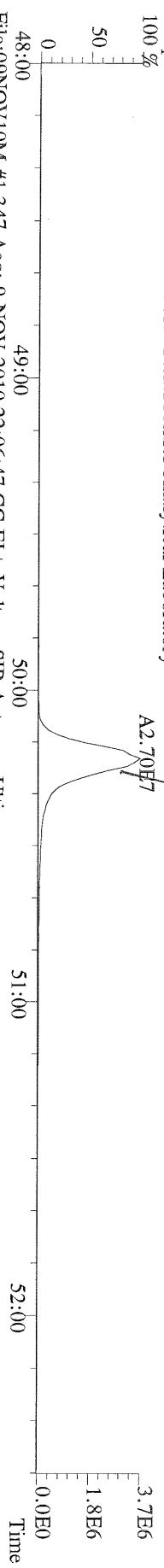
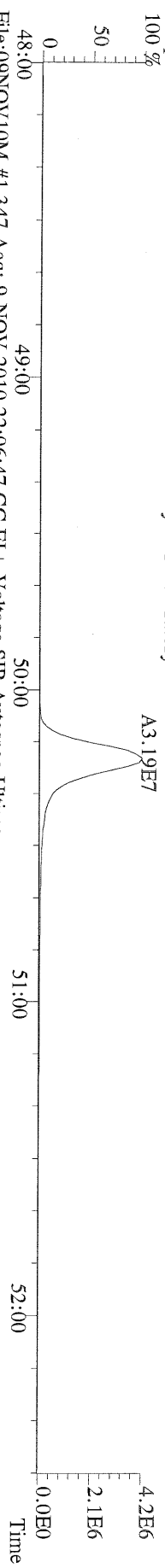


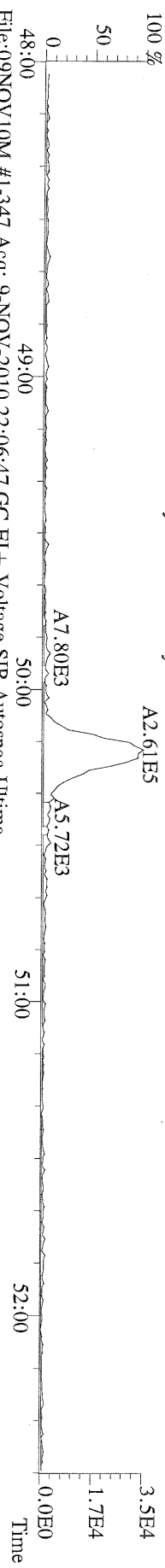
File:09NOV10M #1-347 Acq: 9-NOV-2010 22:06:47 GC EI+ Voltage SIR Autospec-Ultima
 441.7428 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-009-0001-SA File Text:Frontier Analytical Laboratory
 100 %



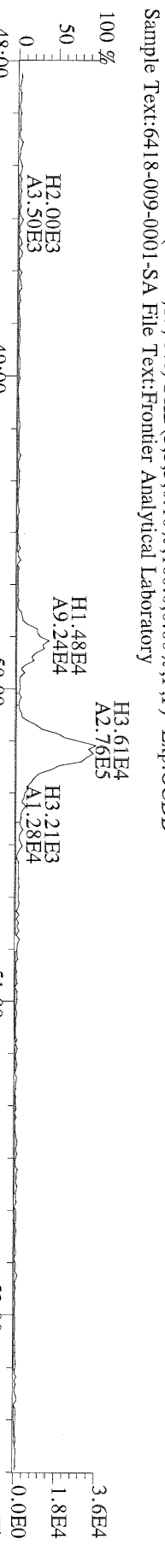
File:09NOV10M #1-347 Acq: 9-NOV-2010 22:06:47 GC EI+ Voltage SIR Autospec-Ultima
 443.7398 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-009-0001-SA File Text:Frontier Analytical Laboratory
 100 %



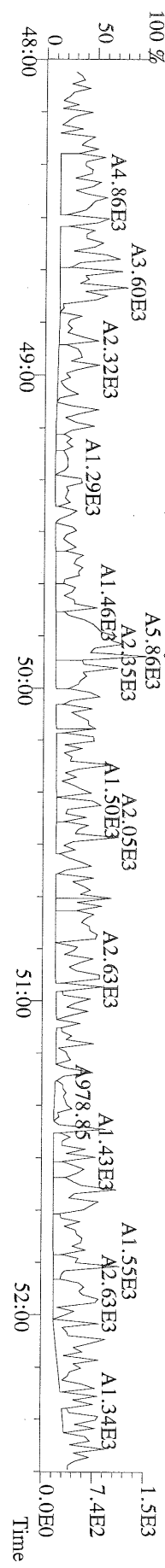
File:09NOV10M #1-347 Acq: 9-NOV-2010 22:06:47 GC EI+ Voltage SIR Autospec-Ultima
 453.7831 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-009-0001-SA File Text:Frontier Analytical Laboratory
 100 %



File:09NOV10M #1-347 Acq: 9-NOV-2010 22:06:47 GC EI+ Voltage SIR Autospec-Ultima
 455.7801 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-009-0001-SA File Text:Frontier Analytical Laboratory



File:09NOV10M #1-347 Acq: 9-NOV-2010 22:06:47 GC EI+ Voltage SIR Autospec-Ultima
 513.6775 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-009-0001-SA File Text:Frontier Analytical Laboratory



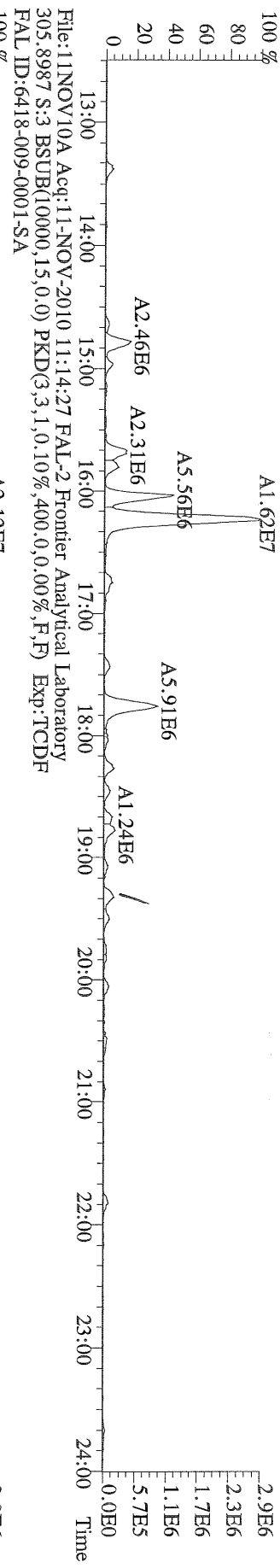
FAL ID: 6418-009-0001-SA Filename: 11NOV10A Sam:3 Acquired: 11-NOV-10 11:14:27 ICal: tcdfal1-9-3-10
Client ID: PSB27-1.5-2-082610 ConCal: ST111110A1 EndCal: ST111110A2
Results: 6418TCDF GC Column: DB225 Amount: 5.020 ✓

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise	DL	#Hom	Rec
2,3,7,8-TCDF	2.89e+06	0.74 y	19:19	1.10	4.42		2.50	-	-	1	
13C-2,3,7,8-TCDF	2.38e+08	0.78 y	19:17	1.06	370						92.8
13C-1,2,3,4-TCDF	2.42e+08	0.78 y	16:43	-	33.7						

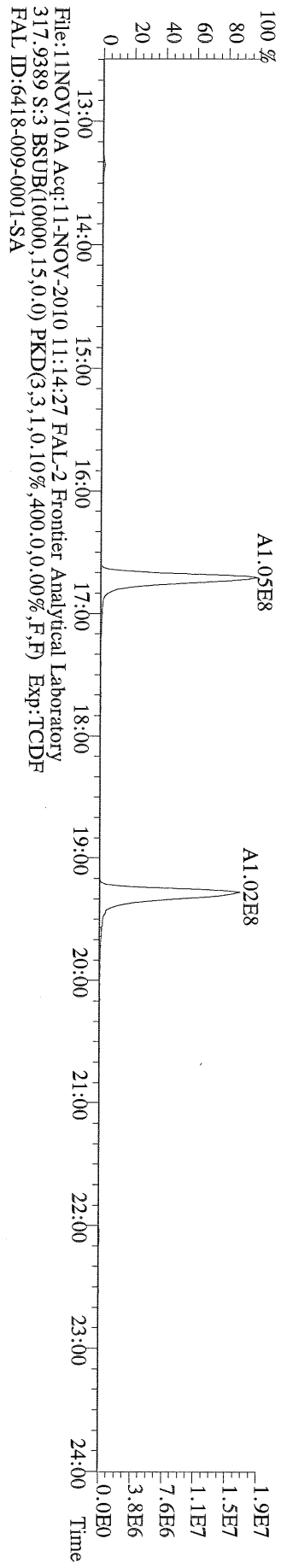
Analyst: 

Date: 11/10/10

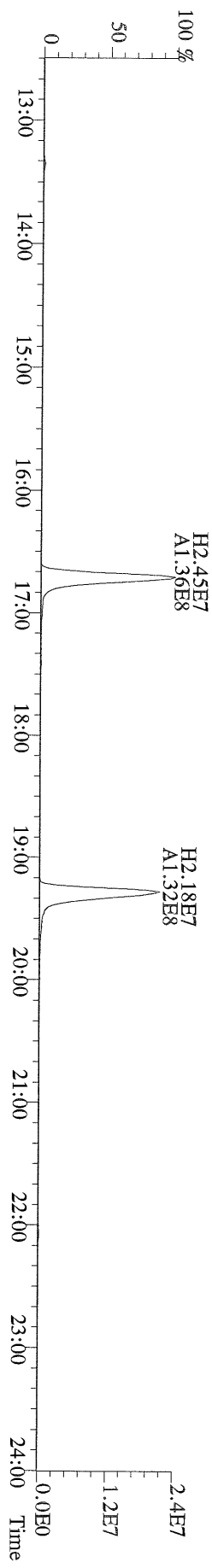
File:11NOV10A Acq:11-NOV-2010 11:14:27 FAL-2 Frontier Analytical Laboratory
 303.9016 S:3 BSUB(10000,15,0.0) PKD(3,3,1,0.10%,400.0,0.00%,F,F) Exp:TCDF
 FAL ID:6418-009-0001-SA



File:11NOV10A Acq:11-NOV-2010 11:14:27 FAL-2 Frontier Analytical Laboratory
 315.9419 S:3 BSUB(10000,15,0.0) PKD(3,3,1,0.10%,400.0,0.00%,F,F) Exp:TCDF
 FAL ID:6418-009-0001-SA



File:11NOV10A Acq:11-NOV-2010 11:14:27 FAL-2 Frontier Analytical Laboratory
 317.9389 S:3 BSUB(10000,15,0.0) PKD(3,3,1,0.10%,400.0,0.00%,F,F) Exp:TCDF
 FAL ID:6418-009-0001-SA



Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL	Rec	#Hom
2,3,7,8-TCDD	4.33e+04	0.70 y	27:28	1.11	0.635	J	2.50	-	-	*	
1,2,3,7,8-PeCDD	2.09e+05	1.54 y	33:18	1.10	3.04	J	2.50	-	-	*	
1,2,3,4,7,8-HxCDD	4.52e+05	1.25 y	38:40	1.37	5.70		2.50	-	-	*	
1,2,3,6,7,8-HxCDD	1.07e+06	1.29 y	38:50	1.37	15.3		2.50	-	-	*	
1,2,3,7,8,9-HxCDD	7.89e+05	1.25 y	39:17	1.36	10.7		2.50	-	-	*	
1,2,3,4,6,7,8-HpCDD	2.55e+07	1.04 y	44:16	1.45	348		2.50	-	-	*	
OCDD	1.50e+08	0.93 y	49:51	1.43	2860		2.50	-	-	*	
2,3,7,8-TCDF	1.61e+05	0.78 y	26:42	1.50	0.971	J	2.50	-	-	*	
1,2,3,7,8-PeCDF	9.34e+04	1.38 y	31:33	0.94	0.904	J	2.50	-	-	*	
2,3,4,7,8-PeCDF	2.97e+05	1.38 y	32:56	0.94	3.03	J	2.50	-	-	*	
1,2,3,4,7,8-HxCDF	4.68e+05	1.13 y	37:16	0.93	5.72		2.50	-	-	*	
1,2,3,6,7,8-HxCDF	3.96e+05	1.23 y	37:28	0.82	4.30	J	2.50	-	-	*	
2,3,4,6,7,8-HxCDF	5.13e+05	1.16 y	38:25	0.92	6.20		2.50	-	-	*	
1,2,3,7,8,9-HxCDF	1.13e+05	1.14 y	39:55	1.00	1.10	J	2.50	-	-	*	
1,2,3,4,6,7,8-HpCDF	9.80e+06	1.08 y	42:21	1.39	109		2.50	-	-	*	
1,2,3,4,7,8,9-HpCDF	5.00e+05	1.09 y	45:11	1.36	6.36		2.50	-	-	*	
OCDF	2.20e+07	0.86 y	50:14	0.79	423		2.50	-	-	*	
13C-2,3,7,8-TCDD	2.44e+07	0.71 y	27:27	1.02	381					95.8	
13C-1,2,3,7,8-PeCDD	2.47e+07	1.72 y	33:16	0.84	470					118	
13C-1,2,3,4,7,8-HxCDD	2.29e+07	1.28 y	38:39	1.07	382					96.1	
13C-1,2,3,6,7,8-HxCDD	2.02e+07	1.28 y	38:49	1.01	358					90.0	
13C-1,2,3,4,6,7,8-HpCDD	2.01e+07	1.05 y	44:15	0.86	420					106	
13C-OCDD	2.91e+07	0.99 y	49:50	0.55	953					120	
13C-2,3,7,8-TCDF	4.38e+07	0.87 y	26:41	0.99	401					101	
13C-1,2,3,7,8-PeCDF	4.36e+07	1.75 y	31:32	0.84	474					119	
13C-2,3,4,7,8-PeCDF	4.17e+07	1.70 y	32:52	0.81	468					118	
13C-1,2,3,4,7,8-HxCDF	3.50e+07	0.52 y	37:15	1.85	339					85.2	
13C-1,2,3,6,7,8-HxCDF	4.45e+07	0.52 y	37:27	2.54	314					79.1	
13C-2,3,4,6,7,8-HxCDF	3.58e+07	0.54 y	38:23	2.01	318					80.0	
13C-1,2,3,7,8,9-HxCDF	4.10e+07	0.52 y	39:50	2.03	361					90.9	
13C-1,2,3,4,6,7,8-HpCDF	2.56e+07	0.45 y	42:21	1.11	413					104	
13C-1,2,3,4,7,8,9-HpCDF	2.31e+07	0.45 y	45:11	0.80	513					129	
13C-OCDF	5.26e+07	0.95 y	50:12	1.08	869					109	
37Cl-2,3,7,8-TCDD	6.79e+06		27:28	0.69	158					99.6	
13C-1,2,3,4-TCDD	2.48e+07	0.71 y	26:52	-	11.0						
13C-1,2,3,4-TCDF	4.37e+07	0.88 y	25:36	-	12.0						
13C-1,2,3,7,8,9-HxCDD	2.22e+07	1.27 y	39:15	-	16.0						
Total Tetra-Dioxins	5.94e+05		24:27	1.11	8.72		2.50	-	-	*	12
Total Penta-Dioxins	1.58e+06		30:18	1.10	23.0		2.50	-	-	*	10
Total Hexa-Dioxins	7.55e+06		36:12	1.37	102		2.50	-	-	*	8
Total Hepta-Dioxins	4.40e+07		42:52	1.45	598		2.50	-	-	*	2
Total Tetra-Furans	3.43e+06		23:05	1.50	20.7		2.50	-	-	*	18
1st Fn. Tot Penta-Furans	1.83e+06		28:30	0.94	18.1		2.50	-	-	*	PeCDF 1.1/11/10
Total Penta-Furans	2.70e+06		30:08	0.94	26.8		2.50	-	-	*	45.0 10
Total Hexa-Furans	1.13e+07		35:18	0.91	127		2.50	-	-	*	44.9 9
Total Hepta-Furans	2.81e+07		42:21	1.38	327		2.50	-	-	*	4

Analyst: 6

Date: 11/10/10

Totals class: Total Tetra-Dioxins

Entry #: 38

Run: 12

File: 09NOV10M

S: 8 I: 1 F: 1

Acquired: 9-NOV-10 20:16:10

Total Concentration: 8.72

Unnamed Concentration: 8.086

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
24:27	6.27e+04	8.63e+04	0.73 y	1.49e+05	2.19	
24:44	3.88e+04	5.15e+04	0.75 y	9.03e+04	1.33	
25:02	1.32e+04	1.81e+04	0.73 y	3.12e+04	0.459	
25:40	2.41e+04	2.79e+04	0.86 y	5.20e+04	0.764	
25:50	1.54e+04	2.17e+04	0.71 y	3.72e+04	0.545	
26:00	2.33e+04	2.89e+04	0.80 y	5.22e+04	0.766	
26:10	8.46e+03	1.18e+04	0.71 y	2.03e+04	0.298	
26:31	1.35e+04	1.53e+04	0.88 y	2.88e+04	0.422	
26:52	1.62e+04	2.08e+04	0.78 y	3.70e+04	0.543	
27:14	1.07e+04	1.52e+04	0.71 y	2.59e+04	0.380	
27:28	1.77e+04	2.55e+04	0.70 y	4.33e+04	0.635	2,3,7,8-TCDD
27:46	1.09e+04	1.61e+04	0.67 y	2.70e+04	0.396	

Totals class: Total Penta-Dioxins

Entry #: 39

Run: 12

File: 09NOV10M

S: 8 I: 1 F: 2

Acquired: 9-NOV-10 20:16:10

Total Concentration: 23.0

Unnamed Concentration: 19.942

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
30:18	1.99e+05	1.23e+05	1.62 y	3.22e+05	4.70	
30:55	1.29e+05	7.52e+04	1.71 y	2.04e+05	2.97	
31:33	9.64e+04	5.88e+04	1.64 y	1.55e+05	2.26	
31:46	1.27e+05	7.47e+04	1.70 y	2.02e+05	2.94	
31:54	8.85e+04	5.39e+04	1.64 y	1.42e+05	2.08	
32:11	9.81e+04	6.01e+04	1.63 y	1.58e+05	2.31	
32:41	3.70e+04	2.51e+04	1.47 y	6.21e+04	0.906	
33:18	1.27e+05	8.20e+04	1.54 y	2.09e+05	3.04	1,2,3,7,8-PeCDD
33:23	3.48e+04	2.17e+04	1.60 y	5.65e+04	0.825	
33:53	3.71e+04	2.78e+04	1.33 y	6.49e+04	0.948	

Totals class: Total Hexa-Dioxins

Entry #: 40

Run: 12

File: 09NOV10M

S: 8 I: 1 F: 3

Acquired: 9-NOV-10 20:16:10

Total Concentration: 102

Unnamed Concentration: 70.537

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
36:12	9.54e+05	7.33e+05	1.30 y	1.69e+06	22.7	
37:07	2.64e+05	2.05e+05	1.28 y	4.69e+05	6.31	
37:33	1.53e+06	1.17e+06	1.31 y	2.71e+06	36.4	
37:45	1.18e+05	1.01e+05	1.16 y	2.19e+05	2.95	
38:40	2.51e+05	2.01e+05	1.25 y	4.52e+05	5.70	1,2,3,4,7,8-HxCDD
38:50	6.02e+05	4.67e+05	1.29 y	1.07e+06	15.3	1,2,3,6,7,8-HxCDD
39:07	9.12e+04	7.05e+04	1.29 y	1.62e+05	2.17	
39:17	4.39e+05	3.51e+05	1.25 y	7.89e+05	10.7	1,2,3,7,8,9-HxCDD

Totals class: Total Hepta-Dioxins

Entry #: 41

Run: 12

File: 09NOV10M

S: 8 I: 1 F: 4

Acquired: 9-NOV-10 20:16:10

Total Concentration: 598

Unnamed Concentration: 250.799

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
42:52	9.36e+06	9.07e+06	1.03 y	1.84e+07	251	
44:16	1.30e+07	1.25e+07	1.04 y	2.55e+07	348	1,2,3,4,6,7,8-HpCDD

Totals class: Total Tetra-Furans

Entry #: 42

Run: 12

File: 09NOV10M

S: 8 I: 1 F: 1

Acquired: 9-NOV-10 20:16:10

Total Concentration: 20.7

Unnamed Concentration: 19.730

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
23:05	1.90e+04	2.21e+04	0.86 y	4.11e+04	0.248	
23:28	1.02e+05	1.18e+05	0.86 y	2.20e+05	1.33	
23:50	3.32e+05	3.99e+05	0.83 y	7.31e+05	4.41	
24:11	1.33e+05	1.59e+05	0.84 y	2.92e+05	1.77	
24:29	1.20e+05	1.53e+05	0.79 y	2.73e+05	1.65	
24:47	1.48e+05	2.08e+05	0.71 y	3.56e+05	2.15	
25:00	2.45e+04	3.37e+04	0.73 y	5.82e+04	0.352	
25:23	5.36e+04	6.82e+04	0.79 y	1.22e+05	0.736	
25:30	1.88e+05	2.13e+05	0.88 y	4.01e+05	2.42	
25:37	7.64e+04	1.06e+05	0.72 y	1.82e+05	1.10	
25:58	3.68e+04	4.38e+04	0.84 y	8.06e+04	0.487	
26:12	3.14e+04	4.39e+04	0.72 y	7.54e+04	0.455	
26:22	3.39e+04	3.91e+04	0.86 y	7.30e+04	0.441	
26:31	2.10e+04	2.41e+04	0.87 y	4.51e+04	0.273	
26:36	2.27e+04	2.66e+04	0.85 y	4.93e+04	0.298	
26:42	7.06e+04	9.02e+04	0.78 y	1.61e+05	0.971	2,3,7,8-TCDF
27:02	8.30e+04	9.85e+04	0.84 y	1.82e+05	1.10	
28:31	3.71e+04	4.89e+04	0.76 y	8.60e+04	0.519	

Totals class: 1st Fn. Tot Penta-Furans Entry #: 43

Run: 12 File: 09NOV10M S: 8 I: 1 F: 1
Acquired: 9-NOV-10 20:16:10

Total Concentration: 18.1 Unnamed Concentration: 18.115

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
28:30	1.11e+06	7.18e+05	1.54 y	1.83e+06	18.1	

Totals class: Total Penta-Furans

Entry #: 44

Run: 12

File: 09NOV10M

S: 8 I: 1 F: 2

Acquired: 9-NOV-10 20:16:10

Total Concentration: 26.8

Unnamed Concentration: 22.917

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
30:08	9.89e+04	6.45e+04	1.53 y	1.63e+05	1.62	
30:18	6.49e+05	4.69e+05	1.38 y	1.12e+06	11.1	
30:59	3.36e+05	2.33e+05	1.44 y	5.70e+05	5.65	
31:19	3.02e+04	2.25e+04	1.34 y	5.27e+04	0.523	
31:33	5.42e+04	3.92e+04	1.38 y	9.34e+04	0.904	1,2,3,7,8-PeCDF
31:54	1.12e+05	8.26e+04	1.36 y	1.95e+05	1.93	
32:43	3.73e+04	2.64e+04	1.41 y	6.36e+04	0.631	
32:56	1.72e+05	1.25e+05	1.38 y	2.97e+05	3.03	2,3,4,7,8-PeCDF
32:59	4.48e+04	3.28e+04	1.36 y	7.75e+04	0.769	
33:20	4.19e+04	2.92e+04	1.44 y	7.11e+04	0.705	

Totals class: Total Hexa-Furans

Entry #: 45

Run: 12

File: 09NOV10M

S: 8 I: 1 F: 3

Acquired: 9-NOV-10 20:16:10

Total Concentration: 127

Unnamed Concentration: 109.203

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
35:18	6.20e+05	5.52e+05	1.12 y	1.17e+06	13.1	
35:34	2.54e+06	2.14e+06	1.18 y	4.68e+06	52.2	
36:11	4.95e+04	4.10e+04	1.21 y	9.04e+04	1.01	
36:29	2.04e+06	1.70e+06	1.20 y	3.75e+06	41.8	
37:06	4.87e+04	4.40e+04	1.11 y	9.28e+04	1.04	
37:16	2.49e+05	2.19e+05	1.13 y	4.68e+05	5.72	1,2,3,4,7,8-HxCDF
37:28	2.18e+05	1.78e+05	1.23 y	3.96e+05	4.30	1,2,3,6,7,8-HxCDF
38:25	2.75e+05	2.38e+05	1.16 y	5.13e+05	6.20	2,3,4,6,7,8-HxCDF
39:55	6.03e+04	5.31e+04	1.14 y	1.13e+05	1.10	1,2,3,7,8,9-HxCDF

Totals class: Total Hepta-Furans

Entry #: 46

Run: 12

File: 09NOV10M

S: 8 I: 1 F: 4

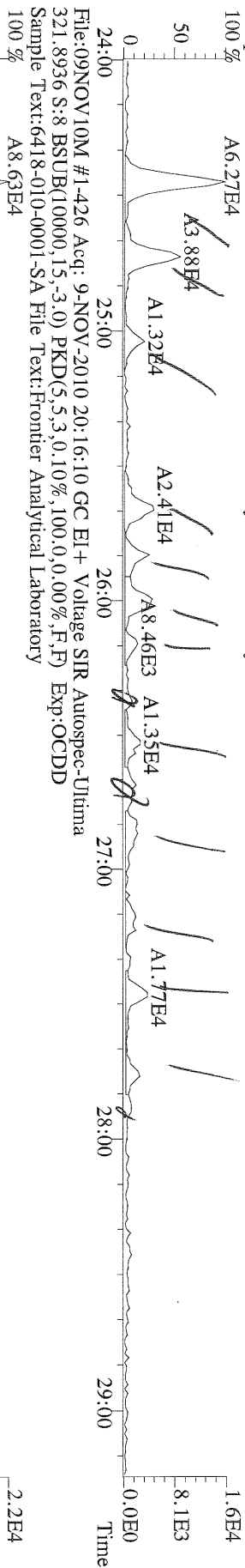
Acquired: 9-NOV-10 20:16:10

Total Concentration: 327

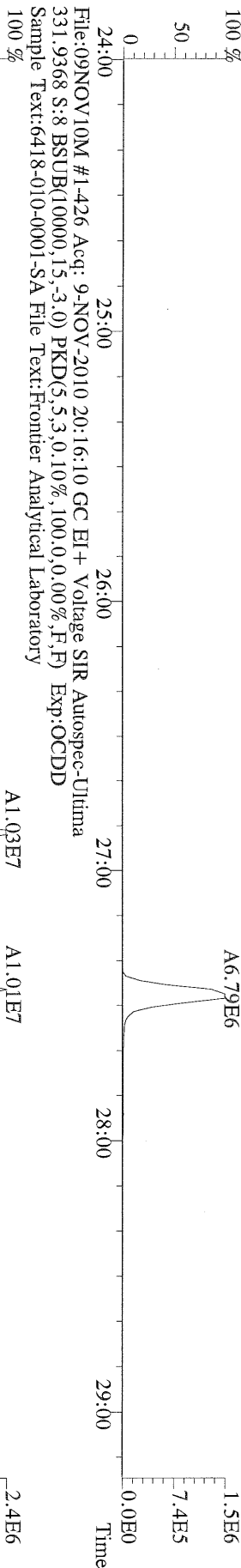
Unnamed Concentration: 211.348

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
42:21	5.10e+06	4.70e+06	1.08 y	9.80e+06	109	1,2,3,4,6,7,8-HpCDF
42:55	7.44e+04	7.48e+04	0.99 y	1.49e+05	1.77	
43:11	9.09e+06	8.56e+06	1.06 y	1.76e+07	210	
45:11	2.60e+05	2.40e+05	1.09 y	5.00e+05	6.36	1,2,3,4,7,8,9-HpCDF

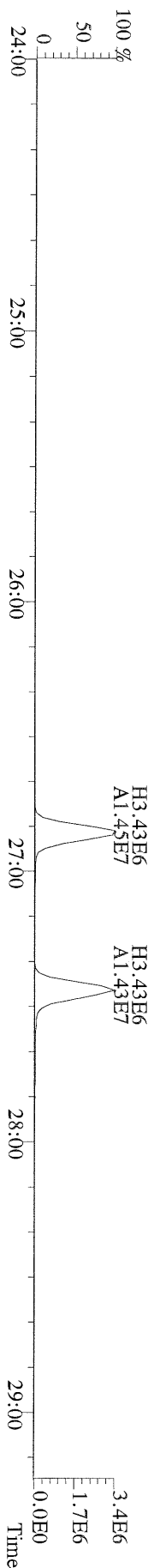
File:09NOV10M #1-426 Acq: 9-NOV-2010 20:16:10 GC EI+ Voltage SIR Autospec-Ultima
 319.8965 S:8 BSUB(10000,15,-3.0) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



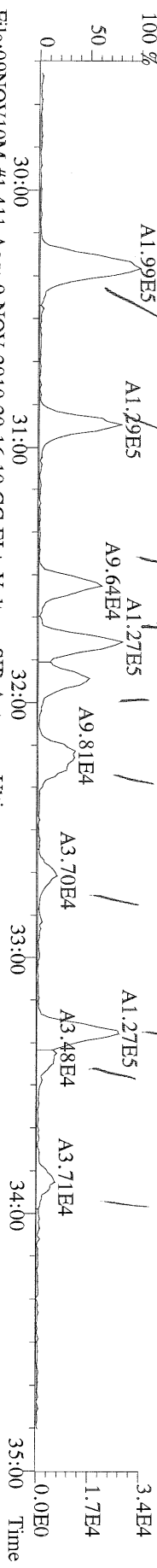
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 327.8847 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



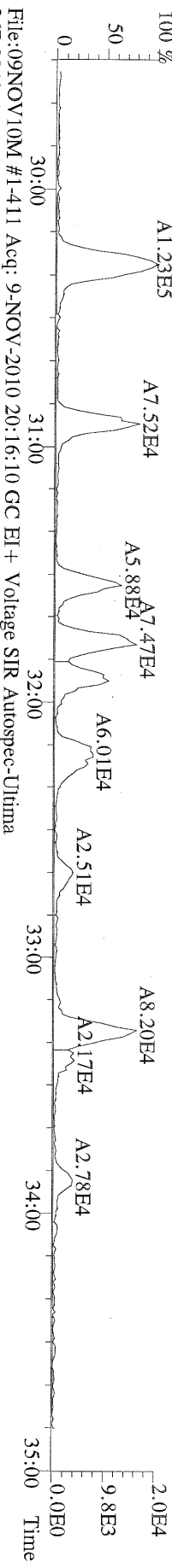
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 333.9339 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



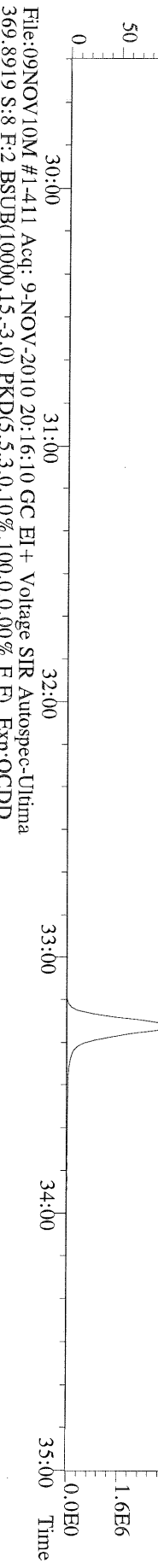
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 355.8546 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



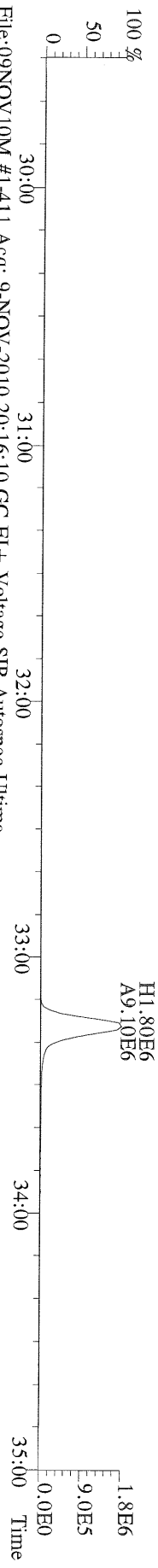
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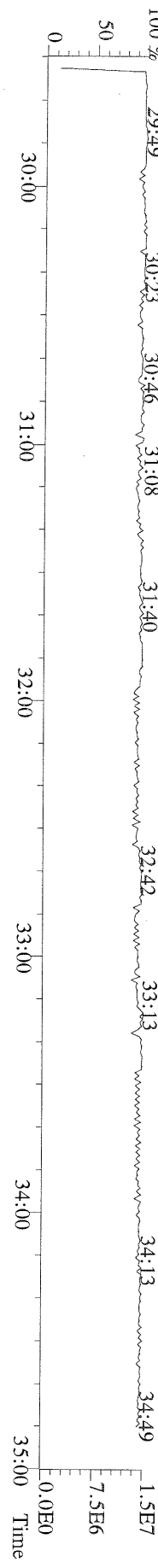
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 367.8949 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



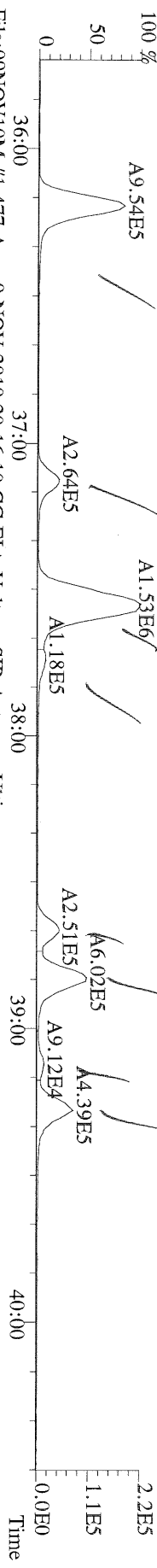
File:09NOV10M #1-411 Acq: 9-NOV-2010 20:16:10 GC EI+ Voltage SIR Autospec-Utima
 369.8919 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



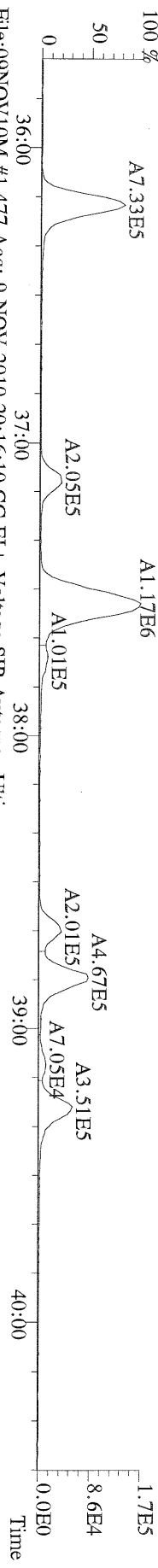
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 366.9792 S:8 F:2 Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



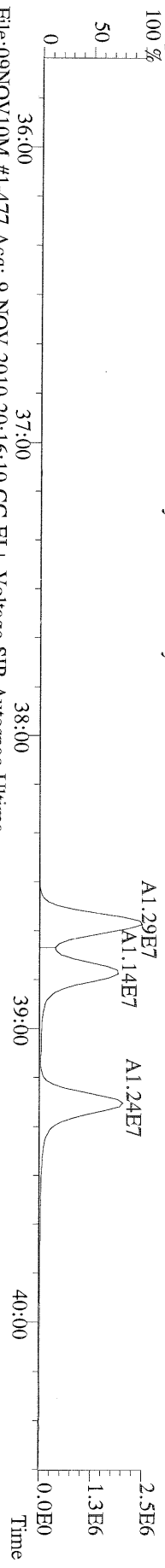
File:09NOV10M #1-477 Acq: 9-NOV-2010 20:16:10 GC EI+ Voltage SIR Autospec-Utima
 389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



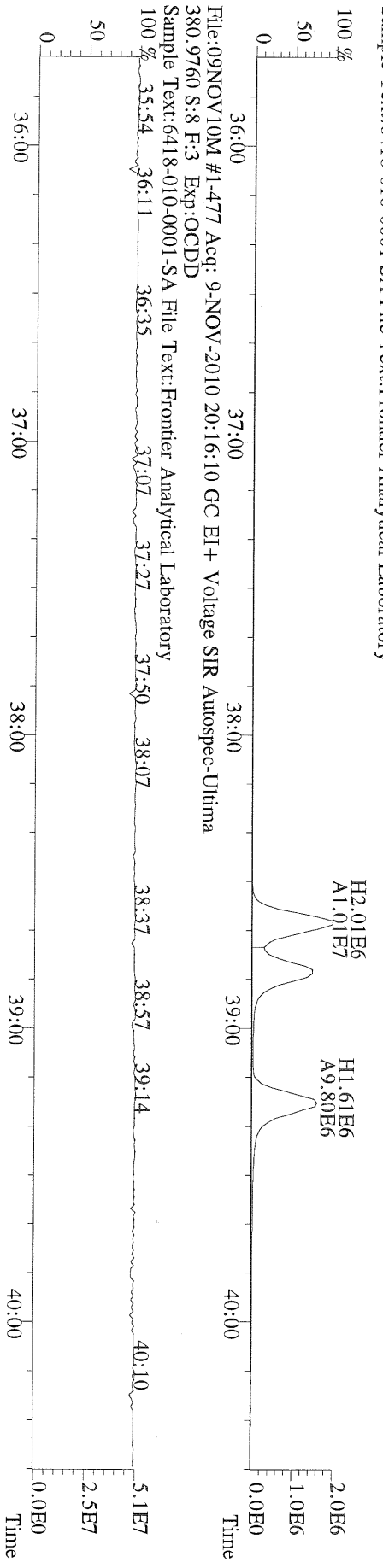
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 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



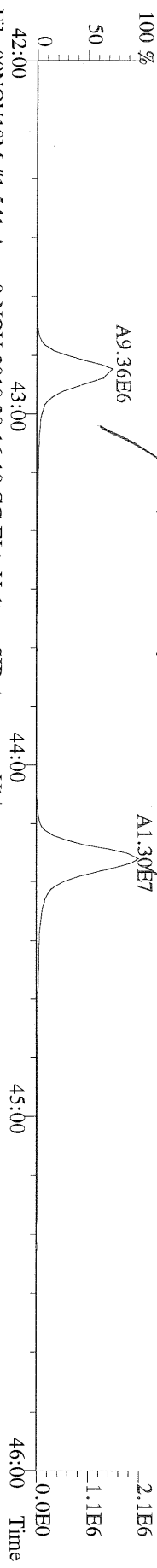
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 401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



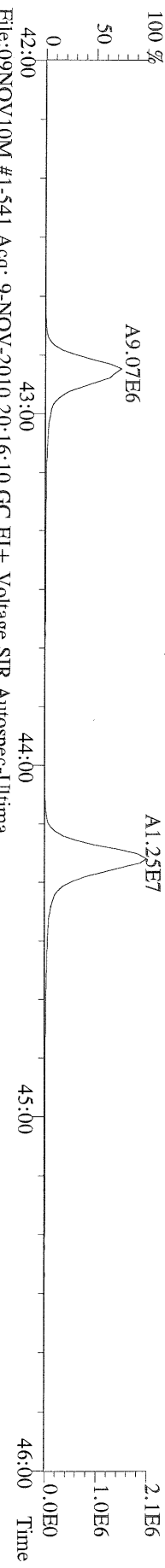
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 403.8530 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



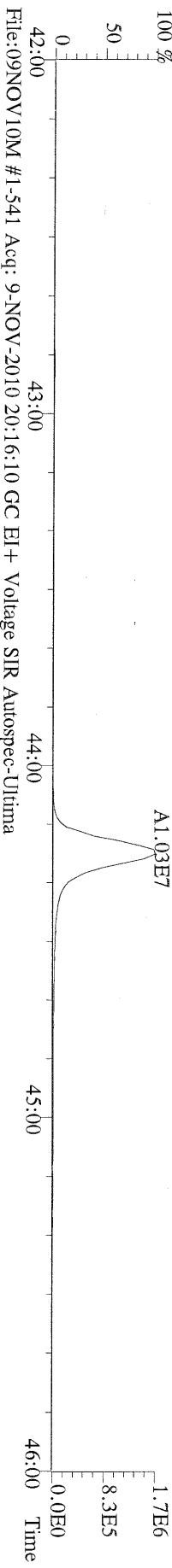
File:09NOV10M #1-541 Acq: 9-NOV-2010 20:16:10 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



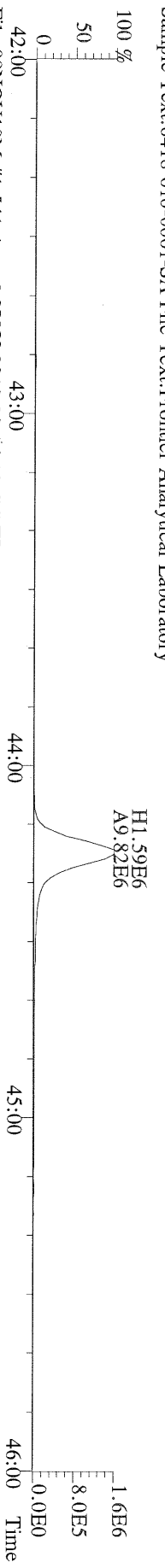
File:09NOV10M #1-541 Acq: 9-NOV-2010 20:16:10 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



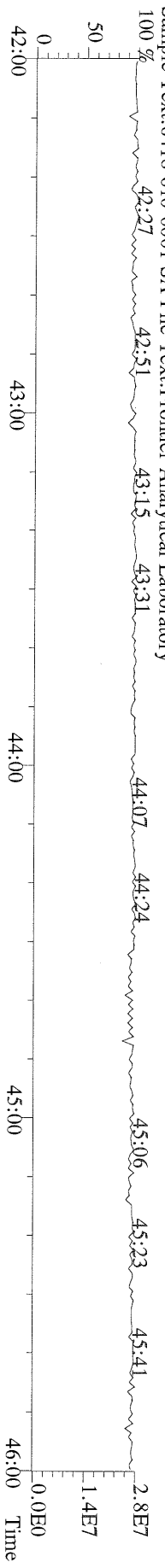
File:09NOV10M #1-541 Acq: 9-NOV-2010 20:16:10 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



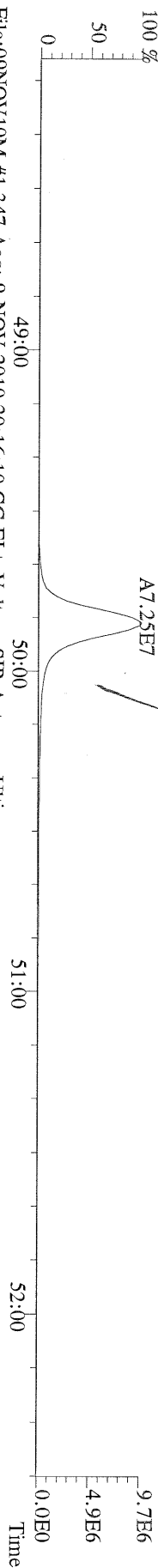
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Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



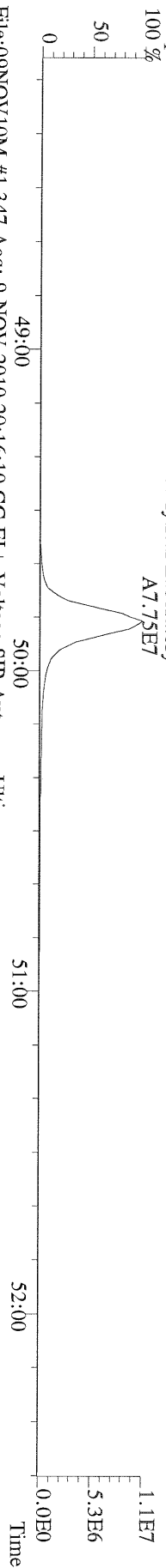
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430.9728 S:8 F:4 Exp:OCDD
Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



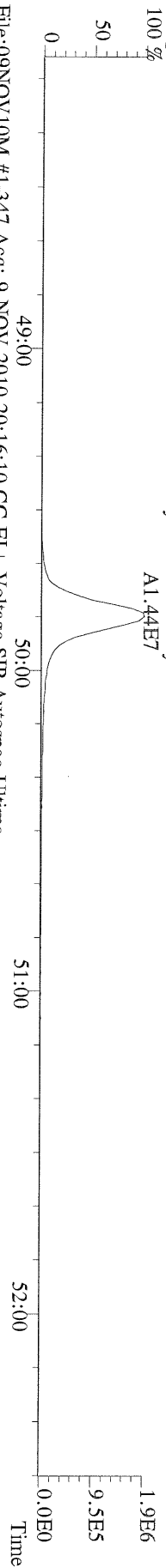
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457.7377 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



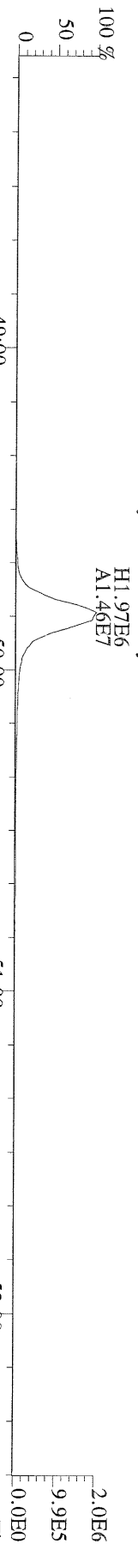
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459.7348 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



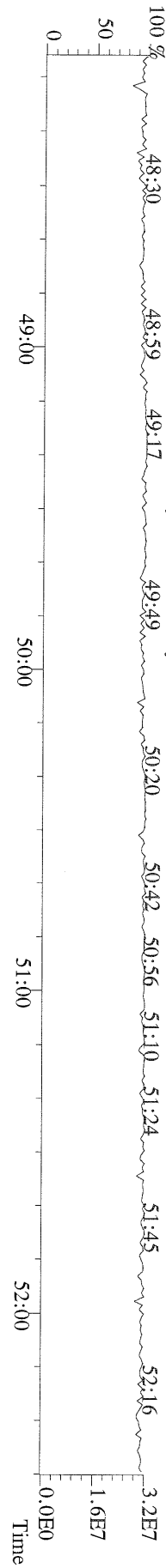
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469.7780 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



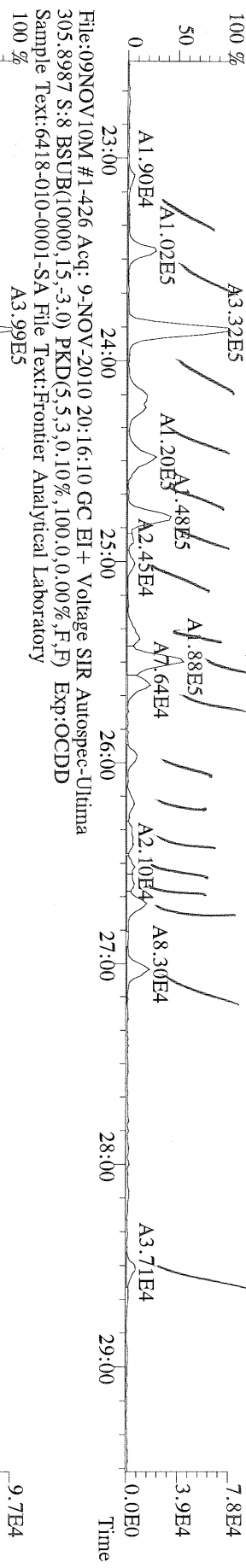
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Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



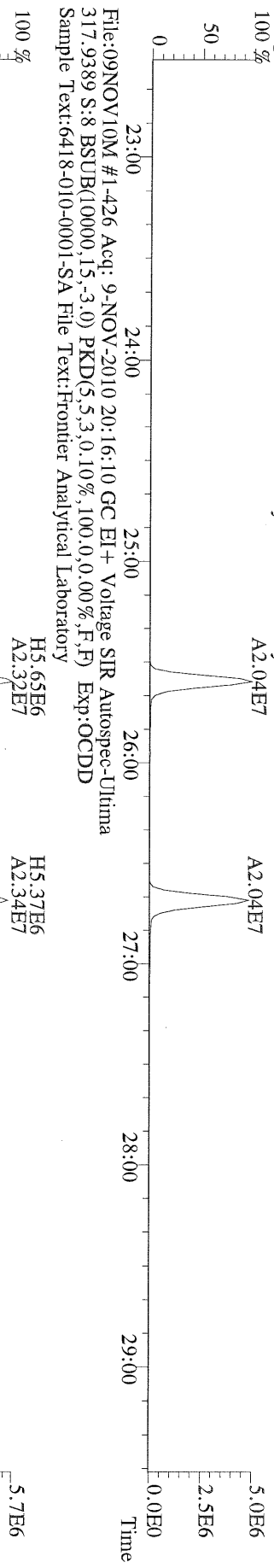
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454.9728 S:8 F:5 Exp:OCDD
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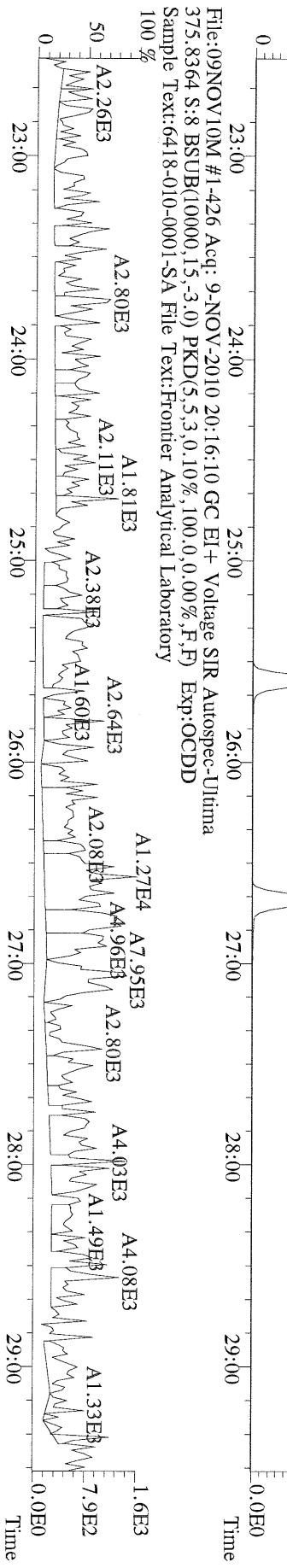
File:09NOV10M #1-426 Acq: 9-NOV-2010 20:16:10 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:8 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



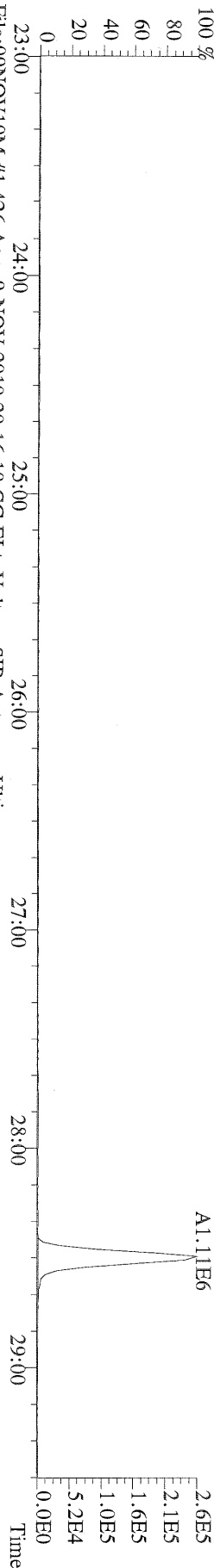
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315.9419 S:8 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



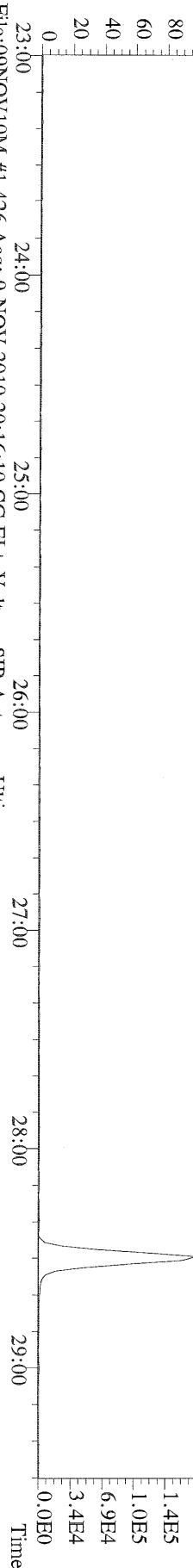
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375.8364 S:8 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



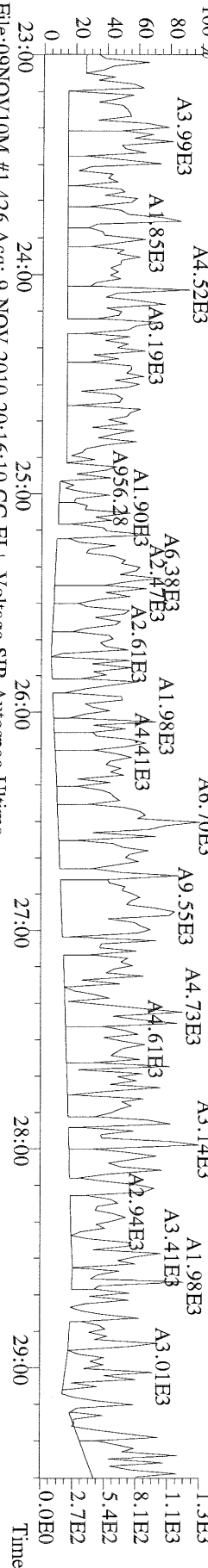
File:09NOV10M #1-426 Acq: 9-NOV-2010 20:16:10 GC EI + Voltage SIR Autospec-Utima
 339.8597 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



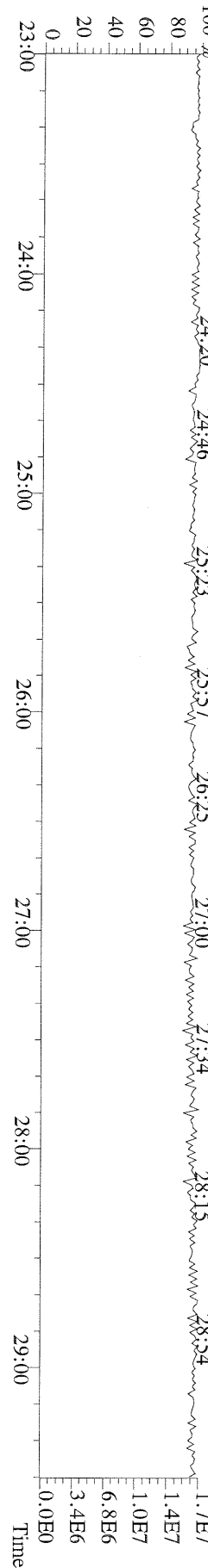
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 341.8568 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



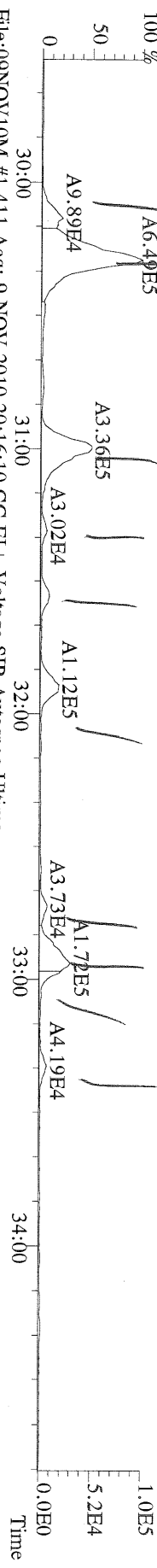
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 409.7974 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



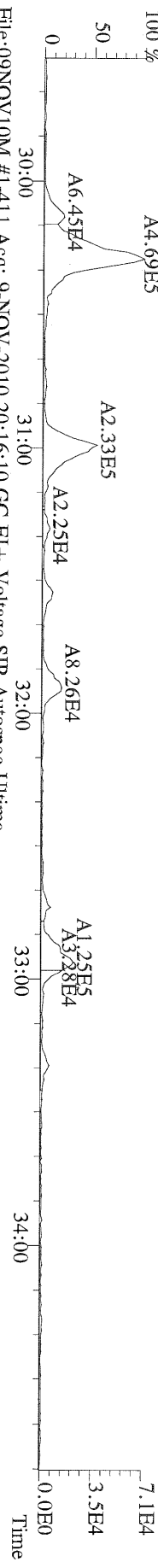
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 316.9824 S:8 Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



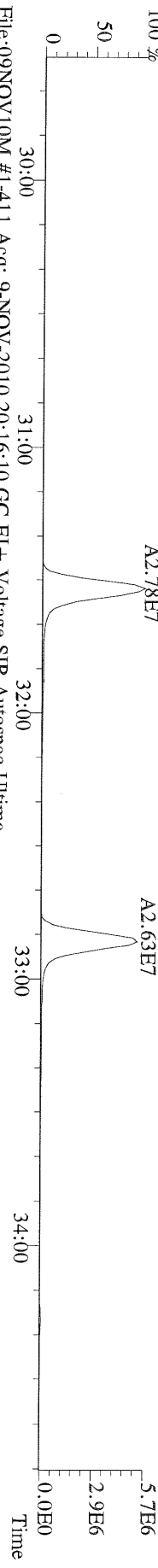
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339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



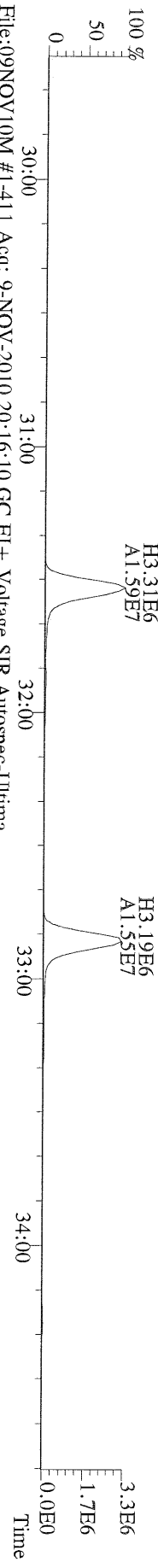
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341.8568 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



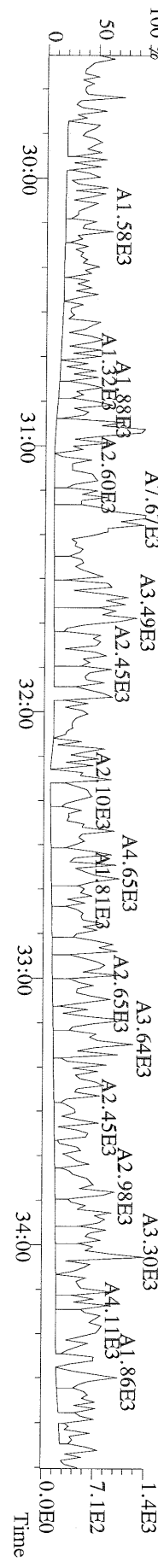
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351.9000 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



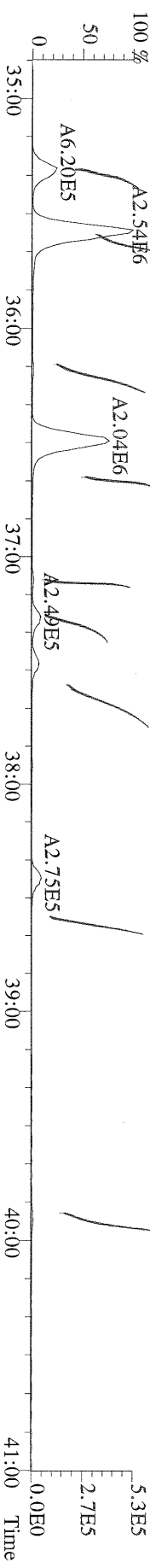
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353.8970 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



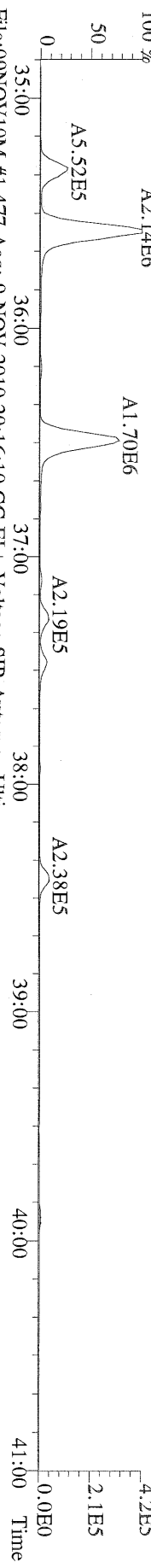
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409.7974 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



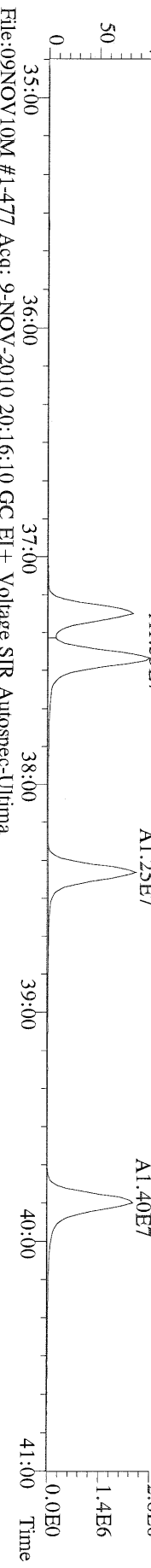
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 373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



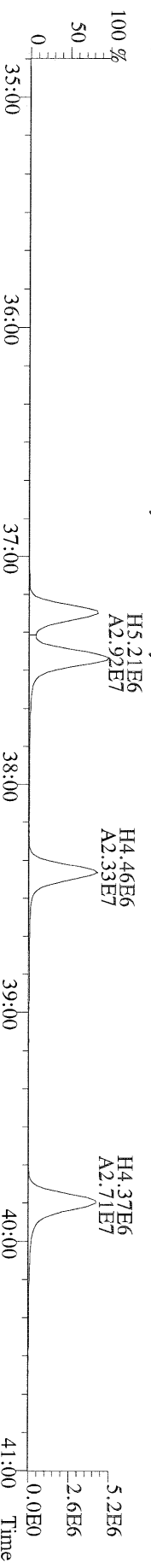
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 375.8178 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



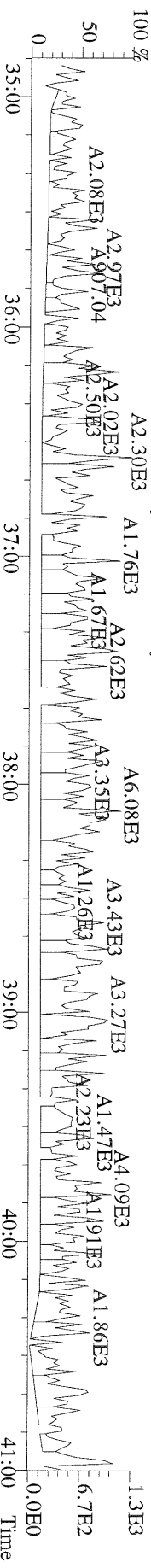
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 383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



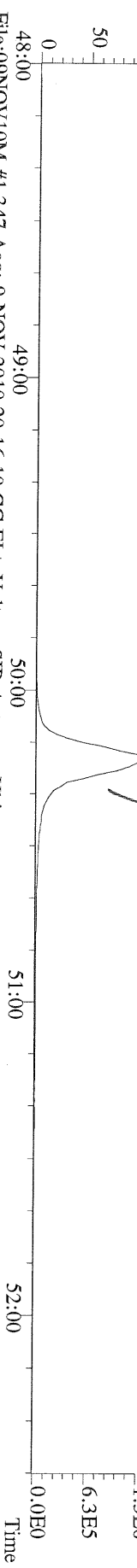
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 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



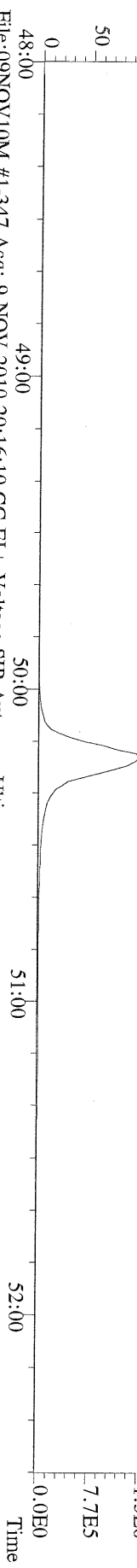
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 445.7555 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



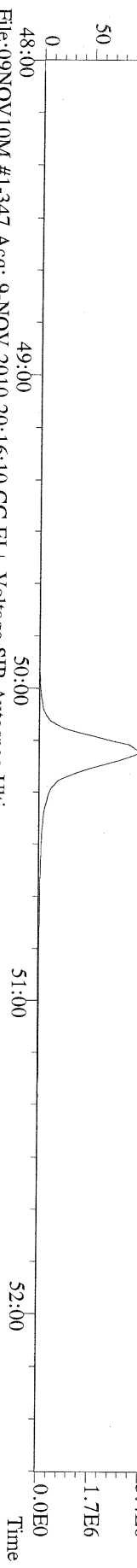
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 441.7428 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



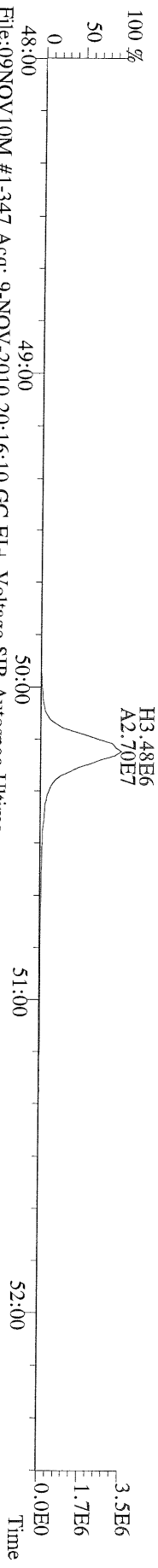
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 443.7398 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
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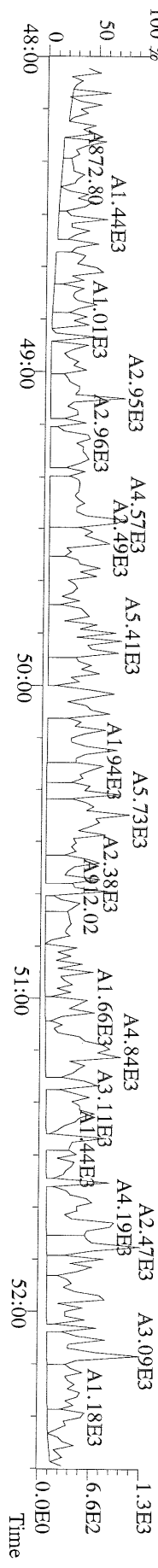
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 453.7831 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



File:09NOV10M #1-347 Acq: 9-NOV-2010 20:16:10 GC EI+ Voltage SIR Autospec-Ultima
 455.7801 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



File:09NOV10M #1-347 Acq: 9-NOV-2010 20:16:10 GC EI+ Voltage SIR Autospec-Ultima
 513.6775 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-010-0001-SA File Text:Frontier Analytical Laboratory



Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL	#Hom	
2,3,7,8-TCDD	*	* n	NotFnd	1.11	*		2.50	369	364	0.115	
1,2,3,7,8-PeCDD	*	* n	NotFnd	1.10	*		2.50	356	326	0.133	
1,2,3,4,7,8-HxCDD	*	* n	NotFnd	1.37	*		2.50	761	584	0.235	
1,2,3,6,7,8-HxCDD	*	* n	NotFnd	1.37	*		2.50	761	584	0.303	
1,2,3,7,8,9-HxCDD	*	* n	NotFnd	1.36	*		2.50	761	584	0.269	
1,2,3,4,6,7,8-HpCDD	1.40e+05	0.93 y	44:16	1.45	2.03	J	2.50	-	-	*	
OCDD	6.69e+05	0.93 y	49:50	1.43	15.8		2.50	-	-	*	
2,3,7,8-TCDF	*	* n	NotFnd	1.50	*		2.50	632	804	0.0976	
1,2,3,7,8-PeCDF	*	* n	NotFnd	0.94	*		2.50	389	496	0.110	
2,3,4,7,8-PeCDF	*	* n	NotFnd	0.94	*		2.50	389	496	0.122	
1,2,3,4,7,8-HxCDF	*	* n	NotFnd	0.93	*		2.50	327	383	0.125	
1,2,3,6,7,8-HxCDF	*	* n	NotFnd	0.82	*		2.50	327	383	0.118	
2,3,4,6,7,8-HxCDF	*	* n	NotFnd	0.92	*		2.50	327	383	0.124	
1,2,3,7,8,9-HxCDF	*	* n	NotFnd	1.00	*		2.50	327	383	0.116	
1,2,3,4,6,7,8-HpCDF	5.08e+04	1.18 y	42:22	1.39	0.624	J	2.50	-	-	*	
1,2,3,4,7,8,9-HpCDF	*	* n	NotFnd	1.36	*		2.50	404	326	0.146	
OCDF	7.26e+04	0.92 y	50:13	0.79	1.56	J	2.50	-	-	*	
										Rec	
13C-2,3,7,8-TCDD	2.43e+07	0.75 y	27:26	1.02	364					91.8	
13C-1,2,3,7,8-PeCDD	2.34e+07	1.75 y	33:17	0.84	426					108	
13C-1,2,3,4,7,8-HxCDD	2.13e+07	1.28 y	38:38	1.07	359					90.6	
13C-1,2,3,6,7,8-HxCDD	1.83e+07	1.27 y	38:48	1.01	328					82.7	
13C-1,2,3,4,6,7,8-HpCDD	1.88e+07	1.05 y	44:15	0.86	398					100	
13C-OCDD	2.35e+07	0.98 y	49:49	0.55	778					98.2	
13C-2,3,7,8-TCDF	4.17e+07	0.87 y	26:42	0.99	378					95.4	
13C-1,2,3,7,8-PeCDF	4.04e+07	1.71 y	31:32	0.84	434					110	
13C-2,3,4,7,8-PeCDF	3.79e+07	1.75 y	32:51	0.81	420					106	
13C-1,2,3,4,7,8-HxCDF	3.23e+07	0.52 y	37:15	1.85	316					79.7	
13C-1,2,3,6,7,8-HxCDF	4.14e+07	0.52 y	37:27	2.54	296					74.7	
13C-2,3,4,6,7,8-HxCDF	3.35e+07	0.54 y	38:23	2.01	301					76.0	
13C-1,2,3,7,8,9-HxCDF	3.81e+07	0.53 y	39:50	2.03	339					85.7	
13C-1,2,3,4,6,7,8-HpCDF	2.32e+07	0.46 y	42:20	1.11	379					95.7	
13C-1,2,3,4,7,8,9-HpCDF	2.29e+07	0.44 y	45:10	0.80	515					130	
13C-OCDF	4.69e+07	0.93 y	50:12	1.08	784					99.0	
37Cl-2,3,7,8-TCDD	6.69e+06		27:27	0.69	150					94.5	
13C-1,2,3,4-TCDD	2.58e+07	0.76 y	26:51	-	11.4						
13C-1,2,3,4-TCDF	4.40e+07	0.86 y	25:35	-	12.0						
13C-1,2,3,7,8,9-HxCDD	2.19e+07	1.29 y	39:15	-	15.7						
Total Tetra-Dioxins	*		NotFnd	1.11	*		2.50	369	364	0.115	0
Total Penta-Dioxins	*		NotFnd	1.10	*		2.50	356	326	0.133	0
Total Hexa-Dioxins	*		NotFnd	1.37	*		2.50	907	692	0.318	0
Total Hepta-Dioxins	2.86e+05		42:53	1.45	4.15	J	2.50	-	-	*	2
Total Tetra-Furans	*		NotFnd	1.50	*		2.50	632	804	0.0976	0
1st Fn. Tot Penta-Furans	*		NotFnd	0.94	*		2.50	389	496	0.122	0
Total Penta-Furans	*		NotFnd	0.94	*		2.50	389	496	0.122	0.00
Total Hexa-Furans	*		NotFnd	0.91	*		2.50	728	480	0.206	0
Total Hepta-Furans	1.00e+05		42:22	1.38	1.24	J	2.50	-	-	*	2

Analyst: *[Signature]* Date: 11/10/10

Totals class: Total Hepta-Dioxins

Entry #: 41

Run: 10

File: 09NOV10M

S: 6 I: 1 F: 4

Acquired: 9-NOV-10 18:25:34

Total Concentration: 4.15

Unnamed Concentration: 2.120

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
42:53	7.12e+04	7.50e+04	0.95 y	1.46e+05	2.12	
44:16	6.76e+04	7.27e+04	0.93 y	1.40e+05	2.03	1,2,3,4,6,7,8-HpCDD

Totals class: Total Hepta-Furans

Entry #: 46

Run: 10

File: 09NOV10M

S: 6 I: 1 F: 4

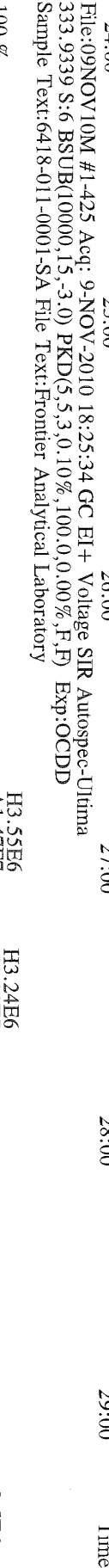
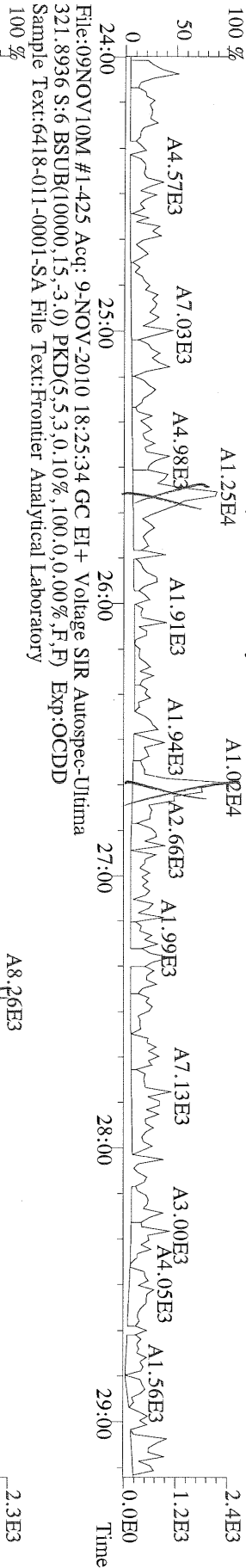
Acquired: 9-NOV-10 18:25:34

Total Concentration: 1.24

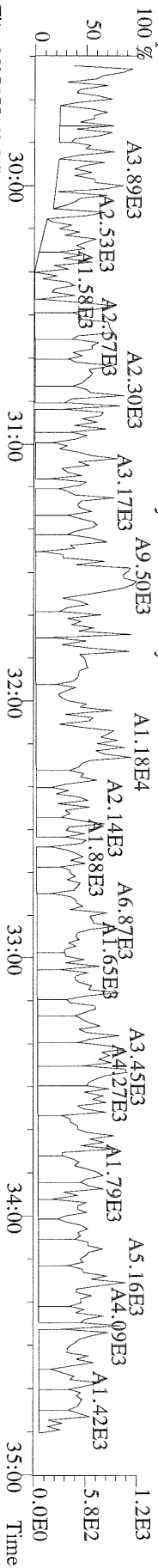
Unnamed Concentration: 0.620

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
42:22	2.75e+04	2.33e+04	1.18 y	5.08e+04	0.624	1,2,3,4,6,7,8-HpCDF
43:10	2.67e+04	2.29e+04	1.17 y	4.96e+04	0.620	

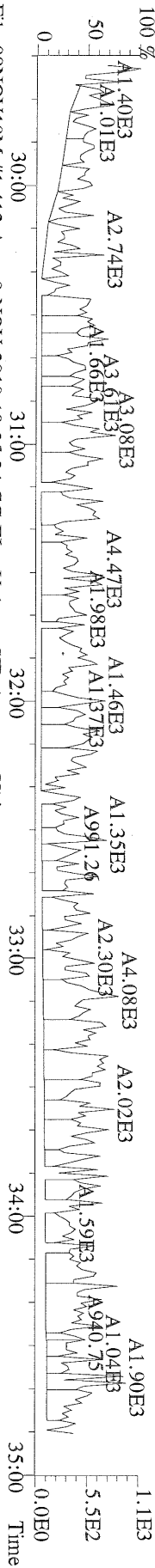
File:09NOV10M #1-425 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
 319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



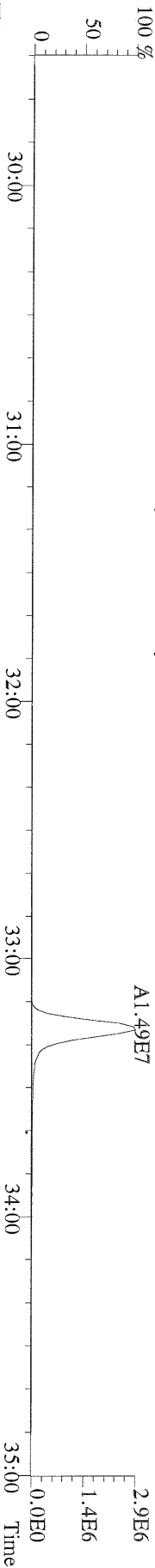
File:09NOV10M #1-412 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



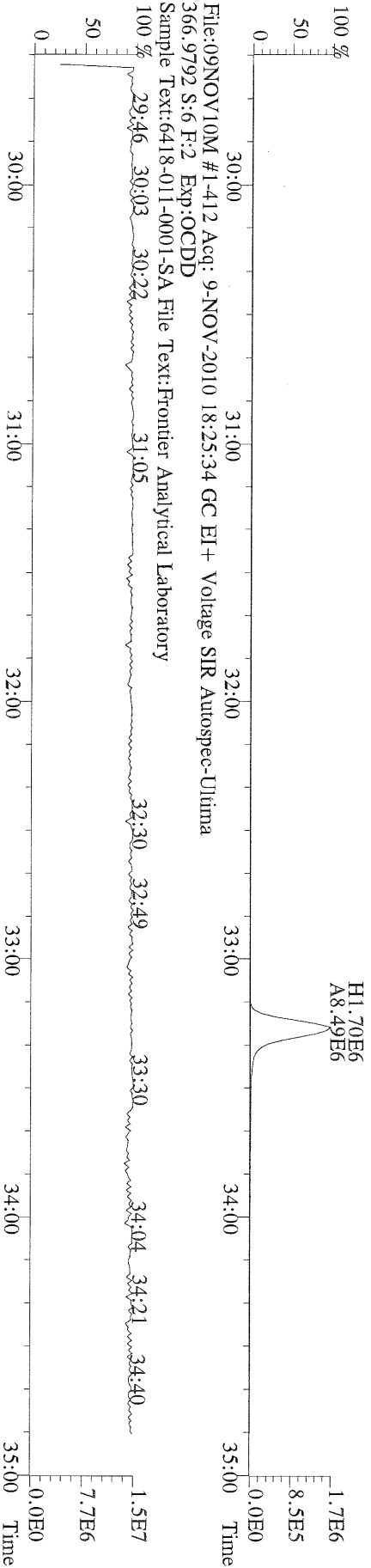
File:09NOV10M #1-412 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
357.8517 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



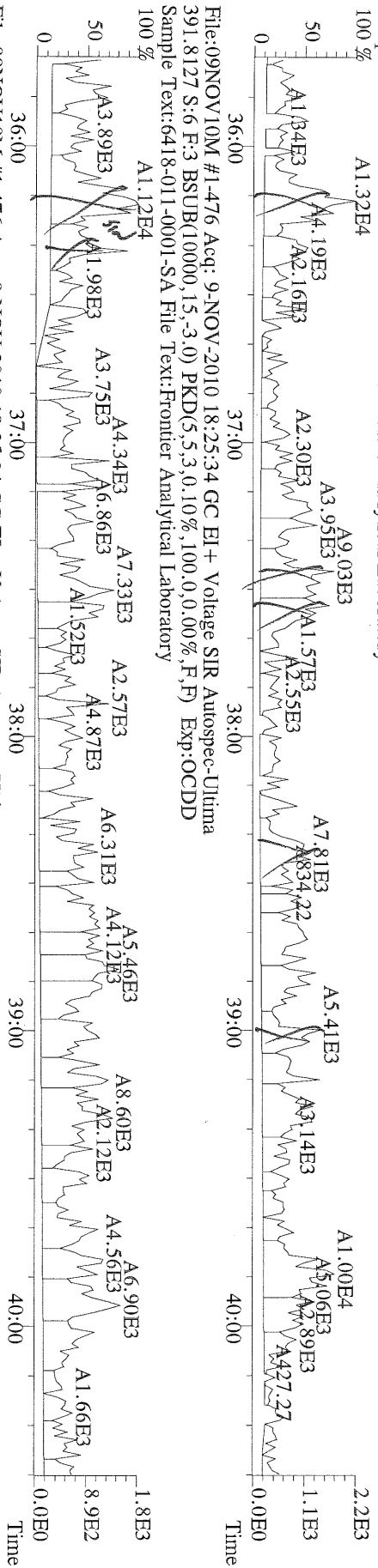
File:09NOV10M #1-412 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



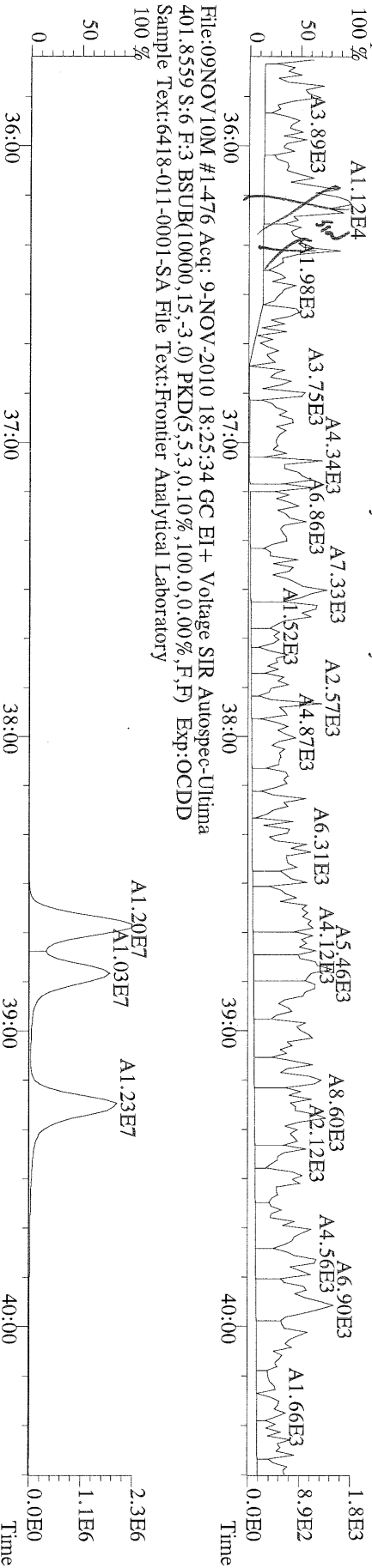
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369.8919 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



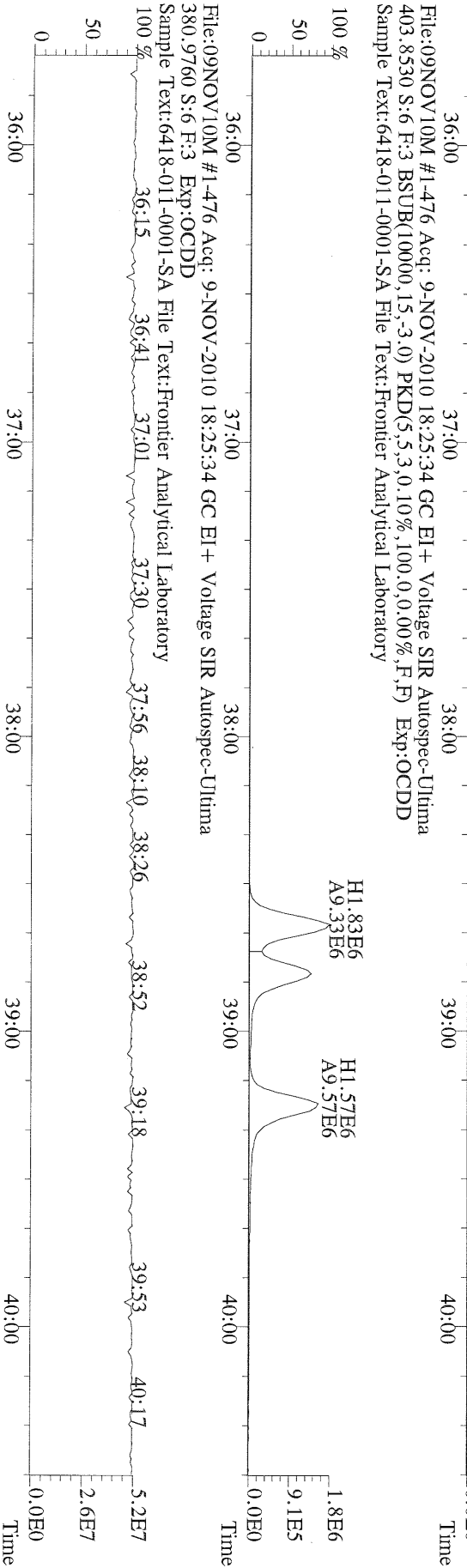
File:09NOV10M #1-476 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Ultima
 389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



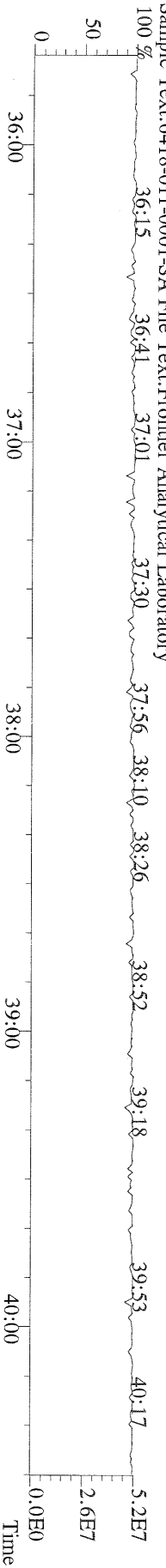
File:09NOV10M #1-476 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Ultima
 391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



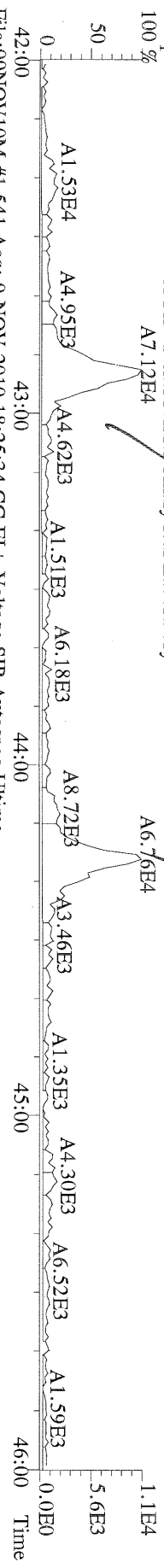
File:09NOV10M #1-476 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Ultima
 401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



File:09NOV10M #1-476 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Ultima
 380.9760 S:6 F:3 Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



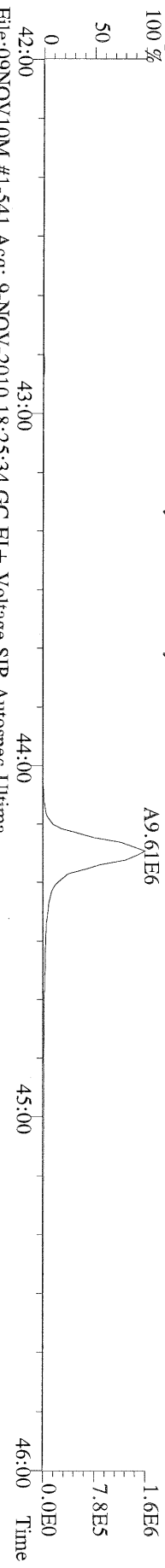
File:09NOV10M #1-541 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



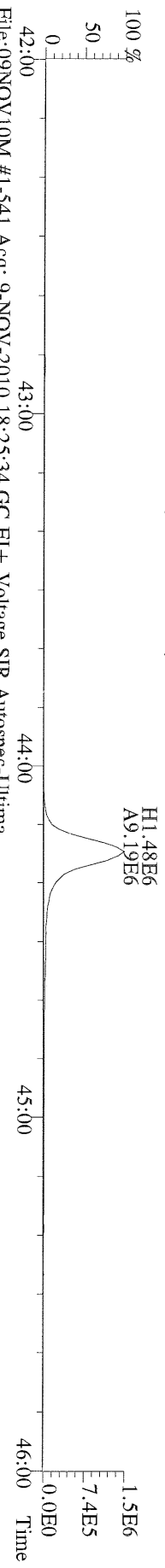
File:09NOV10M #1-541 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
425.7737 S:6 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



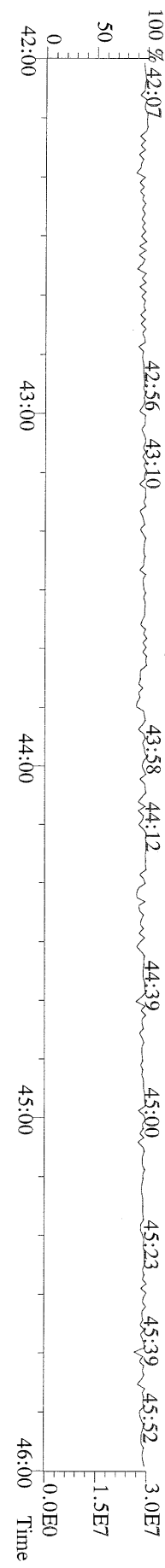
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435.8169 S:6 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



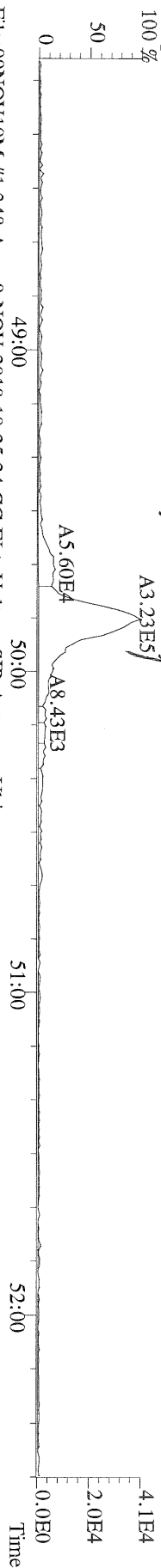
File:09NOV10M #1-541 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
437.8140 S:6 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



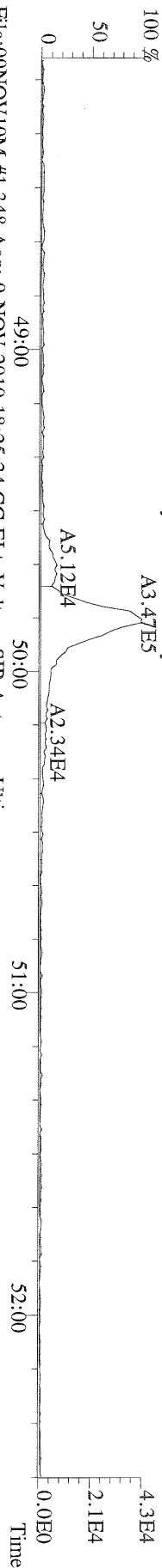
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430.9728 S:6 F:4 Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



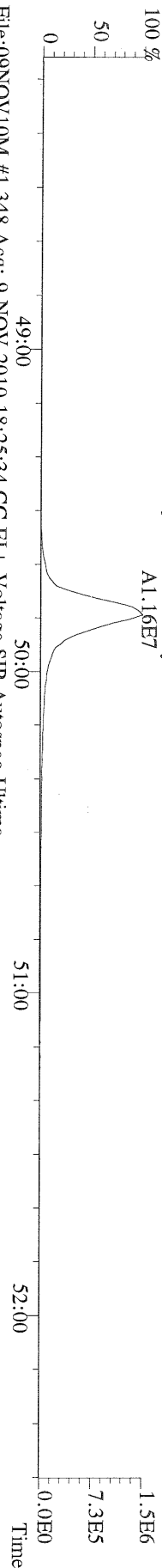
File:09NOV10M #1-348 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
 457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory
 100 %



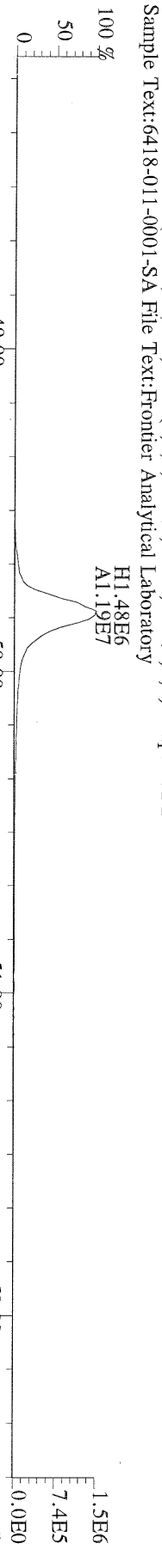
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 459.7348 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory
 100 %



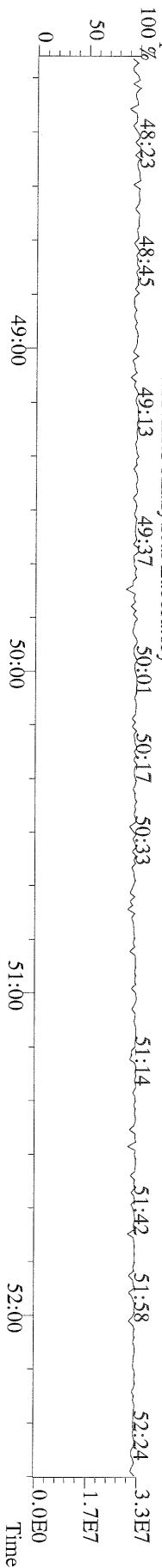
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 469.7780 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory
 100 %



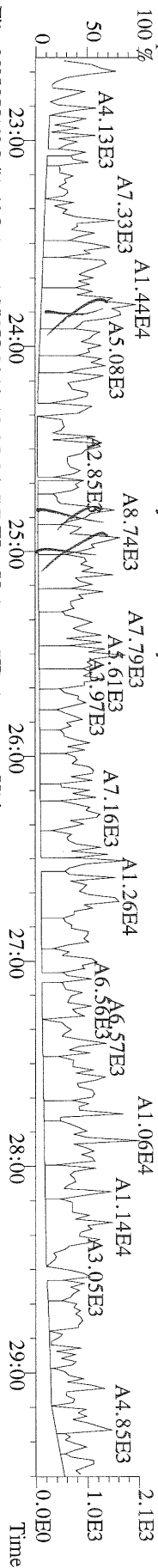
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 471.7750 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory
 100 %



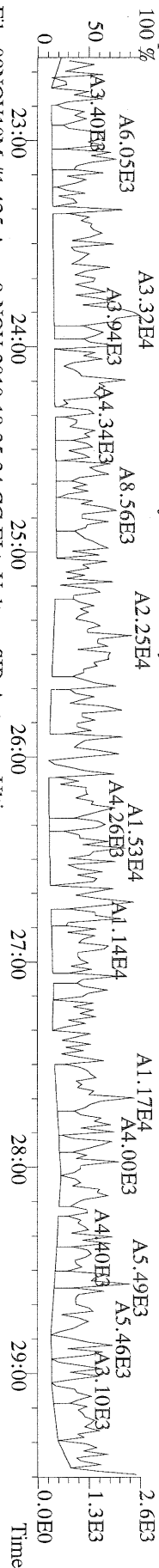
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 454.9728 S:6 F:5 Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory
 100 %



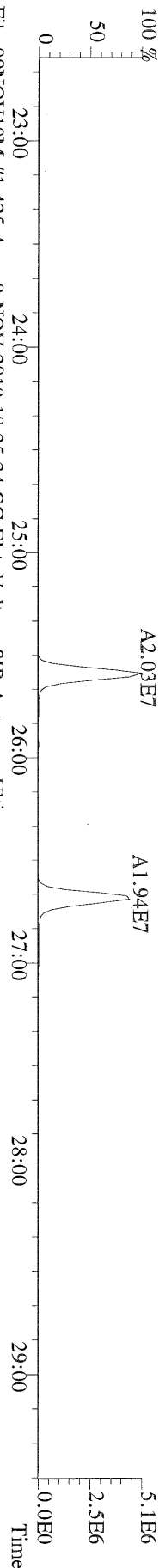
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 303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



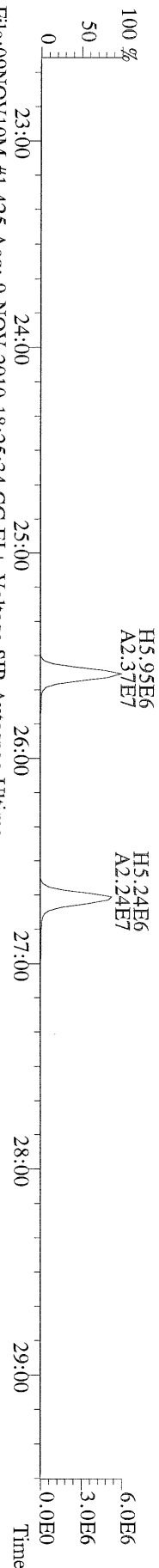
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 305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



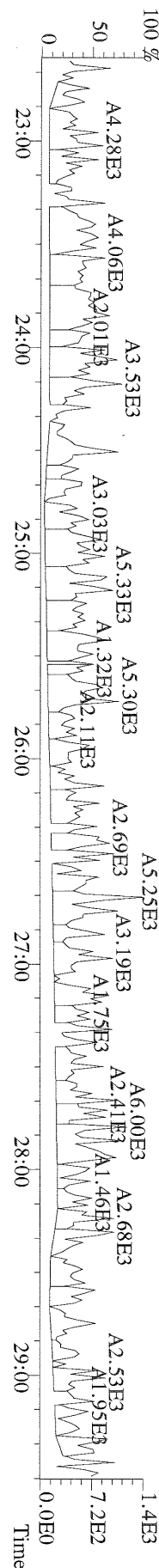
File:09NOV10M #1-425 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
 315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



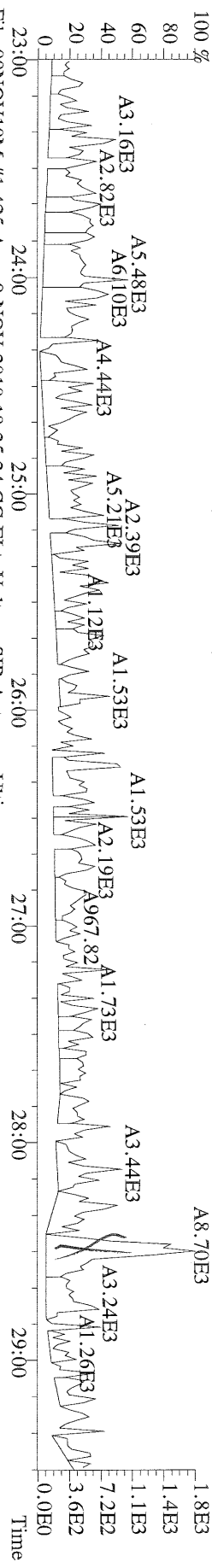
File:09NOV10M #1-425 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
 317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



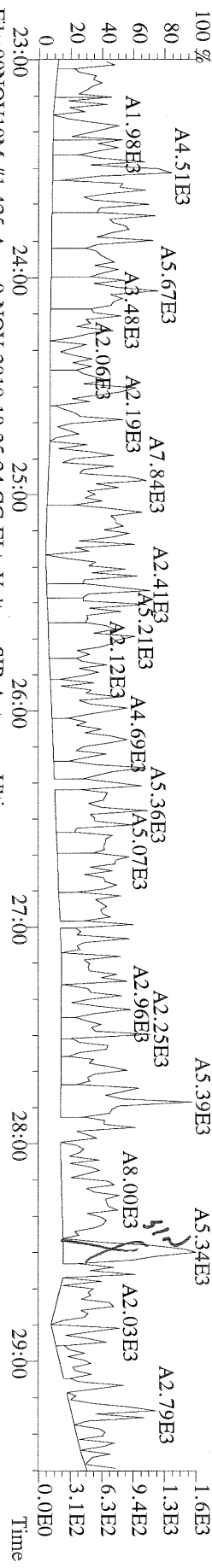
File:09NOV10M #1-425 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
 375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



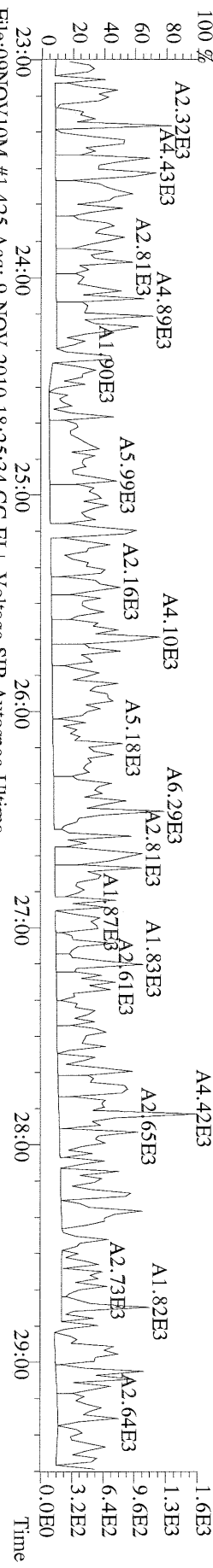
File:09NOV10M #1-425 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
 339.8597 S:6 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



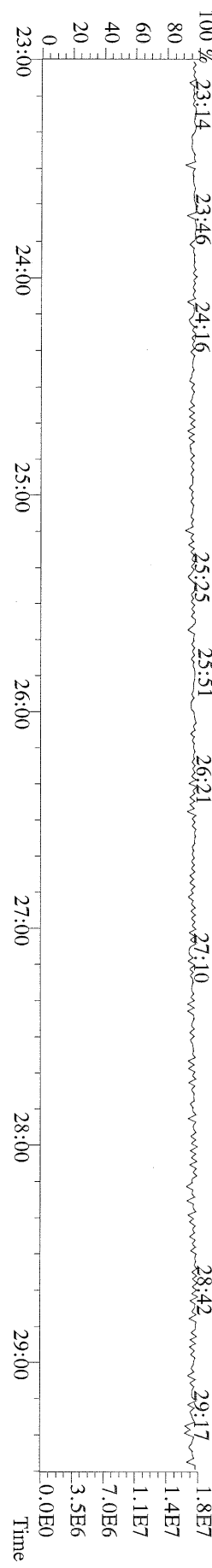
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 341.8568 S:6 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



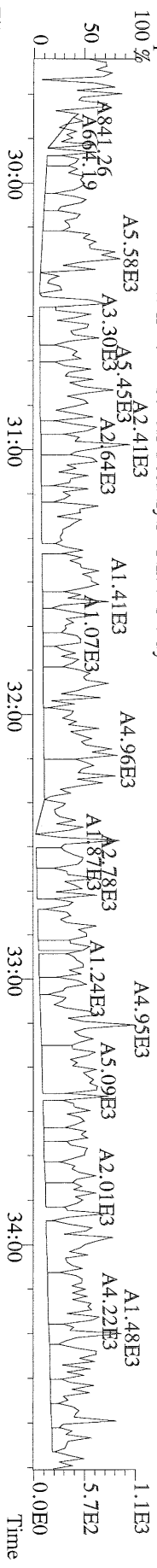
File:09NOV10M #1-425 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
 409.7974 S:6 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



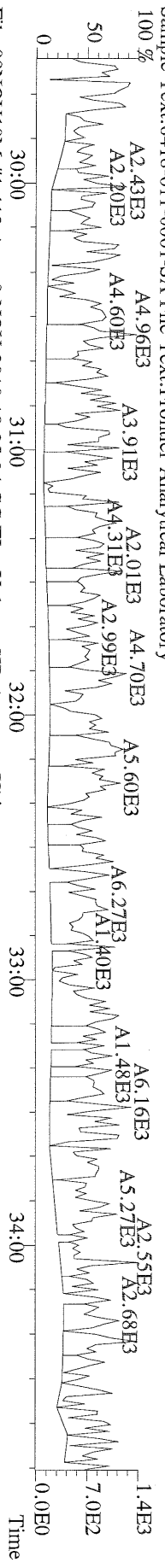
File:09NOV10M #1-425 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
 316.9824 S:6 Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



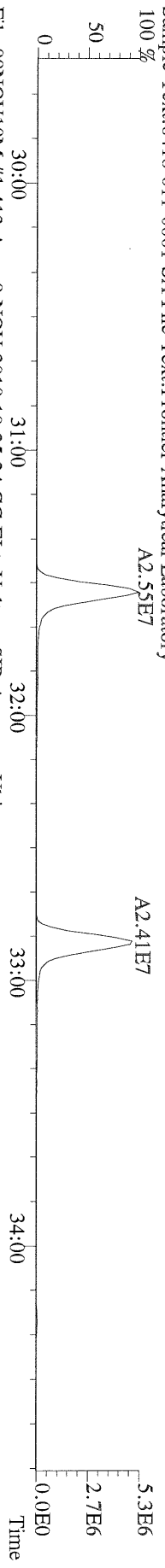
File:09NOV10M #1-412 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



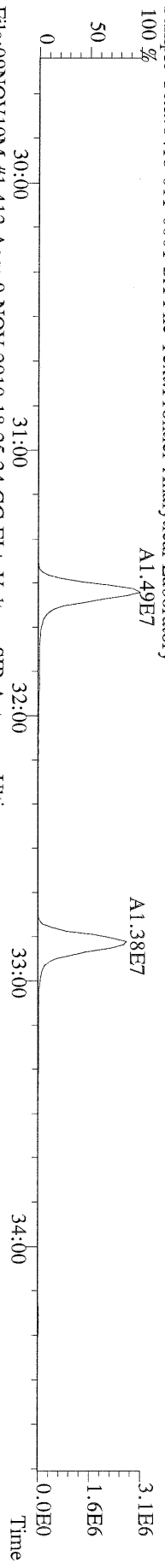
File:09NOV10M #1-412 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
341.8568 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



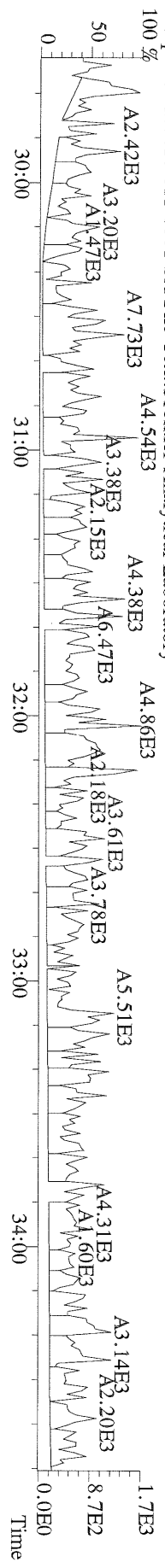
File:09NOV10M #1-412 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
351.9000 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



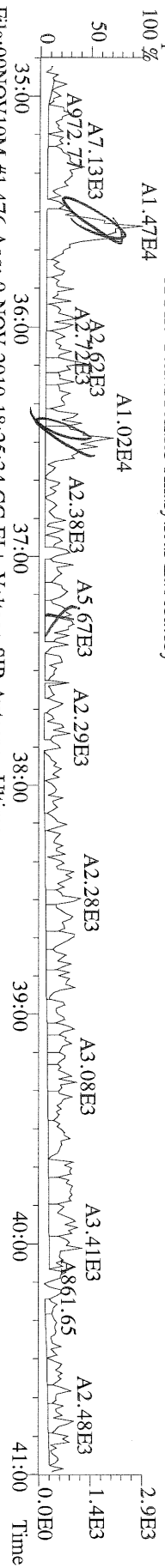
File:09NOV10M #1-412 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
353.8970 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



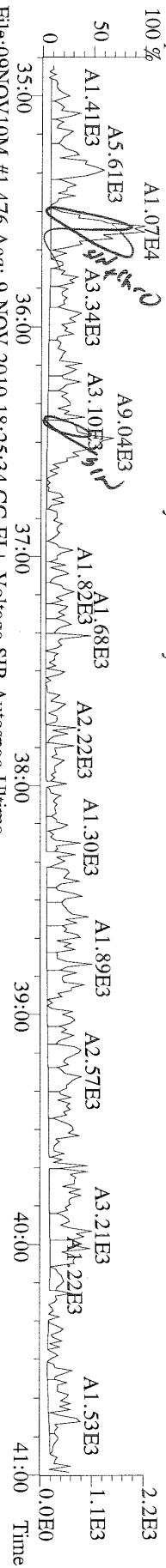
File:09NOV10M #1-412 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
409.7974 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



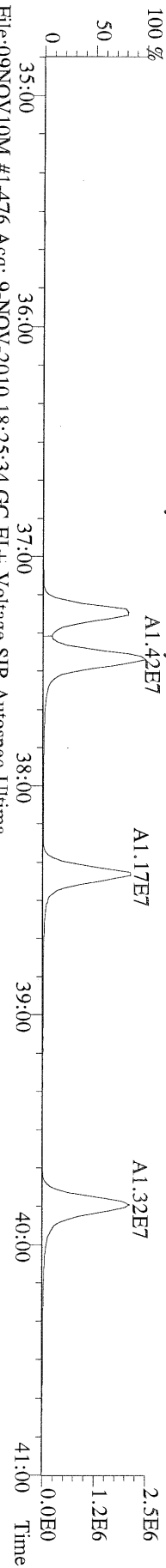
File:09NOV10M #1-476 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
 373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



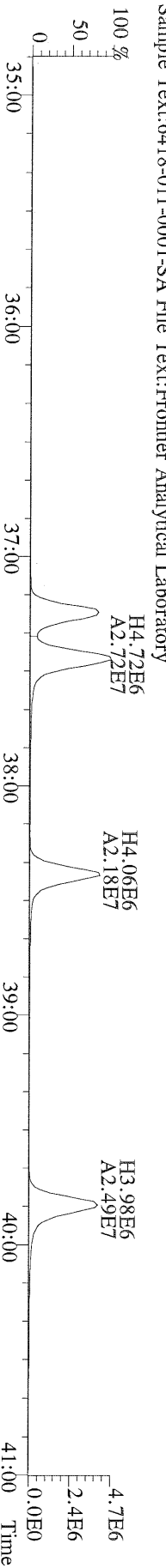
File:09NOV10M #1-476 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
 375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



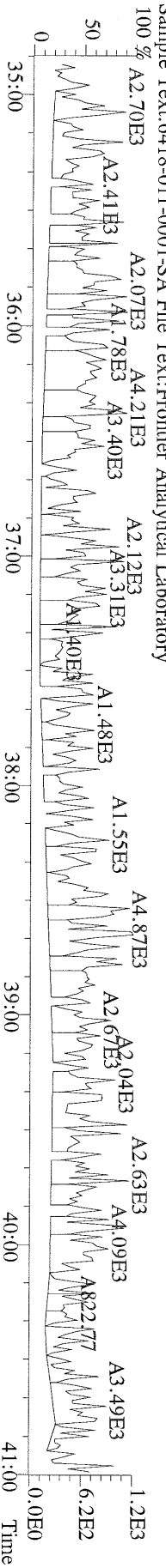
File:09NOV10M #1-476 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
 383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



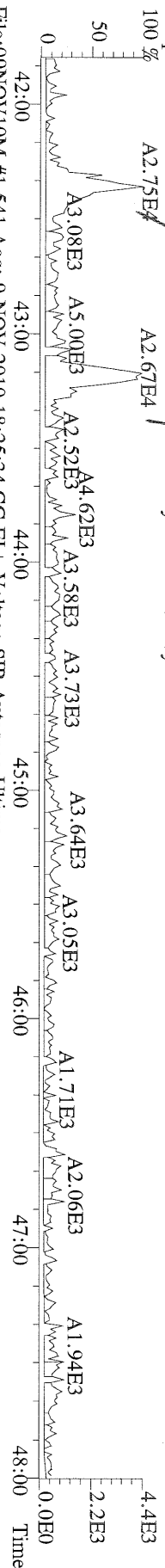
File:09NOV10M #1-476 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
 385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



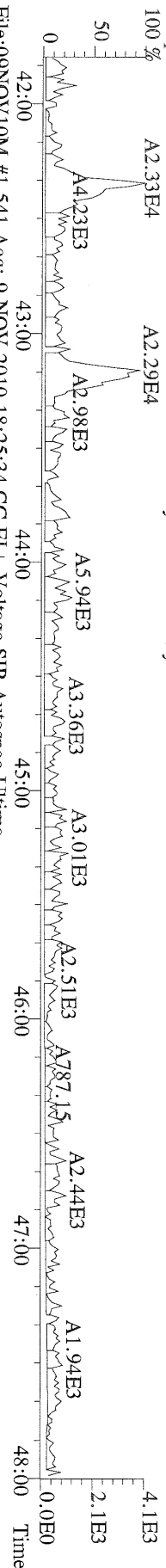
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 445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



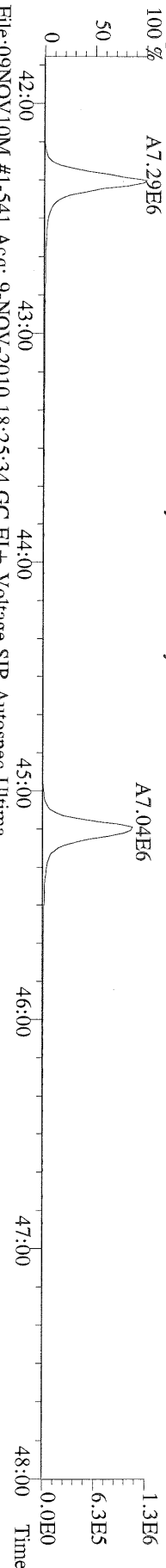
File:09NOV10M #1-541 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



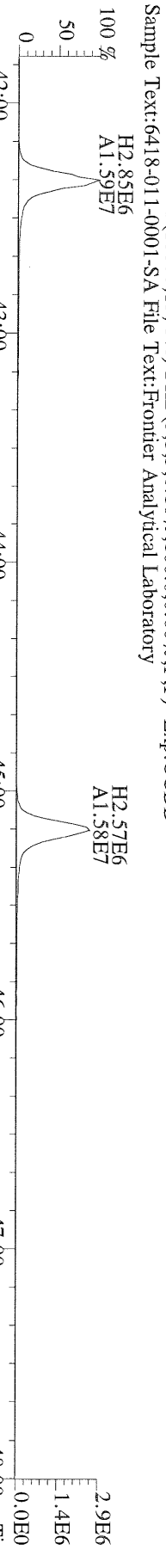
File:09NOV10M #1-541 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
409.7788 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



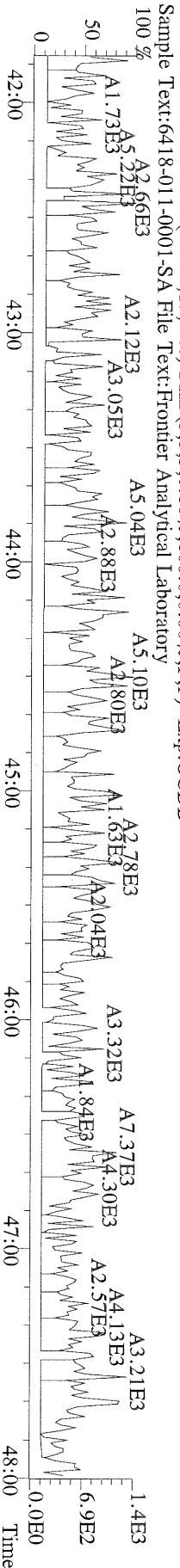
File:09NOV10M #1-541 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
417.8253 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



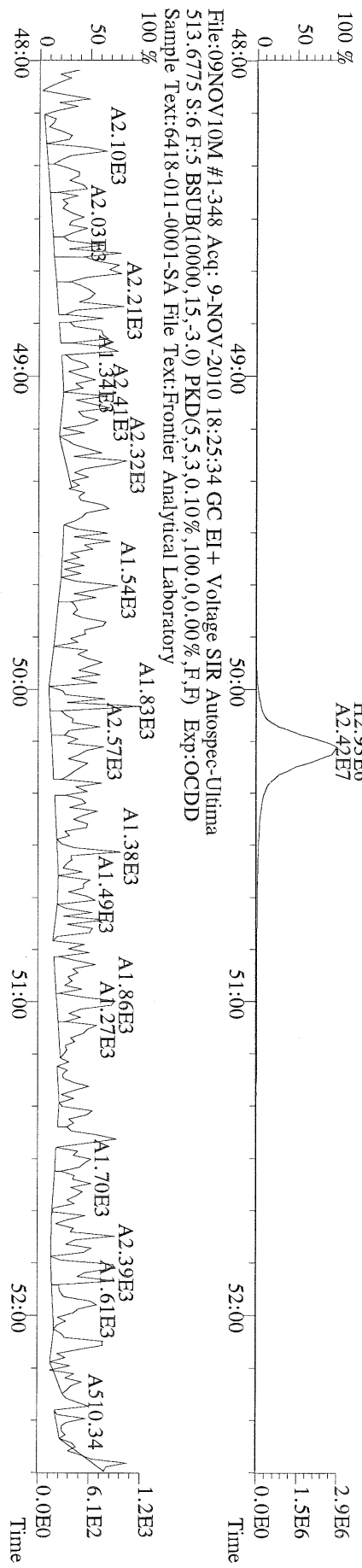
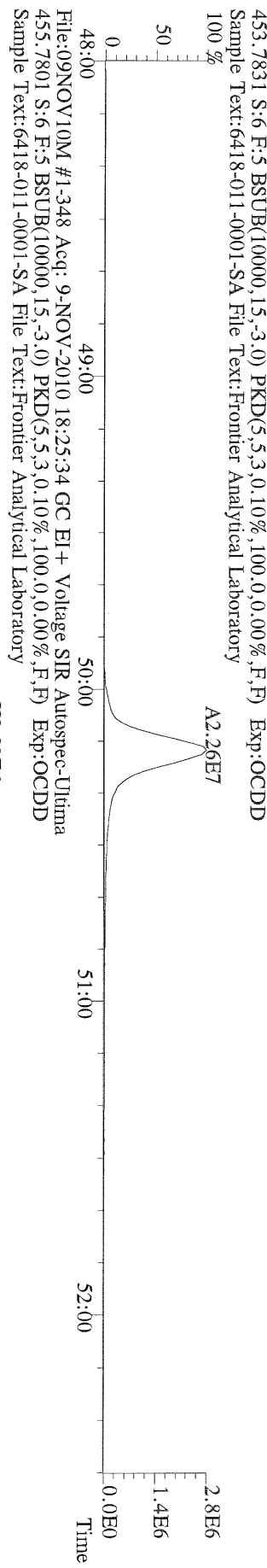
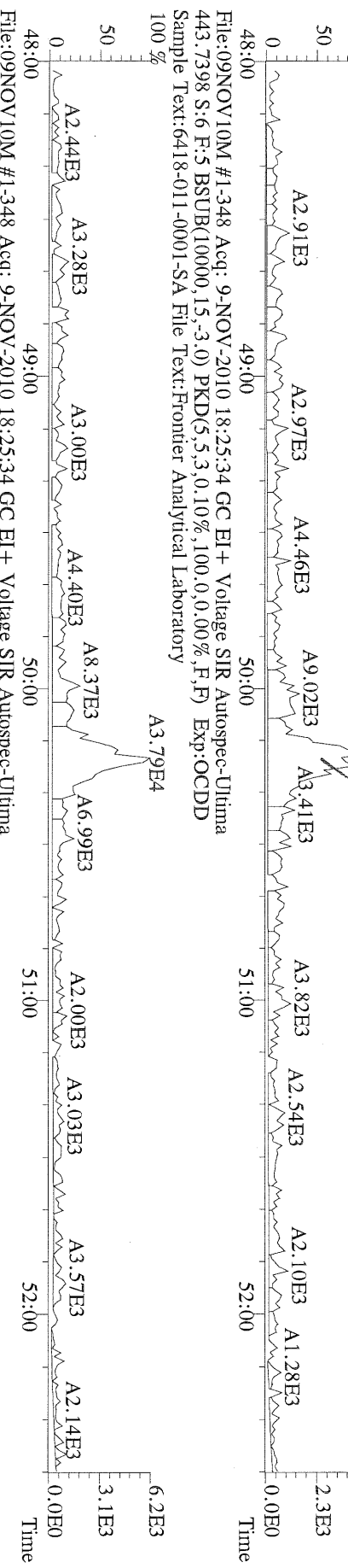
File:09NOV10M #1-541 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
419.8220 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



File:09NOV10M #1-541 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Utima
479.7165 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory



File:09NOV10M #1-348 Acq: 9-NOV-2010 18:25:34 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-011-0001-SA File Text:Frontier Analytical Laboratory
100 %



Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL	#Hom	
2,3,7,8-TCDD	*	* n	NotFnd	1.11	*		2.50	668	796	0.247	
1,2,3,7,8-PeCDD	*	* n	NotFnd	1.10	*		2.50	397	250	0.132	
1,2,3,4,7,8-HxCDD	*	* n	NotFnd	1.37	*		2.50	690	725	0.264	
1,2,3,6,7,8-HxCDD	4.56e+04	1.23 y	38:50	1.37	0.738	J	2.50	-	-	*	
1,2,3,7,8,9-HxCDD	*	* n	NotFnd	1.36	*		2.50	690	725	0.292	
1,2,3,4,6,7,8-HpCDD	1.12e+06	1.02 y	44:16	1.45	18.2		2.50	-	-	*	
OCDD	8.91e+06	0.94 y	49:50	1.43	217		2.50	-	-	*	
2,3,7,8-TCDF	7.91e+04	0.82 y	26:42	1.50	0.526	J	2.50	-	-	*	
1,2,3,7,8-PeCDF	2.50e+04	1.32 y	31:33	0.94	0.273	J	2.50	-	-	*	
2,3,4,7,8-PeCDF	3.82e+04	1.35 y	32:53	0.94	0.436	J	2.50	-	-	*	
1,2,3,4,7,8-HxCDF	2.27e+04	1.11 y	37:17	0.93	0.310	J	2.50	-	-	*	
1,2,3,6,7,8-HxCDF	2.38e+04	1.26 y	37:28	0.82	0.291	J	2.50	-	-	*	
2,3,4,6,7,8-HxCDF	2.59e+04	1.15 y	38:25	0.92	0.354	J	2.50	-	-	*	
1,2,3,7,8,9-HxCDF	*	* n	NotFnd	1.00	*		2.50	330	287	0.103	
1,2,3,4,6,7,8-HpCDF	4.47e+05	1.08 y	42:21	1.39	5.89		2.50	-	-	*	
1,2,3,4,7,8,9-HpCDF	2.23e+04	0.92 y	45:10	1.36	0.303	J	2.50	-	-	*	
OCDF	1.33e+06	0.83 y	50:13	0.79	29.9		2.50	-	-	*	
										Rec	
13C-2,3,7,8-TCDD	2.21e+07	0.72 y	27:26	1.02	334					84.1	
13C-1,2,3,7,8-PeCDD	2.20e+07	1.70 y	33:16	0.84	405					102	
13C-1,2,3,4,7,8-HxCDD	2.04e+07	1.30 y	38:39	1.07	344					86.5	
13C-1,2,3,6,7,8-HxCDD	1.79e+07	1.22 y	38:49	1.01	320					80.4	
13C-1,2,3,4,6,7,8-HpCDD	1.68e+07	1.07 y	44:14	0.86	355					89.3	
13C-OCDD	2.28e+07	0.94 y	49:49	0.55	753					94.7	
13C-2,3,7,8-TCDF	3.98e+07	0.88 y	26:41	0.99	358					90.0	
13C-1,2,3,7,8-PeCDF	3.86e+07	1.74 y	31:33	0.84	411					103	
13C-2,3,4,7,8-PeCDF	3.72e+07	1.72 y	32:52	0.81	409					103	
13C-1,2,3,4,7,8-HxCDF	3.14e+07	0.51 y	37:15	1.85	307					77.2	
13C-1,2,3,6,7,8-HxCDF	3.96e+07	0.51 y	37:27	2.54	282					70.9	
13C-2,3,4,6,7,8-HxCDF	3.17e+07	0.52 y	38:23	2.01	285					71.6	
13C-1,2,3,7,8,9-HxCDF	3.67e+07	0.52 y	39:50	2.03	326					82.1	
13C-1,2,3,4,6,7,8-HpCDF	2.17e+07	0.46 y	42:21	1.11	354					89.0	
13C-1,2,3,4,7,8,9-HpCDF	2.16e+07	0.44 y	45:10	0.80	484					122	
13C-OCDF	4.49e+07	0.94 y	50:12	1.08	749					94.2	
37Cl-2,3,7,8-TCDD	6.60e+06		27:27	0.69	149					93.6	
13C-1,2,3,4-TCDD	2.57e+07	0.75 y	26:51	-	11.4						
13C-1,2,3,4-TCDF	4.45e+07	0.88 y	25:36	-	12.2						
13C-1,2,3,7,8,9-HxCDD	2.20e+07	1.24 y	39:15	-	15.9						
Total Tetra-Dioxins	1.84e+05		24:27	1.11	2.97		2.50	-	-	*	3
Total Penta-Dioxins	1.58e+05		30:18	1.10	2.58	J	2.50	-	-	*	4
Total Hexa-Dioxins	3.15e+05		36:12	1.37	4.82	J	2.50	-	-	*	4
Total Hepta-Dioxins	2.25e+06		42:53	1.45	36.7		2.50	-	-	*	2
Total Tetra-Furans	1.77e+06		23:06	1.50	11.8		2.50	-	-	*	17
1st Fn. Tot Penta-Furans	1.10e+05		28:30	0.94	1.23		2.50	-	-	*	PeCDF 1
Total Penta-Furans	3.67e+05		30:08	0.94	4.11		2.50	-	-	*	5.34 7
Total Hexa-Furans	4.50e+05		35:20	0.91	5.69		2.50	-	-	*	6
Total Hepta-Furans	1.47e+06		42:21	1.38	19.5		2.50	-	-	*	3

Analyst: 6

Date: 11/10/10

Totals class: Total Tetra-Dioxins

Entry #: 38

Run: 11

File: 09NOV10M

S: 7 I: 1 F: 1

Acquired: 9-NOV-10 19:20:52

Total Concentration: 2.97

Unnamed Concentration: 2.974

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
24:27	3.92e+04	4.97e+04	0.79 y	8.89e+04	1.44	
24:45	2.39e+04	3.12e+04	0.77 y	5.50e+04	0.890	
26:52	1.79e+04	2.22e+04	0.81 y	4.00e+04	0.647	

Totals class: Total Penta-Dioxins

Entry #: 39

Run: 11

File: 09NOV10M

S: 7 I: 1 F: 2

Acquired: 9-NOV-10 19:20:52

Total Concentration: 2.58

Unnamed Concentration: 2.582

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
30:18	3.33e+04	2.28e+04	1.46 y	5.61e+04	0.920	
31:32	2.76e+04	1.59e+04	1.73 y	4.35e+04	0.713	
31:55	2.17e+04	1.23e+04	1.76 y	3.40e+04	0.558	
32:41	1.40e+04	9.79e+03	1.43 y	2.38e+04	0.391	

Totals class: Total Hexa-Dioxins

Entry #: 40

Run: 11

File: 09NOV10M

S: 7 I: 1 F: 3

Acquired: 9-NOV-10 19:20:52

Total Concentration: 4.82

Unnamed Concentration: 4.079

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
36:12	4.53e+04	3.23e+04	1.40 y	7.76e+04	1.17	
37:07	3.82e+04	3.34e+04	1.15 y	7.16e+04	1.08	
37:33	6.91e+04	5.11e+04	1.35 y	1.20e+05	1.82	
38:50	2.51e+04	2.05e+04	1.23 y	4.56e+04	0.738	1,2,3,6,7,8-HxCDD

Totals class: Total Hepta-Dioxins

Entry #: 41

Run: 11

File: 09NOV10M

S: 7 I: 1 F: 4

Acquired: 9-NOV-10 19:20:52

Total Concentration: 36.7

Unnamed Concentration: 18.462

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
42:53	5.58e+05	5.76e+05	0.97 y	1.13e+06	18.5	
44:16	5.65e+05	5.52e+05	1.02 y	1.12e+06	18.2	1,2,3,4,6,7,8-HpCDD

Totals class: Total Tetra-Furans

Entry #: 42

Run: 11

File: 09NOV10M

S: 7 I: 1 F: 1

Acquired: 9-NOV-10 19:20:52

Total Concentration: 11.8

Unnamed Concentration: 11.238

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
23:06	2.94e+04	3.52e+04	0.83 y	6.46e+04	0.430	
23:28	2.54e+04	3.64e+04	0.70 y	6.18e+04	0.411	
23:51	7.16e+04	1.00e+05	0.71 y	1.72e+05	1.14	
24:14	1.12e+05	1.31e+05	0.86 y	2.43e+05	1.62	
24:32	7.30e+04	8.59e+04	0.85 y	1.59e+05	1.06	
24:47	4.08e+04	5.00e+04	0.82 y	9.08e+04	0.604	
24:54	1.34e+04	1.82e+04	0.74 y	3.16e+04	0.210	
25:00	3.15e+04	3.80e+04	0.83 y	6.95e+04	0.462	
25:22	5.61e+04	6.77e+04	0.83 y	1.24e+05	0.823	
25:29	5.05e+04	6.46e+04	0.78 y	1.15e+05	0.766	
25:38	4.89e+04	5.53e+04	0.88 y	1.04e+05	0.692	
25:59	4.76e+04	5.42e+04	0.88 y	1.02e+05	0.677	
26:12	2.89e+04	3.51e+04	0.82 y	6.40e+04	0.425	
26:20	2.47e+04	2.81e+04	0.88 y	5.28e+04	0.351	
26:32	3.59e+04	4.50e+04	0.80 y	8.09e+04	0.537	
26:42	3.56e+04	4.36e+04	0.82 y	7.91e+04	0.526	2,3,7,8-TCDF
27:02	7.17e+04	8.37e+04	0.86 y	1.55e+05	1.03	

Totals class: 1st Fn. Tot Penta-Furans Entry #: 43

Run: 11 File: 09NOV10M S: 7 I: 1 F: 1
Acquired: 9-NOV-10 19:20:52

Total Concentration: 1.23 Unnamed Concentration: 1.228

RT	ml Resp	m2 Resp RA	Resp	Concentration	Name
28:30	6.56e+04	4.42e+04 1.48 y	1.10e+05	1.23	

Totals class: Total Penta-Furans

Entry #: 44

Run: 11

File: 09NOV10M

S: 7 I: 1 F: 2

Acquired: 9-NOV-10 19:20:52

Total Concentration: 4.11

Unnamed Concentration: 3.399

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
30:08	3.00e+04	2.09e+04	1.44 y	5.08e+04	0.568	
30:17	7.33e+04	5.14e+04	1.42 y	1.25e+05	1.39	
30:59	2.74e+04	1.82e+04	1.51 y	4.55e+04	0.509	
31:33	1.42e+04	1.07e+04	1.32 y	2.50e+04	0.273	1,2,3,7,8-PeCDF
31:53	3.03e+04	2.29e+04	1.33 y	5.32e+04	0.595	
32:45	1.71e+04	1.26e+04	1.36 y	2.97e+04	0.332	
32:53	2.19e+04	1.62e+04	1.35 y	3.82e+04	0.436	2,3,4,7,8-PeCDF

Totals class: Total Hexa-Furans

Entry #: 45

Run: 11

File: 09NOV10M

S: 7 I: 1 F: 3

Acquired: 9-NOV-10 19:20:52

Total Concentration: 5.69

Unnamed Concentration: 4.736

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
35:20	1.89e+04	1.70e+04	1.11 y	3.59e+04	0.450	
35:34	7.47e+04	6.33e+04	1.18 y	1.38e+05	1.73	
36:29	1.10e+05	9.37e+04	1.18 y	2.04e+05	2.56	
37:17	1.20e+04	1.08e+04	1.11 y	2.27e+04	0.310	1,2,3,4,7,8-HxCDF
37:28	1.32e+04	1.05e+04	1.26 y	2.38e+04	0.291	1,2,3,6,7,8-HxCDF
38:25	1.38e+04	1.21e+04	1.15 y	2.59e+04	0.354	2,3,4,6,7,8-HxCDF

Totals class: Total Hepta-Furans

Entry #: 46

Run: 11

File: 09NOV10M

S: 7 I: 1 F: 4

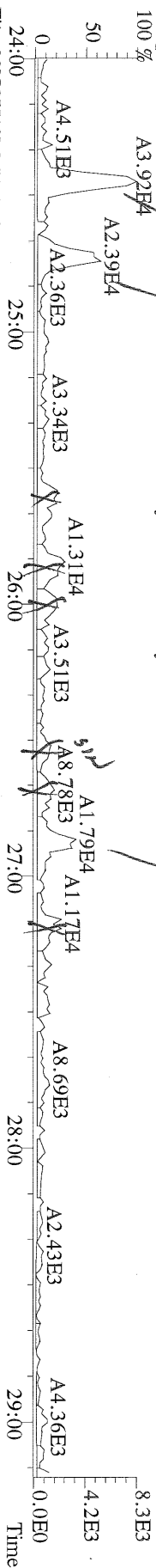
Acquired: 9-NOV-10 19:20:52

Total Concentration: 19.5

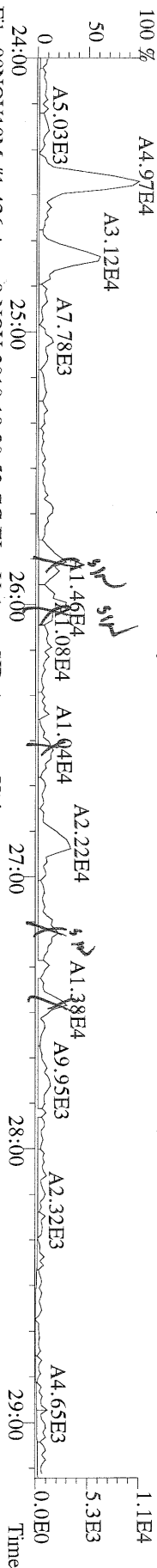
Unnamed Concentration: 13.314

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
42:21	2.32e+05	2.16e+05	1.08 y	4.47e+05	5.89	1,2,3,4,6,7,8-HpCDF
43:12	5.27e+05	4.70e+05	1.12 y	9.97e+05	13.3	
45:10	1.07e+04	1.16e+04	0.92 y	2.23e+04	0.303	1,2,3,4,7,8,9-HpCDF

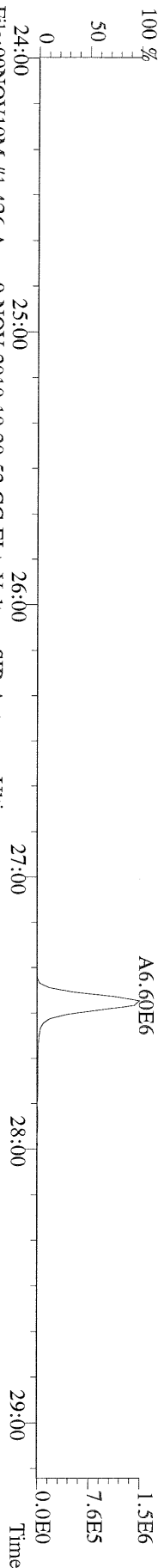
File:09NOV10M #1-426 Acq: 9-NOV-2010 19:20:52 GC EI + Voltage SIR Autospec-Utima
319.8965 S:7 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-012-0001-SA File Text:Frontier Analytical Laboratory



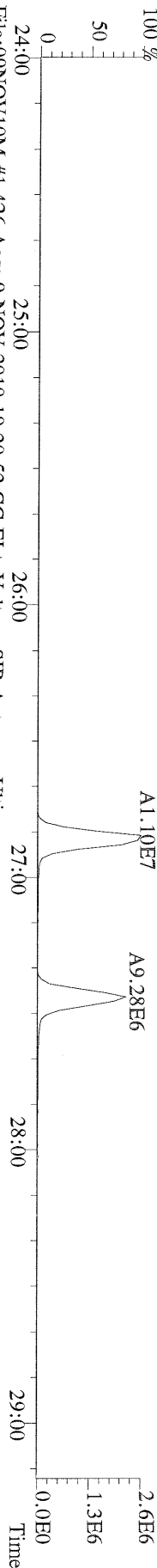
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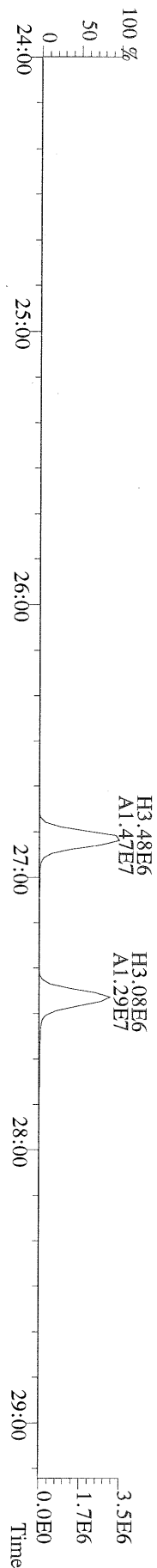
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327.8847 S:7 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
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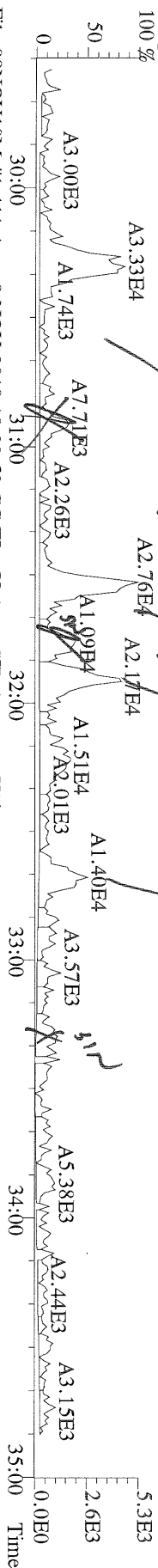
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331.9368 S:7 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-012-0001-SA File Text:Frontier Analytical Laboratory



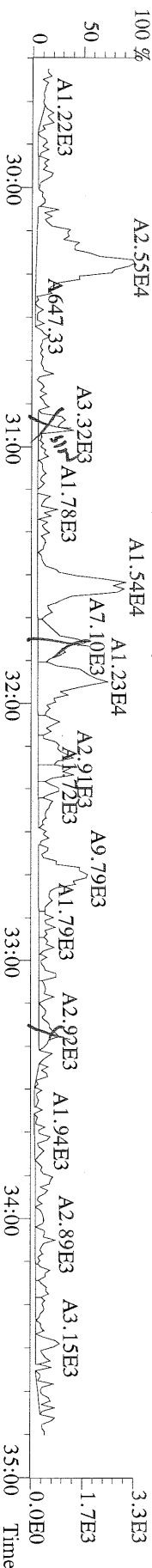
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333.9339 S:7 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-012-0001-SA File Text:Frontier Analytical Laboratory



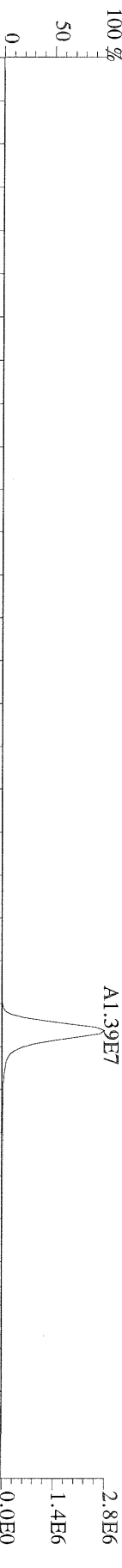
File:09NOV10M #1-411 Acq: 9-NOV-2010 19:20:52 GC EI+ Voltage SIR Autospec-Ultima
 355.8546 S:7 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-012-0001-SA File Text:Frontier Analytical Laboratory



File:09NOV10M #1-411 Acq: 9-NOV-2010 19:20:52 GC EI+ Voltage SIR Autospec-Ultima
 357.8517 S:7 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
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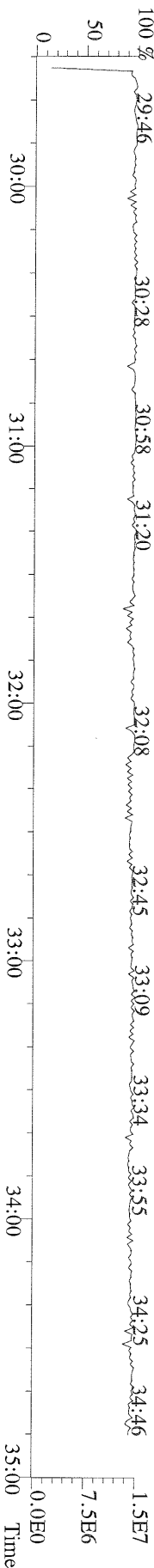
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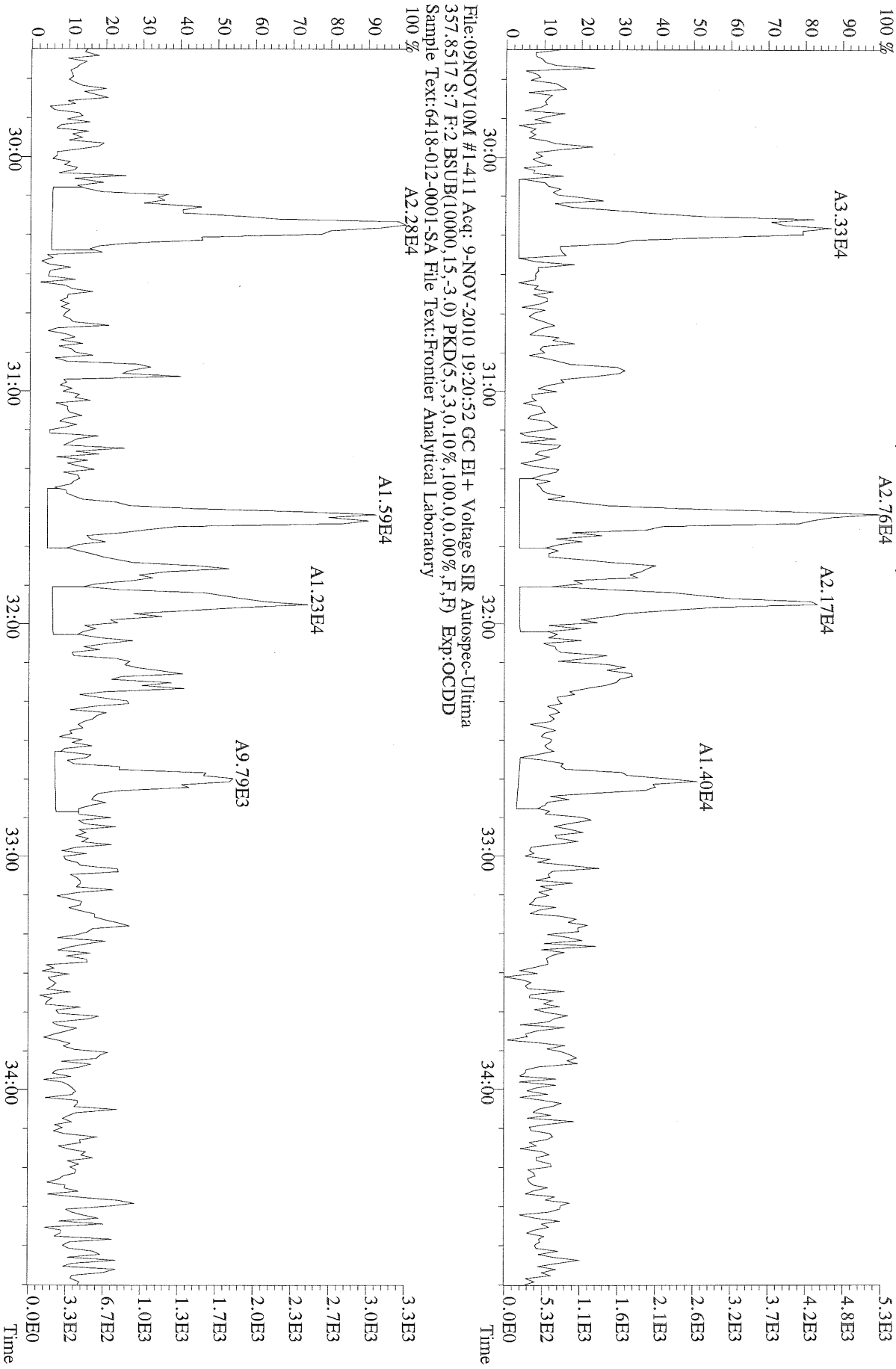
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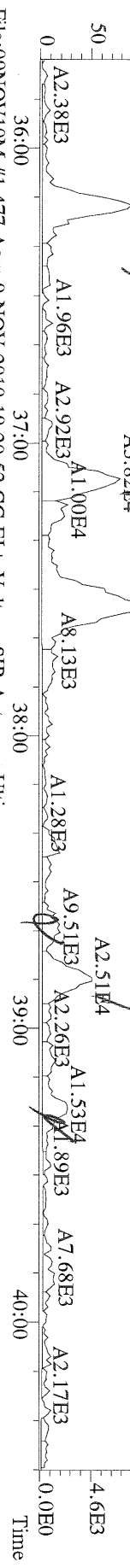
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 366.9792 S:7 F:2 Exp:OCDD
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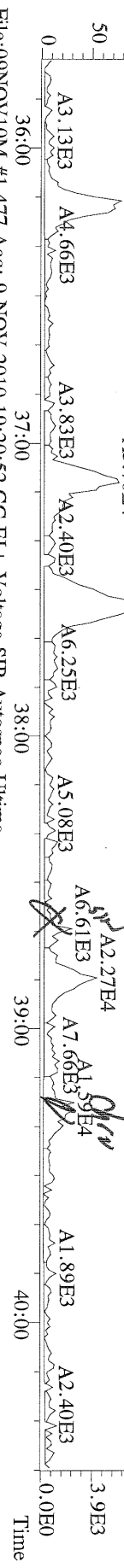
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355.8546 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6418-012-0001-SA File Text:Frontier Analytical Laboratory



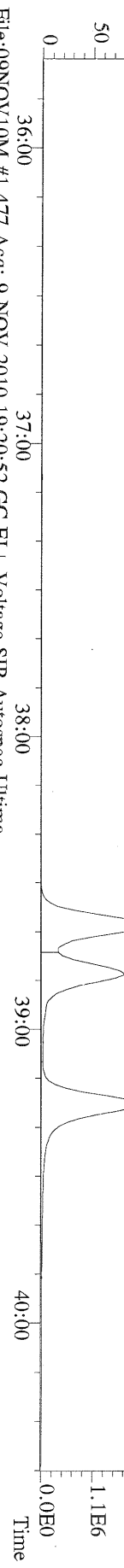
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 389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-012-0001-SA File Text:Frontier Analytical Laboratory



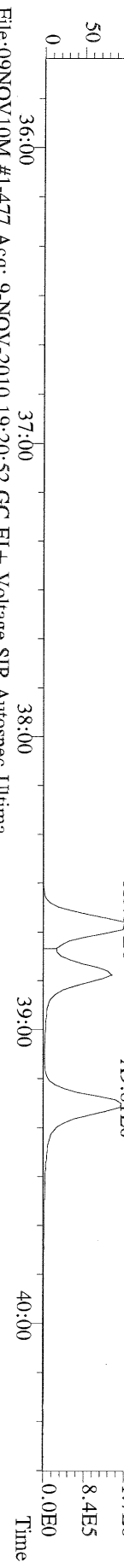
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 391.8127 S:7 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-012-0001-SA File Text:Frontier Analytical Laboratory



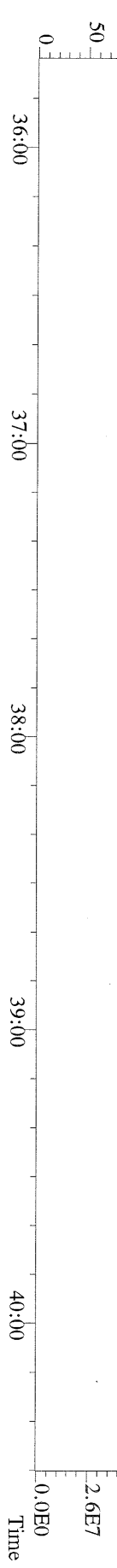
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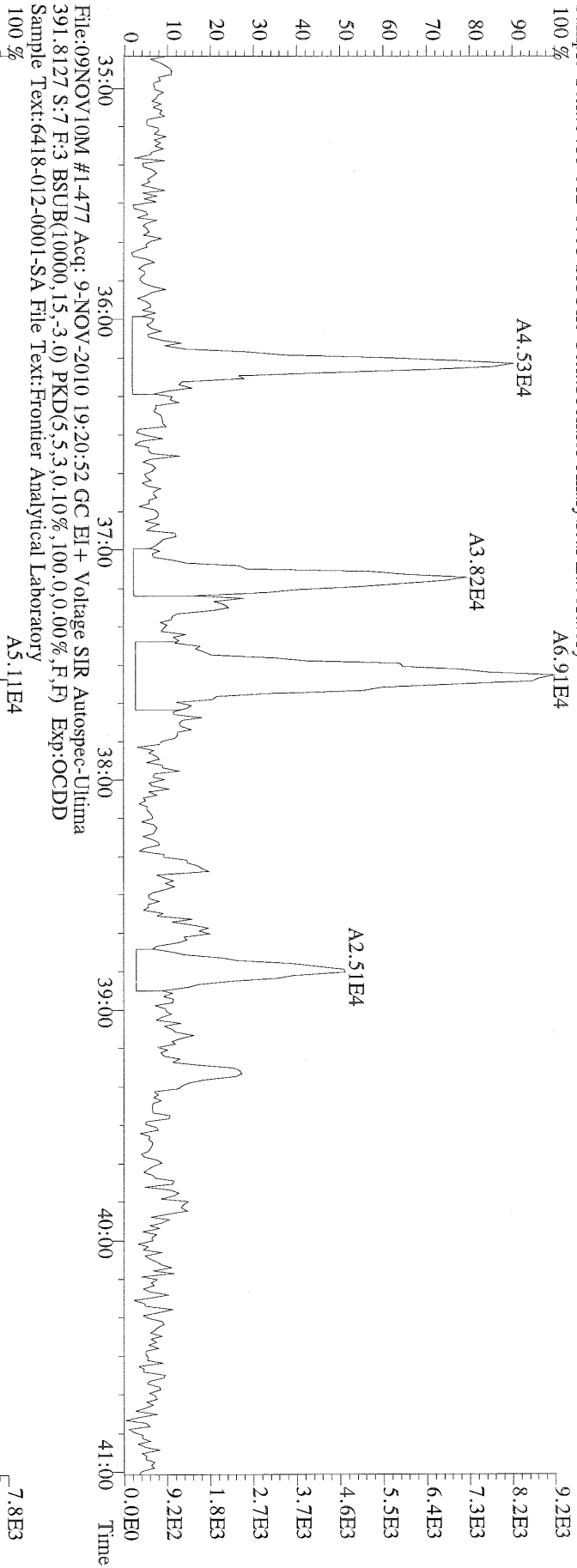
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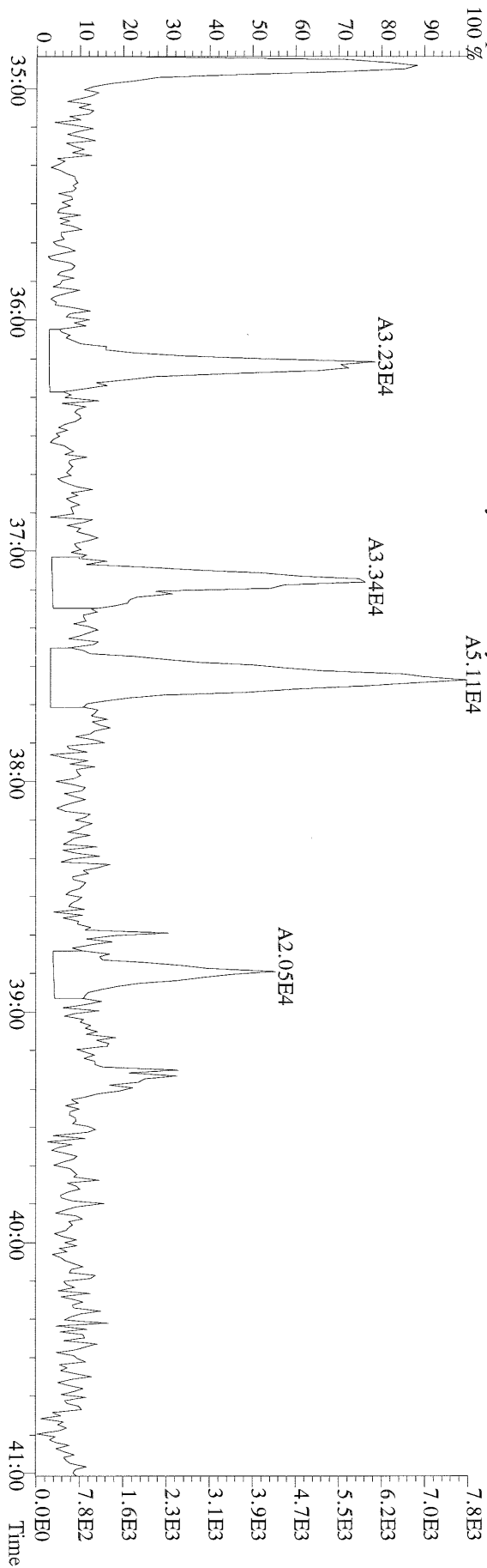
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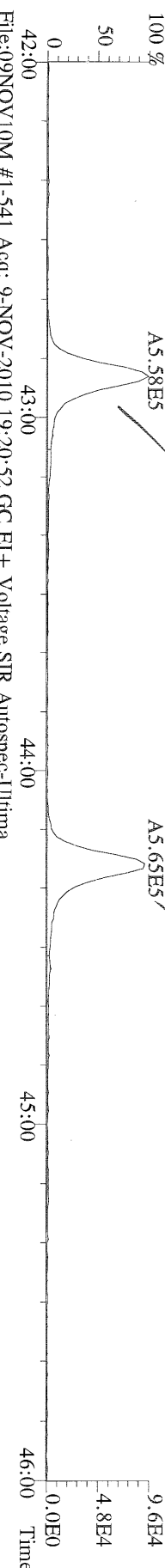
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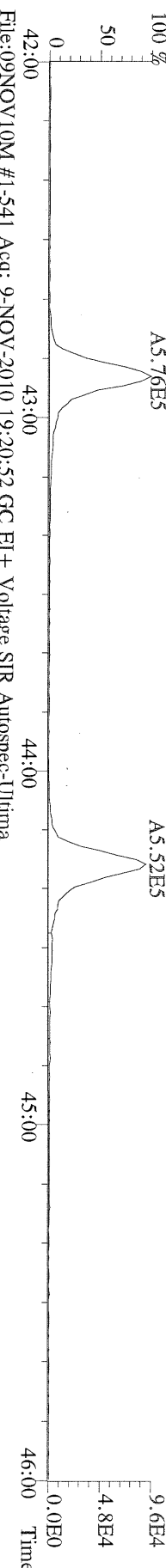
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Sample Text:6418-012-0001-SA File Text:Frontier Analytical Laboratory



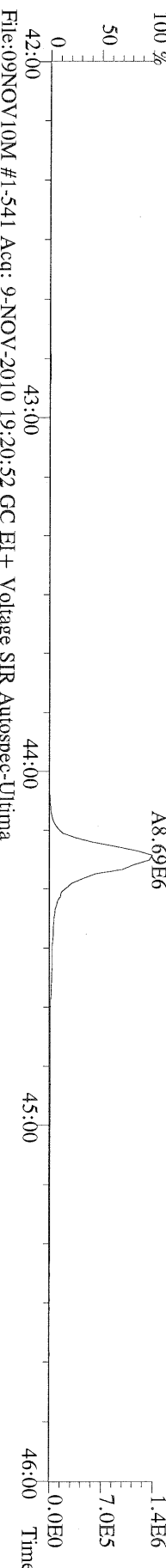
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423.7767 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
Sample Text:6418-012-0001-SA File Text:Frontier Analytical Laboratory



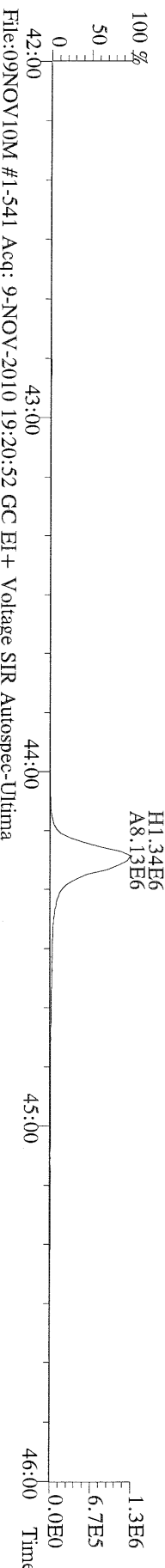
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425.7737 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
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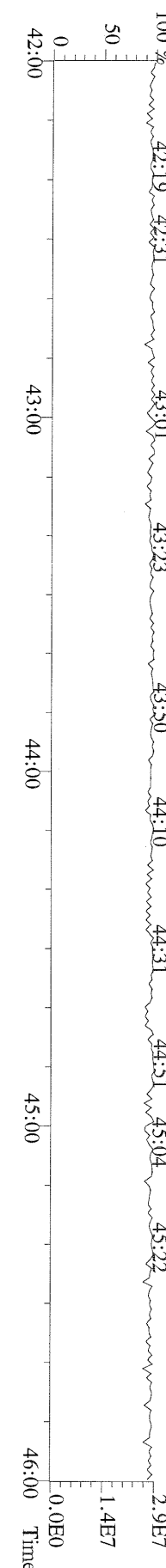
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435.8169 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
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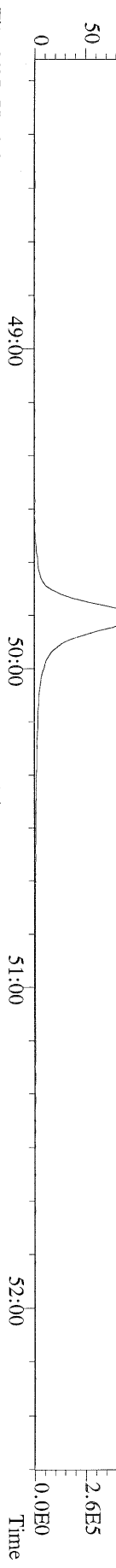
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437.8140 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
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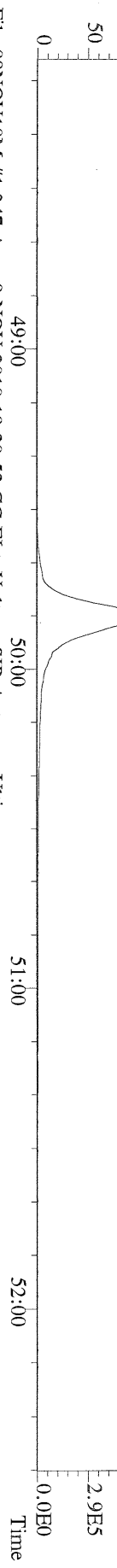
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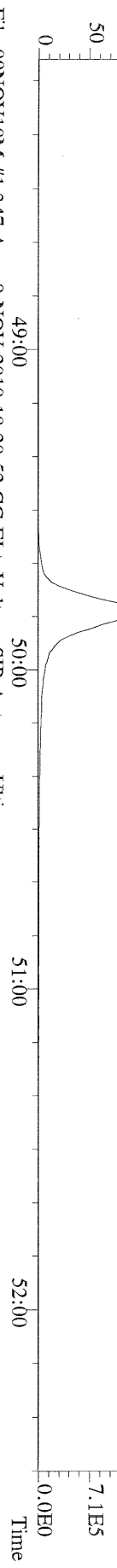
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457.7377 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
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100 %



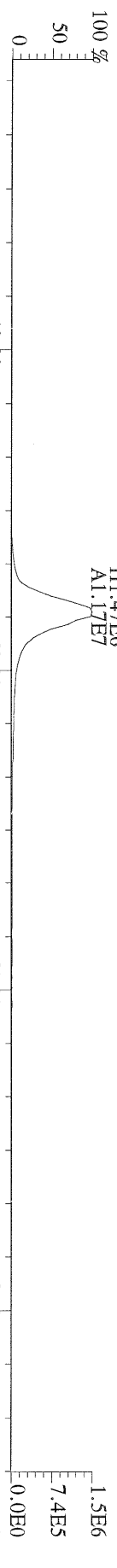
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Sample Text:6418-012-0001-SA File Text:Frontier Analytical Laboratory
100 %



File:09NOV10M #1-347 Acq: 9-NOV-2010 19:20:52 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
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100 %



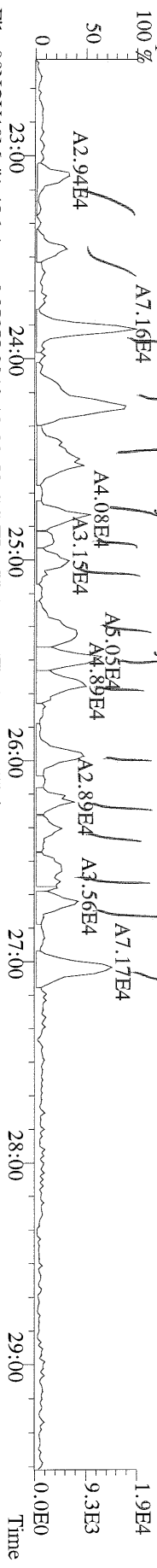
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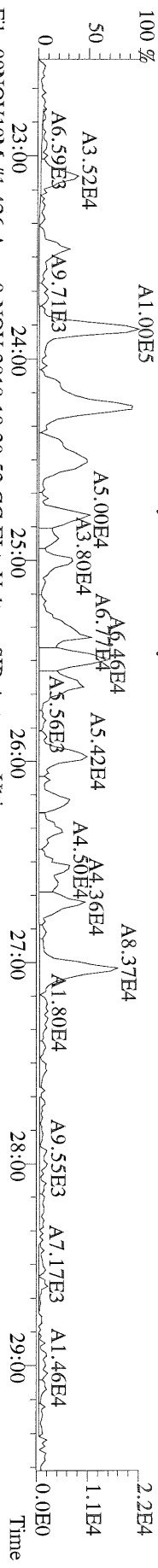
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100 %



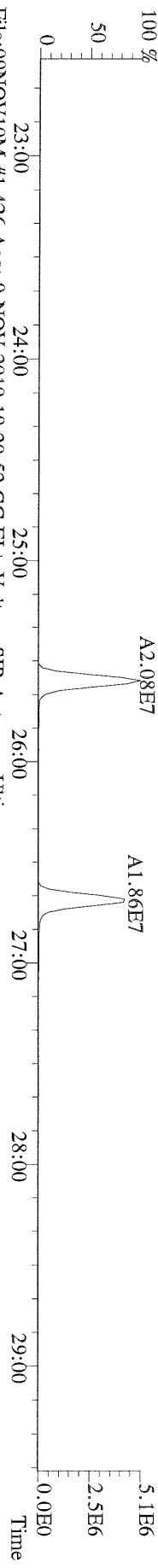
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303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
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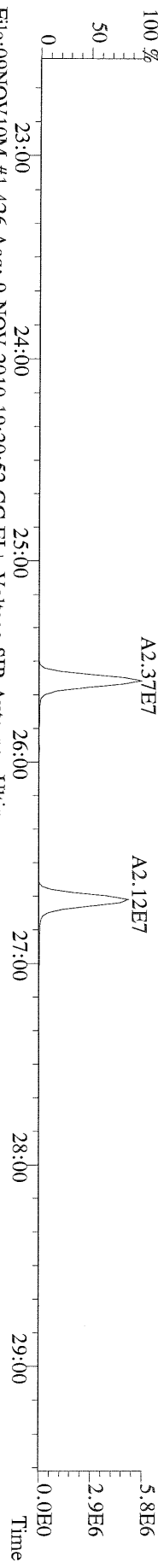
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305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
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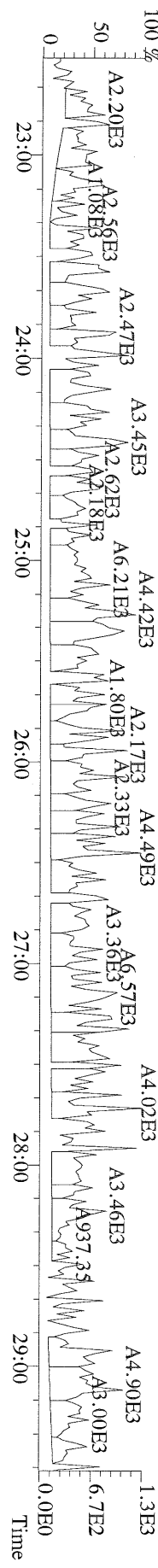
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315.9419 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6418-012-0001-SA File Text:Frontier Analytical Laboratory



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317.9389 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
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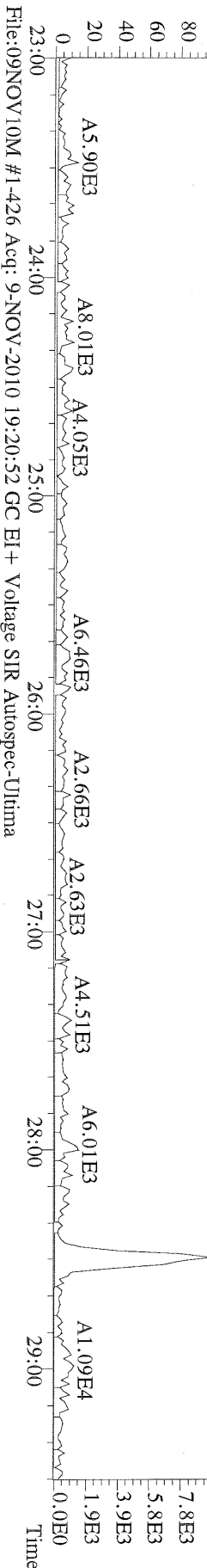
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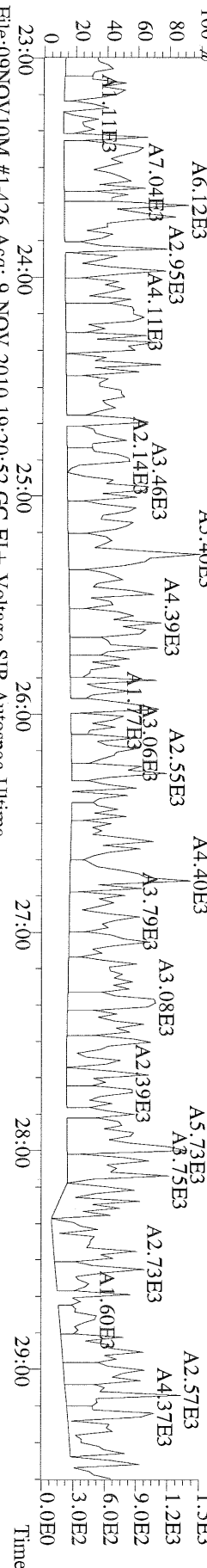
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 339.8597 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
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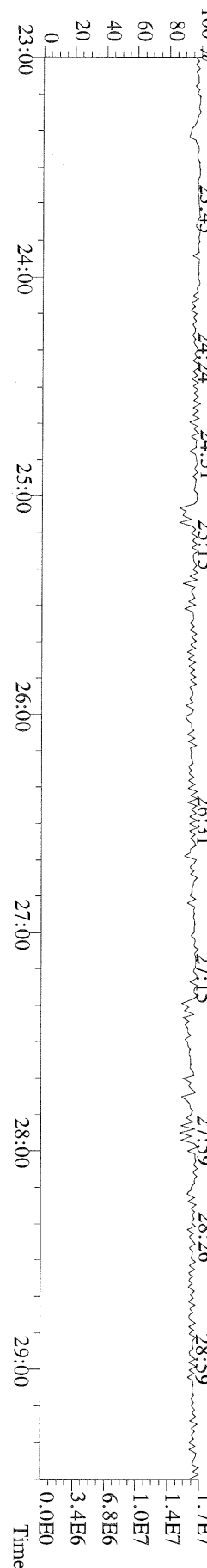
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 341.8568 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-012-0001-SA File Text:Frontier Analytical Laboratory



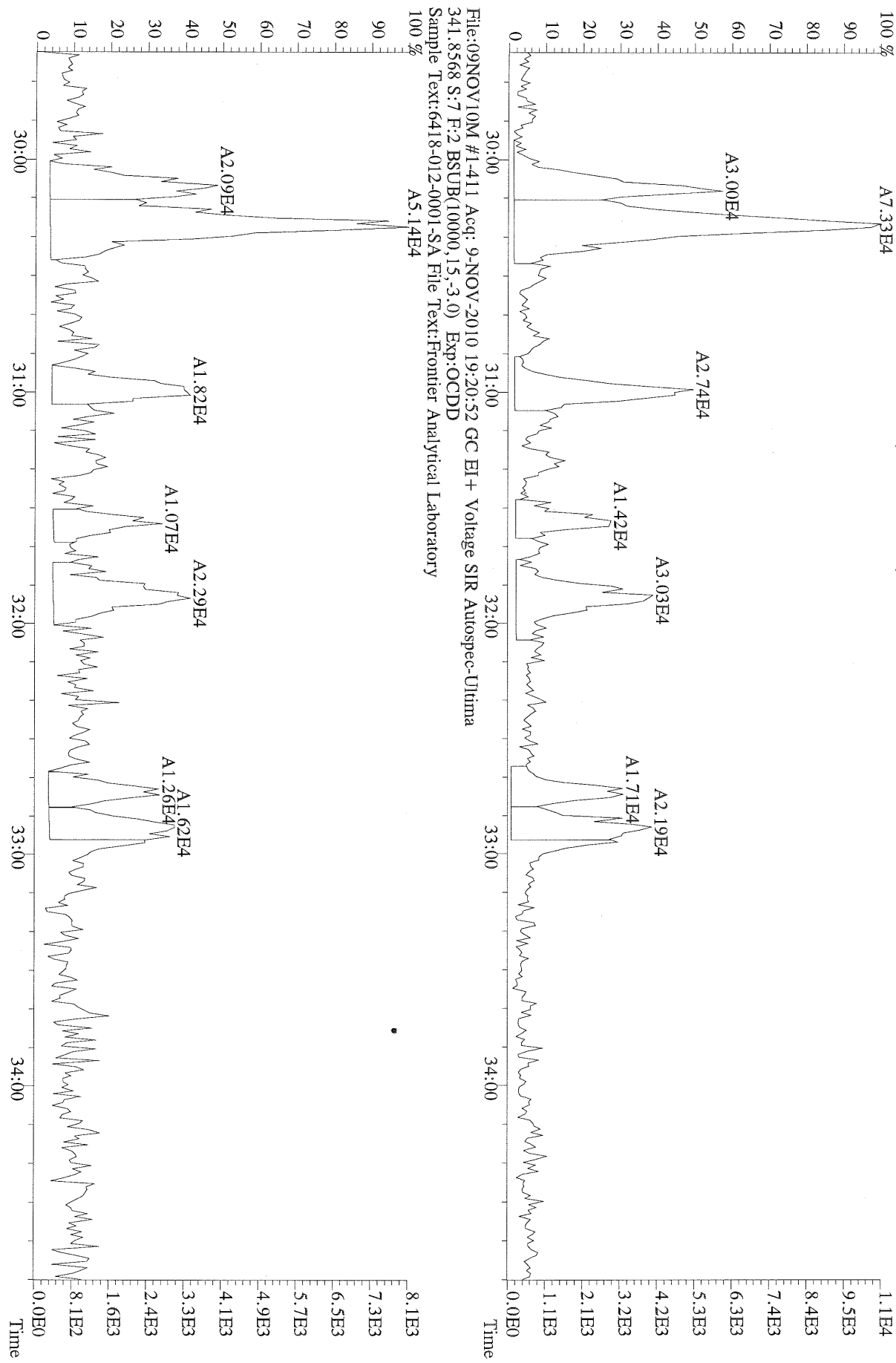
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 409.7974 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
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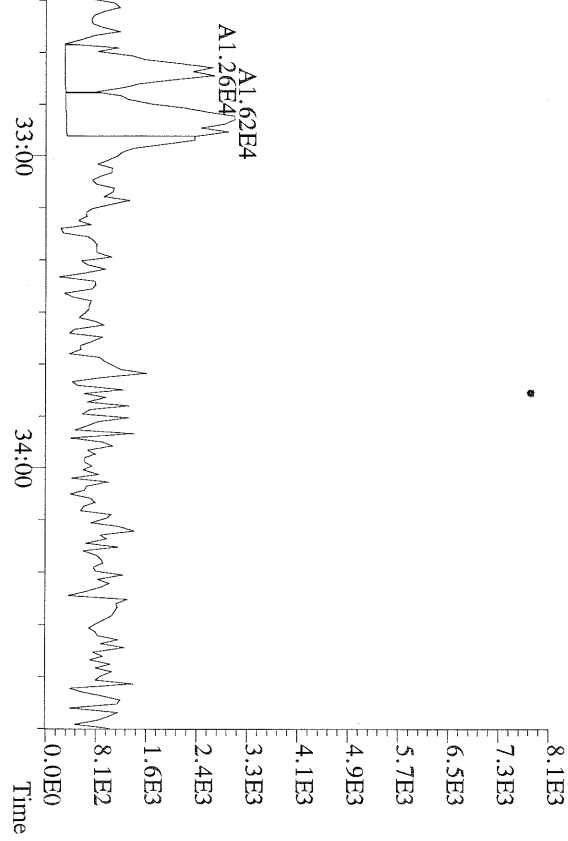
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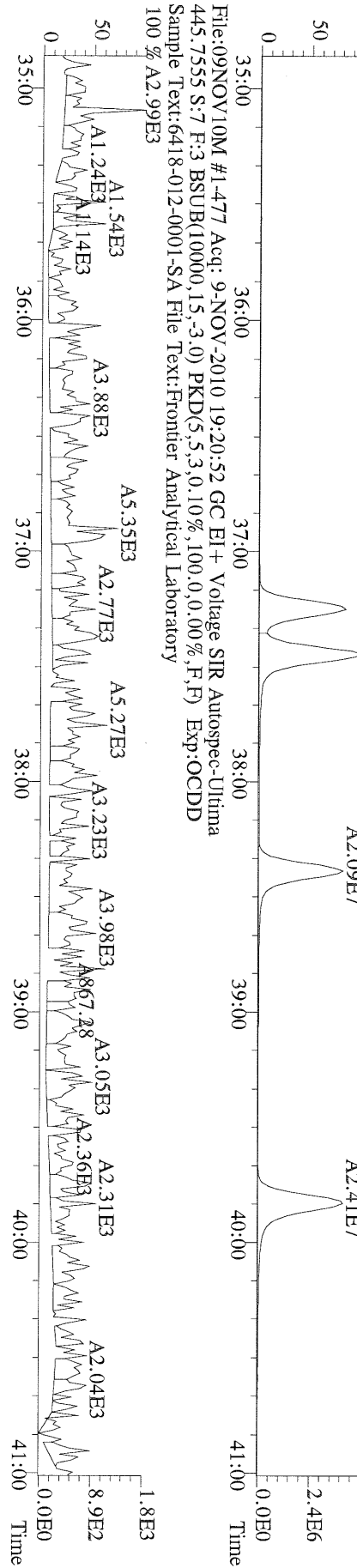
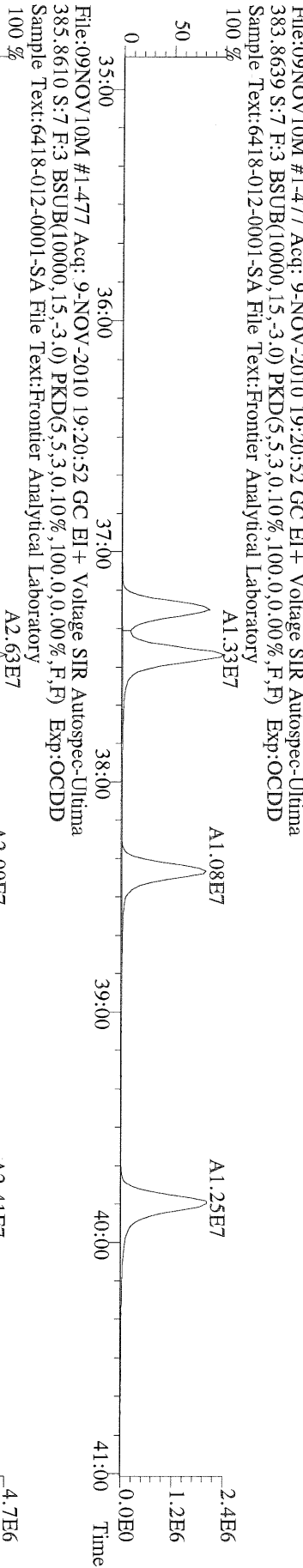
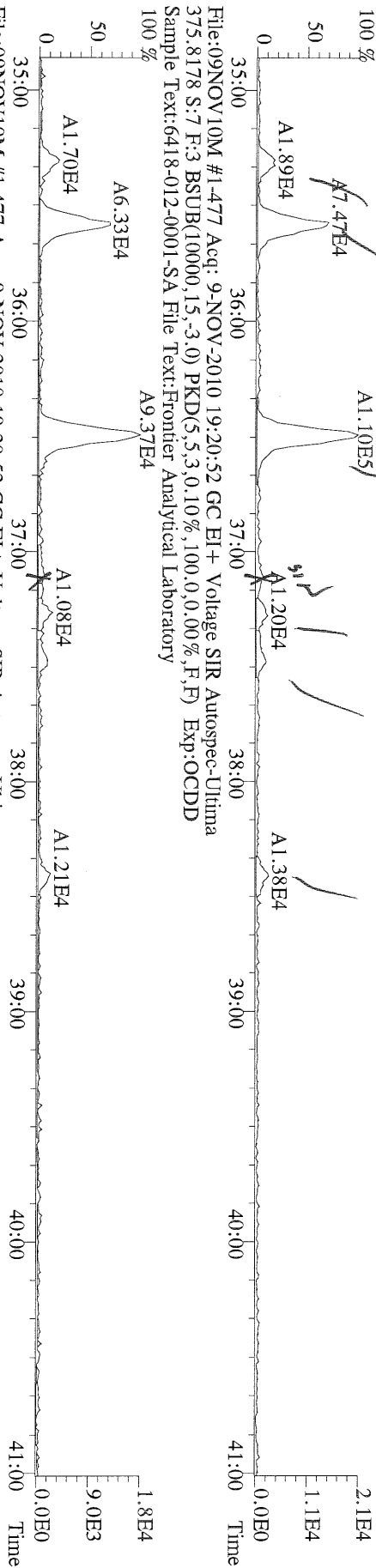
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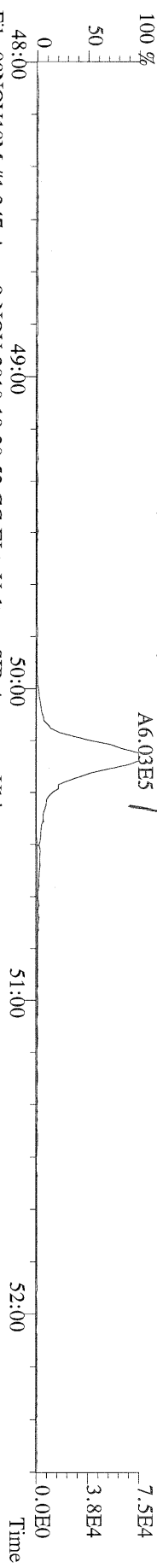
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 Sample Text:6418-012-0001-SA File Text:Frontier Analytical Laboratory



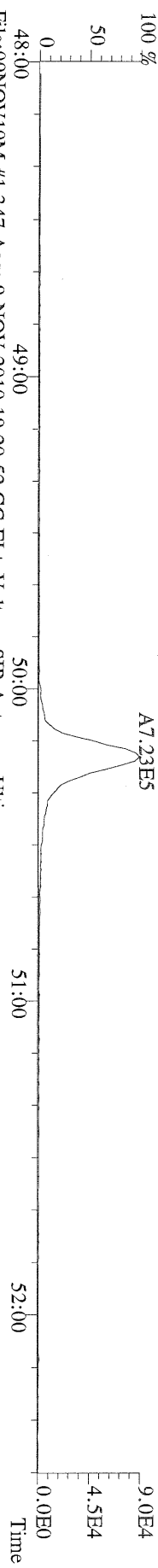
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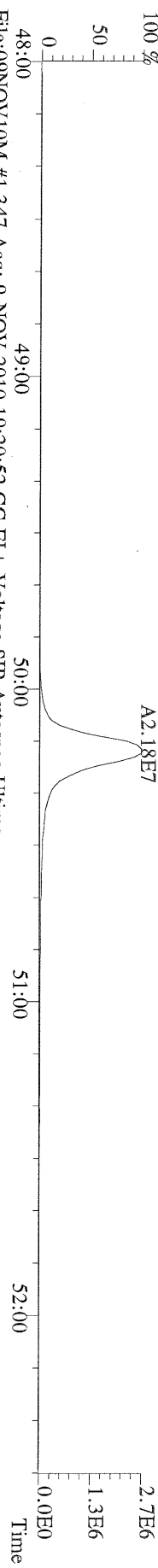
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 441.7428 S.:7 F.:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-012-0001-SA File Text:Frontier Analytical Laboratory



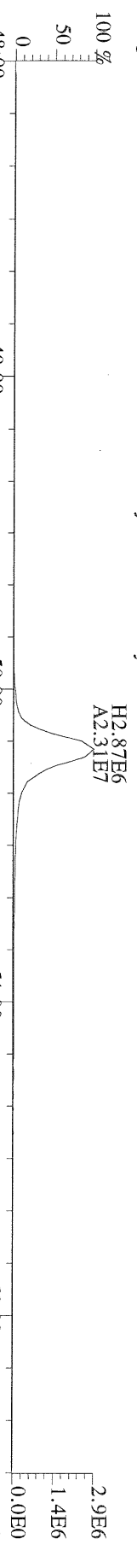
File:09NOV10M #1-347 Acq: 9-NOV-2010 19:20:52 GC EI+ Voltage SIR Autospec-Utima
 443.7398 S.:7 F.:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-012-0001-SA File Text:Frontier Analytical Laboratory



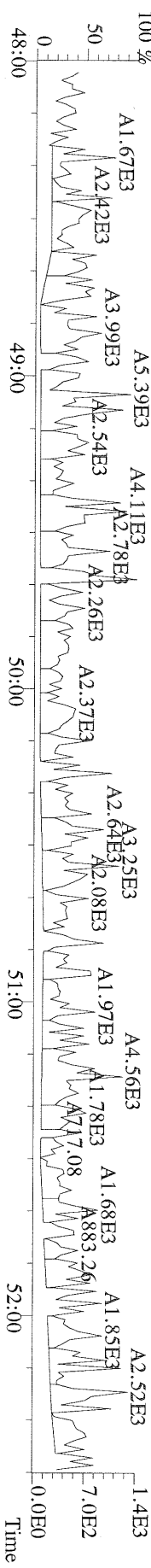
File:09NOV10M #1-347 Acq: 9-NOV-2010 19:20:52 GC EI+ Voltage SIR Autospec-Utima
 453.7831 S.:7 F.:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-012-0001-SA File Text:Frontier Analytical Laboratory



File:09NOV10M #1-347 Acq: 9-NOV-2010 19:20:52 GC EI+ Voltage SIR Autospec-Utima
 455.7801 S.:7 F.:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-012-0001-SA File Text:Frontier Analytical Laboratory



File:09NOV10M #1-347 Acq: 9-NOV-2010 19:20:52 GC EI+ Voltage SIR Autospec-Utima
 513.6775 S.:7 F.:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6418-012-0001-SA File Text:Frontier Analytical Laboratory




Frontier Analytical Laboratory

Data Filename: 23AUG10M

Analyte:

Cal: PCDDFAL3-8-23-10

	Name	RRF	S. D.	%RSD	S3 RRF#1	S4 RRF#2	S5 RRF#3	S1 RRF#4	S6 RRF#5	S7 RRF#6
	2,3,7,8-TCDD	1.11	0.0404	3.63 %	1.07	1.09	1.06	1.16	1.13	1.14
	1,2,3,7,8-PeCDD	1.10	0.0456	4.14 %	1.03	1.08	1.09	1.11	1.15	1.15
	1,2,3,4,7,8-HxCDD	1.37	0.0589	4.29 %	1.40	1.30	1.31	1.36	1.44	1.42
	1,2,3,6,7,8-HxCDD	1.37	0.0522	3.80 %	1.30	1.38	1.39	1.32	1.43	1.42
	1,2,3,7,8,9-HxCDD	1.36	0.0713	5.24 %	1.29	1.31	1.37	1.30	1.45	1.45
	1,2,3,4,6,7,8-HpCDD	1.45	0.0199	1.37 %	1.43	1.47	1.45	1.44	1.45	1.48
	OCDD	1.43	0.0834	5.81 %	1.37	1.37	1.42	1.44	1.42	1.59
	2,3,7,8-TCDF	1.50	0.0738	4.91 %	1.57	1.60	1.50	1.40	1.47	1.48
	1,2,3,7,8-PeCDF	0.94	0.0427	4.53 %	0.92	0.88	0.92	0.96	0.99	0.99
	2,3,4,7,8-PeCDF	0.94	0.0501	5.35 %	0.88	0.90	0.91	0.93	0.99	1.00
	1,2,3,4,7,8-HxCDF	0.93	0.0529	5.70 %	0.90	0.88	0.90	0.91	0.99	1.00
	1,2,3,6,7,8-HxCDF	0.82	0.0486	5.91 %	0.75	0.79	0.82	0.83	0.87	0.88
	2,3,4,6,7,8-HxCDF	0.92	0.0553	6.02 %	0.87	0.86	0.92	0.89	0.98	0.99
	1,2,3,7,8,9-HxCDF	1.00	0.0728	7.30 %	0.90	0.94	0.99	1.00	1.08	1.08
	1,2,3,4,6,7,8-HpCDF	1.39	0.0804	5.78 %	1.28	1.33	1.37	1.39	1.49	1.47
	1,2,3,4,7,8,9-HpCDF	1.36	0.108	7.94 %	1.30	1.20	1.33	1.35	1.45	1.50
	OCDF	0.79	0.0651	8.29 %	0.73	0.72	0.75	0.79	0.86	0.87
	13C-2,3,7,8-TCDD	1.02	0.0764	7.46 %	0.98	0.98	0.97	0.98	1.15	1.08
	13C-1,2,3,7,8-PeCDD	0.84	0.0798	9.48 %	0.79	0.79	0.79	0.79	0.95	0.93
	13C-1,2,3,4,7,8-HxCDD	1.07	0.0580	5.40 %	1.06	1.03	1.06	1.01	1.12	1.16
	13C-1,2,3,6,7,8-HxCDD	1.01	0.0164	1.62 %	1.00	1.00	1.00	1.02	1.03	1.03
	13C-1,2,3,4,6,7,8-HpCDD	0.86	0.0467	5.45 %	0.82	0.82	0.84	0.83	0.90	0.93
	13C-OCDD	0.55	0.0456	8.36 %	0.52	0.51	0.52	0.52	0.58	0.63
	13C-2,3,7,8-TCDF	0.99	0.0775	7.79 %	0.97	0.92	0.93	0.96	1.12	1.05
	13C-1,2,3,7,8-PeCDF	0.84	0.0816	9.74 %	0.78	0.78	0.79	0.79	0.95	0.93
	13C-2,3,4,7,8-PeCDF	0.81	0.0728	8.97 %	0.77	0.75	0.76	0.78	0.91	0.90
	13C-1,2,3,4,7,8-HxCDF	1.85	0.0371	2.00 %	1.82	1.85	1.85	1.81	1.91	1.88
	13C-1,2,3,6,7,8-HxCDF	2.54	0.0434	1.71 %	2.55	2.51	2.52	2.51	2.62	2.51
	13C-2,3,4,6,7,8-HxCDF	2.01	0.0361	1.79 %	2.00	2.00	1.98	2.00	2.08	2.03
	13C-1,2,3,7,8,9-HxCDF	2.03	0.110	5.42 %	1.97	1.94	1.96	1.98	2.14	2.20
	13C-1,2,3,4,6,7,8-HpCDF	1.11	0.0532	4.80 %	1.08	1.05	1.12	1.07	1.16	1.18
	13C-1,2,3,4,7,8,9-HpCDF	0.80	0.0576	7.16 %	0.78	0.76	0.78	0.77	0.83	0.91
	13C-OCDF	1.08	0.0934	8.63 %	1.00	1.00	1.05	1.05	1.16	1.23
	37Cl-2,3,7,8-TCDD	0.69	0.0526	7.67 %	0.67	0.70	0.63	0.63	0.76	0.73
	13C-1,2,3,4-TCDD	-	-	- %	-	-	-	-	-	-
	13C-1,2,3,4-TCDF	-	-	- %	-	-	-	-	-	-
	13C-1,2,3,7,8,9-HxCDD	-	-	- %	-	-	-	-	-	-
	Total Tetra-Dioxins	1.11	0.0404	3.63 %	1.07	1.09	1.06	1.16	1.13	1.14
	Total Penta-Dioxins	1.10	0.0456	4.14 %	1.03	1.08	1.09	1.11	1.15	1.15
	Total Hexa-Dioxins	1.37	0.0513	3.75 %	1.33	1.33	1.36	1.33	1.44	1.43
	Total Hepta-Dioxins	1.45	0.0199	1.37 %	1.43	1.47	1.45	1.44	1.45	1.48
	Total Tetra-Furans	1.50	0.0738	4.91 %	1.57	1.60	1.50	1.40	1.47	1.48
1st Fn.	Tot Penta-Furans	0.94	0.0454	4.83 %	0.90	0.89	0.91	0.95	0.99	0.99
	Total Penta-Furans	0.94	0.0454	4.83 %	0.90	0.89	0.91	0.95	0.99	0.99
	Total Hexa-Furans	0.91	0.0562	6.18 %	0.84	0.86	0.90	0.90	0.97	0.98
	Total Hepta-Furans	1.38	0.0885	6.43 %	1.29	1.28	1.36	1.37	1.47	1.48

Analyst: 

Date: 8/24/10

Run #1 Filename 23AUG10M
Client ID: ST082310MO

S: 3 Acquired: 23-AUG-10 16:16:35 Cal: PCDDFAL3-8-23-10
Analyte: FAL ID: 1613 CSO 100511G

Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk 2,3,7,8-TCDD	0.25	1.20e+05	0.73 y	27:27	-	1.07 y
2	Unk 1,2,3,7,8-PeCDD	1.25	4.64e+05	1.70 y	33:15	-	1.03 y
3	Unk 1,2,3,4,7,8-HxCDD	1.25	4.89e+05	1.42 y	38:38	-	1.40 y
4	Unk 1,2,3,6,7,8-HxCDD	1.25	4.28e+05	1.40 y	38:48	-	1.30 y
5	Unk 1,2,3,7,8,9-HxCDD	1.25	4.38e+05	1.41 y	39:14	-	1.29 y
6	Unk 1,2,3,4,6,7,8-HpCDD	1.25	3.88e+05	1.02 y	44:13	-	1.43 y
7	Unk OCDD	2.50	4.72e+05	1.00 y	49:47	-	1.37 y
8	Unk 2,3,7,8-TCDF	0.25	2.81e+05	0.67 y	26:41	-	1.57 y
9	Unk 1,2,3,7,8-PeCDF	1.25	6.57e+05	1.49 y	31:31	-	0.916 y
10	Unk 2,3,4,7,8-PeCDF	1.25	6.24e+05	1.48 y	32:50	-	0.883 y
11	Unk 1,2,3,4,7,8-HxCDF	1.25	5.37e+05	1.22 y	37:14	-	0.897 y
12	Unk 1,2,3,6,7,8-HxCDF	1.25	6.28e+05	1.31 y	37:25	-	0.747 y
13	Unk 2,3,4,6,7,8-HxCDF	1.25	5.72e+05	1.25 y	38:22	-	0.870 y
14	Unk 1,2,3,7,8,9-HxCDF	1.25	5.81e+05	1.15 y	39:48	-	0.897 y
15	Unk 1,2,3,4,6,7,8-HpCDF	1.25	4.57e+05	1.04 y	42:19	-	1.28 y
16	Unk 1,2,3,4,7,8,9-HpCDF	1.25	3.34e+05	0.99 y	45:09	-	1.30 y
17	Unk OCDF	2.50	4.80e+05	0.93 y	50:10	-	0.727 y
18	IS/RT 13C-2,3,7,8-TCDD	100.00	4.47e+07	0.85 y	27:24	-	0.976 y
19	IS 13C-1,2,3,7,8-PeCDD	100.00	3.60e+07	1.77 y	33:14	-	0.786 y
20	IS 13C-1,2,3,4,7,8-HxCDD	100.00	2.78e+07	1.26 y	38:36	-	1.06 y
21	IS 13C-1,2,3,6,7,8-HxCDD	100.00	2.63e+07	1.26 y	38:46	-	0.998 y
22	IS 13C-1,2,3,4,6,7,8-HpCDD	100.00	2.17e+07	1.00 y	44:13	-	0.825 y
23	IS 13C-OCDD	200.00	2.76e+07	1.00 y	49:46	-	0.523 y
24	IS 13C-2,3,7,8-TCDF	100.00	7.17e+07	0.88 y	26:40	-	0.975 y
25	IS 13C-1,2,3,7,8-PeCDF	100.00	5.74e+07	1.74 y	31:30	-	0.780 y
26	IS 13C-2,3,4,7,8-PeCDF	100.00	5.65e+07	1.74 y	32:49	-	0.769 y
27	IS 13C-1,2,3,4,7,8-HxCDF	100.00	4.79e+07	0.55 y	37:12	-	1.82 y
28	IS 13C-1,2,3,6,7,8-HxCDF	100.00	6.72e+07	0.56 y	37:24	-	2.55 y
29	IS 13C-2,3,4,6,7,8-HxCDF	100.00	5.26e+07	0.58 y	38:20	-	2.00 y
30	IS 13C-1,2,3,7,8,9-HxCDF	100.00	5.18e+07	0.54 y	39:47	-	1.97 y
31	IS 13C-1,2,3,4,6,7,8-HpCDF	100.00	2.84e+07	0.42 y	42:18	-	1.08 y
32	IS 13C-1,2,3,4,7,8,9-HpCDF	100.00	2.05e+07	0.43 y	45:08	-	0.778 y
33	IS 13C-OCDF	200.00	5.28e+07	0.95 y	50:09	-	1.00 y
34	C/Up 37Cl-2,3,7,8-TCDD	0.25	7.69e+04		27:26	-	0.671 y
35	RS 13C-1,2,3,4-TCDD	100.00	4.58e+07	0.85 y	26:50	4.58e+05	- n
36	RS 13C-1,2,3,4-TCDF	100.00	7.35e+07	0.87 y	25:35	7.35e+05	- n
37	RS/RT 13C-1,2,3,7,8,9-HxCDD	100.00	2.64e+07	1.27 y	39:12	2.64e+05	- n
38	Tot Total Tetra-Dioxins	0.00	-	- n	-	-	1.07 y
39	Tot Total Penta-Dioxins	0.00	-	- n	-	-	1.03 y
40	Tot Total Hexa-Dioxins	0.00	-	- n	-	-	1.33 y
41	Tot Total Hepta-Dioxins	0.00	-	- n	-	-	1.43 y
42	Tot Total Tetra-Furans	0.00	-	- n	-	-	1.57 y
43	Tot 1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.899 y
44	Tot Total Penta-Furans	0.00	-	- n	-	-	0.899 y
45	Tot Total Hexa-Furans	0.00	-	- n	-	-	0.845 y
46	Tot Total Hepta-Furans	0.00	-	- n	-	-	1.29 y


Analyst: 

Date: 8/24/10

Run #2 Filename 23AUG10M
Client ID: ST082310M1

S: 4 Acquired: 23-AUG-10 17:12:02 Cal: PCDDFAL3-8-23-10
Analyte: FAL ID: 1613 CS1 100511H

Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk 2,3,7,8-TCDD	0.50	2.50e+05	0.74 y	27:27	-	1.09 y
2	Unk 1,2,3,7,8-PeCDD	2.50	9.93e+05	1.61 y	33:16	-	1.08 y
3	Unk 1,2,3,4,7,8-HxCDD	2.50	8.89e+05	1.42 y	38:37	-	1.30 y
4	Unk 1,2,3,6,7,8-HxCDD	2.50	9.16e+05	1.42 y	38:48	-	1.38 y
5	Unk 1,2,3,7,8,9-HxCDD	2.50	8.82e+05	1.39 y	39:14	-	1.31 y
6	Unk 1,2,3,4,6,7,8-HpCDD	2.50	8.00e+05	1.07 y	44:14	-	1.47 y
7	Unk OCDD	5.00	9.24e+05	0.99 y	49:48	-	1.37 y
8	Unk 2,3,7,8-TCDF	0.50	5.65e+05	0.69 y	26:41	-	1.60 y
9	Unk 1,2,3,7,8-PeCDF	2.50	1.31e+06	1.45 y	31:32	-	0.885 y
10	Unk 2,3,4,7,8-PeCDF	2.50	1.29e+06	1.43 y	32:51	-	0.896 y
11	Unk 1,2,3,4,7,8-HxCDF	2.50	1.08e+06	1.27 y	37:14	-	0.877 y
12	Unk 1,2,3,6,7,8-HxCDF	2.50	1.32e+06	1.22 y	37:26	-	0.790 y
13	Unk 2,3,4,6,7,8-HxCDF	2.50	1.14e+06	1.31 y	38:23	-	0.858 y
14	Unk 1,2,3,7,8,9-HxCDF	2.50	1.21e+06	1.23 y	39:48	-	0.938 y
15	Unk 1,2,3,4,6,7,8-HpCDF	2.50	9.30e+05	1.05 y	42:20	-	1.33 y
16	Unk 1,2,3,4,7,8,9-HpCDF	2.50	6.04e+05	1.06 y	45:09	-	1.20 y
17	Unk OCDF	5.00	9.66e+05	0.89 y	50:10	-	0.721 y
18	IS/RT 13C-2,3,7,8-TCDD	100.00	4.56e+07	0.84 y	27:25	-	0.980 y
19	IS 13C-1,2,3,7,8-PeCDD	100.00	3.68e+07	1.77 y	33:14	-	0.790 y
20	IS 13C-1,2,3,4,7,8-HxCDD	100.00	2.74e+07	1.32 y	38:36	-	1.03 y
21	IS 13C-1,2,3,6,7,8-HxCDD	100.00	2.66e+07	1.22 y	38:46	-	0.996 y
22	IS 13C-1,2,3,4,6,7,8-HpCDD	100.00	2.18e+07	1.02 y	44:13	-	0.818 y
23	IS 13C-OCDD	200.00	2.71e+07	0.99 y	49:47	-	0.507 y
24	IS 13C-2,3,7,8-TCDF	100.00	7.06e+07	0.86 y	26:40	-	0.923 y
25	IS 13C-1,2,3,7,8-PeCDF	100.00	5.94e+07	1.73 y	31:30	-	0.777 y
26	IS 13C-2,3,4,7,8-PeCDF	100.00	5.75e+07	1.68 y	32:49	-	0.752 y
27	IS 13C-1,2,3,4,7,8-HxCDF	100.00	4.93e+07	0.55 y	37:13	-	1.85 y
28	IS 13C-1,2,3,6,7,8-HxCDF	100.00	6.70e+07	0.55 y	37:24	-	2.51 y
29	IS 13C-2,3,4,6,7,8-HxCDF	100.00	5.33e+07	0.57 y	38:21	-	2.00 y
30	IS 13C-1,2,3,7,8,9-HxCDF	100.00	5.18e+07	0.55 y	39:48	-	1.94 y
31	IS 13C-1,2,3,4,6,7,8-HpCDF	100.00	2.79e+07	0.44 y	42:18	-	1.05 y
32	IS 13C-1,2,3,4,7,8,9-HpCDF	100.00	2.02e+07	0.42 y	45:09	-	0.756 y
33	IS 13C-OCDF	200.00	5.36e+07	0.96 y	50:09	-	1.00 y
34	C/Up 37Cl-2,3,7,8-TCDD	0.50	1.62e+05		27:26	-	0.696 y
35	RS 13C-1,2,3,4-TCDD	100.00	4.66e+07	0.83 y	26:51	4.66e+05	- n
36	RS 13C-1,2,3,4-TCDF	100.00	7.65e+07	0.88 y	25:34	7.65e+05	- n
37	RS/RT 13C-1,2,3,7,8,9-HxCDD	100.00	2.67e+07	1.27 y	39:13	2.67e+05	- n
38	Tot Total Tetra-Dioxins	0.00	-	- n	-	-	1.09 y
39	Tot Total Penta-Dioxins	0.00	-	- n	-	-	1.08 y
40	Tot Total Hexa-Dioxins	0.00	-	- n	-	-	1.33 y
41	Tot Total Hepta-Dioxins	0.00	-	- n	-	-	1.47 y
42	Tot Total Tetra-Furans	0.00	-	- n	-	-	1.60 y
43	Tot 1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.890 y
44	Tot Total Penta-Furans	0.00	-	- n	-	-	0.890 y
45	Tot Total Hexa-Furans	0.00	-	- n	-	-	0.860 y
46	Tot Total Hepta-Furans	0.00	-	- n	-	-	1.28 y

Analyst:  Date: 8/24/10

Run #3 Filename 23AUG10M
Client ID: ST082310M2

S: 5

Acquired: 23-AUG-10 18:07:23

Cal: PCDDFAL3-8-23-10

Analyte:

FAL ID: 1613 CS2 100511I

Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk 2,3,7,8-TCDD	2.00	9.56e+05	0.76 y	27:26	-	1.06 y
2	Unk 1,2,3,7,8-PeCDD	10.00	3.99e+06	1.62 y	33:15	-	1.09 y
3	Unk 1,2,3,4,7,8-HxCDD	10.00	3.69e+06	1.40 y	38:38	-	1.31 y
4	Unk 1,2,3,6,7,8-HxCDD	10.00	3.71e+06	1.40 y	38:47	-	1.39 y
5	Unk 1,2,3,7,8,9-HxCDD	10.00	3.75e+06	1.40 y	39:14	-	1.37 y
6	Unk 1,2,3,4,6,7,8-HpCDD	10.00	3.22e+06	1.04 y	44:14	-	1.45 y
7	Unk OCDD	20.00	3.97e+06	0.89 y	49:47	-	1.42 y
8	Unk 2,3,7,8-TCDF	2.00	2.12e+06	0.69 y	26:41	-	1.50 y
9	Unk 1,2,3,7,8-PeCDF	10.00	5.47e+06	1.50 y	31:32	-	0.916 y
10	Unk 2,3,4,7,8-PeCDF	10.00	5.23e+06	1.51 y	32:51	-	0.913 y
11	Unk 1,2,3,4,7,8-HxCDF	10.00	4.43e+06	1.30 y	37:14	-	0.900 y
12	Unk 1,2,3,6,7,8-HxCDF	10.00	5.48e+06	1.24 y	37:26	-	0.819 y
13	Unk 2,3,4,6,7,8-HxCDF	10.00	4.88e+06	1.33 y	38:22	-	0.924 y
14	Unk 1,2,3,7,8,9-HxCDF	10.00	5.17e+06	1.28 y	39:49	-	0.990 y
15	Unk 1,2,3,4,6,7,8-HpCDF	10.00	4.10e+06	1.03 y	42:19	-	1.37 y
16	Unk 1,2,3,4,7,8,9-HpCDF	10.00	2.76e+06	1.01 y	45:09	-	1.33 y
17	Unk OCDF	20.00	4.20e+06	0.92 y	50:11	-	0.753 y
18	IS/RT 13C-2,3,7,8-TCDD	100.00	4.51e+07	0.83 y	27:25	-	0.970 y
19	IS 13C-1,2,3,7,8-PeCDD	100.00	3.68e+07	1.77 y	33:14	-	0.792 y
20	IS 13C-1,2,3,4,7,8-HxCDD	100.00	2.81e+07	1.27 y	38:36	-	1.06 y
21	IS 13C-1,2,3,6,7,8-HxCDD	100.00	2.66e+07	1.28 y	38:46	-	1.00 y
22	IS 13C-1,2,3,4,6,7,8-HpCDD	100.00	2.22e+07	1.02 y	44:13	-	0.835 y
23	IS 13C-OCDD	200.00	2.79e+07	0.95 y	49:47	-	0.524 y
24	IS 13C-2,3,7,8-TCDF	100.00	7.06e+07	0.88 y	26:40	-	0.935 y
25	IS 13C-1,2,3,7,8-PeCDF	100.00	5.98e+07	1.74 y	31:30	-	0.791 y
26	IS 13C-2,3,4,7,8-PeCDF	100.00	5.73e+07	1.71 y	32:50	-	0.759 y
27	IS 13C-1,2,3,4,7,8-HxCDF	100.00	4.92e+07	0.55 y	37:13	-	1.85 y
28	IS 13C-1,2,3,6,7,8-HxCDF	100.00	6.70e+07	0.55 y	37:25	-	2.52 y
29	IS 13C-2,3,4,6,7,8-HxCDF	100.00	5.28e+07	0.56 y	38:21	-	1.98 y
30	IS 13C-1,2,3,7,8,9-HxCDF	100.00	5.23e+07	0.56 y	39:47	-	1.96 y
31	IS 13C-1,2,3,4,6,7,8-HpCDF	100.00	2.98e+07	0.43 y	42:18	-	1.12 y
32	IS 13C-1,2,3,4,7,8,9-HpCDF	100.00	2.07e+07	0.41 y	45:08	-	0.777 y
33	IS 13C-OCDF	200.00	5.58e+07	1.00 y	50:09	-	1.05 y
34	C/Up 37Cl-2,3,7,8-TCDD	2.00	5.87e+05		27:27	-	0.632 y
35	RS 13C-1,2,3,4-TCDD	100.00	4.65e+07	0.85 y	26:50	4.65e+05	- n
36	RS 13C-1,2,3,4-TCDF	100.00	7.56e+07	0.87 y	25:35	7.56e+05	- n
37	RS/RT 13C-1,2,3,7,8,9-HxCDD	100.00	2.66e+07	1.26 y	39:13	2.66e+05	- n
38	Tot Total Tetra-Dioxins	0.00	-	- n	-	-	1.06 y
39	Tot Total Penta-Dioxins	0.00	-	- n	-	-	1.09 y
40	Tot Total Hexa-Dioxins	0.00	-	- n	-	-	1.36 y
41	Tot Total Hepta-Dioxins	0.00	-	- n	-	-	1.45 y
42	Tot Total Tetra-Furans	0.00	-	- n	-	-	1.50 y
43	Tot 1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.914 y
44	Tot Total Penta-Furans	0.00	-	- n	-	-	0.914 y
45	Tot Total Hexa-Furans	0.00	-	- n	-	-	0.902 y
46	Tot Total Hepta-Furans	0.00	-	- n	-	-	1.36 y


Analyst: 

Date: 8/24/10

Run #4 Filename 23AUG10M
Client ID: ST082310M3

S: 1 Acquired: 23-AUG-10 14:25:46 Cal: PCDDFAL3-8-23-10
Analyte: FAL ID: 1613 CS3 100511J

Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk 2,3,7,8-TCDD	10.00	5.04e+06	0.73 y	27:24	-	1.16 y
2	Unk 1,2,3,7,8-PeCDD	50.00	1.95e+07	1.64 y	33:14	-	1.11 y
3	Unk 1,2,3,4,7,8-HxCDD	50.00	1.81e+07	1.41 y	38:36	-	1.36 y
4	Unk 1,2,3,6,7,8-HxCDD	50.00	1.75e+07	1.39 y	38:46	-	1.32 y
5	Unk 1,2,3,7,8,9-HxCDD	50.00	1.74e+07	1.41 y	39:13	-	1.30 y
6	Unk 1,2,3,4,6,7,8-HpCDD	50.00	1.56e+07	1.04 y	44:13	-	1.44 y
7	Unk OCDD	100.00	1.96e+07	0.95 y	49:47	-	1.44 y
8	Unk 2,3,7,8-TCDF	10.00	9.40e+06	0.67 y	26:39	-	1.40 y
9	Unk 1,2,3,7,8-PeCDF	50.00	2.67e+07	1.53 y	31:30	-	0.959 y
10	Unk 2,3,4,7,8-PeCDF	50.00	2.56e+07	1.52 y	32:49	-	0.933 y
11	Unk 1,2,3,4,7,8-HxCDF	50.00	2.15e+07	1.29 y	37:12	-	0.905 y
12	Unk 1,2,3,6,7,8-HxCDF	50.00	2.72e+07	1.26 y	37:24	-	0.826 y
13	Unk 2,3,4,6,7,8-HxCDF	50.00	2.34e+07	1.24 y	38:21	-	0.892 y
14	Unk 1,2,3,7,8,9-HxCDF	50.00	2.60e+07	1.28 y	39:47	-	1.00 y
15	Unk 1,2,3,4,6,7,8-HpCDF	50.00	1.95e+07	1.04 y	42:18	-	1.39 y
16	Unk 1,2,3,4,7,8,9-HpCDF	50.00	1.37e+07	1.04 y	45:08	-	1.35 y
17	Unk OCDF	100.00	2.16e+07	0.93 y	50:09	-	0.785 y
18	IS/RT 13C-2,3,7,8-TCDD	100.00	4.35e+07	0.86 y	27:23	-	0.982 y
19	IS 13C-1,2,3,7,8-PeCDD	100.00	3.51e+07	1.77 y	33:13	-	0.793 y
20	IS 13C-1,2,3,4,7,8-HxCDD	100.00	2.66e+07	1.26 y	38:35	-	1.01 y
21	IS 13C-1,2,3,6,7,8-HxCDD	100.00	2.66e+07	1.27 y	38:45	-	1.02 y
22	IS 13C-1,2,3,4,6,7,8-HpCDD	100.00	2.18e+07	1.04 y	44:11	-	0.830 y
23	IS 13C-OCDD	200.00	2.73e+07	0.93 y	49:45	-	0.521 y
24	IS 13C-2,3,7,8-TCDF	100.00	6.73e+07	0.86 y	26:38	-	0.959 y
25	IS 13C-1,2,3,7,8-PeCDF	100.00	5.57e+07	1.78 y	31:28	-	0.794 y
26	IS 13C-2,3,4,7,8-PeCDF	100.00	5.49e+07	1.74 y	32:48	-	0.783 y
27	IS 13C-1,2,3,4,7,8-HxCDF	100.00	4.74e+07	0.56 y	37:11	-	1.81 y
28	IS 13C-1,2,3,6,7,8-HxCDF	100.00	6.58e+07	0.55 y	37:23	-	2.51 y
29	IS 13C-2,3,4,6,7,8-HxCDF	100.00	5.25e+07	0.54 y	38:19	-	2.00 y
30	IS 13C-1,2,3,7,8,9-HxCDF	100.00	5.18e+07	0.55 y	39:45	-	1.98 y
31	IS 13C-1,2,3,4,6,7,8-HpCDF	100.00	2.80e+07	0.42 y	42:17	-	1.07 y
32	IS 13C-1,2,3,4,7,8,9-HpCDF	100.00	2.02e+07	0.42 y	45:06	-	0.772 y
33	IS 13C-OCDF	200.00	5.49e+07	0.98 y	50:08	-	1.05 y
34	C/Up 37Cl-2,3,7,8-TCDD	10.00	2.77e+06		27:24	-	0.626 y
35	RS 13C-1,2,3,4-TCDD	100.00	4.42e+07	0.84 y	26:49	4.42e+05	- n
36	RS 13C-1,2,3,4-TCDF	100.00	7.01e+07	0.87 y	25:33	7.01e+05	- n
37	RS/RT 13C-1,2,3,7,8,9-HxCDD	100.00	2.62e+07	1.28 y	39:11	2.62e+05	- n
38	Tot Total Tetra-Dioxins	0.00	-	- n	-	-	1.16 y
39	Tot Total Penta-Dioxins	0.00	-	- n	-	-	1.11 y
40	Tot Total Hexa-Dioxins	0.00	-	- n	-	-	1.33 y
41	Tot Total Hepta-Dioxins	0.00	-	- n	-	-	1.44 y
42	Tot Total Tetra-Furans	0.00	-	- n	-	-	1.40 y
43	Tot 1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.946 y
44	Tot Total Penta-Furans	0.00	-	- n	-	-	0.946 y
45	Tot Total Hexa-Furans	0.00	-	- n	-	-	0.902 y
46	Tot Total Hepta-Furans	0.00	-	- n	-	-	1.37 y

Analyst: 

Date: 8/24/10

Run #5 Filename 23AUG10M
Client ID: ST082310M4

S: 6

Acquired: 23-AUG-10 19:02:46

Cal: PCDDFAL3-8-23-10

Analyte:

FAL ID: 1613 CS4 100511K

Typ	Name	Amount	Resp	RA	RT	RF	RRF
1 Unk	2,3,7,8-TCDD	40.00	2.29e+07	0.76 y	27:27	-	1.13 y
2 Unk	1,2,3,7,8-PeCDD	200.00	9.61e+07	1.62 y	33:16	-	1.15 y
3 Unk	1,2,3,4,7,8-HxCDD	200.00	9.66e+07	1.40 y	38:37	-	1.44 y
4 Unk	1,2,3,6,7,8-HxCDD	200.00	8.79e+07	1.41 y	38:47	-	1.43 y
5 Unk	1,2,3,7,8,9-HxCDD	200.00	9.29e+07	1.41 y	39:15	-	1.45 y
6 Unk	1,2,3,4,6,7,8-HpCDD	200.00	7.75e+07	1.03 y	44:14	-	1.45 y
7 Unk	OCDD	400.00	9.77e+07	1.00 y	49:48	-	1.42 y
8 Unk	2,3,7,8-TCDF	40.00	4.55e+07	0.67 y	26:42	-	1.47 y
9 Unk	1,2,3,7,8-PeCDF	200.00	1.31e+08	1.55 y	31:31	-	0.991 y
10 Unk	2,3,4,7,8-PeCDF	200.00	1.25e+08	1.52 y	32:50	-	0.991 y
11 Unk	1,2,3,4,7,8-HxCDF	200.00	1.13e+08	1.27 y	37:14	-	0.995 y
12 Unk	1,2,3,6,7,8-HxCDF	200.00	1.35e+08	1.28 y	37:26	-	0.869 y
13 Unk	2,3,4,6,7,8-HxCDF	200.00	1.21e+08	1.26 y	38:23	-	0.979 y
14 Unk	1,2,3,7,8,9-HxCDF	200.00	1.38e+08	1.30 y	39:49	-	1.08 y
15 Unk	1,2,3,4,6,7,8-HpCDF	200.00	1.03e+08	1.03 y	42:19	-	1.49 y
16 Unk	1,2,3,4,7,8,9-HpCDF	200.00	7.19e+07	1.05 y	45:09	-	1.45 y
17 Unk	OCDF	400.00	1.19e+08	0.92 y	50:11	-	0.860 y
18 IS/RT	13C-2,3,7,8-TCDD	100.00	5.05e+07	0.85 y	27:25	-	1.15 y
19 IS	13C-1,2,3,7,8-PeCDD	100.00	4.17e+07	1.76 y	33:14	-	0.955 y
20 IS	13C-1,2,3,4,7,8-HxCDD	100.00	3.35e+07	1.27 y	38:37	-	1.12 y
21 IS	13C-1,2,3,6,7,8-HxCDD	100.00	3.08e+07	1.28 y	38:46	-	1.03 y
22 IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	2.67e+07	1.01 y	44:13	-	0.896 y
23 IS	13C-OCDD	200.00	3.44e+07	0.94 y	49:47	-	0.578 y
24 IS	13C-2,3,7,8-TCDF	100.00	7.76e+07	0.88 y	26:41	-	1.12 y
25 IS	13C-1,2,3,7,8-PeCDF	100.00	6.59e+07	1.75 y	31:30	-	0.954 y
26 IS	13C-2,3,4,7,8-PeCDF	100.00	6.31e+07	1.73 y	32:49	-	0.913 y
27 IS	13C-1,2,3,4,7,8-HxCDF	100.00	5.67e+07	0.55 y	37:13	-	1.91 y
28 IS	13C-1,2,3,6,7,8-HxCDF	100.00	7.79e+07	0.55 y	37:25	-	2.62 y
29 IS	13C-2,3,4,6,7,8-HxCDF	100.00	6.19e+07	0.54 y	38:21	-	2.08 y
30 IS	13C-1,2,3,7,8,9-HxCDF	100.00	6.38e+07	0.54 y	39:48	-	2.14 y
31 IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	3.44e+07	0.43 y	42:18	-	1.16 y
32 IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	2.48e+07	0.43 y	45:08	-	0.832 y
33 IS	13C-OCDF	200.00	6.90e+07	0.99 y	50:09	-	1.16 y
34 C/Up	37Cl-2,3,7,8-TCDD	40.00	1.32e+07		27:27	-	0.757 y
35 RS	13C-1,2,3,4-TCDD	100.00	4.37e+07	0.85 y	26:50	4.37e+05	- n
36 RS	13C-1,2,3,4-TCDF	100.00	6.91e+07	0.87 y	25:35	6.91e+05	- n
37 RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	2.98e+07	1.25 y	39:13	2.98e+05	- n
38 Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.13 y
39 Tot	Total Penta-Dioxins	0.00	-	- n	-	-	1.15 y
40 Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.44 y
41 Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.45 y
42 Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.47 y
43 Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.991 y
44 Tot	Total Penta-Furans	0.00	-	- n	-	-	0.991 y
45 Tot	Total Hexa-Furans	0.00	-	- n	-	-	0.974 y
46 Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.47 y

Analyst: 


Date: 8/24/10

Run #6 Filename 23AUG10M
Client ID: ST082310M5

S: 7 Acquired: 23-AUG-10 19:58:08 Cal: PCDDFAL3-8-23-10
Analyte: PCDDFAL3-8-23-10

FAL ID: 1613 CS5 100511L

Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk 2,3,7,8-TCDD	200.00	1.06e+08	0.76 y	27:26	-	1.14 y
2	Unk 1,2,3,7,8-PeCDD	1000.00	4.58e+08	1.63 y	33:15	-	1.15 y
3	Unk 1,2,3,4,7,8-HxCDD	1000.00	4.92e+08	1.39 y	38:38	-	1.42 y
4	Unk 1,2,3,6,7,8-HxCDD	1000.00	4.34e+08	1.40 y	38:48	-	1.42 y
5	Unk 1,2,3,7,8,9-HxCDD	1000.00	4.72e+08	1.38 y	39:14	-	1.45 y
6	Unk 1,2,3,4,6,7,8-HpCDD	1000.00	4.12e+08	1.03 y	44:14	-	1.48 y
7	Unk OCDD	2000.00	5.93e+08	0.92 y	49:50	-	1.59 y
8	Unk 2,3,7,8-TCDF	200.00	2.14e+08	0.66 y	26:41	-	1.48 y
9	Unk 1,2,3,7,8-PeCDF	1000.00	6.33e+08	1.52 y	31:32	-	0.985 y
10	Unk 2,3,4,7,8-PeCDF	1000.00	6.21e+08	1.52 y	32:51	-	1.00 y
11	Unk 1,2,3,4,7,8-HxCDF	1000.00	5.58e+08	1.28 y	37:14	-	0.996 y
12	Unk 1,2,3,6,7,8-HxCDF	1000.00	6.54e+08	1.27 y	37:26	-	0.876 y
13	Unk 2,3,4,6,7,8-HxCDF	1000.00	5.98e+08	1.27 y	38:22	-	0.989 y
14	Unk 1,2,3,7,8,9-HxCDF	1000.00	7.04e+08	1.28 y	39:49	-	1.08 y
15	Unk 1,2,3,4,6,7,8-HpCDF	1000.00	5.19e+08	1.05 y	42:20	-	1.47 y
16	Unk 1,2,3,4,7,8,9-HpCDF	1000.00	4.06e+08	1.08 y	45:09	-	1.50 y
17	Unk OCDF	2000.00	6.38e+08	0.93 y	50:12	-	0.869 y
18	IS/RT 13C-2,3,7,8-TCDD	100.00	4.62e+07	0.84 y	27:25	-	1.08 y
19	IS 13C-1,2,3,7,8-PeCDD	100.00	4.00e+07	1.76 y	33:15	-	0.933 y
20	IS 13C-1,2,3,4,7,8-HxCDD	100.00	3.46e+07	1.27 y	38:37	-	1.16 y
21	IS 13C-1,2,3,6,7,8-HxCDD	100.00	3.07e+07	1.25 y	38:46	-	1.03 y
22	IS 13C-1,2,3,4,6,7,8-HpCDD	100.00	2.78e+07	1.04 y	44:13	-	0.932 y
23	IS 13C-OCDD	200.00	3.72e+07	0.93 y	49:49	-	0.625 y
24	IS 13C-2,3,7,8-TCDF	100.00	7.26e+07	0.87 y	26:40	-	1.05 y
25	IS 13C-1,2,3,7,8-PeCDF	100.00	6.43e+07	1.73 y	31:30	-	0.931 y
26	IS 13C-2,3,4,7,8-PeCDF	100.00	6.19e+07	1.73 y	32:49	-	0.896 y
27	IS 13C-1,2,3,4,7,8-HxCDF	100.00	5.60e+07	0.55 y	37:13	-	1.88 y
28	IS 13C-1,2,3,6,7,8-HxCDF	100.00	7.47e+07	0.56 y	37:25	-	2.51 y
29	IS 13C-2,3,4,6,7,8-HxCDF	100.00	6.05e+07	0.56 y	38:21	-	2.03 y
30	IS 13C-1,2,3,7,8,9-HxCDF	100.00	6.55e+07	0.54 y	39:47	-	2.20 y
31	IS 13C-1,2,3,4,6,7,8-HpCDF	100.00	3.52e+07	0.44 y	42:18	-	1.18 y
32	IS 13C-1,2,3,4,7,8,9-HpCDF	100.00	2.71e+07	0.42 y	45:08	-	0.909 y
33	IS 13C-OCDF	200.00	7.35e+07	0.99 y	50:11	-	1.23 y
34	C/Up 37Cl-2,3,7,8-TCDD	200.00	6.26e+07		27:26	-	0.731 y
35	RS 13C-1,2,3,4-TCDD	100.00	4.28e+07	0.84 y	26:50	4.28e+05	- n
36	RS 13C-1,2,3,4-TCDF	100.00	6.91e+07	0.87 y	25:34	6.91e+05	- n
37	RS/RT 13C-1,2,3,7,8,9-HxCDD	100.00	2.98e+07	1.25 y	39:13	2.98e+05	- n
38	Tot Total Tetra-Dioxins	0.00	-	- n	-	-	1.14 y
39	Tot Total Penta-Dioxins	0.00	-	- n	-	-	1.15 y
40	Tot Total Hexa-Dioxins	0.00	-	- n	-	-	1.43 y
41	Tot Total Hepta-Dioxins	0.00	-	- n	-	-	1.48 y
42	Tot Total Tetra-Furans	0.00	-	- n	-	-	1.48 y
43	Tot 1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.994 y
44	Tot Total Penta-Furans	0.00	-	- n	-	-	0.994 y
45	Tot Total Hexa-Furans	0.00	-	- n	-	-	0.980 y
46	Tot Total Hepta-Furans	0.00	-	- n	-	-	1.48 y

Analyst: 

Date: 

USEPA - ITD

FORM 3A

PCDD/PCDF INITIAL CALIBRATION RELATIVE RESPONSES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 8/23/10


Instrument ID: FAL3 GC Column ID: db5

CS0 Data Filename: 23AUG10M S3 CS3 Data Filename: 23AUG10M S1

CS1 Data Filename: 23AUG10M S4 CS4 Data Filename: 23AUG10M S6

CS2 Data Filename: 23AUG10M S5 CS5 Data Filename: 23AUG10M S7

	RELATIVE RESPONSE (RR)						MEAN RR	Cv (%RSD)
	CS1	CS2	CS3	CS4	CS5	CS6		
NATIVE ANALYTES								
2,3,7,8-TCDD	1.07	1.09	1.06	1.16	1.13	1.14	1.11	3.63
1,2,3,7,8-PeCDD	1.03	1.08	1.09	1.11	1.15	1.15	1.10	4.14
1,2,3,4,7,8-HxCDD	1.40	1.30	1.31	1.36	1.44	1.42	1.37	4.29
1,2,3,6,7,8-HxCDD	1.30	1.38	1.39	1.32	1.43	1.42	1.37	3.80
1,2,3,7,8,9-HxCDD	1.29	1.31	1.37	1.30	1.45	1.45	1.36	5.24
1,2,3,4,6,7,8-HpCDD	1.43	1.47	1.45	1.44	1.45	1.48	1.45	1.37
OCDD	1.37	1.37	1.42	1.44	1.42	1.59	1.43	5.81
2,3,7,8-TCDF	1.57	1.60	1.50	1.40	1.47	1.48	1.50	4.91
1,2,3,7,8-PeCDF	0.92	0.88	0.92	0.96	0.99	0.99	0.94	4.53
2,3,4,7,8-PeCDF	0.88	0.90	0.91	0.93	0.99	1.00	0.94	5.35
1,2,3,4,7,8-HxCDF	0.90	0.88	0.90	0.91	0.99	1.00	0.93	5.70
1,2,3,6,7,8-HxCDF	0.75	0.79	0.82	0.83	0.87	0.88	0.82	5.91
2,3,4,6,7,8-HxCDF	0.87	0.86	0.92	0.89	0.98	0.99	0.92	6.02
1,2,3,7,8,9-HxCDF	0.90	0.94	0.99	1.00	1.08	1.08	1.00	7.30
1,2,3,4,6,7,8-HpCDF	1.28	1.33	1.37	1.39	1.49	1.47	1.39	5.78
1,2,3,4,7,8,9-HpCDF	1.30	1.20	1.33	1.35	1.45	1.50	1.36	7.94
OCDF	0.73	0.72	0.75	0.79	0.86	0.87	0.79	8.29

Analyst:  Date: 8/24/10

USEPA - ITD

FORM 3B

PCDD/PCDF INITIAL CALIBRATION RELATIVE RESPONSES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 8/23/10

Instrument ID: FAL3 GC Column ID: db5

CS0 Data Filename: 23AUG10M S3 CS4 Data Filename: 23AUG10M S1

CS1 Data Filename: 23AUG10M S4 CS4 Data Filename: 23AUG10M S6

CS2 Data Filename: 23AUG10M S5 CS5 Data Filename: 23AUG10M S7

Labeled Compounds	RELATIVE RESPONSE (RR)						MEAN RR	Cv (%RSD)
	CS1	CS2	CS3	CS4	CS5	CS6		
13C-2,3,7,8-TCDD	0.98	0.98	0.97	0.98	1.15	1.08	1.02	7.46
13C-1,2,3,7,8-PeCDD	0.79	0.79	0.79	0.79	0.95	0.93	0.84	9.48
13C-1,2,3,4,7,8-HxCDD	1.06	1.03	1.06	1.01	1.12	1.16	1.07	5.40
13C-1,2,3,6,7,8-HxCDD	1.00	1.00	1.00	1.02	1.03	1.03	1.01	1.62
13C-1,2,3,4,6,7,8-HpCDD	0.82	0.82	0.84	0.83	0.90	0.93	0.86	5.45
13C-OCDD	0.52	0.51	0.52	0.52	0.58	0.63	0.55	8.36
13C-2,3,7,8-TCDF	0.97	0.92	0.93	0.96	1.12	1.05	0.99	7.79
13C-1,2,3,7,8-PeCDF	0.78	0.78	0.79	0.79	0.95	0.93	0.84	9.74
13C-2,3,4,7,8-PeCDF	0.77	0.75	0.76	0.78	0.91	0.90	0.81	8.97
13C-1,2,3,4,7,8-HxCDF	1.82	1.85	1.85	1.81	1.91	1.88	1.85	2.00
13C-1,2,3,6,7,8-HxCDF	2.55	2.51	2.52	2.51	2.62	2.51	2.54	1.71
13C-2,3,4,6,7,8-HxCDF	2.00	2.00	1.98	2.00	2.08	2.03	2.01	1.79
13C-1,2,3,7,8,9-HxCDF	1.97	1.94	1.96	1.98	2.14	2.20	2.03	5.42
13C-1,2,3,4,6,7,8-HpCDF	1.08	1.05	1.12	1.07	1.16	1.18	1.11	4.80
13C-1,2,3,4,7,8,9-HpCDF	0.78	0.76	0.78	0.77	0.83	0.91	0.80	7.16
13C-OCDF	1.00	1.00	1.05	1.05	1.16	1.23	1.08	8.63
CLEANUP STANDARD								
37Cl-2,3,7,8-TCDD	0.67	0.70	0.63	0.63	0.76	0.73	0.69	7.67

Analyst: Date: 8/24/10

USEPA - ITD

FORM 3C

PCDD/PCDF INITIAL CALIBRATION ION ABUNDANCE RATIOS

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 8/23/10

Instrument ID: FAL3

GC Column ID: db5

CS0 Data Filename: 23AUG10M S3 CS3 Data Filename: 23AUG10M S1

CS1 Data Filename: 23AUG10M S4 CS4 Data Filename: 23AUG10M S6

CS2 Data Filename: 23AUG10M S5 CS5 Data Filename: 23AUG10M S7

	M/Z'S FORMING RATIO	ION ABUNDANCE RATIOS						QC LIMITS
		CS1	CS2	CS3	CS4	CS5	CS6	
NATIVE ANALYTES								
2,3,7,8-TCDD	M/M+2	0.73	0.74	0.76	0.73	0.76	0.76	0.65-0.89
1,2,3,7,8-PeCDD	M+2/M+4	1.70	1.61	1.62	1.64	1.62	1.63	1.32-1.78
1,2,3,4,7,8-HxCDD	M+2/M+4	1.42	1.42	1.40	1.41	1.40	1.39	1.05-1.43
1,2,3,6,7,8-HxCDD	M+2/M+4	1.40	1.42	1.40	1.39	1.41	1.40	1.05-1.43
1,2,3,7,8,9-HxCDD	M+2/M+4	1.41	1.39	1.40	1.41	1.41	1.38	1.05-1.43
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	1.07	1.04	1.04	1.03	1.03	0.88-1.20
OCDD	M+2/M+4	1.00	0.99	0.89	0.95	1.00	0.92	0.76-1.02
2,3,7,8-TCDF	M/M+2	0.67	0.69	0.69	0.67	0.67	0.66	0.65-0.89
1,2,3,7,8-PeCDF	M+2/M+4	1.49	1.45	1.50	1.53	1.55	1.52	1.32-1.78
2,3,4,7,8-PeCDF	M+2/M+4	1.48	1.43	1.51	1.52	1.52	1.52	1.32-1.78
1,2,3,4,7,8-HxCDF	M+2/M+4	1.22	1.27	1.30	1.29	1.27	1.28	1.05-1.43
1,2,3,6,7,8-HxCDF	M+2/M+4	1.31	1.22	1.24	1.26	1.28	1.27	1.05-1.43
2,3,4,6,7,8-HxCDF	M+2/M+4	1.25	1.31	1.33	1.24	1.26	1.27	1.05-1.43
1,2,3,7,8,9-HxCDF	M+2/M+4	1.15	1.23	1.28	1.28	1.30	1.28	1.05-1.43
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.04	1.05	1.03	1.04	1.03	1.05	0.88-1.20
1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.99	1.06	1.01	1.04	1.05	1.08	0.88-1.20
OCDF	M+2/M+4	0.93	0.89	0.92	0.93	0.92	0.93	0.76-1.02

Analyst: 

Date: 8/24/10

FORM 3D

PCDD/PCDF INITIAL CALIBRATION ION ABUNDANCE RATIOS

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 8/23/10

Instrument ID: FAL3

GC Column ID: db5

CS0 Data Filename: 23AUG10M S3 CS3 Data Filename: 23AUG10M S1

CS1 Data Filename: 23AUG10M S4 CS4 Data Filename: 23AUG10M S6

CS2 Data Filename: 23AUG10M S5 CS5 Data Filename: 23AUG10M S7

Labeled Compounds	M/Z'S FORMING RATIO	ION ABUNDANCE RATIOS						QC LIMITS
		CS1	CS2	CS3	CS4	CS5	CS6	
13C-2,3,7,8-TCDD	M/M+2	0.85	0.84	0.83	0.86	0.85	0.84	0.65-0.89
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.77	1.77	1.77	1.77	1.76	1.76	1.32-1.78
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.32	1.27	1.26	1.27	1.27	1.05-1.43
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.22	1.28	1.27	1.28	1.25	1.05-1.43
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.00	1.02	1.02	1.04	1.01	1.04	0.88-1.20
13C-OCDD	M+2/M+4	1.00	0.99	0.95	0.93	0.94	0.93	0.76-1.02
13C-2,3,7,8-TCDF	M/M+2	0.88	0.86	0.88	0.86	0.88	0.87	0.65-0.89
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.74	1.73	1.74	1.78	1.75	1.73	1.32-1.78
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.74	1.68	1.71	1.74	1.73	1.73	1.32-1.78
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.55	0.55	0.55	0.56	0.55	0.55	0.43-0.59
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.56	0.55	0.55	0.55	0.55	0.56	0.43-0.59
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.58	0.57	0.56	0.54	0.54	0.56	0.43-0.59
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.54	0.55	0.56	0.55	0.54	0.54	0.43-0.59
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.42	0.44	0.43	0.42	0.43	0.44	0.37-0.51
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.43	0.42	0.41	0.42	0.43	0.42	0.37-0.51
13C-OCDF	M+2/M+4	0.95	0.96	1.00	0.98	0.99	0.99	0.76-1.02

Analyst: 

Date: 8/24/10

USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 8/23/10

Instrument ID: FAL3

GC Column ID: db5

VER Data Filename: 23AUG10M Sam:1

Analysis Date: 23-AUG-10 14:25:46

NATIVE ANALYTES	M/Z'S	ION	QC	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
	FORMING RATIO (1)	ABUND. RATIO	LIMITS (2)			
2,3,7,8-TCDD	M/M+2	0.73	0.65-0.89	y	10.4	7.80 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	1.64	1.32-1.78	y	50.6	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.41	1.05-1.43	y	49.6	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.39	1.05-1.43	y	48.0	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.41	1.05-1.43	y	47.9	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	49.5	43.0 - 58.0
OCDD	M+2/M+4	0.95	0.76-1.02	y	100	79.0 - 126
2,3,7,8-TCDF	M/M+2	0.67	0.65-0.89	y	9.30	8.40 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.53	1.32-1.78	y	50.9	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.52	1.32-1.78	y	49.8	41.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	48.8	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	y	50.3	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	48.5	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.28	1.05-1.43	y	50.3	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.04	0.88-1.20	y	49.9	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.04	0.88-1.20	y	49.8	43.0 - 58.0
OCDF	M+2/M+4	0.93	0.76-1.02	y	99.9	63.0 - 159

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

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

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

Analyst: Date: 8/24/10

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 8/23/10

Instrument ID: FAL3

GC Column ID: db5

VER Data Filename: 23AUG10M Sam:1

Analysis Date: 23-AUG-10 14:25:46

LABELLED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
13C-2,3,7,8-TCDD	M/M+2	0.86	0.65-0.89	y	95.9	82.0 - 121
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.77	1.32-1.78	y	94.2	62.0 - 160
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	94.5	85.0 - 117
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	100	85.0 - 118
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	97.0	72.0 - 138
13C-OCDD	M+2/M+4	0.93	0.76-1.02	y	191	96.0 - 415
13C-2,3,7,8-TCDF	M/M+2	0.86	0.65-0.89	y	96.5	71.0 - 140
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.78	1.32-1.78	y	94.8	76.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.74	1.32-1.78	y	96.5	77.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.56	0.43-0.59	y	97.7	76.0 - 131
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.55	0.43-0.59	y	99.0	70.0 - 143
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	y	99.4	73.0 - 137
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.55	0.43-0.59	y	97.2	74.0 - 135
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.42	0.37-0.51	y	96.4	78.0 - 129
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.42	0.37-0.51	y	96.0	77.0 - 129
13C-OCDF	M+2/M+4	0.98	0.76-1.02	y	194	96.0 - 415
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					9.14	7.80 - 12.8

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

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

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

(4) No ion abundance ratio; report concentration found.

Analyst: Date: 8/24/10

FORM 5
PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Frontier Analytical Laboratory Episode No.:
Contract No.: SAS No.:
Instrument ID: FAL3 Initial Calibration Date: 8/23/10
RT Window Data Filename: 23AUG10M Sam:1 Analysis Date: 23-AUG-10 Time: 14:25:46
DB-5 IS Data Filename: 23AUG10M Sam:1 Analysis Date: 23-AUG-10 Time: 14:25:46
DB-225 IS Date Filename: Analysis Date: Time:

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:24	1,3,6,8-TCDF (F)	23:04
1,2,8,9-TCDD (L)	28:21	1,2,8,9-TCDF (L)	28:34
1,2,4,7,9-PeCDD (F)	30:15	1,3,4,6,8-PeCDF (F)	28:25
1,2,3,8,9-PeCDD (L)	33:48	1,2,3,8,9-PeCDF (L)	34:14
1,2,4,6,7,9-HxCDD (F)	36:08	1,2,3,4,6,8-HxCDF (F)	35:15
1,2,3,7,8,9-HxCDD (L)	39:13	1,2,3,7,8,9-HxCDF (L)	39:47
1,2,3,4,6,7,9-HpCDD (F)	42:49	1,2,3,4,6,7,8-HpCDF (F)	42:18
1,2,3,4,6,7,8-HpCDD (L)	44:13	1,2,3,4,7,8,9-HpCDF (L)	45:08

(F) = First eluting isomer (DB-5); (L) = Last eluting isomer (DB-5)

=====

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT
BETWEEN
COMPARED PEAKS (1)

<25%

(1) To meet contract requirement, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: 

Date: 8/24/10

USEPA - ITD

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Init. Cal. Date: 8/23/10

Instrument ID: FAL3

GC Column ID: db5

Analysis Date: 23-AUG-10 14:25:46

CS3 or VER Data Filename: 23AUG10M

Sam:1

NATIVE ANALYTES	RETENTION TIME		RRT	RRT
	REFERENCE			QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD		1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF		1.001	0.999-1.003
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD		1.001	0.999-1.002
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF		1.001	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF		1.001	0.999-1.002
LABELED COMPOUNDS				
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD		1.022	0.989-1.052
13C-2,3,7,8-TCDD			1.021	0.976-1.043
13C-2,3,7,8-TCDF			0.993	0.923-1.103
13C-1,2,3,7,8-PeCDD			1.239	1.000-1.567
13C-1,2,3,7,8-PeCDF			1.174	0.923-1.203
13C-2,3,4,7,8-PeCDF			1.223	0.923-1.303

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

Analyst: Date: 8/24/10

USEPA - ITD

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Init. Cal. Date: 8/23/10

Instrument ID: FAL3

GC Column ID: db5

Analysis Date: 23-AUG-10 14:25:46

CS3 or VER Data Filename: 23AUG10M

Sam:1

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.001	0.999-1.001
OCDD	13C-OCDD	1.001	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.985	0.977-1.000
13C-1,2,3,6,7,8-HxCDD		0.989	0.981-1.003
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975
13C-2,3,4,6,7,8-HxCDF		0.978	0.959-1.021
13C-1,2,3,7,8,9-HxCDF		1.014	0.977-1.047
13C-1,2,3,4,6,7,8-HpCDD		1.128	1.086-1.130
13C-1,2,3,4,6,7,8-HpCDF		1.079	1.043-1.085
13C-1,2,3,4,7,8,9-HpCDF		1.151	1.057-1.154
13C-OCDD		1.270	1.032-1.311
13C-OCDF		1.279	1.000-1.311

(1) Contract-required limits for Relative Retention Times (RRT) as specified
in Table 2, Method 1613.

Analyst: Date: 8/24/10

WHO 1998 Tox: 125 WHO 2005 Tox: 114
 Conc Qual Fac Noise-1 Noise-2 DL

Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL	DL
2,3,7,8-TCDD	5.04e+06	0.73 y	27:24	1.11	10.4		2.50	-	-	*
1,2,3,7,8-PeCDD	1.95e+07	1.64 y	33:14	1.10	50.6		2.50	-	-	*
1,2,3,4,7,8-HxCDD	1.81e+07	1.41 y	38:36	1.37	49.6		2.50	-	-	*
1,2,3,6,7,8-HxCDD	1.75e+07	1.39 y	38:46	1.37	48.0		2.50	-	-	*
1,2,3,7,8,9-HxCDD	1.74e+07	1.41 y	39:13	1.36	47.9		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	1.56e+07	1.04 y	44:13	1.45	49.5		2.50	-	-	*
OCDD	1.96e+07	0.95 y	49:47	1.43	100		2.50	-	-	*
2,3,7,8-TCDF	9.40e+06	0.67 y	26:39	1.50	9.30		2.50	-	-	*
1,2,3,7,8-PeCDF	2.67e+07	1.53 y	31:30	0.94	50.9		2.50	-	-	*
2,3,4,7,8-PeCDF	2.56e+07	1.52 y	32:49	0.94	49.8		2.50	-	-	*
1,2,3,4,7,8-HxCDF	2.15e+07	1.29 y	37:12	0.93	48.8		2.50	-	-	*
1,2,3,6,7,8-HxCDF	2.72e+07	1.26 y	37:24	0.82	50.3		2.50	-	-	*
2,3,4,6,7,8-HxCDF	2.34e+07	1.24 y	38:21	0.92	48.5		2.50	-	-	*
1,2,3,7,8,9-HxCDF	2.60e+07	1.28 y	39:47	1.00	50.3		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	1.95e+07	1.04 y	42:18	1.39	49.9		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	1.37e+07	1.04 y	45:08	1.36	49.8		2.50	-	-	*
OCDF	2.16e+07	0.93 y	50:09	0.79	99.9		2.50	-	-	*
Rec										
13C-2,3,7,8-TCDD	4.35e+07	0.86 y	27:23	1.02	95.9					95.9
13C-1,2,3,7,8-PeCDD	3.51e+07	1.77 y	33:13	0.84	94.2					94.2
13C-1,2,3,4,7,8-HxCDD	2.66e+07	1.26 y	38:35	1.07	94.5					94.5
13C-1,2,3,6,7,8-HxCDD	2.66e+07	1.27 y	38:45	1.01	100					100
13C-1,2,3,4,6,7,8-HpCDD	2.18e+07	1.04 y	44:11	0.86	97.0					97.0
13C-OCDD	2.73e+07	0.93 y	49:45	0.55	191					95.3
13C-2,3,7,8-TCDF	6.73e+07	0.86 y	26:38	0.99	96.5					96.5
13C-1,2,3,7,8-PeCDF	5.57e+07	1.78 y	31:28	0.84	94.8					94.8
13C-2,3,4,7,8-PeCDF	5.49e+07	1.74 y	32:48	0.81	96.5					96.5
13C-1,2,3,4,7,8-HxCDF	4.74e+07	0.56 y	37:11	1.85	97.7					97.7
13C-1,2,3,6,7,8-HxCDF	6.58e+07	0.55 y	37:23	2.54	99.0					99.0
13C-2,3,4,6,7,8-HxCDF	5.25e+07	0.54 y	38:19	2.01	99.4					99.4
13C-1,2,3,7,8,9-HxCDF	5.18e+07	0.55 y	39:45	2.03	97.2					97.2
13C-1,2,3,4,6,7,8-HpCDF	2.80e+07	0.42 y	42:17	1.11	96.4					96.4
13C-1,2,3,4,7,8,9-HpCDF	2.02e+07	0.42 y	45:06	0.80	96.0					96.0
13C-OCDF	5.49e+07	0.98 y	50:08	1.08	194					96.8
37Cl-2,3,7,8-TCDD	2.77e+06		27:24	0.69	9.14					91.4
13C-1,2,3,4-TCDD	4.42e+07	0.84 y	26:49	-	98.4					
13C-1,2,3,4-TCDF	7.01e+07	0.87 y	25:33	-	97.0					
13C-1,2,3,7,8,9-HxCDD	2.62e+07	1.28 y	39:11	-	95.1					
Fac Noise-1 Noise-2 DL #Hom										
Total Tetra-Dioxins	2.58e+07		24:24	1.11	53.5	2.50	-	-	*	19
Total Penta-Dioxins	4.23e+07		30:15	1.10	109	2.50	-	-	*	7
Total Hexa-Dioxins	6.03e+07		36:08	1.37	165	2.50	-	-	*	11
Total Hepta-Dioxins	3.51e+07		42:49	1.45	111	2.50	-	-	*	20
Total Tetra-Furans	4.14e+07		23:04	1.50	41.0	2.50	-	-	*	9
1st Fn. Tot Penta-Furans	3.21e+07		28:25	0.94	61.7	2.50	-	-	*	PeCDF 1
Total Penta-Furans	7.50e+07		30:12	0.94	144	2.50	-	-	*	206 15
Total Hexa-Furans	1.14e+08		35:15	0.91	230	2.50	-	-	*	8
Total Hepta-Furans	3.43e+07		42:18	1.38	103	2.50	-	-	*	14

Analyst: 

Date: 8/24/10

Frontier Analytical Laboratory - Acquisition Log


Run Name:23AUG10M

Instrument: FAL3

GC: DB5

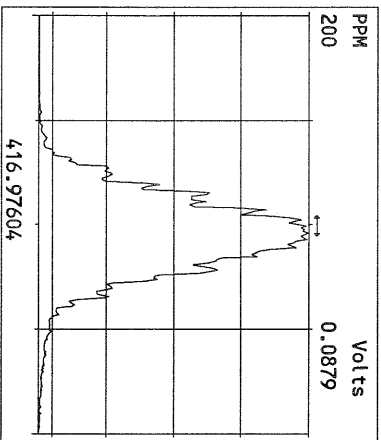
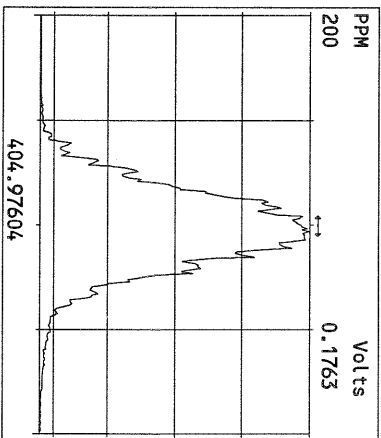
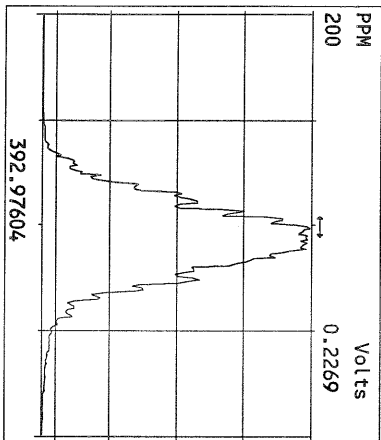
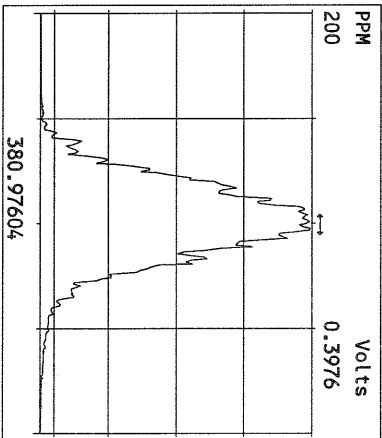
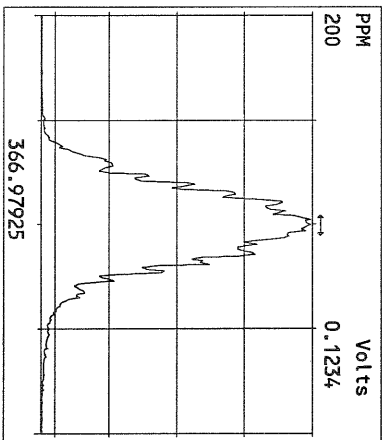
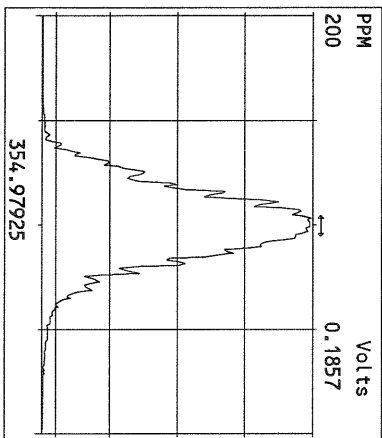
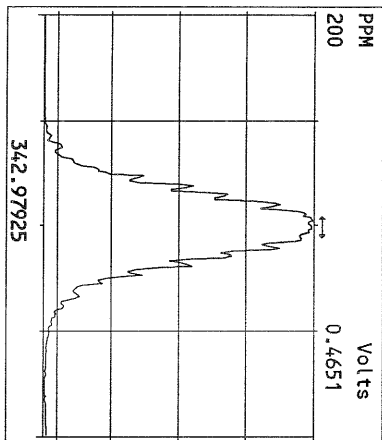
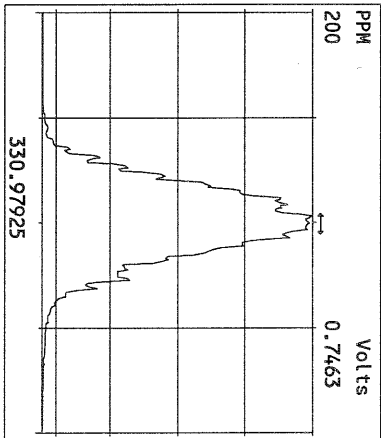
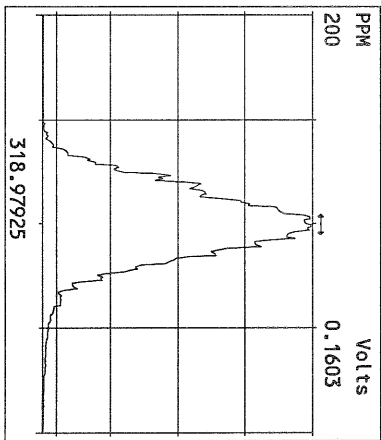
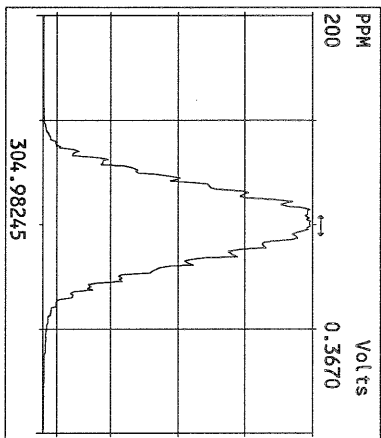
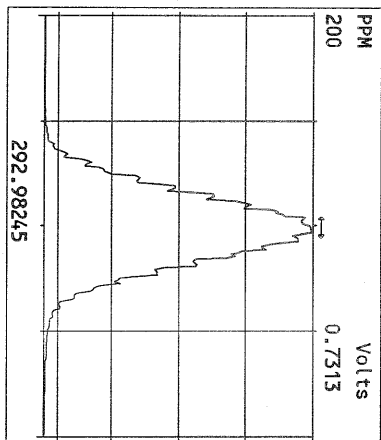
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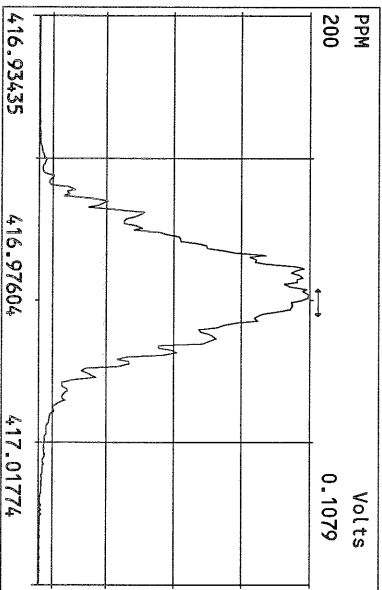
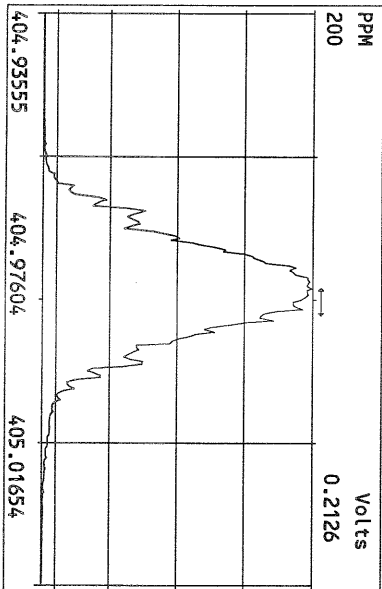
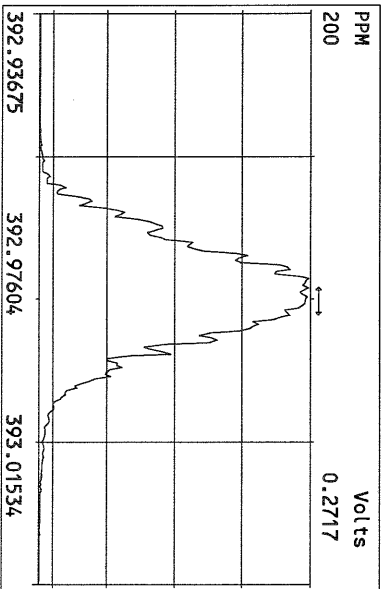
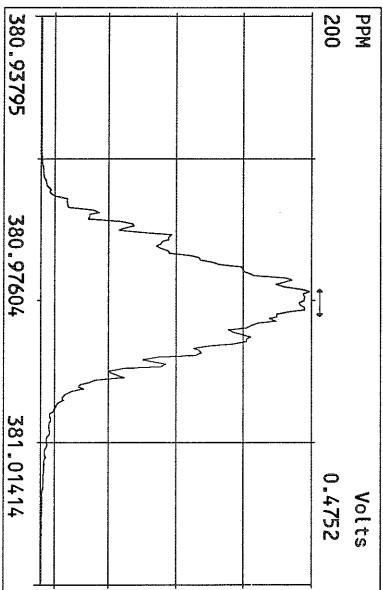
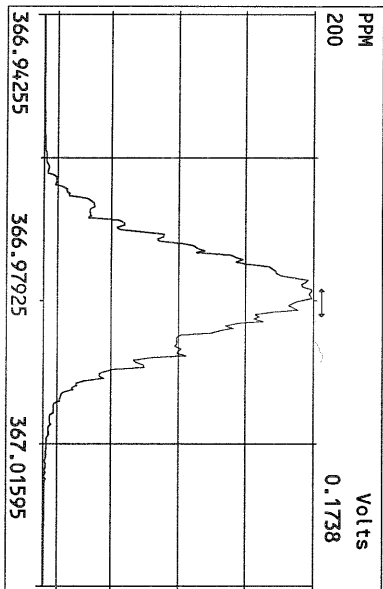
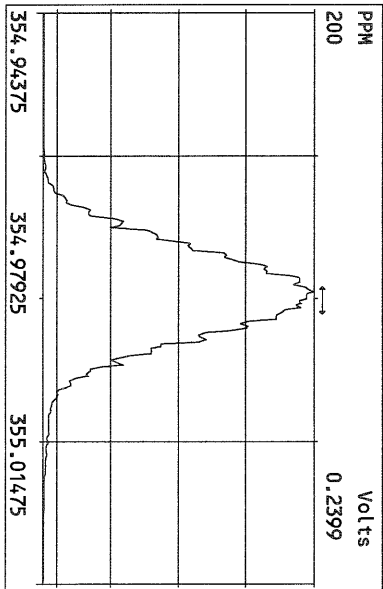
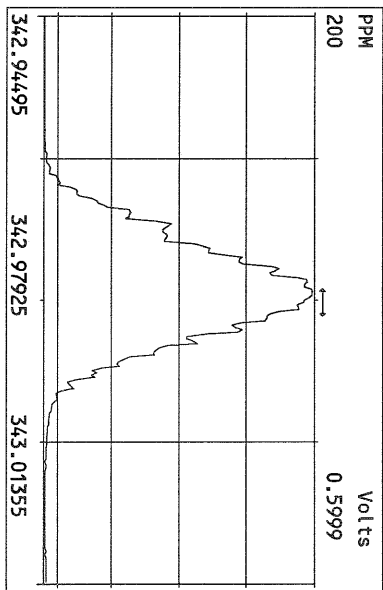
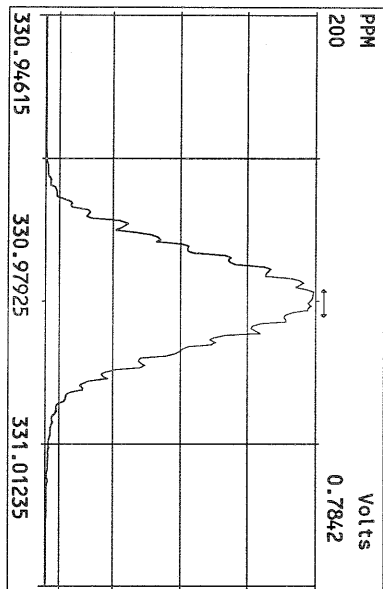
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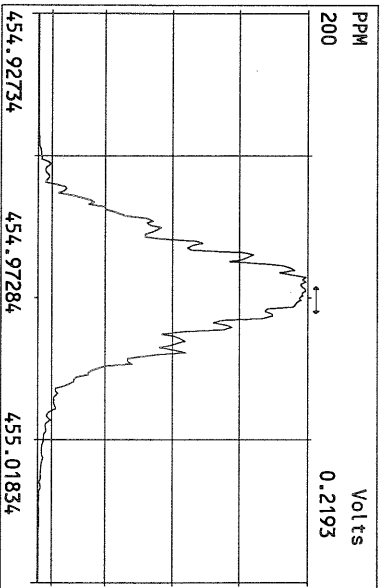
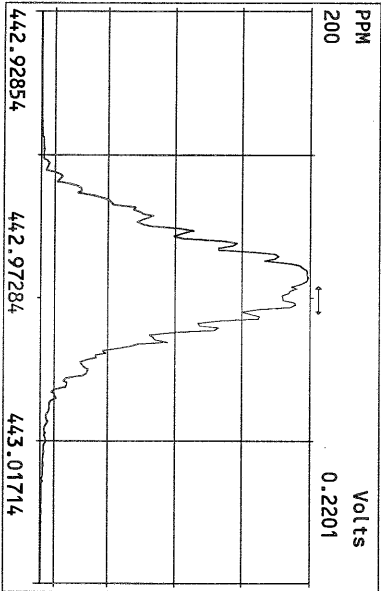
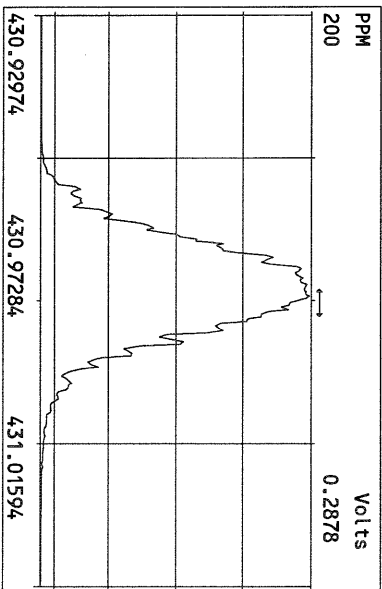
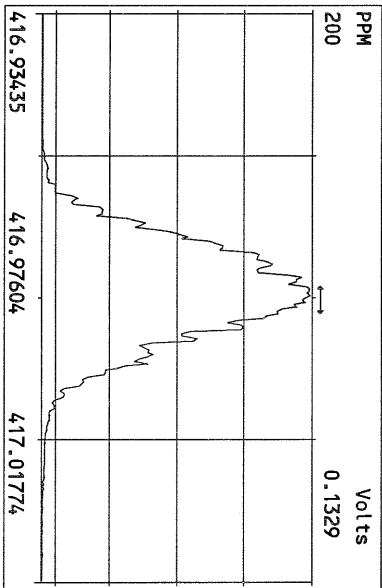
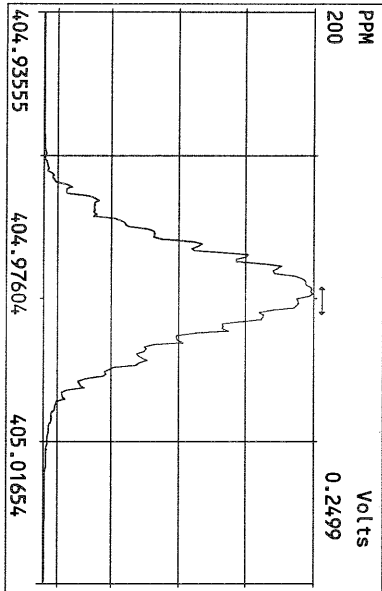
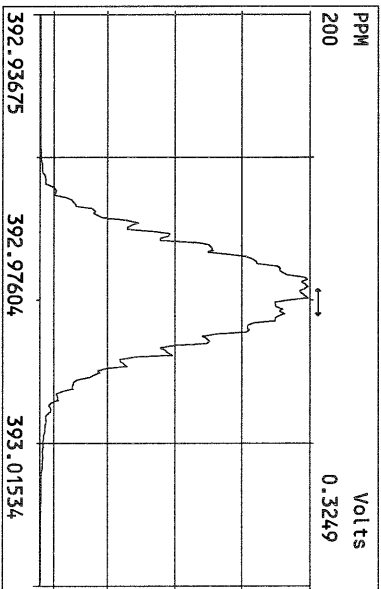
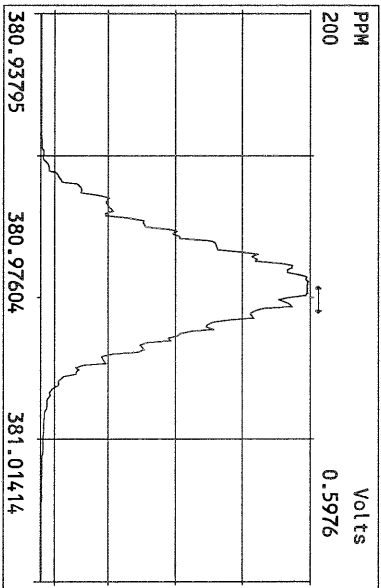
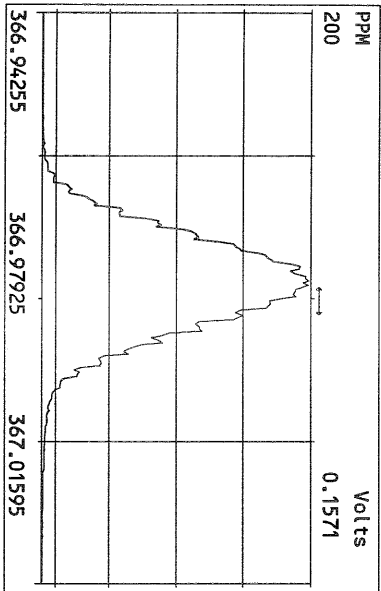
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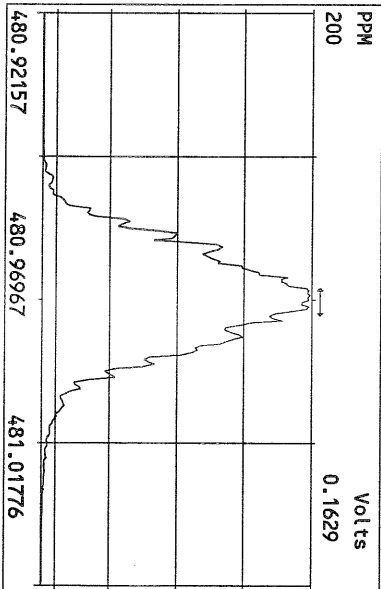
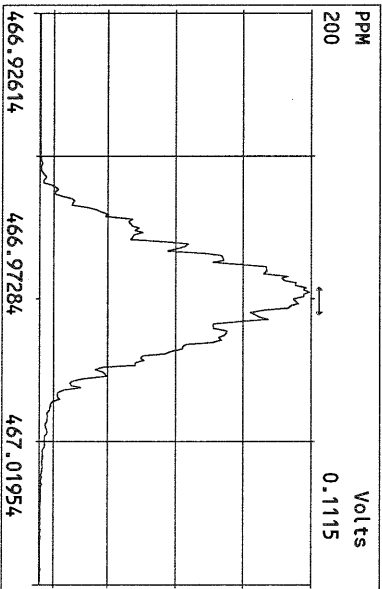
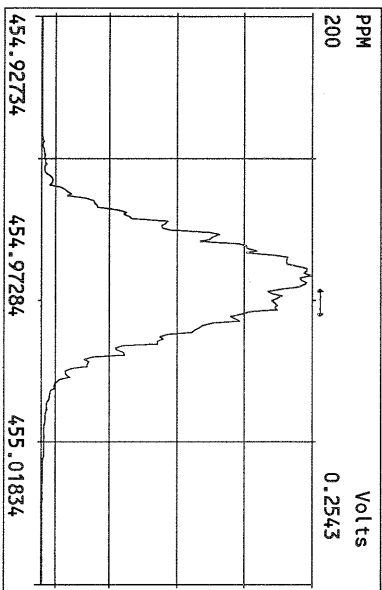
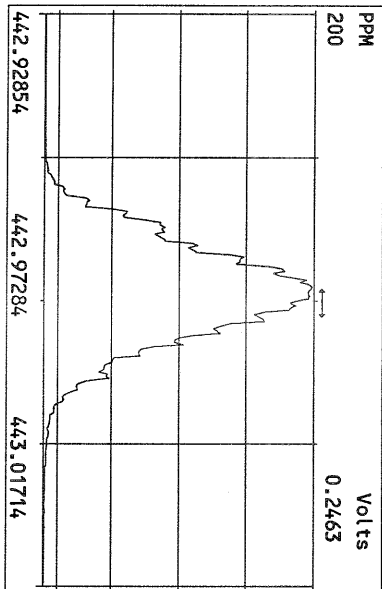
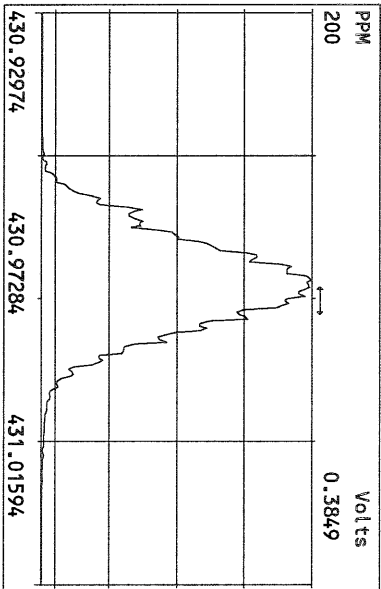
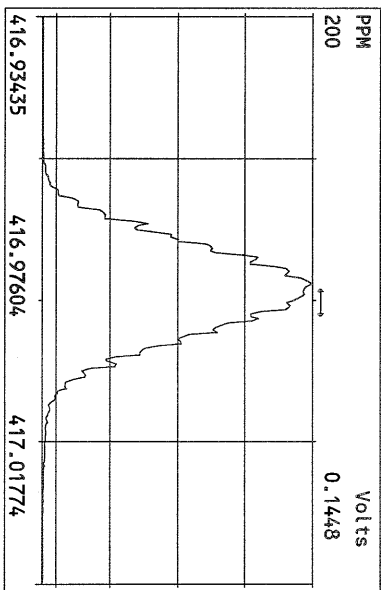
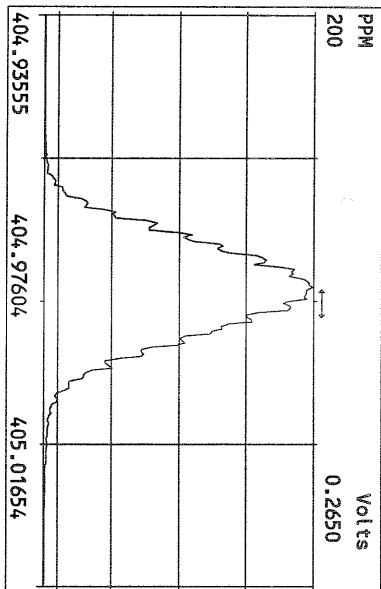
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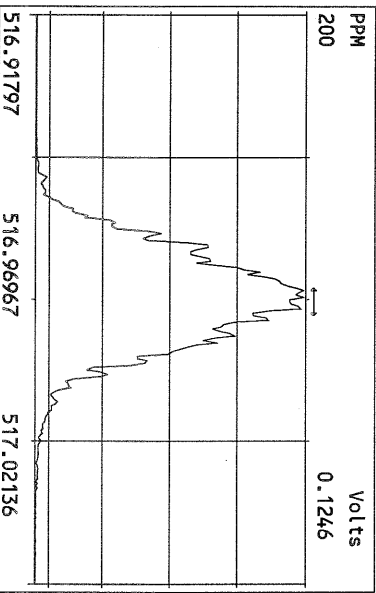
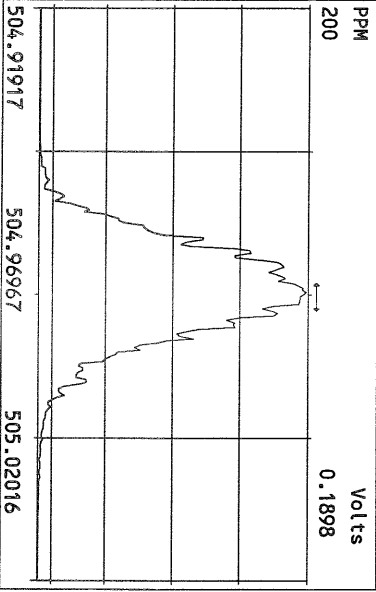
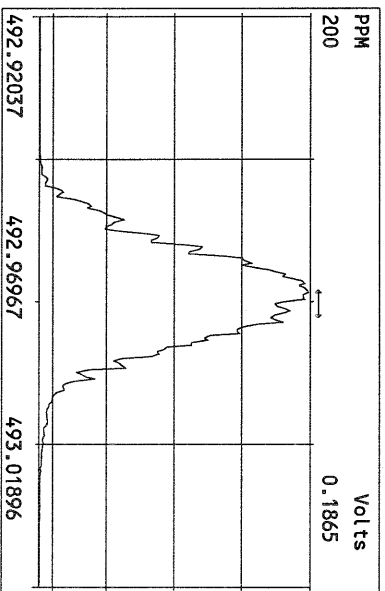
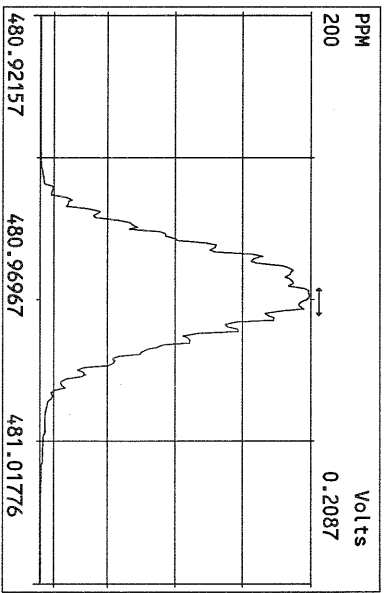
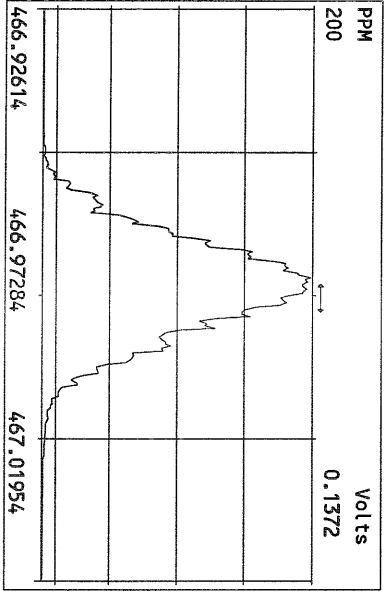
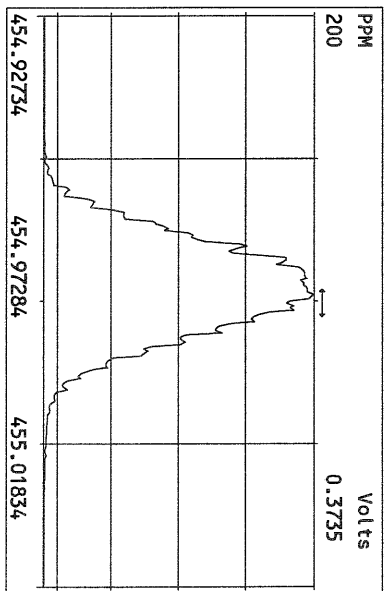
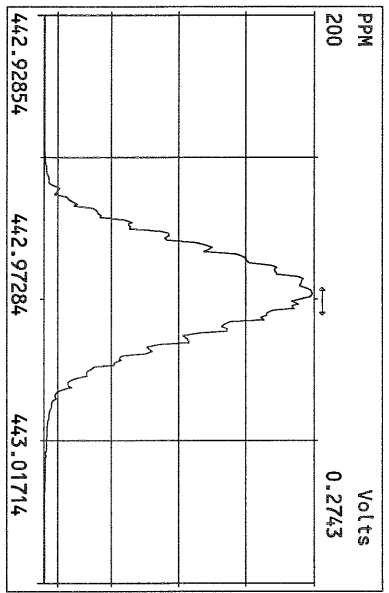
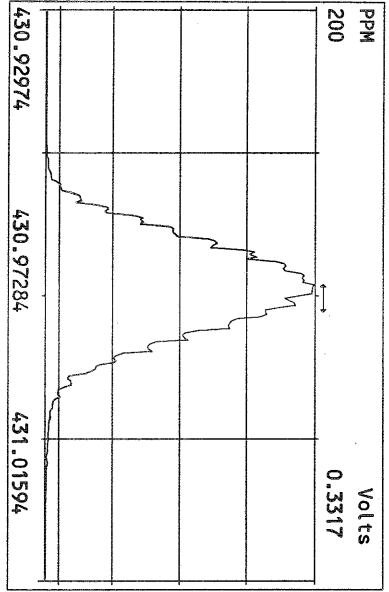
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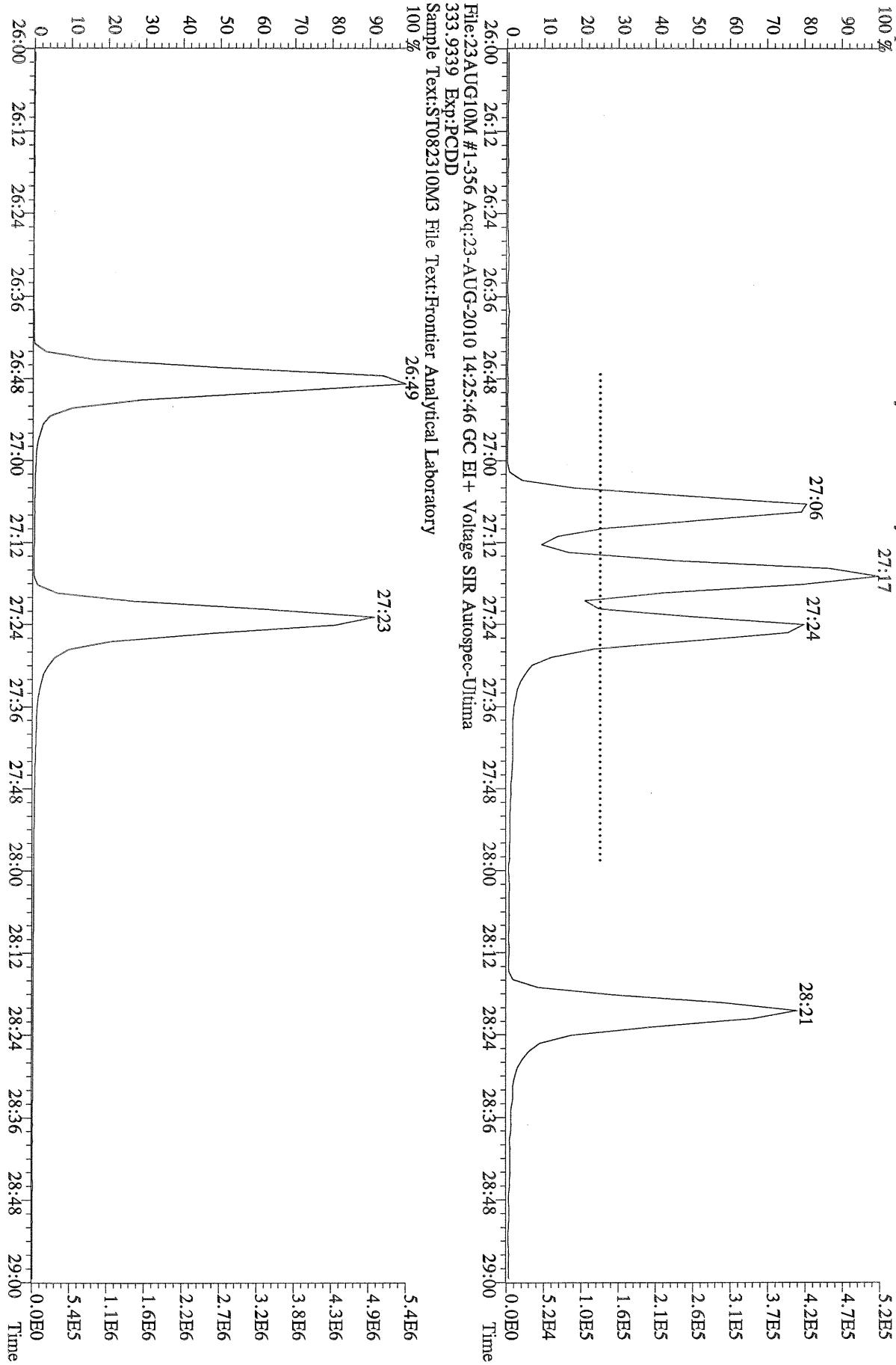






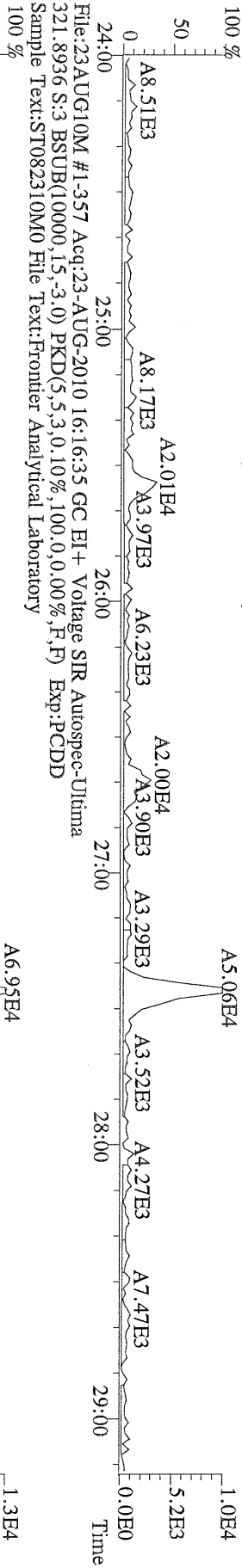


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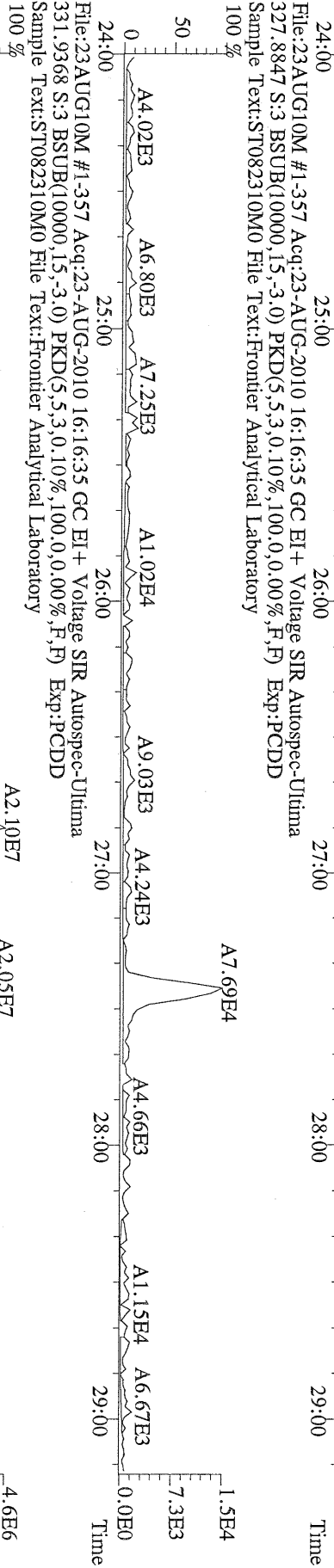


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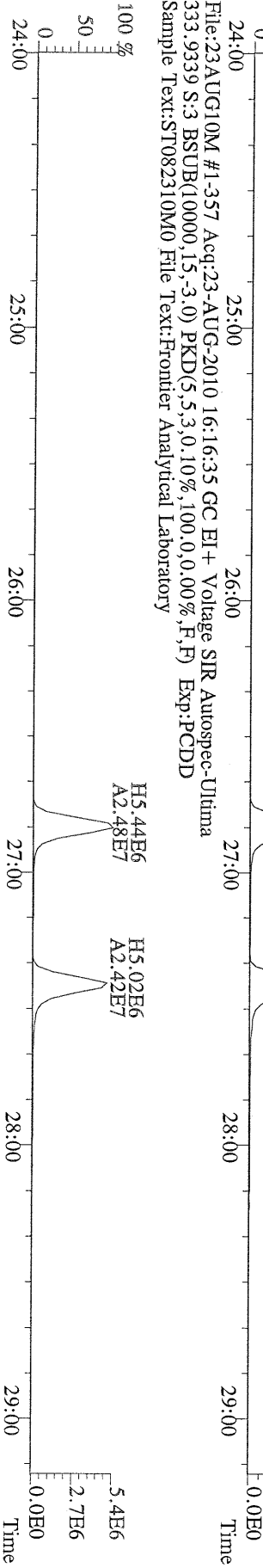
File:23AUG10M #1-357 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



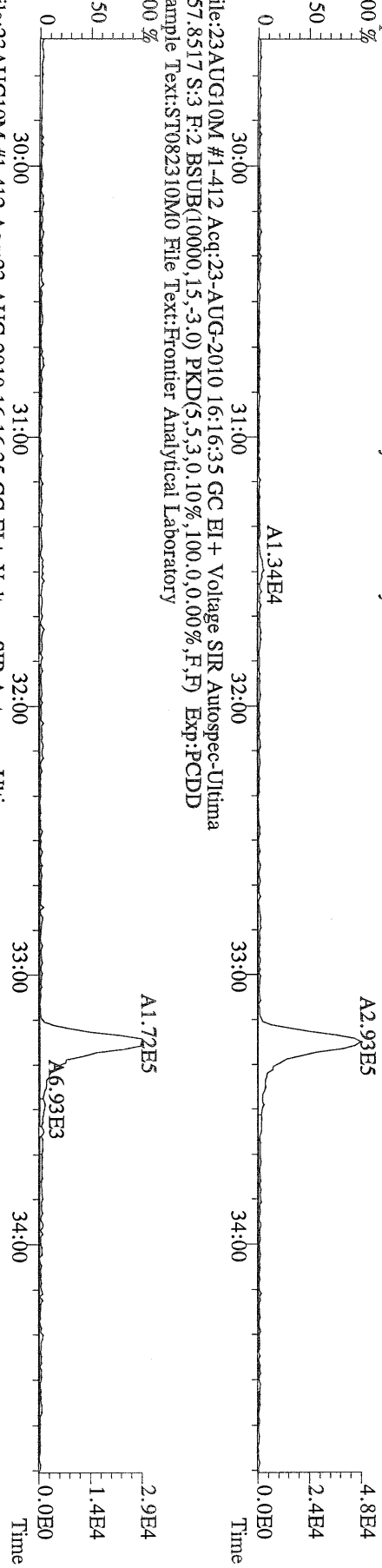
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327.8847 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



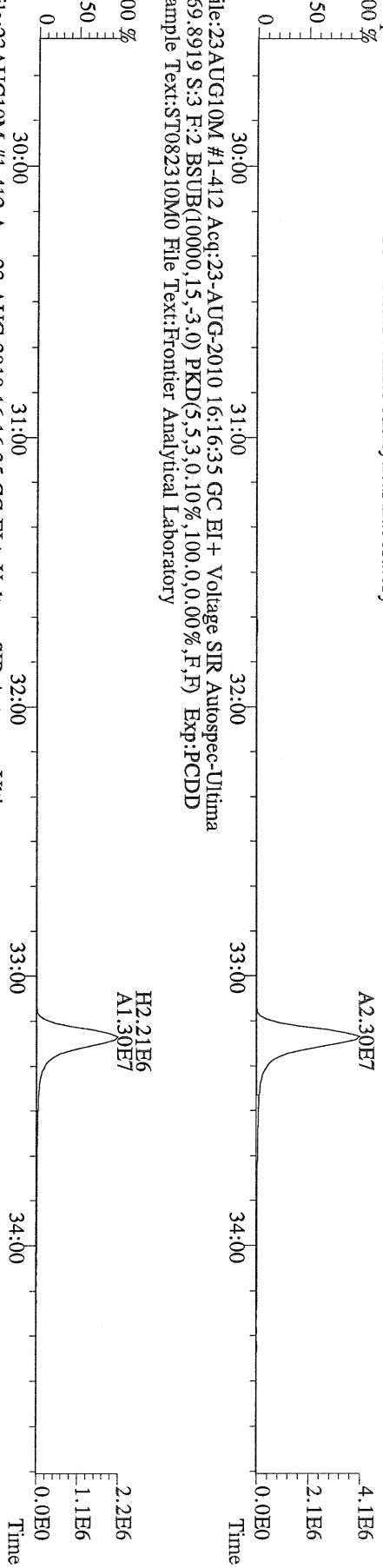
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333.9339 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



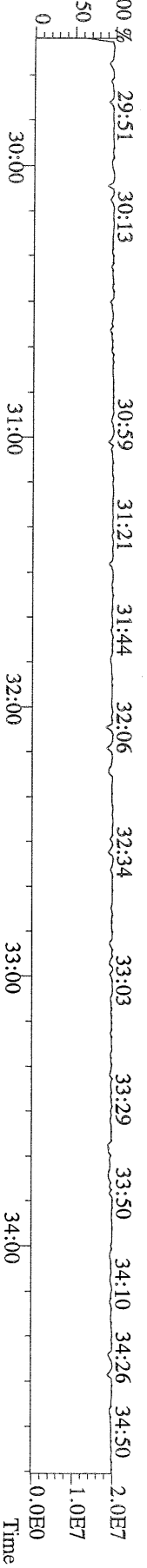
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355.8546 S:3 F:2 BSub(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory
100 %



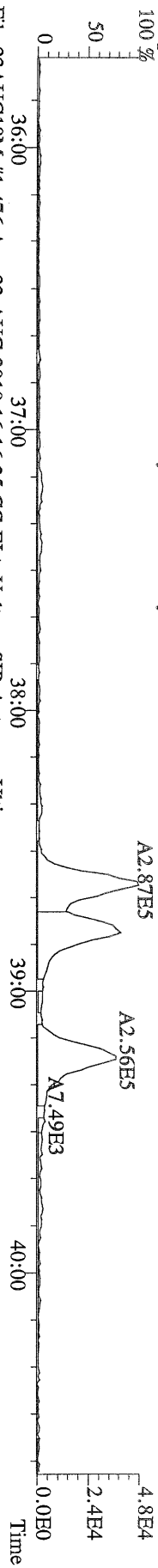
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367.8949 S:3 F:2 BSub(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory
100 %



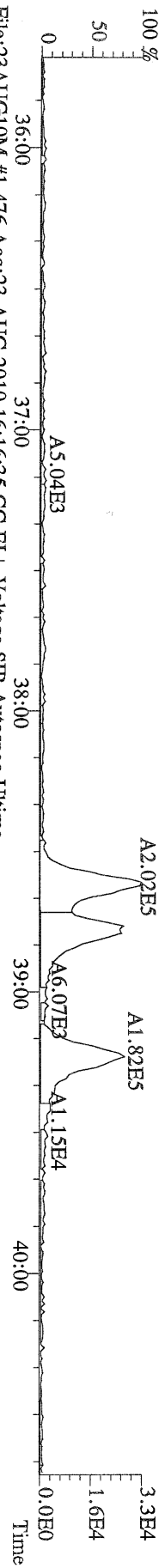
File:23AUG10M #1-412 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:3 F:2 Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



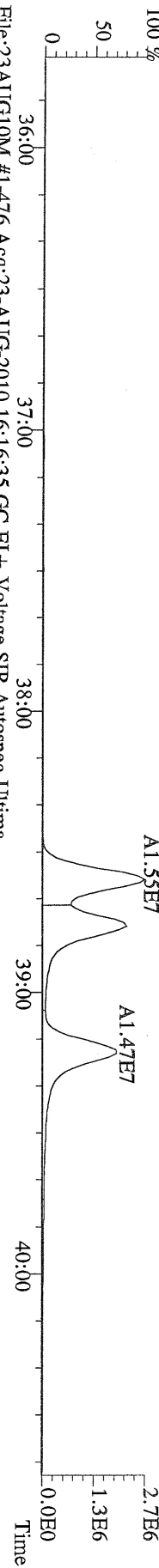
File:23AUG10M #1-476 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
 389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Fronier Analytical Laboratory



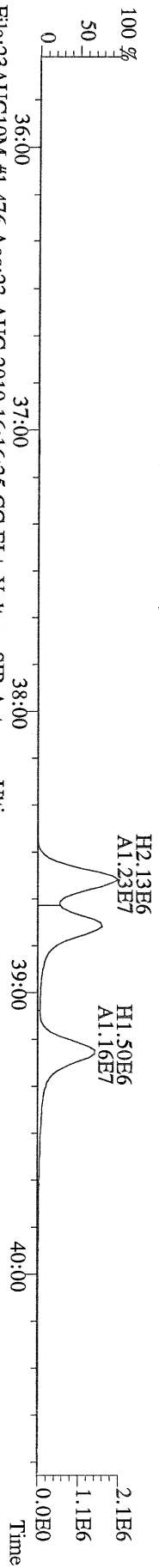
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 391.8127 S:3 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Fronier Analytical Laboratory



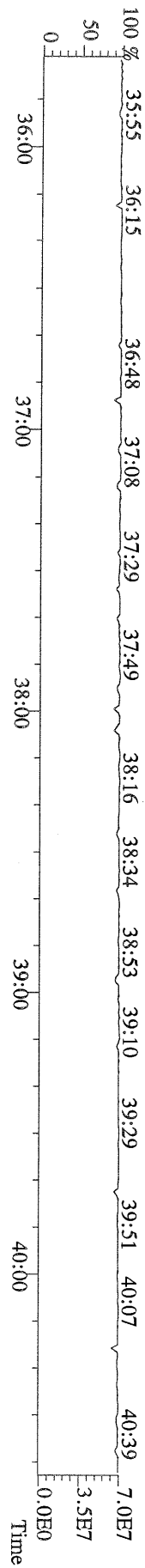
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 401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Fronier Analytical Laboratory



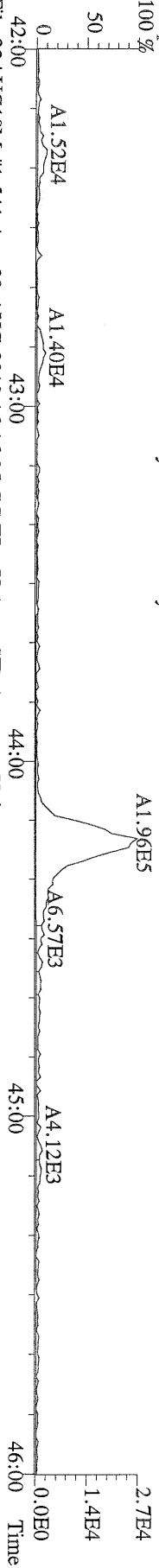
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 403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Fronier Analytical Laboratory



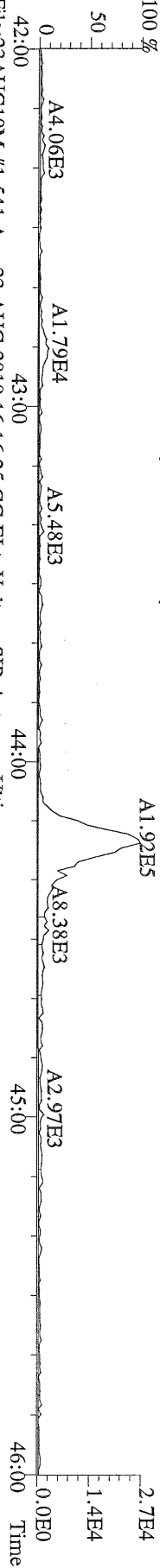
File:23AUG10M #1-476 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
 380.9760 S:3 F:3 Exp:PCDD
 Sample Text:ST082310M0 File Text:Fronier Analytical Laboratory



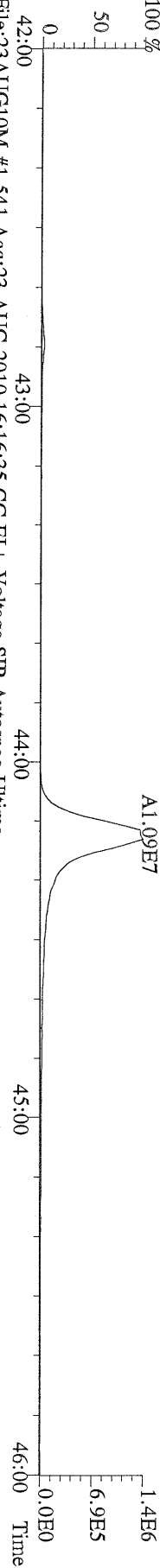
File:23AUG10M #1-541 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



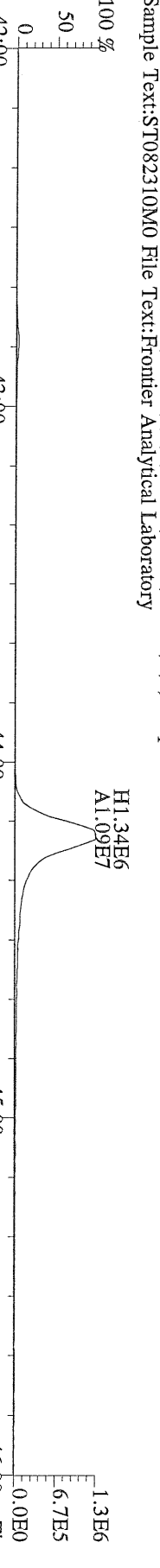
File:23AUG10M #1-541 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



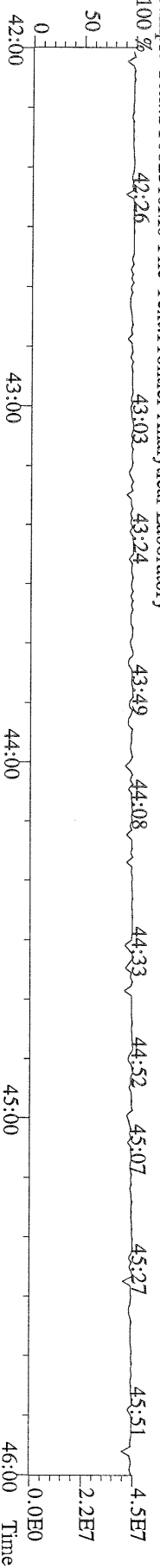
File:23AUG10M #1-541 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:3 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



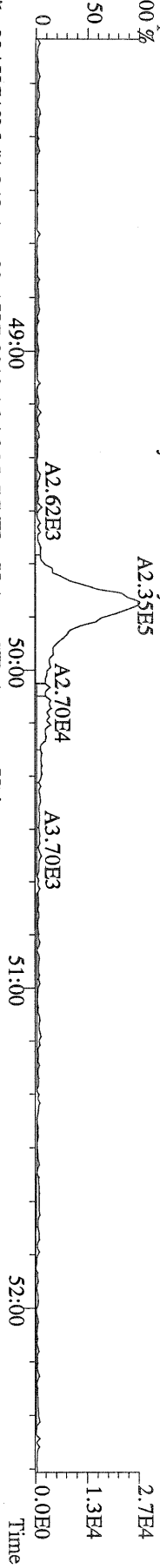
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437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



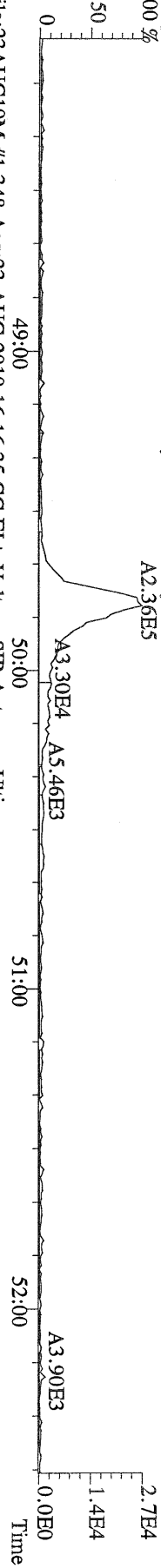
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430.9728 S:3 F:4 Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



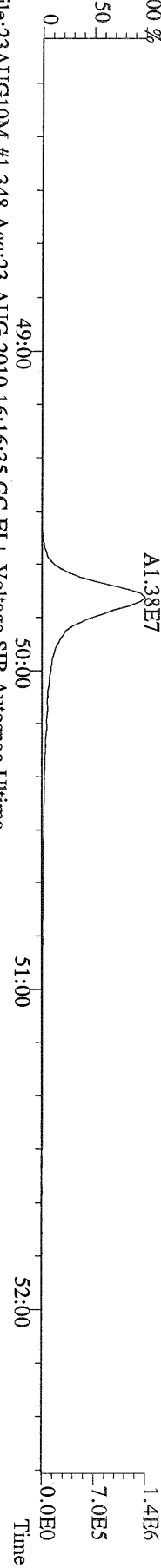
File:23AUG10M #1-348 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
 457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



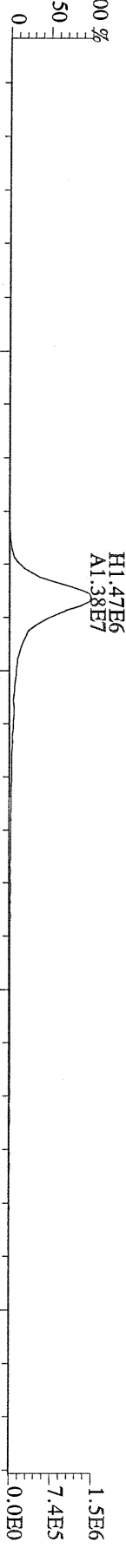
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 459.7348 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



File:23AUG10M #1-348 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
 469.7780 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



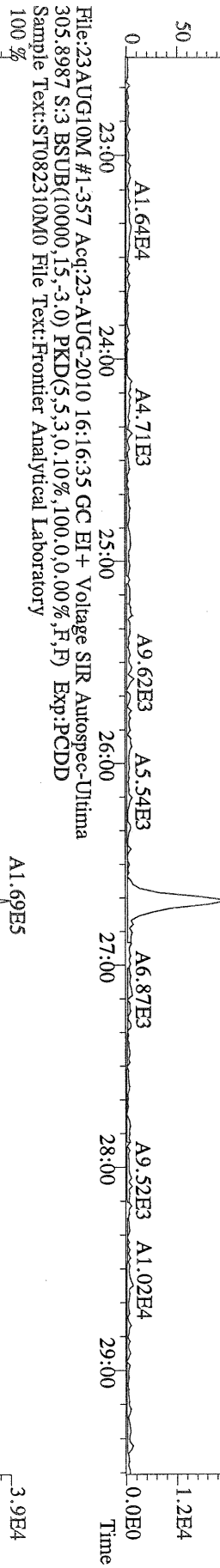
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 471.7750 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



File:23AUG10M #1-348 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
 454.9728 S:3 F:5 Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



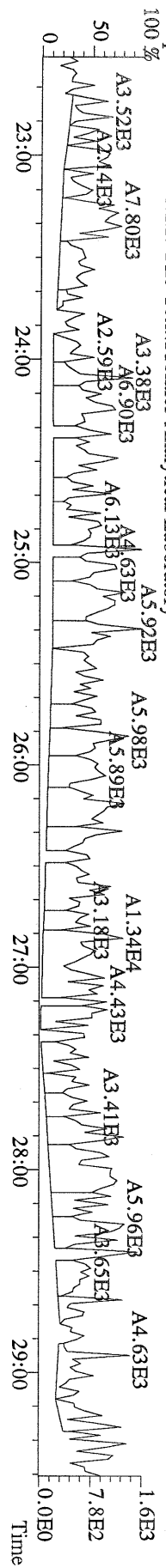
File:23AUG10M #1-357 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
 303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



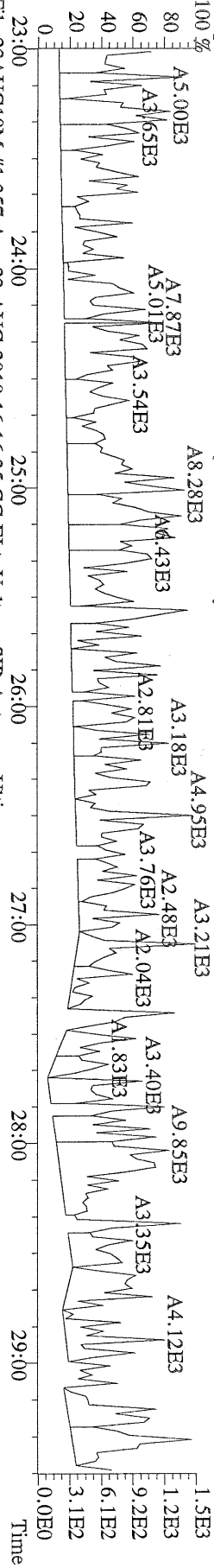
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 315.9419 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



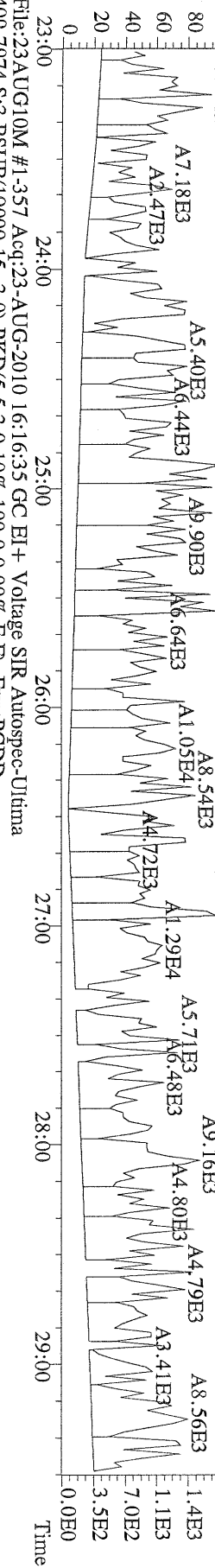
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 375.8364 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



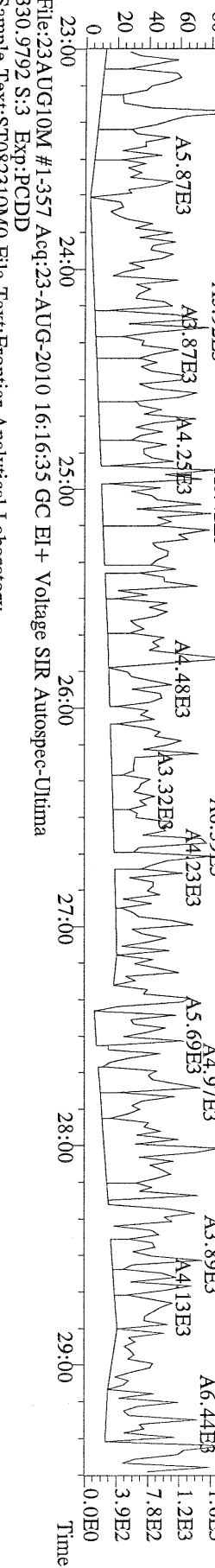
File:23AUG10M #1-357 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



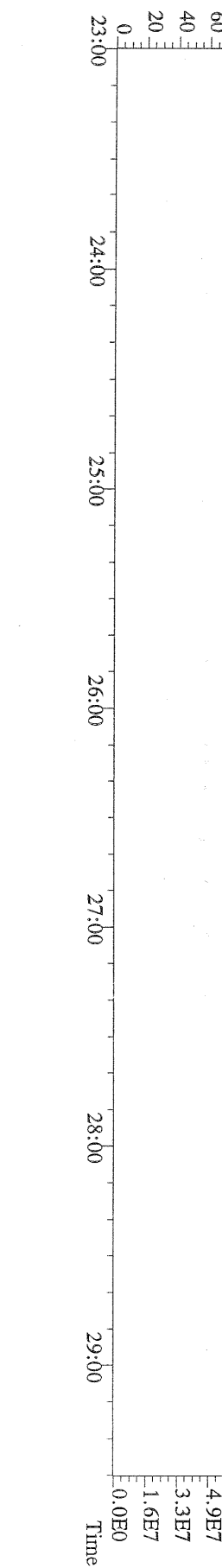
File:23AUG10M #1-357 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
 341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



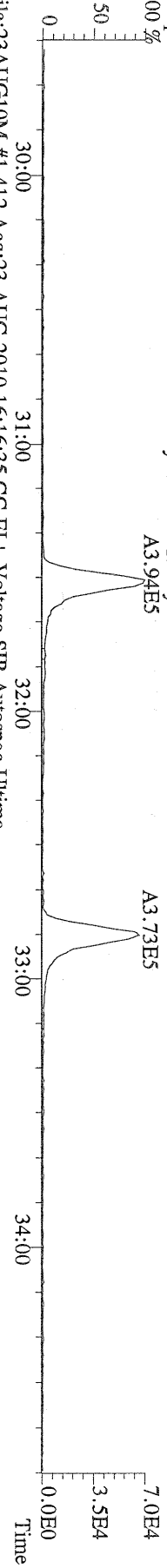
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 409.7974 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



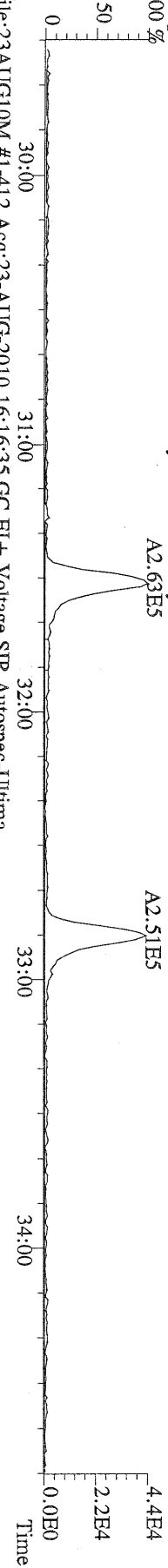
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 330.9792 S:3 Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



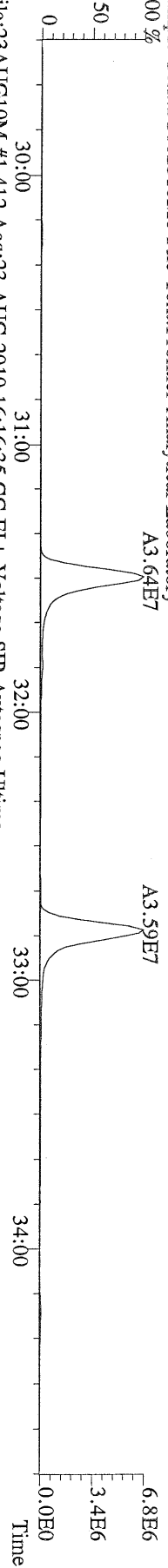
File:23AUG10M #1-412 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp.:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



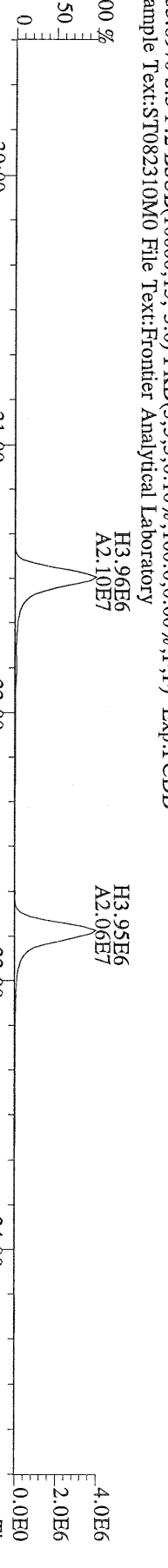
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 341.8568 S:3 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp.:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



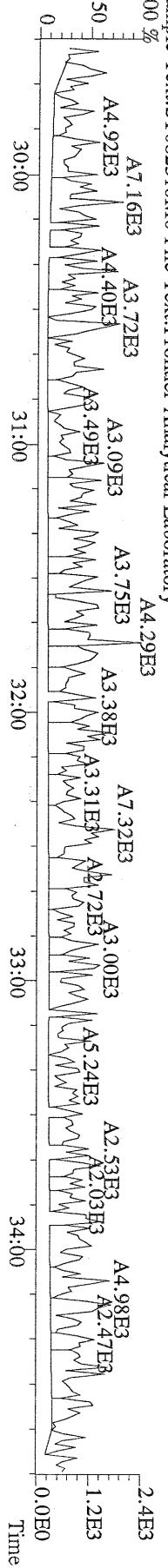
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 351.9000 S:3 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp.:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



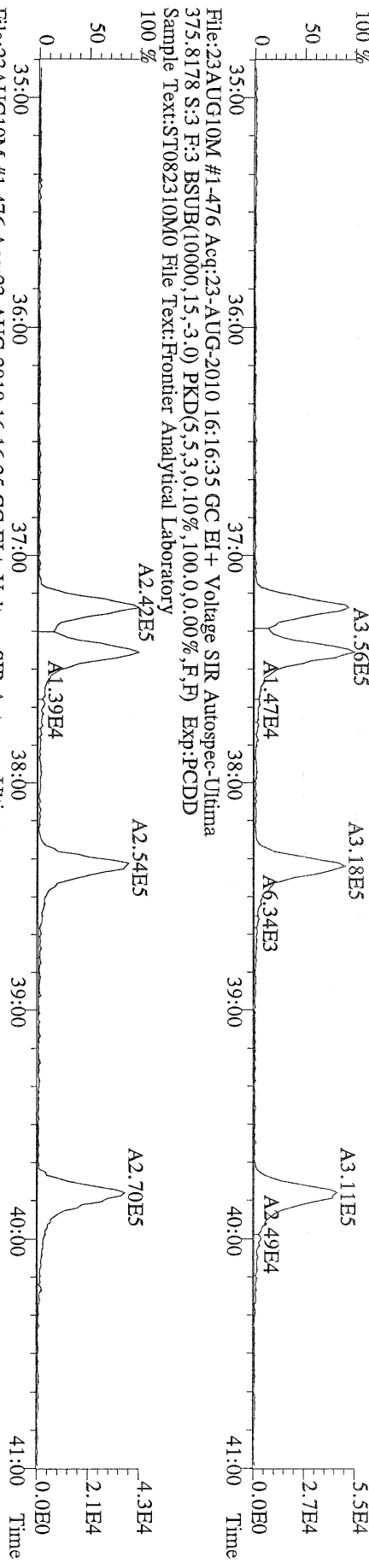
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 353.8970 S:3 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp.:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



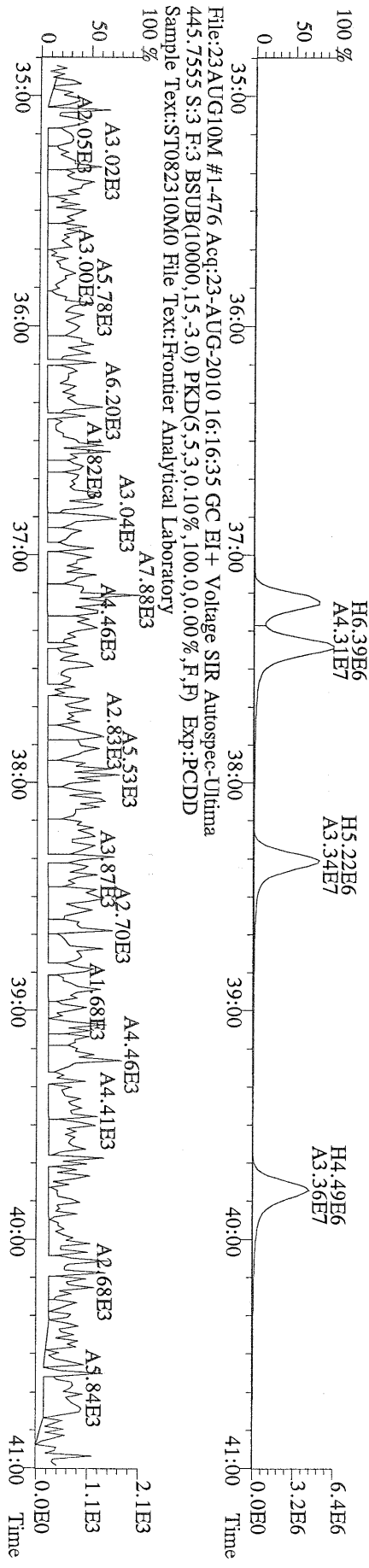
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 409.7974 S:3 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp.:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



File:23AUG10M #1-476 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory

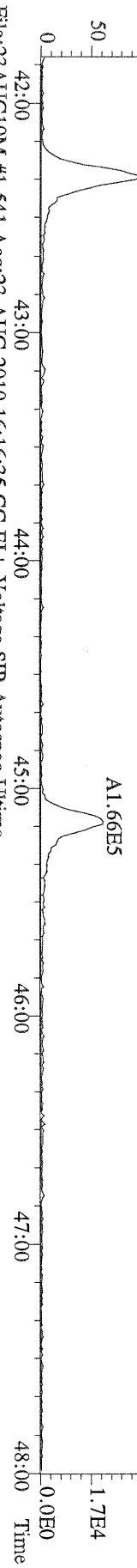


File:23AUG10M #1-476 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory

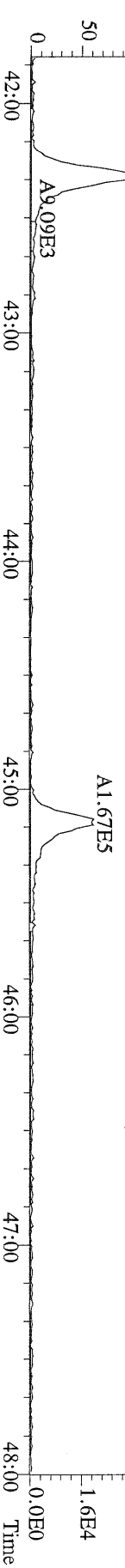


File:23AUG10M #1-476 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory

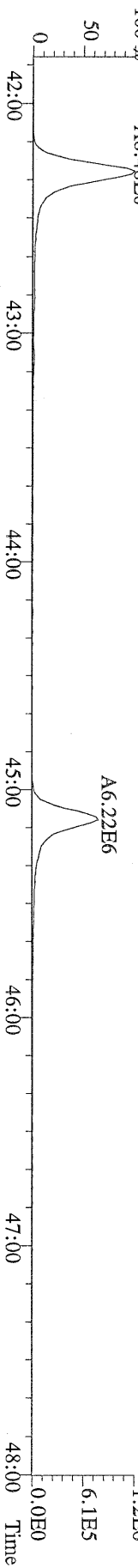
File:23AUG10M #1-541 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
 407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory
 100 % A2.33E5



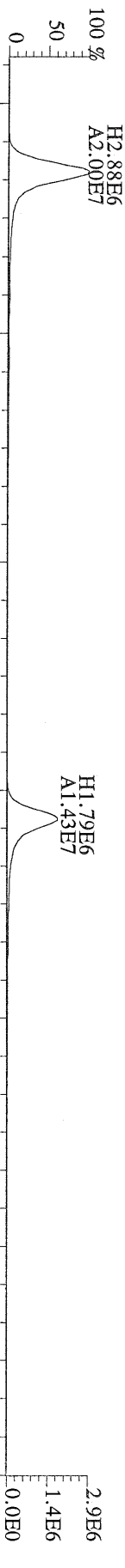
File:23AUG10M #1-541 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
 409.7788 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory
 100 % A2.24E5



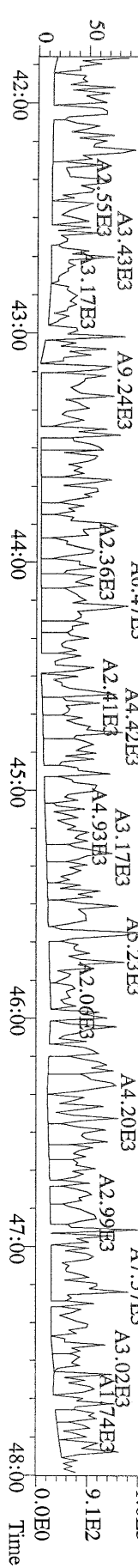
File:23AUG10M #1-541 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
 417.8253 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory
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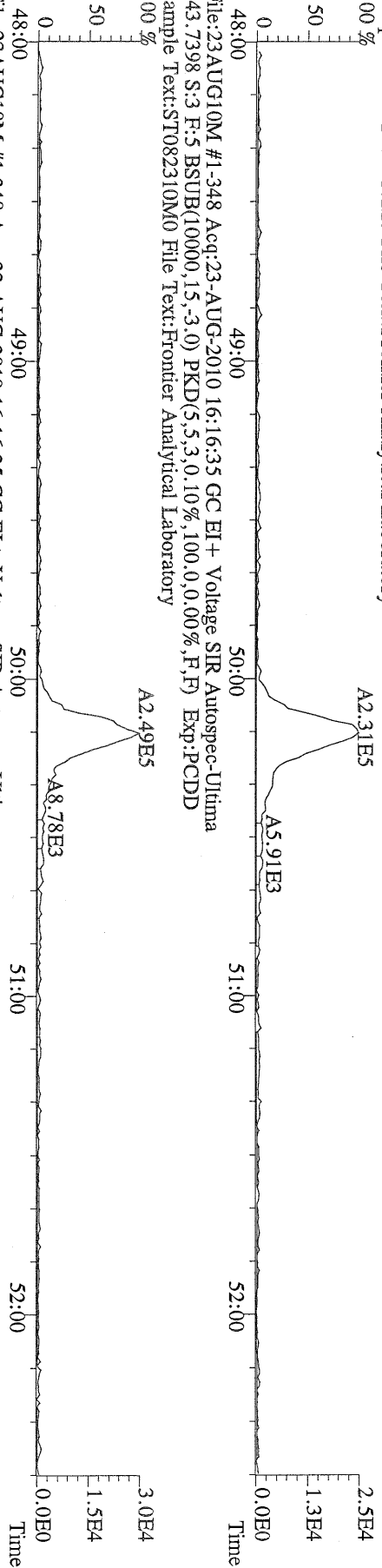
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 419.8220 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



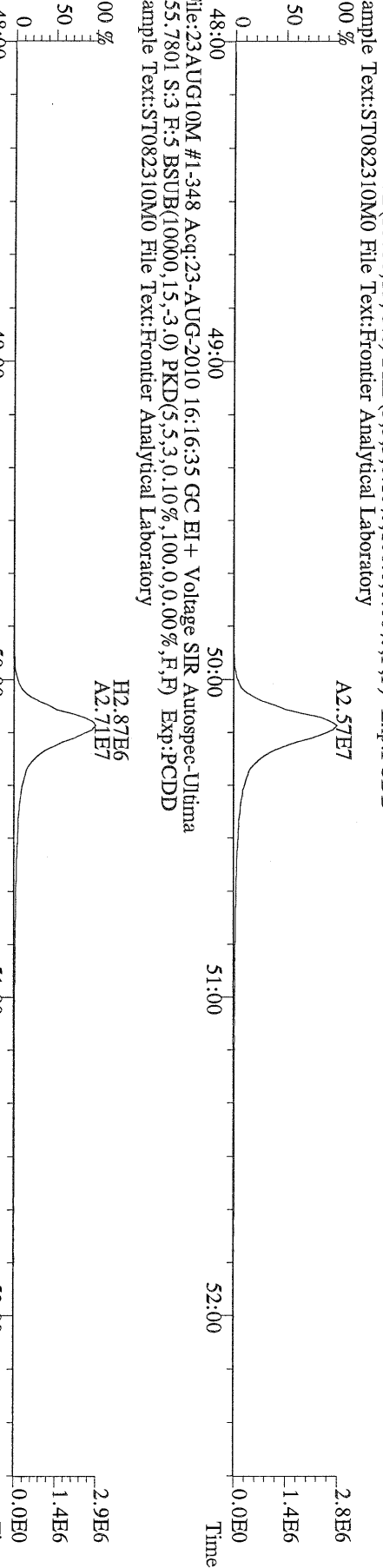
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 479.7165 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



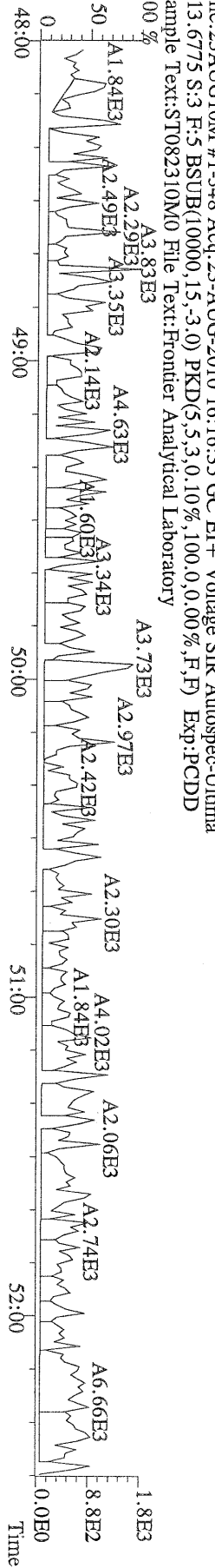
File:23AUG10M #1-348 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory
100 %



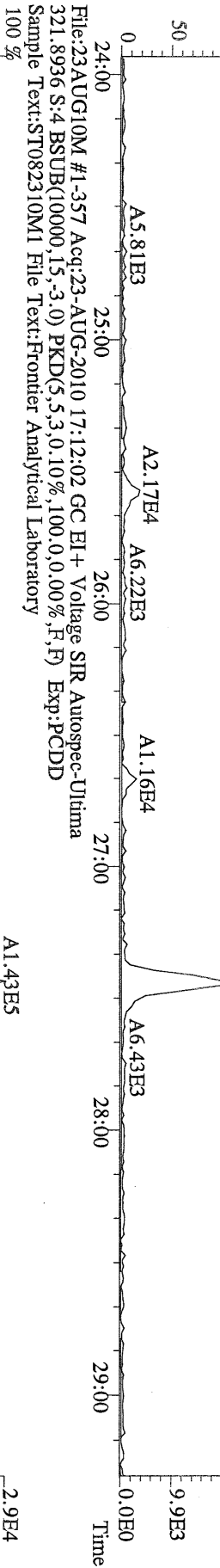
File:23AUG10M #1-348 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory
100 %



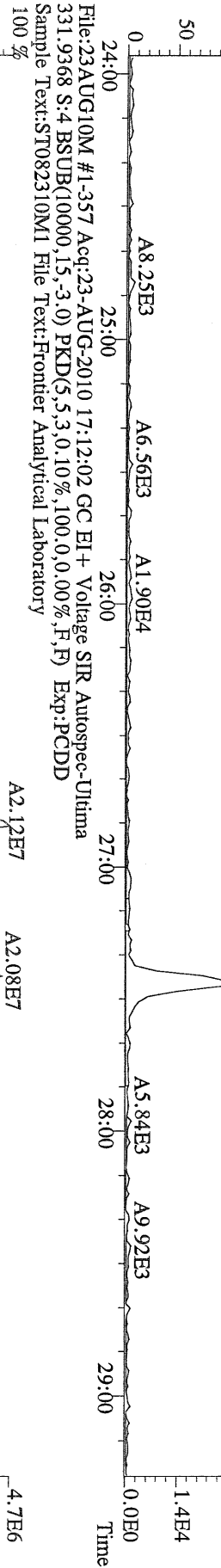
File:23AUG10M #1-348 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory
100 %



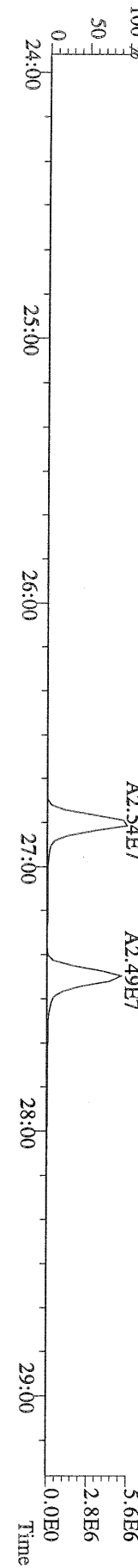
File:23AUG10M #1-357 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
 319.8965 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



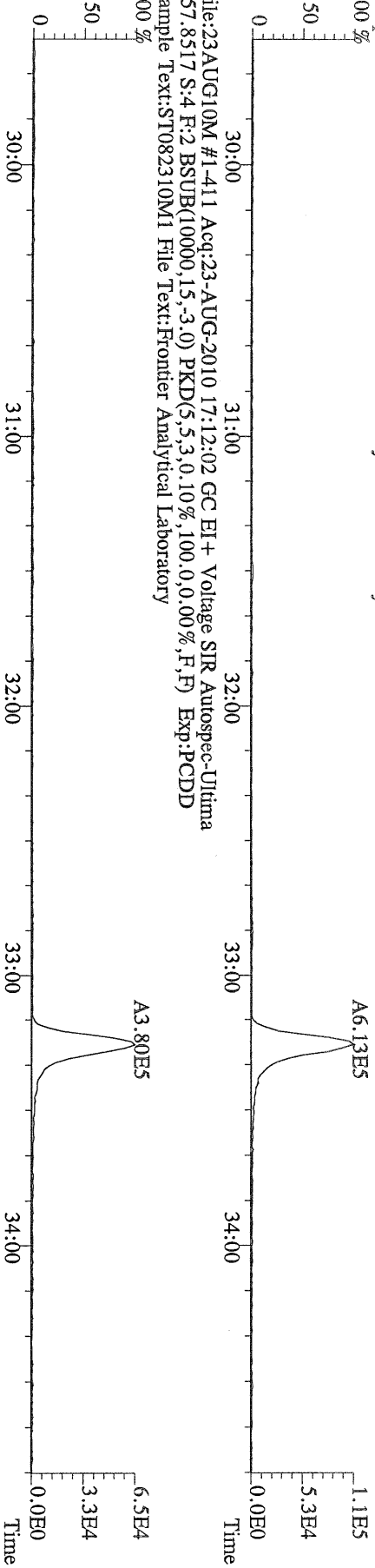
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 327.8847 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



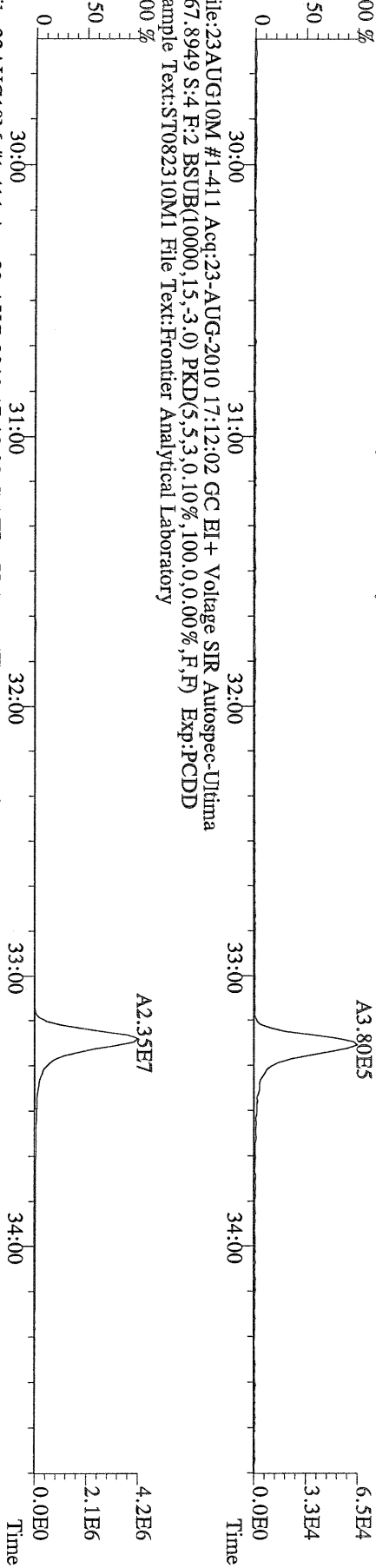
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 331.9368 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



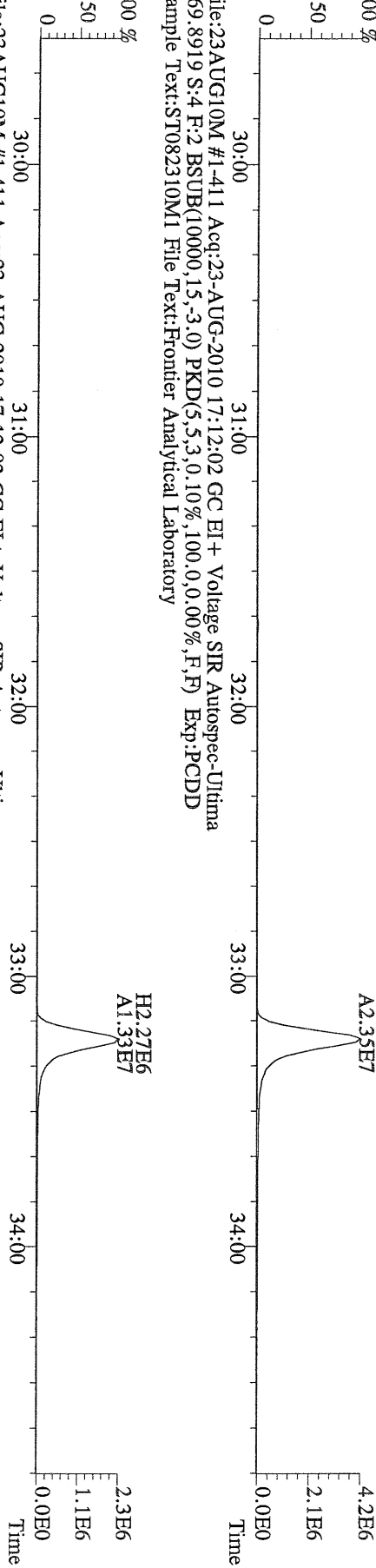
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355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory
100 %



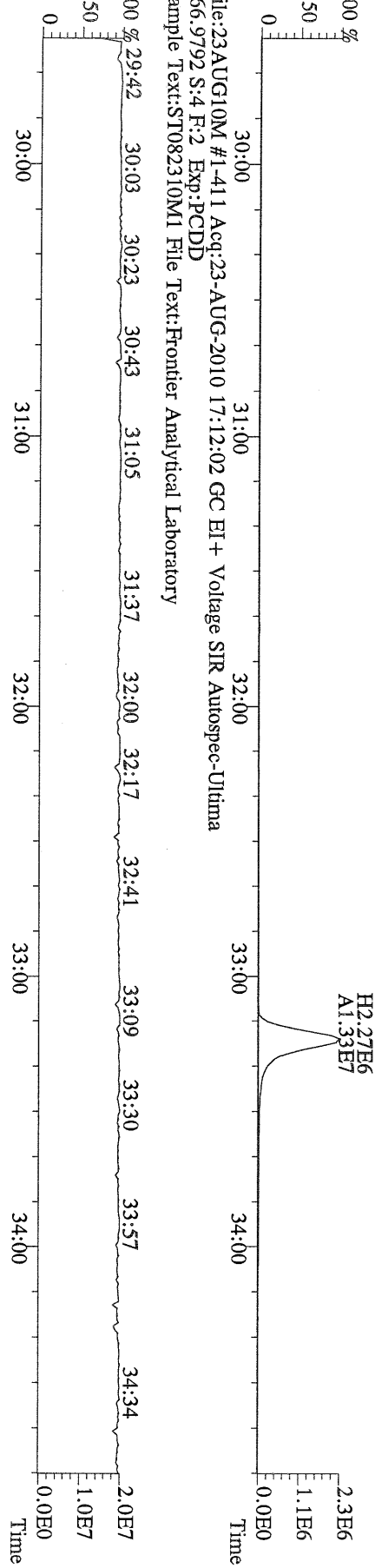
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357.8517 S:4 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory
100 %



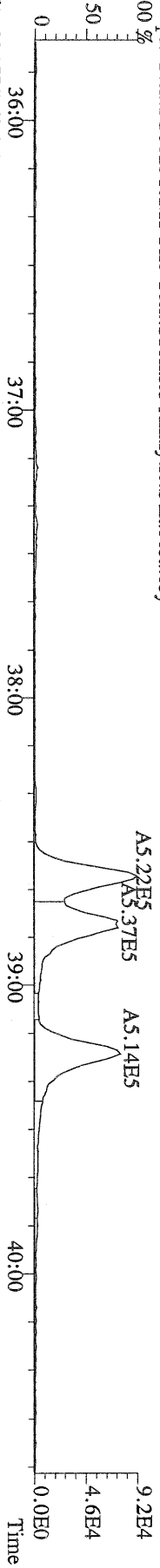
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Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory
100 %



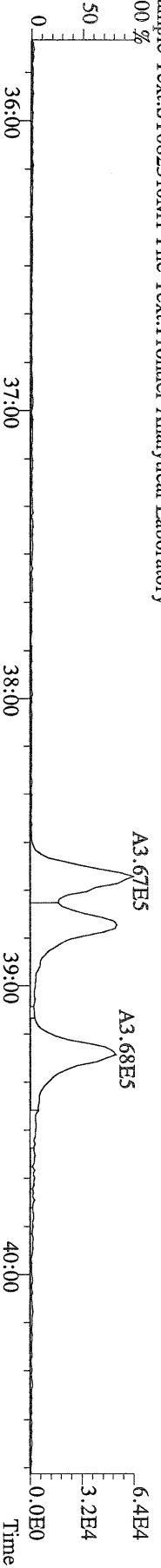
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Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



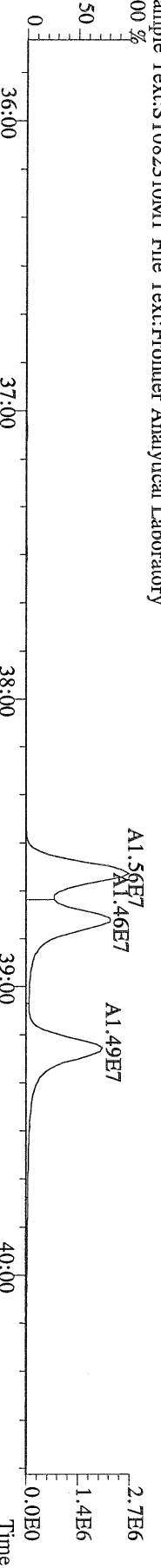
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 389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



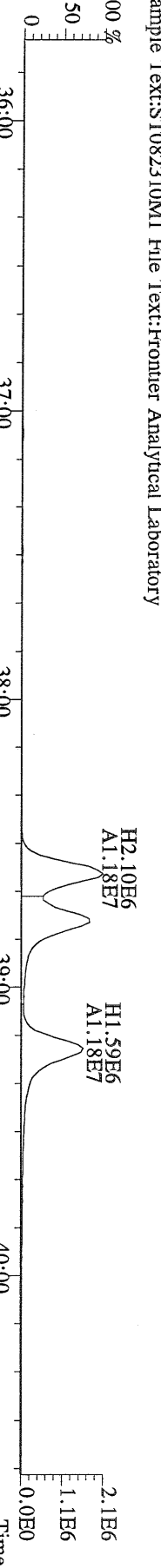
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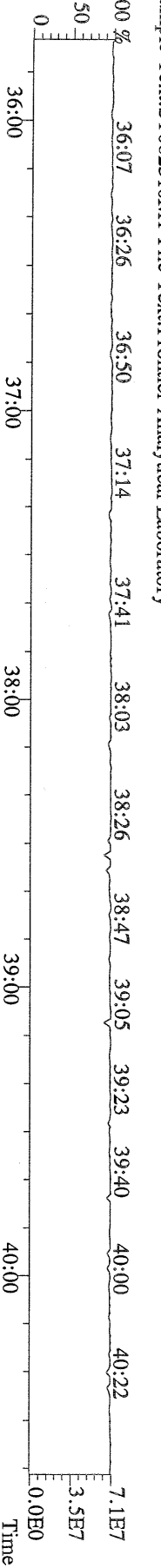
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 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



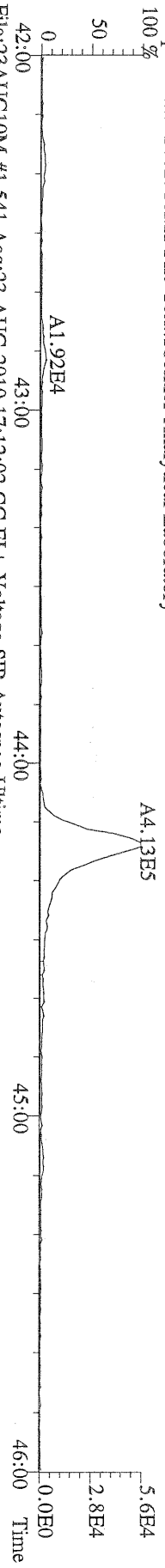
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 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



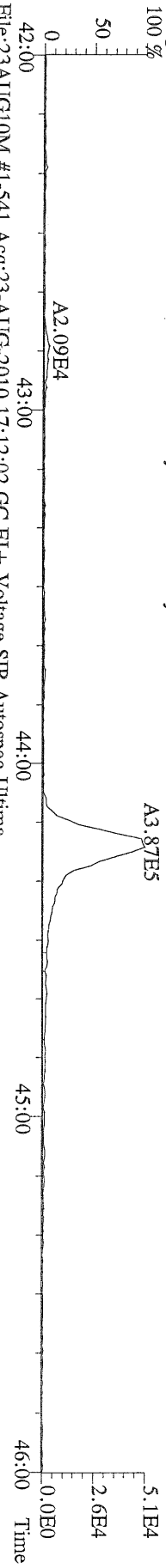
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 380.9760 S:4 F:3 Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



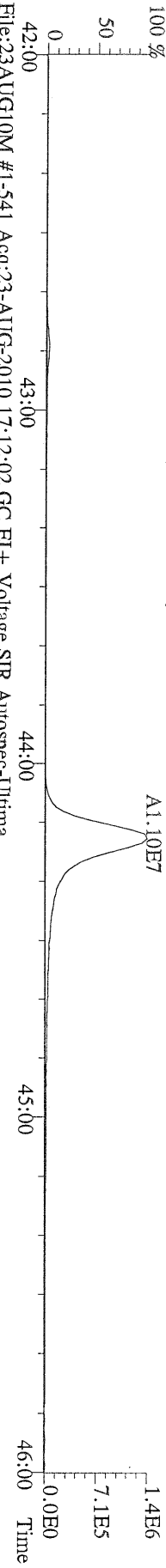
File:23AUG10M #1-541 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory
100 %



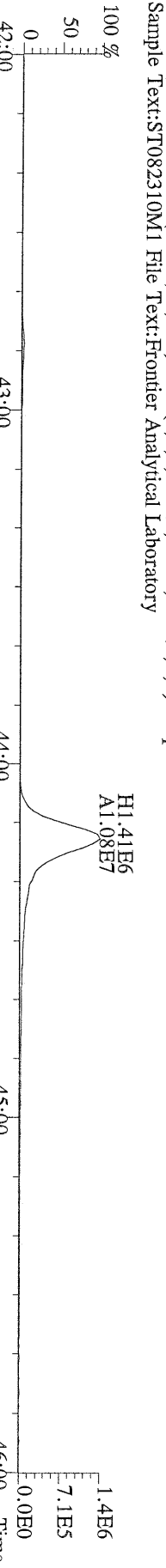
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425.7737 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory
100 %



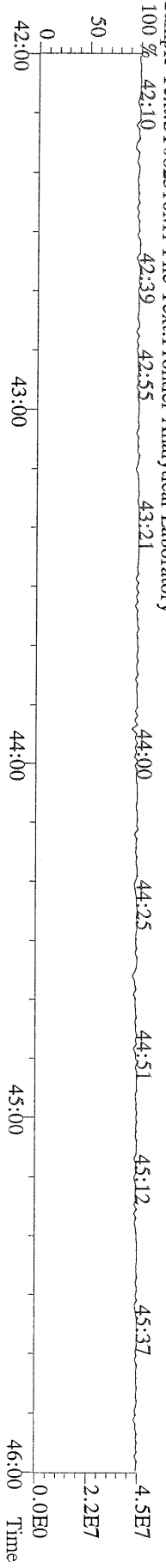
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435.8169 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory
100 %



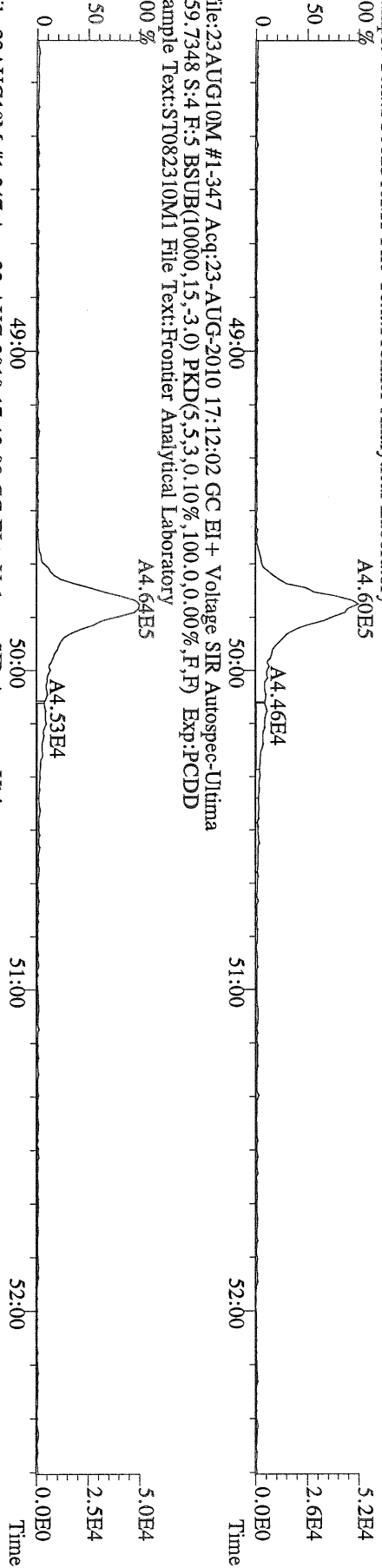
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437.8140 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
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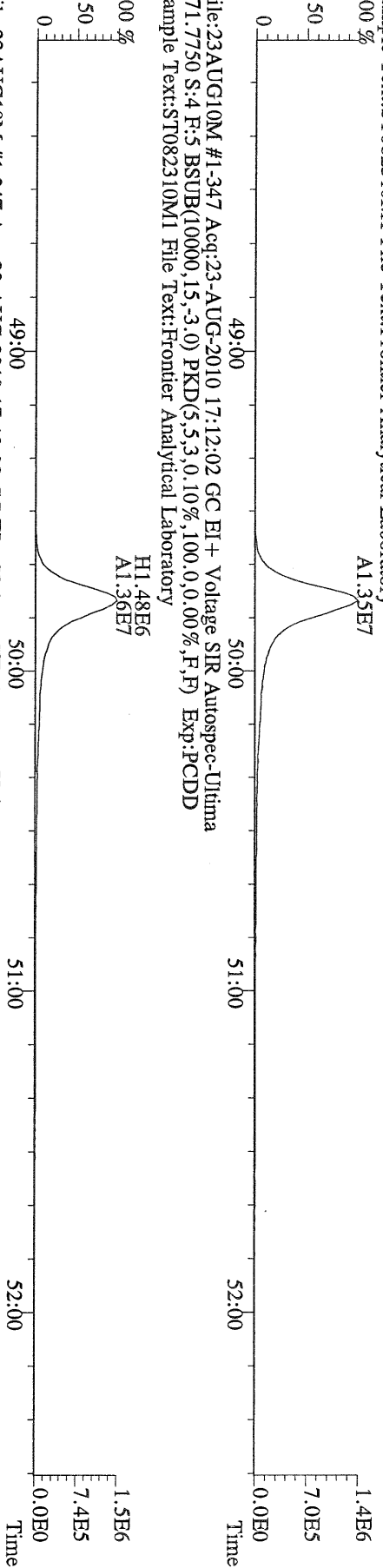
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430.9728 S:4 F:4 Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory
100 %



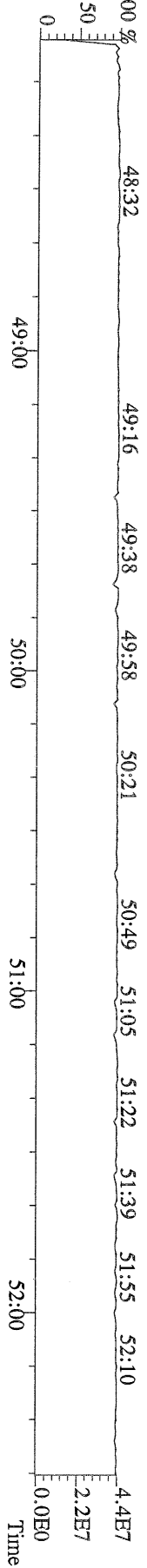
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457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory
100 %



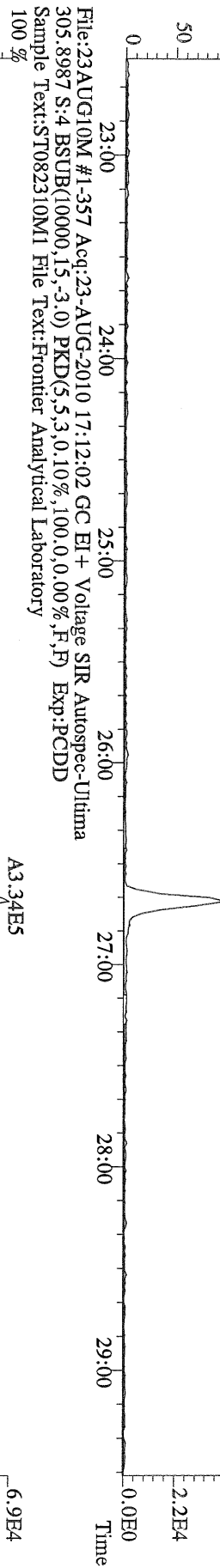
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469.7780 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory
100 %



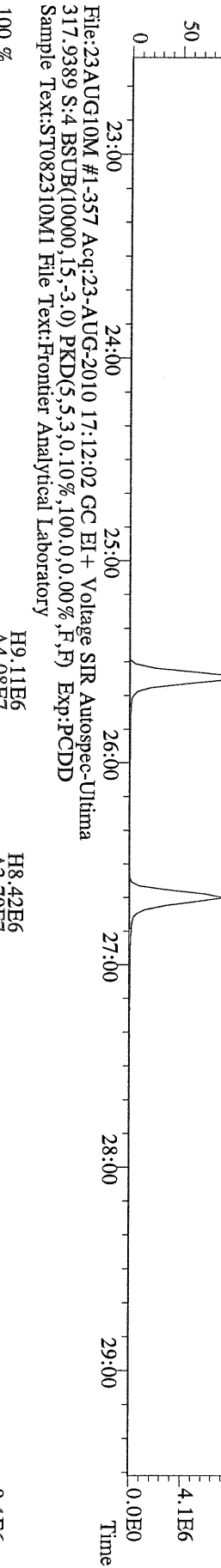
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Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



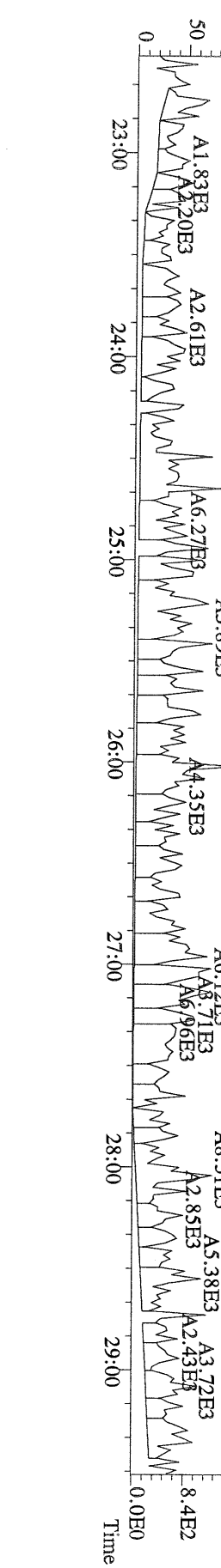
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 303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



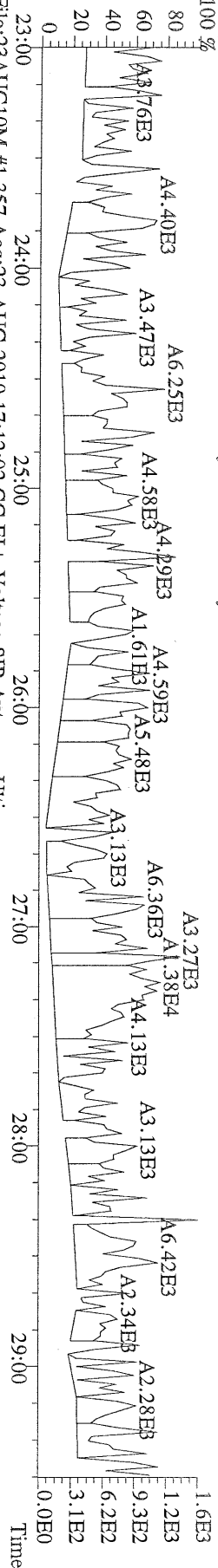
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 315.9419 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



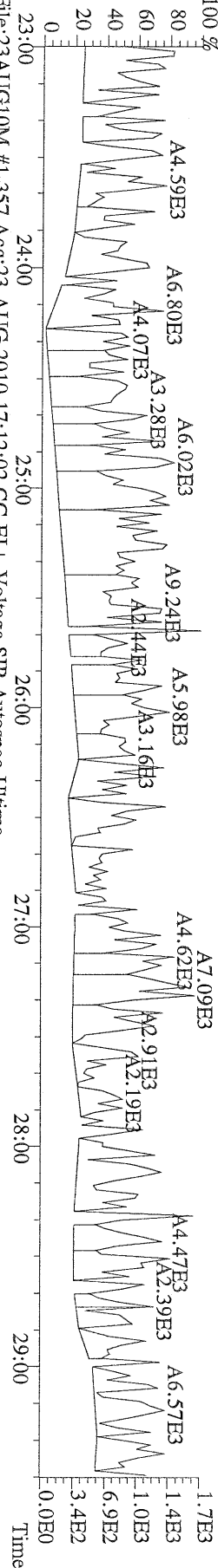
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 317.9389 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
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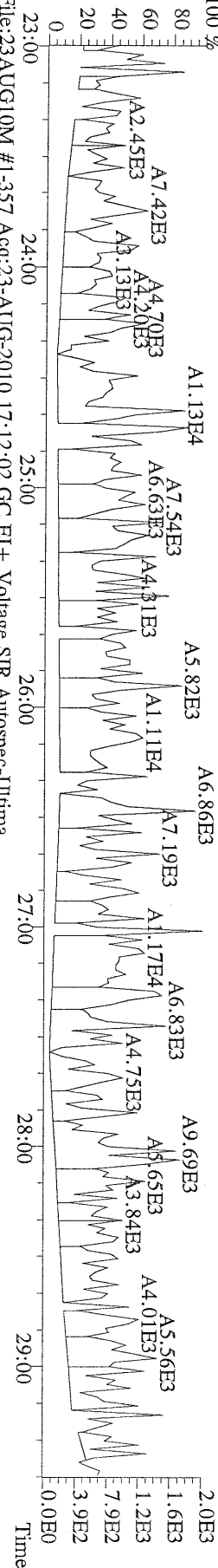
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339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



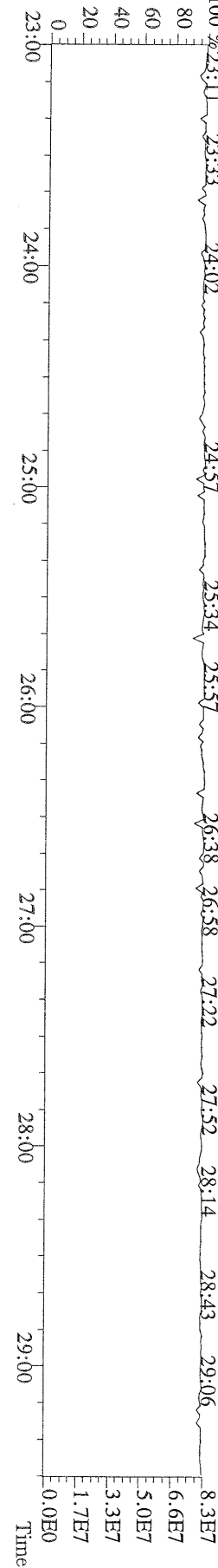
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341.8568 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



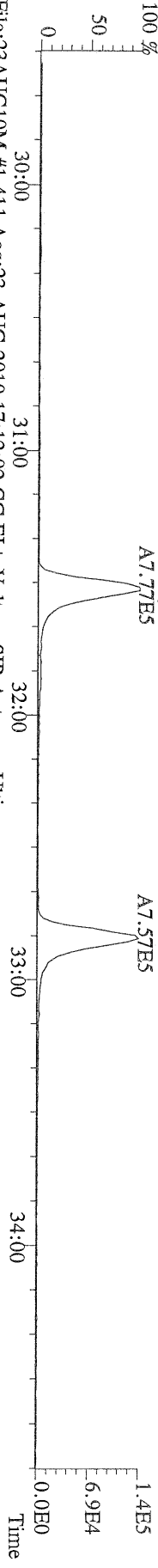
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409.7974 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



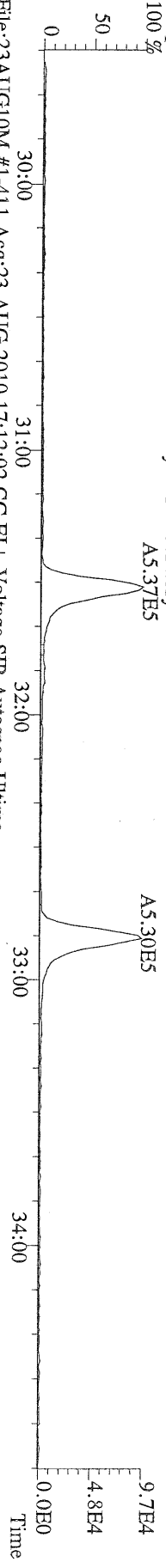
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330.9792 S:4 Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



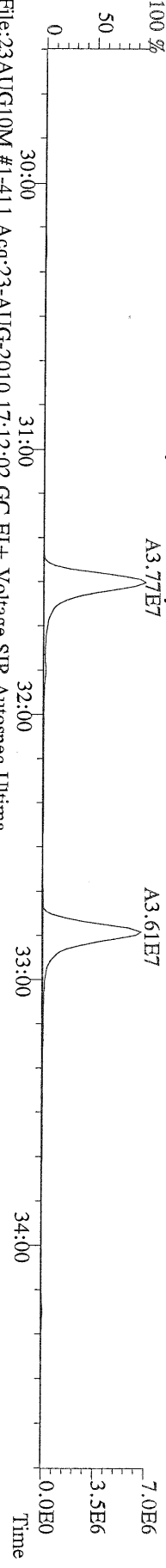
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 339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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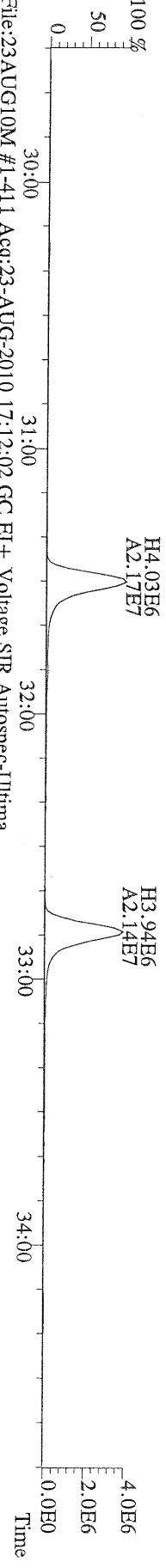
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 341.8568 S:4 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



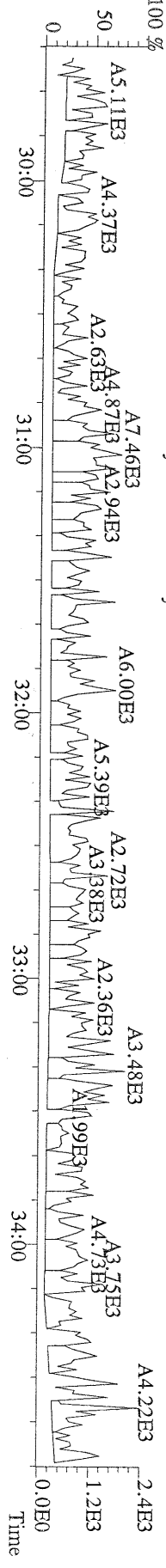
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 351.9000 S:4 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



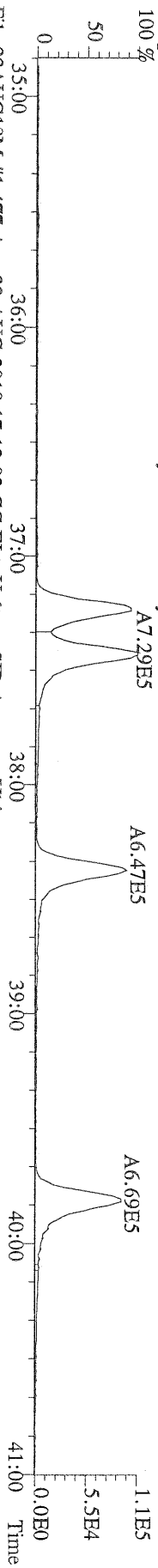
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 353.8970 S:4 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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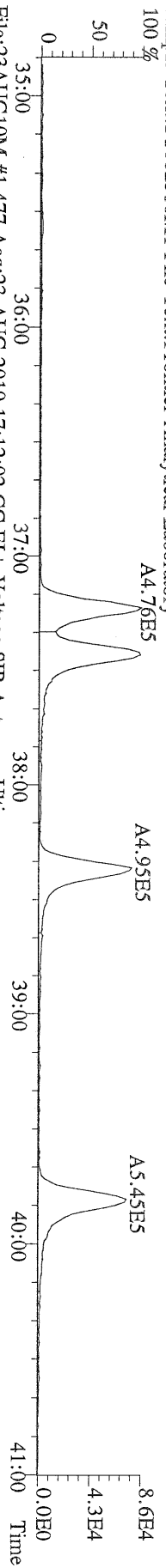
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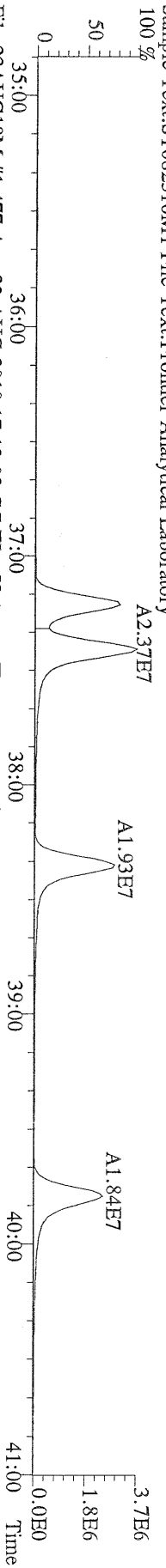
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 373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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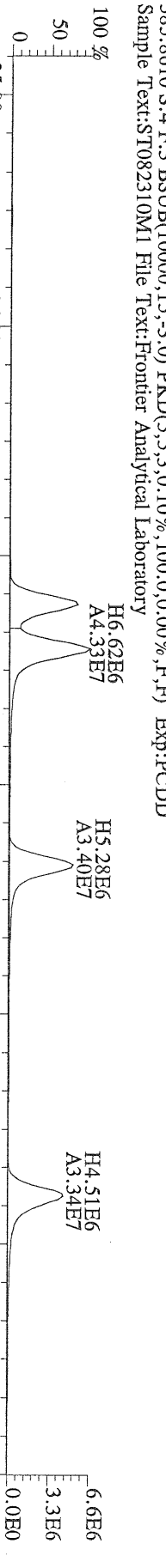
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 375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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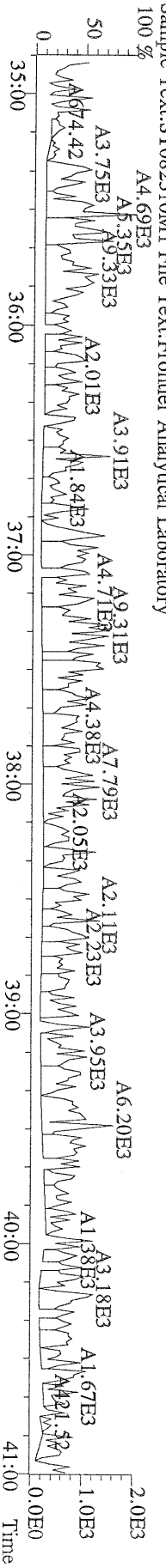
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 383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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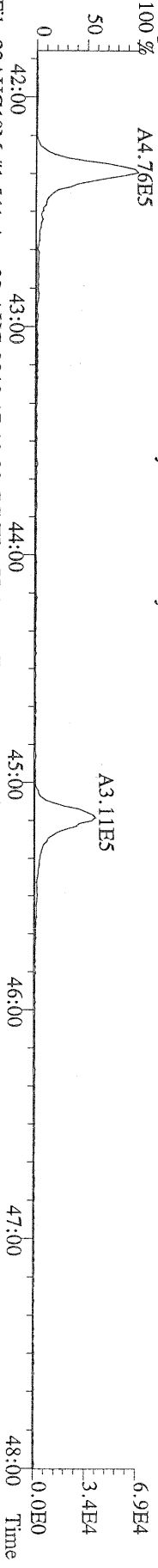
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 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



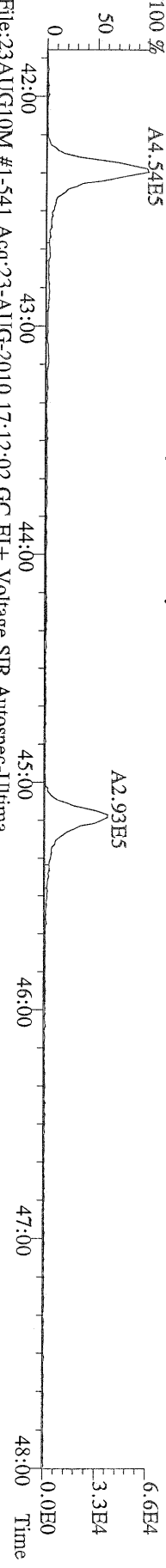
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 445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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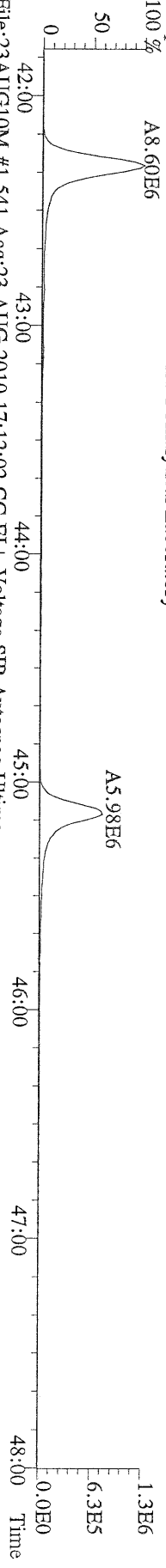
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407.7818 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
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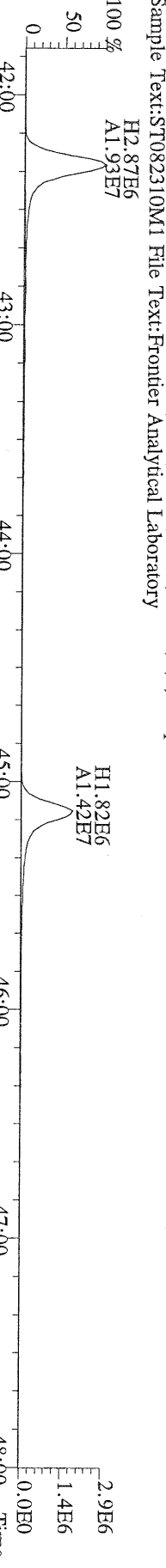
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409.7788 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
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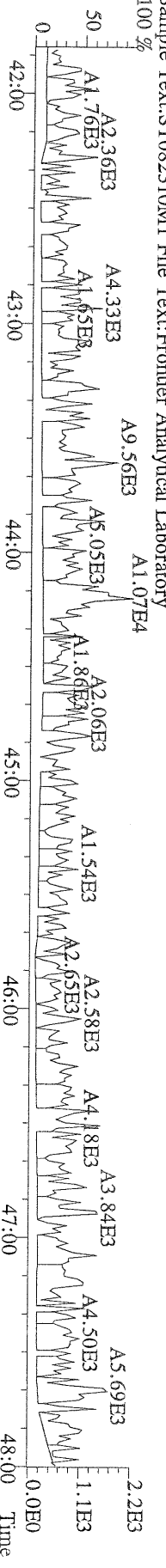
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417.8253 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
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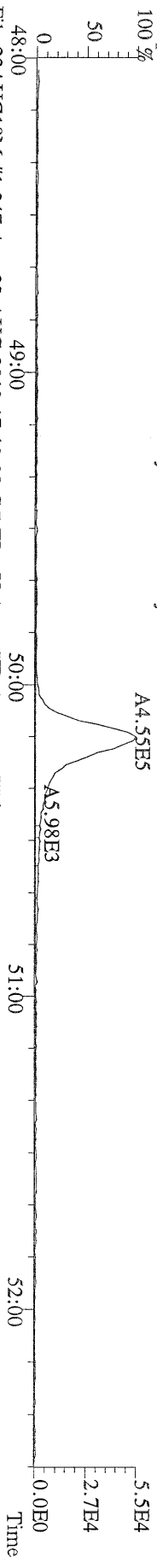
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419.8220 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



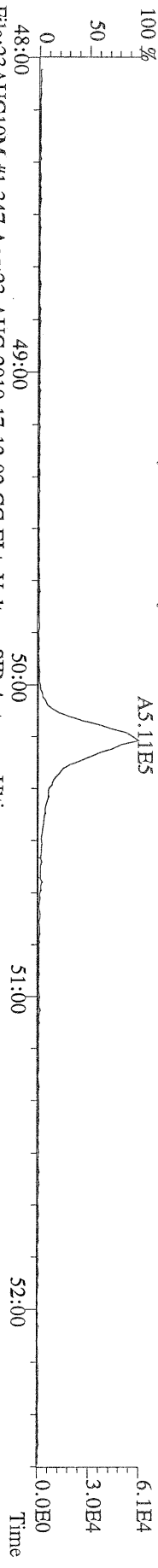
File:23AUG10M #1-541 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



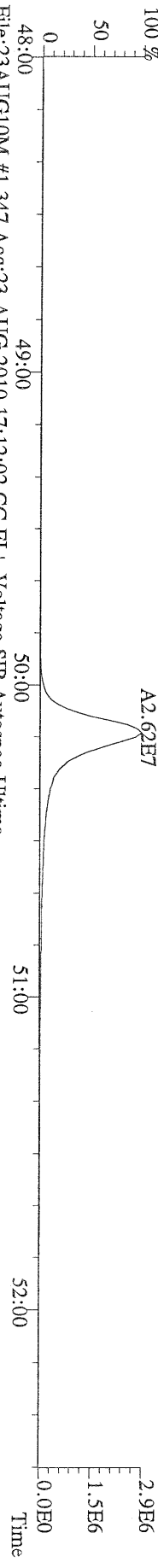
File:23AUG10M #1-347 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
 441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



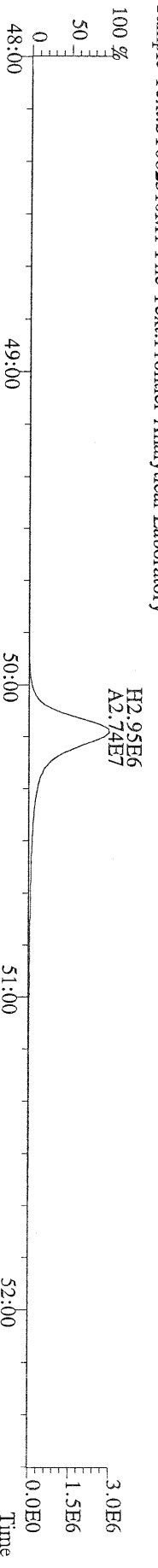
File:23AUG10M #1-347 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
 443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



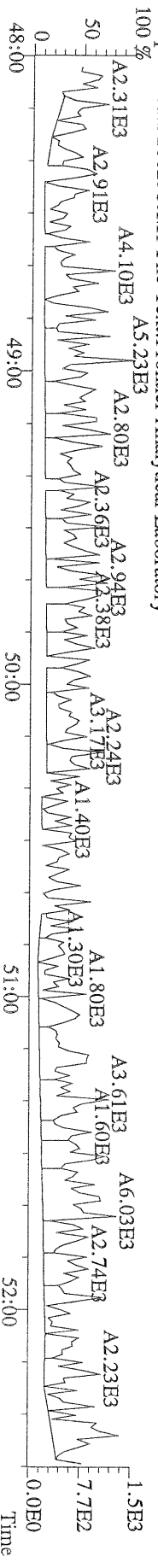
File:23AUG10M #1-347 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
 453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



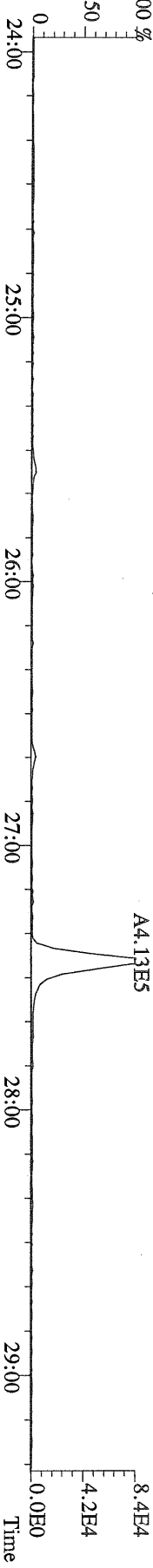
File:23AUG10M #1-347 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
 455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



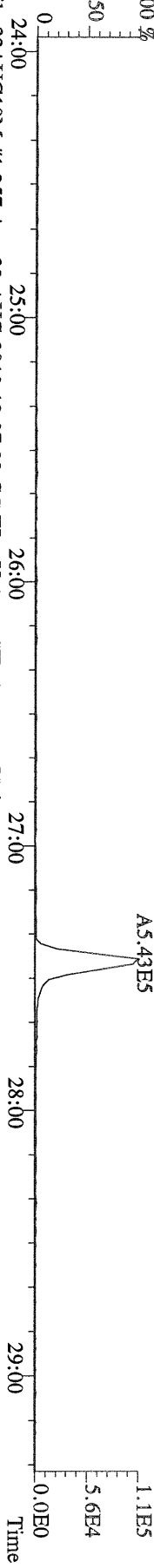
File:23AUG10M #1-347 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
 513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



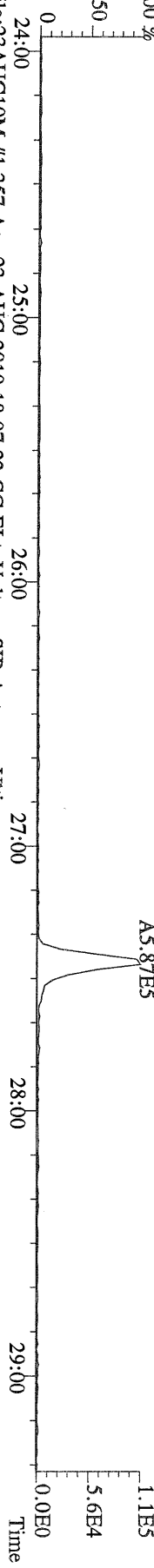
File:23AUG10M #1-357 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory
100 %



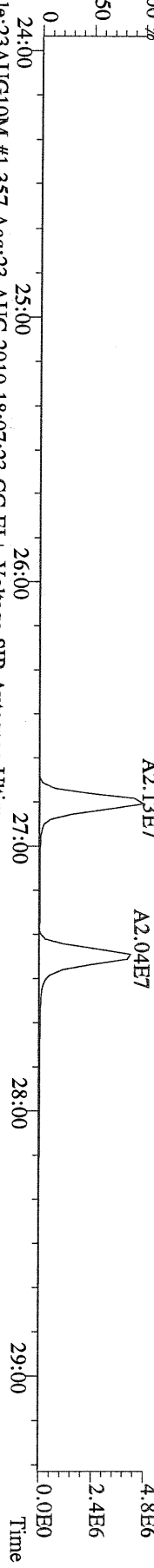
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321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory
100 %



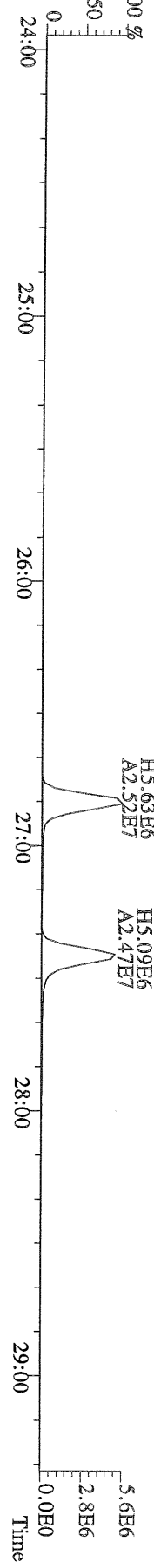
File:23AUG10M #1-357 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory
100 %



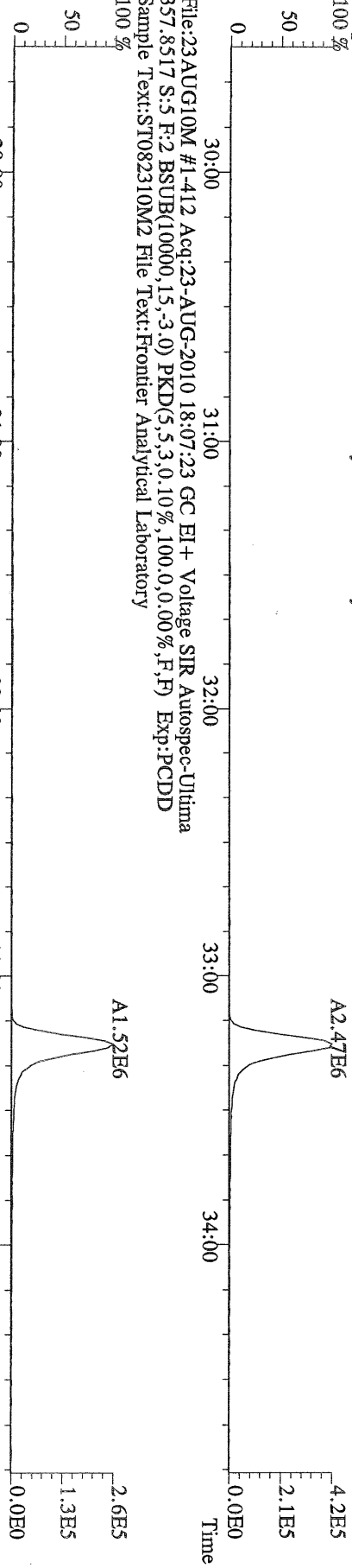
File:23AUG10M #1-357 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory
100 %



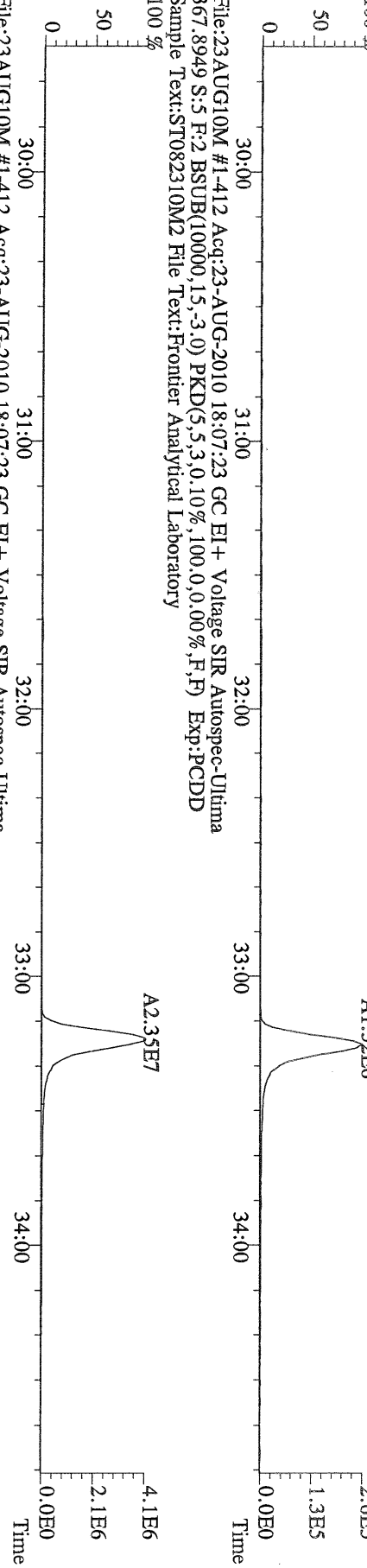
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333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



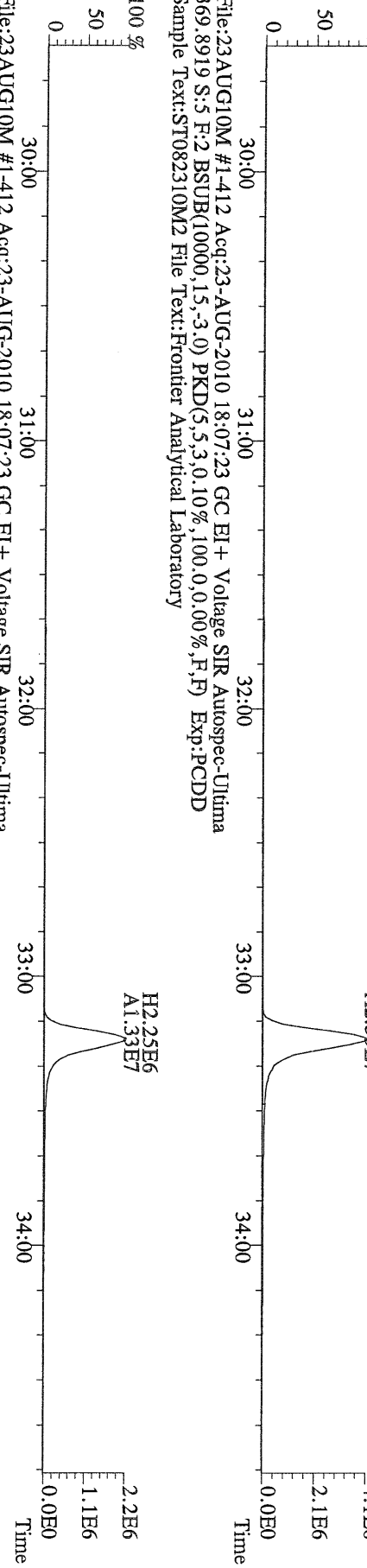
File:23AUG10M #1-412 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



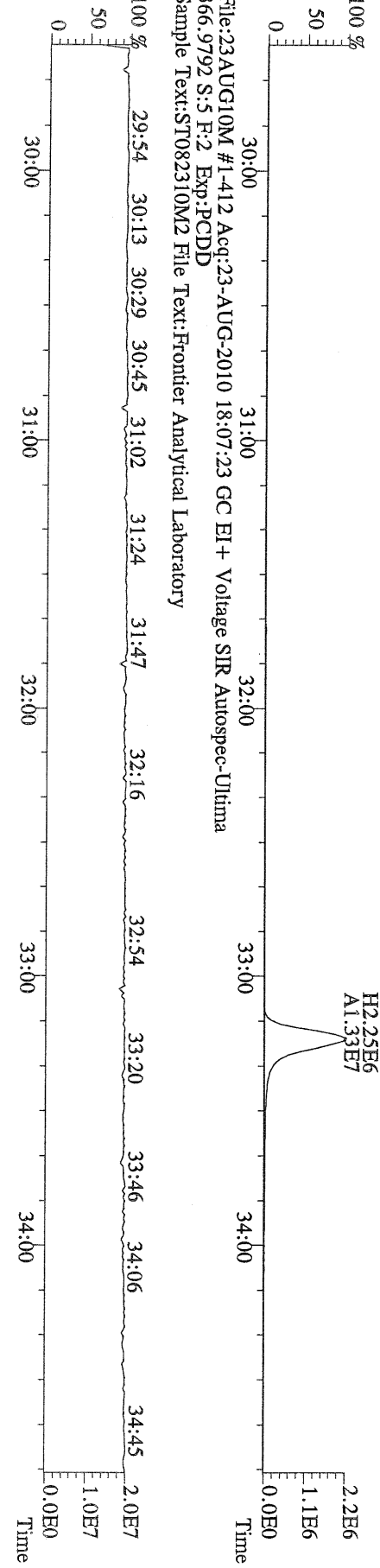
File:23AUG10M #1-412 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



File:23AUG10M #1-412 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory

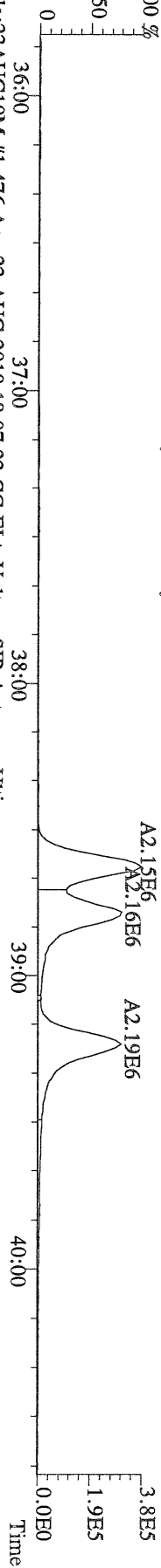


File:23AUG10M #1-412 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory

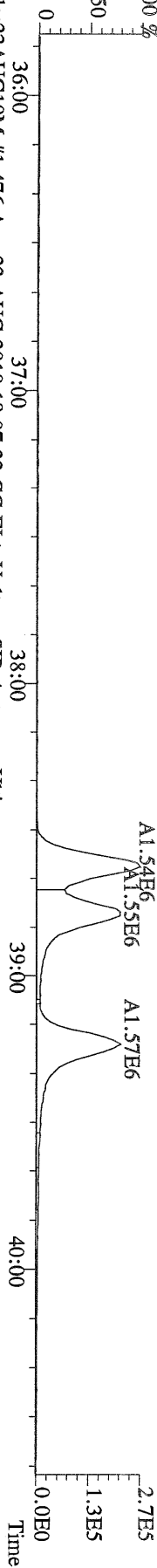


File:23AUG10M #1-412 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:5 F:2 Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory

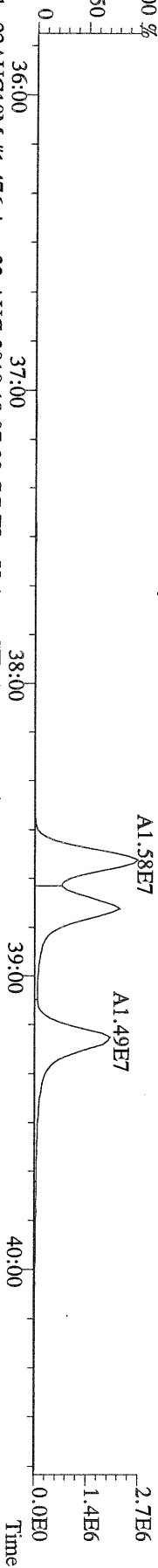
File:23AUG10M #1-476 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
 389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp.:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



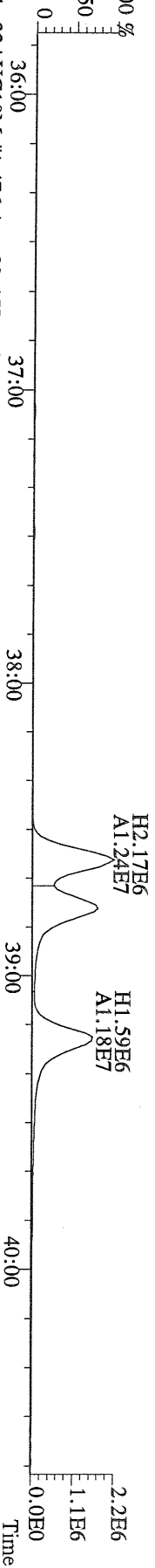
File:23AUG10M #1-476 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
 391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp.:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



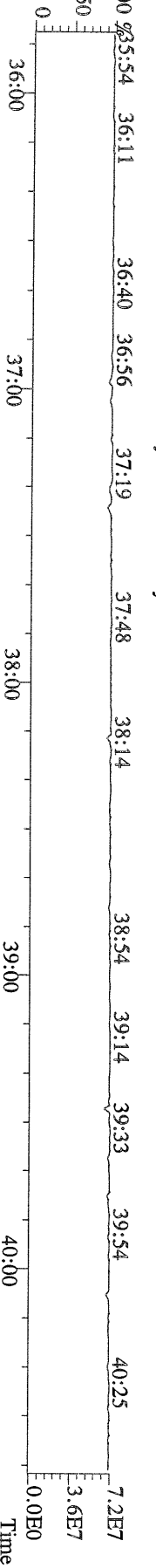
File:23AUG10M #1-476 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
 401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp.:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



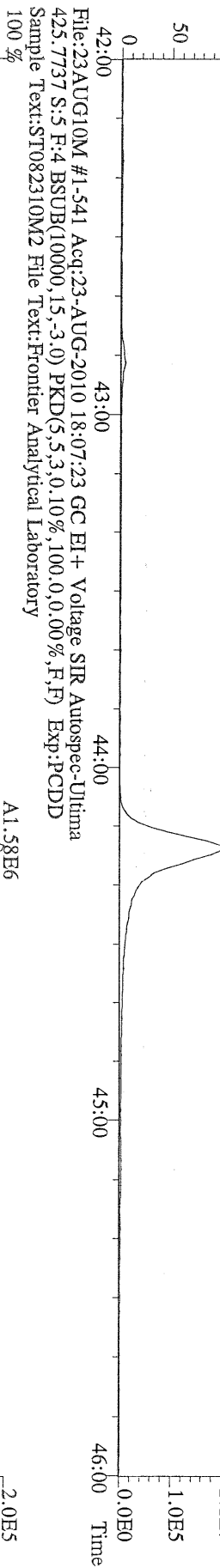
File:23AUG10M #1-476 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
 403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp.:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



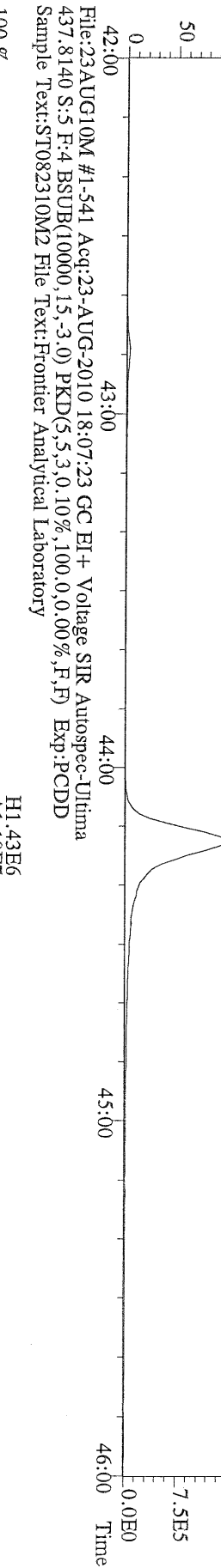
File:23AUG10M #1-476 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
 380.9760 S:5 F:3 Exp.:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



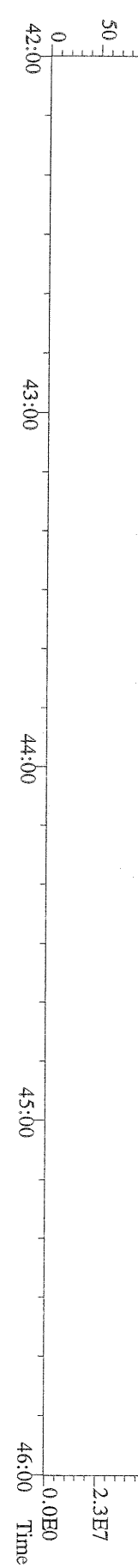
File:23AUG10M #1-541 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory
100 %



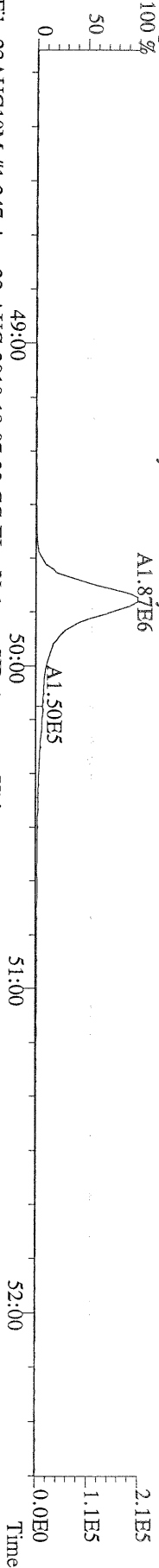
File:23AUG10M #1-541 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory
100 %



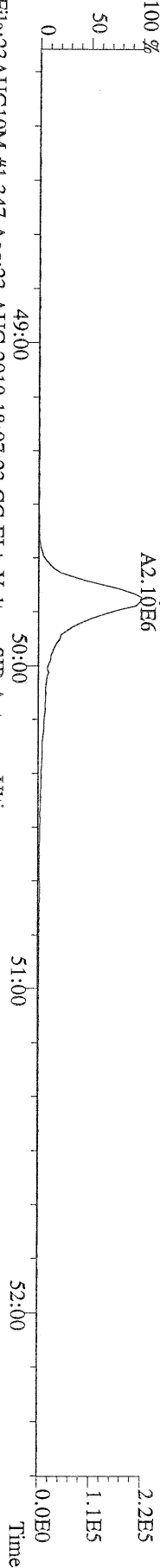
File:23AUG10M #1-541 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:5 F:4 Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory
100 %



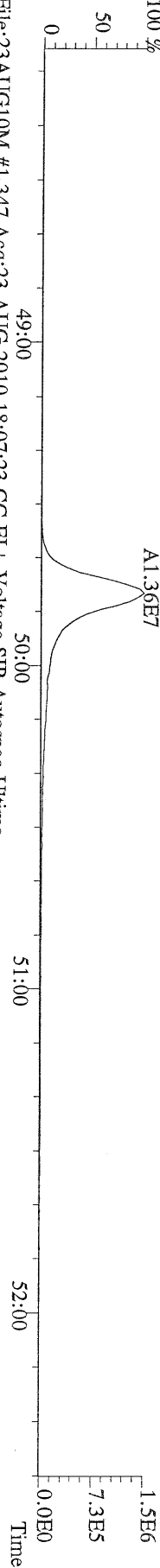
File:23AUG10M #1-347 Acq:23-AUG-2010 18:07:23 GC EI + Voltage SIR Autospec-Ultima
 457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



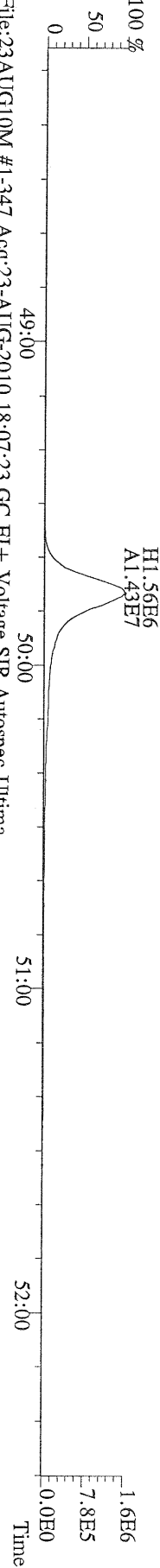
File:23AUG10M #1-347 Acq:23-AUG-2010 18:07:23 GC EI + Voltage SIR Autospec-Ultima
 459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



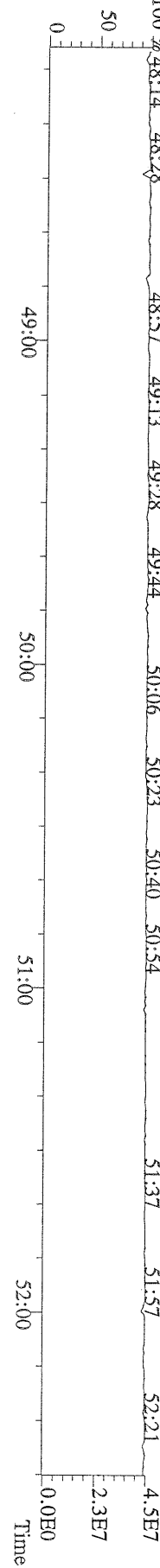
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 469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



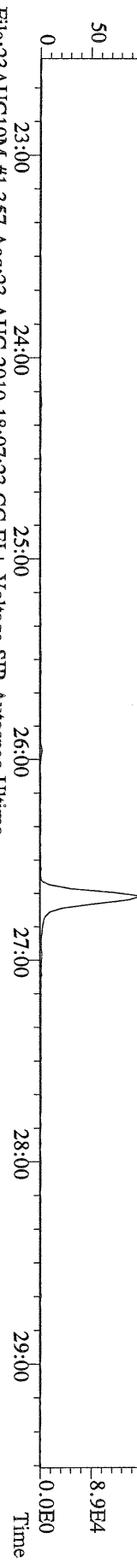
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 471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



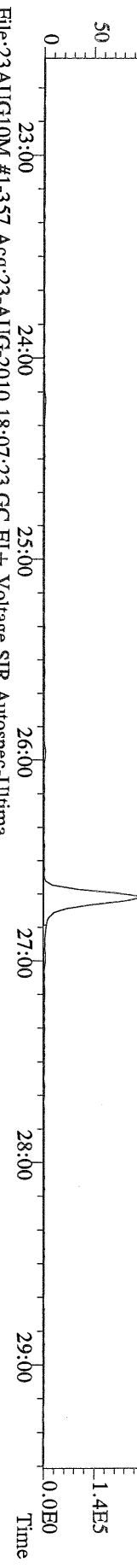
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 454.9728 S:5 F:5 Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



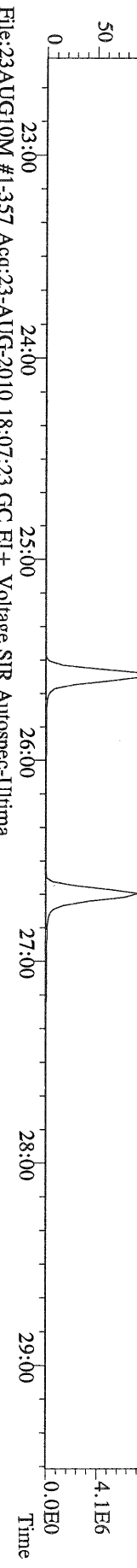
File:23AUG10M #1-357 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
 303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



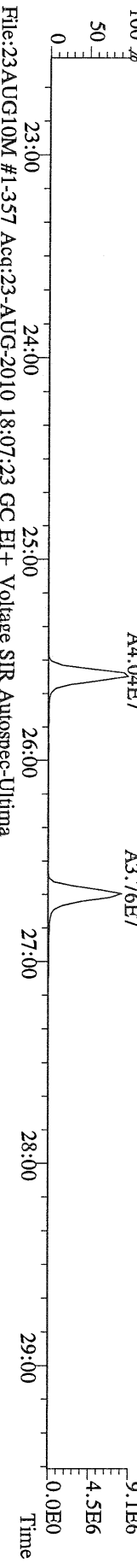
File:23AUG10M #1-357 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
 305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



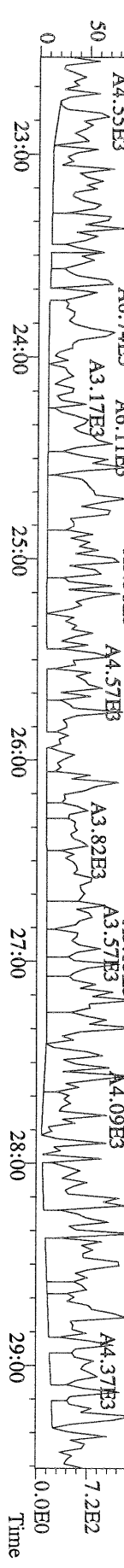
File:23AUG10M #1-357 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
 315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



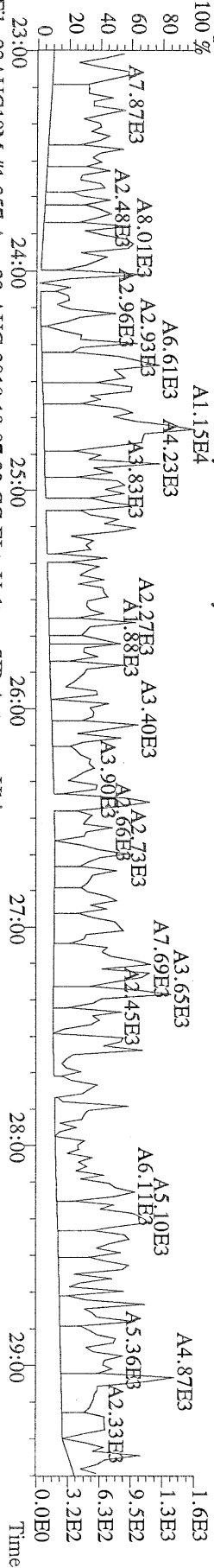
File:23AUG10M #1-357 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
 317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



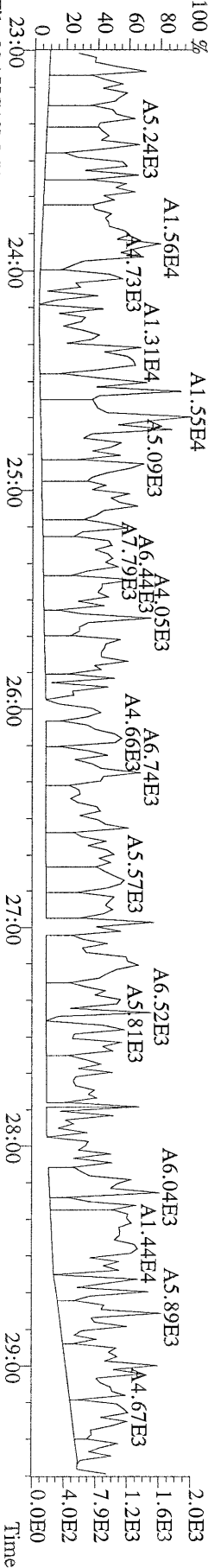
File:23AUG10M #1-357 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
 375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



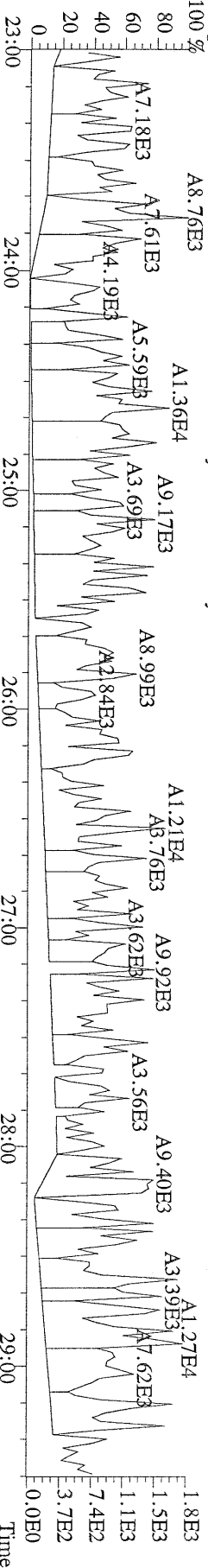
File:23AUG10M #1-357 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



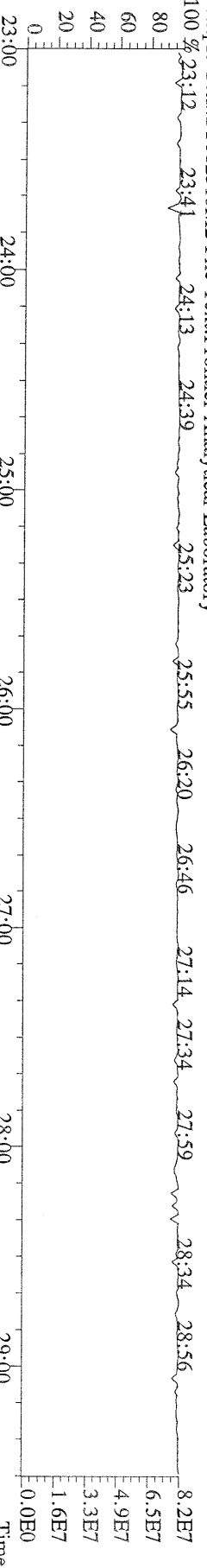
File:23AUG10M #1-357 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
 341.8568 S:5 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



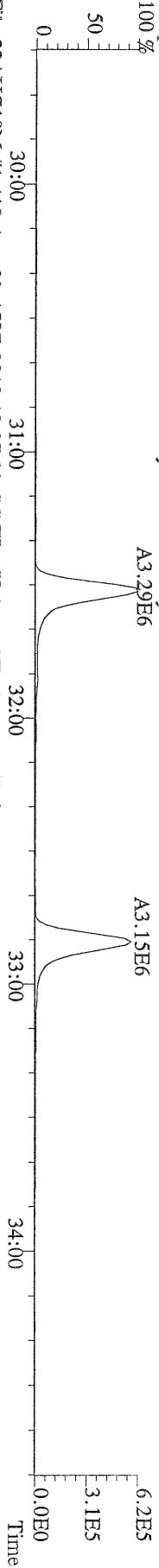
File:23AUG10M #1-357 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
 409.7974 S:5 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



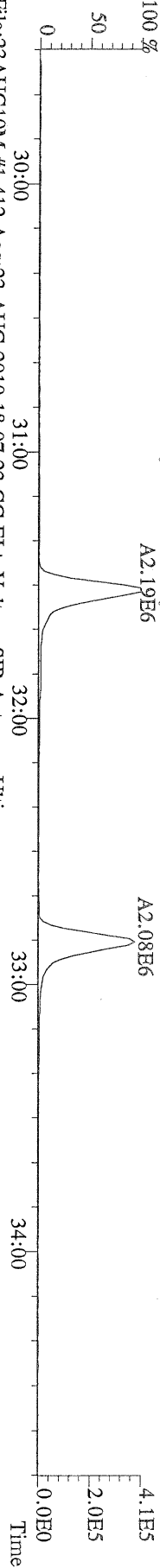
File:23AUG10M #1-357 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
 330.9792 S:5 Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



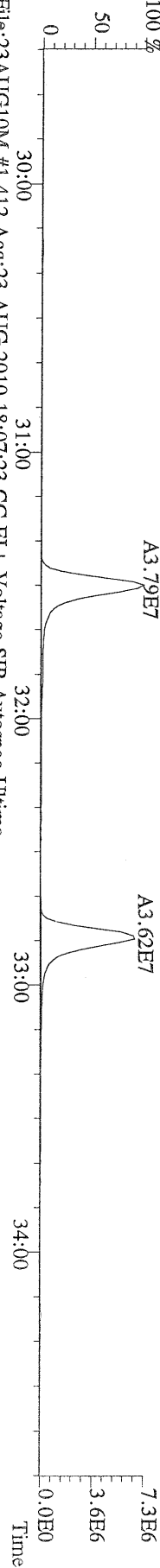
File:23AUG10M #1-412 Acq:23-AUG-2010 18:07:23 GC EI + Voltage SIR Autospec-Ultima
 339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



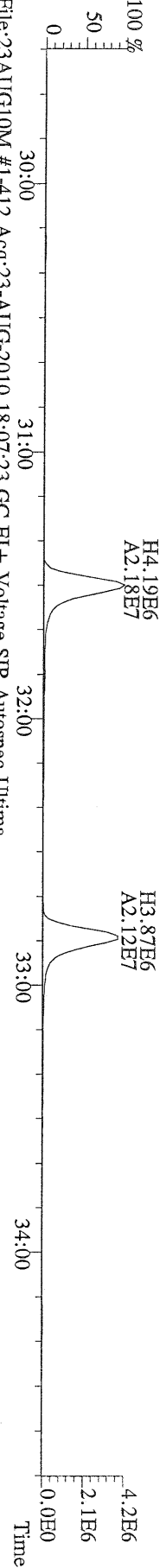
File:23AUG10M #1-412 Acq:23-AUG-2010 18:07:23 GC EI + Voltage SIR Autospec-Ultima
 341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



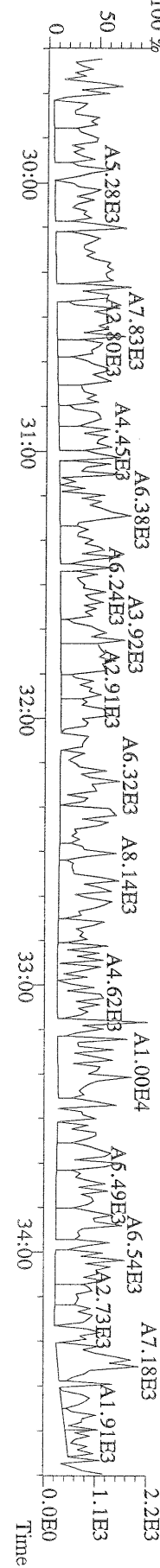
File:23AUG10M #1-412 Acq:23-AUG-2010 18:07:23 GC EI + Voltage SIR Autospec-Ultima
 351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



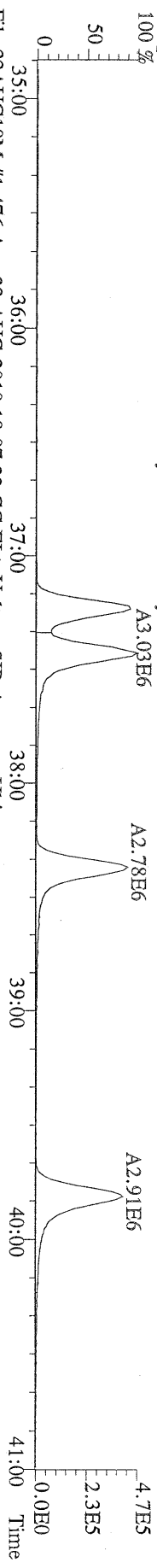
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 353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



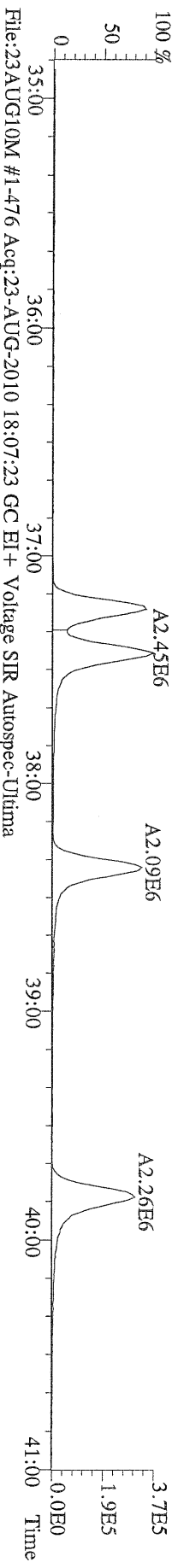
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 409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



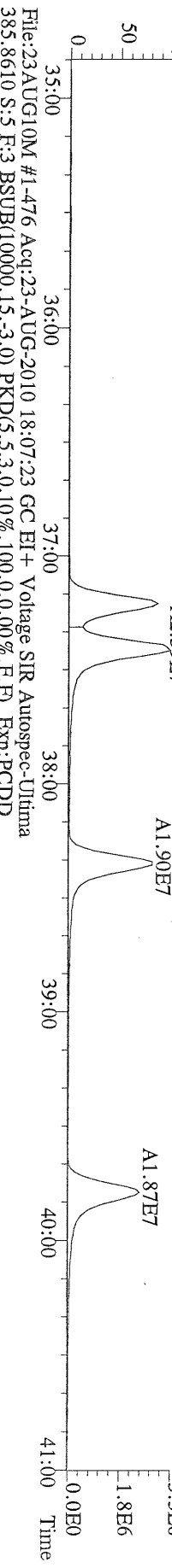
File:23AUG10M #1-476 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



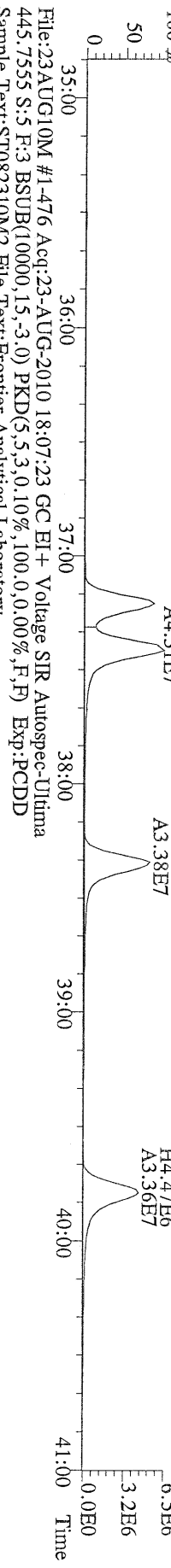
File:23AUG10M #1-476 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



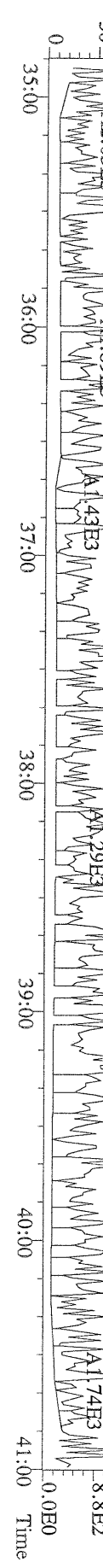
File:23AUG10M #1-476 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



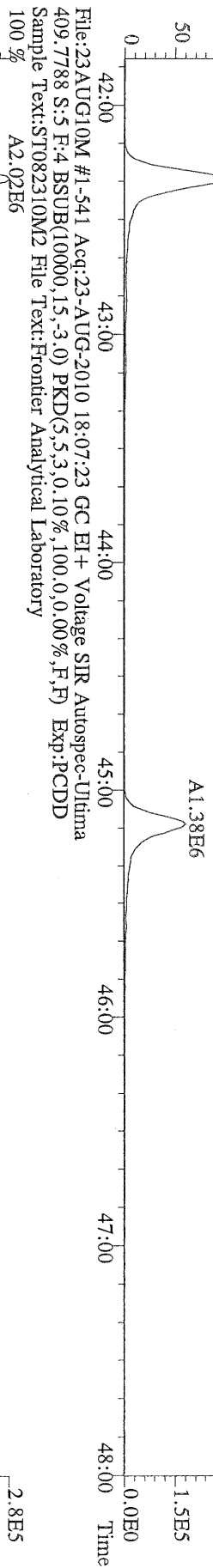
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445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



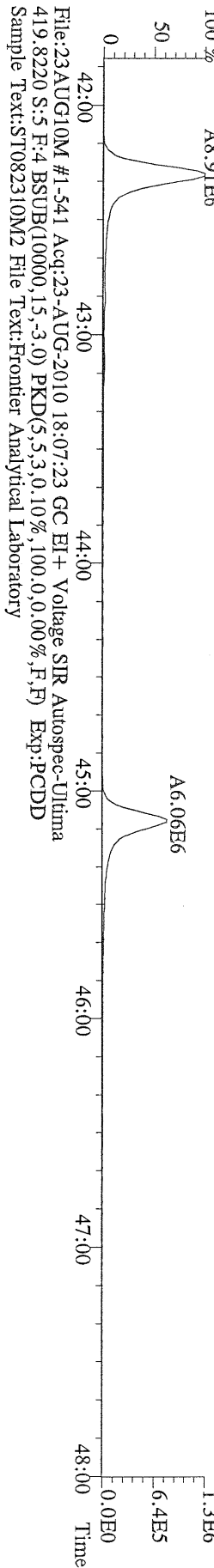
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445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



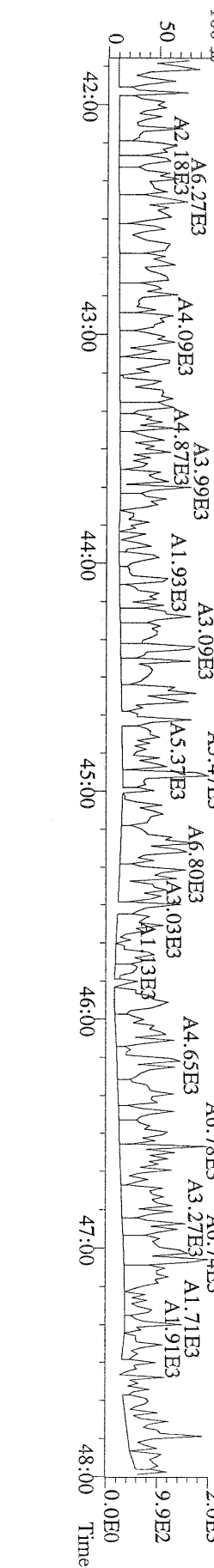
File:23AUG10M #1-541 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Fronter Analytical Laboratory



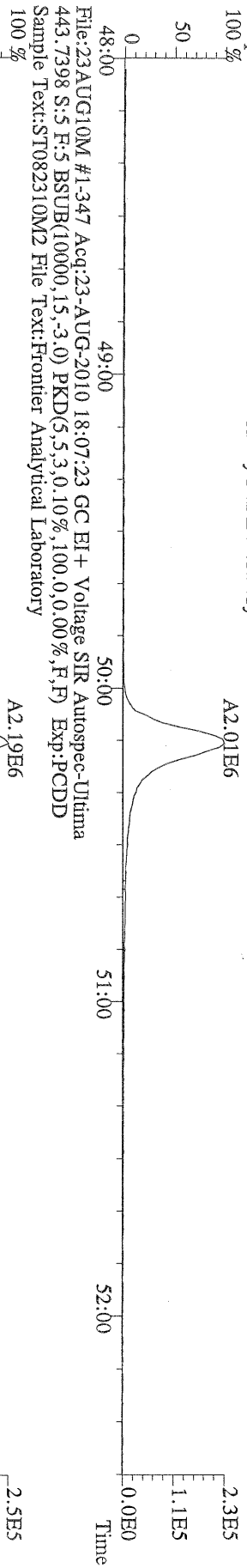
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417.8253 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Fronter Analytical Laboratory



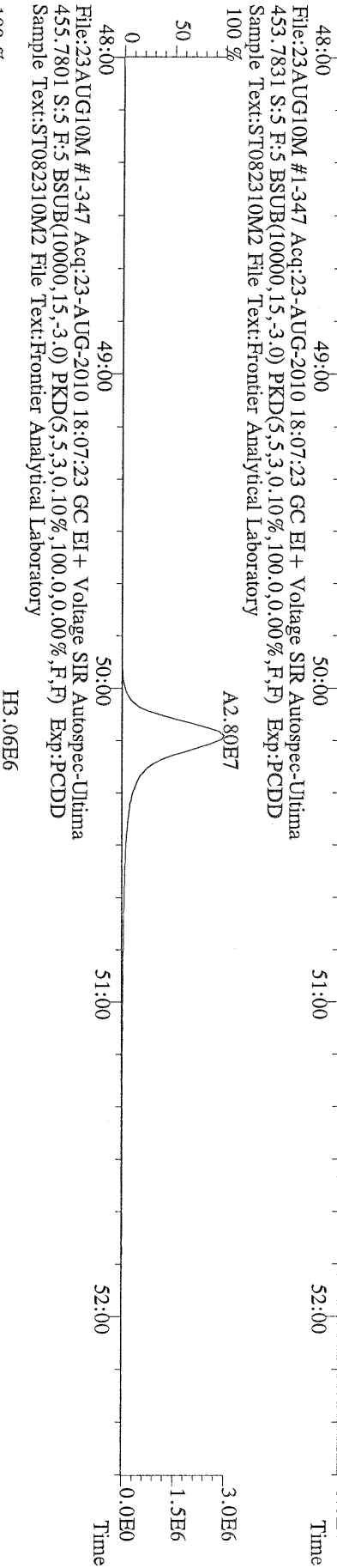
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419.8220 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Fronter Analytical Laboratory



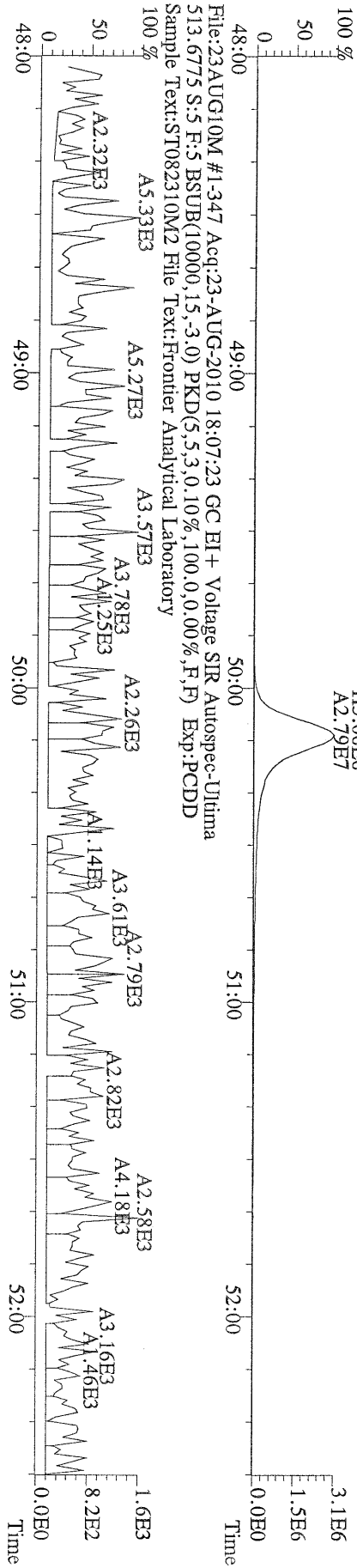
File:23AUG10M #1-347 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
 441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



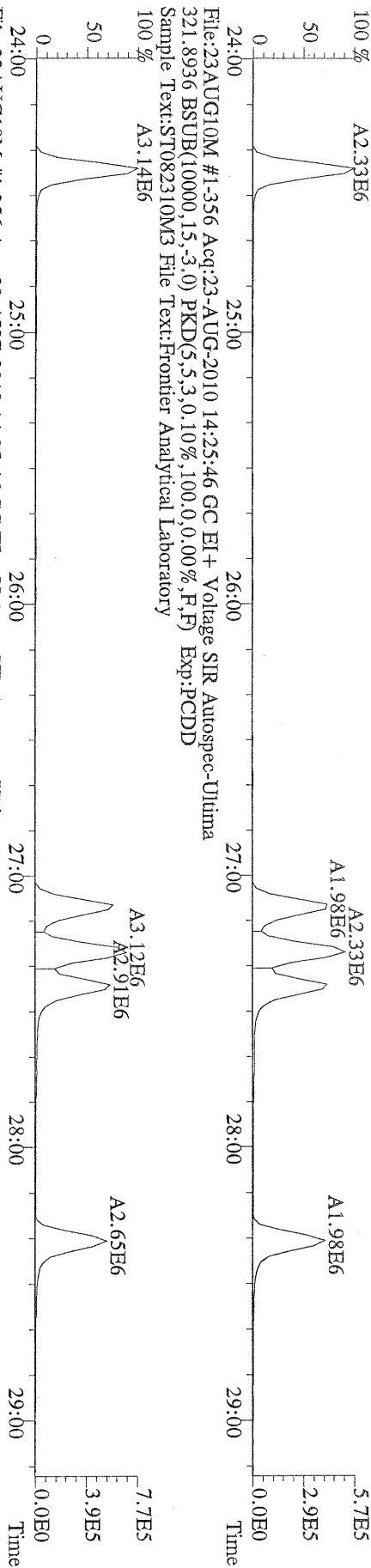
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 453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



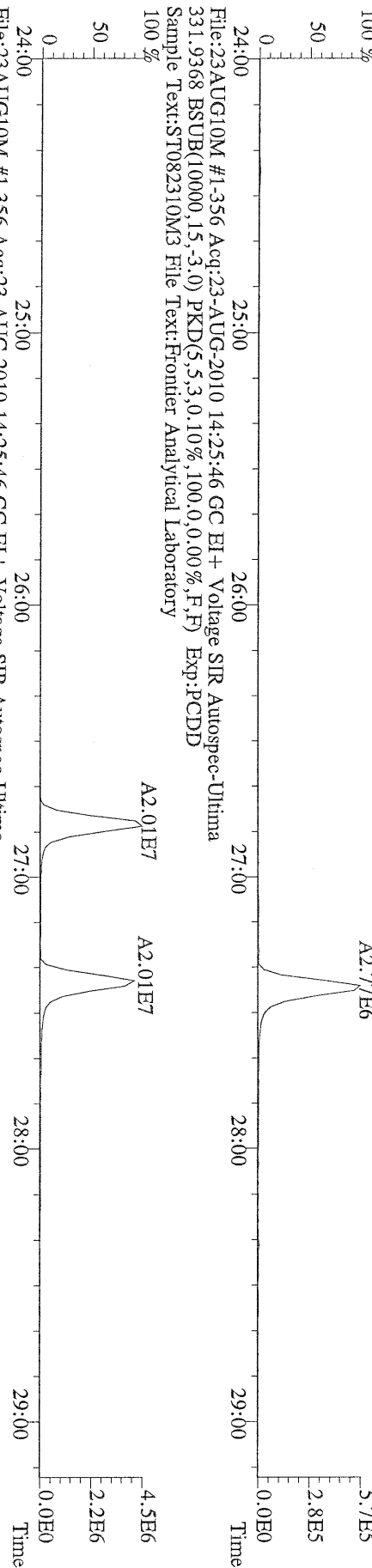
File:23AUG10M #1-347 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
 513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



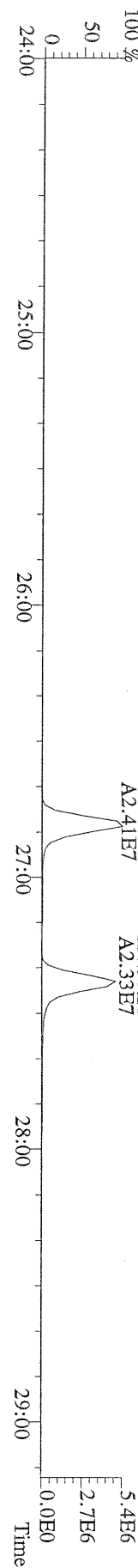
File:23AUG10M #1-356 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



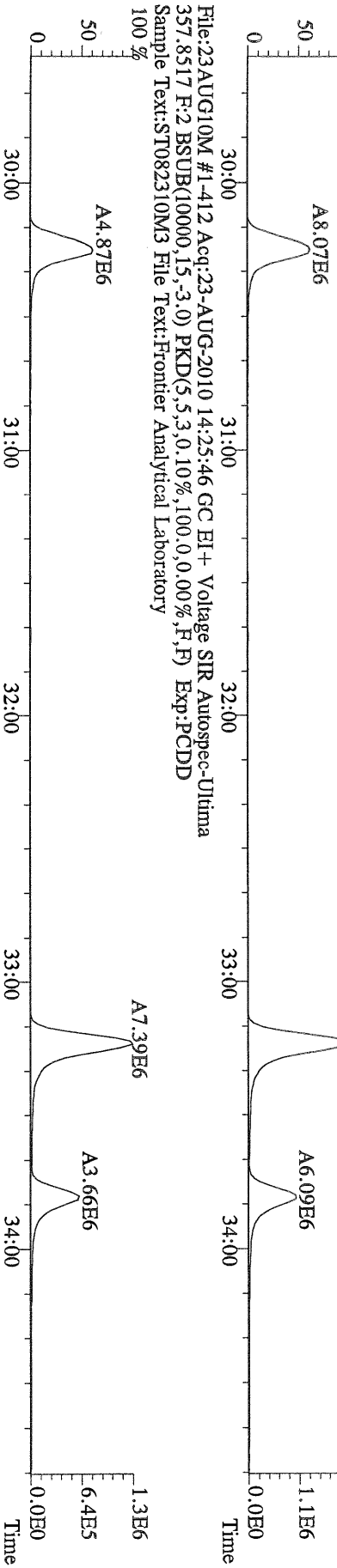
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327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



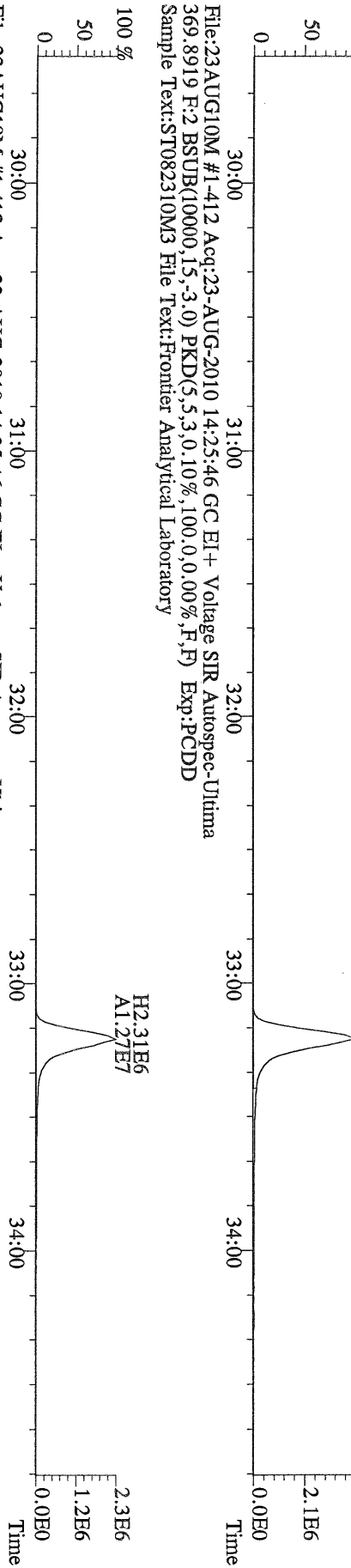
File:23AUG10M #1-356 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



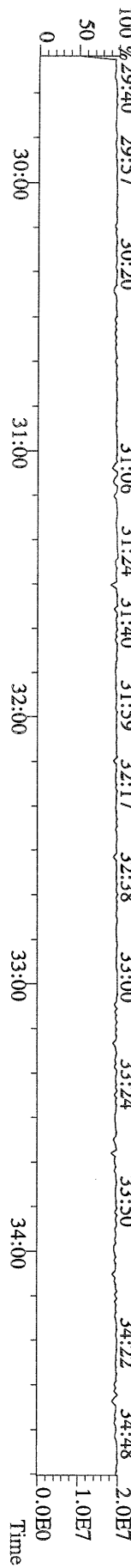
File:23AUG10M #1-412 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
 355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3.0,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory
 100 %



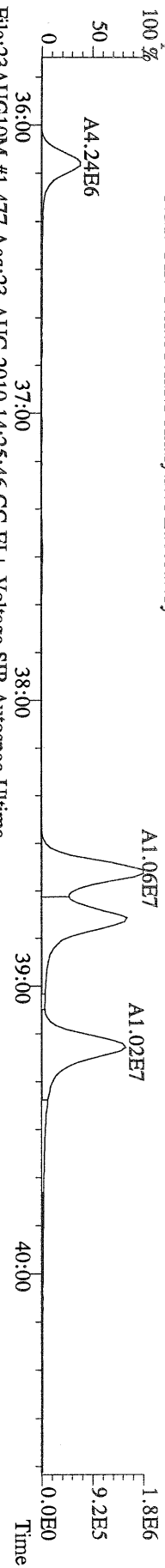
File:23AUG10M #1-412 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
 367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3.0,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory
 100 %



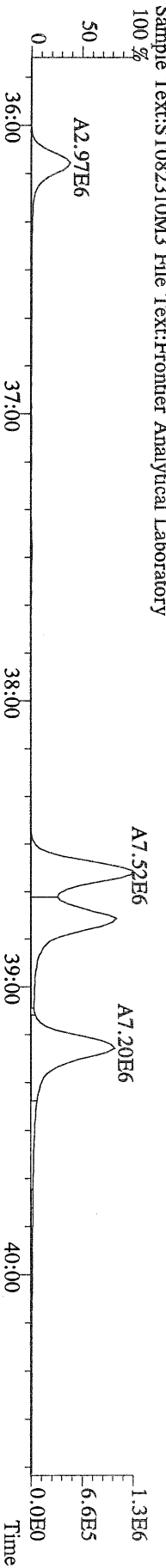
File:23AUG10M #1-412 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
 366.9792 F:2 Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



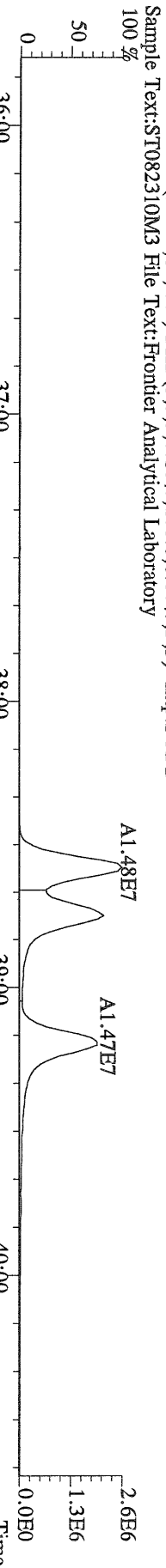
File:23AUG10M #1-477 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
 389.8156 F.3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Fronter Analytical Laboratory



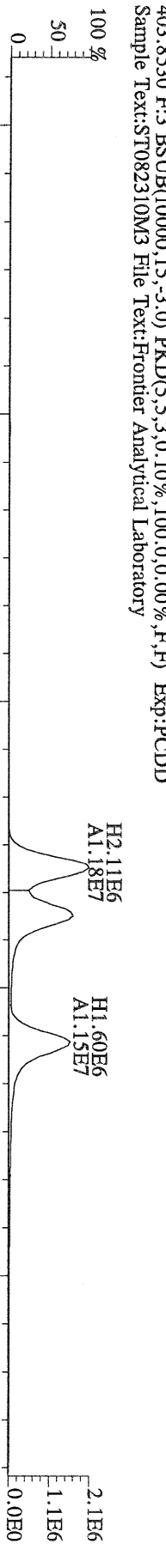
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 391.8127 F.3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Fronter Analytical Laboratory



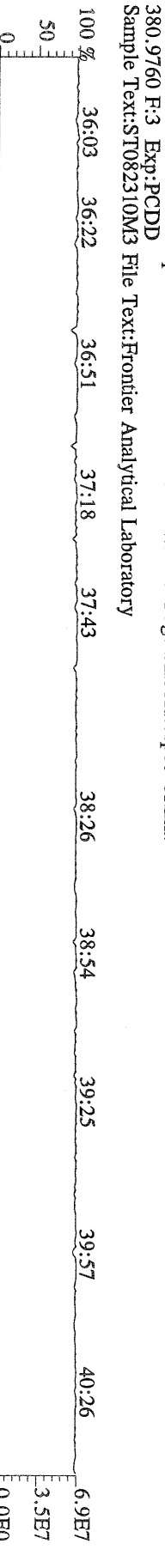
File:23AUG10M #1-477 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
 401.8559 F.3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Fronter Analytical Laboratory



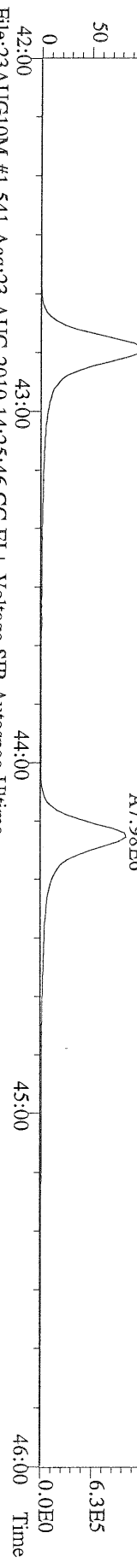
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 403.8530 F.3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Fronter Analytical Laboratory



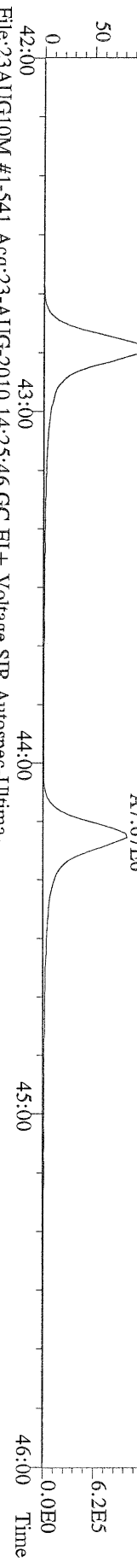
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 380.9760 F.3 Exp:PCDD
 Sample Text:ST082310M3 File Text:Fronter Analytical Laboratory



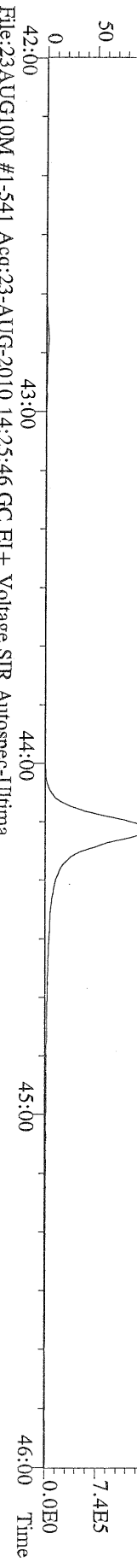
File:23AUG10M #1-541 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



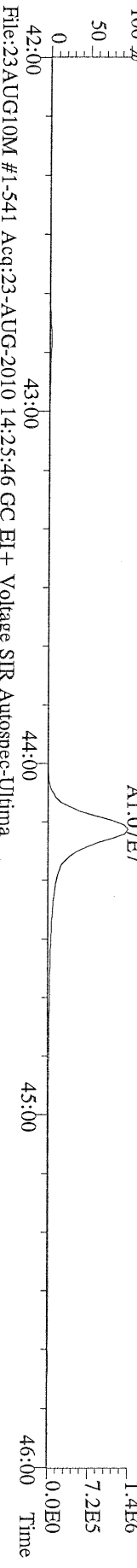
File:23AUG10M #1-541 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



File:23AUG10M #1-541 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



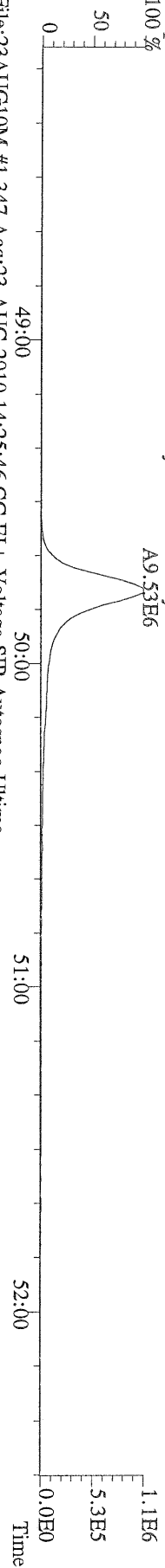
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430.9728 F:4 Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



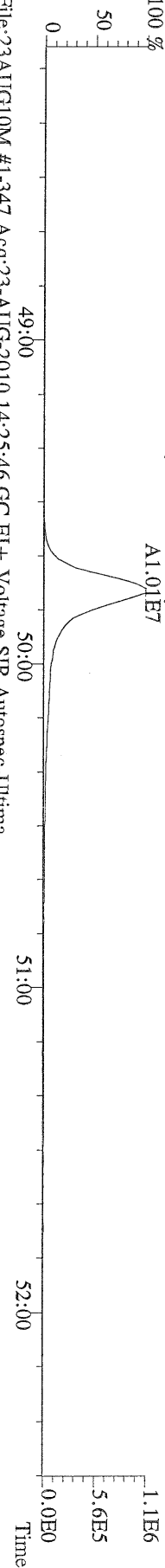
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423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



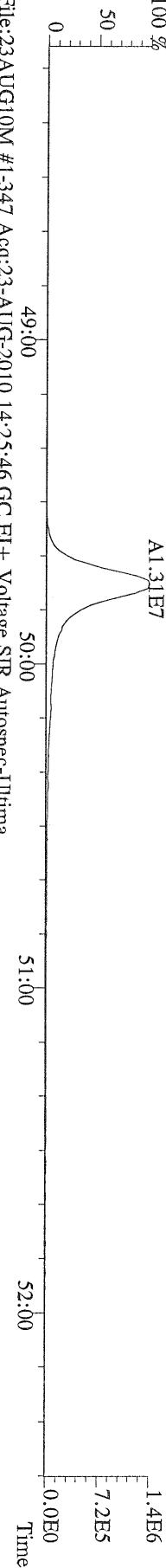
File:23AUG10M #1-347 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



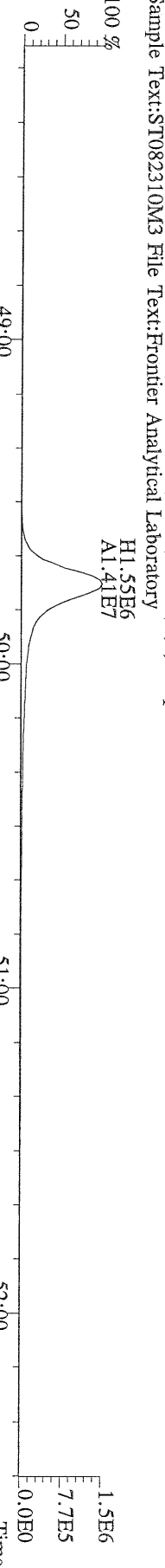
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459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



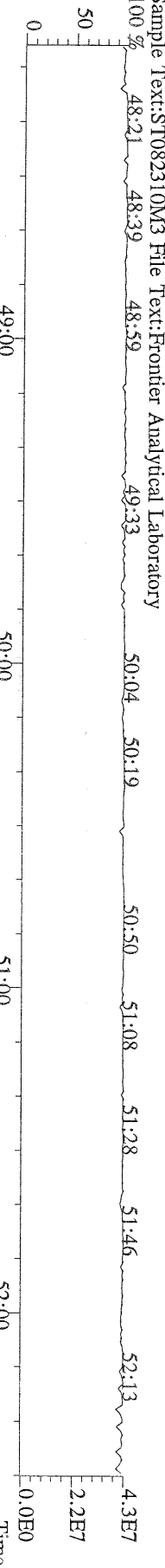
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469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



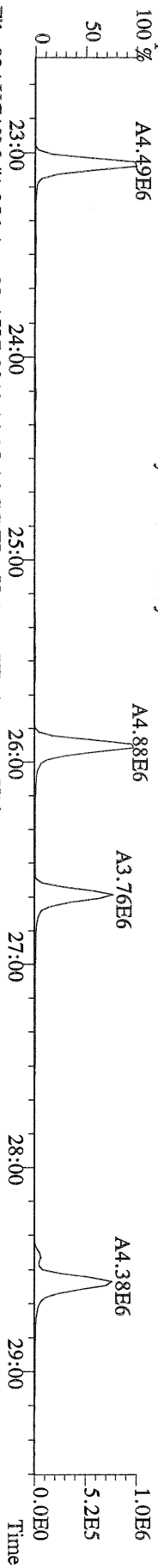
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471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



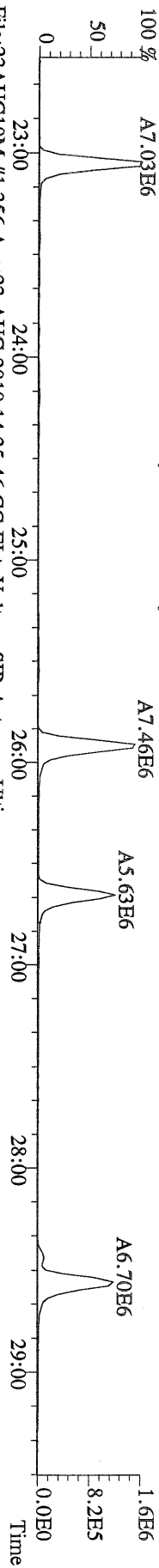
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454.9728 F:5 Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



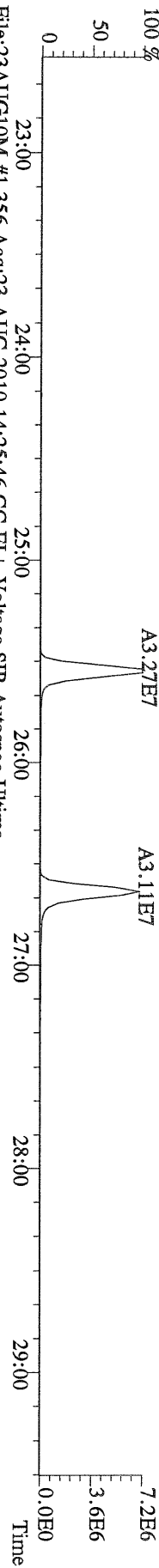
File:23AUG10M #1-356 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
 303.9016 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



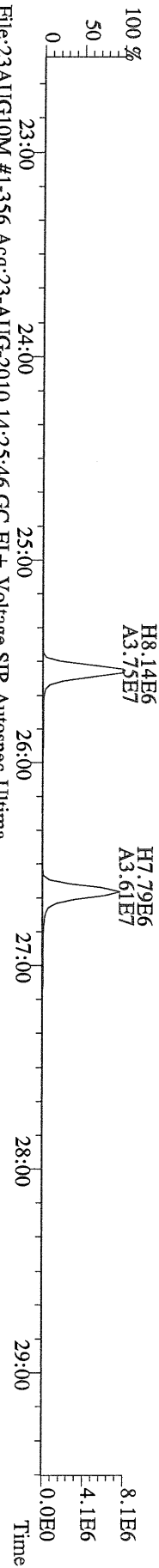
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 305.8987 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



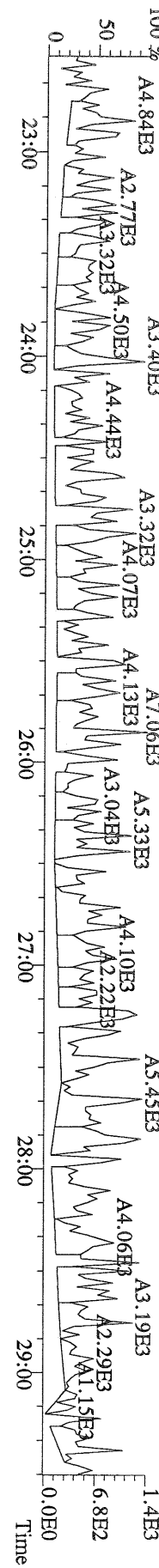
File:23AUG10M #1-356 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
 315.9419 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



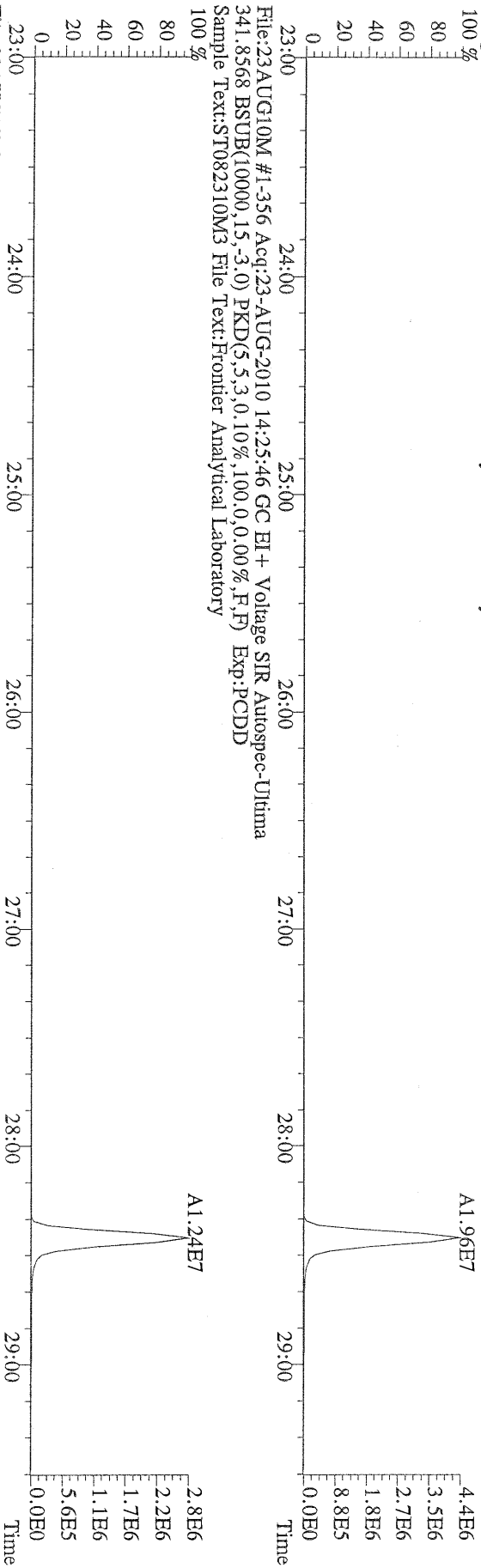
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 317.9389 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



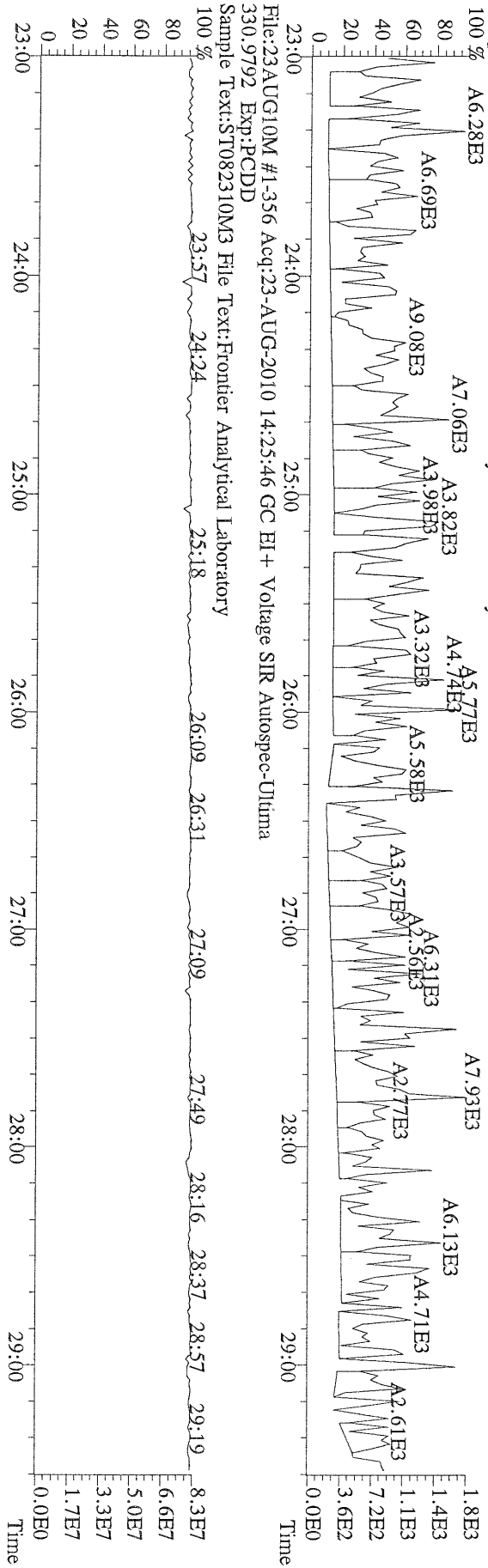
File:23AUG10M #1-356 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
 375.8364 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



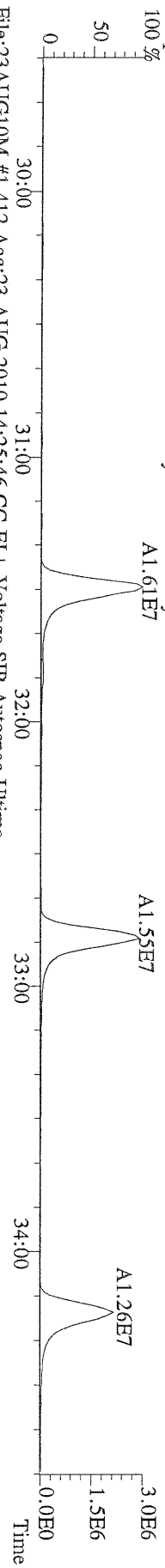
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 339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



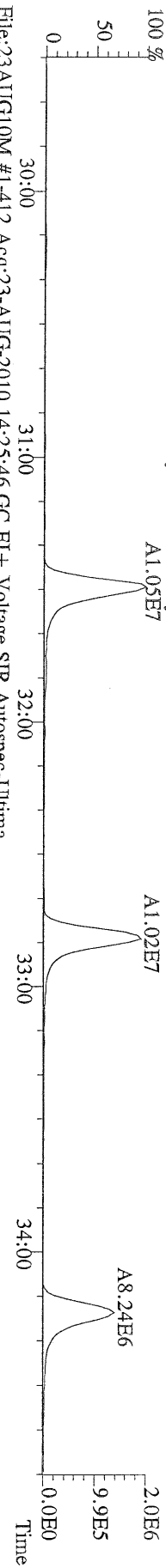
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 409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



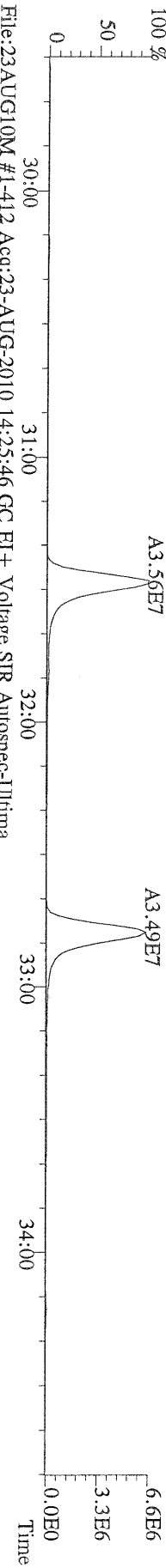
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 339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



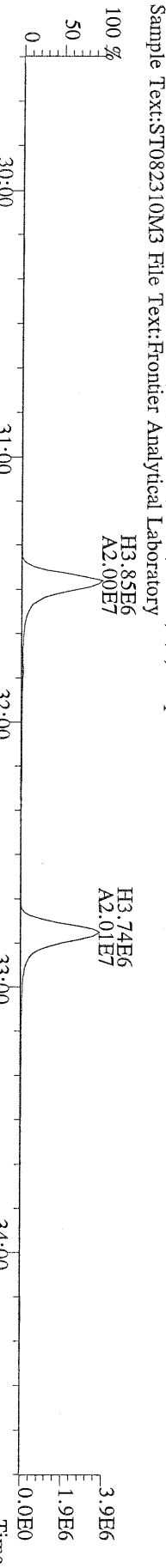
File:23AUG10M #1-412 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
 341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



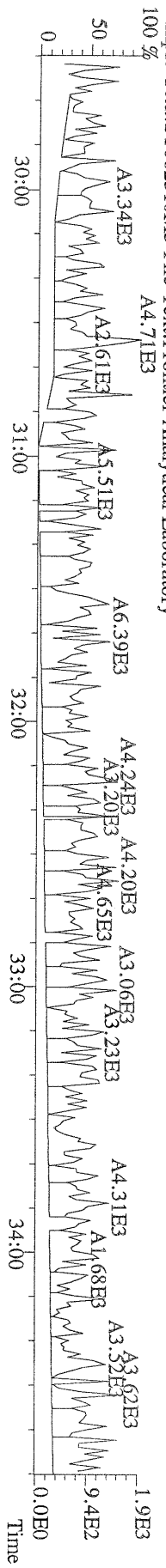
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 351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



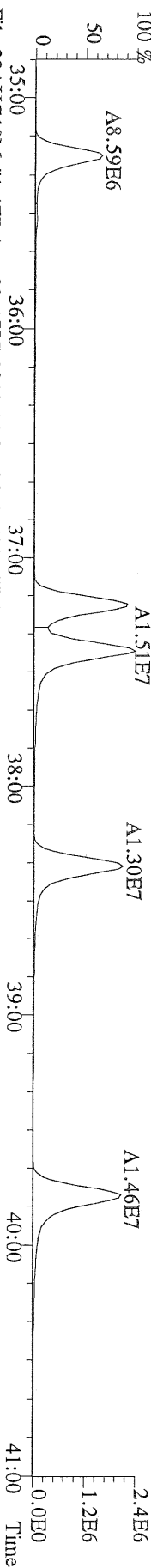
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 353.8970 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



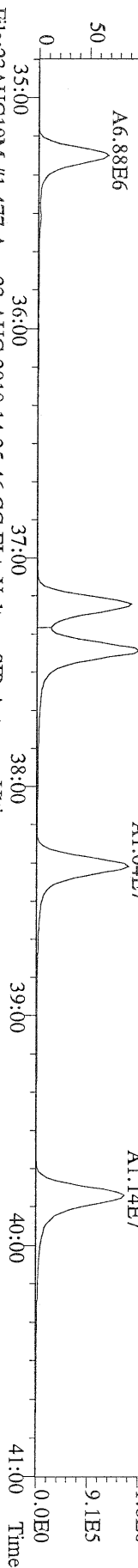
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 409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



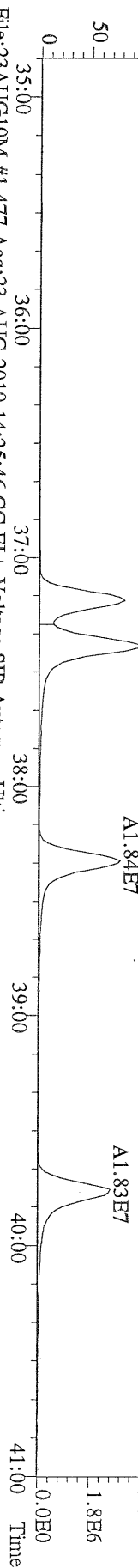
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373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



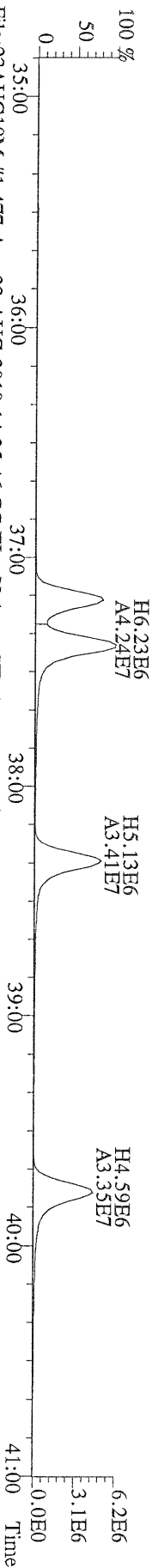
File:23AUG10M #1-477 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



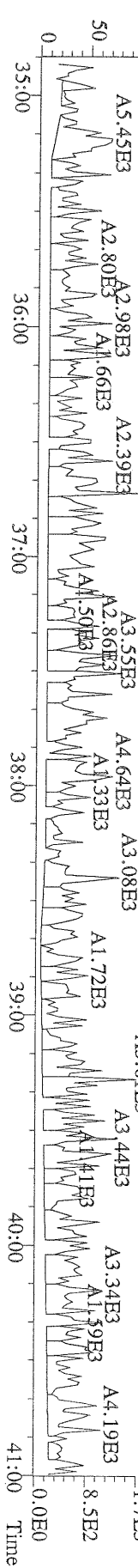
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383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



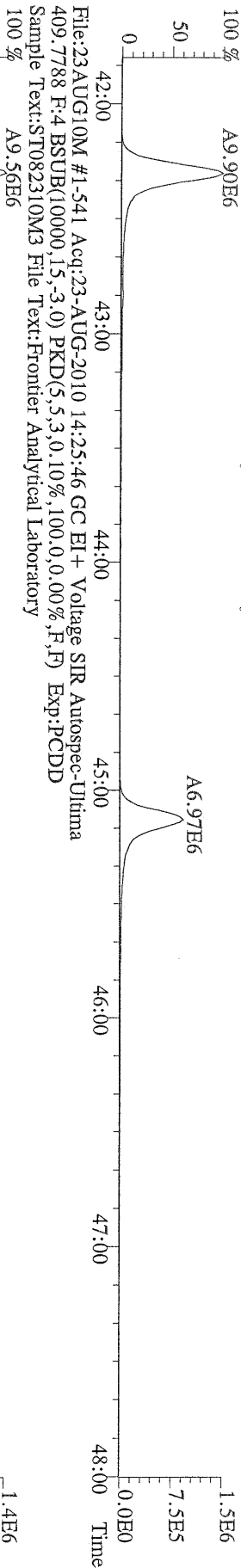
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385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



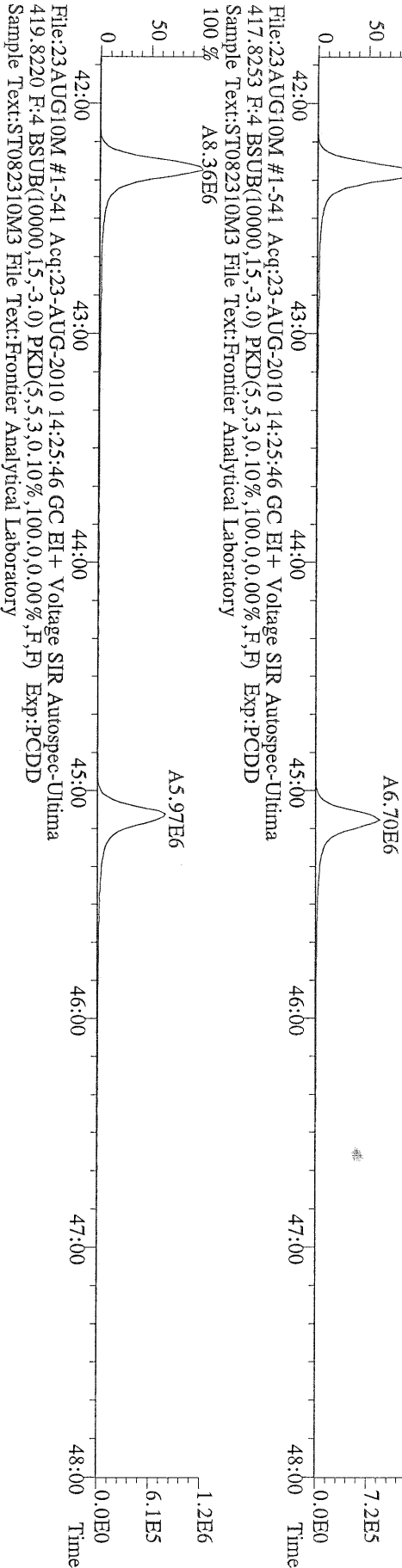
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445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



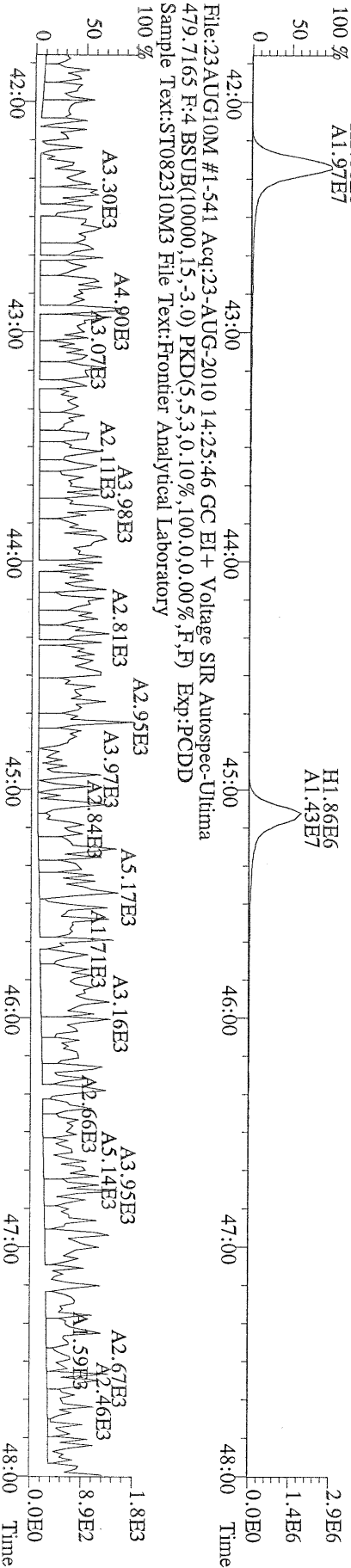
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 407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



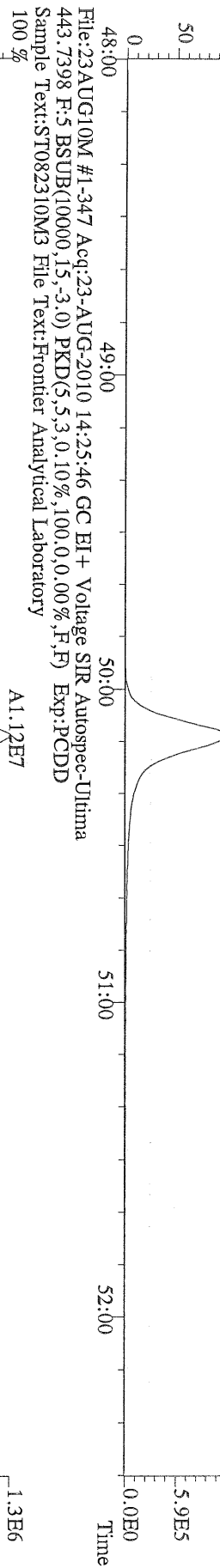
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 417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



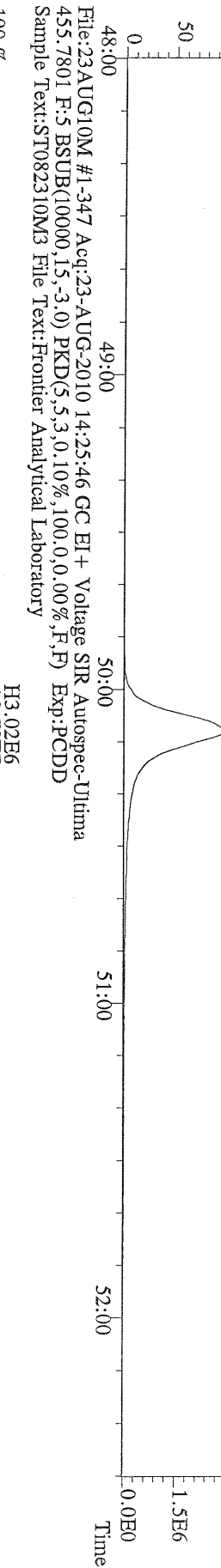
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 419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



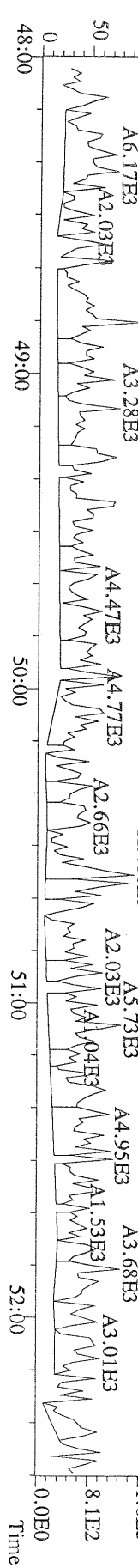
File:23AUG10M #1-347 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
 441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



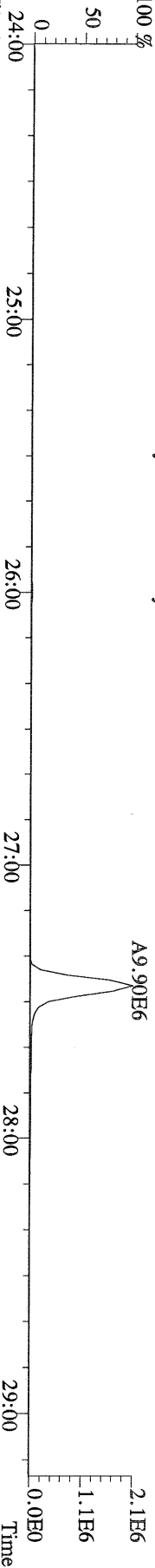
File:23AUG10M #1-347 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
 453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



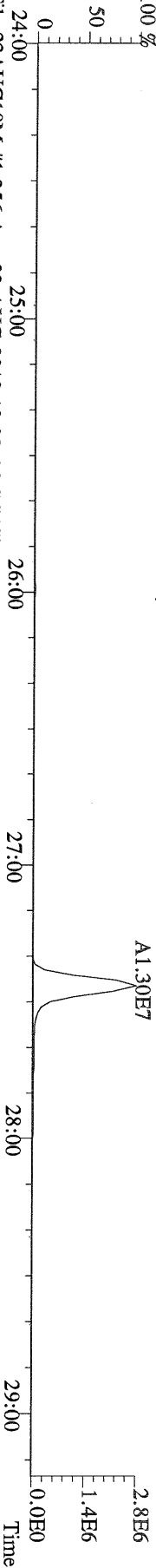
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 455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



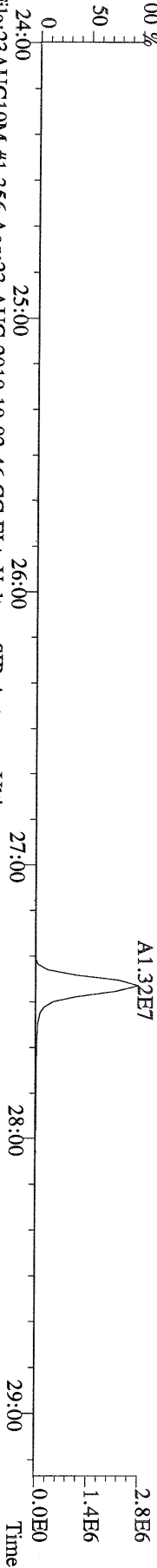
File:23AUG10M #1-356 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory
100 %



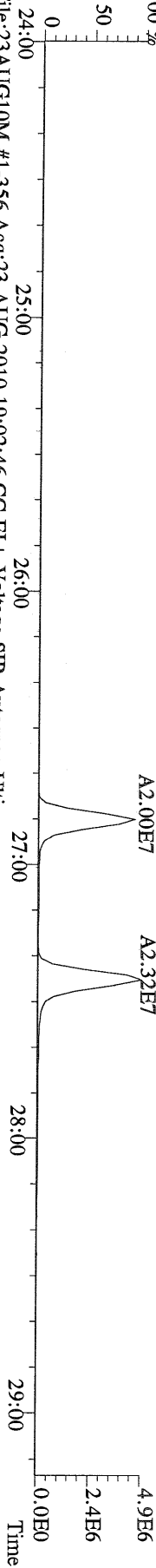
File:23AUG10M #1-356 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory
100 %



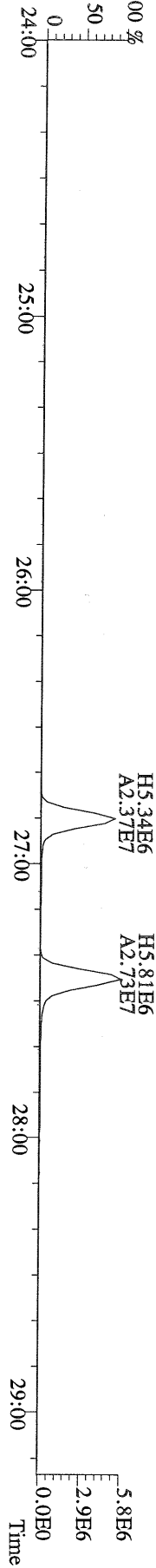
File:23AUG10M #1-356 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory
100 %



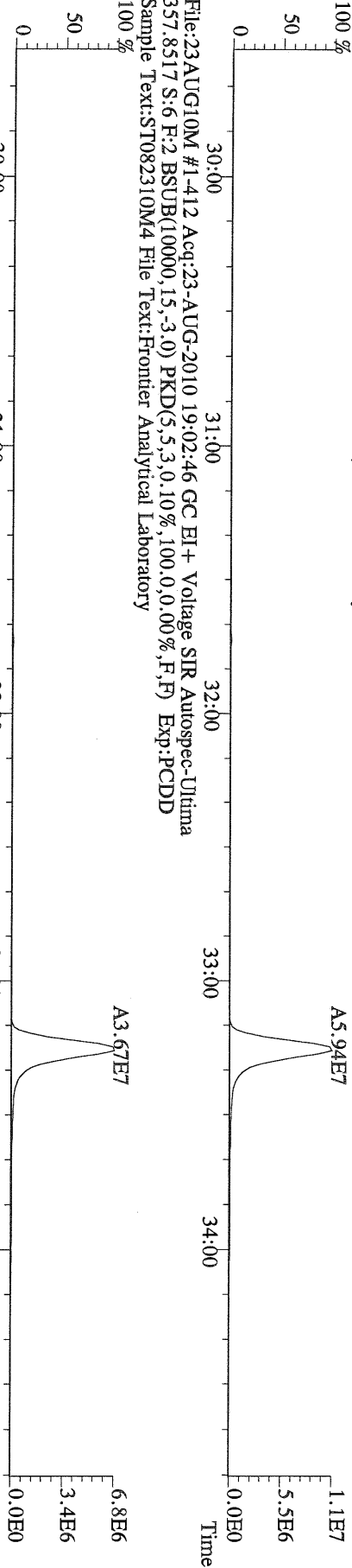
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331.9368 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory
100 %



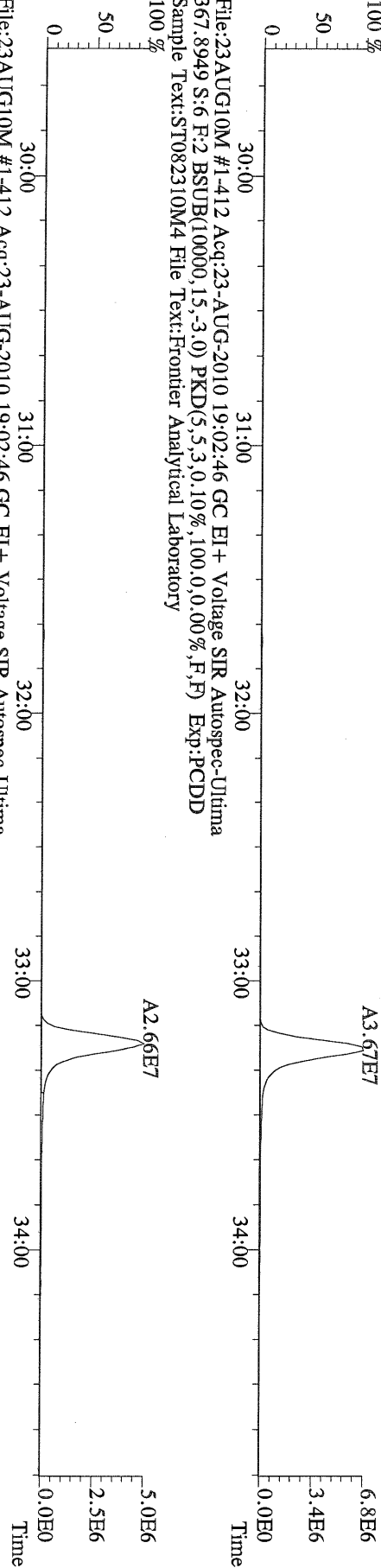
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333.9339 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



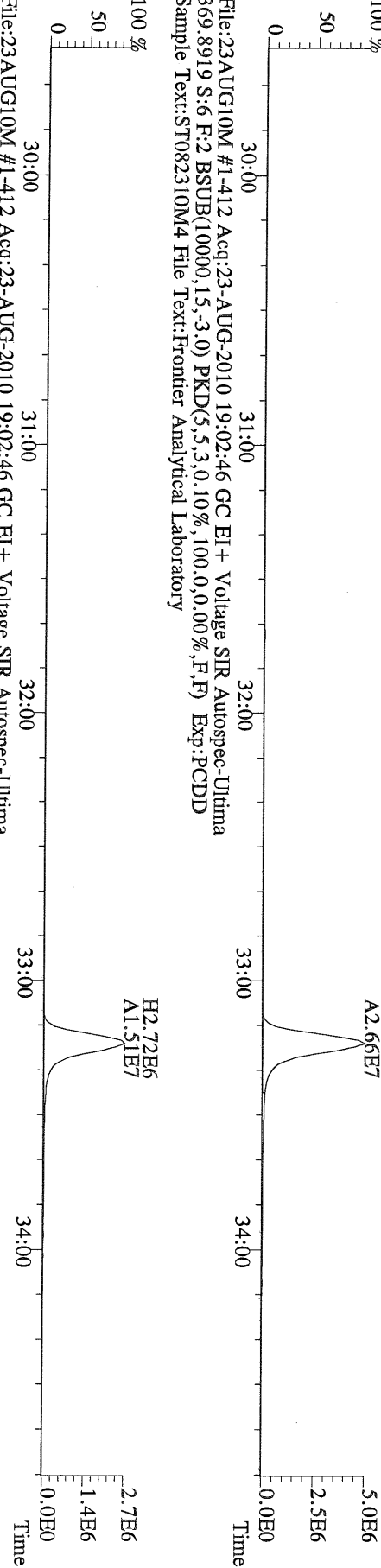
File:23AUG10M #1-412 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



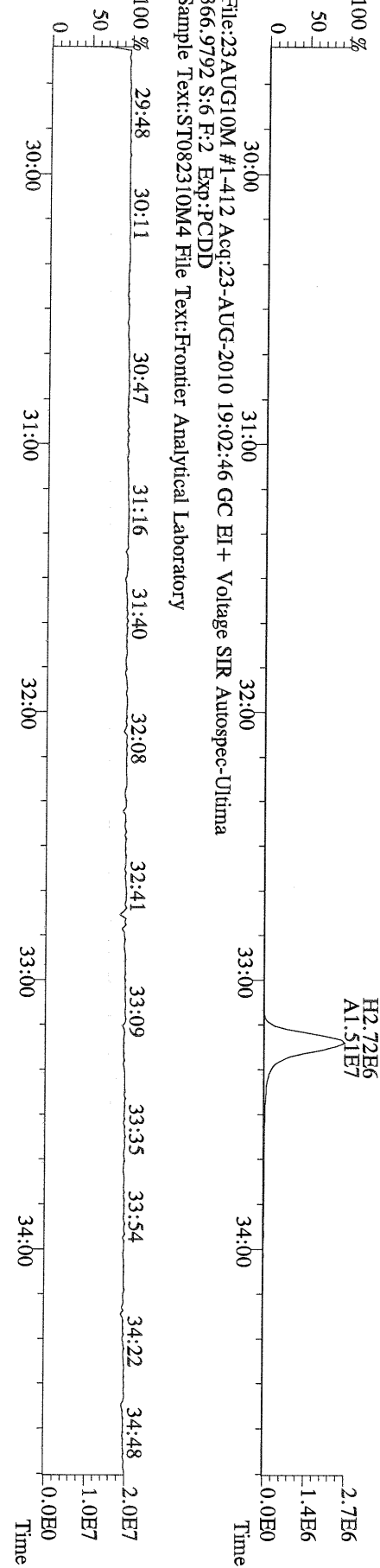
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357.8517 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



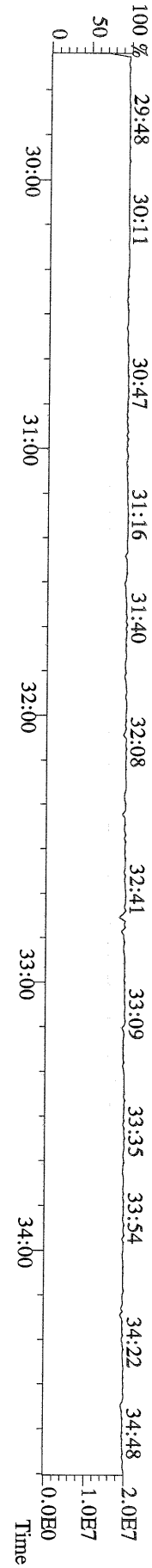
File:23AUG10M #1-412 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



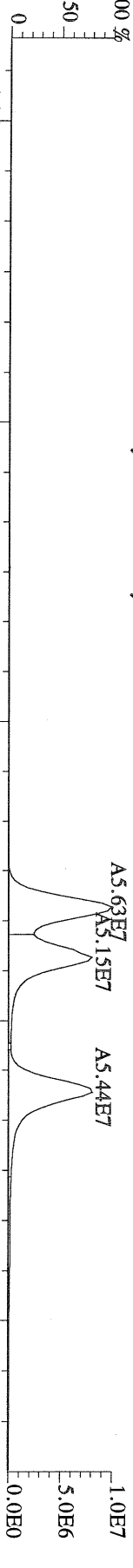
File:23AUG10M #1-412 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



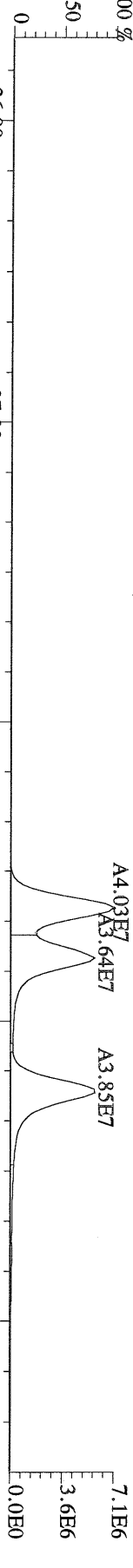
File:23AUG10M #1-412 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:6 F:2 Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



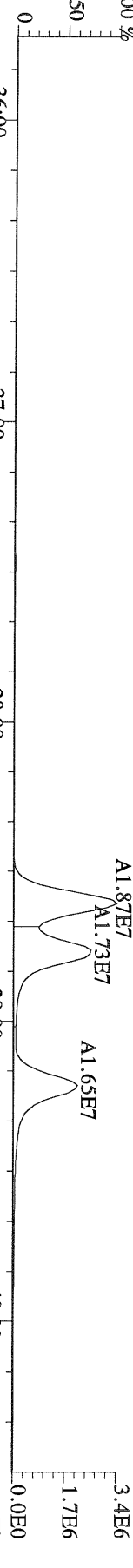
File:23AUG10M #1-477 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
 389.8156 S:6 F:3 BSUB(10000,15,-3.0) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



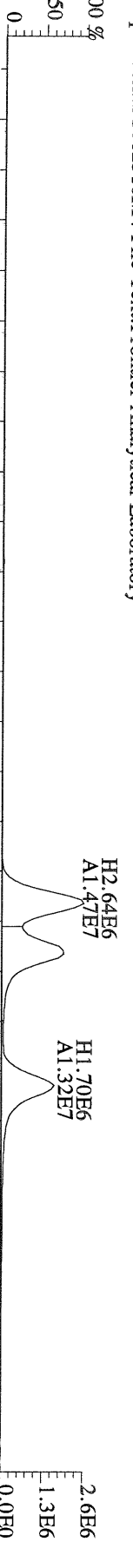
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 391.8127 S:6 F:3 BSUB(10000,15,-3.0) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



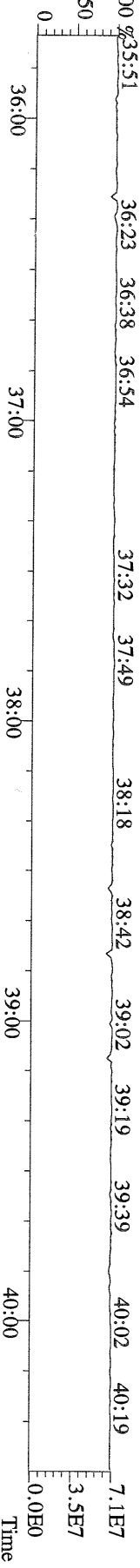
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 401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



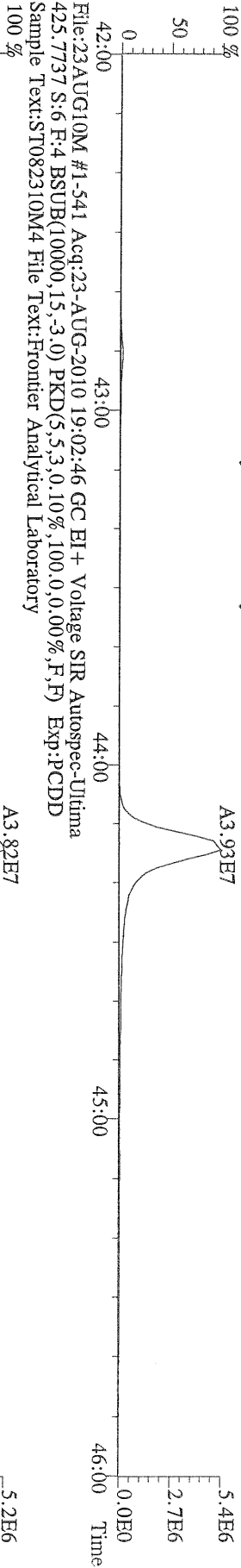
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 403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



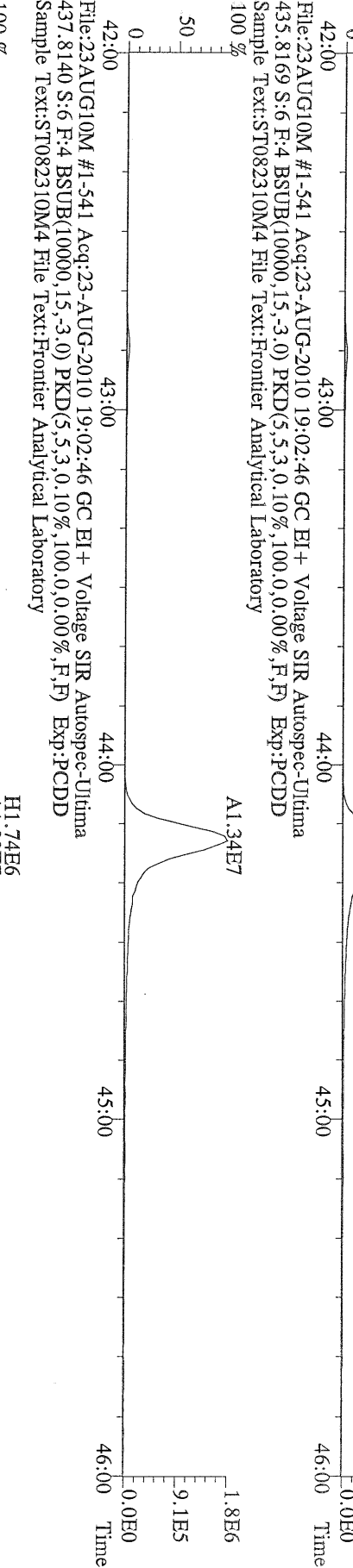
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 380.9760 S:6 F:3 Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



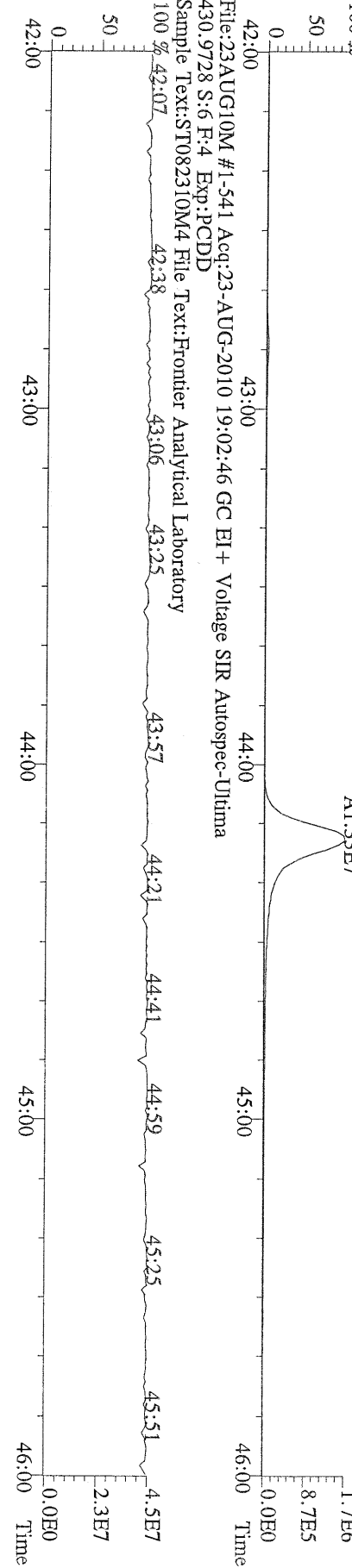
File:23AUG10M #1-541 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



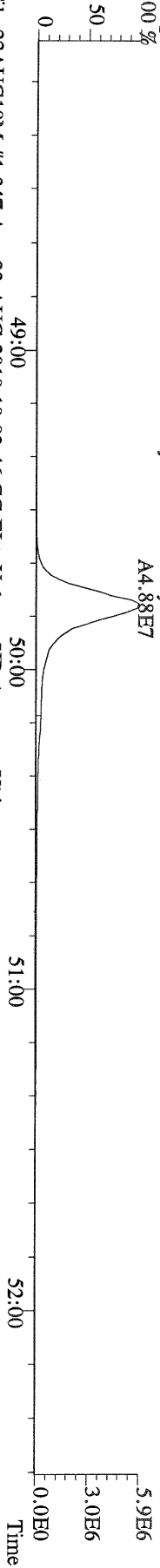
File:23AUG10M #1-541 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



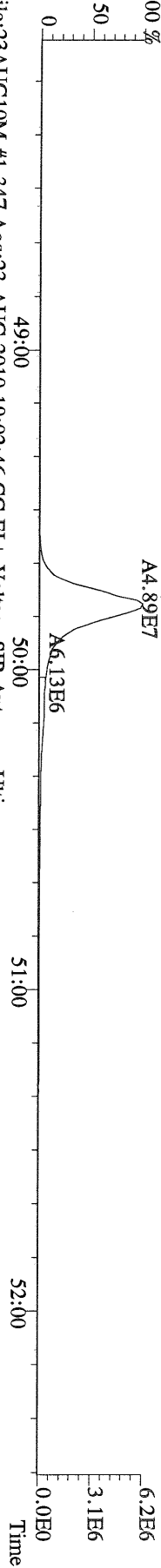
File:23AUG10M #1-541 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:6 F:4 Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



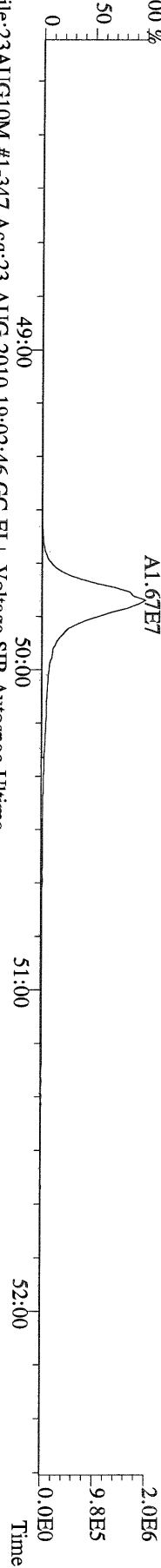
File:23AUG10M #1-347 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



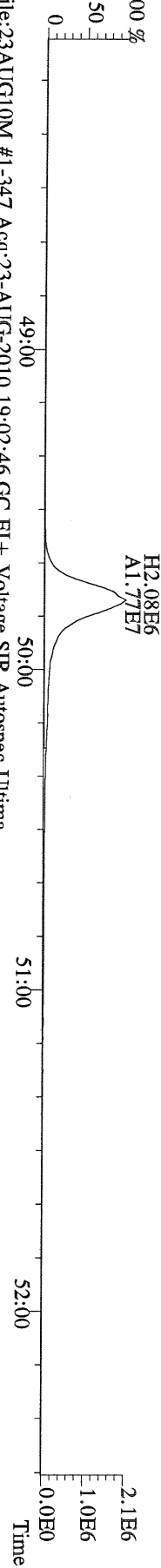
File:23AUG10M #1-347 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



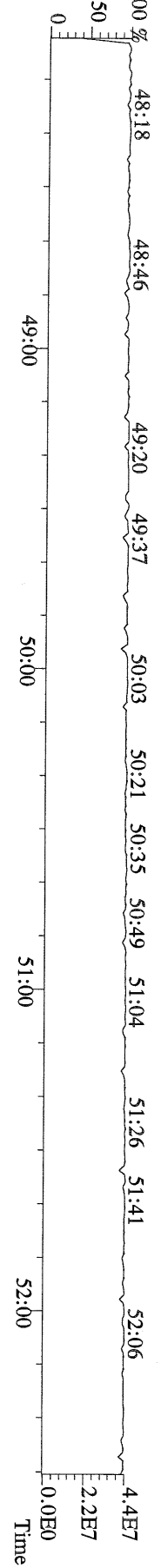
File:23AUG10M #1-347 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



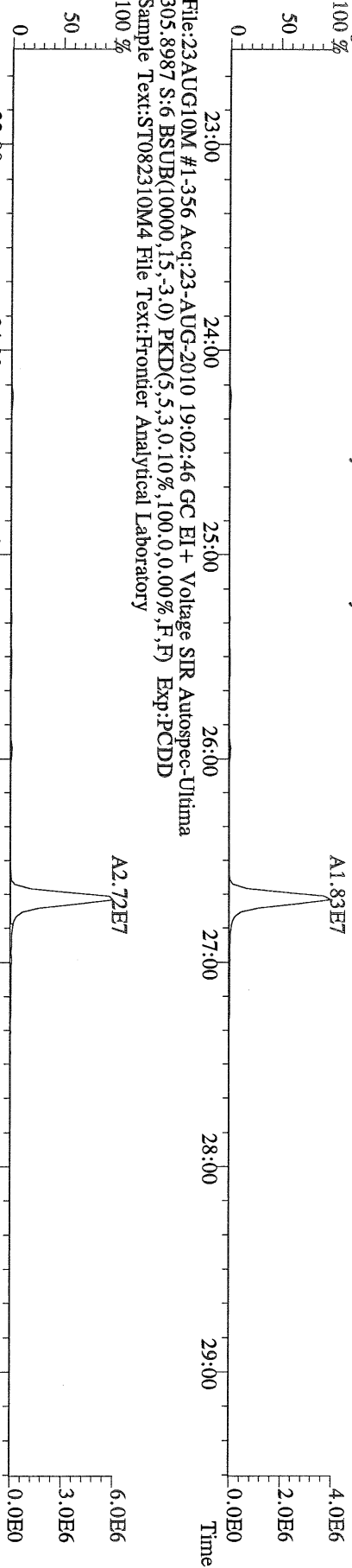
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471.7750 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



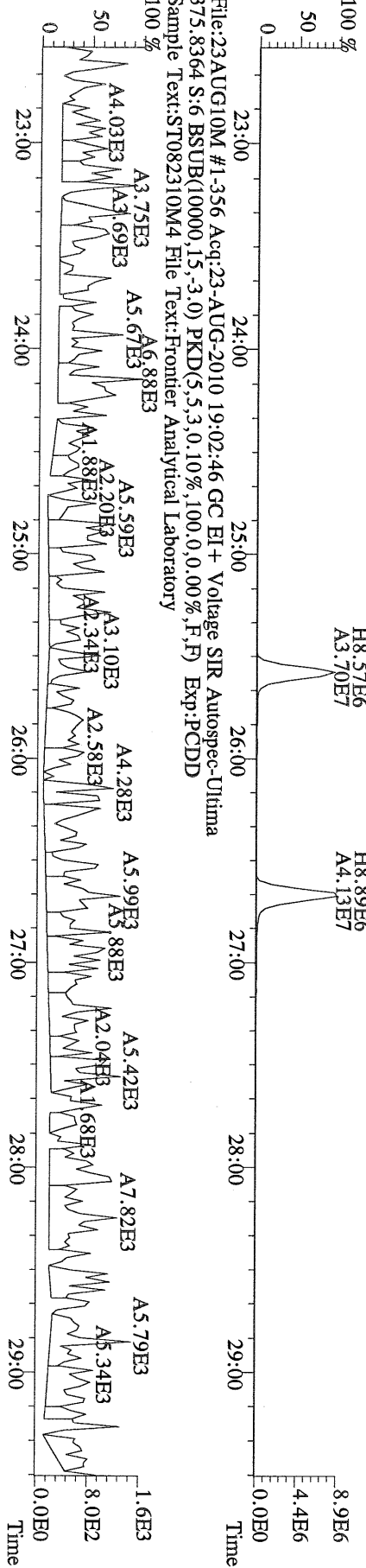
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454.9728 S:6 F:5 Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



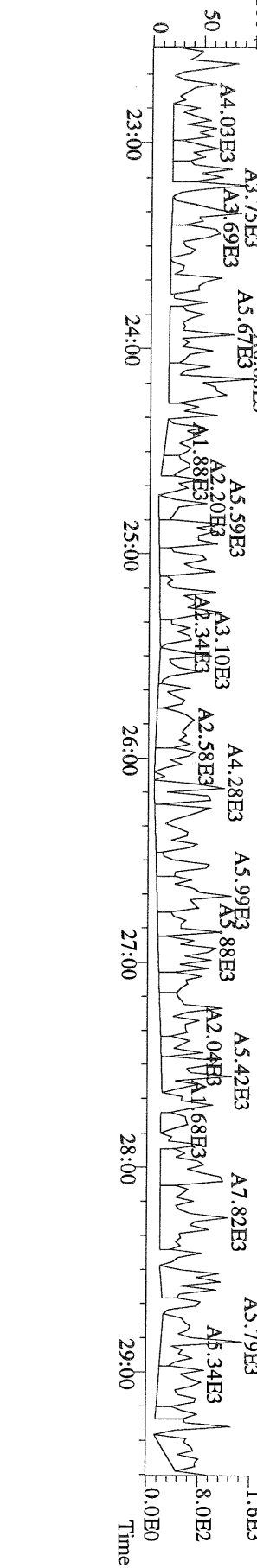
File:23AUG10M #1-356 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



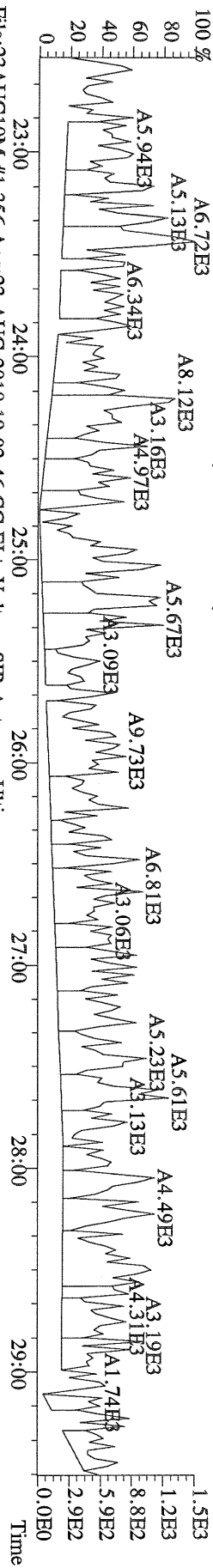
File:23AUG10M #1-356 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



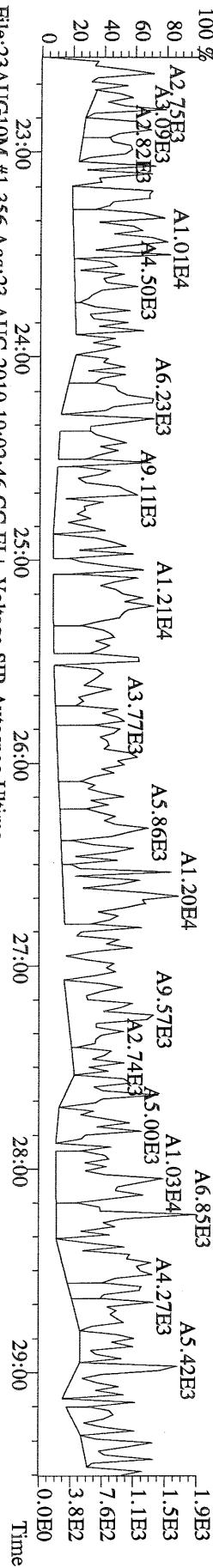
File:23AUG10M #1-356 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



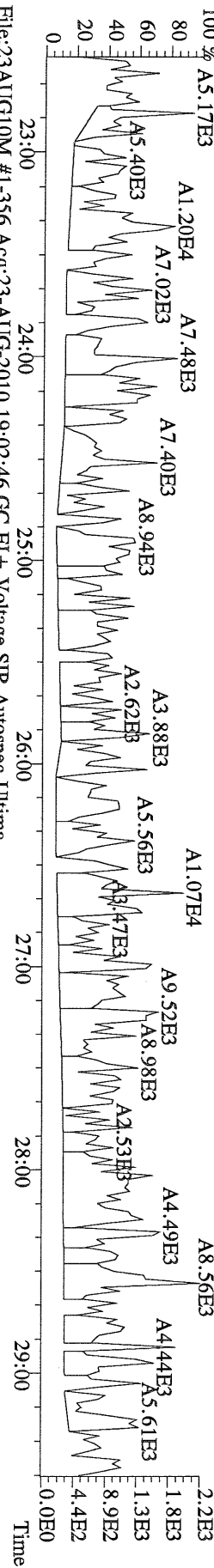
File:23AUG10M #1-356 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



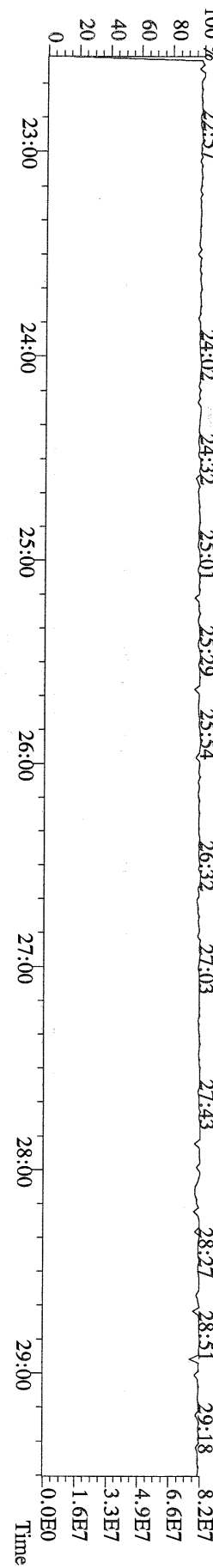
File:23AUG10M #1-356 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
 341.8568 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



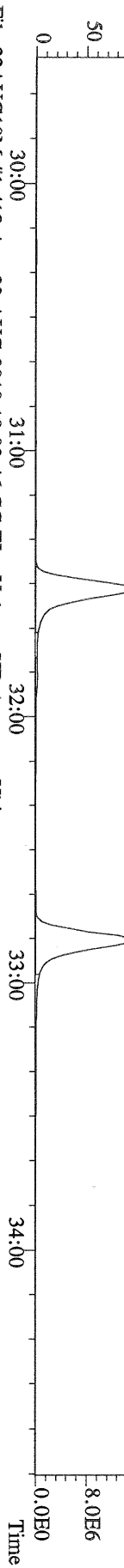
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 409.7974 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



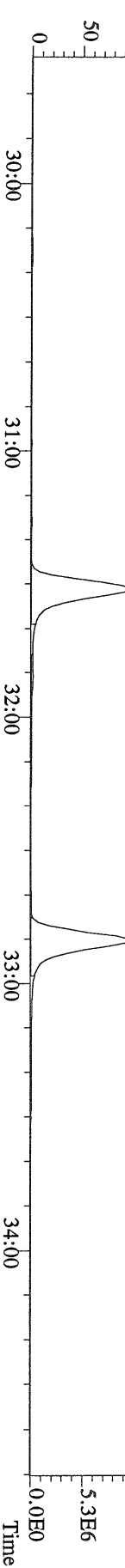
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 LOCK MASS CHECK S:6 Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



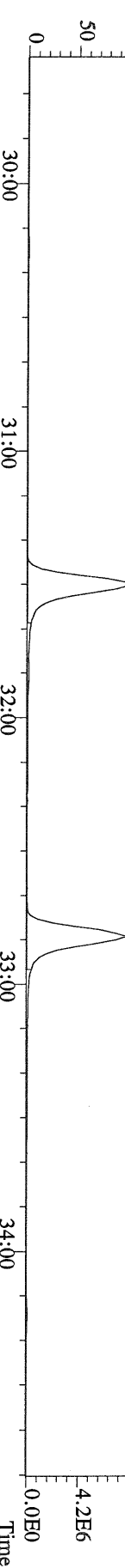
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 339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



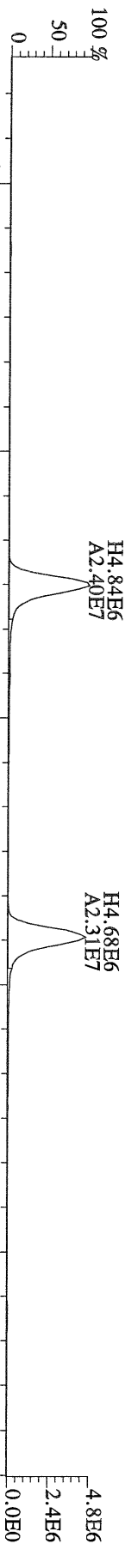
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 341.8568 S:6 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



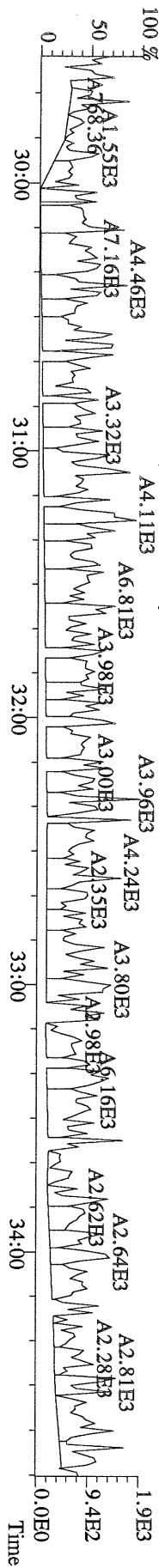
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 351.9000 S:6 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



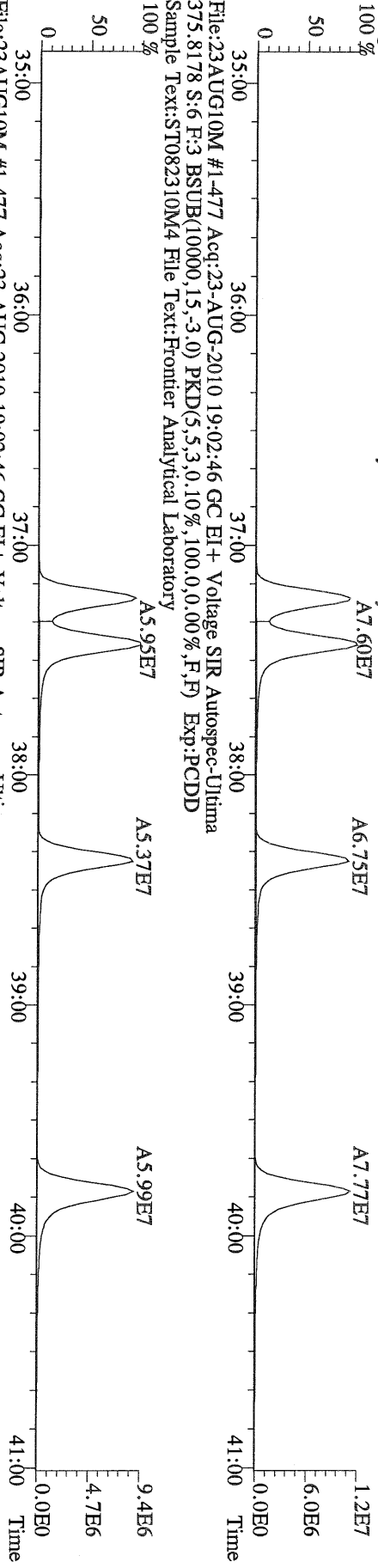
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 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



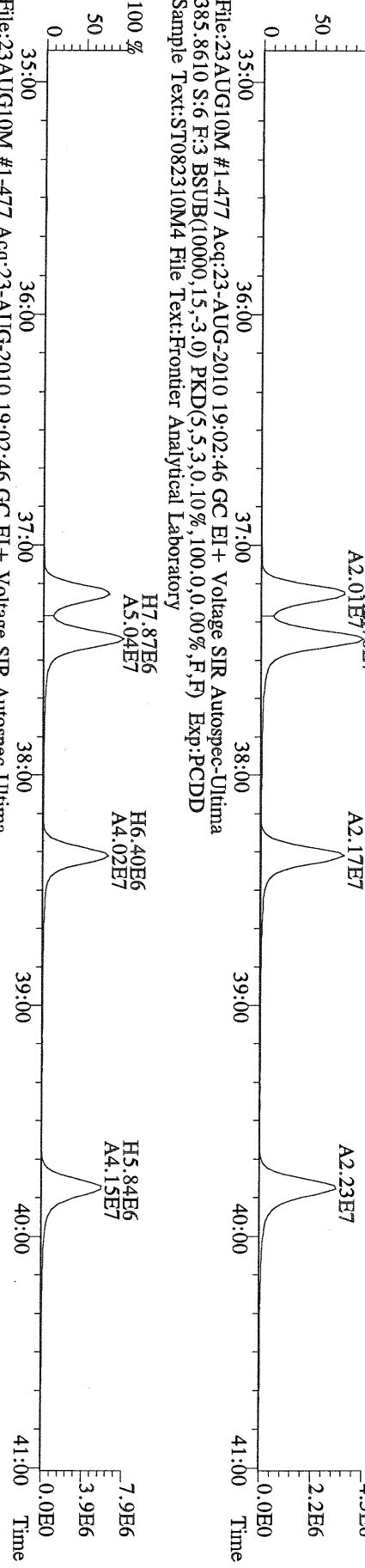
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 409.7974 S:6 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



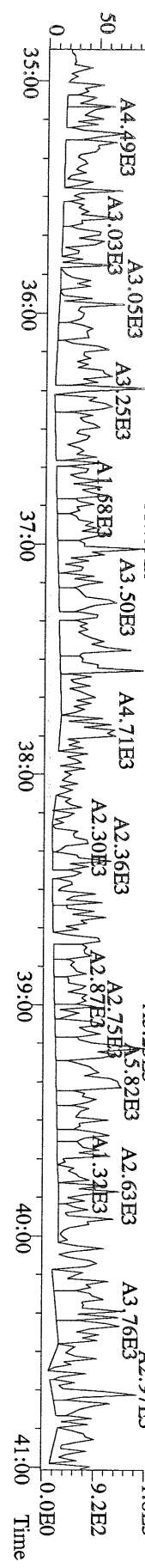
File:23AUG10M #1-477 Acq:23-AUG-2010 19:02:46 GC EI + Voltage SIR Autospec-Utima
373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



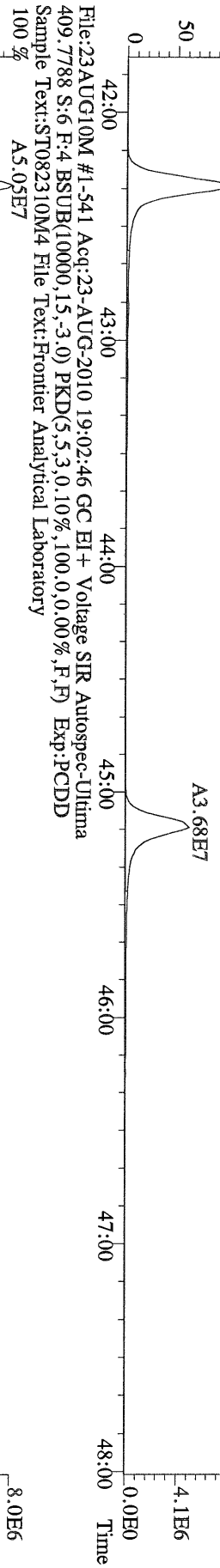
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383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



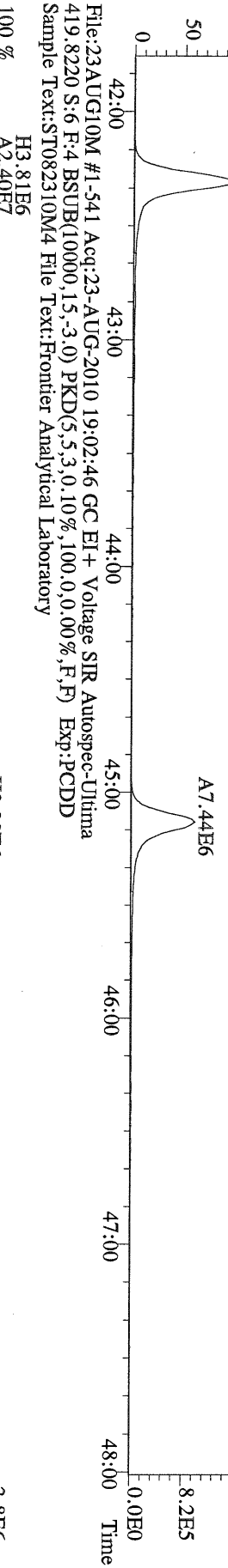
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445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



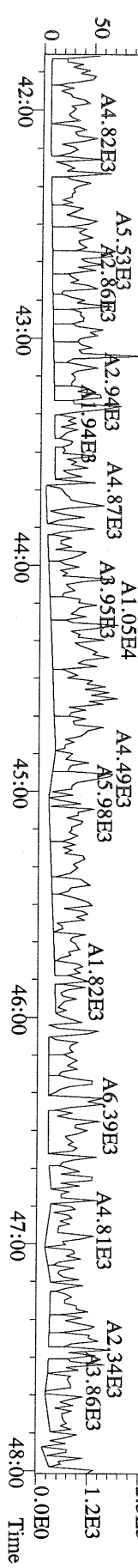
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407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp.:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



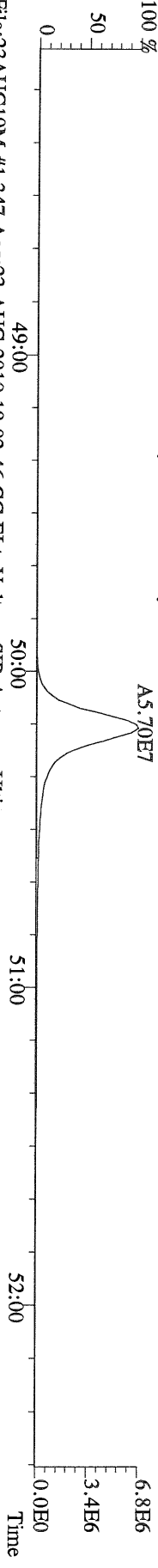
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417.8253 S:6 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp.:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



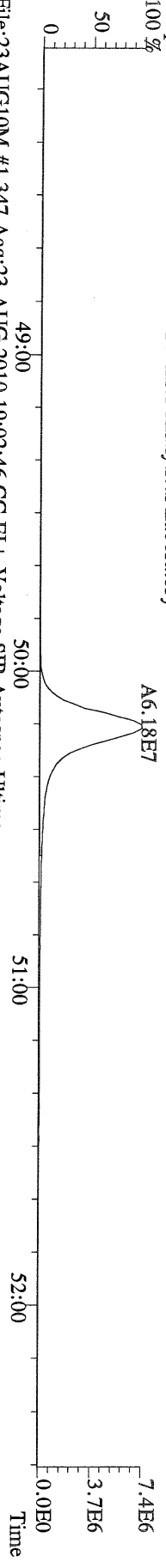
File:23AUG10M #1-541 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:6 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp.:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



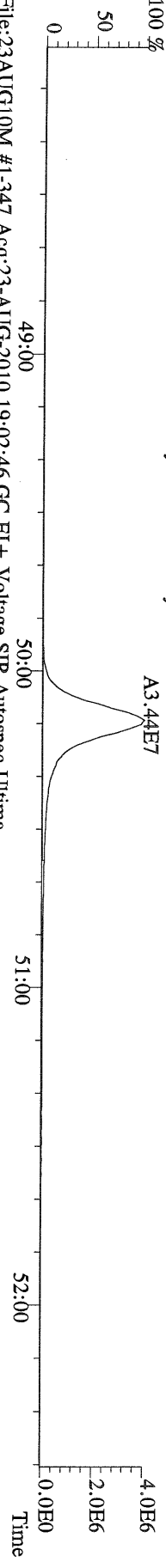
File:23AUG10M #1-347 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
 441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



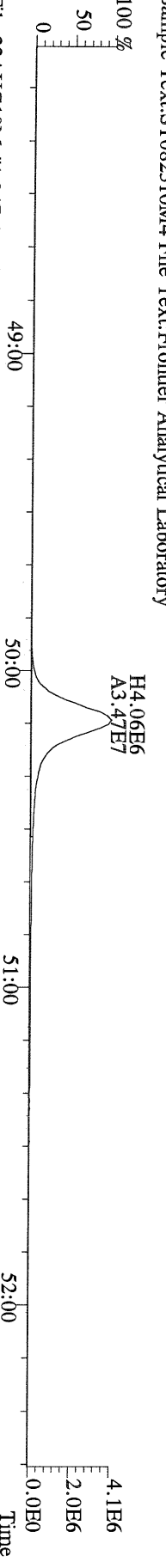
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 443.7398 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



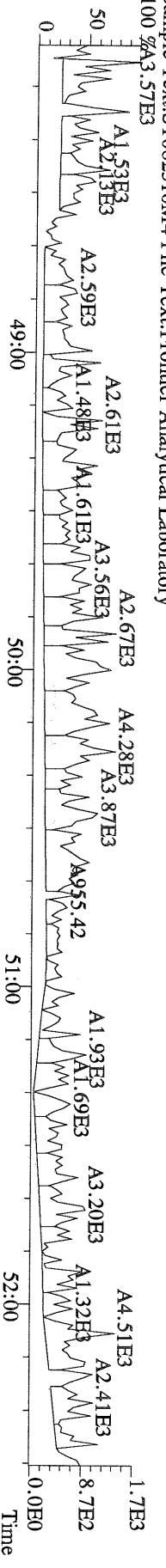
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 453.7831 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



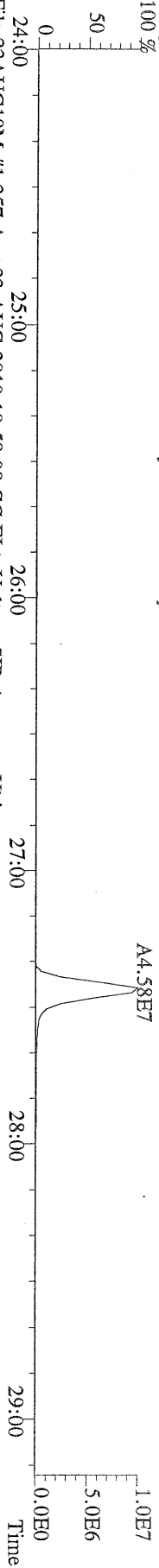
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 455.7801 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



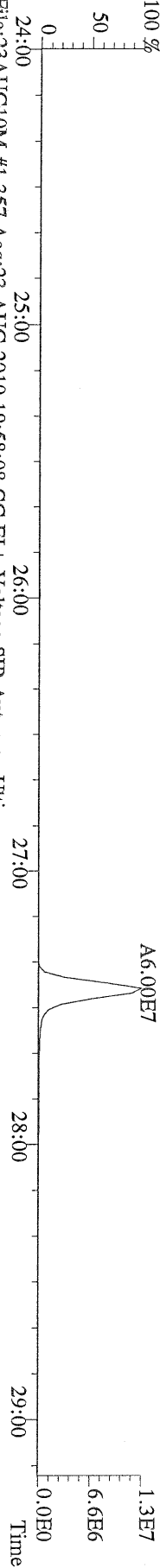
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 513.6775 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



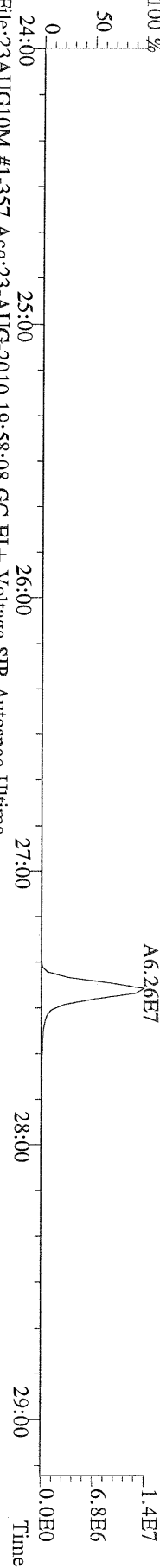
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319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



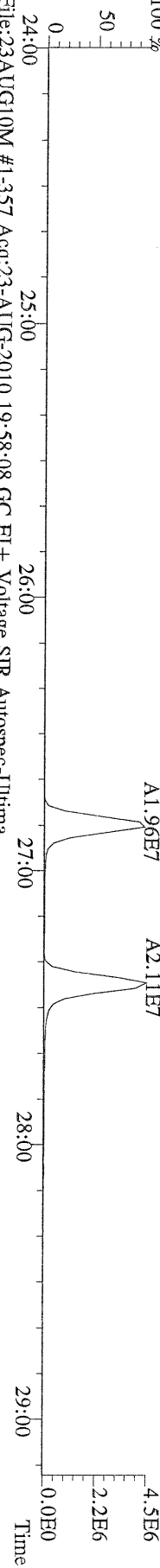
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321.8936 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



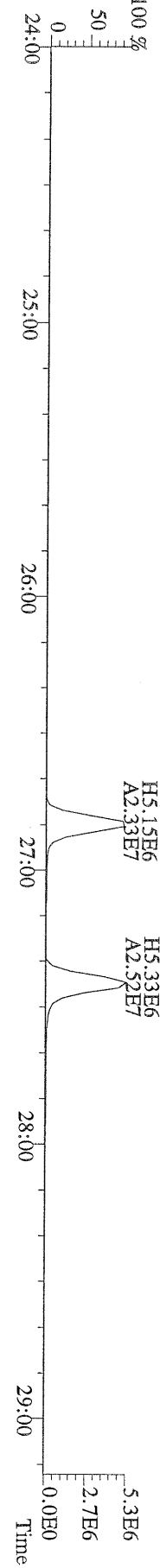
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327.8847 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



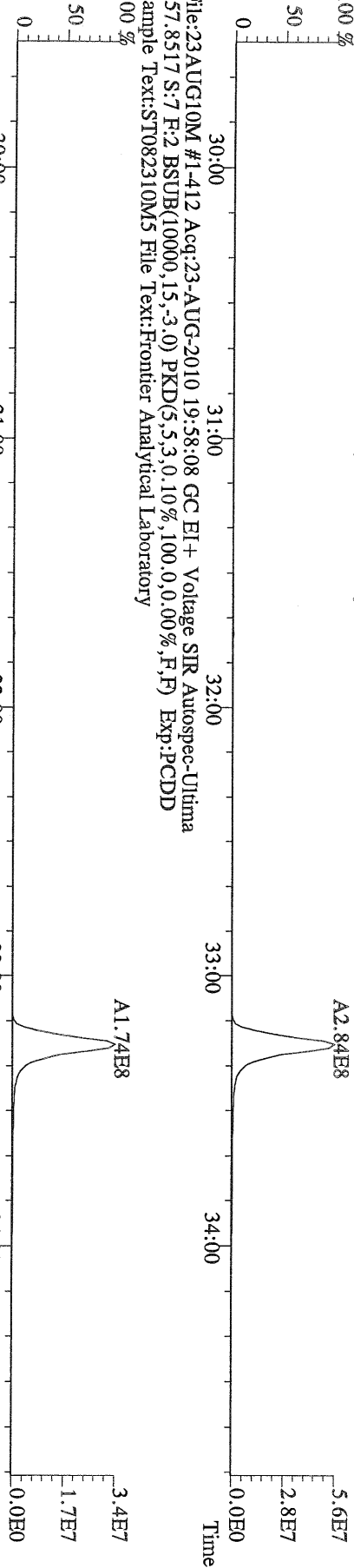
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331.9368 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



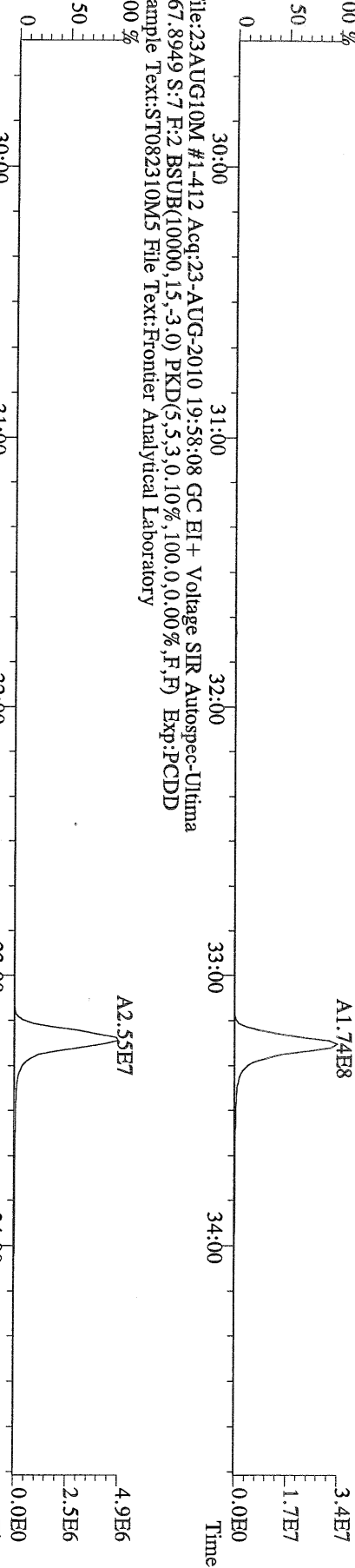
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333.9339 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



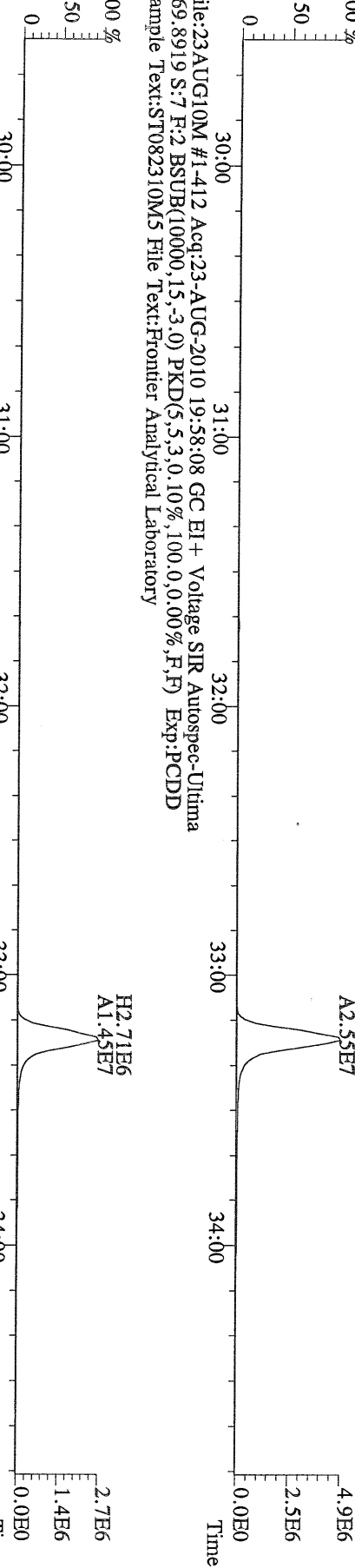
File:23AUG10M #1-412 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:7 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Fronter Analytical Laboratory



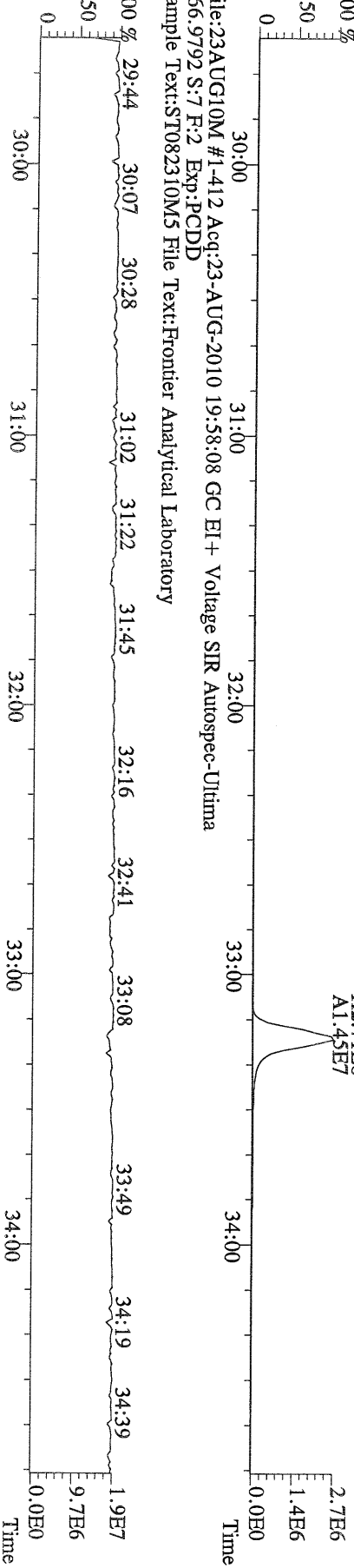
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357.8517 S:7 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Fronter Analytical Laboratory



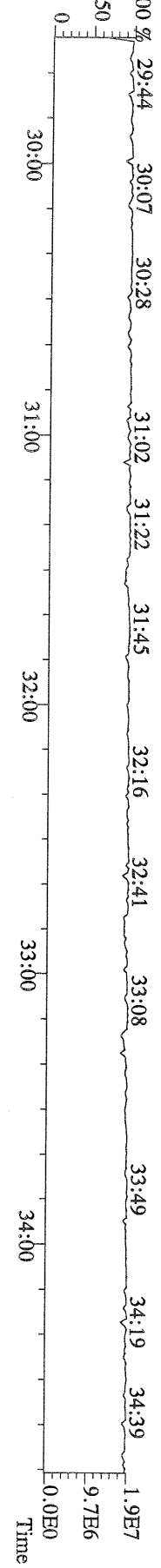
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367.8949 S:7 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Fronter Analytical Laboratory



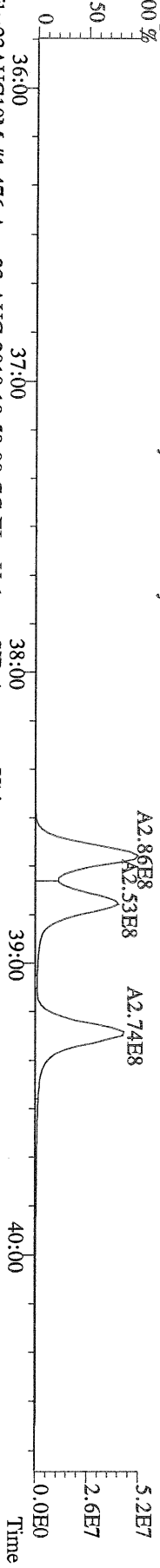
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369.8919 S:7 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Fronter Analytical Laboratory



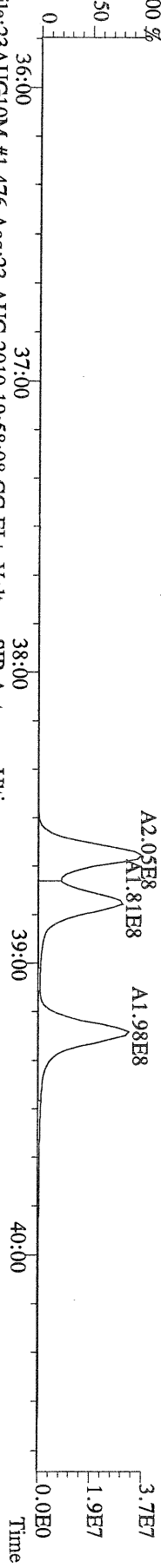
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366.9792 S:7 F:2 Exp:PCDD
Sample Text:ST082310M5 File Text:Fronter Analytical Laboratory



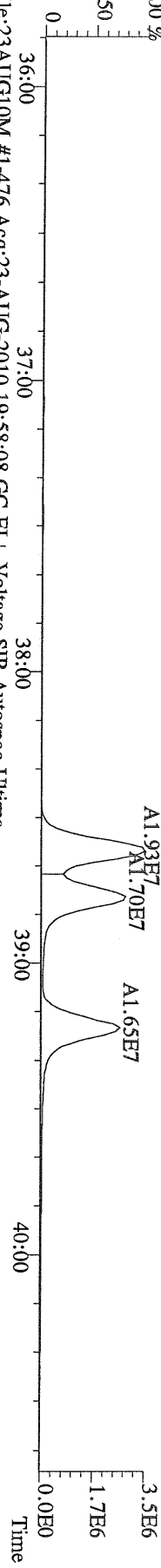
File:23AUG10M #1-476 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



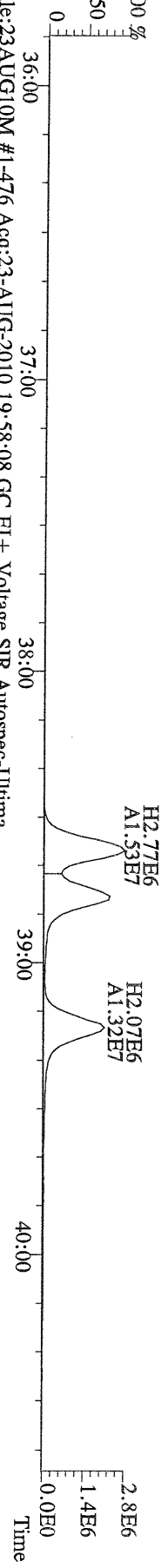
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391.8127 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



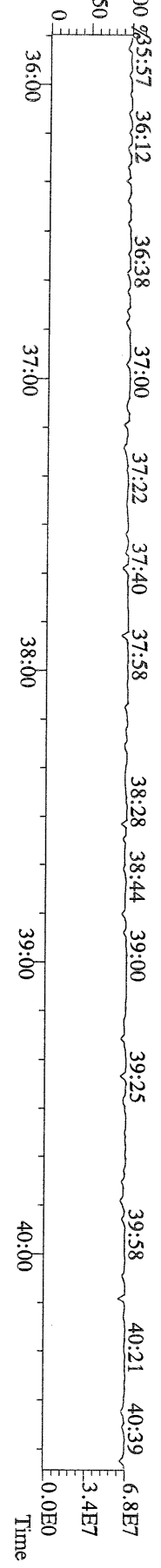
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401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



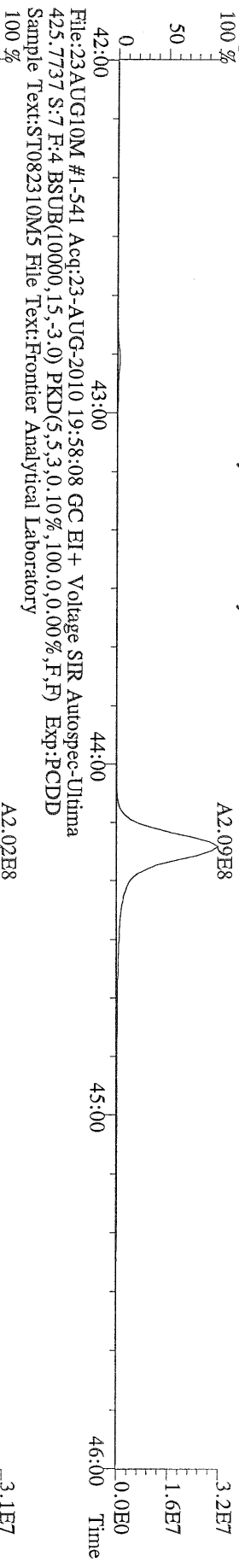
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403.8530 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



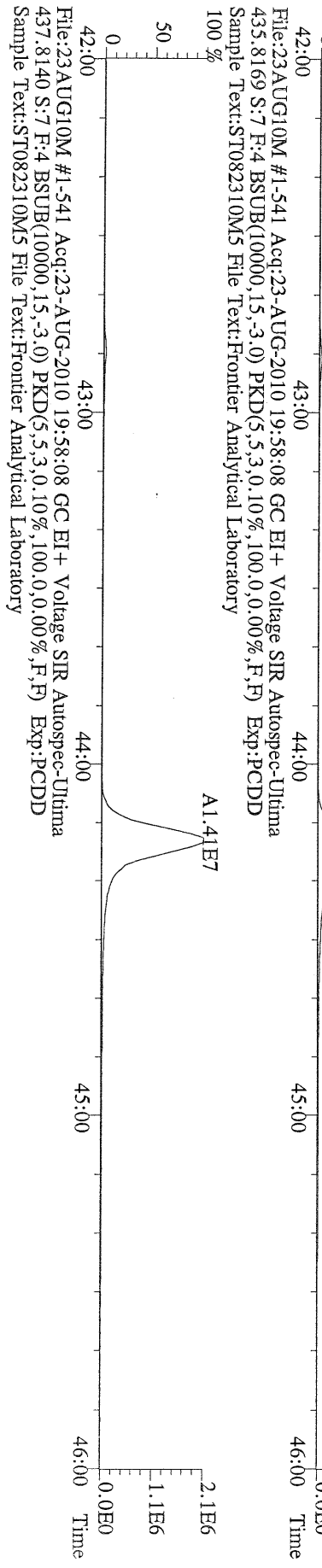
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380.9760 S:7 F:3 Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



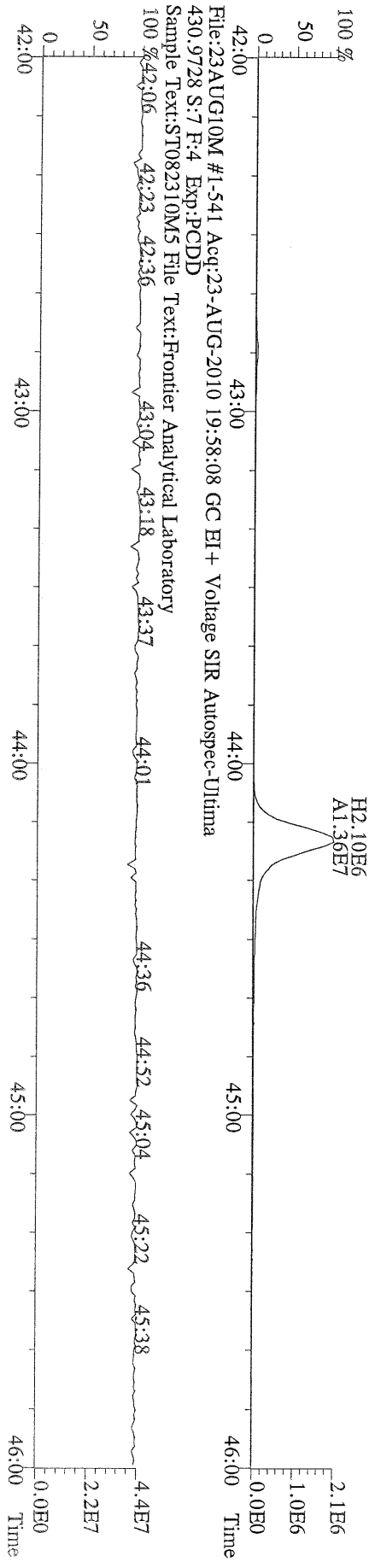
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423.7767 S:7 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



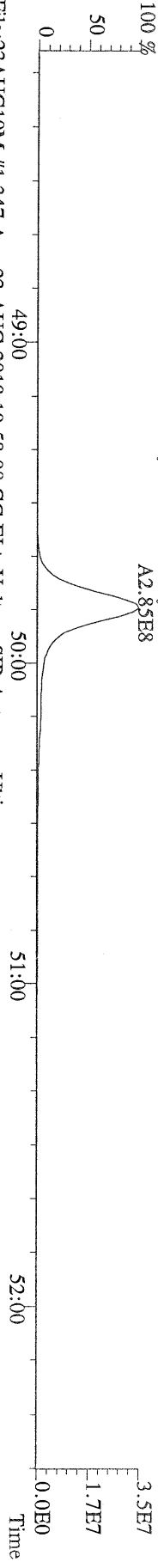
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435.8169 S:7 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



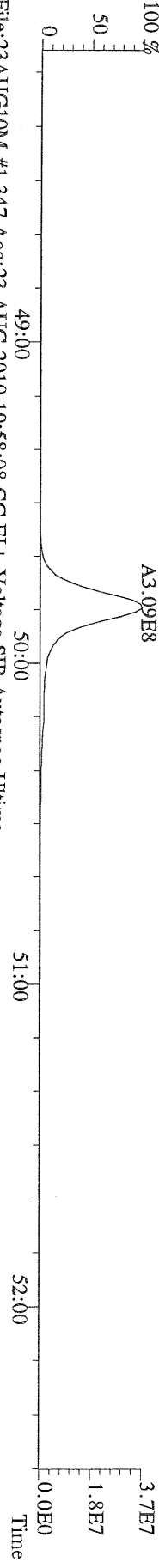
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430.9728 S:7 F:4 Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



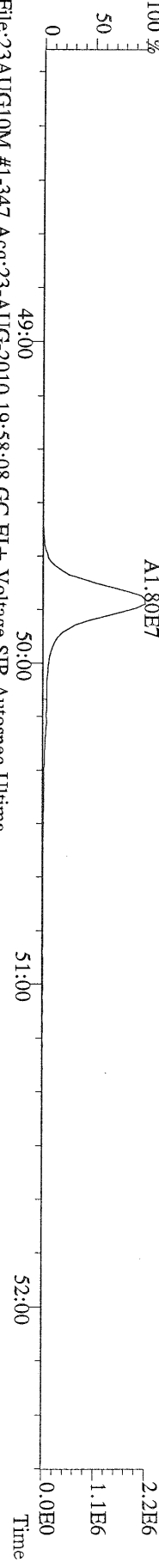
File:23AUG10M #1-347 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



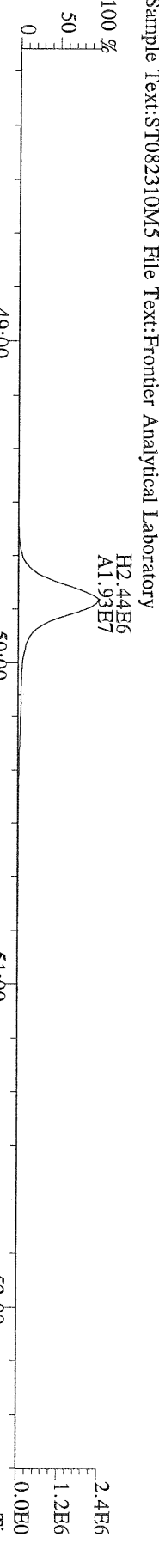
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459.7348 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



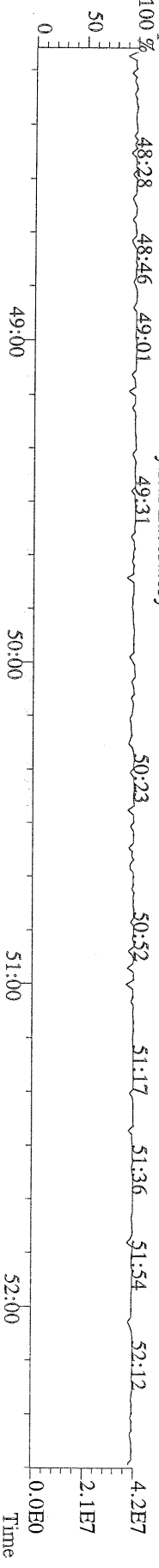
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469.7780 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



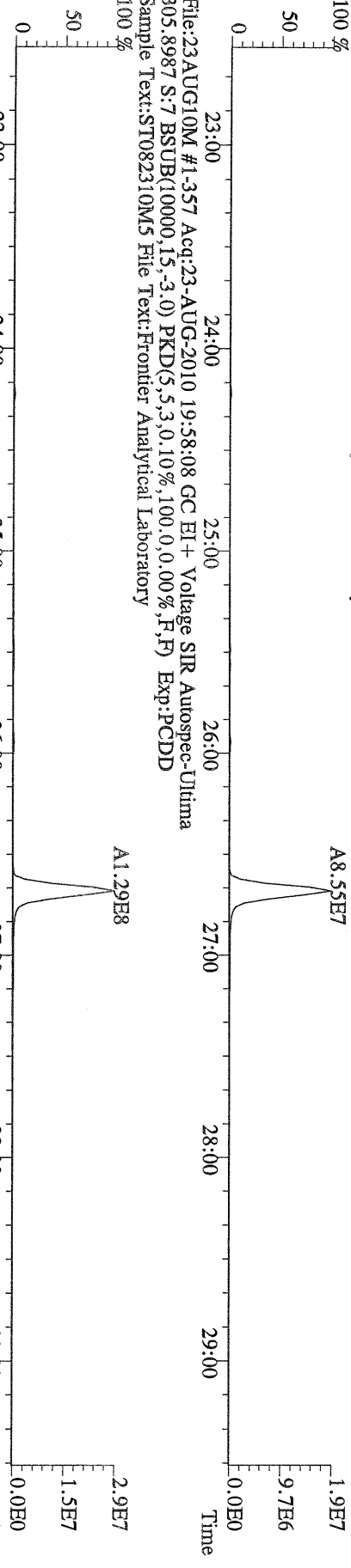
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471.7750 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



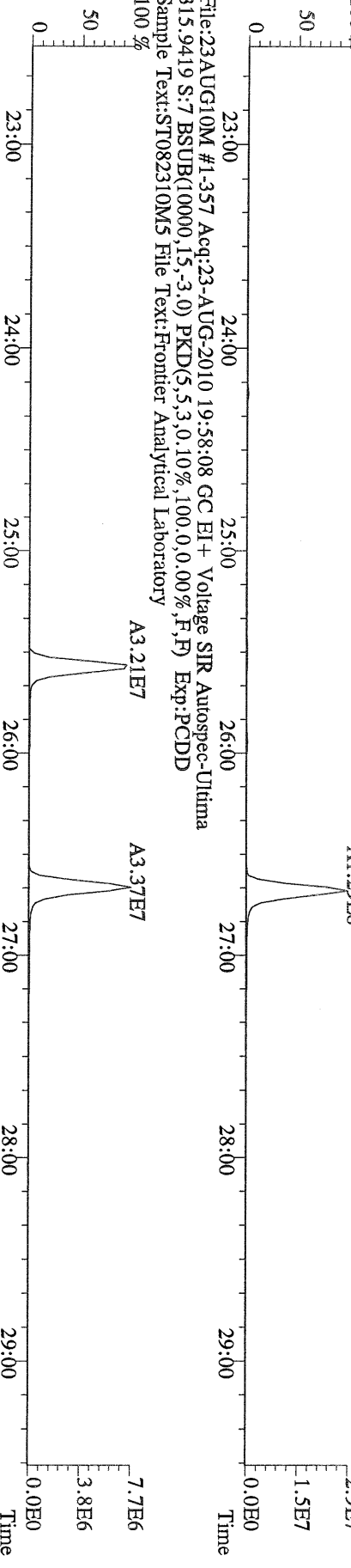
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454.9728 S:7 F:5 Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



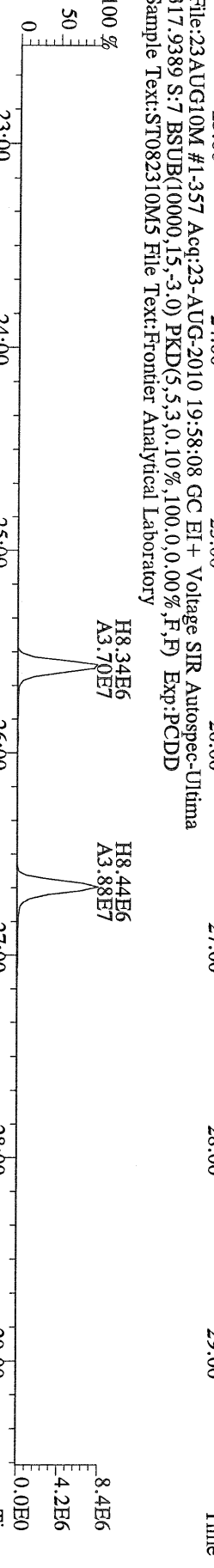
File:23AUG10M #1-357 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



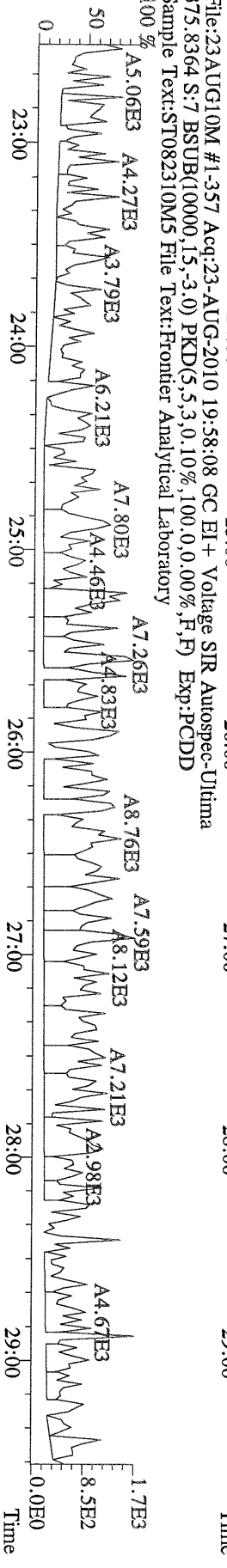
File:23AUG10M #1-357 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



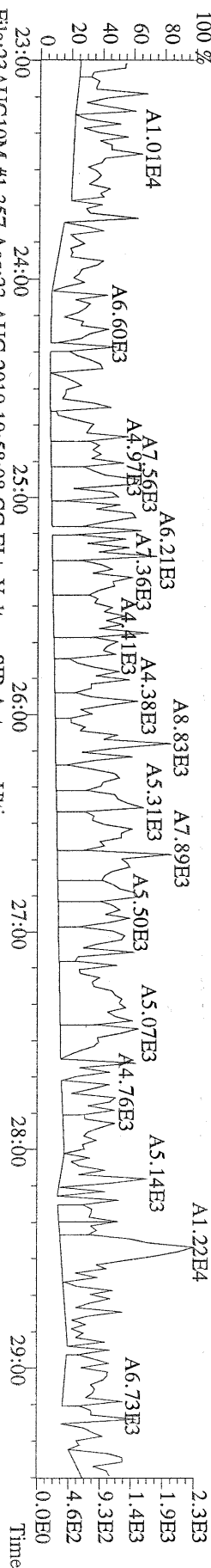
File:23AUG10M #1-357 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



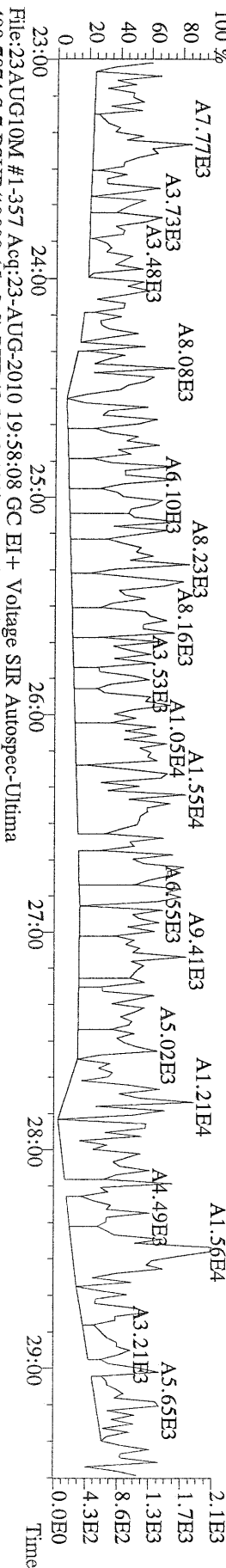
File:23AUG10M #1-357 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



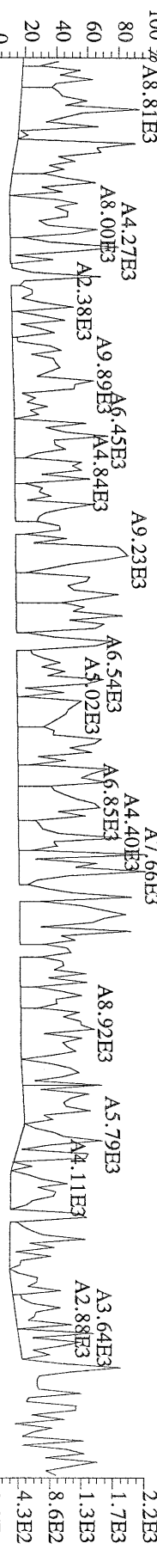
File:23AUG10M #1-357 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



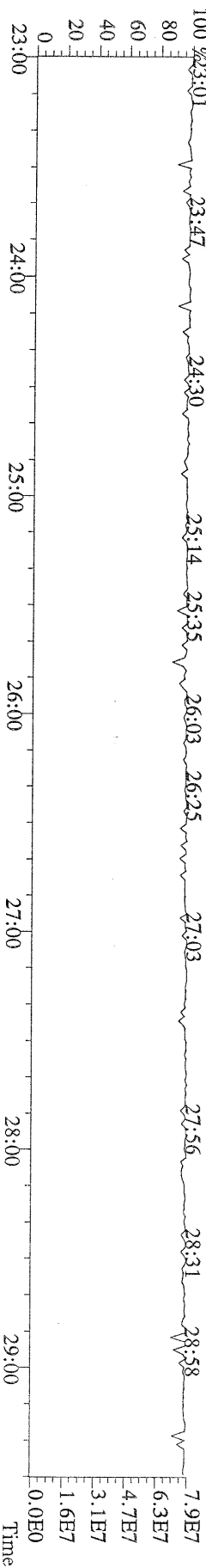
File:23AUG10M #1-357 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
 341.8568 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



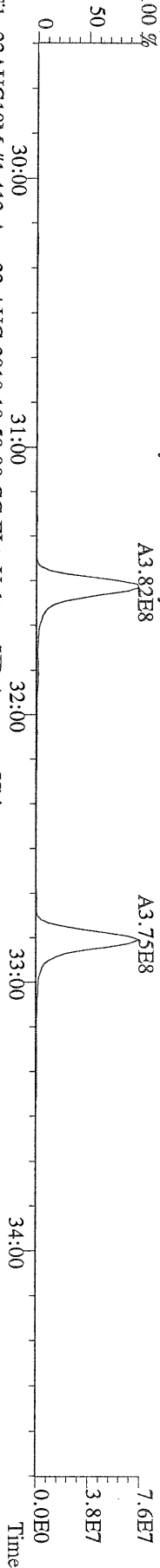
File:23AUG10M #1-357 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
 409.7974 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



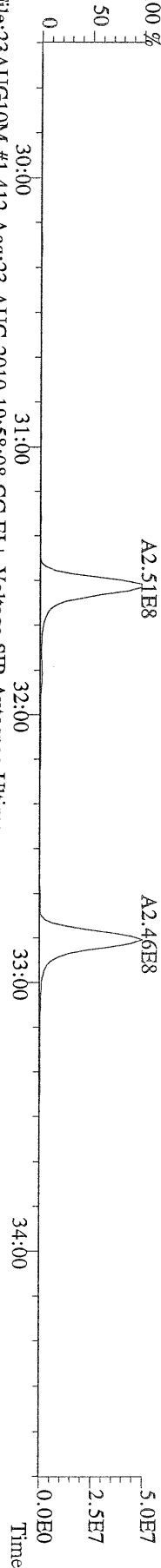
File:23AUG10M #1-357 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
 330.9792 S:7 Exp:PCDD
 Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



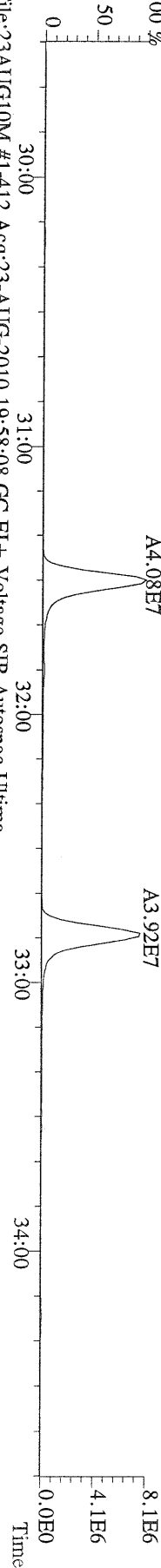
File:23AUG10M #1-412 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



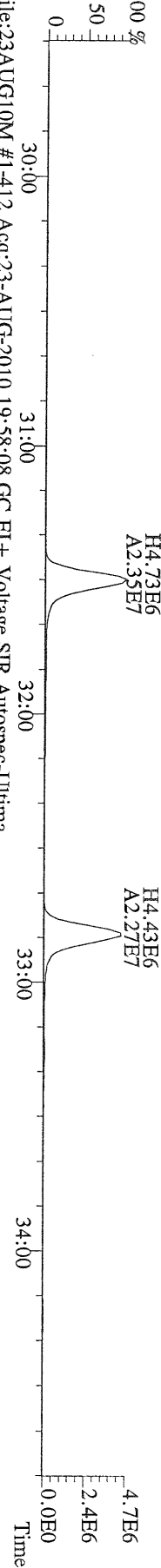
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 341.8568 S:7 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



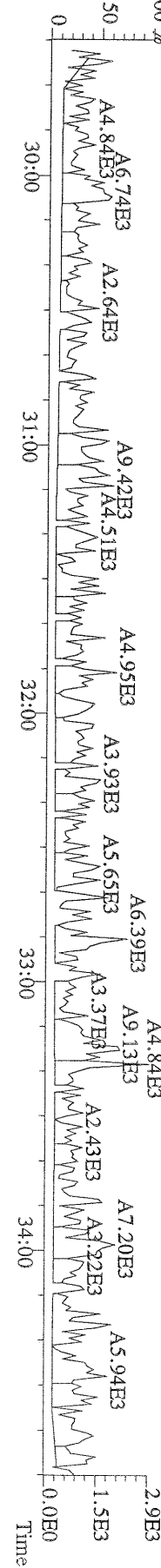
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 351.9000 S:7 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



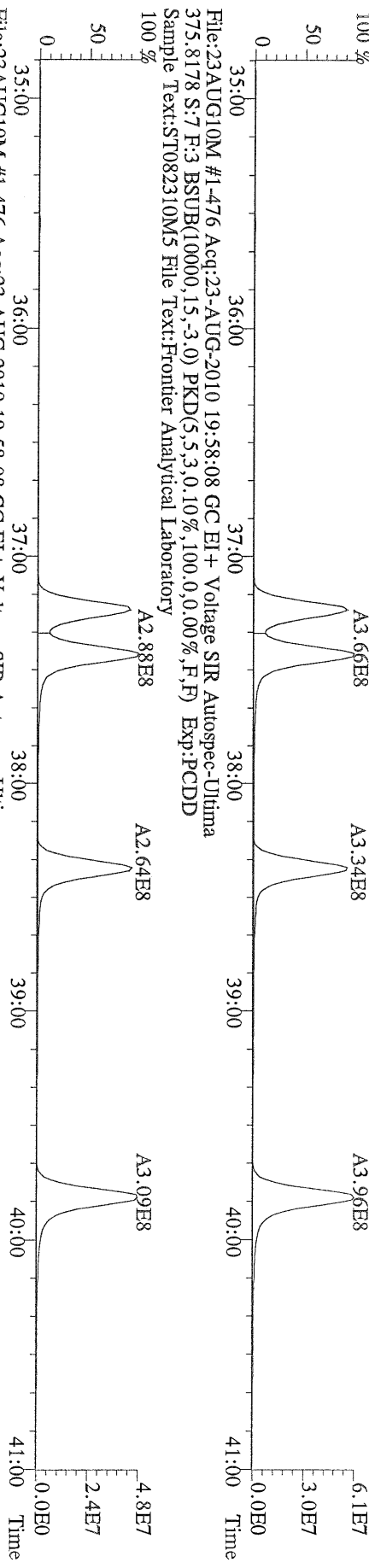
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 353.8970 S:7 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



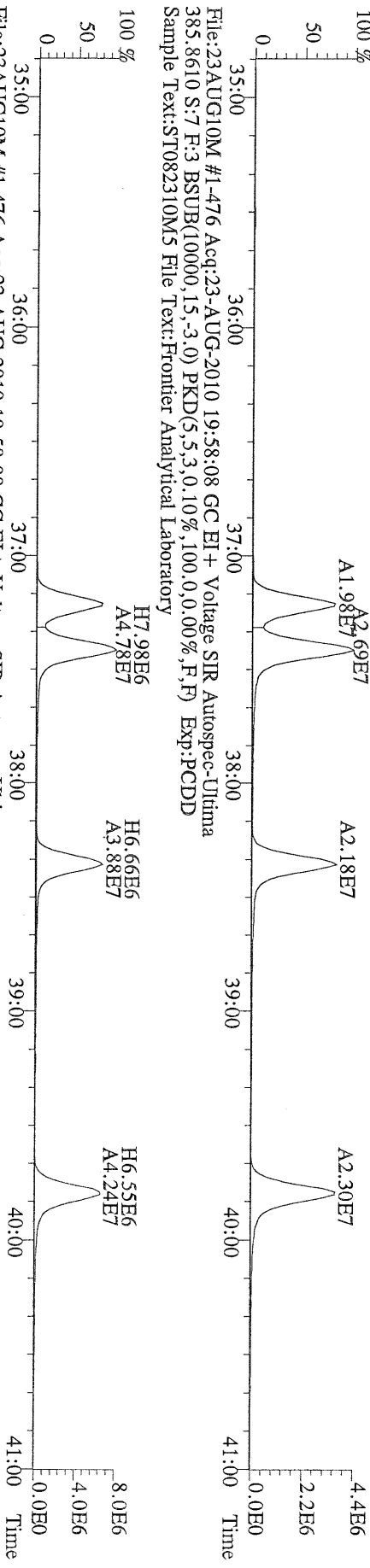
File:23AUG10M #1-412 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
 409.7974 S:7 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



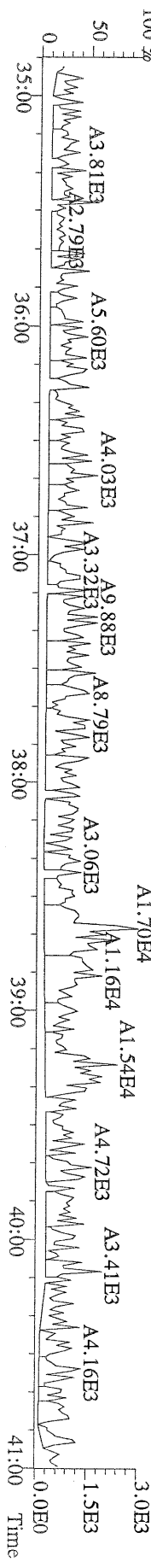
File:23AUG10M #1-476 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



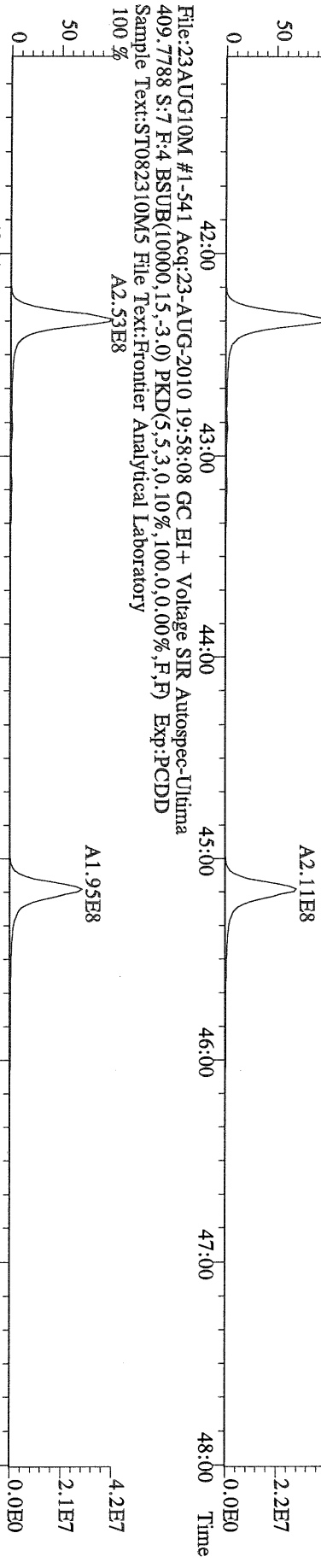
File:23AUG10M #1-476 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



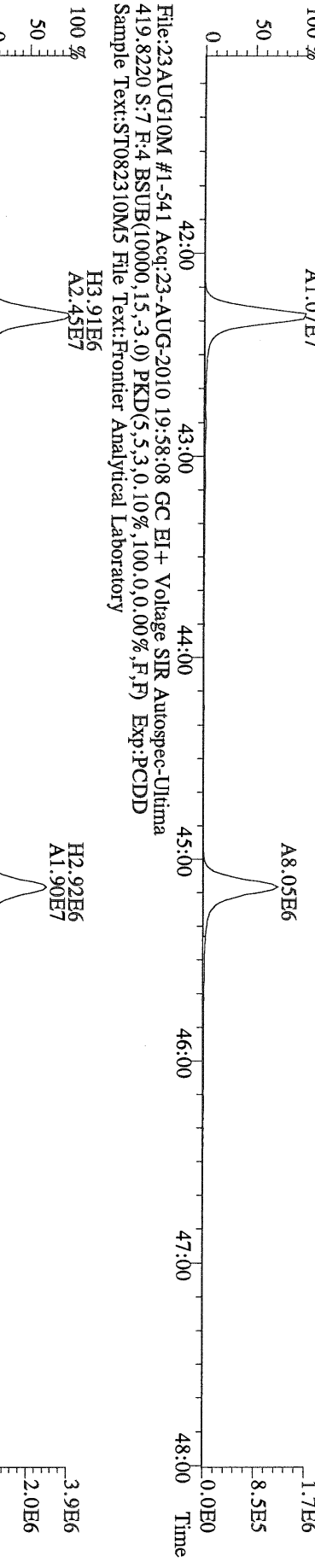
File:23AUG10M #1-476 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



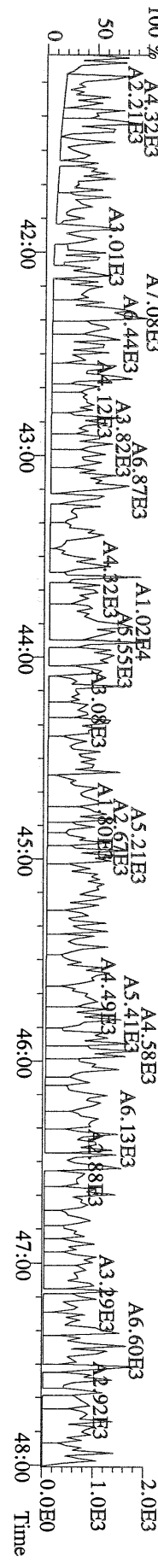
File:23AUG10M #1-541 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



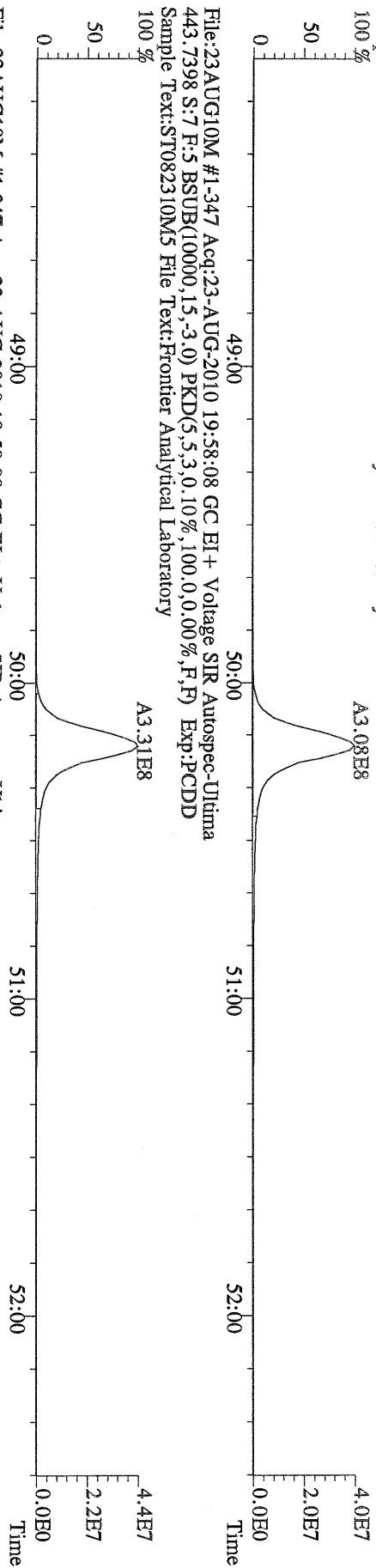
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417.8253 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



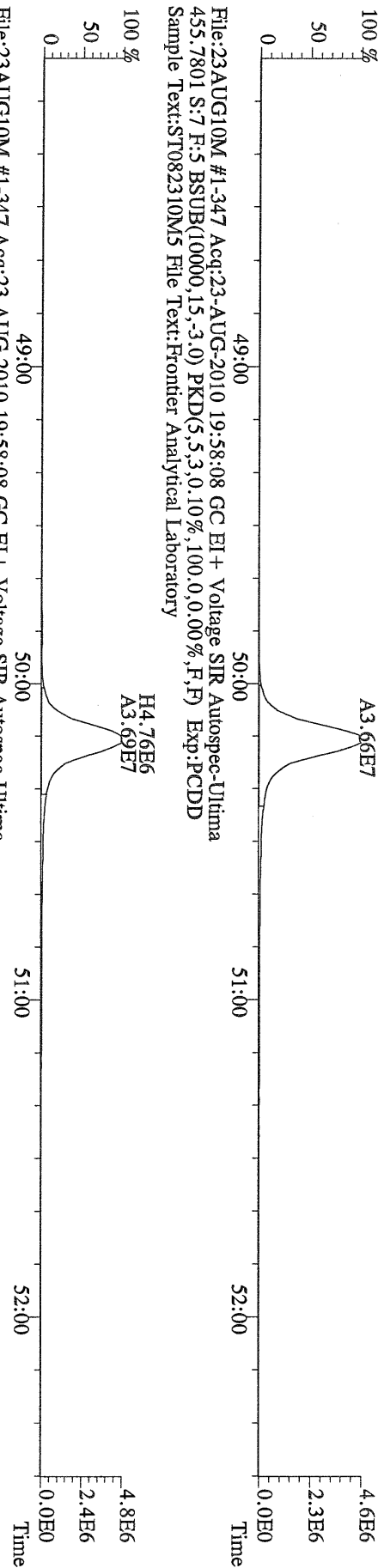
File:23AUG10M #1-541 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



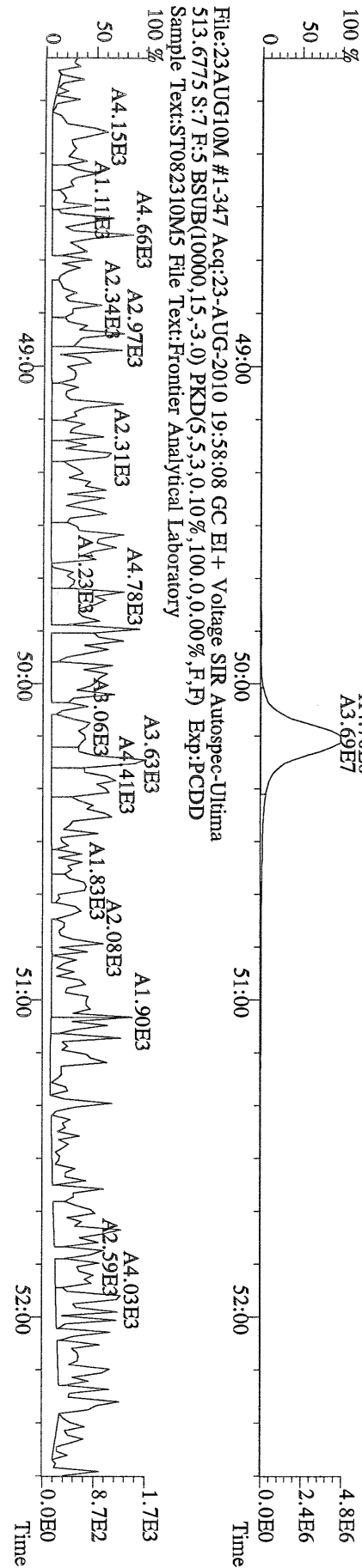
File:23AUG10M #1-347 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
 441.7428 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:P:PCDD
 Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



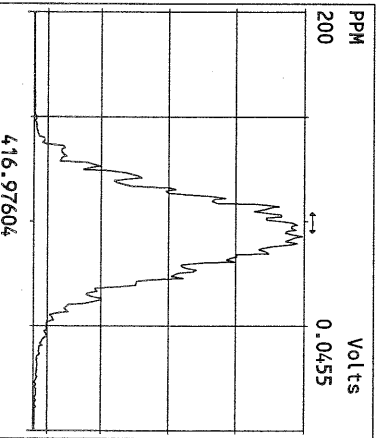
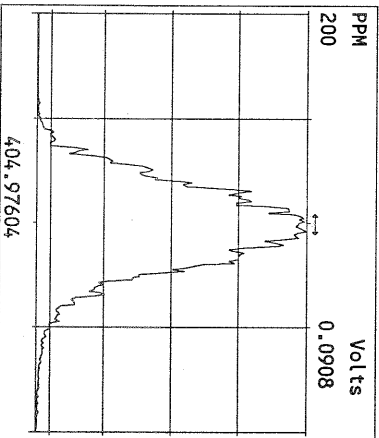
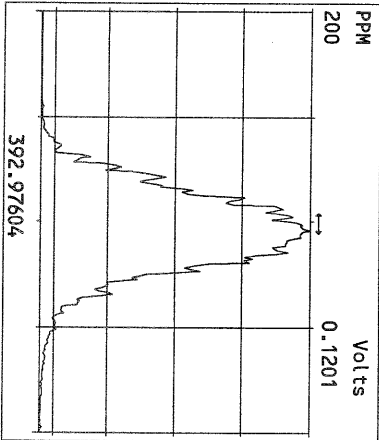
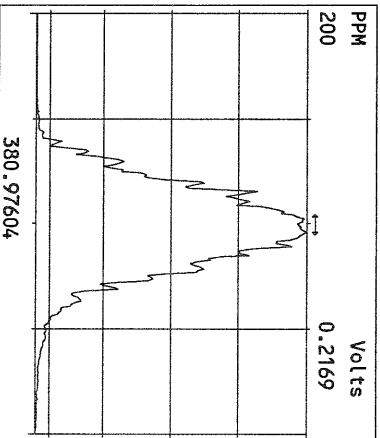
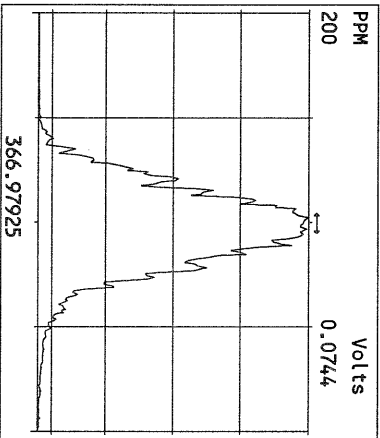
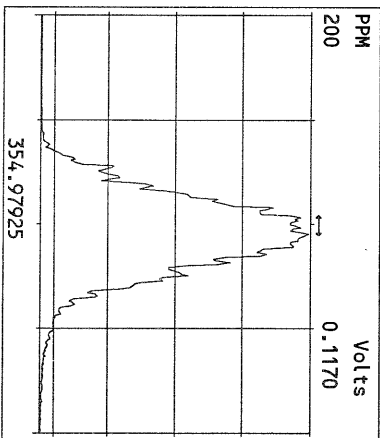
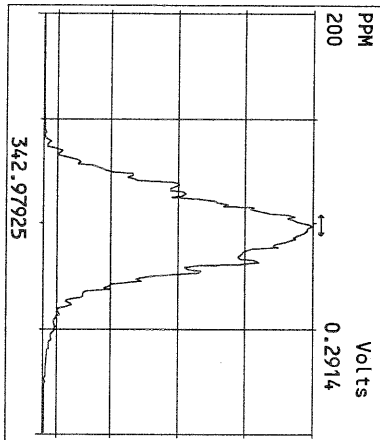
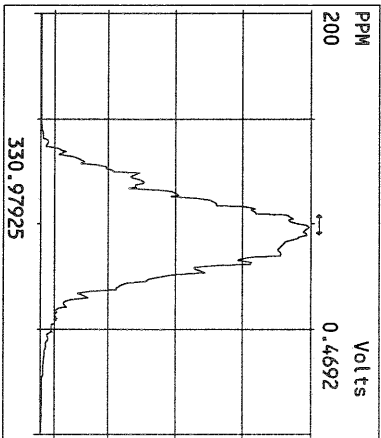
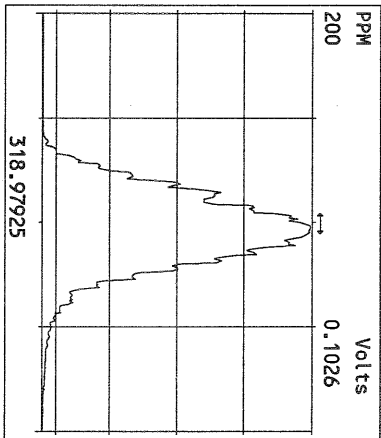
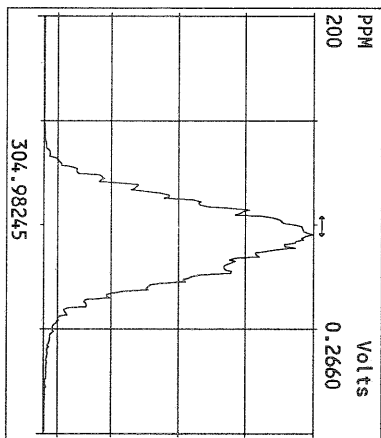
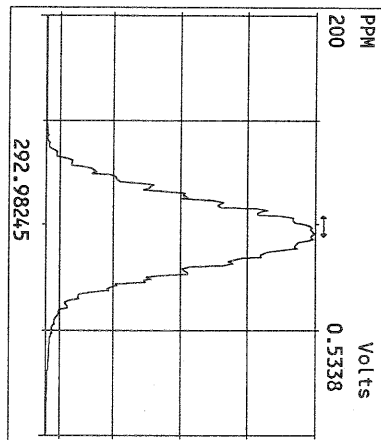
File:23AUG10M #1-347 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
 453.7831 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:P:PCDD
 Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory

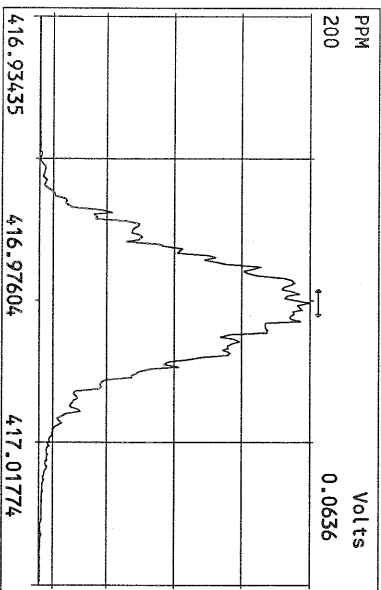
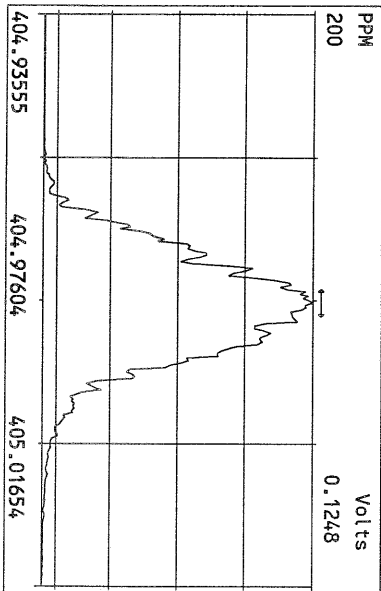
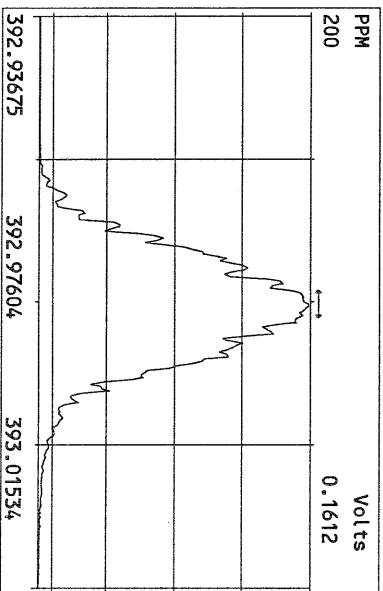
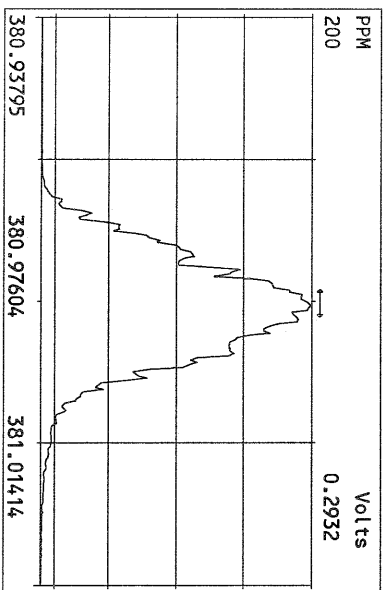
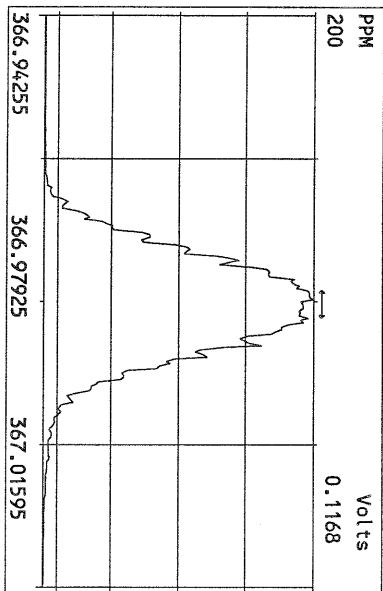
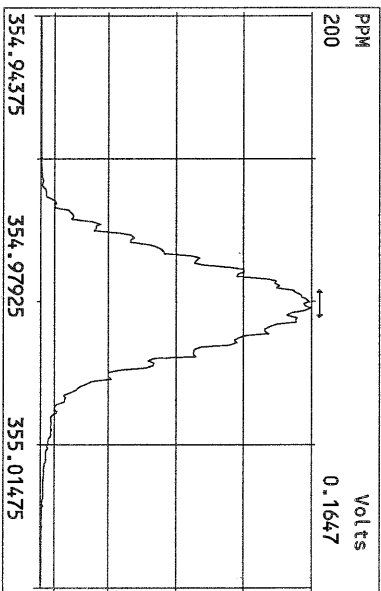
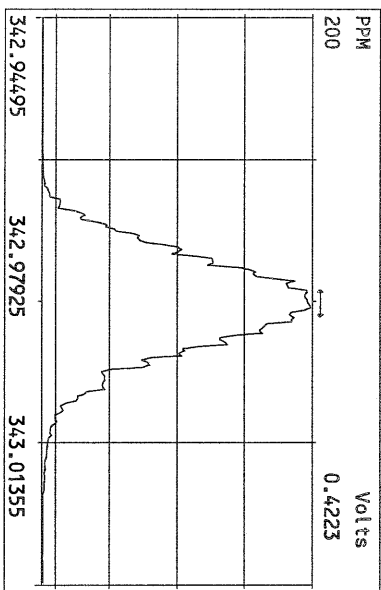
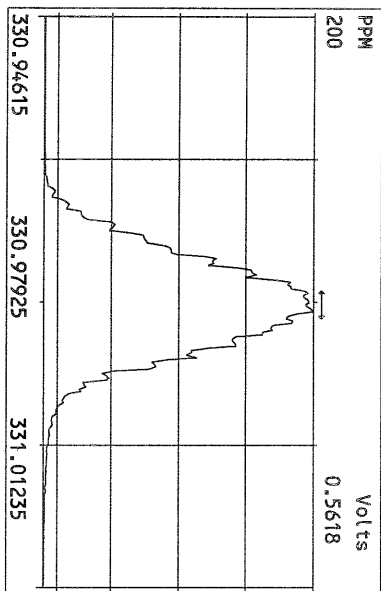


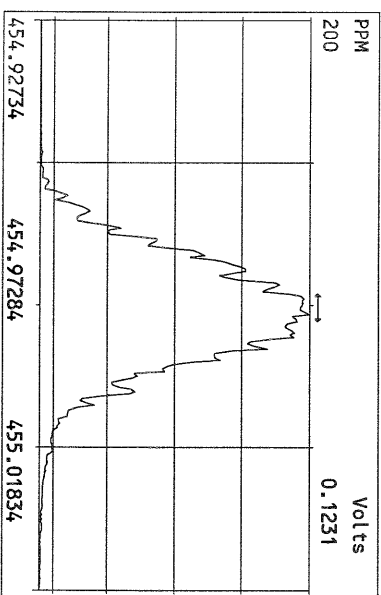
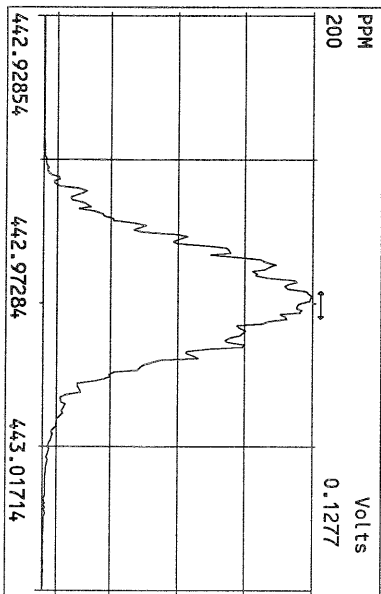
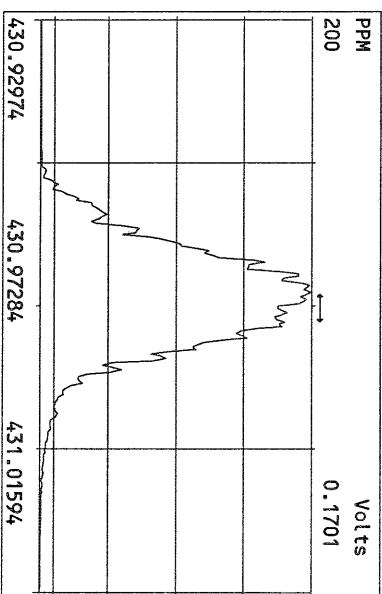
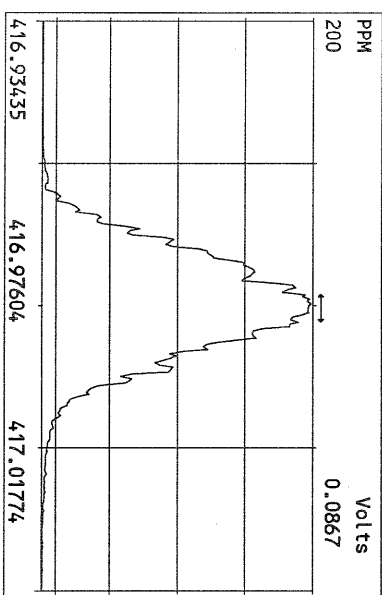
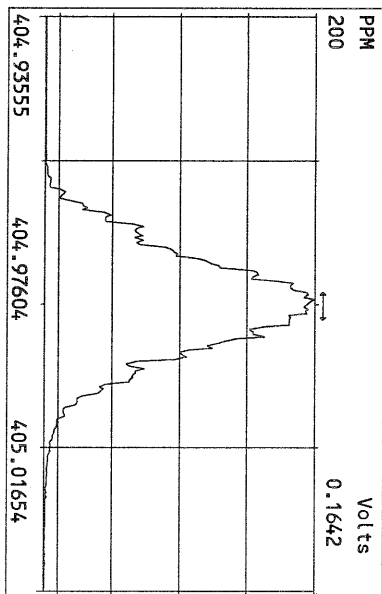
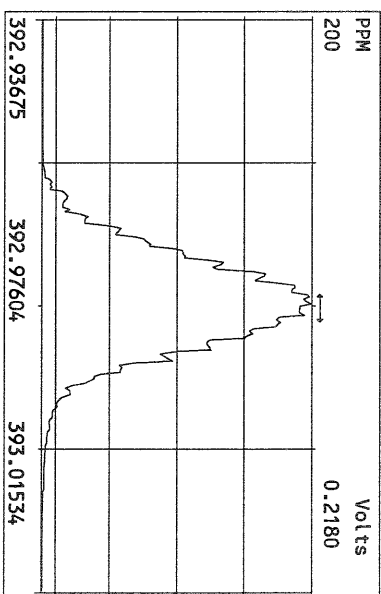
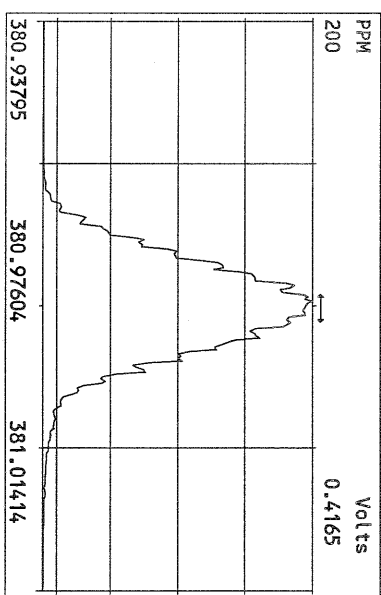
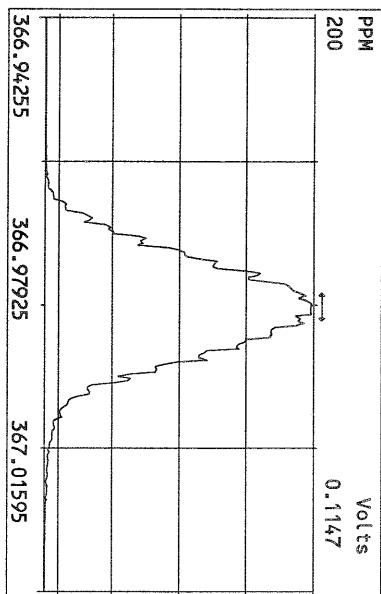
File:23AUG10M #1-347 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
 455.7801 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:P:PCDD
 Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory

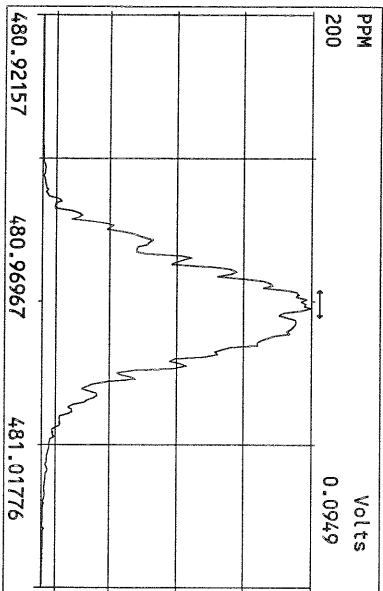
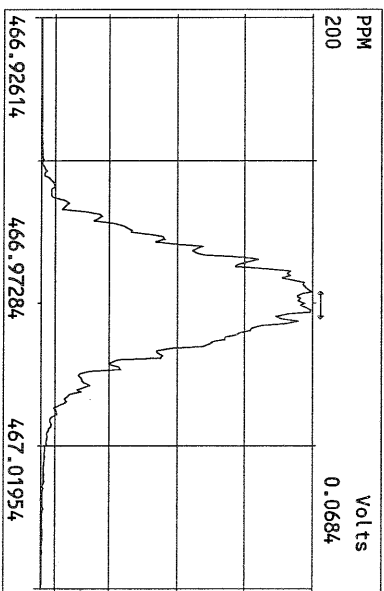
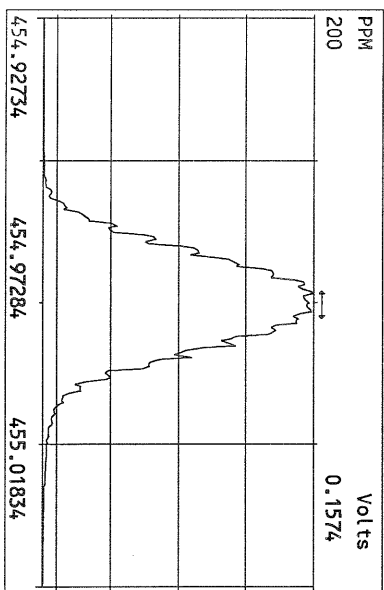
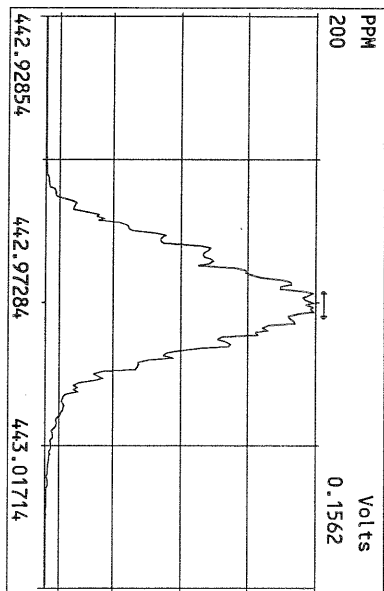
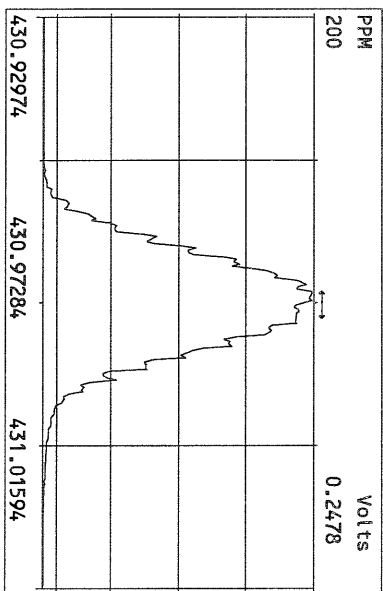
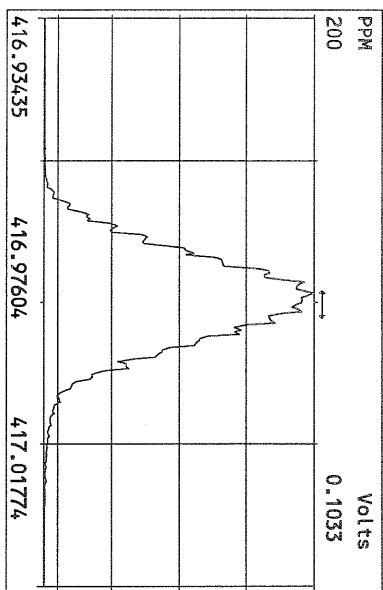
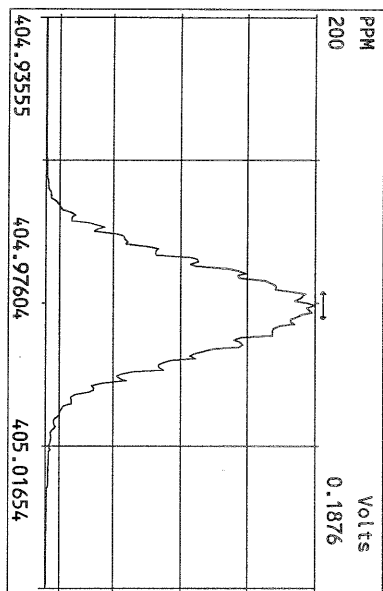


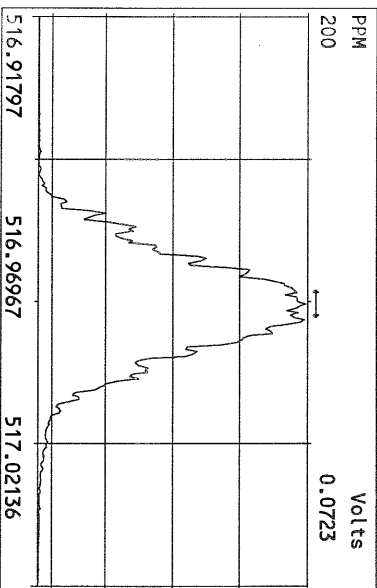
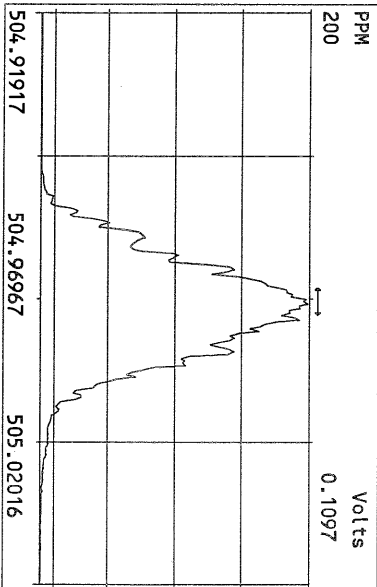
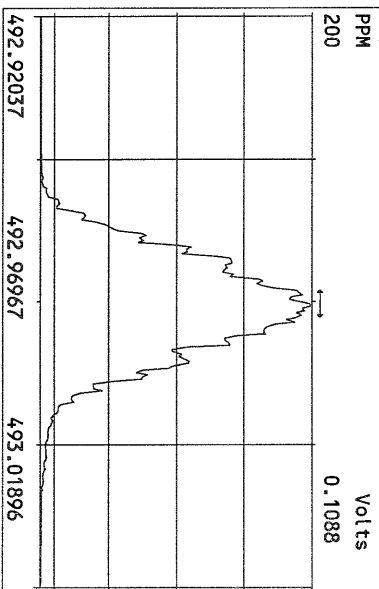
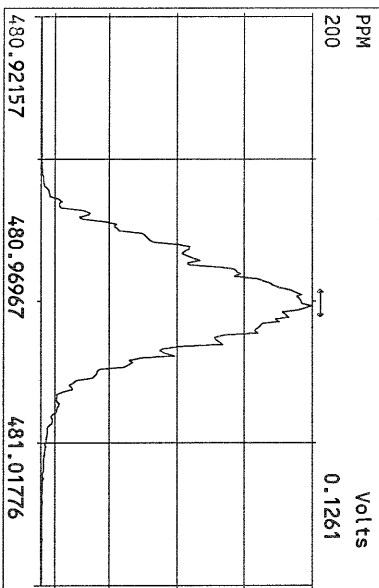
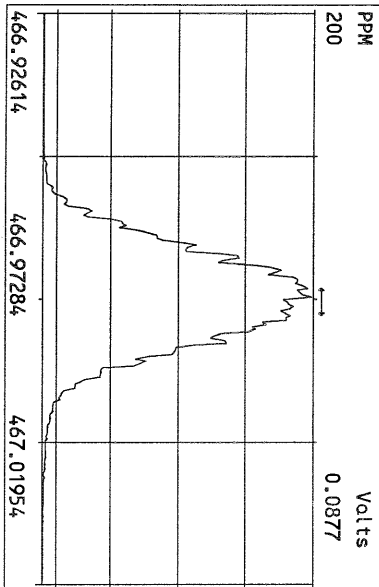
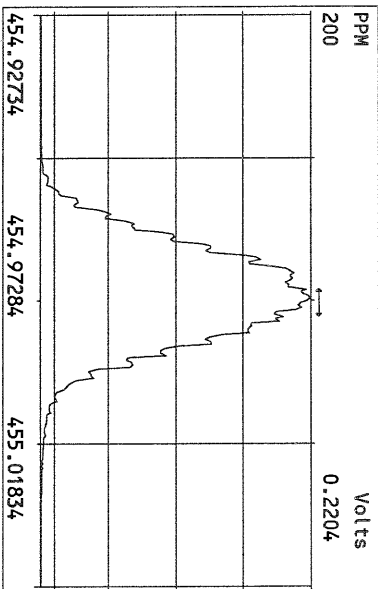
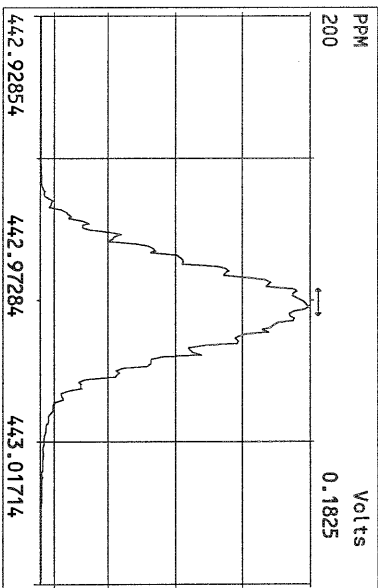
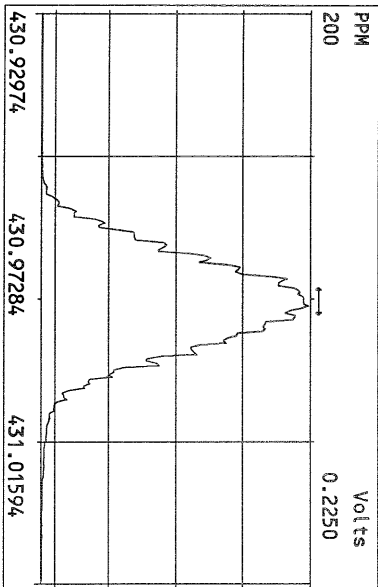
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 513.6775 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:P:PCDD
 Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory











Frontier Analytical Laboratory

Data Filename: 07SEP10A

Analyte: TCDFFAL1-9-3-10

Cal: TCDFFAL1-9-3-10

Name	RRF	S. D.	%RSD	S2 RRF#1	S3 RRF#2	S4 RRF#3	S5 RRF#4	S6 RRF#5
2,3,7,8-TCDF	1.10	0.0606	5.54 %	1.19	1.12	1.04	1.07	1.06
13C-2,3,7,8-TCDF	1.06	0.0889	8.41 %	1.01	1.02	0.97	1.19	1.10
13C-1,2,3,4-TCDF	-	-	- %	-	-	-	-	-

Analyst: 

Date: 9/3/10

Run #1 Filename 03SEP10A
Client ID: ST090310A1

S: 2 Acquired: 3-SEP-10 11:33:16 Cal: TCDFFAL1-9-3-10
Analyte: FAL ID: 1613 CS1 100511H

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDF	0.50	8.75e+05	0.73 y	19:38	-	1.19 y
2	IS	13C-2,3,7,8-TCDF	100.00	1.47e+08	0.81 y	19:37	-	1.01 y
3	RS	13C-1,2,3,4-TCDF	100.00	1.46e+08	0.79 y	17:00	1.46e+06	- n

Analyst: 

Date: 9/3/10

Run #2 Filename 03SEP10A
Client ID: ST090310A2

S: 3 Acquired: 3-SEP-10 12:08:21 Cal:
Analyte:

FAL ID: 1613 CS2 1005111

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDF	2.00	3.30e+06	0.74 y	19:39	-	1.12 y
2	IS	13C-2,3,7,8-TCDF	100.00	1.48e+08	0.79 y	19:36	-	1.02 y
3	RS	13C-1,2,3,4-TCDF	100.00	1.45e+08	0.79 y	17:01	1.45e+06	- n

Analyst: 

Date: 9/3/10

Run #3 Filename 03SEP10A
Client ID: ST090310A3

S: 4 Acquired: 3-SEP-10 12:43:24 Cal:
Analyte:

FAL ID: 1613 CS3 100511J

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDF	10.00	1.47e+07	0.77 y	19:38	-	1.04 y
2	IS	13C-2,3,7,8-TCDF	100.00	1.42e+08	0.80 y	19:36	-	0.972 y
3	RS	13C-1,2,3,4-TCDF	100.00	1.46e+08	0.79 y	17:01	1.46e+06	- n

Analyst: 

Date: 9/3/10

Run #4 Filename 03SEP10A
Client ID: ST090310A4

S: 5 Acquired: 3-SEP-10 13:18:29 Cal:
Analyte:

FAL ID: 1613 CS4 100511K

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDF	40.00	6.98e+07	0.77 y	19:38	-	1.07 y
2	IS	13C-2,3,7,8-TCDF	100.00	1.63e+08	0.79 y	19:36	-	1.19 y
3	RS	13C-1,2,3,4-TCDF	100.00	1.37e+08	0.80 y	17:00	1.37e+06	- n

Analyst: *E*


Date: 9/3/10

Run #5 Filename 03SEP10A
Client ID: ST090310A5

S: 6 Acquired: 3-SEP-10 13:53:32 Cal:
Analyte: TCDFFAL1-9-3-10

FAL ID: 1613 CS5 100511L

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDF	200.00	3.34e+08	0.81 y	19:37	-	1.06 y
2	IS	13C-2,3,7,8-TCDF	100.00	1.58e+08	0.78 y	19:36	-	1.10 y
3	RS	13C-1,2,3,4-TCDF	100.00	1.43e+08	0.77 y	17:01	1.43e+06	- n

Analyst: 

Date: 9/3/10

USEPA - ITD

FORM 4A
TCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 9/3/10

Instrument ID: FAL1 GC Column ID: DB225

VER Data Filename: 03SEP10A Sam:4 Analysis Date: 3-SEP-10 Time: 12:43:24

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
NATIVE ANALYTES						
2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	y	9.48	8.40 - 12.0
LABELED COMPOUNDS						
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	91.8	71.0 - 140

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

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

(3) Contract-required concentration range as specified in Table 6A, Method 1613

Analyst: 

Date: 9/3/10

TCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Frontier Analytical Laboratory Episode No.:
 Contract No.: SAS No.:
 Instrument ID: FAL1 Initial Calibration Date: 9/3/10
 RT Window Data Filename: 03SEP10A Sam:1 Analysis Date: 3-SEP-10 Time: 10:58:13
 DB-5 IS Data Filename: Analysis Date: Time:
 DB-225 IS Data Filename: 03SEP10A Sam:1 Analysis Date: 3-SEP-10 Time: 10:58:13

DB-225 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT
1,3,6,8-TCDF (F)	13:39
1,2,8,9-TCDF (L)	22:18

(F) = First eluting iosmer (DB-5); (L) = Last eluting isomer (DB-5)

=====

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT
 BETWEEN
 COMPARED PEAKS (1)

<25%

(1) To meet contract requirement, %Valley Height Between Compared Peaks shall not exceed 25%.

Analyst: E

Date: 9/3/10

FAL ID: ST090310A3 Filename: 03SEP10A Sam:4 Acquired: 3-SEP-10 12:43:24 ICal:

Client ID: 1613 CS3 100511J ConCal: NA EndCal: NA

Results: GC Column: DB225 Amount: 1.000

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise	DL	#Hom	Rec
2,3,7,8-TCDF	1.47e+07	0.77 y	19:38	1.10	9.48		2.50	-	-	1	
13C-2,3,7,8-TCDF	1.42e+08	0.80 y	19:36	1.06	91.8						91.8
13C-1,2,3,4-TCDF	1.46e+08	0.79 y	17:01	-	102						

Analyst: 

Date: 9/3/10

Frontier Analytical Laboratory - Acquisition Log


Run Name:03SEP10A

Instrument: FAL1

GC: DB225

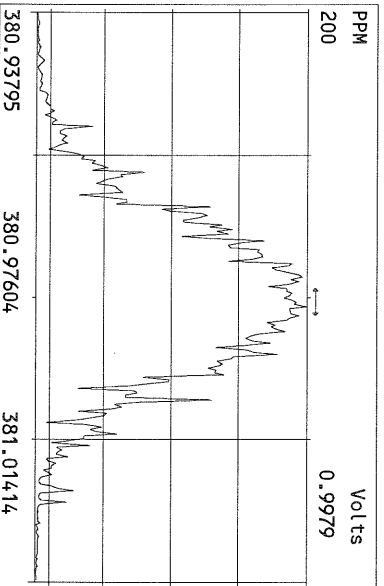
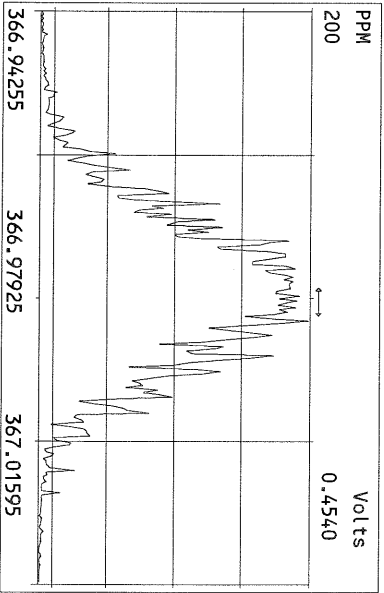
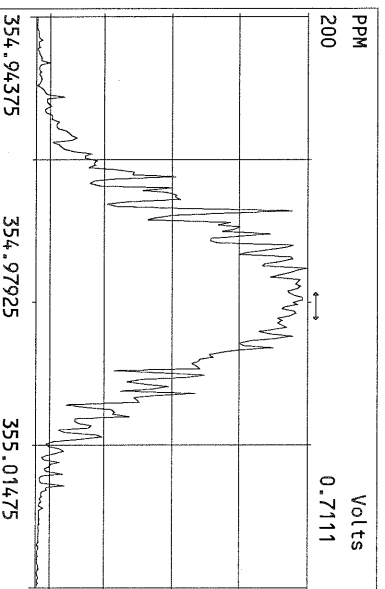
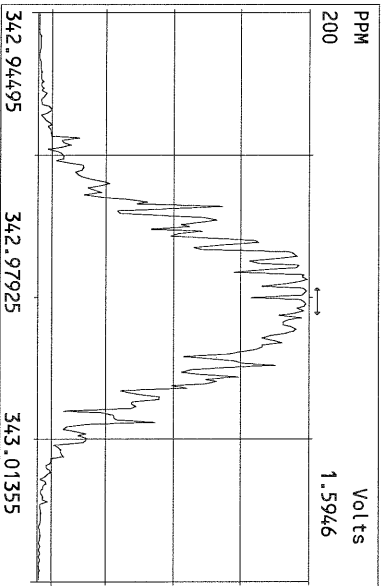
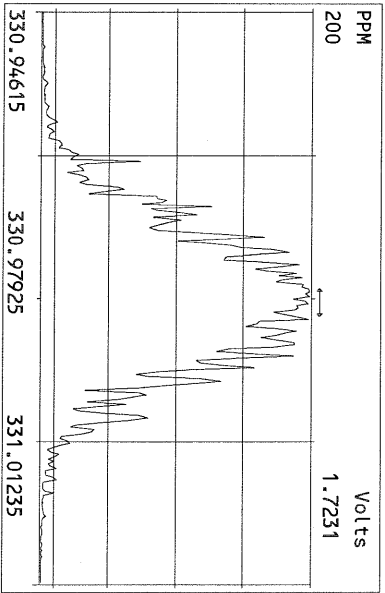
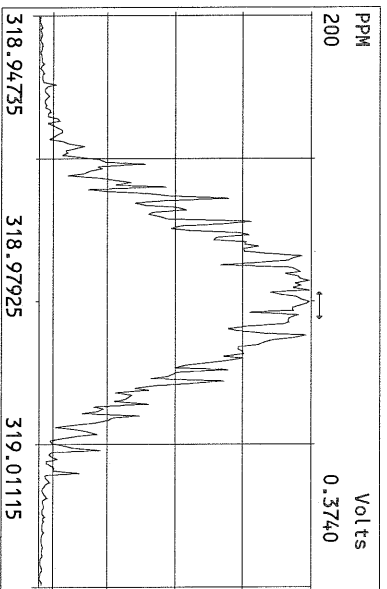
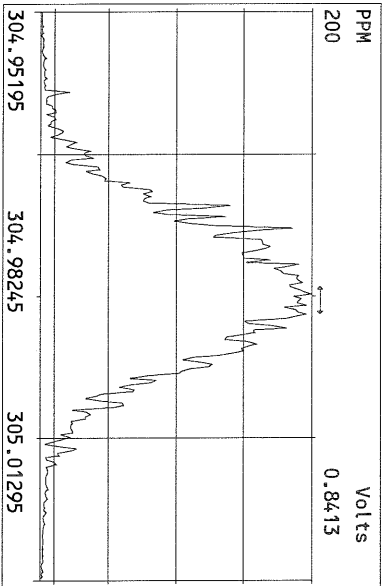
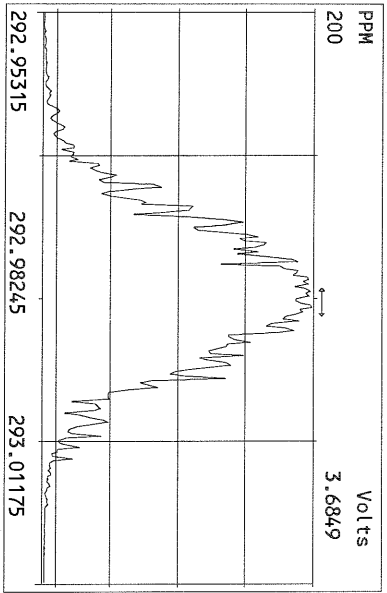
Experiment:TCDF

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03SEP10A	2	ST090310A1	1613 CS1 100511H	3-SEP-10 11:33:16	NA	NA	TC
03SEP10A	3	ST090310A2	1613 CS2 100511I	3-SEP-10 12:08:21	NA	NA	TC
03SEP10A	4	ST090310A3	1613 CS3 100511J	3-SEP-10 12:43:24	NA	NA	TC
03SEP10A	5	ST090310A4	1613 CS4 100511K	3-SEP-10 13:18:29	NA	NA	TC
03SEP10A	6	ST090310A5	1613 CS5 100511L	3-SEP-10 13:53:32	NA	NA	TC

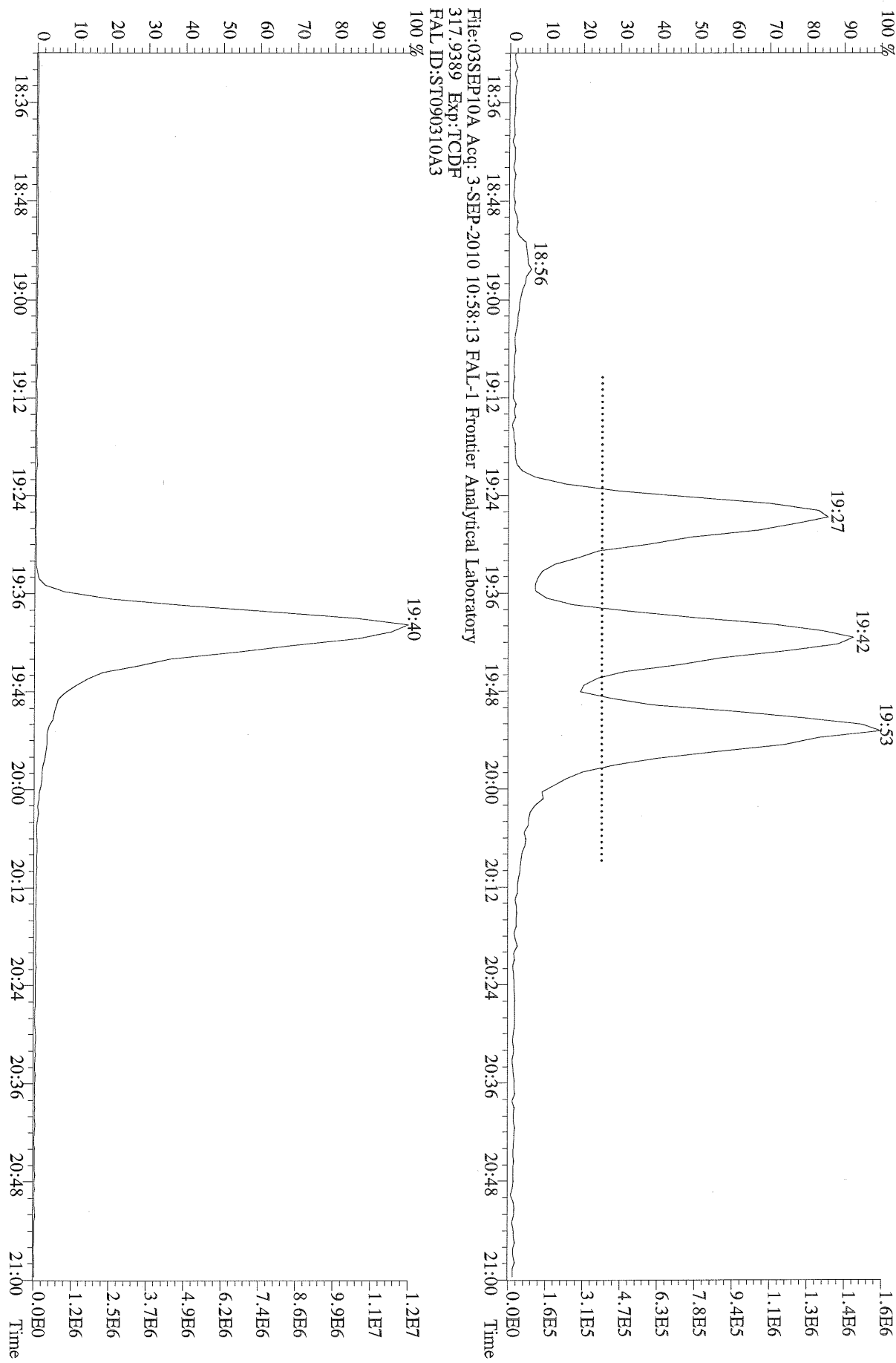
 9/3/10

Data Backed Up: _____

Date: _____

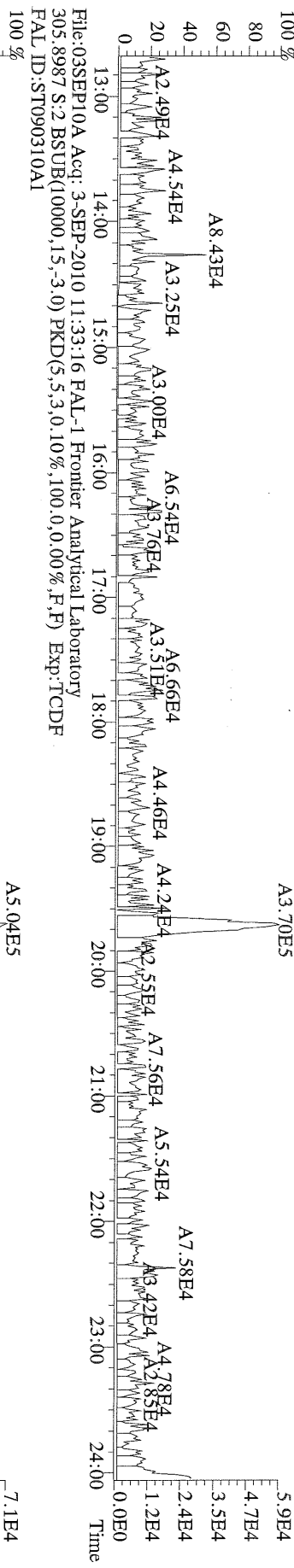


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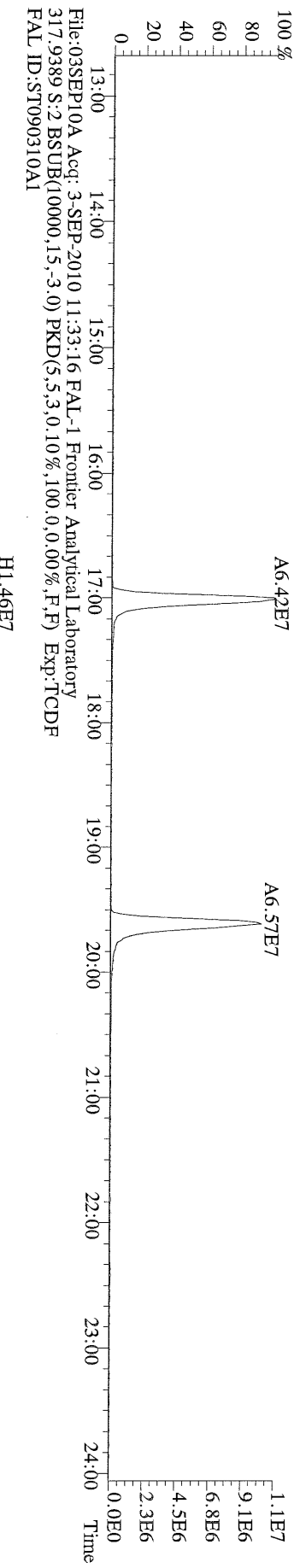


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317.9389 Exp:TCDF
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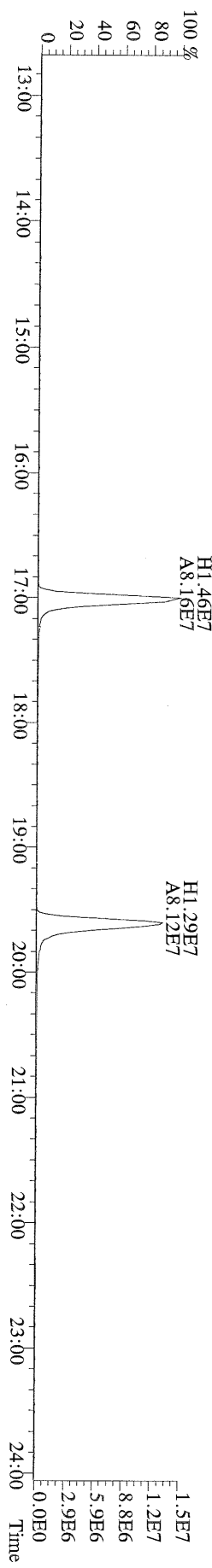
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FAL ID:ST090310A1



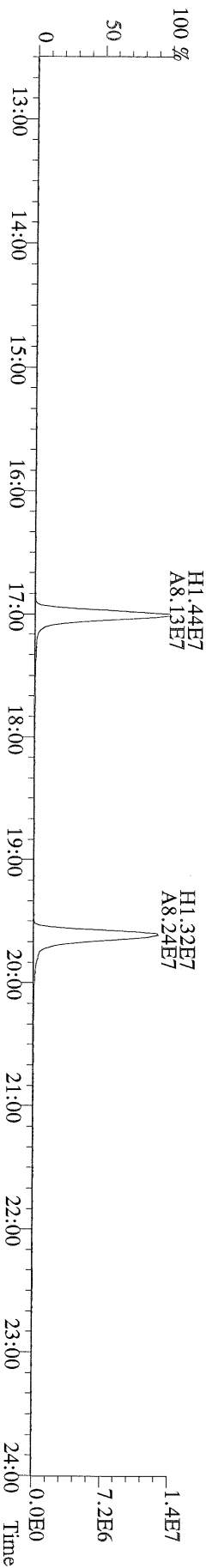
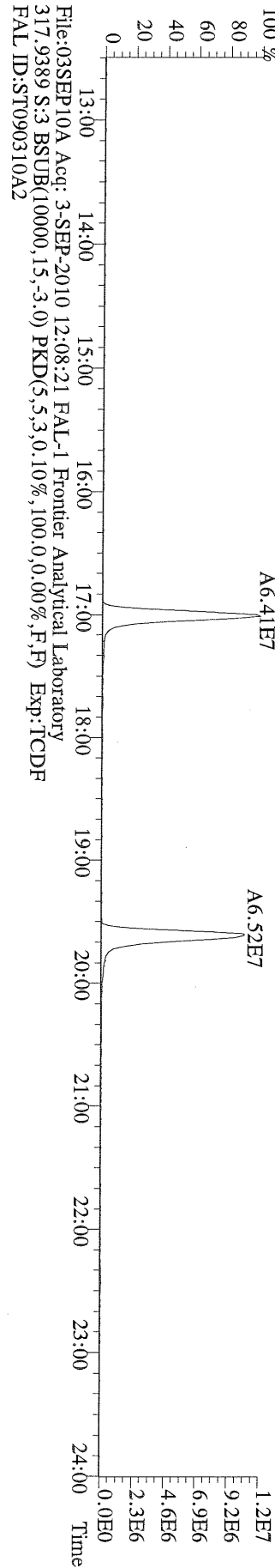
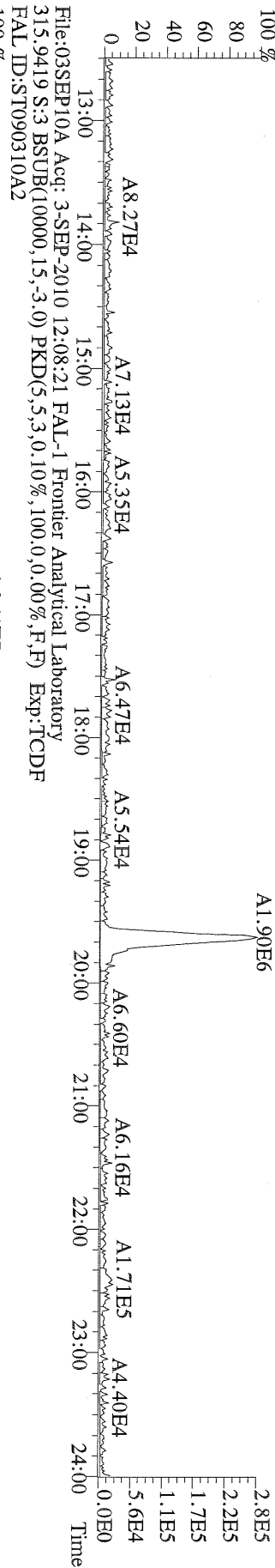
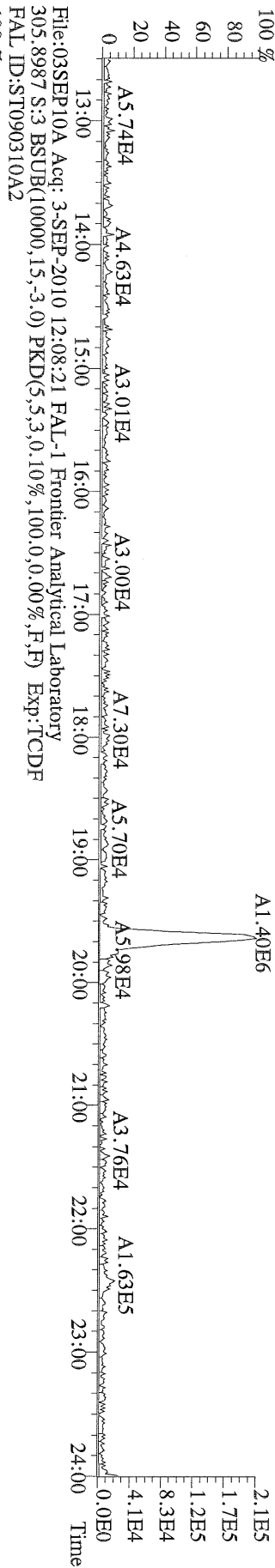
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315.9419 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:TCDF
FAL ID:ST090310A1



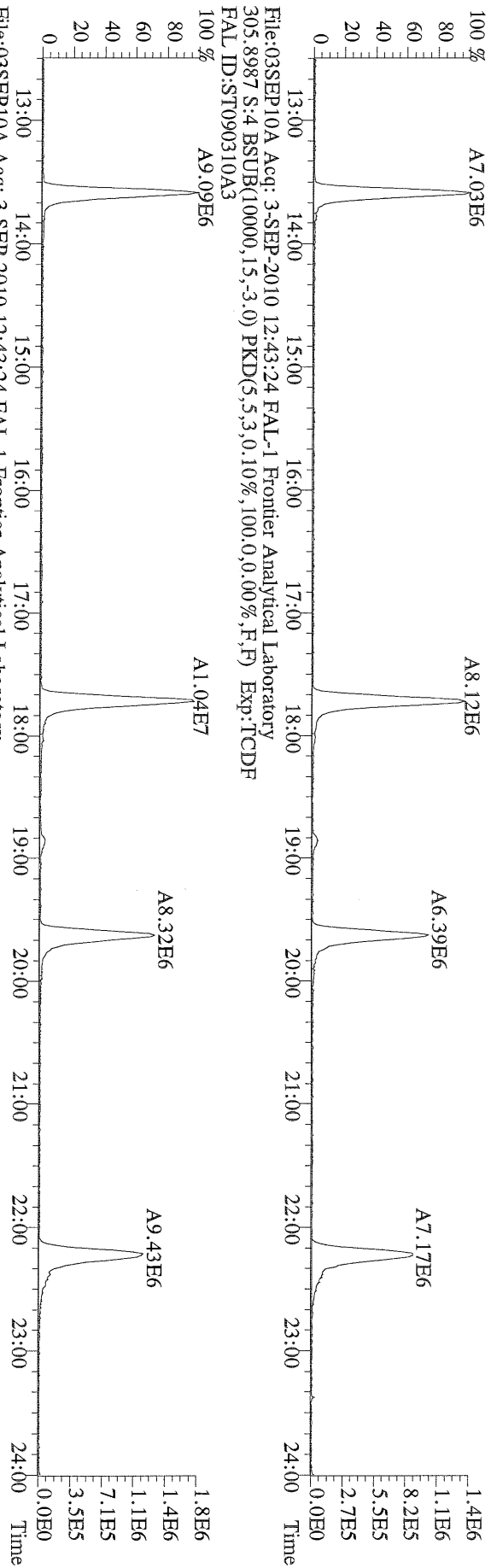
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FAL ID:ST090310A1



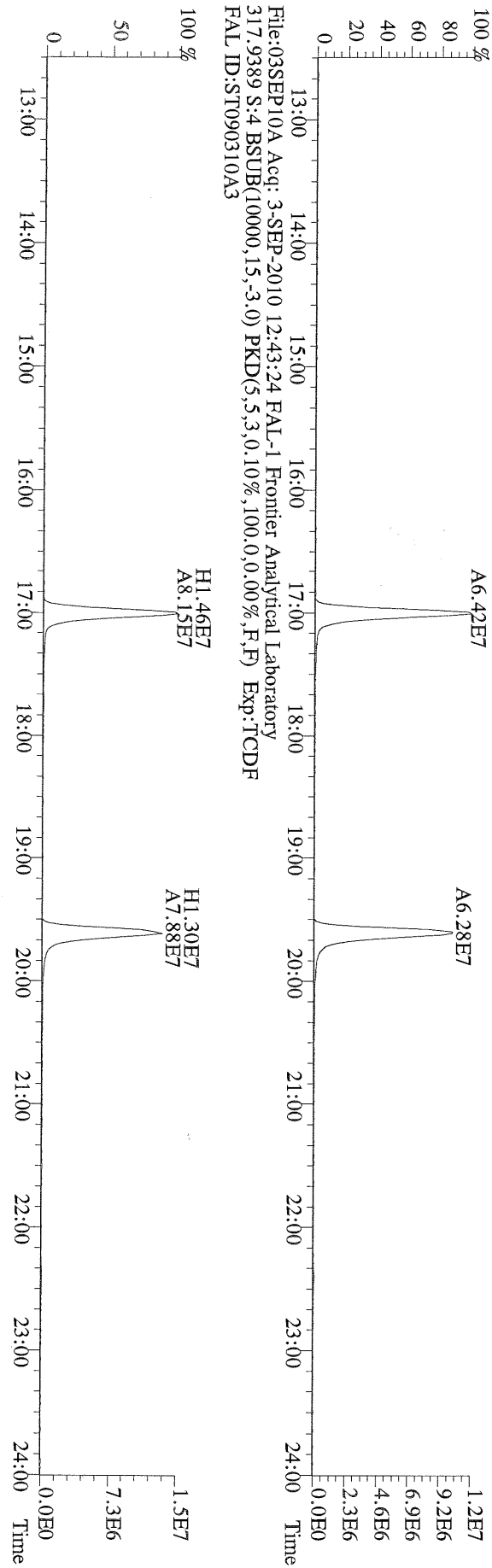
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 FAL ID:ST090310A2



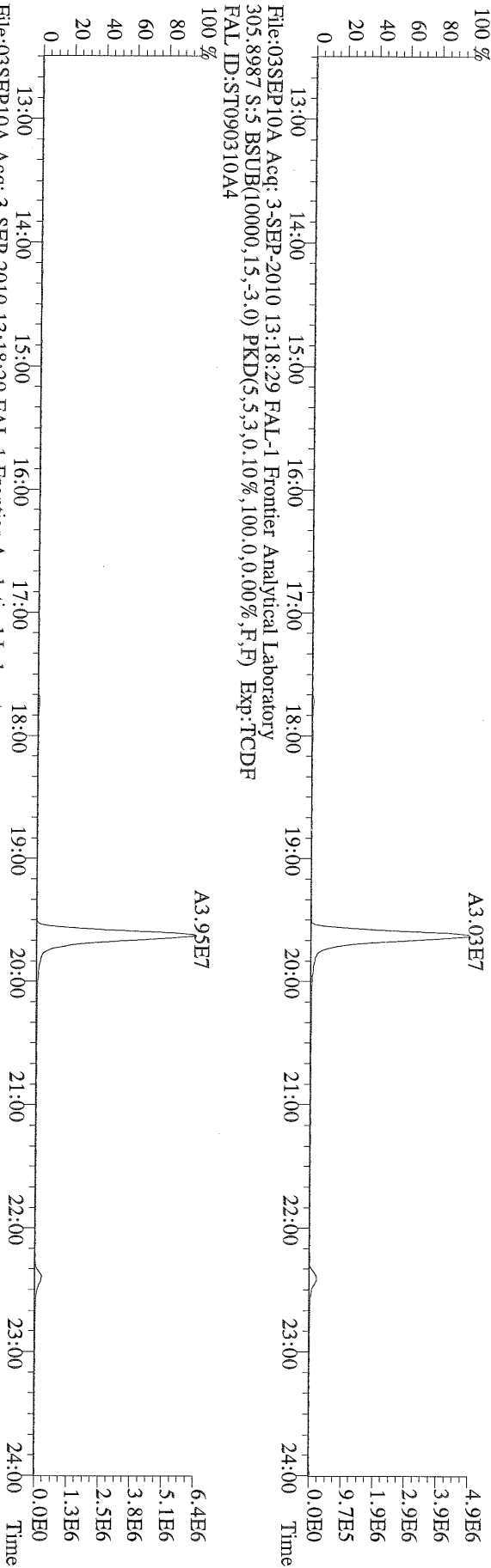
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FAL ID:ST090310A3



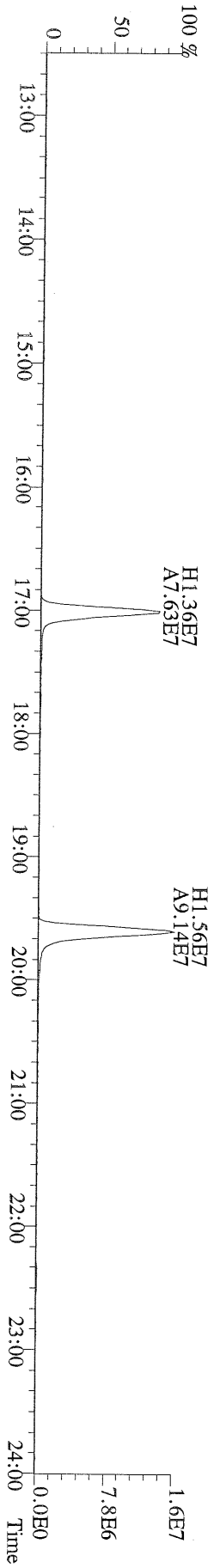
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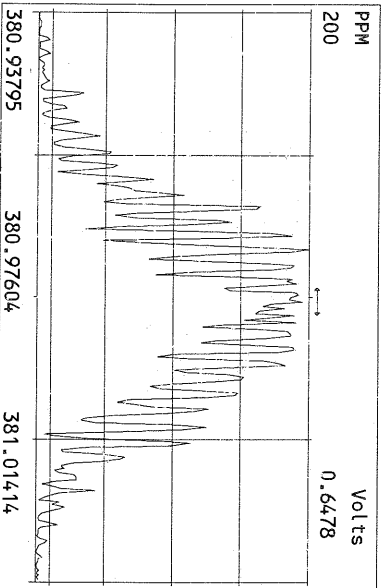
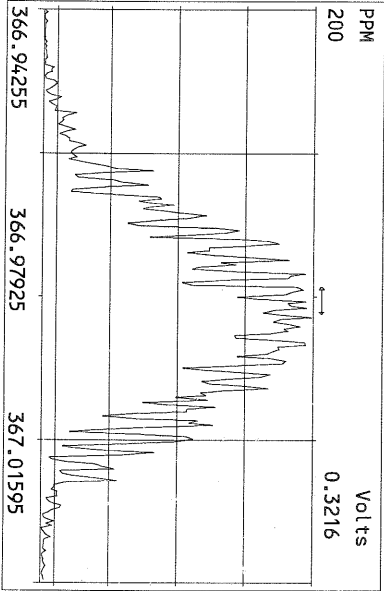
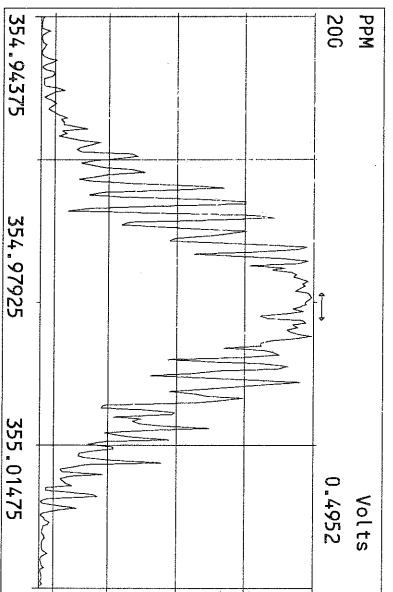
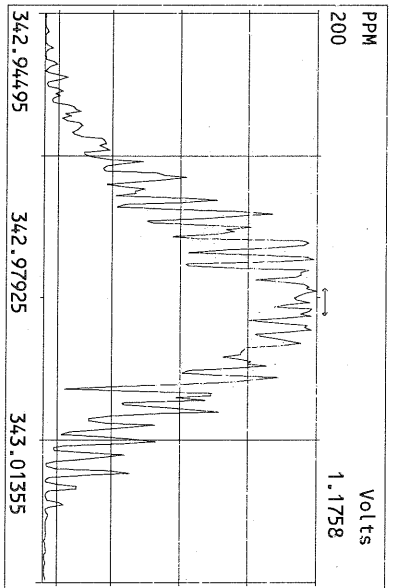
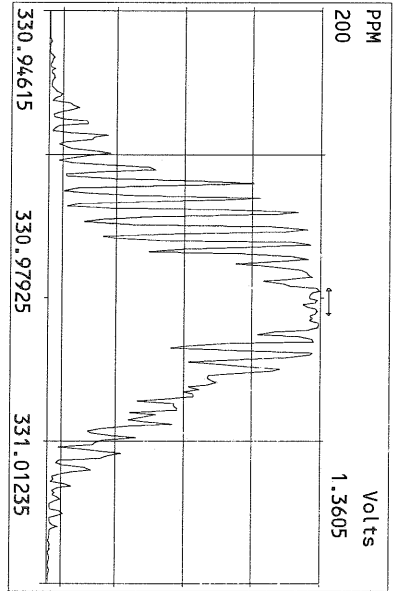
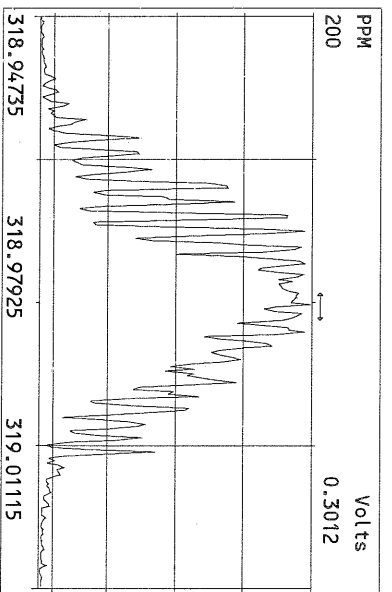
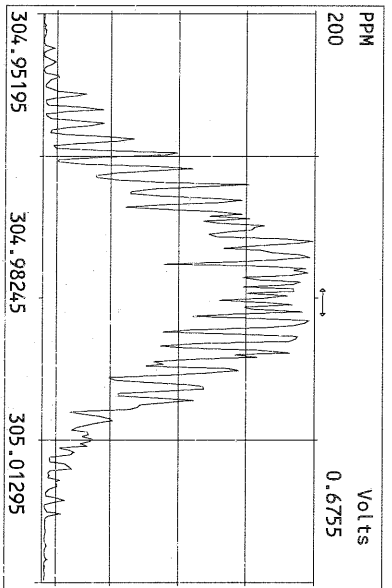
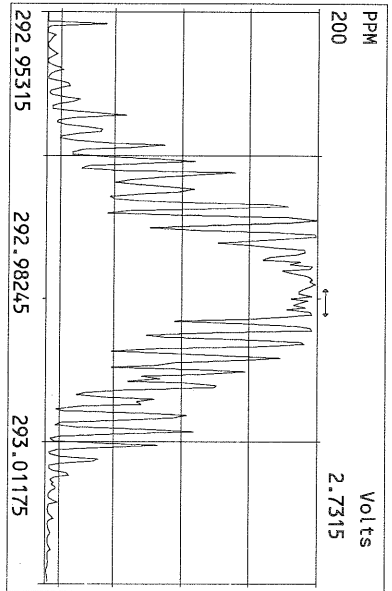


File:03SEP10A Acq: 3-SEP-2010 13:18:29 FAL-1 Frontier Analytical Laboratory
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:TCDF
FAL ID:ST090310A4



File:03SEP10A Acq: 3-SEP-2010 13:18:29 FAL-1 Frontier Analytical Laboratory
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:TCDF
FAL ID:ST090310A4





USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 8/23/10

Instrument ID: FAL3

GC Column ID: DB5

VER Data Filename: 08NOV10M Sam:1

Analysis Date: 8-NOV-10 12:50:43

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	11.3	7.80 - 12.9 ✓
1,2,3,7,8-PeCDD	M+2/M+4	1.68	1.32-1.78	y	51.6	39.0 - 65.0 ✓
1,2,3,4,7,8-HxCDD	M+2/M+4	1.33	1.05-1.43	y	50.1	39.0 - 64.0 ✓
1,2,3,6,7,8-HxCDD	M+2/M+4	1.34	1.05-1.43	y	49.6	39.0 - 64.0 ✓
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	y	55.1	41.0 - 61.0 ✓
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	44.9	43.0 - 58.0 ✓
OCDD	M+2/M+4	0.90	0.76-1.02	y	101	79.0 - 126 ✓
2,3,7,8-TCDF	M/M+2	0.83	0.65-0.89	y	8.50	8.40 - 12.0 ✓
1,2,3,7,8-PeCDF	M+2/M+4	1.52	1.32-1.78	y	57.0	41.0 - 60.0 ✓
2,3,4,7,8-PeCDF	M+2/M+4	1.49	1.32-1.78	y	53.2	41.0 - 60.0 ✓
1,2,3,4,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	y	55.4	45.0 - 56.0 ✓
1,2,3,6,7,8-HxCDF	M+2/M+4	1.21	1.05-1.43	y	56.7	44.0 - 57.0 ✓
2,3,4,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	y	56.3	44.0 - 57.0 ✓
1,2,3,7,8,9-HxCDF	M+2/M+4	1.20	1.05-1.43	y	55.1	45.0 - 56.0 ✓
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.11	0.88-1.20	y	48.2	45.0 - 55.0 ✓
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.14	0.88-1.20	y	48.7	43.0 - 58.0 ✓
OCDF	M+2/M+4	0.82	0.76-1.02	y	108	63.0 - 159 ✓

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

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

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

Analyst: 

Date: 11/18/10

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:
Contract No.: SAS No.:
Initial Calibration Date: 8/23/10
Instrument ID: FAL3 GC Column ID: DB5
VER Data Filename: 08NOV10M Sam:1 Analysis Date: 8-NOV-10 12:50:43

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.74	0.65-0.89	y	98.1	82.0 - 121 ✓
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.68	1.32-1.78	y	110	62.0 - 160 ✓
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	94.8	85.0 - 117 ✓
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	94.4	85.0 - 118 ✓
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	y	103	72.0 - 138 ✓
13C-OCDD	M+2/M+4	0.92	0.76-1.02	y	230	96.0 - 415 ✓
13C-2,3,7,8-TCDF	M/M+2	0.88	0.65-0.89	y	106	71.0 - 140 ✓
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.74	1.32-1.78	y	118	76.0 - 130 ✓
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.73	1.32-1.78	y	120	77.0 - 130 ✓
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	85.0	76.0 - 131 ✓
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	y	83.6	70.0 - 143 ✓
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	84.6	73.0 - 137 ✓
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	y	93.8	74.0 - 135 ✓
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.47	0.37-0.51	y	98.7	78.0 - 129 ✓
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.47	0.37-0.51	y	117	77.0 - 129 ✓
13C-OCDF	M+2/M+4	0.93	0.76-1.02	y	220	96.0 - 415 ✓
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					10.1	7.80 - 12.8 ✓

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

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

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

(4) No ion abundance ratio; report concentration found.

Analyst: 8

Date: 11/2/10

USEPA - ITD

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Init. Cal. Date: 8/23/10

Instrument ID: FAL3

GC Column ID: DB5


Analysis Date: 8-NOV-10 12:50:43

CS3 or VER Data Filename: 08NOV10M

Sam:1

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002 ✓
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003 ✓
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002 ✓
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002 ✓
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	0.999-1.002 ✓
LABELED COMPOUNDS			
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052 ✓
13C-2,3,7,8-TCDD		1.021	0.976-1.043 ✓
13C-2,3,7,8-TCDF		0.993	0.923-1.103 ✓
13C-1,2,3,7,8-PeCDD		1.239	1.000-1.567 ✓
13C-1,2,3,7,8-PeCDF		1.174	0.923-1.203 ✓
13C-2,3,4,7,8-PeCDF		1.223	0.923-1.303 ✓

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

Analyst: 

Date: 11/2/10

USEPA - ITD

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Init. Cal. Date: 8/23/10

Instrument ID: FAL3

GC Column ID: DB5

Analysis Date: 8-NOV-10 12:50:43

CS3 or VER Data Filename: 08NOV10M

Sam:1

NATIVE ANALYTES	RETENTION TIME		RRT	RRT QC LIMITS (1)
	REFERENCE	REFERENCE		
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999-1.001 ✓
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998-1.004 ✓
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019 ✓
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001 ✓
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005 ✓
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001 ✓
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001 ✓
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999-1.001 ✓
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001 ✓
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001 ✓
OCDD	13C-OCDD	13C-OCDD	1.001	0.999-1.001 ✓
OCDF	13C-OCDF	13C-OCDF	1.000	0.999-1.001 ✓
Labeled Compounds				
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.984	0.977-1.000 ✓
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	0.988	0.981-1.003 ✓
13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	0.948	0.944-0.970 ✓
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	0.954	0.949-0.975 ✓
13C-2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	0.978	0.959-1.021 ✓
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.014	0.977-1.047 ✓
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.127	1.086-1.130 ✓
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.079	1.043-1.085 ✓
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.151	1.057-1.154 ✓
13C-OCDD	13C-OCDD	13C-OCDD	1.269	1.032-1.311 ✓
13C-OCDF	13C-OCDF	13C-OCDF	1.279	1.000-1.311 ✓

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

Analyst: Date: 11/8/10

Frontier Analytical Laboratory - Acquisition Log

Run Name:08NOV10M

Instrument: FAL3

GC: DB5

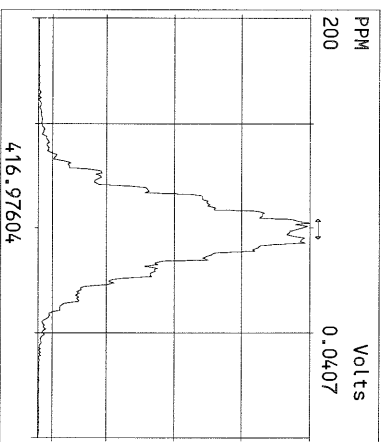
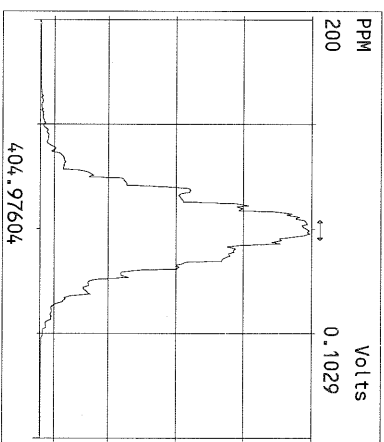
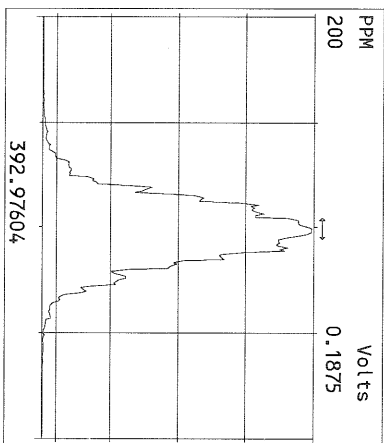
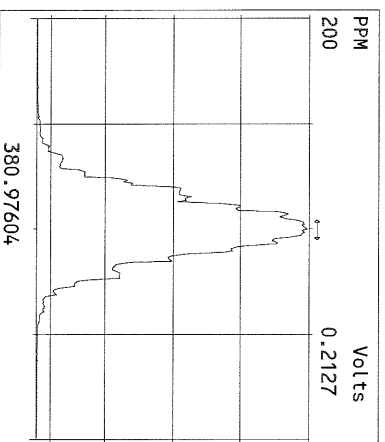
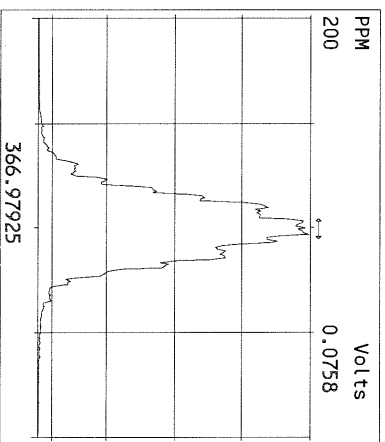
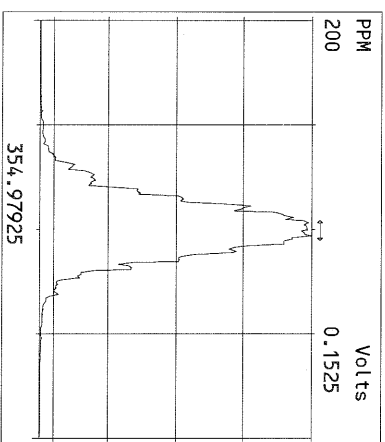
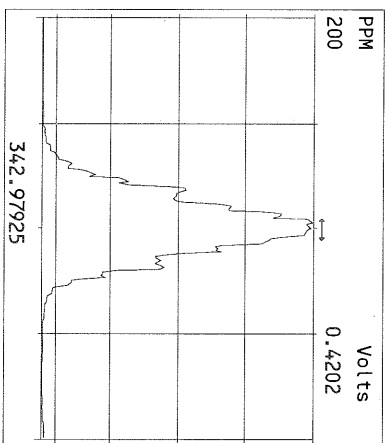
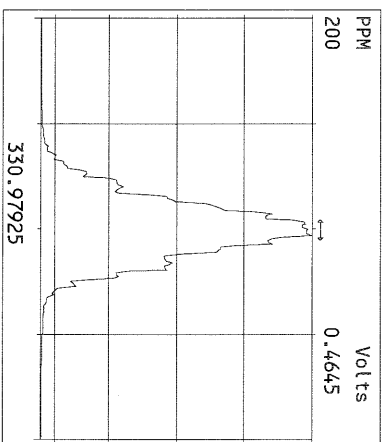
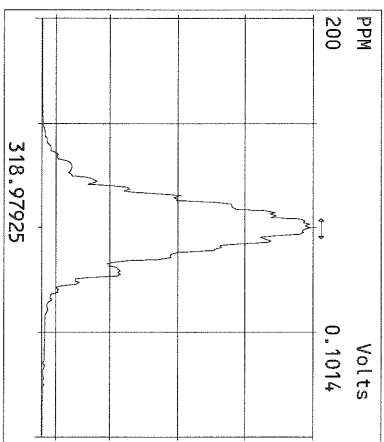
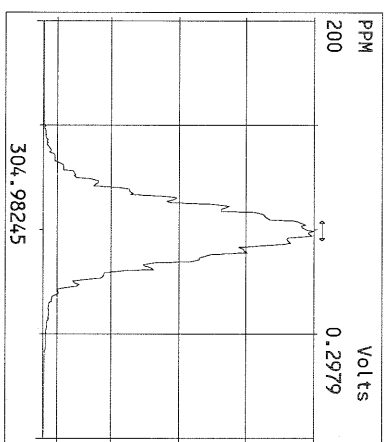
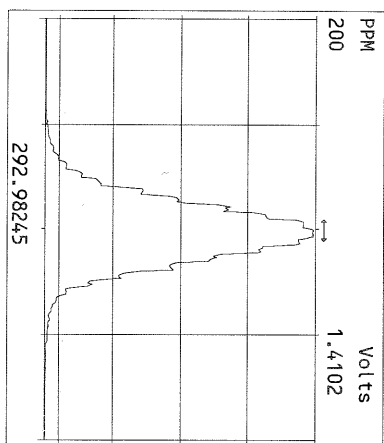
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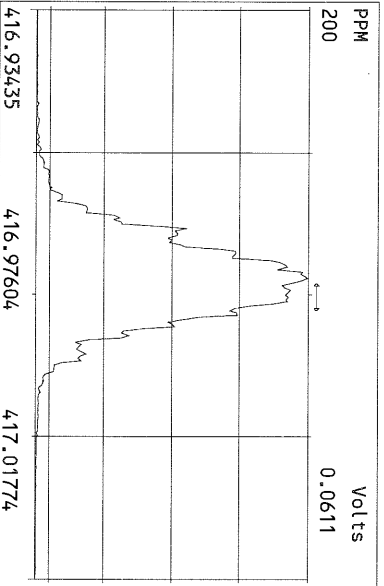
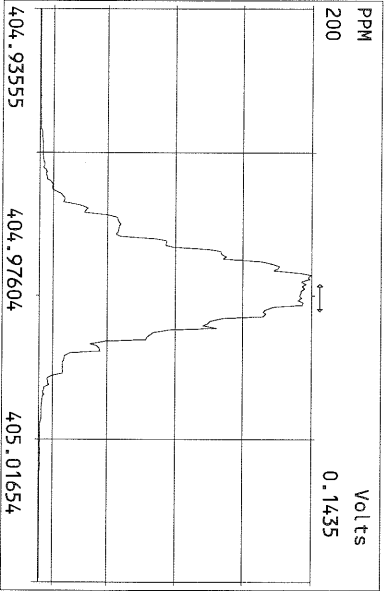
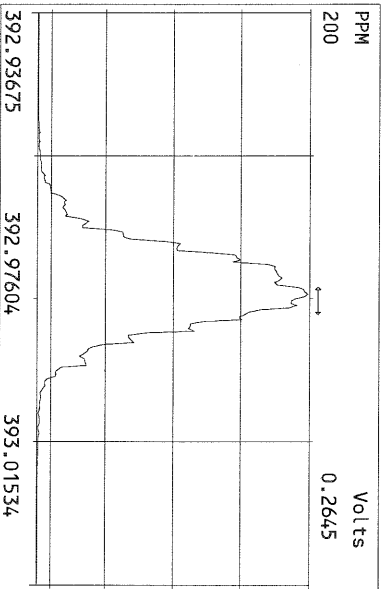
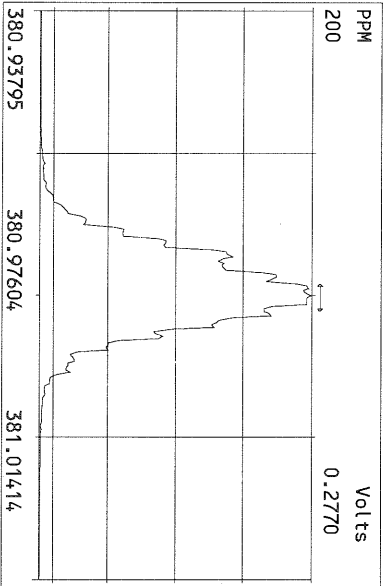
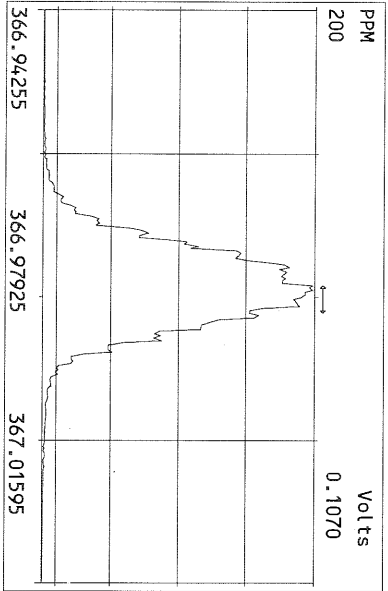
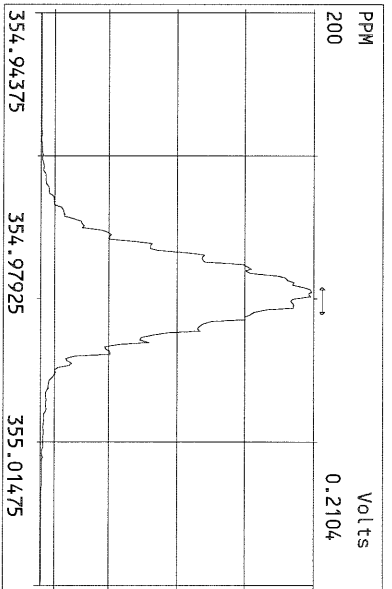
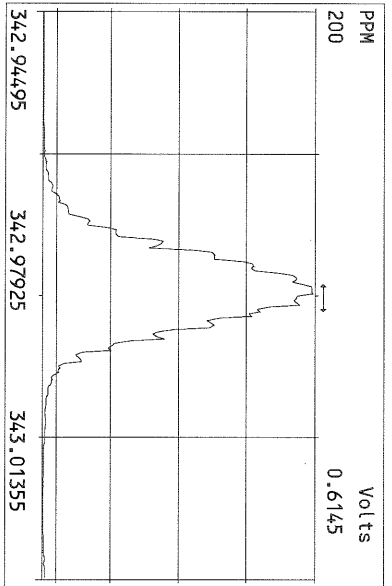
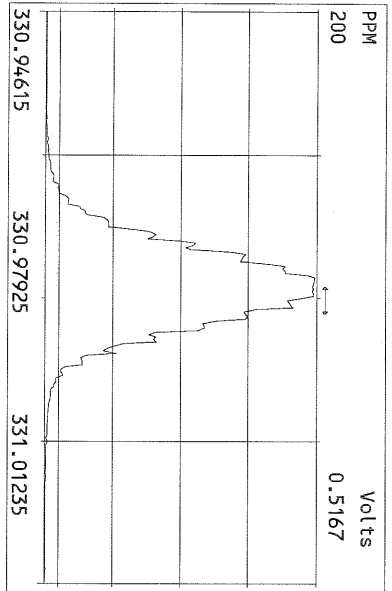
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08NOV10M 3	QC110810M1	NSQC	8-NOV-10 14:42:38	ST110810M1	ST110810M2	BS
08NOV10M 4	QC110810M2	ISQC	8-NOV-10 15:38:01	ST110810M1	ST110810M2	BS
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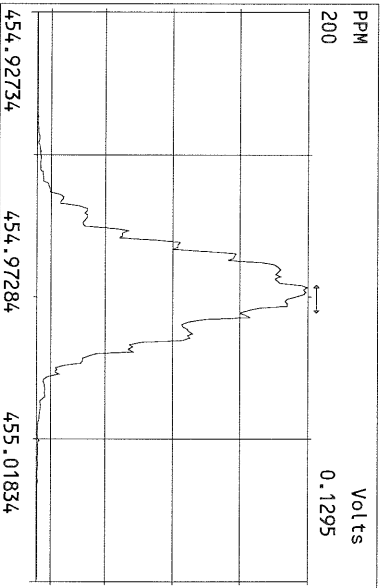
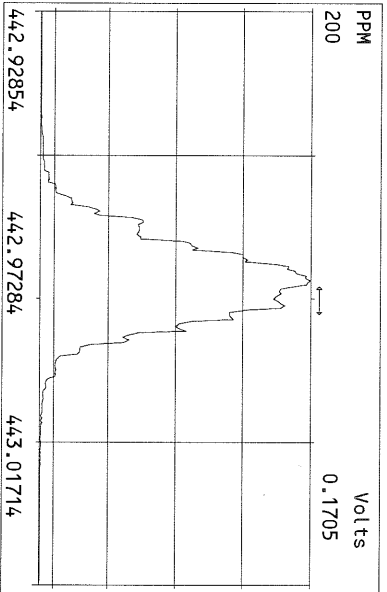
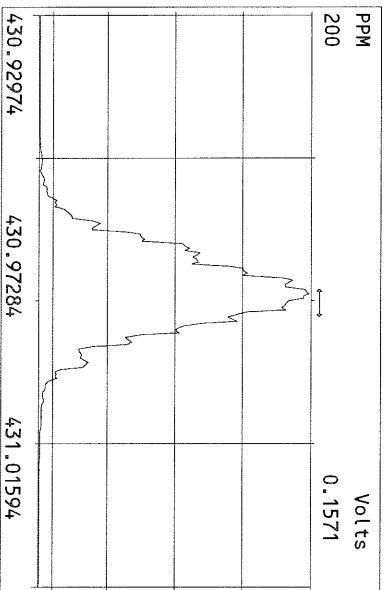
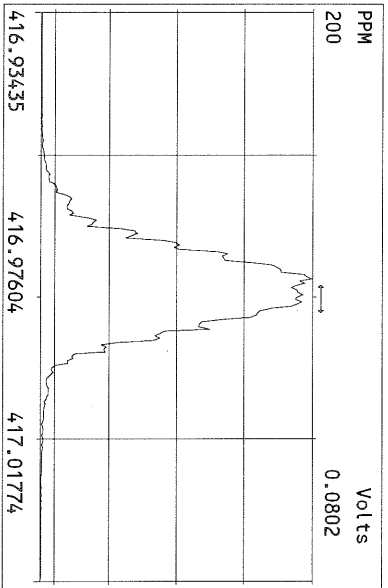
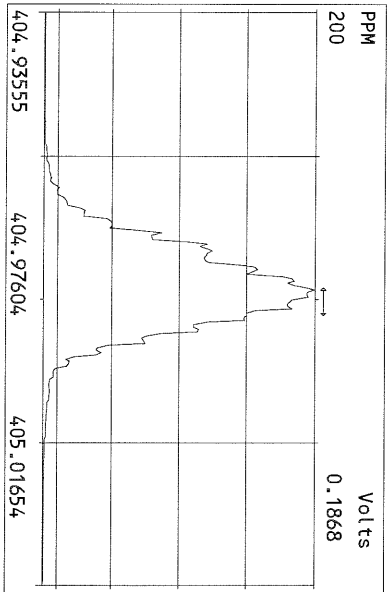
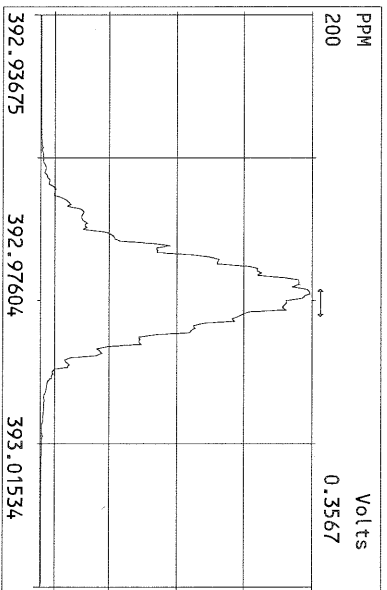
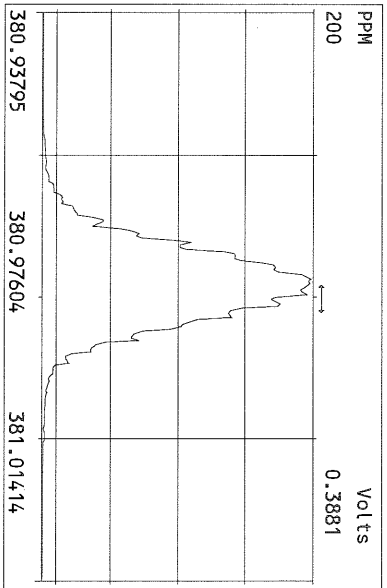
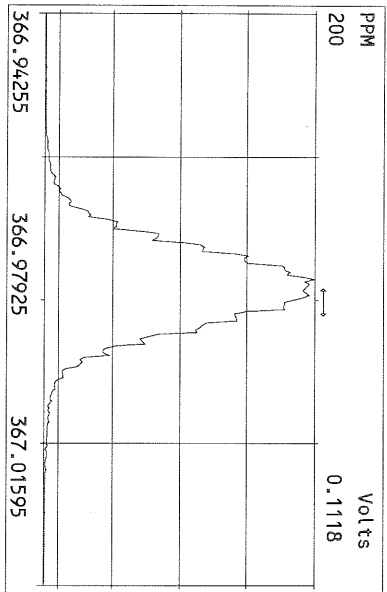
6/11/9/10

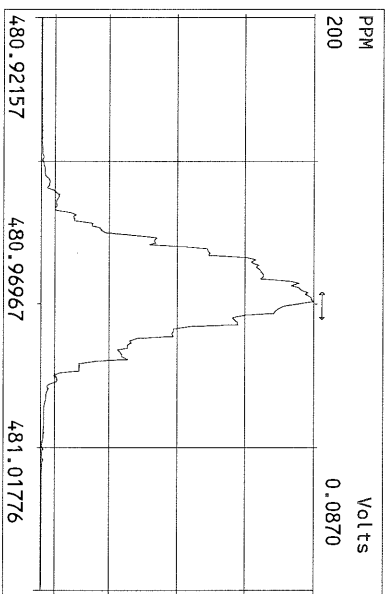
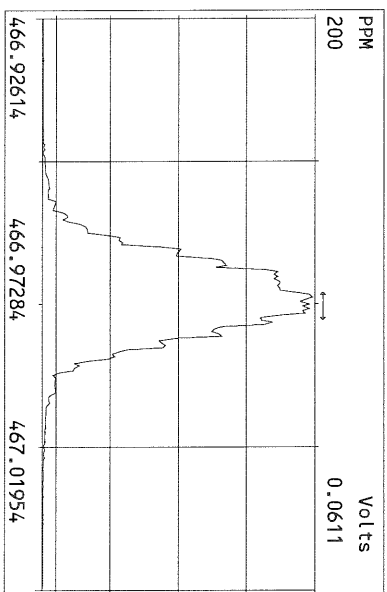
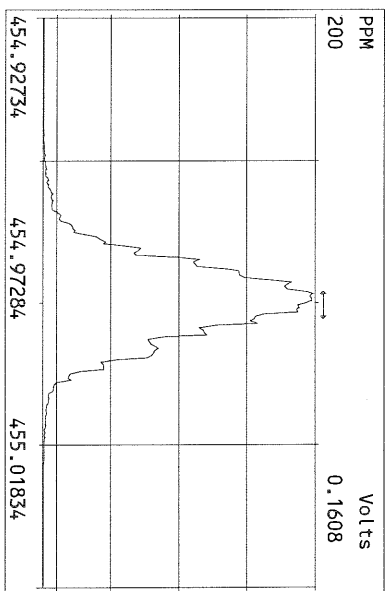
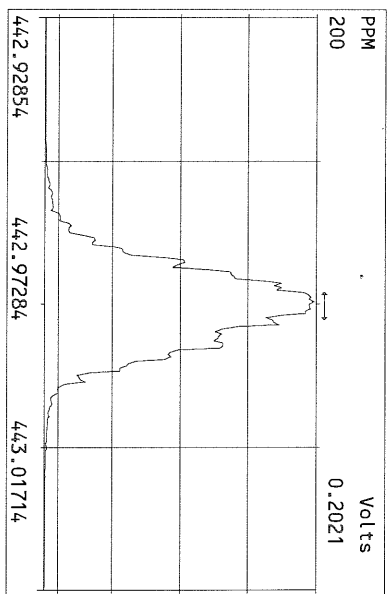
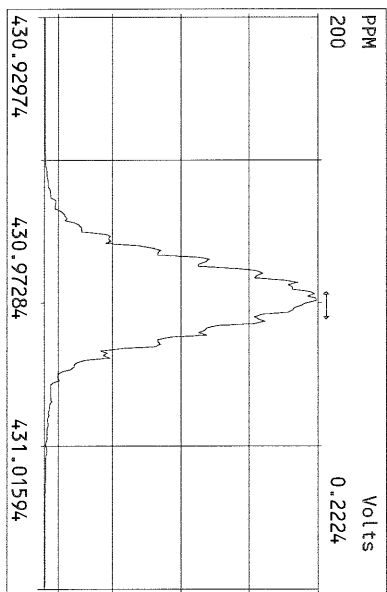
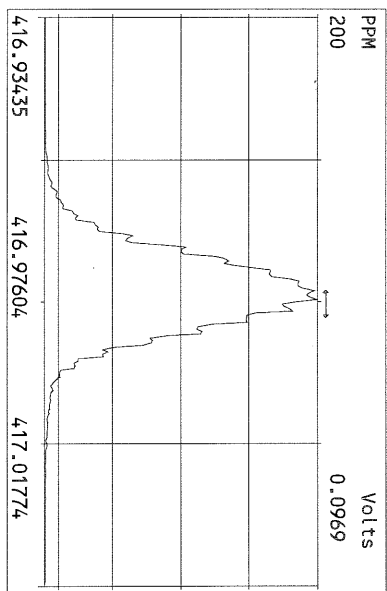
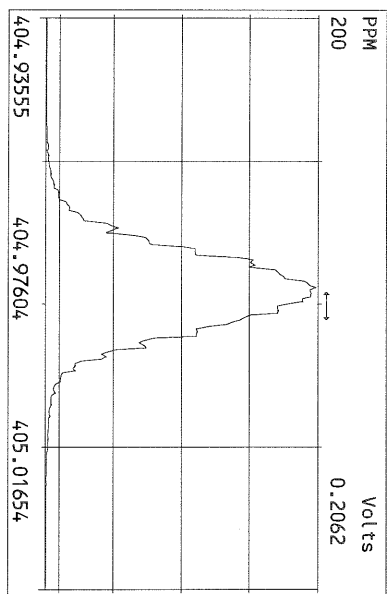
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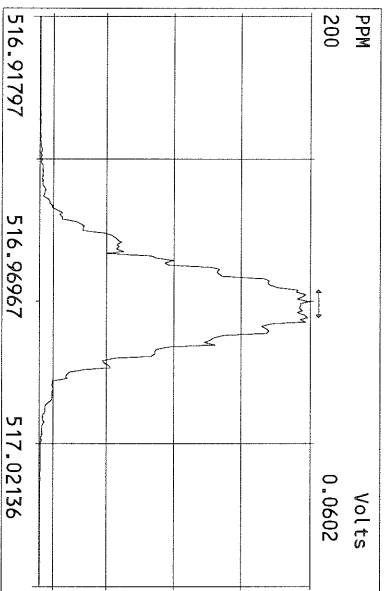
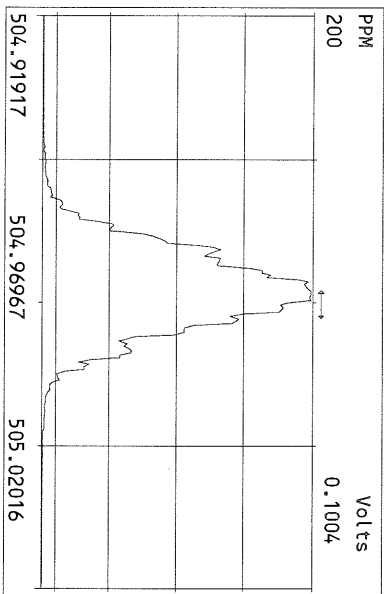
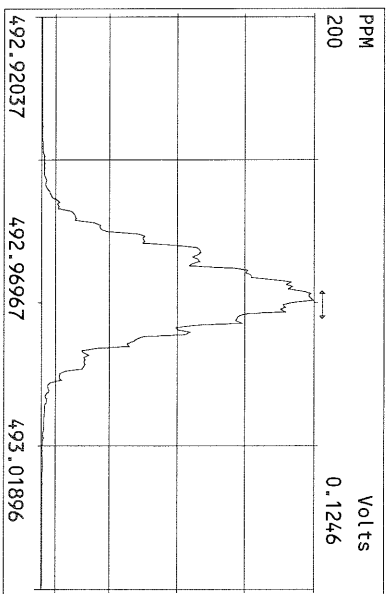
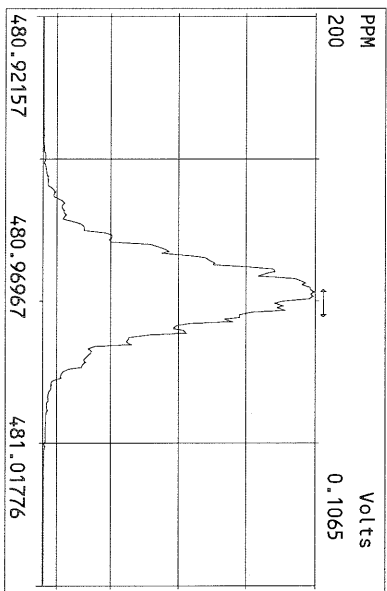
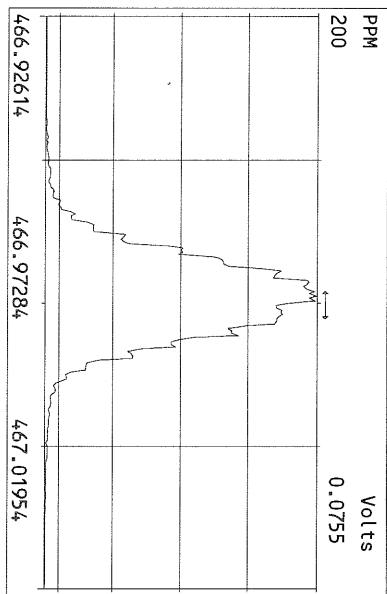
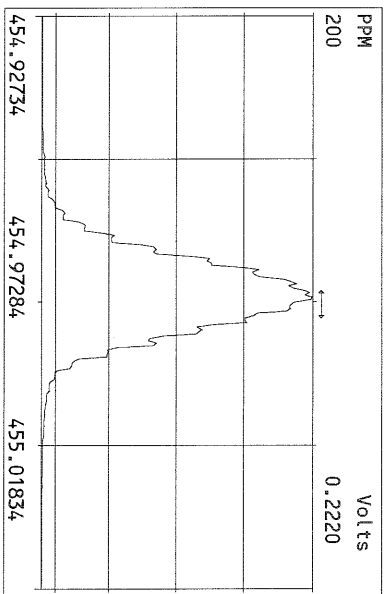
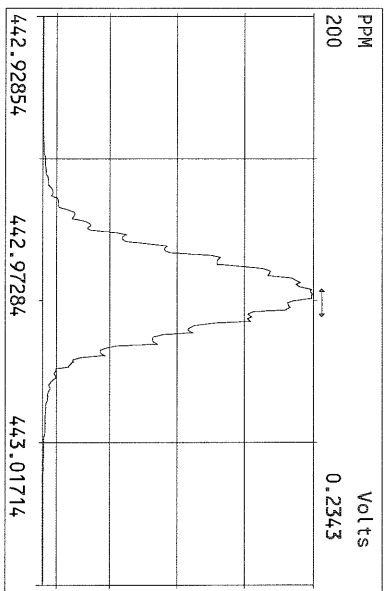
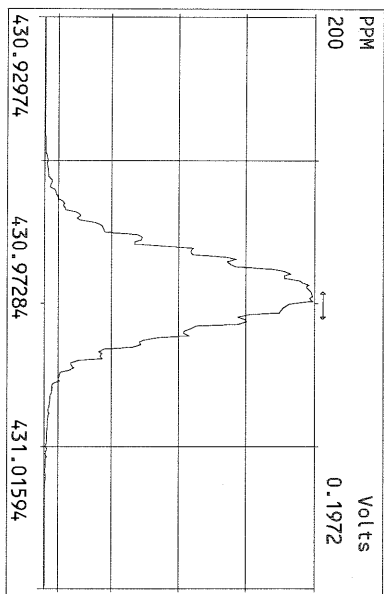
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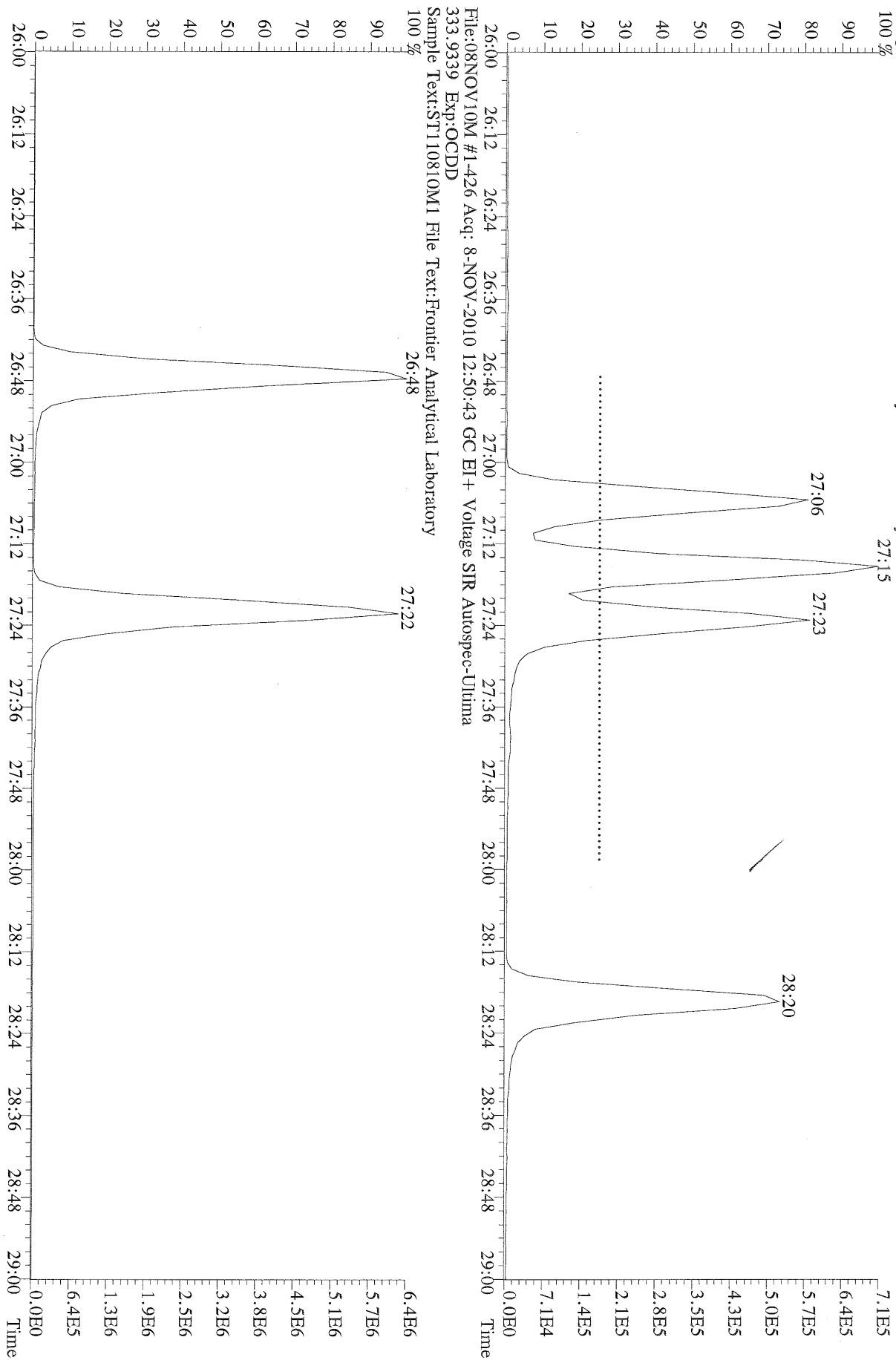




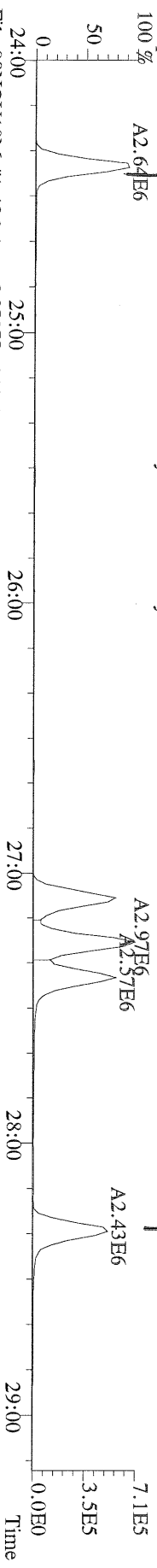




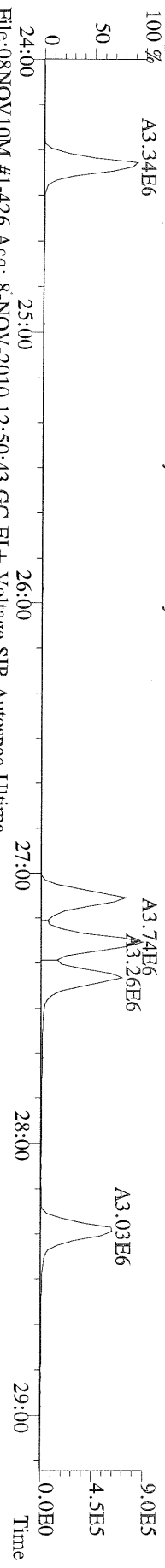
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Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



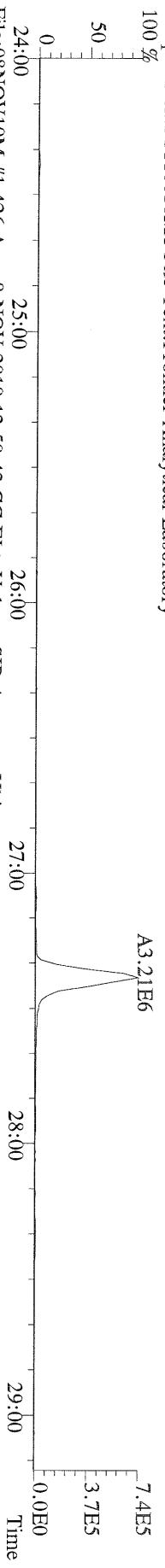
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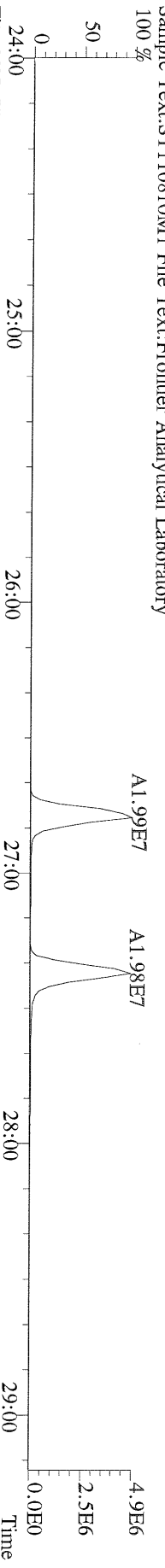
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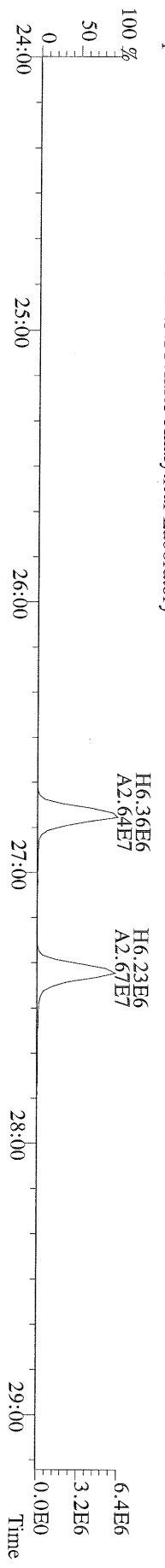
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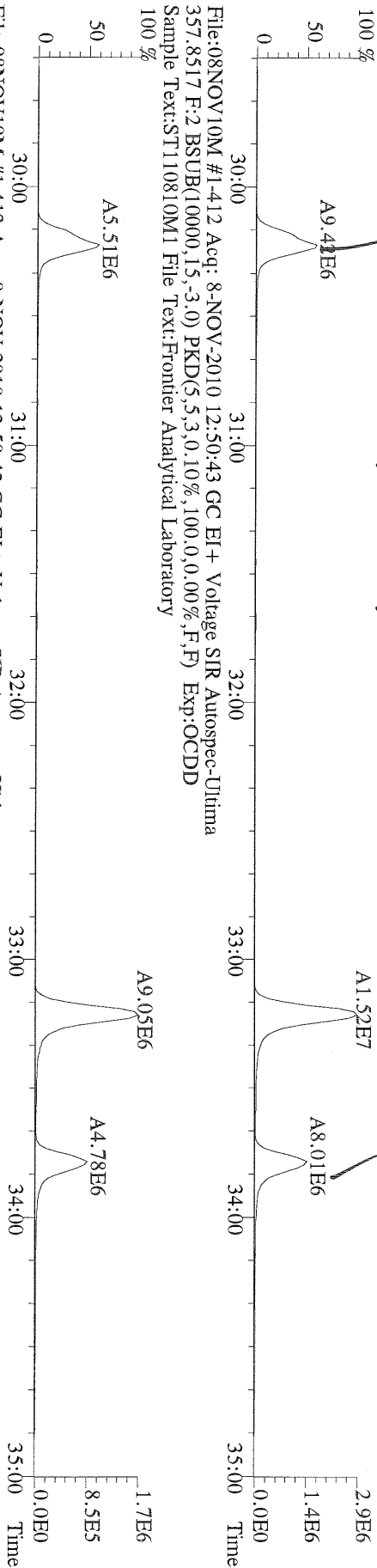
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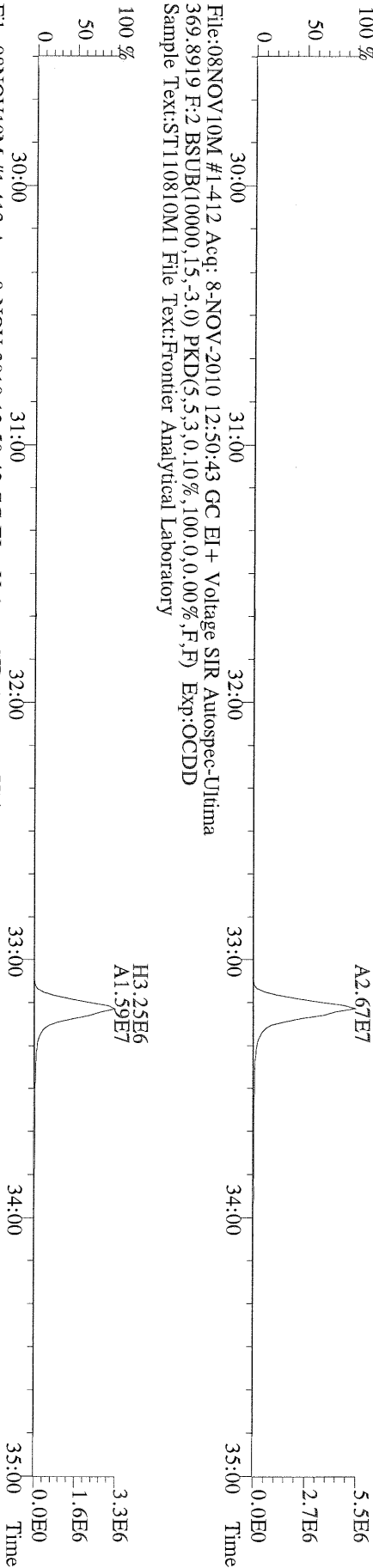
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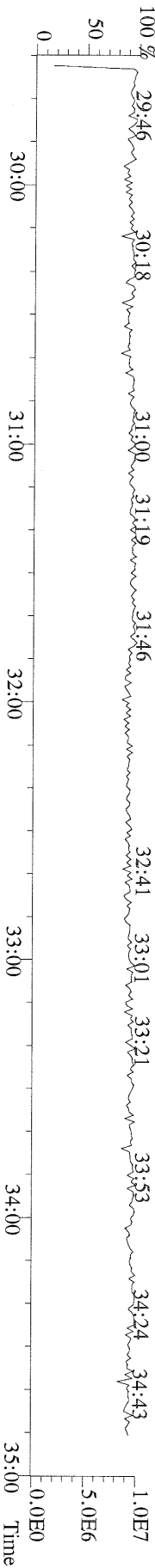
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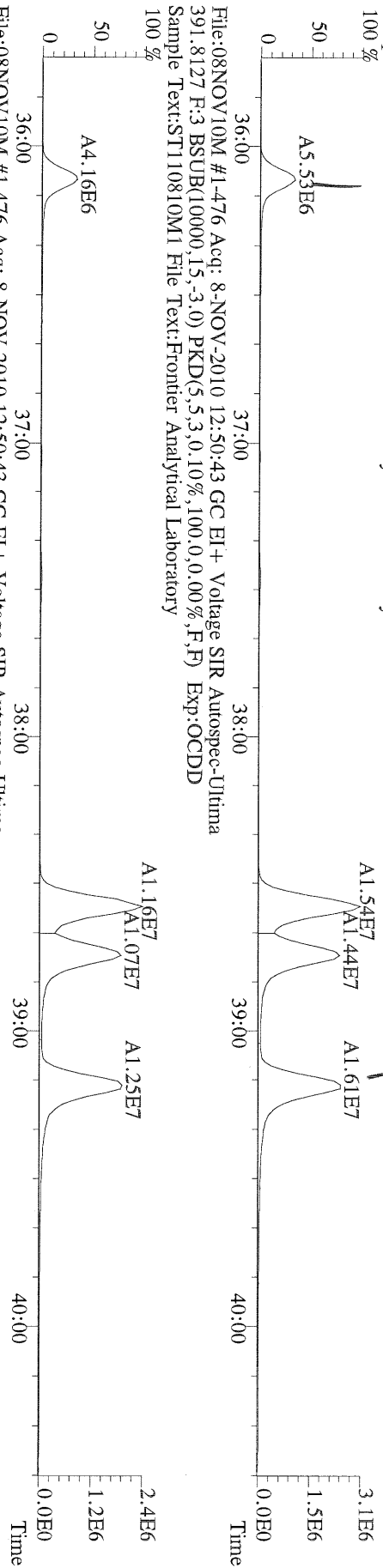
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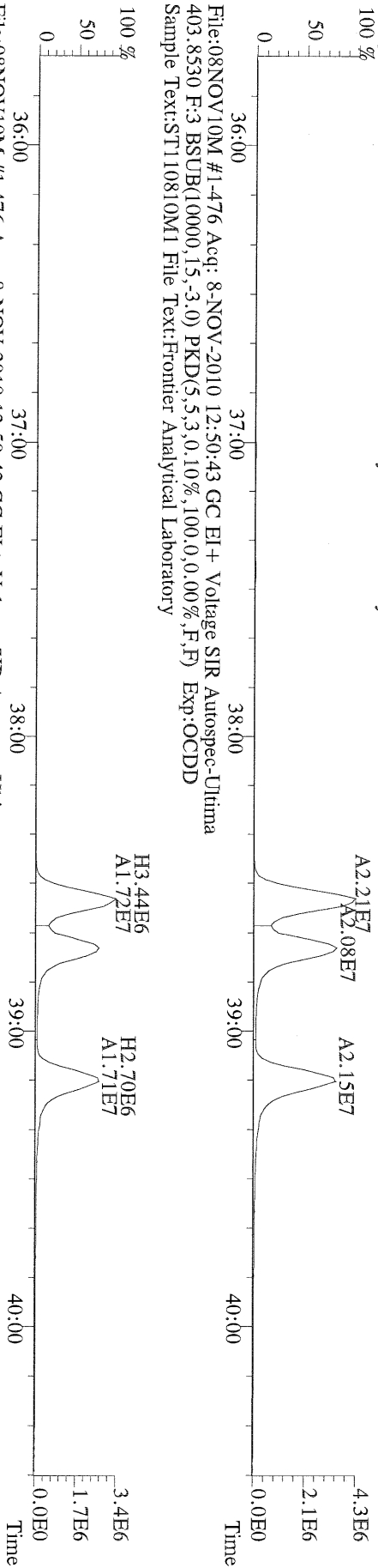
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366.9792 F:2 Exp:OCDD
Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



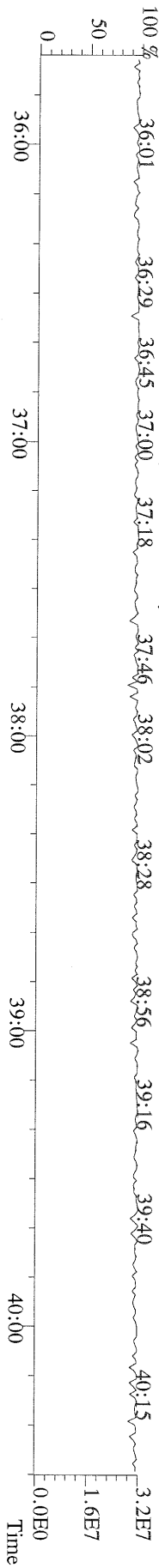
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389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0,0,0,0) Exp:OCDD
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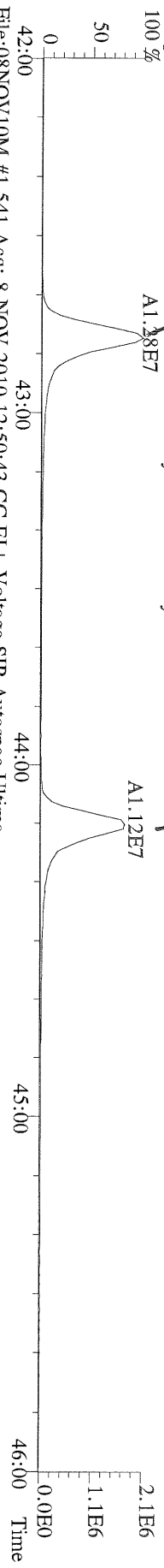
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401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0,0,0) Exp:OCDD
Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



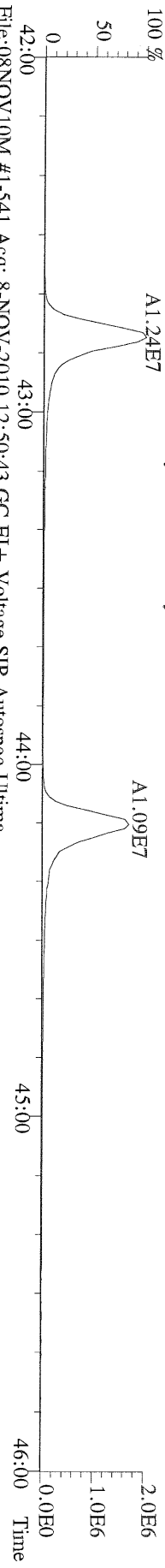
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380.9760 F:3 Exp:OCDD
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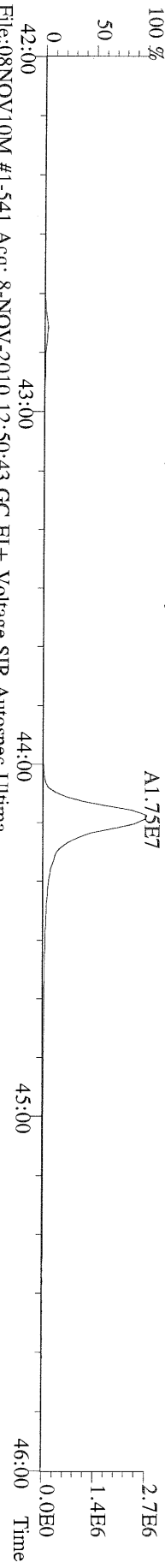
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423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



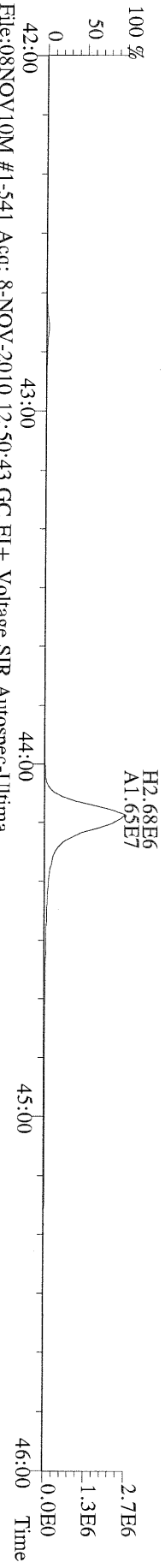
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425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



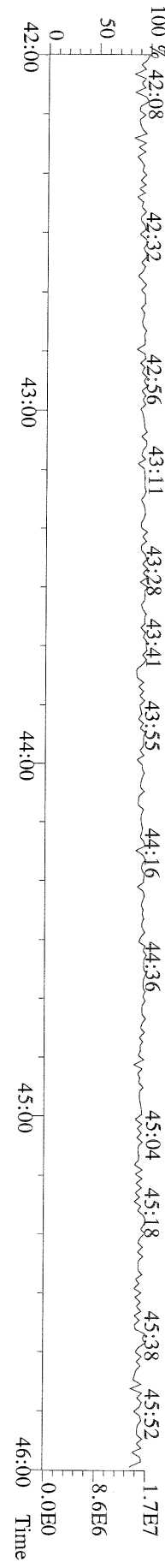
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435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
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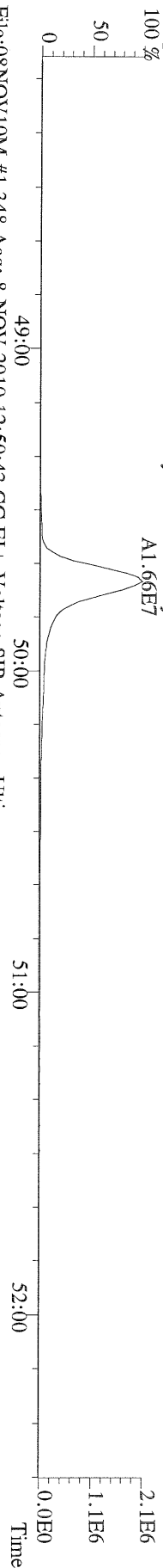
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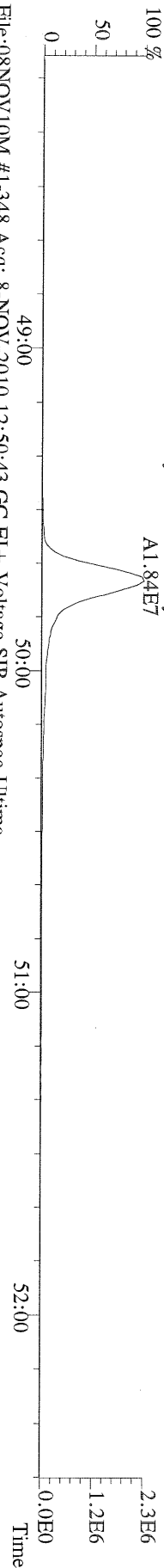
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430.9728 F:4 Exp:OCDD
Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



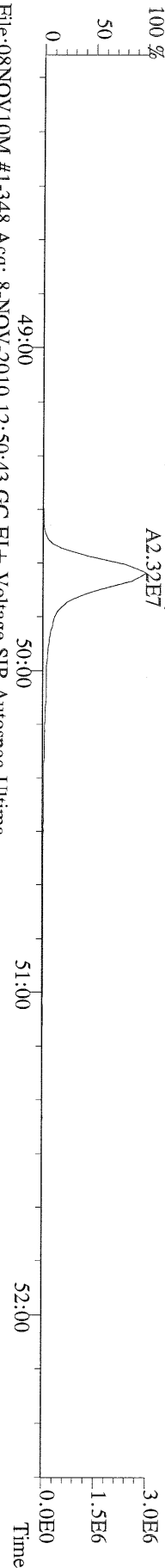
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457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



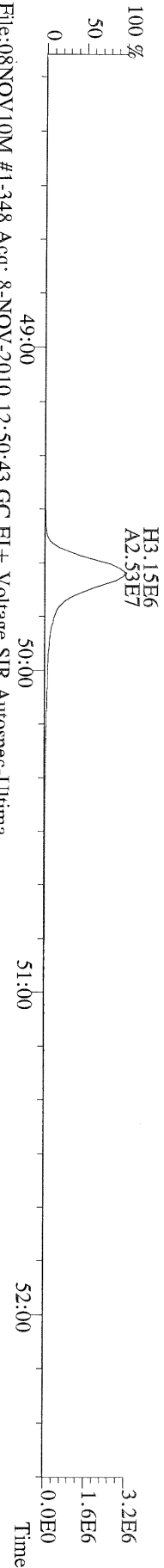
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459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



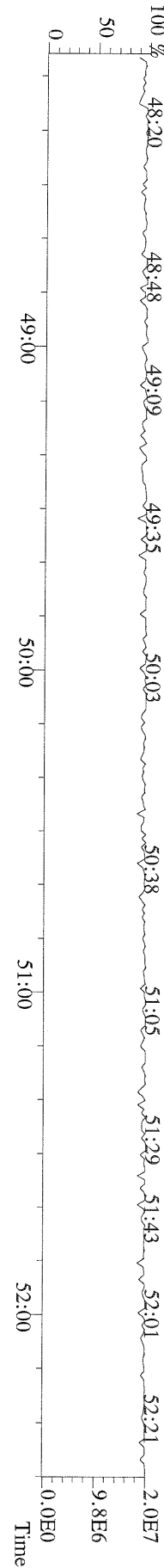
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Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



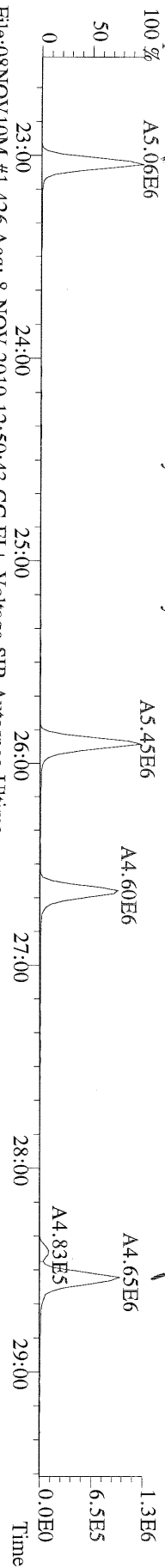
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471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



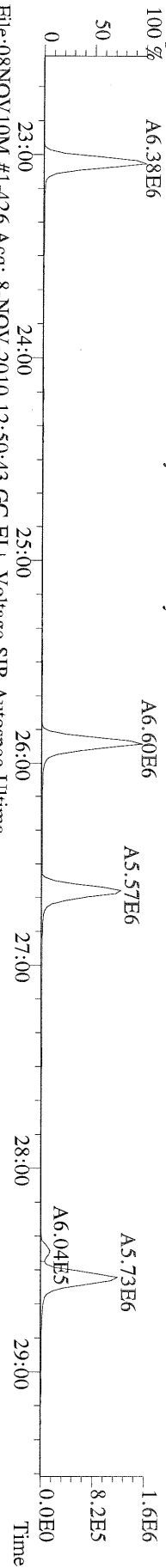
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454.9728 F:5 Exp:OCDD
Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



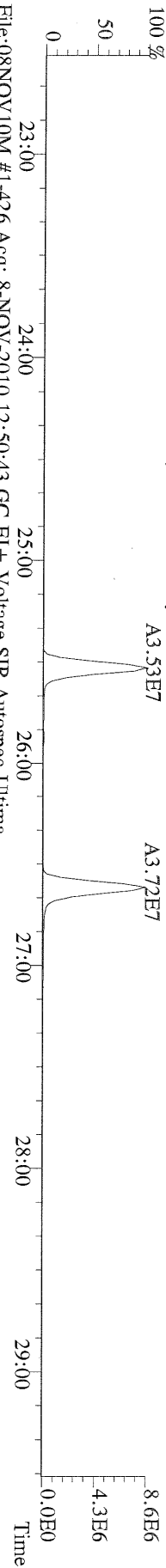
File:08NOV10M #1-426 Acq: 8-NOV-2010 12:50:43 GC EI+ Voltage SIR Autospec-Utima
 303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



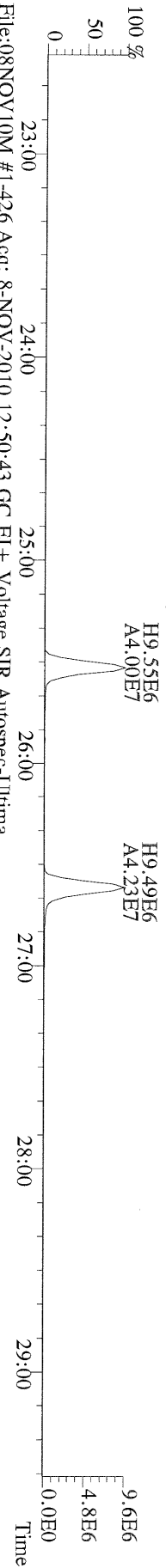
File:08NOV10M #1-426 Acq: 8-NOV-2010 12:50:43 GC EI+ Voltage SIR Autospec-Utima
 305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



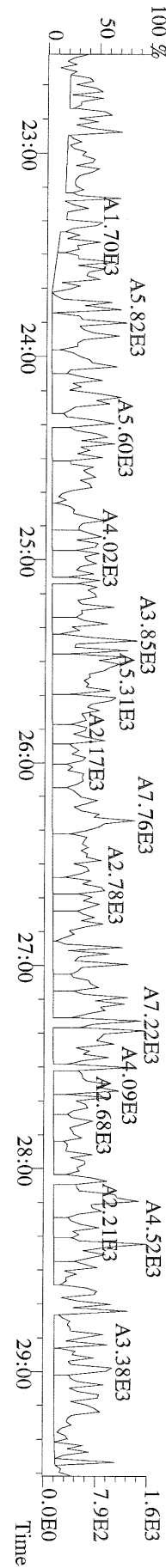
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 315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



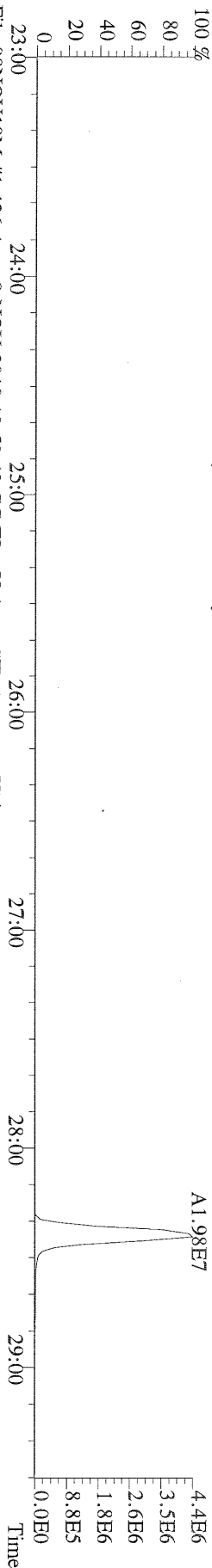
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 317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



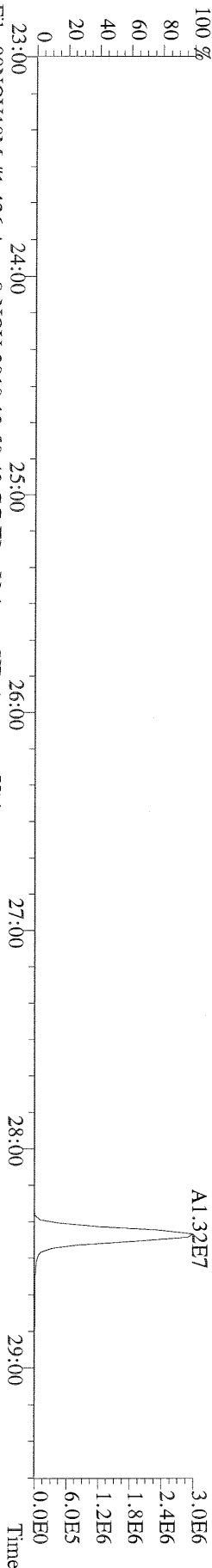
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 375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



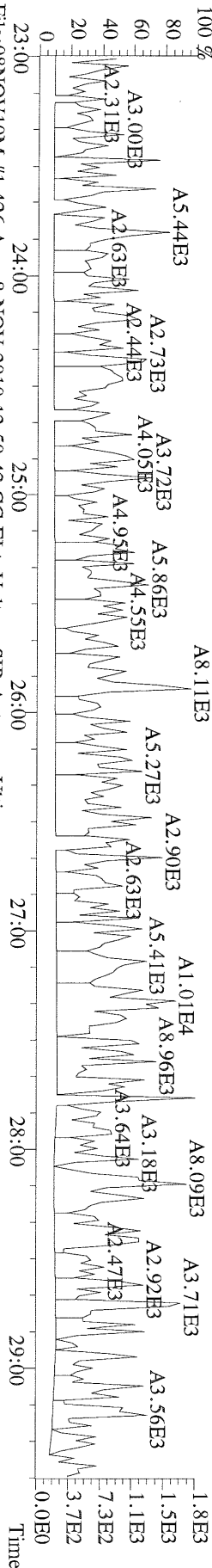
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 339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



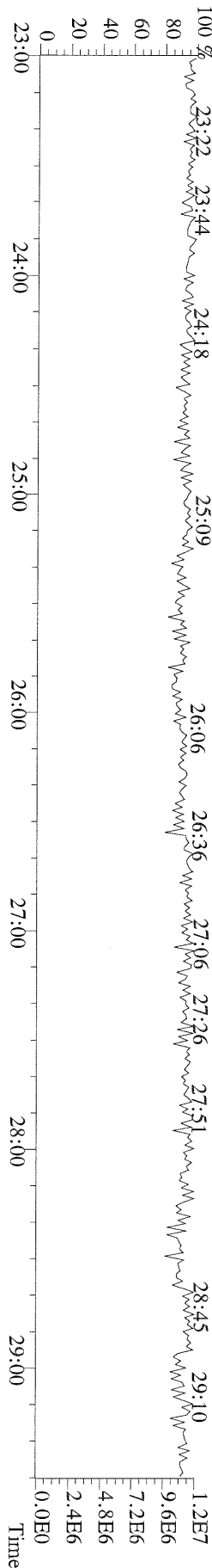
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 341.8568 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



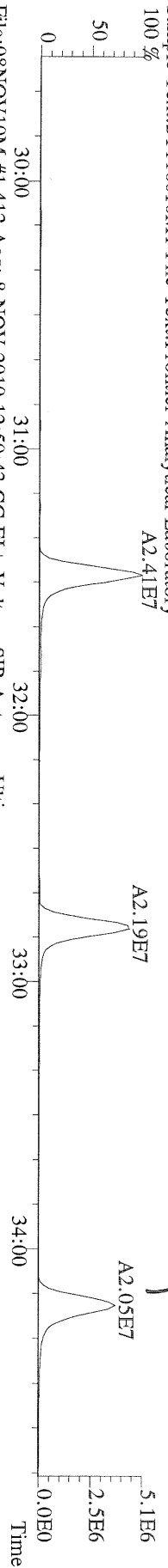
File:08NOV10M #1-426 Acq: 8-NOV-2010 12:50:43 GC EI+ Voltage SIR Autospec-Utima
 409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



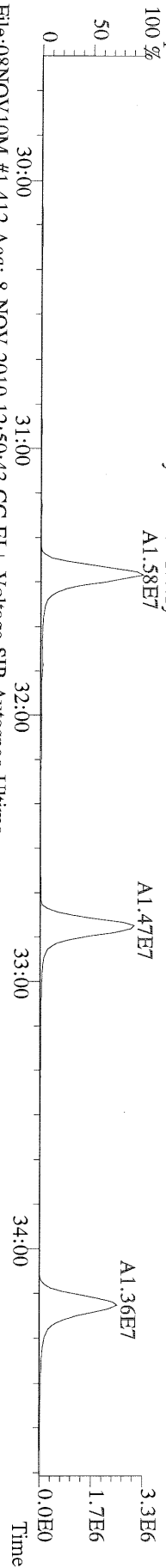
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 Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



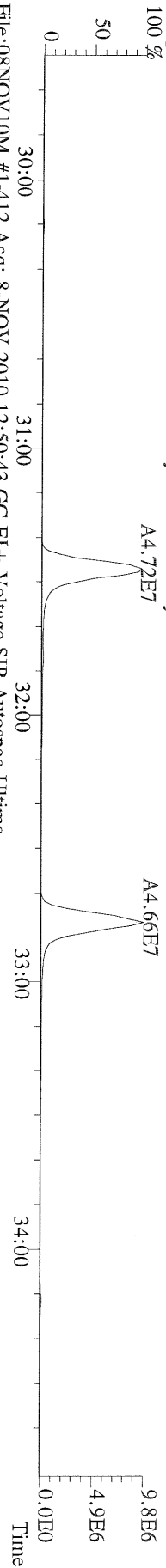
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 339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



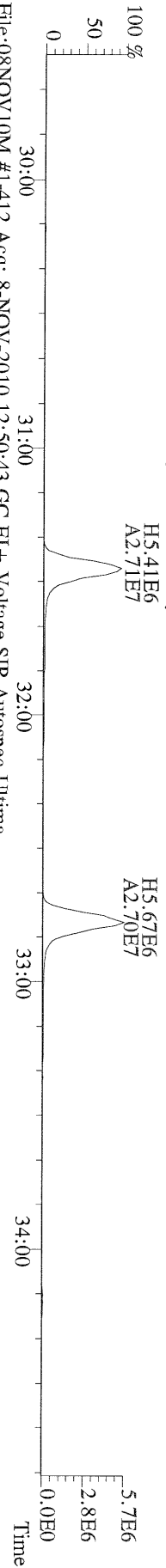
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 341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



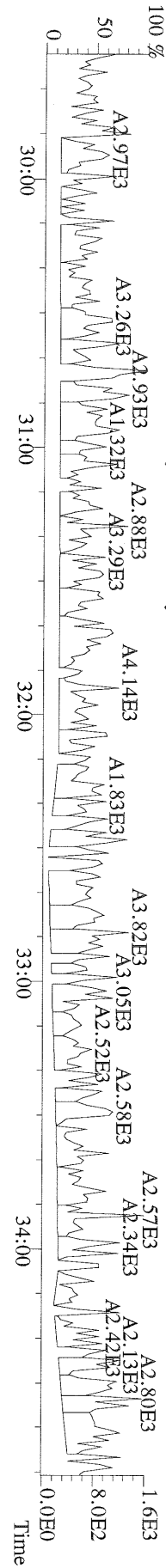
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 351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



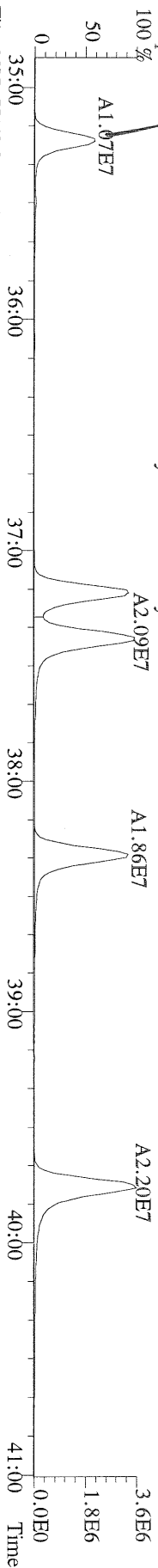
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 Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



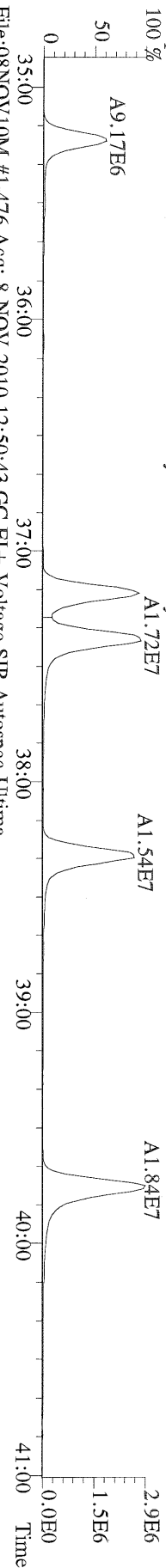
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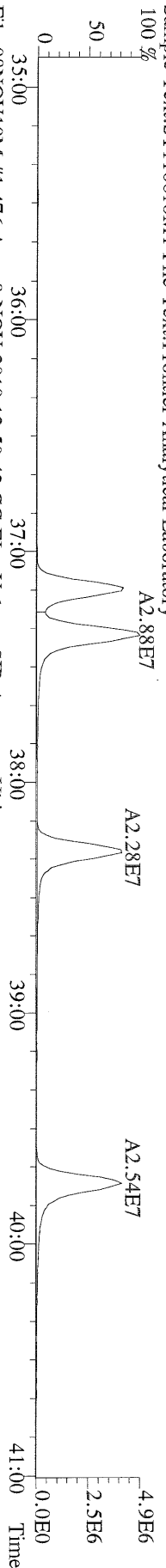
File:08NOV10M #1-476 Acq: 8-NOV-2010 12:50:43 GC EI+ Voltage SIR Autospec-Utima
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



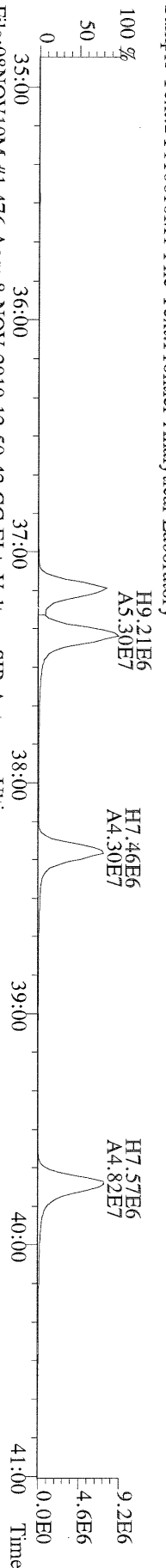
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375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
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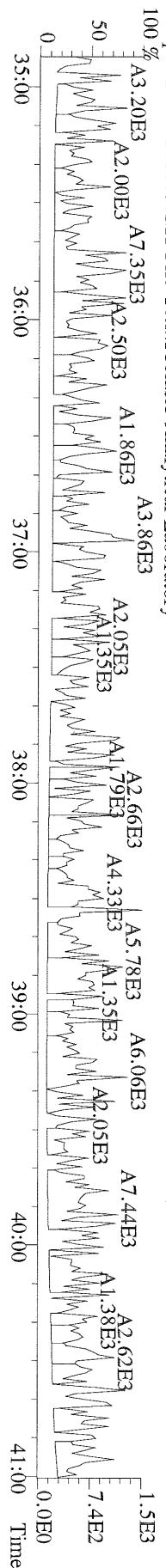
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383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



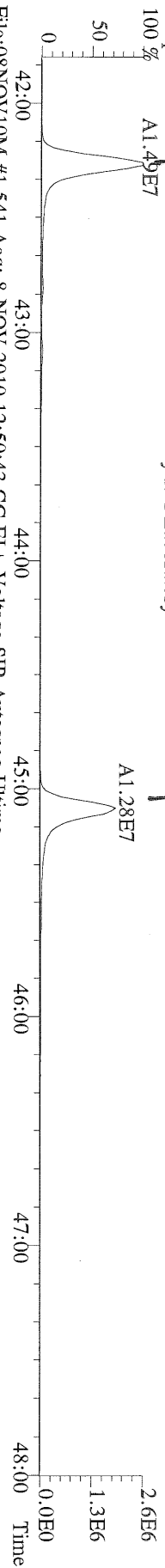
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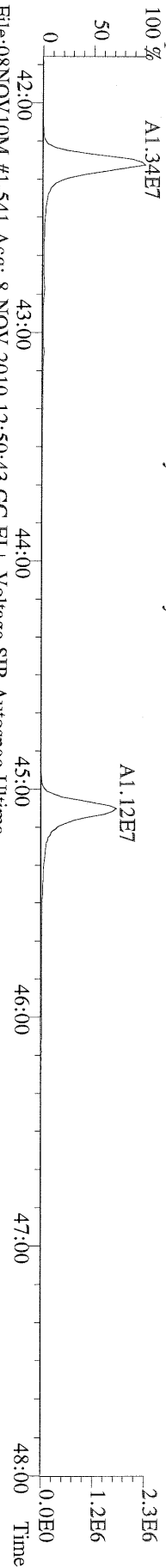
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Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



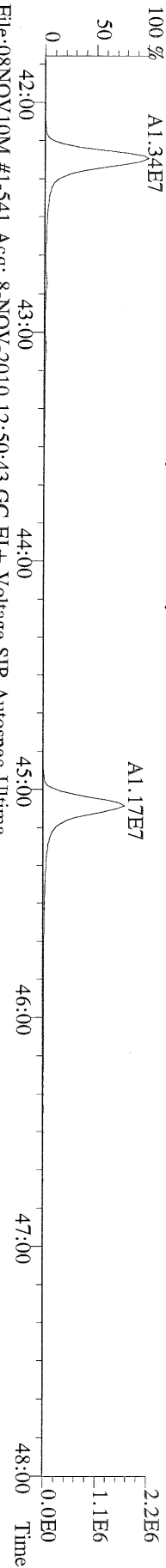
File:08NOV10M #1-541 Acq: 8-NOV-2010 12:50:43 GC EI+ Voltage SIR Autospec-Utima
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory
100 % A1.49E7



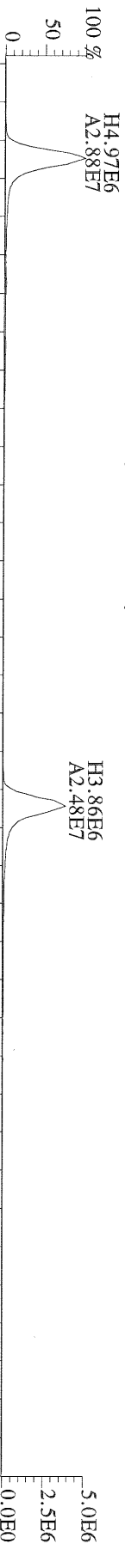
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Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory
100 % A1.34E7



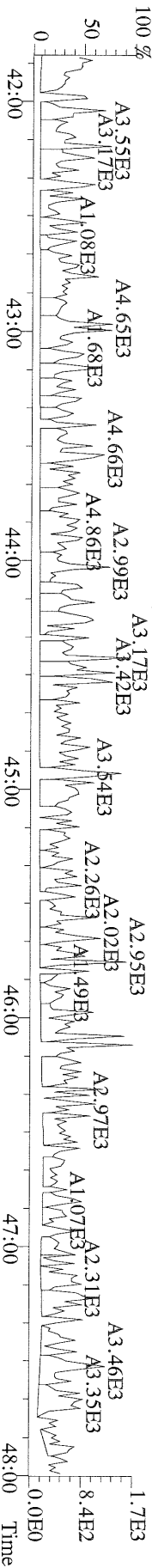
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417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
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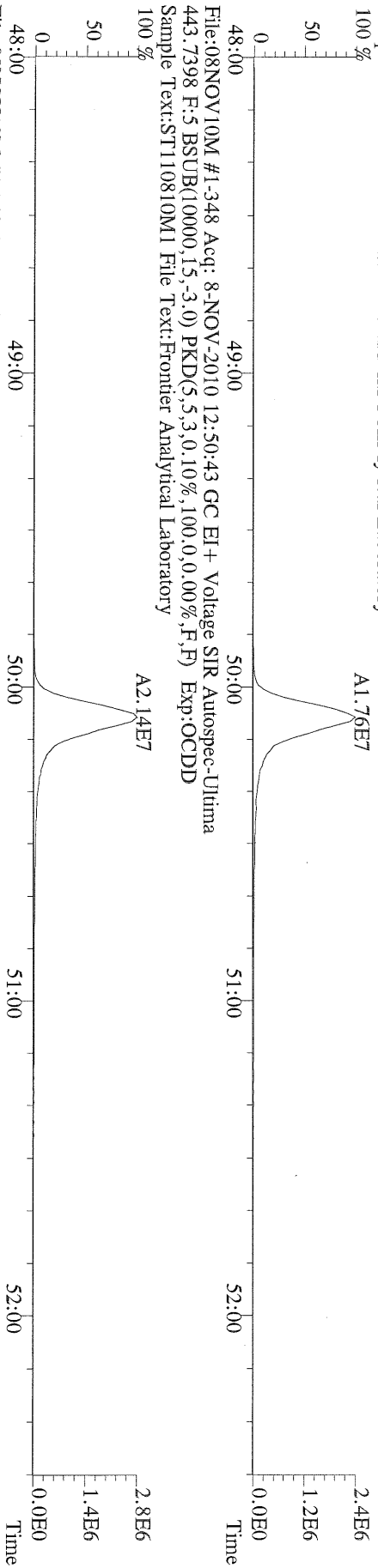
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Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



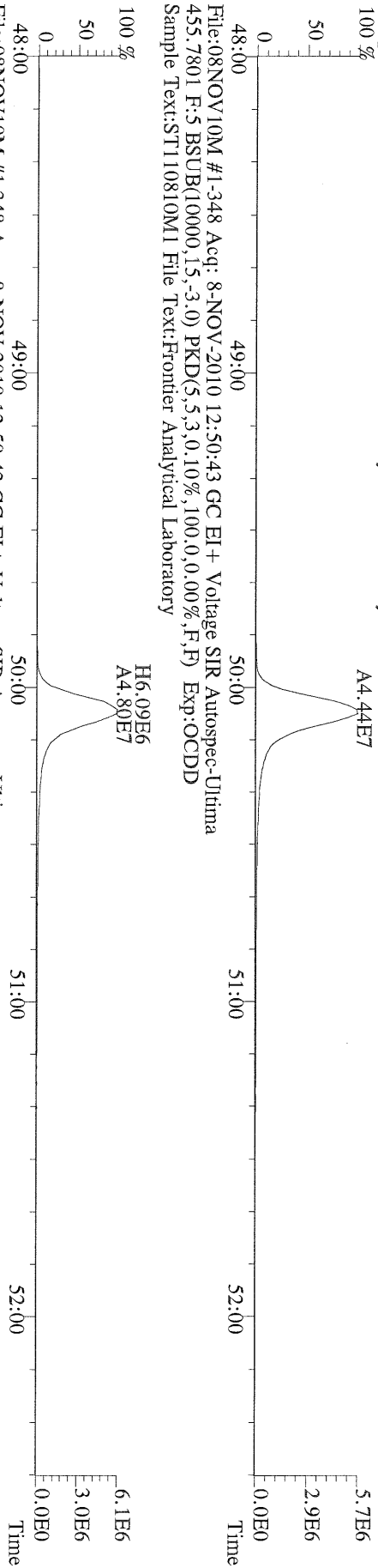
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Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory



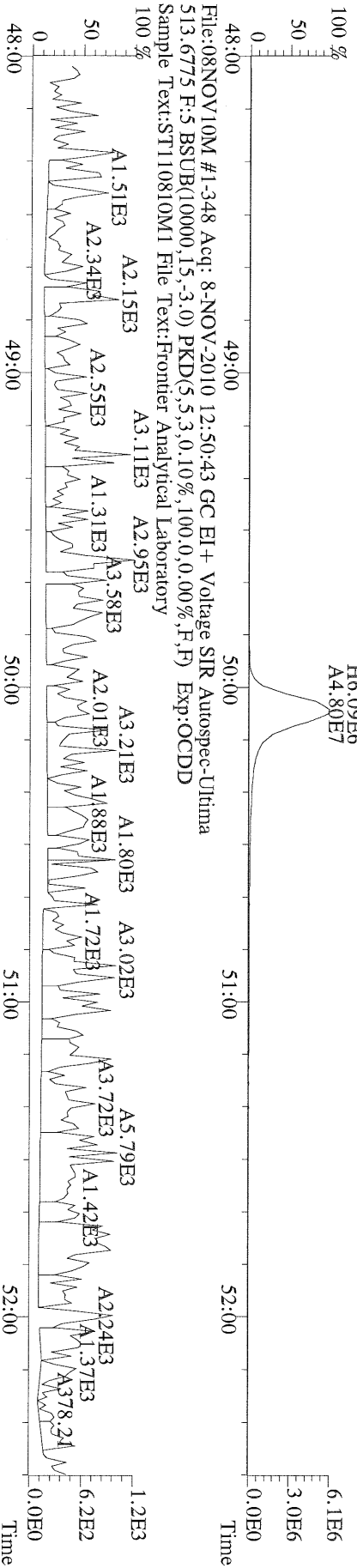
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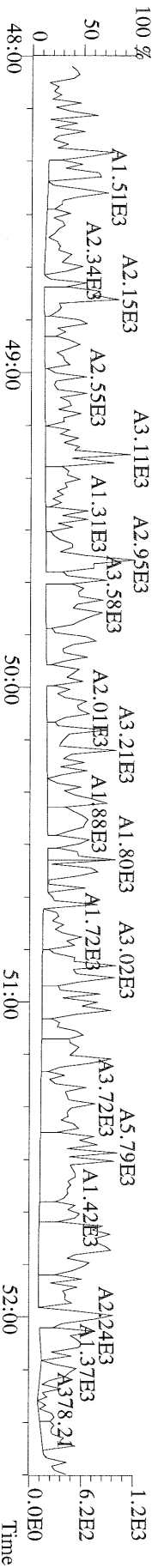
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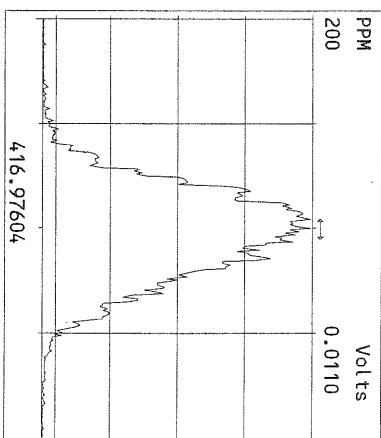
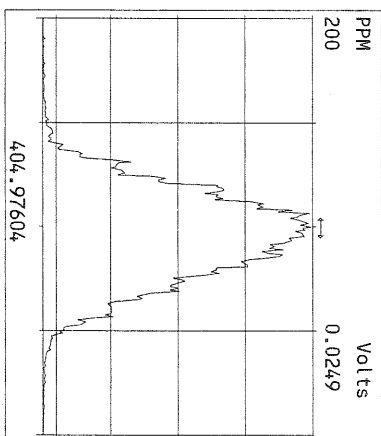
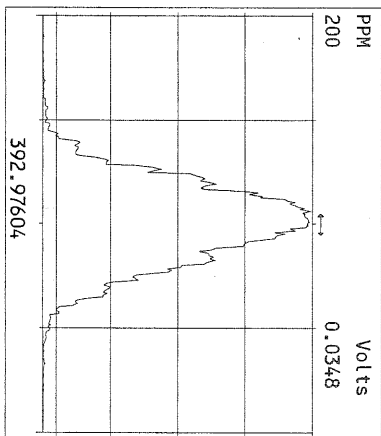
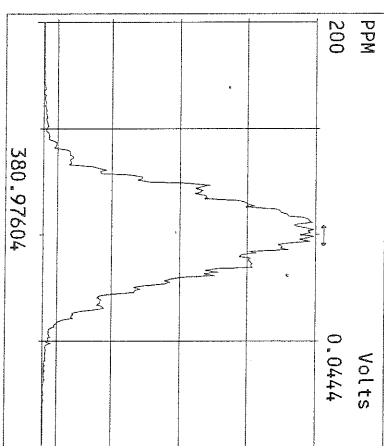
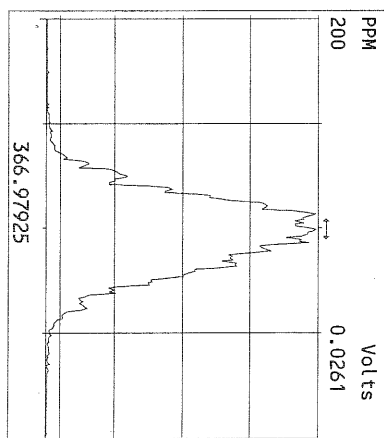
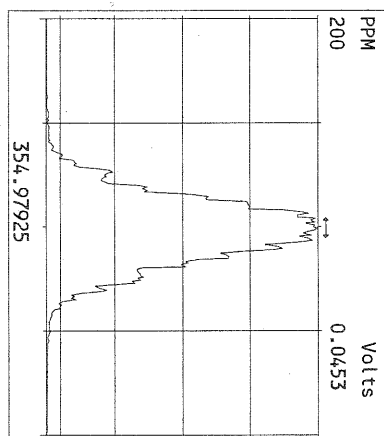
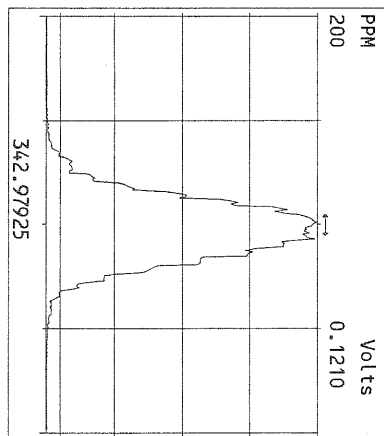
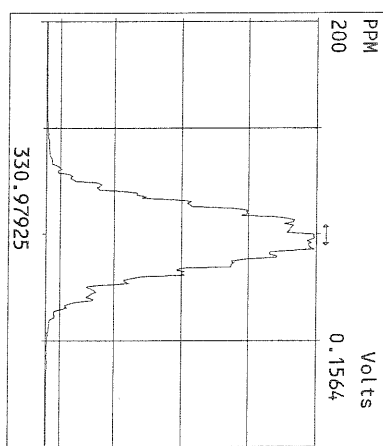
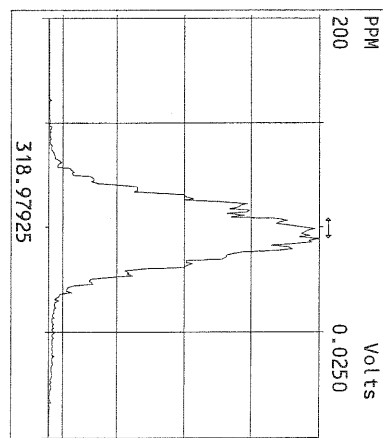
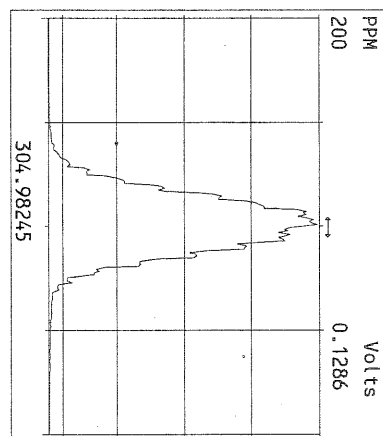
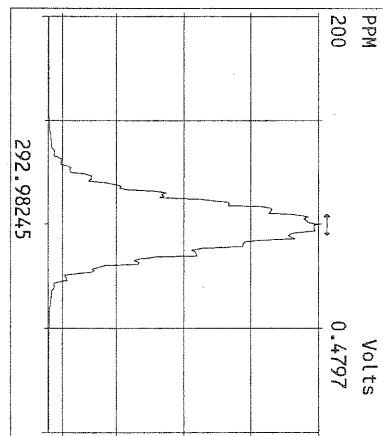


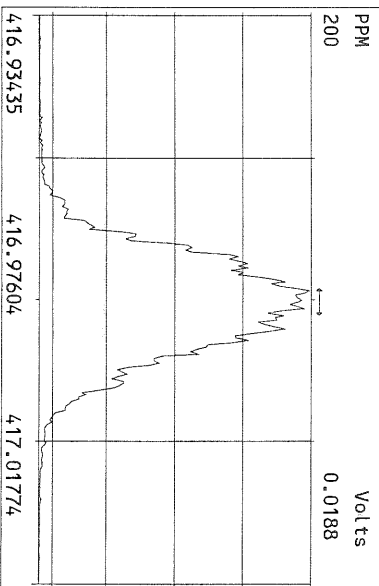
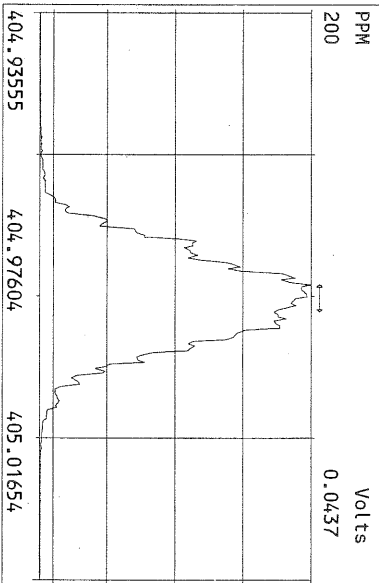
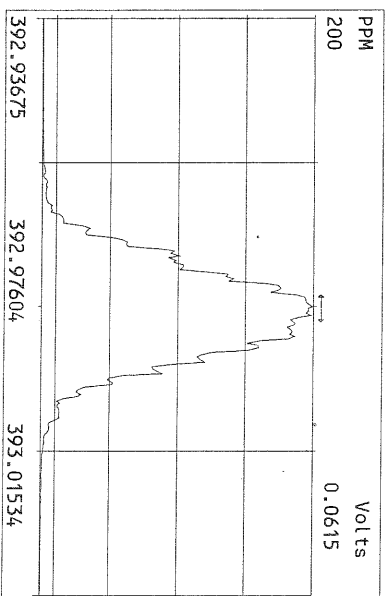
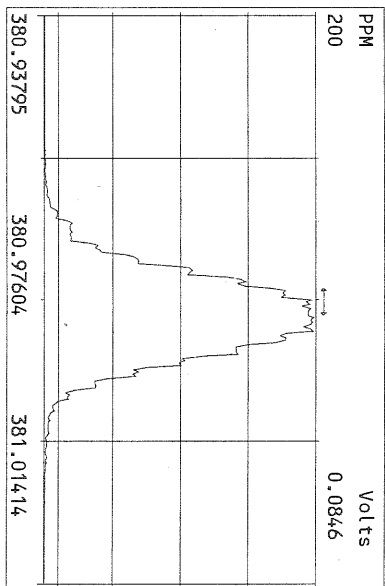
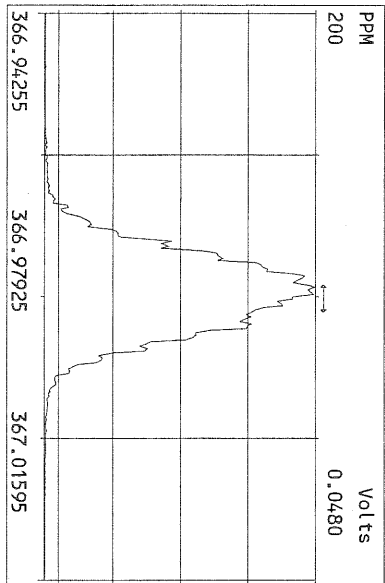
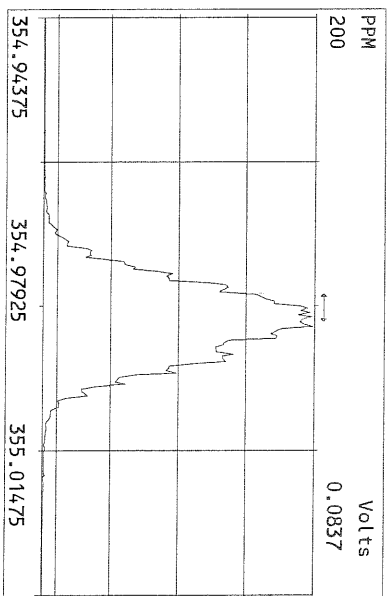
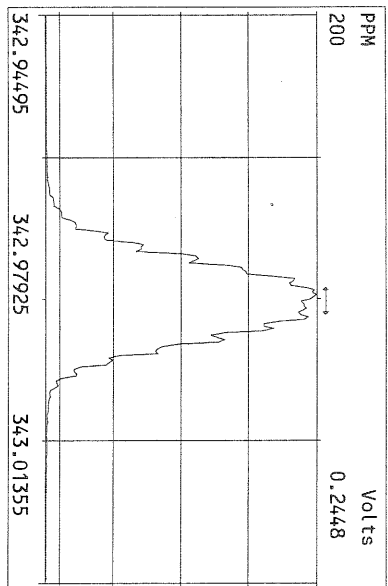
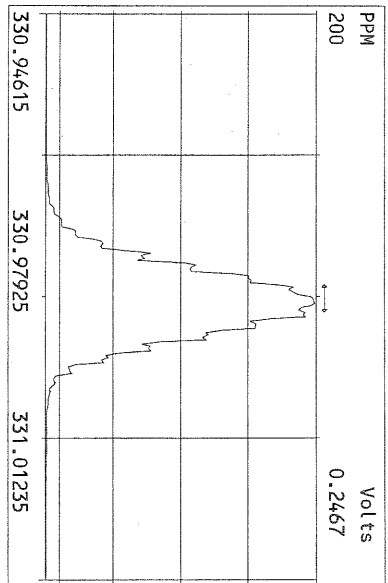
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 Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory

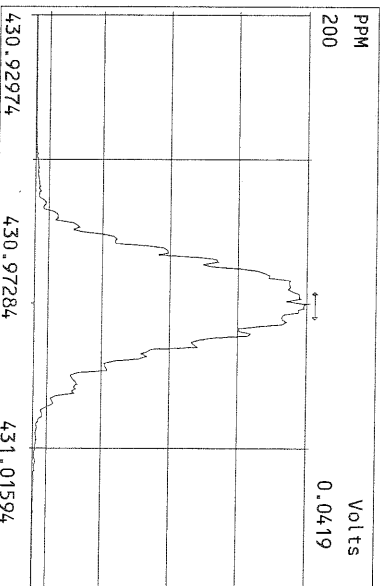
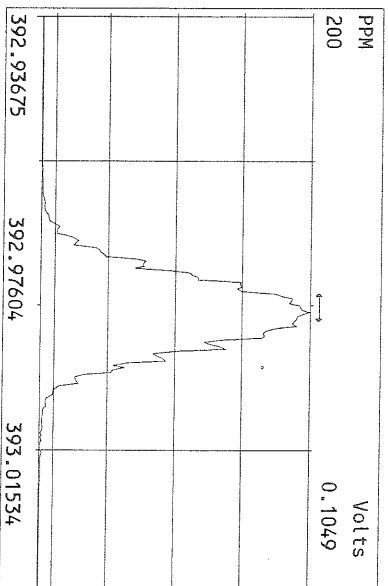
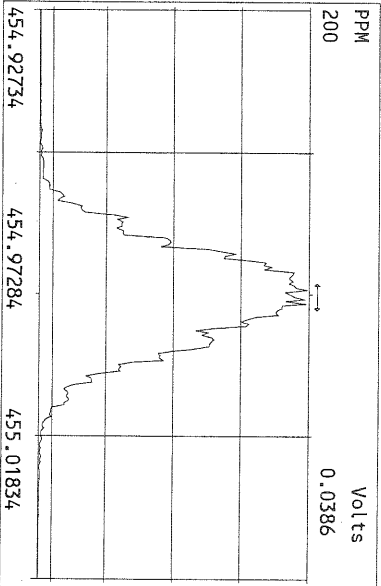
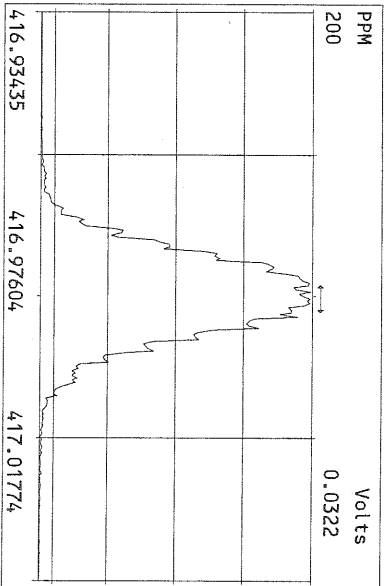
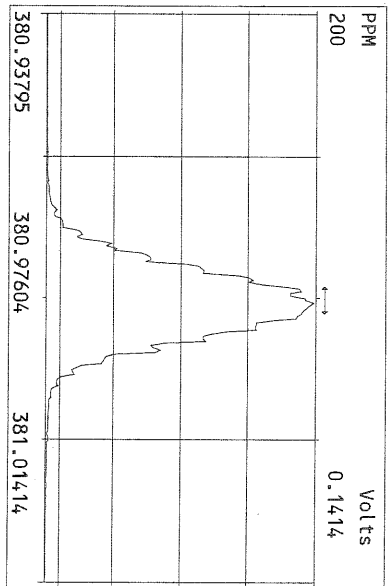
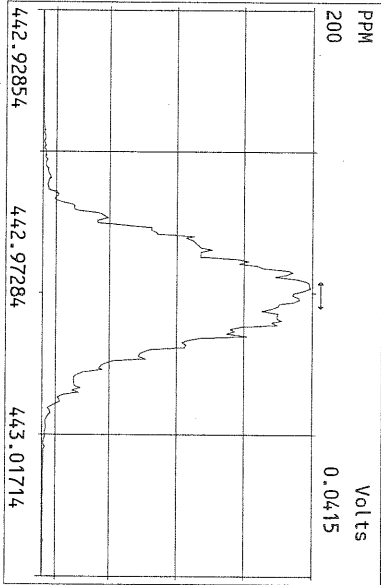
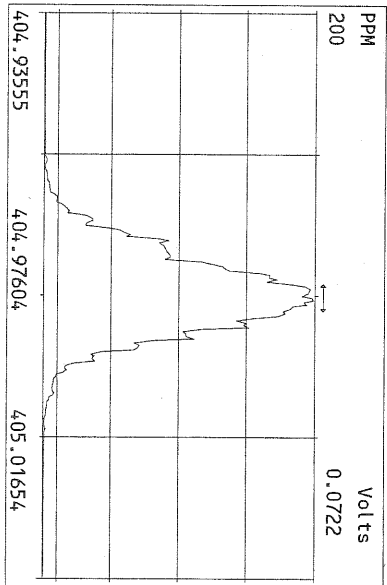
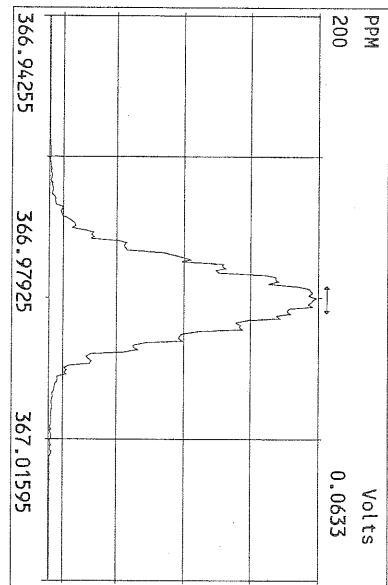


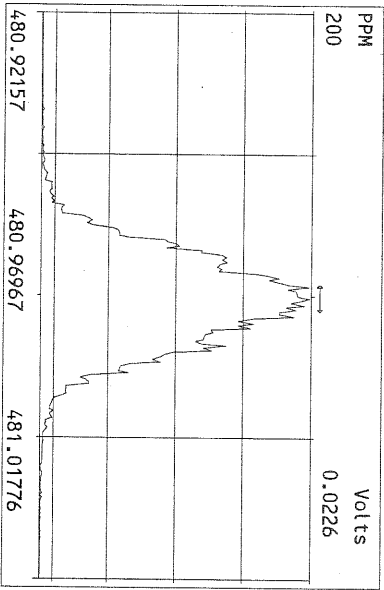
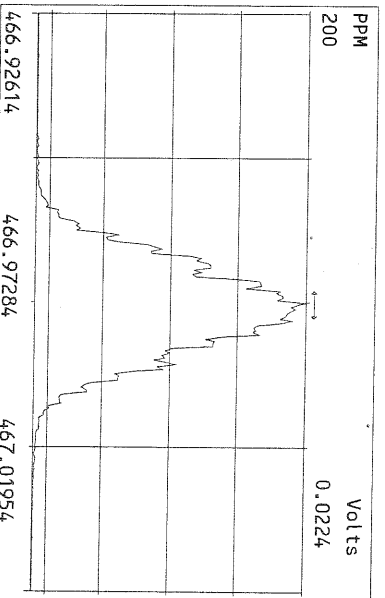
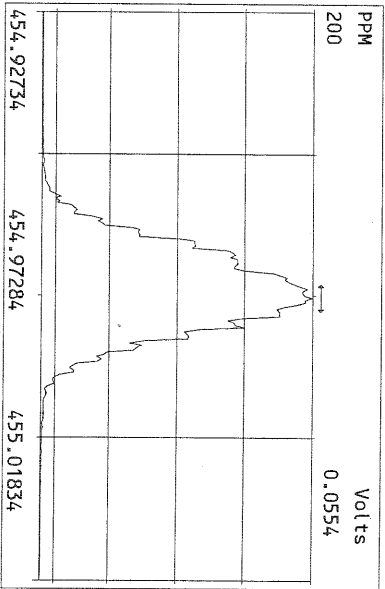
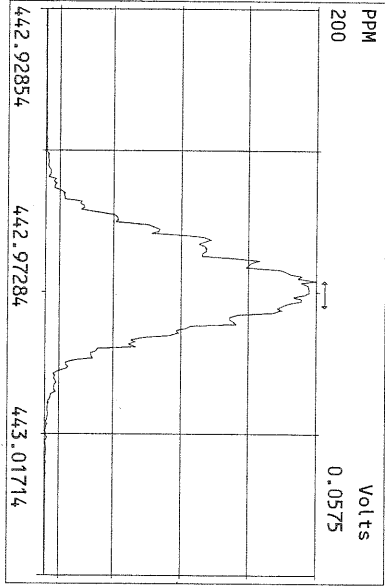
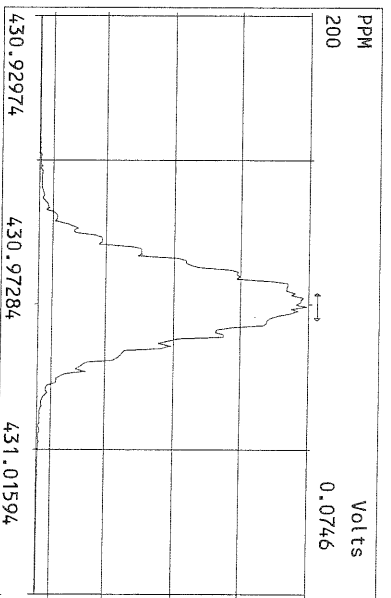
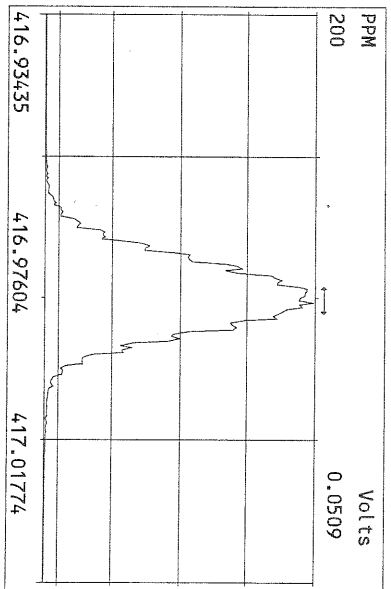
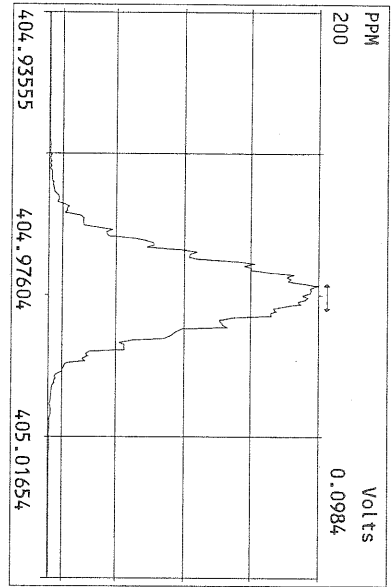
File:08NOV10M #1-348 Acq: 8-NOV-2010 12:50:43 GC EI+ Voltage SIR Autospec-Utima
 513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:ST110810M1 File Text:Frontier Analytical Laboratory

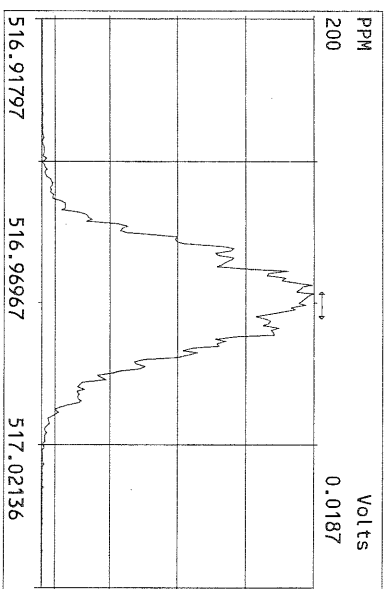
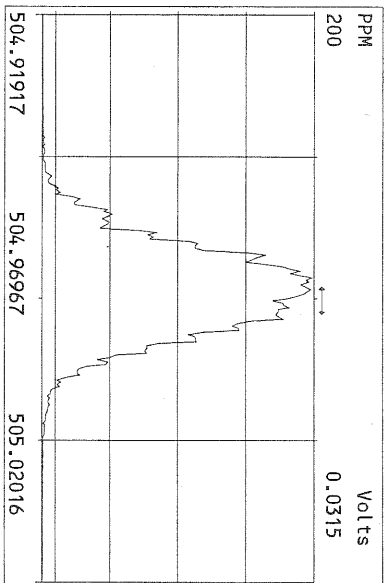
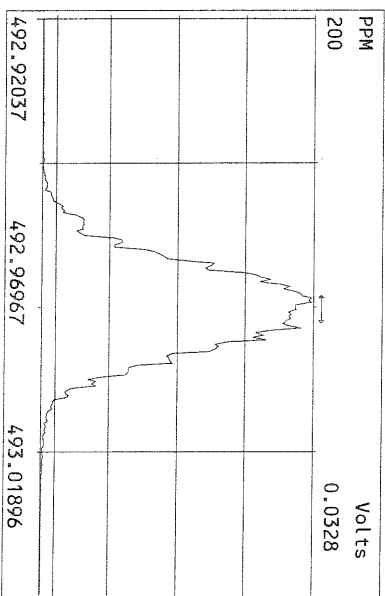
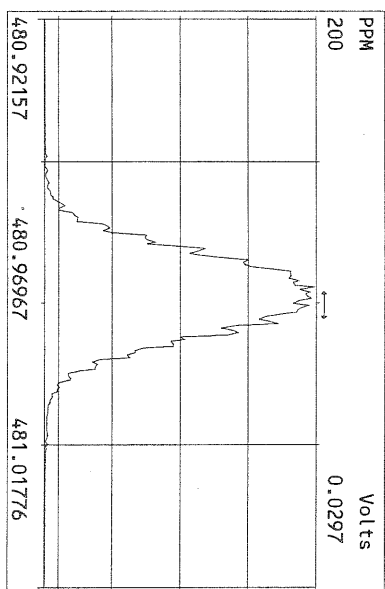
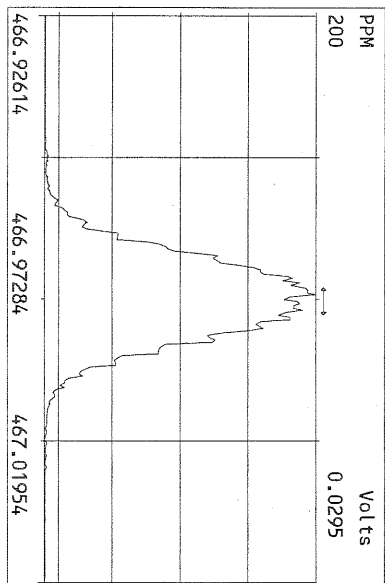
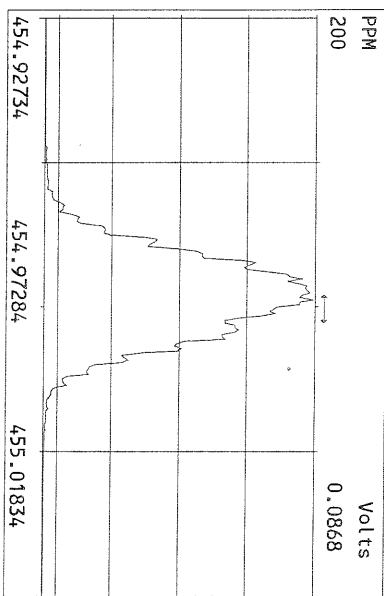
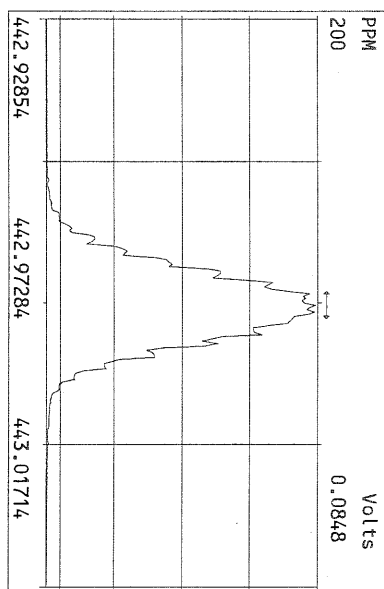
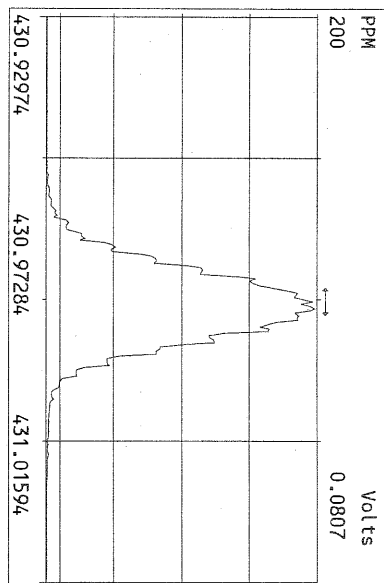












USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 8/23/10

Instrument ID: FAL3

GC Column ID: DB5

VER Data Filename: 08NOV10M Sam:16

Analysis Date: 9-NOV-10 02:41:52

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
2,3,7,8-TCDD	M/M+2	0.81	0.65-0.89	y	12.6	7.80 - 12.9 ✓
1,2,3,7,8-PeCDD	M+2/M+4	1.77	1.32-1.78	y	55.3	39.0 - 65.0 ✓
1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	52.7	39.0 - 64.0 ✓
1,2,3,6,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	52.2	39.0 - 64.0 ✓
1,2,3,7,8,9-HxCDD	M+2/M+4	1.31	1.05-1.43	y	57.3	41.0 - 61.0 ✓
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.08	0.88-1.20	y	50.7	43.0 - 58.0 ✓
OCDD	M+2/M+4	0.89	0.76-1.02	y	118	79.0 - 126 ✓
2,3,7,8-TCDF	M/M+2	0.85	0.65-0.89	y	9.36	8.40 - 12.0 ✓
1,2,3,7,8-PeCDF	M+2/M+4	1.48	1.32-1.78	y	59.5	41.0 - 60.0 ✓
2,3,4,7,8-PeCDF	M+2/M+4	1.50	1.32-1.78	y	59.8	41.0 - 60.0 ✓
1,2,3,4,7,8-HxCDF	M+2/M+4	1.21	1.05-1.43	y	55.4	45.0 - 56.0 ✓
1,2,3,6,7,8-HxCDF	M+2/M+4	1.17	1.05-1.43	y	55.7	44.0 - 57.0 ✓
2,3,4,6,7,8-HxCDF	M+2/M+4	1.19	1.05-1.43	y	54.8	44.0 - 57.0 ✓
1,2,3,7,8,9-HxCDF	M+2/M+4	1.19	1.05-1.43	y	55.2	45.0 - 56.0 ✓
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.11	0.88-1.20	y	48.2	45.0 - 55.0 ✓
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.12	0.88-1.20	y	49.2	43.0 - 58.0 ✓
OCDF	M+2/M+4	0.78	0.76-1.02	y	118	63.0 - 159 ✓

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

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

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

Analyst: Date: 11/9/10

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 8/23/10

Instrument ID: FAL3

GC Column ID: DB5

VER Data Filename: 08NOV10M

Sam:16

Analysis Date: 9-NOV-10 02:41:52

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.75	0.65-0.89	y	105	82.0 - 121 ✓
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.71	1.32-1.78	y	119	62.0 - 160 ✓
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	97.8	85.0 - 117 ✓
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	86.0	85.0 - 118 ✓
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.11	0.88-1.20	y	95.7	72.0 - 138 ✓
13C-OCDD	M+2/M+4	0.92	0.76-1.02	y	182	96.0 - 415 ✓
13C-2,3,7,8-TCDF	M/M+2	0.88	0.65-0.89	y	98.8	71.0 - 140 ✓
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.77	1.32-1.78	y	119	76.0 - 130 ✓
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.78	1.32-1.78	y	116	77.0 - 130 ✓
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	y	107	76.0 - 131 ✓
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.55	0.43-0.59	y	92.2	70.0 - 143 ✓
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.55	0.43-0.59	y	99.1	73.0 - 137 ✓
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.55	0.43-0.59	y	104	74.0 - 135 ✓
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	y	114	78.0 - 129 ✓
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.46	0.37-0.51	y	127	77.0 - 129 ✓
13C-OCDF	M+2/M+4	0.94	0.76-1.02	y	189	96.0 - 415 ✓
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					11.2	7.80 - 12.8 ✓

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

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

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

(4) No ion abundance ratio; report concentration found.

Analyst: B

Date: 11/9/10

FORM 5
PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Frontier Analytical Laboratory Episode No.:
Contract No.: SAS No.:
Instrument ID: FAL3 Initial Calibration Date: 8/23/10
RT Window Data Filename: 08NOV10M Sam:16 Analysis Date: 9-NOV-10 Time: 02:41:52
DB-5 IS Data Filename: 08NOV10M Sam:16 Analysis Date: 9-NOV-10 Time: 02:41:52
DB-225 IS Data Filename: Analysis Date: Time:

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:24 ✓	1,3,6,8-TCDF (F)	23:02 ✓
1,2,8,9-TCDD (L)	28:19 ✓	1,2,8,9-TCDF (L)	28:33 ✓
1,2,4,7,9-PeCDD (F)	30:14 ✓	1,3,4,6,8-PeCDF (F)	28:24 ✓
1,2,3,8,9-PeCDD (L)	33:48 ✓	1,2,3,8,9-PeCDF (L)	34:13 ✓
1,2,4,6,7,9-HxCDD (F)	36:07 ✓	1,2,3,4,6,8-HxCDF (F)	35:14 ✓
1,2,3,7,8,9-HxCDD (L)	39:11 ✓	1,2,3,7,8,9-HxCDF (L)	39:46 ✓
1,2,3,4,6,7,9-HpCDD (F)	42:47 ✓	1,2,3,4,6,7,8-HpCDF (F)	42:15 ✓
1,2,3,4,6,7,8-HpCDD (L)	44:10 ✓	1,2,3,4,7,8,9-HpCDF (L)	45:05 ✓

(F) = First eluting isomer (DB-5); (L) = Last eluting isomer (DB-5)

=====

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT
BETWEEN
COMPARED PEAKS (1)

<25%

(1) To meet contract requirement, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: J

Date: 11/9/10

USEPA - ITD

FORM 6A

PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Init. Cal. Date: 8/23/10

Instrument ID: FAL3

GC Column ID: DB5

Analysis Date: 9-NOV-10 02:41:52

CS3 or VER Data Filename: 08NOV10M

Sam:16

NATIVE ANALYTES	RETENTION TIME		RRT	RRT
	REFERENCE	RRT	QC LIMITS (1)	
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002 ✓	
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003 ✓	
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002 ✓	
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002 ✓	
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	0.999-1.002 ✓	
LABELED COMPOUNDS				
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052 ✓	
13C-2,3,7,8-TCDD		1.022	0.976-1.043 ✓	
13C-2,3,7,8-TCDF		0.994	0.923-1.103 ✓	
13C-1,2,3,7,8-PeCDD		1.240	1.000-1.567 ✓	
13C-1,2,3,7,8-PeCDF		1.175	0.923-1.203 ✓	
13C-2,3,4,7,8-PeCDF		1.224	0.923-1.303 ✓	

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

Analyst: Date: 11/9/10

USEPA - ITD

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Init. Cal. Date: 8/23/10

Instrument ID: FAL3

GC Column ID: DB5

Analysis Date: 9-NOV-10 02:41:52 CS3 or VER Data Filename: 08NOV10M Sam:16

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001 ✓
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998-1.004 ✓
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019 ✓
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001 ✓
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005 ✓
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001 ✓
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001 ✓
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001 ✓
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001 ✓
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001 ✓
OCDD	13C-OCDD	1.000	0.999-1.001 ✓
OCDF	13C-OCDF	1.000	0.999-1.001 ✓
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.985	0.977-1.000 ✓
13C-1,2,3,6,7,8-HxCDD		0.989	0.981-1.003 ✓
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970 ✓
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975 ✓
13C-2,3,4,6,7,8-HxCDF		0.978	0.959-1.021 ✓
13C-1,2,3,7,8,9-HxCDF		1.014	0.977-1.047 ✓
13C-1,2,3,4,6,7,8-HpCDD		1.127	1.086-1.130 ✓
13C-1,2,3,4,6,7,8-HpCDF		1.079	1.043-1.085 ✓
13C-1,2,3,4,7,8,9-HpCDF		1.151	1.057-1.154 ✓
13C-OCDD		1.269	1.032-1.311 ✓
13C-OCDF		1.278	1.000-1.311 ✓

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

Analyst: JDate: 11/9/10

Frontier Analytical Laboratory - Acquisition Log

Run Name:08NOV10M Instrument: FAL3 GC: DB5 Experiment:PCDD

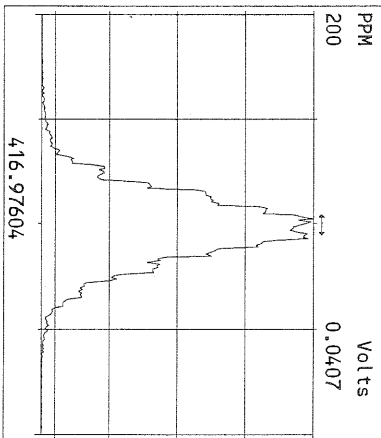
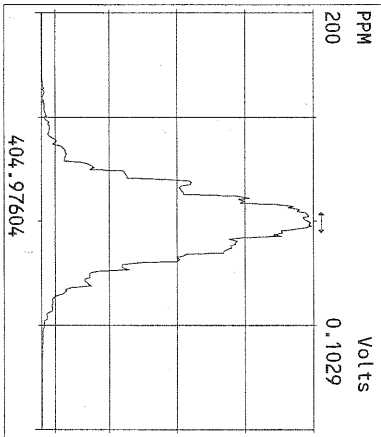
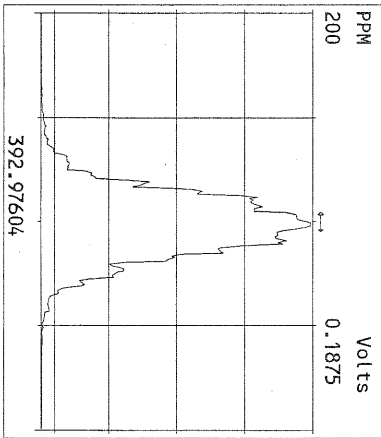
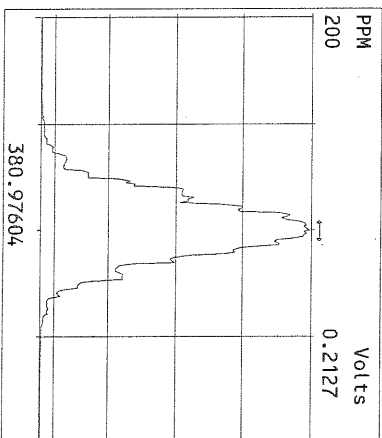
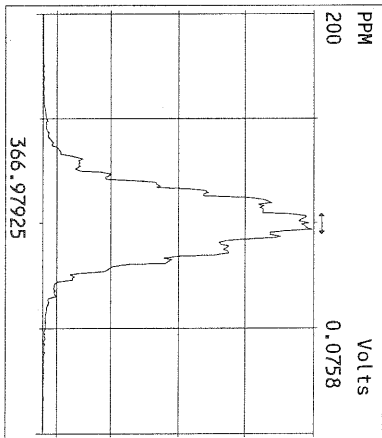
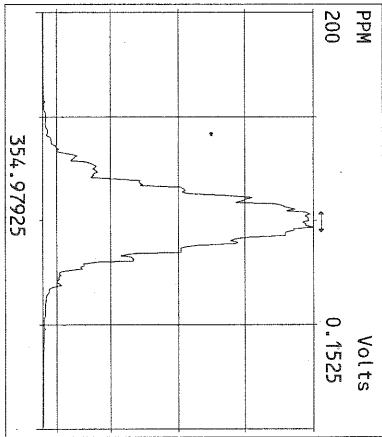
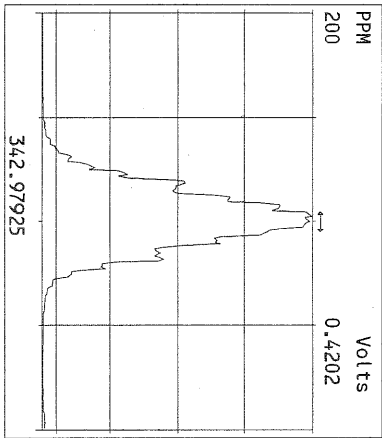
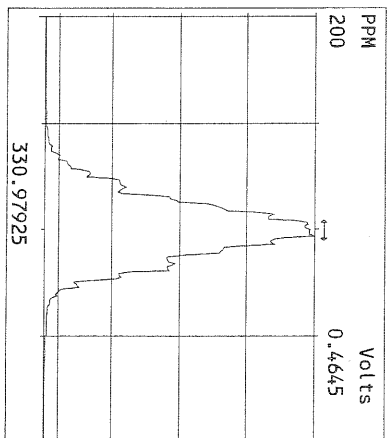
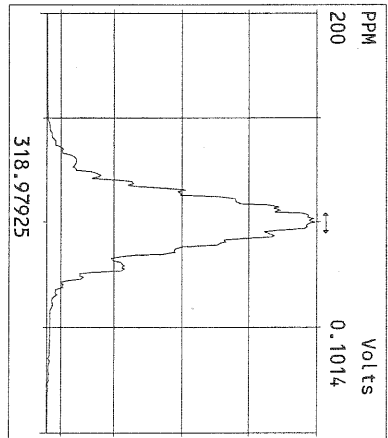
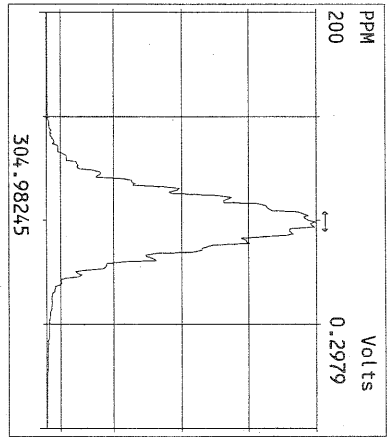
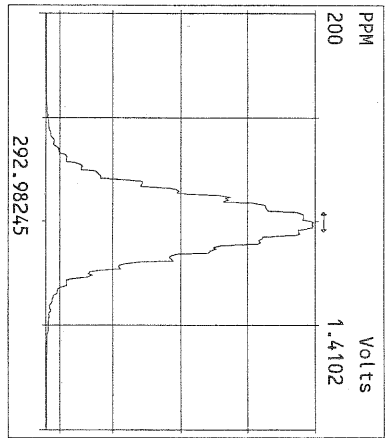
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08NOV10M	5	6418-004-0001-SA	PSB12-8-10-072810	8-NOV-10 16:33:24	ST110810M1	ST110810M2	BS
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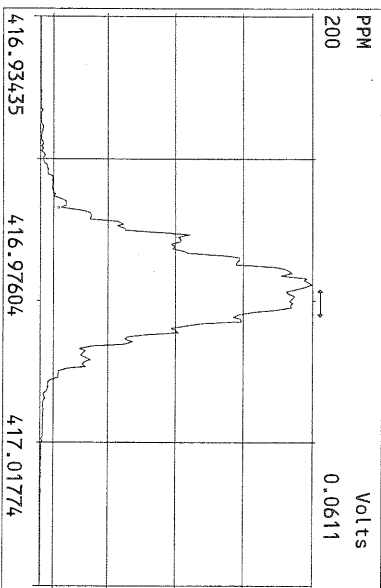
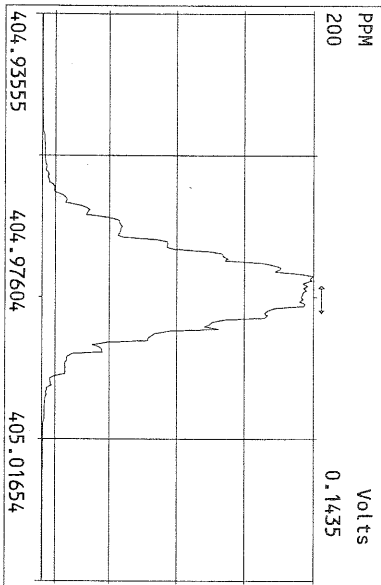
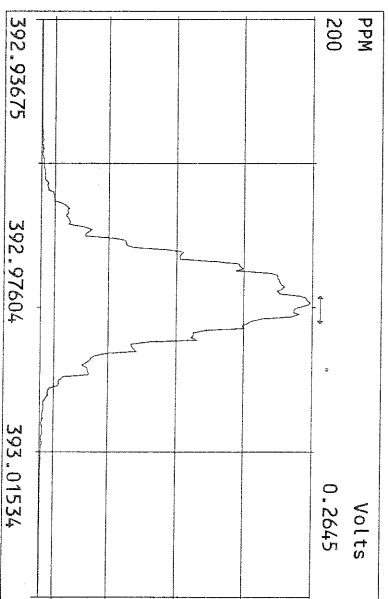
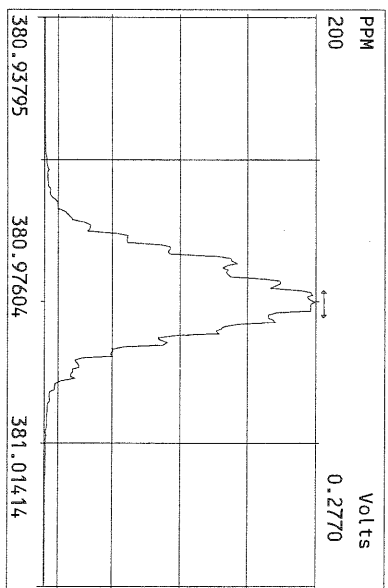
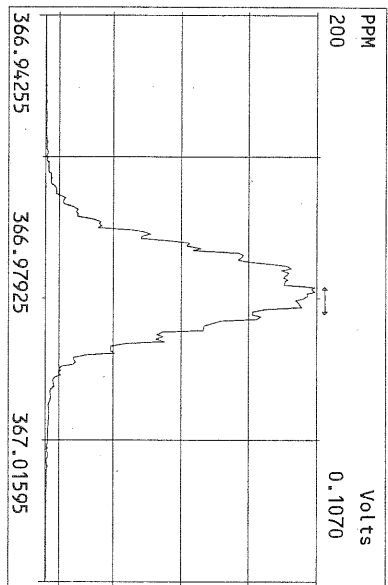
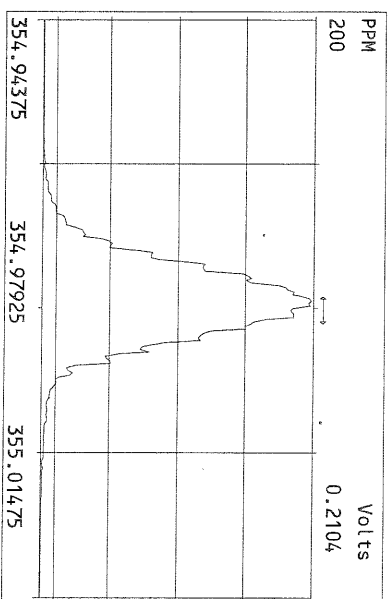
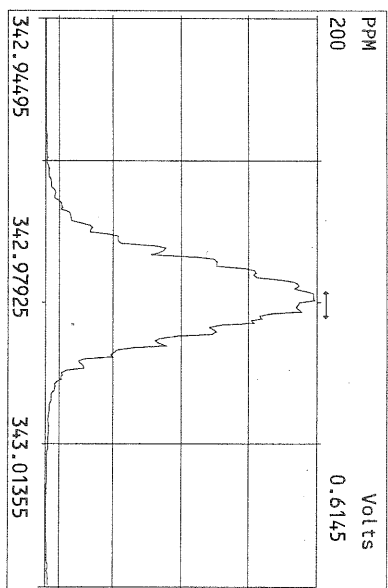
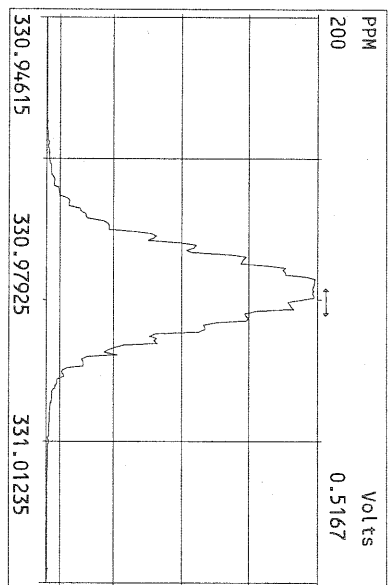
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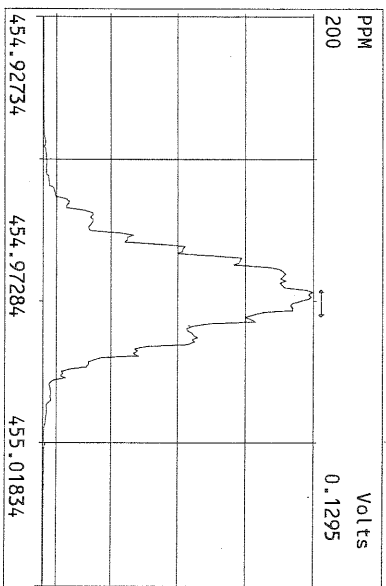
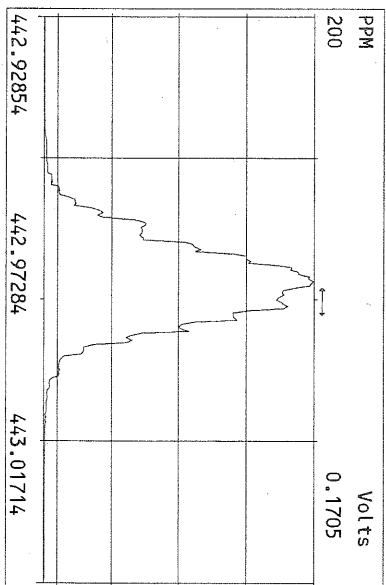
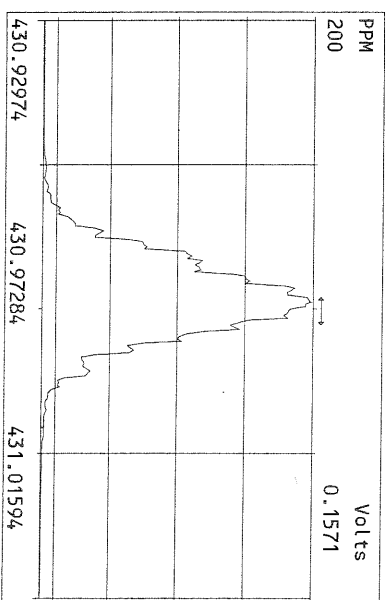
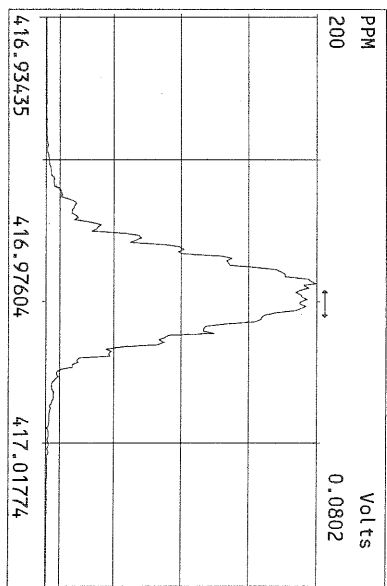
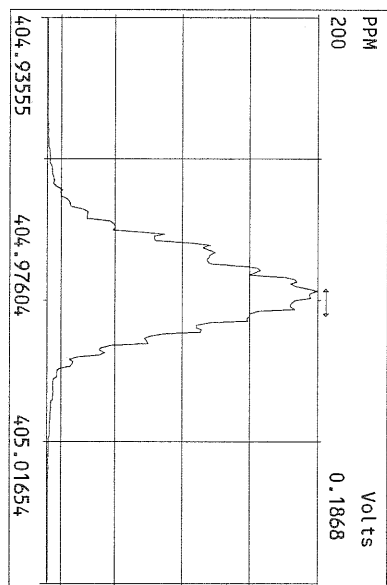
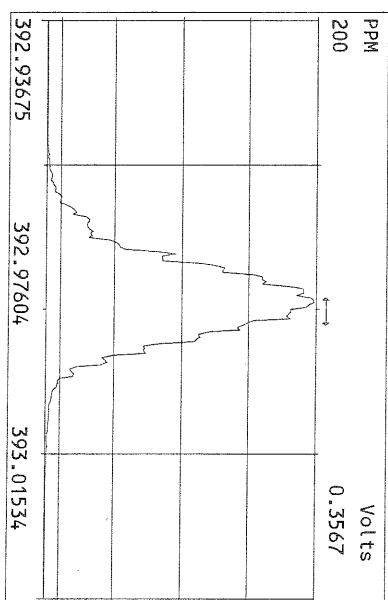
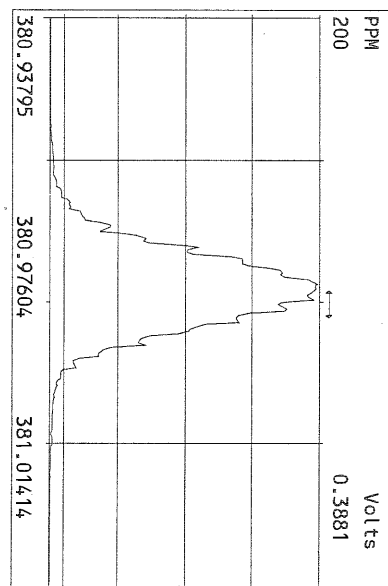
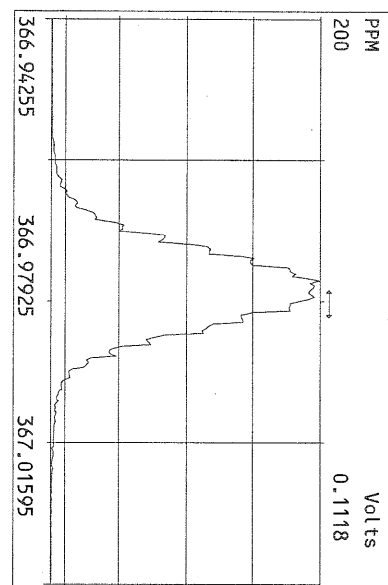
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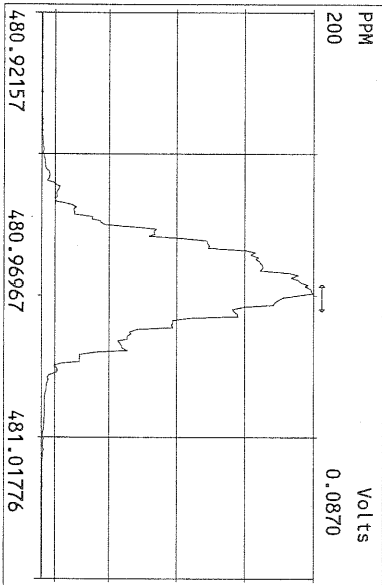
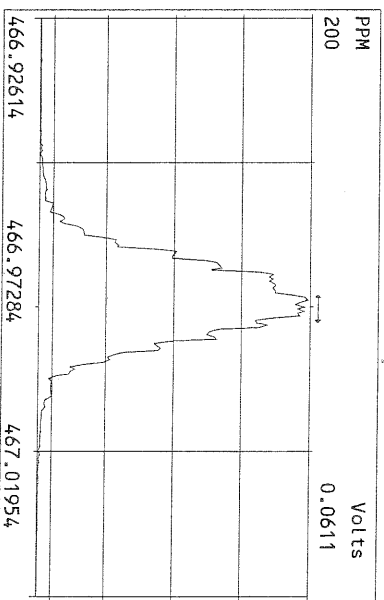
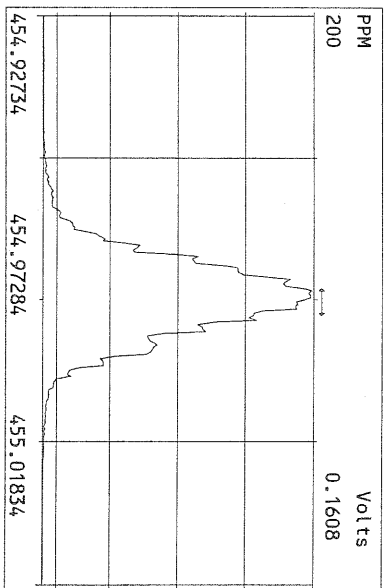
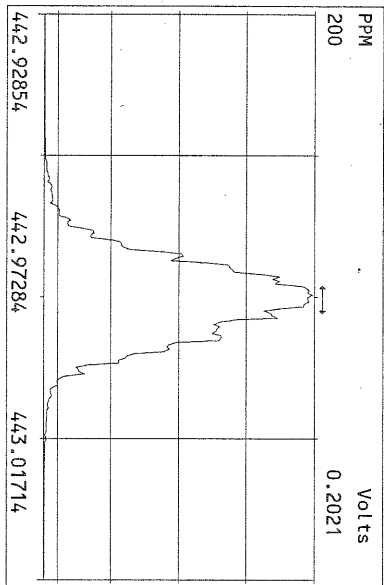
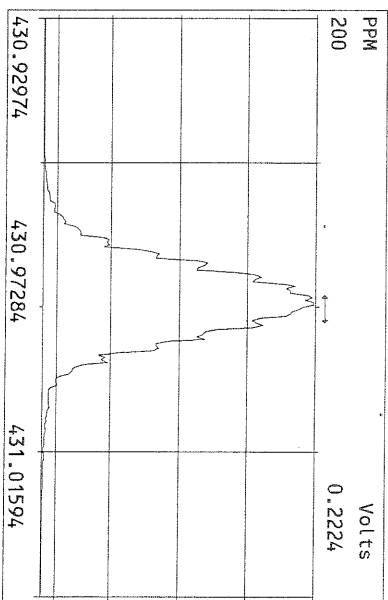
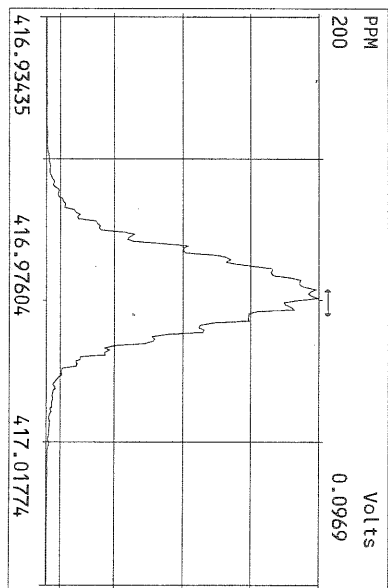
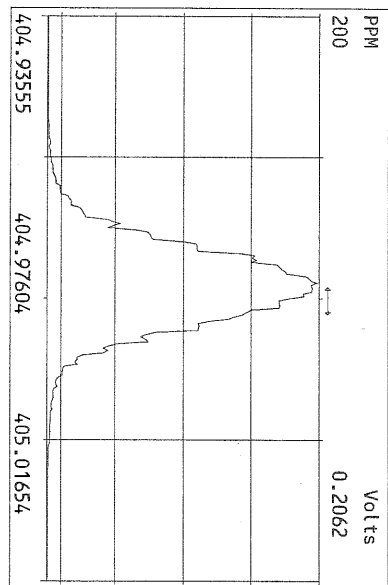
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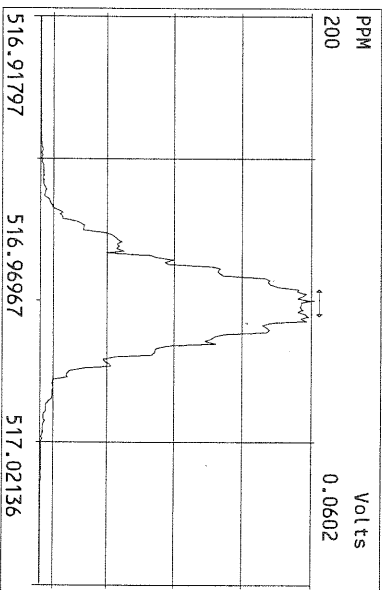
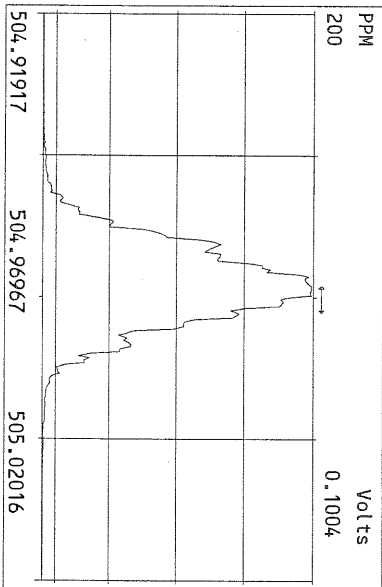
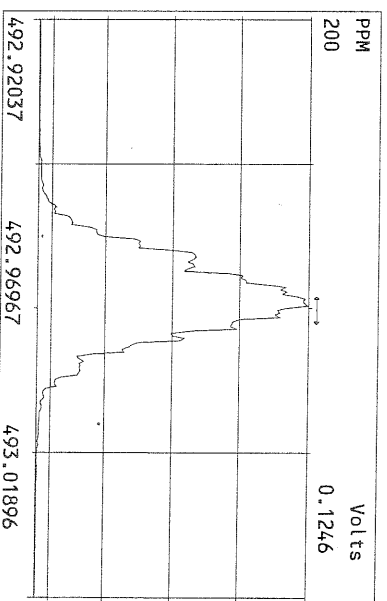
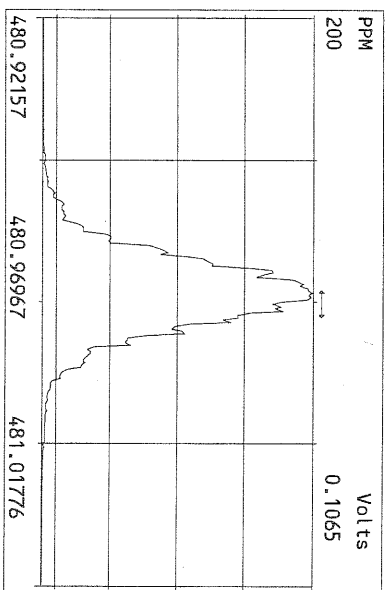
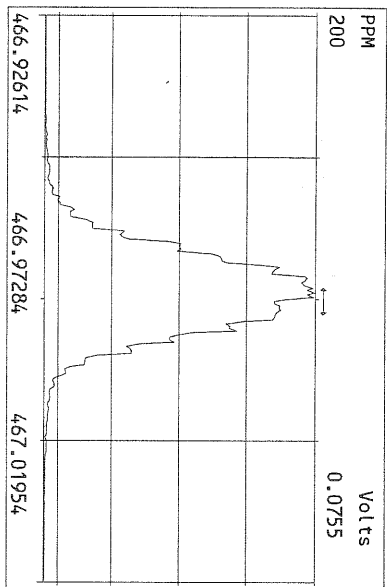
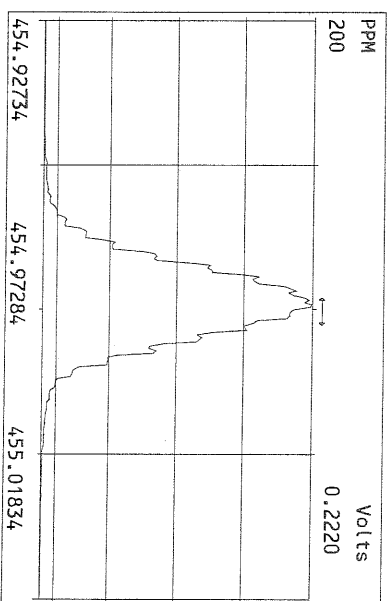
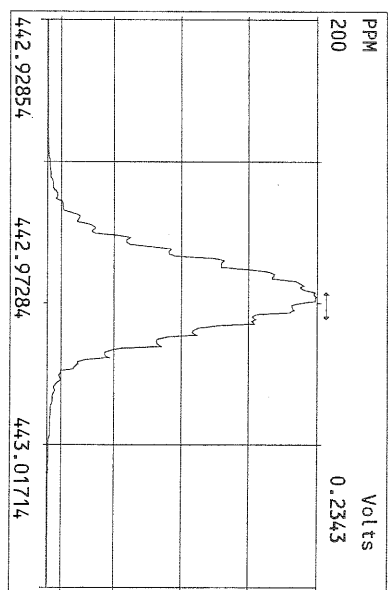
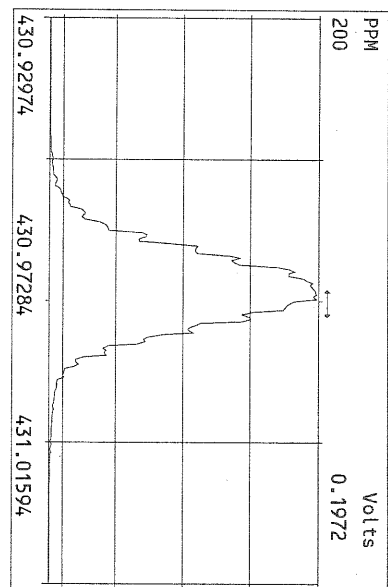
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Experiment:OCDD Function:1 Reference:PFK



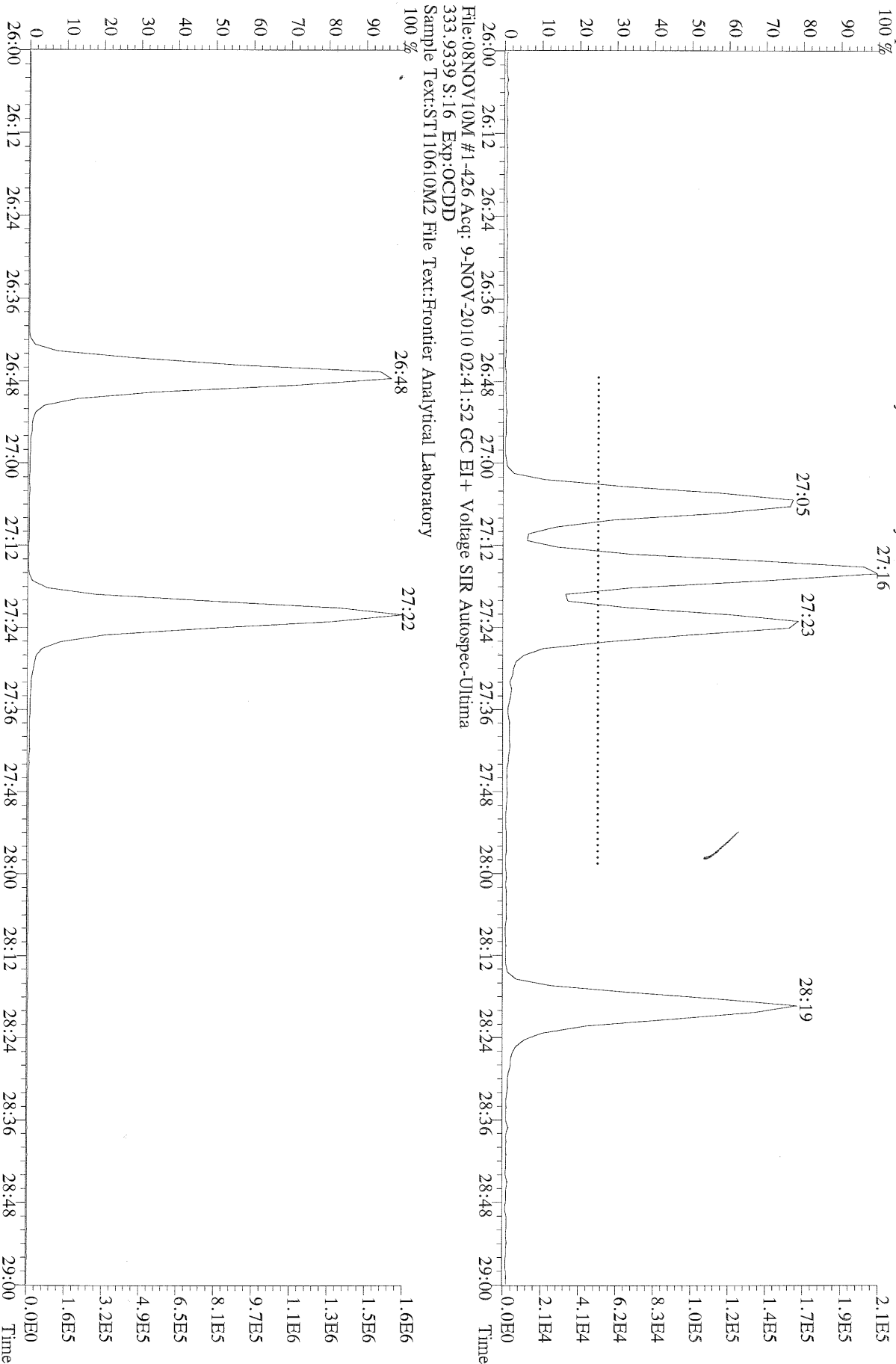




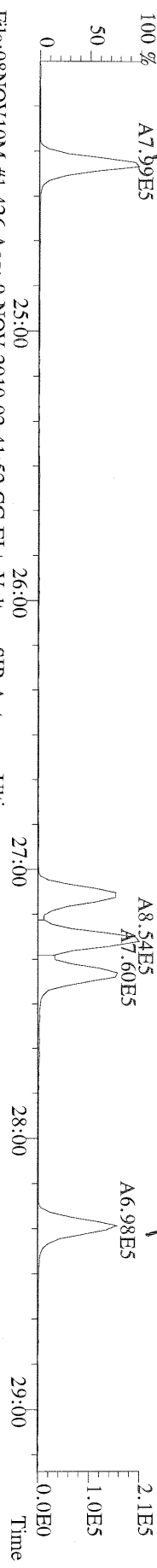




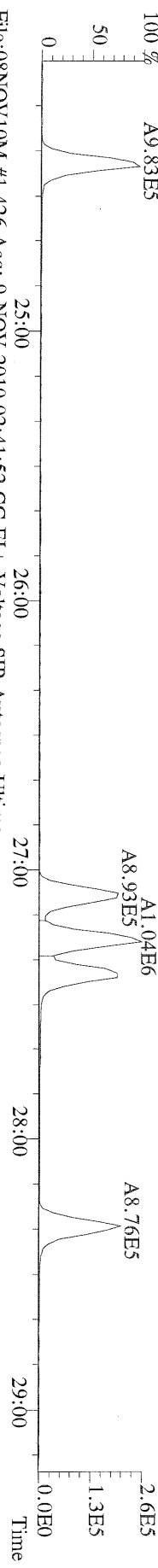
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319.8965 S:16 Exp:OCDD
Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory
100 %



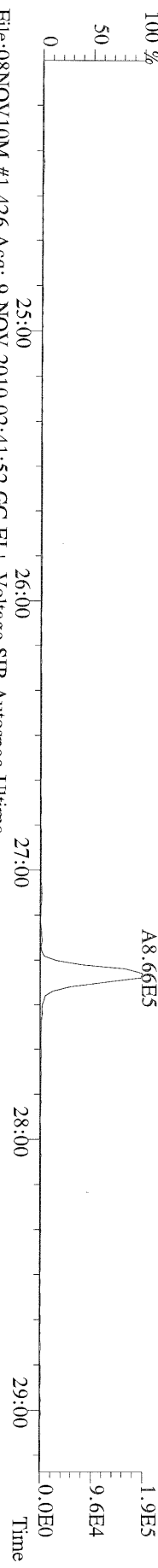
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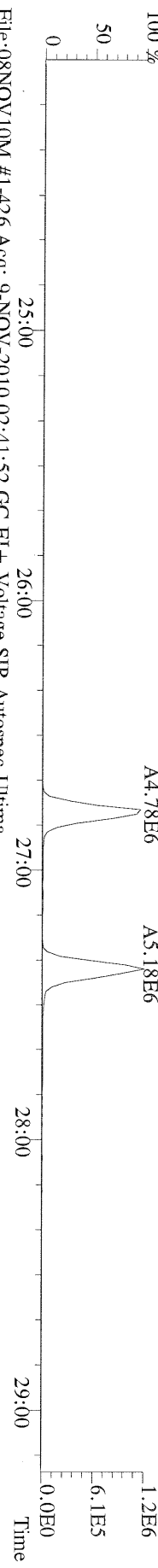
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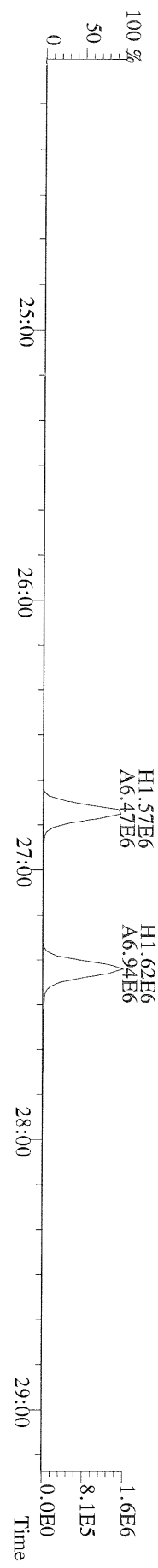
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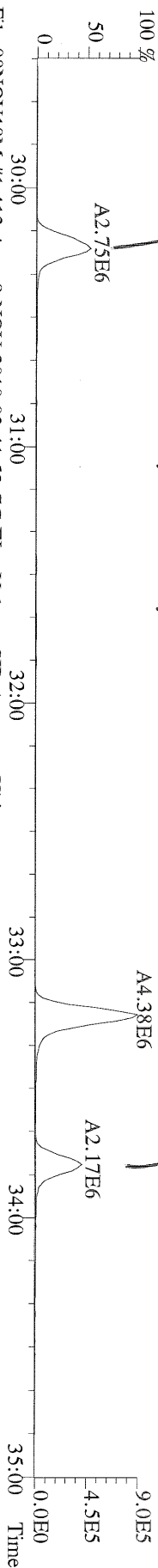
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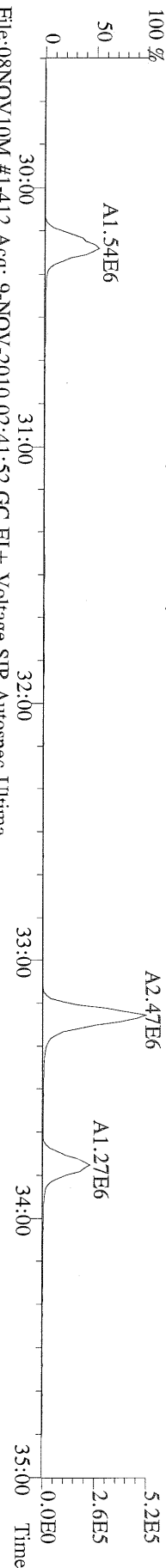
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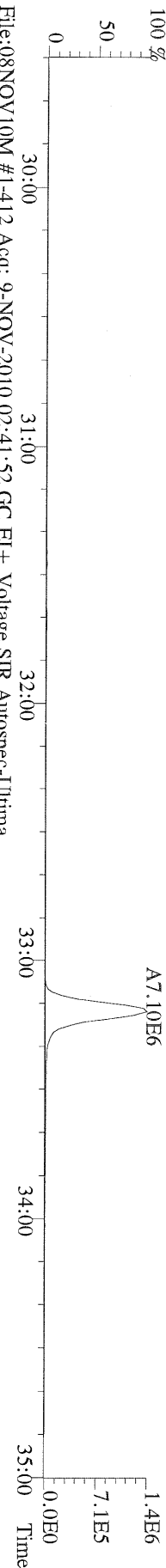
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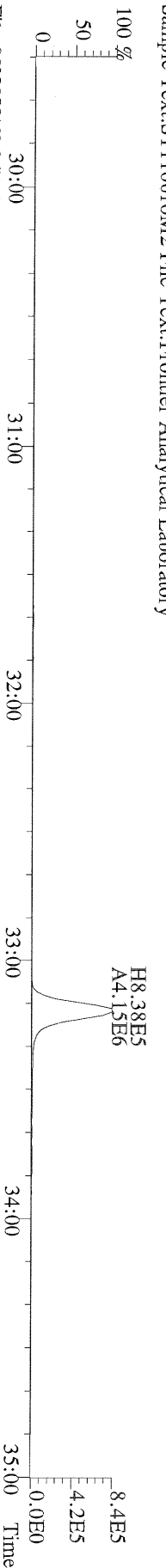
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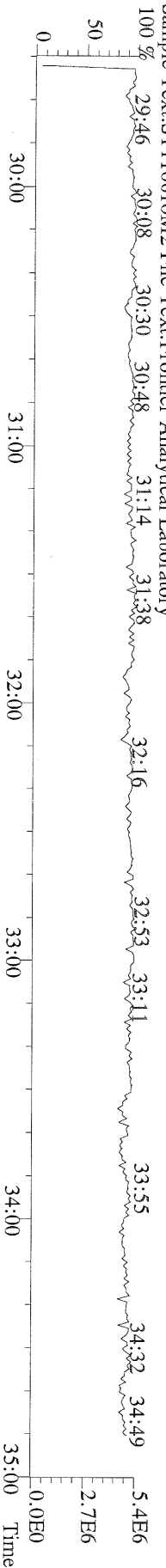
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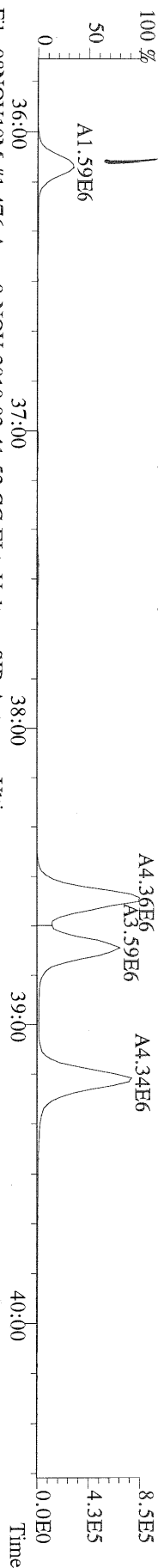
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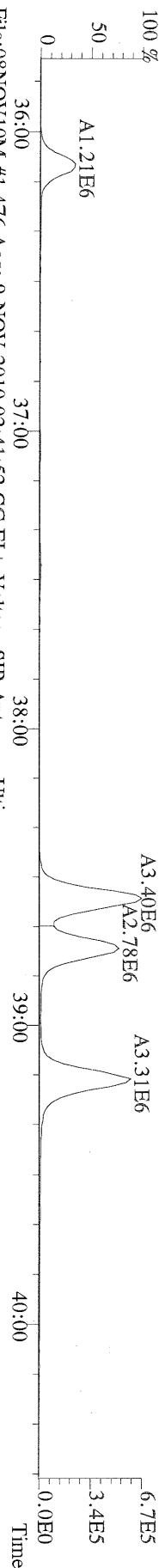
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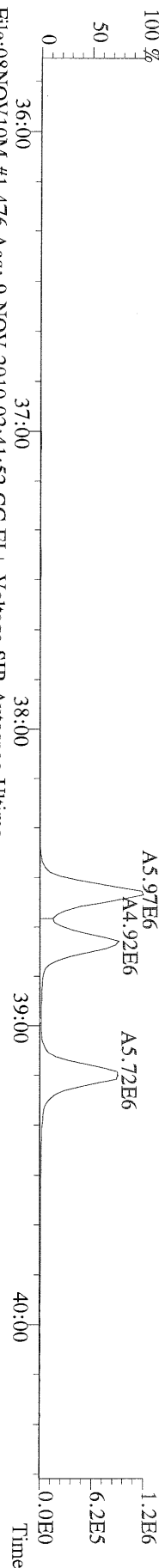
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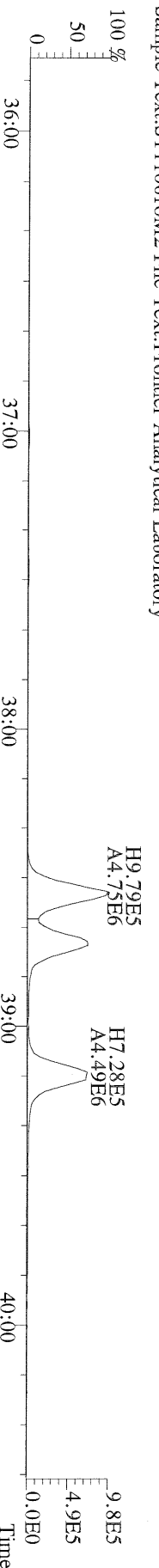
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Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory



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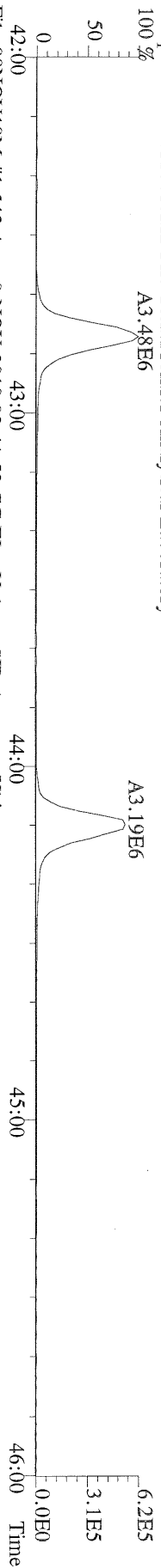
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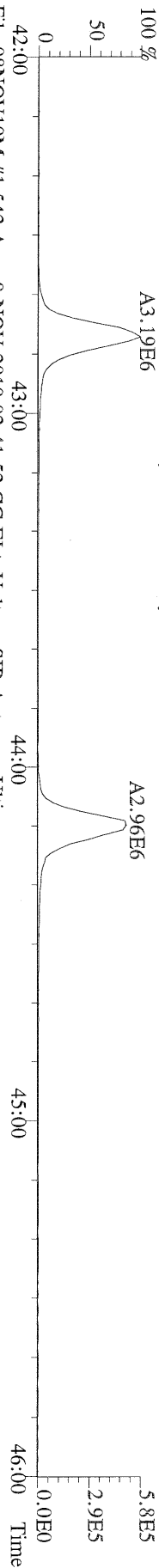
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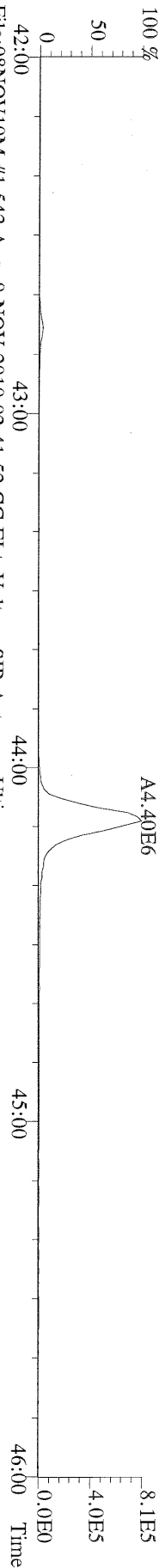
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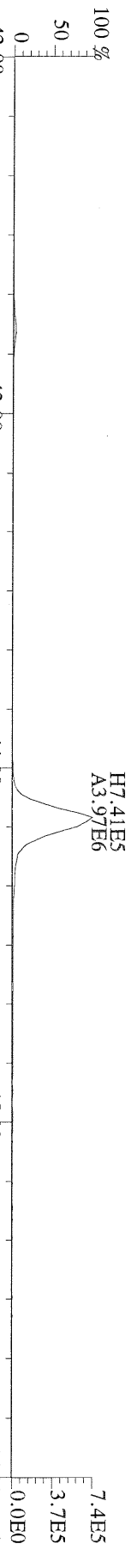
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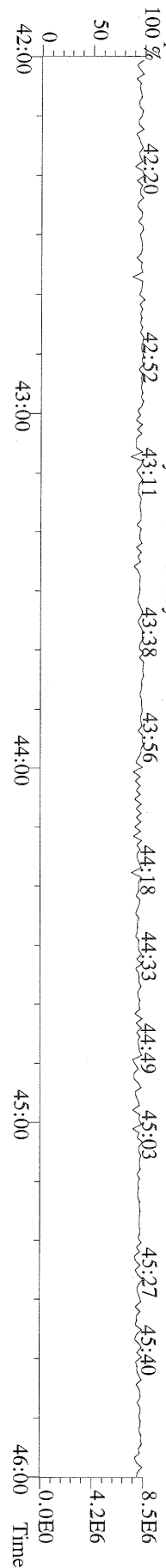
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 435.8169 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
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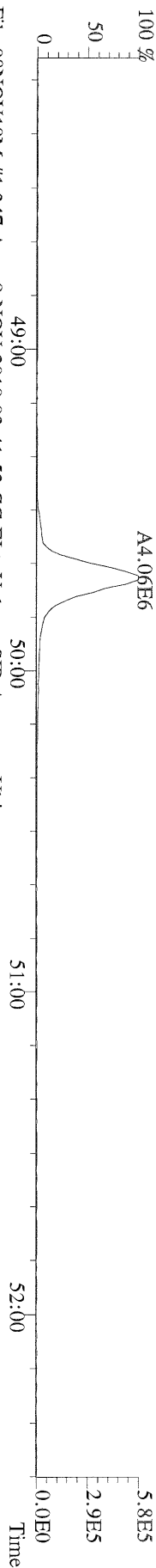
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 437.8140 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory



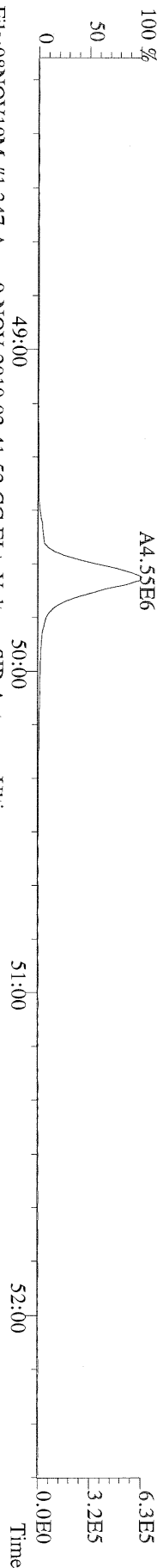
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 430.9728 S:16 F:4 Exp:OCDD
 Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory



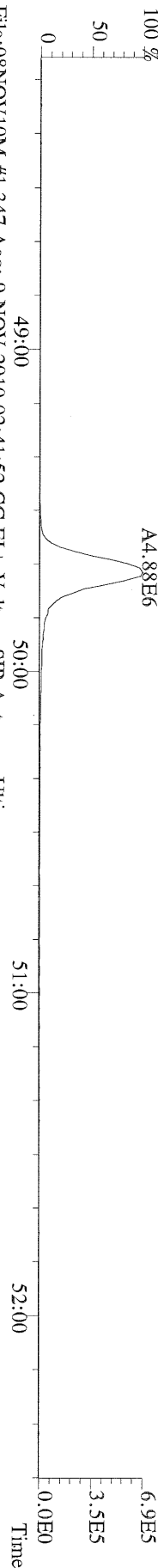
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457.7377 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory
100 %



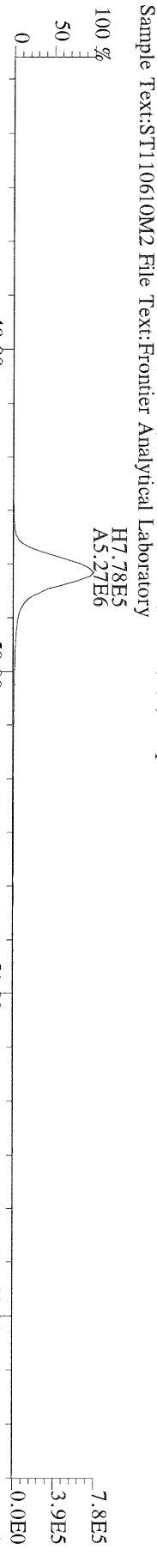
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Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory
100 %



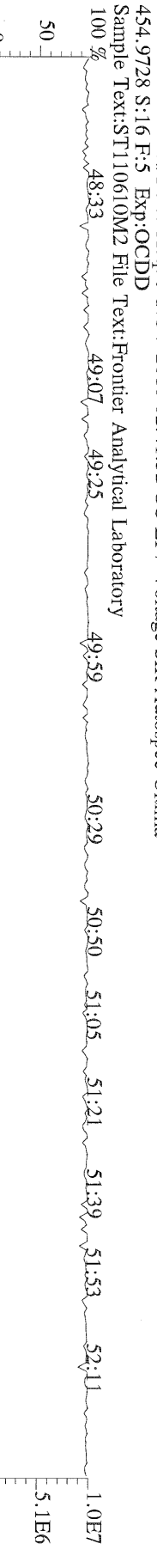
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469.7780 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory
100 %



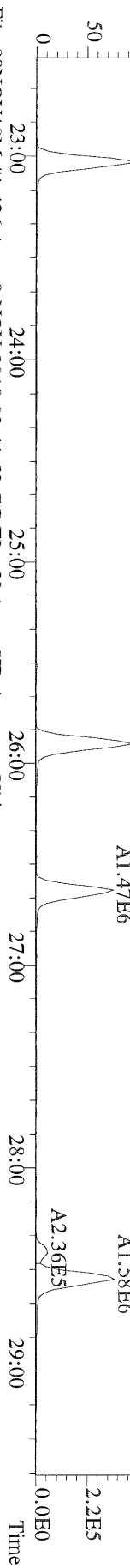
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471.7750 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory



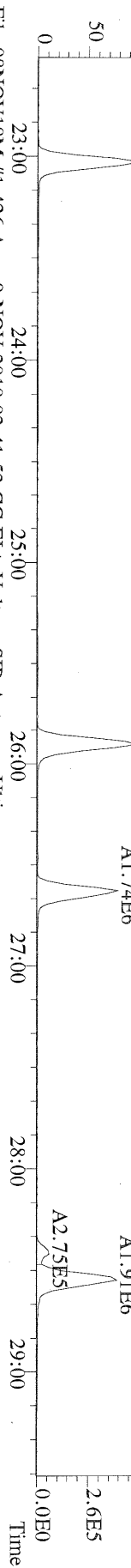
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454.9728 S:16 F:5 Exp:OCDD
Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory



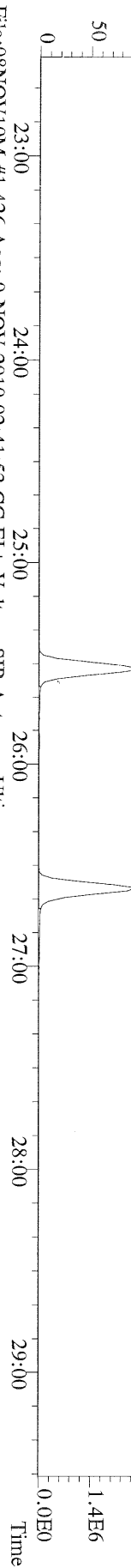
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303.9016 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
Sample Text:ST110610M2 File Text:Fronter Analytical Laboratory



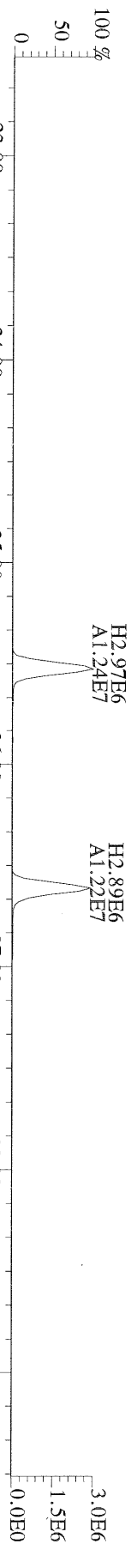
File:08NOV10M #1-426 Acq: 9-NOV-2010 02:41:52 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
Sample Text:ST110610M2 File Text:Fronter Analytical Laboratory



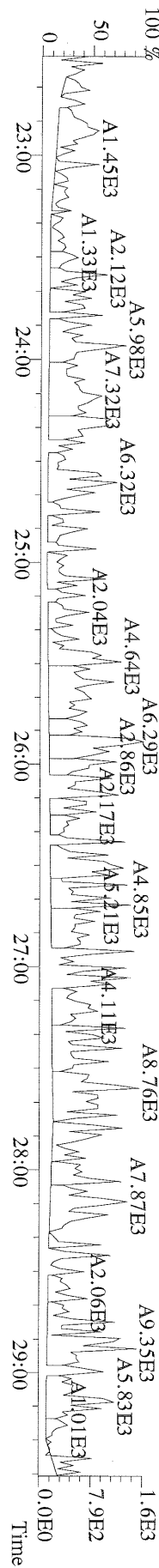
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315.9419 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
Sample Text:ST110610M2 File Text:Fronter Analytical Laboratory



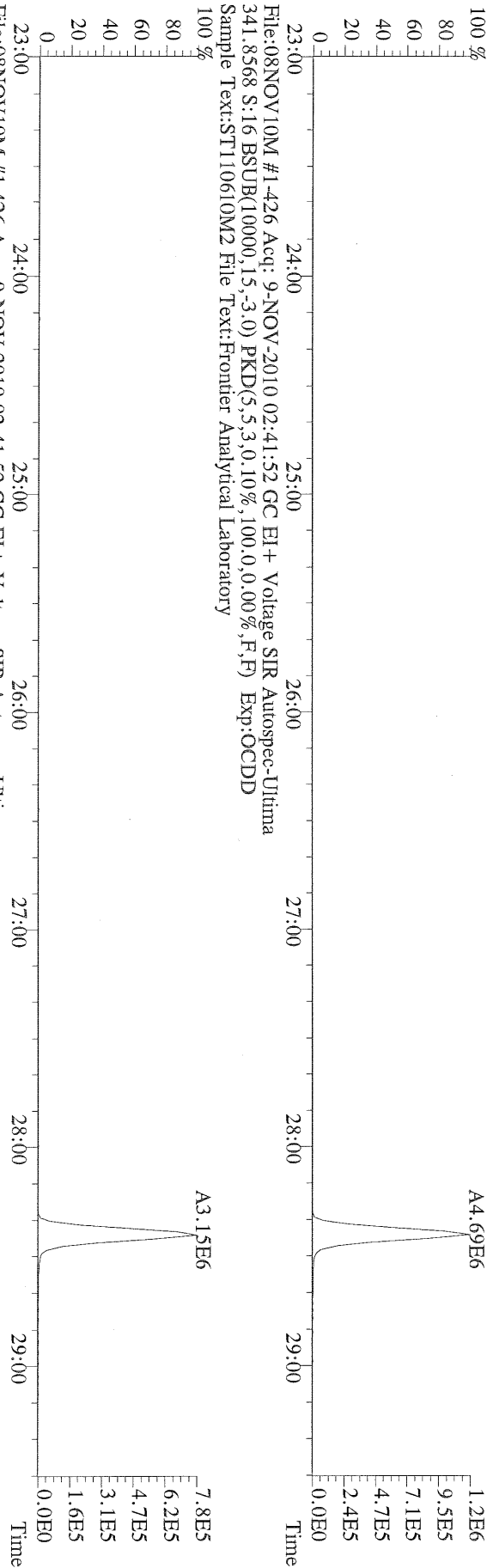
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317.9389 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
Sample Text:ST110610M2 File Text:Fronter Analytical Laboratory



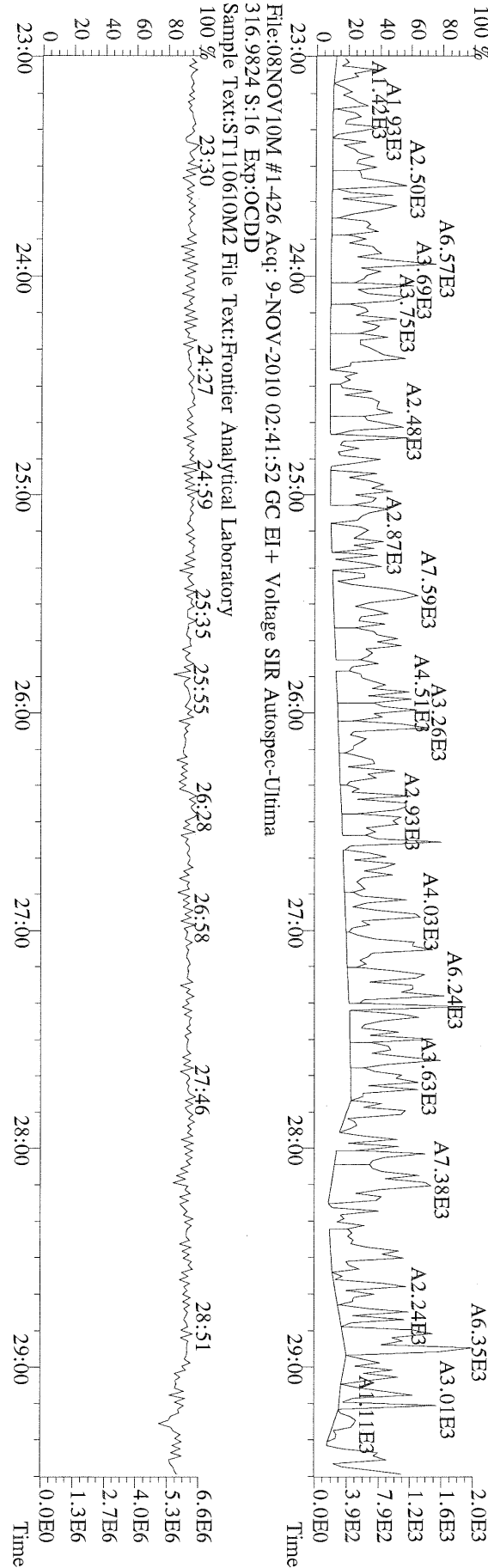
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375.8364 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
Sample Text:ST110610M2 File Text:Fronter Analytical Laboratory



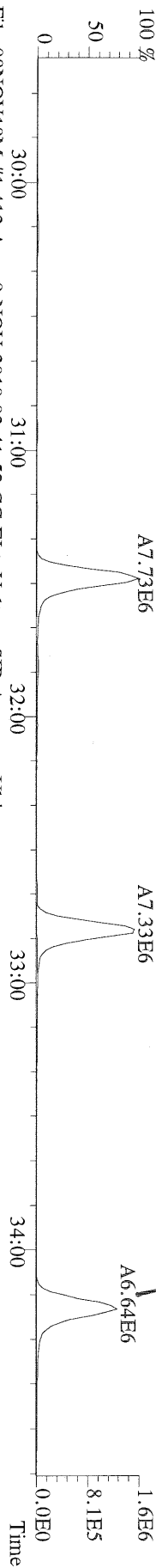
File:08NOV10M #1-426 Acq: 9-NOV-2010 02:41:52 GC EI + Voltage SIR Autospec-Ultima
 339.8597 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory



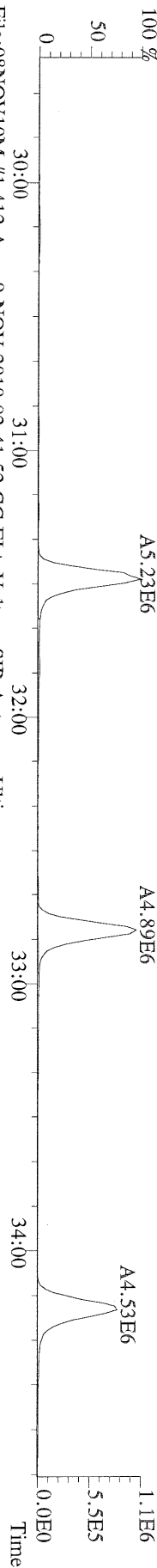
File:08NOV10M #1-426 Acq: 9-NOV-2010 02:41:52 GC EI + Voltage SIR Autospec-Ultima
 409.7974 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory



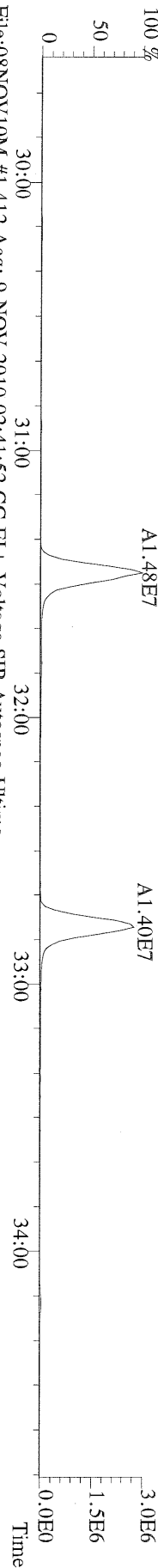
File:08NOV10M #1-412 Acq: 9-NOV-2010 02:41:52 GC EI + Voltage SIR Autospec-Ultima
 339.8597 S:16 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory



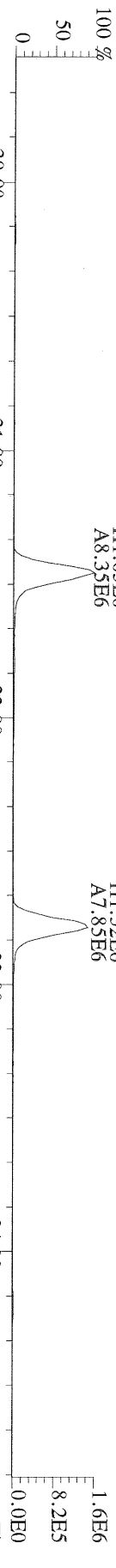
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 341.8568 S:16 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory



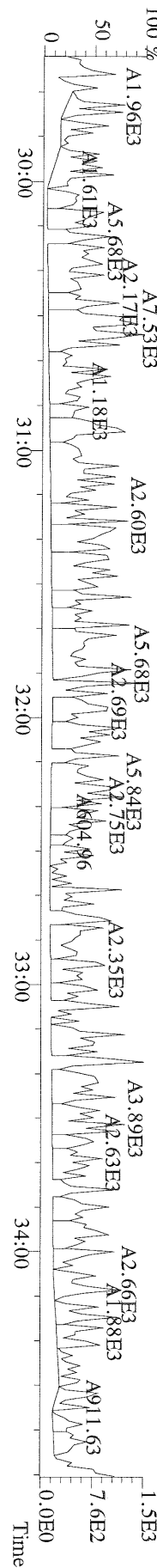
File:08NOV10M #1-412 Acq: 9-NOV-2010 02:41:52 GC EI + Voltage SIR Autospec-Ultima
 351.9000 S:16 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory



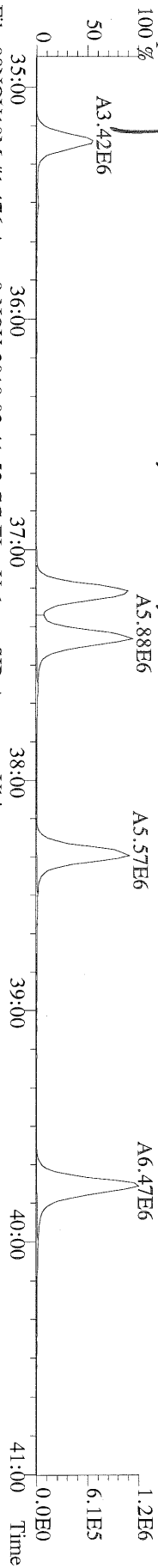
File:08NOV10M #1-412 Acq: 9-NOV-2010 02:41:52 GC EI + Voltage SIR Autospec-Ultima
 353.8970 S:16 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory



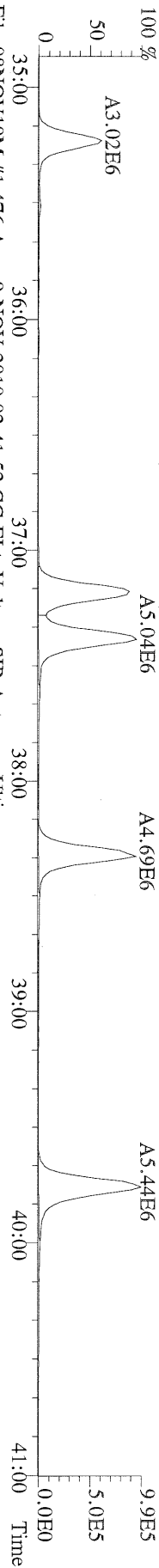
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 409.7974 S:16 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory



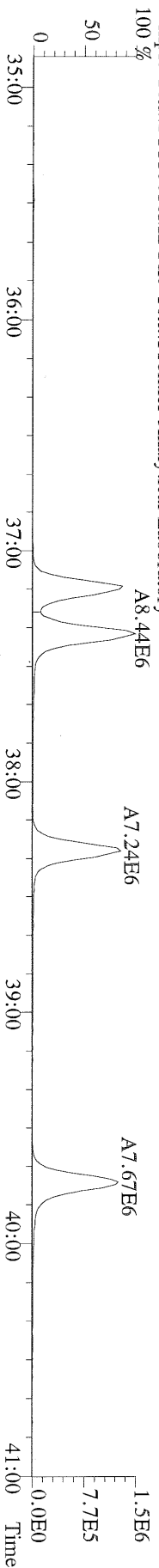
File:08NOV10M #1-476 Acq: 9-NOV-2010 02:41:52 GC EI + Voltage SIR Autospec-Ultima
 373.8207 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory



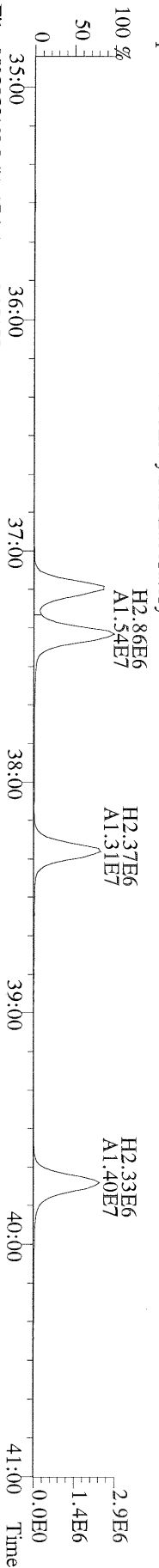
File:08NOV10M #1-476 Acq: 9-NOV-2010 02:41:52 GC EI + Voltage SIR Autospec-Ultima
 375.8178 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory



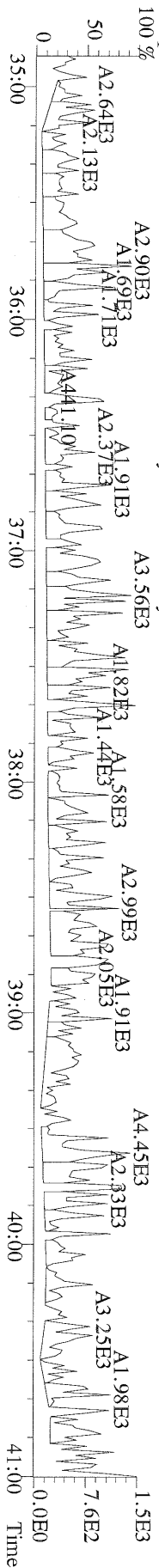
File:08NOV10M #1-476 Acq: 9-NOV-2010 02:41:52 GC EI + Voltage SIR Autospec-Ultima
 383.8639 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory



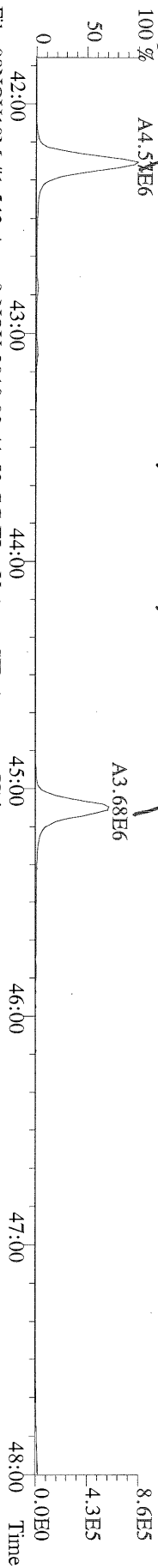
File:08NOV10M #1-476 Acq: 9-NOV-2010 02:41:52 GC EI + Voltage SIR Autospec-Ultima
 385.8610 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory



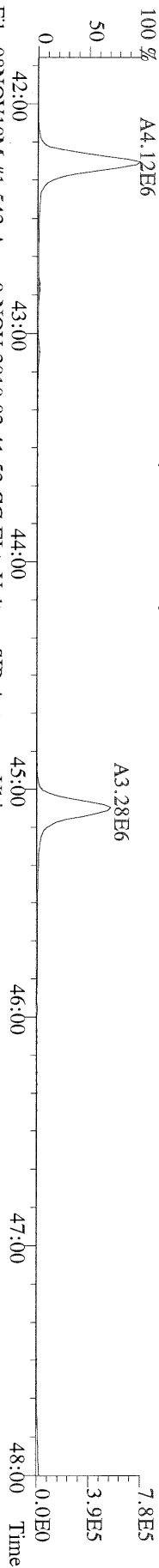
File:08NOV10M #1-476 Acq: 9-NOV-2010 02:41:52 GC EI + Voltage SIR Autospec-Ultima
 445.7555 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory



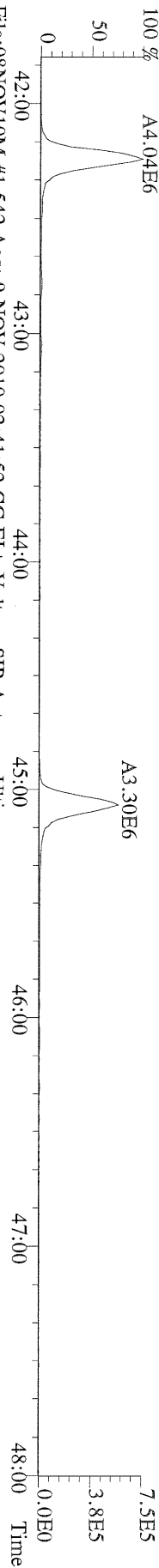
File:08NOV10M #1-542 Acq: 9-NOV-2010 02:41:52 GC EI+ Voltage SIR Autospec-Ultima
 407.7818 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory
 100 % A4.57E6



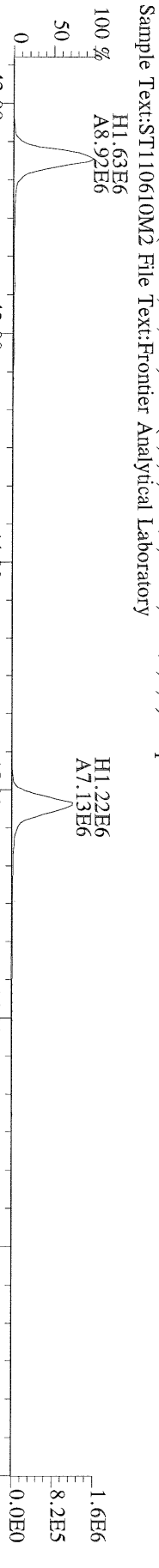
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 409.7788 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory
 100 % A4.12E6



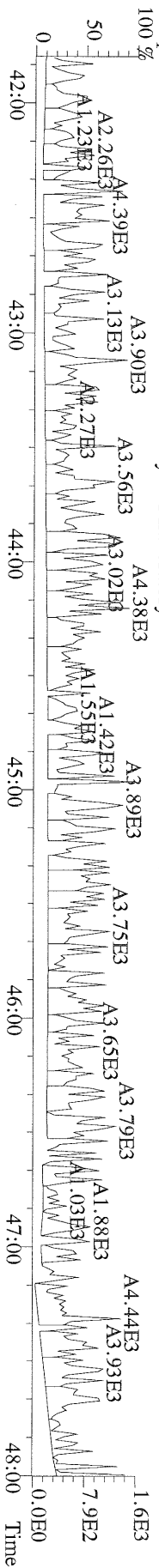
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 417.8253 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
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 100 % A4.04E6



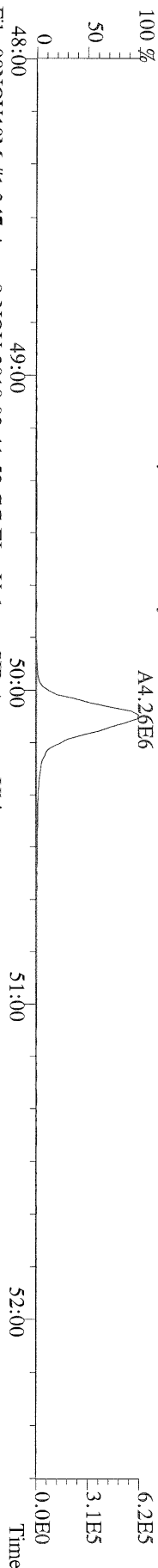
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 419.8220 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory



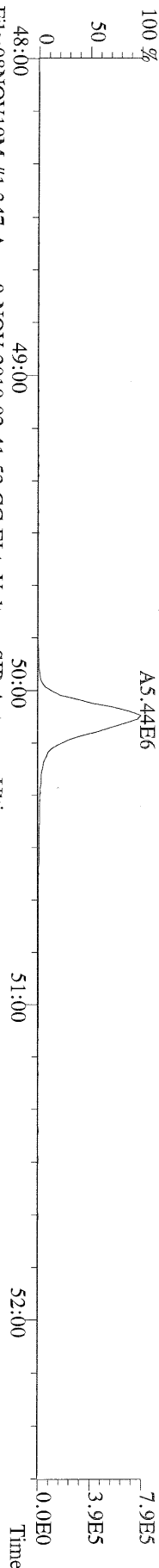
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 479.7165 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory



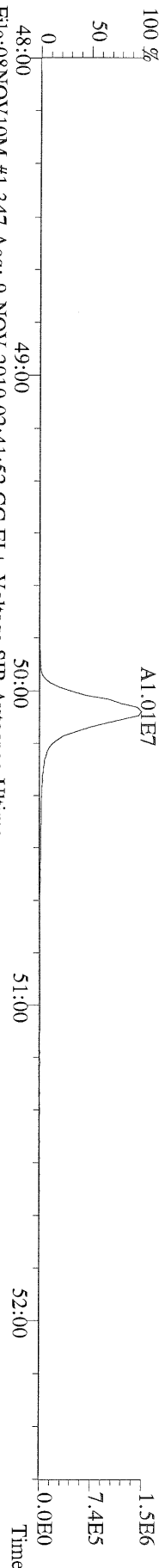
File:08NOV10M #1-347 Acq: 9-NOV-2010 02:41:52 GC EI + Voltage SIR Autospec-Ultima
441.7428 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory
100 %



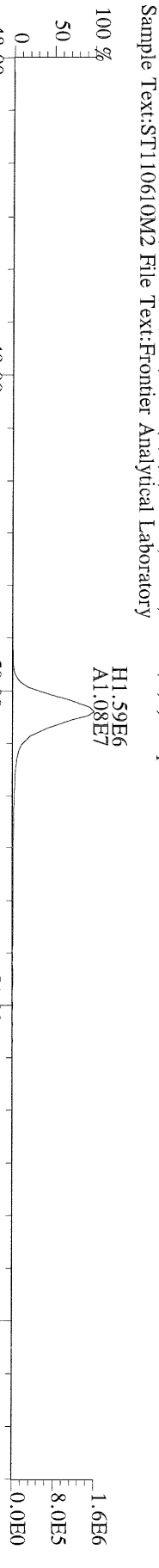
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443.7398 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory
100 %



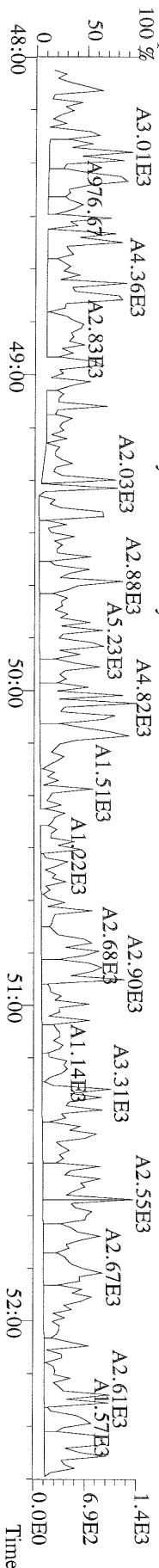
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453.7831 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory
100 %

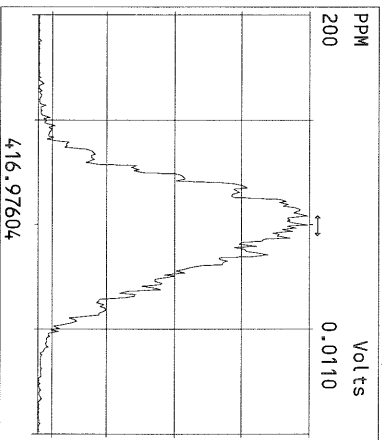
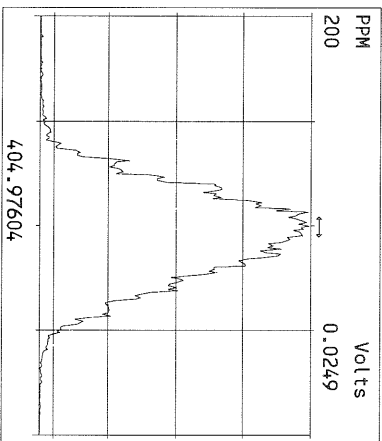
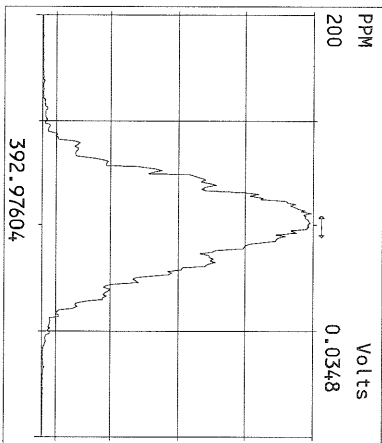
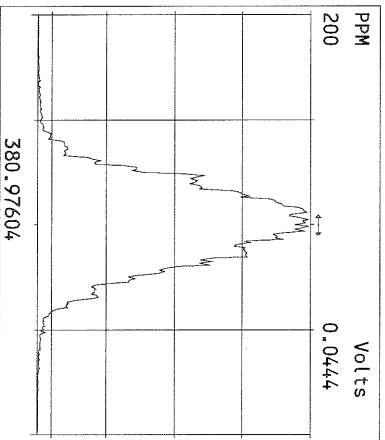
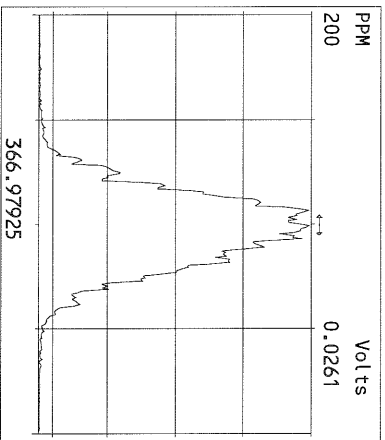
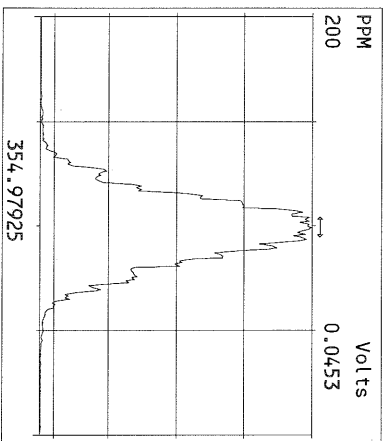
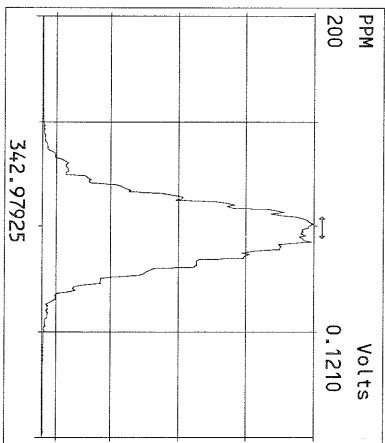
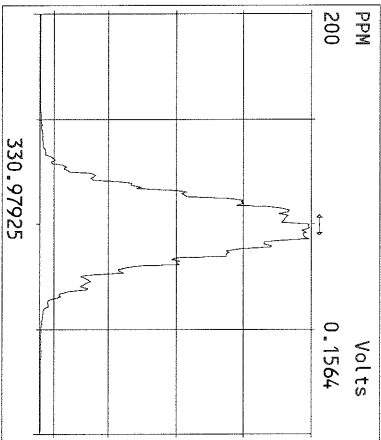
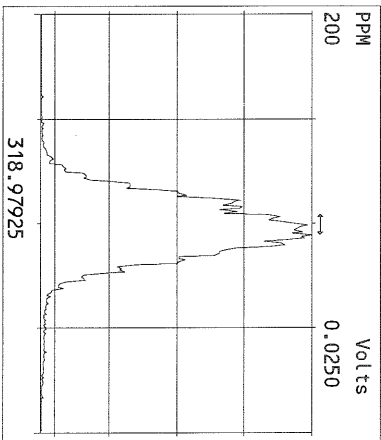
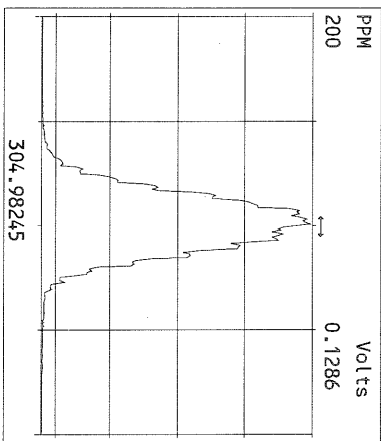
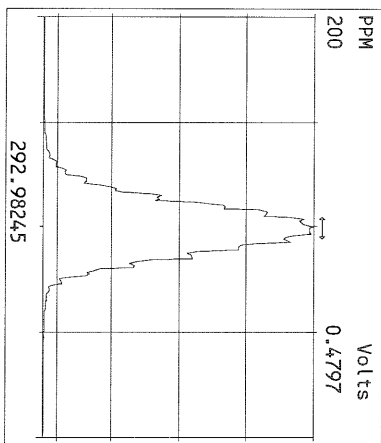


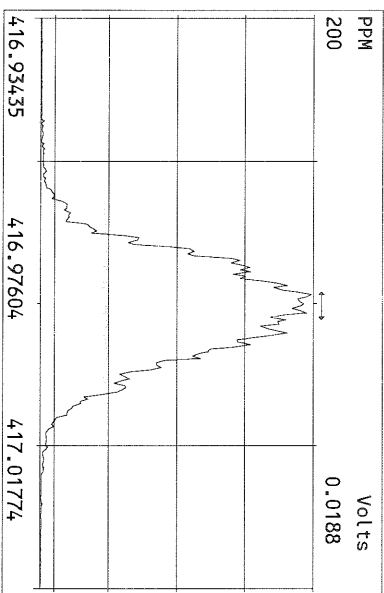
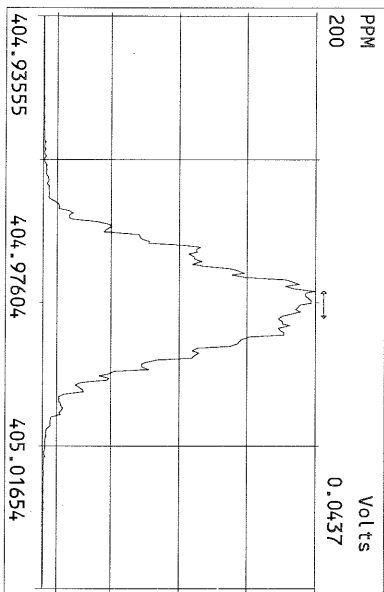
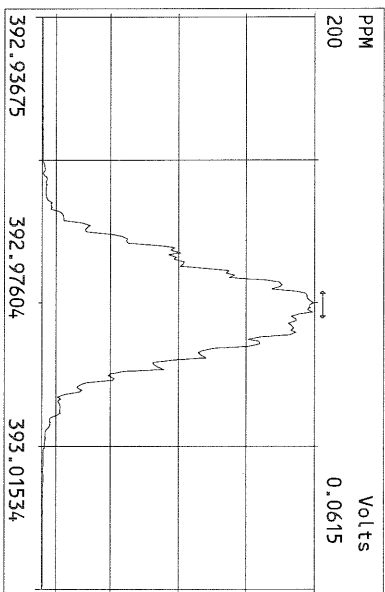
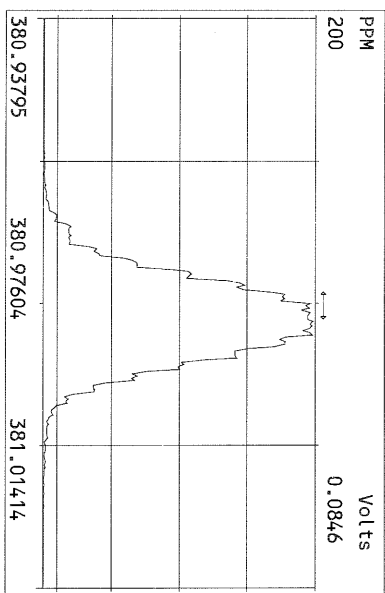
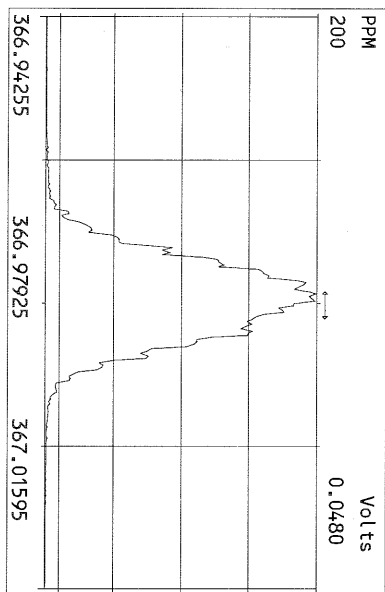
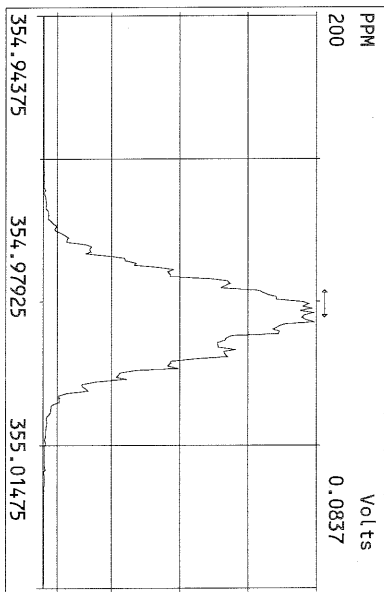
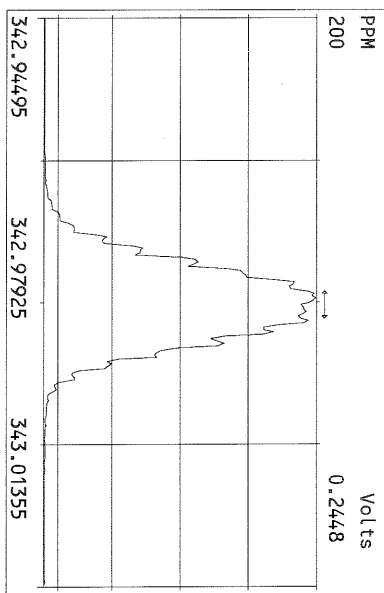
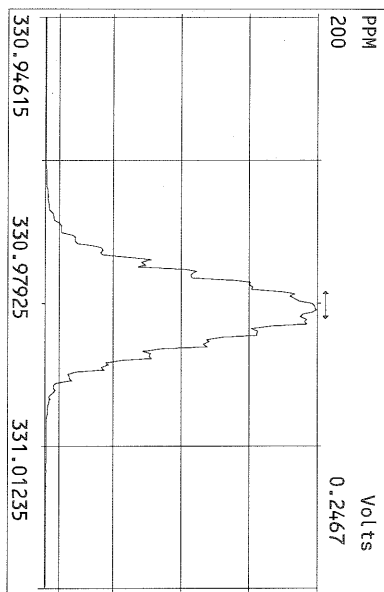
File:08NOV10M #1-347 Acq: 9-NOV-2010 02:41:52 GC EI + Voltage SIR Autospec-Ultima
455.7801 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory

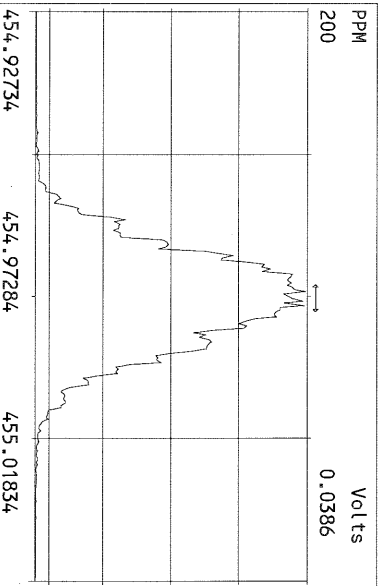
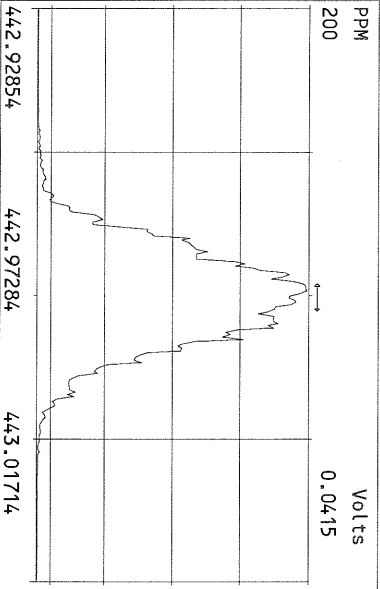
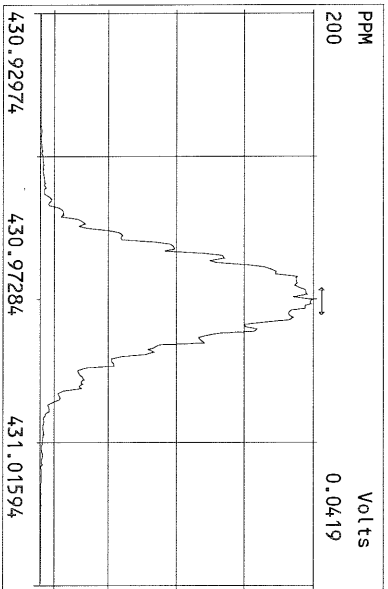
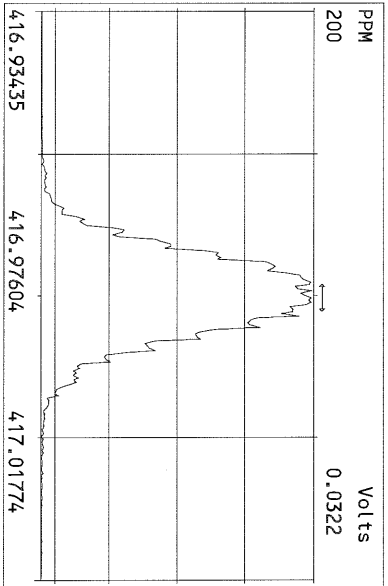
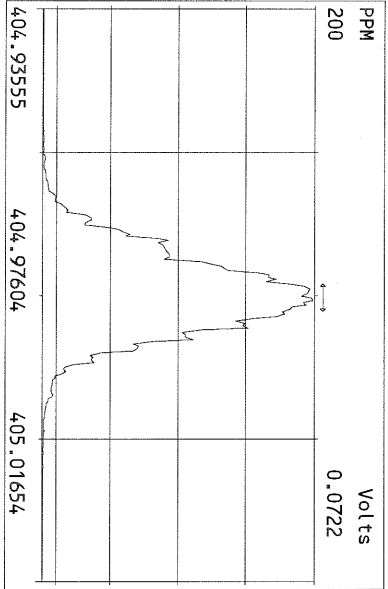
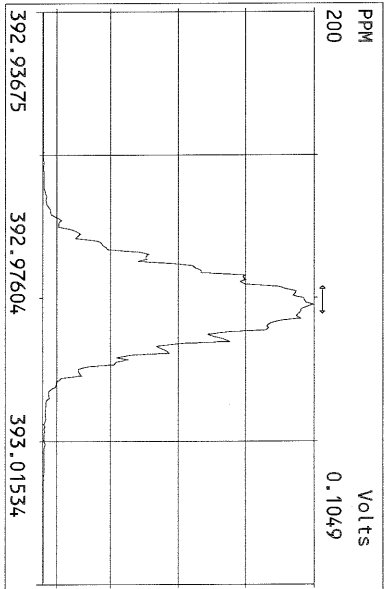
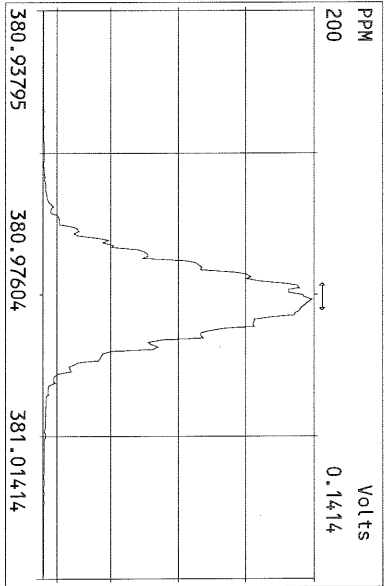
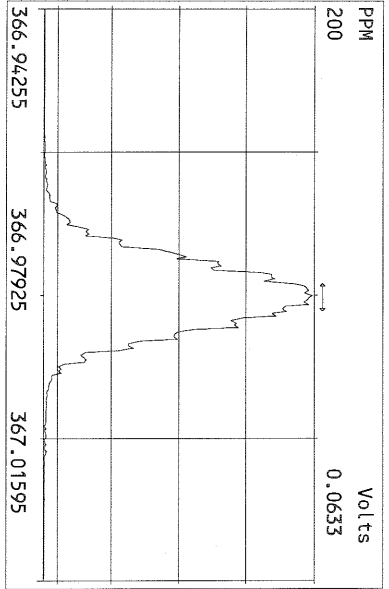


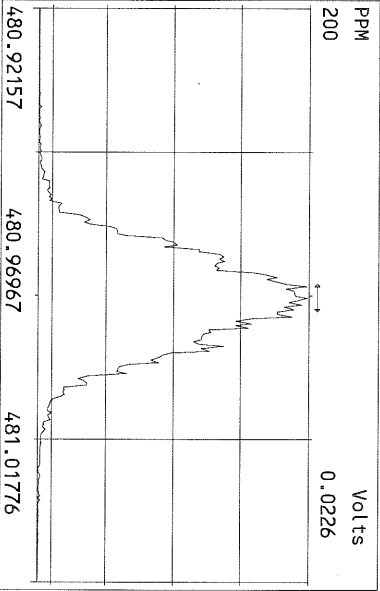
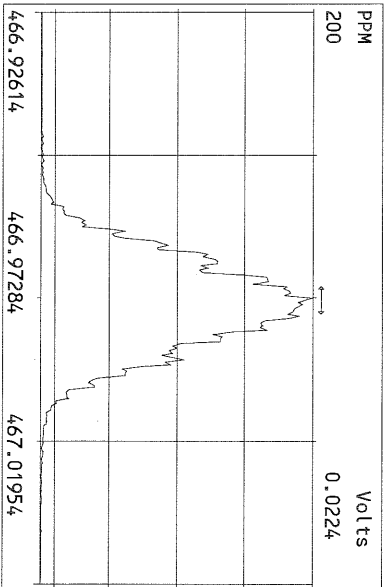
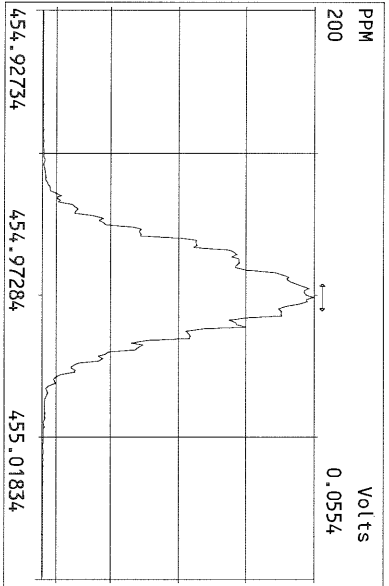
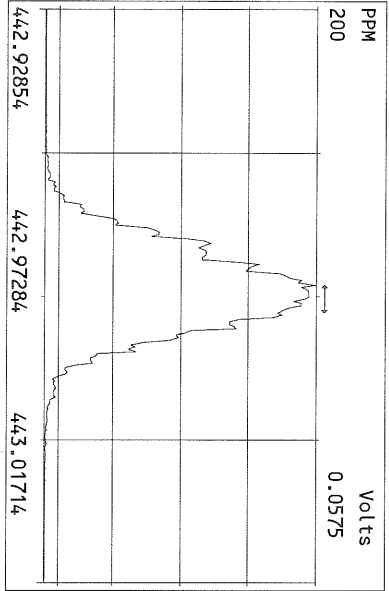
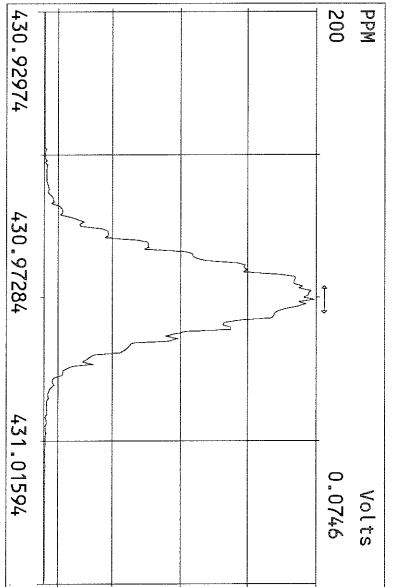
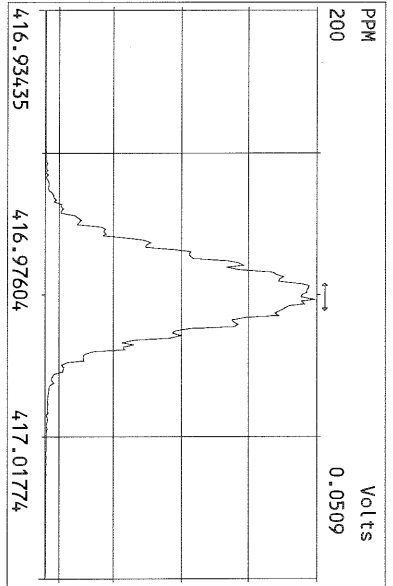
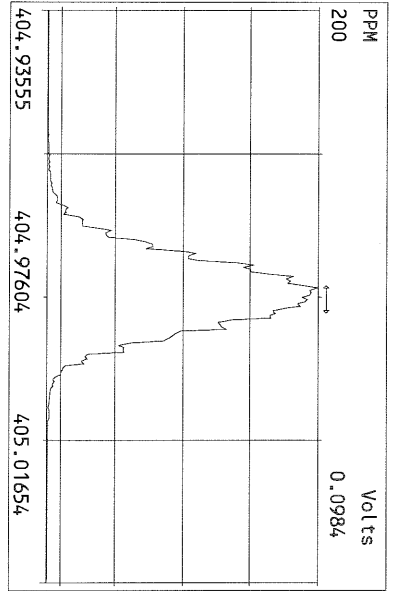
File:08NOV10M #1-347 Acq: 9-NOV-2010 02:41:52 GC EI + Voltage SIR Autospec-Ultima
513.6775 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST110610M2 File Text:Frontier Analytical Laboratory
100 %

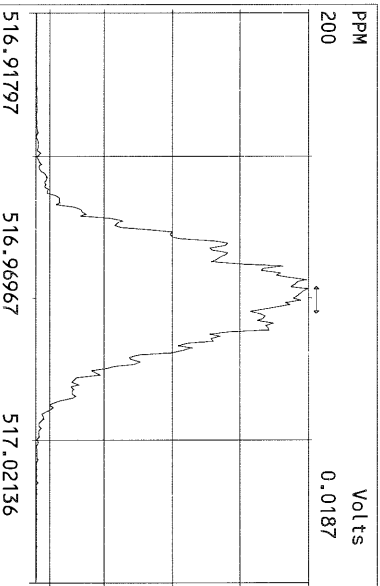
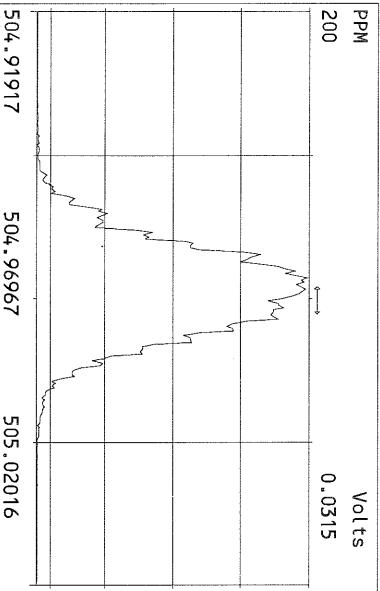
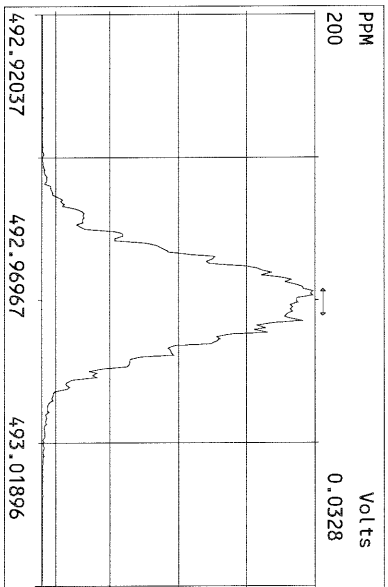
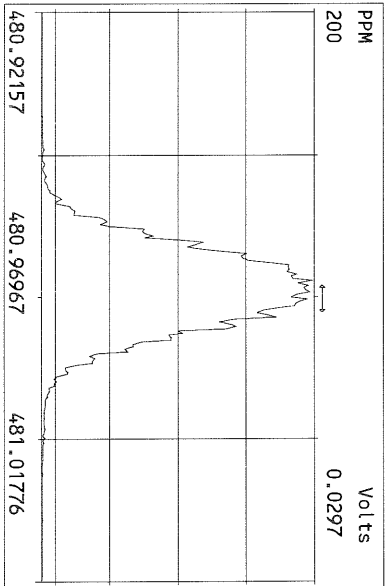
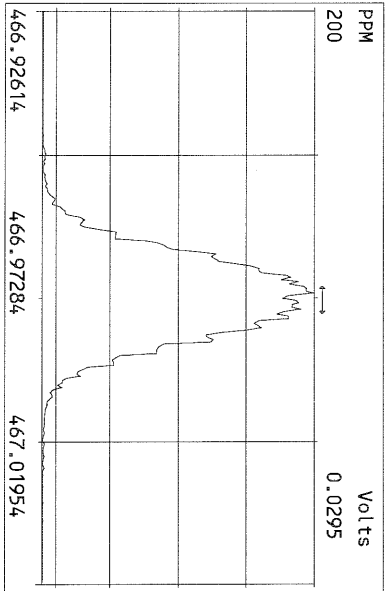
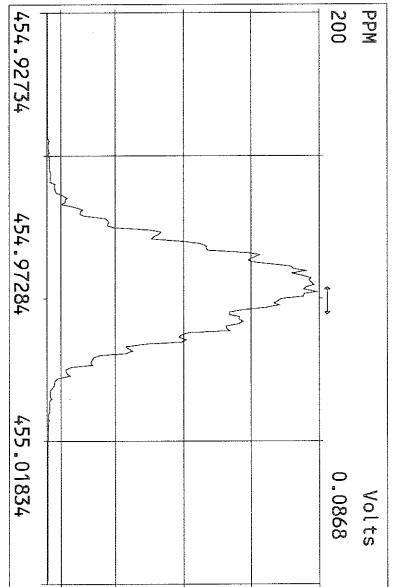
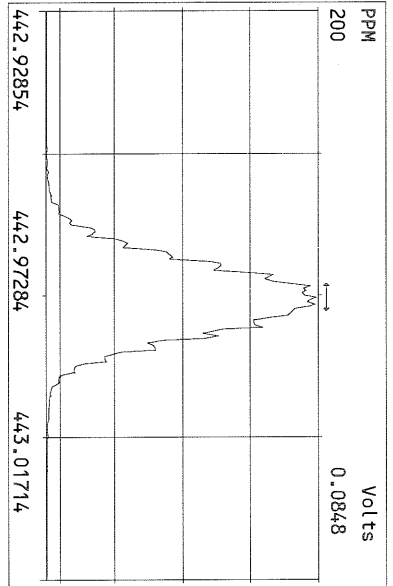
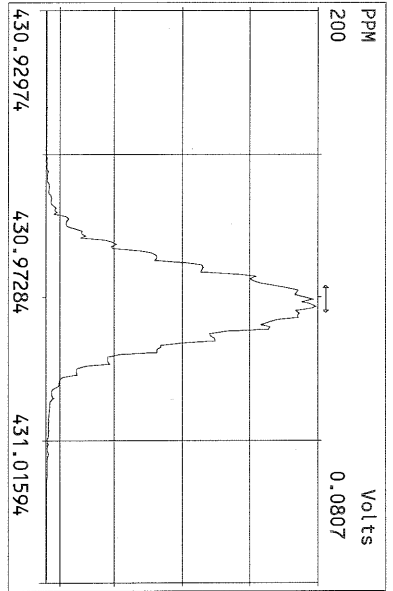












USEPA - ITD

FORM 4A

PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 8/23/10

Instrument ID: FAL3

GC Column ID: DB5

VER Data Filename: 09NOV10M Sam:1

Analysis Date: 9-NOV-10 13:44:28

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	y	10.8	7.80 - 12.9 ✓
1,2,3,7,8-PeCDD	M+2/M+4	1.71	1.32-1.78	y	50.6	39.0 - 65.0 ✓
1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	48.8	39.0 - 64.0 ✓
1,2,3,6,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	50.3	39.0 - 64.0 ✓
1,2,3,7,8,9-HxCDD	M+2/M+4	1.29	1.05-1.43	y	55.1	41.0 - 61.0 ✓
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	y	46.1	43.0 - 58.0 ✓
OCDD	M+2/M+4	0.94	0.76-1.02	y	102	79.0 - 126 ✓
2,3,7,8-TCDF	M/M+2	0.81	0.65-0.89	y	8.84	8.40 - 12.0 ✓
1,2,3,7,8-PeCDF	M+2/M+4	1.52	1.32-1.78	y	55.3	41.0 - 60.0 ✓
2,3,4,7,8-PeCDF	M+2/M+4	1.51	1.32-1.78	y	53.6	41.0 - 60.0 ✓
1,2,3,4,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	y	55.9	45.0 - 56.0 ✓
1,2,3,6,7,8-HxCDF	M+2/M+4	1.19	1.05-1.43	y	56.2	44.0 - 57.0 ✓
2,3,4,6,7,8-HxCDF	M+2/M+4	1.18	1.05-1.43	y	56.2	44.0 - 57.0 ✓
1,2,3,7,8,9-HxCDF	M+2/M+4	1.19	1.05-1.43	y	55.8	45.0 - 56.0 ✓
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.13	0.88-1.20	y	48.7	45.0 - 55.0 ✓
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.06	0.88-1.20	y	48.5	43.0 - 58.0 ✓
OCDF	M+2/M+4	0.87	0.76-1.02	y	115	63.0 - 159 ✓

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

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

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

Analyst: JDate: 11/10/10

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 8/23/10

Instrument ID: FAL3

GC Column ID: DB5

VER Data Filename: 09NOV10M Sam:1

Analysis Date: 9-NOV-10 13:44:28

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	y	102	82.0 - 121 ✓
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.72	1.32-1.78	y	117	62.0 - 160 ✓
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	91.5	85.0 - 117 ✓
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	87.7	85.0 - 118 ✓
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	y	103	72.0 - 138 ✓
13C-OCDD	M+2/M+4	0.91	0.76-1.02	y	232	96.0 - 415 ✓
13C-2,3,7,8-TCDF	M/M+2	0.87	0.65-0.89	y	103	71.0 - 140 ✓
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.75	1.32-1.78	y	117	76.0 - 130 ✓
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.78	1.32-1.78	y	118	77.0 - 130 ✓
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	82.9	76.0 - 131 ✓
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	77.1	70.0 - 143 ✓
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	78.4	73.0 - 137 ✓
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	87.0	74.0 - 135 ✓
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.47	0.37-0.51	y	98.0	78.0 - 129 ✓
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	y	122	77.0 - 129 ✓
13C-OCDF	M+2/M+4	0.95	0.76-1.02	y	225	96.0 - 415 ✓
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					10.1	7.80 - 12.8 ✓

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

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

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

(4) No ion abundance ratio; report concentration found.

Analyst: JDate: 11/10/10

FORM 5
PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Frontier Analytical Laboratory Episode No.:
Contract No.: SAS No.:
Instrument ID: FAL3 Initial Calibration Date: 8/23/10
RT Window Data Filename: 09NOV10M Sam:1 Analysis Date: 9-NOV-10 Time: 13:44:28
DB-5 IS Data Filename: 09NOV10M Sam:1 Analysis Date: 9-NOV-10 Time: 13:44:28
DB-225 IS Data Filename: Analysis Date: Time:

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:26 ✓	1,3,6,8-TCDF (F)	23:05 ✓
1,2,8,9-TCDD (L)	28:23 ✓	1,2,8,9-TCDF (L)	28:29 ✓
1,2,4,7,9-PeCDD (F)	30:18 ✓	1,3,4,6,8-PeCDF (F)	28:28 ✓
1,2,3,8,9-PeCDD (L)	33:52 ✓	1,2,3,8,9-PeCDF (L)	34:18 ✓
1,2,4,6,7,9-HxCDD (F)	36:12 ✓	1,2,3,4,6,8-HxCDF (F)	35:19 ✓
1,2,3,7,8,9-HxCDD (L)	39:16 ✓	1,2,3,7,8,9-HxCDF (L)	39:50 ✓
1,2,3,4,6,7,9-HpCDD (F)	42:53 ✓	1,2,3,4,6,7,8-HpCDF (F)	42:21 ✓
1,2,3,4,6,7,8-HpCDD (L)	44:15 ✓	1,2,3,4,7,8,9-HpCDF (L)	45:10 ✓

(F) = First eluting isomer (DB-5); (L) = Last eluting isomer (DB-5)

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT
BETWEEN
COMPARED PEAKS (1)

<25%

(1) To meet contract requirement, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst: 

Date: 11/10/10

PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Init. Cal. Date: 8/23/10

Instrument ID: FAL3

GC Column ID: DB5

Analysis Date: 9-NOV-10 13:44:28

CS3 or VER Data Filename: 09NOV10M


Sam:1

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001 ✓
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998-1.004 ✓
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019 ✓
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001 ✓
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005 ✓
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001 ✓
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001 ✓
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001 ✓
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001 ✓
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001 ✓
OCDD	13C-OCDD	1.001	0.999-1.001 ✓
OCDF	13C-OCDF	1.000	0.999-1.001 ✓

LABELED COMPOUNDS

13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.984	0.977-1.000 ✓
13C-1,2,3,6,7,8-HxCDD		0.989	0.981-1.003 ✓
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970 ✓
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975 ✓
13C-2,3,4,6,7,8-HxCDF		0.978	0.959-1.021 ✓
13C-1,2,3,7,8,9-HxCDF		1.015	0.977-1.047 ✓
13C-1,2,3,4,6,7,8-HpCDD		1.127	1.086-1.130 ✓
13C-1,2,3,4,6,7,8-HpCDF		1.079	1.043-1.085 ✓
13C-1,2,3,4,7,8,9-HpCDF		1.151	1.057-1.154 ✓
13C-OCDD		1.269	1.032-1.311 ✓
13C-OCDF		1.279	1.000-1.311 ✓

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

Analyst: Date: 11/10/10

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL	Rec
2,3,7,8-TCDD	3.11e+06	0.78 y	27:27	1.11	10.8		2.50	-	-	*	
1,2,3,7,8-PeCDD	1.37e+07	1.71 y	33:17	1.10	50.6		2.50	-	-	*	
1,2,3,4,7,8-HxCDD	1.60e+07	1.29 y	38:39	1.37	48.8		2.50	-	-	*	
1,2,3,6,7,8-HxCDD	1.49e+07	1.29 y	38:50	1.37	50.3		2.50	-	-	*	
1,2,3,7,8,9-HxCDD	1.70e+07	1.29 y	39:16	1.36	55.1		2.50	-	-	*	
1,2,3,4,6,7,8-HpCDD	1.43e+07	1.02 y	44:15	1.45	46.1		2.50	-	-	*	
OCDD	2.26e+07	0.94 y	49:50	1.43	102		2.50	-	-	*	
2,3,7,8-TCDF	5.83e+06	0.81 y	26:43	1.50	8.84		2.50	-	-	*	
1,2,3,7,8-PeCDF	2.18e+07	1.52 y	31:33	0.94	55.3		2.50	-	-	*	
2,3,4,7,8-PeCDF	2.06e+07	1.51 y	32:53	0.94	53.6		2.50	-	-	*	
1,2,3,4,7,8-HxCDF	1.93e+07	1.22 y	37:16	0.93	55.9		2.50	-	-	*	
1,2,3,6,7,8-HxCDF	2.19e+07	1.19 y	37:28	0.82	56.2		2.50	-	-	*	
2,3,4,6,7,8-HxCDF	1.98e+07	1.18 y	38:24	0.92	56.2		2.50	-	-	*	
1,2,3,7,8,9-HxCDF	2.39e+07	1.19 y	39:50	1.00	55.8		2.50	-	-	*	
1,2,3,4,6,7,8-HpCDF	1.79e+07	1.13 y	42:21	1.39	48.7		2.50	-	-	*	
1,2,3,4,7,8,9-HpCDF	1.57e+07	1.06 y	45:10	1.36	48.5		2.50	-	-	*	
OCDF	2.68e+07	0.87 y	50:12	0.79	115		2.50	-	-	*	
<hr/>											
13C-2,3,7,8-TCDD	2.60e+07	0.76 y	27:26	1.02	102						102
13C-1,2,3,7,8-PeCDD	2.45e+07	1.72 y	33:16	0.84	117						117
13C-1,2,3,4,7,8-HxCDD	2.39e+07	1.29 y	38:38	1.07	91.5						91.5
13C-1,2,3,6,7,8-HxCDD	2.16e+07	1.28 y	38:48	1.01	87.7						87.7
13C-1,2,3,4,6,7,8-HpCDD	2.13e+07	1.05 y	44:15	0.86	103						103
13C-OCDD	3.08e+07	0.91 y	49:48	0.55	232						116
13C-2,3,7,8-TCDF	4.39e+07	0.87 y	26:42	0.99	103						103
13C-1,2,3,7,8-PeCDF	4.17e+07	1.75 y	31:32	0.84	117						117
13C-2,3,4,7,8-PeCDF	4.10e+07	1.78 y	32:51	0.81	118						118
13C-1,2,3,4,7,8-HxCDF	3.73e+07	0.53 y	37:15	1.85	82.9						82.9
13C-1,2,3,6,7,8-HxCDF	4.75e+07	0.52 y	37:27	2.54	77.1						77.1
13C-2,3,4,6,7,8-HxCDF	3.84e+07	0.51 y	38:23	2.01	78.4						78.4
13C-1,2,3,7,8,9-HxCDF	4.29e+07	0.51 y	39:50	2.03	87.0						87.0
13C-1,2,3,4,6,7,8-HpCDF	2.64e+07	0.47 y	42:20	1.11	98.0						98.0
13C-1,2,3,4,7,8,9-HpCDF	2.39e+07	0.45 y	45:10	0.80	122						122
13C-OCDF	5.91e+07	0.95 y	50:11	1.08	225						112
37Cl-2,3,7,8-TCDD	1.73e+06		27:27	0.69	10.1						101
13C-1,2,3,4-TCDD	2.50e+07	0.75 y	26:51	-	55.6						
13C-1,2,3,4-TCDF	4.27e+07	0.84 y	25:35	-	59.0						
13C-1,2,3,7,8,9-HxCDD	2.43e+07	1.27 y	39:15	-	88.1						
<hr/>											
Total Tetra-Dioxins	1.66e+07		23:22	1.11	57.5		2.50	-	-	*	22
Total Penta-Dioxins	2.93e+07		30:18	1.10	109		2.50	-	-	*	13
Total Hexa-Dioxins	5.39e+07		36:12	1.37	173		2.50	-	-	*	11
Total Hepta-Dioxins	3.03e+07		42:53	1.45	97.9		2.50	-	-	*	8
Total Tetra-Furans	2.72e+07		23:05	1.50	41.3		2.50	-	-	*	26
1st Fn. Tot Penta-Furans	1.88e+07		28:28	0.94	48.5		2.50	-	-	*	PeCDF 2
Total Penta-Furans	6.27e+07		30:14	0.94	161		2.50	-	-	*	210 14
Total Hexa-Furans	9.69e+07		35:19	0.91	256		2.50	-	-	*	8
Total Hepta-Furans	3.39e+07		42:21	1.38	98.1		2.50	-	-	*	4

Analyst:

Date: 11/10/10

Frontier Analytical Laboratory - Acquisition Log

Run Name:09NOV10M

Instrument: FAL3

GC: DB5

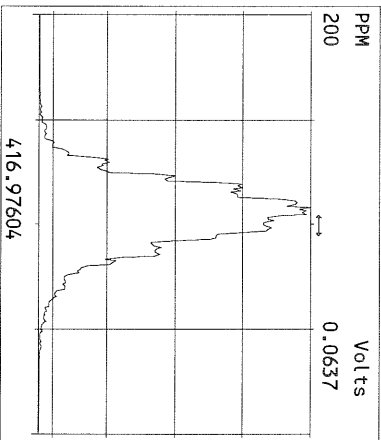
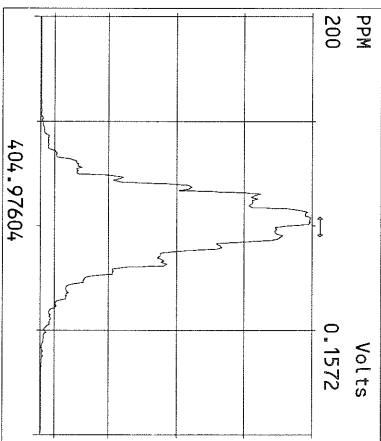
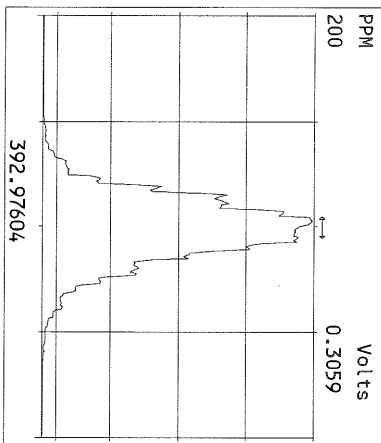
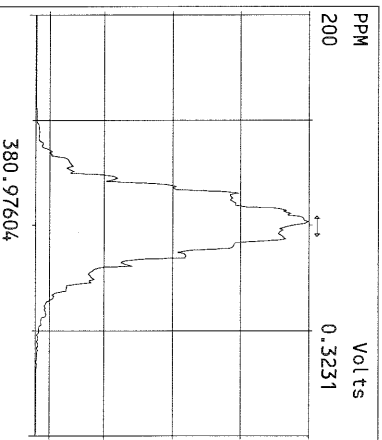
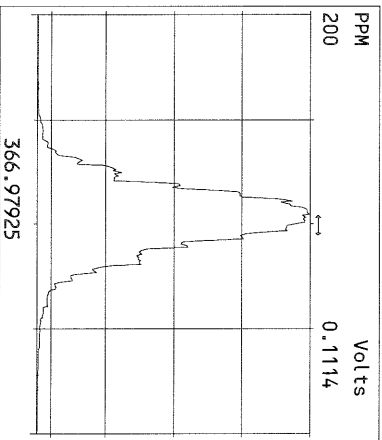
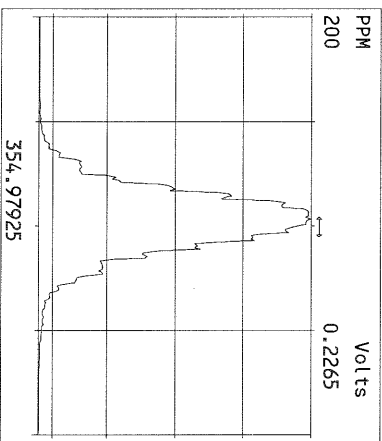
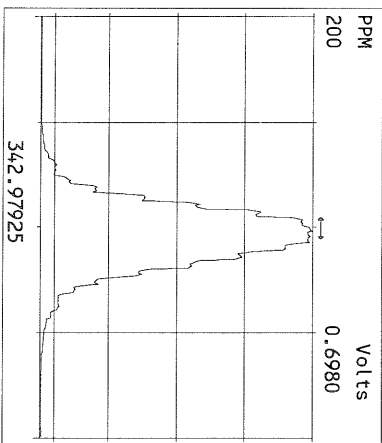
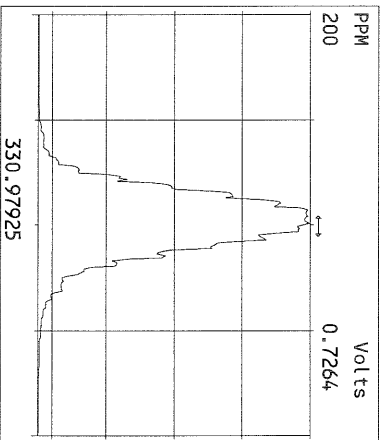
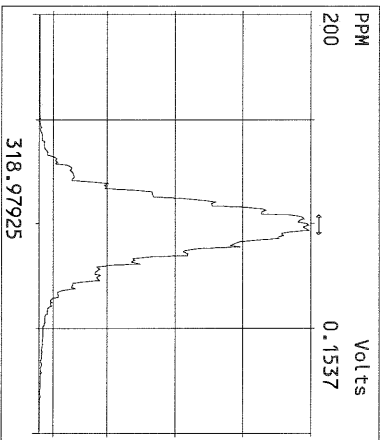
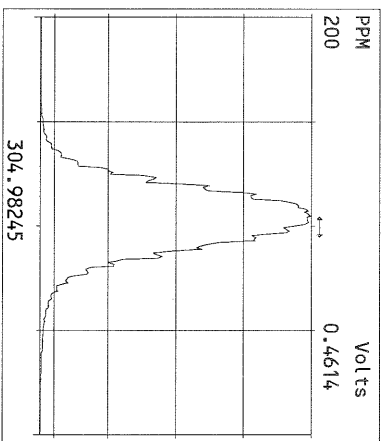
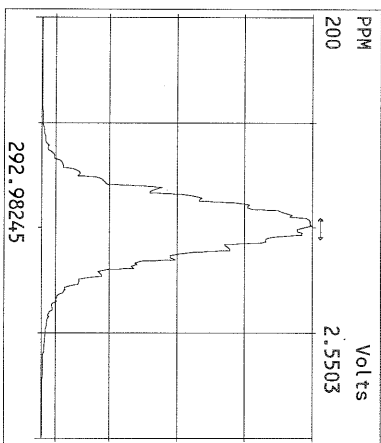
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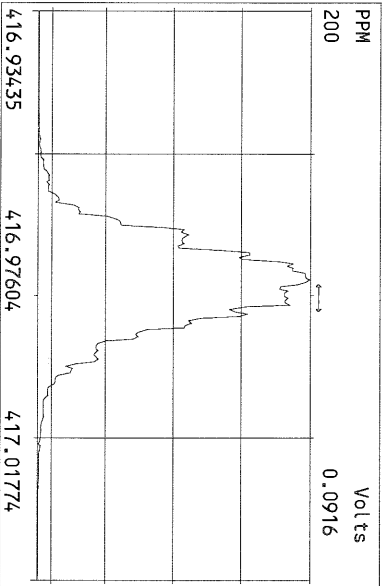
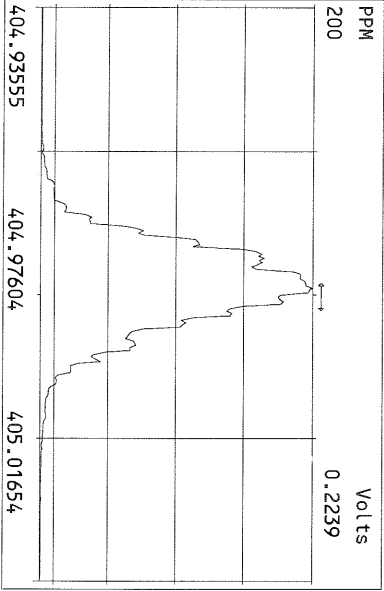
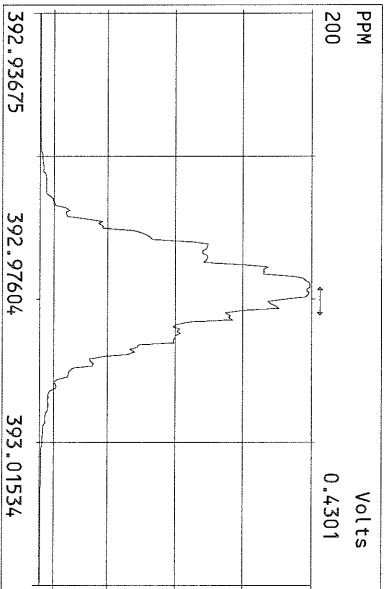
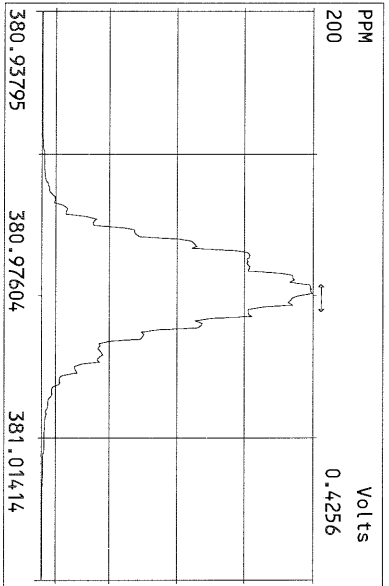
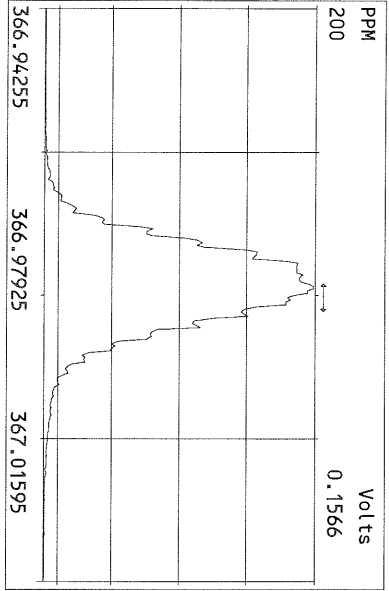
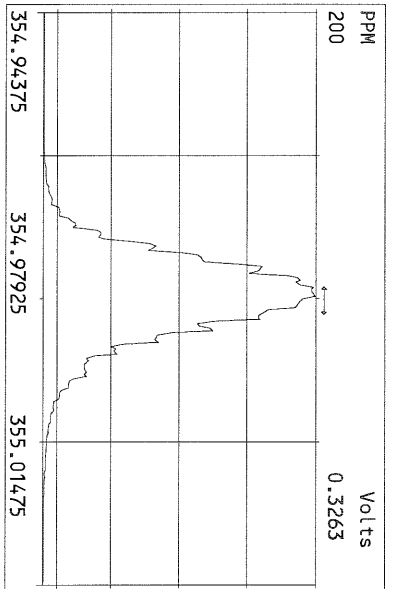
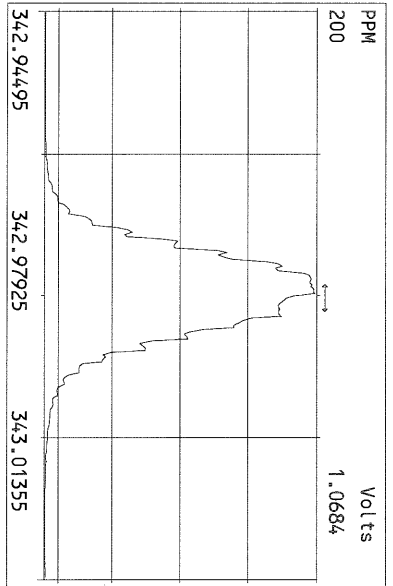
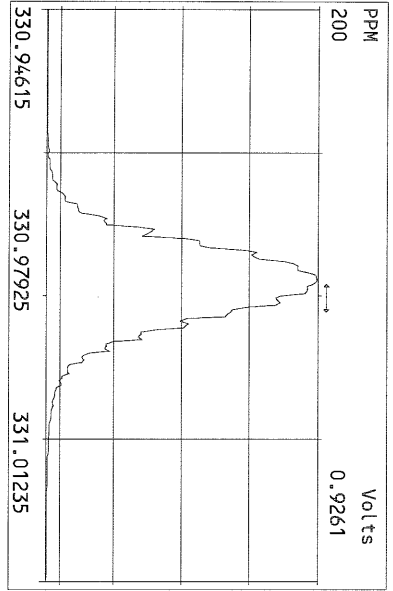
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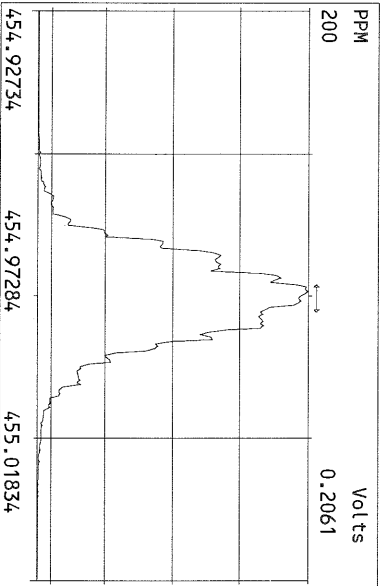
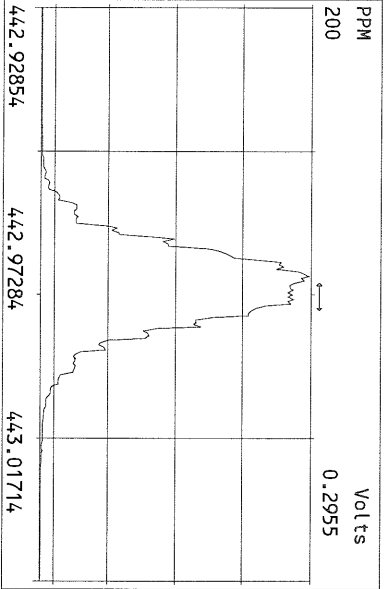
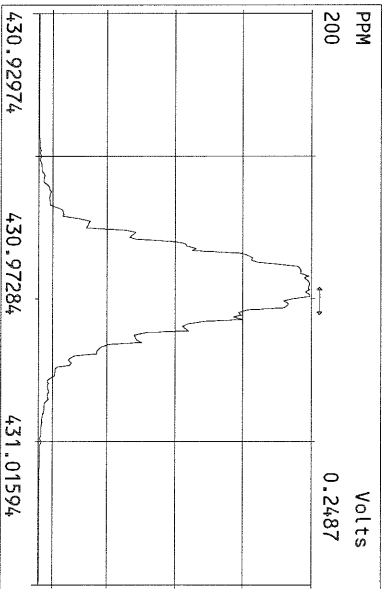
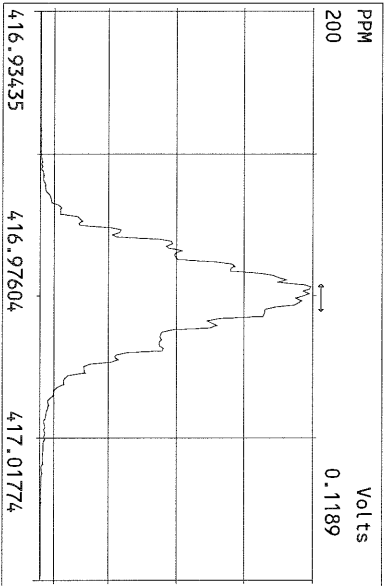
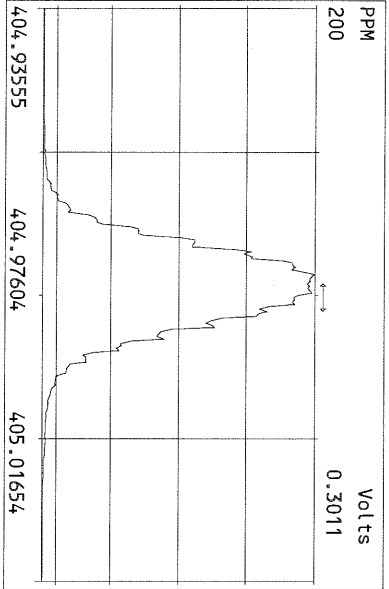
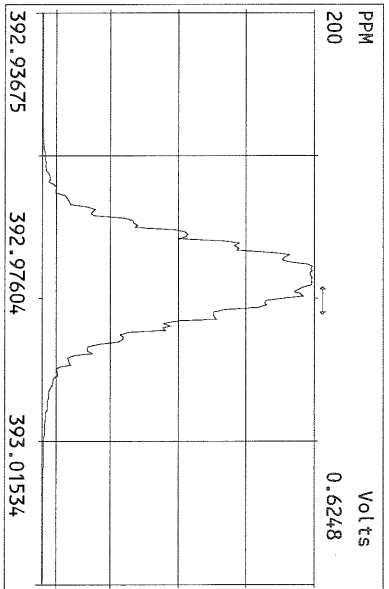
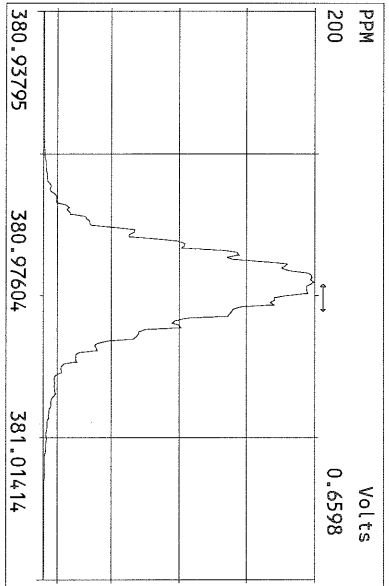
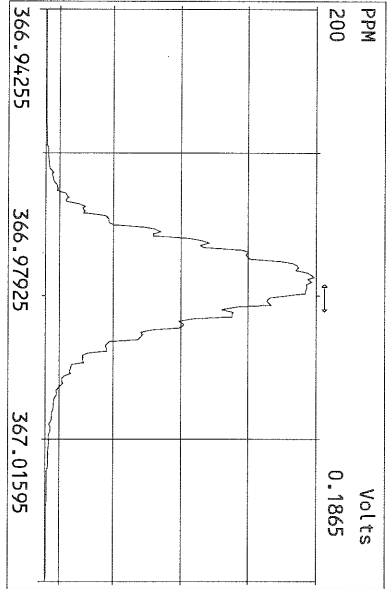
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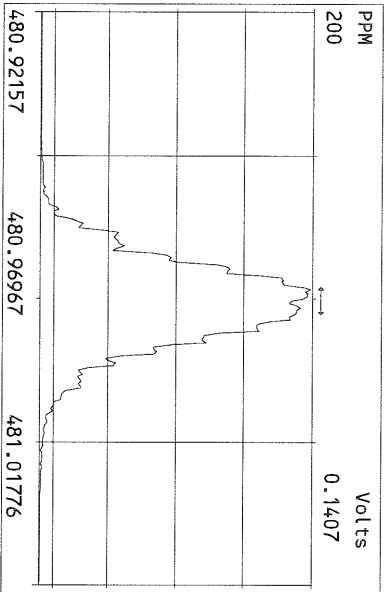
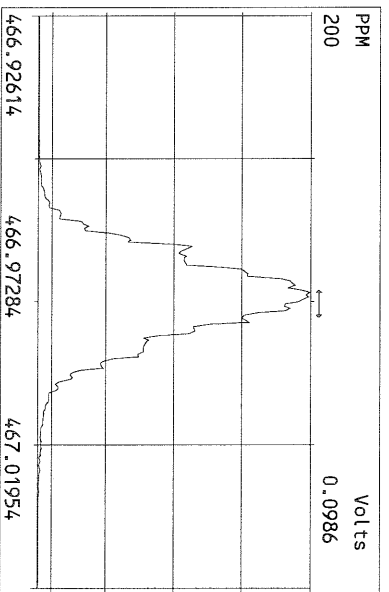
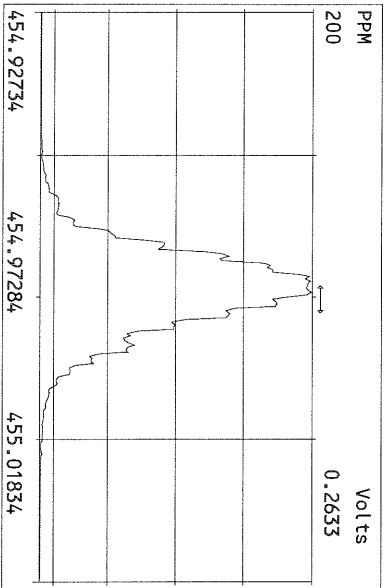
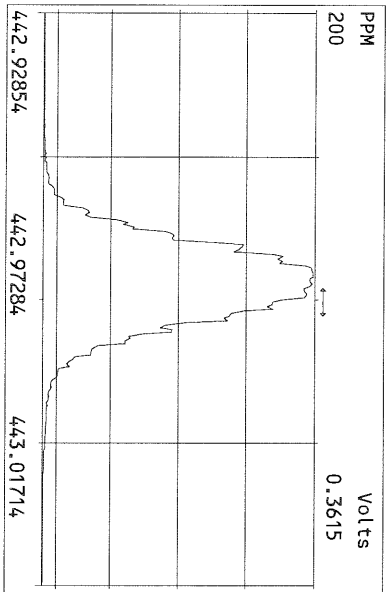
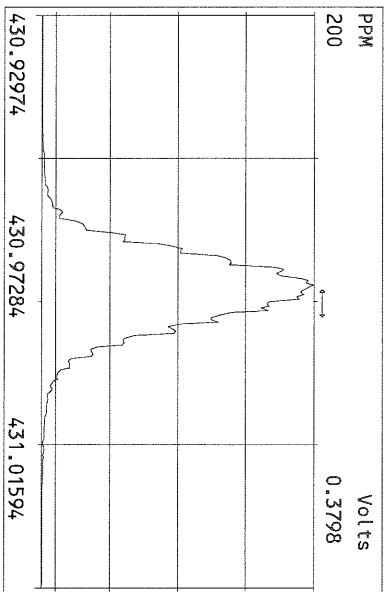
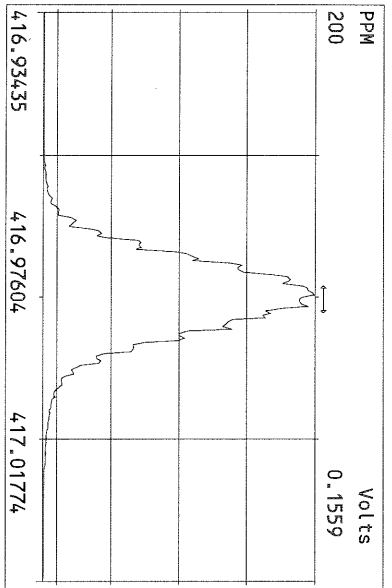
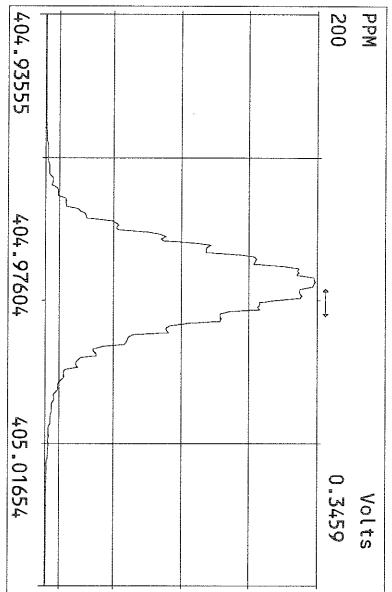
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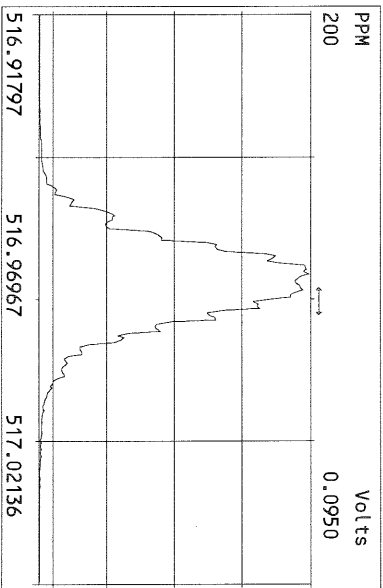
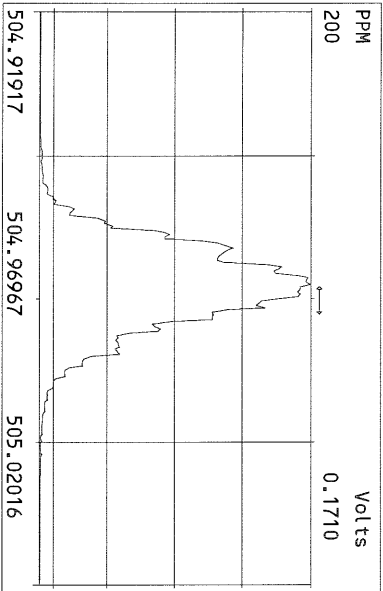
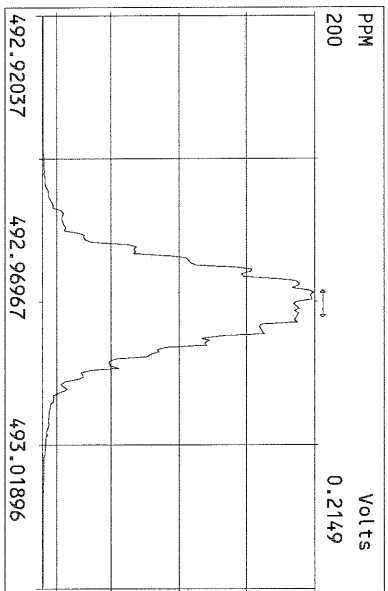
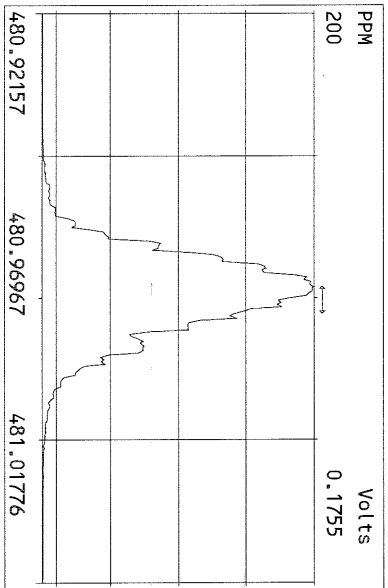
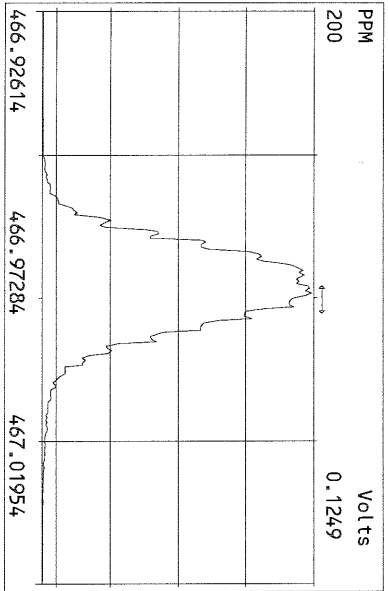
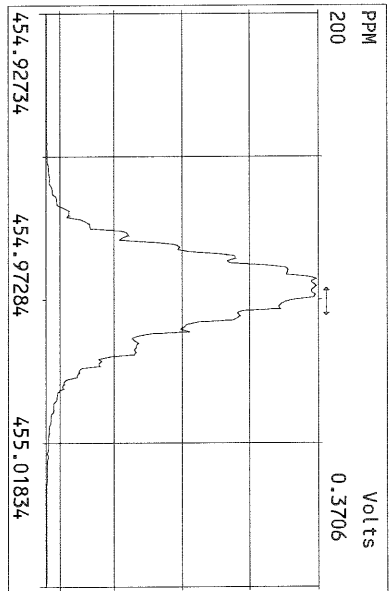
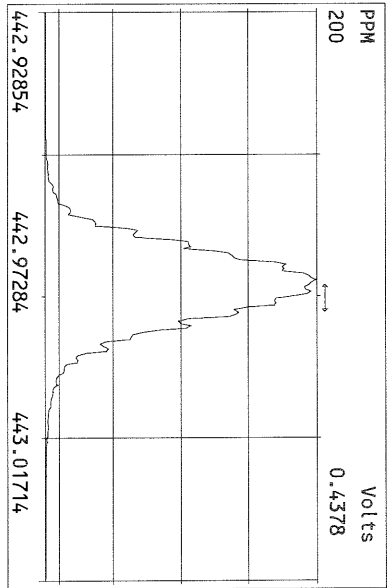
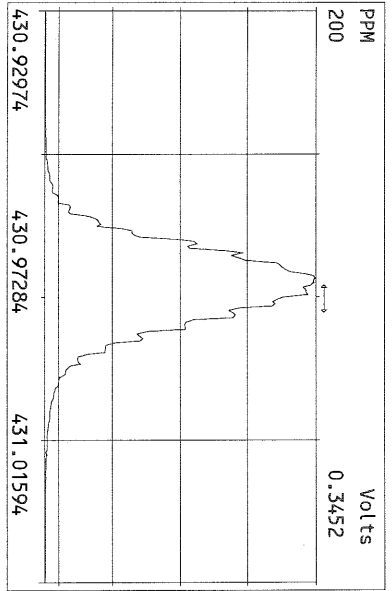
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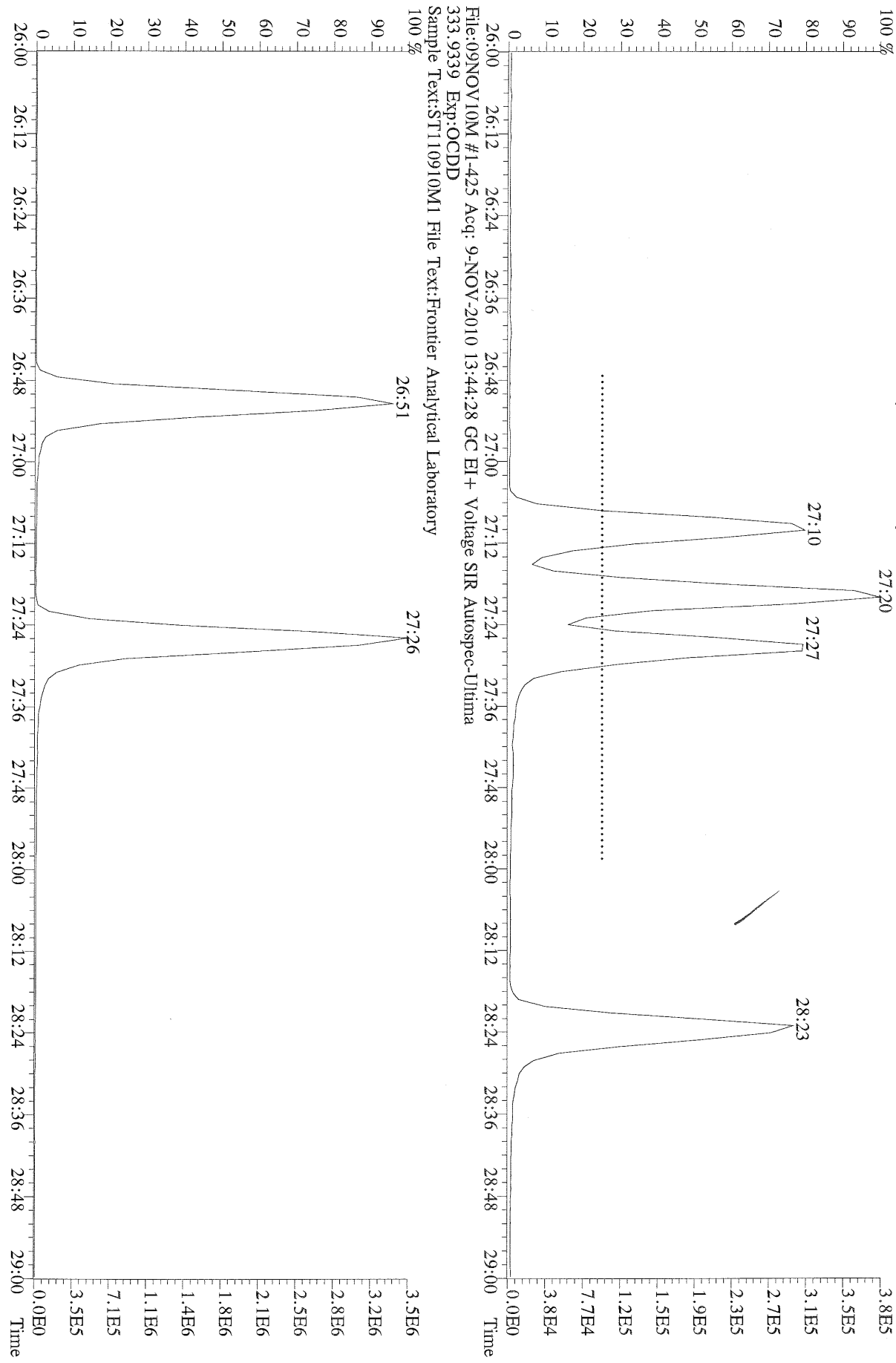




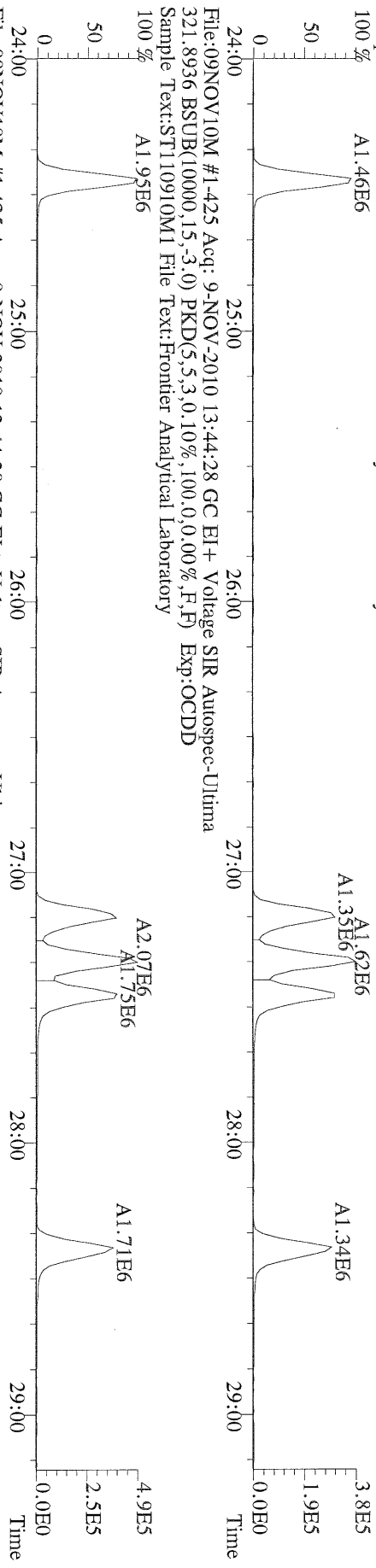




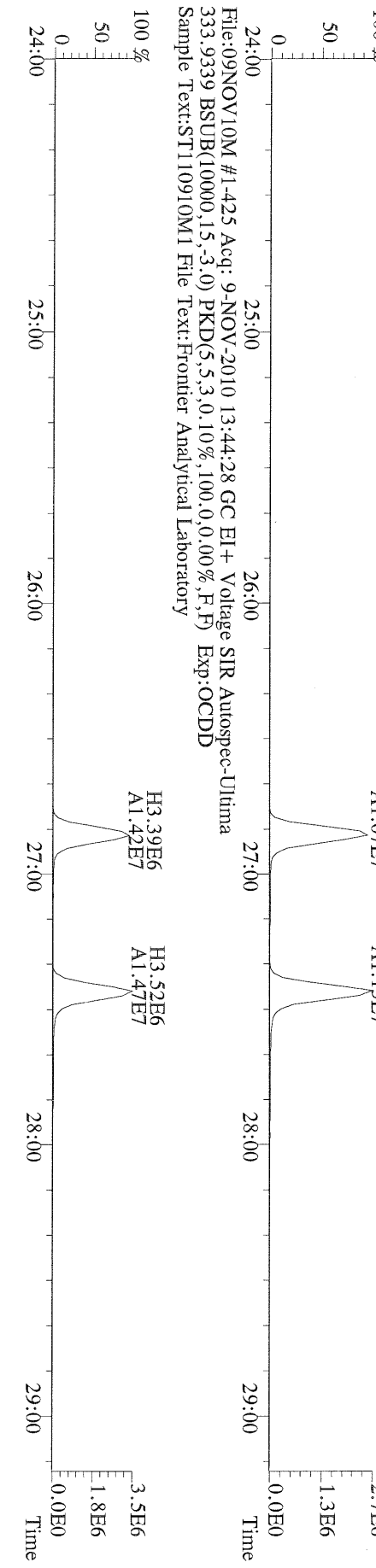
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319.8965 Exp: OCDD
Sample Text: ST110910M1 File Text: Frontier Analytical Laboratory



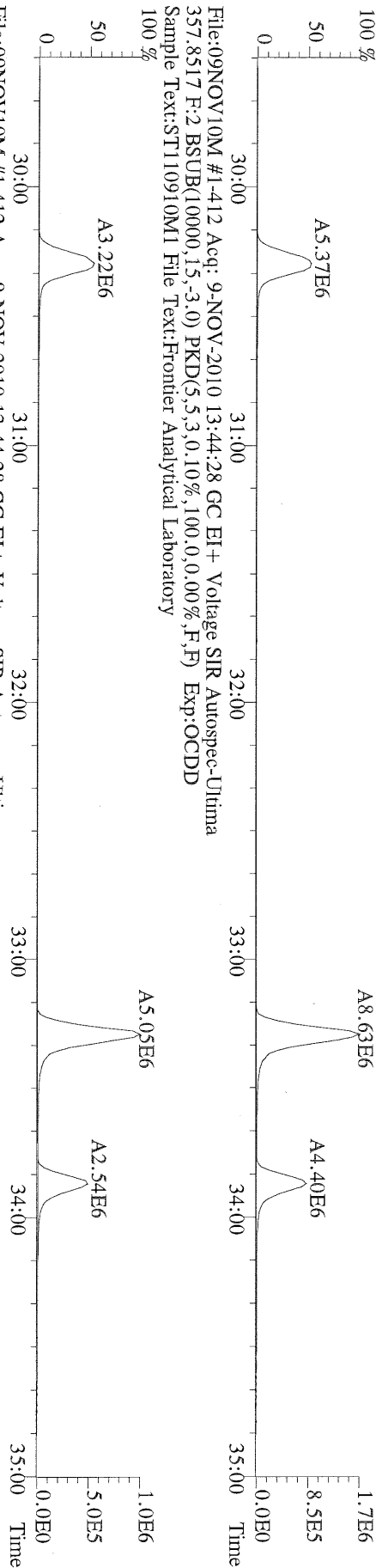
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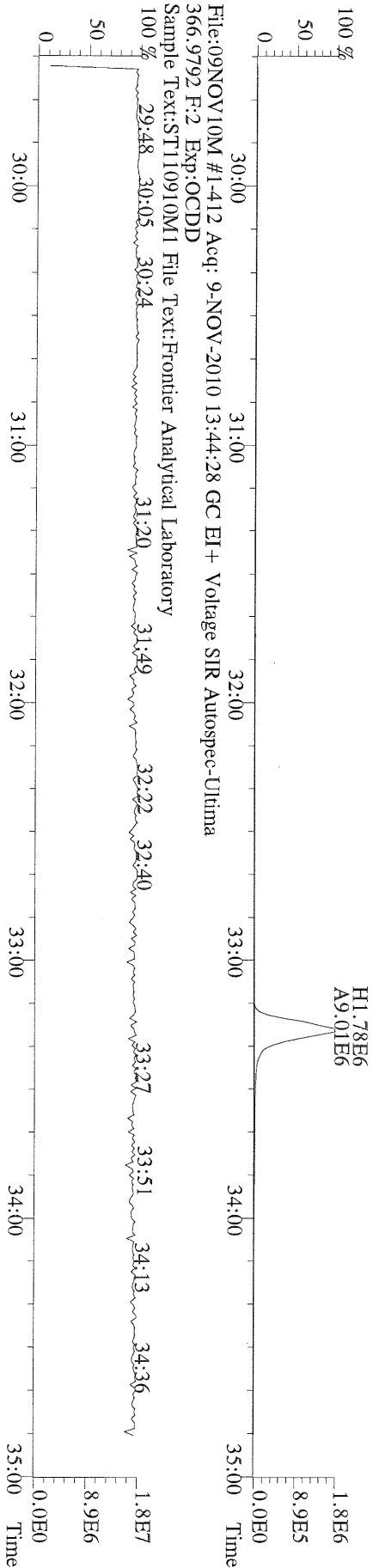
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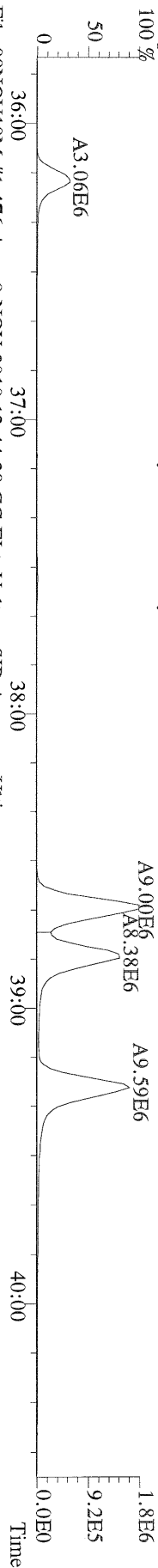
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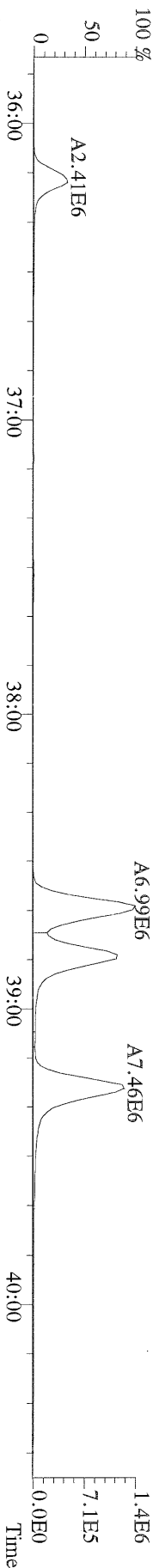
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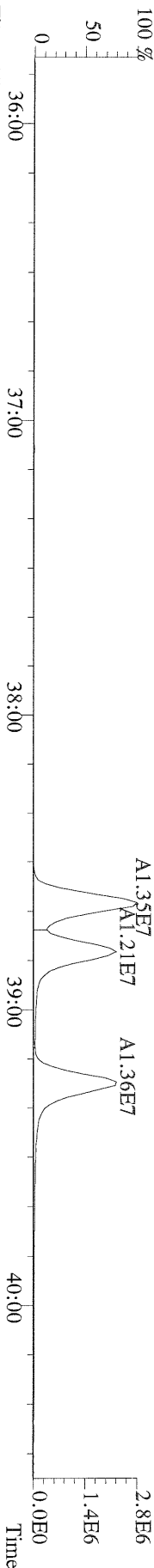
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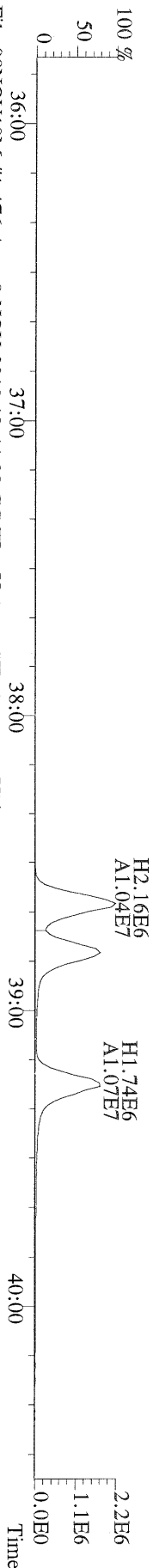
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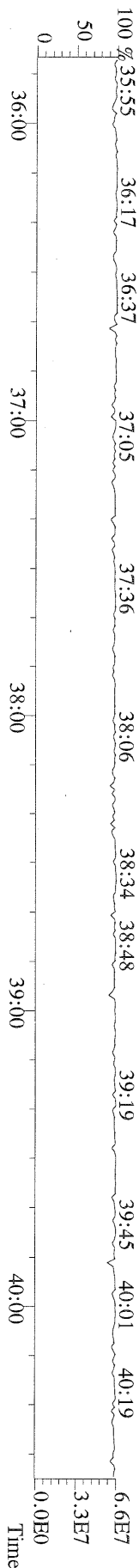
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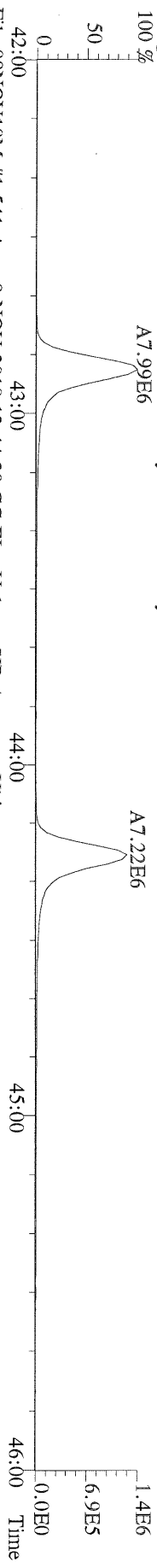
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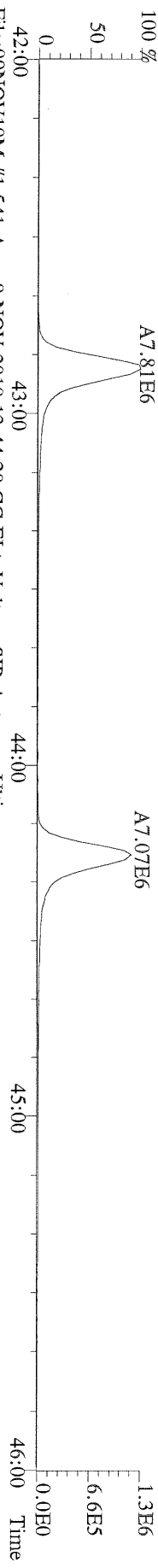
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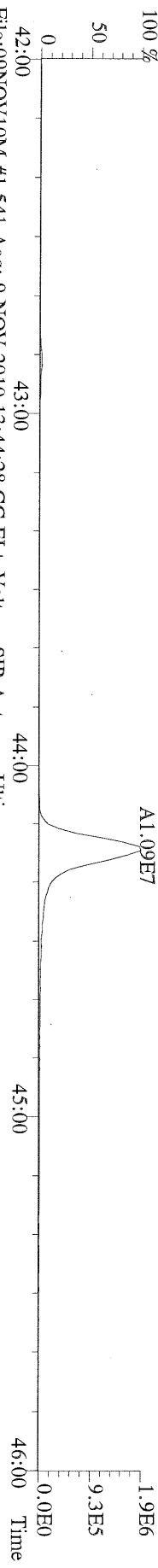
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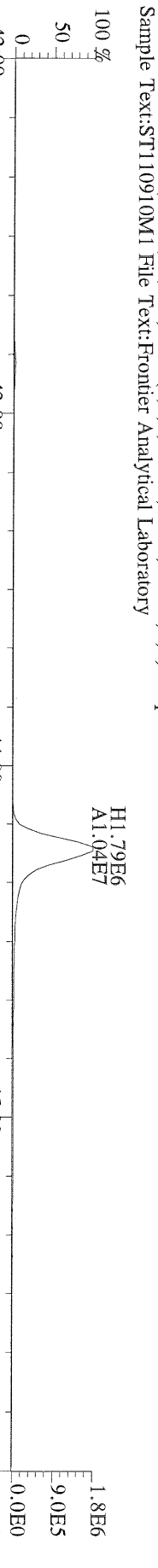
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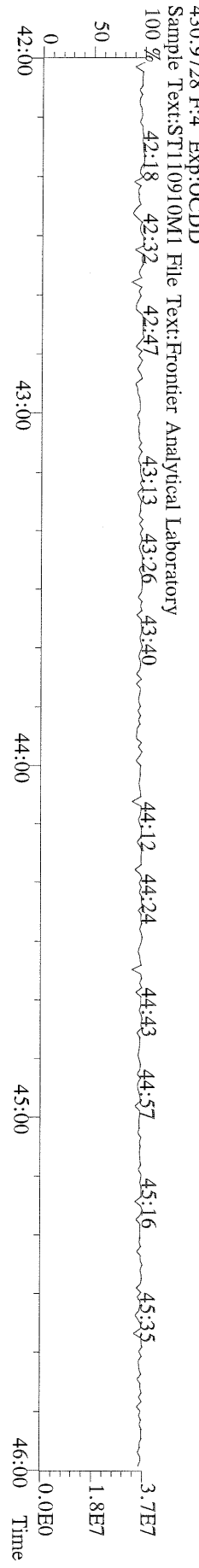
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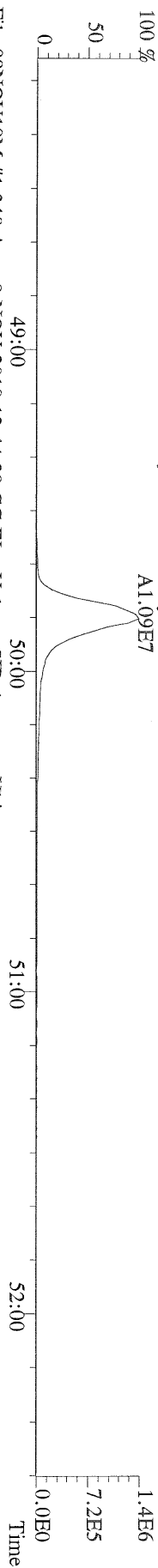
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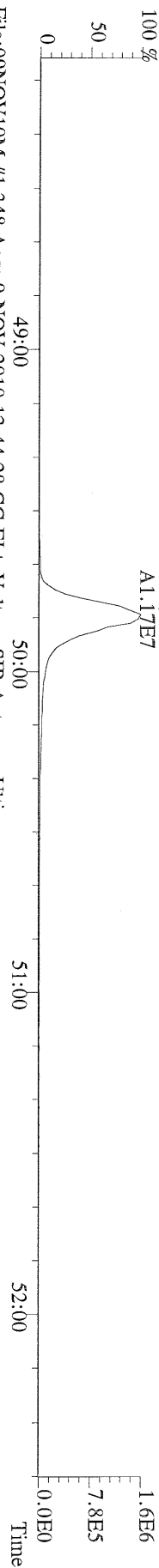
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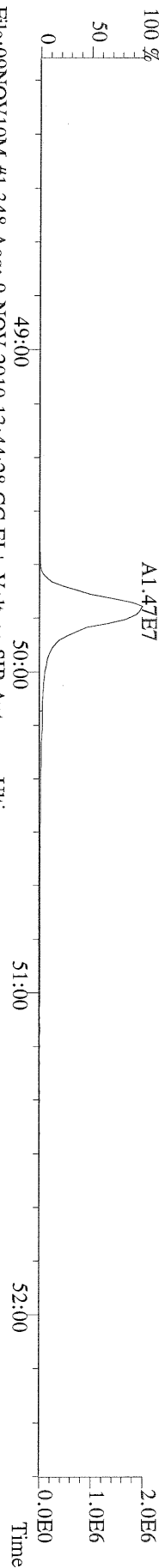
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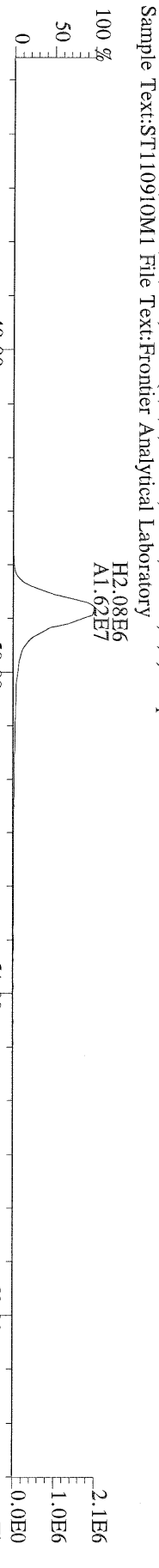
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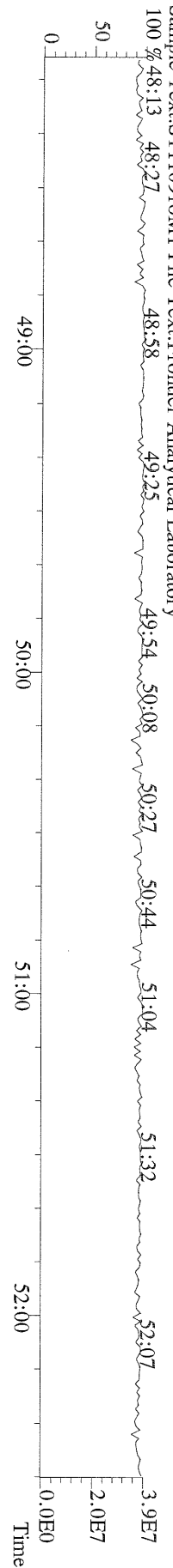
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469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



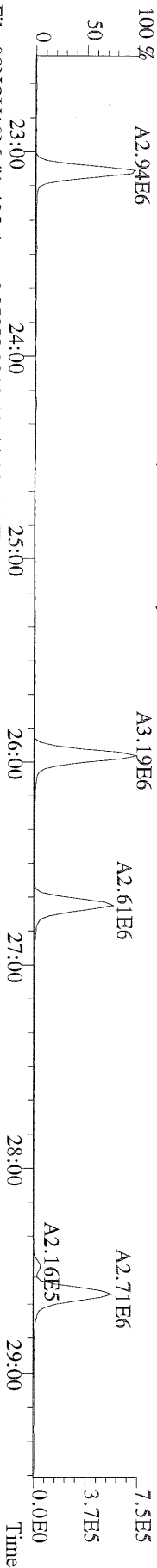
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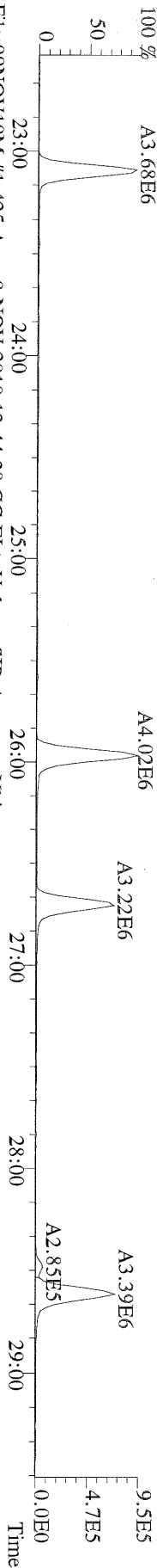
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454.9728 F:5 Exp:OCDD
Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



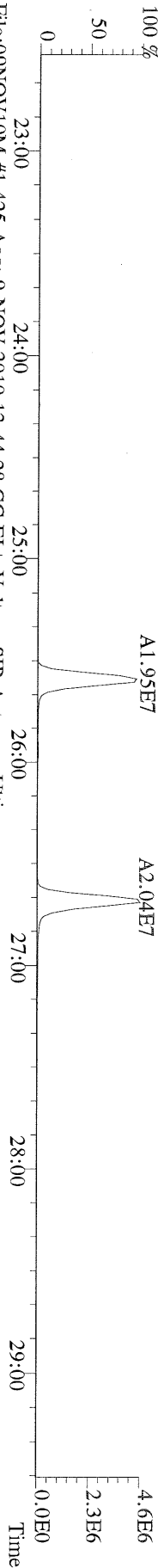
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303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



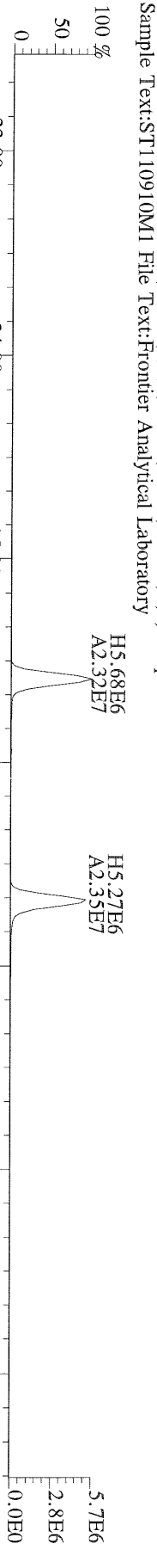
File:09NOV10M #1-425 Acq: 9-NOV-2010 13:44:28 GC EI+ Voltage SIR Autospec-Ultima
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



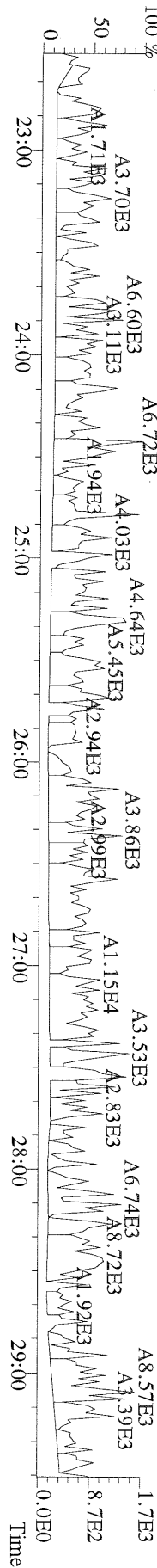
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315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



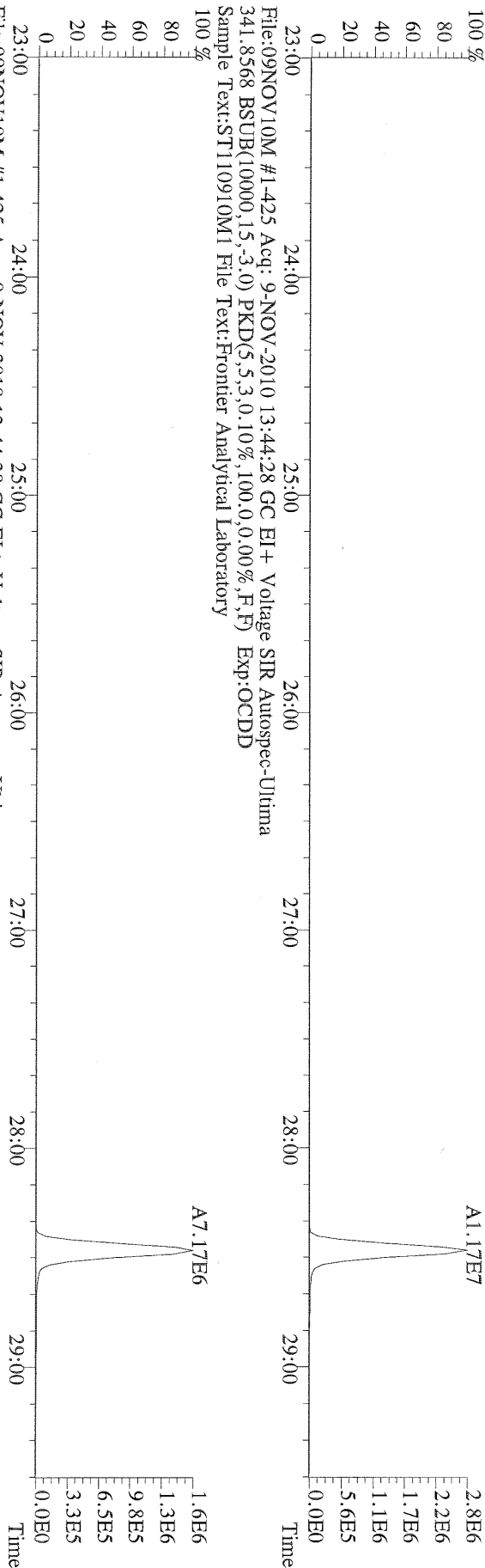
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Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



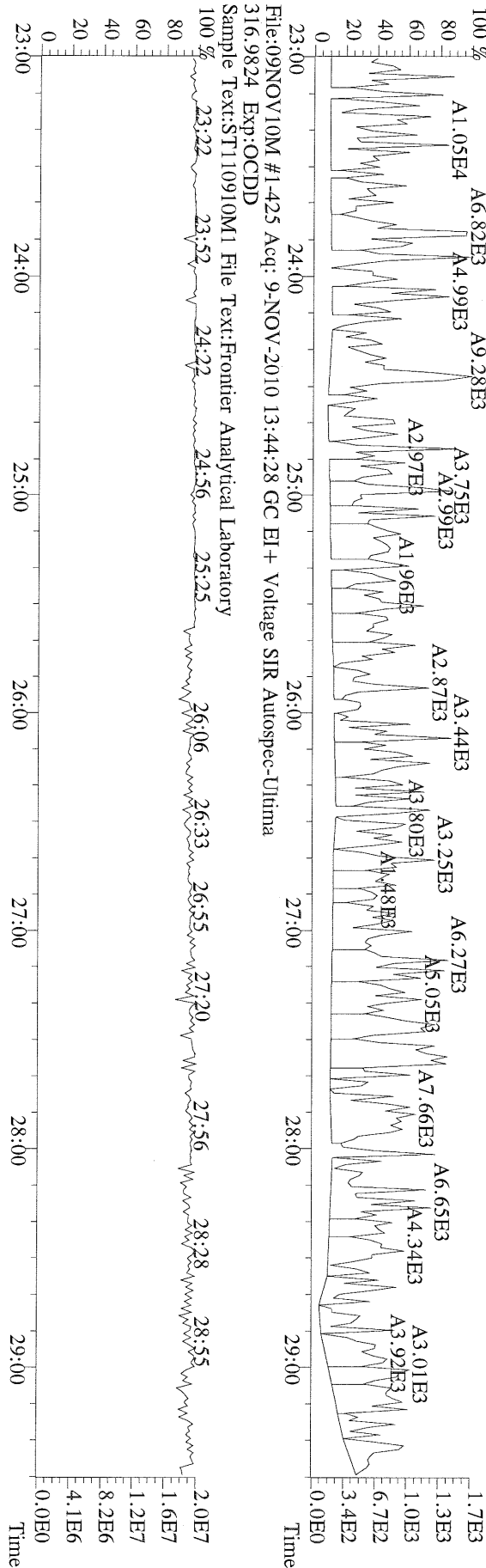
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375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



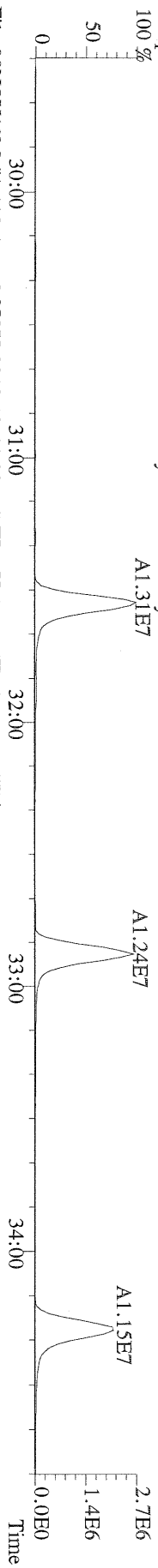
File:09NOV10M #1-425 Acq: 9-NOV-2010 13:44:28 GC EI+ Voltage SIR Autospec-Utima
 339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



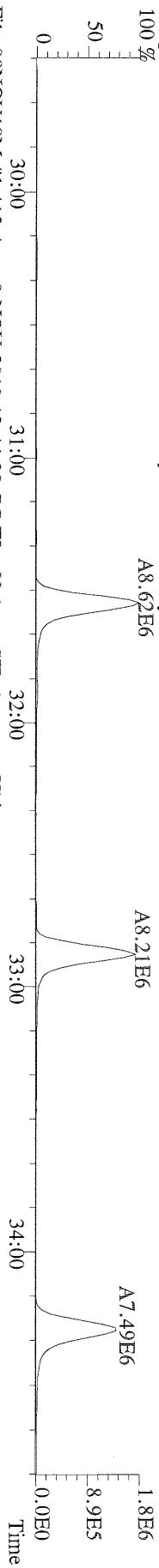
File:09NOV10M #1-425 Acq: 9-NOV-2010 13:44:28 GC EI+ Voltage SIR Autospec-Utima
 409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



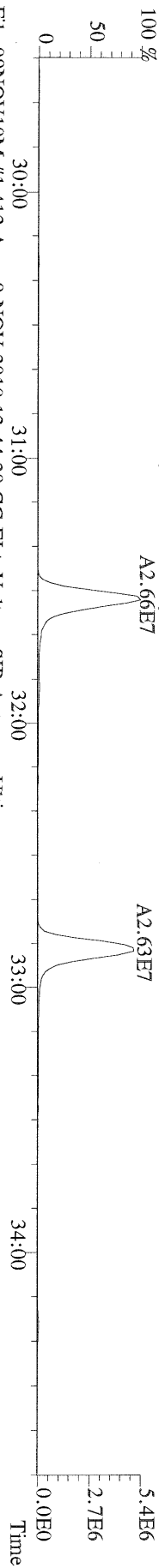
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 339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



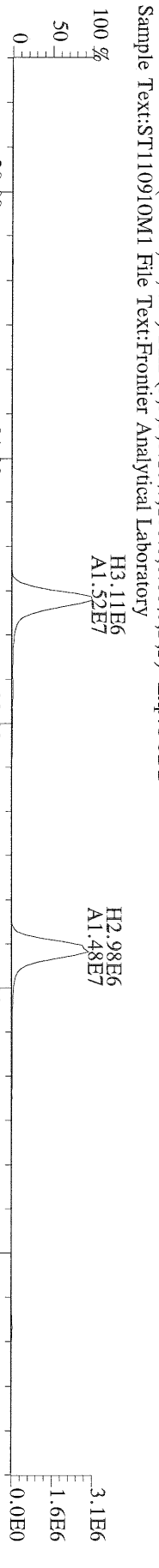
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 341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



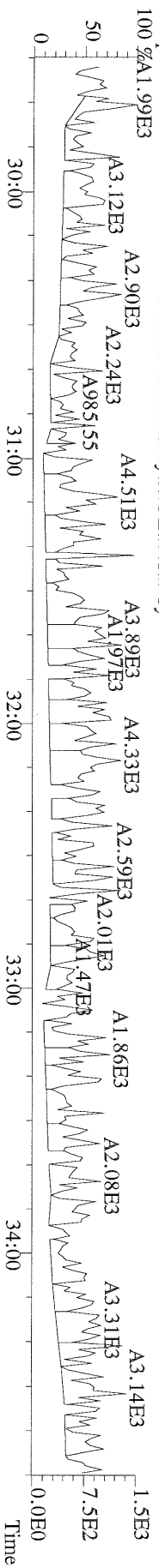
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 351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



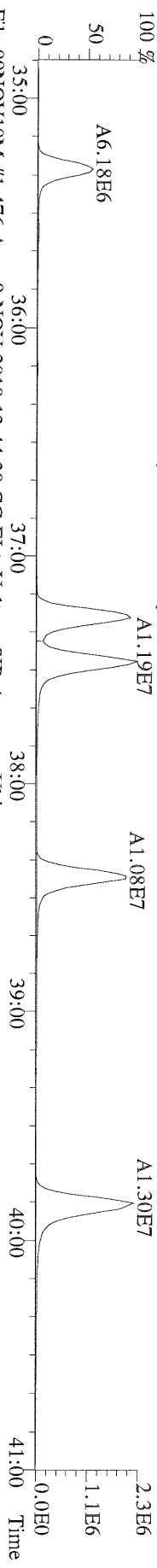
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 353.8970 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



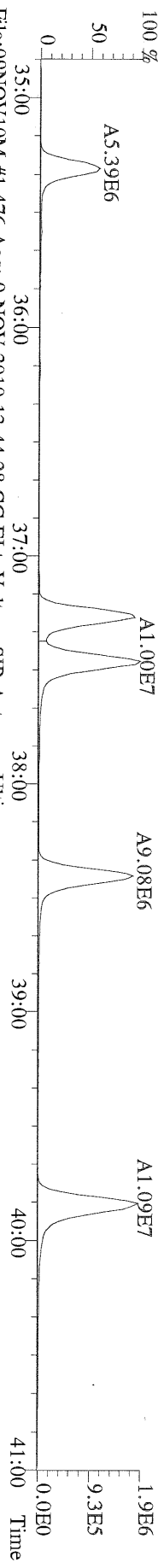
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 409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
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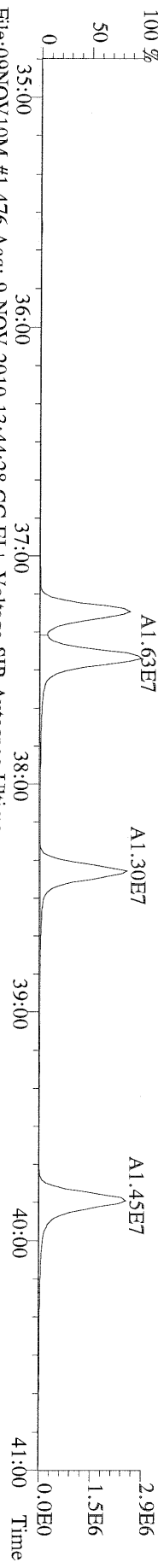
File:09NOV10M #1-476 Acq: 9-NOV-2010 13:44:28 GC EI+ Voltage SIR Autospec-Ultima
 373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



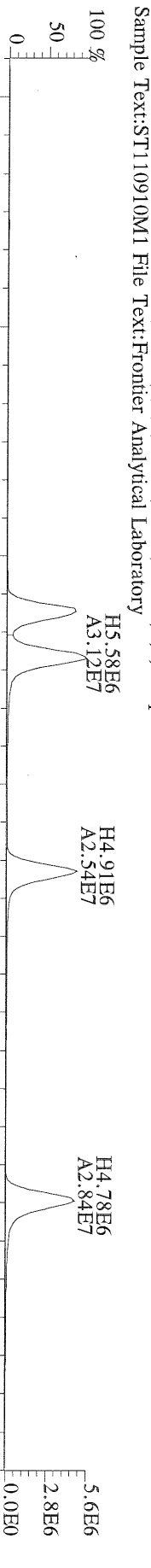
File:09NOV10M #1-476 Acq: 9-NOV-2010 13:44:28 GC EI+ Voltage SIR Autospec-Ultima
 375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



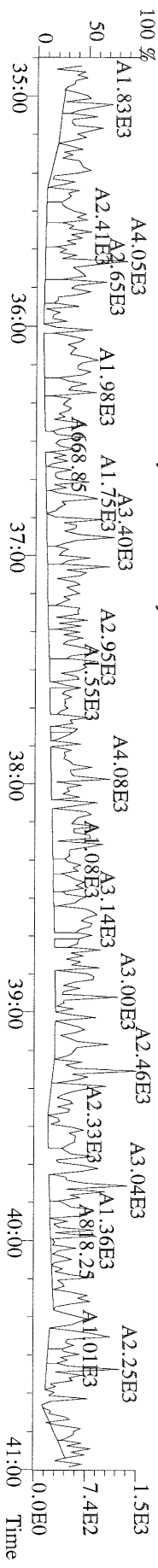
File:09NOV10M #1-476 Acq: 9-NOV-2010 13:44:28 GC EI+ Voltage SIR Autospec-Ultima
 383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



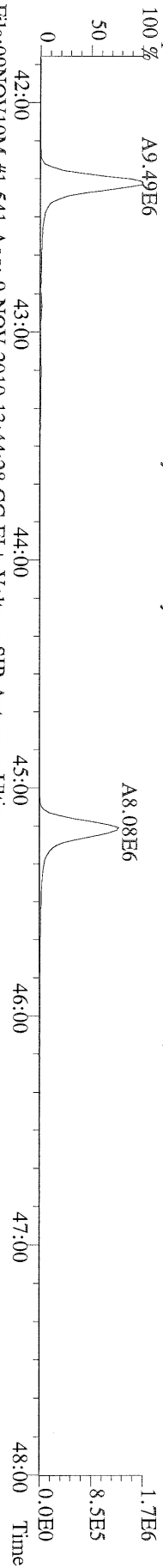
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 385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:OCDD
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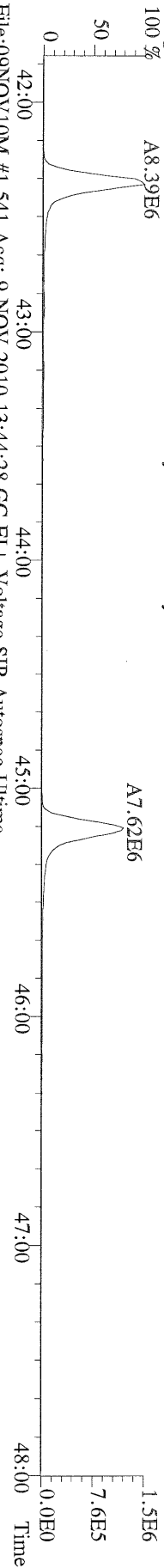
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 Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



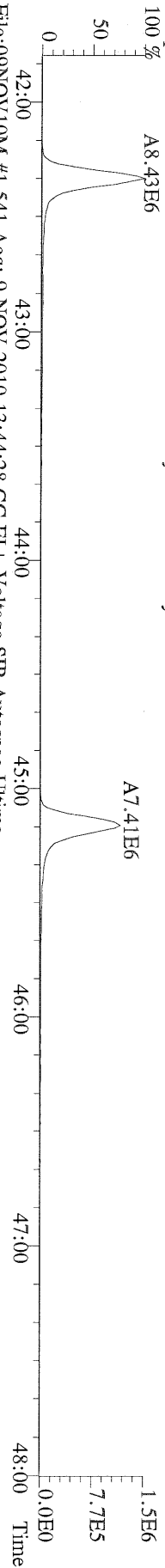
File:09NOV10M #1-541 Acq: 9-NOV-2010 13:44:28 GC EI + Voltage SIR Autospec-Utima
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD
Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



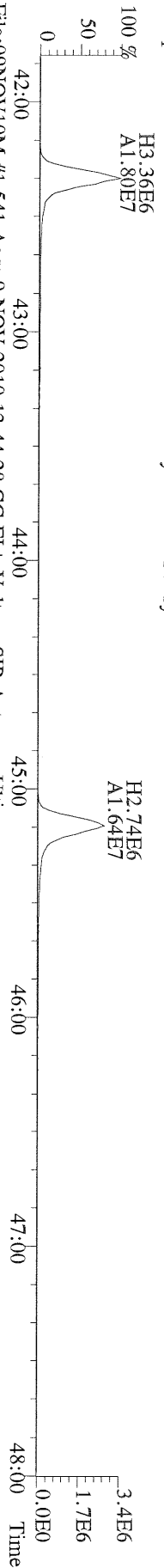
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Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



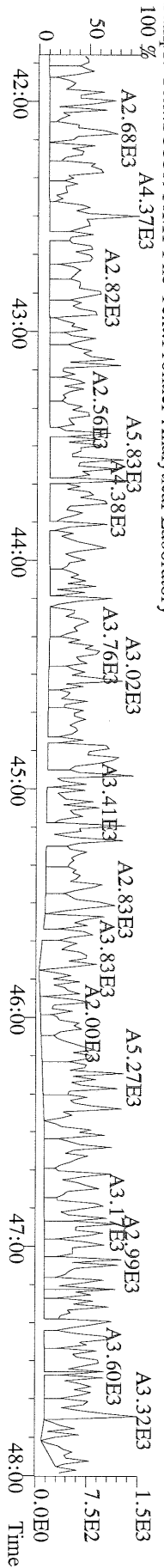
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417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD
Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



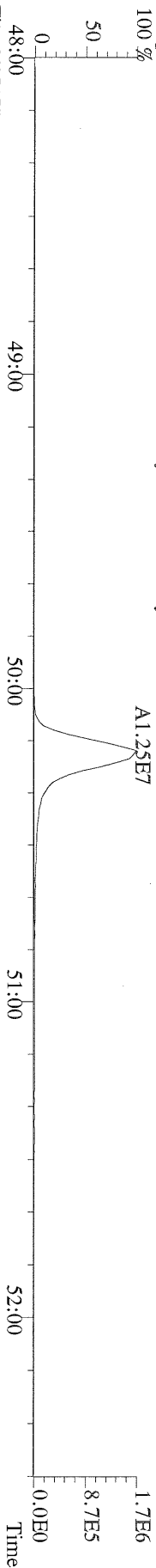
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419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD
Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



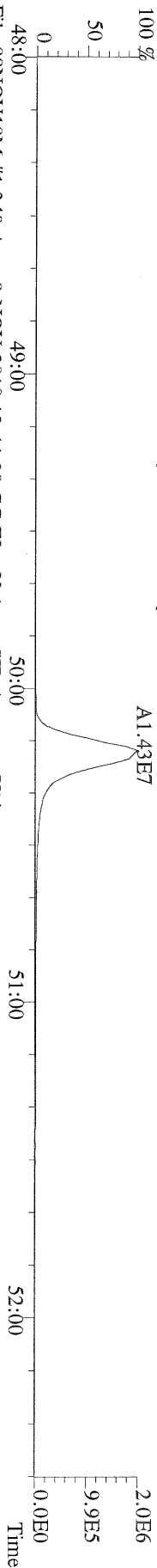
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479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD
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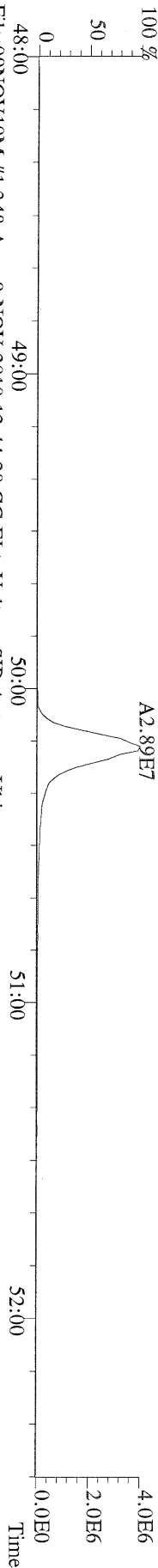
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 441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory



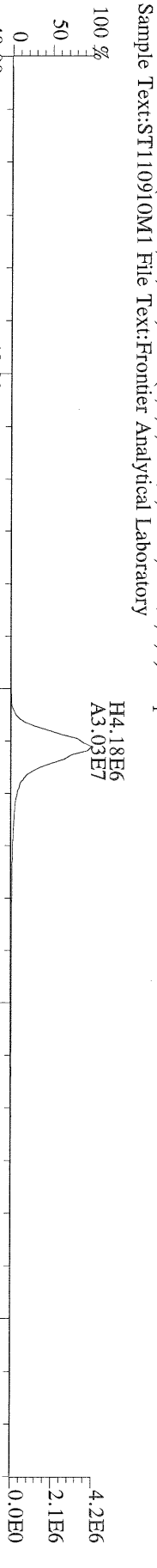
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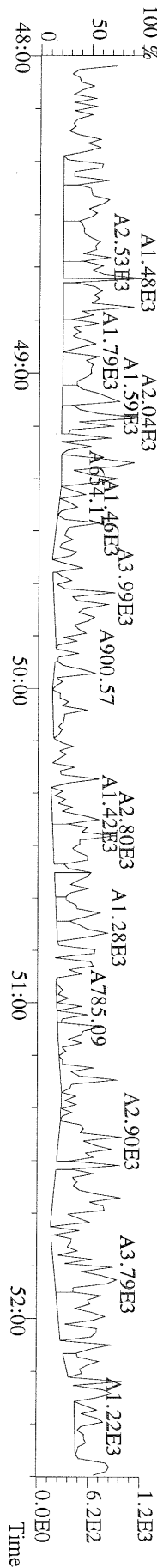
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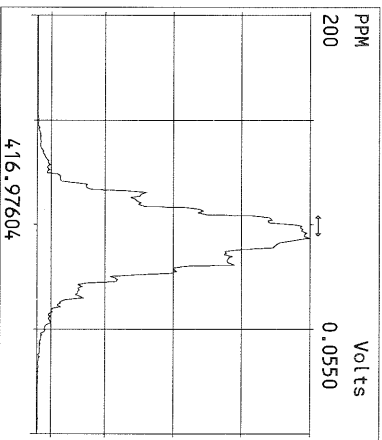
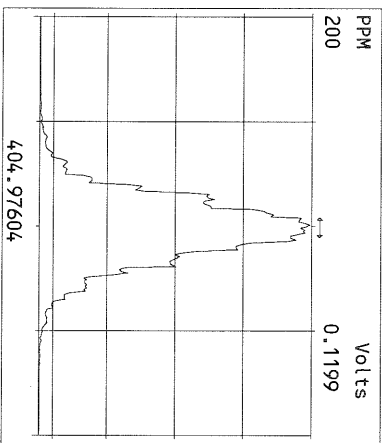
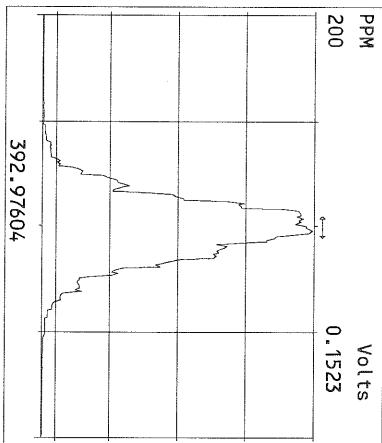
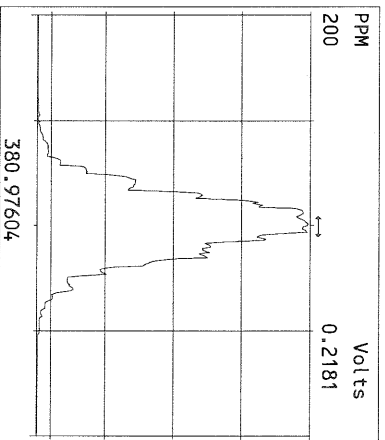
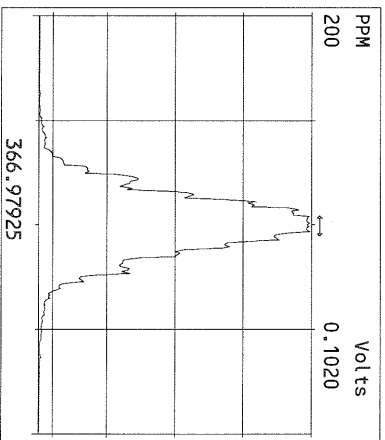
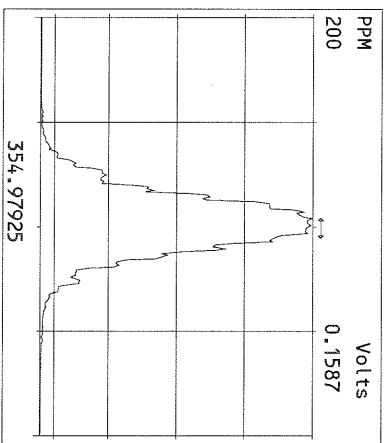
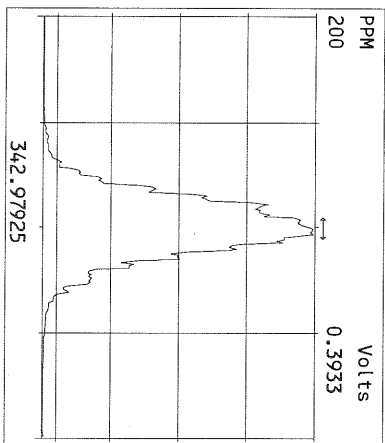
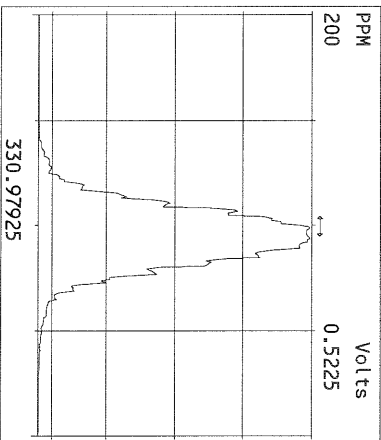
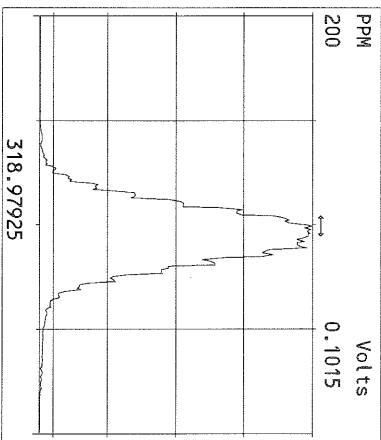
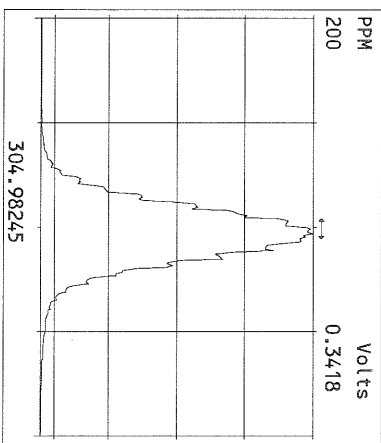
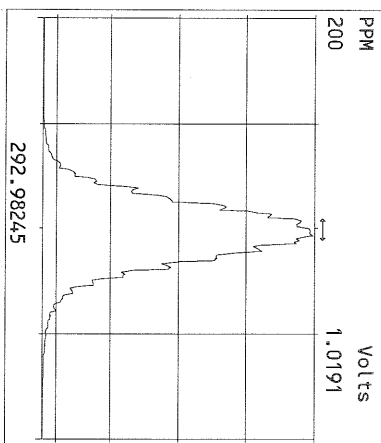


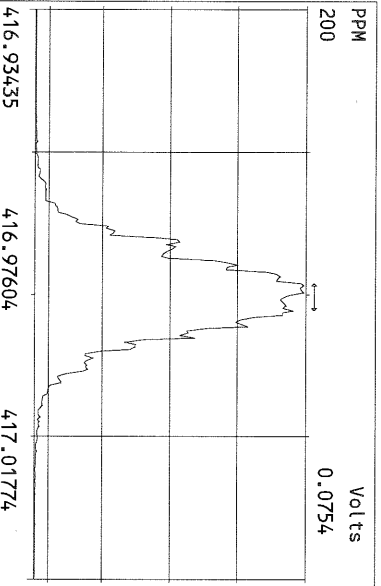
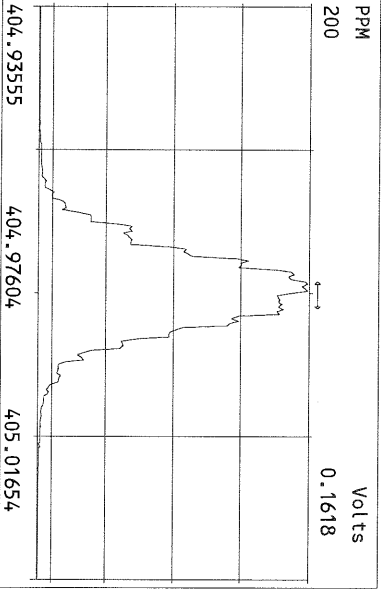
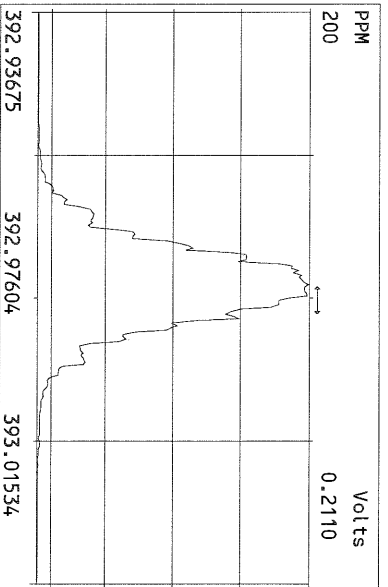
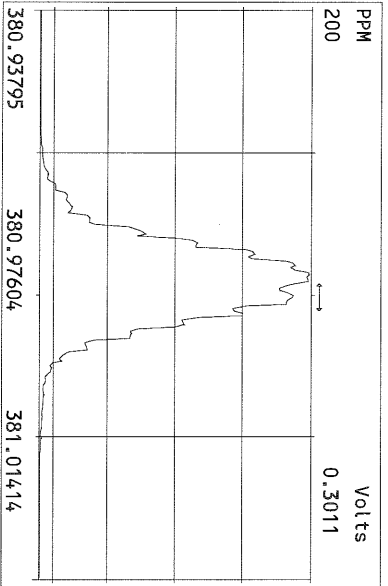
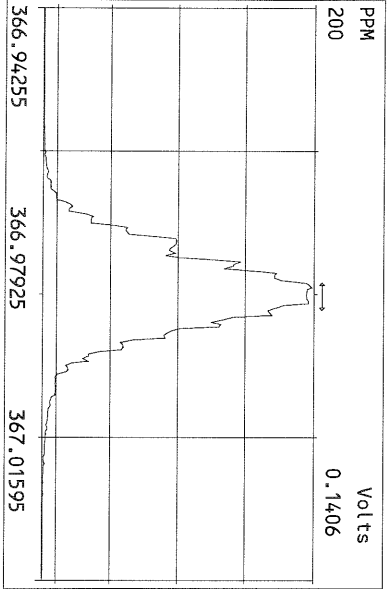
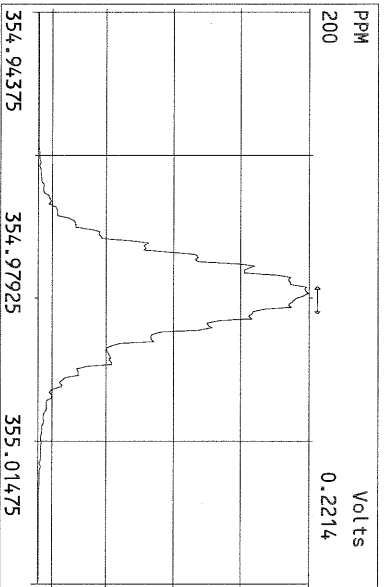
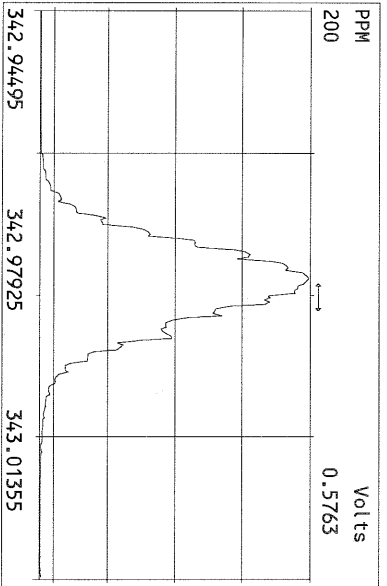
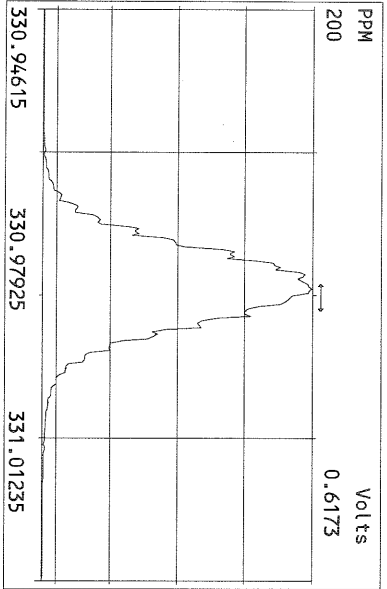
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 Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory

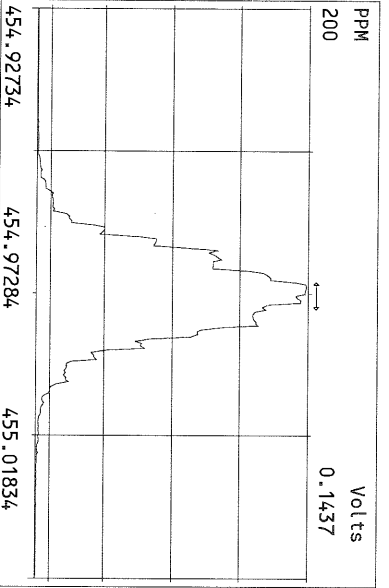
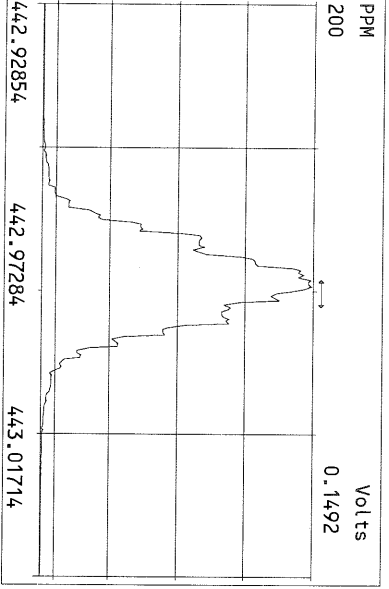
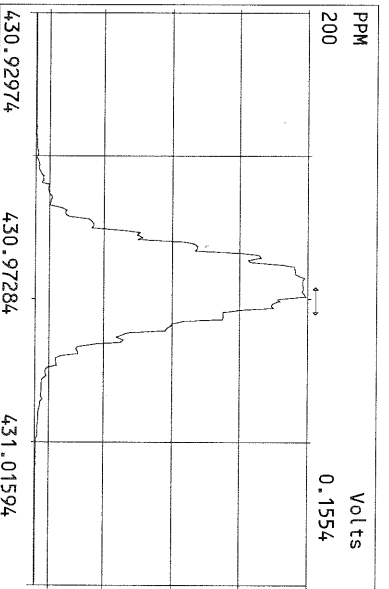
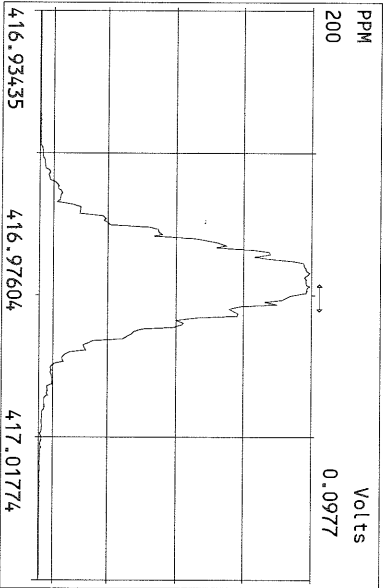
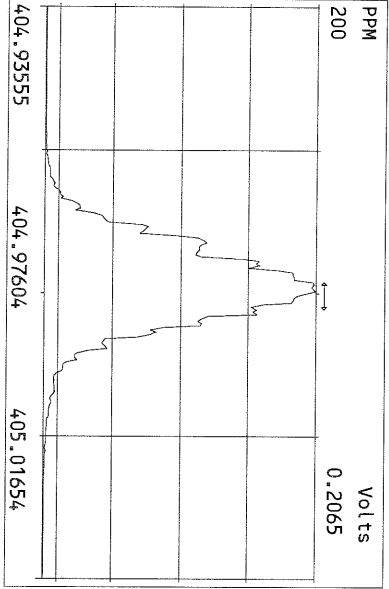
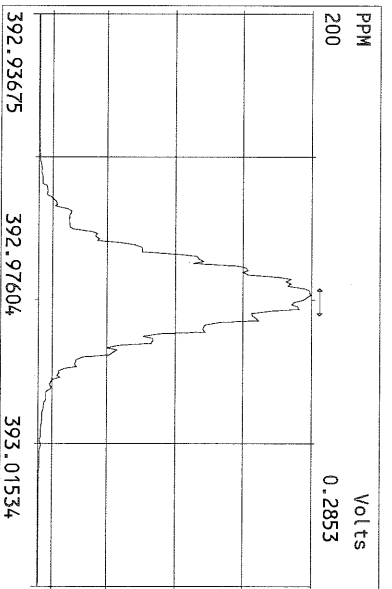
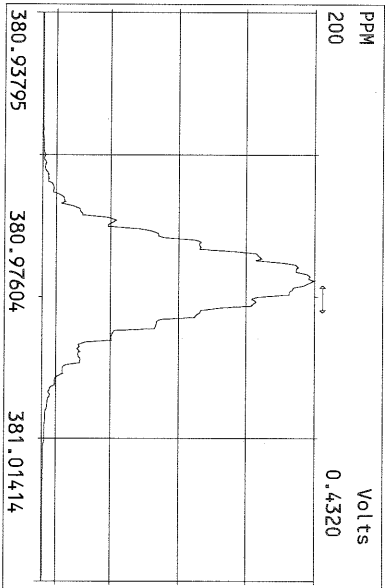
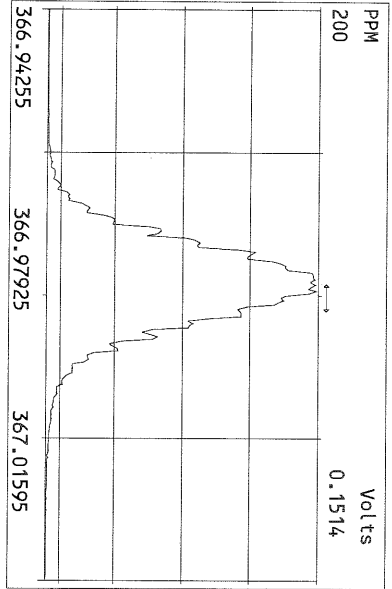


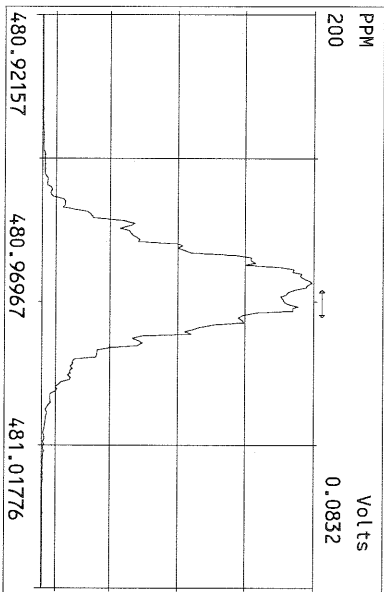
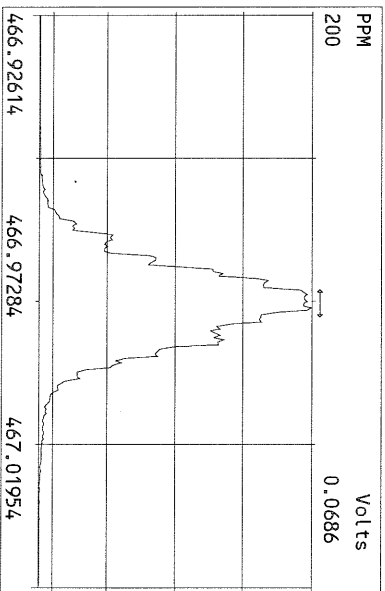
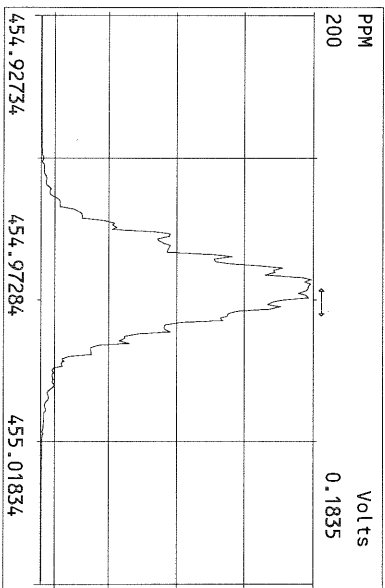
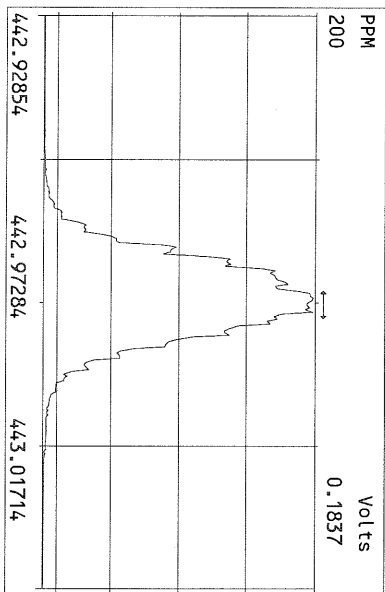
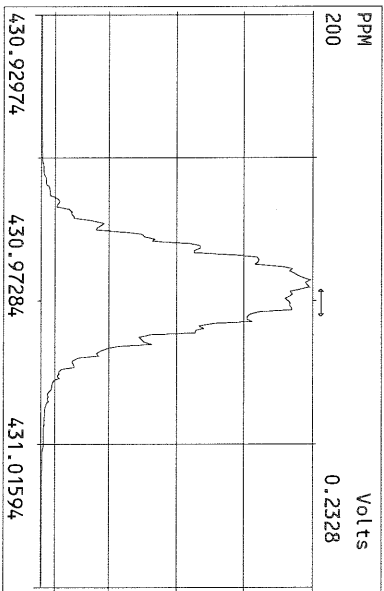
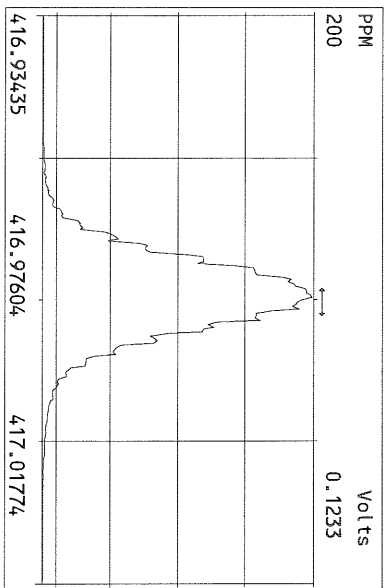
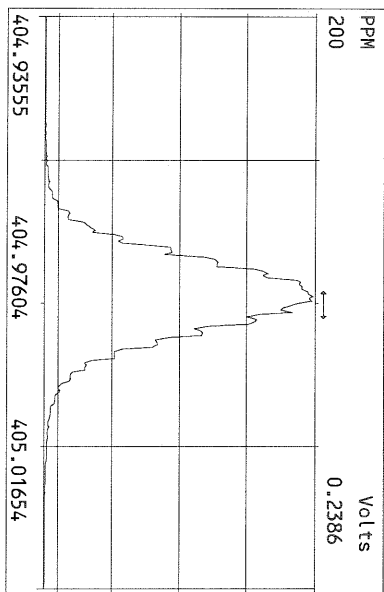
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 513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110910M1 File Text:Frontier Analytical Laboratory

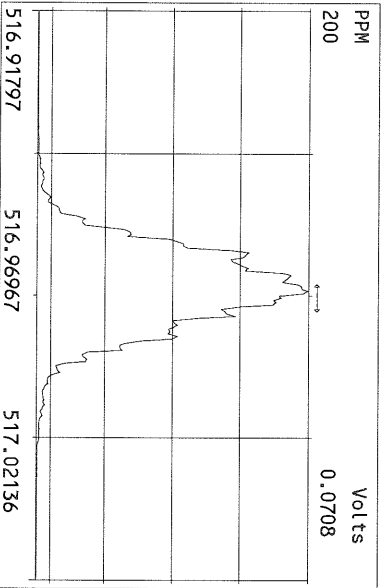
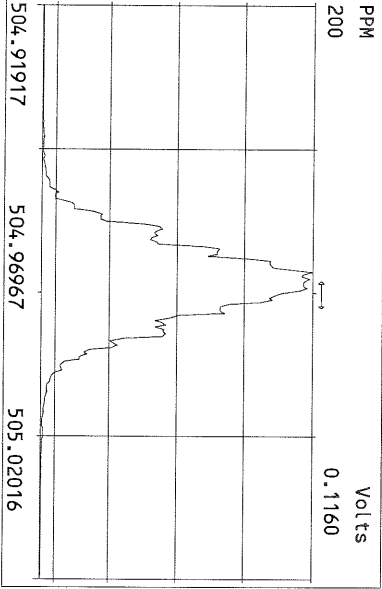
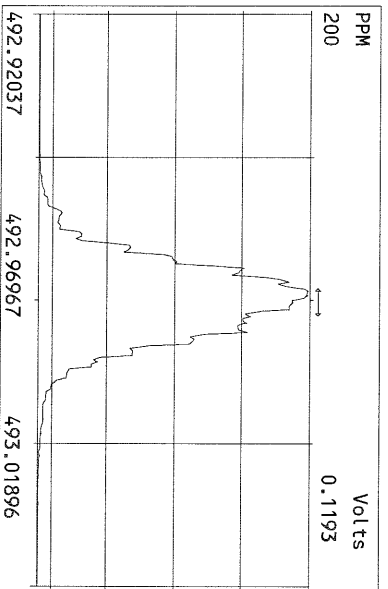
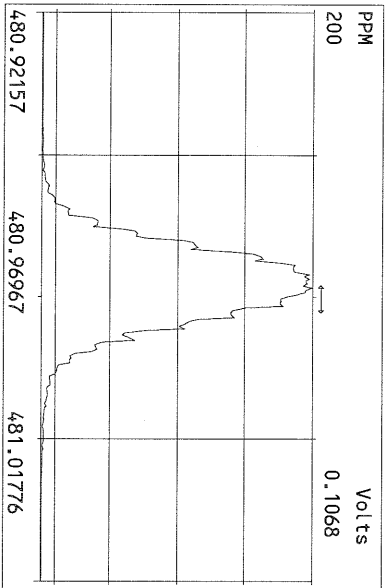
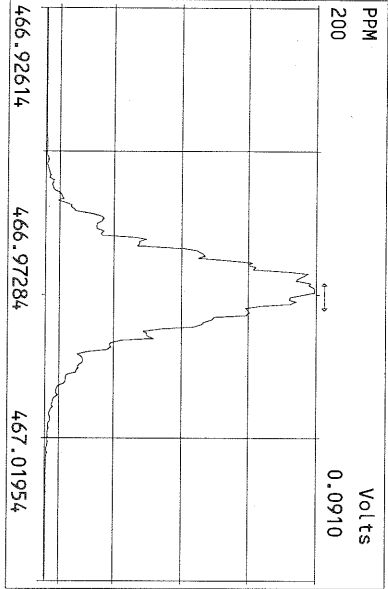
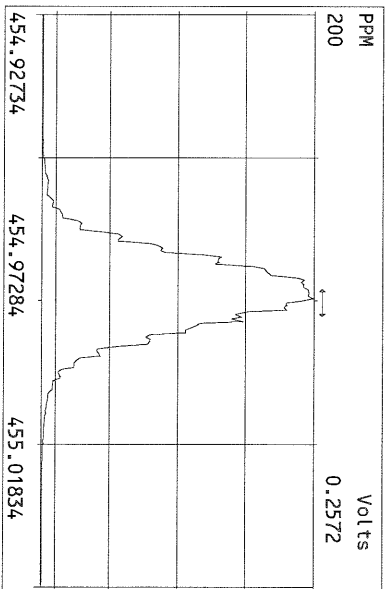
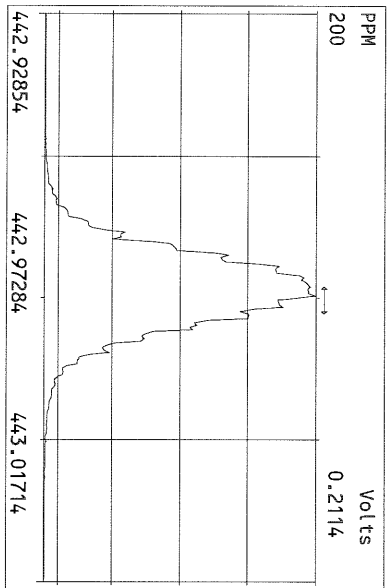
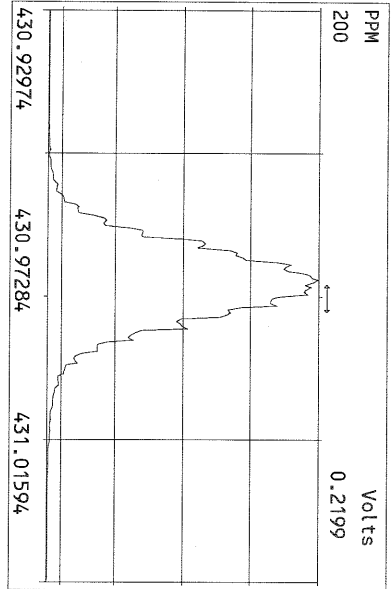












USEPA - ITD

FORM 4A

PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 8/23/10

Instrument ID: FAL3

GC Column ID: DB5

VER Data Filename: 09NOV10M Sam:16

Analysis Date: 10-NOV-10 03:38:49

NATIVE ANALYTES	M/Z'S	ION	QC	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
	FORMING RATIO (1)	ABUND. RATIO	LIMITS (2)			
2,3,7,8-TCDD	M/M+2	0.74	0.65-0.89	y	10.6	7.80 - 12.9 ✓
1,2,3,7,8-PeCDD	M+2/M+4	1.69	1.32-1.78	y	51.4	39.0 - 65.0 ✓
1,2,3,4,7,8-HxCDD	M+2/M+4	1.31	1.05-1.43	y	49.4	39.0 - 64.0 ✓
1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	51.1	39.0 - 64.0 ✓
1,2,3,7,8,9-HxCDD	M+2/M+4	1.30	1.05-1.43	y	54.5	41.0 - 61.0 ✓
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	45.6	43.0 - 58.0 ✓
OCDD	M+2/M+4	0.92	0.76-1.02	y	107	79.0 - 126 ✓
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	y	9.14	8.40 - 12.0 ✓
1,2,3,7,8-PeCDF	M+2/M+4	1.50	1.32-1.78	y	54.4	41.0 - 60.0 ✓
2,3,4,7,8-PeCDF	M+2/M+4	1.48	1.32-1.78	y	53.0	41.0 - 60.0 ✓
1,2,3,4,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	y	54.8	45.0 - 56.0 ✓
1,2,3,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	55.1	44.0 - 57.0 ✓
2,3,4,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	55.9	44.0 - 57.0 ✓
1,2,3,7,8,9-HxCDF	M+2/M+4	1.20	1.05-1.43	y	55.7	45.0 - 56.0 ✓
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.10	0.88-1.20	y	49.1	45.0 - 55.0 ✓
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.11	0.88-1.20	y	48.3	43.0 - 58.0 ✓
OCDF	M+2/M+4	0.87	0.76-1.02	y	116	63.0 - 159 ✓

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

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

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

Analyst: JDate: 11/10/10

USEPA - ITD

FORM 4B

PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 8/23/10

Instrument ID: FAL3

GC Column ID: DB5

VER Data Filename: 09NOV10M Sam:16

Analysis Date: 10-NOV-10 03:38:49

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	y	99.0	82.0 - 121 ✓
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.71	1.32-1.78	y	112	62.0 - 160 ✓
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	99.5	85.0 - 117 ✓
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.31	1.05-1.43	y	91.3	85.0 - 118 ✓
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	y	104	72.0 - 138 ✓
13C-OCDD	M+2/M+4	0.96	0.76-1.02	y	233	96.0 - 415 ✓
13C-2,3,7,8-TCDF	M/M+2	0.86	0.65-0.89	y	98.9	71.0 - 140 ✓
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.73	1.32-1.78	y	113	76.0 - 130 ✓
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.71	1.32-1.78	y	115	77.0 - 130 ✓
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	92.4	76.0 - 131 ✓
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	86.9	70.0 - 143 ✓
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	87.0	73.0 - 137 ✓
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	y	94.3	74.0 - 135 ✓
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	y	108	78.0 - 129 ✓
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.47	0.37-0.51	y	120	77.0 - 129 ✓
13C-OCDF	M+2/M+4	0.95	0.76-1.02	y	225	96.0 - 415 ✓
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					9.88	7.80 - 12.8 ✓

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

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

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

(4) No ion abundance ratio; report concentration found.

Analyst: _____

Date: 11/22/10

FORM 5
PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: FAL3 Initial Calibration Date: 8/23/10

RT Window Data Filename: 09NOV10M Sam:16 Analysis Date: 10-NOV-10 Time: 03:38:49

DB-5 IS Data Filename: 09NOV10M Sam:16 Analysis Date: 10-NOV-10 Time: 03:38:49

DB-225 IS Data Filename: Analysis Date: Time:

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

	ABSOLUTE RT		ABSOLUTE RT
ISOMERS		ISOMERS	
1,3,6,8-TCDD (F)	24:27 ✓	1,3,6,8-TCDF (F)	23:07 ✓
1,2,8,9-TCDD (L)	28:24 ✓	1,2,8,9-TCDF (L)	28:29 ✓
1,2,4,7,9-PeCDD (F)	30:19 ✓	1,3,4,6,8-PeCDF (F)	28:28 ✓
1,2,3,8,9-PeCDD (L)	33:52 ✓	1,2,3,8,9-PeCDF (L)	34:18 ✓
1,2,4,6,7,9-HxCDD (F)	36:11 ✓	1,2,3,4,6,8-HxCDF (F)	35:19 ✓
1,2,3,7,8,9-HxCDD (L)	39:16 ✓	1,2,3,7,8,9-HxCDF (L)	39:51 ✓
1,2,3,4,6,7,9-HpCDD (F)	42:53 ✓	1,2,3,4,6,7,8-HpCDF (F)	42:21 ✓
1,2,3,4,6,7,8-HpCDD (L)	44:16 ✓	1,2,3,4,7,8,9-HpCDF (L)	45:11 ✓

(F) = First eluting isomer (DB-5); (L) = Last eluting isomer (DB-5)

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT
BETWEEN
COMPARED PEAKS (1)

<25%

(1) To meet contract requirement, %Valley Height Between Compared Peaks shall not exceed 25% (section 15.4.2.2, Method 1613).

Analyst:  Date: 11/10/12

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Init. Cal. Date: 8/23/10

Instrument ID: FAL3

GC Column ID: DB5

Analysis Date: 10-NOV-10 03:38:49

CS3 or VER Data Filename: 09NOV10M

Sam:16

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002 ✓
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003 ✓
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002 ✓
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002 ✓
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002 ✓
LABELED COMPOUNDS			
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989-1.052 ✓
13C-2,3,7,8-TCDD		1.022	0.976-1.043 ✓
13C-2,3,7,8-TCDF		0.994	0.923-1.103 ✓
13C-1,2,3,7,8-PeCDD		1.239	1.000-1.567 ✓
13C-1,2,3,7,8-PeCDF		1.174	0.923-1.203 ✓
13C-2,3,4,7,8-PeCDF		1.224	0.923-1.303 ✓

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

Analyst: *J* Date: 11/10/10

USEPA - ITD

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Init. Cal. Date: 8/23/10

Instrument ID: FAL3

GC Column ID: DB5

Analysis Date: 10-NOV-10 03:38:49

CS3 or VER Data Filename: 09NOV10M

Sam:16

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999-1.001 ✓
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998-1.004 ✓
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019 ✓
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001 ✓
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005 ✓
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001 ✓
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001 ✓
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999-1.001 ✓
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001 ✓
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.001	0.999-1.001 ✓
OCDD	13C-OCDD	1.000	0.999-1.001 ✓
OCDF	13C-OCDF	1.000	0.999-1.001 ✓

LABELED COMPOUNDS


13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.984	0.977-1.000 ✓
13C-1,2,3,6,7,8-HxCDD		0.988	0.981-1.003 ✓
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970 ✓
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975 ✓
13C-2,3,4,6,7,8-HxCDF		0.978	0.959-1.021 ✓
13C-1,2,3,7,8,9-HxCDF		1.014	0.977-1.047 ✓
13C-1,2,3,4,6,7,8-HpCDD		1.127	1.086-1.130 ✓
13C-1,2,3,4,6,7,8-HpCDF		1.078	1.043-1.085 ✓
13C-1,2,3,4,7,8,9-HpCDF		1.150	1.057-1.154 ✓
13C-OCDD		1.269	1.032-1.311 ✓
13C-OCDF		1.279	1.000-1.311 ✓

(1) Contract-required limits for Relative Retention Times (RRT) as specified in Table 2, Method 1613.

Analyst: 

Date: 11/10/10

Name	Resp	RA	RT	RRF	NATO 1989 Tox:		WHO 1998 Tox:		WHO 2005 Tox:		DL	120
					Conc	Qual	Fac	Noise-1	Noise-2	DL		
2,3,7,8-TCDD	3.18e+06	0.74 y	27:28	1.11	10.6	2.50	-	-	-	-	*	
1,2,3,7,8-PeCDD	1.42e+07	1.69 y	33:18	1.10	51.4	2.50	-	-	-	-	*	
1,2,3,4,7,8-HxCDD	1.56e+07	1.31 y	38:40	1.37	49.4	2.50	-	-	-	-	*	
1,2,3,6,7,8-HxCDD	1.40e+07	1.26 y	38:50	1.37	51.1	2.50	-	-	-	-	*	
1,2,3,7,8,9-HxCDD	1.59e+07	1.30 y	39:16	1.36	54.5	2.50	-	-	-	-	*	
1,2,3,4,6,7,8-HpCDD	1.27e+07	1.04 y	44:16	1.45	45.6	2.50	-	-	-	-	*	
OCDD	2.10e+07	0.92 y	49:50	1.43	107	2.50	-	-	-	-	*	
2,3,7,8-TCDF	6.13e+06	0.78 y	26:43	1.50	9.14	2.50	-	-	-	-	*	
1,2,3,7,8-PeCDF	2.21e+07	1.50 y	31:33	0.94	54.4	2.50	-	-	-	-	*	
2,3,4,7,8-PeCDF	2.11e+07	1.48 y	32:53	0.94	53.0	2.50	-	-	-	-	*	
1,2,3,4,7,8-HxCDF	1.87e+07	1.22 y	37:16	0.93	54.8	2.50	-	-	-	-	*	
1,2,3,6,7,8-HxCDF	2.14e+07	1.24 y	37:28	0.82	55.1	2.50	-	-	-	-	*	
2,3,4,6,7,8-HxCDF	1.94e+07	1.23 y	38:24	0.92	55.9	2.50	-	-	-	-	*	
1,2,3,7,8,9-HxCDF	2.29e+07	1.20 y	39:51	1.00	55.7	2.50	-	-	-	-	*	
1,2,3,4,6,7,8-HpCDF	1.75e+07	1.10 y	42:21	1.39	49.1	2.50	-	-	-	-	*	
1,2,3,4,7,8,9-HpCDF	1.36e+07	1.11 y	45:11	1.36	48.3	2.50	-	-	-	-	*	
OCDF	2.38e+07	0.87 y	50:13	0.79	116	2.50	-	-	-	-	*	
												Rec
13C-2,3,7,8-TCDD	2.70e+07	0.77 y	27:27	1.02	99.0							99.0
13C-1,2,3,7,8-PeCDD	2.51e+07	1.71 y	33:17	0.84	112							112
13C-1,2,3,4,7,8-HxCDD	2.30e+07	1.28 y	38:38	1.07	99.5							99.5
13C-1,2,3,6,7,8-HxCDD	1.99e+07	1.31 y	38:48	1.01	91.3							91.3
13C-1,2,3,4,6,7,8-HpCDD	1.91e+07	1.06 y	44:15	0.86	104							104
13C-OCDD	2.74e+07	0.96 y	49:49	0.55	233							117
13C-2,3,7,8-TCDF	4.47e+07	0.86 y	26:42	0.99	98.9							98.9
13C-1,2,3,7,8-PeCDF	4.31e+07	1.73 y	31:32	0.84	113							113
13C-2,3,4,7,8-PeCDF	4.25e+07	1.71 y	32:52	0.81	115							115
13C-1,2,3,4,7,8-HxCDF	3.68e+07	0.53 y	37:15	1.85	92.4							92.4
13C-1,2,3,6,7,8-HxCDF	4.74e+07	0.53 y	37:27	2.54	86.9							86.9
13C-2,3,4,6,7,8-HxCDF	3.77e+07	0.53 y	38:24	2.01	87.0							87.0
13C-1,2,3,7,8,9-HxCDF	4.12e+07	0.53 y	39:50	2.03	94.3							94.3
13C-1,2,3,4,6,7,8-HpCDF	2.57e+07	0.46 y	42:20	1.11	108							108
13C-1,2,3,4,7,8,9-HpCDF	2.08e+07	0.47 y	45:10	0.80	120							120
13C-OCDF	5.23e+07	0.95 y	50:12	1.08	225							112
37Cl-2,3,7,8-TCDD	1.81e+06		27:28	0.69	9.88							98.8
13C-1,2,3,4-TCDD	2.67e+07	0.79 y	26:52	-	59.3							
13C-1,2,3,4-TCDF	4.54e+07	0.87 y	25:37	-	62.8							
13C-1,2,3,7,8,9-HxCDD	2.15e+07	1.29 y	39:16	-	78.0							
						Fac	Noise-1	Noise-2	DL	#Hom		
Total Tetra-Dioxins	1.68e+07		23:11	1.11	55.8	2.50	-	-	*	21		
Total Penta-Dioxins	3.00e+07		30:19	1.10	109	2.50	-	-	*	9		
Total Hexa-Dioxins	5.16e+07		36:11	1.37	176	2.50	-	-	*	14		
Total Hepta-Dioxins	2.71e+07		41:49	1.45	97.6	2.50	-	-	*	21		
Total Tetra-Furans	2.84e+07		23:07	1.50	42.3	2.50	-	-	*	22		
1st Fn. Tot Penta-Furans	1.94e+07		28:28	0.94	48.3	2.50	-	-	*	PeCDF	3	
Total Penta-Furans	6.31e+07		30:16	0.94	157	2.50	-	-	*	205	10	
Total Hexa-Furans	9.51e+07		35:19	0.91	256	2.50	-	-	*		14	
Total Hepta-Furans	3.19e+07		42:21	1.38	100.0	2.50	-	-	*		8	

Analyst: 

Date: 11/10/10

Frontier Analytical Laboratory - Acquisition Log

Run Name:09NOV10M

Instrument: FAL3

GC: DB5

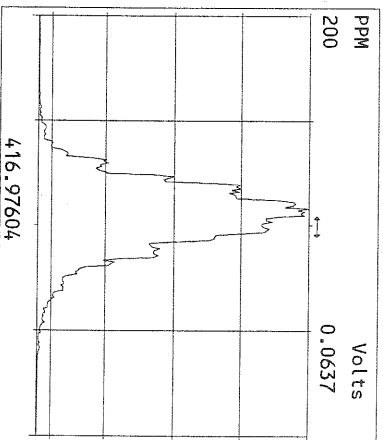
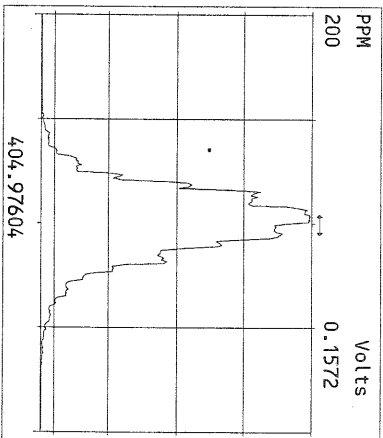
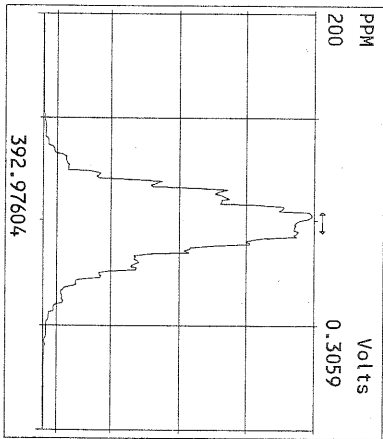
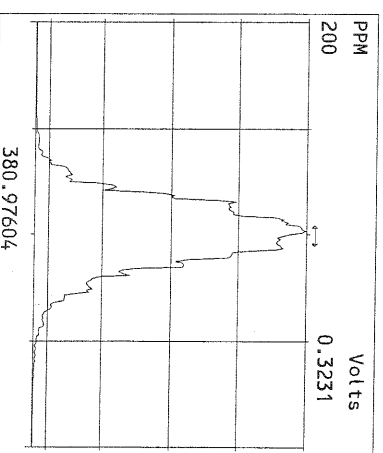
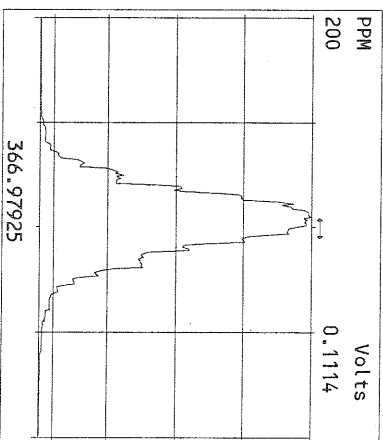
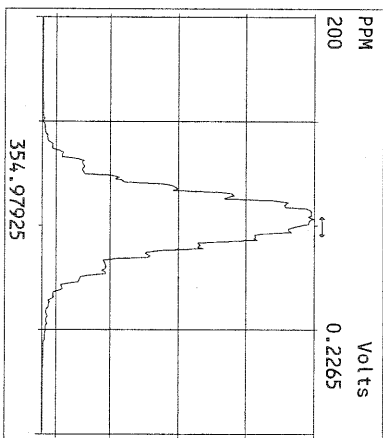
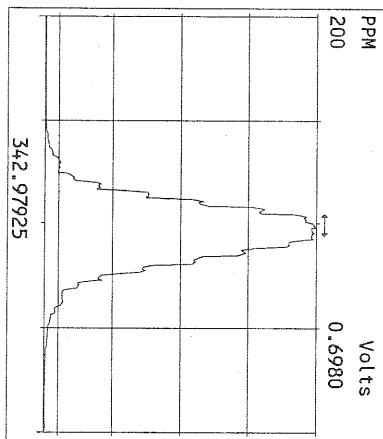
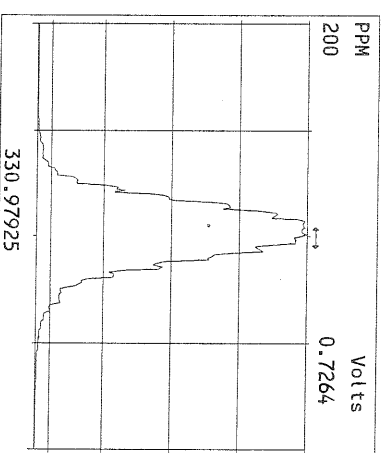
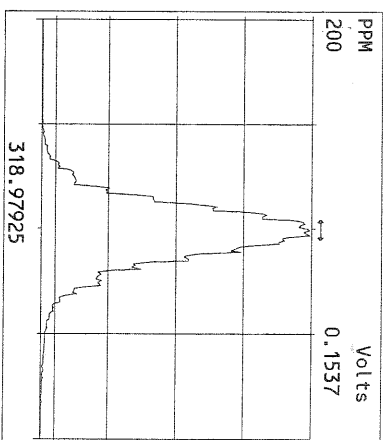
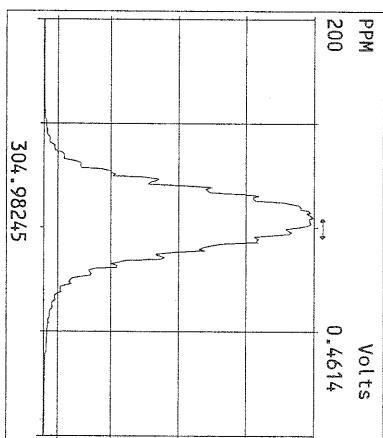
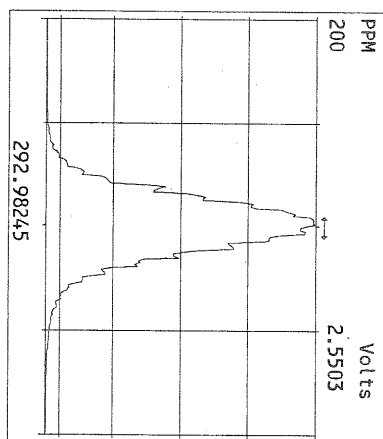
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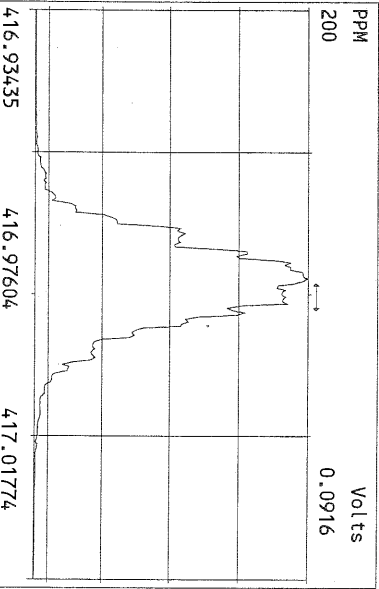
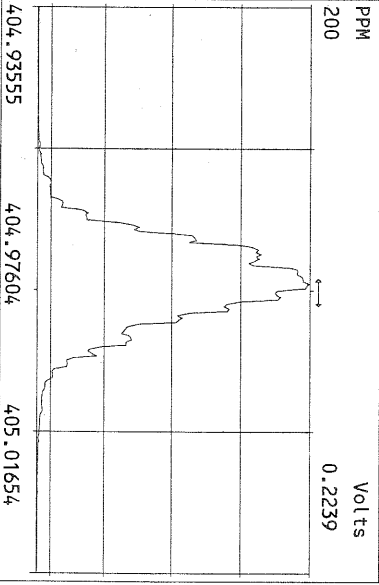
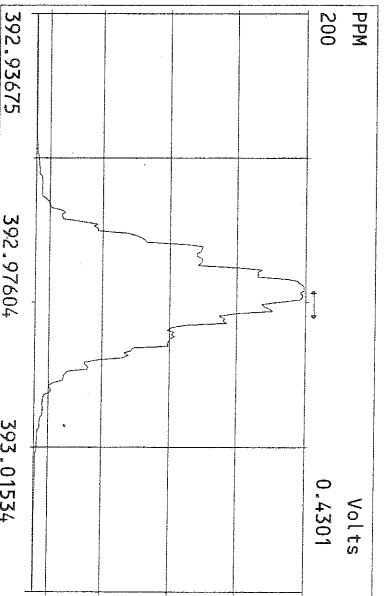
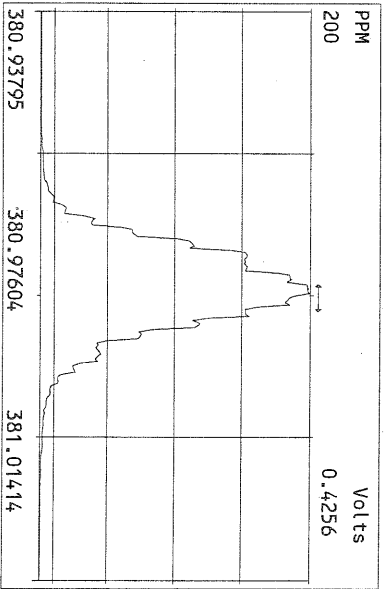
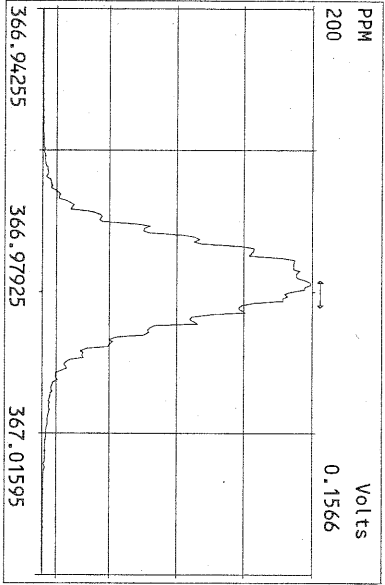
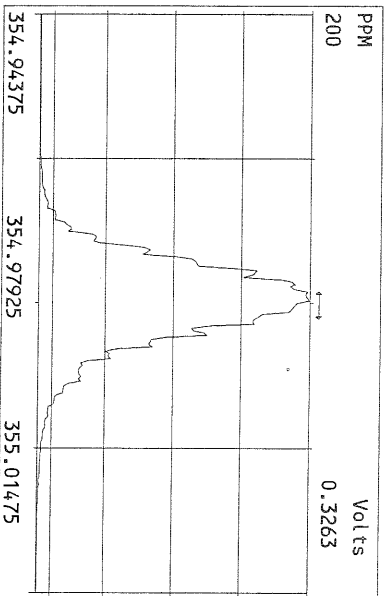
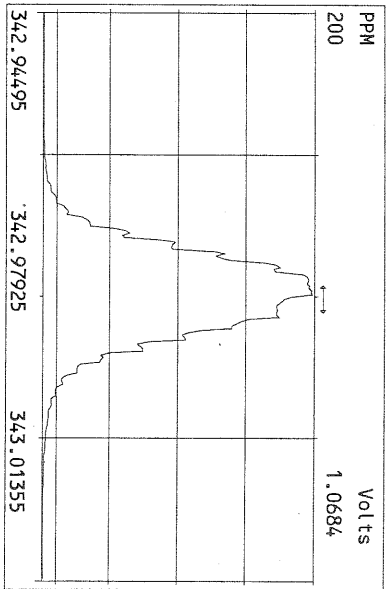
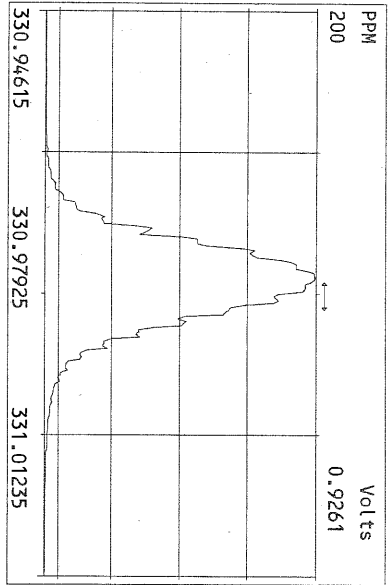
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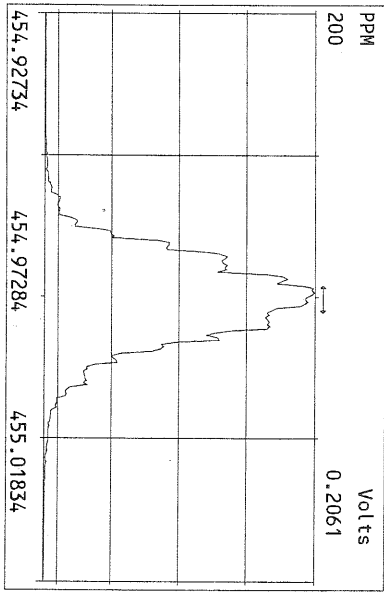
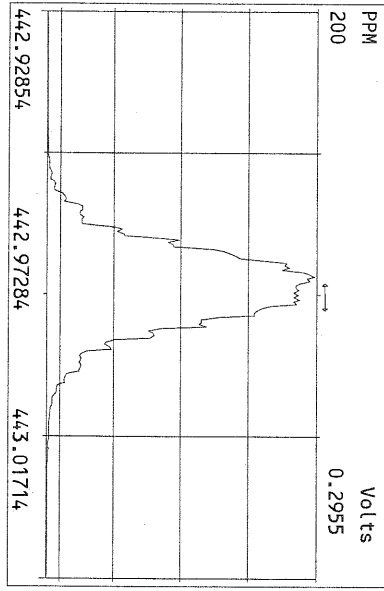
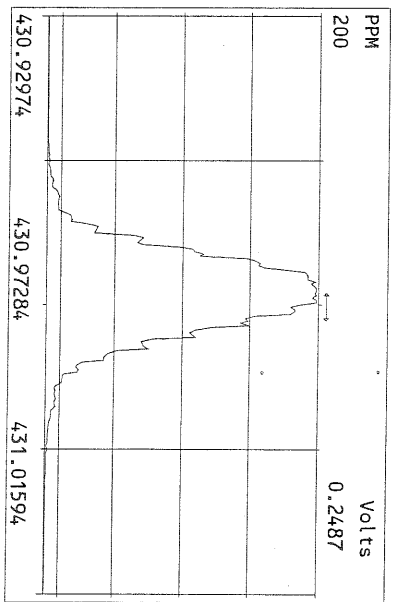
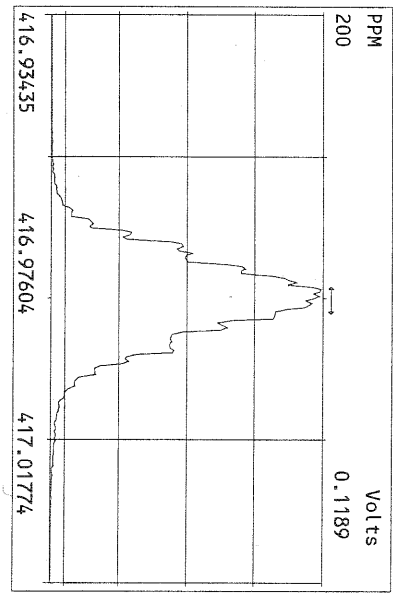
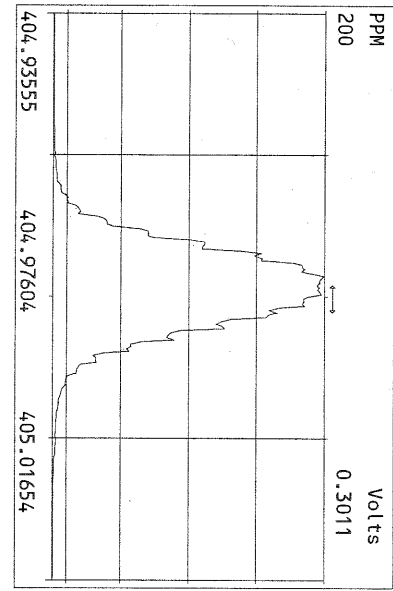
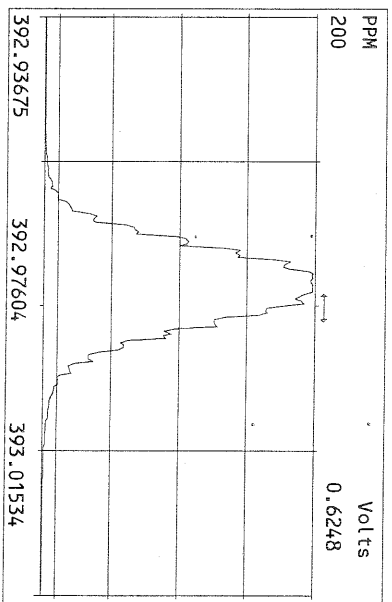
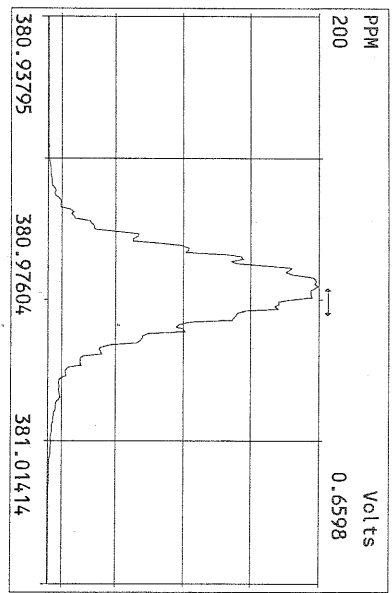
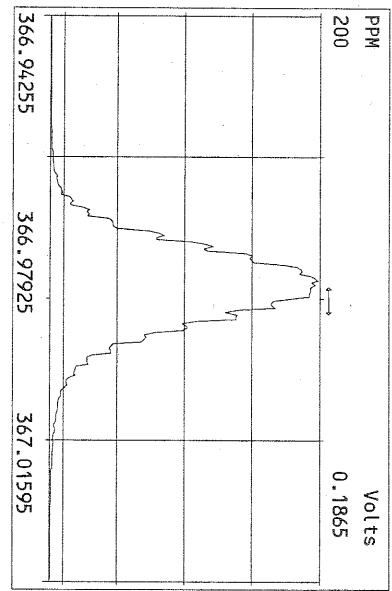
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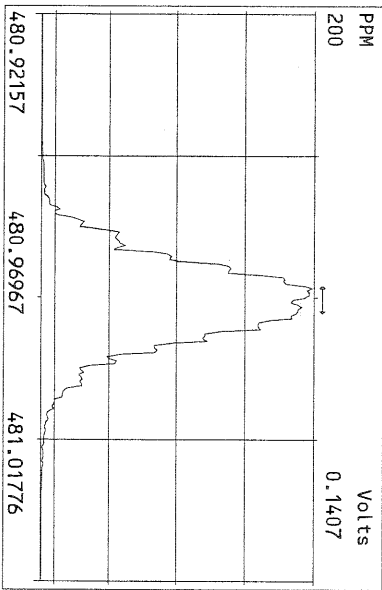
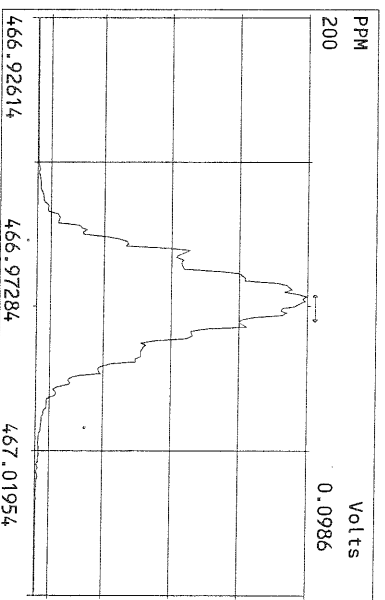
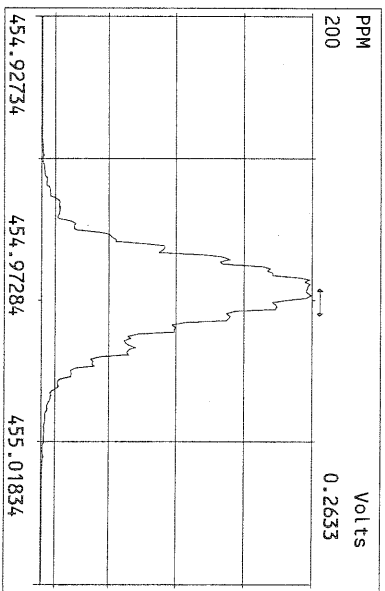
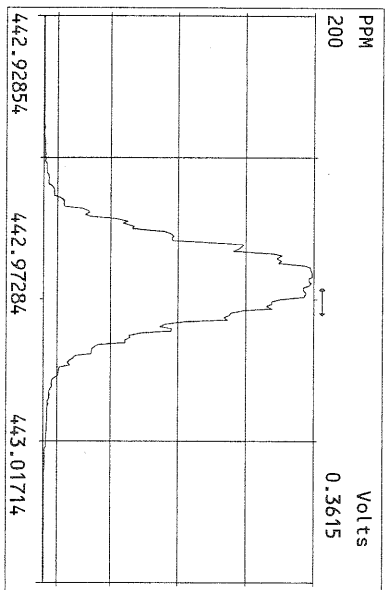
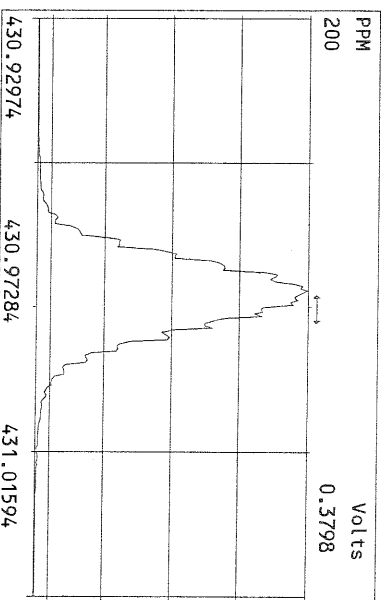
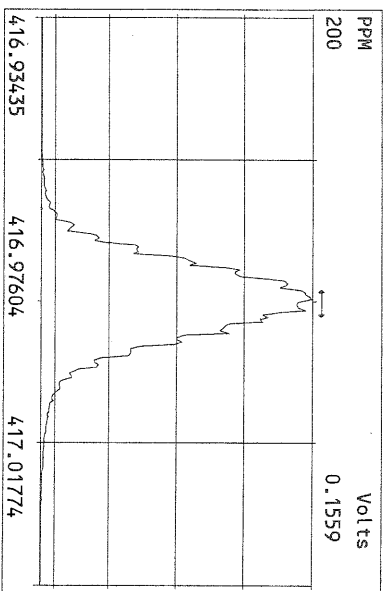
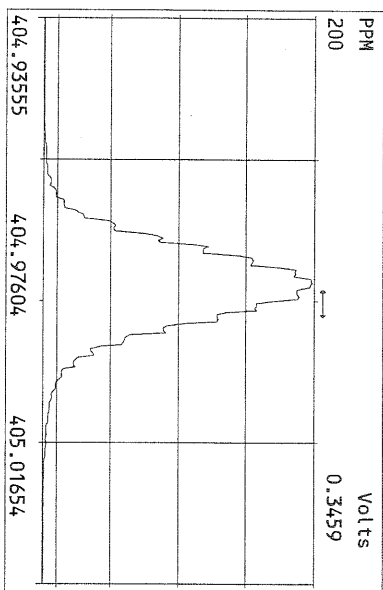
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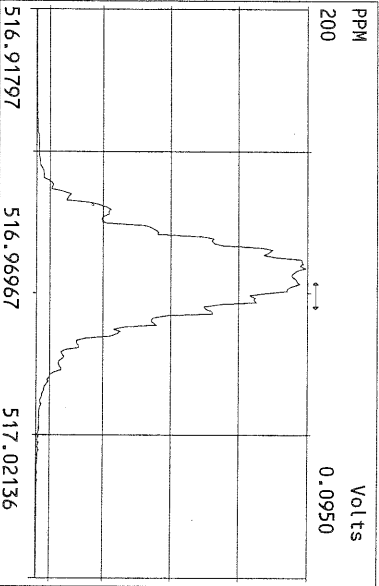
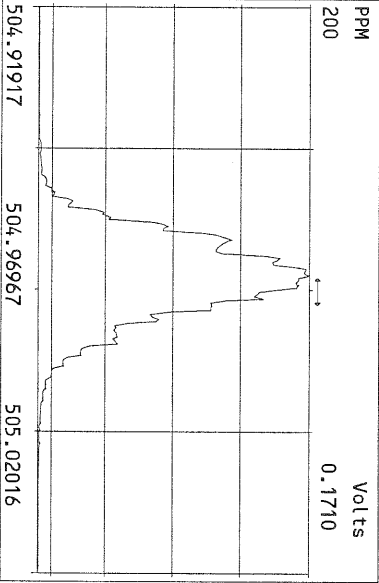
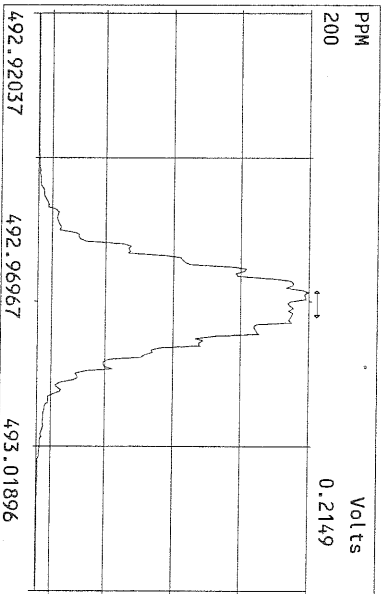
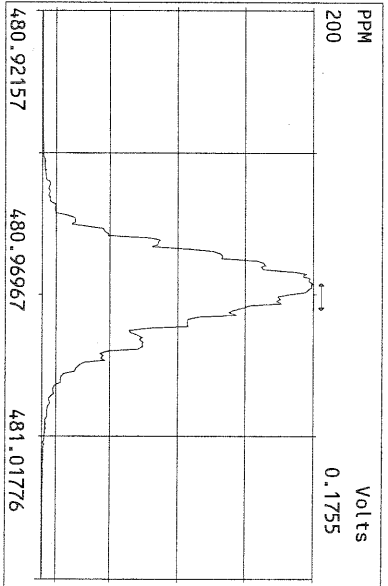
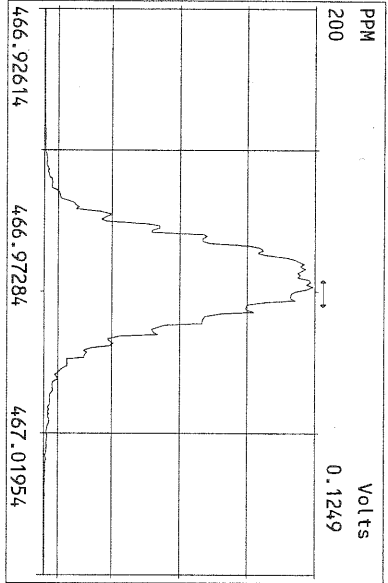
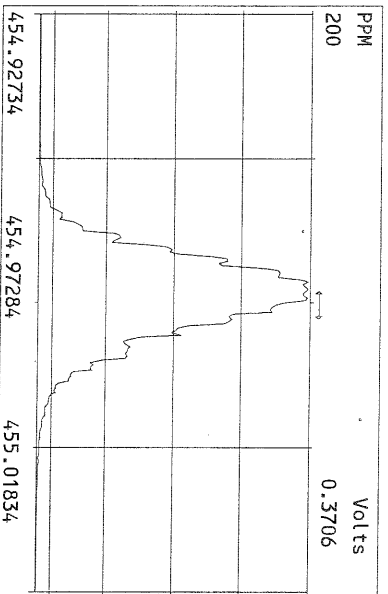
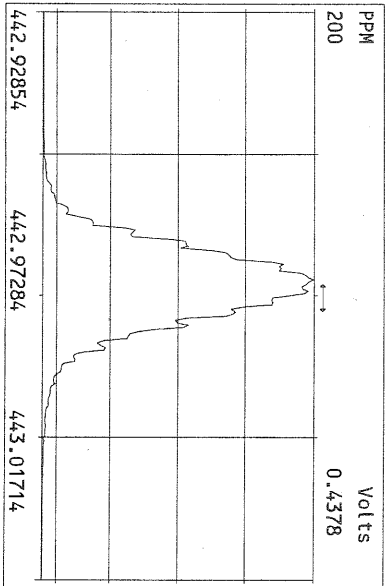
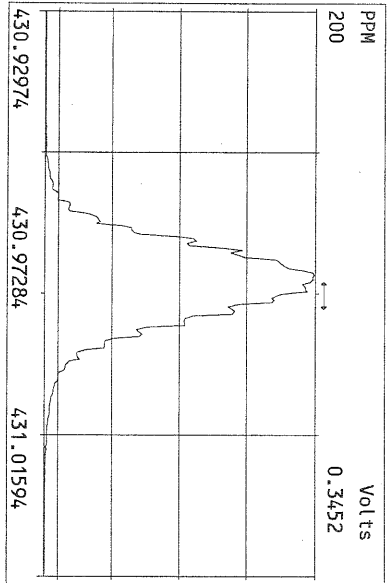
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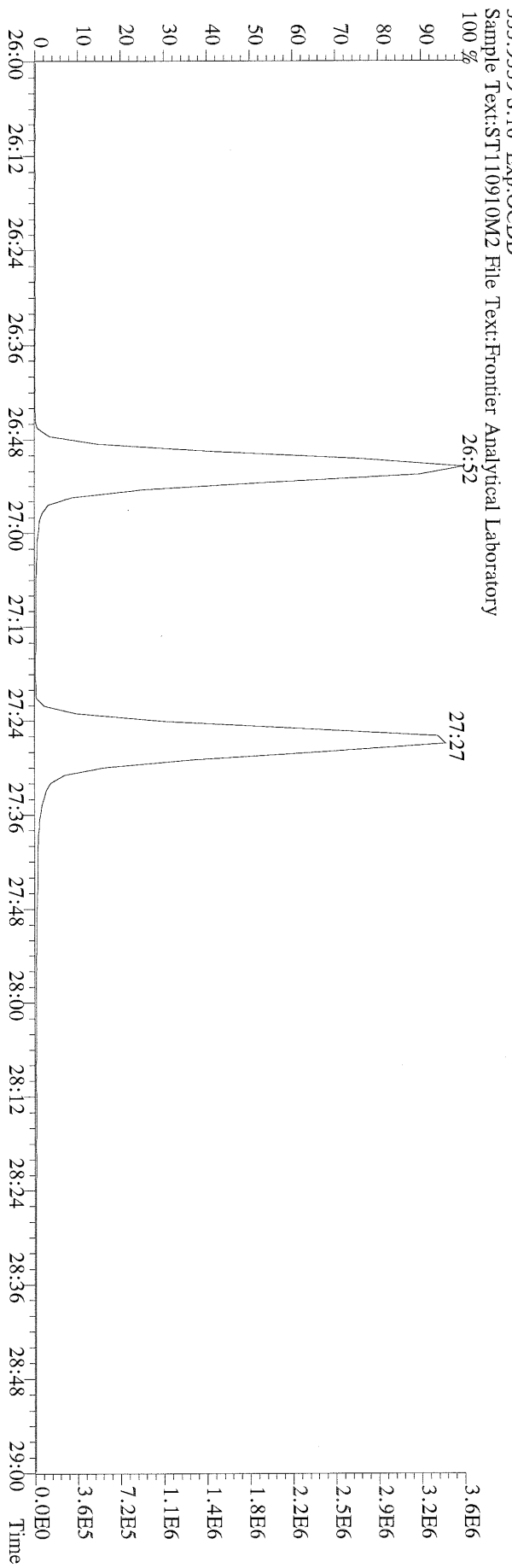
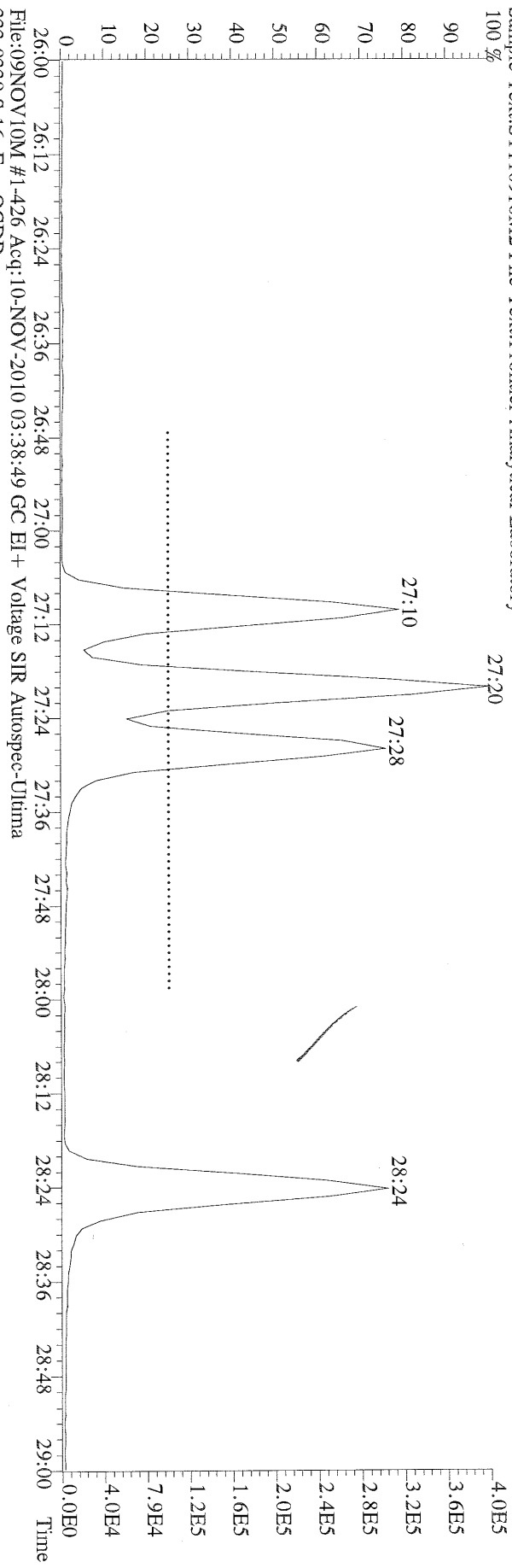




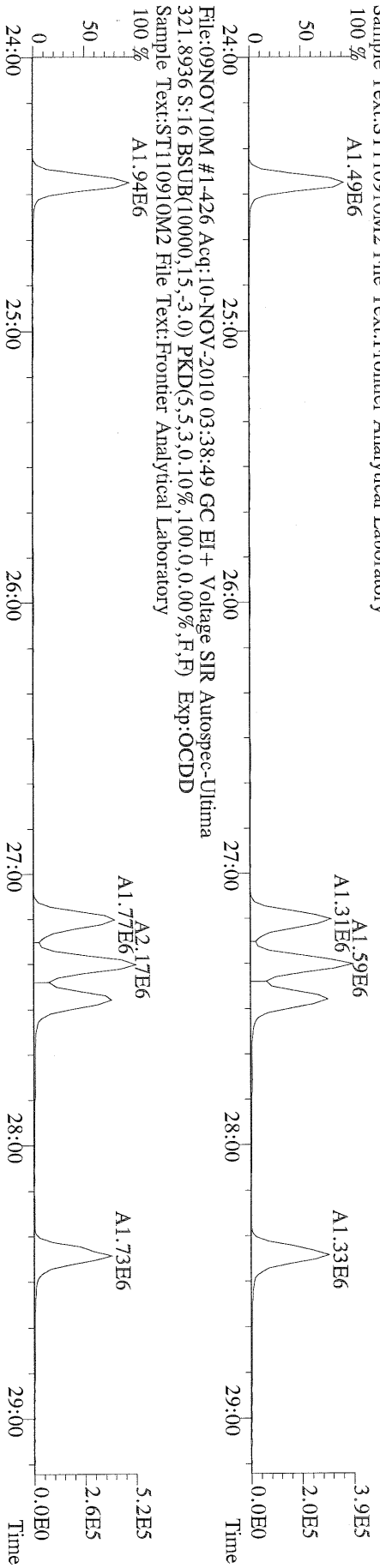




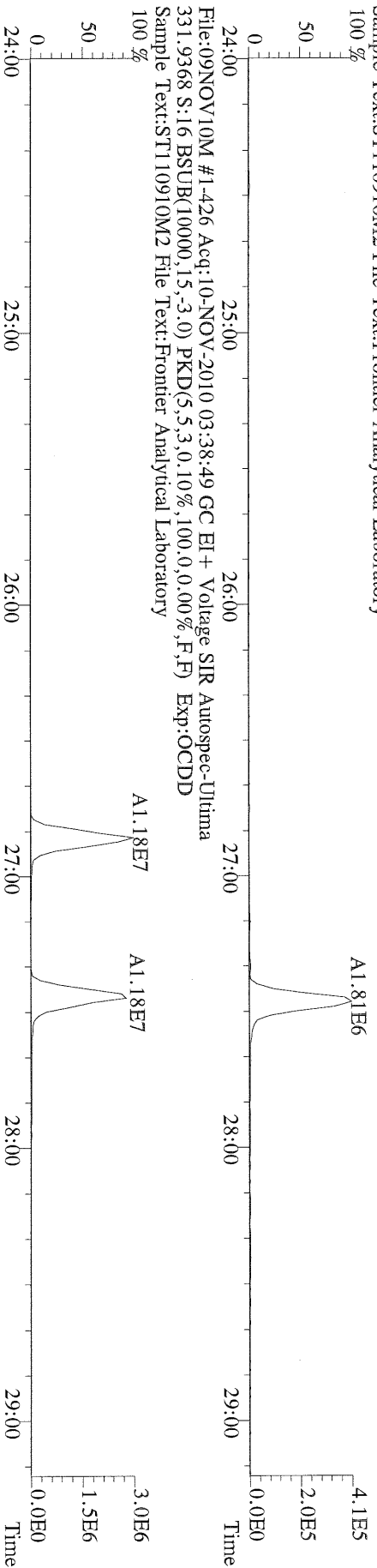
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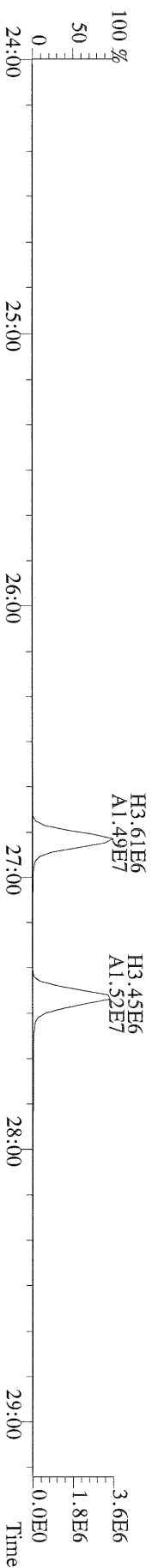
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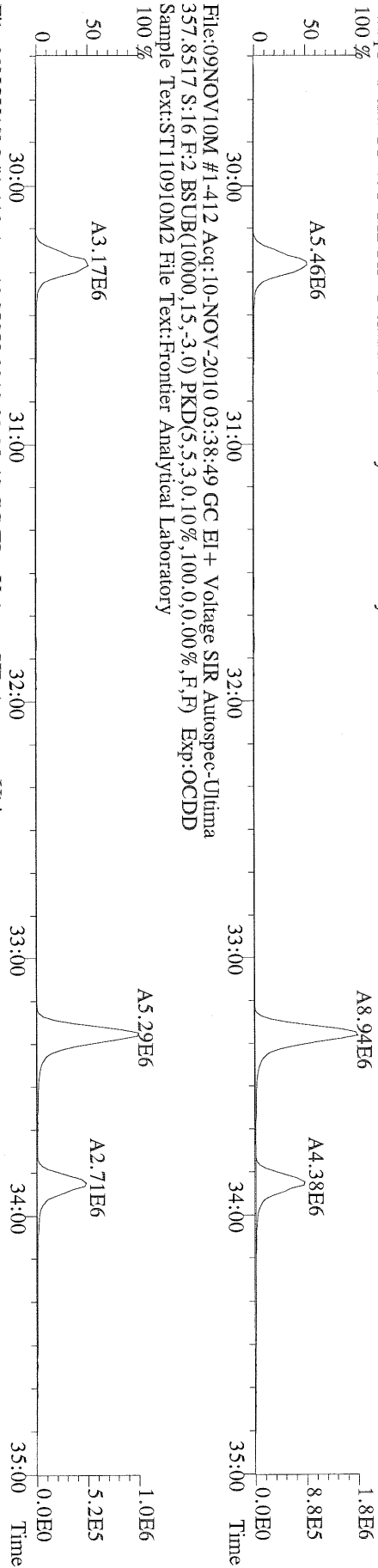
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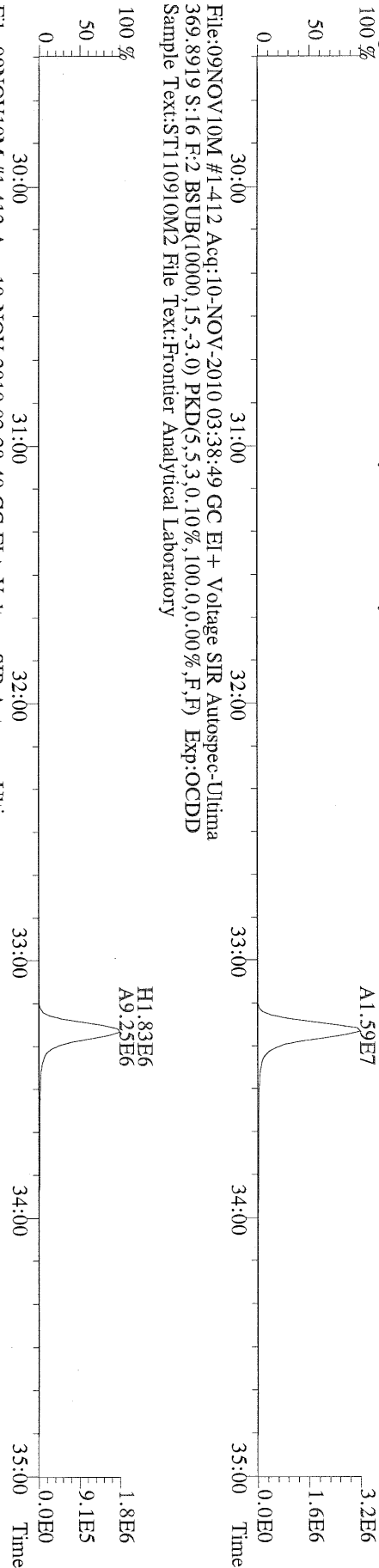
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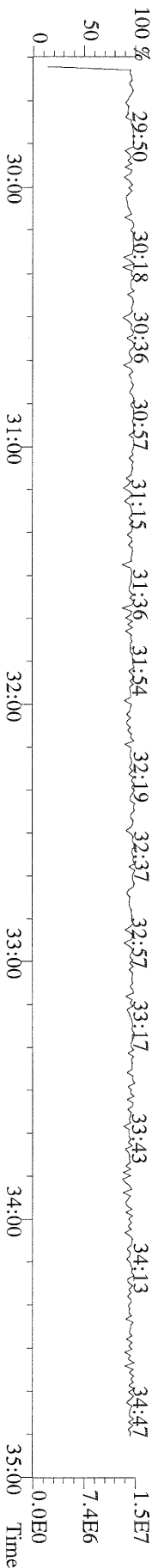
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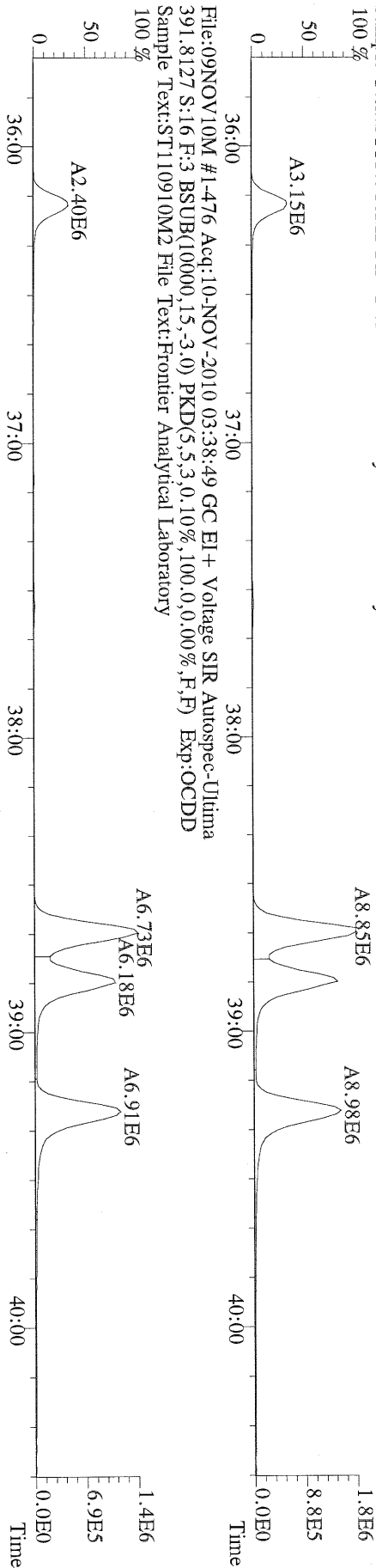
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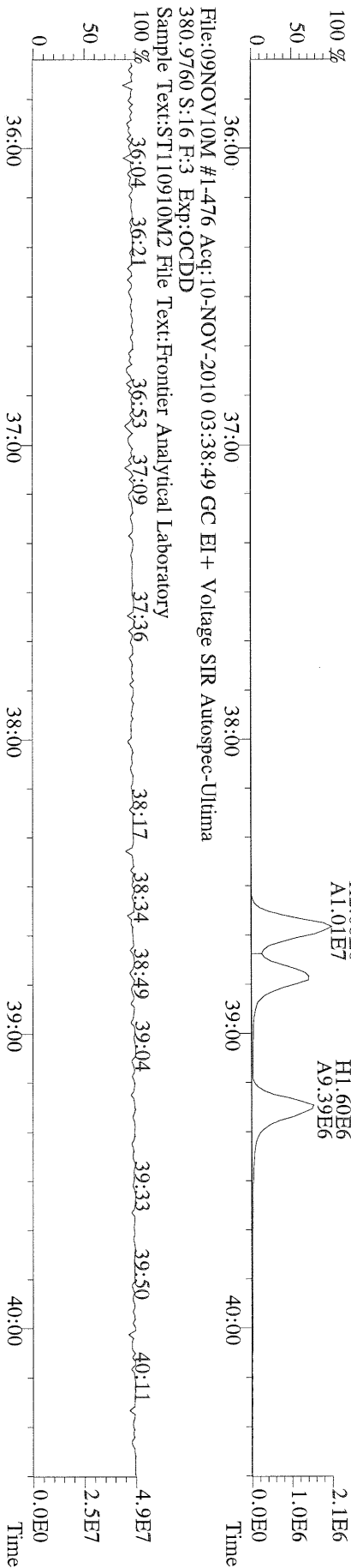
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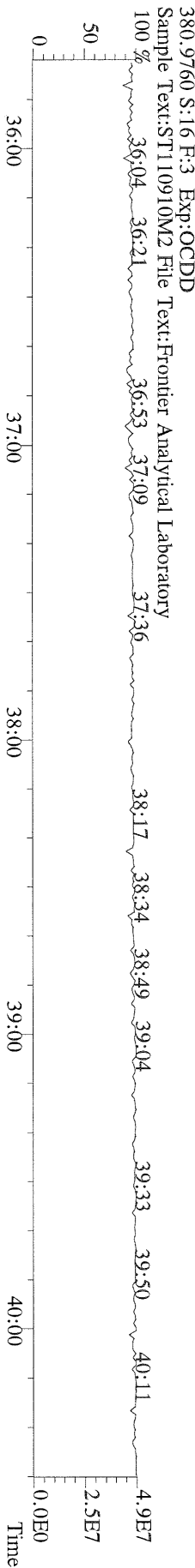
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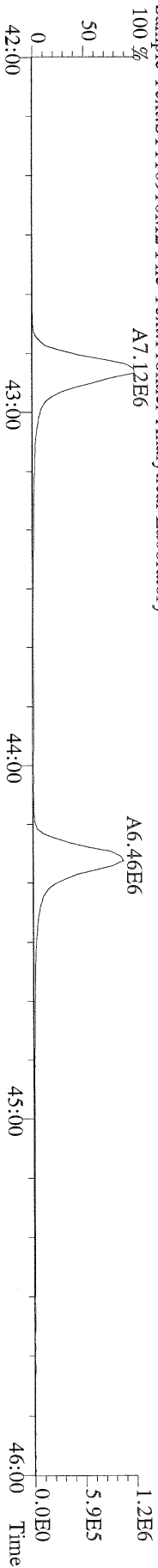
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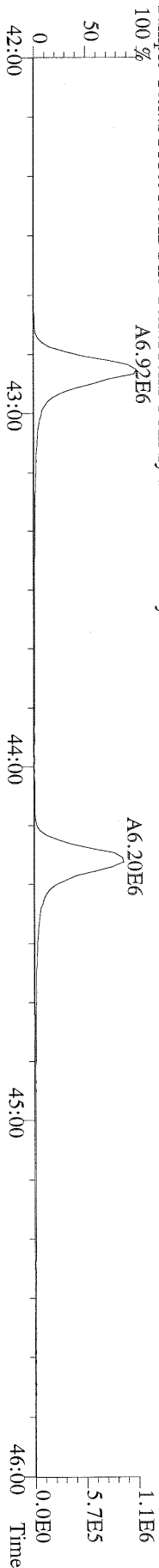
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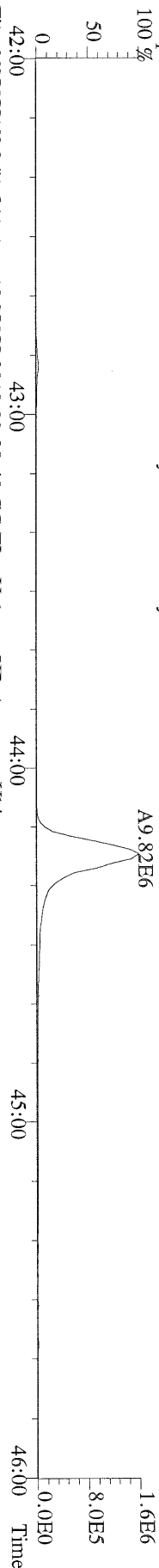
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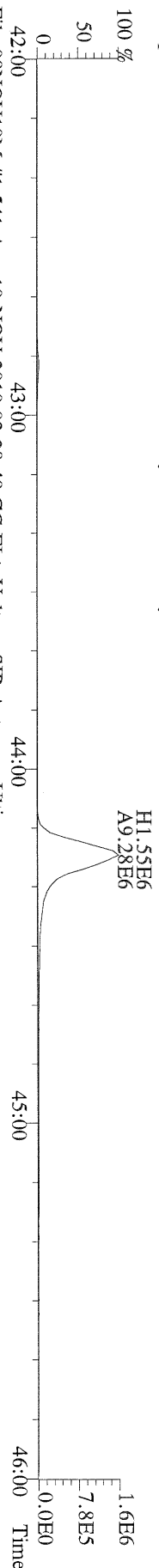
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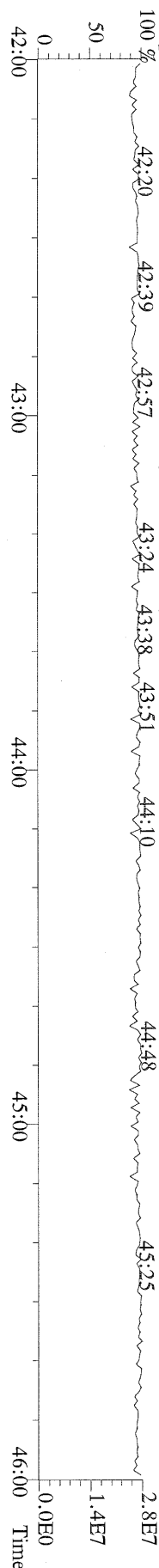
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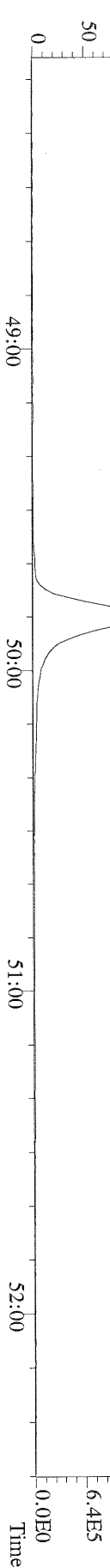
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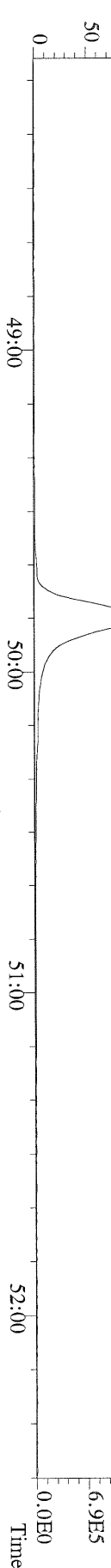
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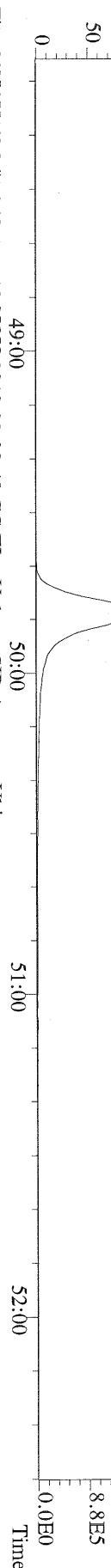
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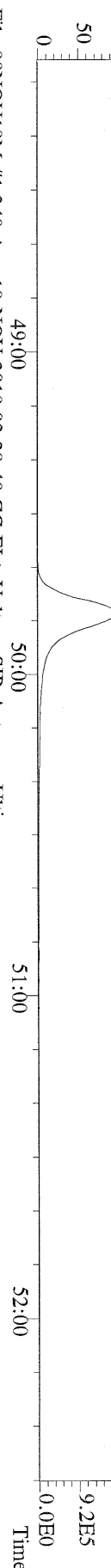
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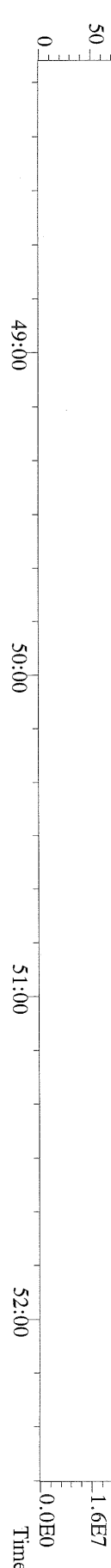
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469.7780 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
Sample Text:ST110910M2 File Text:Frontier Analytical Laboratory
100 %



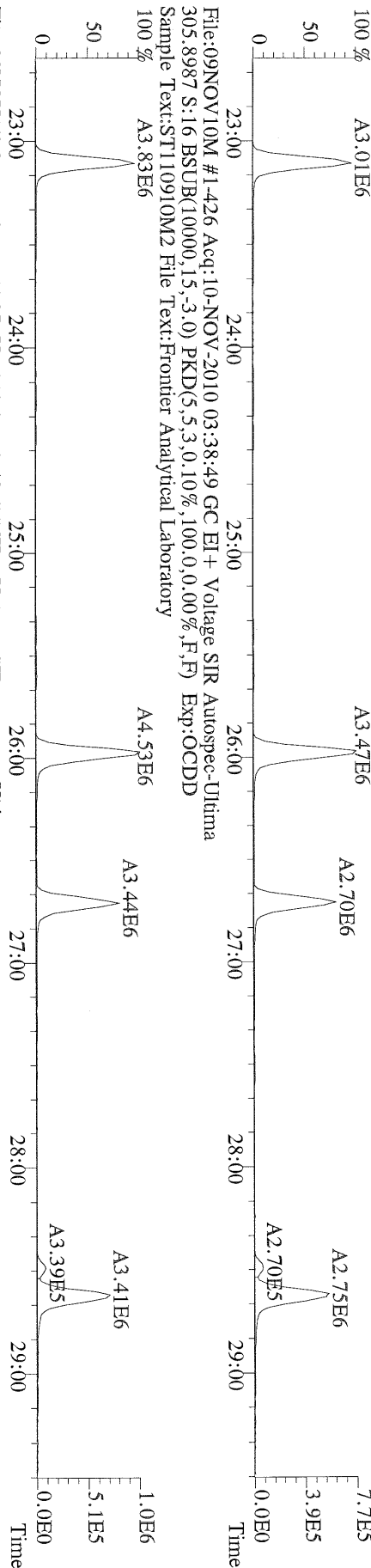
File:09NOV10M #1-348 Acq:10-NOV-2010 03:38:49 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
Sample Text:ST110910M2 File Text:Frontier Analytical Laboratory



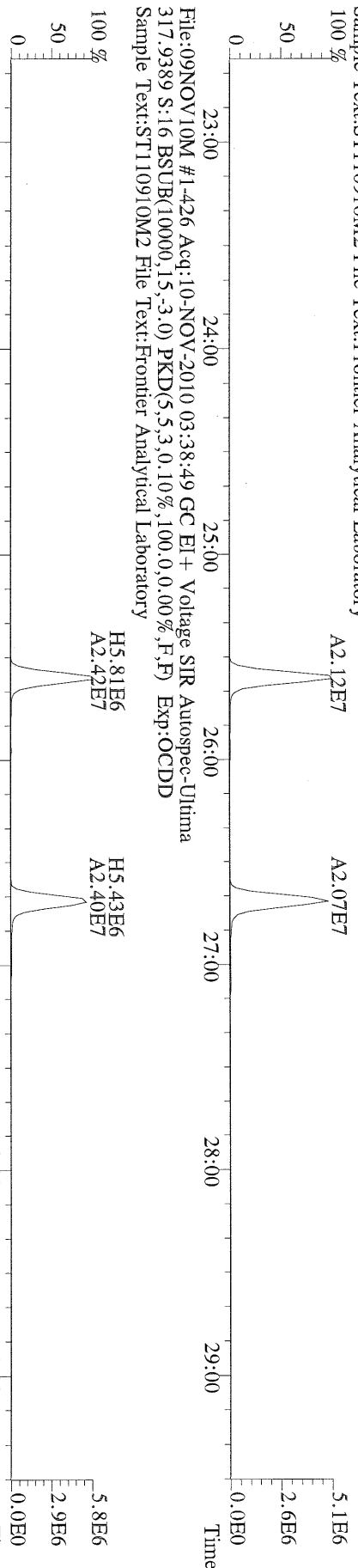
File:09NOV10M #1-348 Acq:10-NOV-2010 03:38:49 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:16 F:5 Exp:OCDD
Sample Text:ST110910M2 File Text:Frontier Analytical Laboratory



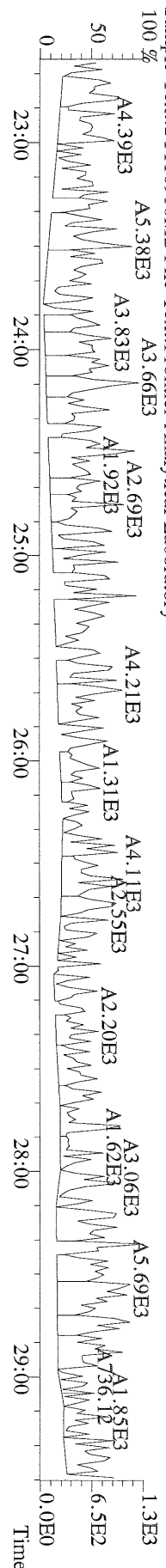
File:09NOV10M #1-426 Acq:10-NOV-2010 03:38:49 GC EI+ Voltage SIR Autospec-Ultima
 303.9016 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:ST110910M2 File Text:Frontier Analytical Laboratory



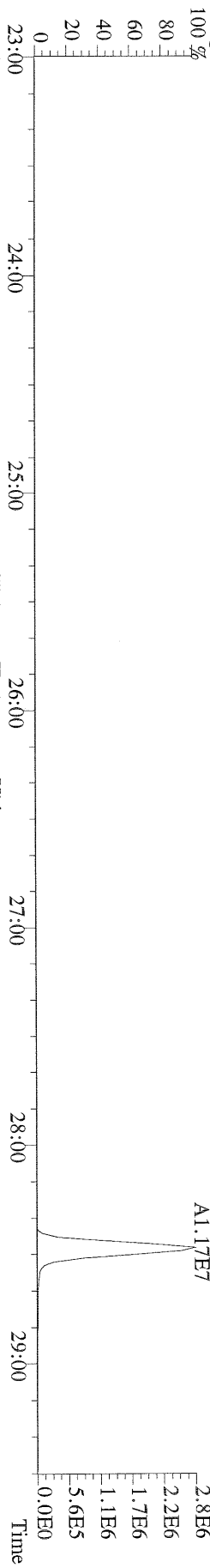
File:09NOV10M #1-426 Acq:10-NOV-2010 03:38:49 GC EI+ Voltage SIR Autospec-Ultima
 315.9419 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:ST110910M2 File Text:Frontier Analytical Laboratory



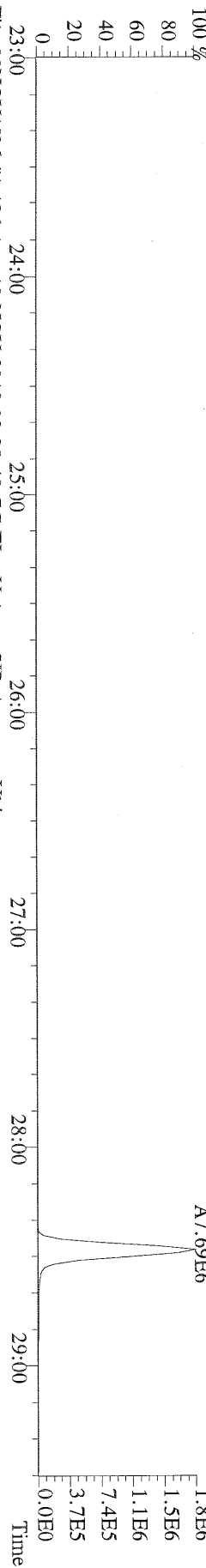
File:09NOV10M #1-426 Acq:10-NOV-2010 03:38:49 GC EI+ Voltage SIR Autospec-Ultima
 375.8364 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:ST110910M2 File Text:Frontier Analytical Laboratory



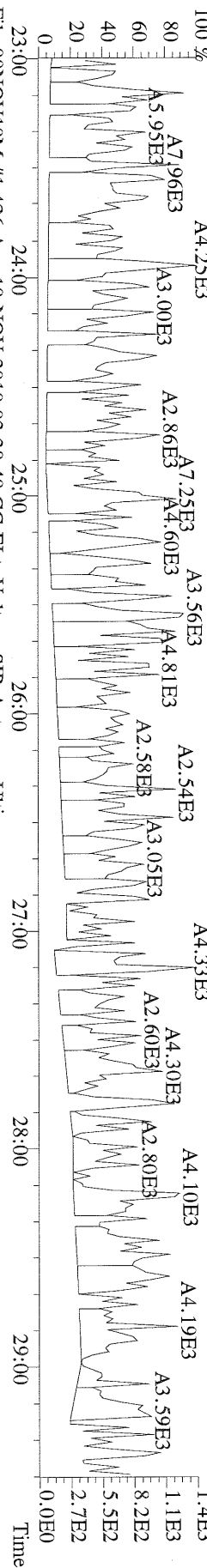
File:09NOV10M #1-426 Acq:10-NOV-2010 03:38:49 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110910M2 File Text:Frontier Analytical Laboratory



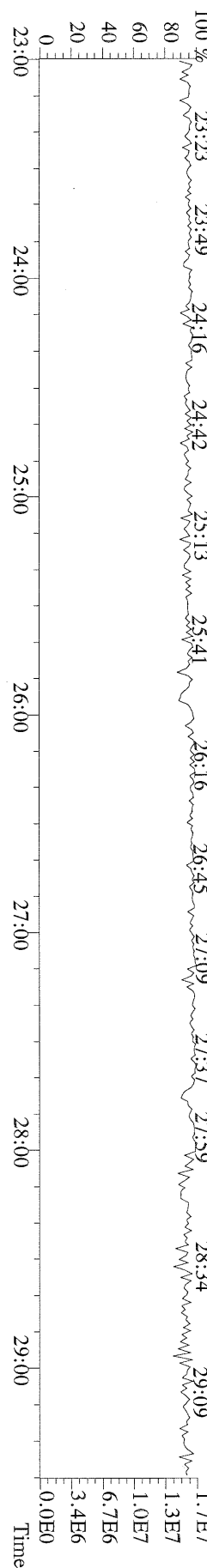
File:09NOV10M #1-426 Acq:10-NOV-2010 03:38:49 GC EI+ Voltage SIR Autospec-Ultima
 341.8568 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110910M2 File Text:Frontier Analytical Laboratory



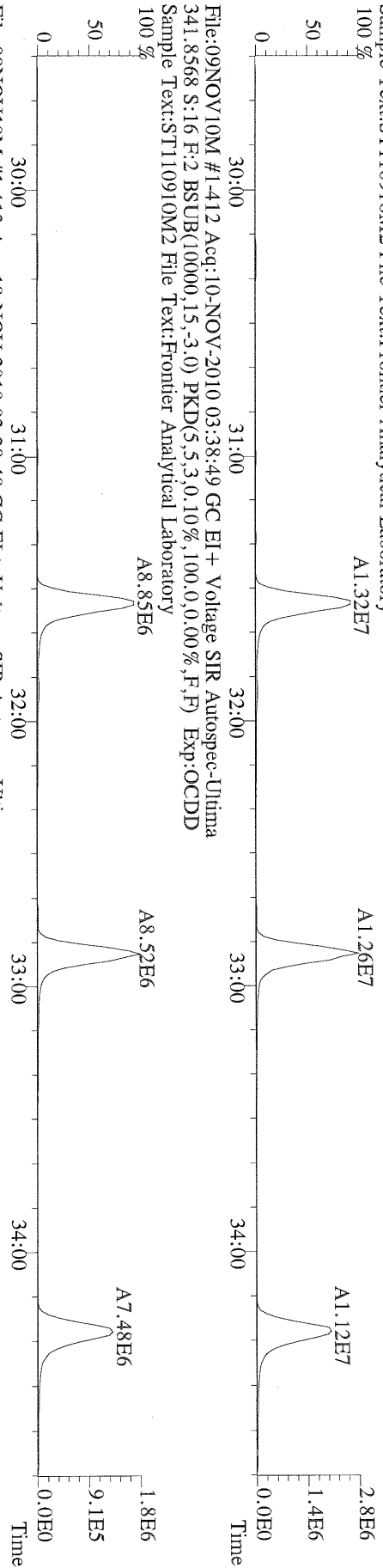
File:09NOV10M #1-426 Acq:10-NOV-2010 03:38:49 GC EI+ Voltage SIR Autospec-Ultima
 409.7974 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
 Sample Text:ST110910M2 File Text:Frontier Analytical Laboratory



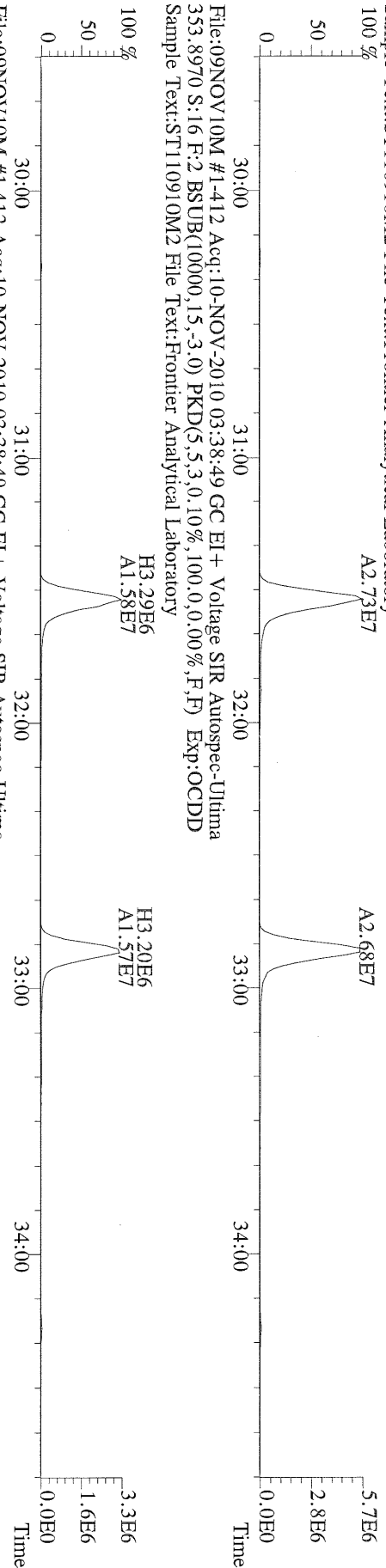
File:09NOV10M #1-426 Acq:10-NOV-2010 03:38:49 GC EI+ Voltage SIR Autospec-Ultima
 316.9824 S:16 Exp:OCDD
 Sample Text:ST110910M2 File Text:Frontier Analytical Laboratory



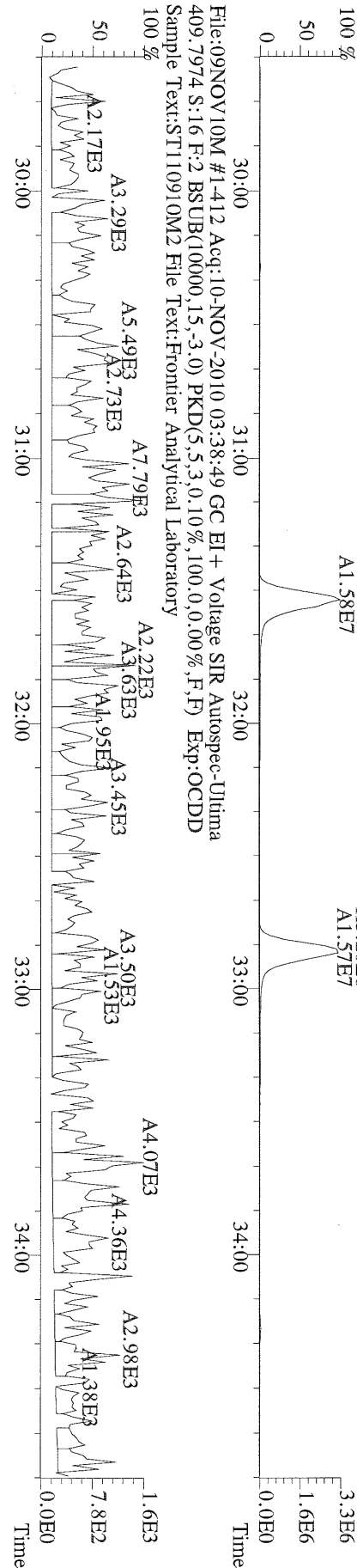
File:09NOV10M #1-412 Acq:10-NOV-2010 03:38:49 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
Sample Text:ST110910M2 File Text:Frontier Analytical Laboratory



File:09NOV10M #1-412 Acq:10-NOV-2010 03:38:49 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
Sample Text:ST110910M2 File Text:Frontier Analytical Laboratory



File:09NOV10M #1-412 Acq:10-NOV-2010 03:38:49 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
Sample Text:ST110910M2 File Text:Frontier Analytical Laboratory



File:09NOV10M #1-412 Acq:10-NOV-2010 03:38:49 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
Sample Text:ST110910M2 File Text:Frontier Analytical Laboratory

