


Results:		GC Column: DB5	Amount: 1.000	NATO 1989 Tox: 103		WHO 1998 Tox: 129		WHO 2005 Tox:		119
Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL	DL
2,3,7,8-TCDD	3.08e+06	0.84 y	27:18	1.11	11.6		2.50	-	-	*
1,2,3,7,8-PeCDD	1.37e+07	1.47 y	33:09	1.10	51.9		2.50	-	-	*
1,2,3,4,7,8-HxCDD	1.29e+07	1.24 y	38:31	1.37	50.5		2.50	-	-	*
1,2,3,6,7,8-HxCDD	1.19e+07	1.24 y	38:41	1.37	50.6		2.50	-	-	*
1,2,3,7,8,9-HxCDD	1.28e+07	1.27 y	39:08	1.36	52.5		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	1.04e+07	0.92 y	44:09	1.45	44.2		2.50	-	-	*
OCDD	1.50e+07	0.87 y	49:43	1.43	103		2.50	-	-	*
2,3,7,8-TCDF	4.84e+06	0.77 y	26:34	1.50	8.74		2.50	-	-	*
1,2,3,7,8-PeCDF	1.64e+07	1.55 y	31:24	0.94	47.7		2.50	-	-	*
2,3,4,7,8-PeCDF	1.53e+07	1.55 y	32:44	0.94	45.7		2.50	-	-	*
1,2,3,4,7,8-HxCDF	1.52e+07	1.27 y	37:07	0.93	53.8		2.50	-	-	*
1,2,3,6,7,8-HxCDF	1.78e+07	1.23 y	37:20	0.82	55.7		2.50	-	-	*
2,3,4,6,7,8-HxCDF	1.60e+07	1.25 y	38:16	0.92	54.5		2.50	-	-	*
1,2,3,7,8,9-HxCDF	1.76e+07	1.26 y	39:43	1.00	55.7		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	1.29e+07	1.09 y	42:14	1.39	53.0		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	9.82e+06	1.09 y	45:04	1.36	54.5		2.50	-	-	*
OCDF	1.52e+07	0.91 y	50:05	0.79	107		2.50	-	-	*
Rec										
13C-2,3,7,8-TCDD	2.38e+07	0.78 y	27:17	1.02	95.8					95.8
13C-1,2,3,7,8-PeCDD	2.39e+07	1.71 y	33:07	0.84	117					117
13C-1,2,3,4,7,8-HxCDD	1.86e+07	1.23 y	38:29	1.07	101					101
13C-1,2,3,6,7,8-HxCDD	1.71e+07	1.22 y	38:40	1.01	98.7					98.7
13C-1,2,3,4,6,7,8-HpCDD	1.62e+07	1.03 y	44:07	0.86	110					110
13C-OCDD	2.04e+07	0.98 y	49:41	0.55	218					109
13C-2,3,7,8-TCDF	3.69e+07	0.88 y	26:32	0.99	92.5					92.5
13C-1,2,3,7,8-PeCDF	3.64e+07	1.68 y	31:23	0.84	109					109
13C-2,3,4,7,8-PeCDF	3.59e+07	1.66 y	32:42	0.81	110					110
13C-1,2,3,4,7,8-HxCDF	3.05e+07	0.50 y	37:07	1.85	96.2					96.2
13C-1,2,3,6,7,8-HxCDF	3.89e+07	0.50 y	37:18	2.54	89.6					89.6
13C-2,3,4,6,7,8-HxCDF	3.19e+07	0.49 y	38:15	2.01	92.5					92.5
13C-1,2,3,7,8,9-HxCDF	3.18e+07	0.51 y	39:41	2.03	91.4					91.4
13C-1,2,3,4,6,7,8-HpCDF	1.75e+07	0.49 y	42:13	1.11	91.9					91.9
13C-1,2,3,4,7,8,9-HpCDF	1.33e+07	0.50 y	45:03	0.80	96.5					96.5
13C-OCDF	3.60e+07	0.94 y	50:04	1.08	194					97.2
37Cl-2,3,7,8-TCDD	1.79e+06		27:18	0.69	10.7					107
13C-1,2,3,4-TCDD	2.43e+07	0.77 y	26:42	-	54.0					
13C-1,2,3,4-TCDF	4.01e+07	0.88 y	25:27	-	55.4					
13C-1,2,3,7,8,9-HxCDD	1.71e+07	1.21 y	39:07	-	62.1					
Fac Noise-1 Noise-2 DL #Hom										
Total Tetra-Dioxins	1.59e+07		23:22	1.11	60.3		2.50	-	-	* 30
Total Penta-Dioxins	2.99e+07		30:09	1.10	113		2.50	-	-	* 11
Total Hexa-Dioxins	4.33e+07		36:03	1.37	177		2.50	-	-	* 21
Total Hepta-Dioxins	2.30e+07		42:45	1.45	97.9		2.50	-	-	* 39
Total Tetra-Furans	2.39e+07		22:57	1.50	43.2		2.50	-	-	* 22
1st Fn. Tot Penta-Furans	1.89e+07		28:19	0.94	55.8		2.50	-	-	* PeCDF 1
Total Penta-Furans	4.73e+07		30:05	0.94	139		2.50	-	-	* 195 22
Total Hexa-Furans	7.82e+07		35:10	0.91	258		2.50	-	-	* 24
Total Hepta-Furans	2.34e+07		41:53	1.38	111		2.50	-	-	* 22

Analyst: 

Date: 2/2/11

Frontier Analytical Laboratory - Acquisition Log

Run Name:01FEB11M

Instrument: FAL3

GC: DB5

Experiment:OCDD

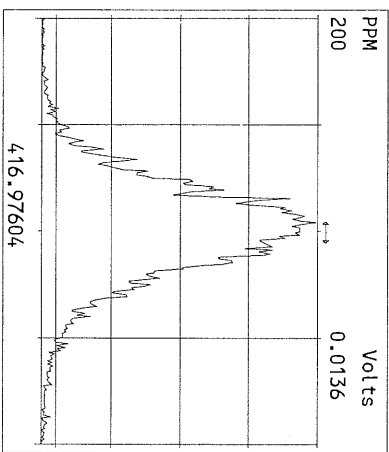
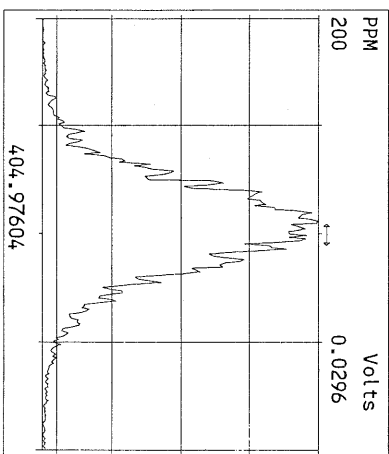
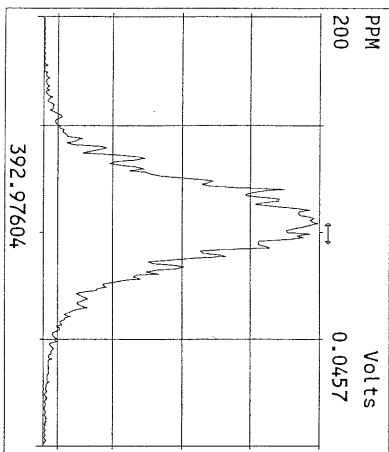
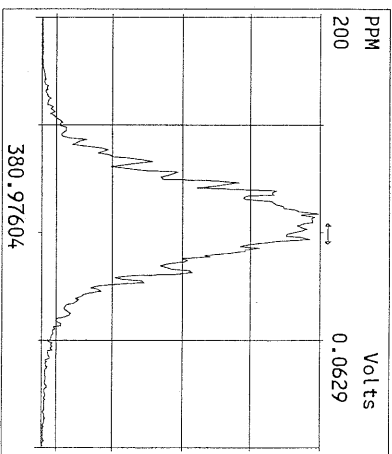
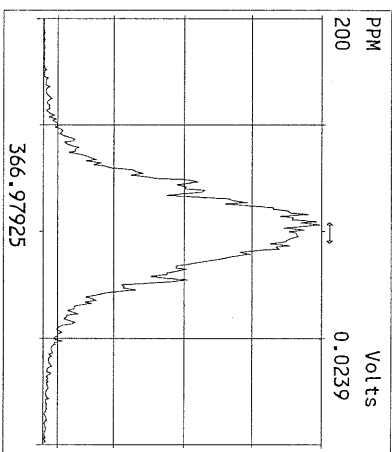
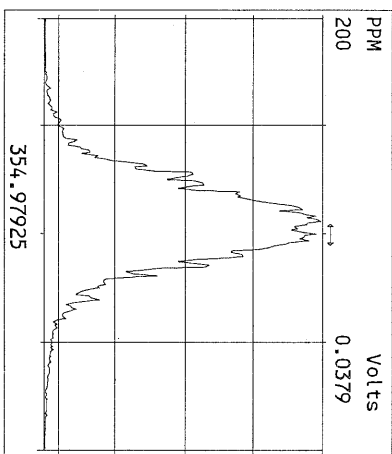
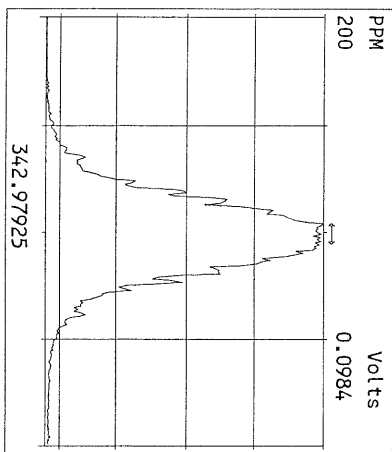
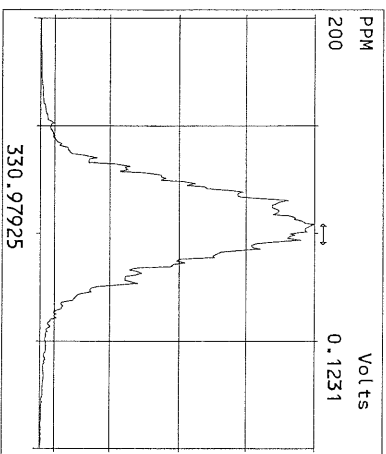
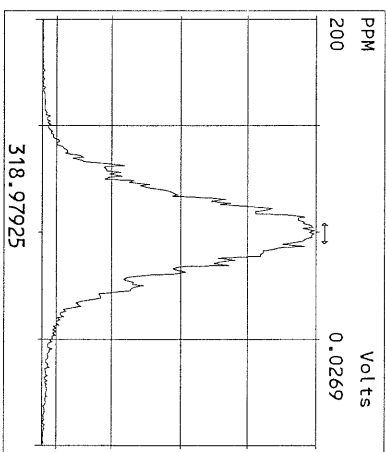
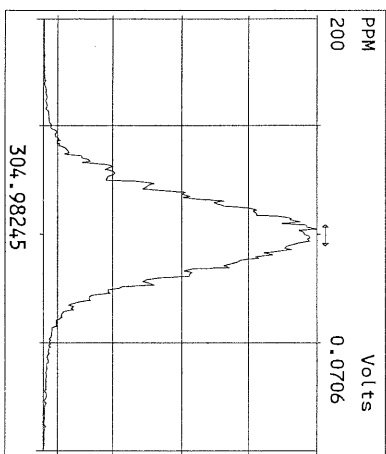
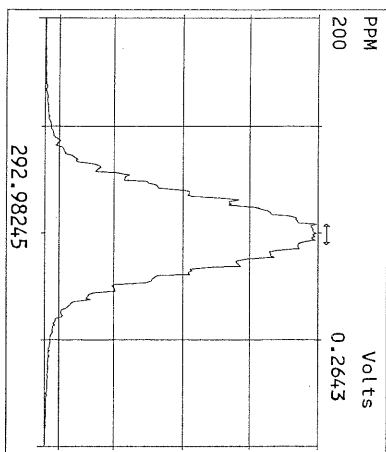
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01FEB11M 15	SB020111M1	Solvent Blank	2-FEB-11 03:52:48	ST020111M1	ST020111M2	TC

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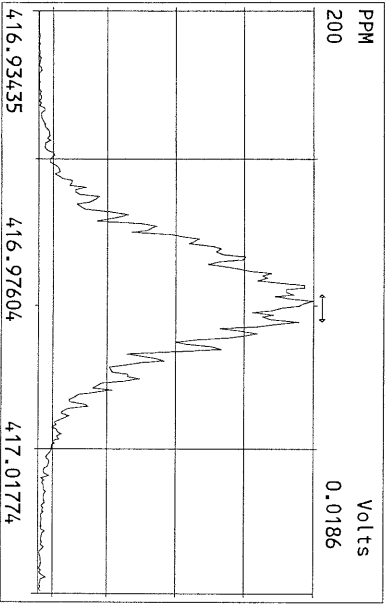
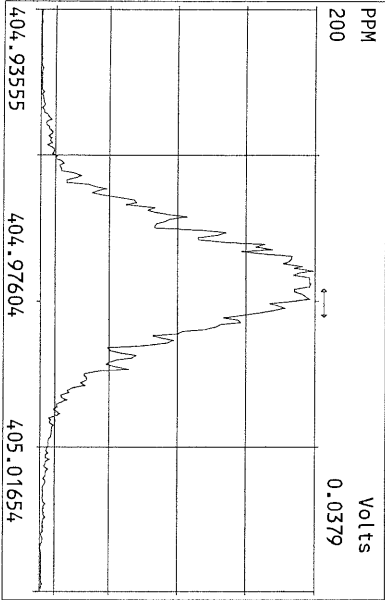
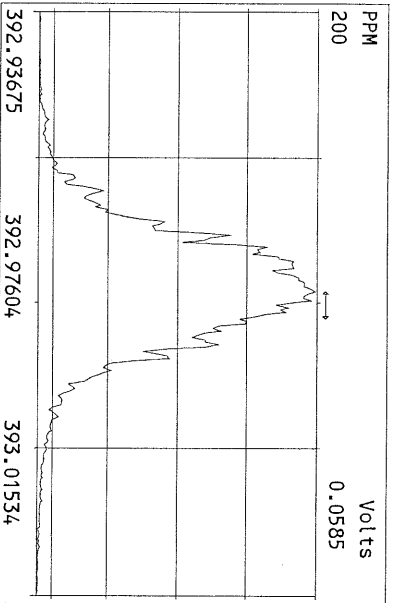
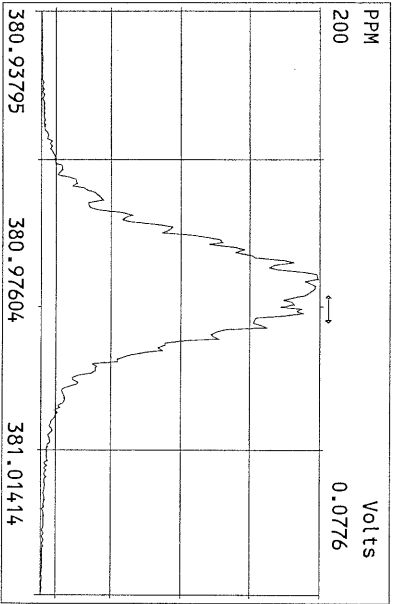
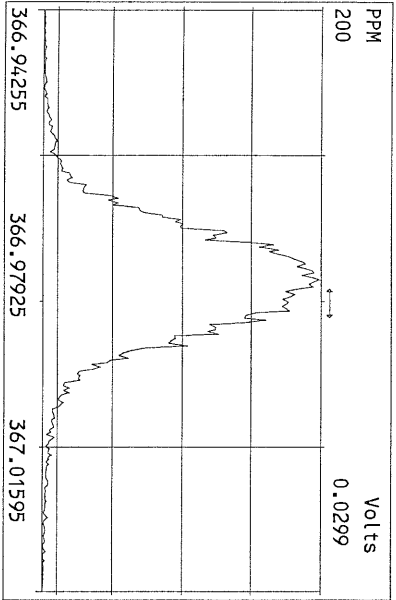
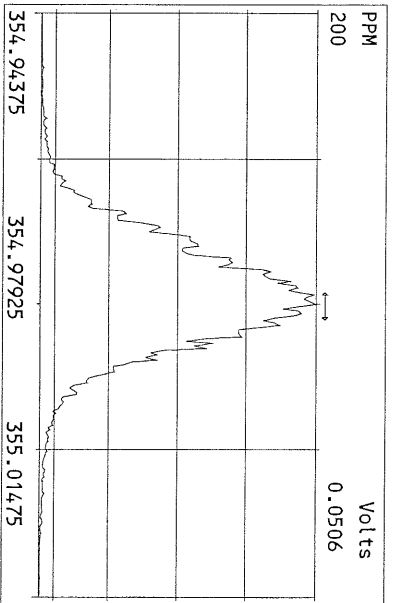
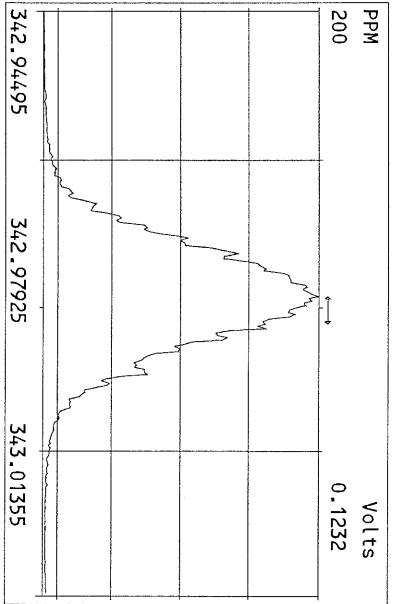
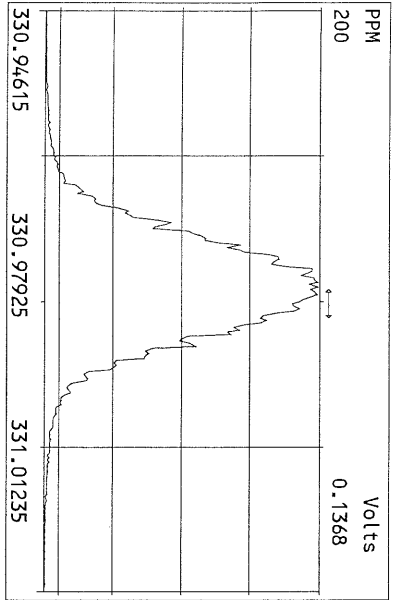
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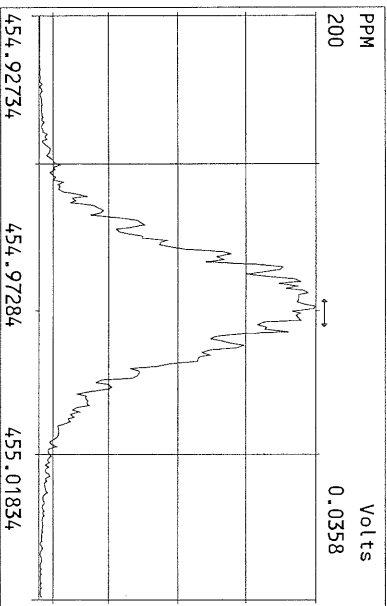
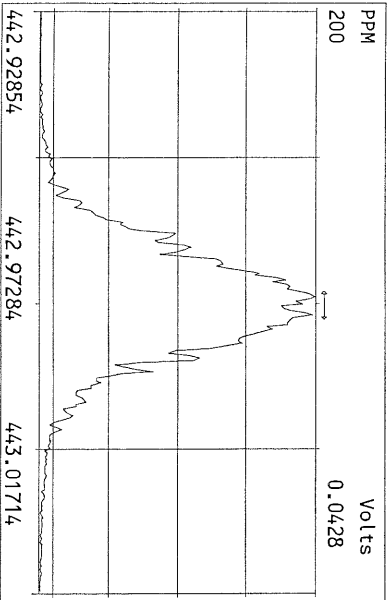
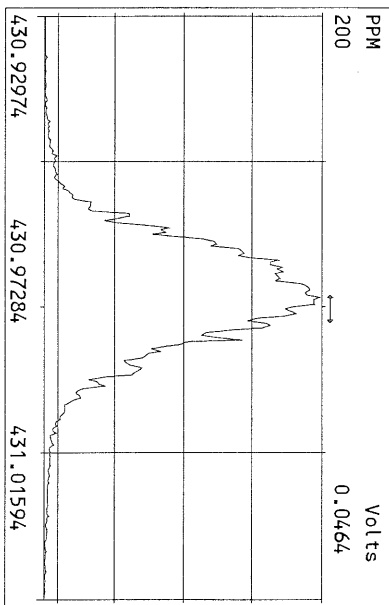
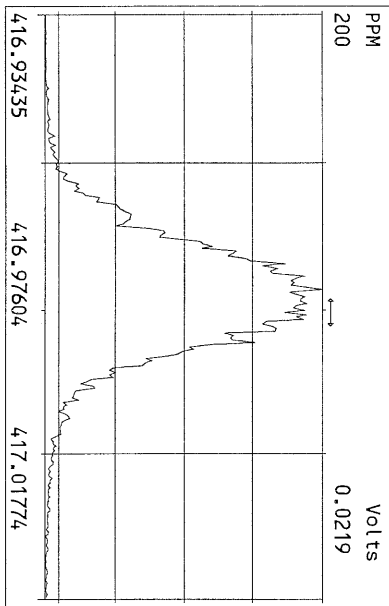
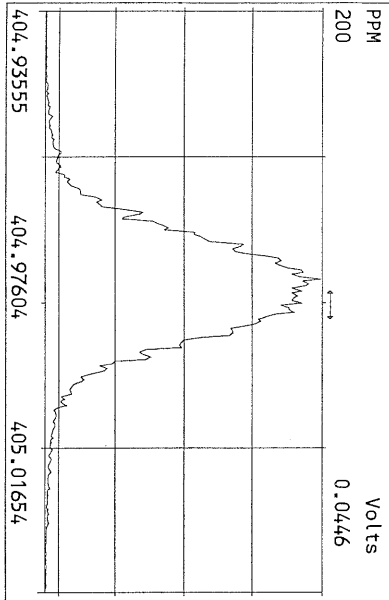
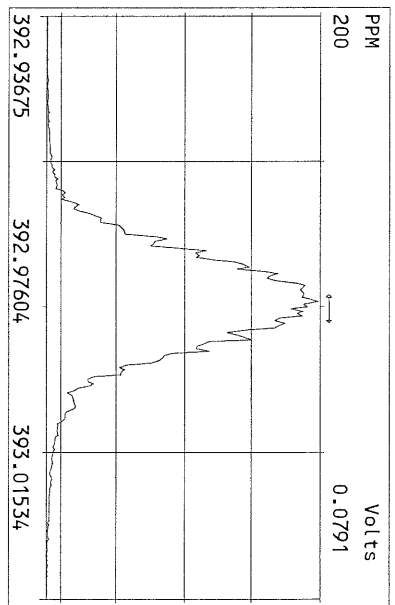
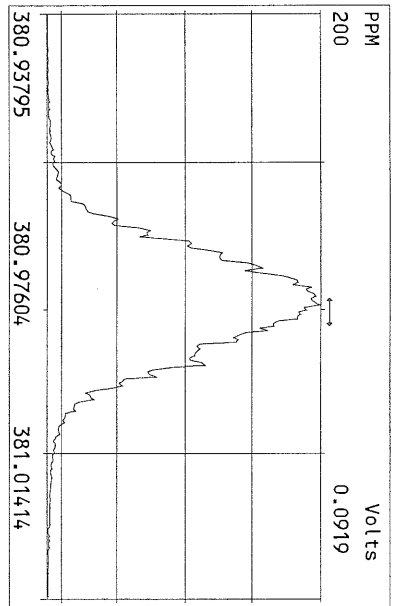
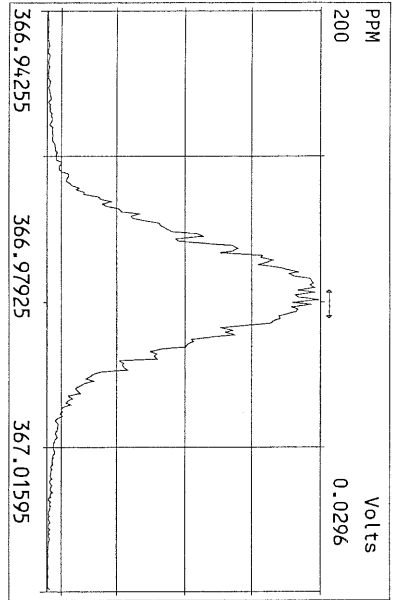
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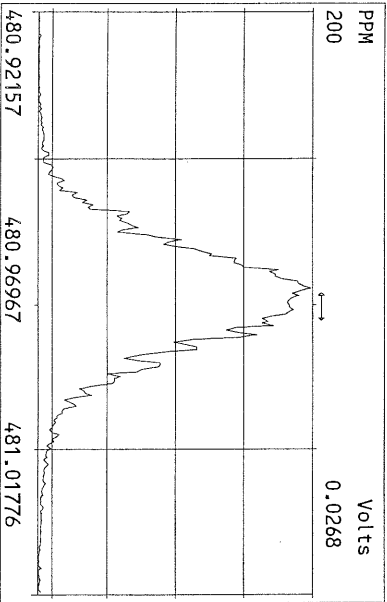
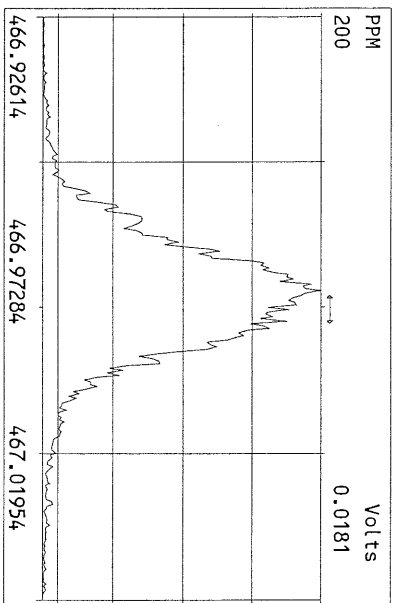
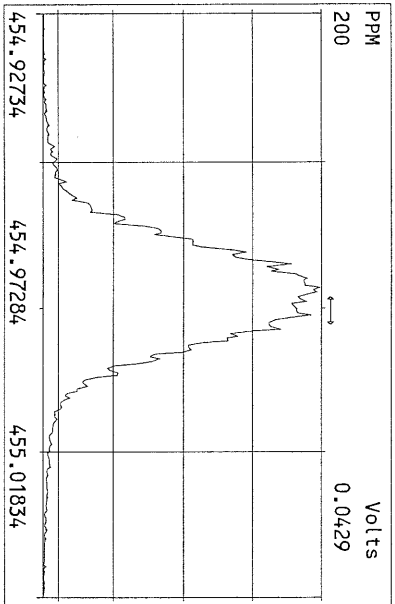
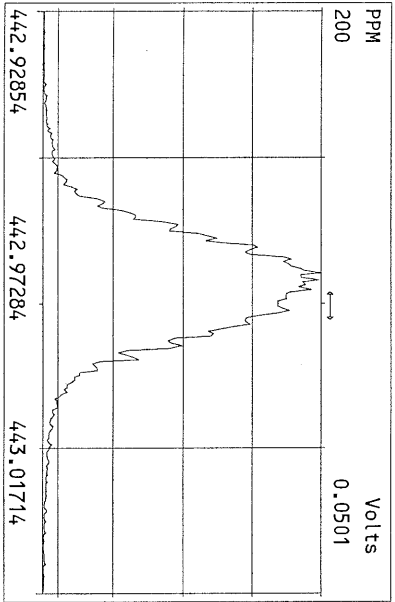
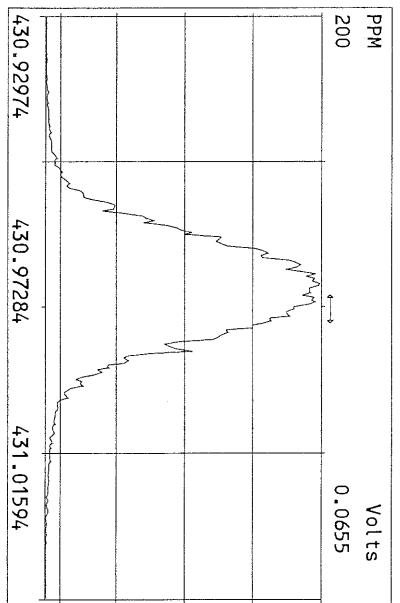
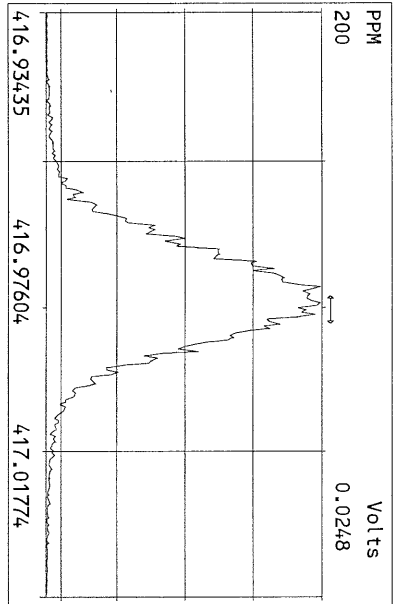
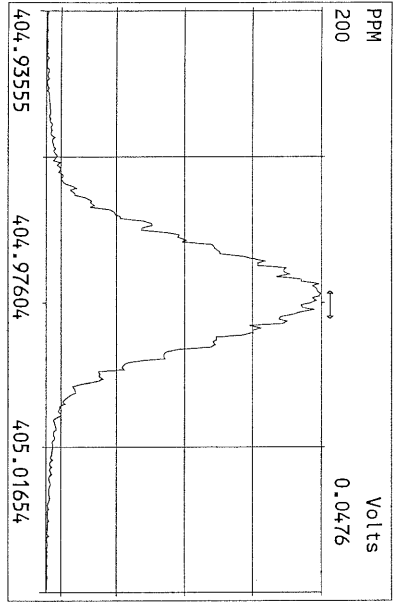
Peak Locate Examination: 1-FEB-2011:14:56 File:01FEB11M
Experiment:OCCD Function:1 Reference:PFK

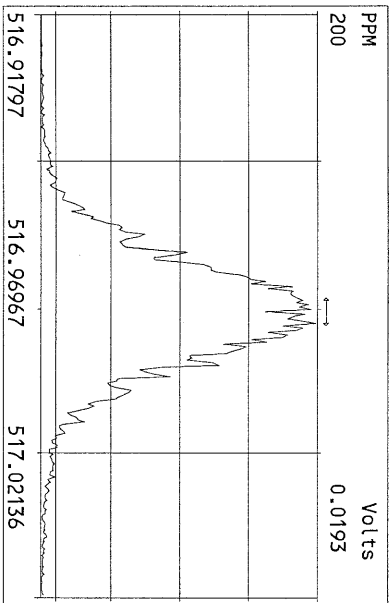
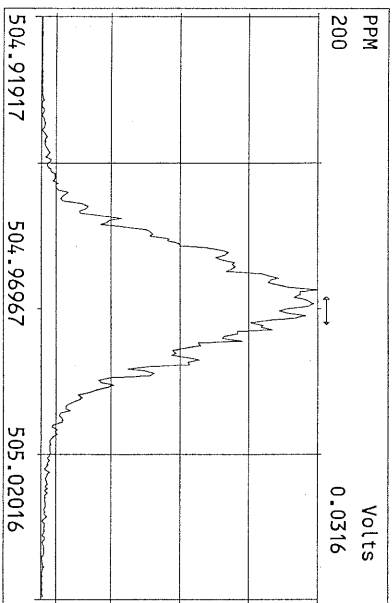
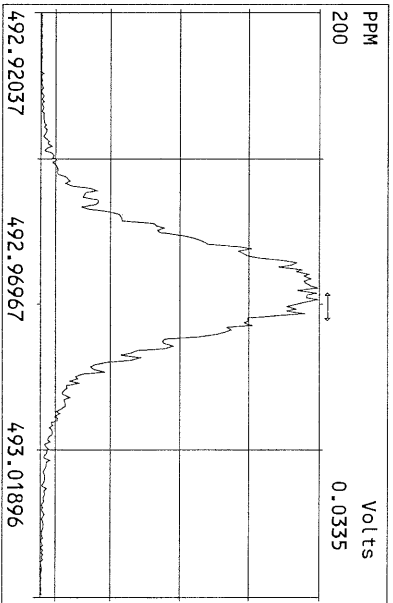
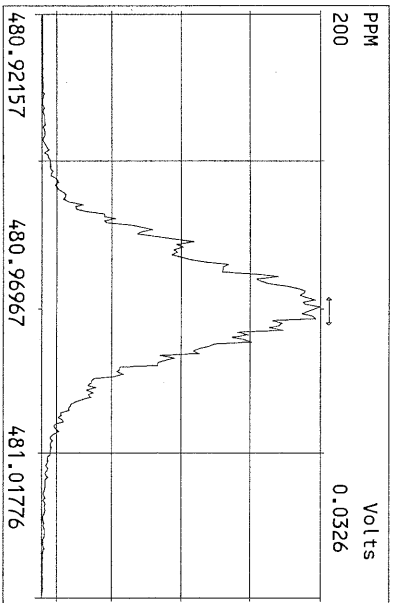
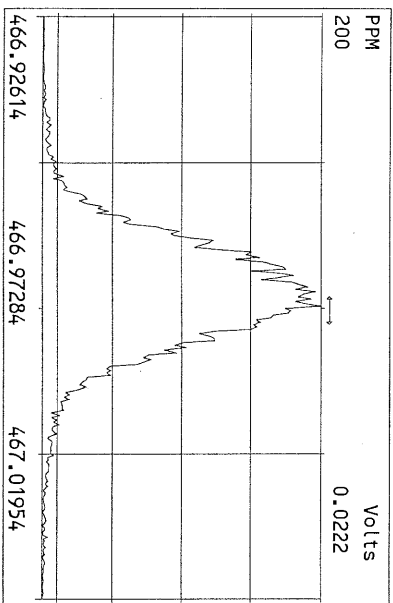
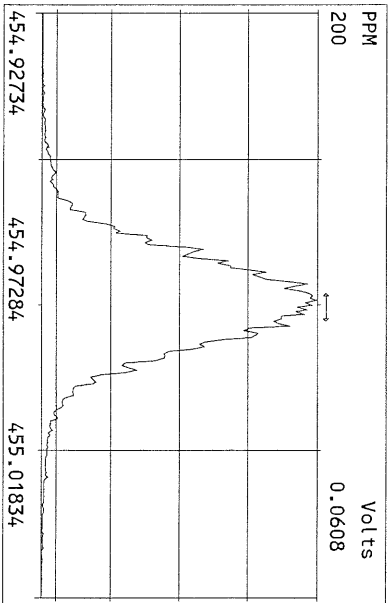
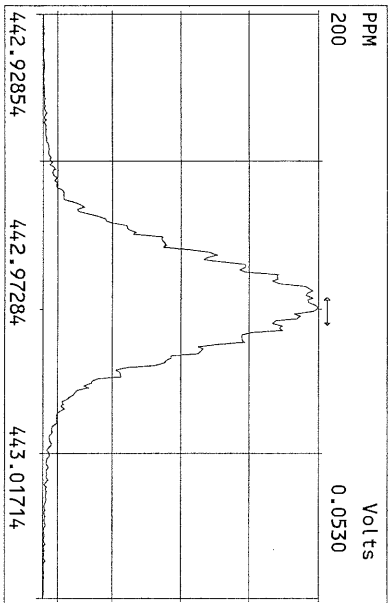
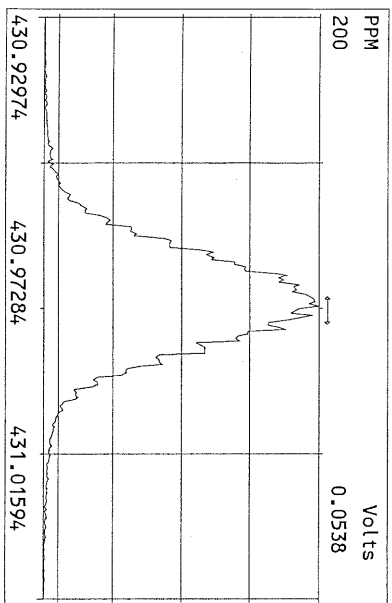


Peak Locate Examination: 1-FEB-2011:14:56 File:01FEB11M
Experiment:OCDD Function:2 Reference:PFK

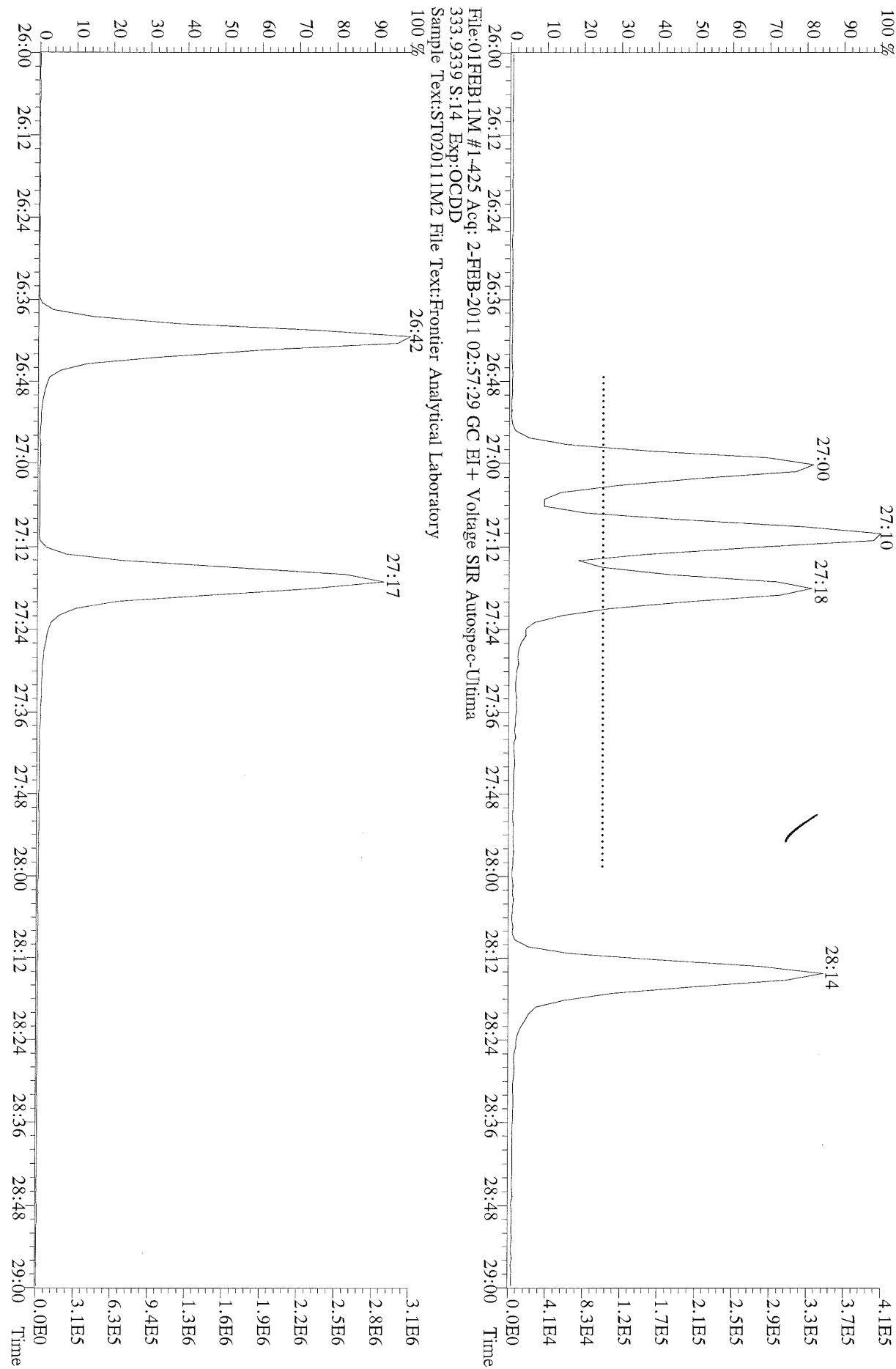




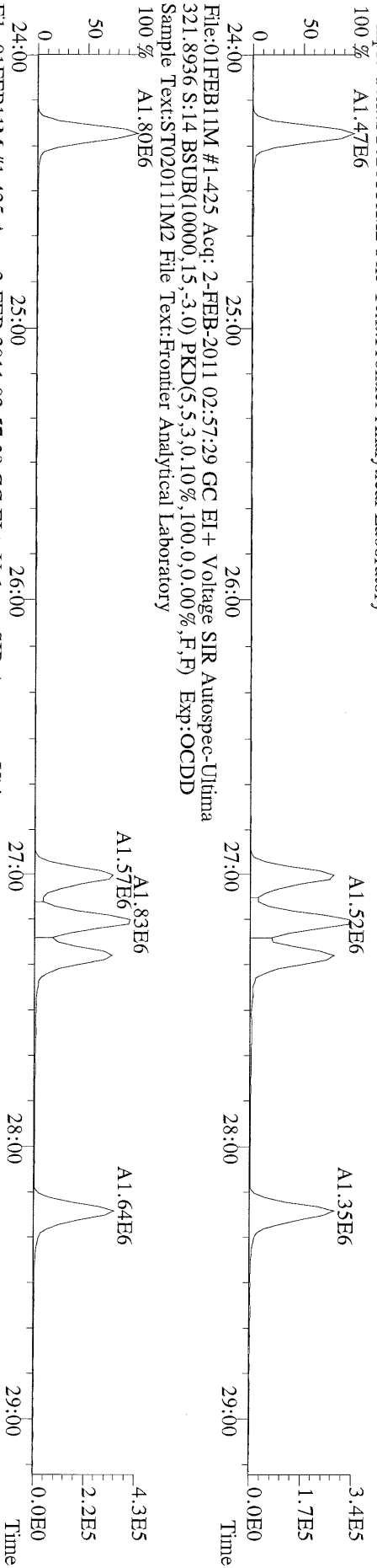




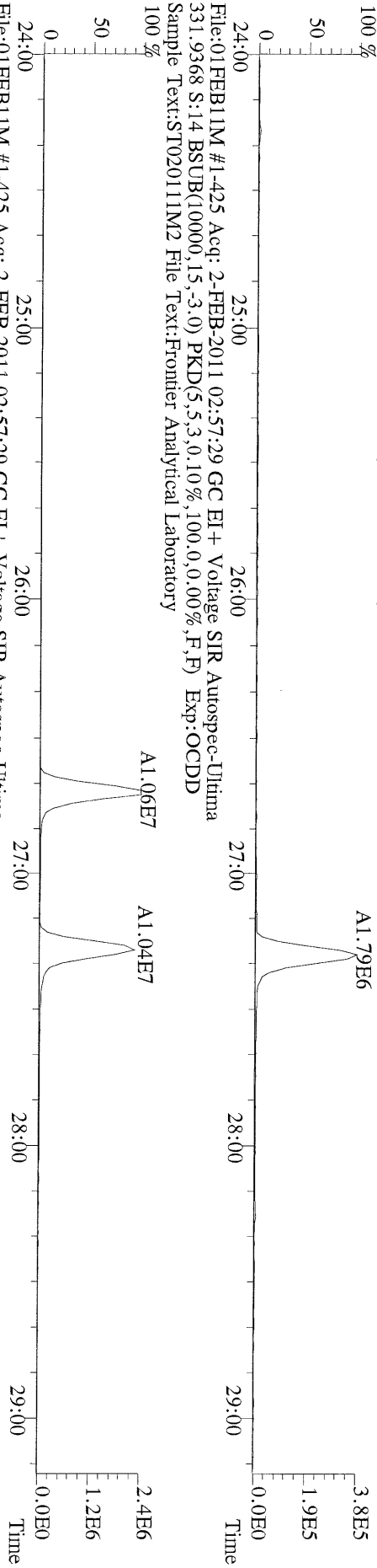
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321.8936 S.14 Exp:OCDD
Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory
100%



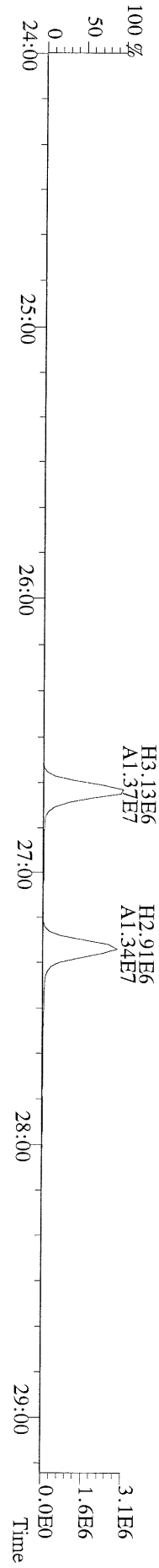
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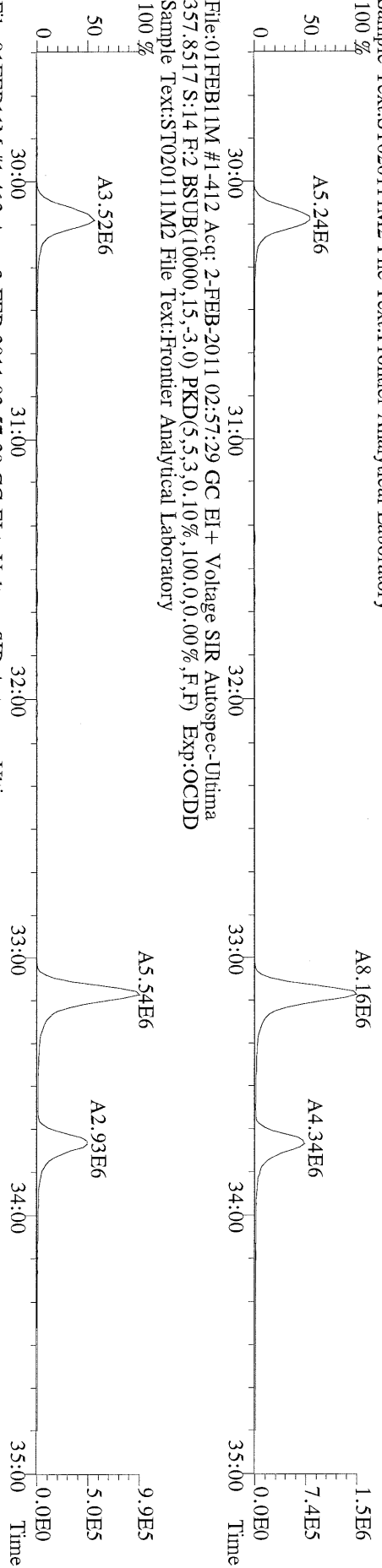
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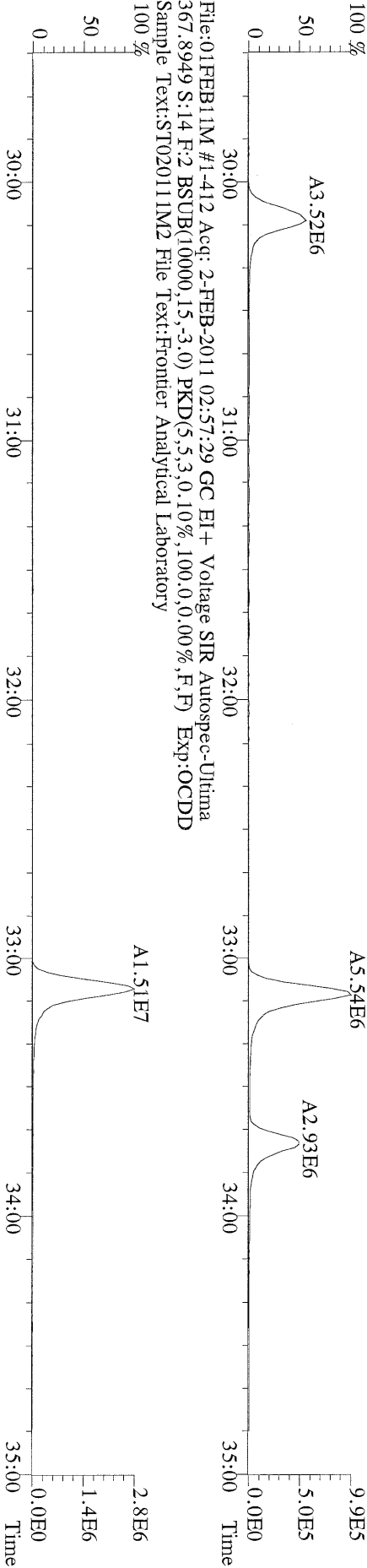
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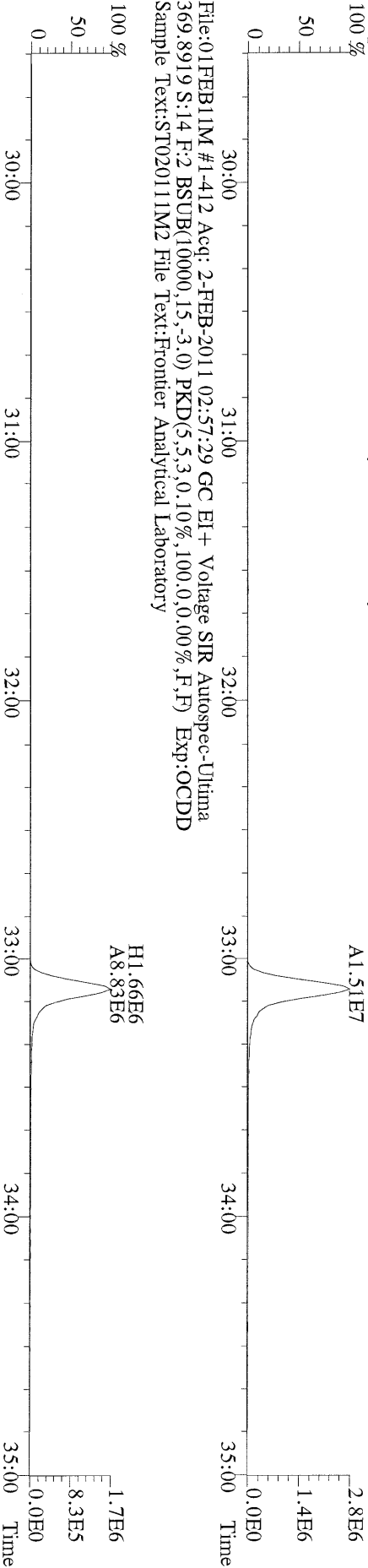
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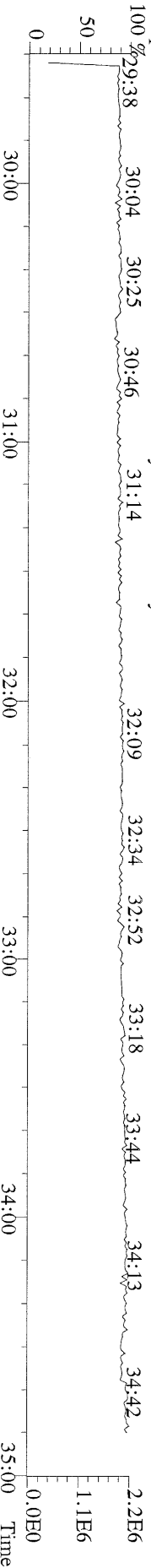
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Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



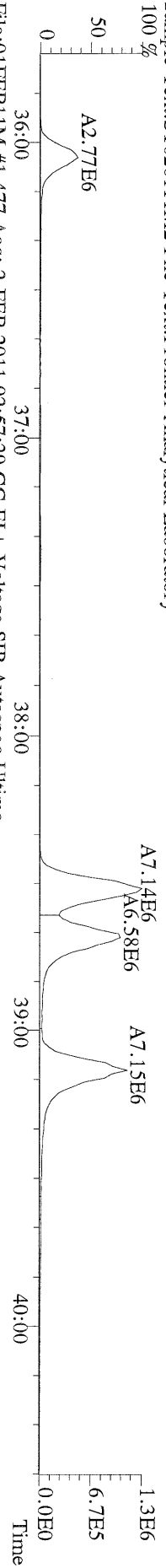
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369.8919 S:14 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



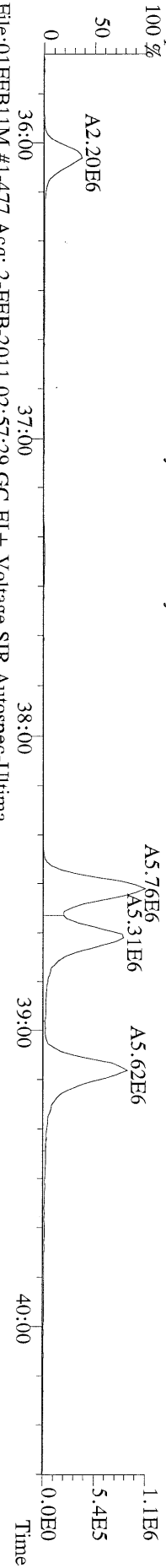
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366.9792 S:14 F:2 Exp:OCDD
Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



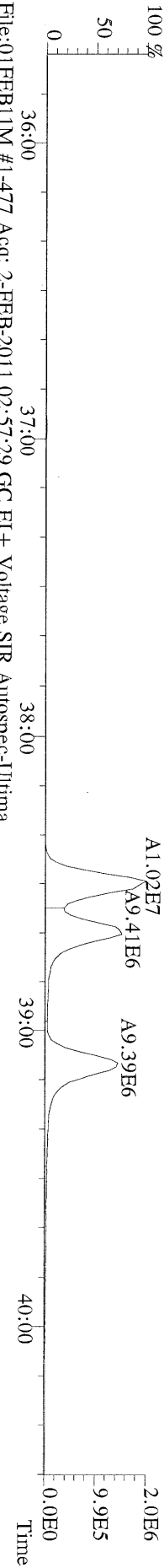
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389.8156 S:14 F:3 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



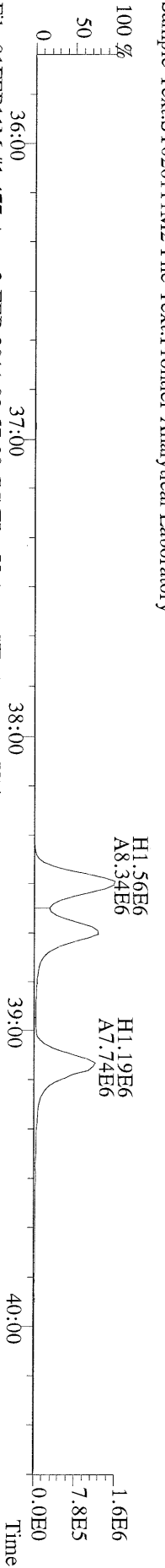
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Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



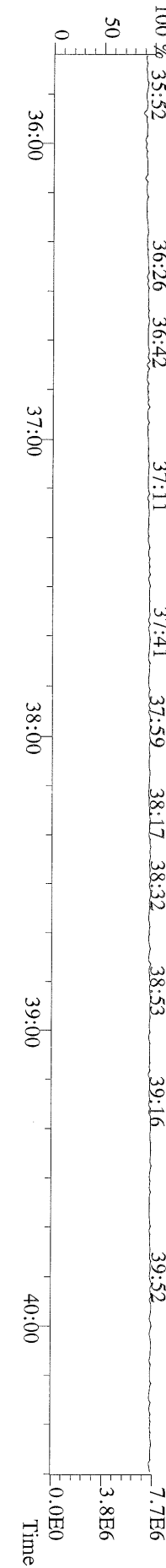
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401.8559 S:14 F:3 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



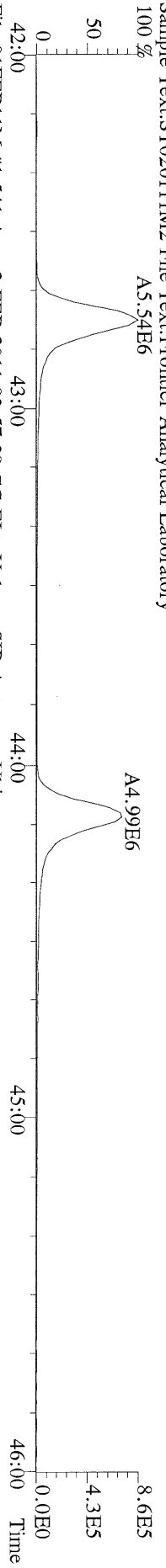
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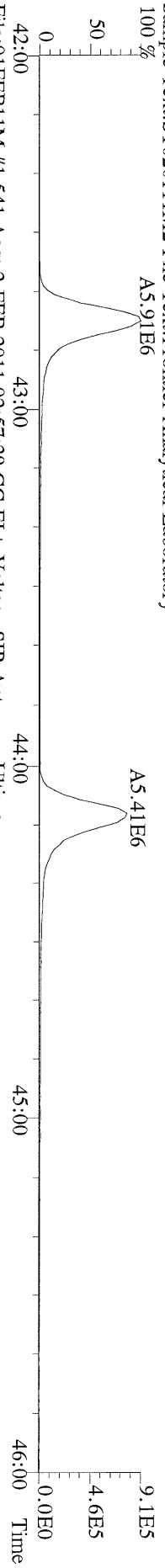
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380.9760 S:14 F:3 Exp:OCDD
Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



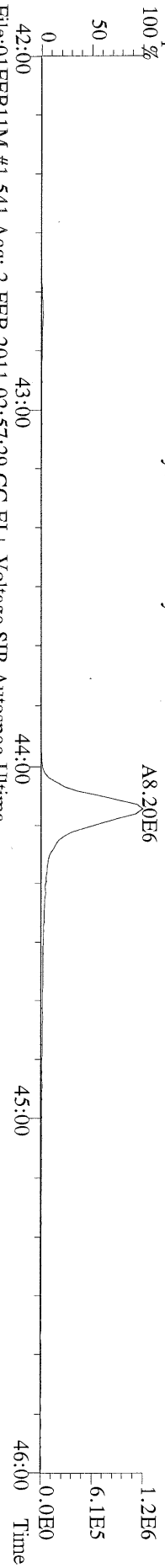
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Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



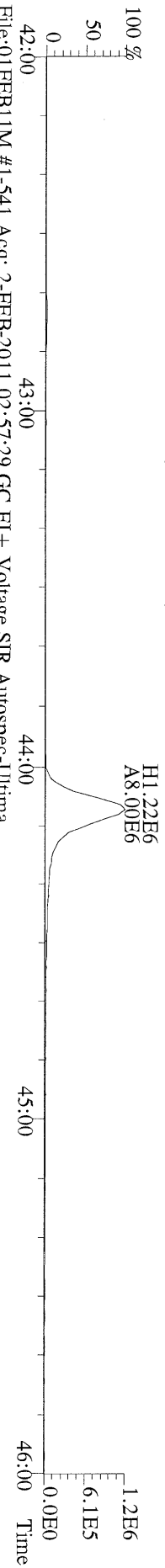
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Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



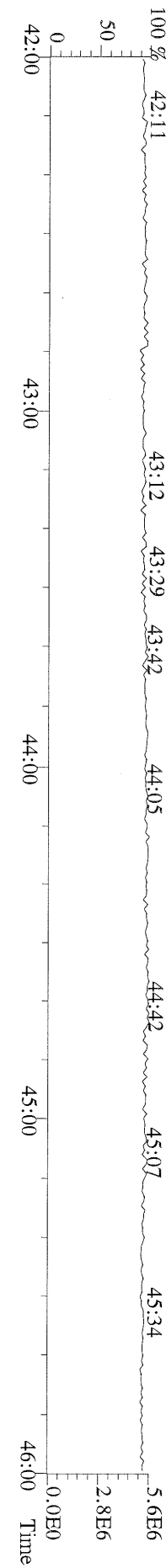
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435.8169 S:14 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



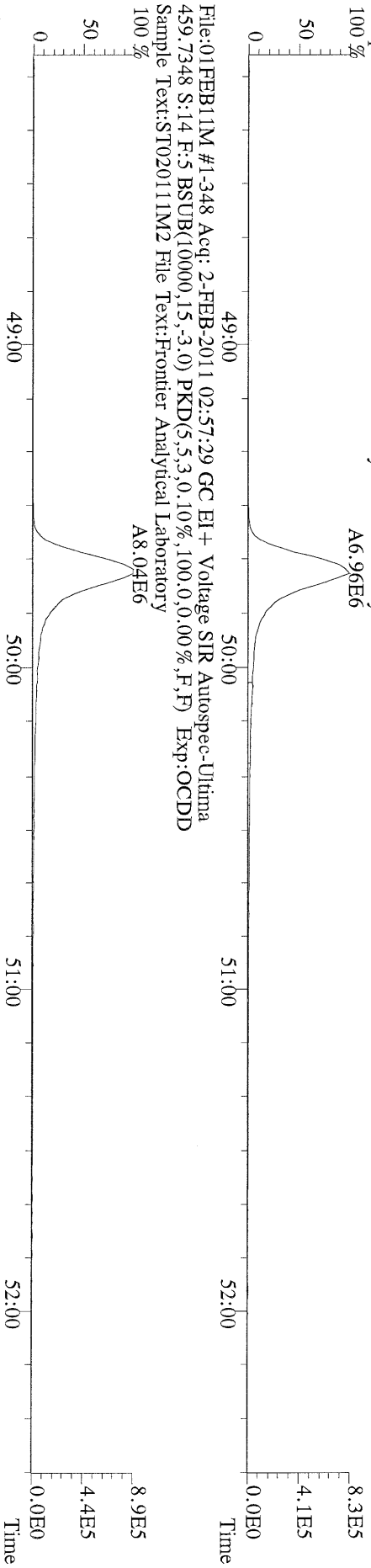
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Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



File:01FEB11M #1-541 Acq: 2-FEB-2011 02:57:29 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:14 F:4 Exp:OCDD
Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



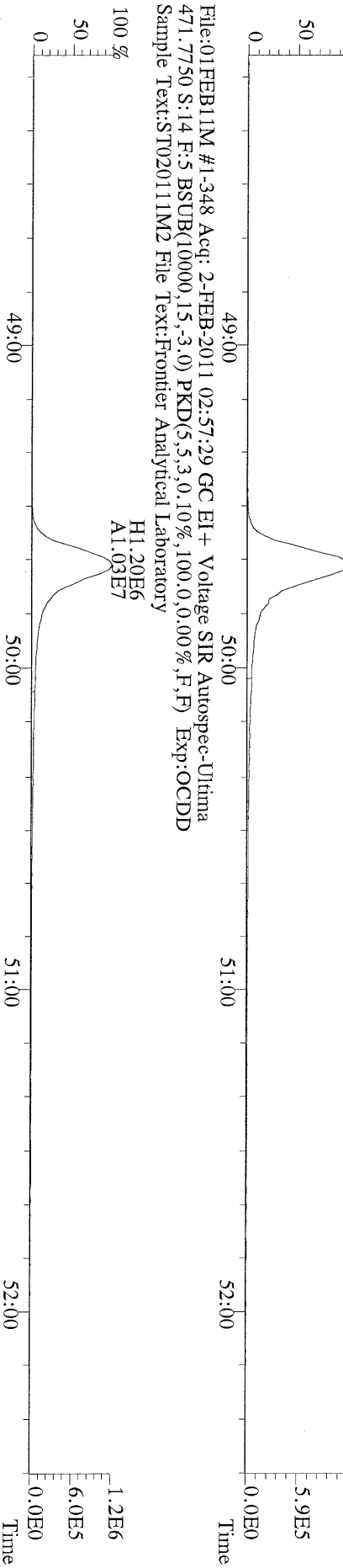
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457.7377 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST02011IM2 File Text:Frontier Analytical Laboratory
100 %



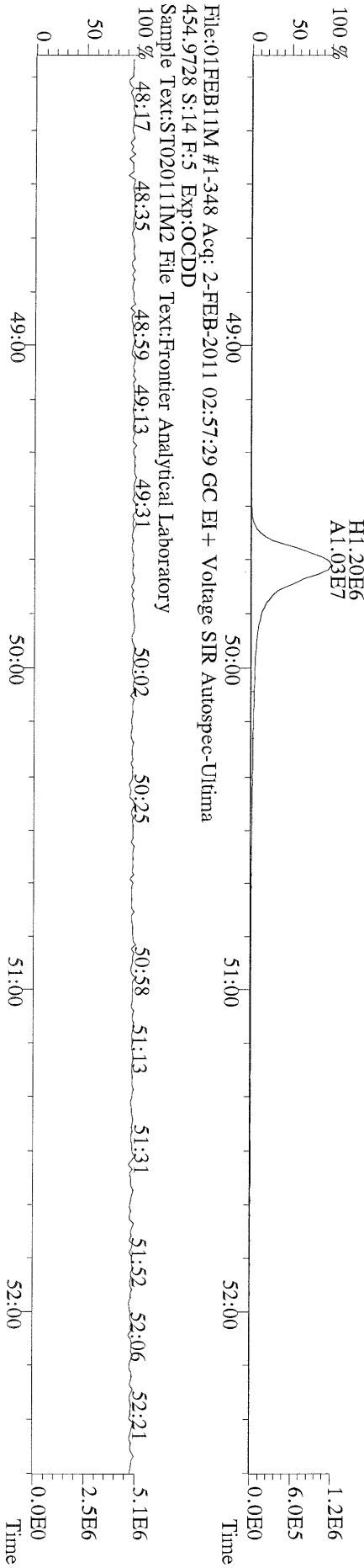
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459.7348 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST02011IM2 File Text:Frontier Analytical Laboratory
100 %



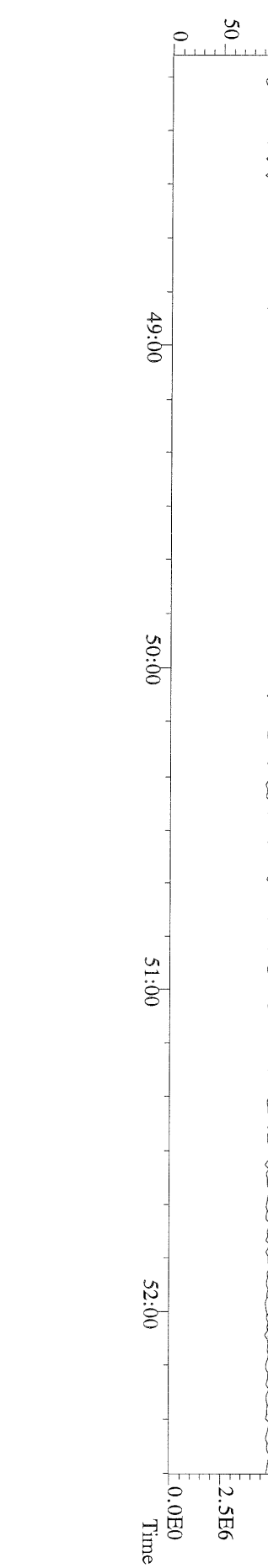
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469.7780 S:14 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST02011IM2 File Text:Frontier Analytical Laboratory
100 %



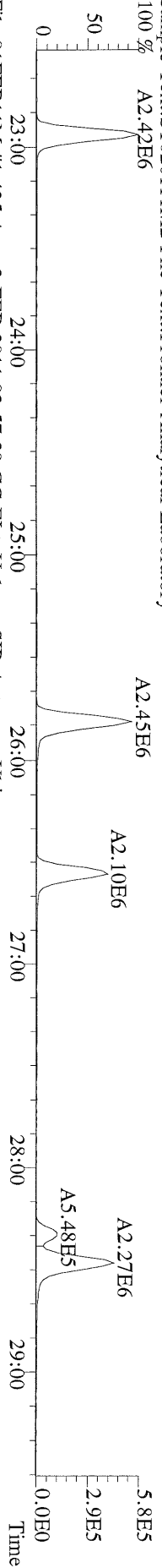
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Sample Text:ST02011IM2 File Text:Frontier Analytical Laboratory



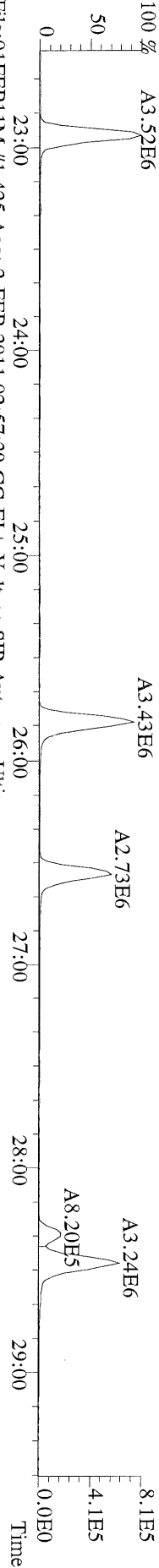
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Sample Text:ST02011IM2 File Text:Frontier Analytical Laboratory
100 %



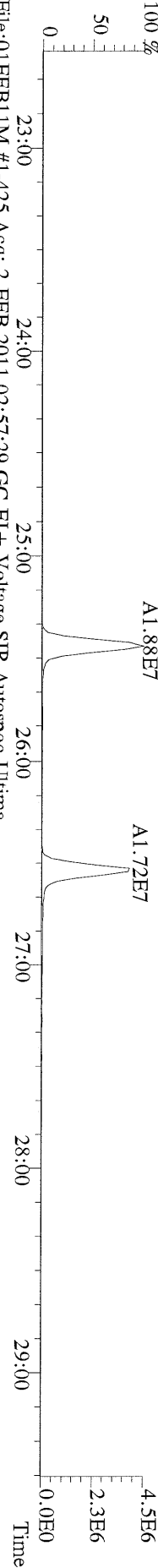
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303.9016 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD
Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



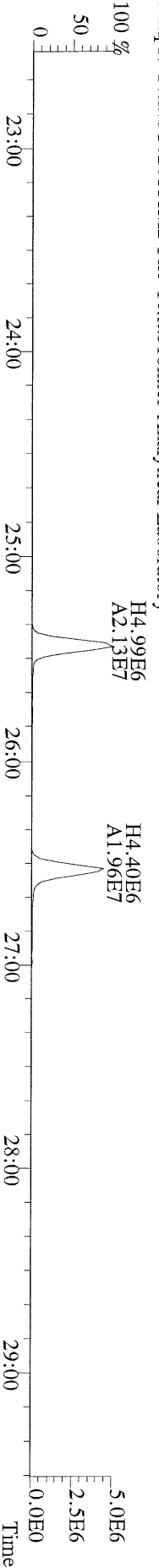
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305.8987 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD
Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



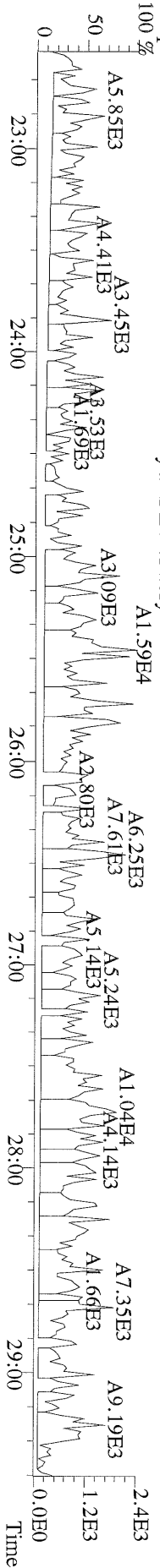
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Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



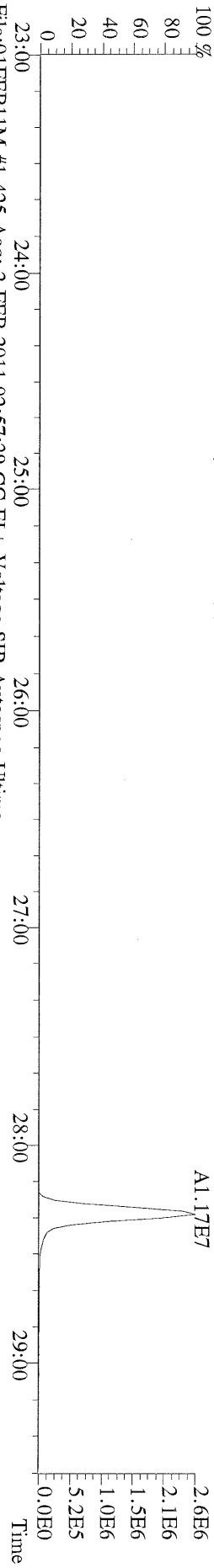
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Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



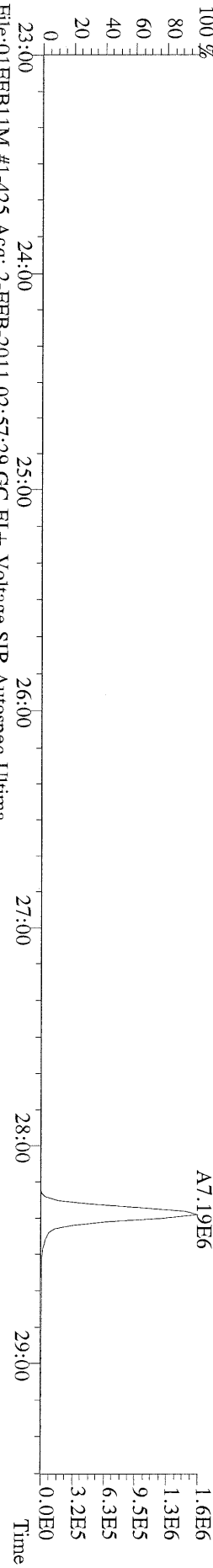
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Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



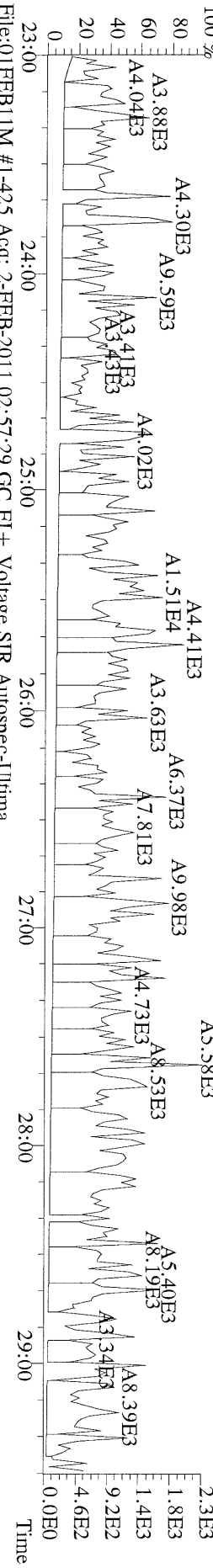
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 Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



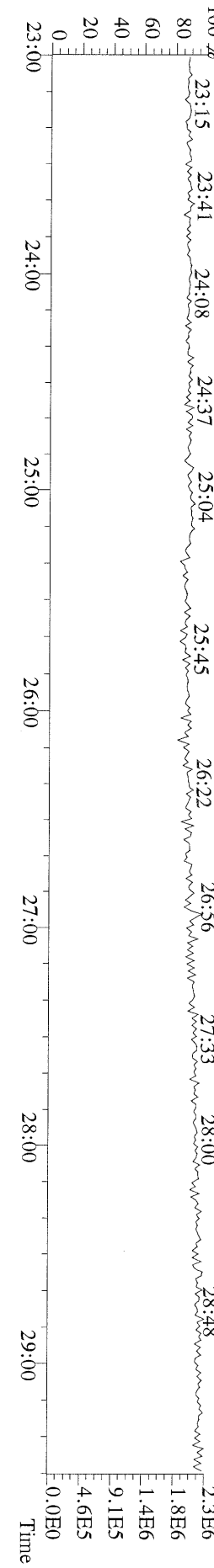
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 341.8568 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



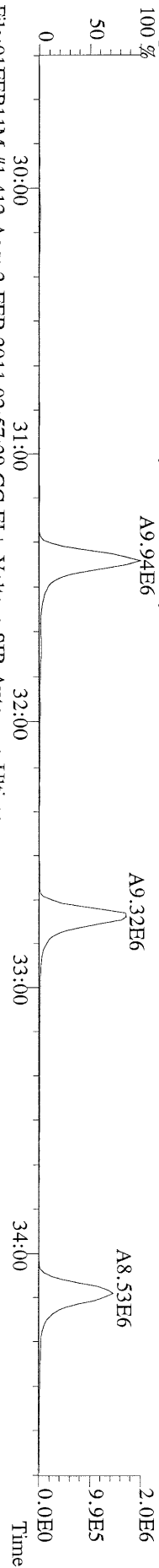
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 409.7974 S:14 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



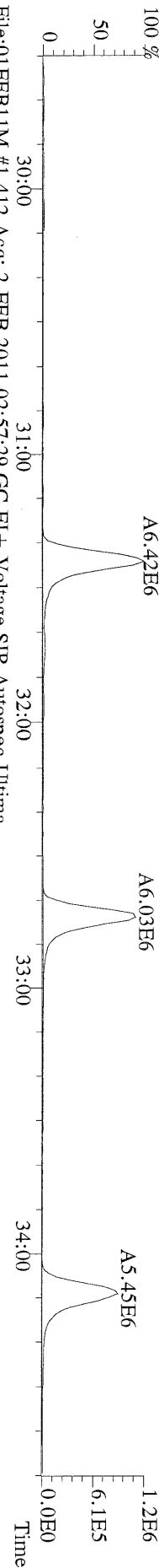
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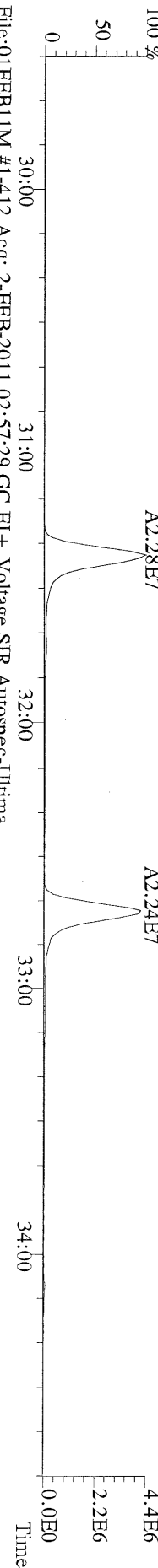
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Sample Text:ST020111M2 File Text:Fronier Analytical Laboratory



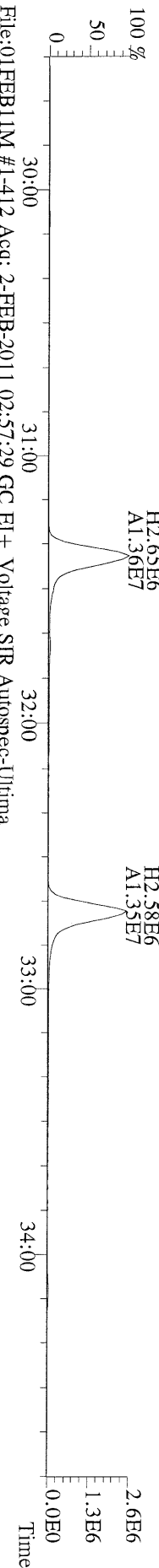
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341.8568 S:14 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:OCDD
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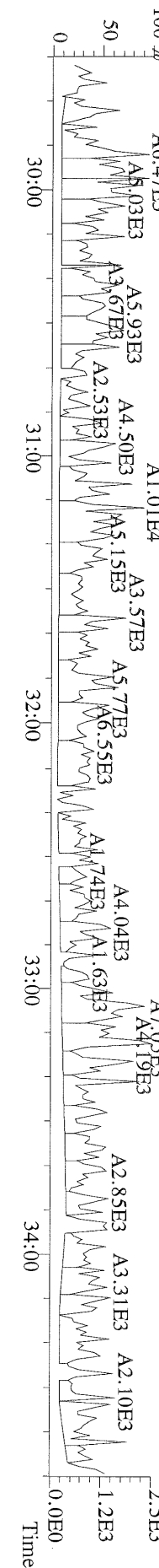
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351.9000 S:14 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:OCDD
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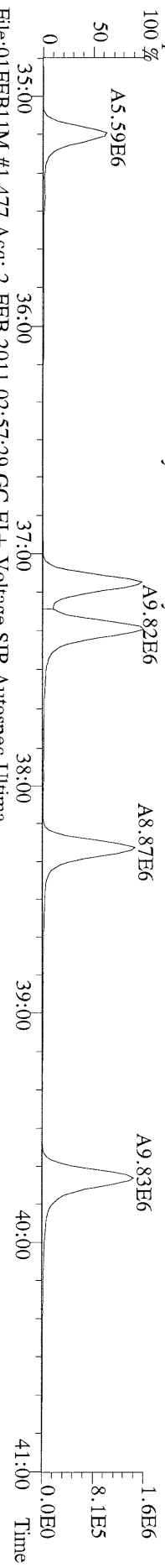
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Sample Text:ST020111M2 File Text:Fronier Analytical Laboratory



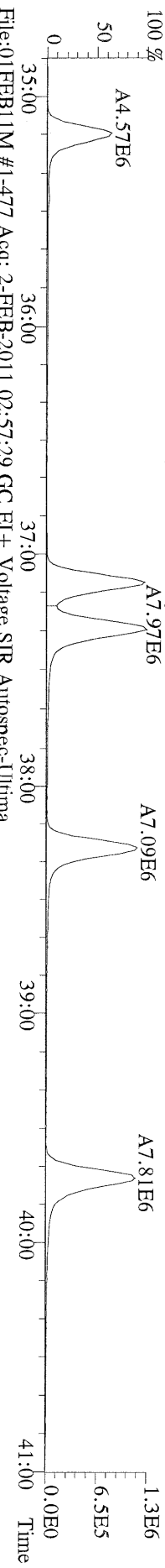
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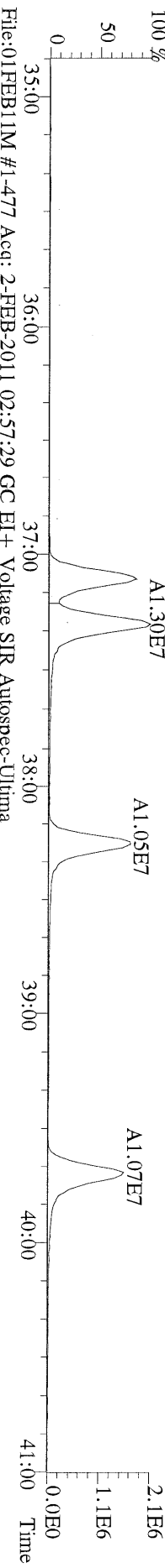
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 Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



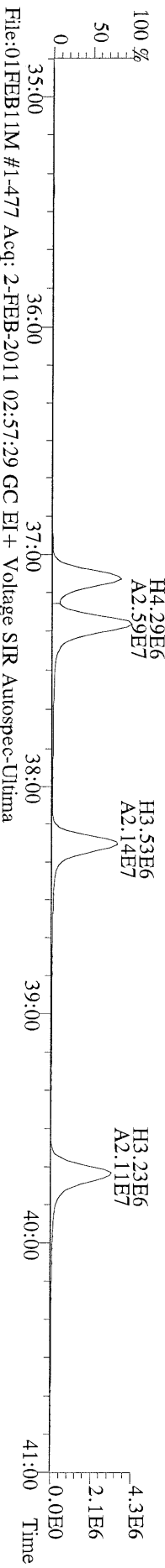
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 Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



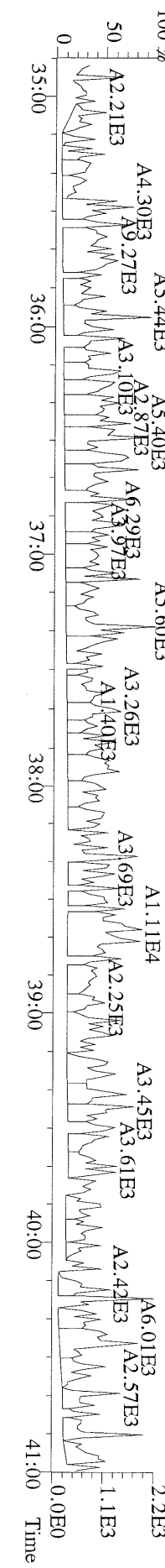
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 Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



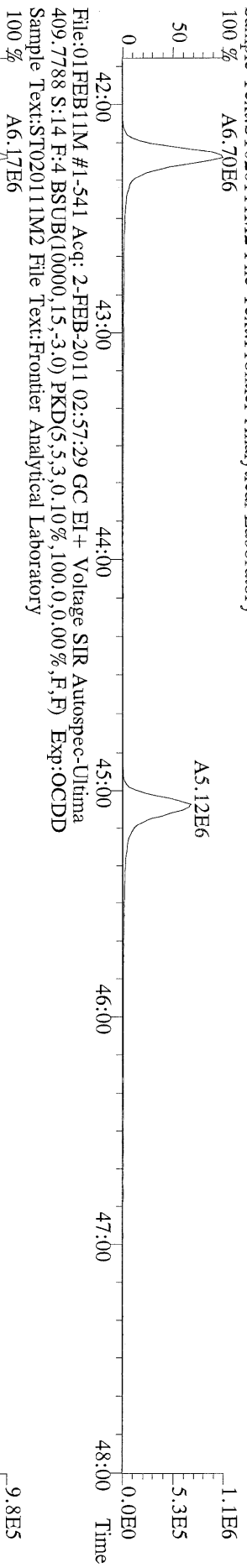
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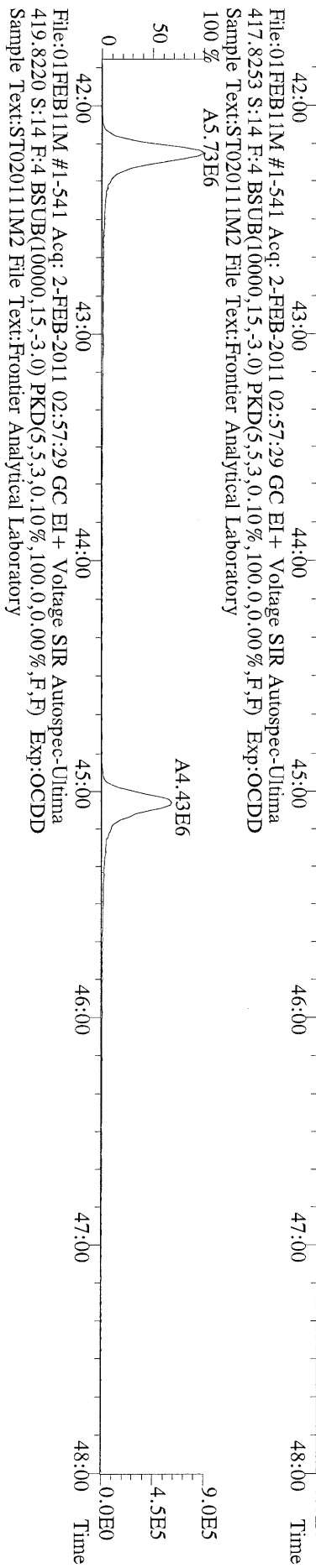
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 Sample Text:ST02011M2 File Text:Frontier Analytical Laboratory



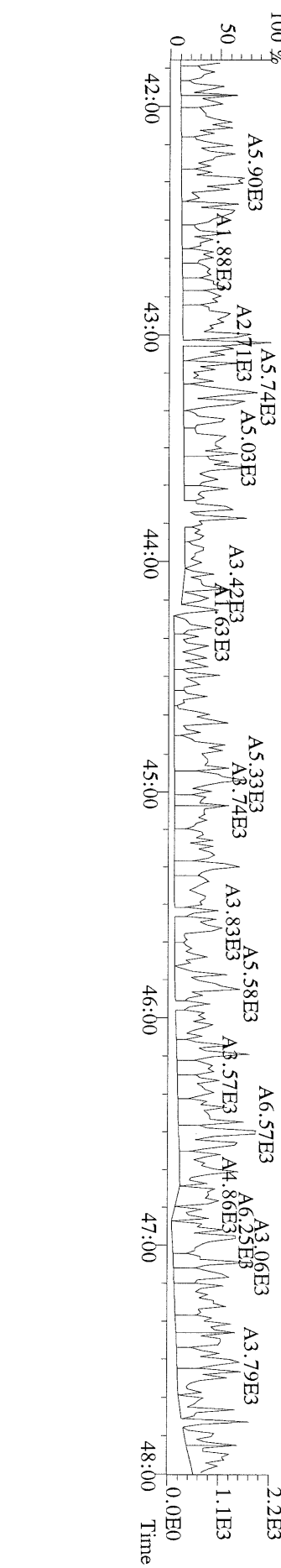
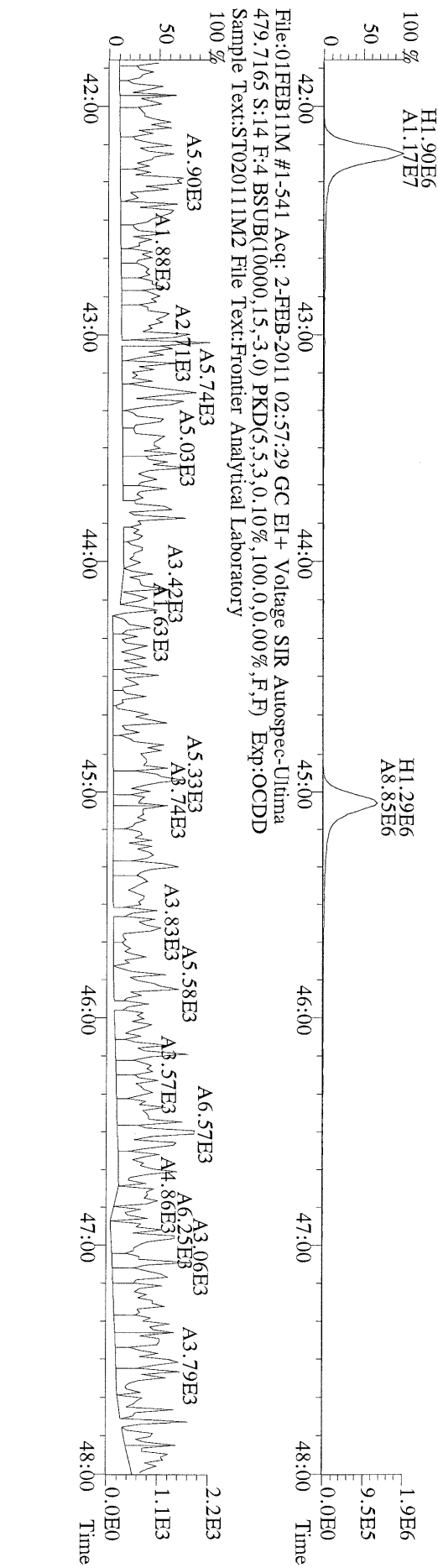
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407.7818 S:14 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST02011M2 File Text:Fronter Analytical Laboratory
100 % A6.70E6



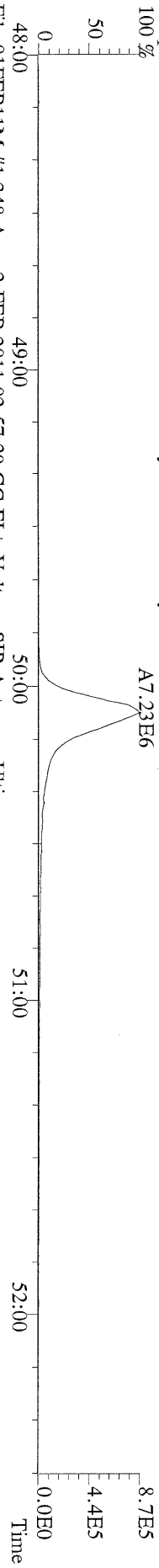
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417.8253 S:14 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST02011M2 File Text:Fronter Analytical Laboratory
100 % A5.73E6



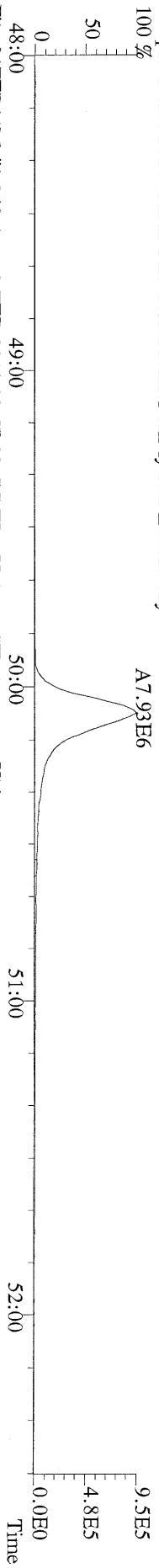
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Sample Text:ST02011M2 File Text:Fronter Analytical Laboratory
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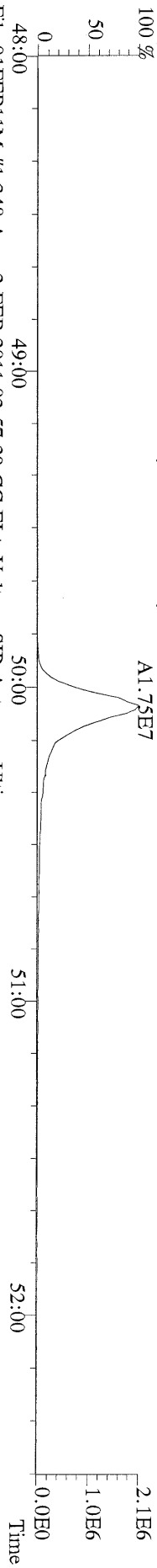
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Sample Text:ST02011IM2 File Text:Frontier Analytical Laboratory



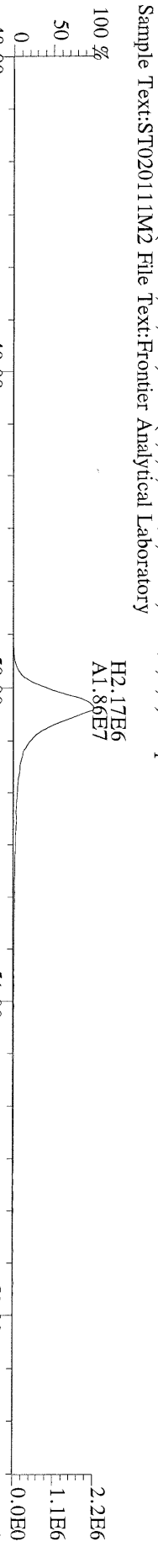
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Sample Text:ST02011IM2 File Text:Frontier Analytical Laboratory



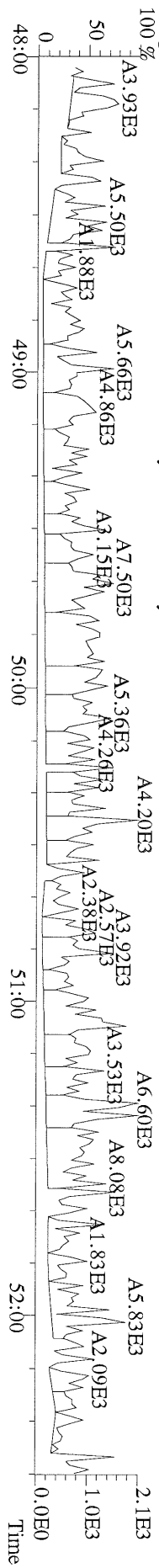
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Sample Text:ST02011IM2 File Text:Frontier Analytical Laboratory



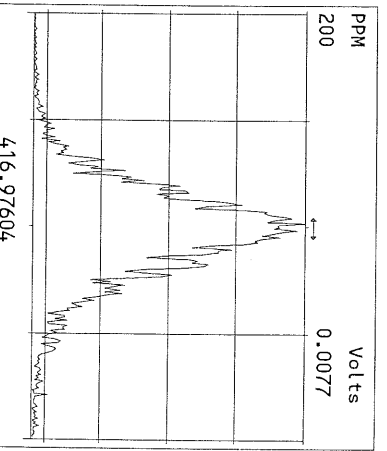
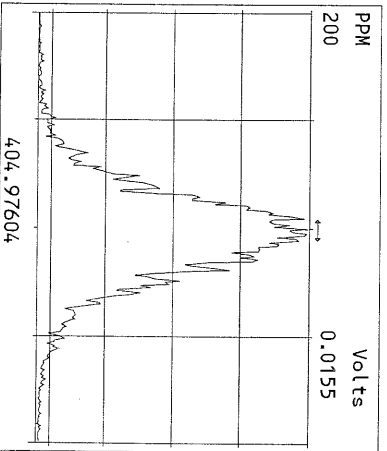
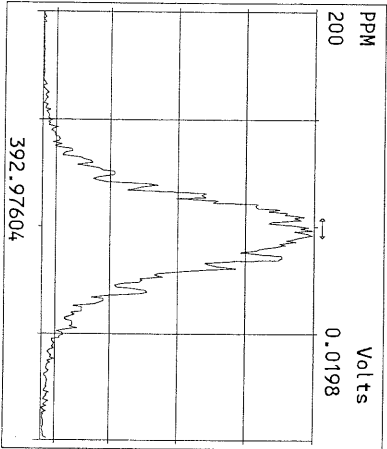
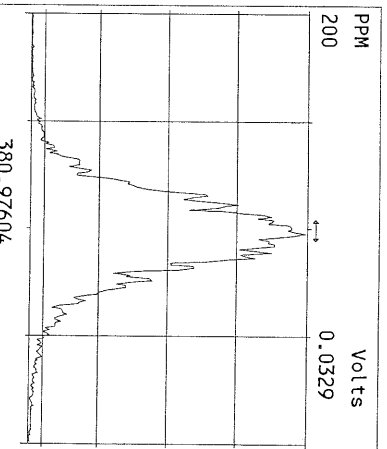
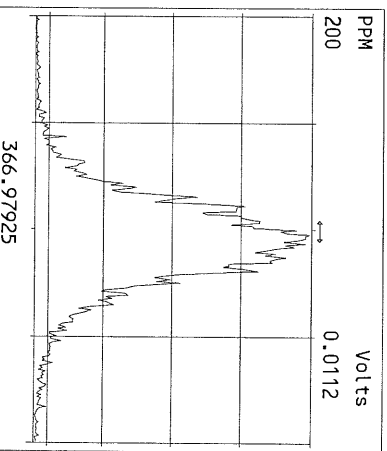
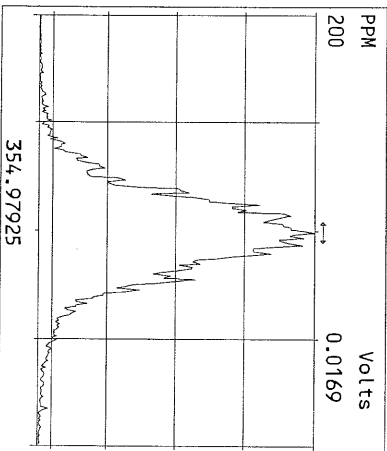
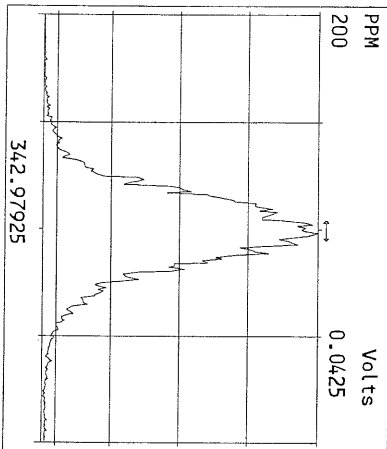
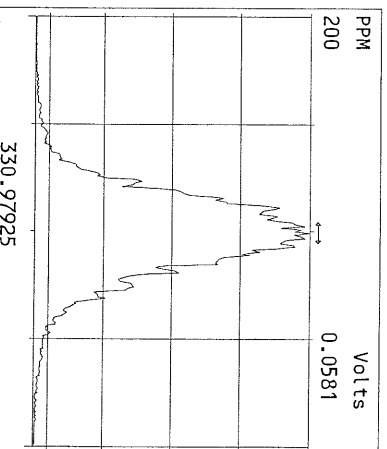
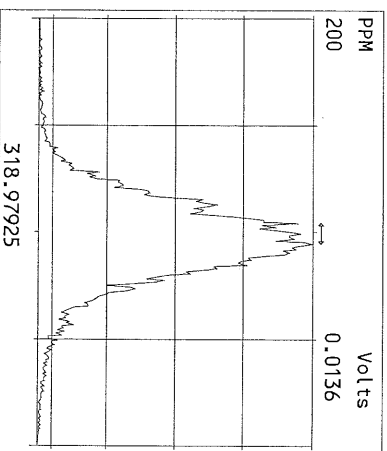
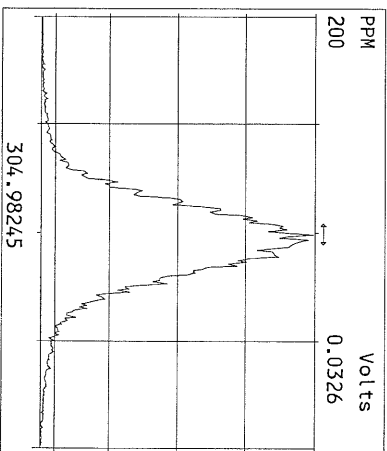
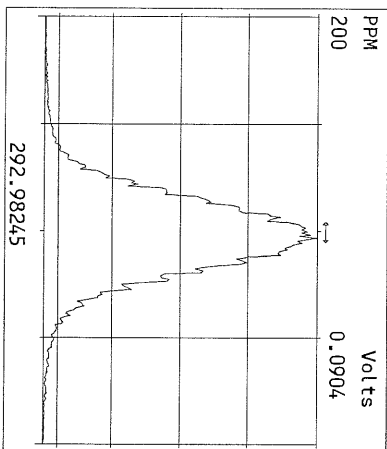
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Sample Text:ST02011IM2 File Text:Frontier Analytical Laboratory

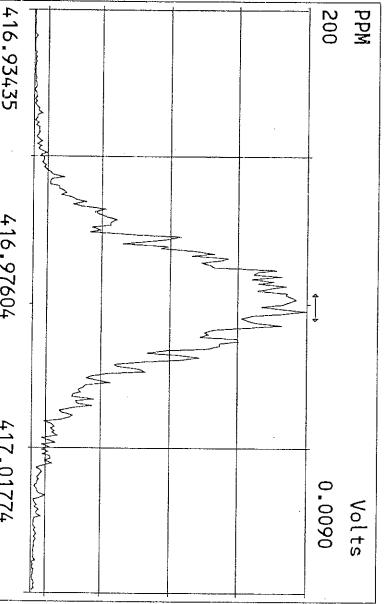
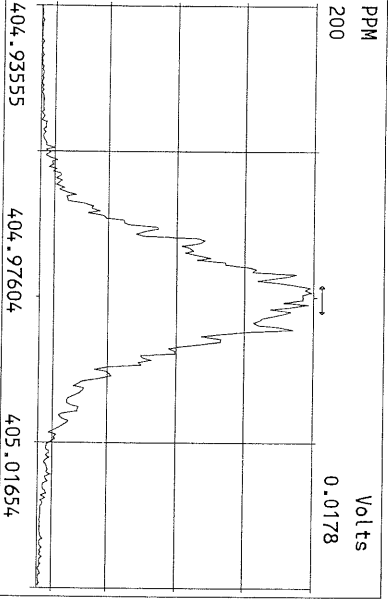
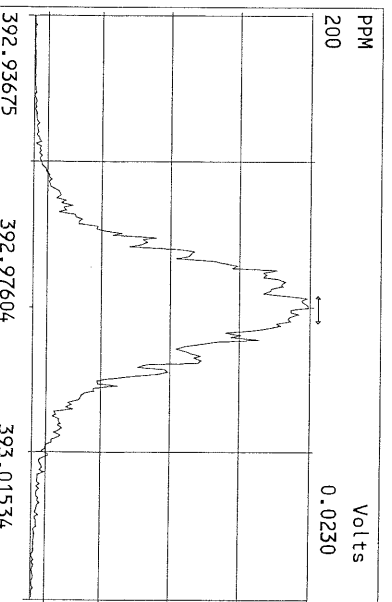
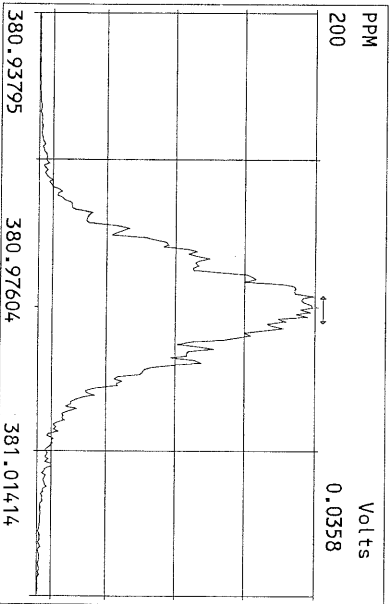
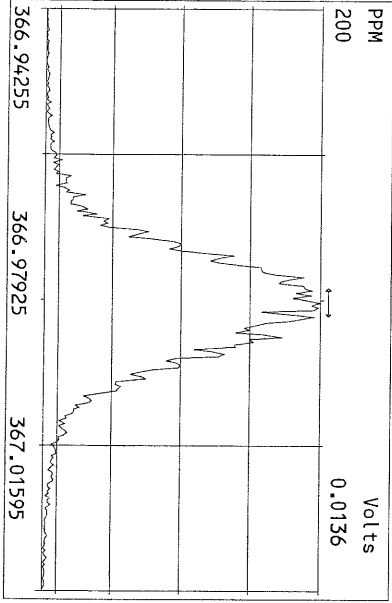
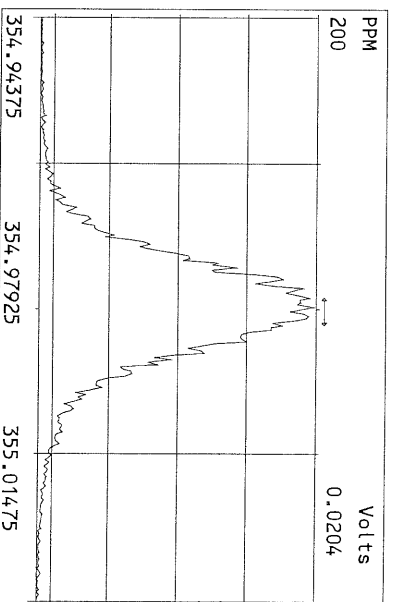
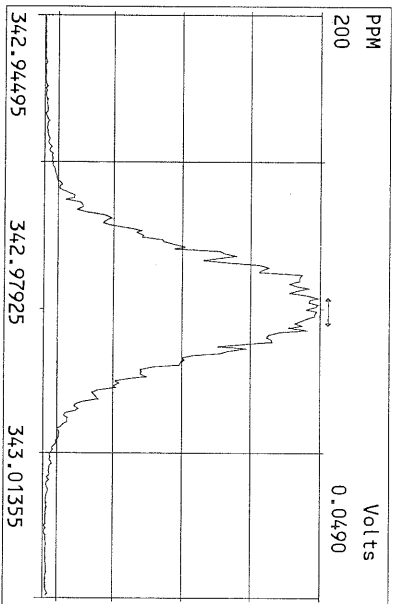
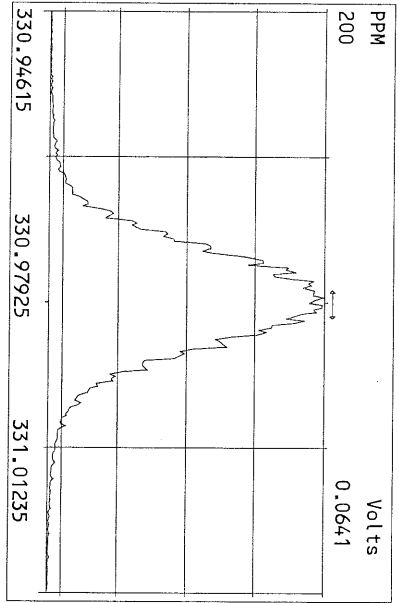


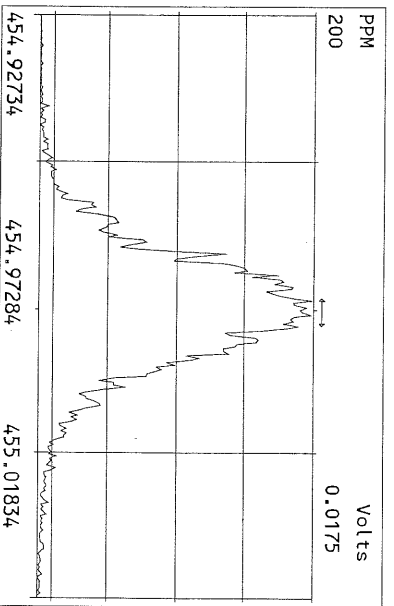
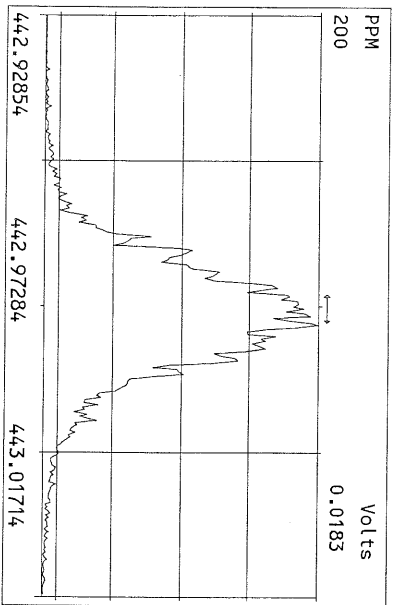
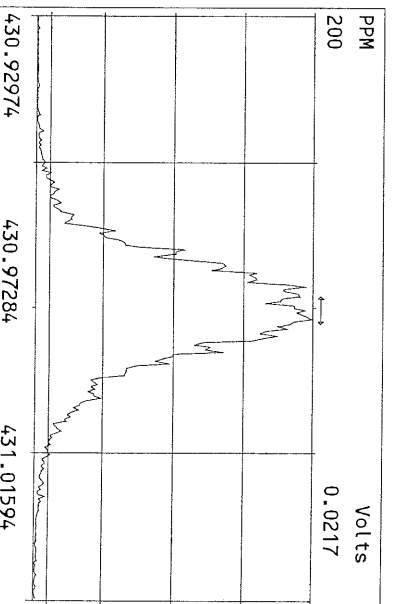
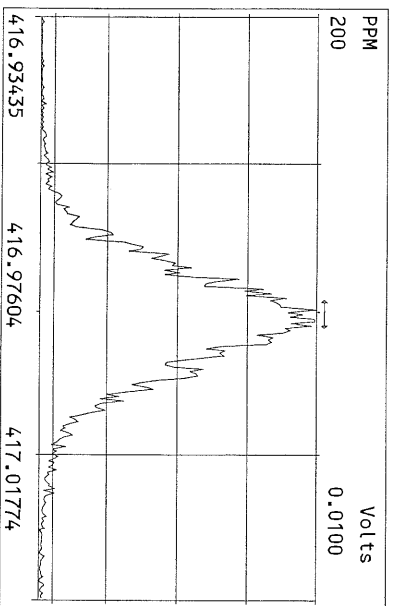
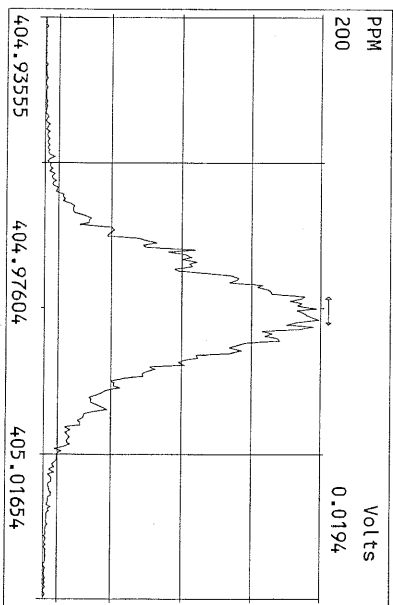
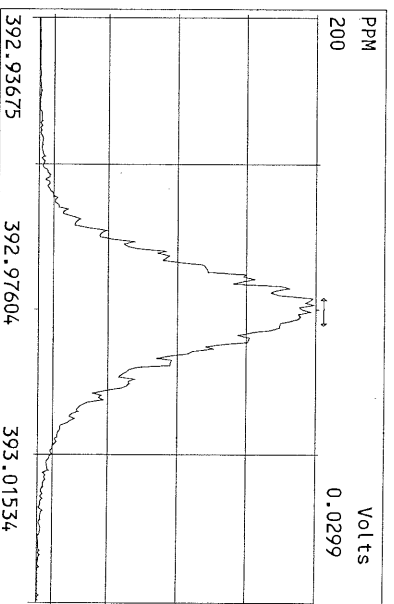
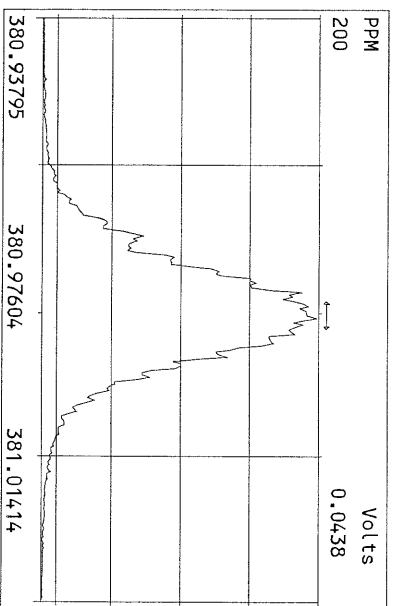
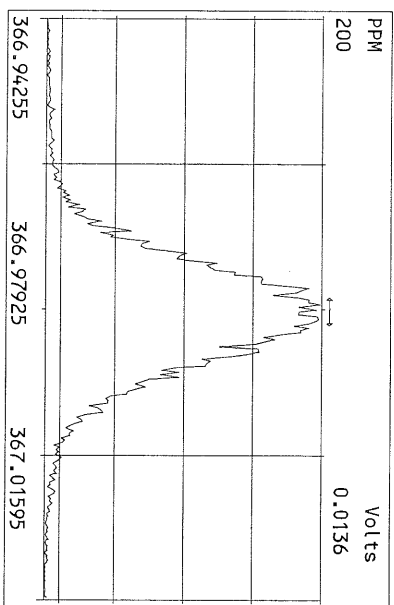
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Sample Text:ST02011IM2 File Text:Frontier Analytical Laboratory

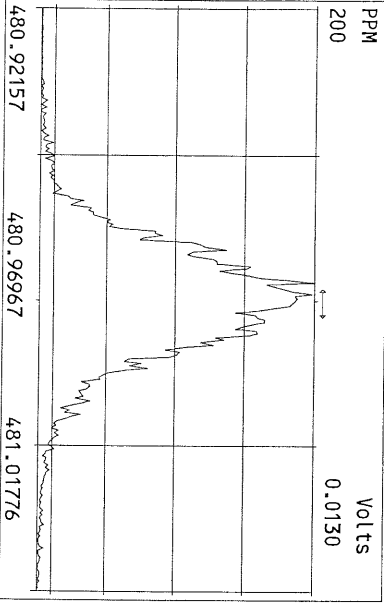
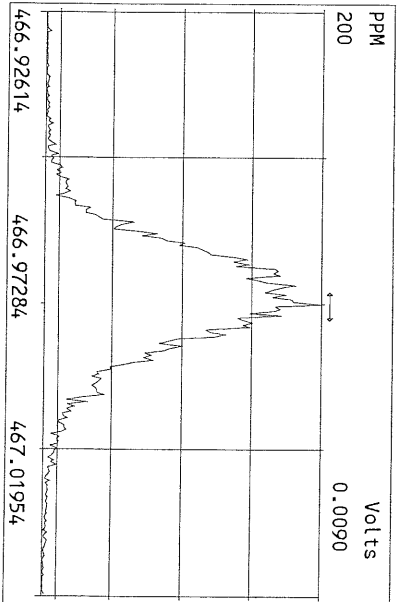
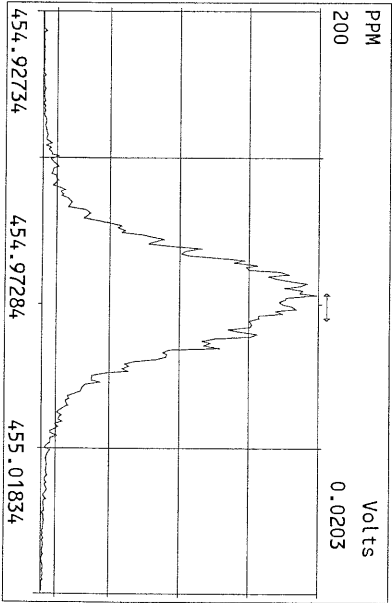
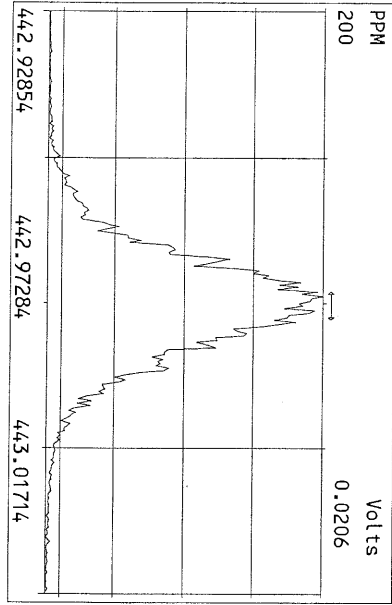
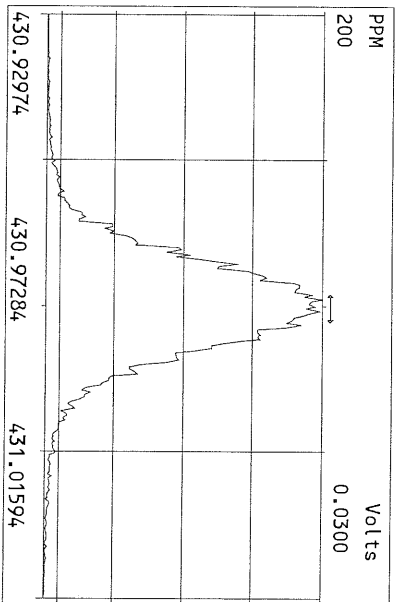
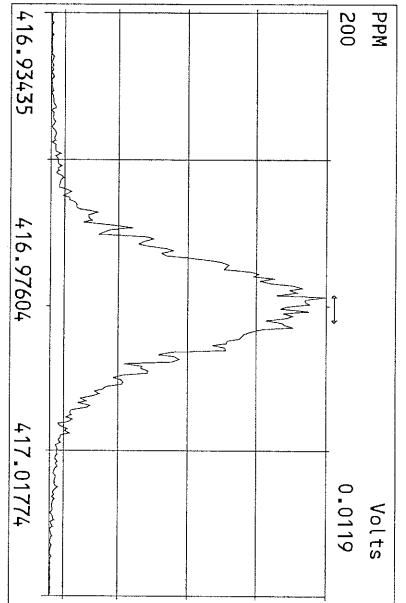
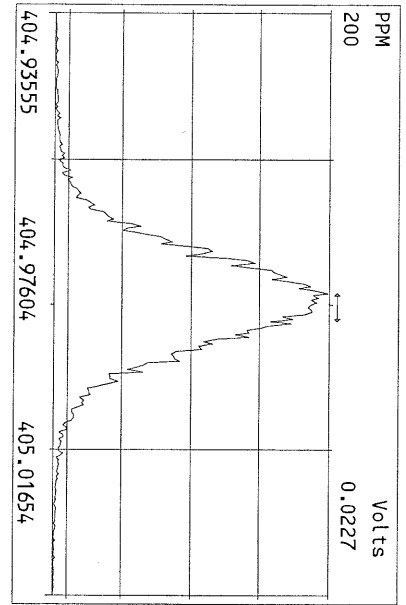


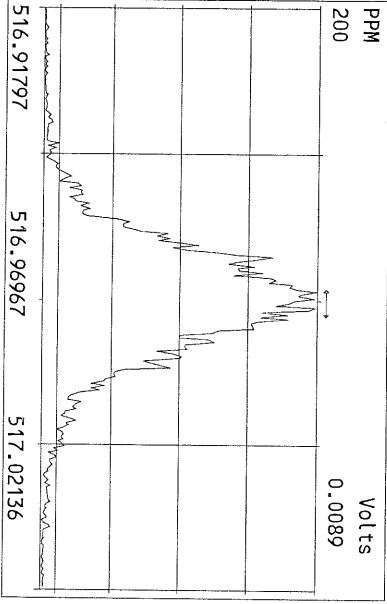
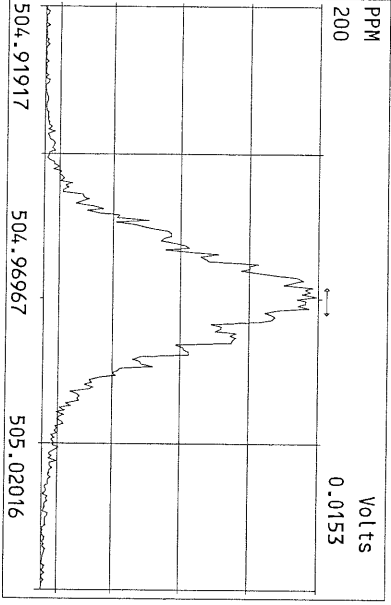
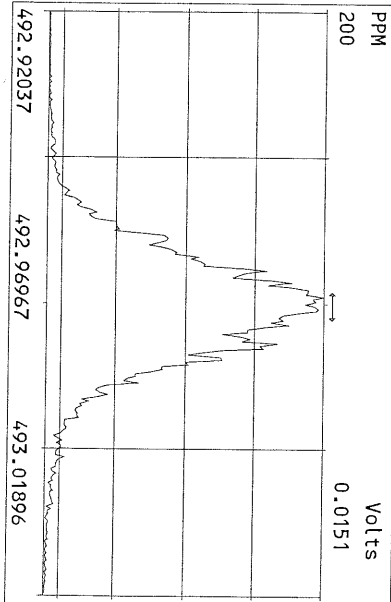
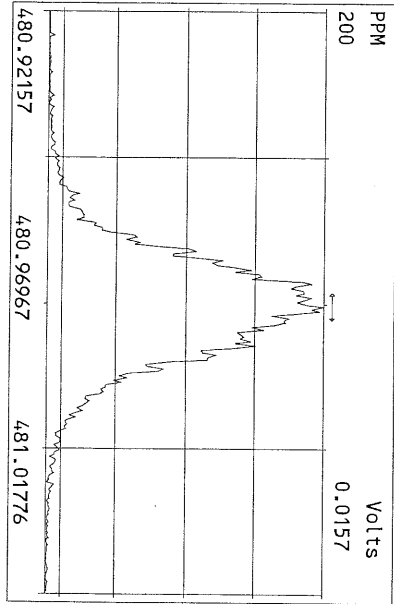
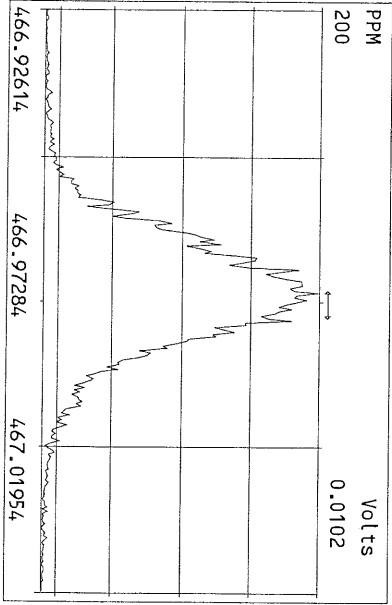
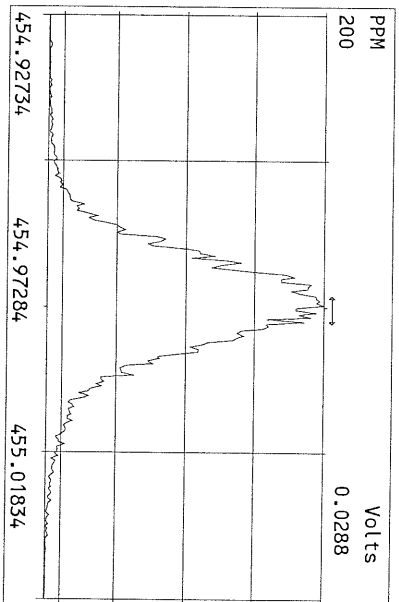
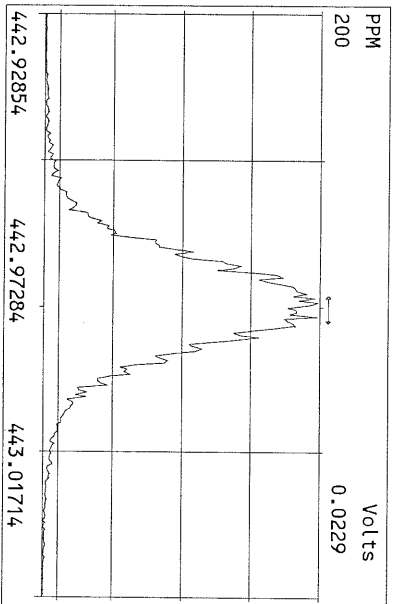
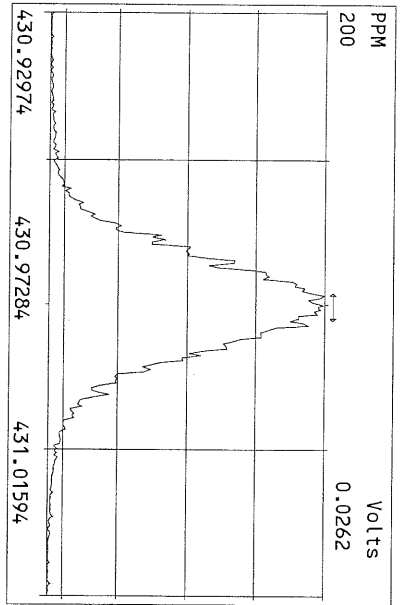
Peak Locate Examination: 2-FEB-2011:04:50 File:01FEB11M_RES_CHECK
Experiment:OCDD Function:1 Reference:PFK













February 4, 2011

Ms. Sue Dunninghoo
Analytical Resources Incorporated
4611 South 134th Place
Tukwila, WA 98168-3240

Dear Ms. Dunninghoo,

Enclosed are the results for Frontier Analytical Laboratory project **6548**. This corresponds to your **Lora Lake Apts RI** project under ARI project number **SF50**. Five aqueous samples were received at our laboratory on 1/25/11. As per your chain of custody request, a matrix spike (MS) and a matrix spike duplicate (MSD) were performed on sample 6548-001-SA (ARI Sample ID: MW13-012011). These samples were extracted and analyzed by EPA Method 1613 for tetra through octa chlorinated dibenzo dioxins and furans. The 2005 World Health Organizations toxic equivalency factors were used to calculate the toxic equivalency (TEQs) on your report. Analytical Resources Incorporated requested a Level IV report and a turnaround time of fifteen business days for project **6548**.

The following Level IV report consists of an Analytical Data section, a Sample Receipt section, a Laboratory Raw Data section, and an Instrument Raw Data section. The Analytical Data section contains our project-sample tracking log and the analytical results. The Sample Receipt section contains your original chain of custody, our sample login form and the sample photos. The Laboratory Raw Data section contains our project request sheet, a percent solids sheet, an extraction bench sheet, and the cleanup bench sheet. The instrument raw data section contains three sub-sections; the sample results section, the initial calibration section and the continuing/ending calibration section. The sample results sub-section consists of the quantitation summary forms with chromatograms for all samples and QC. The initial calibration sub-section consists of the individual quantitation summary forms and chromatograms for each point of the initial calibration curve as well as an overall quantitation summary form of the initial calibration curve. The continuing/ending calibration sub-section consists of the quantitation summary forms and chromatograms for all beginning and ending calibration injections associated with the samples and QC. The Level I summary and the Electronic Data Deliverables (EDDs) have been sent to you via email. A hardcopy of the Level IV data package has been sent to you via OnTrac overnight delivery. The enclosed results are specifically for the samples referenced in this report only. These results meet all NELAC requirements and shall not be reproduced except in full.

If you have any questions regarding project **6548**, please contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

A handwritten signature in black ink, appearing to read "Bradley B. Silverbush".

Bradley B. Silverbush
Director of Operations

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **6548**

Received on: **01/25/2011**

Project Due: **02/16/2011**

Storage: **R1**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
6548-001-MS	1	SF50	MW13-012011	EPA 1613 D/F	Ground Water	01/20/2011	09:00 am	01/20/2012
6548-001-MSD	1	SF50	MW13-012011	EPA 1613 D/F	Ground Water	01/20/2011	09:00 am	01/20/2012
6548-001-SA	1	SF50	MW13-012011	EPA 1613 D/F	Ground Water	01/20/2011	09:00 am	01/20/2012
6548-002-SA	1	SF50	MW06-012011	EPA 1613 D/F	Ground Water	01/20/2011	10:40 am	01/20/2012
6548-003-SA	1	SF50	MW12-012011	EPA 1613 D/F	Ground Water	01/20/2011	11:25 am	01/20/2012
6548-004-SA	0	SF50	MW04-012011	EPA 1613 D/F	Ground Water	01/20/2011	02:50 pm	01/20/2012
6548-005-SA	1	SF50	MW03-012011	EPA 1613 D/F	Ground Water	01/20/2011	04:30 pm	01/20/2012

FAL Sample ID	Notes
6548-004-SA	'Backup sample received broken.'

EPA Method 1613
PCDD/F



FAL ID: 6548-001-MB
Client ID: Method Blank
Matrix: Aqueous
Batch No: X2210

Date Extracted: 02-02-2011
Date Received: NA
Amount: 1.000 L

ICal: pccdfal3-8-23-10
GC Column: DB5
Units: pg/L

Acquired: 02-03-2011
2005 WHO TEQ: 0.00

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	1.03		-	0.212				
1,2,3,7,8-PeCDD	ND	1.56		-	0.302				
1,2,3,4,7,8-HxCDD	ND	1.73		-	0.328				
1,2,3,6,7,8-HxCDD	ND	2.18		-	0.381	Total TCDD	ND	1.03	
1,2,3,7,8,9-HxCDD	ND	1.96		-	0.351	Total PeCDD	ND	1.56	
1,2,3,4,6,7,8-HpCDD	ND	2.36		-	0.495	Total HxCDD	ND	2.18	
OCDD	ND	4.86		-	1.02	Total HpCDD	ND	2.36	
2,3,7,8-TCDF	ND	0.597		-	0.112				
1,2,3,7,8-PeCDF	ND	1.04		-	0.219				
2,3,4,7,8-PeCDF	ND	1.13		-	0.232				
1,2,3,4,7,8-HxCDF	ND	1.51		-	0.162				
1,2,3,6,7,8-HxCDF	ND	1.45		-	0.167				
2,3,4,6,7,8-HxCDF	ND	1.53		-	0.167				
1,2,3,7,8,9-HxCDF	ND	1.64		-	0.185	Total TCDF	ND	0.597	
1,2,3,4,6,7,8-HpCDF	ND	1.81		-	0.251	Total PeCDF	ND	1.13	
1,2,3,4,7,8,9-HpCDF	ND	2.74		-	0.280	Total HxCDF	ND	1.64	
OCDF	ND	5.31		-	0.451	Total HpCDF	ND	2.74	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	91.4	25.0 - 164	
13C-1,2,3,7,8-PeCDD	96.6	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	89.3	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	88.0	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	90.0	23.0 - 140	
13C-OCDD	89.9	17.0 - 157	
13C-2,3,7,8-TCDF	90.1	24.0 - 169	
13C-1,2,3,7,8-PeCDF	95.4	24.0 - 185	
13C-2,3,4,7,8-PeCDF	92.8	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	80.7	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	77.6	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	80.4	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	76.7	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	75.0	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	76.5	26.0 - 138	
13C-OCDF	79.9	17.0 - 157	

Cleanup Surrogate

37Cl-2,3,7,8-TCDD 91.0 35.0 - 197

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Chemical Interference
- D Presence of Diphenyl Ethers
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: [Signature]

Date: 2/4/11

Reviewed By: DN

Date: 2/4/11

EPA Method 1613
PCDD/F



FAL ID: 6548-001-OPR
Client ID: OPR
Matrix: Aqueous
Batch No: X2210

Date Extracted: 02-02-2011
Date Received: NA
Amount: 1.000 L

ICal: pccdfal3-8-23-10
GC Column: DB5
Units: ng/ml

Acquired: 02-03-2011
2005 WHO TEQ: NA

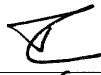
Compound	Conc	QC Limits	Qual
2,3,7,8-TCDD	10.6	6.70 - 15.8	
1,2,3,7,8-PeCDD	51.6	35.0 - 71.0	
1,2,3,4,7,8-HxCDD	53.9	35.0 - 82.0	
1,2,3,6,7,8-HxCDD	55.0	38.0 - 67.0	
1,2,3,7,8,9-HxCDD	58.7	32.0 - 81.0	
1,2,3,4,6,7,8-HpCDD	45.2	35.0 - 70.0	
OCDD	102	78.0 - 144	
2,3,7,8-TCDF	8.66	7.50 - 15.8	
1,2,3,7,8-PeCDF	48.5	40.0 - 67.0	
2,3,4,7,8-PeCDF	49.5	34.0 - 80.0	
1,2,3,4,7,8-HxCDF	55.6	36.0 - 67.0	
1,2,3,6,7,8-HxCDF	57.8	42.0 - 65.0	
2,3,4,6,7,8-HxCDF	57.4	35.0 - 78.0	
1,2,3,7,8,9-HxCDF	56.8	39.0 - 65.0	
1,2,3,4,6,7,8-HpCDF	54.7	41.0 - 61.0	
1,2,3,4,7,8,9-HpCDF	55.2	39.0 - 69.0	
OCDF	110	63.0 - 170	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	77.6	20.0 - 175	
13C-1,2,3,7,8-PeCDD	81.5	21.0 - 227	
13C-1,2,3,4,7,8-HxCDD	78.2	21.0 - 193	
13C-1,2,3,6,7,8-HxCDD	73.7	25.0 - 163	
13C-1,2,3,4,6,7,8-HpCDD	76.3	26.0 - 166	
13C-OCDD	80.7	13.0 - 198	
13C-2,3,7,8-TCDF	76.6	22.0 - 152	
13C-1,2,3,7,8-PeCDF	79.7	21.0 - 192	
13C-2,3,4,7,8-PeCDF	76.3	13.0 - 328	
13C-1,2,3,4,7,8-HxCDF	70.9	19.0 - 202	
13C-1,2,3,6,7,8-HxCDF	66.5	21.0 - 159	
13C-2,3,4,6,7,8-HxCDF	69.5	22.0 - 176	
13C-1,2,3,7,8,9-HxCDF	66.3	17.0 - 205	
13C-1,2,3,4,6,7,8-HpCDF	66.3	21.0 - 158	
13C-1,2,3,4,7,8,9-HpCDF	68.7	20.0 - 186	
13C-OCDF	69.4	13.0 - 198	

Cleanup Surrogate

37Cl-2,3,7,8-TCDD	81.5	31.0 - 191	
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- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Chemical Interference
- D Presence of Diphenyl Ethers
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 2/4/11

Reviewed By: DN
Date: 2/4/11

EPA Method 1613
PCDD/F



FAL ID: 6548-001-SA
Client ID: MW13-012011
Matrix: Aqueous
Batch No: X2210

Date Extracted: 02-02-2011
Date Received: 01-25-2011
Amount: 1.005 L

ICal: pccdfal3-8-23-10
GC Column: DB5
Units: pg/L

Acquired: 02-03-2011
2005 WHO TEQ: 0.00

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	1.32		-	0.212				
1,2,3,7,8-PeCDD	ND	1.97		-	0.302				
1,2,3,4,7,8-HxCDD	ND	2.12		-	0.328				
1,2,3,6,7,8-HxCDD	ND	2.61		-	0.381	Total TCDD	ND	1.32	
1,2,3,7,8,9-HxCDD	ND	2.37		-	0.351	Total PeCDD	ND	1.97	
1,2,3,4,6,7,8-HpCDD	ND	2.78		-	0.495	Total HxCDD	ND	2.61	
OCDD	ND	4.87		-	1.02	Total HpCDD	ND	2.78	
2,3,7,8-TCDF	ND	0.848		-	0.112				
1,2,3,7,8-PeCDF	ND	1.34		-	0.219				
2,3,4,7,8-PeCDF	ND	1.37		-	0.232				
1,2,3,4,7,8-HxCDF	ND	1.50		-	0.162				
1,2,3,6,7,8-HxCDF	ND	1.46		-	0.167				
2,3,4,6,7,8-HxCDF	ND	1.58		-	0.167				
1,2,3,7,8,9-HxCDF	ND	1.69		-	0.185	Total TCDF	ND	0.848	
1,2,3,4,6,7,8-HpCDF	ND	2.27		-	0.251	Total PeCDF	ND	1.37	
1,2,3,4,7,8,9-HpCDF	ND	3.61		-	0.280	Total HxCDF	ND	1.69	
OCDF	ND	5.77		-	0.451	Total HpCDF	ND	3.61	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	75.2	25.0 - 164	
13C-1,2,3,7,8-PeCDD	80.5	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	79.0	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	75.8	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	82.6	23.0 - 140	
13C-OCDD	86.9	17.0 - 157	
13C-2,3,7,8-TCDF	74.7	24.0 - 169	
13C-1,2,3,7,8-PeCDF	76.8	24.0 - 185	
13C-2,3,4,7,8-PeCDF	77.3	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	71.3	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	68.5	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	70.3	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	67.7	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	70.8	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	68.4	26.0 - 138	
13C-OCDF	74.2	17.0 - 157	

Cleanup Surrogate

37Cl-2,3,7,8-TCDD 74.8 35.0 - 197

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Chemical Interference
- D Presence of Diphenyl Ethers
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 

Date: 2/4/11

Reviewed By: DJ

Date: 2/4/11

EPA Method 1613
PCDD/F




FAL ID: 6548-001-MS/MSD
Client ID: MW13-012011
Matrix: Aqueous

Date Extracted: 02-02-2011
Date Received: 01-25-2011
Sample Amount: 1.005 L
MS Amount: 0.983 L
MSD Amount: 1.012 L

ICal: pccdfal3-8-23-10
Batch No: X2210
Units: pg/L

MS Acquired: 2011-02-04
MSD Acquired: 2011-02-04
GC Column: DB5

Compound	Amount Spiked (pg)	Sample Amount	MS Amount	MSD Amount	% RSD	Qual
2,3,7,8-TCDD	200	-	218	210	0.468	
1,2,3,7,8-PeCDD	1000	-	1090	990	6.76	
1,2,3,4,7,8-HxCDD	1000	-	1100	1040	2.82	
1,2,3,6,7,8-HxCDD	1000	-	1170	1100	3.54	
1,2,3,7,8,9-HxCDD	1000	-	1240	1130	6.78	
1,2,3,4,6,7,8-HpCDD	1000	-	935	898	1.09	
OCDD	2000	-	2080	2000	0.985	
2,3,7,8-TCDF	200	-	184	168	6.27	
1,2,3,7,8-PeCDF	1000	-	976	922	2.75	
2,3,4,7,8-PeCDF	1000	-	1010	916	6.88	
1,2,3,4,7,8-HxCDF	1000	-	1160	1080	4.48	
1,2,3,6,7,8-HxCDF	1000	-	1200	1100	6.11	
2,3,4,6,7,8-HxCDF	1000	-	1160	1100	2.67	
1,2,3,7,8,9-HxCDF	1000	-	1170	1100	3.54	
1,2,3,4,6,7,8-HpCDF	1000	-	1150	1080	3.60	
1,2,3,4,7,8,9-HpCDF	1000	-	1140	1030	7.41	
OCDF	2000	-	2280	2110	4.57	
Internal Standards						
		% Rec	% Rec	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	2000	75.2	82.2	65.0	25.0 - 164	
13C-1,2,3,7,8-PeCDD	2000	80.5	83.0	67.3	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	2000	79.0	79.2	64.8	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	2000	75.8	72.1	61.3	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	2000	82.6	78.5	67.6	23.0 - 140	
13C-OCDD	4000	86.9	79.0	71.8	17.0 - 157	
13C-2,3,7,8-TCDF	2000	74.7	83.2	69.4	24.0 - 169	
13C-1,2,3,7,8-PeCDF	2000	76.8	79.3	64.9	24.0 - 185	
13C-2,3,4,7,8-PeCDF	2000	77.3	83.1	67.3	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	2000	71.3	70.1	58.2	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	2000	68.5	64.9	55.0	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	2000	70.3	70.2	57.2	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	2000	67.7	67.0	55.8	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	2000	70.8	63.7	53.5	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	2000	68.4	66.9	60.2	26.0 - 138	
13C-OCDF	4000	74.2	67.8	61.9	17.0 - 157	
Cleanup Surrogate						
37Cl-2,3,7,8-TCDD	800	74.8	89.3	74.2	35.0 - 197	

Analyst: 
Date: 2/4/11

Reviewed By: DAJ
Date: 2/4/11

EPA Method 1613
PCDD/F



FAL ID: 6548-002-SA
Client ID: MW06-012011
Matrix: Aqueous
Batch No: X2210

Date Extracted: 02-02-2011
Date Received: 01-25-2011
Amount: 1.048 L

ICal: pcddfal3-8-23-10
GC Column: DB5
Units: pg/L

Acquired: 02-03-2011
2005 WHO TEQ: 0.00

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	1.02		-	0.212				
1,2,3,7,8-PeCDD	ND	1.55		-	0.302				
1,2,3,4,7,8-HxCDD	ND	1.60		-	0.328				
1,2,3,6,7,8-HxCDD	ND	2.03		-	0.381	Total TCDD	ND	1.02	
1,2,3,7,8,9-HxCDD	ND	1.82		-	0.351	Total PeCDD	ND	1.55	
1,2,3,4,6,7,8-HpCDD	ND	1.80		-	0.495	Total HxCDD	ND	2.03	
OCDD	ND	3.15		-	1.02	Total HpCDD	ND	1.80	
2,3,7,8-TCDF	ND	0.613		-	0.112				
1,2,3,7,8-PeCDF	ND	1.14		-	0.219				
2,3,4,7,8-PeCDF	ND	1.20		-	0.232				
1,2,3,4,7,8-HxCDF	ND	1.38		-	0.162				
1,2,3,6,7,8-HxCDF	ND	1.37		-	0.167				
2,3,4,6,7,8-HxCDF	ND	1.39		-	0.167				
1,2,3,7,8,9-HxCDF	ND	1.50		-	0.185	Total TCDF	ND	0.613	
1,2,3,4,6,7,8-HpCDF	ND	1.57		-	0.251	Total PeCDF	ND	1.20	
1,2,3,4,7,8,9-HpCDF	ND	2.44		-	0.280	Total HxCDF	ND	1.50	
OCDF	ND	3.32		-	0.451	Total HpCDF	ND	2.44	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	87.7	25.0 - 164	
13C-1,2,3,7,8-PeCDD	93.3	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	97.1	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	93.9	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	102	23.0 - 140	
13C-OCDD	105	17.0 - 157	
13C-2,3,7,8-TCDF	89.7	24.0 - 169	
13C-1,2,3,7,8-PeCDF	90.2	24.0 - 185	
13C-2,3,4,7,8-PeCDF	88.6	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	87.5	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	83.3	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	85.4	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	83.8	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	85.7	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	85.2	26.0 - 138	
13C-OCDF	90.5	17.0 - 157	

Cleanup Surrogate

37Cl-2,3,7,8-TCDD 93.3 35.0 - 197

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Chemical Interference
- D Presence of Diphenyl Ethers
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst:

Date: 2/4/11

Reviewed By: SPV

Date: 2/4/11

EPA Method 1613
PCDD/F



FAL ID: 6548-003-SA
Client ID: MW12-012011
Matrix: Aqueous
Batch No: X2210

Date Extracted: 02-02-2011
Date Received: 01-25-2011
Amount: 0.995 L

ICal: pccdfal3-8-23-10
GC Column: DB5
Units: pg/L

Acquired: 02-03-2011
2005 WHO TEQ: 0.0475


Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	1.12		-	0.212				
1,2,3,7,8-PeCDD	ND	1.40		-	0.302				
1,2,3,4,7,8-HxCDD	ND	1.60		-	0.328				
1,2,3,6,7,8-HxCDD	ND	2.04		-	0.381	Total TCDD	ND	1.12	
1,2,3,7,8,9-HxCDD	ND	1.82		-	0.351	Total PeCDD	ND	1.40	
1,2,3,4,6,7,8-HpCDD	3.94	-	J	0.0394	0.495	Total HxCDD	ND	2.04	
OCDD	27.0	-	J	0.00810	1.02	Total HpCDD	8.35	-	J
2,3,7,8-TCDF	ND	0.577		-	0.112				
1,2,3,7,8-PeCDF	ND	0.949		-	0.219				
2,3,4,7,8-PeCDF	ND	0.974		-	0.232				
1,2,3,4,7,8-HxCDF	ND	1.28		-	0.162				
1,2,3,6,7,8-HxCDF	ND	1.25		-	0.167				
2,3,4,6,7,8-HxCDF	ND	1.27		-	0.167				
1,2,3,7,8,9-HxCDF	ND	1.37		-	0.185	Total TCDF	ND	0.754	
1,2,3,4,6,7,8-HpCDF	ND	1.87		-	0.251	Total PeCDF	ND	0.974	
1,2,3,4,7,8,9-HpCDF	ND	2.79		-	0.280	Total HxCDF	ND	1.37	
OCDF	ND	3.58		-	0.451	Total HpCDF	ND	2.79	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	87.5	25.0 - 164	
13C-1,2,3,7,8-PeCDD	89.5	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	83.8	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	79.8	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	81.7	23.0 - 140	
13C-OCDD	86.4	17.0 - 157	
13C-2,3,7,8-TCDF	87.7	24.0 - 169	
13C-1,2,3,7,8-PeCDF	87.8	24.0 - 185	
13C-2,3,4,7,8-PeCDF	87.8	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	73.8	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	69.9	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	74.8	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	71.1	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	69.4	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	72.4	26.0 - 138	
13C-OCDF	74.5	17.0 - 157	

Cleanup Surrogate

37Cl-2,3,7,8-TCDD 92.0 35.0 - 197

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Chemical Interference
- D Presence of Diphenyl Ethers
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 2/4/11

Reviewed By: BAJ
Date: 2/4/11

EPA Method 1613
PCDD/F



FAL ID: 6548-004-SA
Client ID: MW04-012011
Matrix: Aqueous
Batch No: X2210

Date Extracted: 02-02-2011
Date Received: 01-25-2011
Amount: 0.960 L

ICal: pcddfal3-8-23-10
GC Column: DB5
Units: pg/L

Acquired: 02-03-2011
2005 WHO TEQ: 0.321

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	1.11		-	0.212				
1,2,3,7,8-PeCDD	ND	1.64		-	0.302				
1,2,3,4,7,8-HxCDD	ND	1.78		-	0.328				
1,2,3,6,7,8-HxCDD	ND	2.23		-	0.381	Total TCDD	ND	1.11	
1,2,3,7,8,9-HxCDD	ND	2.01		-	0.351	Total PeCDD	ND	1.64	
1,2,3,4,6,7,8-HpCDD	19.5	-	J	0.195	0.495	Total HxCDD	ND	2.23	
OCDD	186	-		0.0558	1.02	Total HpCDD	39.6	-	
2,3,7,8-TCDF	ND	0.610		-	0.112				
1,2,3,7,8-PeCDF	ND	1.14		-	0.219				
2,3,4,7,8-PeCDF	ND	1.23		-	0.232				
1,2,3,4,7,8-HxCDF	ND	1.45		-	0.162				
1,2,3,6,7,8-HxCDF	ND	1.40		-	0.167				
2,3,4,6,7,8-HxCDF	ND	1.53		-	0.167				
1,2,3,7,8,9-HxCDF	ND	1.53		-	0.185	Total TCDF	ND	0.610	
1,2,3,4,6,7,8-HpCDF	6.37	-	J	0.0637	0.251	Total PeCDF	ND	1.23	
1,2,3,4,7,8,9-HpCDF	ND	2.68		-	0.280	Total HxCDF	5.73	-	J
OCDF	22.1	-	J	0.00663	0.451	Total HpCDF	19.1	-	J

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	89.2	25.0 - 164	
13C-1,2,3,7,8-PeCDD	93.7	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	84.9	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	82.4	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	86.4	23.0 - 140	
13C-OCDD	89.0	17.0 - 157	
13C-2,3,7,8-TCDF	89.4	24.0 - 169	
13C-1,2,3,7,8-PeCDF	92.0	24.0 - 185	
13C-2,3,4,7,8-PeCDF	89.7	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	76.6	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	74.3	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	76.5	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	74.8	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	69.5	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	75.1	26.0 - 138	
13C-OCDF	75.7	17.0 - 157	

Cleanup Surrogate

37Cl-2,3,7,8-TCDD 91.1 35.0 - 197

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Chemical Interference
- D Presence of Diphenyl Ethers
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst:
Date: 2/4/11

Reviewed By: JN
Date: 2/4/11

EPA Method 1613
PCDD/F



FAL ID: 6548-005-SA
Client ID: MW03-012011
Matrix: Aqueous
Batch No: X2210

Date Extracted: 02-02-2011
Date Received: 01-25-2011
Amount: 0.974 L

ICal: pccdfal3-8-23-10
GC Column: DB5
Units: pg/L

Acquired: 02-03-2011
2005 WHO TEQ: 0.0753

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	1.43		-	0.212				
1,2,3,7,8-PeCDD	ND	2.00		-	0.302				
1,2,3,4,7,8-HxCDD	ND	2.11		-	0.328				
1,2,3,6,7,8-HxCDD	ND	2.65		-	0.381	Total TCDD	ND	1.43	
1,2,3,7,8,9-HxCDD	ND	2.38		-	0.351	Total PeCDD	ND	2.00	
1,2,3,4,6,7,8-HpCDD	5.99	-	J	0.0599	0.495	Total HxCDD	ND	2.65	
OCDD	51.2	-	J	0.0154	1.02	Total HpCDD	12.6	-	J
2,3,7,8-TCDF	ND	0.785		-	0.112				
1,2,3,7,8-PeCDF	ND	1.29		-	0.219				
2,3,4,7,8-PeCDF	ND	1.39		-	0.232				
1,2,3,4,7,8-HxCDF	ND	2.30		-	0.162				
1,2,3,6,7,8-HxCDF	ND	2.28		-	0.167				
2,3,4,6,7,8-HxCDF	ND	2.52		-	0.167				
1,2,3,7,8,9-HxCDF	ND	2.59		-	0.185	Total TCDF	ND	0.785	
1,2,3,4,6,7,8-HpCDF	ND	2.61		-	0.251	Total PeCDF	ND	1.39	
1,2,3,4,7,8,9-HpCDF	ND	4.96		-	0.280	Total HxCDF	ND	2.59	
OCDF	ND	8.40		-	0.451	Total HpCDF	ND	4.96	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	76.2	25.0 - 164	
13C-1,2,3,7,8-PeCDD	81.1	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	76.1	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	71.3	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	75.8	23.0 - 140	
13C-OCDD	79.0	17.0 - 157	
13C-2,3,7,8-TCDF	77.7	24.0 - 169	
13C-1,2,3,7,8-PeCDF	78.5	24.0 - 185	
13C-2,3,4,7,8-PeCDF	79.3	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	68.4	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	63.7	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	66.0	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	63.3	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	62.3	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	65.9	26.0 - 138	
13C-OCDF	67.9	17.0 - 157	

Cleanup Surrogate

37Cl-2,3,7,8-TCDD 79.7 35.0 - 197

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Chemical Interference
- D Presence of Diphenyl Ethers
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: [Signature]
Date: 2/4/11

Reviewed By: DN
Date: 2/4/11



6548
Doc

Laboratory: Frontier Analytical Laboratory
 Lab Contact: BRAD SILVERBUSH
 Lab Address: 5172 Hillside Circle
 El Dorado Hills, CA 95762
 Phone: 916-934-0900
 Fax: 916-934-0999

ARI Client: Floyd/Snider
 Project ID: Lora Lake Apts RI
 ARI PM: Sue Dunnihoo
 Phone: 206-695-6207
 Fax: 206-695-6201

Analytical Protocol: In-house
 Special Instructions:

Requested Turn Around: 02/04/11
 Email Results (Y/N): **email**

Limits of Liability. Subcontractor is expected to perform all requested services in accordance with appropriate methodology following Standard Operating Procedures that meet standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the negotiated amount for said services. The agreement by the Subcontractor to perform services requested by ARI releases ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Subcontractor.

ARI ID	Client ID/ Add'l ID	Sampled	Matrix	Bottles	Analyses
11-1198-SF50A	MW13-012011	01/20/11 09:00 ✓	Water	6	Dioxin/Furans 1613(Sub) <i>MS/MSD</i>
Special Instructions: None					
11-1199-SF50B	MW06-012011	01/20/11 10:40 ✓	Water	2	Dioxin/Furans 1613(Sub)
Special Instructions: None					
11-1200-SF50C	MW12-012011	01/20/11 11:25 ✓	Water	2	Dioxin/Furans 1613(Sub)
Special Instructions: None					
11-1201-SF50D	MW04-012011	01/20/11 14:50 ✓	Water	2	Dioxin/Furans 1613(Sub) <i>1- rec'd broken</i>
Special Instructions: None					
11-1203-SF50F	MW03-012011	01/20/11 16:30 ✓	Water	2	Dioxin/Furans 1613(Sub)
Special Instructions: None					

*Sue to Kathy - L4 Data package + Excel EDD.
 Login as groundwater, <2/25/11*

Carrier	<i>UPS</i>	Airbill	<i>128326950151463229</i> <i>178326950150928630</i> <i>128326950149735243</i>	Date	<i>1/24/11</i>
Relinquished by	<i>Milka Tulyumba</i>	Company	<i>ARI</i>	Date	<i>1/24/11</i>
Received by	<i>MALN</i>	Company	<i>FAL</i>	Date	<i>1/25/11</i>
				Time	<i>1515</i>
				Time	<i>1010</i>

Frontier Analytical Laboratory

Sample Login Form

FAL Project ID: **6548**

Client:	Analytical Resources Inc. Sue Dunninghoo
Client Project ID:	SF50
Date Received:	01/25/2011
Time Received:	10:10 am
Received By:	GN
Logged In By:	KZ
# of Samples Received:	5
Duplicates:	6
Storage Location:	R1

Method of Delivery:	UPS
Tracking Number:	1Z8326950149735243
Shipping Container Received Intact	Yes
Custody seals(s) present?	Yes
Custody seals(s) intact?	Yes
Sample Arrival Temperature (C)	0
Cooling Method	Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	Yes
Test for residual Chlorine	Yes
Thiosulfate Added	No
Earliest Sample Hold Time Expiration	01/20/2012
Adequate Sample Volume	Yes
Anomalies or additional comments:	
L4 DATA PACKAGE / EXCEL EDD	





Frontier Analytical Laboratory
PROJECT REQUEST SHEET

Project #: 6548 Sample #: 1-5 Client Manager: BS
Client: Analytical Resources Inc. Sue Dunnihoo Hold Time: 01/20/2012
Matrix: Ground Water Extraction Batch: 2210 Due Date: 02/16/2011
Method: EPA 1613 D/F Storage: R1
SOP: SOPs: EP2A Rev.8 IP2A Rev.9

COMMENTS/INSTRUCTIONS: *-no cap-*

Sample	Full Weight (g)	Empty Weight (g)
<u>6548-001-0001-SA</u>	<u>1501.92</u>	<u>497.27</u>
<u>6548-002-0001-SA</u>	<u>1541.41</u>	<u>493.91</u>
<u>6548-003-0001-SA</u>	<u>1492.13</u>	<u>497.39</u>
<u>6548-004-0001-SA</u>	<u>1453.25</u>	<u>493.62</u>
<u>6548-005-0001-SA</u>	<u>1468.54</u>	<u>494.17</u>
<u>6548-001-0001-MS</u>	<u>1480.33</u>	<u>497.04</u>
<u>6548-001-0001-MSD</u>	<u>1509.82</u>	<u>497.71</u>

LU & Excel EDD

Results: 6548 Instrument: FAL-3
DB5 _____
DB225 _____
DB1 _____
Other _____
Extract/s located in box: "The Box with NO NAME"
Standards: 6548

Frontier Analytical Laboratory Percent Solids

FAL Project: 6548

	Sample ID	Chemist	Date	Wet Sample Weight (g)	Dry Sample Weight (g)	% Solids	10g Equiv
1.33	6548-001-0001-MS	MP	2-2-11	6.58	0.00	0.00	-
1.33	6548-001-0001-MSD	↓	↓	7.07	0.00	0.00	-
	6548-001-0001-SA			6.77	0.00	0.00	-
1.32	6548-002-0001-SA			7.67	0.01	0.13	-
1.32	6548-003-0001-SA			6.83	0.01	0.15	-
1.32	6548-004-0001-SA			11.56	0.01	0.09	-
1.33	6548-005-0001-SA			7.89	0.01	0.13	-

% Solids Summary:

Non-Filtered Determination

1. Place an aliquot of sample into a pre-weighed aluminum weighing boat. Use approximately two to ten grams for solid samples, approximately 10 mL for aqueous samples.
2. Record the weight.
3. Dry sample overnight at approximately 110 C.

Filtered Determination

1. Pre-weigh a glass fiber filter of appropriate pore size and pressure filter a sample aliquot (200-1000mL) through it.
2. Air dry the filter and record the dry weight.

% Solids calculation

$\% \text{ solids} = \text{aliquot after drying} / \text{aliquot before drying} \times 100$

- Samples containing one percent solids or less are prepared as aqueous samples.
- Samples containing greater than one percent solids prepared as solid samples.

Frontier Analytical Laboratory

EXTRACTION SHEET

Project #: 6548 Extraction Date: 2011-02-02 Extraction Chemist: MP

Method/Analysis: EPA 1613 D/F

Procedure: SPE/SOX

Solvent: Toluene

Sample ID	Wet wt. (g/L)	Dry wt. (g/L)	IS		NS		CSS	
			Amt: 10.0uL ID: 100511A Vial: 3 Chemist/Witness/Date		Amt: 10.0uL ID: 100511B Vial: 1 Chemist/Witness/Date		Amt: 10.0uL ID: 100511C Vial: 3 Chemist/Witness/Date	
2210-001-0001-MB	(1.000L)	N/A	MP	2-2-11	N/A		MP	2-3-11
2210-001-0001-OPR	(1.000L)				MP	2-2-11		
6548-001-0001-SA	1.005L				N/A			
6548-001-0001-MS	0.983L				MP	2-2-11		
6548-001-0001-MSD	1.012L				↓			
6548-002-0001-SA	1.048L				N/A			
6548-003-0001-SA	0.995L							
6548-004-0001-SA	0.960L							
6548-005-0001-SA	0.974L	↓		↓		↓		↓

AX-21 Charcoal Cleaned	031210	Acetone	105790	Acid Alumina	A0284730	Hexane	105556
Hydrochloric Acid	B08505	Methanol	106063	Methylene Chloride (DCM)	50267	Silica Gel	TA1592834
Sodium Hydroxide	9120904	Sodium Sulfate	1750C277	Sulfuric Acid	104256	Tetradecane	086237
Toluene	104811	Water	50229	C-18 Empore Discs	320637	Cyclohexane	48151

Comments:

Frontier Analytical Laboratory CLEANUP SHEET

Project #: 6548


Method/Analysis: EPA 1613 D/F

Splits: 0 Split Date: N/A Final Volume: 20.0uL

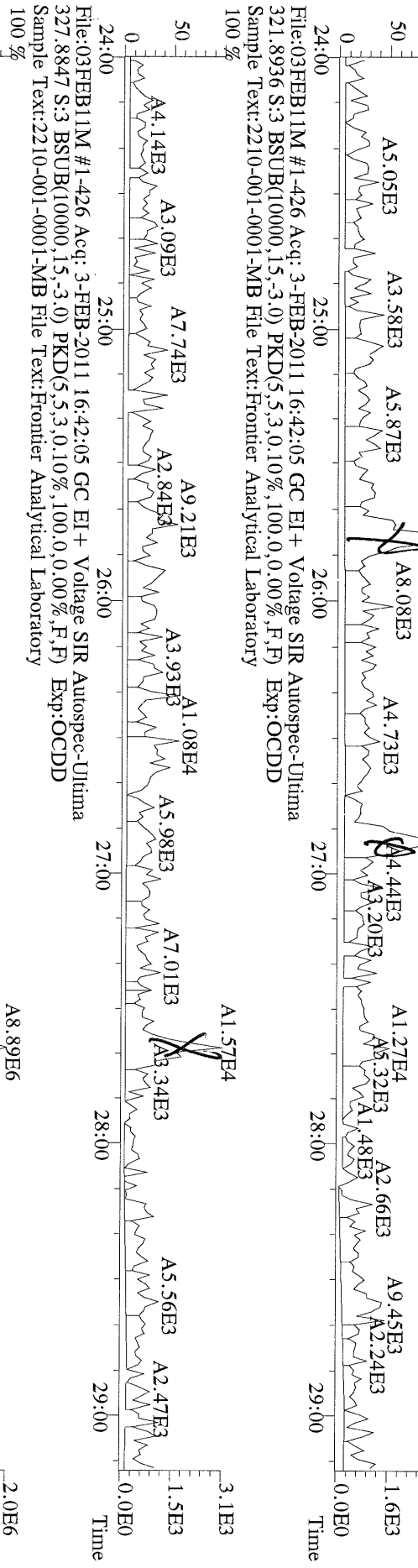
Sample ID	Cleanup 1	Cleanup 2	Cleanup 3	RS
	MSG/AA	N/A	N/A	Amt: 10.0uL ID: 100511D Vial: 5 Chemist/Witness/Date
	Chemist/Date	Chemist/Date	Chemist/Date	
2210-001-0001-MB	MP 2-3-11	N/A	N/A	MP GN 2-3-11
2210-001-0001-OPR	↓	↓	↓	↓
6548-001-0001-SA	↓	↓	↓	↓
6548-001-0001-MS	↓	↓	↓	↓
6548-001-0001-MSD	↓	↓	↓	↓
6548-002-0001-SA	↓	↓	↓	↓
6548-003-0001-SA	↓	↓	↓	↓
6548-004-0001-SA	↓	↓	↓	↓
6548-005-0001-SA	↓	↓	↓	↓

Comments:

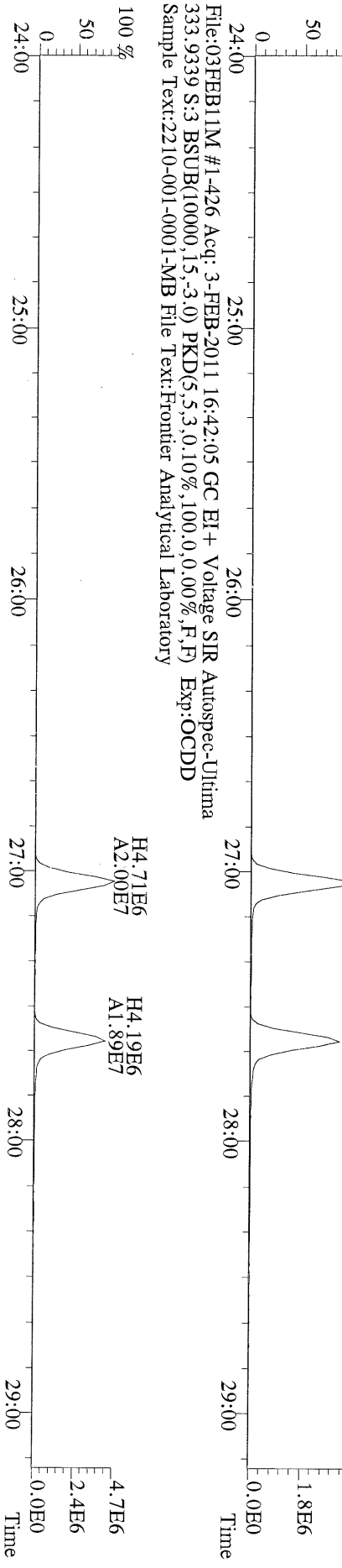
Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL	#Hom	
2,3,7,8-TCDD	*	* n	NotFnd	1.11	*		2.50	892	800	1.03	
1,2,3,7,8-PeCDD	*	* n	NotFnd	1.10	*		2.50	864	868	1.56	
1,2,3,4,7,8-HxCDD	*	* n	NotFnd	1.37	*		2.50	960	1010	1.73	
1,2,3,6,7,8-HxCDD	*	* n	NotFnd	1.37	*		2.50	960	1010	2.18	
1,2,3,7,8,9-HxCDD	*	* n	NotFnd	1.36	*		2.50	960	1010	1.96	
1,2,3,4,6,7,8-HpCDD	*	* n	NotFnd	1.45	*		2.50	904	856	2.36	
OCDD	*	* n	NotFnd	1.43	*		2.50	988	916	4.86	
2,3,7,8-TCDF	*	* n	NotFnd	1.50	*		2.50	956	1060	0.597	
1,2,3,7,8-PeCDF	*	* n	NotFnd	0.94	*		2.50	740	940	1.04	
2,3,4,7,8-PeCDF	*	* n	NotFnd	0.94	*		2.50	740	940	1.13	
1,2,3,4,7,8-HxCDF	*	* n	NotFnd	0.93	*		2.50	864	916	1.51	
1,2,3,6,7,8-HxCDF	*	* n	NotFnd	0.82	*		2.50	864	916	1.45	
2,3,4,6,7,8-HxCDF	*	* n	NotFnd	0.92	*		2.50	864	916	1.53	
1,2,3,7,8,9-HxCDF	*	* n	NotFnd	1.00	*		2.50	864	916	1.64	
1,2,3,4,6,7,8-HpCDF	*	* n	NotFnd	1.39	*		2.50	808	704	1.81	
1,2,3,4,7,8,9-HpCDF	*	* n	NotFnd	1.36	*		2.50	808	704	2.74	
OCDF	*	* n	NotFnd	0.79	*		2.50	948	960	5.31	
Rec											
13C-2,3,7,8-TCDD	3.33e+07	0.76 y	27:38	1.02	1830					91.4	
13C-1,2,3,7,8-PeCDD	2.90e+07	1.66 y	33:29	0.84	1930					96.6	
13C-1,2,3,4,7,8-HxCDD	2.23e+07	1.25 y	38:52	1.07	1790					89.3	
13C-1,2,3,6,7,8-HxCDD	2.07e+07	1.30 y	39:01	1.01	1760					88.0	
13C-1,2,3,4,6,7,8-HpCDD	1.79e+07	1.04 y	44:30	0.86	1800					90.0	
13C-OCDD	2.28e+07	1.01 y	50:08	0.55	3600					89.9	
13C-2,3,7,8-TCDF	5.22e+07	0.88 y	26:52	0.99	1800					90.1	
13C-1,2,3,7,8-PeCDF	4.66e+07	1.65 y	31:44	0.84	1910					95.4	
13C-2,3,4,7,8-PeCDF	4.39e+07	1.65 y	33:04	0.81	1860					92.8	
13C-1,2,3,4,7,8-HxCDF	3.47e+07	0.48 y	37:28	1.85	1610					80.7	
13C-1,2,3,6,7,8-HxCDF	4.58e+07	0.49 y	37:41	2.54	1550					77.6	
13C-2,3,4,6,7,8-HxCDF	3.76e+07	0.47 y	38:37	2.01	1610					80.4	
13C-1,2,3,7,8,9-HxCDF	3.62e+07	0.48 y	40:04	2.03	1530					76.7	
13C-1,2,3,4,6,7,8-HpCDF	1.94e+07	0.50 y	42:35	1.11	1500					75.0	
13C-1,2,3,4,7,8,9-HpCDF	1.43e+07	0.50 y	45:26	0.80	1530					76.5	
13C-OCDF	4.02e+07	0.94 y	50:32	1.08	3200					79.9	
37Cl-2,3,7,8-TCDD	8.89e+06		27:39	0.69	728					91.0	
13C-1,2,3,4-TCDD	3.56e+07	0.78 y	27:02	-	79.3						
13C-1,2,3,4-TCDF	5.83e+07	0.87 y	25:47	-	80.7						
13C-1,2,3,7,8,9-HxCDD	2.33e+07	1.25 y	39:29	-	84.3						
Total Tetra-Dioxins	*		NotFnd	1.11	*		2.50	892	800	1.03	0
Total Penta-Dioxins	*		NotFnd	1.10	*		2.50	864	868	1.56	0
Total Hexa-Dioxins	*		NotFnd	1.37	*		2.50	960	1010	2.18	0
Total Hepta-Dioxins	*		NotFnd	1.45	*		2.50	904	856	2.36	0
Total Tetra-Furans	*		NotFnd	1.50	*		2.50	956	1060	0.597	0
1st Fn. Tot Penta-Furans	*		NotFnd	0.94	*		2.50	740	940	1.13	PeCDF 0
Total Penta-Furans	*		NotFnd	0.94	*		2.50	740	940	1.13	* 0
Total Hexa-Furans	*		NotFnd	0.91	*		2.50	864	916	1.64	0
Total Hepta-Furans	*		NotFnd	1.38	*		2.50	808	704	2.74	0

Analyst:  Date: 2/4/11

File:03FEB11M #1-426 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Utima
319.8965 S:3 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory

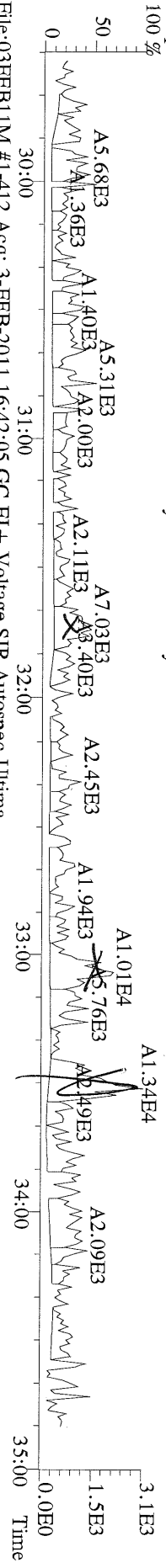


File:03FEB11M #1-426 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Utima
327.8847 S:3 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
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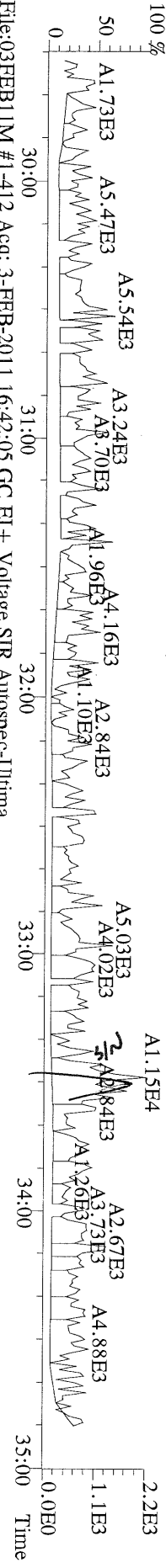


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333.9339 S:3 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
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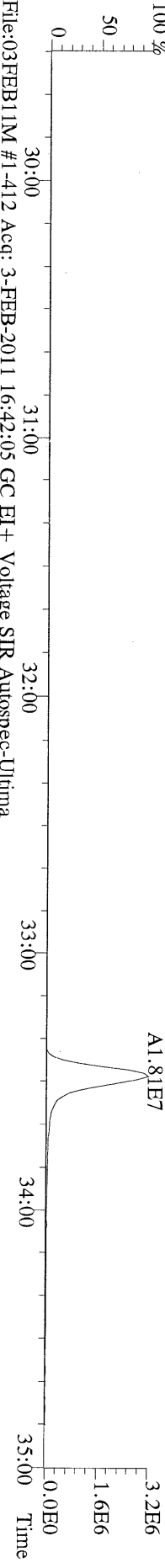
File:03FEB11M #1-412 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Ultima
 355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory
 100 %



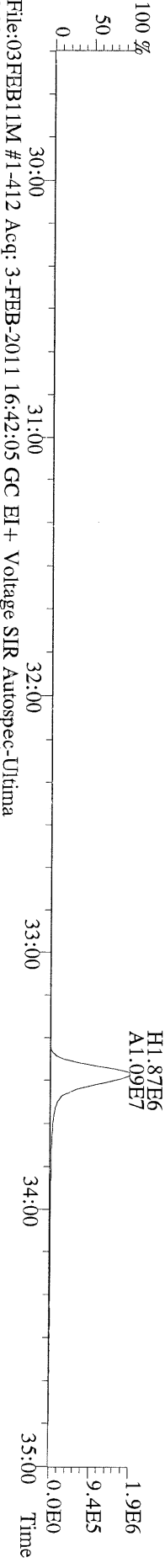
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 357.8517 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
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 100 %



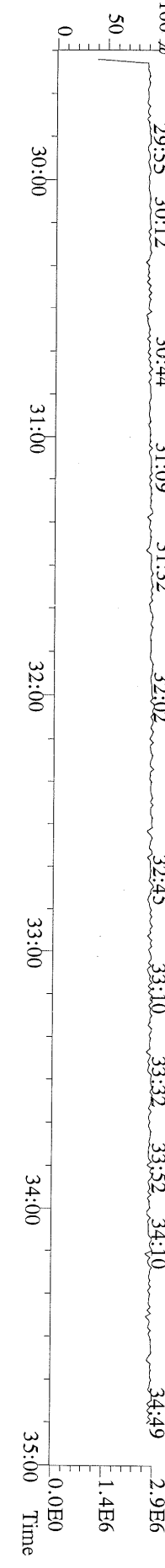
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 367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory
 100 %



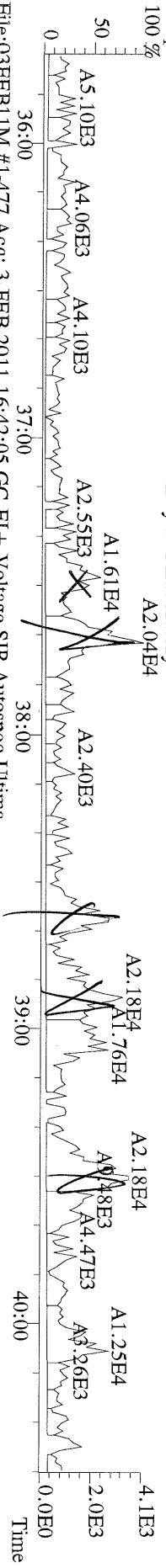
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 100 %



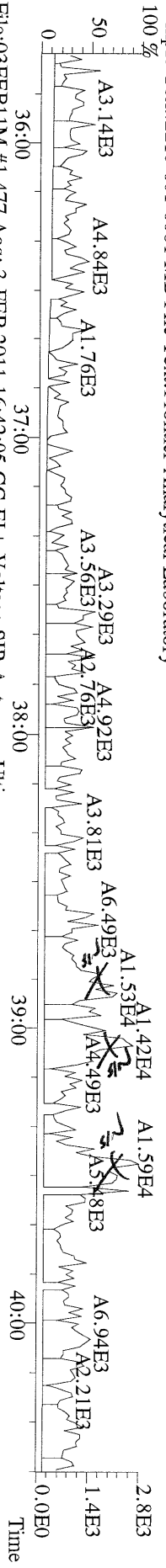
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 100 %



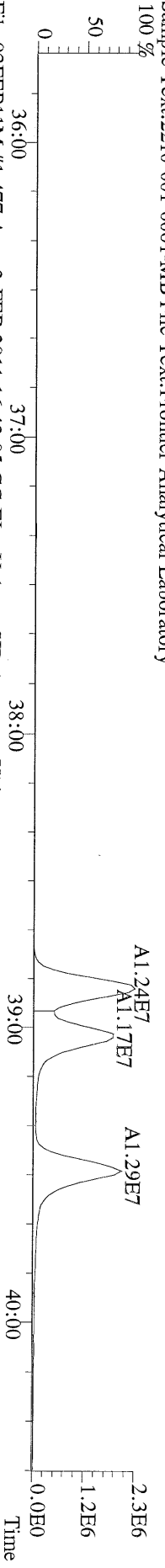
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 389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
 Sample Text:2210-001-0001-MB File Text:Fronter Analytical Laboratory



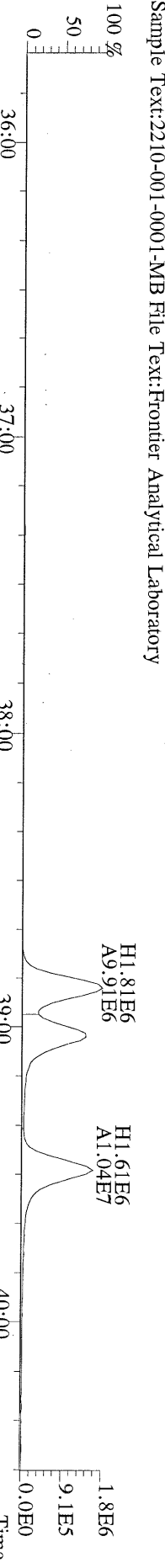
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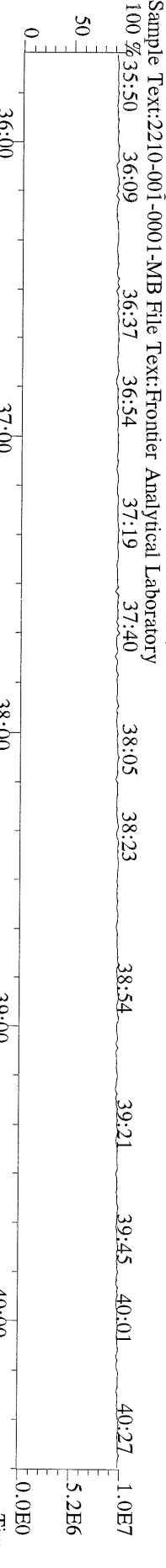
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 401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
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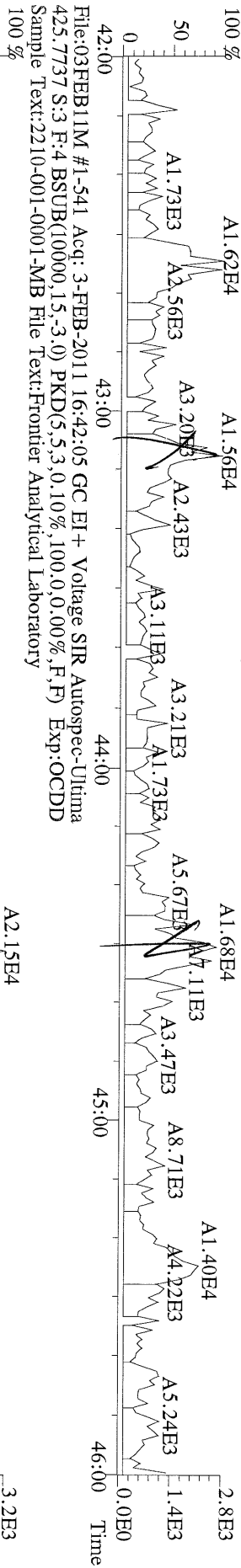
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 403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
 Sample Text:2210-001-0001-MB File Text:Fronter Analytical Laboratory



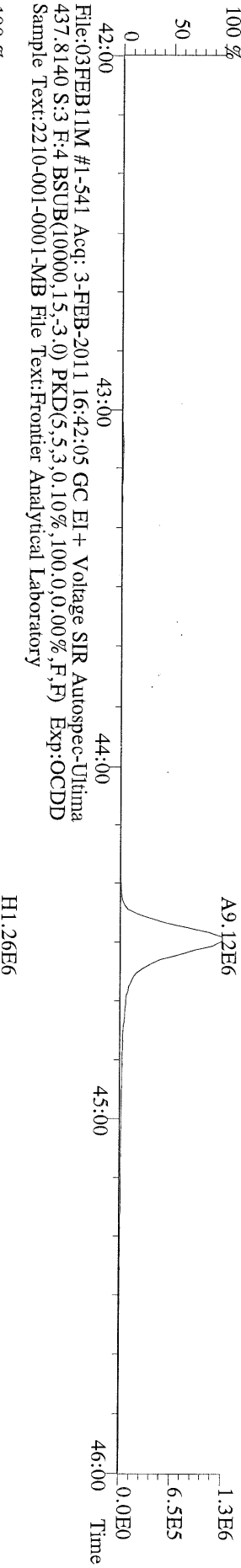
File:03FEB11M #1-477 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Utima
 380.9760 S:3 F:3 Exp:OCDD
 Sample Text:2210-001-0001-MB File Text:Fronter Analytical Laboratory



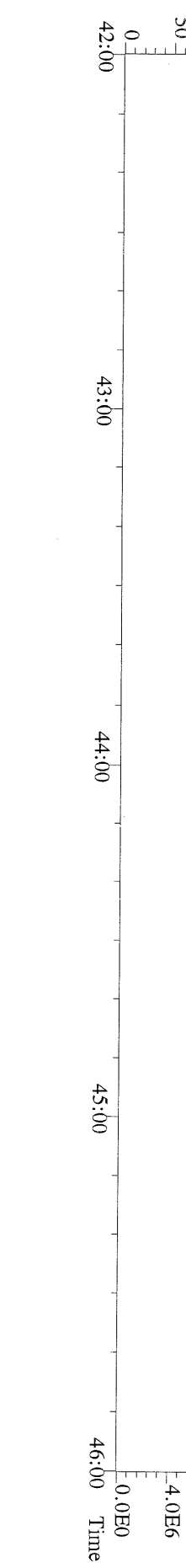
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423.7767 S:3 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



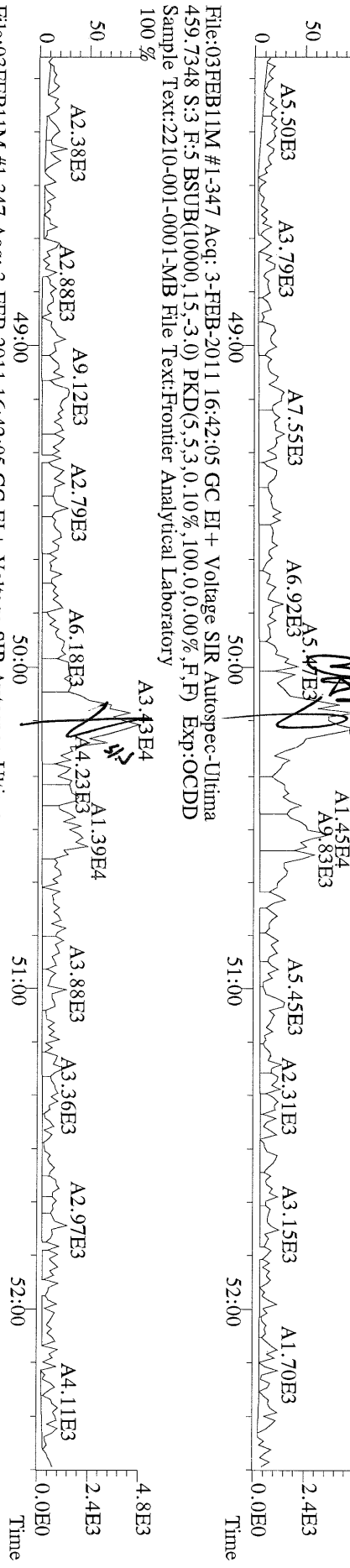
File:03FEB11M #1-541 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Utima
425.8169 S:3 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



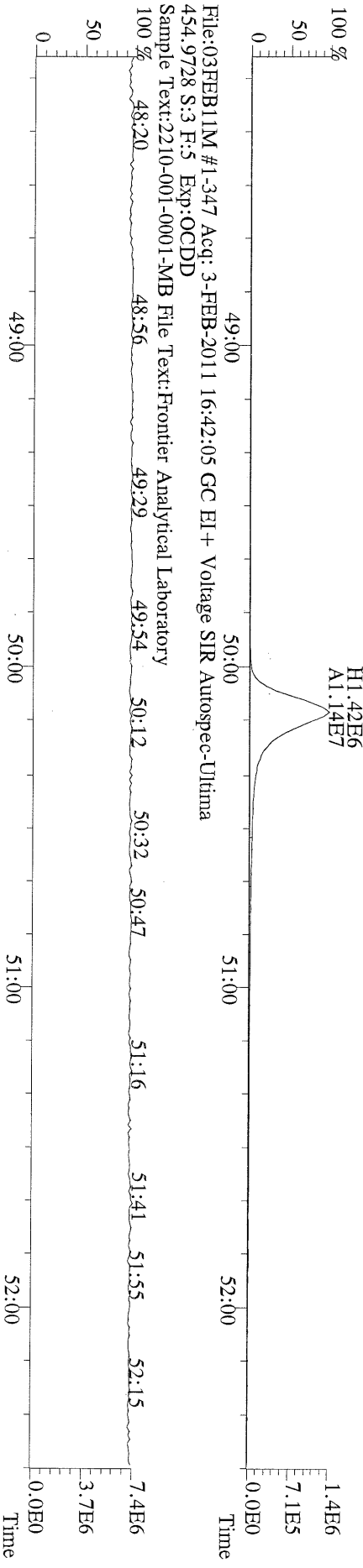
File:03FEB11M #1-541 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Utima
437.8140 S:3 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



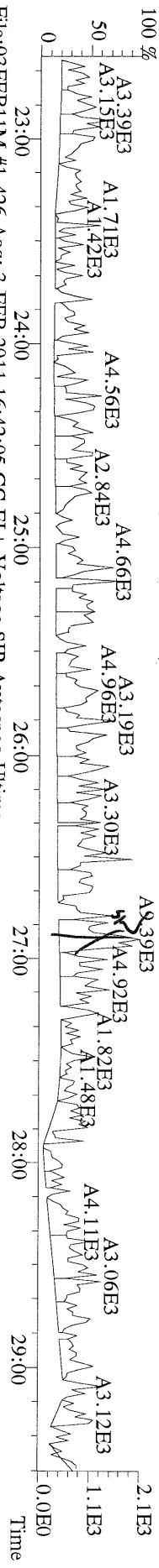
File:03FEB11M #1-347 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Ultima
 457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



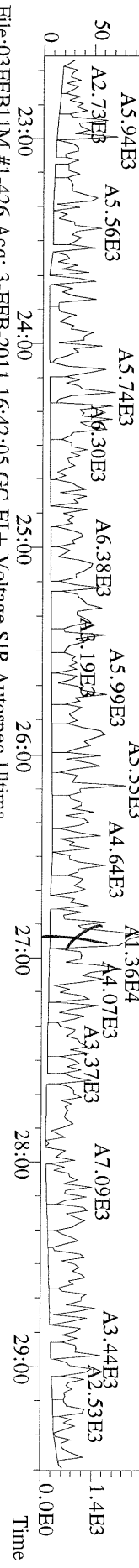
File:03FEB11M #1-347 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Ultima
 469.7780 S:3 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



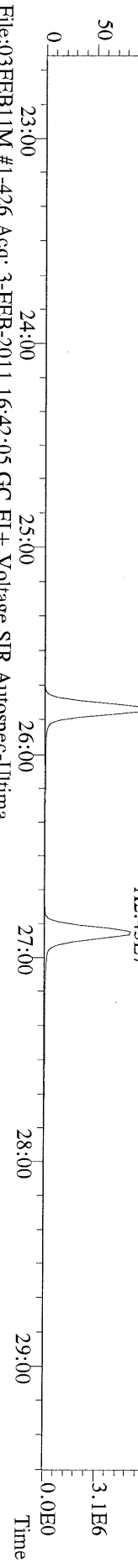
File:03FEB11M #1-426 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Utima
305.9016 S:3 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



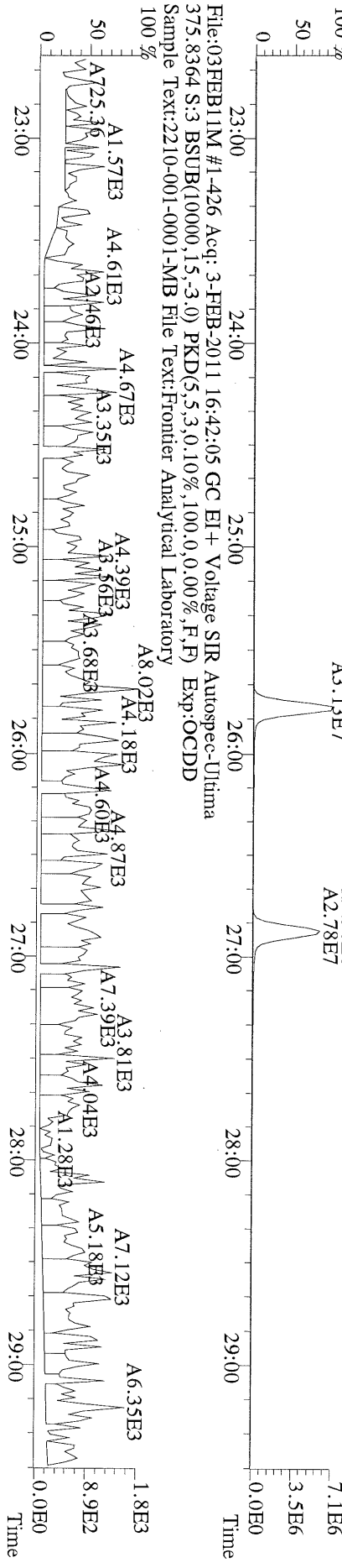
File:03FEB11M #1-426 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Utima
305.8987 S:3 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



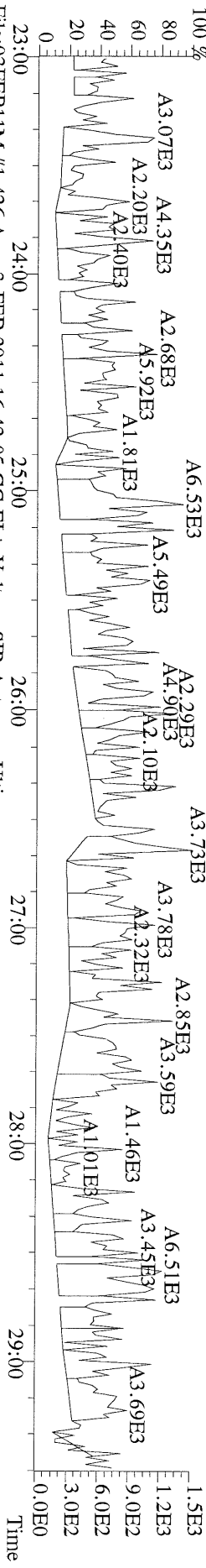
File:03FEB11M #1-426 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Utima
317.9389 S:3 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



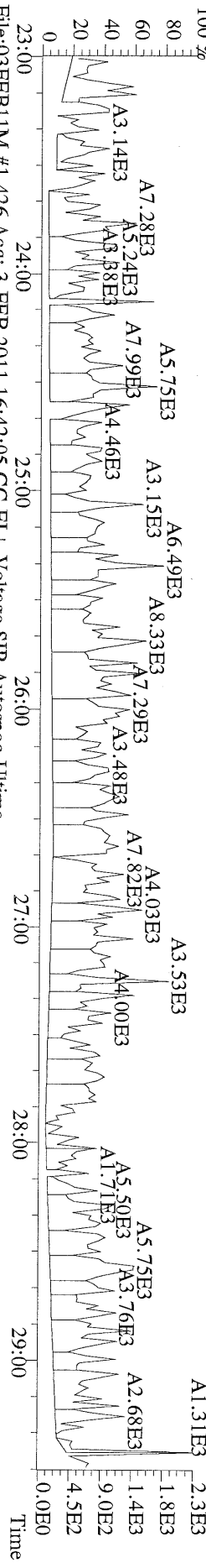
File:03FEB11M #1-426 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Utima
375.8364 S:3 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



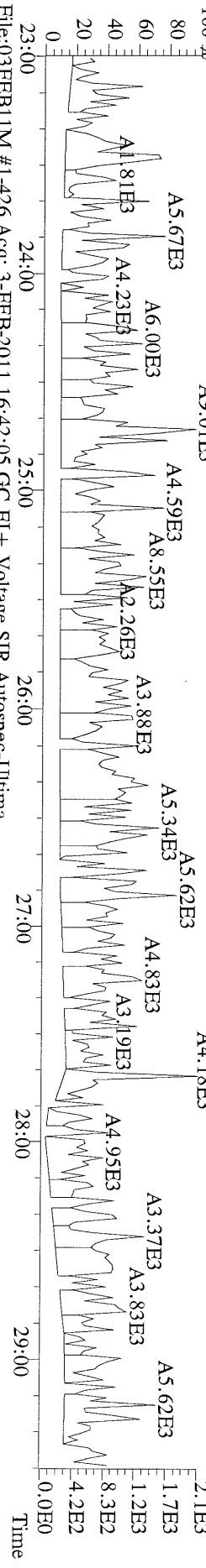
File:03FEB11M #1-426 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Utima
 339.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



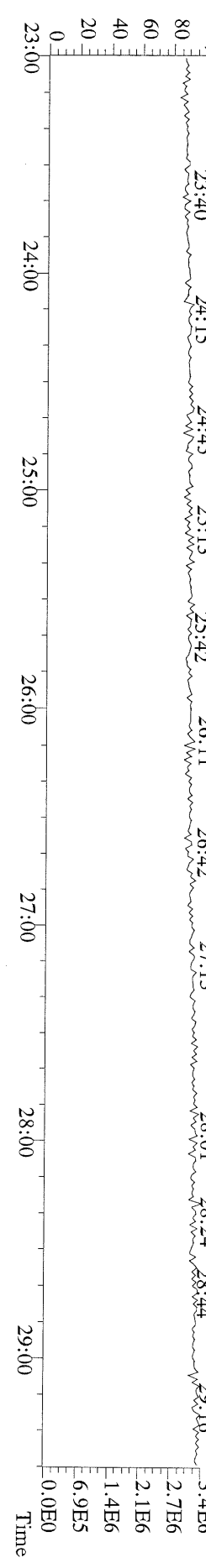
File:03FEB11M #1-426 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Utima
 341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



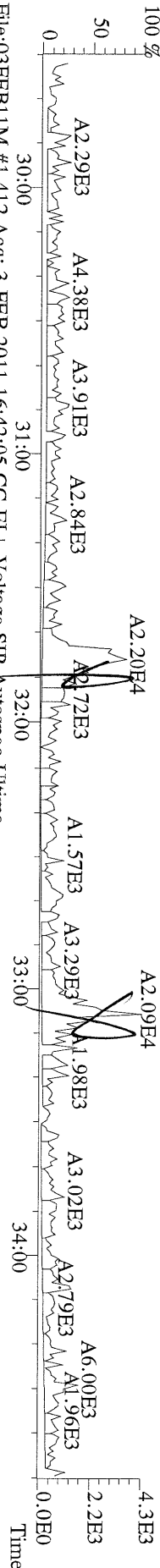
File:03FEB11M #1-426 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Utima
 409.7974 S:3 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



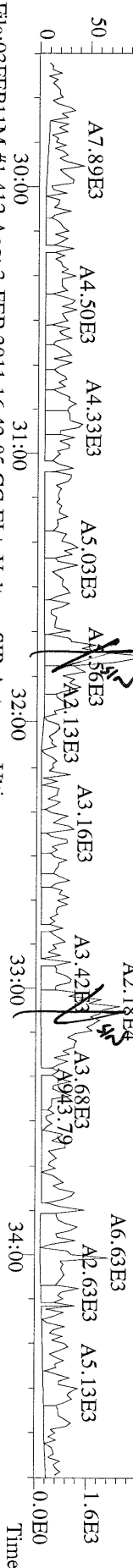
File:03FEB11M #1-426 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Utima
 316.9824 S:3 Exp:OCDD
 Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



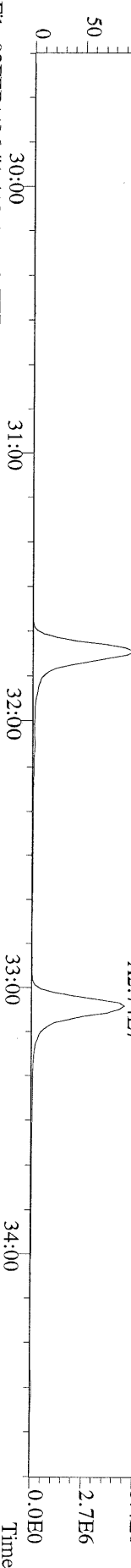
File:03FEB11M #1-412 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:3 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



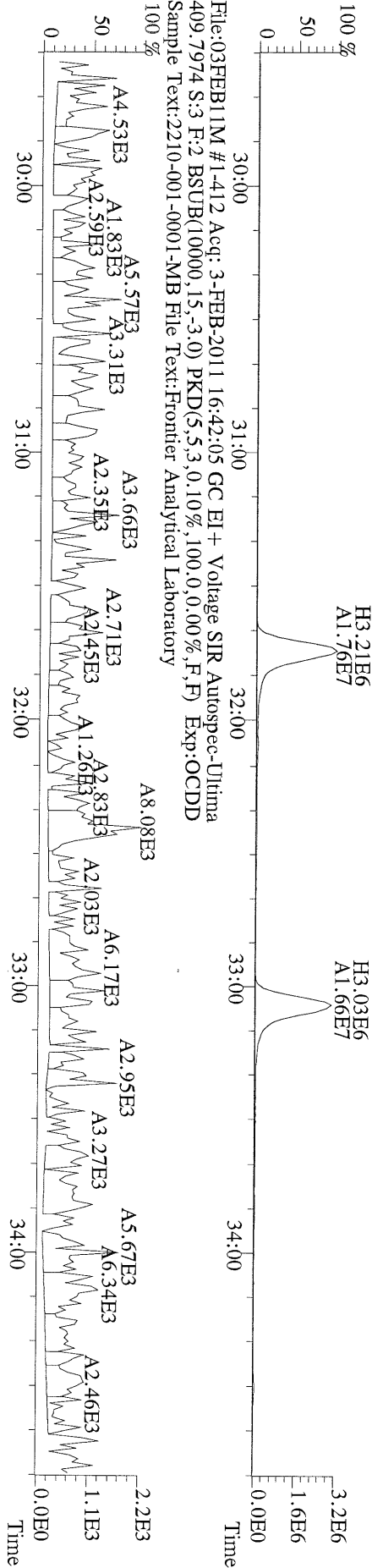
File:03FEB11M #1-412 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:3 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



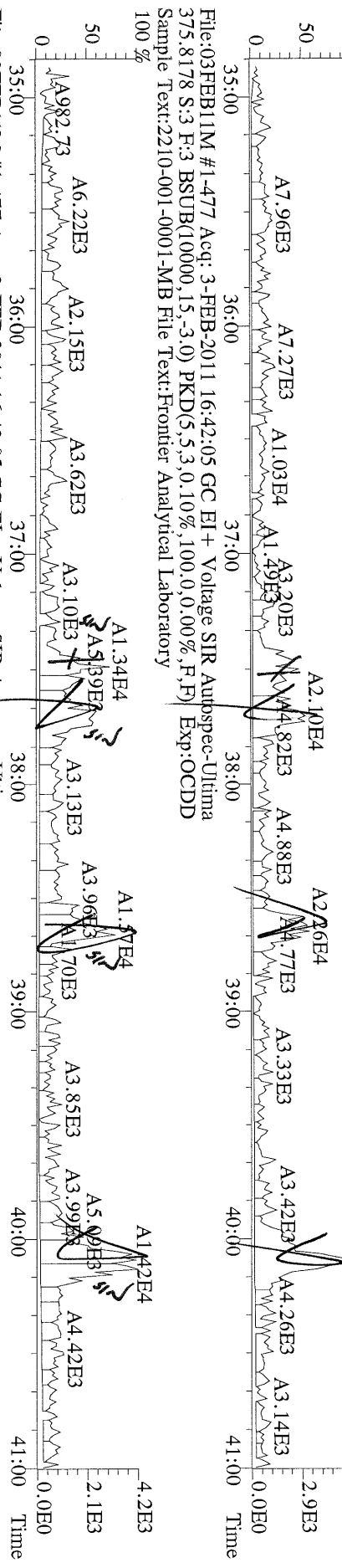
File:03FEB11M #1-412 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:3 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



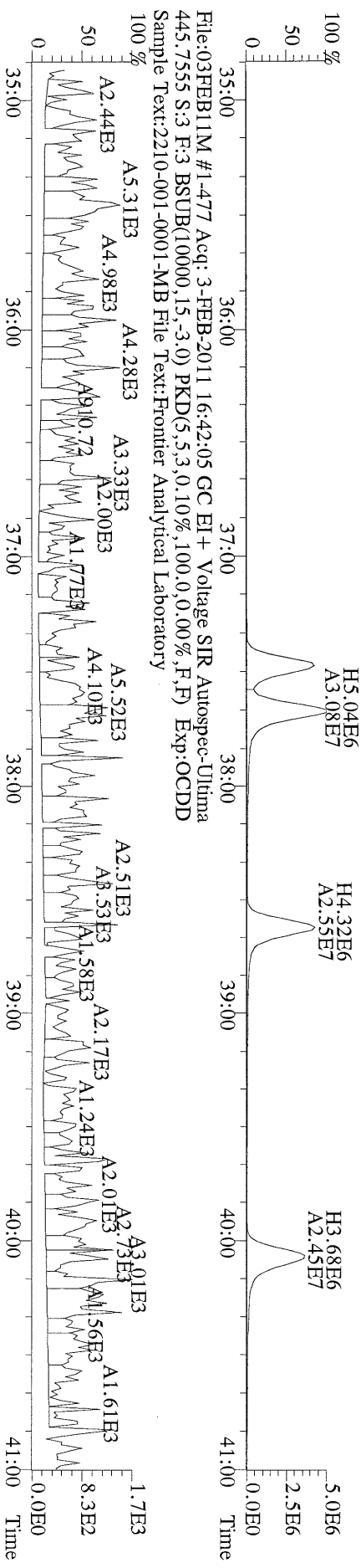
File:03FEB11M #1-412 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:3 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



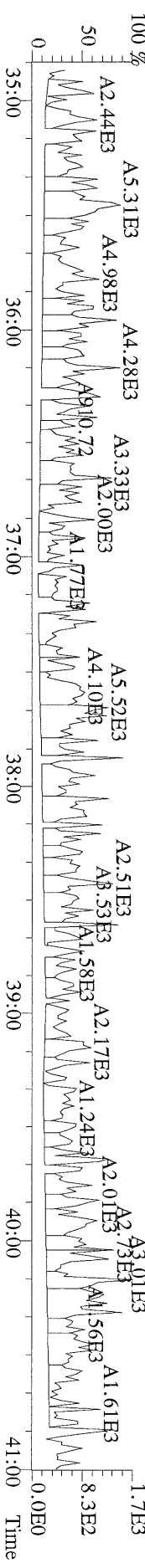
File:03FEB11M #1-477 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Ultima
 373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



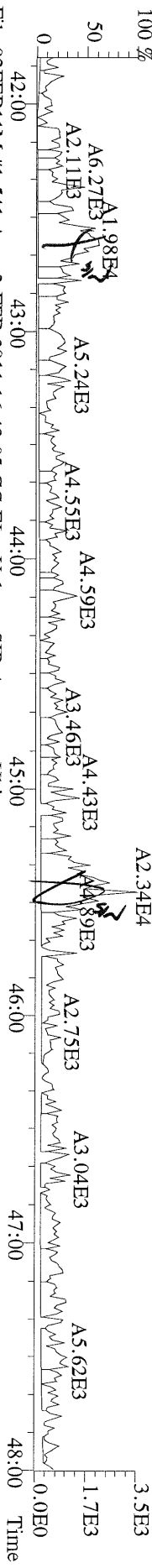
File:03FEB11M #1-477 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Ultima
 383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



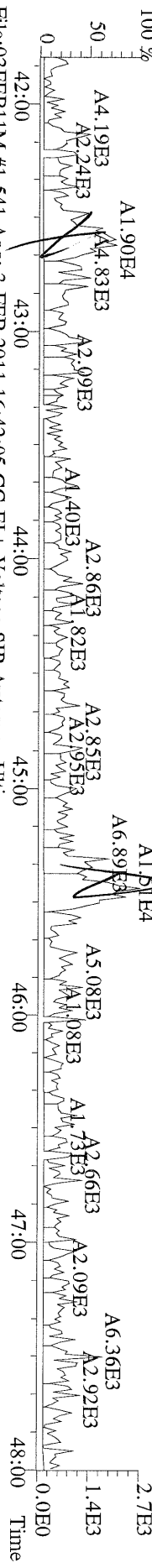
File:03FEB11M #1-477 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Ultima
 445.7555 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



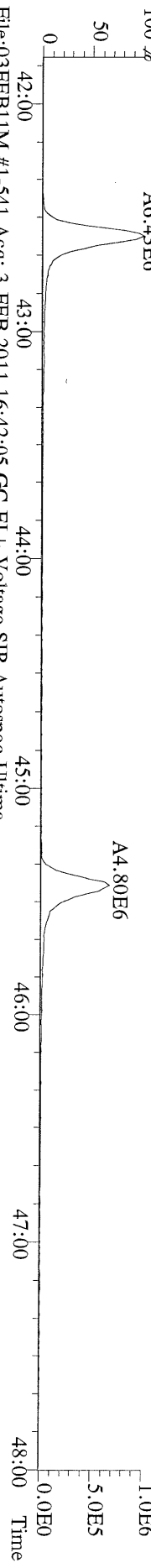
File:03FEB11M #1-541 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Ultima
 407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



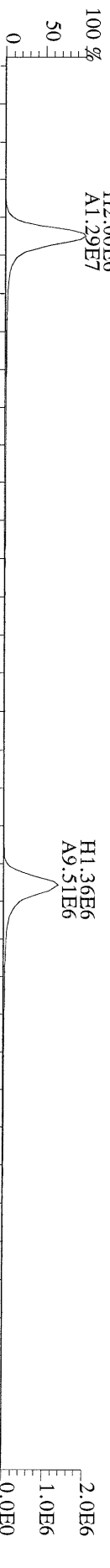
File:03FEB11M #1-541 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Ultima
 409.7788 S:3 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



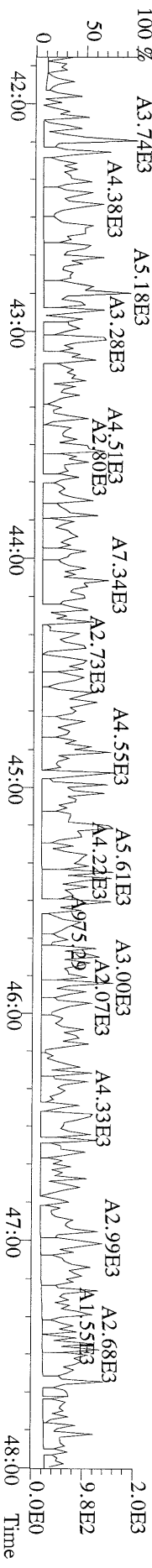
File:03FEB11M #1-541 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Ultima
 417.8253 S:3 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



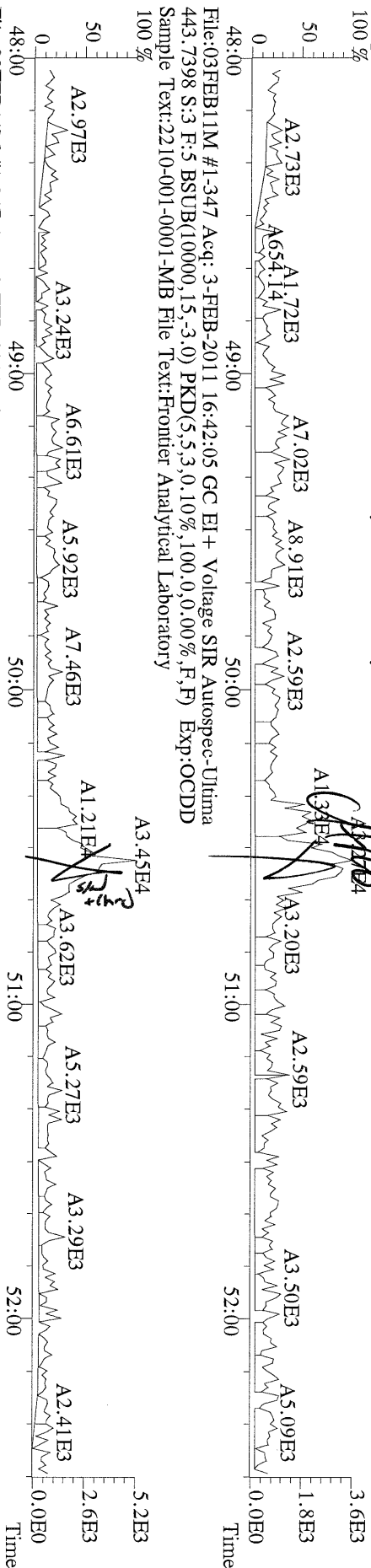
File:03FEB11M #1-541 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Ultima
 419.8220 S:3 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



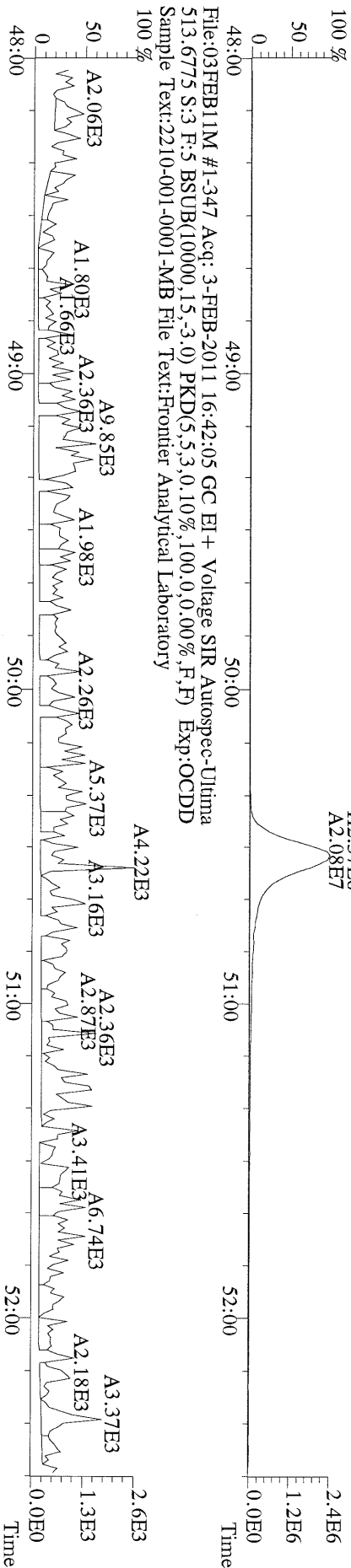
File:03FEB11M #1-541 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Ultima
 479.7165 S:3 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



File:03FEB11M #1-347 Acq: 3-FEB-2011 16:42:05 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,P) Exp:OCDD
Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



File:03FEB11M #1-347 Acq: 3-FEB-2011 16:42:05 GC EI+ Voltage SIR Autospec-Ultima
453.7801 S:3 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,P) Exp:OCDD
Sample Text:2210-001-0001-MB File Text:Frontier Analytical Laboratory



USEPA - ITD

FORM 8A

PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Matrix (aqueous/solid/leachate): Aqueous

OPR Data Filename: 03FEB11M

Sam:2


Ext. Date: 2/2/11 Shift: Day

Analysis Date: 3-FEB-11 15:46:50

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
NATIVE ANALYTES			
2,3,7,8-TCDD	10	10.6	6.70 - 15.8 ✓
1,2,3,7,8-PeCDD	50	51.6	35.0 - 71.0 ✓
1,2,3,4,7,8-HxCDD	50	53.9	35.0 - 82.0 ✓
1,2,3,6,7,8-HxCDD	50	55.0	38.0 - 67.0 ✓
1,2,3,7,8,9-HxCDD	50	58.7	32.0 - 81.0 ✓
1,2,3,4,6,7,8-HpCDD	50	45.2	35.0 - 70.0 ✓
OCDD	100	102	78.0 - 144 ✓
2,3,7,8-TCDF	10	8.66	7.50 - 15.8 ✓
1,2,3,7,8-PeCDF	50	48.5	40.0 - 67.0 ✓
2,3,4,7,8-PeCDF	50	49.5	34.0 - 80.0 ✓
1,2,3,4,7,8-HxCDF	50	55.6	36.0 - 67.0 ✓
1,2,3,6,7,8-HxCDF	50	57.8	42.0 - 65.0 ✓
2,3,4,6,7,8-HxCDF	50	57.4	35.0 - 78.0 ✓
1,2,3,7,8,9-HxCDF	50	56.8	39.0 - 65.0 ✓
1,2,3,4,6,7,8-HpCDF	50	54.7	41.0 - 61.0 ✓
1,2,3,4,7,8,9-HpCDF	50	55.2	39.0 - 69.0 ✓
OCDF	100	110	63.0 - 170 ✓

(1) Contract-required concentration limits for OPR as specified in Table 6, Method 1613

Analyst: Date: 

FORM 8B

PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): Aqueous OPR Data Filename: 03FEB11M Sam:2

Ext. Date: 2/2/11 Shift: Day Analysis Date: 3-FEB-11 15:46:50

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	100	77.6	20.0 - 175 ✓
13C-1,2,3,7,8-PeCDD	100	81.5	21.0 - 227 ✓
13C-1,2,3,4,7,8-HxCDD	100	78.2	21.0 - 193 ✓
13C-1,2,3,6,7,8-HxCDD	100	73.7	25.0 - 163 ✓
13C-1,2,3,4,6,7,8-HpCDD	100	76.3	26.0 - 166 ✓
13C-OCDD	200	161	26.0 - 397 ✓
13C-2,3,7,8-TCDF	100	76.6	22.0 - 152 ✓
13C-1,2,3,7,8-PeCDF	100	79.7	21.0 - 192 ✓
13C-2,3,4,7,8-PeCDF	100	76.3	13.0 - 328 ✓
13C-1,2,3,4,7,8-HxCDF	100	70.9	19.0 - 202 ✓
13C-1,2,3,6,7,8-HxCDF	100	66.5	21.0 - 159 ✓
13C-2,3,4,6,7,8-HxCDF	100	69.5	22.0 - 176 ✓
13C-1,2,3,7,8,9-HxCDF	100	66.3	17.0 - 205 ✓
13C-1,2,3,4,6,7,8-HpCDF	100	66.3	21.0 - 158 ✓
13C-1,2,3,4,7,8,9-HpCDF	100	68.7	20.0 - 186 ✓
13C-OCDF	200	139	26.0 - 397 ✓
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	32.6	12.4 - 76.4 ✓

(1) Contract-required concentration limits for OPR as specified in Table 6, Method 1613. Labeled compound concentration limits are based on required percent recovery of 25%-150%.

Analyst: 

Date: 2/4/11

Results:


GC Column: DB5

Amount: 1.000

NATO 1989 Tox: 106

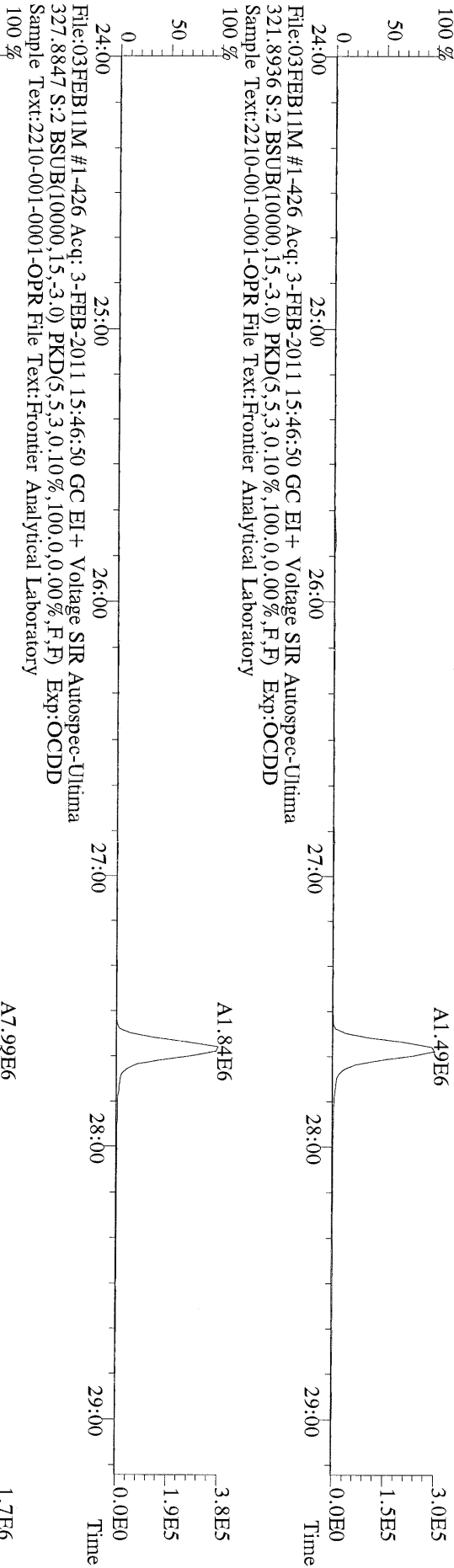
WHO 1998 Tox: 131 WHO 2005 Tox: 120

Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL	Rec	#Hom
2,3,7,8-TCDD	3.33e+06	0.81 y	27:39	1.11	10.6		2.50	-	-	*	
1,2,3,7,8-PeCDD	1.39e+07	1.42 y	33:31	1.10	51.6		2.50	-	-	*	
1,2,3,4,7,8-HxCDD	1.43e+07	1.29 y	38:53	1.37	53.9		2.50	-	-	*	
1,2,3,6,7,8-HxCDD	1.29e+07	1.30 y	39:03	1.37	55.0		2.50	-	-	*	
1,2,3,7,8,9-HxCDD	1.46e+07	1.28 y	39:30	1.36	58.7		2.50	-	-	*	
1,2,3,4,6,7,8-HpCDD	9.85e+06	0.91 y	44:31	1.45	45.2		2.50	-	-	*	
OCDD	1.49e+07	0.93 y	50:09	1.43	102		2.50	-	-	*	
2,3,7,8-TCDF	5.93e+06	0.68 y	26:54	1.50	8.66		2.50	-	-	*	
1,2,3,7,8-PeCDF	1.82e+07	1.59 y	31:45	0.94	48.5		2.50	-	-	*	
2,3,4,7,8-PeCDF	1.72e+07	1.56 y	33:05	0.94	49.5		2.50	-	-	*	
1,2,3,4,7,8-HxCDF	1.56e+07	1.22 y	37:30	0.93	55.6		2.50	-	-	*	
1,2,3,6,7,8-HxCDF	1.84e+07	1.28 y	37:42	0.82	57.8		2.50	-	-	*	
2,3,4,6,7,8-HxCDF	1.70e+07	1.27 y	38:39	0.92	57.4		2.50	-	-	*	
1,2,3,7,8,9-HxCDF	1.75e+07	1.27 y	40:06	1.00	56.8		2.50	-	-	*	
1,2,3,4,6,7,8-HpCDF	1.28e+07	1.10 y	42:36	1.39	54.7		2.50	-	-	*	
1,2,3,4,7,8,9-HpCDF	9.49e+06	1.07 y	45:27	1.36	55.2		2.50	-	-	*	
OCDF	1.49e+07	0.91 y	50:33	0.79	110		2.50	-	-	*	
13C-2,3,7,8-TCDD	2.84e+07	0.76 y	27:37	1.02	77.6					77.6	
13C-1,2,3,7,8-PeCDD	2.45e+07	1.68 y	33:29	0.84	81.5					81.5	
13C-1,2,3,4,7,8-HxCDD	1.93e+07	1.31 y	38:52	1.07	78.2					78.2	
13C-1,2,3,6,7,8-HxCDD	1.71e+07	1.23 y	39:01	1.01	73.7					73.7	
13C-1,2,3,4,6,7,8-HpCDD	1.50e+07	1.06 y	44:29	0.86	76.3					76.3	
13C-OCDD	2.03e+07	0.99 y	50:08	0.55	161					80.7	
13C-2,3,7,8-TCDF	4.56e+07	0.88 y	26:53	0.99	76.6					76.6	
13C-1,2,3,7,8-PeCDF	3.99e+07	1.66 y	31:45	0.84	79.7					79.7	
13C-2,3,4,7,8-PeCDF	3.71e+07	1.62 y	33:04	0.81	76.3					76.3	
13C-1,2,3,4,7,8-HxCDF	3.02e+07	0.48 y	37:29	1.85	70.9					70.9	
13C-1,2,3,6,7,8-HxCDF	3.87e+07	0.48 y	37:40	2.54	66.5					66.5	
13C-2,3,4,6,7,8-HxCDF	3.22e+07	0.47 y	38:37	2.01	69.5					69.5	
13C-1,2,3,7,8,9-HxCDF	3.10e+07	0.49 y	40:04	2.03	66.3					66.3	
13C-1,2,3,4,6,7,8-HpCDF	1.69e+07	0.49 y	42:35	1.11	66.3					66.3	
13C-1,2,3,4,7,8,9-HpCDF	1.27e+07	0.49 y	45:26	0.80	68.7					68.7	
13C-OCDF	3.45e+07	0.88 y	50:32	1.08	139					69.4	
37Cl-2,3,7,8-TCDD	7.99e+06		27:38	0.69	32.6					81.5	
13C-1,2,3,4-TCDD	3.57e+07	0.77 y	27:02	-	79.5						
13C-1,2,3,4-TCDF	5.98e+07	0.87 y	25:46	-	82.7						
13C-1,2,3,7,8,9-HxCDD	2.30e+07	1.22 y	39:29	-	83.4						
Total Tetra-Dioxins	3.54e+06		22:51	1.11	11.2		2.50	-	-	*	27
Total Penta-Dioxins	1.42e+07		33:31	1.10	52.7		2.50	-	-	*	10
Total Hexa-Dioxins	4.26e+07		38:53	1.37	171		2.50	-	-	*	13
Total Hepta-Dioxins	1.06e+07		43:07	1.45	48.7		2.50	-	-	*	28
Total Tetra-Furans	6.16e+06		23:01	1.50	8.99		2.50	-	-	*	21
1st Fn. Tot Penta-Furans	2.04e+05		22:47	0.94	0.564		2.50	-	-	*	PeCDF 33
Total Penta-Furans	3.69e+07		30:29	0.94	102		2.50	-	-	*	103 15
Total Hexa-Furans	6.90e+07		35:32	0.91	229		2.50	-	-	*	15
Total Hepta-Furans	2.32e+07		42:36	1.38	114		2.50	-	-	*	23

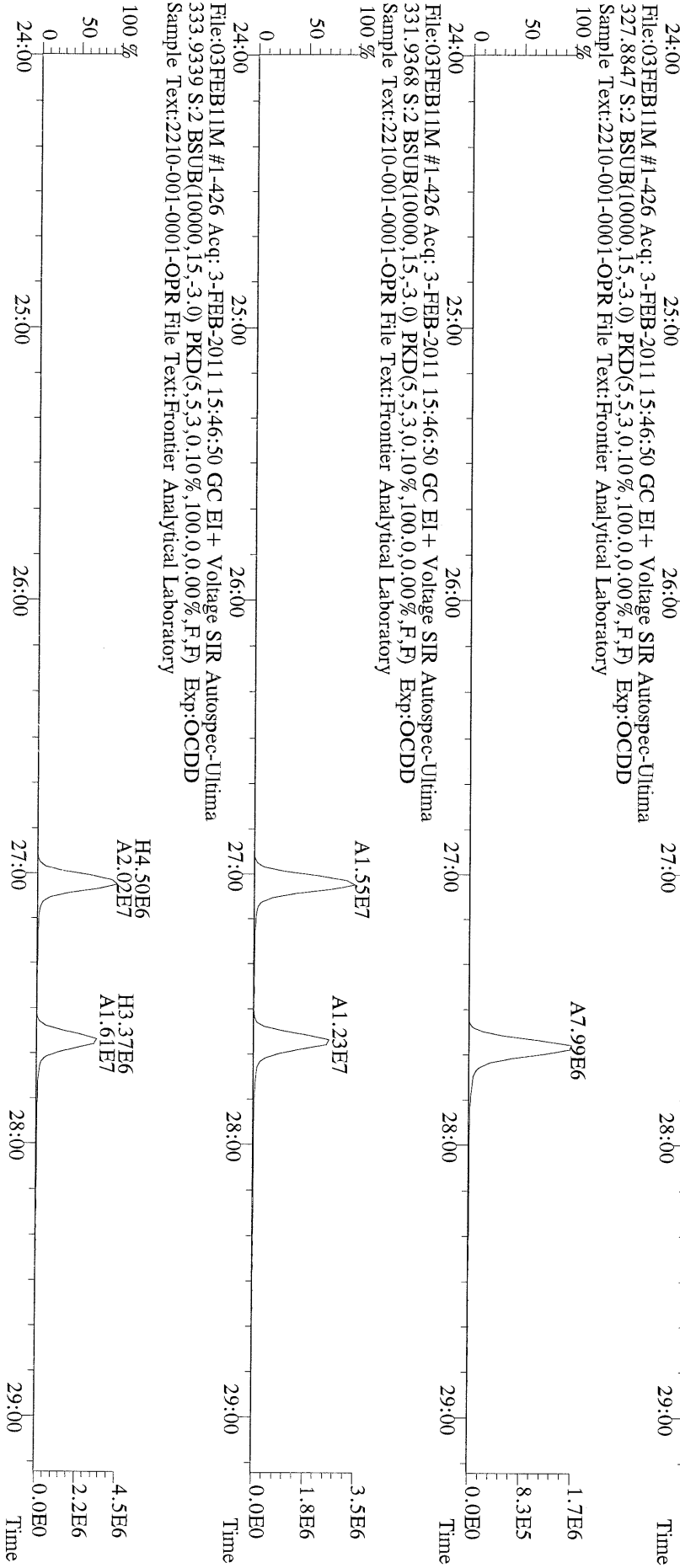
Analyst: 

Date: 2/4/11

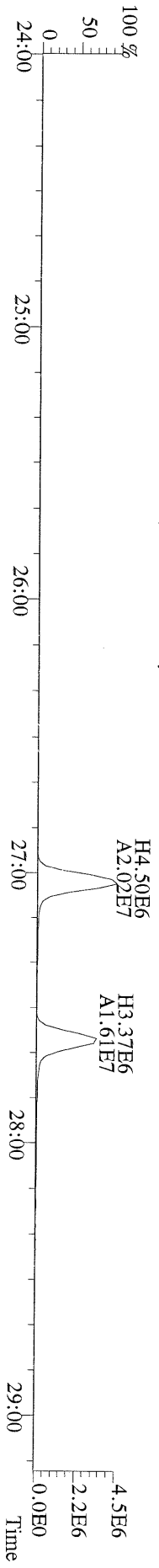
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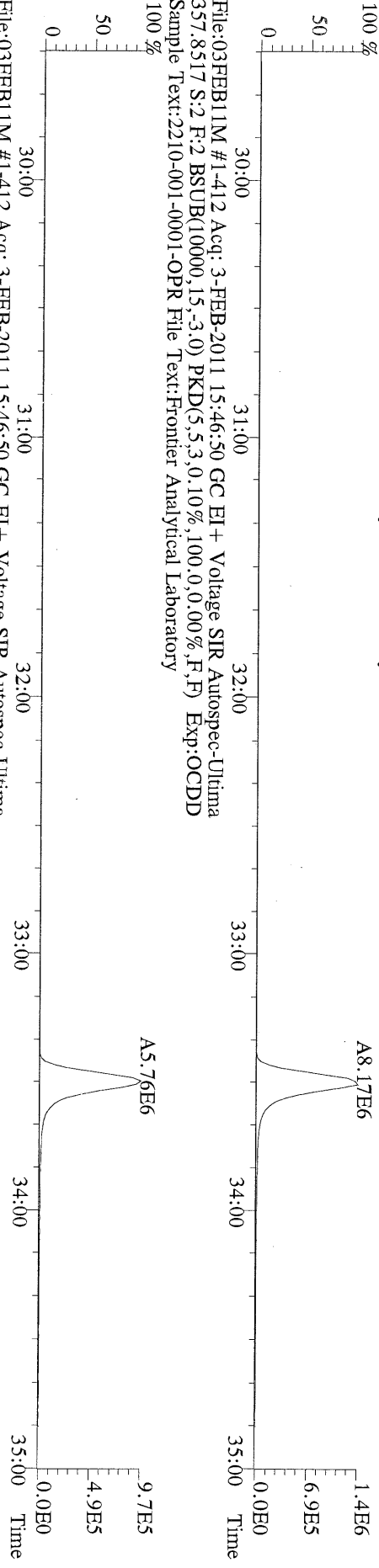
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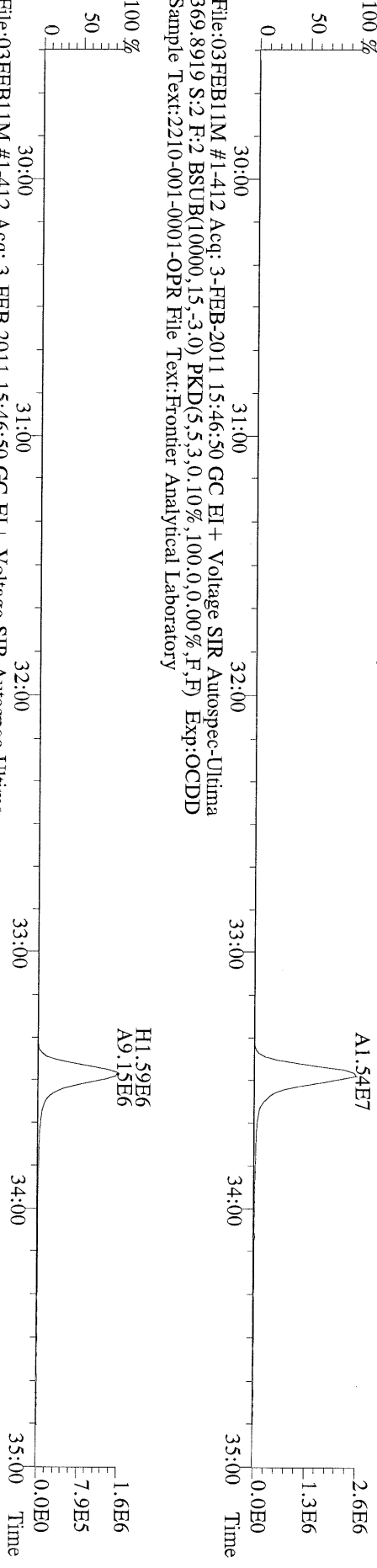
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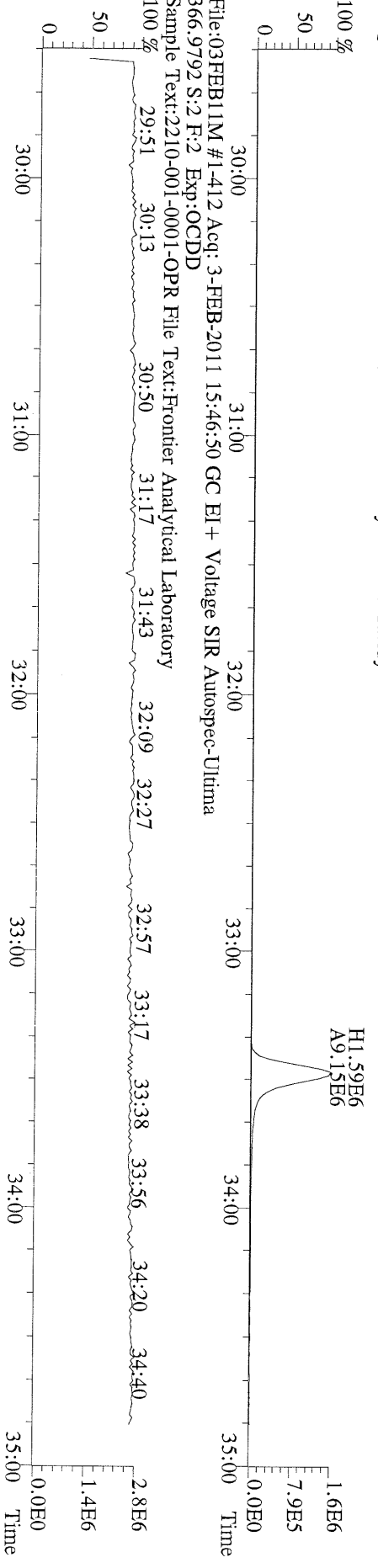
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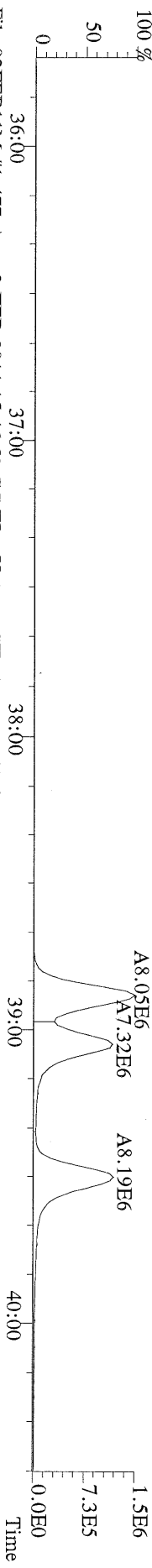


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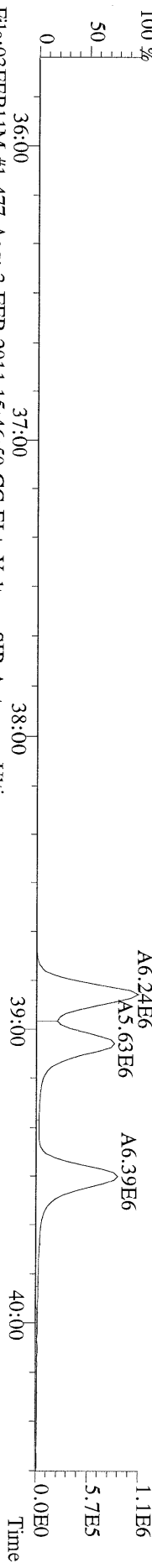


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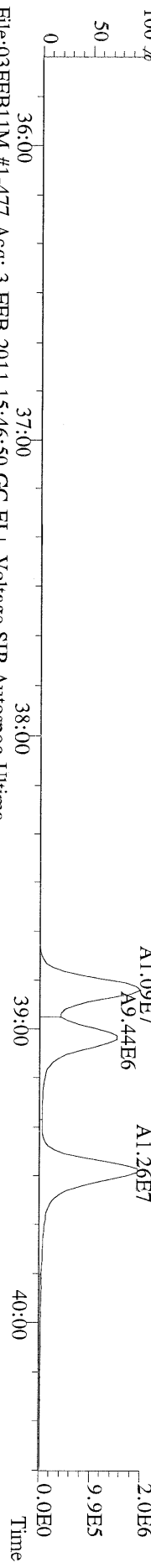
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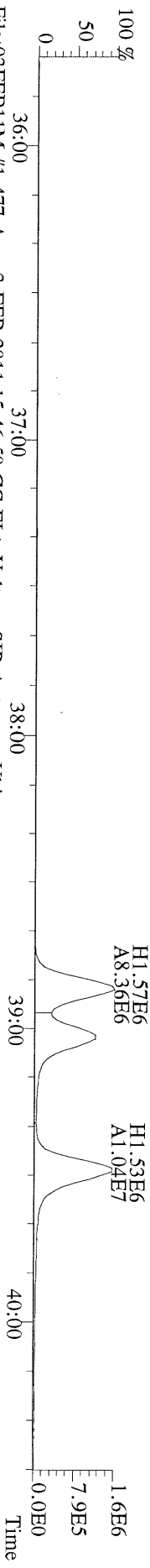
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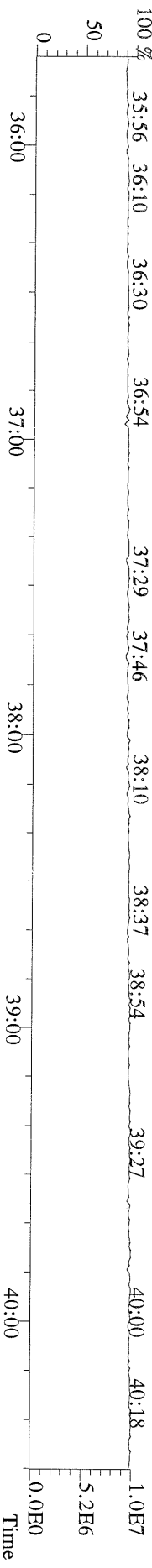
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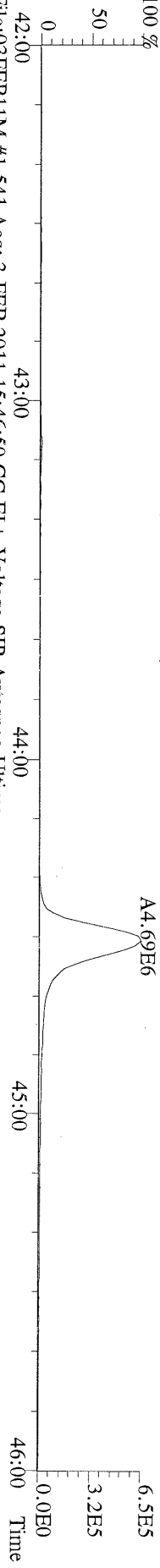
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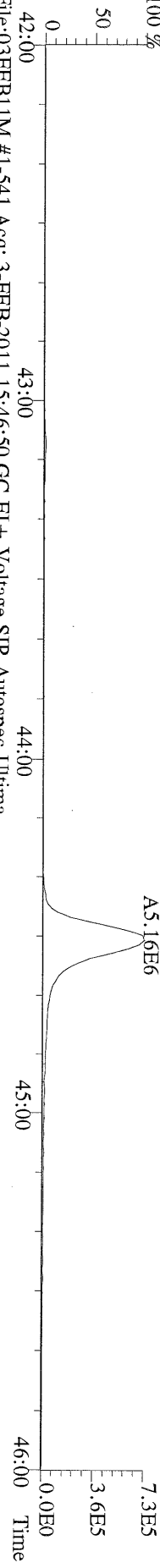
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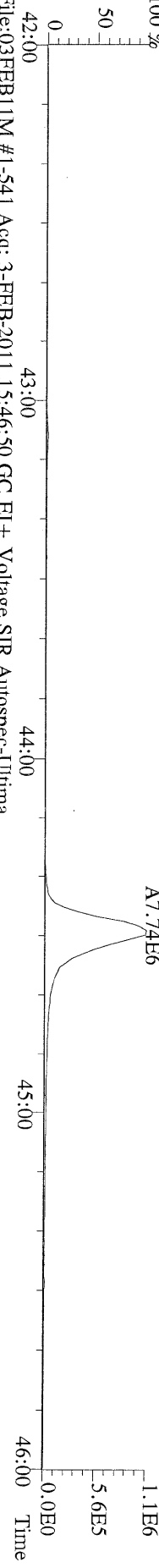
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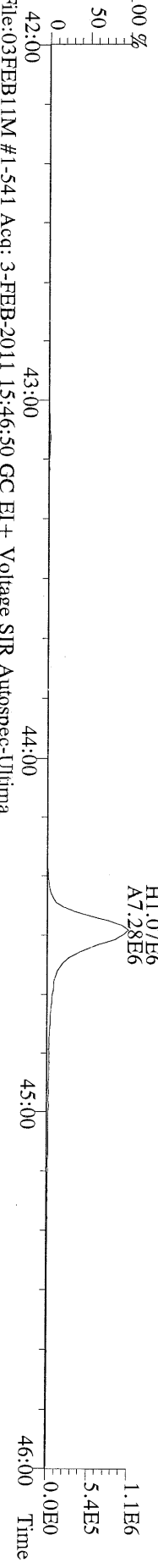
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100 %



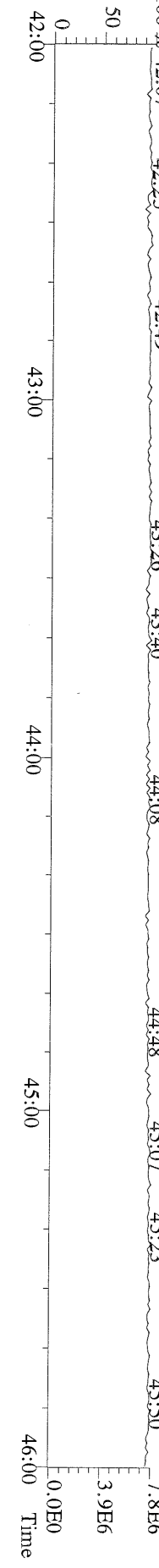
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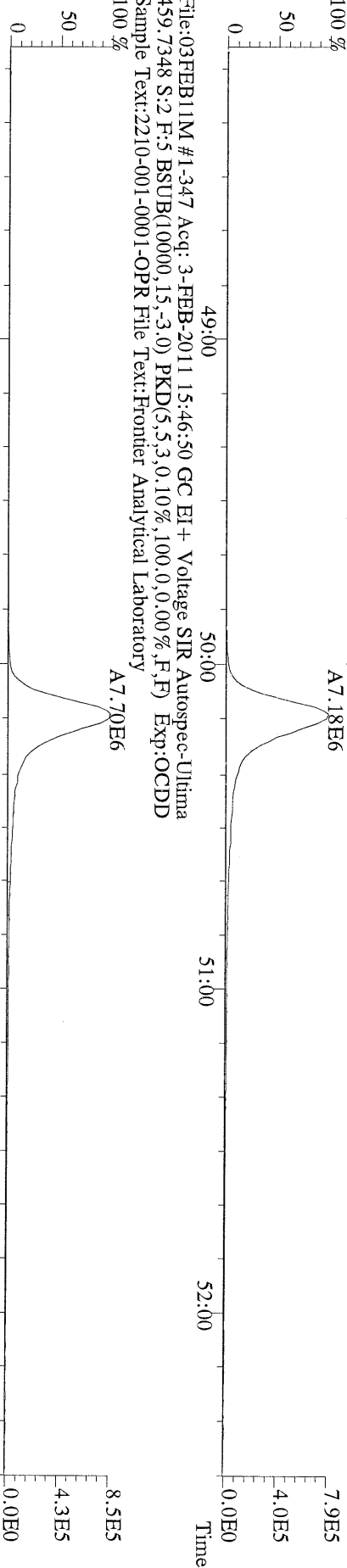
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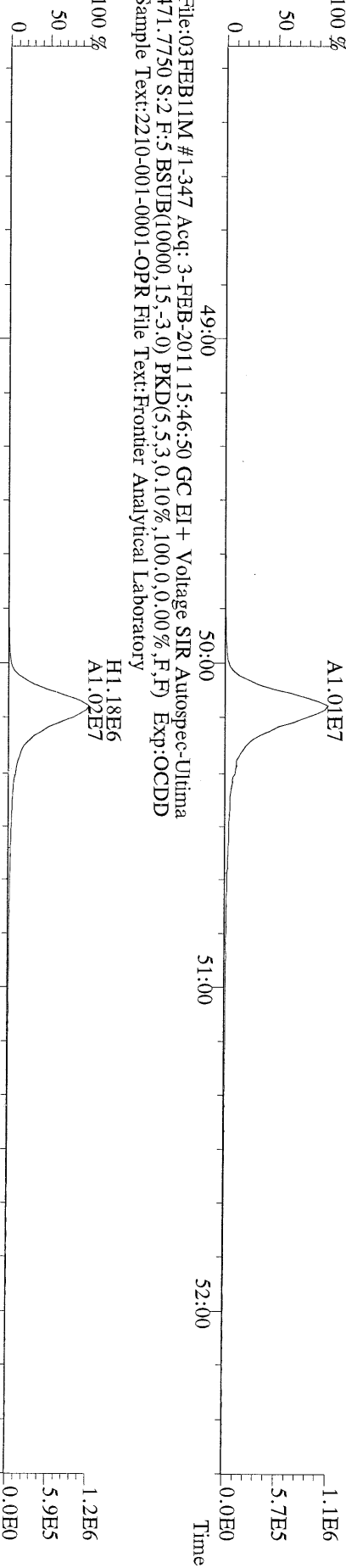
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430.9728 S:2 F:4 Exp:OCDD
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100 %



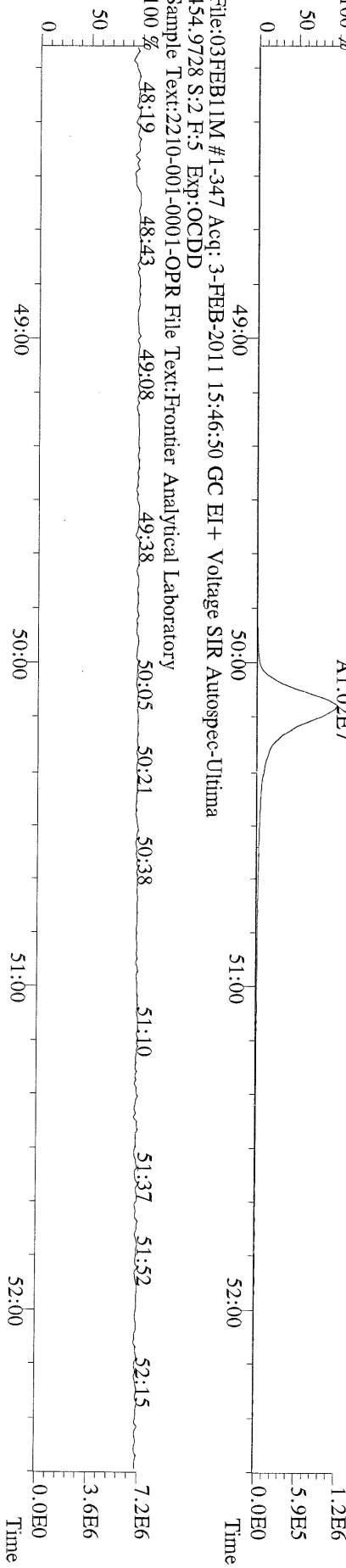
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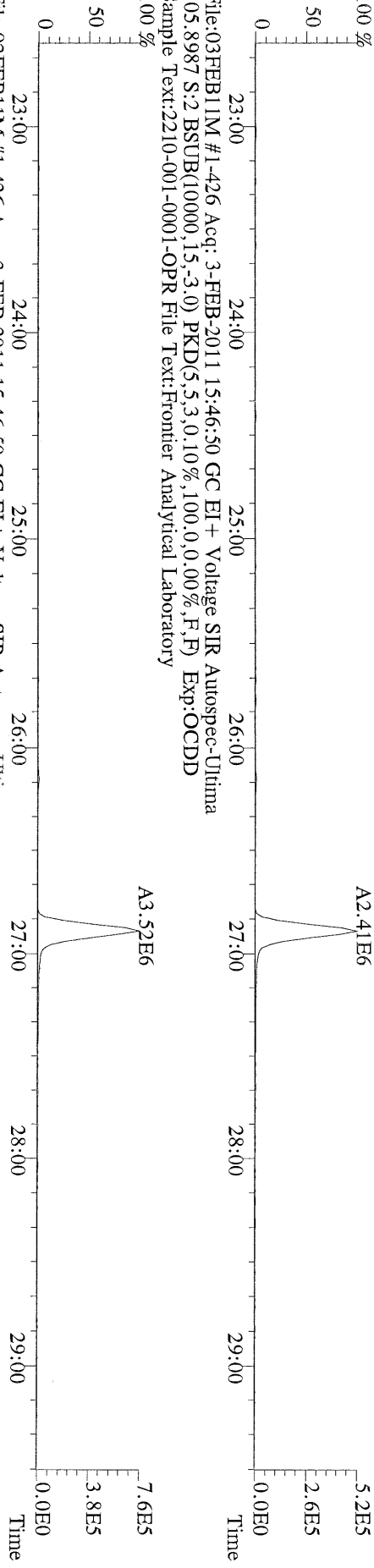
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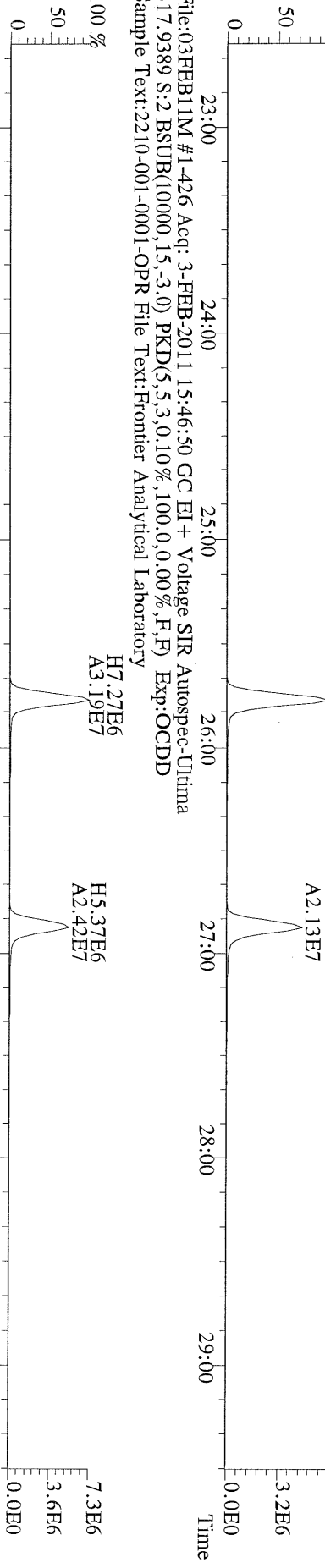
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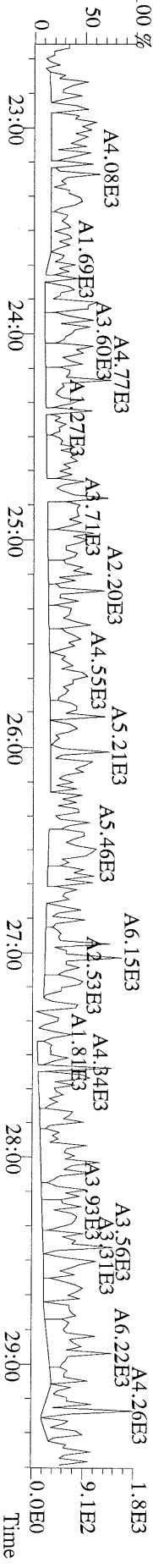
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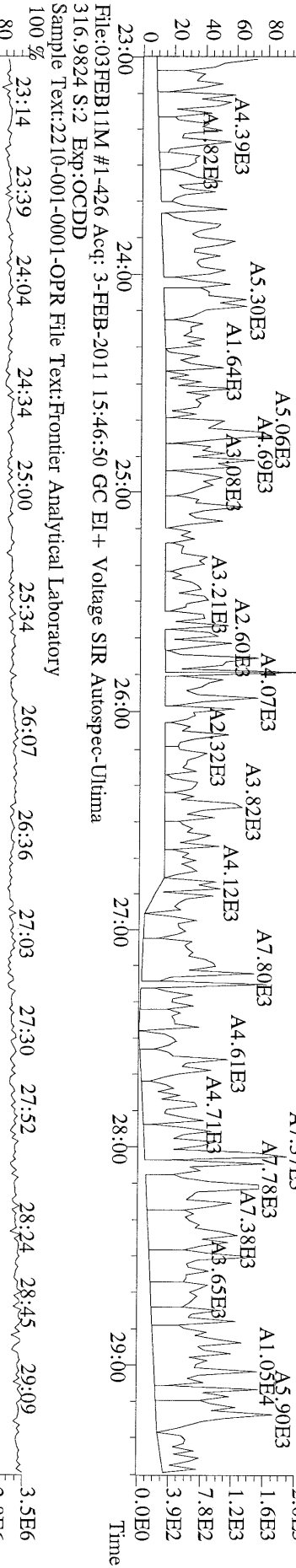
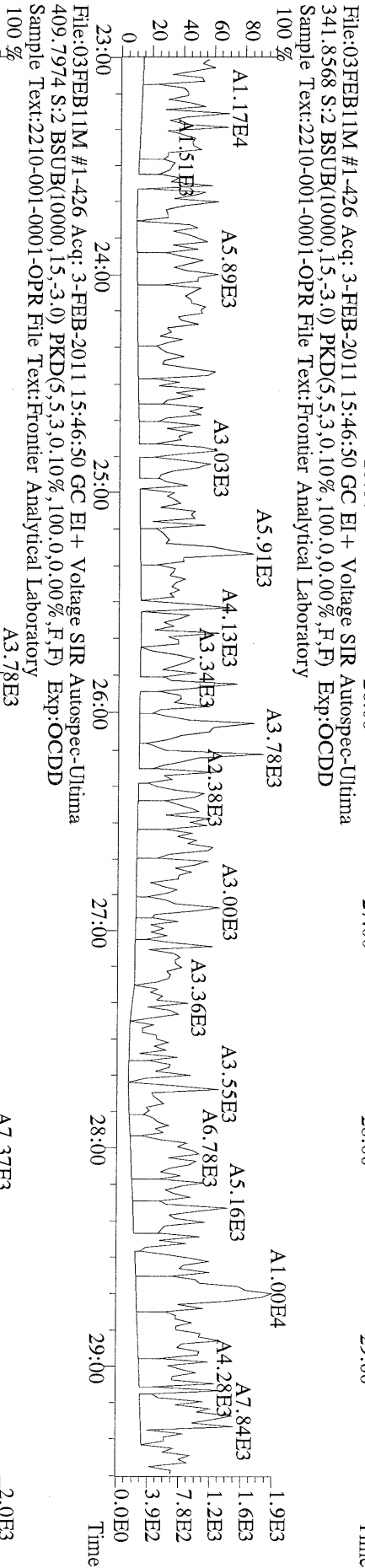
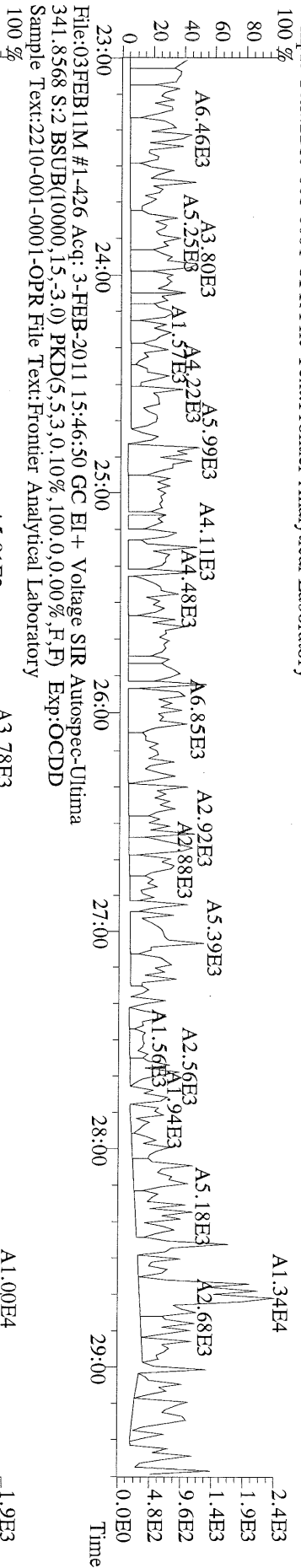
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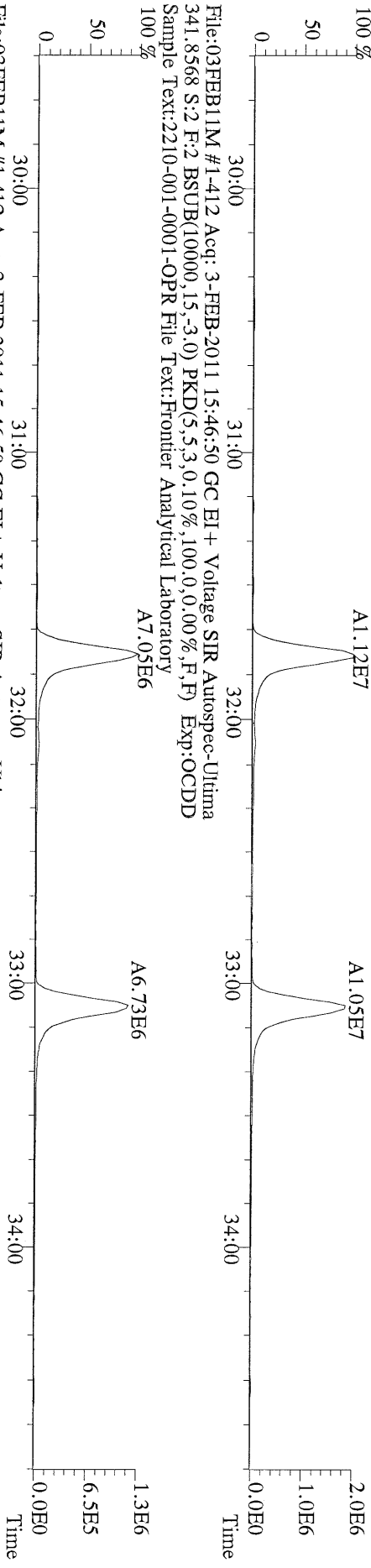
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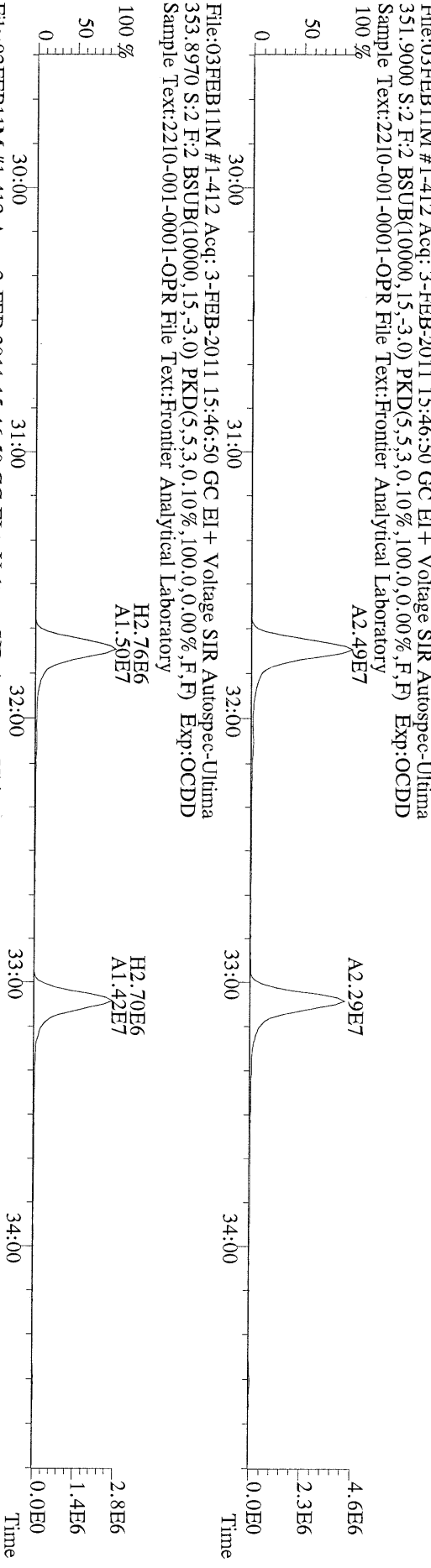
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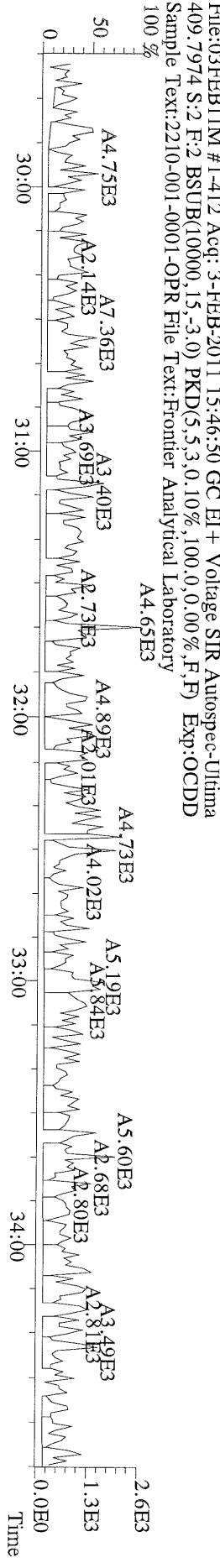
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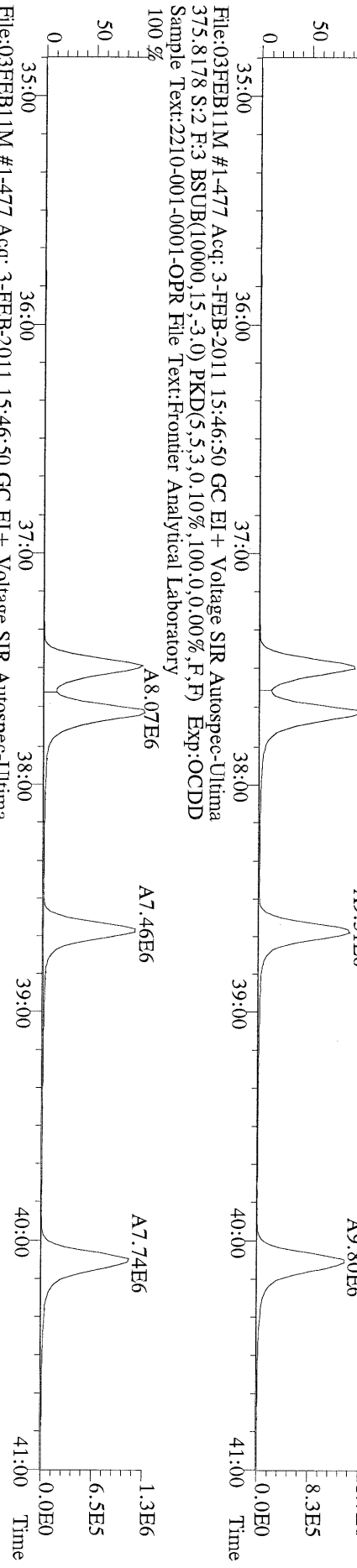
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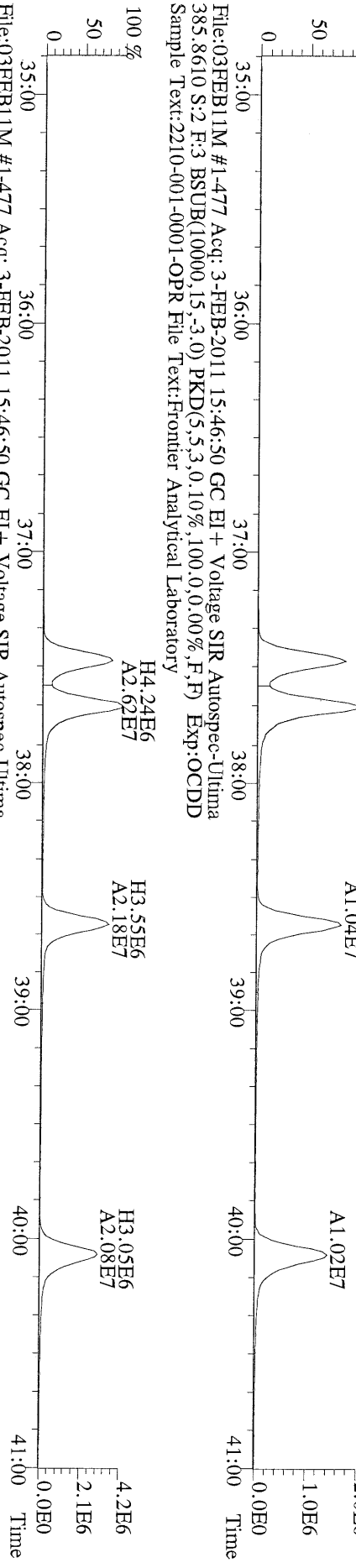
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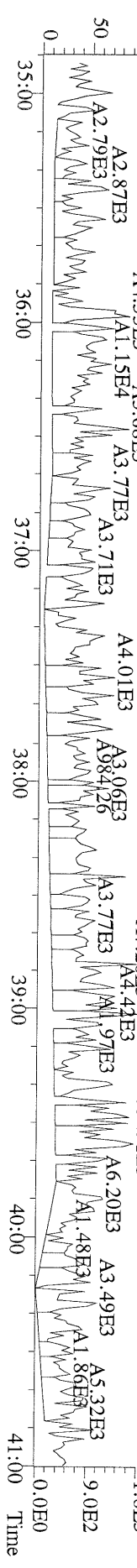
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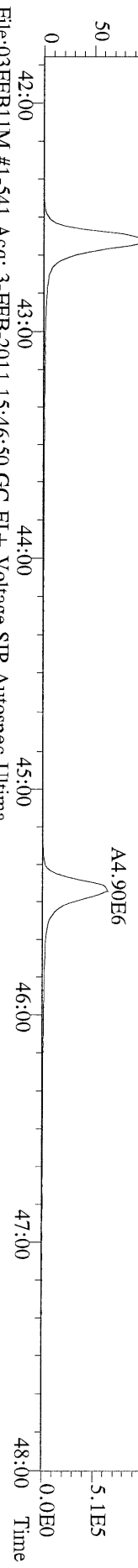
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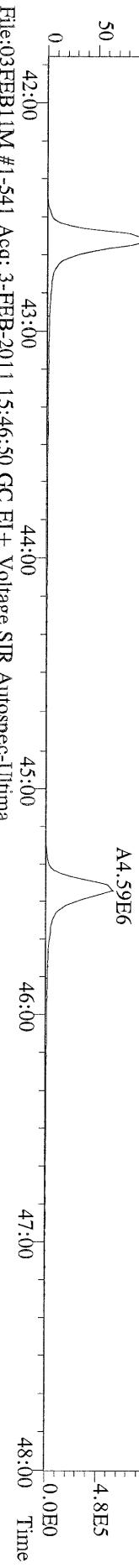
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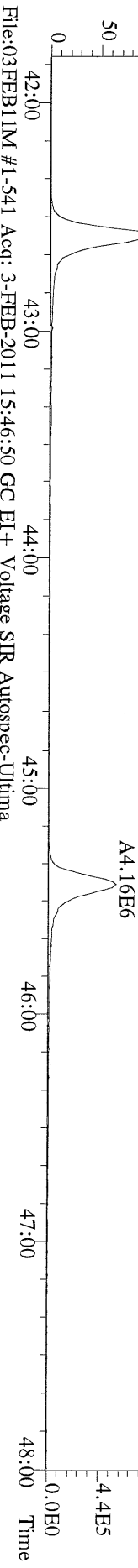
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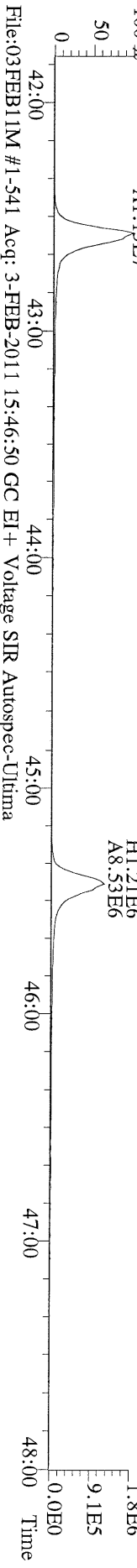
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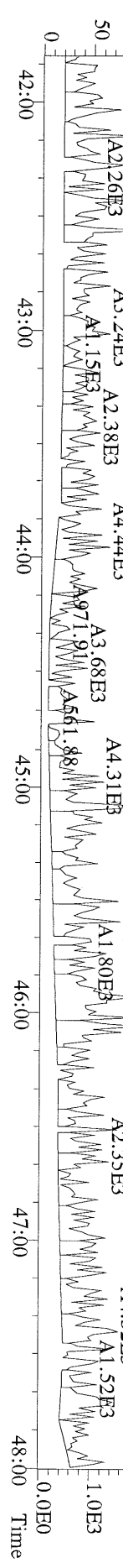
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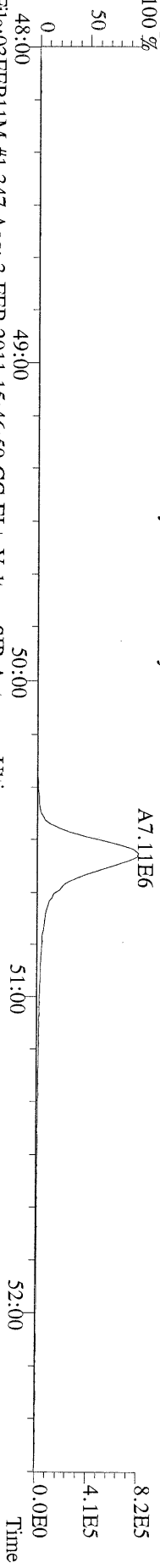
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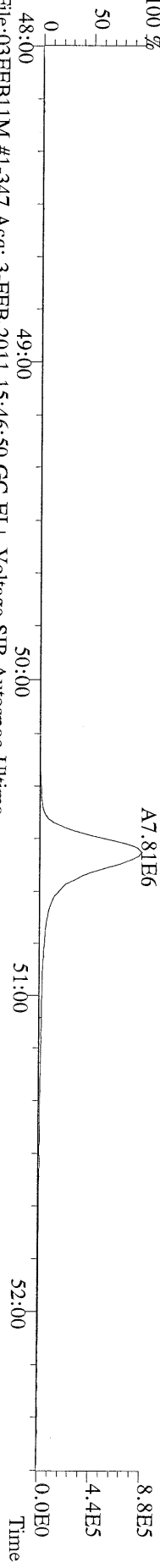
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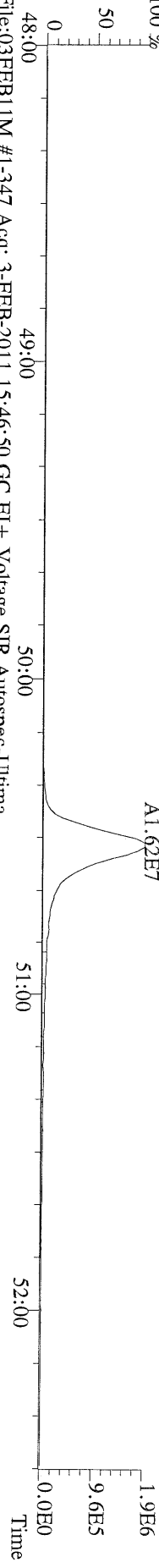
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441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
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100 %



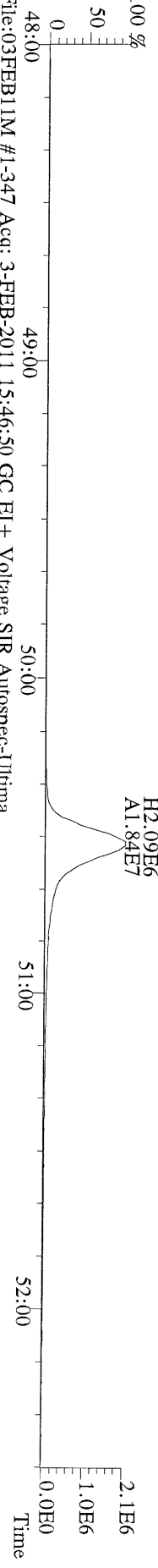
File:03FEB11M #1-347 Acq: 3-FEB-2011 15:46:50 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:2210-001-0001-OPR File Text:Frontier Analytical Laboratory
100 %



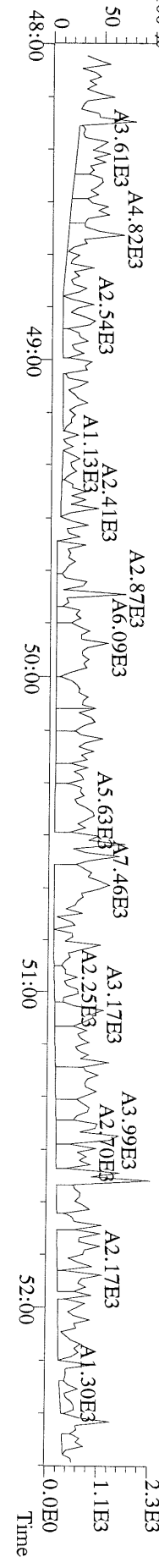
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453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:2210-001-0001-OPR File Text:Frontier Analytical Laboratory
100 %




File:03FEB11M #1-347 Acq: 3-FEB-2011 15:46:50 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:2210-001-0001-OPR File Text:Frontier Analytical Laboratory



File:03FEB11M #1-347 Acq: 3-FEB-2011 15:46:50 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:2210-001-0001-OPR File Text:Frontier Analytical Laboratory
100 %

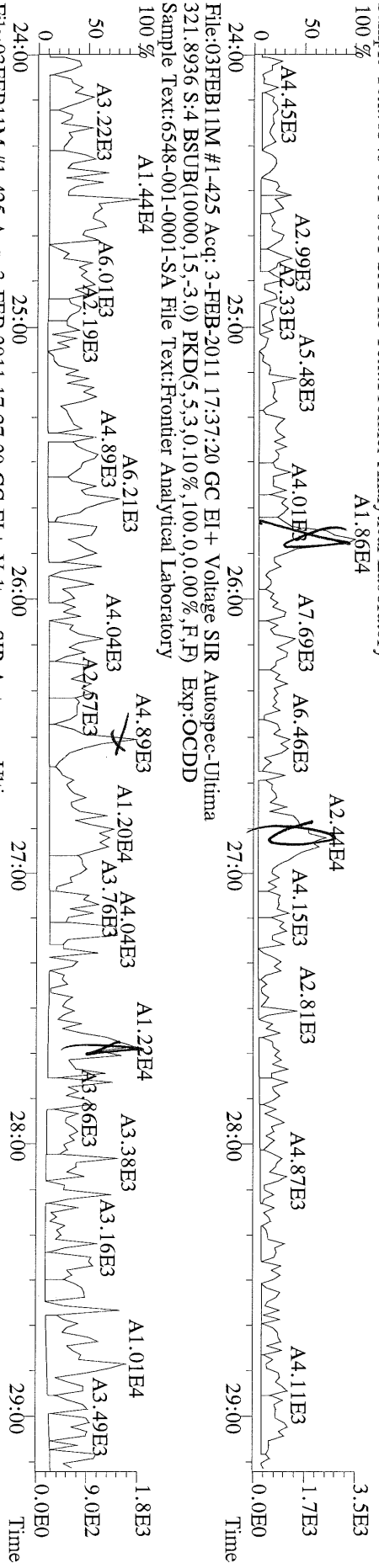


Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL		
2,3,7,8-TCDD	*	* n	NotFnd	1.11	*		2.50	860	796	1.32	
1,2,3,7,8-PeCDD	*	* n	NotFnd	1.10	*		2.50	980	776	1.97	
1,2,3,4,7,8-HxCDD	*	* n	NotFnd	1.37	*		2.50	980	932	2.12	
1,2,3,6,7,8-HxCDD	*	* n	NotFnd	1.37	*		2.50	980	932	2.61	
1,2,3,7,8,9-HxCDD	*	* n	NotFnd	1.36	*		2.50	980	932	2.37	
1,2,3,4,6,7,8-HpCDD	*	* n	NotFnd	1.45	*		2.50	828	872	2.78	
OCDD	*	* n	NotFnd	1.43	*		2.50	796	844	4.87	
2,3,7,8-TCDF	*	* n	NotFnd	1.50	*		2.50	1060	1240	0.848	
1,2,3,7,8-PeCDF	*	* n	NotFnd	0.94	*		2.50	748	912	1.34	
2,3,4,7,8-PeCDF	*	* n	NotFnd	0.94	*		2.50	748	912	1.37	
1,2,3,4,7,8-HxCDF	*	* n	NotFnd	0.93	*		2.50	696	724	1.50	
1,2,3,6,7,8-HxCDF	*	* n	NotFnd	0.82	*		2.50	696	724	1.46	
2,3,4,6,7,8-HxCDF	*	* n	NotFnd	0.92	*		2.50	696	724	1.58	
1,2,3,7,8,9-HxCDF	*	* n	NotFnd	1.00	*		2.50	696	724	1.69	
1,2,3,4,6,7,8-HpCDF	*	* n	NotFnd	1.39	*		2.50	760	800	2.27	
1,2,3,4,7,8,9-HpCDF	*	* n	NotFnd	1.36	*		2.50	760	800	3.61	
OCDF	*	* n	NotFnd	0.79	*		2.50	824	876	5.77	
Rec											
13C-2,3,7,8-TCDD	2.59e+07	0.81 y	27:38	1.02	1500					75.2	
13C-1,2,3,7,8-PeCDD	2.28e+07	1.71 y	33:29	0.84	1600					80.5	
13C-1,2,3,4,7,8-HxCDD	1.82e+07	1.26 y	38:52	1.07	1570					79.0	
13C-1,2,3,6,7,8-HxCDD	1.65e+07	1.27 y	39:02	1.01	1510					75.8	
13C-1,2,3,4,6,7,8-HpCDD	1.52e+07	1.03 y	44:30	0.86	1640					82.6	
13C-OCDD	2.04e+07	1.01 y	50:09	0.55	3460					86.9	
13C-2,3,7,8-TCDF	4.14e+07	0.88 y	26:53	0.99	1490					74.7	
13C-1,2,3,7,8-PeCDF	3.59e+07	1.62 y	31:45	0.84	1530					76.8	
13C-2,3,4,7,8-PeCDF	3.50e+07	1.62 y	33:04	0.81	1540					77.3	
13C-1,2,3,4,7,8-HxCDF	2.84e+07	0.49 y	37:28	1.85	1420					71.3	
13C-1,2,3,6,7,8-HxCDF	3.74e+07	0.46 y	37:41	2.54	1360					68.5	
13C-2,3,4,6,7,8-HxCDF	3.04e+07	0.49 y	38:38	2.01	1400					70.3	
13C-1,2,3,7,8,9-HxCDF	2.96e+07	0.48 y	40:05	2.03	1350					67.7	
13C-1,2,3,4,6,7,8-HpCDF	1.69e+07	0.48 y	42:35	1.11	1410					70.8	
13C-1,2,3,4,7,8,9-HpCDF	1.18e+07	0.50 y	45:25	0.80	1360					68.4	
13C-OCDF	3.46e+07	0.94 y	50:31	1.08	2950					74.2	
37Cl-2,3,7,8-TCDD	6.89e+06		27:39	0.69	595					74.8	
13C-1,2,3,4-TCDD	3.36e+07	0.80 y	27:02	-	74.4						
13C-1,2,3,4-TCDF	5.57e+07	0.88 y	25:47	-	76.7						
13C-1,2,3,7,8,9-HxCDD	2.15e+07	1.26 y	39:29	-	77.6						
Total Tetra-Dioxins	*		NotFnd	1.11	*		2.50	860	796	1.32	0
Total Penta-Dioxins	*		NotFnd	1.10	*		2.50	980	776	1.97	0
Total Hexa-Dioxins	*		NotFnd	1.37	*		2.50	980	932	2.61	0
Total Hepta-Dioxins	*		NotFnd	1.45	*		2.50	828	872	2.78	0
Total Tetra-Furans	*		NotFnd	1.50	*		2.50	1060	1240	0.848	0
1st Fn. Tot Penta-Furans	*		NotFnd	0.94	*		2.50	788	960	1.37	PeCDF 0
Total Penta-Furans	*		NotFnd	0.94	*		2.50	748	912	1.37	* 0
Total Hexa-Furans	*		NotFnd	0.91	*		2.50	696	724	1.69	0
Total Hepta-Furans	*		NotFnd	1.38	*		2.50	760	800	3.61	0

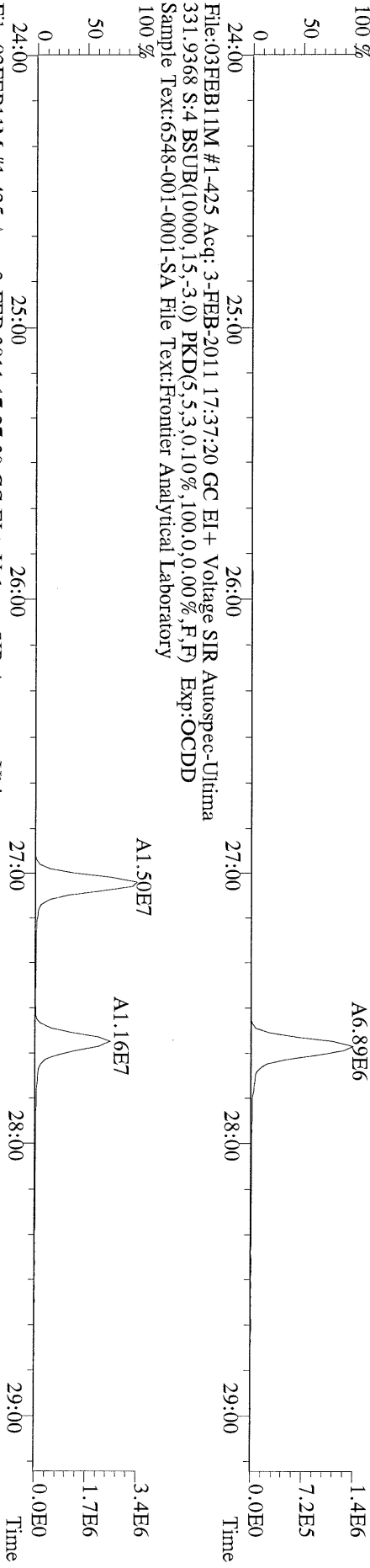
Analyst: 

Date: 2/4/11

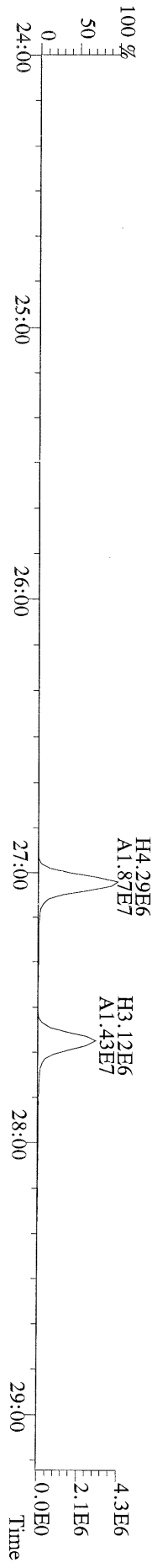
File:03FEB11M #1-425 Acq: 3-FEB-2011 17:37:20 GC EI+ Voltage SIR Autospec-Ultima
 319.8965 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



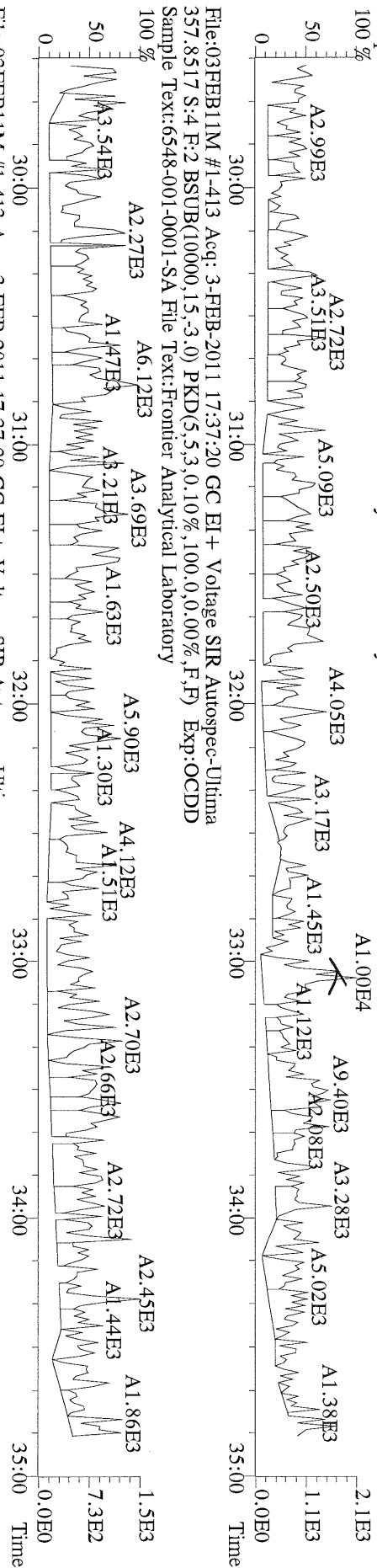
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 327.8847 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



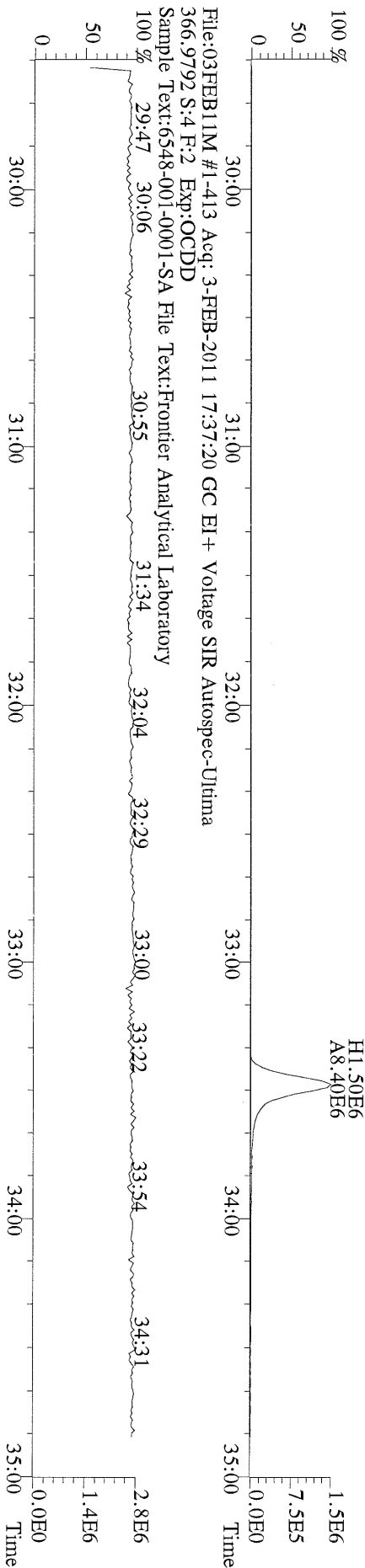
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 333.9339 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



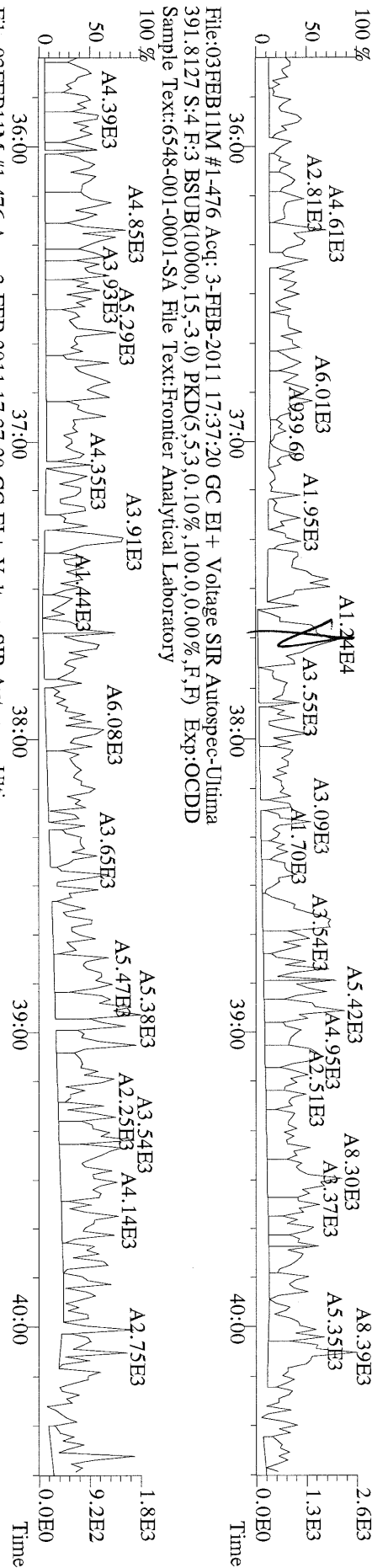
File:03FEB11M #1-413 Acq: 3-FEB-2011 17:37:20 GC EI+ Voltage SIR Autospec-Ultima
 355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0,0,0,0,0,0) Exp:OCDD
 Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



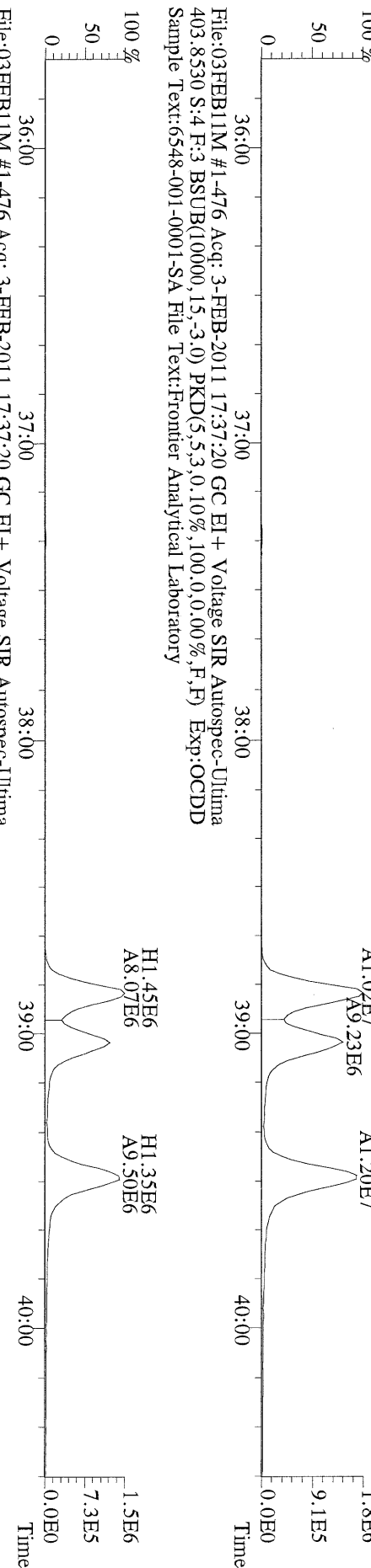
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 367.8949 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0,0,0,0,0) Exp:OCDD
 Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



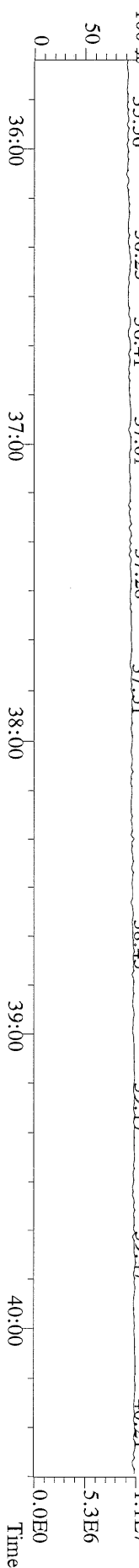
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 389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



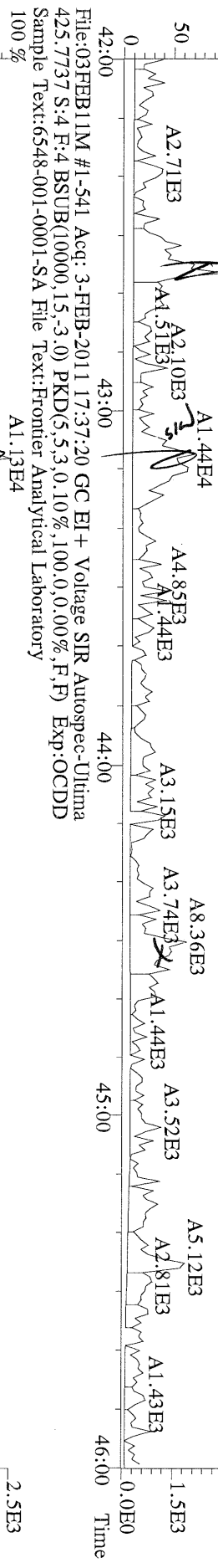
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 401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



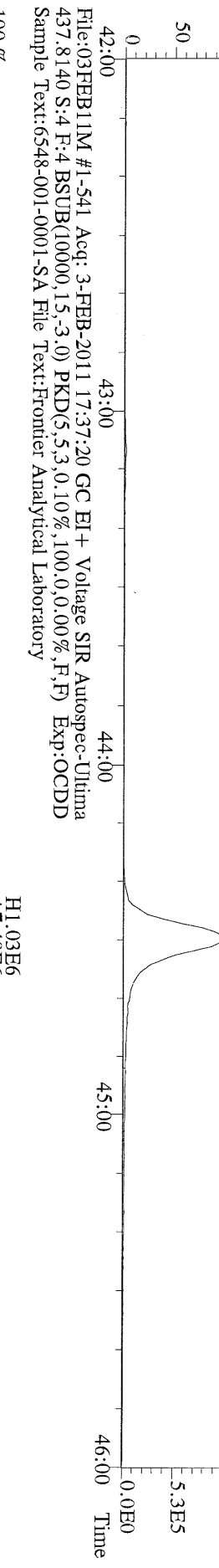
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 380.9760 S:4 F:3 Exp:OCDD
 Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



File:03FEB11M #1-541 Acq: 3-FEB-2011 17:37:20 GC EI+ Voltage SIR Autospec-Utima
423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



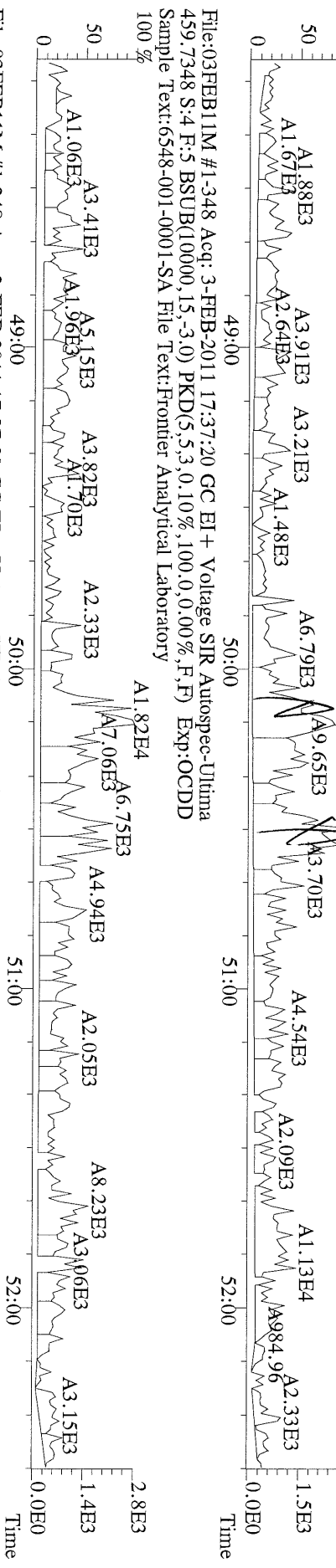
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435.8169 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



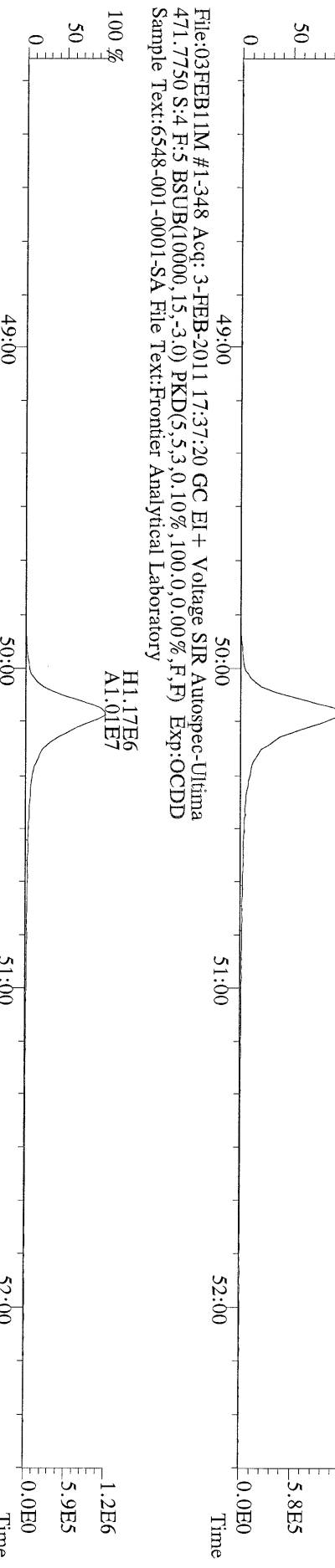
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430.9728 S:4 F:4 Exp:OCDD
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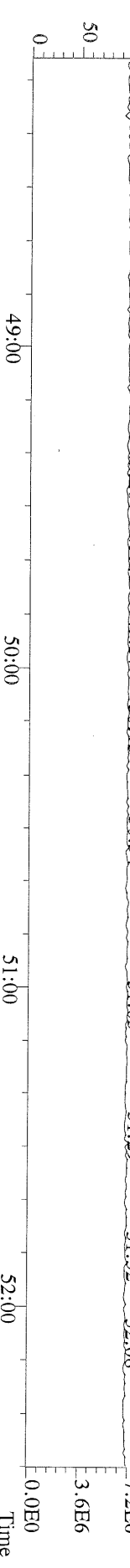
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 457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
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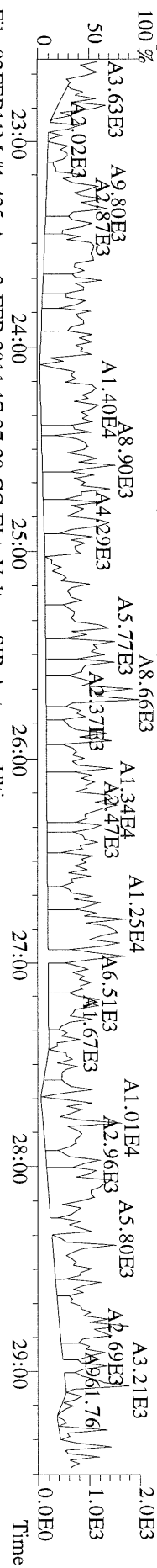
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 469.7780 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
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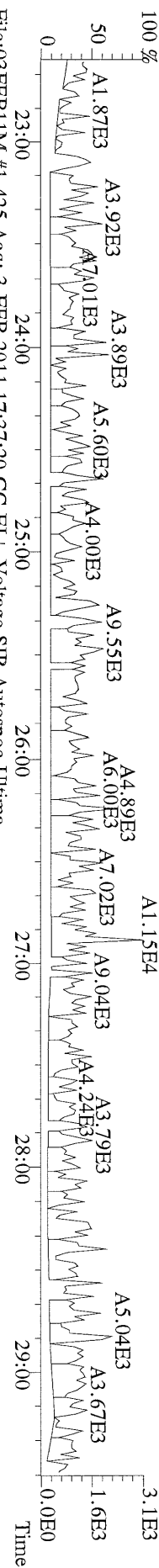
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 454.9728 S:4 F:5 Exp:OCDD
 Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



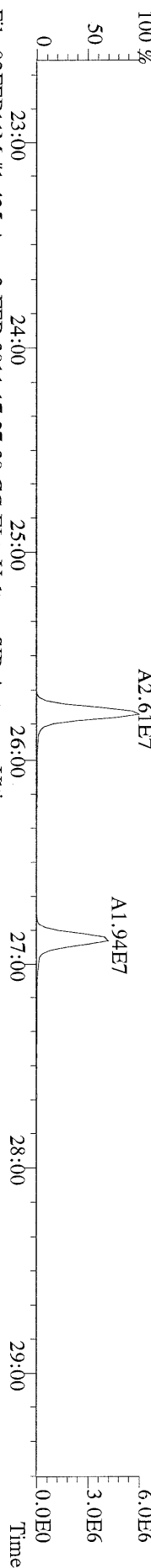
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303.9016 S:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Fronder Analytical Laboratory



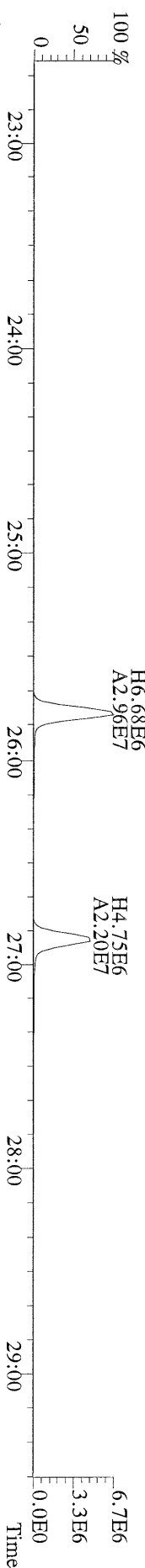
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305.8987 S:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Fronder Analytical Laboratory



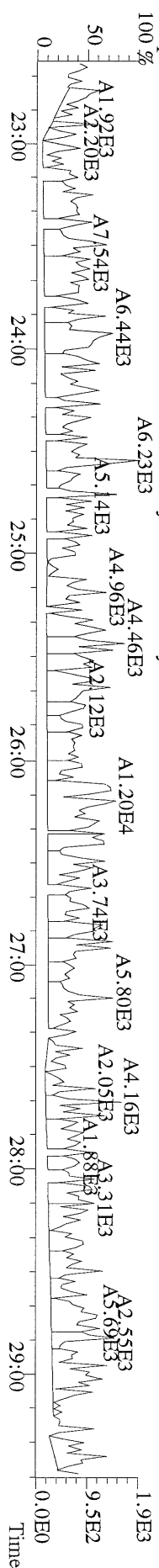
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315.9419 S:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Fronder Analytical Laboratory



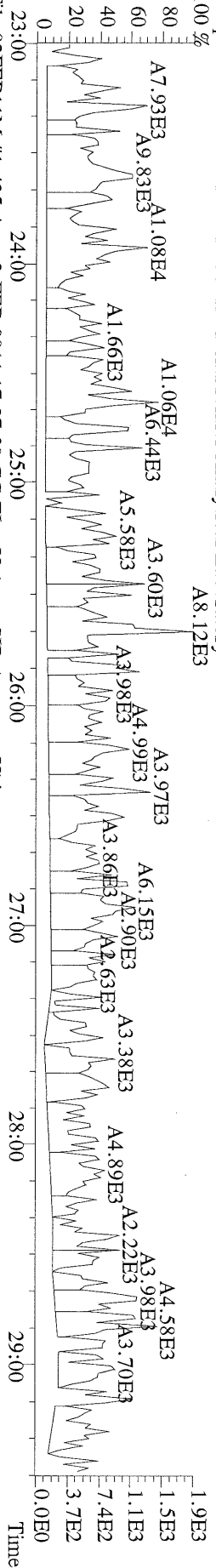
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Sample Text:6548-001-0001-SA File Text:Fronder Analytical Laboratory



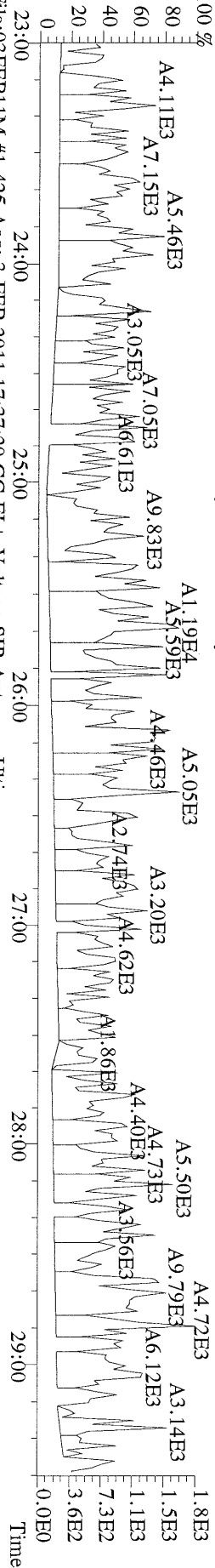
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375.8364 S:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Fronder Analytical Laboratory



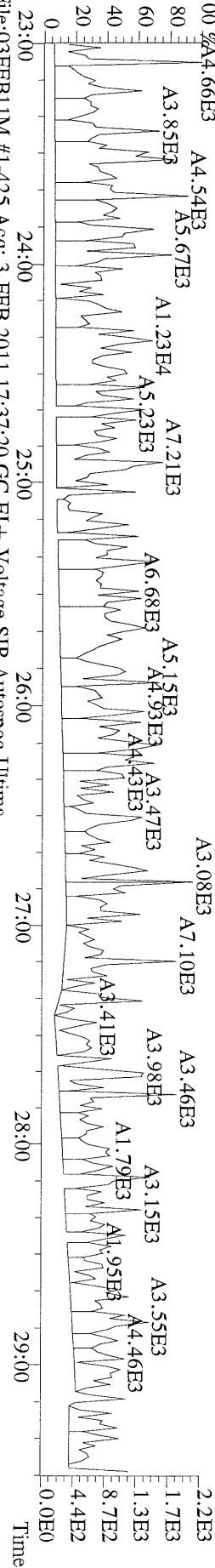
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 339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



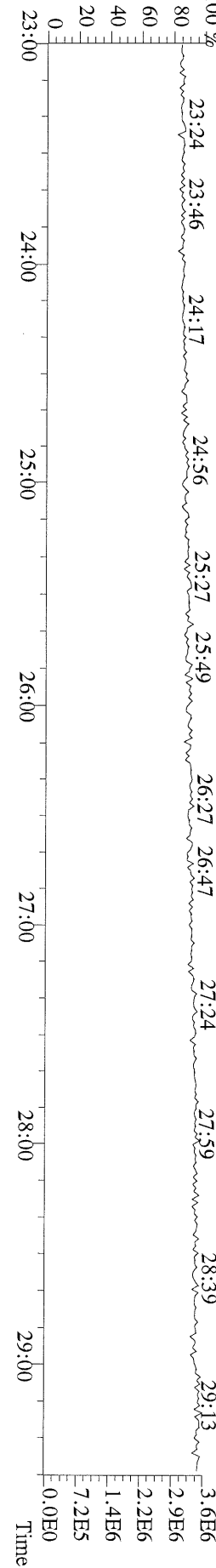
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 341.8568 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



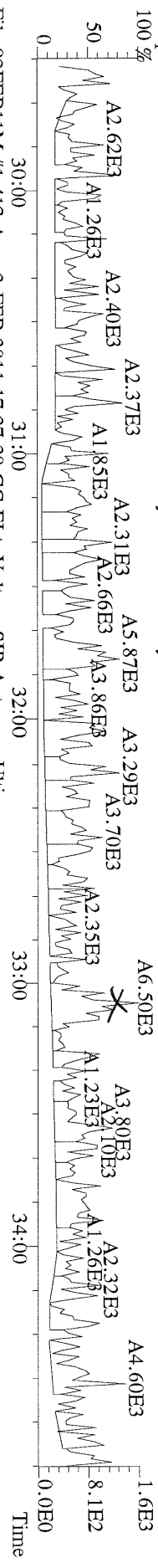
File:03FEBB11M #1-425 Acq: 3-FEB-2011 17:37:20 GC EI+ Voltage SIR Autospec-Utima
 409.7974 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



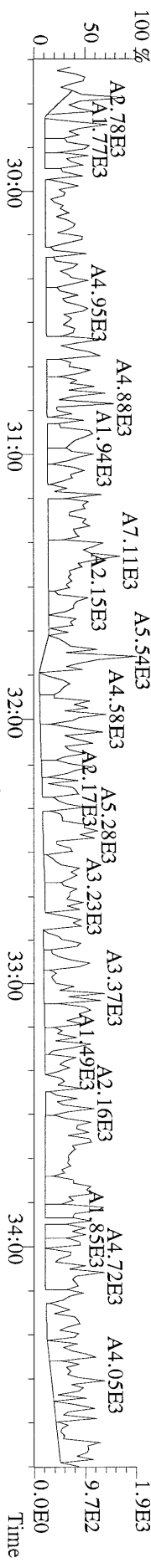
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 316.9824 S:4 Exp:OCDD
 Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



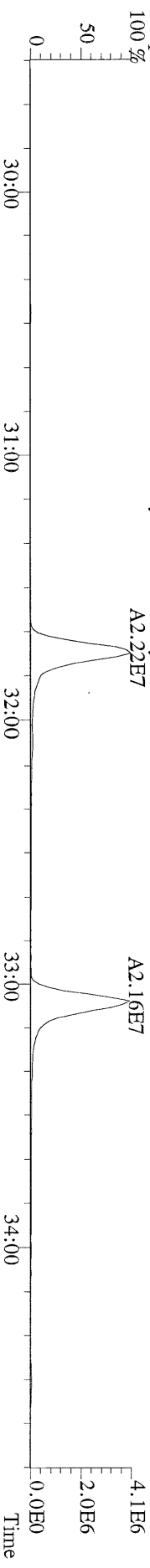
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339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Frondier Analytical Laboratory



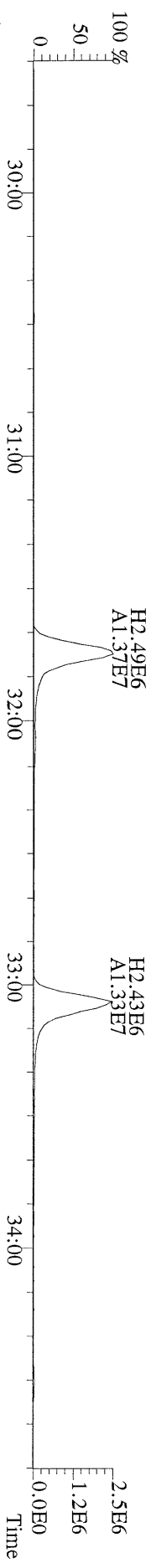
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341.8568 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Frondier Analytical Laboratory



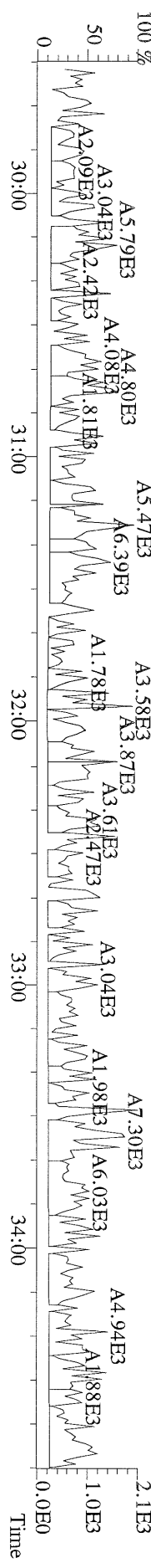
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351.9000 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Frondier Analytical Laboratory



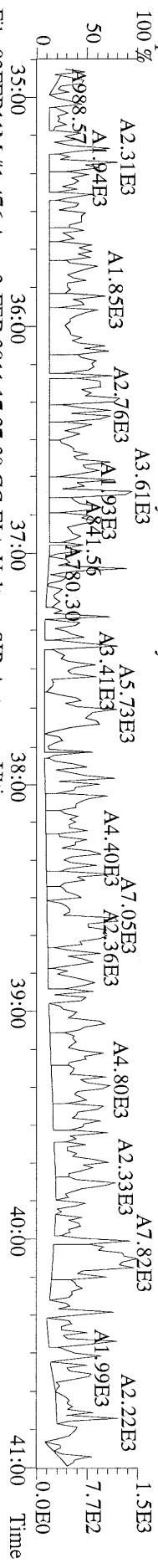
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353.8970 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Frondier Analytical Laboratory



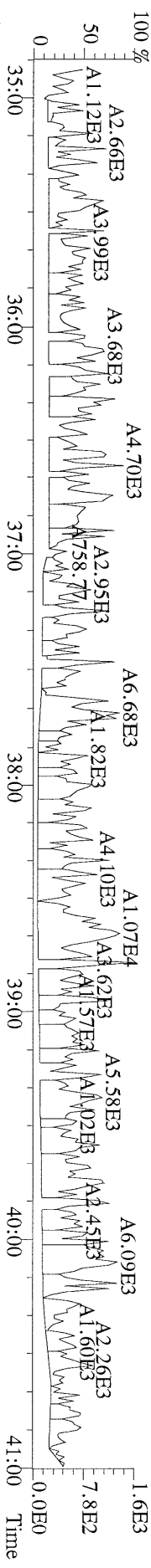
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409.7974 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Frondier Analytical Laboratory



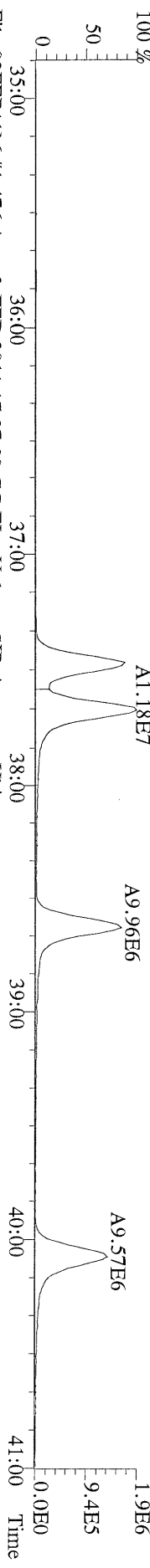
File:03FEBB11M #1-476 Acq: 3-FEB-2011 17:37:20 GC EI+ Voltage SIR Autospec-Utima
 373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



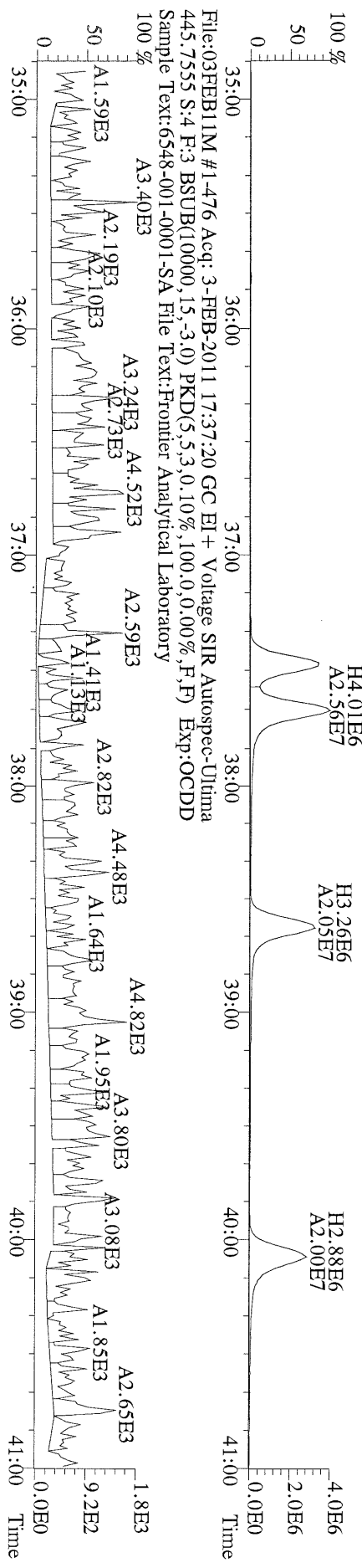
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 375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



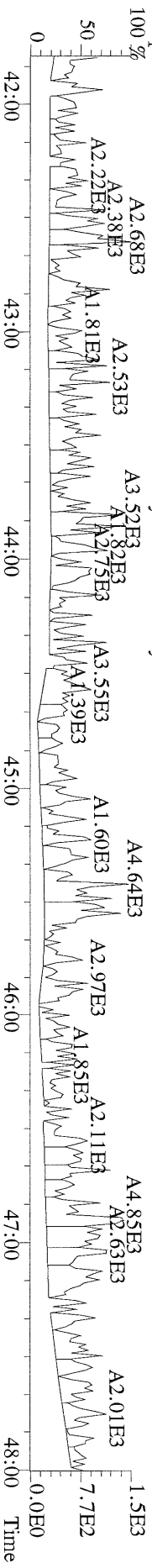
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 383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



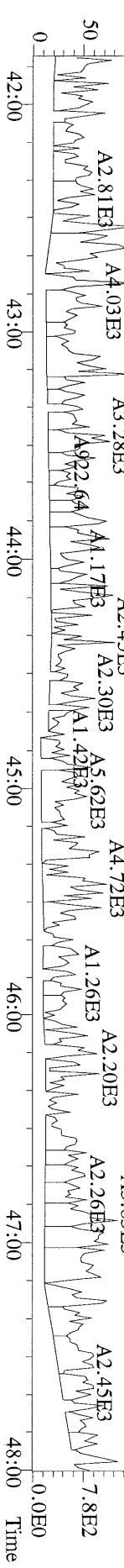
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 Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



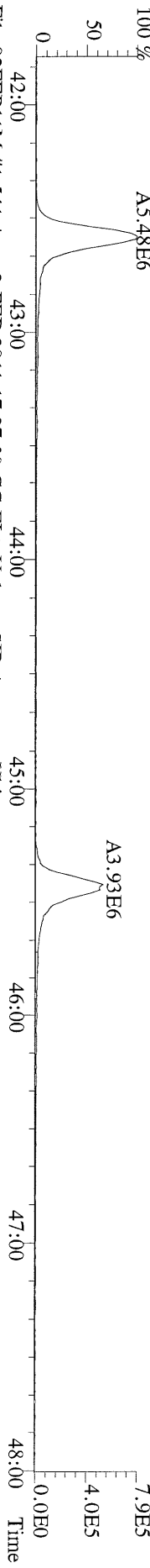
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407.7818 S:4 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



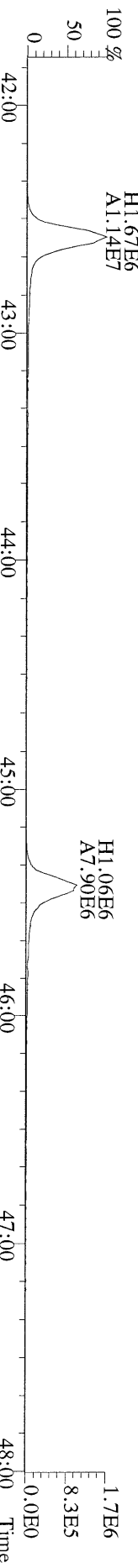
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Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



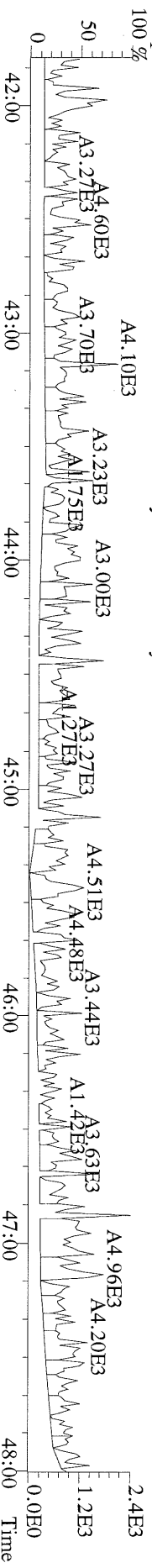
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417.8253 S:4 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



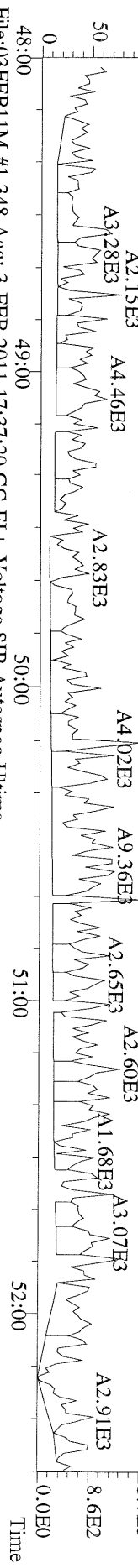
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419.8220 S:4 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



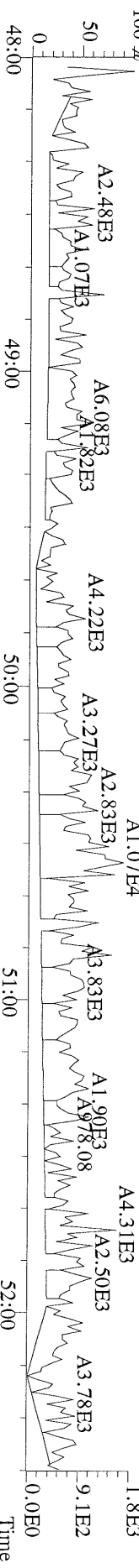
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479.7165 S:4 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



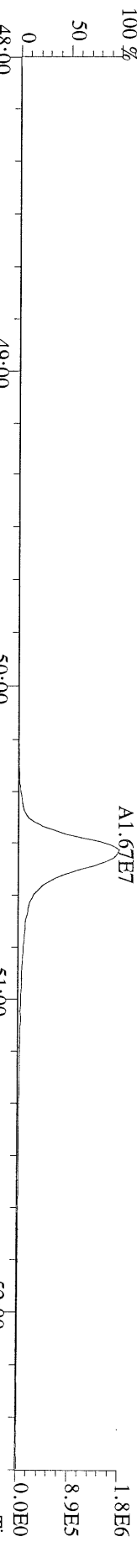
File:03FEB11M #1-348 Acq: 3-FEB-2011 17:37:20 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



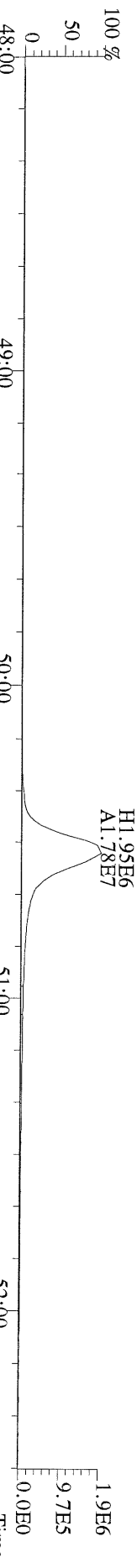
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443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



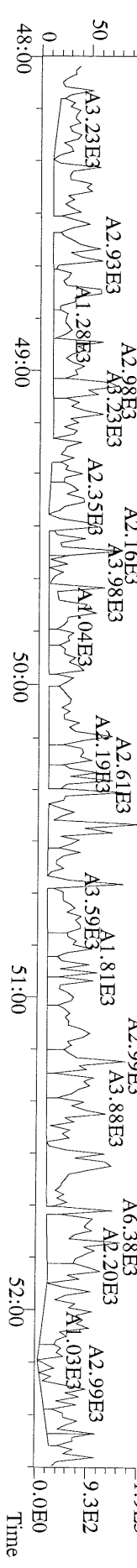
File:03FEB11M #1-348 Acq: 3-FEB-2011 17:37:20 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



File:03FEB11M #1-348 Acq: 3-FEB-2011 17:37:20 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory




File:03FEB11M #1-348 Acq: 3-FEB-2011 17:37:20 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-SA File Text:Frontier Analytical Laboratory



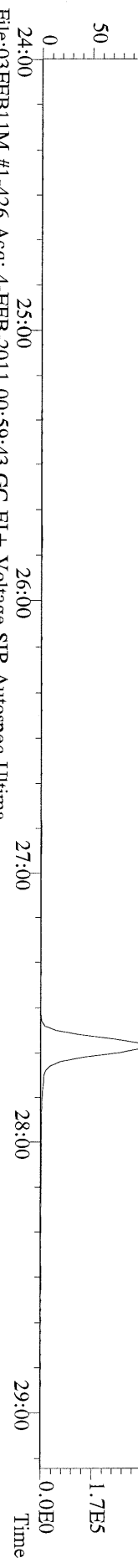
Results: 6548 GC Column: DB5 Amount: 0.9830 NATO 1989 Tox: 2190 WHO 1998 Tox: 2730 WHO 2005 Tox: 2510

Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL	DL
2,3,7,8-TCDD	3.60e+06	0.82 y	27:38	1.11	218		2.50	-	-	*
1,2,3,7,8-PeCDD	1.48e+07	1.43 y	33:30	1.10	1090		2.50	-	-	*
1,2,3,4,7,8-HxCDD	1.51e+07	1.27 y	38:53	1.37	1100		2.50	-	-	*
1,2,3,6,7,8-HxCDD	1.37e+07	1.27 y	39:03	1.37	1170		2.50	-	-	*
1,2,3,7,8,9-HxCDD	1.57e+07	1.25 y	39:30	1.36	1240		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	1.07e+07	0.91 y	44:30	1.45	935		2.50	-	-	*
OCDD	1.51e+07	0.90 y	50:09	1.43	2080		2.50	-	-	*
2,3,7,8-TCDF	6.65e+06	0.68 y	26:54	1.50	184		2.50	-	-	*
1,2,3,7,8-PeCDF	1.77e+07	1.54 y	31:45	0.94	976		2.50	-	-	*
2,3,4,7,8-PeCDF	1.85e+07	1.56 y	33:05	0.94	1010		2.50	-	-	*
1,2,3,4,7,8-HxCDF	1.64e+07	1.26 y	37:29	0.93	1160		2.50	-	-	*
1,2,3,6,7,8-HxCDF	1.90e+07	1.26 y	37:42	0.82	1200		2.50	-	-	*
2,3,4,6,7,8-HxCDF	1.77e+07	1.28 y	38:38	0.92	1160		2.50	-	-	*
1,2,3,7,8,9-HxCDF	1.86e+07	1.27 y	40:05	1.00	1170		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	1.32e+07	1.10 y	42:35	1.39	1150		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	9.73e+06	1.10 y	45:27	1.36	1140		2.50	-	-	*
OCDF	1.54e+07	0.92 y	50:33	0.79	2280		2.50	-	-	*
Rec										
13C-2,3,7,8-TCDD	3.02e+07	0.76 y	27:37	1.02	1670					82.2
13C-1,2,3,7,8-PeCDD	2.51e+07	1.68 y	33:28	0.84	1690					83.0
13C-1,2,3,4,7,8-HxCDD	2.03e+07	1.26 y	38:51	1.07	1610					79.2
13C-1,2,3,6,7,8-HxCDD	1.74e+07	1.25 y	39:02	1.01	1470					72.1
13C-1,2,3,4,6,7,8-HpCDD	1.60e+07	1.05 y	44:29	0.86	1600					78.5
13C-OCDD	2.06e+07	0.98 y	50:08	0.55	3210					79.0
13C-2,3,7,8-TCDF	4.88e+07	0.89 y	26:53	0.99	1690					83.2
13C-1,2,3,7,8-PeCDF	3.92e+07	1.62 y	31:44	0.84	1610					79.3
13C-2,3,4,7,8-PeCDF	3.98e+07	1.62 y	33:04	0.81	1690					83.1
13C-1,2,3,4,7,8-HxCDF	3.10e+07	0.49 y	37:29	1.85	1430					70.1
13C-1,2,3,6,7,8-HxCDF	3.92e+07	0.49 y	37:40	2.54	1320					64.9
13C-2,3,4,6,7,8-HxCDF	3.37e+07	0.49 y	38:37	2.01	1430					70.2
13C-1,2,3,7,8,9-HxCDF	3.25e+07	0.50 y	40:04	2.03	1360					67.0
13C-1,2,3,4,6,7,8-HpCDF	1.69e+07	0.49 y	42:34	1.11	1300					63.7
13C-1,2,3,4,7,8,9-HpCDF	1.28e+07	0.49 y	45:25	0.80	1360					66.9
13C-OCDF	3.50e+07	0.97 y	50:32	1.08	2760					67.8
37Cl-2,3,7,8-TCDD	8.80e+06		27:38	0.69	727					89.3
13C-1,2,3,4-TCDD	3.59e+07	0.77 y	27:03	-	81.3					
13C-1,2,3,4-TCDF	5.90e+07	0.88 y	25:47	-	83.0					
13C-1,2,3,7,8,9-HxCDD	2.38e+07	1.28 y	39:29	-	88.0					
Fac Noise-1 Noise-2 DL #Hom										
Total Tetra-Dioxins	3.77e+06		22:49	1.11	228	2.50	-	-	*	30
Total Penta-Dioxins	1.50e+07		33:30	1.10	1110	2.50	-	-	*	7
Total Hexa-Dioxins	4.49e+07		38:53	1.37	3550	2.50	-	-	*	8
Total Hepta-Dioxins	1.11e+07		42:50	1.45	970	2.50	-	-	*	17
Total Tetra-Furans	6.86e+06		23:60	1.50	190	2.50	-	-	*	14
1st Fn. Tot Penta-Furans	1.55e+05		22:51	0.94	8.50	2.50	-	-	*	PeCDF 33
Total Penta-Furans	3.75e+07		30:30	0.94	2060	2.50	-	-	*	2060 16
Total Hexa-Furans	7.29e+07		35:49	0.91	4770	2.50	-	-	*	14
Total Hepta-Furans	2.34e+07		42:35	1.38	2330	2.50	-	-	*	28

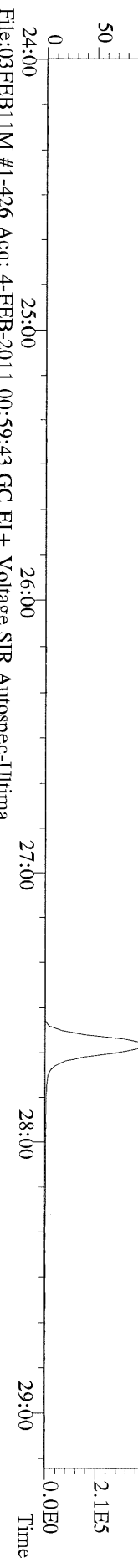
Analyst: 

Date: 2/4/11

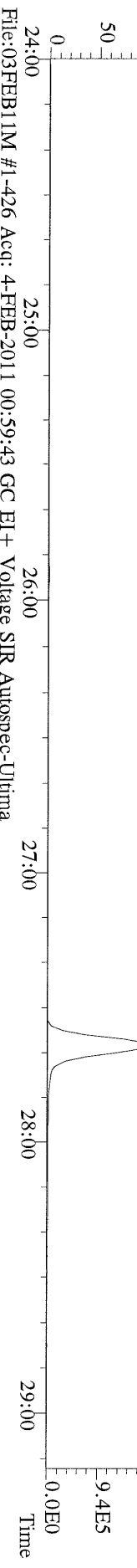
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319.8965 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory
100 %



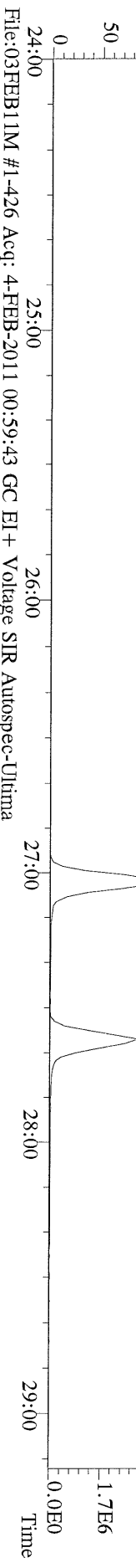
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Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory
100 %



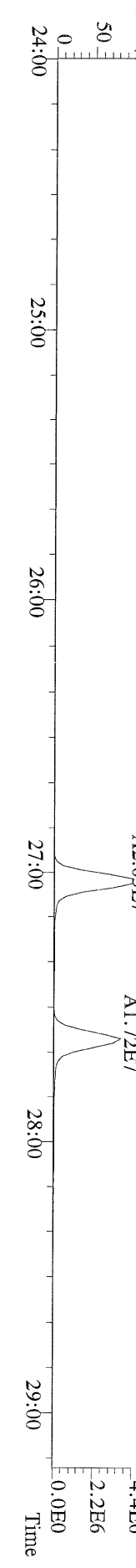
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327.8847 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory
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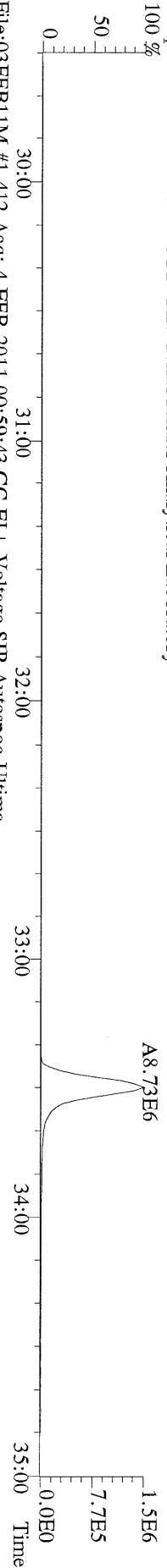
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331.9368 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
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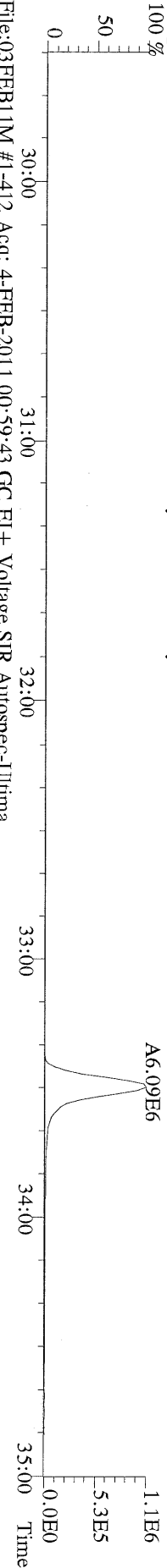
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333.9339 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
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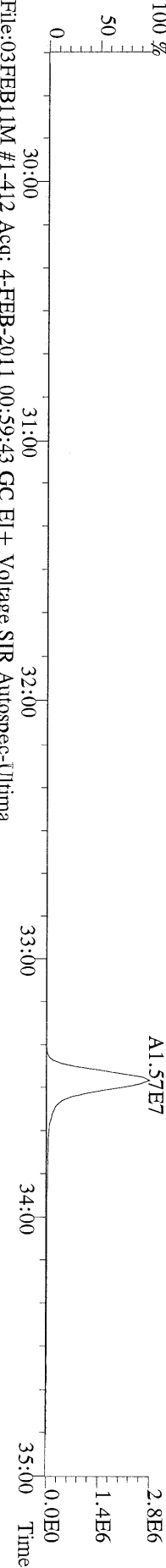
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355.8546 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
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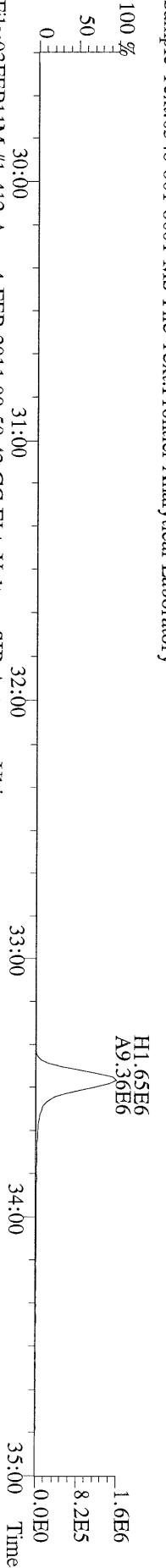
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357.8517 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory
100 %



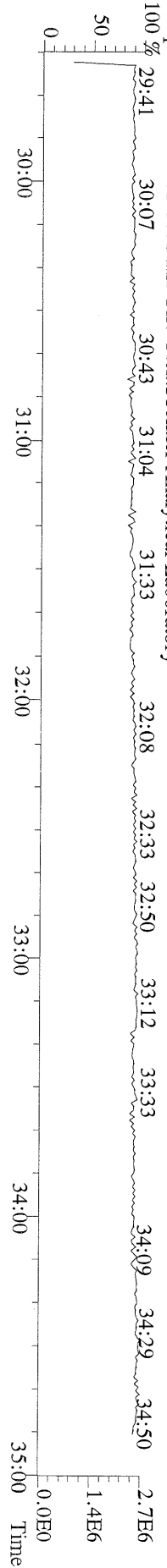
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367.8949 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory
100 %



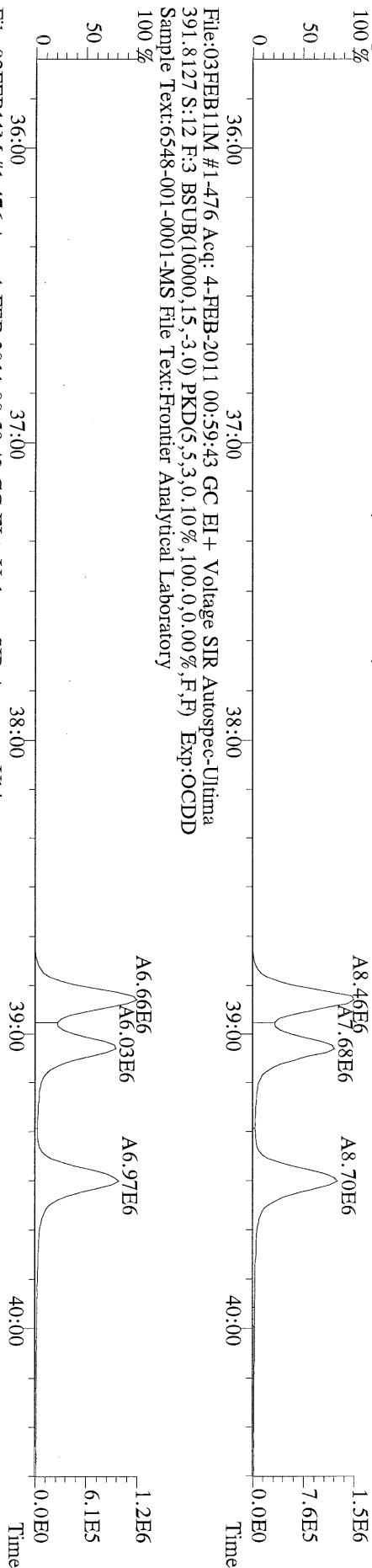
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369.8919 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



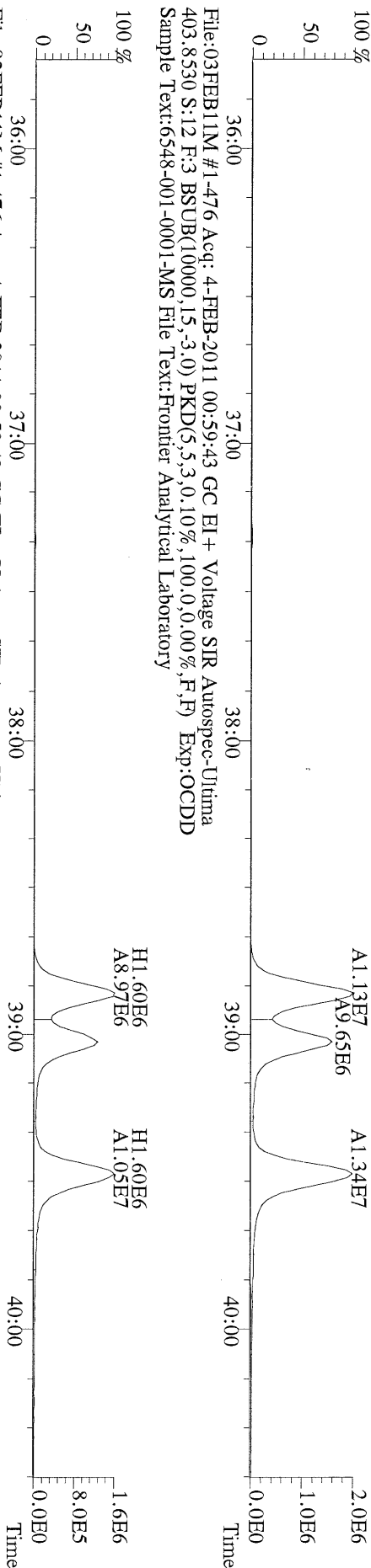
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366.9792 S:12 F:2 Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



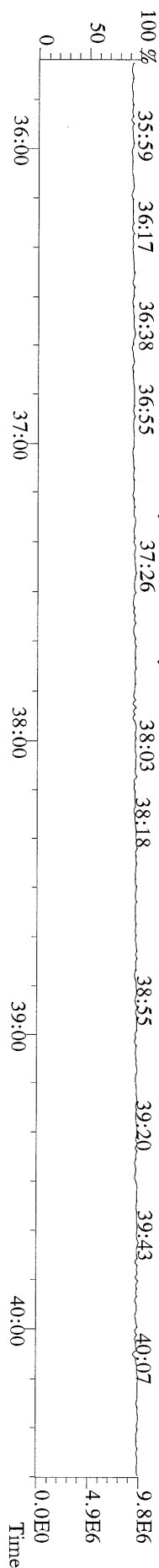
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389.8156 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory
100 %



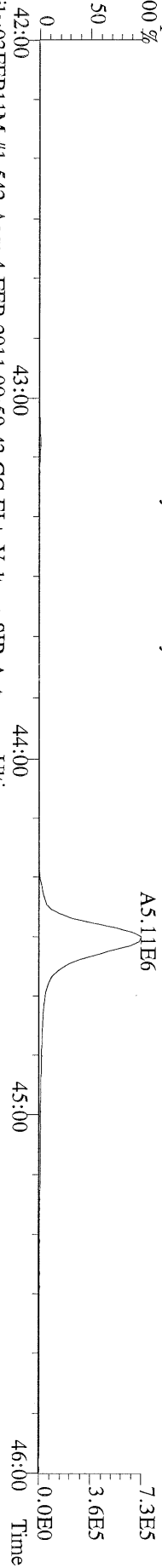
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401.8559 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory
100 %



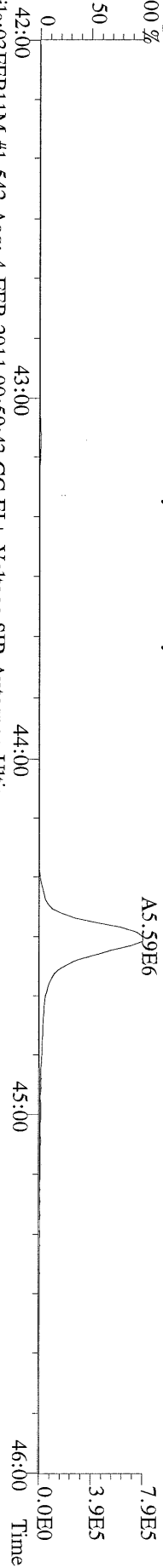
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380.9760 S:12 F:3 Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory
100 %



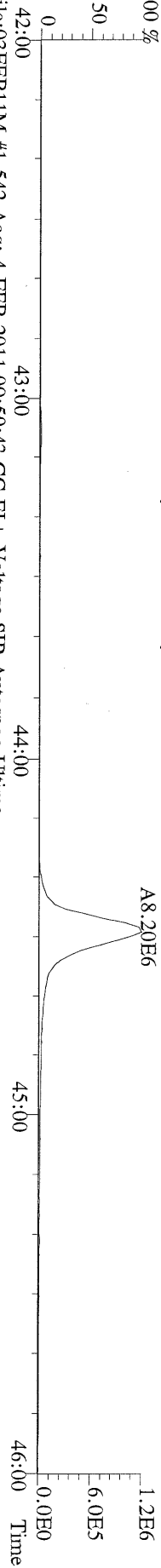
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423.7767 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory
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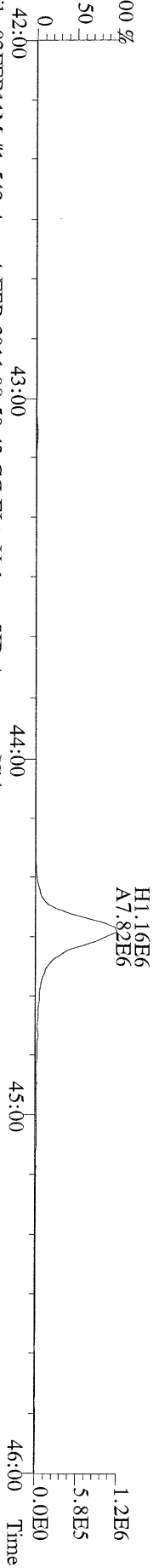
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425.7737 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory
100 %



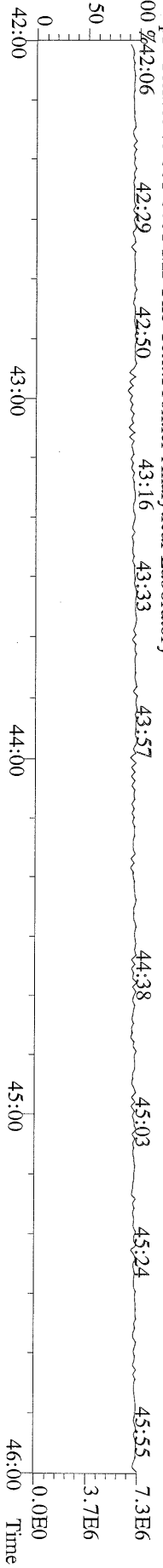
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435.8169 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory
100 %



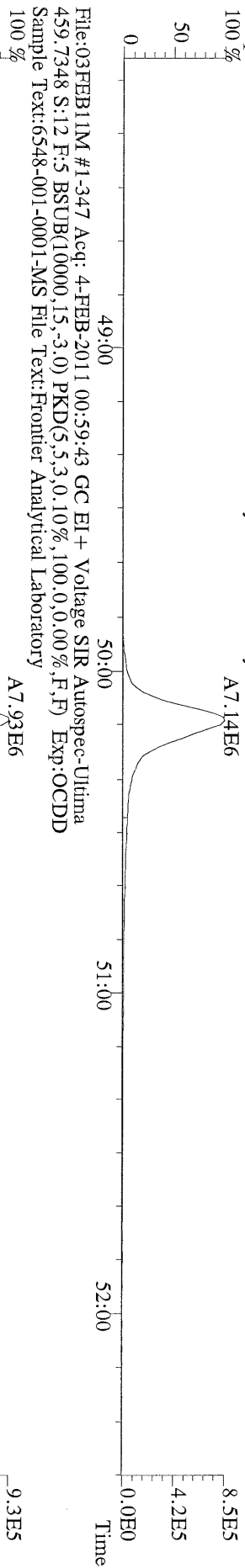
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437.8140 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



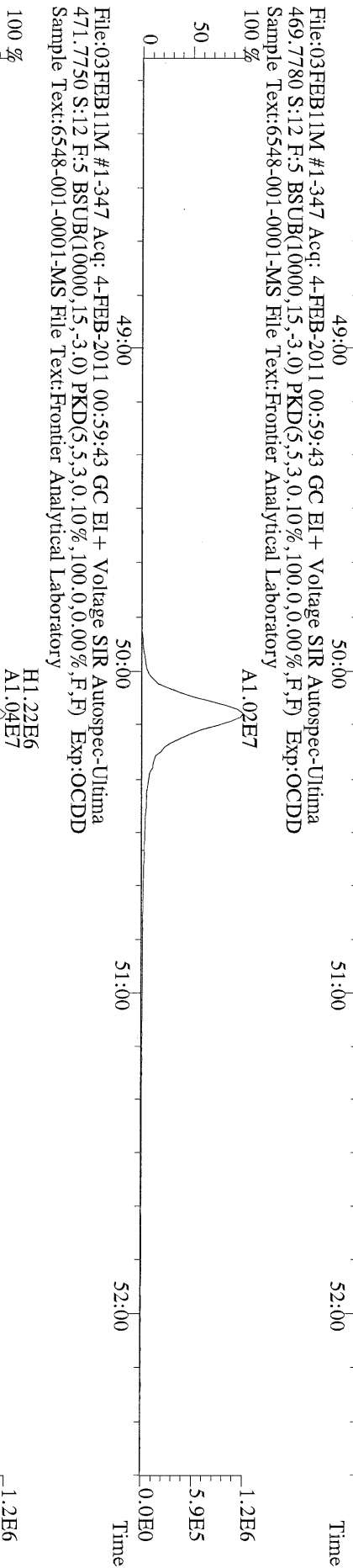
File:03FEB11M #1-542 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Utima
430.9728 S:12 F:4 Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory
100 %



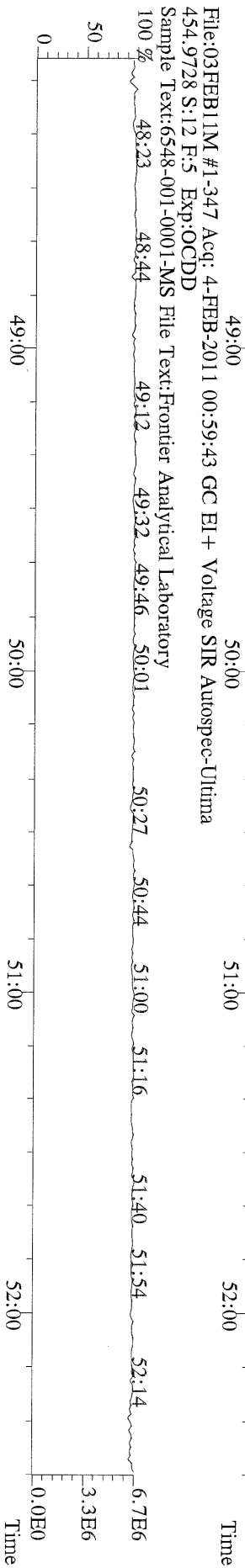
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457.7377 S:12 F:5 BSUB(10000,15,-3,0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory
100 %



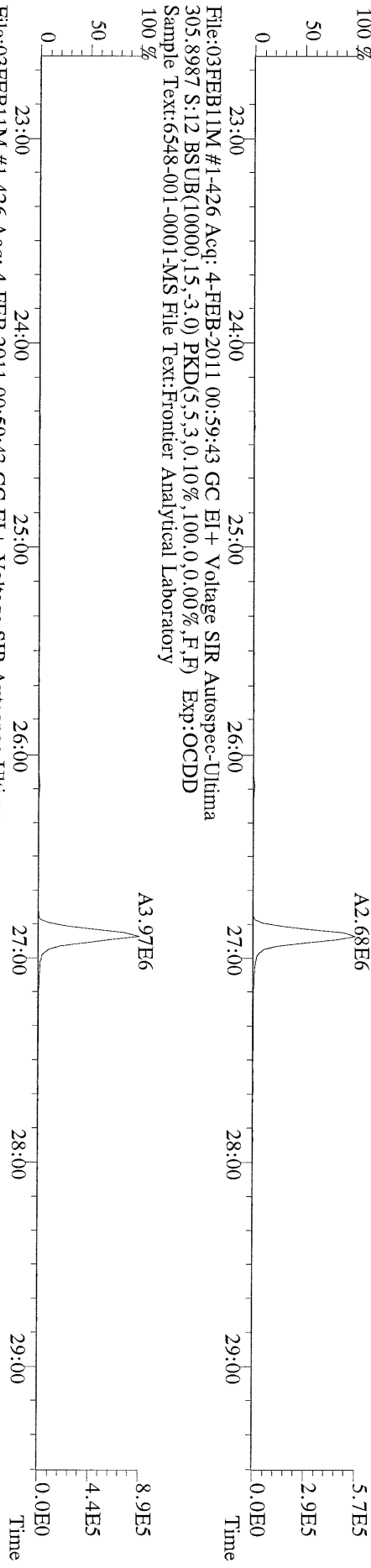
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469.7780 S:12 F:5 BSUB(10000,15,-3,0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory
100 %



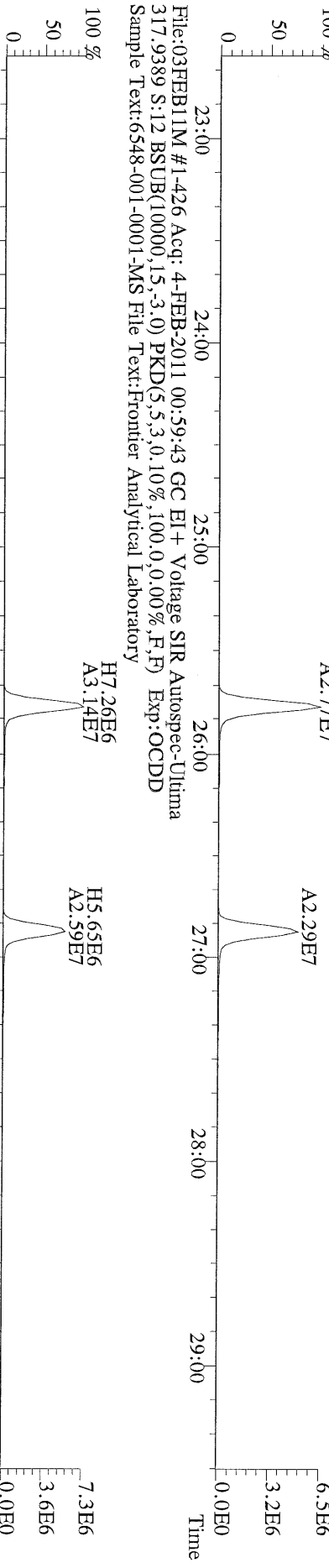
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454.9728 S:12 F:5 Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory
100 %



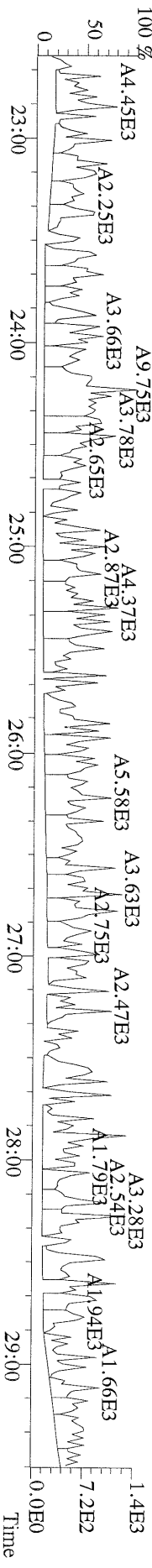
File:03FEB11M #1-426 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Ultima
 303.9016 S:12 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



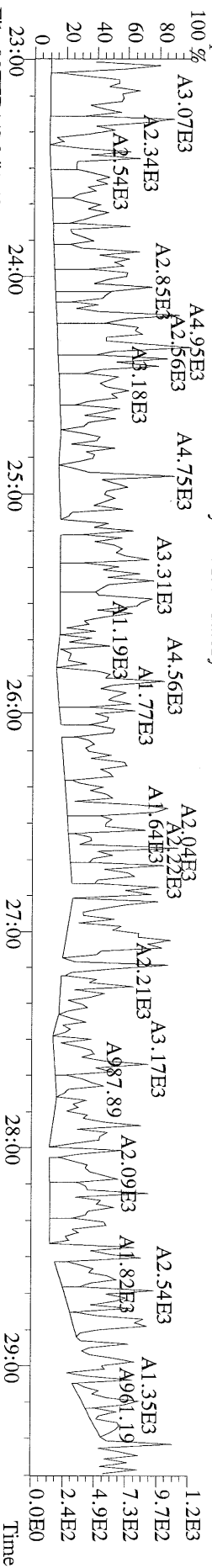
File:03FEB11M #1-426 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Ultima
 315.9419 S:12 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



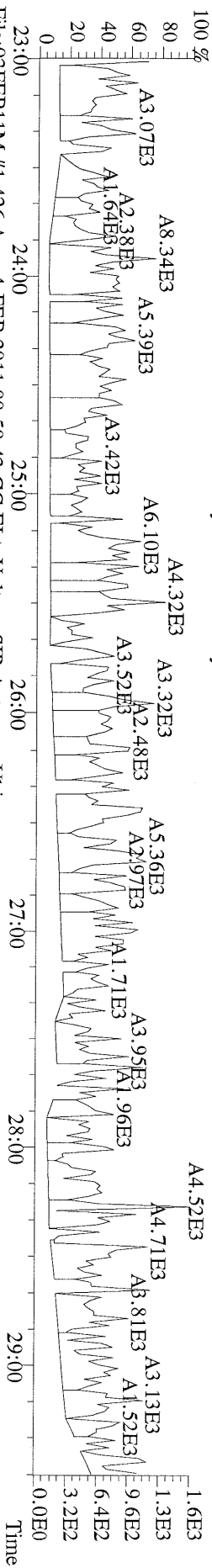
File:03FEB11M #1-426 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Ultima
 317.9389 S:12 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



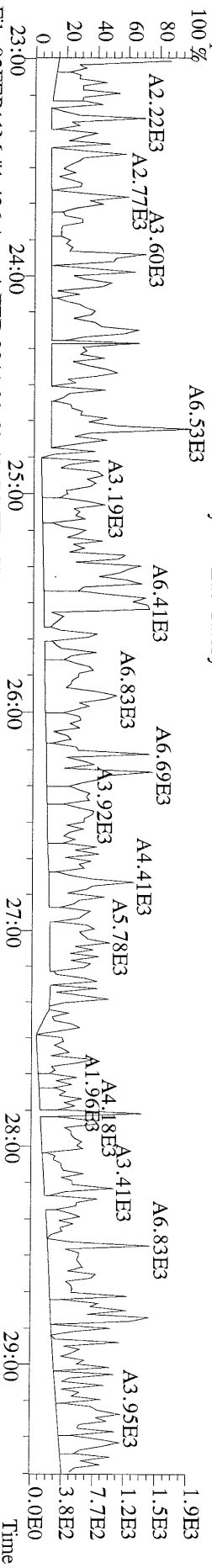
File:03FEB11M #1-426 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:12 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



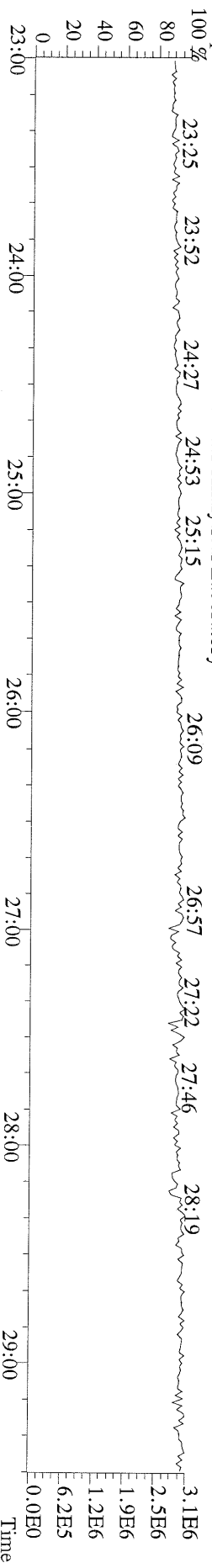
File:03FEB11M #1-426 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:12 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



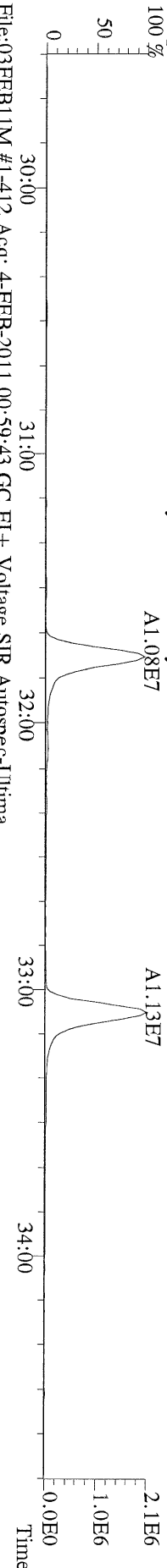
File:03FEB11M #1-426 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:12 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



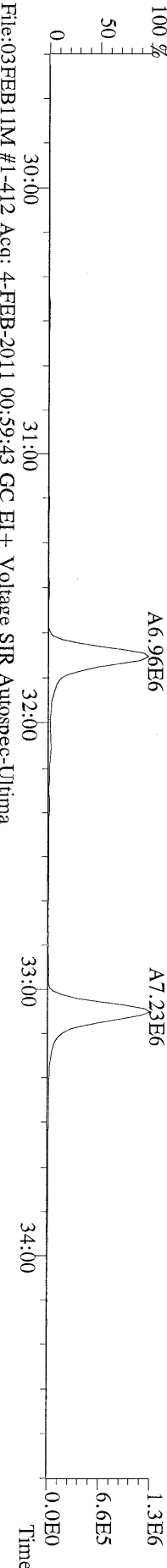
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316.9824 S:12 Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



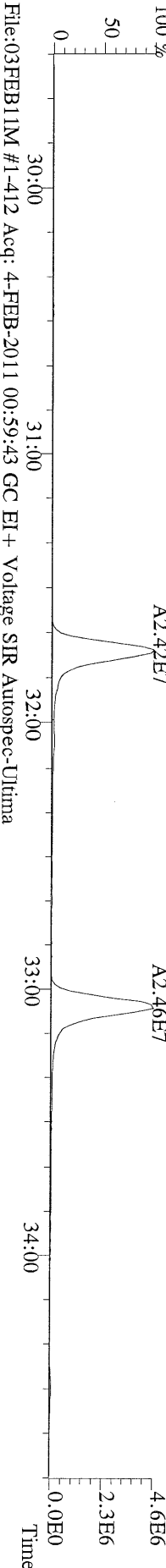
File:03FEB11M #1-412 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



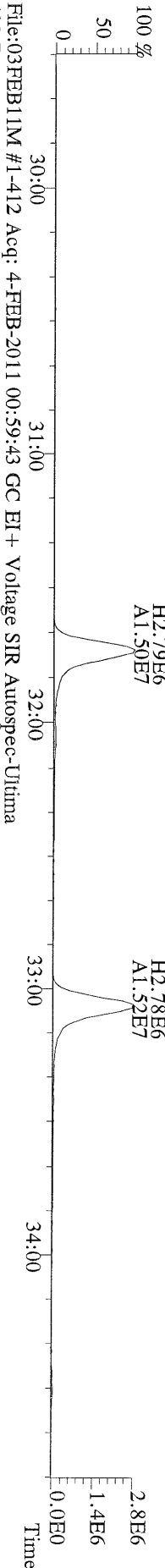
File:03FEB11M #1-412 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Ultima
 341.8568 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



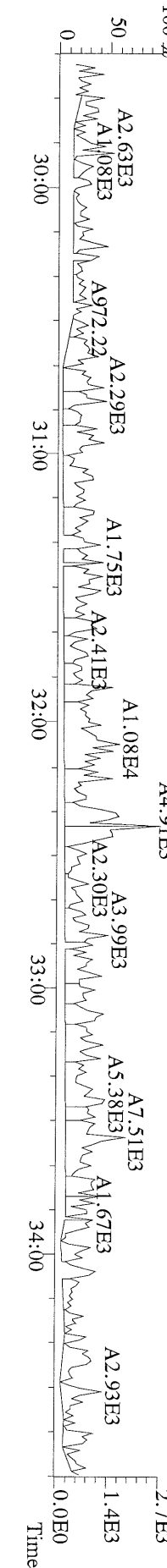
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 351.9000 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



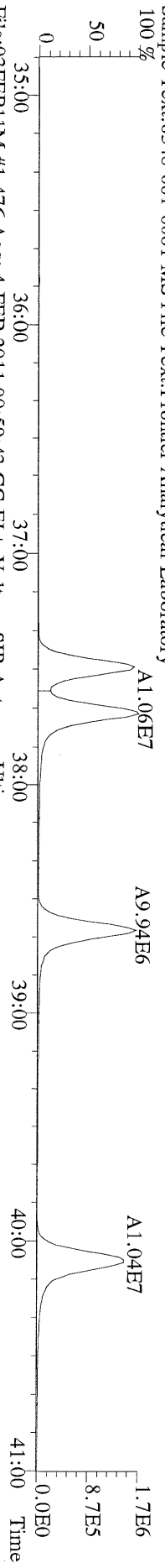
File:03FEB11M #1-412 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Ultima
 353.8970 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



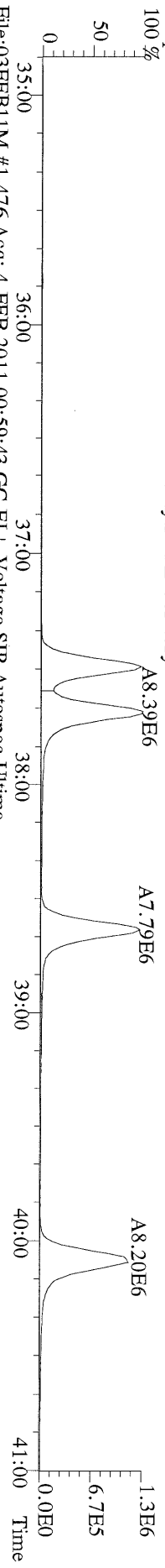
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 409.7974 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



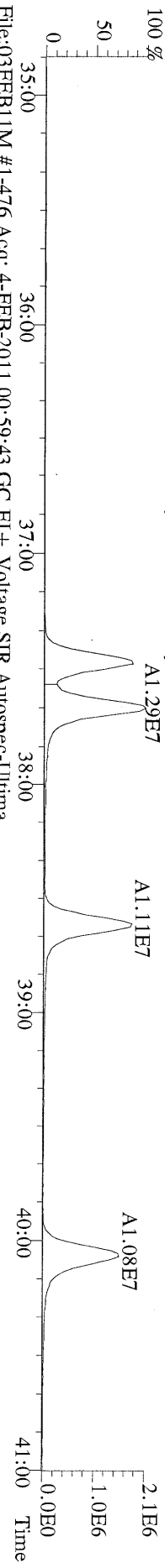
File:03FEB11M #1-476 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Utima
373.8207 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



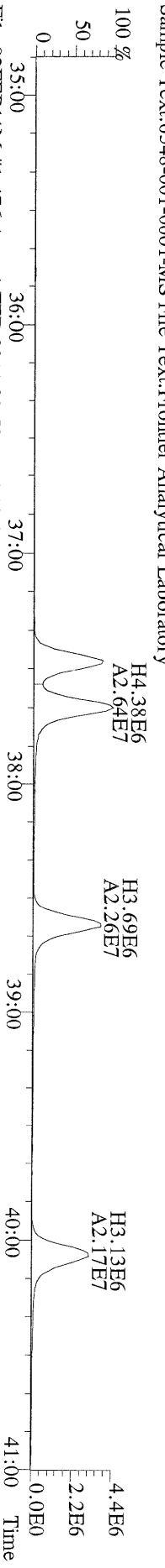
File:03FEB11M #1-476 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Utima
375.8178 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



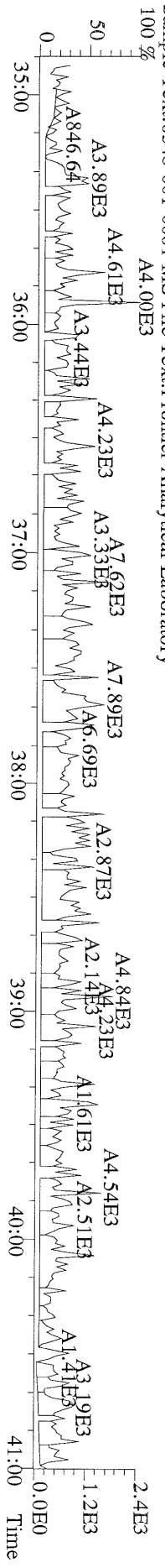
File:03FEB11M #1-476 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Utima
383.8639 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



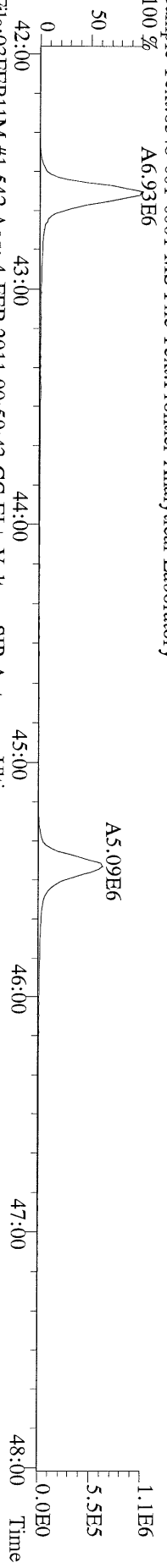
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385.8610 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



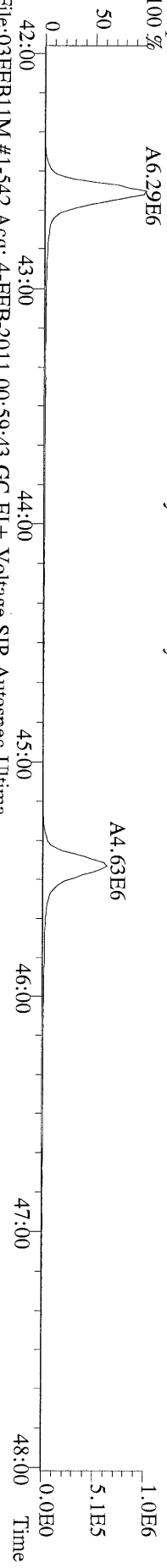
File:03FEB11M #1-476 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Utima
445.7555 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



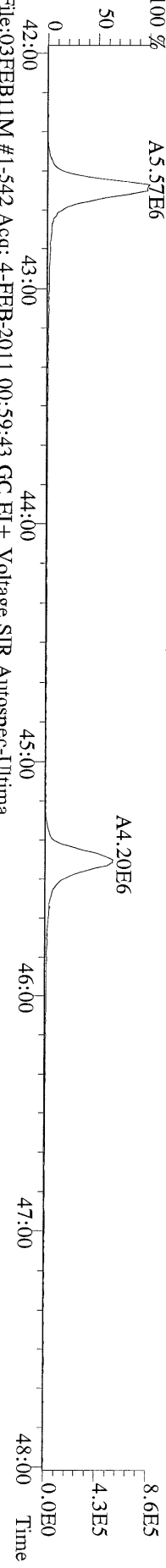
File:03FEB11M#1-542 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Utima
407.7818 S:12 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



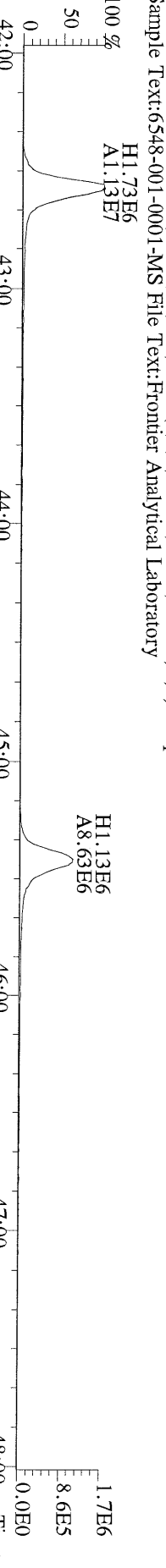
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409.7788 S:12 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



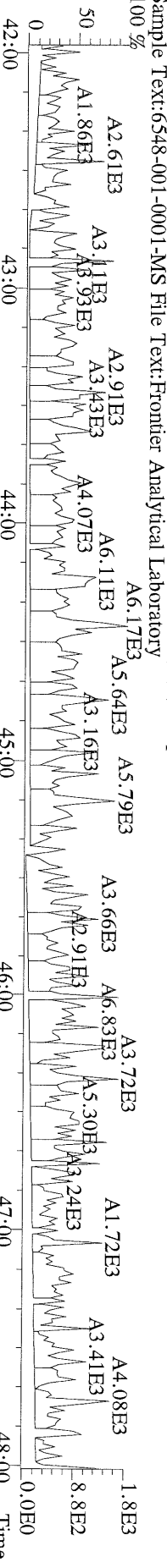
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417.8253 S:12 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



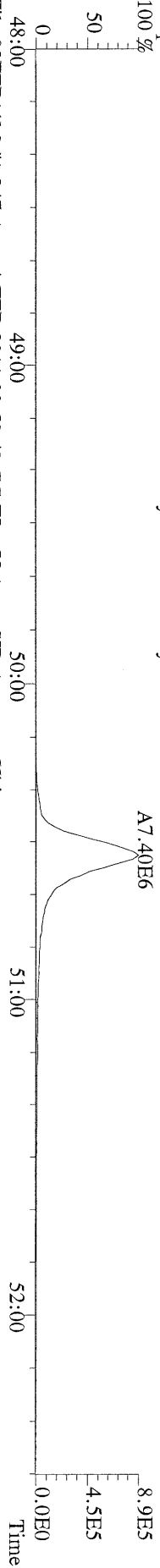
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419.8220 S:12 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



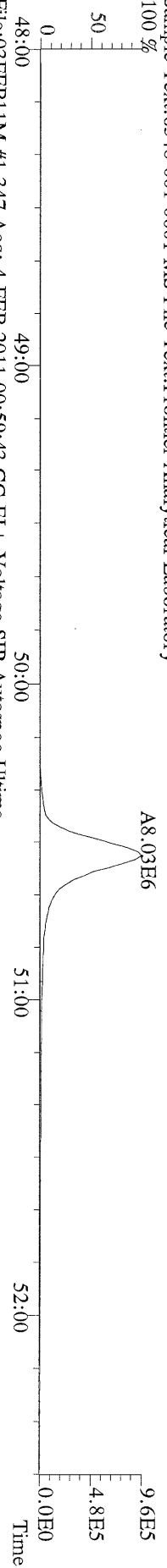
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479.7165 S:12 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



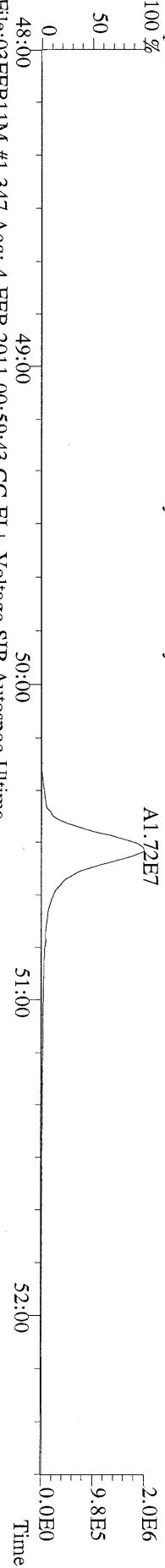
File:03FEB11M #1-347 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory
100 %



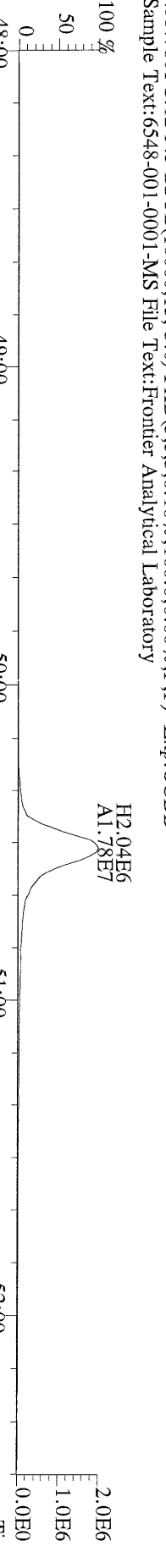
File:03FEB11M #1-347 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory
100 %



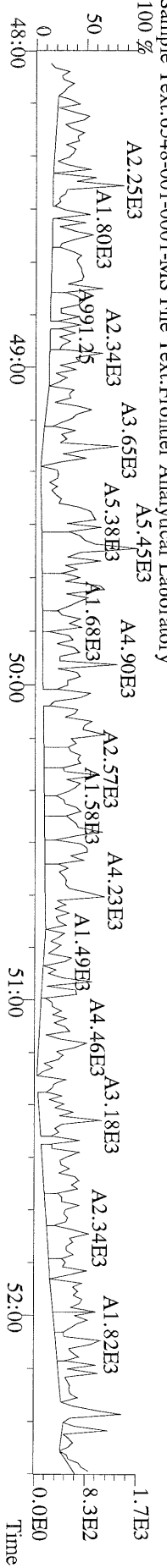
File:03FEB11M #1-347 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory
100 %



File:03FEB11M #1-347 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory



File:03FEB11M #1-347 Acq: 4-FEB-2011 00:59:43 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MS File Text:Frontier Analytical Laboratory
100 %

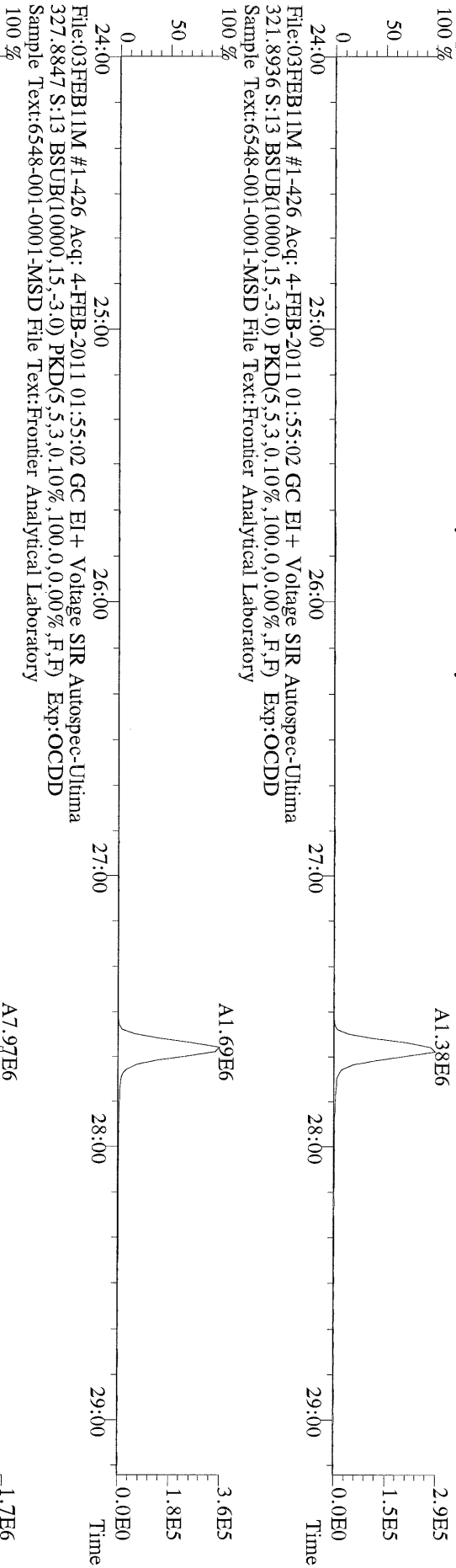


Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL	#Hom	
2,3,7,8-TCDD	3.08e+06	0.82 y	27:39	1.11	210		2.50	-	-	*	
1,2,3,7,8-PeCDD	1.22e+07	1.39 y	33:30	1.10	990		2.50	-	-	*	
1,2,3,4,7,8-HxCDD	1.24e+07	1.26 y	38:53	1.37	1040		2.50	-	-	*	
1,2,3,6,7,8-HxCDD	1.18e+07	1.27 y	39:02	1.37	1100		2.50	-	-	*	
1,2,3,7,8,9-HxCDD	1.27e+07	1.23 y	39:30	1.36	1130		2.50	-	-	*	
1,2,3,4,6,7,8-HpCDD	9.47e+06	0.89 y	44:30	1.45	898		2.50	-	-	*	
OCDD	1.42e+07	0.92 y	50:09	1.43	2000		2.50	-	-	*	
2,3,7,8-TCDF	5.56e+06	0.68 y	26:54	1.50	168		2.50	-	-	*	
1,2,3,7,8-PeCDF	1.51e+07	1.54 y	31:45	0.94	922		2.50	-	-	*	
2,3,4,7,8-PeCDF	1.50e+07	1.50 y	33:05	0.94	916		2.50	-	-	*	
1,2,3,4,7,8-HxCDF	1.36e+07	1.27 y	37:29	0.93	1080		2.50	-	-	*	
1,2,3,6,7,8-HxCDF	1.57e+07	1.28 y	37:41	0.82	1100		2.50	-	-	*	
2,3,4,6,7,8-HxCDF	1.46e+07	1.24 y	38:38	0.92	1100		2.50	-	-	*	
1,2,3,7,8,9-HxCDF	1.57e+07	1.24 y	40:05	1.00	1100		2.50	-	-	*	
1,2,3,4,6,7,8-HpCDF	1.12e+07	1.08 y	42:35	1.39	1080		2.50	-	-	*	
1,2,3,4,7,8,9-HpCDF	8.45e+06	1.07 y	45:26	1.36	1030		2.50	-	-	*	
OCDF	1.39e+07	0.90 y	50:32	0.79	2110		2.50	-	-	*	
										Rec	
13C-2,3,7,8-TCDD	2.60e+07	0.79 y	27:37	1.02	1280					65.0	
13C-1,2,3,7,8-PeCDD	2.22e+07	1.67 y	33:28	0.84	1330					67.3	
13C-1,2,3,4,7,8-HxCDD	1.73e+07	1.25 y	38:51	1.07	1280					64.8	
13C-1,2,3,6,7,8-HxCDD	1.54e+07	1.27 y	39:01	1.01	1210					61.3	
13C-1,2,3,4,6,7,8-HpCDD	1.44e+07	1.02 y	44:29	0.86	1340					67.6	
13C-OCDD	1.95e+07	1.02 y	50:08	0.55	2840					71.8	
13C-2,3,7,8-TCDF	4.37e+07	0.86 y	26:53	0.99	1370					69.4	
13C-1,2,3,7,8-PeCDF	3.44e+07	1.63 y	31:44	0.84	1280					64.9	
13C-2,3,4,7,8-PeCDF	3.46e+07	1.61 y	33:00	0.81	1330					67.3	
13C-1,2,3,4,7,8-HxCDF	2.67e+07	0.48 y	37:28	1.85	1150					58.2	
13C-1,2,3,6,7,8-HxCDF	3.46e+07	0.49 y	37:40	2.54	1090					55.0	
13C-2,3,4,6,7,8-HxCDF	2.86e+07	0.48 y	38:37	2.01	1130					57.2	
13C-1,2,3,7,8,9-HxCDF	2.81e+07	0.49 y	40:03	2.03	1100					55.8	
13C-1,2,3,4,6,7,8-HpCDF	1.47e+07	0.49 y	42:35	1.11	1060					53.5	
13C-1,2,3,4,7,8,9-HpCDF	1.20e+07	0.48 y	45:25	0.80	1190					60.2	
13C-OCDF	3.32e+07	0.94 y	50:32	1.08	2450					61.9	
37Cl-2,3,7,8-TCDD	7.97e+06		27:38	0.69	587					74.2	
13C-1,2,3,4-TCDD	3.92e+07	0.79 y	27:02	-	86.1						
13C-1,2,3,4-TCDF	6.33e+07	0.87 y	25:46	-	86.5						
13C-1,2,3,7,8,9-HxCDD	2.48e+07	1.29 y	39:29	-	88.9						
Total Tetra-Dioxins	3.22e+06		22:45	1.11	220		2.50	-	-	*	30
Total Penta-Dioxins	1.24e+07		33:30	1.10	1000		2.50	-	-	*	9
Total Hexa-Dioxins	3.75e+07		38:53	1.37	3320		2.50	-	-	*	12
Total Hepta-Dioxins	1.00e+07		43:07	1.45	950		2.50	-	-	*	29
Total Tetra-Furans	5.84e+06		23:48	1.50	176		2.50	-	-	*	25
1st Fn. Tot Penta-Furans	1.58e+05		22:56	0.94	9.64		2.50	-	-	*	PeCDF 33
Total Penta-Furans	3.14e+07		30:29	0.94	1910		2.50	-	-	*	1920 24
Total Hexa-Furans	6.05e+07		35:31	0.91	4450		2.50	-	-	*	16
Total Hepta-Furans	2.05e+07		42:35	1.38	2200		2.50	-	-	*	28

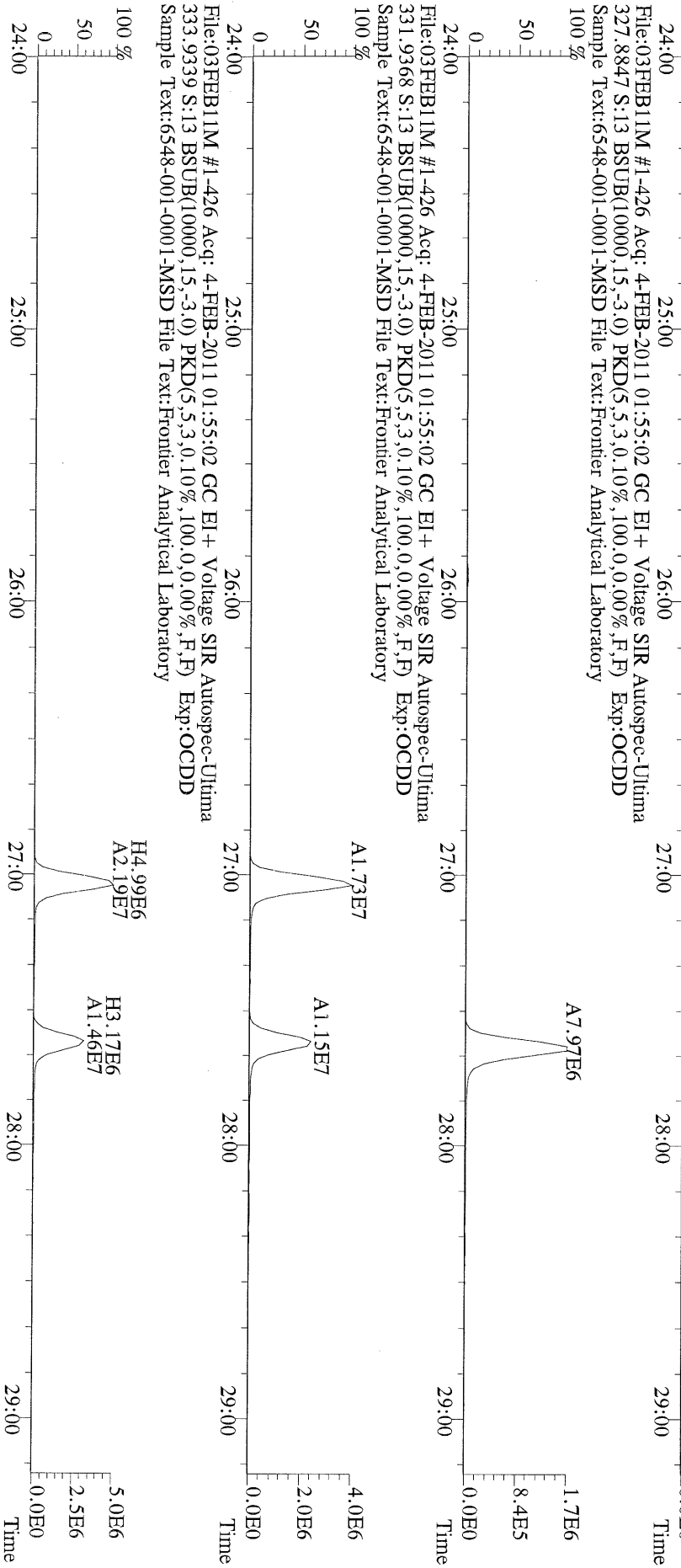
Analyst: 

Date: 2/4/11

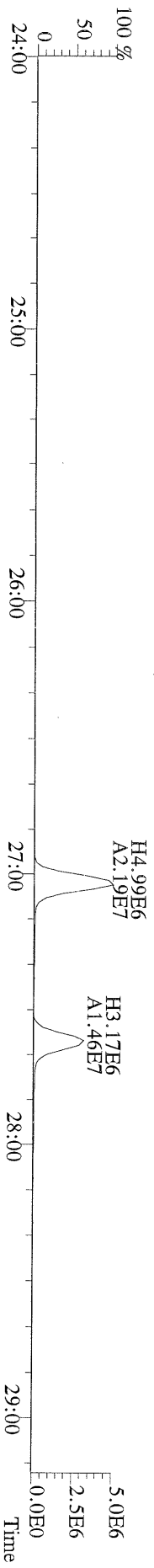
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100 %



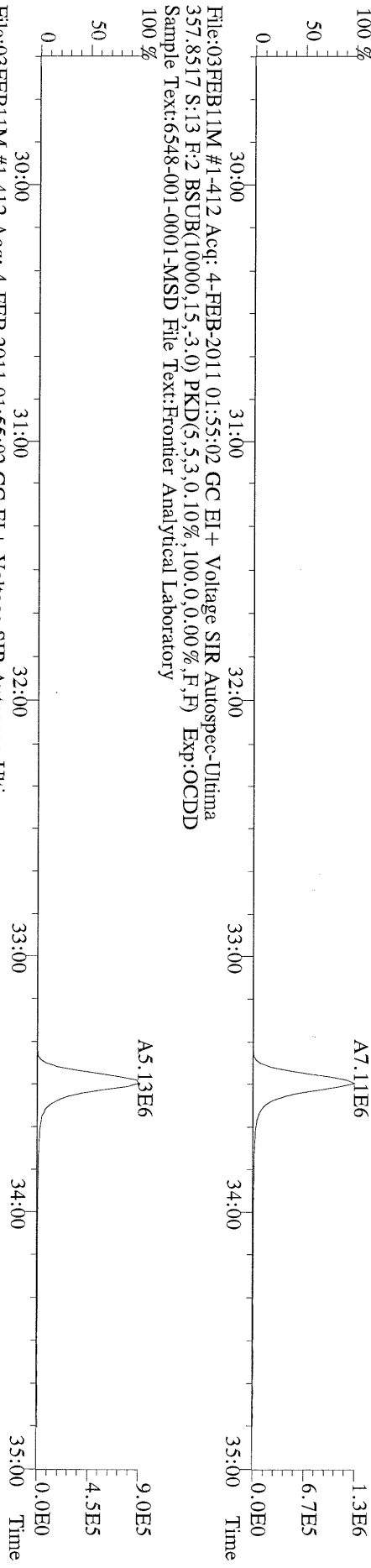
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Sample Text:6548-001-0001-MSD File Text:Frontier Analytical Laboratory
100 %



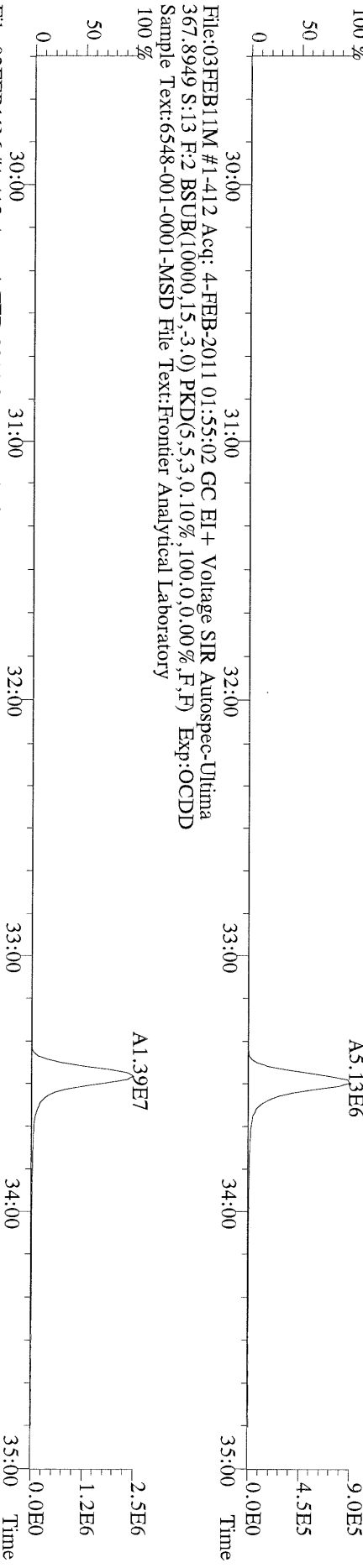
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Sample Text:6548-001-0001-MSD File Text:Frontier Analytical Laboratory



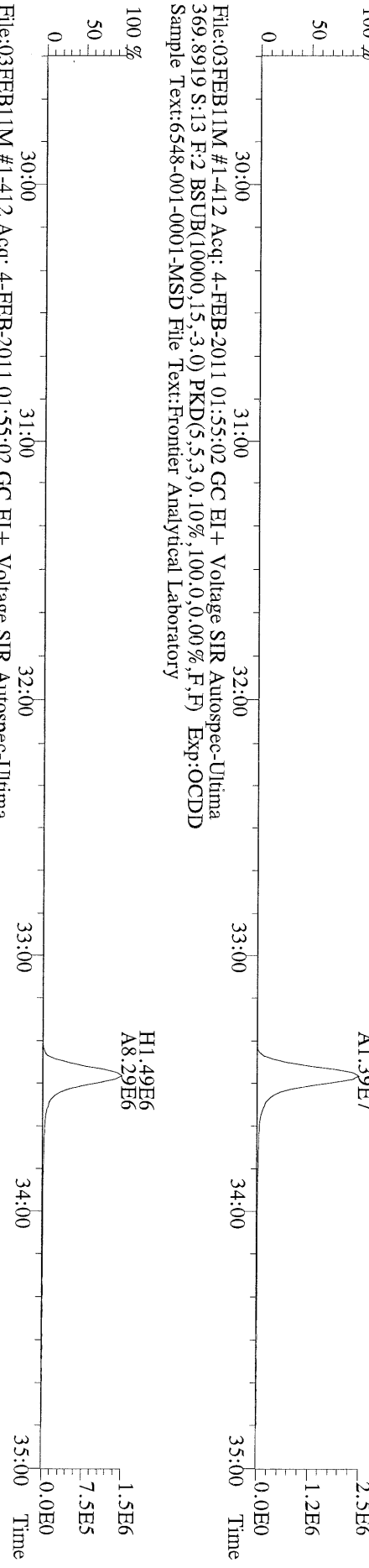
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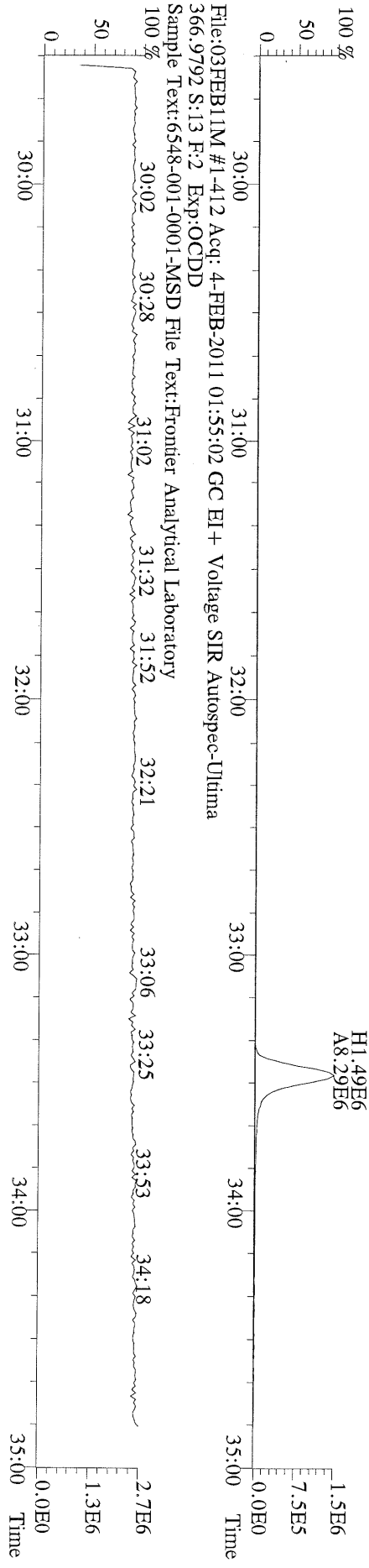
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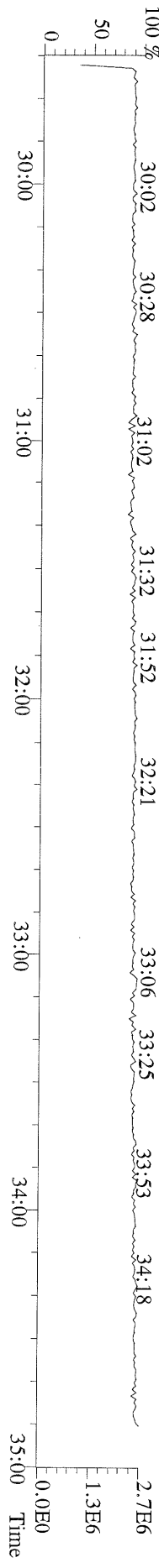
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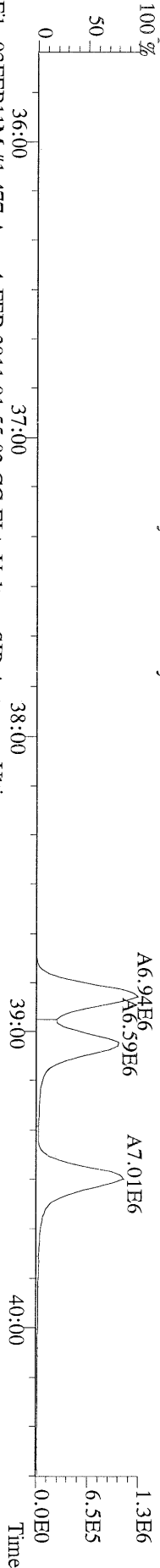
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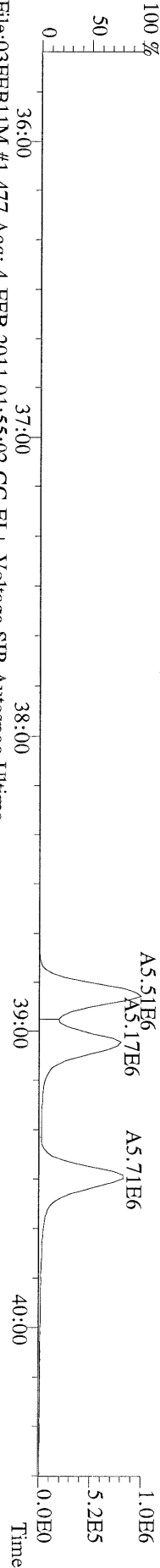
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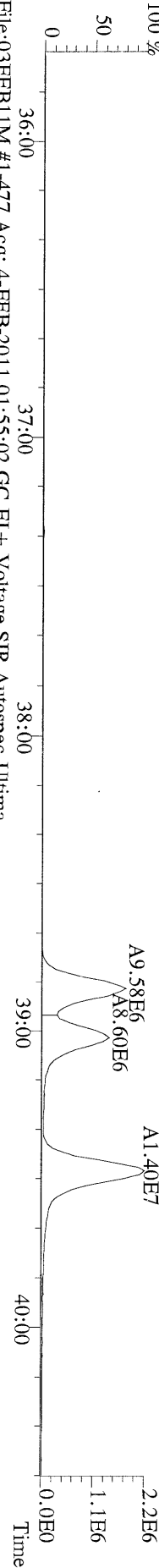
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Sample Text:6548-001-0001-MSD File Text:Frontier Analytical Laboratory
100 %



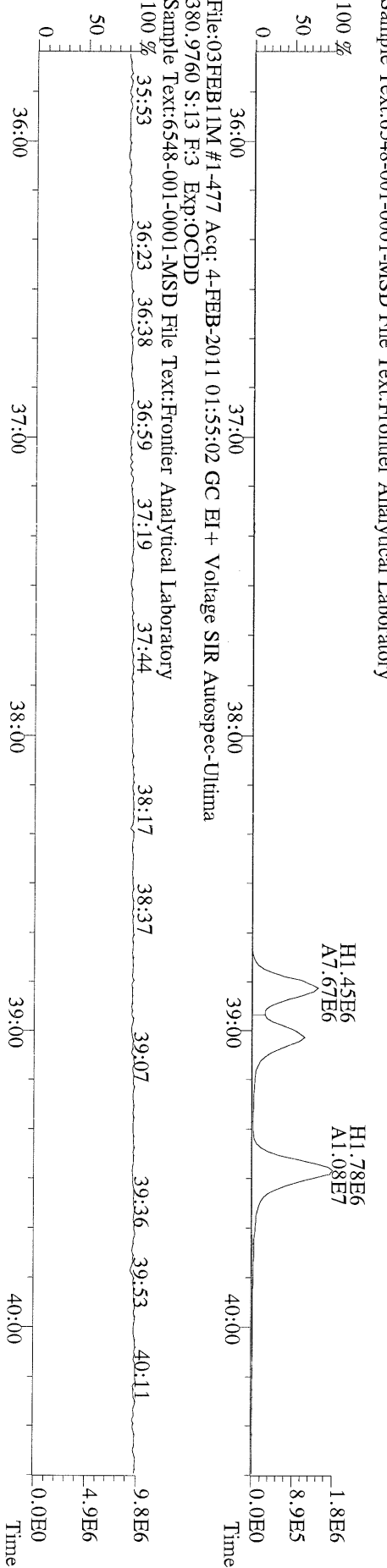
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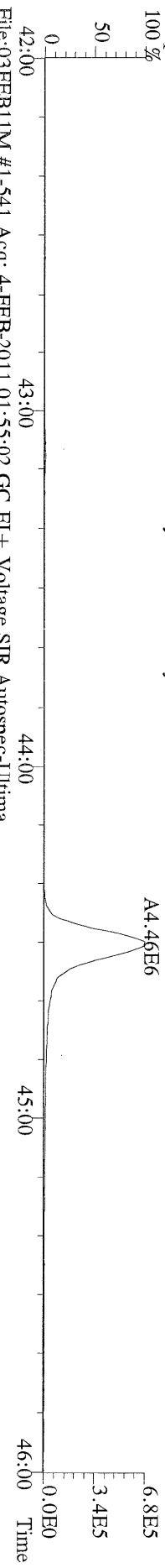
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Sample Text:6548-001-0001-MSD File Text:Frontier Analytical Laboratory
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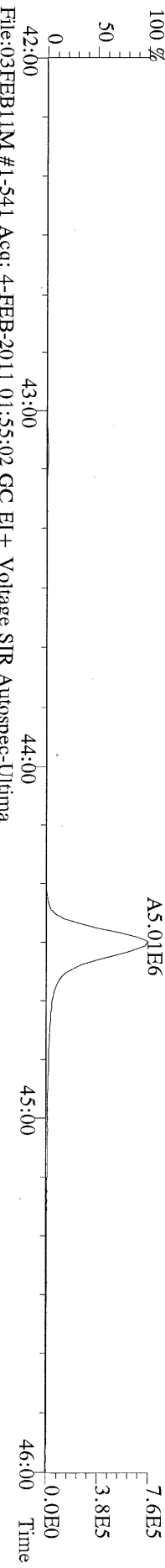
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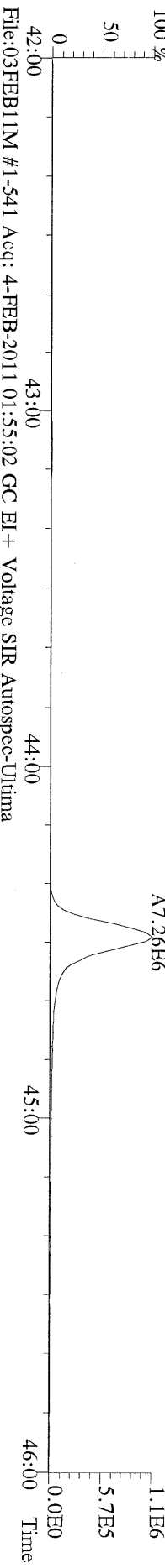
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Sample Text:6548-001-0001-MSD File Text:Frontier Analytical Laboratory
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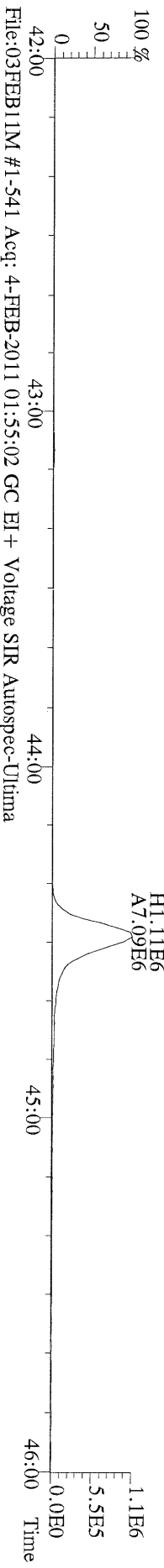
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Sample Text:6548-001-0001-MSD File Text:Frontier Analytical Laboratory
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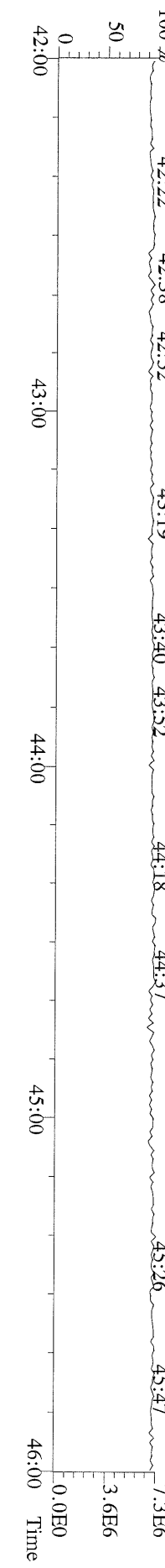
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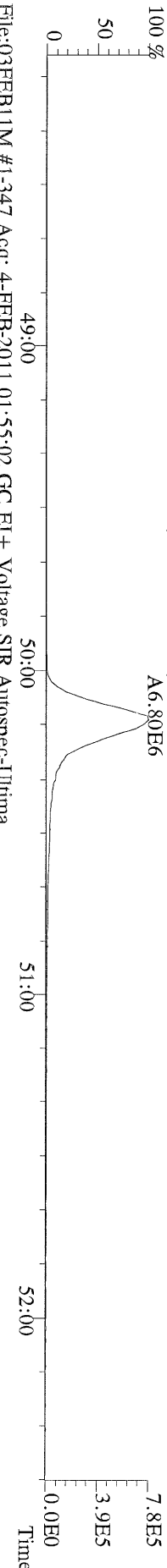
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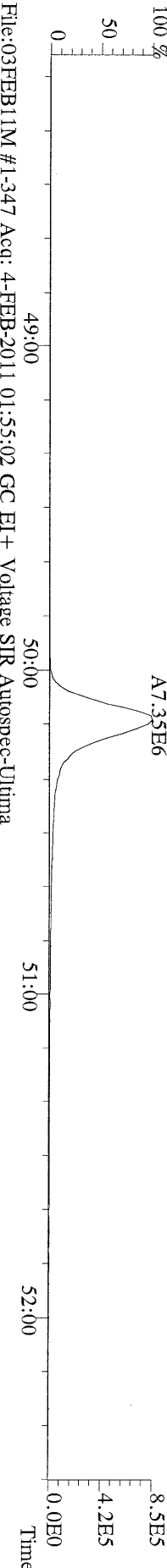
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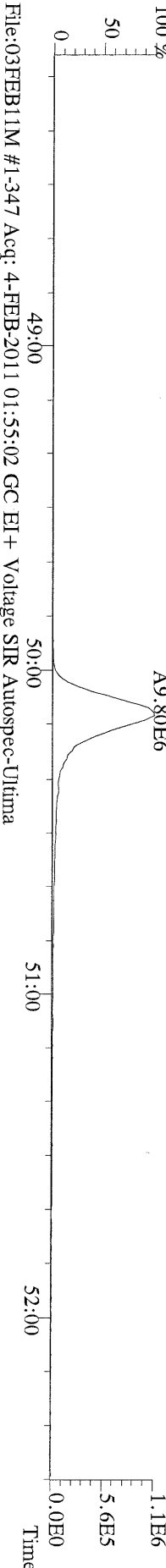
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Sample Text:6548-001-0001-MSD File Text:Frontier Analytical Laboratory
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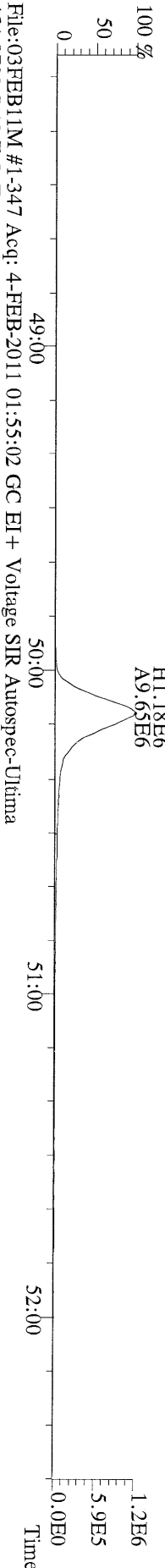
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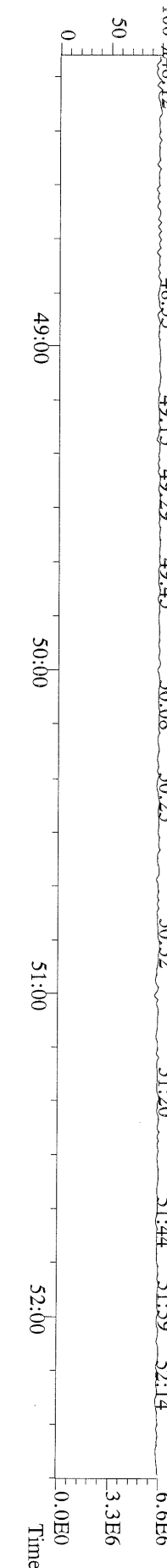
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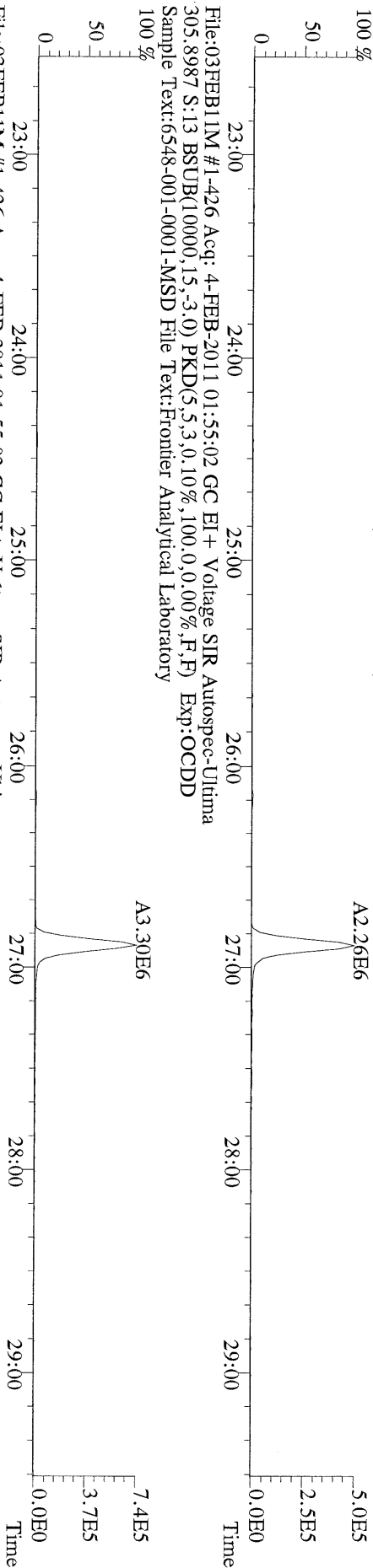
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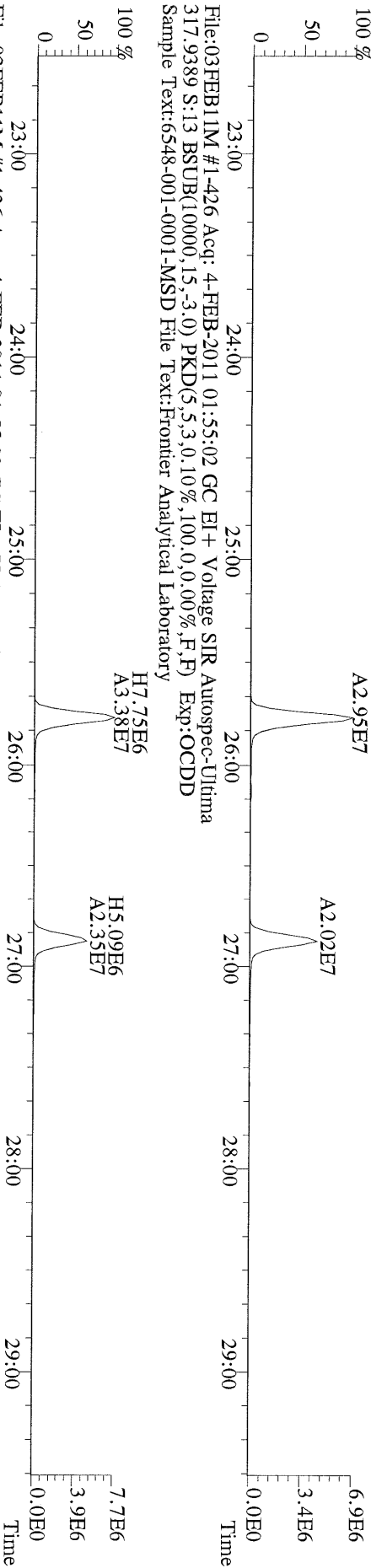
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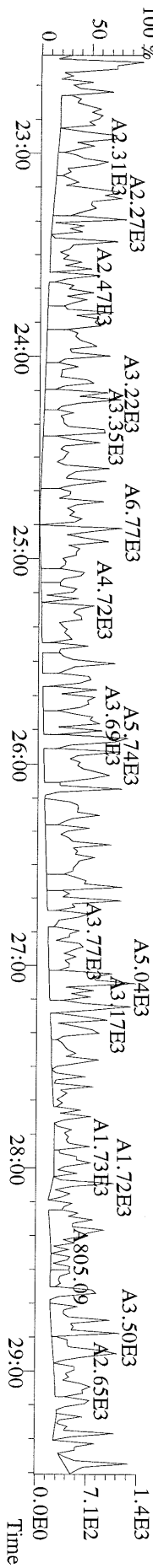
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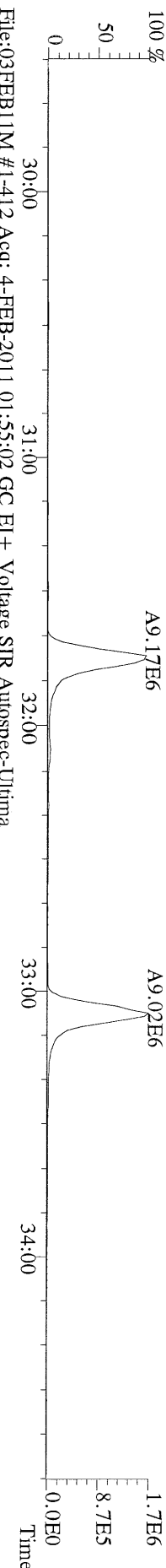
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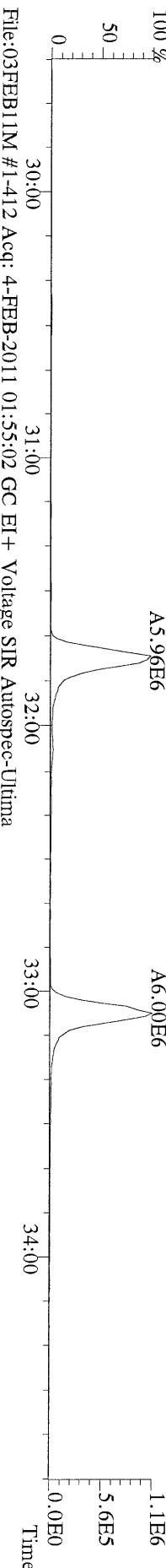
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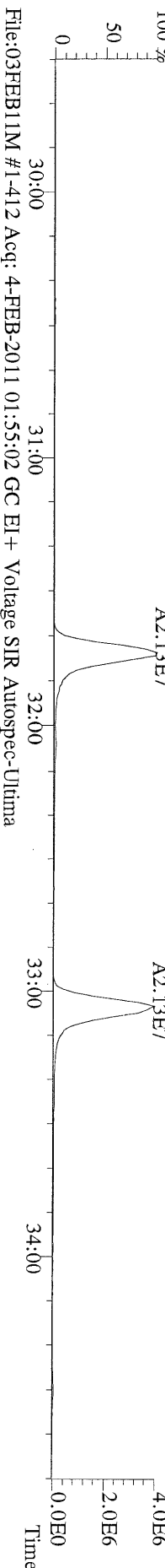
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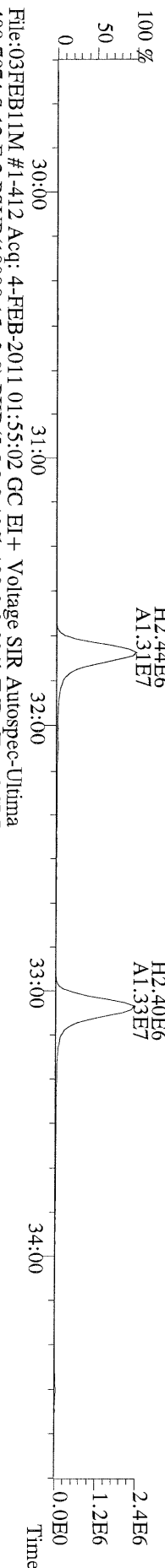
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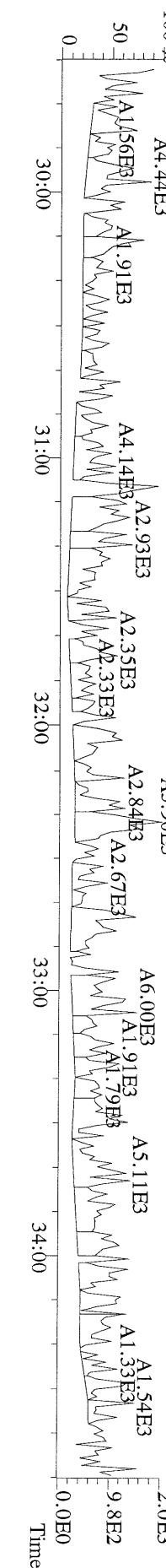
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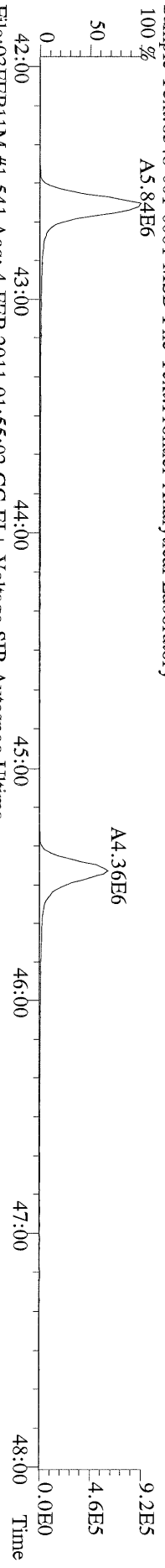
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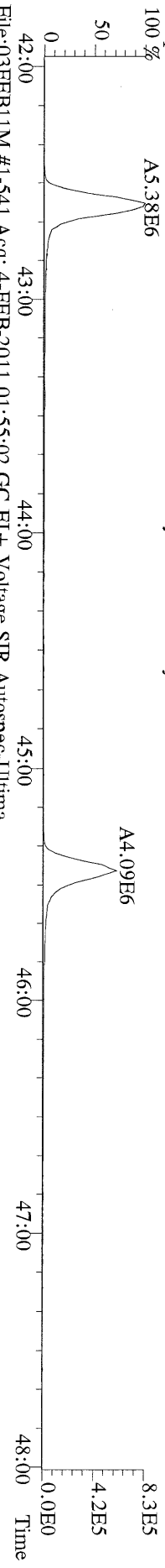
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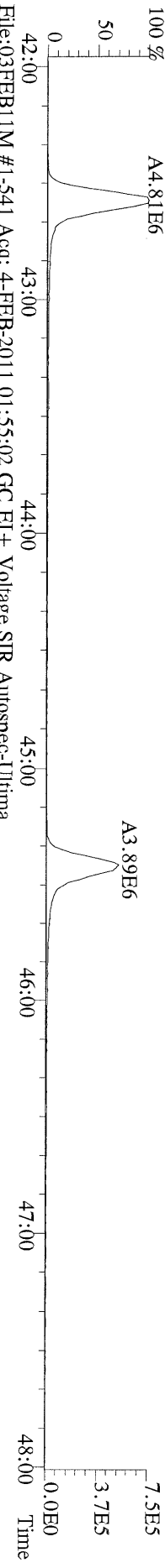
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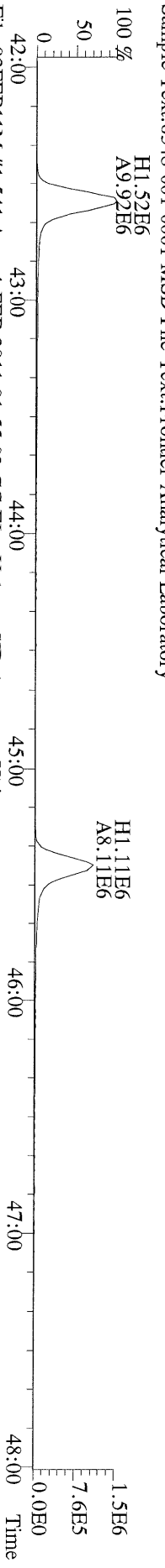
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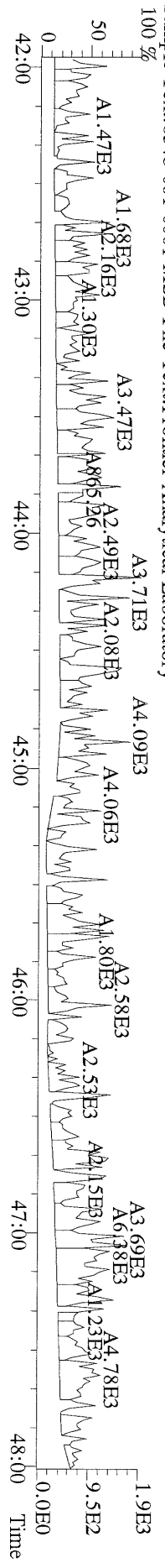
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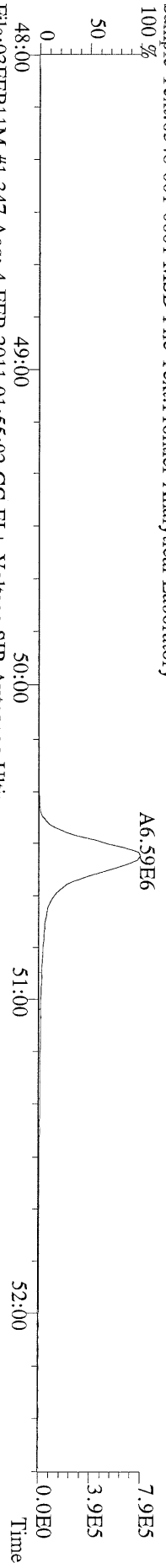
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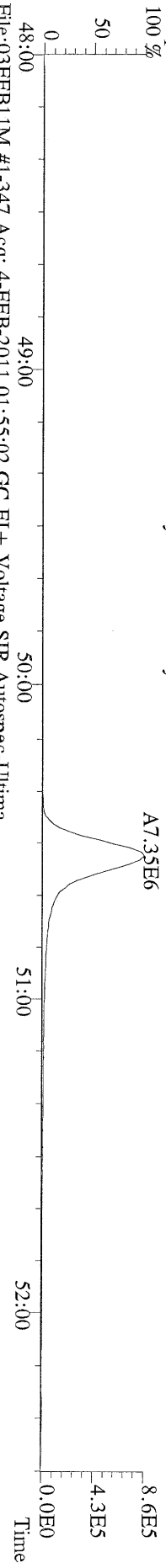
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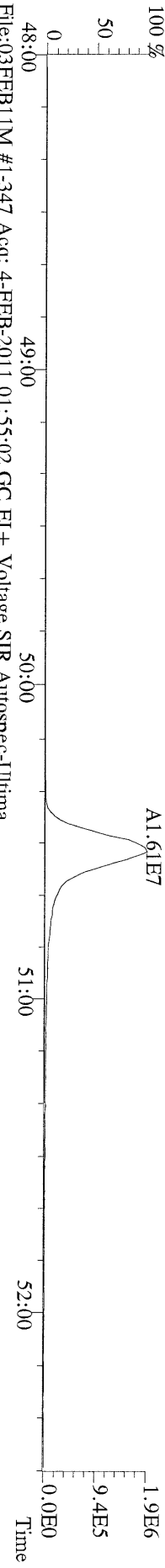
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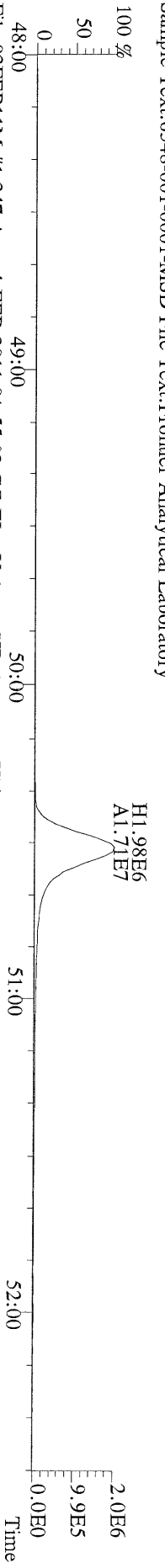
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443.7398 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MSD File Text:Frontier Analytical Laboratory



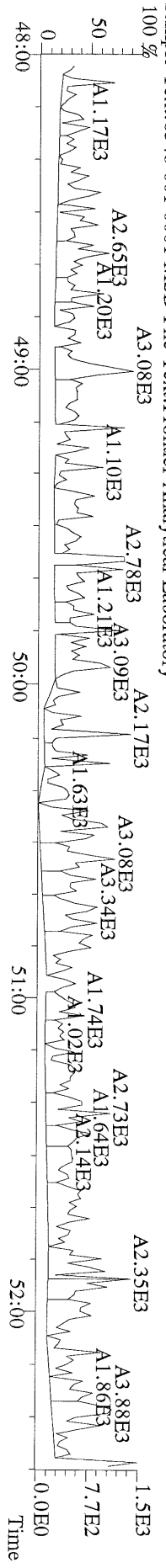
File:03FEB11M #1-347 Acq: 4-FEB-2011 01:55:02 GC EI+ Voltage SIR Autospec-Utima
453.7831 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MSD File Text:Frontier Analytical Laboratory




File:03FEB11M #1-347 Acq: 4-FEB-2011 01:55:02 GC EI+ Voltage SIR Autospec-Utima
455.7801 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MSD File Text:Frontier Analytical Laboratory



File:03FEB11M #1-347 Acq: 4-FEB-2011 01:55:02 GC EI+ Voltage SIR Autospec-Utima
513.6775 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-001-0001-MSD File Text:Frontier Analytical Laboratory

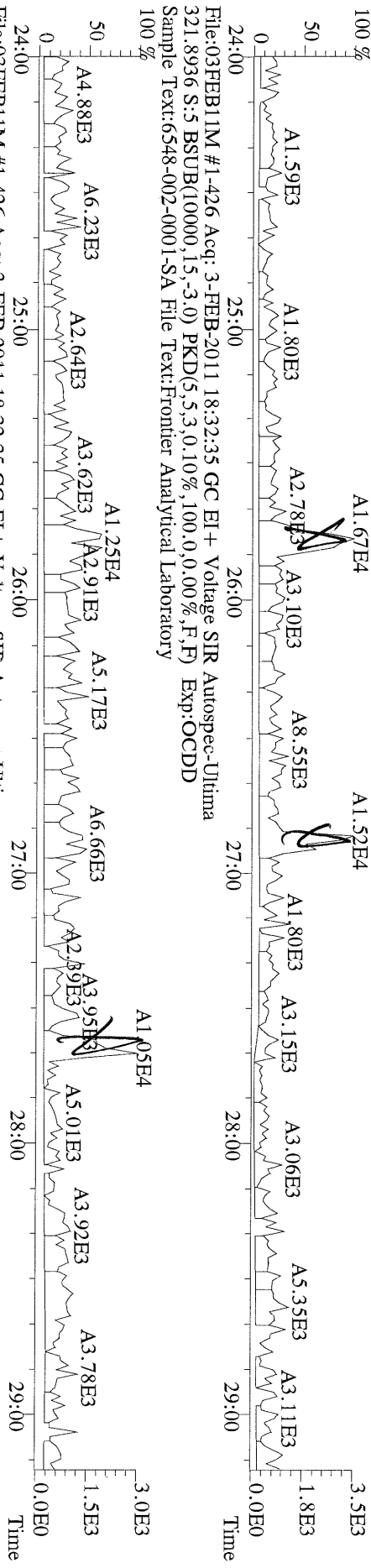


Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL	#Hom	
2,3,7,8-TCDD	*	* n	NotFnd	1.11	*		2.50	800	884	1.02	
1,2,3,7,8-PeCDD	*	* n	NotFnd	1.10	*		2.50	912	912	1.55	
1,2,3,4,7,8-HxCDD	*	* n	NotFnd	1.37	*		2.50	1080	928	1.60	
1,2,3,6,7,8-HxCDD	*	* n	NotFnd	1.37	*		2.50	1080	928	2.03	
1,2,3,7,8,9-HxCDD	*	* n	NotFnd	1.36	*		2.50	1080	928	1.82	
1,2,3,4,6,7,8-HpCDD	*	* n	NotFnd	1.45	*		2.50	792	808	1.80	
OCDD	*	* n	NotFnd	1.43	*		2.50	724	724	3.15	
2,3,7,8-TCDF	*	* n	NotFnd	1.50	*		2.50	1080	1230	0.613	
1,2,3,7,8-PeCDF	*	* n	NotFnd	0.94	*		2.50	944	976	1.14	
2,3,4,7,8-PeCDF	*	* n	NotFnd	0.94	*		2.50	944	976	1.20	
1,2,3,4,7,8-HxCDF	*	* n	NotFnd	0.93	*		2.50	924	864	1.38	
1,2,3,6,7,8-HxCDF	*	* n	NotFnd	0.82	*		2.50	924	864	1.37	
2,3,4,6,7,8-HxCDF	*	* n	NotFnd	0.92	*		2.50	924	864	1.39	
1,2,3,7,8,9-HxCDF	*	* n	NotFnd	1.00	*		2.50	924	864	1.50	
1,2,3,4,6,7,8-HpCDF	*	* n	NotFnd	1.39	*		2.50	704	824	1.57	
1,2,3,4,7,8,9-HpCDF	*	* n	NotFnd	1.36	*		2.50	704	824	2.44	
OCDF	*	* n	NotFnd	0.79	*		2.50	680	728	3.32	
											Rec
13C-2,3,7,8-TCDD	3.25e+07	0.78	y	27:38	1.02	1670					87.7
13C-1,2,3,7,8-PeCDD	2.84e+07	1.70	y	33:29	0.84	1780					93.3
13C-1,2,3,4,7,8-HxCDD	2.32e+07	1.31	y	38:52	1.07	1850					97.1
13C-1,2,3,6,7,8-HxCDD	2.12e+07	1.22	y	39:02	1.01	1790					93.9
13C-1,2,3,4,6,7,8-HpCDD	1.94e+07	1.04	y	44:30	0.86	1940					102
13C-OCDD	2.56e+07	1.00	y	50:09	0.55	4020					105
13C-2,3,7,8-TCDF	5.37e+07	0.86	y	26:53	0.99	1710					89.7
13C-1,2,3,7,8-PeCDF	4.55e+07	1.61	y	31:45	0.84	1720					90.2
13C-2,3,4,7,8-PeCDF	4.33e+07	1.58	y	33:04	0.81	1690					88.6
13C-1,2,3,4,7,8-HxCDF	3.61e+07	0.48	y	37:29	1.85	1670					87.5
13C-1,2,3,6,7,8-HxCDF	4.70e+07	0.47	y	37:41	2.54	1590					83.3
13C-2,3,4,6,7,8-HxCDF	3.83e+07	0.47	y	38:38	2.01	1630					85.4
13C-1,2,3,7,8,9-HxCDF	3.80e+07	0.48	y	40:04	2.03	1600					83.8
13C-1,2,3,4,6,7,8-HpCDF	2.12e+07	0.49	y	42:36	1.11	1630					85.7
13C-1,2,3,4,7,8,9-HpCDF	1.53e+07	0.49	y	45:26	0.80	1630					85.2
13C-OCDF	4.36e+07	0.95	y	50:32	1.08	3450					90.5
37Cl-2,3,7,8-TCDD	9.26e+06			27:39	0.69	712					93.3
13C-1,2,3,4-TCDD	3.62e+07	0.78	y	27:03	-	76.9					
13C-1,2,3,4-TCDF	6.02e+07	0.87	y	25:47	-	79.5					
13C-1,2,3,7,8,9-HxCDD	2.23e+07	1.26	y	39:29	-	77.1					
Total Tetra-Dioxins	*		NotFnd	1.11	*		2.50	800	884	1.02	0
Total Penta-Dioxins	*		NotFnd	1.10	*		2.50	912	912	1.55	0
Total Hexa-Dioxins	*		NotFnd	1.37	*		2.50	1080	928	2.03	0
Total Hepta-Dioxins	*		NotFnd	1.45	*		2.50	792	808	1.80	0
Total Tetra-Furans	*		NotFnd	1.50	*		2.50	1080	1230	0.613	0
1st Fn. Tot Penta-Furans	*		NotFnd	0.94	*		2.50	720	952	1.20	PeCDF 0
Total Penta-Furans	*		NotFnd	0.94	*		2.50	944	976	1.20	* 0
Total Hexa-Furans	*		NotFnd	0.91	*		2.50	924	864	1.50	0
Total Hepta-Furans	*		NotFnd	1.38	*		2.50	704	824	2.44	0

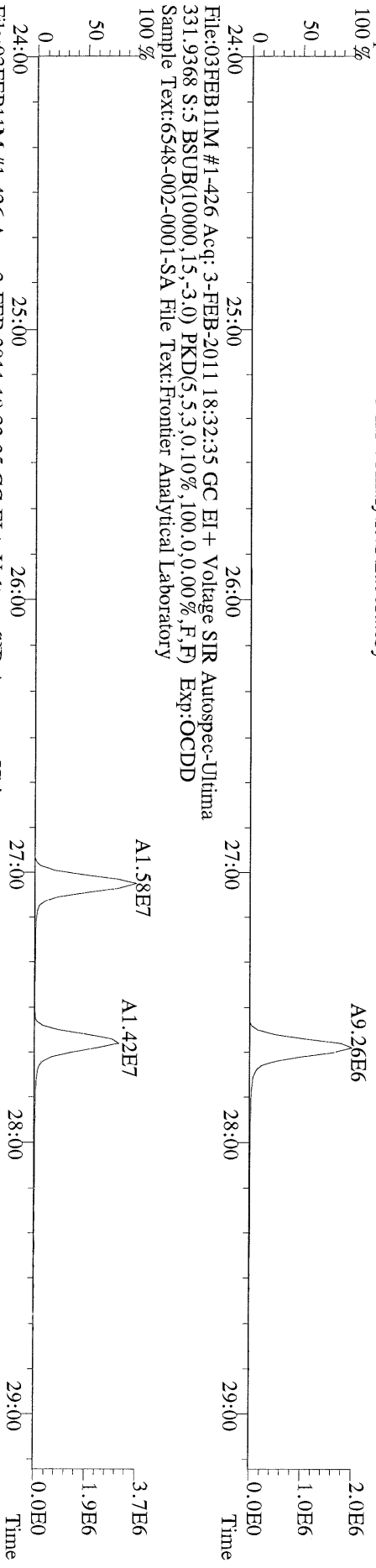
Analyst: 

Date: 2/4/11

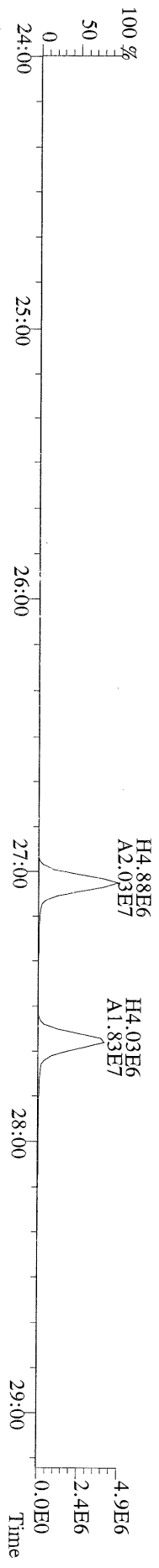
File:03FEB11M #1-426 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Utima
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



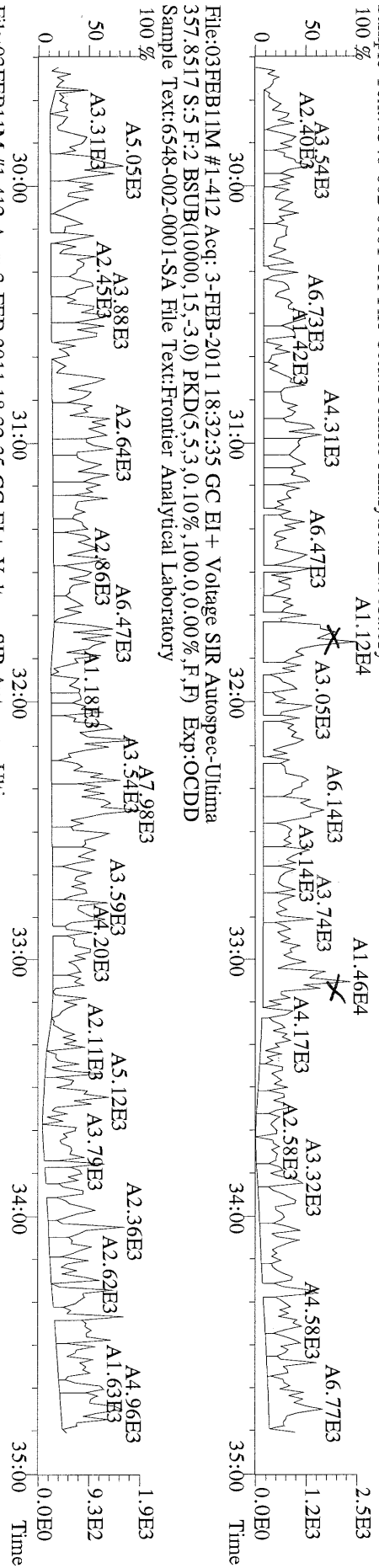
File:03FEB11M #1-426 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Utima
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



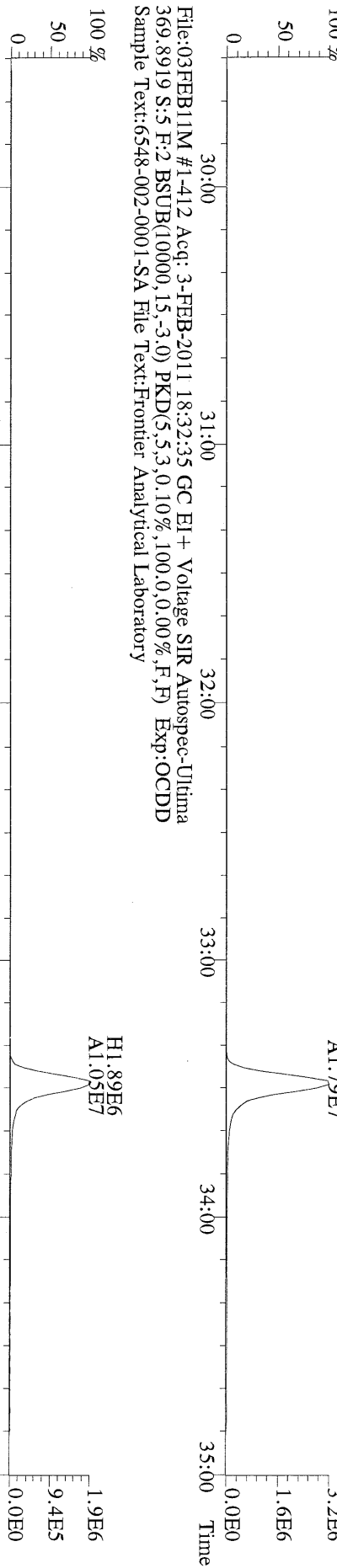
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333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



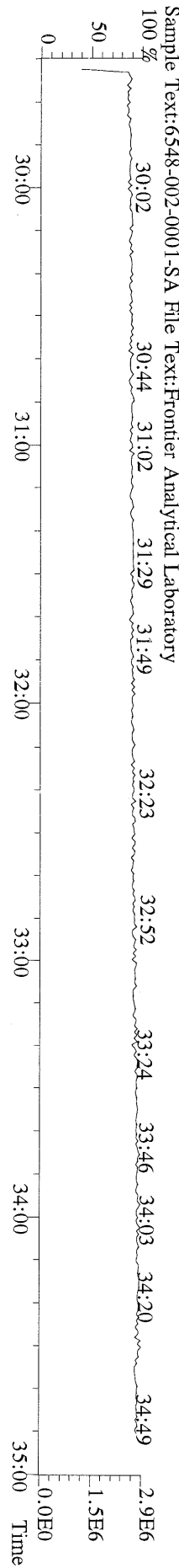
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 355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



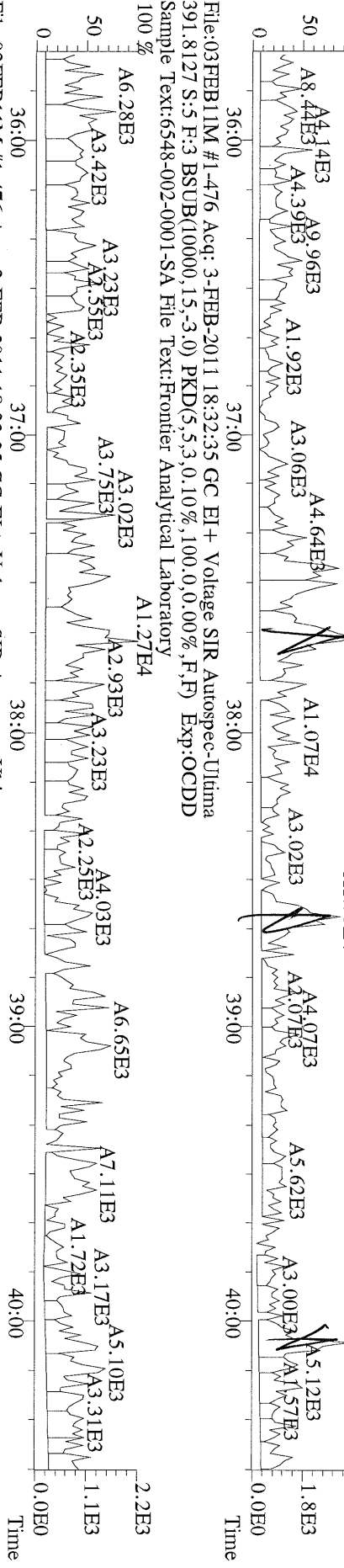
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 367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



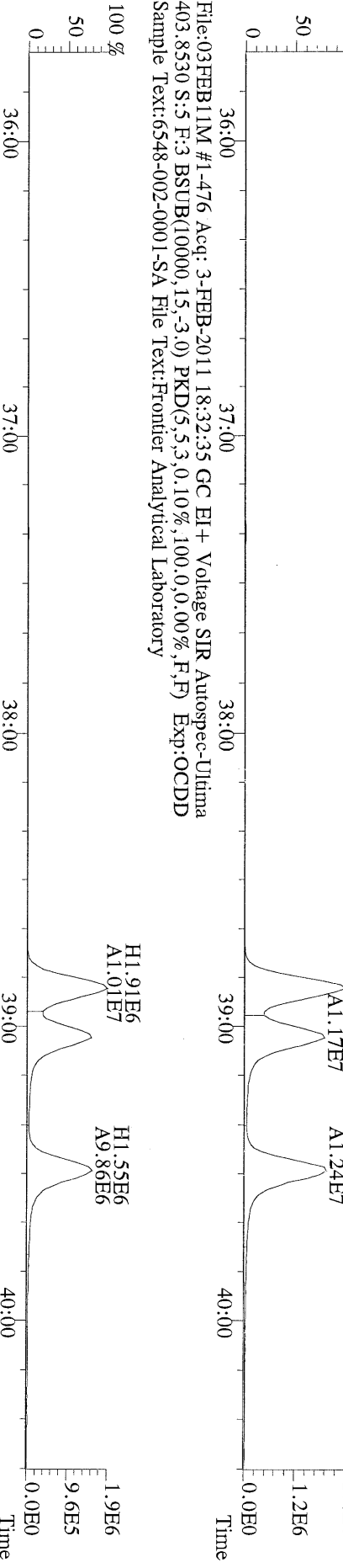
File:03FEB11M #1-412 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Ultima
 366.9792 S:5 F:2 Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



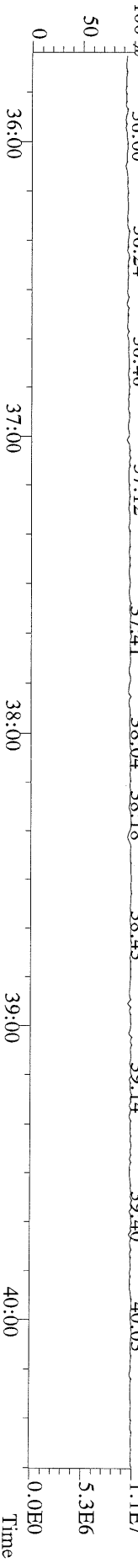
File:03FEB11M #1-476 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Ultima
 389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



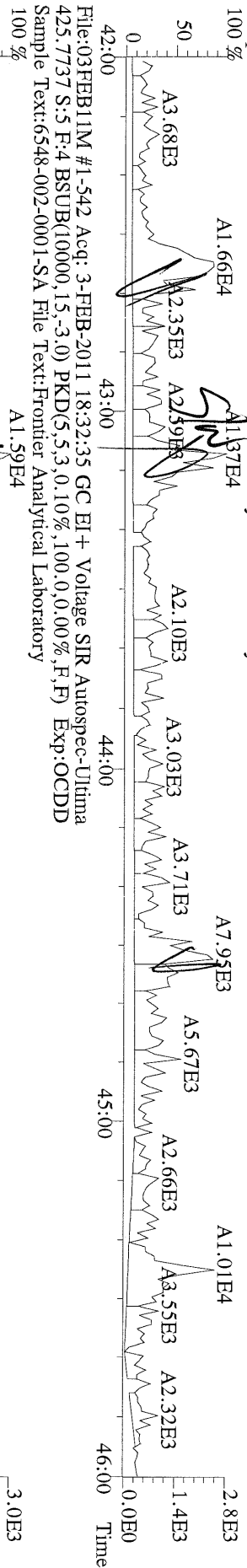
File:03FEB11M #1-476 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Ultima
 401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



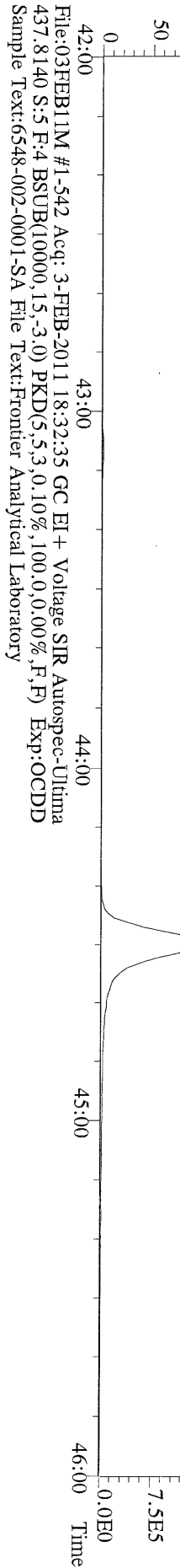
File:03FEB11M #1-476 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Ultima
 380.9760 S:5 F:3 Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



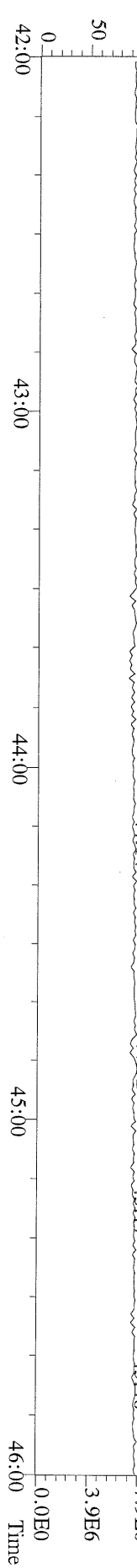
File:03FEB11M #1-542 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Utima
 423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



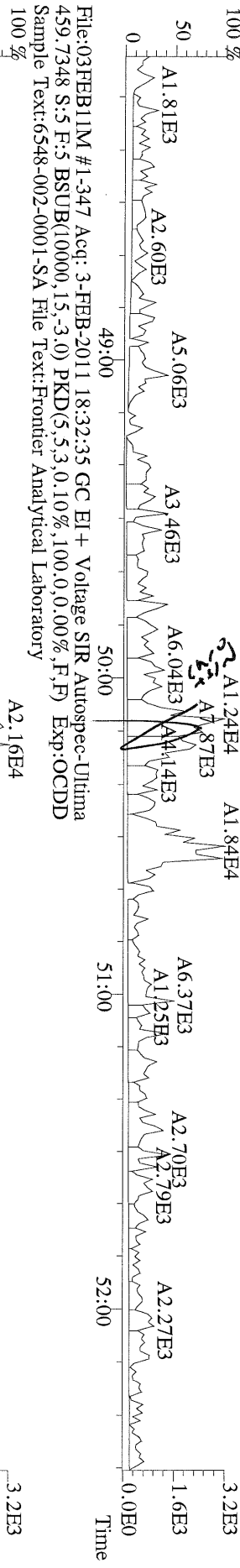
File:03FEB11M #1-542 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Utima
 435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



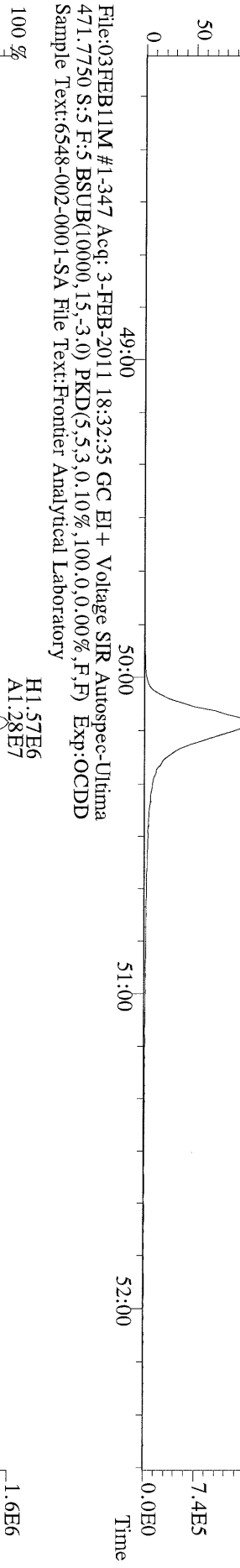
File:03FEB11M #1-542 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Utima
 430.9728 S:5 F:4 Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



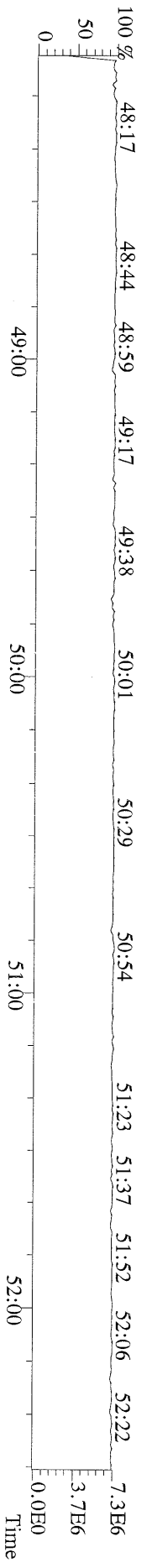
File:03FEB11M #1-347 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



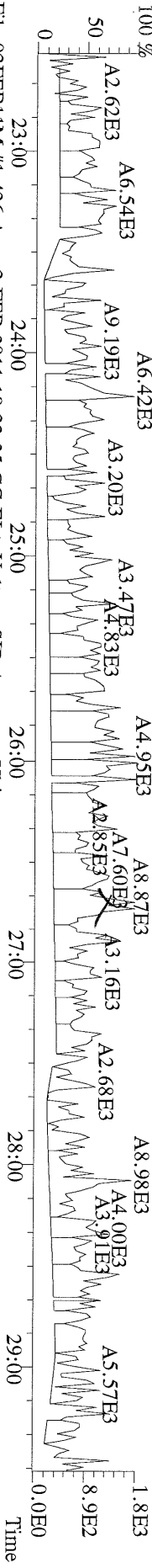
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469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



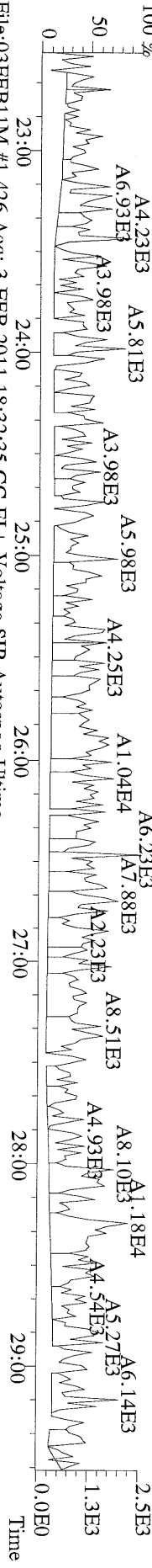
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454.9728 S:5 F:5 Exp:OCDD
Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



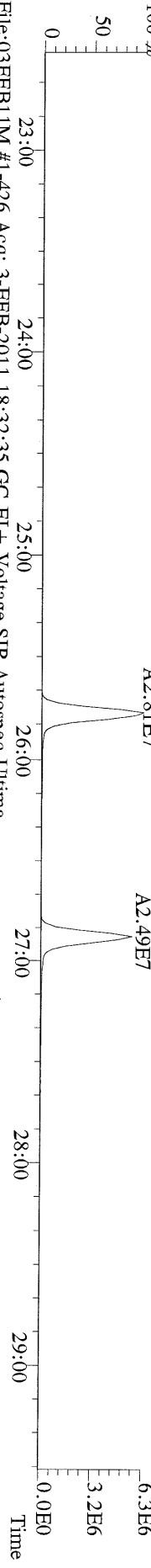
File:03FEB11M #1-426 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Utima
 303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



File:03FEB11M #1-426 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Utima
 305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



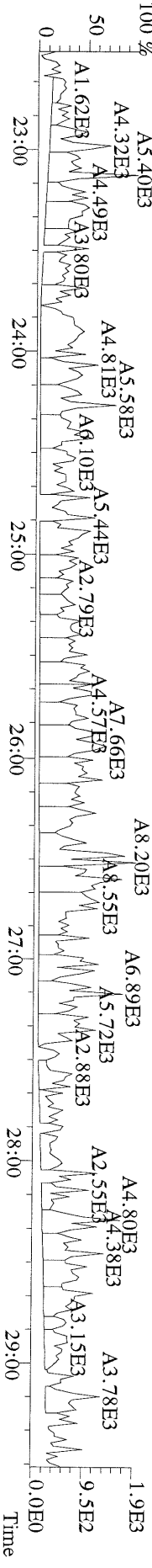
File:03FEB11M #1-426 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Utima
 315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



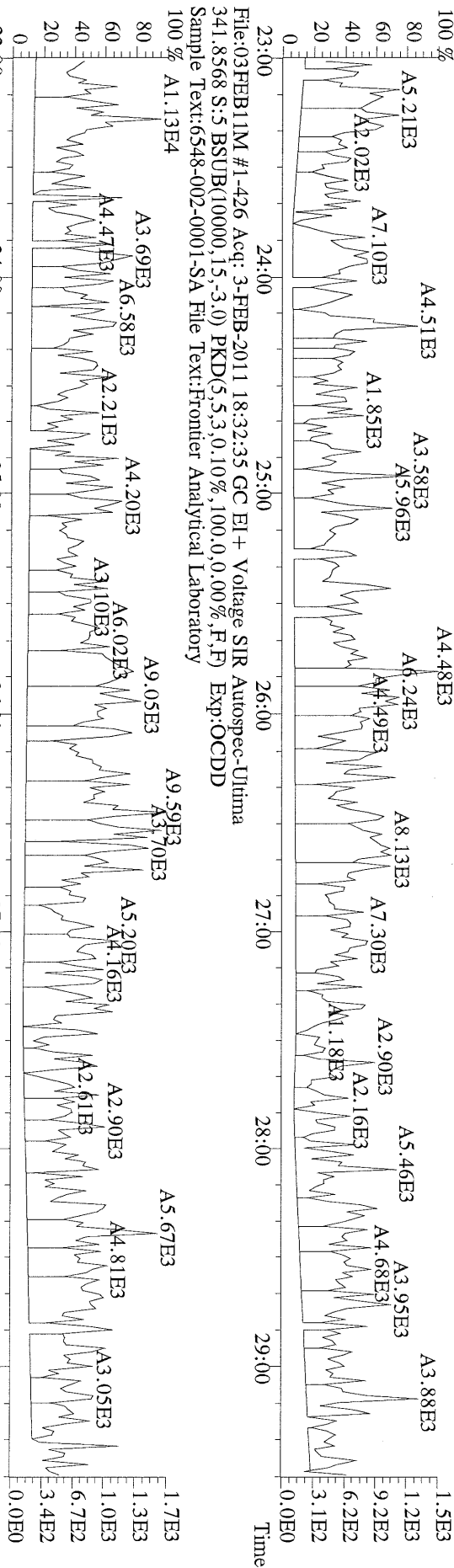
File:03FEB11M #1-426 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Utima
 317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



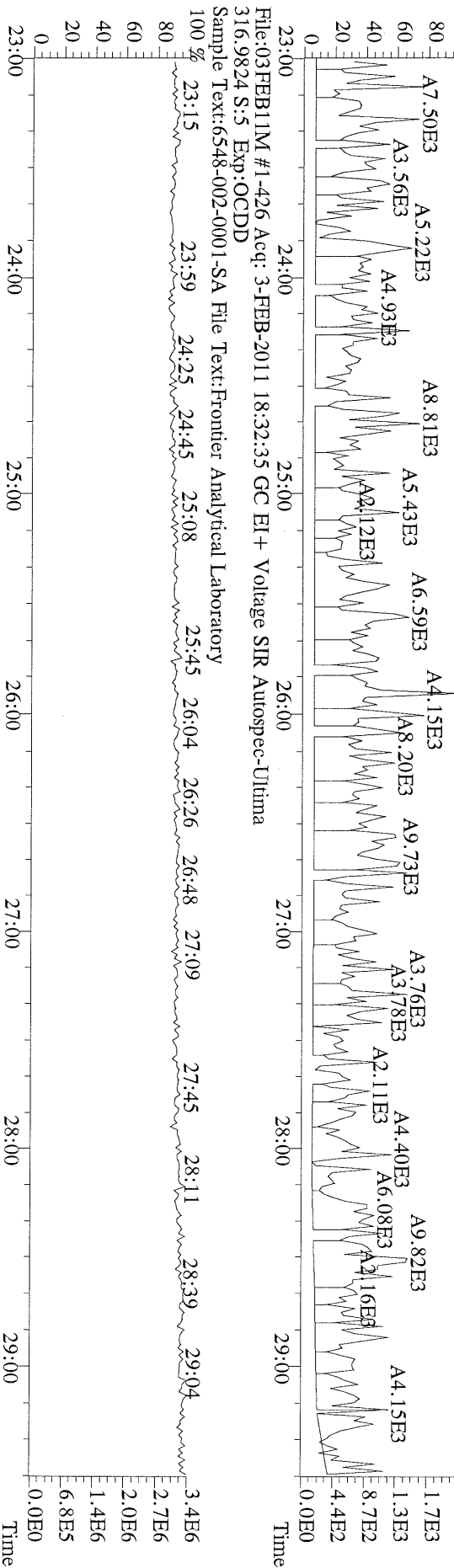
File:03FEB11M #1-426 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Utima
 375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



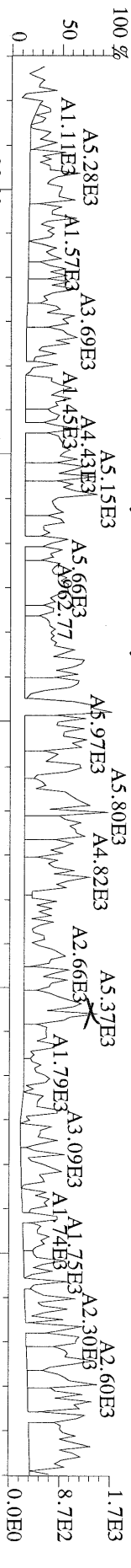
File:03FEBB11M #1-426 Acq: 3-FEBB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



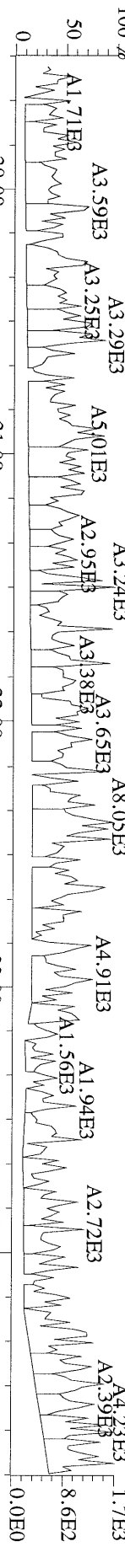
File:03FEBB11M #1-426 Acq: 3-FEBB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



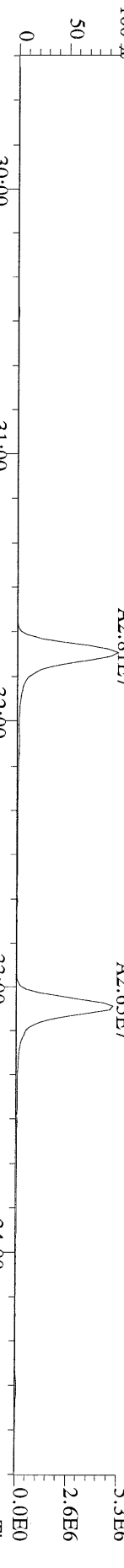
File:03FEB11M #1-412 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Ultima
 339,8597 S.S; F:2; BSUB(10000,15,-3,0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



File:03FEB11M #1-412 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Ultima
 341,8568 S.S; F:2; BSUB(10000,15,-3,0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



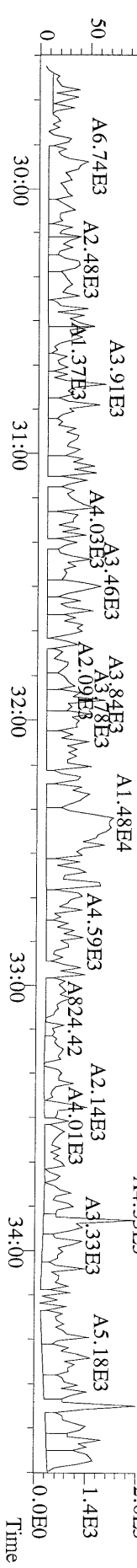
File:03FEB11M #1-412 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Ultima
 351,9000 S.S; F:2; BSUB(10000,15,-3,0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



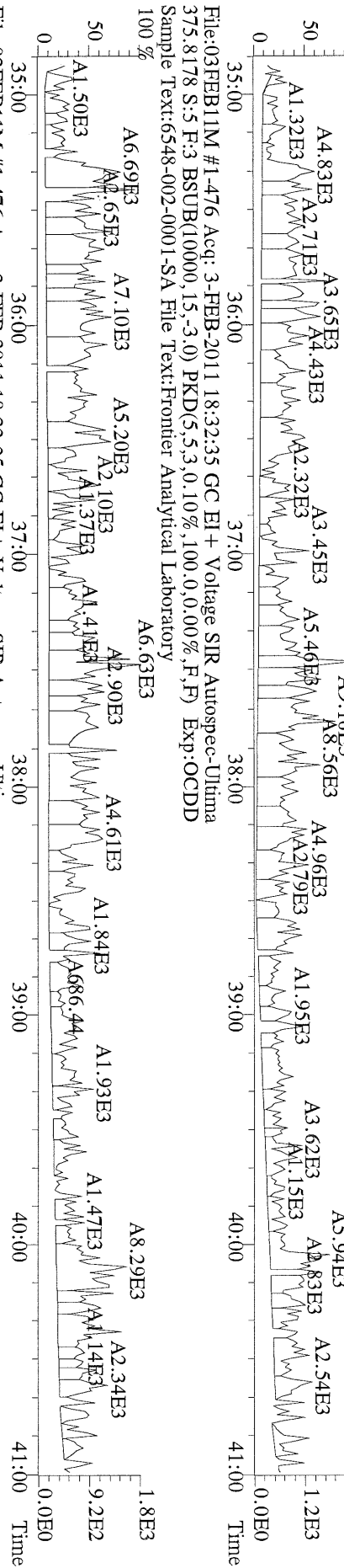
File:03FEB11M #1-412 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Ultima
 353,8970 S.S; F:2; BSUB(10000,15,-3,0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



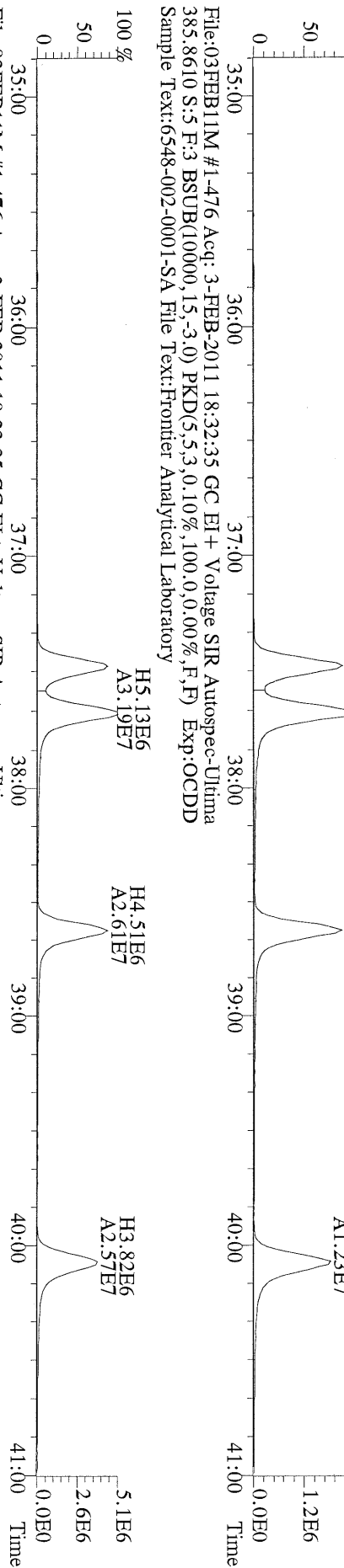
File:03FEB11M #1-412 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Ultima
 409,7974 S.S; F:2; BSUB(10000,15,-3,0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



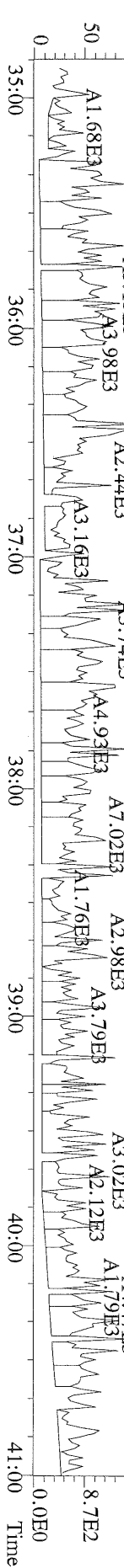
File:03FEB11M #1-476 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Ultima
 373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



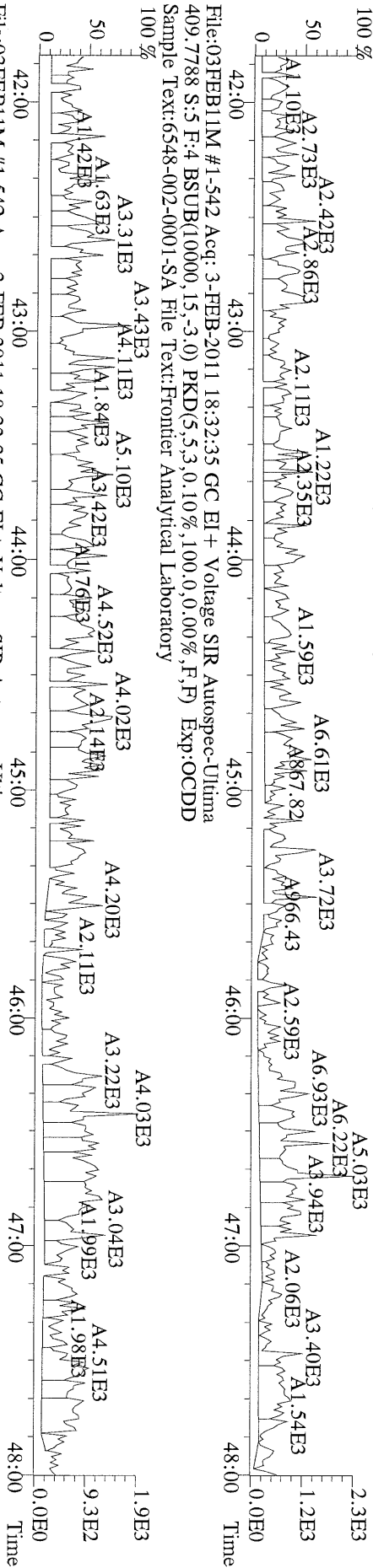
File:03FEB11M #1-476 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Ultima
 385.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



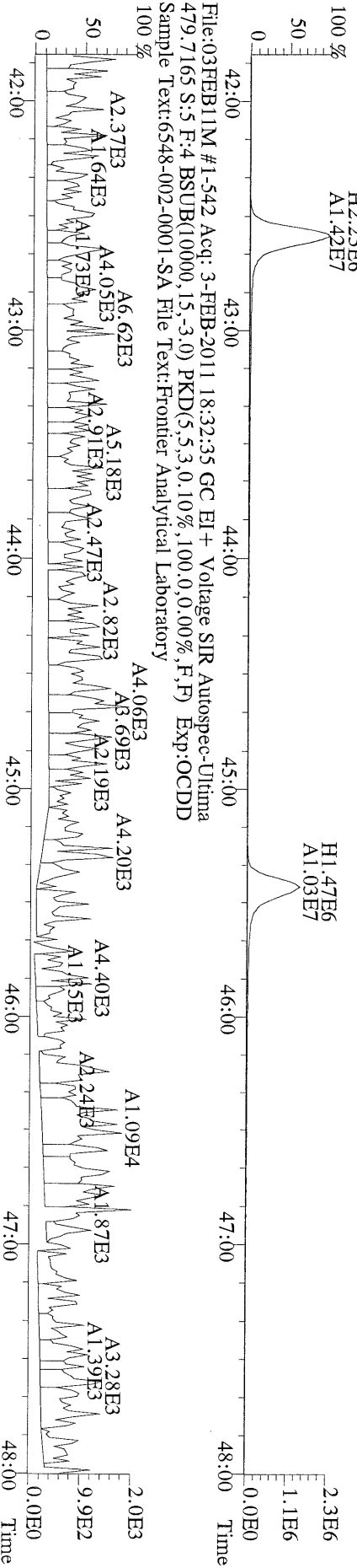
File:03FEB11M #1-476 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Ultima
 445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



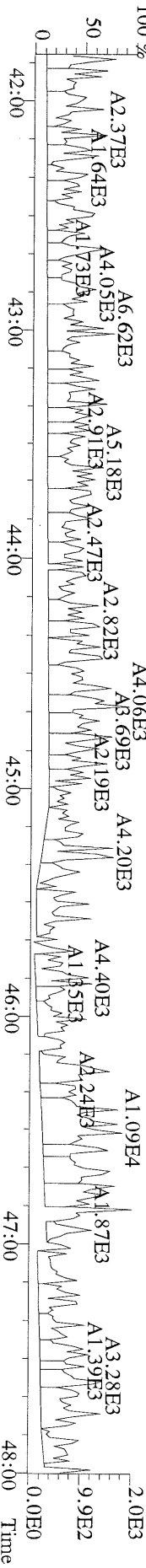
File:03FEB11M #1-542 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:5 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



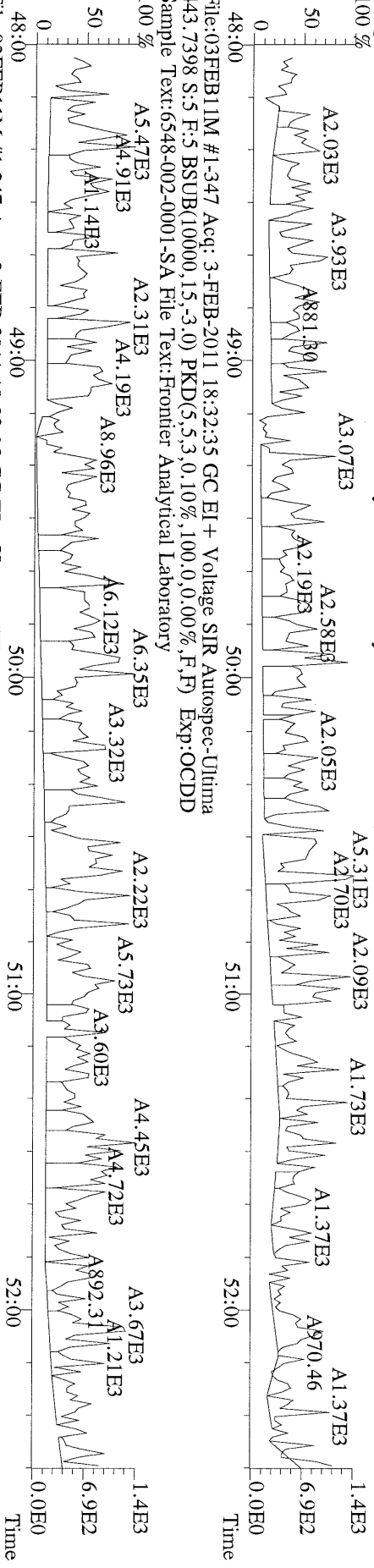
File:03FEB11M #1-542 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:5 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



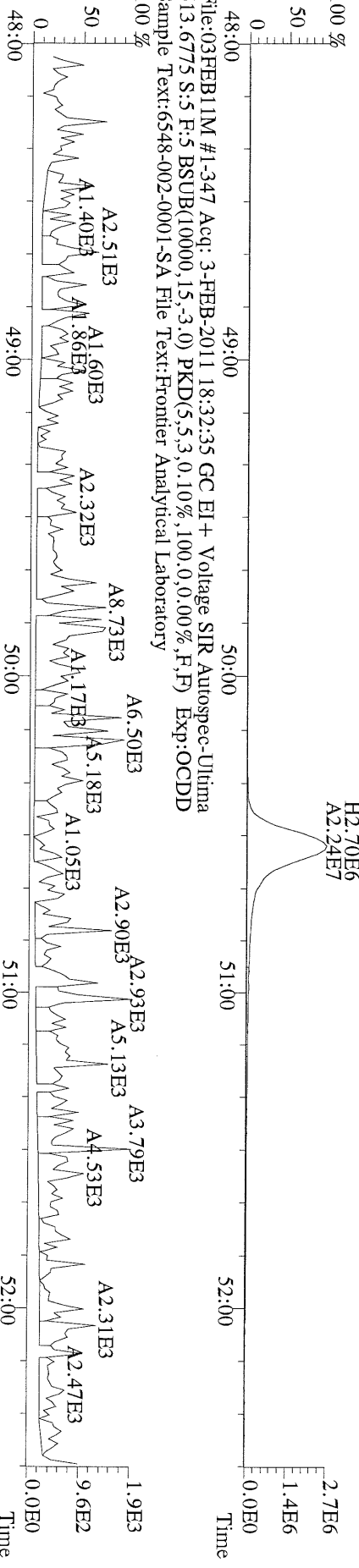
File:03FEB11M #1-542 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:5 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



File:03FEB11M #1-347 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Utima
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



File:03FEB11M #1-347 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Utima
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory



File:03FEB11M #1-347 Acq: 3-FEB-2011 18:32:35 GC EI+ Voltage SIR Autospec-Utima
513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-002-0001-SA File Text:Frontier Analytical Laboratory

Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL	Rec	#Hom
2,3,7,8-TCDD	*	* n	NotFnd	1.11	*		2.50	936	936	1.12	
1,2,3,7,8-PeCDD	*	* n	NotFnd	1.10	*		2.50	892	780	1.40	
1,2,3,4,7,8-HxCDD	*	* n	NotFnd	1.37	*		2.50	1020	940	1.60	
1,2,3,6,7,8-HxCDD	*	* n	NotFnd	1.37	*		2.50	1020	940	2.04	
1,2,3,7,8,9-HxCDD	*	* n	NotFnd	1.36	*		2.50	1020	940	1.82	
1,2,3,4,6,7,8-HpCDD	5.33e+04	0.92 y	44:30	1.45	3.94	J	2.50	-	-	*	
OCDD	2.44e+05	1.00 y	50:11	1.43	27.0	J	2.50	-	-	*	
2,3,7,8-TCDF	*	* n	NotFnd	1.50	*		2.50	1020	1180	0.577	
1,2,3,7,8-PeCDF	*	* n	NotFnd	0.94	*		2.50	688	936	0.949	
2,3,4,7,8-PeCDF	*	* n	NotFnd	0.94	*		2.50	688	936	0.974	
1,2,3,4,7,8-HxCDF	*	* n	NotFnd	0.93	*		2.50	772	772	1.28	
1,2,3,6,7,8-HxCDF	*	* n	NotFnd	0.82	*		2.50	772	772	1.25	
2,3,4,6,7,8-HxCDF	*	* n	NotFnd	0.92	*		2.50	772	772	1.27	
1,2,3,7,8,9-HxCDF	*	* n	NotFnd	1.00	*		2.50	772	772	1.37	
1,2,3,4,6,7,8-HpCDF	*	* n	NotFnd	1.39	*		2.50	832	780	1.87	
1,2,3,4,7,8,9-HpCDF	*	* n	NotFnd	1.36	*		2.50	832	780	2.79	
OCDF	*	* n	NotFnd	0.79	*		2.50	700	752	3.58	
13C-2,3,7,8-TCDD	3.64e+07	0.76 y	27:38	1.02	1760					87.5	
13C-1,2,3,7,8-PeCDD	3.06e+07	1.73 y	33:28	0.84	1800					89.5	
13C-1,2,3,4,7,8-HxCDD	2.41e+07	1.31 y	38:52	1.07	1680					83.8	
13C-1,2,3,6,7,8-HxCDD	2.16e+07	1.22 y	39:02	1.01	1600					79.8	
13C-1,2,3,4,6,7,8-HpCDD	1.87e+07	1.03 y	44:30	0.86	1640					81.7	
13C-OCDD	2.53e+07	0.95 y	50:09	0.55	3470					86.4	
13C-2,3,7,8-TCDF	5.80e+07	0.87 y	26:53	0.99	1760					87.7	
13C-1,2,3,7,8-PeCDF	4.90e+07	1.63 y	31:45	0.84	1760					87.8	
13C-2,3,4,7,8-PeCDF	4.74e+07	1.61 y	33:04	0.81	1760					87.8	
13C-1,2,3,4,7,8-HxCDF	3.66e+07	0.49 y	37:29	1.85	1480					73.8	
13C-1,2,3,6,7,8-HxCDF	4.75e+07	0.48 y	37:40	2.54	1400					69.9	
13C-2,3,4,6,7,8-HxCDF	4.04e+07	0.47 y	38:37	2.01	1500					74.8	
13C-1,2,3,7,8,9-HxCDF	3.87e+07	0.48 y	40:04	2.03	1430					71.1	
13C-1,2,3,4,6,7,8-HpCDF	2.06e+07	0.49 y	42:35	1.11	1400					69.4	
13C-1,2,3,4,7,8,9-HpCDF	1.56e+07	0.49 y	45:26	0.80	1450					72.4	
13C-OCDF	4.32e+07	0.94 y	50:32	1.08	3000					74.5	
37Cl-2,3,7,8-TCDD	1.03e+07		27:39	0.69	739					92.0	
13C-1,2,3,4-TCDD	4.07e+07	0.77 y	27:02	-	91.0						
13C-1,2,3,4-TCDF	6.66e+07	0.88 y	25:47	-	92.5						
13C-1,2,3,7,8,9-HxCDD	2.68e+07	1.28 y	39:29	-	97.7						
Total Tetra-Dioxins	*		NotFnd	1.11	*		2.50	936	936	1.12	0
Total Penta-Dioxins	*		NotFnd	1.10	*		2.50	892	780	1.40	0
Total Hexa-Dioxins	*		NotFnd	1.37	*		2.50	1020	940	2.04	0
Total Hepta-Dioxins	1.13e+05		43:08	1.45	8.35	J	2.50	-	-	*	2
Total Tetra-Furans	*		NotFnd	1.50	*		2.50	1530	1350	0.754	0
1st Fn. Tot Penta-Furans	*		NotFnd	0.94	*		2.50	688	936	0.974	PeCDF 0
Total Penta-Furans	*		NotFnd	0.94	*		2.50	688	936	0.974	0.00 0
Total Hexa-Furans	*		NotFnd	0.91	*		2.50	772	772	1.37	0
Total Hepta-Furans	*		NotFnd	1.38	*		2.50	832	780	2.79	0

Analyst: 

Date: 2/4/11

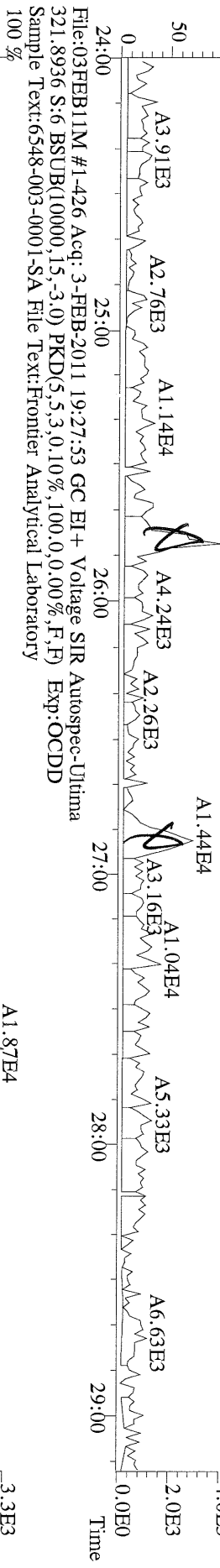
Totals class: Total Hepta-Dioxins Entry #: 41

Run: 13 File: 03FEB11M S: 6 I: 1 F: 4
Acquired: 3-FEB-11 19:27:53

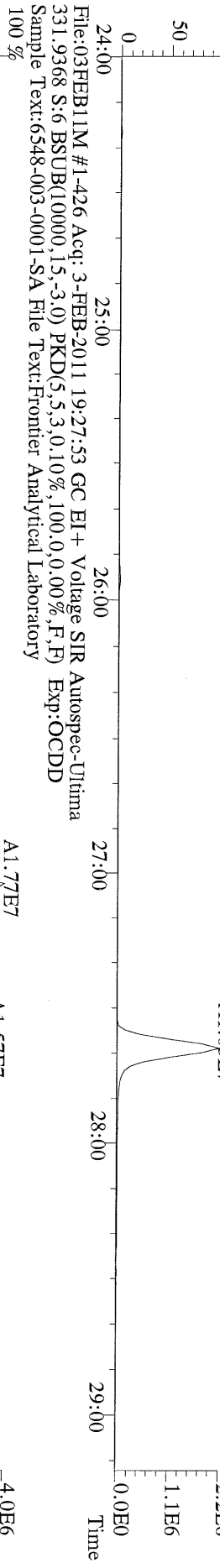
Total Concentration: 8.35 Unnamed Concentration: 4.409

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
43:08	3.10e+04	2.87e+04	1.08 y	5.97e+04	4.41	
44:30	2.56e+04	2.77e+04	0.92 y	5.33e+04	3.94	1,2,3,4,6,7,8-HpCDD

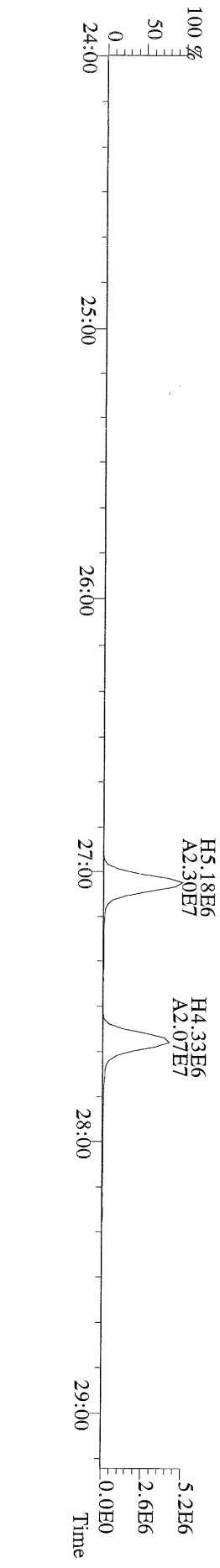
File:03FEB11M #1-426 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Utima
 319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0,0) Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



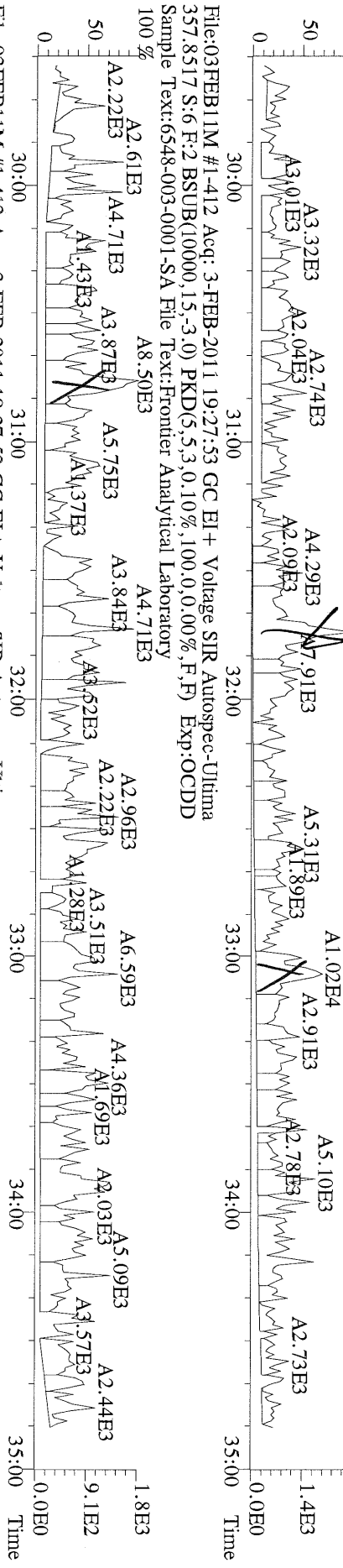
File:03FEB11M #1-426 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Utima
 327.8847 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0,0) Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



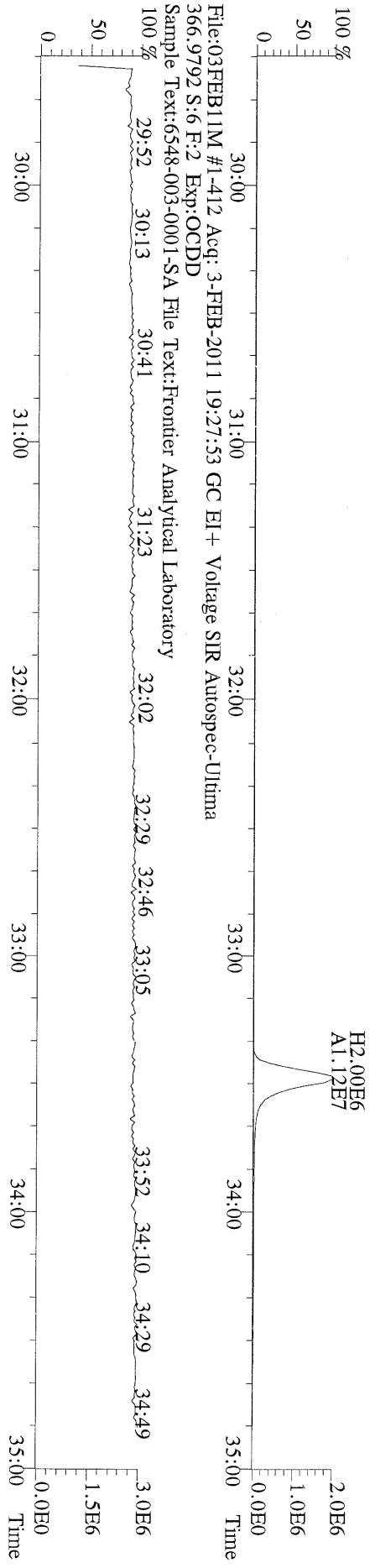
File:03FEB11M #1-426 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Utima
 333.9339 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0,0) Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



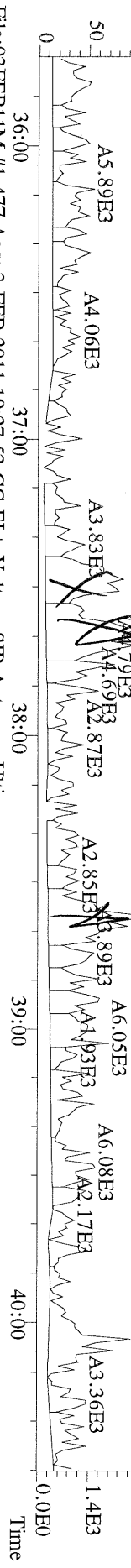
File:03FEB11M #1-412 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



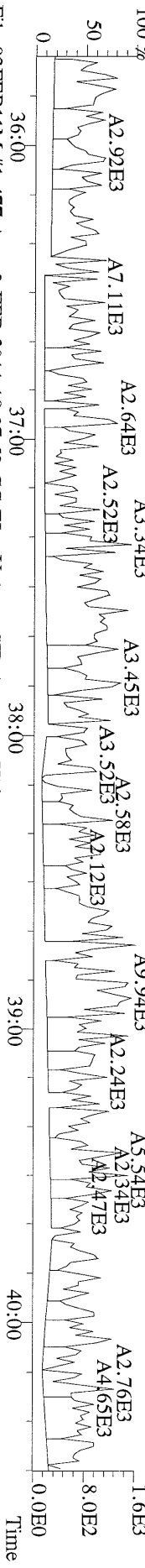
File:03FEB11M #1-412 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



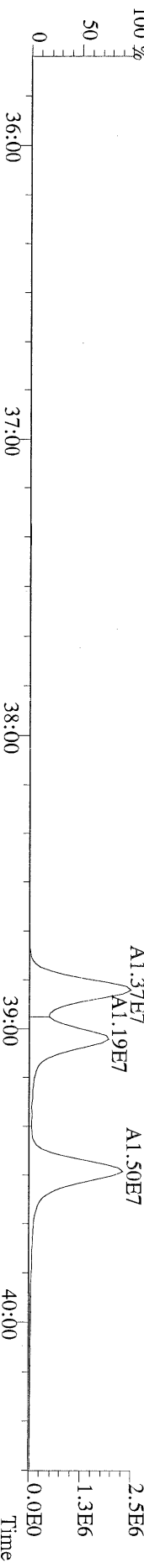
File:03FEB11M #1-477 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Utima
 389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



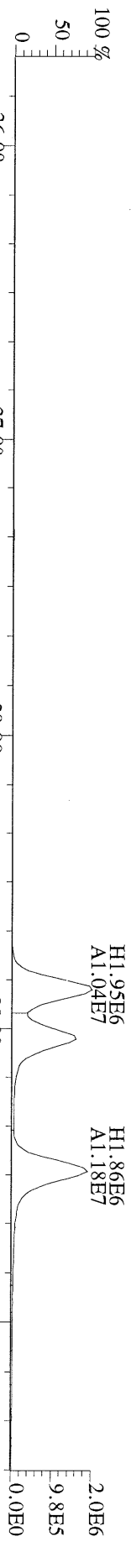
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 391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



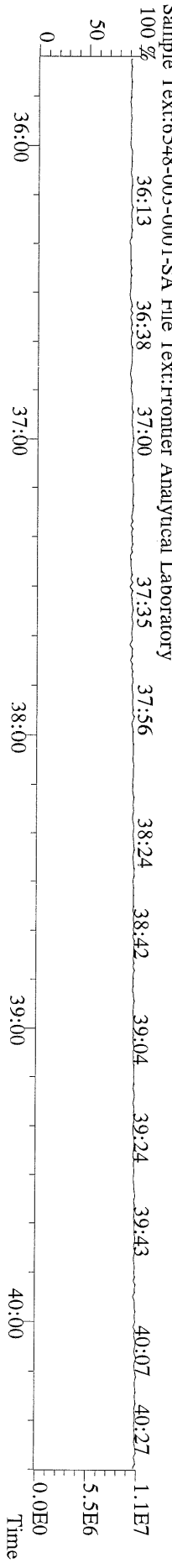
File:03FEB11M #1-477 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Utima
 401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



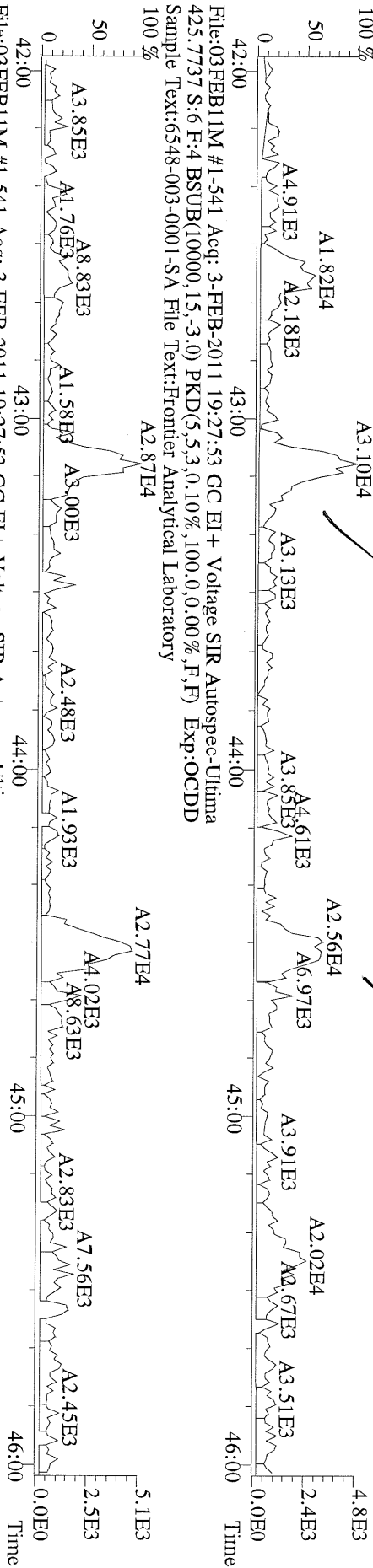
File:03FEB11M #1-477 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Utima
 403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



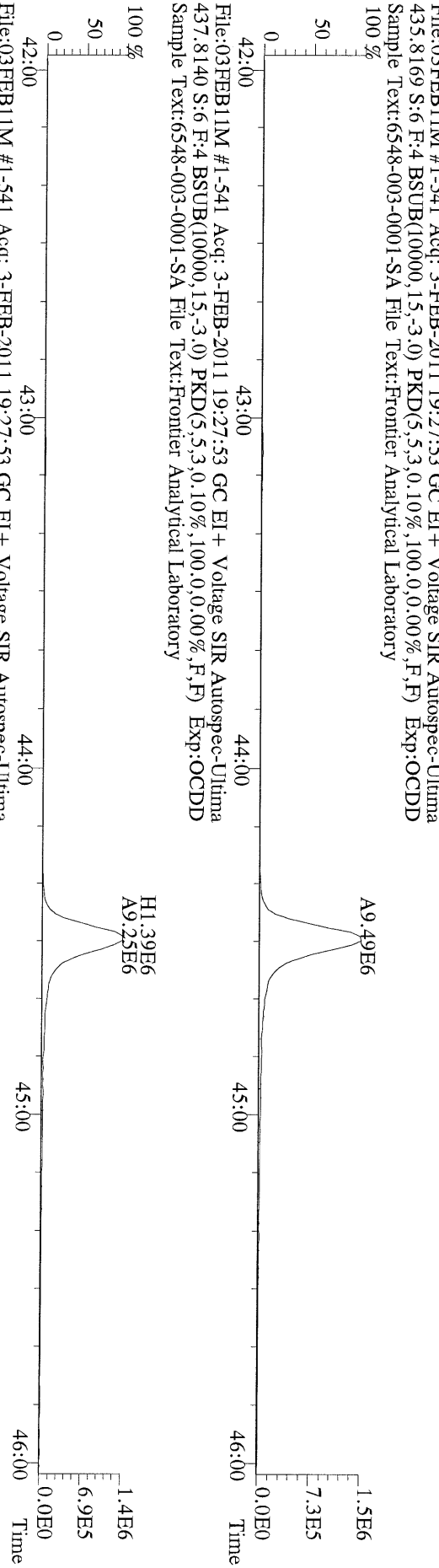
File:03FEB11M #1-477 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Utima
 380.9760 S:6 F:3 Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



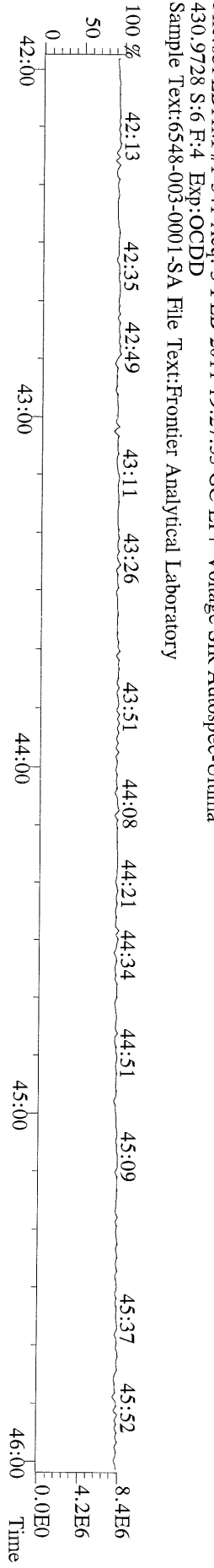
File:03FEB11M #1-541 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Ultima
 423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



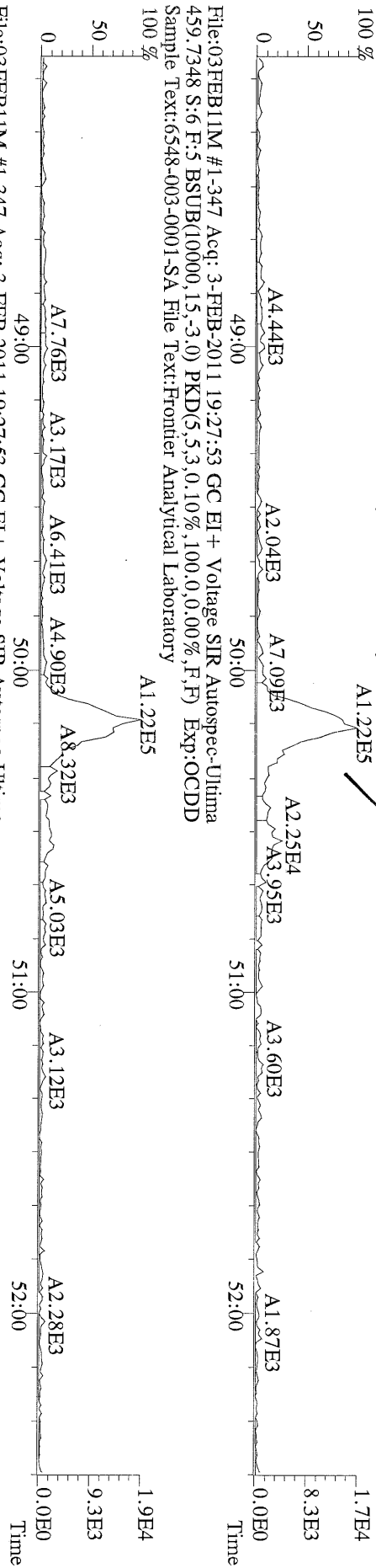
File:03FEB11M #1-541 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Ultima
 435.8169 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



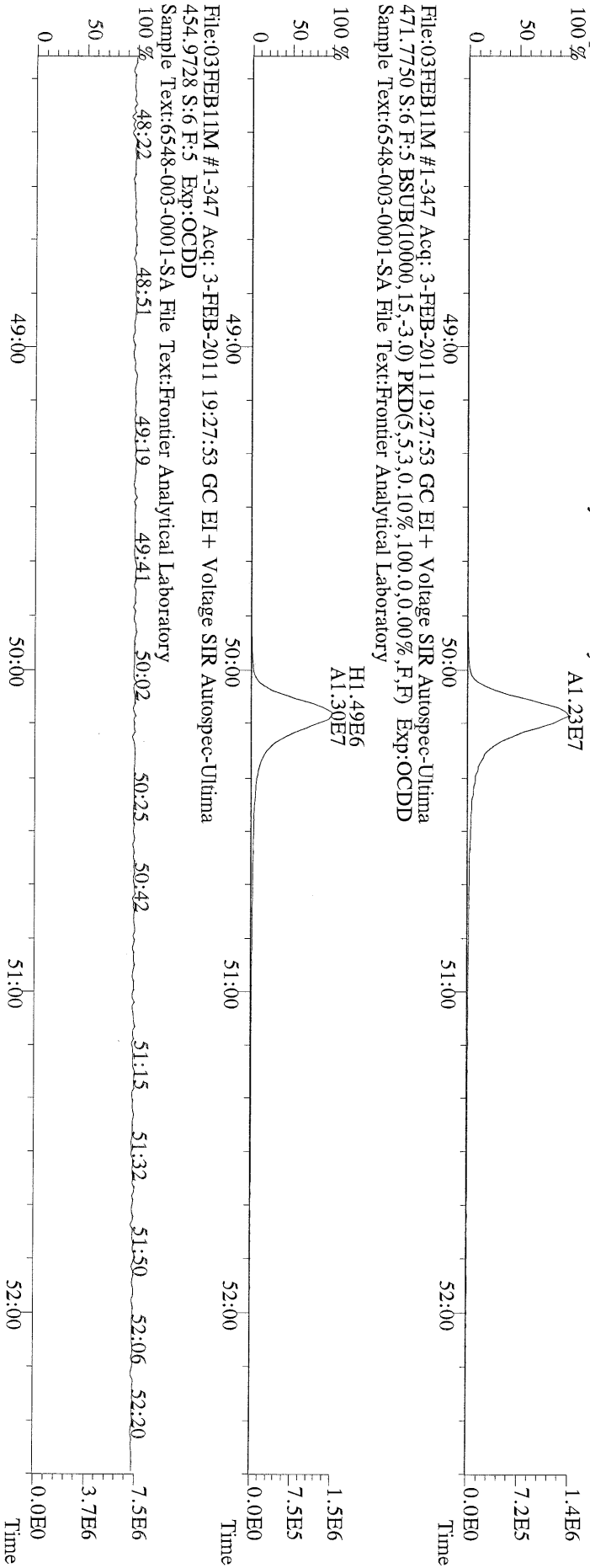
File:03FEB11M #1-541 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Ultima
 430.9728 S:6 F:4 Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



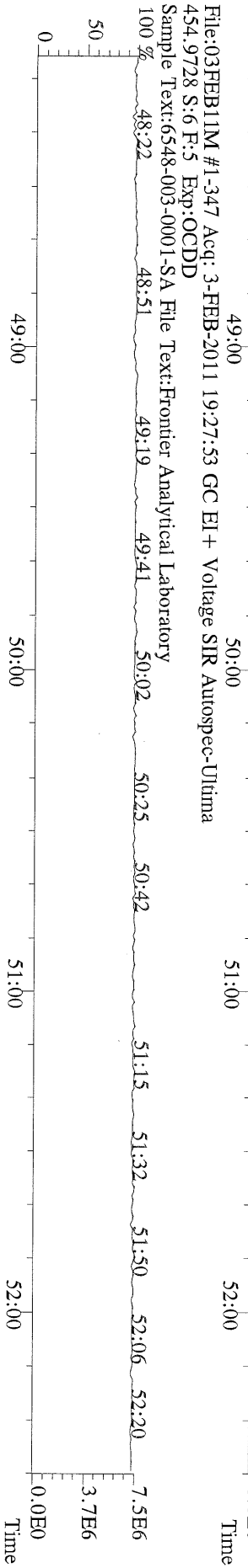
File:03FEB11M #1-347 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Ultima
 457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



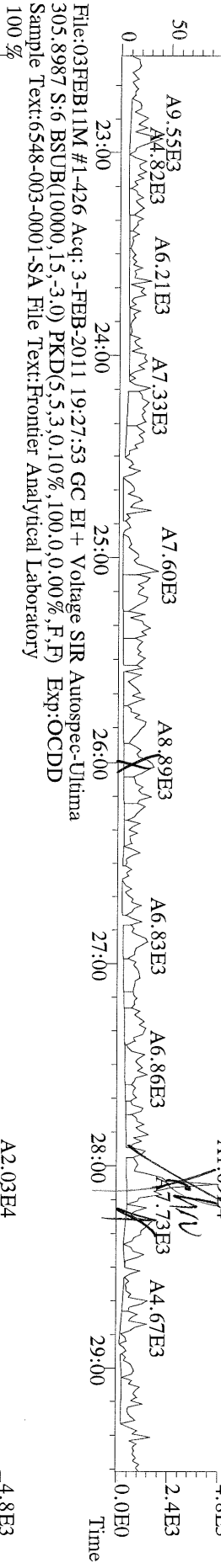
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 469.7780 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



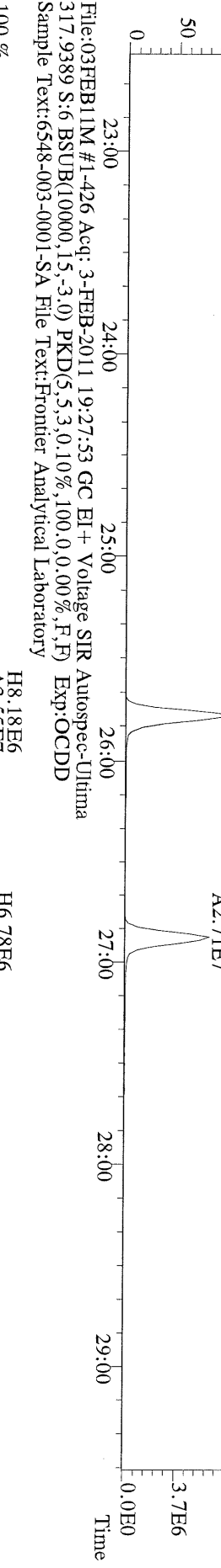
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 454.9728 S:6 F:5 Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



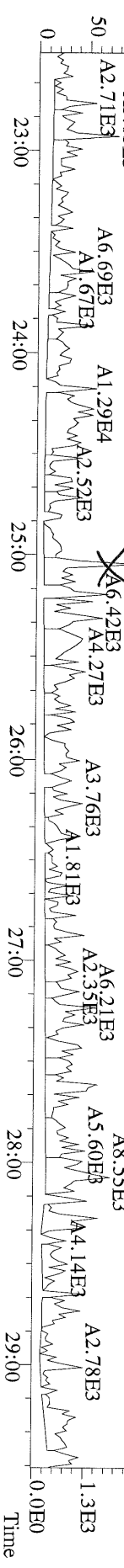
File:03FEB11M #1-426 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Utima
 303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory
 100%



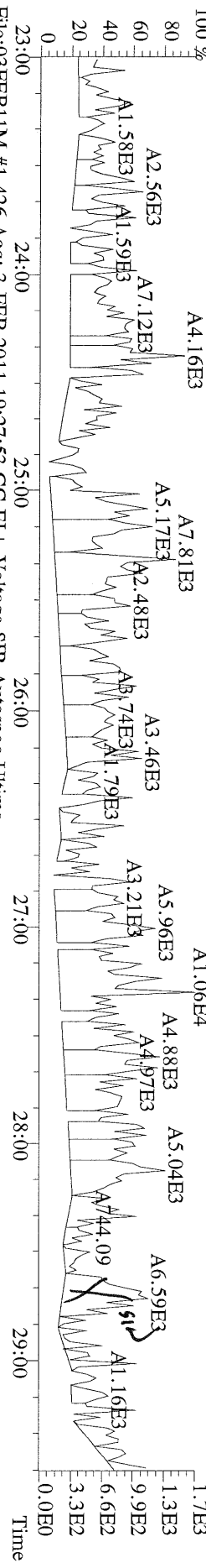
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 315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory
 100%



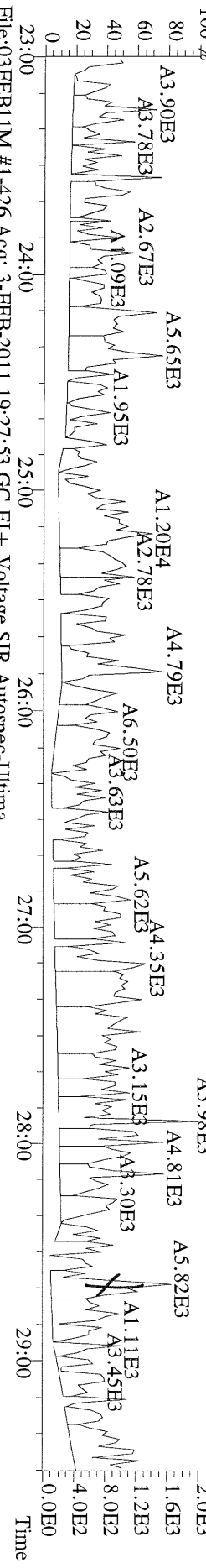
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 375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory
 100%



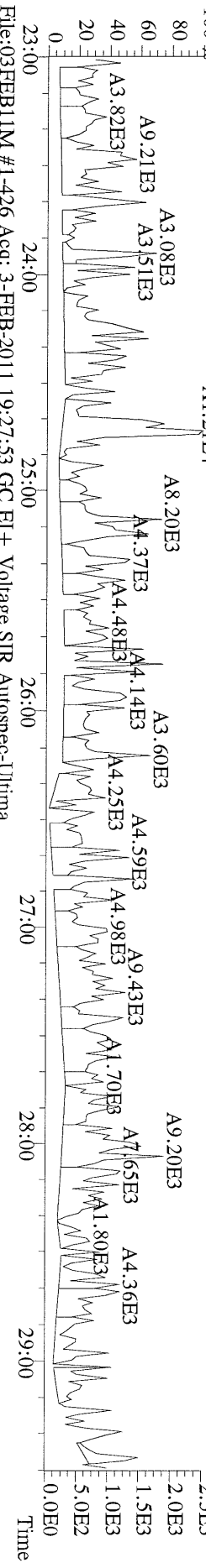
File:03FEB11M #1-426 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Utima
 339.8568 S:6 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



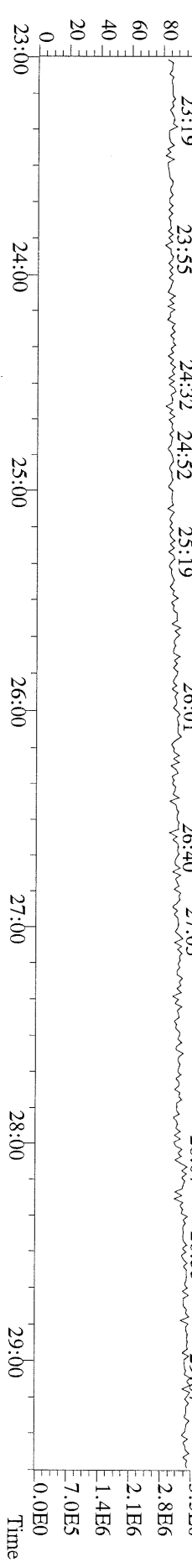
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 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



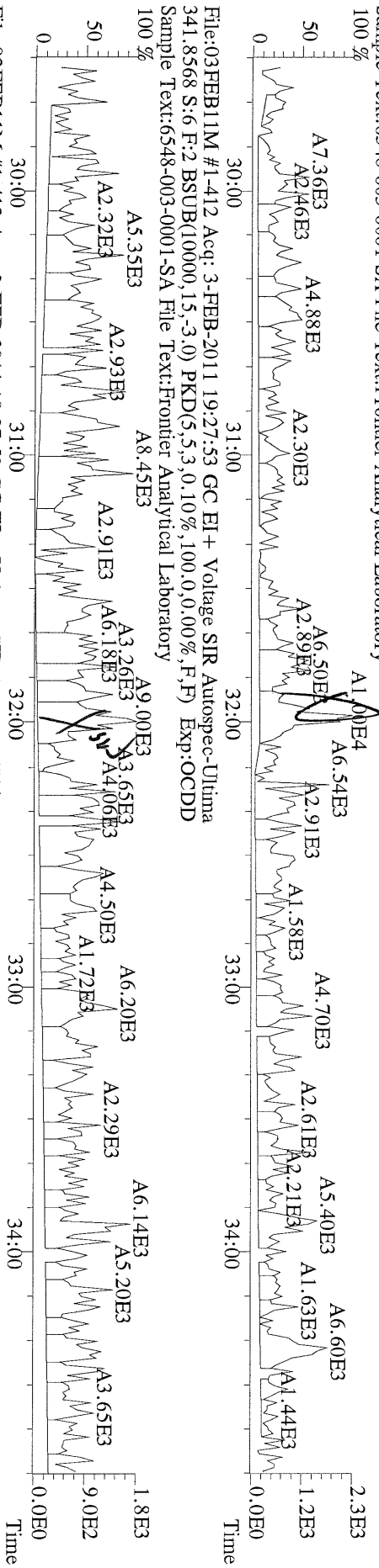
File:03FEB11M #1-426 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Utima
 409.7974 S:6 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



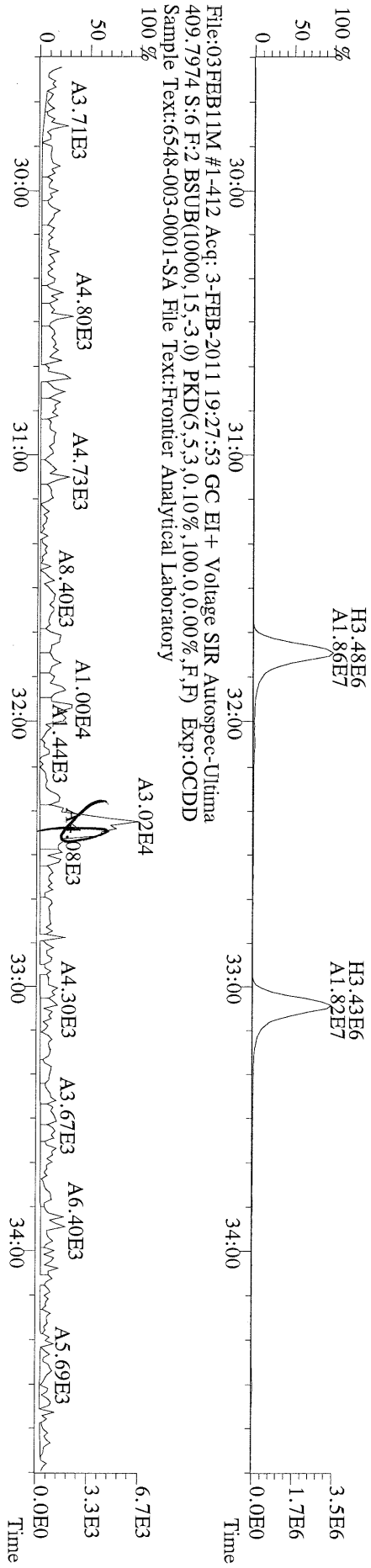
File:03FEB11M #1-426 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Utima
 316.9824 S:6 Exp:OCDD
 Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



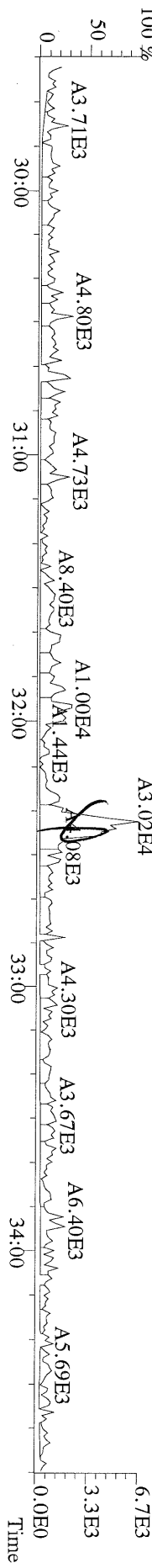
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339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



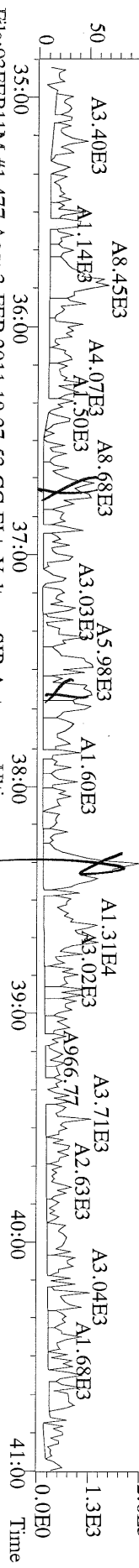
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351.9000 S:6 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



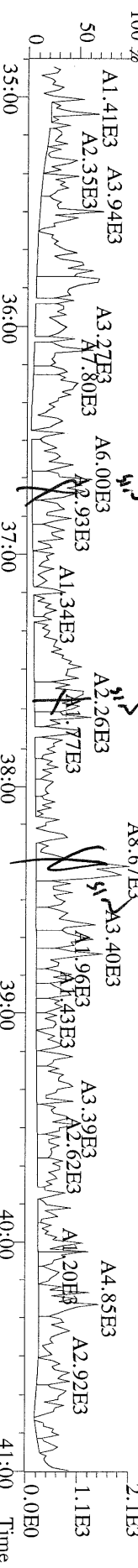
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Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



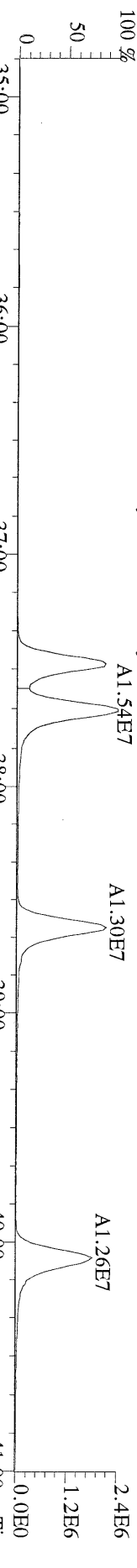
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373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



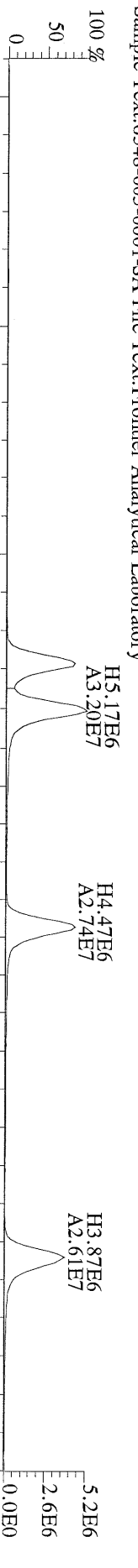
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375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



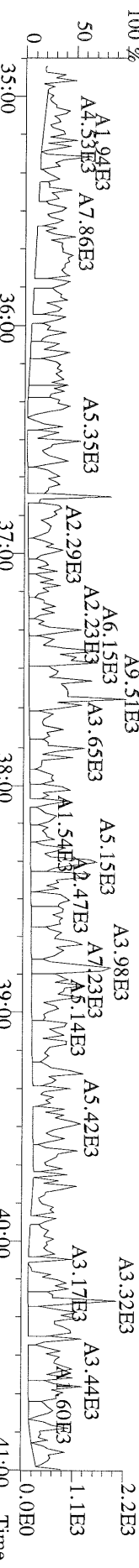
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383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



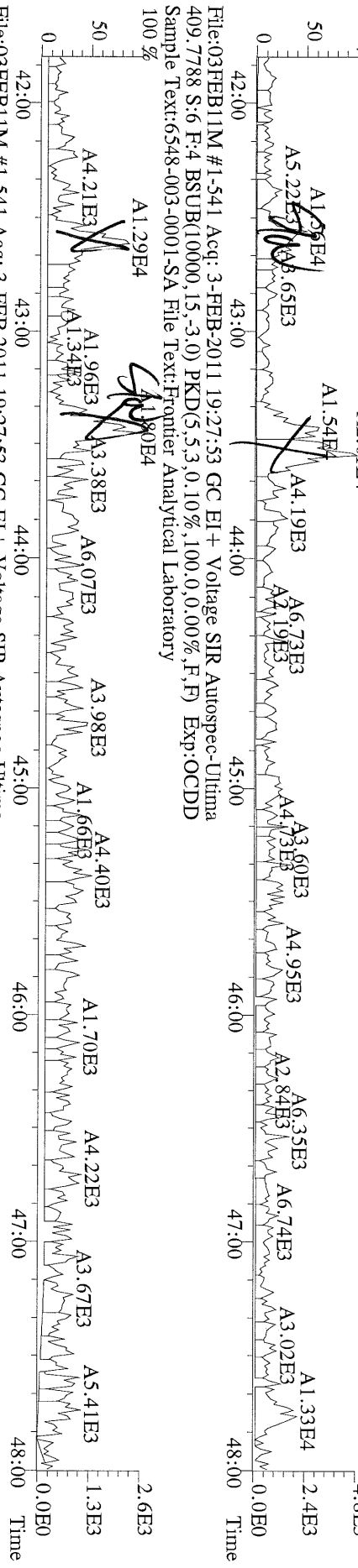
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Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



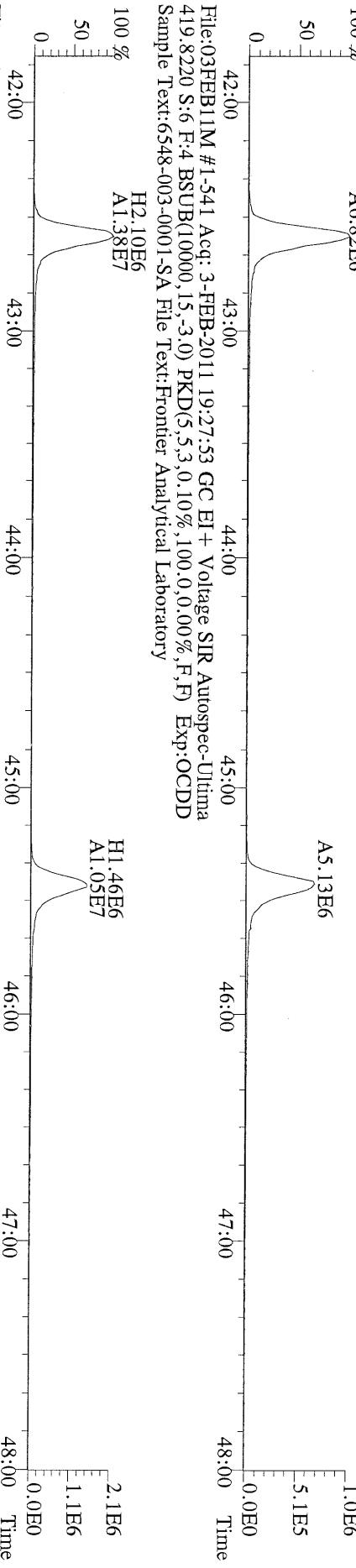
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Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



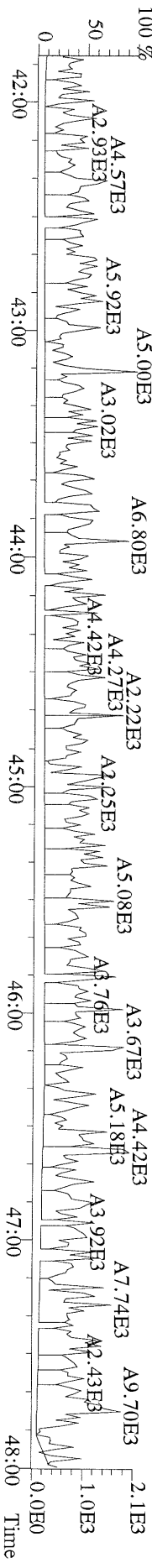
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407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



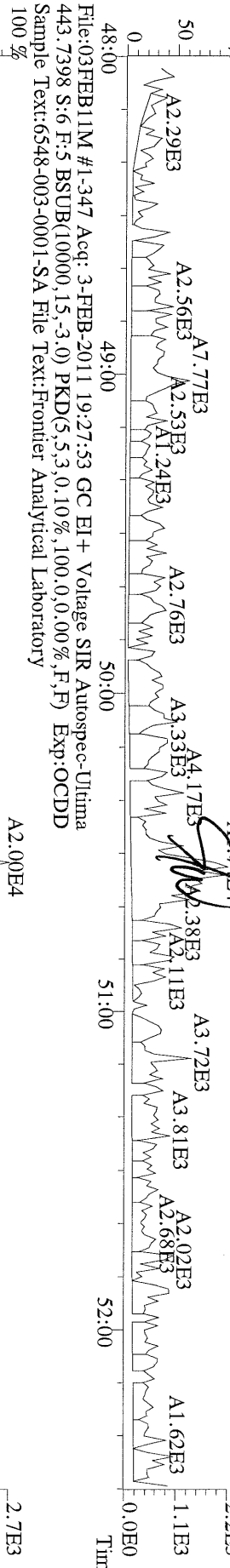
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Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



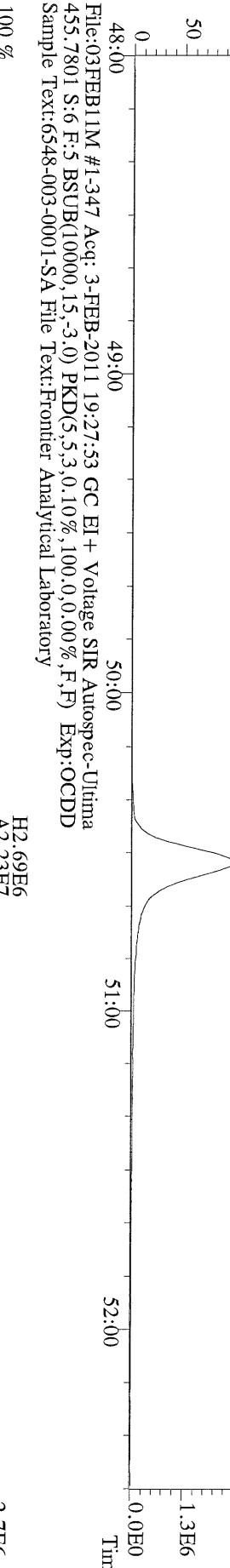
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479.7165 S:6 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



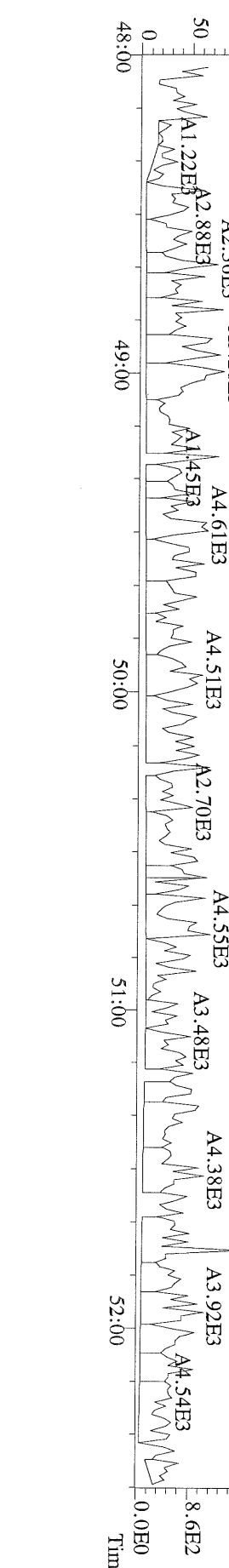
File:03FEB11M #1-347 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-003-0001-SA File Text:Frontier Analytical Laboratory



File:03FEB11M #1-347 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Ultima
453.7831 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:6548-003-0001-SA File Text:Frontier Analytical Laboratory



File:03FEB11M #1-347 Acq: 3-FEB-2011 19:27:53 GC EI+ Voltage SIR Autospec-Ultima
513.6775 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:6548-003-0001-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	788	844	1.11	
1,2,3,7,8-PeCDD	*	* n	NotFnd	1.10	*		2.50	980	832	1.64	
1,2,3,4,7,8-HxCDD	*	* n	NotFnd	1.37	*		2.50	1010	932	1.78	
1,2,3,6,7,8-HxCDD	*	* n	NotFnd	1.37	*		2.50	1010	932	2.23	
1,2,3,7,8,9-HxCDD	*	* n	NotFnd	1.36	*		2.50	1010	932	2.01	
1,2,3,4,6,7,8-HpCDD	2.43e+05	0.91 y	44:31	1.45	19.5	J	2.50	-	-	*	
OCDD	1.51e+06	0.92 y	50:10	1.43	186		2.50	-	-	*	
2,3,7,8-TCDF	*	* n	NotFnd	1.50	*		2.50	864	1130	0.610	
1,2,3,7,8-PeCDF	*	* n	NotFnd	0.94	*		2.50	824	932	1.14	
2,3,4,7,8-PeCDF	*	* n	NotFnd	0.94	*		2.50	824	932	1.23	
1,2,3,4,7,8-HxCDF	*	* n	NotFnd	0.93	*		2.50	844	788	1.45	
1,2,3,6,7,8-HxCDF	*	* n	NotFnd	0.82	*		2.50	844	788	1.40	
2,3,4,6,7,8-HxCDF	*	* n	NotFnd	0.92	*		2.50	844	788	1.53	
1,2,3,7,8,9-HxCDF	*	* n	NotFnd	1.00	*		2.50	844	788	1.53	
1,2,3,4,6,7,8-HpCDF	7.94e+04	1.15 y	42:36	1.39	6.37	J	2.50	-	-	*	
1,2,3,4,7,8,9-HpCDF	*	* n	NotFnd	1.36	*		2.50	752	684	2.68	
OCDF	1.65e+05	0.90 y	50:33	0.79	22.1	J	2.50	-	-	*	
Rec											
13C-2,3,7,8-TCDD	3.28e+07	0.77 y	27:37	1.02	1860					89.2	
13C-1,2,3,7,8-PeCDD	2.83e+07	1.72 y	33:29	0.84	1950					93.7	
13C-1,2,3,4,7,8-HxCDD	2.21e+07	1.27 y	38:52	1.07	1770					84.9	
13C-1,2,3,6,7,8-HxCDD	2.02e+07	1.27 y	39:02	1.01	1720					82.4	
13C-1,2,3,4,6,7,8-HpCDD	1.79e+07	1.03 y	44:29	0.86	1800					86.4	
13C-OCDD	2.36e+07	1.00 y	50:08	0.55	3710					89.0	
13C-2,3,7,8-TCDF	5.26e+07	0.86 y	26:53	0.99	1860					89.4	
13C-1,2,3,7,8-PeCDF	4.56e+07	1.66 y	31:45	0.84	1920					92.0	
13C-2,3,4,7,8-PeCDF	4.31e+07	1.61 y	33:05	0.81	1870					89.7	
13C-1,2,3,4,7,8-HxCDF	3.44e+07	0.49 y	37:29	1.85	1600					76.6	
13C-1,2,3,6,7,8-HxCDF	4.56e+07	0.47 y	37:40	2.54	1550					74.3	
13C-2,3,4,6,7,8-HxCDF	3.73e+07	0.50 y	38:38	2.01	1590					76.5	
13C-1,2,3,7,8,9-HxCDF	3.68e+07	0.48 y	40:04	2.03	1560					74.8	
13C-1,2,3,4,6,7,8-HpCDF	1.87e+07	0.49 y	42:36	1.11	1450					69.5	
13C-1,2,3,4,7,8,9-HpCDF	1.46e+07	0.50 y	45:26	0.80	1560					75.1	
13C-OCDF	3.97e+07	0.95 y	50:31	1.08	3150					75.7	
37Cl-2,3,7,8-TCDD	8.97e+06		27:39	0.69	759					91.1	
13C-1,2,3,4-TCDD	3.59e+07	0.77 y	27:03	-	83.2						
13C-1,2,3,4-TCDF	5.92e+07	0.88 y	25:47	-	85.2						
13C-1,2,3,7,8,9-HxCDD	2.42e+07	1.26 y	39:30	-	91.5						
Total Tetra-Dioxins	*		NotFnd	1.11	*		2.50	788	844	1.11	0
Total Penta-Dioxins	*		NotFnd	1.10	*		2.50	980	832	1.64	0
Total Hexa-Dioxins	*		NotFnd	1.37	*		2.50	1010	932	2.23	0
Total Hepta-Dioxins	4.95e+05		43:07	1.45	39.6		2.50	-	-	*	2
Total Tetra-Furans	*		NotFnd	1.50	*		2.50	864	1130	0.610	0
1st Fn. Tot Penta-Furans	*		NotFnd	0.94	*		2.50	824	932	1.23	0
Total Penta-Furans	*		NotFnd	0.94	*		2.50	824	932	1.23	0
Total Hexa-Furans	9.65e+04		36:45	0.91	5.73	J	2.50	-	-	*	2
Total Hepta-Furans	2.19e+05		42:36	1.38	19.1	J	2.50	-	-	*	2

Analyst:  Date: 2/4/11

Totals class: Total Hepta-Dioxins

Entry #: 41

Run: 14

File: 03FEB11M

S: 7 I: 1 F: 4

Acquired: 3-FEB-11 20:23:12

Total Concentration: 39.6

Unnamed Concentration: 20.124

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
43:07	1.21e+05	1.30e+05	0.93 y	2.51e+05	20.1	
44:31	1.16e+05	1.27e+05	0.91 y	2.43e+05	19.5	1,2,3,4,6,7,8-HpCDD

Totals class: Total Hexa-Furans

Entry #: 45

Run: 14

File: 03FEB11M

S: 7 I: 1 F: 3

Acquired: 3-FEB-11 20:23:12

Total Concentration: 5.73

Unnamed Concentration: 5.730

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
36:45	2.34e+04	1.90e+04	1.23 y	4.24e+04	2.52	
38:21	2.93e+04	2.47e+04	1.19 y	5.41e+04	3.21	

Totals class: Total Hepta-Furans

Entry #: 46

Run: 14

File: 03FEB11M

S: 7 I: 1 F: 4

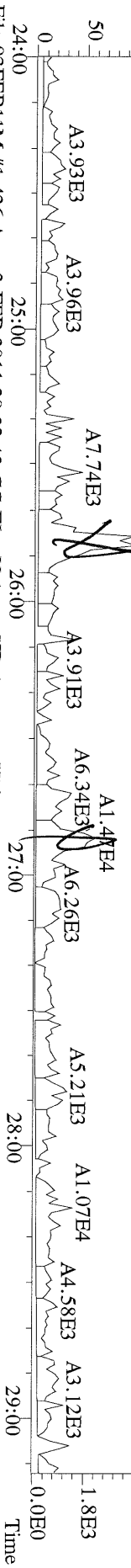
Acquired: 3-FEB-11 20:23:12

Total Concentration: 19.1

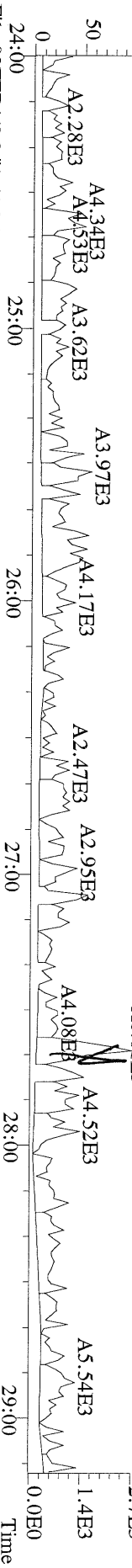
Unnamed Concentration: 12.742

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
42:36	4.24e+04	3.70e+04	1.15 y	7.94e+04	6.37	1,2,3,4,6,7,8-HpCDF
43:26	7.58e+04	6.42e+04	1.18 y	1.40e+05	12.7	

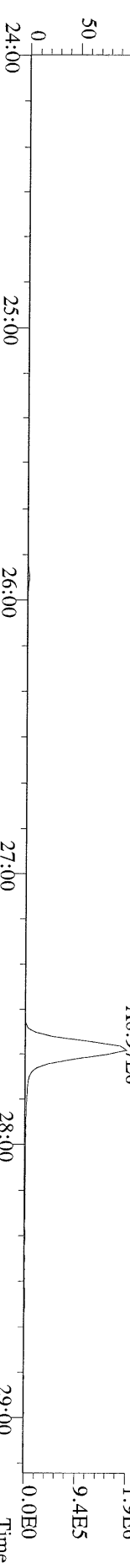
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 319.8965 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



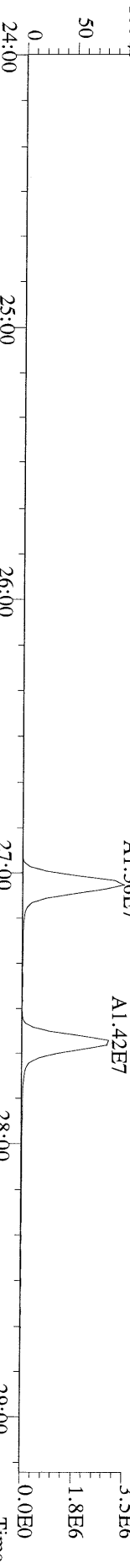
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 321.8936 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



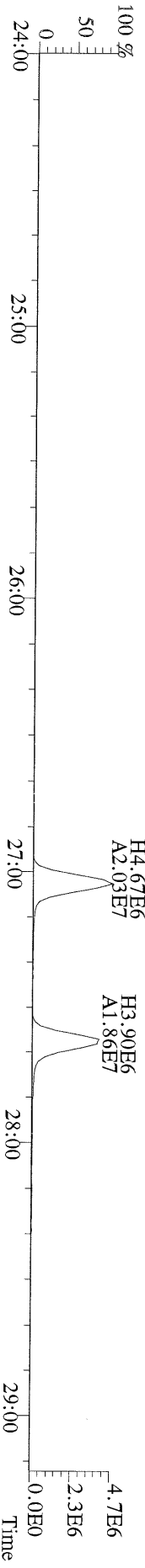
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 327.8847 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



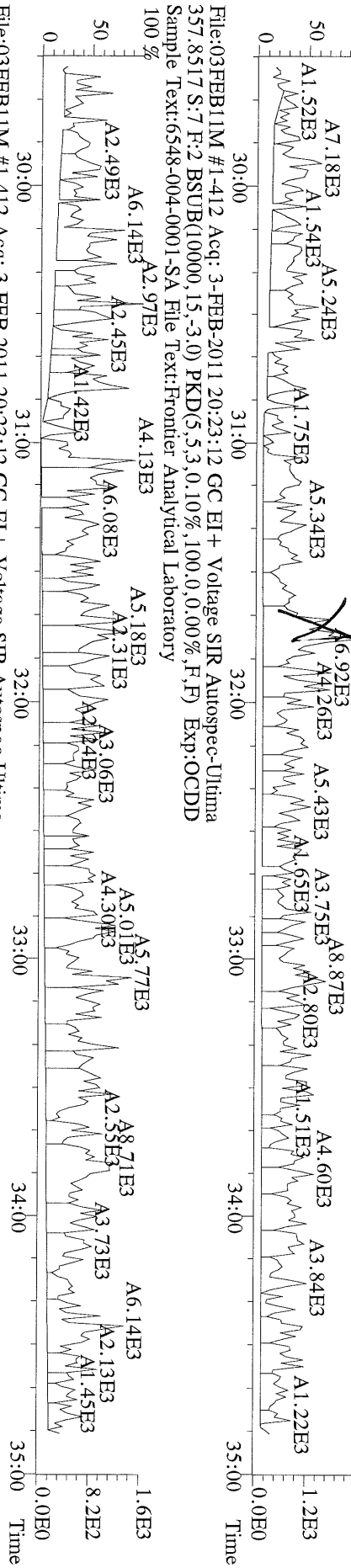
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 331.9368 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



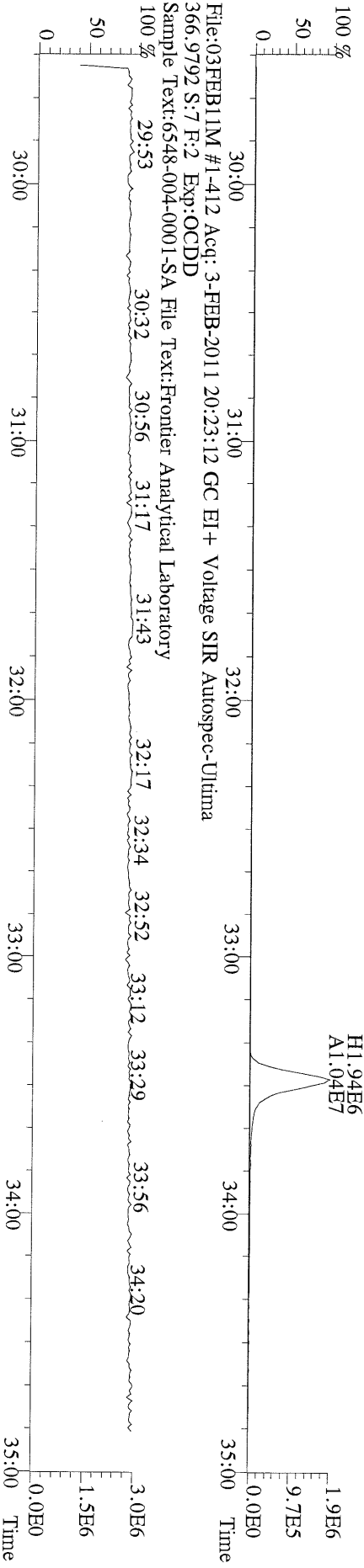
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 333.9339 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



File:03FEB11M #1-412 Acq: 3-FEB-2011 20:23:12 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:6548-004-0001-SA File Text:Frontier Analytical Laboratory

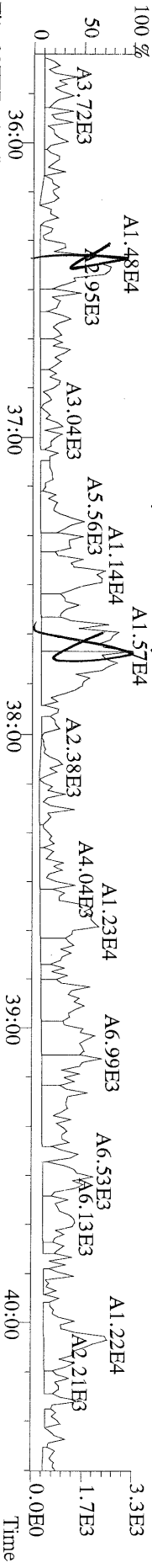


File:03FEB11M #1-412 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Ultima
 367,8949 S:7 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory

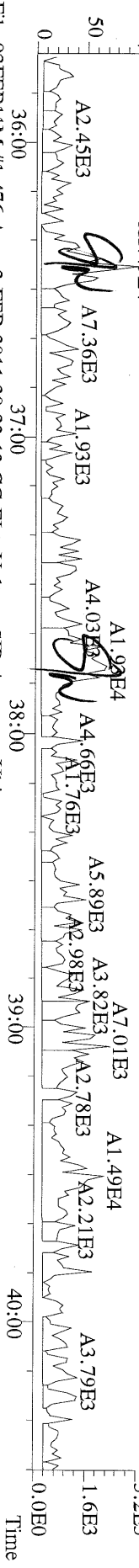


File:03FEB11M #1-412 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Ultima
 366,9792 S:7 F:2 Exp:OCDD
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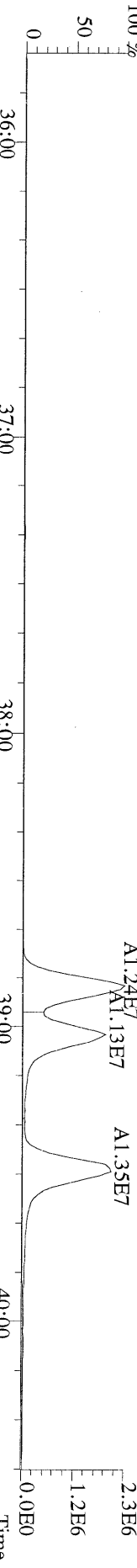
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 389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



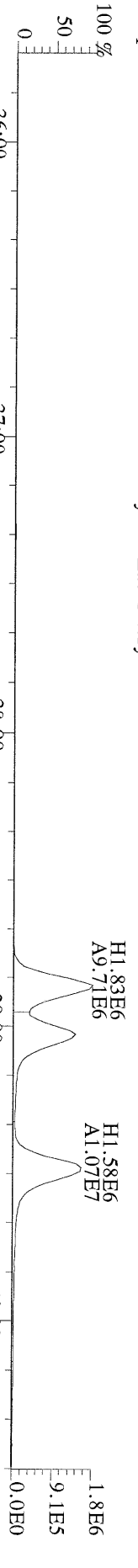
File:03FEB11M #1-476 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Ultima
 391.8127 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



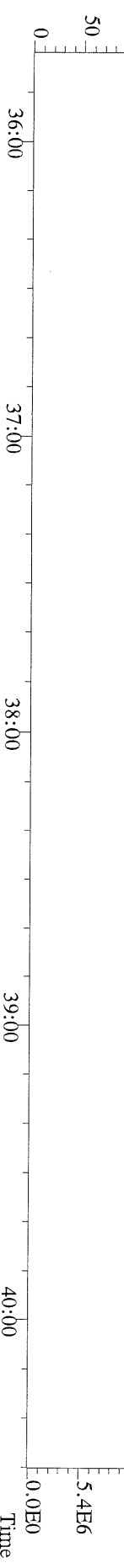
File:03FEB11M #1-476 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Ultima
 401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



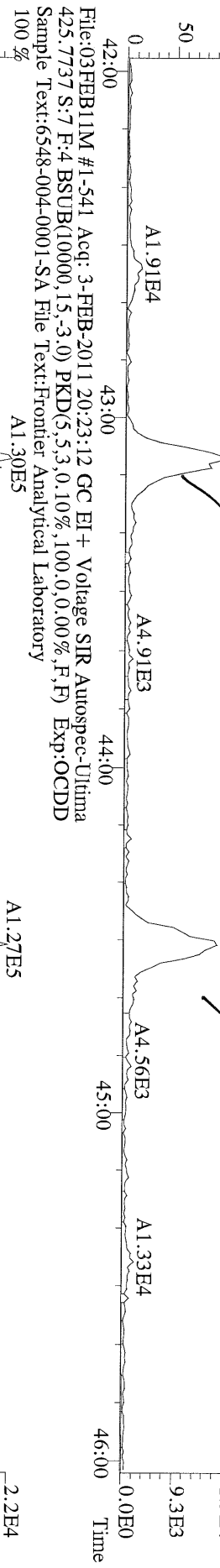
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 403.8530 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



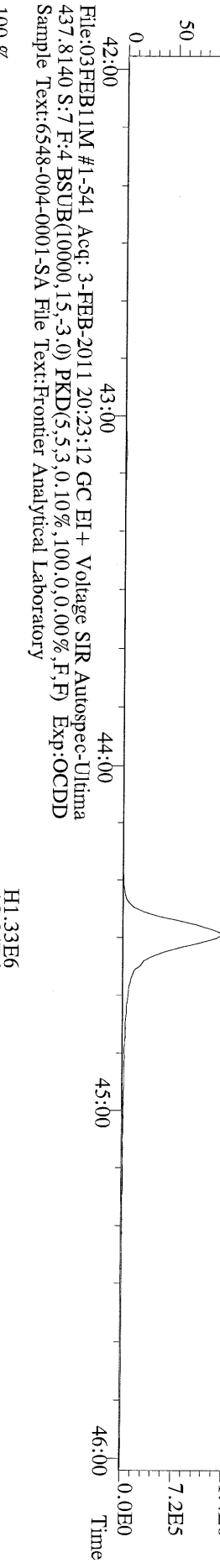
File:03FEB11M #1-476 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Ultima
 380.9760 S:7 F:3 Exp:OCDD
 Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



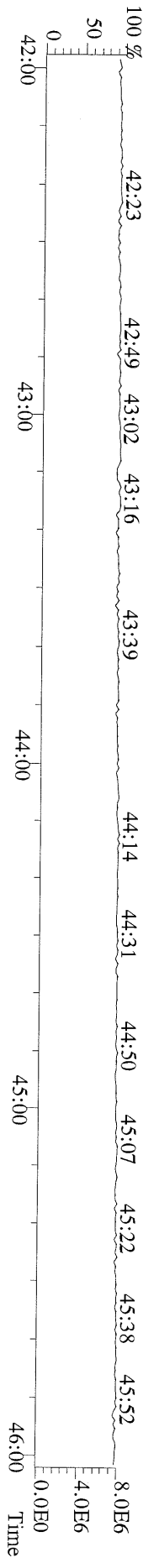
File:03FEB11M #1-541 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospes-Ultima
423.7767 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory
100 %



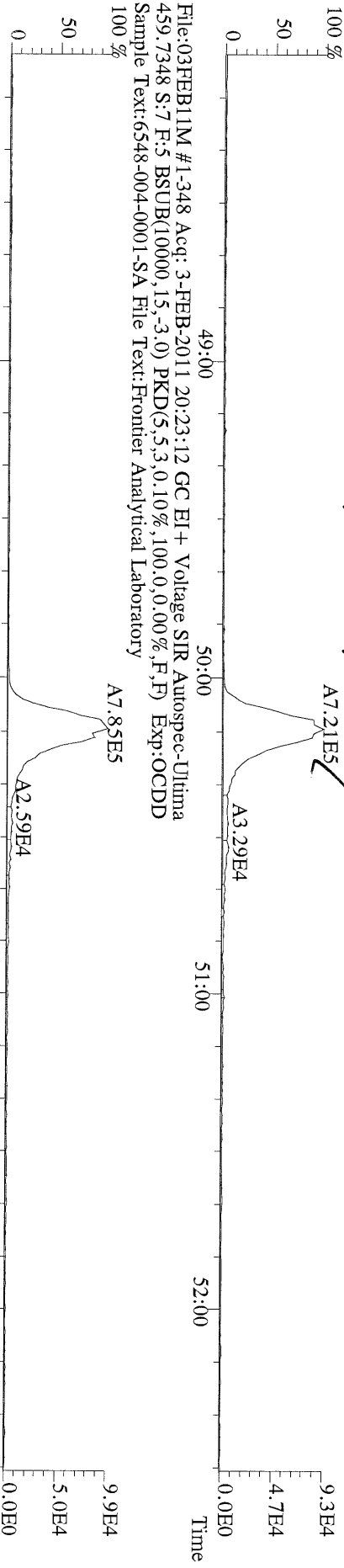
File:03FEB11M #1-541 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospes-Ultima
435.8169 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory
100 %



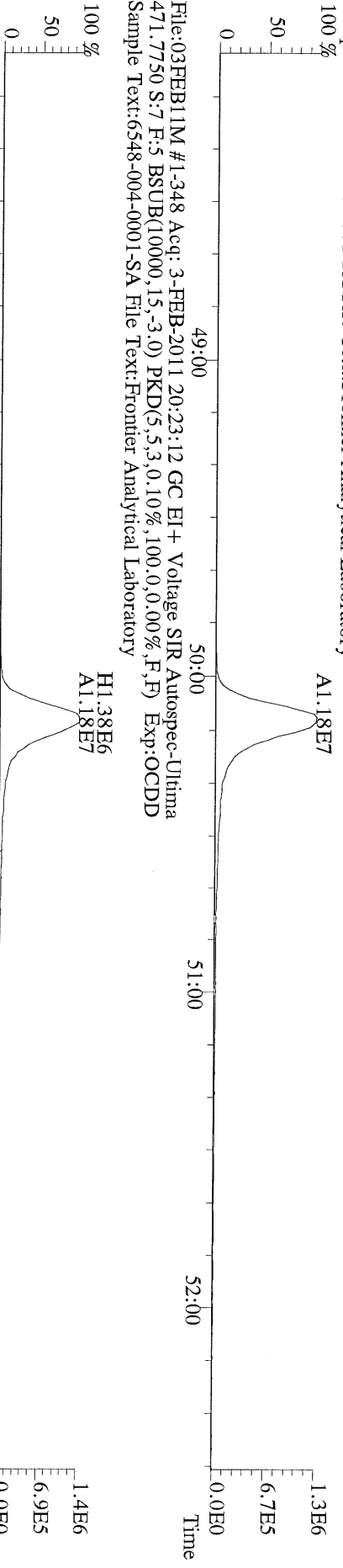
File:03FEB11M #1-541 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospes-Ultima
430.9728 S:7 F:4 Exp:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



File:03FEB11M #1-348 Acq: 3-FEB-2011 20:23:12 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:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



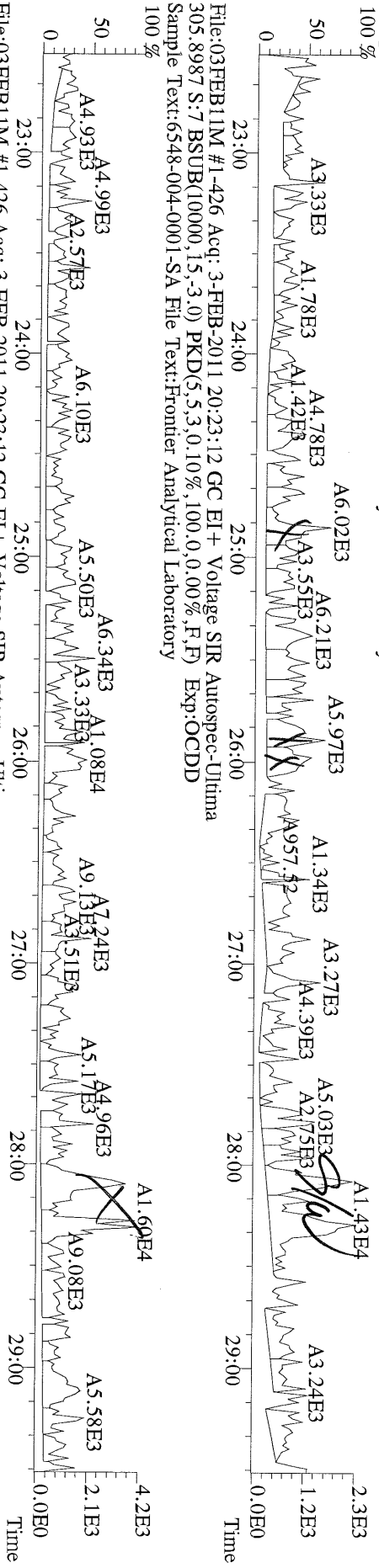
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469.7780 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



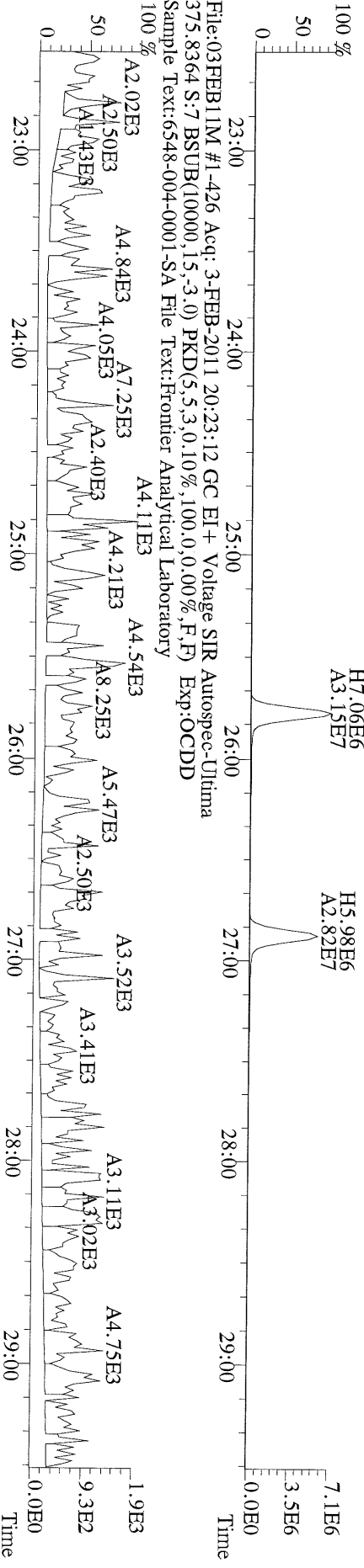
File:03FEB11M #1-348 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:7 F:5 Exp:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



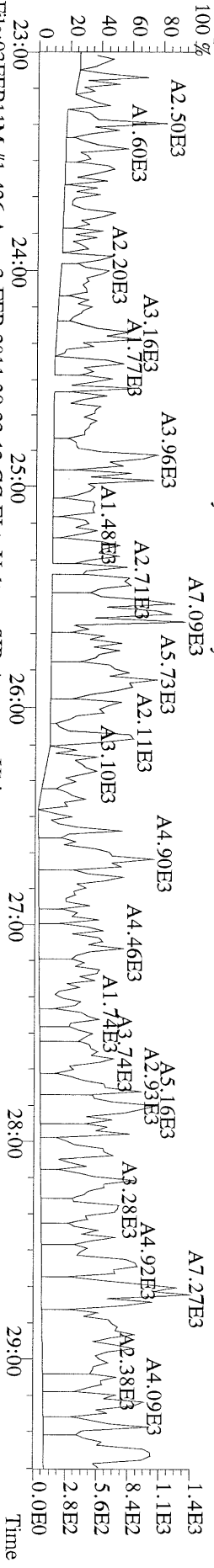
File:03FEB11M #1-426 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Utima
303.9016 S:7 BSUB(10000,15,-3,0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



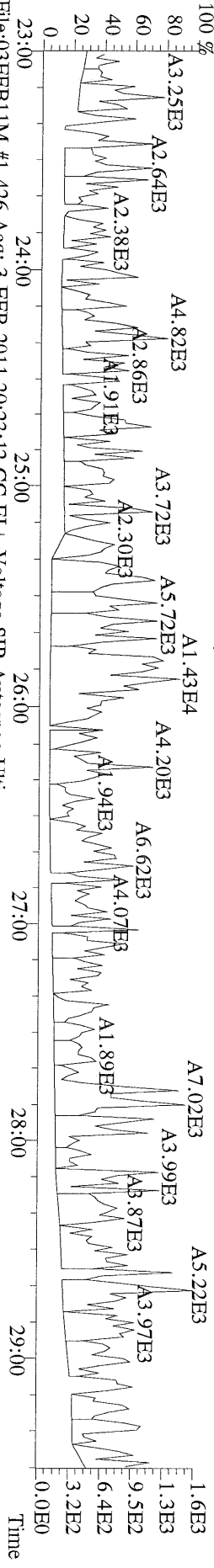
File:03FEB11M #1-426 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Utima
315.9419 S:7 BSUB(10000,15,-3,0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



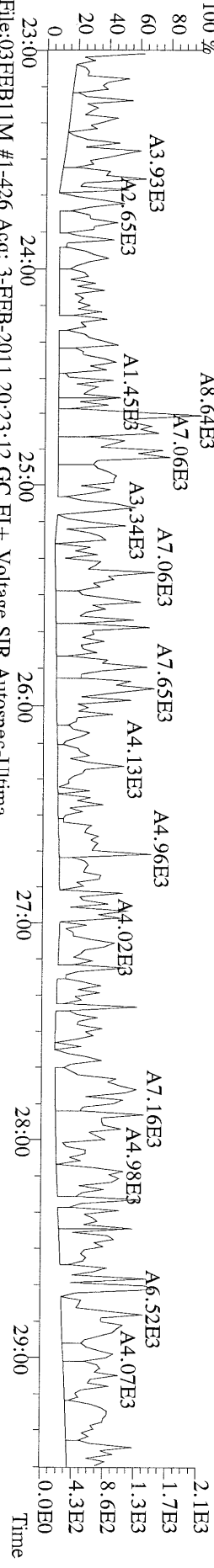
File:03FEB11M #1-426 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 S:7 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



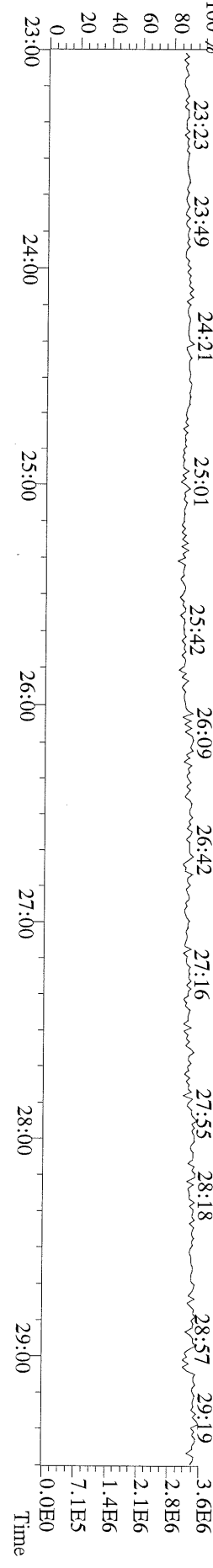
File:03FEB11M #1-426 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Ultima
 341.8568 S:7 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



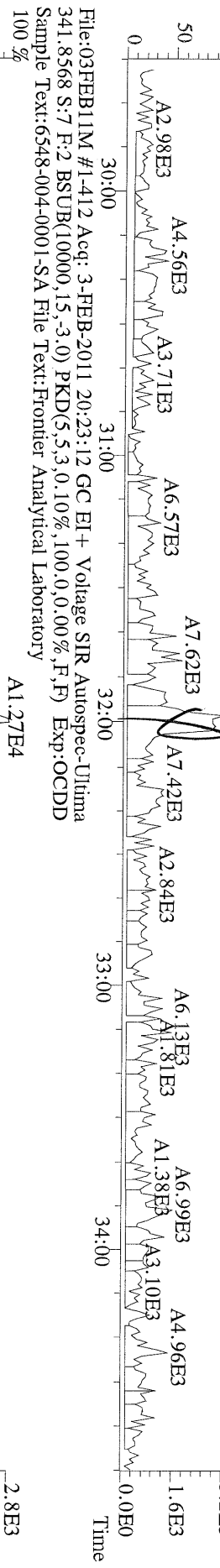
File:03FEB11M #1-426 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Ultima
 409.7974 S:7 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



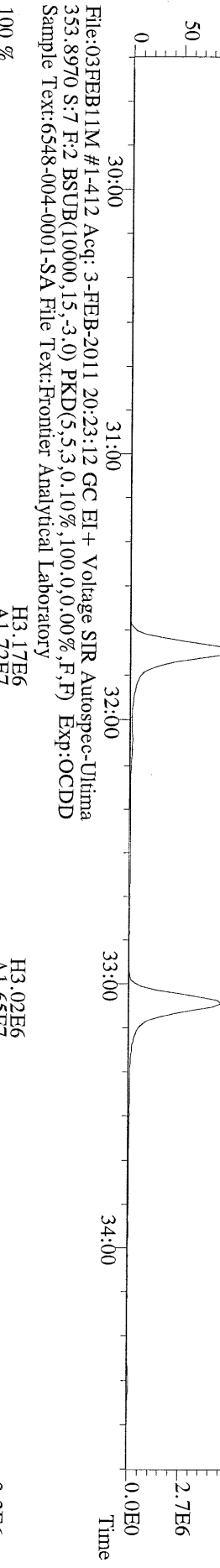
File:03FEB11M #1-426 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Ultima
 316.9824 S:7 Exp:OCDD
 Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



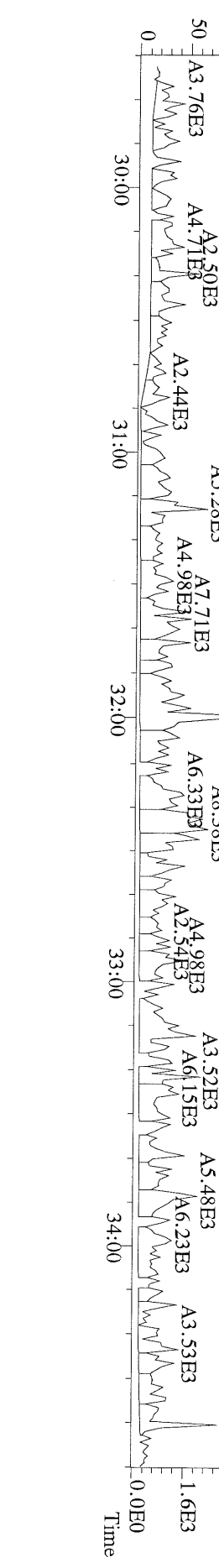
File:03FEB11M #1-412 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



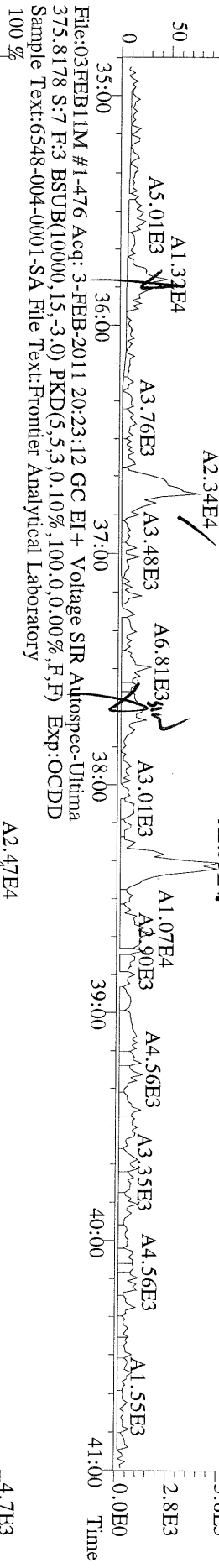
File:03FEB11M #1-412 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



File:03FEB11M #1-412 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



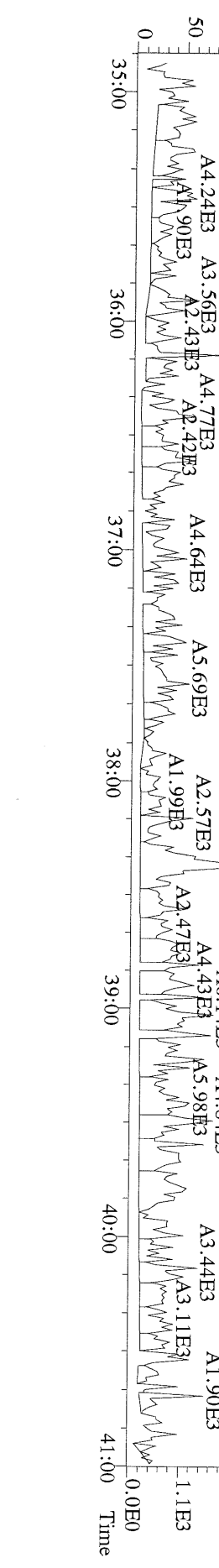
File:03FEB11M #1-476 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Utima
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



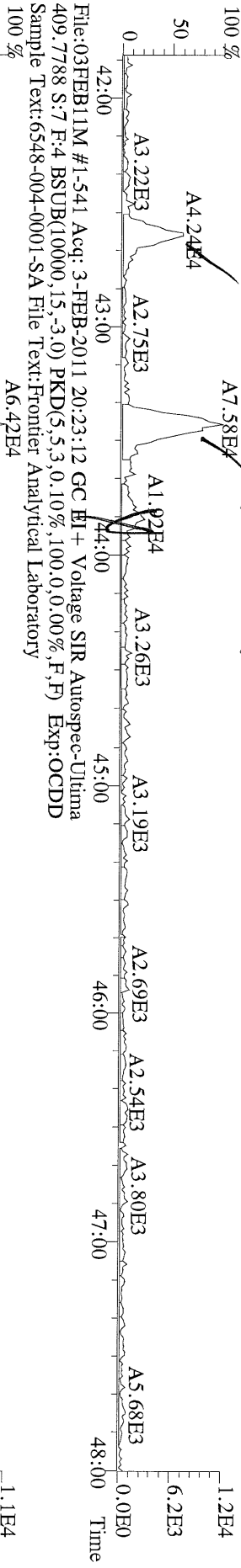
File:03FEB11M #1-476 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Utima
383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



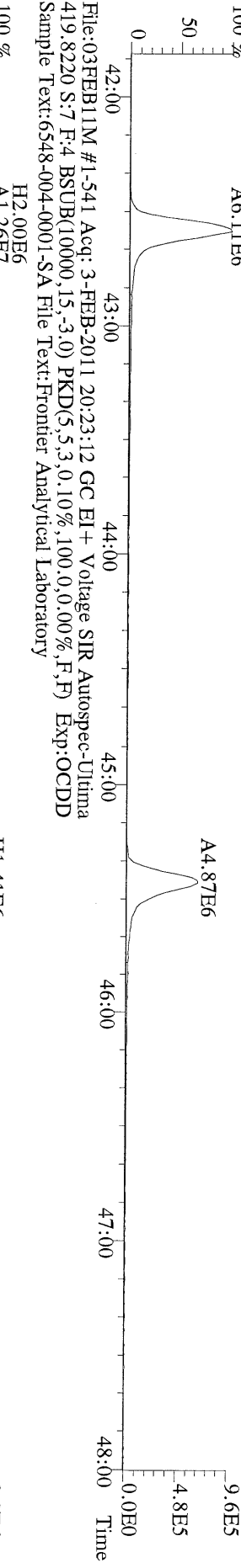
File:03FEB11M #1-476 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Utima
445.7555 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



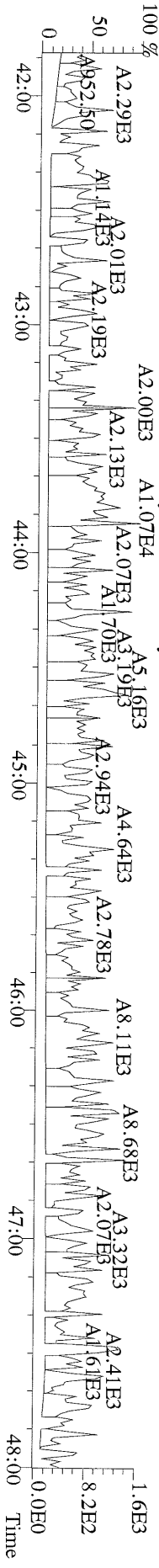
File:03FEB11M #1-541 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Utima
407.7818 S:7 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,0%) F,F) Exp:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



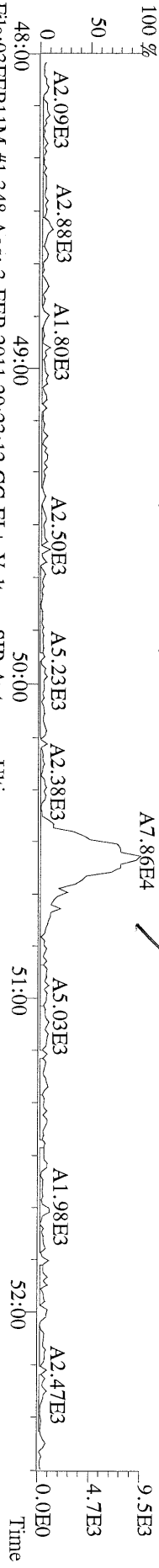
File:03FEB11M #1-541 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Utima
417.8253 S:7 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,0%) F,F) Exp:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



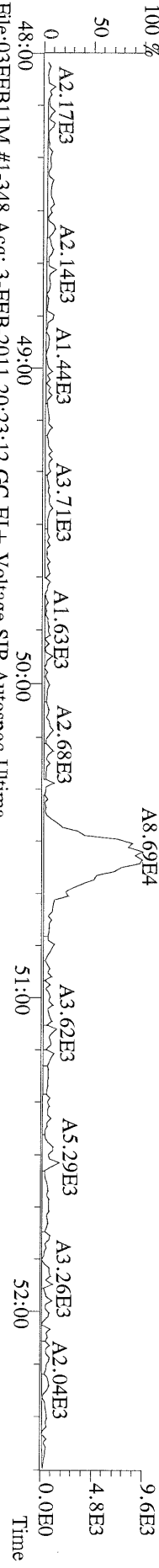
File:03FEB11M #1-541 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Utima
419.8220 S:7 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,0%) F,F) Exp:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



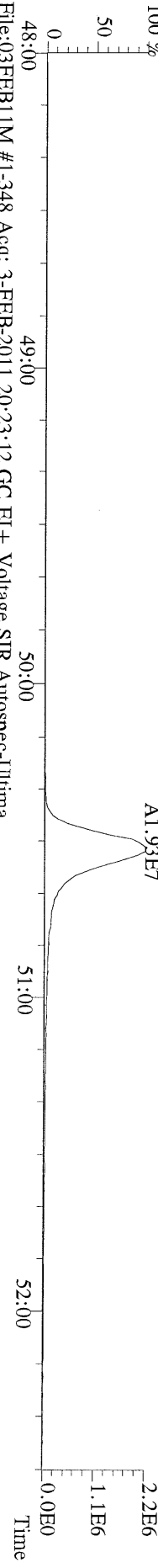
File:03FEB11M #1-348 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:7 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



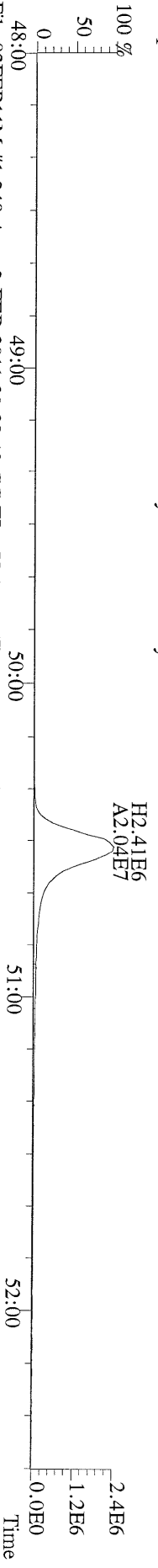
File:03FEB11M #1-348 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:7 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



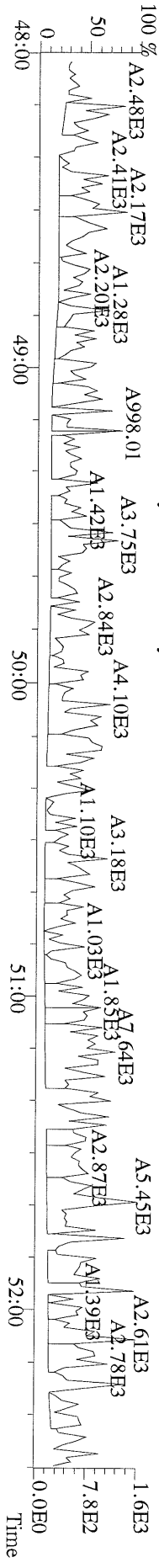
File:03FEB11M #1-348 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:7 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



File:03FEB11M #1-348 Acq: 3-FEB-2011 20:23:12 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:OCDD
Sample Text:6548-004-0001-SA File Text:Frontier Analytical Laboratory



File:03FEB11M #1-348 Acq: 3-FEB-2011 20:23:12 GC EI+ Voltage SIR Autospec-Ultima
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:6548-004-0001-SA File Text:Frontier Analytical Laboratory



Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL	Rec	#Hom
2,3,7,8-TCDD	*	* n	NotFnd	1.11	*		2.50	852	944	1.43	
1,2,3,7,8-PeCDD	*	* n	NotFnd	1.10	*		2.50	924	896	2.00	
1,2,3,4,7,8-HxCDD	*	* n	NotFnd	1.37	*		2.50	1060	912	2.11	
1,2,3,6,7,8-HxCDD	*	* n	NotFnd	1.37	*		2.50	1060	912	2.65	
1,2,3,7,8,9-HxCDD	*	* n	NotFnd	1.36	*		2.50	1060	912	2.38	
1,2,3,4,6,7,8-HpCDD	6.44e+04	1.03 y	44:31	1.45	5.99	J	2.50	-	-	*	
OCDD	3.62e+05	0.90 y	50:10	1.43	51.2	J	2.50	-	-	*	
2,3,7,8-TCDF	*	* n	NotFnd	1.50	*		2.50	996	1250	0.785	
1,2,3,7,8-PeCDF	*	* n	NotFnd	0.94	*		2.50	768	1000	1.29	
2,3,4,7,8-PeCDF	*	* n	NotFnd	0.94	*		2.50	768	1000	1.39	
1,2,3,4,7,8-HxCDF	*	* n	NotFnd	0.93	*		2.50	1340	937	2.30	
1,2,3,6,7,8-HxCDF	*	* n	NotFnd	0.82	*		2.50	1340	937	2.28	
2,3,4,6,7,8-HxCDF	*	* n	NotFnd	0.92	*		2.50	1340	937	2.52	
1,2,3,7,8,9-HxCDF	*	* n	NotFnd	1.00	*		2.50	1340	937	2.59	
1,2,3,4,6,7,8-HpCDF	*	* n	NotFnd	1.39	*		2.50	1230	588	2.61	
1,2,3,4,7,8,9-HpCDF	*	* n	NotFnd	1.36	*		2.50	1230	1060	4.96	
OCDF	*	* n	NotFnd	0.79	*		2.50	1210	1360	8.40	
13C-2,3,7,8-TCDD	2.80e+07	0.78 y	27:38	1.02	1560					76.2	
13C-1,2,3,7,8-PeCDD	2.45e+07	1.71 y	33:29	0.84	1670					81.1	
13C-1,2,3,4,7,8-HxCDD	1.92e+07	1.27 y	38:52	1.07	1560					76.1	
13C-1,2,3,6,7,8-HxCDD	1.69e+07	1.28 y	39:01	1.01	1460					71.3	
13C-1,2,3,4,6,7,8-HpCDD	1.52e+07	1.04 y	44:30	0.86	1560					75.8	
13C-OCDD	2.02e+07	0.98 y	50:08	0.55	3240					79.0	
13C-2,3,7,8-TCDF	4.55e+07	0.88 y	26:52	0.99	1600					77.7	
13C-1,2,3,7,8-PeCDF	3.87e+07	1.63 y	31:44	0.84	1610					78.5	
13C-2,3,4,7,8-PeCDF	3.80e+07	1.67 y	33:04	0.81	1630					79.3	
13C-1,2,3,4,7,8-HxCDF	2.97e+07	0.48 y	37:28	1.85	1400					68.4	
13C-1,2,3,6,7,8-HxCDF	3.79e+07	0.49 y	37:40	2.54	1310					63.7	
13C-2,3,4,6,7,8-HxCDF	3.12e+07	0.48 y	38:37	2.01	1360					66.0	
13C-1,2,3,7,8,9-HxCDF	3.02e+07	0.49 y	40:04	2.03	1300					63.3	
13C-1,2,3,4,6,7,8-HpCDF	1.62e+07	0.50 y	42:35	1.11	1280					62.3	
13C-1,2,3,4,7,8,9-HpCDF	1.24e+07	0.50 y	45:26	0.80	1350					65.9	
13C-OCDF	3.45e+07	0.94 y	50:32	1.08	2790					67.9	
37Cl-2,3,7,8-TCDD	7.84e+06		27:39	0.69	655					79.7	
13C-1,2,3,4-TCDD	3.58e+07	0.77 y	27:02	-	81.9						
13C-1,2,3,4-TCDF	5.89e+07	0.87 y	25:46	-	83.7						
13C-1,2,3,7,8,9-HxCDD	2.35e+07	1.30 y	39:28	-	87.3						
Total Tetra-Dioxins	*		NotFnd	1.11	*		2.50	852	944	1.43	0
Total Penta-Dioxins	*		NotFnd	1.10	*		2.50	924	896	2.00	0
Total Hexa-Dioxins	*		NotFnd	1.37	*		2.50	1060	912	2.65	0
Total Hepta-Dioxins	1.36e+05		43:08	1.45	12.6	J	2.50	-	-	*	2
Total Tetra-Furans	*		NotFnd	1.50	*		2.50	996	1250	0.785	0
1st Fn. Tot Penta-Furans	*		NotFnd	0.94	*		2.50	768	1000	1.39	PeCDF 0
Total Penta-Furans	*		NotFnd	0.94	*		2.50	768	1000	1.39	0.00 0
Total Hexa-Furans	*		NotFnd	0.91	*		2.50	1340	937	2.59	0
Total Hepta-Furans	*		NotFnd	1.38	*		2.50	1230	1060	4.96	0

Analyst: 

Date: 2/4/11

Totals class: Total Hepta-Dioxins

Entry #: 41

Run: 15

File: 03FEB11M

S: 8 I: 1 F: 4

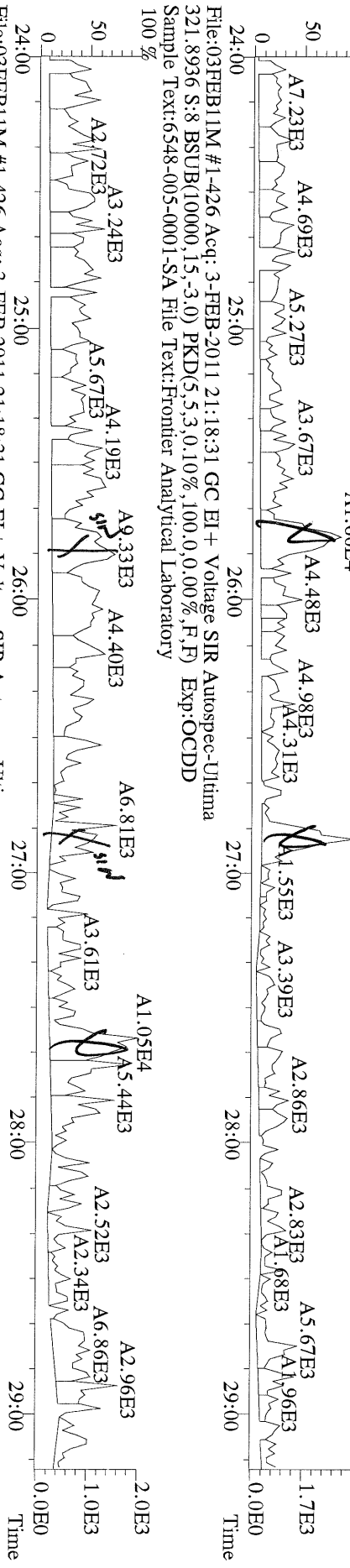
Acquired: 3-FEB-11 21:18:31

Total Concentration: 12.6

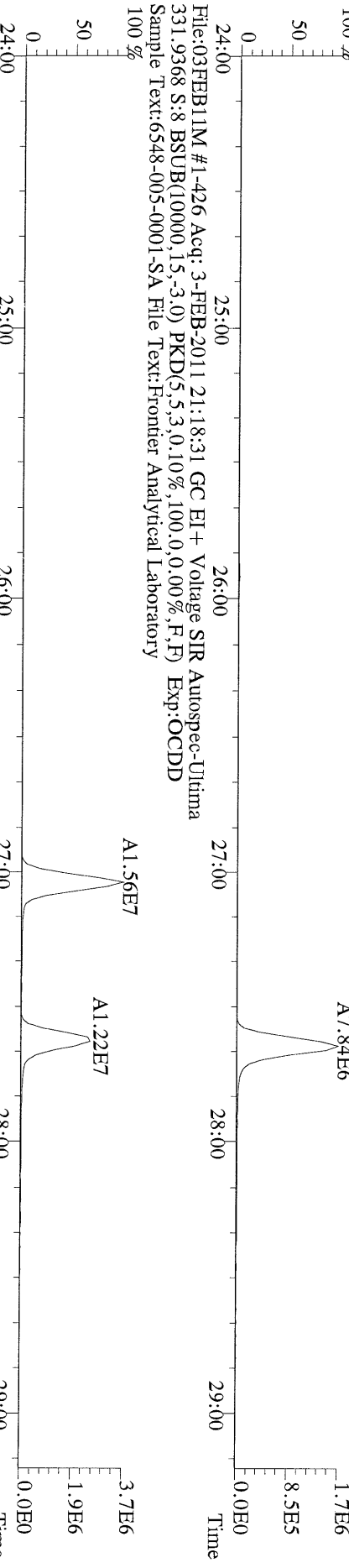
Unnamed Concentration: 6.622

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
43:08	3.36e+04	3.77e+04	0.89 y	7.12e+04	6.62	
44:31	3.28e+04	3.17e+04	1.03 y	6.44e+04	5.99	1,2,3,4,6,7,8-HpCDD

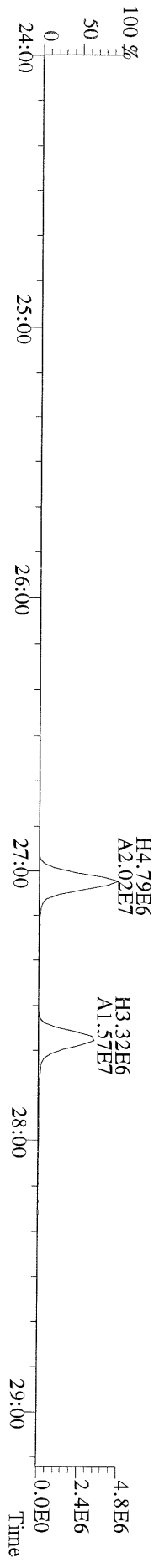
File:03FEB11M #1-426 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Utima
319.8965 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%) F,F) Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



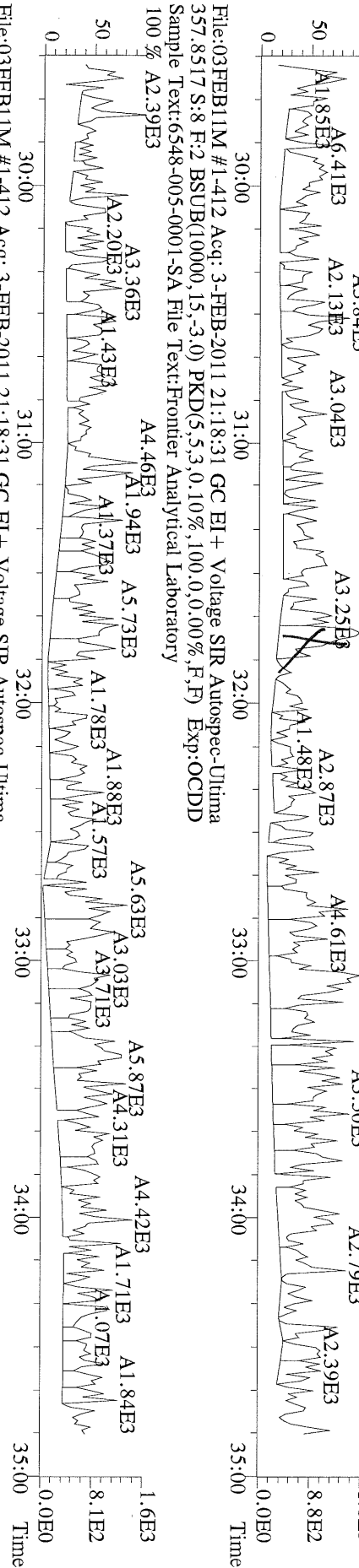
File:03FEB11M #1-426 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Utima
327.8847 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%) F,F) Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



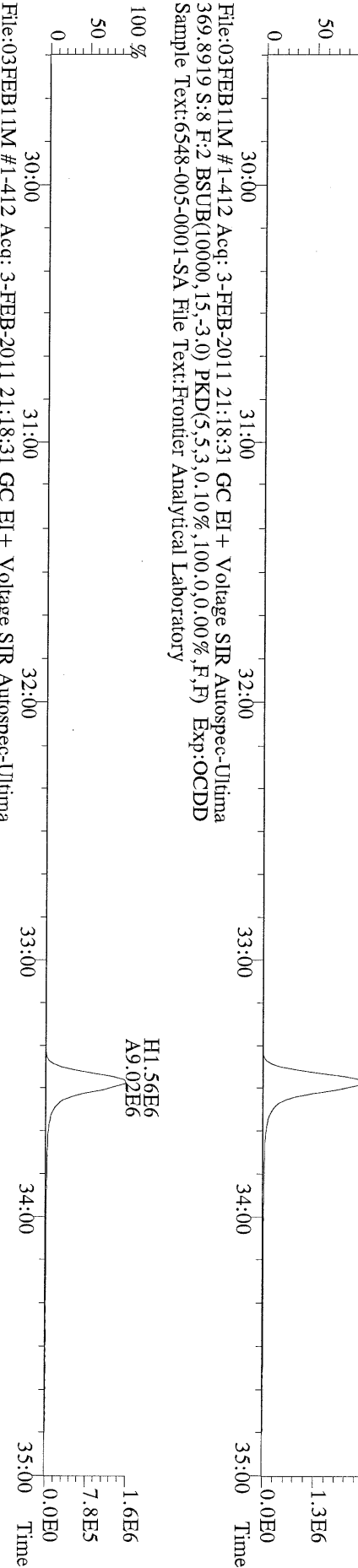
File:03FEB11M #1-426 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Utima
333.9339 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%) F,F) Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



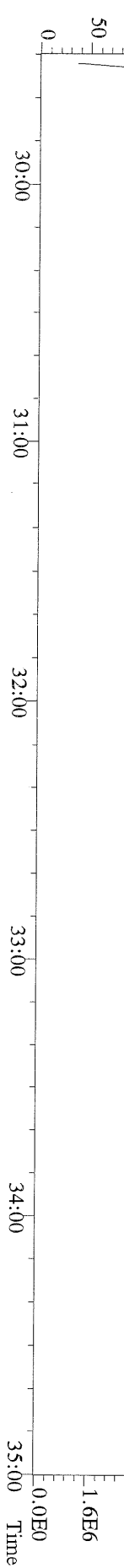
File:03FEB11M #1-412 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Utima
 355.8546 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



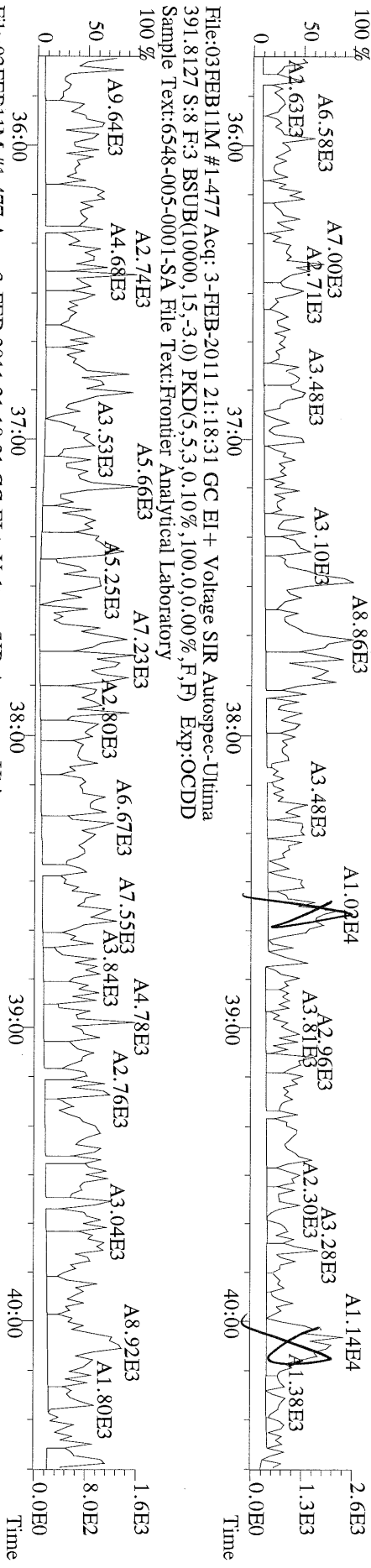
File:03FEB11M #1-412 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Utima
 367.8949 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



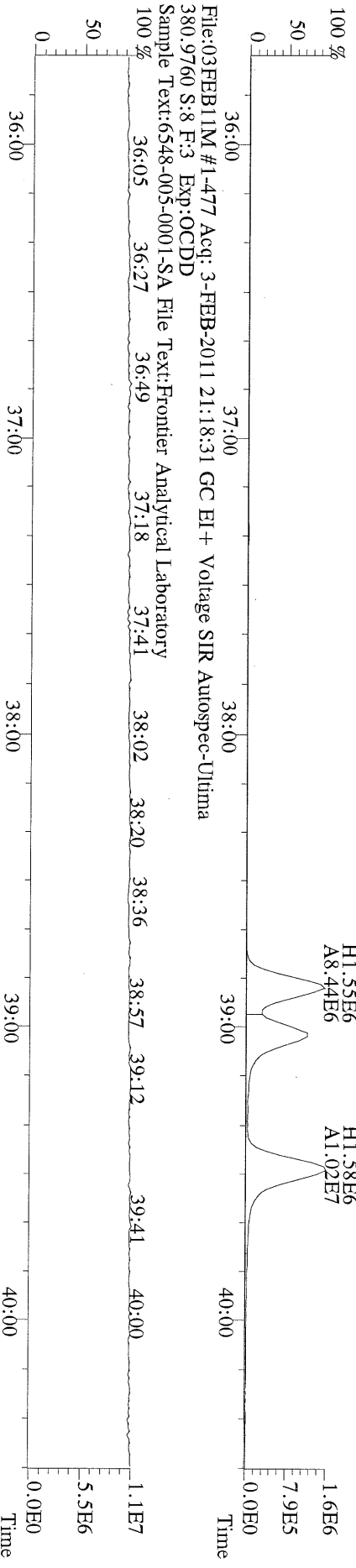
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 366.9792 S:8 F:2 Exp:OCDD
 Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



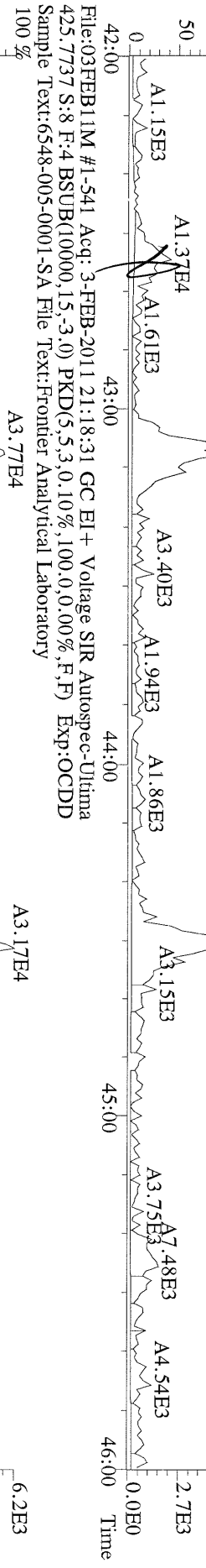
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 389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



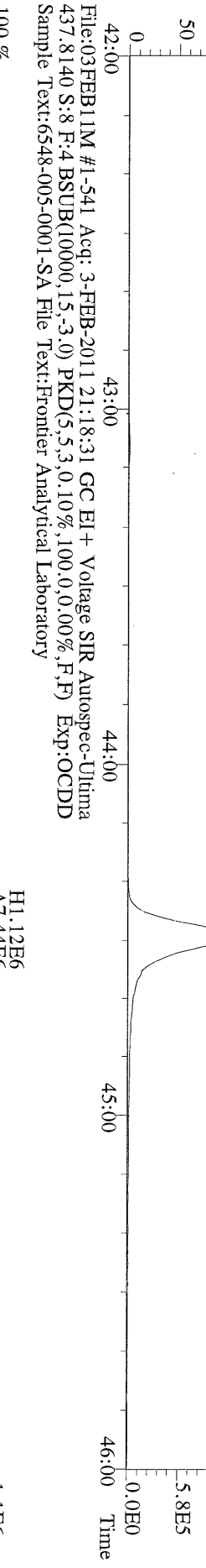
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 401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



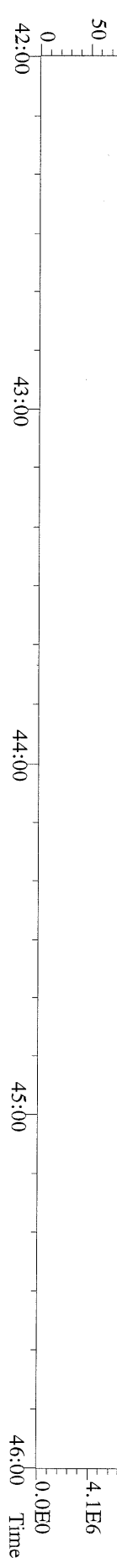
File:03FEB11M #1-541 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Utima
423.7767 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory
100 %



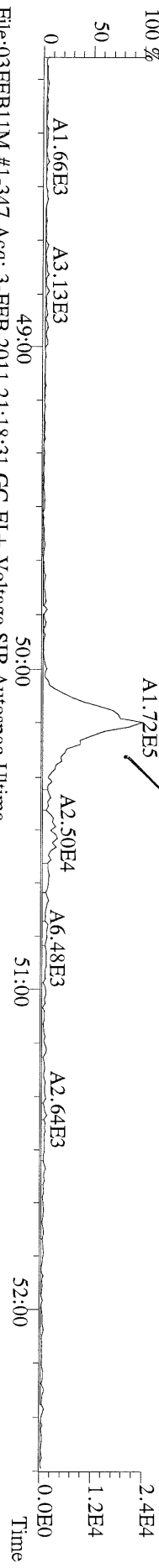
File:03FEB11M #1-541 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Utima
425.8169 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory
100 %



File:03FEB11M #1-541 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Utima
430.9728 S:8 F:4 Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory
100 %



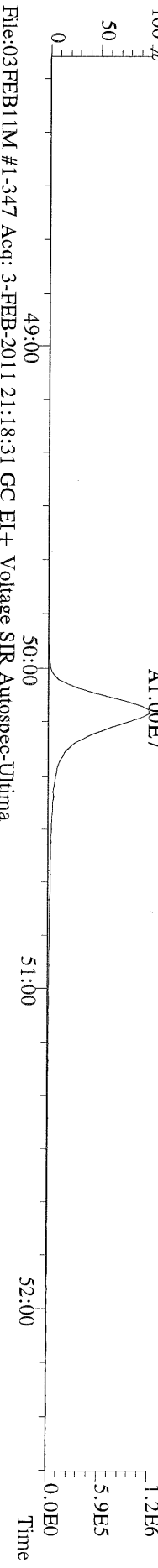
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457.7377 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0,0,0,0) Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



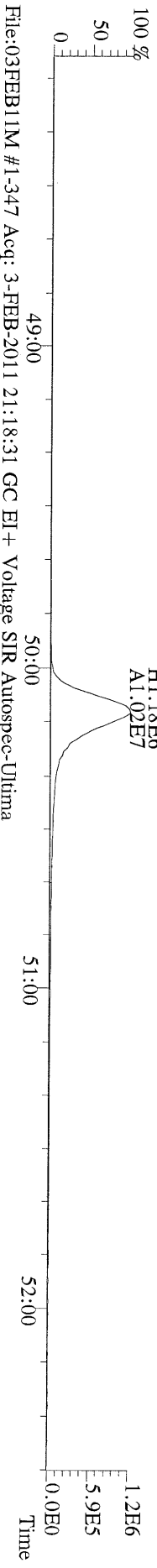
File:03FEB11M #1-347 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Utima
459.7348 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0,0,0) Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



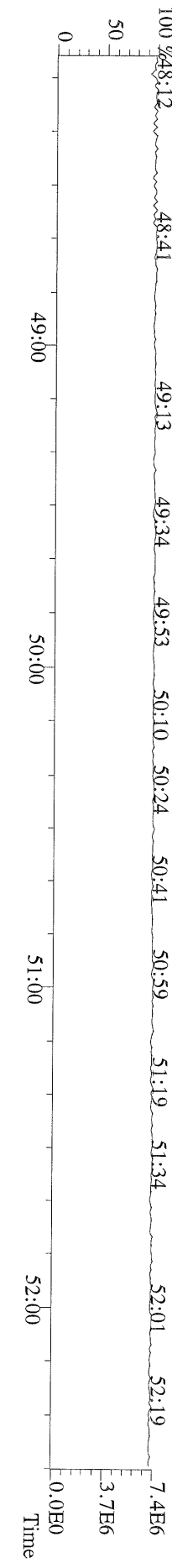
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469.7780 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0,0,0) Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



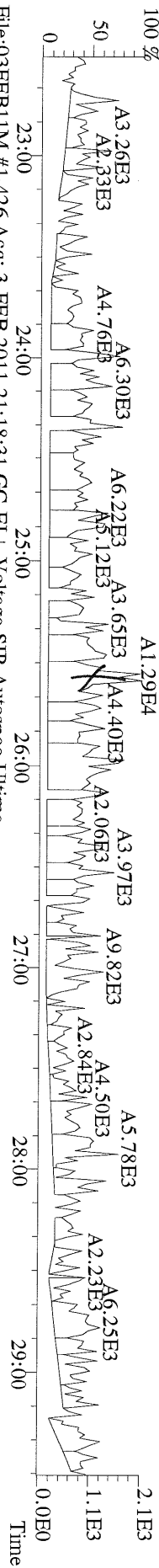
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471.7750 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0,0,0) Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



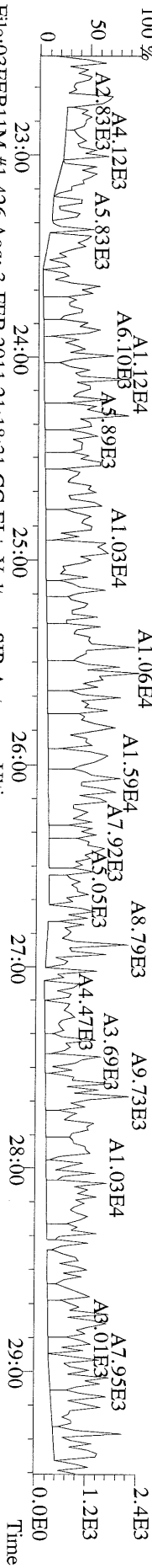
File:03FEB11M #1-347 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Utima
454.9728 S:8 F:5 Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



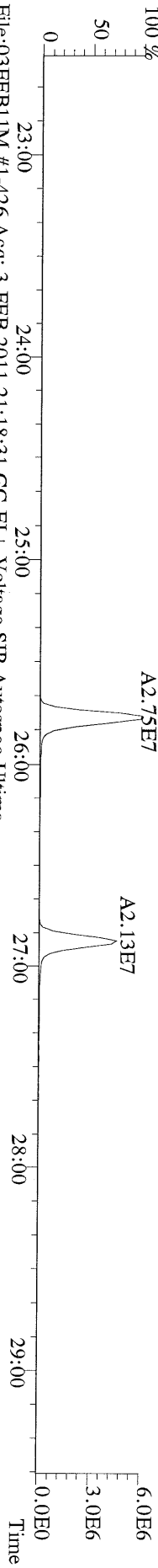
File:03FEB11M #1-426 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Ultima
 303.9016 S:8 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



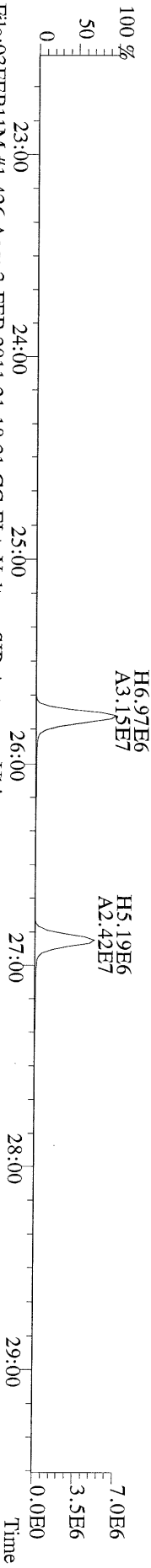
File:03FEB11M #1-426 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Ultima
 305.8987 S:8 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



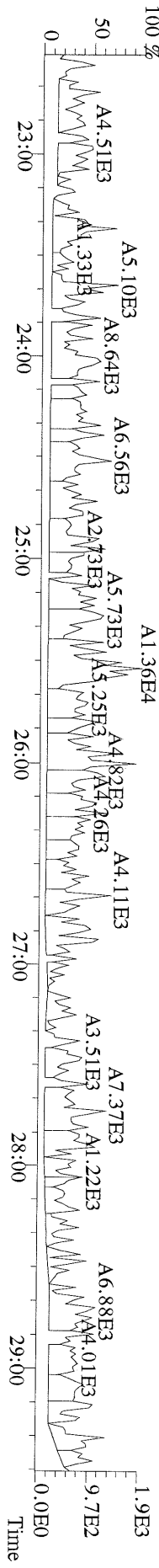
File:03FEB11M #1-426 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Ultima
 315.9419 S:8 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



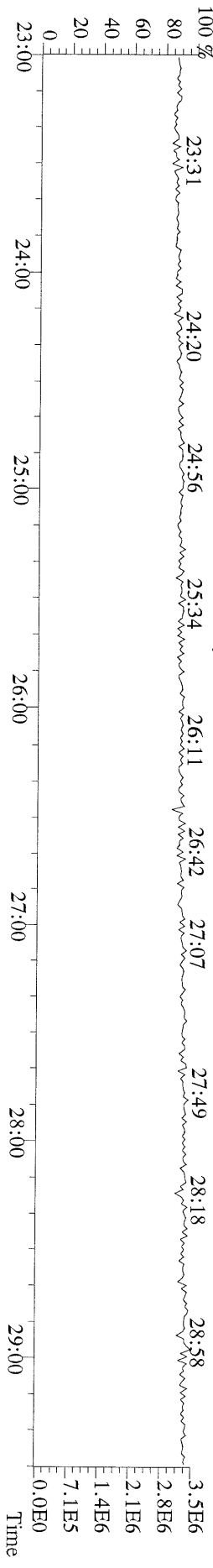
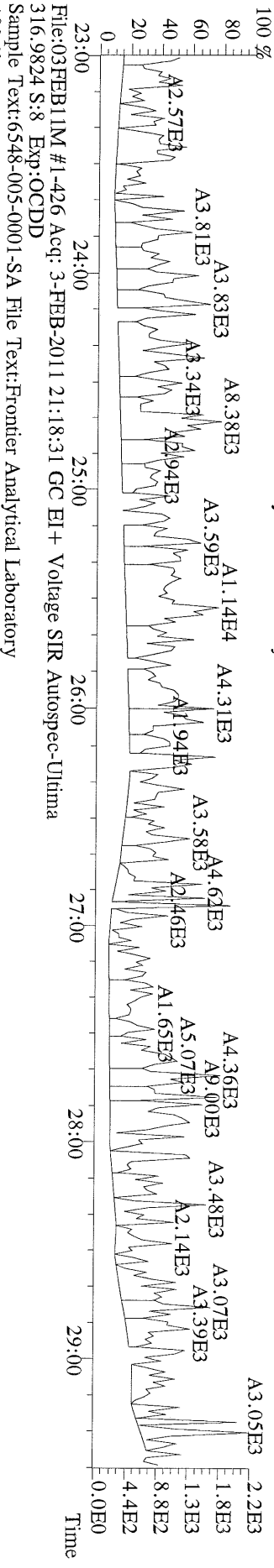
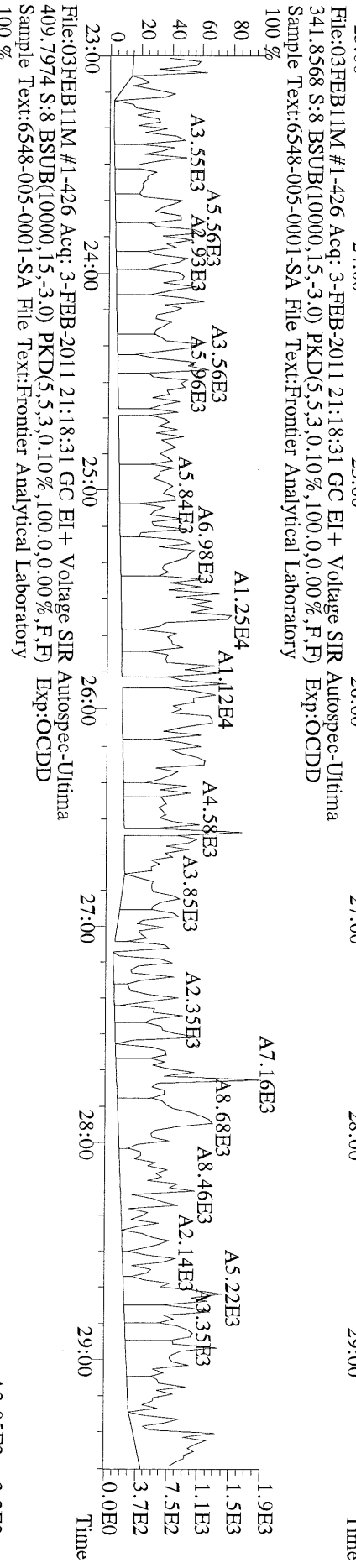
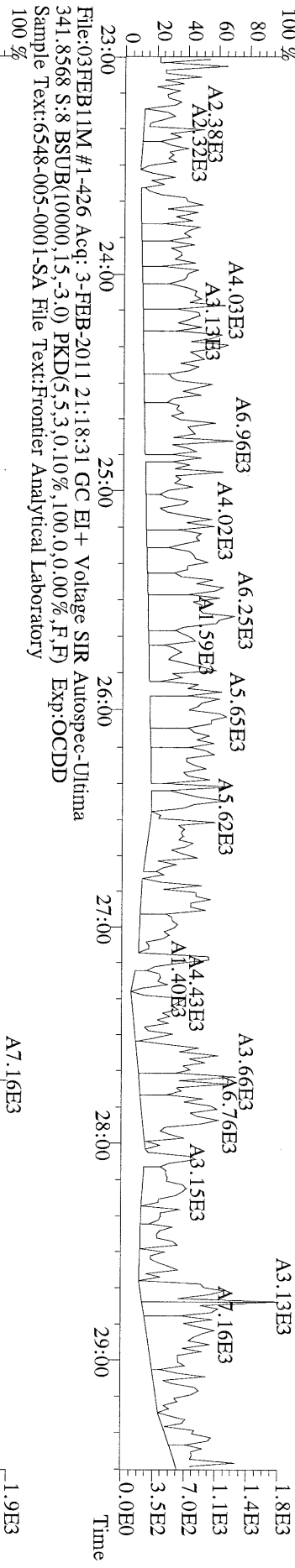
File:03FEB11M #1-426 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Ultima
 317.9389 S:8 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



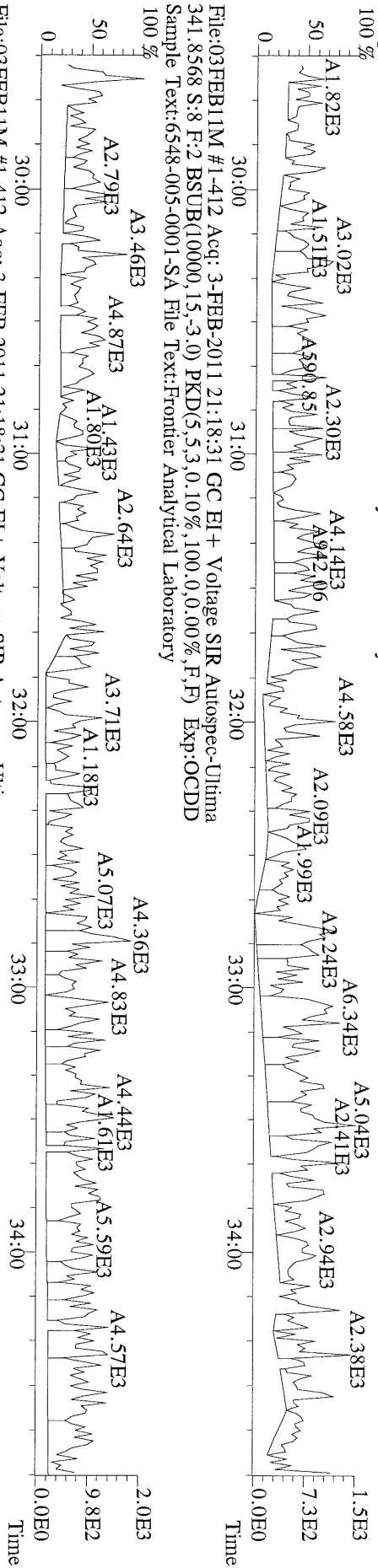
File:03FEB11M #1-426 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Ultima
 375.8364 S:8 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



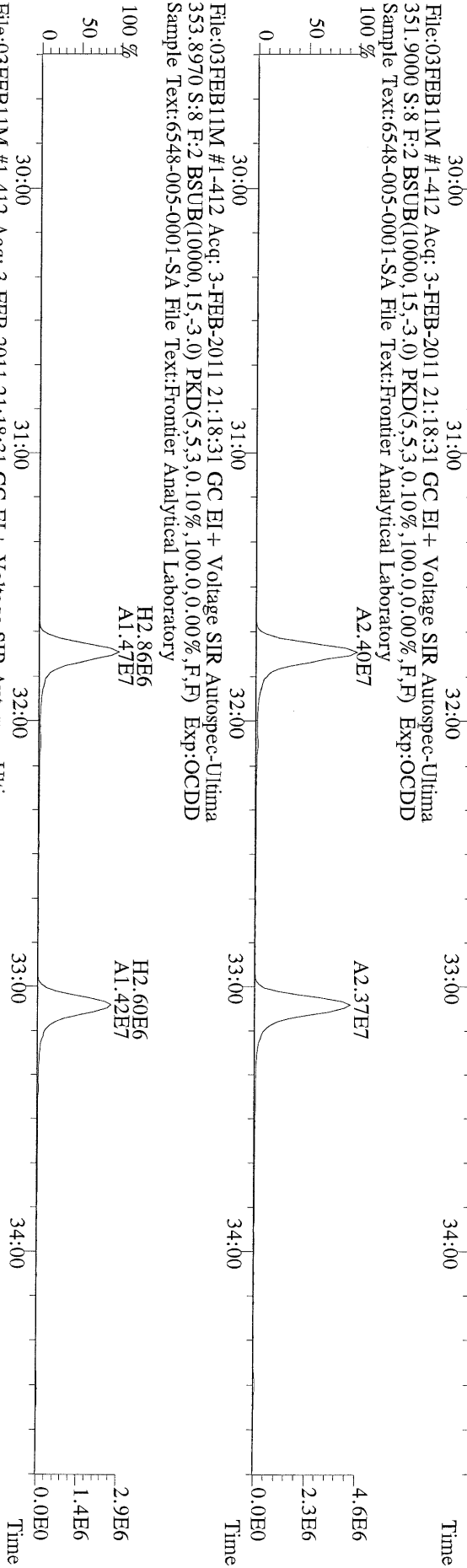
File:03FEB11M #1-426 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Ultima
 339.8568 S:8 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD
 Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



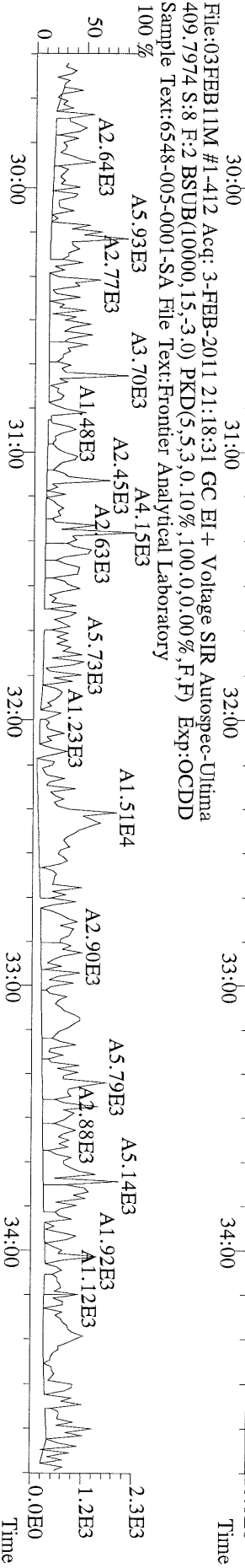
File:03FEB11M #1-412 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Utima
339.8597 S:8 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



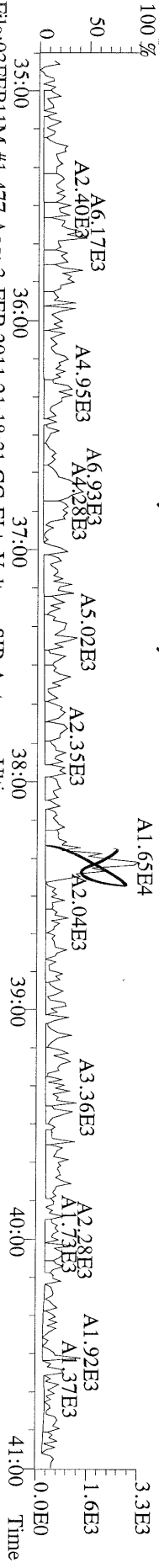
File:03FEB11M #1-412 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Utima
351.9000 S:8 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



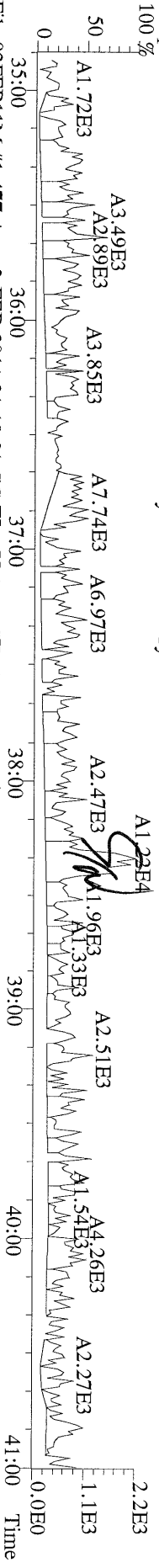
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409.7974 S:8 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



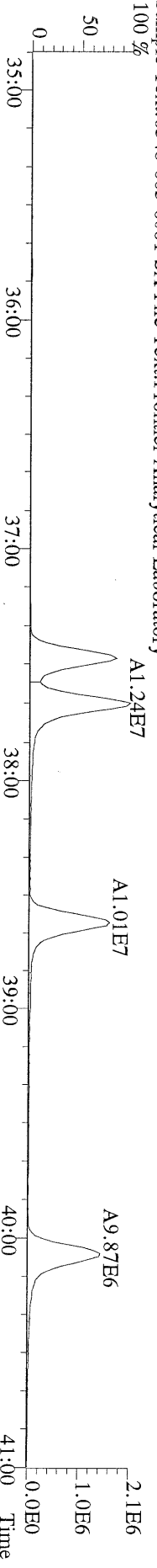
File:03FEB11M #1-477 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Utima
373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



File:03FEB11M #1-477 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Utima
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:6548-005-0001-SA File Text:Frontier Analytical Laboratory



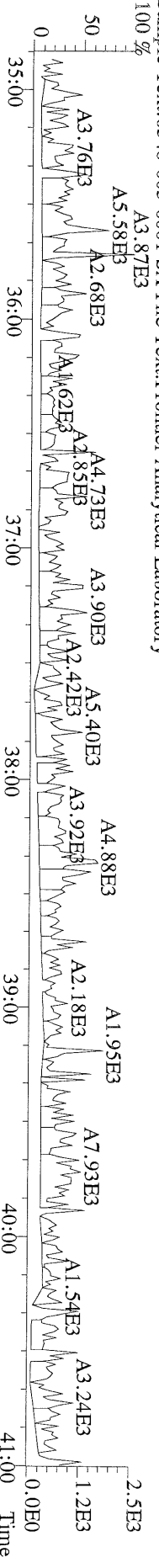
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383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



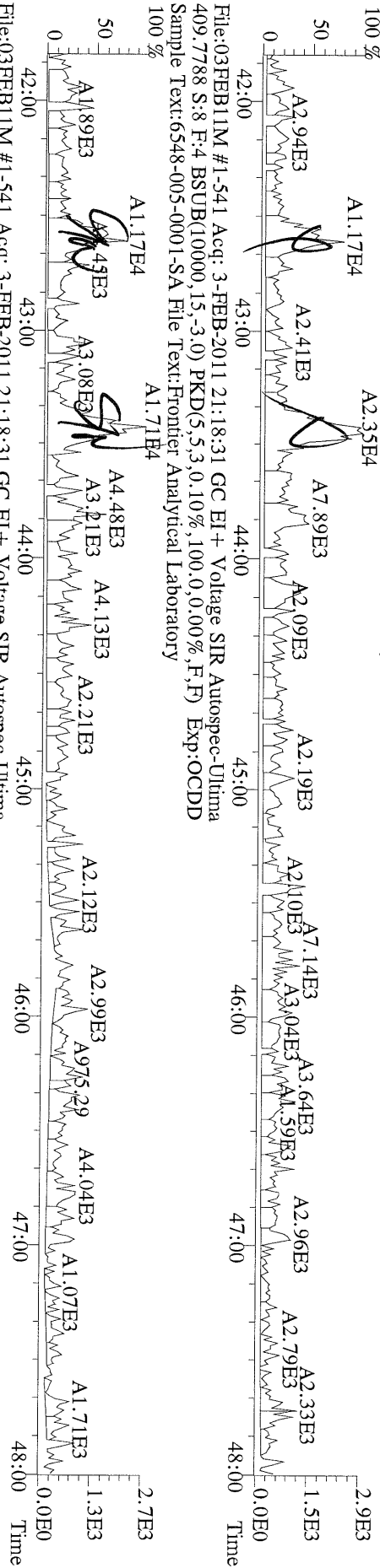
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385.8610 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



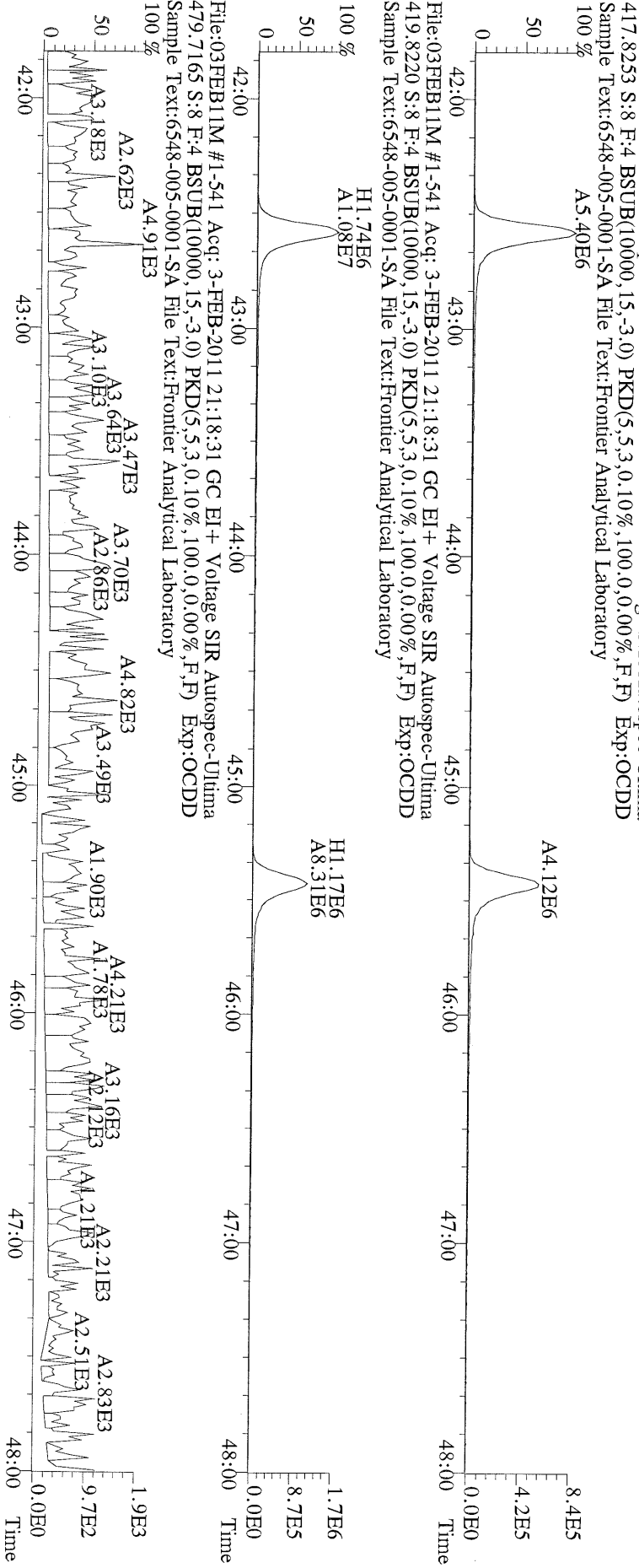
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445.7555 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



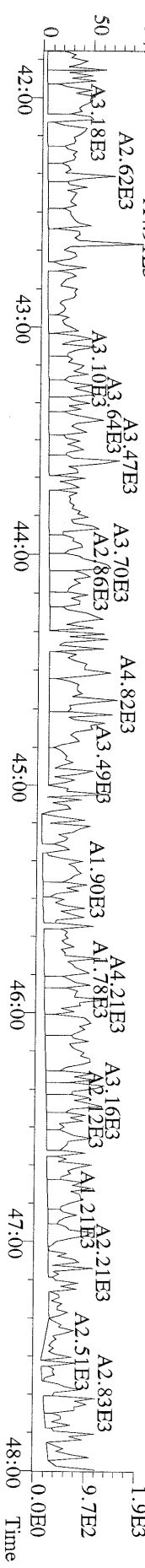
File:03FEB11M #1-541 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



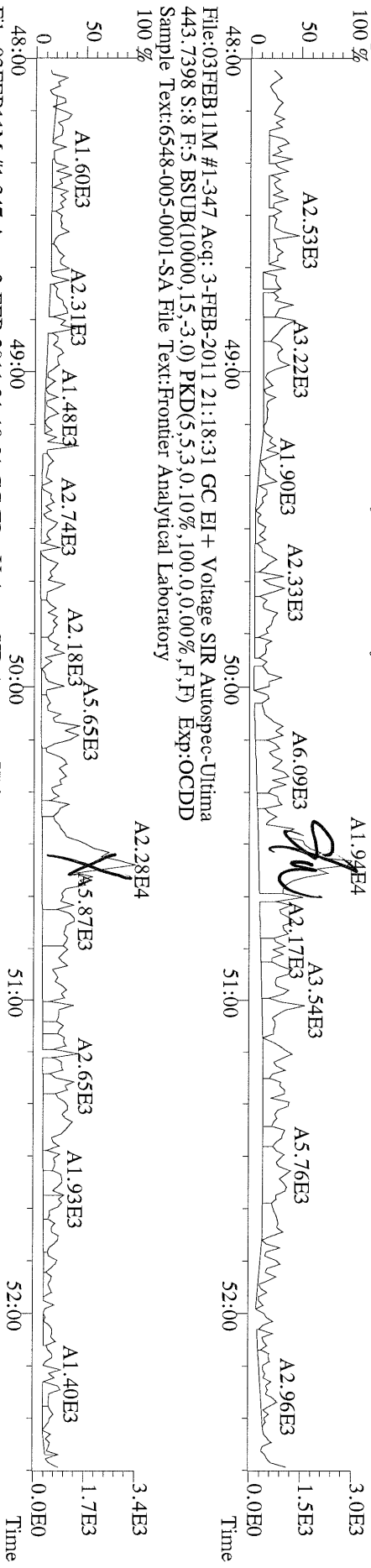
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417.8253 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



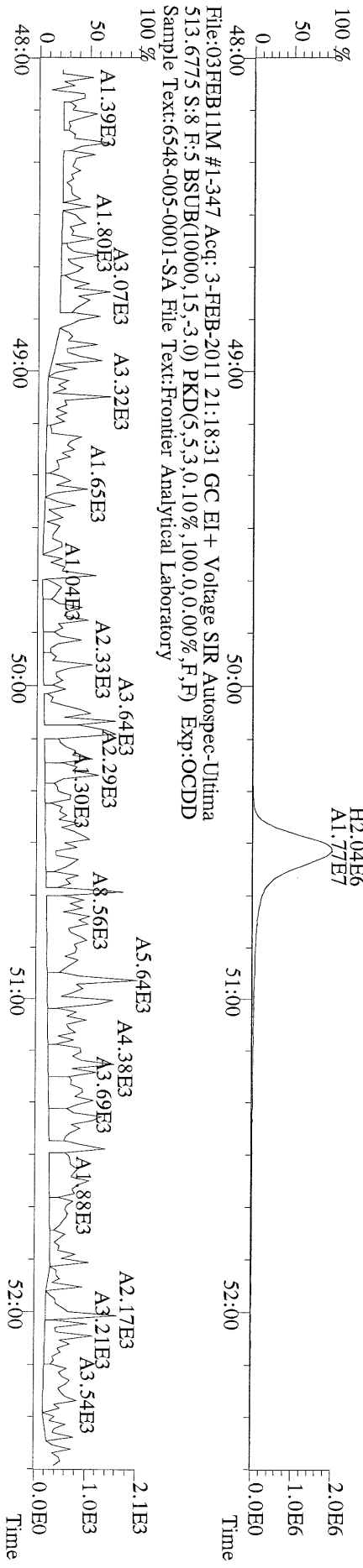
File:03FEB11M #1-541 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:6548-005-0001-SA File Text:Frontier Analytical Laboratory



File:03FEB11M #1-347 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Utima
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:6548-005-0001-SA File Text:Frontier Analytical Laboratory



File:03FEB11M #1-347 Acq: 3-FEB-2011 21:18:31 GC EI+ Voltage SIR Autospec-Utima
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:6548-005-0001-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-1,2,3,4,6,7,8,9-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: ST082310M0

S: 3 Acquired: 23-AUG-10 16:16:35 Cal: PCDDFAL3-8-23-10
Analyte: FAL ID: 1613 CS0 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

RELATIVE RESPONSE (RR)

MEAN
RR Cv
(%RSD)

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

NATIVE ANALYTES	M/Z'S FORMING RATIO	ION ABUNDANCE RATIOS						QC LIMITS
		CS1	CS2	CS3	CS4	CS5	CS6	
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

USEPA - ITD

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

	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-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: 

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 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)	23:04
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 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: 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

Name	Resp	RA	RT	RRF	WHO 1998 Tox:		WHO 2005 Tox:		DL	114	
					Conc	Qual	Fac Noise-1	Noise-2			
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						
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

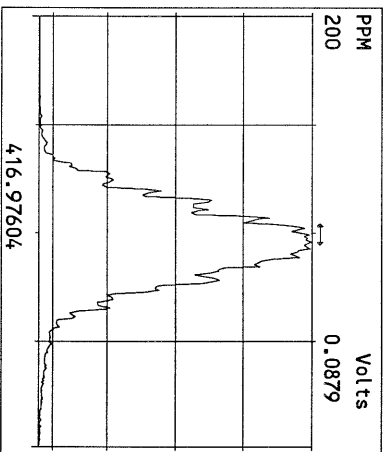
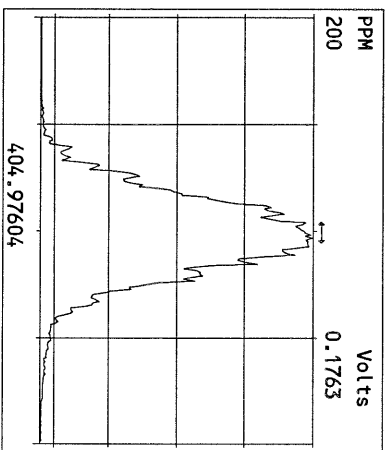
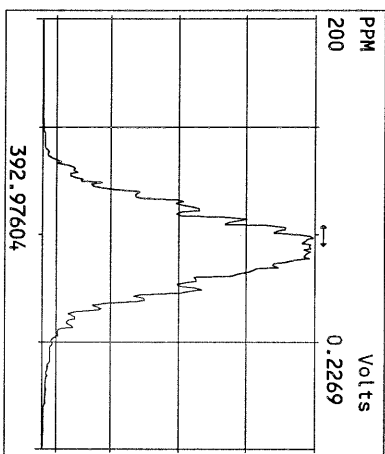
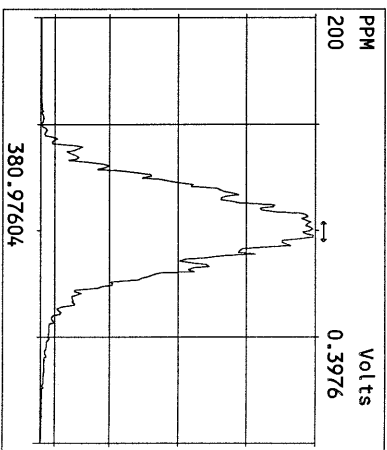
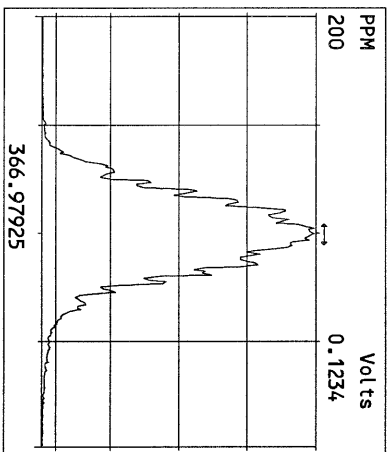
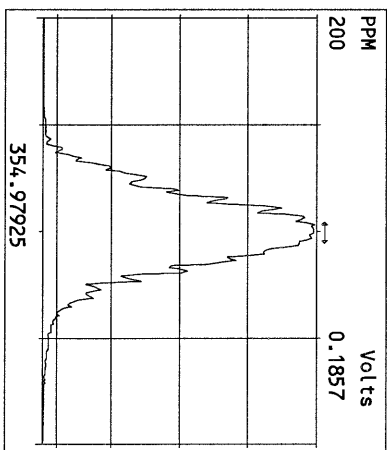
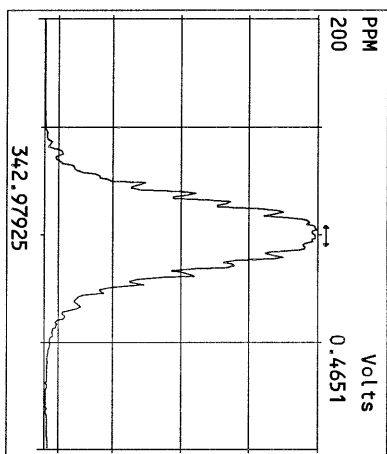
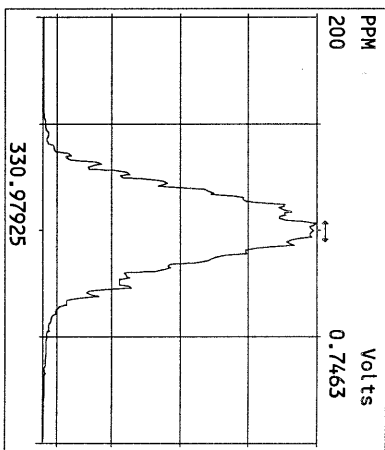
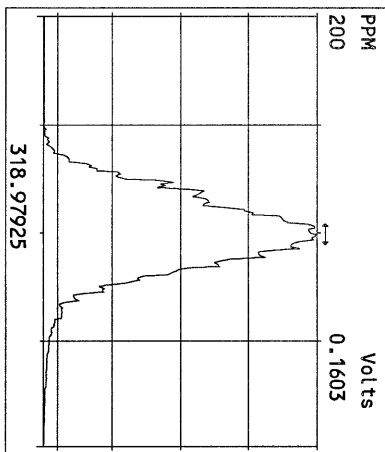
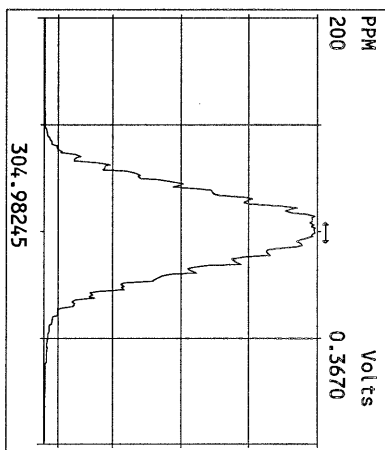
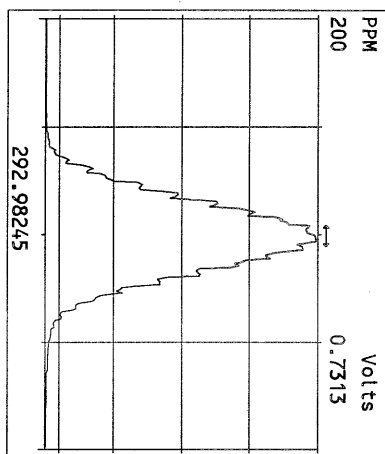
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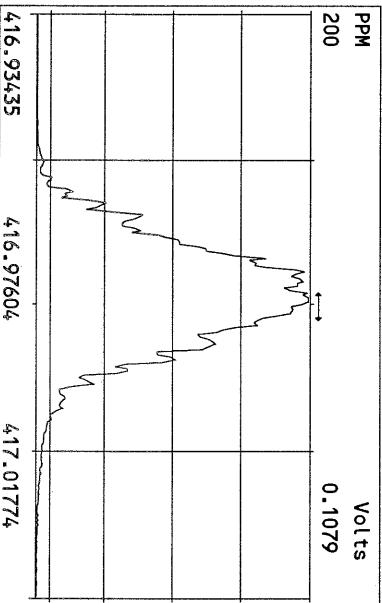
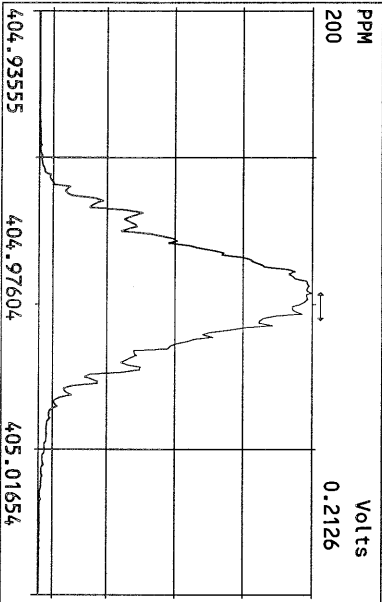
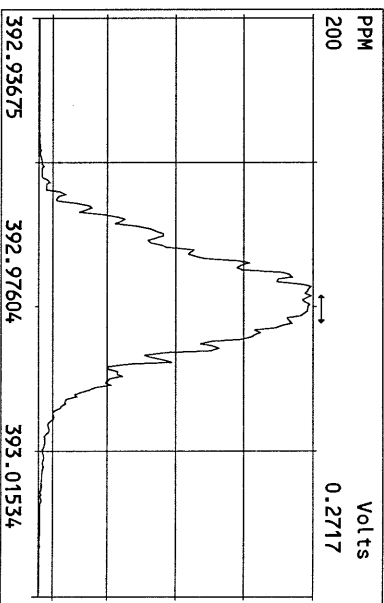
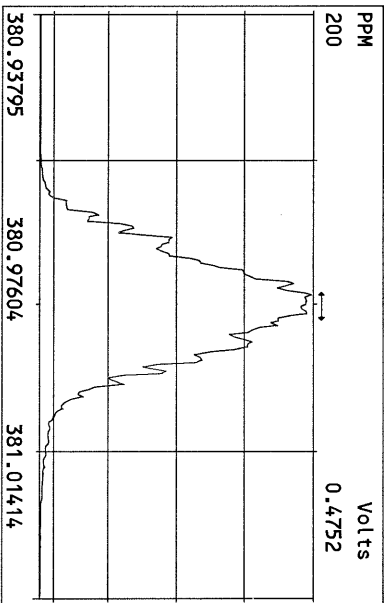
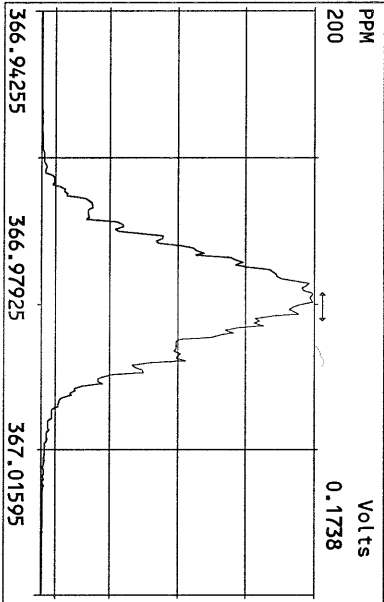
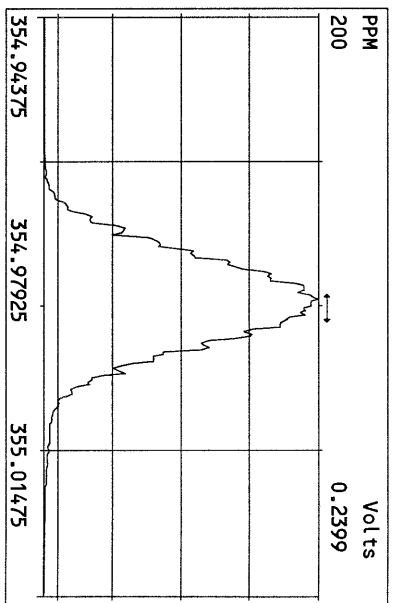
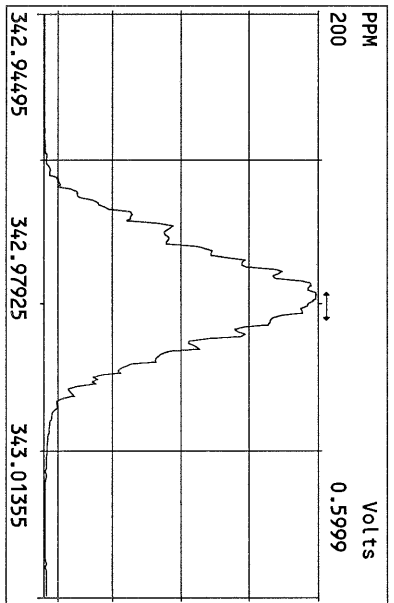
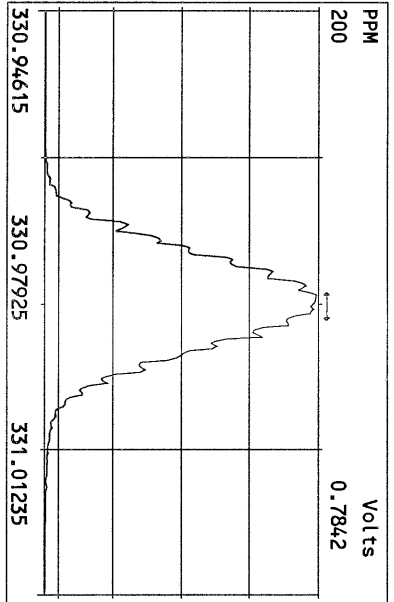
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23AUG10M 10	ST082310M6	1613 CS3 100511J	23-AUG-10 22:44:05	ST082310M3	ST082310M6	BS
23AUG10M 11	ST082310M7	8280 CS3 071227J	23-AUG-10 23:39:28	ST082310M7	ST082310M8	BS
23AUG10M 12	SB082310M2	Solvent Blank	24-AUG-10 00:34:46	ST082310M7	ST082310M8	BS
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23AUG10M 20	6263-007-0001-SA	MDL 7	24-AUG-10 07:57:23	ST082310M7	ST082310M8	BS
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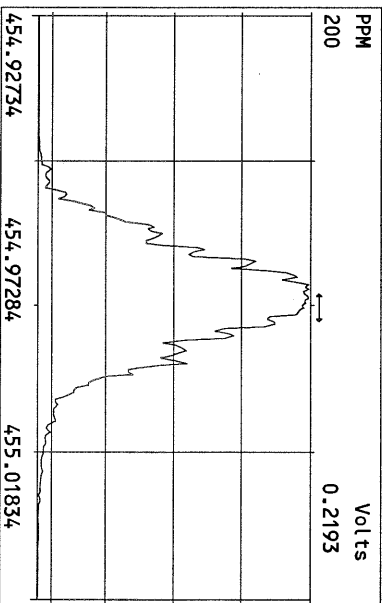
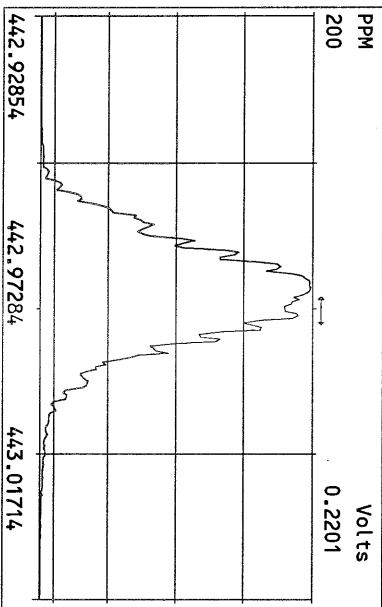
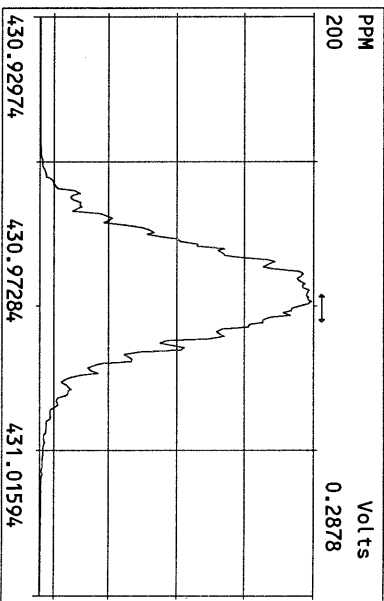
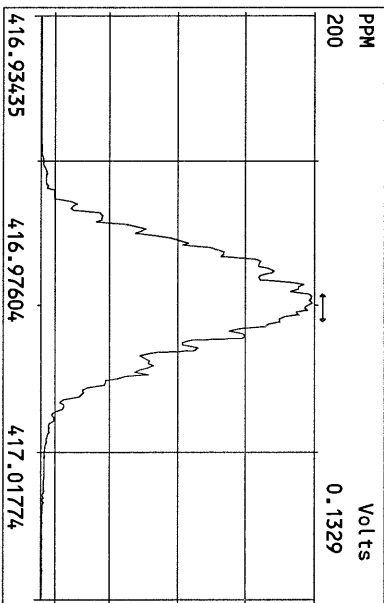
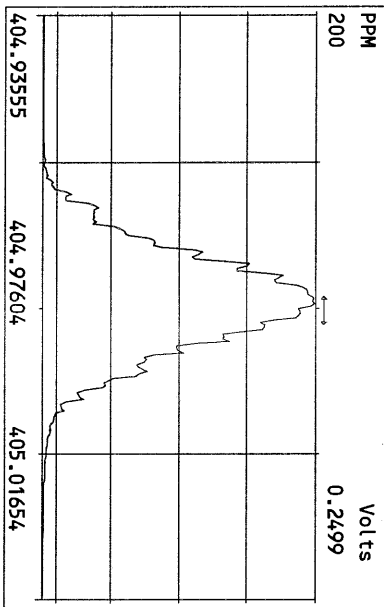
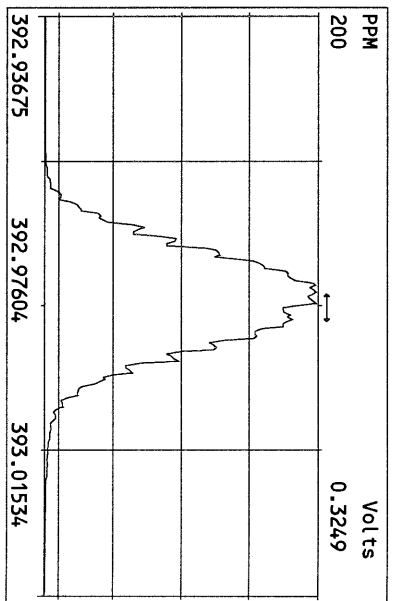
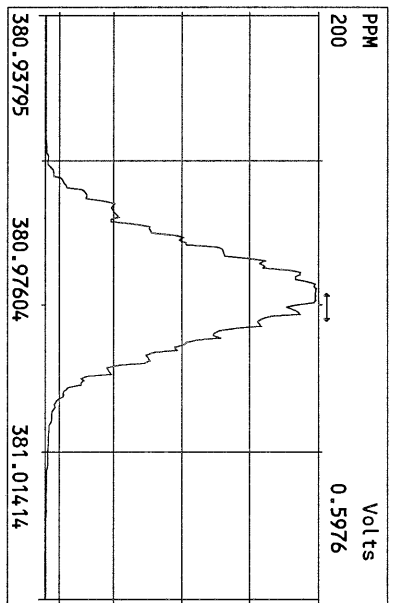
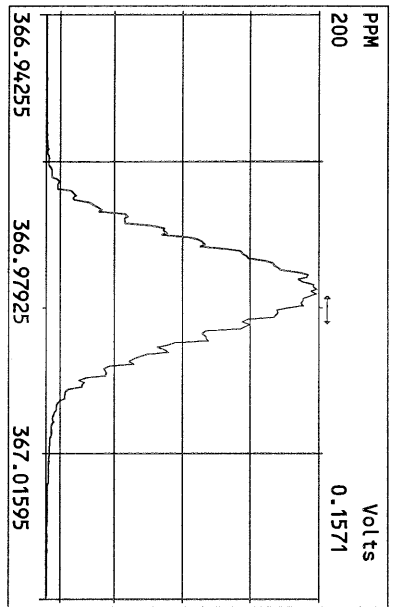
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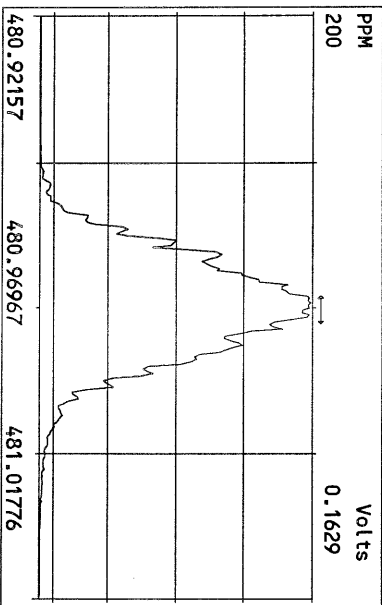
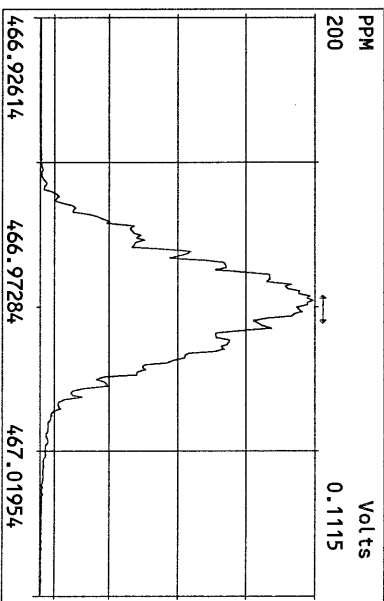
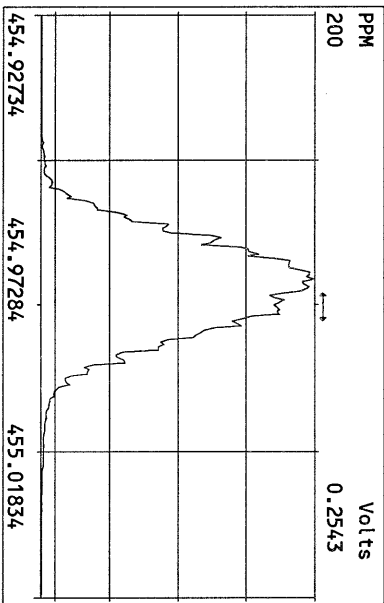
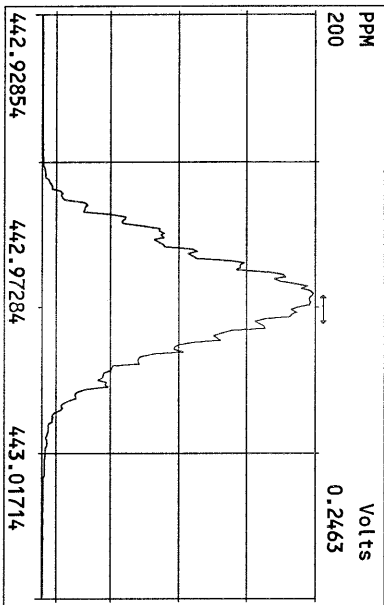
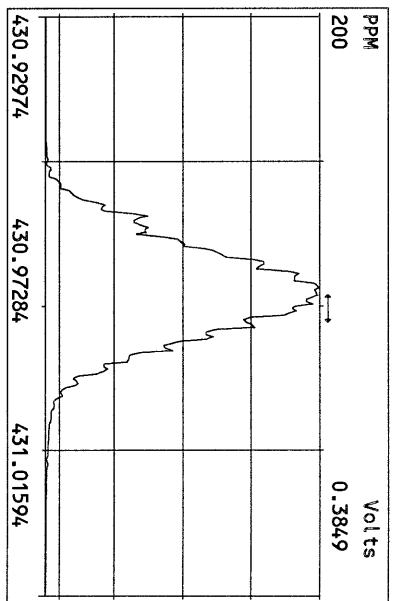
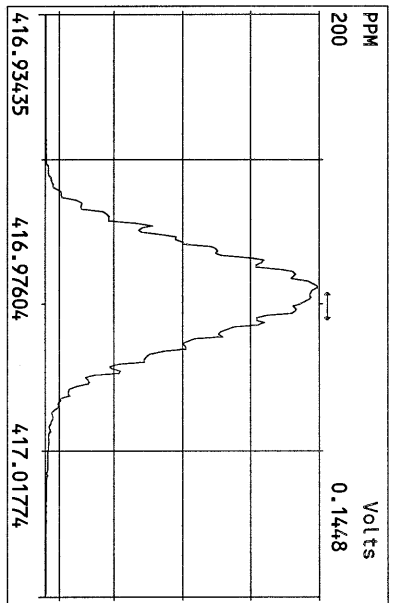
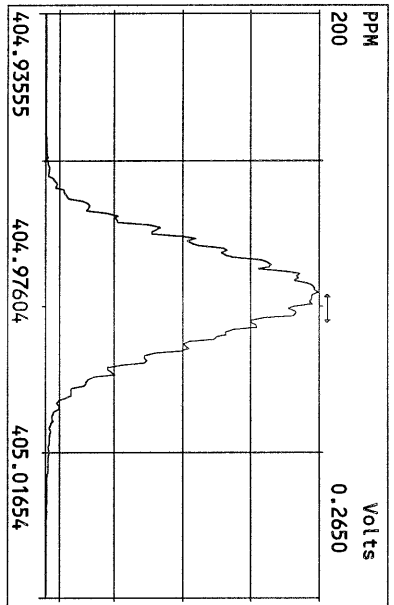
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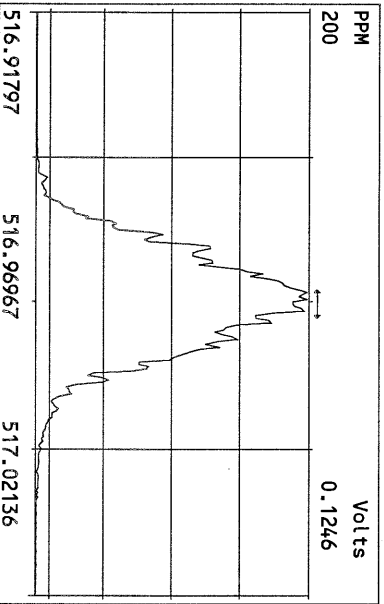
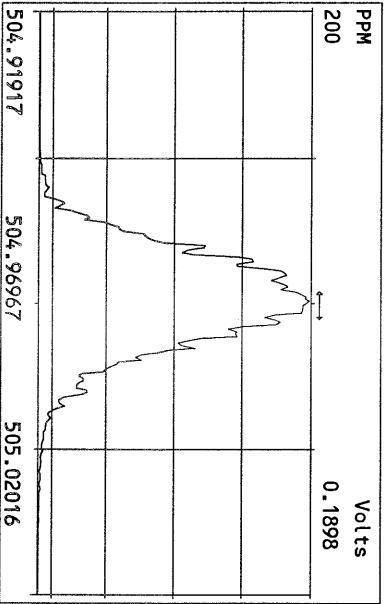
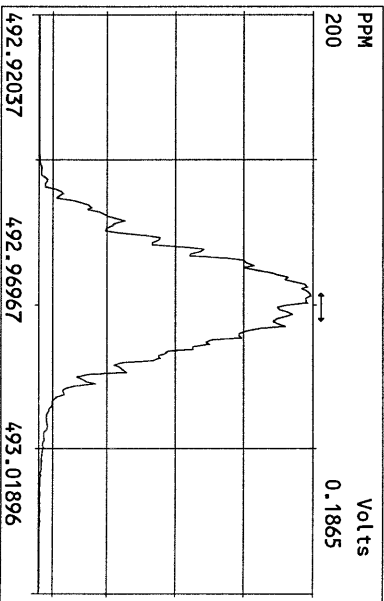
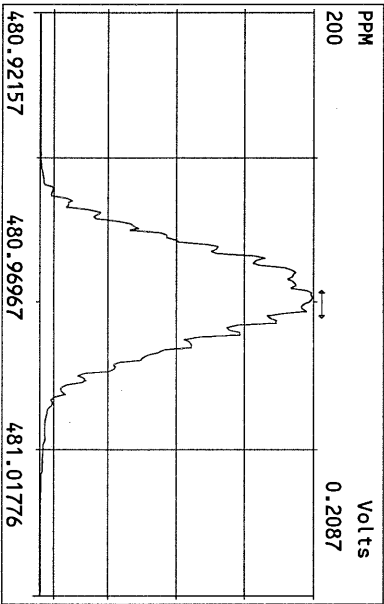
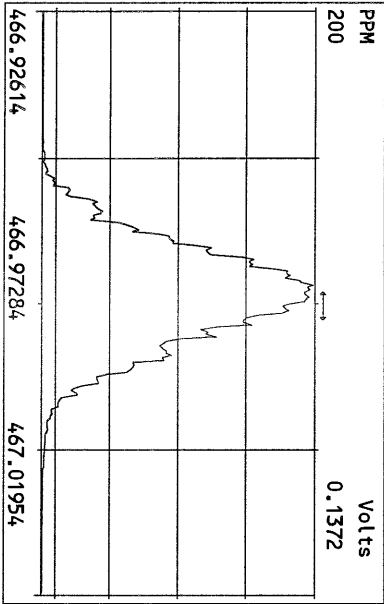
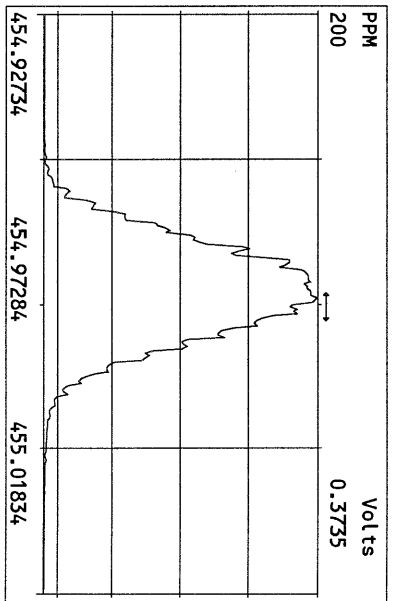
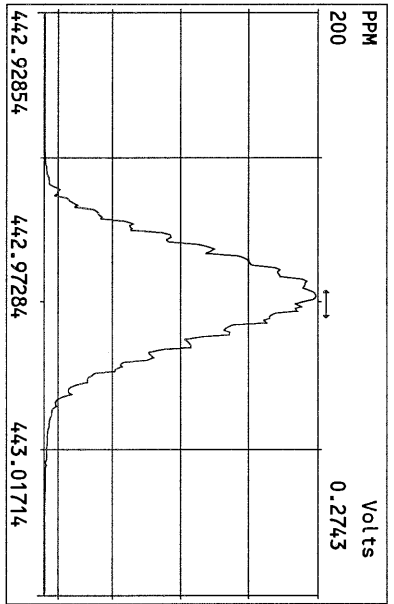
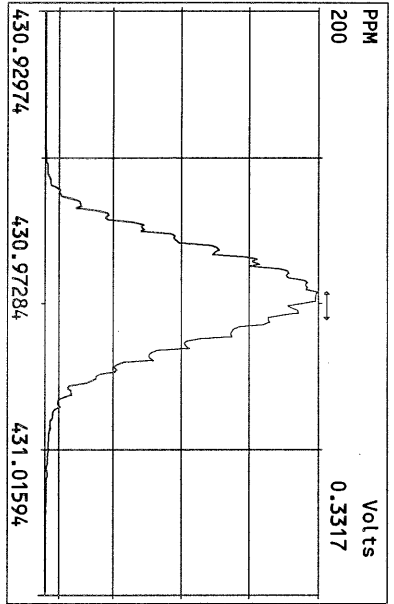
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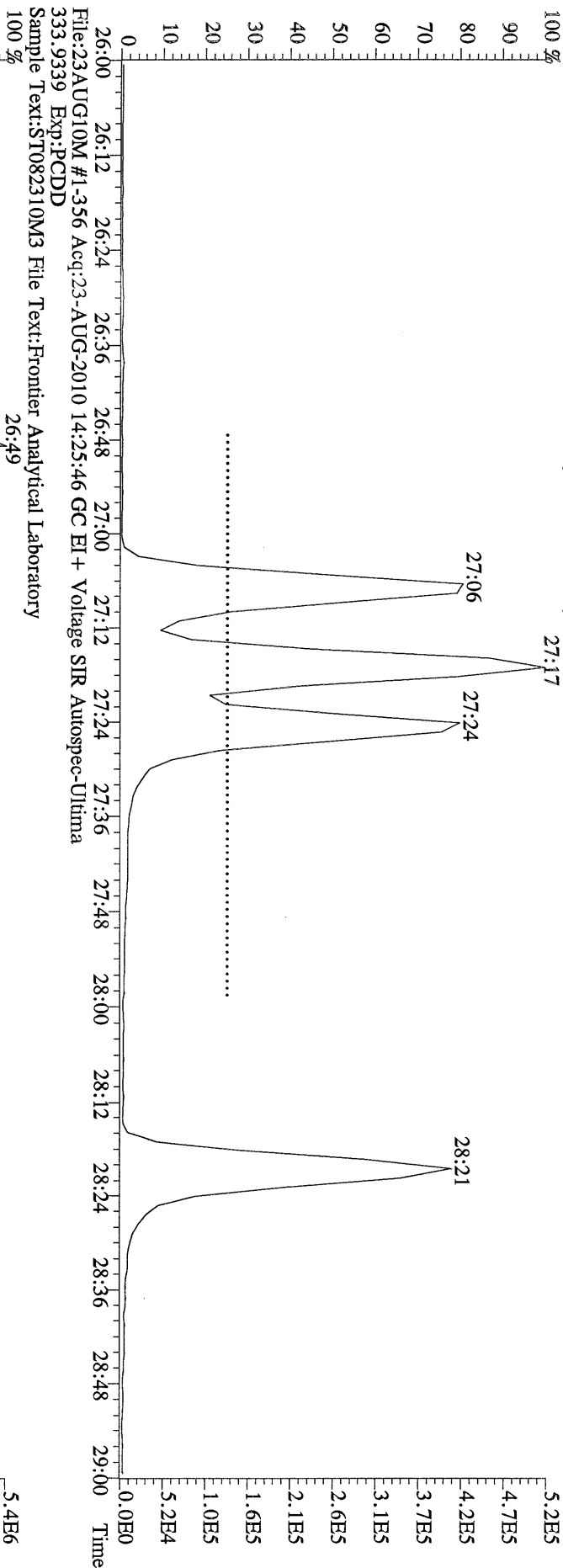




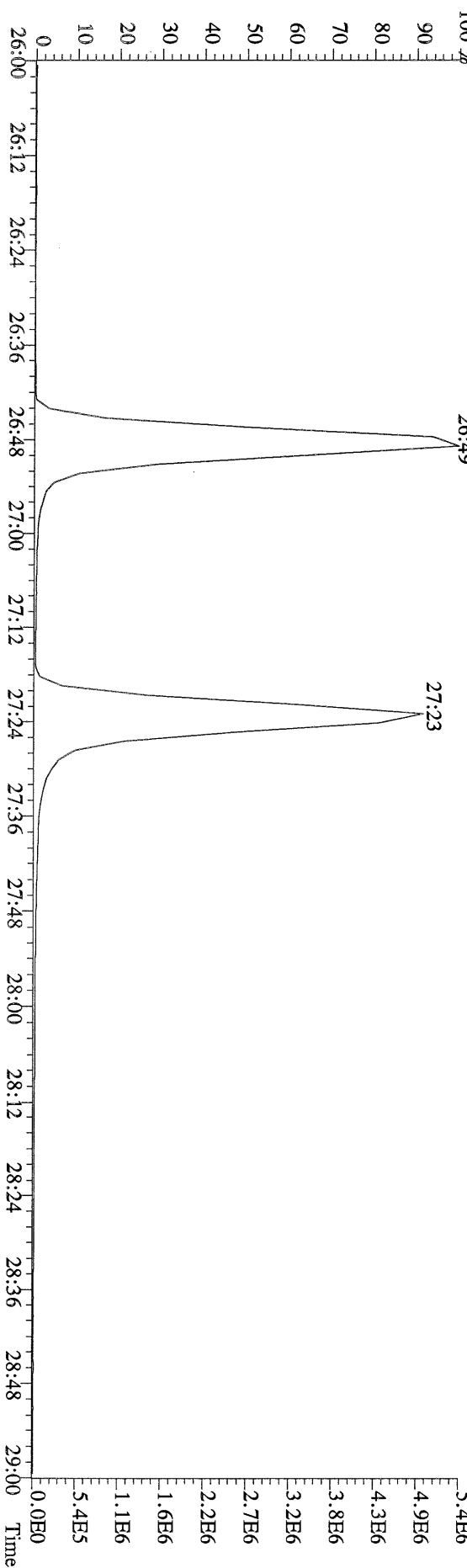




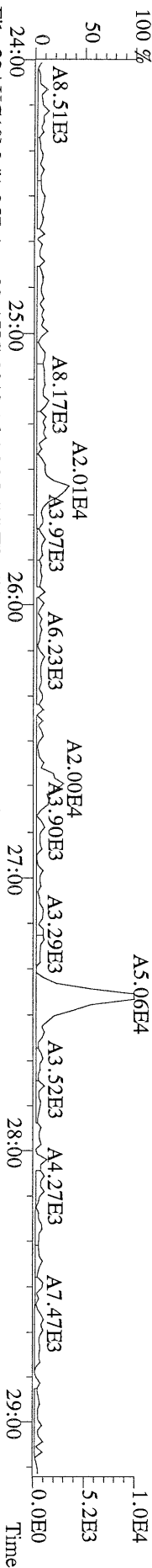
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319,8965 Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



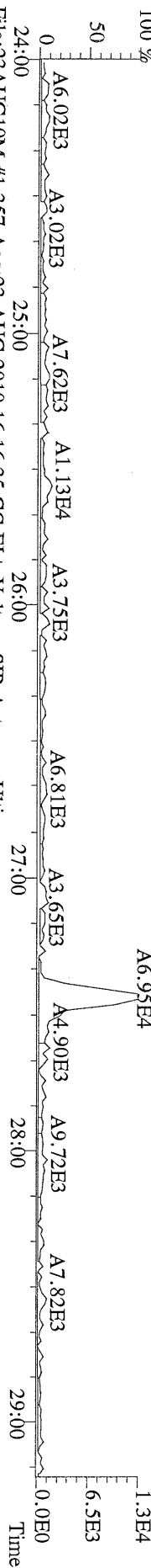
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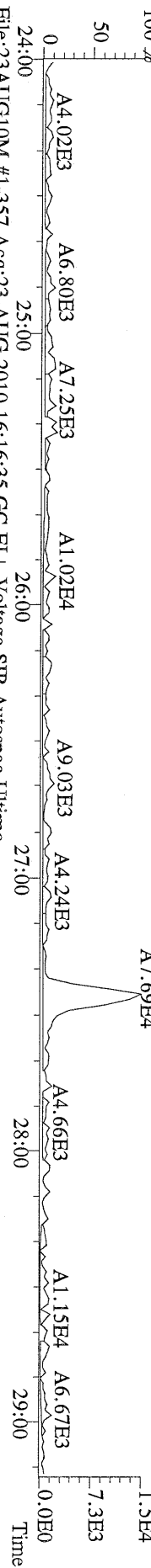
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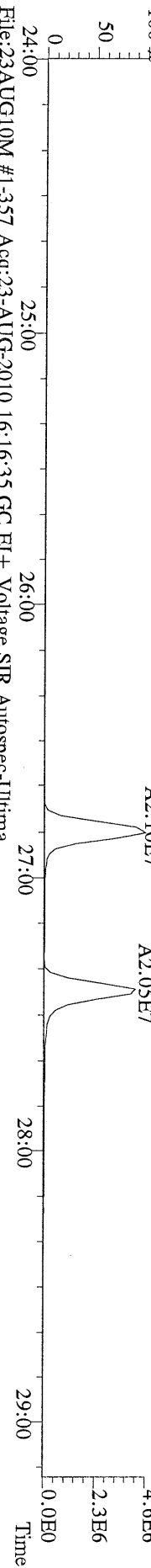
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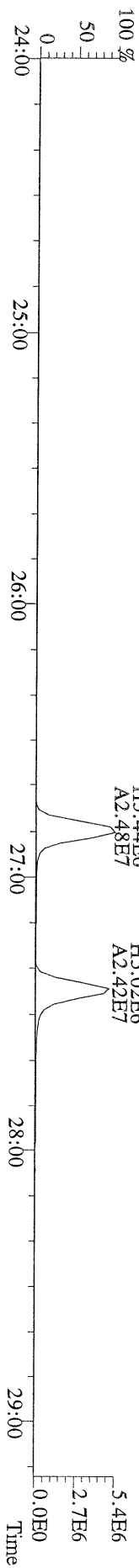
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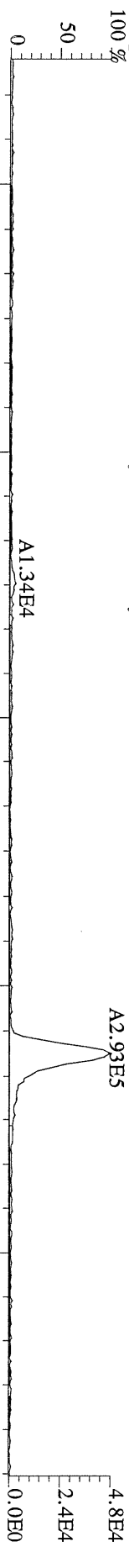
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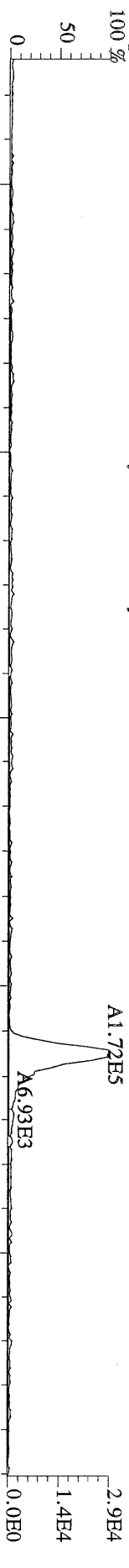
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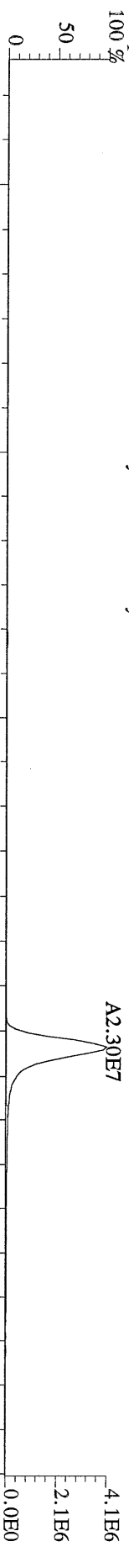
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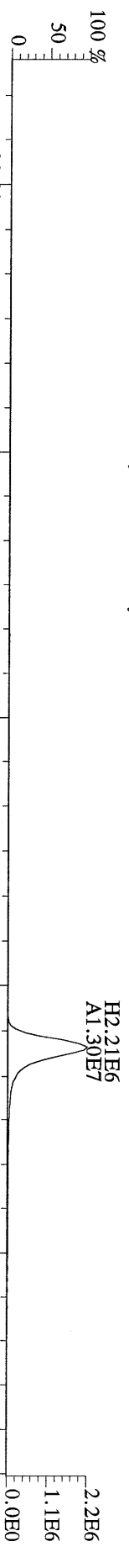
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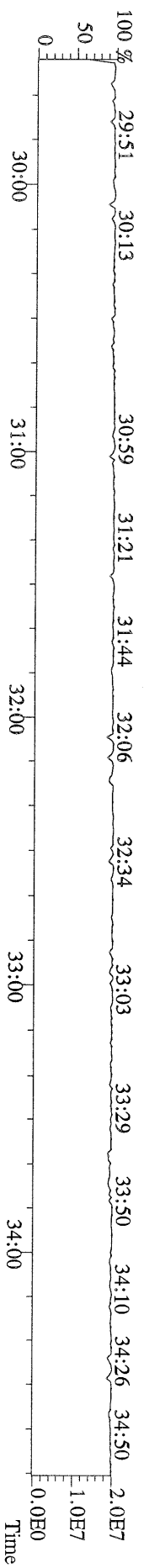
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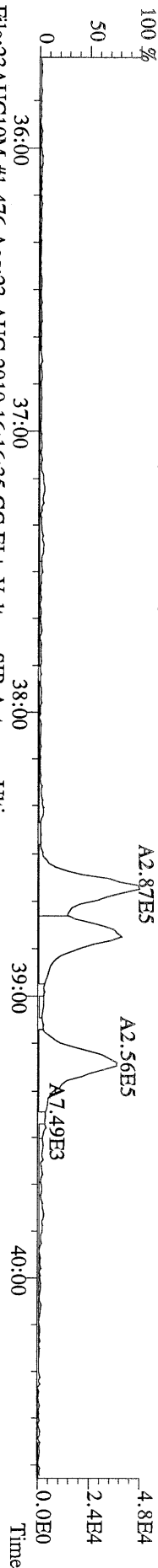
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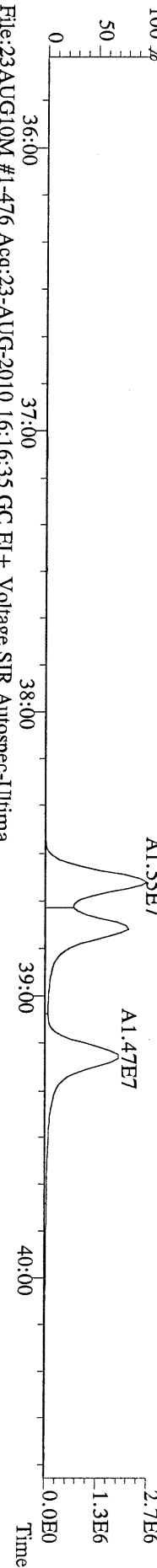
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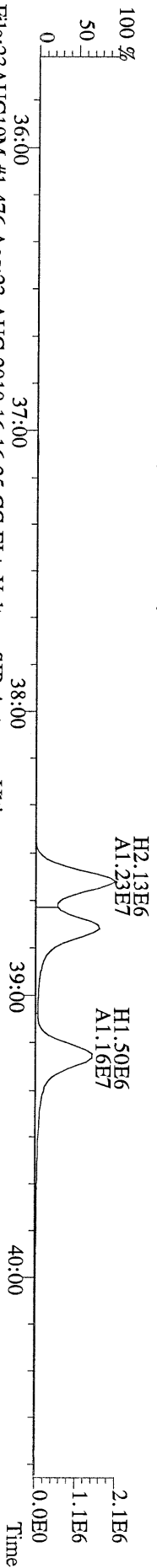
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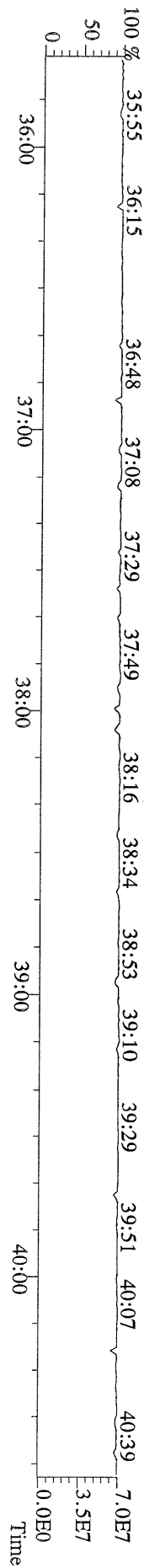
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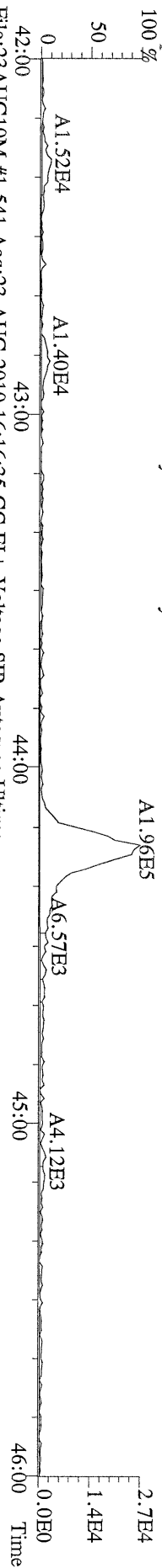
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403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
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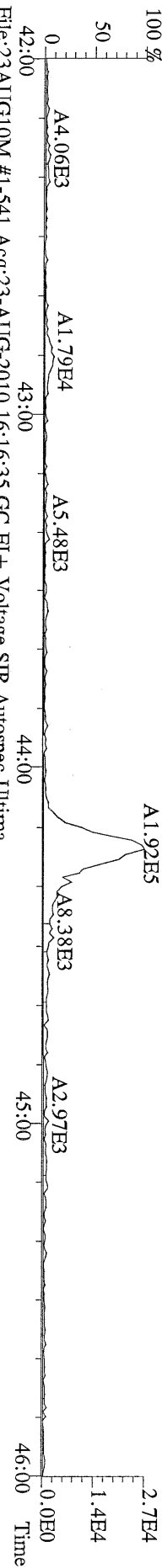
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380.9760 S:3 F:3 Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



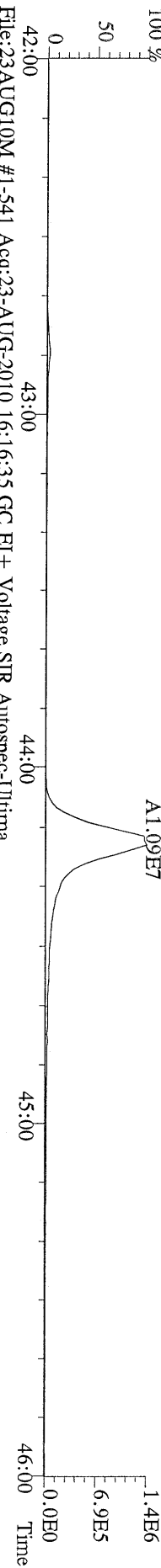
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423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



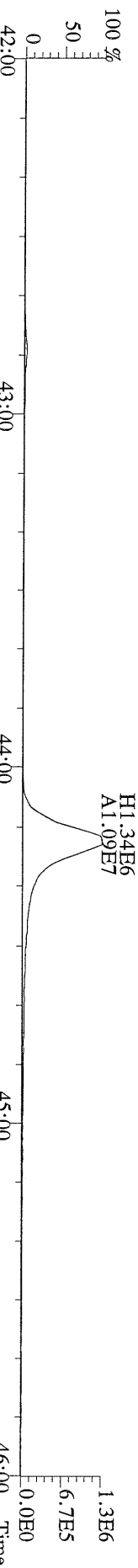
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425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100,0,0.00%,F,F) Exp:PCDD
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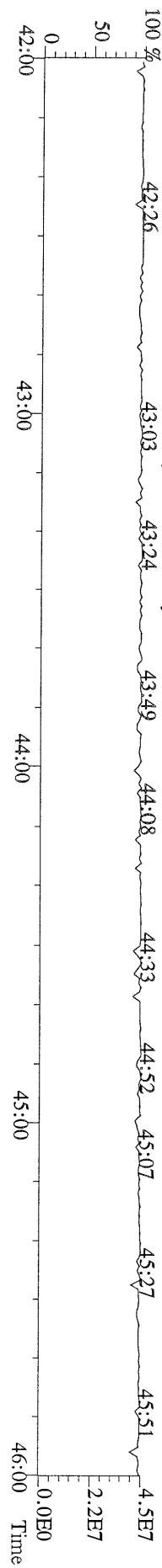
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Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



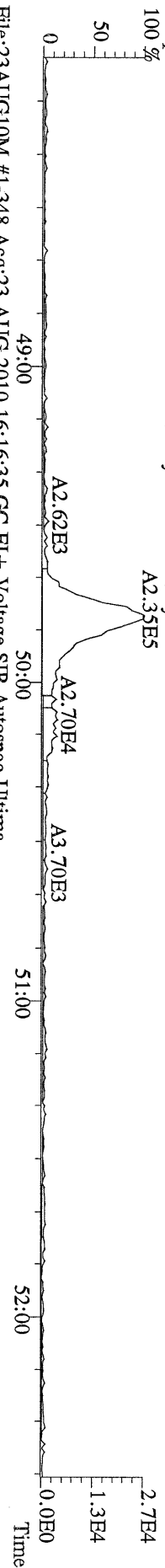
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437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100,0,0.00%,F,F) Exp:PCDD
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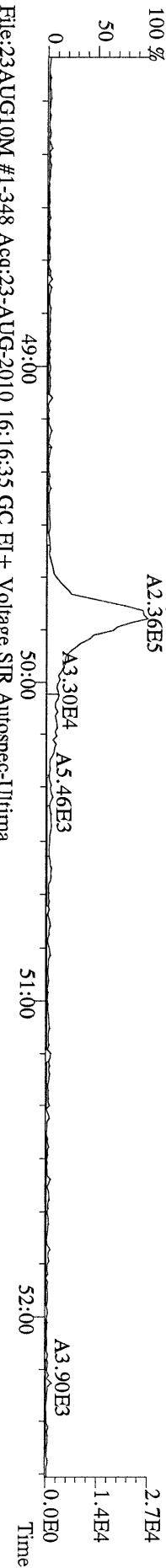
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430.9728 S:3 F:4 Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



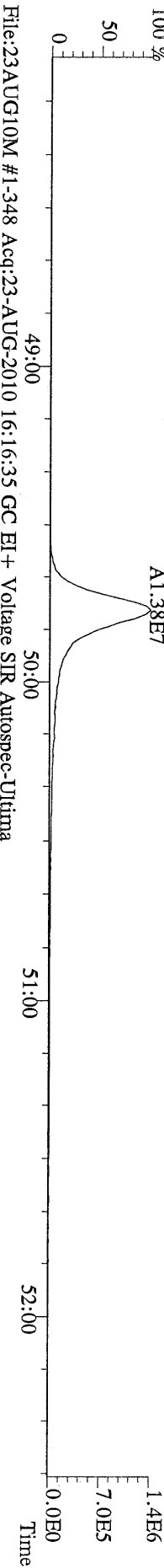
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457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Fronier Analytical Laboratory



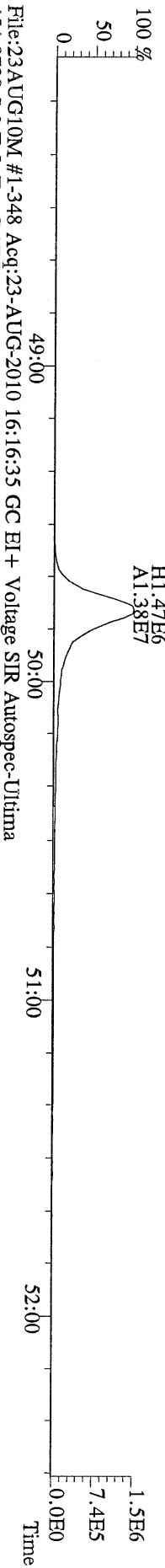
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459.7348 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Fronier Analytical Laboratory



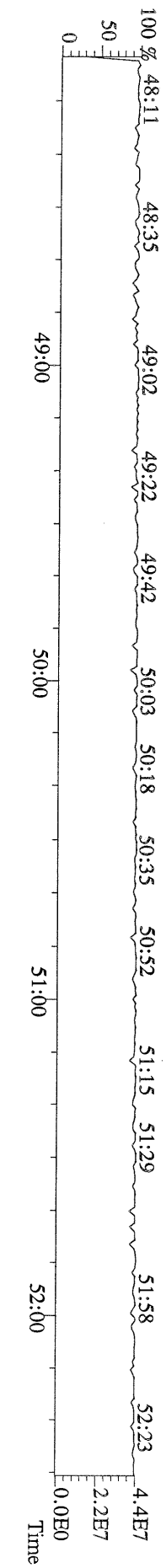
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469.7780 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Fronier Analytical Laboratory



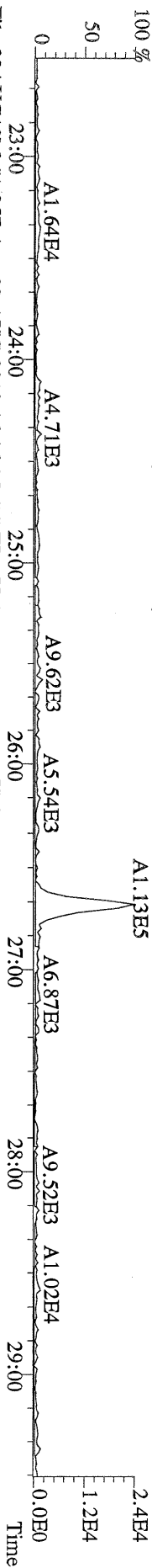
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Sample Text:ST082310M0 File Text:Fronier Analytical Laboratory



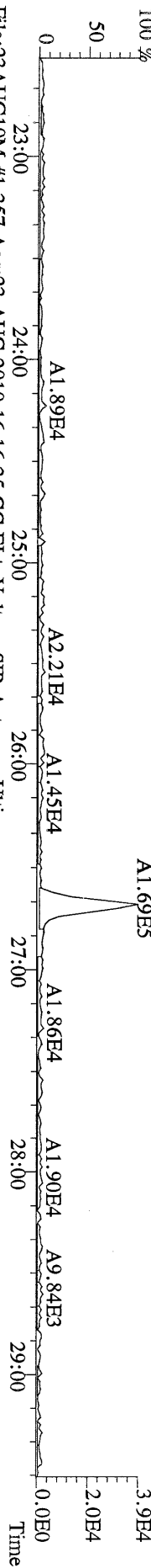
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Sample Text:ST082310M0 File Text:Fronier Analytical Laboratory



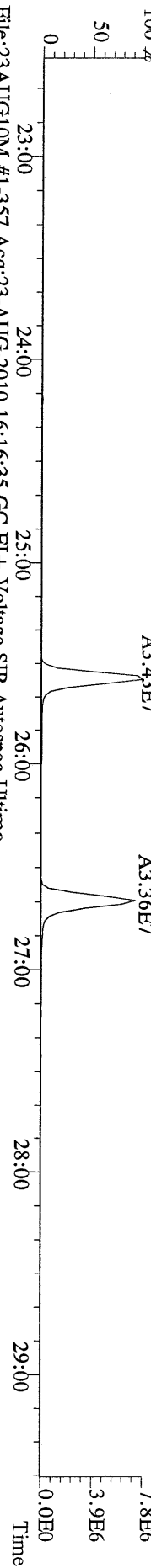
File:23AUG10M #1-357 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
 303.9016 S:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



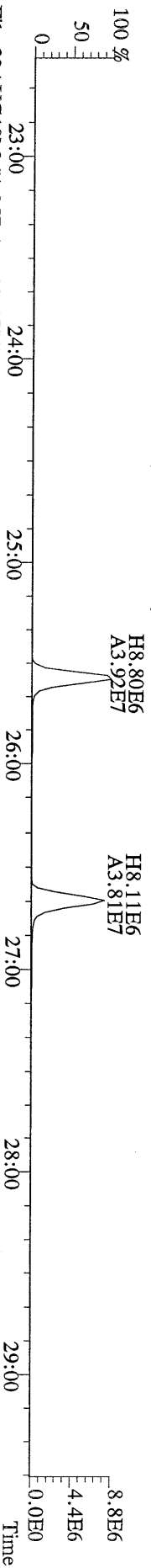
File:23AUG10M #1-357 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Ultima
 305.8987 S:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



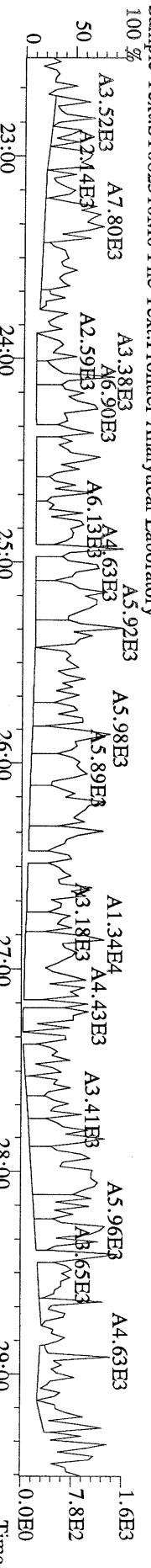
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 315.9419 S:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



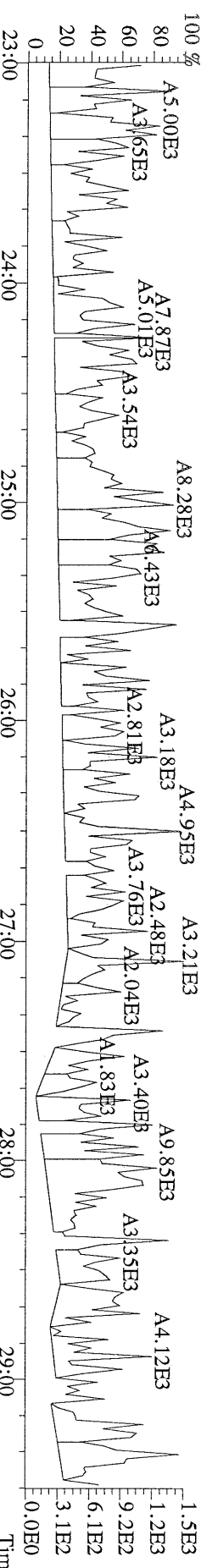
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 317.9389 S:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



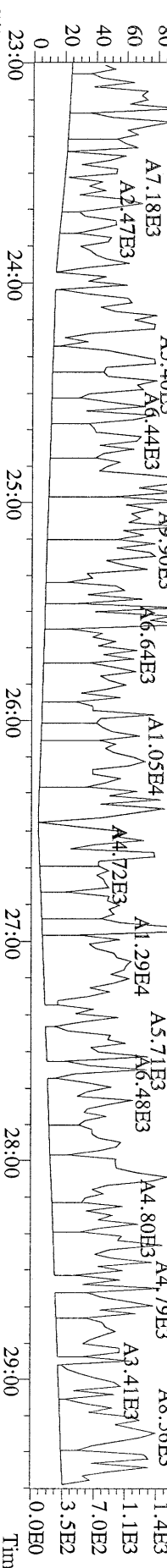
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 375.8364 S:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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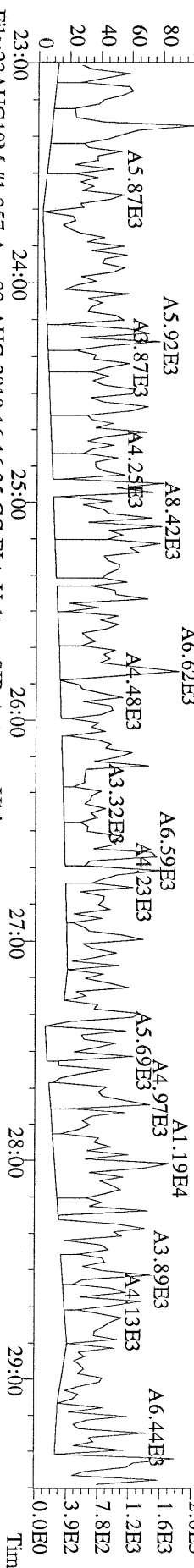
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 339.8597 S:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



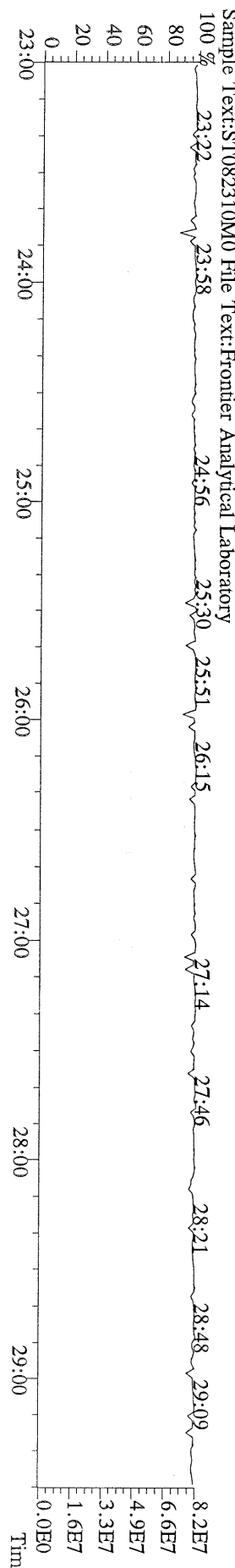
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 341.8568 S:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



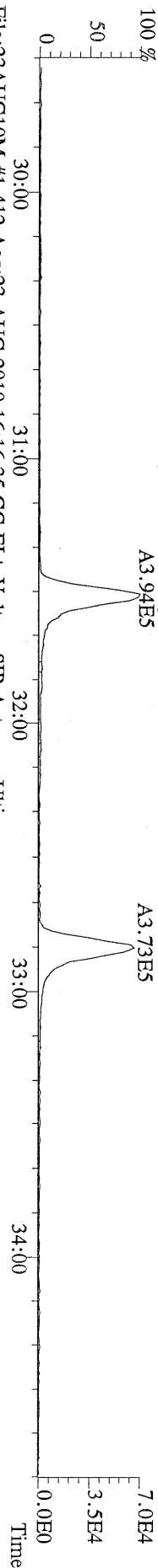
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 409.7974 S:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



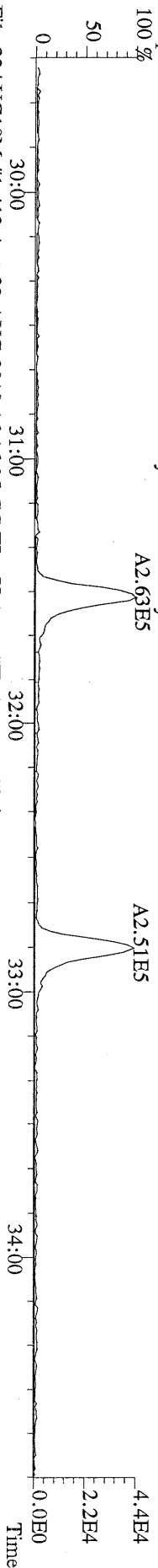
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 330.9792 S:3 Exp:PCDD
 Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



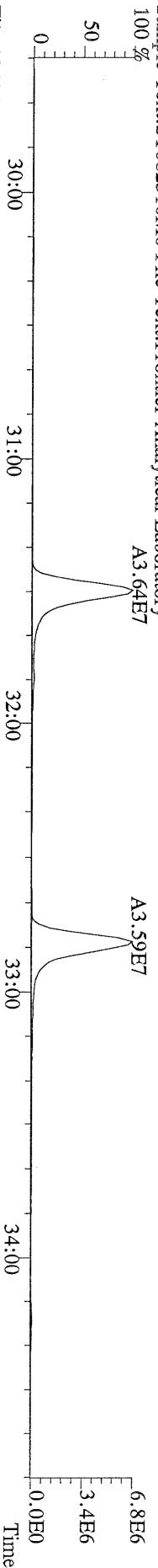
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339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



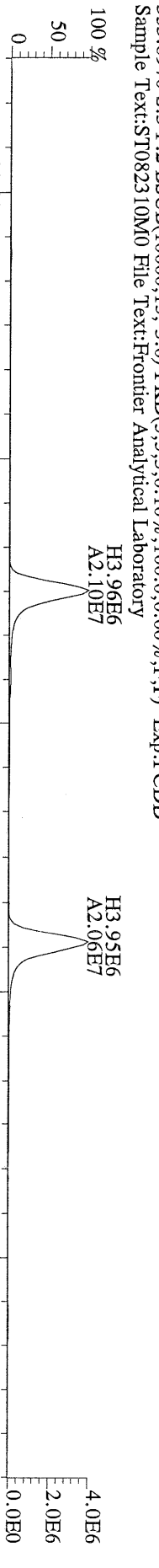
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341.8568 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



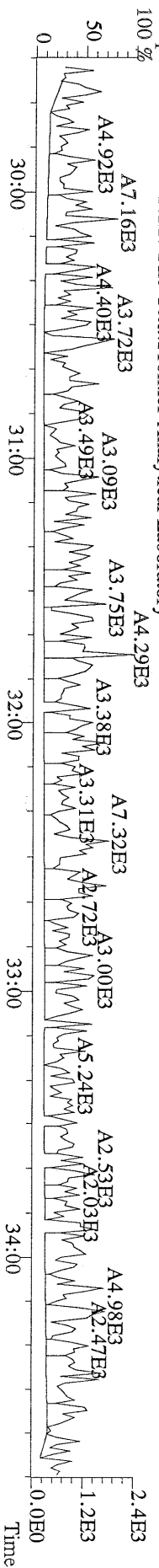
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351.9000 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



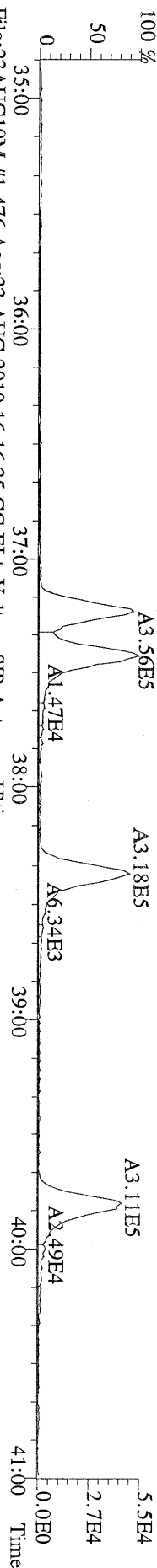
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353.8970 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



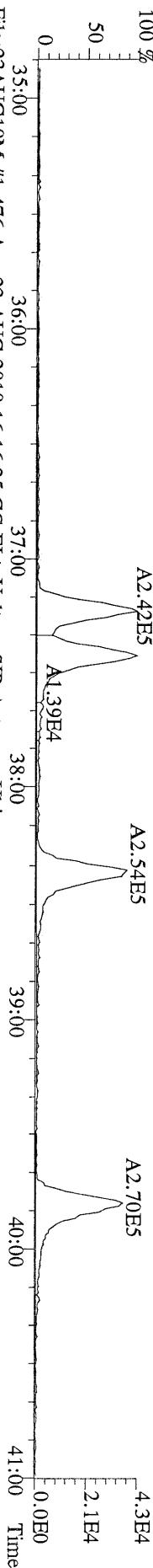
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409.7974 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
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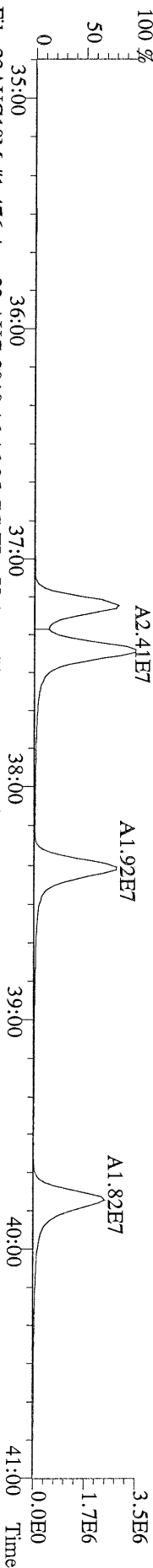
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373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
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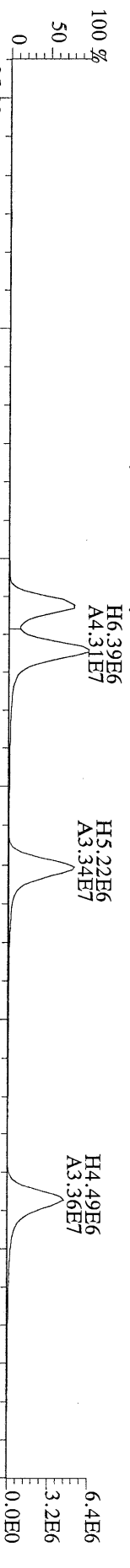
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375.8178 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
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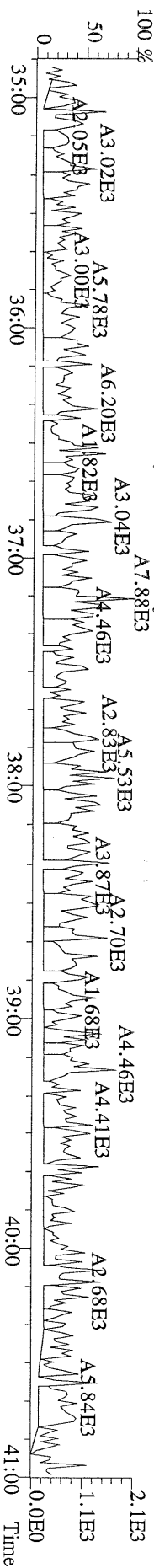
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383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



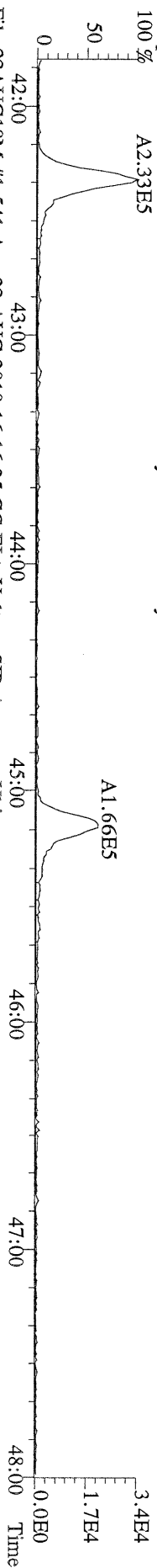
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Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



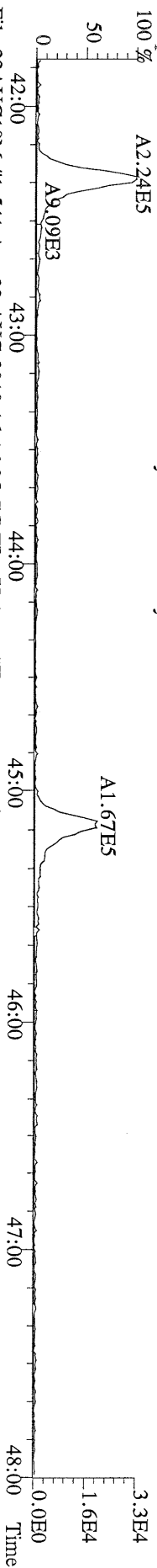
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Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



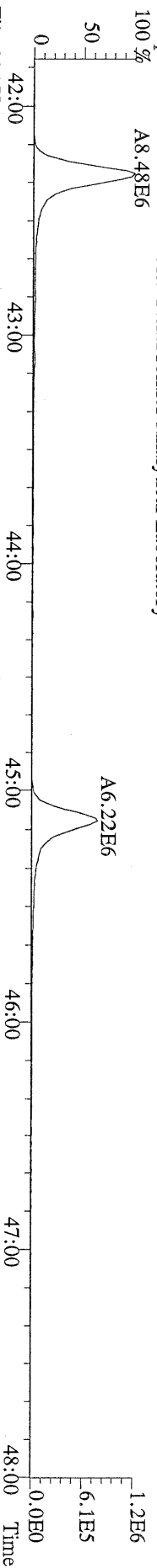
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407.7818 S:3 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory
100 % A2.33E5



File:23AUG10M #1-541 Acq:23-AUG-2010 16:16:35 GC EI+ Voltage SIR Autospec-Utima
409.7788 S:3 F:4 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
100 % A2.24E5



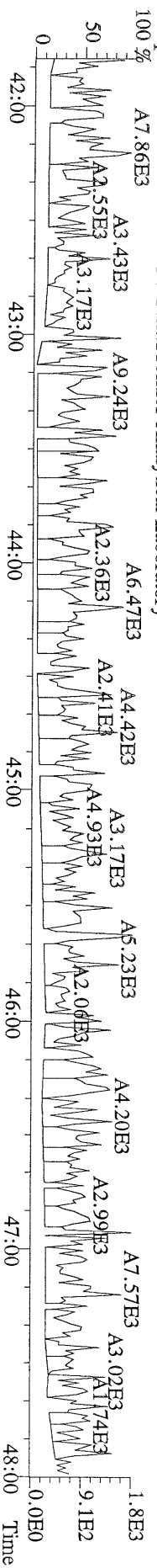
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Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory
100 % A8.48E6



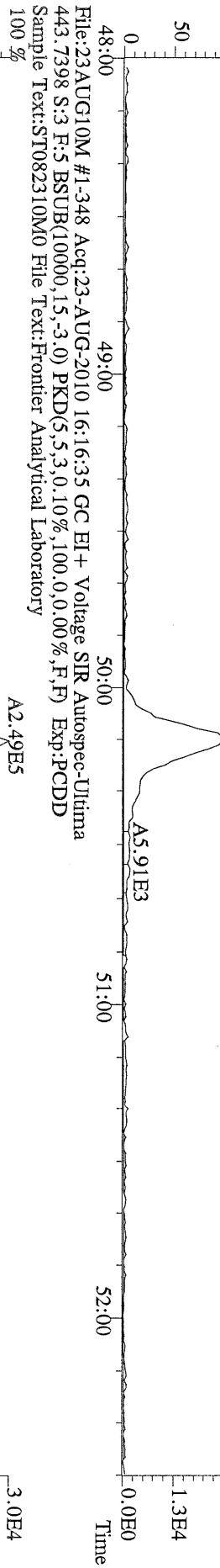
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Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



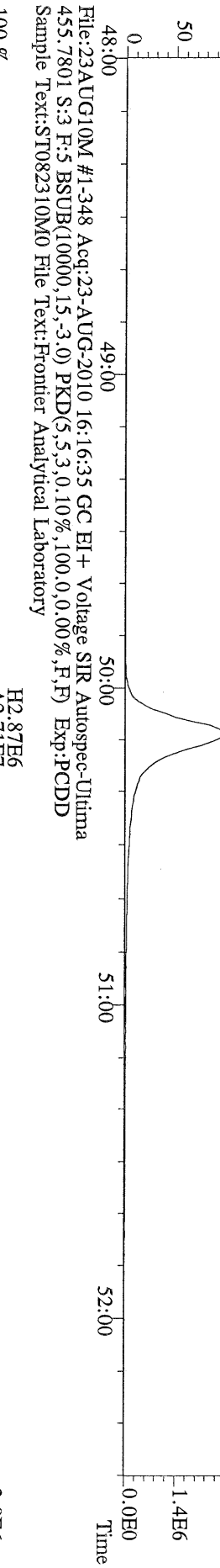
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479.7165 S:3 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



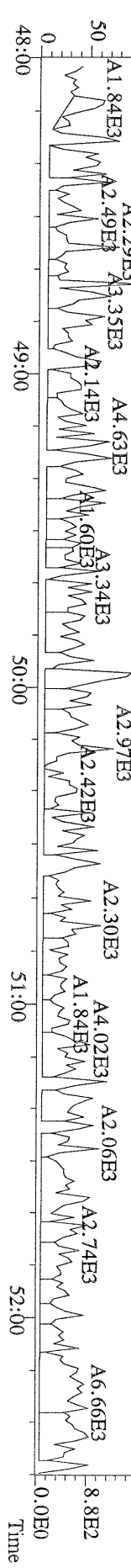
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441.7428 S:3 F:5 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



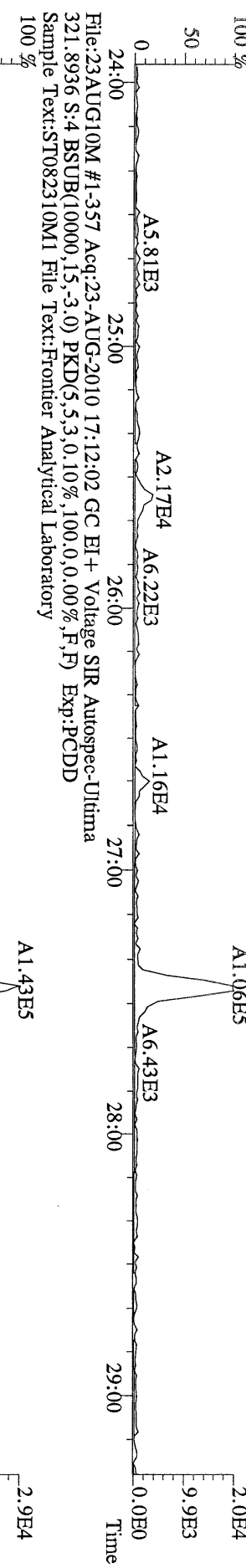
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453.7831 S:3 F:5 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



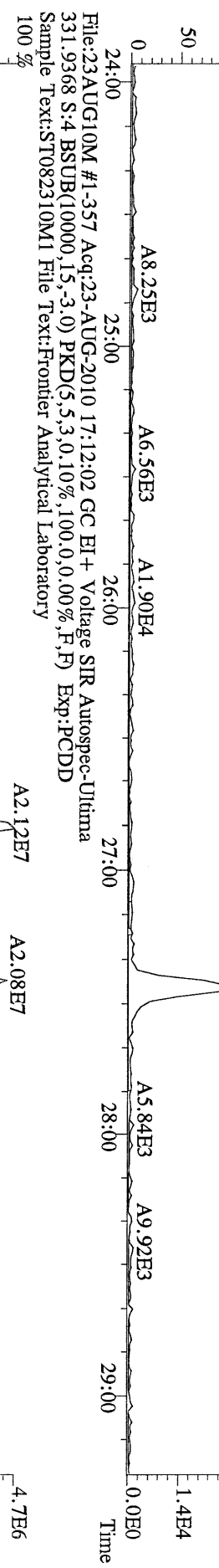
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513.6775 S:3 F:5 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M0 File Text:Frontier Analytical Laboratory



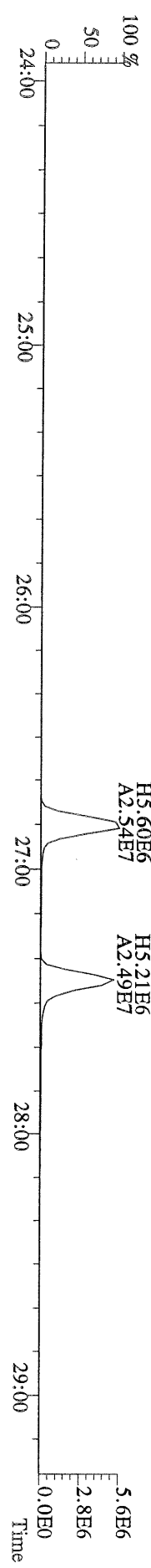
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319.8965 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



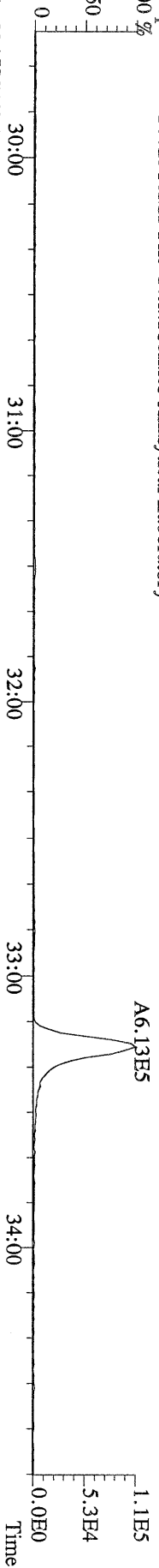
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327.8847 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



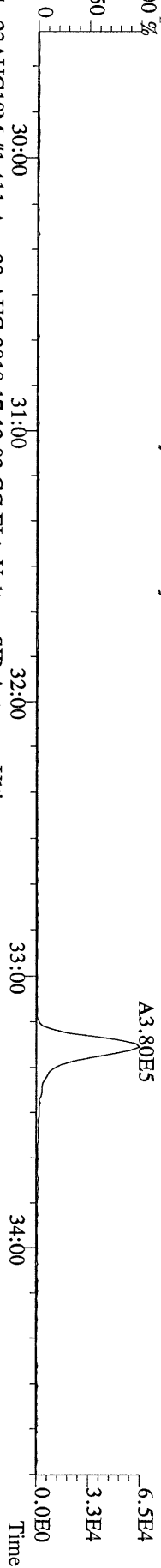
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333.9339 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



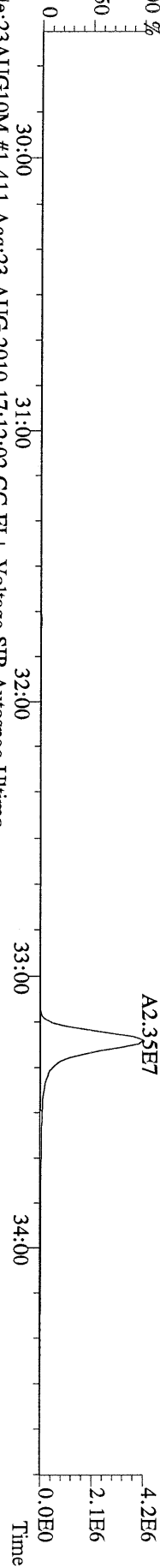
File:23AUG10M #1-411 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Utima
355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory
100 %



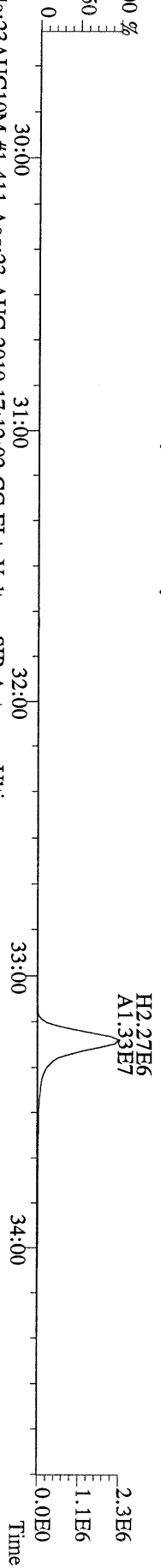
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357.8517 S:4 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory
100 %



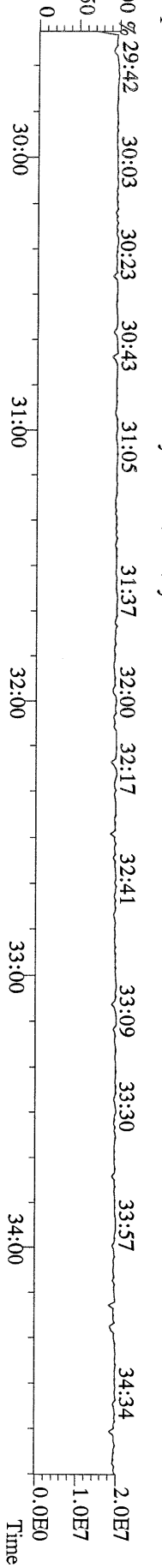
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367.8949 S:4 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory
100 %



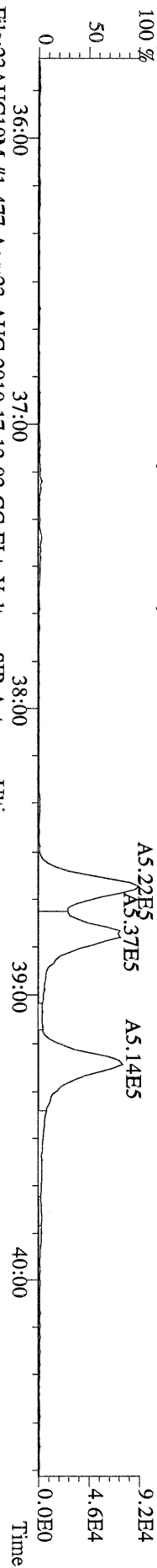
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369.8919 S:4 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



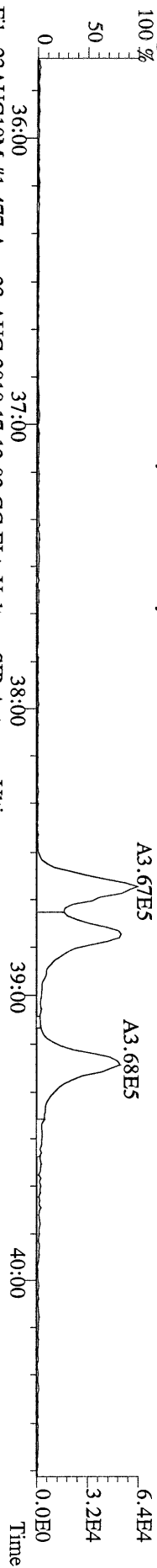
File:23AUG10M #1-411 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Utima
366.9792 S:4 F:2 Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



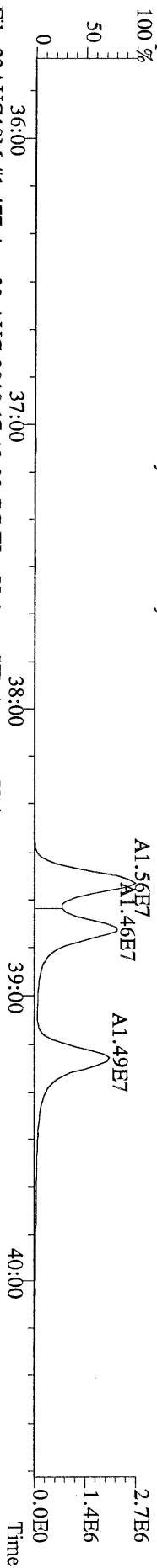
File:23AUG10M #1-477 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



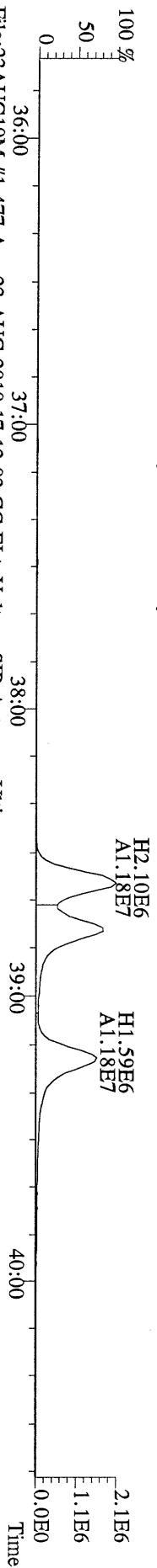
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391.8127 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



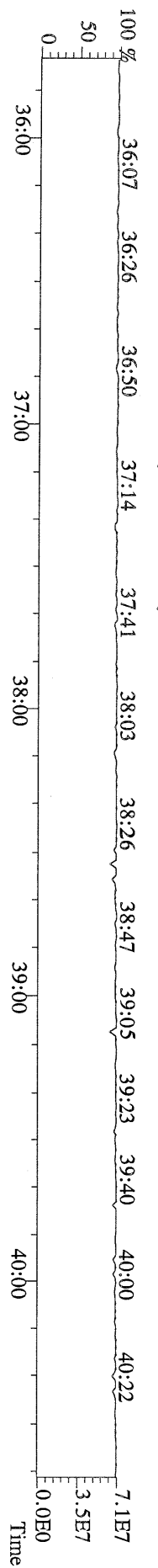
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401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



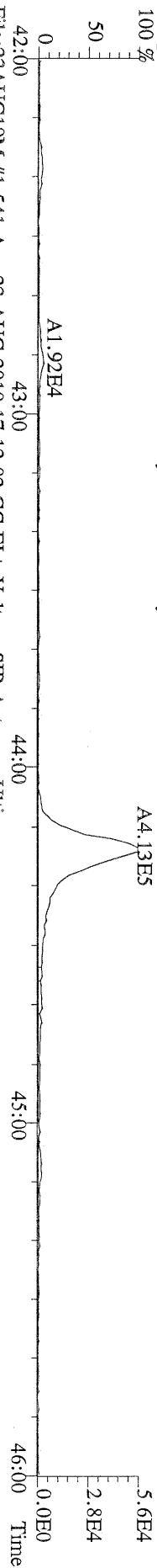
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403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



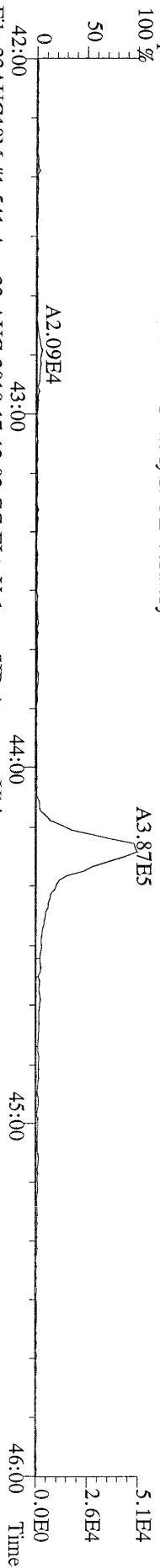
File:23AUG10M #1-477 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:4 F:3 Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



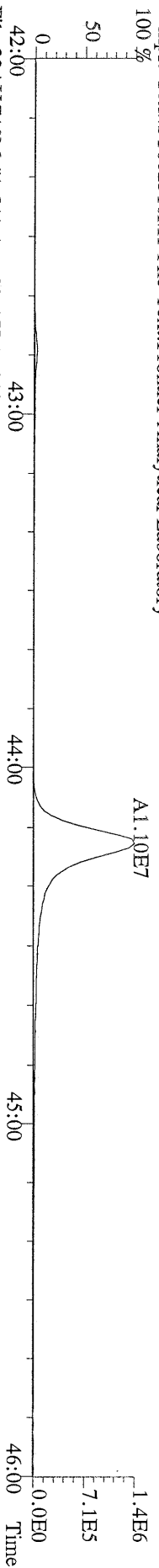
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423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory
100 %



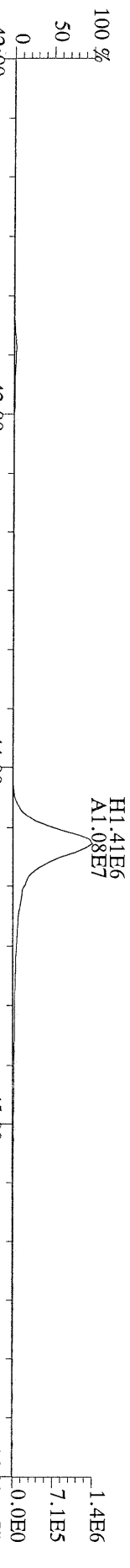
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425.7737 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory
100 %



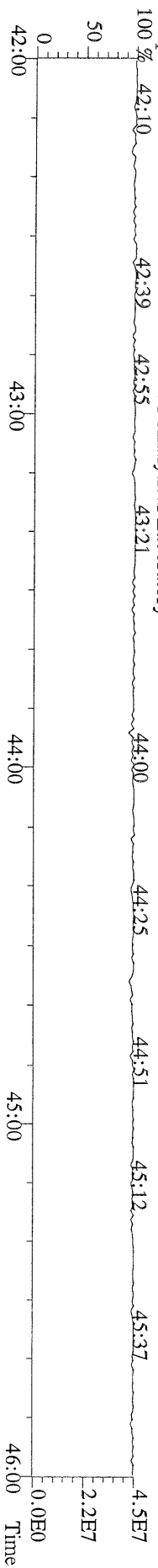
File:23AUG10M #1-541 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory
100 %



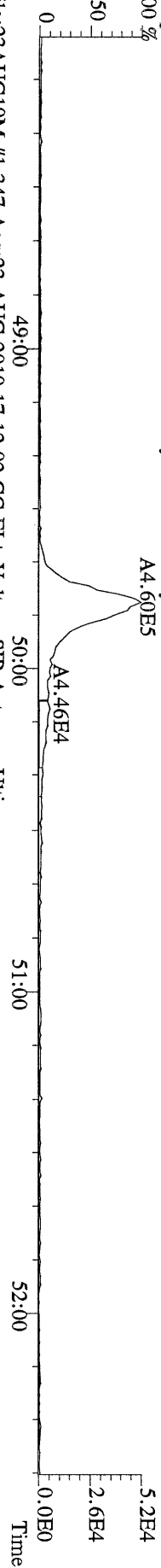
File:23AUG10M #1-541 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



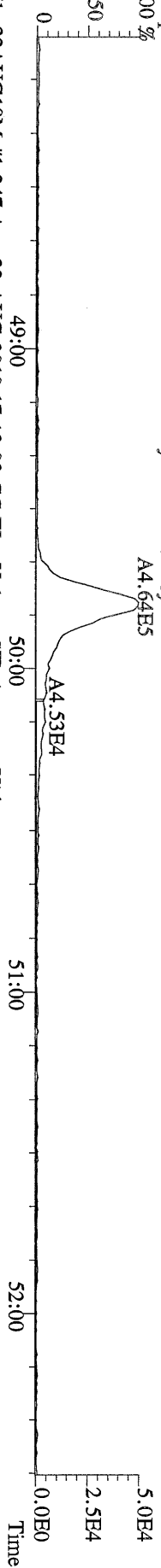
File:23AUG10M #1-541 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:4 F:4 Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory
100 %



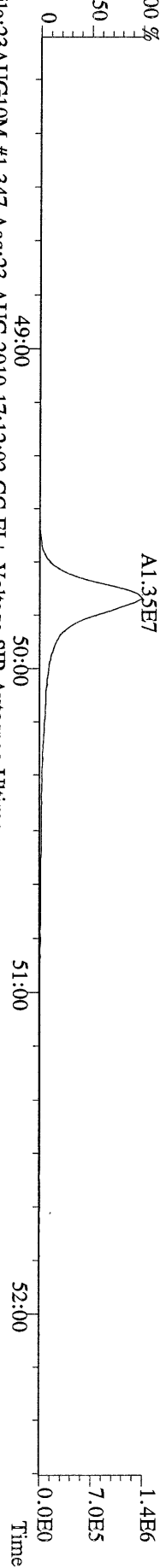
File:23AUG10M #1-347 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



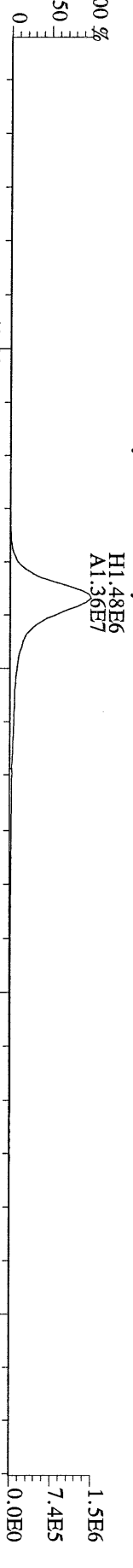
File:23AUG10M #1-347 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:4 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



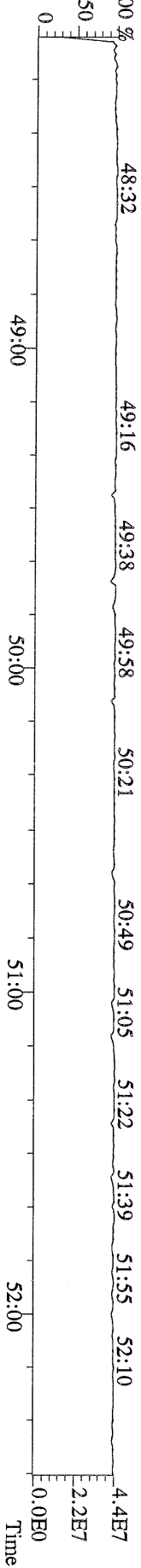
File:23AUG10M #1-347 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:4 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



File:23AUG10M #1-347 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
471.7750 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



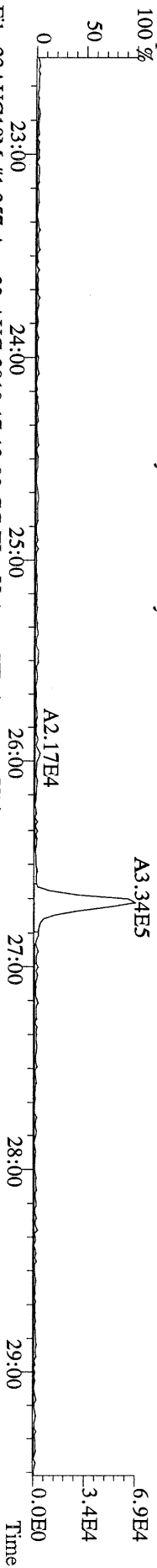
File:23AUG10M #1-347 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:4 F:5 Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



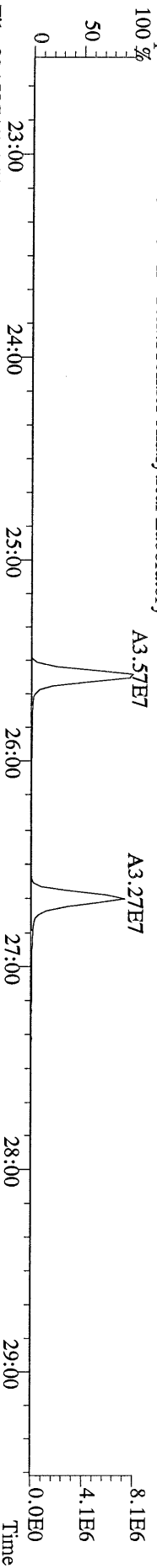
File:23AUG10M #1-357 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
 303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



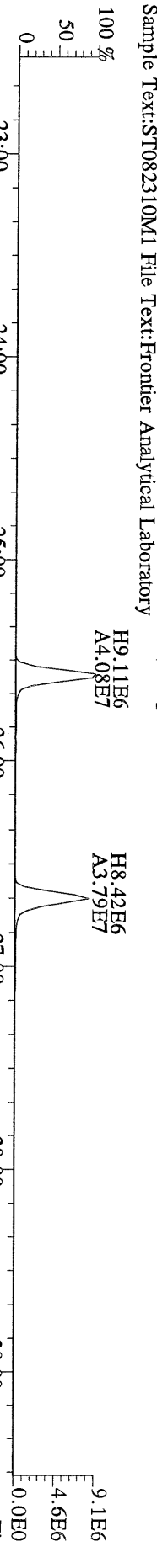
File:23AUG10M #1-357 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
 305.8987 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



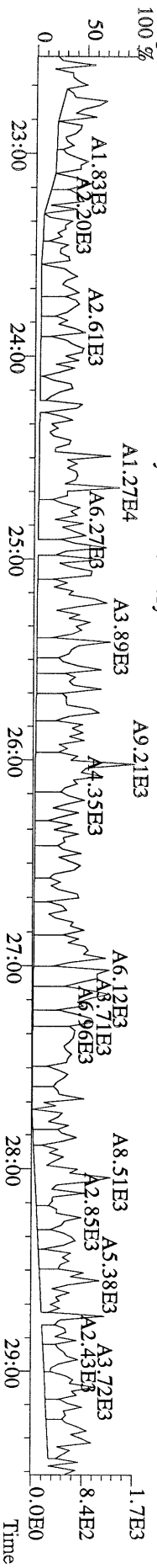
File:23AUG10M #1-357 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
 315.9419 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



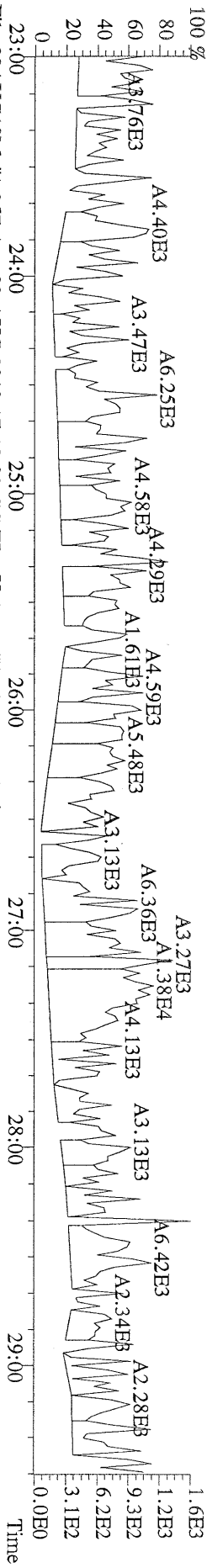
File:23AUG10M #1-357 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
 317.9389 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



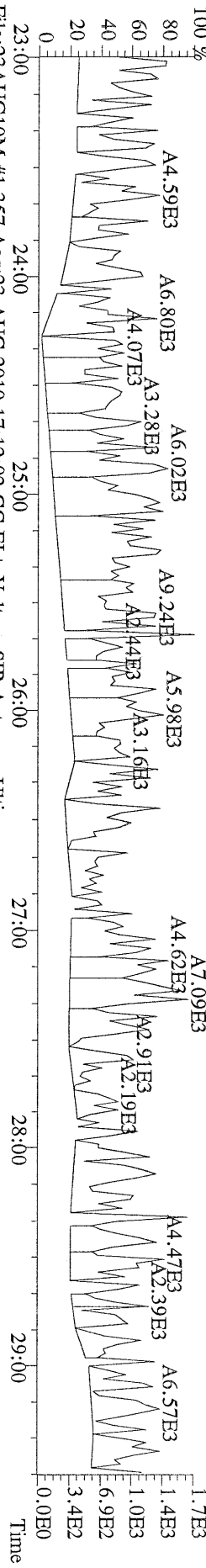
File:23AUG10M #1-357 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
 375.8364 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



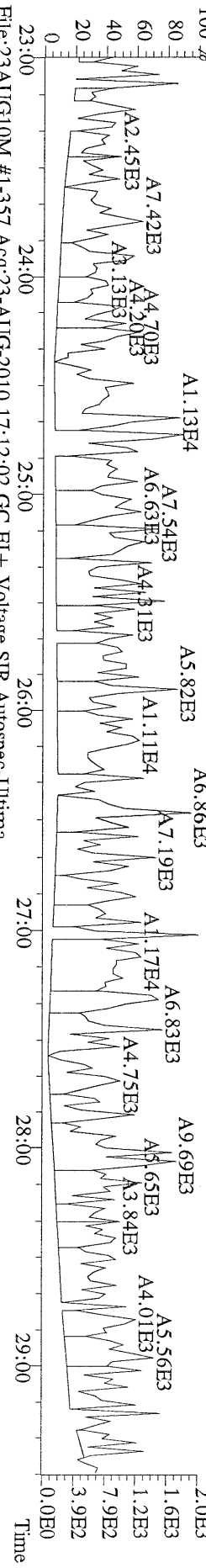
File:23AUG10M #1-357 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



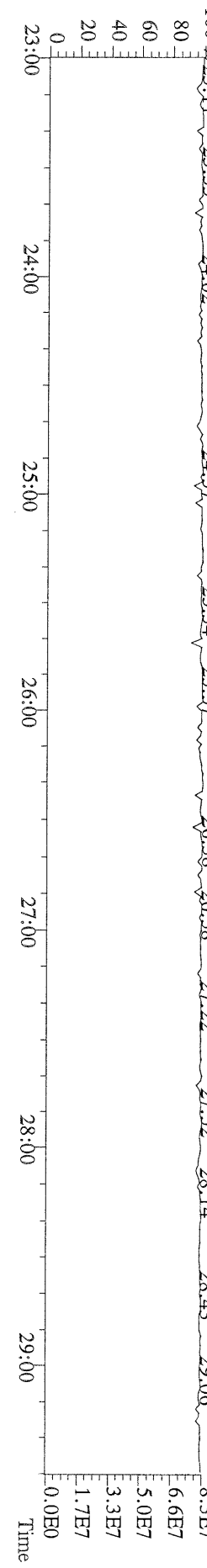
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341.8568 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



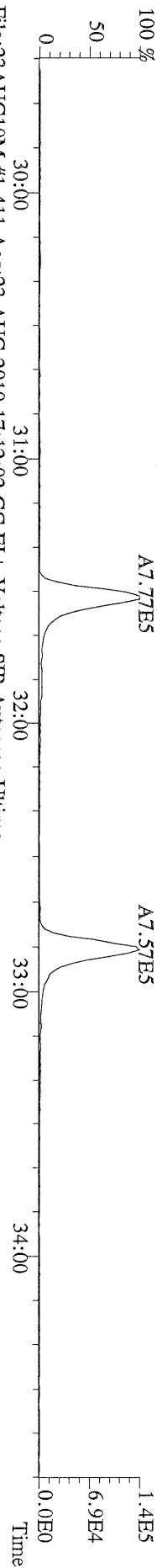
File:23AUG10M #1-357 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



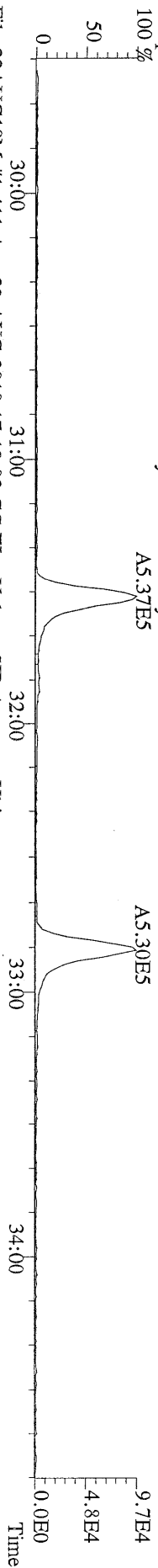
File:23AUG10M #1-357 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:4 Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



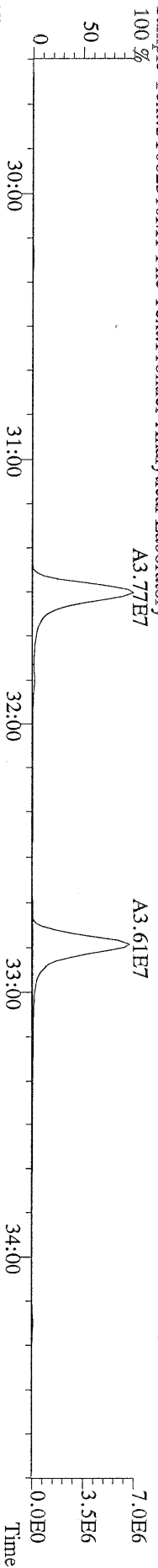
File:23AUG10M #1-411 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
 339,8597 S:4 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



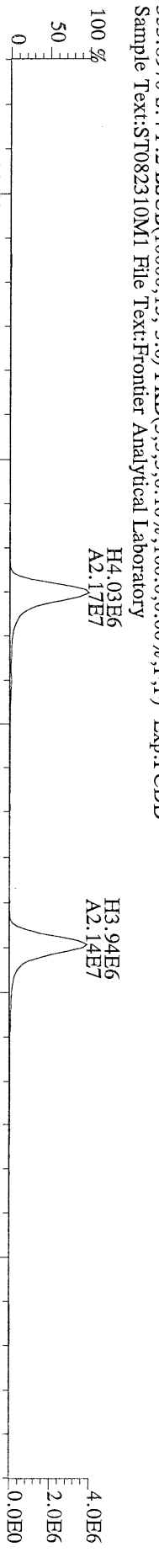
File:23AUG10M #1-411 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
 341,8568 S:4 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



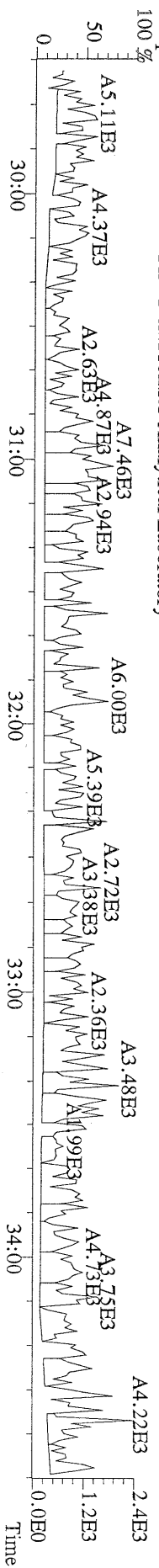
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 351,9000 S:4 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



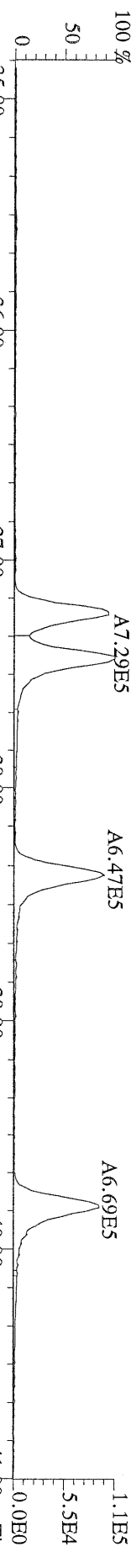
File:23AUG10M #1-411 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
 353,8970 S:4 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



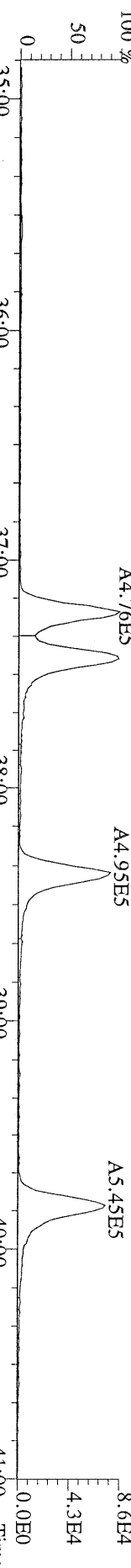
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 409,7974 S:4 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



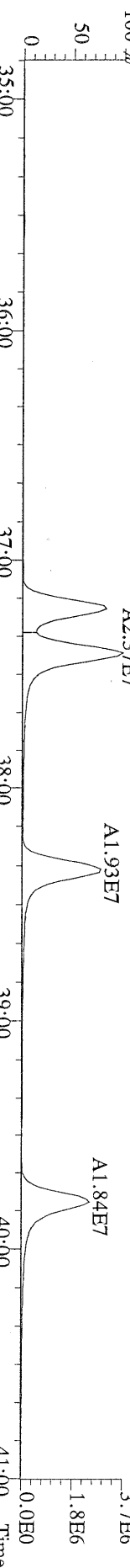
File:23AUG10M #1-477 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
 373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3.0,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Fronier Analytical Laboratory



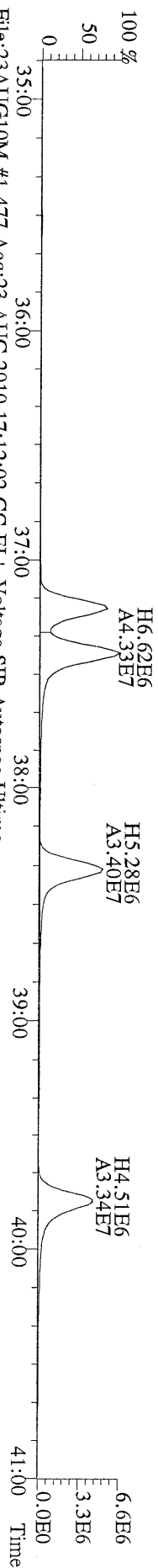
File:23AUG10M #1-477 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
 375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3.0,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Fronier Analytical Laboratory



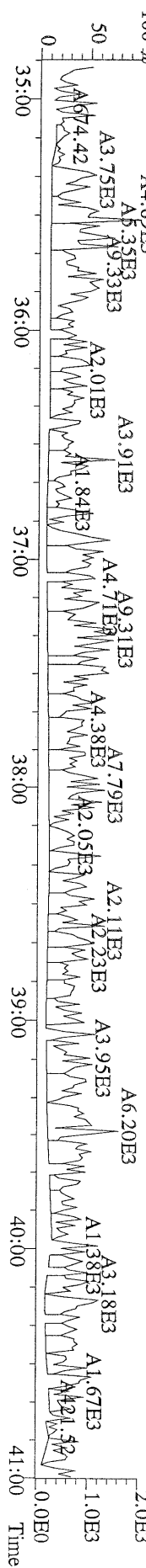
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 383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3.0,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Fronier Analytical Laboratory



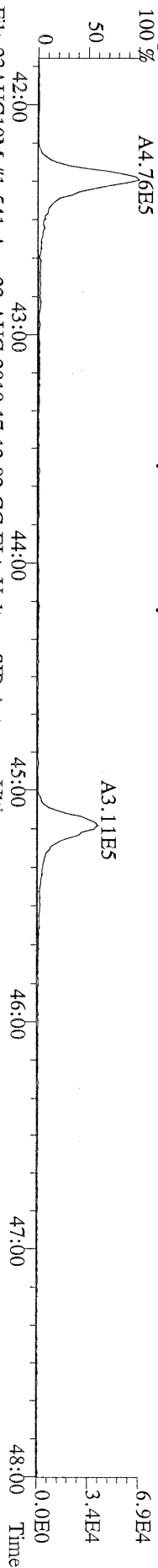
File:23AUG10M #1-477 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
 385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3.0,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Fronier Analytical Laboratory



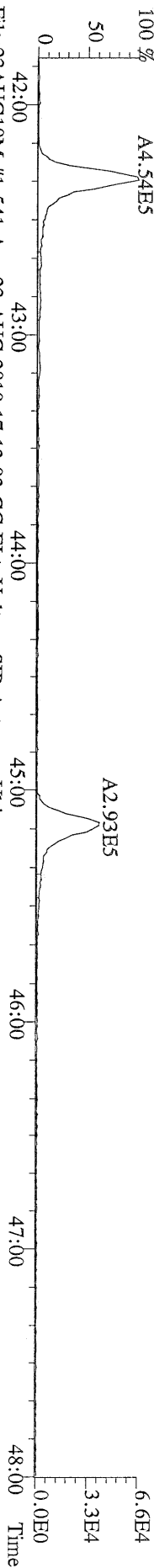
File:23AUG10M #1-477 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Ultima
 445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3.0,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M1 File Text:Fronier Analytical Laboratory



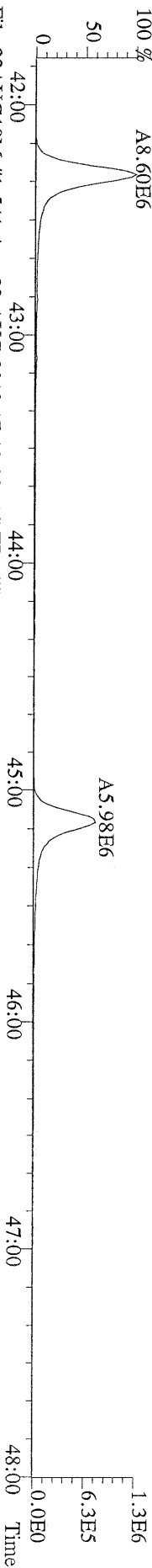
File:23AUG10M #1-541 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Utima
407.7818 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory
100 % A4.76E5



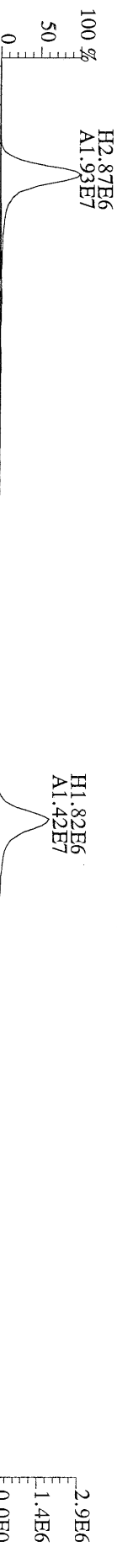
File:23AUG10M #1-541 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Utima
409.7788 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory
100 % A4.54E5



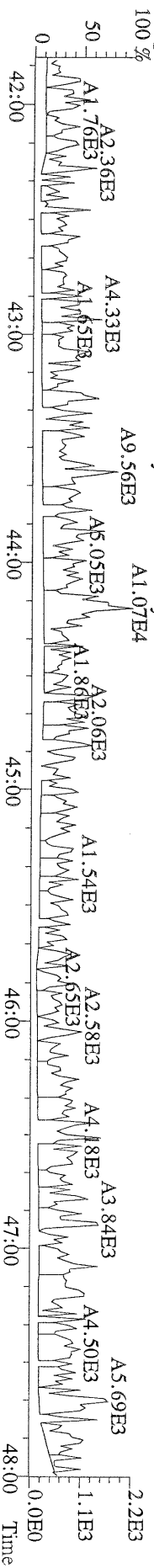
File:23AUG10M #1-541 Acq:23-AUG-2010 17:12:02 GC EI+ Voltage SIR Autospec-Utima
417.8253 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory
100 % A8.60E6



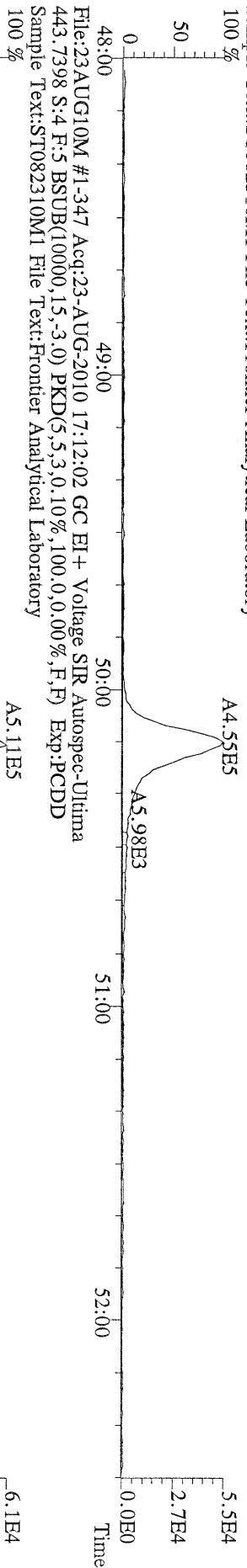
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419.8220 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



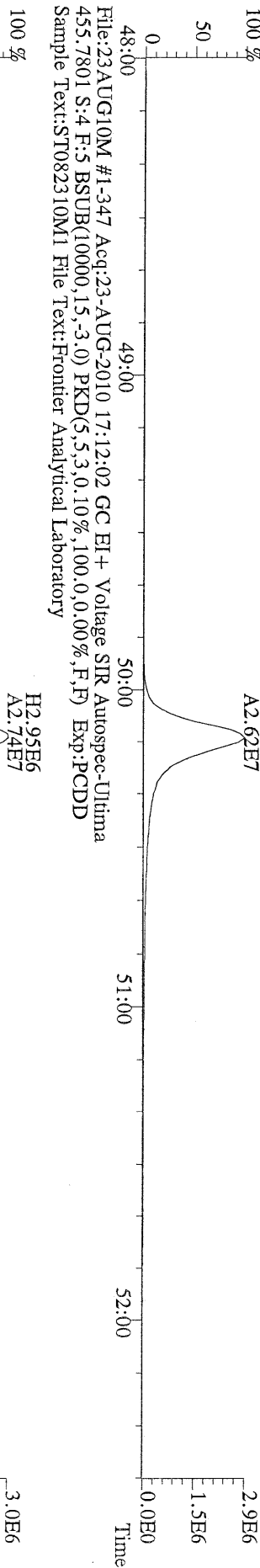
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479.7165 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



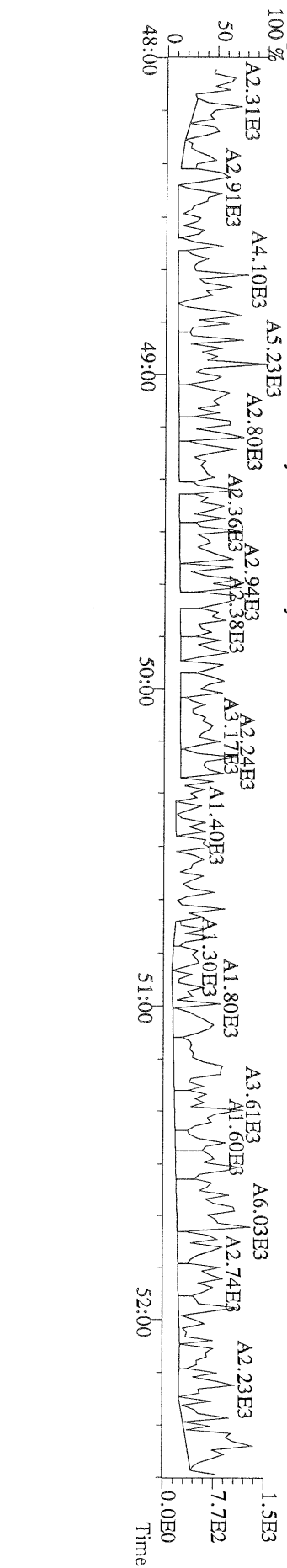
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441.7428 S:4 F:5 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



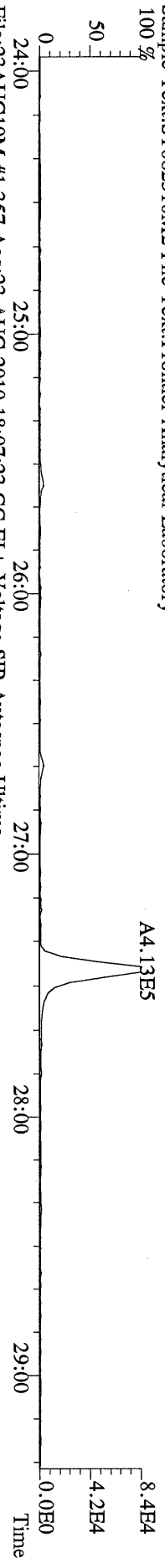
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443.7398 S:4 F:5 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



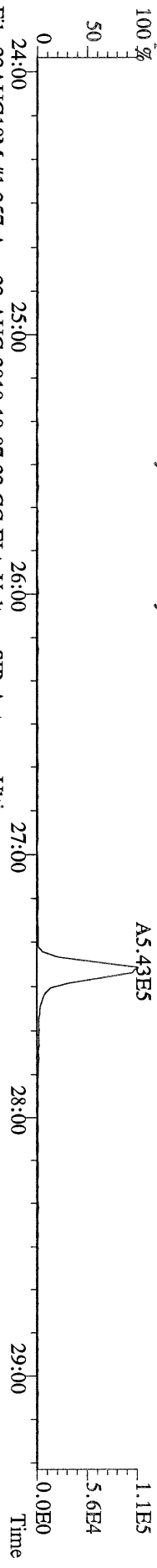
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513.6775 S:4 F:5 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M1 File Text:Frontier Analytical Laboratory



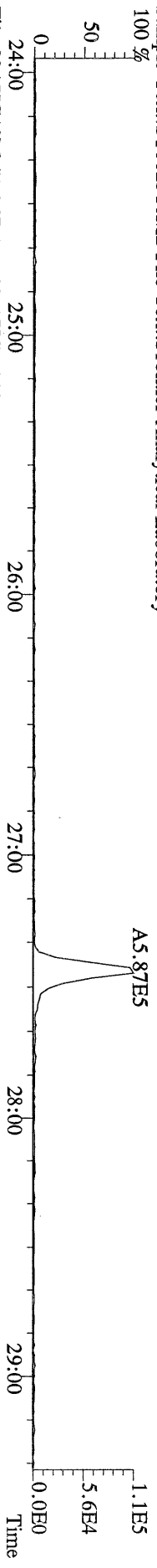
File:23AUG10M #1-357 Acq:23-AUG-2010 18:07:23 GC EI + Voltage SIR Autospec-Ultima
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



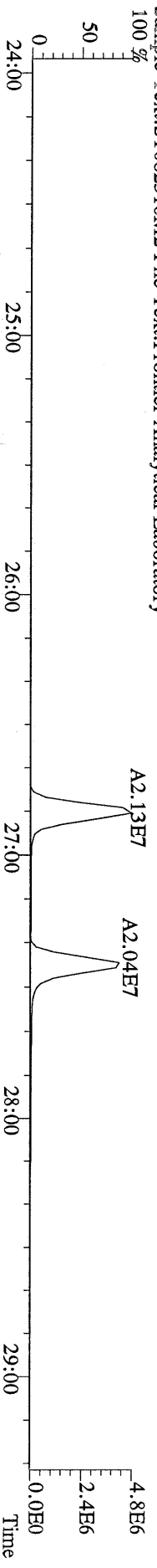
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321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



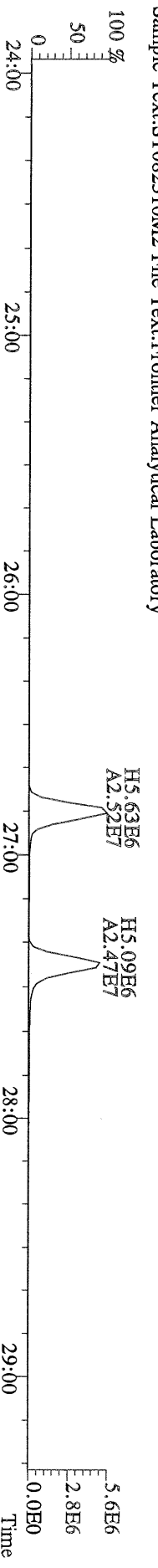
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327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



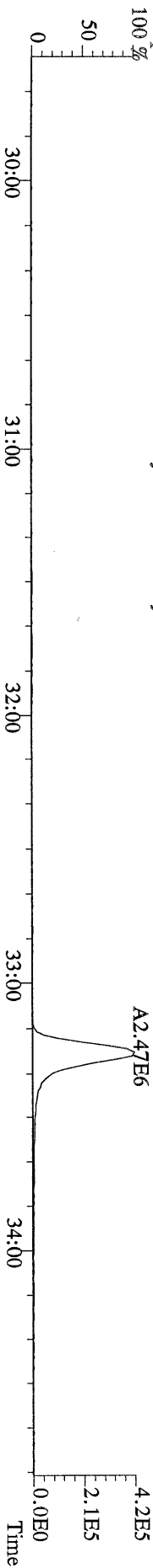
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331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



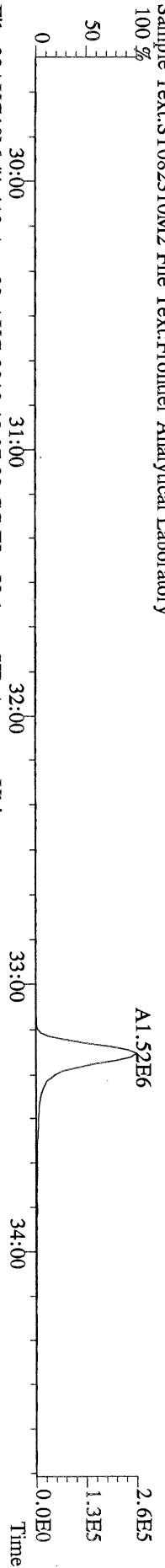
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333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



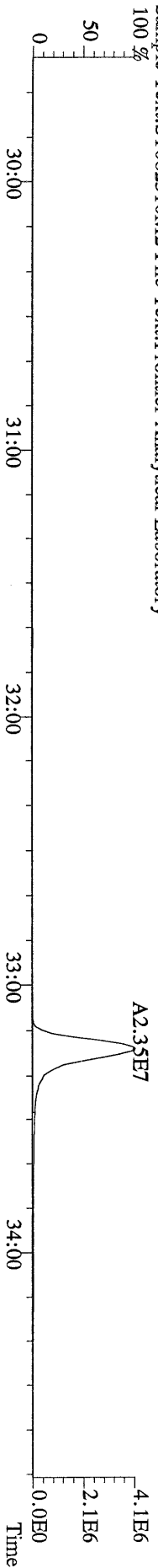
File:23AUG10M #1-412 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
355,8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory
100 %



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
100 %



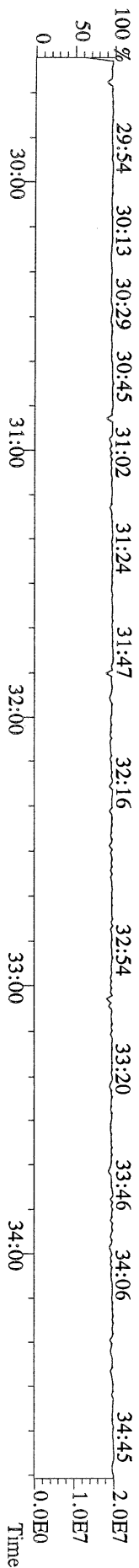
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367,8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory
100 %



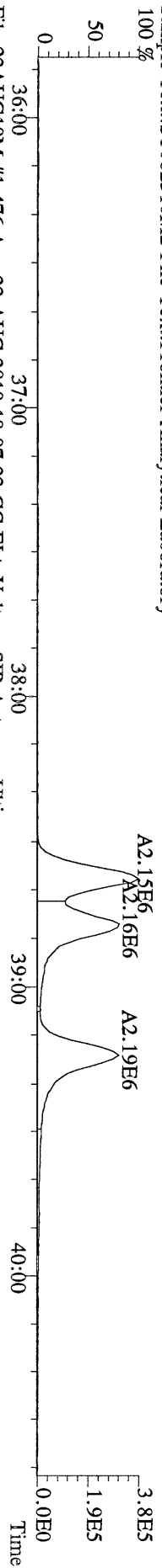
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369,8919 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



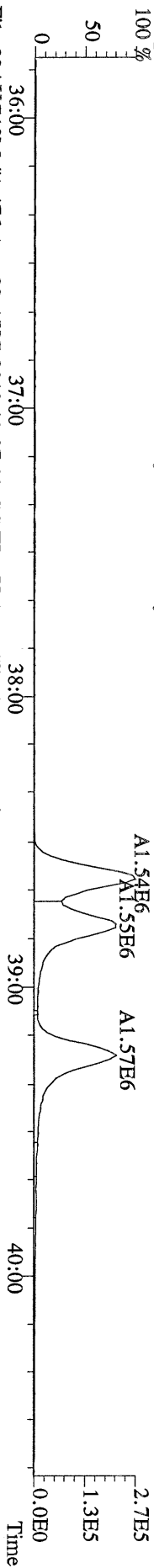
File:23AUG10M #1-412 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
366,9792 S:5 F:2 Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



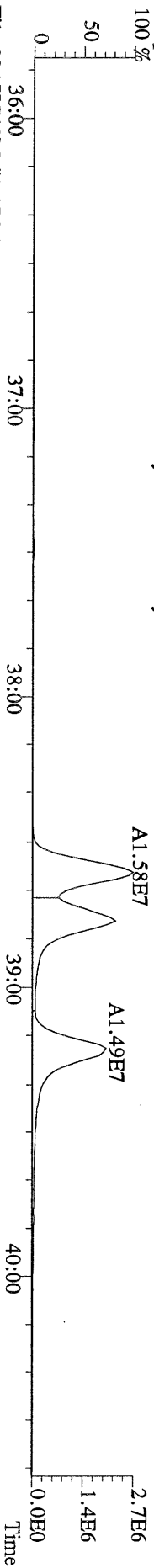
File:23AUG10M #1-476 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Utima
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



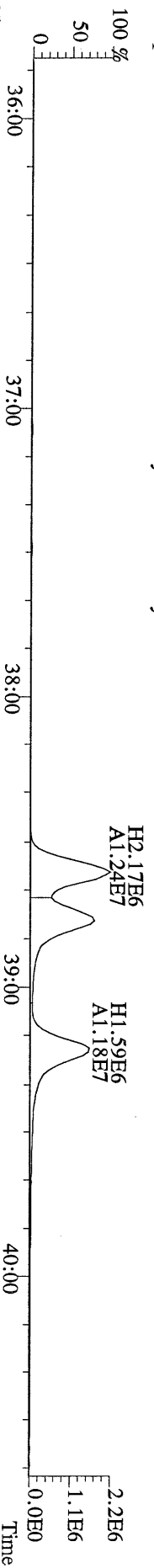
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391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
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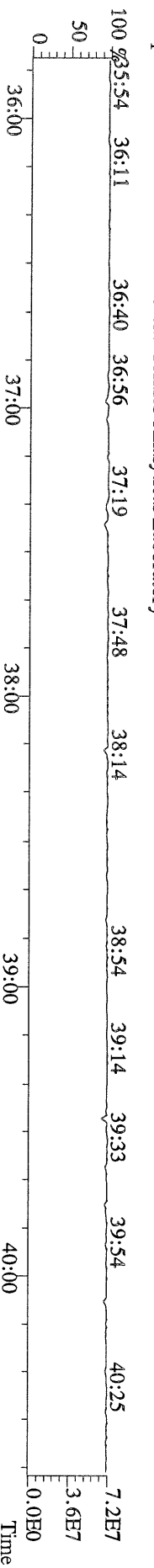
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401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



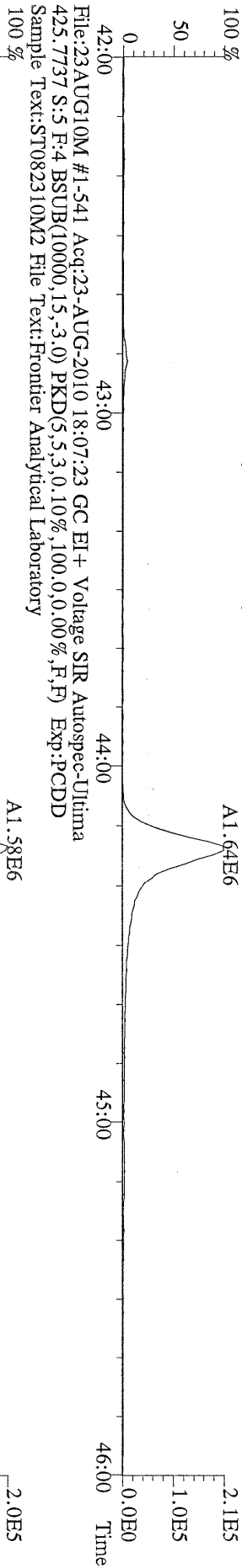
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403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
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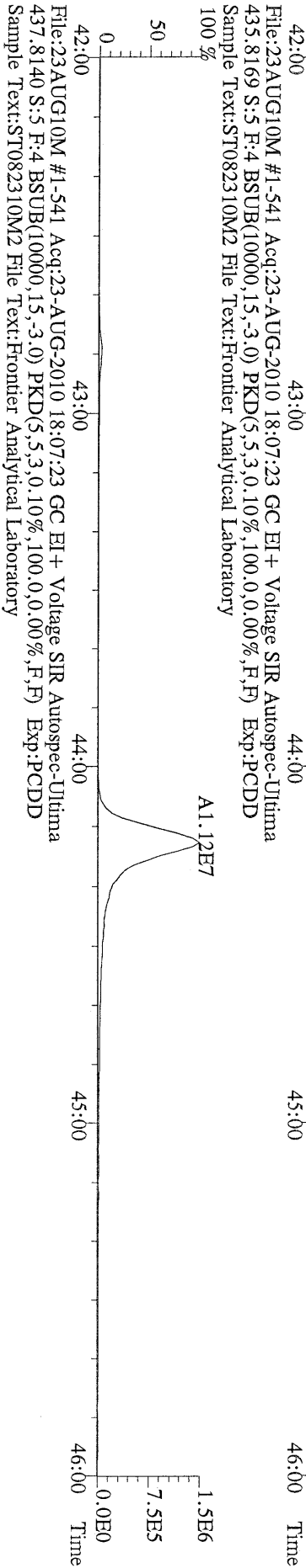
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380.9760 S:5 F:3 Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



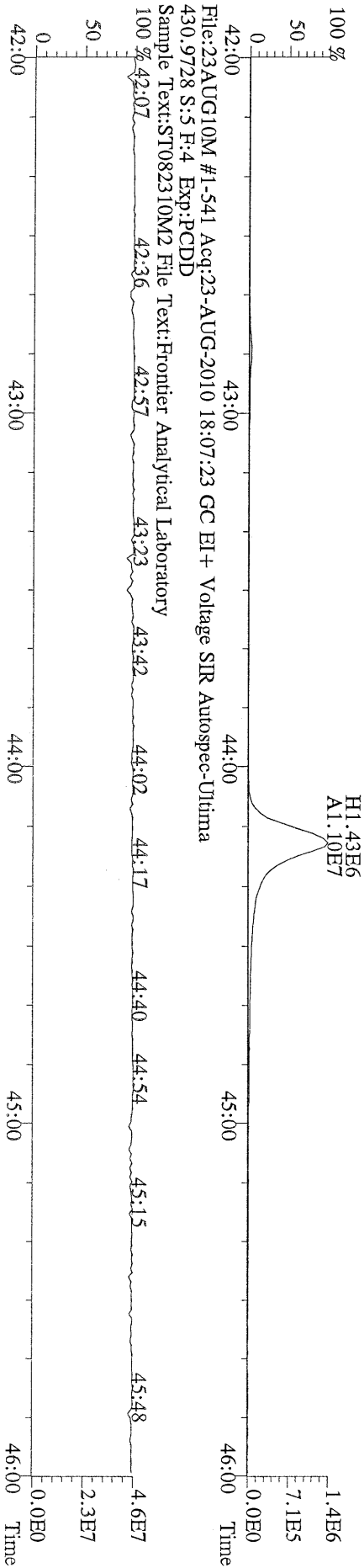
File:23AUG10M #1-541 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Utlima
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory
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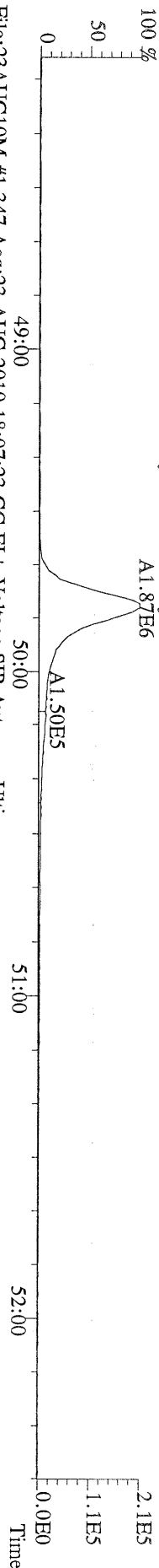
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435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory
100 %



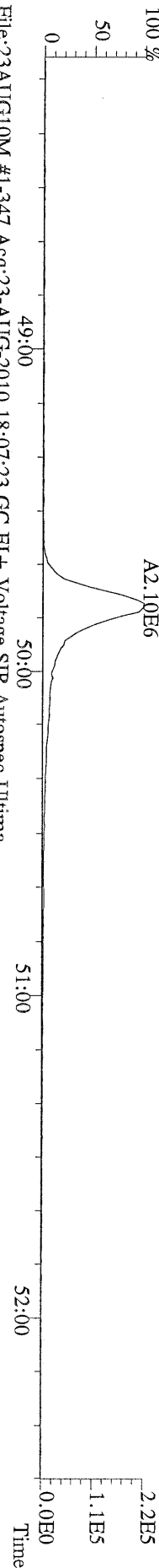
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437.8140 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory
100 %



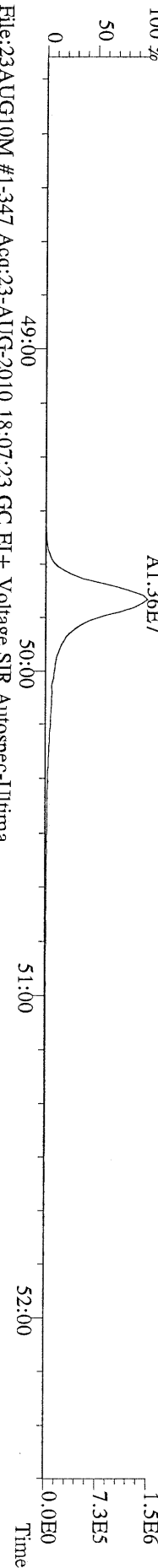
File:23AUG10M #1-347 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



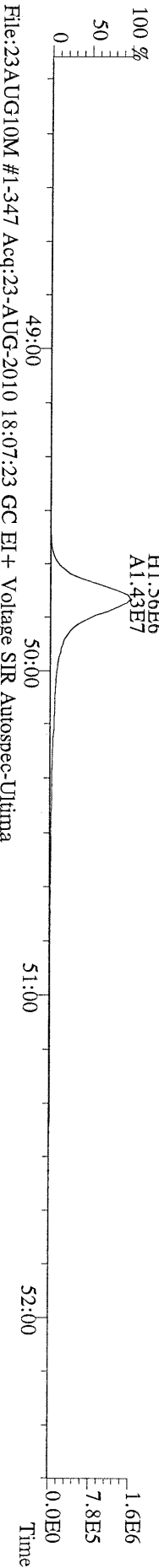
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459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



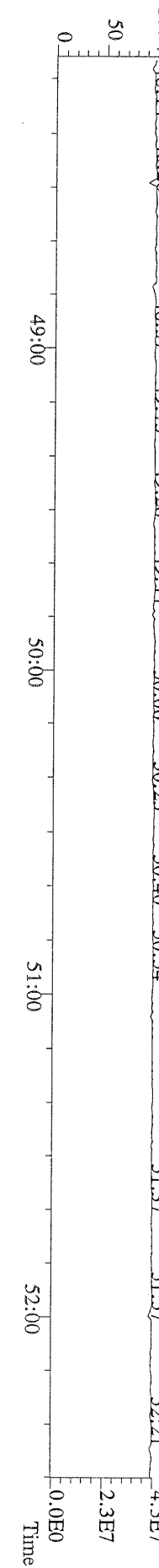
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469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
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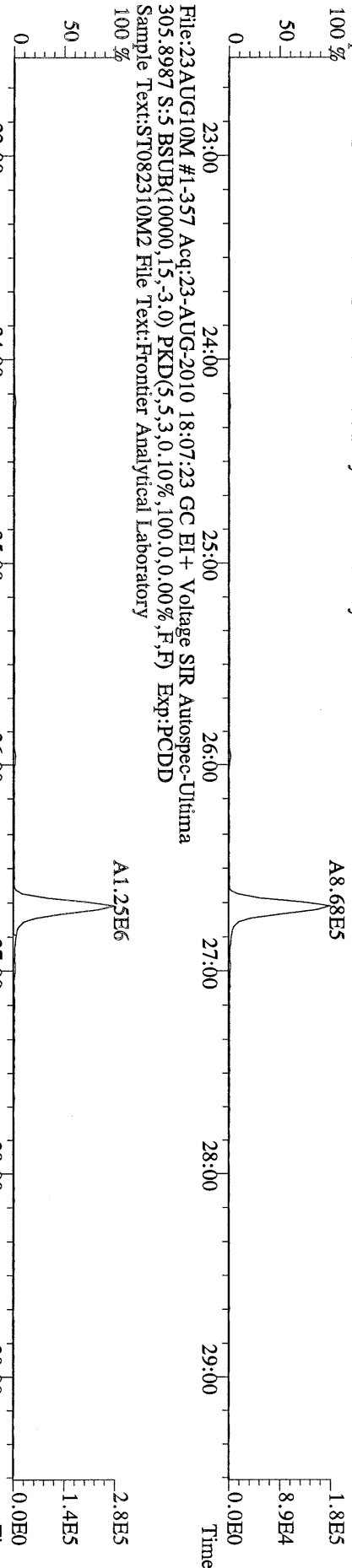
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471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
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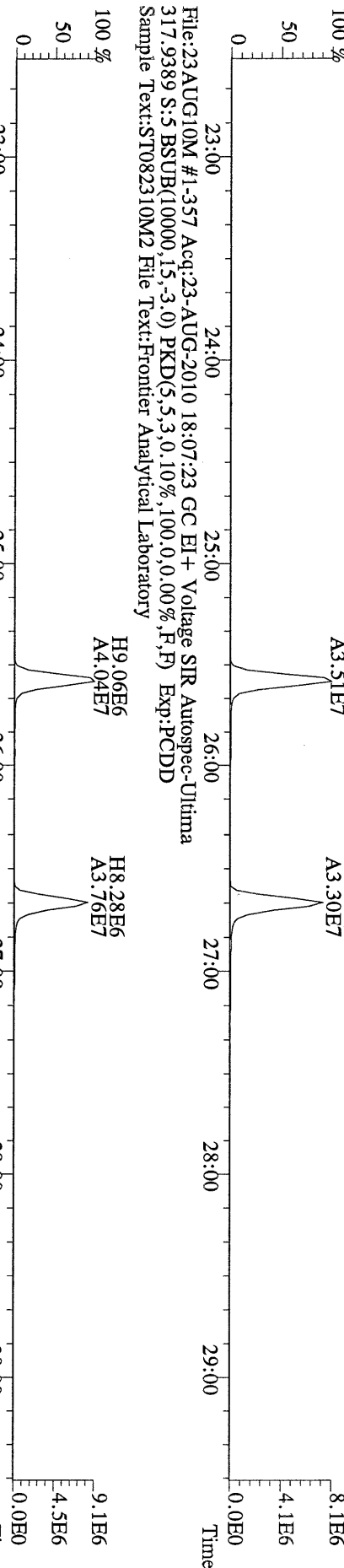
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454.9728 S:5 F:5 Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



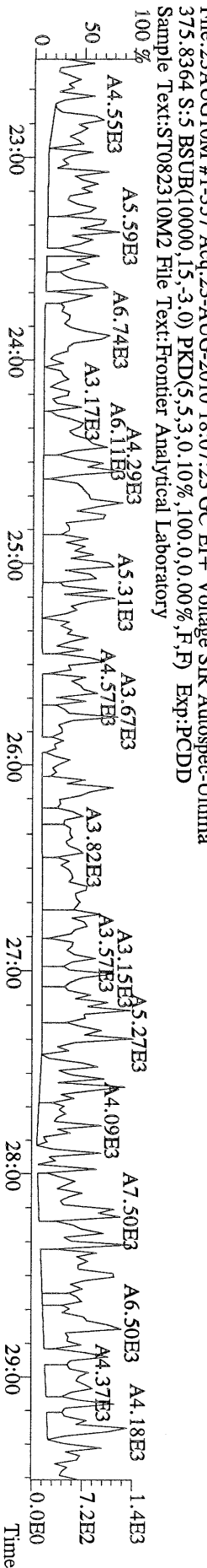
File:23AUG10M #1-357 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Utima
303.9016 S:5 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory
100 %



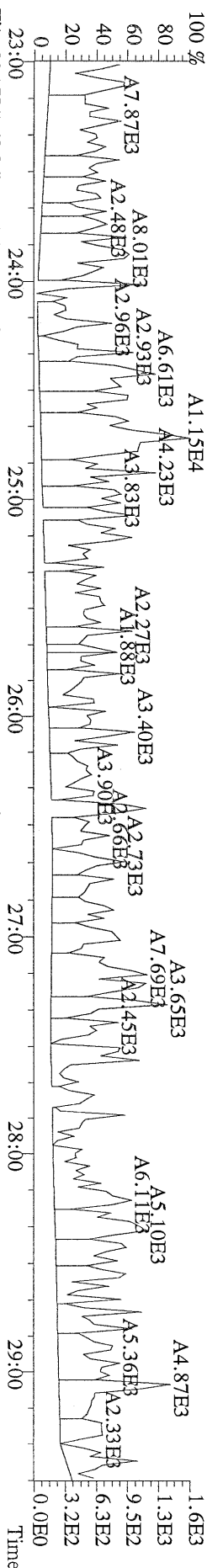
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315.9419 S:5 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory
100 %



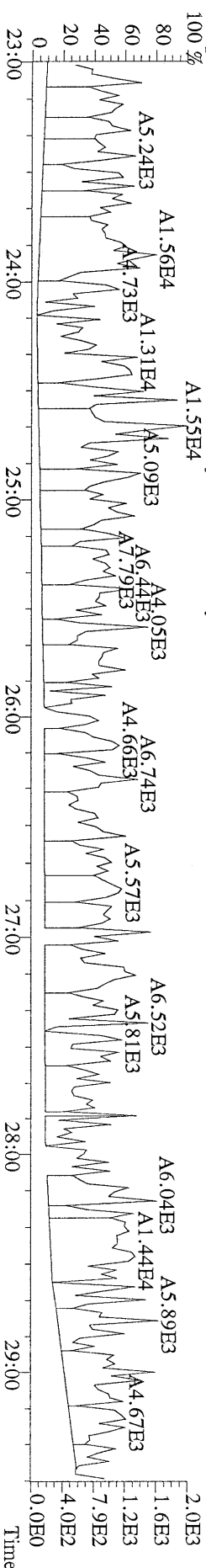
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375.8364 S:5 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory
100 %



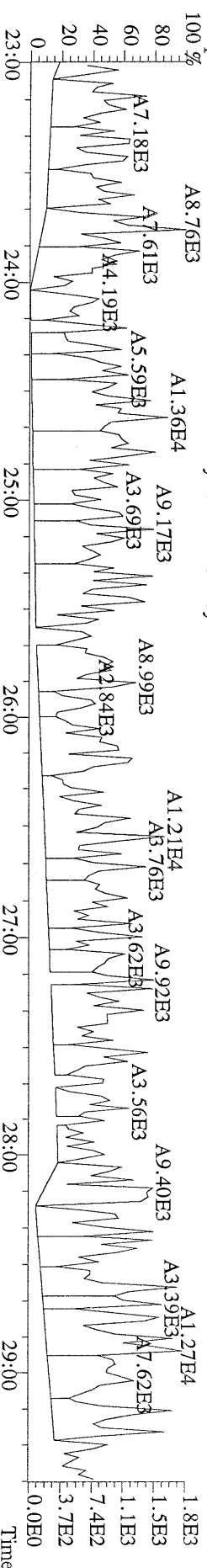
File:23AUG10M #1-357 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Utima
 339.8597 S:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



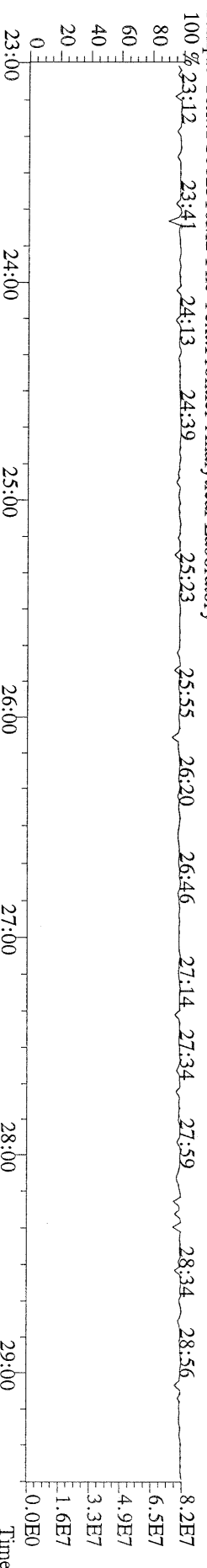
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 341.8568 S:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



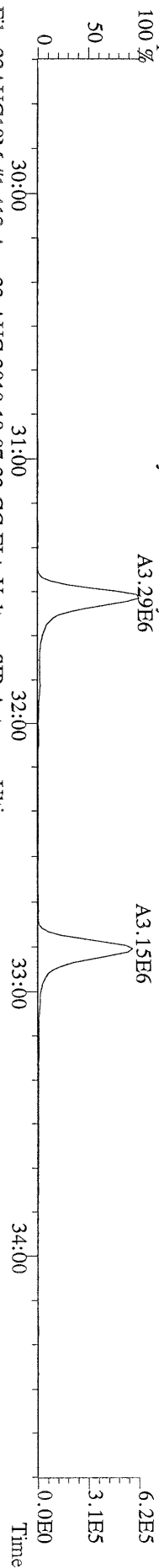
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 409.7974 S:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,100.0,0.00%,F,F) Exp:PCDD
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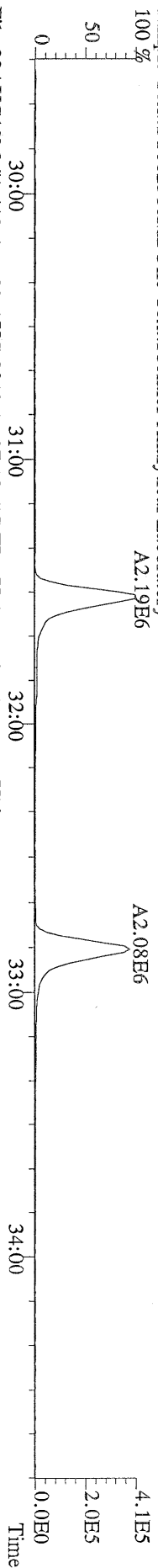
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 330.9792 S:5 Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



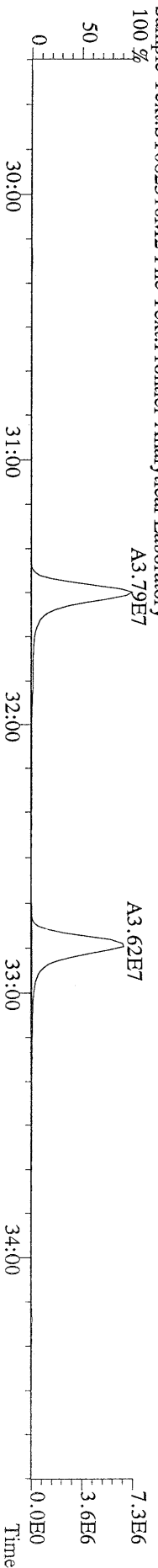
File:23AUG10M #1-412 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Utima
 339,8597 S:5 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



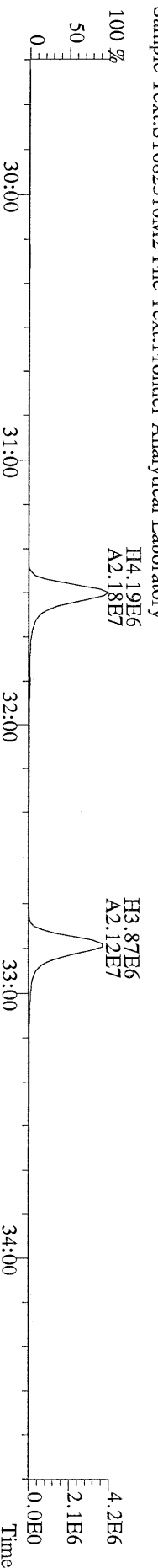
File:23AUG10M #1-412 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Utima
 341,8568 S:5 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



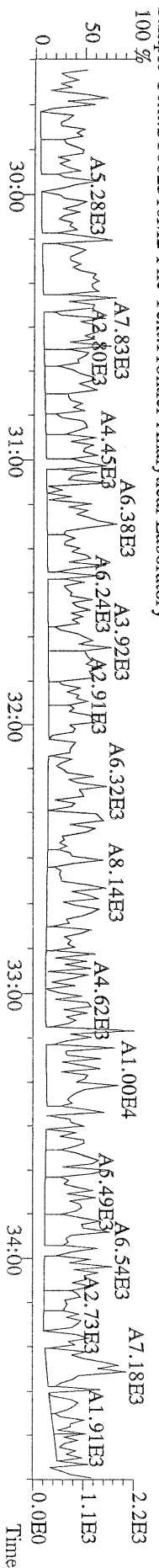
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 351,9000 S:5 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
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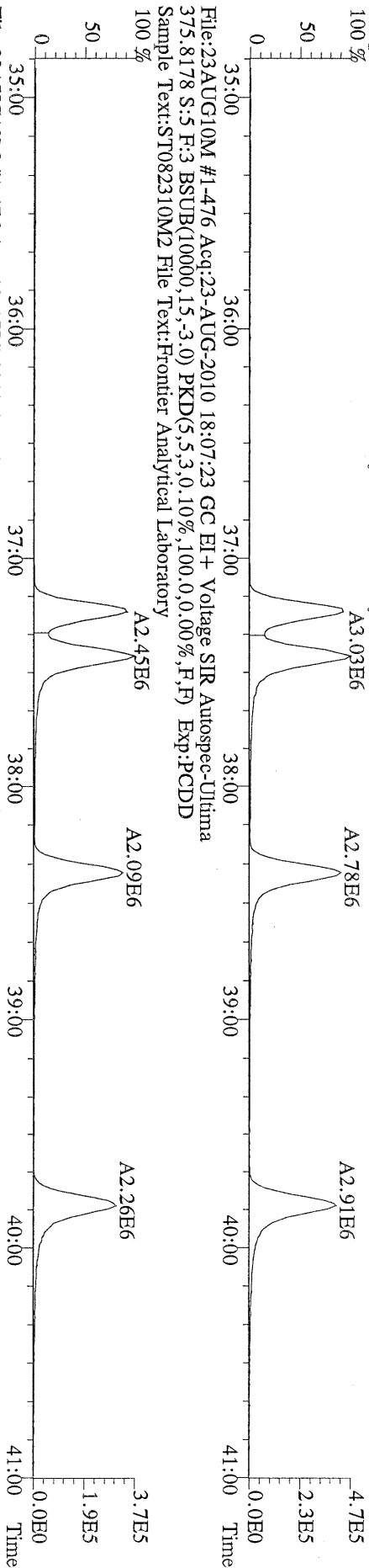
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 353,8970 S:5 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
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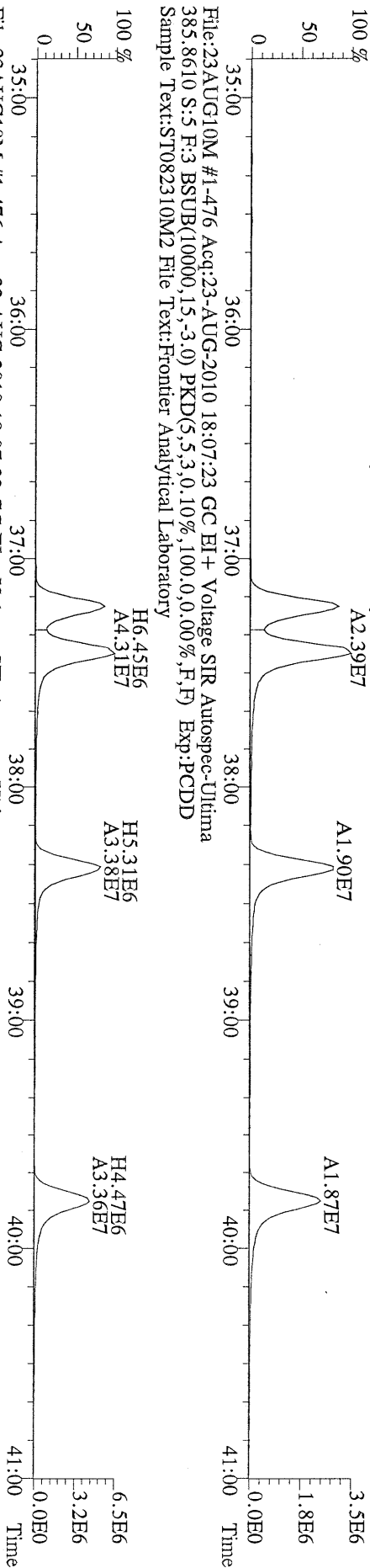
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 409,7974 S:5 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



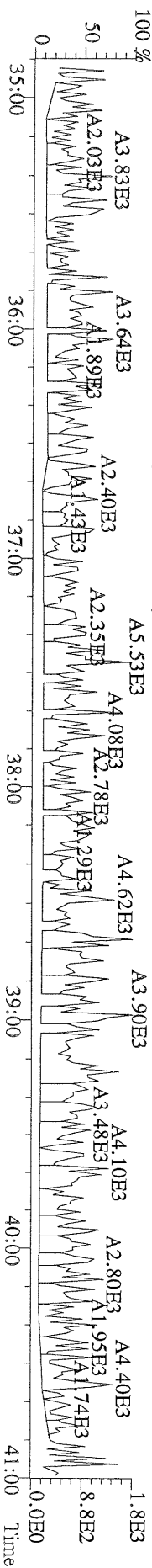
File:23AUG10M #1-476 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Utima
 373.8207 S:5 F:3 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
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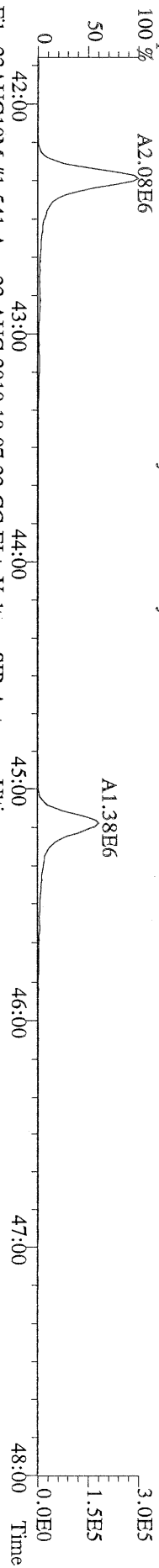
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 383.8639 S:5 F:3 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



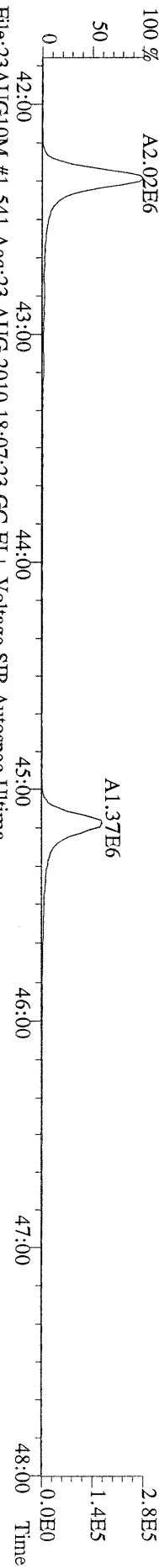
File:23AUG10M #1-476 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Utima
 445.7555 S:5 F:3 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



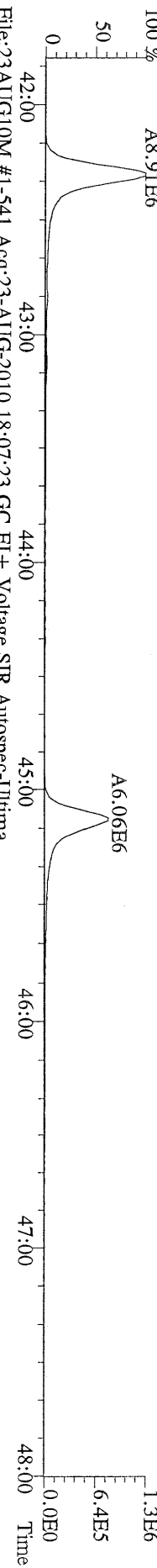
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407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



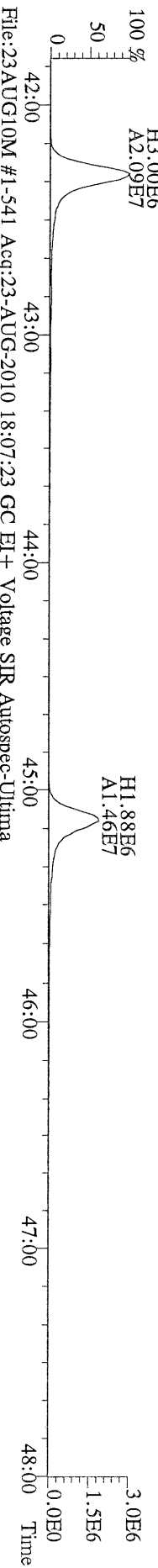
File:23AUG10M #1-541 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Utima
409.7788 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



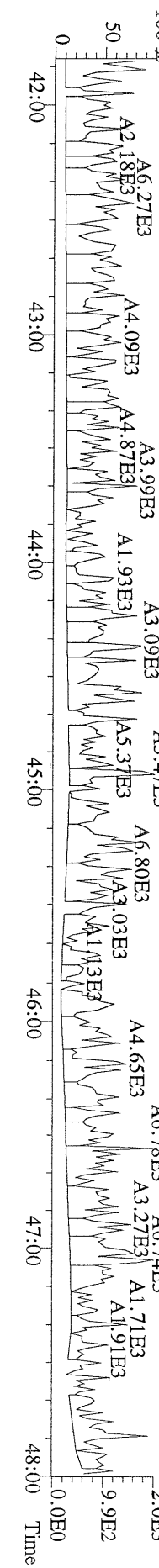
File:23AUG10M #1-541 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Utima
417.8253 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



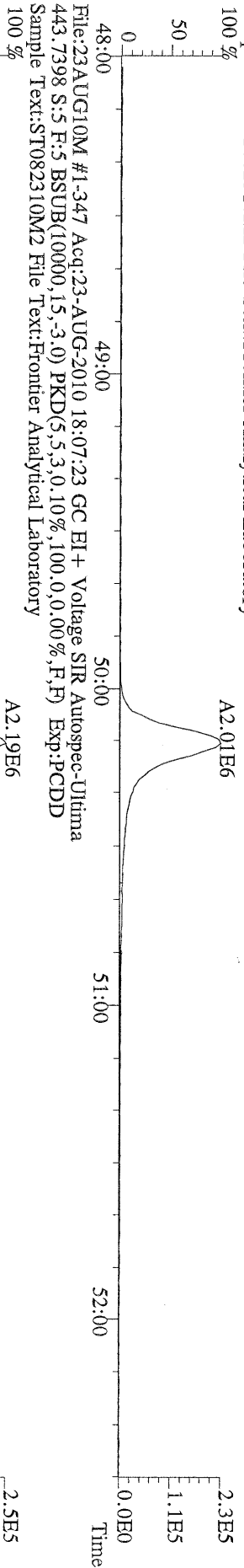
File:23AUG10M #1-541 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Utima
419.8220 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



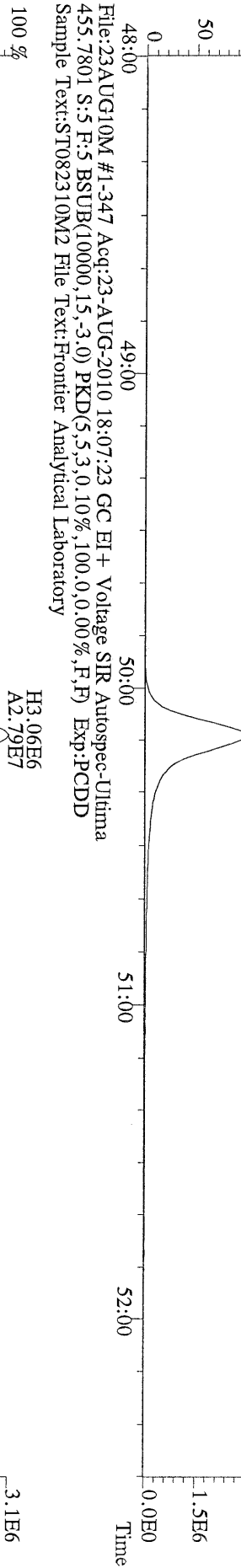
File:23AUG10M #1-541 Acq:23-AUG-2010 18:07:23 GC EI+ Voltage SIR Autospec-Utima
479.7165 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



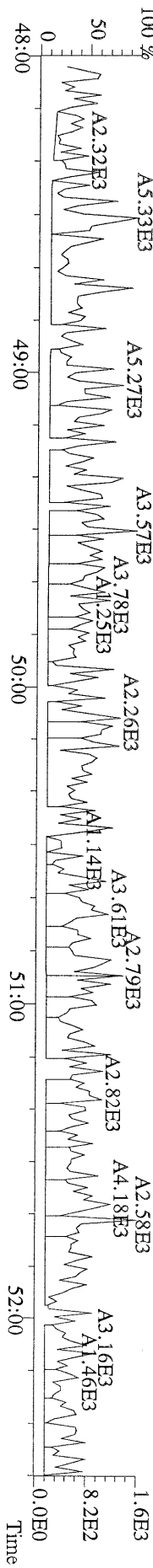
File:23AUG10M #1-347 Acq:23-AUG-2010 18:07:23 GC BI+ Voltage SIR Autospec-Ultima
 441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



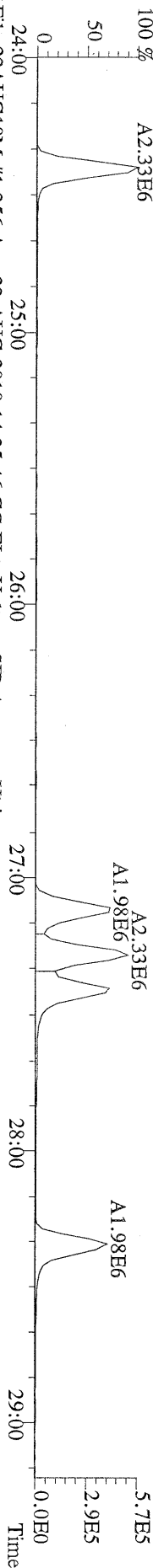
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 453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



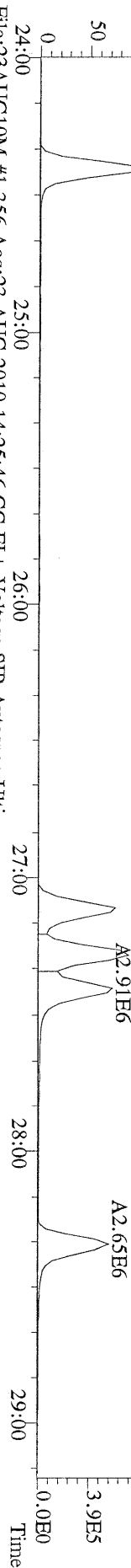
File:23AUG10M #1-347 Acq:23-AUG-2010 18:07:23 GC BI+ Voltage SIR Autospec-Ultima
 513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M2 File Text:Frontier Analytical Laboratory



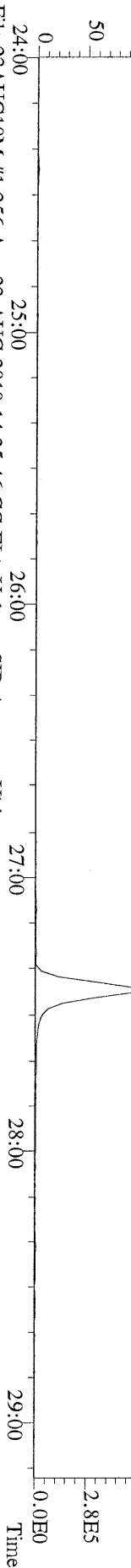
File:23AUG10M #1-356 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



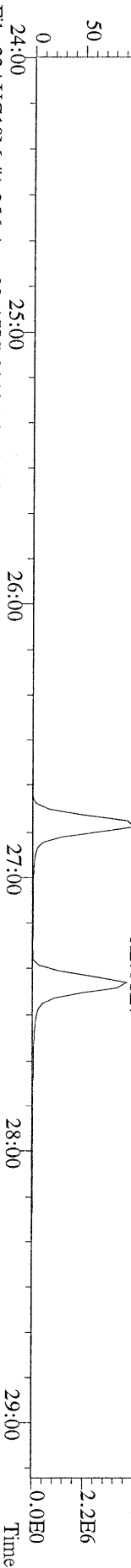
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321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



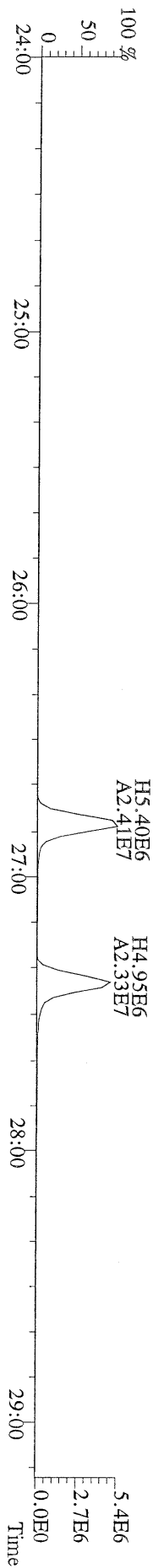
File:23AUG10M #1-356 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



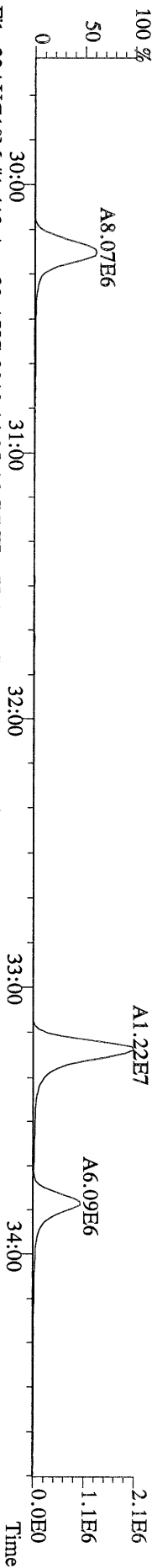
File:23AUG10M #1-356 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



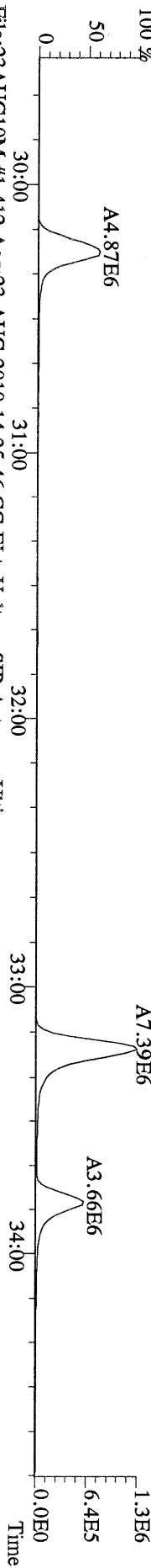
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333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



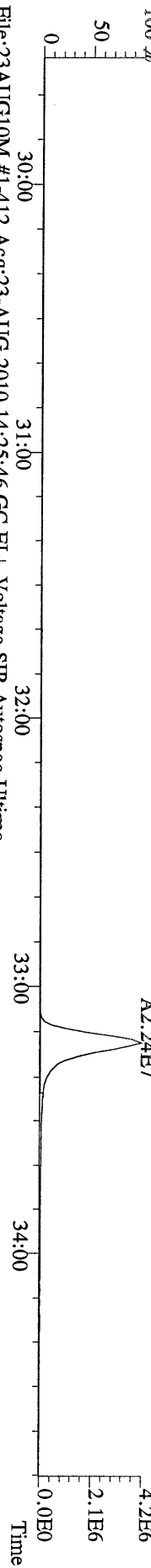
File:23AUG10M #1-412 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



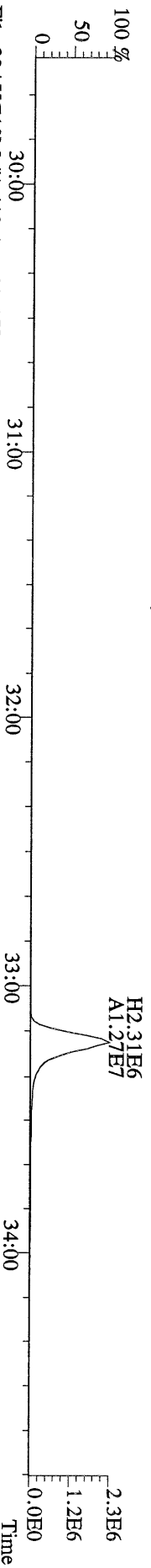
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357.8517 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



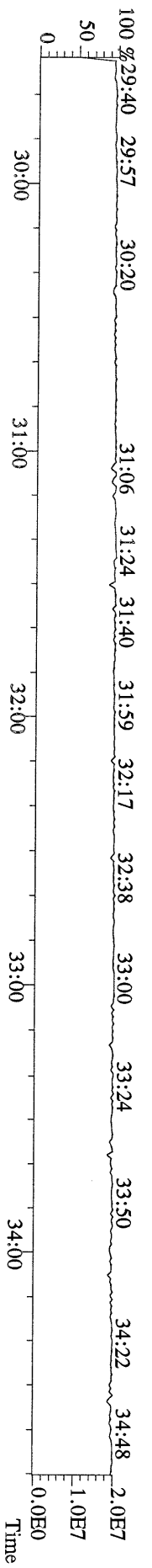
File:23AUG10M #1-412 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



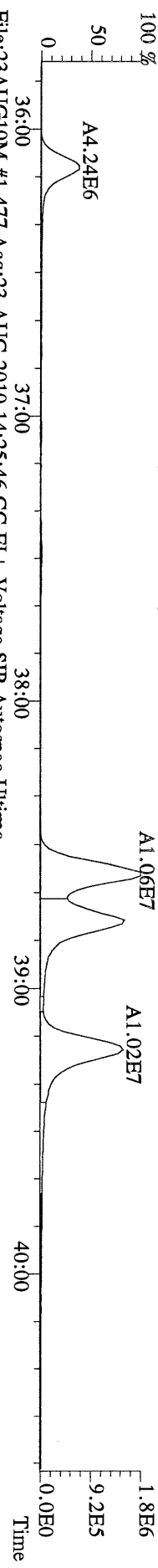
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369.8919 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



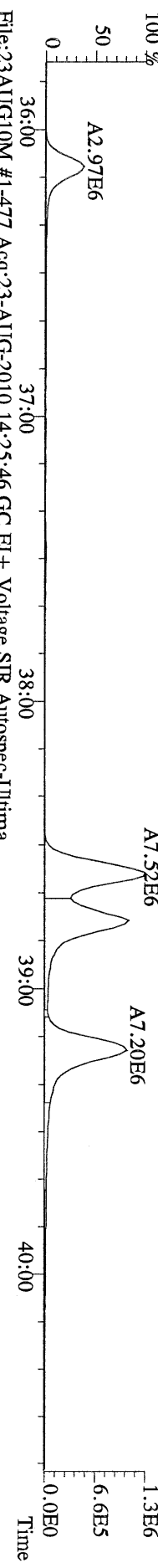
File:23AUG10M #1-412 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
366.9792 F:2 Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



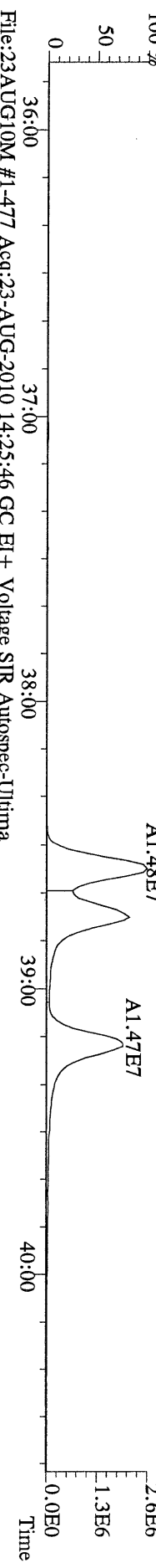
File:23AUG10M #1-477 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



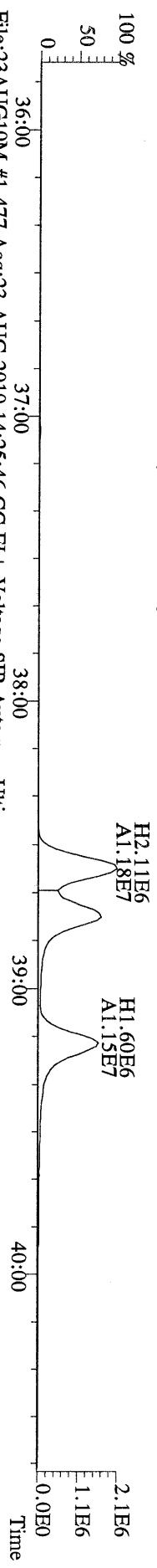
File:23AUG10M #1-477 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



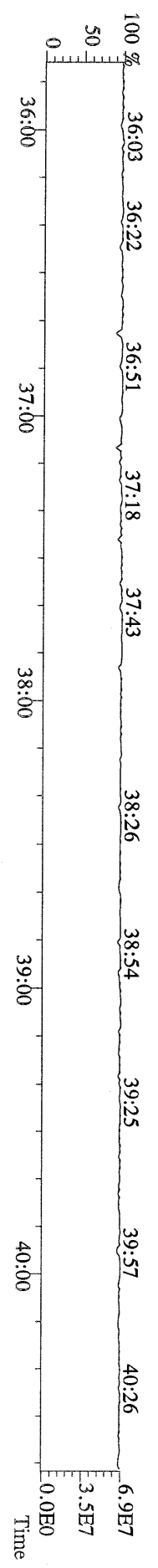
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401.8559 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



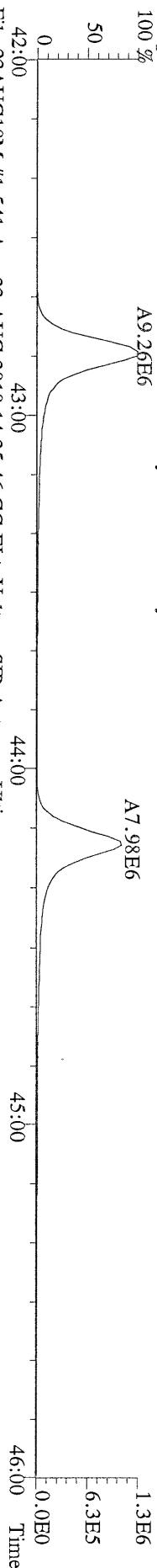
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403.8530 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



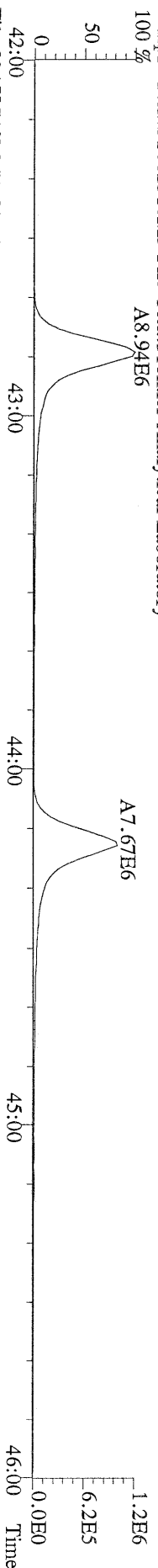
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380.9760 F:3 Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



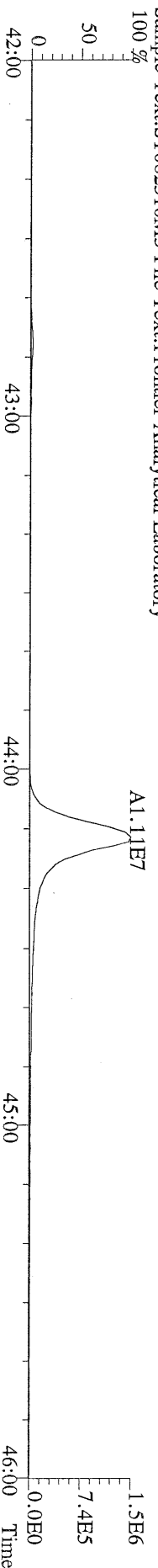
File:23AUG10M #1-541 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Utima
423.7767 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



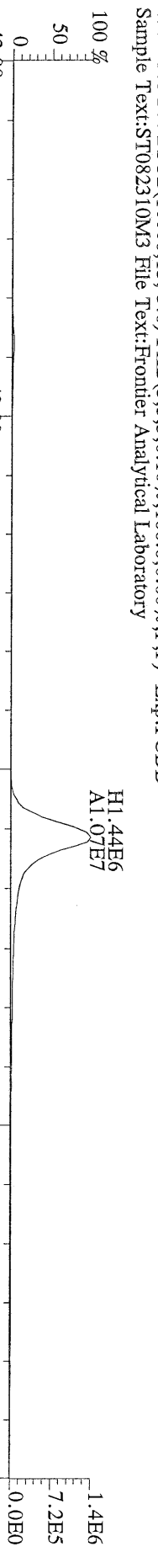
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425.7737 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



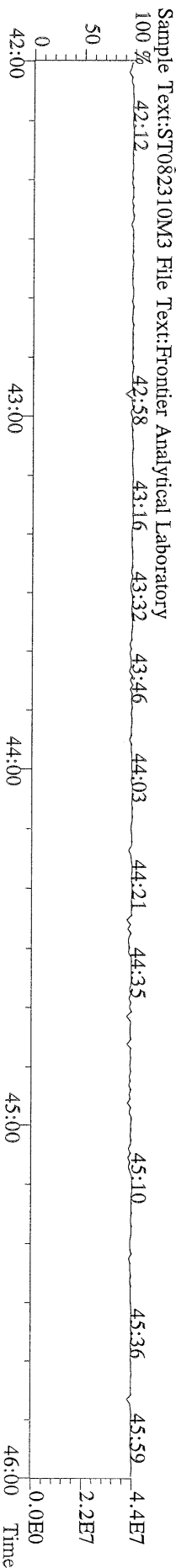
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435.8169 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:PCDD
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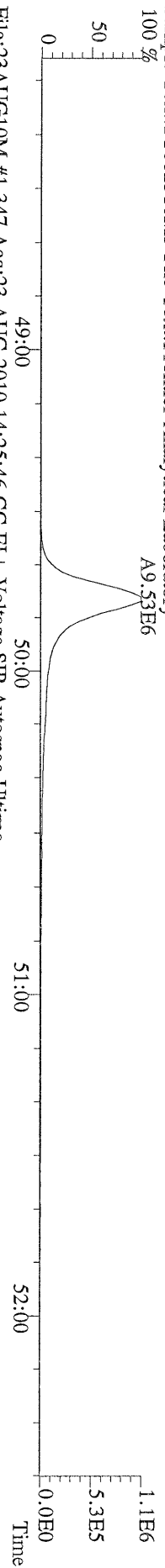
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437.8140 F:4 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



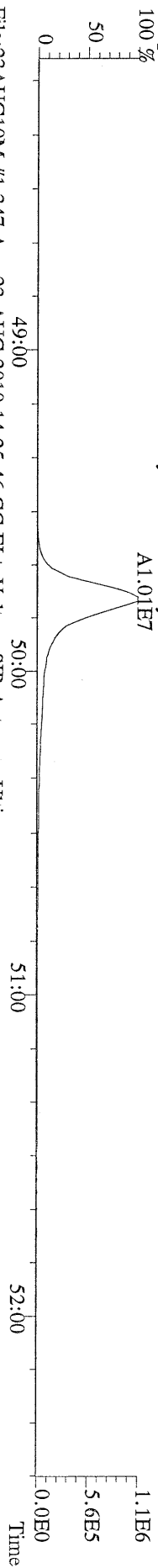
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430.9728 F:4 Exp:PCDD



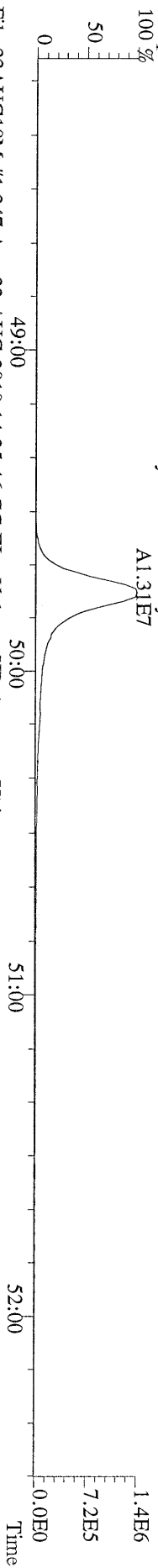
File:23AUG10M #1-347 Acq:23-AUG-2010 14:25:46 GC BI + Voltage SIR Autospec-Ultima
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,0,0,0,0) F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Fronier Analytical Laboratory



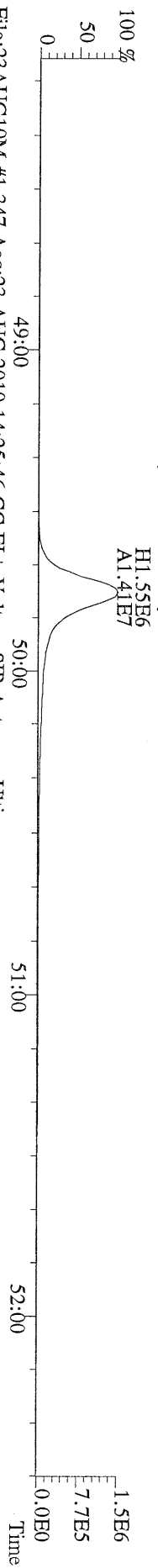
File:23AUG10M #1-347 Acq:23-AUG-2010 14:25:46 GC BI + Voltage SIR Autospec-Ultima
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,0,0,0,0) F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Fronier Analytical Laboratory



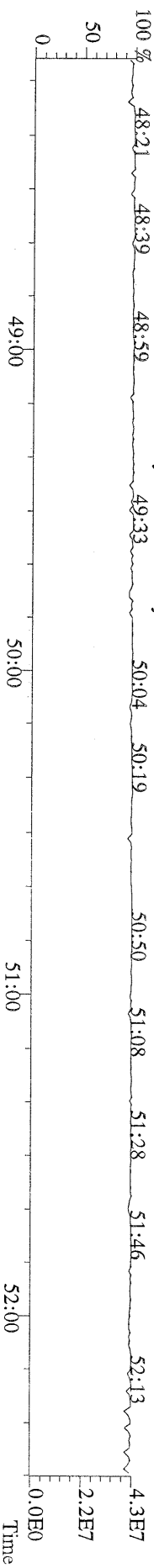
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469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,0,0,0,0) F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Fronier Analytical Laboratory



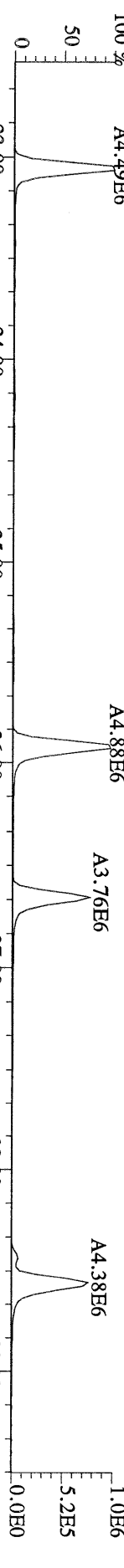
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471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,0,0,0,0) F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Fronier Analytical Laboratory



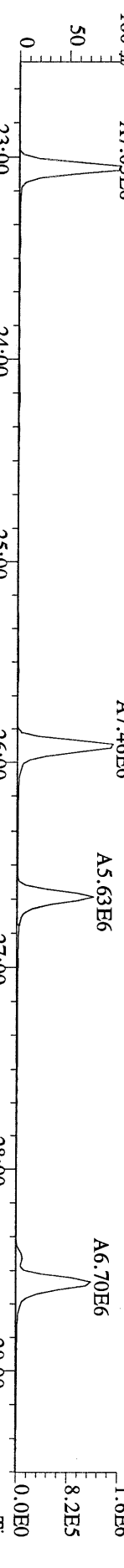
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454.9728 F:5 Exp:PCDD
Sample Text:ST082310M3 File Text:Fronier Analytical Laboratory



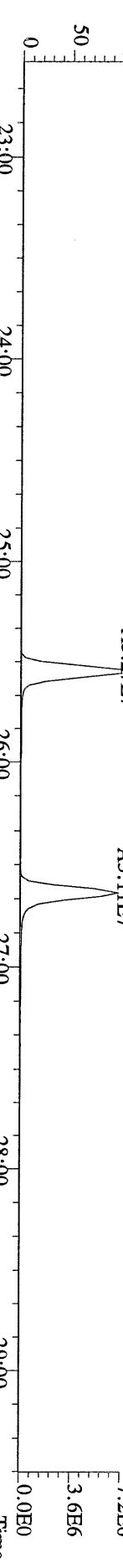
File:23AUG10M #1-356 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
 303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:P:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



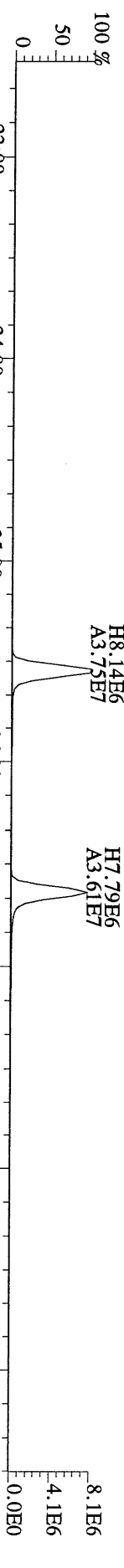
File:23AUG10M #1-356 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
 305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:P:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



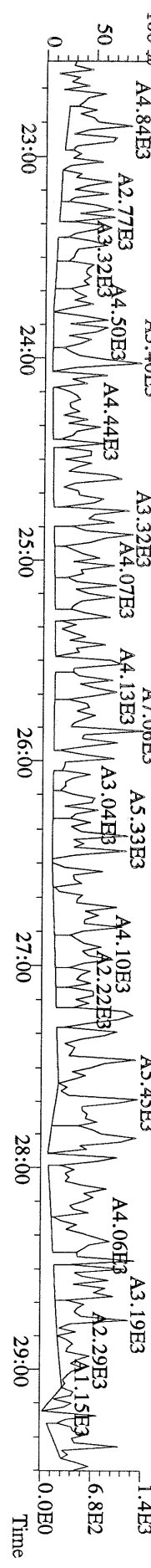
File:23AUG10M #1-356 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
 315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:P:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



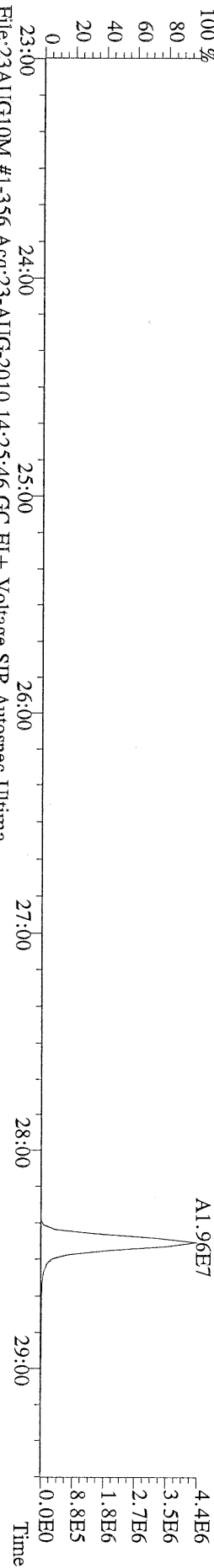
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 317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:P:PCDD
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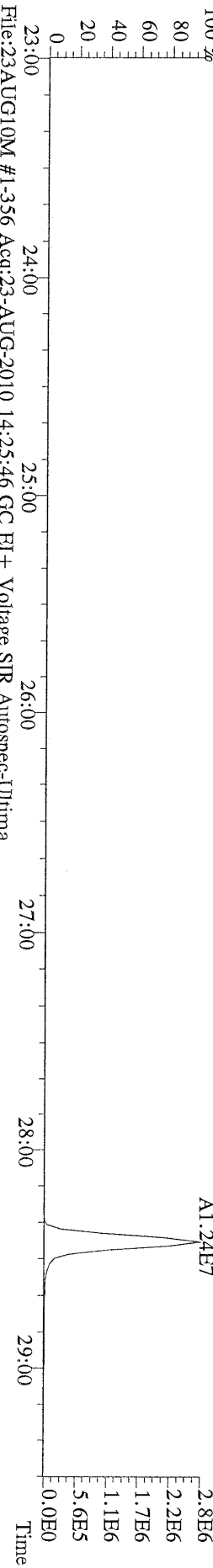
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 375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:P:PCDD
 Sample Text:ST082310M3 File Text:Frontier Analytical Laboratory



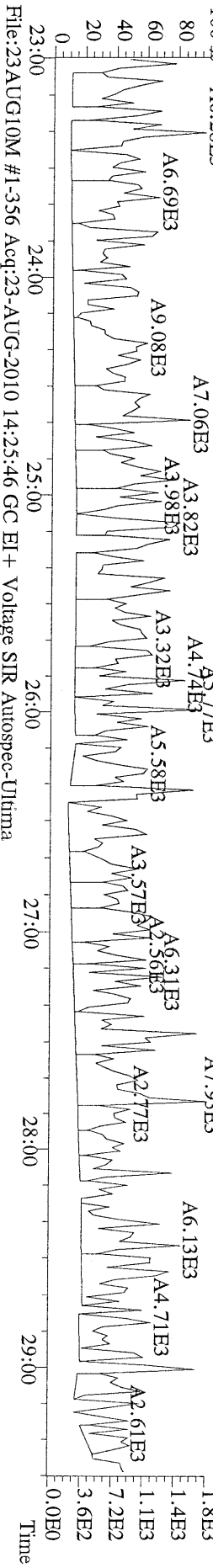
File:23AUG10M #1-356 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Fronier Analytical Laboratory



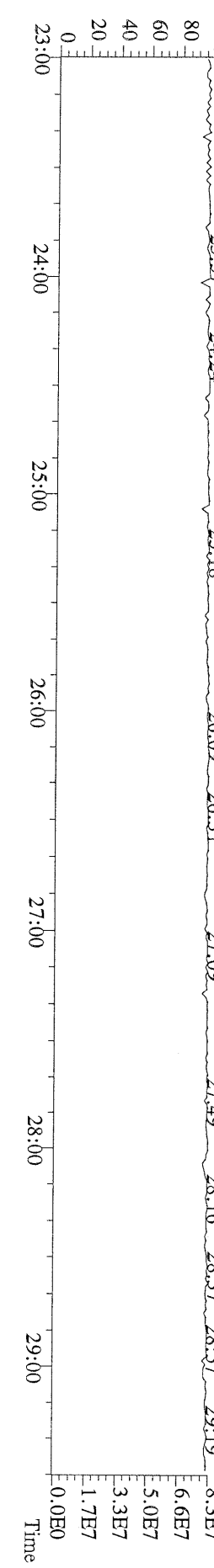
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 341.8568 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Fronier Analytical Laboratory



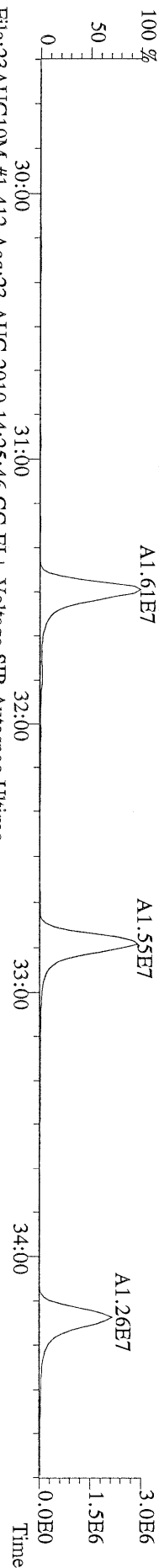
File:23AUG10M #1-356 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
 409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M3 File Text:Fronier Analytical Laboratory



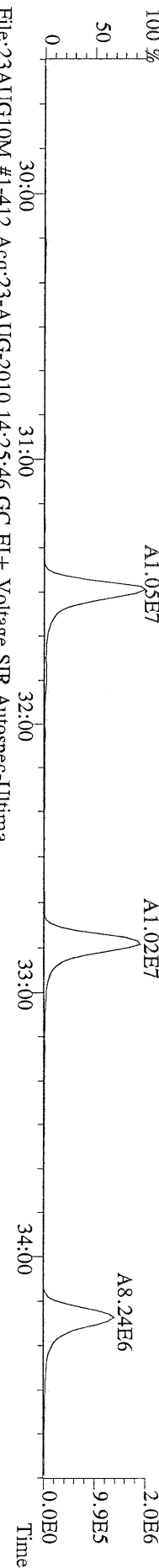
File:23AUG10M #1-356 Acq:23-AUG-2010 14:25:46 GC EI+ Voltage SIR Autospec-Ultima
 330.9792 Exp:PCDD
 Sample Text:ST082310M3 File Text:Fronier Analytical Laboratory



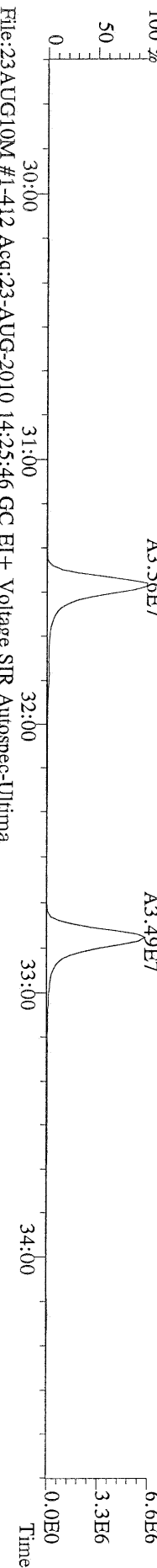
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339.8597 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00% ,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Fronier Analytical Laboratory



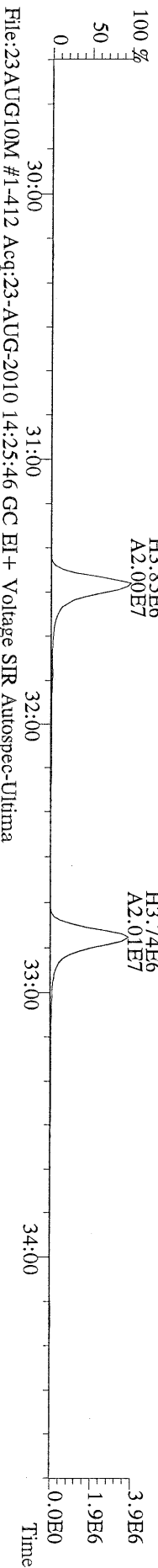
File:23AUG10M #1-412 Acq:23-AUG-2010 14:25:46 GC BI+ Voltage SIR Autospec-Ultima
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00% ,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Fronier Analytical Laboratory



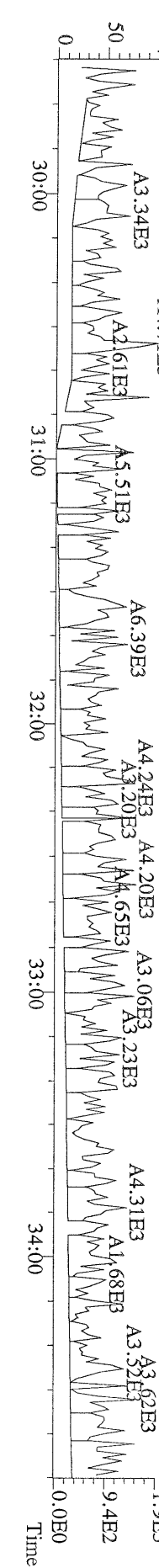
File:23AUG10M #1-412 Acq:23-AUG-2010 14:25:46 GC BI+ Voltage SIR Autospec-Ultima
351.9000 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00% ,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Fronier Analytical Laboratory



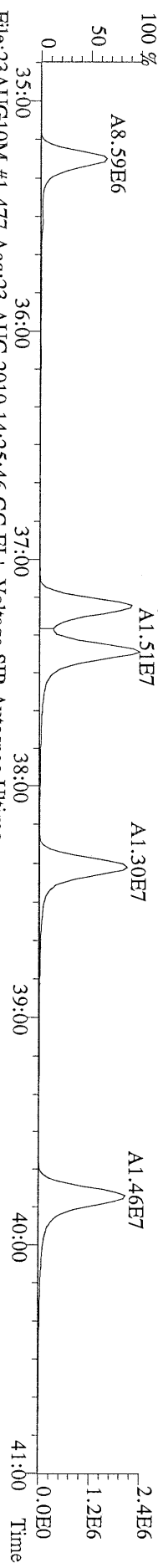
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353.8970 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00% ,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Fronier Analytical Laboratory



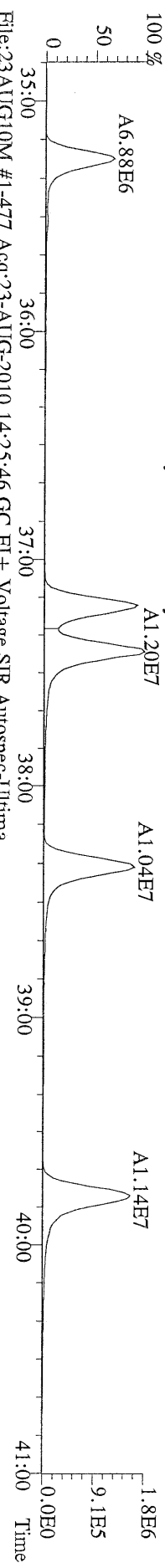
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409.7974 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00% ,F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Fronier Analytical Laboratory



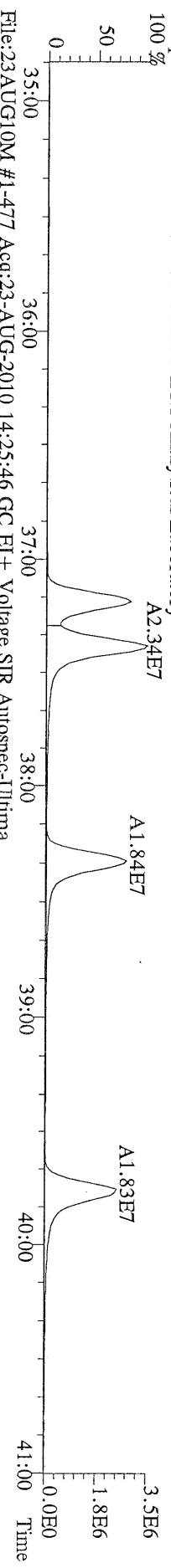
File:23AUG10M #1-477 Acq:23-AUG-2010 14:25:46 GC EI + Voltage SIR Autospec-Ultima
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,100,0.0,0.00% F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Fronier Analytical Laboratory



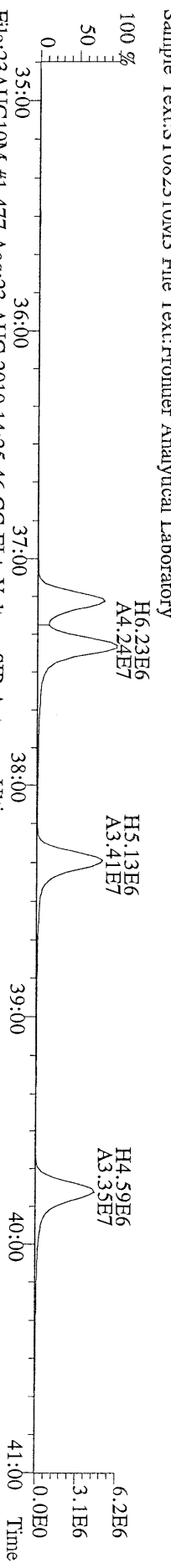
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375.8178 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,100,0.0,0.00% F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Fronier Analytical Laboratory



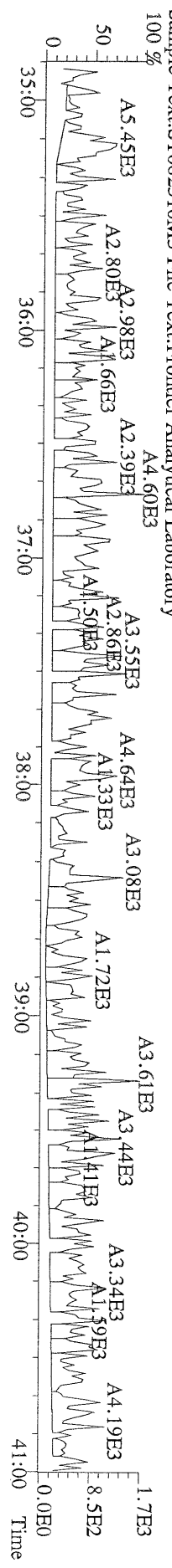
File:23AUG10M #1-477 Acq:23-AUG-2010 14:25:46 GC EI + Voltage SIR Autospec-Ultima
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,100,0.0,0.00% F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Fronier Analytical Laboratory



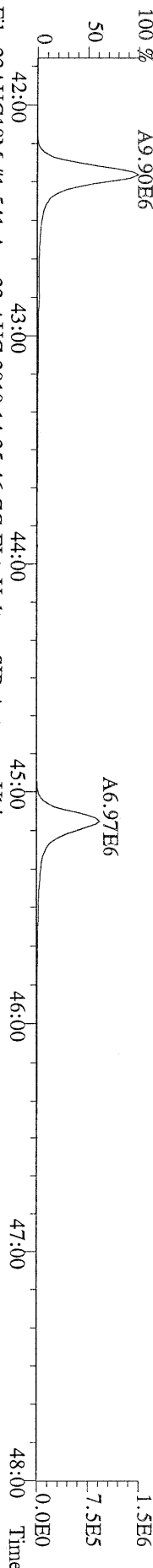
File:23AUG10M #1-477 Acq:23-AUG-2010 14:25:46 GC EI + Voltage SIR Autospec-Ultima
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,100,0.0,0.00% F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Fronier Analytical Laboratory



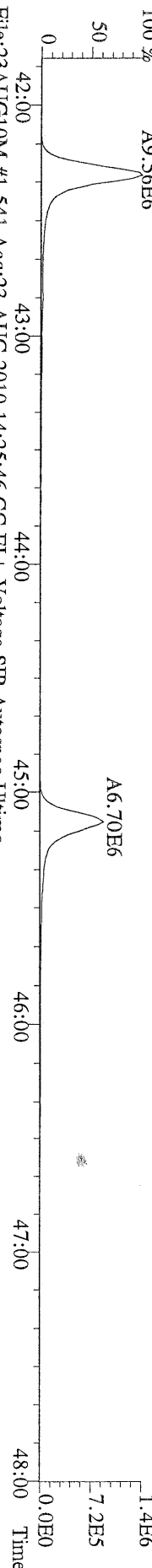
File:23AUG10M #1-477 Acq:23-AUG-2010 14:25:46 GC EI + Voltage SIR Autospec-Ultima
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,100,0.0,0.00% F,F) Exp:PCDD
Sample Text:ST082310M3 File Text:Fronier Analytical Laboratory



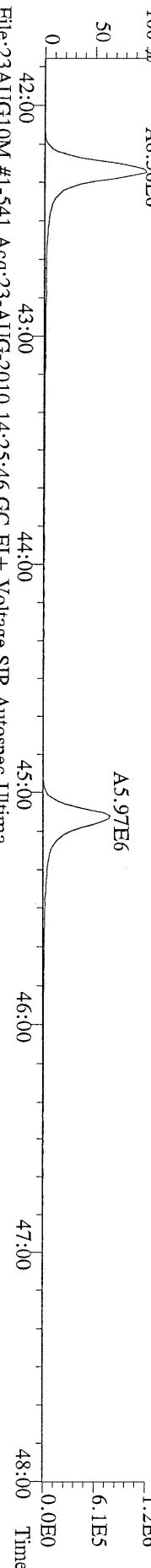
File:23AUG10M #1-541 Acq:23-AUG-2010 14:25:46 GC BI + Voltage SIR Autospec-Ultima
 407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0,0,0) Exp:PCDD
 Sample Text:ST082310M3 File Text:Pronier Analytical Laboratory



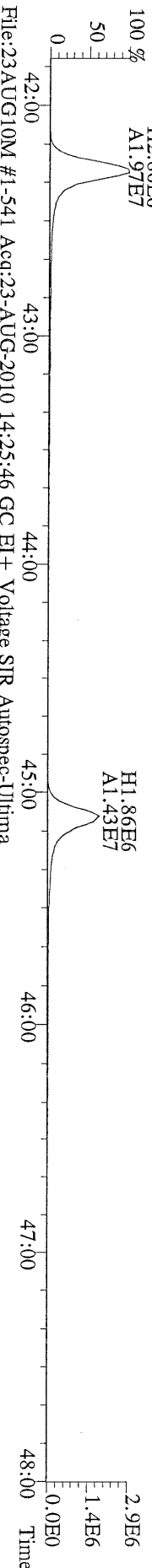
File:23AUG10M #1-541 Acq:23-AUG-2010 14:25:46 GC BI + Voltage SIR Autospec-Ultima
 409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0,0,0) Exp:PCDD
 Sample Text:ST082310M3 File Text:Pronier Analytical Laboratory



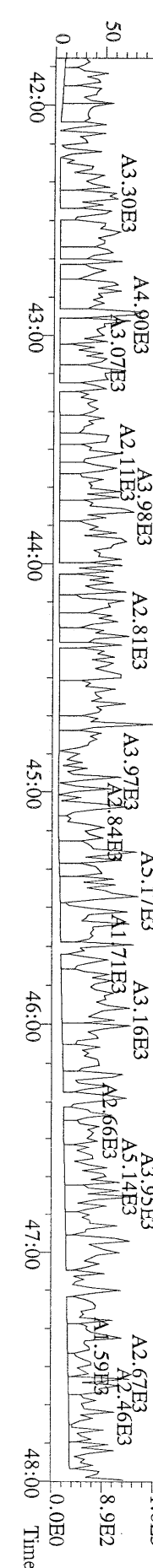
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 417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0,0,0) Exp:PCDD
 Sample Text:ST082310M3 File Text:Pronier Analytical Laboratory



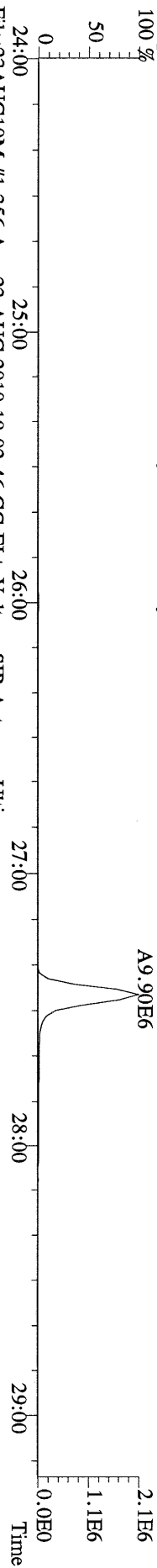
File:23AUG10M #1-541 Acq:23-AUG-2010 14:25:46 GC BI + Voltage SIR Autospec-Ultima
 419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0,0,0) Exp:PCDD
 Sample Text:ST082310M3 File Text:Pronier Analytical Laboratory



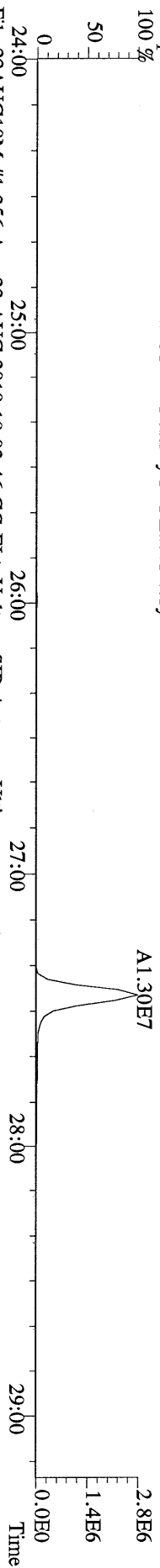
File:23AUG10M #1-541 Acq:23-AUG-2010 14:25:46 GC BI + Voltage SIR Autospec-Ultima
 479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0,0,0) Exp:PCDD
 Sample Text:ST082310M3 File Text:Pronier Analytical Laboratory



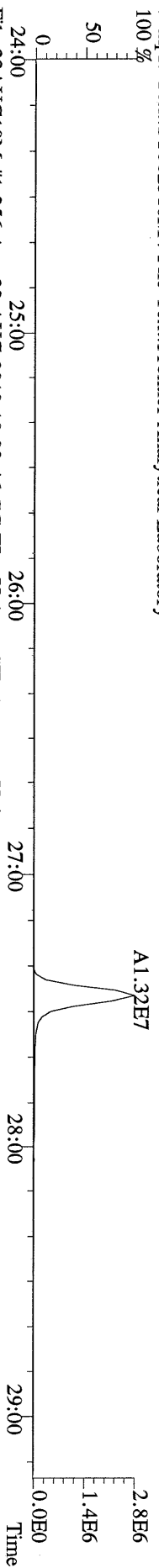
File:23AUG10M #1-356 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Utima
319.8965 S:6 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory
100 %



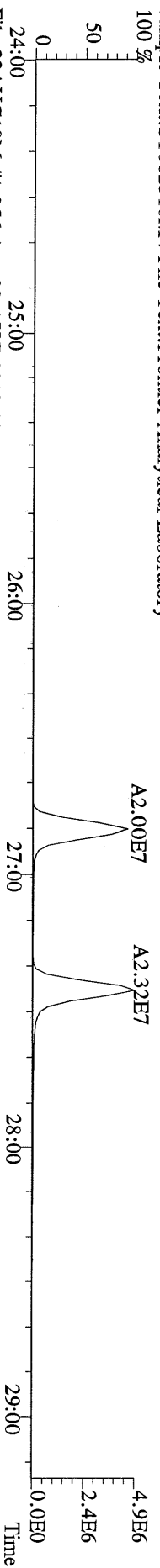
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321.8936 S:6 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory
100 %



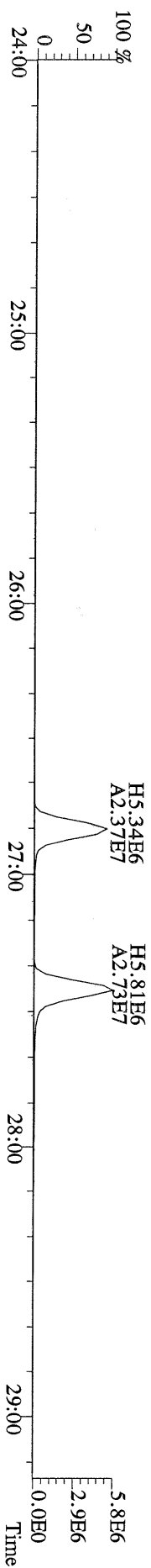
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327.8847 S:6 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory
100 %



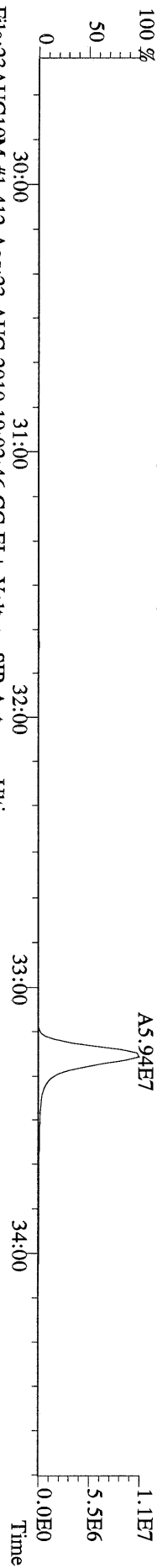
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331.9368 S:6 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory
100 %



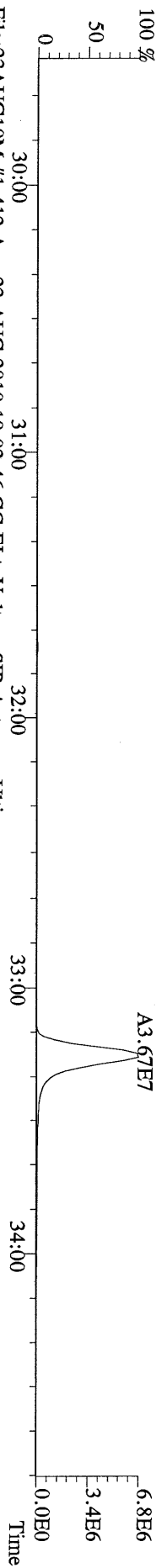
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333.9339 S:6 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



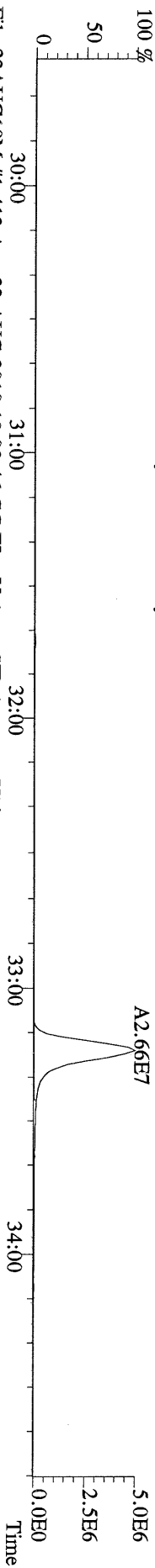
File:23AUG10M #1-412 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



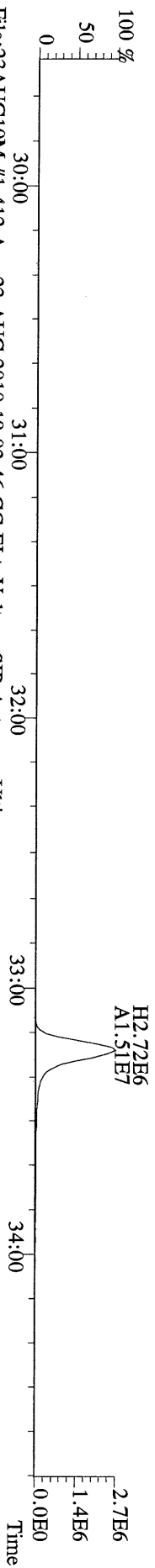
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357.8517 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



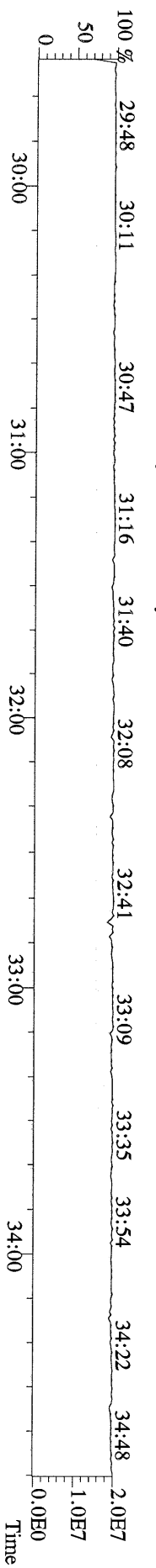
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367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



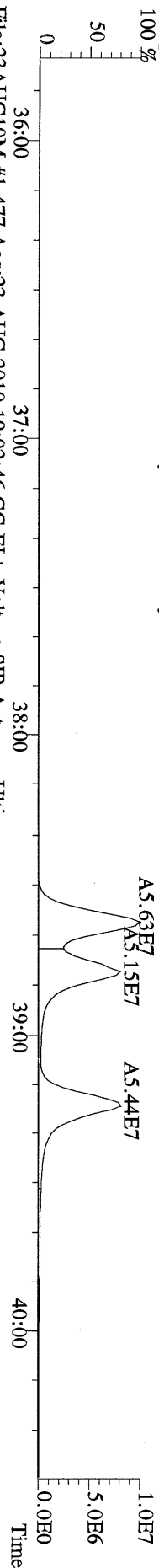
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369.8919 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



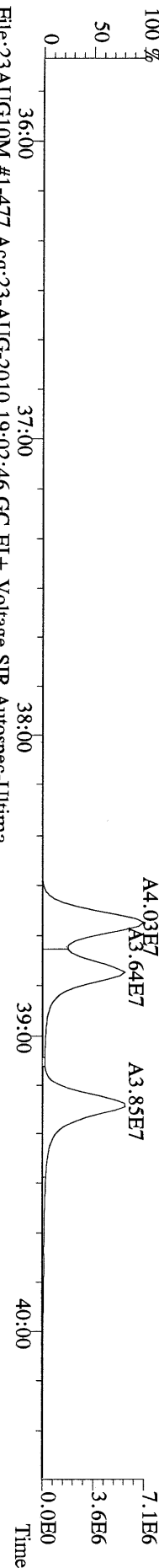
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366.9792 S:6 F:2 Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



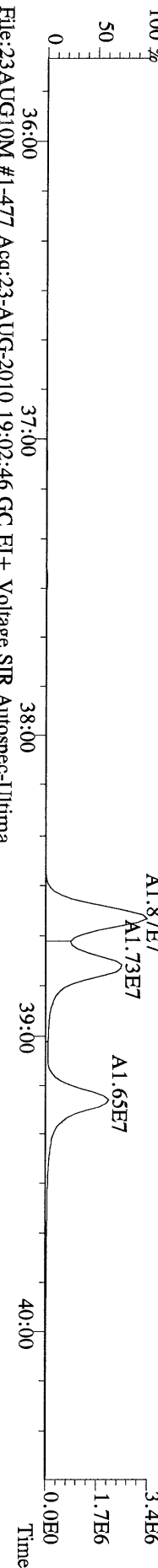
File:23AUG10M #1-477 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
 389.8156 S:6 F:3 BSUB(10000,15,-3.0) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



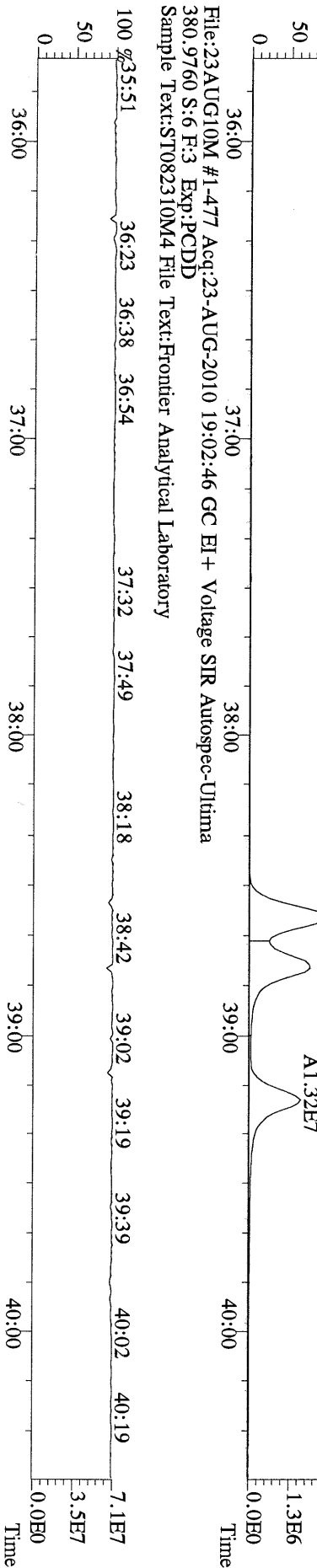
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 391.8127 S:6 F:3 BSUB(10000,15,-3.0) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



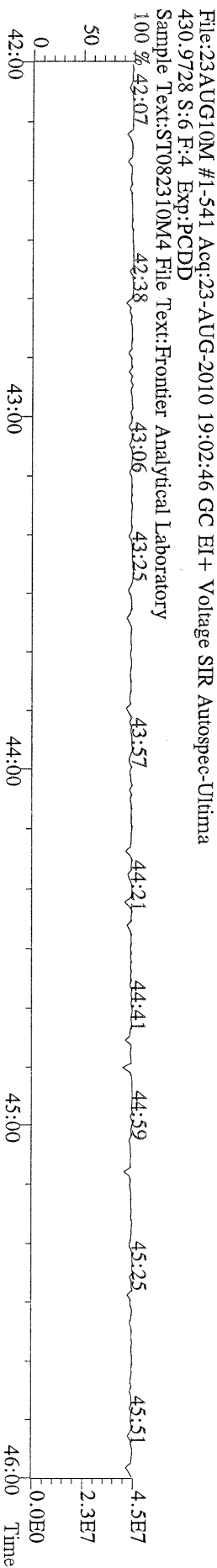
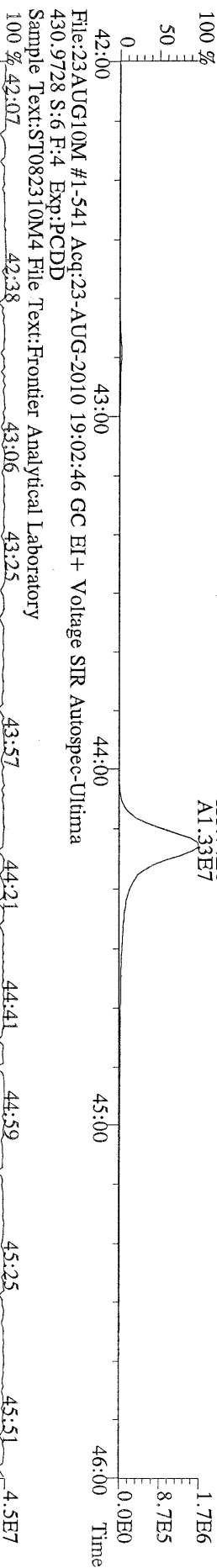
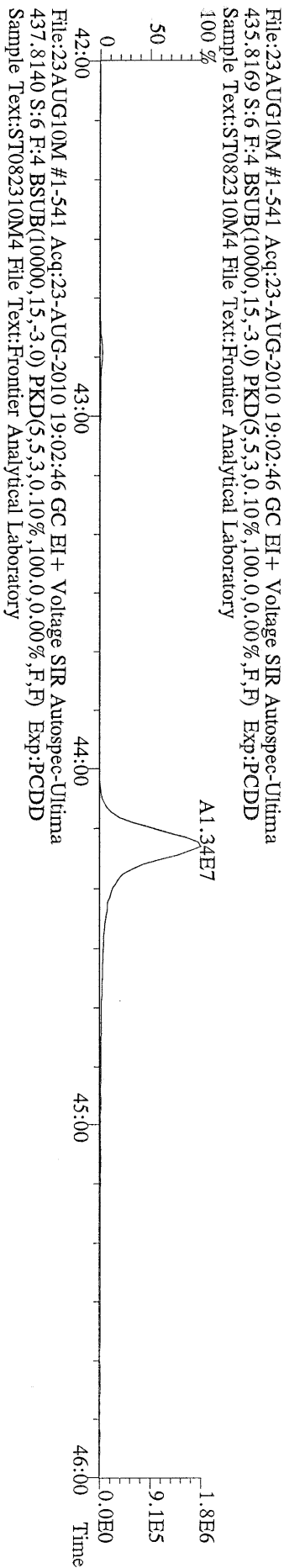
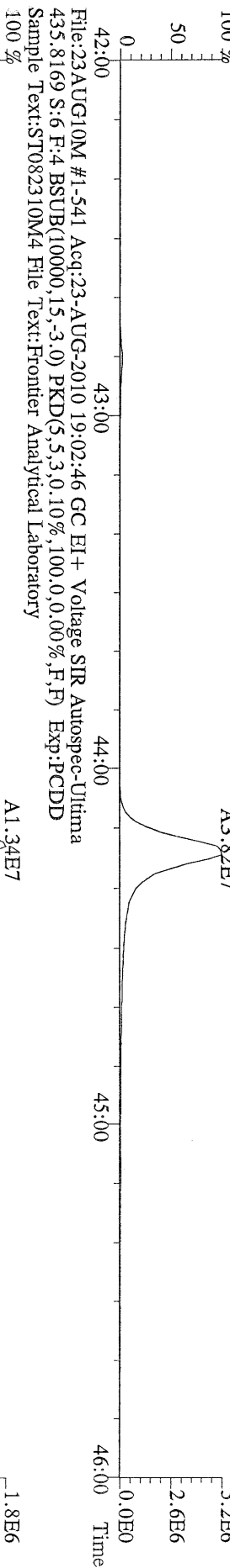
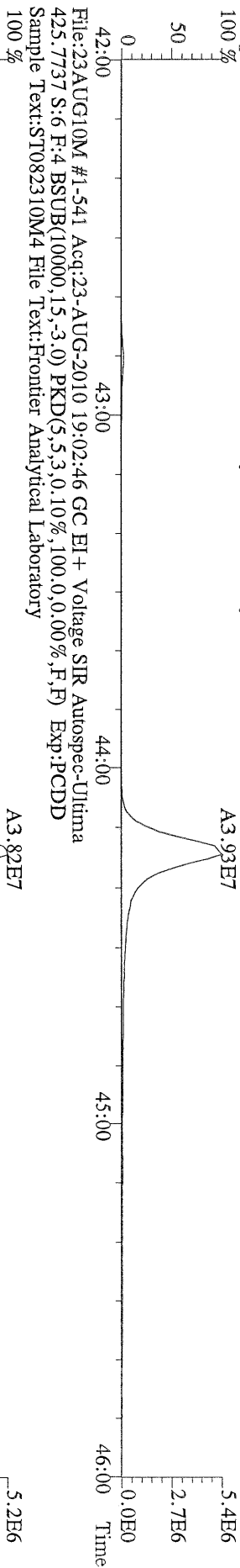
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 401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



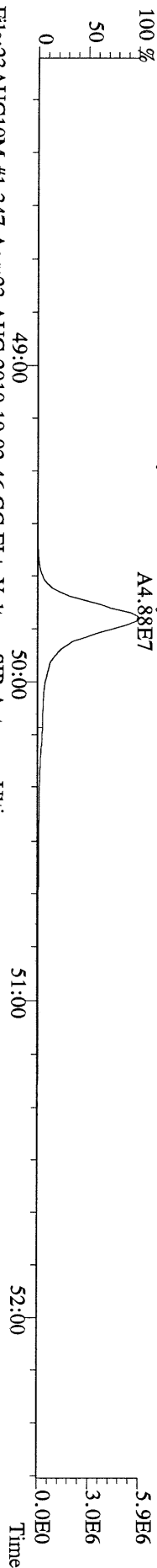
File:23AUG10M #1-477 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
 380.9760 S:6 F:3 Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



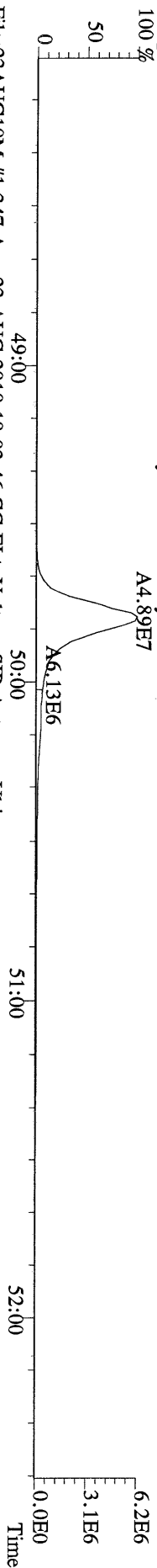
File:23AUG10M #1-541 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory
100 %



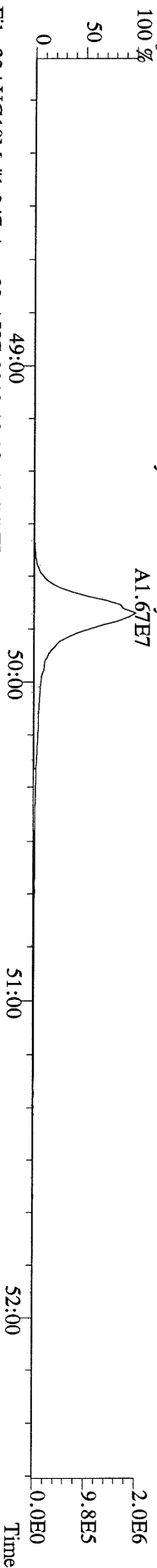
File:23AUG10M #1-347 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Utlima
 457.7377 S:6 F:5 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory
 100 %



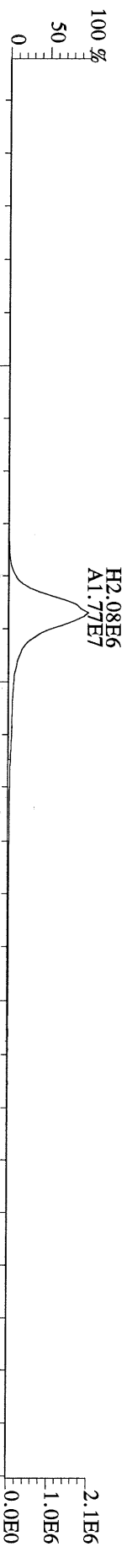
File:23AUG10M #1-347 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Utlima
 459.7348 S:6 F:5 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory
 100 %



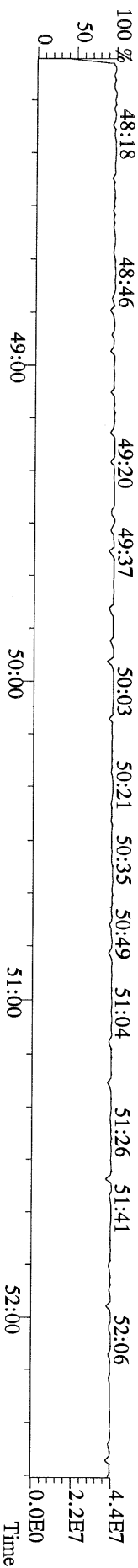
File:23AUG10M #1-347 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Utlima
 469.7780 S:6 F:5 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory
 100 %



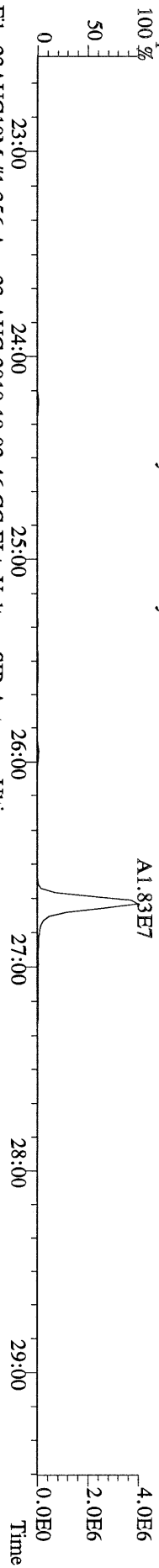
File:23AUG10M #1-347 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Utlima
 471.7750 S:6 F:5 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



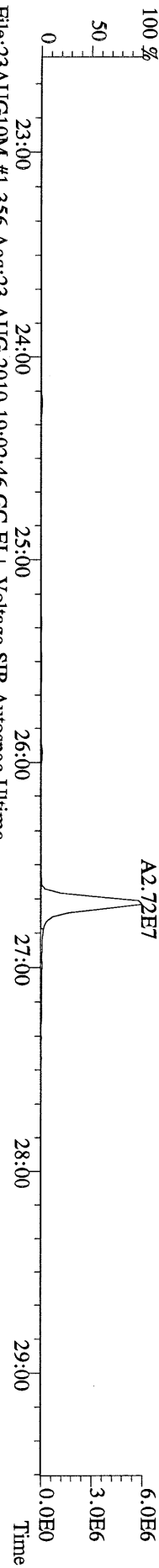
File:23AUG10M #1-347 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Utlima
 454.9728 S:6 F:5 Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



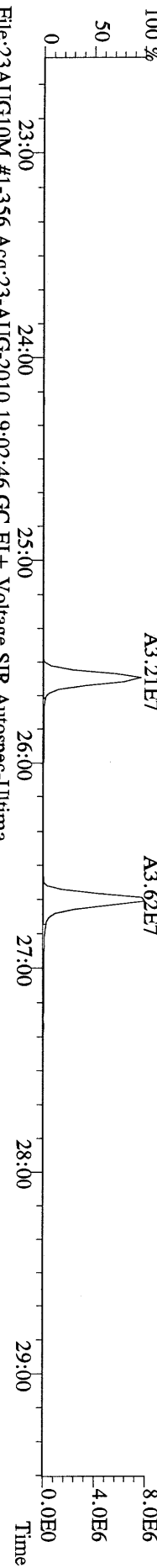
File:23AUG10M #1-356 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



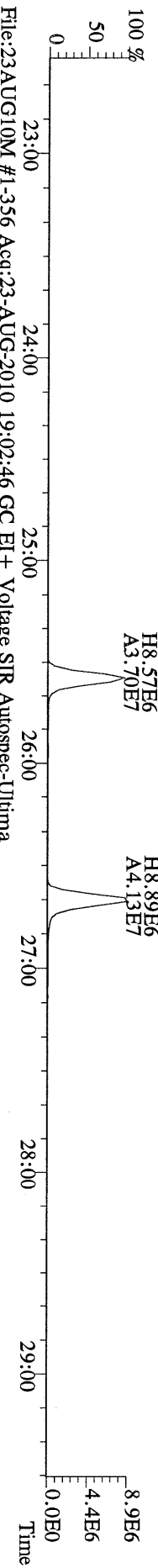
File:23AUG10M #1-356 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



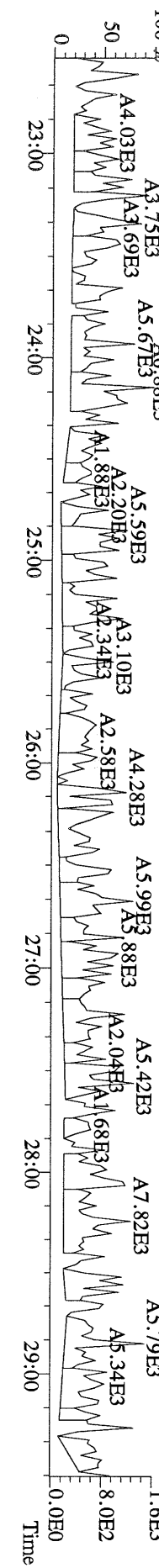
File:23AUG10M #1-356 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



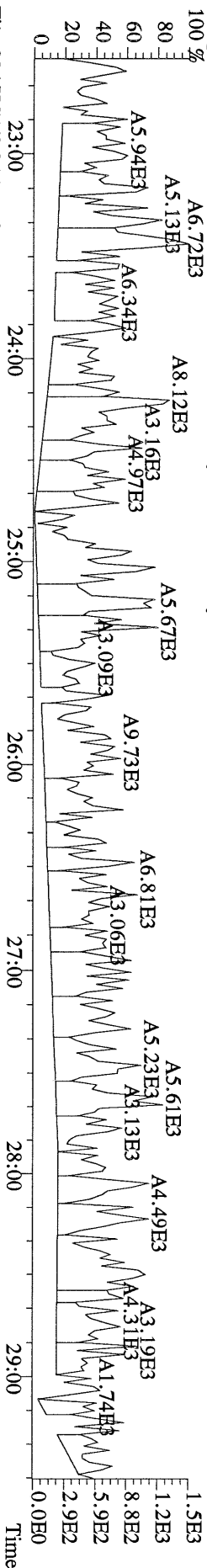
File:23AUG10M #1-356 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



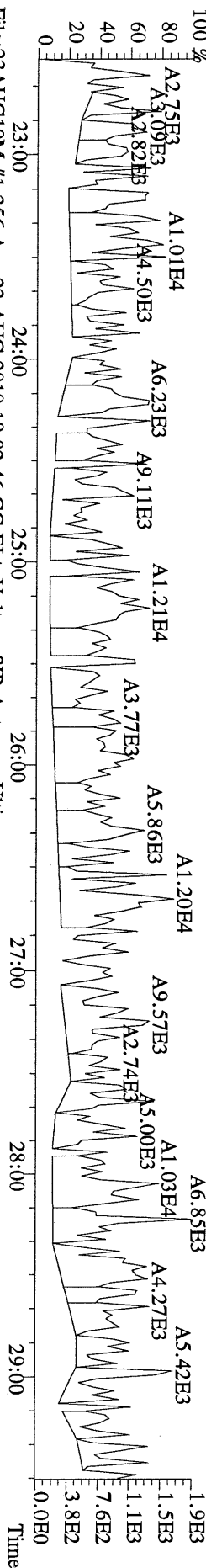
File:23AUG10M #1-356 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



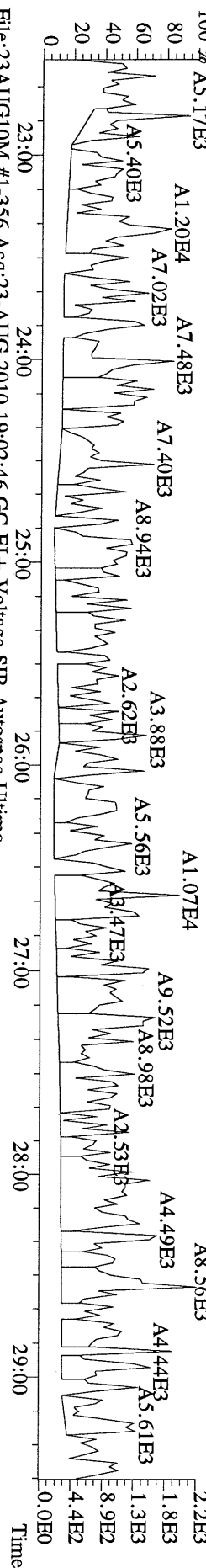
File:23AUG10M #1-356 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



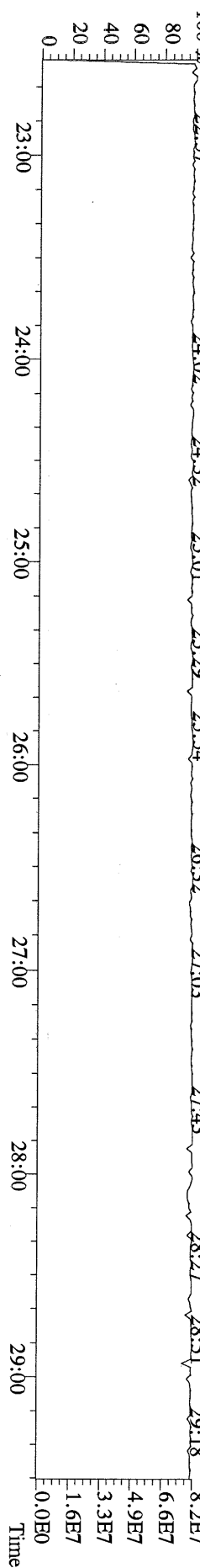
File:23AUG10M #1-356 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
 341.8568 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



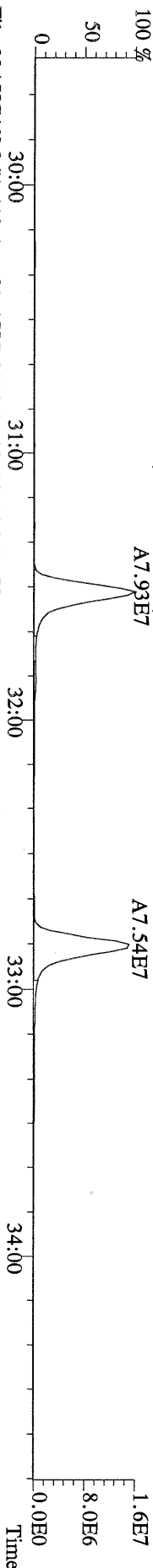
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 409.7974 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



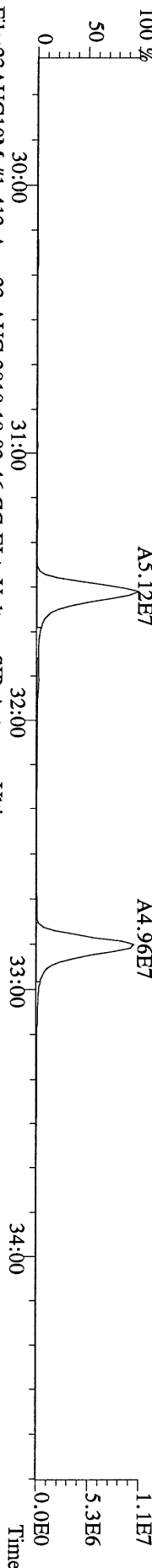
File:23AUG10M #1-356 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
 LOCK MASS CHECK S:6 Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



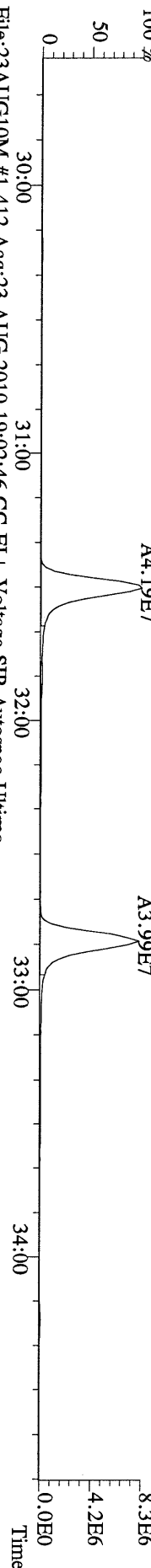
File:23AUG10M #1-412 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



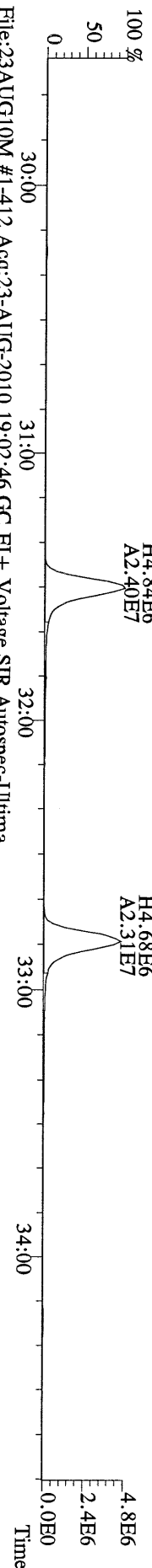
File:23AUG10M #1-412 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
 341.8568 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



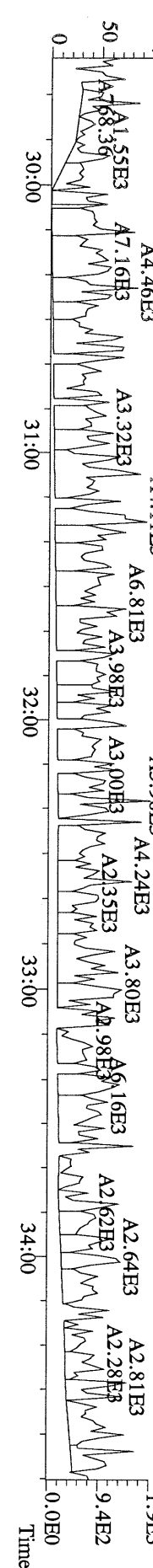
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 351.9000 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



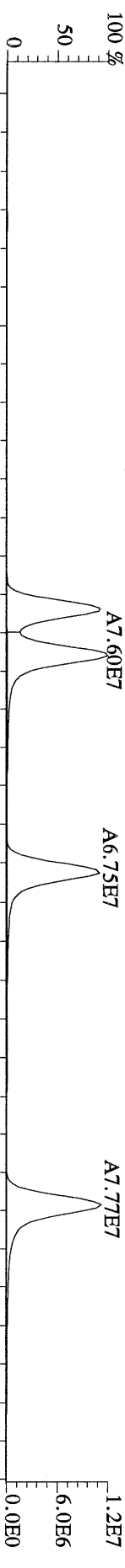
File:23AUG10M #1-412 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
 353.8970 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



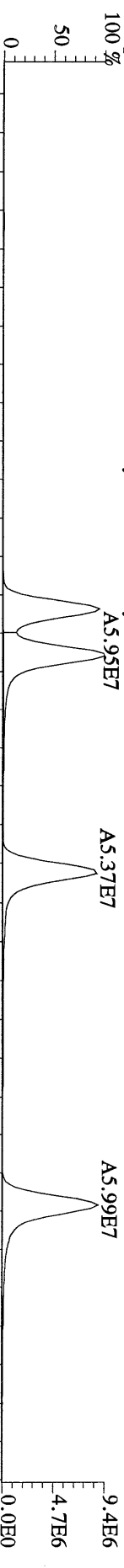
File:23AUG10M #1-412 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Ultima
 409.7974 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



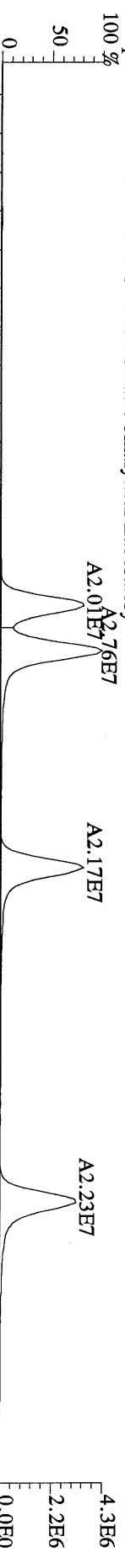
File:23AUG10M #1-477 Acq:23-AUG-2010 19:02:46 GC BI + Voltage SIR Autospec-Ultima
373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Fronier Analytical Laboratory



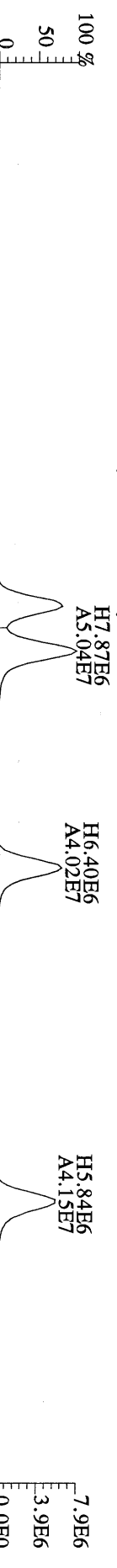
File:23AUG10M #1-477 Acq:23-AUG-2010 19:02:46 GC BI + Voltage SIR Autospec-Ultima
375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Fronier Analytical Laboratory



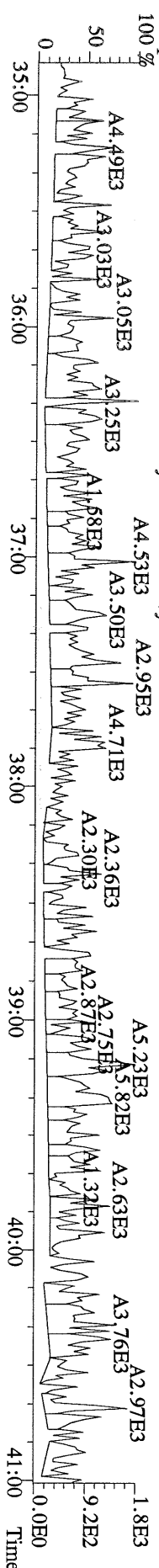
File:23AUG10M #1-477 Acq:23-AUG-2010 19:02:46 GC BI + Voltage SIR Autospec-Ultima
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Fronier Analytical Laboratory



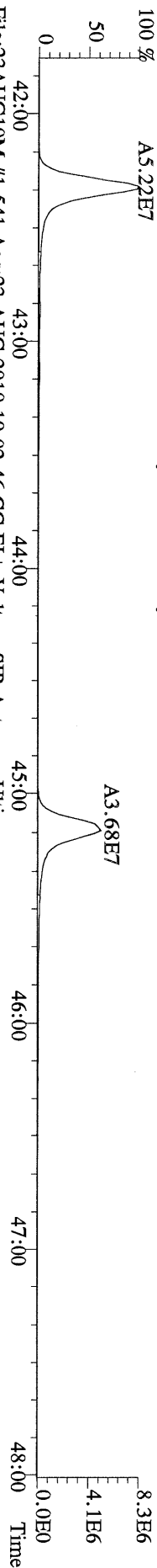
File:23AUG10M #1-477 Acq:23-AUG-2010 19:02:46 GC BI + Voltage SIR Autospec-Ultima
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Fronier Analytical Laboratory



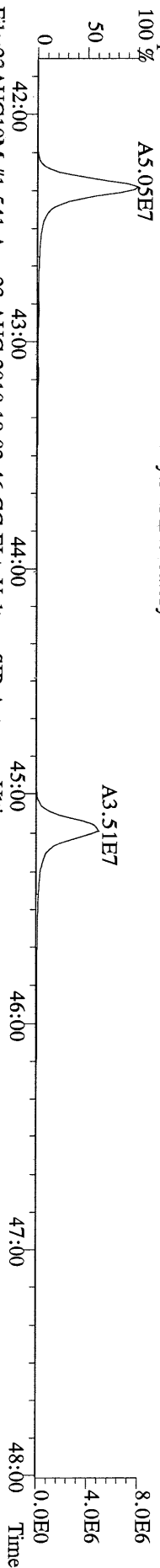
File:23AUG10M #1-477 Acq:23-AUG-2010 19:02:46 GC BI + Voltage SIR Autospec-Ultima
445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Fronier Analytical Laboratory



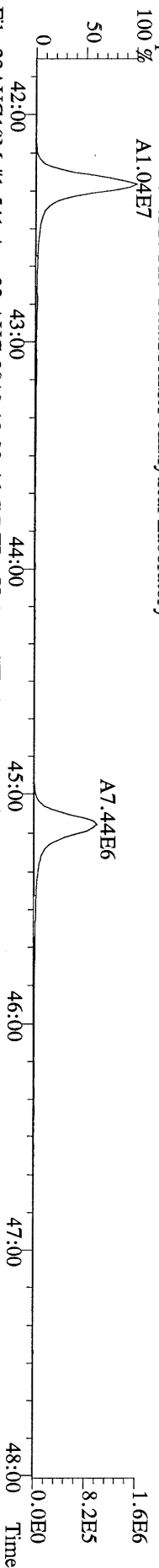
File:23AUG10M #1-541 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Utima
407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



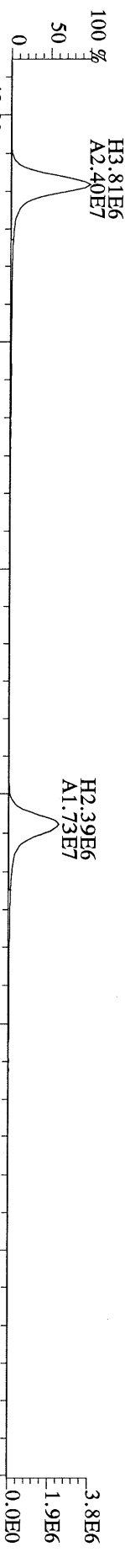
File:23AUG10M #1-541 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Utima
409.7788 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



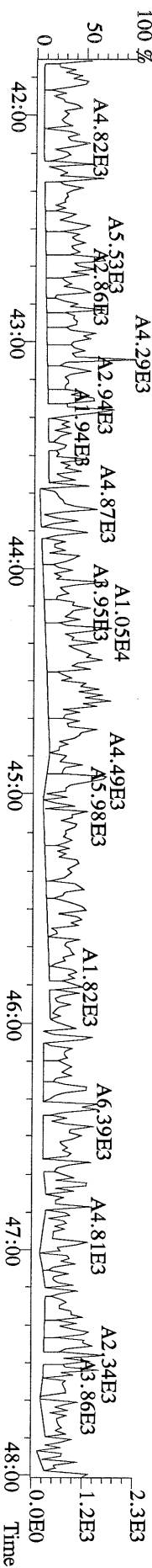
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417.8253 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



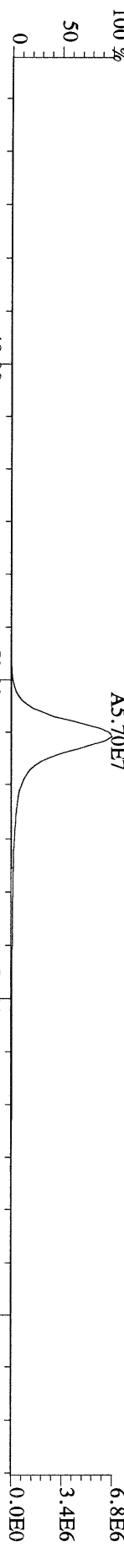
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419.8220 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



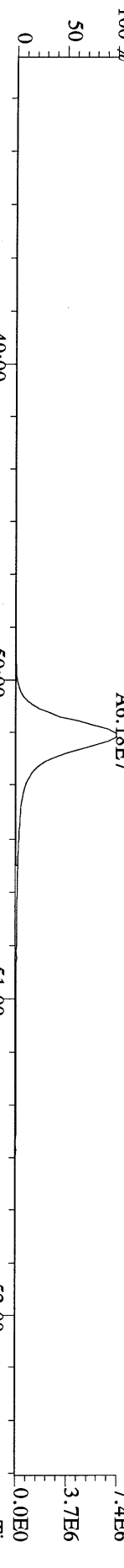
File:23AUG10M #1-541 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SIR Autospec-Utima
479.7165 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



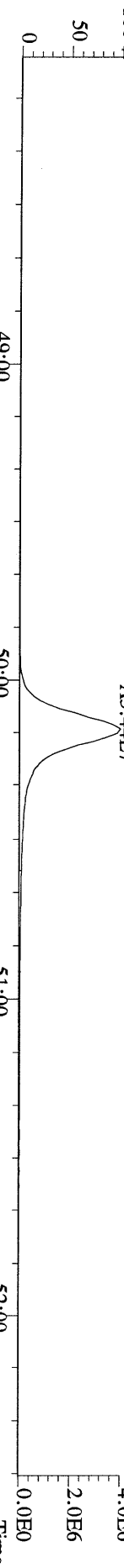
File:23AUG10M #1-347 Acq:23-AUG-2010 19:02:46 GC EI+ Voltage SHR Autospec-Ultima
441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory
100 %



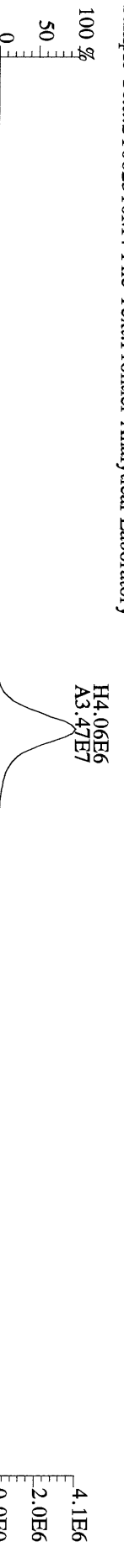
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443.7398 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory
100 %



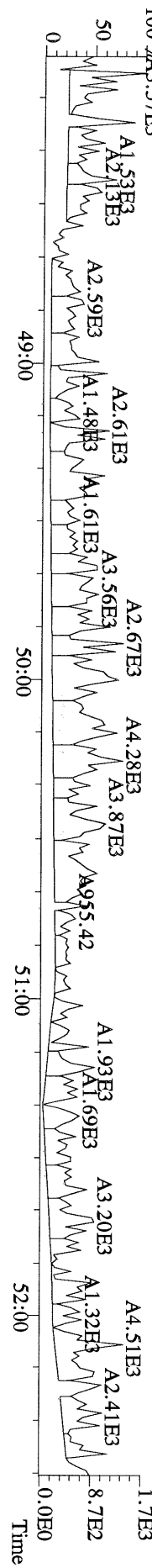
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453.7831 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory
100 %



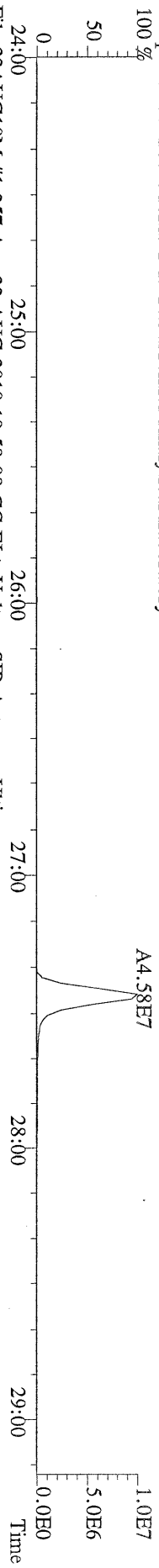
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455.7801 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



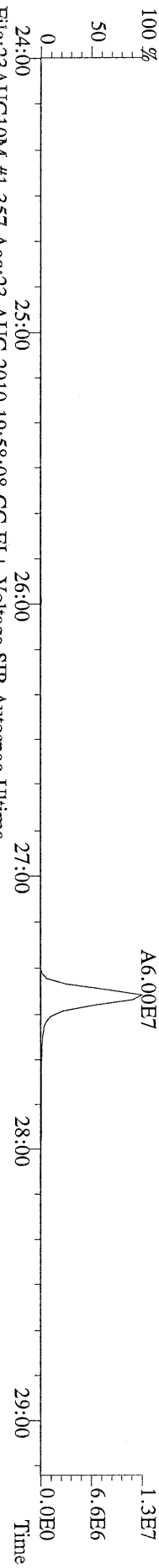
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513.6775 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M4 File Text:Frontier Analytical Laboratory



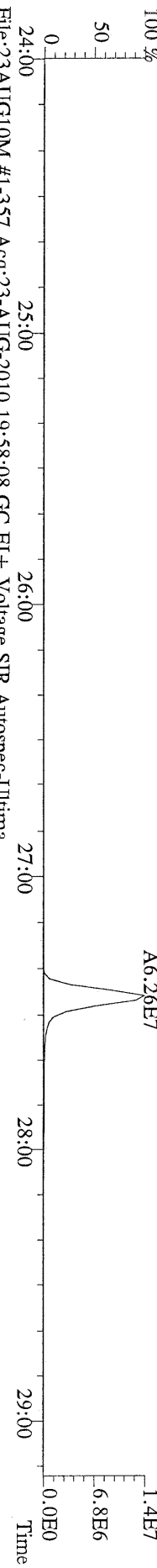
File:23AUG10M #1-357 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:7 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory
100 %



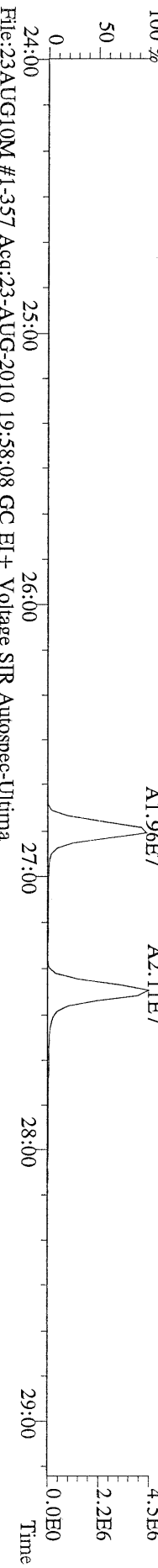
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321.8936 S:7 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory
100 %



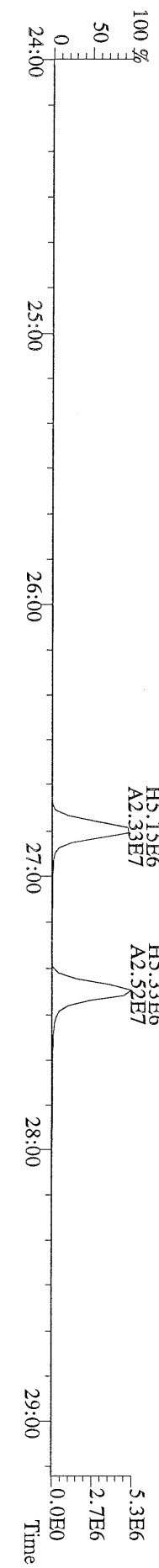
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327.8847 S:7 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory
100 %



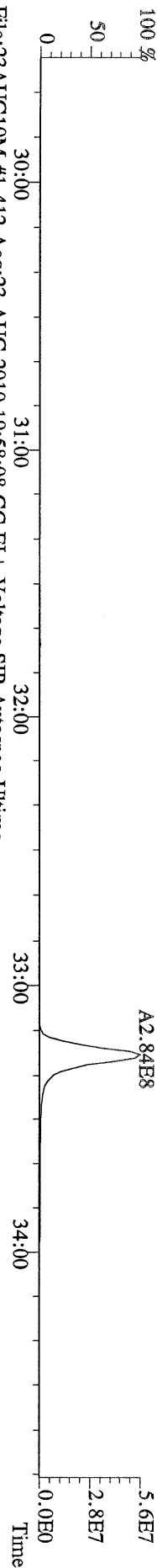
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331.9368 S:7 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory
100 %



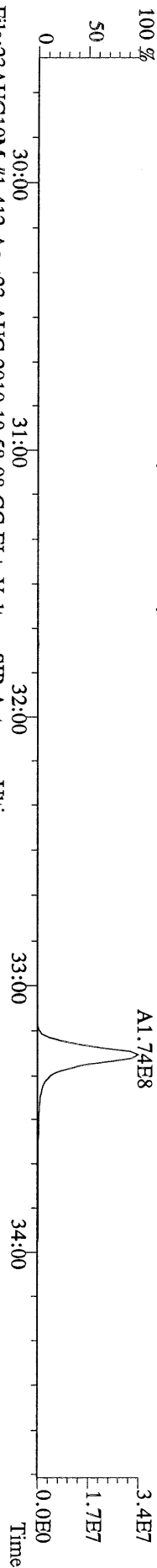
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333.9339 S:7 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



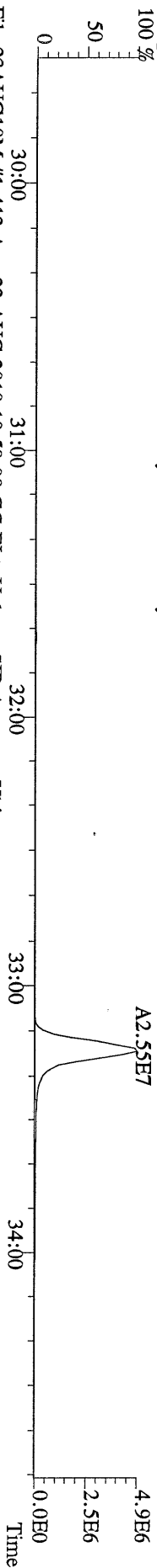
File:23AUG10M #1-412 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



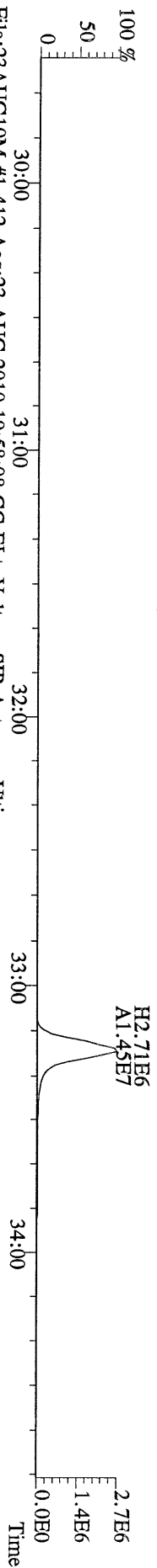
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357.8517 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



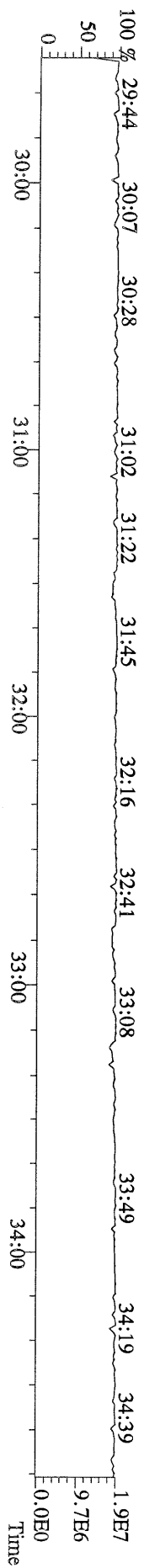
File:23AUG10M #1-412 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



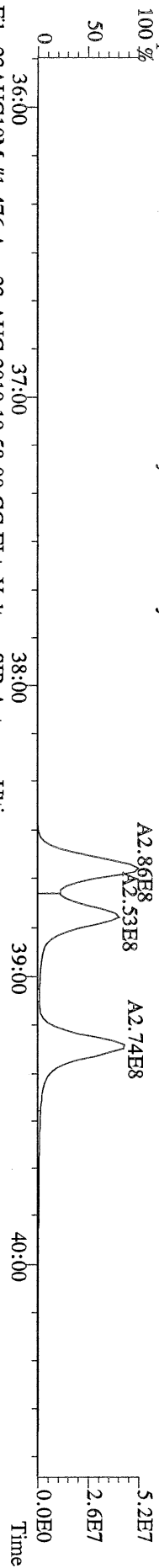
File:23AUG10M #1-412 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



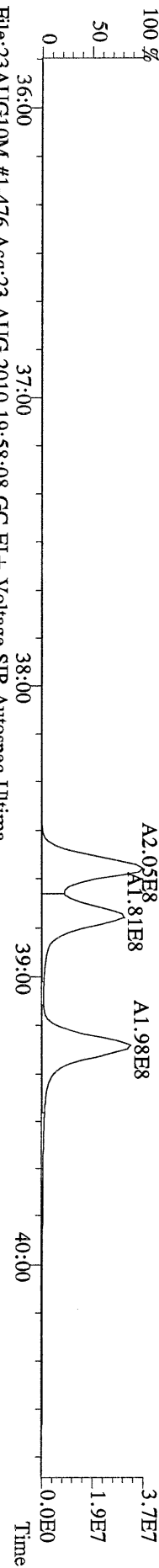
File:23AUG10M #1-412 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:7 F:2 Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



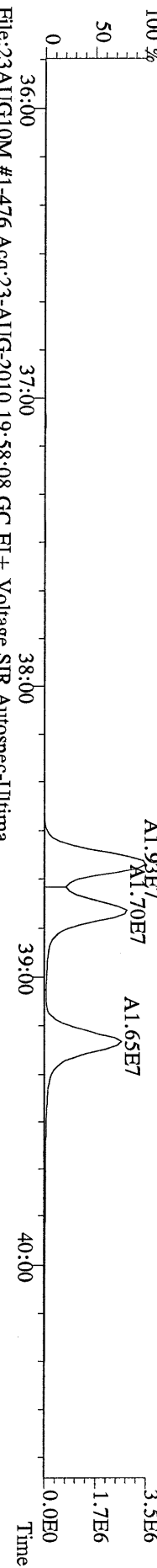
File:23AUG10M #1-476 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



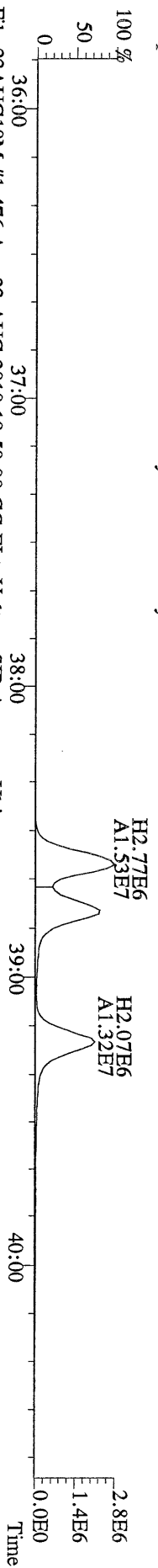
File:23AUG10M #1-476 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



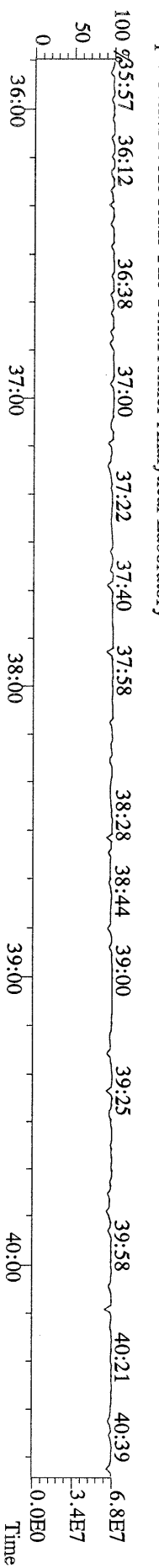
File:23AUG10M #1-476 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



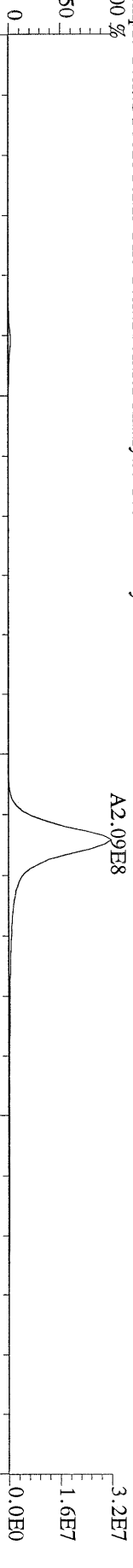
File:23AUG10M #1-476 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



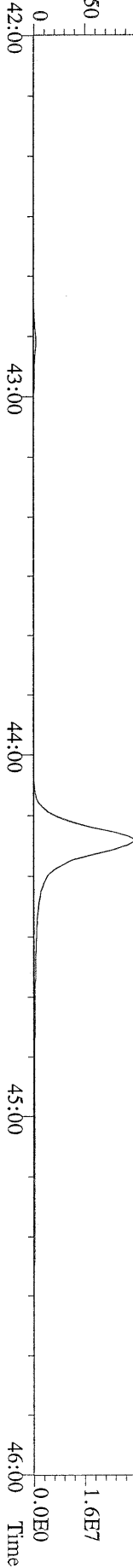
File:23AUG10M #1-476 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:7 F:3 Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



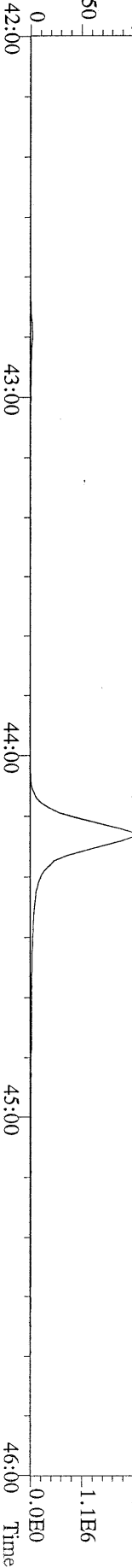
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 423.7767 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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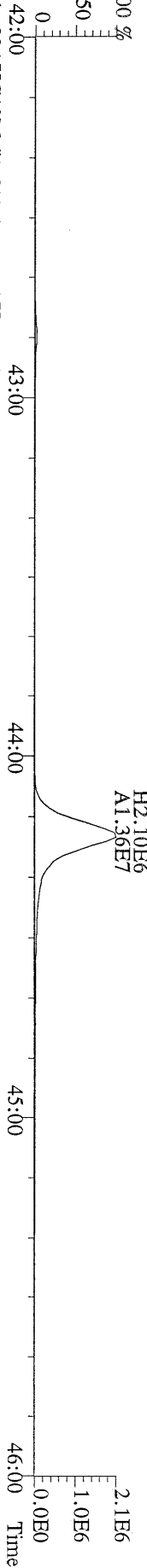
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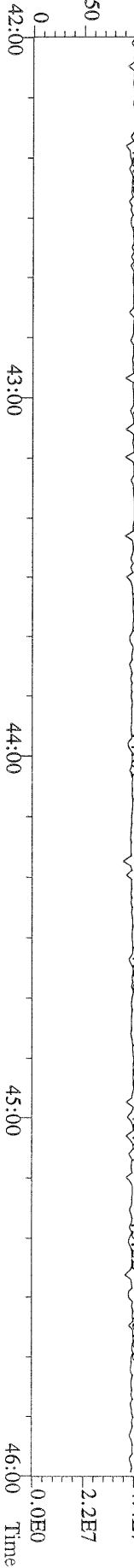
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 435.8169 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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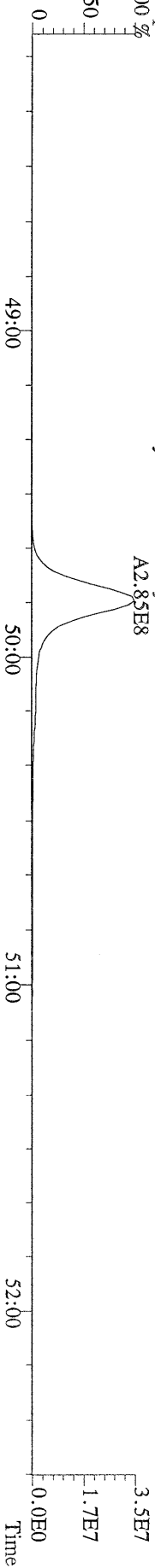
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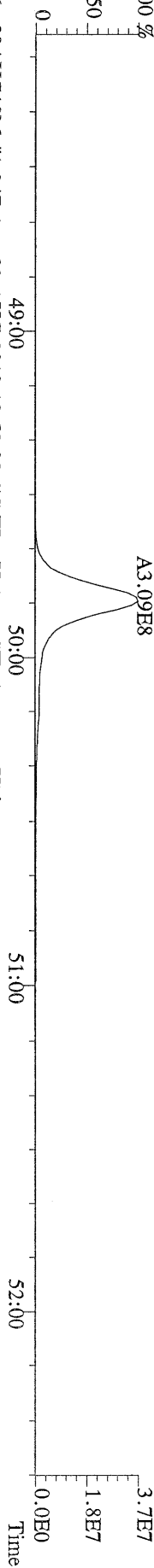
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 100 %



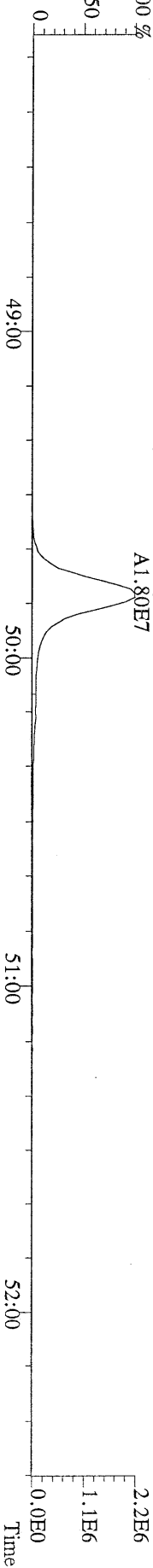
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457.7377 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory
100 %



File:23AUG10M #1-347 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
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
100 %



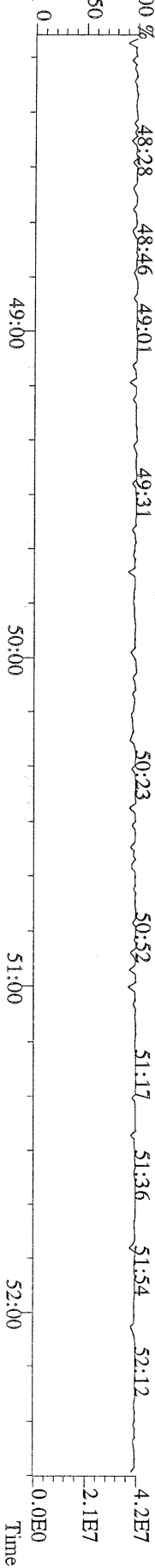
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Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory
100 %



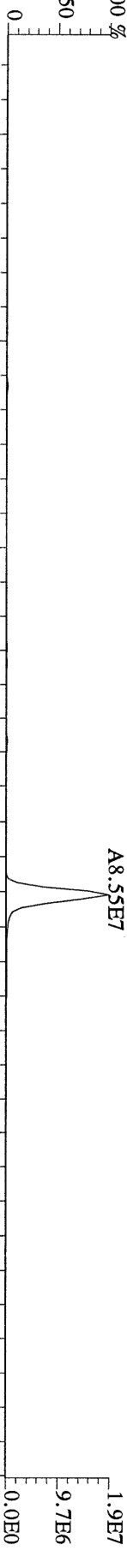
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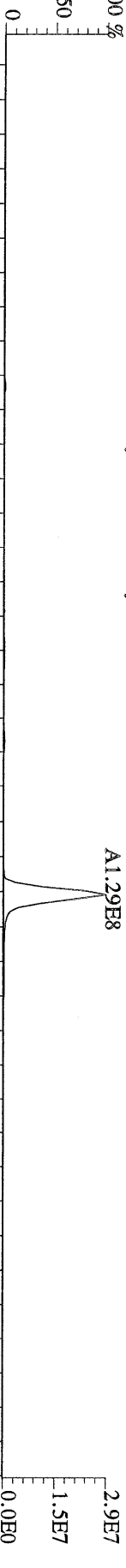
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Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



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



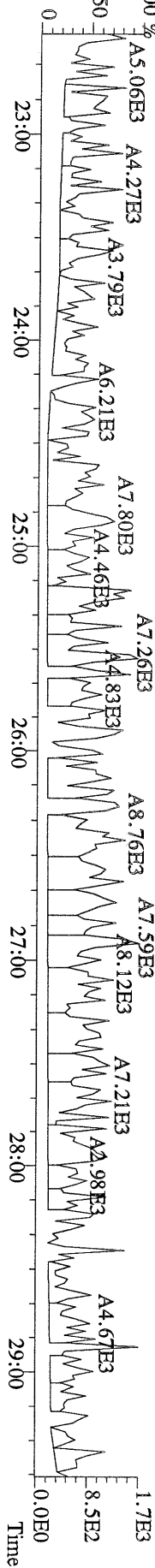
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315.9419 S:7 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



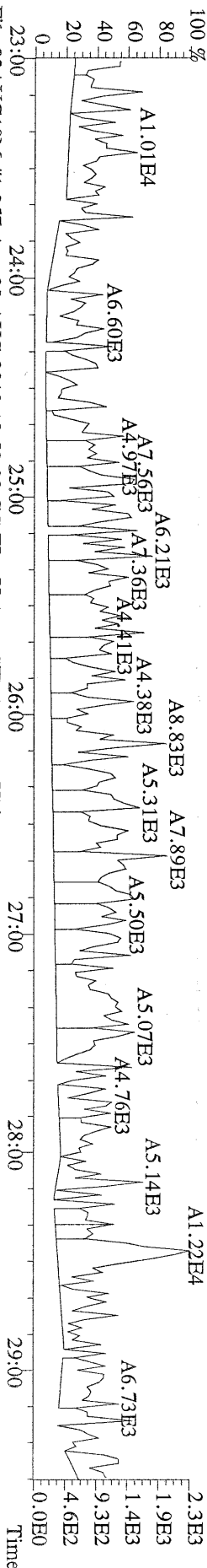
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317.9389 S:7 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
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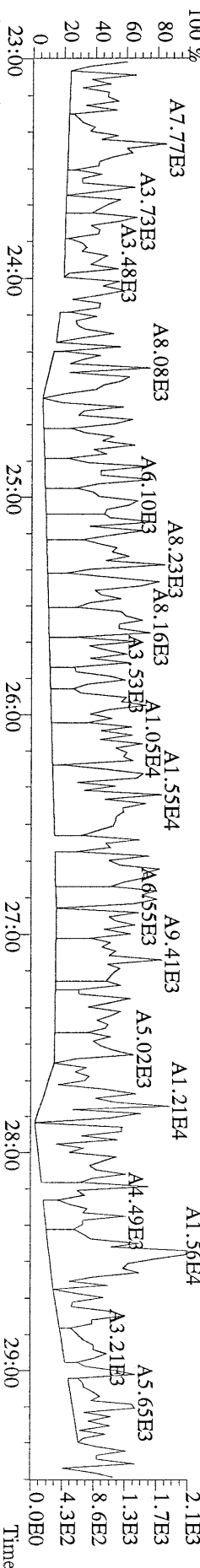
File:23AUG10M #1-357 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:7 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



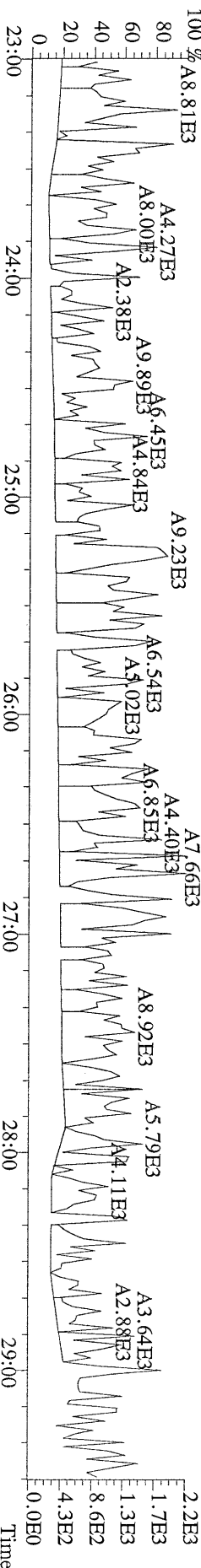
File:23AUG10M #1-357 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 S:7 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



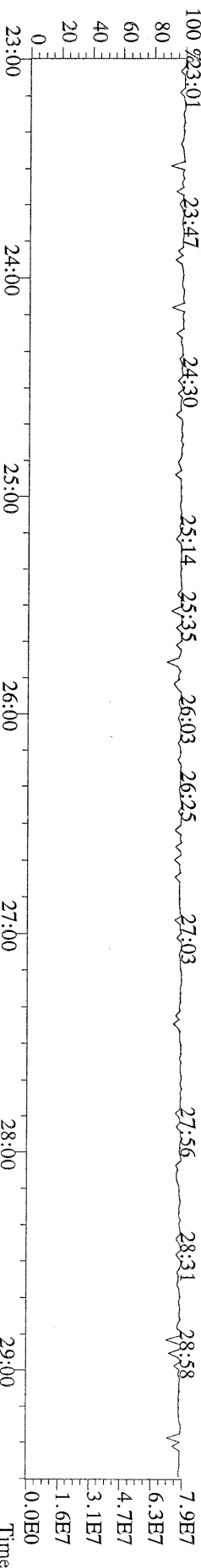
File:23AUG10M #1-357 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
 341.8568 S:7 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



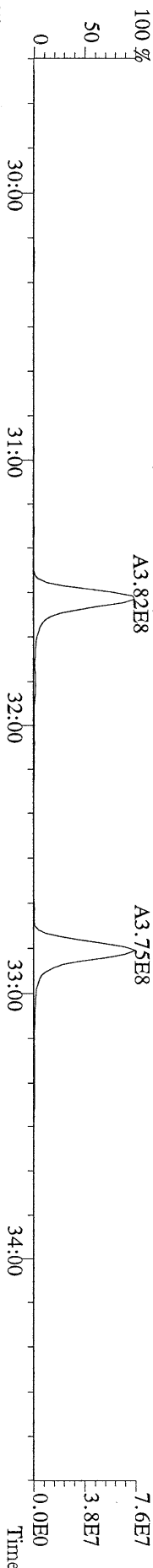
File:23AUG10M #1-357 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
 409.7974 S:7 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



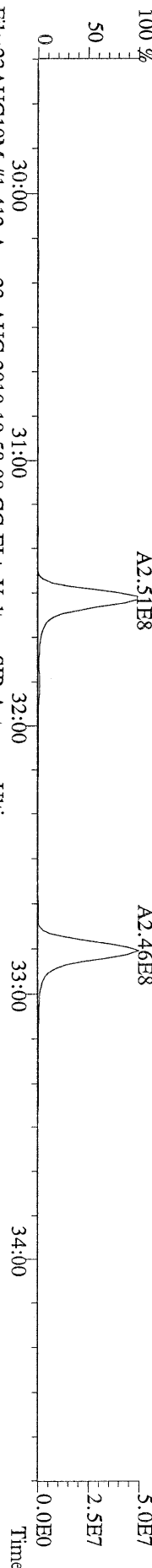
File:23AUG10M #1-357 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
 330.9792 S:7 Exp:PCDD
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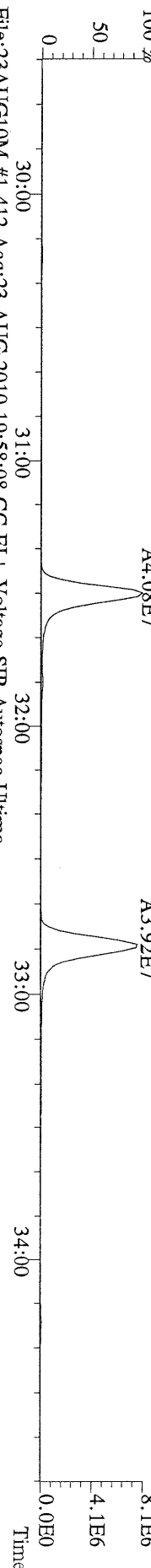
File:23AUG10M #1-412 Acq:23-AUG-2010 19:58:08 GC HI+ Voltage SIR Autospec-Ultima
 339.8597 S:7 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M5 File Text:Fronier Analytical Laboratory



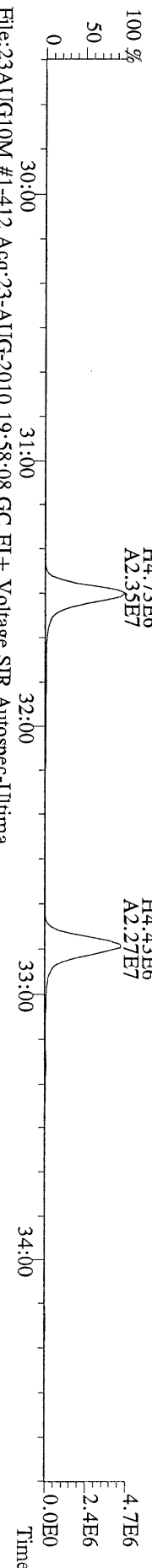
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 341.8568 S:7 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M5 File Text:Fronier Analytical Laboratory



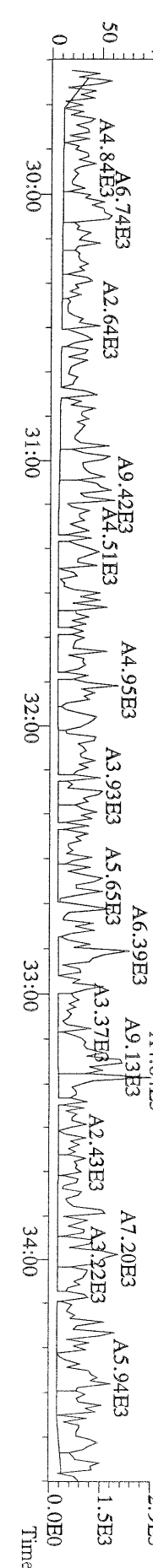
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 351.9000 S:7 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST082310M5 File Text:Fronier Analytical Laboratory



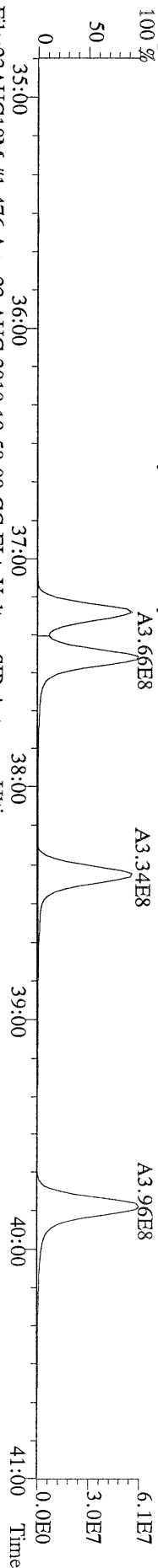
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 353.8970 S:7 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
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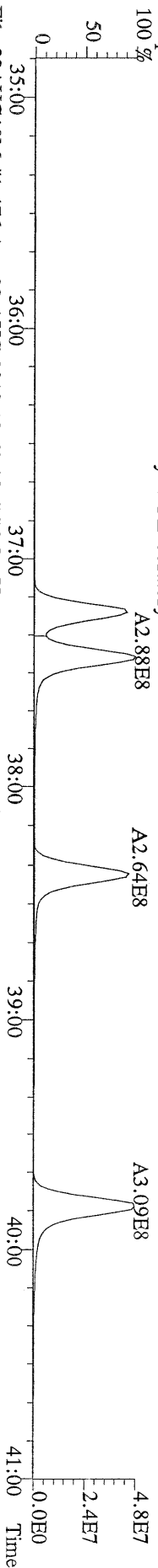
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 Sample Text:ST082310M5 File Text:Fronier Analytical Laboratory



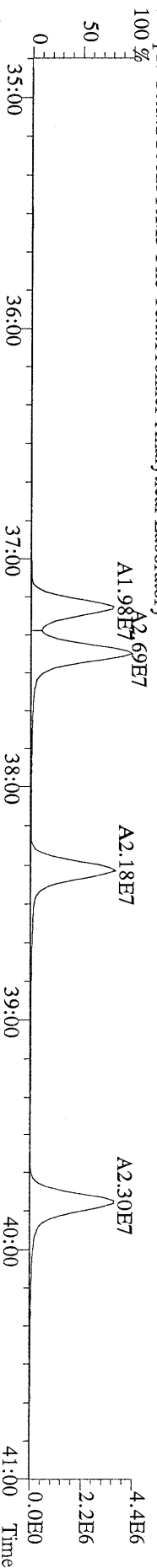
File:23AUG10M #1-476 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Utima
373.8207 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



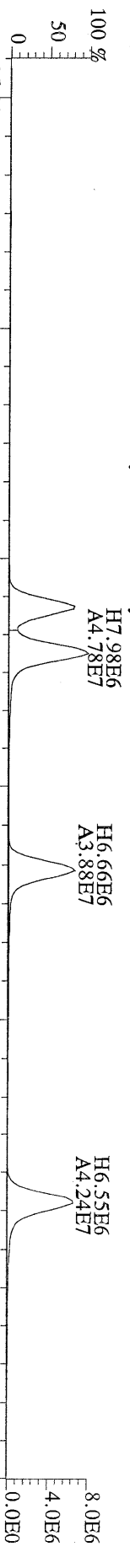
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375.8178 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0) Exp:PCDD
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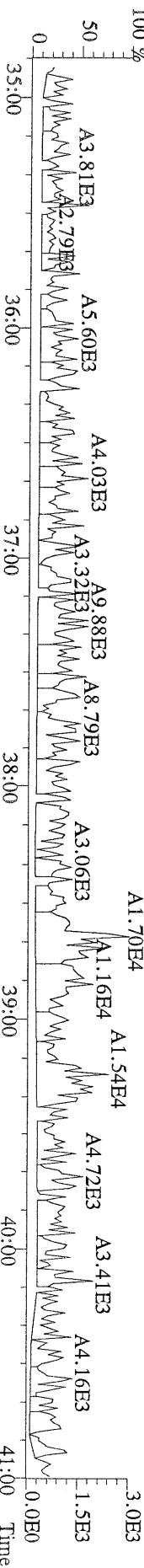
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383.8639 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



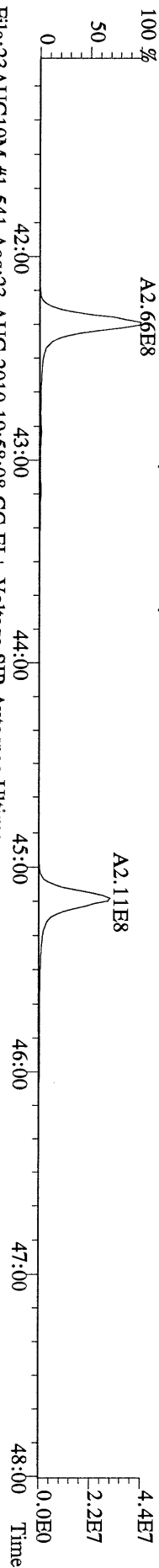
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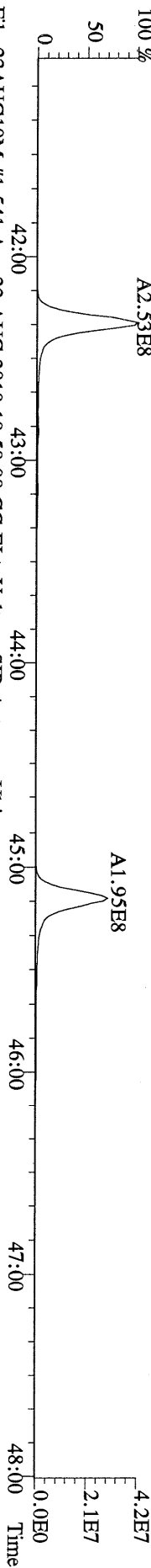
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445.7555 S:7 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0) Exp:PCDD
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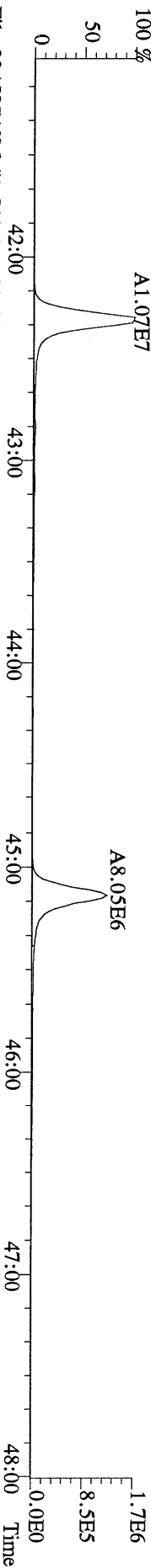
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407.7818 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
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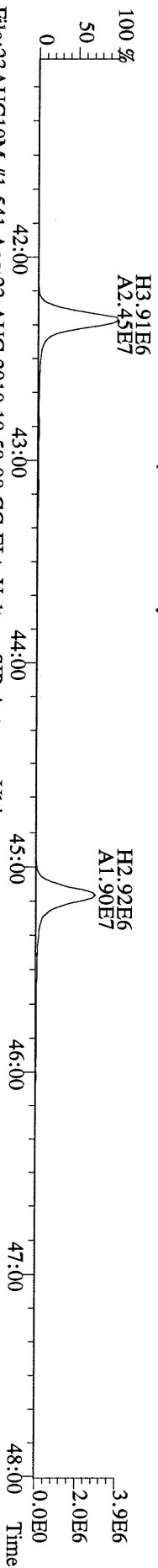
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409.7788 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
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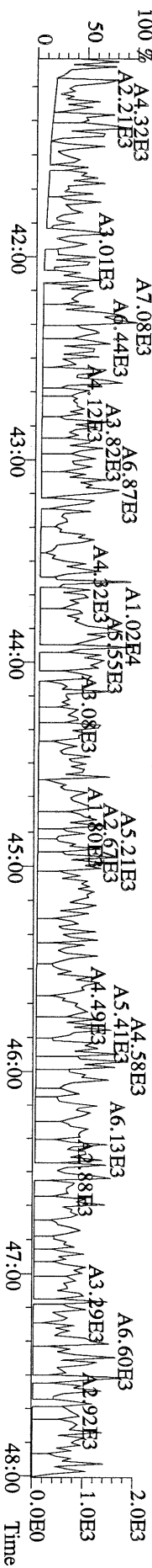
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417.8253 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
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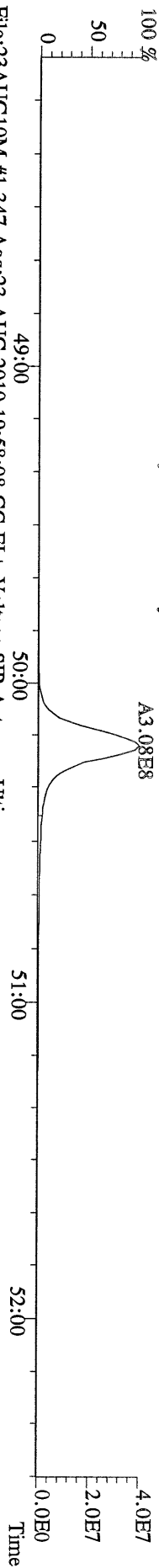
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419.8220 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



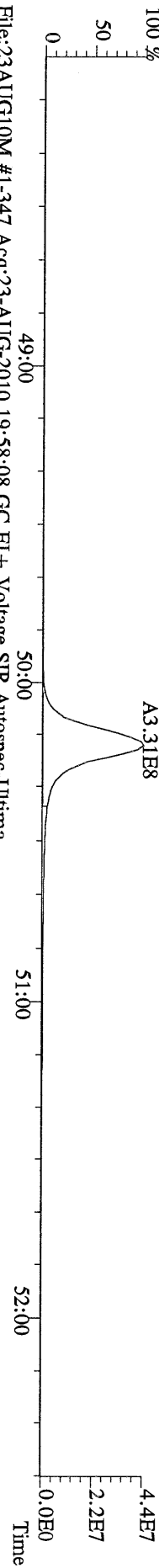
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479.7165 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory



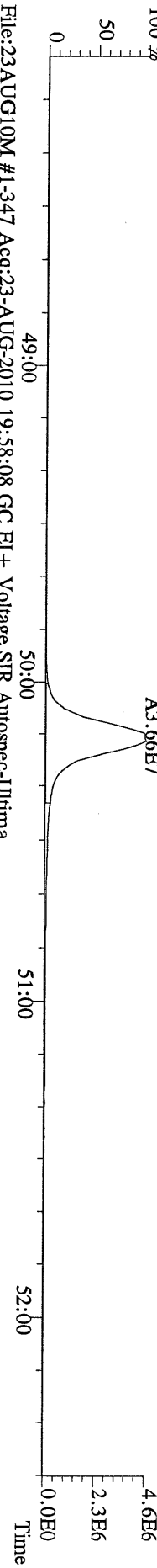
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441.7428 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory
100 %



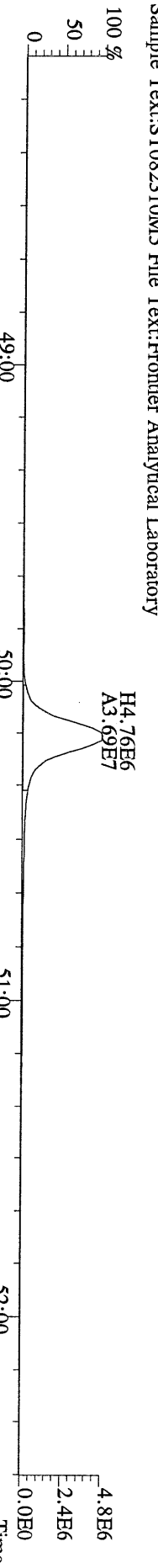
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Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory
100 %



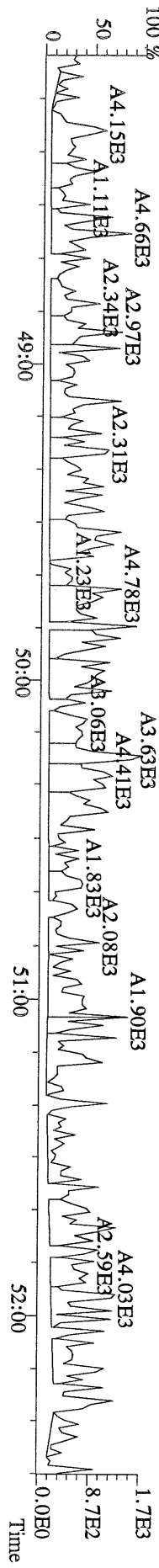
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Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory
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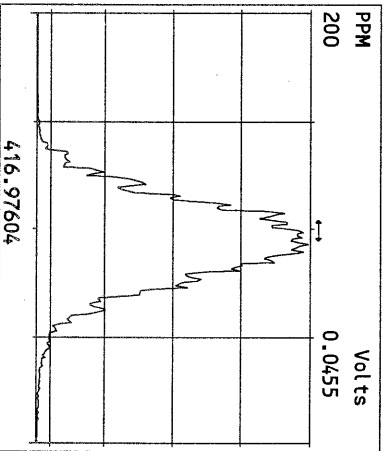
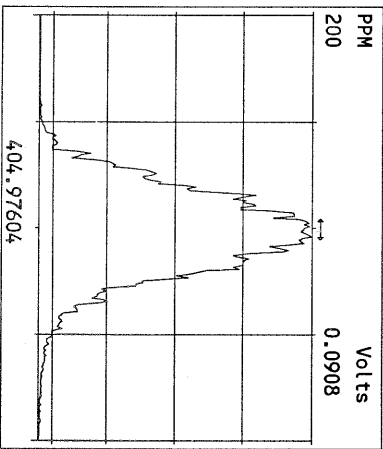
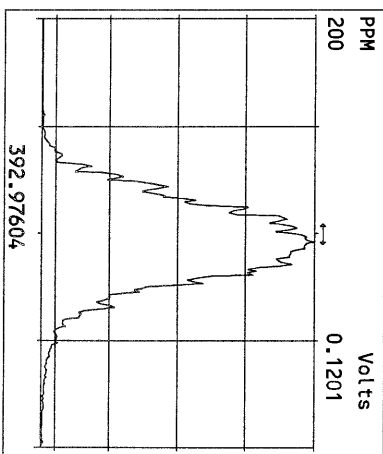
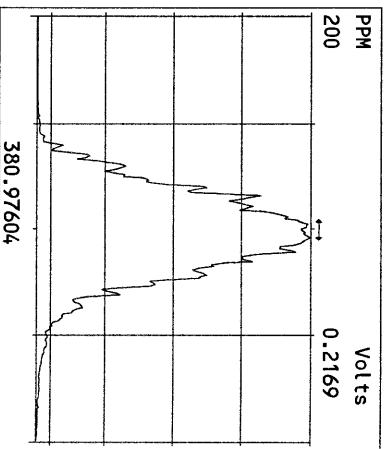
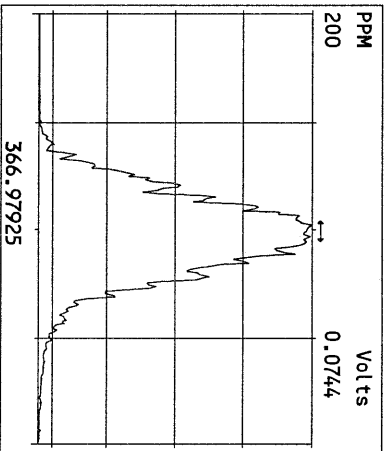
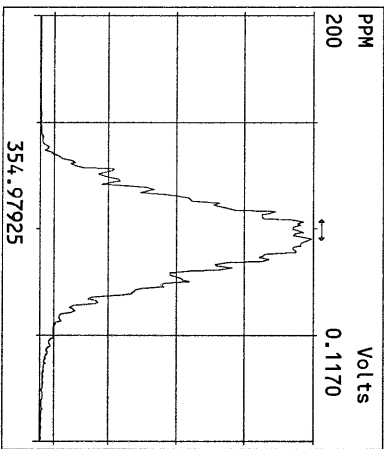
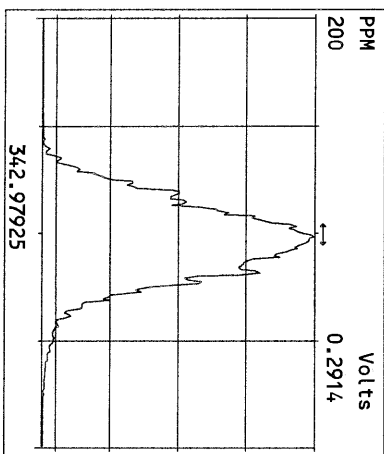
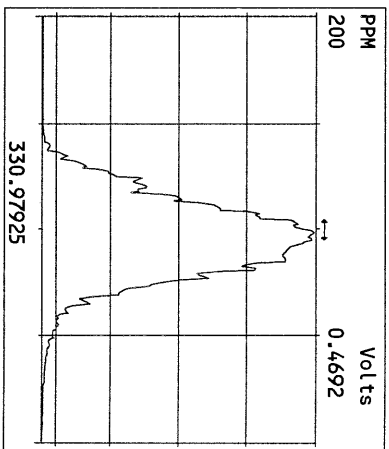
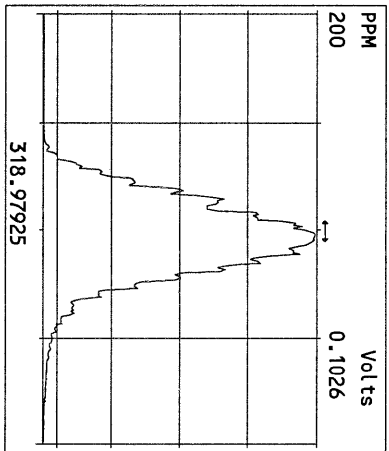
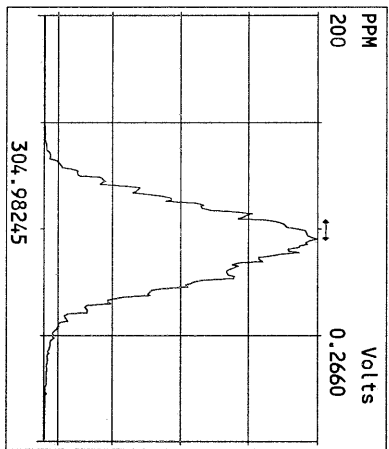
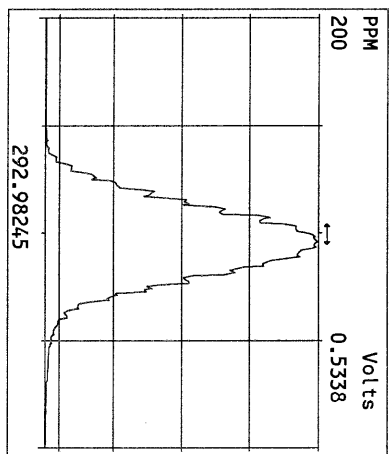


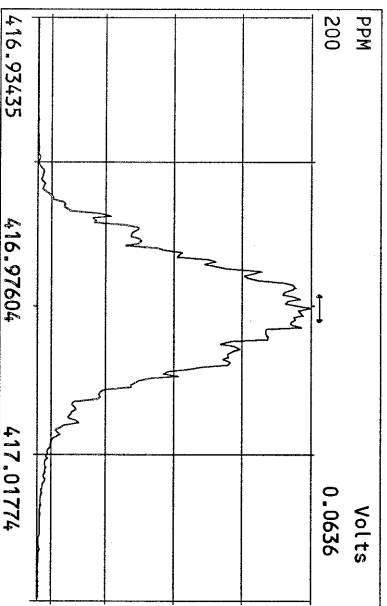
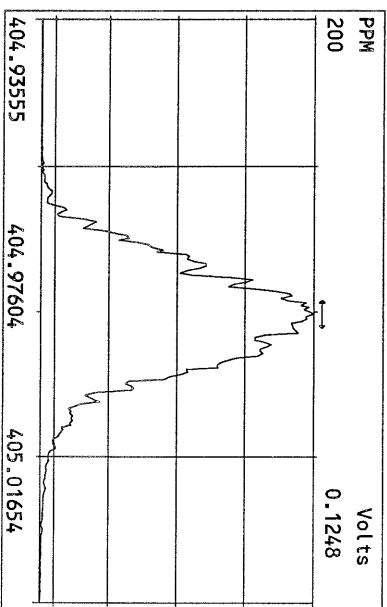
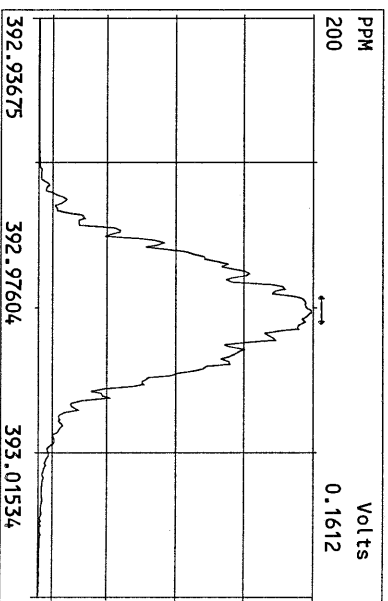
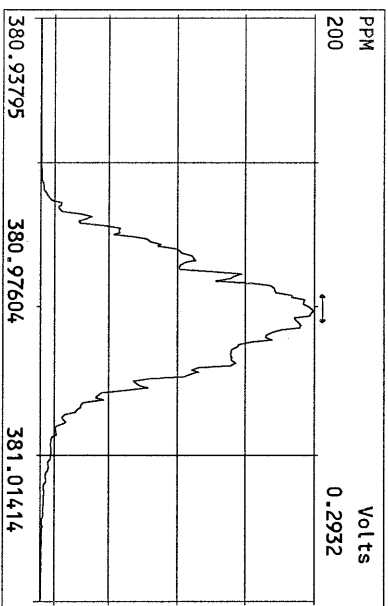
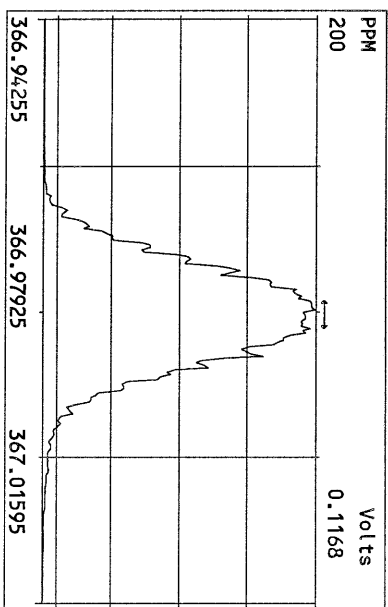
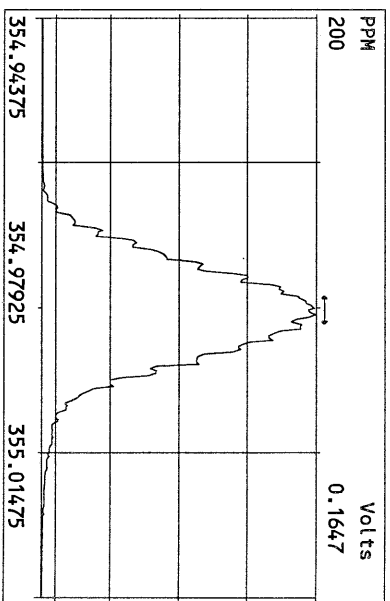
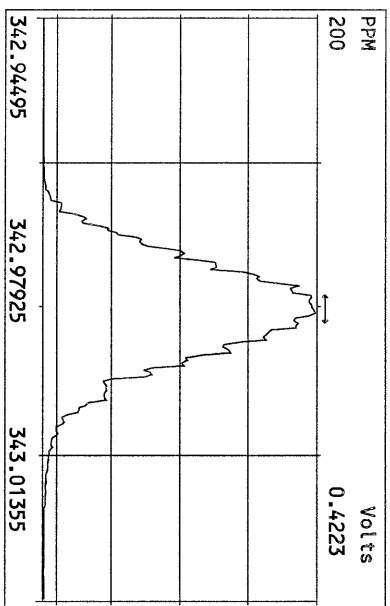
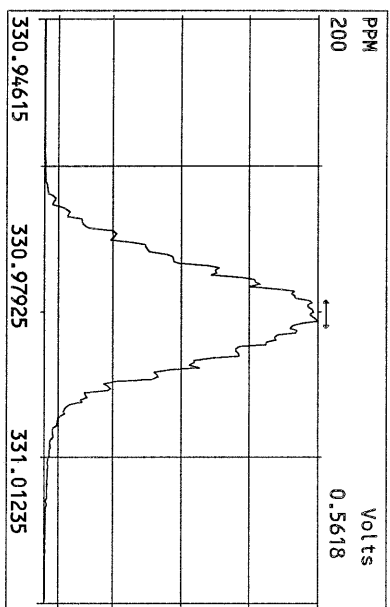
File:23AUG10M #1-347 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory

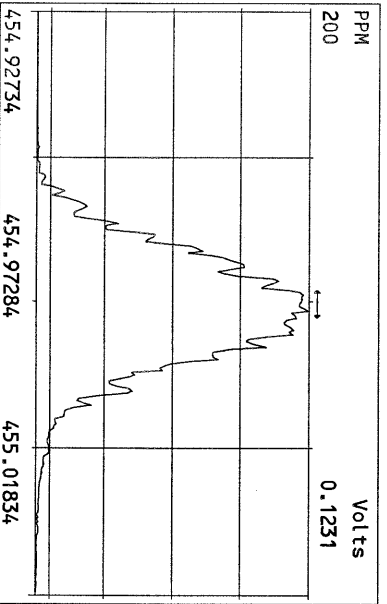
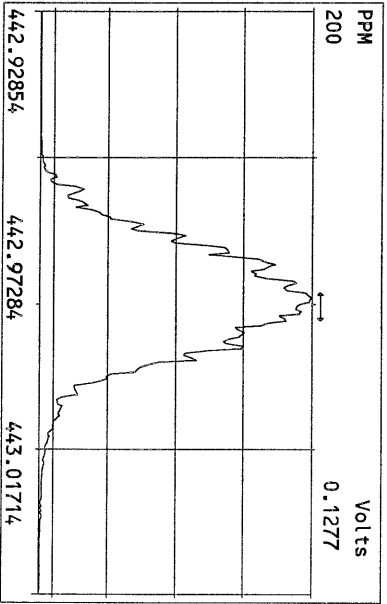
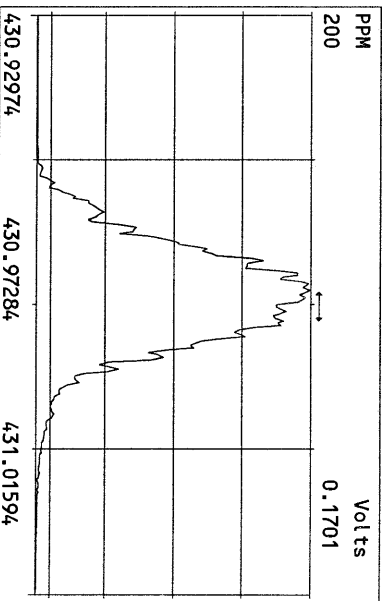
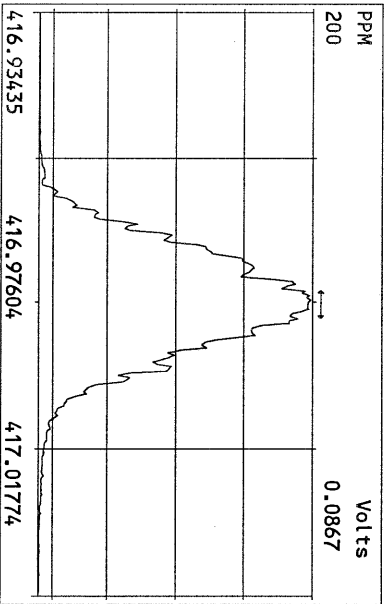
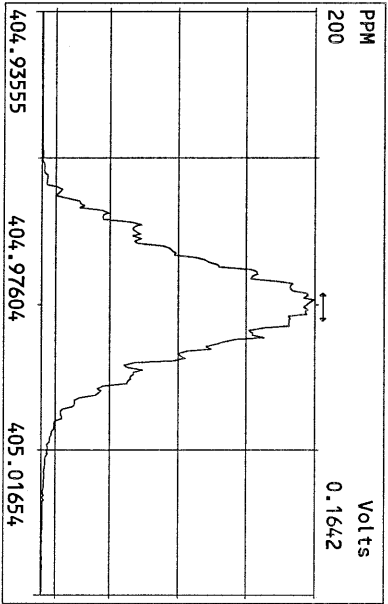
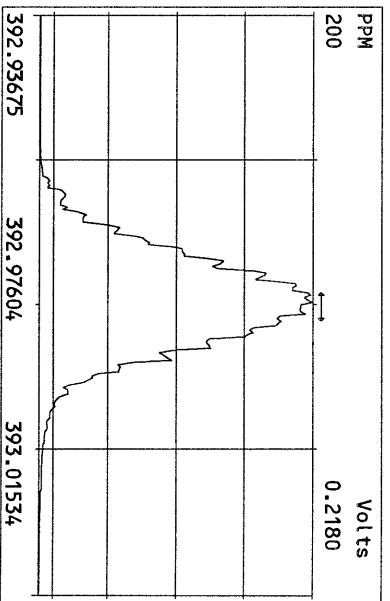
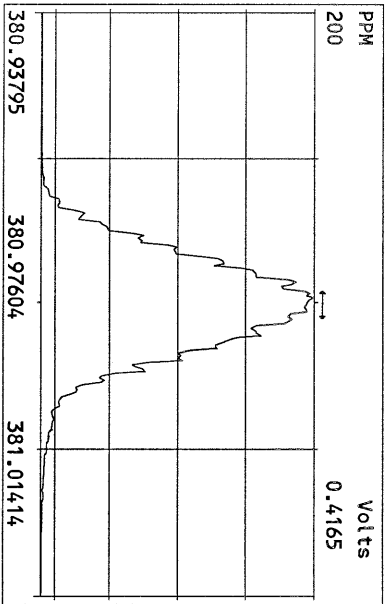
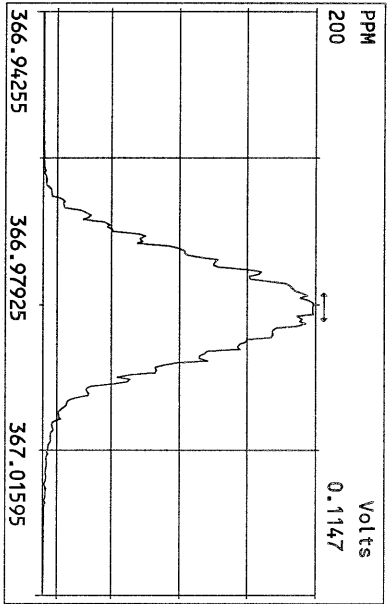


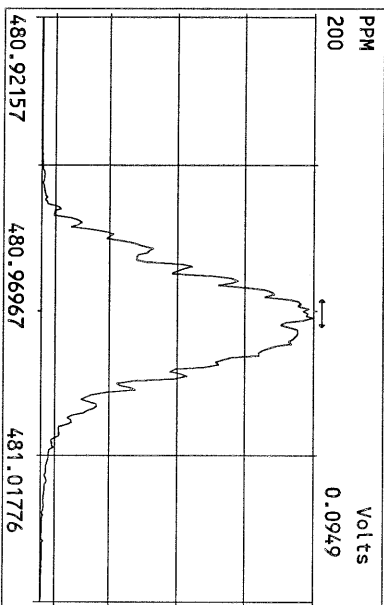
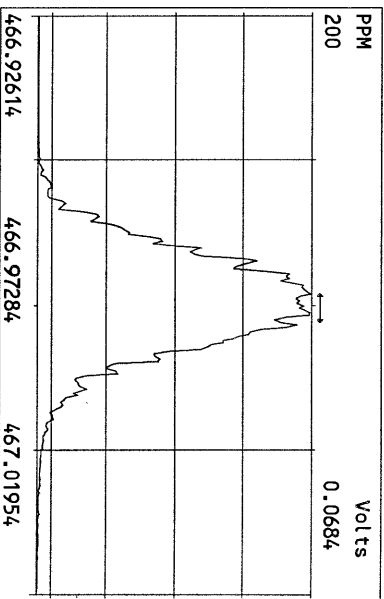
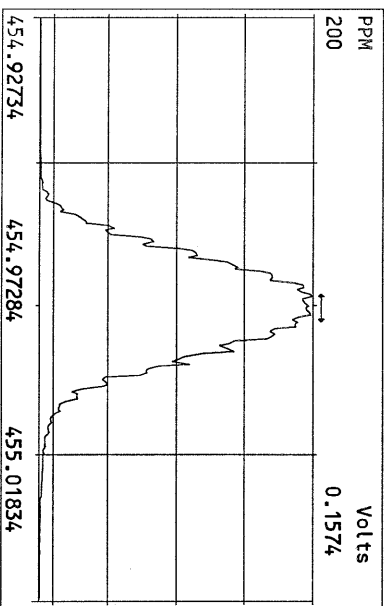
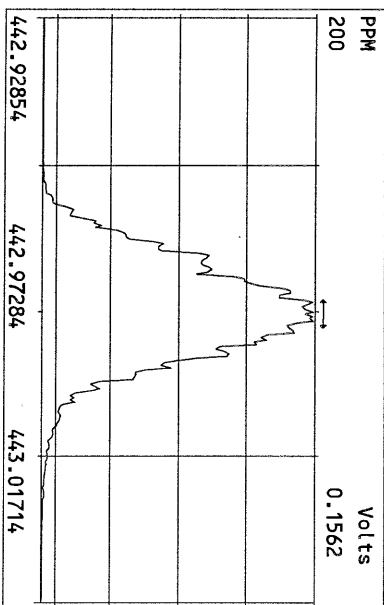
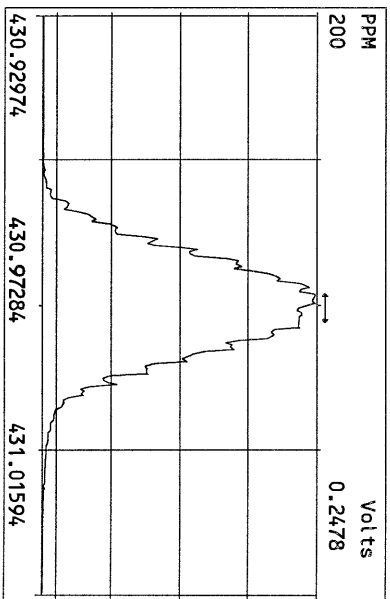
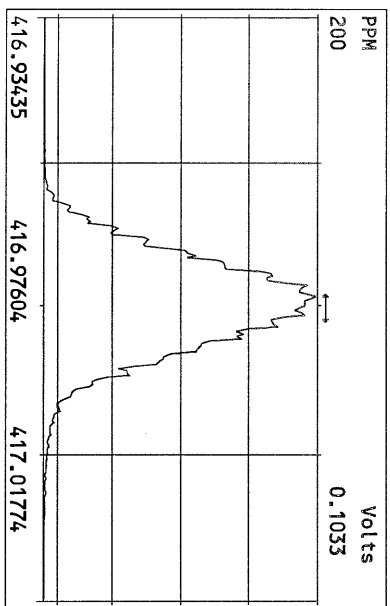
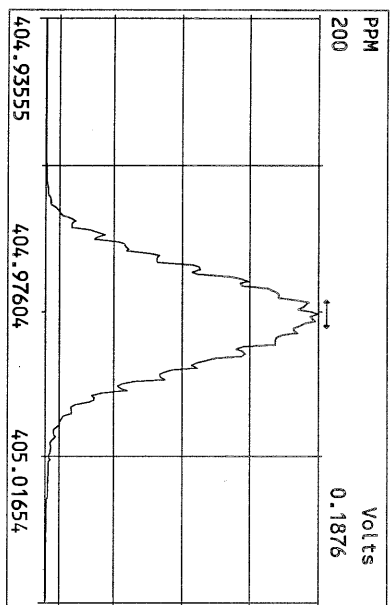
File:23AUG10M #1-347 Acq:23-AUG-2010 19:58:08 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:7 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST082310M5 File Text:Frontier Analytical Laboratory

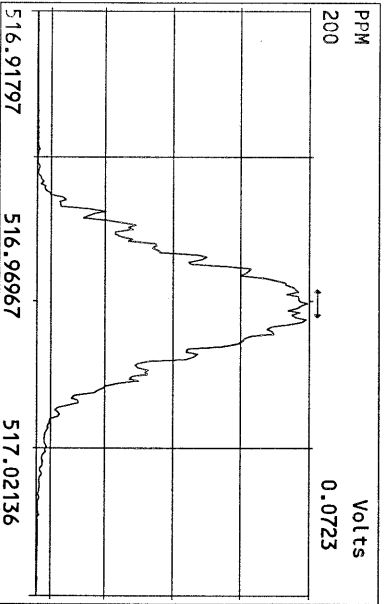
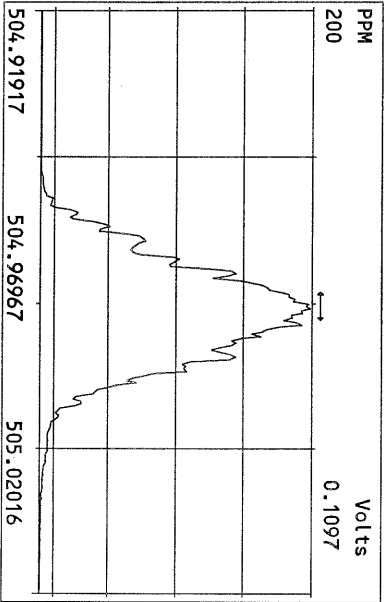
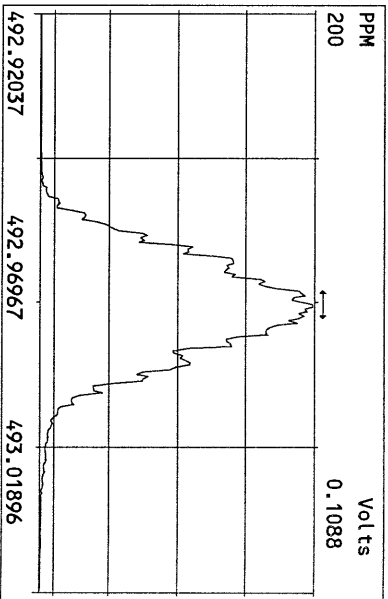
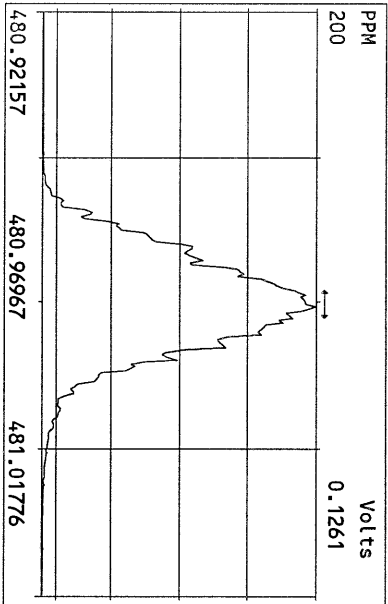
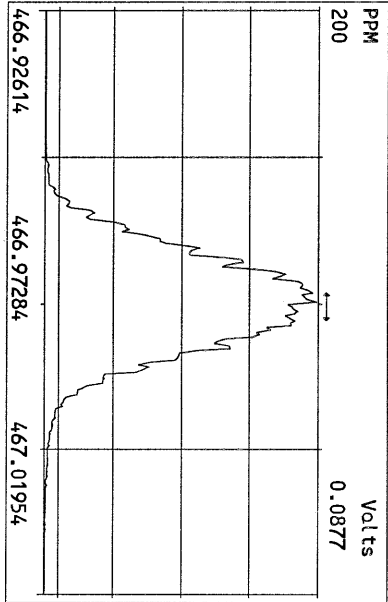
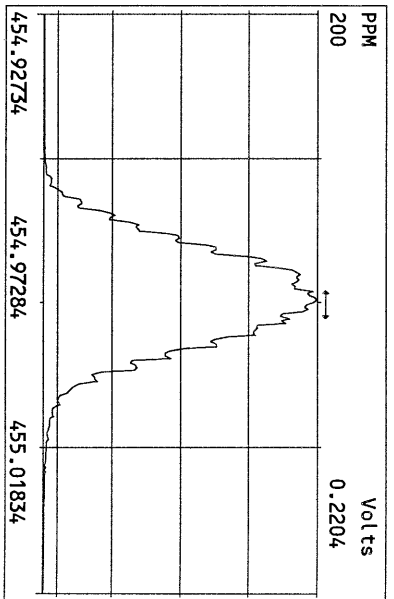
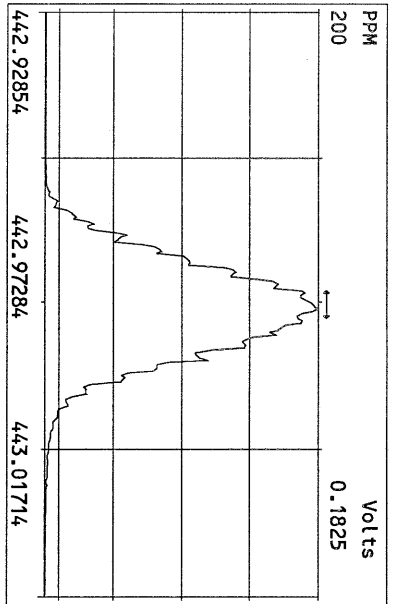
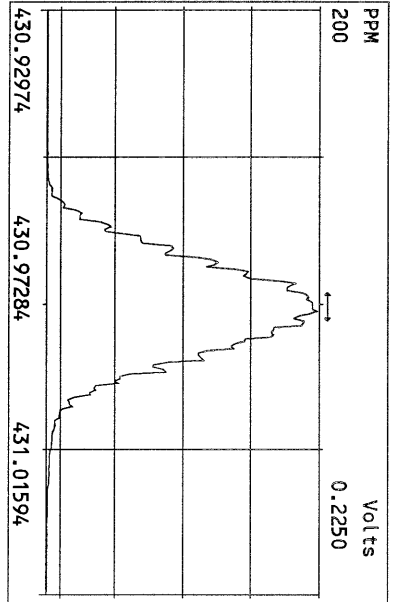












USEPA - ITD

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: 03FEB11M Sam:1


Analysis Date: 3-FEB-11 14:51:36

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	0.80	0.65-0.89	y	11.3	7.80 - 12.9 ✓
1,2,3,7,8-PeCDD	M+2/M+4	1.43	1.32-1.78	y	50.8	39.0 - 65.0 ✓
1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	51.5	39.0 - 64.0 ✓
1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	53.7	39.0 - 64.0 ✓
1,2,3,7,8,9-HxCDD	M+2/M+4	1.35	1.05-1.43	y	56.8	41.0 - 61.0 ✓
1,2,3,4,6,7,8-HpCDD	M+2/M+4	0.90	0.88-1.20	y	44.7	43.0 - 58.0 ✓
OCDD	M+2/M+4	0.87	0.76-1.02	y	99.7	79.0 - 126 ✓
2,3,7,8-TCDF	M/M+2	0.68	0.65-0.89	y	8.83	8.40 - 12.0 ✓
1,2,3,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	48.6	41.0 - 60.0 ✓
2,3,4,7,8-PeCDF	M+2/M+4	1.62	1.32-1.78	y	47.7	41.0 - 60.0 ✓
1,2,3,4,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	54.8	45.0 - 56.0 ✓
1,2,3,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	55.2	44.0 - 57.0 ✓
2,3,4,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	55.4	44.0 - 57.0 ✓
1,2,3,7,8,9-HxCDF	M+2/M+4	1.23	1.05-1.43	y	55.4	45.0 - 56.0 ✓
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.07	0.88-1.20	y	54.1	45.0 - 55.0 ✓
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.04	0.88-1.20	y	54.9	43.0 - 58.0 ✓
OCDF	M+2/M+4	0.91	0.76-1.02	y	107	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: 2/4/11

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: 03FEB11M Sam:1

Analysis Date: 3-FEB-11 14:51:36

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	0.76	0.65-0.89	y	93.5	82.0 - 121 ✓
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.71	1.32-1.78	y	99.4	62.0 - 160 ✓
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	97.7	85.0 - 117 ✓
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	96.3	85.0 - 118 ✓
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	y	101	72.0 - 138 ✓
13C-OCDD	M+2/M+4	0.94	0.76-1.02	y	208	96.0 - 415 ✓
13C-2,3,7,8-TCDF	M/M+2	0.88	0.65-0.89	y	92.4	71.0 - 140 ✓
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.66	1.32-1.78	y	97.4	76.0 - 130 ✓
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.70	1.32-1.78	y	96.5	77.0 - 130 ✓
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.47	0.43-0.59	y	87.6	76.0 - 131 ✓
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.48	0.43-0.59	y	86.8	70.0 - 143 ✓
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.49	0.43-0.59	y	87.3	73.0 - 137 ✓
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.48	0.43-0.59	y	85.5	74.0 - 135 ✓
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.49	0.37-0.51	y	88.4	78.0 - 129 ✓
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.50	0.37-0.51	y	90.4	77.0 - 129 ✓
13C-OCDF	M+2/M+4	0.90	0.76-1.02	y	185	96.0 - 415 ✓
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					9.91	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:

FORM 5
PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Frontier Analytical Laboratory Episode No.: T010037
Contract No.: 658969 SAS No.:
Instrument ID: FAL3 Initial Calibration Date: 8/23/10
RT Window Data Filename: 03FEB11M Sam:1 Analysis Date: 3-FEB-11 Time: 14:51:36
DB-5 IS Data Filename: 03FEB11M Sam:1 Analysis Date: 3-FEB-11 Time: 14:51:36
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)	24:35 ✓	1,3,6,8-TCDF (F)	23:13 ✓
1,2,8,9-TCDD (L)	28:35 ✓	1,2,8,9-TCDF (L)	28:48 ✓
1,2,4,7,9-PeCDD (F)	30:29 ✓	1,3,4,6,8-PeCDF (F)	28:39 ✓
1,2,3,8,9-PeCDD (L)	34:04 ✓	1,2,3,8,9-PeCDF (L)	34:31 ✓
1,2,4,6,7,9-HxCDD (F)	36:24 ✓	1,2,3,4,6,8-HxCDF (F)	35:31 ✓
1,2,3,7,8,9-HxCDD (L)	39:30 ✓	1,2,3,7,8,9-HxCDF (L)	40:05 ✓
1,2,3,4,6,7,9-HpCDD (F)	43:07 ✓	1,2,3,4,6,7,8-HpCDF (F)	42:36 ✓
1,2,3,4,6,7,8-HpCDD (L)	44:30 ✓	1,2,3,4,7,8,9-HpCDF (L)	45:26 ✓

(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: 2/4/11

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: 3-FEB-11 14:51:36

CS3 or VER Data Filename: 03FEB11M

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		1.000	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: Date: 2/4/11

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: 3-FEB-11 14:51:36

CS3 or VER Data Filename: 03FEB11M

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	1.001	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	1.001	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	1.000	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	1.001	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	1.001	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		1.270	1.032-1.311 ✓
13C-OCDF		1.280	1.000-1.311 ✓

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

Analyst: Date: 2/4/11

Results:		GC Column: DB5	Amount: 1.000	NATO 1989 Tox:	104	WHO 1998 Tox:	129	WHO 2005 Tox:	119
Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL
2,3,7,8-TCDD	3.61e+06	0.80 y	27:37	1.11	11.3		2.50	-	*
1,2,3,7,8-PeCDD	1.41e+07	1.43 y	33:30	1.10	50.8		2.50	-	*
1,2,3,4,7,8-HxCDD	1.43e+07	1.28 y	38:53	1.37	51.5		2.50	-	*
1,2,3,6,7,8-HxCDD	1.39e+07	1.28 y	39:03	1.37	53.7		2.50	-	*
1,2,3,7,8,9-HxCDD	1.51e+07	1.35 y	39:30	1.36	56.8		2.50	-	*
1,2,3,4,6,7,8-HpCDD	1.09e+07	0.90 y	44:30	1.45	44.7		2.50	-	*
OCDD	1.57e+07	0.87 y	50:10	1.43	99.7		2.50	-	*
2,3,7,8-TCDF	6.08e+06	0.68 y	26:52	1.50	8.83		2.50	-	*
1,2,3,7,8-PeCDF	1.86e+07	1.60 y	31:45	0.94	48.6		2.50	-	*
2,3,4,7,8-PeCDF	1.75e+07	1.62 y	33:05	0.94	47.7		2.50	-	*
1,2,3,4,7,8-HxCDF	1.59e+07	1.24 y	37:29	0.93	54.8		2.50	-	*
1,2,3,6,7,8-HxCDF	1.92e+07	1.27 y	37:41	0.82	55.2		2.50	-	*
2,3,4,6,7,8-HxCDF	1.72e+07	1.25 y	38:38	0.92	55.4		2.50	-	*
1,2,3,7,8,9-HxCDF	1.85e+07	1.23 y	40:05	1.00	55.4		2.50	-	*
1,2,3,4,6,7,8-HpCDF	1.42e+07	1.07 y	42:36	1.39	54.1		2.50	-	*
1,2,3,4,7,8,9-HpCDF	1.04e+07	1.04 y	45:26	1.36	54.9		2.50	-	*
OCDF	1.63e+07	0.91 y	50:33	0.79	107		2.50	-	*
									Rec
13C-2,3,7,8-TCDD	2.88e+07	0.76 y	27:36	1.02	93.5				93.5
13C-1,2,3,7,8-PeCDD	2.52e+07	1.71 y	33:28	0.84	99.4				99.4
13C-1,2,3,4,7,8-HxCDD	2.02e+07	1.27 y	38:51	1.07	97.7				97.7
13C-1,2,3,6,7,8-HxCDD	1.88e+07	1.25 y	39:01	1.01	96.3				96.3
13C-1,2,3,4,6,7,8-HpCDD	1.67e+07	1.06 y	44:29	0.86	101				101
13C-OCDD	2.19e+07	0.94 y	50:08	0.55	208				104
13C-2,3,7,8-TCDF	4.58e+07	0.88 y	26:51	0.99	92.4				92.4
13C-1,2,3,7,8-PeCDF	4.07e+07	1.66 y	31:44	0.84	97.4				97.4
13C-2,3,4,7,8-PeCDF	3.91e+07	1.70 y	33:04	0.81	96.5				96.5
13C-1,2,3,4,7,8-HxCDF	3.13e+07	0.47 y	37:27	1.85	87.6				87.6
13C-1,2,3,6,7,8-HxCDF	4.24e+07	0.48 y	37:39	2.54	86.8				86.8
13C-2,3,4,6,7,8-HxCDF	3.39e+07	0.49 y	38:36	2.01	87.3				87.3
13C-1,2,3,7,8,9-HxCDF	3.35e+07	0.48 y	40:04	2.03	85.5				85.5
13C-1,2,3,4,6,7,8-HpCDF	1.89e+07	0.49 y	42:34	1.11	88.4				88.4
13C-1,2,3,4,7,8,9-HpCDF	1.40e+07	0.50 y	45:25	0.80	90.4				90.4
13C-OCDF	3.87e+07	0.90 y	50:31	1.08	185				92.7
37Cl-2,3,7,8-TCDD	2.05e+06		27:37	0.69	9.91				99.1
13C-1,2,3,4-TCDD	3.01e+07	0.76 y	27:01	-	67.0				
13C-1,2,3,4-TCDF	4.99e+07	0.88 y	25:45	-	69.0				
13C-1,2,3,7,8,9-HxCDD	1.93e+07	1.30 y	39:28	-	69.9				
									DL
Total Tetra-Dioxins	1.84e+07		22:48	1.11	57.5		2.50	-	*
Total Penta-Dioxins	3.14e+07		30:29	1.10	113		2.50	-	*
Total Hexa-Dioxins	5.00e+07		36:24	1.37	187		2.50	-	*
Total Hepta-Dioxins	2.29e+07		43:07	1.45	94.4		2.50	-	*
									#Hom
Total Tetra-Furans	2.94e+07		23:13	1.50	42.8		2.50	-	*
1st Fn. Tot Penta-Furans	2.29e+07		28:39	0.94	61.0		2.50	-	*
Total Penta-Furans	5.13e+07		30:25	0.94	137		2.50	-	*
Total Hexa-Furans	8.35e+07		35:31	0.91	260		2.50	-	*
Total Hepta-Furans	2.58e+07		42:36	1.38	114		2.50	-	*

Analyst: 

Date: 2/4/11

Frontier Analytical Laboratory - Acquisition Log

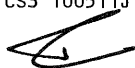
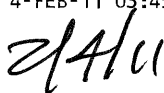
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GC: DB5

Experiment:OCDD

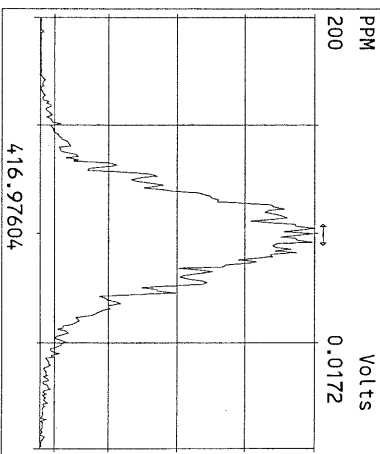
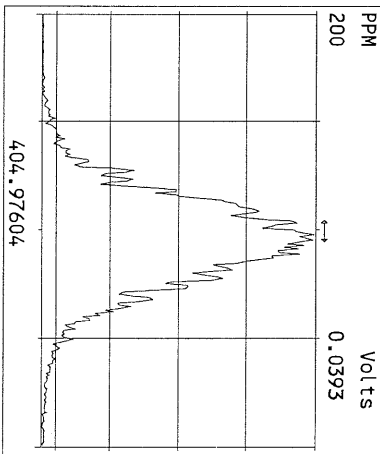
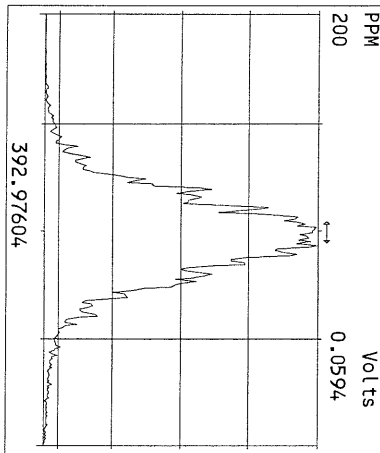
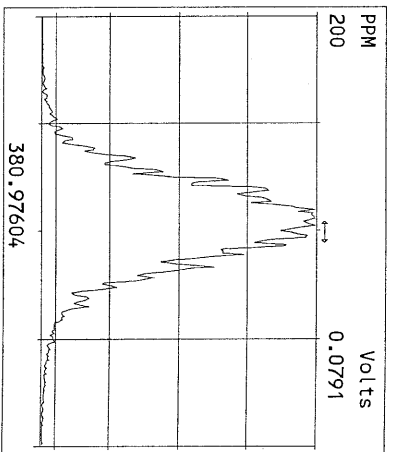
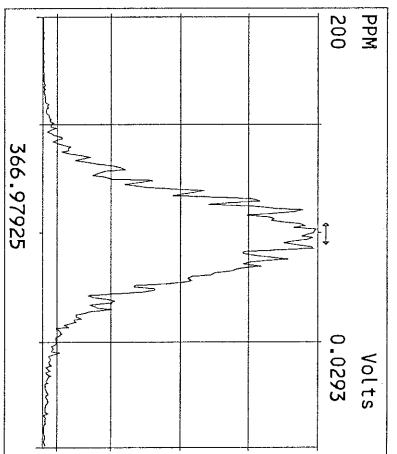
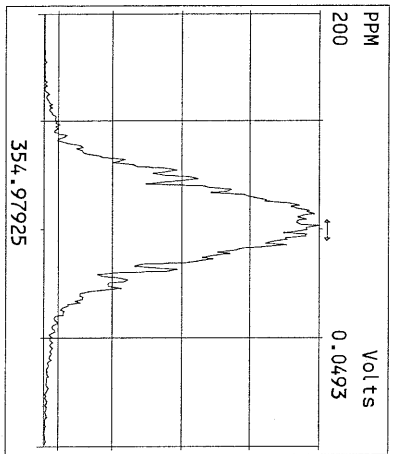
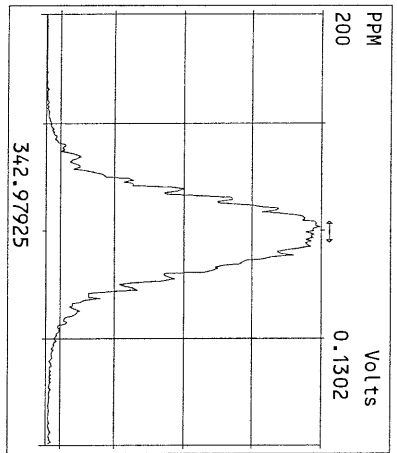
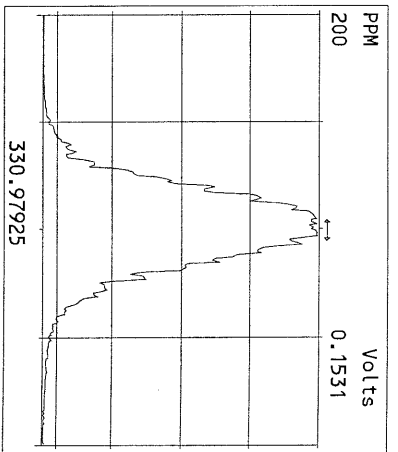
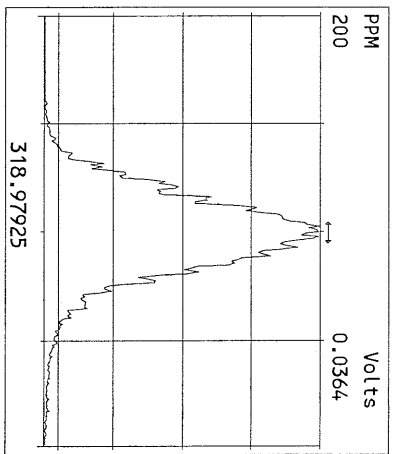
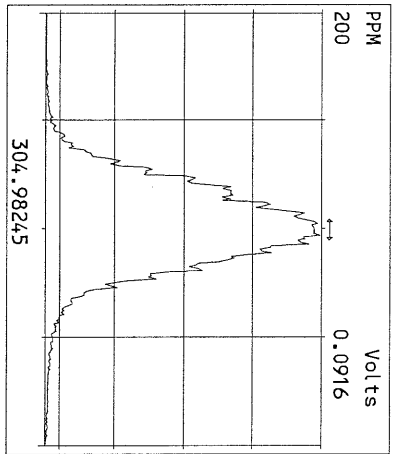
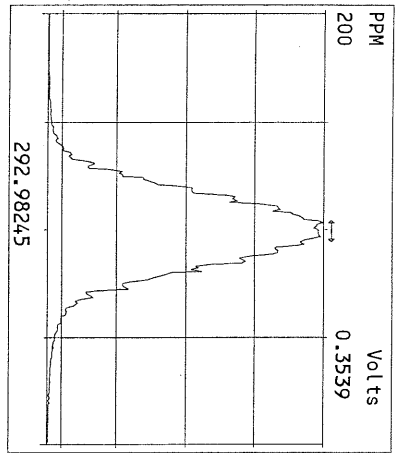
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03FEB11M 8	6548-005-0001-SA	MW03-012011	3-FEB-11 21:18:31	ST020311M1	ST020311M2	TC
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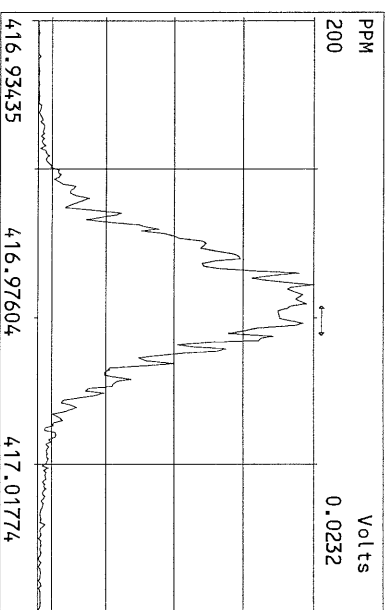
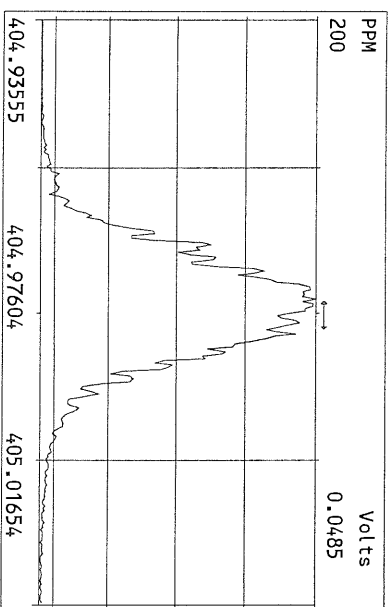
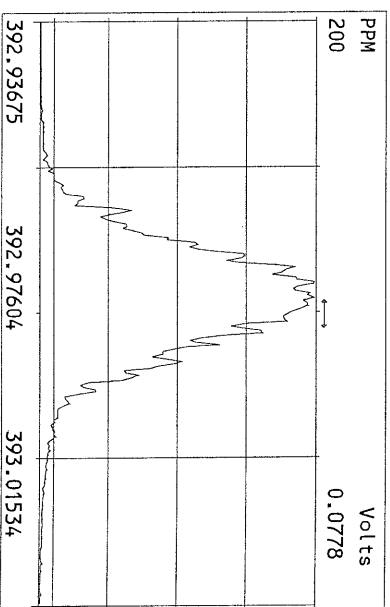
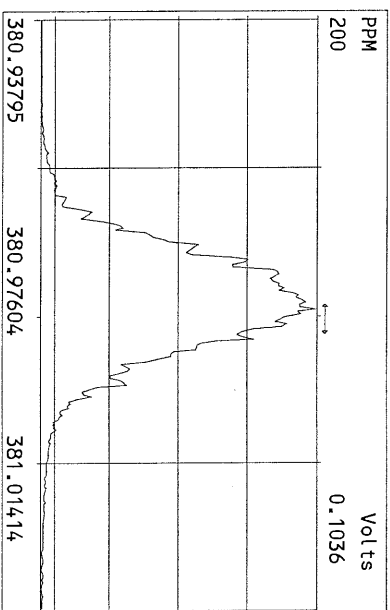
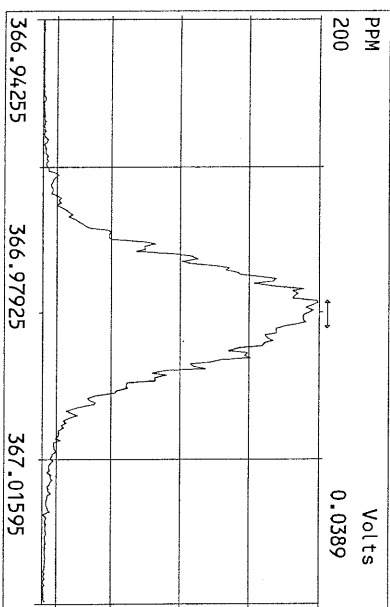
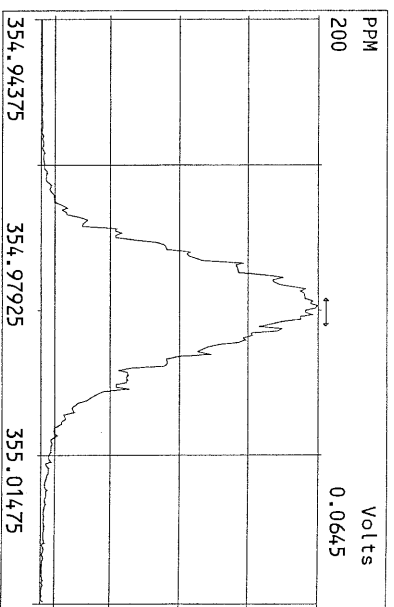
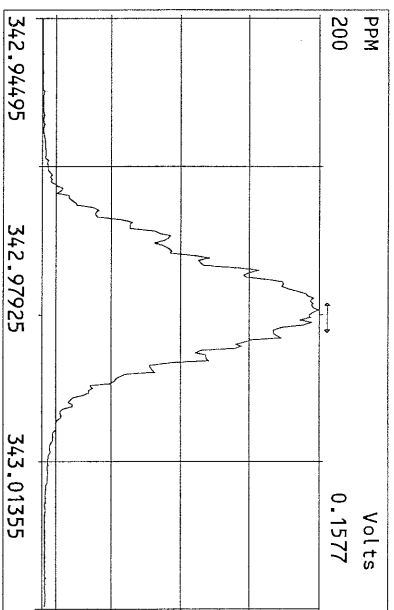
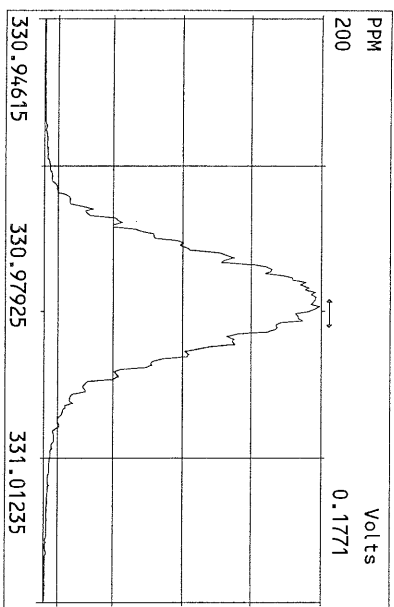



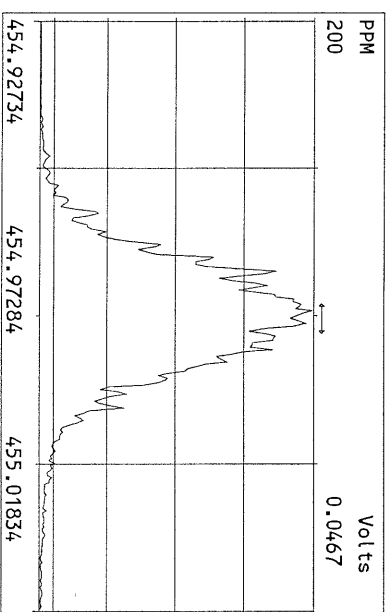
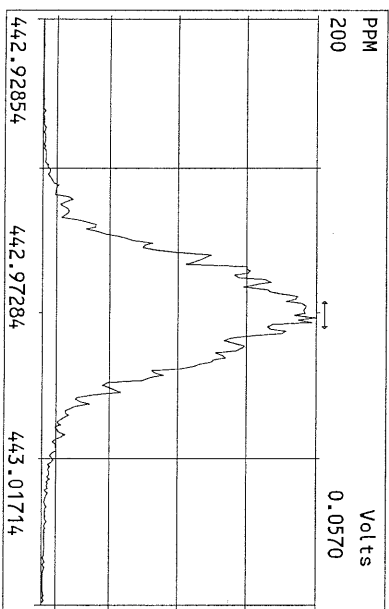
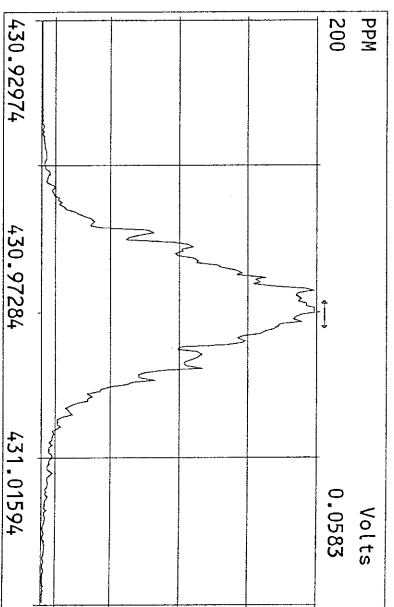
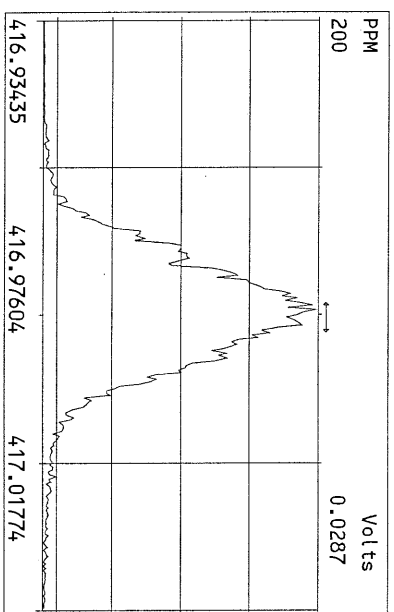
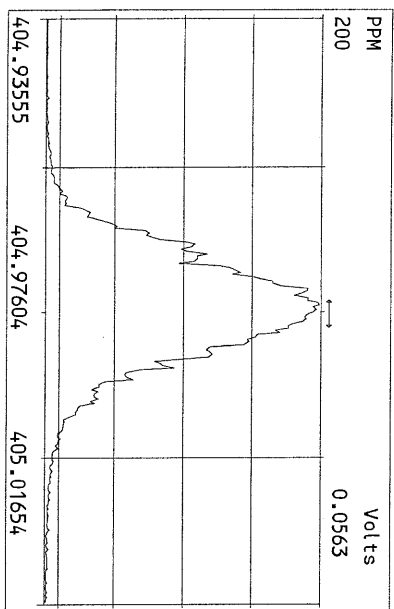
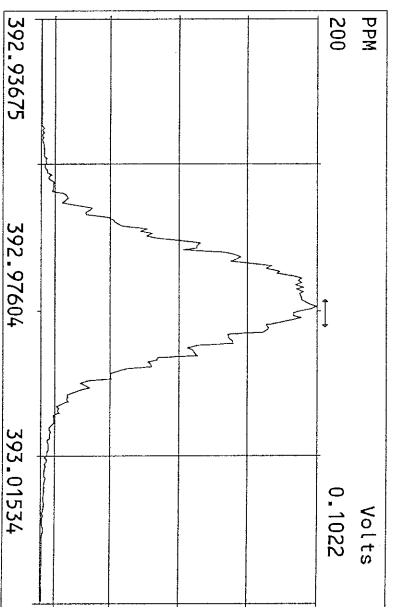
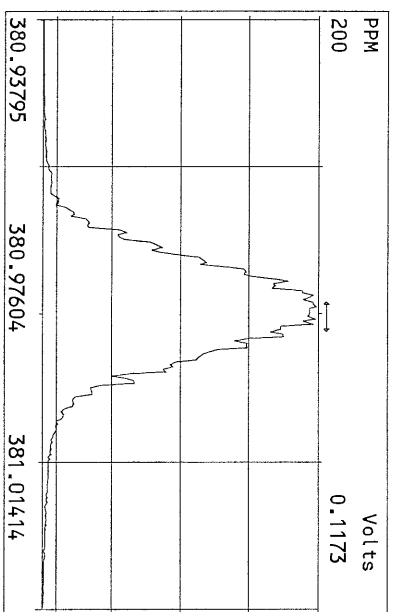
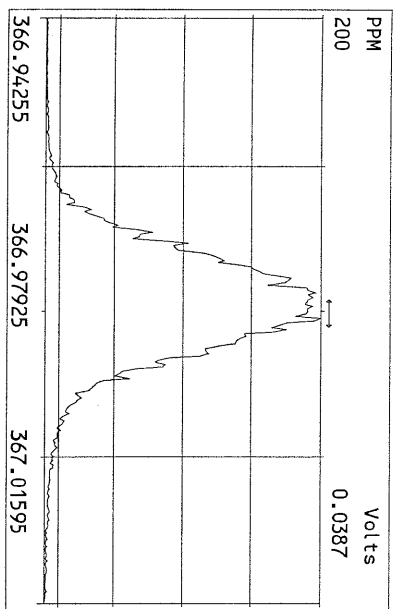
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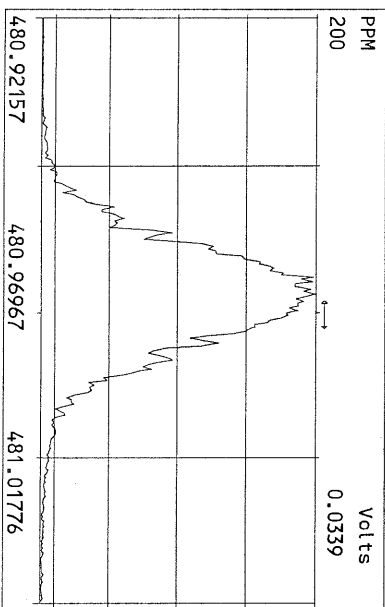
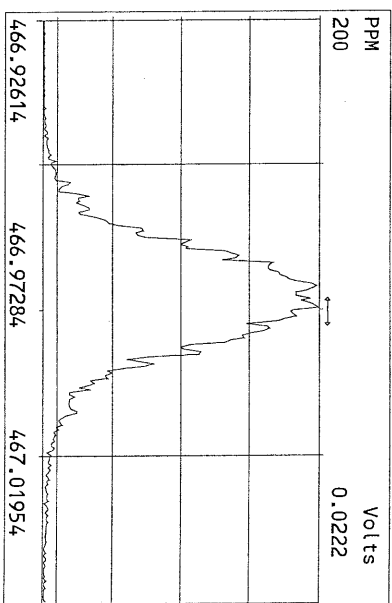
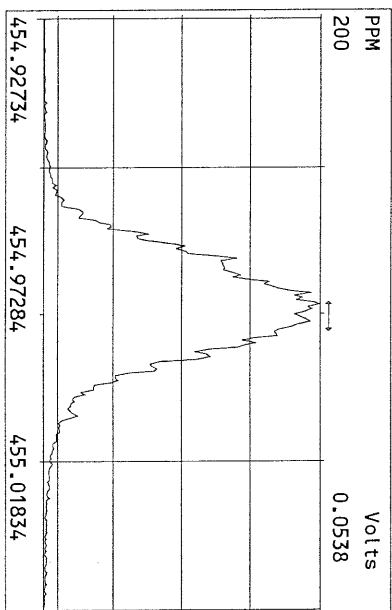
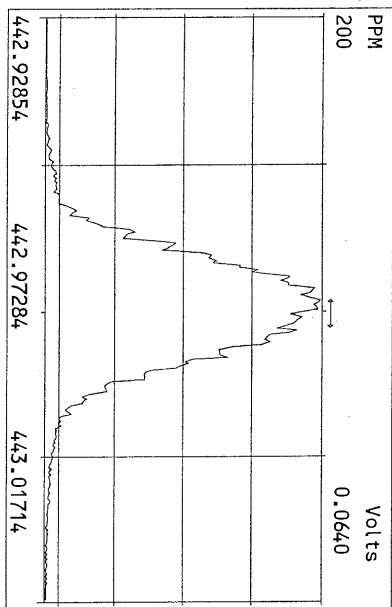
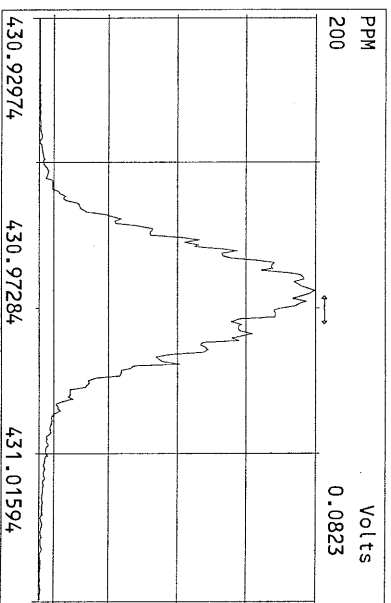
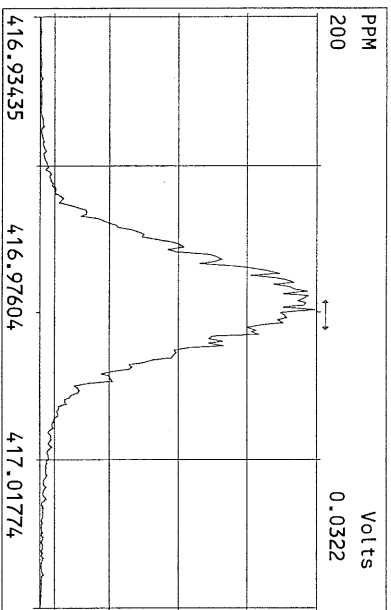
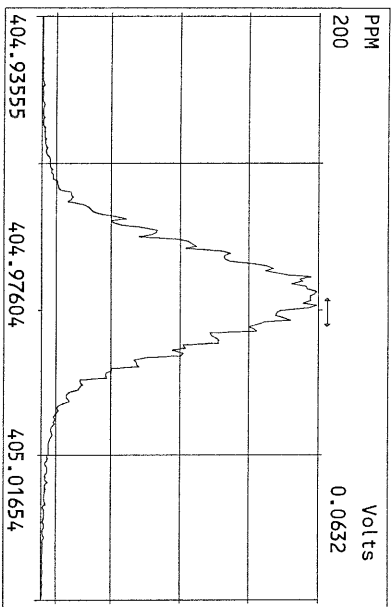
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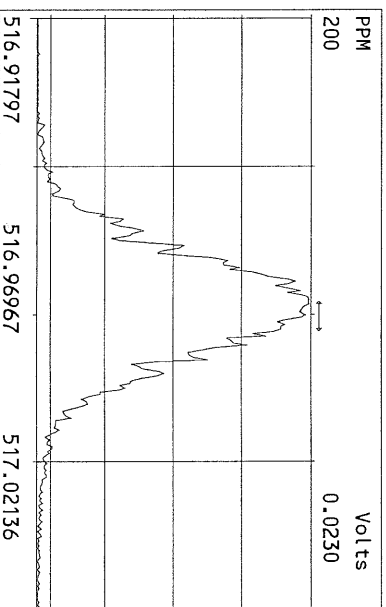
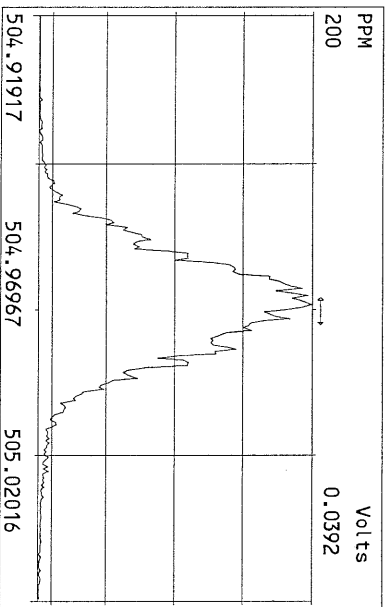
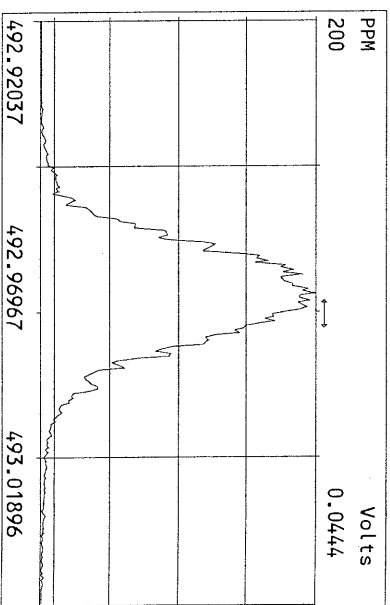
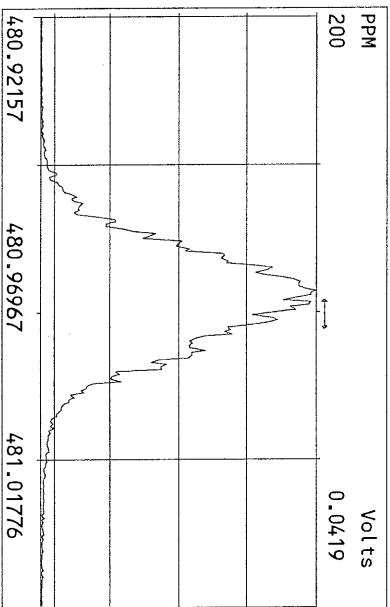
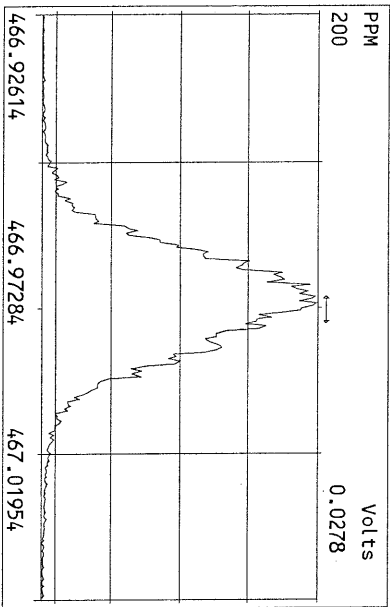
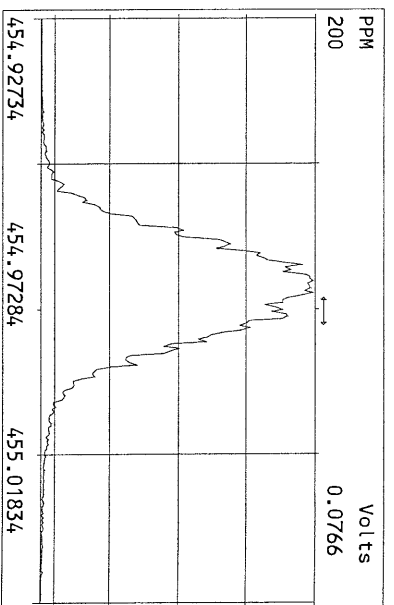
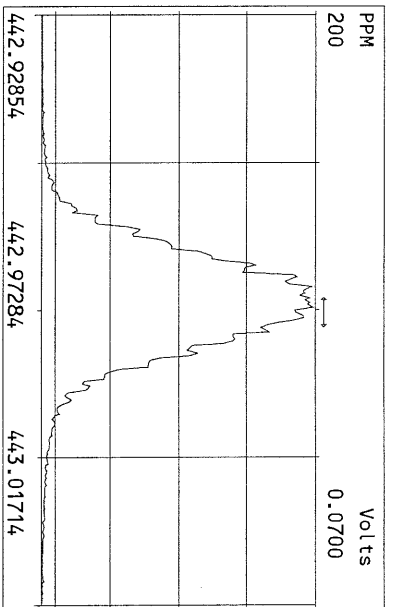
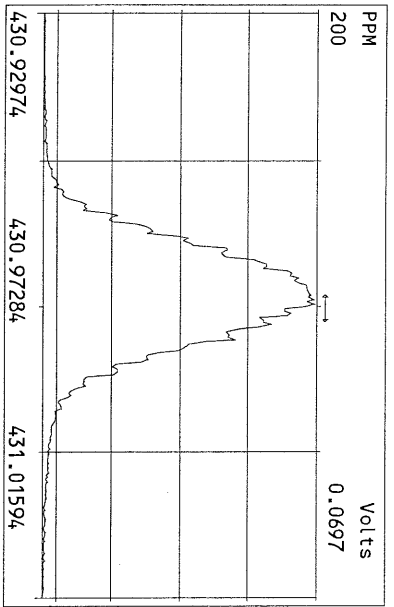
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Experiment:OCDJ Function:1 Reference:PFK



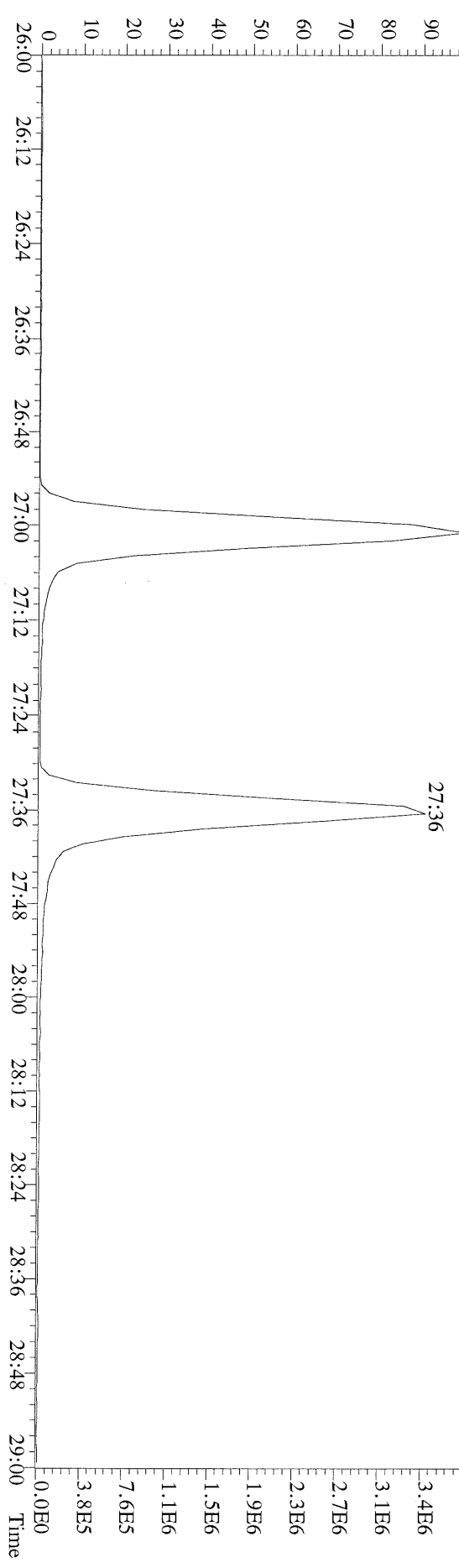
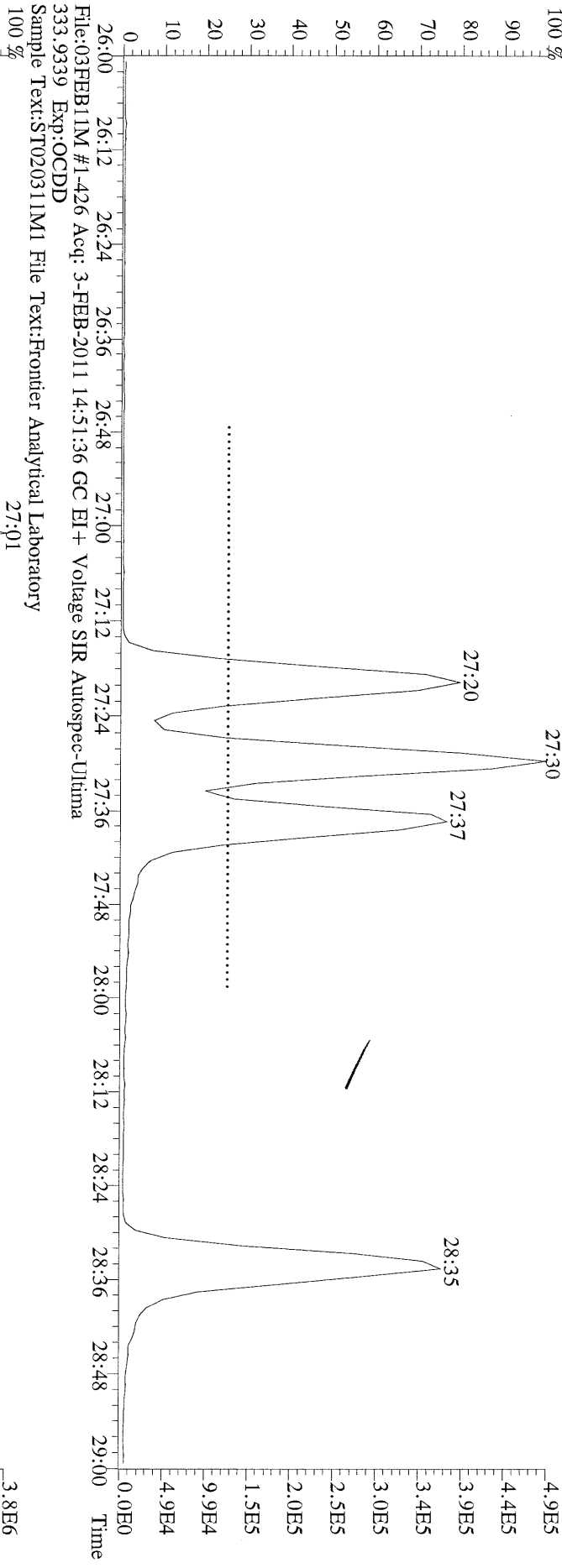




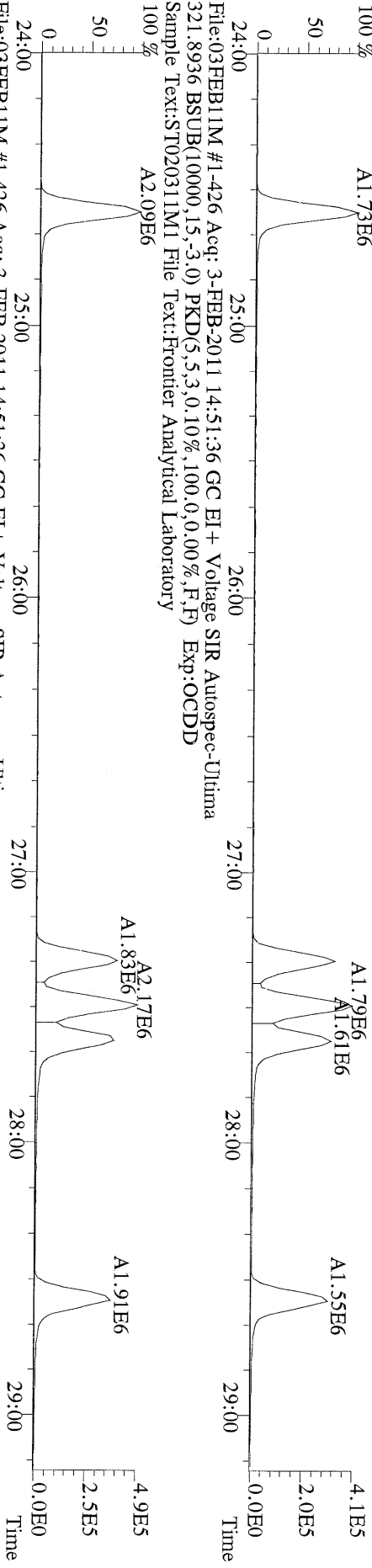




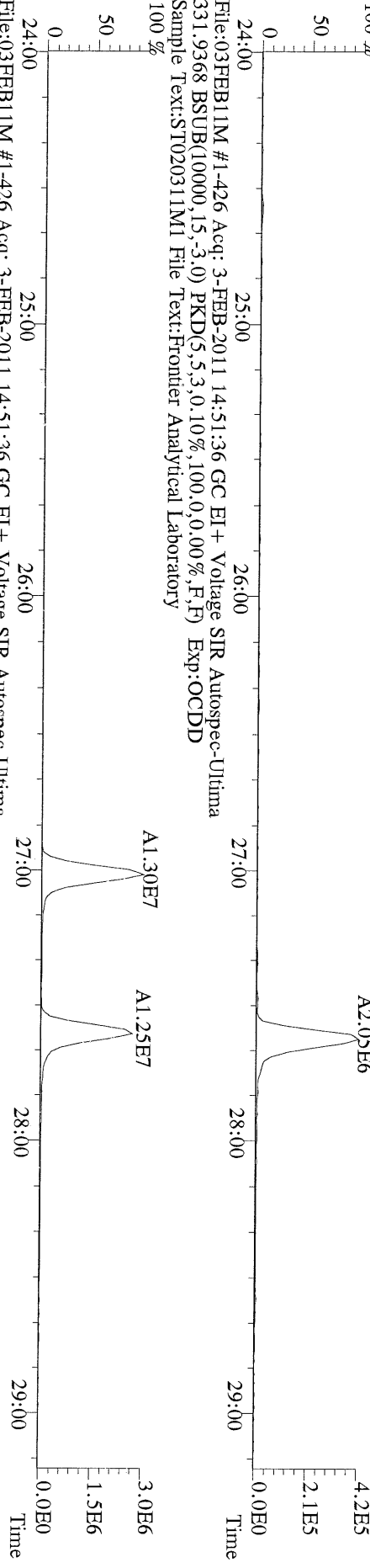
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321.8936 Exp:OCDD
Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory



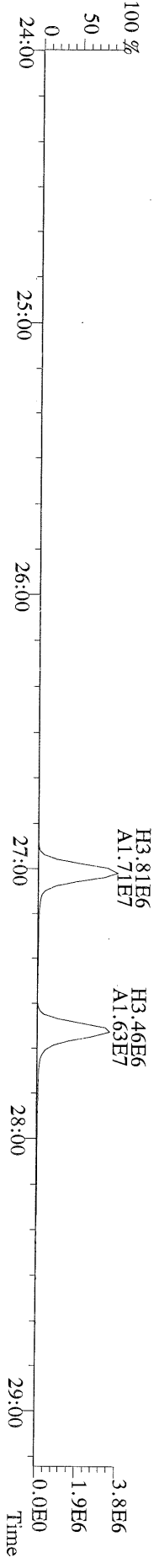
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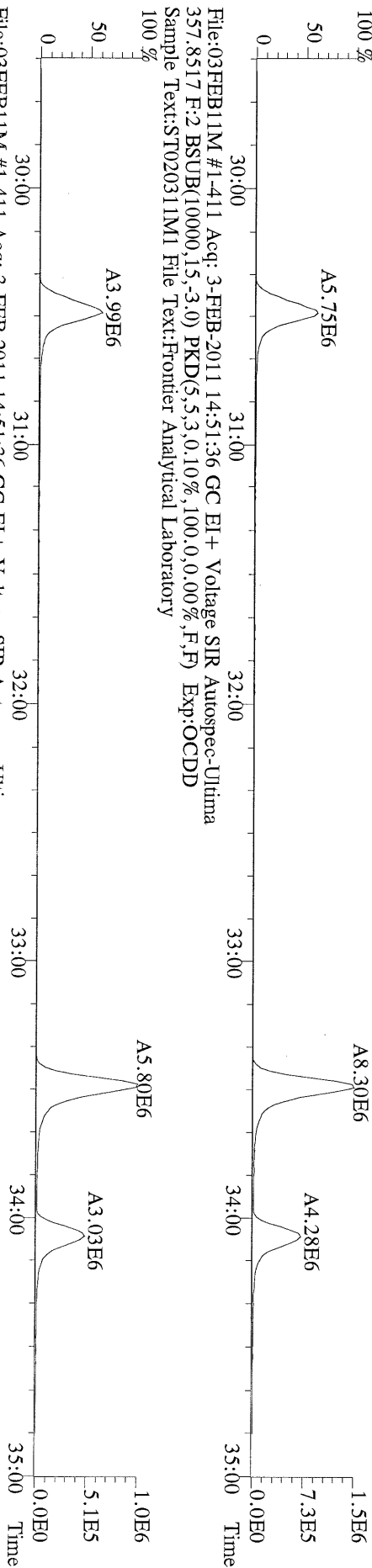
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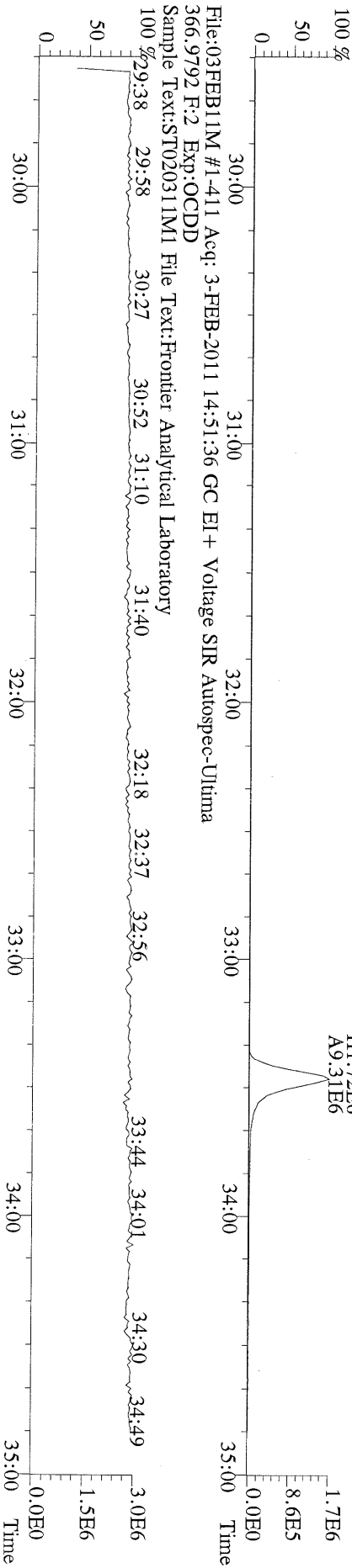
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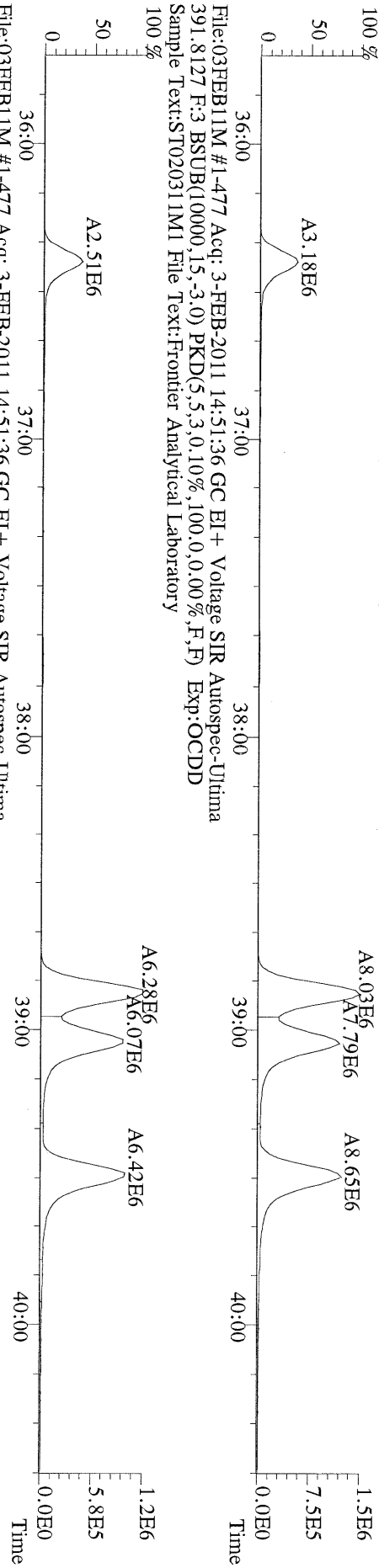
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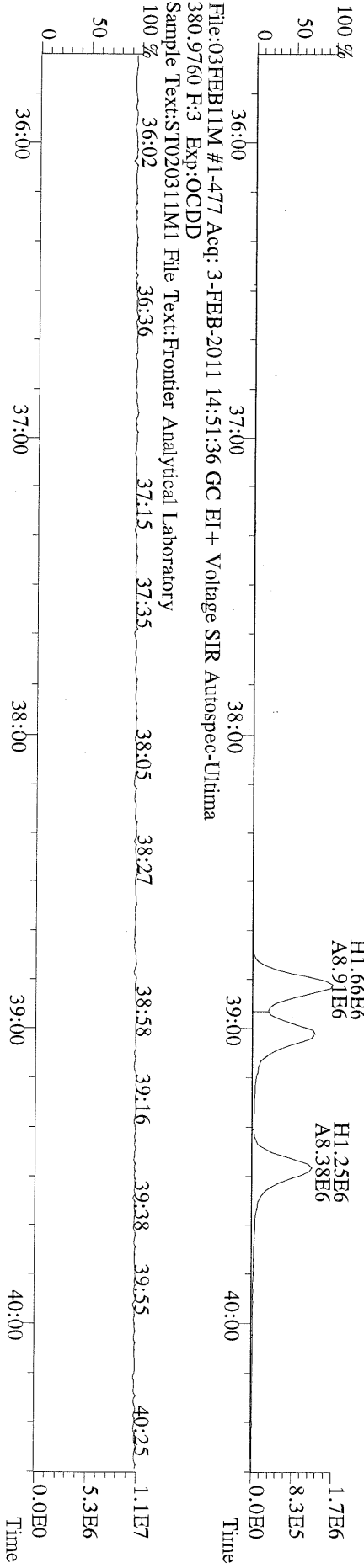
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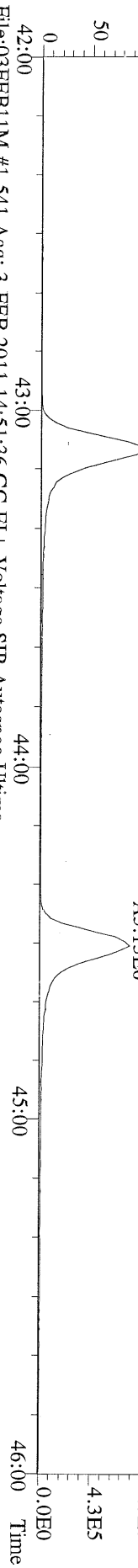
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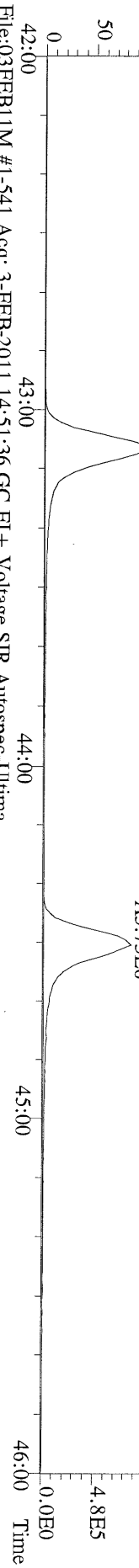
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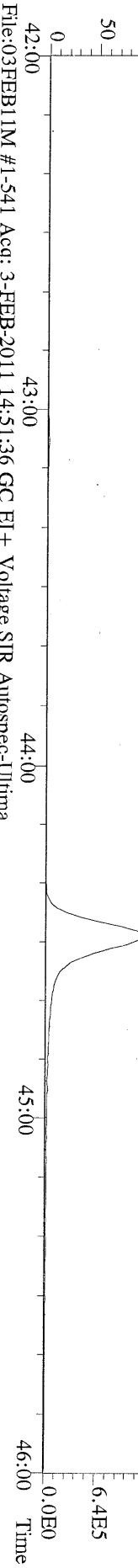
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423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory



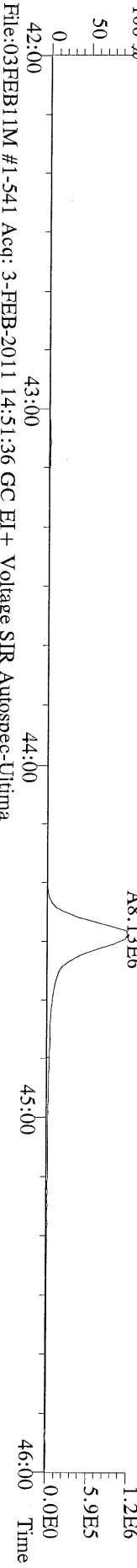
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425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100,0,0.00%,F,F) Exp:OCDD
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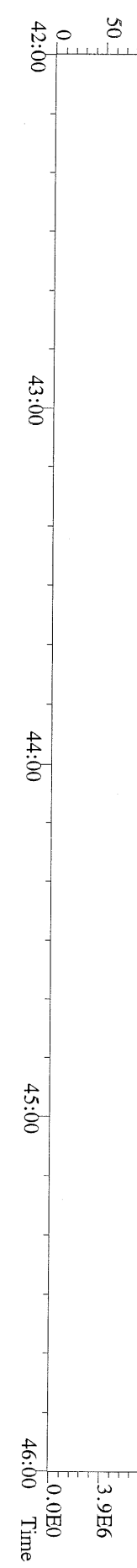
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435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory



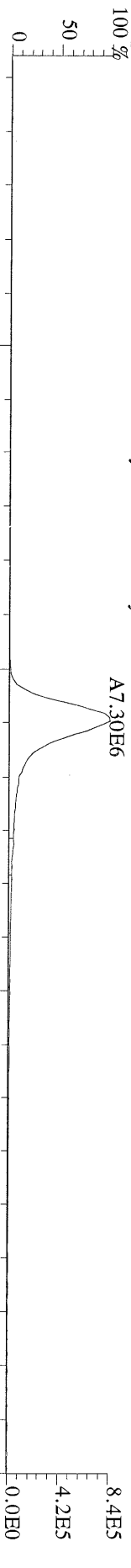
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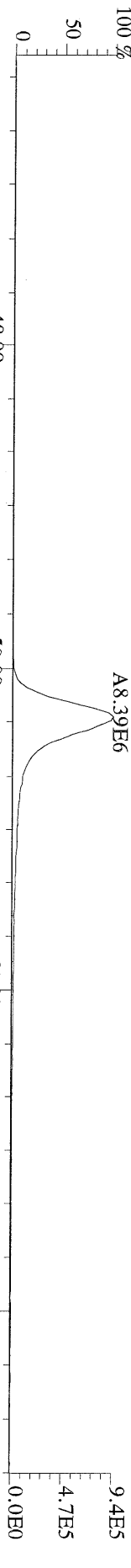
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430.9728 F:4 Exp:OCDD
Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory



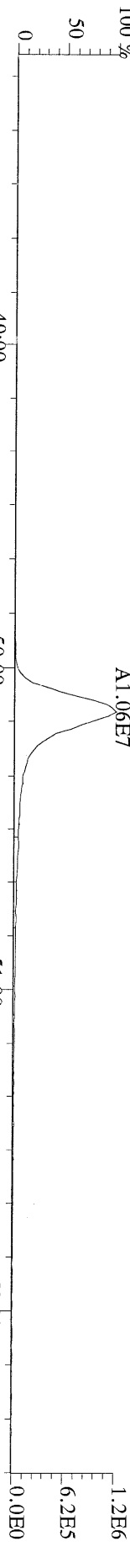
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457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory
100 %



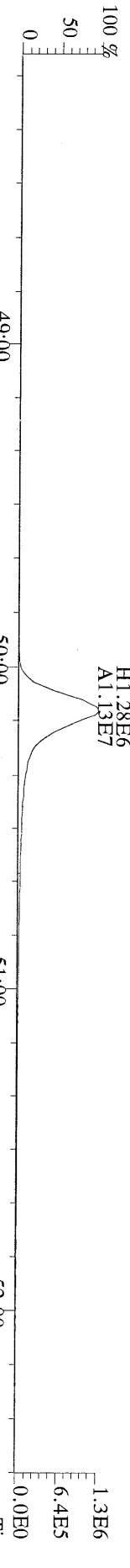
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459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory
100 %



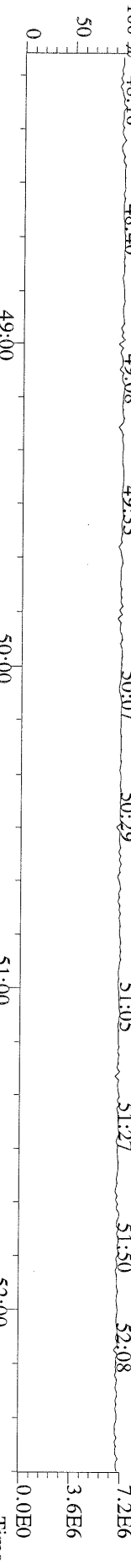
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Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory
100 %



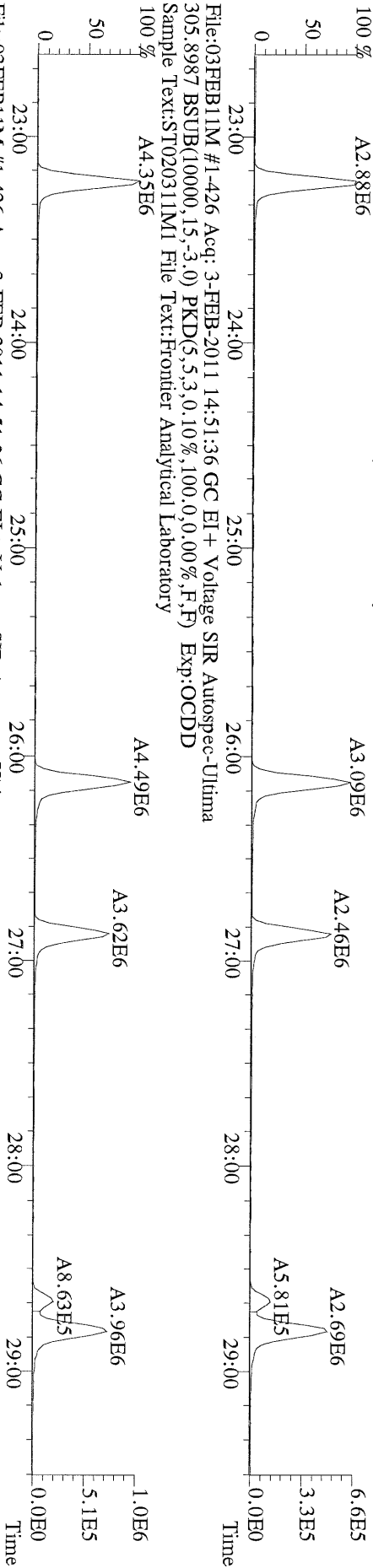
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Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory



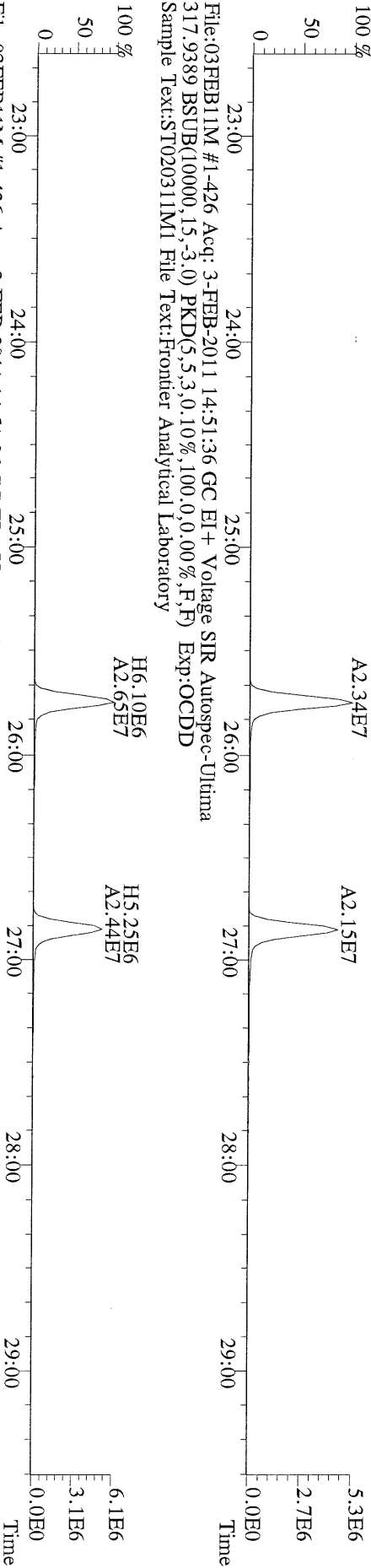
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454.9728 F:5 Exp:OCDD
Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory
100 %



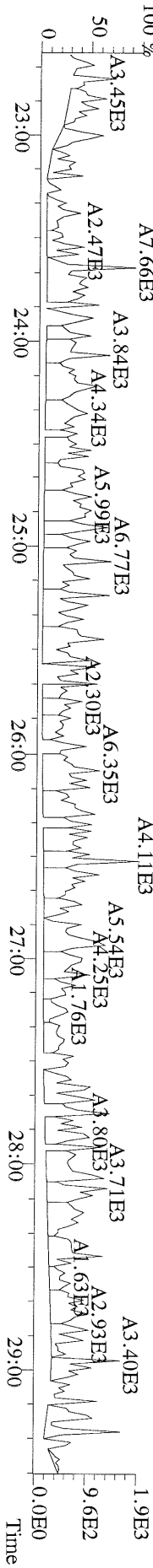
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 303.9016 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory



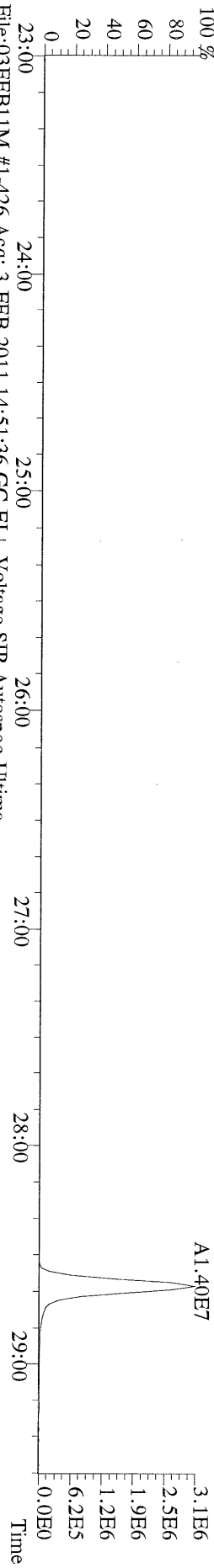
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 315.9419 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory



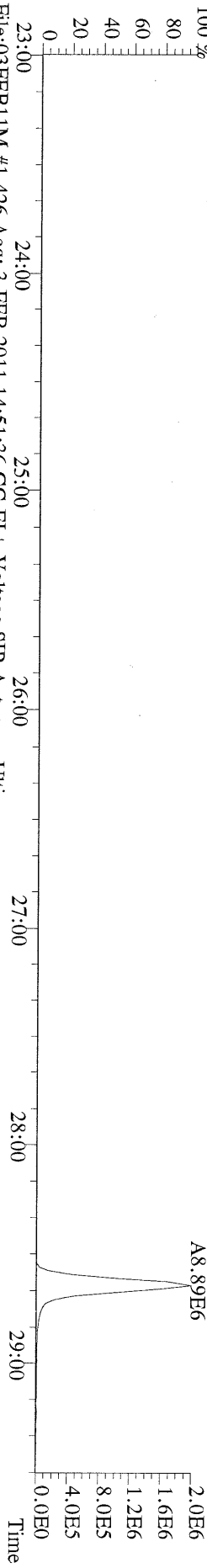
File:03FEB11M #1-426 Acq: 3-FEB-2011 14:51:36 GC EI + Voltage SIR Autospec-Ultima
 375.8364 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory



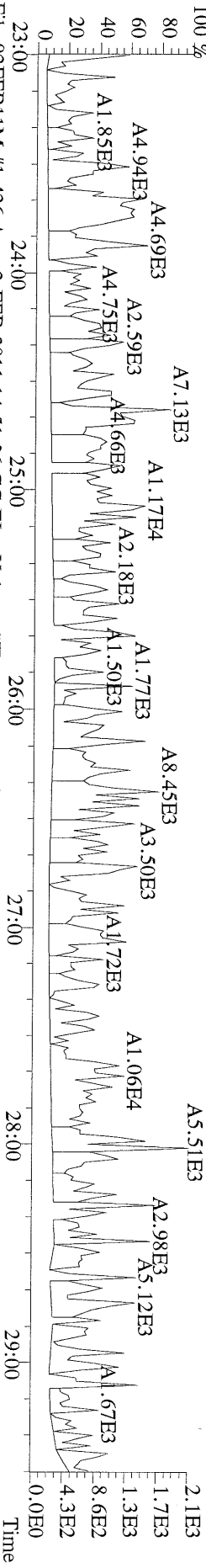
File:03FEB11M #1-426 Acq: 3-FEB-2011 14:51:36 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory



File:03FEB11M #1-426 Acq: 3-FEB-2011 14:51:36 GC EI+ Voltage SIR Autospec-Ultima
 341.8568 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory



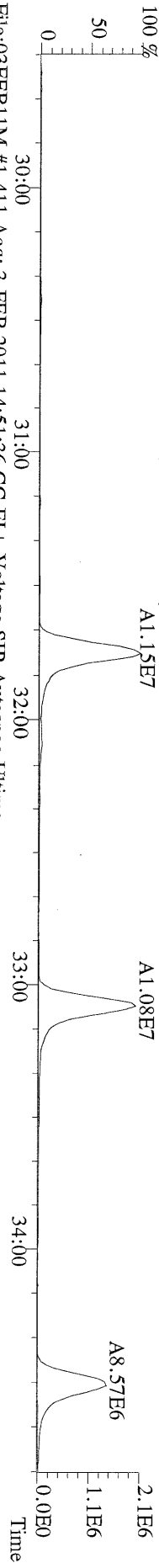
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 409.7974 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
 Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory



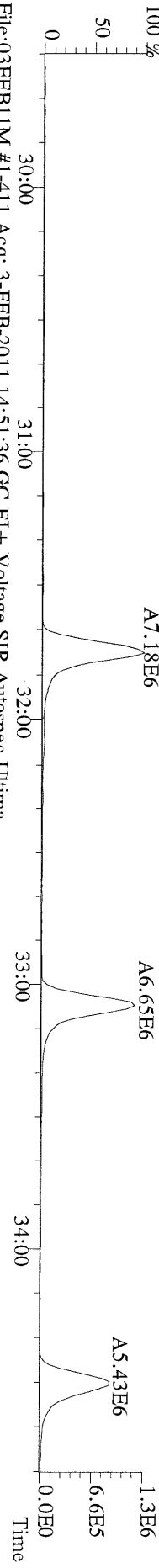
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 Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory



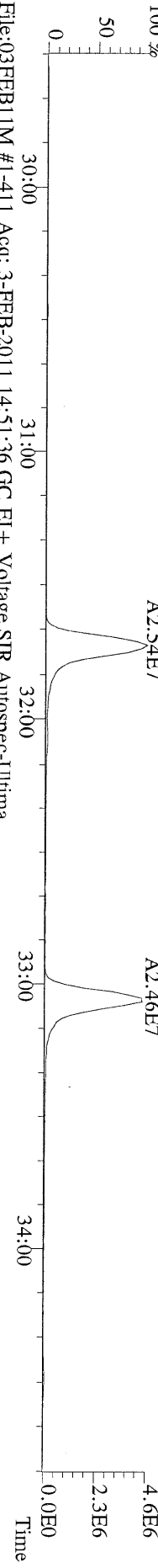
File:03FEB11M #1-411 Acq: 3-FEB-2011 14:51:36 GC EI+ Voltage SIR Autospec-Ultima
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory



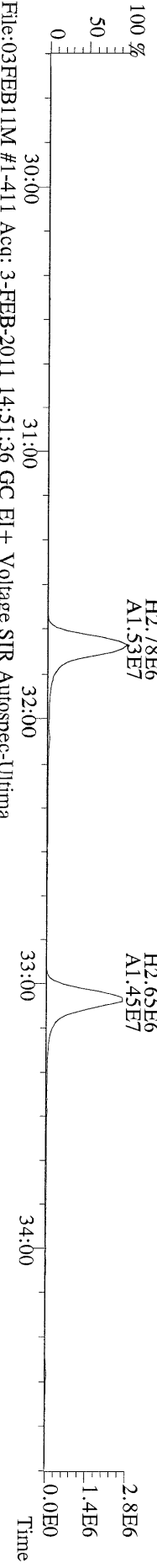
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341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory



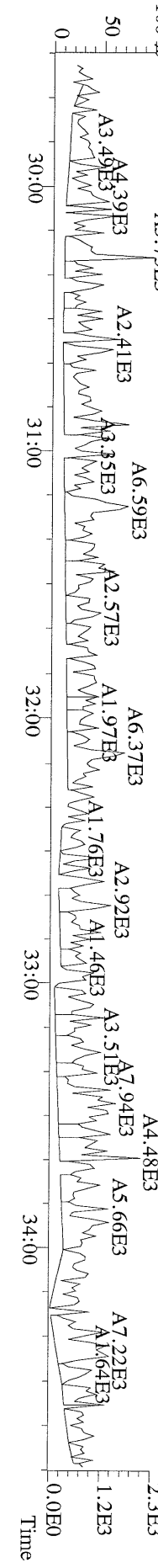
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351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory



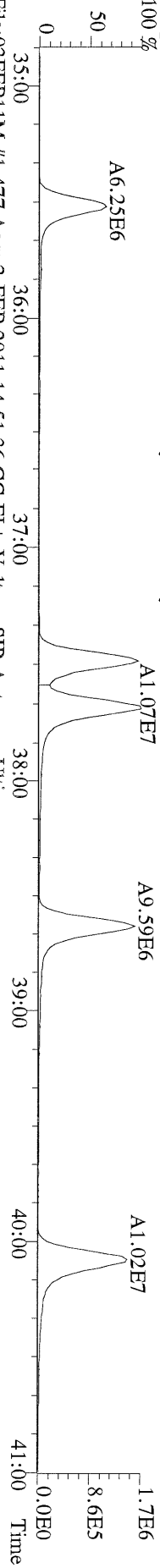
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353.8970 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory



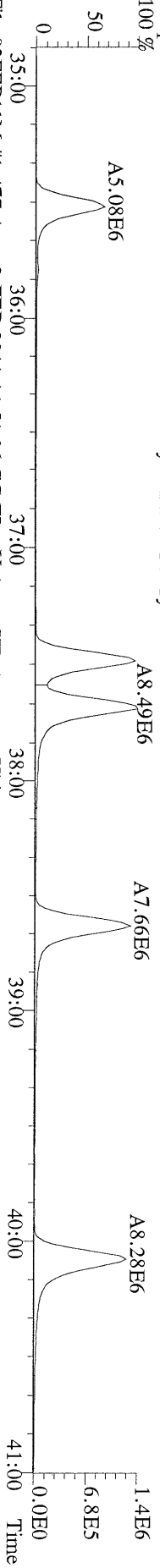
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409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
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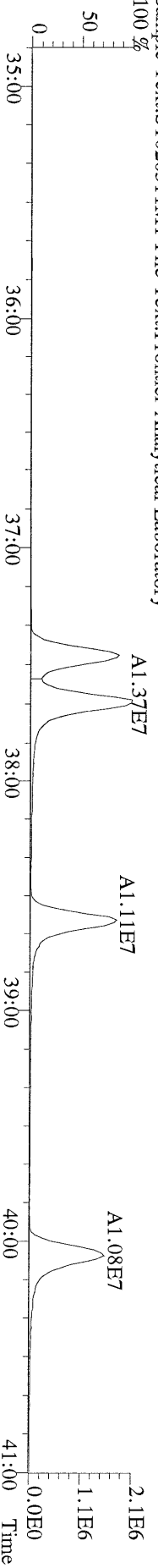
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373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
Sample Text:ST02031 IM1 File Text:Frontier Analytical Laboratory



File:03FEB11M #1-477 Acq: 3-FEB-2011 14:51:36 GC EI+ Voltage SIR Autospec-Ultima
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
Sample Text:ST02031 IM1 File Text:Frontier Analytical Laboratory



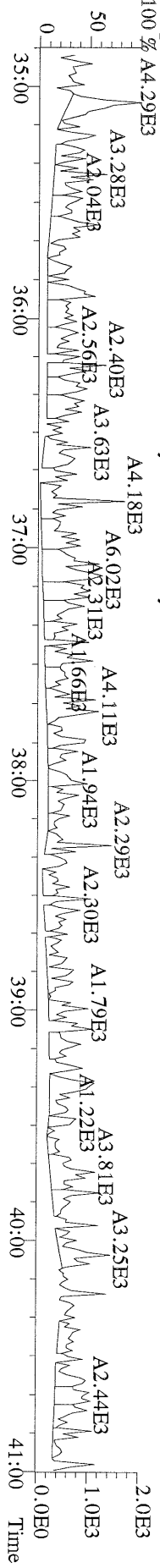
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383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
Sample Text:ST02031 IM1 File Text:Frontier Analytical Laboratory



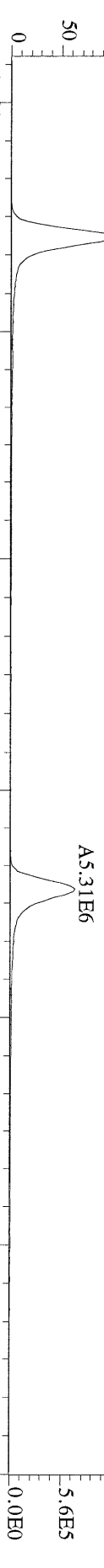
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385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
Sample Text:ST02031 IM1 File Text:Frontier Analytical Laboratory



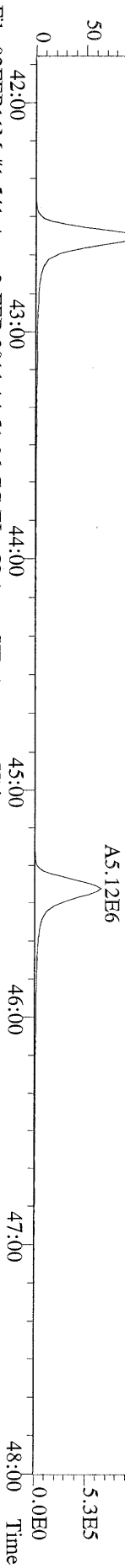
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445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
Sample Text:ST02031 IM1 File Text:Frontier Analytical Laboratory



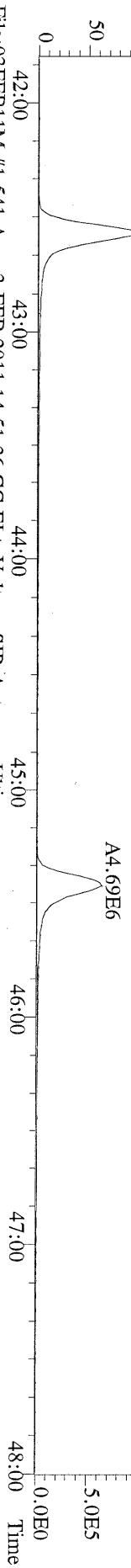
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407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory
100 %



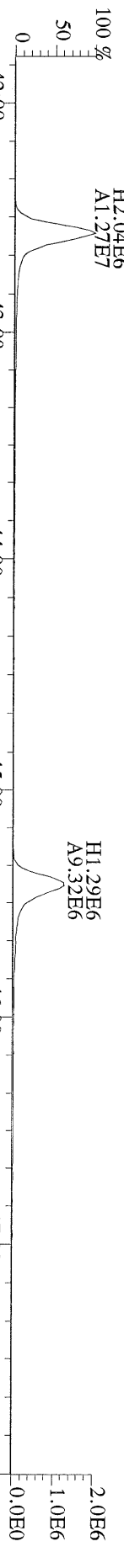
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409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory
100 %



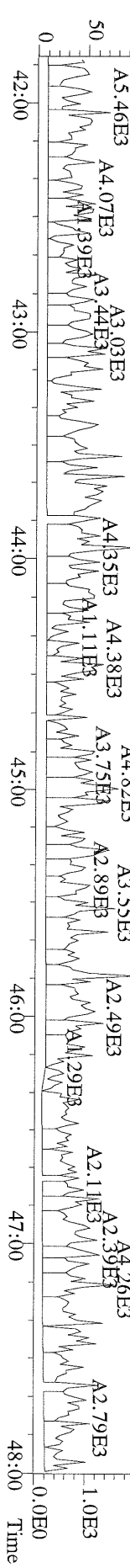
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417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory
100 %



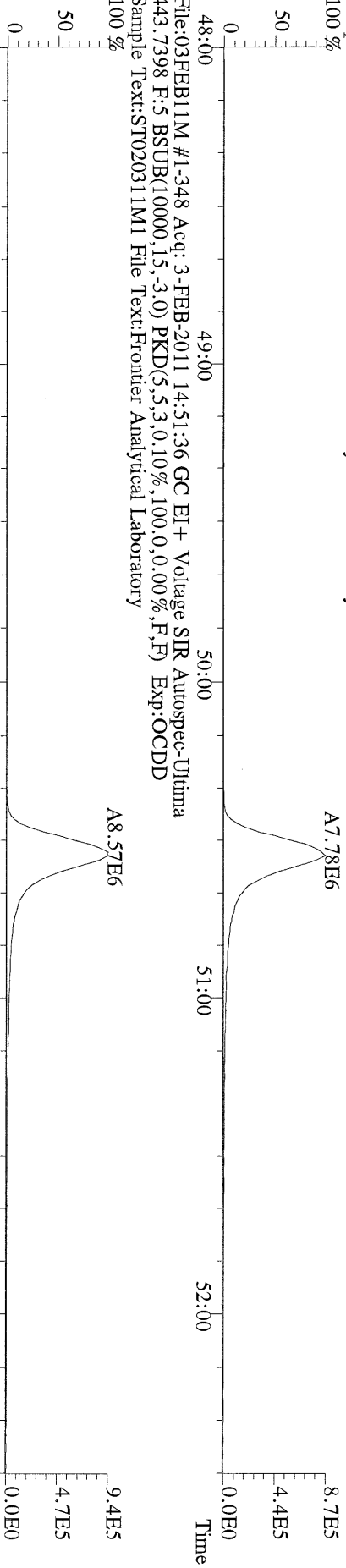
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419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory
100 %



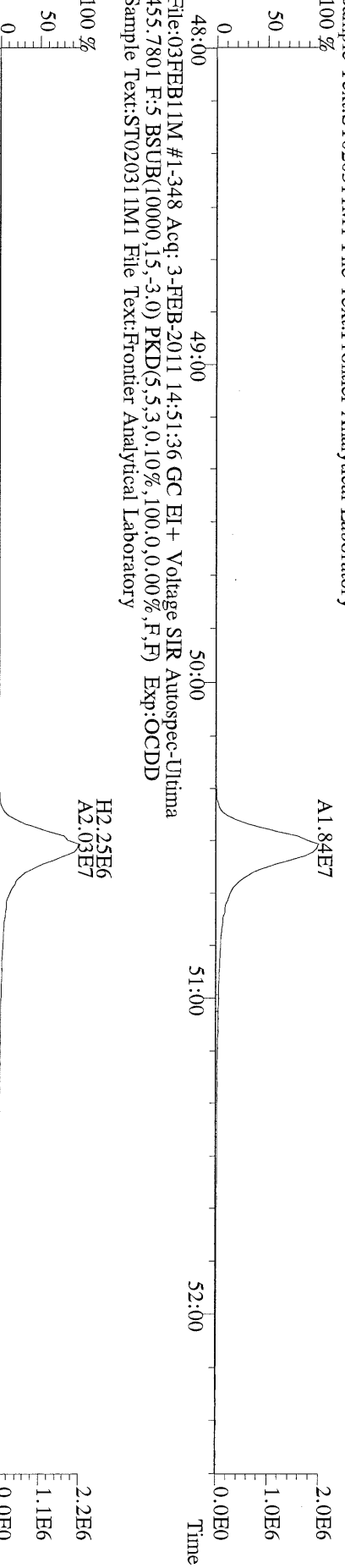
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479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M1 File Text:Frontier Analytical Laboratory
100 %



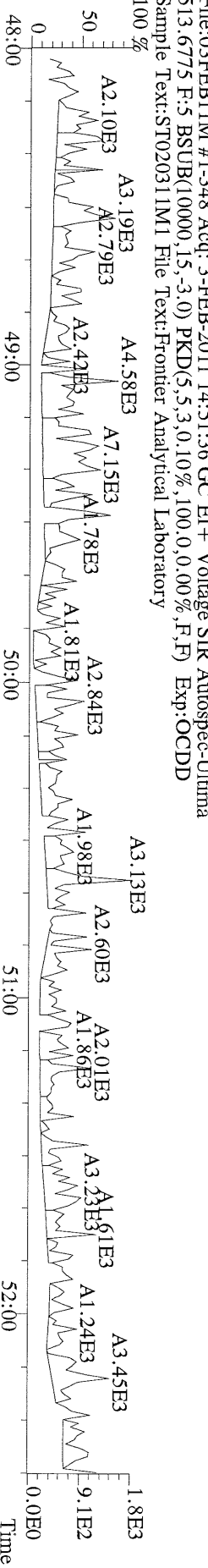
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441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:ST02031IM1 File Text:Frontier Analytical Laboratory



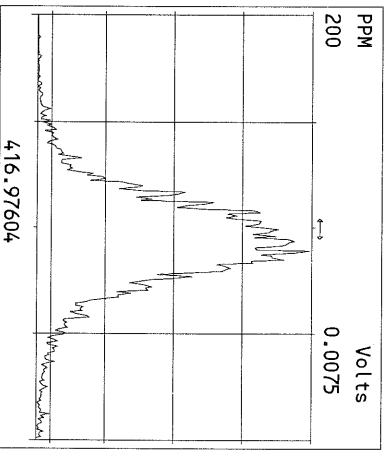
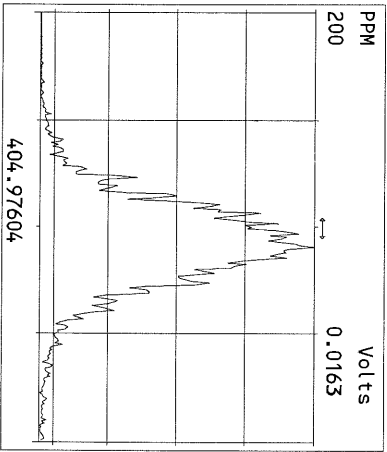
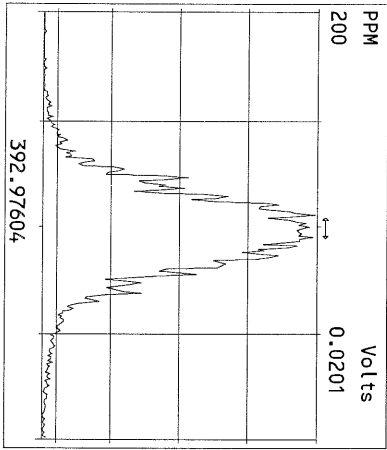
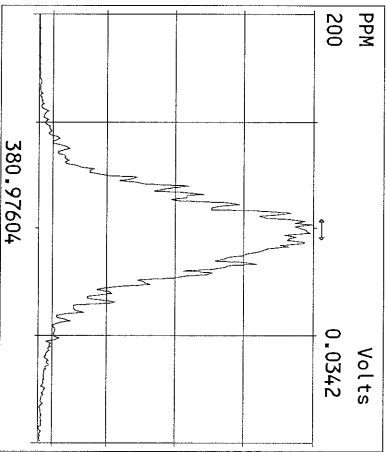
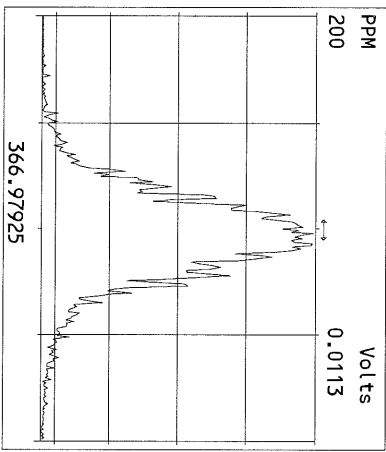
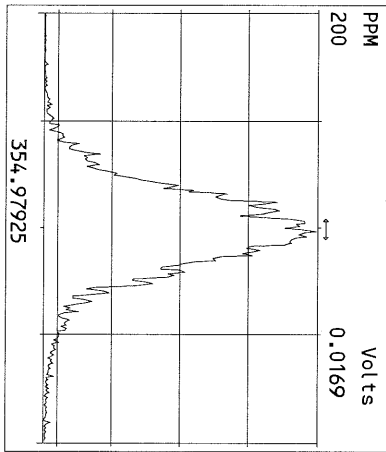
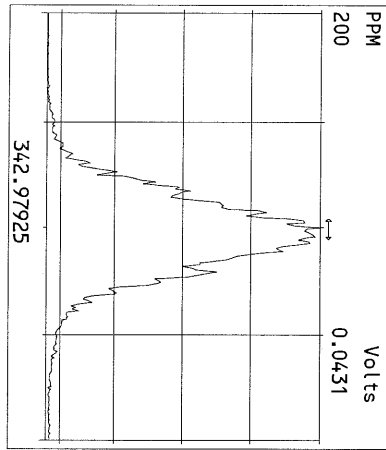
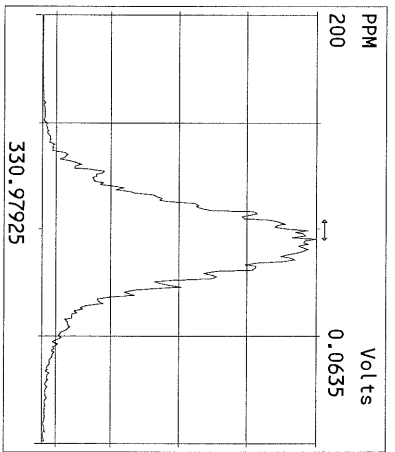
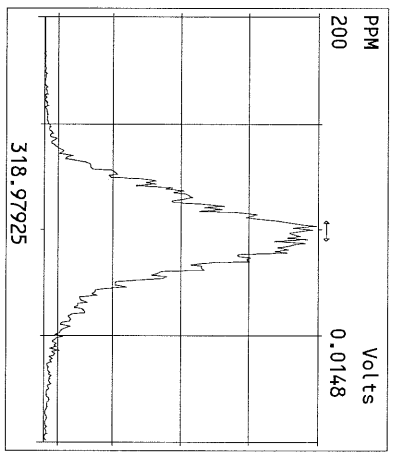
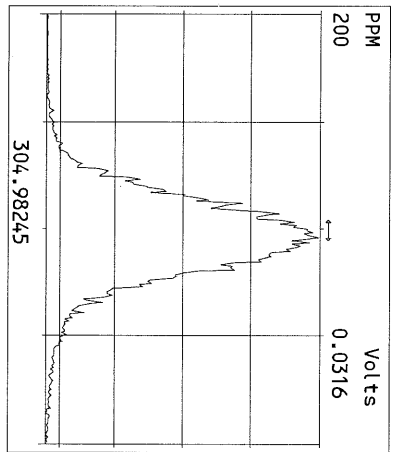
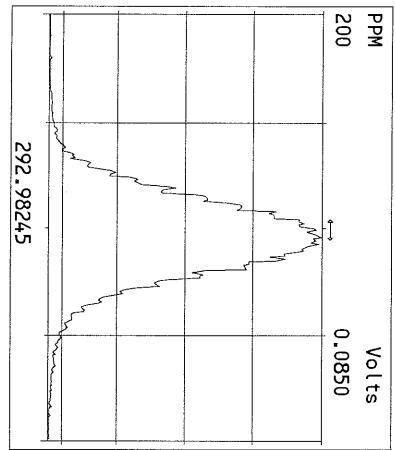
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453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:ST02031IM1 File Text:Frontier Analytical Laboratory

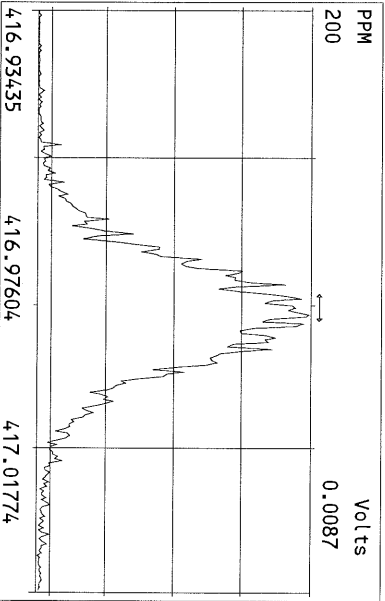
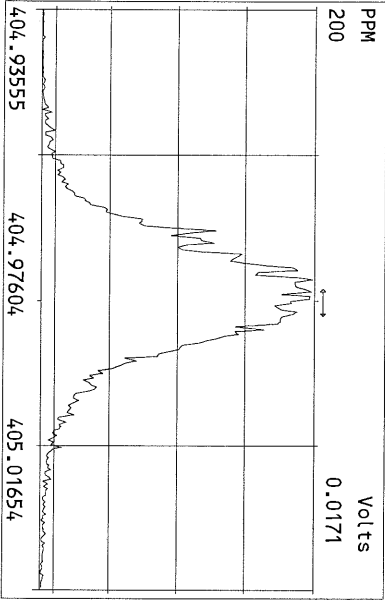
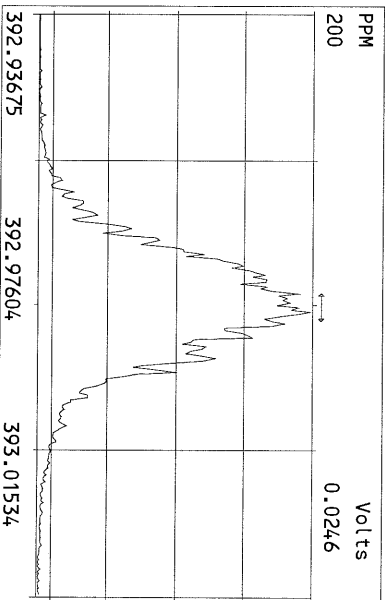
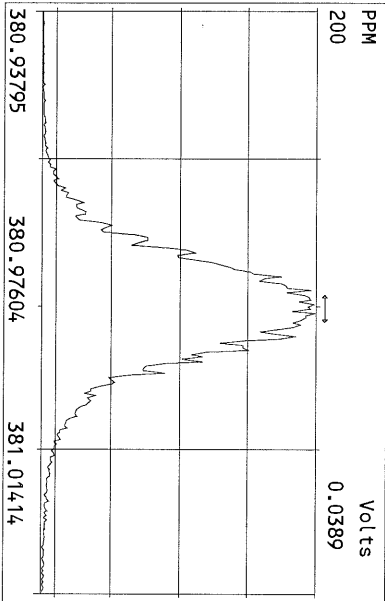
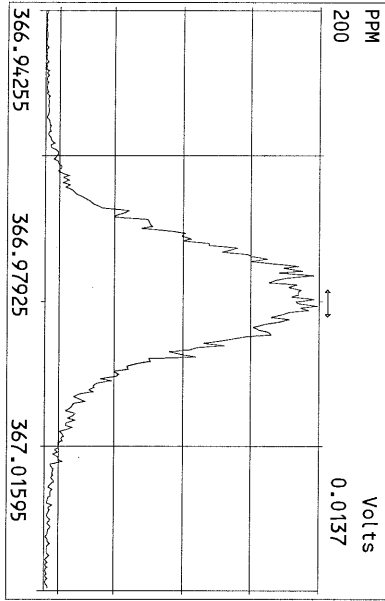
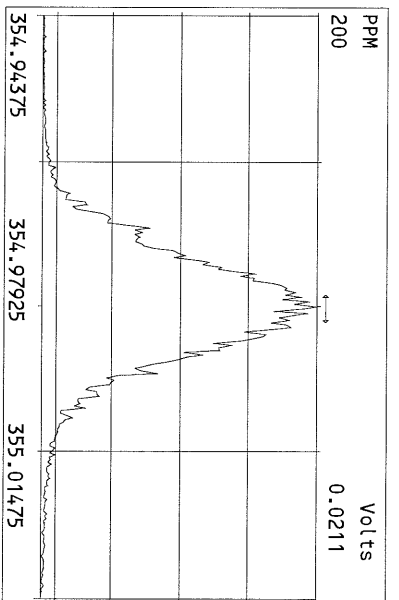
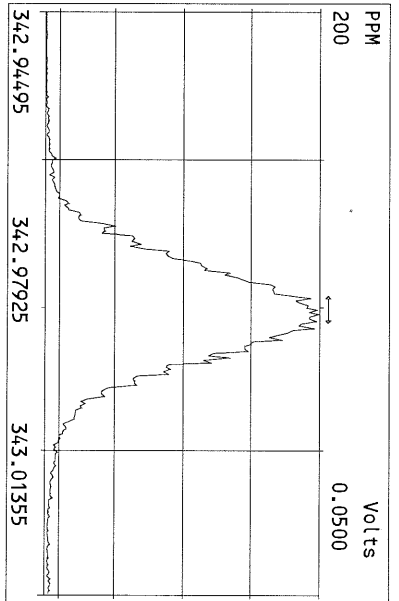
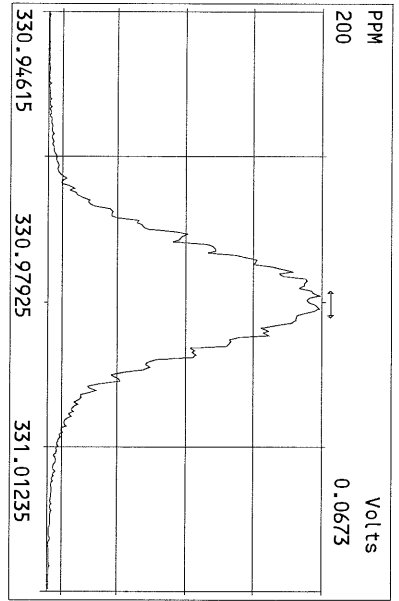


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513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
Sample Text:ST02031IM1 File Text:Frontier Analytical Laboratory

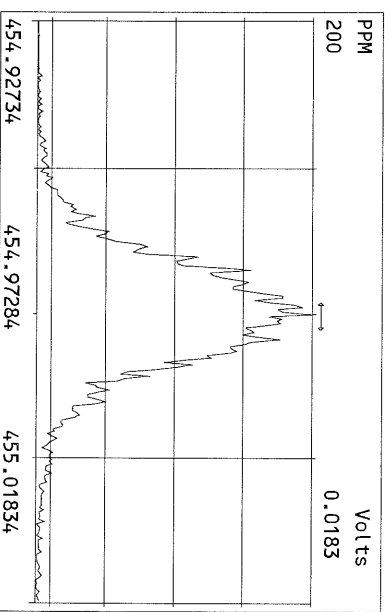
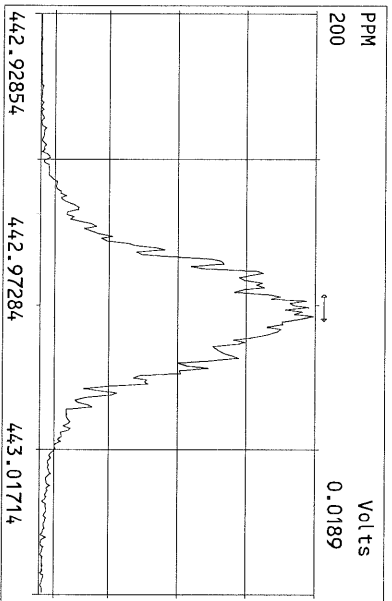
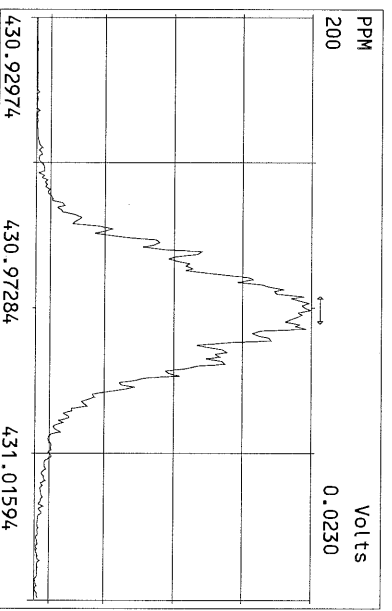
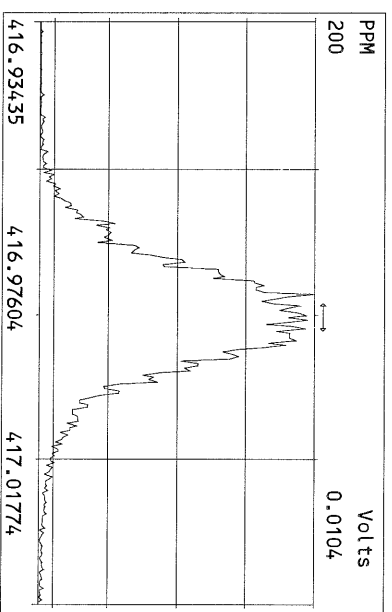
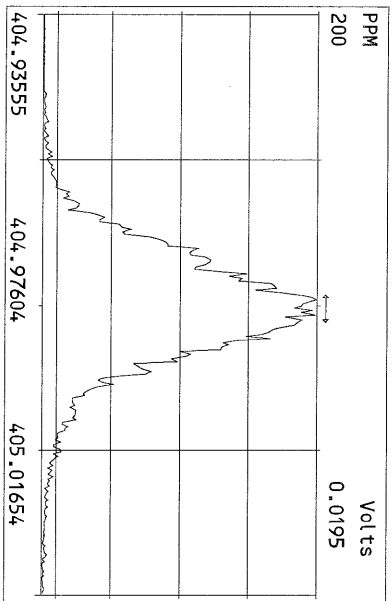
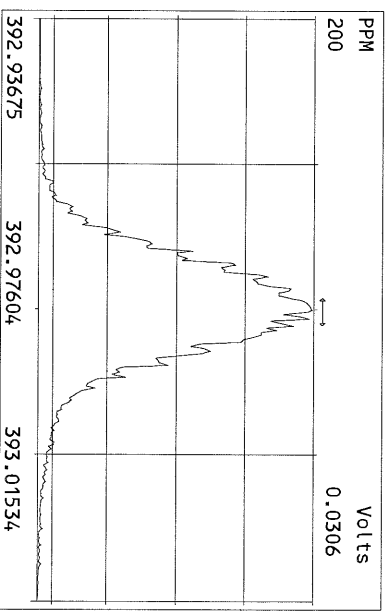
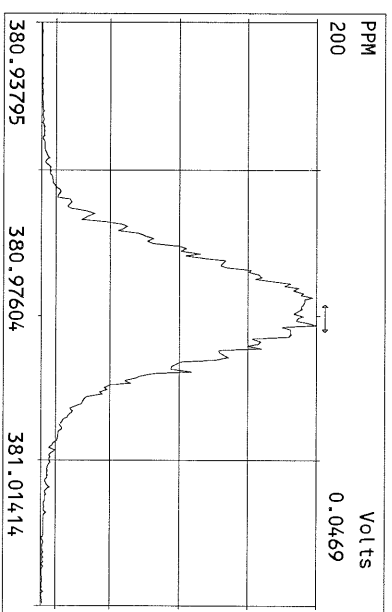
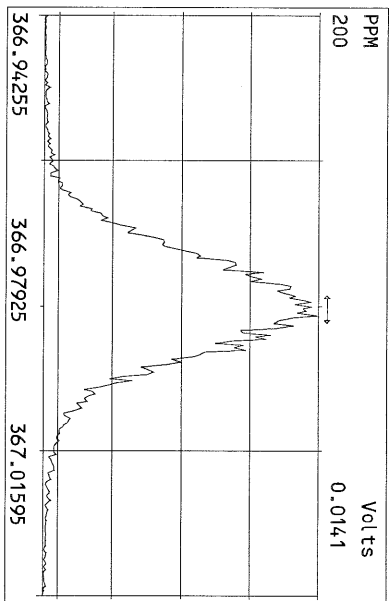


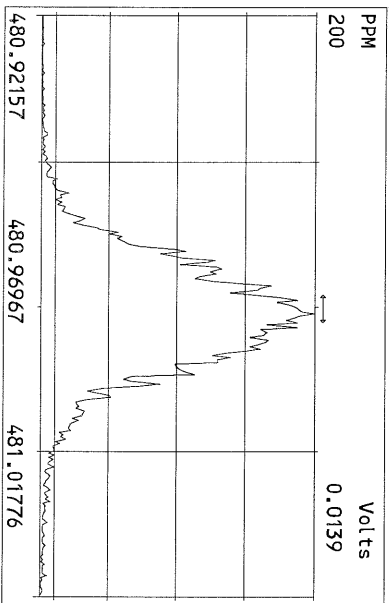
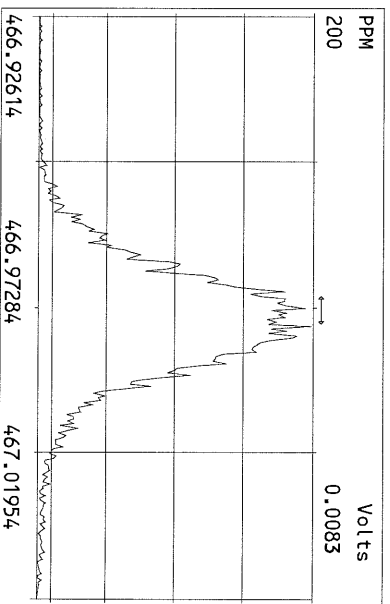
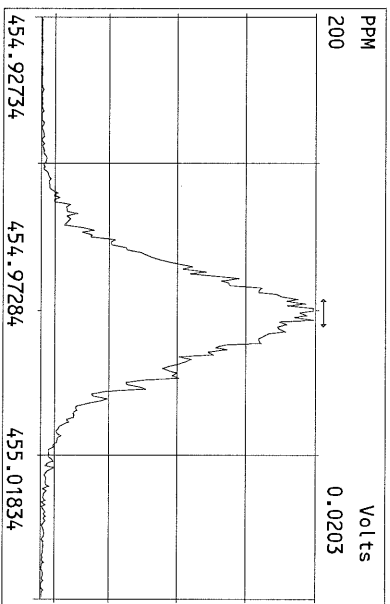
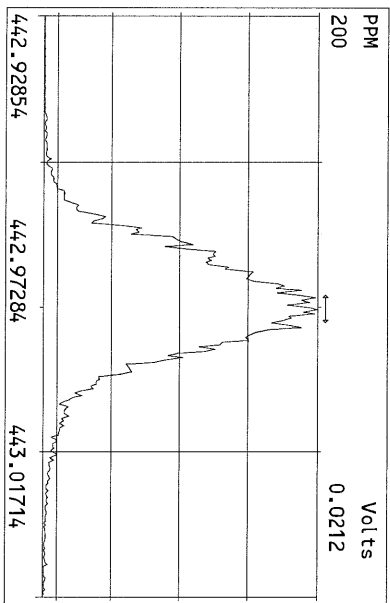
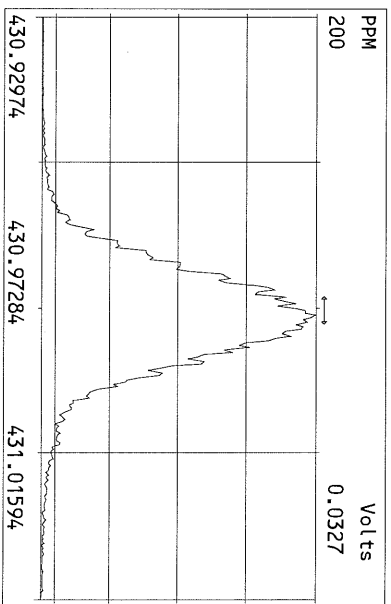
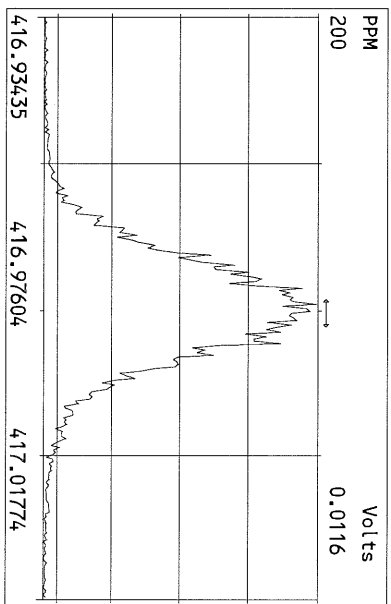
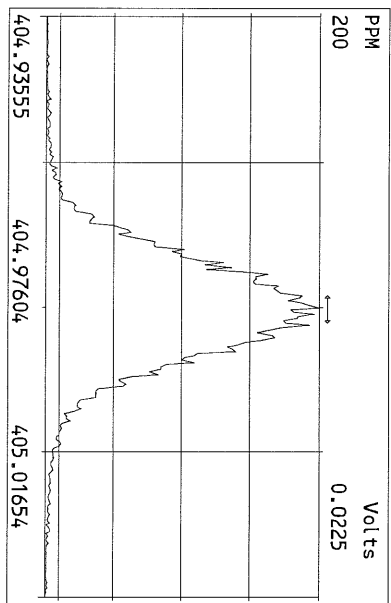
Peak Locate Examination: 4-FEB-2011:04:42 File:03FEB11M_RES_CHECK
Experiment:OCDD Function:1 Reference:PFK



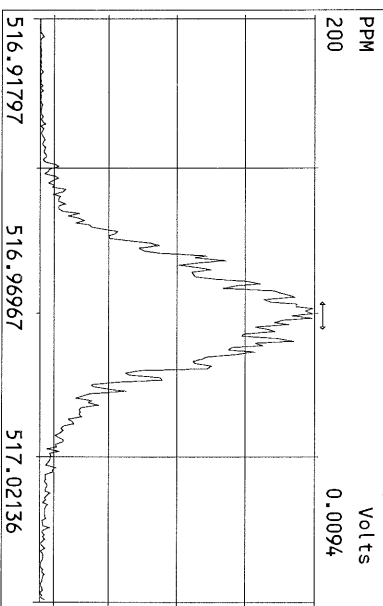
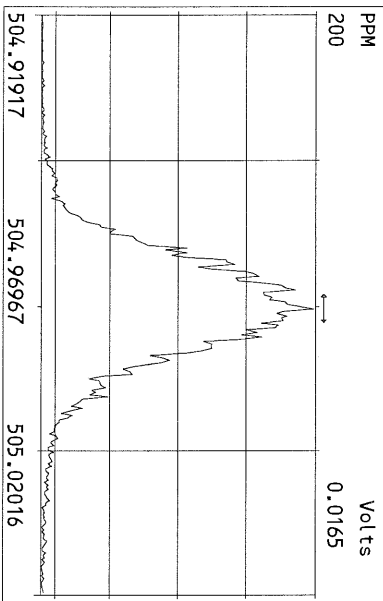
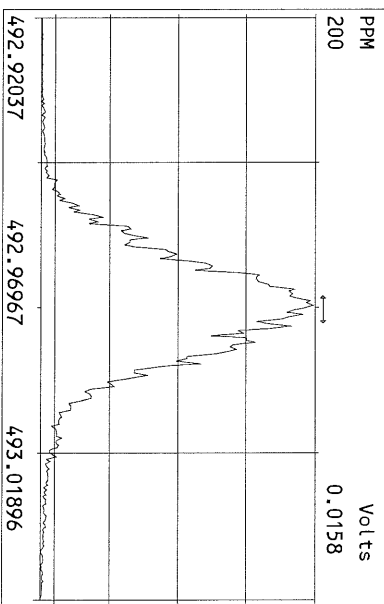
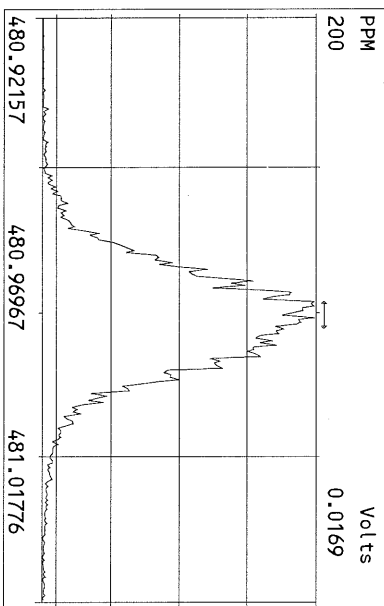
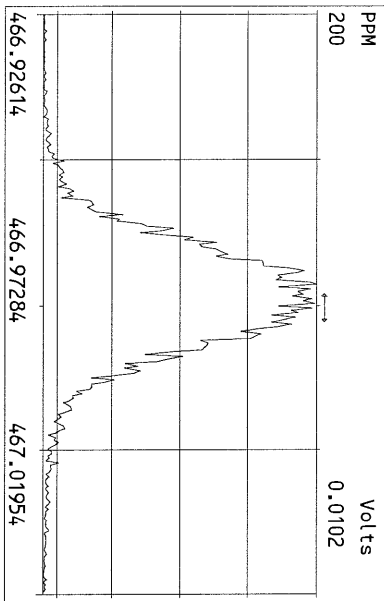
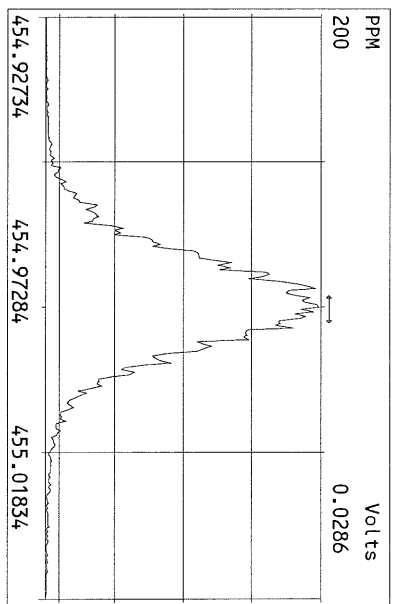
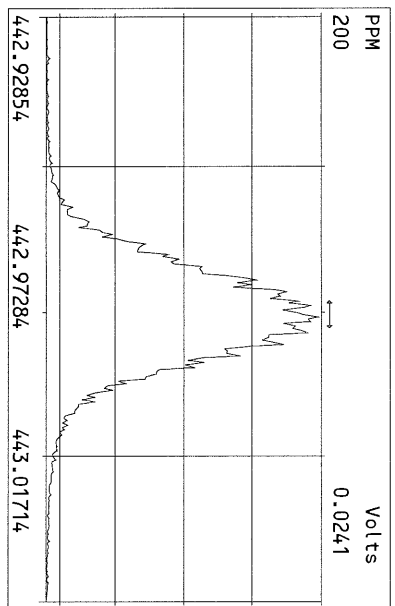
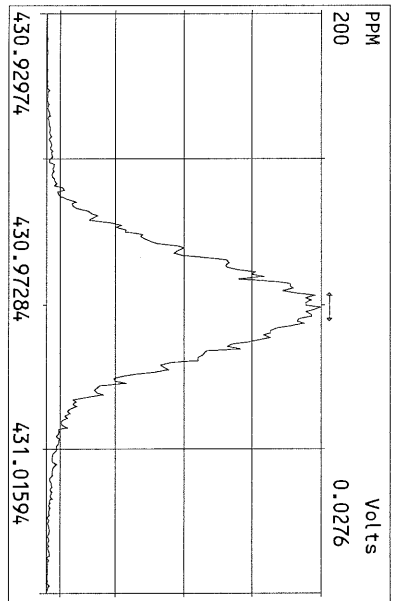


Peak Locate Examination: 4--FEB--2011:04:46 File:03FEB11M_RES_CHECK
Experiment:OCDD Function:3 Reference:PFK





Peak Locate Examination: 4-FEB-2011:04:50 File:03FEB11M_RES_CHECK
Experiment:OCDD Function:5 Reference:PFK



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: 03FEB11M Sam:15 Analysis Date: 4-FEB-11 03:45:35

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	0.83	0.65-0.89	y	11.0	7.80 - 12.9 ✓
1,2,3,7,8-PeCDD	M+2/M+4	1.43	1.32-1.78	y	49.6	39.0 - 65.0 ✓
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	50.9	39.0 - 64.0 ✓
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	53.8	39.0 - 64.0 ✓
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	y	55.9	41.0 - 61.0 ✓
1,2,3,4,6,7,8-HpCDD	M+2/M+4	0.99	0.88-1.20	y	45.9	43.0 - 58.0 ✓
OCDD	M+2/M+4	0.96	0.76-1.02	y	101	79.0 - 126 ✓
2,3,7,8-TCDF	M/M+2	0.72	0.65-0.89	y	8.56	8.40 - 12.0 ✓
1,2,3,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	y	46.7	41.0 - 60.0 ✓
2,3,4,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	y	46.2	41.0 - 60.0 ✓
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	53.6	45.0 - 56.0 ✓
1,2,3,6,7,8-HxCDF	M+2/M+4	1.33	1.05-1.43	y	54.6	44.0 - 57.0 ✓
2,3,4,6,7,8-HxCDF	M+2/M+4	1.31	1.05-1.43	y	55.0	44.0 - 57.0 ✓
1,2,3,7,8,9-HxCDF	M+2/M+4	1.30	1.05-1.43	y	54.8	45.0 - 56.0 ✓
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.07	0.88-1.20	y	53.8	45.0 - 55.0 ✓
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.07	0.88-1.20	y	52.0	43.0 - 58.0 ✓
OCDF	M+2/M+4	0.92	0.76-1.02	y	105	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: 2/4/11

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: 03FEB11M

Sam:15

Analysis Date: 4-FEB-11 03:45:35


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	0.76	0.65-0.89	y	92.8	82.0 - 121 ✓
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.71	1.32-1.78	y	102	62.0 - 160 ✓
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	103	85.0 - 117 ✓
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	93.3	85.0 - 118 ✓
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	104	72.0 - 138 ✓
13C-OCDD	M+2/M+4	0.98	0.76-1.02	y	209	96.0 - 415 ✓
13C-2,3,7,8-TCDF	M/M+2	0.87	0.65-0.89	y	92.7	71.0 - 140 ✓
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.64	1.32-1.78	y	97.6	76.0 - 130 ✓
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.64	1.32-1.78	y	99.6	77.0 - 130 ✓
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.49	0.43-0.59	y	91.8	76.0 - 131 ✓
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.49	0.43-0.59	y	85.1	70.0 - 143 ✓
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	86.8	73.0 - 137 ✓
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.50	0.43-0.59	y	87.8	74.0 - 135 ✓
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.50	0.37-0.51	y	85.7	78.0 - 129 ✓
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.49	0.37-0.51	y	91.4	77.0 - 129 ✓
13C-OCDF	M+2/M+4	0.93	0.76-1.02	y	189	96.0 - 415 ✓
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					9.63	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: 

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: 4-FEB-11 03:45:35

CS3 or VER Data Filename: 03FEB11M

Sam:15

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		1.223	0.923-1.303 ✓

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

Analyst: 

Date: 2/4/11

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: 4-FEB-11 03:45:35

CS3 or VER Data Filename: 03FEB11M

Sam:15


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	1.001	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	1.001	0.999-1.001 ✓
OCDD	13C-OCDD	1.001	0.999-1.001 ✓
OCDF	13C-OCDF	1.001	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		1.150	1.057-1.154 ✓
13C-OCDD		1.270	1.032-1.311 ✓
13C-OCDF		1.280	1.000-1.311 ✓

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

Analyst: 

Date: 2/4/11

Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL	Rec	#Hom
2,3,7,8-TCDD	4.04e+06	0.83 y	27:38	1.11	11.0		2.50	-	-	*	
1,2,3,7,8-PeCDD	1.63e+07	1.43 y	33:30	1.10	49.6		2.50	-	-	*	
1,2,3,4,7,8-HxCDD	1.76e+07	1.27 y	38:52	1.37	50.9		2.50	-	-	*	
1,2,3,6,7,8-HxCDD	1.59e+07	1.27 y	39:02	1.37	53.8		2.50	-	-	*	
1,2,3,7,8,9-HxCDD	1.78e+07	1.28 y	39:29	1.36	55.9		2.50	-	-	*	
1,2,3,4,6,7,8-HpCDD	1.35e+07	0.99 y	44:30	1.45	45.9		2.50	-	-	*	
OCDD	1.87e+07	0.96 y	50:09	1.43	101		2.50	-	-	*	
2,3,7,8-TCDF	6.75e+06	0.72 y	26:54	1.50	8.56		2.50	-	-	*	
1,2,3,7,8-PeCDF	2.05e+07	1.54 y	31:45	0.94	46.7		2.50	-	-	*	
2,3,4,7,8-PeCDF	1.99e+07	1.56 y	33:04	0.94	46.2		2.50	-	-	*	
1,2,3,4,7,8-HxCDF	1.92e+07	1.27 y	37:29	0.93	53.6		2.50	-	-	*	
1,2,3,6,7,8-HxCDF	2.20e+07	1.33 y	37:41	0.82	54.6		2.50	-	-	*	
2,3,4,6,7,8-HxCDF	2.01e+07	1.31 y	38:38	0.92	55.0		2.50	-	-	*	
1,2,3,7,8,9-HxCDF	2.22e+07	1.30 y	40:05	1.00	54.8		2.50	-	-	*	
1,2,3,4,6,7,8-HpCDF	1.62e+07	1.07 y	42:35	1.39	53.8		2.50	-	-	*	
1,2,3,4,7,8,9-HpCDF	1.18e+07	1.07 y	45:27	1.36	52.0		2.50	-	-	*	
OCDF	1.92e+07	0.92 y	50:33	0.79	105		2.50	-	-	*	
13C-2,3,7,8-TCDD	3.30e+07	0.76 y	27:37	1.02	92.8					92.8	
13C-1,2,3,7,8-PeCDD	2.99e+07	1.71 y	33:28	0.84	102					102	
13C-1,2,3,4,7,8-HxCDD	2.52e+07	1.25 y	38:51	1.07	103					103	
13C-1,2,3,6,7,8-HxCDD	2.15e+07	1.25 y	39:02	1.01	93.3					93.3	
13C-1,2,3,4,6,7,8-HpCDD	2.02e+07	1.03 y	44:29	0.86	104					104	
13C-OCDD	2.59e+07	0.98 y	50:08	0.55	209					104	
13C-2,3,7,8-TCDF	5.25e+07	0.87 y	26:52	0.99	92.7					92.7	
13C-1,2,3,7,8-PeCDF	4.66e+07	1.64 y	31:44	0.84	97.6					97.6	
13C-2,3,4,7,8-PeCDF	4.61e+07	1.64 y	33:04	0.81	99.6					99.6	
13C-1,2,3,4,7,8-HxCDF	3.86e+07	0.49 y	37:28	1.85	91.8					91.8	
13C-1,2,3,6,7,8-HxCDF	4.90e+07	0.49 y	37:40	2.54	85.1					85.1	
13C-2,3,4,6,7,8-HxCDF	3.98e+07	0.51 y	38:37	2.01	86.8					86.8	
13C-1,2,3,7,8,9-HxCDF	4.06e+07	0.50 y	40:03	2.03	87.8					87.8	
13C-1,2,3,4,6,7,8-HpCDF	2.16e+07	0.50 y	42:35	1.11	85.7					85.7	
13C-1,2,3,4,7,8,9-HpCDF	1.67e+07	0.49 y	45:25	0.80	91.4					91.4	
13C-OCDF	4.64e+07	0.93 y	50:31	1.08	189					94.3	
37Cl-2,3,7,8-TCDD	2.29e+06		27:38	0.69	9.63					96.3	
13C-1,2,3,4-TCDD	3.47e+07	0.78 y	27:02	-	77.3						
13C-1,2,3,4-TCDF	5.70e+07	0.88 y	25:47	-	78.8						
13C-1,2,3,7,8,9-HxCDD	2.27e+07	1.24 y	39:29	-	82.5						
Total Tetra-Dioxins	2.09e+07		22:48	1.11	57.0		2.50	-	-	*	27
Total Penta-Dioxins	3.61e+07		30:30	1.10	110		2.50	-	-	*	9
Total Hexa-Dioxins	5.86e+07		36:24	1.37	184		2.50	-	-	*	14
Total Hepta-Dioxins	2.86e+07		43:06	1.45	97.4		2.50	-	-	*	18
Total Tetra-Furans	3.26e+07		23:16	1.50	41.3		2.50	-	-	*	14
1st Fn. Tot Penta-Furans	2.54e+07		28:39	0.94	58.4		2.50	-	-	*	PeCDF 1
Total Penta-Furans	5.72e+07		30:26	0.94	132		2.50	-	-	*	190 14
Total Hexa-Furans	9.70e+07		35:31	0.91	253		2.50	-	-	*	14
Total Hepta-Furans	2.92e+07		42:35	1.38	111		2.50	-	-	*	33

Analyst: 

Date: 2/4/11

Frontier Analytical Laboratory - Acquisition Log

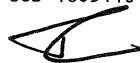
Run Name:03FEB11M

Instrument: FAL3

GC: DB5

Experiment:OCDD

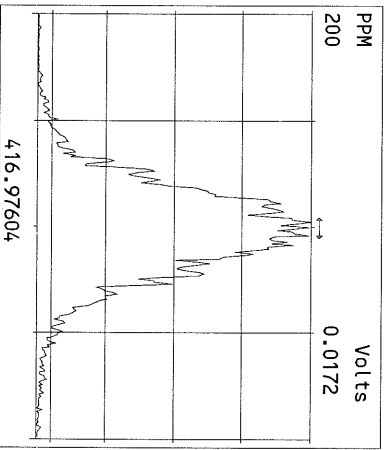
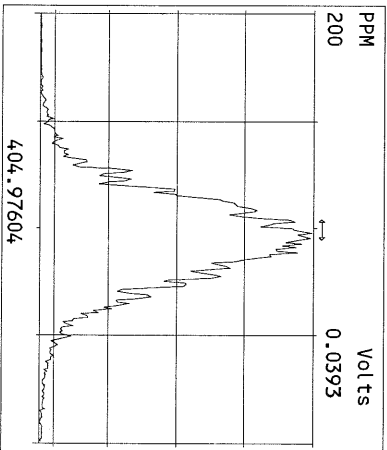
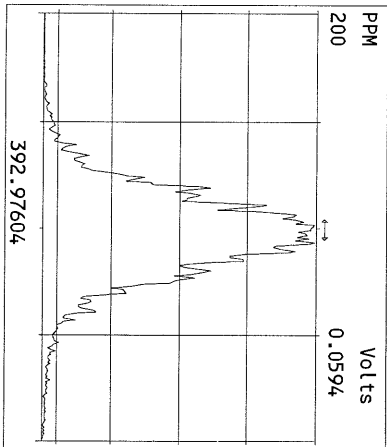
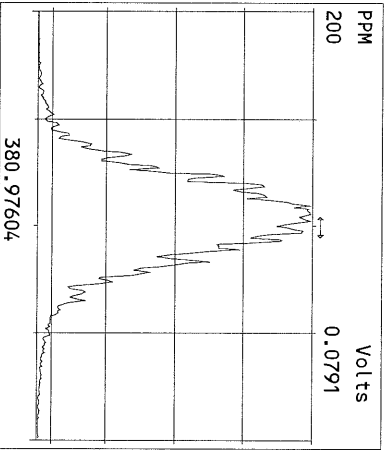
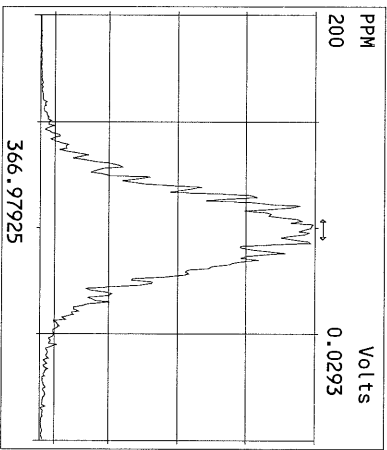
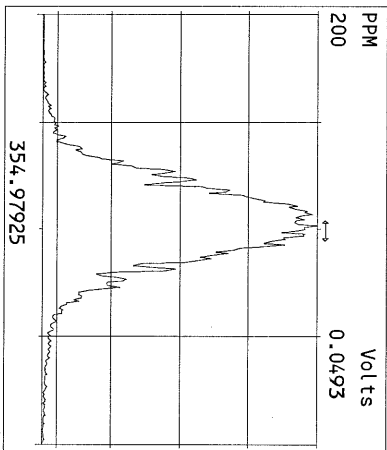
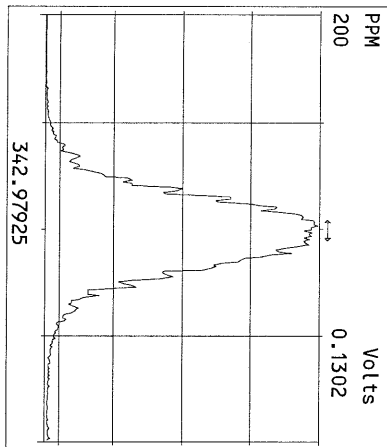
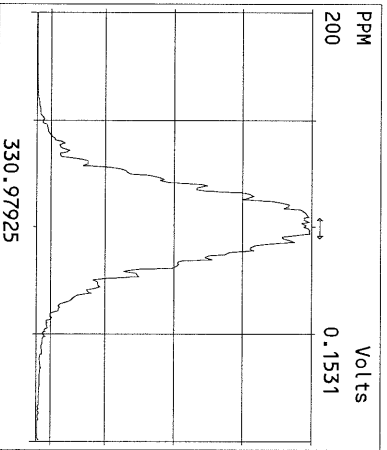
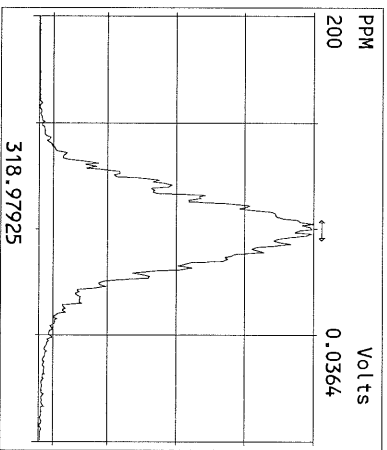
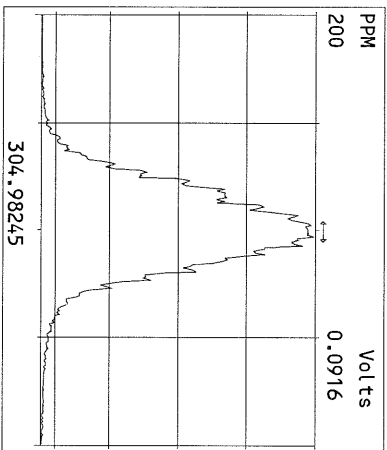
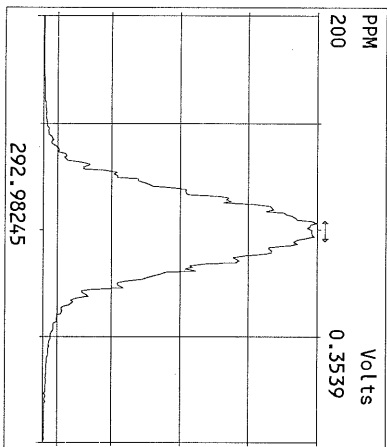
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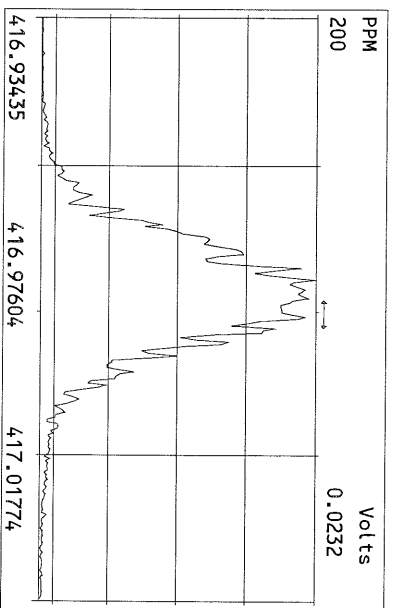
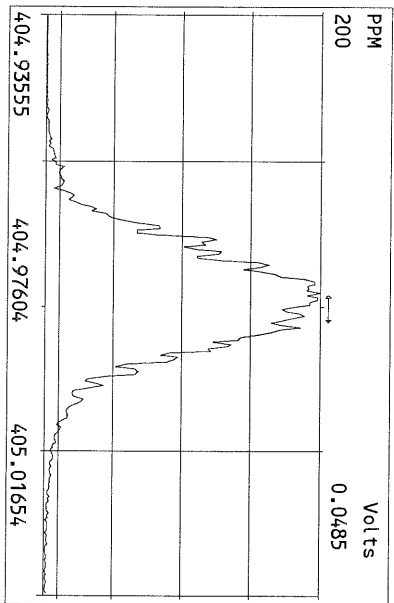
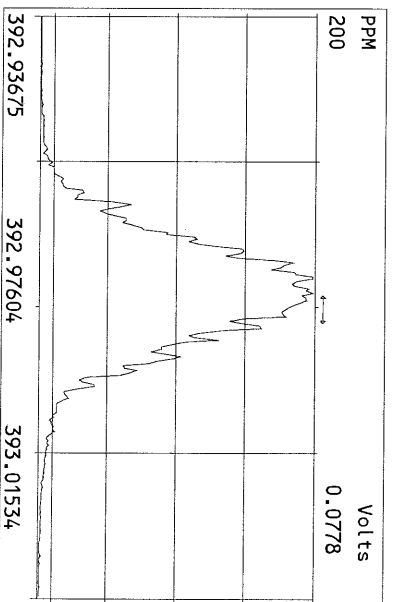
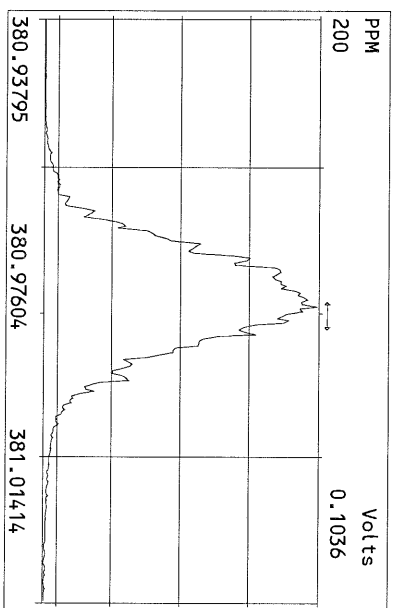
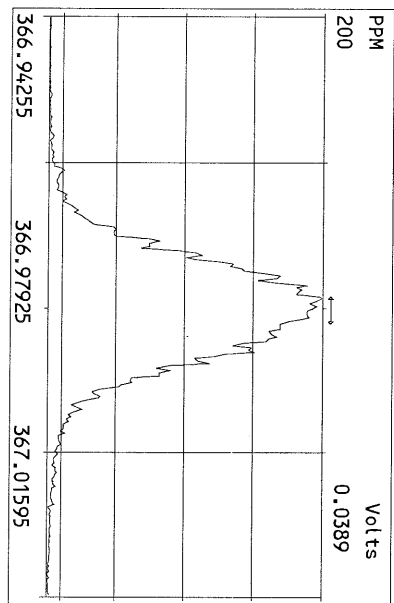
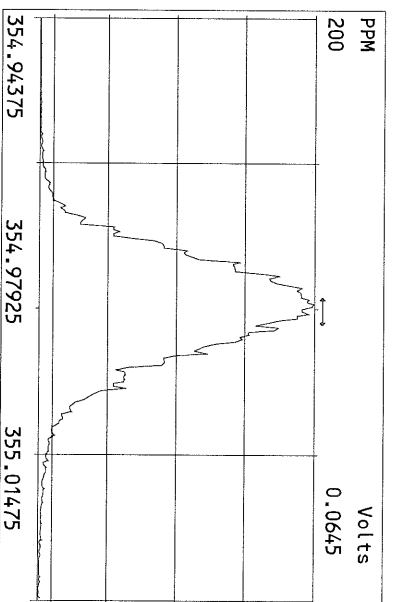
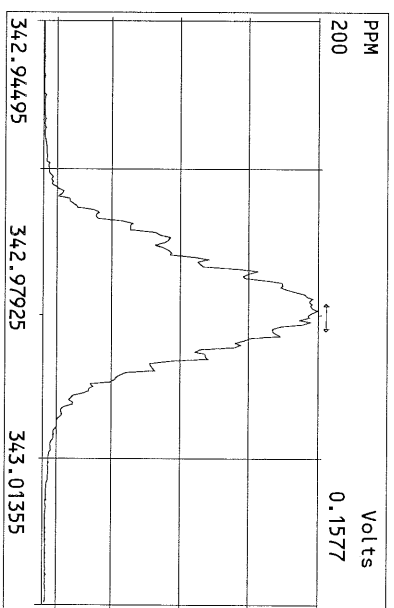
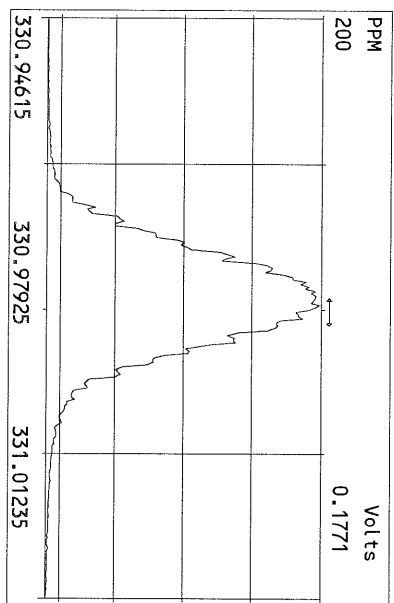


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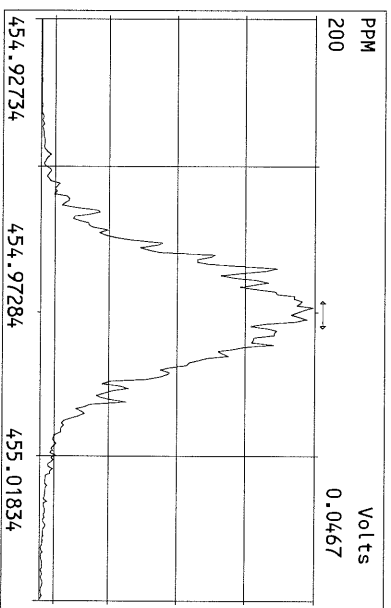
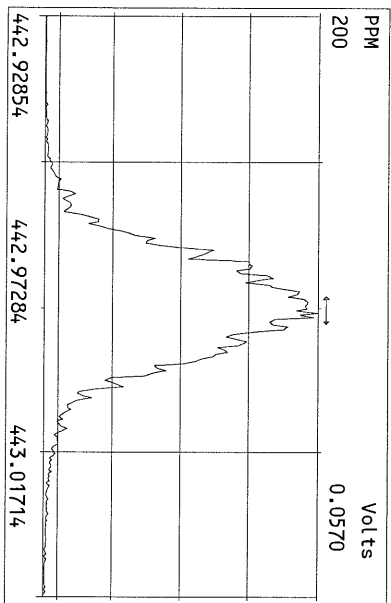
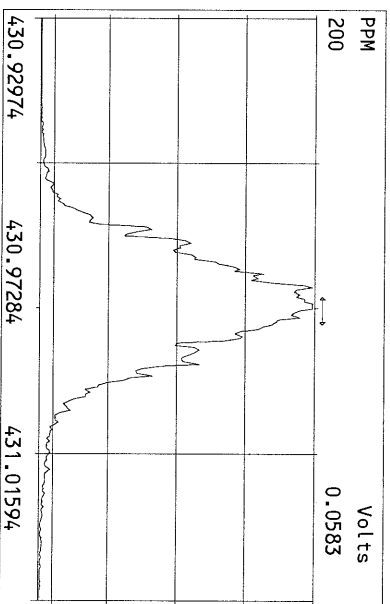
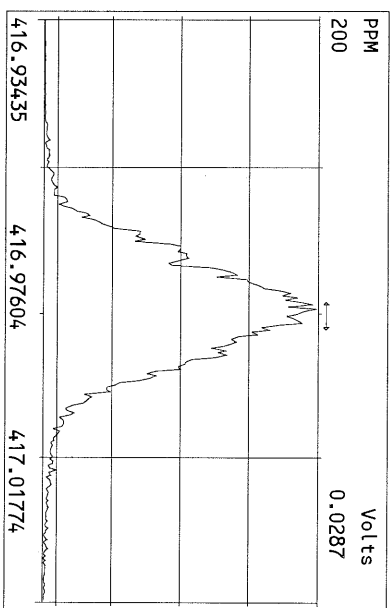
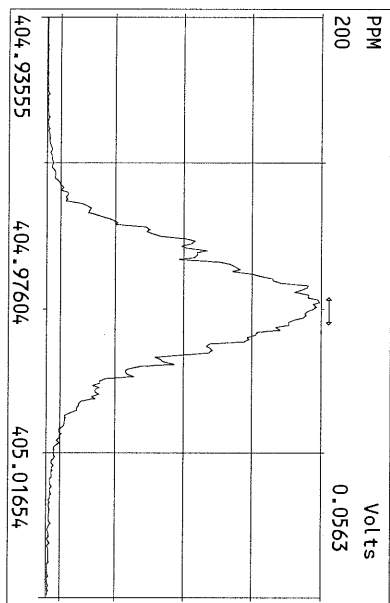
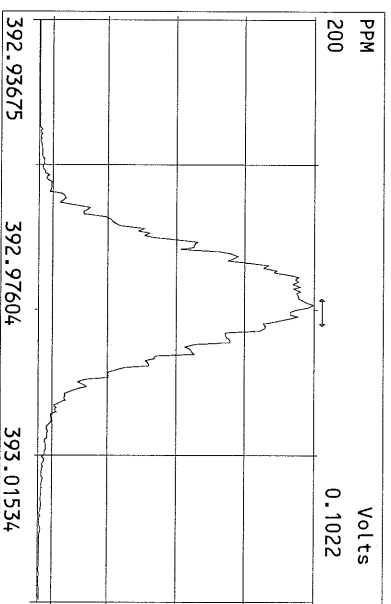
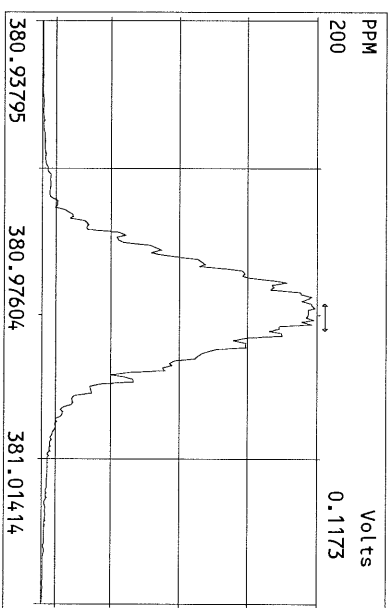
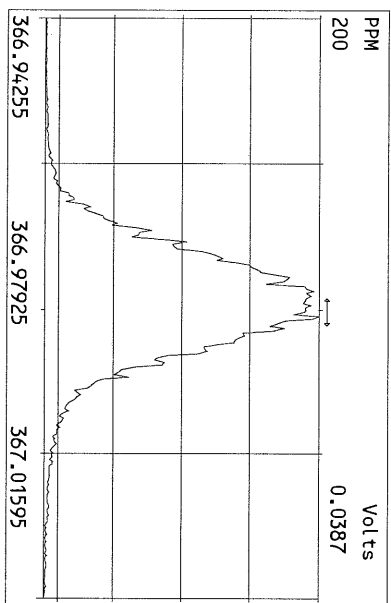
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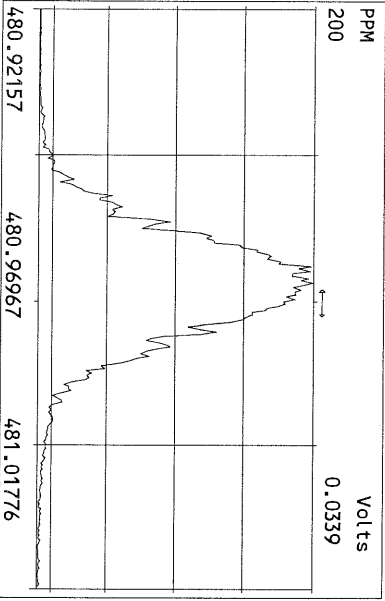
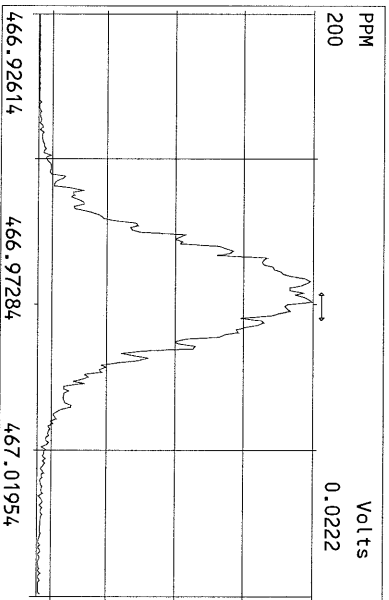
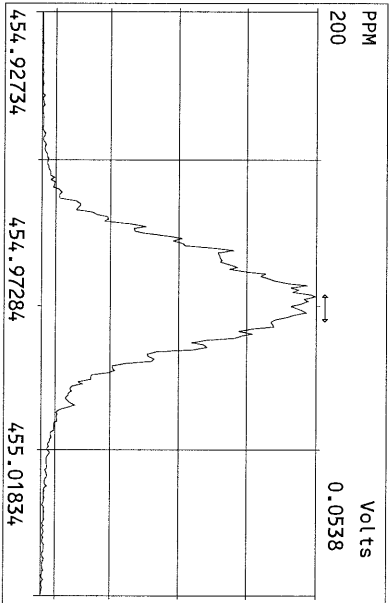
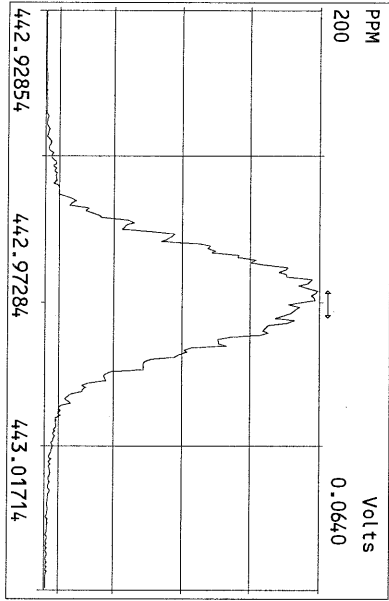
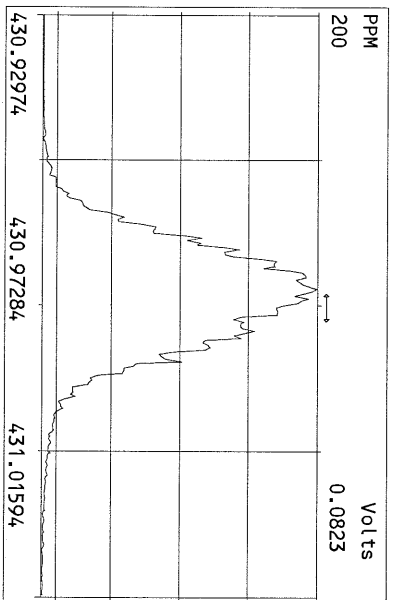
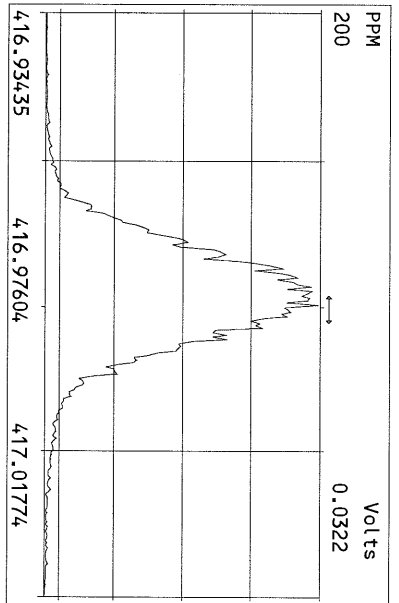
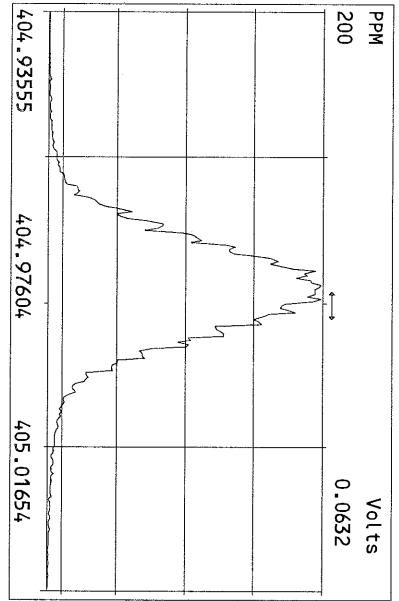
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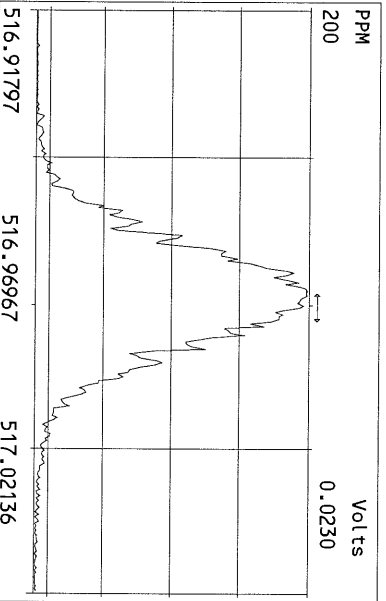
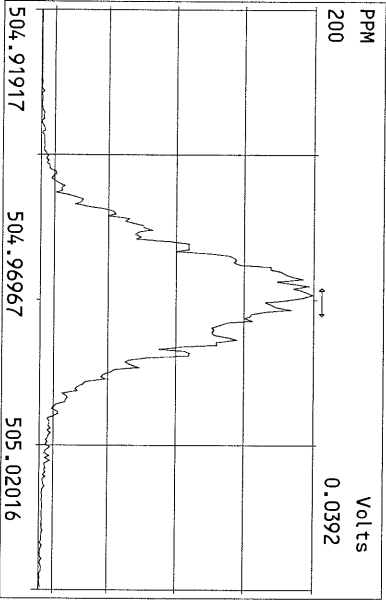
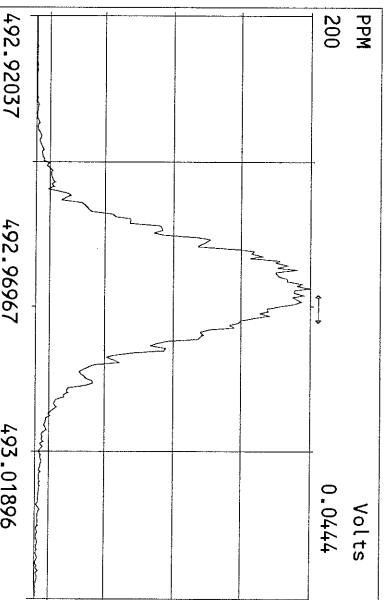
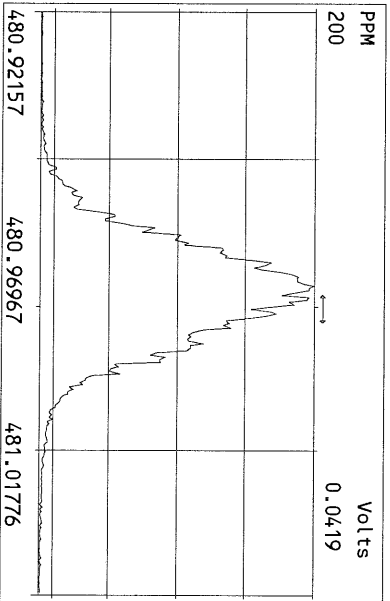
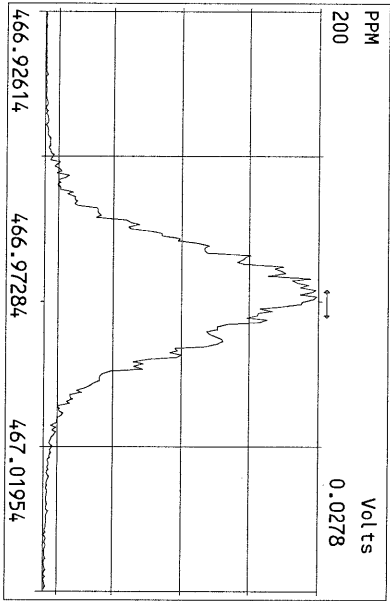
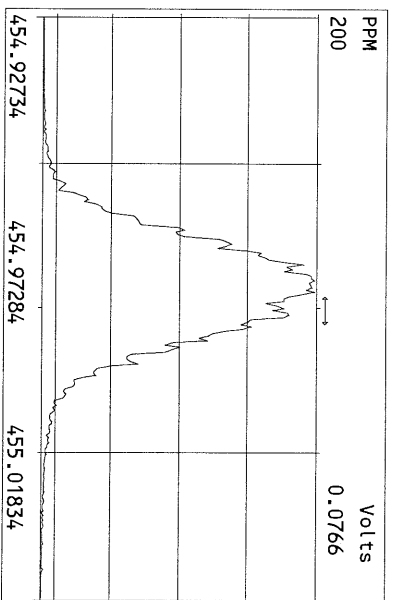
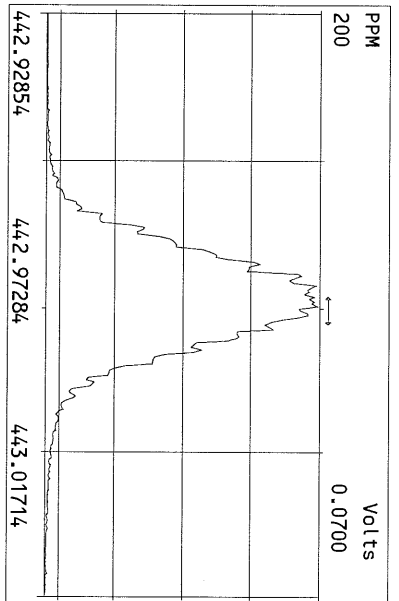
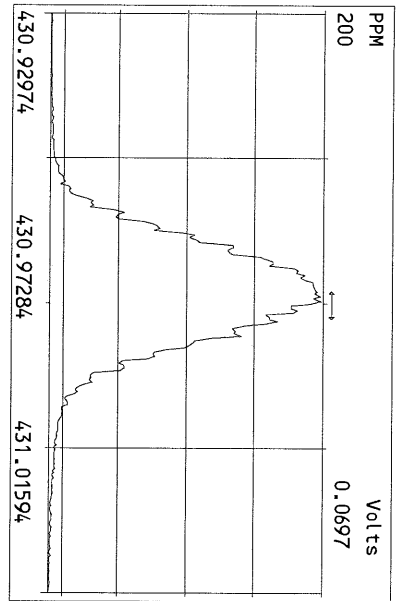




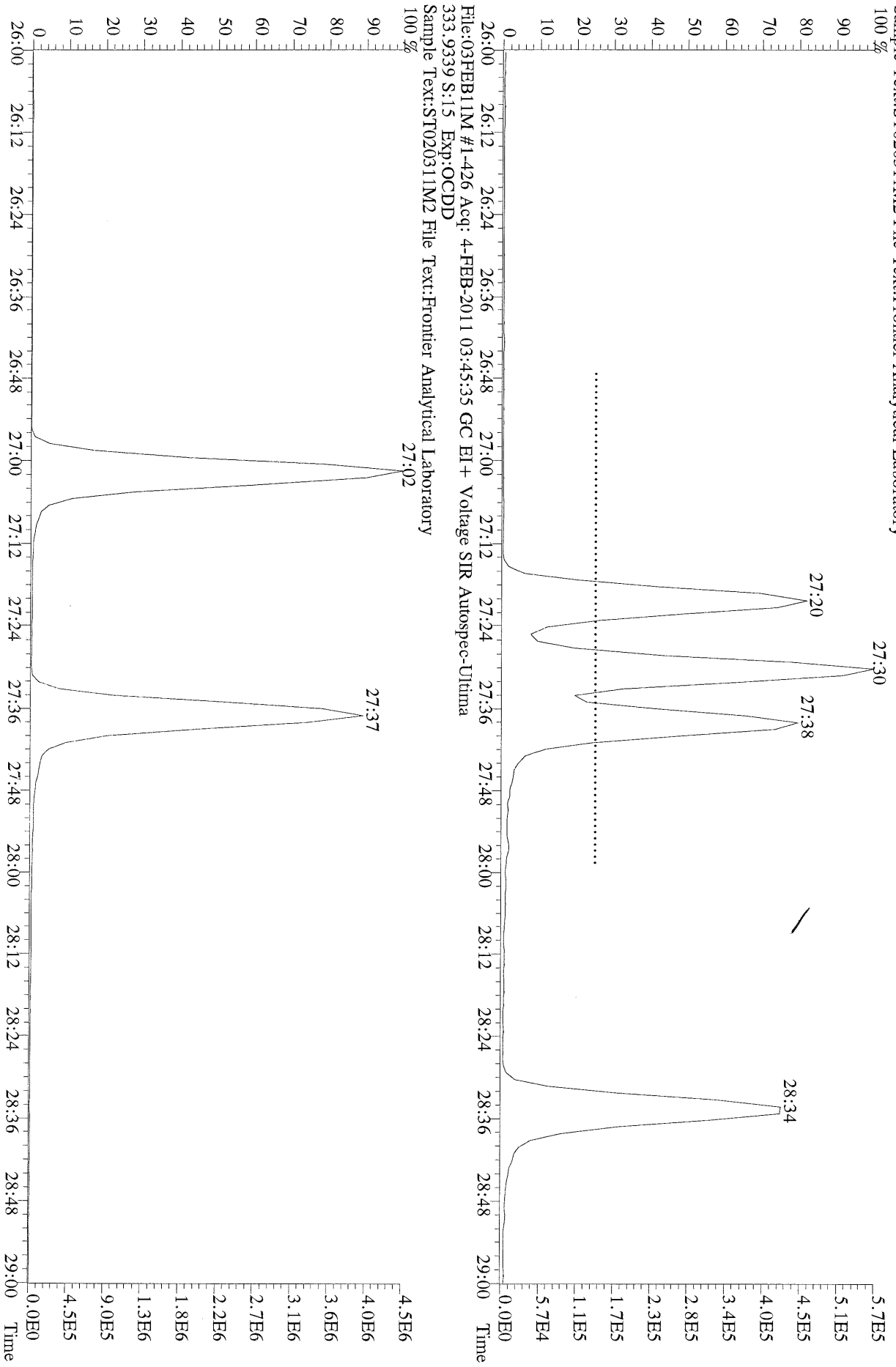
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Experiment:OCDD Function:3 Reference:PFK



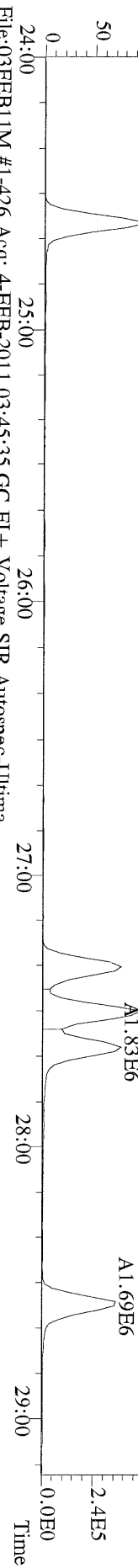




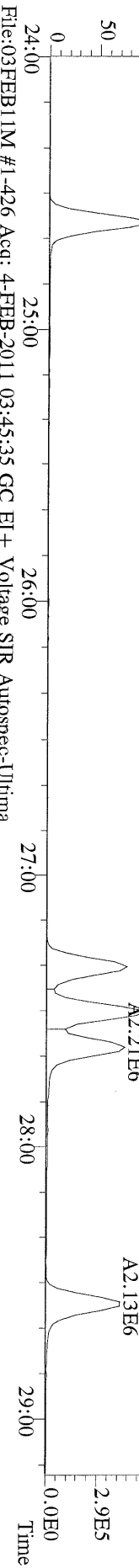
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Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory



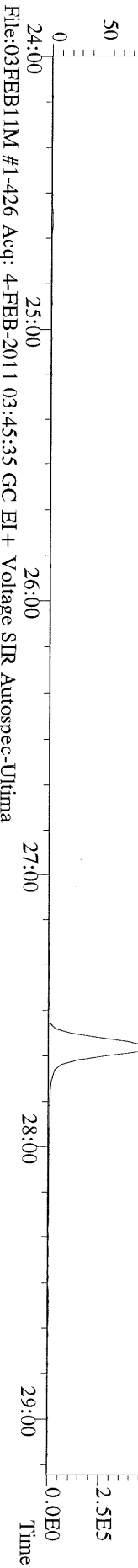
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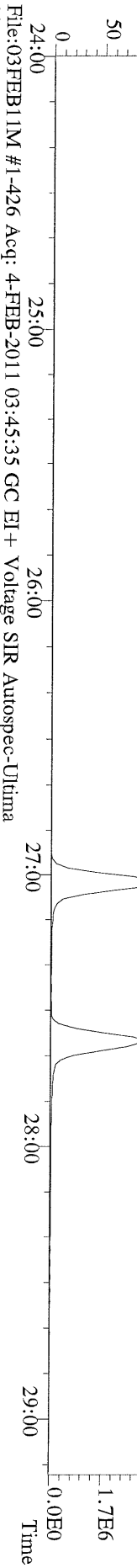
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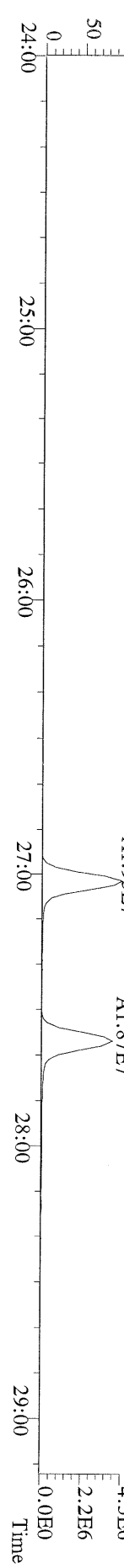
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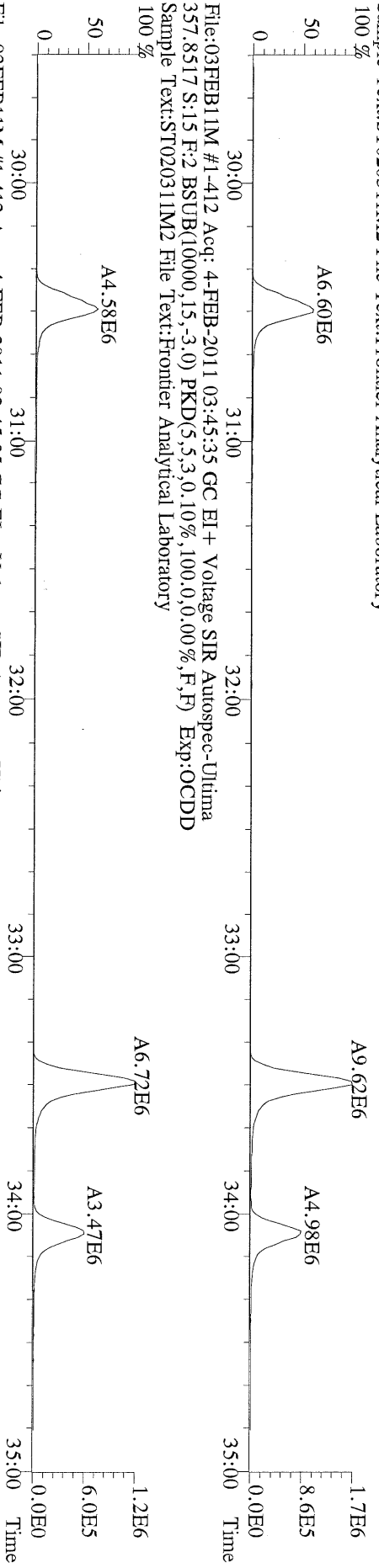
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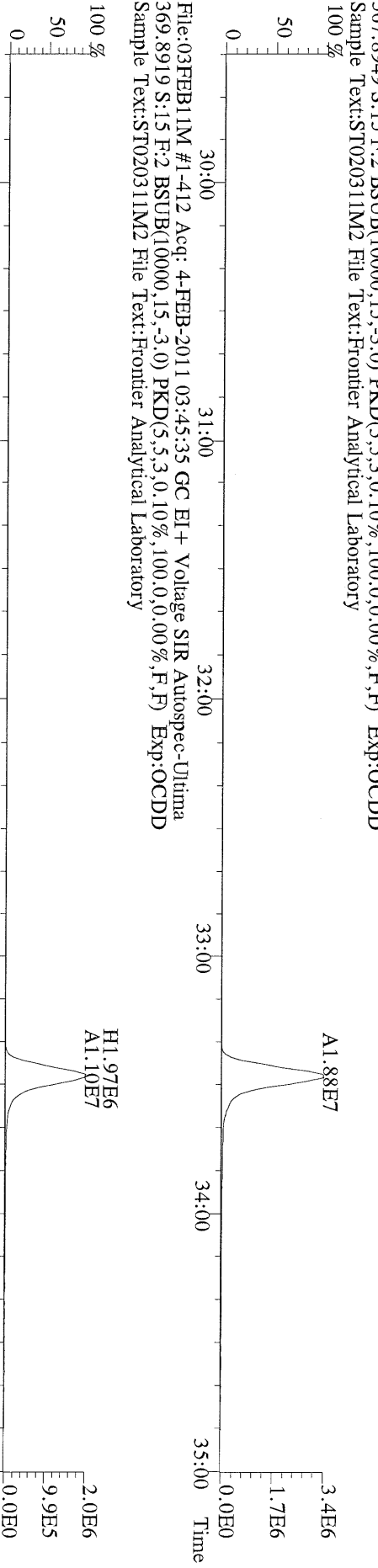
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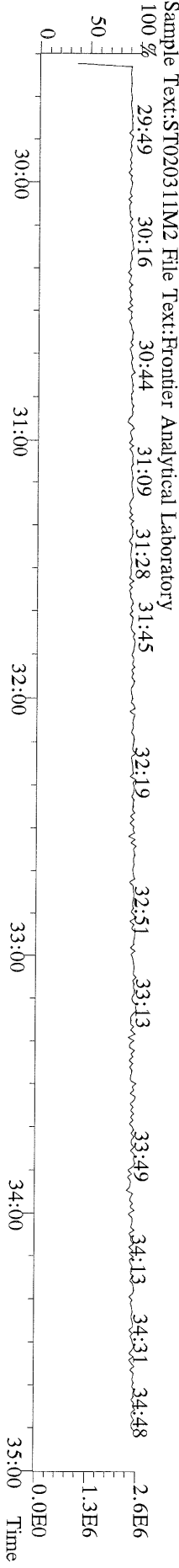
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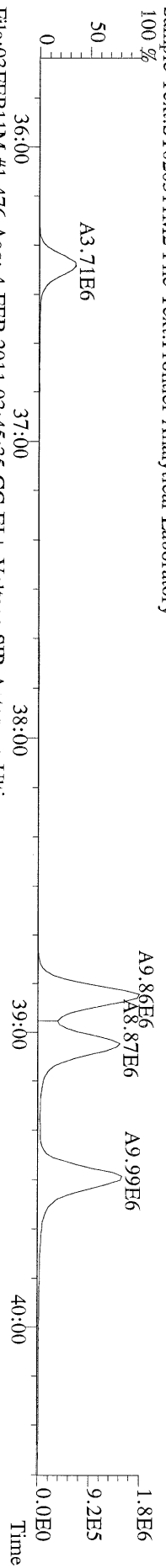
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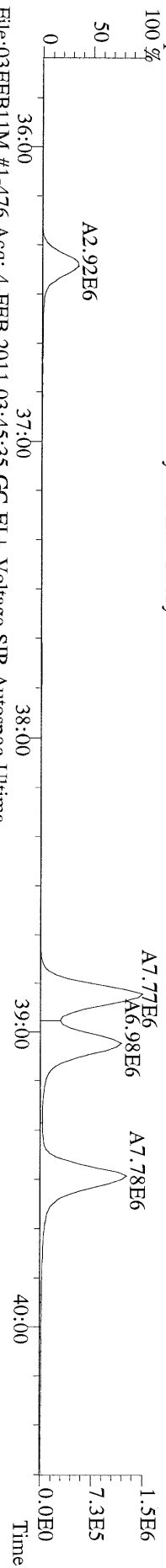
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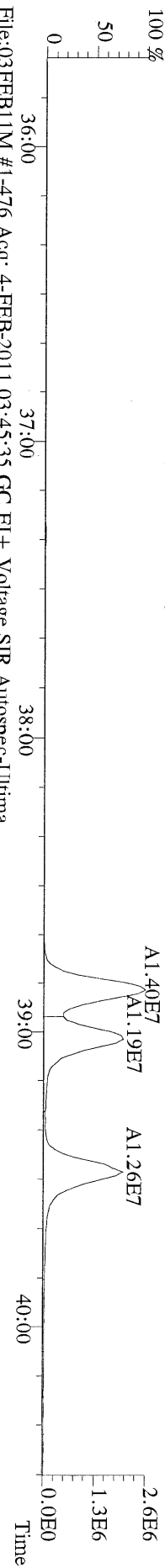
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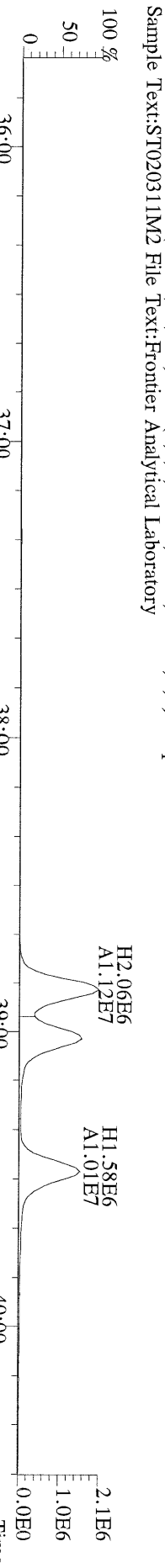
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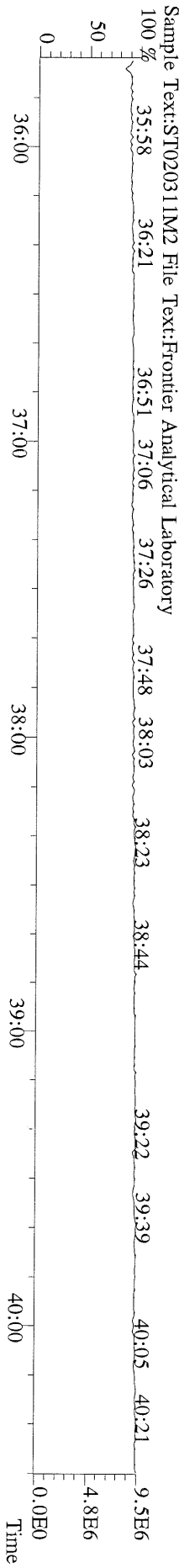
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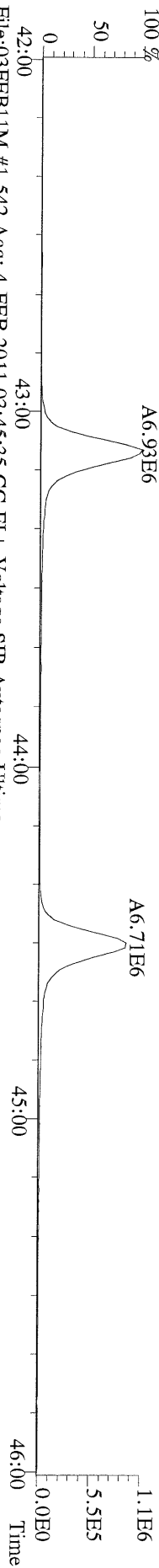
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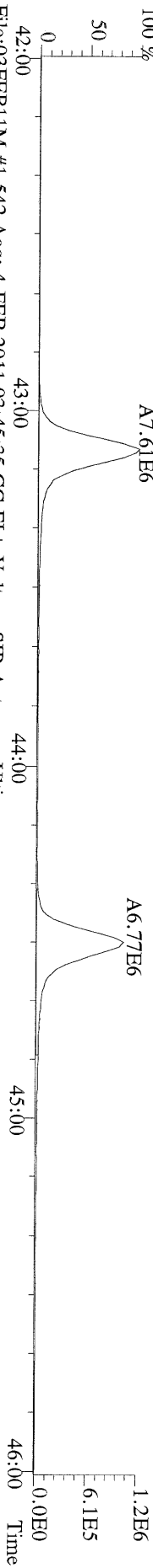
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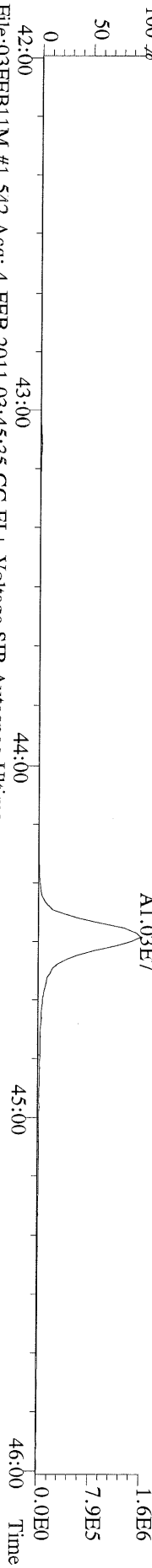
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Sample Text:ST02031IM2 File Text:Frontier Analytical Laboratory



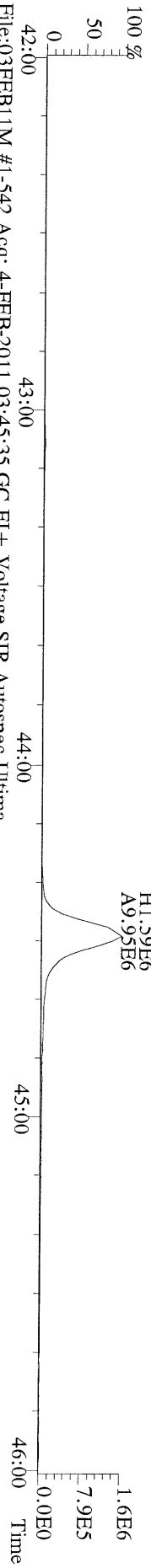
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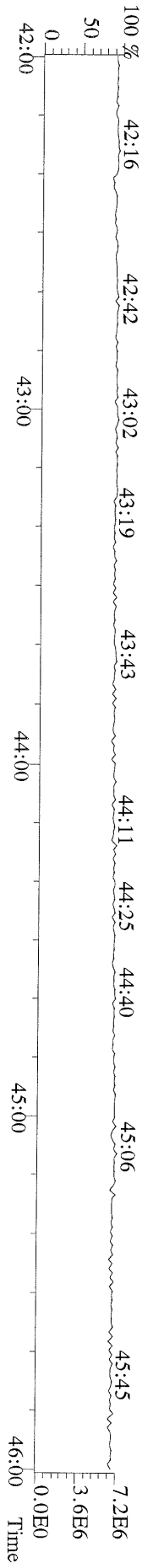
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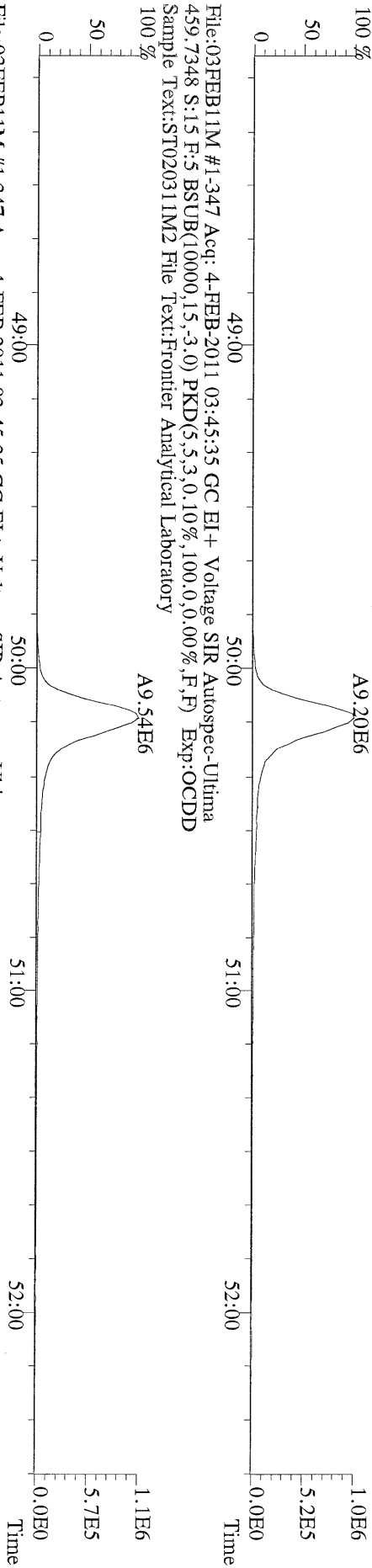
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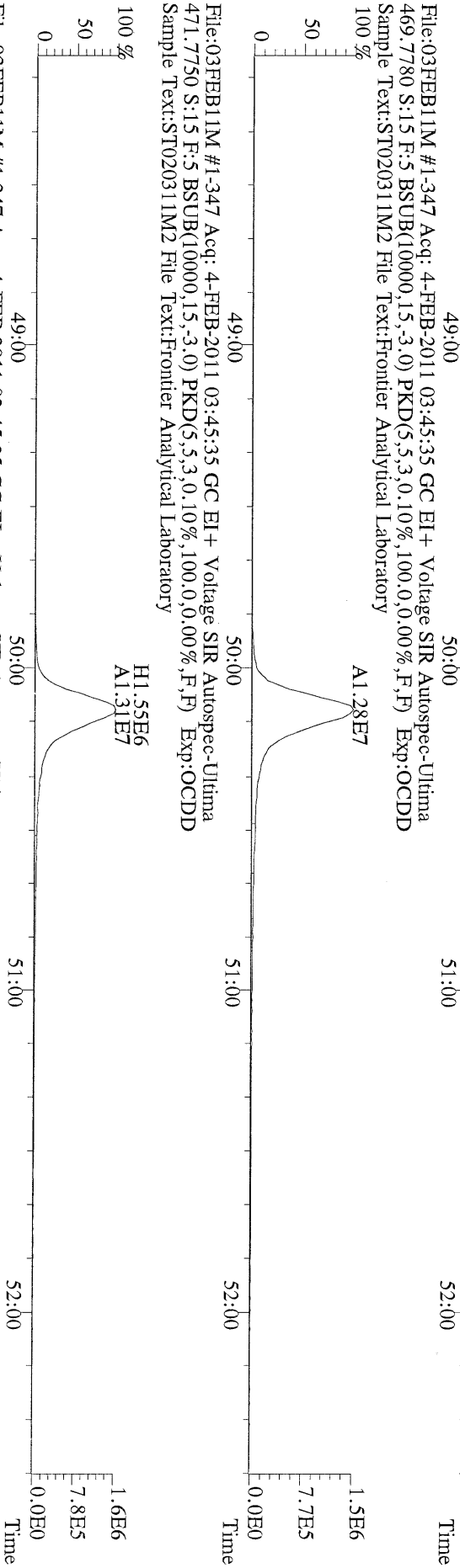
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430.9728 S:15 F:4 Exp:OCDD
Sample Text:ST02031IM2 File Text:Frontier Analytical Laboratory



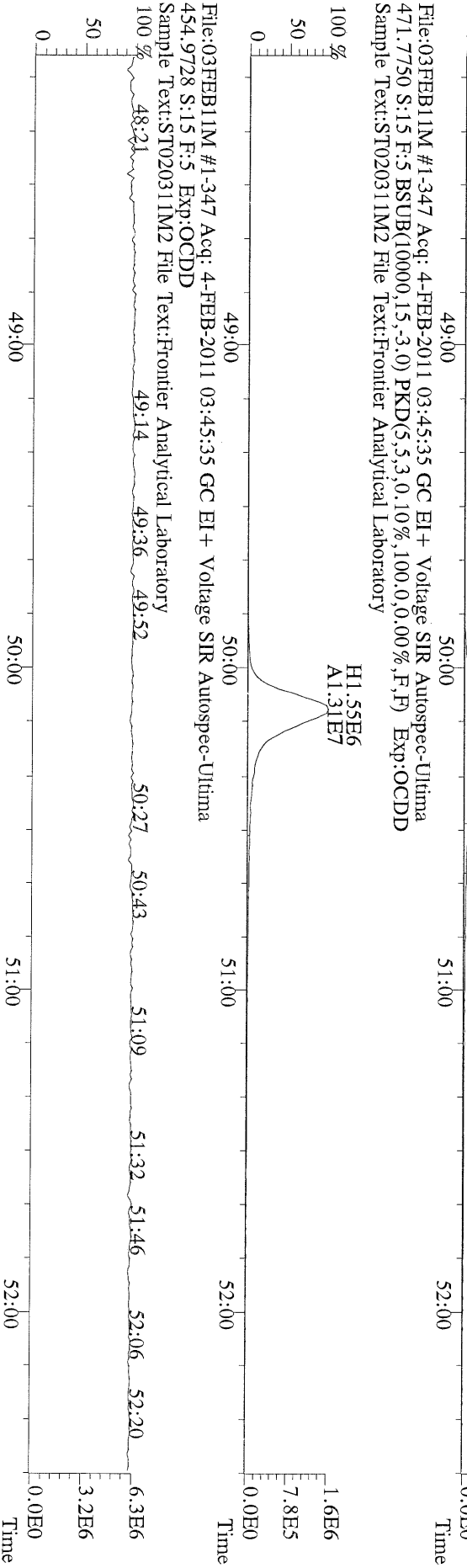
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457.7377 S:15 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST02031IM2 File Text:Frontier Analytical Laboratory



File:03FEB11M #1-347 Acq: 4-FEB-2011 03:45:35 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:15 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST02031IM2 File Text:Frontier Analytical Laboratory



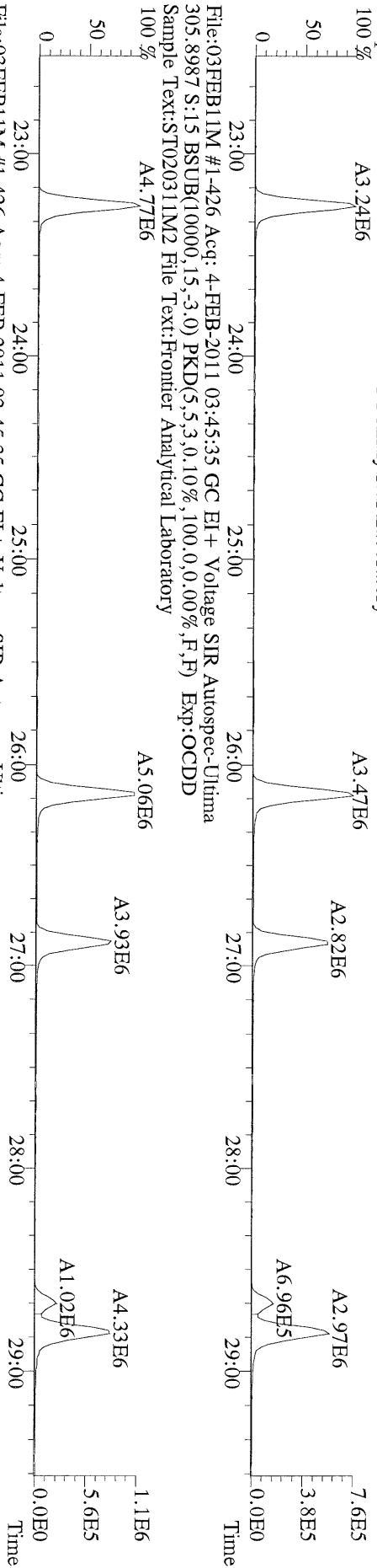
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Sample Text:ST02031IM2 File Text:Frontier Analytical Laboratory



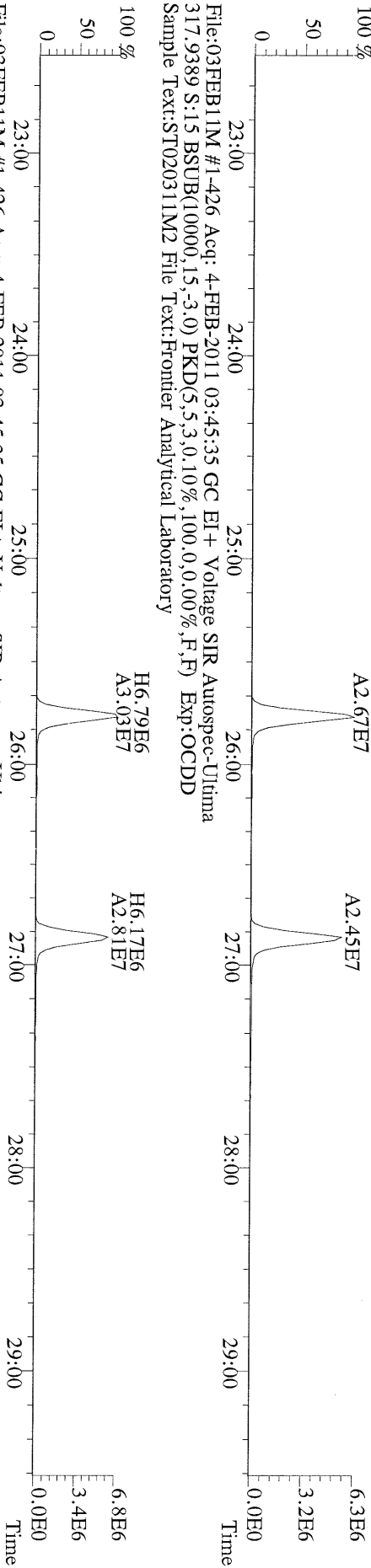
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454.9728 S:15 F:5 Exp:OCDD
Sample Text:ST02031IM2 File Text:Frontier Analytical Laboratory



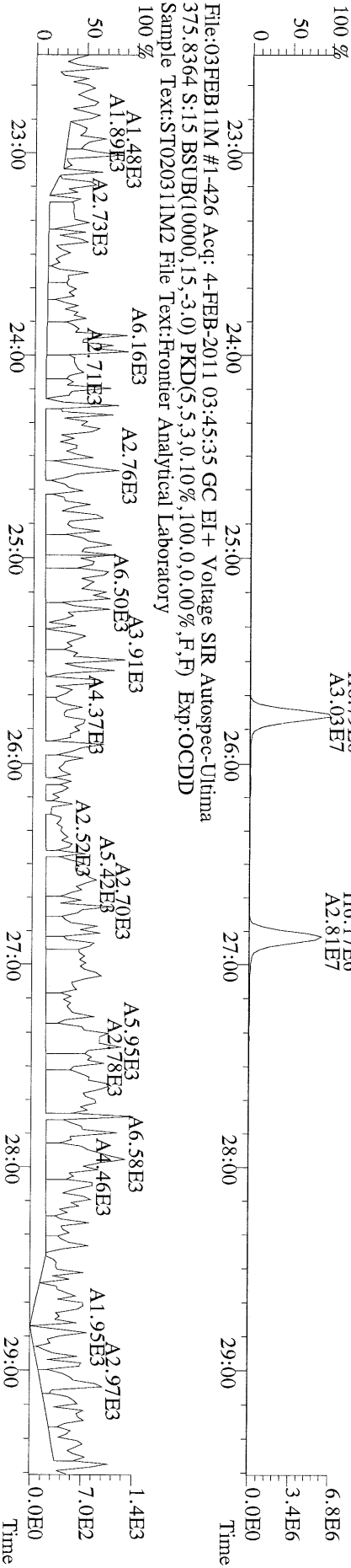
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303.9016 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory



File:03FEB11M #1-426 Acq: 4-FEB-2011 03:45:35 GC EI + Voltage SIR Autospec-Ultima
315.9419 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory

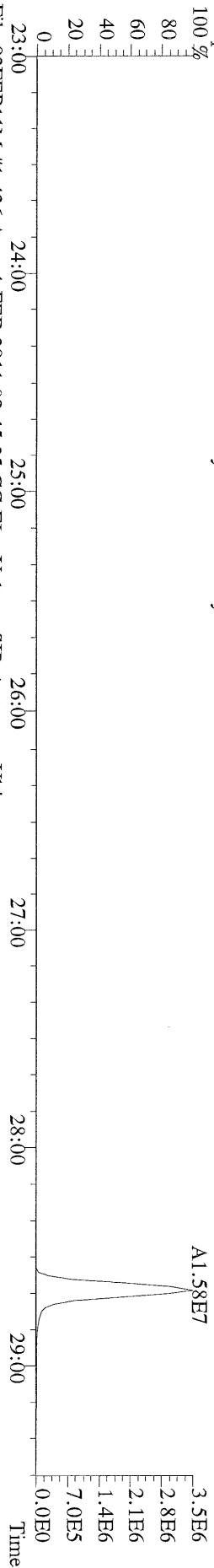


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317.9389 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory

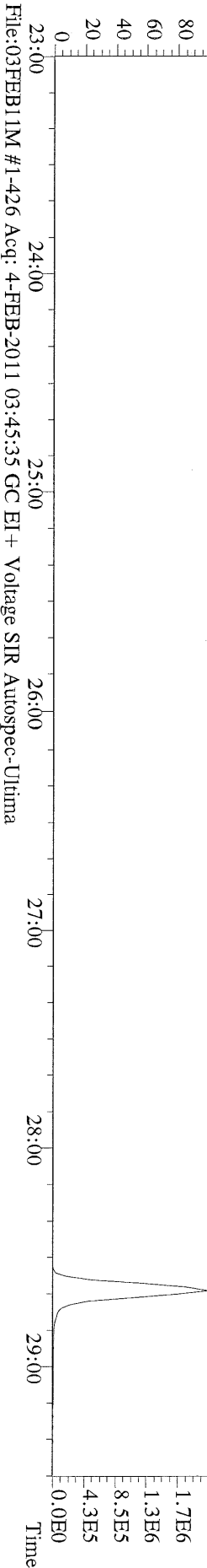


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375.8364 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory

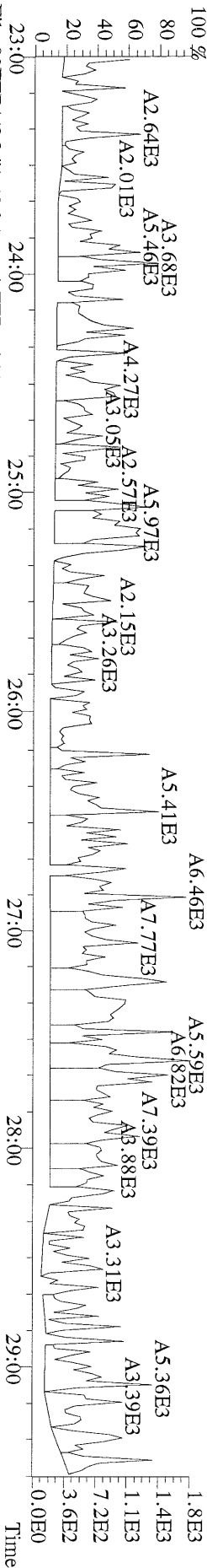
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 339.8597 S:1.5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory



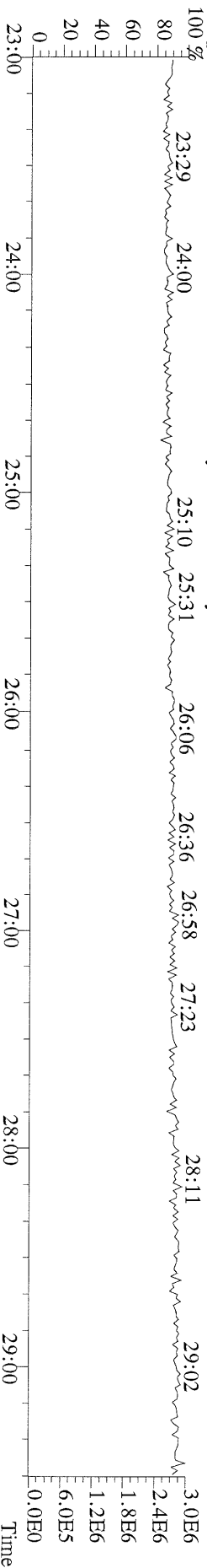
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 341.8568 S:1.5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory



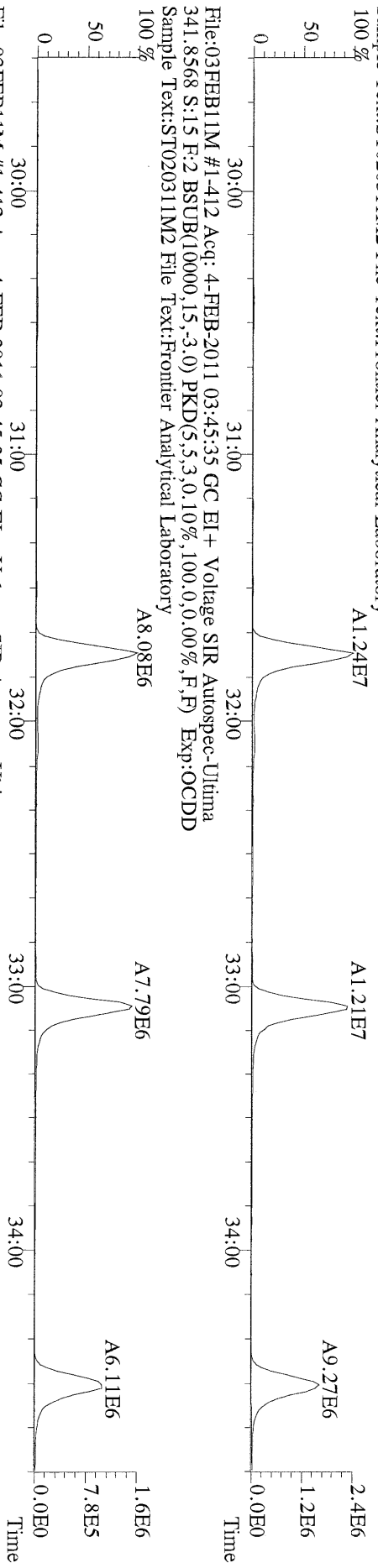
File:03FEB11M #1-426 Acq: 4-FEB-2011 03:45:35 GC EI+ Voltage SIR Autospec-Ultima
 409.7974 S:1.5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:OCDD
 Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory



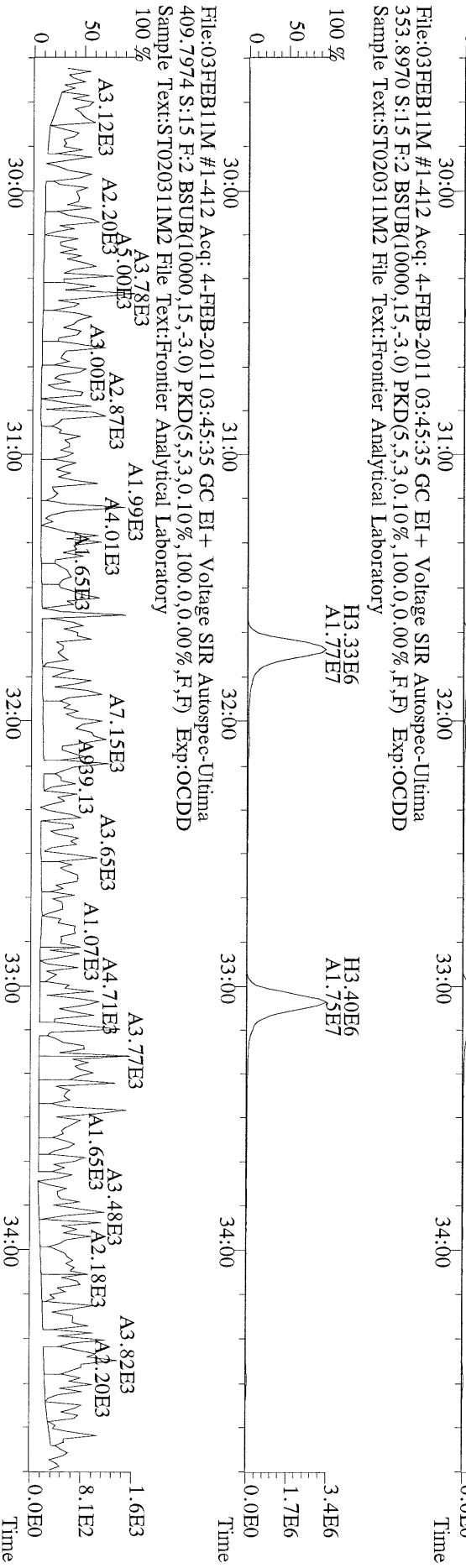
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 316.9824 S:1.5 Exp:OCDD
 Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory



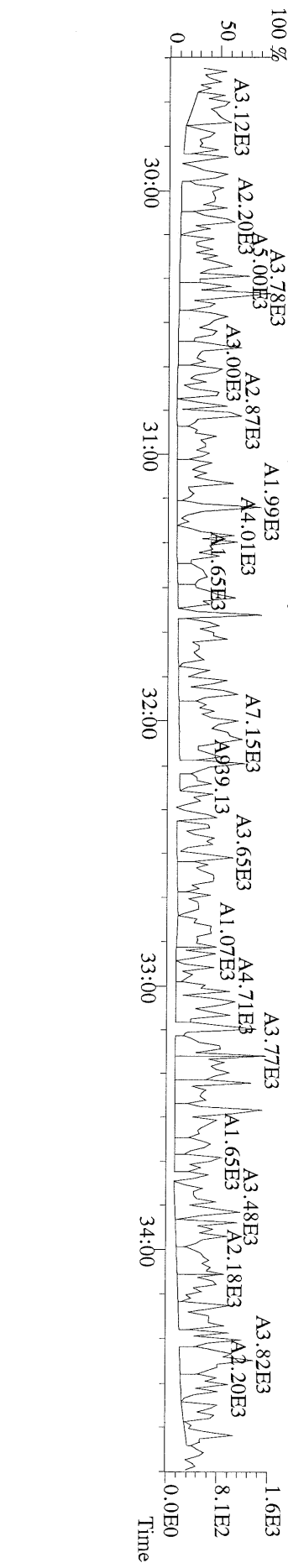
File:03FEB11M #1-412 Acq: 4-FEB-2011 03:45:35 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory



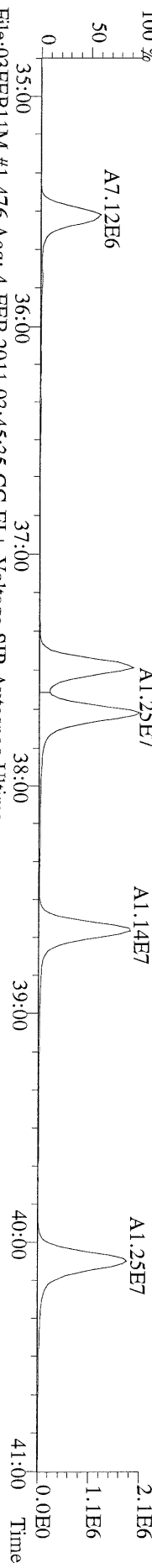
File:03FEB11M #1-412 Acq: 4-FEB-2011 03:45:35 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory



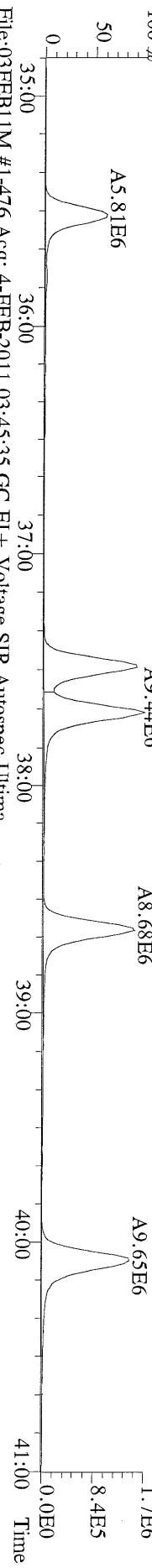
File:03FEB11M #1-412 Acq: 4-FEB-2011 03:45:35 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory



File:03FEB11M #1-476 Acq: 4-FEB-2011 03:45:35 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory



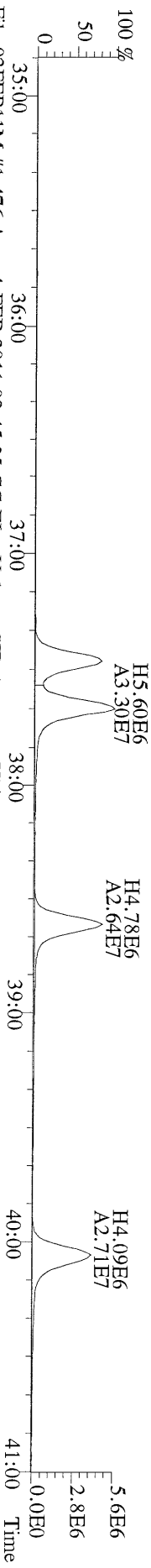
File:03FEB11M #1-476 Acq: 4-FEB-2011 03:45:35 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory



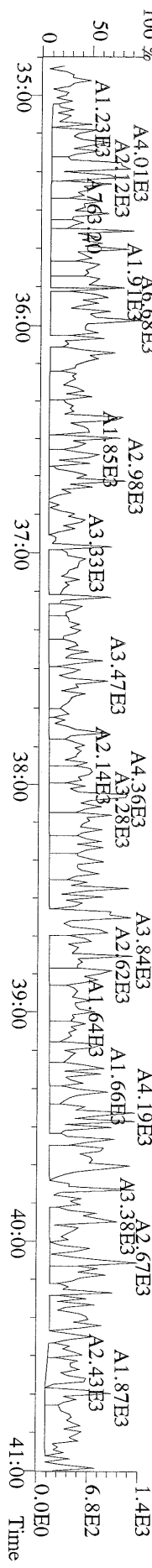
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383.8639 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory



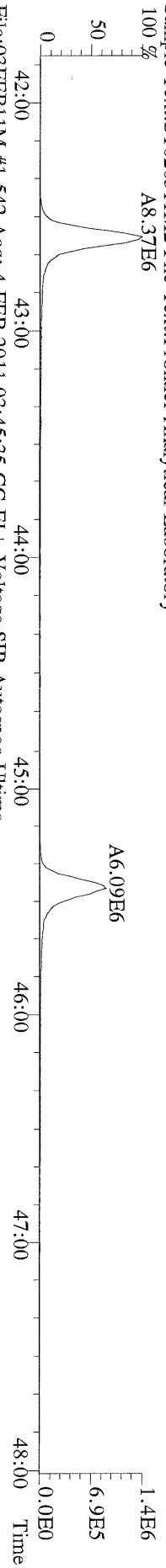
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385.8610 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory



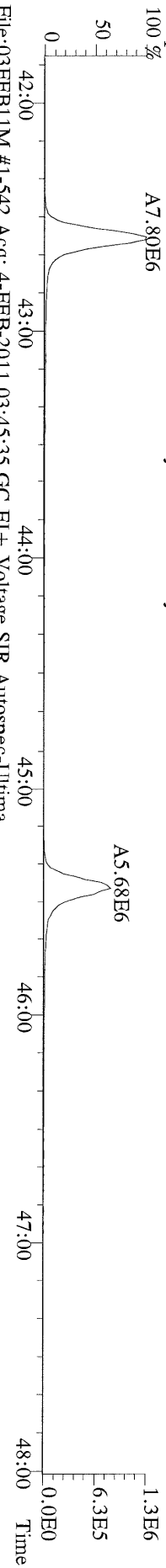
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445.7555 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory



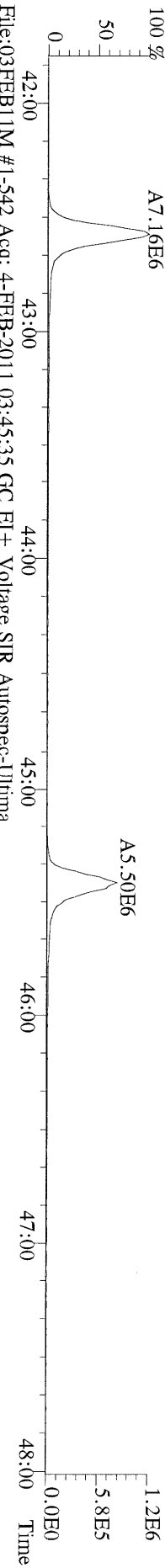
File:03FEB11M #1-542 Acq: 4-FEB-2011 03:45:35 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:15 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory



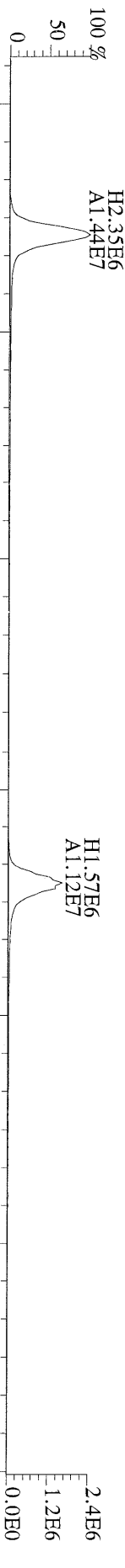
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409.7788 S:15 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory



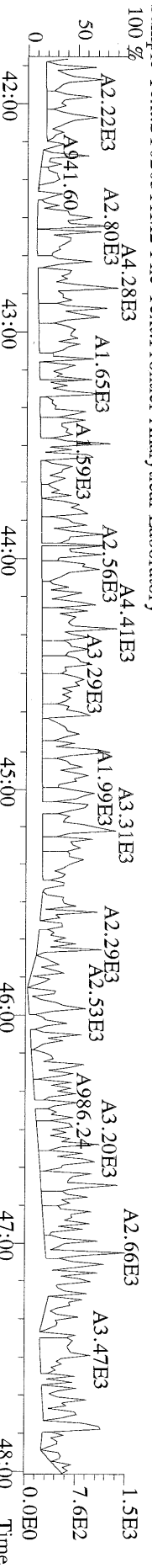
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417.8253 S:15 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory



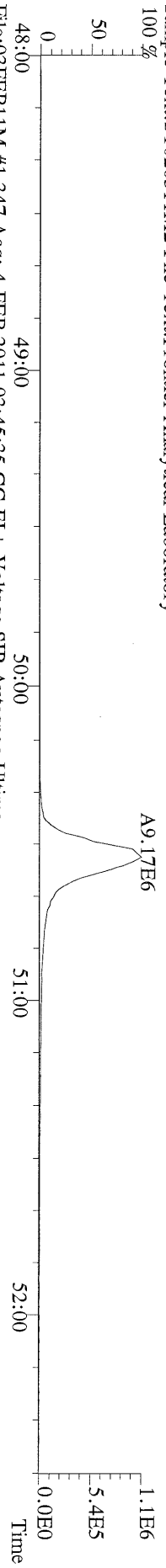
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419.8220 S:15 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory



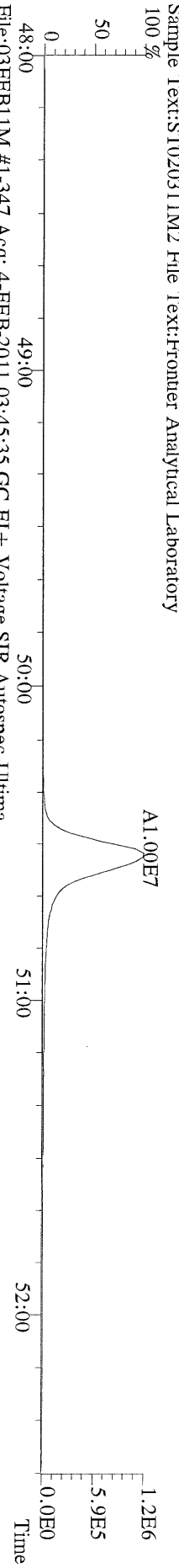
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479.7165 S:15 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST020311M2 File Text:Frontier Analytical Laboratory



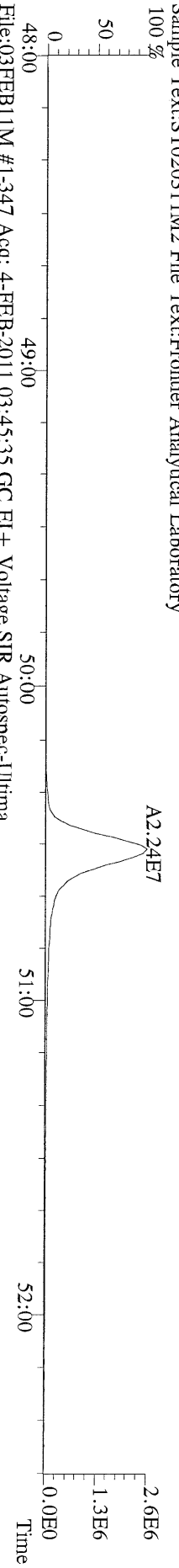
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441.7428 S:15 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST02031IM2 File Text:Frontier Analytical Laboratory



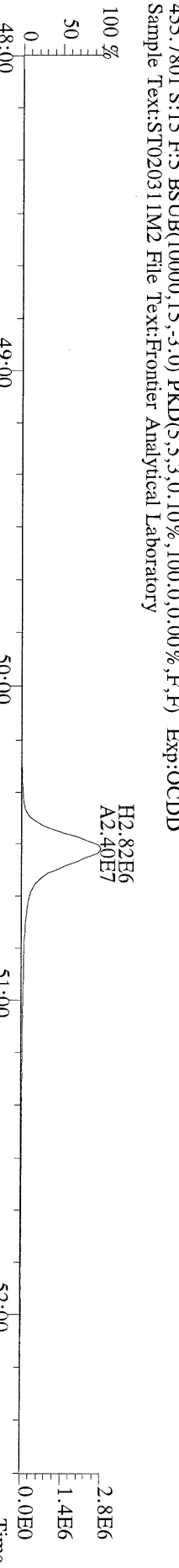
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443.7398 S:15 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST02031IM2 File Text:Frontier Analytical Laboratory



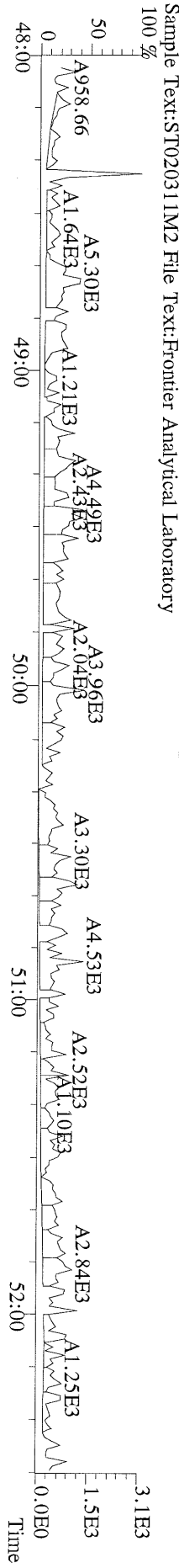
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453.7831 S:15 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST02031IM2 File Text:Frontier Analytical Laboratory

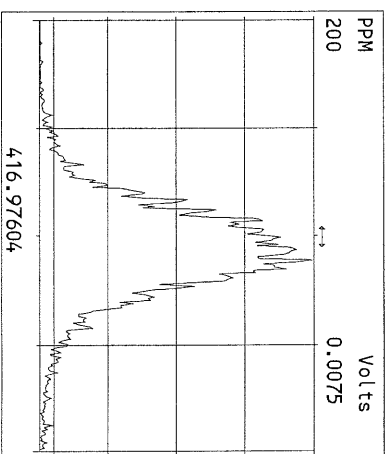
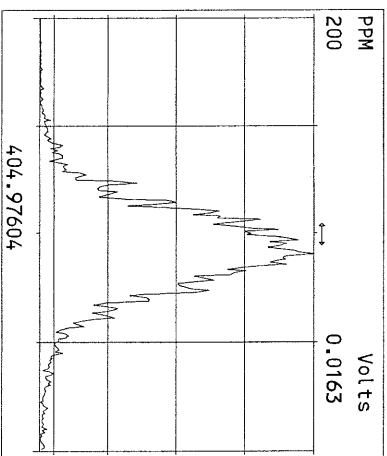
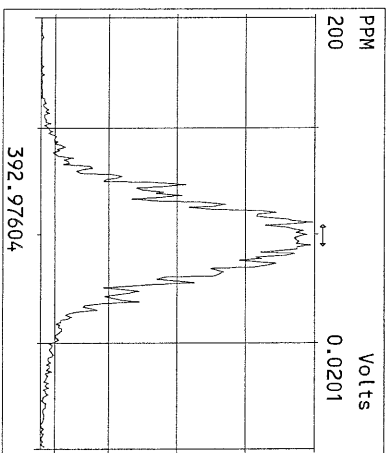
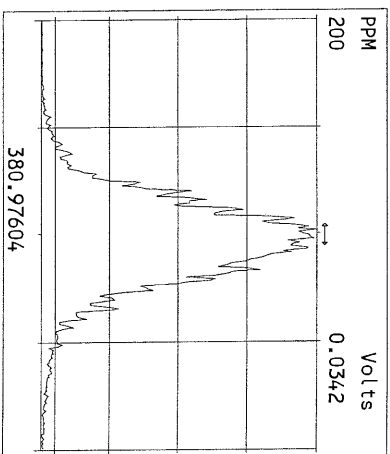
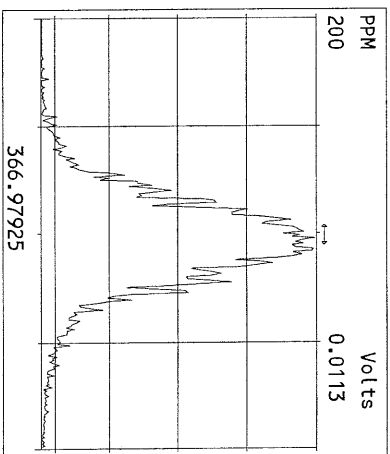
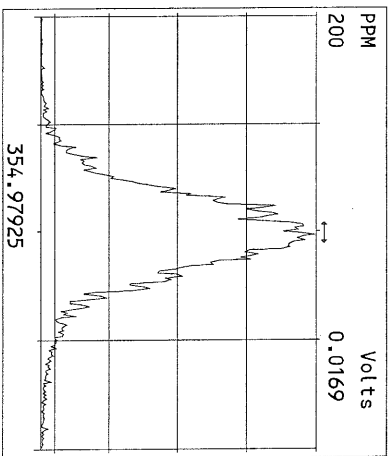
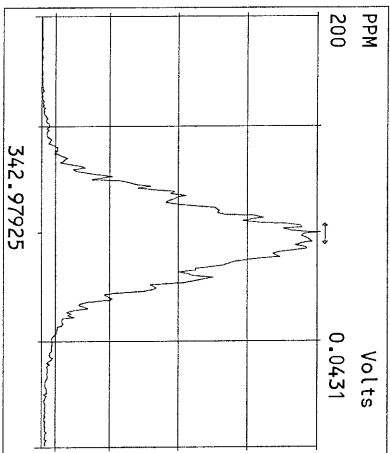
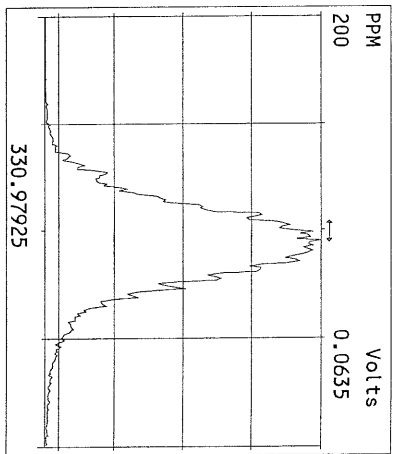
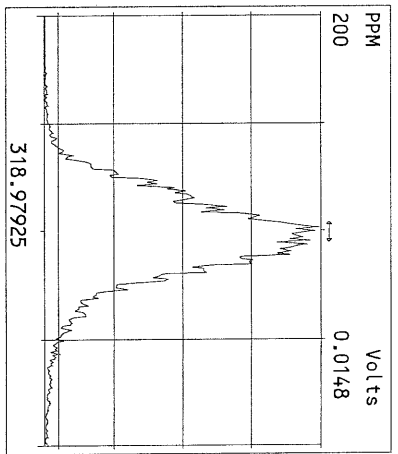
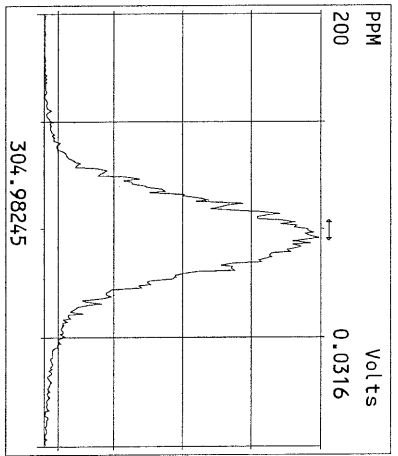
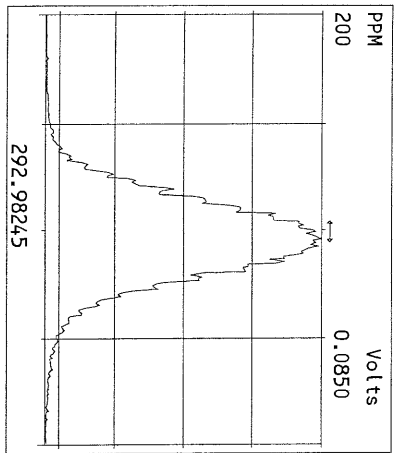


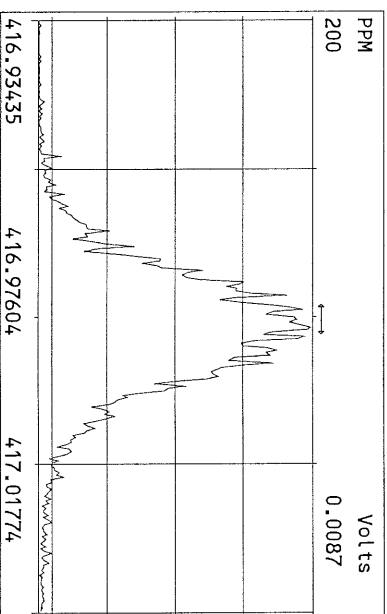
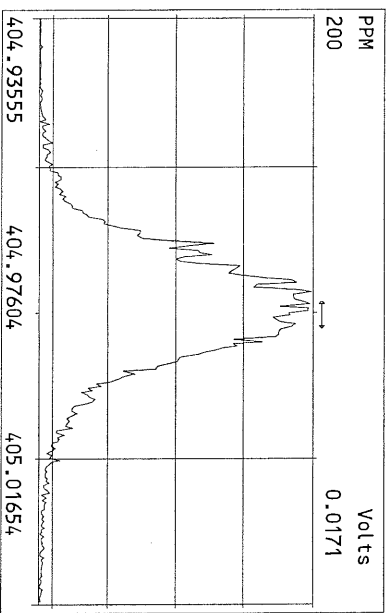
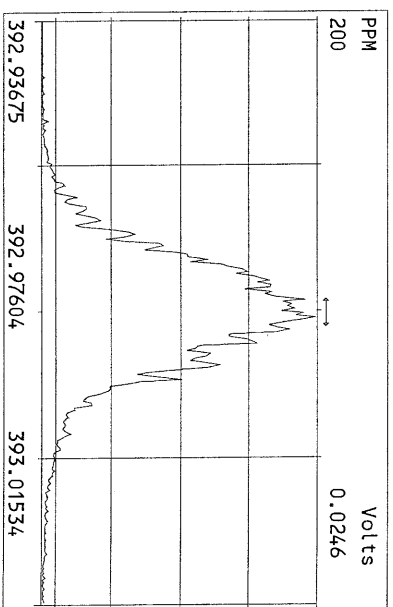
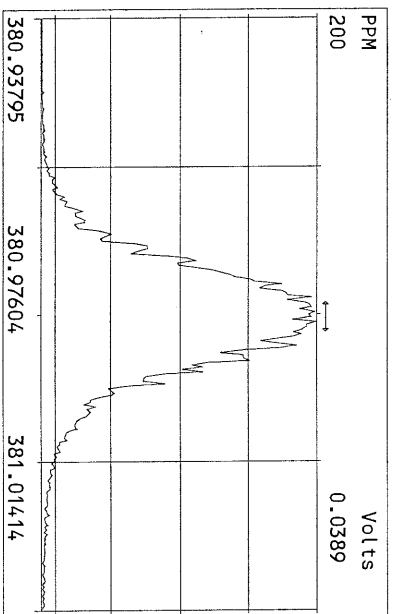
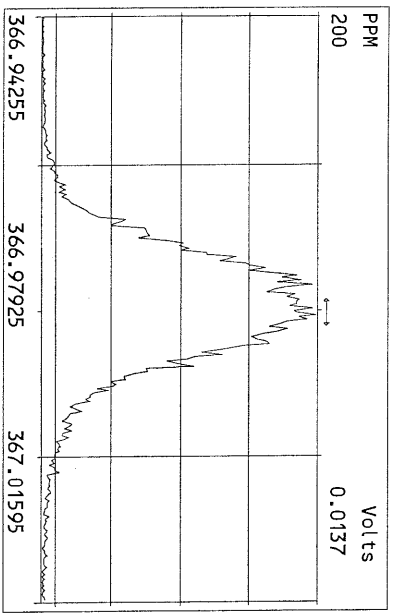
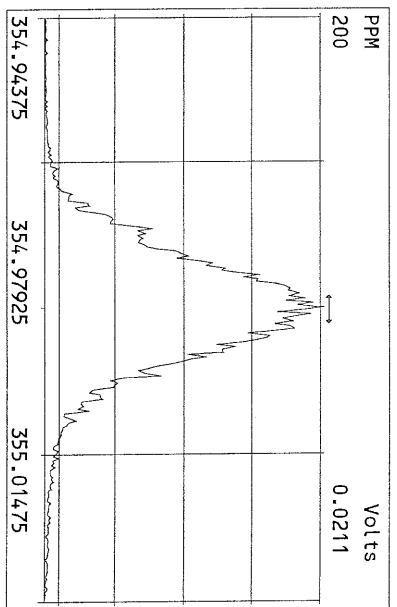
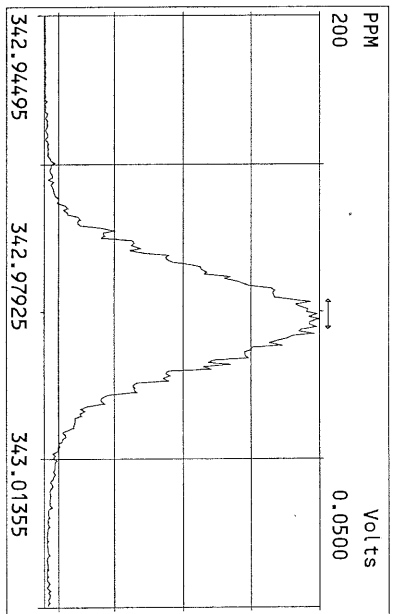
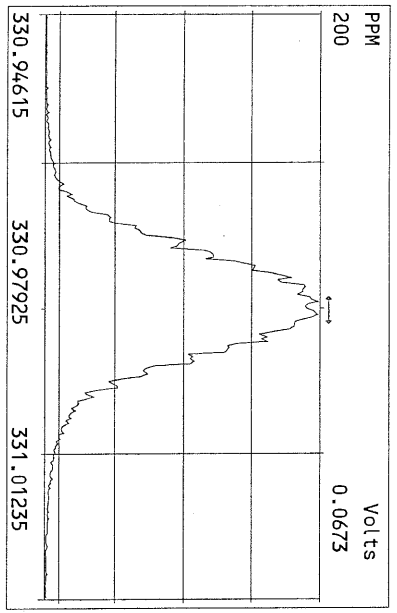
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455.7801 S:15 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST02031IM2 File Text:Frontier Analytical Laboratory

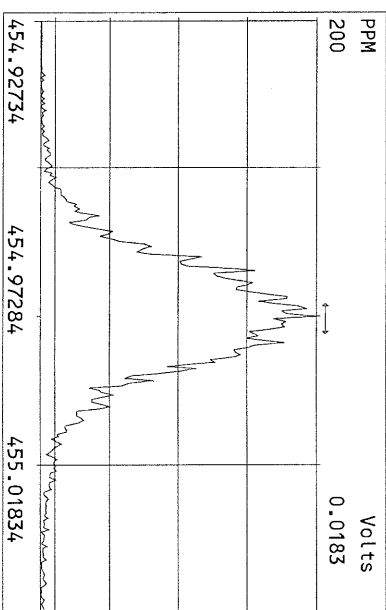
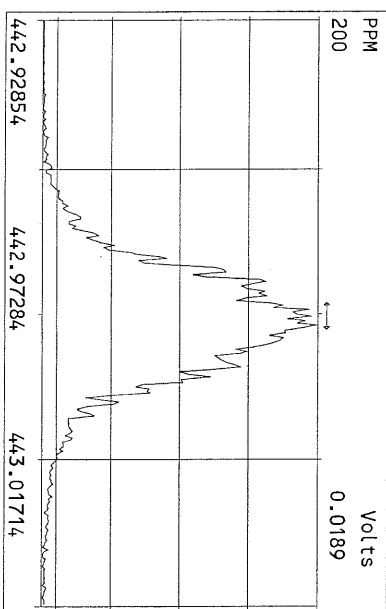
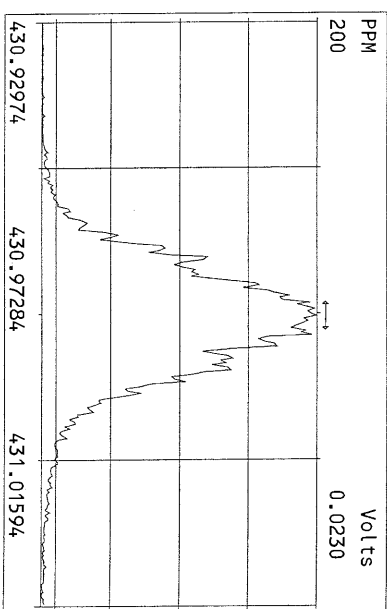
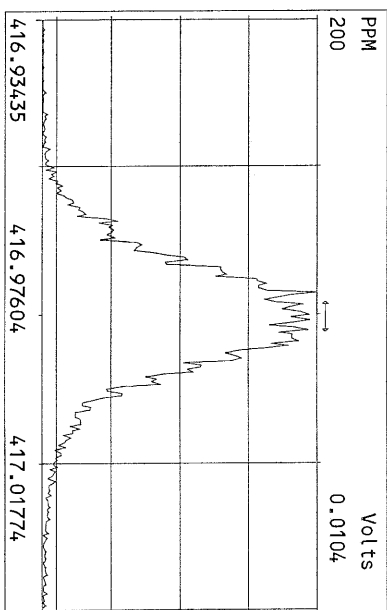
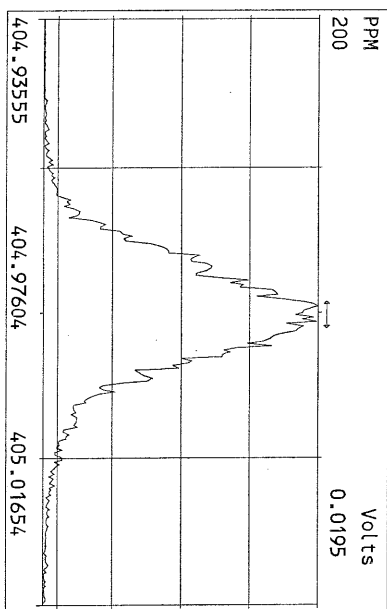
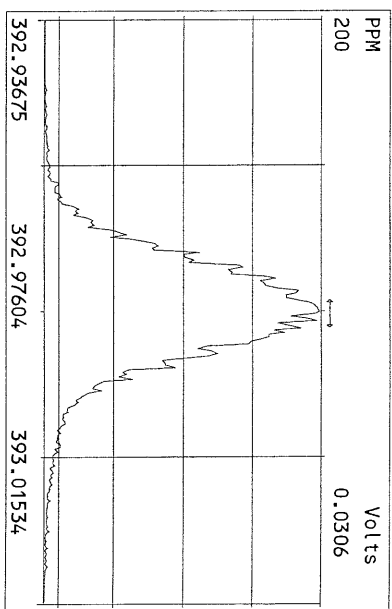
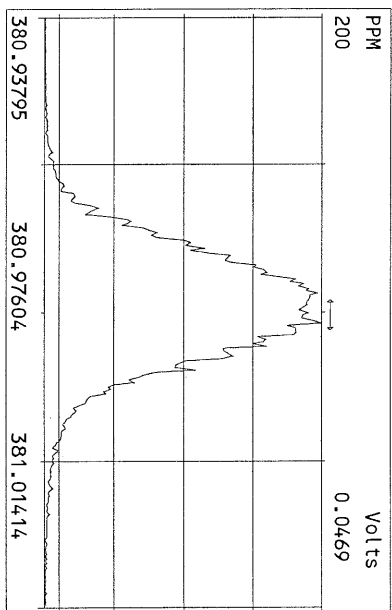
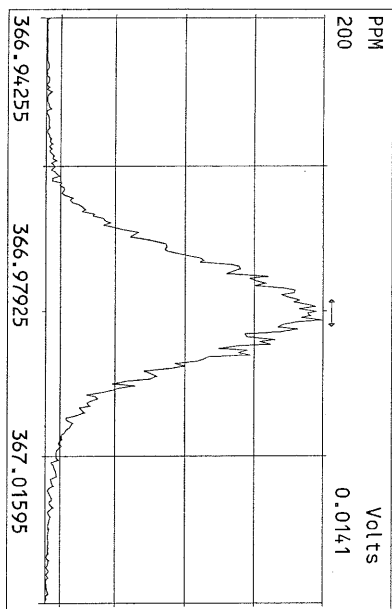


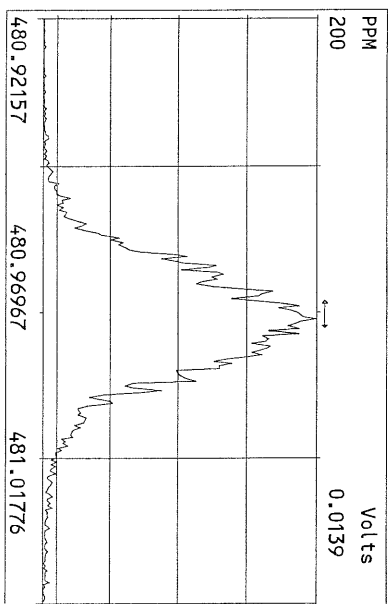
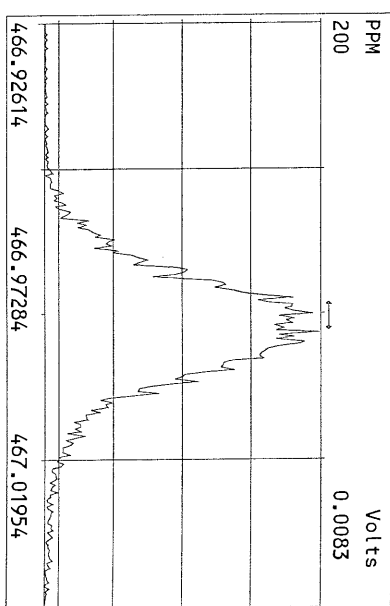
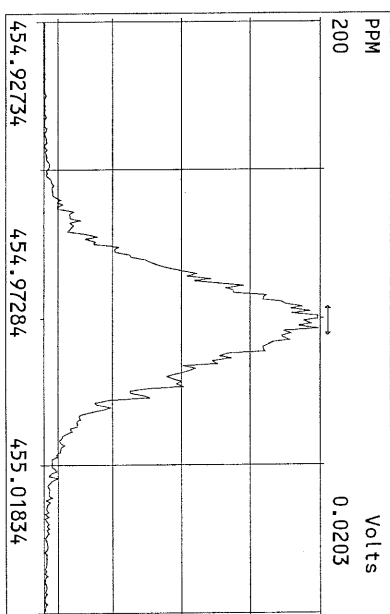
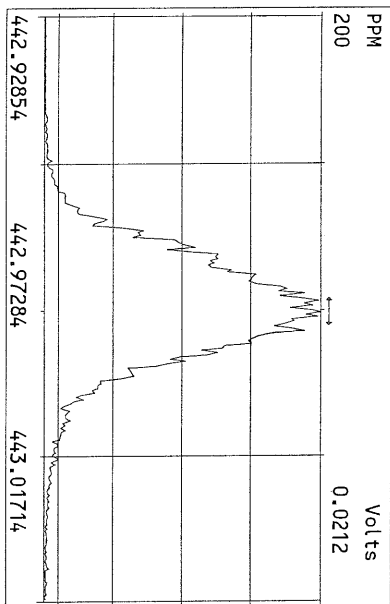
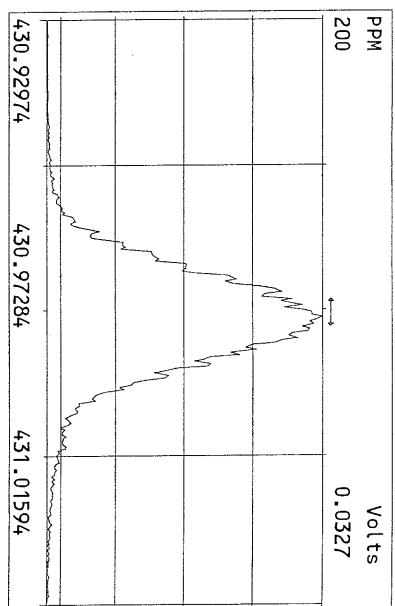
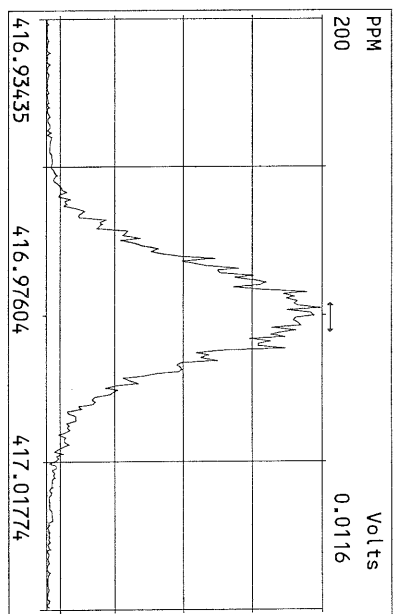
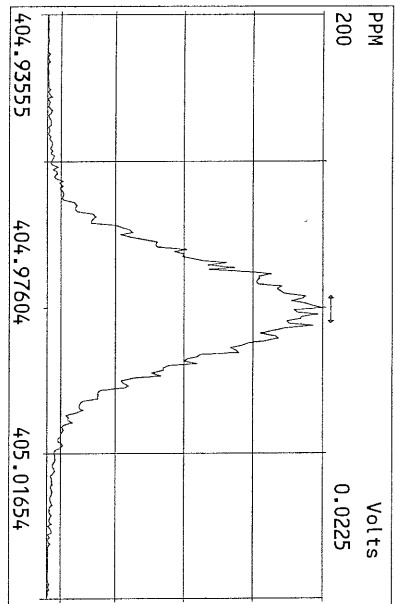
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513.6775 S:15 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100.0,0.00%,F,F) Exp:OCDD
Sample Text:ST02031IM2 File Text:Frontier Analytical Laboratory

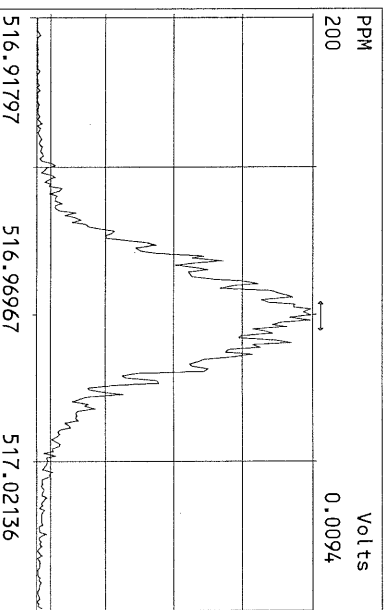
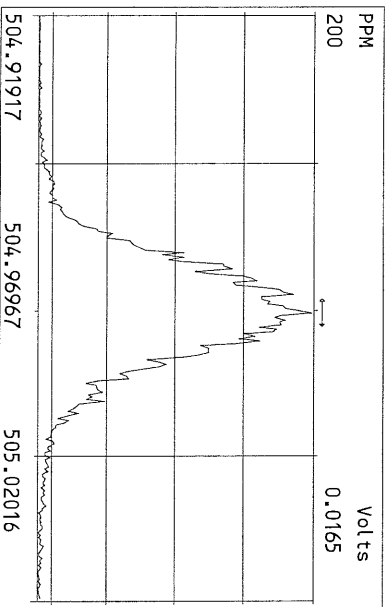
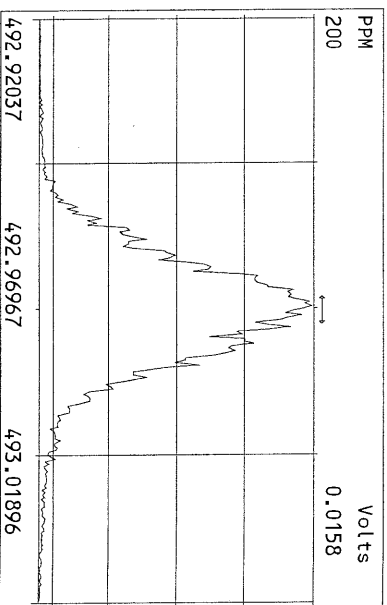
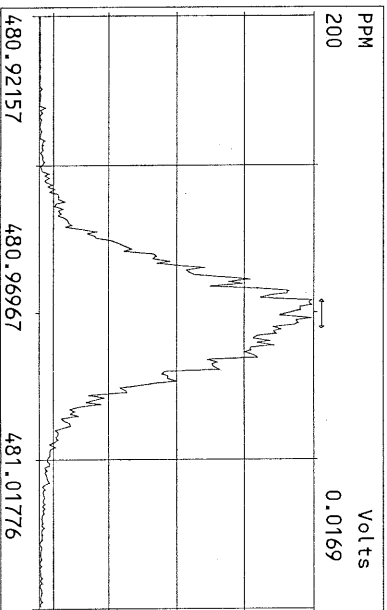
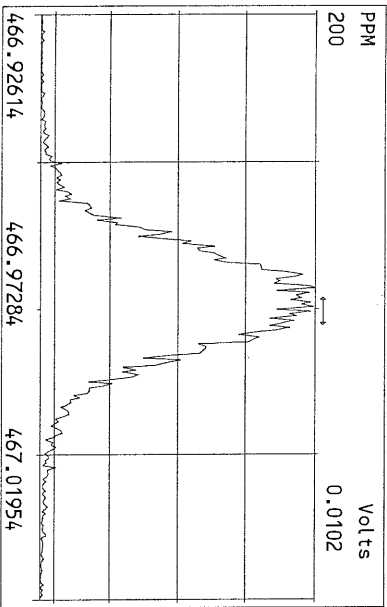
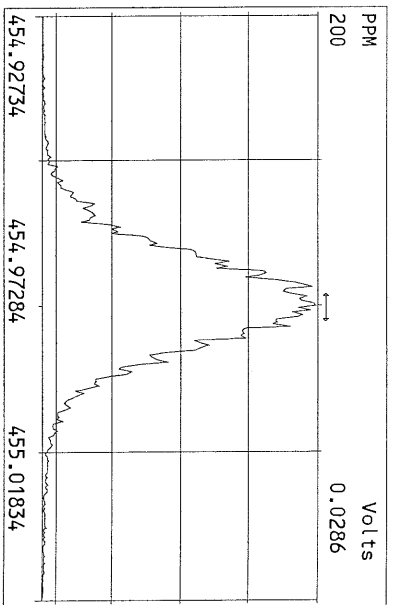
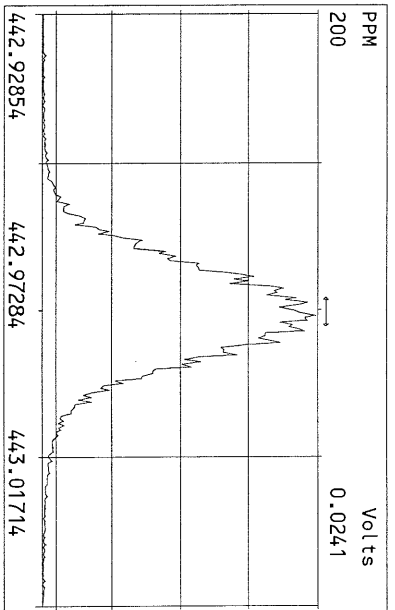
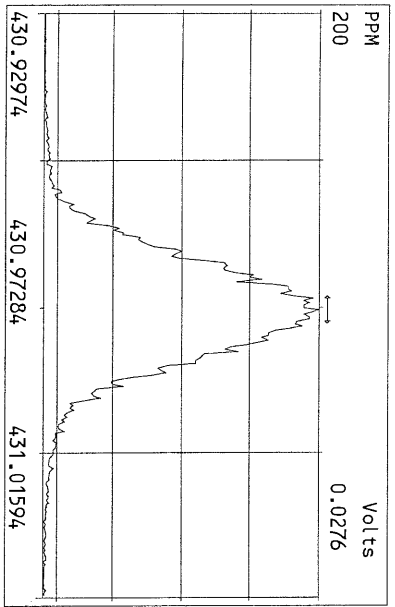














February 7, 2011

Ms. Sue Dunnihoo
Analytical Resources Incorporated
4611 South 134th Place
Tukwila, WA 98168-3240

Dear Ms. Dunnihoo,

Enclosed are the results for Frontier Analytical Laboratory project **6546**. This corresponds to your **Lora Lake Apts RI** project under ARI project number **SF76**. Six aqueous samples were received at our laboratory on 1/25/11. The two sample bottles designated as sample 6546-002-SA (ARI Sample ID: MW-02-012111) were received broken. We contacted you on 1/25/11 to advise you of the broken bottles. We received the replacement bottles for sample 6546-002-SA on 1/26/11 in good condition. All six samples were extracted and analyzed by EPA Method 1613 for tetra through octa chlorinated dibenzo dioxins and furans. The 2005 World Health Organizations toxic equivalency factors were used to calculate the toxic equivalency (TEQs) on your report. Analytical Resources Incorporated requested a Level IV report and a turnaround time of fifteen business days for project **6546**.

The following Level IV report consists of an Analytical Data section, a Sample Receipt section, a Laboratory Raw Data section, and an Instrument Raw Data section. The Analytical Data section contains our project-sample tracking log and the analytical results. The Sample Receipt section contains your original chain of custody, our sample login form and the sample photos. The Laboratory Raw Data section contains our project request sheet, a percent solids sheet, an extraction bench sheet, and the cleanup bench sheet. The instrument raw data section contains three sub-sections; the sample results section, the initial calibration section and the continuing/ending calibration section. The sample results sub-section consists of the quantitation summary forms with chromatograms for all samples and QC. The initial calibration sub-section consists of the individual quantitation summary forms and chromatograms for each point of the initial calibration curve as well as an overall quantitation summary form of the initial calibration curve. The continuing/ending calibration sub-section consists of the quantitation summary forms and chromatograms for all beginning and ending calibration injections associated with the samples and QC. The Level I summary and the Electronic Data Deliverables (EDDs) have been sent to you via email. A hardcopy of the Level IV data package has been sent to you via OnTrac overnight delivery. The enclosed results are specifically for the samples referenced in this report only. These results meet all NELAC requirements and shall not be reproduced except in full.

If you have any questions regarding project **6546**, please contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

A handwritten signature in black ink that reads "Bradley B. Silverbush". The signature is fluid and cursive.

Bradley B. Silverbush
Director of Operations

FRONTIER ANALYTICAL LABORATORY
5172 Hillside Circle • El Dorado Hills, CA 95762
Tel (916) 934-0900 • Fax (916) 934-0999
www.frontieranalytical.com

000001 of 000297

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: 6546

Received on: 01/25/2011

Project Due: 02/16/2011

Storage: R1

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
6546-001-SA	1	SF76	MW-05-012111	EPA 1613 D/F	Ground Water	01/21/2011	10:10 am	01/23/2012
6546-002-SA	1	SF76	MW-02-012111	EPA 1613 D/F	Ground Water	01/21/2011	12:50 pm	01/23/2012
6546-003-SA	1	SF76	MW-09-012111	EPA 1613 D/F	Ground Water	01/21/2011	02:30 pm	01/23/2012
6546-004-SA	1	SF76	MW-08-012111	EPA 1613 D/F	Ground Water	01/21/2011	02:55 pm	01/23/2012
6546-005-SA	2	SF76	MW-01-012111	EPA 1613 D/F	Ground Water	01/21/2011	04:20 pm	01/23/2012
6546-006-SA	1	SF76	MW-01-012111-D	EPA 1613 D/F	Ground Water	01/21/2011	04:40 pm	01/23/2012

FAL Sample ID	Notes
6546-002-SA	Both sample bottles received broken on 1/25/11. Replacement bottles received 1-26-11 @ zero degrees celsius.

EPA Method 1613
PCDD/F



FAL ID: 6546-001-MB
Client ID: Method Blank
Matrix: Aqueous
Batch No: X2207

Date Extracted: 01-31-2011
Date Received: NA
Amount: 1.000 L

ICal: pccdfal3-8-23-10
GC Column: DB5
Units: pg/L

Acquired: 02-01-2011
2005 WHO TEQ: 0.00

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	1.06		-	0.212				
1,2,3,7,8-PeCDD	ND	1.54		-	0.302				
1,2,3,4,7,8-HxCDD	ND	2.16		-	0.328				
1,2,3,6,7,8-HxCDD	ND	2.63		-	0.381	Total TCDD	ND	1.06	
1,2,3,7,8,9-HxCDD	ND	2.40		-	0.351	Total PeCDD	ND	1.54	
1,2,3,4,6,7,8-HpCDD	ND	2.50		-	0.495	Total HxCDD	ND	2.63	
OCDD	ND	4.49		-	1.02	Total HpCDD	ND	2.50	
2,3,7,8-TCDF	ND	0.813		-	0.112				
1,2,3,7,8-PeCDF	ND	1.13		-	0.219				
2,3,4,7,8-PeCDF	ND	1.23		-	0.232				
1,2,3,4,7,8-HxCDF	ND	1.91		-	0.162				
1,2,3,6,7,8-HxCDF	ND	1.91		-	0.167				
2,3,4,6,7,8-HxCDF	ND	2.04		-	0.167				
1,2,3,7,8,9-HxCDF	ND	2.32		-	0.185	Total TCDF	ND	0.813	
1,2,3,4,6,7,8-HpCDF	ND	2.43		-	0.251	Total PeCDF	ND	1.23	
1,2,3,4,7,8,9-HpCDF	ND	3.59		-	0.280	Total HxCDF	ND	2.32	
OCDF	ND	4.59		-	0.451	Total HpCDF	ND	3.59	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	97.7	25.0 - 164	
13C-1,2,3,7,8-PeCDD	108	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	100	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	101	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	107	23.0 - 140	
13C-OCDD	111	17.0 - 157	
13C-2,3,7,8-TCDF	90.2	24.0 - 169	
13C-1,2,3,7,8-PeCDF	101	24.0 - 185	
13C-2,3,4,7,8-PeCDF	97.4	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	96.3	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	93.6	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	93.9	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	84.8	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	89.2	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	94.5	26.0 - 138	
13C-OCDF	94.4	17.0 - 157	

Cleanup Surrogate

37Cl-2,3,7,8-TCDD	99.7	35.0 - 197	
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- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Chemical Interference
- D Presence of Diphenyl Ethers
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: [Signature]

Date: 2/2/11

Reviewed By: [Signature]

Date: 2/7/11

EPA Method 1613
PCDD/F



FAL ID: 6546-001-OPR
Client ID: OPR
Matrix: Aqueous
Batch No: X2207

Date Extracted: 01-31-2011
Date Received: NA
Amount: 1.000 L

ICal: pccdfal3-8-23-10
GC Column: DB5
Units: ng/ml

Acquired: 02-01-2011
2005 WHO TEQ: NA


Compound	Conc	QC Limits	Qual
2,3,7,8-TCDD	10.9	6.70 - 15.8	
1,2,3,7,8-PeCDD	52.0	35.0 - 71.0	
1,2,3,4,7,8-HxCDD	50.8	35.0 - 82.0	
1,2,3,6,7,8-HxCDD	54.1	38.0 - 67.0	
1,2,3,7,8,9-HxCDD	55.2	32.0 - 81.0	
1,2,3,4,6,7,8-HpCDD	46.1	35.0 - 70.0	
OCDD	107	78.0 - 144	
2,3,7,8-TCDF	8.50	7.50 - 15.8	
1,2,3,7,8-PeCDF	48.2	40.0 - 67.0	
2,3,4,7,8-PeCDF	47.4	34.0 - 80.0	
1,2,3,4,7,8-HxCDF	55.0	36.0 - 67.0	
1,2,3,6,7,8-HxCDF	56.6	42.0 - 65.0	
2,3,4,6,7,8-HxCDF	56.7	35.0 - 78.0	
1,2,3,7,8,9-HxCDF	55.3	39.0 - 65.0	
1,2,3,4,6,7,8-HpCDF	54.6	41.0 - 61.0	
1,2,3,4,7,8,9-HpCDF	54.0	39.0 - 69.0	
OCDF	105	63.0 - 170	


Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	70.3	20.0 - 175	
13C-1,2,3,7,8-PeCDD	81.6	21.0 - 227	
13C-1,2,3,4,7,8-HxCDD	73.7	21.0 - 193	
13C-1,2,3,6,7,8-HxCDD	71.7	25.0 - 163	
13C-1,2,3,4,6,7,8-HpCDD	72.6	26.0 - 166	
13C-OCDD	74.2	13.0 - 198	
13C-2,3,7,8-TCDF	68.7	22.0 - 152	
13C-1,2,3,7,8-PeCDF	76.3	21.0 - 192	
13C-2,3,4,7,8-PeCDF	78.0	13.0 - 328	
13C-1,2,3,4,7,8-HxCDF	67.7	19.0 - 202	
13C-1,2,3,6,7,8-HxCDF	65.6	21.0 - 159	
13C-2,3,4,6,7,8-HxCDF	65.2	22.0 - 176	
13C-1,2,3,7,8,9-HxCDF	63.7	17.0 - 205	
13C-1,2,3,4,6,7,8-HpCDF	58.8	21.0 - 158	
13C-1,2,3,4,7,8,9-HpCDF	65.9	20.0 - 186	
13C-OCDF	68.5	13.0 - 198	

Cleanup Surrogate

37Cl-2,3,7,8-TCDD	73.6	31.0 - 191	
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- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Chemical Interference
- D Presence of Diphenyl Ethers
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 2/2/11

Reviewed By: 
Date: 2/7/11

EPA Method 1613
PCDD/F



FAL ID: 6546-001-SA
Client ID: MW-05-012111
Matrix: Aqueous
Batch No: X2207

Date Extracted: 01-31-2011
Date Received: 01-25-2011
Amount: 1.003 L

ICal: pccdfal3-8-23-10
GC Column: DB5
Units: pg/L

Acquired: 02-01-2011
2005 WHO TEQ: 0.377

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	1.26		-	0.212				
1,2,3,7,8-PeCDD	ND	1.88		-	0.302				
1,2,3,4,7,8-HxCDD	ND	2.23		-	0.328				
1,2,3,6,7,8-HxCDD	ND	2.83		-	0.381	Total TCDD	ND	1.26	
1,2,3,7,8,9-HxCDD	ND	2.54		-	0.351	Total PeCDD	ND	2.76	
1,2,3,4,6,7,8-HpCDD	26.5	-		0.265	0.495	Total HxCDD	9.94	-	J
OCDD	166	-		0.0498	1.02	Total HpCDD	49.9	-	
2,3,7,8-TCDF	ND	0.991		-	0.112				
1,2,3,7,8-PeCDF	ND	1.47		-	0.219				
2,3,4,7,8-PeCDF	ND	1.52		-	0.232				
1,2,3,4,7,8-HxCDF	ND	1.73		-	0.162				
1,2,3,6,7,8-HxCDF	ND	1.76		-	0.167				
2,3,4,6,7,8-HxCDF	ND	1.88		-	0.167				
1,2,3,7,8,9-HxCDF	ND	2.04		-	0.185	Total TCDF	14.4	-	D,M
1,2,3,4,6,7,8-HpCDF	5.71	-	J	0.0571	0.251	Total PeCDF	17.9	-	D,J,M
1,2,3,4,7,8,9-HpCDF	ND	2.97		-	0.280	Total HxCDF	11.1	-	J
OCDF	17.8	-	J	0.00534	0.451	Total HpCDF	20.4	-	J

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	75.0	25.0 - 164	
13C-1,2,3,7,8-PeCDD	88.4	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	80.1	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	80.7	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	84.9	23.0 - 140	
13C-OCDD	96.3	17.0 - 157	
13C-2,3,7,8-TCDF	74.9	24.0 - 169	
13C-1,2,3,7,8-PeCDF	83.5	24.0 - 185	
13C-2,3,4,7,8-PeCDF	83.3	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	76.6	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	72.1	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	69.3	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	70.6	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	68.0	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	76.3	26.0 - 138	
13C-OCDF	80.5	17.0 - 157	

Cleanup Surrogate

37Cl-2,3,7,8-TCDD	74.6	35.0 - 197
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- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Chemical Interference
- D Presence of Diphenyl Ethers
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst:
Date: 2/2/11

Reviewed By: DPJ
Date: 2/7/11

EPA Method 1613
PCDD/F



FAL ID: 6546-002-SA
Client ID: MW-02-012111
Matrix: Aqueous
Batch No: X2207

Date Extracted: 01-31-2011
Date Received: 01-26-2011
Amount: 0.452 L

ICal: pccdfal3-8-23-10
GC Column: DB5
Units: pg/L

Acquired: 02-01-2011
2005 WHO TEQ: 0.104


Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	2.62		-	0.212				
1,2,3,7,8-PeCDD	ND	4.11		-	0.302				
1,2,3,4,7,8-HxCDD	ND	4.87		-	0.328				
1,2,3,6,7,8-HxCDD	ND	6.15		-	0.381	Total TCDD	ND	2.62	
1,2,3,7,8,9-HxCDD	ND	5.54		-	0.351	Total PeCDD	ND	4.11	
1,2,3,4,6,7,8-HpCDD	9.05	-	J	0.0905	0.495	Total HxCDD	ND	6.15	
OCDD	43.2	-	J	0.0130	1.02	Total HpCDD	19.1	-	J
2,3,7,8-TCDF	ND	1.92		-	0.112				
1,2,3,7,8-PeCDF	ND	2.68		-	0.219				
2,3,4,7,8-PeCDF	ND	2.93		-	0.232				
1,2,3,4,7,8-HxCDF	ND	4.23		-	0.162				
1,2,3,6,7,8-HxCDF	ND	4.14		-	0.167				
2,3,4,6,7,8-HxCDF	ND	4.74		-	0.167				
1,2,3,7,8,9-HxCDF	ND	5.13		-	0.185	Total TCDF	ND	1.92	
1,2,3,4,6,7,8-HpCDF	ND	5.92		-	0.251	Total PeCDF	ND	2.93	
1,2,3,4,7,8,9-HpCDF	ND	8.21		-	0.280	Total HxCDF	ND	5.13	
OCDF	ND	11.5		-	0.451	Total HpCDF	ND	8.21	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	85.8	25.0 - 164	
13C-1,2,3,7,8-PeCDD	100	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	90.6	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	92.0	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	93.7	23.0 - 140	
13C-OCDD	108	17.0 - 157	
13C-2,3,7,8-TCDF	83.5	24.0 - 169	
13C-1,2,3,7,8-PeCDF	91.9	24.0 - 185	
13C-2,3,4,7,8-PeCDF	93.1	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	88.7	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	82.8	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	81.3	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	79.5	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	77.8	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	82.6	26.0 - 138	
13C-OCDF	92.5	17.0 - 157	

Cleanup Surrogate

37Cl-2,3,7,8-TCDD 87.2 35.0 - 197

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Chemical Interference
- D Presence of Diphenyl Ethers
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 2/2/11

Reviewed By: DN
Date: 2/7/11

EPA Method 1613
PCDD/F



FAL ID: 6546-003-SA
Client ID: MWV-09-012111
Matrix: Aqueous
Batch No: X2207

Date Extracted: 01-31-2011
Date Received: 01-25-2011
Amount: 1.030 L

ICal: pccdfal3-8-23-10
GC Column: DB5
Units: pg/L

Acquired: 02-01-2011
2005 WHO TEQ: 0.00274

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	1.57		-	0.212				
1,2,3,7,8-PeCDD	ND	2.54		-	0.302				
1,2,3,4,7,8-HxCDD	ND	2.51		-	0.328				
1,2,3,6,7,8-HxCDD	ND	3.17		-	0.381	Total TCDD	ND	1.57	
1,2,3,7,8,9-HxCDD	ND	2.86		-	0.351	Total PeCDD	ND	2.54	
1,2,3,4,6,7,8-HpCDD	ND	3.05		-	0.495	Total HxCDD	ND	3.17	
OCDD	9.14	-	J	0.00274	1.02	Total HpCDD	ND	3.05	
2,3,7,8-TCDF	ND	1.06		-	0.112				
1,2,3,7,8-PeCDF	ND	1.54		-	0.219				
2,3,4,7,8-PeCDF	ND	1.62		-	0.232				
1,2,3,4,7,8-HxCDF	ND	2.03		-	0.162				
1,2,3,6,7,8-HxCDF	ND	1.93		-	0.167				
2,3,4,6,7,8-HxCDF	ND	2.18		-	0.167				
1,2,3,7,8,9-HxCDF	ND	2.47		-	0.185	Total TCDF	ND	1.06	
1,2,3,4,6,7,8-HpCDF	ND	2.52		-	0.251	Total PeCDF	ND	1.62	
1,2,3,4,7,8,9-HpCDF	ND	3.49		-	0.280	Total HxCDF	3.70	-	J
OCDF	ND	7.91		-	0.451	Total HpCDF	ND	3.49	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	81.9	25.0 - 164	
13C-1,2,3,7,8-PeCDD	90.7	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	84.3	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	85.4	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	93.0	23.0 - 140	
13C-OCDD	99.2	17.0 - 157	
13C-2,3,7,8-TCDF	82.5	24.0 - 169	
13C-1,2,3,7,8-PeCDF	87.1	24.0 - 185	
13C-2,3,4,7,8-PeCDF	87.1	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	82.3	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	78.4	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	79.8	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	73.6	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	74.1	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	85.6	26.0 - 138	
13C-OCDF	86.3	17.0 - 157	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Chemical Interference
- D Presence of Diphenyl Ethers
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Cleanup Surrogate

37Cl-2,3,7,8-TCDD 83.0 35.0 - 197

Analyst: [Signature]
Date: 2/2/11

Reviewed By: DAJ
Date: 2/7/11

EPA Method 1613
PCDD/F



FAL ID: 6546-004-SA
Client ID: MW-08-012111
Matrix: Aqueous
Batch No: X2207

Date Extracted: 01-31-2011
Date Received: 01-25-2011
Amount: 1.030 L

ICal: pccdfal3-8-23-10
GC Column: DB5
Units: pg/L

Acquired: 02-01-2011
2005 WHO TEQ: 0.0340


Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	1.20		-	0.212				
1,2,3,7,8-PeCDD	ND	1.75		-	0.302				
1,2,3,4,7,8-HxCDD	ND	1.84		-	0.328				
1,2,3,6,7,8-HxCDD	ND	2.30		-	0.381	Total TCDD	ND	1.20	
1,2,3,7,8,9-HxCDD	ND	2.08		-	0.351	Total PeCDD	ND	1.75	
1,2,3,4,6,7,8-HpCDD	2.62	-	J	0.0262	0.495	Total HxCDD	ND	2.30	
OCDD	26.1	-		0.00783	1.02	Total HpCDD	7.21	-	J
2,3,7,8-TCDF	ND	0.718		-	0.112				
1,2,3,7,8-PeCDF	ND	1.31		-	0.219				
2,3,4,7,8-PeCDF	ND	1.31		-	0.232				
1,2,3,4,7,8-HxCDF	ND	1.64		-	0.162				
1,2,3,6,7,8-HxCDF	ND	1.60		-	0.167				
2,3,4,6,7,8-HxCDF	ND	1.77		-	0.167				
1,2,3,7,8,9-HxCDF	ND	1.80		-	0.185	Total TCDF	1.17	-	J
1,2,3,4,6,7,8-HpCDF	ND	2.18		-	0.251	Total PeCDF	ND	1.31	
1,2,3,4,7,8,9-HpCDF	ND	3.19		-	0.280	Total HxCDF	ND	1.80	
OCDF	ND	4.47		-	0.451	Total HpCDF	ND	3.19	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	92.9	25.0 - 164	
13C-1,2,3,7,8-PeCDD	109	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	100	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	97.1	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	103	23.0 - 140	
13C-OCDD	116	17.0 - 157	
13C-2,3,7,8-TCDF	93.3	24.0 - 169	
13C-1,2,3,7,8-PeCDF	103	24.0 - 185	
13C-2,3,4,7,8-PeCDF	105	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	92.3	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	89.2	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	89.1	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	87.8	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	84.2	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	91.9	26.0 - 138	
13C-OCDF	98.5	17.0 - 157	

Cleanup Surrogate

37Cl-2,3,7,8-TCDD 97.4 35.0 - 197

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Chemical Interference
- D Presence of Diphenyl Ethers
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 

Date: 2/2/11

Reviewed By: SN

Date: 2/7/11

EPA Method 1613
PCDD/F



FAL ID: 6546-005-SA
Client ID: MW-01-012111
Matrix: Aqueous
Batch No: X2207

Date Extracted: 01-31-2011
Date Received: 01-25-2011
Amount: 0.995 L

ICal: pccdfal3-8-23-10
GC Column: DB5
Units: pg/L

Acquired: 02-01-2011
2005 WHO TEQ: 38.6

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	3.34	-	J	3.34	0.212				
1,2,3,7,8-PeCDD	9.29	-	J	9.29	0.302				
1,2,3,4,7,8-HxCDD	5.19	-	J	0.519	0.328				
1,2,3,6,7,8-HxCDD	37.9	-		3.79	0.381	Total TCDD	10.0	-	
1,2,3,7,8,9-HxCDD	20.6	-	J	2.06	0.351	Total PeCDD	112	-	M
1,2,3,4,6,7,8-HpCDD	843	-		8.43	0.495	Total HxCDD	398	-	
OCDD	16200	-		4.86	1.02	Total HpCDD	1930	-	
2,3,7,8-TCDF	ND	1.38		-	0.112				
1,2,3,7,8-PeCDF	11.8	-	J	0.354	0.219				
2,3,4,7,8-PeCDF	4.51	-	J	1.35	0.232				
1,2,3,4,7,8-HxCDF	5.06	-	J	0.506	0.162				
1,2,3,6,7,8-HxCDF	9.83	-	D,J,M	0.983	0.167				
2,3,4,6,7,8-HxCDF	16.2	-	J	1.62	0.167				
1,2,3,7,8,9-HxCDF	ND	1.85		-	0.185	Total TCDF	1440	-	D,M
1,2,3,4,6,7,8-HpCDF	126	-		1.26	0.251	Total PeCDF	3090	-	D,M
1,2,3,4,7,8,9-HpCDF	11.7	-	J	0.117	0.280	Total HxCDF	410	-	D,M
OCDF	384	-		0.115	0.451	Total HpCDF	379	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	75.0	25.0 - 164	
13C-1,2,3,7,8-PeCDD	87.9	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	78.0	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	77.9	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	85.7	23.0 - 140	
13C-OCDD	97.2	17.0 - 157	
13C-2,3,7,8-TCDF	73.3	24.0 - 169	
13C-1,2,3,7,8-PeCDF	83.8	24.0 - 185	
13C-2,3,4,7,8-PeCDF	83.2	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	70.2	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	69.0	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	70.5	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	69.9	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	71.0	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	77.3	26.0 - 138	
13C-OCDF	77.1	17.0 - 157	

Cleanup Surrogate

37Cl-2,3,7,8-TCDD 75.4 35.0 - 197

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Chemical Interference
- D Presence of Diphenyl Ethers
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: [Signature]

Date: 2/2/11

Reviewed By: [Signature]

Date: 2/7/11

EPA Method 1613
PCDD/F



FAL ID: 6546-006-SA
Client ID: MW-01-012111-D
Matrix: Aqueous
Batch No: X2207

Date Extracted: 01-31-2011
Date Received: 01-25-2011
Amount: 0.451 L

ICal: pccdfal3-8-23-10
GC Column: DB5
Units: pg/L

Acquired: 02-01-2011
2005 WHO TEQ: 31.5

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	4.54		-	0.212				
1,2,3,7,8-PeCDD	7.94	-	J	7.94	0.302				
1,2,3,4,7,8-HxCDD	ND	5.61		-	0.328				
1,2,3,6,7,8-HxCDD	46.6	-	J	4.66	0.381	Total TCDD	ND	4.54	
1,2,3,7,8,9-HxCDD	17.6	-	J	1.76	0.351	Total PeCDD	161	-	M
1,2,3,4,6,7,8-HpCDD	920	-		9.20	0.495	Total HxCDD	452	-	
OCDD	13300	-		3.99	1.02	Total HpCDD	1920	-	
2,3,7,8-TCDF	ND	3.10		-	0.112				
1,2,3,7,8-PeCDF	13.0	-	J	0.390	0.219				
2,3,4,7,8-PeCDF	ND	4.02		-	0.232				
1,2,3,4,7,8-HxCDF	ND	3.89		-	0.162				
1,2,3,6,7,8-HxCDF	6.56	-	D,J,M	0.656	0.167				
2,3,4,6,7,8-HxCDF	17.4	-	J	1.74	0.167				
1,2,3,7,8,9-HxCDF	ND	4.25		-	0.185	Total TCDF	984	-	D,M
1,2,3,4,6,7,8-HpCDF	94.9	-		0.949	0.251	Total PeCDF	2320	-	D,M
1,2,3,4,7,8,9-HpCDF	8.75	-	J	0.0875	0.280	Total HxCDF	331	-	D,M
OCDF	294	-		0.0882	0.451	Total HpCDF	289	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	61.2	25.0 - 164	
13C-1,2,3,7,8-PeCDD	72.0	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	65.2	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	63.4	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	69.0	23.0 - 140	
13C-OCDD	76.0	17.0 - 157	
13C-2,3,7,8-TCDF	57.7	24.0 - 169	
13C-1,2,3,7,8-PeCDF	68.3	24.0 - 185	
13C-2,3,4,7,8-PeCDF	68.2	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	58.0	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	54.7	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	58.6	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	56.2	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	58.5	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	62.5	26.0 - 138	
13C-OCDF	63.5	17.0 - 157	

Cleanup Surrogate

37Cl-2,3,7,8-TCDD 64.5 35.0 - 197

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Chemical Interference
- D Presence of Diphenyl Ethers
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected
- NP Not Provided
- P Pre-filtered through a Whatman 0.7um GF/F filter
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: [Signature]
Date: 2/2/11

Reviewed By: DN
Date: 2/7/11