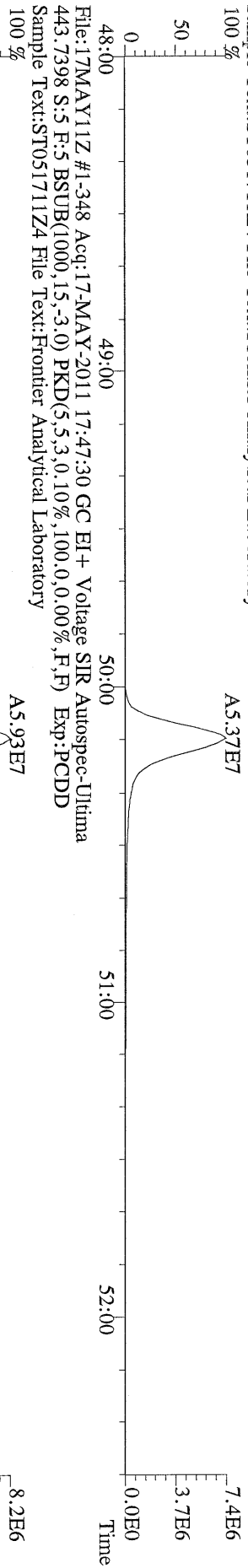
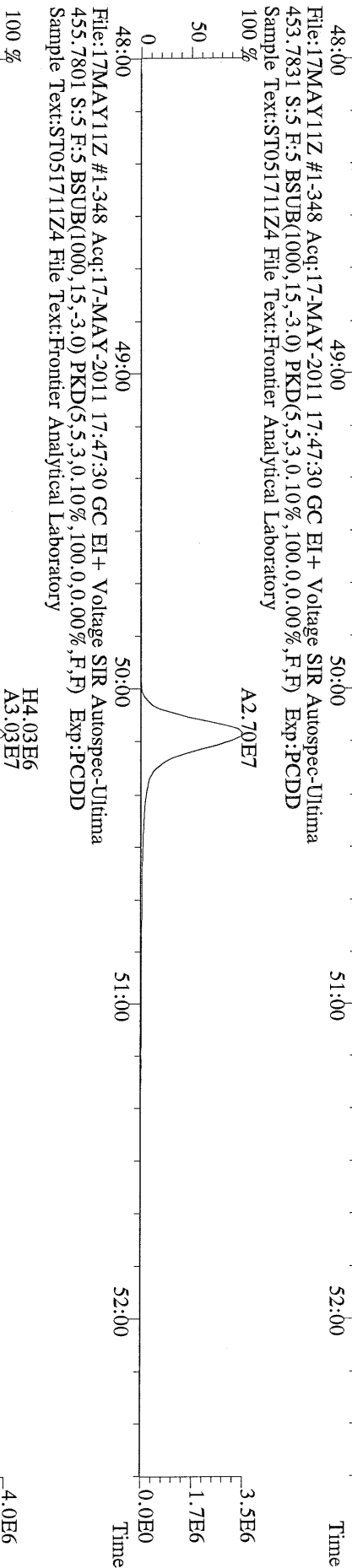


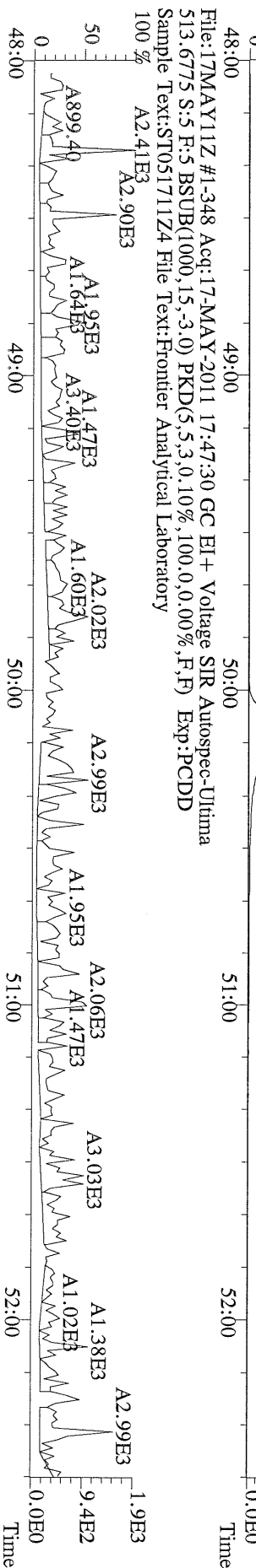
File: 17MAY11Z #1-348 Acq: 17-MAY-2011 17:47:30 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:5 F:5 BSUB(1000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051711Z4 File Text:Frontier Analytical Laboratory



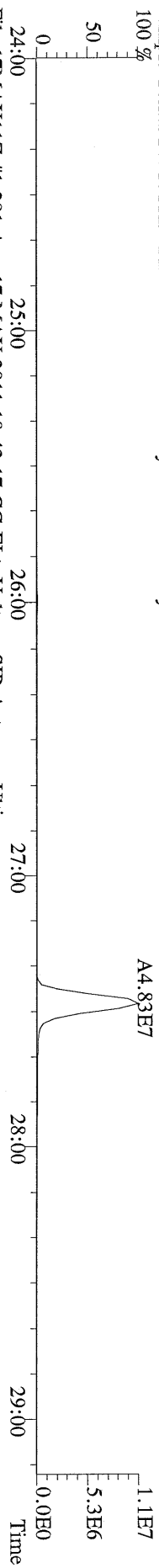
File: 17MAY11Z #1-348 Acq: 17-MAY-2011 17:47:30 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:5 F:5 BSUB(1000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051711Z4 File Text:Frontier Analytical Laboratory



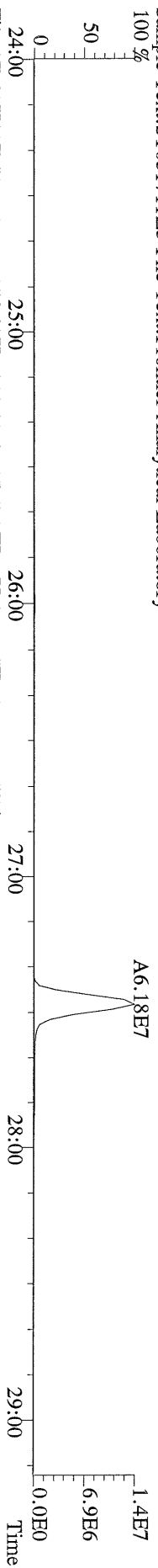
File: 17MAY11Z #1-348 Acq: 17-MAY-2011 17:47:30 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:5 F:5 BSUB(1000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051711Z4 File Text:Frontier Analytical Laboratory



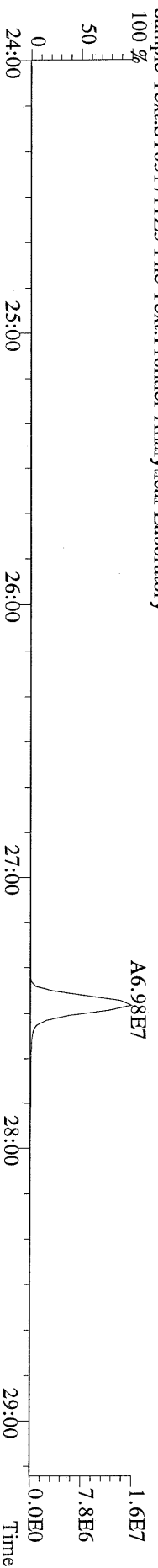
File:17MAY11Z #1-391 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:6 BSUB(1000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory
100 %



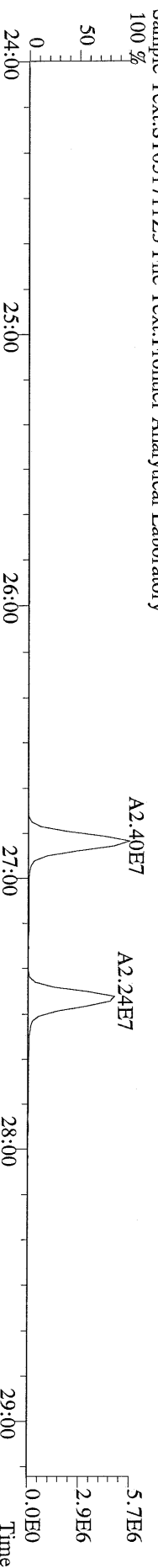
File:17MAY11Z #1-391 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:6 BSUB(1000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory
100 %



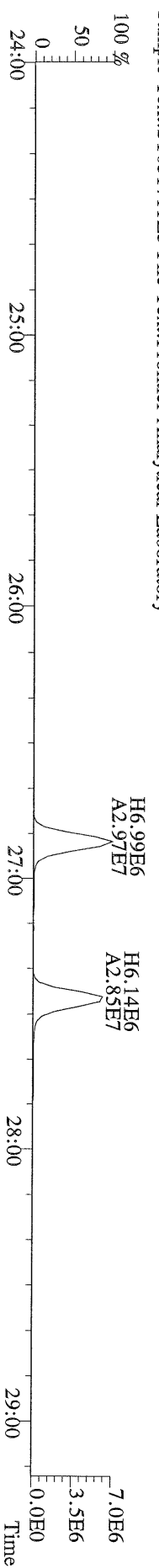
File:17MAY11Z #1-391 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:6 BSUB(1000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory
100 %



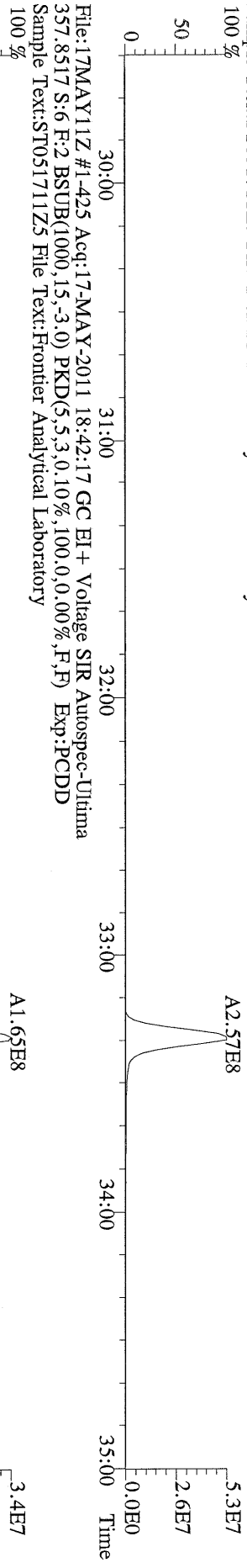
File:17MAY11Z #1-391 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:6 BSUB(1000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory
100 %



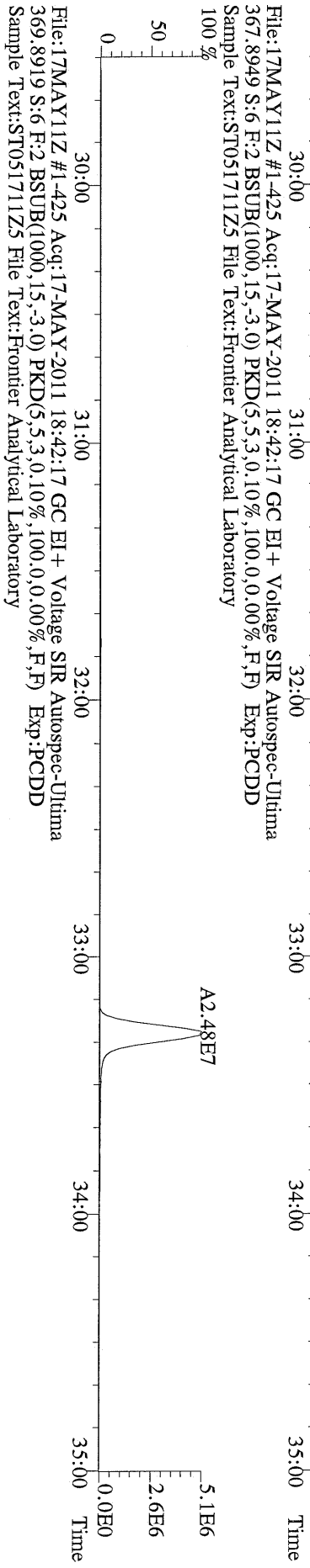
File:17MAY11Z #1-391 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:6 BSUB(1000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory



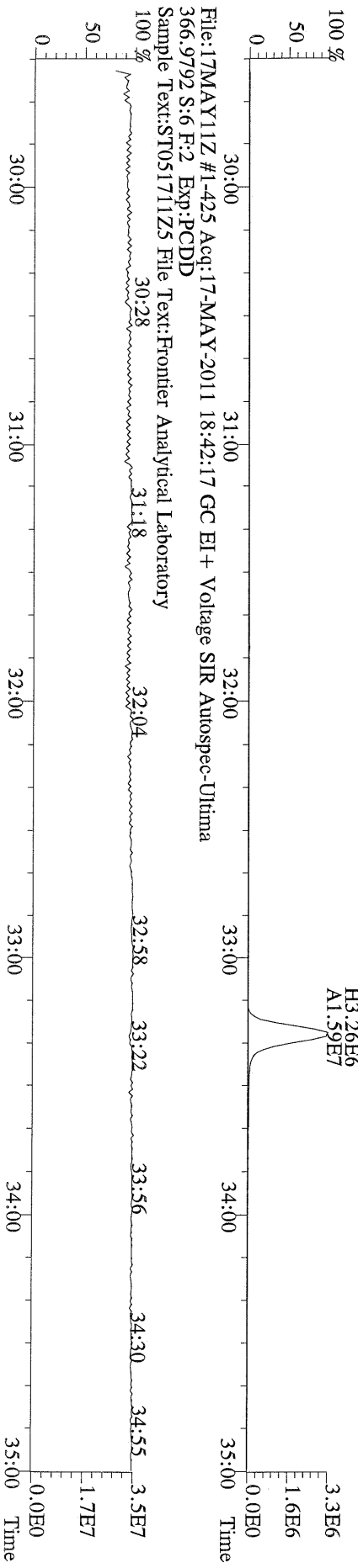
File:17MAY11Z #1-425 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:6 F:2 BSUB(1000,15,-3,0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory
100 %



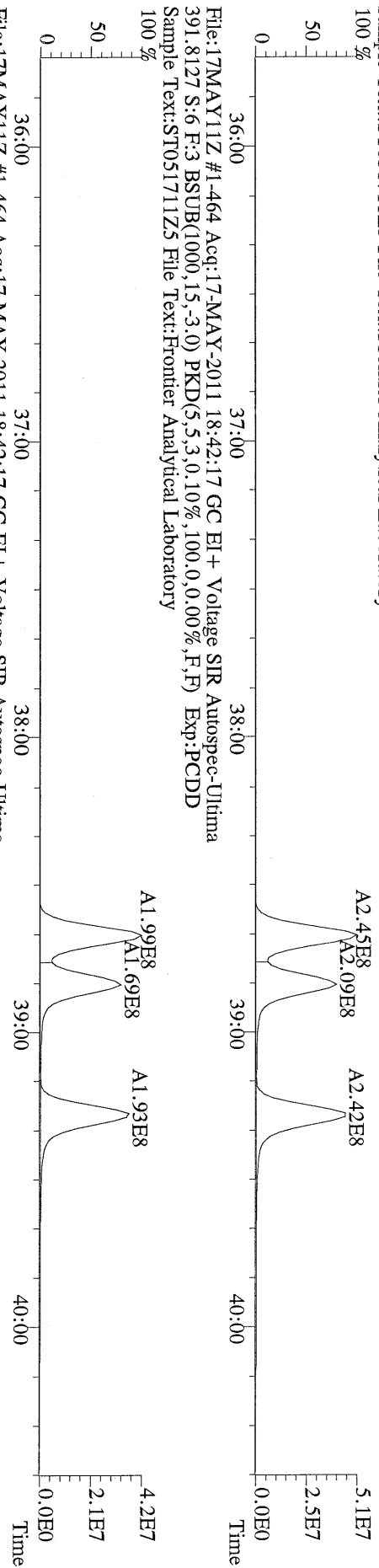
File:17MAY11Z #1-425 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:6 F:2 BSUB(1000,15,-3,0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory
100 %



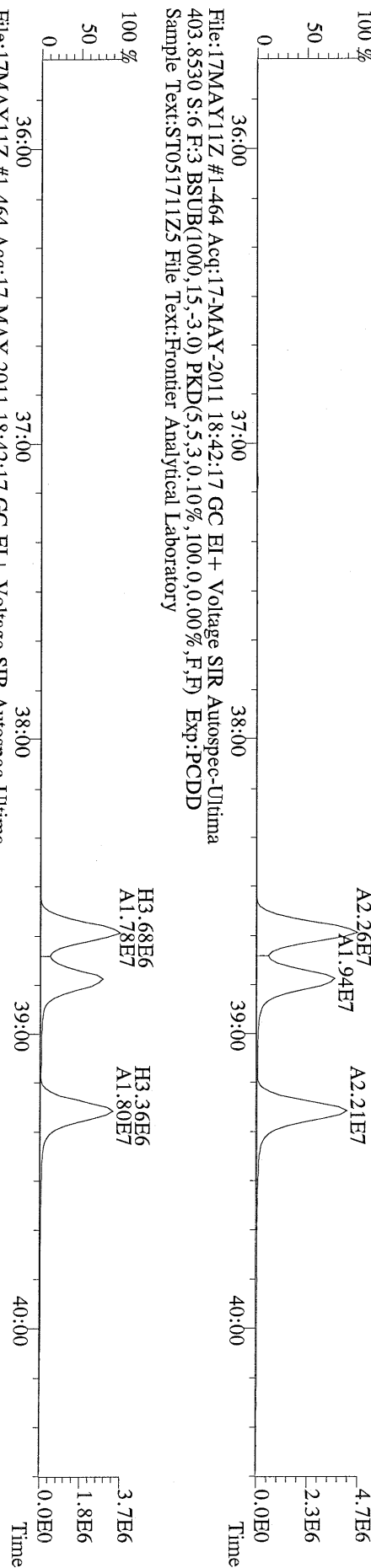
File:17MAY11Z #1-425 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:6 F:2 Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory
100 %



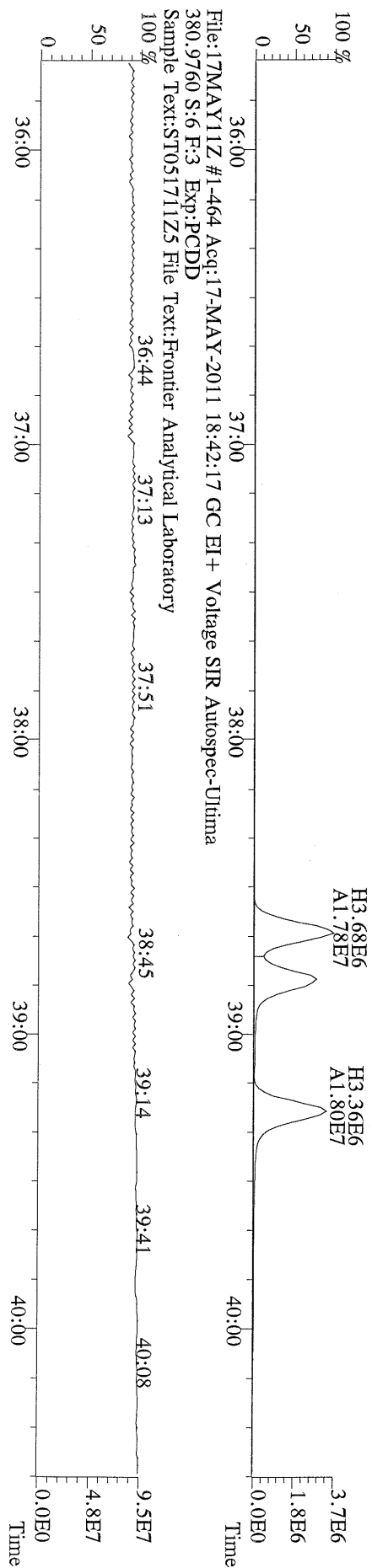
File:17MAY11Z #1-464 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:6 F:3 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory



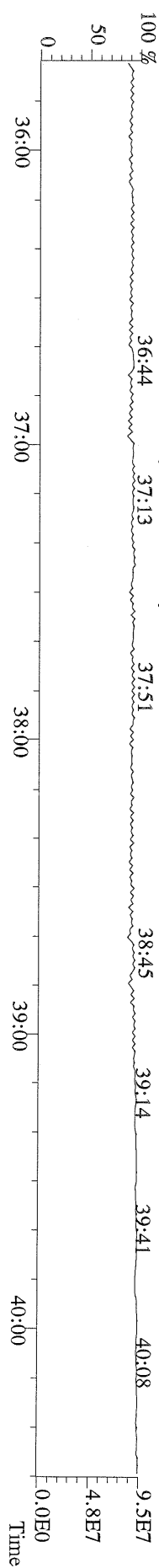
File:17MAY11Z #1-464 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:6 F:3 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory



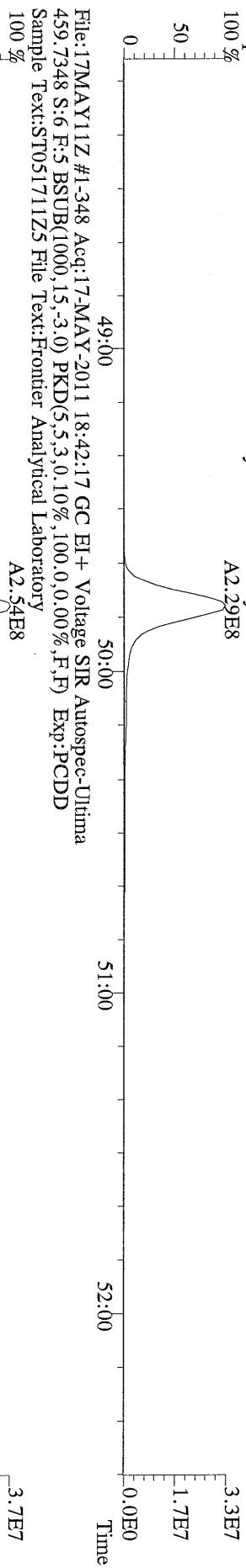
File:17MAY11Z #1-464 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:6 F:3 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory



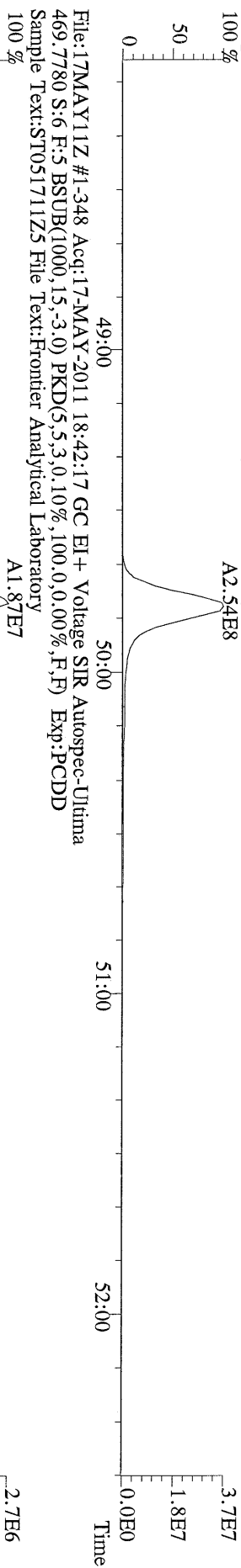
File:17MAY11Z #1-464 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:6 F:3 Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory



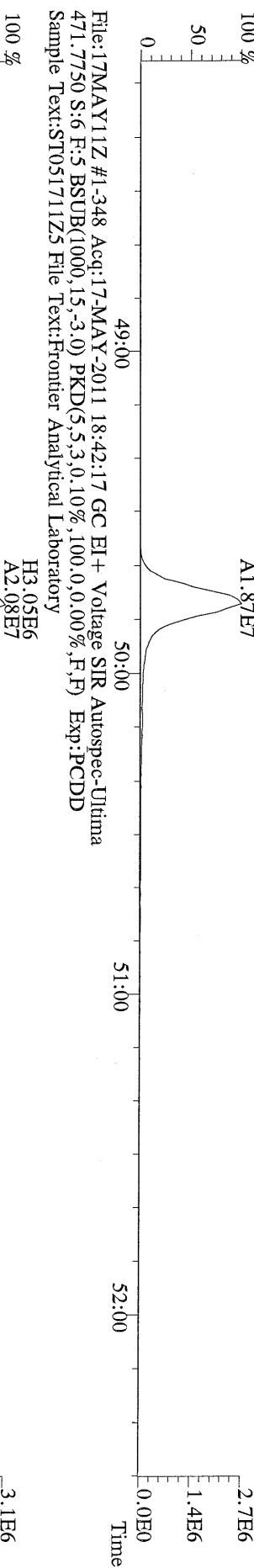
File:17MAY11Z #1-348 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:6 F:5 BSUB(1000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp.:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory



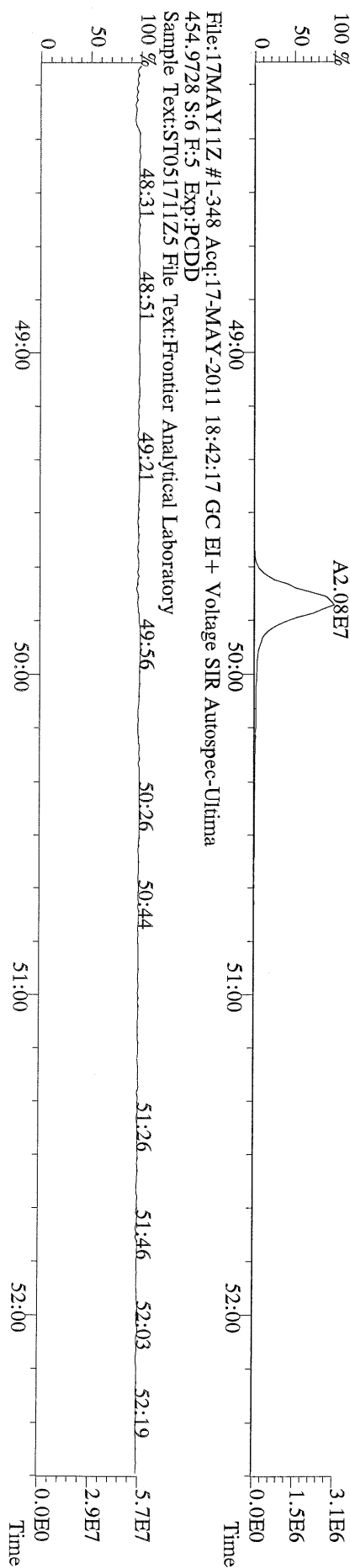
File:17MAY11Z #1-348 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:6 F:5 BSUB(1000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp.:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory



File:17MAY11Z #1-348 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:6 F:5 BSUB(1000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp.:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory

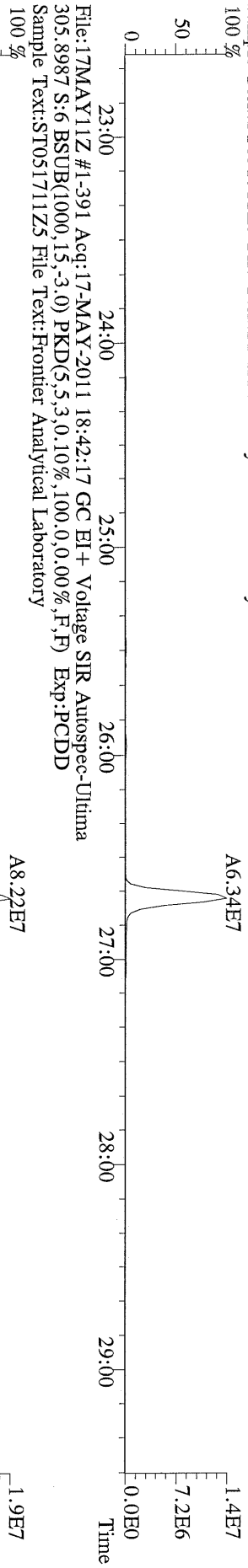


File:17MAY11Z #1-348 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:6 F:5 BSUB(1000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp.:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory

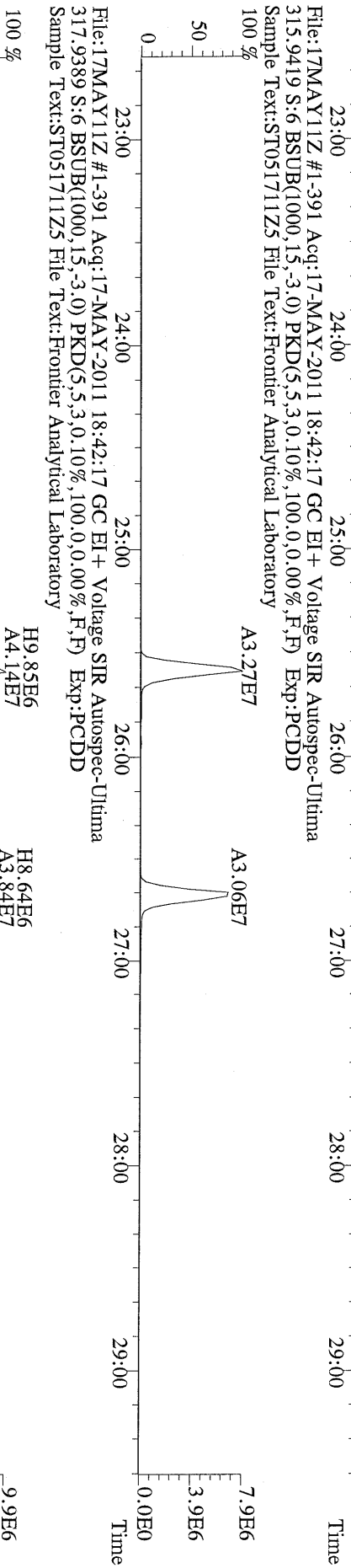


File:17MAY11Z #1-348 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:6 F:5 Exp.:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory

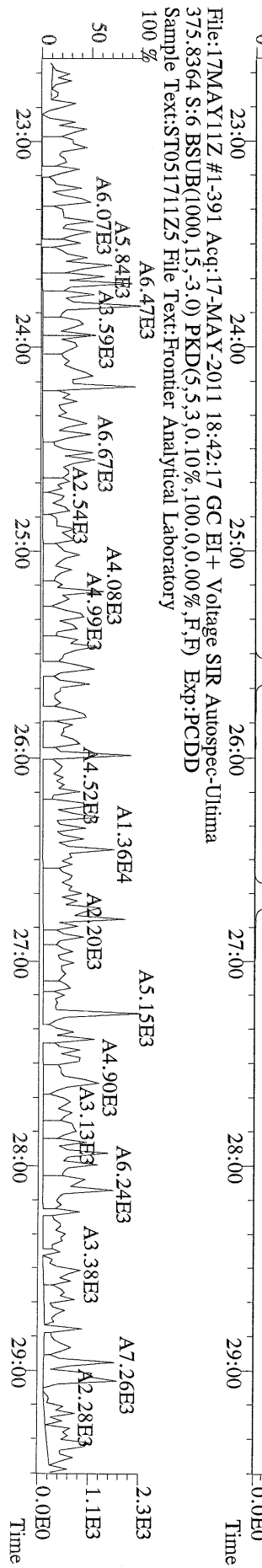
File:17MAY11Z #1-391 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
 303.9016 S:6 BSUB(1000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory



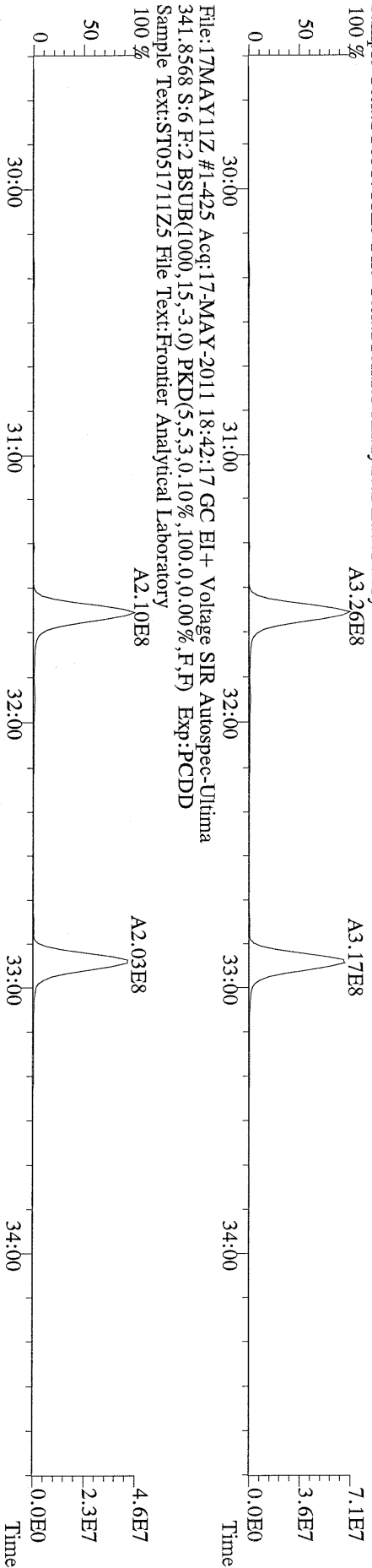
File:17MAY11Z #1-391 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
 315.9419 S:6 BSUB(1000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory



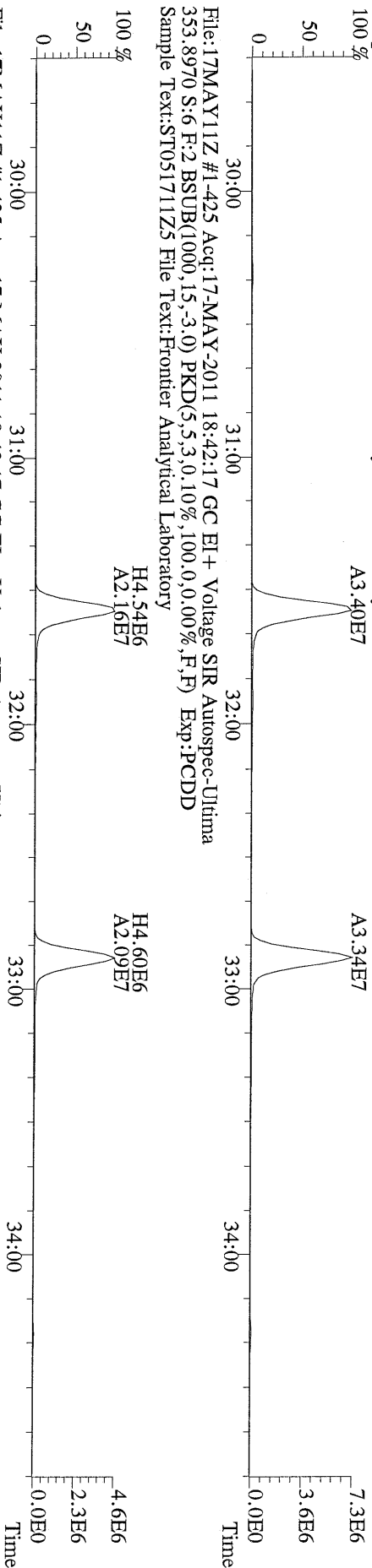
File:17MAY11Z #1-391 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
 375.8364 S:6 BSUB(1000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory



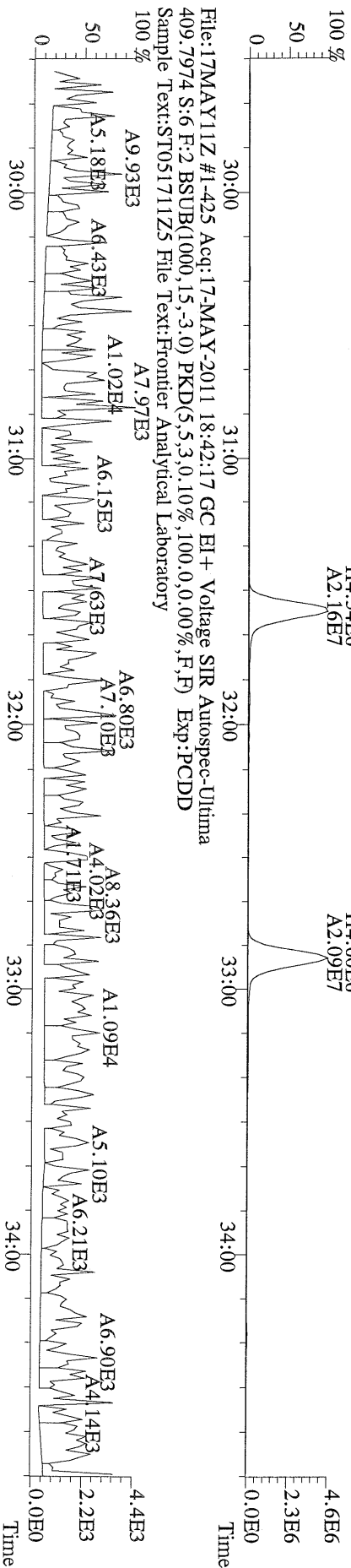
File:17MAY11Z #1-425 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:6 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory
100 %



File:17MAY11Z #1-425 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:6 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory
100 %

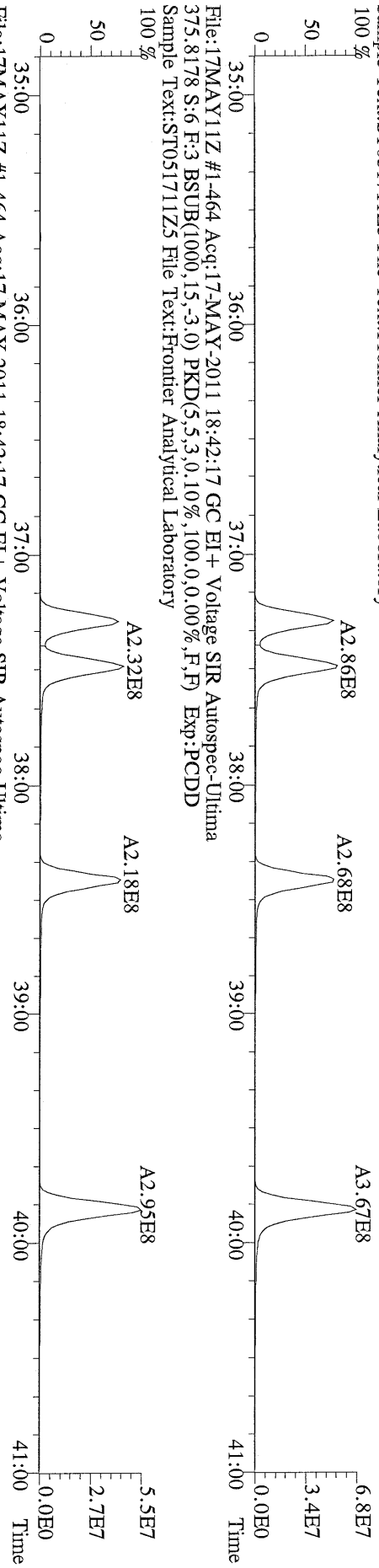


File:17MAY11Z #1-425 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:6 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory

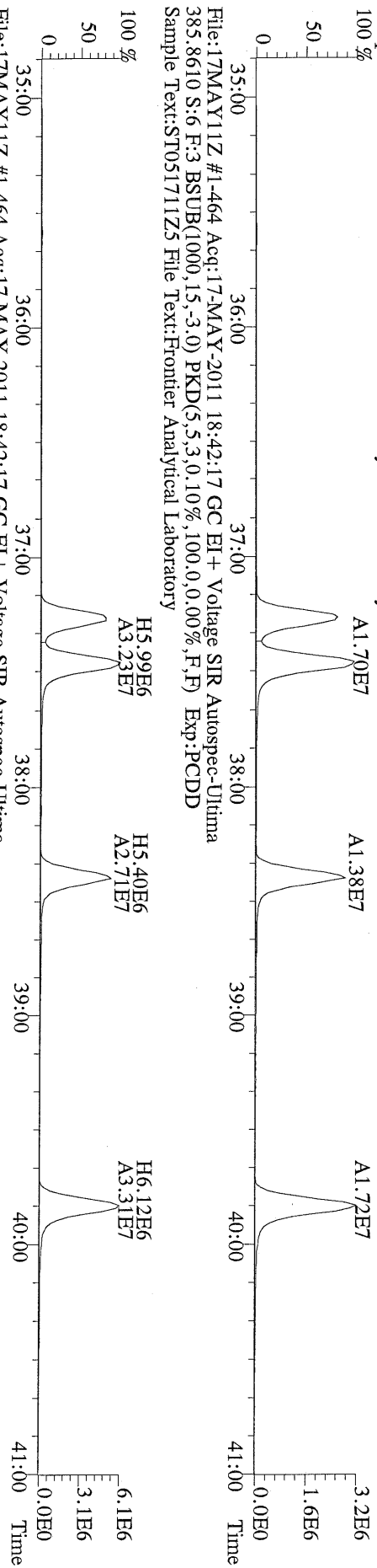


File:17MAY11Z #1-425 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:6 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory
100 %

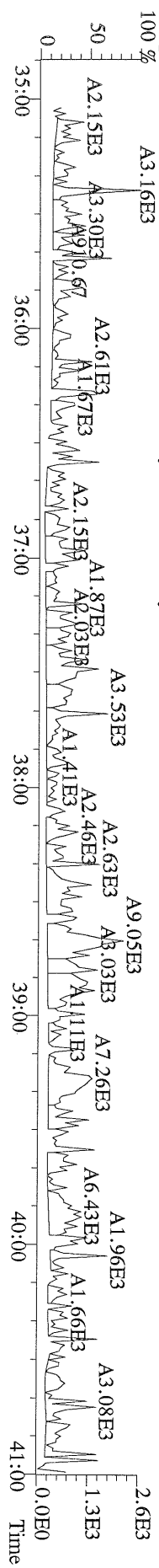
File: 17MAY11Z #1-464 Acq: 17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:6 F:3 BSUB(1000,15,-3.0) PKD(5,5,3,0,100%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory



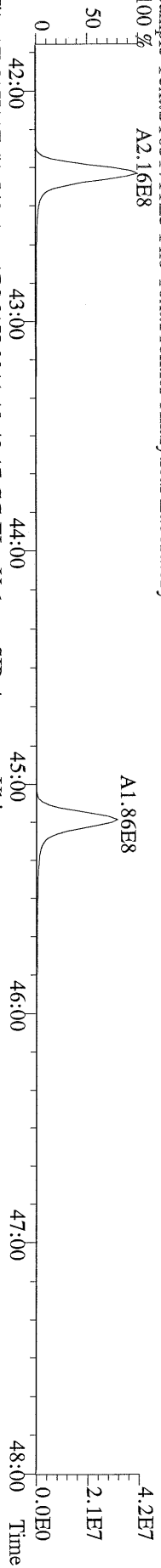
File: 17MAY11Z #1-464 Acq: 17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:6 F:3 BSUB(1000,15,-3.0) PKD(5,5,3,0,100%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory



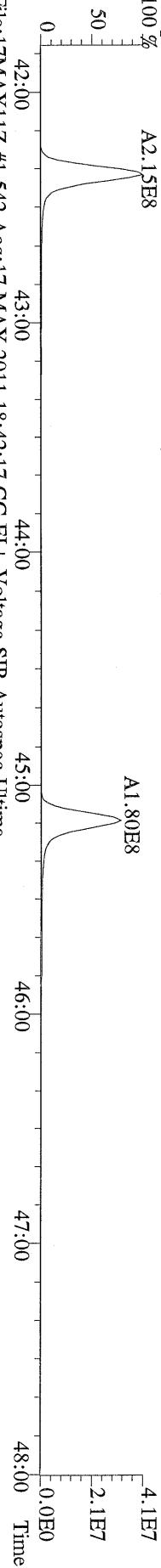
File: 17MAY11Z #1-464 Acq: 17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:6 F:3 BSUB(1000,15,-3.0) PKD(5,5,3,0,100%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory



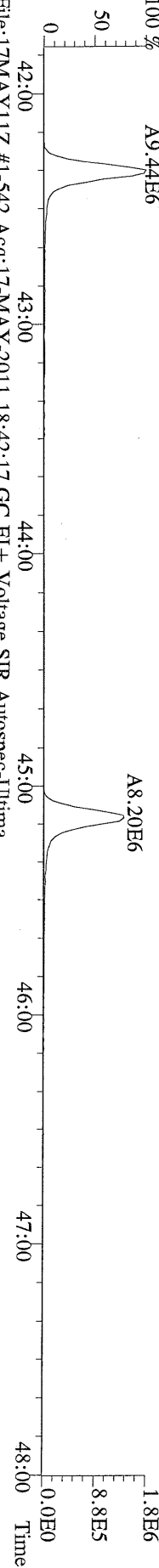
File:17MAY11Z #1-542 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:6 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory



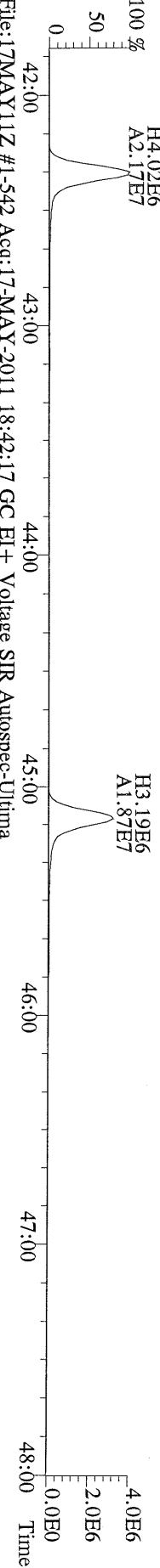
File:17MAY11Z #1-542 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:6 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory



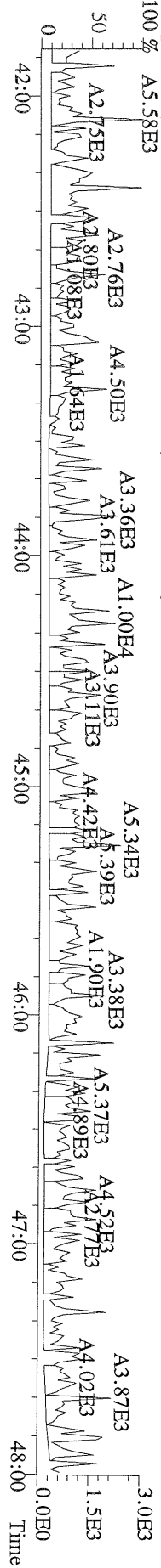
File:17MAY11Z #1-542 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:6 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory



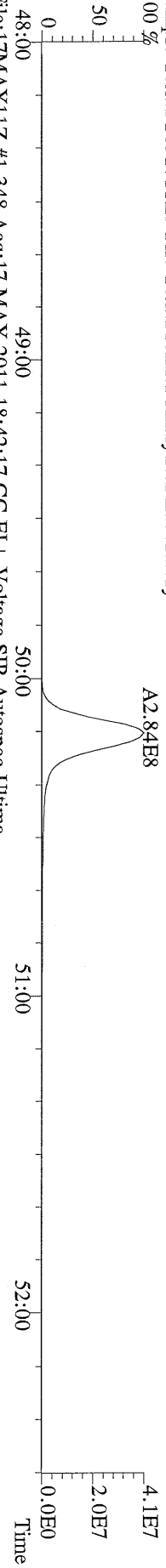
File:17MAY11Z #1-542 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:6 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory



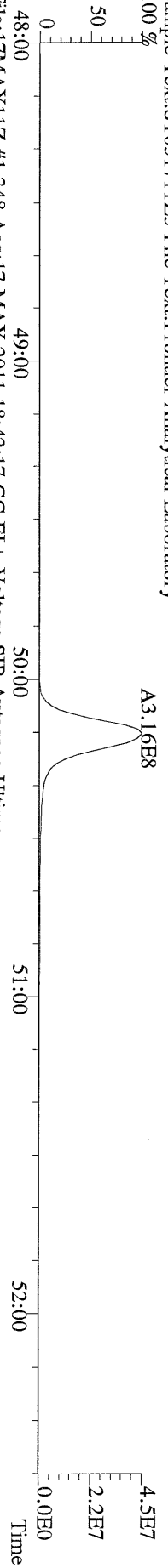
File:17MAY11Z #1-542 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:6 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory



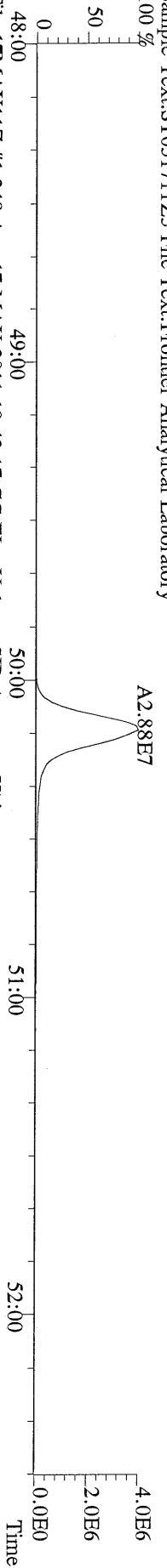
File:17MAY11Z #1-348 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:6 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory
100 %



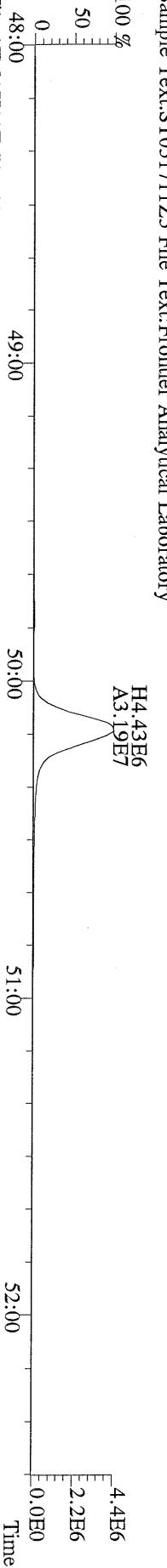
File:17MAY11Z #1-348 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:6 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory
100 %



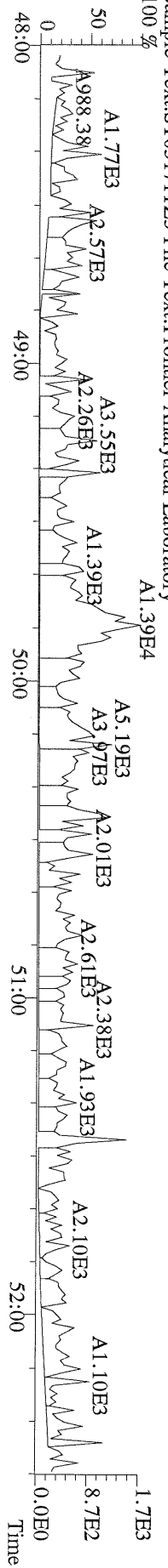
File:17MAY11Z #1-348 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:6 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory
100 %

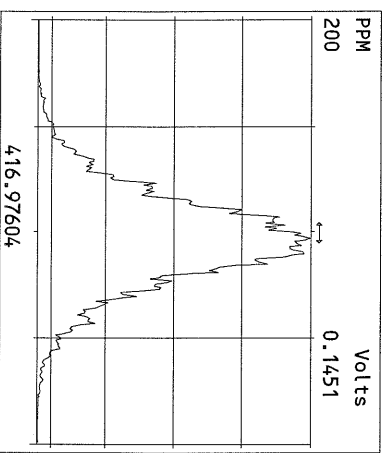
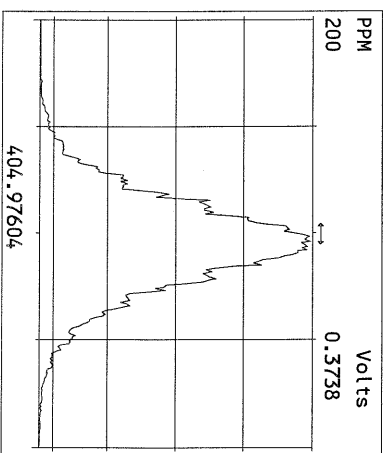
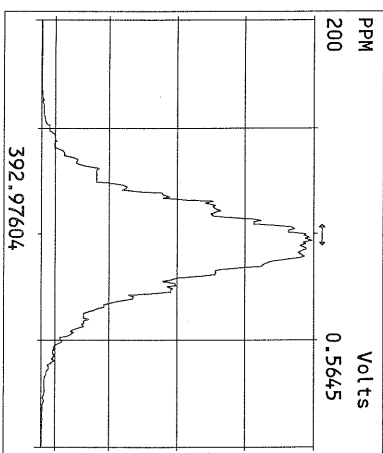
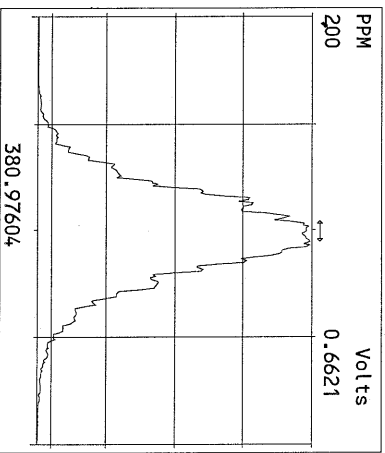
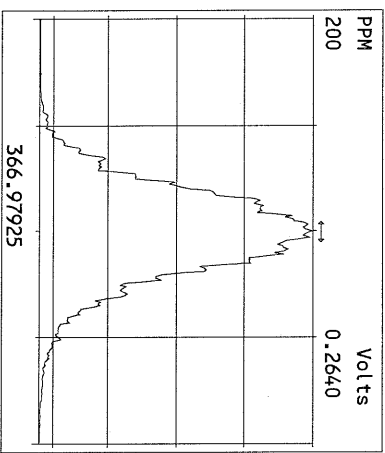
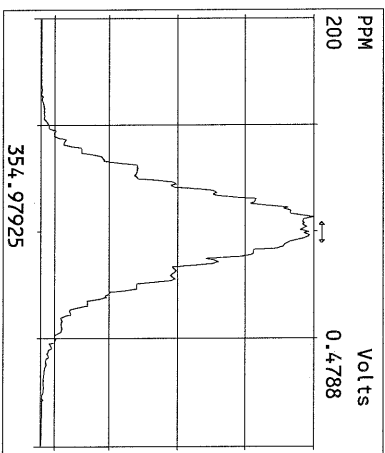
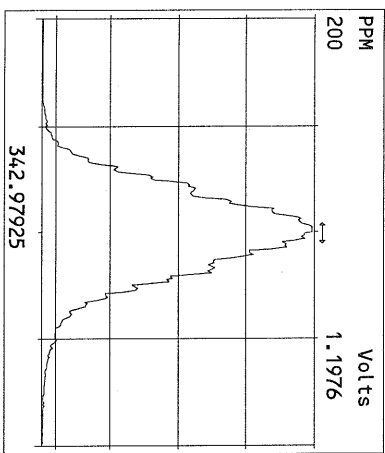
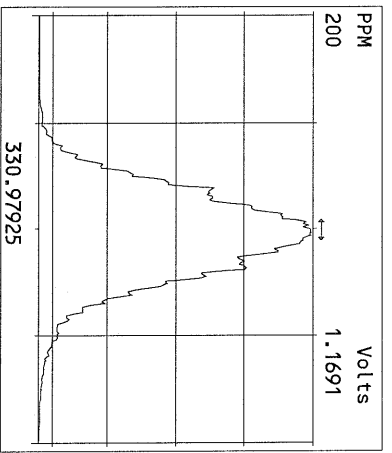
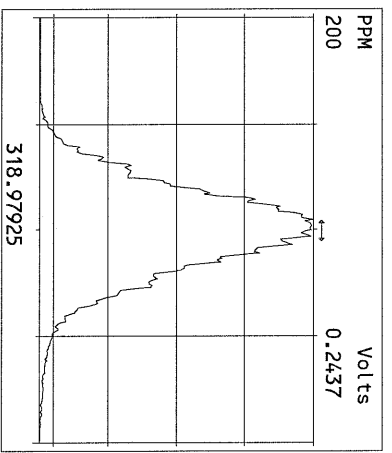
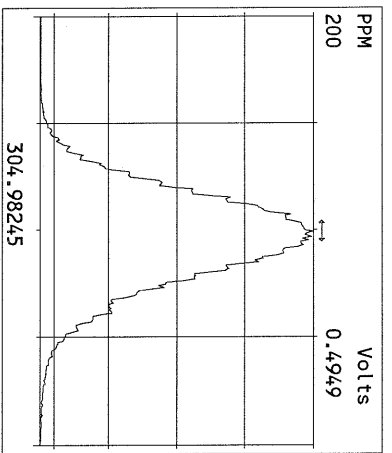
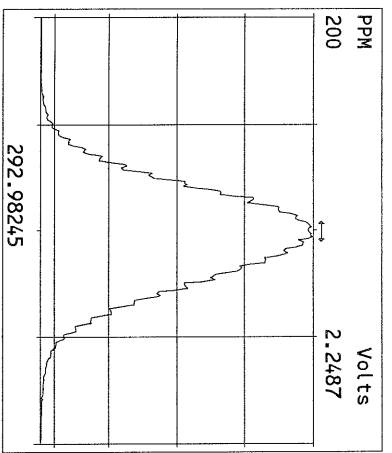


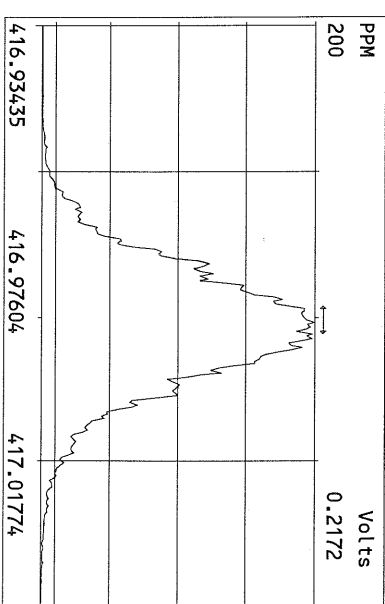
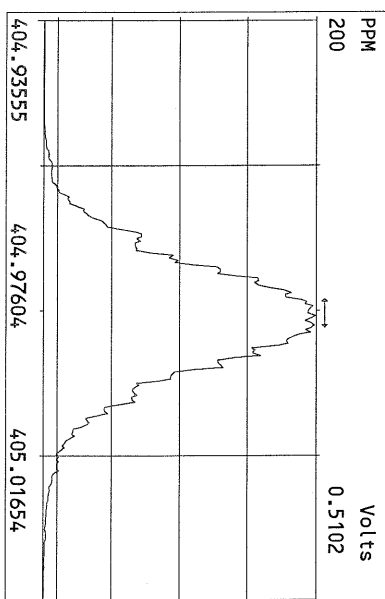
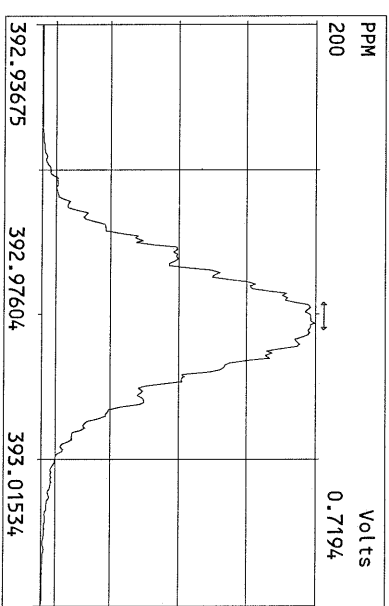
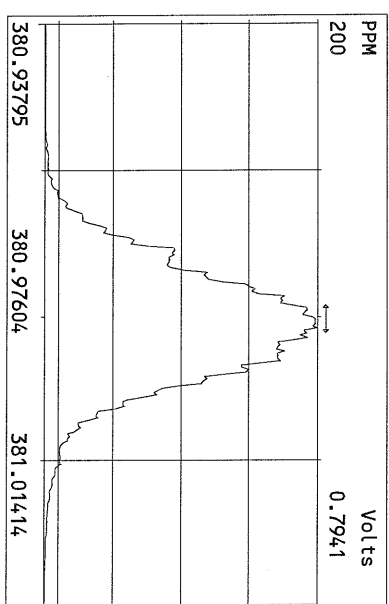
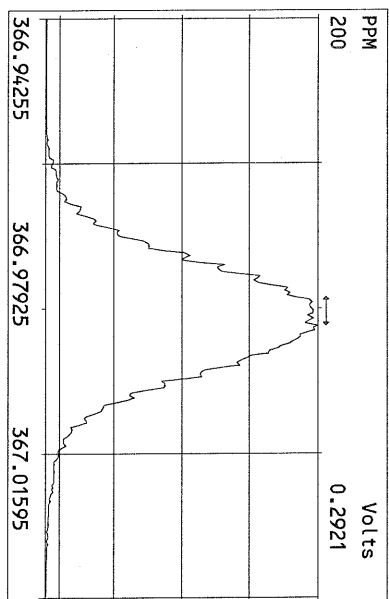
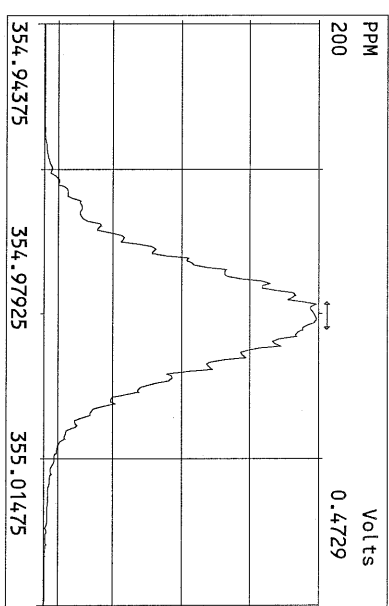
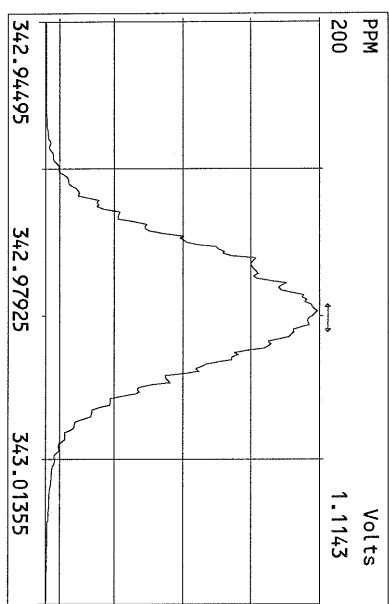
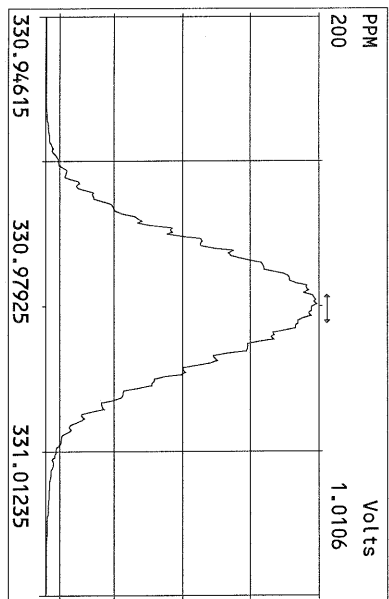
File:17MAY11Z #1-348 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:6 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory

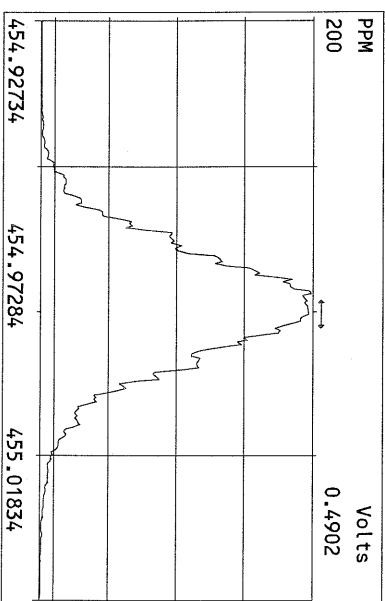
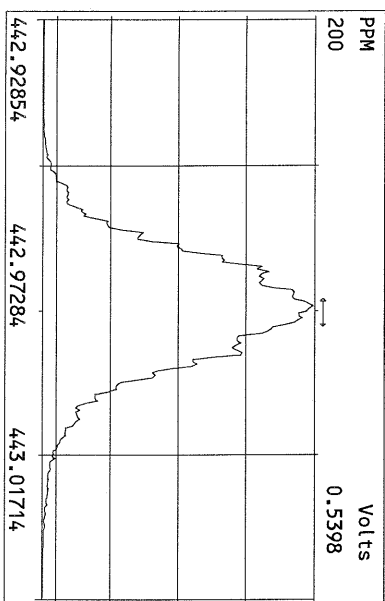
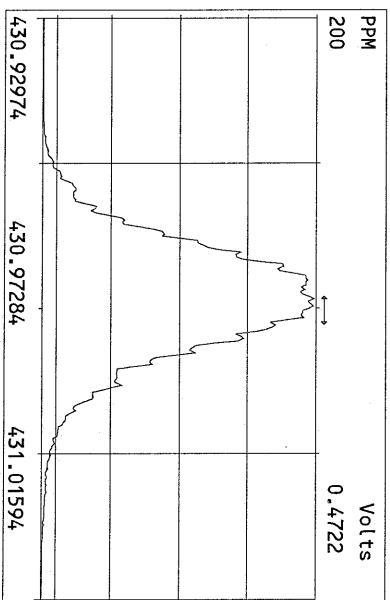
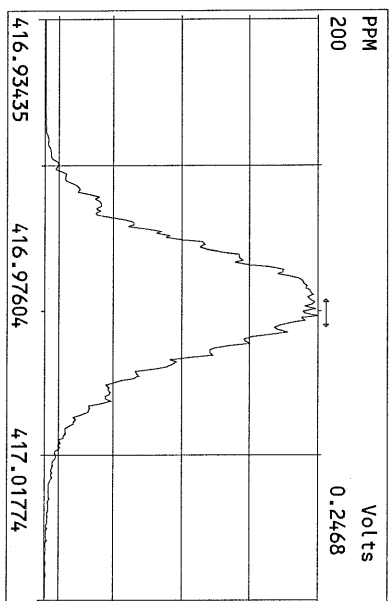
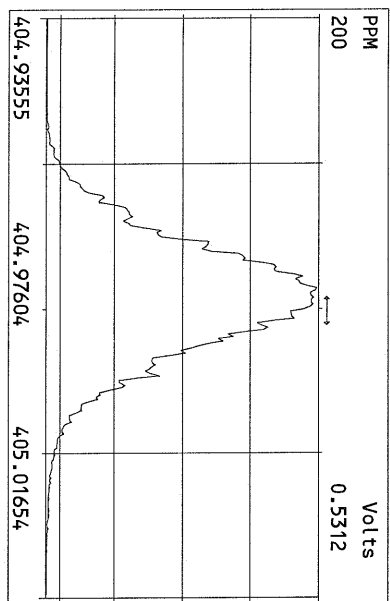
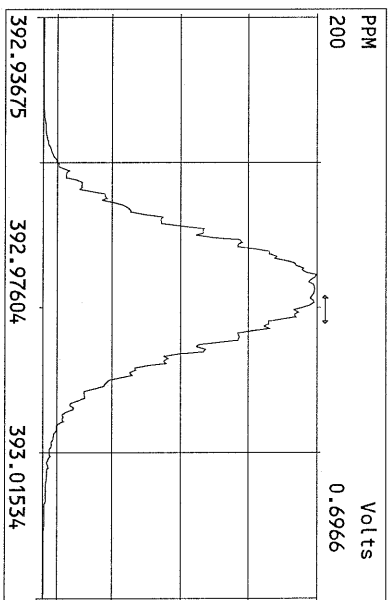
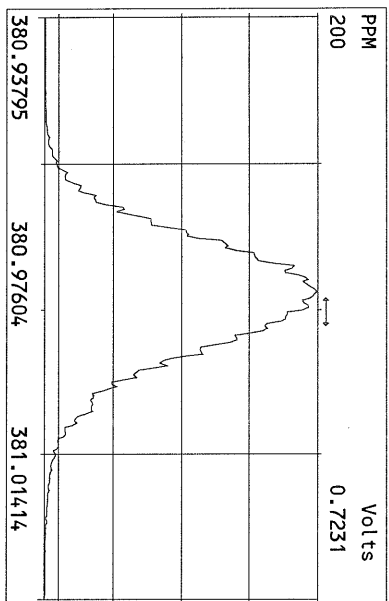
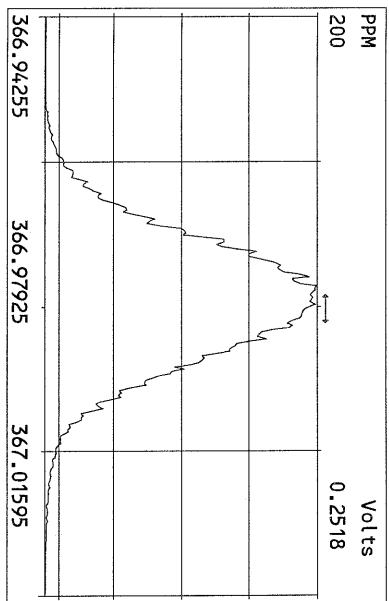


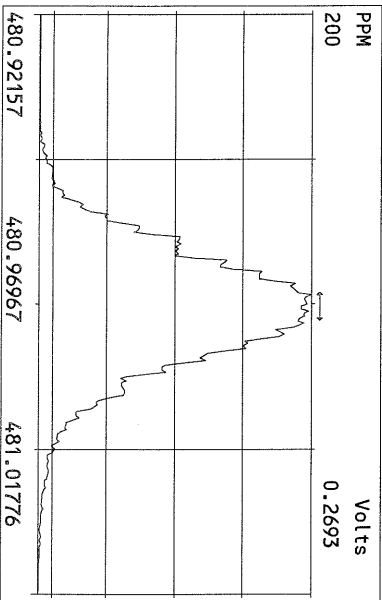
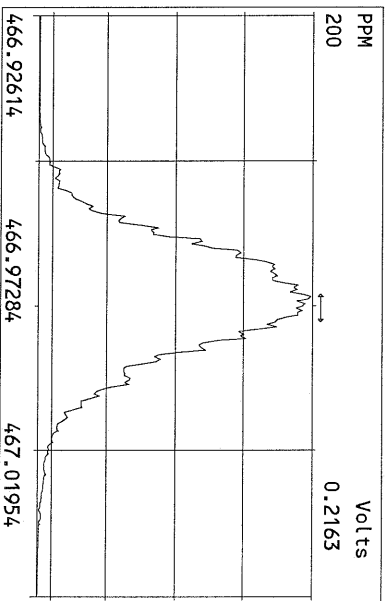
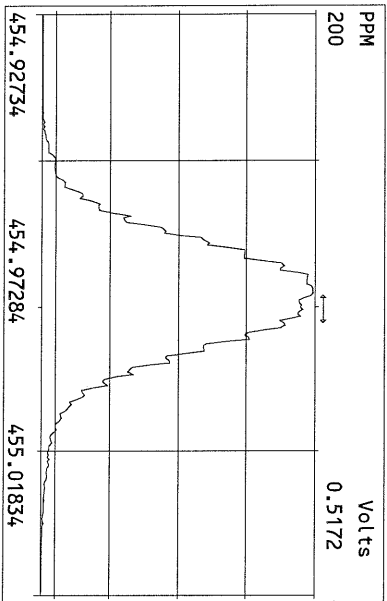
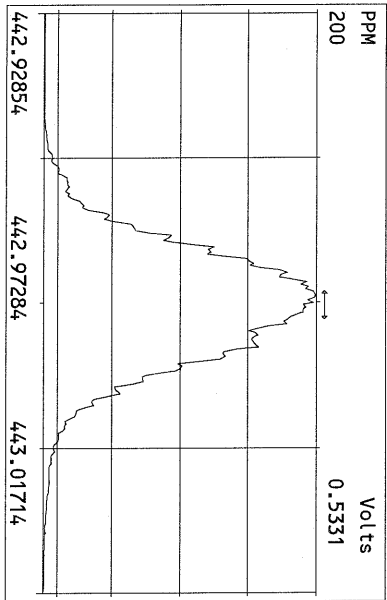
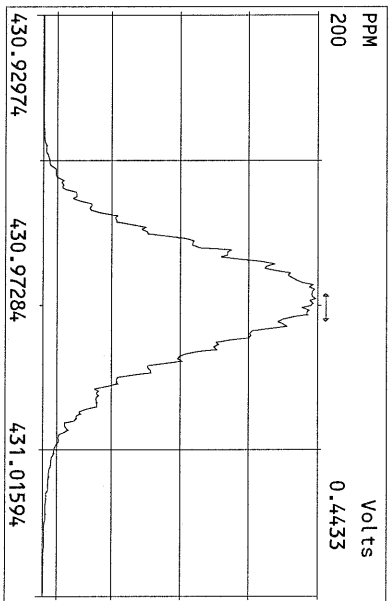
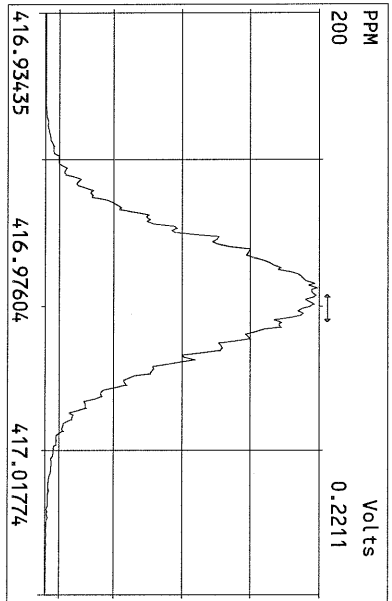
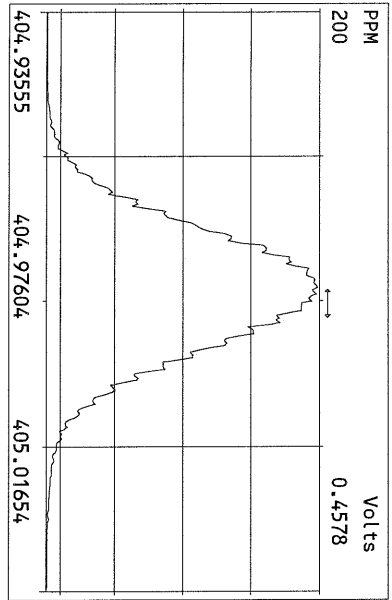
File:17MAY11Z #1-348 Acq:17-MAY-2011 18:42:17 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:6 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051711Z5 File Text:Frontier Analytical Laboratory
100 %

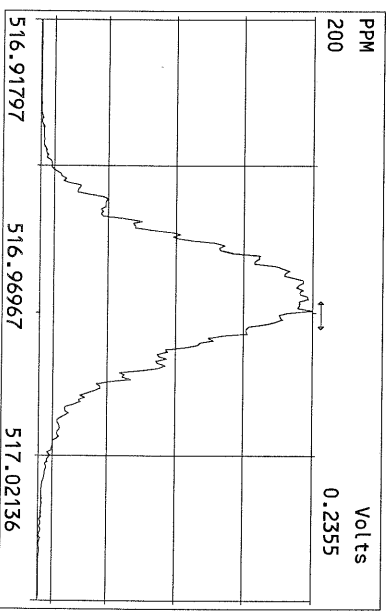
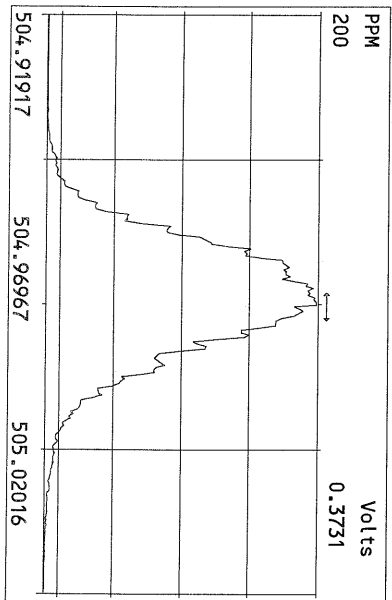
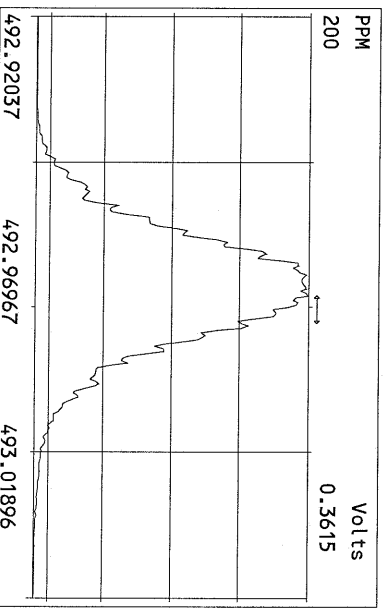
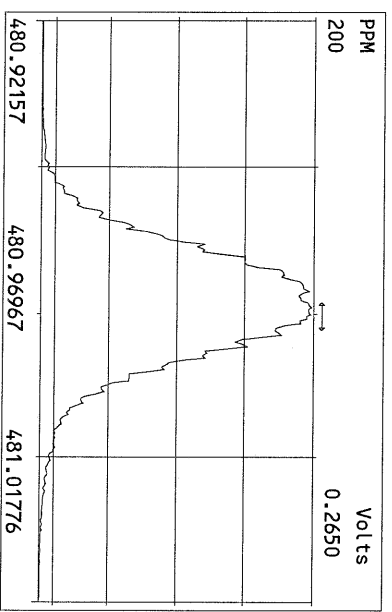
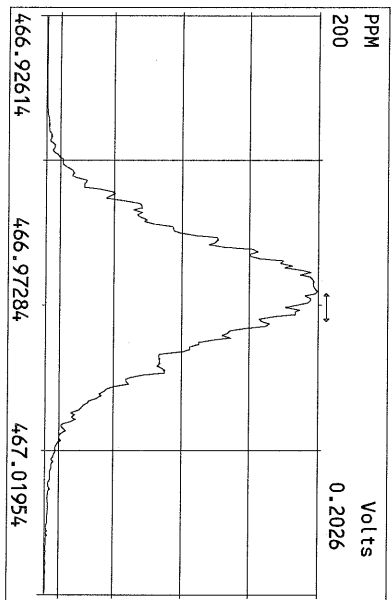
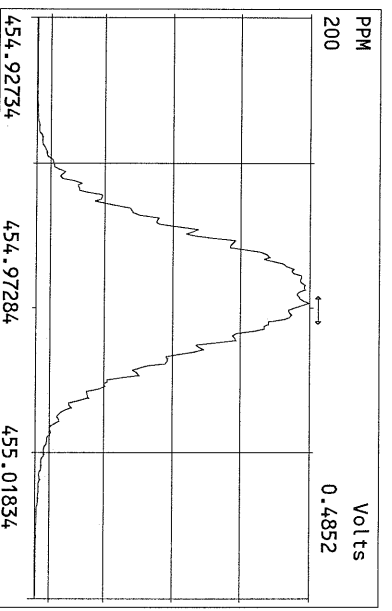
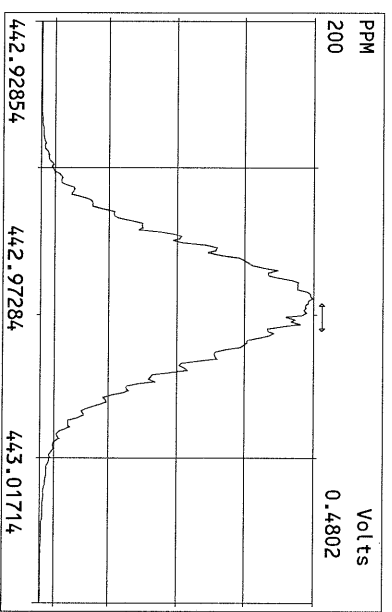
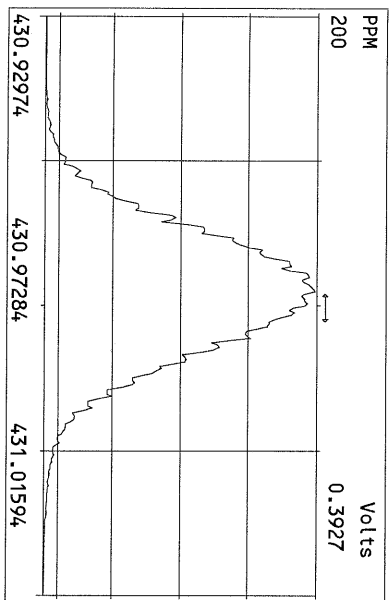












FORM 5
PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Frontier Analytical Laboratory Episode No.:
Contract No.: SAS No.:
Instrument ID: FAL4 Initial Calibration Date: 5/17/11
RT Window Data Filename: 18MAY11Z Sam:1 Analysis Date: 18-MAY-11 Time: 12:16:46
DB-5 IS Data Filename: 18MAY11Z Sam:1 Analysis Date: 18-MAY-11 Time: 12:16:46
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)	24:22	1,3,6,8-TCDF (F)	22:59
1,2,8,9-TCDD (L)	28:22	1,2,8,9-TCDF (L)	28:34
1,2,4,7,9-PeCDD (F)	30:18	1,3,4,6,8-PeCDF (F)	28:27
1,2,3,8,9-PeCDD (L)	33:51	1,2,3,8,9-PeCDF (L)	34:16
1,2,4,6,7,9-HxCDD (F)	36:09	1,2,3,4,6,8-HxCDF (F)	35:17
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)	44:11	1,2,3,4,7,8,9-HpCDF (L)	45:05

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

=====

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT
BETWEEN
COMPARED PEAKS (1)

<25%

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

Analyst: J

Date: 5/18/11

USEPA - ITD

FORM 6B

PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Init. Cal. Date: 5/17/11

Instrument ID: FAL4

GC Column ID: DB5

Analysis Date: 18-MAY-11 12:16:46

CS3 or VER Data Filename: 18MAY11Z

Sam:1

NATIVE ANALYTES	RETENTION TIME		RRT	RRT
	REFERENCE			QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD		1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD		1.001	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD		1.012	1.000-1.019
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF		1.000	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		1.001	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		1.000	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			0.988	0.981-1.003
13C-1,2,3,4,7,8-HxCDF			0.949	0.944-0.970
13C-1,2,3,6,7,8-HxCDF			0.954	0.949-0.975
13C-2,3,4,6,7,8-HxCDF			0.978	0.959-1.021
13C-1,2,3,7,8,9-HxCDF			1.014	0.977-1.047
13C-1,2,3,4,6,7,8-HpCDD			1.127	1.086-1.130
13C-1,2,3,4,6,7,8-HpCDF			1.078	1.043-1.085
13C-1,2,3,4,7,8,9-HpCDF			1.150	1.057-1.154
13C-OCDD			1.267	1.032-1.311
13C-OCDF			1.277	1.000-1.311

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

Analyst: 8Date: 5/18/11

Frontier Analytical Laboratory - Acquisition Log

Run Name:18MAY11Z

Instrument: FAL4

GC: DB5

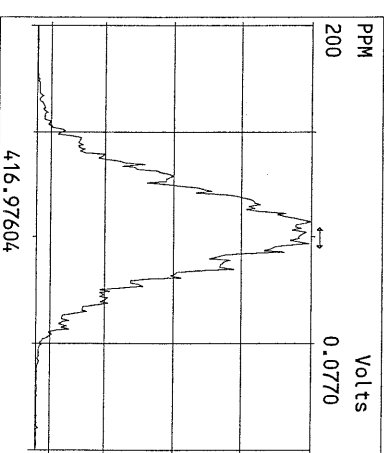
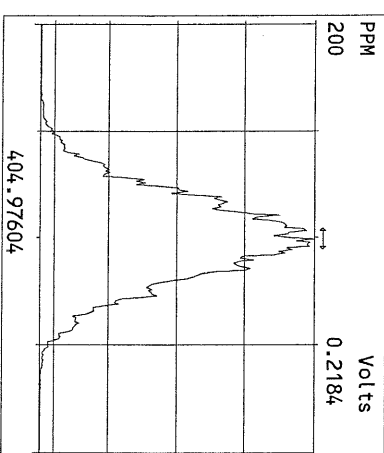
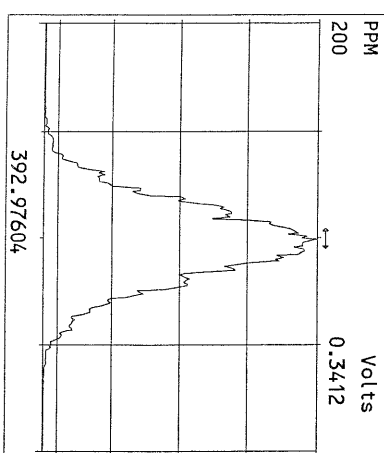
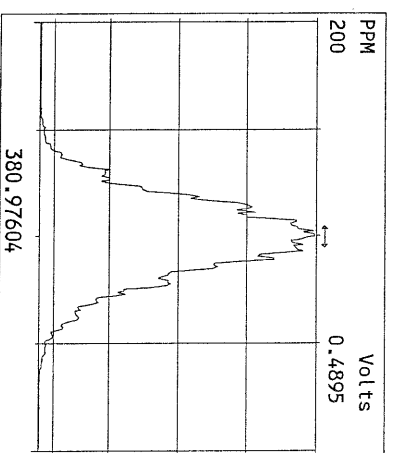
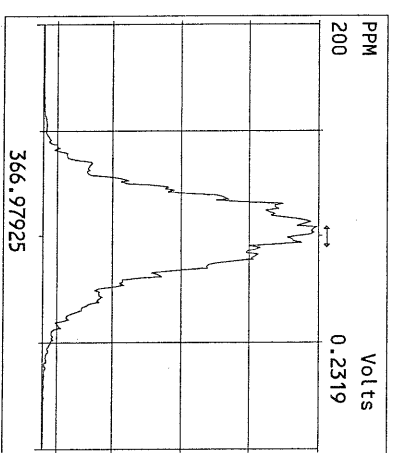
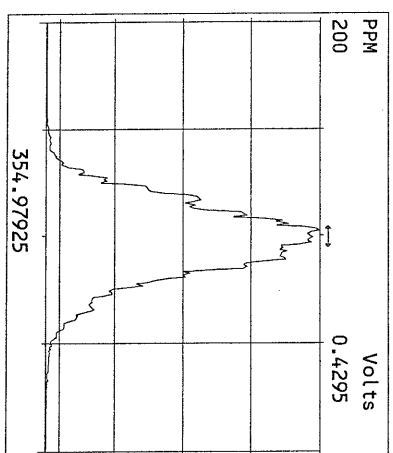
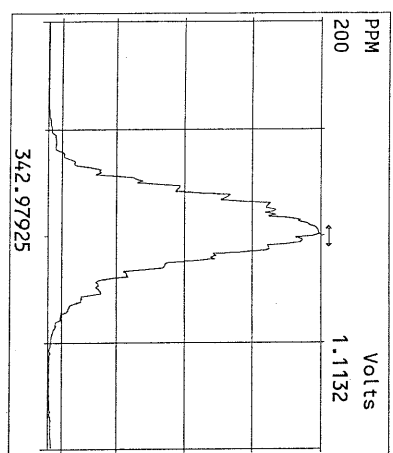
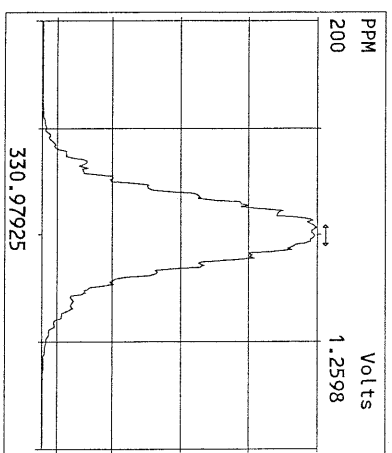
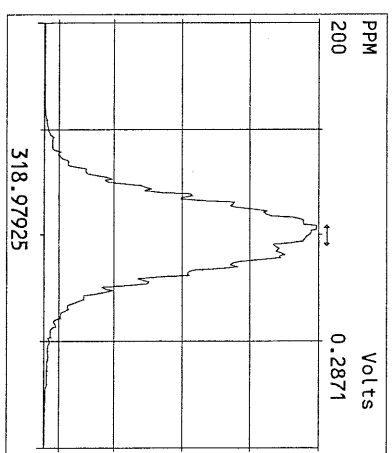
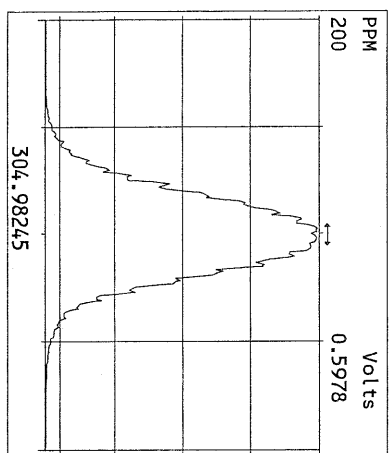
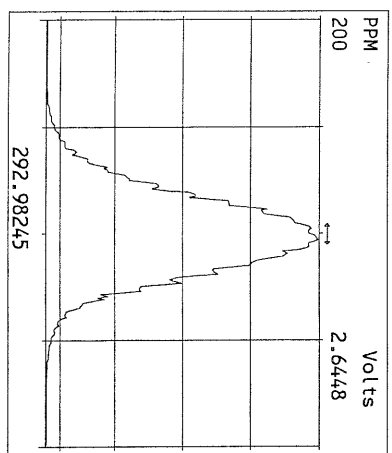
Experiment:PCDD

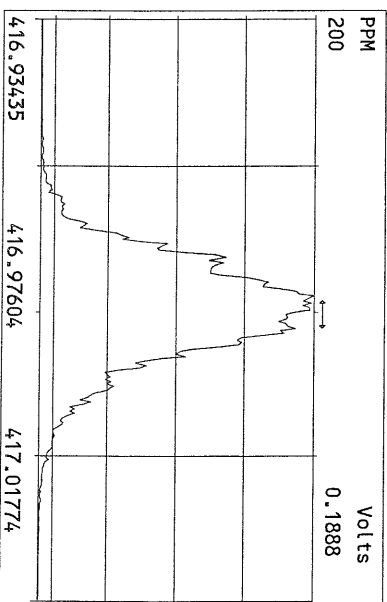
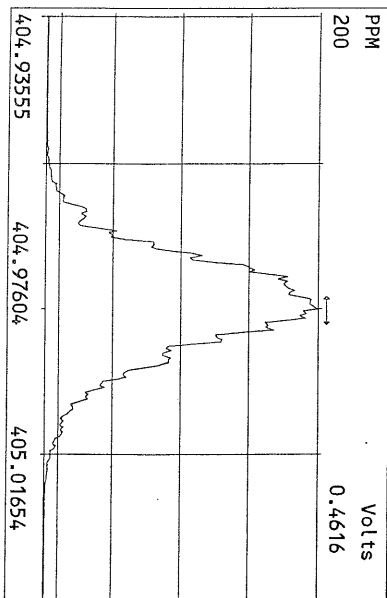
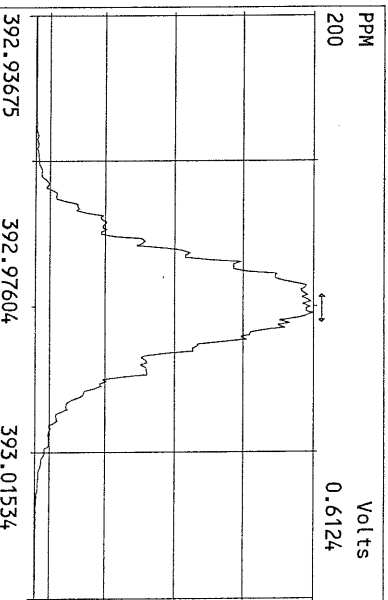
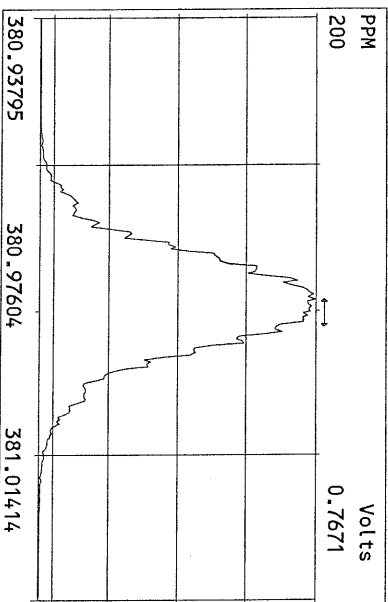
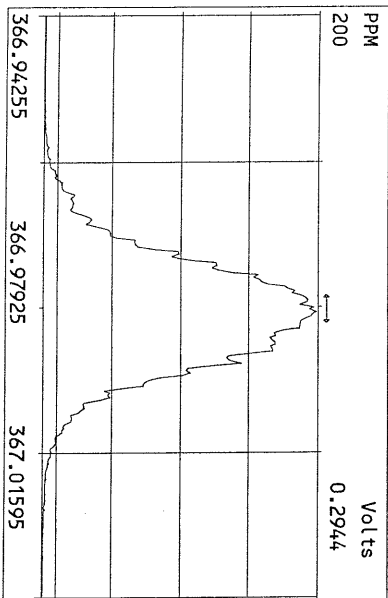
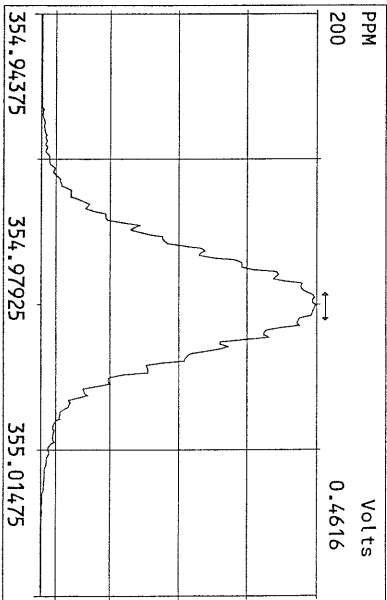
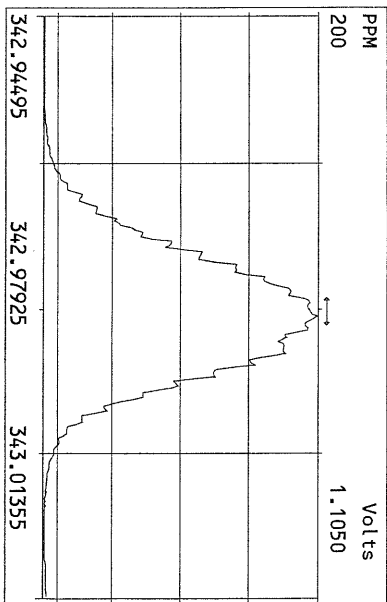
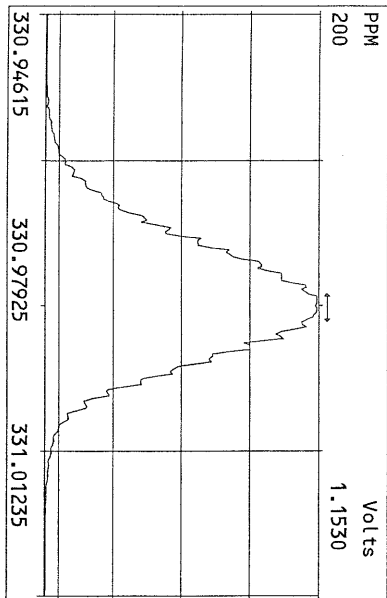
Data File S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
18MAY11Z 1	ST051811Z1	1613 CS3 100511J	18-MAY-11 12:16:46	ST051811Z1	ST051811Z2	BS
18MAY11Z 2	SB051811Z1	Solvent Blank	18-MAY-11 13:11:33	ST051811Z1	ST051811Z2	BS
18MAY11Z 3	2293-001-0001-OPR	OPR	18-MAY-11 14:06:21	ST051811Z1	ST051811Z2	BS
18MAY11Z 4	2293-001-0001-MB	Method Blank	18-MAY-11 15:01:08	ST051811Z1	ST051811Z2	BS
18MAY11Z 5	6739-001-0001-SA	MW02-042611	18-MAY-11 15:55:55	ST051811Z1	ST051811Z2	BS
18MAY11Z 6	6739-002-0001-SA	MW03-042611	18-MAY-11 16:50:42	ST051811Z1	ST051811Z2	BS
18MAY11Z 7	6739-003-0001-SA	MW13-042611	18-MAY-11 17:45:30	ST051811Z1	ST051811Z2	BS
18MAY11Z 8	6740-001-0001-SA	MW07-042711	18-MAY-11 18:40:18	ST051811Z1	ST051811Z2	BS
18MAY11Z 9	6740-002-0001-SA	MW11-042711	18-MAY-11 19:35:05	ST051811Z1	ST051811Z2	BS
18MAY11Z 10	6740-003-0001-SA	MW10-042711	18-MAY-11 20:29:51	ST051811Z1	ST051811Z2	BS
18MAY11Z 11	6740-004-0001-SA	MW09-042711	18-MAY-11 21:24:37	ST051811Z1	ST051811Z2	BS
18MAY11Z 12	6740-005-0001-SA	MW08-042711	18-MAY-11 22:19:23	ST051811Z1	ST051811Z2	BS
18MAY11Z 13	6740-006-0001-SA	MW12-042711	18-MAY-11 23:14:09	ST051811Z1	ST051811Z2	BS
18MAY11Z 14	SB051811Z2	Solvent Blank	19-MAY-11 00:08:56	ST051811Z1	ST051811Z2	BS
18MAY11Z 15	ST051811Z2	1613 CS3 100511J	19-MAY-11 01:03:43	ST051811Z1	ST051811Z2	BS
18MAY11Z 16	QC051811Z1	NEWQC	19-MAY-11 01:58:32	ST051811Z2	ST051811Z3	BS
18MAY11Z 17	QC051811Z2	SSQC	19-MAY-11 02:53:20	ST051811Z2	ST051811Z3	BS
18MAY11Z 18	SB051811Z3	Solvent Blank	19-MAY-11 03:48:07	ST051811Z2	ST051811Z3	BS

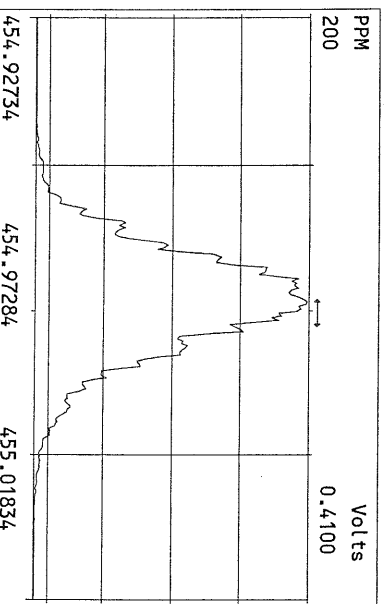
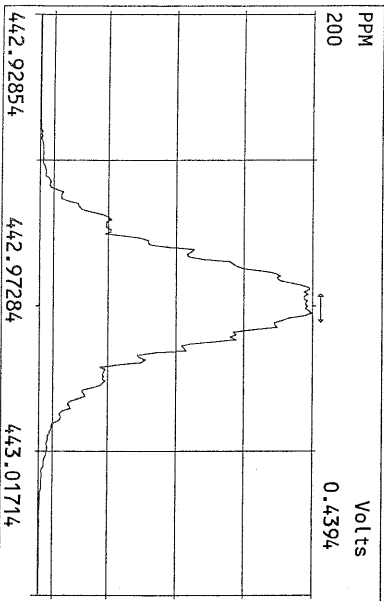
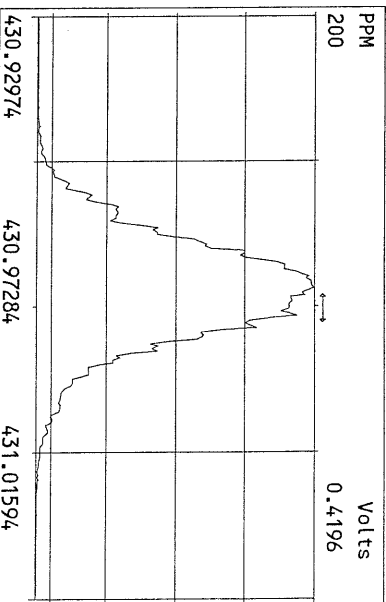
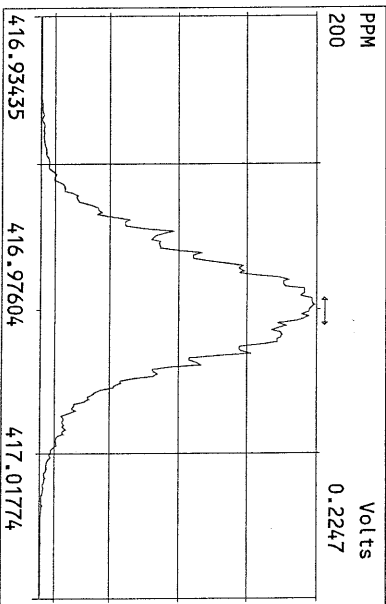
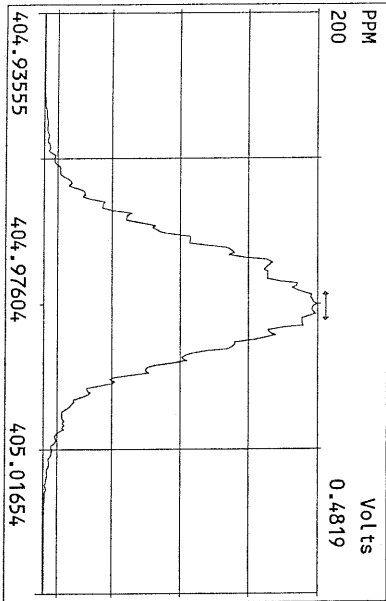
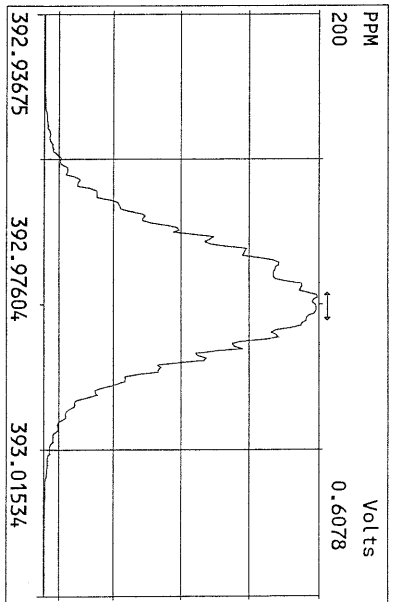
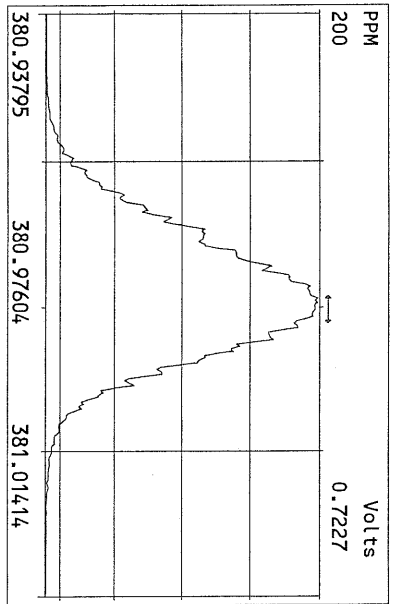
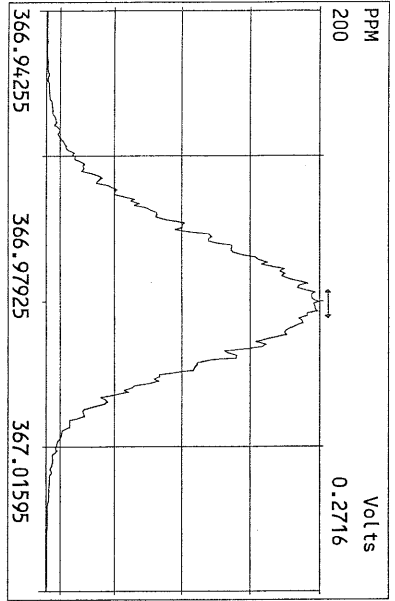
6/5/11

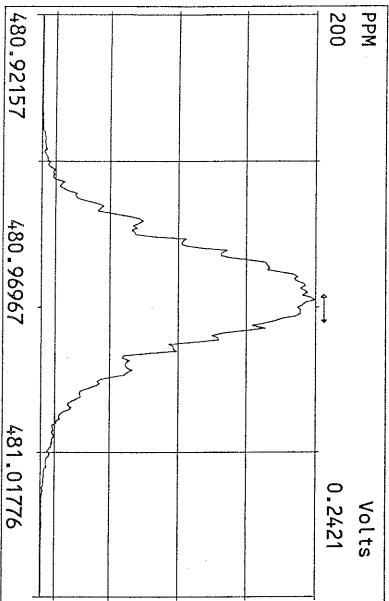
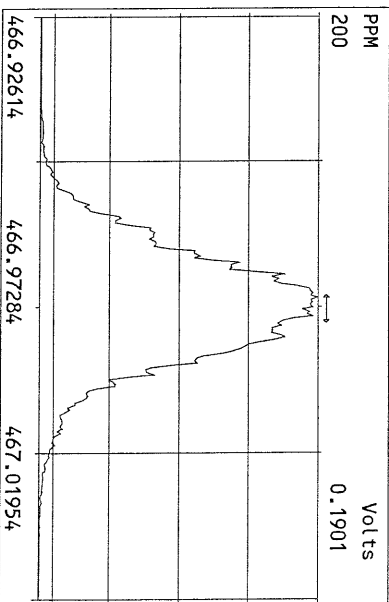
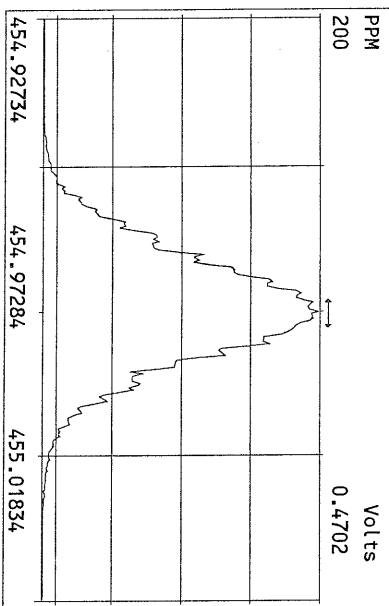
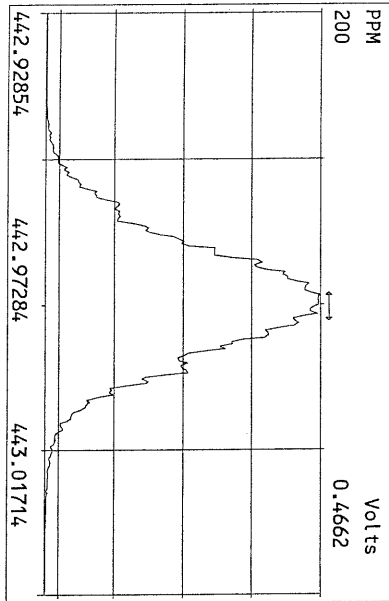
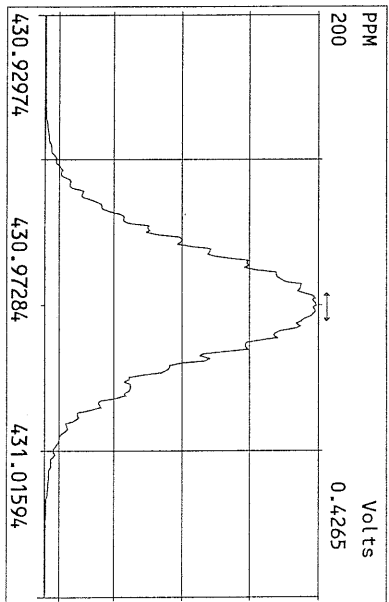
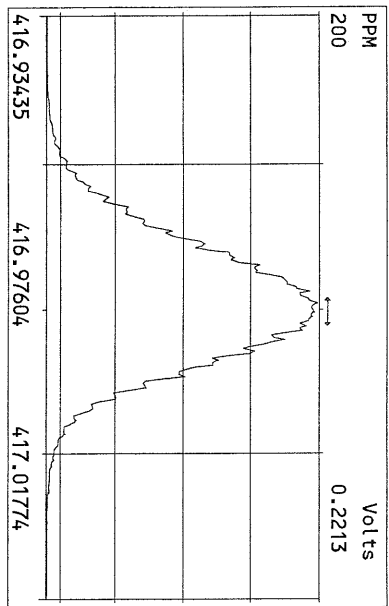
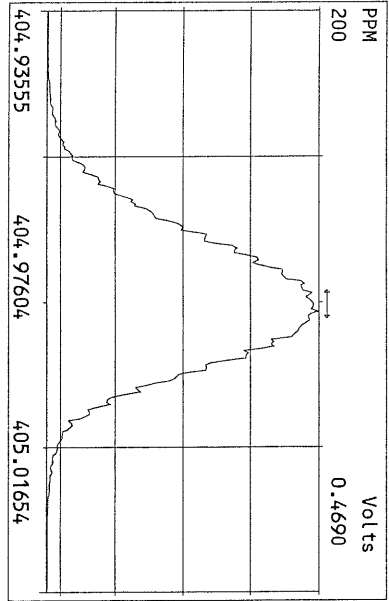
Data Backed Up: _____

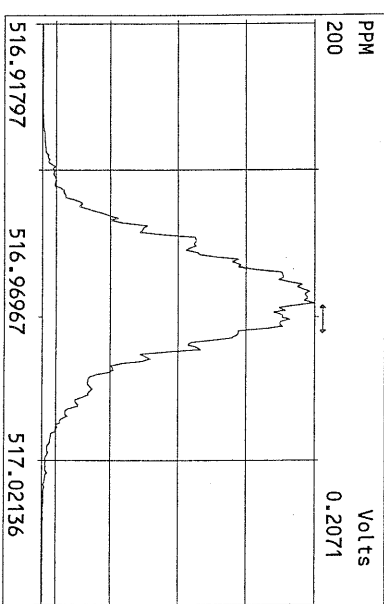
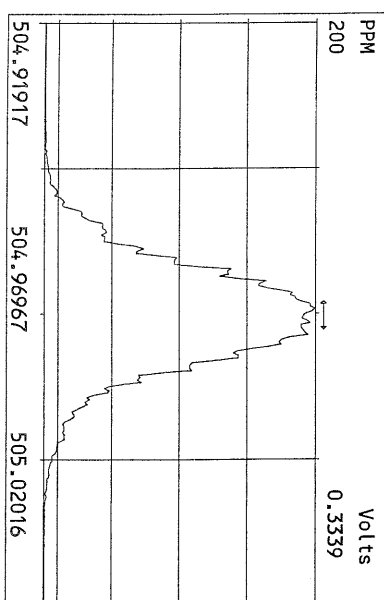
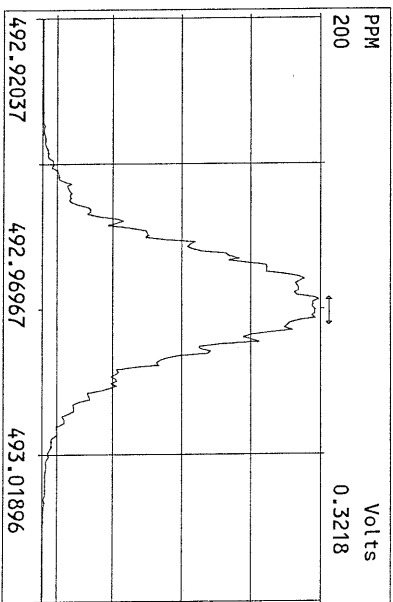
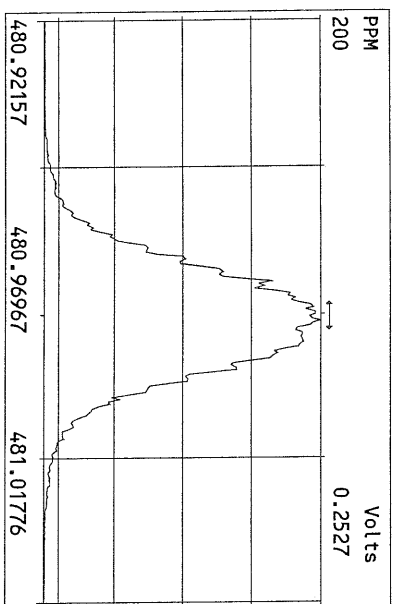
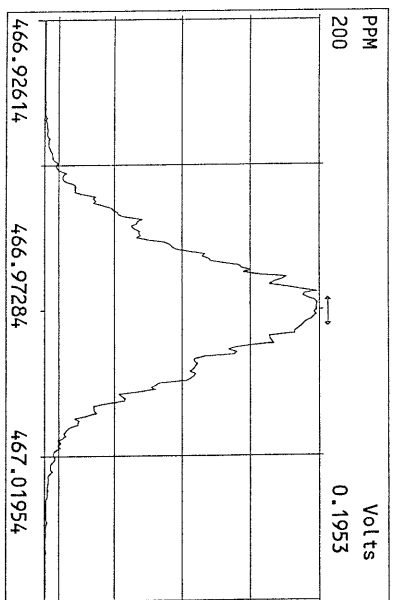
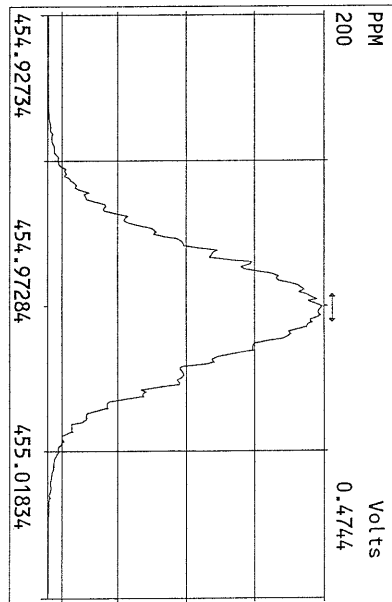
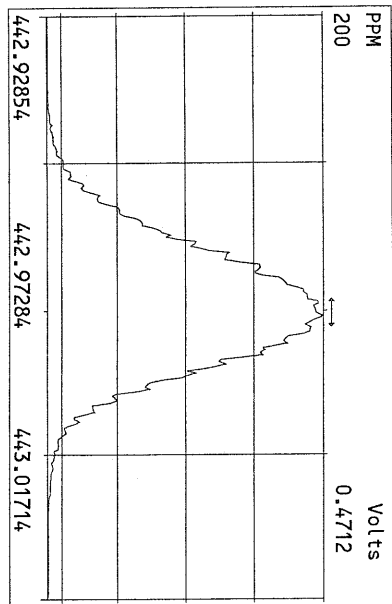
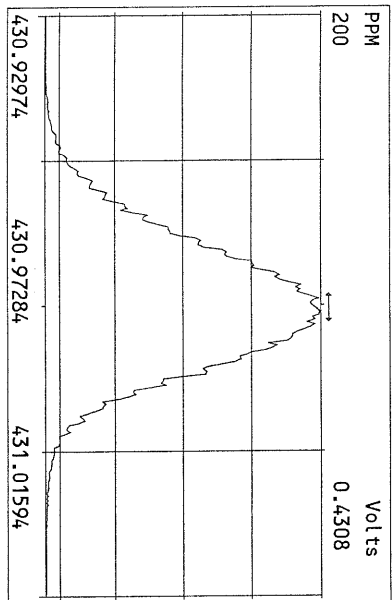
Date: _____



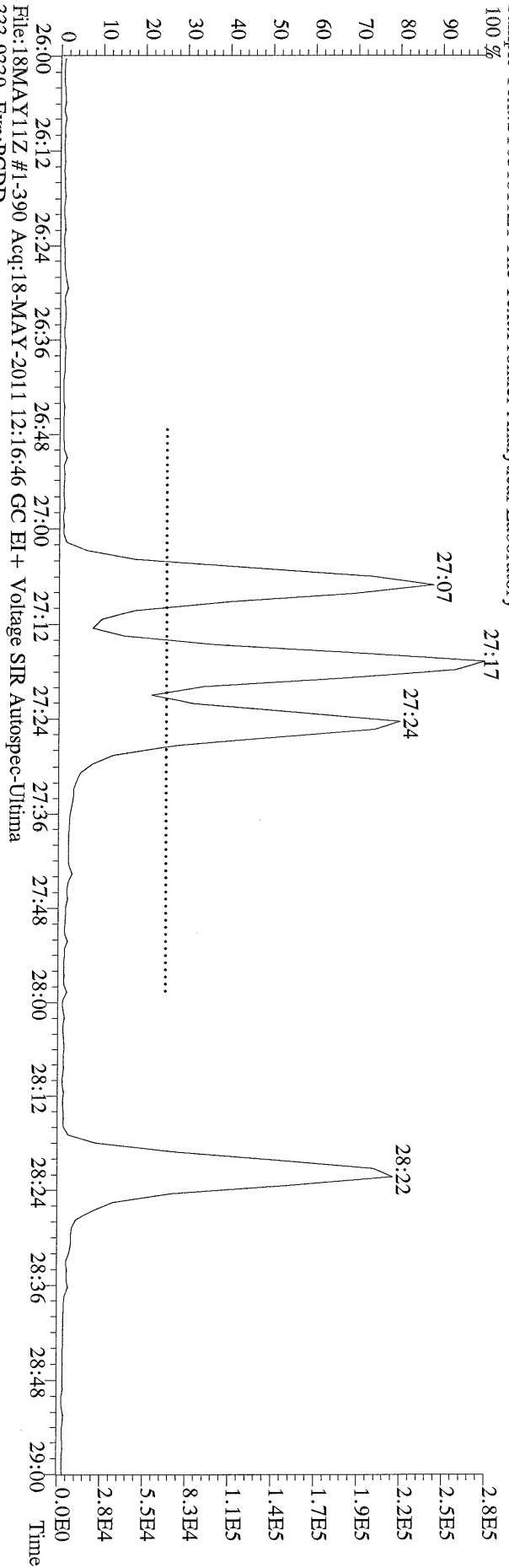




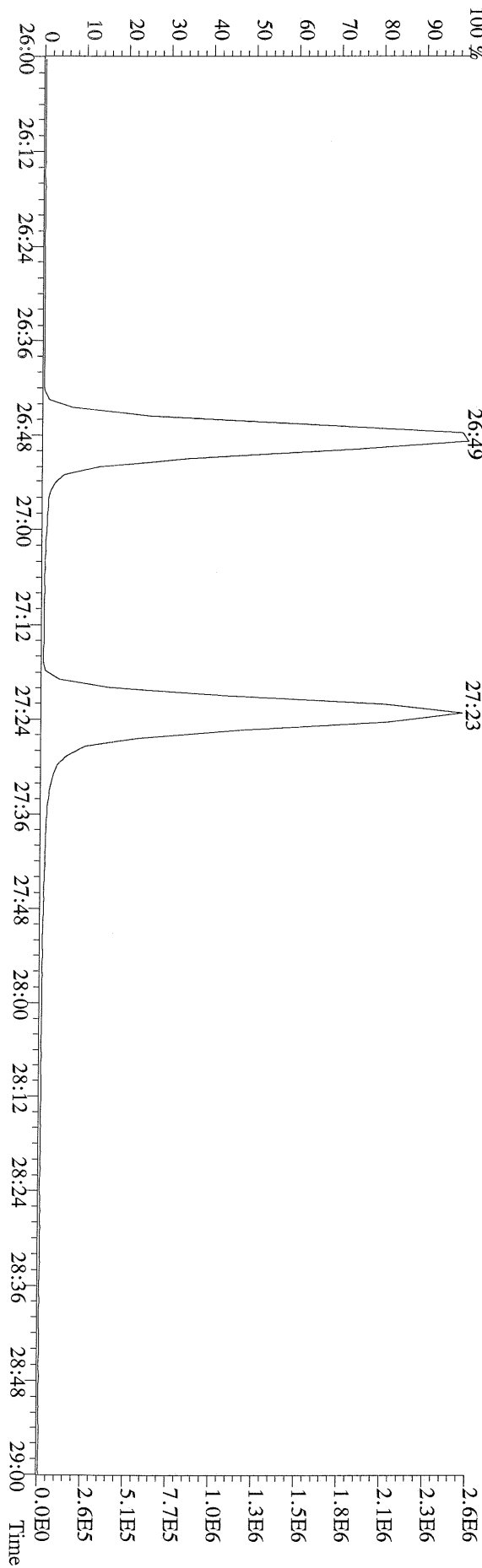




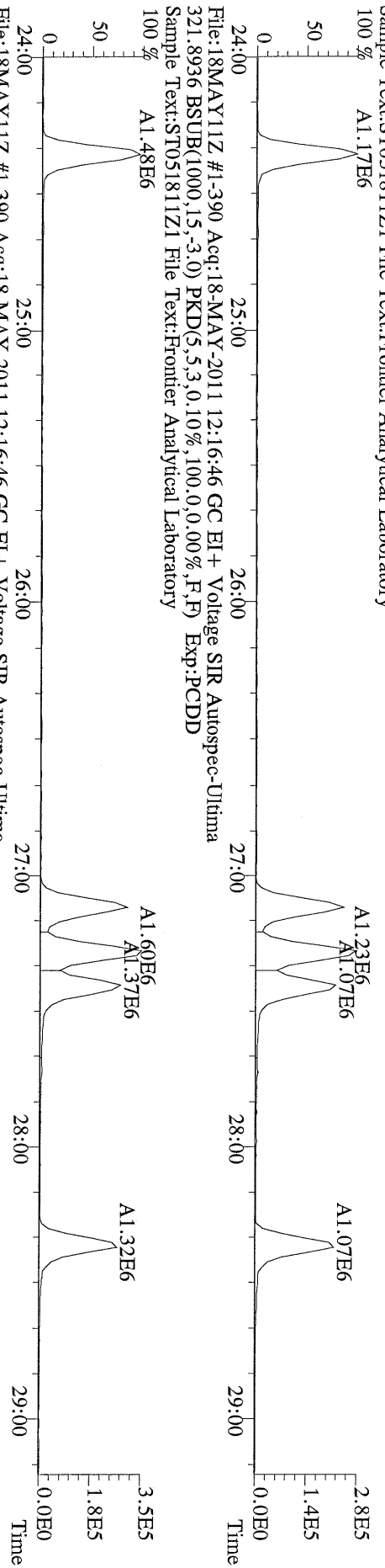
File: 18MAY11Z #1-390 Acq: 18-MAY-2011 12:16:46 GC EI + Voltage SIR Autospec-Ultima
319.8965 Exp: PCDD
Sample Text: ST051811Z1 File Text: Frontier Analytical Laboratory
100 %



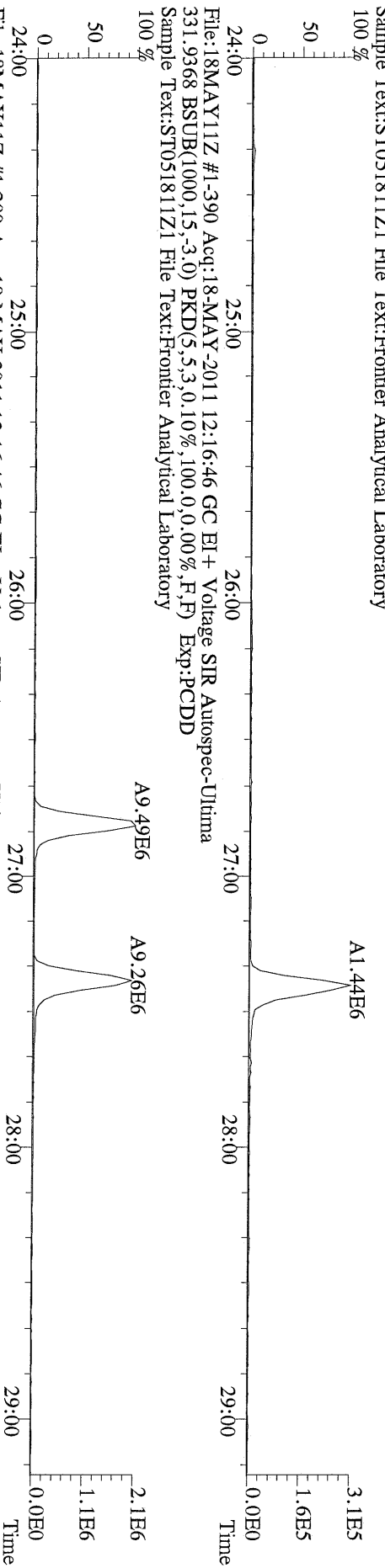
File: 18MAY11Z #1-390 Acq: 18-MAY-2011 12:16:46 GC EI + Voltage SIR Autospec-Ultima
333.9339 Exp: PCDD
Sample Text: ST051811Z1 File Text: Frontier Analytical Laboratory
100 %



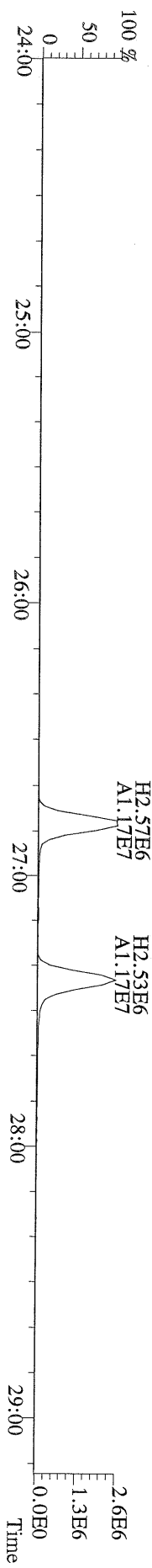
File:18MAYY11Z #1-390 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
319.8965 BSUB(1000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



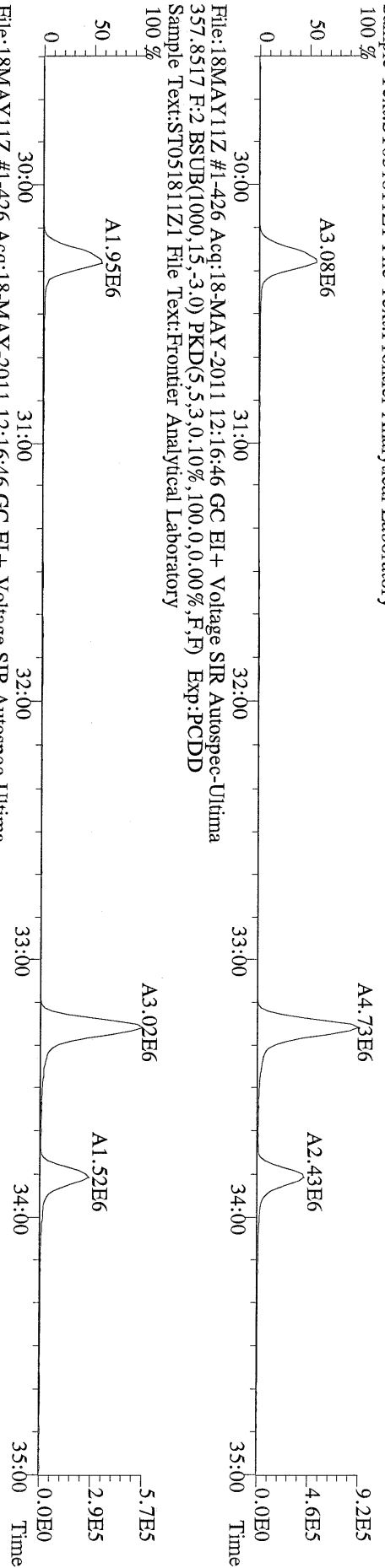
File:18MAYY11Z #1-390 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
327.8847 BSUB(1000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



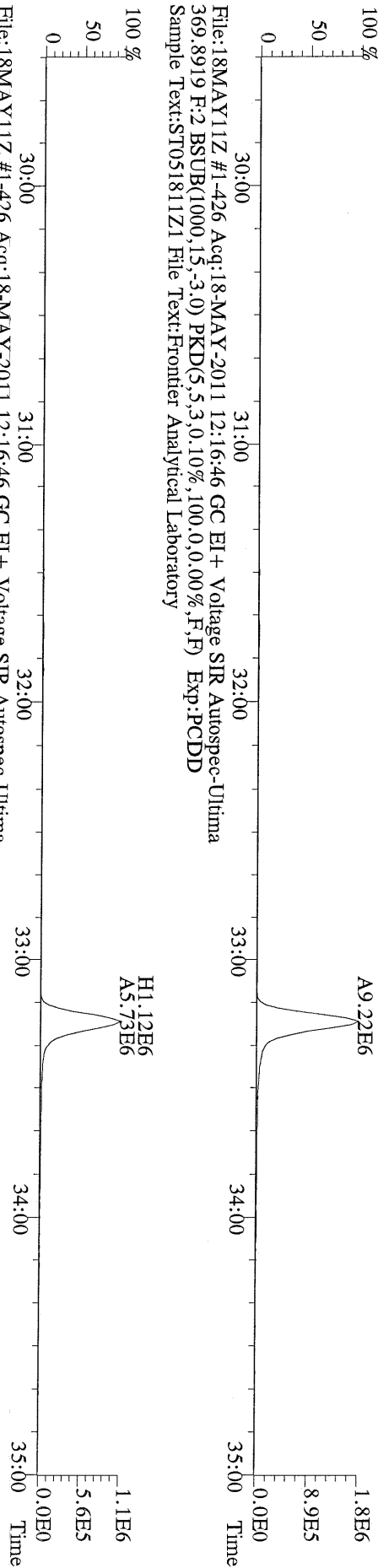
File:18MAYY11Z #1-390 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
331.9368 BSUB(1000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



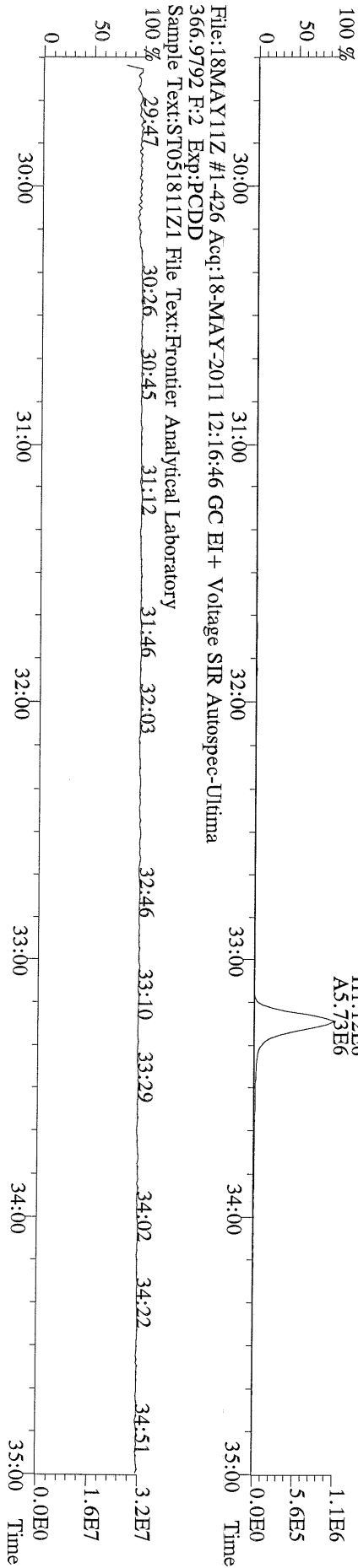
File: 18MAY11Z #1-426 Acq: 18-MAY-2011 12:16:46 GC EI + Voltage SIR Autospec-Ultima
355.8546 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



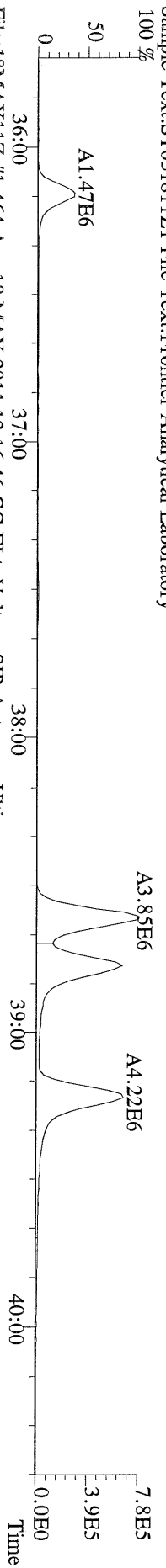
File: 18MAY11Z #1-426 Acq: 18-MAY-2011 12:16:46 GC EI + Voltage SIR Autospec-Ultima
367.8949 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



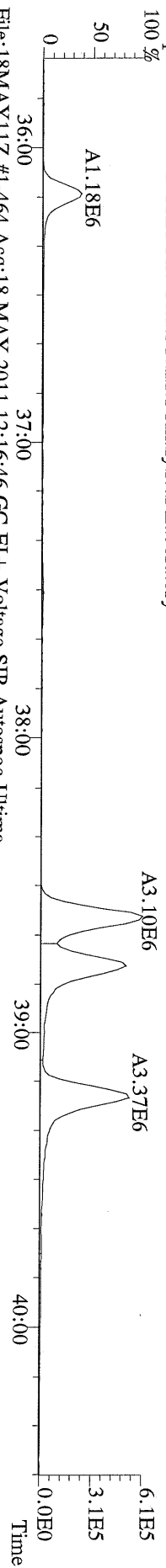
File: 18MAY11Z #1-426 Acq: 18-MAY-2011 12:16:46 GC EI + Voltage SIR Autospec-Ultima
369.8919 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



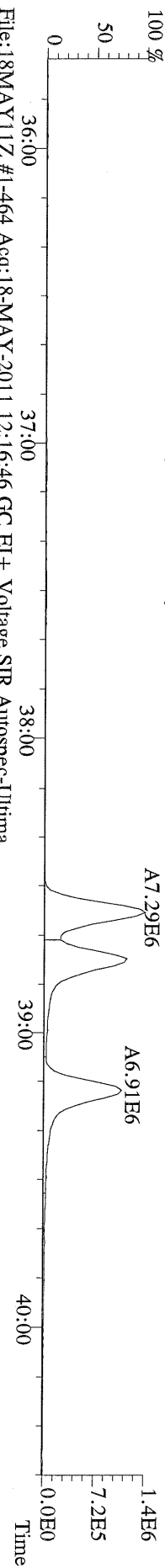
File:18MAY11Z #1-464 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
389.8156 F:3 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



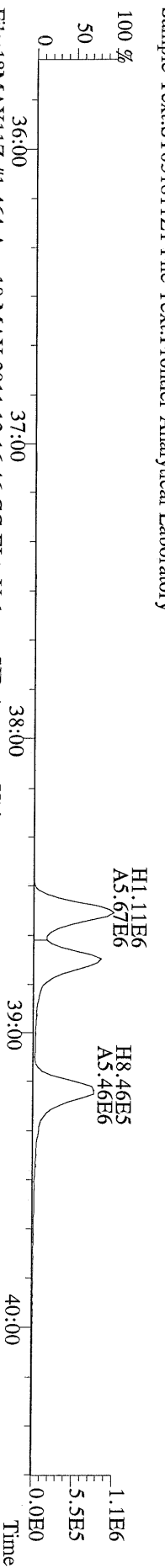
File:18MAY11Z #1-464 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
391.8127 F:3 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



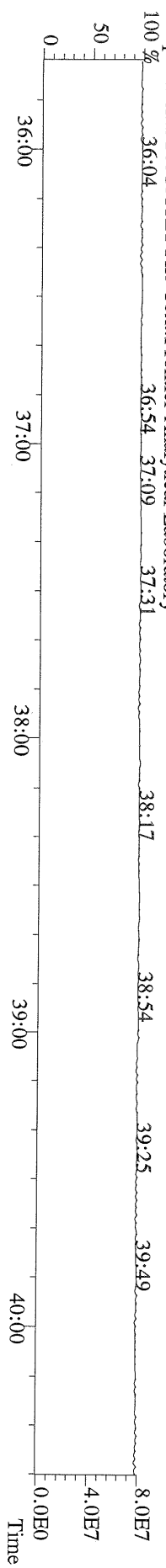
File:18MAY11Z #1-464 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
401.8559 F:3 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



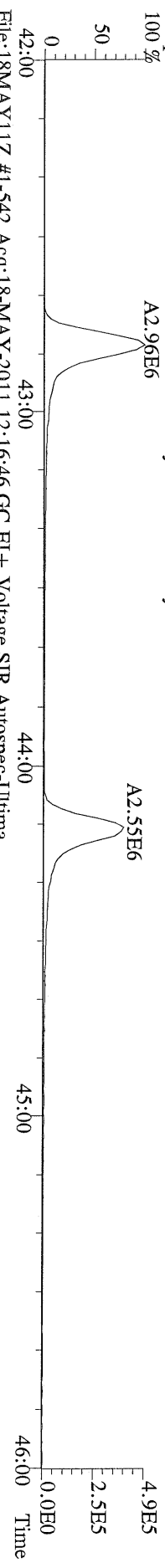
File:18MAY11Z #1-464 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
403.8530 F:3 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



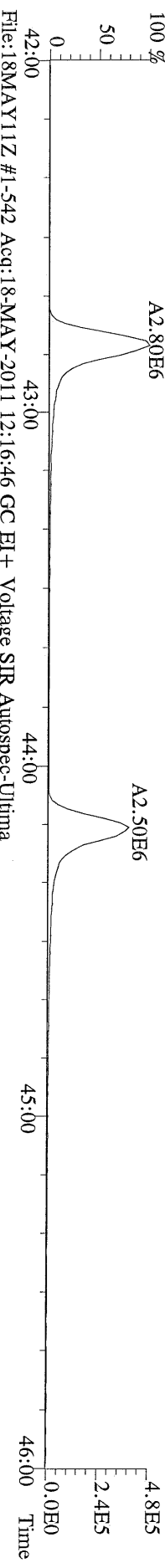
File:18MAY11Z #1-464 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
380.9760 F:3 Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



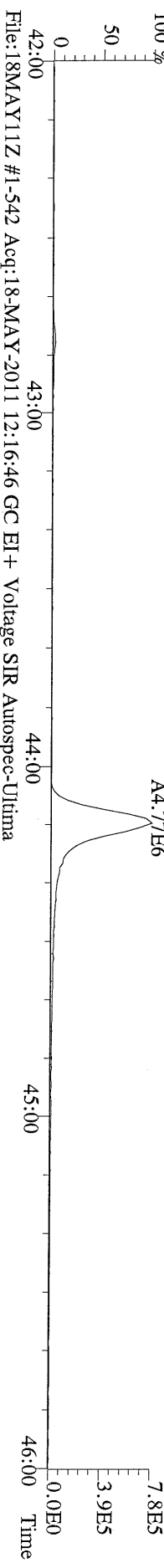
File:18MAY11Z #1-542 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
423.7767 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



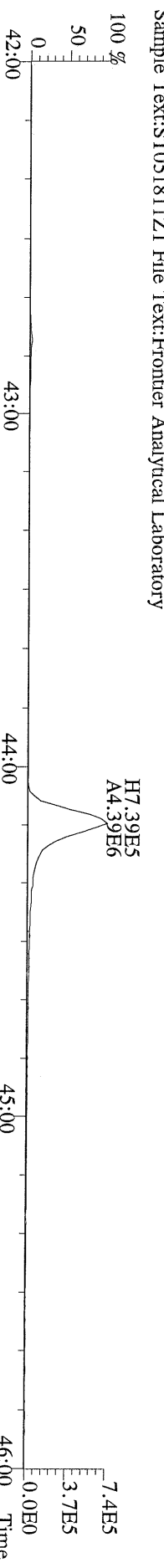
File:18MAY11Z #1-542 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
425.7737 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



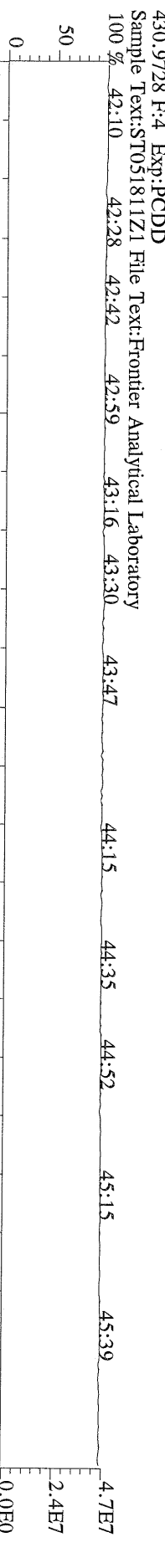
File:18MAY11Z #1-542 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
435.8169 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



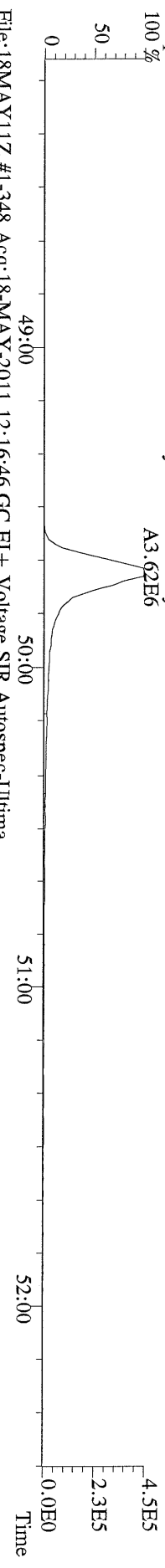
File:18MAY11Z #1-542 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
437.8140 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



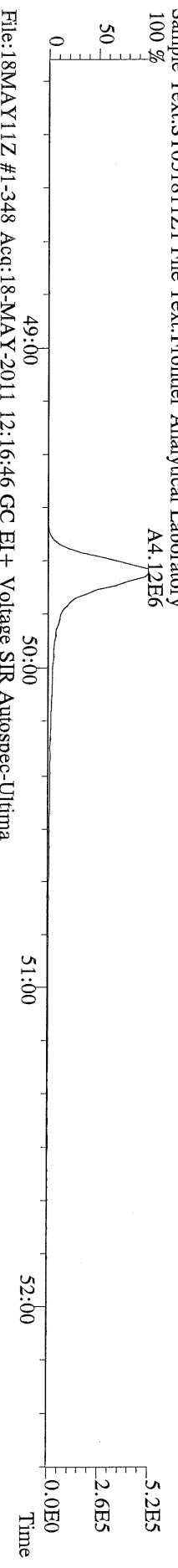
File:18MAY11Z #1-542 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
430.9728 F:4 Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



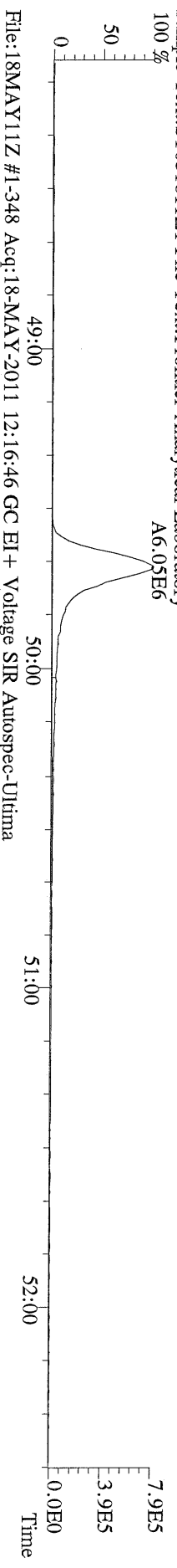
File:18MAY11Z #1-348 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
457.7377 F:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory
100 %



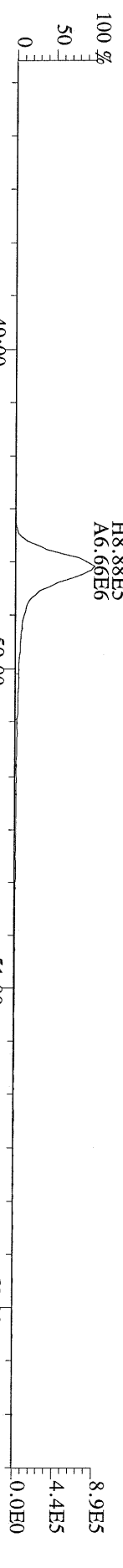
File:18MAY11Z #1-348 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
459.7348 F:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory
100 %



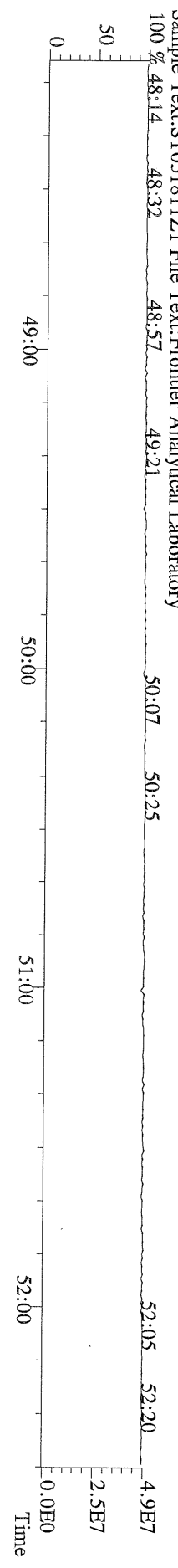
File:18MAY11Z #1-348 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
469.7780 F:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory
100 %



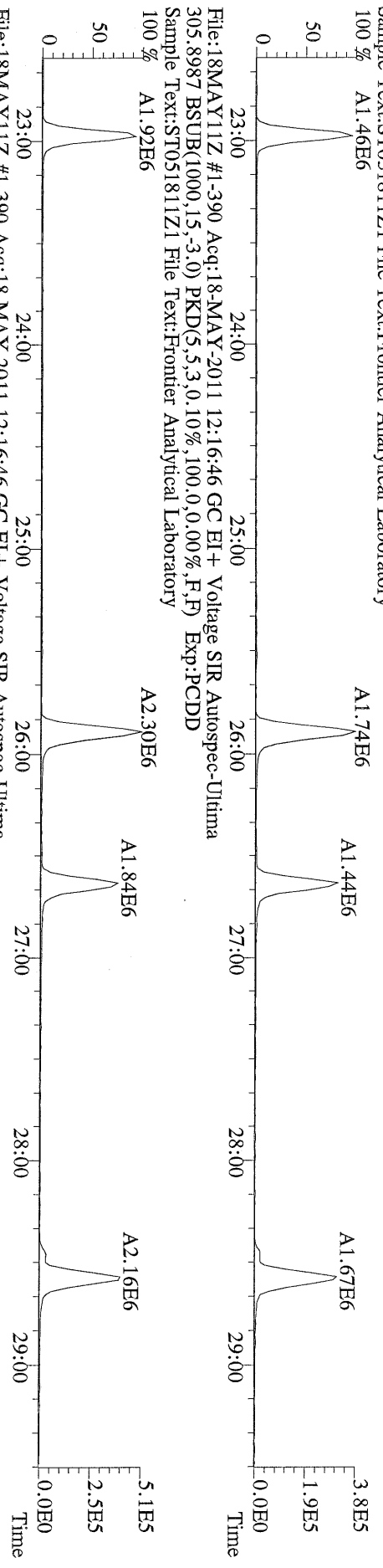
File:18MAY11Z #1-348 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
471.7750 F:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



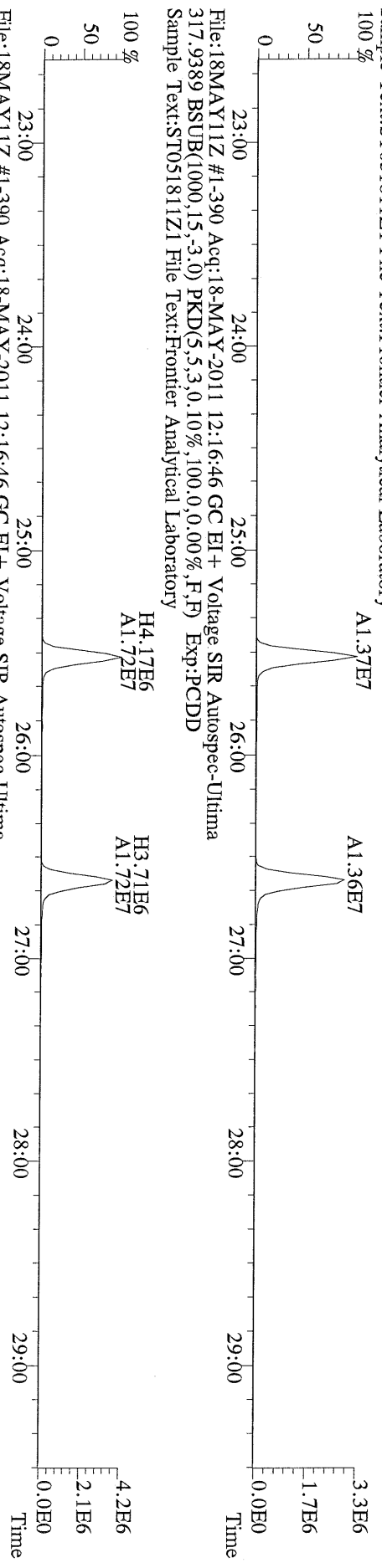
File:18MAY11Z #1-348 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
454.9728 F:5 Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory
100 %



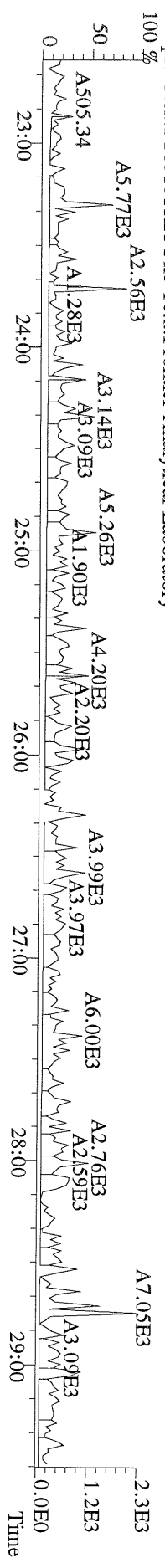
File:18MAY11Z #1-390 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
303.9016 BSUB(1000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



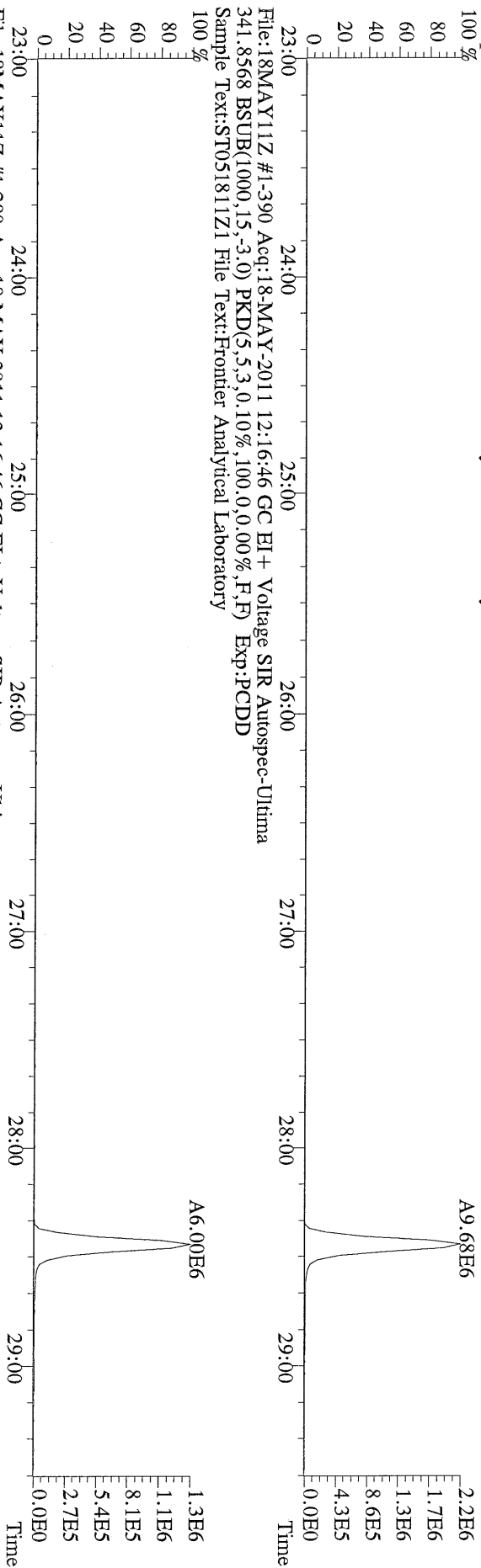
File:18MAY11Z #1-390 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
315.9419 BSUB(1000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



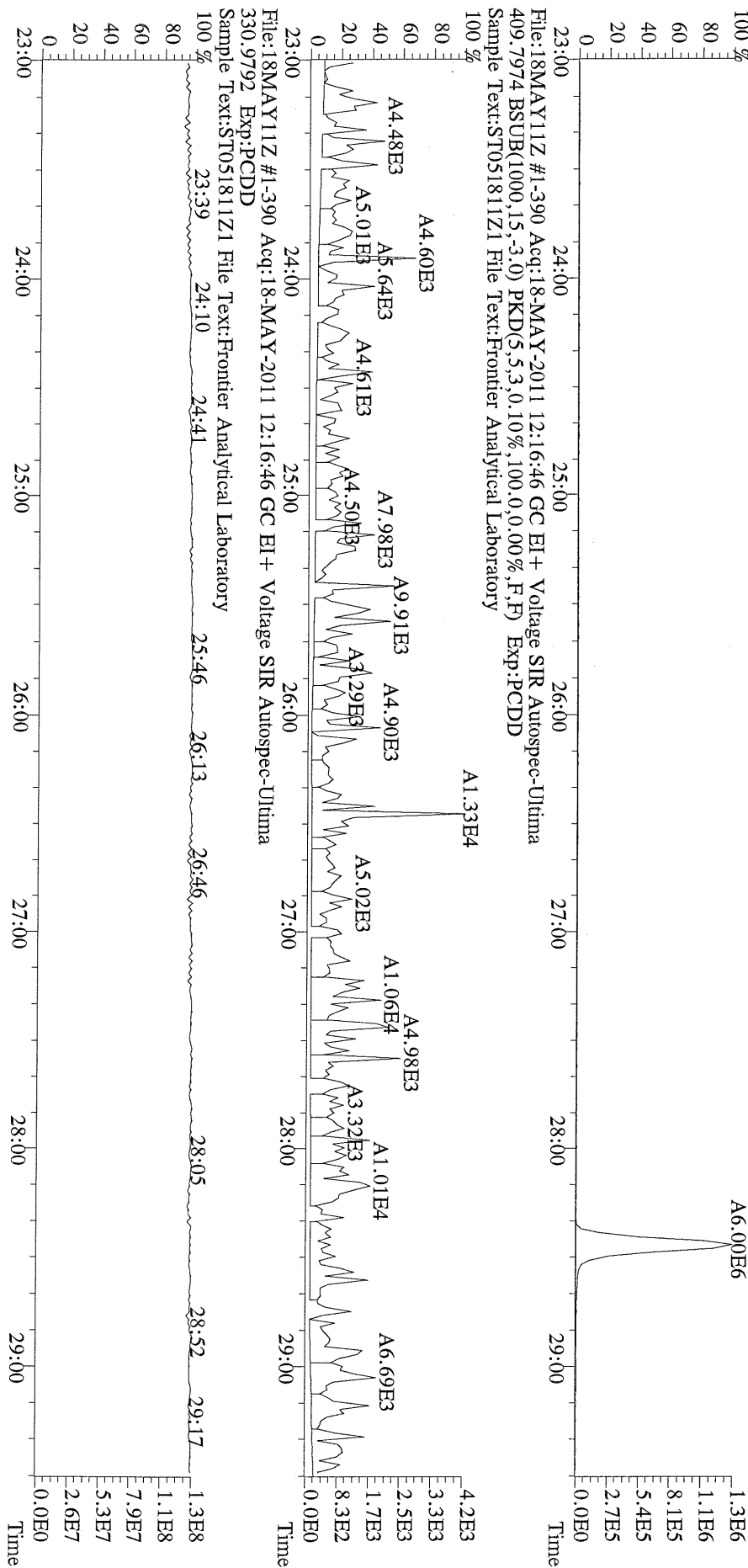
File:18MAY11Z #1-390 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
375.8364 BSUB(1000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



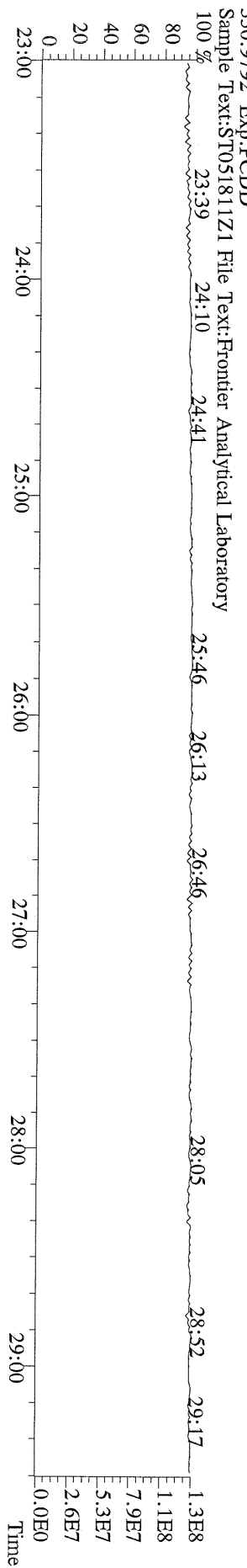
File:18MAY11Z #1-390 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 BSUB(1000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



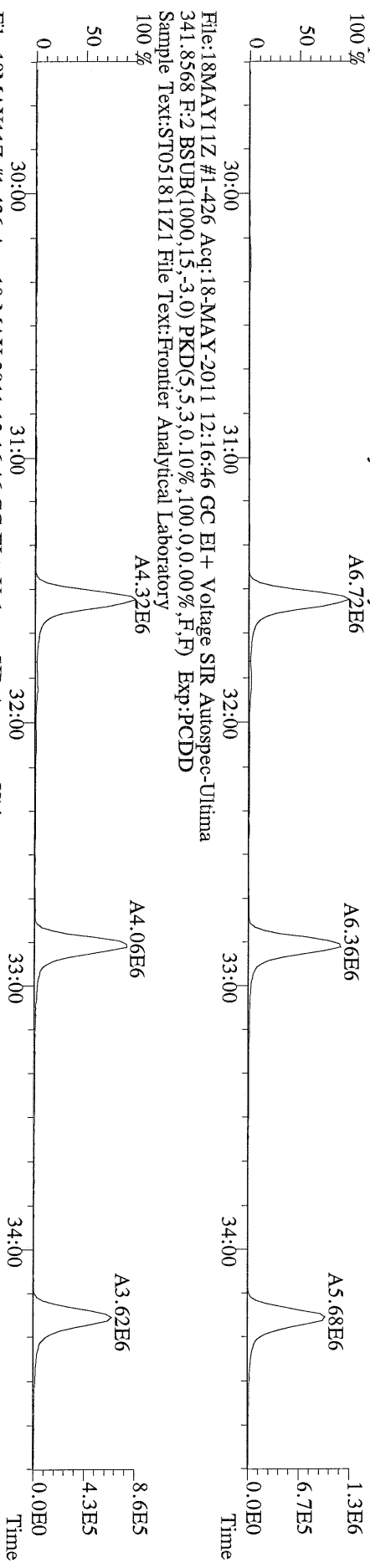
File:18MAY11Z #1-390 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
 341.8568 BSUB(1000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



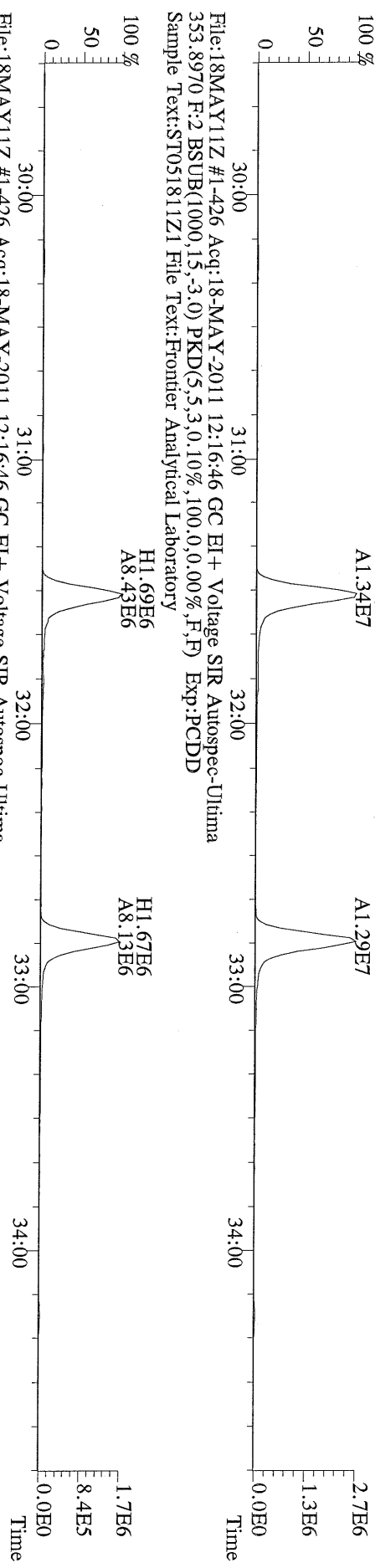
File:18MAY11Z #1-390 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
 330.9792 Exp:PCDD
 Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



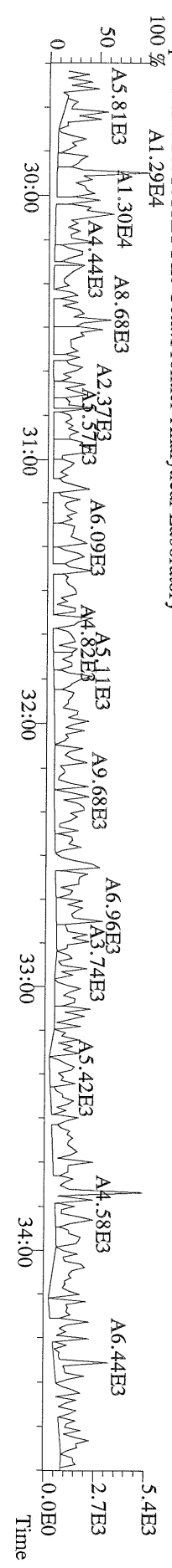
File:18MAY11Z #1-426 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
339.8597 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



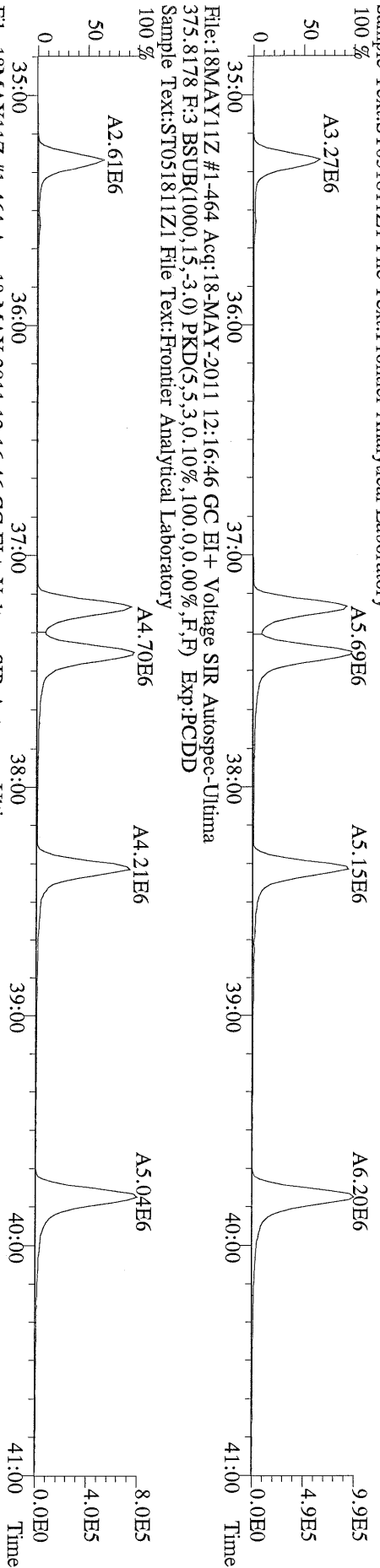
File:18MAY11Z #1-426 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
351.9000 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



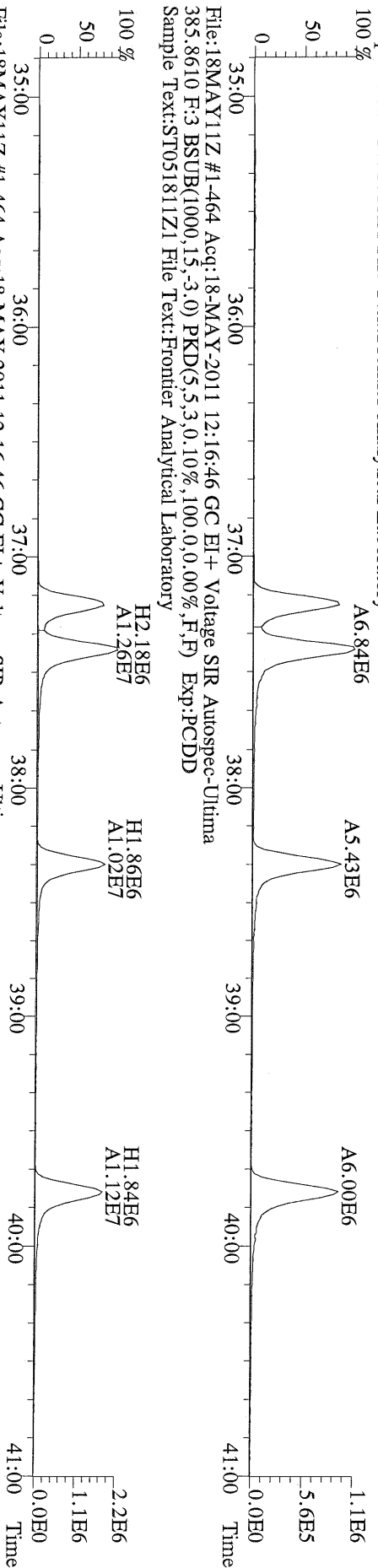
File:18MAY11Z #1-426 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
409.7974 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



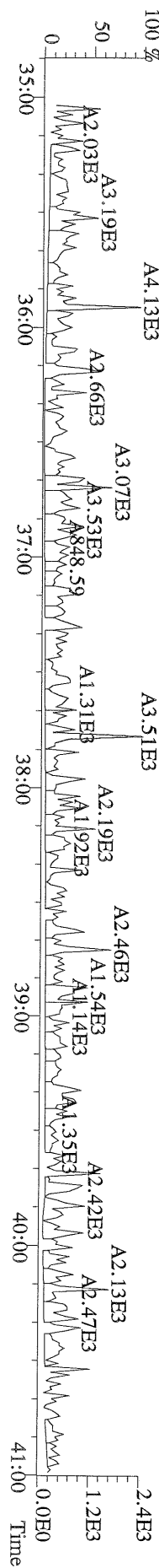
File:18MAY11Z #1-464 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
373.8207 F:3 BSUB(1000,15,-3.0) PKD(5,5,3.0,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



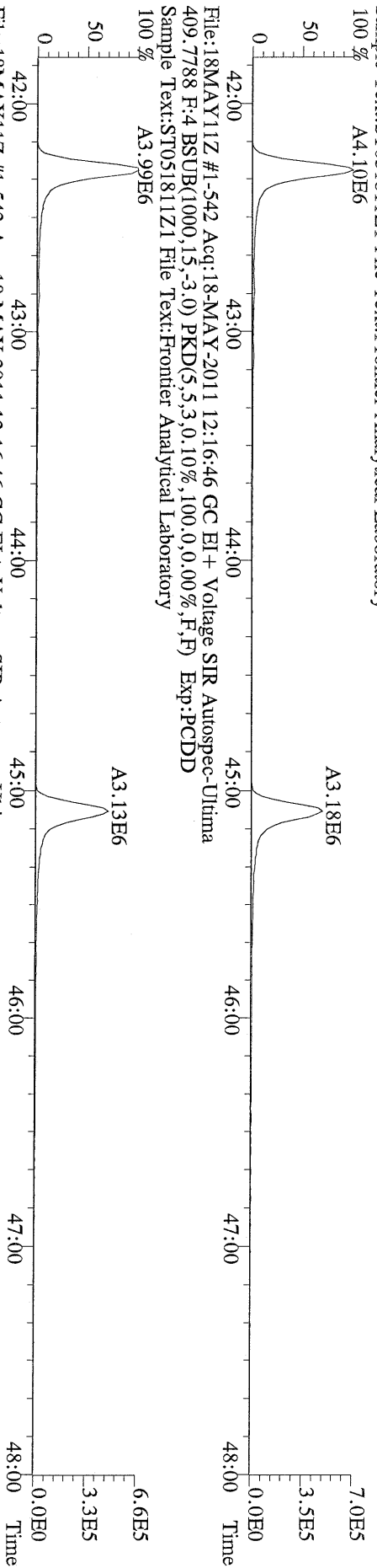
File:18MAY11Z #1-464 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
383.8639 F:3 BSUB(1000,15,-3.0) PKD(5,5,3.0,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



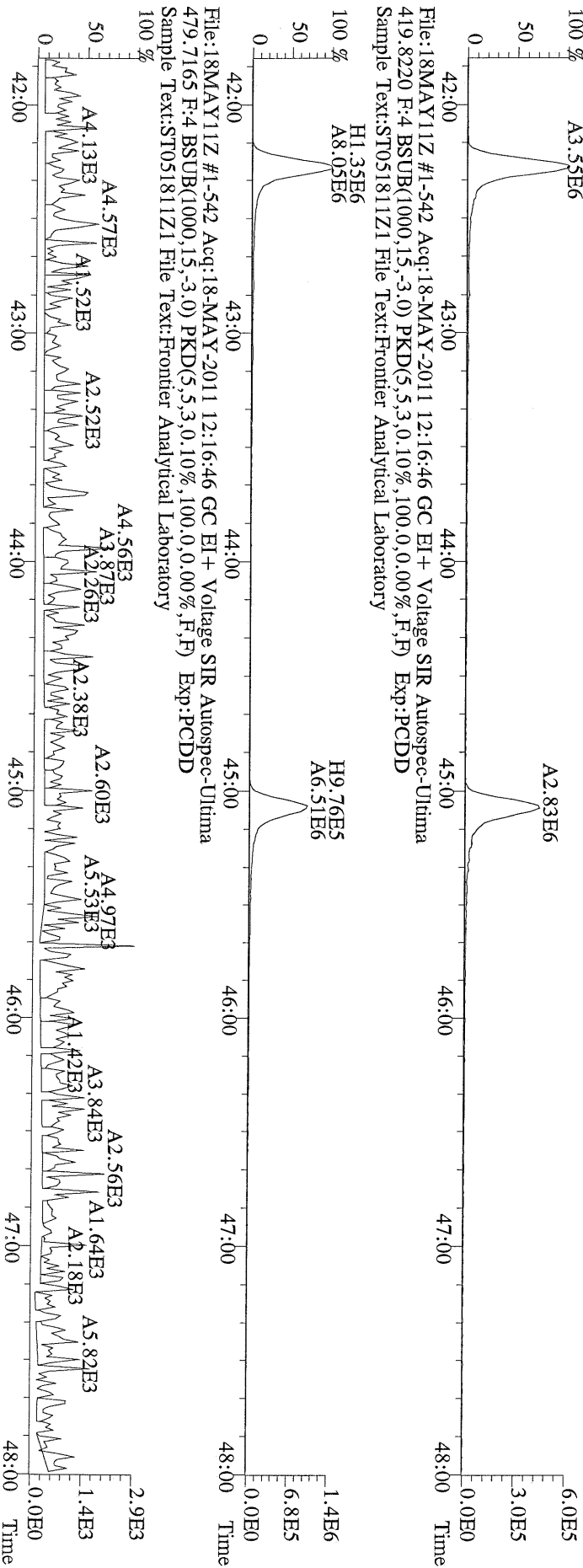
File:18MAY11Z #1-464 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
445.7555 F:3 BSUB(1000,15,-3.0) PKD(5,5,3.0,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



File:18MAY11Z #1-542 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
407.7818 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



File:18MAY11Z #1-542 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
417.8253 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



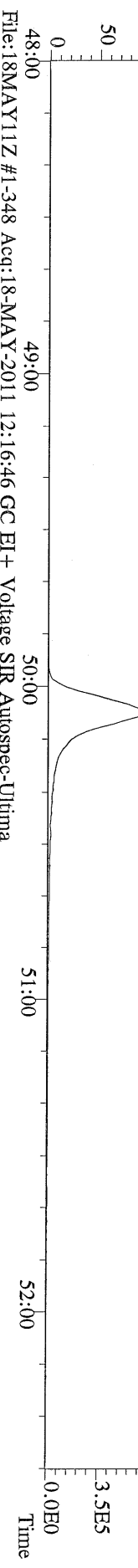
File:18MAY11Z #1-542 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
479.7165 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



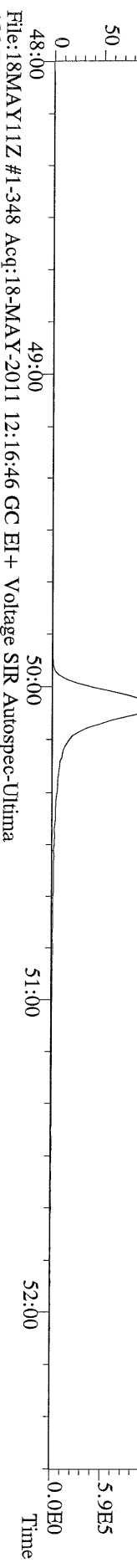
File:18MAY11Z #1-348 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
441.7428 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



File:18MAY11Z #1-348 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
443.7398 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory



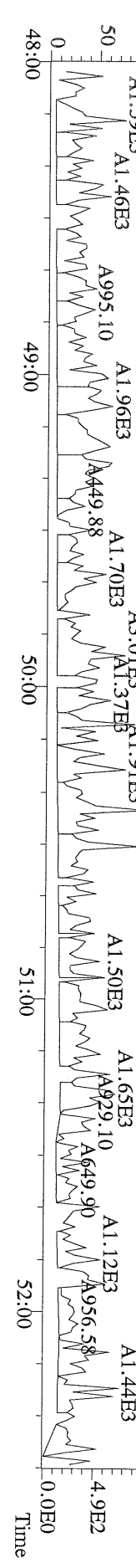
File:18MAY11Z #1-348 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
453.7831 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory

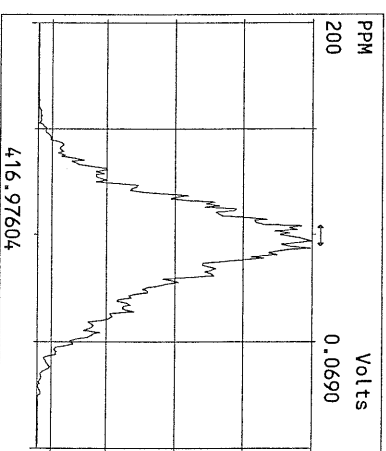
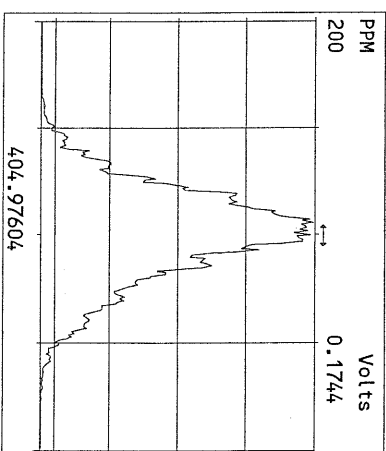
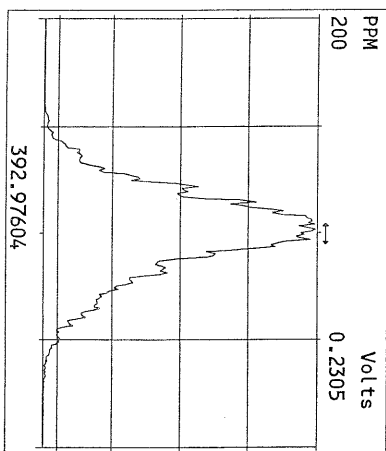
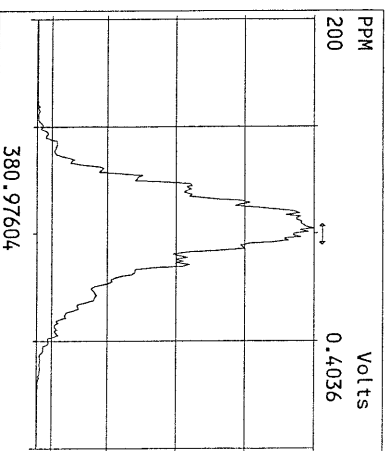
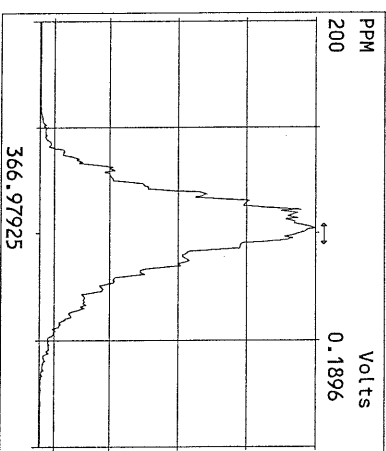
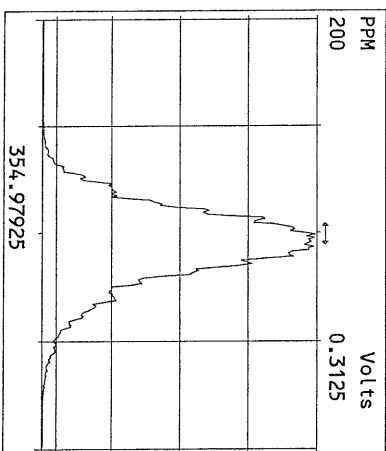
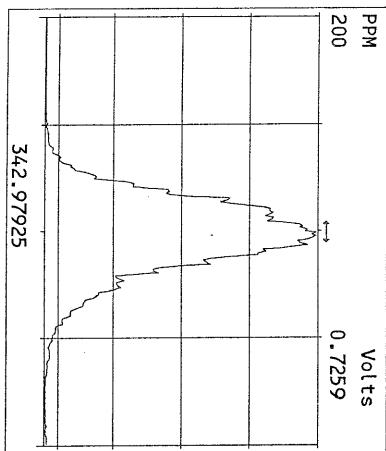
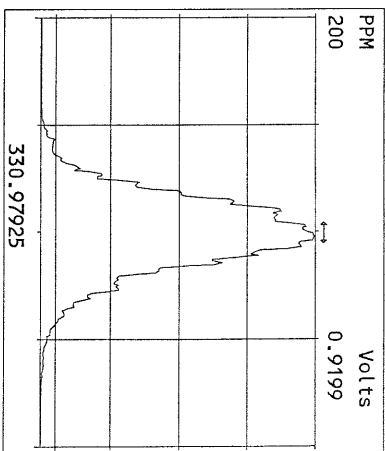
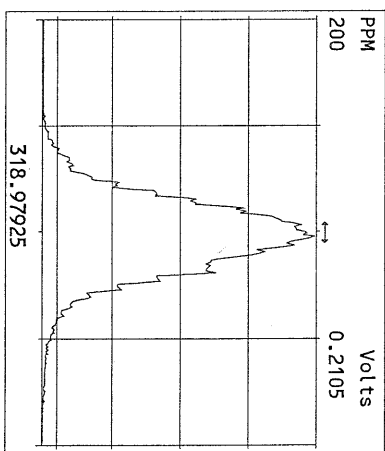
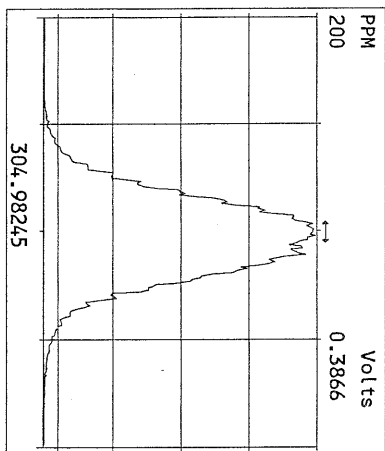
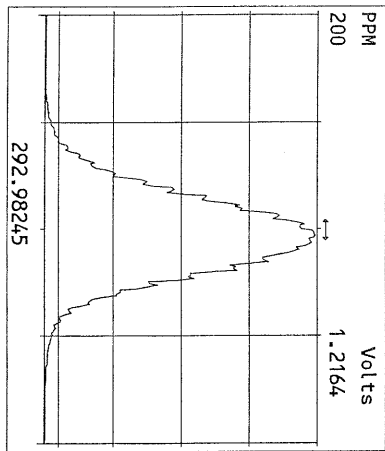


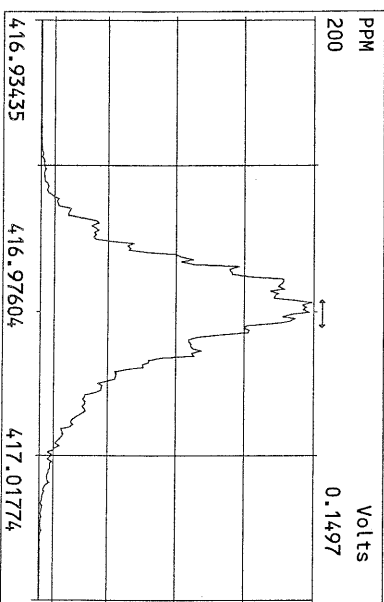
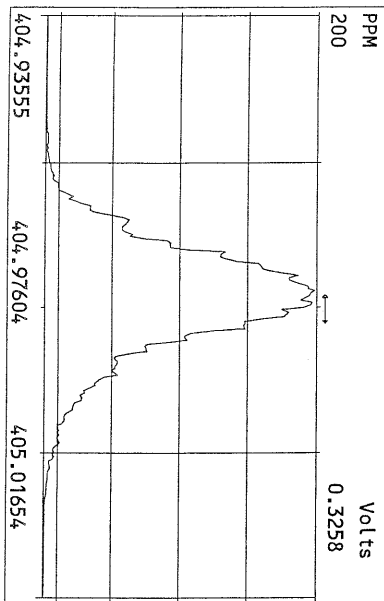
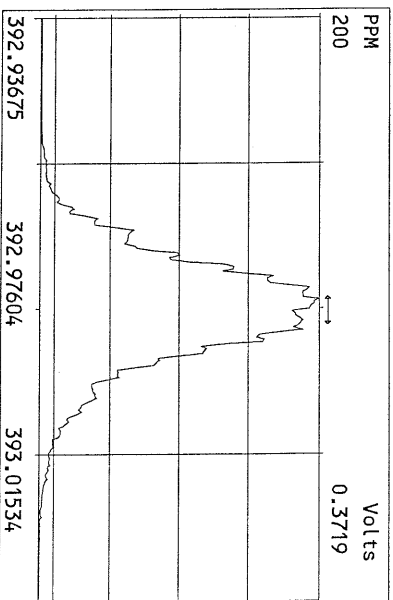
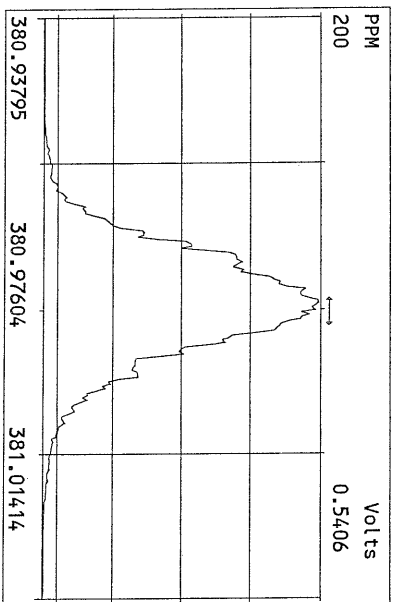
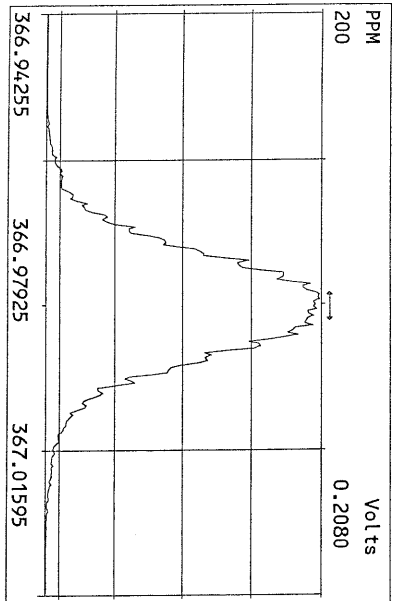
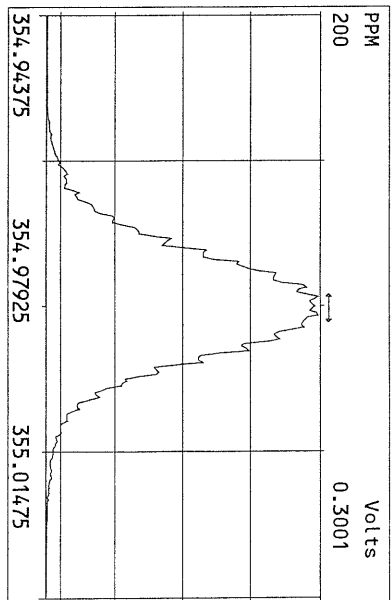
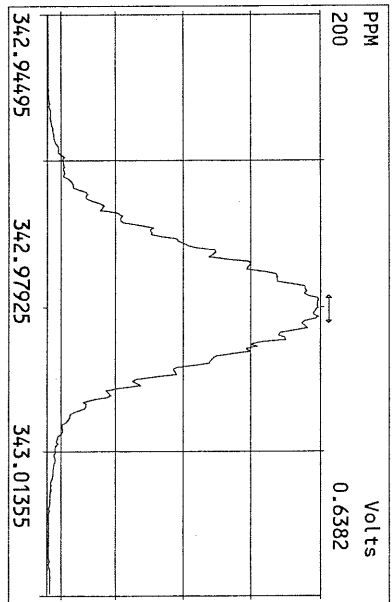
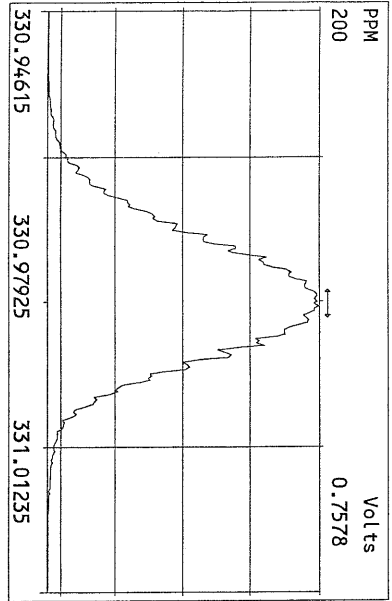
File:18MAY11Z #1-348 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
455.7801 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory

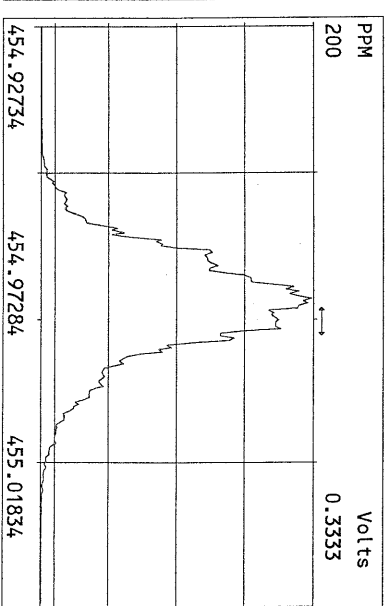
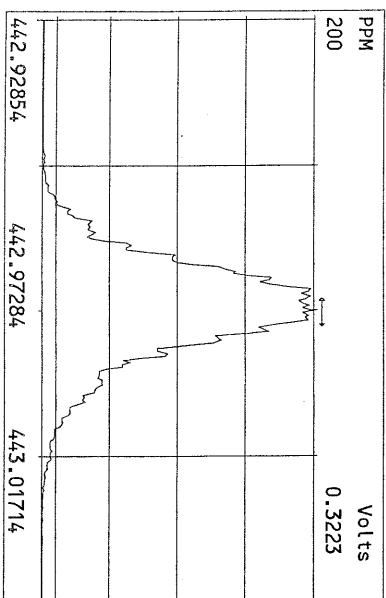
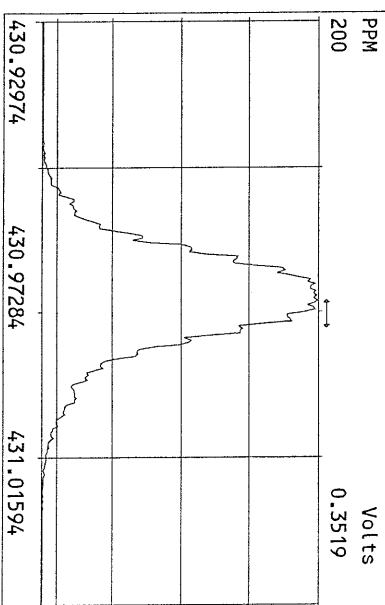
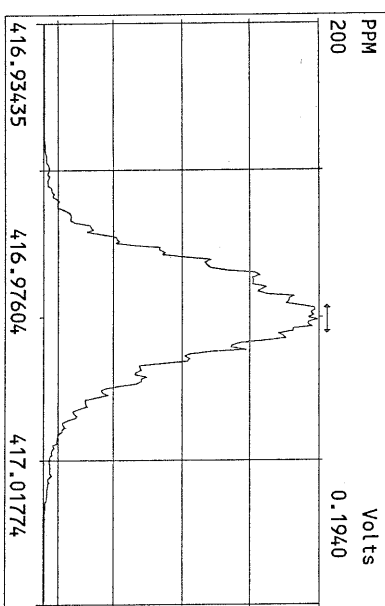
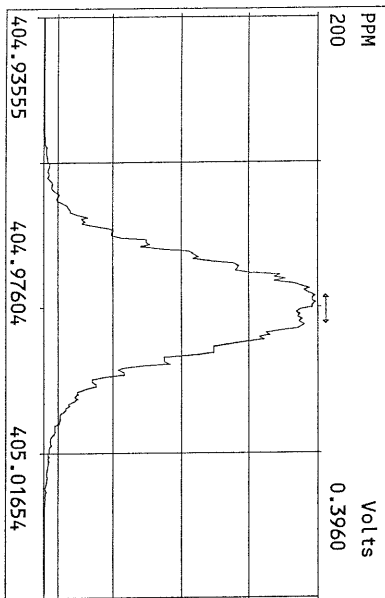
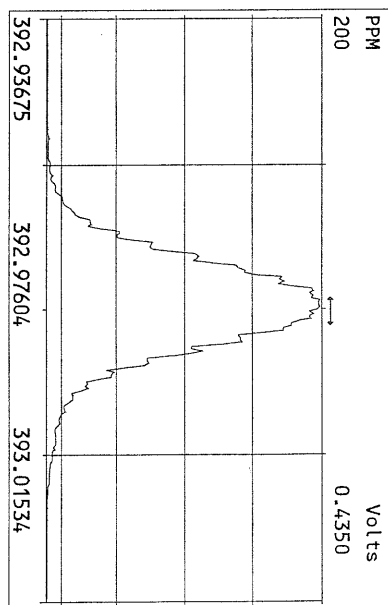
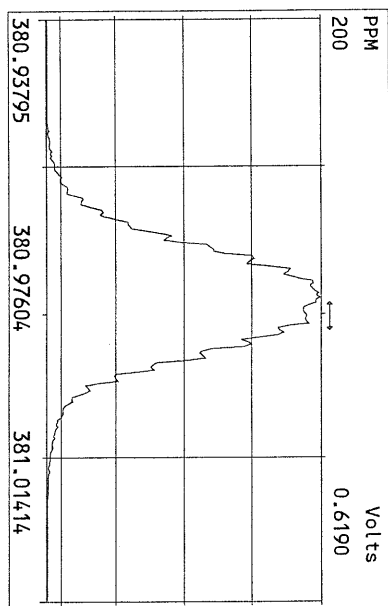
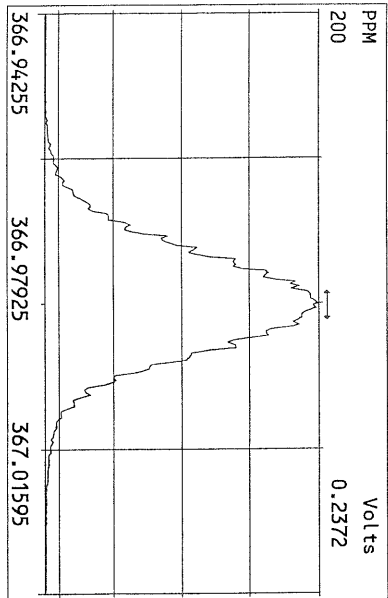


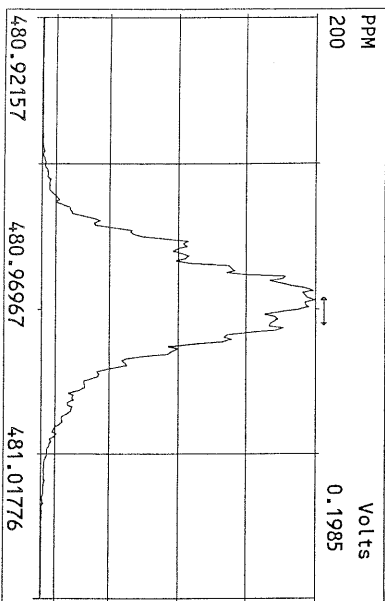
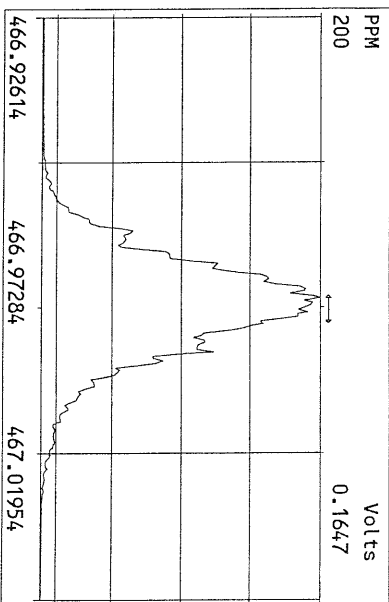
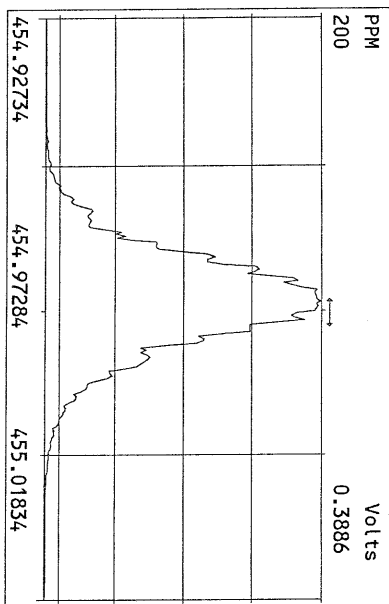
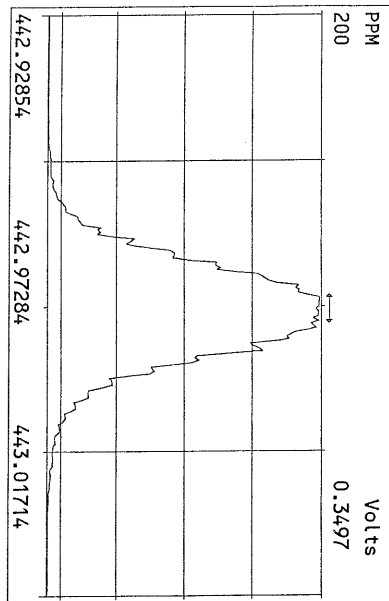
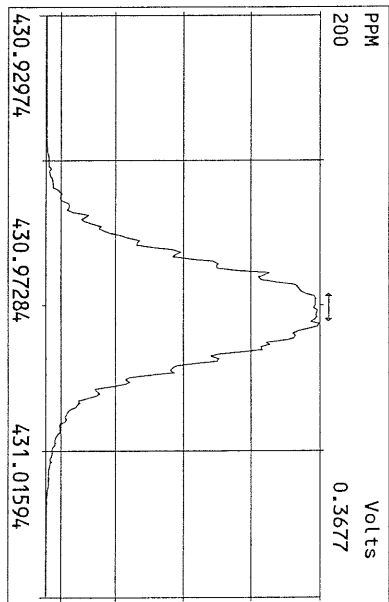
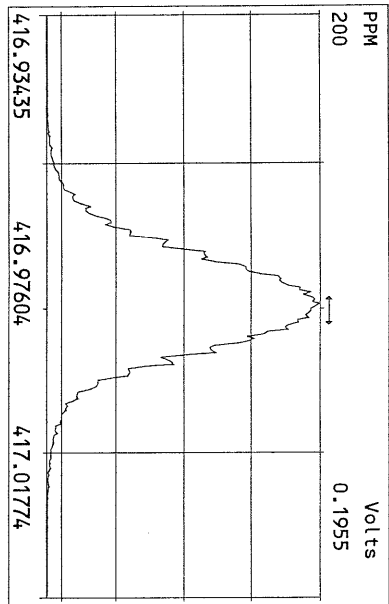
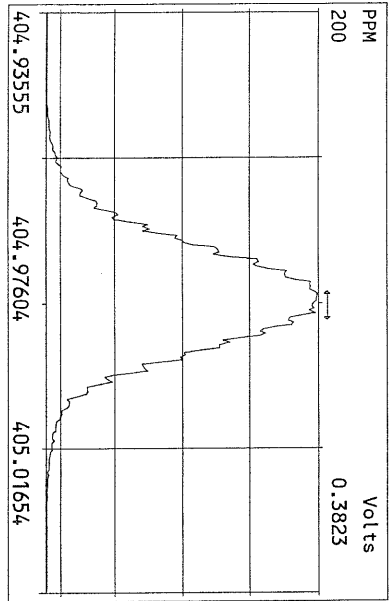
File:18MAY11Z #1-348 Acq:18-MAY-2011 12:16:46 GC EI+ Voltage SIR Autospec-Ultima
513.6775 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z1 File Text:Frontier Analytical Laboratory

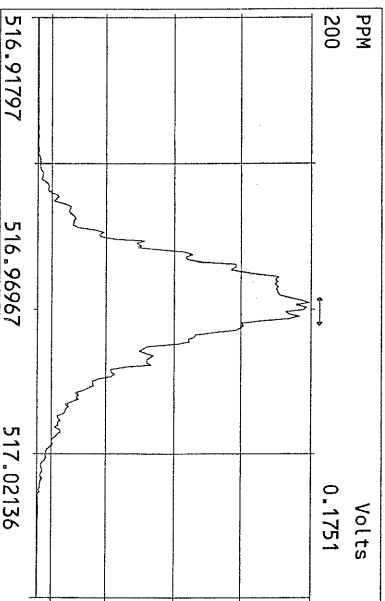
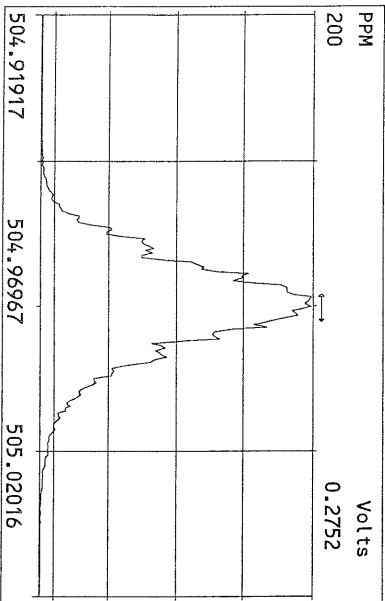
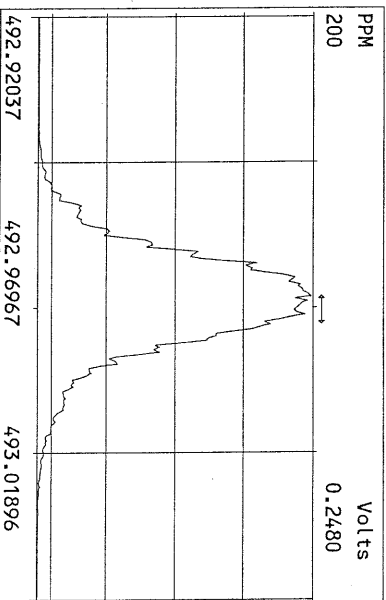
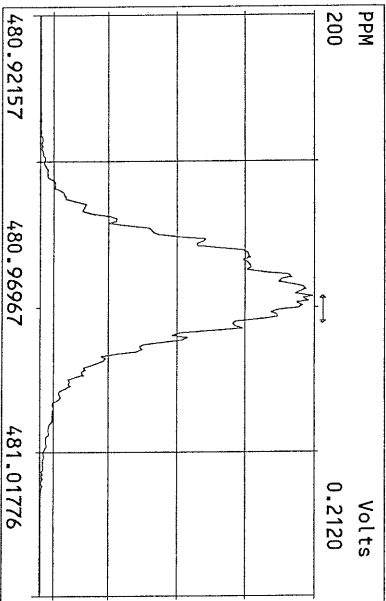
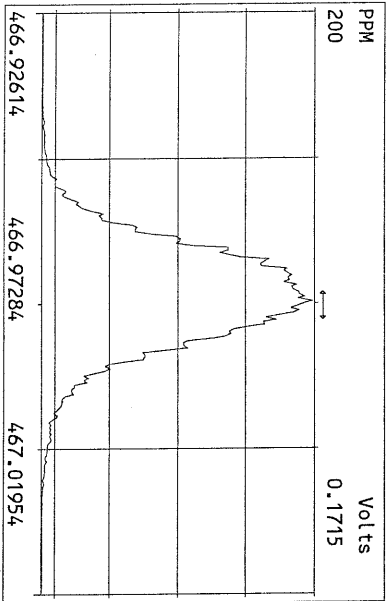
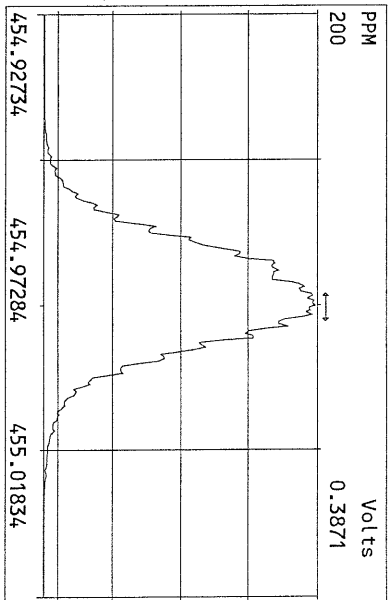
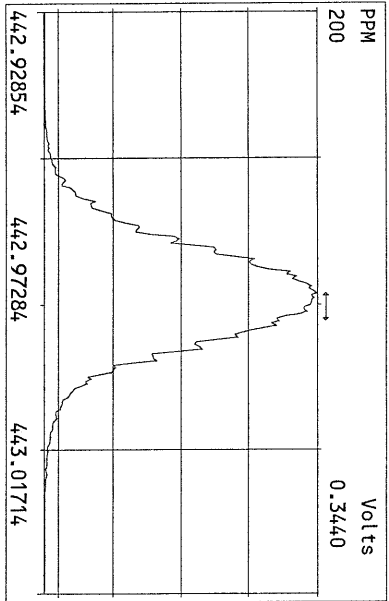
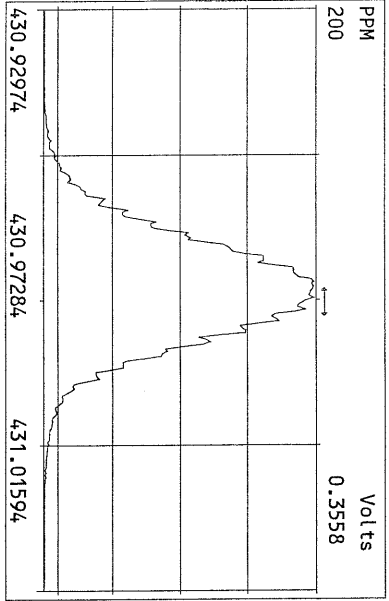












Frontier Analytical Laboratory - Acquisition Log

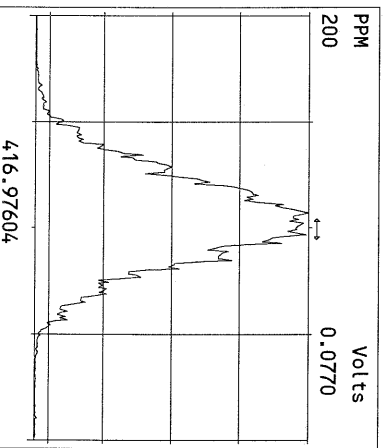
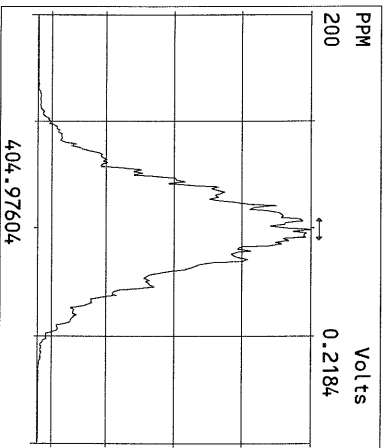
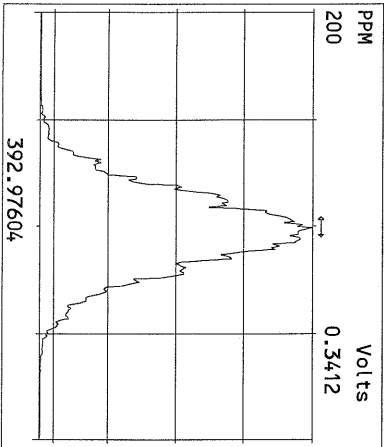
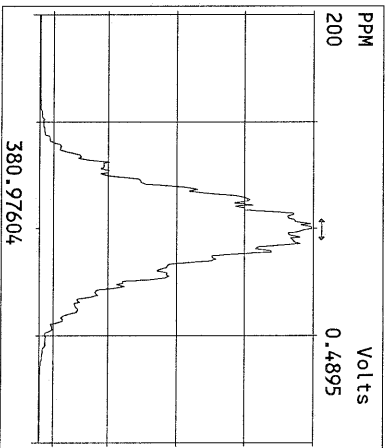
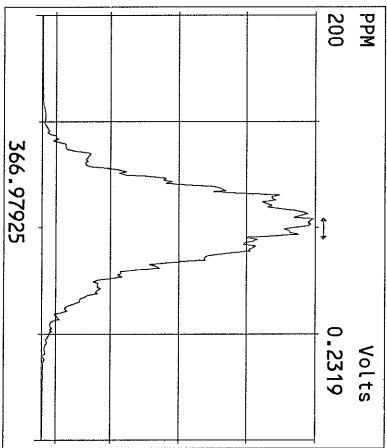
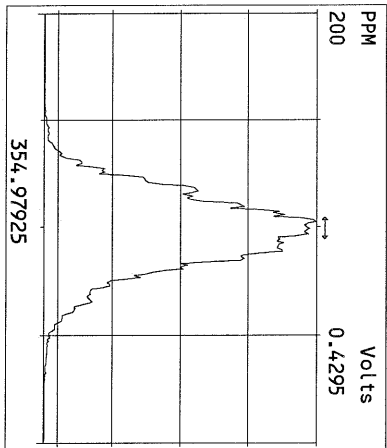
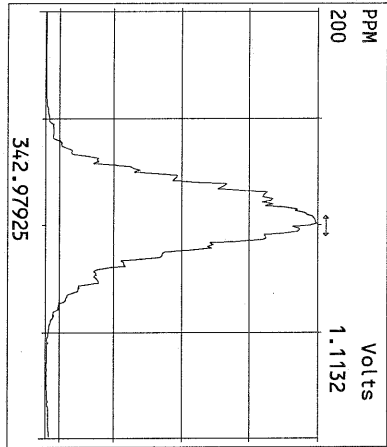
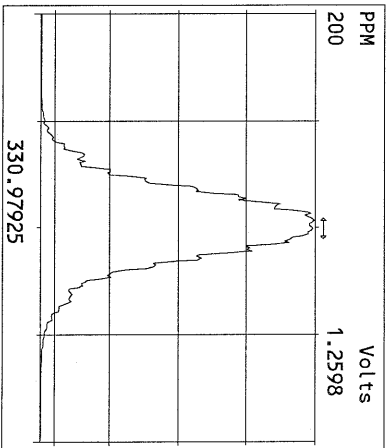
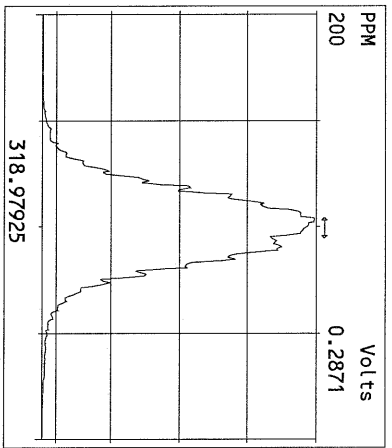
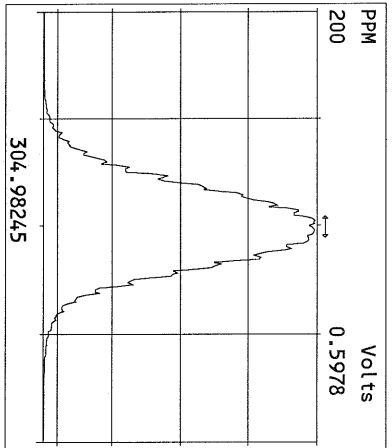
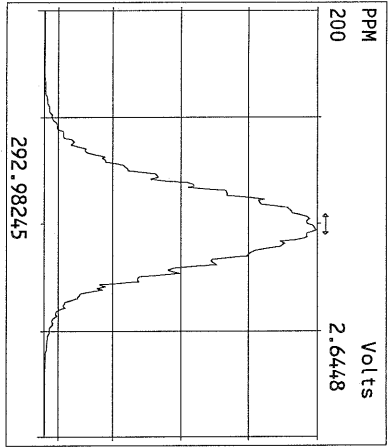
Run Name:18MAY11Z Instrument: FAL4 GC: DB5 Experiment:PCDD

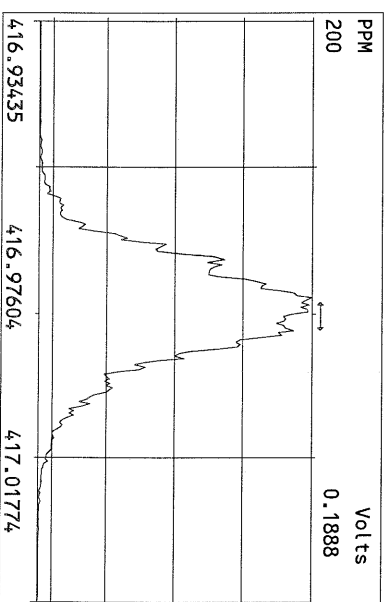
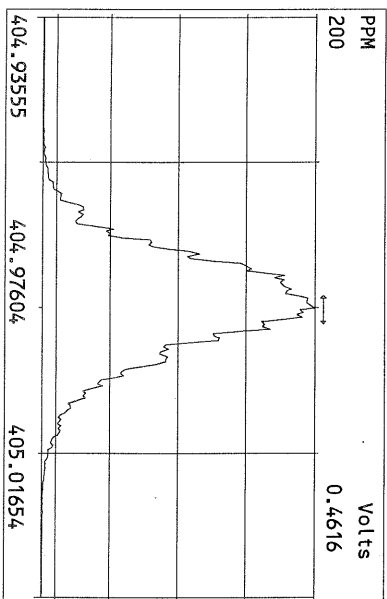
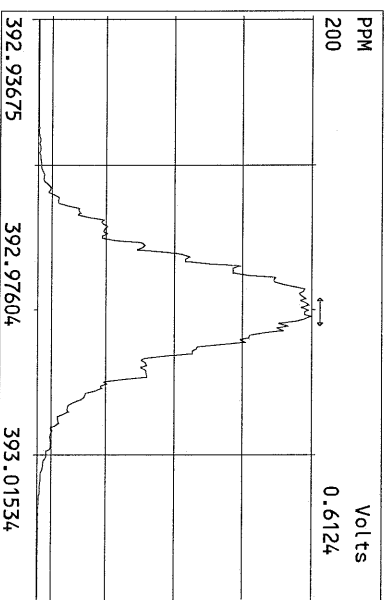
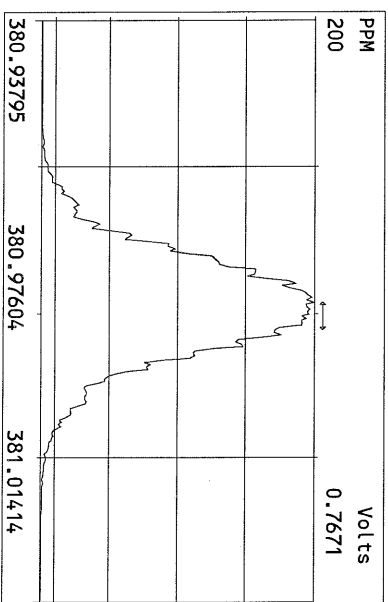
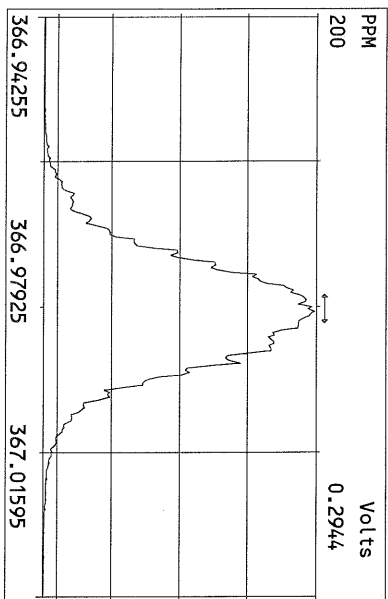
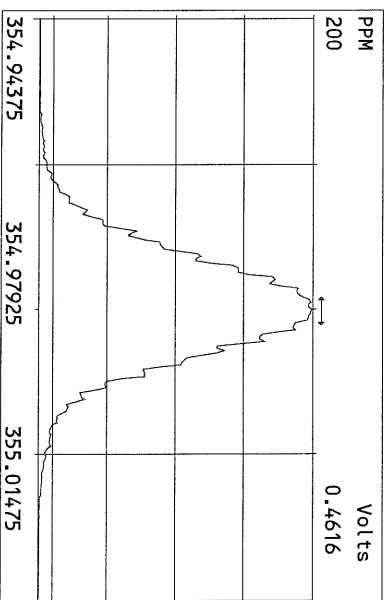
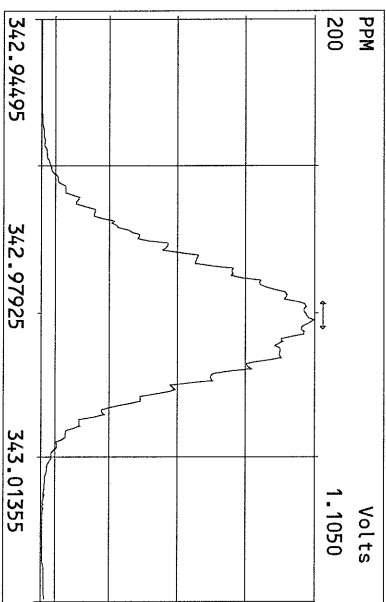
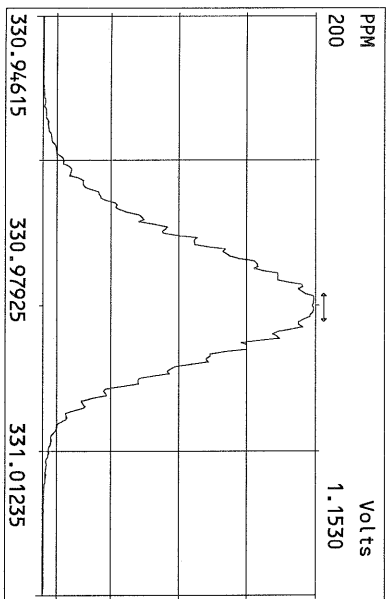
Data File S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
18MAY11Z 1	ST051811Z1	1613 CS3 100511J	18-MAY-11 12:16:46	ST051811Z1	ST051811Z2	BS
18MAY11Z 2	SB051811Z1	Solvent Blank	18-MAY-11 13:11:33	ST051811Z1	ST051811Z2	BS
18MAY11Z 3	2293-001-0001-OPR	OPR	18-MAY-11 14:06:21	ST051811Z1	ST051811Z2	BS
18MAY11Z 4	2293-001-0001-MB	Method Blank	18-MAY-11 15:01:08	ST051811Z1	ST051811Z2	BS
18MAY11Z 5	6739-001-0001-SA	MW02-042611	18-MAY-11 15:55:55	ST051811Z1	ST051811Z2	BS
18MAY11Z 6	6739-002-0001-SA	MW03-042611	18-MAY-11 16:50:42	ST051811Z1	ST051811Z2	BS
18MAY11Z 7	6739-003-0001-SA	MW13-042611	18-MAY-11 17:45:30	ST051811Z1	ST051811Z2	BS
18MAY11Z 8	6740-001-0001-SA	MW07-042711	18-MAY-11 18:40:18	ST051811Z1	ST051811Z2	BS
18MAY11Z 9	6740-002-0001-SA	MW11-042711	18-MAY-11 19:35:05	ST051811Z1	ST051811Z2	BS
18MAY11Z 10	6740-003-0001-SA	MW10-042711	18-MAY-11 20:29:51	ST051811Z1	ST051811Z2	BS
18MAY11Z 11	6740-004-0001-SA	MW09-042711	18-MAY-11 21:24:37	ST051811Z1	ST051811Z2	BS
18MAY11Z 12	6740-005-0001-SA	MW08-042711	18-MAY-11 22:19:23	ST051811Z1	ST051811Z2	BS
18MAY11Z 13	6740-006-0001-SA	MW12-042711	18-MAY-11 23:14:09	ST051811Z1	ST051811Z2	BS
18MAY11Z 14	SB051811Z2	Solvent Blank	19-MAY-11 00:08:56	ST051811Z1	ST051811Z2	BS
18MAY11Z 15	ST051811Z2	1613 CS3 100511J	19-MAY-11 01:03:43	ST051811Z1	ST051811Z2	BS
18MAY11Z 16	QC051811Z1	NEWQC	19-MAY-11 01:58:32	ST051811Z2	ST051811Z3	BS
18MAY11Z 17	QC051811Z2	SSQC	19-MAY-11 02:53:20	ST051811Z2	ST051811Z3	BS
18MAY11Z 18	SB051811Z3	Solvent Blank	19-MAY-11 03:48:07	ST051811Z2	ST051811Z3	BS

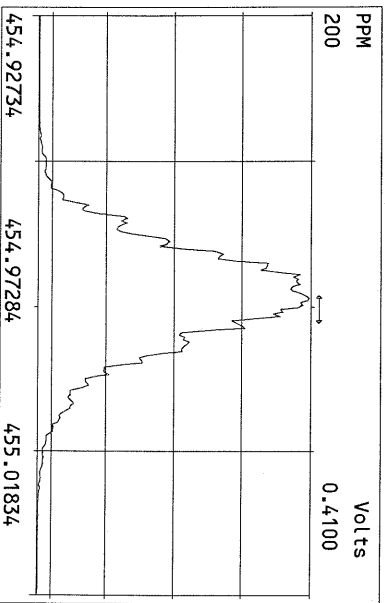
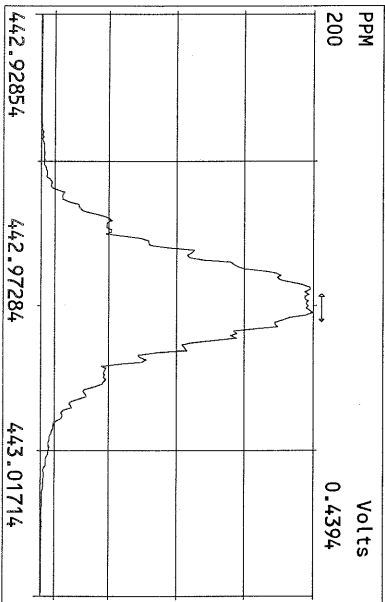
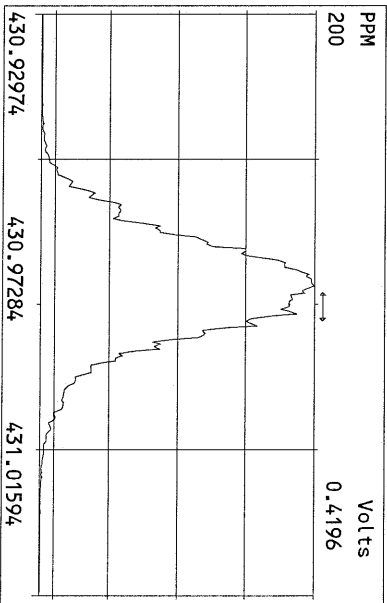
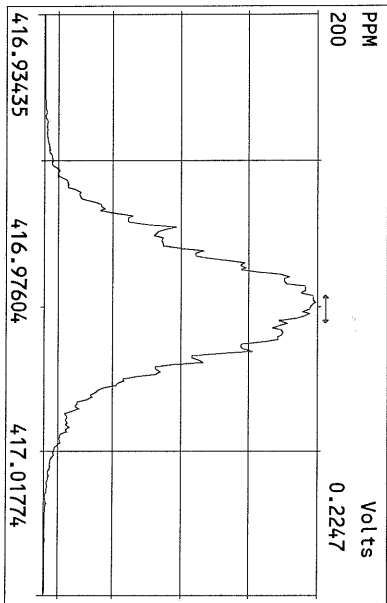
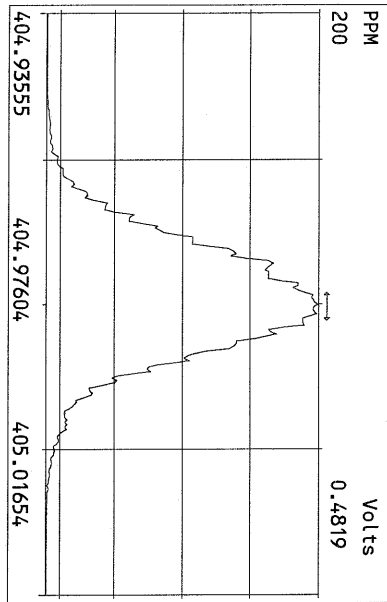
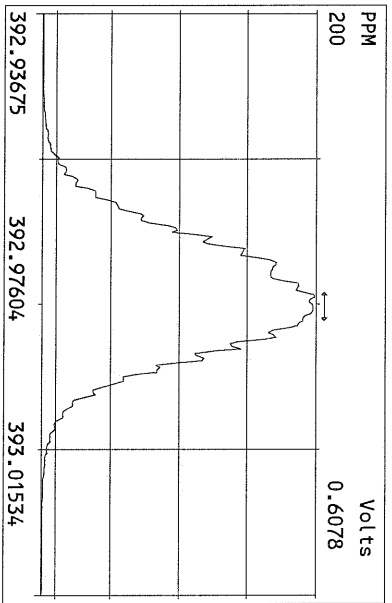
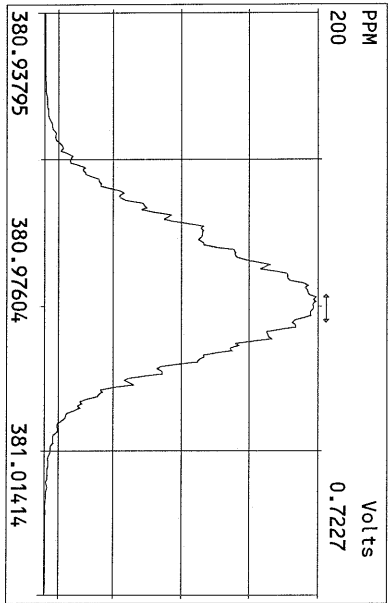
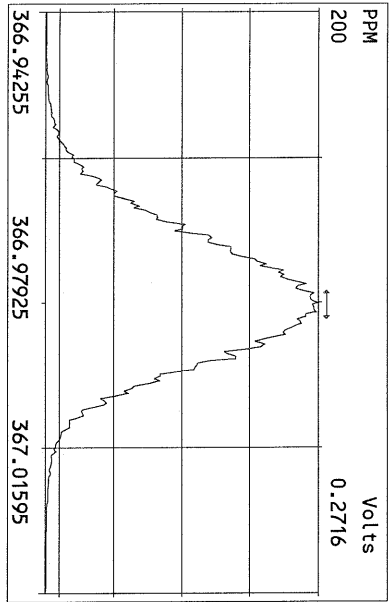
& 5/19/11

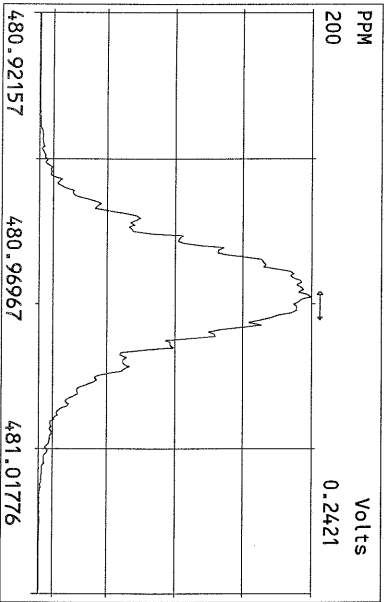
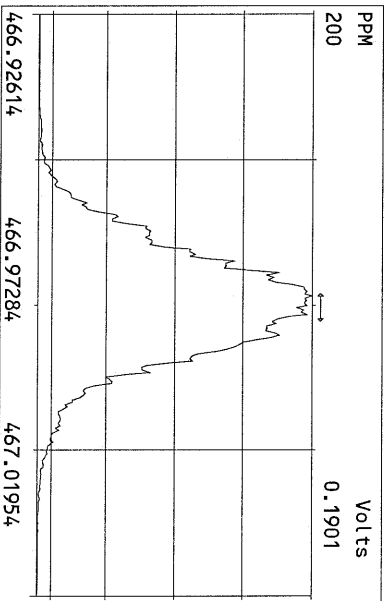
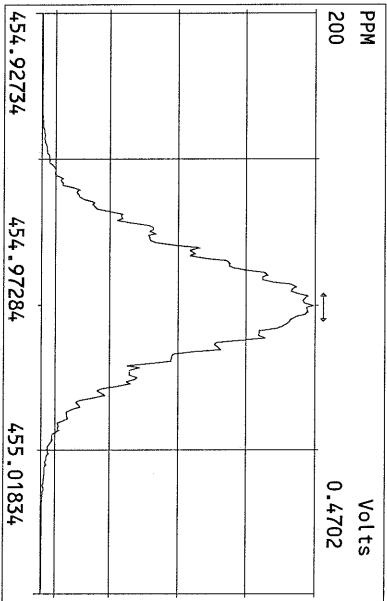
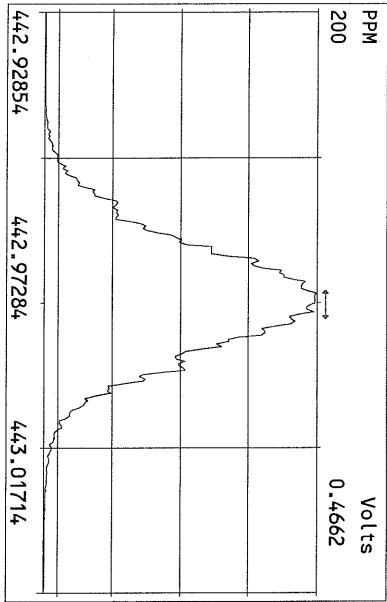
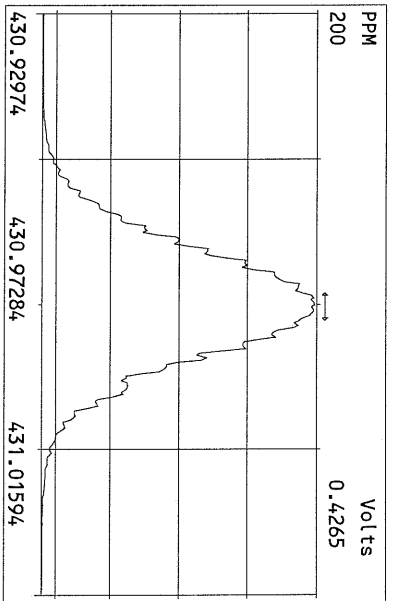
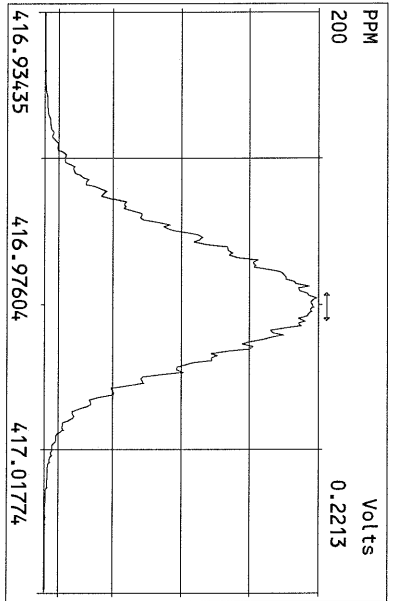
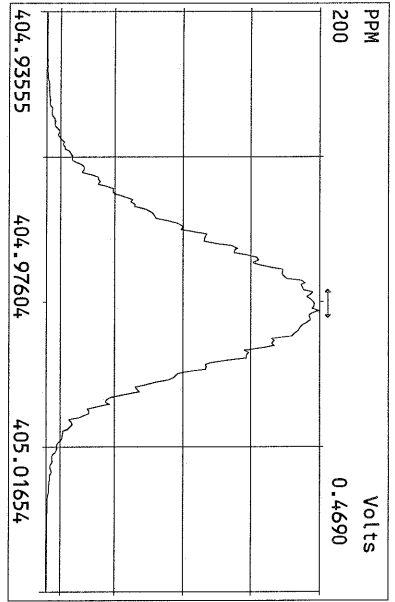
Data Backed Up: _____

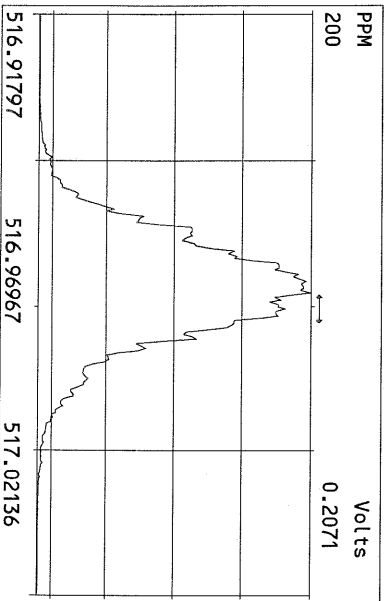
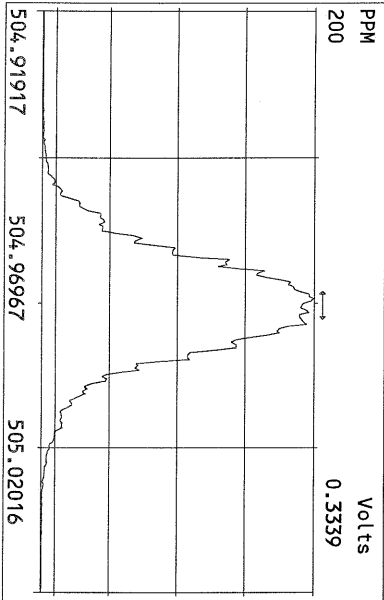
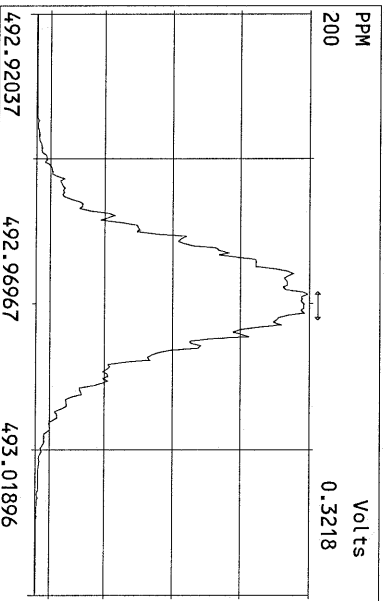
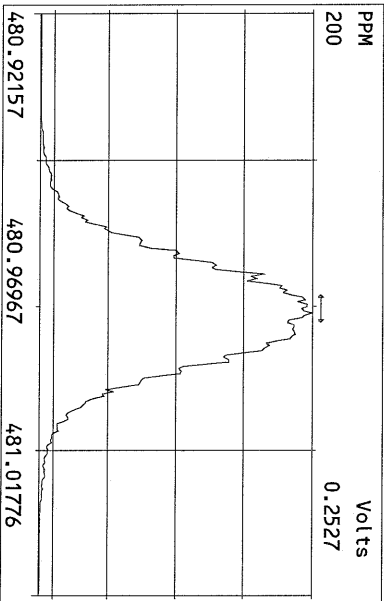
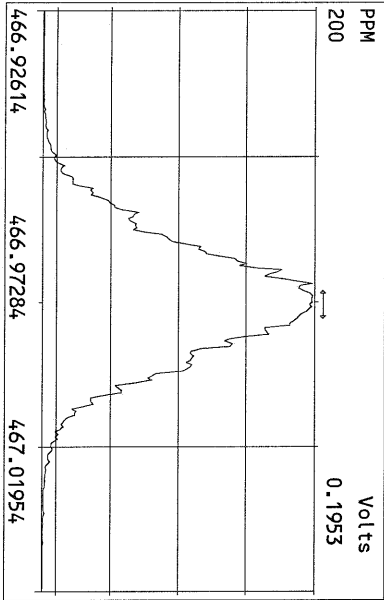
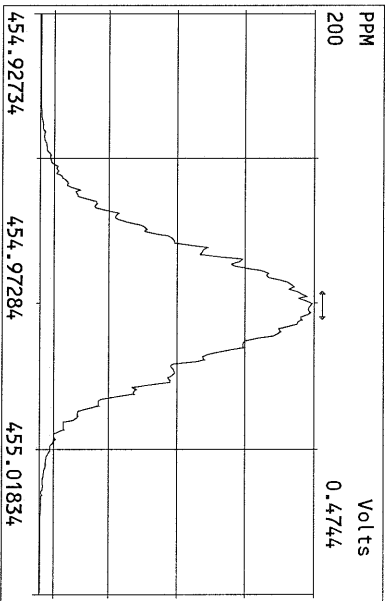
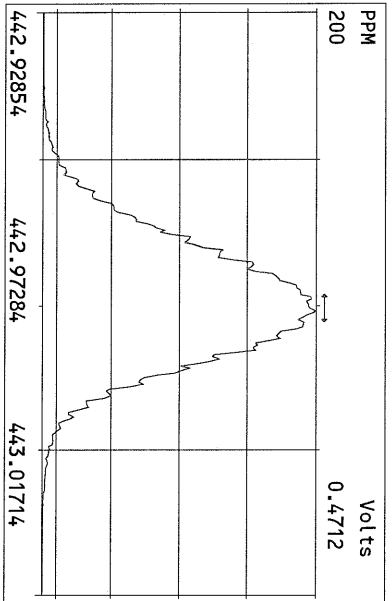
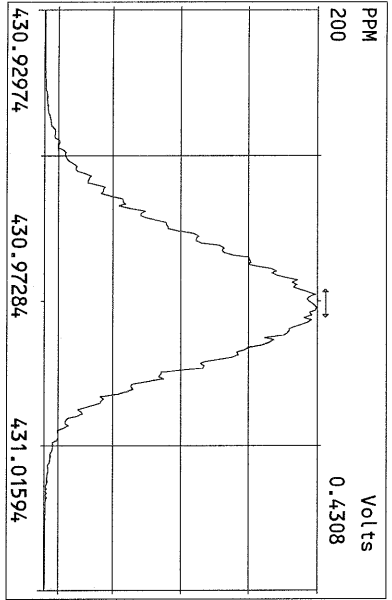
Date: _____



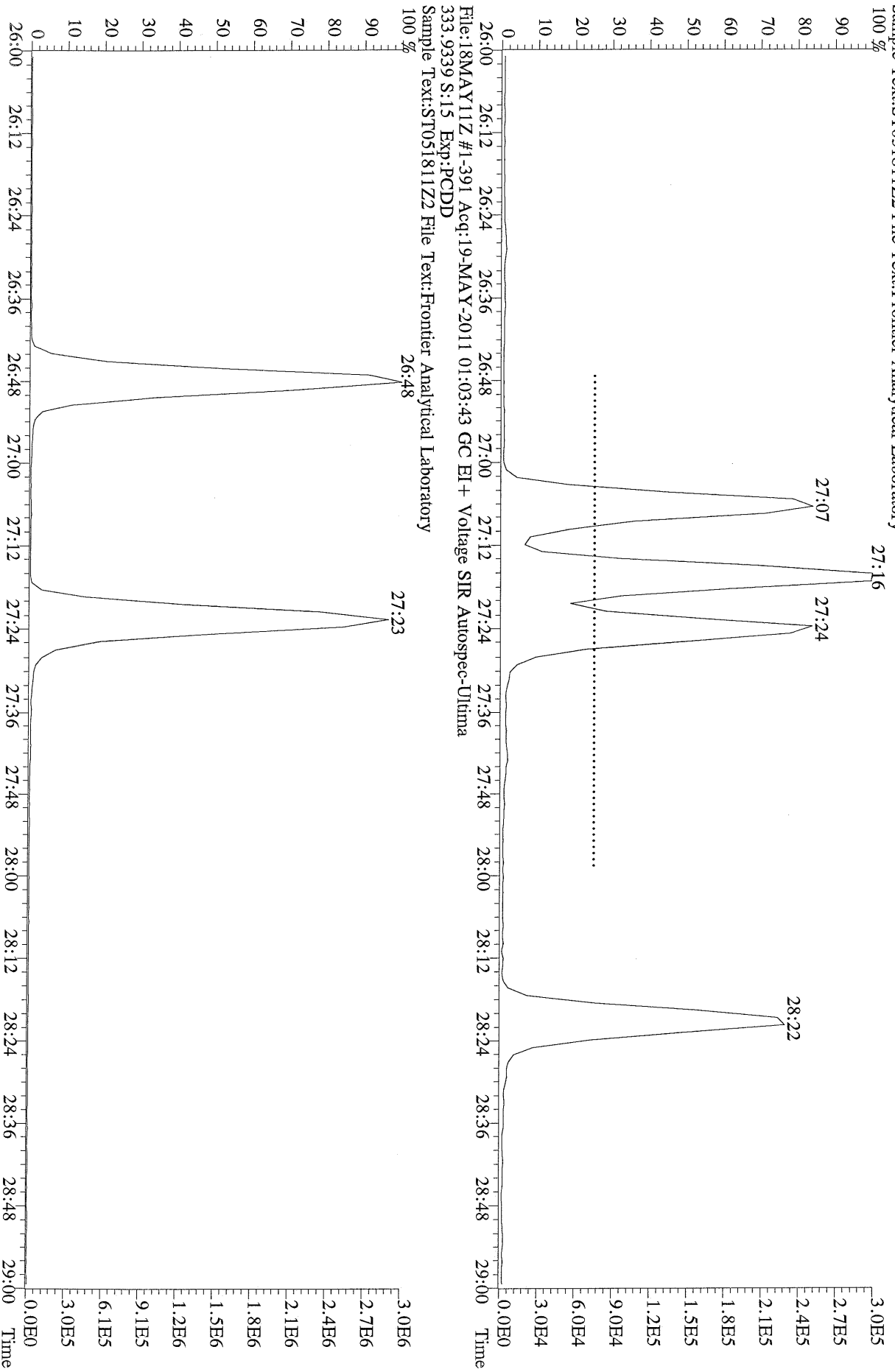




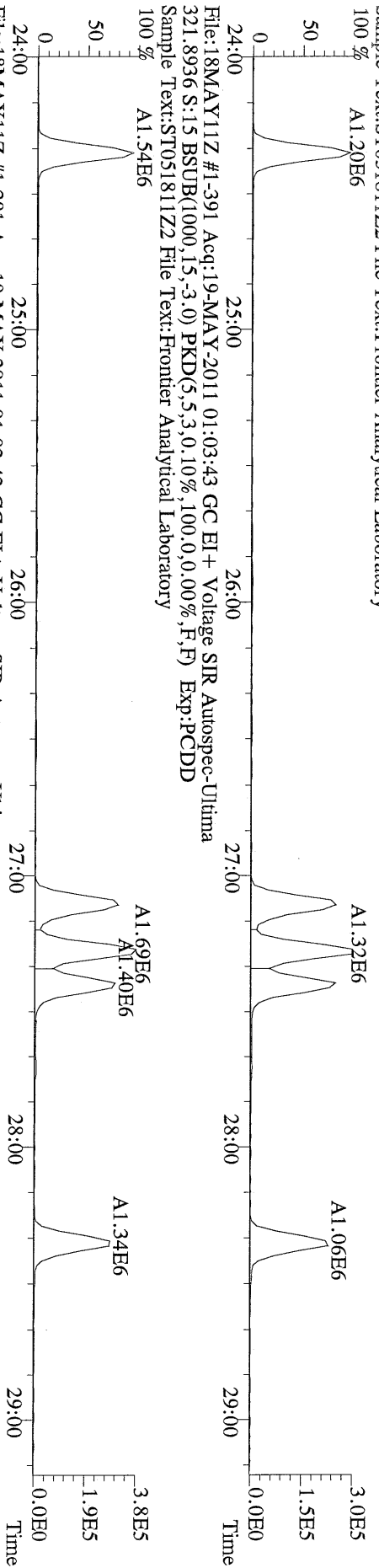




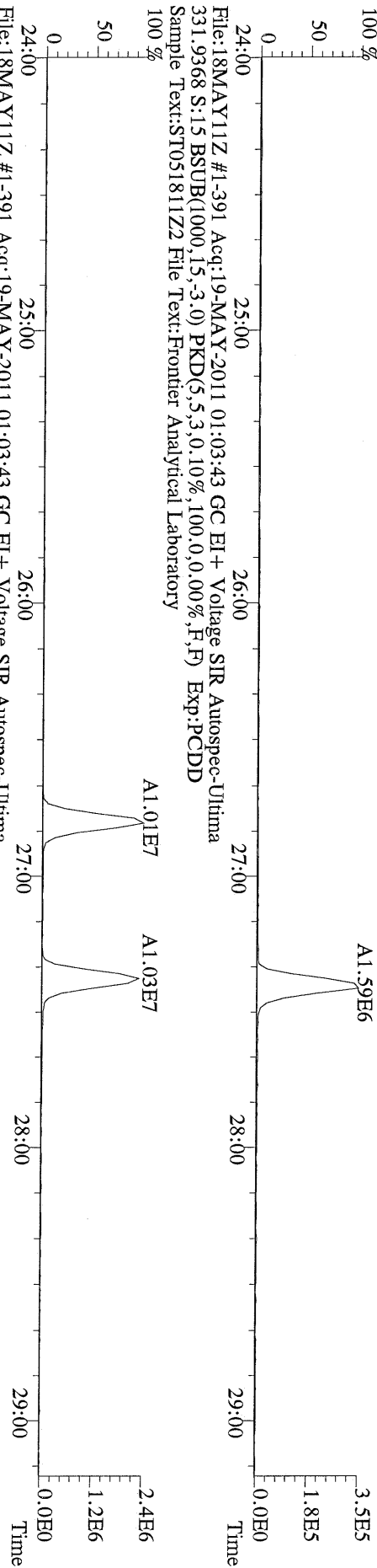
File:18MAY11Z #1-391 Acq:19-MAY-2011 01:03:43 GC EI + Voltage SIR Autospec-Ultima
319.8965 S:15 Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



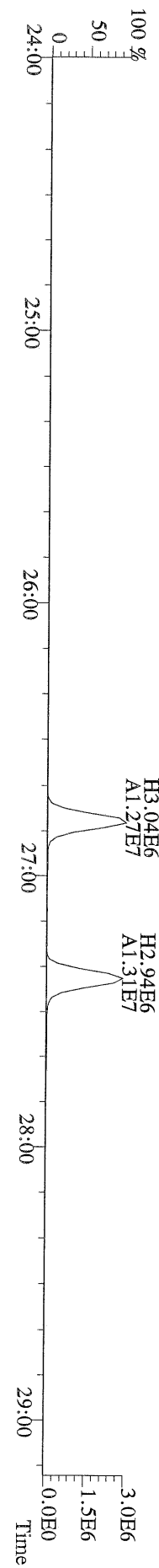
File:18MAY11Z #1-391 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:1.5 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



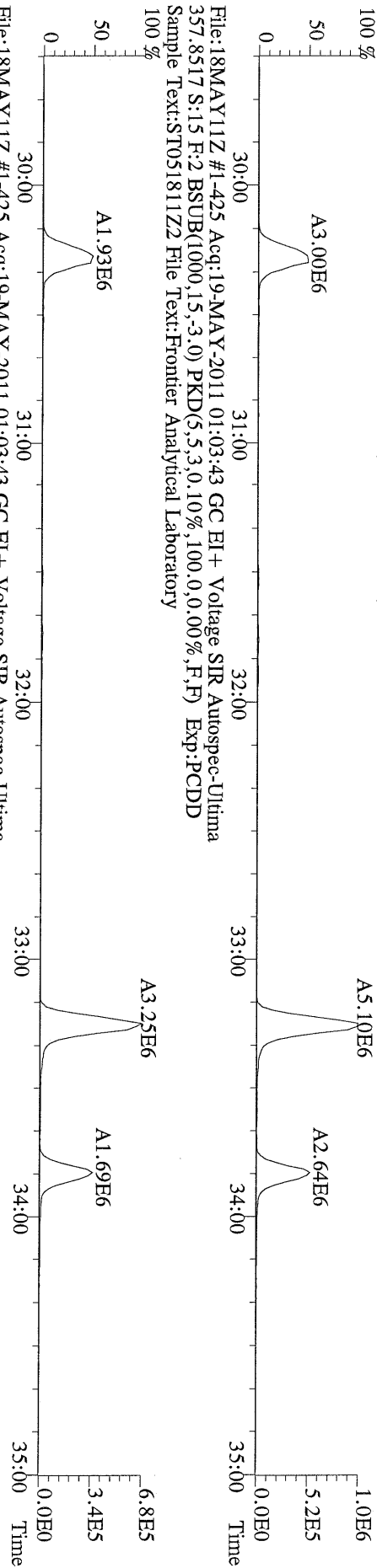
File:18MAY11Z #1-391 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:1.5 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



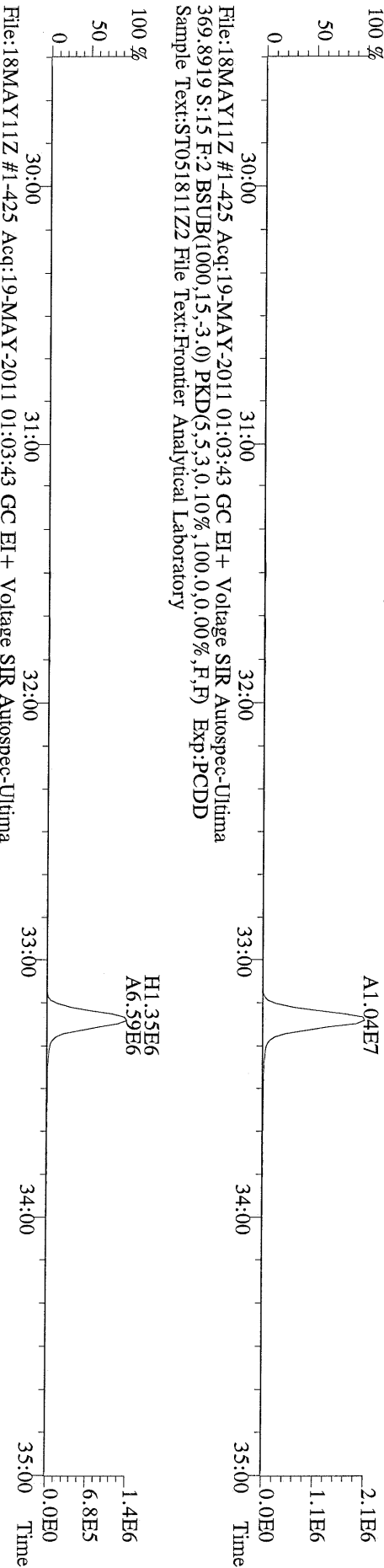
File:18MAY11Z #1-391 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:1.5 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



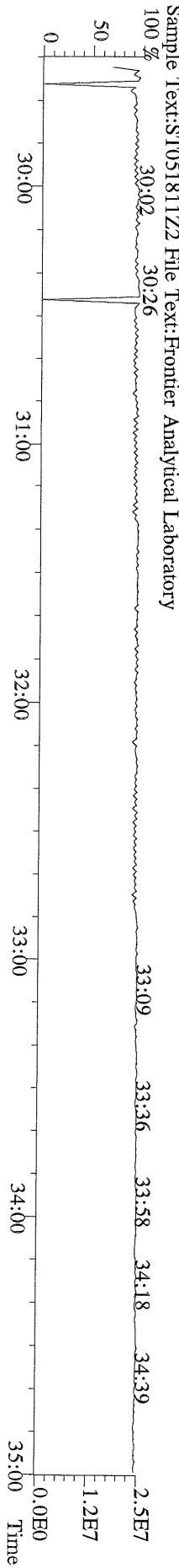
File:18MAY11Z #1-425 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:15 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



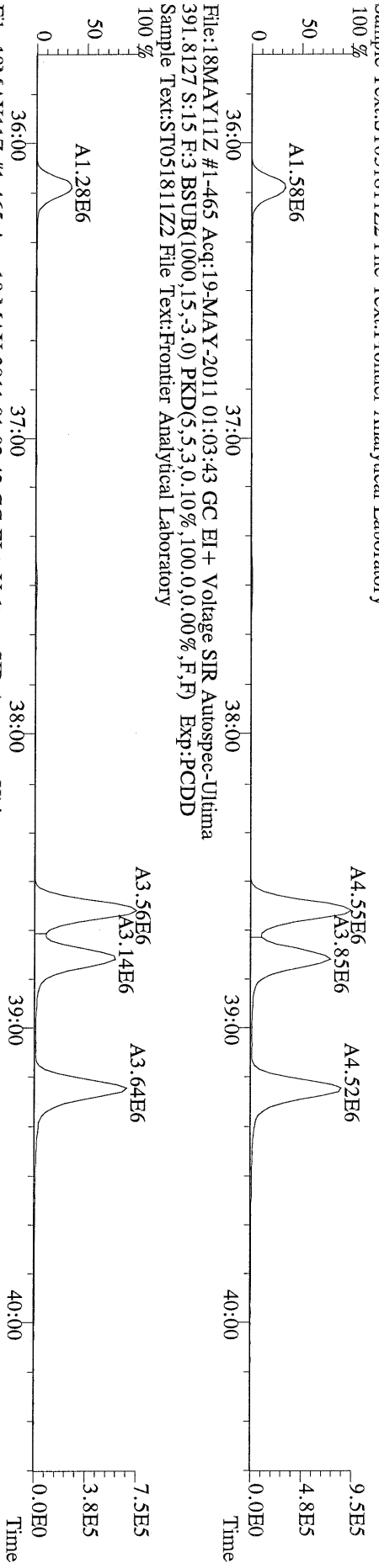
File:18MAY11Z #1-425 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:15 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



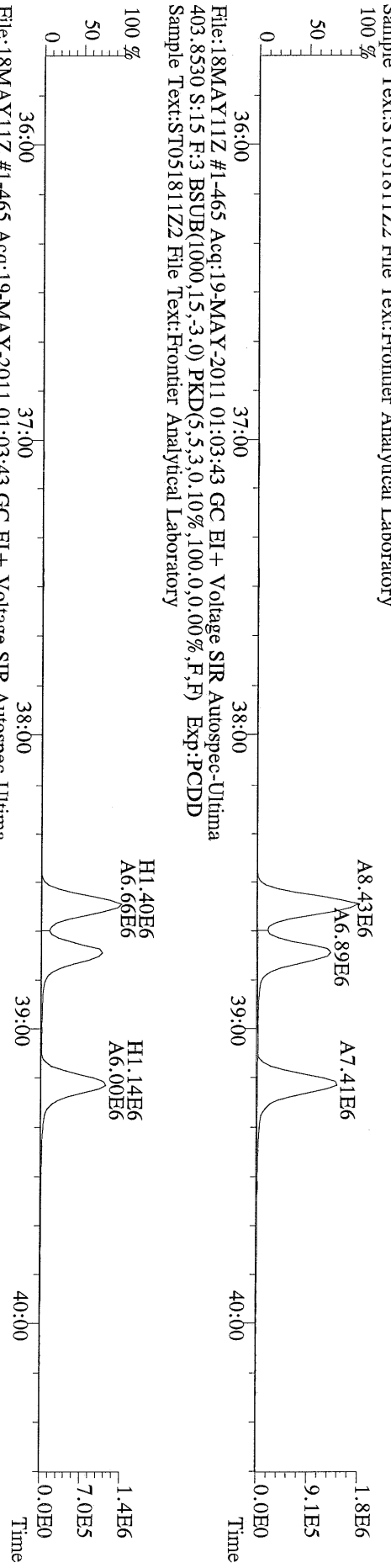
File:18MAY11Z #1-425 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:15 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



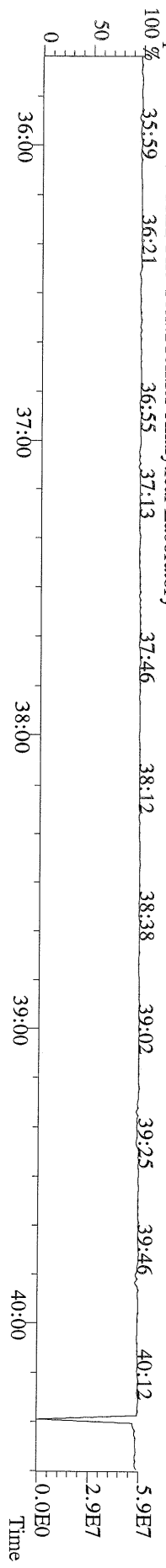
File:18MAY11Z #1-465 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Utima
389.8156 S:15 F:3 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



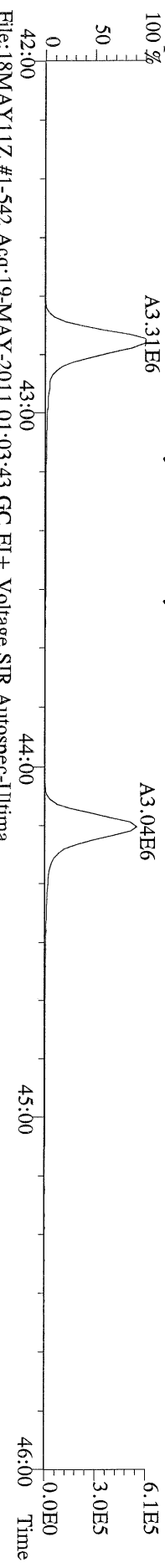
File:18MAY11Z #1-465 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Utima
401.8559 S:15 F:3 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



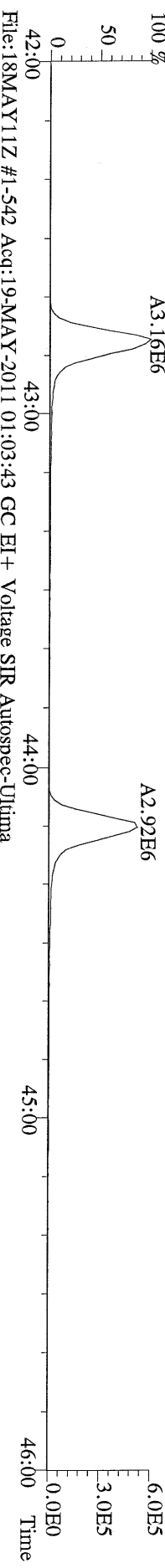
File:18MAY11Z #1-465 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Utima
380.9760 S:15 F:3 Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



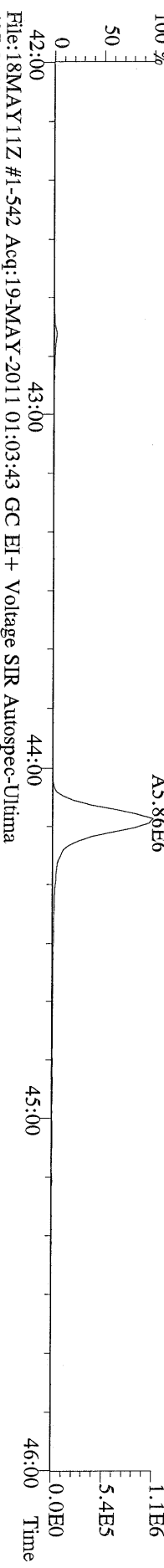
File:18MAY11Z #1-542 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:15 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



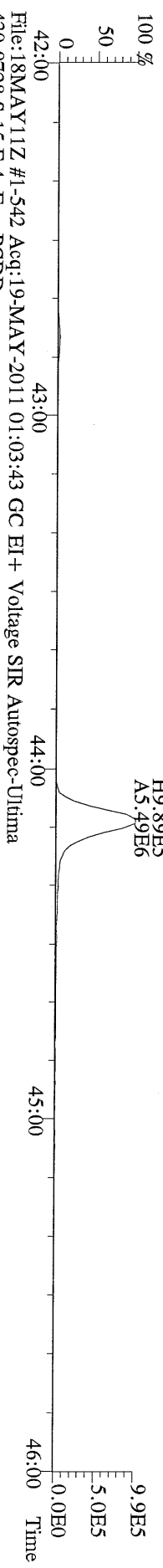
File:18MAY11Z #1-542 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:15 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



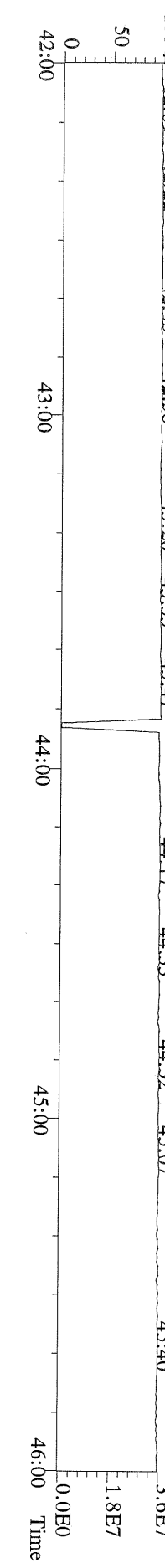
File:18MAY11Z #1-542 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:15 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



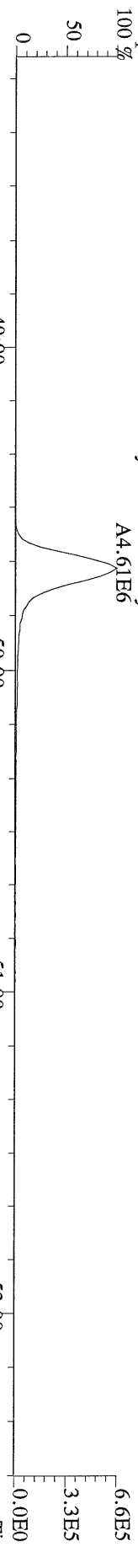
File:18MAY11Z #1-542 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:15 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



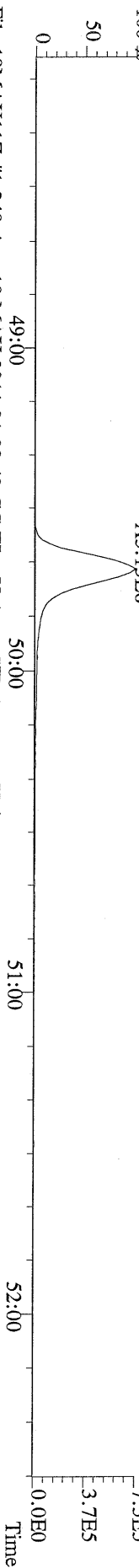
File:18MAY11Z #1-542 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:15 F:4 Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



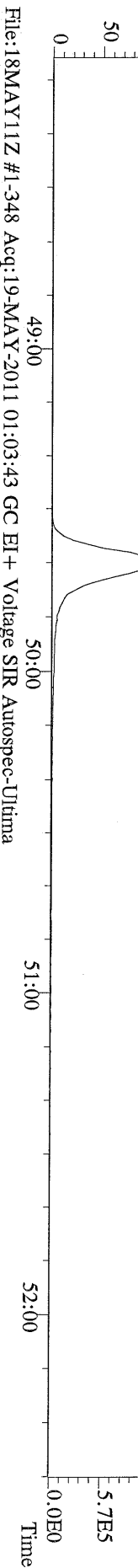
File:18MAY11Z #1-348 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:15 F:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



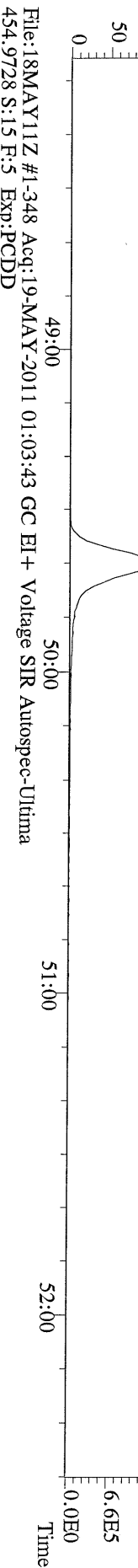
File:18MAY11Z #1-348 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:15 F:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



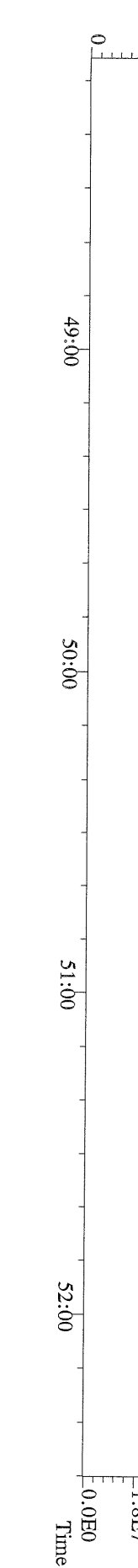
File:18MAY11Z #1-348 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:15 F:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



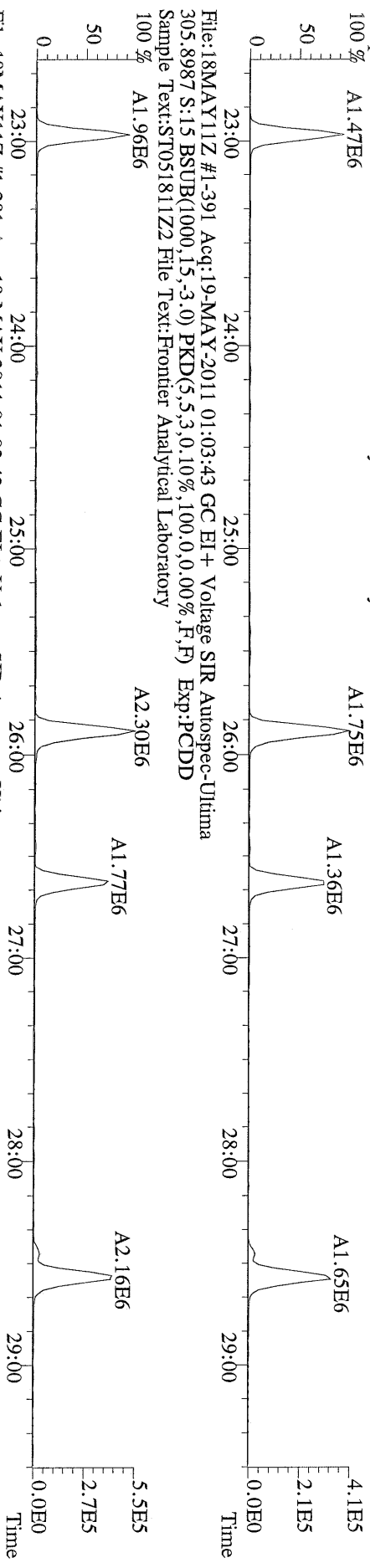
File:18MAY11Z #1-348 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:15 F:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



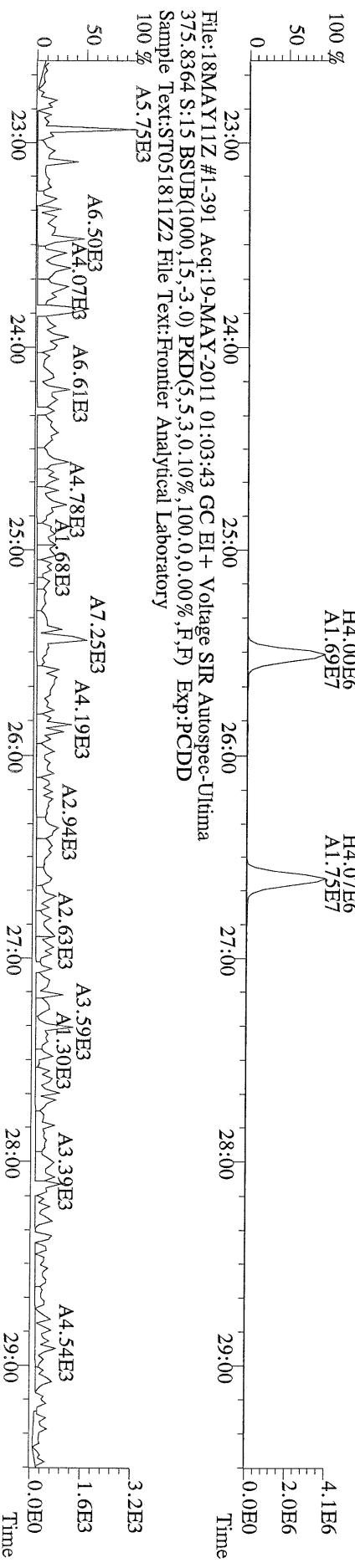
File:18MAY11Z #1-348 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:15 F:5 Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



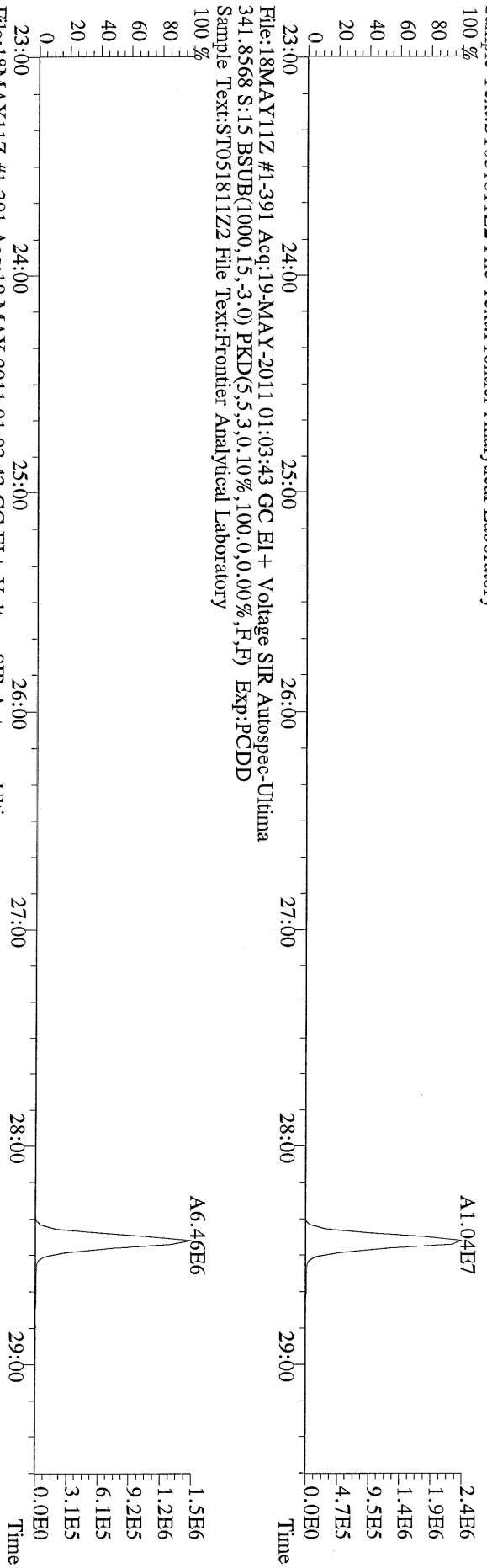
File:18MAY11Z #-1-391 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:15 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



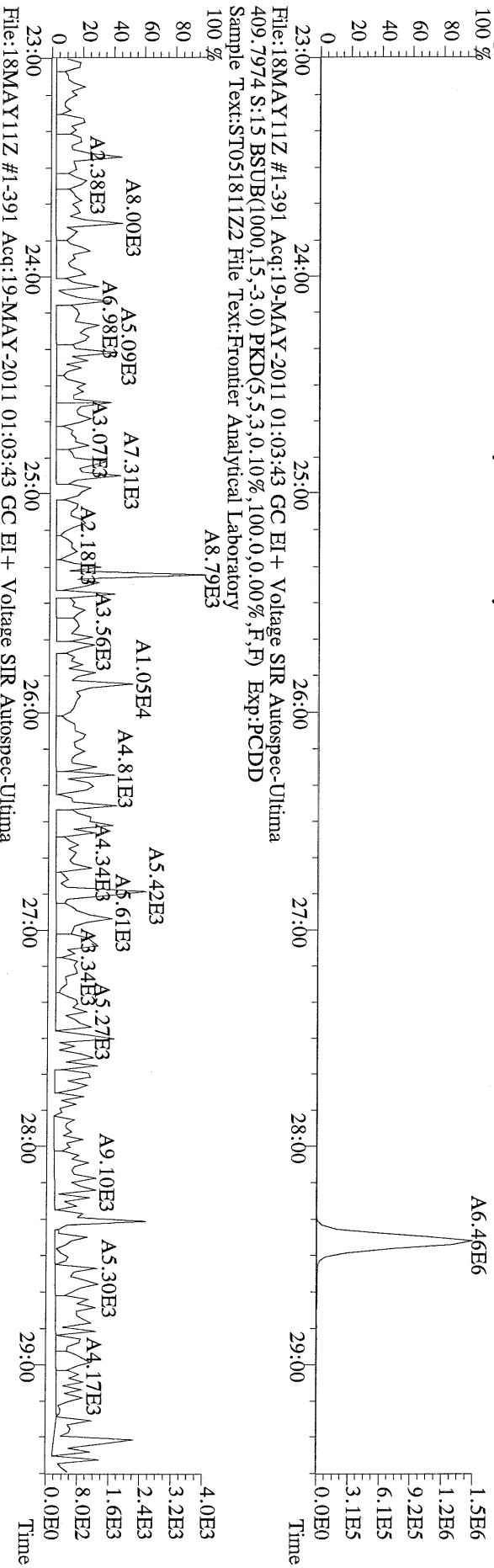
File:18MAY11Z #-1-391 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:15 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



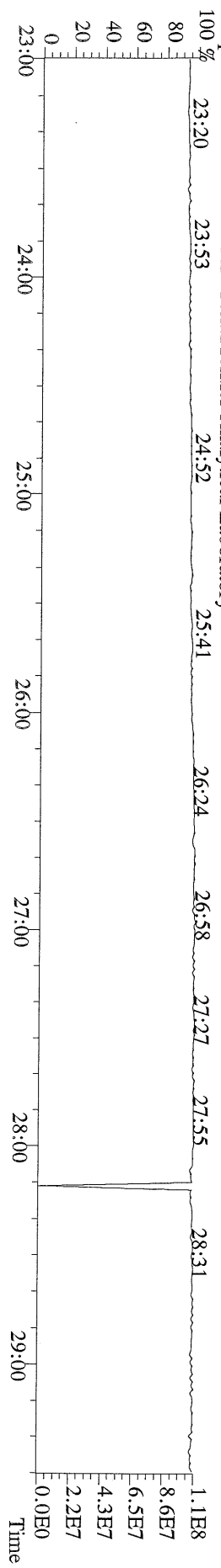
File:18MAY11Z #1-391 Acq:19-MAY-2011 01:03:43 GC EI + Voltage SIR Autospec-Ultima
 339.8597 S:15 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



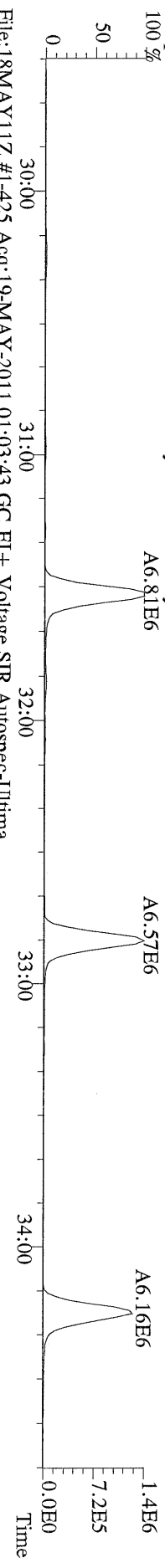
File:18MAY11Z #1-391 Acq:19-MAY-2011 01:03:43 GC EI + Voltage SIR Autospec-Ultima
 341.8568 S:15 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



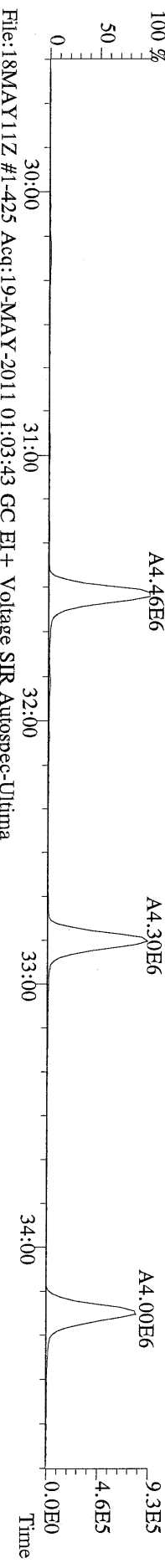
File:18MAY11Z #1-391 Acq:19-MAY-2011 01:03:43 GC EI + Voltage SIR Autospec-Ultima
 330.9792 S:15 Exp:PCDD
 Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



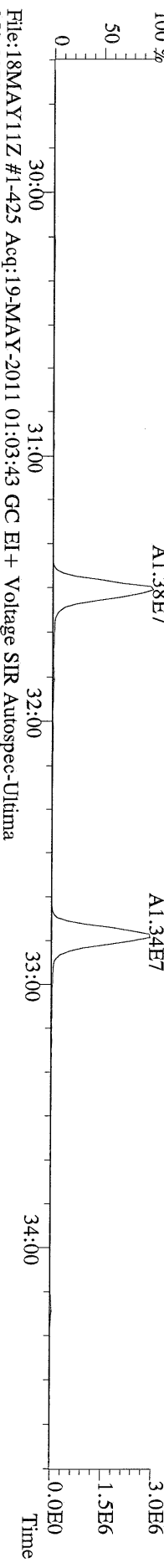
File: 18MAY11Z #1-425 Acq: 19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 S:15 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



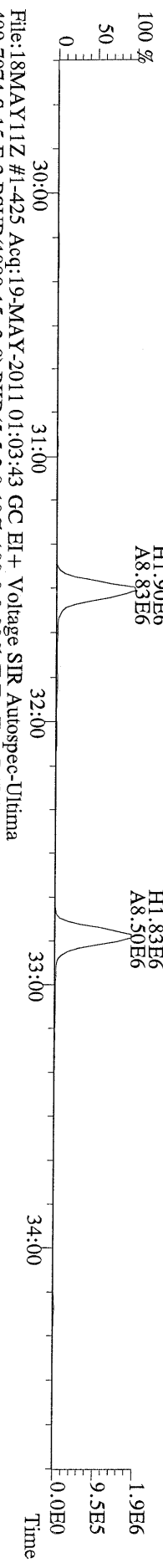
File: 18MAY11Z #1-425 Acq: 19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
 341.8568 S:15 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



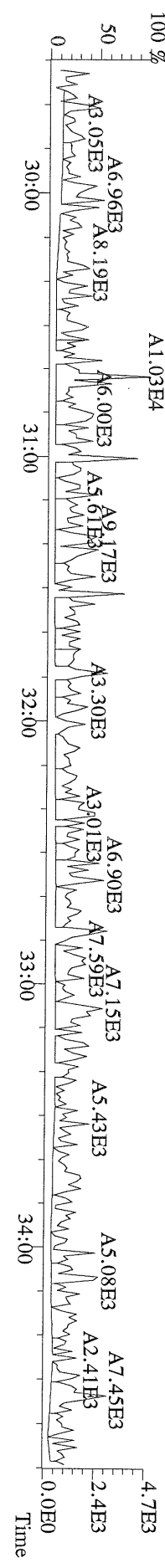
File: 18MAY11Z #1-425 Acq: 19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
 351.9000 S:15 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



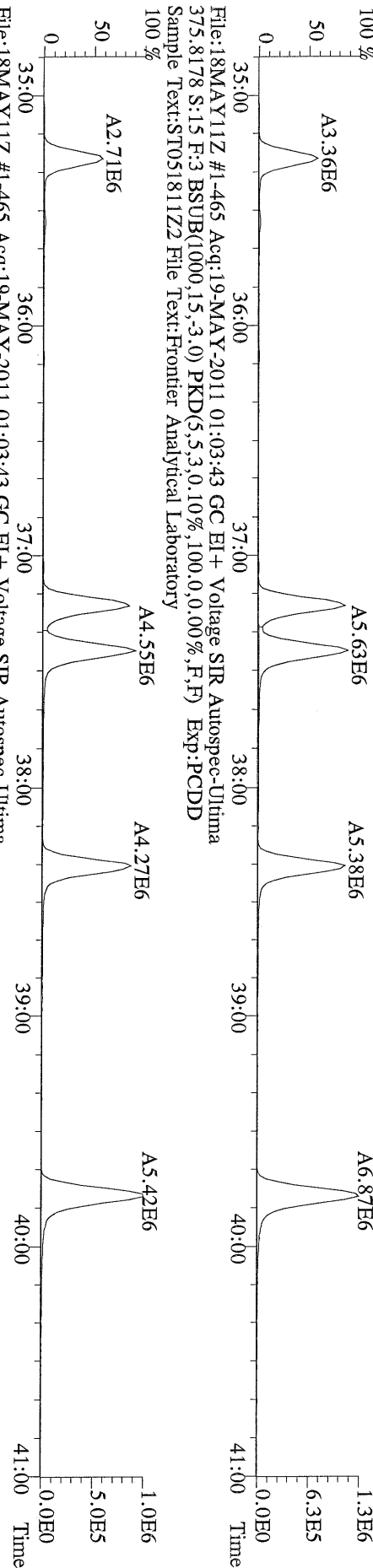
File: 18MAY11Z #1-425 Acq: 19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
 353.8970 S:15 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



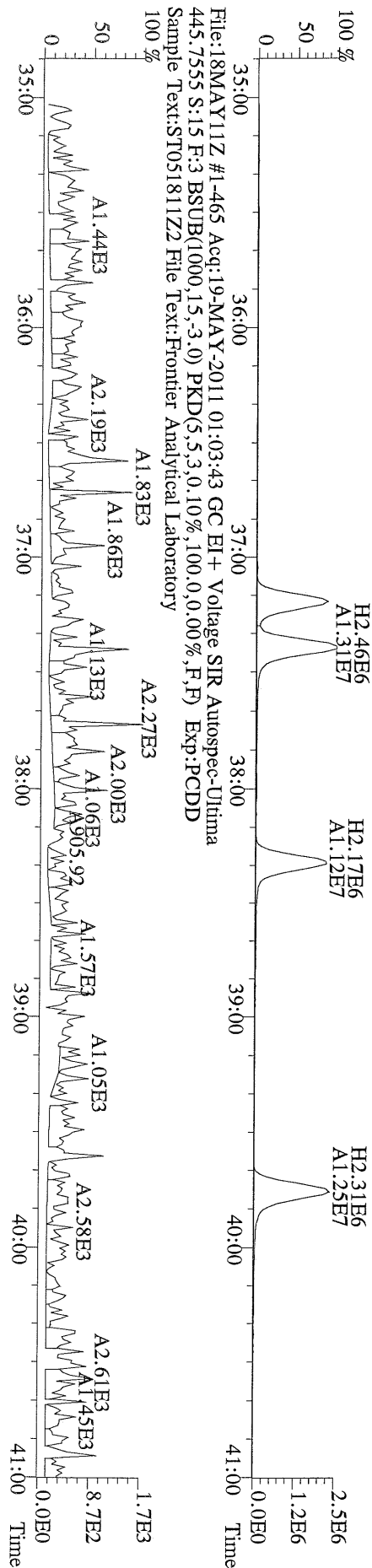
File: 18MAY11Z #1-425 Acq: 19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
 409.7974 S:15 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



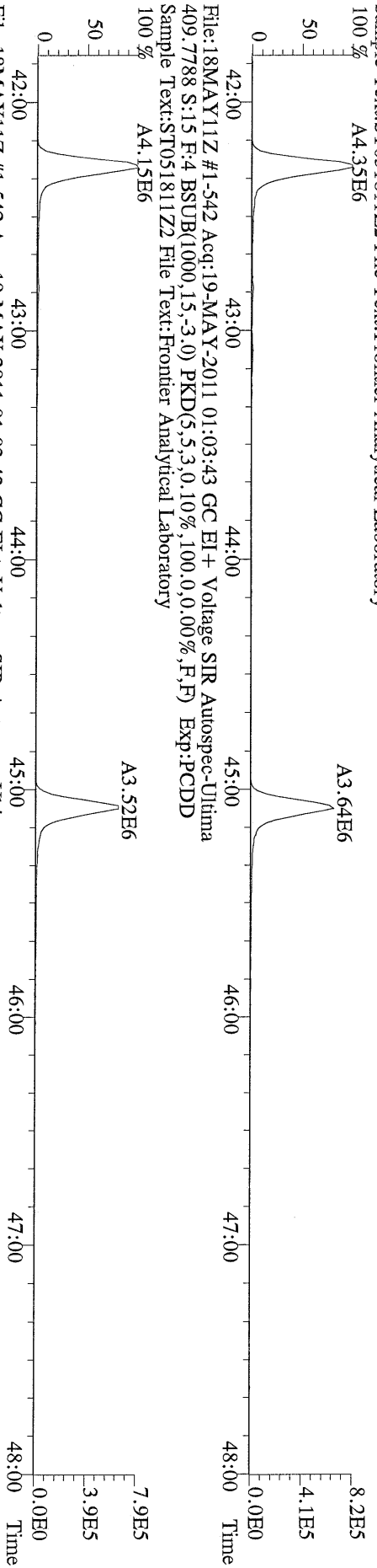
File:18MAY11Z #1-465 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Utima
373.8207 S:15 F:3 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp.:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



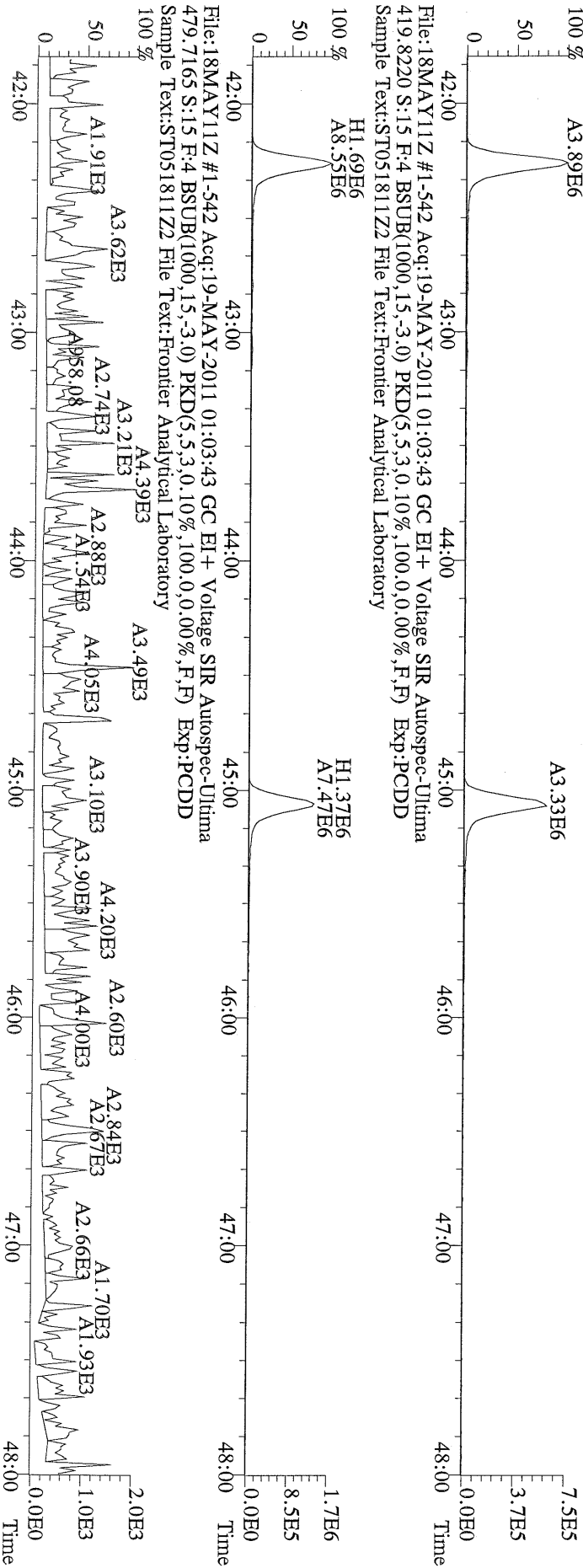
File:18MAY11Z #1-465 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Utima
383.8639 S:15 F:3 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp.:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



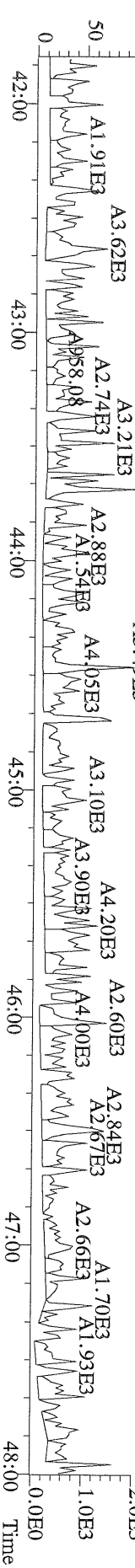
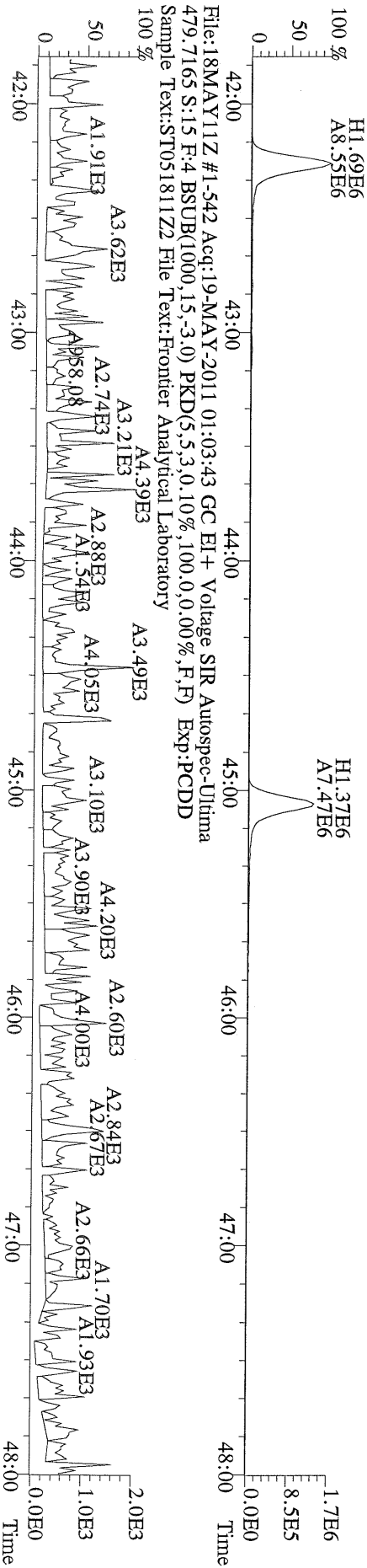
File: 18MAY11Z #1-542 Acq: 19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:15 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



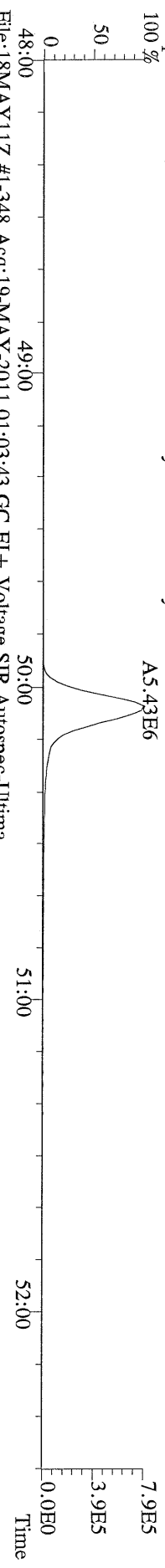
File: 18MAY11Z #1-542 Acq: 19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:15 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



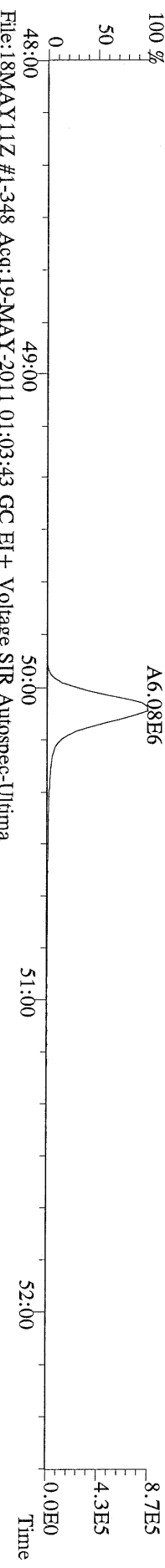
File: 18MAY11Z #1-542 Acq: 19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:15 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



File:18MAY11Z #1-348 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:15 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



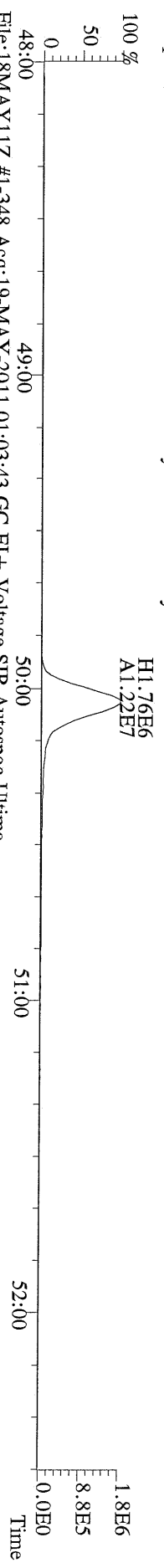
File:18MAY11Z #1-348 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:15 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory



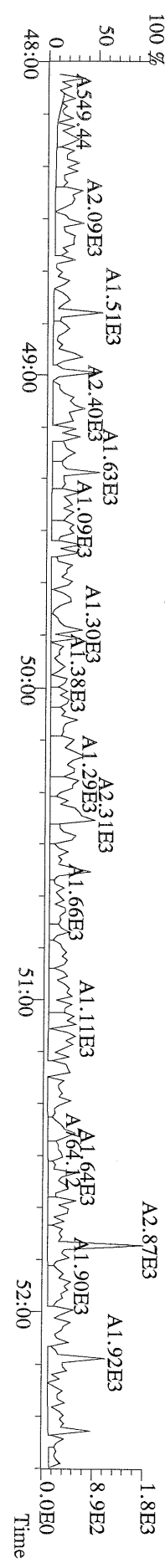
File:18MAY11Z #1-348 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:15 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory

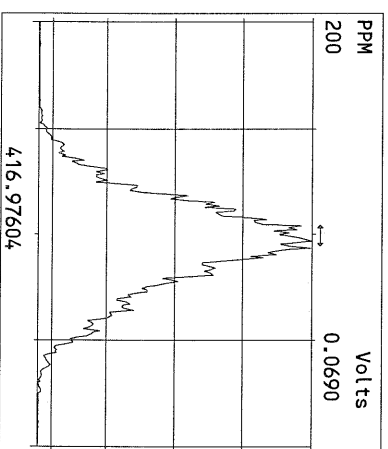
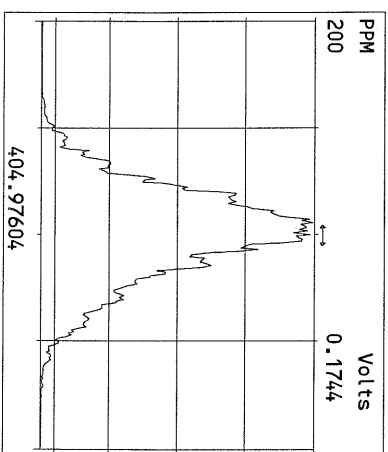
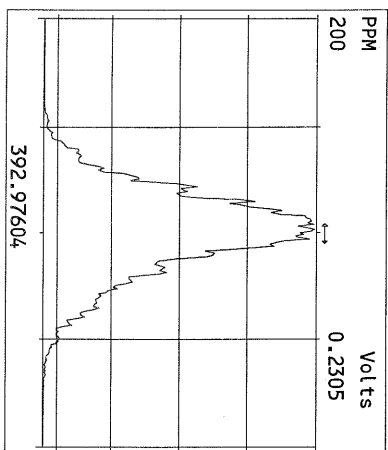
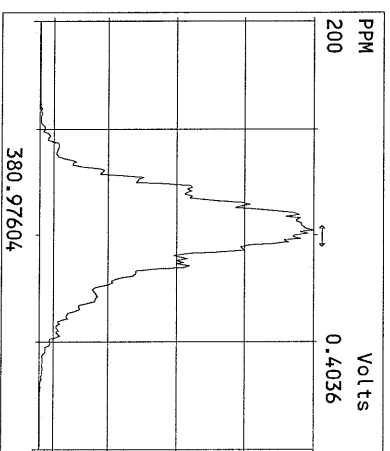
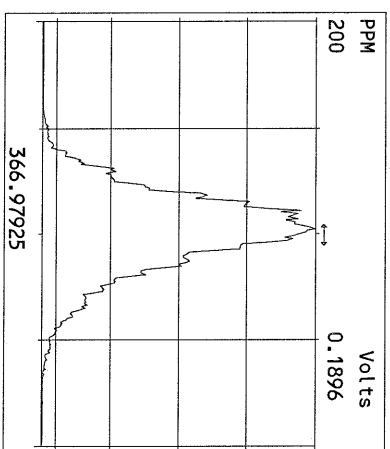
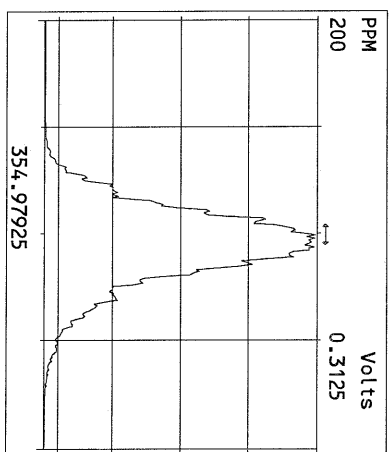
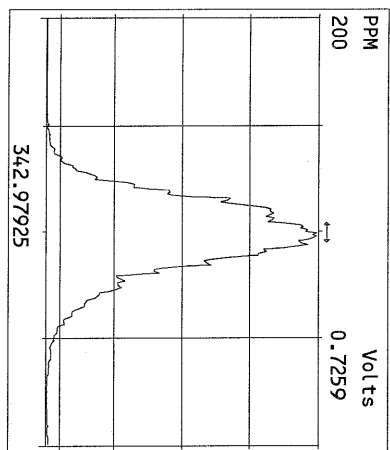
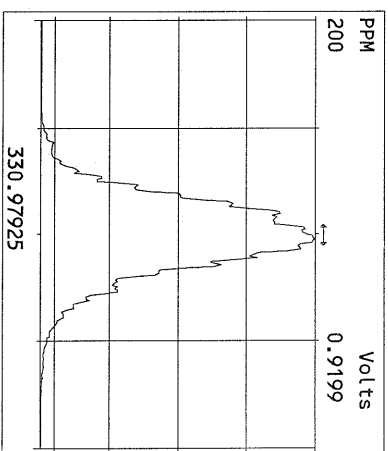
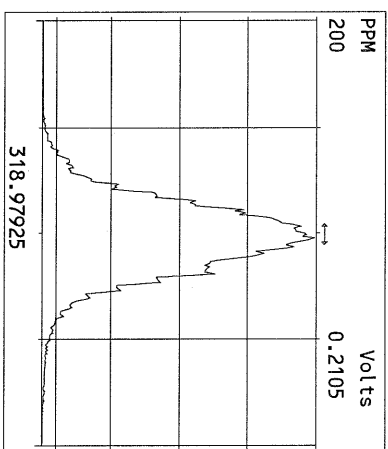
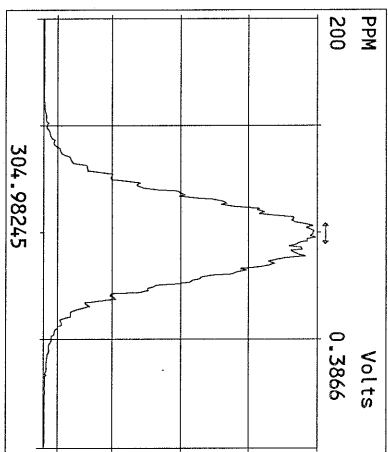
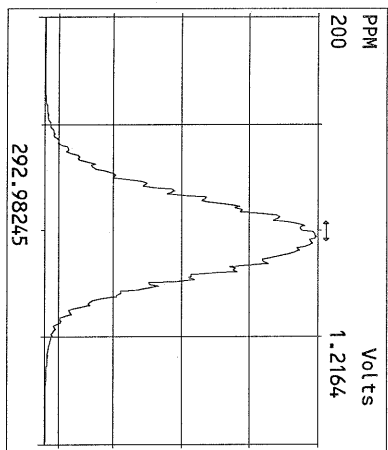


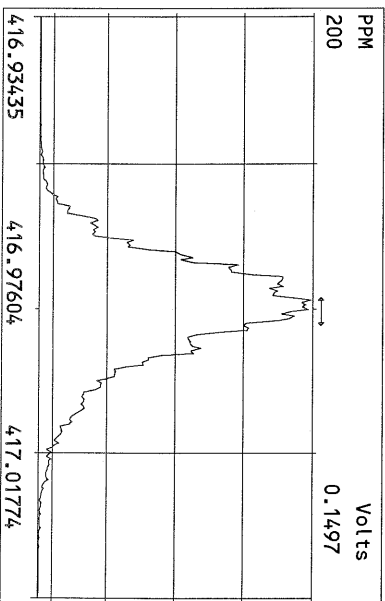
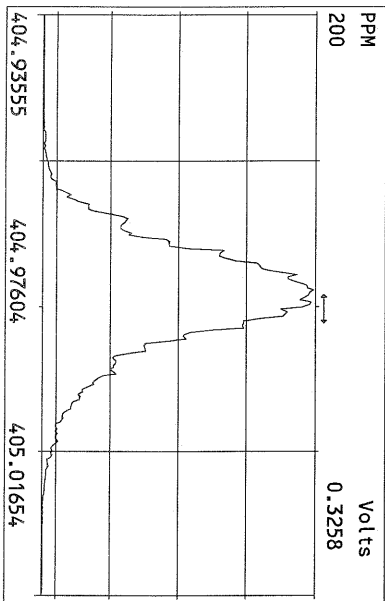
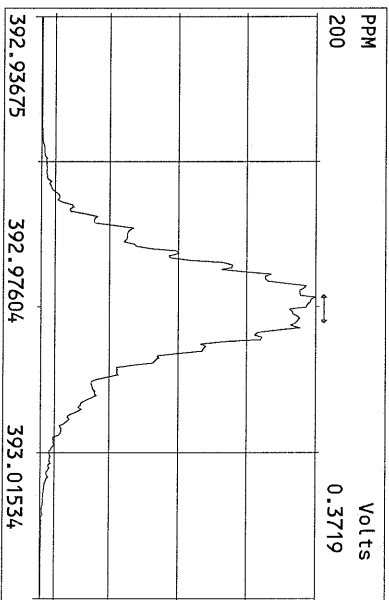
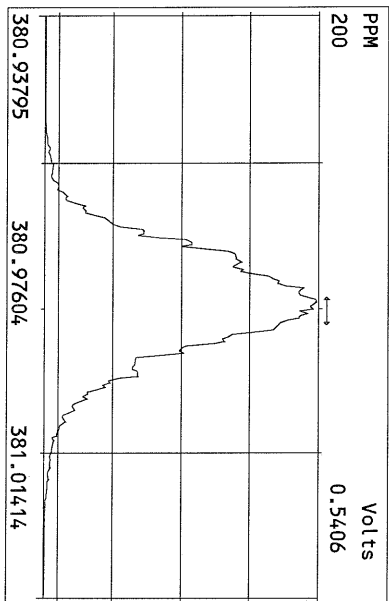
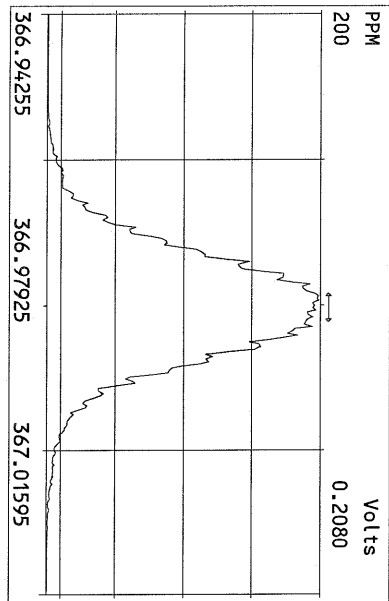
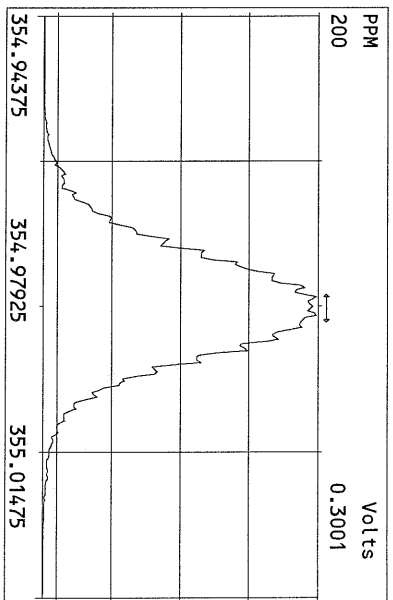
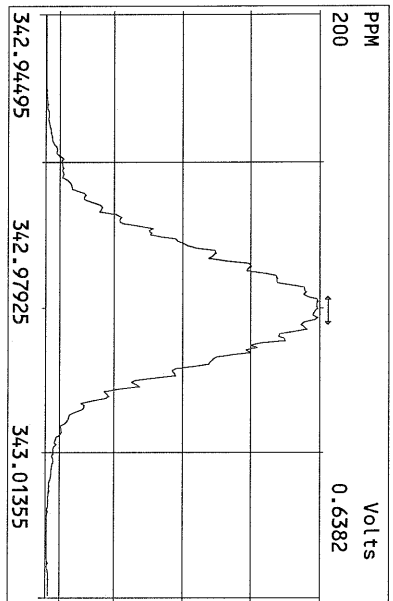
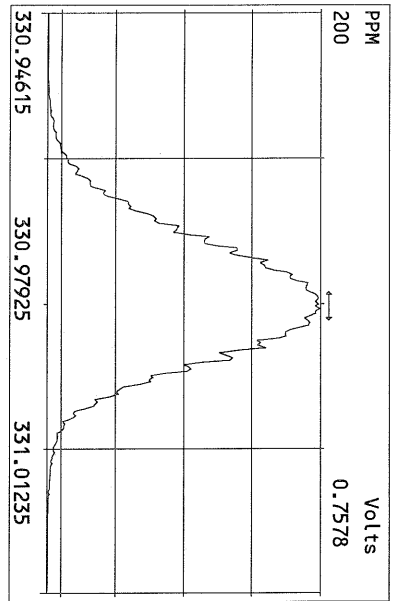
File:18MAY11Z #1-348 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:15 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory

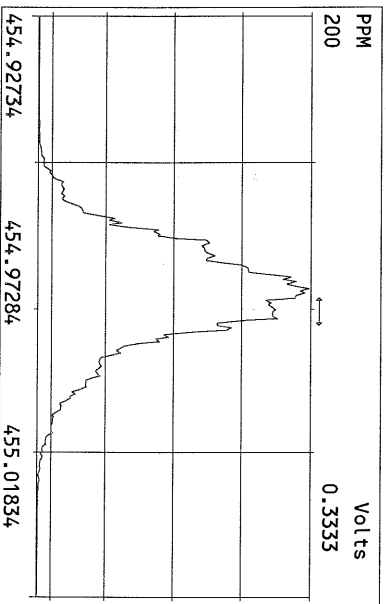
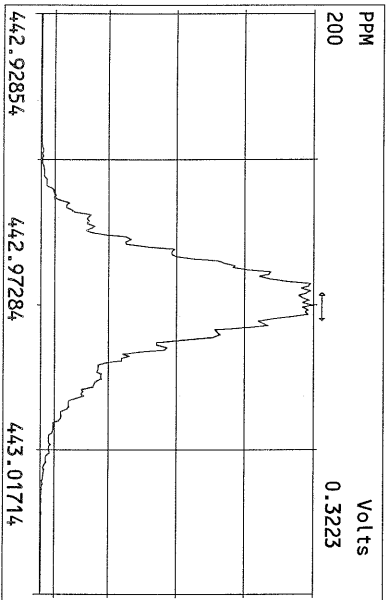
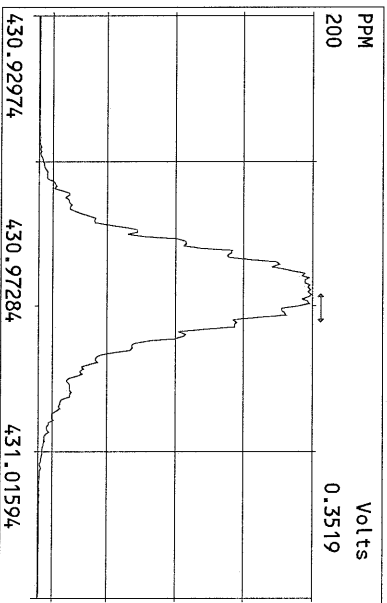
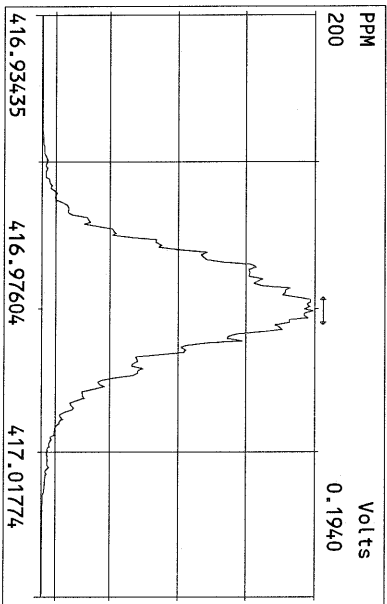
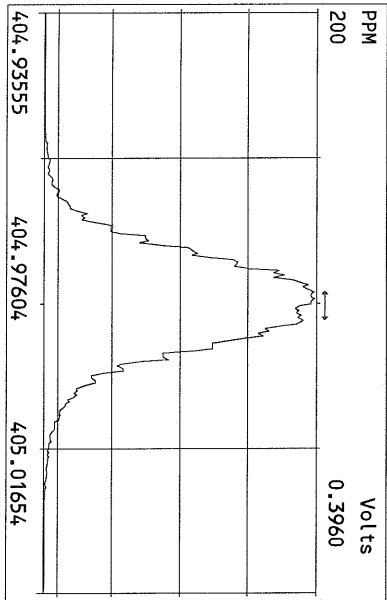
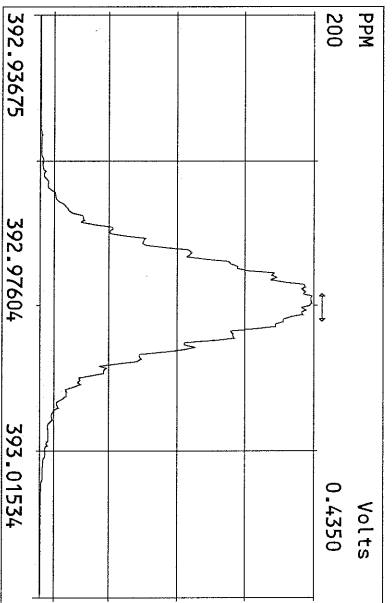
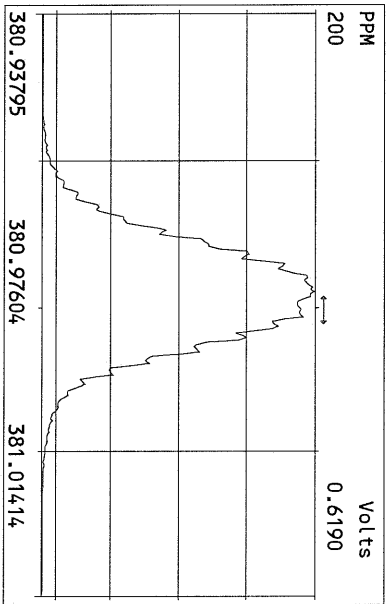
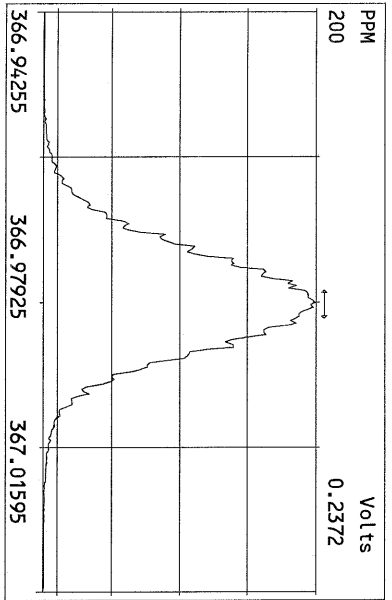


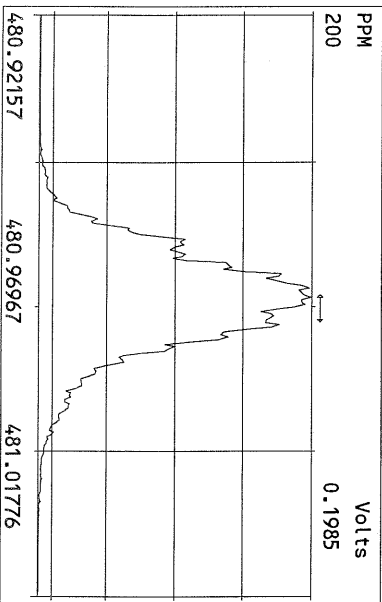
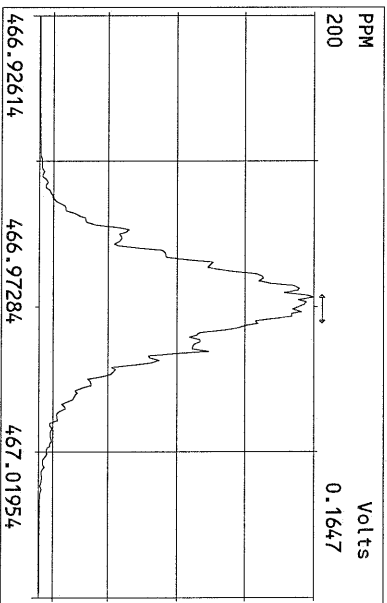
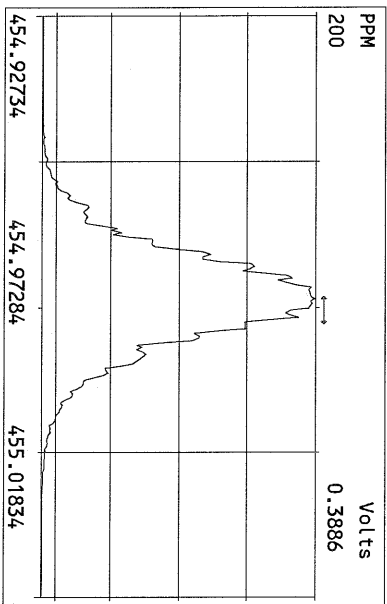
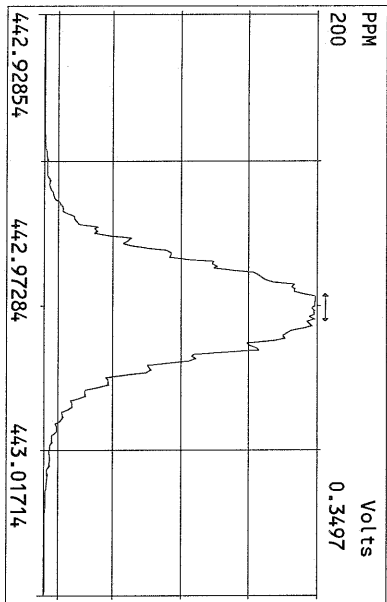
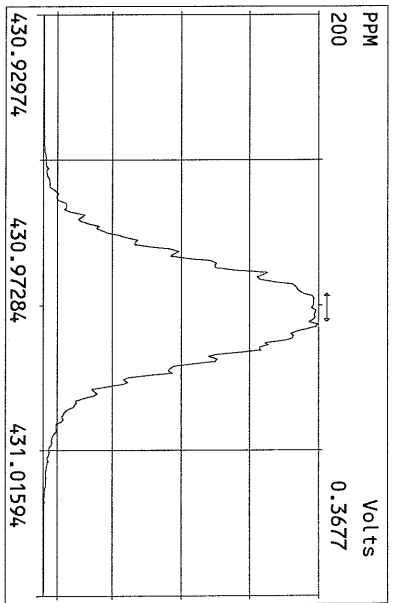
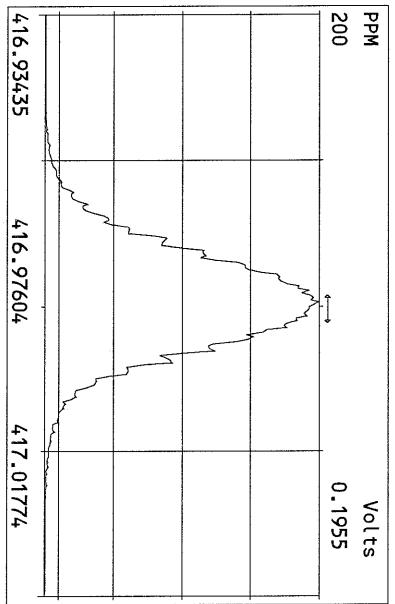
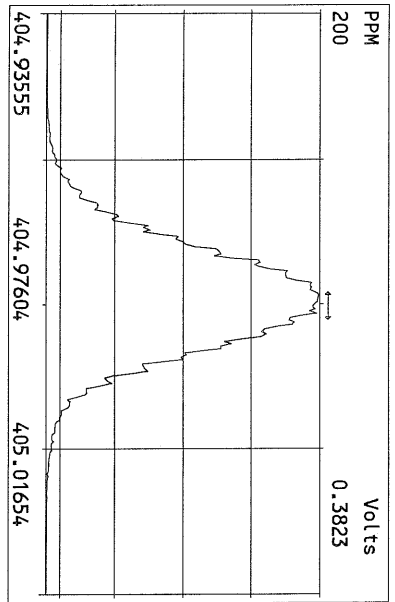
File:18MAY11Z #1-348 Acq:19-MAY-2011 01:03:43 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:15 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051811Z2 File Text:Frontier Analytical Laboratory

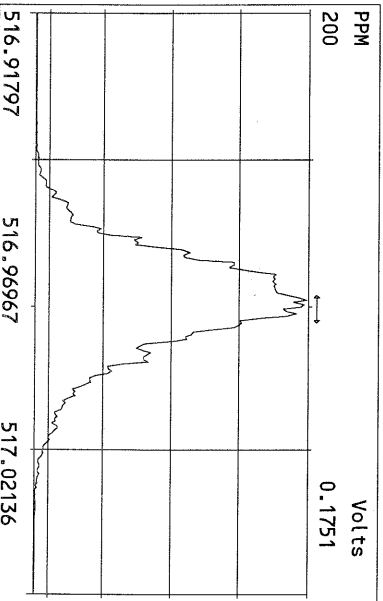
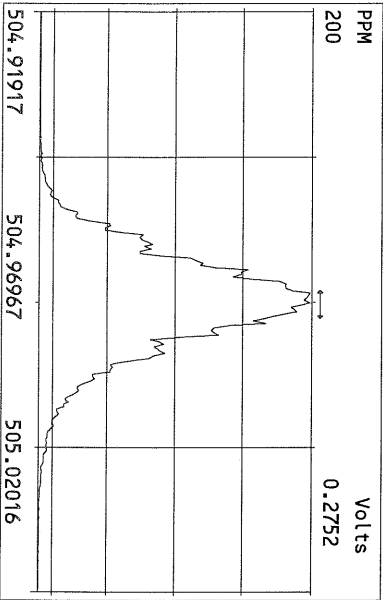
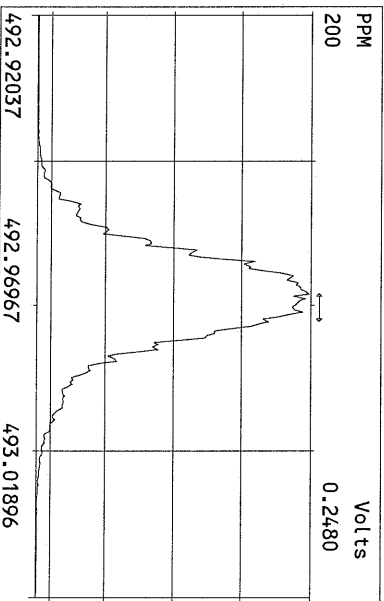
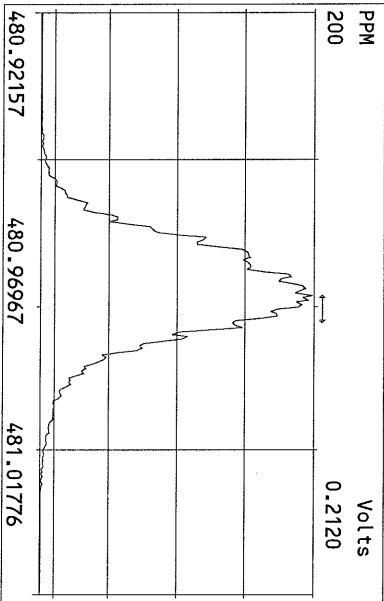
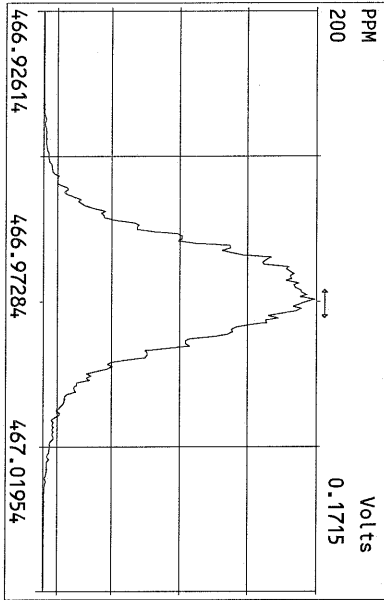
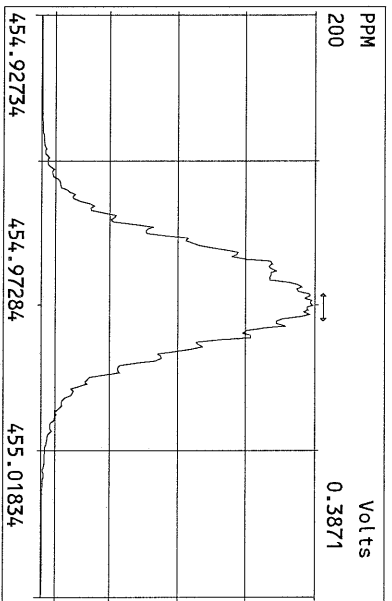
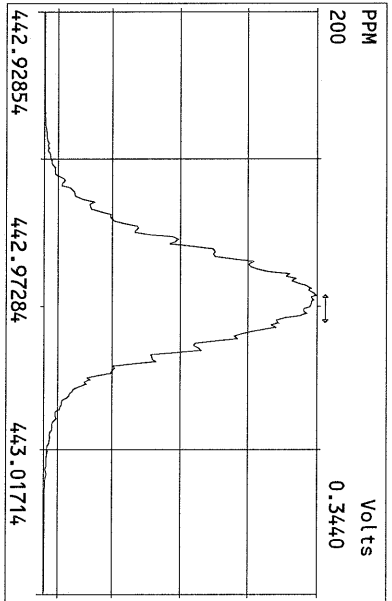
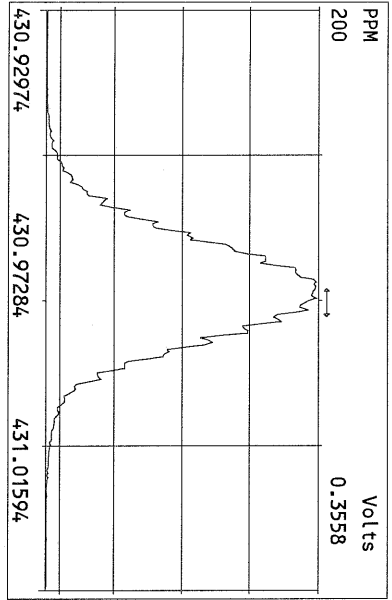












USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/17/11

Instrument ID: FAL4 GC Column ID: DB5

VER Data Filename: 19MAY11Z Sam:1 Analysis Date: 19-MAY-11 09:10:24

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	10.2	7.80 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	1.58	1.32-1.78	y	52.6	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	50.7	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	52.3	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	y	53.6	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	51.8	43.0 - 58.0
OCDD	M+2/M+4	0.89	0.76-1.02	y	98.8	79.0 - 126
2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	y	9.77	8.40 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.52	1.32-1.78	y	50.2	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.52	1.32-1.78	y	50.1	41.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	y	50.3	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	52.3	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	51.1	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.26	1.05-1.43	y	50.9	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	y	51.4	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.08	0.88-1.20	y	50.1	43.0 - 58.0
OCDF	M+2/M+4	0.89	0.76-1.02	y	108	63.0 - 159

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

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

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

Analyst: J Date: 5/19/11

FORM 5
PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Frontier Analytical Laboratory Episode No.:
Contract No.: SAS No.:
Instrument ID: FAL4 Initial Calibration Date: 5/17/11
RT Window Data Filename: 19MAY11Z Sam:1 Analysis Date: 19-MAY-11 Time: 09:10:24
DB-5 IS Data Filename: 19MAY11Z Sam:1 Analysis Date: 19-MAY-11 Time: 09:10:24
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)	24:21	1,3,6,8-TCDF (F)	22:58
1,2,8,9-TCDD (L)	28:20	1,2,8,9-TCDF (L)	28:33
1,2,4,7,9-PeCDD (F)	30:16	1,3,4,6,8-PeCDF (F)	28:26
1,2,3,8,9-PeCDD (L)	33:49	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)	35:16
1,2,3,7,8,9-HxCDD (L)	39:12	1,2,3,7,8,9-HxCDF (L)	39:47
1,2,3,4,6,7,9-HpCDD (F)	42:47	1,2,3,4,6,7,8-HpCDF (F)	42:16
1,2,3,4,6,7,8-HpCDD (L)	44:10	1,2,3,4,7,8,9-HpCDF (L)	45:05

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

=====

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT
BETWEEN
COMPARED PEAKS (1)

<25%

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

Analyst: J

Date: 5/19/11

Frontier Analytical Laboratory - Acquisition Log

Run Name:19MAY11Z

Instrument: FAL4

GC: DB5

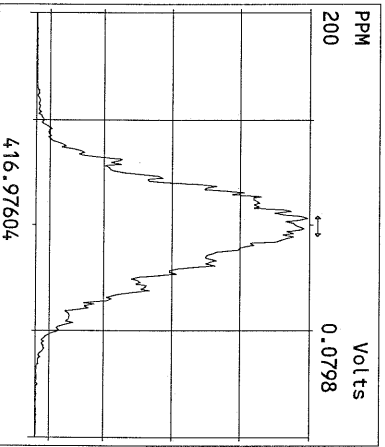
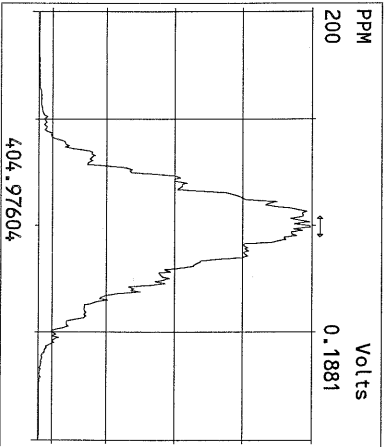
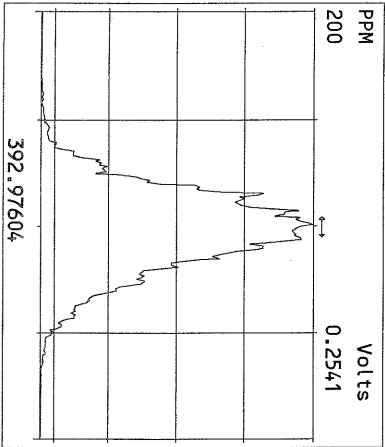
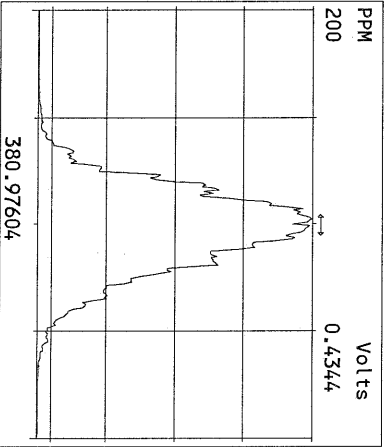
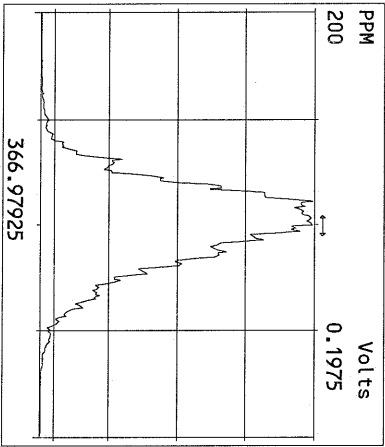
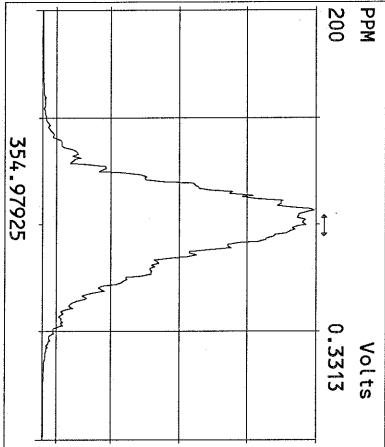
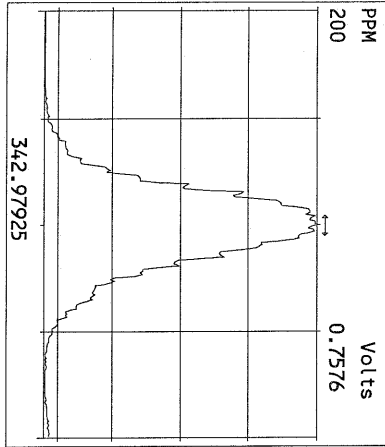
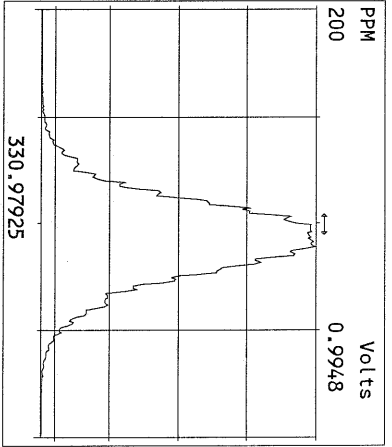
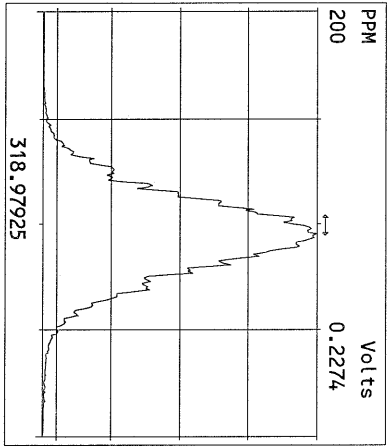
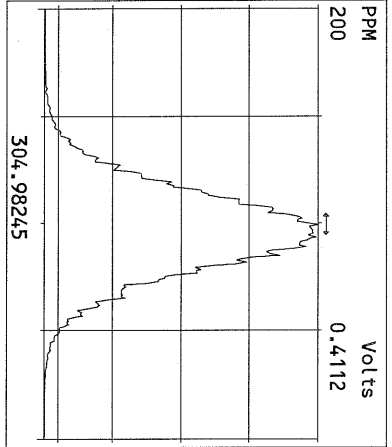
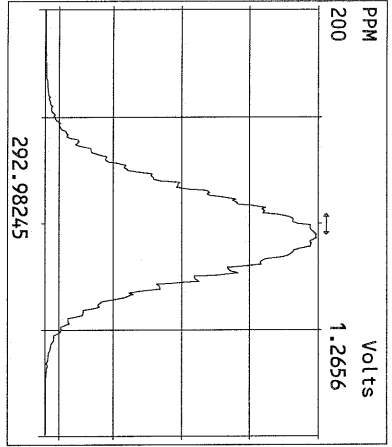
Experiment:PCDD

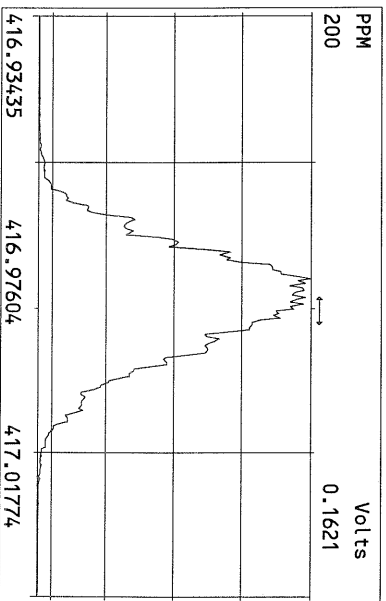
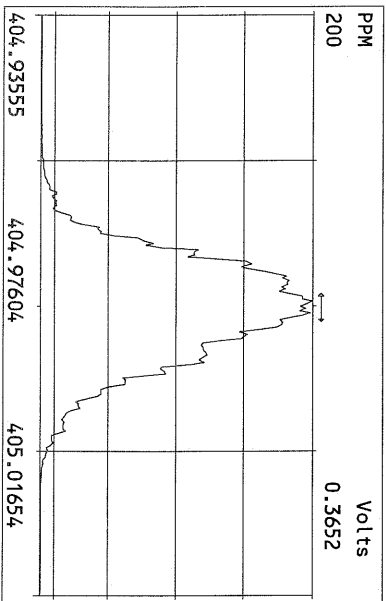
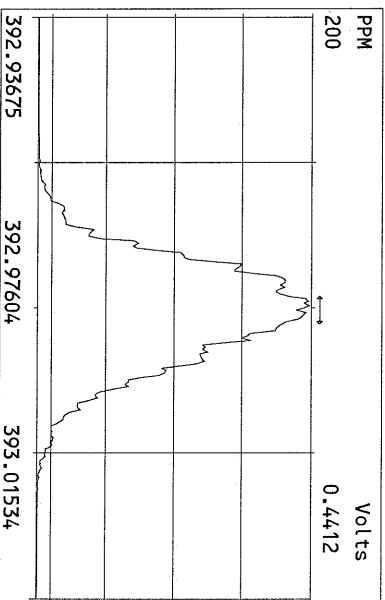
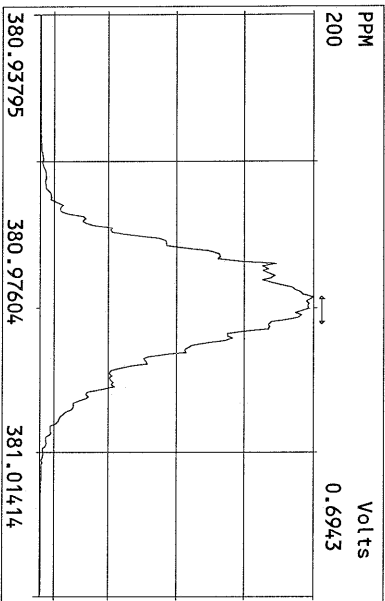
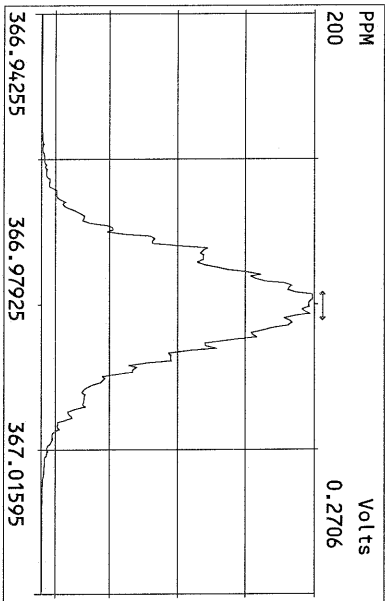
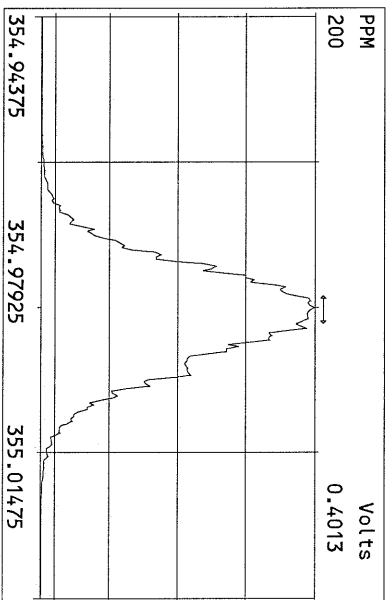
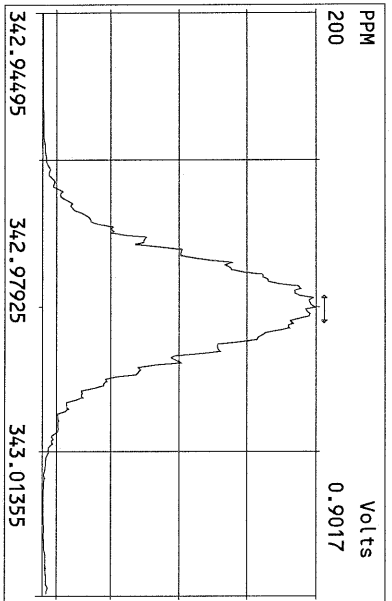
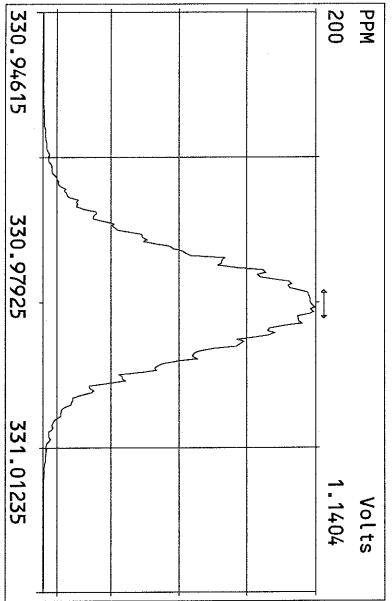
Data File S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
19MAY11Z 1	ST051911Z1	1613 CS3 100511J	19-MAY-11 09:10:24	ST051911Z1	ST051911Z2	BS
19MAY11Z 2	6739-004-0001-SA	MW06-042611	19-MAY-11 10:05:12	ST051911Z1	ST051911Z2	BS
19MAY11Z 3	6739-004-0002-MS	MW06-042611	19-MAY-11 10:59:59	ST051911Z1	ST051911Z2	BS
19MAY11Z 4	6739-004-0002-MSD	MW06-042611	19-MAY-11 11:54:46	ST051911Z1	ST051911Z2	BS
19MAY11Z 5	ST051911Z2	1613 CS3 100511J	19-MAY-11 12:49:34	ST051911Z1	ST051911Z2	BS
19MAY11Z 6	QC051911Z1	NEWQC	19-MAY-11 13:44:22	ST051911Z1	ST051911Z2	BS
19MAY11Z 7	QC051911Z2	SSQC	19-MAY-11 14:39:09	ST051911Z1	ST051911Z2	BS

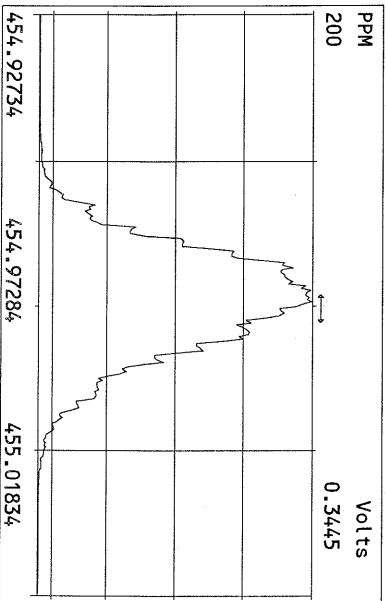
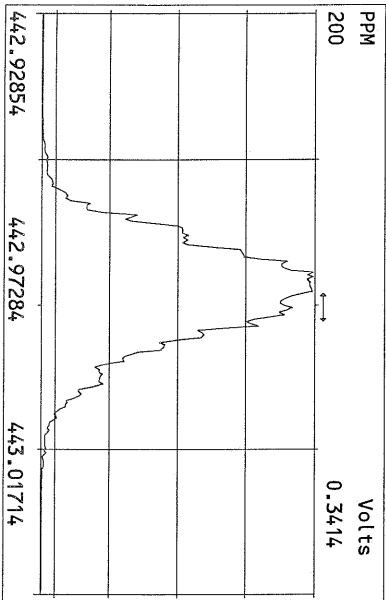
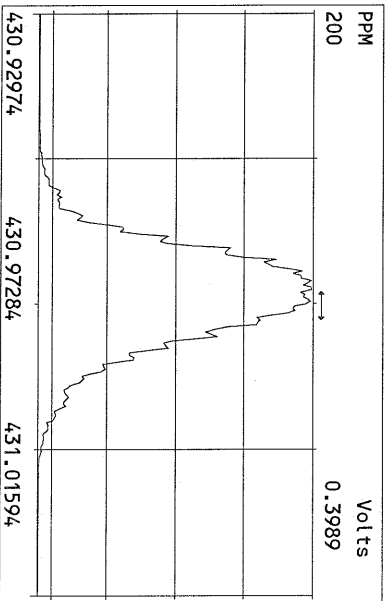
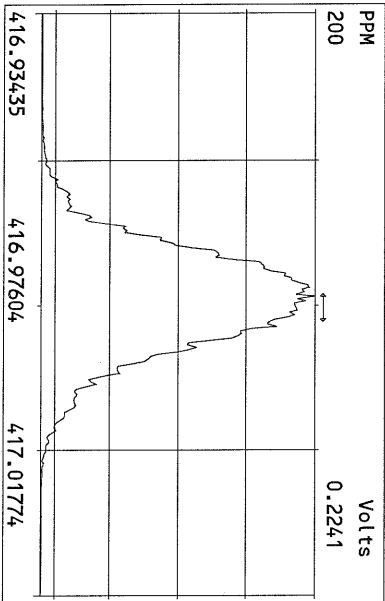
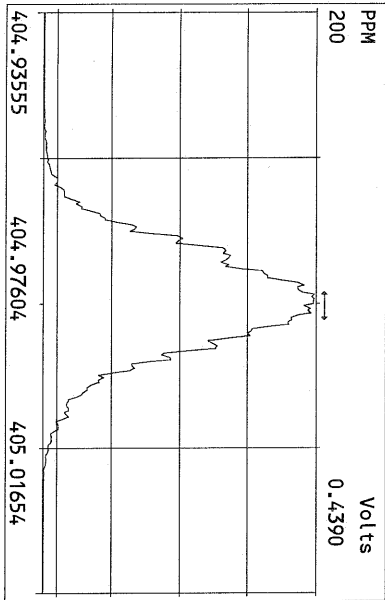
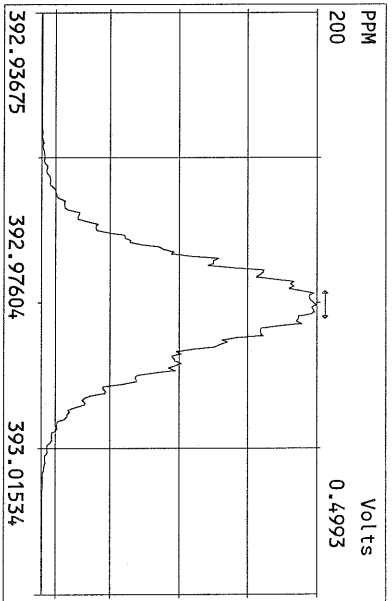
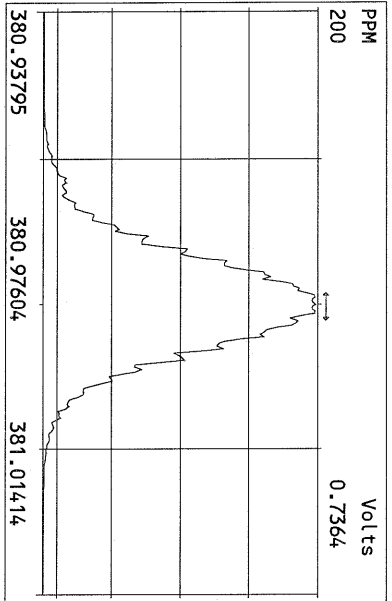
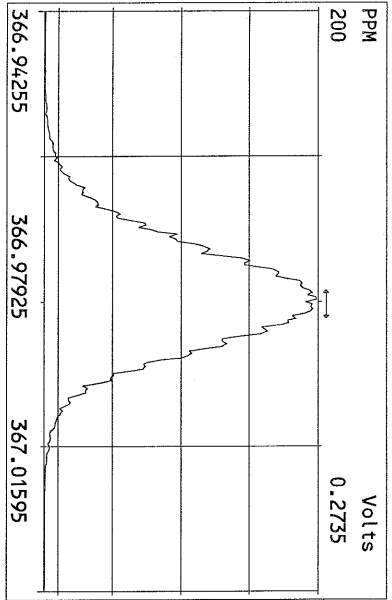
8/5/19/14

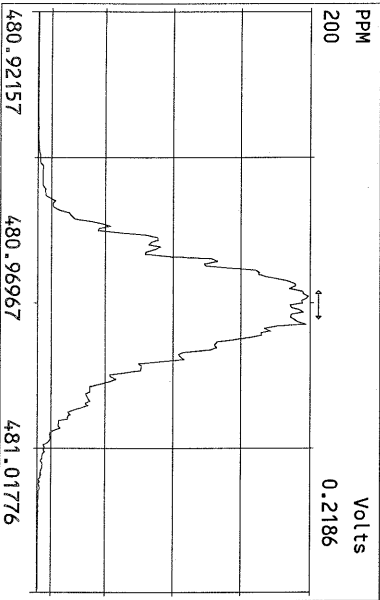
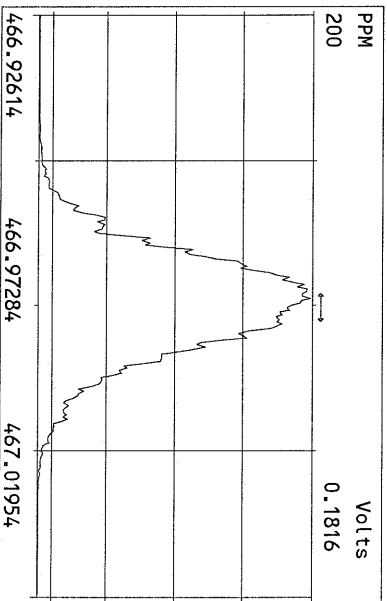
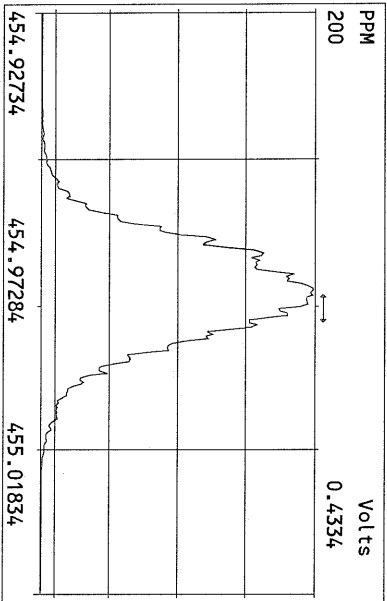
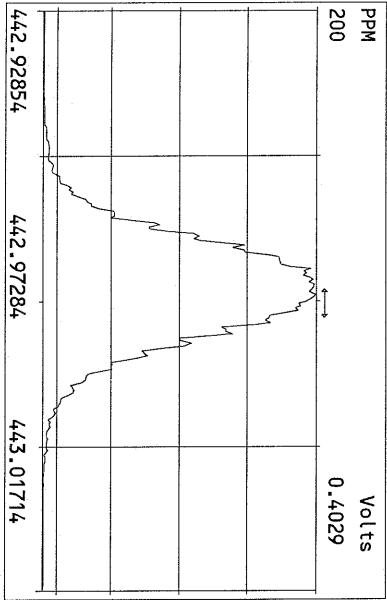
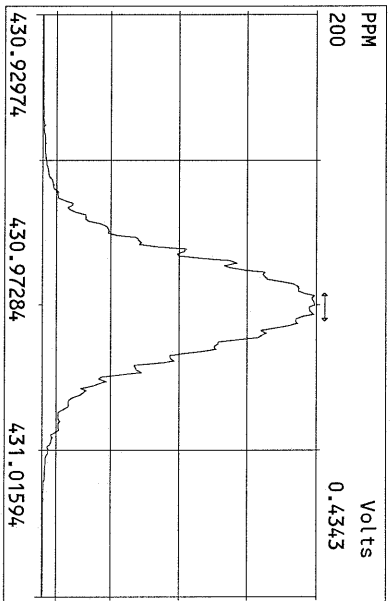
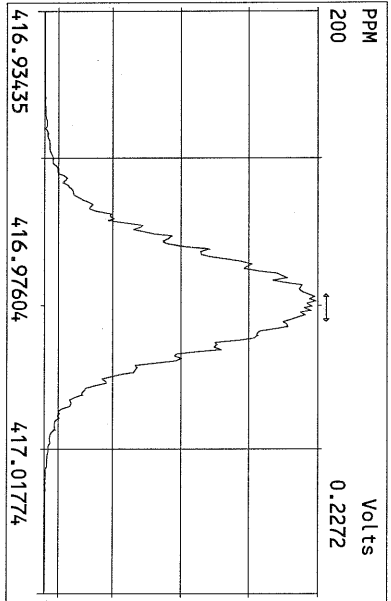
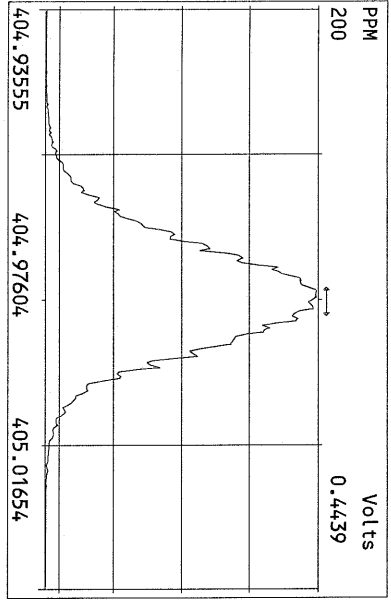
Data Backed Up: _____

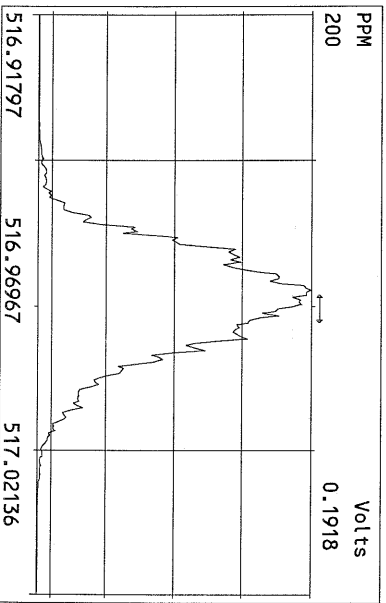
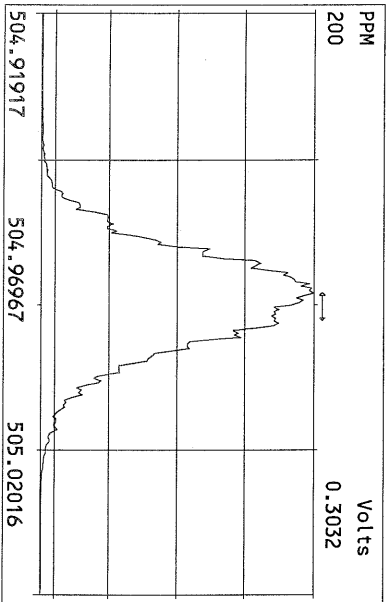
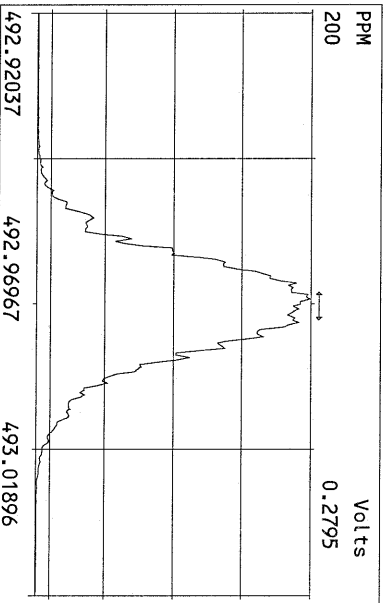
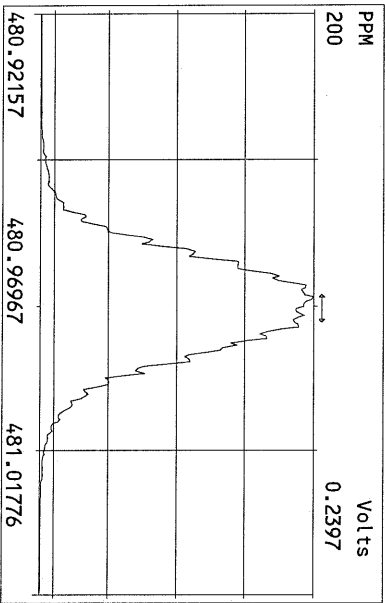
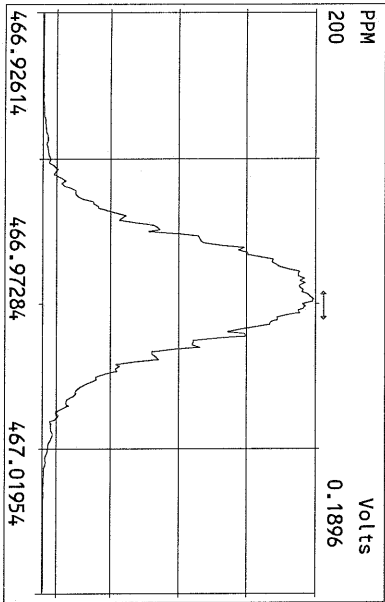
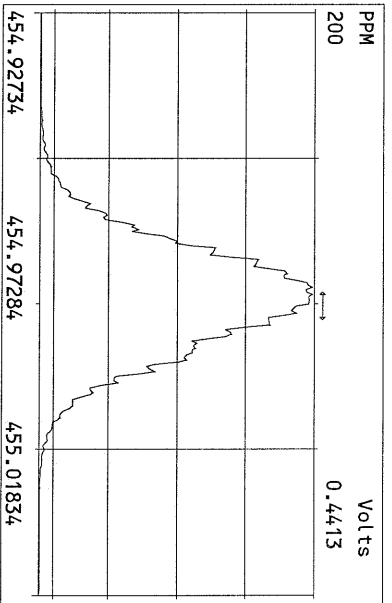
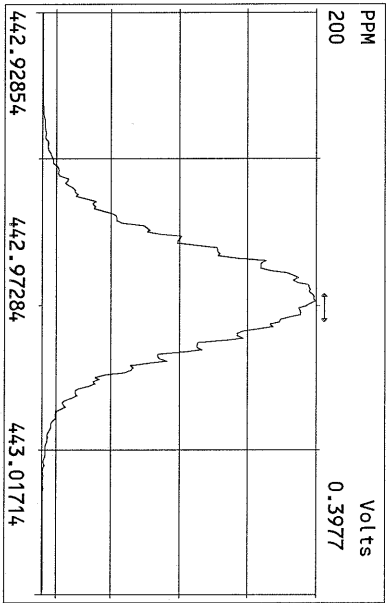
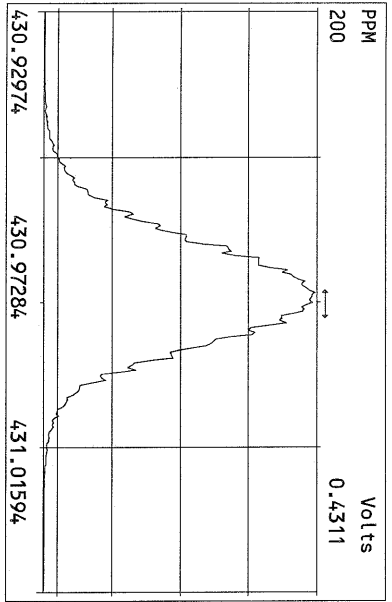
Date: _____



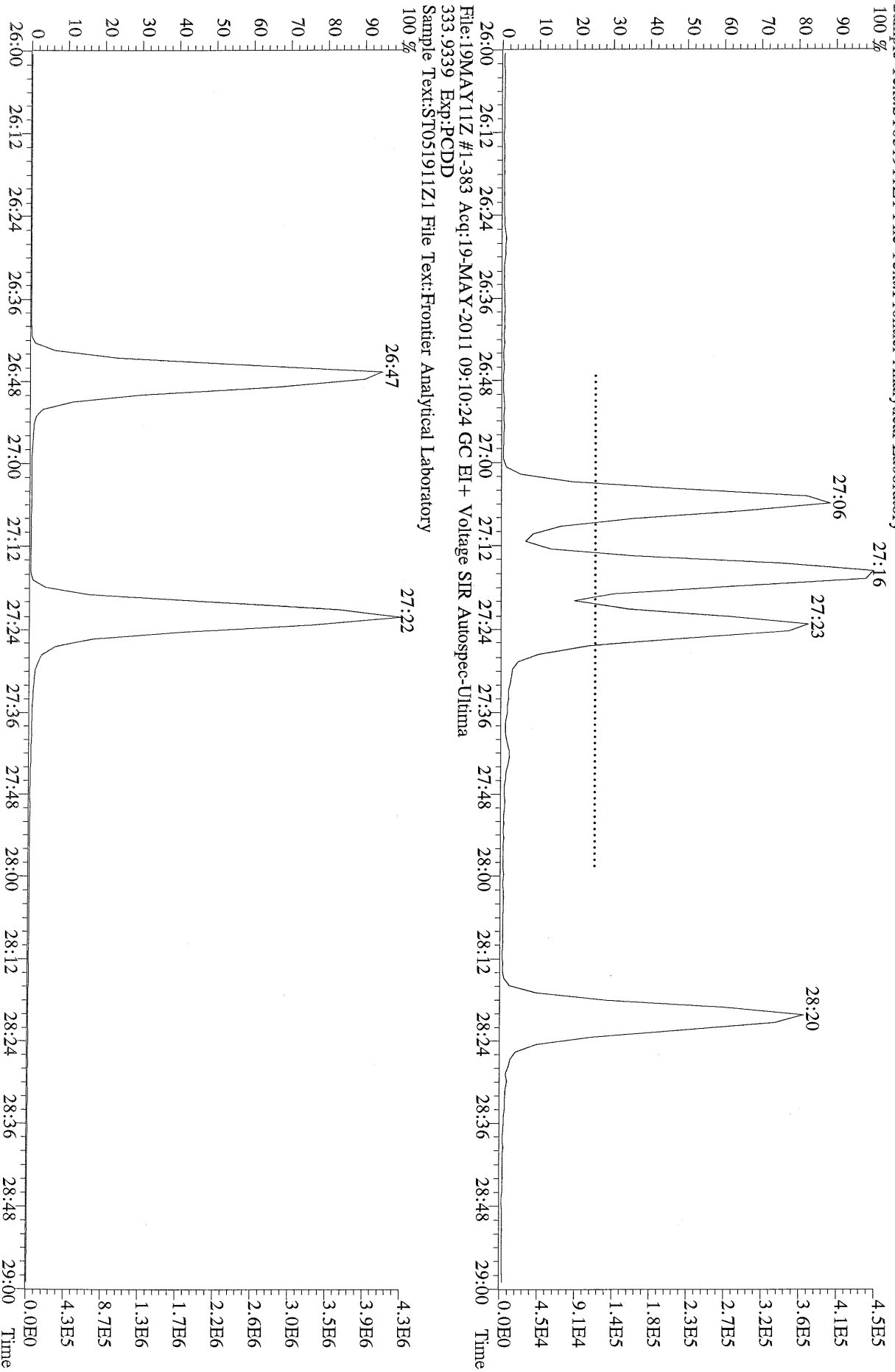




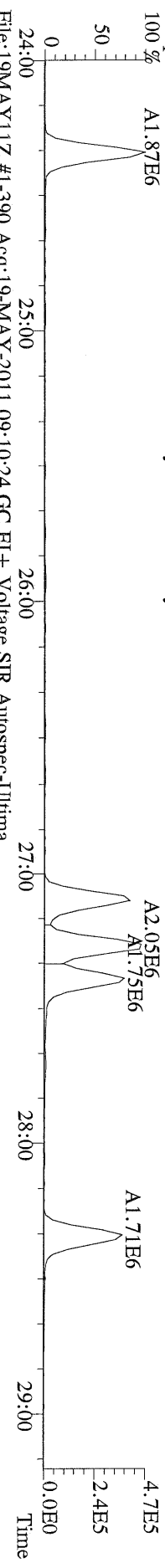




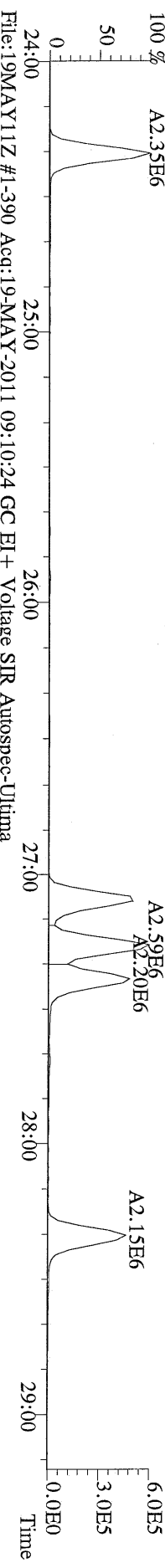
File:19MAY11Z #1-383 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
319.8965 Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory
100%



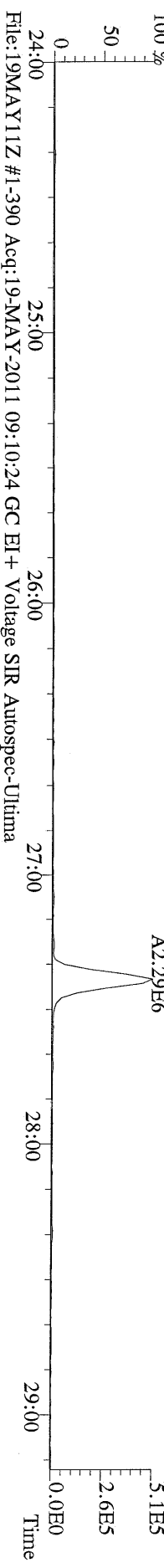
File:19MAY11Z #1-390 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
 319.8965 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



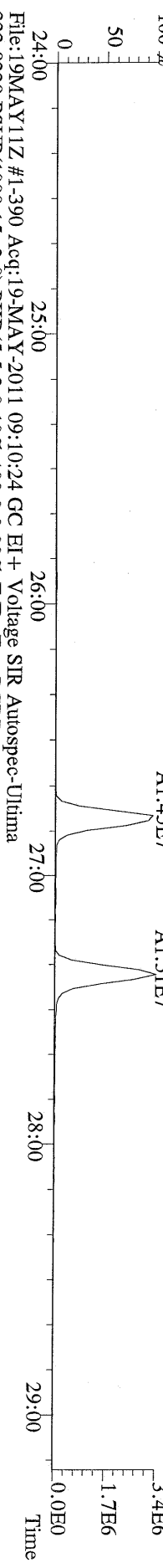
File:19MAY11Z #1-390 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
 321.8936 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



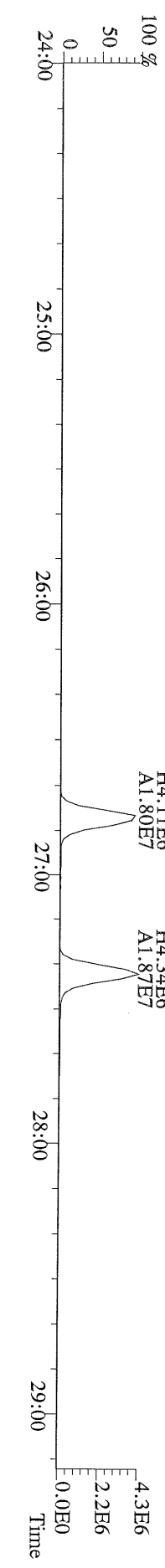
File:19MAY11Z #1-390 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
 327.8847 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



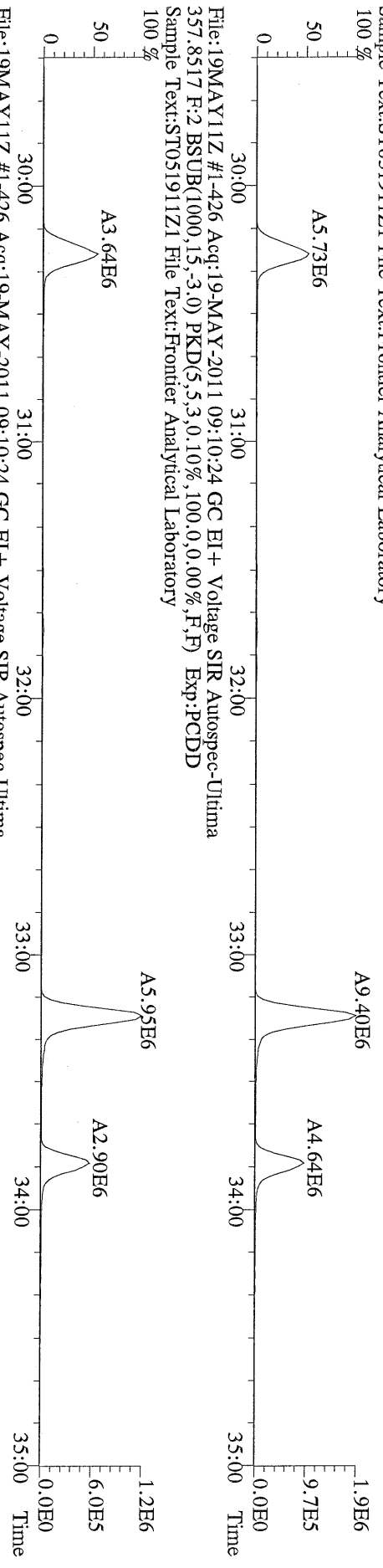
File:19MAY11Z #1-390 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
 331.9368 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



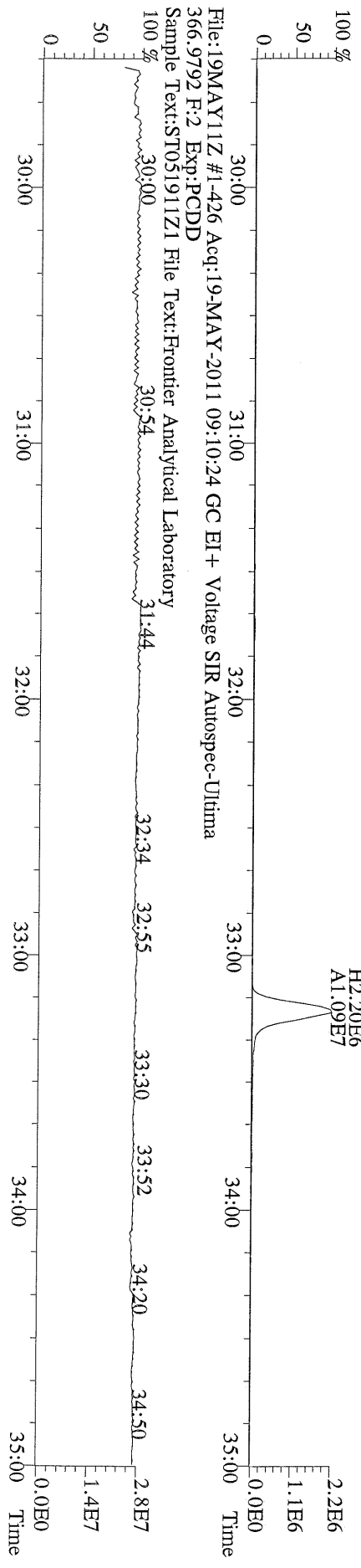
File:19MAY11Z #1-390 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
 333.9339 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



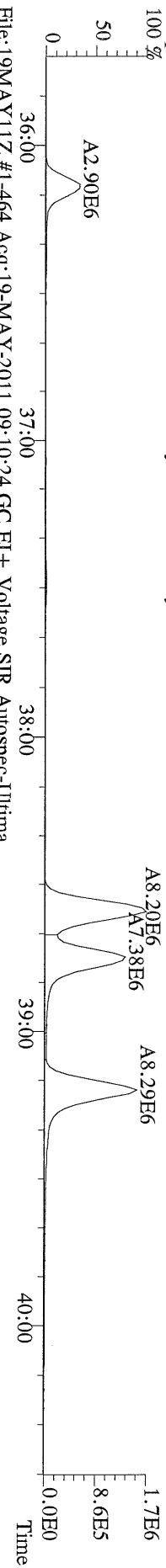
File:19MAY11Z #1-426 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
355.8546 F:2 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



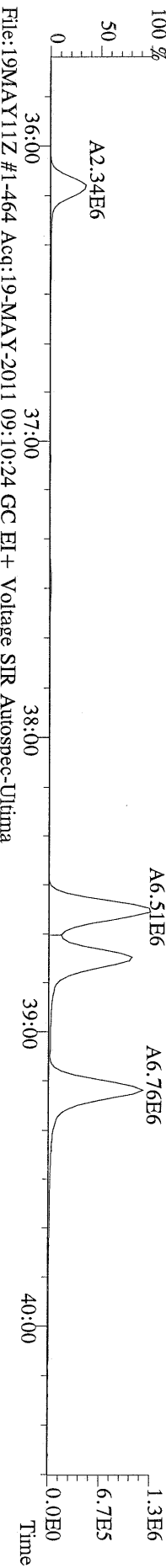
File:19MAY11Z #1-426 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
367.8949 F:2 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



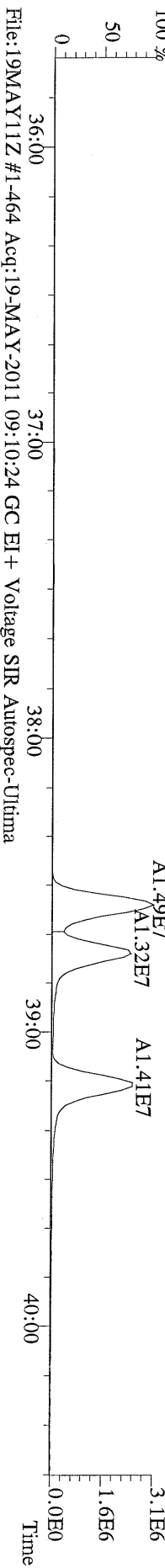
File:19MAY11Z #1-464 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
389.8156 F:3 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



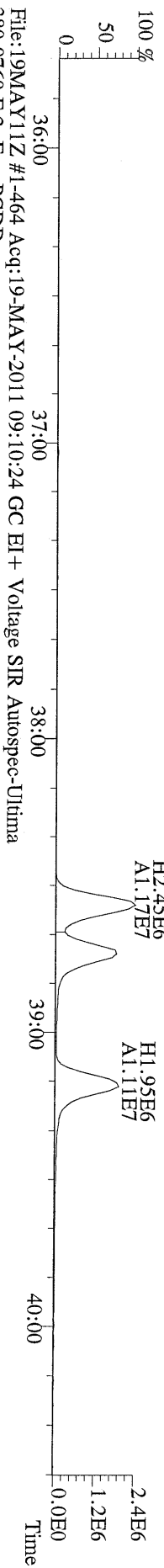
File:19MAY11Z #1-464 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
391.8127 F:3 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



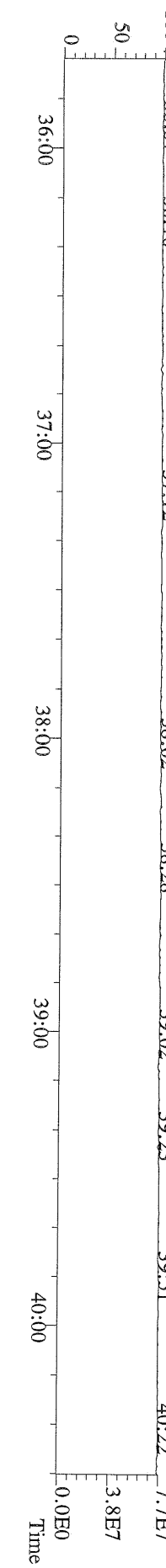
File:19MAY11Z #1-464 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
401.8559 F:3 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



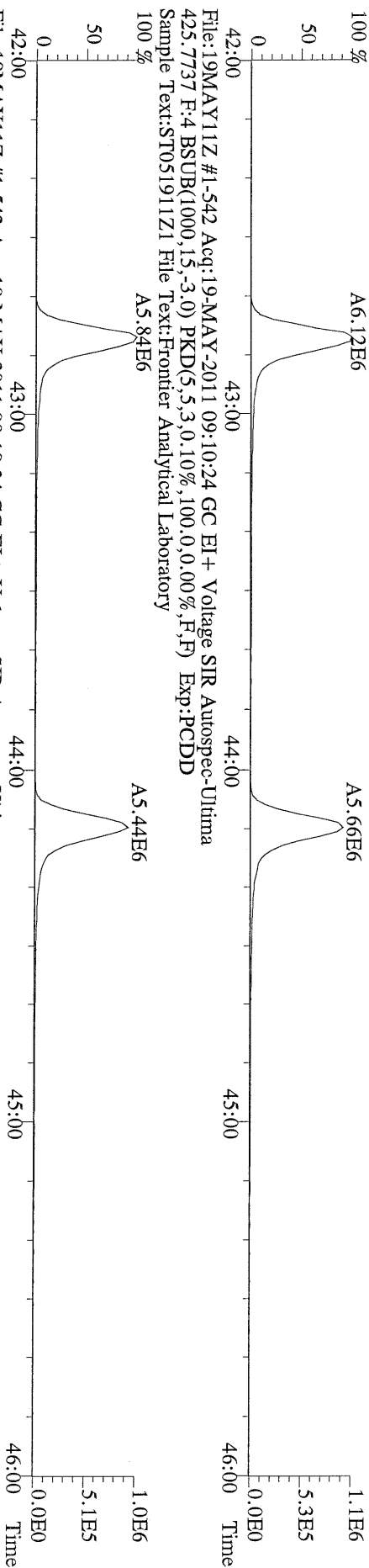
File:19MAY11Z #1-464 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
403.8530 F:3 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



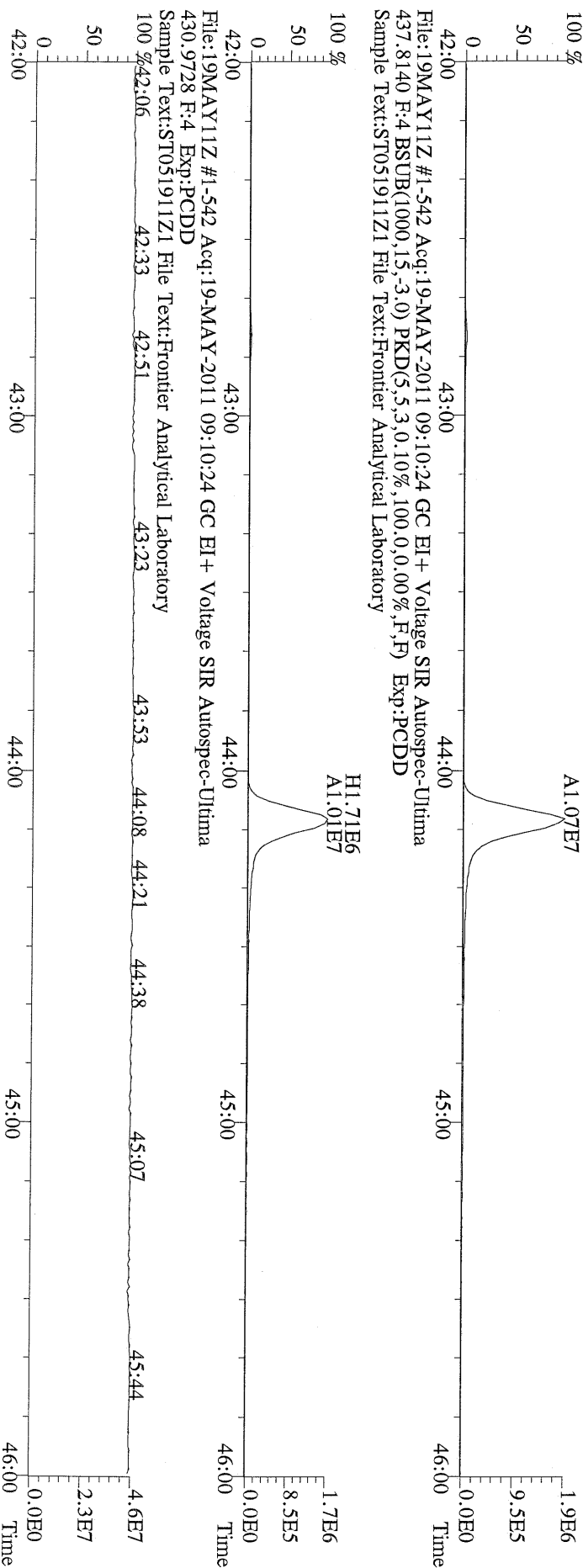
File:19MAY11Z #1-464 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
380.9760 F:3 Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



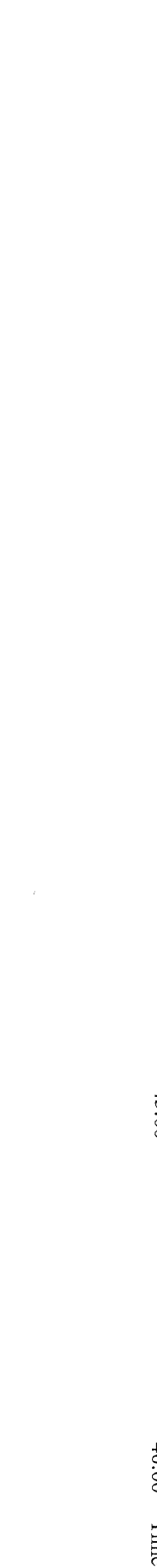
File:19MAY11Z #1-542 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
423.7767 F:4 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



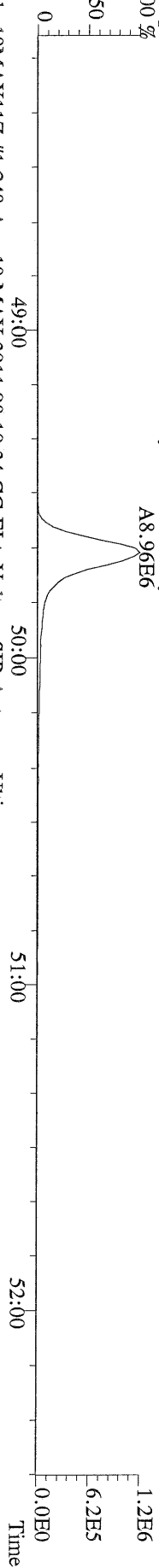
File:19MAY11Z #1-542 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
435.8169 F:4 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



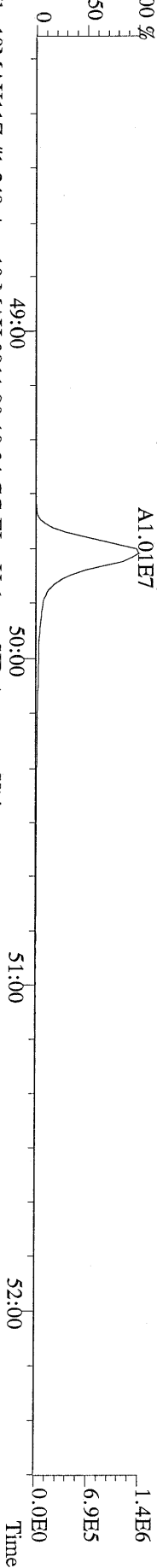
File:19MAY11Z #1-542 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
430.9728 F:4 Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



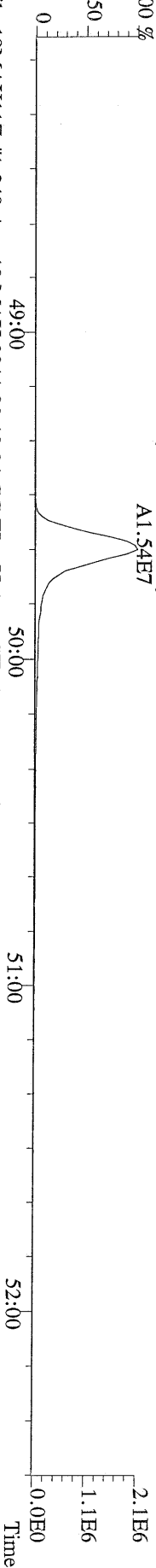
File:19MAYY11Z #1-348 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
457.7377 F:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



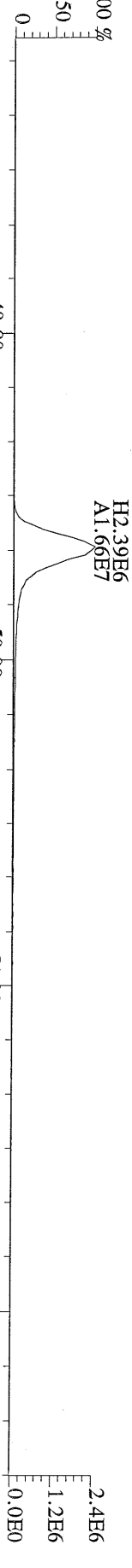
File:19MAYY11Z #1-348 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
459.7348 F:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



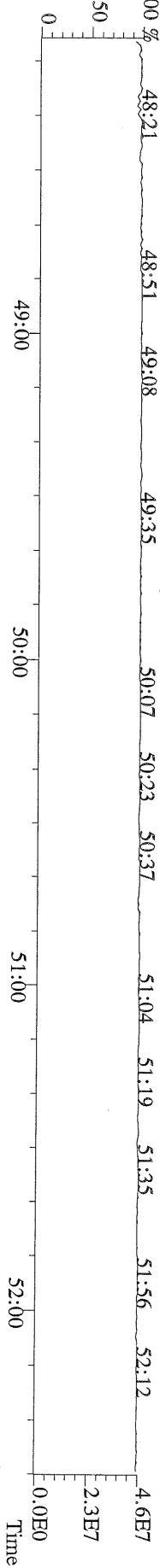
File:19MAYY11Z #1-348 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
469.7780 F:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



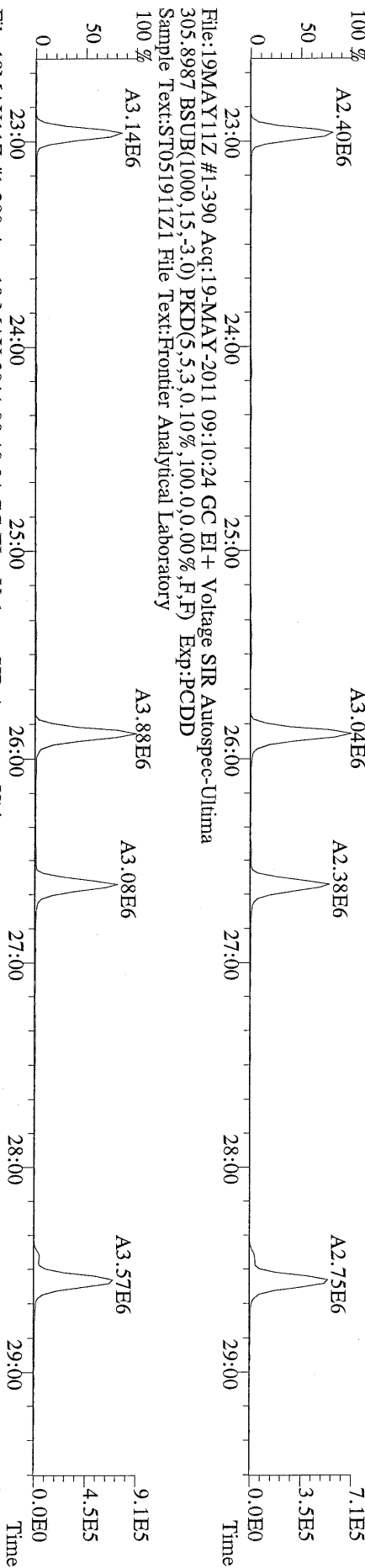
File:19MAYY11Z #1-348 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
471.7750 F:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



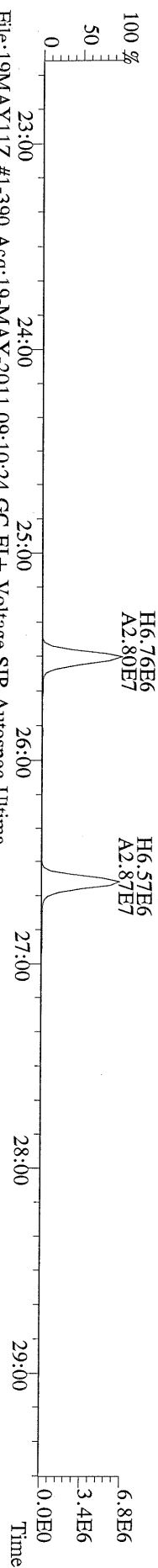
File:19MAYY11Z #1-348 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
454.9728 F:5 Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



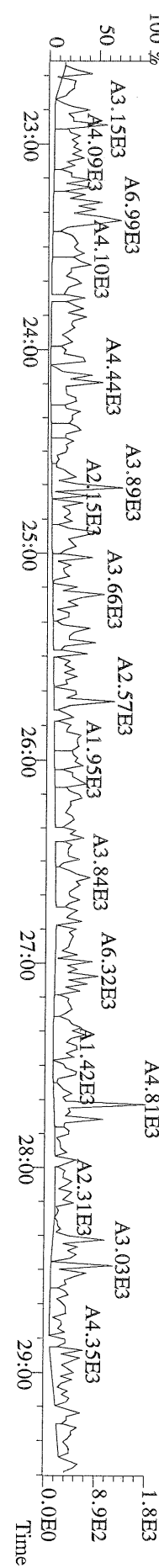
File:19MAY11Z #1-390 Acq:19-MAY-2011 09:10:24 GC EI + Voltage SIR Autospec-Ultima
303.9016 BSUB(1000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



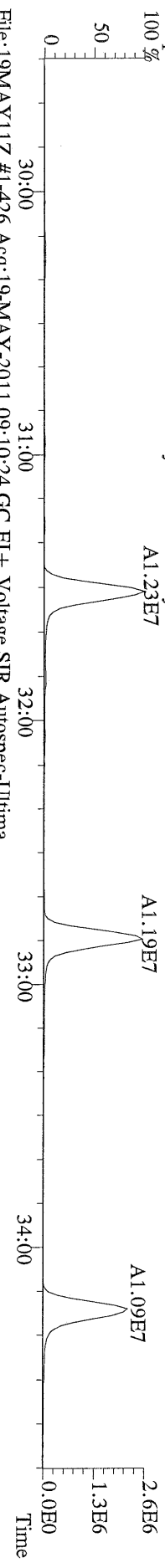
File:19MAY11Z #1-390 Acq:19-MAY-2011 09:10:24 GC EI + Voltage SIR Autospec-Ultima
315.9419 BSUB(1000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



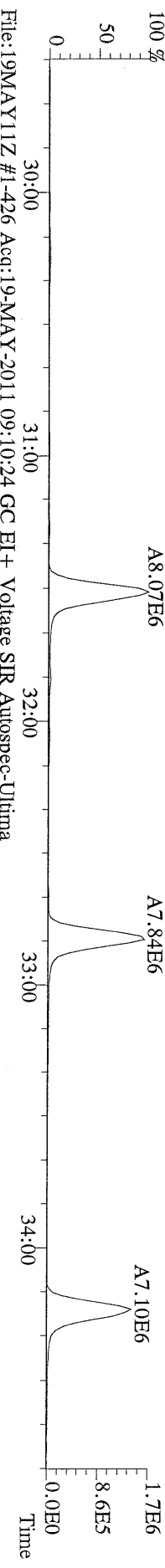
File:19MAY11Z #1-390 Acq:19-MAY-2011 09:10:24 GC EI + Voltage SIR Autospec-Ultima
375.8364 BSUB(1000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



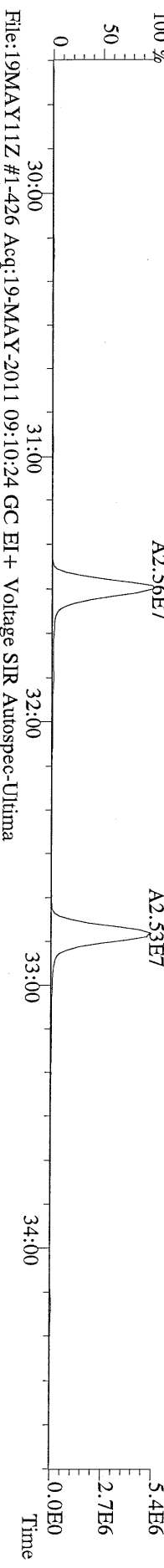
File:19MAYY11Z #1-426 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



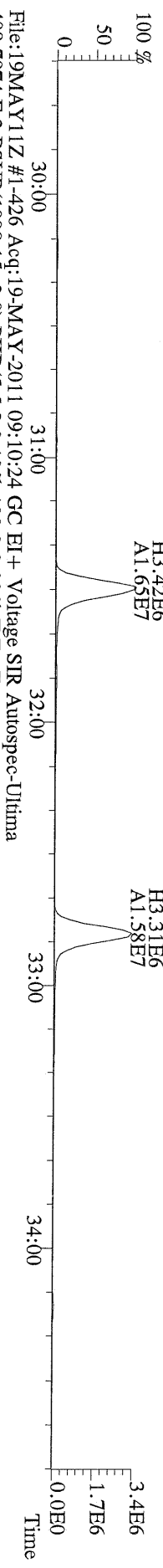
File:19MAYY11Z #1-426 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
 341.8568 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



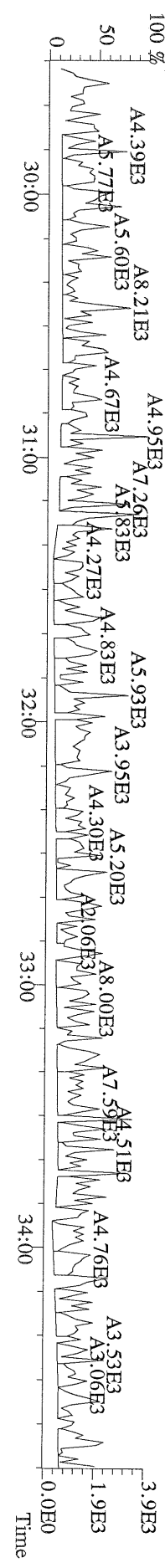
File:19MAYY11Z #1-426 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
 351.9000 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



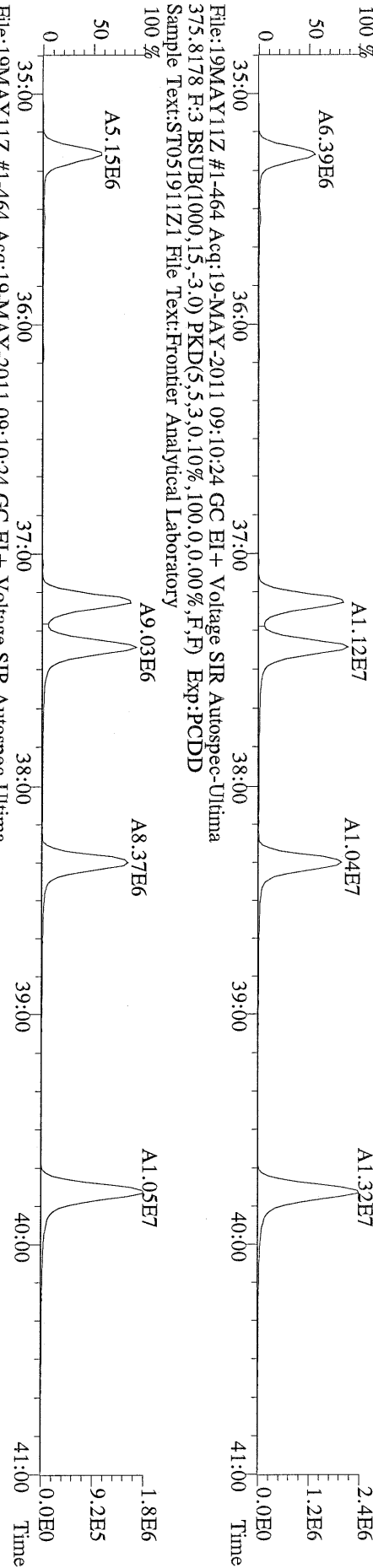
File:19MAYY11Z #1-426 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
 353.8970 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



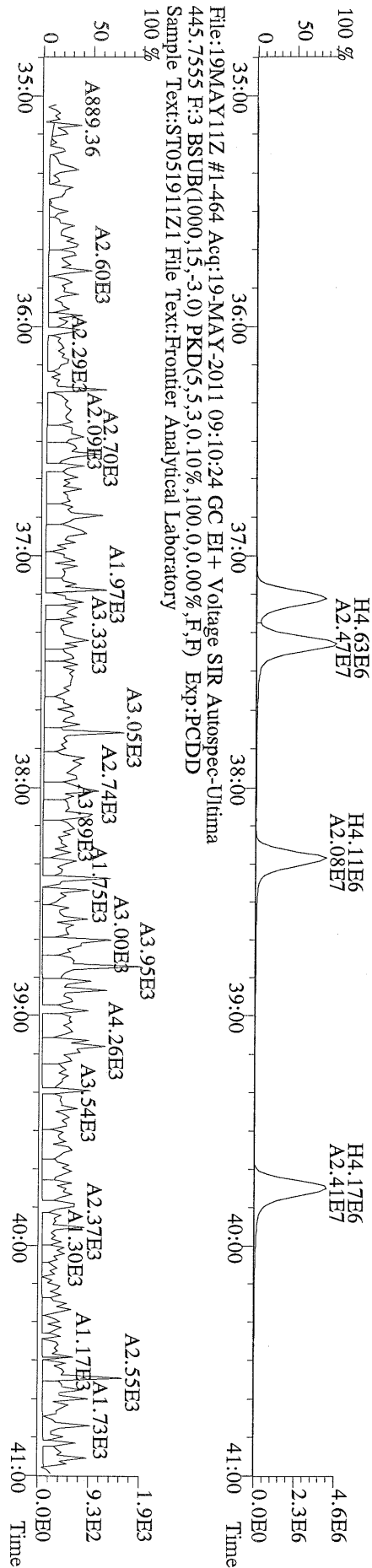
File:19MAYY11Z #1-426 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
 409.7974 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



File:19MAY11Z #1-464 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
373.8207 F:3 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory

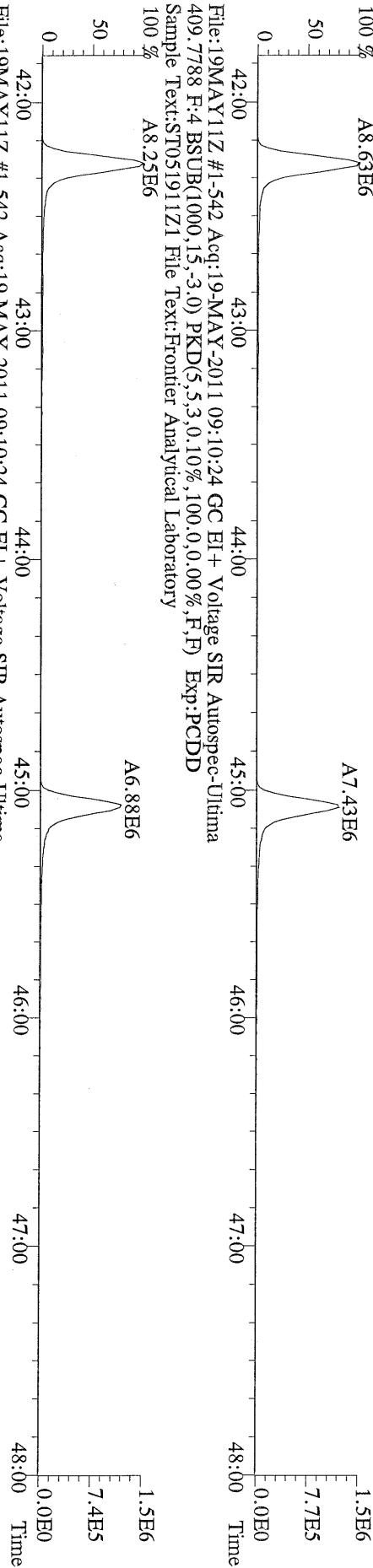


File:19MAY11Z #1-464 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
385.8610 F:3 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory

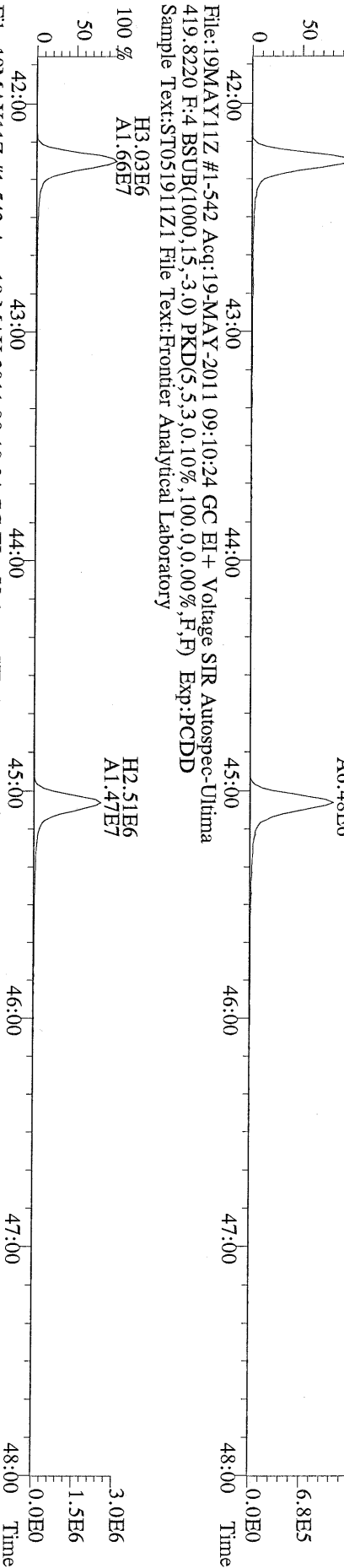


File:19MAY11Z #1-464 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
445.7555 F:3 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory

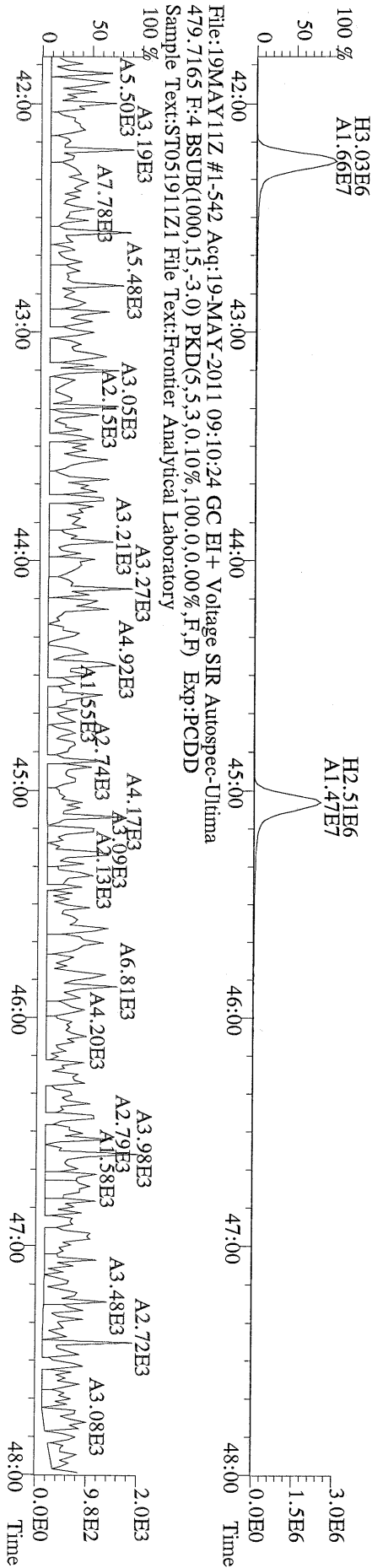
File:19MAY11Z #1-542 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
407.7818 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



File:19MAY11Z #1-542 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
417.8253 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory

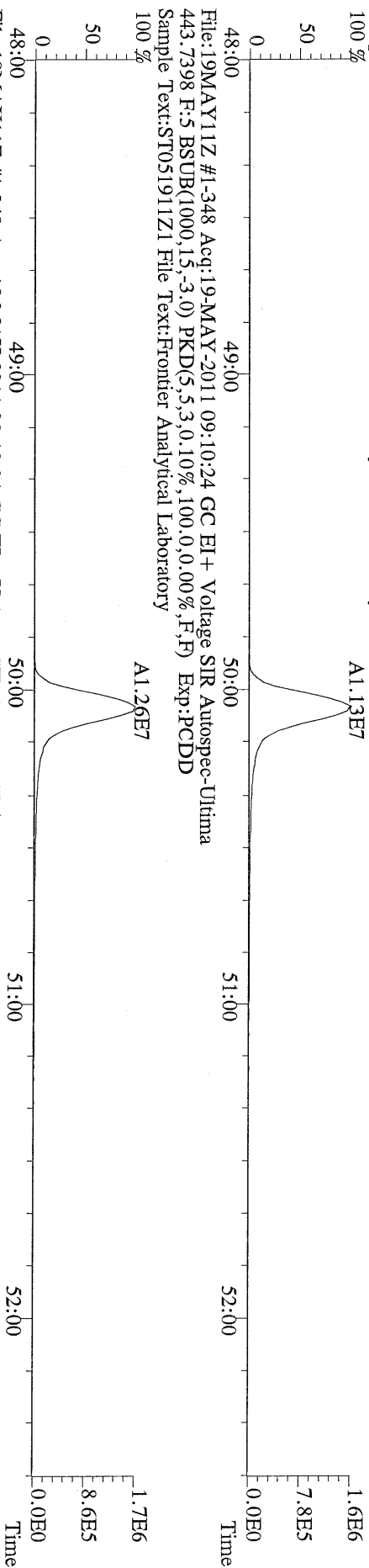


File:19MAY11Z #1-542 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
419.8220 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory

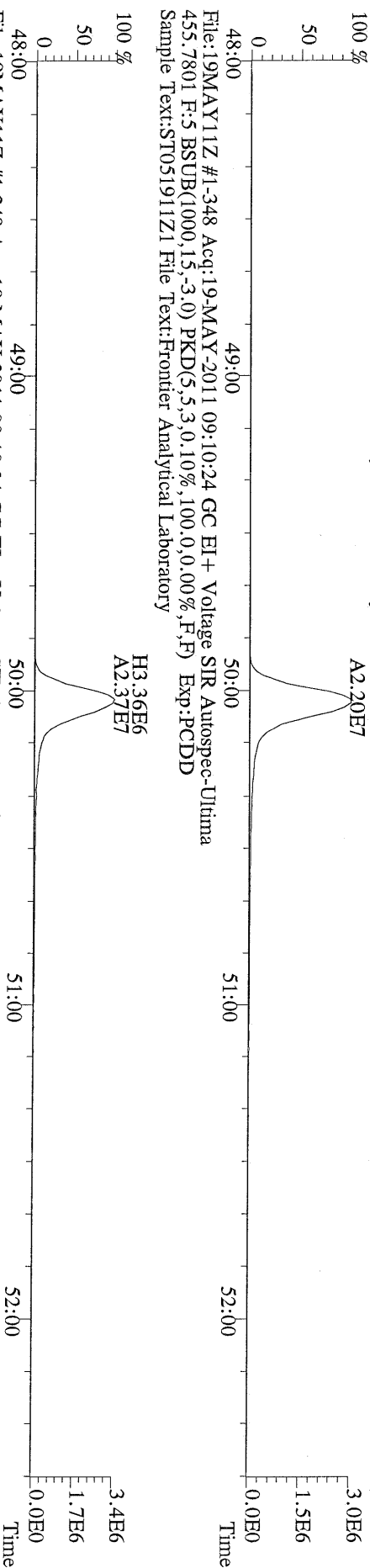


File:19MAY11Z #1-542 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
479.7165 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory

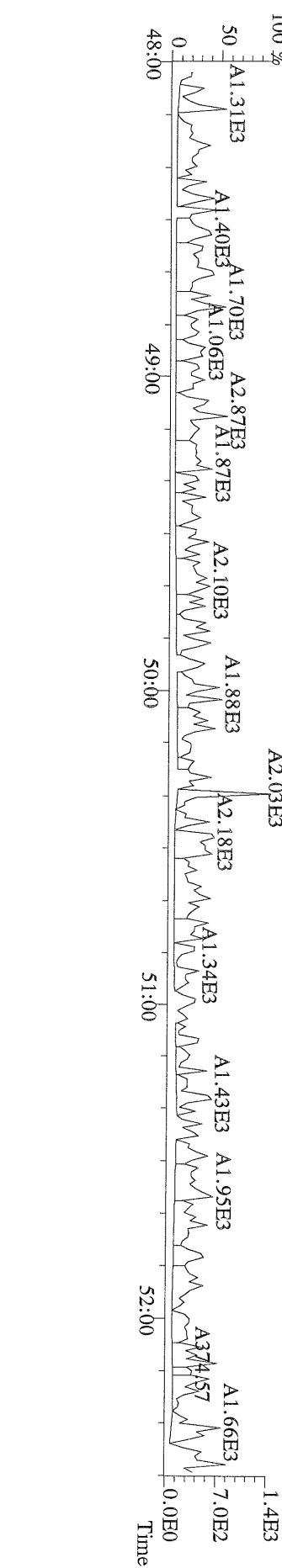
File:19MAYY11Z #1-348 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
441.7428 F:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory



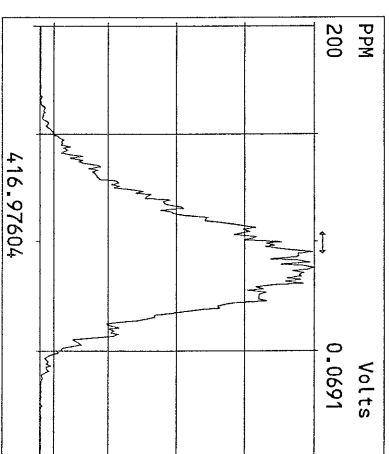
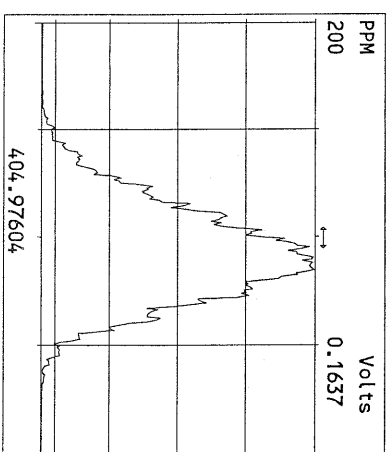
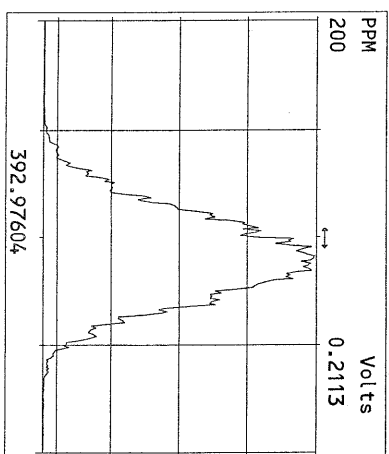
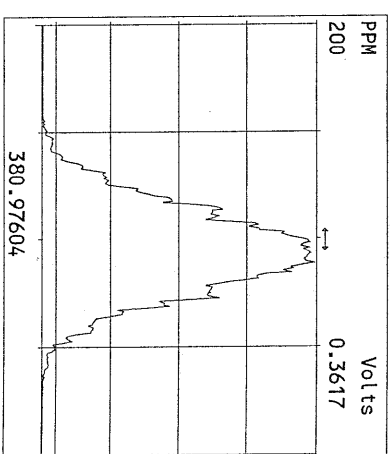
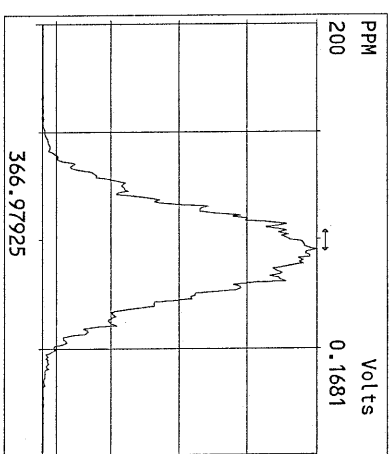
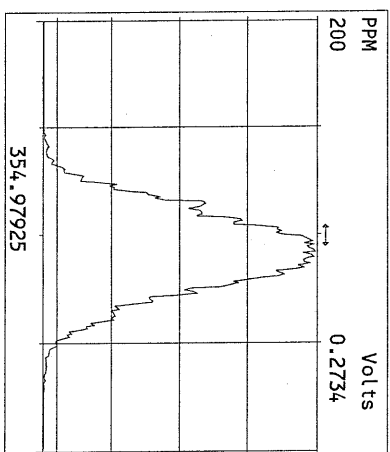
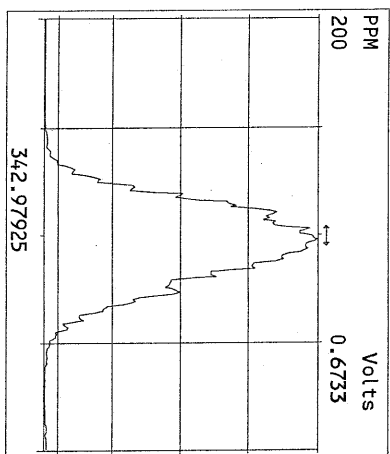
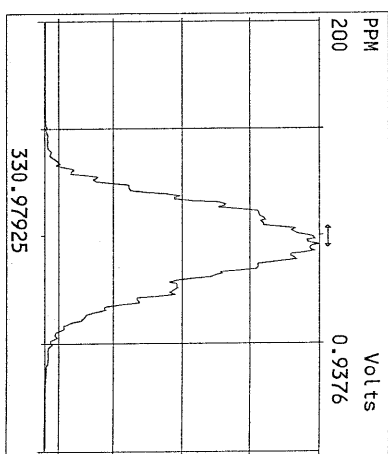
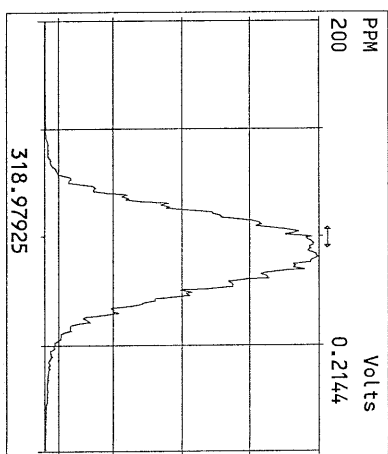
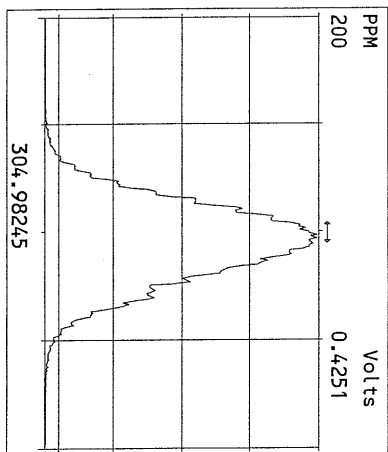
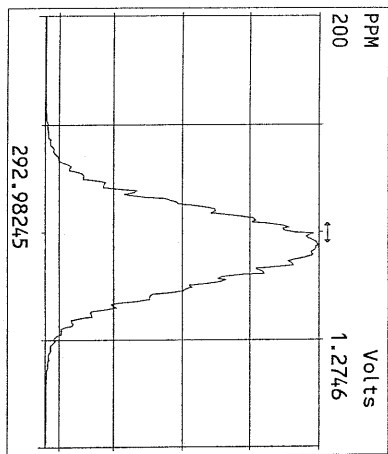
File:19MAYY11Z #1-348 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
453.7831 F:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory

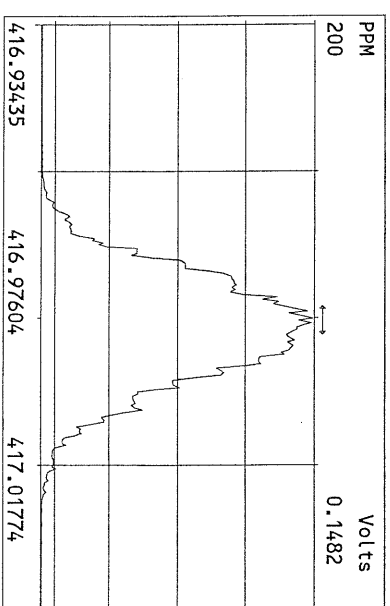
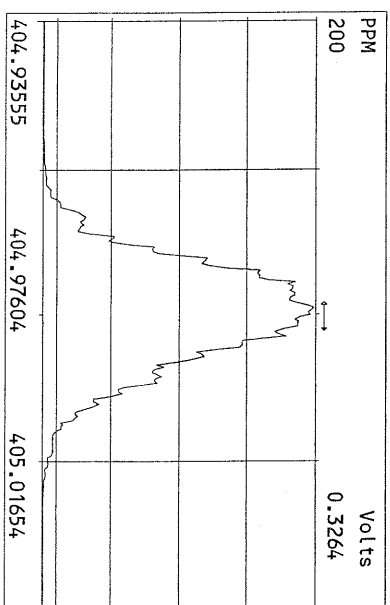
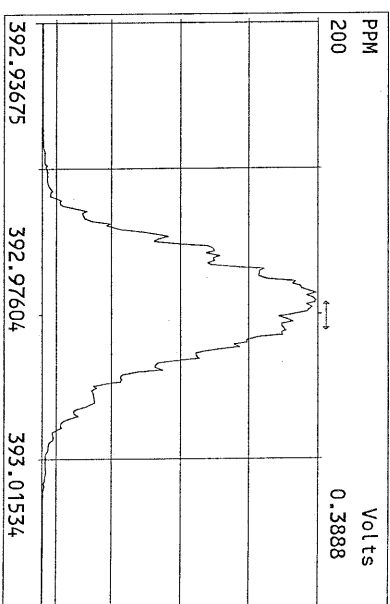
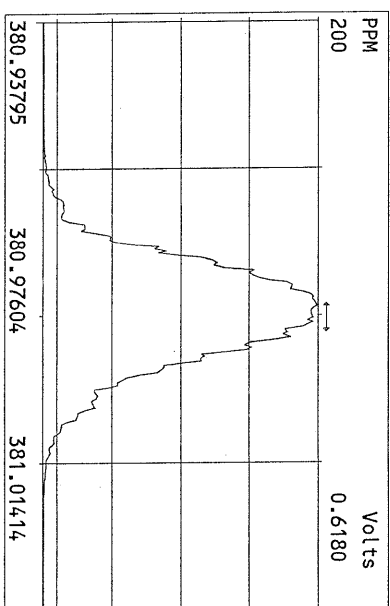
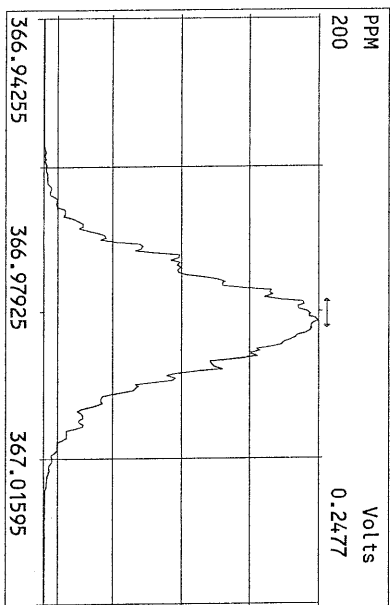
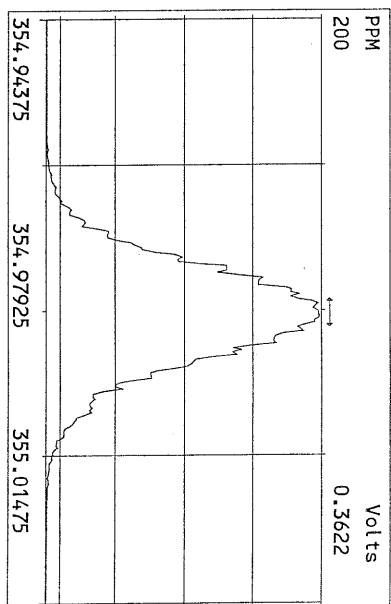
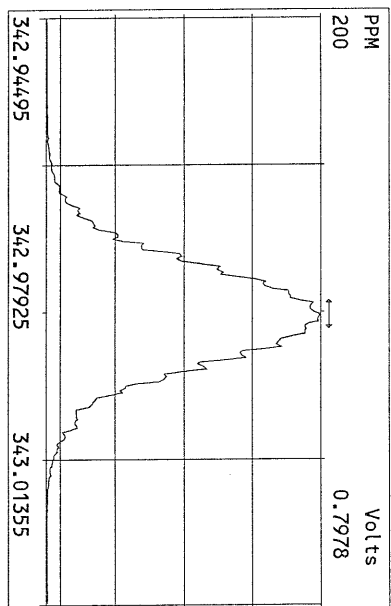
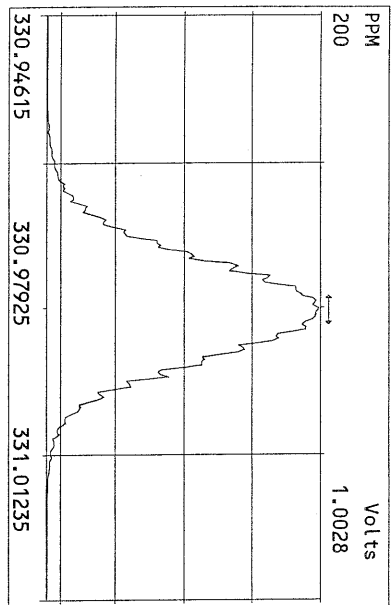


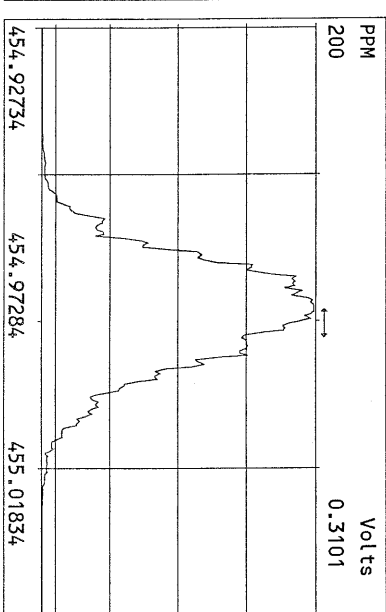
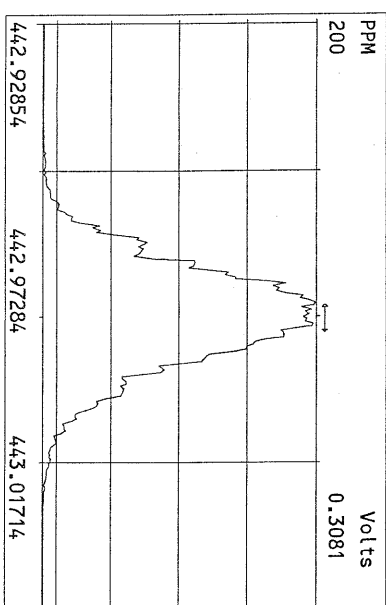
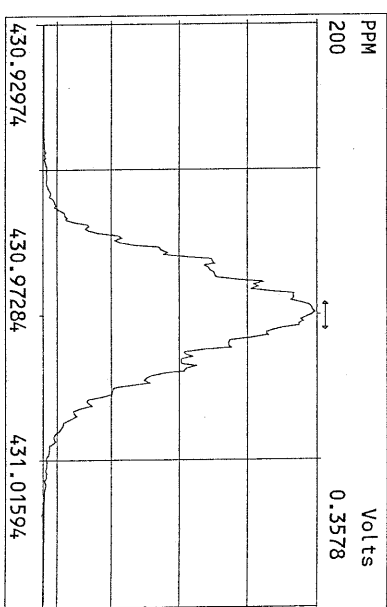
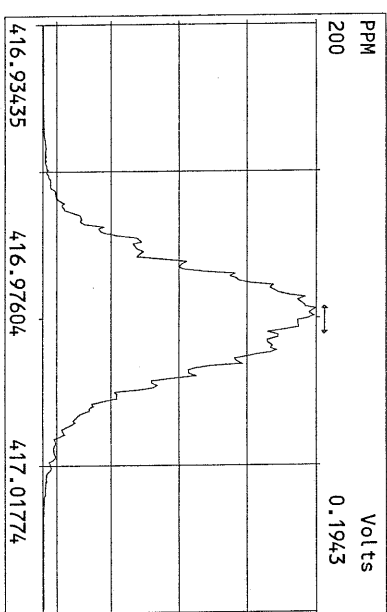
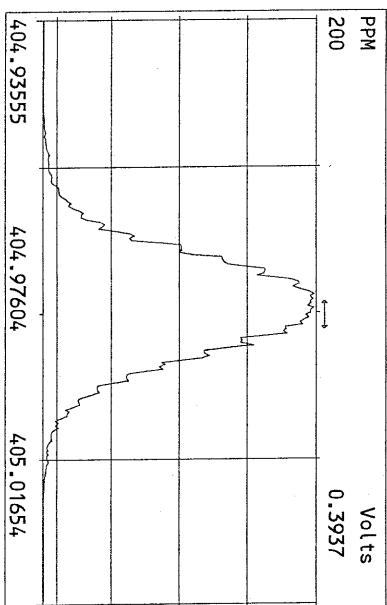
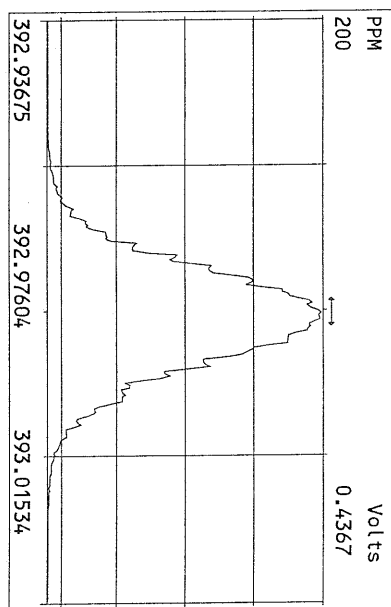
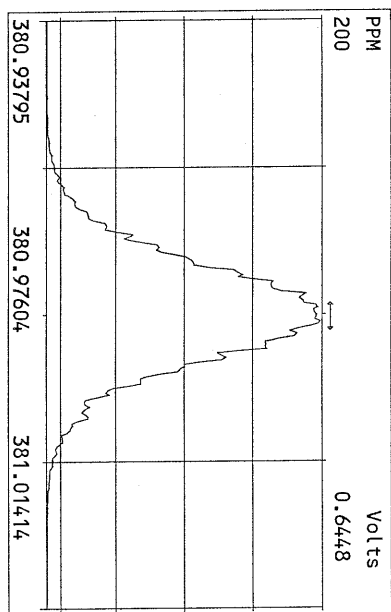
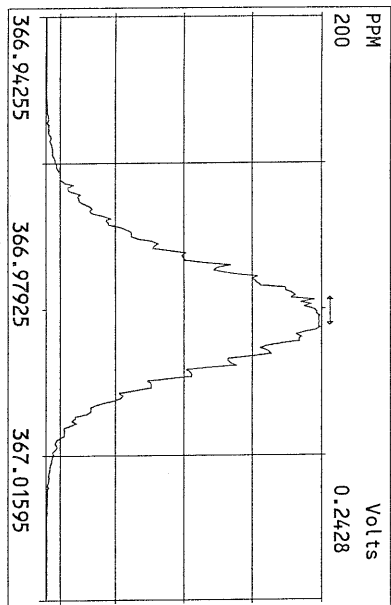
File:19MAYY11Z #1-348 Acq:19-MAY-2011 09:10:24 GC EI+ Voltage SIR Autospec-Ultima
513.6775 F:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z1 File Text:Frontier Analytical Laboratory

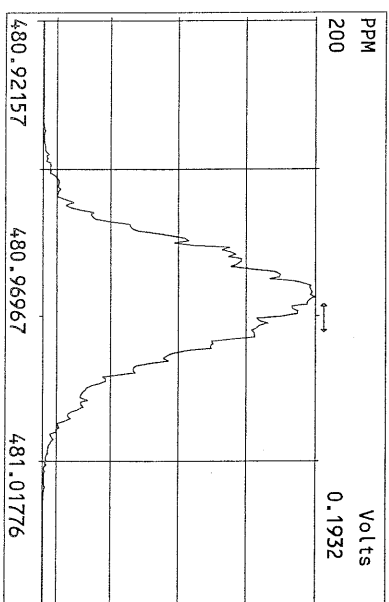
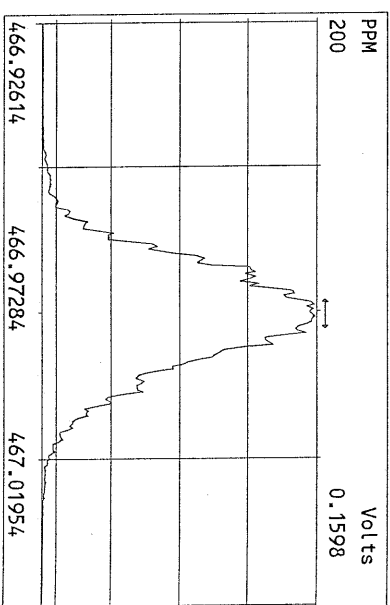
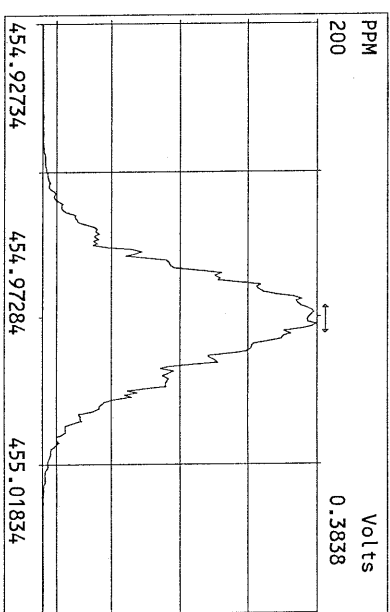
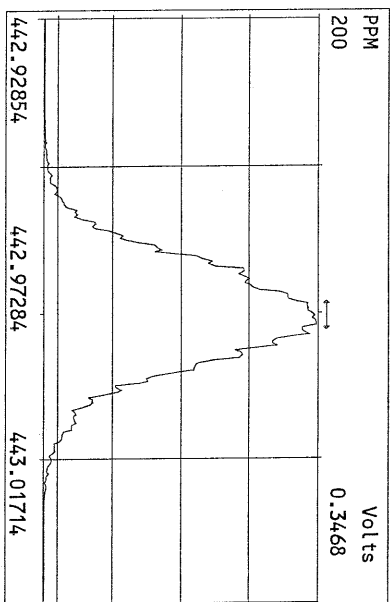
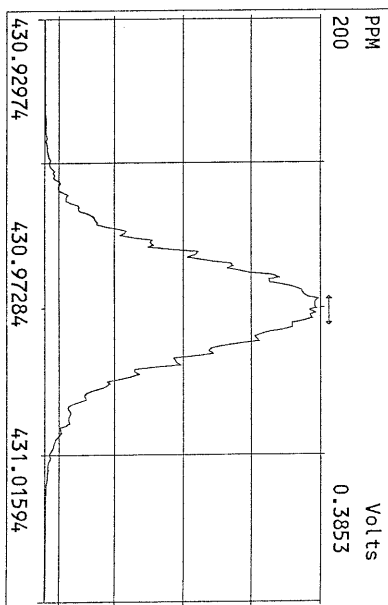
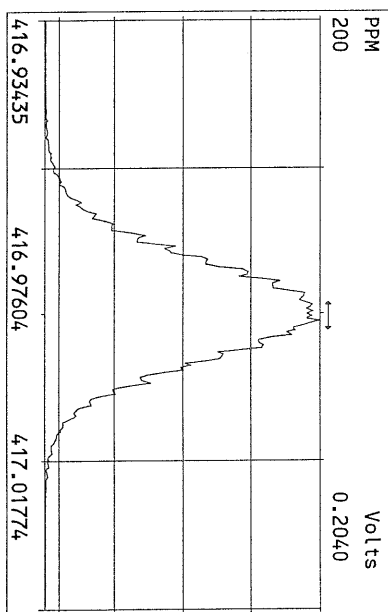
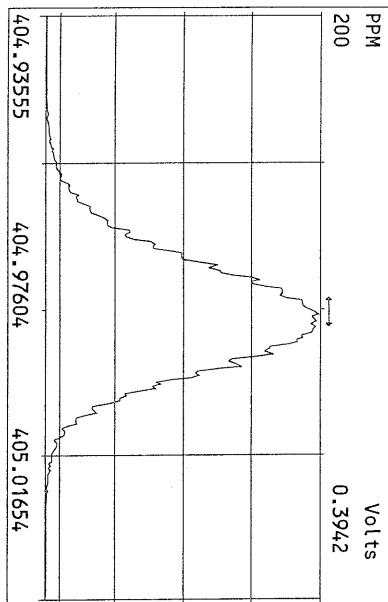


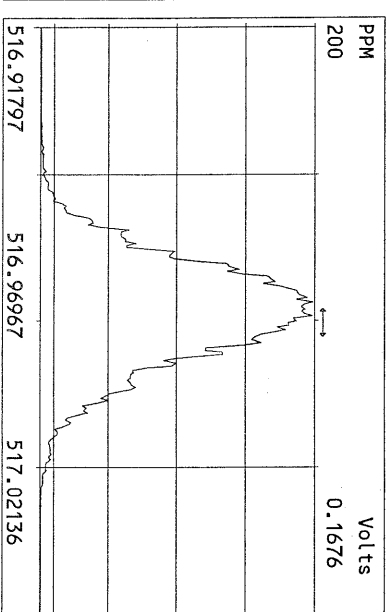
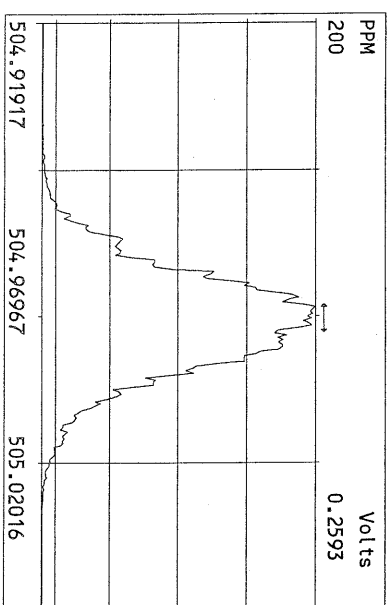
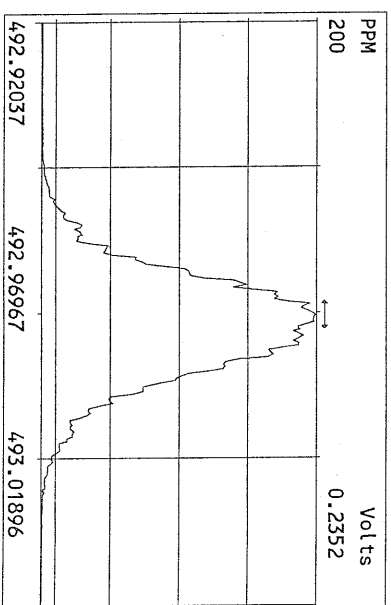
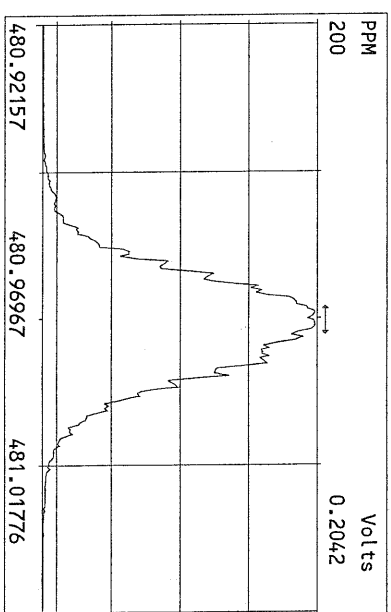
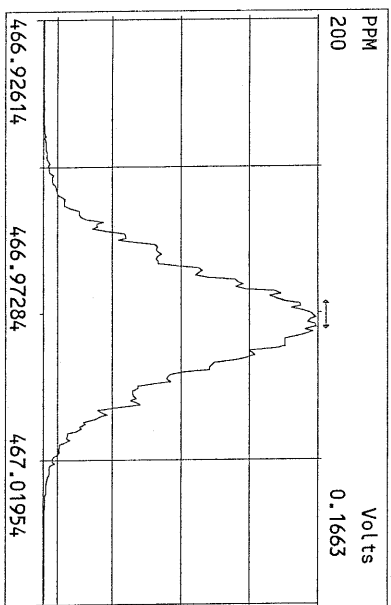
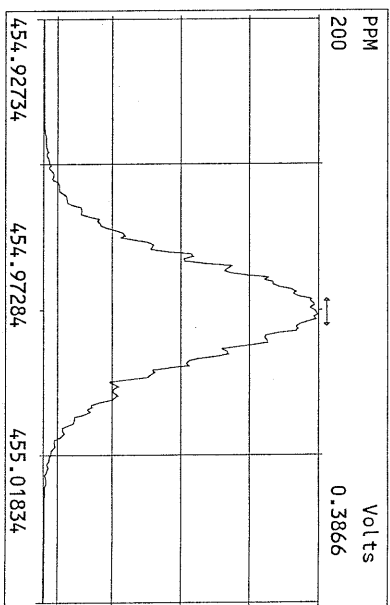
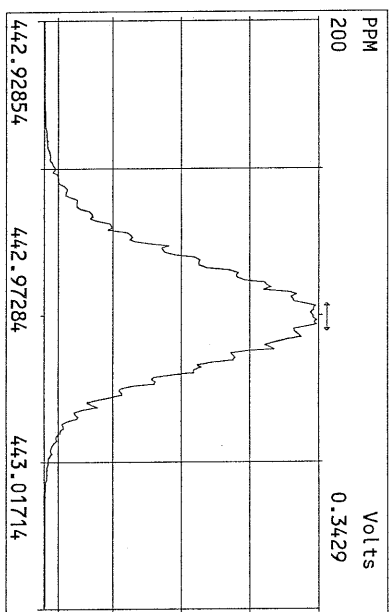
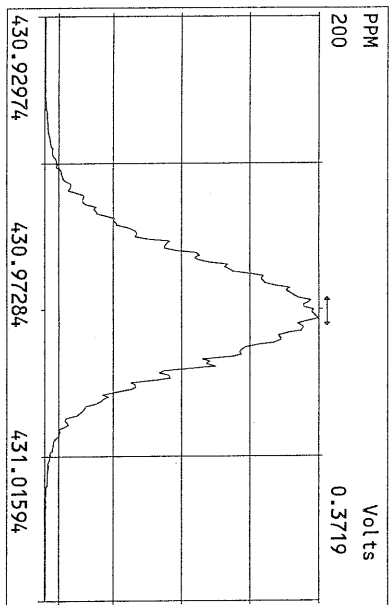
Peak Locate Examination:19-MAY-2011:15:36 File:19MAY11Z_RES_CHECK
Experiment:PCDD Function:1 Reference:PFK











USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/17/11

Instrument ID: FAL4

GC Column ID: DB5

VER Data Filename: 19MAY11Z Sam:5

Analysis Date: 19-MAY-11 12:49:34

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	9.93	7.80 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	1.59	1.32-1.78	y	53.9	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	51.3	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	51.2	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	y	53.4	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	51.1	43.0 - 58.0
OCDD	M+2/M+4	0.88	0.76-1.02	y	98.5	79.0 - 126
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	y	9.91	8.40 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	y	51.3	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	y	51.1	41.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	50.7	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	51.8	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	51.2	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	y	51.2	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.03	0.88-1.20	y	51.1	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.04	0.88-1.20	y	50.7	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: J

Date: 5/19/11

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 5/17/11

Instrument ID: FAL4

GC Column ID: DB5

VER Data Filename: 19MAY11Z Sam:5

Analysis Date: 19-MAY-11 12:49:34

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	0.80	0.65-0.89	y	103	82.0 - 121
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.60	1.32-1.78	y	105	62.0 - 160
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	107	85.0 - 117
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	97.4	85.0 - 118
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.08	0.88-1.20	y	111	72.0 - 138
13C-OCDD	M+2/M+4	0.91	0.76-1.02	y	245	96.0 - 415
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	y	104	71.0 - 140
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	y	108	76.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	108	77.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	115	76.0 - 131
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	107	70.0 - 143
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	110	73.0 - 137
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	y	113	74.0 - 135
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	y	116	78.0 - 129
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	y	121	77.0 - 129
13C-OCDF	M+2/M+4	0.90	0.76-1.02	y	228	96.0 - 415
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					9.97	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: J

Date: 5/19/11

USEPA - ITD

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 5/17/11

Instrument ID: FAL4 GC Column ID: DB5

Analysis Date: 19-MAY-11 12:49:34 CS3 or VER Data Filename: 19MAY11Z Sam:5

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	1.000	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		0.993	0.923-1.103
13C-1,2,3,7,8-PeCDD		1.240	1.000-1.567
13C-1,2,3,7,8-PeCDF		1.176	0.923-1.203
13C-2,3,4,7,8-PeCDF		1.225	0.923-1.303

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

Analyst: b

Date: 5/19/11

Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL	Rec	#Hom
2,3,7,8-TCDD	3.85e+06	0.80 y	27:24	1.15	9.93	2.50	-	-	*		
1,2,3,7,8-PeCDD	1.51e+07	1.59 y	33:15	1.02	53.9	2.50	-	-	*		
1,2,3,4,7,8-HxCDD	1.50e+07	1.26 y	38:35	1.09	51.3	2.50	-	-	*		
1,2,3,6,7,8-HxCDD	1.27e+07	1.25 y	38:45	1.08	51.2	2.50	-	-	*		
1,2,3,7,8,9-HxCDD	1.48e+07	1.25 y	39:12	1.12	53.4	2.50	-	-	*		
1,2,3,4,6,7,8-HpCDD	1.08e+07	1.04 y	44:10	1.03	51.1	2.50	-	-	*		
OCDD	1.79e+07	0.88 y	49:41	1.21	98.5	2.50	-	-	*		
2,3,7,8-TCDF	5.51e+06	0.78 y	26:37	1.09	9.91	2.50	-	-	*		
1,2,3,7,8-PeCDF	2.08e+07	1.55 y	31:31	0.96	51.3	2.50	-	-	*		
2,3,4,7,8-PeCDF	2.00e+07	1.54 y	32:49	0.96	51.1	2.50	-	-	*		
1,2,3,4,7,8-HxCDF	1.78e+07	1.25 y	37:12	1.18	50.7	2.50	-	-	*		
1,2,3,6,7,8-HxCDF	1.96e+07	1.25 y	37:24	1.03	51.8	2.50	-	-	*		
2,3,4,6,7,8-HxCDF	1.86e+07	1.23 y	38:20	1.17	51.2	2.50	-	-	*		
1,2,3,7,8,9-HxCDF	2.33e+07	1.27 y	39:46	1.27	51.2	2.50	-	-	*		
1,2,3,4,6,7,8-HpCDF	1.63e+07	1.03 y	42:17	1.36	51.1	2.50	-	-	*		
1,2,3,4,7,8,9-HpCDF	1.41e+07	1.04 y	45:04	1.35	50.7	2.50	-	-	*		
OCDF	2.22e+07	0.91 y	50:03	0.97	107	2.50	-	-	*		
13C-2,3,7,8-TCDD	3.38e+07	0.80 y	27:23	0.99	103					103	
13C-1,2,3,7,8-PeCDD	2.74e+07	1.60 y	33:13	0.79	105					105	
13C-1,2,3,4,7,8-HxCDD	2.69e+07	1.28 y	38:34	1.03	107					107	
13C-1,2,3,6,7,8-HxCDD	2.28e+07	1.26 y	38:44	0.96	97.4					97.4	
13C-1,2,3,4,6,7,8-HpCDD	2.04e+07	1.08 y	44:09	0.75	111					111	
13C-OCDD	3.02e+07	0.91 y	49:40	0.50	245					122	
13C-2,3,7,8-TCDF	5.12e+07	0.79 y	26:36	0.98	104					104	
13C-1,2,3,7,8-PeCDF	4.22e+07	1.56 y	31:30	0.78	108					108	
13C-2,3,4,7,8-PeCDF	4.09e+07	1.58 y	32:49	0.75	108					108	
13C-1,2,3,4,7,8-HxCDF	2.96e+07	0.52 y	37:11	1.05	115					115	
13C-1,2,3,6,7,8-HxCDF	3.67e+07	0.52 y	37:23	1.40	107					107	
13C-2,3,4,6,7,8-HxCDF	3.11e+07	0.51 y	38:19	1.16	110					110	
13C-1,2,3,7,8,9-HxCDF	3.58e+07	0.52 y	39:45	1.30	113					113	
13C-1,2,3,4,6,7,8-HpCDF	2.34e+07	0.45 y	42:15	0.83	116					116	
13C-1,2,3,4,7,8,9-HpCDF	2.06e+07	0.45 y	45:03	0.69	121					121	
13C-OCDF	4.30e+07	0.90 y	50:02	0.77	228					114	
37Cl-2,3,7,8-TCDD	2.34e+06		27:24	0.71	9.97					99.7	
13C-1,2,3,4-TCDD	3.30e+07	0.81 y	26:47	-	62.0						
13C-1,2,3,4-TCDF	5.01e+07	0.80 y	25:31	-	66.9						
13C-1,2,3,7,8,9-HxCDD	2.45e+07	1.28 y	39:11	-	63.4						
Total Tetra-Dioxins	2.14e+07		23:19	1.15	55.2	2.50	-	-	*		30
Total Penta-Dioxins	3.24e+07		30:16	1.02	116	2.50	-	-	*		17
Total Hexa-Dioxins	4.81e+07		36:08	1.10	176	2.50	-	-	*		11
Total Hepta-Dioxins	2.27e+07		42:16	1.03	108	2.50	-	-	*		21
Total Tetra-Furans	2.55e+07		22:58	1.09	45.8	2.50	-	-	*		22
1st Fn. Tot Penta-Furans	2.45e+07		28:26	0.96	61.3	2.50	-	-	*	PeCDF	3
Total Penta-Furans	6.12e+07		30:02	0.96	153	2.50	-	-	*	215	15
Total Hexa-Furans	9.16e+07		35:16	1.16	237	2.50	-	-	*		16
Total Hepta-Furans	3.09e+07		42:17	1.36	104	2.50	-	-	*		10

Analyst: J

Date: 5/19/11

Frontier Analytical Laboratory - Acquisition Log

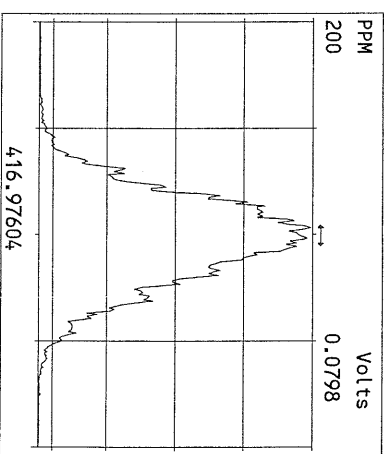
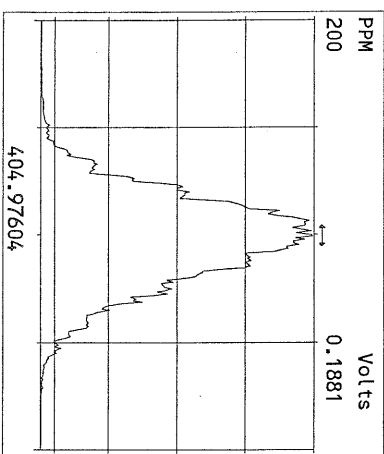
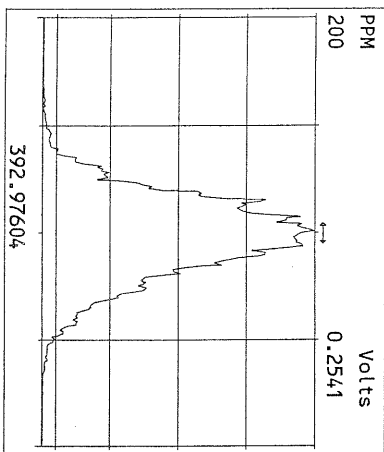
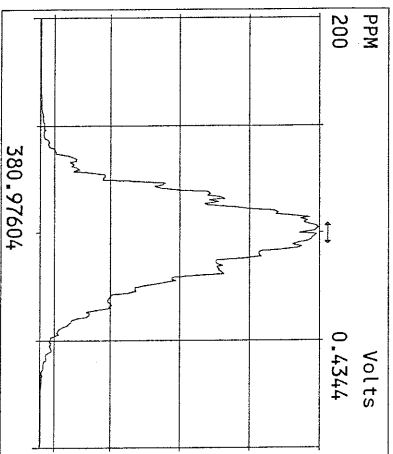
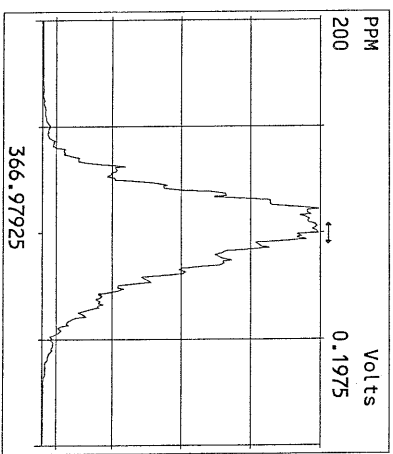
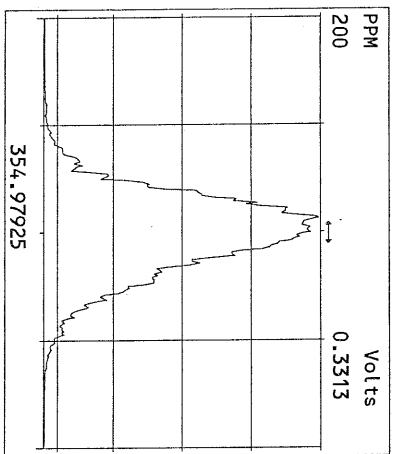
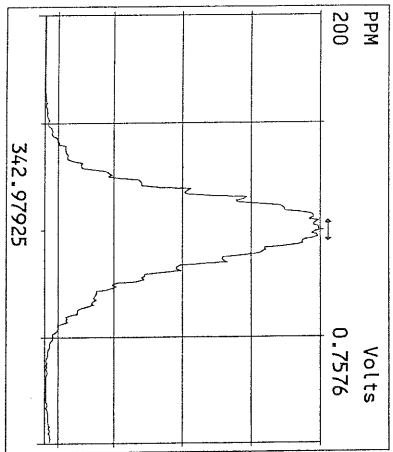
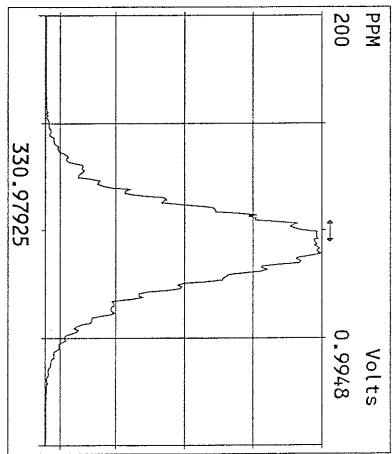
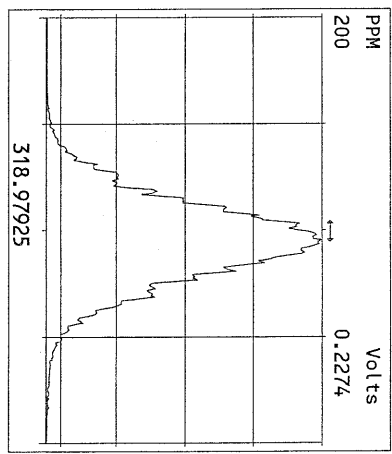
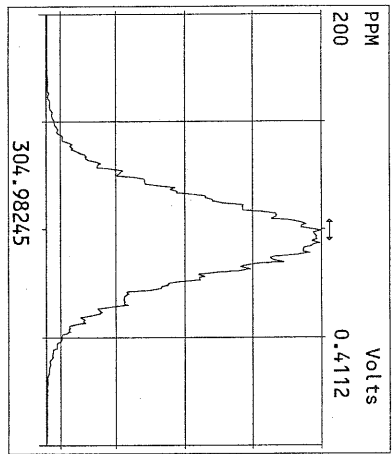
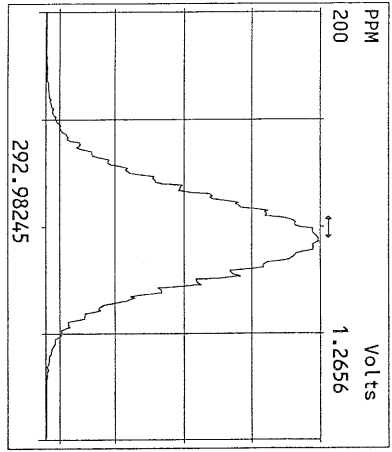
Run Name:19MAY11Z Instrument: FAL4 GC: DB5 Experiment:PCDD

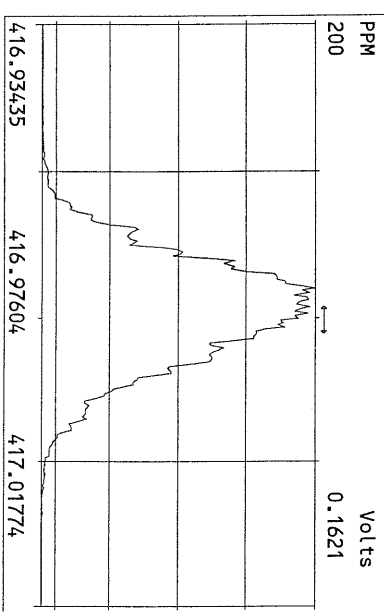
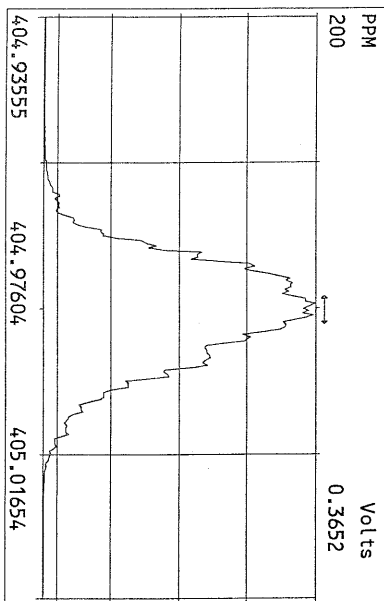
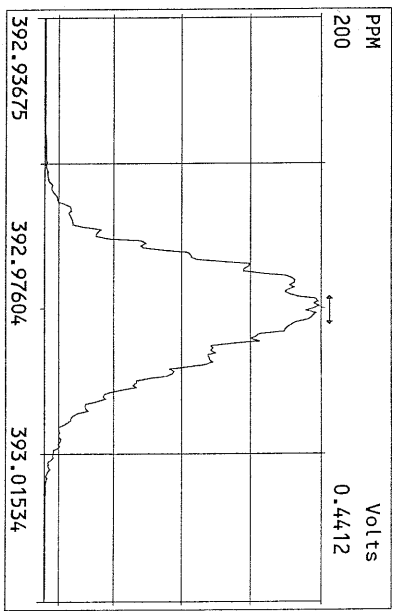
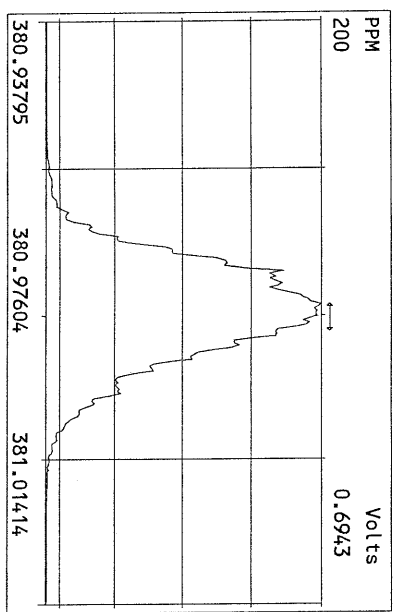
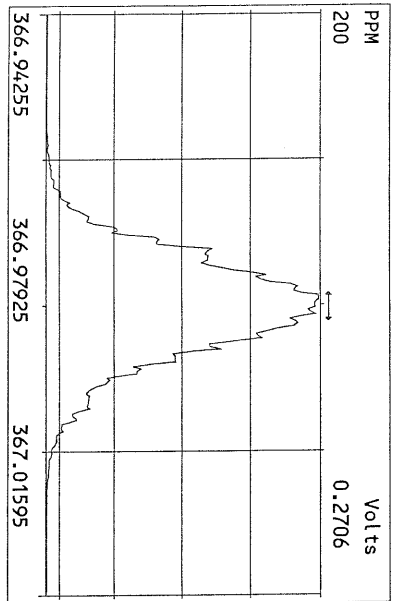
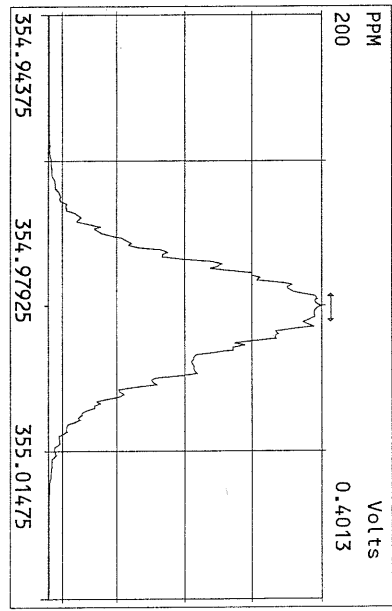
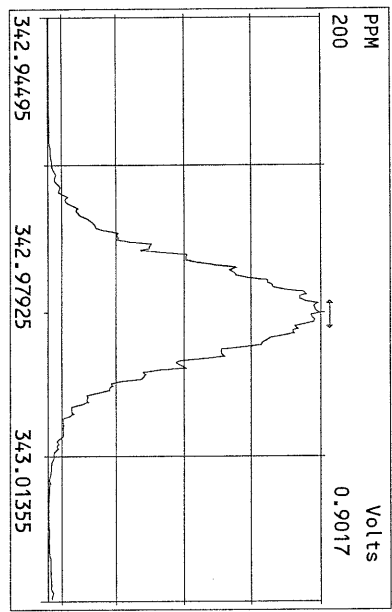
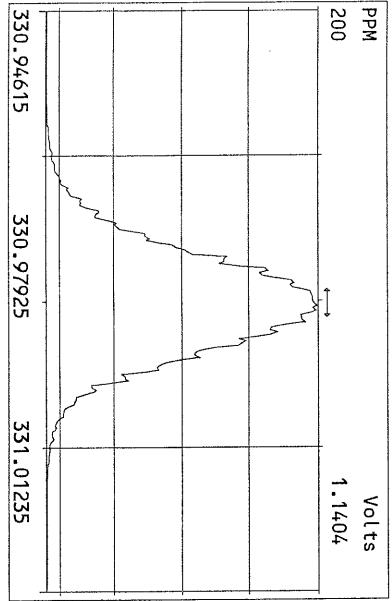
Data File S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
19MAY11Z 1	ST051911Z1	1613 CS3 100511J	19-MAY-11 09:10:24	ST051911Z1	ST051911Z2	BS
19MAY11Z 2	6739-004-0001-SA	MW06-042611	19-MAY-11 10:05:12	ST051911Z1	ST051911Z2	BS
19MAY11Z 3	6739-004-0002-MS	MW06-042611	19-MAY-11 10:59:59	ST051911Z1	ST051911Z2	BS
19MAY11Z 4	6739-004-0002-MSD	MW06-042611	19-MAY-11 11:54:46	ST051911Z1	ST051911Z2	BS
19MAY11Z 5	ST051911Z2	1613 CS3 100511J	19-MAY-11 12:49:34	ST051911Z1	ST051911Z2	BS
19MAY11Z 6	QC051911Z1	NEWQC	19-MAY-11 13:44:22	ST051911Z1	ST051911Z2	BS
19MAY11Z 7	QC051911Z2	SSQC	19-MAY-11 14:39:09	ST051911Z1	ST051911Z2	BS

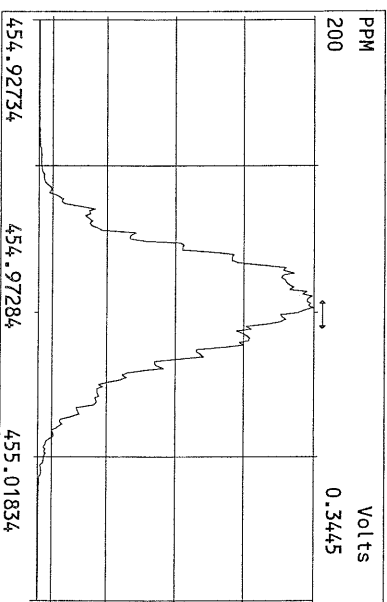
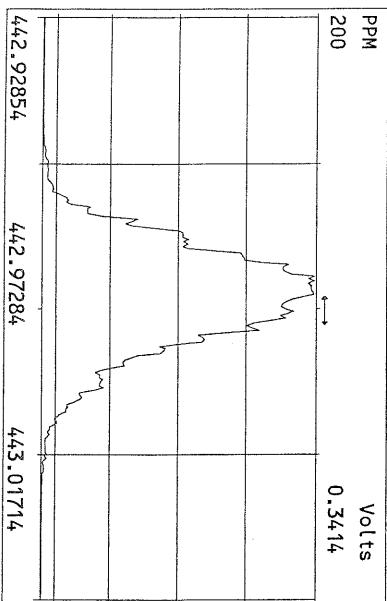
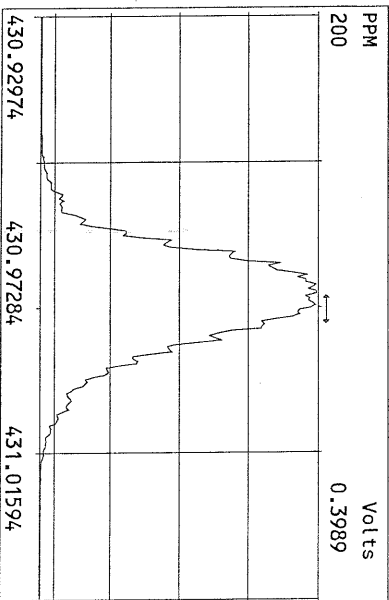
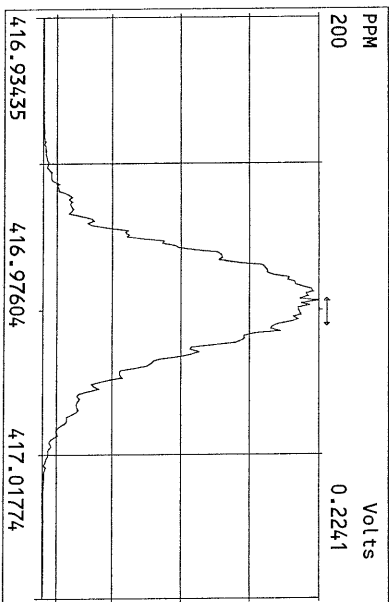
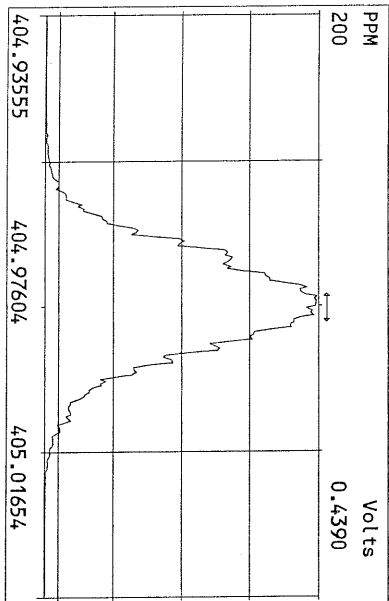
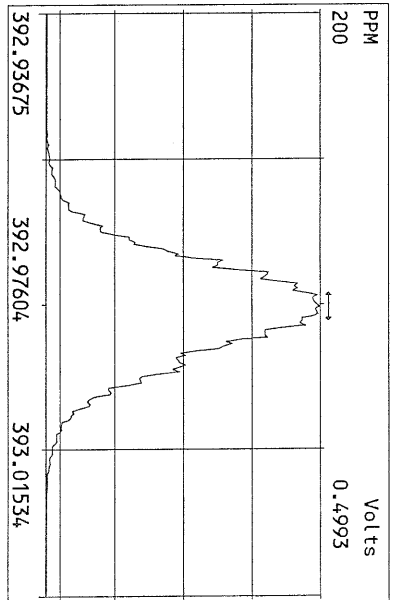
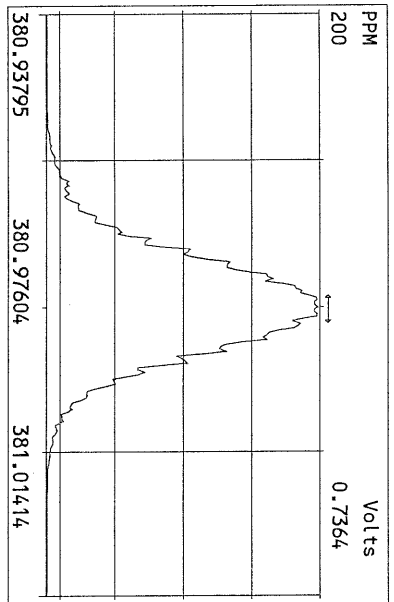
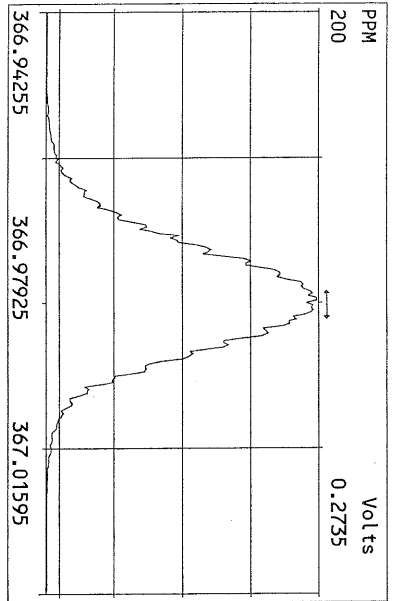
5/19/11

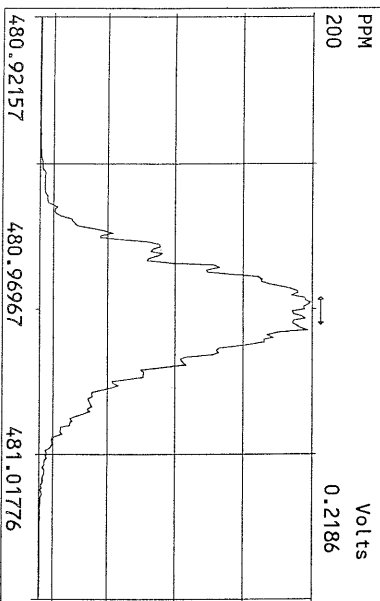
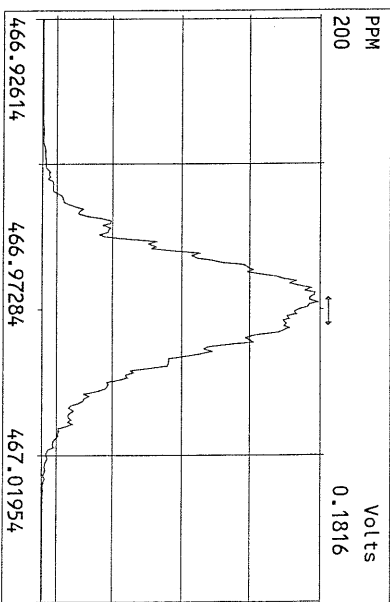
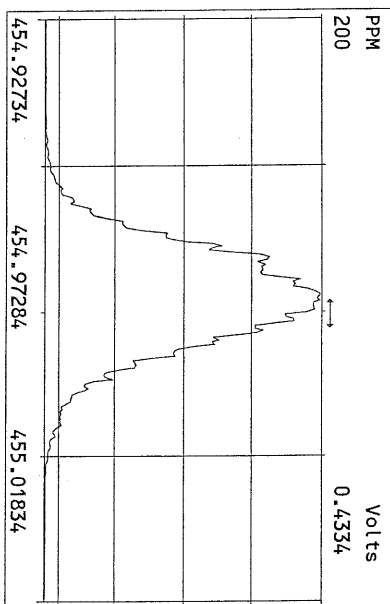
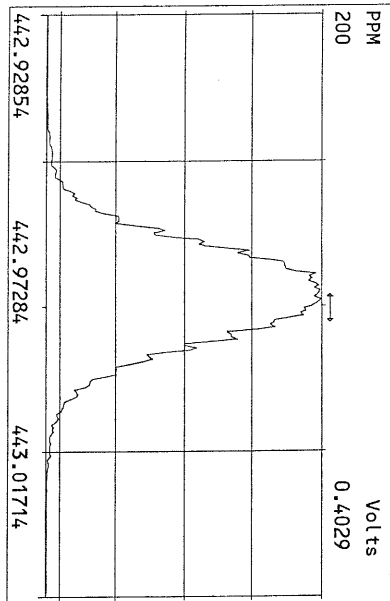
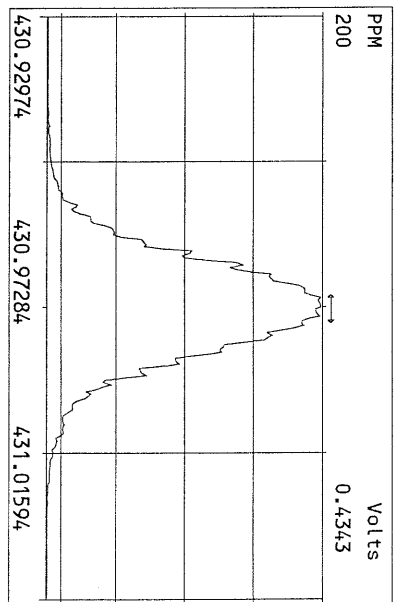
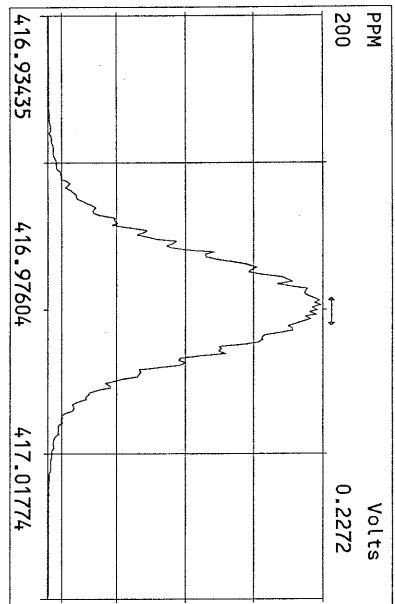
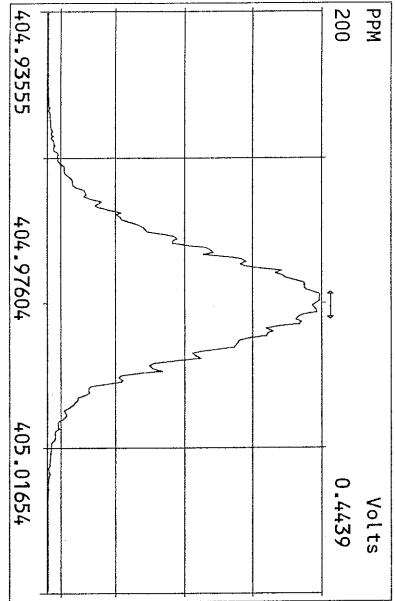
Data Backed Up: _____

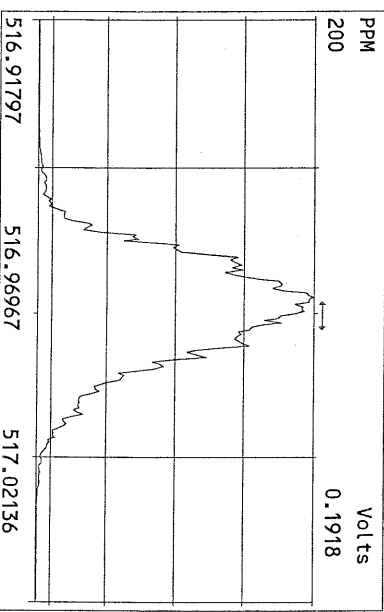
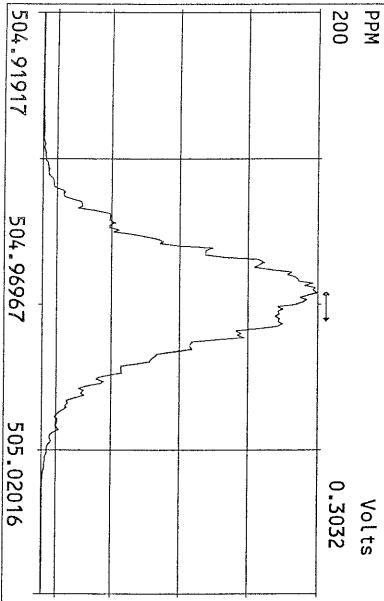
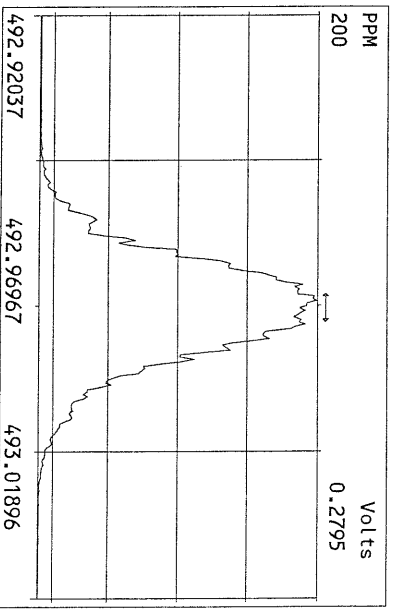
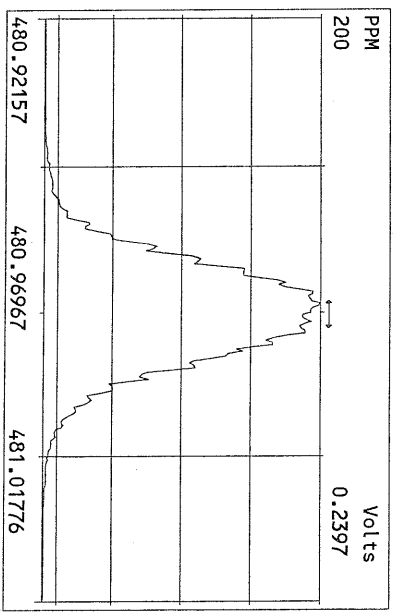
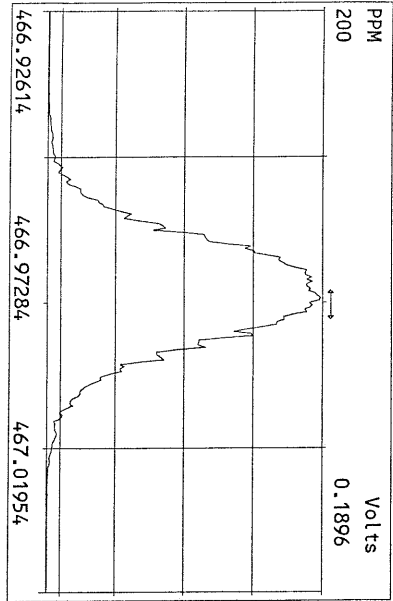
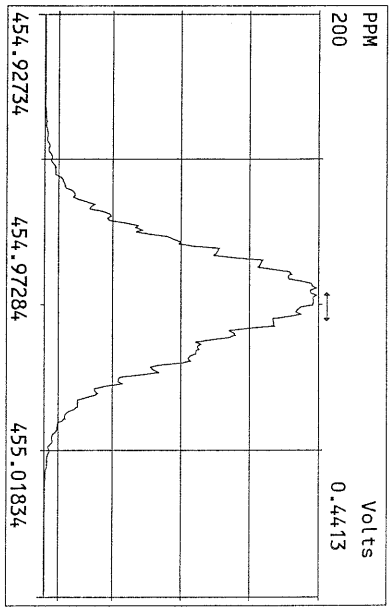
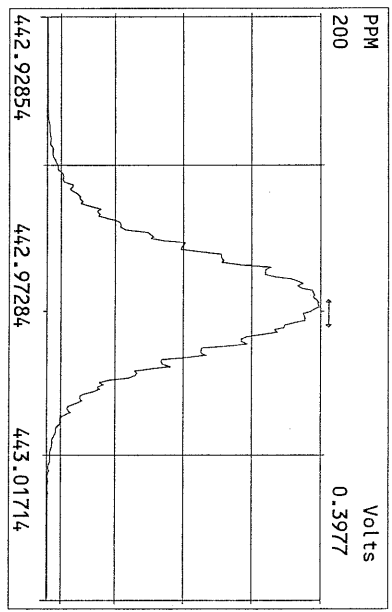
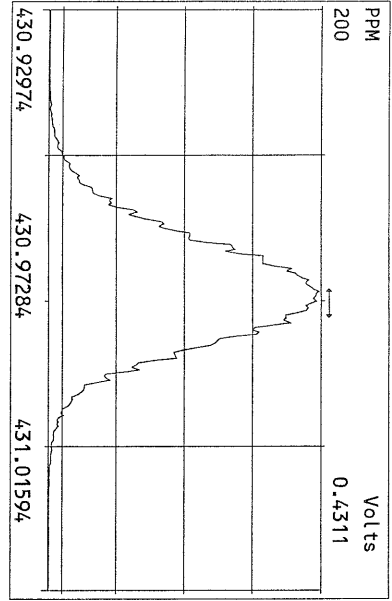
Date: _____



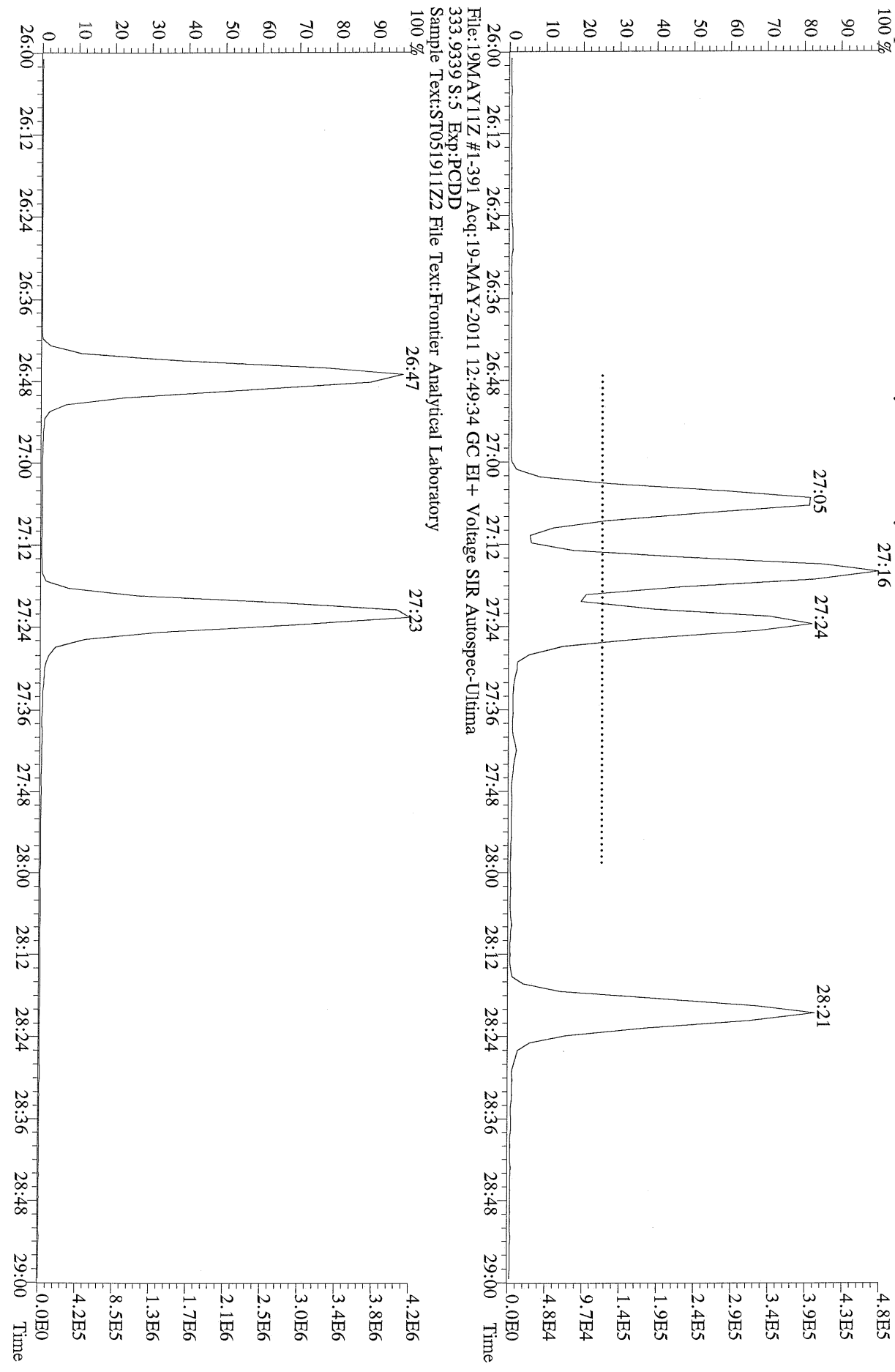




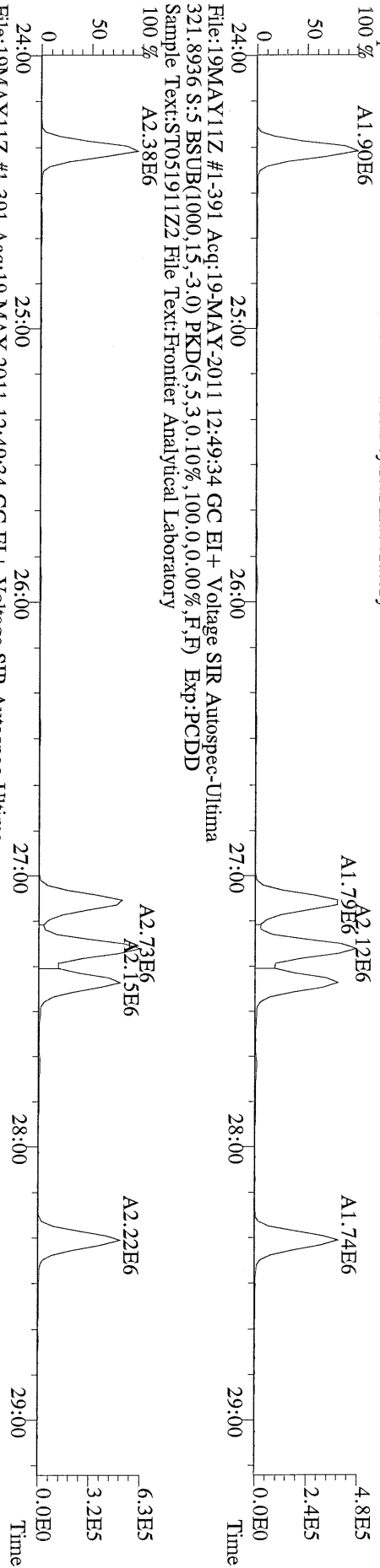




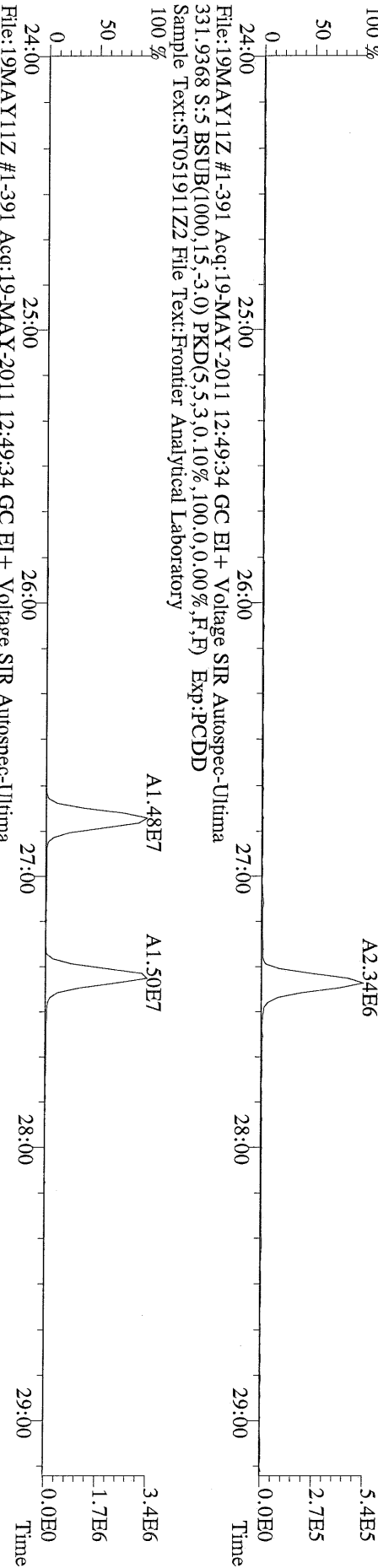
File:19MAY11Z #1-391 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:5 Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



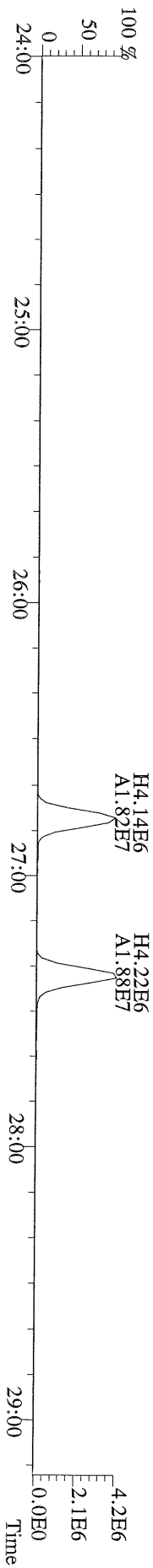
File:19MAYY11Z2 #1-391 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



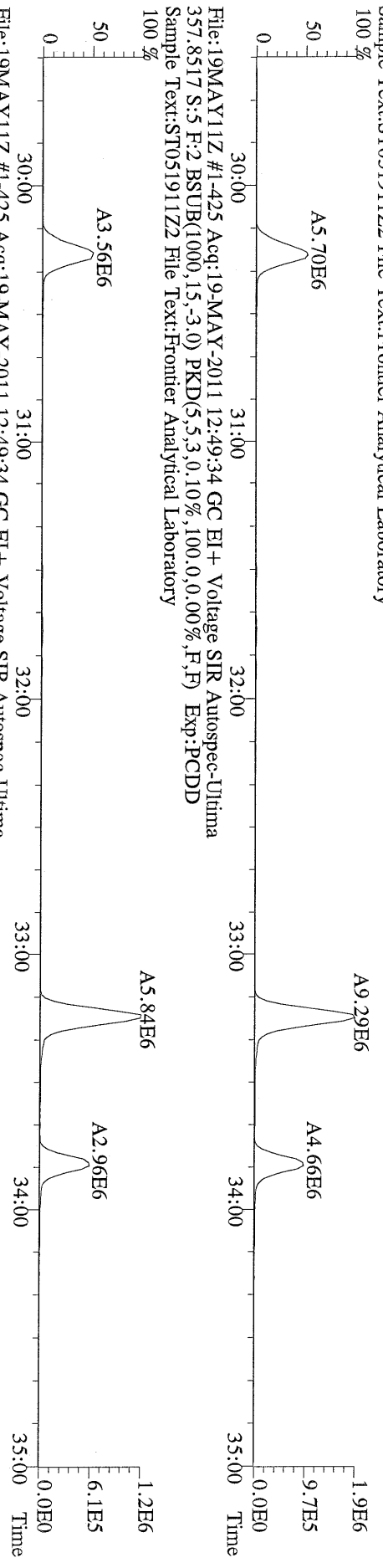
File:19MAYY11Z2 #1-391 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



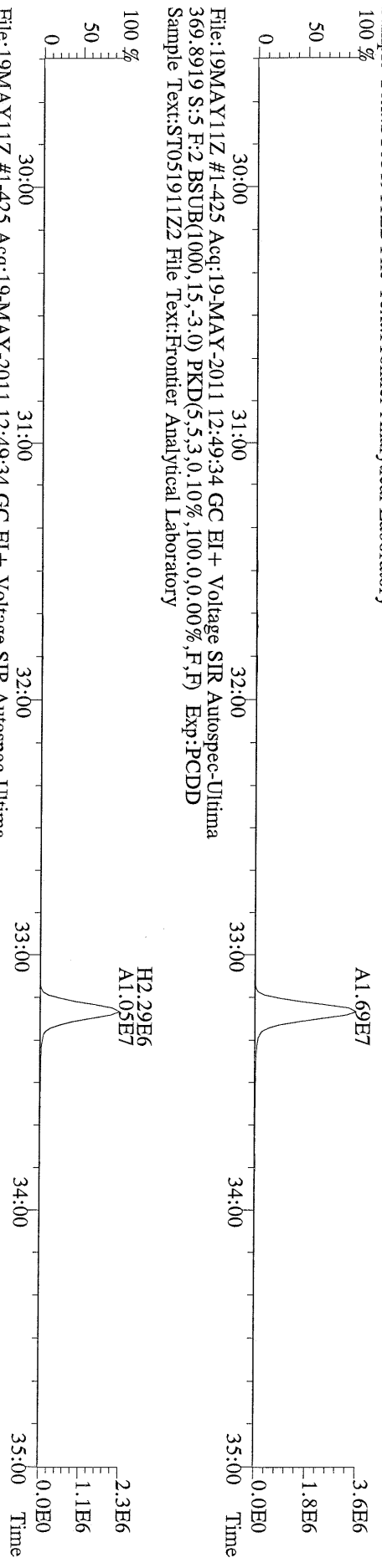
File:19MAYY11Z2 #1-391 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100,0,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



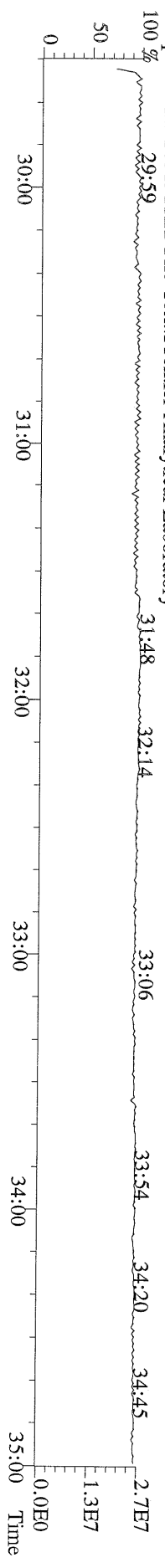
File:19MAY11Z #1-425 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:5 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



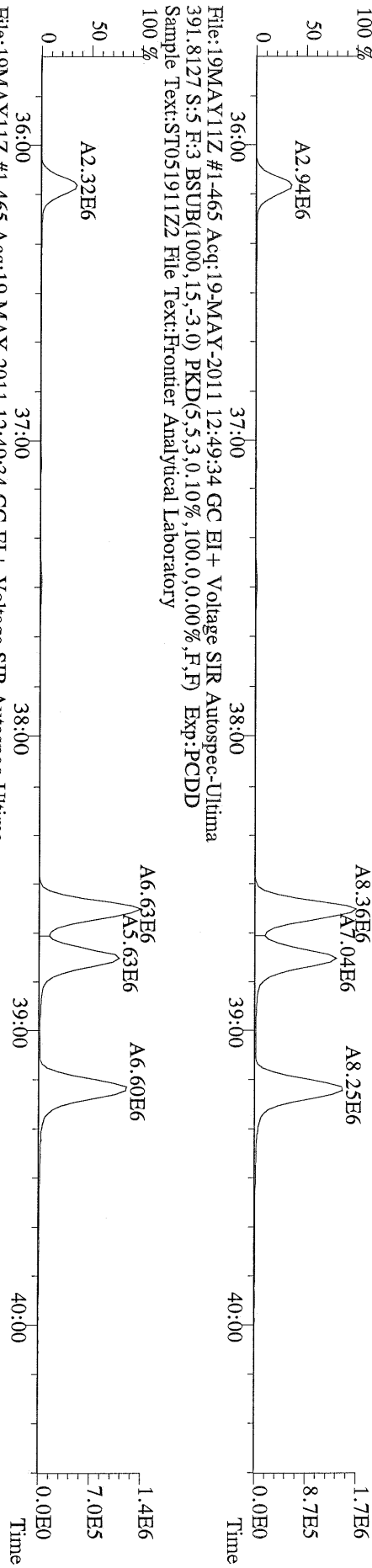
File:19MAY11Z #1-425 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:5 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



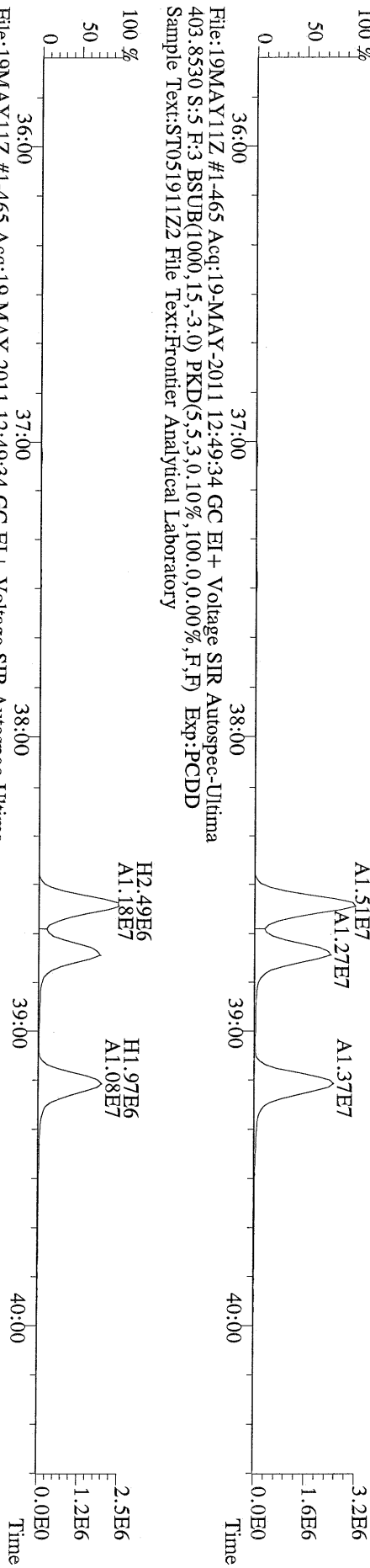
File:19MAY11Z #1-425 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:5 F:2 Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



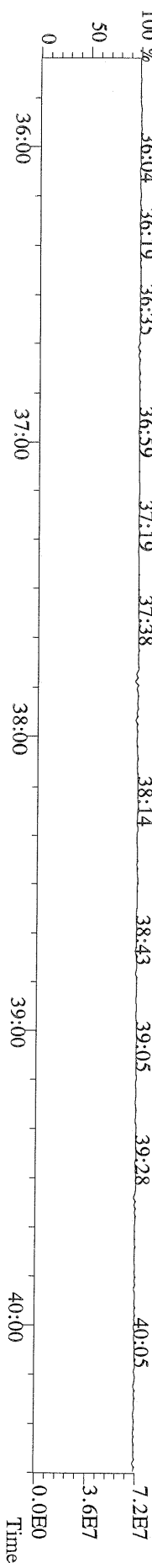
File:19MAYY11Z #1-465 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:5 F:3 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



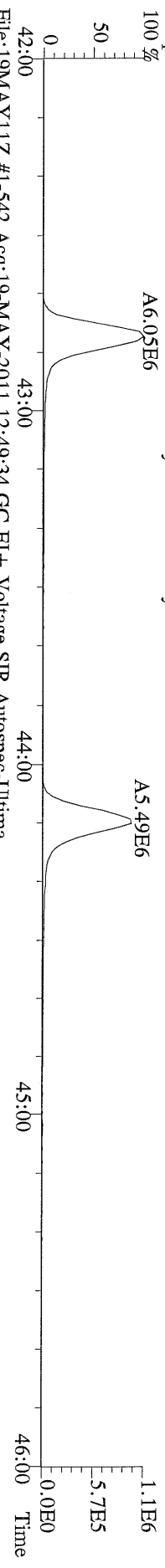
File:19MAYY11Z #1-465 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:5 F:3 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



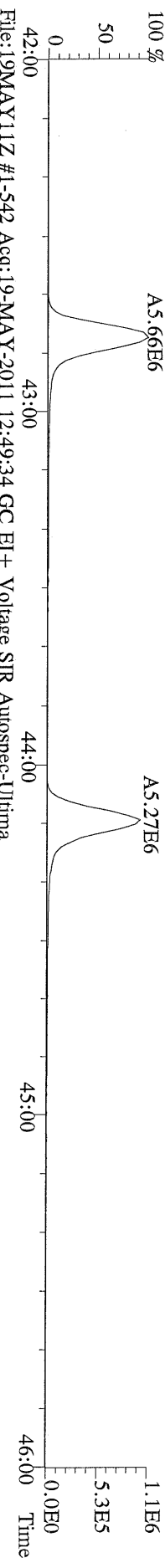
File:19MAYY11Z #1-465 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:5 F:3 Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



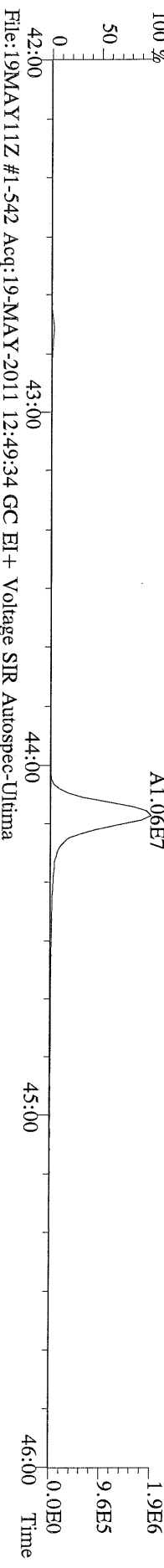
File:19MAYY11Z #1-542 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:5 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



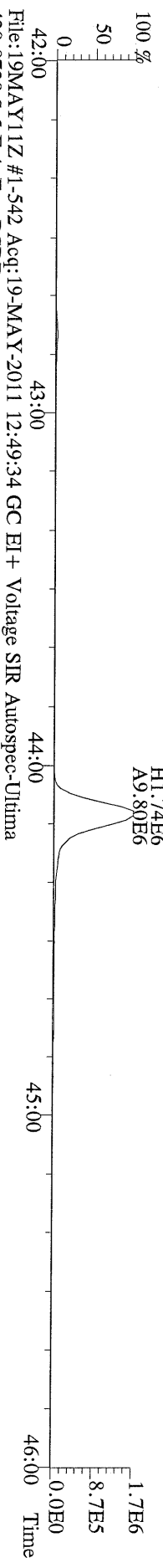
File:19MAYY11Z #1-542 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:5 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



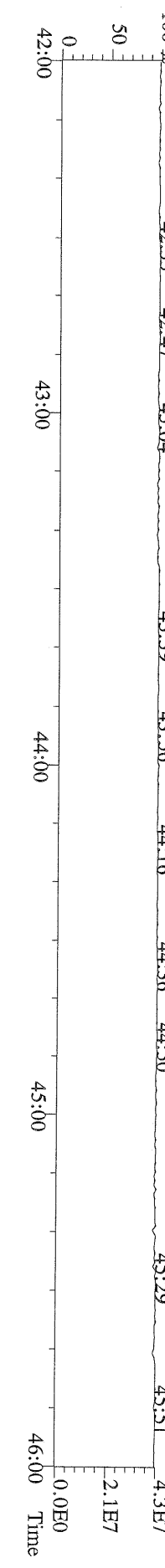
File:19MAYY11Z #1-542 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:5 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



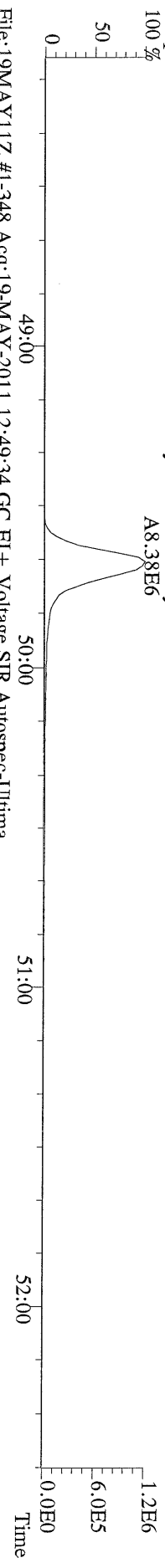
File:19MAYY11Z #1-542 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:5 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



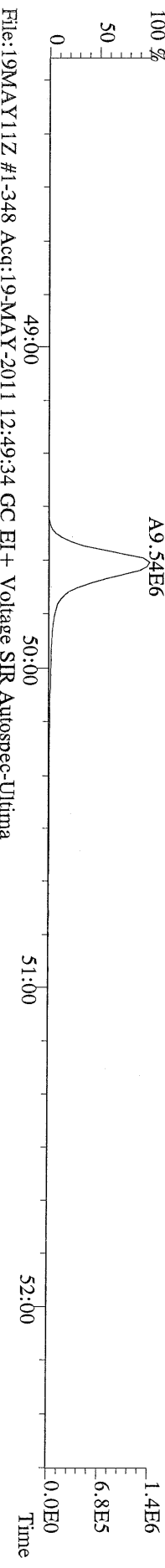
File:19MAYY11Z #1-542 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:5 F:4 Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



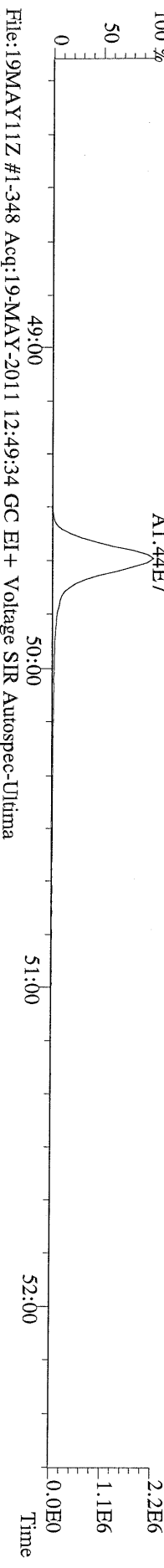
File:19MAY11Z #1-348 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:5 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



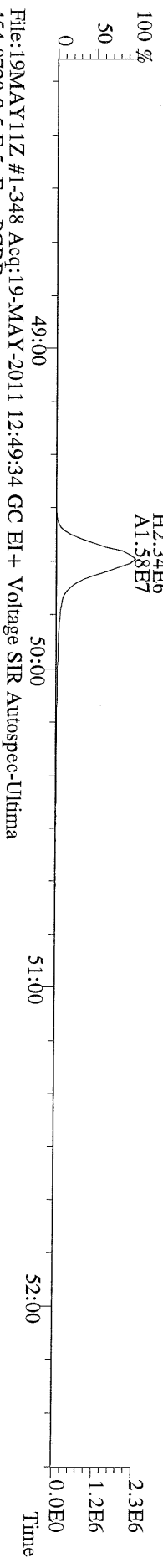
File:19MAY11Z #1-348 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:5 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



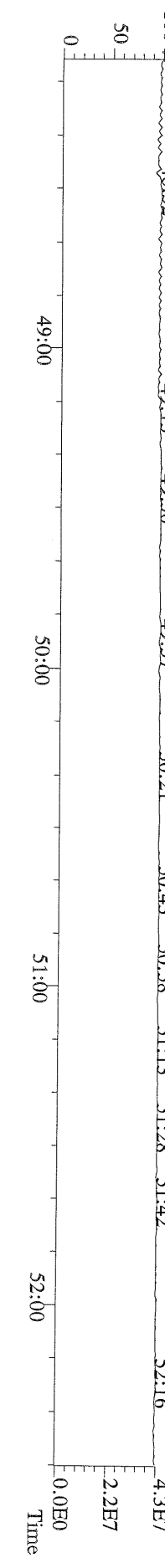
File:19MAY11Z #1-348 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:5 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



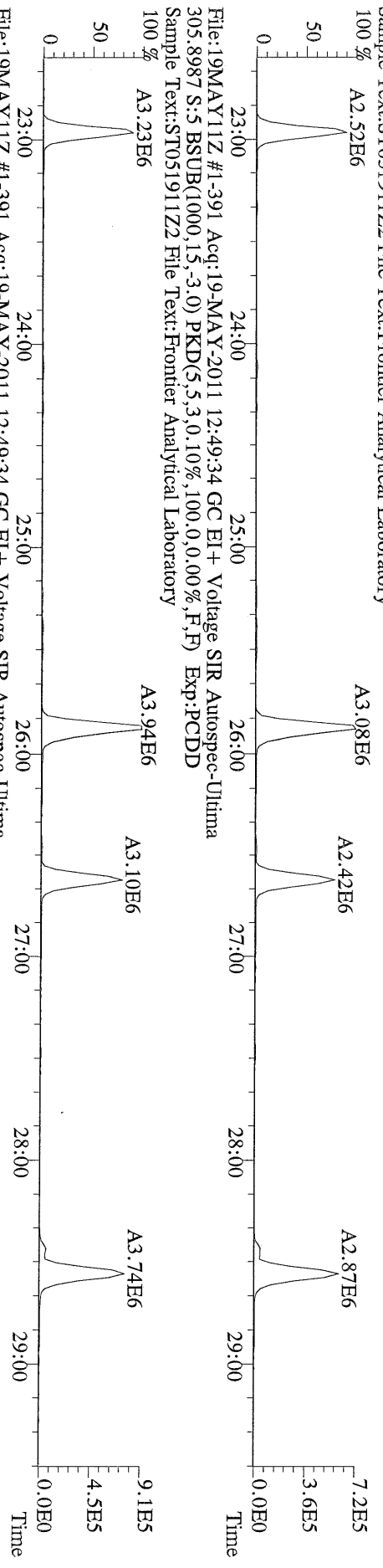
File:19MAY11Z #1-348 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:5 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



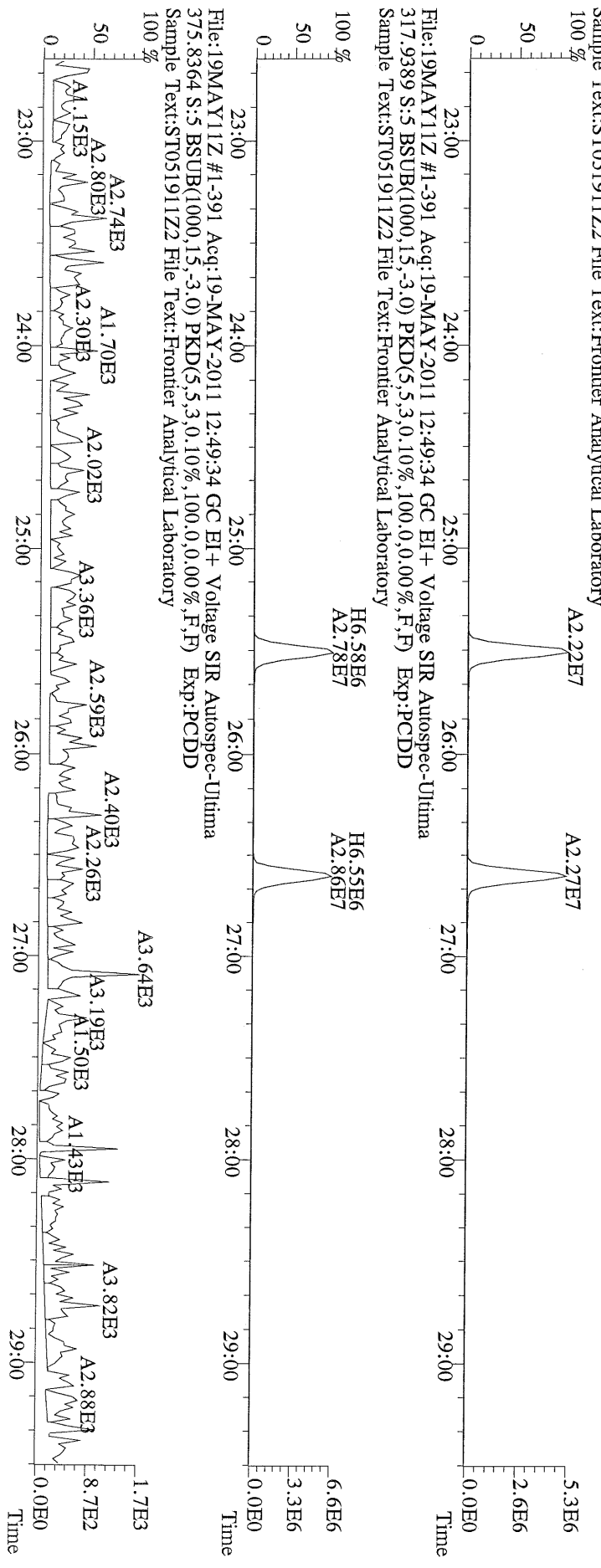
File:19MAY11Z #1-348 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:5 F:5 Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



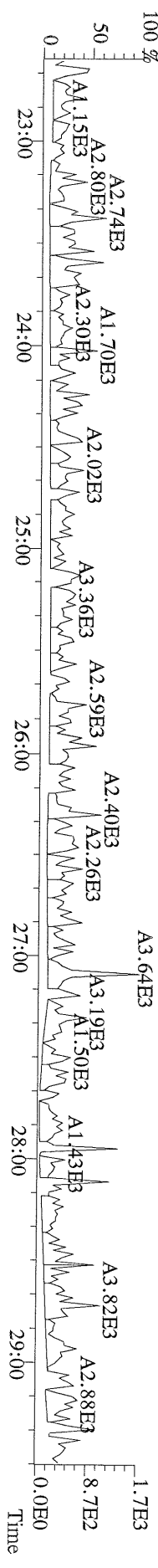
File:19MAY11Z #1-391 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



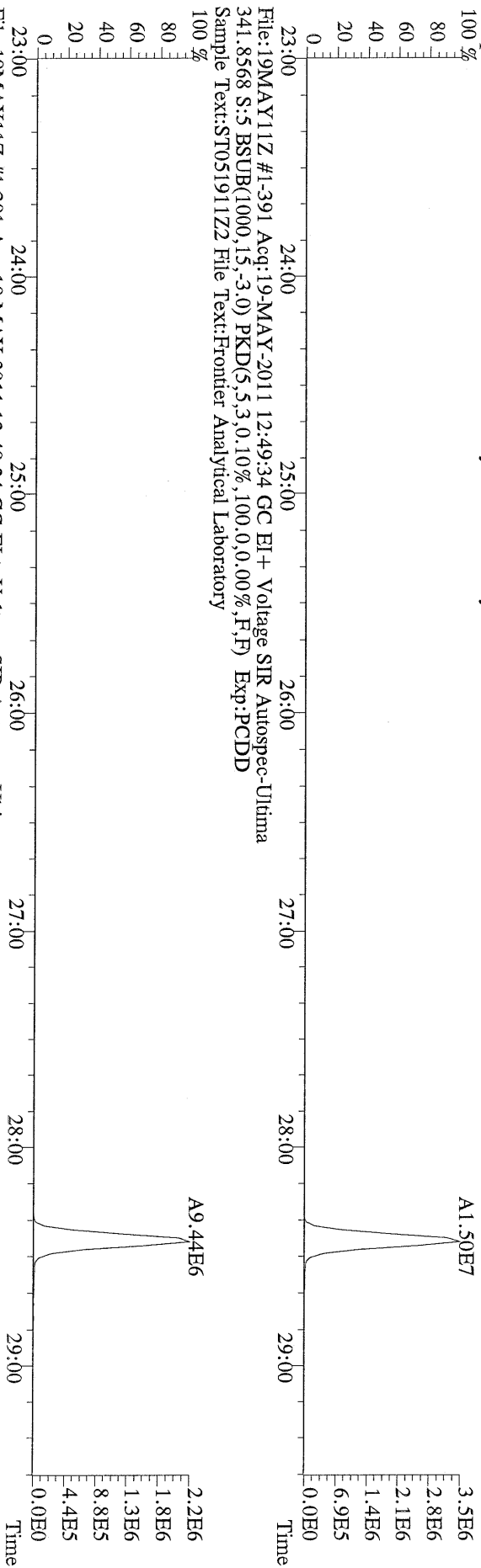
File:19MAY11Z #1-391 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



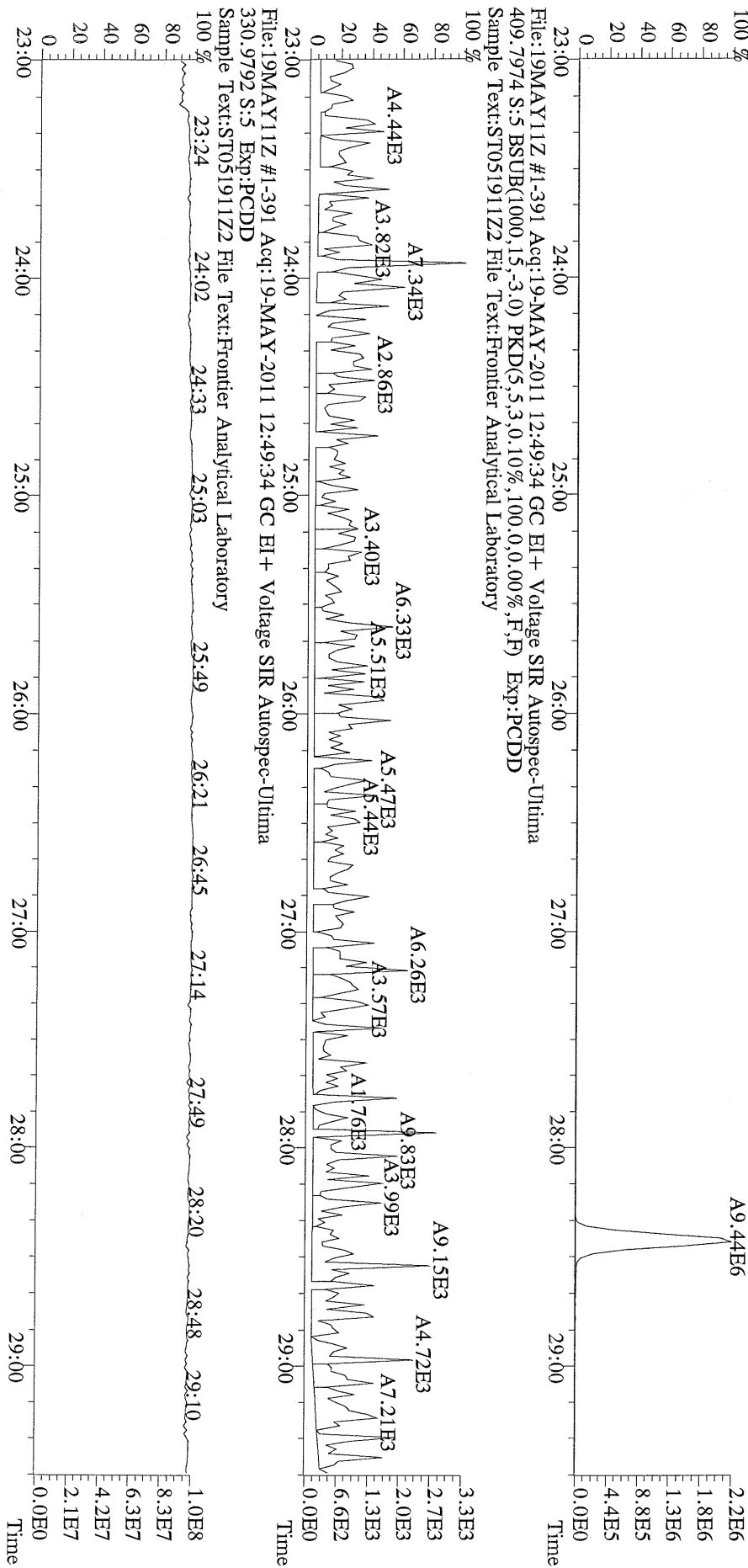
File:19MAY11Z #1-391 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



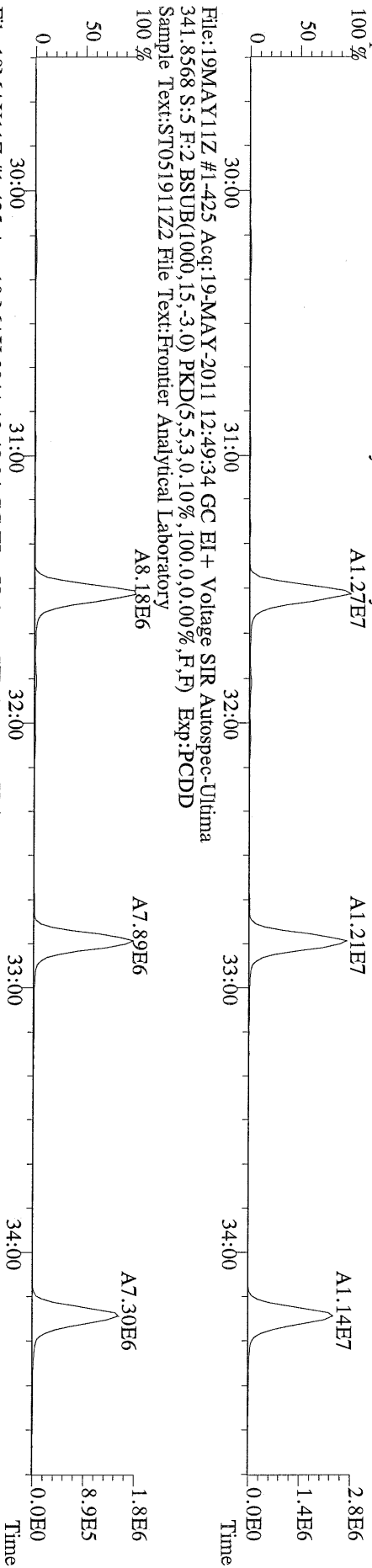
File:19MAY11Z #1-391 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 S:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



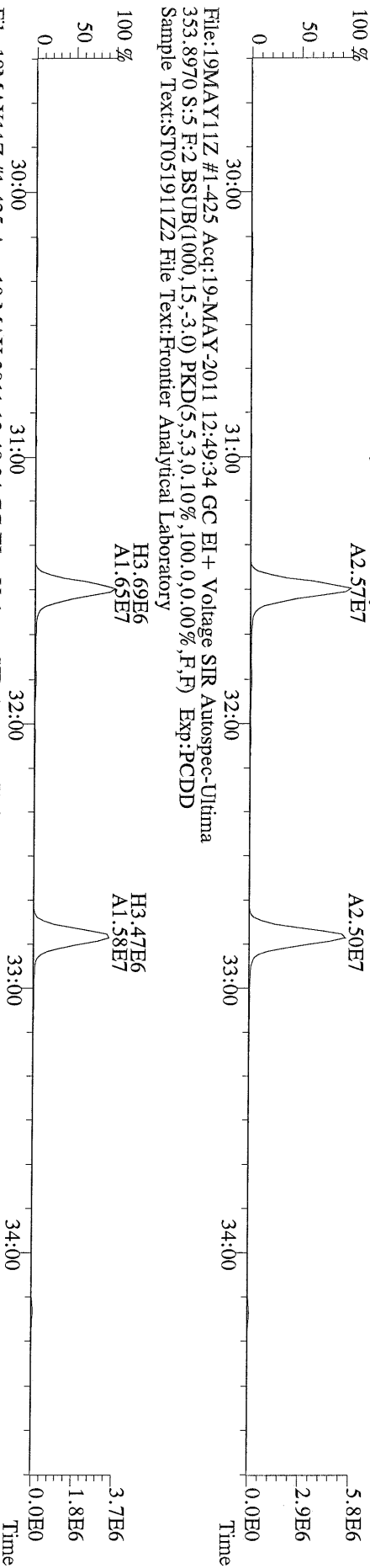
File:19MAY11Z #1-391 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
 341.8568 S:5 BSUB(1000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



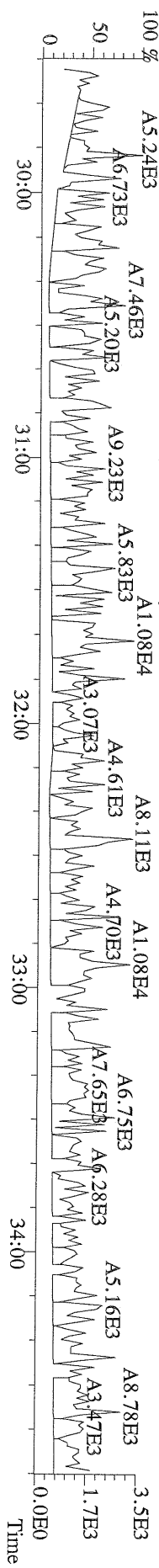
File:19MAY11Z #1-425 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:5 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



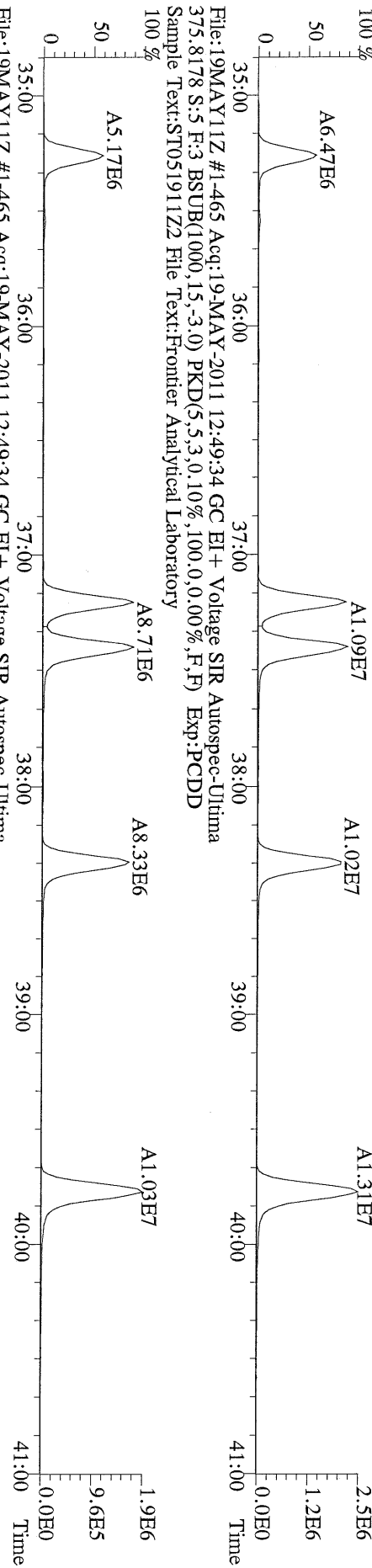
File:19MAY11Z #1-425 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:5 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



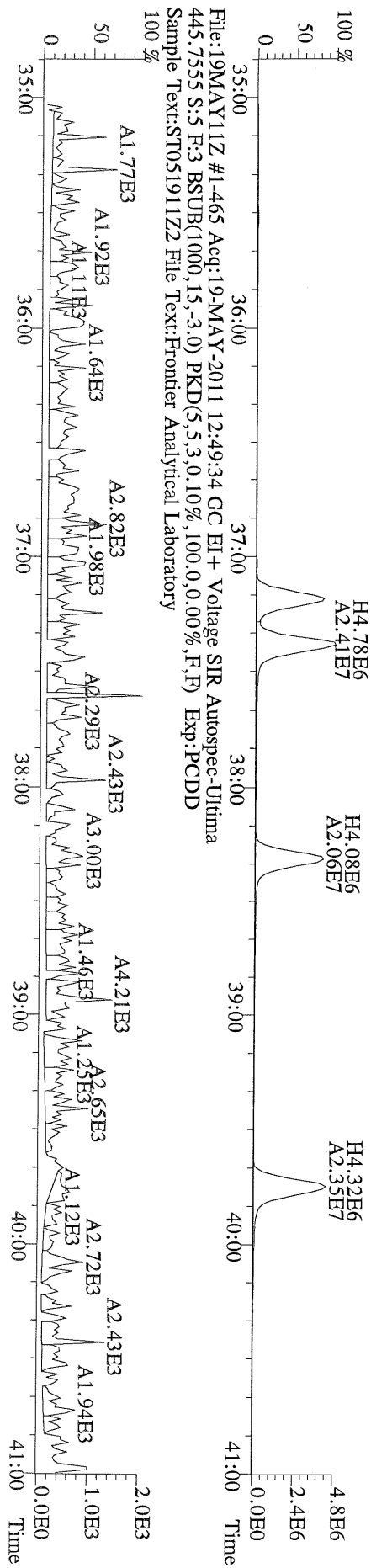
File:19MAY11Z #1-425 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:5 F:2 BSUB(1000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



File:19MAY11Z #1-465 Acq:19-MAY-2011 12:49:34 GC EI + Voltage SIR Autospec-Ultima
373.8207 S:5 F:3 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



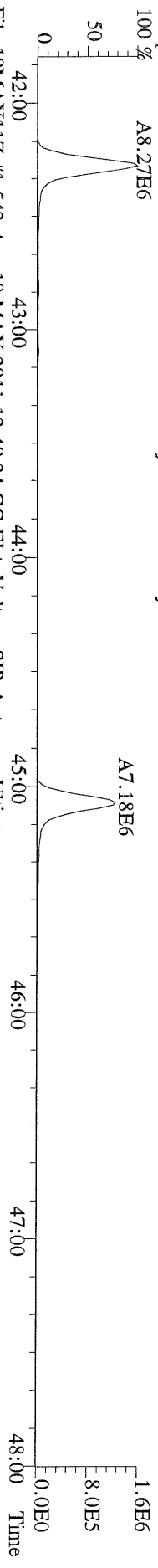
File:19MAY11Z #1-465 Acq:19-MAY-2011 12:49:34 GC EI + Voltage SIR Autospec-Ultima
383.8639 S:5 F:3 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



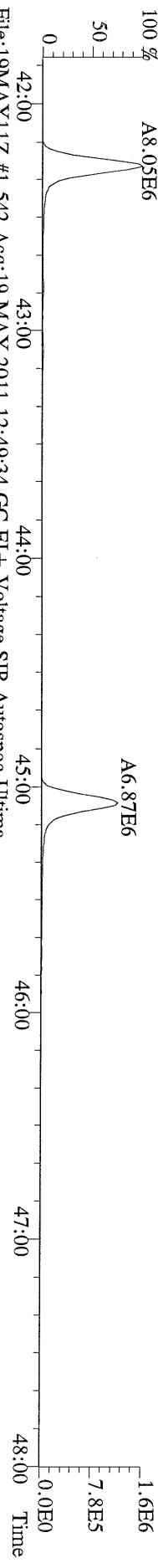
File:19MAY11Z #1-465 Acq:19-MAY-2011 12:49:34 GC EI + Voltage SIR Autospec-Ultima
445.7555 S:5 F:3 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



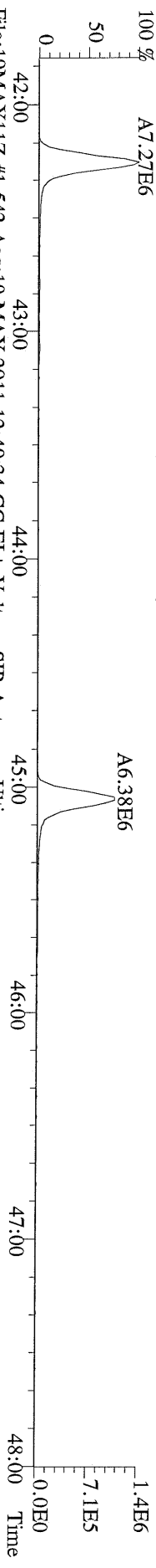
File:19MAYY11Z #1-542 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
 407.7818 S:5 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



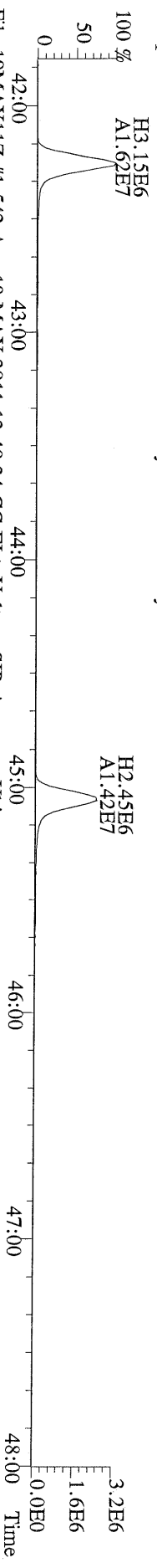
File:19MAYY11Z #1-542 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
 409.7788 S:5 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



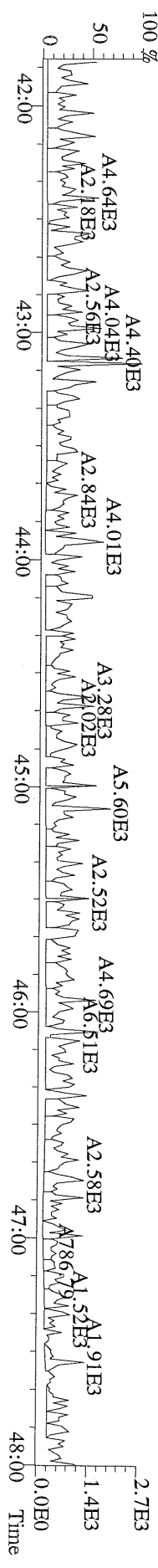
File:19MAYY11Z #1-542 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
 417.8253 S:5 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



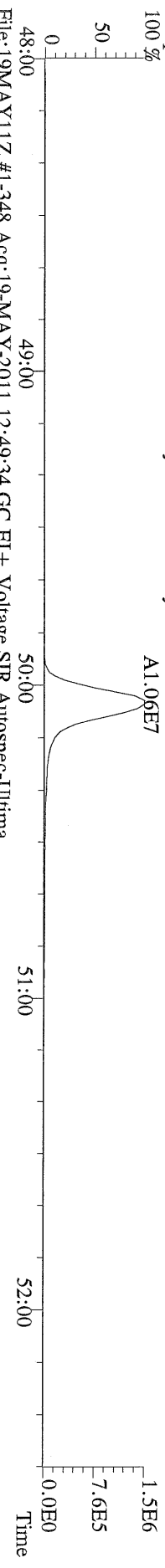
File:19MAYY11Z #1-542 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
 419.8220 S:5 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



File:19MAYY11Z #1-542 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
 479.7165 S:5 F:4 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



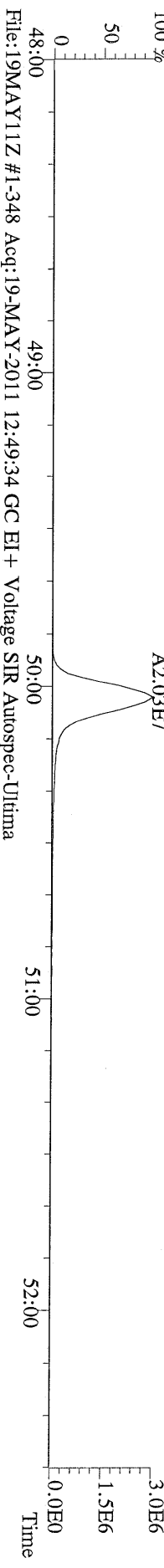
File:19MAY11Z #1-348 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
 441.7428 S:5 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



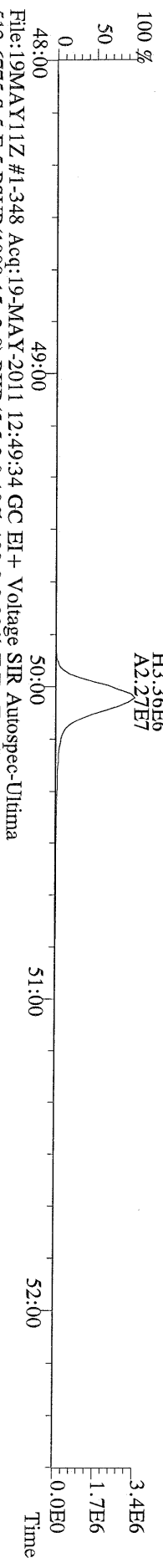
File:19MAY11Z #1-348 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
 443.7398 S:5 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory



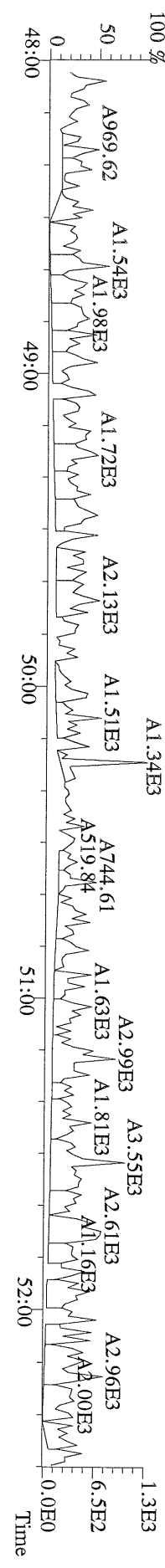
File:19MAY11Z #1-348 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
 453.7831 S:5 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory

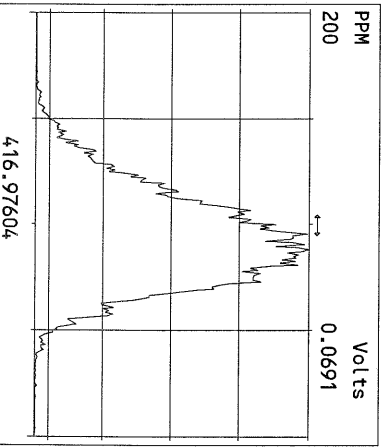
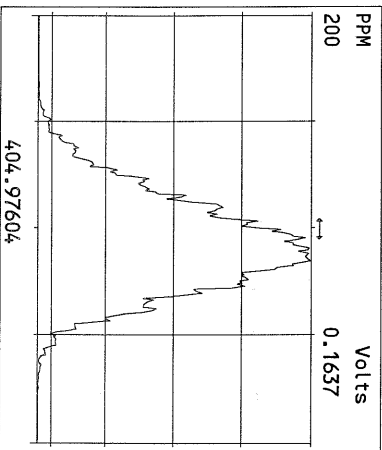
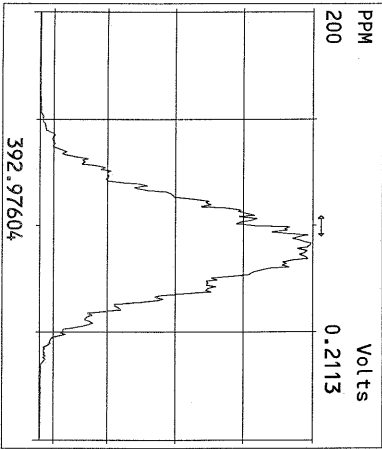
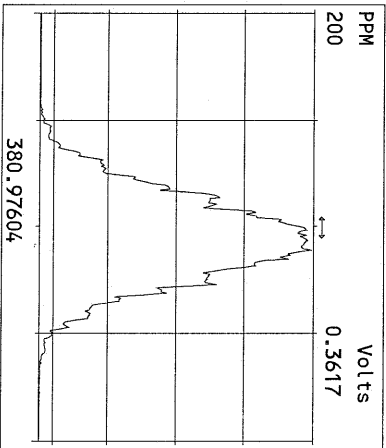
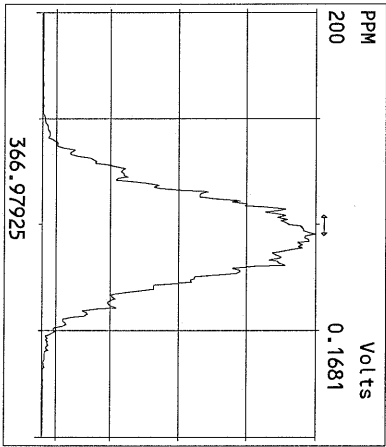
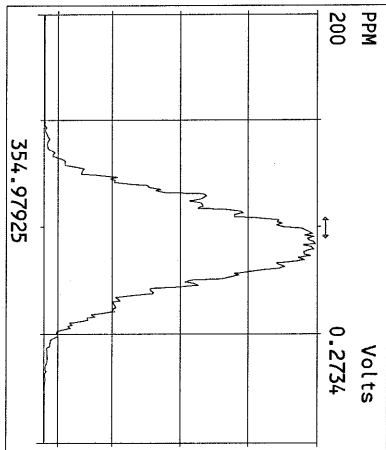
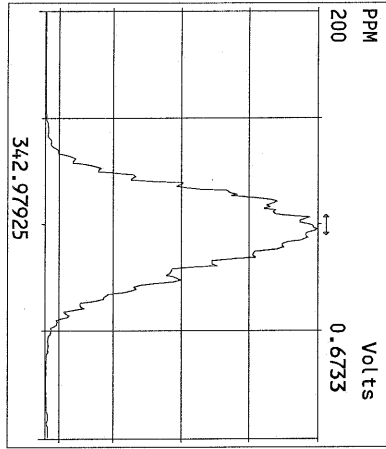
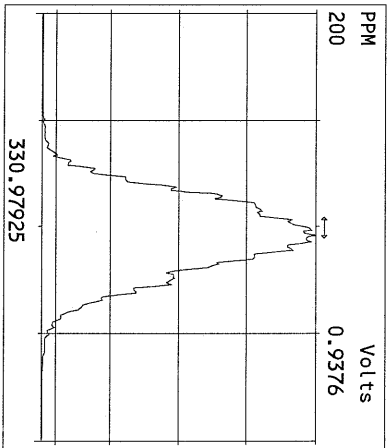
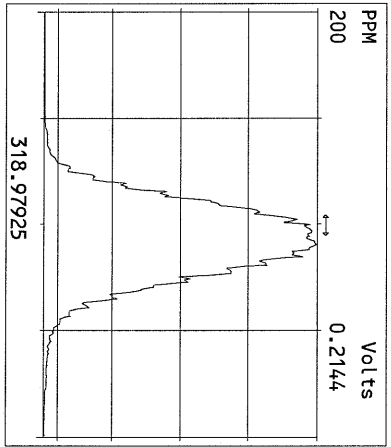
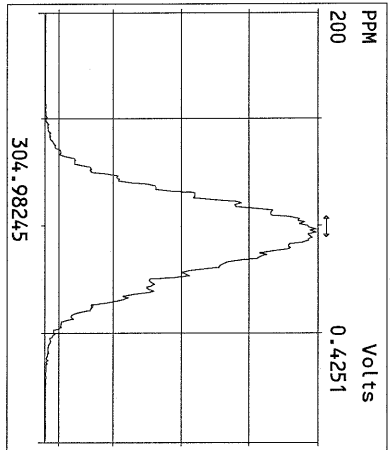
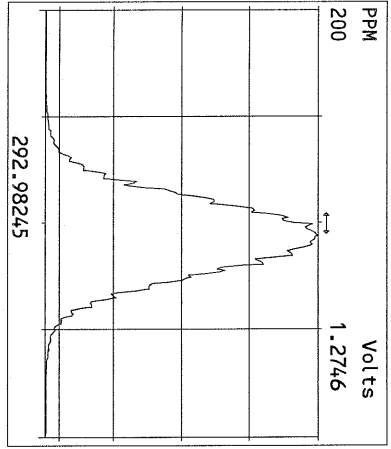


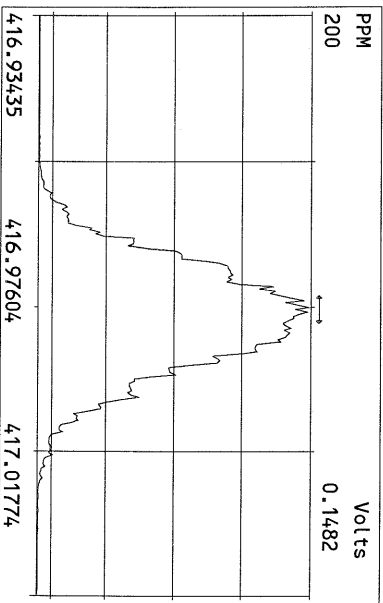
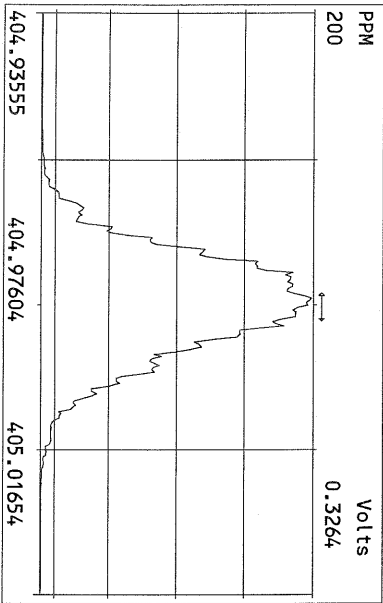
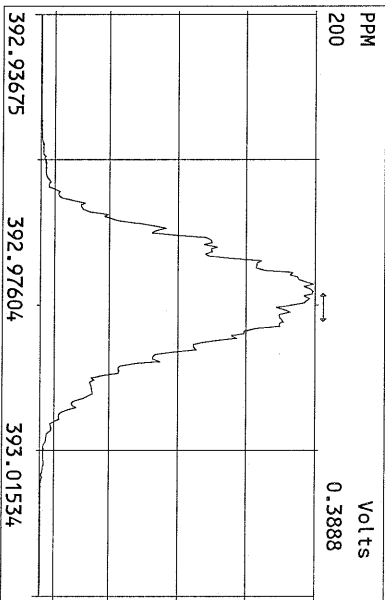
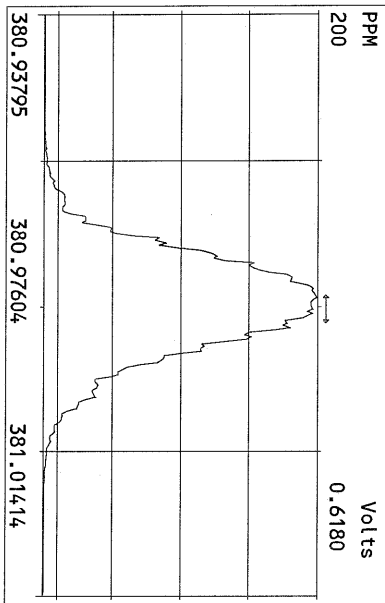
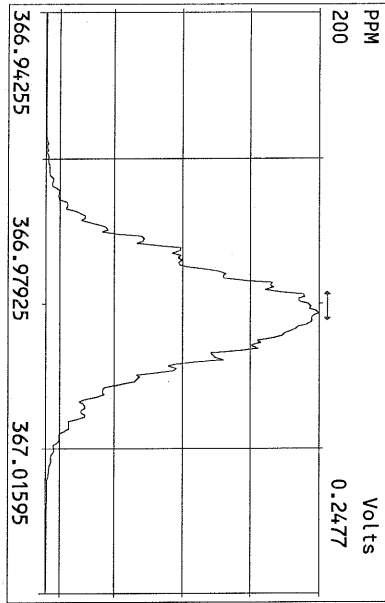
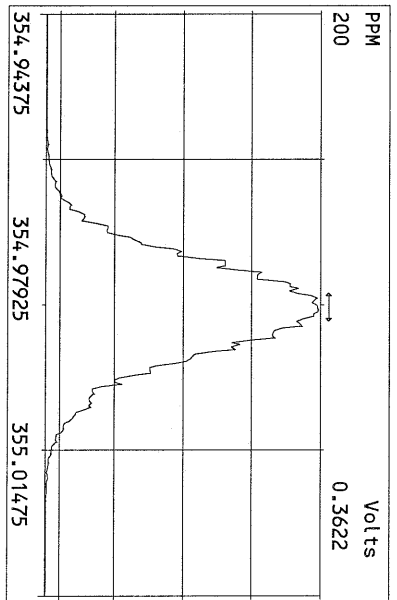
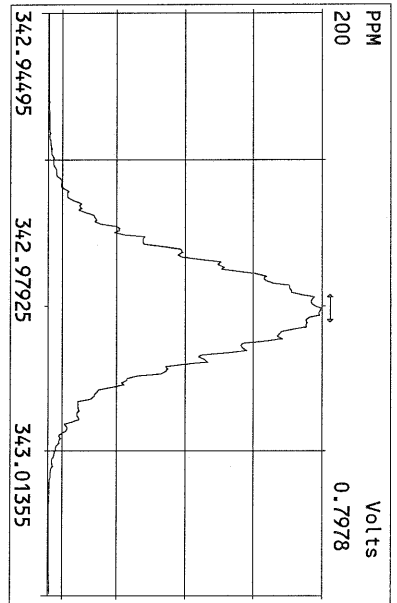
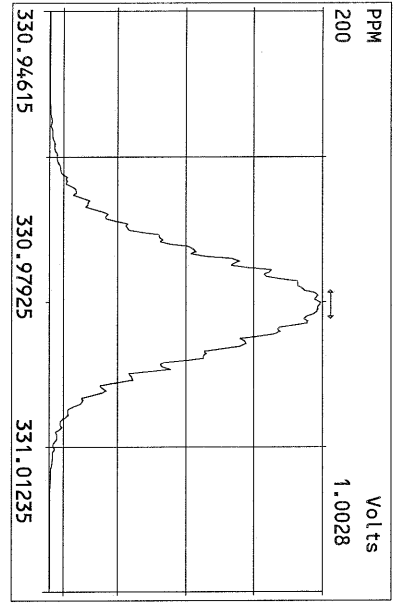
File:19MAY11Z #1-348 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
 455.7801 S:5 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory

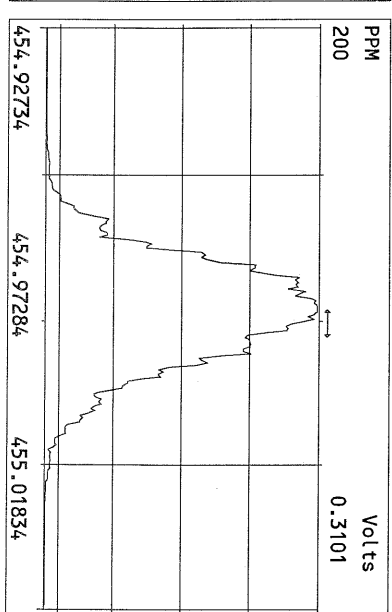
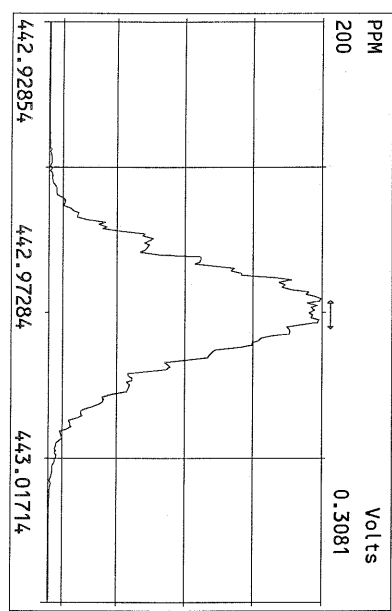
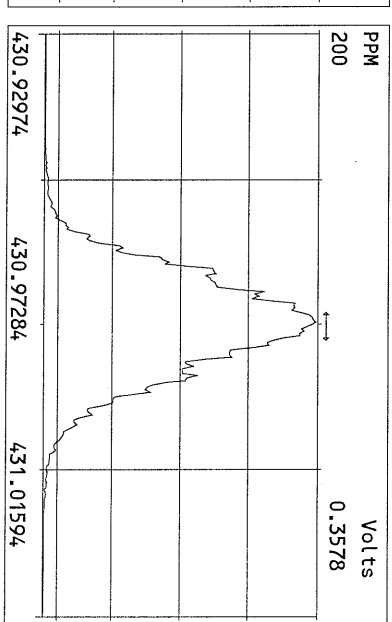
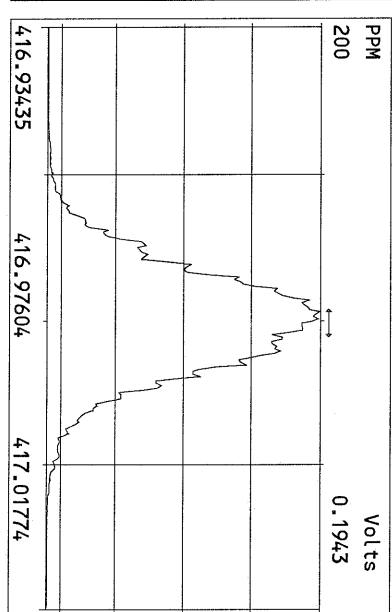
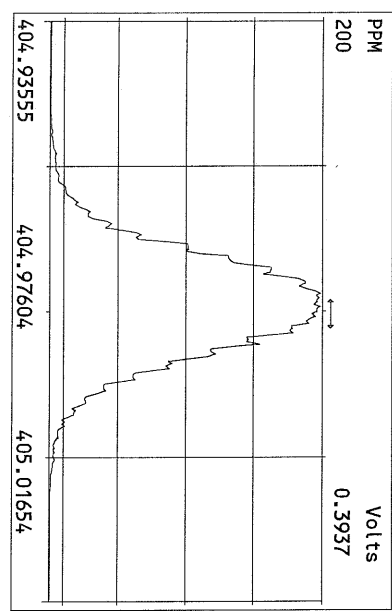
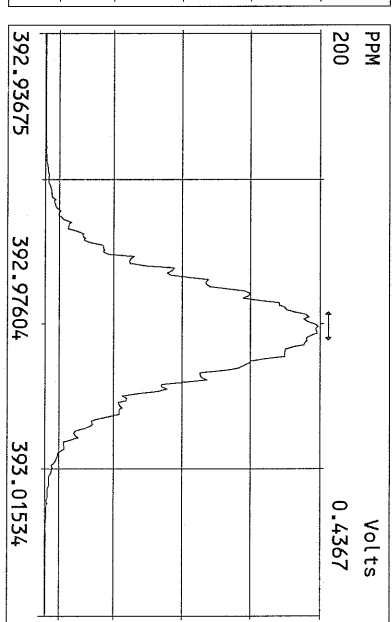
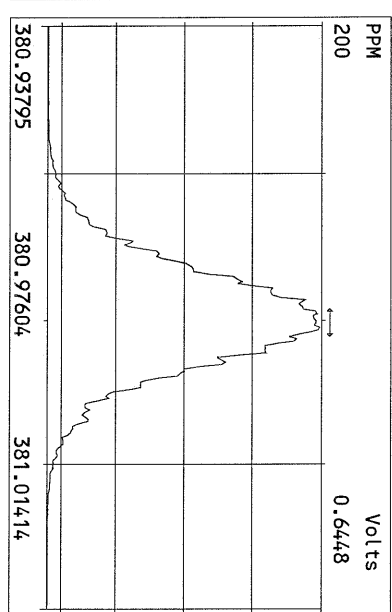
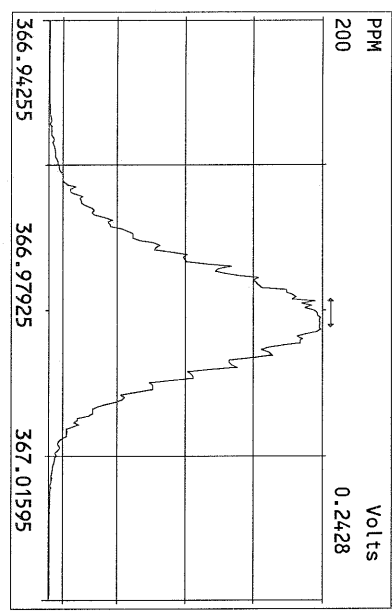


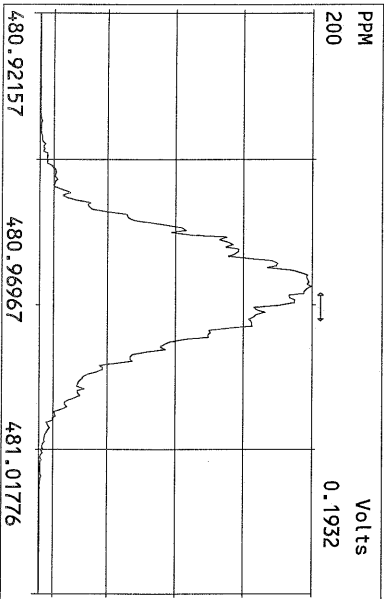
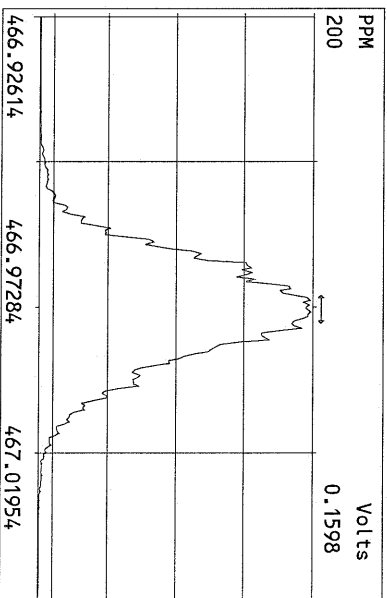
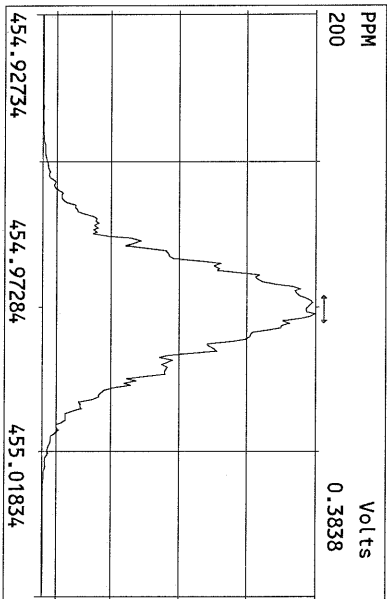
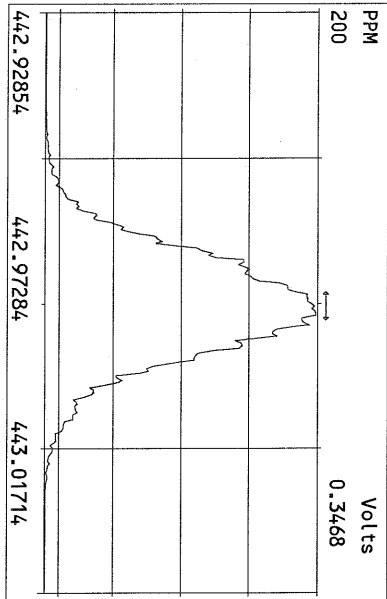
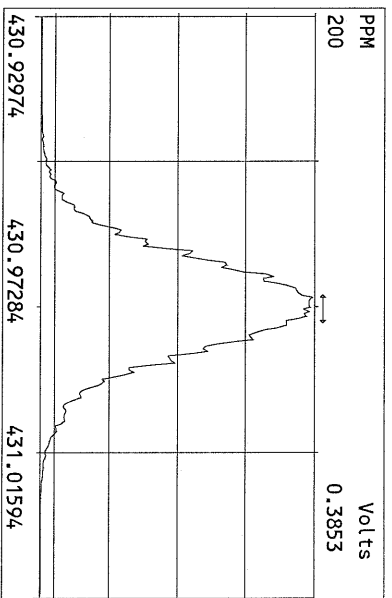
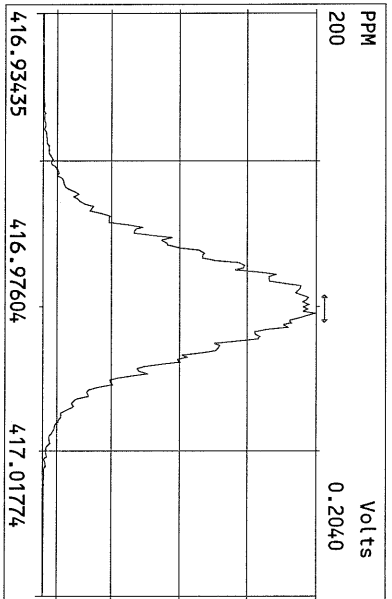
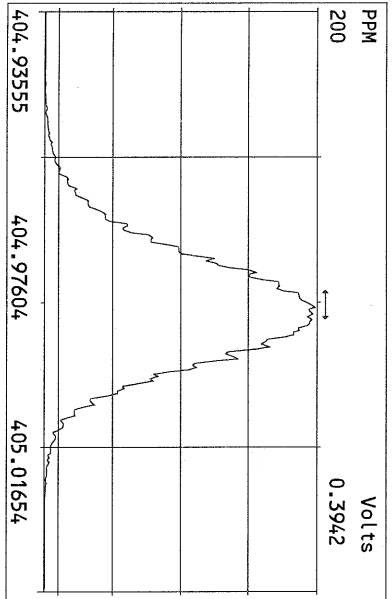
File:19MAY11Z #1-348 Acq:19-MAY-2011 12:49:34 GC EI+ Voltage SIR Autospec-Ultima
 513.6775 S:5 F:5 BSUB(1000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051911Z2 File Text:Frontier Analytical Laboratory

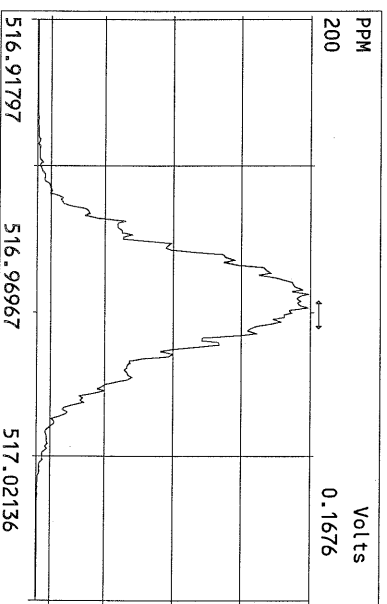
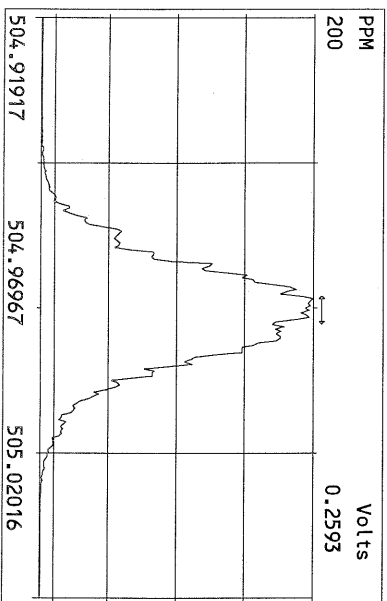
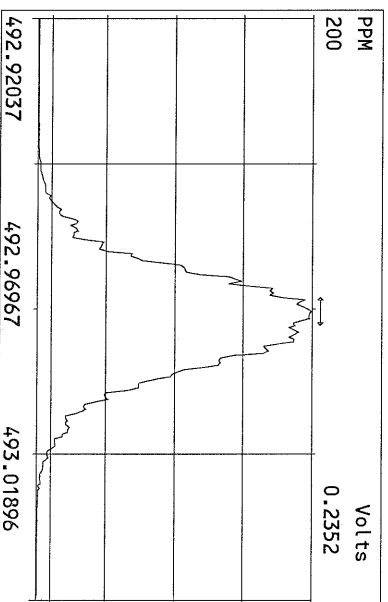
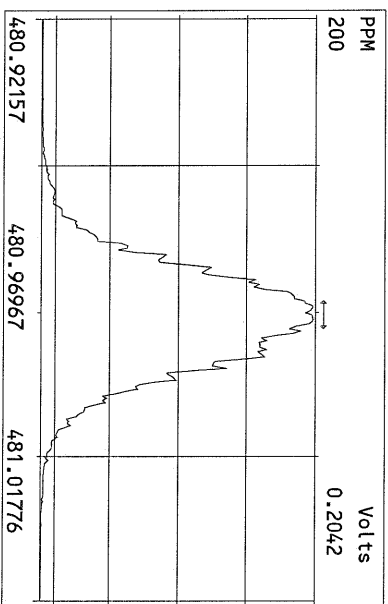
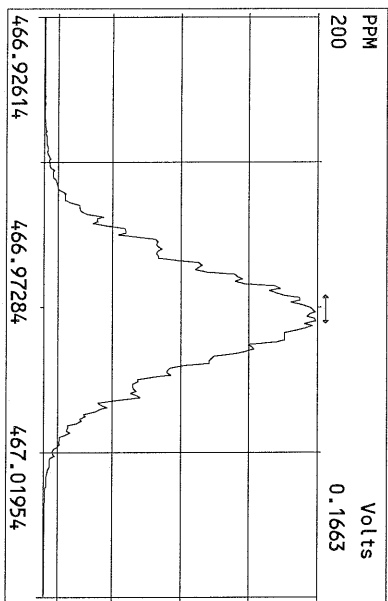
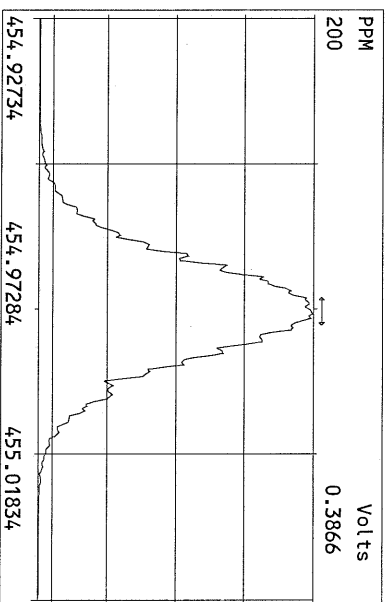
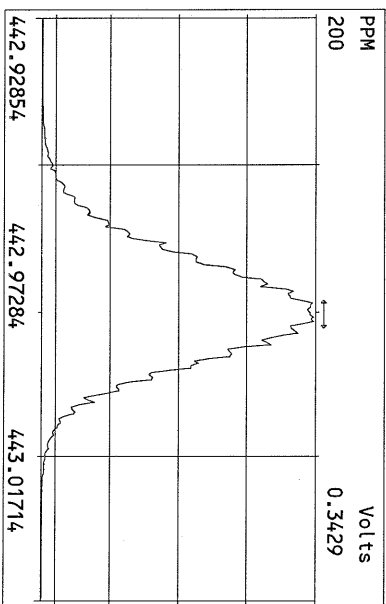
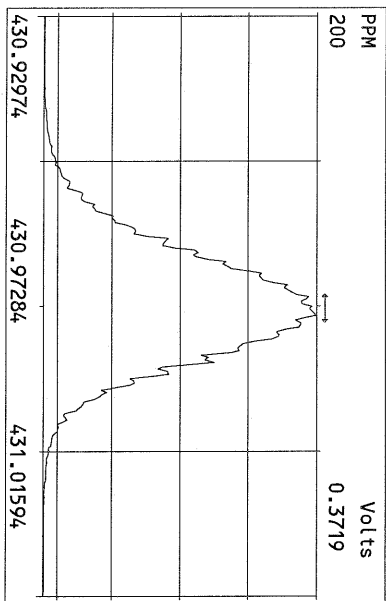












May 23, 2011

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

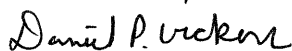
Dear Ms. Dunnihoo,

Enclosed are the results for Frontier Analytical Laboratory project **6740**. This corresponds to your **Lora Lake Apartments RI** project under ARI project number **SU21**. Six aqueous samples were received on 4/29/2011 in good condition. 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 (15) business days for project **6740**.

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 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 **6740**, please contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,



Daniel P. Vickers
Vice President

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **6740**

Received on: **04/29/2011**

Project Due: **05/23/2011** Storage: **R1**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time
6740-001-SA	1	SU21	MW07-042711	EPA 1613 D/F	Aqueous	04/27/2011	09:15 am
6740-002-SA	1	SU21	MW11-042711	EPA 1613 D/F	Aqueous	04/27/2011	10:40 am
6740-003-SA	1	SU21	MW10-042711	EPA 1613 D/F	Aqueous	04/27/2011	11:40 am
6740-004-SA	1	SU21	MW09-042711	EPA 1613 D/F	Aqueous	04/27/2011	01:10 pm
6740-005-SA	1	SU21	MW08-042711	EPA 1613 D/F	Aqueous	04/27/2011	02:17 pm
6740-006-SA	1	SU21	MW12-042711	EPA 1613 D/F	Aqueous	04/27/2011	03:50 pm

EPA Method 1613
PCDD/F



FAL ID: 6740-001-MB
Client ID: Method Blank
Matrix: Aqueous
Batch No: X2293

Date Extracted: 05-17-2011
Date Received: NA
Amount: 1.000 L

ICal: PCDDFAL4-5-17-11
GC Column: DB5
Units: pg/L

Acquired: 05-18-2011
2005 WHO TEQ: 0.00

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.866		-	0.215				
1,2,3,7,8-PeCDD	ND	0.894		-	0.317				
1,2,3,4,7,8-HxCDD	ND	1.19		-	0.326				
1,2,3,6,7,8-HxCDD	ND	1.50		-	0.424	Total TCDD	ND	0.866	
1,2,3,7,8,9-HxCDD	ND	1.30		-	0.367	Total PeCDD	ND	0.894	
1,2,3,4,6,7,8-HpCDD	ND	2.13		-	0.497	Total HxCDD	ND	1.50	
OCDD	ND	2.71		-	1.41	Total HpCDD	ND	2.13	
2,3,7,8-TCDF	ND	0.712		-	0.209				
1,2,3,7,8-PeCDF	ND	1.26		-	0.235				
2,3,4,7,8-PeCDF	ND	1.27		-	0.243				
1,2,3,4,7,8-HxCDF	ND	0.892		-	0.255				
1,2,3,6,7,8-HxCDF	ND	0.849		-	0.248				
2,3,4,6,7,8-HxCDF	ND	0.831		-	0.262				
1,2,3,7,8,9-HxCDF	ND	0.768		-	0.258	Total TCDF	ND	0.712	
1,2,3,4,6,7,8-HpCDF	ND	1.09		-	0.324	Total PeCDF	ND	1.27	
1,2,3,4,7,8,9-HpCDF	ND	1.39		-	0.490	Total HxCDF	ND	0.892	
OCDF	ND	2.46		-	0.805	Total HpCDF	ND	1.39	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	98.2	25.0 - 164	
13C-1,2,3,7,8-PeCDD	89.7	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	96.1	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	94.4	23.0 - 140	
13C-OCDD	99.8	17.0 - 157	
13C-2,3,7,8-TCDF	98.3	24.0 - 169	
13C-1,2,3,7,8-PeCDF	86.4	24.0 - 185	
13C-2,3,4,7,8-PeCDF	90.3	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	101	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	98.8	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	102	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	98.6	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	100	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	99.2	26.0 - 138	
13C-OCDF	93.0	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	99.0	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: 5/19/11

Reviewed By:
Date: 5/19/11

EPA Method 1613
PCDD/F



FAL ID: 6740-001-SA
Client ID: MW07-042711
Matrix: Aqueous
Batch No: X2293

Date Extracted: 05-17-2011
Date Received: 04-29-2011
Amount: 1.030 L

ICal: PCDDFAL4-5-17-11
GC Column: DB5
Units: pg/L

Acquired: 05-18-2011
2005 WHO TEQ: 0.00

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	1.01		-	0.215				
1,2,3,7,8-PeCDD	ND	1.29		-	0.317				
1,2,3,4,7,8-HxCDD	ND	1.24		-	0.326				
1,2,3,6,7,8-HxCDD	ND	1.60		-	0.424	Total TCDD	ND	1.01	
1,2,3,7,8,9-HxCDD	ND	1.37		-	0.367	Total PeCDD	ND	1.29	
1,2,3,4,6,7,8-HpCDD	ND	2.14		-	0.497	Total HxCDD	ND	1.60	
OCDD	ND	2.67		-	1.41	Total HpCDD	ND	2.14	
2,3,7,8-TCDF	ND	0.801		-	0.209				
1,2,3,7,8-PeCDF	ND	1.42		-	0.235				
2,3,4,7,8-PeCDF	ND	1.40		-	0.243				
1,2,3,4,7,8-HxCDF	ND	1.17		-	0.255				
1,2,3,6,7,8-HxCDF	ND	1.19		-	0.248				
2,3,4,6,7,8-HxCDF	ND	1.21		-	0.262				
1,2,3,7,8,9-HxCDF	ND	1.08		-	0.258	Total TCDF	ND	0.801	
1,2,3,4,6,7,8-HpCDF	ND	1.41		-	0.324	Total PeCDF	ND	1.42	
1,2,3,4,7,8,9-HpCDF	ND	1.76		-	0.490	Total HxCDF	ND	1.21	
OCDF	ND	2.73		-	0.805	Total HpCDF	ND	1.76	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	101	25.0 - 164	
13C-1,2,3,7,8-PeCDD	89.0	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	98.4	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	92.6	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	99.3	23.0 - 140	
13C-OCDD	110	17.0 - 157	
13C-2,3,7,8-TCDF	102	24.0 - 169	
13C-1,2,3,7,8-PeCDF	91.6	24.0 - 185	
13C-2,3,4,7,8-PeCDF	94.1	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	101	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	94.5	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	98.1	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	96.8	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	98.3	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	101	26.0 - 138	
13C-OCDF	98.4	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	97.9	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: 5/19/11

Reviewed By: [Signature]
Date: 5/19/11

EPA Method 1613
PCDD/F



FAL ID: 6740-003-SA
Client ID: MW10-042711
Matrix: Aqueous
Batch No: X2293

Date Extracted: 05-17-2011
Date Received: 04-29-2011
Amount: 1.036 L

ICal: PCDDFAL4-5-17-11
GC Column: DB5
Units: pg/L

Acquired: 05-18-2011
2005 WHO TEQ: 0.00

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	1.19		-	0.215				
1,2,3,7,8-PeCDD	ND	1.34		-	0.317				
1,2,3,4,7,8-HxCDD	ND	1.52		-	0.326				
1,2,3,6,7,8-HxCDD	ND	1.97		-	0.424	Total TCDD	ND	1.19	
1,2,3,7,8,9-HxCDD	ND	1.68		-	0.367	Total PeCDD	ND	1.34	
1,2,3,4,6,7,8-HpCDD	ND	2.06		-	0.497	Total HxCDD	ND	1.97	
OCDD	ND	3.13		-	1.41	Total HpCDD	ND	2.06	
2,3,7,8-TCDF	ND	0.816		-	0.209				
1,2,3,7,8-PeCDF	ND	1.19		-	0.235				
2,3,4,7,8-PeCDF	ND	1.23		-	0.243				
1,2,3,4,7,8-HxCDF	ND	1.08		-	0.255				
1,2,3,6,7,8-HxCDF	ND	0.995		-	0.248				
2,3,4,6,7,8-HxCDF	ND	1.07		-	0.262				
1,2,3,7,8,9-HxCDF	ND	0.973		-	0.258	Total TCDF	ND	0.816	
1,2,3,4,6,7,8-HpCDF	ND	1.25		-	0.324	Total PeCDF	ND	1.23	
1,2,3,4,7,8,9-HpCDF	ND	1.60		-	0.490	Total HxCDF	ND	1.08	
OCDF	ND	2.32		-	0.805	Total HpCDF	ND	1.60	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	92.4	25.0 - 164	
13C-1,2,3,7,8-PeCDD	82.6	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	89.4	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	83.1	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	89.8	23.0 - 140	
13C-OCDD	99.5	17.0 - 157	
13C-2,3,7,8-TCDF	96.7	24.0 - 169	
13C-1,2,3,7,8-PeCDF	87.3	24.0 - 185	
13C-2,3,4,7,8-PeCDF	88.9	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	92.5	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	86.5	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	89.6	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	89.3	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	89.5	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	91.1	26.0 - 138	
13C-OCDF	86.4	17.0 - 157	

Cleanup Surrogate

37Cl-2,3,7,8-TCDD 83.1 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: ks
Date: 5/19/11

Reviewed By: [Signature]
Date: 5/19/11

EPA Method 1613
PCDD/F



FAL ID: 6740-004-SA
Client ID: MW09-042711
Matrix: Aqueous
Batch No: X2293

Date Extracted: 05-17-2011
Date Received: 04-29-2011
Amount: 1.029 L

ICal: PCDDFAL4-5-17-11
GC Column: DB5
Units: pg/L

Acquired: 05-18-2011
2005 WHO TEQ: 0.0800

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.962		-	0.215				
1,2,3,7,8-PeCDD	ND	1.50		-	0.317				
1,2,3,4,7,8-HxCDD	ND	1.95		-	0.326				
1,2,3,6,7,8-HxCDD	ND	2.48		-	0.424	Total TCDD	ND	0.962	
1,2,3,7,8,9-HxCDD	ND	2.13		-	0.367	Total PeCDD	ND	1.50	
1,2,3,4,6,7,8-HpCDD	7.05	-	J	0.0705	0.497	Total HxCDD	ND	2.48	
OCDD	31.5	-	J	0.00945	1.41	Total HpCDD	13.7	-	J
2,3,7,8-TCDF	ND	0.931		-	0.209				
1,2,3,7,8-PeCDF	ND	1.30		-	0.235				
2,3,4,7,8-PeCDF	ND	1.29		-	0.243				
1,2,3,4,7,8-HxCDF	ND	1.17		-	0.255				
1,2,3,6,7,8-HxCDF	ND	1.17		-	0.248				
2,3,4,6,7,8-HxCDF	ND	1.17		-	0.262				
1,2,3,7,8,9-HxCDF	ND	1.02		-	0.258	Total TCDF	ND	0.931	
1,2,3,4,6,7,8-HpCDF	ND	1.71		-	0.324	Total PeCDF	ND	1.30	
1,2,3,4,7,8,9-HpCDF	ND	2.11		-	0.490	Total HxCDF	ND	1.17	
OCDF	ND	2.99		-	0.805	Total HpCDF	ND	2.11	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	90.3	25.0 - 164	
13C-1,2,3,7,8-PeCDD	80.9	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	88.8	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	82.1	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	90.8	23.0 - 140	
13C-OCDD	101	17.0 - 157	
13C-2,3,7,8-TCDF	90.7	24.0 - 169	
13C-1,2,3,7,8-PeCDF	82.1	24.0 - 185	
13C-2,3,4,7,8-PeCDF	86.3	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	89.9	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	83.6	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	87.2	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	86.6	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	87.2	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	90.7	26.0 - 138	
13C-OCDF	86.4	17.0 - 157	

Cleanup Surrogate

37Cl-2,3,7,8-TCDD 92.3 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: [Signature]
Date: 5/19/11

Reviewed By: DN
Date: 5/19/11

