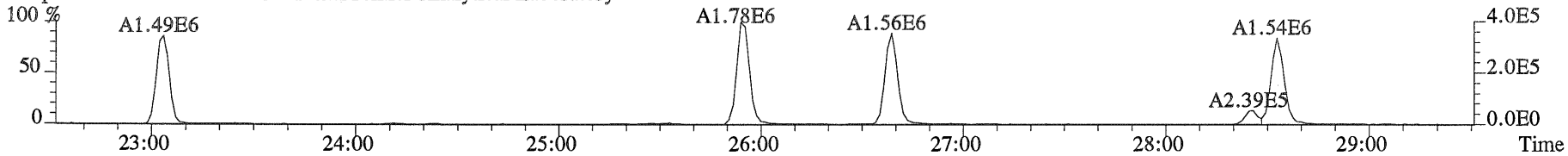
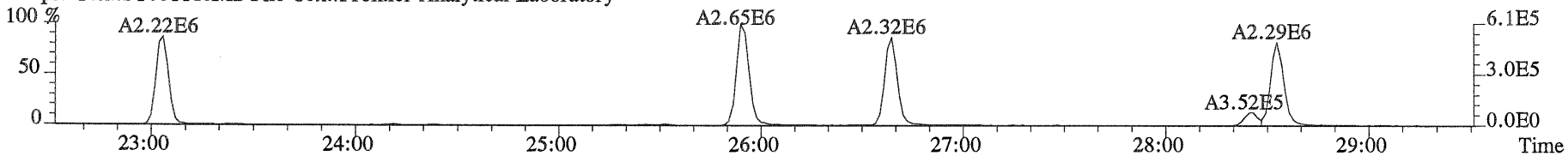
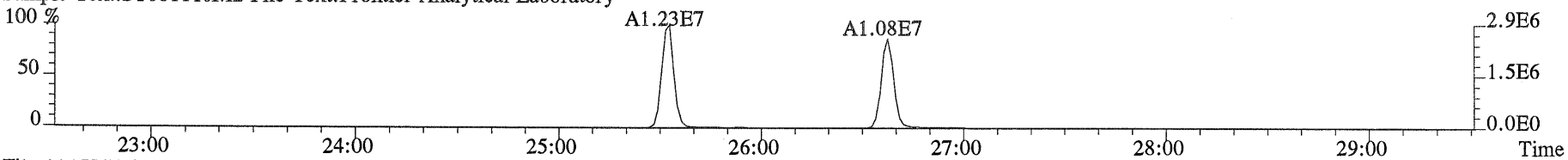
File:11AUG10M #1-357 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



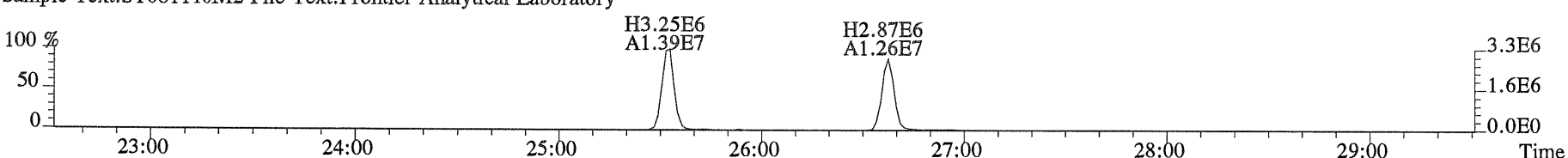
File:11AUG10M #1-357 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



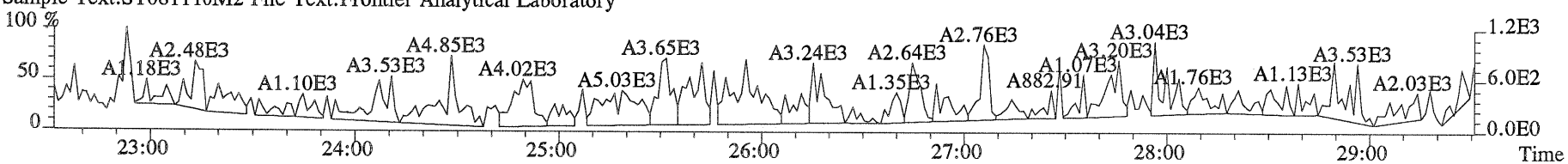
File:11AUG10M #1-357 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



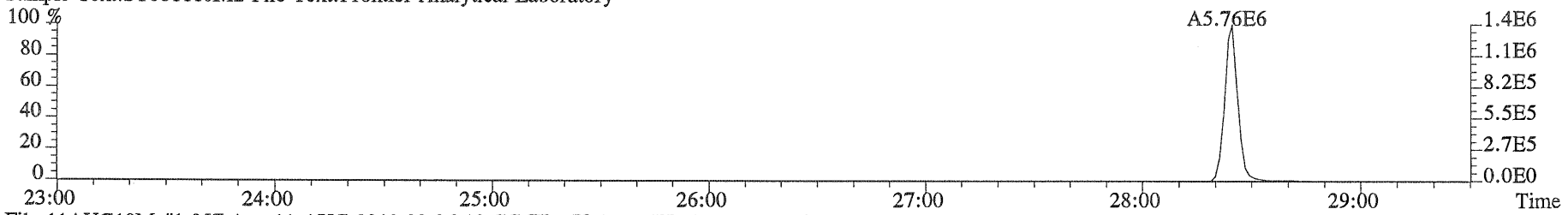
File:11AUG10M #1-357 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



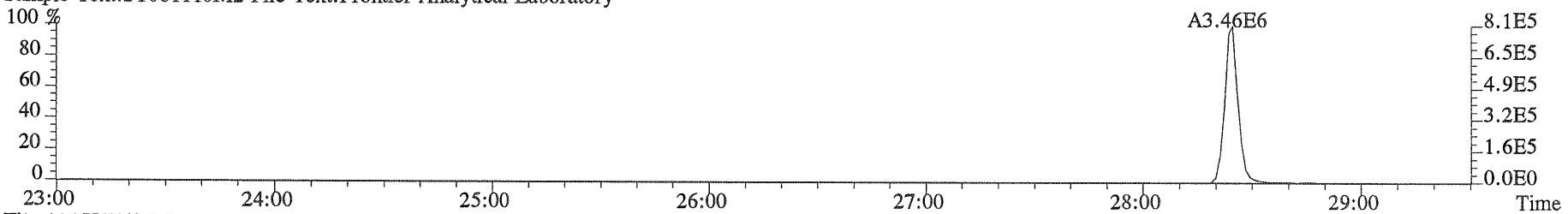
File:11AUG10M #1-357 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



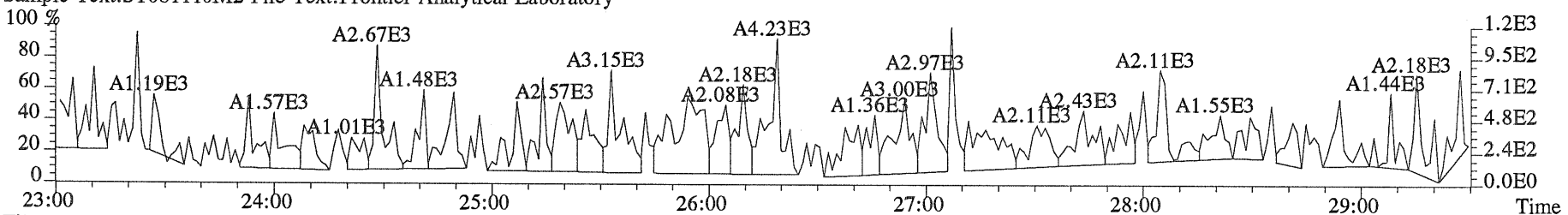
File:11AUG10M #1-357 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



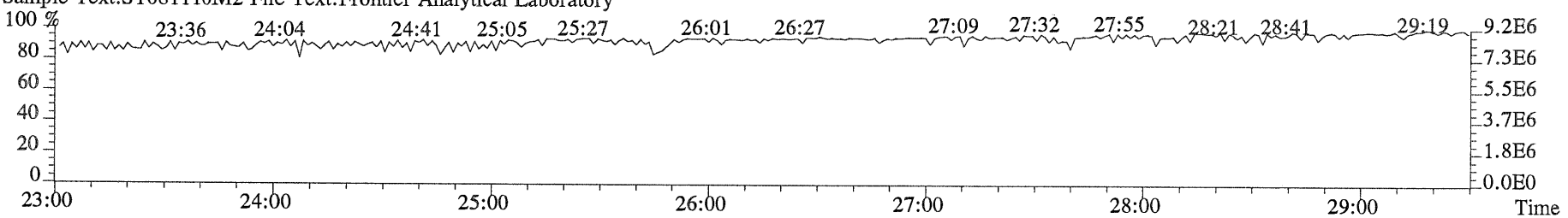
File:11AUG10M #1-357 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



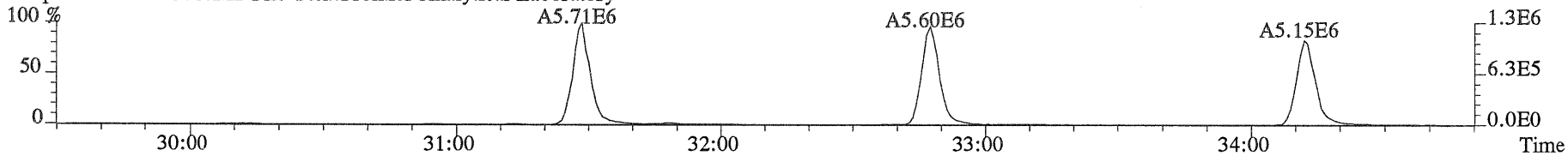
File:11AUG10M #1-357 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



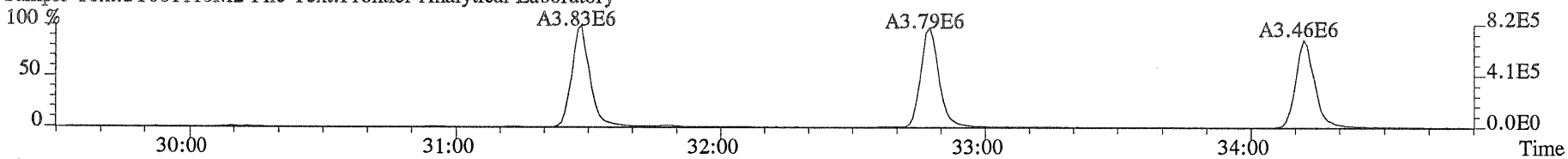
File:11AUG10M #1-357 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:16 Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



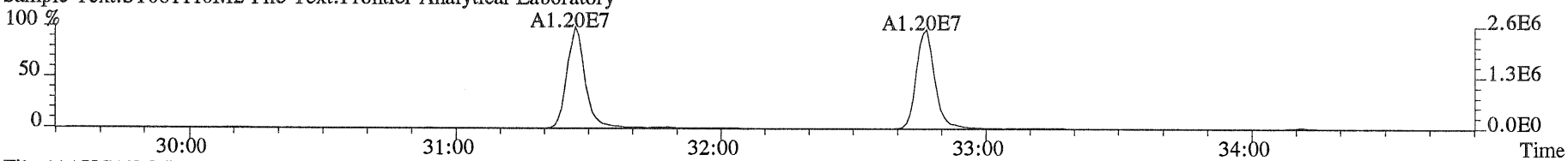
File:11AUG10M #1-412 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



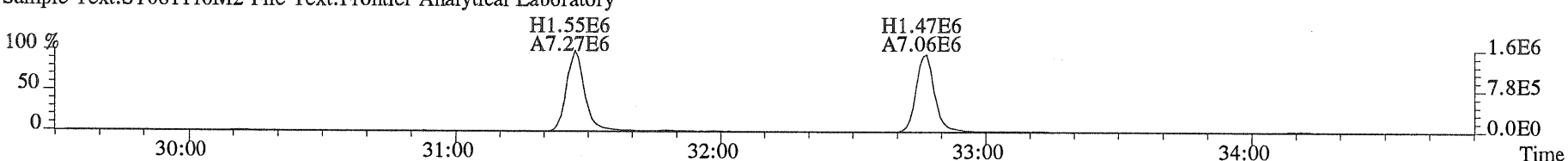
File:11AUG10M #1-412 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



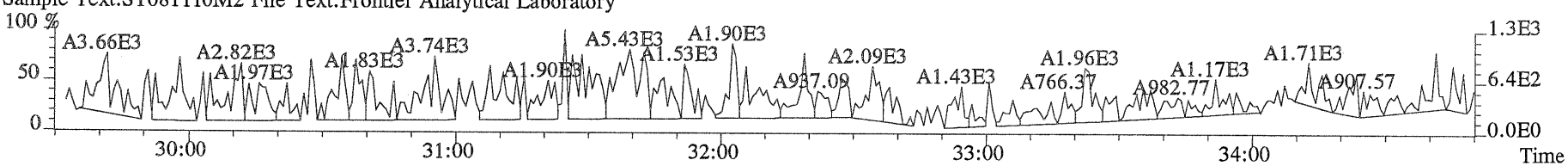
File:11AUG10M #1-412 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



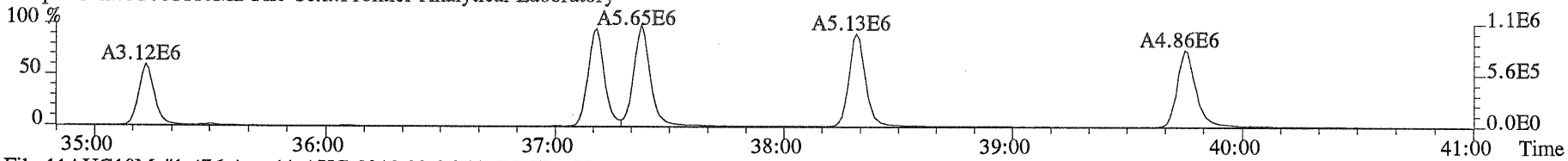
File:11AUG10M #1-412 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



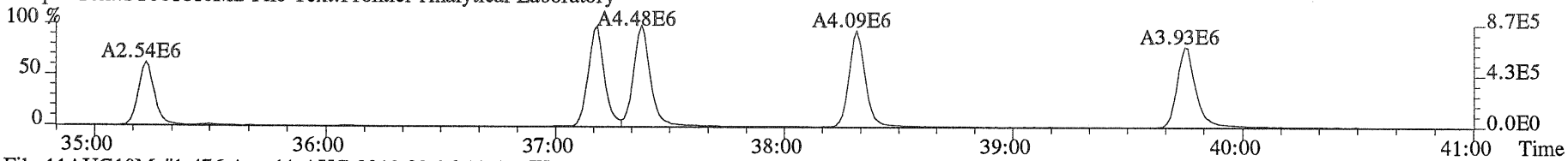
File:11AUG10M #1-412 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



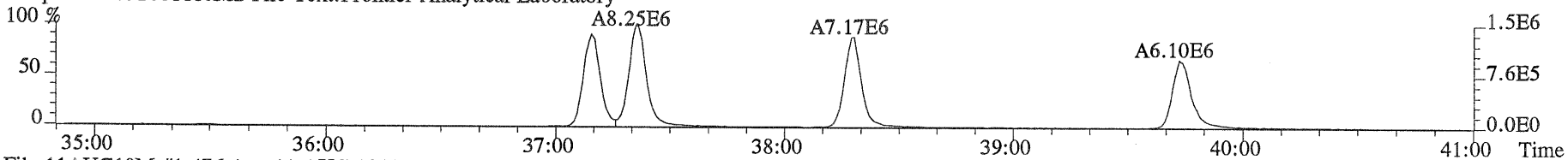
File:11AUG10M #1-476 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



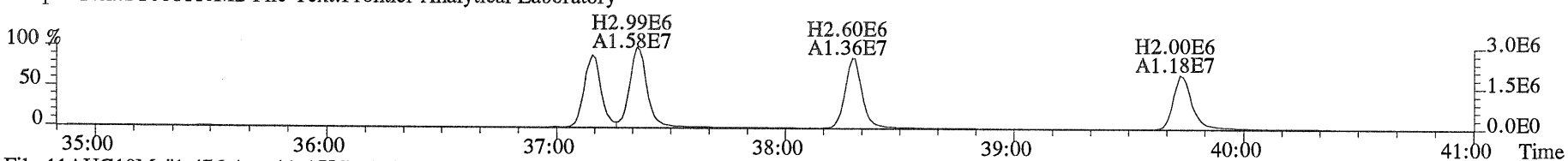
File:11AUG10M #1-476 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



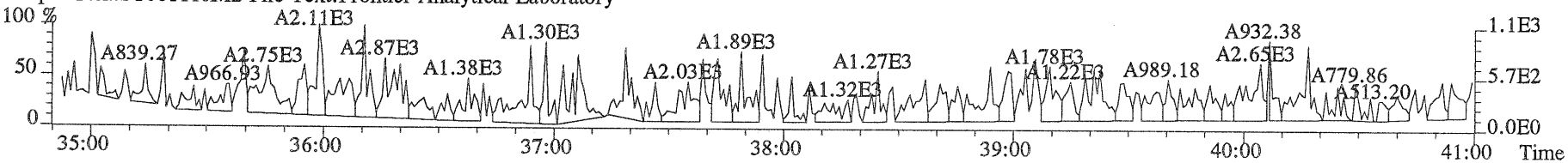
File:11AUG10M #1-476 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



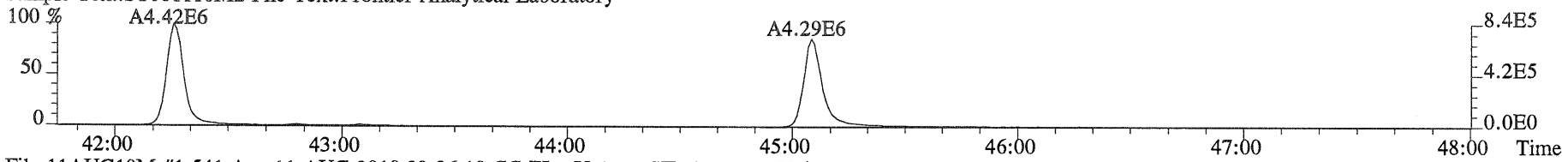
File:11AUG10M #1-476 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



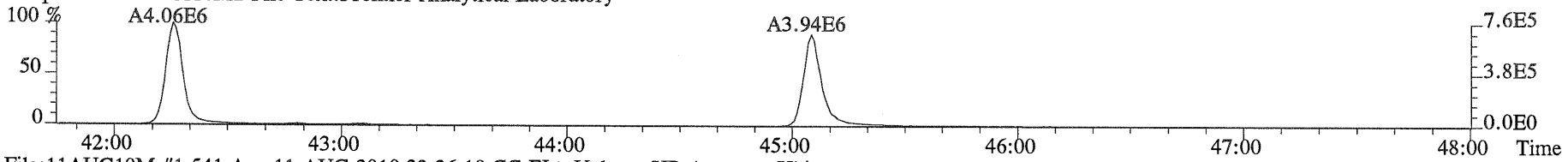
File:11AUG10M #1-476 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



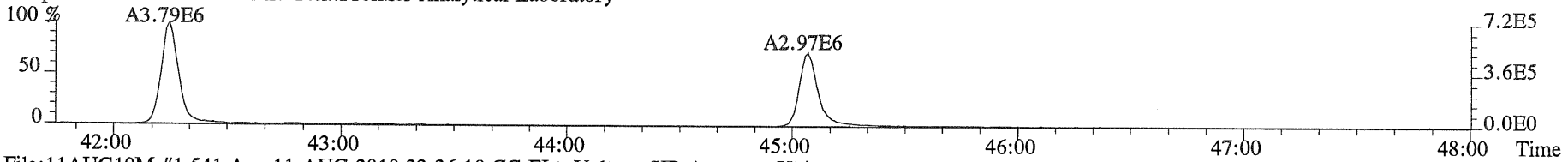
File:11AUG10M #1-541 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



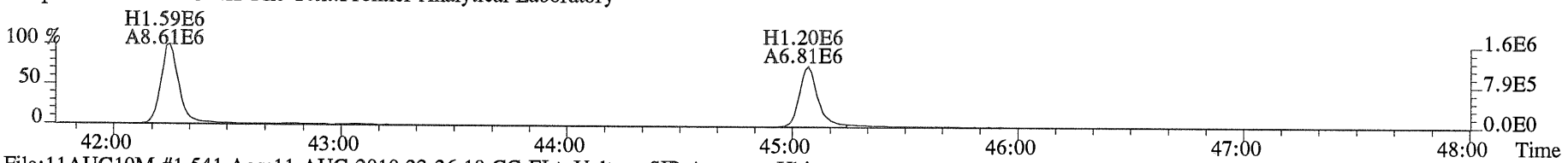
File:11AUG10M #1-541 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



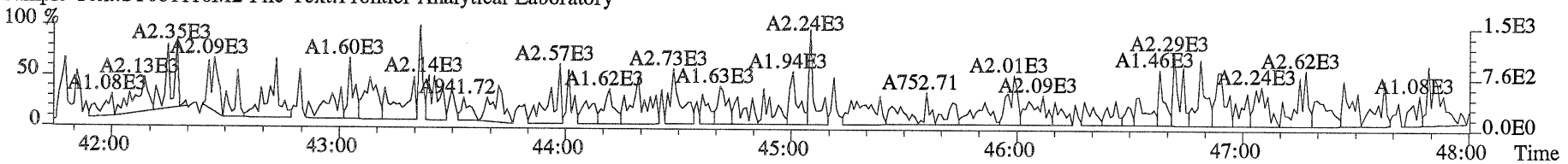
File:11AUG10M #1-541 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



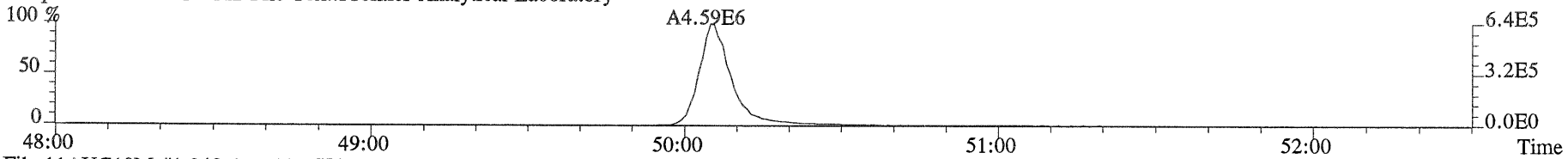
File:11AUG10M #1-541 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



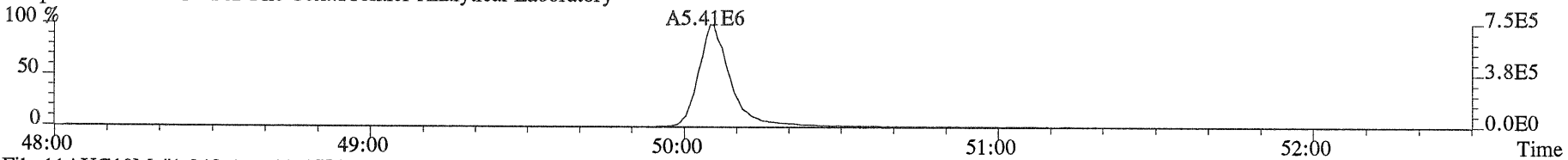
File:11AUG10M #1-541 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



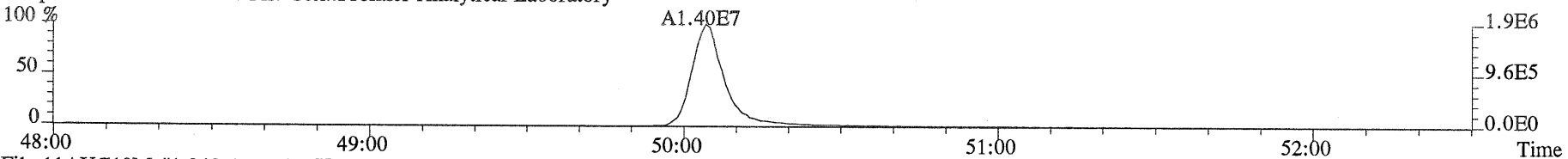
File:11AUG10M #1-348 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



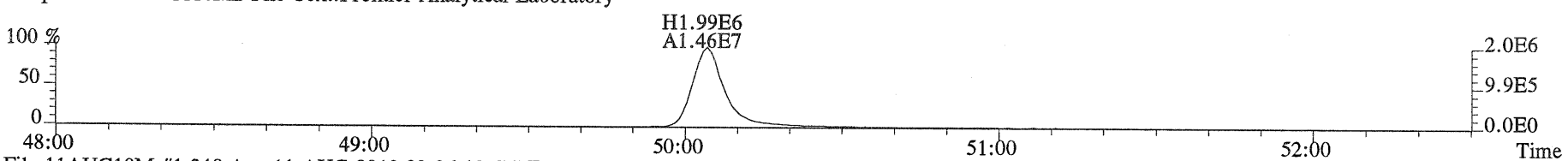
File:11AUG10M #1-348 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



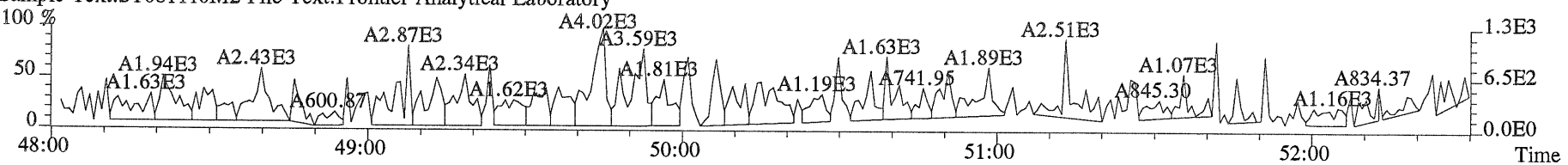
File:11AUG10M #1-348 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



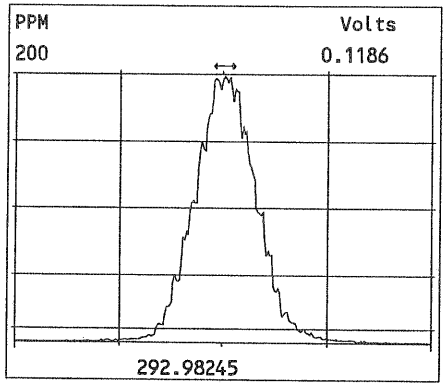
File:11AUG10M #1-348 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory

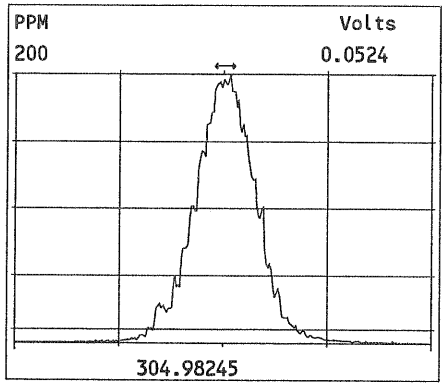


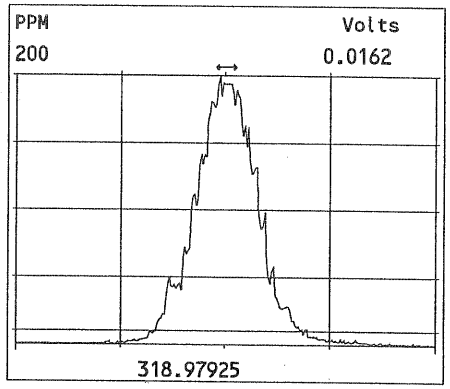
File:11AUG10M #1-348 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory

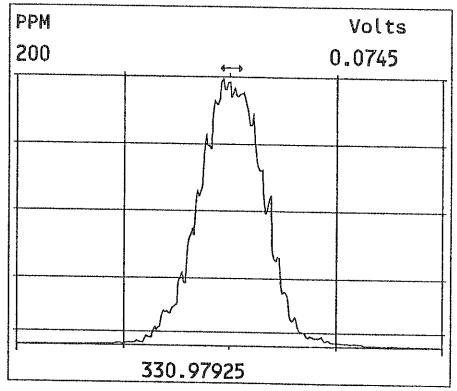


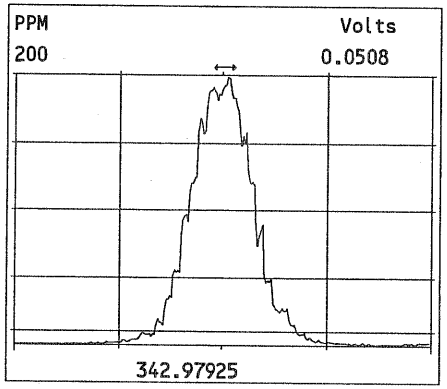
Peak Locate Examination:12-AUG-2010:09:40 File:11AUG10M_RES_CHECK
Experiment:PCDD Function:1 Reference:PFK

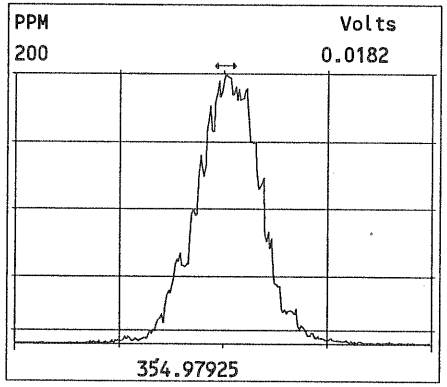


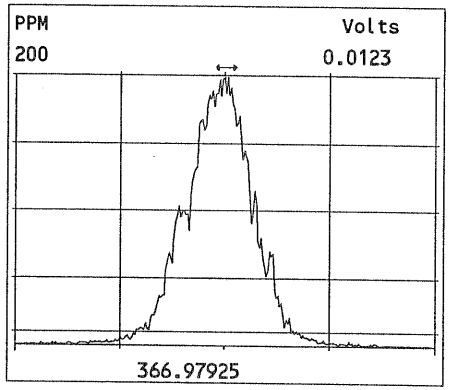


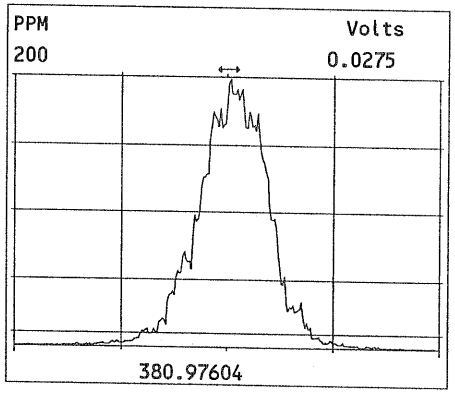


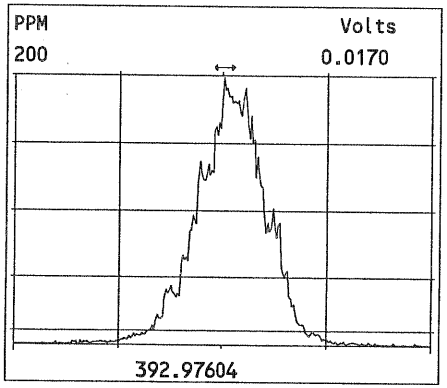


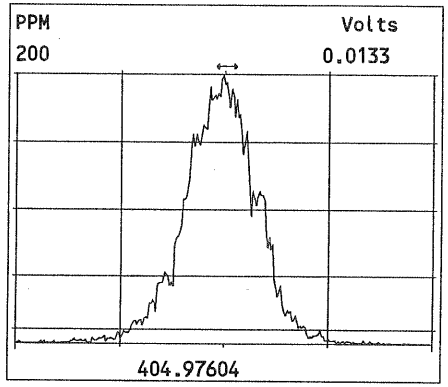


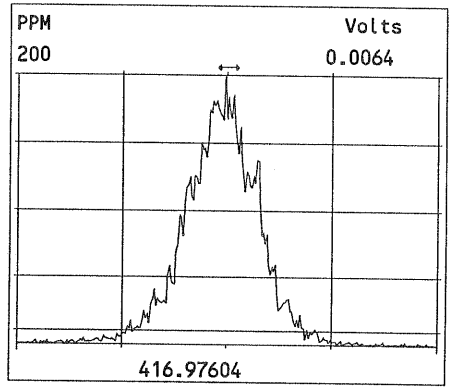




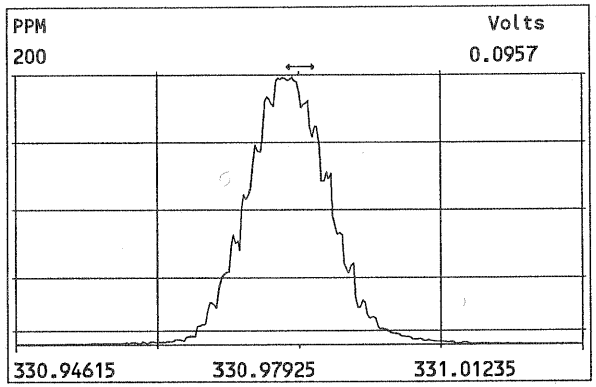


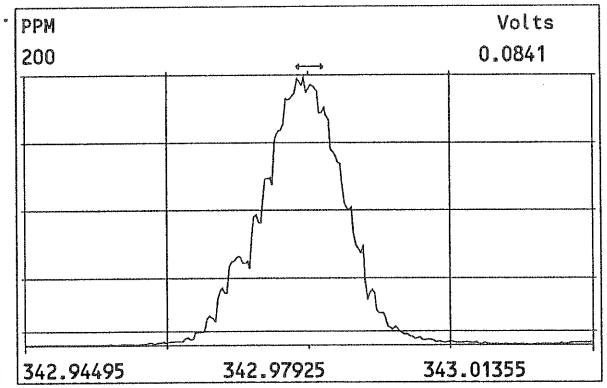


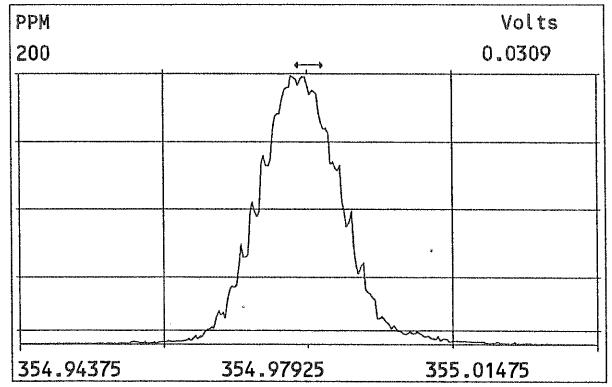


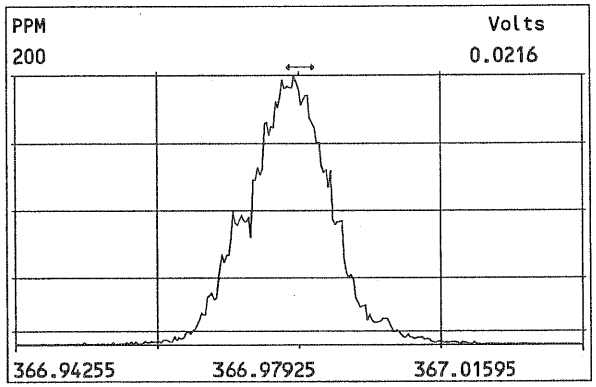


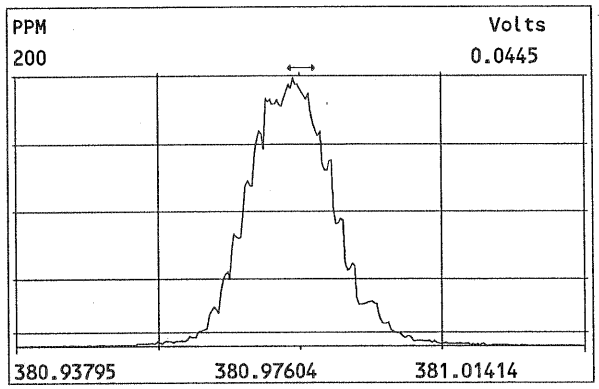
Peak Locate Examination:12-AUG-2010:09:41 File:11AUG10M_RES_CHECK
Experiment:PCDD Function:2 Reference:PFK

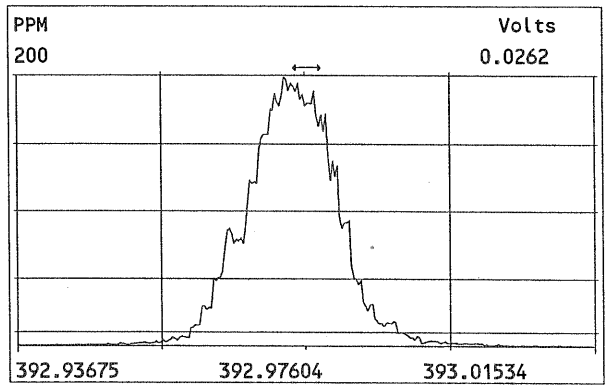


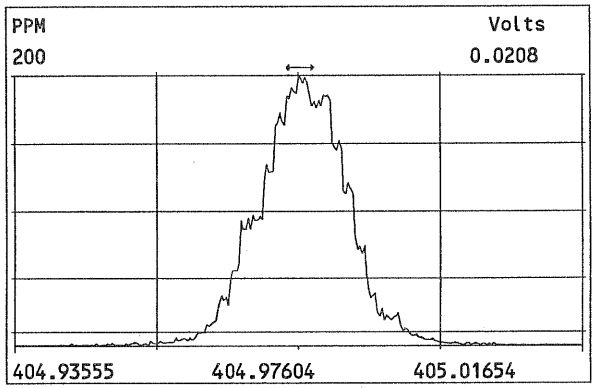


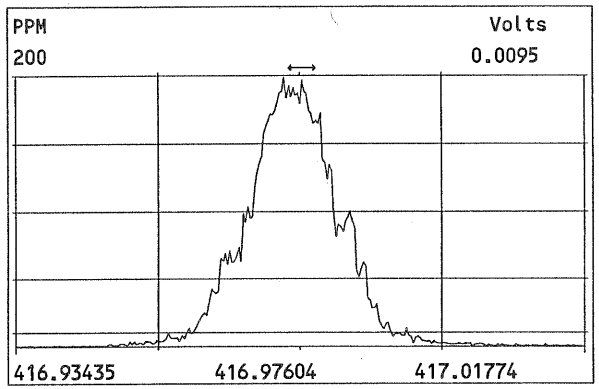




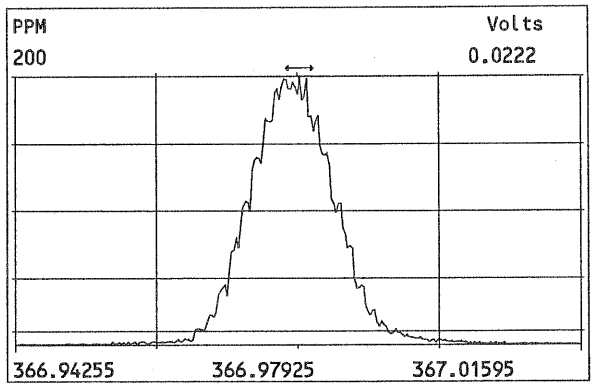


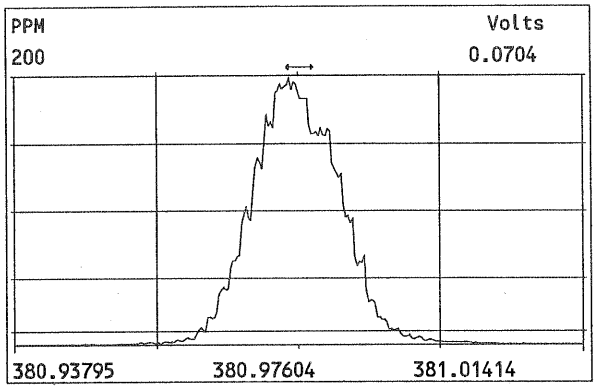


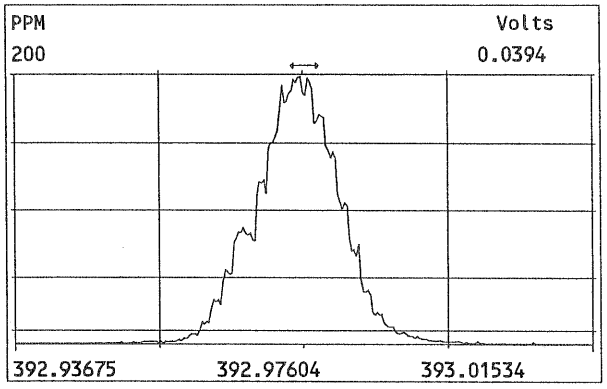


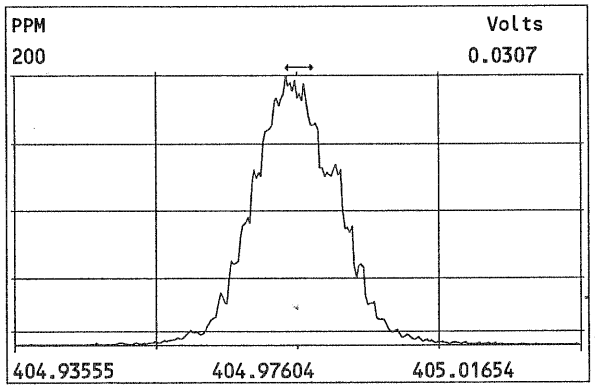


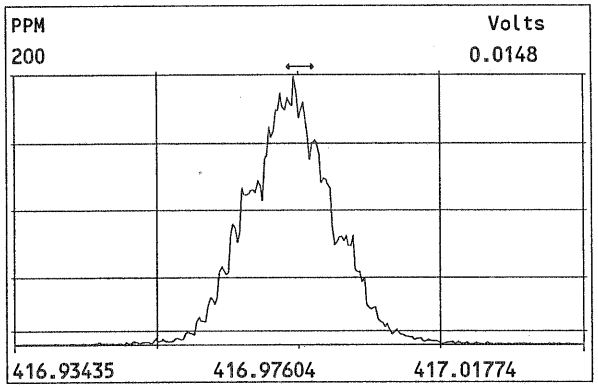
Peak Locate Examination:12-AUG-2010:09:41 File:11AUG10M_RES_CHECK
Experiment:PCDD Function:3 Reference:PFK

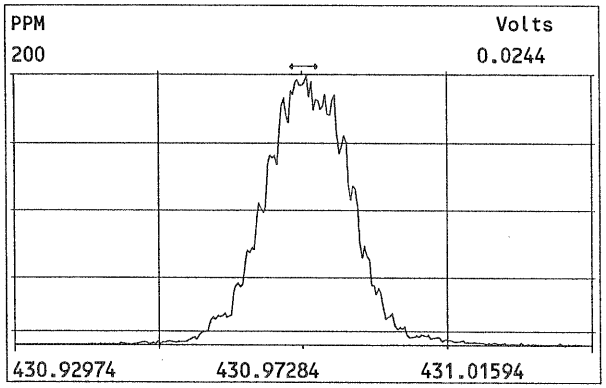


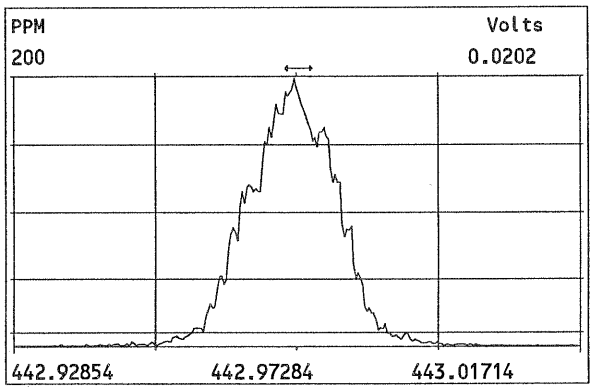


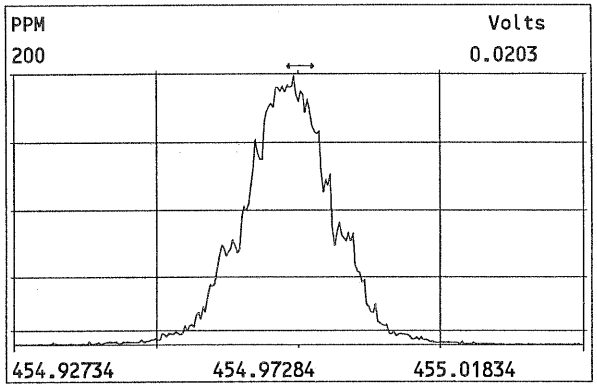




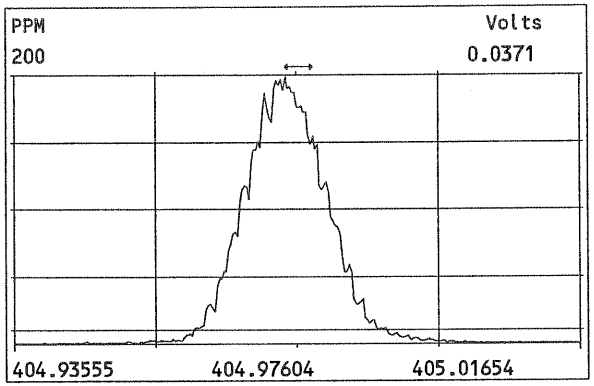


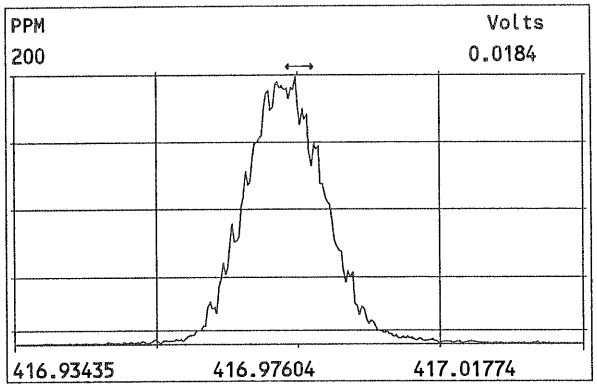


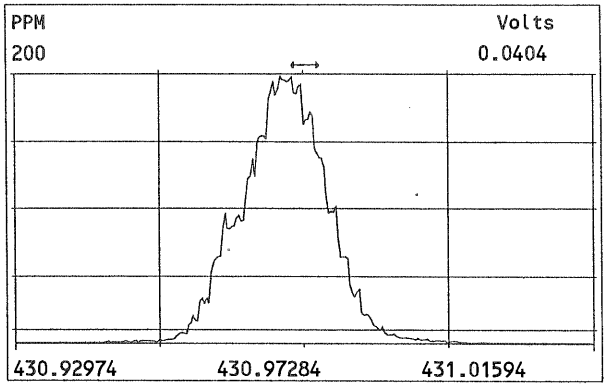


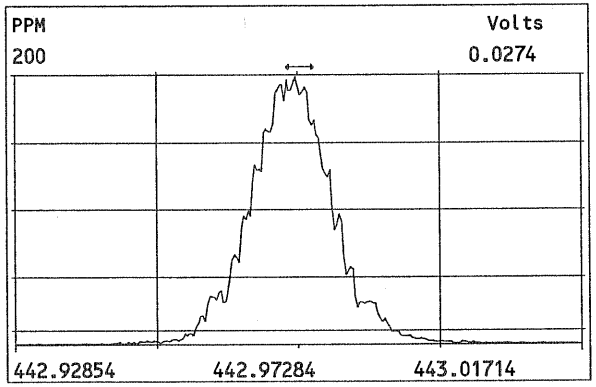


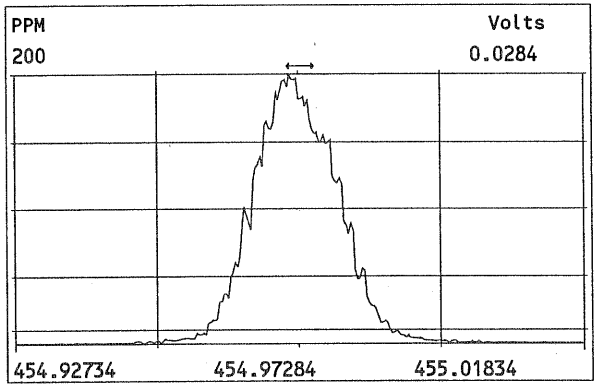
Peak Locate Examination:12-AUG-2010:09:42 File:11AUG10M_RES_CHECK
Experiment:PCDD Function:4 Reference:PFK

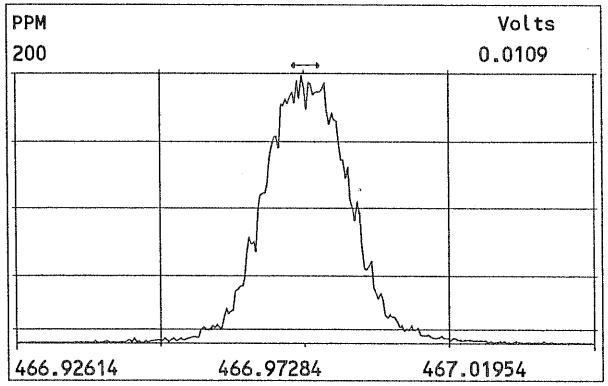


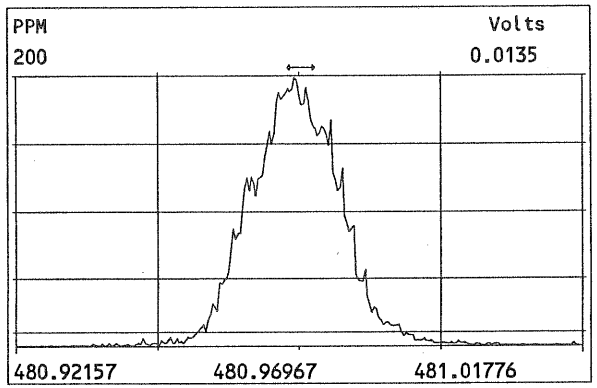




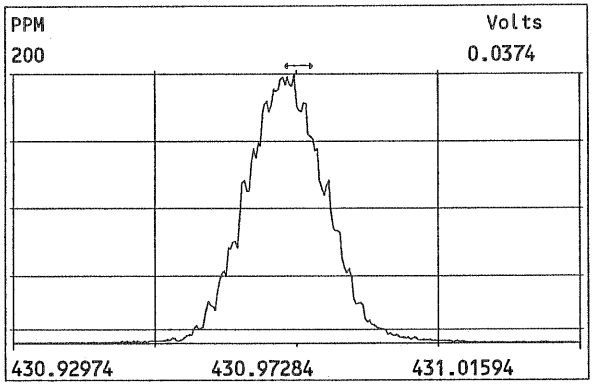


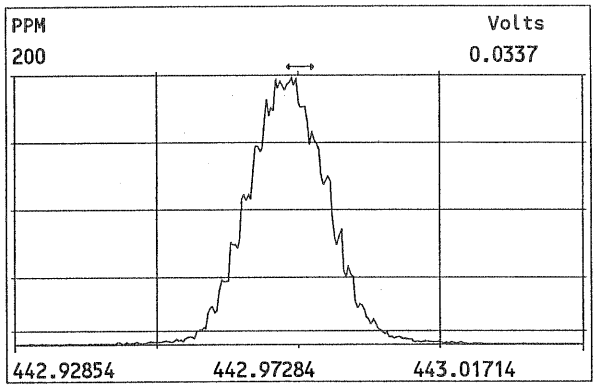


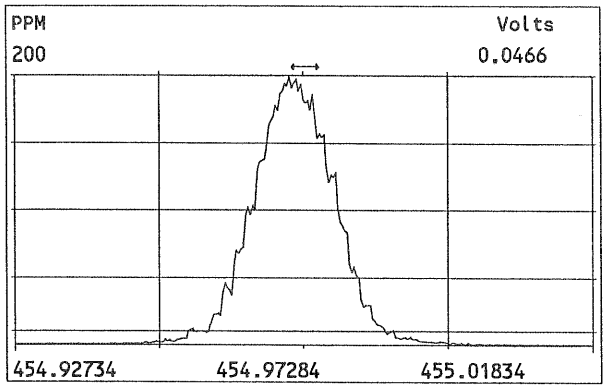


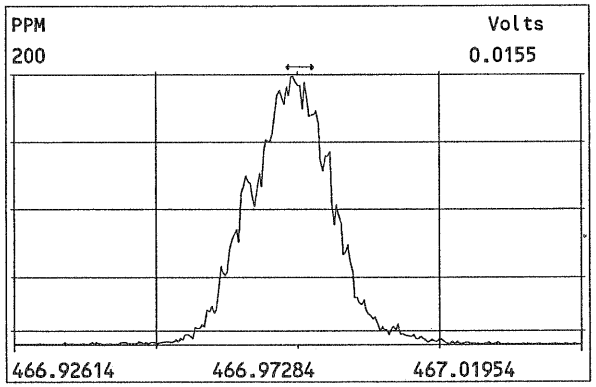


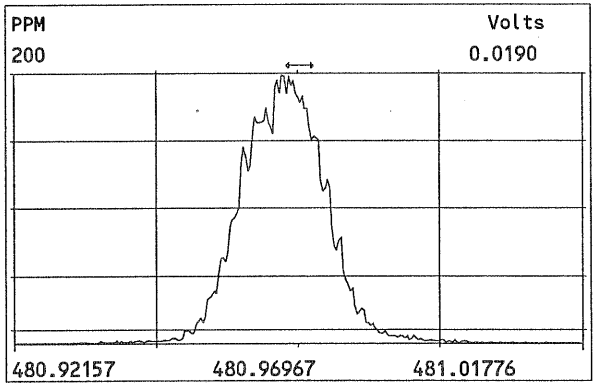
Peak Locate Examination:12-AUG-2010:09:42 File:11AUG10M_RES_CHECK
Experiment:PCDD Function:5 Reference:PFK

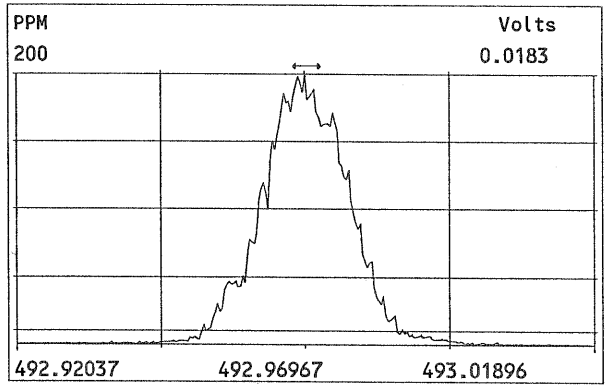


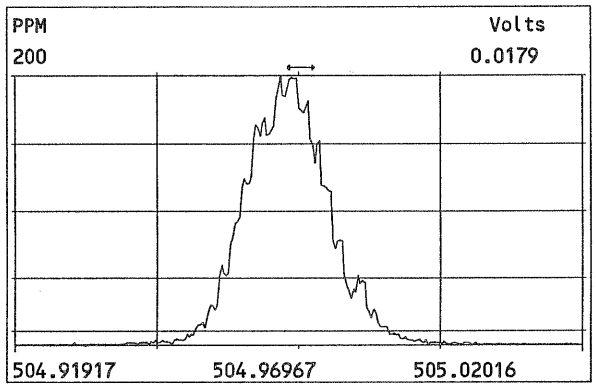


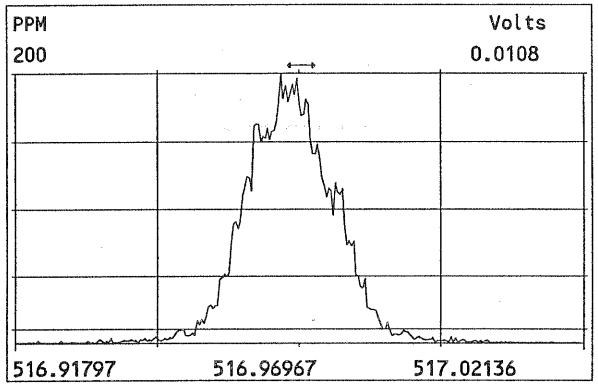












USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 11AUG10M Sam:26 Analysis Date: 12-AUG-10 08:39:32

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	0.76	0.65-0.89	y	10.9	7.80 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	1.58	1.32-1.78	y	52.5	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.39	1.05-1.43	y	56.5	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.37	1.05-1.43	y	57.4	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.40	1.05-1.43	y	58.4	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.01	0.88-1.20	y	54.1	43.0 - 58.0
OCDD	M+2/M+4	1.00	0.76-1.02	y	114	79.0 - 126
2,3,7,8-TCDF	M/M+2	0.69	0.65-0.89	y	10.3	8.40 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.49	1.32-1.78	y	53.5	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.48	1.32-1.78	y	52.3	41.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	y	48.3	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	50.2	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	49.7	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.24	1.05-1.43	y	49.3	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.07	0.88-1.20	y	50.2	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.08	0.88-1.20	y	52.3	43.0 - 58.0
OCDF	M+2/M+4	0.88	0.76-1.02	y	99.8	63.0 - 159

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

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

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

Analyst: _____ Date: 8/12/10

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 11AUG10M Sam:26 Analysis Date: 12-AUG-10 08:39:32

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.83	0.65-0.89	y	102	82.0 - 121
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.77	1.32-1.78	y	108	62.0 - 160
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	98.4	85.0 - 117
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	85.4	85.0 - 118
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	y	110	72.0 - 138
13C-OCDD	M+2/M+4	0.94	0.76-1.02	y	223	96.0 - 415
13C-2,3,7,8-TCDF	M/M+2	0.86	0.65-0.89	y	104	71.0 - 140
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.66	1.32-1.78	y	92.5	76.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.68	1.32-1.78	y	99.3	77.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	124	76.0 - 131
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	113	70.0 - 143
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	y	121	73.0 - 137
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	y	126	74.0 - 135
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	y	115	78.0 - 129
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	y	120	77.0 - 129
13C-OCDF	M+2/M+4	0.97	0.76-1.02	y	246	96.0 - 415
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					9.60	7.80 - 12.8

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

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

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

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

Analyst: _____ Date: 8/12/10

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: FAL3 Initial Calibration Date: 5/12/10

RT Window Data Filename: 11AUG10M Sam:26 Analysis Date: 12-AUG-10 Time: 08:39:32

DB-5 IS Data Filename: 11AUG10M Sam:26 Analysis Date: 12-AUG-10 Time: 08:39:32

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

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:23	1,3,6,8-TCDF (F)	23:02
1,2,8,9-TCDD (L)	28:20	1,2,8,9-TCDF (L)	28:33
1,2,4,7,9-PeCDD (F)	30:13	1,3,4,6,8-PeCDF (F)	28:25
1,2,3,8,9-PeCDD (L)	33:47	1,2,3,8,9-PeCDF (L)	34:12
1,2,4,6,7,9-HxCDD (F)	36:07	1,2,3,4,6,8-HxCDF (F)	35:13
1,2,3,7,8,9-HxCDD (L)	39:11	1,2,3,7,8,9-HxCDF (L)	39:45
1,2,3,4,6,7,9-HpCDD (F)	42:46	1,2,3,4,6,7,8-HpCDF (F)	42:15
1,2,3,4,6,7,8-HpCDD (L)	44:10	1,2,3,4,7,8,9-HpCDF (L)	45:05

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

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

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

Analyst: [signature] Date: 8/12/10

USEPA - ITD

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 12-AUG-10 08:39:32 CS3 or VER Data Filename: 11AUG10M Sam:26

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	1.000	0.999-1.002
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	0.999-1.002
LABELED COMPOUNDS			
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989-1.052
13C-2,3,7,8-TCDD		1.022	0.976-1.043
13C-2,3,7,8-TCDF		0.994	0.923-1.103
13C-1,2,3,7,8-PeCDD		1.239	1.000-1.567
13C-1,2,3,7,8-PeCDF		1.174	0.923-1.203
13C-2,3,4,7,8-PeCDF		1.223	0.923-1.303

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

Analyst: _____ Date: 8/12/10

USEPA - ITD

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 12-AUG-10 08:39:32 CS3 or VER Data Filename: 11AUG10M Sam:26

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.001	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.984	0.977-1.000
13C-1,2,3,6,7,8-HxCDD		0.989	0.981-1.003
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975
13C-2,3,4,6,7,8-HxCDF		0.978	0.959-1.021
13C-1,2,3,7,8,9-HxCDF		1.015	0.977-1.047
13C-1,2,3,4,6,7,8-HpCDD		1.128	1.086-1.130
13C-1,2,3,4,6,7,8-HpCDF		1.079	1.043-1.085
13C-1,2,3,4,7,8,9-HpCDF		1.151	1.057-1.154
13C-OCDD		1.269	1.032-1.311
13C-OCDF		1.279	1.000-1.311

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

Analyst: _____ Date: 8/12/10

FAL ID: ST081110M3 Filename: 11AUG10M Sam:26 Acquired: 12-AUG-10 08:39:32 ICal: PCDDFAL3-5-12-10
Client ID: 1613 CS3 090918J ConCal: ST081110M2 EndCal: ST081110M3
Results: 6278 GC Column: DB5 Amount: 1.000 NATO 1989 Tox: 106
WHO 1998 Tox: 132 WHO 2005 Tox: 120

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	1.31e+06	0.76 y	27:23	1.04	10.9		2.50	-	-	*
1,2,3,7,8-PeCDD	5.83e+06	1.58 y	33:11	1.05	52.5		2.50	-	-	*
1,2,3,4,7,8-HxCDD	5.62e+06	1.39 y	38:34	1.30	56.5		2.50	-	-	*
1,2,3,6,7,8-HxCDD	5.13e+06	1.37 y	38:45	1.28	57.4		2.50	-	-	*
1,2,3,7,8,9-HxCDD	5.35e+06	1.40 y	39:11	1.25	58.4		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	6.09e+06	1.01 y	44:10	1.35	54.1		2.50	-	-	*
OCDD	8.26e+06	1.00 y	49:42	1.25	114		2.50	-	-	*
2,3,7,8-TCDF	3.35e+06	0.69 y	26:39	1.62	10.3		2.50	-	-	*
1,2,3,7,8-PeCDF	8.17e+06	1.49 y	31:28	0.92	53.5		2.50	-	-	*
2,3,4,7,8-PeCDF	8.22e+06	1.48 y	32:47	0.94	52.3		2.50	-	-	*
1,2,3,4,7,8-HxCDF	7.95e+06	1.26 y	37:10	0.93	48.3		2.50	-	-	*
1,2,3,6,7,8-HxCDF	8.44e+06	1.24 y	37:22	0.84	50.2		2.50	-	-	*
2,3,4,6,7,8-HxCDF	8.02e+06	1.23 y	38:19	0.90	49.7		2.50	-	-	*
1,2,3,7,8,9-HxCDF	7.49e+06	1.24 y	39:45	0.98	49.3		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	7.19e+06	1.07 y	42:15	1.38	50.2		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	6.81e+06	1.08 y	45:05	1.62	52.3		2.50	-	-	*
OCDF	8.87e+06	0.88 y	50:05	0.74	99.8		2.50	-	-	*
										Rec
13C-2,3,7,8-TCDD	1.16e+07	0.83 y	27:22	0.93	102					102
13C-1,2,3,7,8-PeCDD	1.06e+07	1.77 y	33:11	0.81	108					108
13C-1,2,3,4,7,8-HxCDD	7.66e+06	1.24 y	38:32	0.95	98.4					98.4
13C-1,2,3,6,7,8-HxCDD	7.00e+06	1.21 y	38:43	1.00	85.4					85.4
13C-1,2,3,4,6,7,8-HpCDD	8.30e+06	1.02 y	44:09	0.92	110					110
13C-OCDD	1.16e+07	0.94 y	49:42	0.63	223					112
13C-2,3,7,8-TCDF	2.02e+07	0.86 y	26:38	0.87	104					104
13C-1,2,3,7,8-PeCDF	1.66e+07	1.66 y	31:27	0.81	92.5					92.5
13C-2,3,4,7,8-PeCDF	1.66e+07	1.68 y	32:46	0.75	99.3					99.3
13C-1,2,3,4,7,8-HxCDF	1.77e+07	0.52 y	37:09	1.74	124					124
13C-1,2,3,6,7,8-HxCDF	2.01e+07	0.52 y	37:21	2.17	113					113
13C-2,3,4,6,7,8-HxCDF	1.80e+07	0.54 y	38:17	1.82	121					121
13C-1,2,3,7,8,9-HxCDF	1.54e+07	0.53 y	39:43	1.49	126					126
13C-1,2,3,4,6,7,8-HpCDF	1.04e+07	0.45 y	42:15	1.10	115					115
13C-1,2,3,4,7,8,9-HpCDF	8.02e+06	0.44 y	45:03	0.81	120					120
13C-OCDF	2.40e+07	0.97 y	50:04	1.19	246					123
37Cl-2,3,7,8-TCDD	1.09e+06		27:23	0.93	9.60					96.0
13C-1,2,3,4-TCDD	1.22e+07	0.85 y	26:47	-	36.0					
13C-1,2,3,4-TCDF	2.23e+07	0.87 y	25:32	-	41.9					
13C-1,2,3,7,8,9-HxCDD	8.23e+06	1.22 y	39:09	-	38.2					

						Fac	Noise-1	Noise-2	DL		#Hom
Total Tetra-Dioxins	7.11e+06		23:49	1.04	59.2	2.50	-	-	*		21
Total Penta-Dioxins	1.25e+07		30:13	1.05	112	2.50	-	-	*		13
Total Hexa-Dioxins	1.83e+07		36:07	1.27	196	2.50	-	-	*		21
Total Hepta-Dioxins	1.29e+07		42:14	1.35	114	2.50	-	-	*		18
Total Tetra-Furans	1.42e+07		23:02	1.62	43.6	2.50	-	-	*		17
1st Fn. Tot Penta-Furans	7.63e+06		28:25	0.93	49.3	2.50	-	-	*	PeCDF	1
Total Penta-Furans	2.41e+07		30:09	0.93	156	2.50	-	-	*	205	10
Total Hexa-Furans	3.70e+07		35:13	0.90	229	2.50	-	-	*		14
Total Hepta-Furans	1.42e+07		42:15	1.48	104	2.50	-	-	*		9

Analyst: _____ Date: 8/12/10

Frontier Analytical Laboratory - Acquisition Log

Run Name:11AUG10M Instrument: FAL3 GC: DB5 Experiment:PCDD

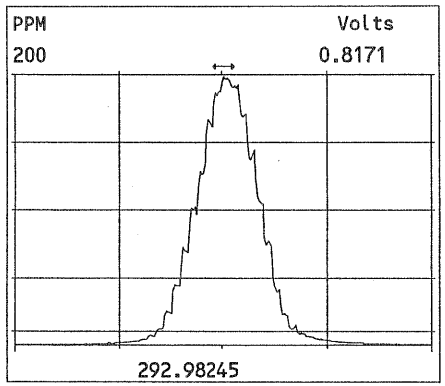
Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
11AUG10M	1	ST081110M1	1613 CS3 090918J	11-AUG-10 09:36:02	ST081110M1	ST081110M2	TC
11AUG10M	2	SB081110M1	Solvent Blank	11-AUG-10 10:31:20	ST081110M1	ST081110M2	TC
11AUG10M	3	2076-001-0001-MB	Method Blank	11-AUG-10 11:26:39	ST081110M1	ST081110M2	TC
11AUG10M	4	6273-010-0001-SA	PSB08-0.0-0.5-072810	11-AUG-10 12:22:02	ST081110M1	ST081110M2	TC
11AUG10M	5	6273-005-0002-MS	PSB06-0-0.5-072810	11-AUG-10 13:17:20	ST081110M1	ST081110M2	TC
11AUG10M	6	6273-005-0002-MSD	PSB06-0-0.5-072810	11-AUG-10 14:12:39	ST081110M1	ST081110M2	TC
11AUG10M	7	SB081110M2	Solvent Blank	11-AUG-10 15:07:58	ST081110M1	ST081110M2	TC
11AUG10M	8	6277-002-0001-SA	MW14-1.5-2-080210	11-AUG-10 16:03:20	ST081110M1	ST081110M2	TC
11AUG10M	9	6277-004-0001-SA	MW13-1.5-2-080210	11-AUG-10 16:58:43	ST081110M1	ST081110M2	TC
11AUG10M	10	6277-006-0001-SA	MW12-1.5-2-080210	11-AUG-10 17:54:06	ST081110M1	ST081110M2	TC
11AUG10M	11	6278-002-0001-SA	PSB22-1.5-2-072910	11-AUG-10 18:49:29	ST081110M1	ST081110M2	TC
11AUG10M	12	6278-004-0001-SA	PSB23-1.5-2-072910	11-AUG-10 19:44:53	ST081110M1	ST081110M2	TC
11AUG10M	13	6278-006-0001-SA	PSB24-1.5-2-072910	11-AUG-10 20:40:15	ST081110M1	ST081110M2	TC
11AUG10M	14	SB081110M3	Solvent Blank	11-AUG-10 21:35:38	ST081110M1	ST081110M2	TC
11AUG10M	15	SB081110M4	Solvent Blank	11-AUG-10 22:30:57	ST081110M1	ST081110M2	TC
11AUG10M	16	ST081110M2	1613 CS3 090918J	11-AUG-10 23:26:18	ST081110M2	ST081110M3	TC
11AUG10M	17	2077-001-0001-OPR	OPR	12-AUG-10 00:21:41	ST081110M2	ST081110M3	TC
11AUG10M	18	2077-001-0001-MB	Method Blank	12-AUG-10 01:17:00	ST081110M2	ST081110M3	TC
11AUG10M	19	6277-001-0001-SA	MW14-0-0.5-080210	12-AUG-10 02:12:19	ST081110M2	ST081110M3	TC
11AUG10M	20	6277-003-0001-SA	MW13-0-0.5-080210	12-AUG-10 03:07:36	ST081110M2	ST081110M3	TC
11AUG10M	21	6277-005-0001-SA	MW12-0-0.5-080210	12-AUG-10 04:02:55	ST081110M2	ST081110M3	TC
11AUG10M	22	6278-001-0001-SA	PSB22-0-0.5-072910	12-AUG-10 04:58:14	ST081110M2	ST081110M3	TC
11AUG10M	23	6278-003-0001-SA	PSB23-0-0.5-072910	12-AUG-10 05:53:33	ST081110M2	ST081110M3	TC
11AUG10M	24	6278-005-0001-SA	PSB24-0-0.5-072910	12-AUG-10 06:48:51	ST081110M2	ST081110M3	TC
11AUG10M	25	SB081110M5	Solvent Blank	12-AUG-10 07:44:14	ST081110M2	ST081110M3	TC
11AUG10M	26	ST081110M3	1613 CS3 090918J	12-AUG-10 08:39:32	ST081110M2	ST081110M3	TC

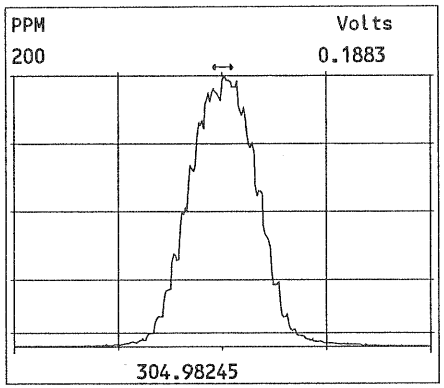
8/12/10

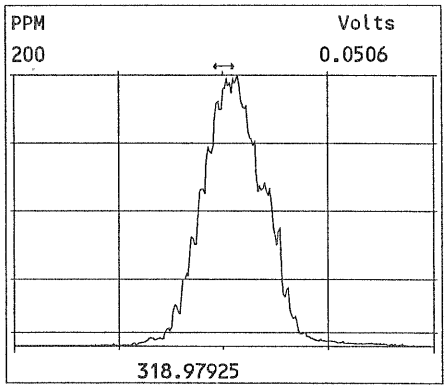
Data Backed Up:_____

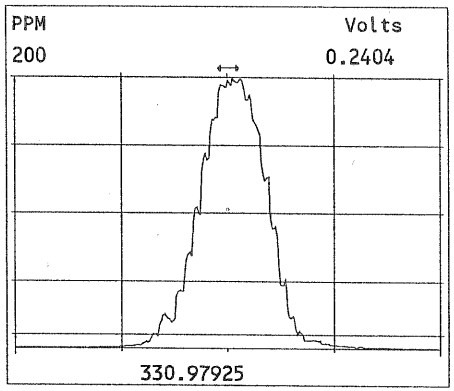
Date:_____

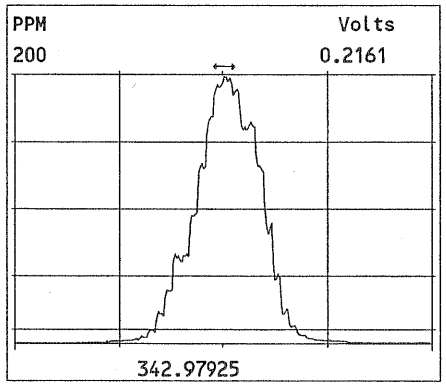
Peak Locate Examination:11-AUG-2010:09:34 File:11AUG10M
Experiment:PCDD Function:1 Reference:PFK

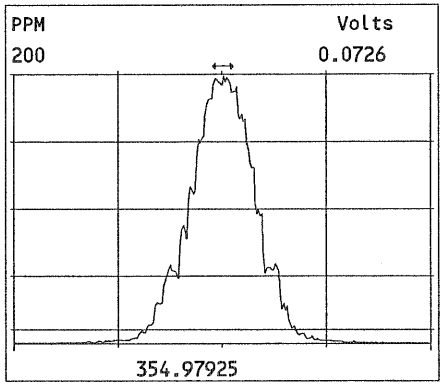


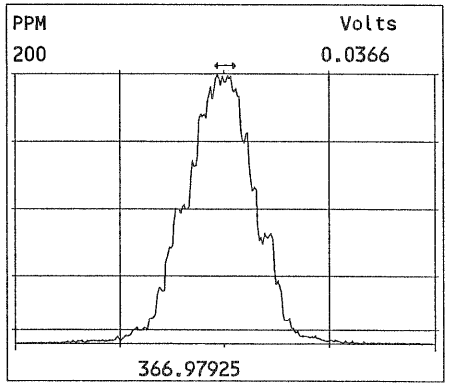


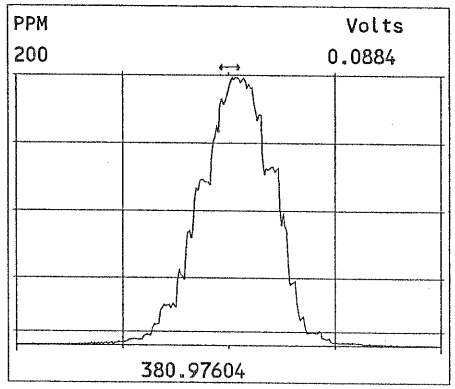


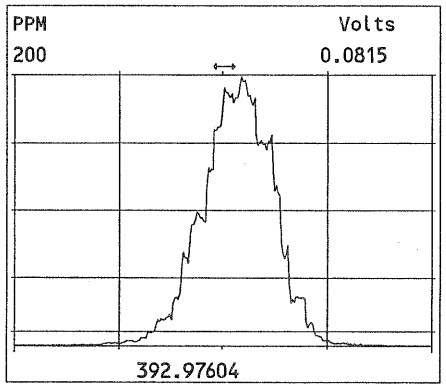


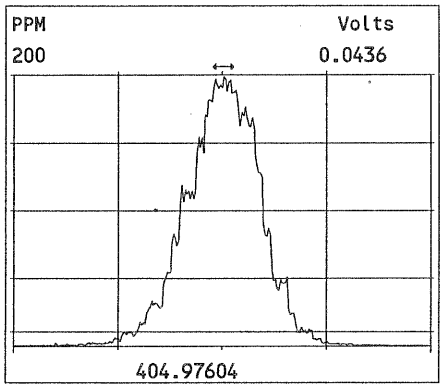


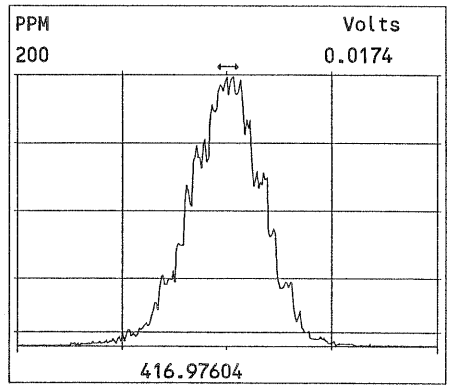




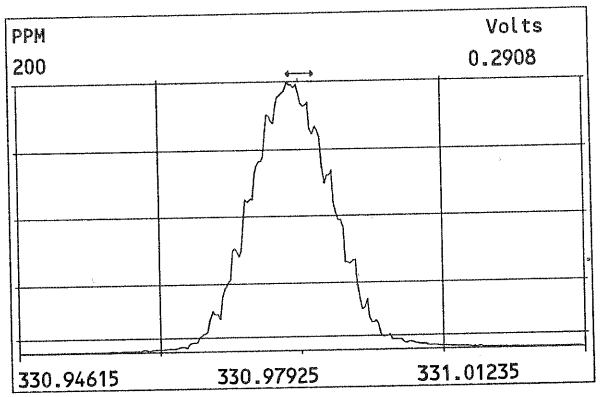


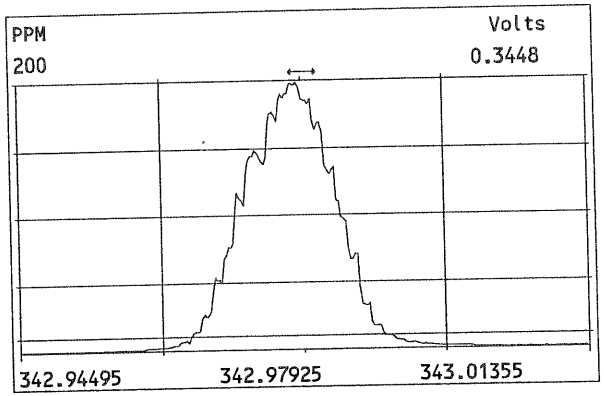


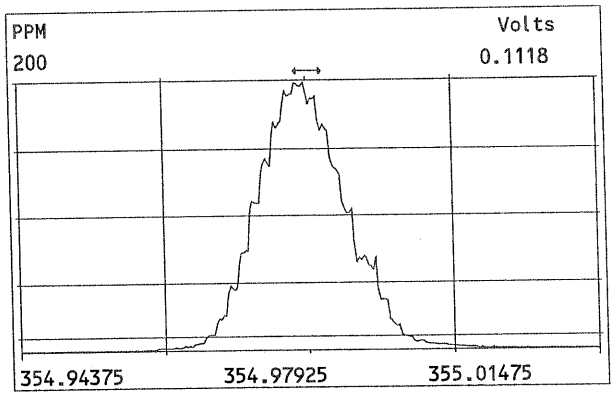


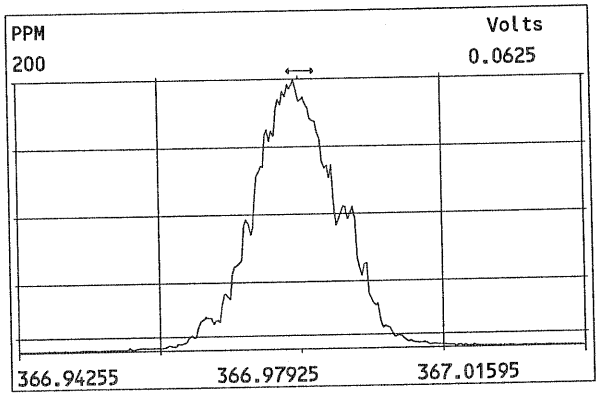


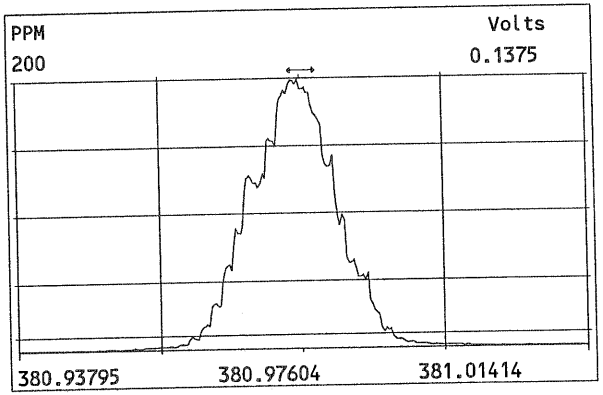
Peak Locate Examination:11-AUG-2010:09:34 File:11AUG10M
Experiment:PCDD Function:2 Reference:PFK

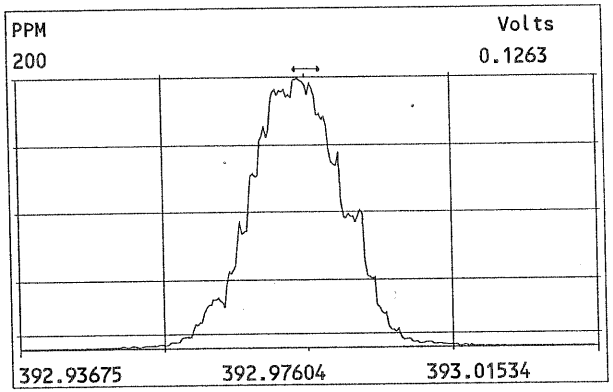


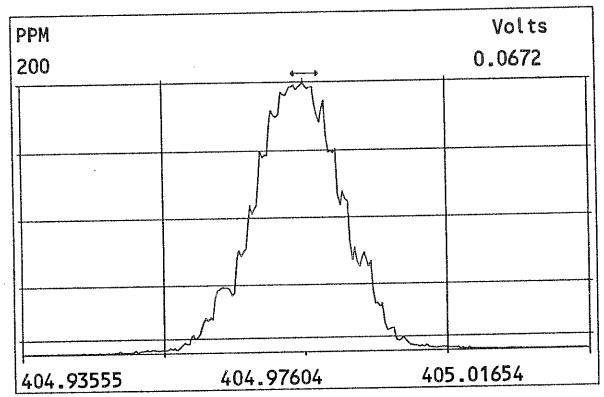


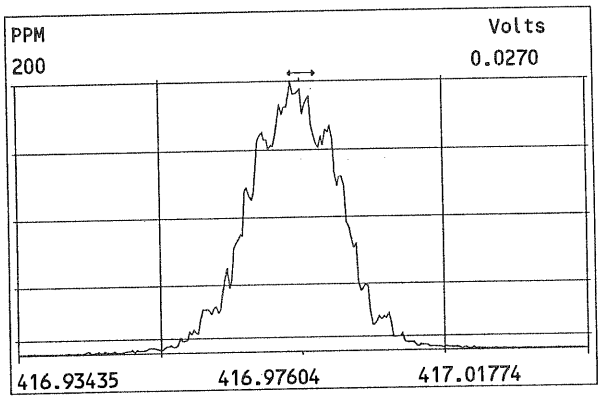




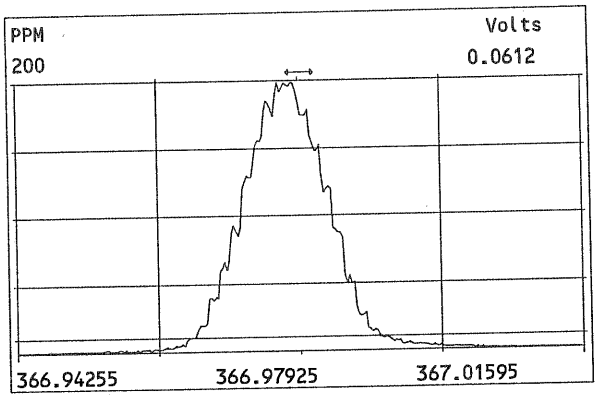


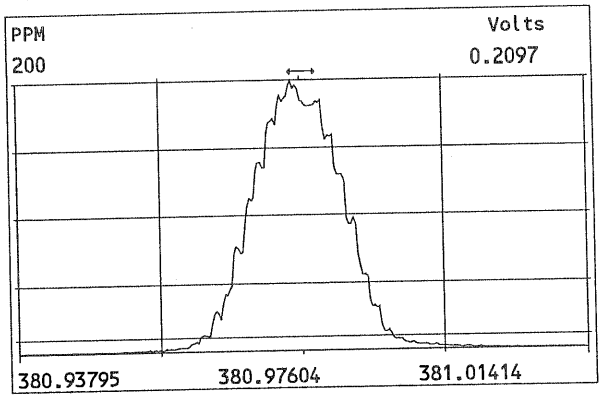


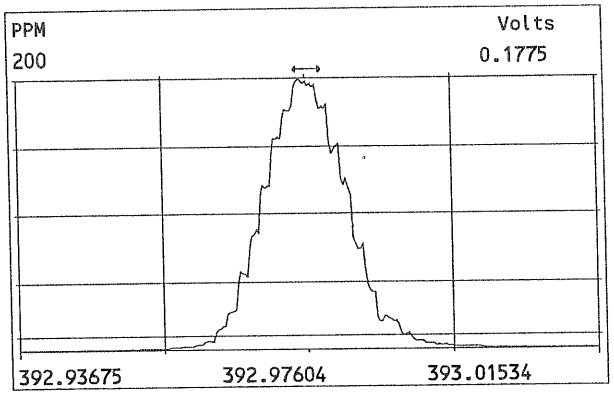


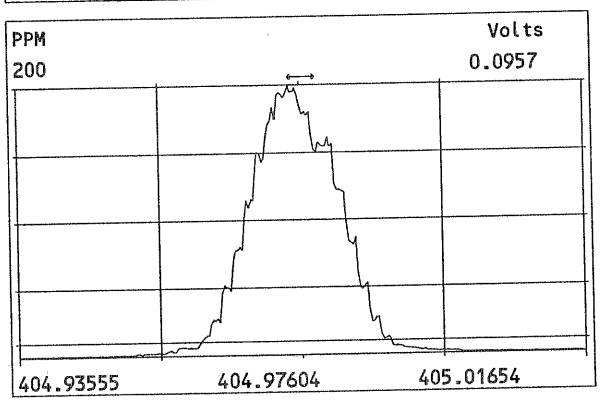


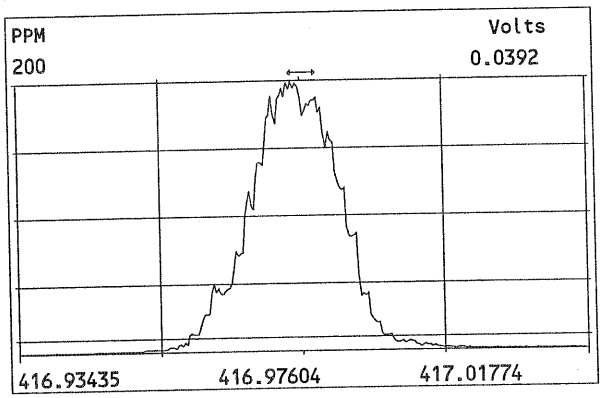
Peak Locate Examination:11-AUG-2010:09:35 File:11AUG10M
Experiment:PCDD Function:3 Reference:PFK

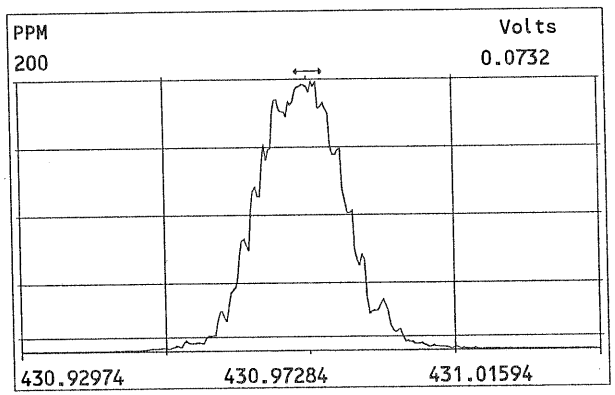


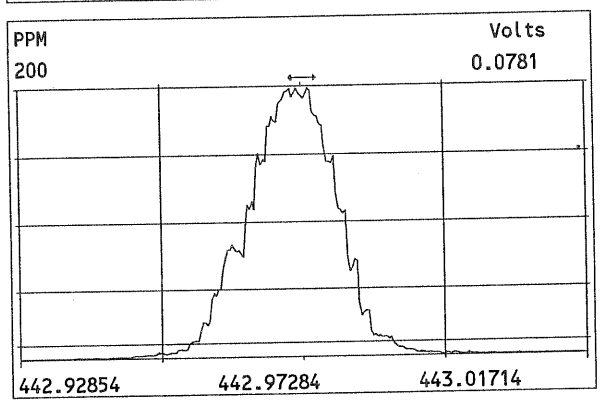


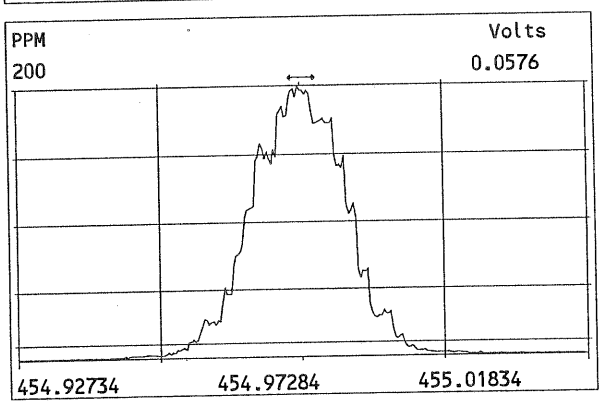




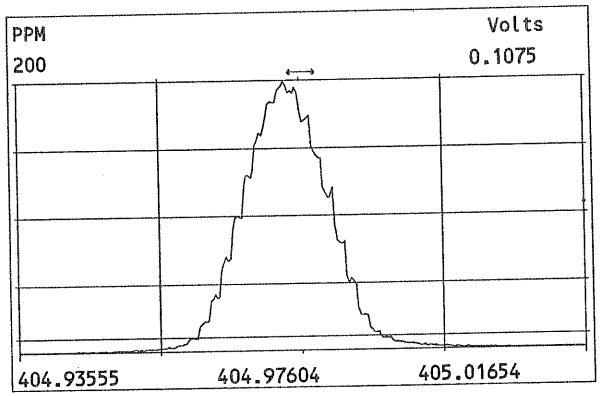


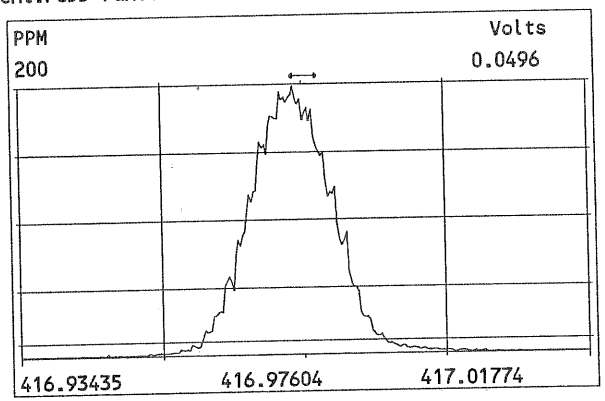


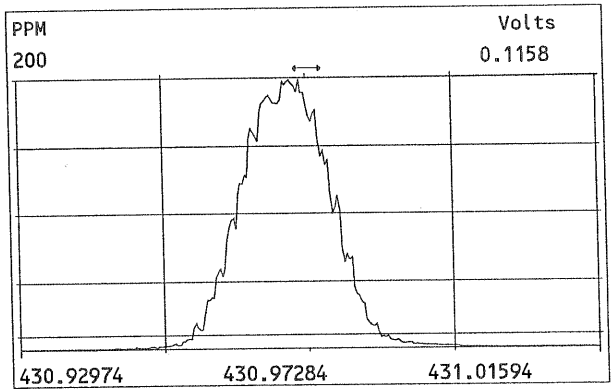


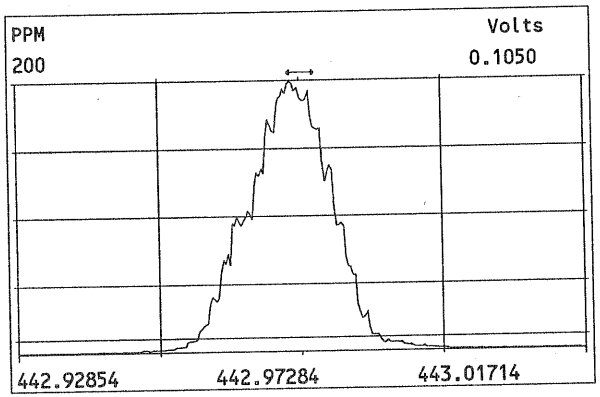


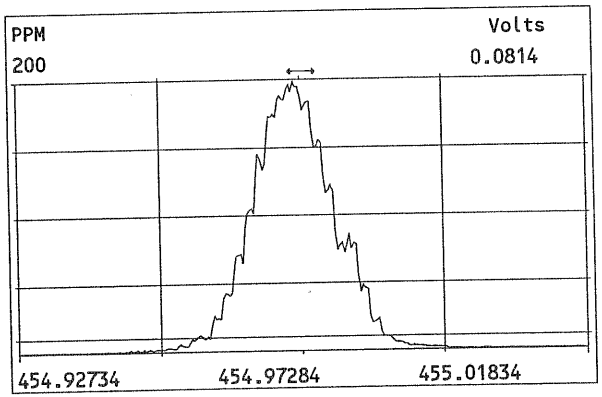
Peak Locate Examination:11-AUG-2010:09:35 File:11AUG10M
Experiment:PCDD Function:4 Reference:PFK

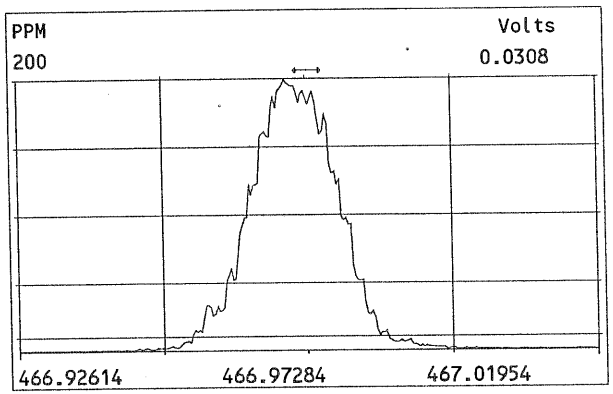


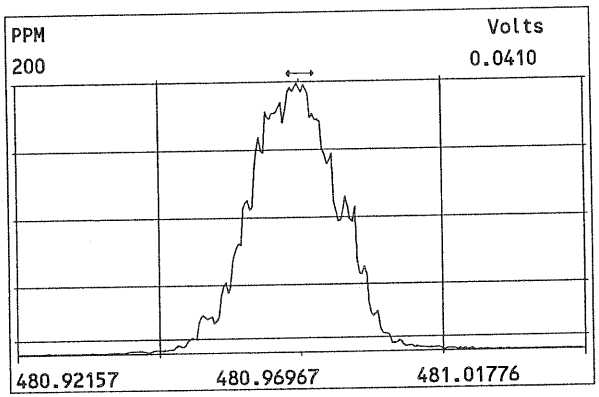




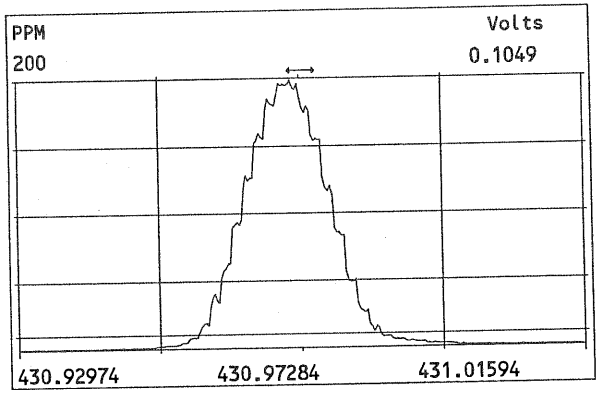


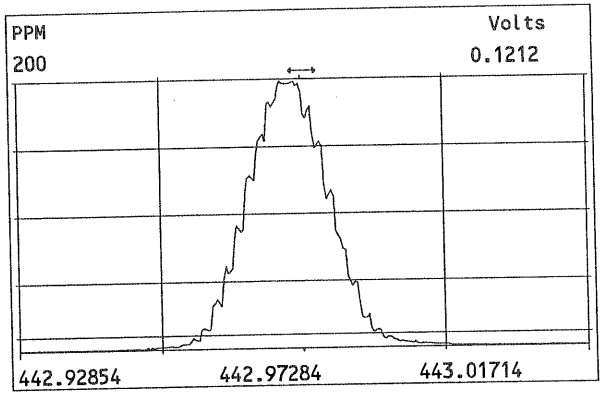


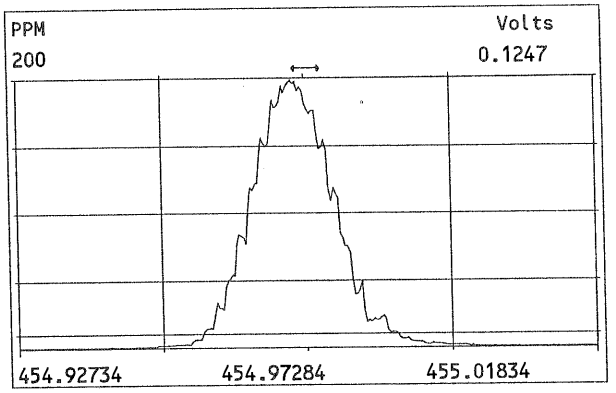


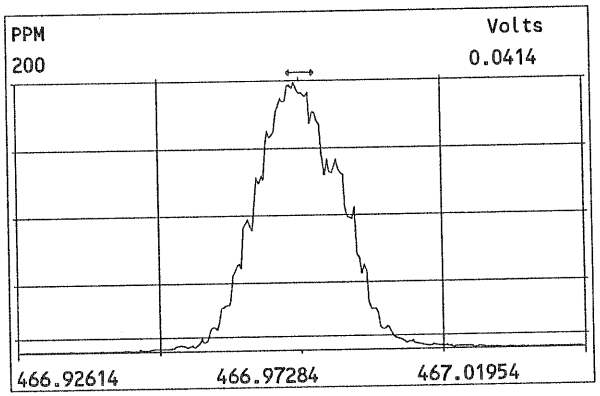


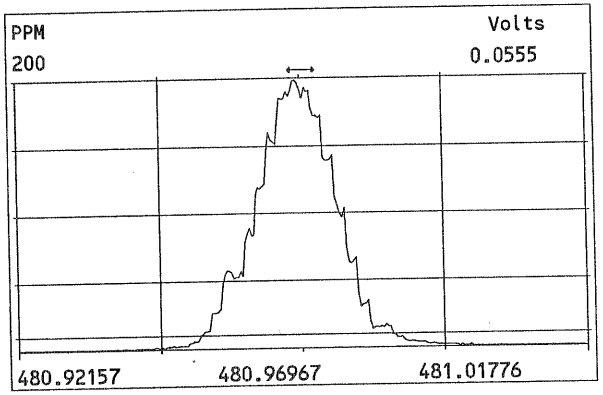
Peak Locate Examination:11-AUG-2010:09:35 File:11AUG10M
Experiment:PCDD Function:5 Reference:PFK

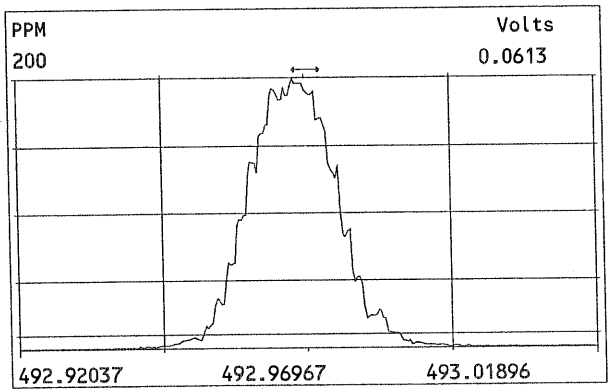


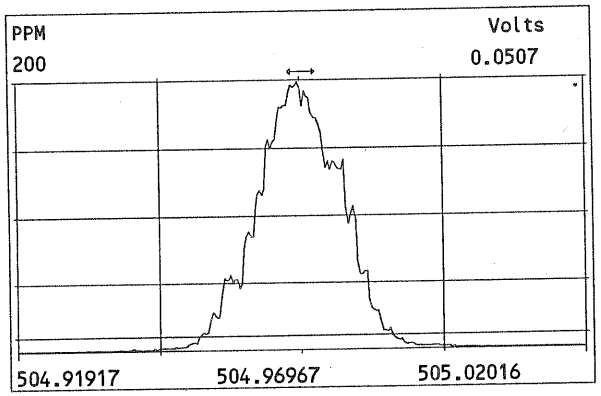


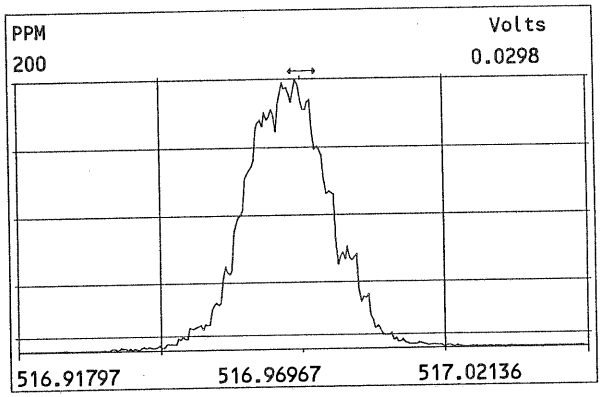




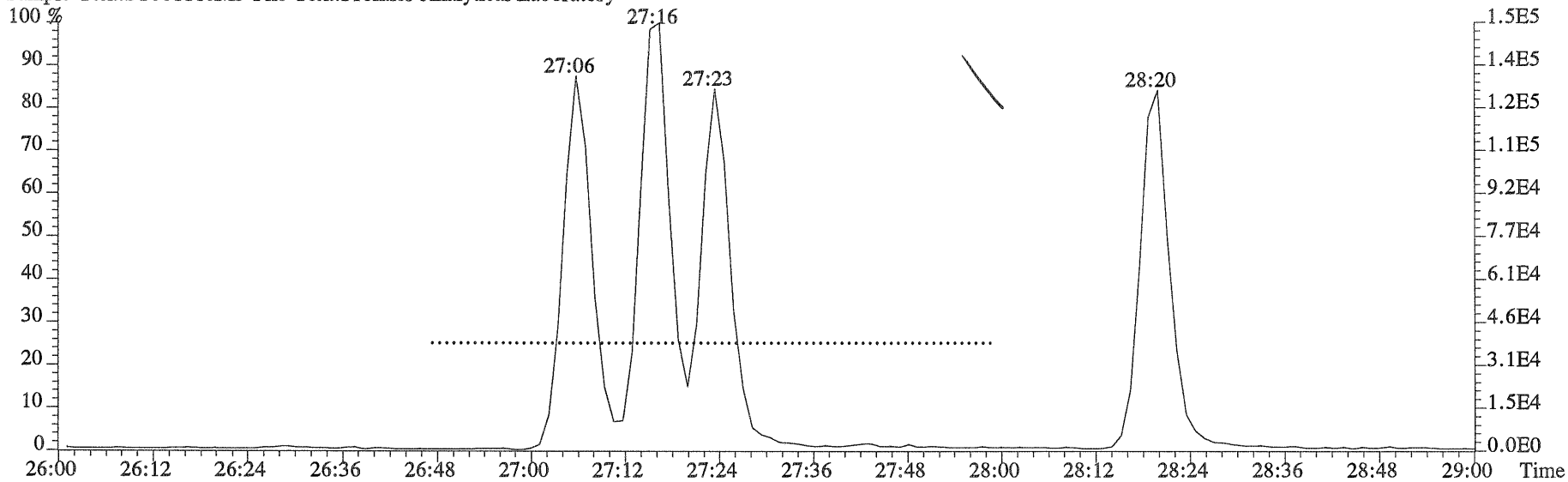




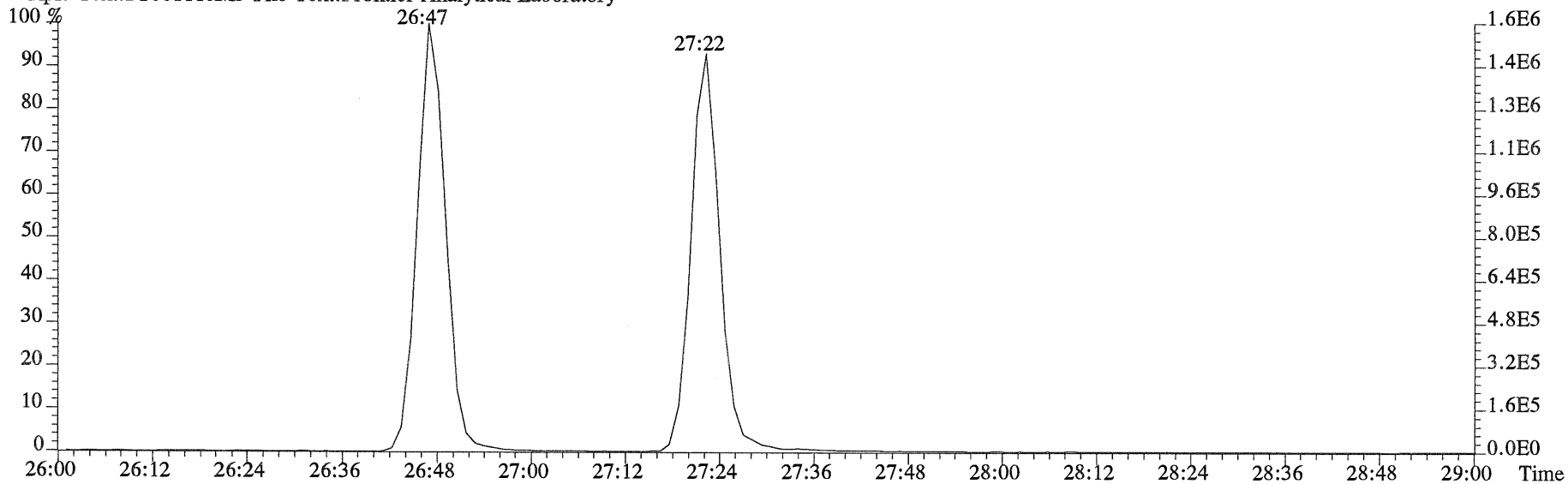




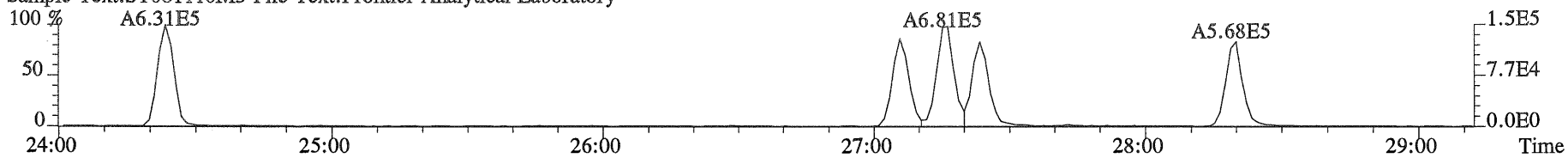
File:11AUG10M #1-357 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:26 Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



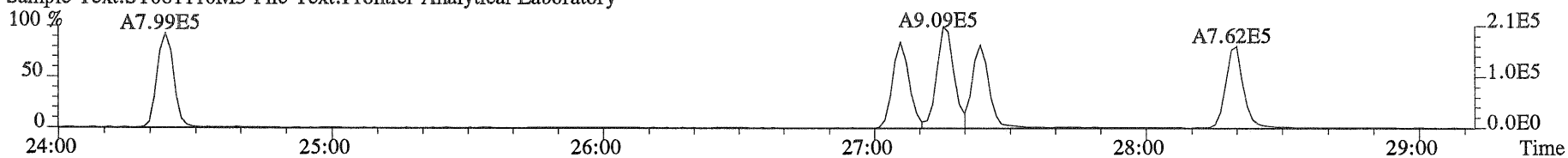
File:11AUG10M #1-357 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:26 Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



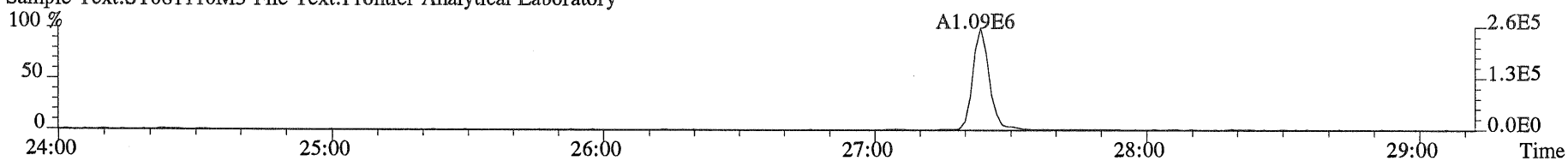
File:11AUG10M #1-357 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:26 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



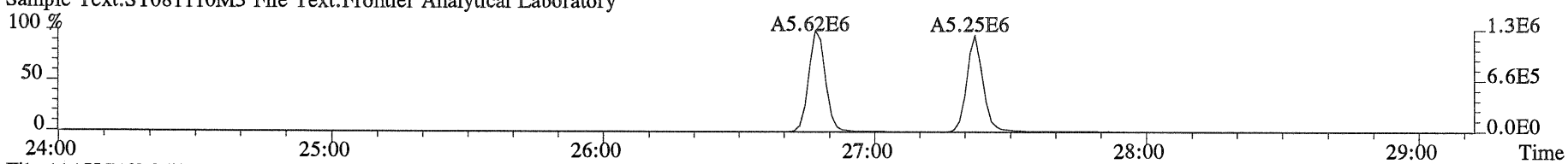
File:11AUG10M #1-357 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:26 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



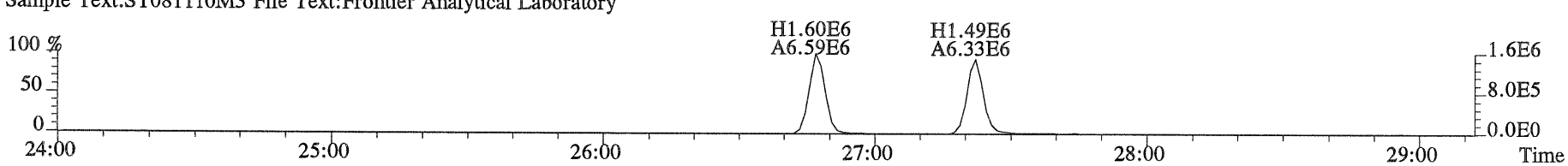
File:11AUG10M #1-357 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:26 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



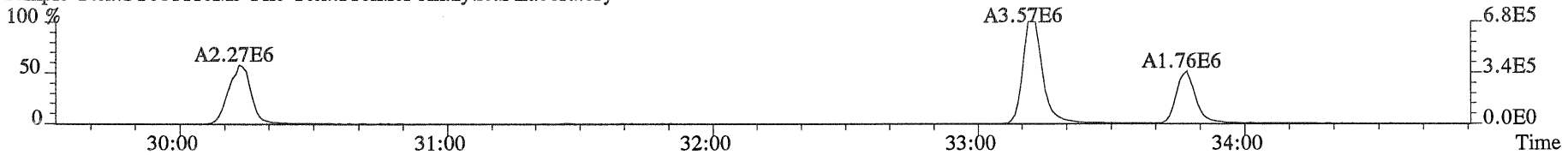
File:11AUG10M #1-357 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:26 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



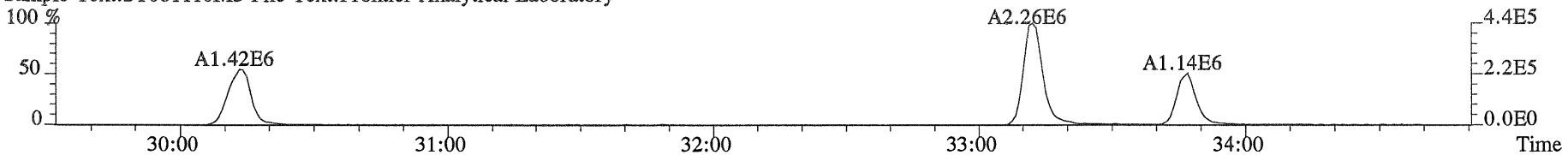
File:11AUG10M #1-357 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:26 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



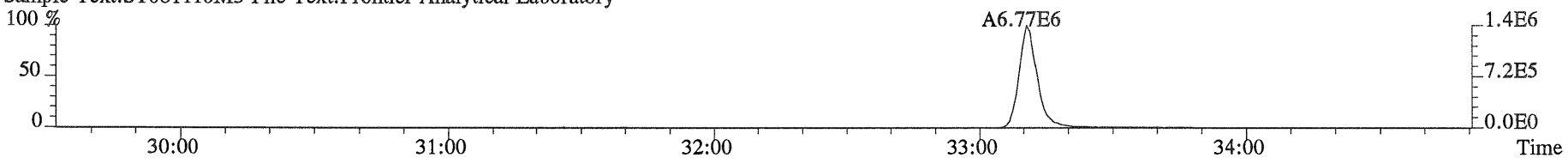
File:11AUG10M #1-412 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:26 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



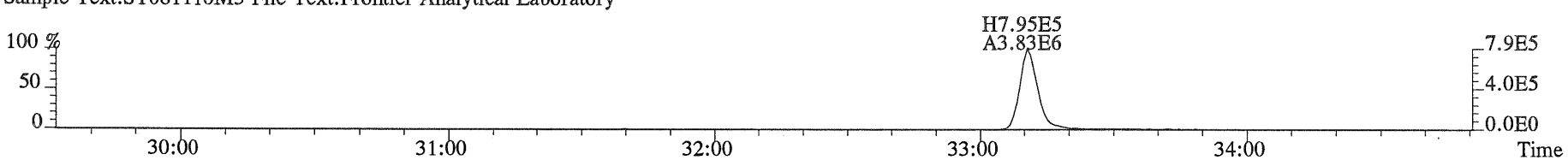
File:11AUG10M #1-412 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:26 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



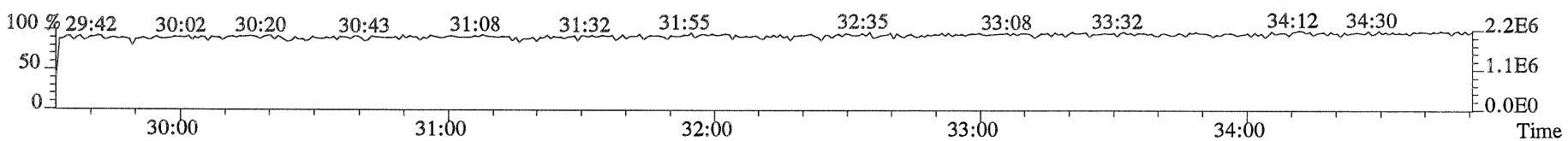
File:11AUG10M #1-412 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:26 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



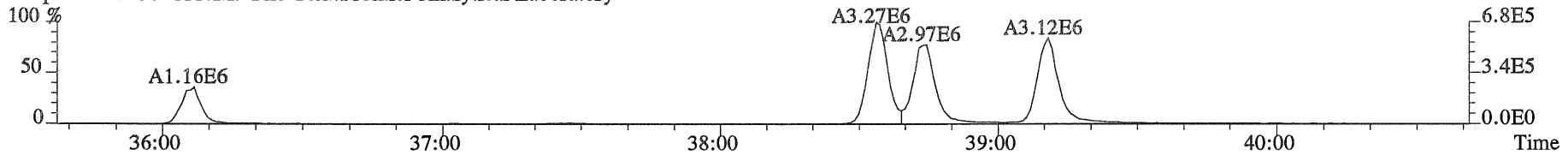
File:11AUG10M #1-412 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:26 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



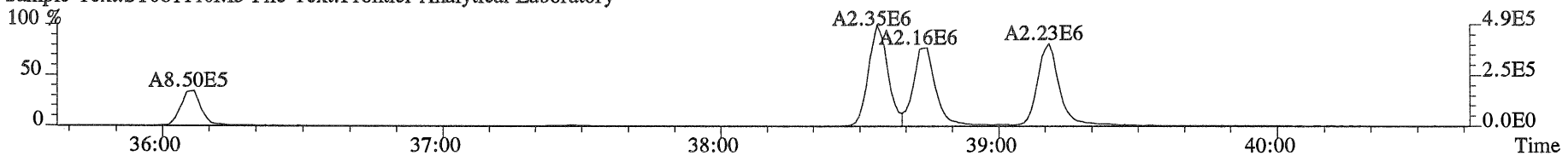
File:11AUG10M #1-412 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:26 F:2 Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



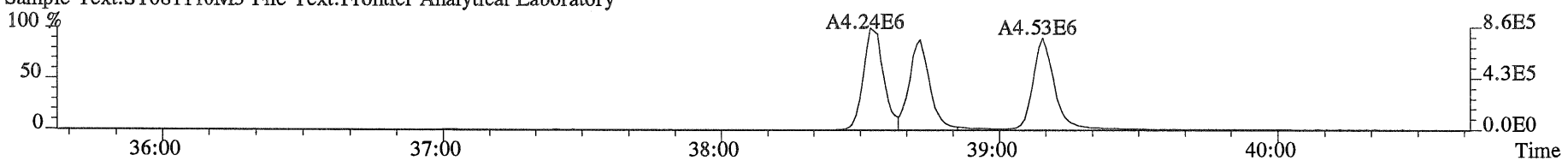
File:11AUG10M #1-476 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:26 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



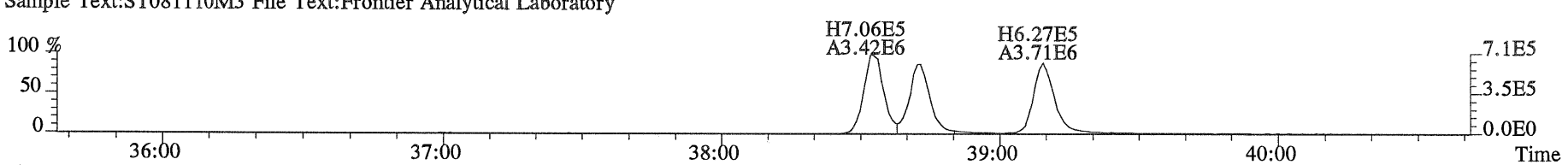
File:11AUG10M #1-476 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:26 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



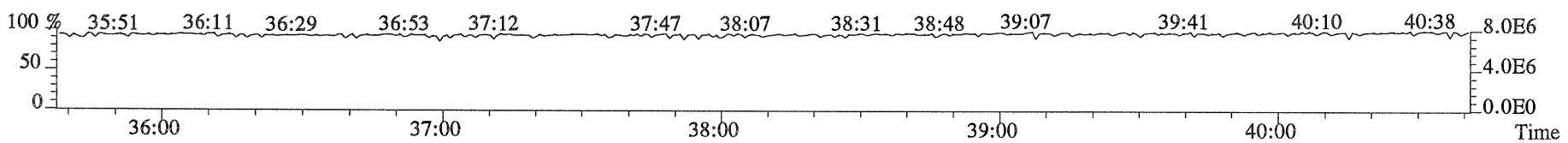
File:11AUG10M #1-476 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:26 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



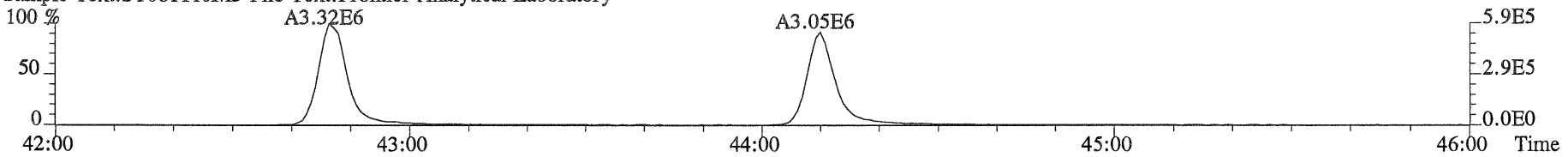
File:11AUG10M #1-476 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:26 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



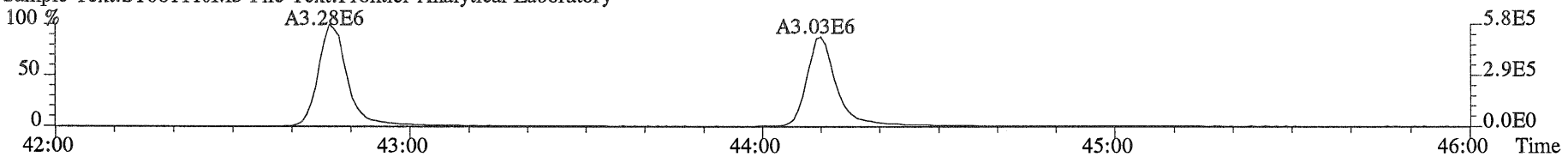
File:11AUG10M #1-476 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:26 F:3 Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



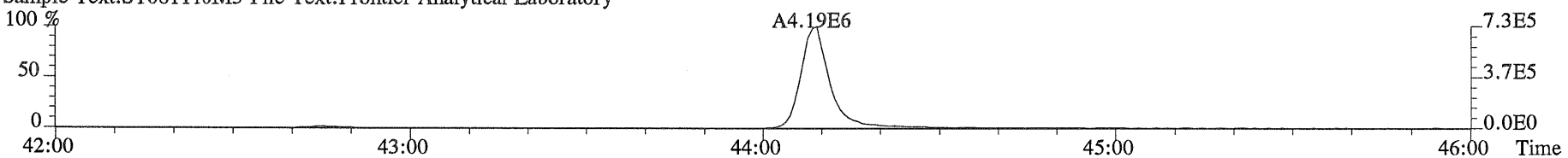
File:11AUG10M #1-542 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:26 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



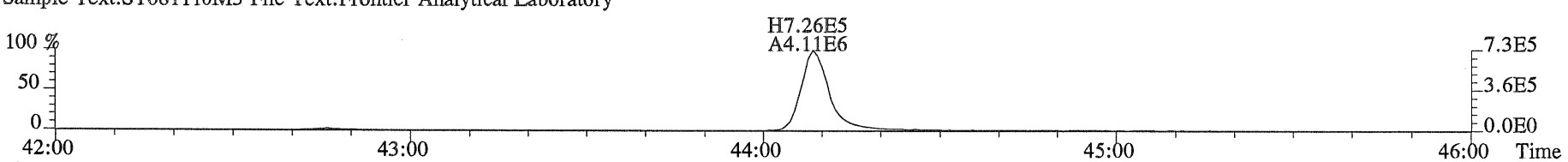
File:11AUG10M #1-542 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:26 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



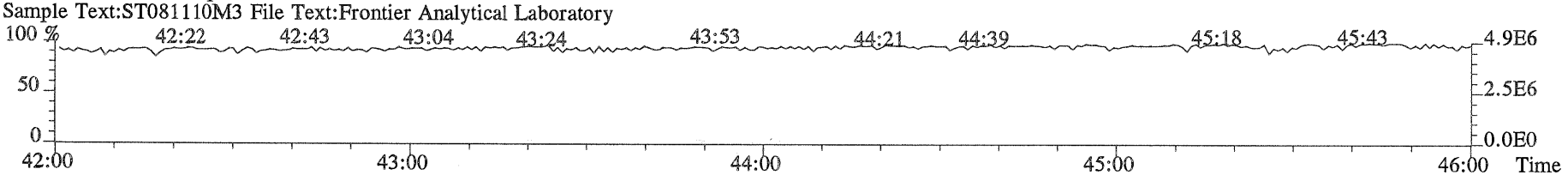
File:11AUG10M #1-542 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:26 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



File:11AUG10M #1-542 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:26 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory

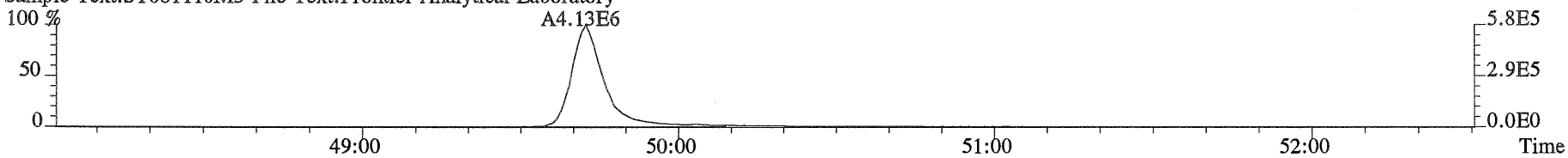


File:11AUG10M #1-542 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:26 F:4 Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory

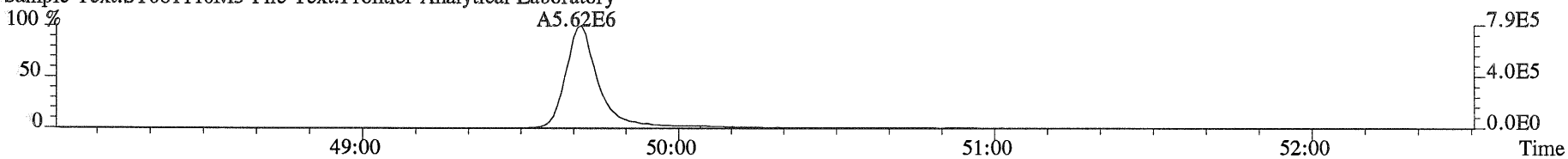


File:11AUG10M #1-347 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:26 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory

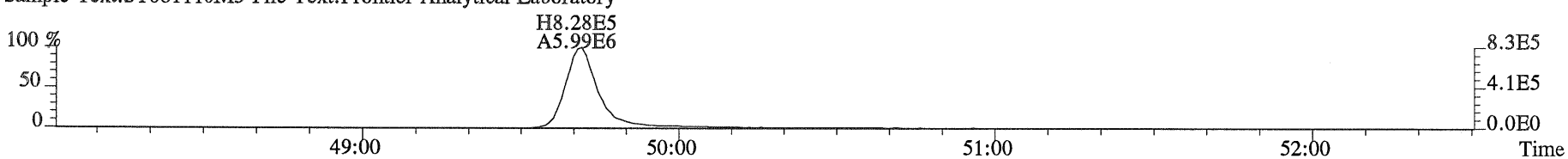
File:11AUG10M #1-347 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:26 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



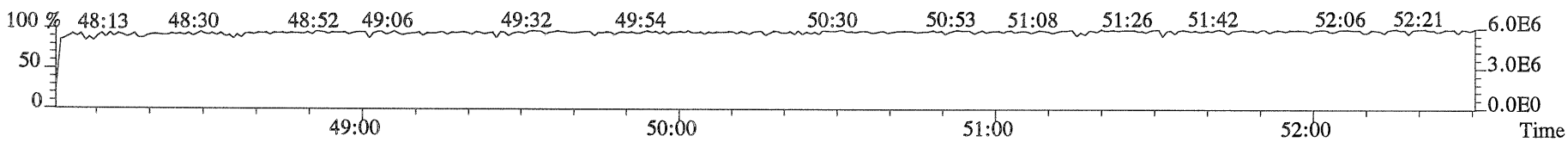
File:11AUG10M #1-347 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:26 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



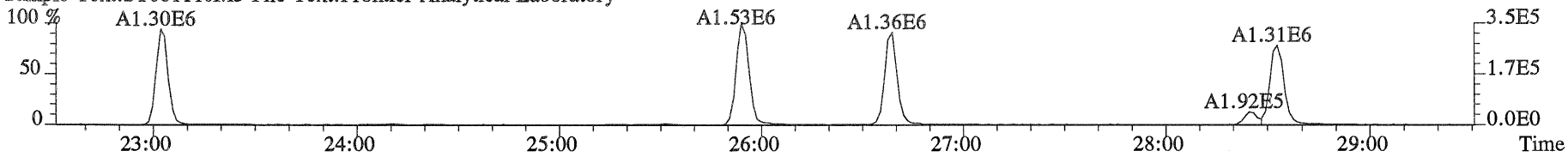
File:11AUG10M #1-347 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:26 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



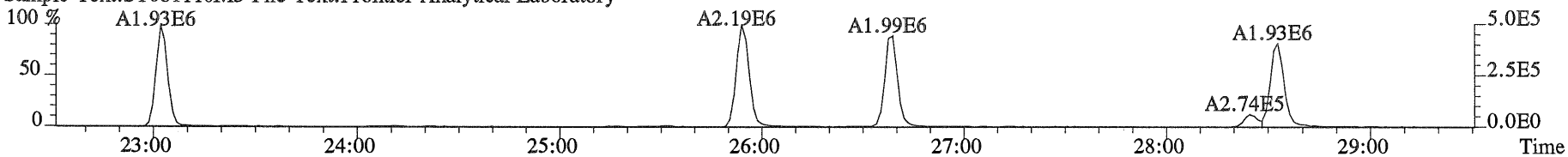
File:11AUG10M #1-347 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:26 F:5 Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



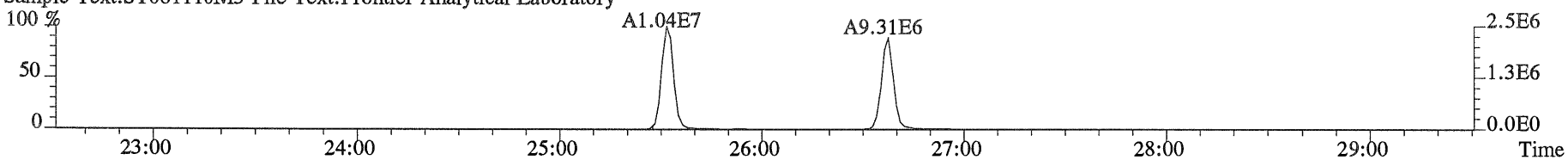
File:11AUG10M #1-357 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:26 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



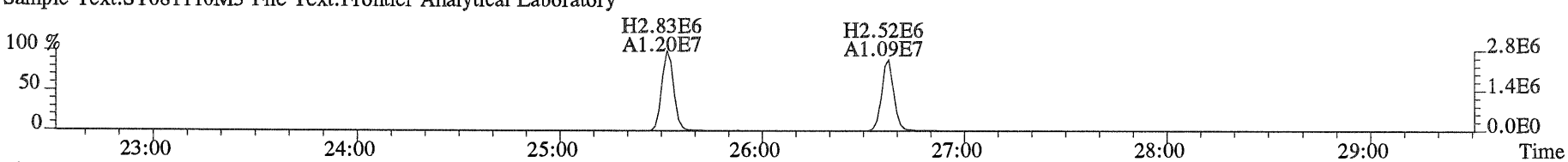
File:11AUG10M #1-357 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:26 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



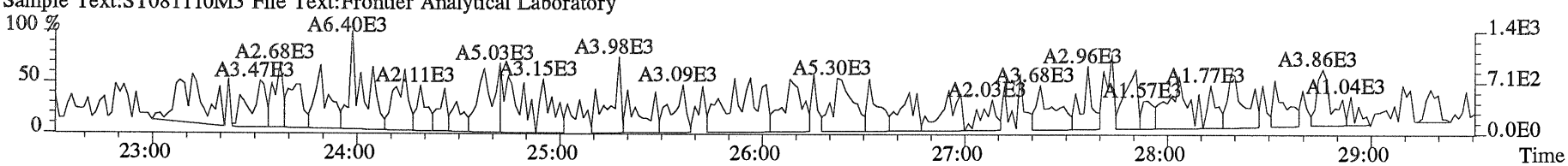
File:11AUG10M #1-357 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:26 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



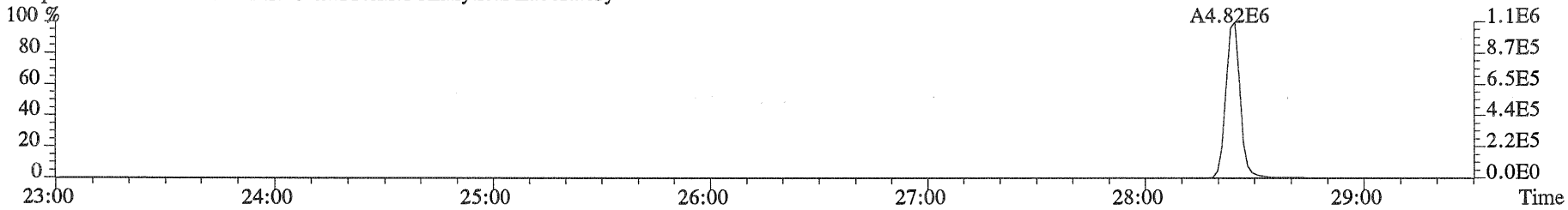
File:11AUG10M #1-357 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:26 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



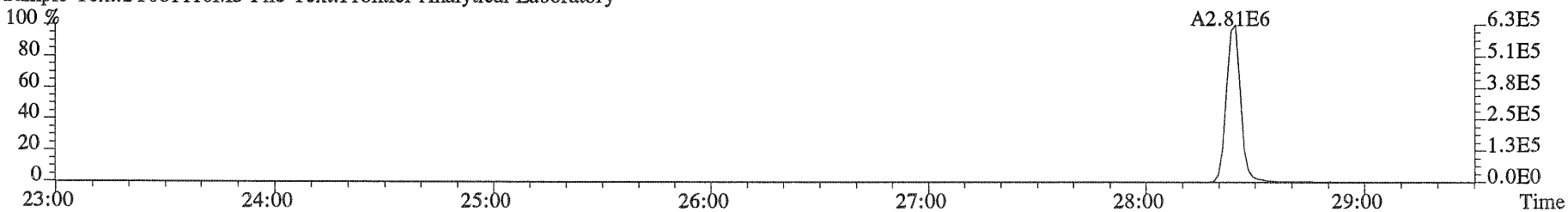
File:11AUG10M #1-357 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:26 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



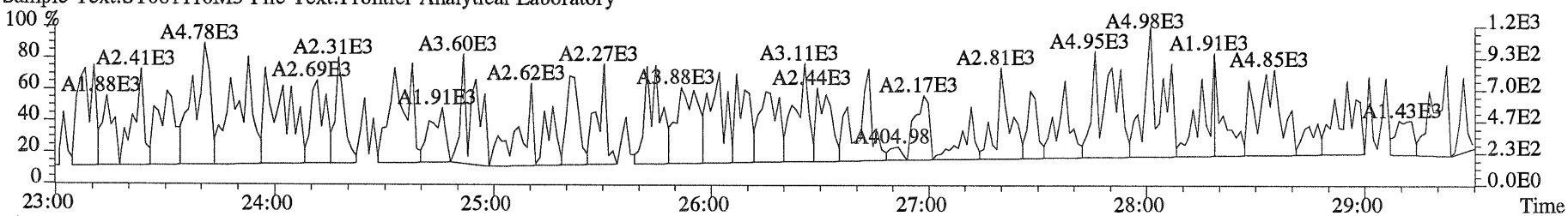
File:11AUG10M #1-357 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:26 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



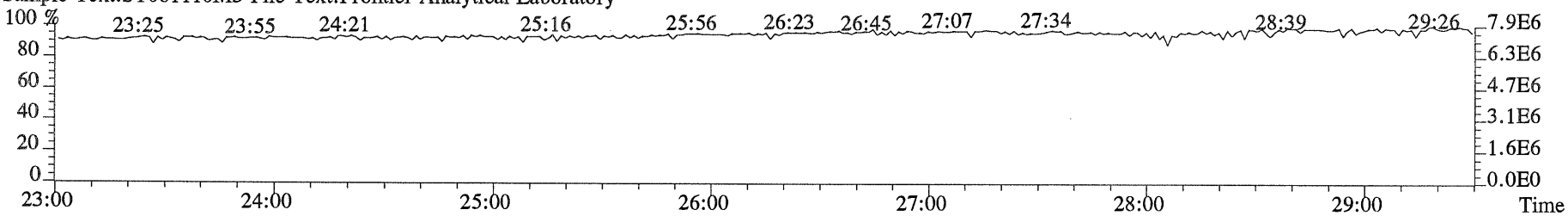
File:11AUG10M #1-357 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:26 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



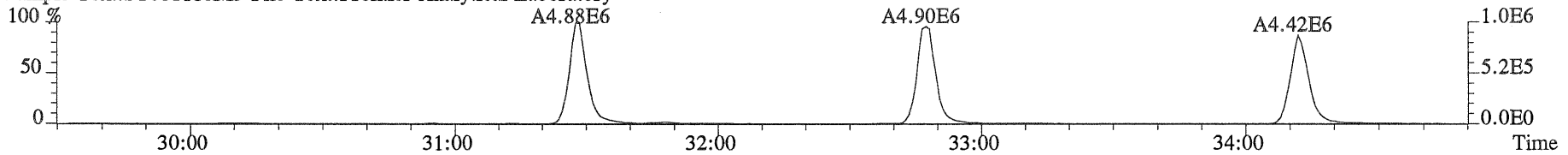
File:11AUG10M #1-357 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:26 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



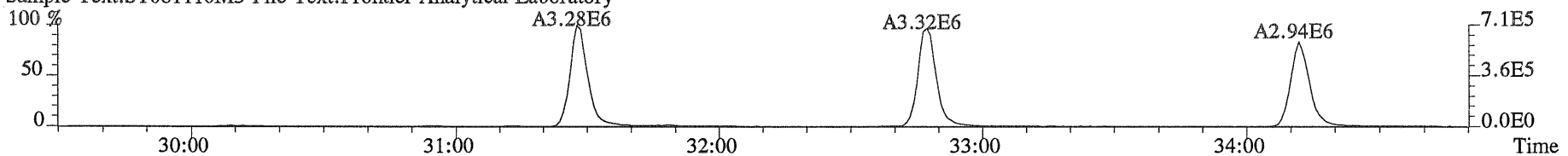
File:11AUG10M #1-357 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:26 Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



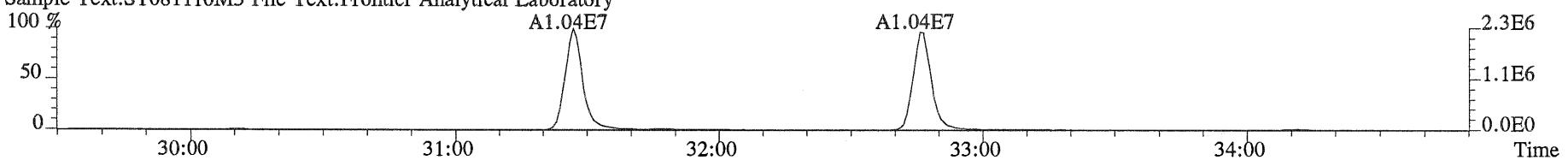
File:11AUG10M #1-412 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:26 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



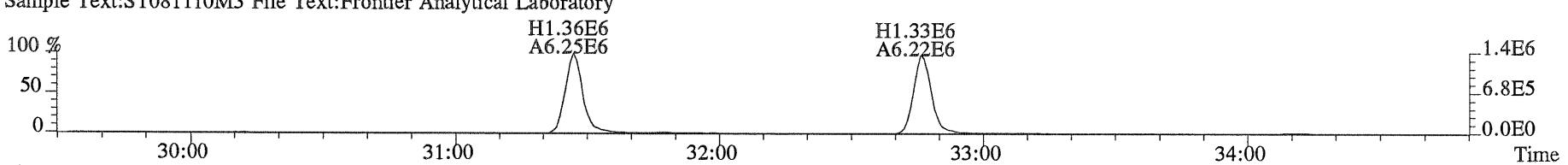
File:11AUG10M #1-412 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:26 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



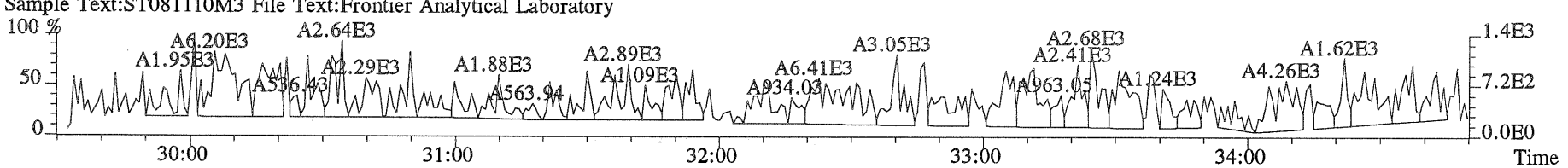
File:11AUG10M #1-412 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:26 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



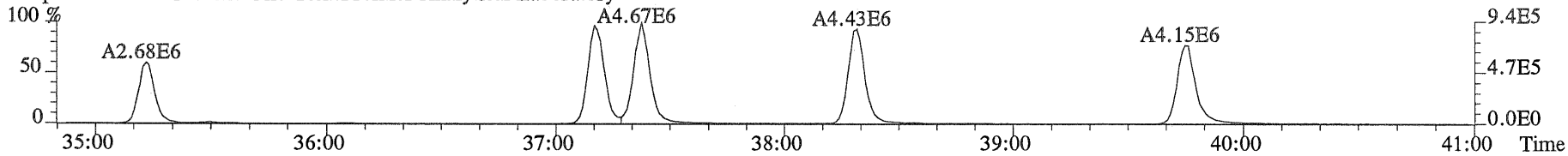
File:11AUG10M #1-412 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:26 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



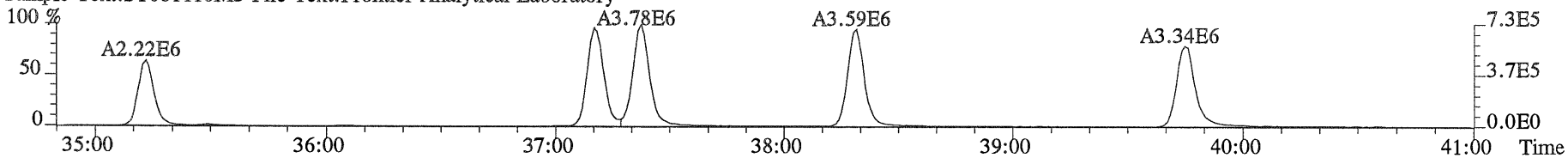
File:11AUG10M #1-412 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:26 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



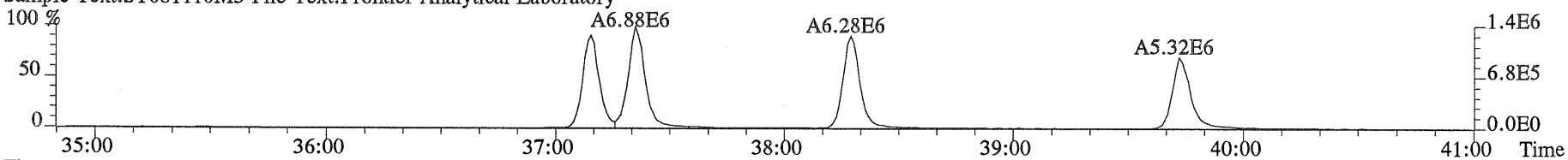
File:11AUG10M #1-476 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:26 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



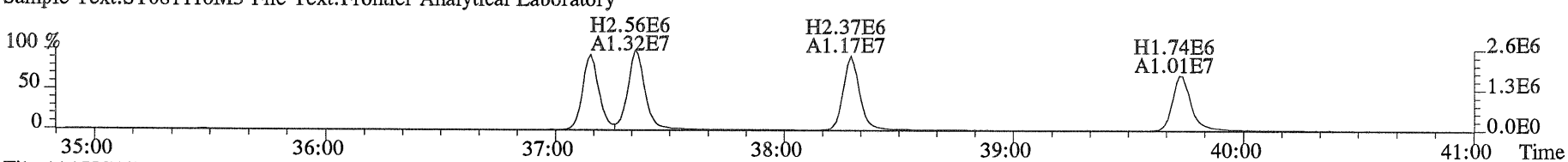
File:11AUG10M #1-476 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:26 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



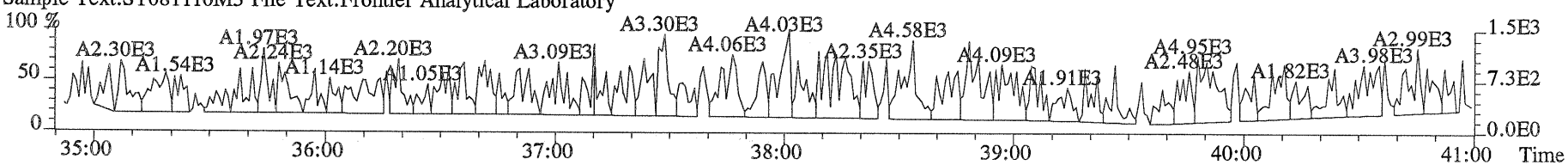
File:11AUG10M #1-476 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:26 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



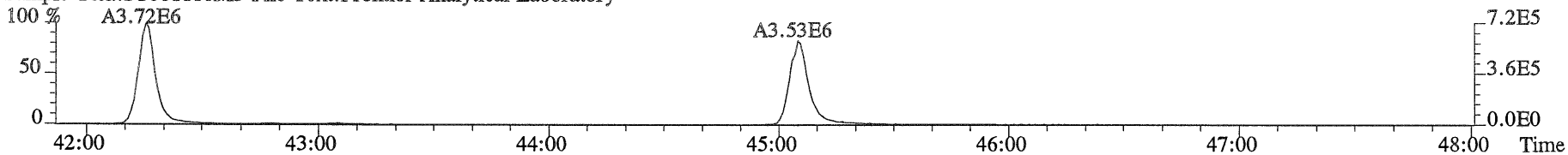
File:11AUG10M #1-476 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:26 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



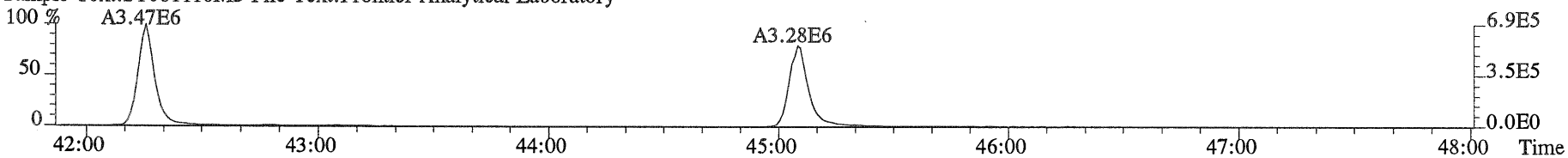
File:11AUG10M #1-476 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:26 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



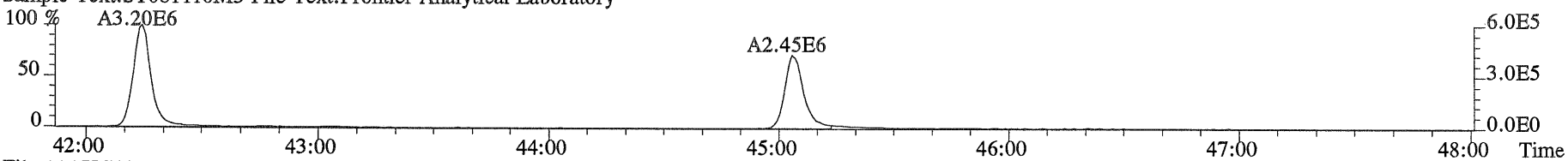
File:11AUG10M #1-542 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:26 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



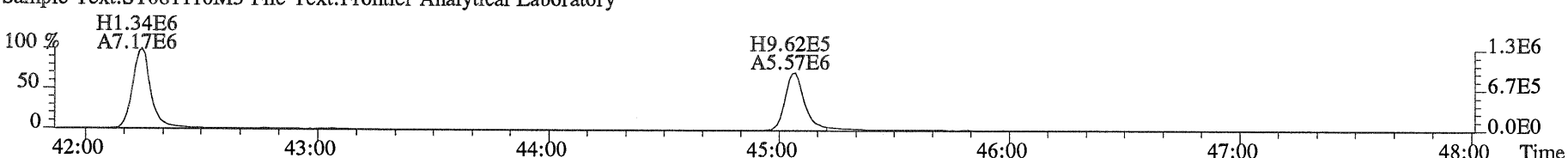
File:11AUG10M #1-542 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:26 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



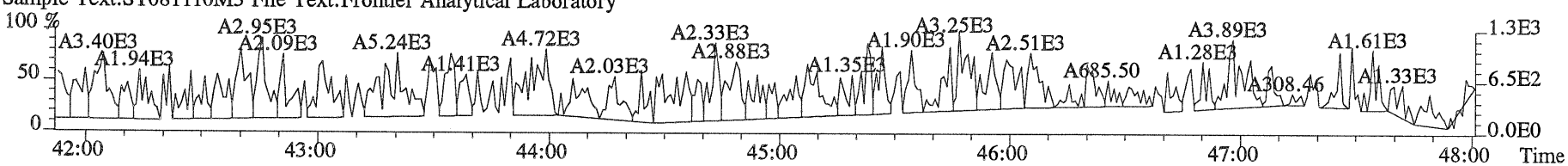
File:11AUG10M #1-542 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:26 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



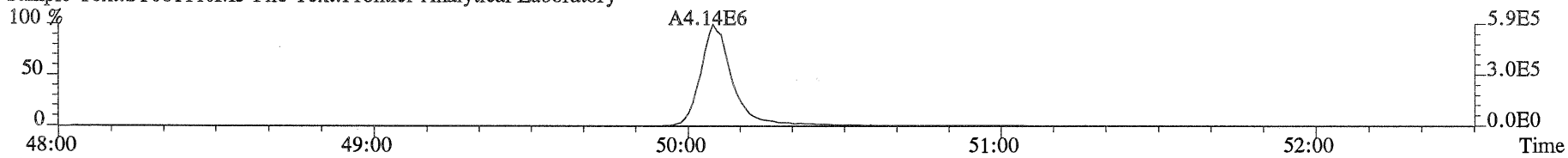
File:11AUG10M #1-542 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:26 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



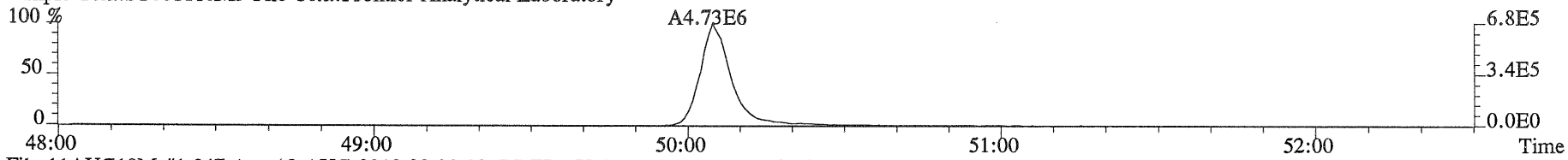
File:11AUG10M #1-542 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:26 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



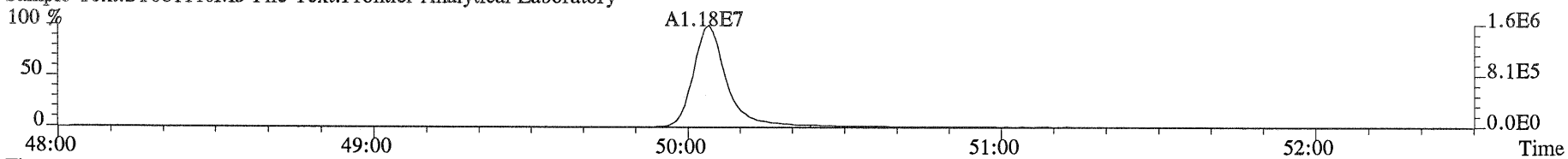
File:11AUG10M #1-347 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:26 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



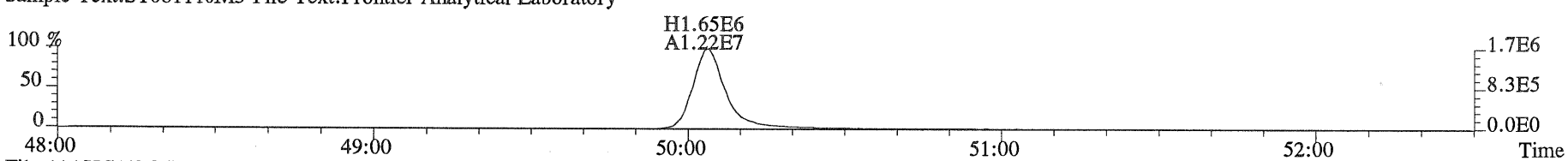
File:11AUG10M #1-347 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:26 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



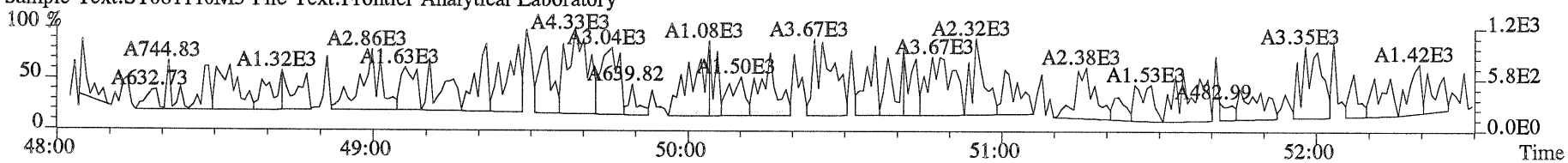
File:11AUG10M #1-347 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:26 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory



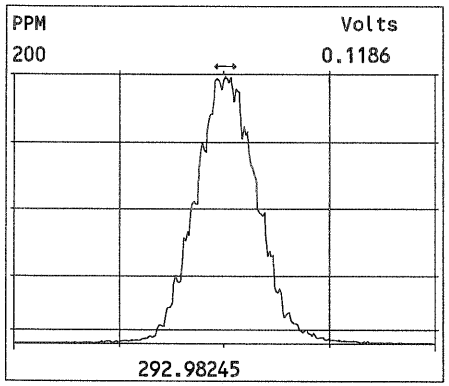
File:11AUG10M #1-347 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:26 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory

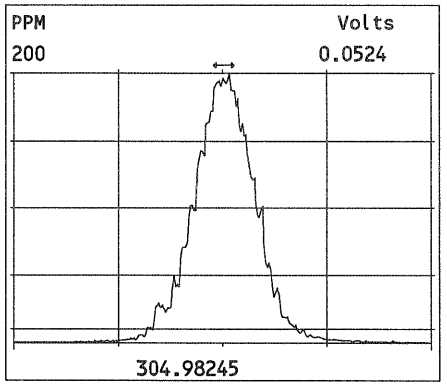


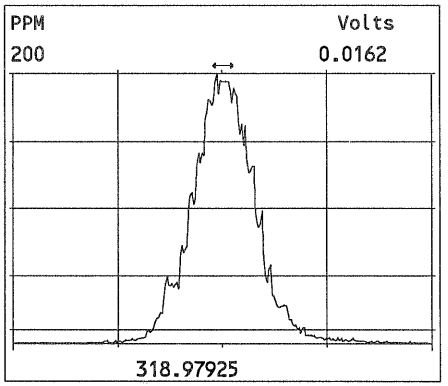
File:11AUG10M #1-347 Acq:12-AUG-2010 08:39:32 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:26 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M3 File Text:Frontier Analytical Laboratory

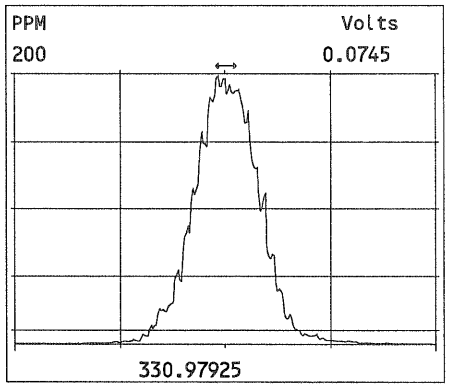


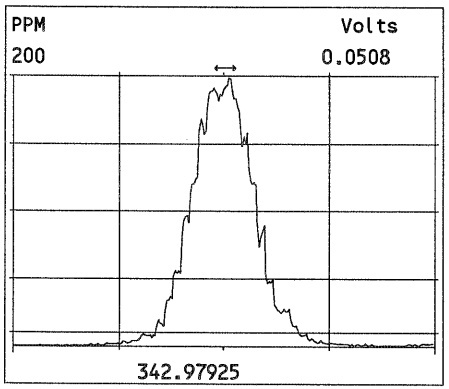
Peak Locate Examination:12-AUG-2010:09:40 File:11AUG10M_RES_CHECK
Experiment:PCDD Function:1 Reference:PFK

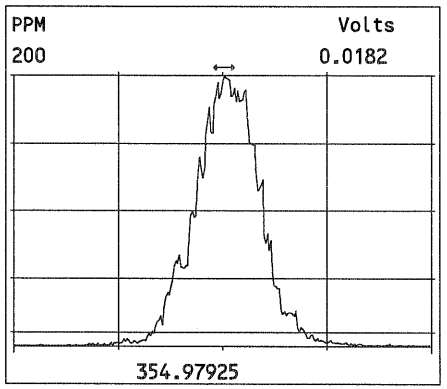


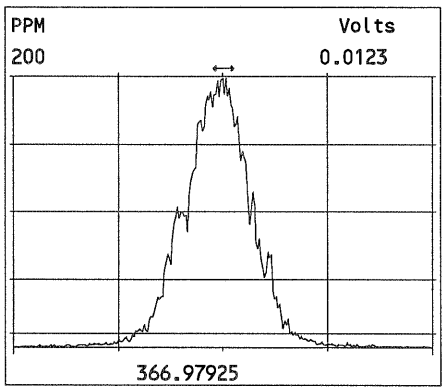


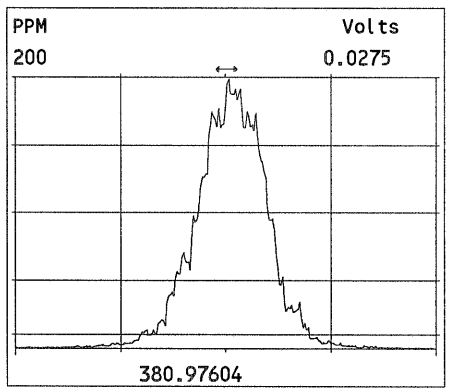


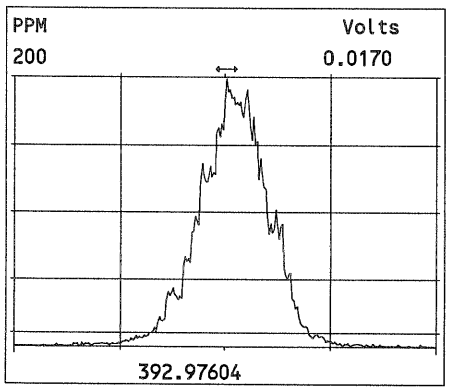


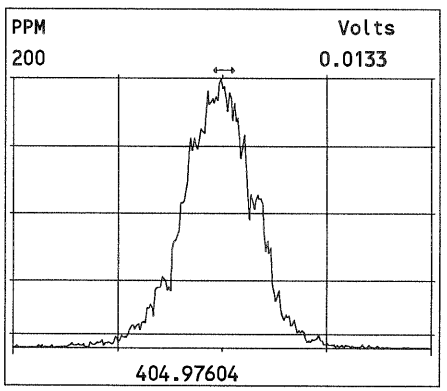


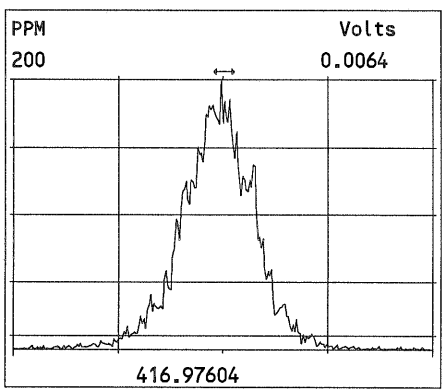




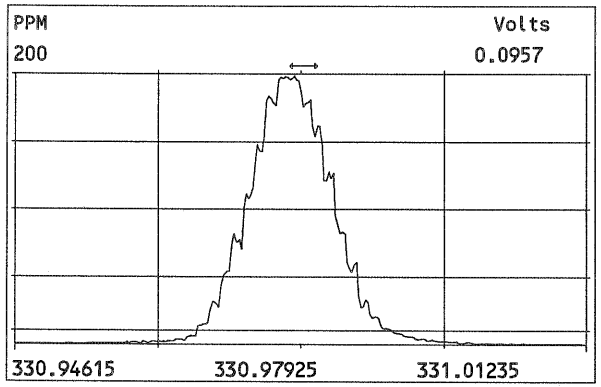


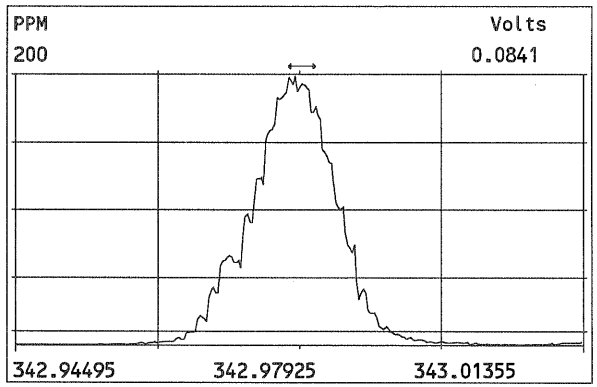


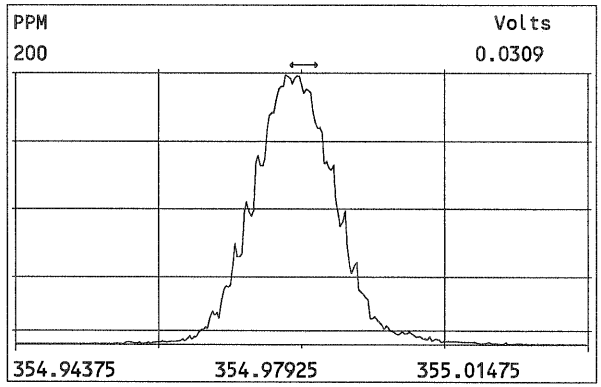


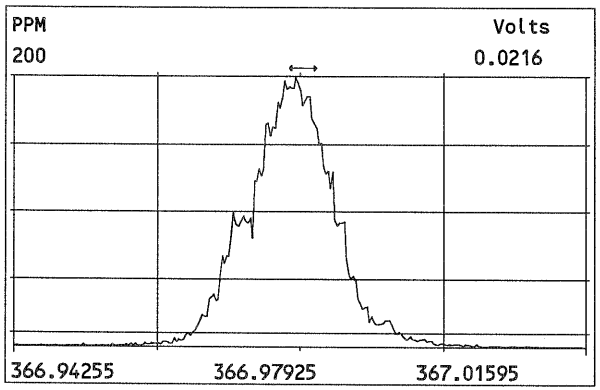


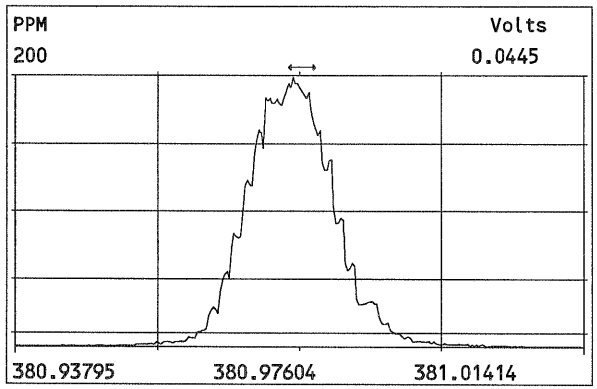
Peak Locate Examination:12-AUG-2010:09:41 File:11AUG10M_RES_CHECK
Experiment:PCDD Function:2 Reference:PFK

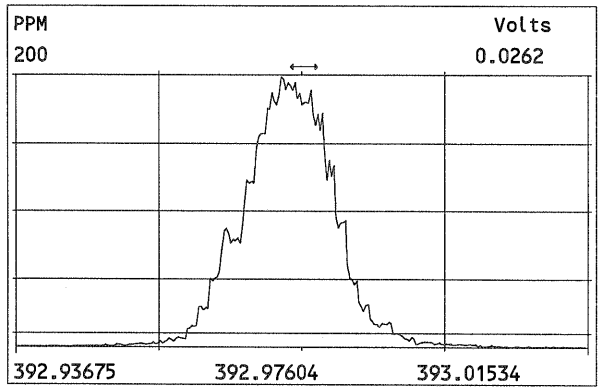


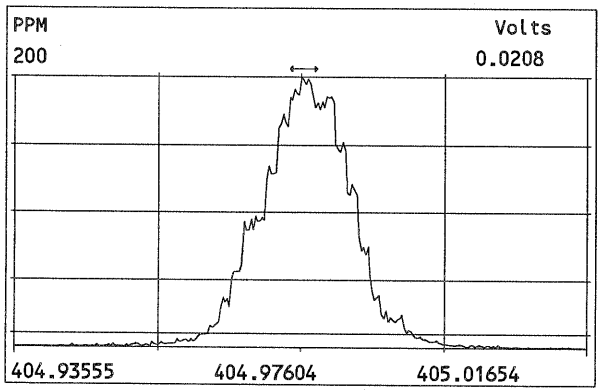


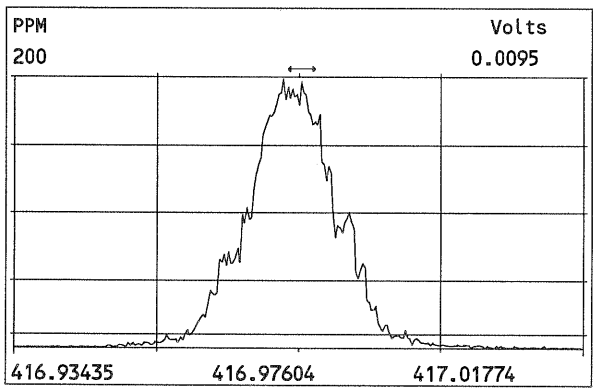




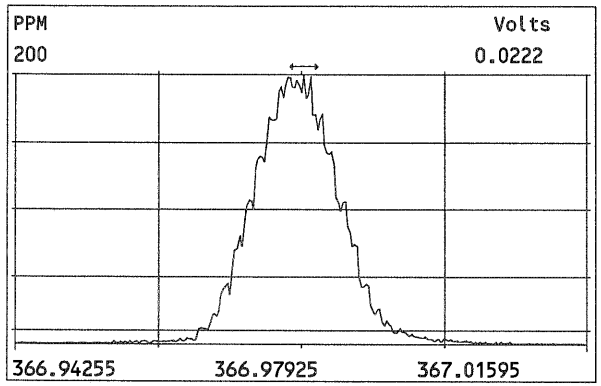


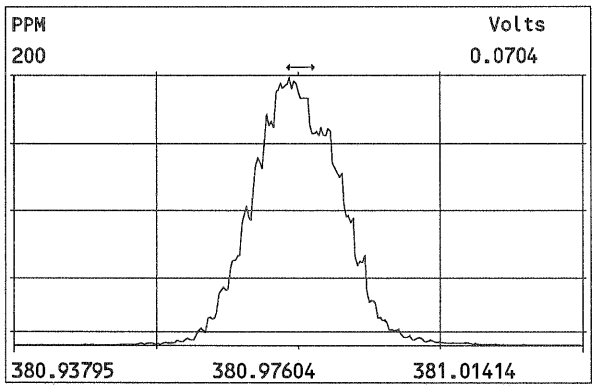


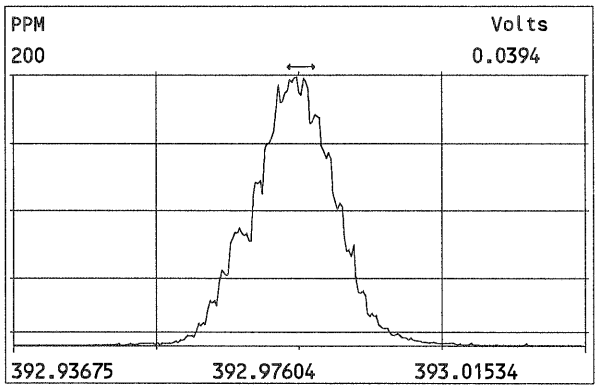


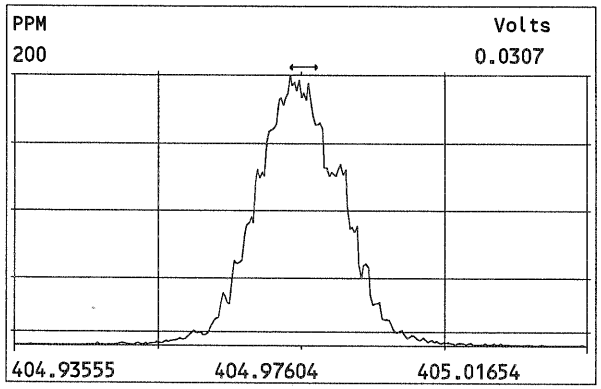


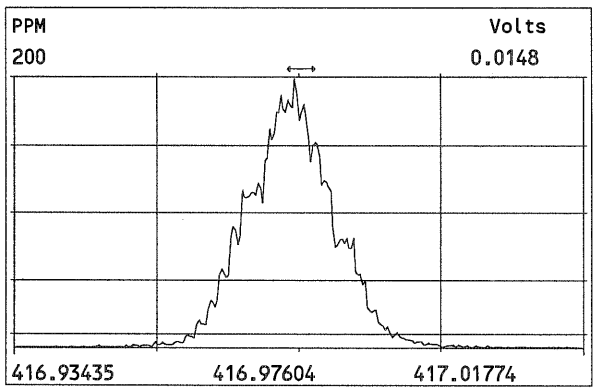
Peak Locate Examination:12-AUG-2010:09:41 File:11AUG10M_RES_CHECK
Experiment:PCDD Function:3 Reference:PFK

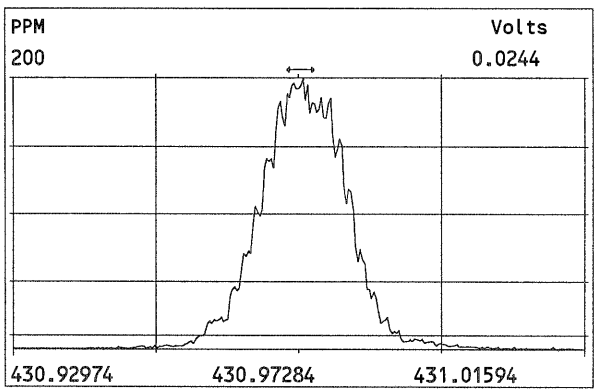


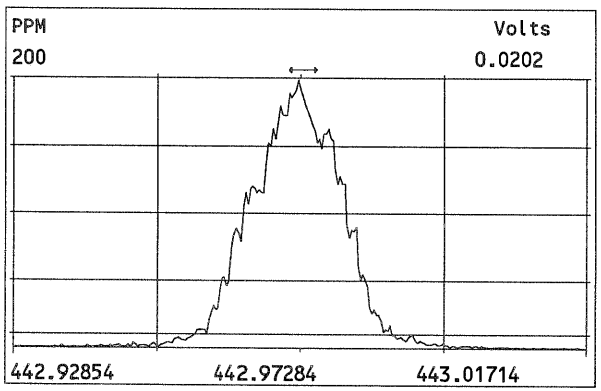


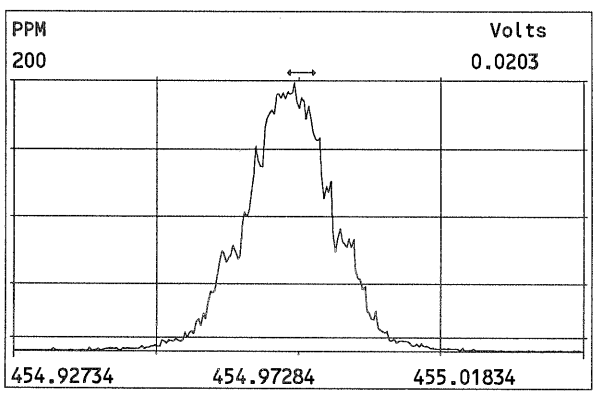




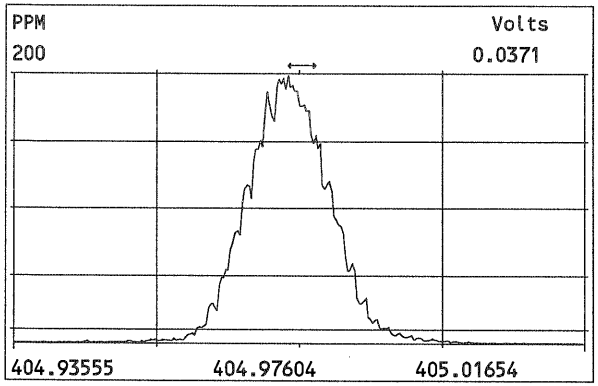


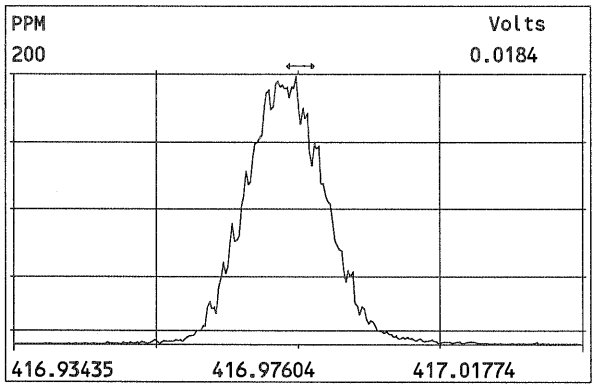


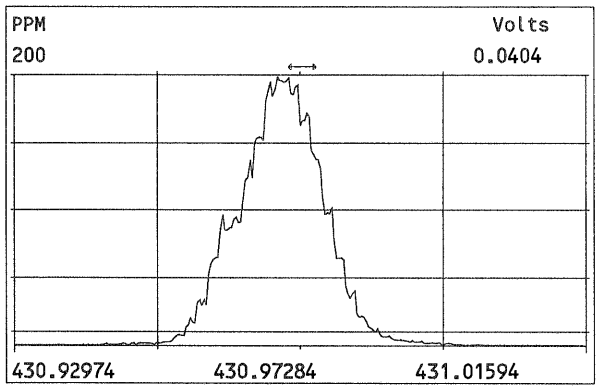


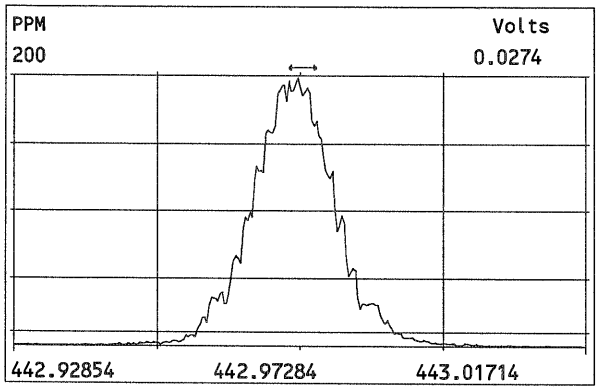


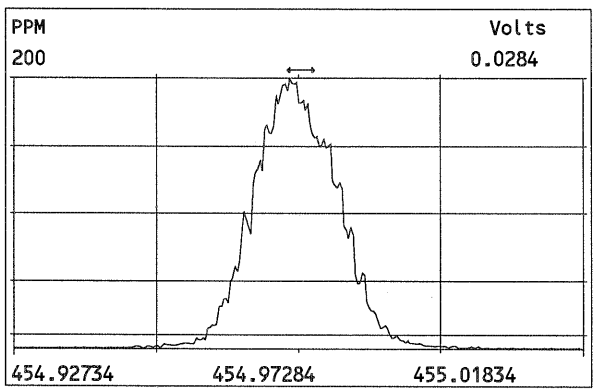
Peak Locate Examination:12-AUG-2010:09:42 File:11AUG10M_RES_CHECK
Experiment:PCDD Function:4 Reference:PFK

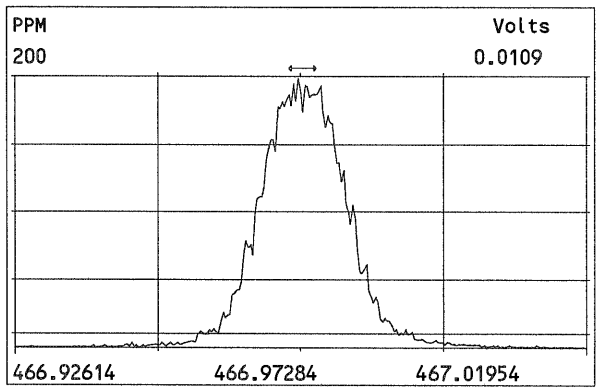


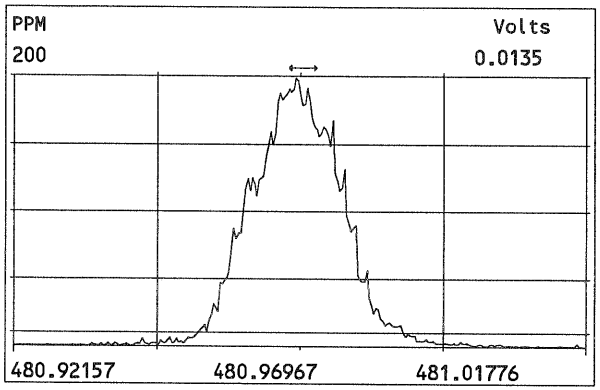




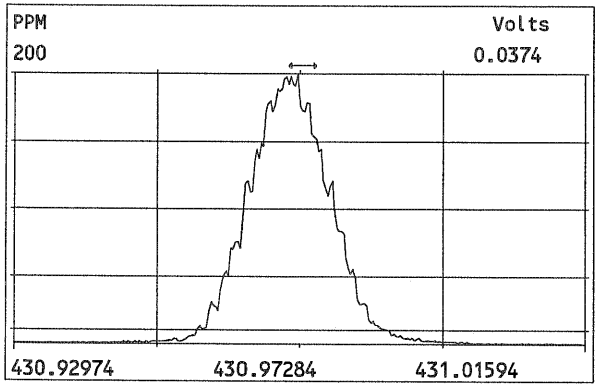


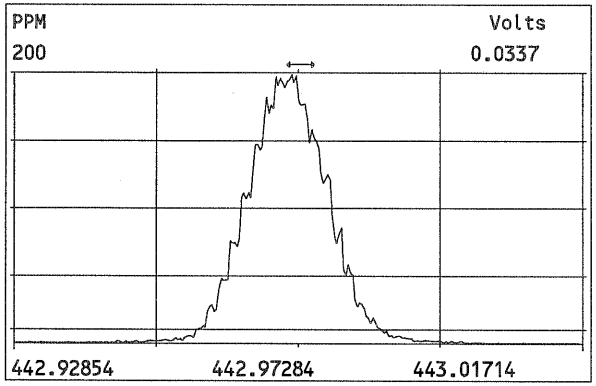


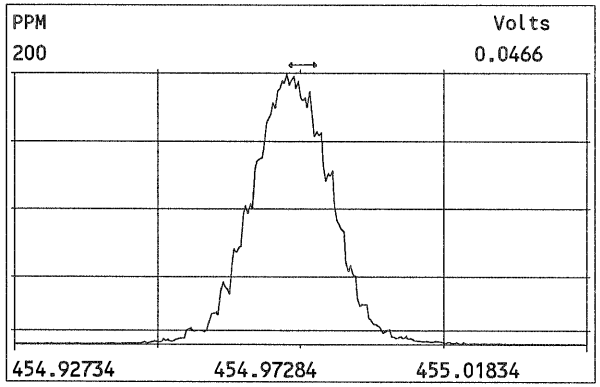


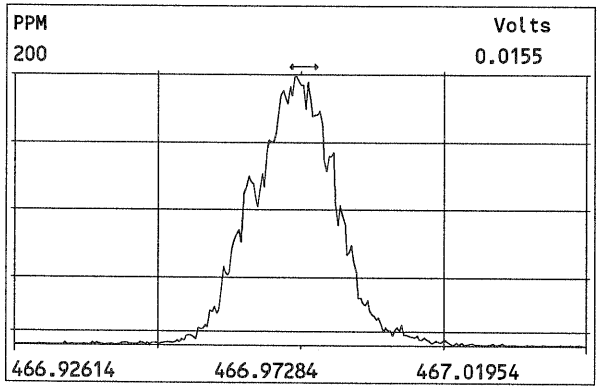


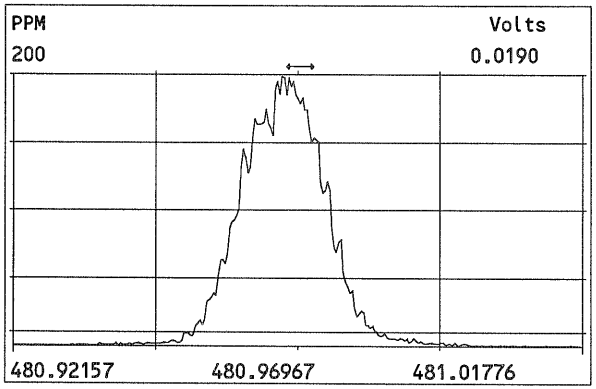
Peak Locate Examination:12-AUG-2010:09:42 File:11AUG10M_RES_CHECK
Experiment:PCDD Function:5 Reference:PFK

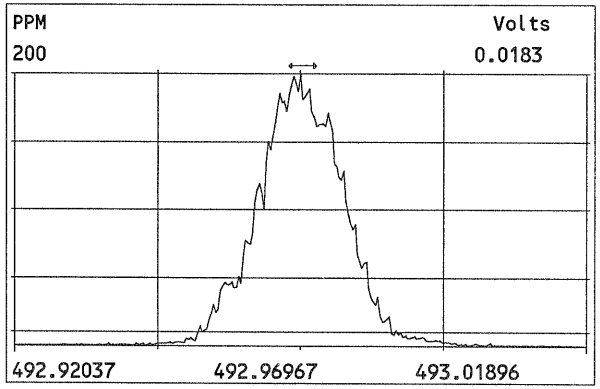


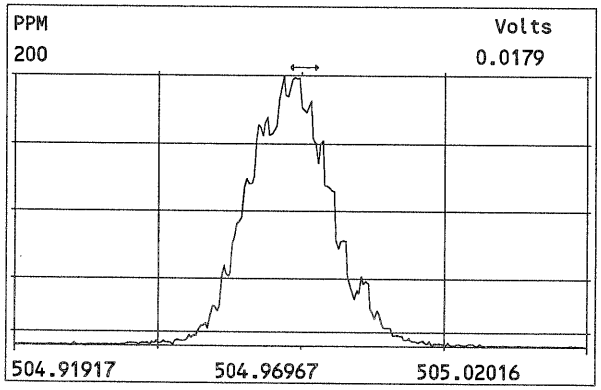


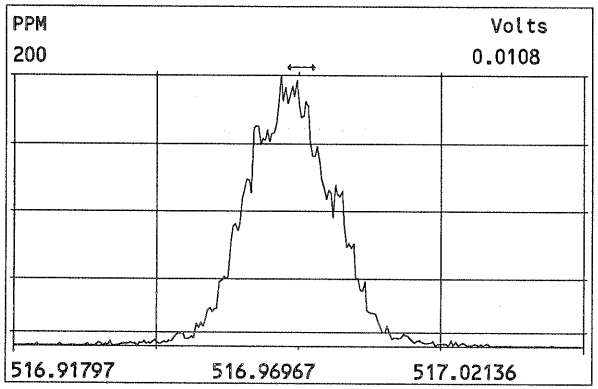












USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 12AUG10M Sam:1 Analysis Date: 12-AUG-10 11:10:55

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	0.75	0.65-0.89	y	11.0	7.80 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	1.71	1.32-1.78	y	52.4	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.42	1.05-1.43	y	56.7	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.39	1.05-1.43	y	53.4	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.36	1.05-1.43	y	54.4	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	54.9	43.0 - 58.0
OCDD	M+2/M+4	1.00	0.76-1.02	y	115	79.0 - 126
2,3,7,8-TCDF	M/M+2	0.68	0.65-0.89	y	10.7	8.40 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.51	1.32-1.78	y	55.1	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.50	1.32-1.78	y	52.3	41.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	48.1	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	y	48.3	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	y	48.1	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.29	1.05-1.43	y	49.5	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.03	0.88-1.20	y	47.8	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.07	0.88-1.20	y	48.5	43.0 - 58.0
OCDF	M+2/M+4	0.93	0.76-1.02	y	101	63.0 - 159

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

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

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

Analyst: _____ Date: 8/13/10

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 12AUG10M Sam:1 Analysis Date: 12-AUG-10 11:10:55

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.85	0.65-0.89	y	95.7	82.0 - 121
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.75	1.32-1.78	y	92.2	62.0 - 160
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.32	1.05-1.43	y	105	85.0 - 117
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.32	1.05-1.43	y	97.7	85.0 - 118
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	y	94.3	72.0 - 138
13C-OCDD	M+2/M+4	0.89	0.76-1.02	y	183	96.0 - 415
13C-2,3,7,8-TCDF	M/M+2	0.87	0.65-0.89	y	91.4	71.0 - 140
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.78	1.32-1.78	y	87.3	76.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.75	1.32-1.78	y	90.1	77.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.55	0.43-0.59	y	126	76.0 - 131
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.56	0.43-0.59	y	124	70.0 - 143
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	y	125	73.0 - 137
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.55	0.43-0.59	y	120	74.0 - 135
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.42	0.37-0.51	y	116	78.0 - 129
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.42	0.37-0.51	y	116	77.0 - 129
13C-OCDF	M+2/M+4	0.99	0.76-1.02	y	188	96.0 - 415
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					9.45	7.80 - 12.8

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

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

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

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

Analyst: _____ Date: 8/13/10

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: FAL3 Initial Calibration Date: 5/12/10

RT Window Data Filename: 12AUG10M Sam:1 Analysis Date: 12-AUG-10 Time: 11:10:55

DB-5 IS Data Filename: 12AUG10M Sam:1 Analysis Date: 12-AUG-10 Time: 11:10:55

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

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:25	1,3,6,8-TCDF (F)	23:04
1,2,8,9-TCDD (L)	28:22	1,2,8,9-TCDF (L)	28:35
1,2,4,7,9-PeCDD (F)	30:15	1,3,4,6,8-PeCDF (F)	28:25
1,2,3,8,9-PeCDD (L)	33:48	1,2,3,8,9-PeCDF (L)	34:14
1,2,4,6,7,9-HxCDD (F)	36:08	1,2,3,4,6,8-HxCDF (F)	35:15
1,2,3,7,8,9-HxCDD (L)	39:12	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)	45:06

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

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

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

Analyst: _____ Date: 8/13/10

USEPA - ITD

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 12-AUG-10 11:10:55 CS3 or VER Data Filename: 12AUG10M Sam:1

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	0.999-1.002
LABELED COMPOUNDS			
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989-1.052
13C-2,3,7,8-TCDD		1.022	0.976-1.043
13C-2,3,7,8-TCDF		0.994	0.923-1.103
13C-1,2,3,7,8-PeCDD		1.239	1.000-1.567
13C-1,2,3,7,8-PeCDF		1.174	0.923-1.203
13C-2,3,4,7,8-PeCDF		1.223	0.923-1.303

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

Analyst: _____ Date: 8/13/10

USEPA - ITD

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 12-AUG-10 11:10:55 CS3 or VER Data Filename: 12AUG10M Sam:1

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	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	1.001	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.984	0.977-1.000
13C-1,2,3,6,7,8-HxCDD		0.988	0.981-1.003
13C-1,2,3,4,7,8-HxCDF		0.948	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		0.977	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		1.268	1.032-1.311
13C-OCDF		1.278	1.000-1.311

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

Analyst: _____ Date: 8/13/10

FAL ID: ST081210M1 Filename: 12AUG10M Sam:1 Acquired: 12-AUG-10 11:10:55 ICal: PCDDFAL3-5-12-10
Client ID: 1613 CS3 090918J ConCal: ST081210M1 EndCal: ST081210M2
Results: GC Column: DB5 Amount: 1.000 NATO 1989 Tox: 105
WHO 1998 Tox: 131 WHO 2005 Tox: 119

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	1.69e+06	0.75 y	27:25	1.04	11.0		2.50	-	-	*
1,2,3,7,8-PeCDD	6.84e+06	1.71 y	33:14	1.05	52.4		2.50	-	-	*
1,2,3,4,7,8-HxCDD	6.65e+06	1.42 y	38:36	1.30	56.7		2.50	-	-	*
1,2,3,6,7,8-HxCDD	6.00e+06	1.39 y	38:46	1.28	53.4		2.50	-	-	*
1,2,3,7,8,9-HxCDD	6.05e+06	1.36 y	39:12	1.25	54.4		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	5.85e+06	1.04 y	44:11	1.35	54.9		2.50	-	-	*
OCDD	7.54e+06	1.00 y	49:45	1.25	115		2.50	-	-	*
2,3,7,8-TCDF	4.28e+06	0.68 y	26:40	1.62	10.7		2.50	-	-	*
1,2,3,7,8-PeCDF	1.11e+07	1.51 y	31:30	0.92	55.1		2.50	-	-	*
2,3,4,7,8-PeCDF	1.04e+07	1.50 y	32:50	0.94	52.3		2.50	-	-	*
1,2,3,4,7,8-HxCDF	8.87e+06	1.27 y	37:12	0.93	48.1		2.50	-	-	*
1,2,3,6,7,8-HxCDF	9.85e+06	1.28 y	37:24	0.84	48.3		2.50	-	-	*
2,3,4,6,7,8-HxCDF	8.85e+06	1.26 y	38:20	0.90	48.1		2.50	-	-	*
1,2,3,7,8,9-HxCDF	7.85e+06	1.29 y	39:47	0.98	49.5		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	7.61e+06	1.03 y	42:18	1.38	47.8		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	6.74e+06	1.07 y	45:06	1.62	48.5		2.50	-	-	*
OCDF	7.57e+06	0.93 y	50:07	0.74	101		2.50	-	-	*

						Rec
13C-2,3,7,8-TCDD	1.48e+07	0.85 y	27:24	0.93	95.7	95.7
13C-1,2,3,7,8-PeCDD	1.25e+07	1.75 y	33:13	0.81	92.2	92.2
13C-1,2,3,4,7,8-HxCDD	9.03e+06	1.32 y	38:35	0.95	105	105
13C-1,2,3,6,7,8-HxCDD	8.81e+06	1.32 y	38:44	1.00	97.7	97.7
13C-1,2,3,4,6,7,8-HpCDD	7.86e+06	1.05 y	44:11	0.92	94.3	94.3
13C-OCDD	1.05e+07	0.89 y	49:43	0.63	183	91.6
13C-2,3,7,8-TCDF	2.47e+07	0.87 y	26:39	0.87	91.4	91.4
13C-1,2,3,7,8-PeCDF	2.19e+07	1.78 y	31:29	0.81	87.3	87.3
13C-2,3,4,7,8-PeCDF	2.11e+07	1.75 y	32:48	0.75	90.1	90.1
13C-1,2,3,4,7,8-HxCDF	1.98e+07	0.55 y	37:11	1.74	126	126
13C-1,2,3,6,7,8-HxCDF	2.44e+07	0.56 y	37:23	2.17	124	124
13C-2,3,4,6,7,8-HxCDF	2.06e+07	0.54 y	38:19	1.82	125	125
13C-1,2,3,7,8,9-HxCDF	1.61e+07	0.55 y	39:46	1.49	120	120
13C-1,2,3,4,6,7,8-HpCDF	1.15e+07	0.42 y	42:16	1.10	116	116
13C-1,2,3,4,7,8,9-HpCDF	8.55e+06	0.42 y	45:06	0.81	116	116
13C-OCDF	2.03e+07	0.99 y	50:06	1.19	188	94.2
37Cl-2,3,7,8-TCDD	1.47e+06		27:25	0.93	9.45	94.5
13C-1,2,3,4-TCDD	1.67e+07	0.88 y	26:49	-	49.4	
13C-1,2,3,4-TCDF	3.12e+07	0.88 y	25:33	-	58.4	
13C-1,2,3,7,8,9-HxCDD	9.06e+06	1.33 y	39:12	-	42.0	

						Fac	Noise-1	Noise-2	DL		#Hom
Total Tetra-Dioxins	9.45e+06		22:56	1.04	61.5	2.50	-	-	*		28
Total Penta-Dioxins	1.51e+07		30:15	1.05	116	2.50	-	-	*		18
Total Hexa-Dioxins	2.15e+07		36:08	1.27	189	2.50	-	-	*		17
Total Hepta-Dioxins	1.29e+07		42:17	1.35	121	2.50	-	-	*		34
Total Tetra-Furans	1.99e+07		23:04	1.62	49.6	2.50	-	-	*		23
1st Fn. Tot Penta-Furans	1.04e+07		28:25	0.93	51.8	2.50	-	-	*	PeCDF	1
Total Penta-Furans	3.09e+07		30:14	0.93	154	2.50	-	-	*	206	13
Total Hexa-Furans	4.18e+07		35:15	0.90	229	2.50	-	-	*		24
Total Hepta-Furans	1.46e+07		41:11	1.48	97.9	2.50	-	-	*		20

Analyst: _____ Date: 8/13/10

Frontier Analytical Laboratory - Acquisition Log

Run Name:12AUG10M Instrument: FAL3 GC: DB5 Experiment:PCDD

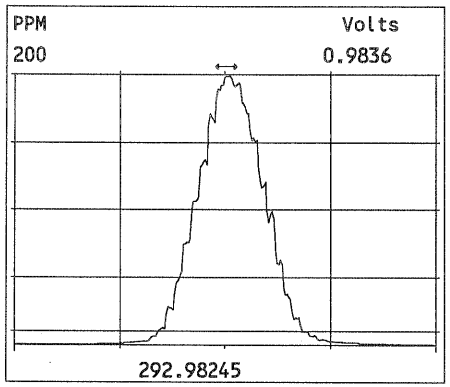
Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
12AUG10M	1	ST081210M1	1613 CS3 090918J	12-AUG-10 11:10:55	ST081210M1	ST081210M2	TC
12AUG10M	2	SB081210M1	Solvent Blank	12-AUG-10 12:06:13	ST081210M1	ST081210M2	TC
12AUG10M	3	6273-009-0001-SA	PSB07-1.5-2.0-072810	12-AUG-10 13:01:32	ST081010N1	ST081010N2	TC
12AUG10M	4	6273-011-0001-SA	PSB08-1.5-2.0-072810	12-AUG-10 13:56:54	ST081010N1	ST081010N2	TC
12AUG10M	5	2078-001-0001-OPR	OPR	12-AUG-10 14:52:16	ST081210M1	ST081210M2	TC
12AUG10M	6	2078-001-0001-MB	Method Blank	12-AUG-10 15:47:38	ST081210M1	ST081210M2	TC
12AUG10M	7	6269-008-0001-SA	PSB17-10-13-072810	12-AUG-10 16:43:05	ST081210M1	ST081210M2	TC
12AUG10M	8	6269-007-0001-SA	PSB17-4-6-072810	12-AUG-10 17:38:28	ST081210M1	ST081210M2	TC
12AUG10M	9	6269-006-0001-SA	PSB17-2-4-072810	12-AUG-10 18:33:55	ST081210M1	ST081210M2	TC
12AUG10M	10	6269-003-0001-SA	PSB14-2-4-072810	12-AUG-10 19:29:18	ST081210M1	ST081210M2	TC
12AUG10M	11	6269-005-0001-SA	PSB17-1.5-2-072810	12-AUG-10 20:24:37	ST081210M1	ST081210M2	TC
12AUG10M	12	6269-002-0001-SA	PSB14-1.5-2.0-072810	12-AUG-10 21:20:00	ST081210M1	ST081210M2	TC
12AUG10M	13	6269-004-0001-SA	PSB17-0-0.5-072810	12-AUG-10 22:15:22	ST081210M1	ST081210M2	TC
12AUG10M	14	6269-001-0001-SA	PSB14-0-.5-072810	12-AUG-10 23:10:40	ST081210M1	ST081210M2	TC
12AUG10M	15	SB081210M2	Solvent Blank	13-AUG-10 00:06:03	ST081210M1	ST081210M2	TC
12AUG10M	16	ST081210M2	1613 CS3 090918J	13-AUG-10 01:01:28	ST081210M2	ST081210M3	TC
12AUG10M	17	SB081210M4	Solvent Blank	13-AUG-10 01:56:52	ST081210M2	ST081210M3	TC
12AUG10M	18	6271-003-0001-SA	PSB13-2-4-072910	13-AUG-10 02:52:15	ST081210M2	ST081210M3	TC
12AUG10M	19	6271-002-0001-SA	PSB13-1.5-2-072910	13-AUG-10 03:47:38	ST081210M2	ST081210M3	TC
12AUG10M	20	6271-001-0001-SA	PSB13-0-0.5-072910	13-AUG-10 04:42:56	ST081210M2	ST081210M3	TC
12AUG10M	21	6279-001-0001-SA	201007300147	13-AUG-10 05:38:15	ST081210M2	ST081210M3	TC
12AUG10M	22	6279-002-0001-SA	201007300149	13-AUG-10 06:33:34	ST081210M2	ST081210M3	TC
12AUG10M	23	SB081210M5	Solvent Blank	13-AUG-10 07:28:53	ST081210M2	ST081210M3	TC
12AUG10M	24	ST081210M3	1613 CS3 090918J	13-AUG-10 08:24:11	ST081210M2	ST081210M3	TC

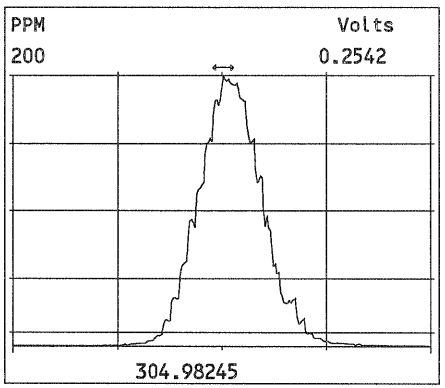
8/13/10

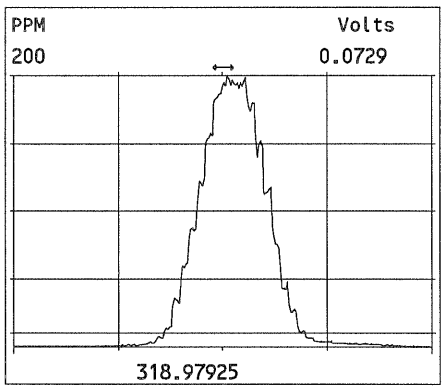
Data Backed Up:_____

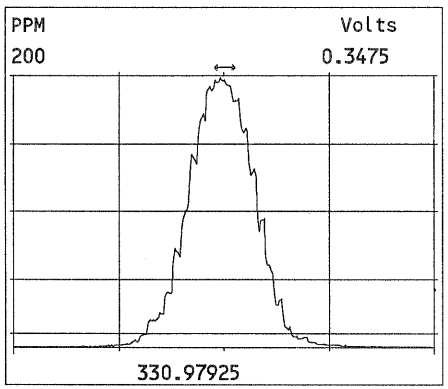
Date:_____

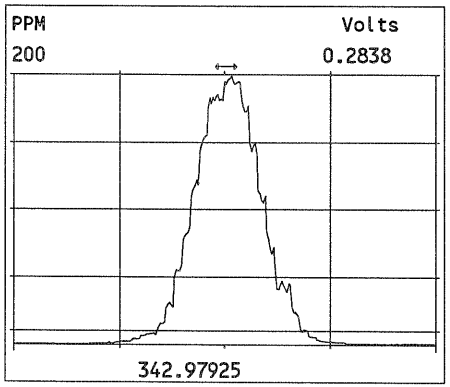
Peak Locate Examination:12-AUG-2010:11:09 File:12AUG10M
Experiment:PCDD Function:1 Reference:PFK

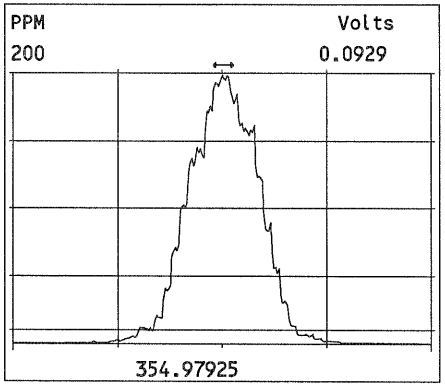


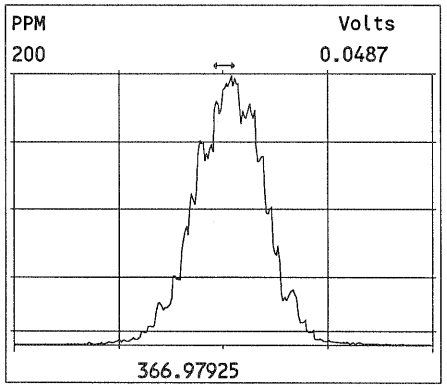


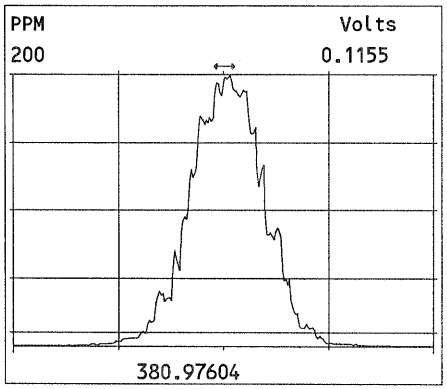


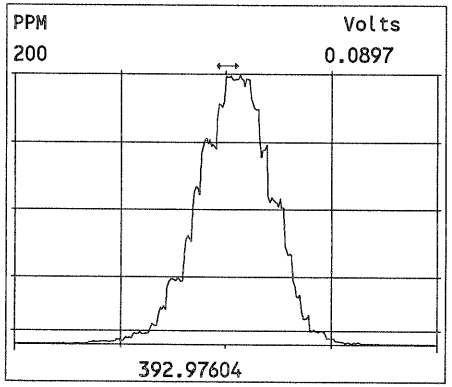


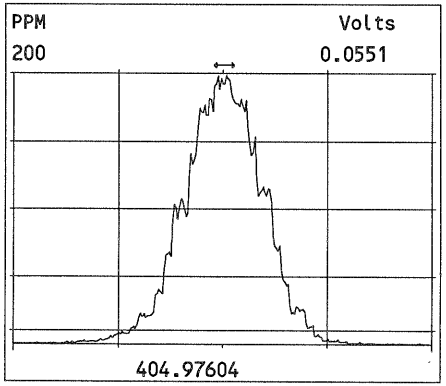


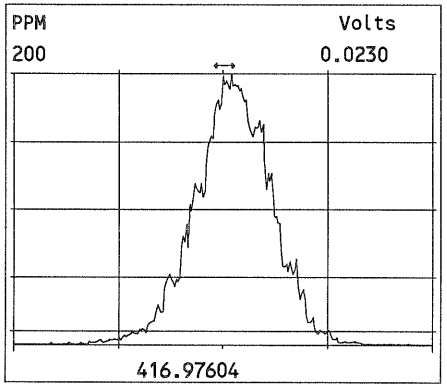




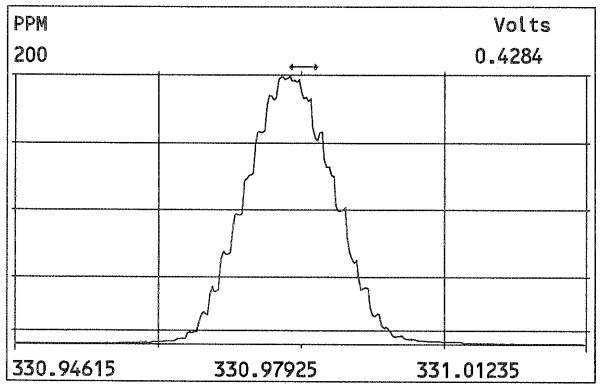


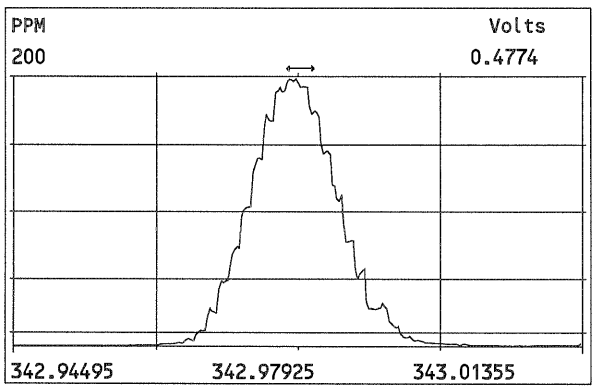


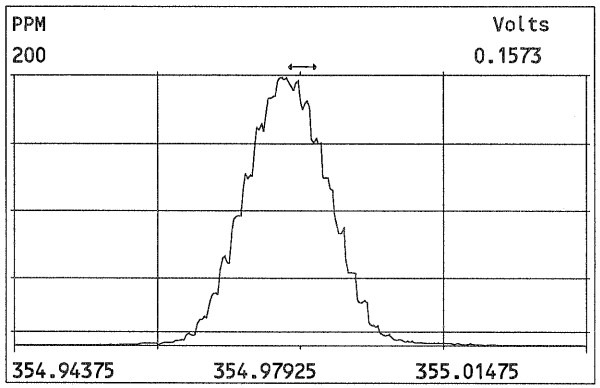


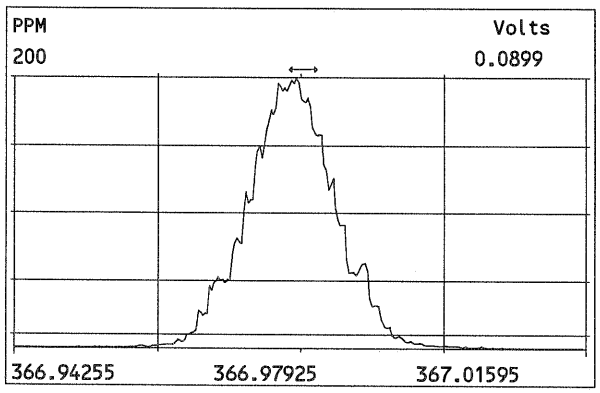


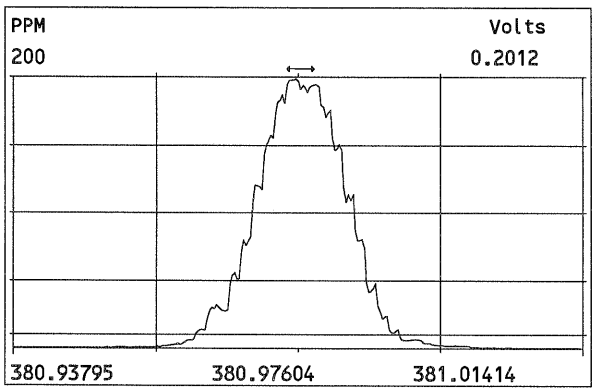
Peak Locate Examination:12-AUG-2010:11:09 File:12AUG10M
Experiment:PCDD Function:2 Reference:PFK

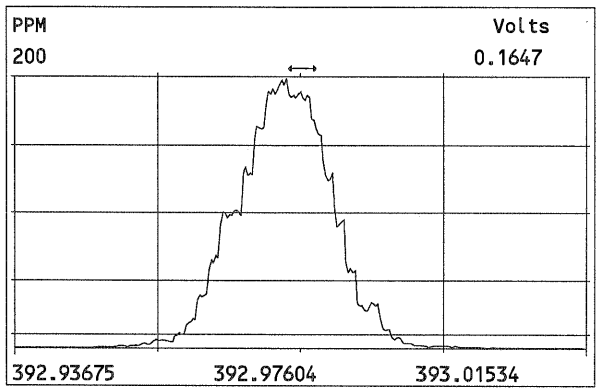


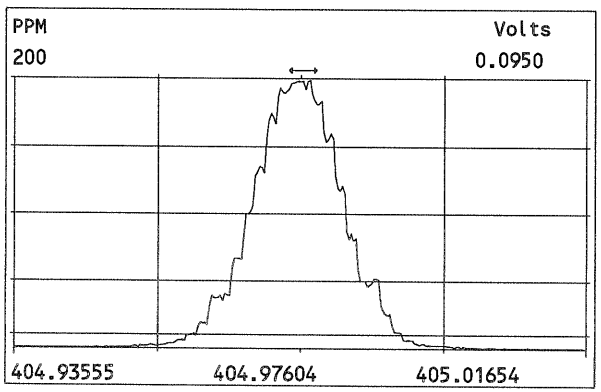


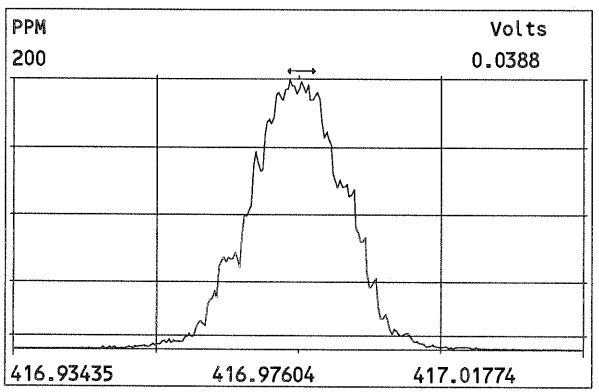




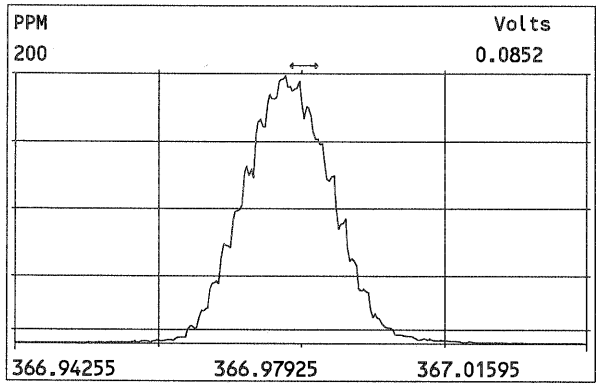


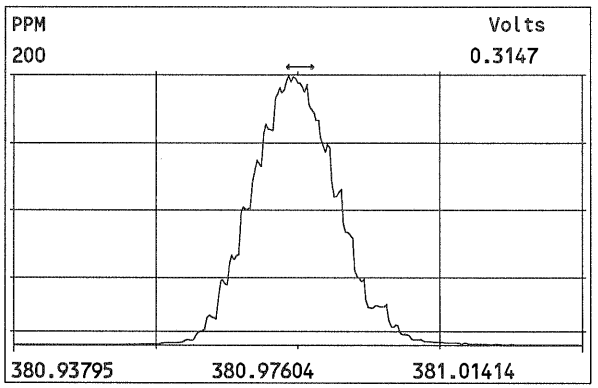


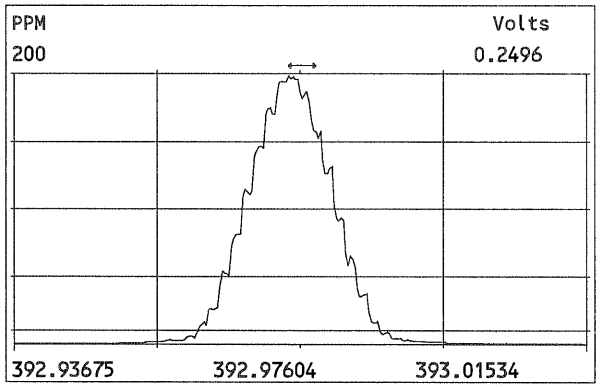


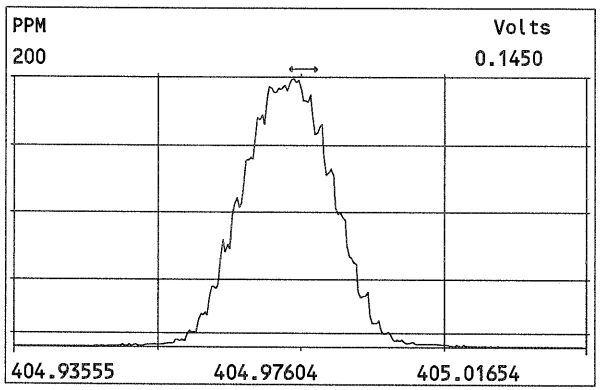


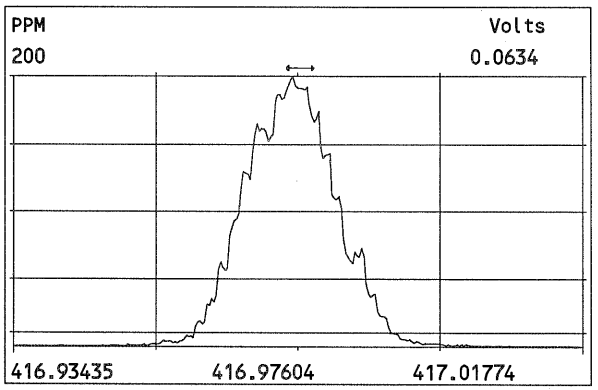
Peak Locate Examination:12-AUG-2010:11:09 File:12AUG10M
Experiment:PCDD Function:3 Reference:PFK

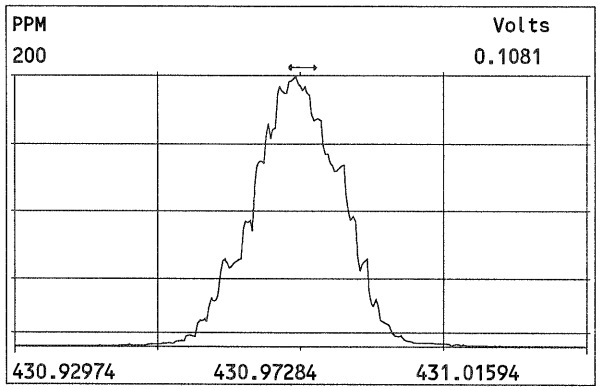


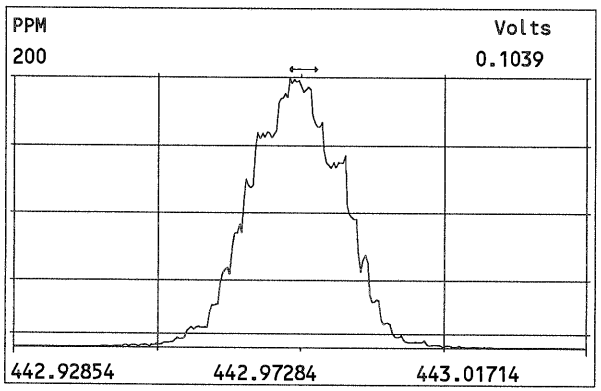


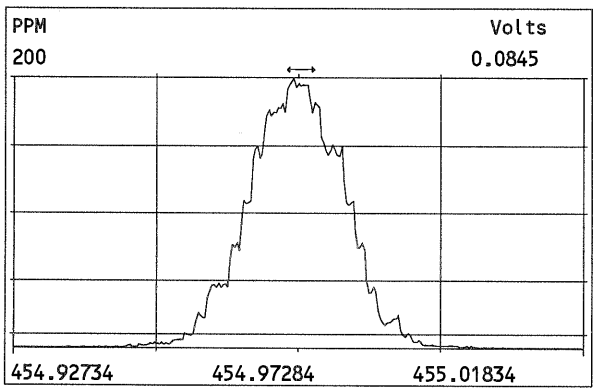




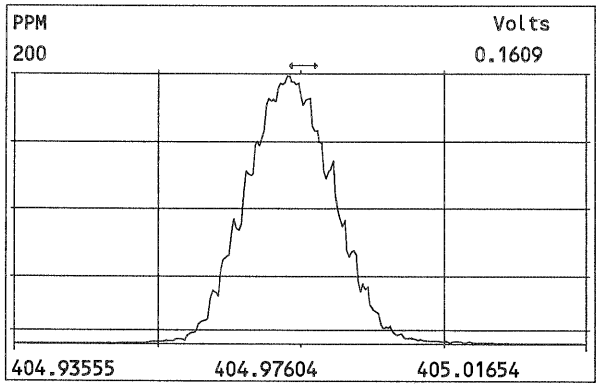


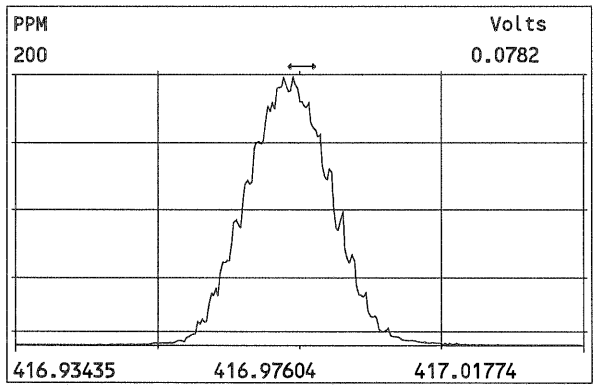


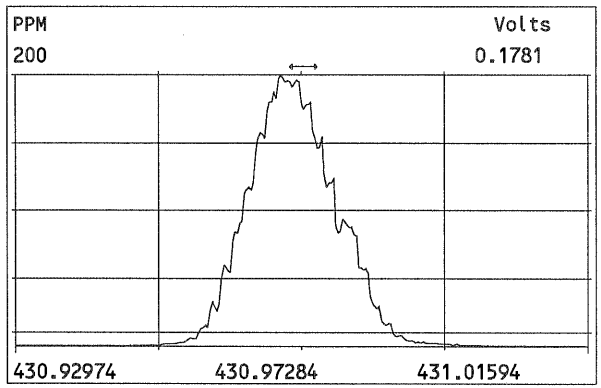


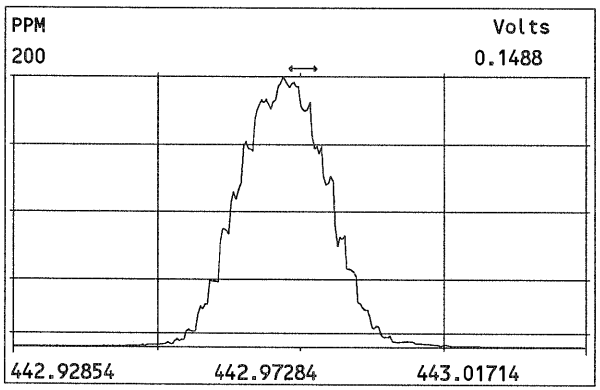


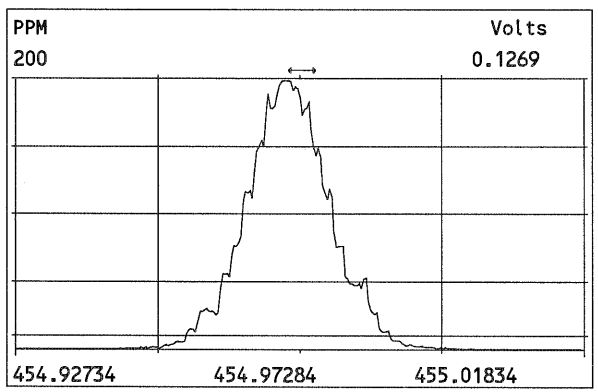
Peak Locate Examination:12-AUG-2010:11:10 File:12AUG10M
Experiment:PCDD Function:4 Reference:PFK

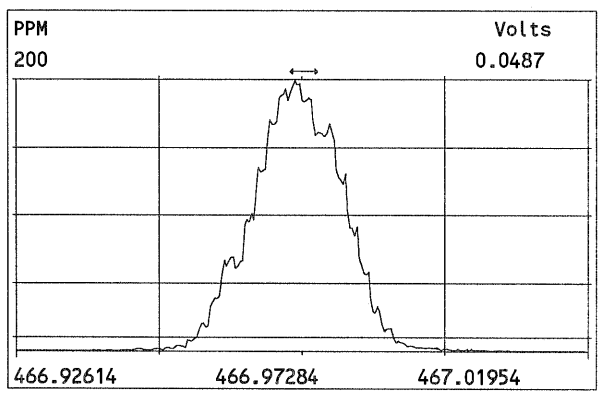


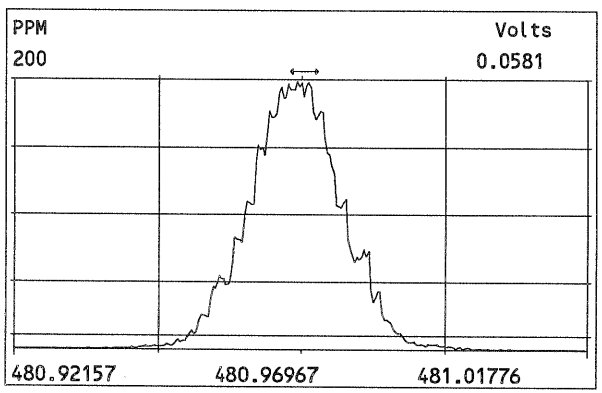




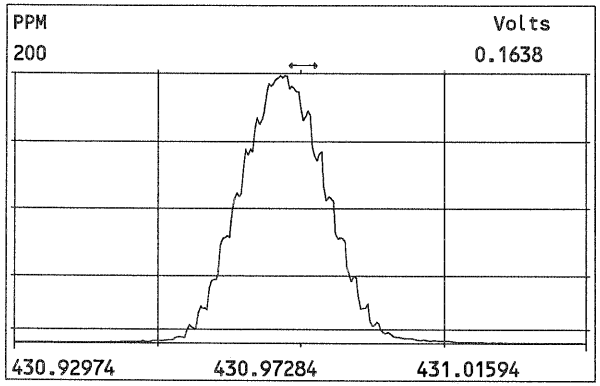


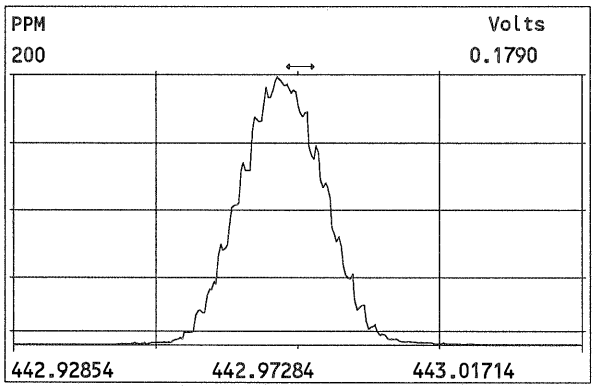


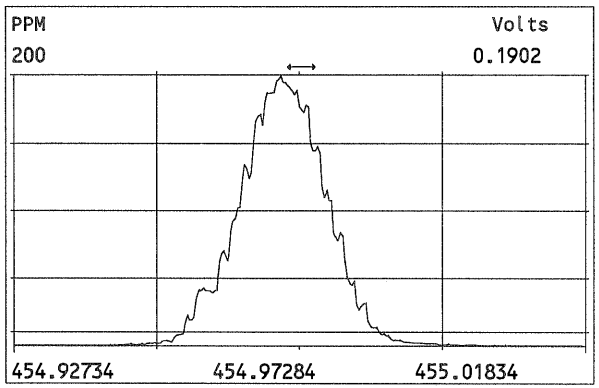


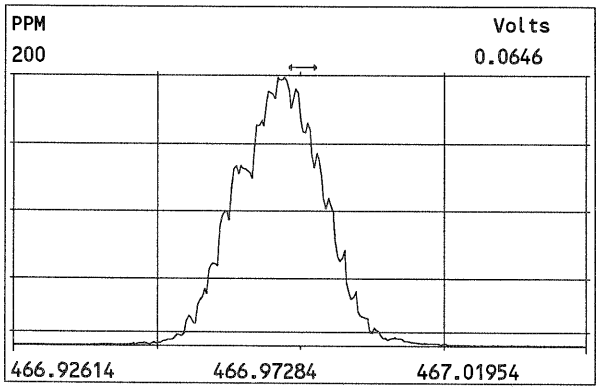


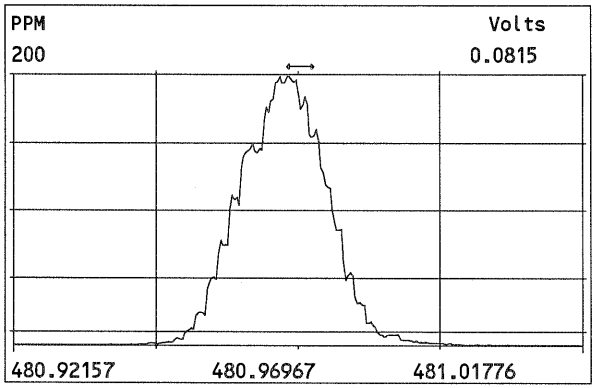
Peak Locate Examination:12-AUG-2010:11:10 File:12AUG10M
Experiment:PCDD Function:5 Reference:PFK

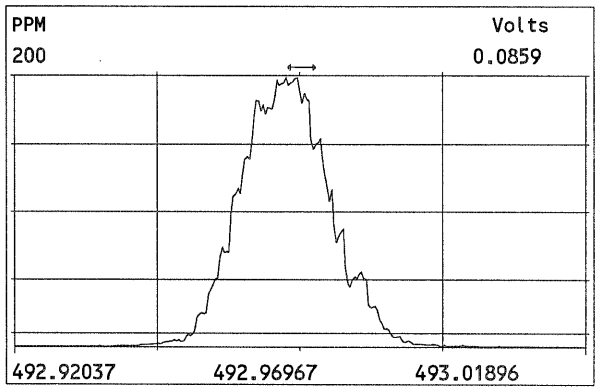


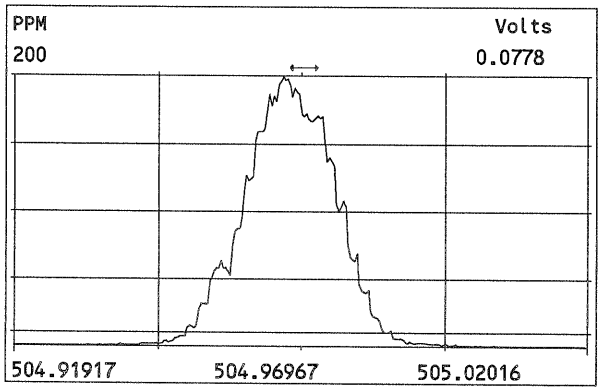


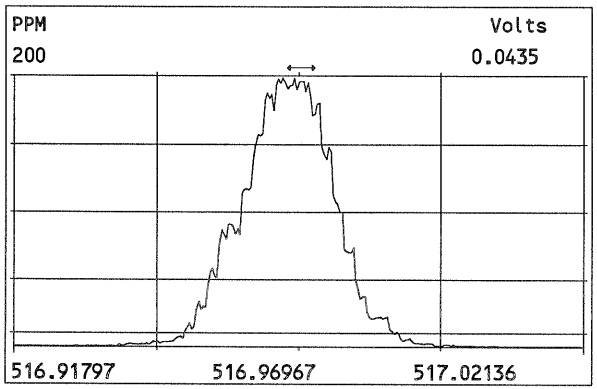




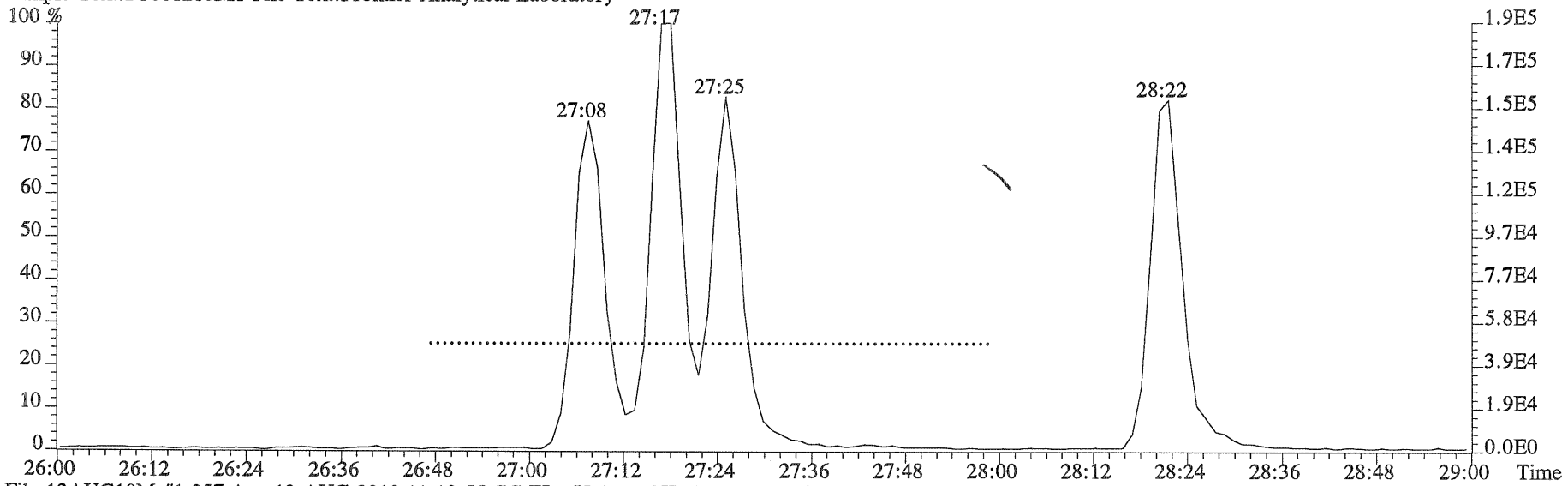




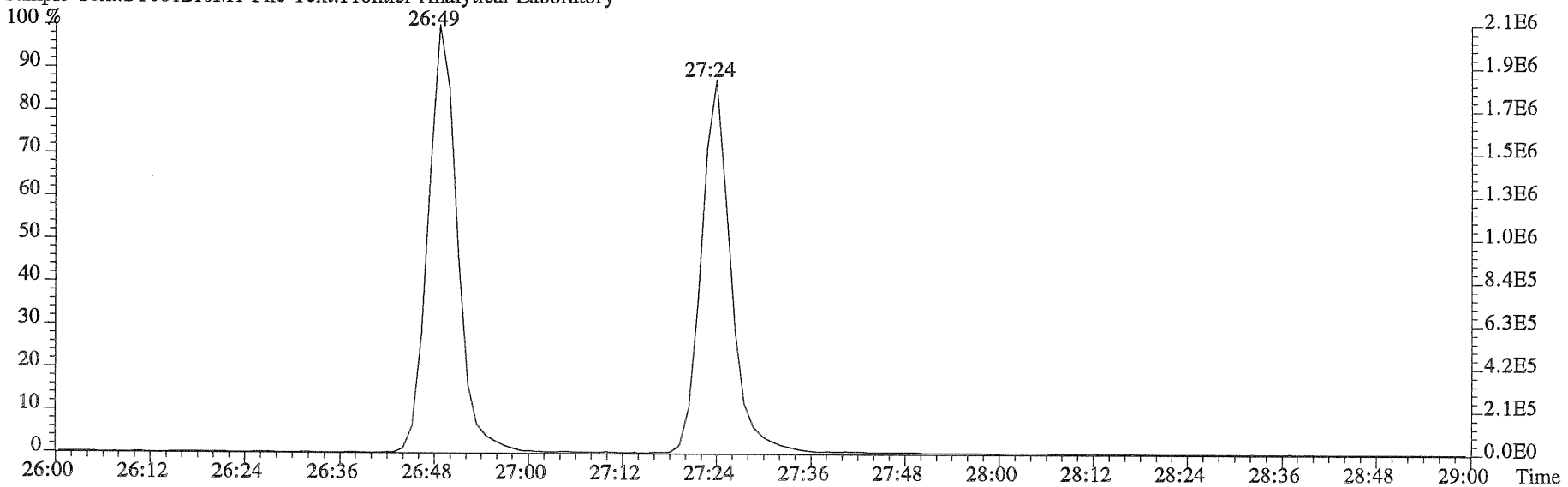




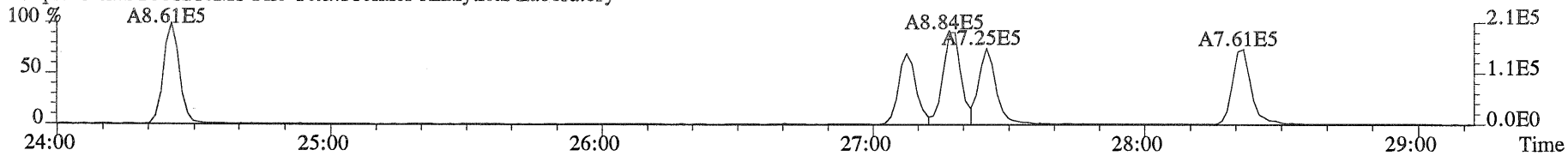
File:12AUG10M #1-357 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
319.8965 Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



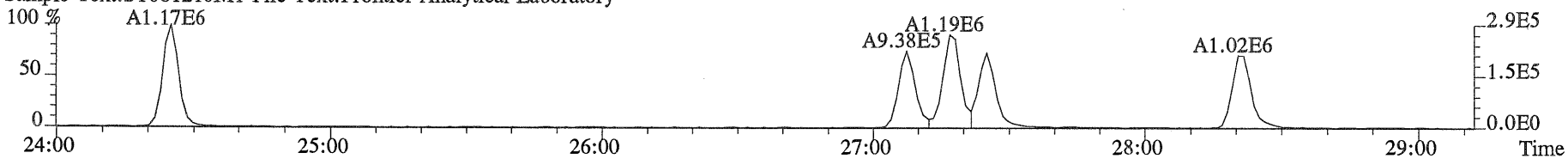
File:12AUG10M #1-357 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
333.9339 Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



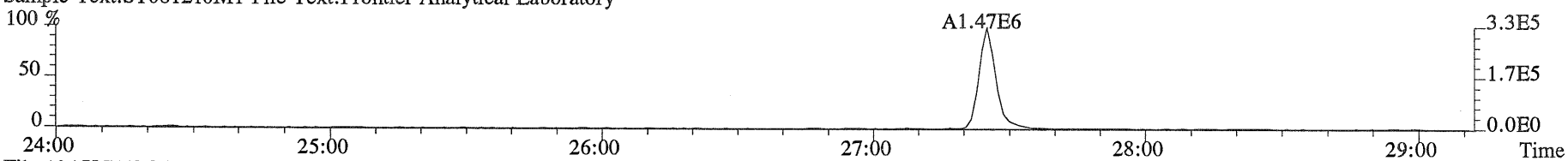
File:12AUG10M #1-357 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



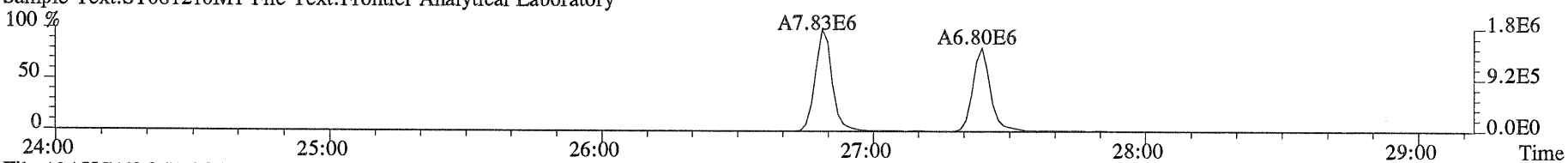
File:12AUG10M #1-357 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



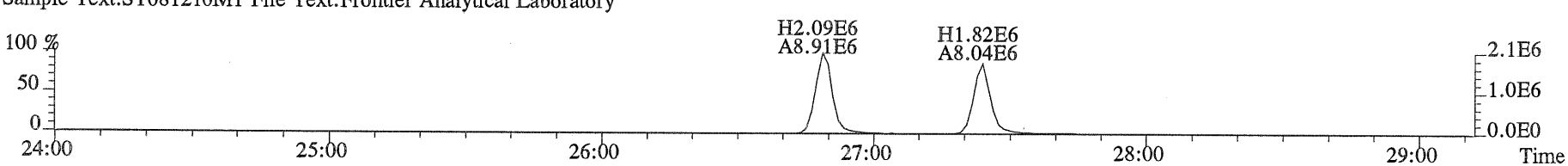
File:12AUG10M #1-357 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



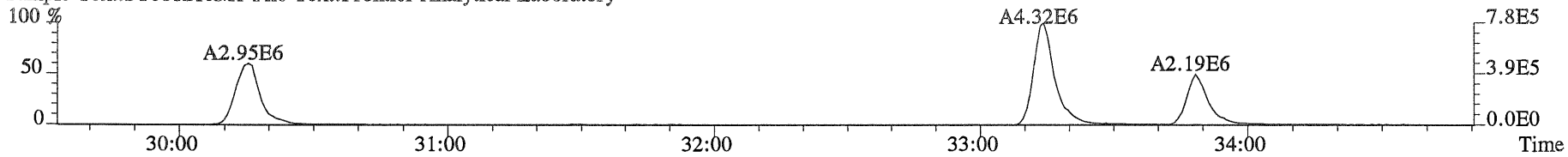
File:12AUG10M #1-357 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



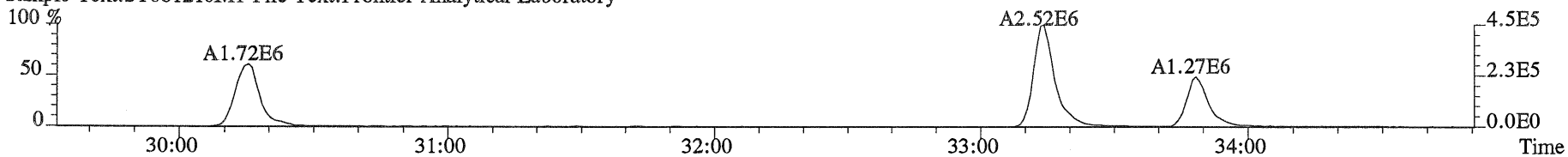
File:12AUG10M #1-357 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



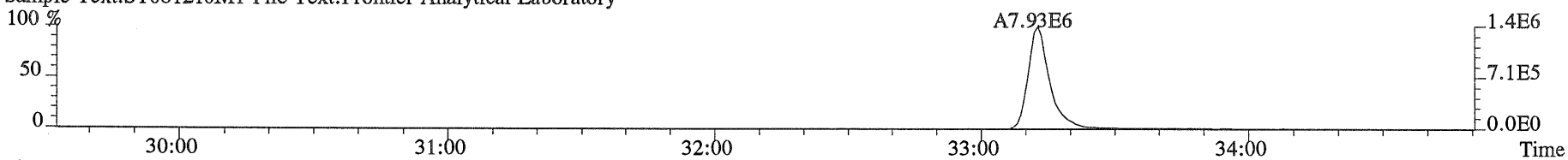
File:12AUG10M #1-411 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



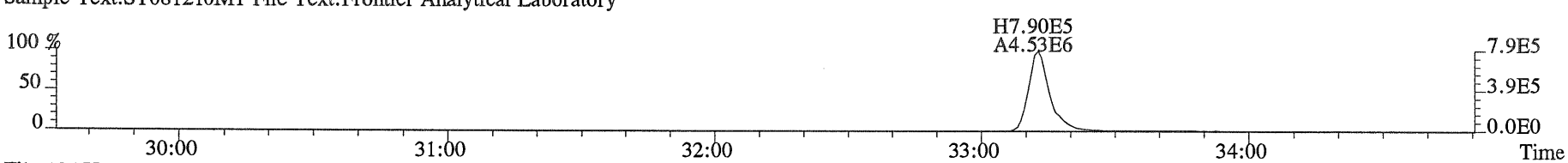
File:12AUG10M #1-411 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
357.8517 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



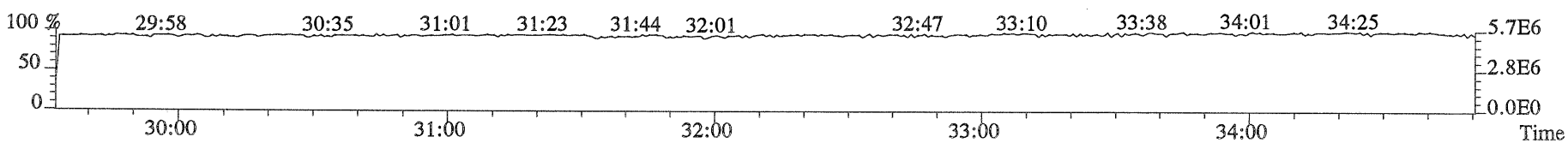
File:12AUG10M #1-411 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



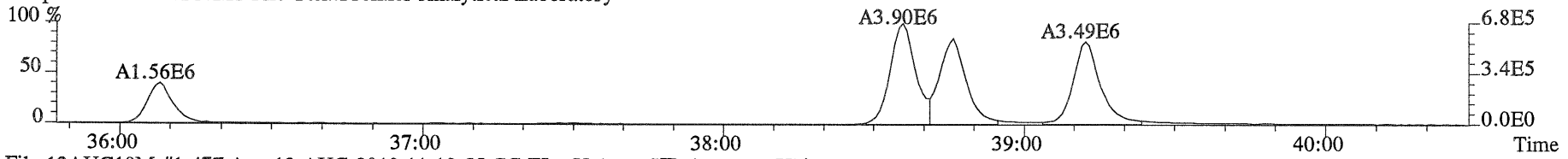
File:12AUG10M #1-411 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
369.8919 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



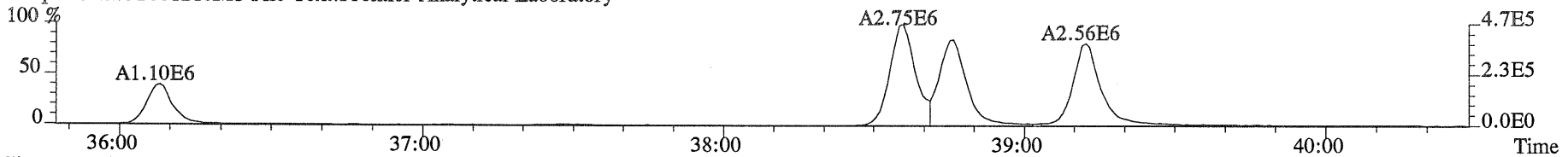
File:12AUG10M #1-411 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
366.9792 F:2 Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



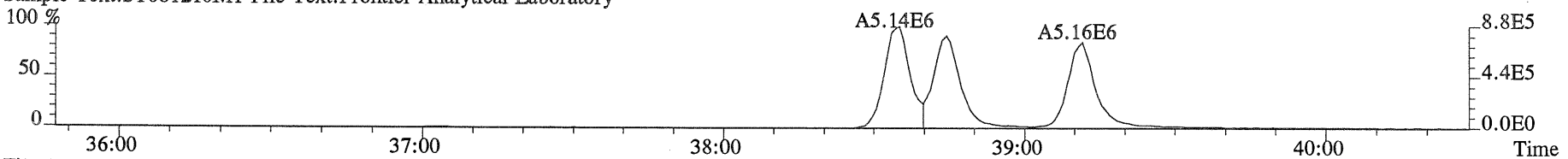
File:12AUG10M #1-477 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



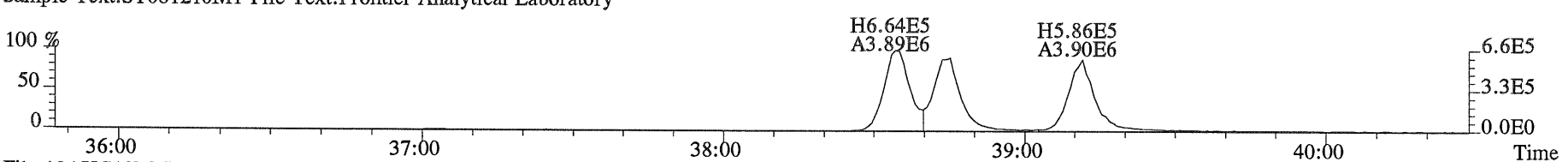
File:12AUG10M #1-477 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



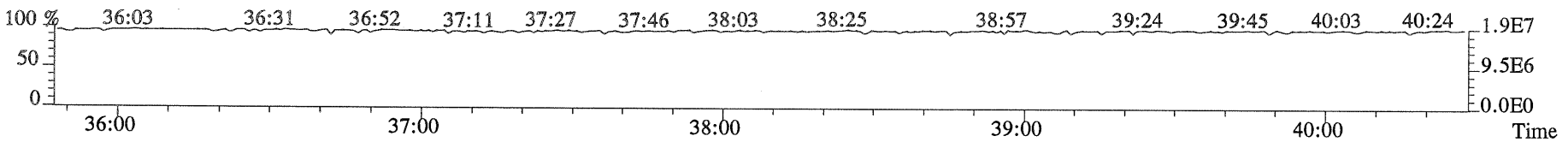
File:12AUG10M #1-477 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



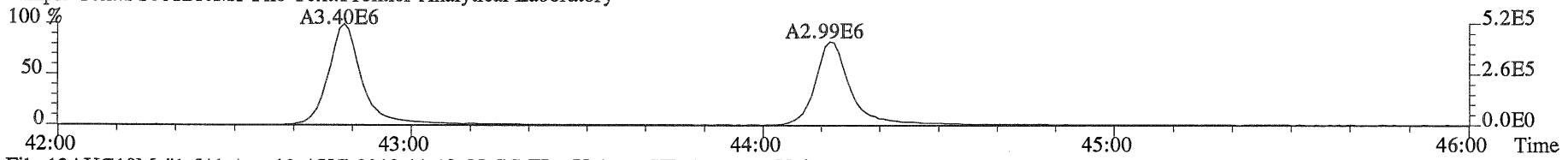
File:12AUG10M #1-477 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



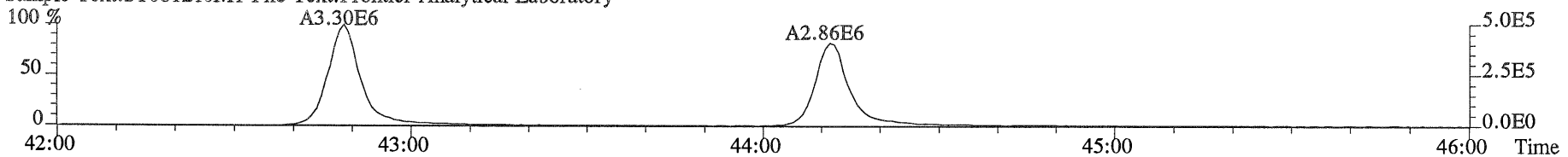
File:12AUG10M #1-477 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
LOCK_MASS_CHECK F:3 Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



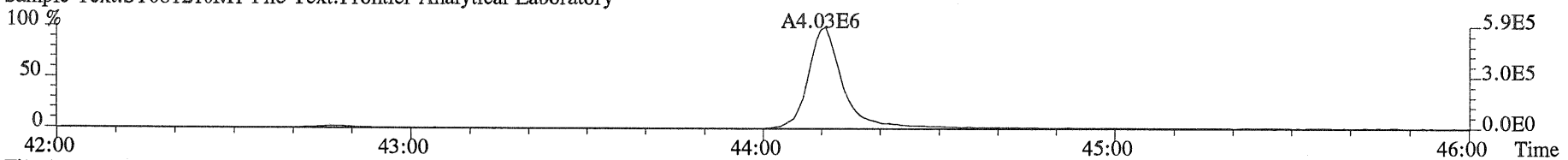
File:12AUG10M #1-541 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



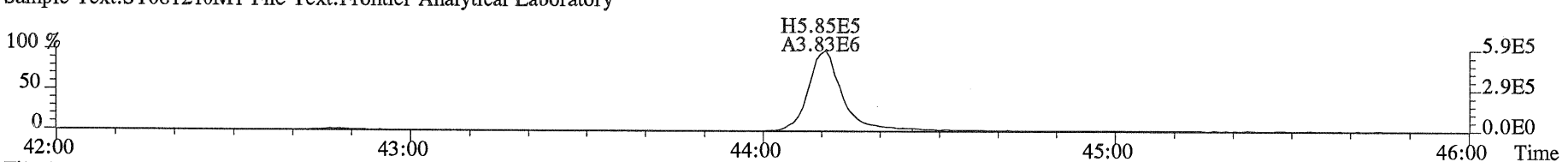
File:12AUG10M #1-541 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



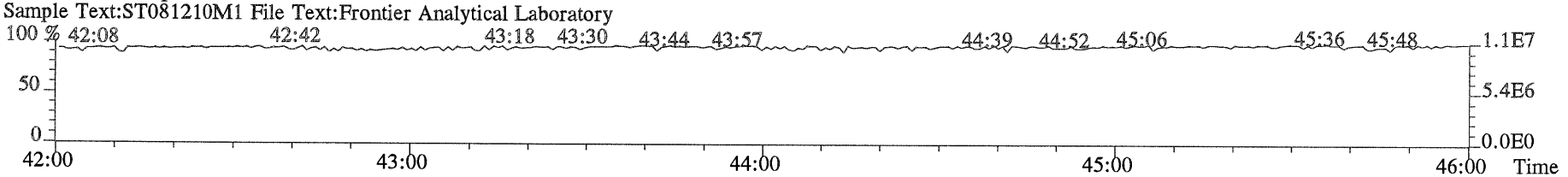
File:12AUG10M #1-541 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



File:12AUG10M #1-541 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



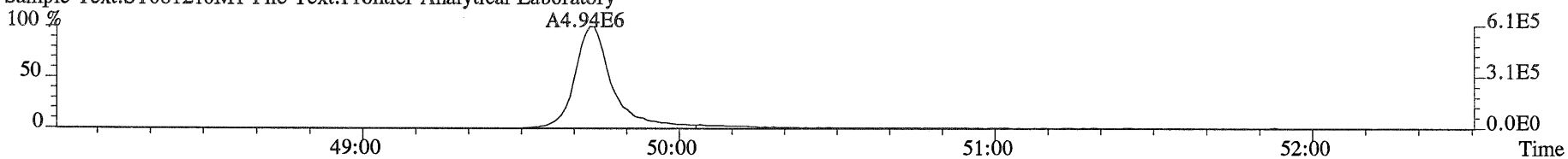
File:12AUG10M #1-541 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
430.9728 F:4 Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



File:12AUG10M #1-347 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory

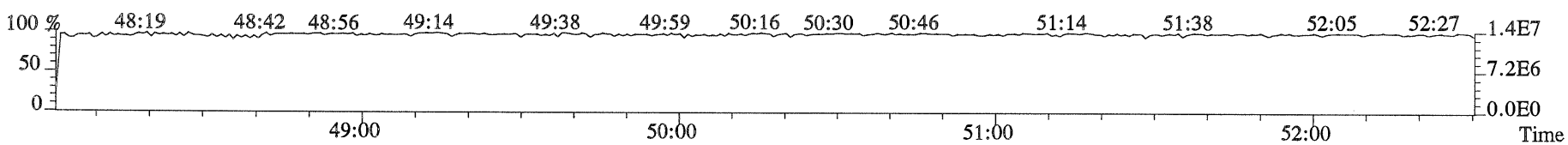
File:12AUG10M #1-347 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory

File:12AUG10M #1-347 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory

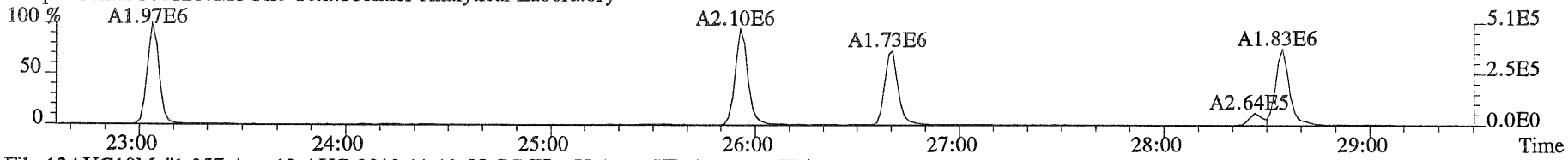


File:12AUG10M #1-347 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory

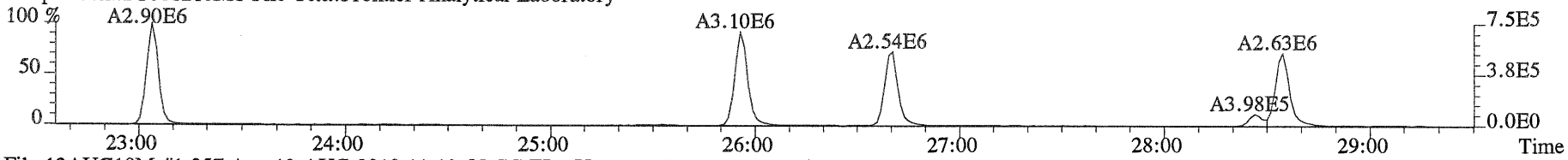
File:12AUG10M #1-347 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
454.9728 F:5 Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



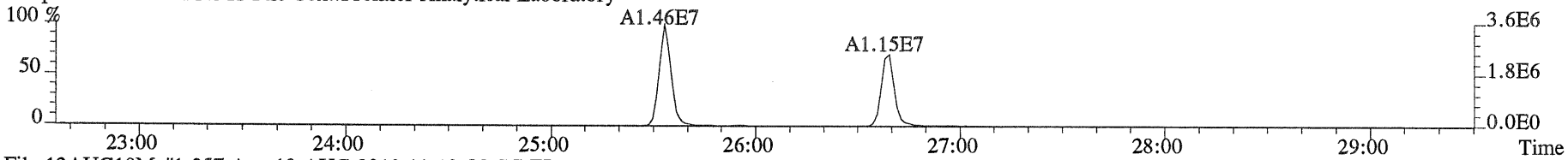
File:12AUG10M #1-357 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



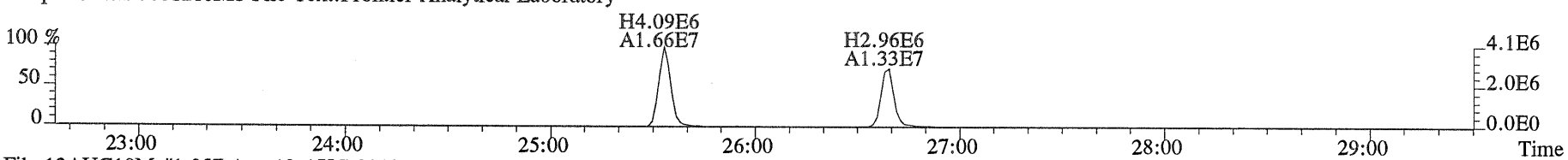
File:12AUG10M #1-357 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



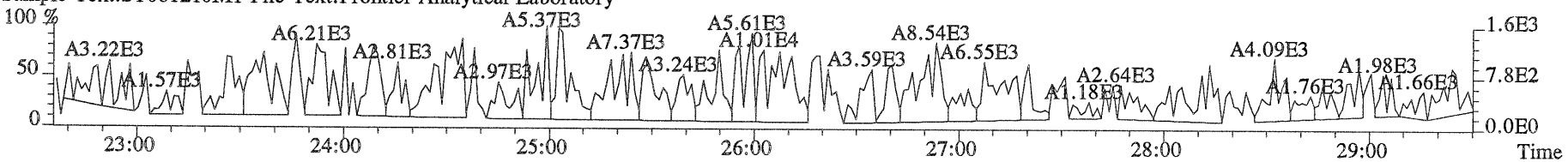
File:12AUG10M #1-357 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



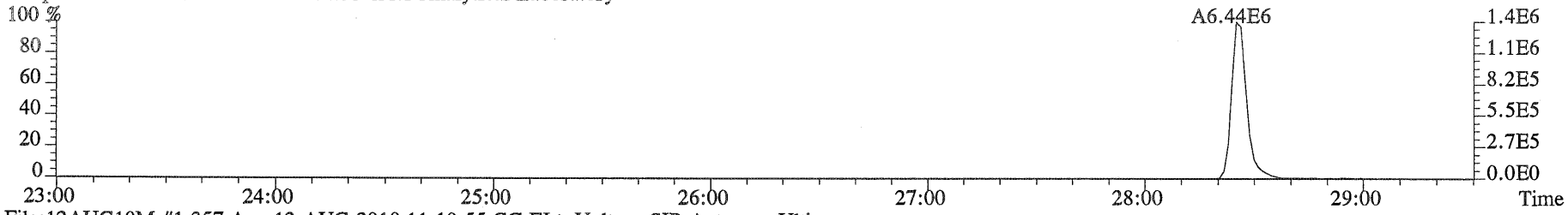
File:12AUG10M #1-357 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



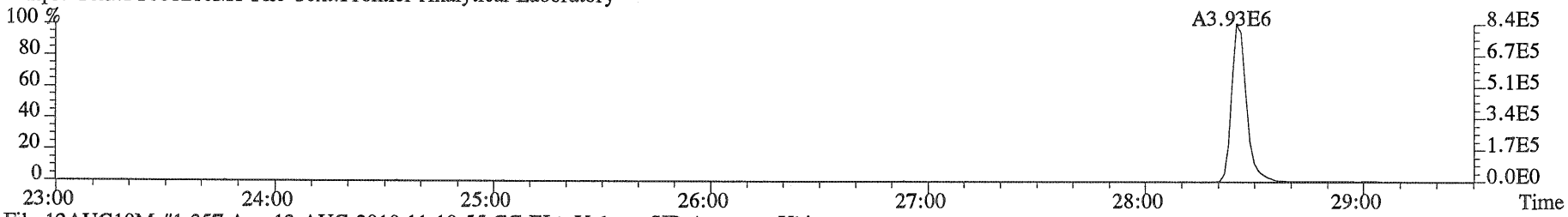
File:12AUG10M #1-357 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



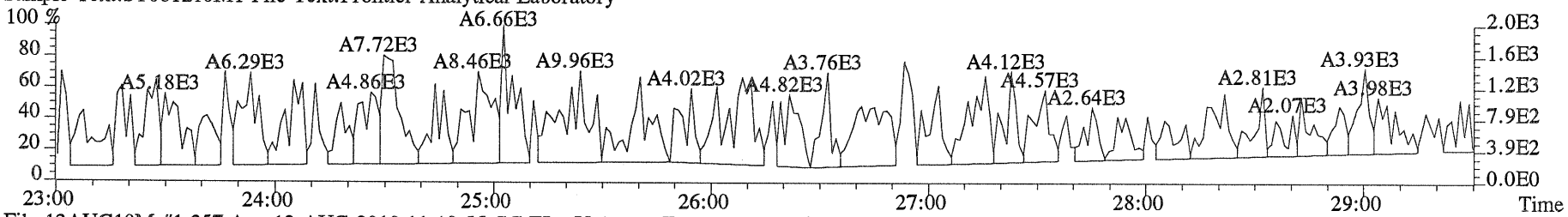
File:12AUG10M #1-357 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



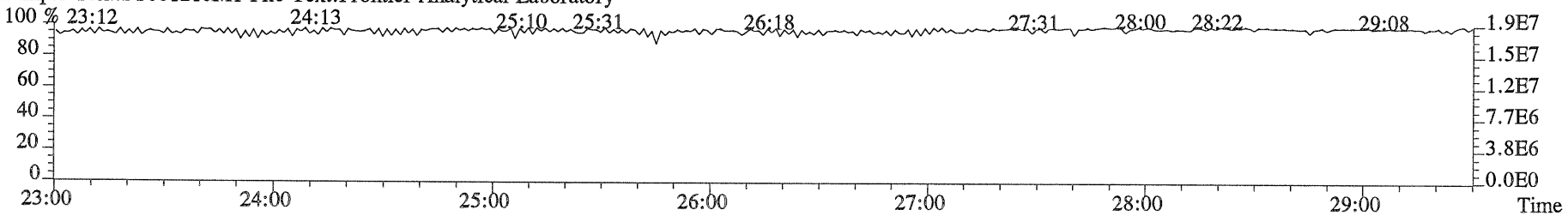
File:12AUG10M #1-357 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
341.8568 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



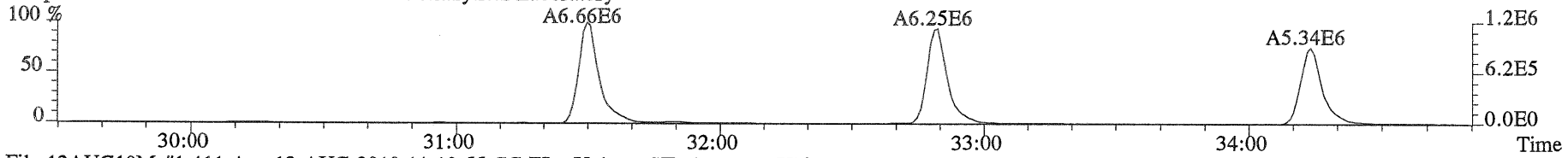
File:12AUG10M #1-357 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



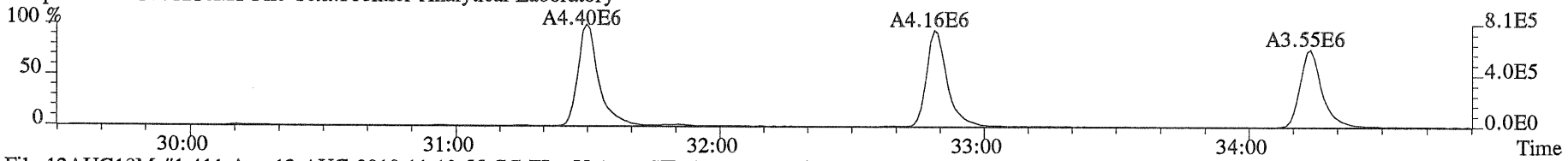
File:12AUG10M #1-357 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
330.9792 Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



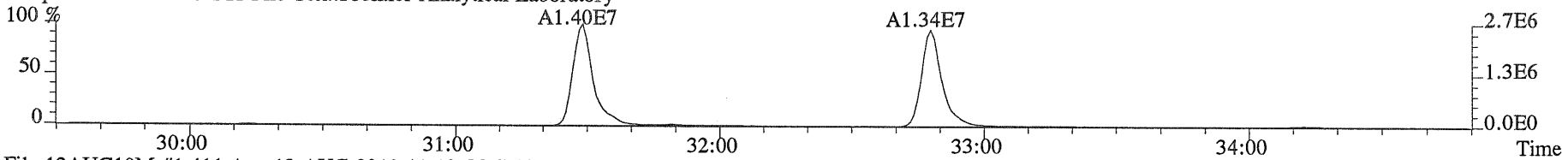
File:12AUG10M #1-411 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



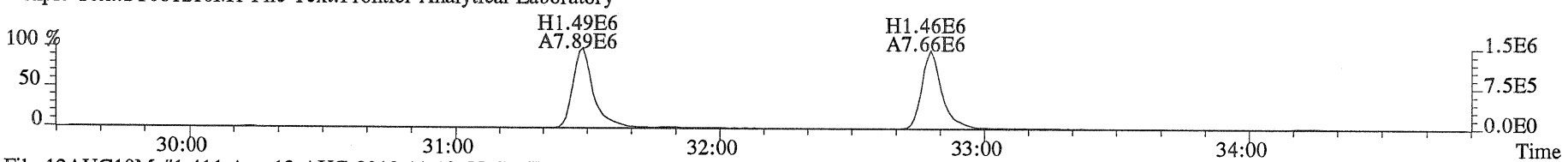
File:12AUG10M #1-411 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



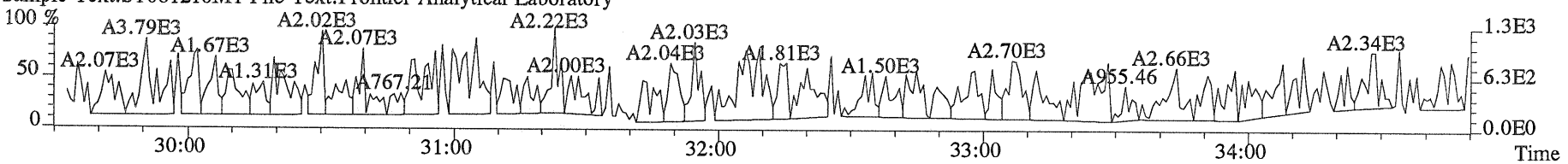
File:12AUG10M #1-411 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



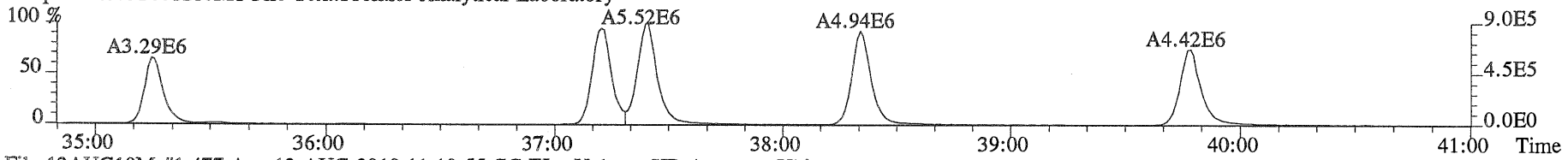
File:12AUG10M #1-411 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
353.8970 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



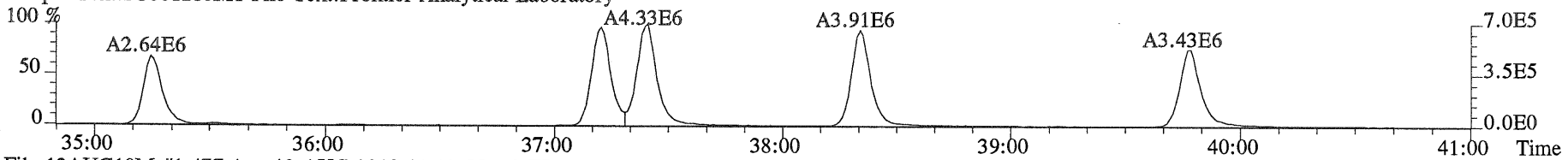
File:12AUG10M #1-411 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



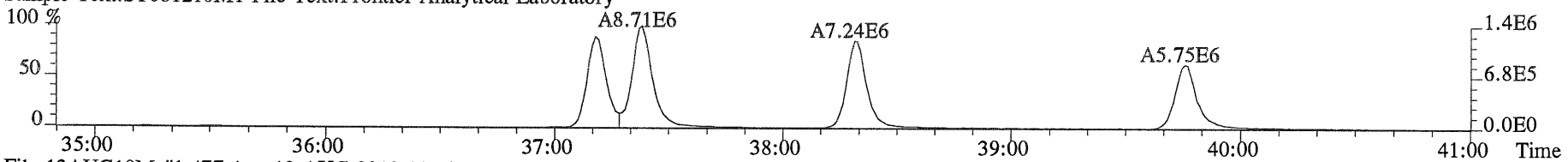
File:12AUG10M #1-477 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



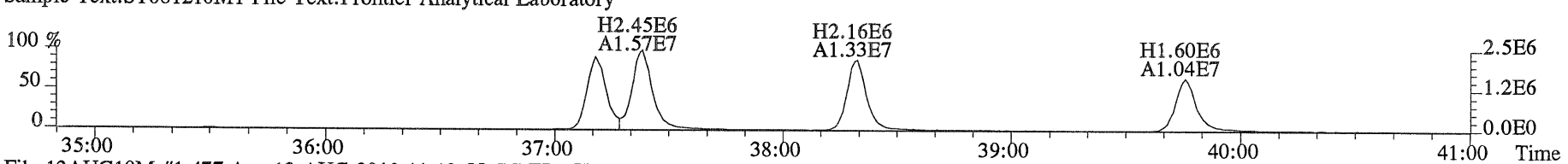
File:12AUG10M #1-477 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



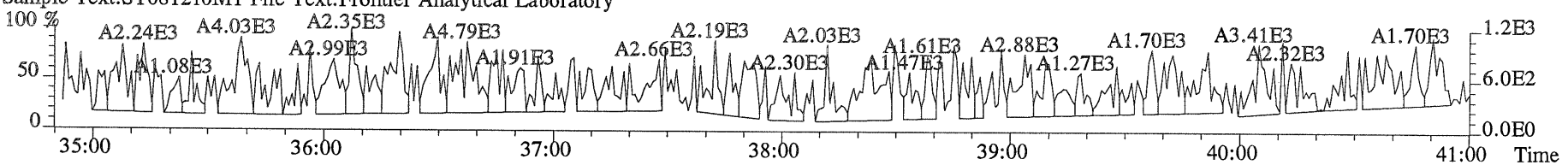
File:12AUG10M #1-477 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



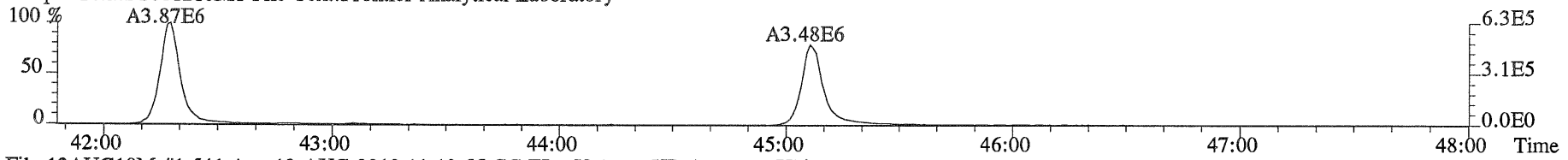
File:12AUG10M #1-477 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



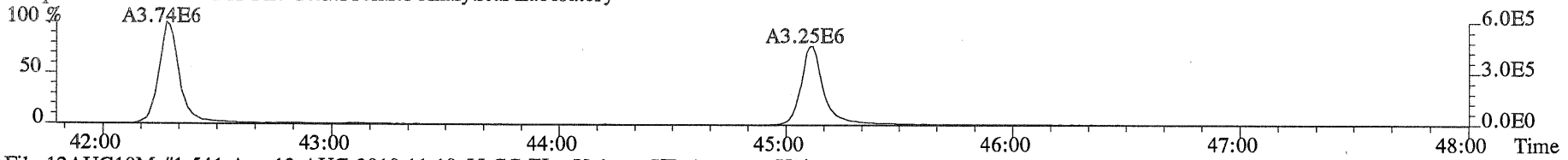
File:12AUG10M #1-477 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



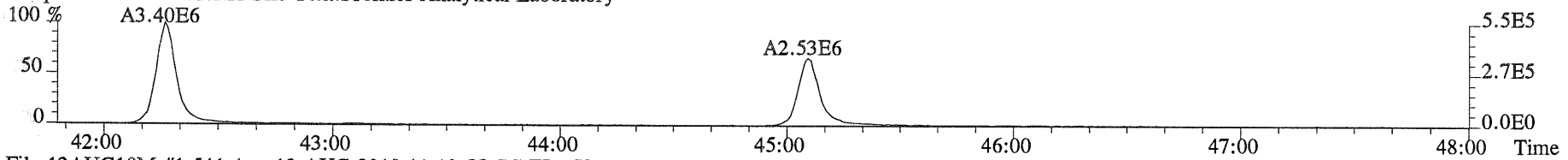
File:12AUG10M #1-541 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



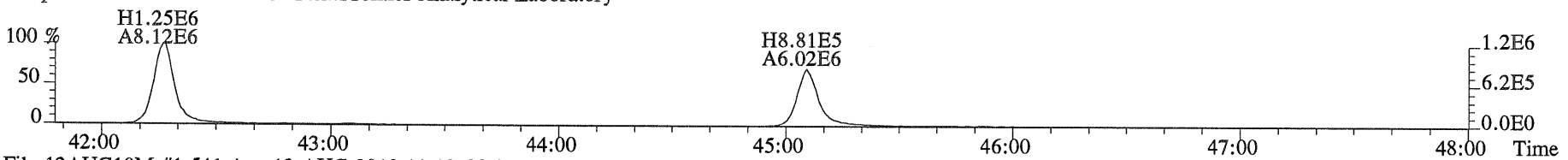
File:12AUG10M #1-541 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



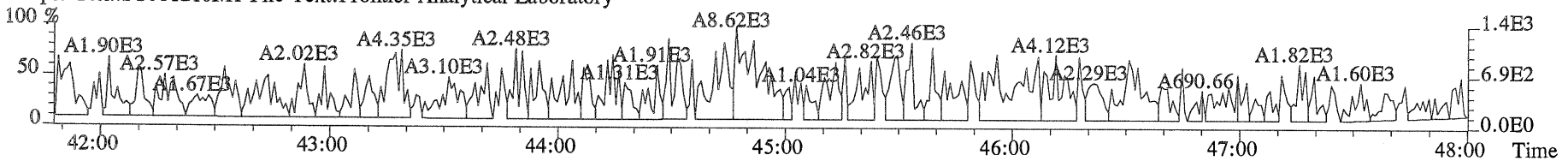
File:12AUG10M #1-541 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



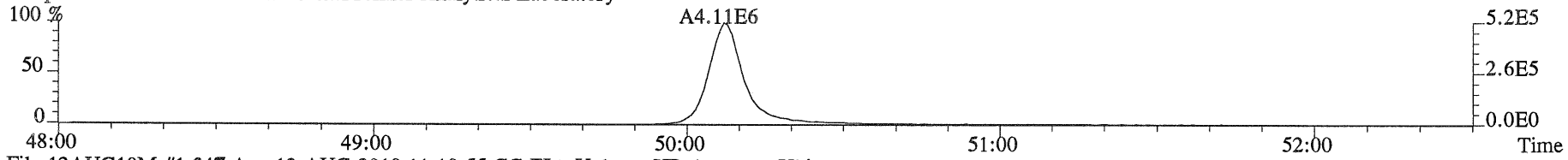
File:12AUG10M #1-541 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



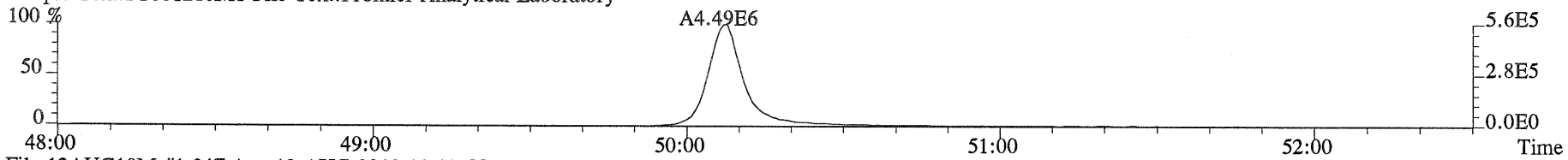
File:12AUG10M #1-541 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



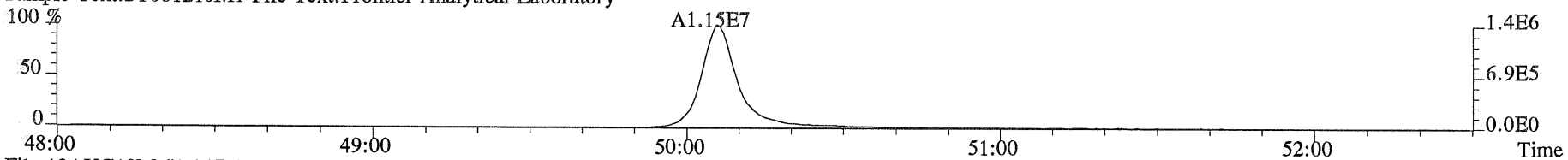
File:12AUG10M #1-347 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



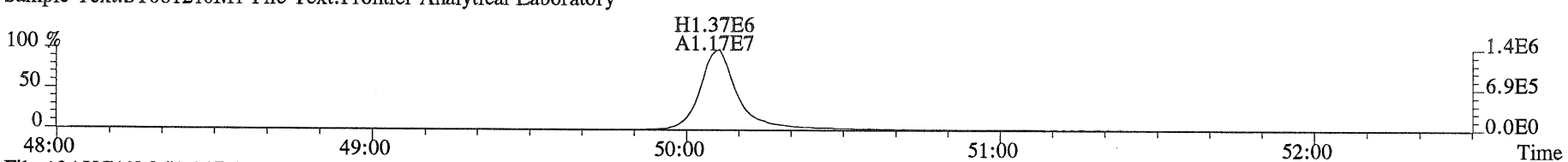
File:12AUG10M #1-347 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



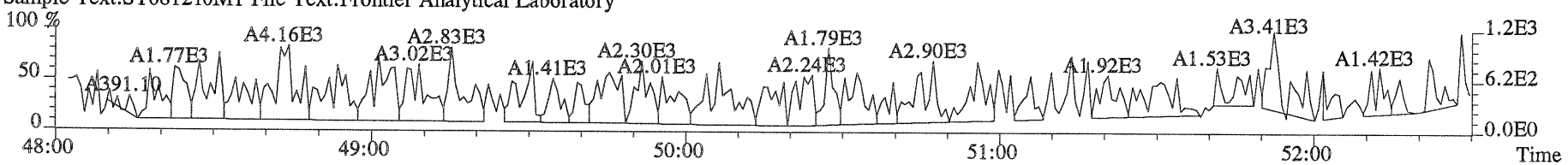
File:12AUG10M #1-347 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory



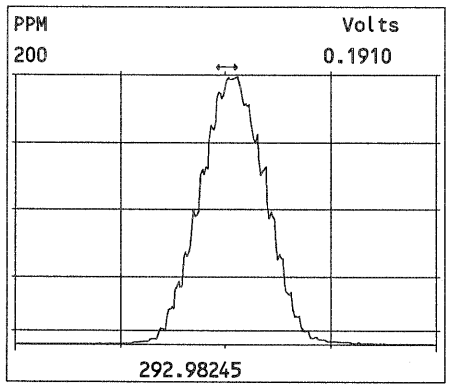
File:12AUG10M #1-347 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory

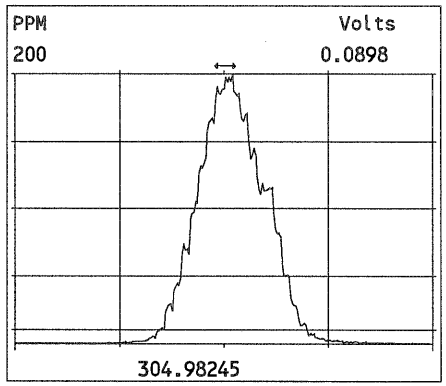


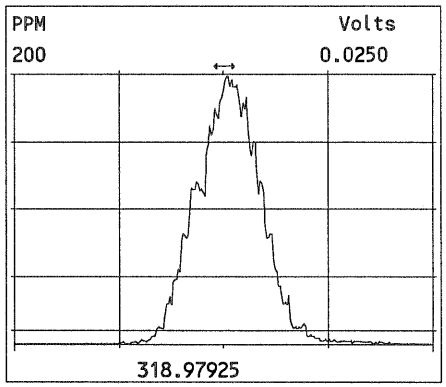
File:12AUG10M #1-347 Acq:12-AUG-2010 11:10:55 GC EI+ Voltage SIR Autospec-Ultima
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M1 File Text:Frontier Analytical Laboratory

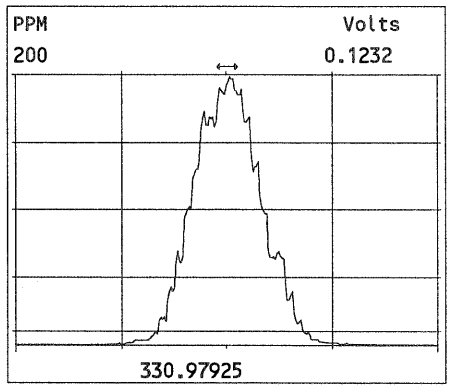


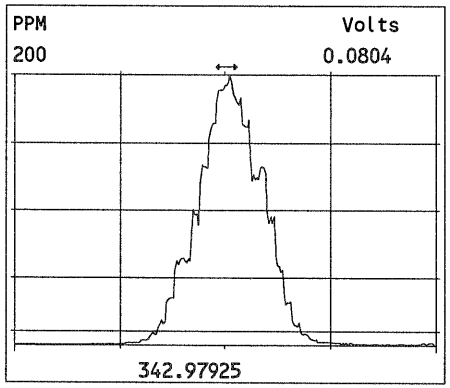
Peak Locate Examination:13-AUG-2010:09:21 File:12AUG10M_RES_CHECK
Experiment:PCDD Function:1 Reference:PFK

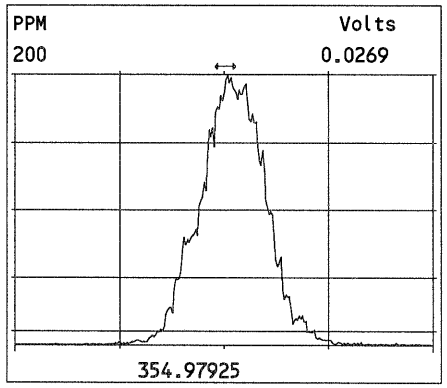


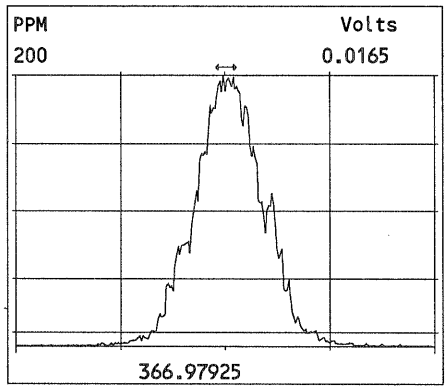


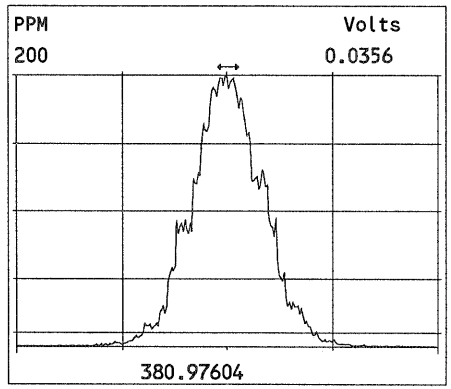


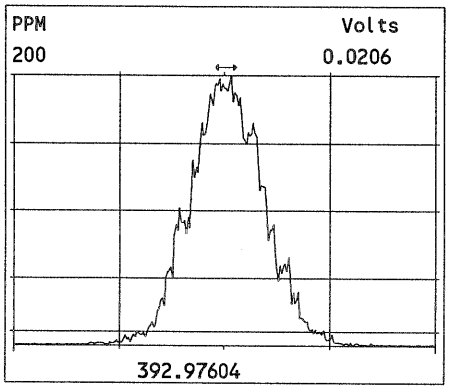


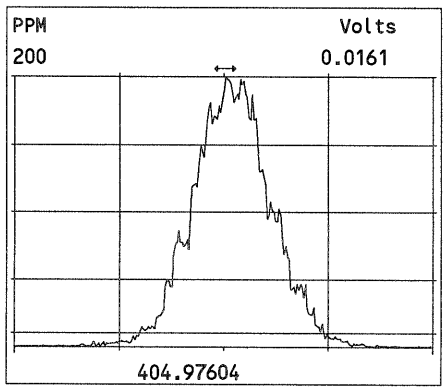


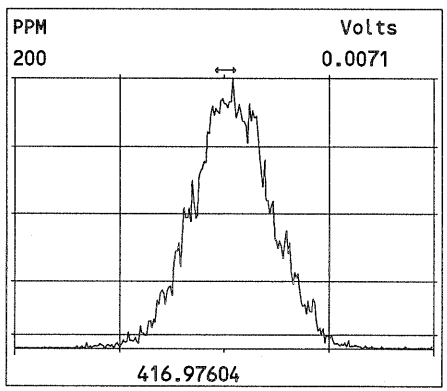




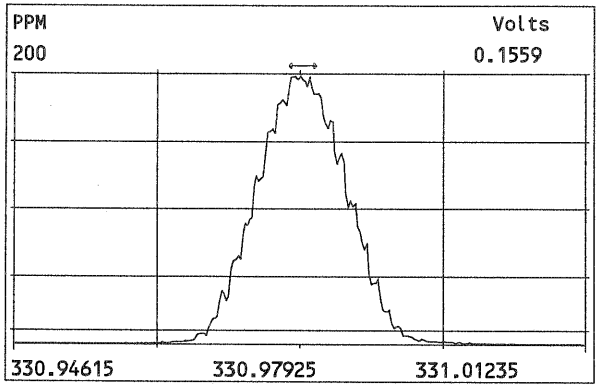


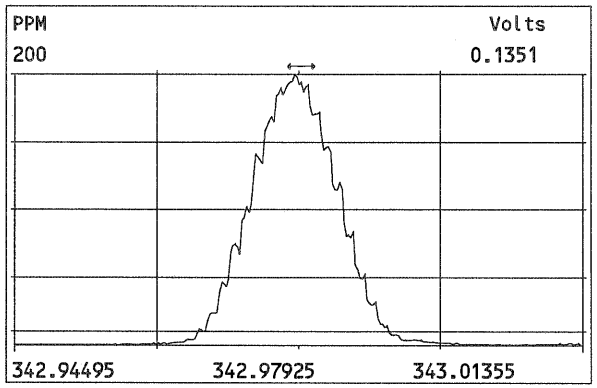


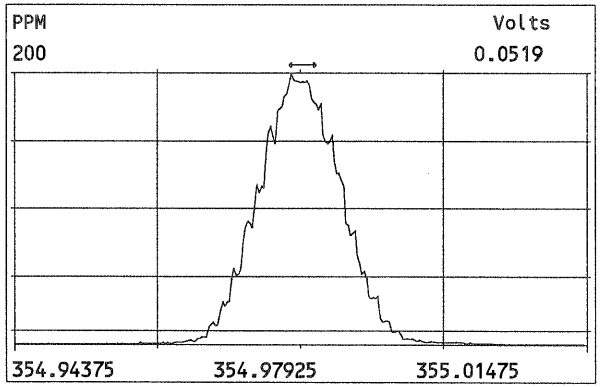


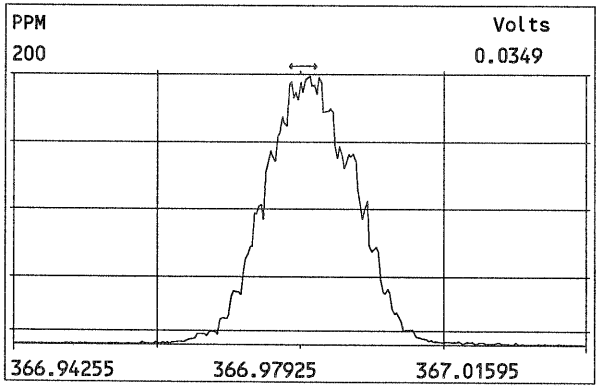


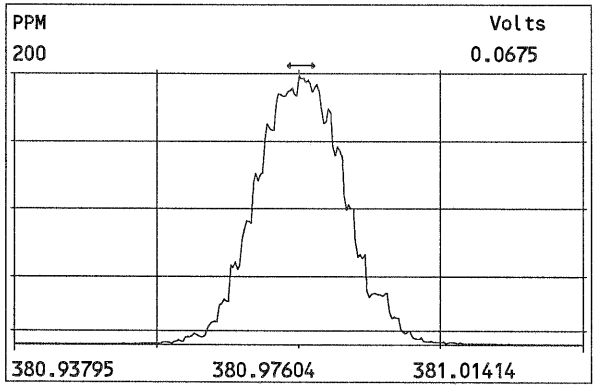
Peak Locate Examination:13-AUG-2010:09:21 File:12AUG10M_RES_CHECK
Experiment:PCDD Function:2 Reference:PFK

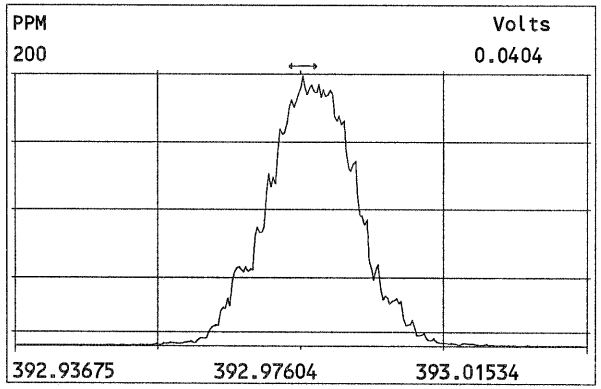


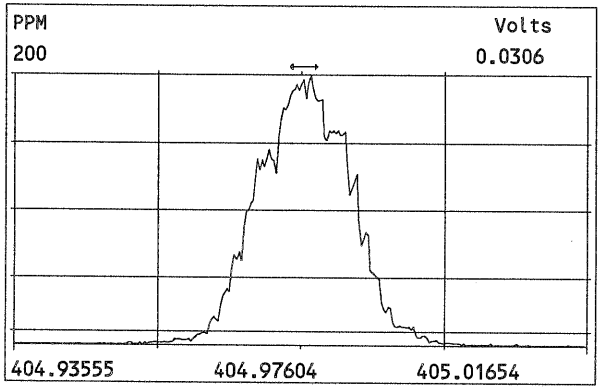


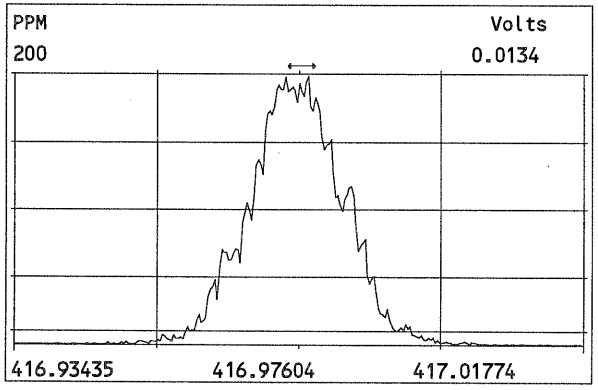






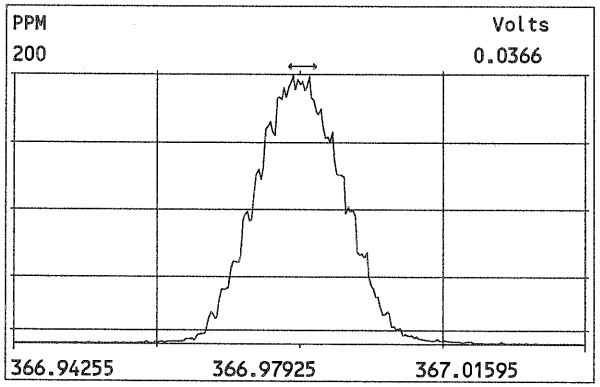


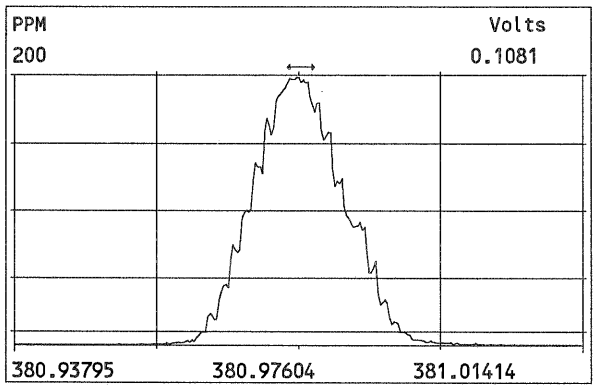


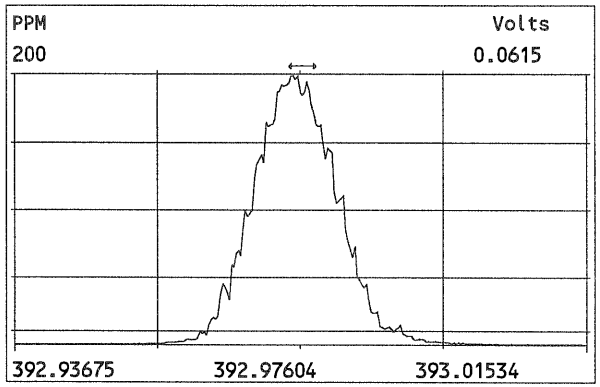


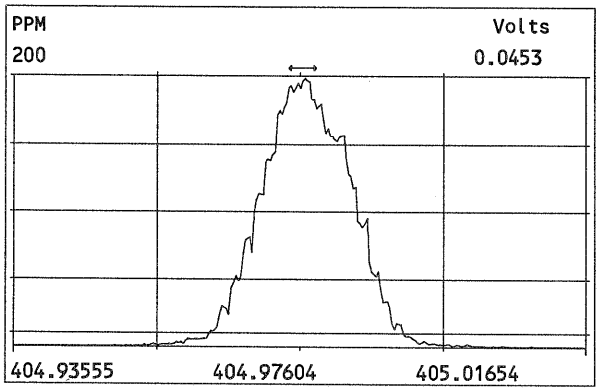
Peak Locate Examination:13-AUG-2010:09:22 File:12AUG10M_RES_CHECK

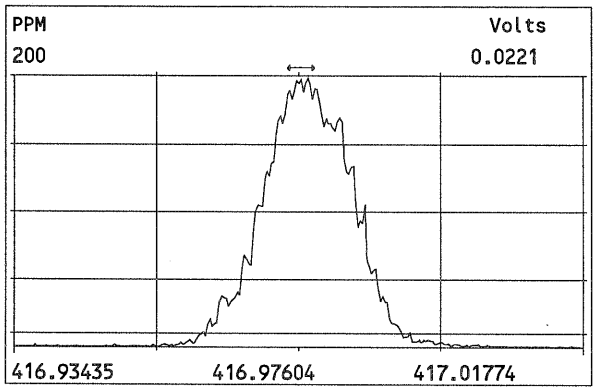
Experiment:PCDD Function:3 Reference:PFK

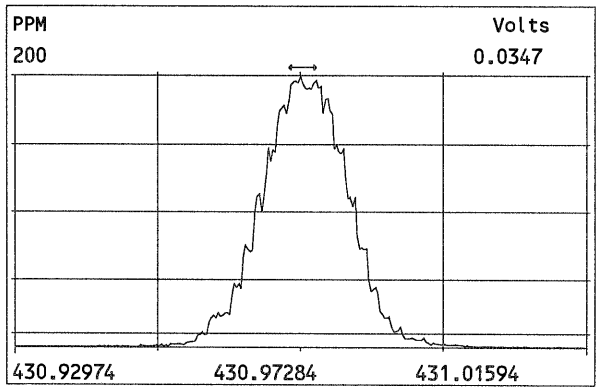


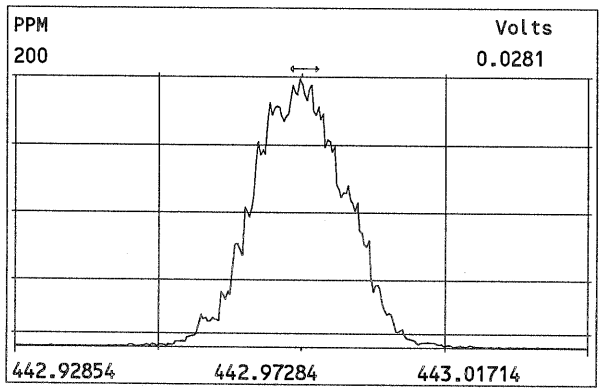


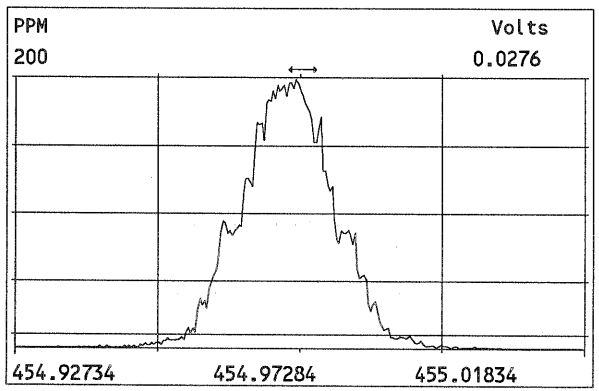






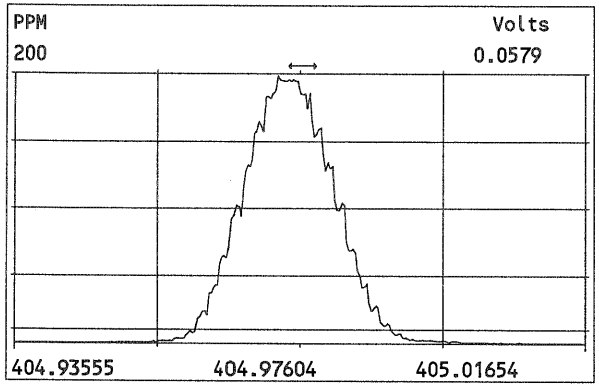


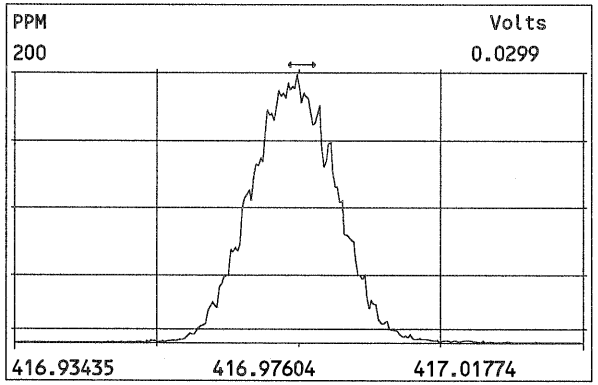


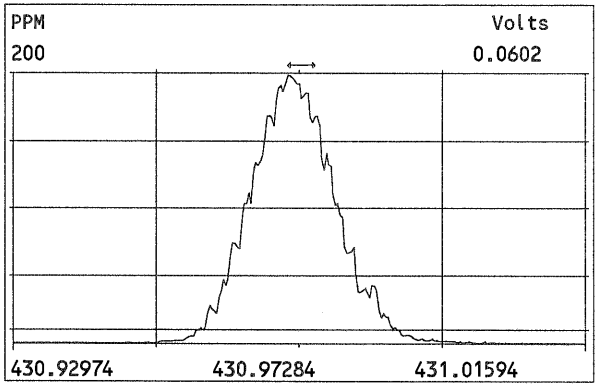


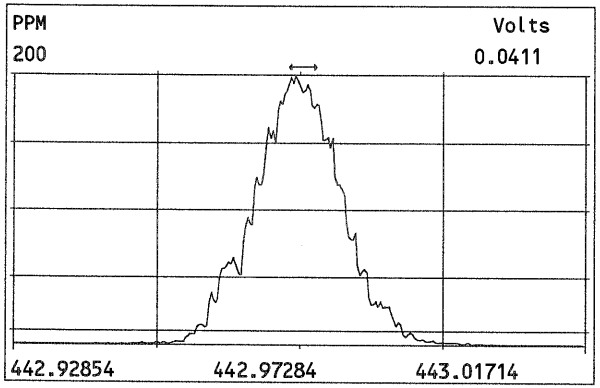
Peak Locate Examination:13-AUG-2010:09:22 File:12AUG10M_RES_CHECK

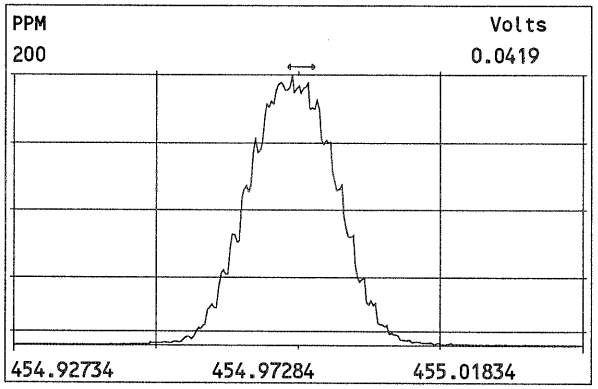
Experiment:PCDD Function:4 Reference:PFK

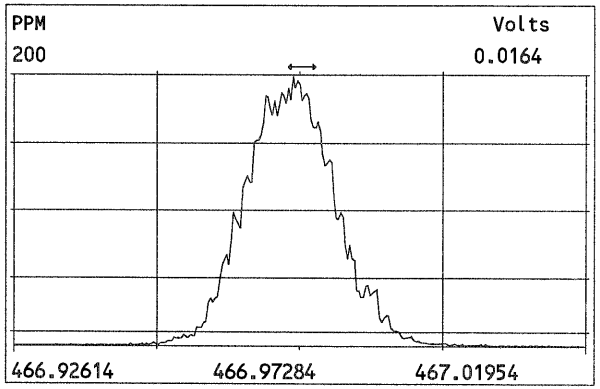


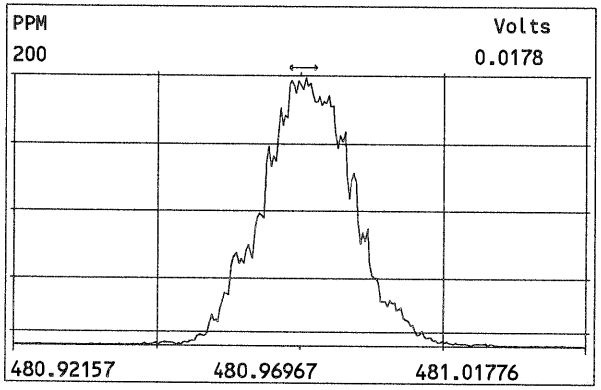




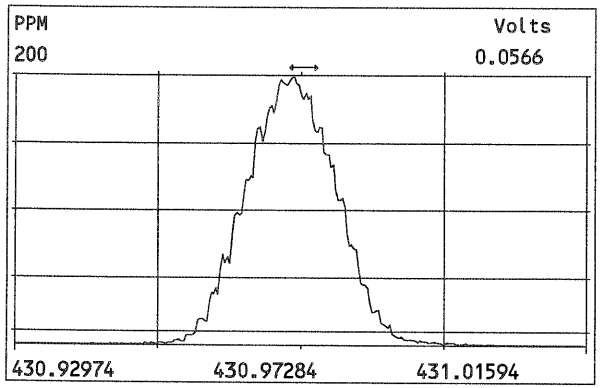


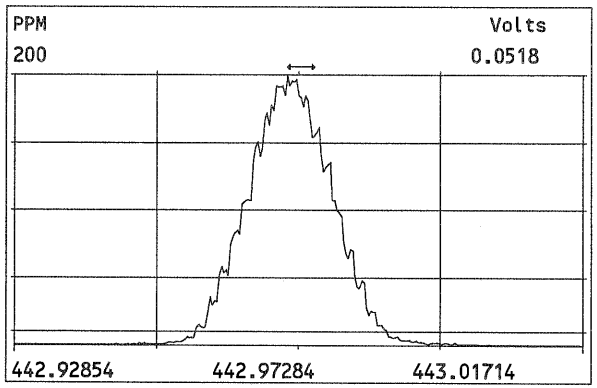


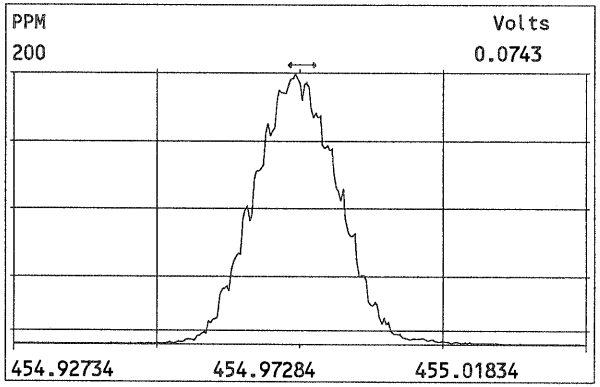


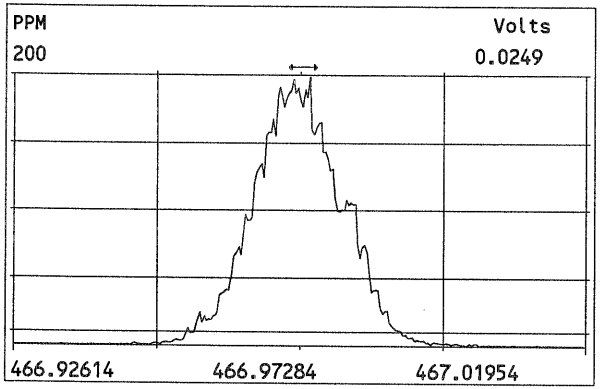


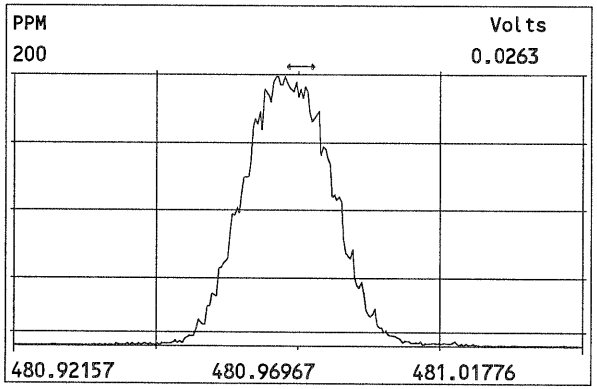
Peak Locate Examination:13-AUG-2010:09:22 File:12AUG10M_RES_CHECK
Experiment:PCDD Function:5 Reference:PFK

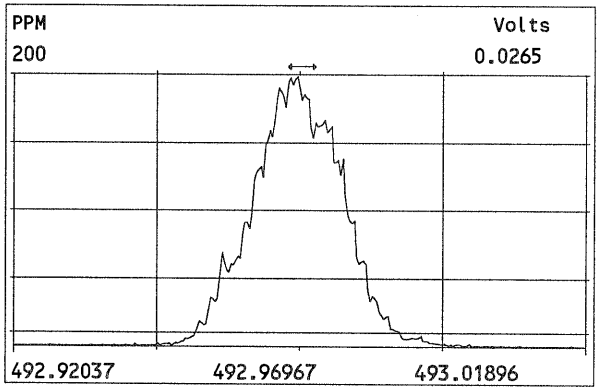


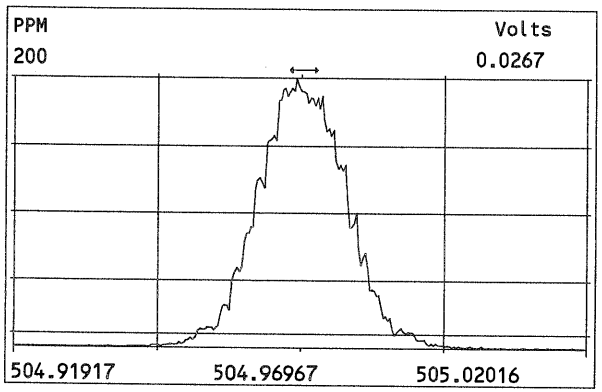


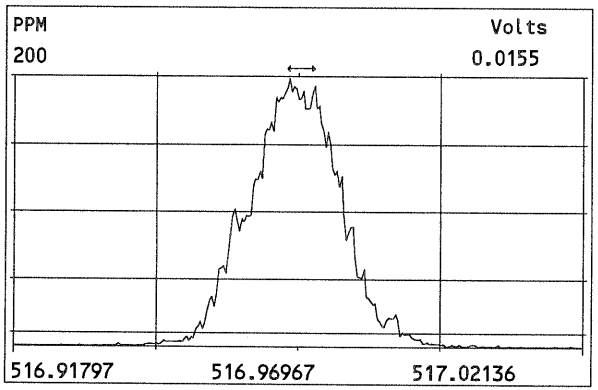












USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 12AUG10M Sam:16 Analysis Date: 13-AUG-10 01:01:28

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
2,3,7,8-TCDD	M/M+2	0.73	0.65-0.89	y	10.9	7.80 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	1.72	1.32-1.78	y	51.7	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.42	1.05-1.43	y	55.6	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.42	1.05-1.43	y	53.6	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.39	1.05-1.43	y	58.0	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	52.4	43.0 - 58.0
OCDD	M+2/M+4	0.99	0.76-1.02	y	111	79.0 - 126
2,3,7,8-TCDF	M/M+2	0.68	0.65-0.89	y	10.6	8.40 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.51	1.32-1.78	y	55.7	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.49	1.32-1.78	y	53.0	41.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	y	47.3	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	49.1	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	y	49.2	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.28	1.05-1.43	y	48.4	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.06	0.88-1.20	y	47.6	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	y	47.6	43.0 - 58.0
OCDF	M+2/M+4	0.90	0.76-1.02	y	103	63.0 - 159

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

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

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

Analyst: _____ Date: 8/13/10

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 12AUG10M Sam:16 Analysis Date: 13-AUG-10 01:01:28

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.87	0.65-0.89	y	101	82.0 - 121
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.72	1.32-1.78	y	111	62.0 - 160
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.31	1.05-1.43	y	103	85.0 - 117
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.32	1.05-1.43	y	96.0	85.0 - 118
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	101	72.0 - 138
13C-OCDD	M+2/M+4	0.93	0.76-1.02	y	195	96.0 - 415
13C-2,3,7,8-TCDF	M/M+2	0.87	0.65-0.89	y	99.2	71.0 - 140
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.74	1.32-1.78	y	104	76.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.73	1.32-1.78	y	110	77.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	123	76.0 - 131
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	y	116	70.0 - 143
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.55	0.43-0.59	y	118	73.0 - 137
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.54	0.43-0.59	y	122	74.0 - 135
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.43	0.37-0.51	y	115	78.0 - 129
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.40	0.37-0.51	y	122	77.0 - 129
13C-OCDF	M+2/M+4	0.97	0.76-1.02	y	213	96.0 - 415
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					10.1	7.80 - 12.8

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

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

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

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

Analyst: _____ Date: 8/13/10

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: FAL3 Initial Calibration Date: 5/12/10

RT Window Data Filename: 12AUG10M Sam:16 Analysis Date: 13-AUG-10 Time: 01:01:28

DB-5 IS Data Filename: 12AUG10M Sam:16 Analysis Date: 13-AUG-10 Time: 01:01:28

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

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:26	1,3,6,8-TCDF (F)	23:05
1,2,8,9-TCDD (L)	28:23	1,2,8,9-TCDF (L)	28:36
1,2,4,7,9-PeCDD (F)	30:17	1,3,4,6,8-PeCDF (F)	28:28
1,2,3,8,9-PeCDD (L)	33:50	1,2,3,8,9-PeCDF (L)	34:15
1,2,4,6,7,9-HxCDD (F)	36:10	1,2,3,4,6,8-HxCDF (F)	35:17
1,2,3,7,8,9-HxCDD (L)	39:14	1,2,3,7,8,9-HxCDF (L)	39:48
1,2,3,4,6,7,9-HpCDD (F)	42:51	1,2,3,4,6,7,8-HpCDF (F)	42:19
1,2,3,4,6,7,8-HpCDD (L)	44:13	1,2,3,4,7,8,9-HpCDF (L)	45:08

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

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

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

Analyst: E Date: 8/13/10

USEPA - ITD

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 13-AUG-10 01:01:28 CS3 or VER Data Filename: 12AUG10M Sam:16

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052
13C-2,3,7,8-TCDD		1.021	0.976-1.043
13C-2,3,7,8-TCDF		0.993	0.923-1.103
13C-1,2,3,7,8-PeCDD		1.238	1.000-1.567
13C-1,2,3,7,8-PeCDF		1.174	0.923-1.203
13C-2,3,4,7,8-PeCDF		1.223	0.923-1.303

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

Analyst: _____ Date: 8/13/10

USEPA - ITD

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 13-AUG-10 01:01:28 CS3 or VER Data Filename: 12AUG10M Sam:16

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.001	0.999-1.001
OCDF	13C-OCDF	1.001	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.984	0.977-1.000
13C-1,2,3,6,7,8-HxCDD		0.988	0.981-1.003
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975
13C-2,3,4,6,7,8-HxCDF		0.978	0.959-1.021
13C-1,2,3,7,8,9-HxCDF		1.014	0.977-1.047
13C-1,2,3,4,6,7,8-HpCDD		1.127	1.086-1.130
13C-1,2,3,4,6,7,8-HpCDF		1.078	1.043-1.085
13C-1,2,3,4,7,8,9-HpCDF		1.150	1.057-1.154
13C-OCDD		1.269	1.032-1.311
13C-OCDF		1.278	1.000-1.311

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

Analyst: _____ Date: 8/13/10

FAL ID: ST081210M2 Filename: 12AUG10M Sam:16 Acquired: 13-AUG-10 01:01:28 ICal: PCDDFAL3-5-12-10
Client ID: 1613 CS3 090918J ConCal: ST081210M2 EndCal: ST081210M3
Results: 2078 GC Column: DB5 Amount: 1.000 NATO 1989 Tox: 105
WHO 1998 Tox: 131 WHO 2005 Tox: 119

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	2.44e+06	0.73 y	27:28	1.04	10.9		2.50	-	-	*
1,2,3,7,8-PeCDD	1.11e+07	1.72 y	33:16	1.05	51.7		2.50	-	-	*
1,2,3,4,7,8-HxCDD	1.13e+07	1.42 y	38:37	1.30	55.6		2.50	-	-	*
1,2,3,6,7,8-HxCDD	1.05e+07	1.42 y	38:47	1.28	53.6		2.50	-	-	*
1,2,3,7,8,9-HxCDD	1.12e+07	1.39 y	39:14	1.25	58.0		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	1.06e+07	1.03 y	44:13	1.35	52.4		2.50	-	-	*
OCDD	1.37e+07	0.99 y	49:47	1.25	111		2.50	-	-	*
2,3,7,8-TCDF	6.02e+06	0.68 y	26:42	1.62	10.6		2.50	-	-	*
1,2,3,7,8-PeCDF	1.73e+07	1.51 y	31:32	0.92	55.7		2.50	-	-	*
2,3,4,7,8-PeCDF	1.68e+07	1.49 y	32:51	0.94	53.0		2.50	-	-	*
1,2,3,4,7,8-HxCDF	1.50e+07	1.26 y	37:14	0.93	47.3		2.50	-	-	*
1,2,3,6,7,8-HxCDF	1.65e+07	1.27 y	37:26	0.84	49.1		2.50	-	-	*
2,3,4,6,7,8-HxCDF	1.52e+07	1.28 y	38:22	0.90	49.2		2.50	-	-	*
1,2,3,7,8,9-HxCDF	1.39e+07	1.28 y	39:48	0.98	48.4		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	1.33e+07	1.06 y	42:19	1.38	47.6		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	1.23e+07	1.05 y	45:08	1.62	47.6		2.50	-	-	*
OCDF	1.55e+07	0.90 y	50:10	0.74	103		2.50	-	-	*
										Rec
13C-2,3,7,8-TCDD	2.15e+07	0.87 y	27:25	0.93	101					101
13C-1,2,3,7,8-PeCDD	2.05e+07	1.72 y	33:15	0.81	111					111
13C-1,2,3,4,7,8-HxCDD	1.56e+07	1.31 y	38:36	0.95	103					103
13C-1,2,3,6,7,8-HxCDD	1.53e+07	1.32 y	38:46	1.00	96.0					96.0
13C-1,2,3,4,6,7,8-HpCDD	1.49e+07	1.04 y	44:12	0.92	101					101
13C-OCDD	1.98e+07	0.93 y	49:46	0.63	195					97.6
13C-2,3,7,8-TCDF	3.51e+07	0.87 y	26:41	0.87	99.2					99.2
13C-1,2,3,7,8-PeCDF	3.40e+07	1.74 y	31:31	0.81	104					104
13C-2,3,4,7,8-PeCDF	3.36e+07	1.73 y	32:50	0.75	110					110
13C-1,2,3,4,7,8-HxCDF	3.42e+07	0.53 y	37:13	1.74	123					123
13C-1,2,3,6,7,8-HxCDF	4.02e+07	0.54 y	37:24	2.17	116					116
13C-2,3,4,6,7,8-HxCDF	3.44e+07	0.55 y	38:21	1.82	118					118
13C-1,2,3,7,8,9-HxCDF	2.91e+07	0.54 y	39:48	1.49	122					122
13C-1,2,3,4,6,7,8-HpCDF	2.02e+07	0.43 y	42:18	1.10	115					115
13C-1,2,3,4,7,8,9-HpCDF	1.59e+07	0.40 y	45:08	0.81	122					122
13C-OCDF	4.05e+07	0.97 y	50:08	1.19	213					106
37Cl-2,3,7,8-TCDD	2.14e+06		27:26	0.93	10.1					101
13C-1,2,3,4-TCDD	2.29e+07	0.84 y	26:51	-	67.4					
13C-1,2,3,4-TCDF	4.07e+07	0.88 y	25:36	-	76.3					
13C-1,2,3,7,8,9-HxCDD	1.60e+07	1.32 y	39:14	-	74.4					

						Fac	Noise-1	Noise-2	DL		#Hom
Total Tetra-Dioxins	1.29e+07		24:26	1.04	58.1	2.50	-	-	*		18
Total Penta-Dioxins	2.41e+07		30:17	1.05	112	2.50	-	-	*		6
Total Hexa-Dioxins	3.75e+07		36:10	1.27	190	2.50	-	-	*		10
Total Hepta-Dioxins	2.27e+07		42:51	1.35	112	2.50	-	-	*		6
Total Tetra-Furans	2.63e+07		23:05	1.62	46.3	2.50	-	-	*		21
1st Fn. Tot Penta-Furans	1.48e+07		28:28	0.93	47.3	2.50	-	-	*	PeCDF	1
Total Penta-Furans	4.96e+07		30:14	0.93	158	2.50	-	-	*	205	10
Total Hexa-Furans	7.08e+07		35:17	0.90	227	2.50	-	-	*		12
Total Hepta-Furans	2.59e+07		42:19	1.48	96.2	2.50	-	-	*		6

Analyst: _____ Date: 8/13/10

Frontier Analytical Laboratory - Acquisition Log

Run Name:12AUG10M Instrument: FAL3 GC: DB5 Experiment:PCDD

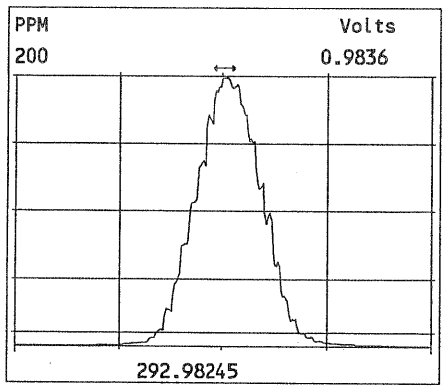
Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
12AUG10M	1	ST081210M1	1613 CS3 090918J	12-AUG-10 11:10:55	ST081210M1	ST081210M2	TC
12AUG10M	2	SB081210M1	Solvent Blank	12-AUG-10 12:06:13	ST081210M1	ST081210M2	TC
12AUG10M	3	6273-009-0001-SA	PSB07-1.5-2.0-072810	12-AUG-10 13:01:32	ST081010N1	ST081010N2	TC
12AUG10M	4	6273-011-0001-SA	PSB08-1.5-2.0-072810	12-AUG-10 13:56:54	ST081010N1	ST081010N2	TC
12AUG10M	5	2078-001-0001-OPR	OPR	12-AUG-10 14:52:16	ST081210M1	ST081210M2	TC
12AUG10M	6	2078-001-0001-MB	Method Blank	12-AUG-10 15:47:38	ST081210M1	ST081210M2	TC
12AUG10M	7	6269-008-0001-SA	PSB17-10-13-072810	12-AUG-10 16:43:05	ST081210M1	ST081210M2	TC
12AUG10M	8	6269-007-0001-SA	PSB17-4-6-072810	12-AUG-10 17:38:28	ST081210M1	ST081210M2	TC
12AUG10M	9	6269-006-0001-SA	PSB17-2-4-072810	12-AUG-10 18:33:55	ST081210M1	ST081210M2	TC
12AUG10M	10	6269-003-0001-SA	PSB14-2-4-072810	12-AUG-10 19:29:18	ST081210M1	ST081210M2	TC
12AUG10M	11	6269-005-0001-SA	PSB17-1.5-2-072810	12-AUG-10 20:24:37	ST081210M1	ST081210M2	TC
12AUG10M	12	6269-002-0001-SA	PSB14-1.5-2.0-072810	12-AUG-10 21:20:00	ST081210M1	ST081210M2	TC
12AUG10M	13	6269-004-0001-SA	PSB17-0-0.5-072810	12-AUG-10 22:15:22	ST081210M1	ST081210M2	TC
12AUG10M	14	6269-001-0001-SA	PSB14-0-.5-072810	12-AUG-10 23:10:40	ST081210M1	ST081210M2	TC
12AUG10M	15	SB081210M2	Solvent Blank	13-AUG-10 00:06:03	ST081210M1	ST081210M2	TC
12AUG10M	16	ST081210M2	1613 CS3 090918J	13-AUG-10 01:01:28	ST081210M2	ST081210M3	TC
12AUG10M	17	SB081210M4	Solvent Blank	13-AUG-10 01:56:52	ST081210M2	ST081210M3	TC
12AUG10M	18	6271-003-0001-SA	PSB13-2-4-072910	13-AUG-10 02:52:15	ST081210M2	ST081210M3	TC
12AUG10M	19	6271-002-0001-SA	PSB13-1.5-2-072910	13-AUG-10 03:47:38	ST081210M2	ST081210M3	TC
12AUG10M	20	6271-001-0001-SA	PSB13-0-0.5-072910	13-AUG-10 04:42:56	ST081210M2	ST081210M3	TC
12AUG10M	21	6279-001-0001-SA	201007300147	13-AUG-10 05:38:15	ST081210M2	ST081210M3	TC
12AUG10M	22	6279-002-0001-SA	201007300149	13-AUG-10 06:33:34	ST081210M2	ST081210M3	TC
12AUG10M	23	SB081210M5	Solvent Blank	13-AUG-10 07:28:53	ST081210M2	ST081210M3	TC
12AUG10M	24	ST081210M3	1613 CS3 090918J	13-AUG-10 08:24:11	ST081210M2	ST081210M3	TC

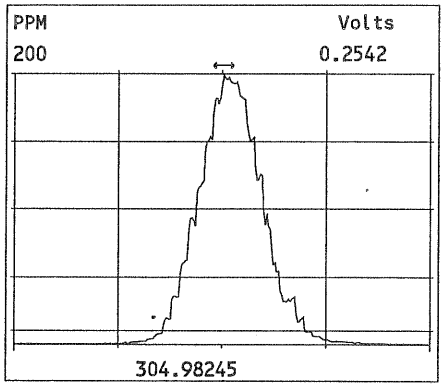
8/13/10

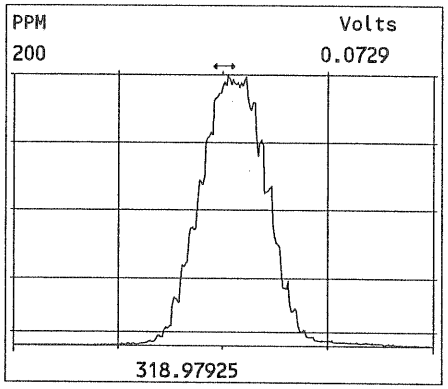
Data Backed Up:_____

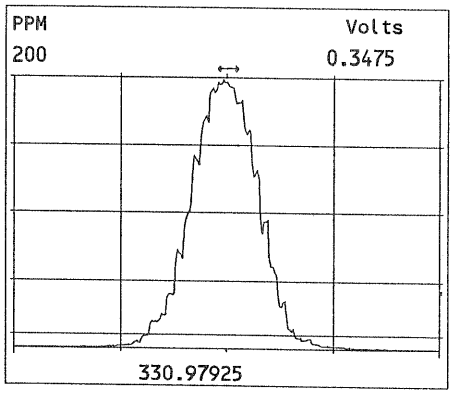
Date:_____

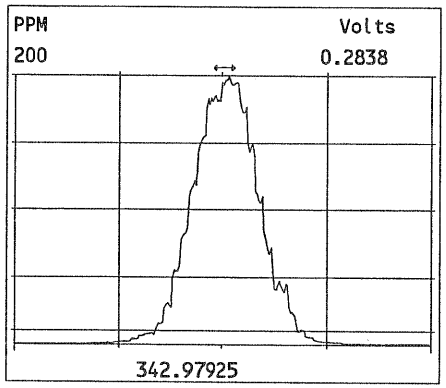
Peak Locate Examination:12-AUG-2010:11:09 File:12AUG10M
Experiment:PCDD Function:1 Reference:PFK

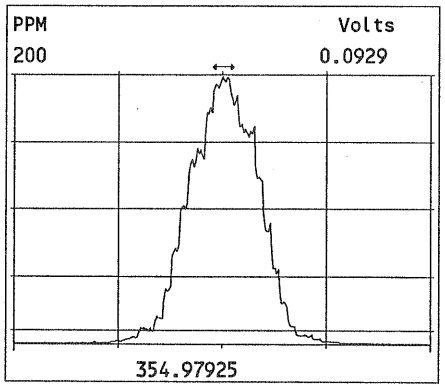


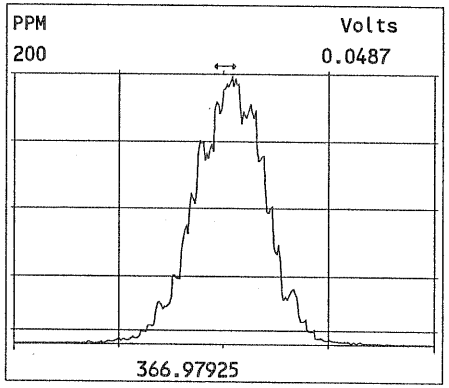


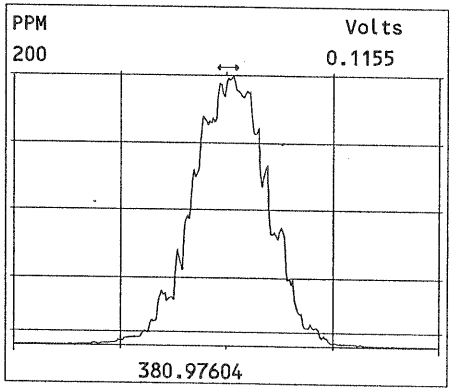


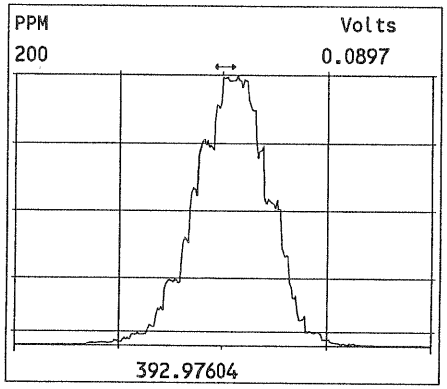


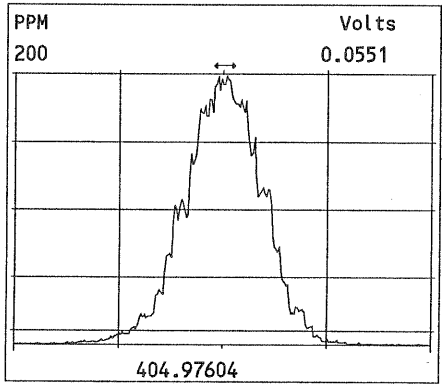


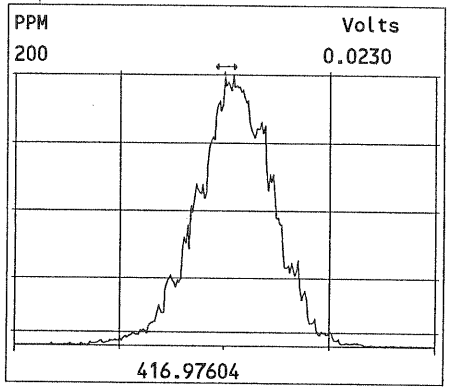




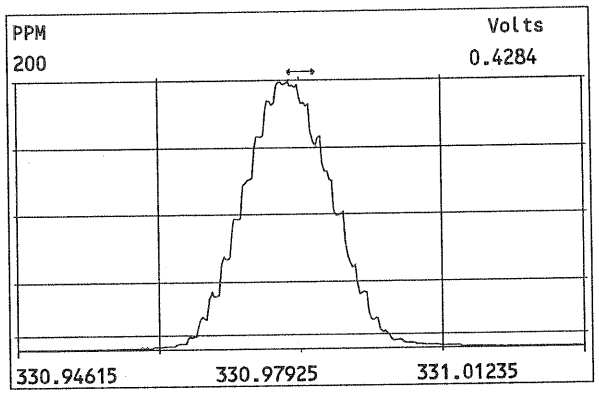


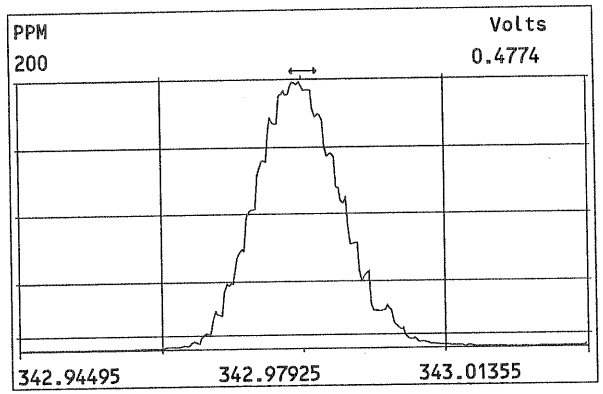


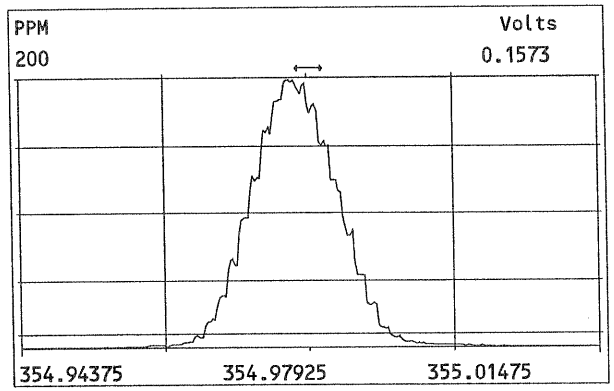


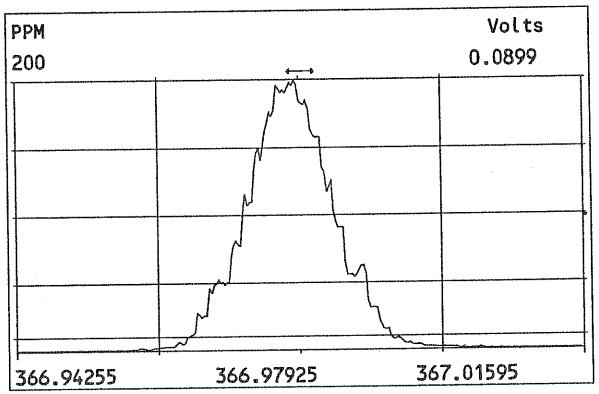


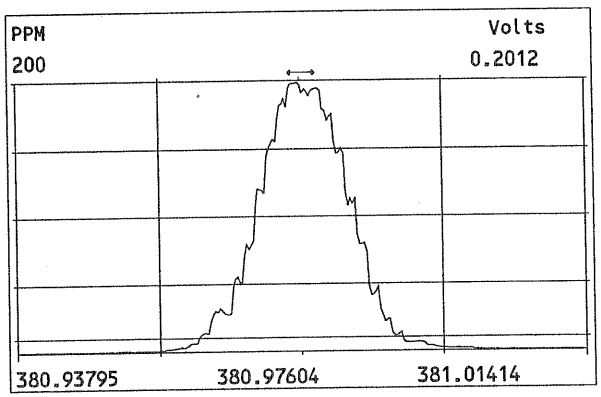
Peak Locate Examination:12-AUG-2010:11:09 File:12AUG10M
Experiment:PCDD Function:2 Reference:PFK

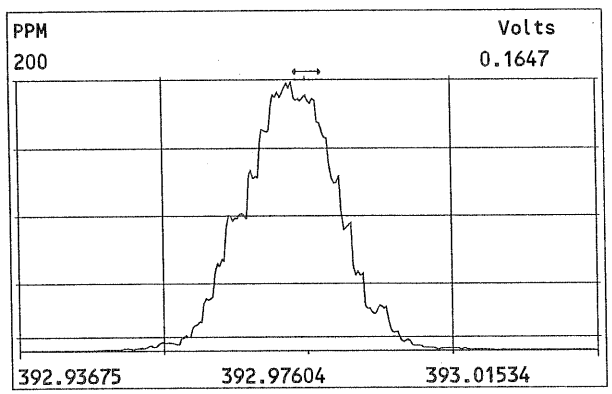


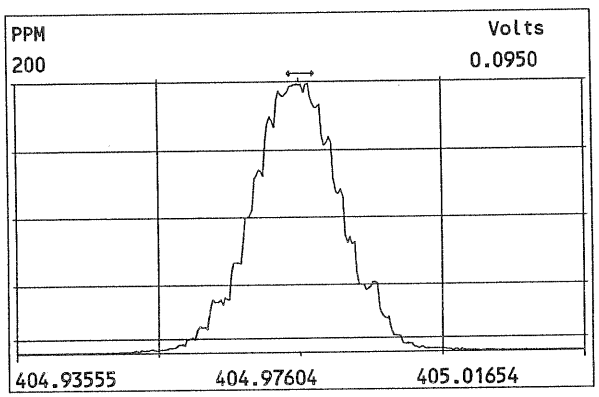


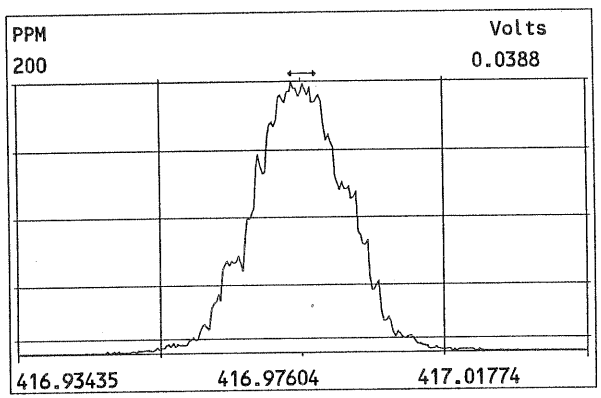




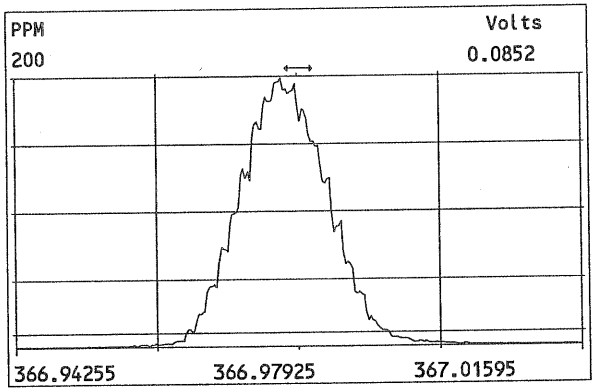


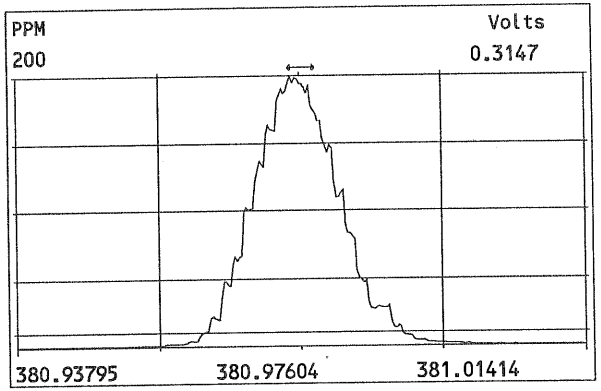


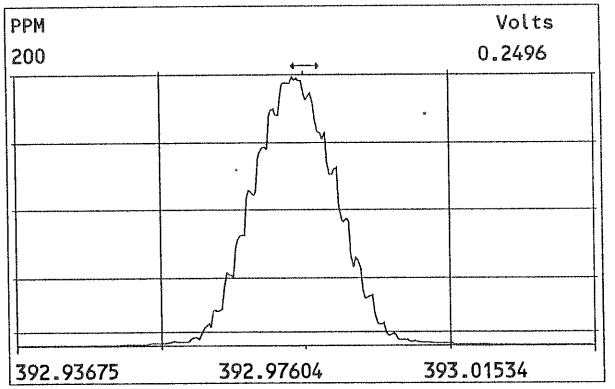


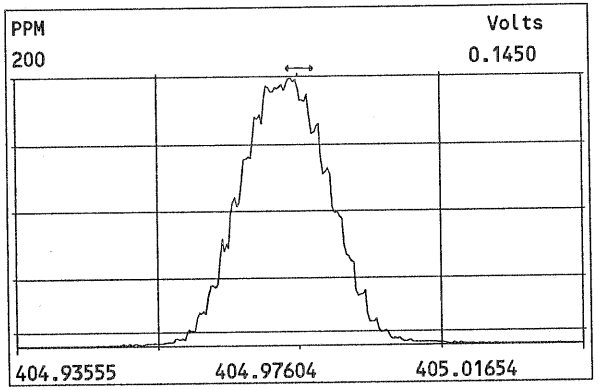


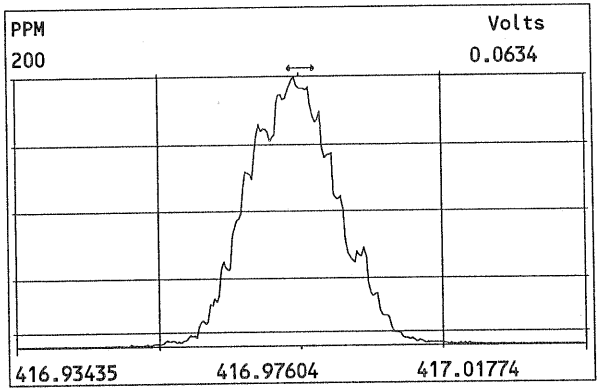
Peak Locate Examination:12-AUG-2010:11:09 File:12AUG10M
Experiment:PCDD Function:3 Reference:PFK

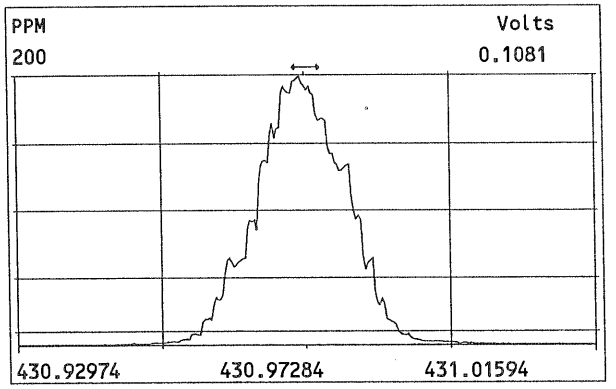


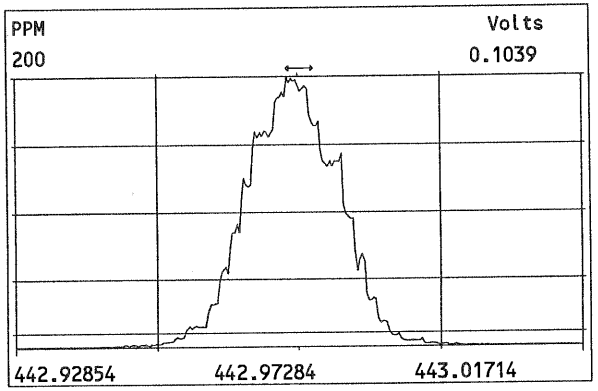


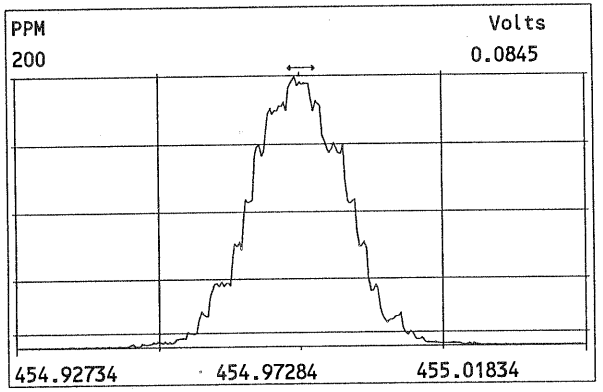




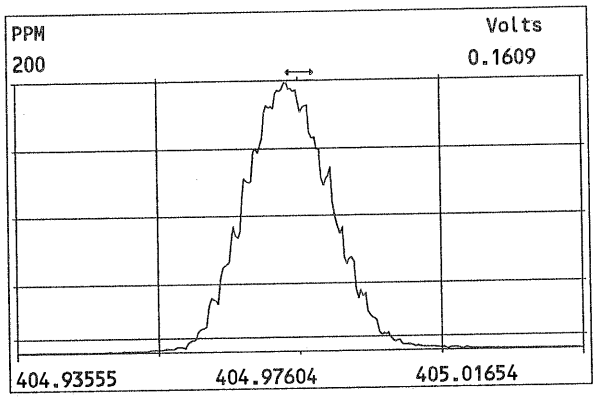


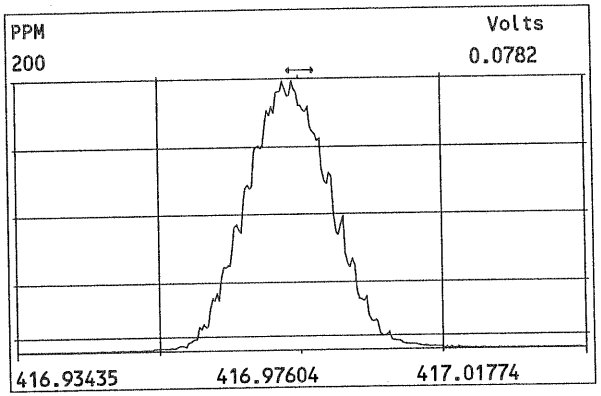


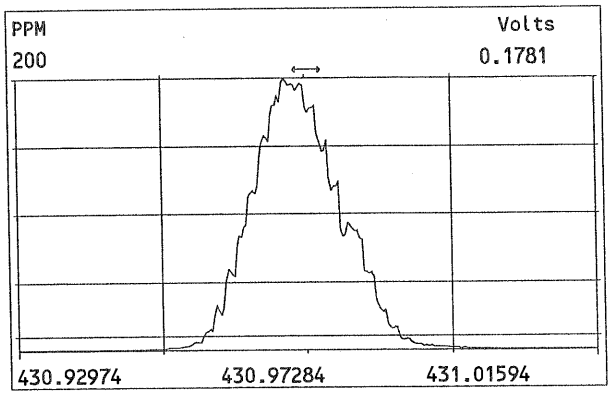


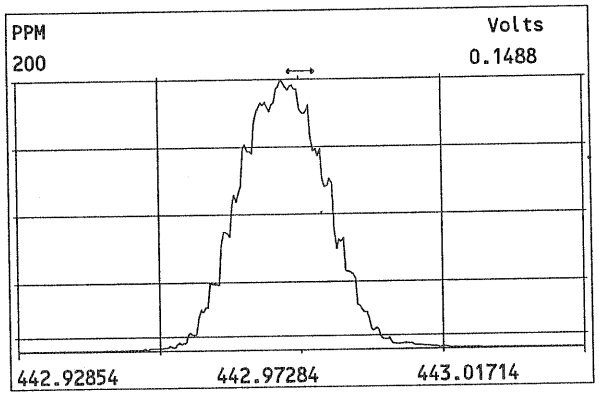


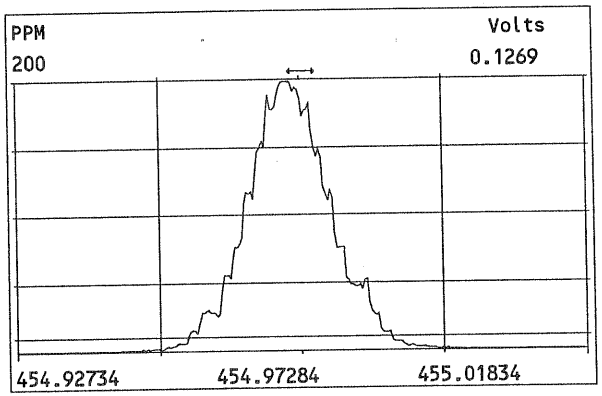
Peak Locate Examination:12-AUG-2010:11:10 File:12AUG10M
Experiment:PCDD Function:4 Reference:PFK

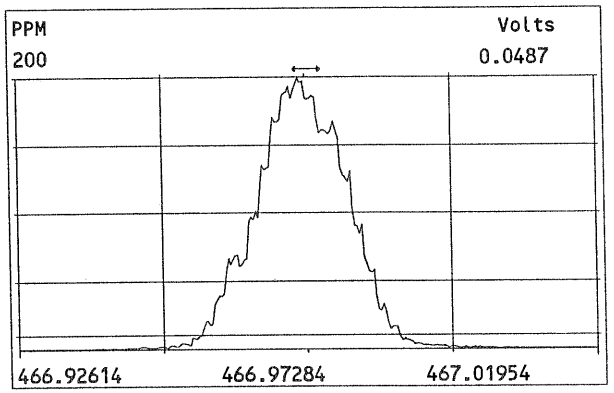


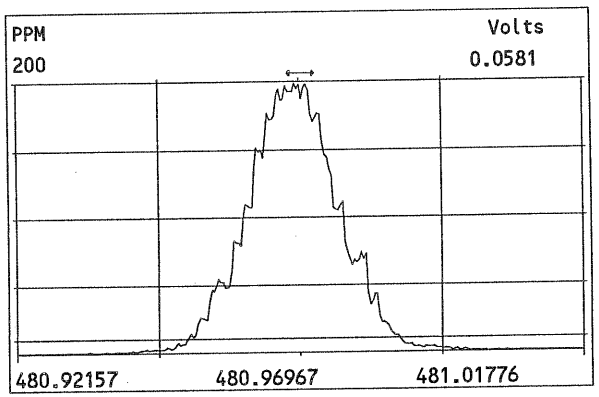




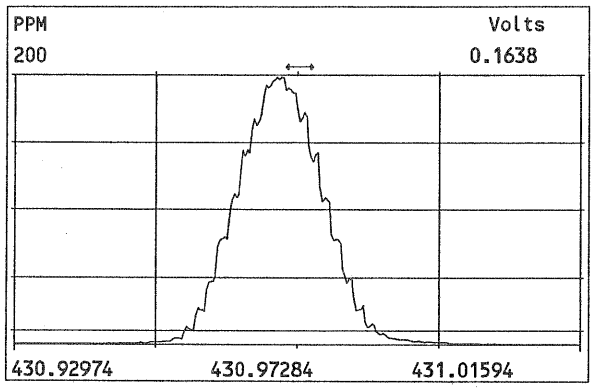


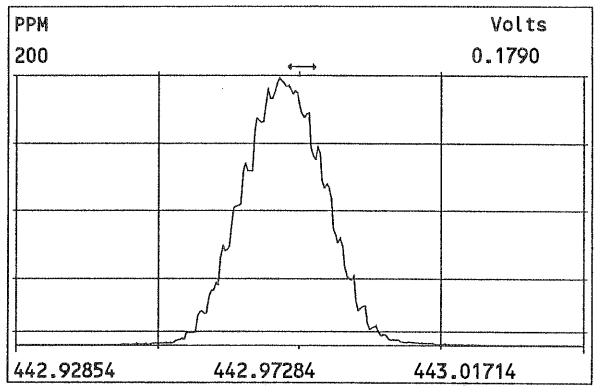


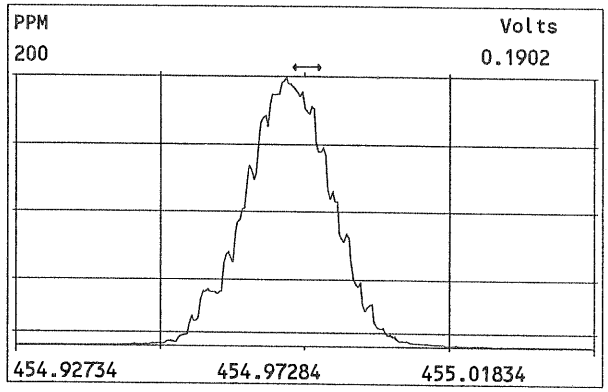


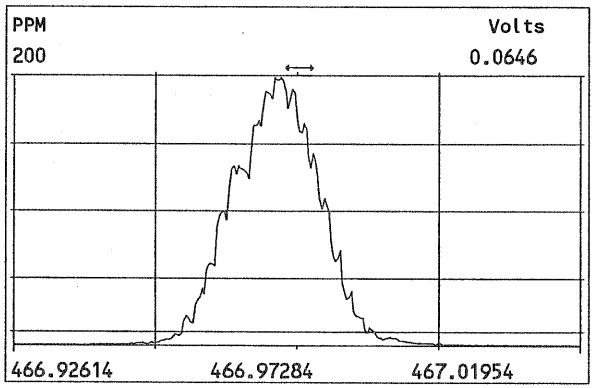


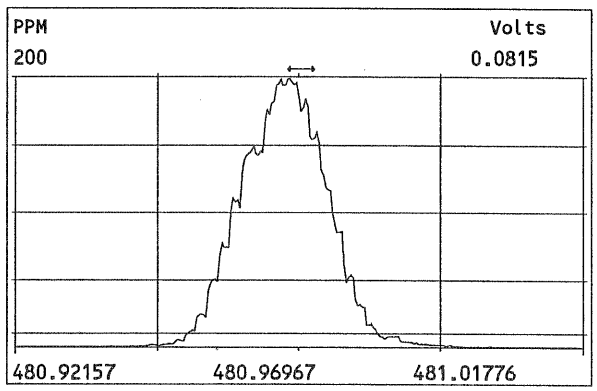
Peak Locate Examination:12-AUG-2010:11:10 File:12AUG10M
Experiment:PCDD Function:5 Reference:PFK

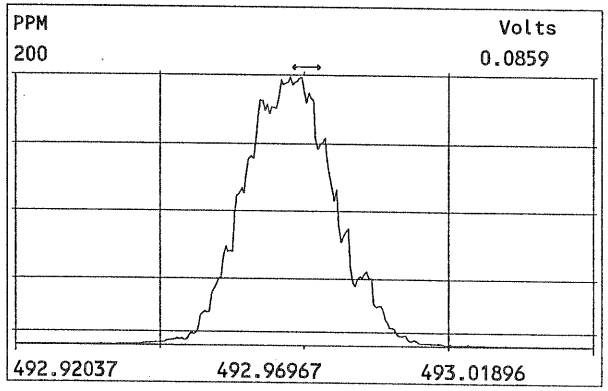


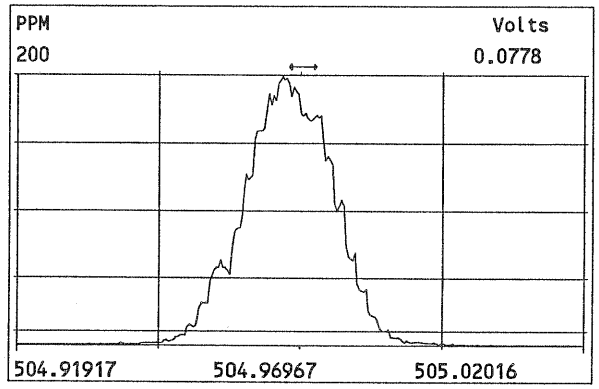


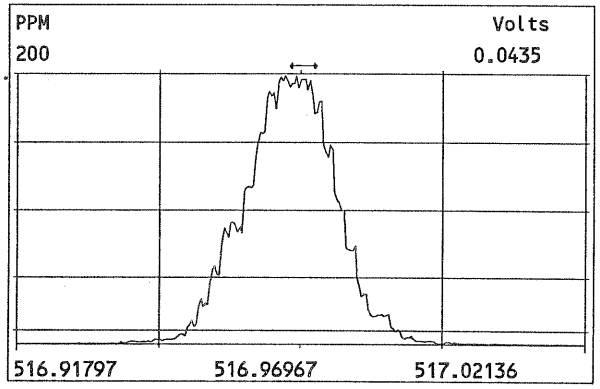




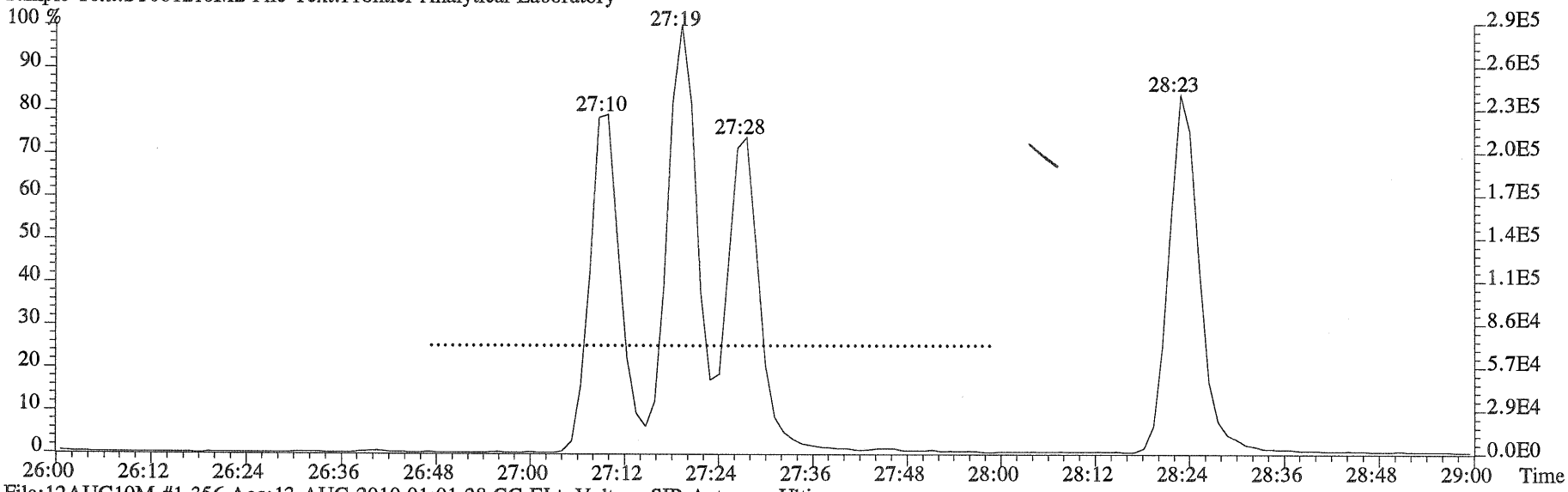




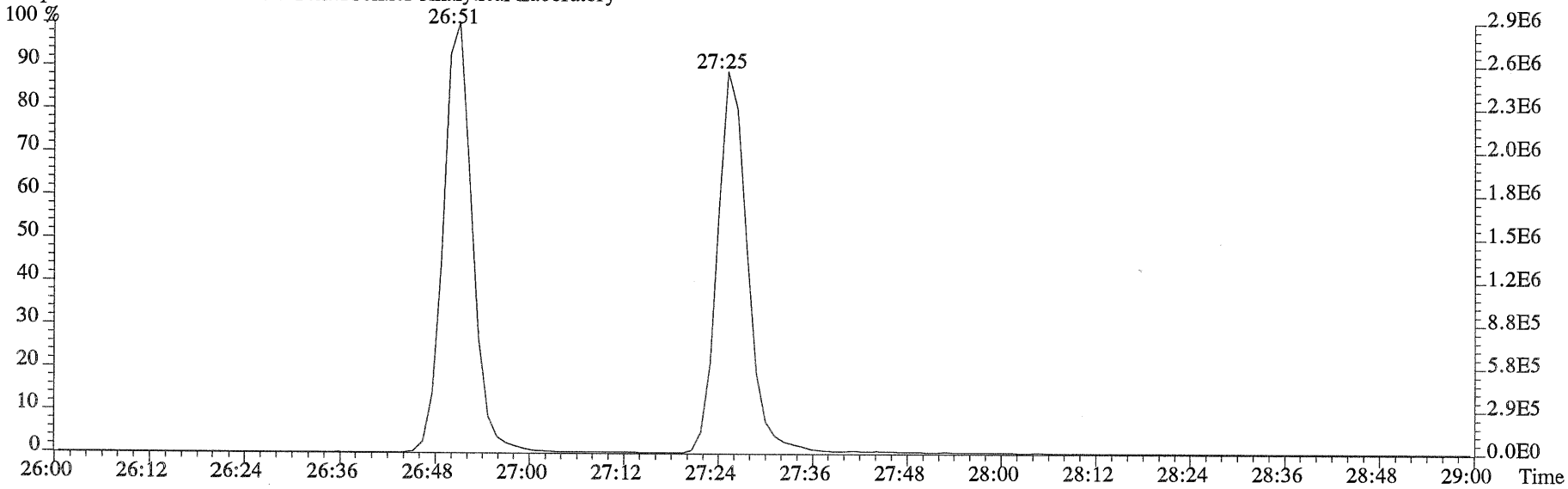




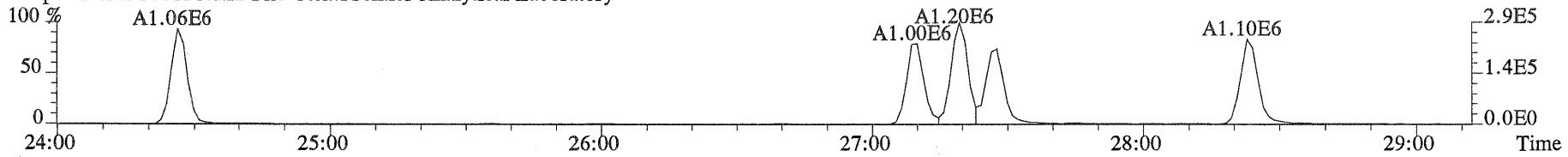
File:12AUG10M #1-356 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:16 Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



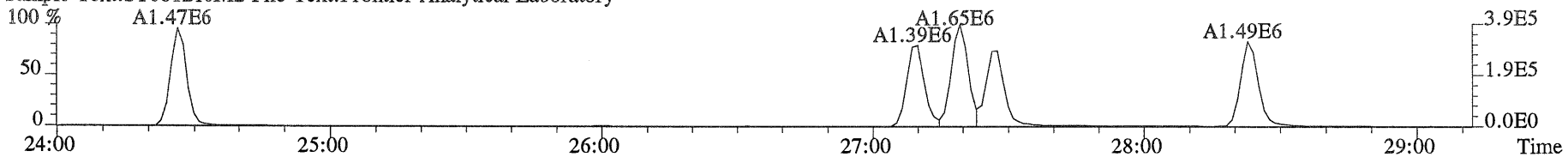
File:12AUG10M #1-356 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:16 Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



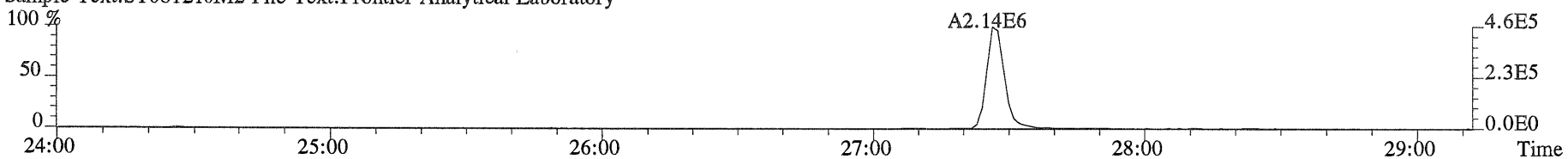
File:12AUG10M #1-356 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



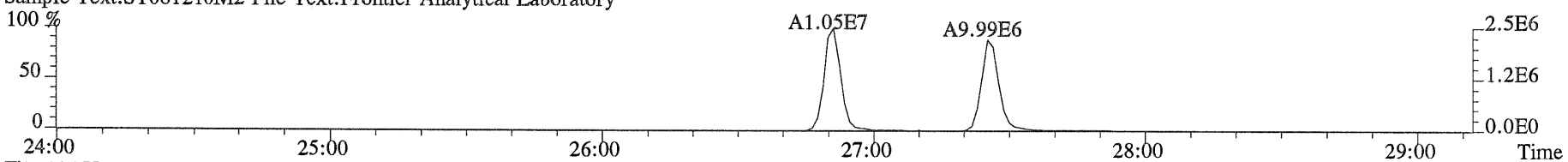
File:12AUG10M #1-356 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



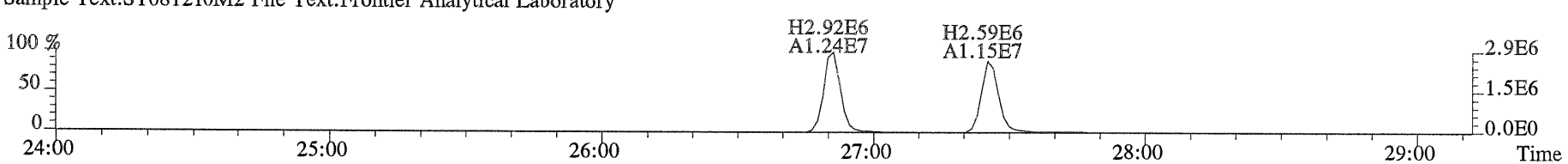
File:12AUG10M #1-356 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



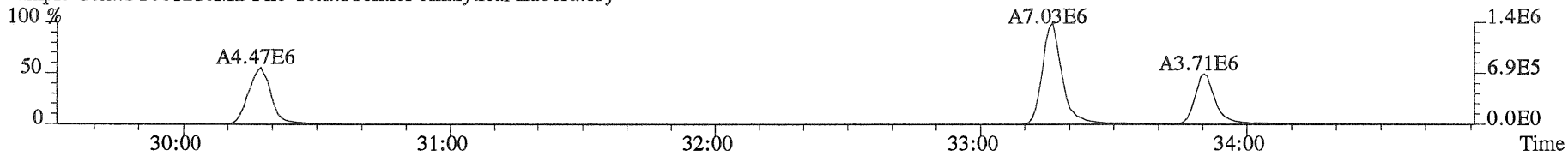
File:12AUG10M #1-356 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



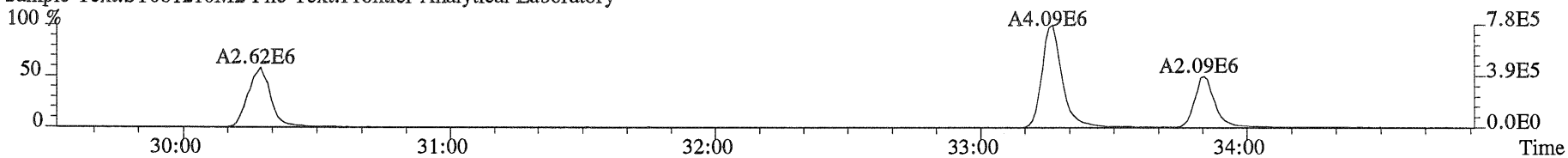
File:12AUG10M #1-356 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



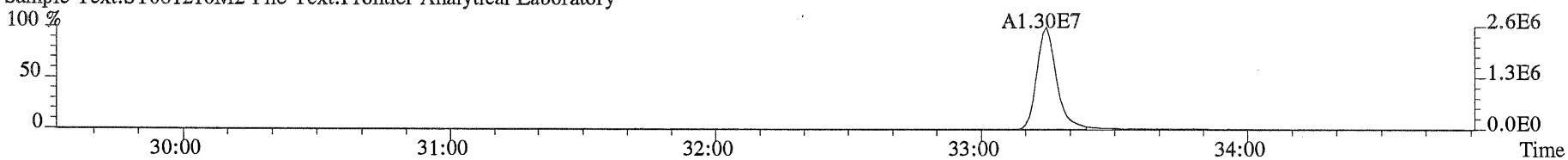
File:12AUG10M #1-413 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



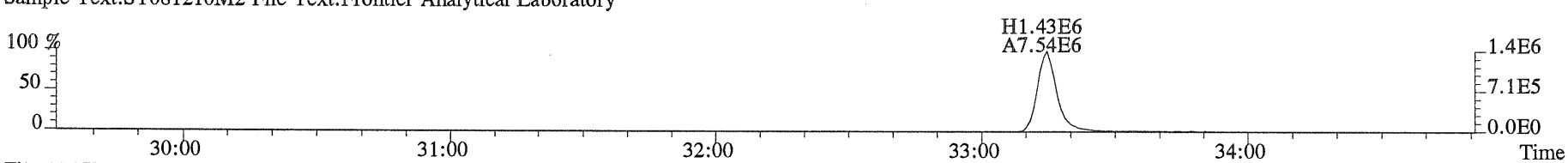
File:12AUG10M #1-413 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



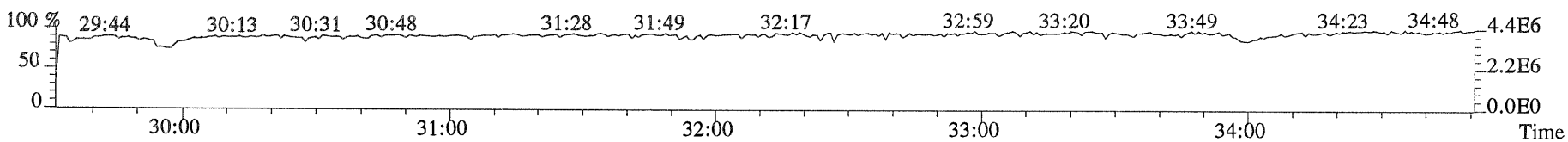
File:12AUG10M #1-413 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



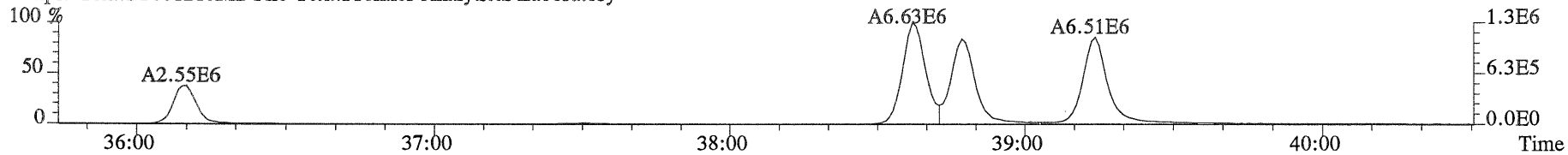
File:12AUG10M #1-413 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



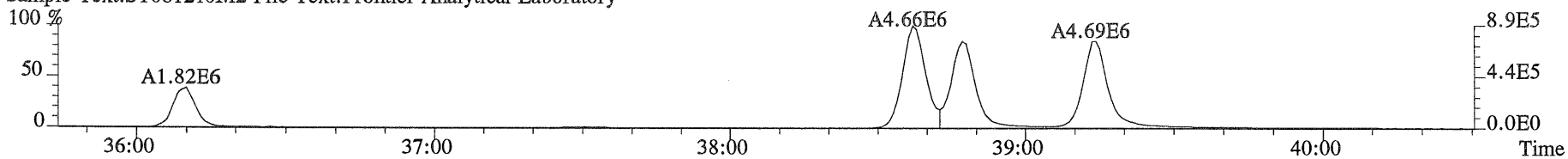
File:12AUG10M #1-413 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:16 F:2 Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



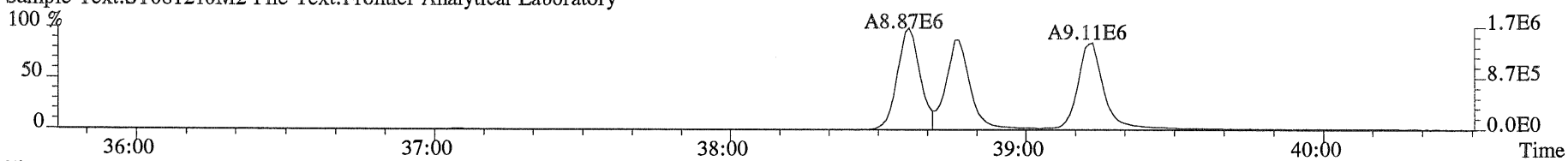
File:12AUG10M #1-476 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



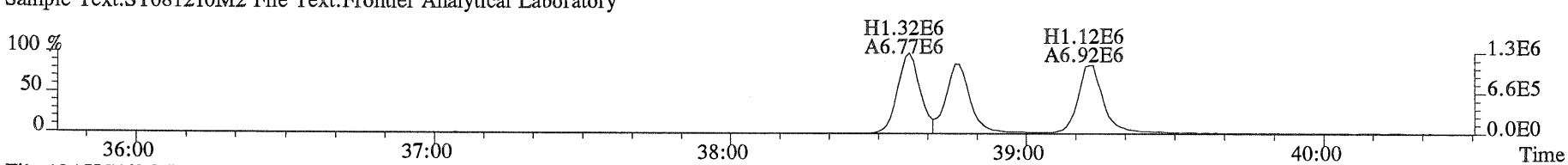
File:12AUG10M #1-476 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



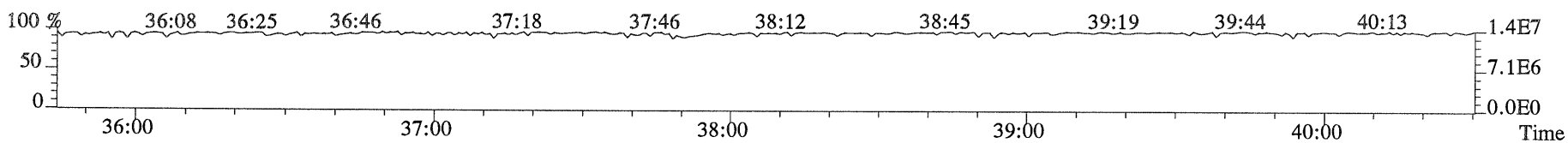
File:12AUG10M #1-476 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



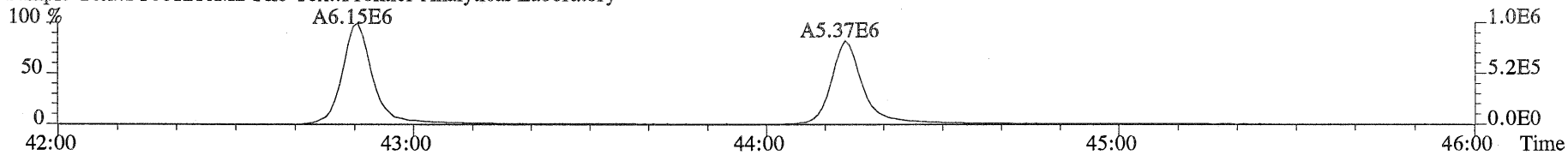
File:12AUG10M #1-476 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



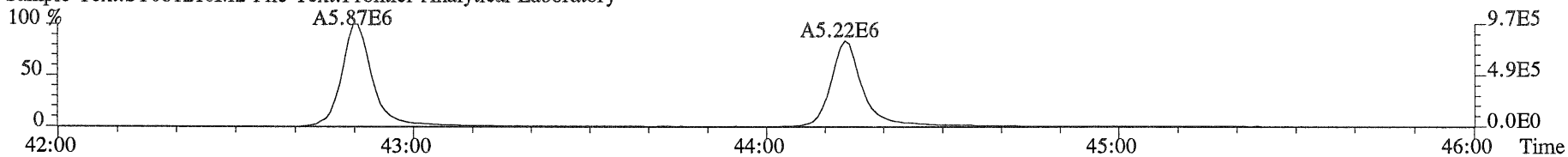
File:12AUG10M #1-476 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:16 F:3 Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



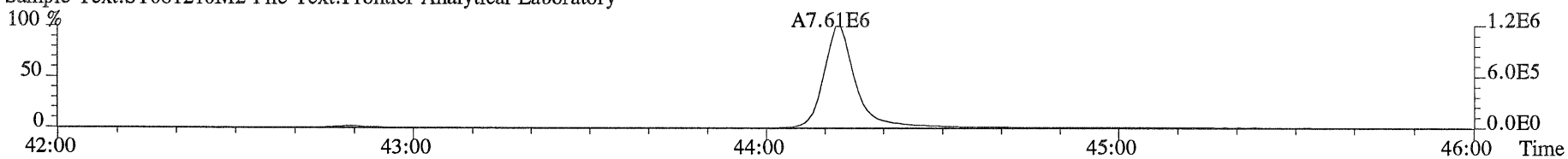
File:12AUG10M #1-541 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



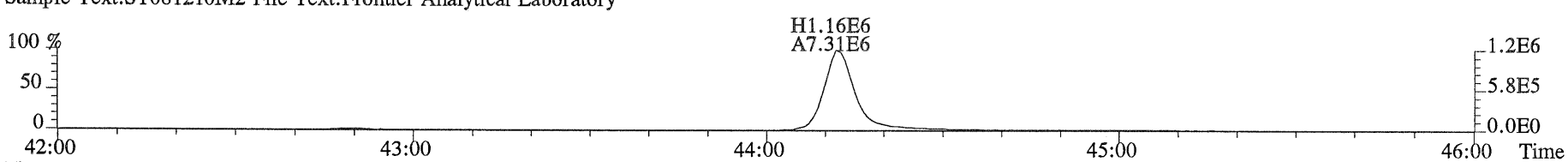
File:12AUG10M #1-541 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



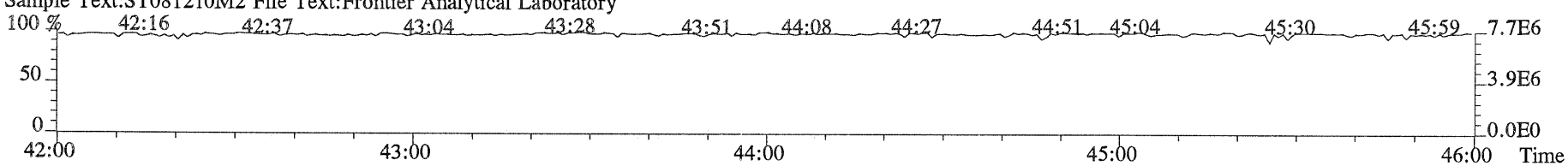
File:12AUG10M #1-541 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



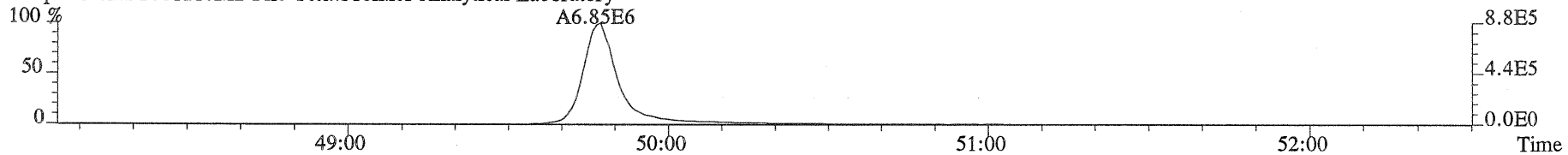
File:12AUG10M #1-541 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



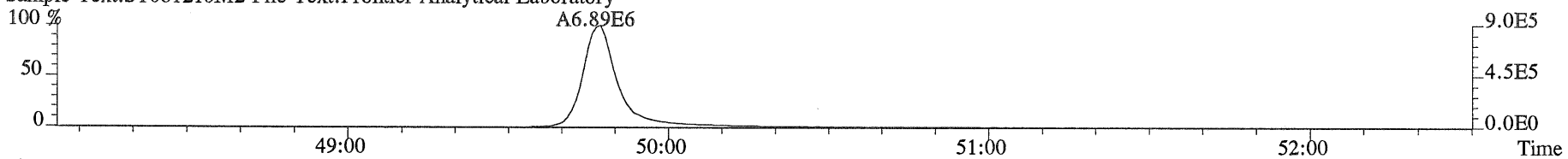
File:12AUG10M #1-541 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:16 F:4 Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



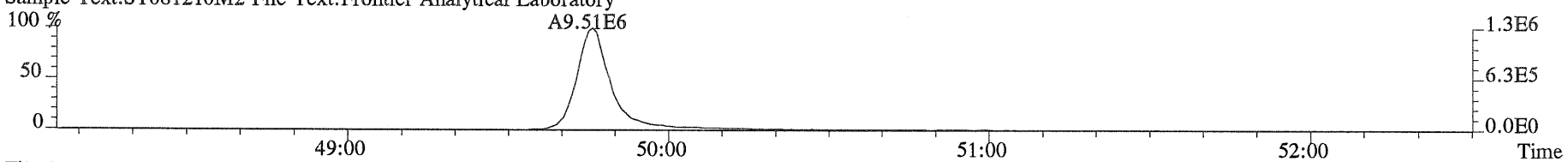
File:12AUG10M #1-348 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



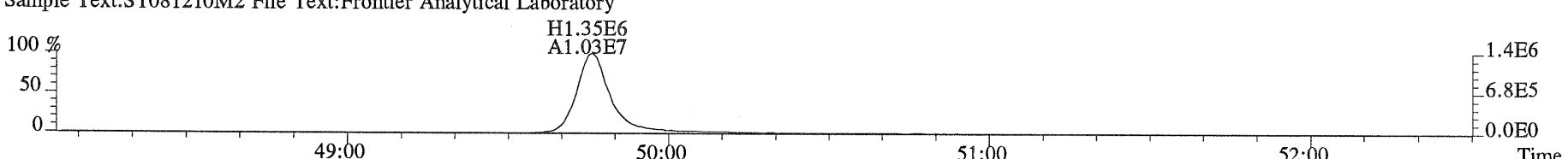
File:12AUG10M #1-348 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



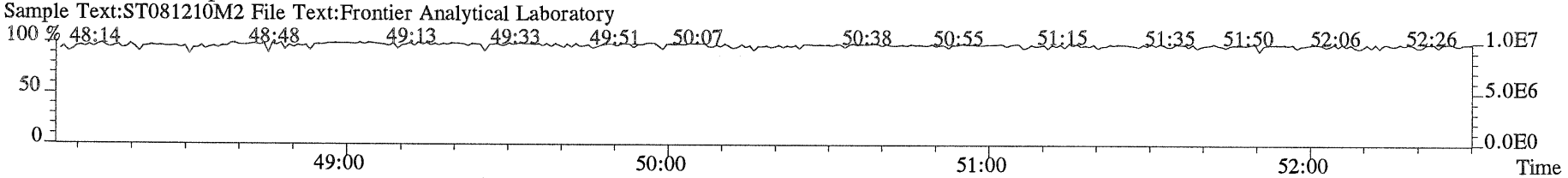
File:12AUG10M #1-348 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



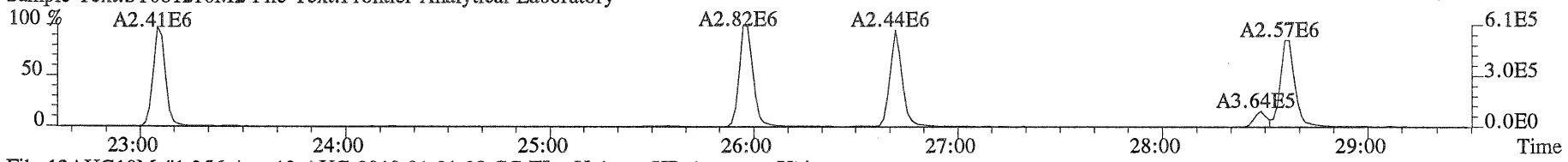
File:12AUG10M #1-348 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



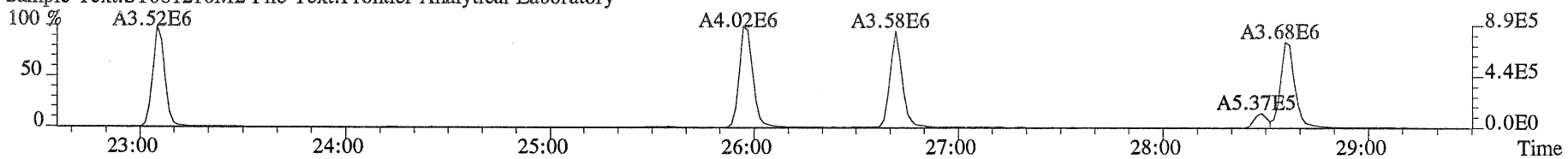
File:12AUG10M #1-348 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:16 F:5 Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



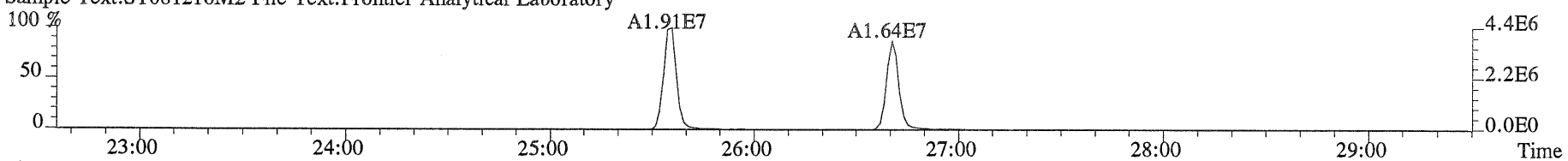
File:12AUG10M #1-356 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



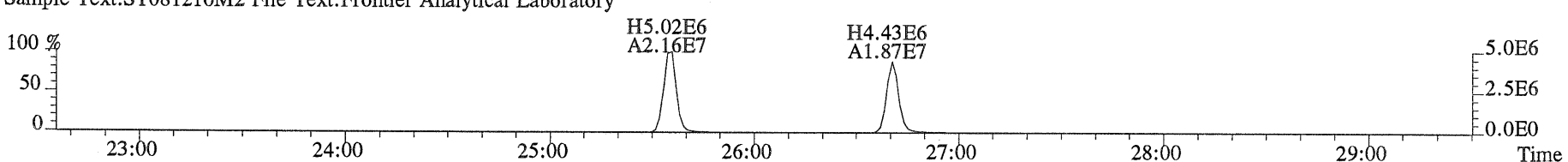
File:12AUG10M #1-356 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



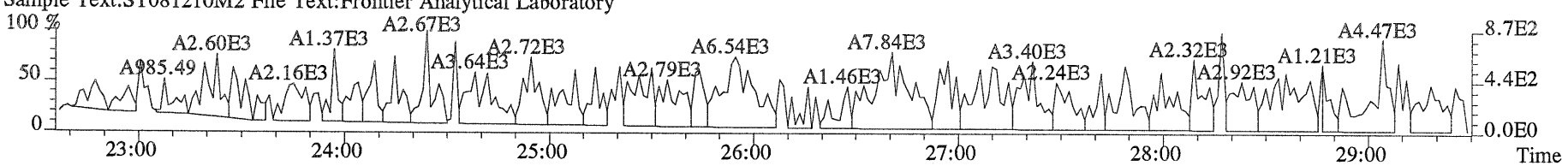
File:12AUG10M #1-356 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



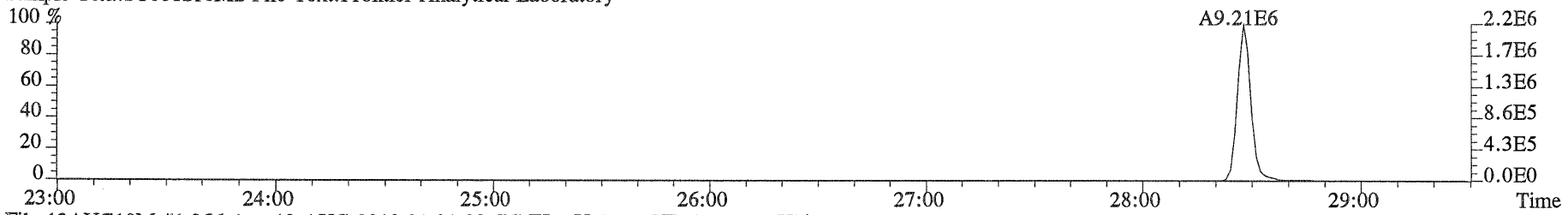
File:12AUG10M #1-356 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



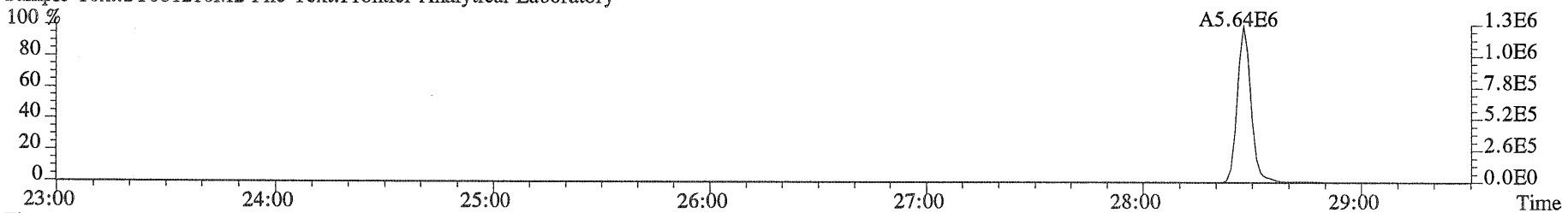
File:12AUG10M #1-356 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



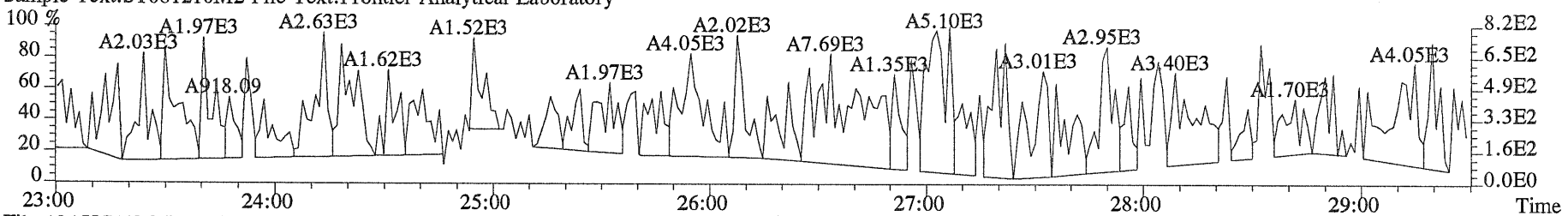
File:12AUG10M #1-356 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



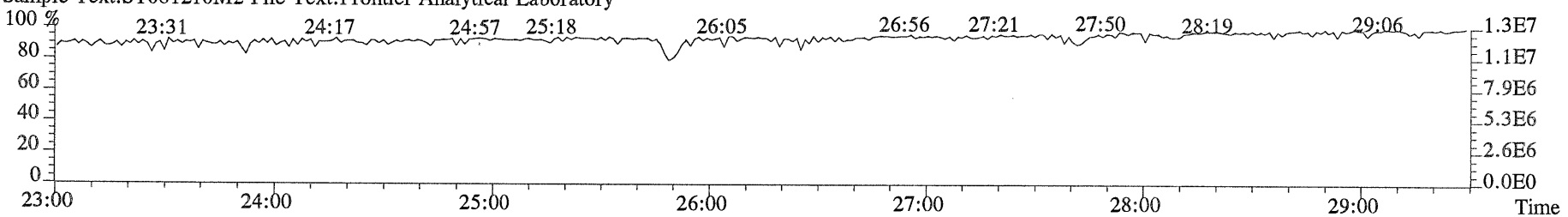
File:12AUG10M #1-356 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



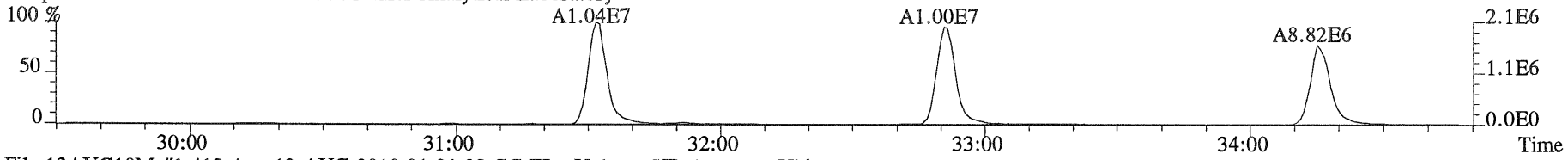
File:12AUG10M #1-356 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



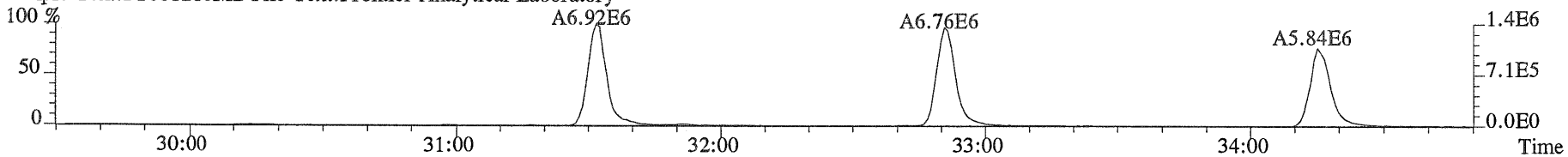
File:12AUG10M #1-356 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:16 Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



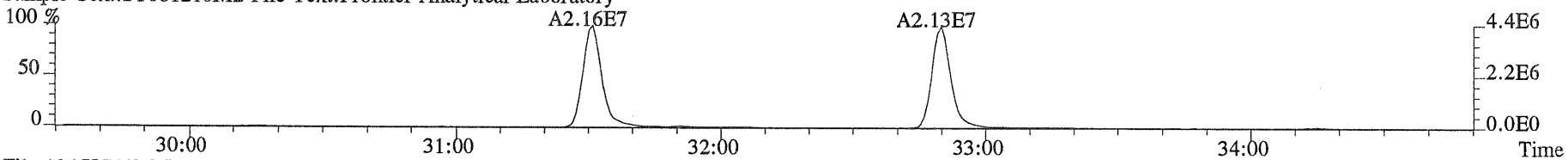
File:12AUG10M #1-413 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



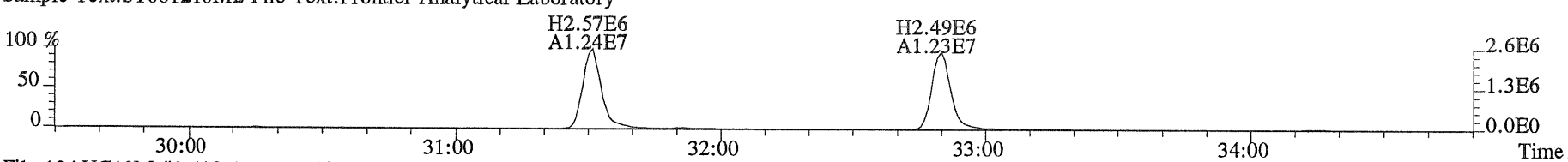
File:12AUG10M #1-413 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



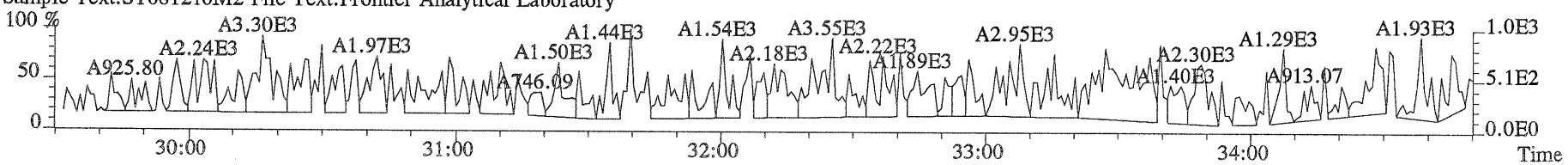
File:12AUG10M #1-413 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



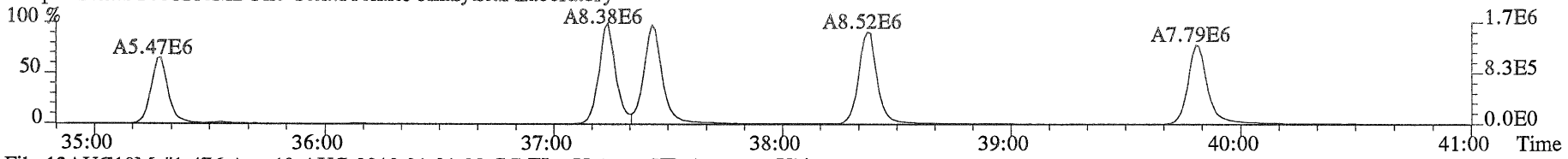
File:12AUG10M #1-413 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



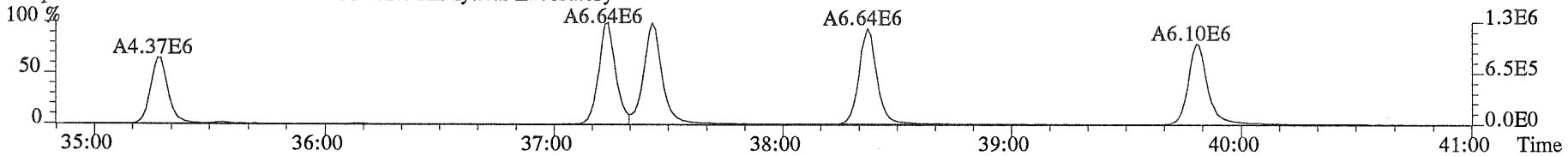
File:12AUG10M #1-413 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:16 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



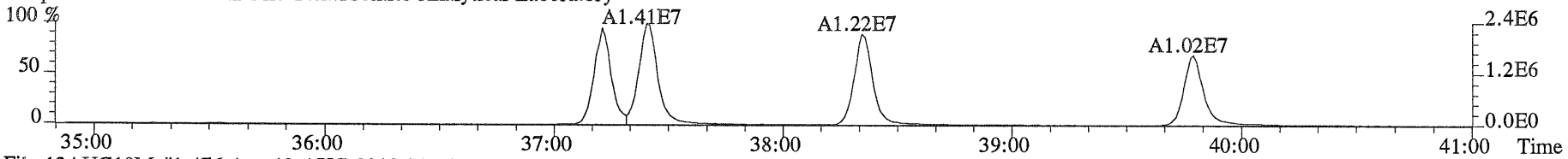
File:12AUG10M #1-476 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



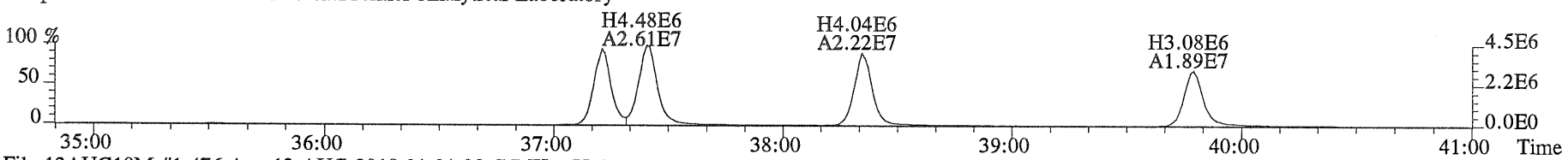
File:12AUG10M #1-476 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



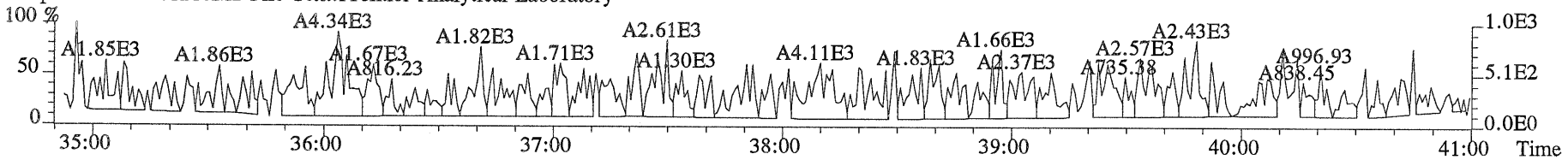
File:12AUG10M #1-476 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



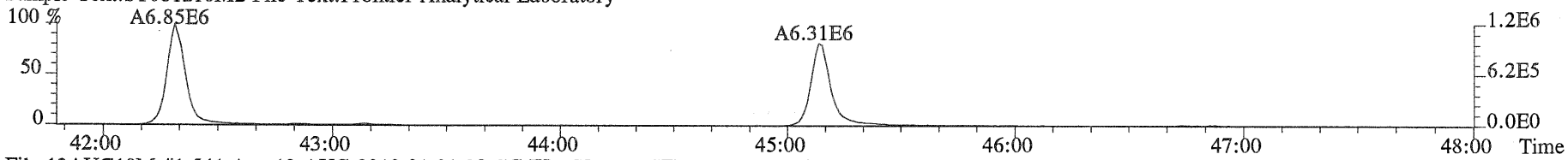
File:12AUG10M #1-476 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



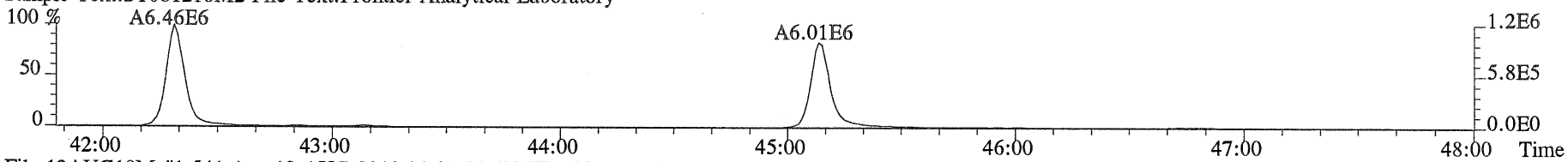
File:12AUG10M #1-476 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



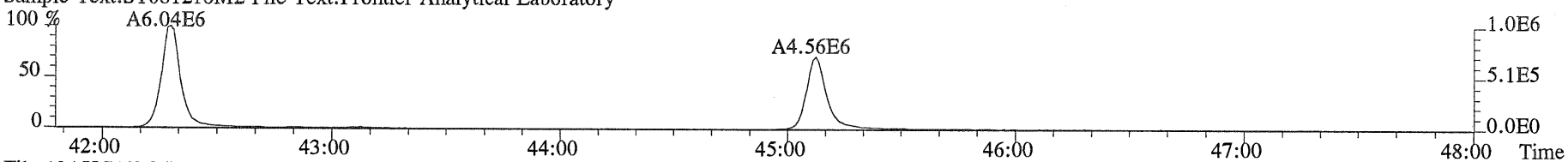
File:12AUG10M #1-541 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



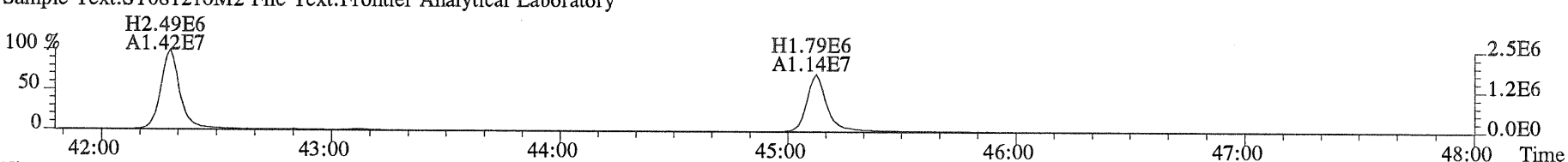
File:12AUG10M #1-541 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



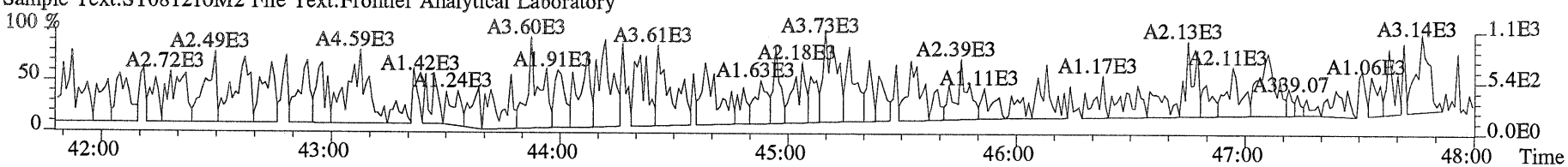
File:12AUG10M #1-541 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



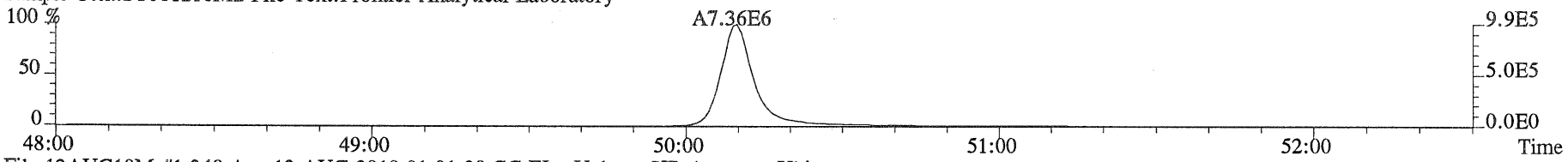
File:12AUG10M #1-541 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



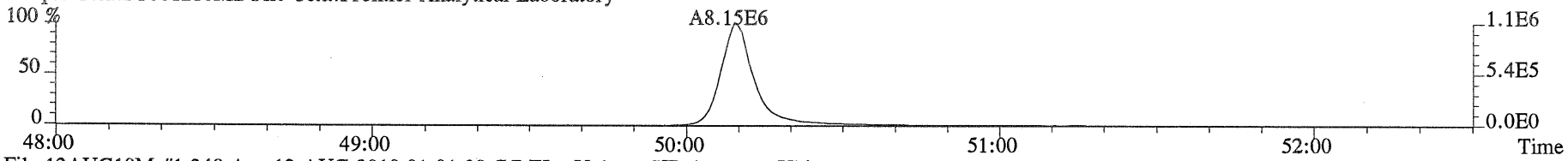
File:12AUG10M #1-541 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



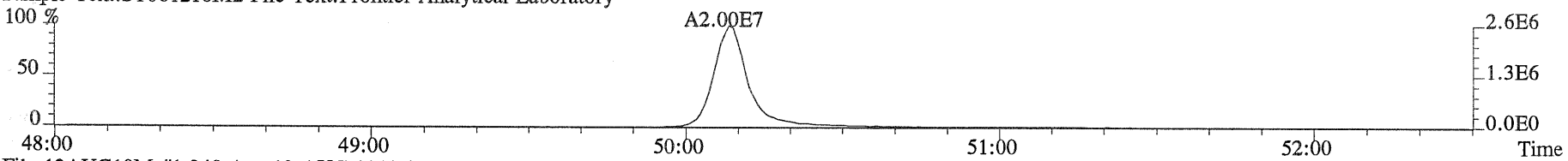
File:12AUG10M #1-348 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



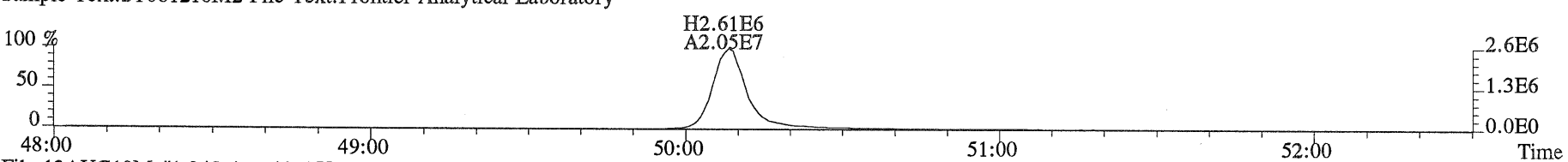
File:12AUG10M #1-348 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



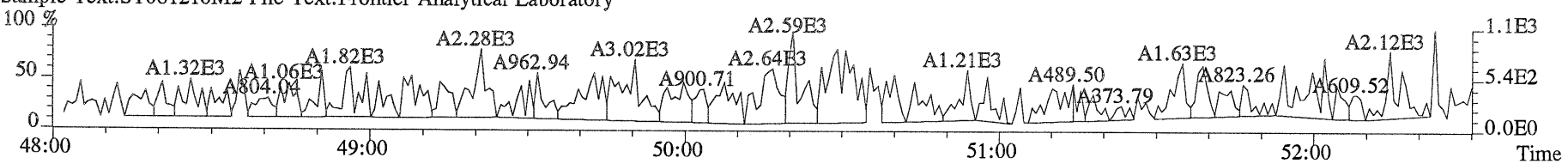
File:12AUG10M #1-348 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory



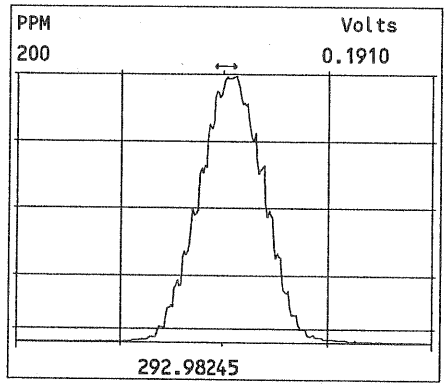
File:12AUG10M #1-348 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory

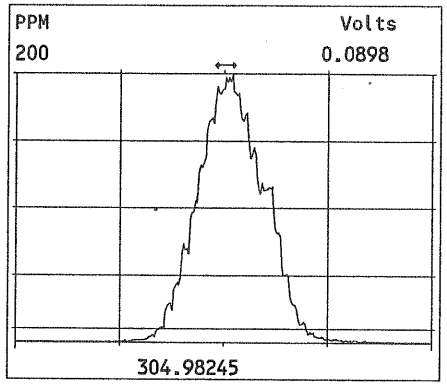


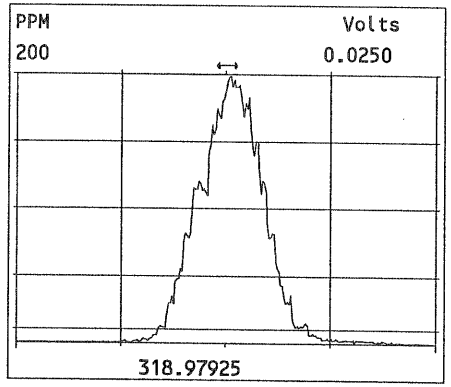
File:12AUG10M #1-348 Acq:13-AUG-2010 01:01:28 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M2 File Text:Frontier Analytical Laboratory

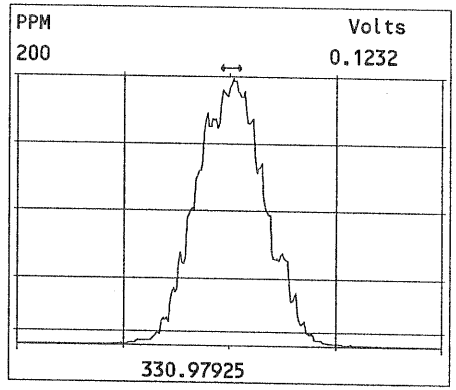


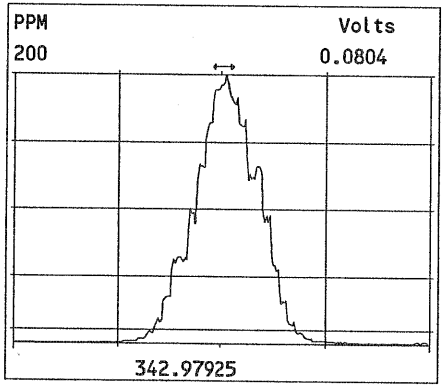
Peak Locate Examination:13-AUG-2010:09:21 File:12AUG10M_RES_CHECK
Experiment:PCDD Function:1 Reference:PFK

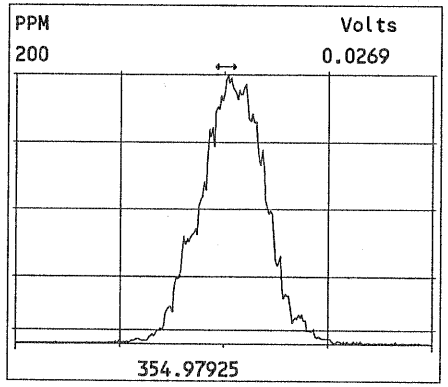


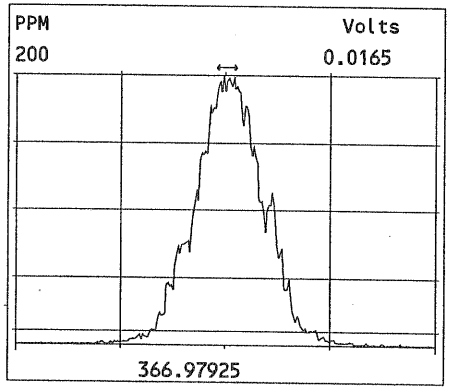


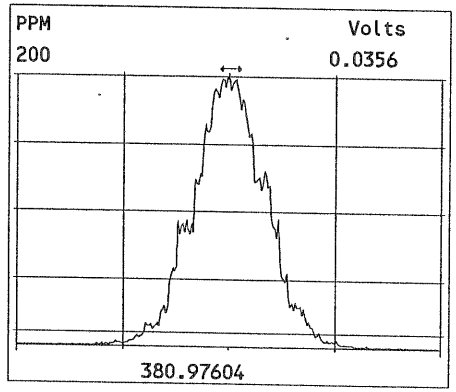


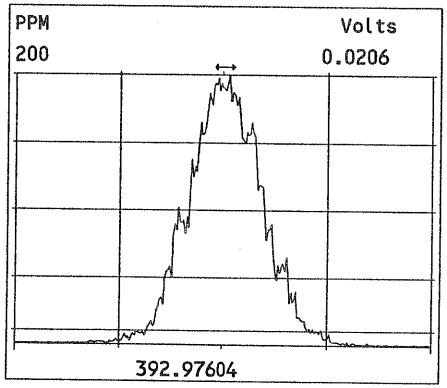


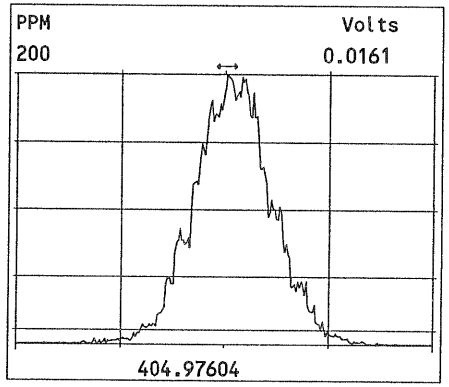


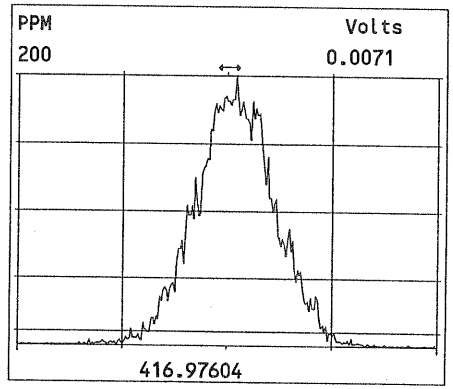




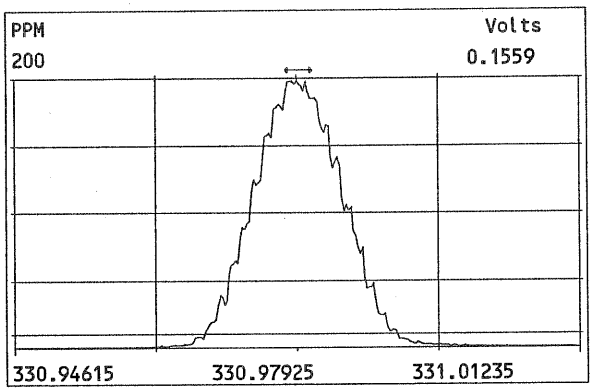


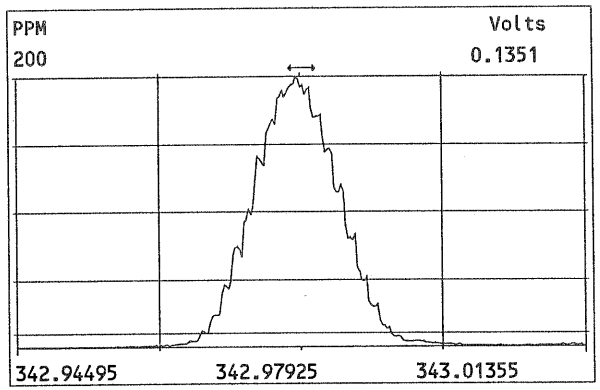


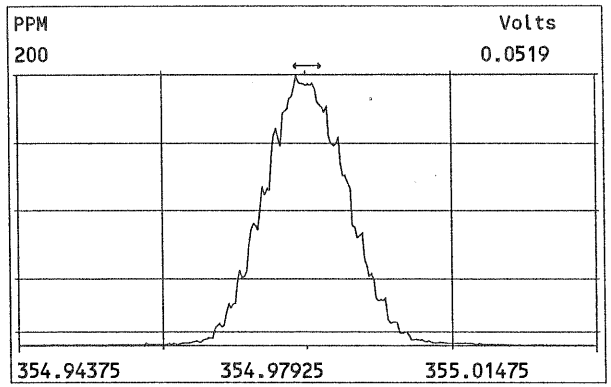


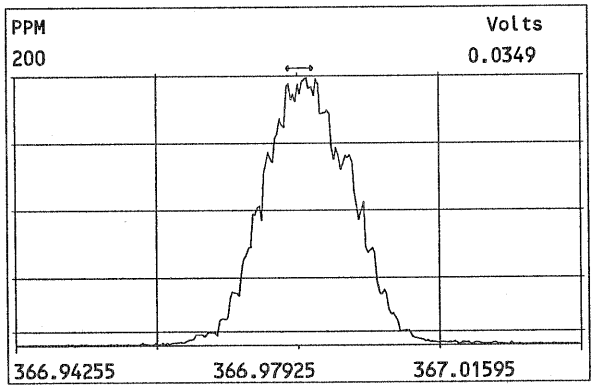


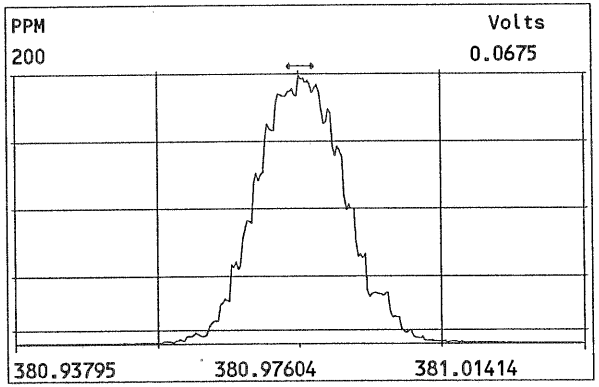
Peak Locate Examination:13-AUG-2010:09:21 File:12AUG10M_RES_CHECK
Experiment:PCDD Function:2 Reference:PFK

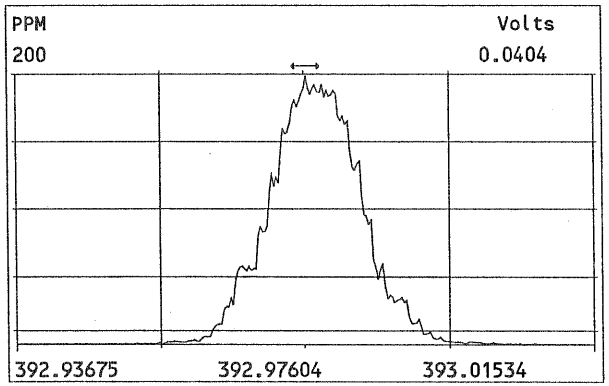


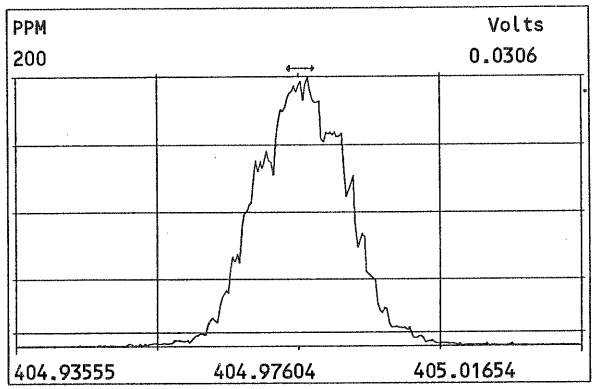


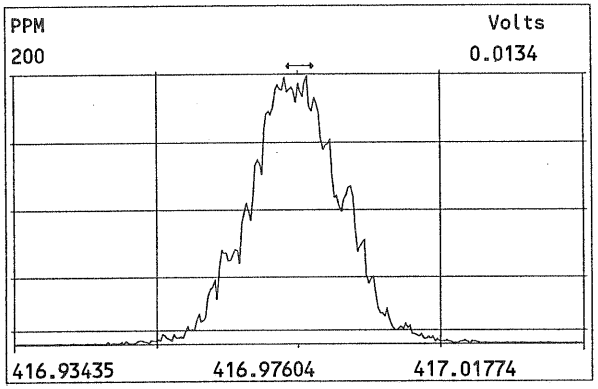




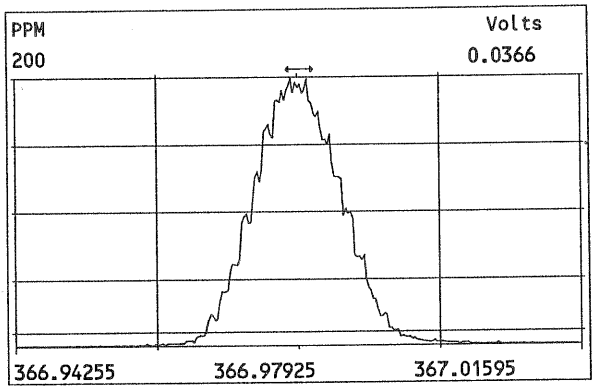


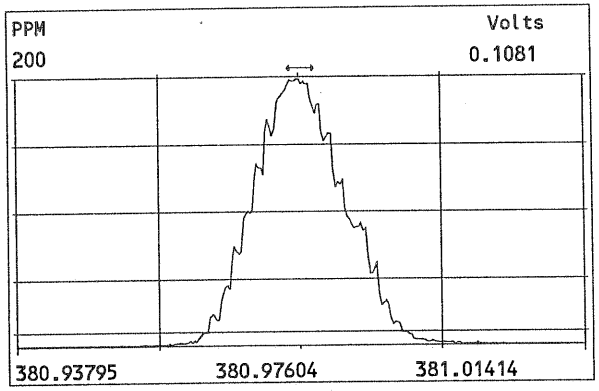


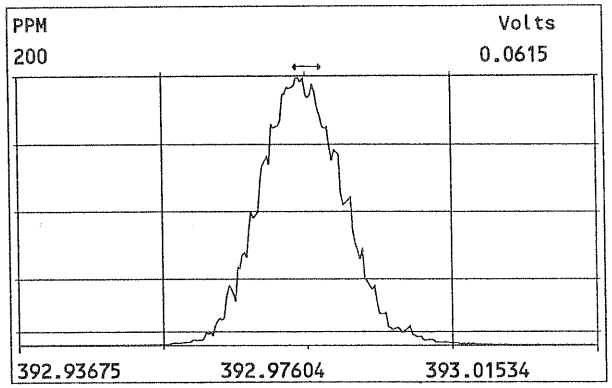


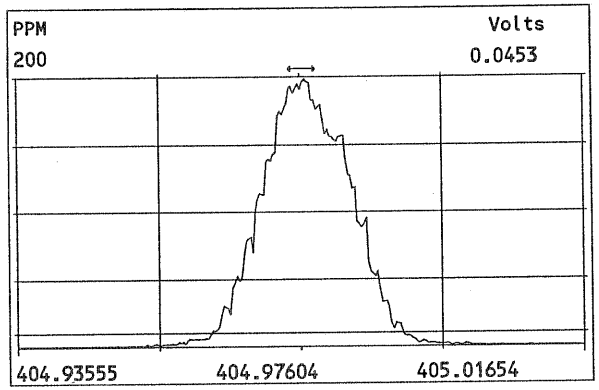


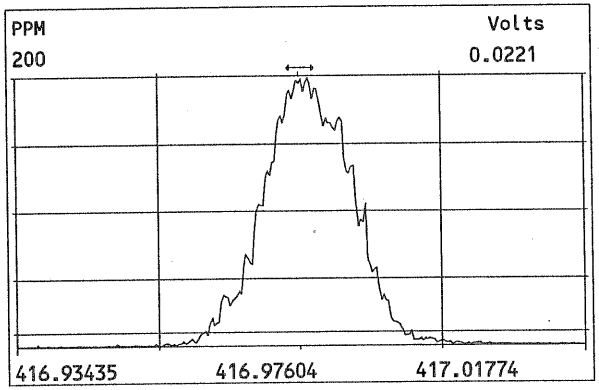
Peak Locate Examination:13-AUG-2010:09:22 File:12AUG10M_RES_CHECK
Experiment:PCDD Function:3 Reference:PFK

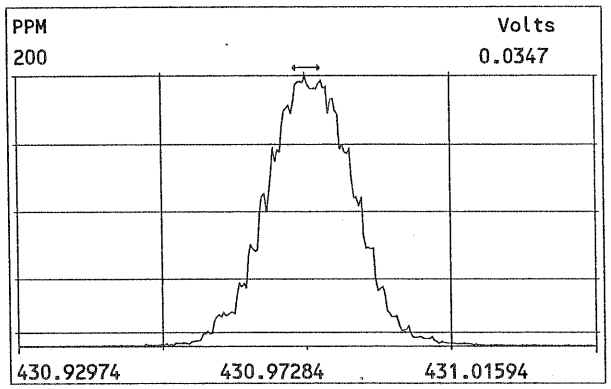


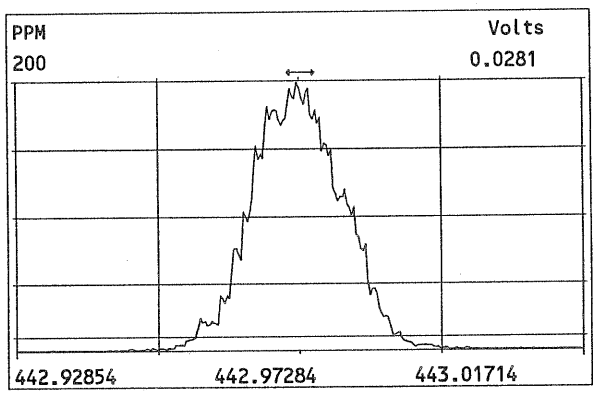


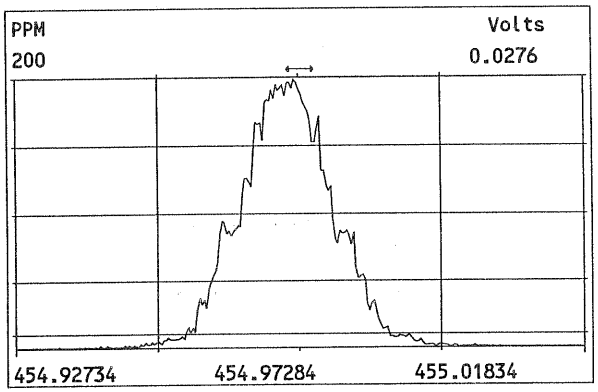




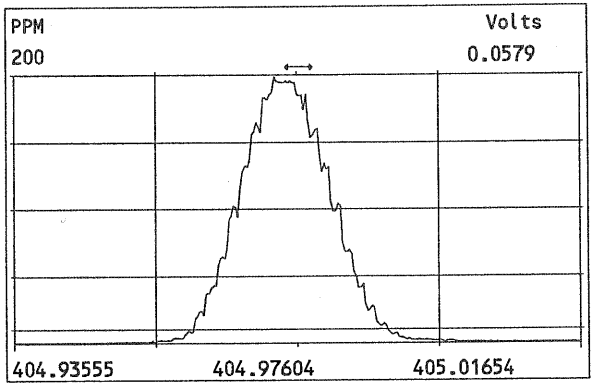


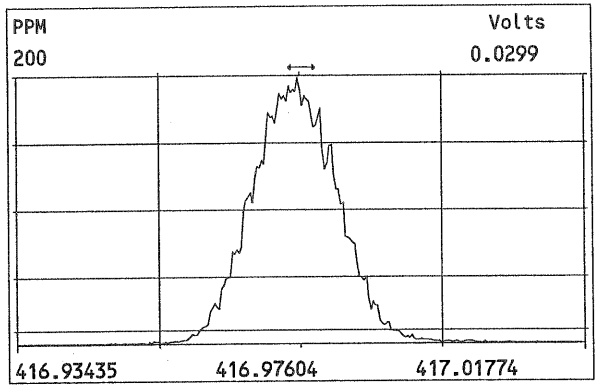


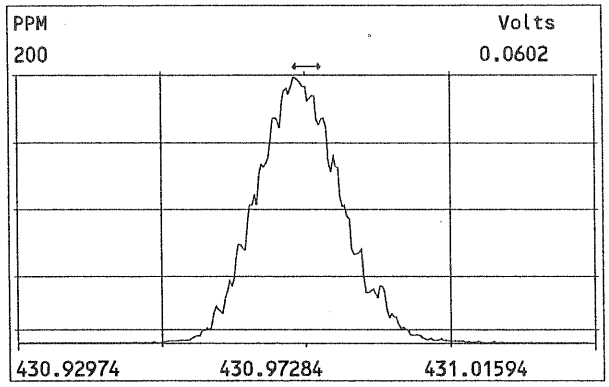


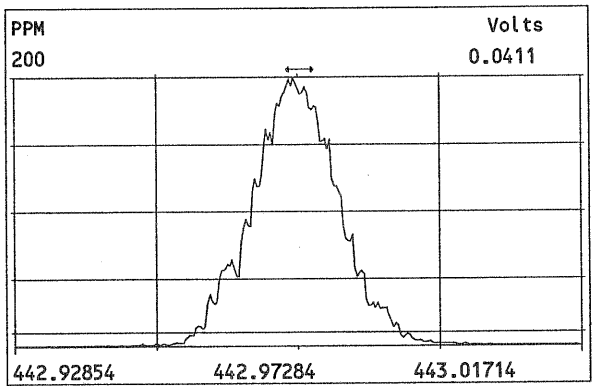


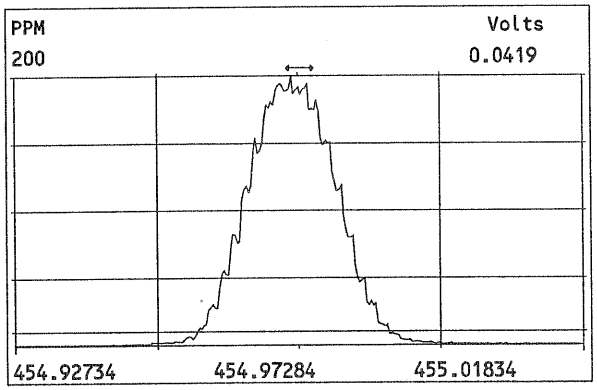
Peak Locate Examination:13-AUG-2010:09:22 File:12AUG10M_RES_CHECK
Experiment:PCDD Function:4 Reference:PFK

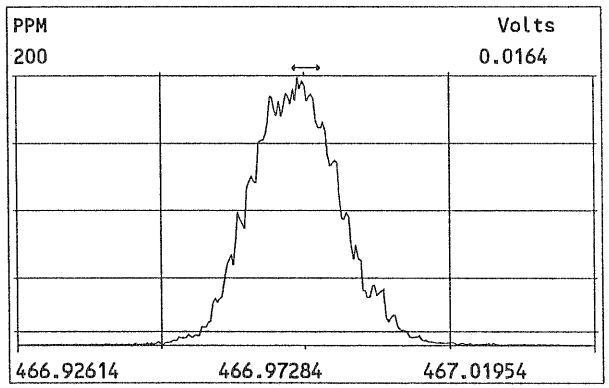


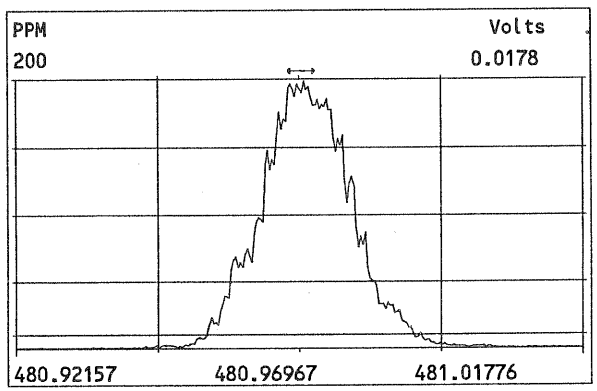




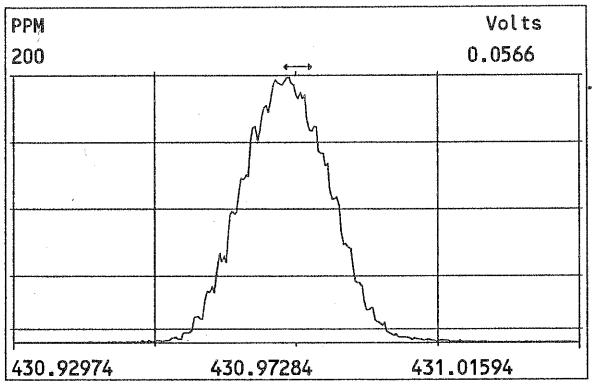


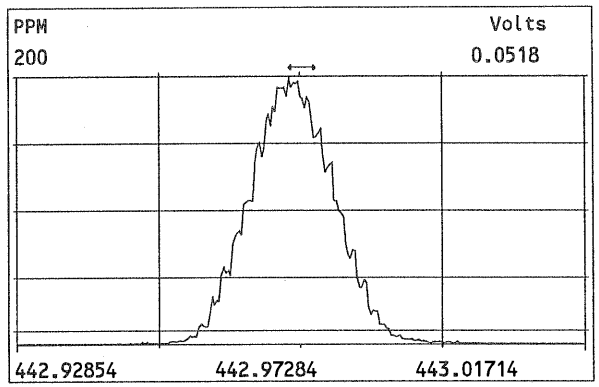


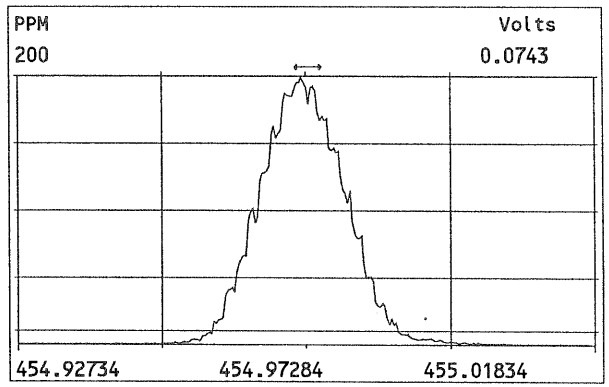


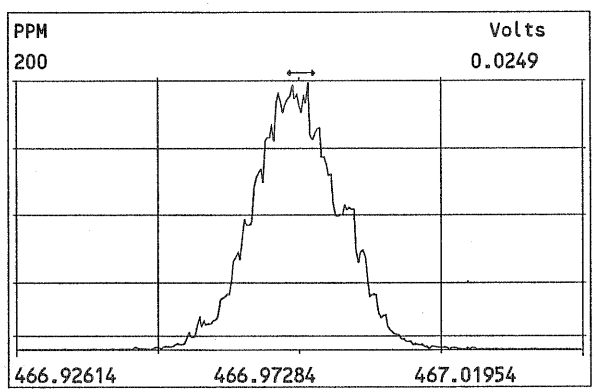


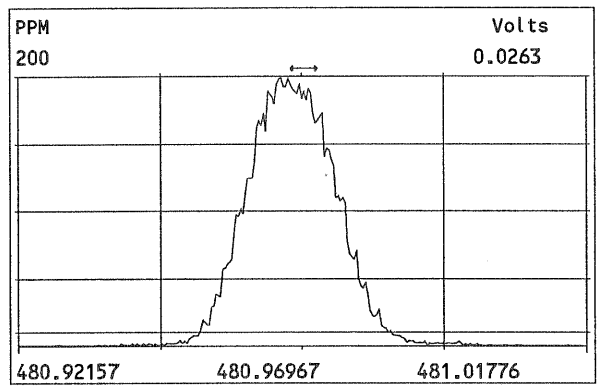
Peak Locate Examination:13-AUG-2010:09:22 File:12AUG10M_RES_CHECK
Experiment:PCDD Function:5 Reference:PFK

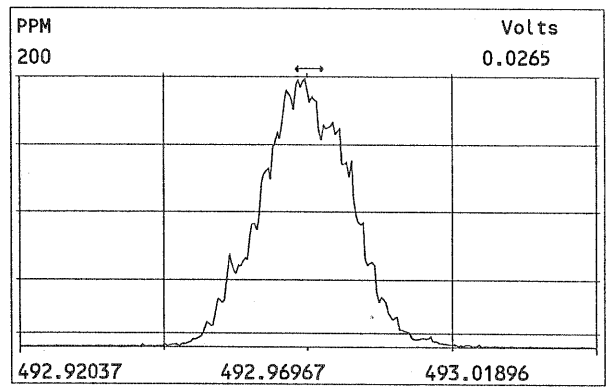


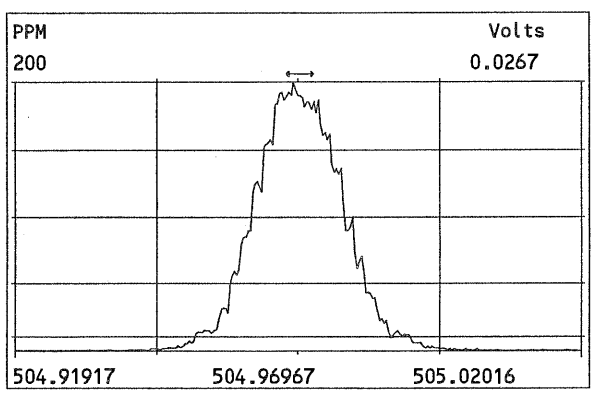


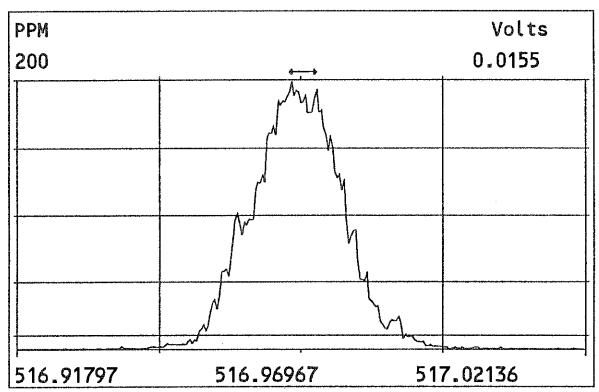












USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 12AUG10M Sam:24 Analysis Date: 13-AUG-10 08:24:11

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	0.74	0.65-0.89	y	10.6	7.80 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	1.71	1.32-1.78	y	53.1	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.42	1.05-1.43	y	56.2	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.42	1.05-1.43	y	54.2	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.41	1.05-1.43	y	57.5	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	y	51.8	43.0 - 58.0
OCDD	M+2/M+4	0.99	0.76-1.02	y	112	79.0 - 126
2,3,7,8-TCDF	M/M+2	0.69	0.65-0.89	y	10.6	8.40 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.53	1.32-1.78	y	55.4	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.51	1.32-1.78	y	52.6	41.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	48.0	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	48.5	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	48.4	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.29	1.05-1.43	y	49.0	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.08	0.88-1.20	y	47.3	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	y	48.9	43.0 - 58.0
OCDF	M+2/M+4	0.91	0.76-1.02	y	103	63.0 - 159

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

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

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

Analyst: _____ Date: 8/13/10

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 12AUG10M Sam:24 Analysis Date: 13-AUG-10 08:24:11

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.85	0.65-0.89	y	101	82.0 - 121
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.73	1.32-1.78	y	114	62.0 - 160
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.31	1.05-1.43	y	102	85.0 - 117
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.33	1.05-1.43	y	97.8	85.0 - 118
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	98.4	72.0 - 138
13C-OCDD	M+2/M+4	0.93	0.76-1.02	y	185	96.0 - 415
13C-2,3,7,8-TCDF	M/M+2	0.87	0.65-0.89	y	102	71.0 - 140
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.76	1.32-1.78	y	106	76.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.74	1.32-1.78	y	111	77.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	123	76.0 - 131
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	115	70.0 - 143
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	121	73.0 - 137
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.54	0.43-0.59	y	123	74.0 - 135
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.42	0.37-0.51	y	116	78.0 - 129
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.42	0.37-0.51	y	117	77.0 - 129
13C-OCDF	M+2/M+4	0.99	0.76-1.02	y	207	96.0 - 415
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					10.0	7.80 - 12.8

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

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

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

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

Analyst: _____ Date: 8/13/10

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: FAL3 Initial Calibration Date: 5/12/10

RT Window Data Filename: 12AUG10M Sam:24 Analysis Date: 13-AUG-10 Time: 08:24:11

DB-5 IS Data Filename: 12AUG10M Sam:24 Analysis Date: 13-AUG-10 Time: 08:24:11

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

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:27	1,3,6,8-TCDF (F)	23:06
1,2,8,9-TCDD (L)	28:24	1,2,8,9-TCDF (L)	28:37
1,2,4,7,9-PeCDD (F)	30:17	1,3,4,6,8-PeCDF (F)	28:27
1,2,3,8,9-PeCDD (L)	33:50	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)	39:14	1,2,3,7,8,9-HxCDF (L)	39:48
1,2,3,4,6,7,9-HpCDD (F)	42:51	1,2,3,4,6,7,8-HpCDF (F)	42:19
1,2,3,4,6,7,8-HpCDD (L)	44:13	1,2,3,4,7,8,9-HpCDF (L)	45:08

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

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

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

Analyst: [signature] Date: 8/13/10

USEPA - ITD

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 13-AUG-10 08:24:11 CS3 or VER Data Filename: 12AUG10M Sam:24

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989-1.052
13C-2,3,7,8-TCDD		1.022	0.976-1.043
13C-2,3,7,8-TCDF		0.994	0.923-1.103
13C-1,2,3,7,8-PeCDD		1.239	1.000-1.567
13C-1,2,3,7,8-PeCDF		1.174	0.923-1.203
13C-2,3,4,7,8-PeCDF		1.223	0.923-1.303

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

Analyst: _____ Date: 8/13/10

USEPA - ITD

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 13-AUG-10 08:24:11 CS3 or VER Data Filename: 12AUG10M Sam:24

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.001	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.984	0.977-1.000
13C-1,2,3,6,7,8-HxCDD		0.989	0.981-1.003
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975
13C-2,3,4,6,7,8-HxCDF		0.978	0.959-1.021
13C-1,2,3,7,8,9-HxCDF		1.015	0.977-1.047
13C-1,2,3,4,6,7,8-HpCDD		1.127	1.086-1.130
13C-1,2,3,4,6,7,8-HpCDF		1.078	1.043-1.085
13C-1,2,3,4,7,8,9-HpCDF		1.151	1.057-1.154
13C-OCDD		1.269	1.032-1.311
13C-OCDF		1.279	1.000-1.311

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

Analyst: _____ Date: 8/13/10

FAL ID: ST081210M3 Filename: 12AUG10M Sam:24 Acquired: 13-AUG-10 08:24:11 ICal: PCDDFAL3-5-12-10
Client ID: 1613 CS3 090918J ConCal: ST081210M2 EndCal: ST081210M3
Results: 6269 GC Column: DB5 Amount: 1.000 NATO 1989 Tox: 105
WHO 1998 Tox: 131 WHO 2005 Tox: 120

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	2.40e+06	0.74 y	27:27	1.04	10.6		2.50	-	-	*
1,2,3,7,8-PeCDD	1.20e+07	1.71 y	33:16	1.05	53.1		2.50	-	-	*
1,2,3,4,7,8-HxCDD	1.22e+07	1.42 y	38:38	1.30	56.2		2.50	-	-	*
1,2,3,6,7,8-HxCDD	1.17e+07	1.42 y	38:47	1.28	54.2		2.50	-	-	*
1,2,3,7,8,9-HxCDD	1.21e+07	1.41 y	39:14	1.25	57.5		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	1.10e+07	1.02 y	44:13	1.35	51.8		2.50	-	-	*
OCDD	1.43e+07	0.99 y	49:47	1.25	112		2.50	-	-	*
2,3,7,8-TCDF	6.50e+06	0.69 y	26:42	1.62	10.6		2.50	-	-	*
1,2,3,7,8-PeCDF	1.86e+07	1.53 y	31:32	0.92	55.4		2.50	-	-	*
2,3,4,7,8-PeCDF	1.77e+07	1.51 y	32:51	0.94	52.6		2.50	-	-	*
1,2,3,4,7,8-HxCDF	1.66e+07	1.25 y	37:14	0.93	48.0		2.50	-	-	*
1,2,3,6,7,8-HxCDF	1.76e+07	1.25 y	37:26	0.84	48.5		2.50	-	-	*
2,3,4,6,7,8-HxCDF	1.65e+07	1.24 y	38:22	0.90	48.4		2.50	-	-	*
1,2,3,7,8,9-HxCDF	1.53e+07	1.29 y	39:48	0.98	49.0		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	1.44e+07	1.08 y	42:19	1.38	47.3		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	1.32e+07	1.05 y	45:08	1.62	48.9		2.50	-	-	*
OCDF	1.63e+07	0.91 y	50:10	0.74	103		2.50	-	-	*

						Rec
13C-2,3,7,8-TCDD	2.19e+07	0.85 y	27:26	0.93	101	101
13C-1,2,3,7,8-PeCDD	2.15e+07	1.73 y	33:15	0.81	114	114
13C-1,2,3,4,7,8-HxCDD	1.68e+07	1.31 y	38:36	0.95	102	102
13C-1,2,3,6,7,8-HxCDD	1.69e+07	1.33 y	38:46	1.00	97.8	97.8
13C-1,2,3,4,6,7,8-HpCDD	1.57e+07	1.03 y	44:12	0.92	98.4	98.4
13C-OCDD	2.04e+07	0.93 y	49:46	0.63	185	92.7
13C-2,3,7,8-TCDF	3.80e+07	0.87 y	26:41	0.87	102	102
13C-1,2,3,7,8-PeCDF	3.67e+07	1.76 y	31:31	0.81	106	106
13C-2,3,4,7,8-PeCDF	3.57e+07	1.74 y	32:50	0.75	111	111
13C-1,2,3,4,7,8-HxCDF	3.72e+07	0.53 y	37:13	1.74	123	123
13C-1,2,3,6,7,8-HxCDF	4.33e+07	0.53 y	37:24	2.17	115	115
13C-2,3,4,6,7,8-HxCDF	3.81e+07	0.53 y	38:21	1.82	121	121
13C-1,2,3,7,8,9-HxCDF	3.18e+07	0.54 y	39:48	1.49	123	123
13C-1,2,3,4,6,7,8-HpCDF	2.21e+07	0.42 y	42:17	1.10	116	116
13C-1,2,3,4,7,8,9-HpCDF	1.66e+07	0.42 y	45:08	0.81	117	117
13C-OCDF	4.27e+07	0.99 y	50:08	1.19	207	104
37Cl-2,3,7,8-TCDD	2.18e+06		27:27	0.93	10.0	100
13C-1,2,3,4-TCDD	2.34e+07	0.85 y	26:51	-	68.9	
13C-1,2,3,4-TCDF	4.29e+07	0.88 y	25:35	-	80.5	
13C-1,2,3,7,8,9-HxCDD	1.74e+07	1.31 y	39:13	-	80.6	

						Fac	Noise-1	Noise-2	DL		#Hom
Total Tetra-Dioxins	1.32e+07		23:27	1.04	58.1	2.50	-	-	*		14
Total Penta-Dioxins	2.54e+07		30:17	1.05	113	2.50	-	-	*		8
Total Hexa-Dioxins	4.08e+07		36:09	1.27	190	2.50	-	-	*		23
Total Hepta-Dioxins	2.39e+07		42:51	1.35	112	2.50	-	-	*		11
Total Tetra-Furans	2.82e+07		23:06	1.62	45.8	2.50	-	-	*		20
1st Fn. Tot Penta-Furans	1.49e+07		28:27	0.93	44.2	2.50	-	-	*	PeCDF	1
Total Penta-Furans	5.34e+07		30:13	0.93	159	2.50	-	-	*	203	11
Total Hexa-Furans	7.67e+07		35:17	0.90	225	2.50	-	-	*		7
Total Hepta-Furans	2.77e+07		42:19	1.48	96.6	2.50	-	-	*		7

Analyst: _____ Date: 8/13/10

Frontier Analytical Laboratory - Acquisition Log

Run Name:12AUG10M Instrument: FAL3 GC: DB5 Experiment:PCDD

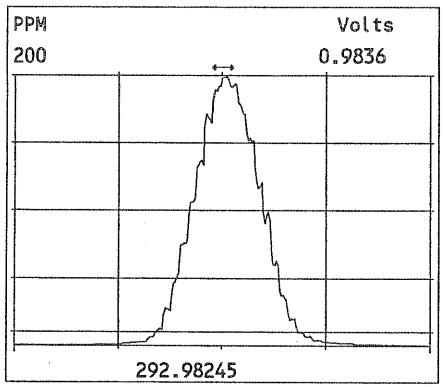
Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
12AUG10M	1	ST081210M1	1613 CS3 090918J	12-AUG-10 11:10:55	ST081210M1	ST081210M2	TC
12AUG10M	2	SB081210M1	Solvent Blank	12-AUG-10 12:06:13	ST081210M1	ST081210M2	TC
12AUG10M	3	6273-009-0001-SA	PSB07-1.5-2.0-072810	12-AUG-10 13:01:32	ST081010N1	ST081010N2	TC
12AUG10M	4	6273-011-0001-SA	PSB08-1.5-2.0-072810	12-AUG-10 13:56:54	ST081010N1	ST081010N2	TC
12AUG10M	5	2078-001-0001-OPR	OPR	12-AUG-10 14:52:16	ST081210M1	ST081210M2	TC
12AUG10M	6	2078-001-0001-MB	Method Blank	12-AUG-10 15:47:38	ST081210M1	ST081210M2	TC
12AUG10M	7	6269-008-0001-SA	PSB17-10-13-072810	12-AUG-10 16:43:05	ST081210M1	ST081210M2	TC
12AUG10M	8	6269-007-0001-SA	PSB17-4-6-072810	12-AUG-10 17:38:28	ST081210M1	ST081210M2	TC
12AUG10M	9	6269-006-0001-SA	PSB17-2-4-072810	12-AUG-10 18:33:55	ST081210M1	ST081210M2	TC
12AUG10M	10	6269-003-0001-SA	PSB14-2-4-072810	12-AUG-10 19:29:18	ST081210M1	ST081210M2	TC
12AUG10M	11	6269-005-0001-SA	PSB17-1.5-2-072810	12-AUG-10 20:24:37	ST081210M1	ST081210M2	TC
12AUG10M	12	6269-002-0001-SA	PSB14-1.5-2.0-072810	12-AUG-10 21:20:00	ST081210M1	ST081210M2	TC
12AUG10M	13	6269-004-0001-SA	PSB17-0-0.5-072810	12-AUG-10 22:15:22	ST081210M1	ST081210M2	TC
12AUG10M	14	6269-001-0001-SA	PSB14-0-.5-072810	12-AUG-10 23:10:40	ST081210M1	ST081210M2	TC
12AUG10M	15	SB081210M2	Solvent Blank	13-AUG-10 00:06:03	ST081210M1	ST081210M2	TC
12AUG10M	16	ST081210M2	1613 CS3 090918J	13-AUG-10 01:01:28	ST081210M2	ST081210M3	TC
12AUG10M	17	SB081210M4	Solvent Blank	13-AUG-10 01:56:52	ST081210M2	ST081210M3	TC
12AUG10M	18	6271-003-0001-SA	PSB13-2-4-072910	13-AUG-10 02:52:15	ST081210M2	ST081210M3	TC
12AUG10M	19	6271-002-0001-SA	PSB13-1.5-2-072910	13-AUG-10 03:47:38	ST081210M2	ST081210M3	TC
12AUG10M	20	6271-001-0001-SA	PSB13-0-0.5-072910	13-AUG-10 04:42:56	ST081210M2	ST081210M3	TC
12AUG10M	21	6279-001-0001-SA	201007300147	13-AUG-10 05:38:15	ST081210M2	ST081210M3	TC
12AUG10M	22	6279-002-0001-SA	201007300149	13-AUG-10 06:33:34	ST081210M2	ST081210M3	TC
12AUG10M	23	SB081210M5	Solvent Blank	13-AUG-10 07:28:53	ST081210M2	ST081210M3	TC
12AUG10M	24	ST081210M3	1613 CS3 090918J	13-AUG-10 08:24:11	ST081210M2	ST081210M3	TC

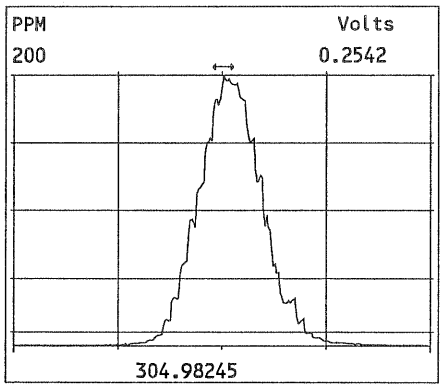
TC 8/13/10

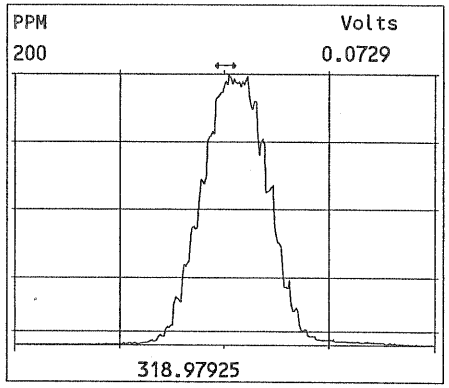
Data Backed Up:_____

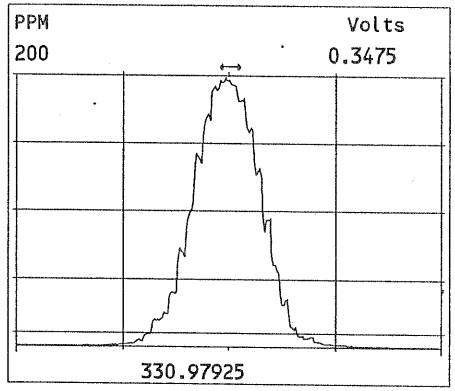
Date:_____

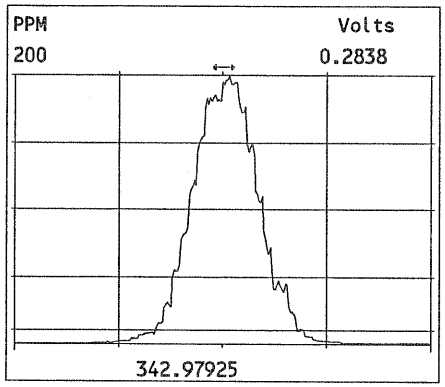
Peak Locate Examination:12-AUG-2010:11:09 File:12AUG10M
Experiment:PCDD Function:1 Reference:PFK

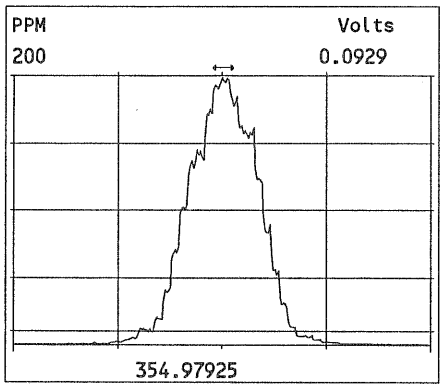


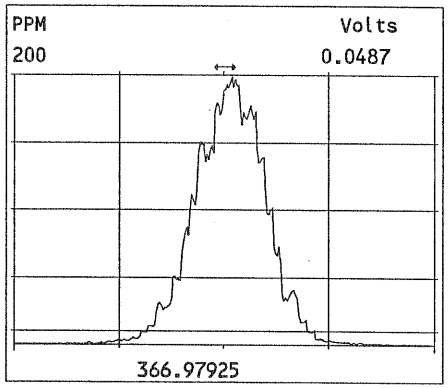


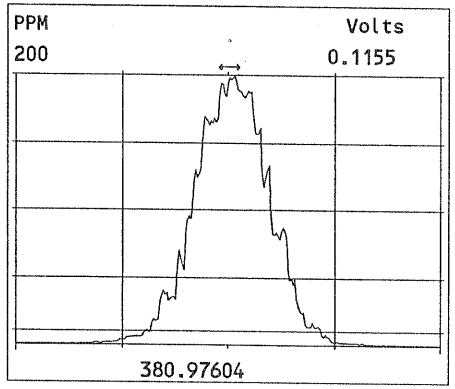


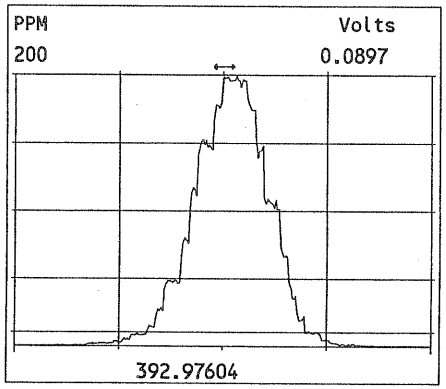


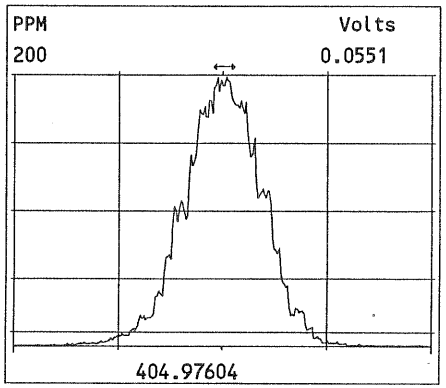


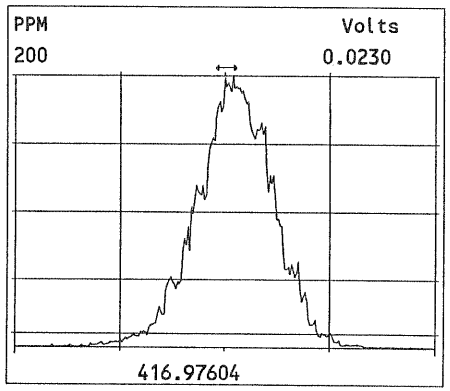




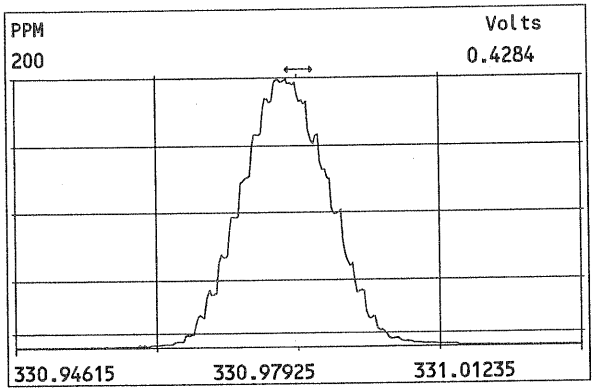


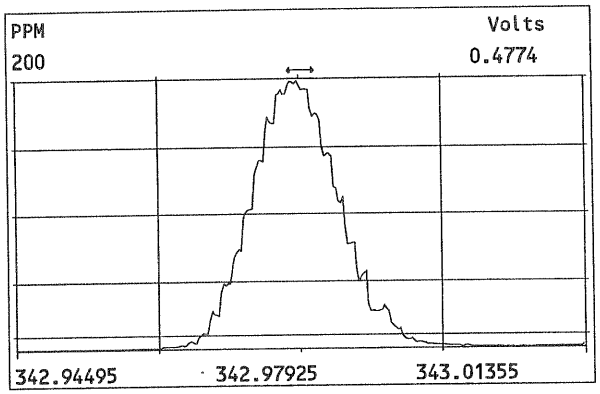


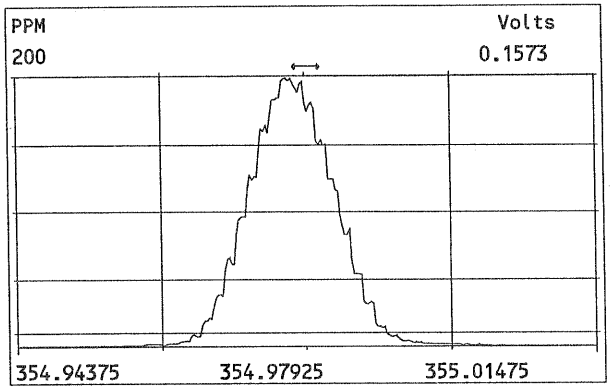


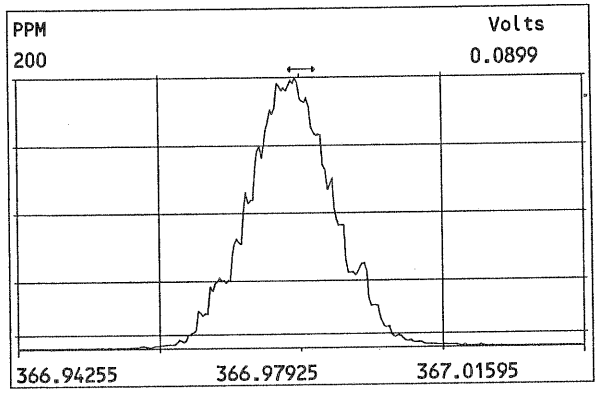


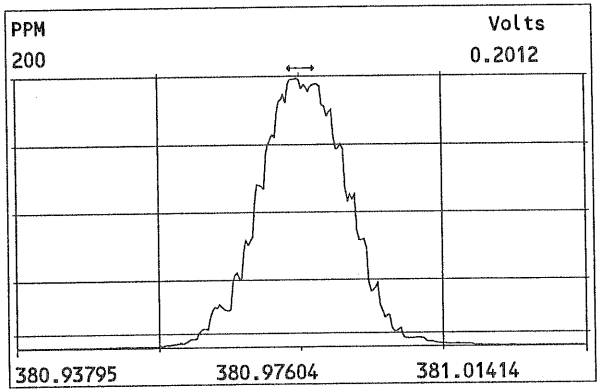
Peak Locate Examination:12-AUG-2010:11:09 File:12AUG10M
Experiment:PCDD Function:2 Reference:PFK

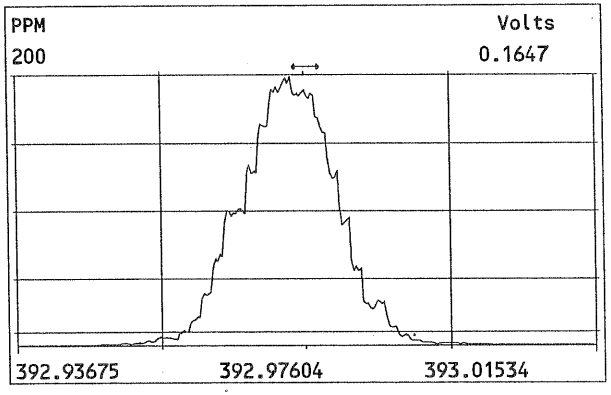


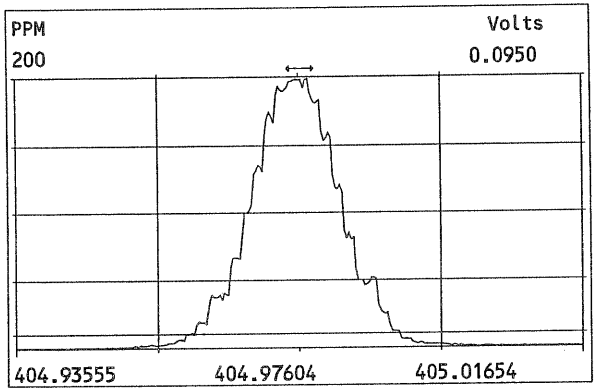


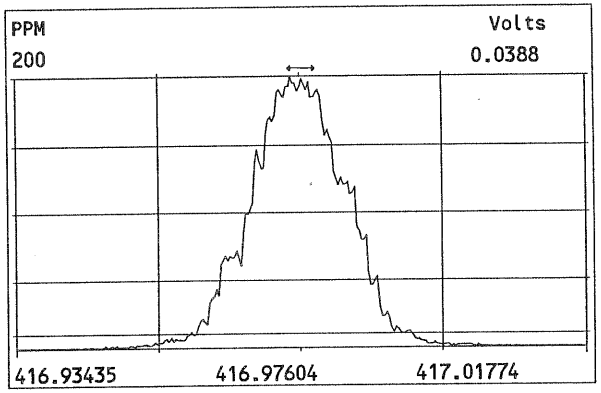




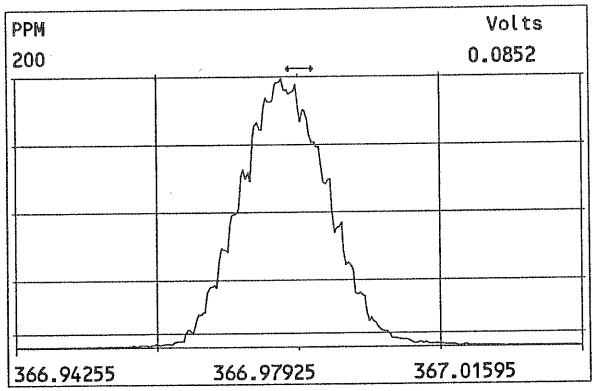


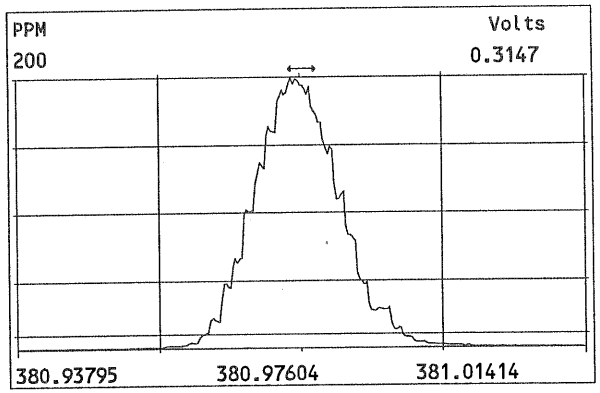


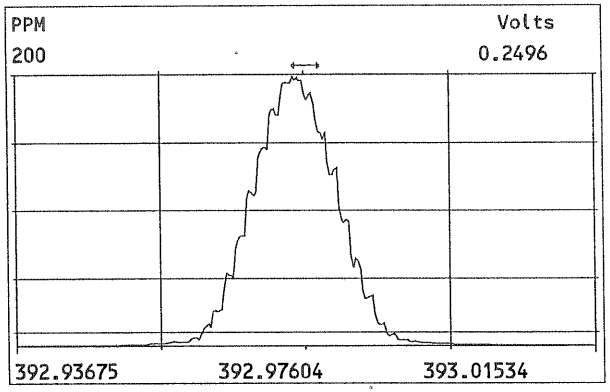


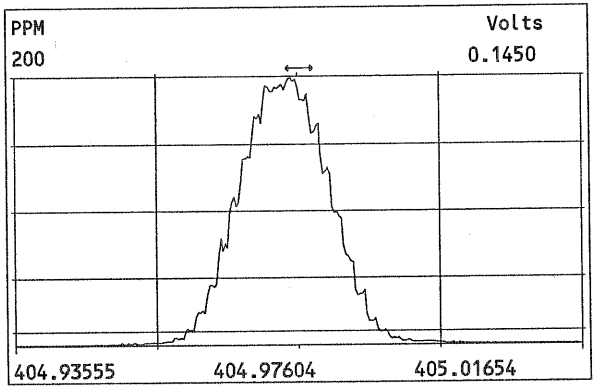


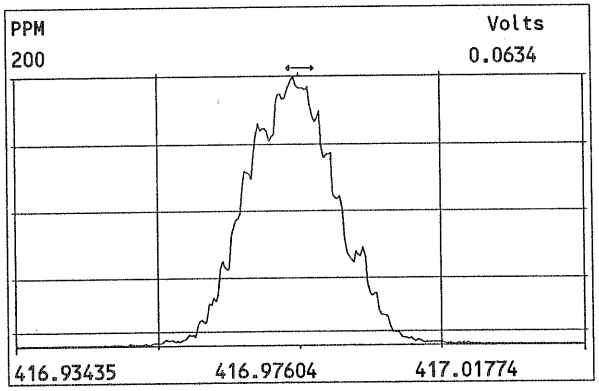
Peak Locate Examination:12-AUG-2010:11:09 File:12AUG10M
Experiment:PCDD Function:3 Reference:PFK

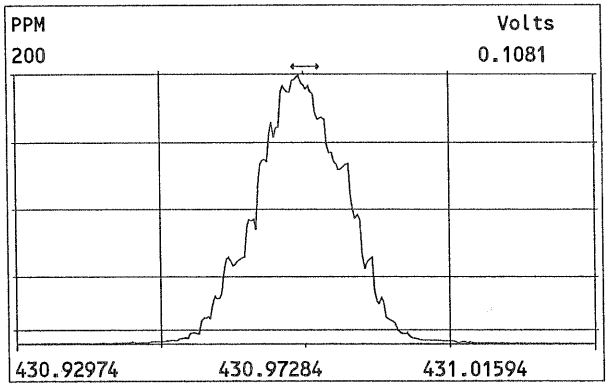


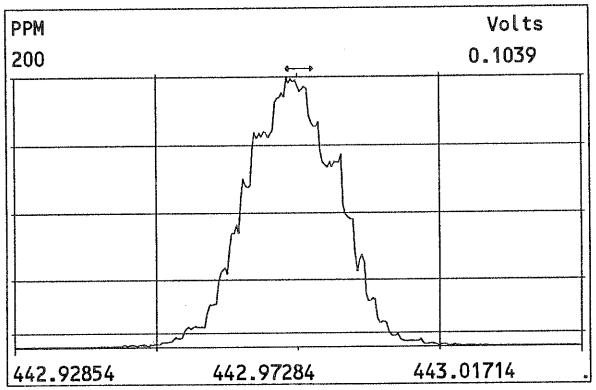


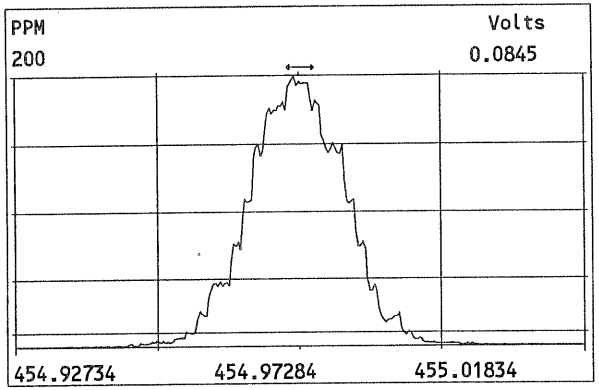






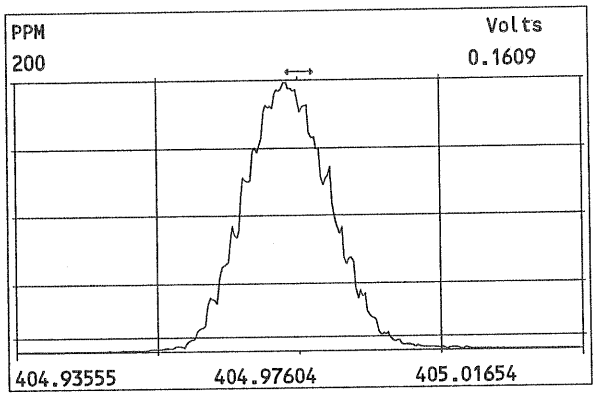


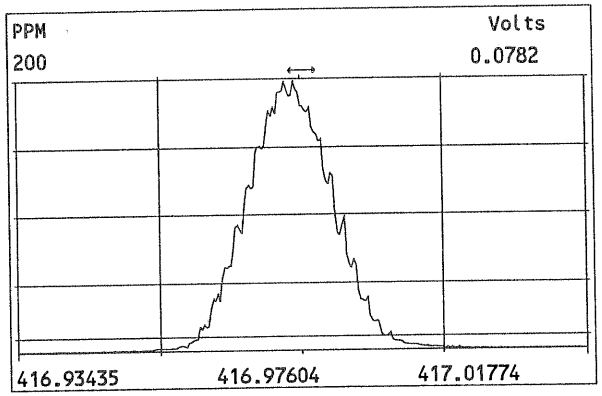


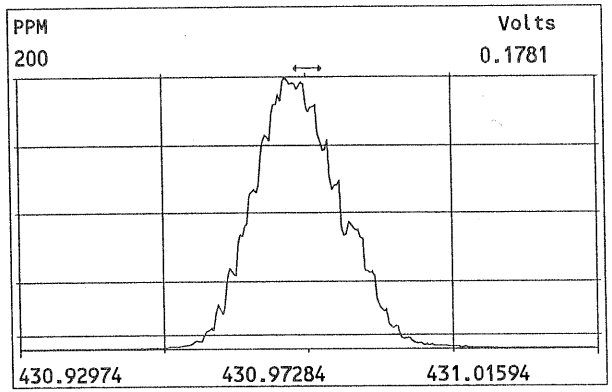


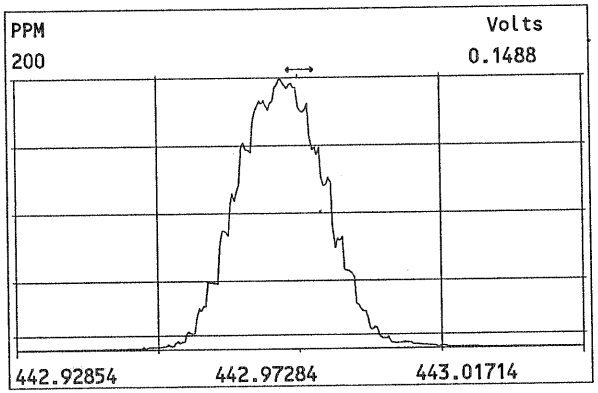
Peak Locate Examination:12-AUG-2010:11:10 File:12AUG10M

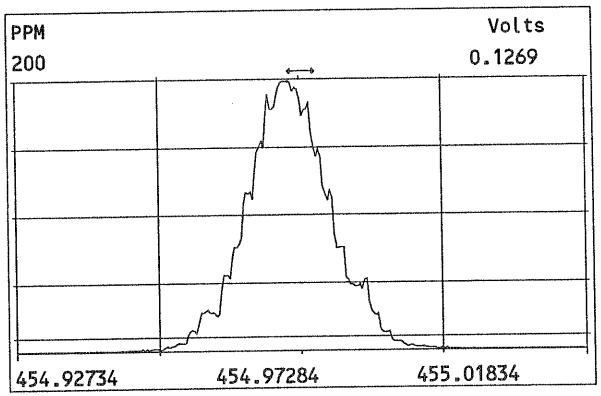
Experiment:PCDD Function:4 Reference:PFK

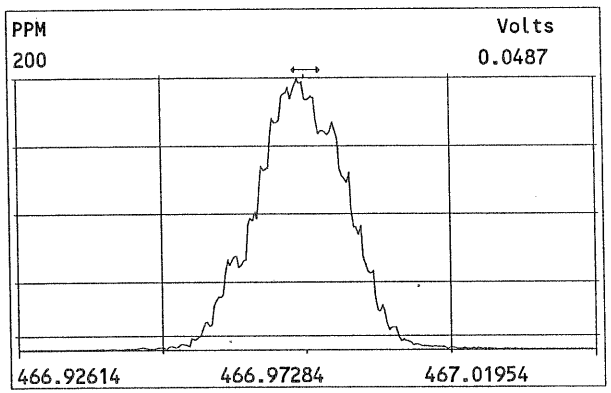


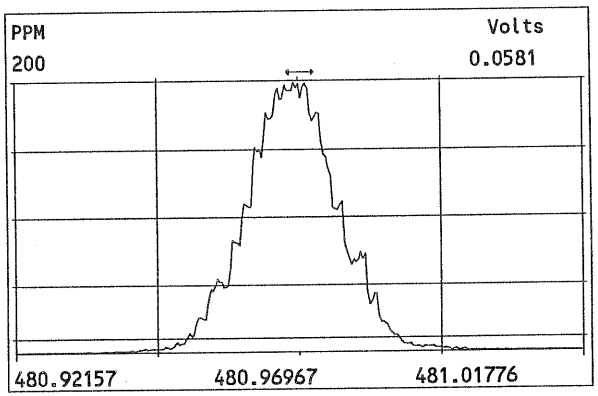




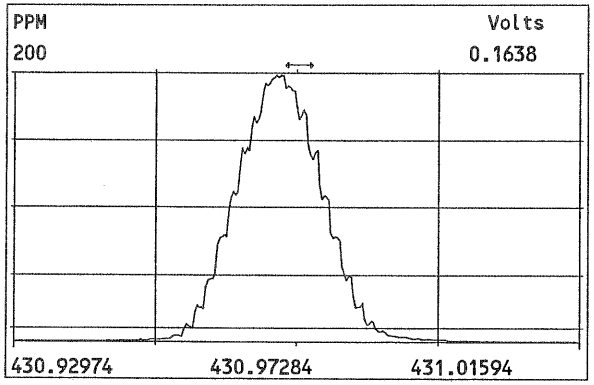


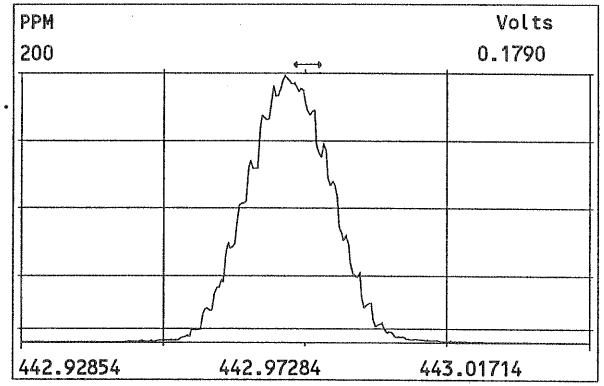


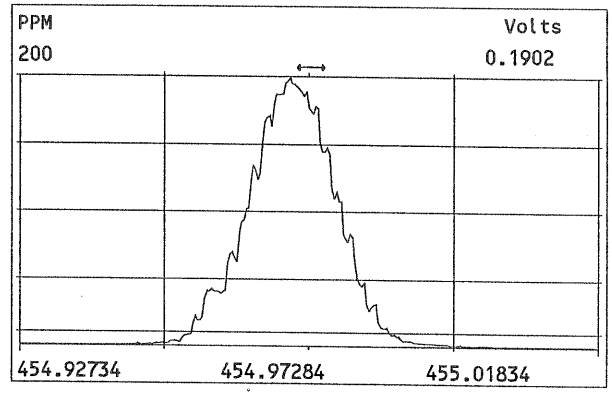


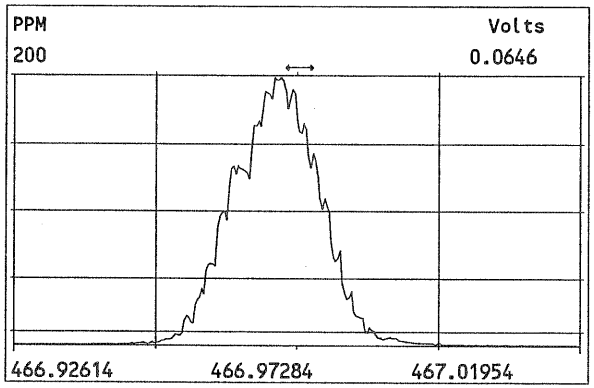


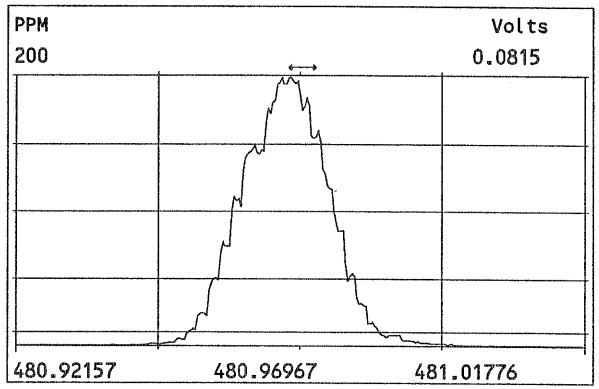
Peak Locate Examination:12-AUG-2010:11:10 File:12AUG10M
Experiment:PCDD Function:5 Reference:PFK

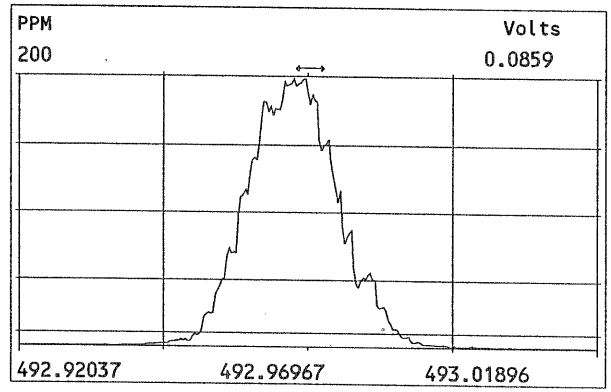


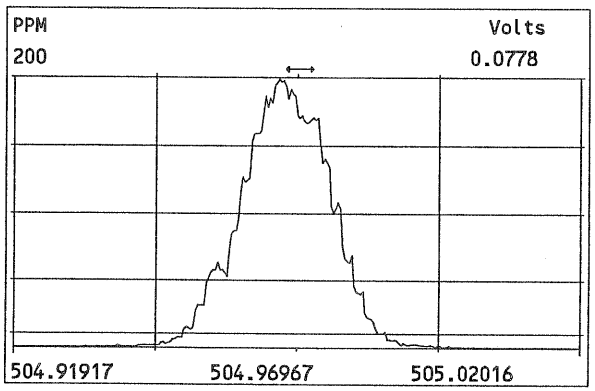


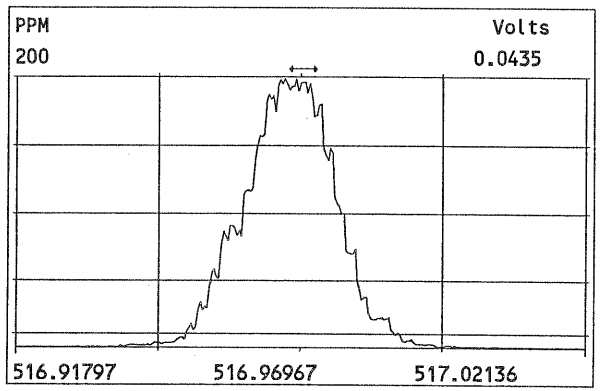




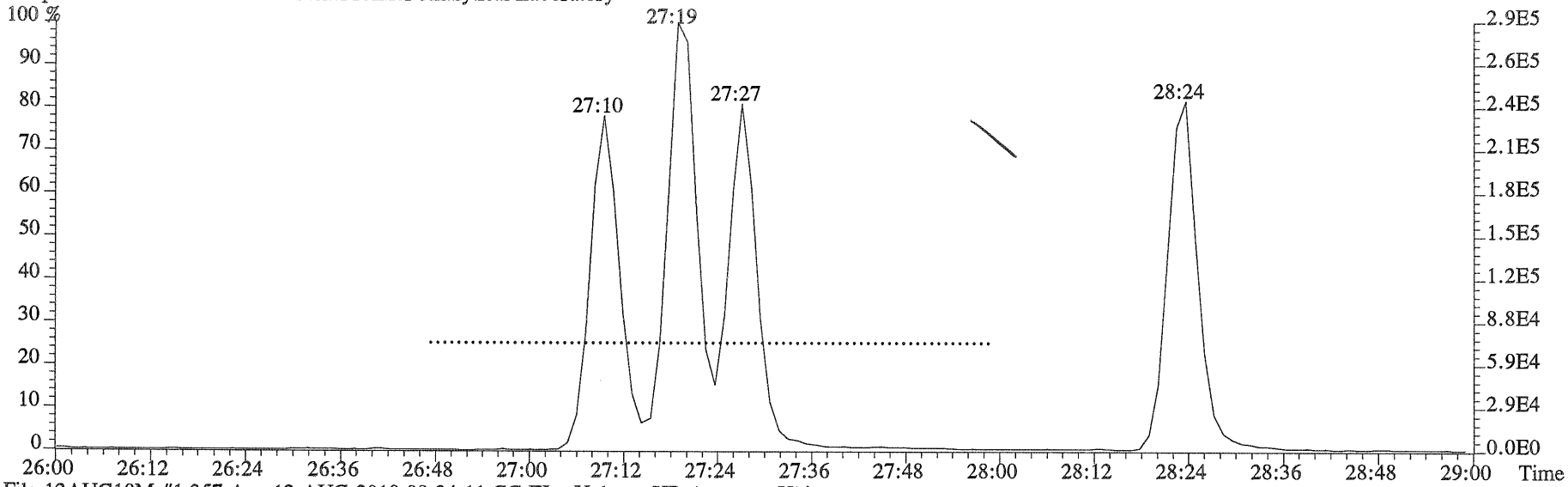




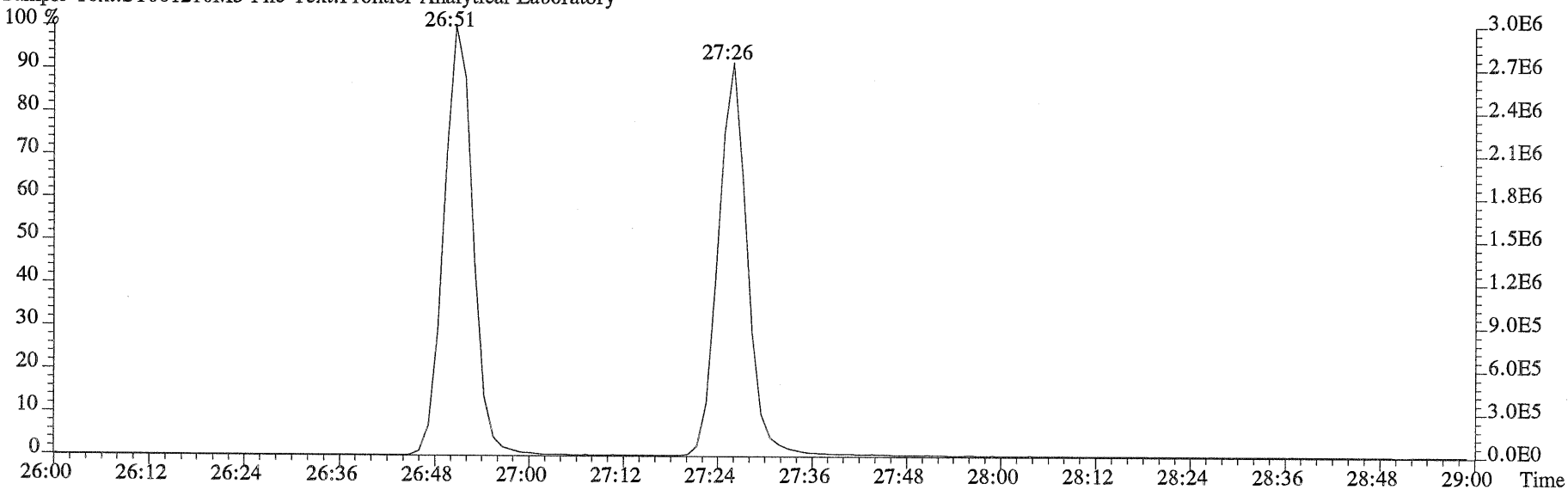




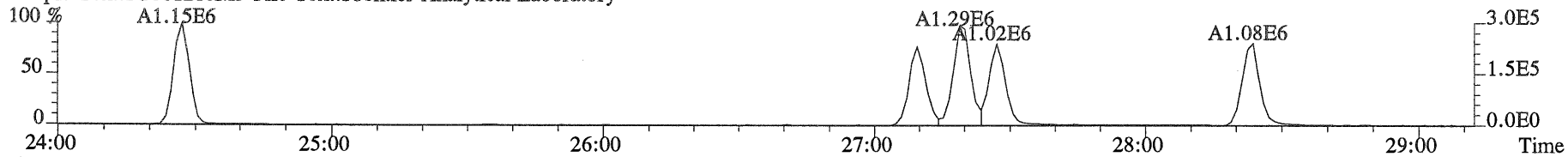
File:12AUG10M #1-357 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:24 Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



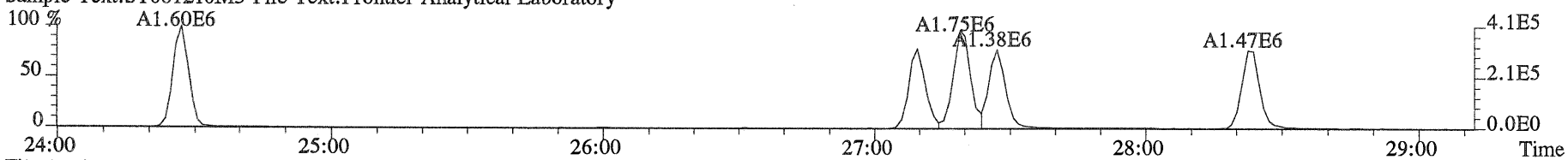
File:12AUG10M #1-357 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:24 Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



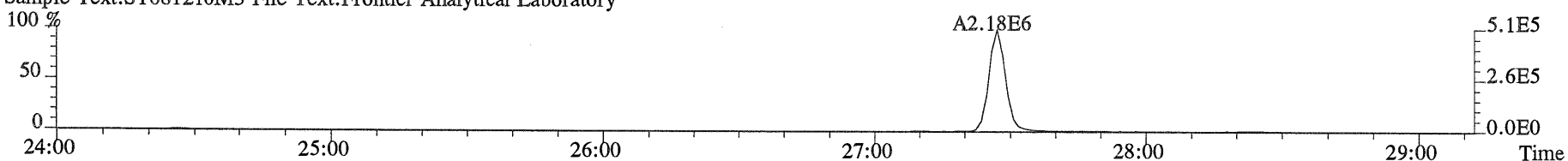
File:12AUG10M #1-357 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:24 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



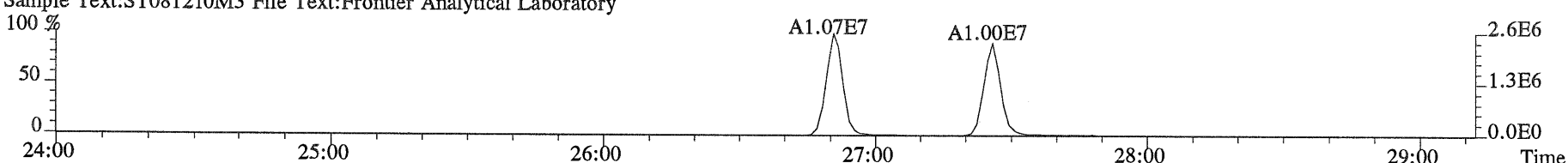
File:12AUG10M #1-357 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:24 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



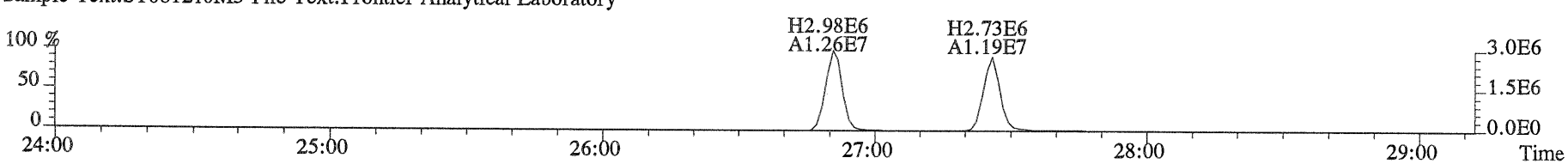
File:12AUG10M #1-357 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:24 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



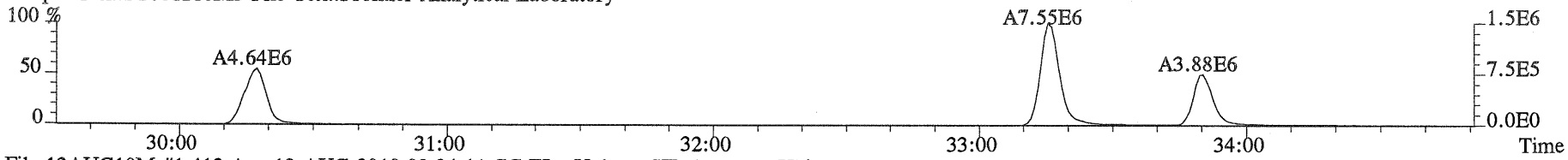
File:12AUG10M #1-357 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:24 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



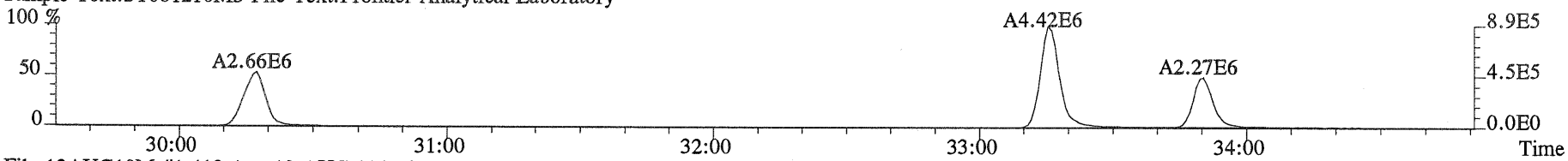
File:12AUG10M #1-357 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:24 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



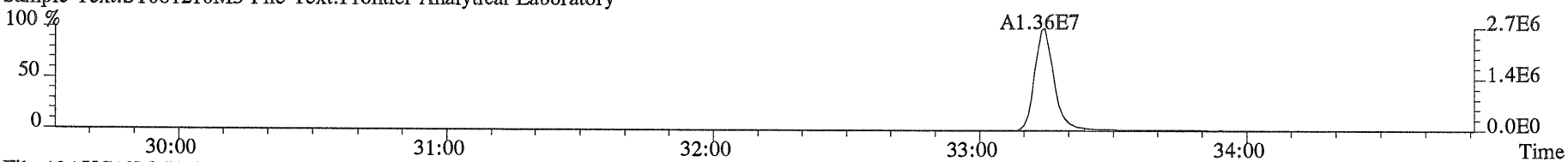
File:12AUG10M #1-412 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:24 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



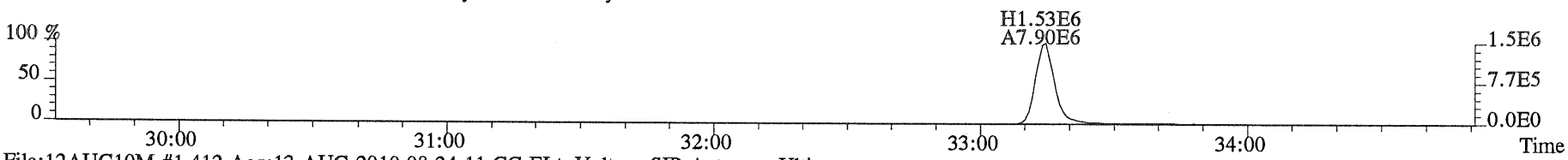
File:12AUG10M #1-412 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:24 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



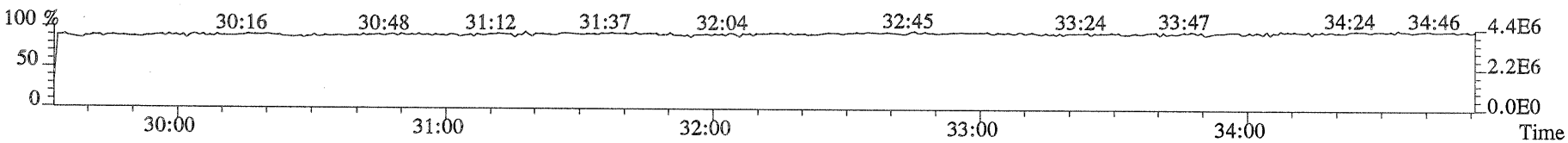
File:12AUG10M #1-412 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:24 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



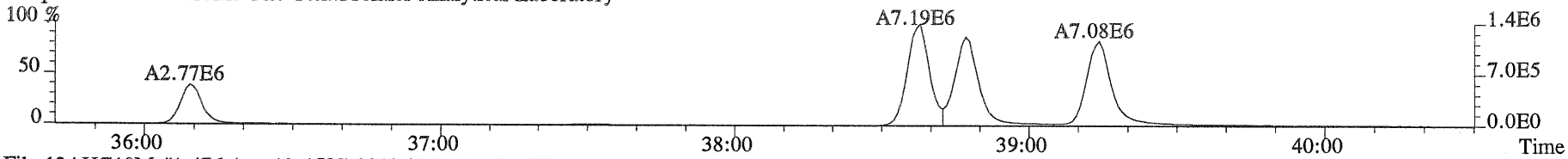
File:12AUG10M #1-412 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:24 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



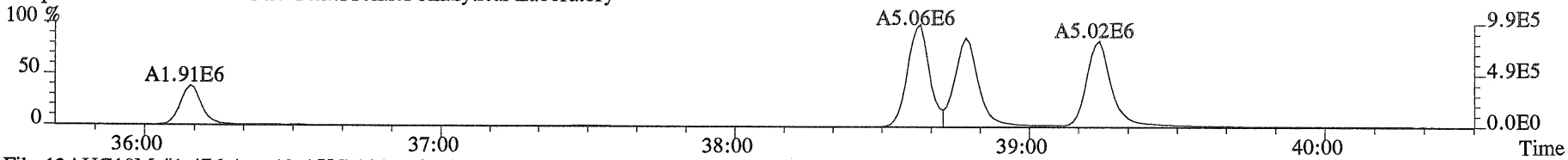
File:12AUG10M #1-412 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:24 F:2 Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



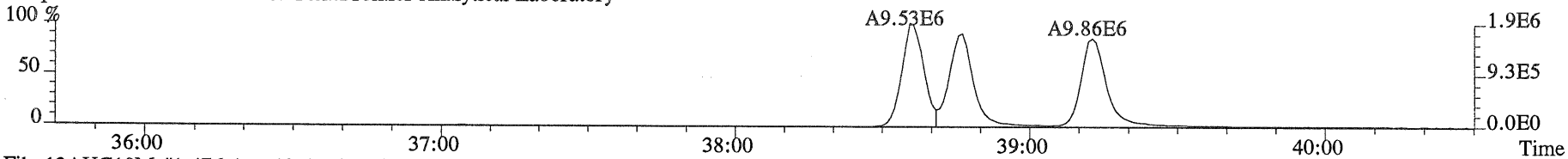
File:12AUG10M #1-476 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:24 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



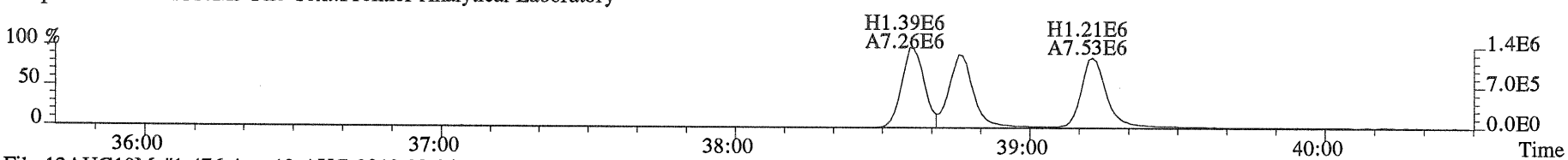
File:12AUG10M #1-476 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:24 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



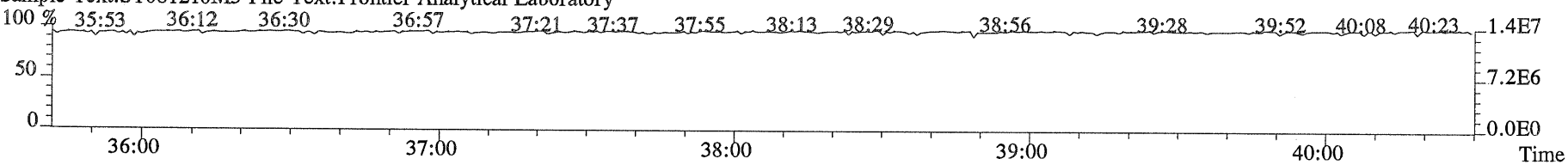
File:12AUG10M #1-476 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:24 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



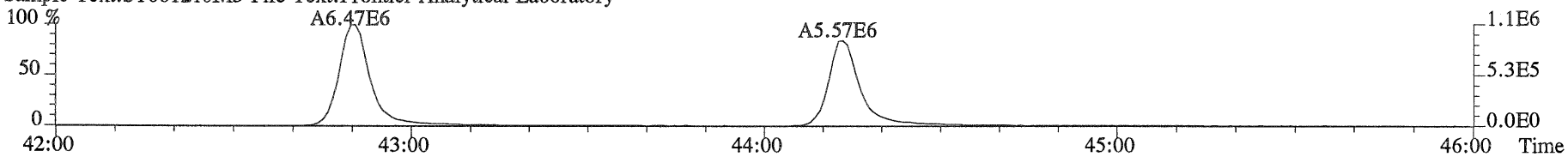
File:12AUG10M #1-476 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:24 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



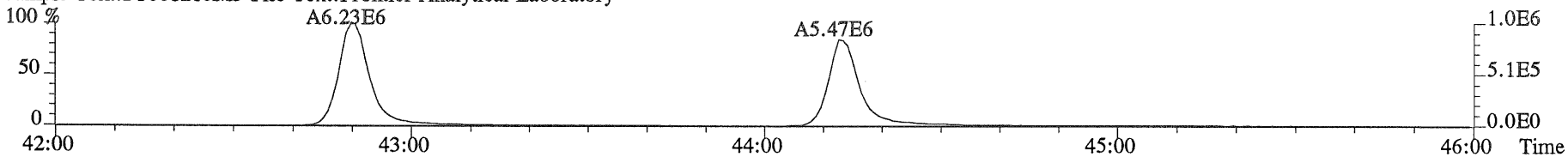
File:12AUG10M #1-476 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:24 F:3 Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



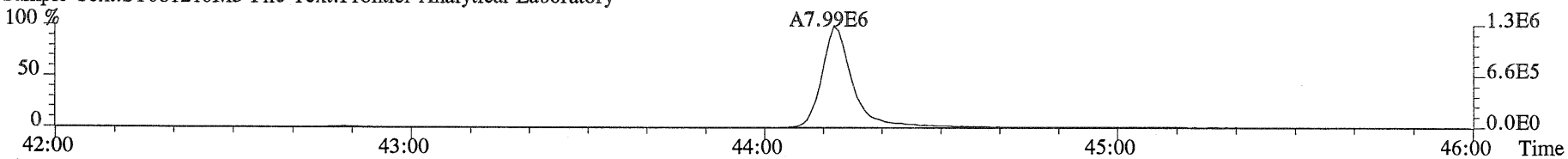
File:12AUG10M #1-541 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:24 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



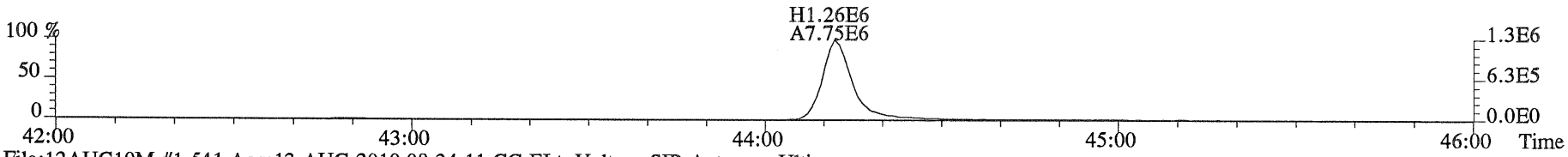
File:12AUG10M #1-541 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:24 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



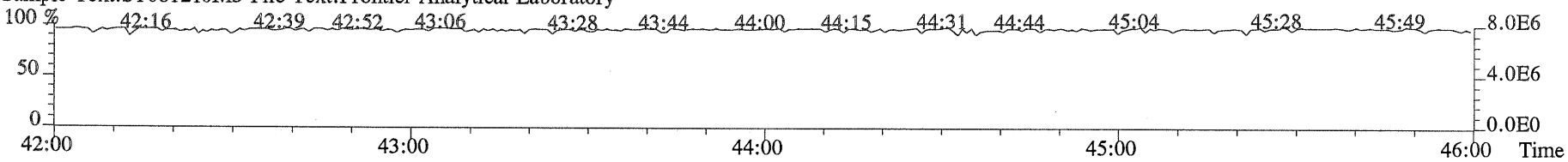
File:12AUG10M #1-541 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:24 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



File:12AUG10M #1-541 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:24 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



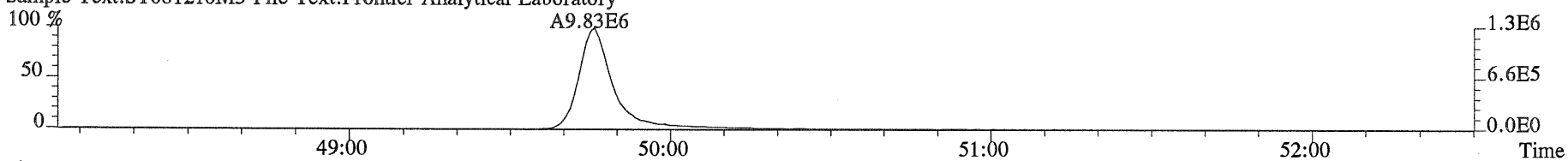
File:12AUG10M #1-541 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:24 F:4 Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



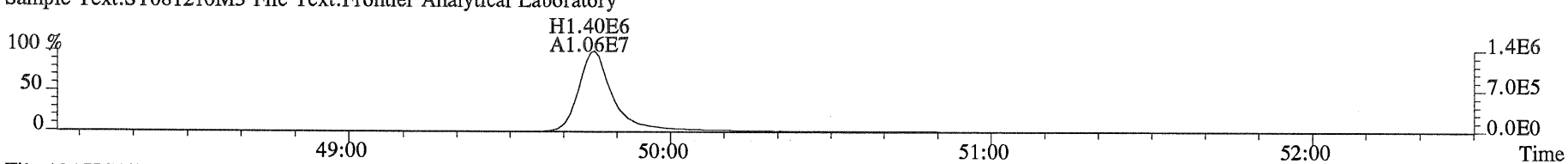
File:12AUG10M #1-348 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:24 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory

File:12AUG10M #1-348 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:24 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory

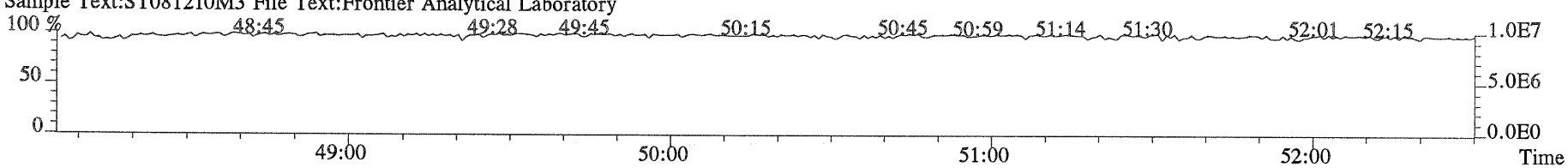
File:12AUG10M #1-348 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:24 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



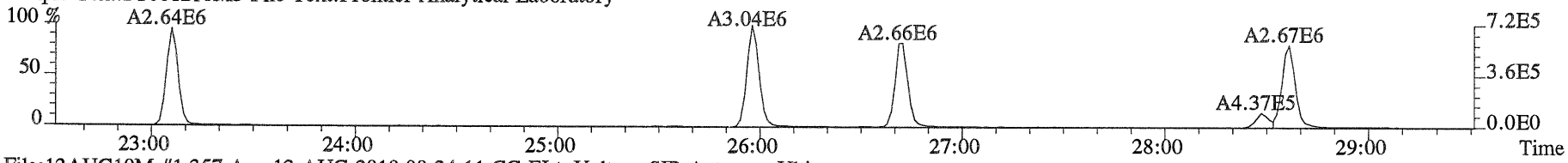
File:12AUG10M #1-348 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:24 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



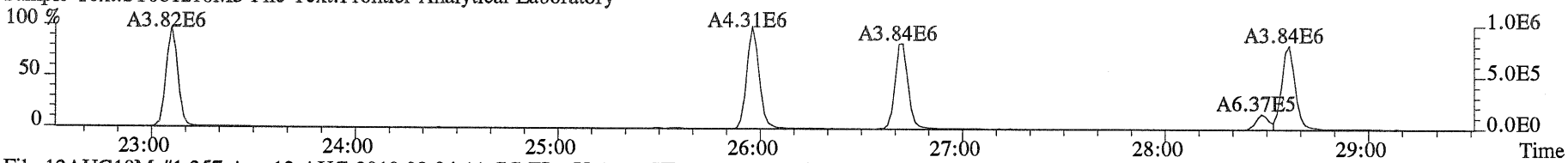
File:12AUG10M #1-348 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:24 F:5 Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



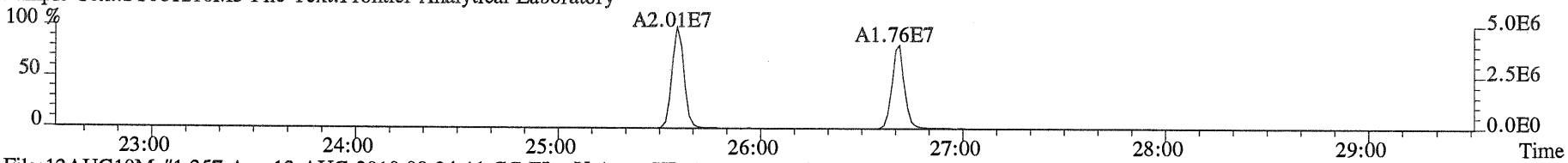
File:12AUG10M #1-357 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:24 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



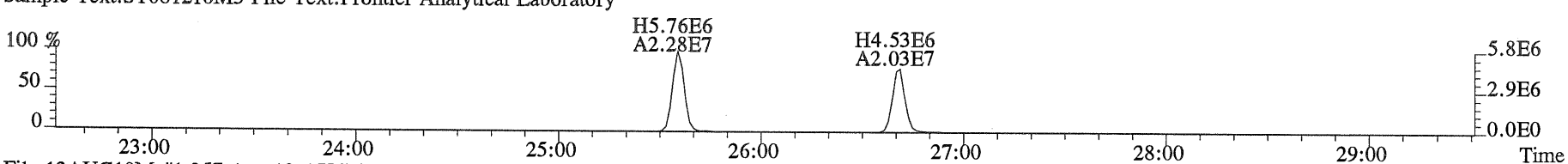
File:12AUG10M #1-357 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:24 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



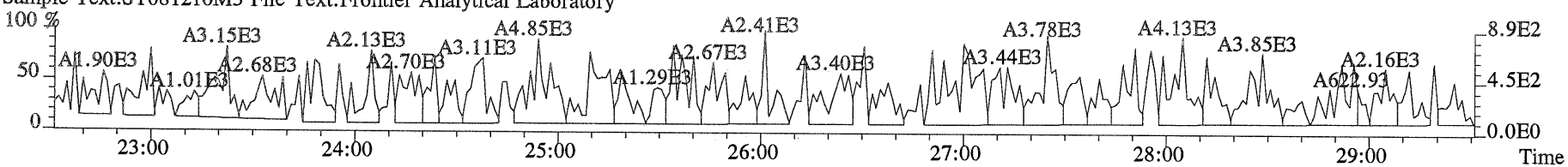
File:12AUG10M #1-357 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:24 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



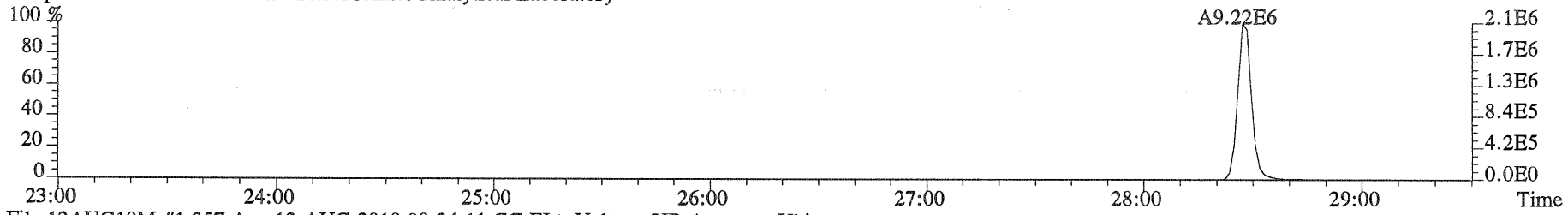
File:12AUG10M #1-357 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:24 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



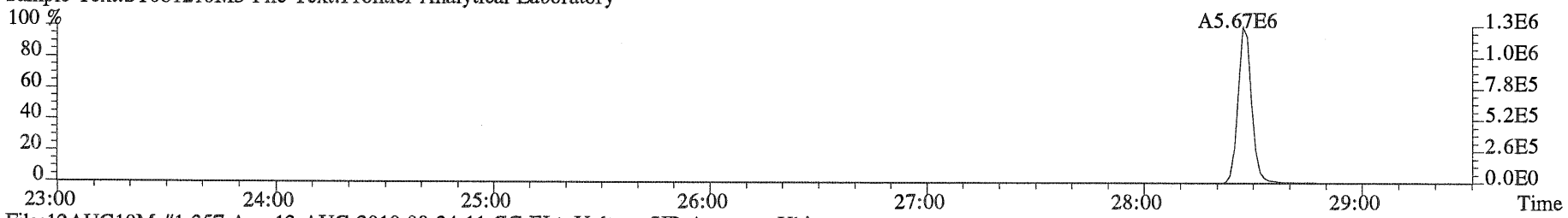
File:12AUG10M #1-357 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:24 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



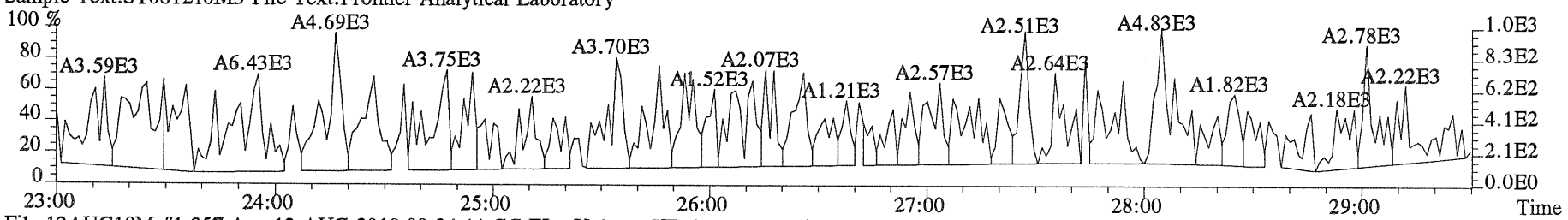
File:12AUG10M #1-357 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:24 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



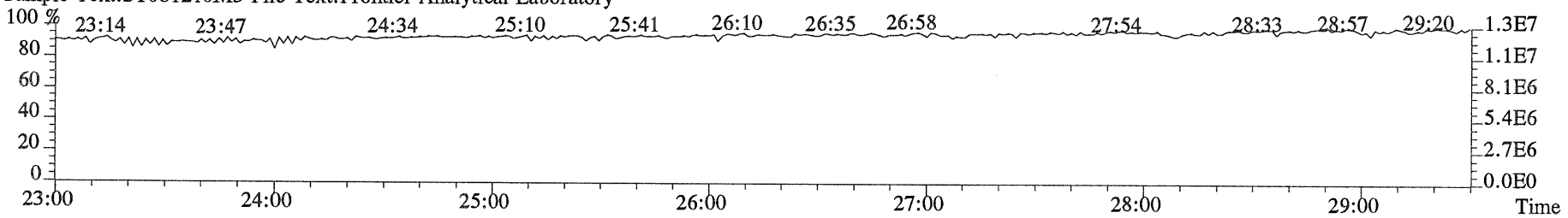
File:12AUG10M #1-357 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:24 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



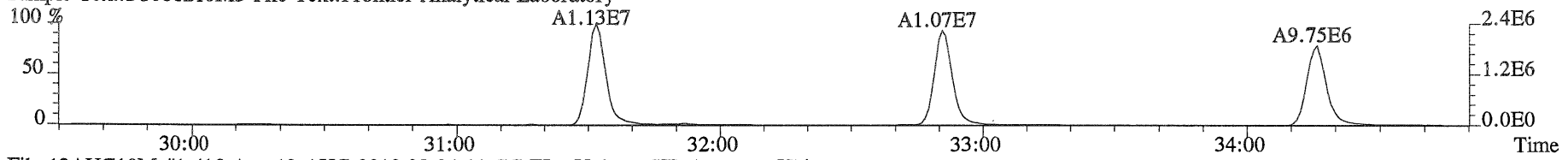
File:12AUG10M #1-357 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:24 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



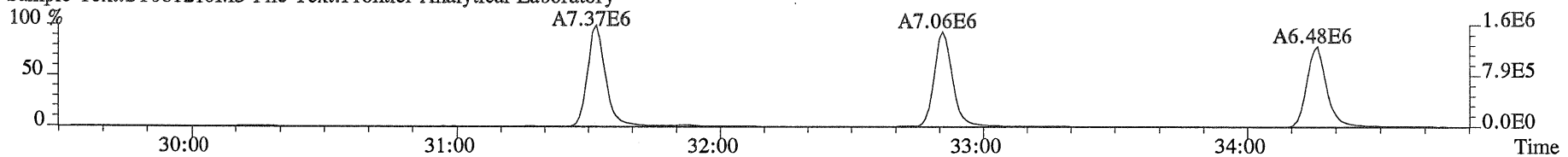
File:12AUG10M #1-357 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:24 Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



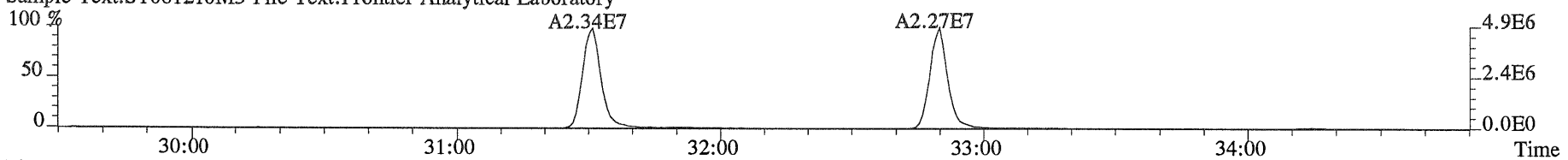
File:12AUG10M #1-412 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:24 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



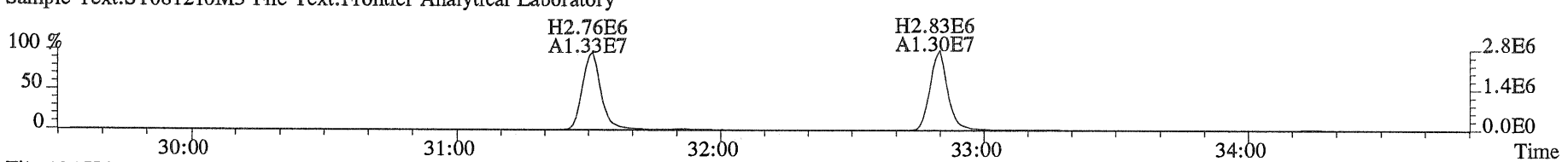
File:12AUG10M #1-412 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:24 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



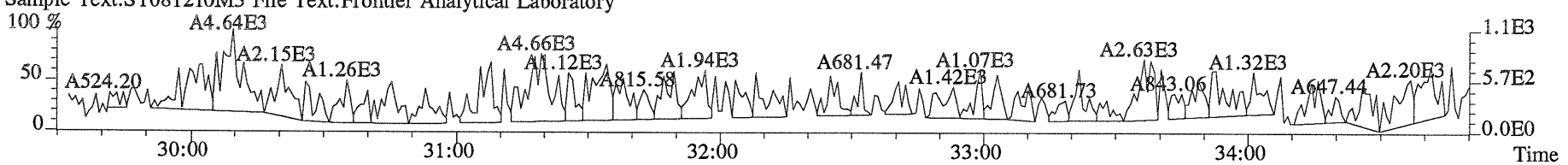
File:12AUG10M #1-412 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:24 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



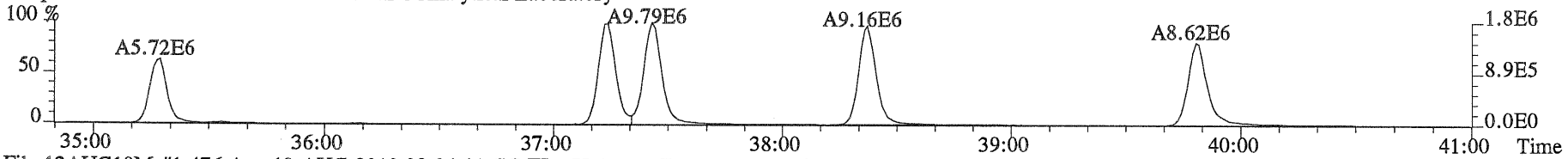
File:12AUG10M #1-412 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:24 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



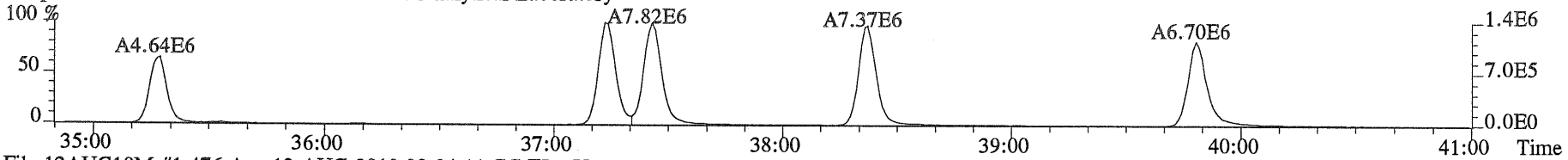
File:12AUG10M #1-412 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:24 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



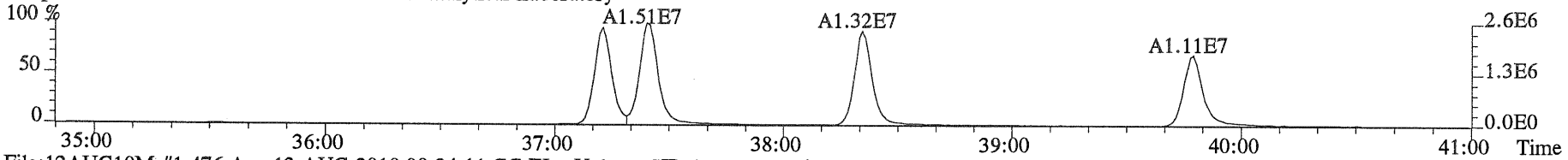
File:12AUG10M #1-476 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:24 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



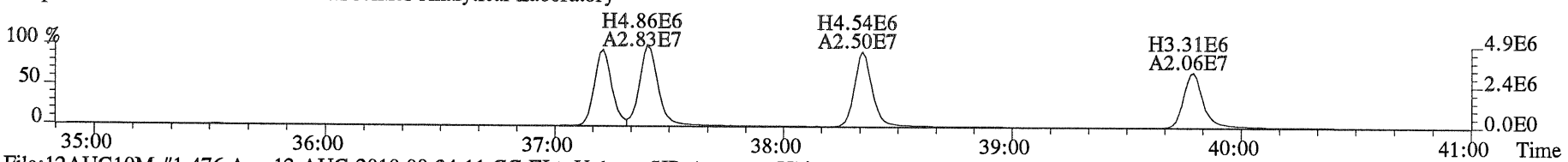
File:12AUG10M #1-476 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:24 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



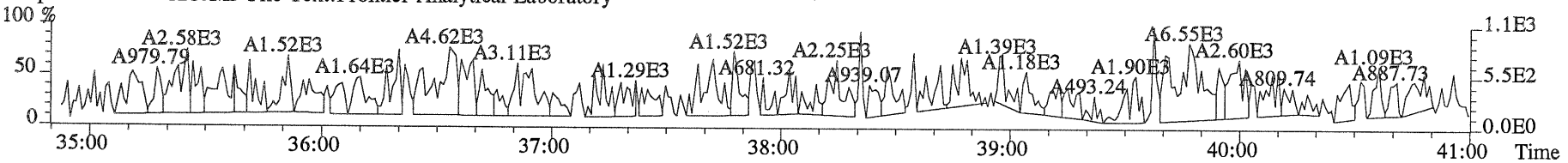
File:12AUG10M #1-476 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:24 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



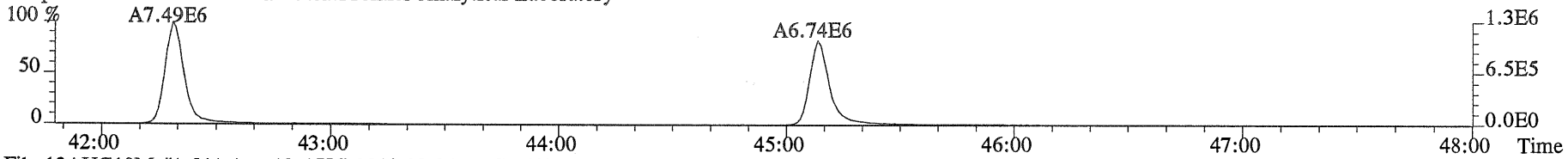
File:12AUG10M #1-476 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:24 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



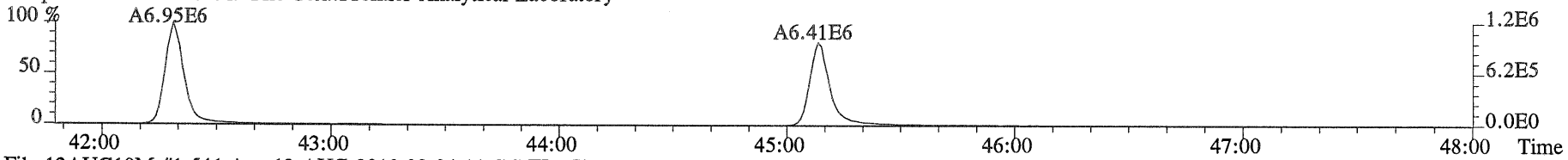
File:12AUG10M #1-476 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:24 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



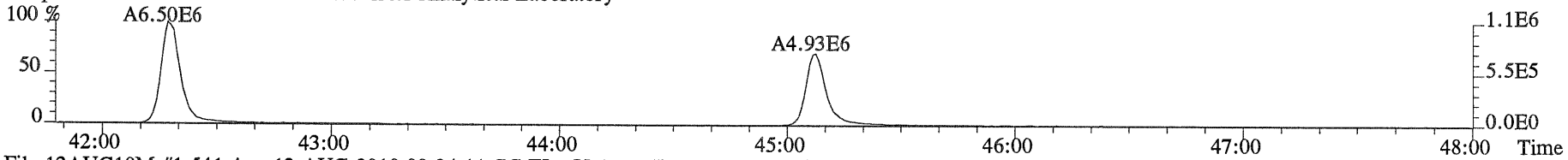
File:12AUG10M #1-541 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:24 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



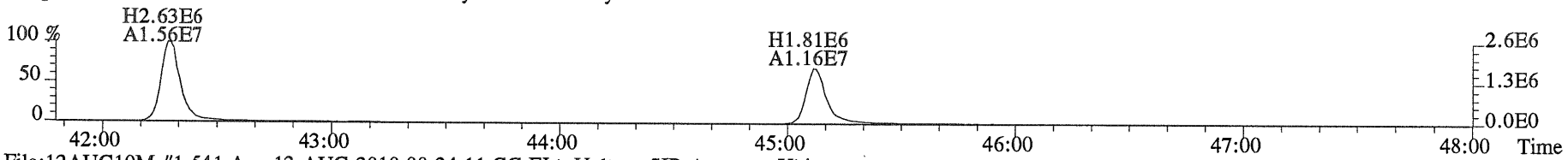
File:12AUG10M #1-541 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:24 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



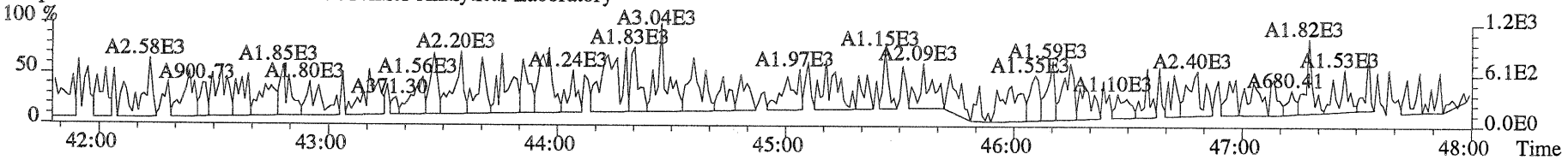
File:12AUG10M #1-541 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:24 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



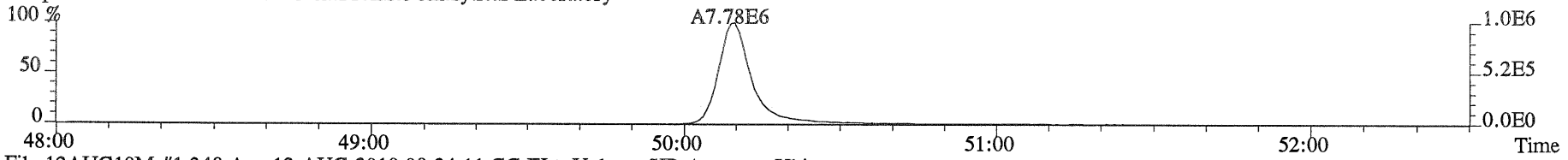
File:12AUG10M #1-541 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:24 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



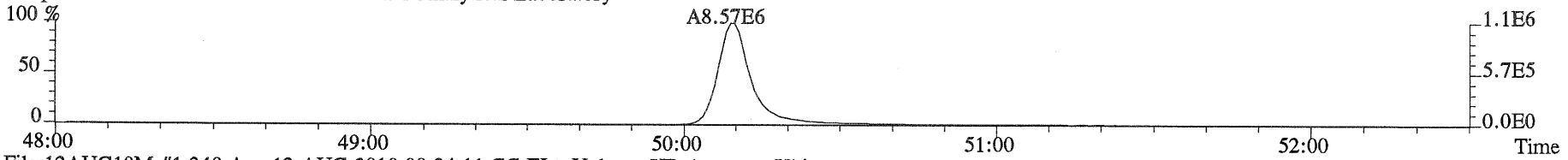
File:12AUG10M #1-541 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:24 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



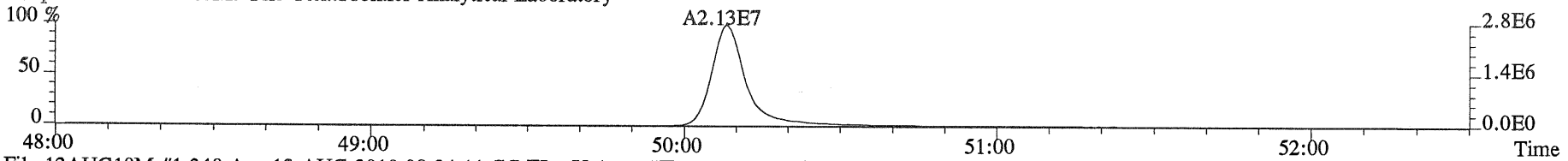
File:12AUG10M #1-348 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:24 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



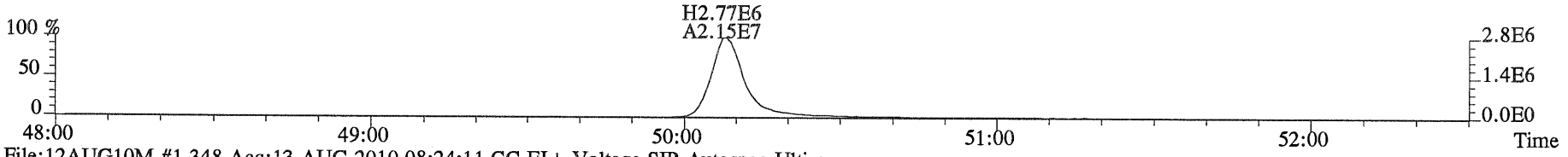
File:12AUG10M #1-348 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:24 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



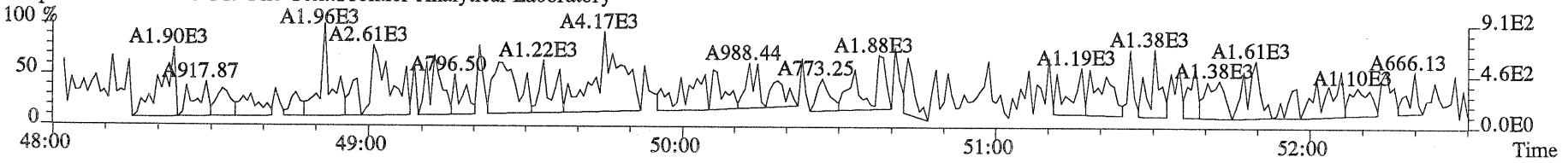
File:12AUG10M #1-348 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:24 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory



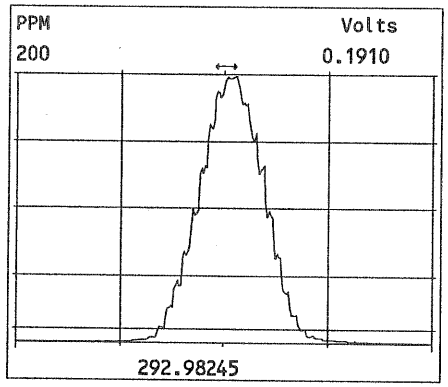
File:12AUG10M #1-348 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:24 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory

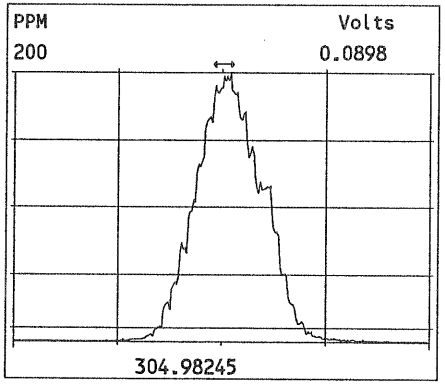


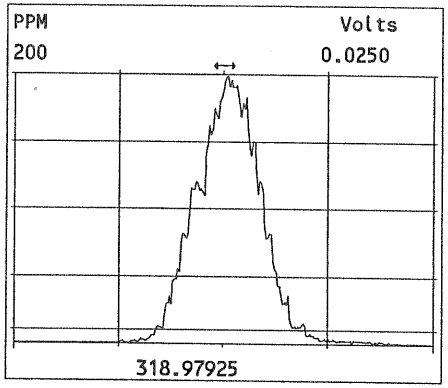
File:12AUG10M #1-348 Acq:13-AUG-2010 08:24:11 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:24 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081210M3 File Text:Frontier Analytical Laboratory

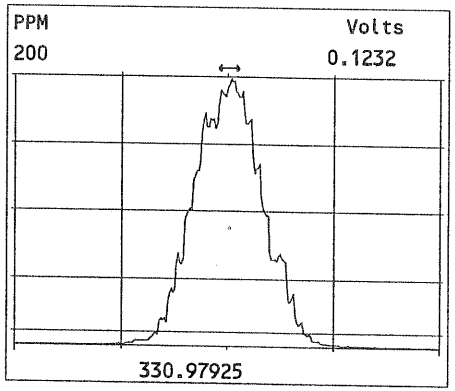


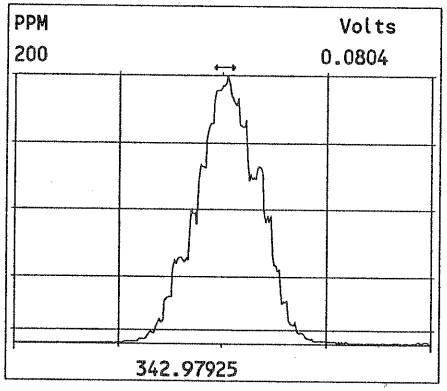
Peak Locate Examination:13-AUG-2010:09:21 File:12AUG10M_RES_CHECK
Experiment:PCDD Function:1 Reference:PFK

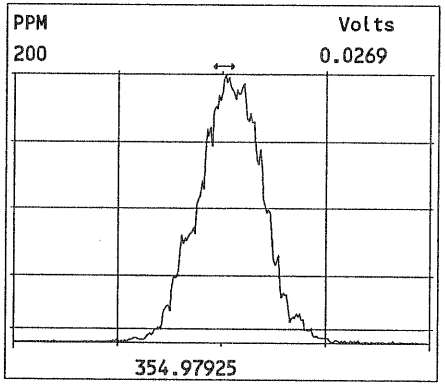


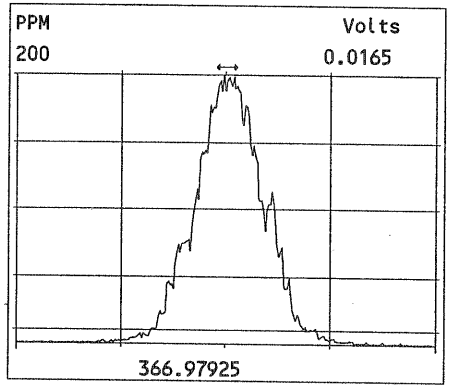


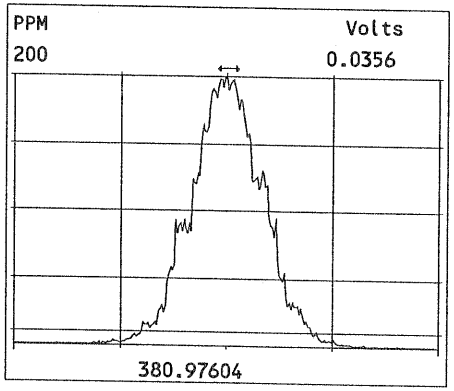


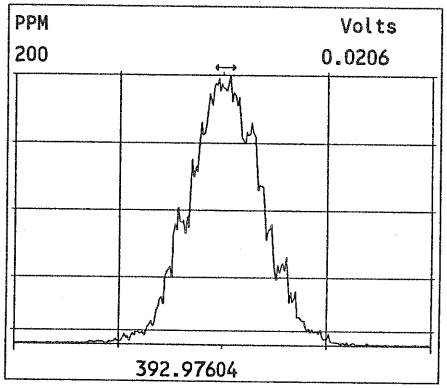


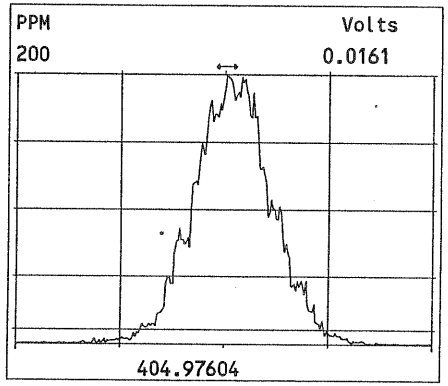


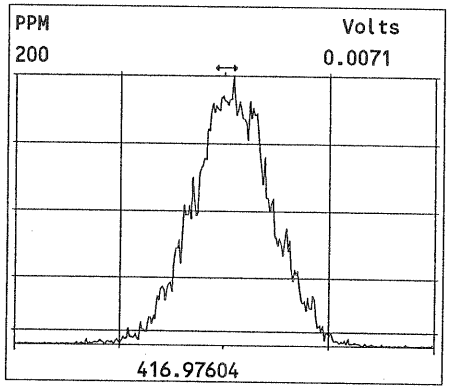




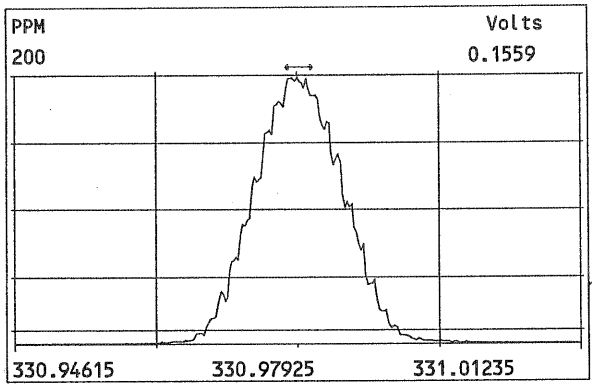


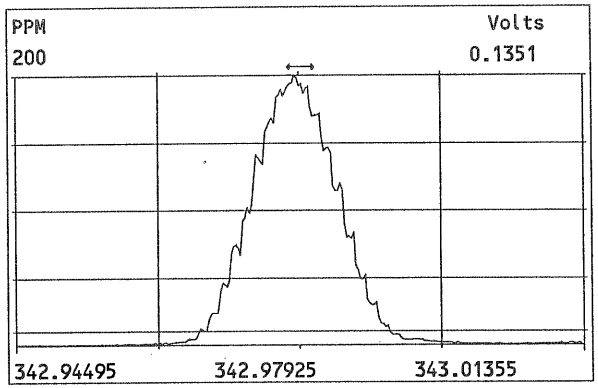


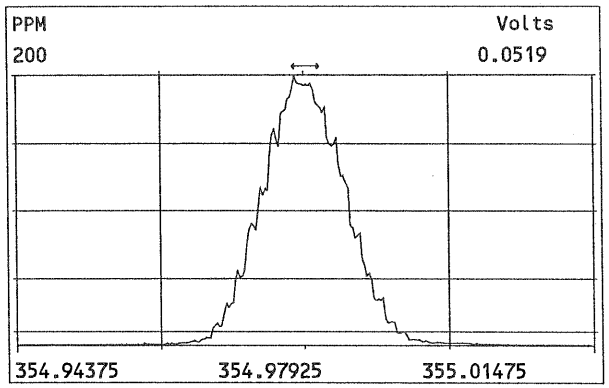


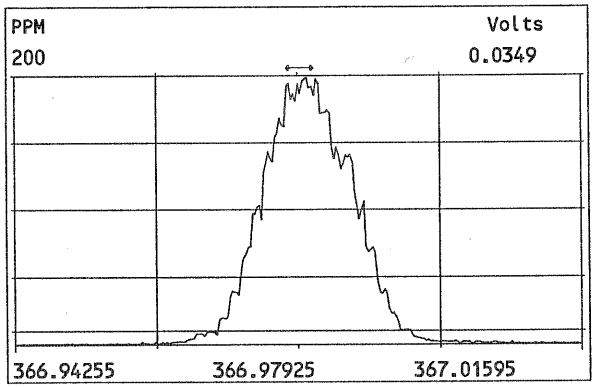


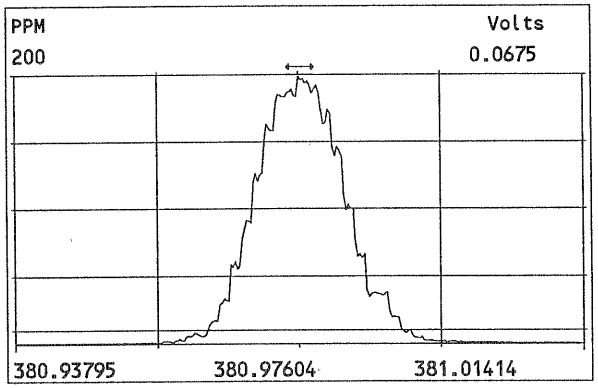
Peak Locate Examination:13-AUG-2010:09:21 File:12AUG10M_RES_CHECK
Experiment:PCDD Function:2 Reference:PFK

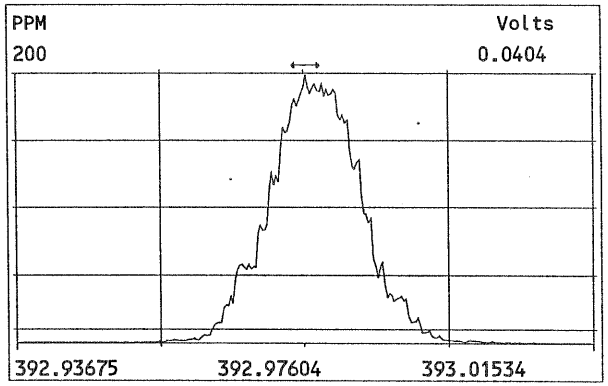


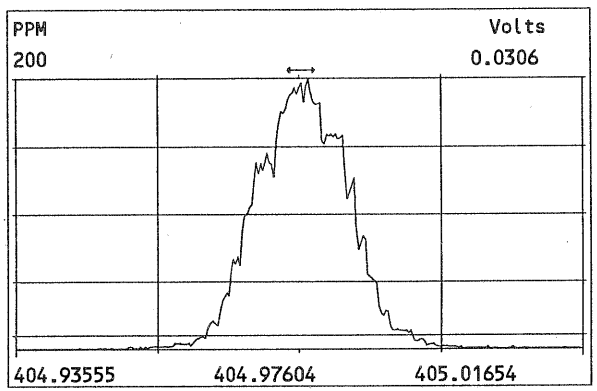


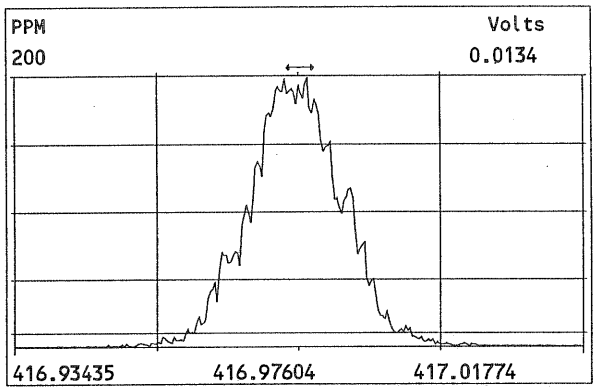




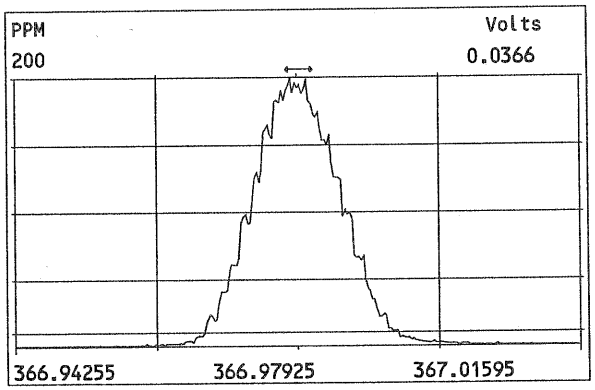


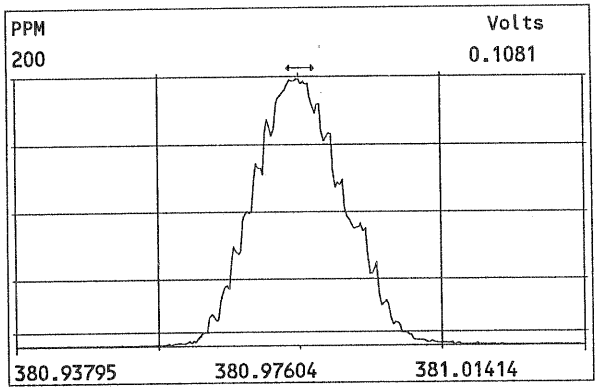


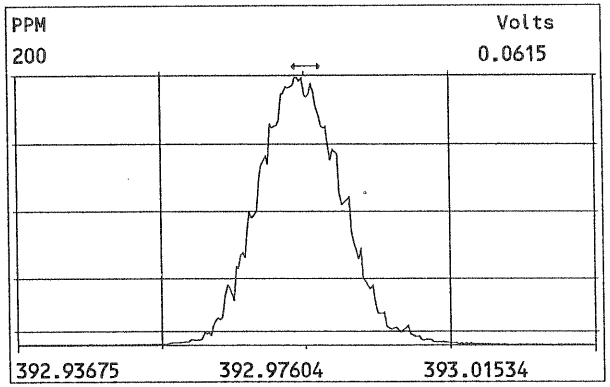


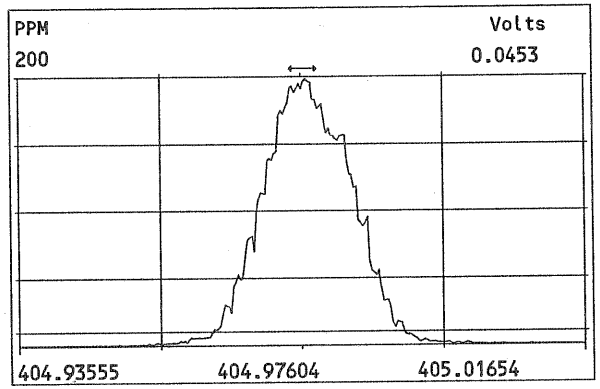


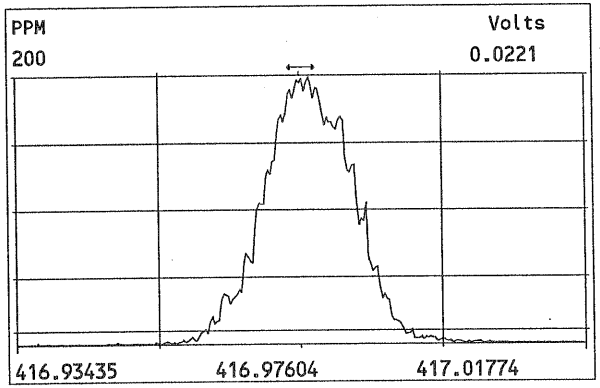
Peak Locate Examination:13-AUG-2010:09:22 File:12AUG10M_RES_CHECK
Experiment:PCDD Function:3 Reference:PFK

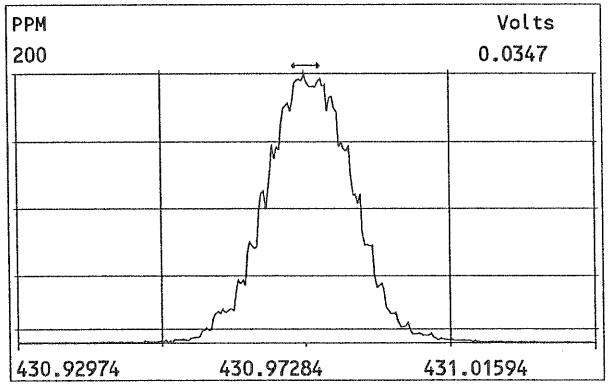


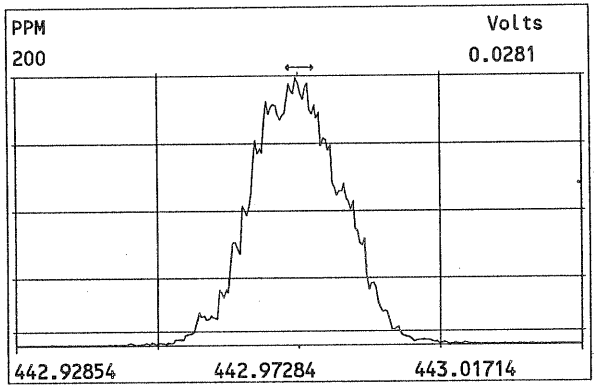


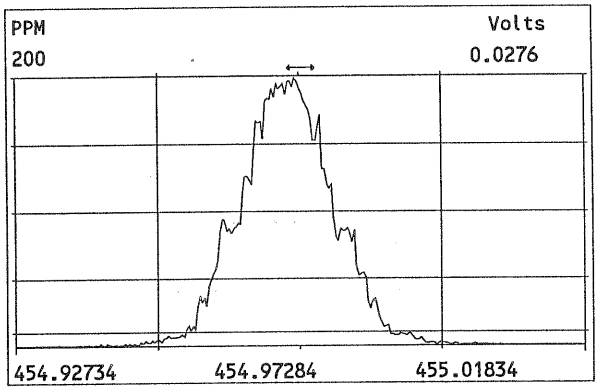




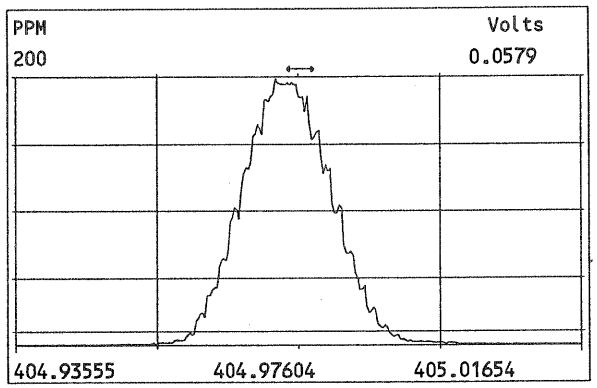


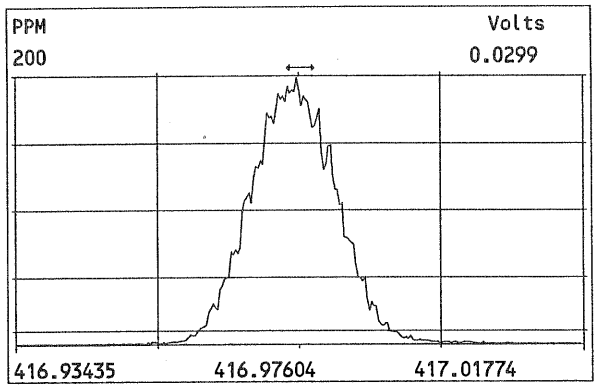


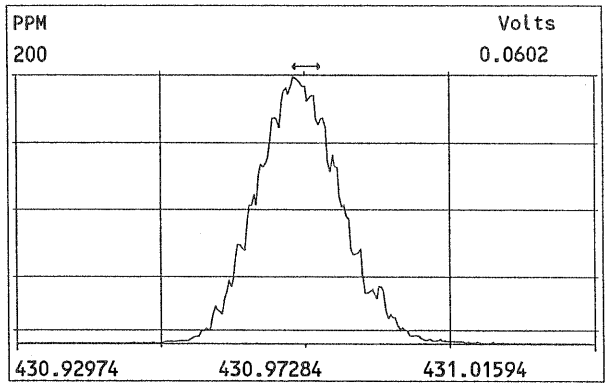


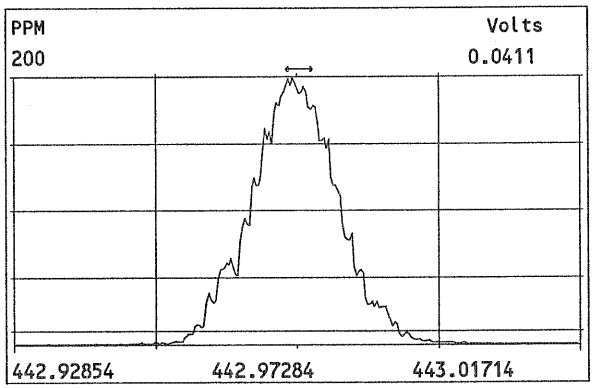


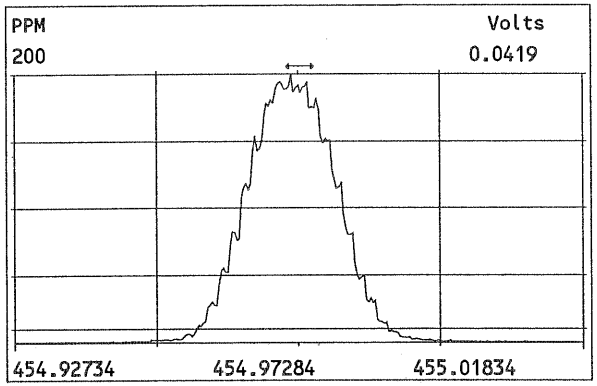
Peak Locate Examination:13-AUG-2010:09:22 File:12AUG10M_RES_CHECK
Experiment:PCDD Function:4 Reference:PFK

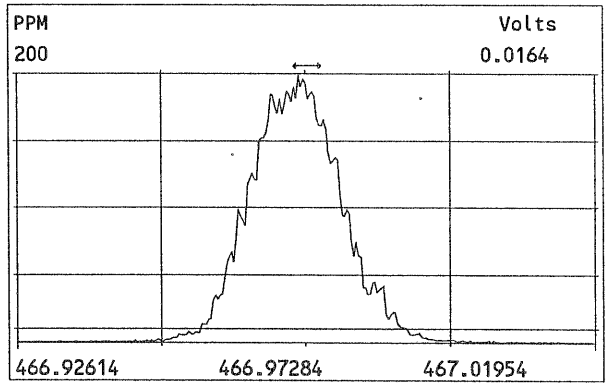


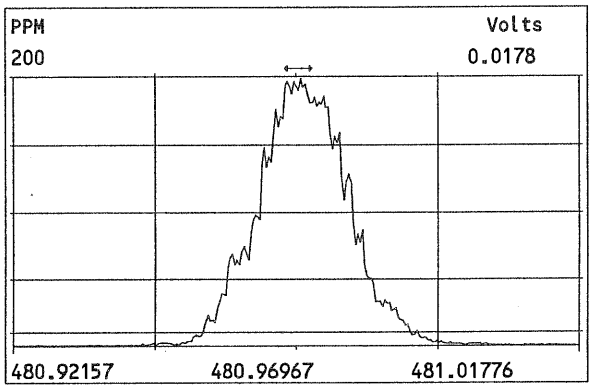




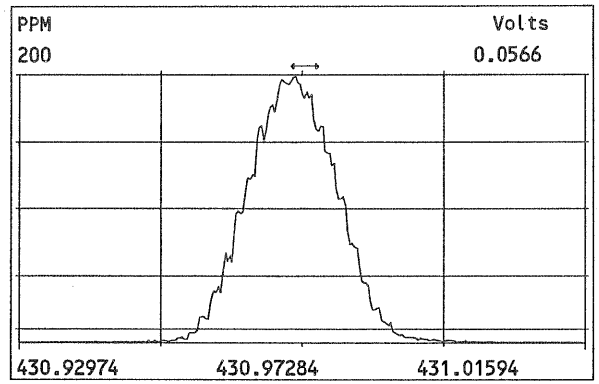


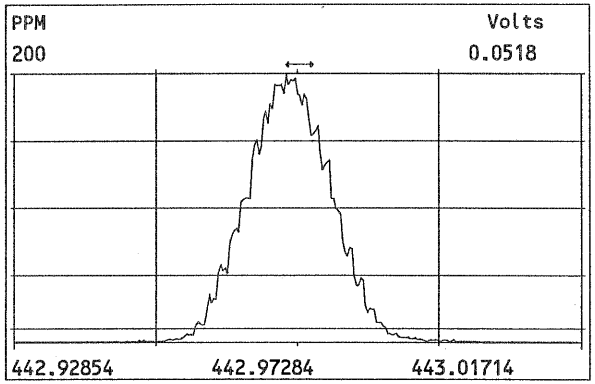


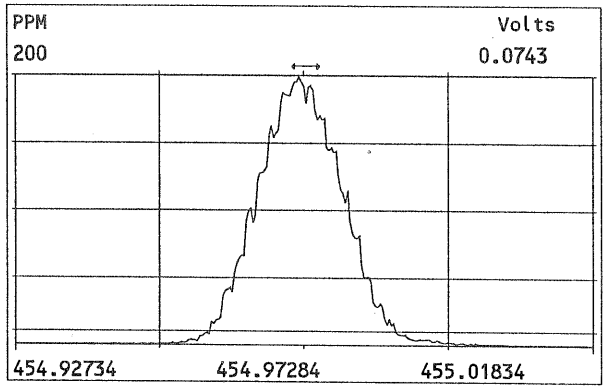


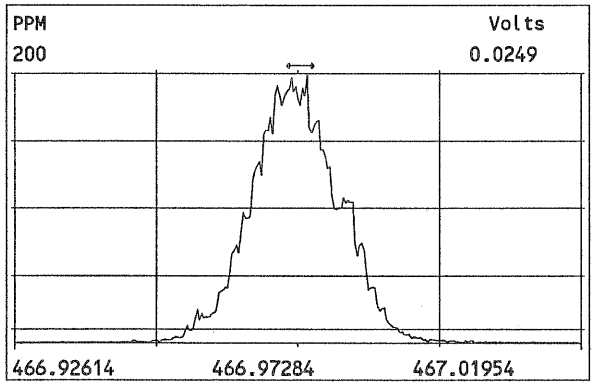


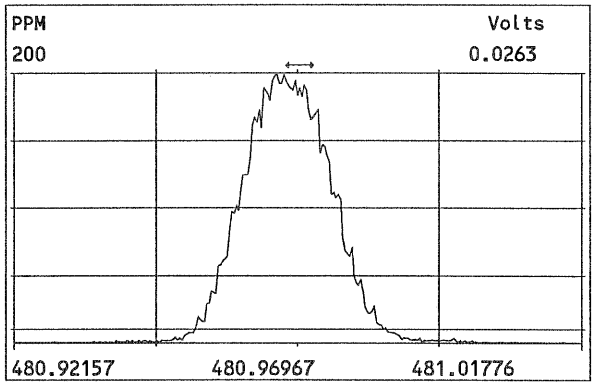
Peak Locate Examination:13-AUG-2010:09:22 File:12AUG10M_RES_CHECK
Experiment:PCDD Function:5 Reference:PFK

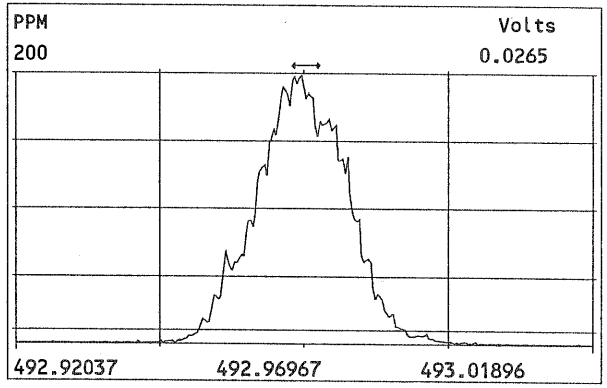


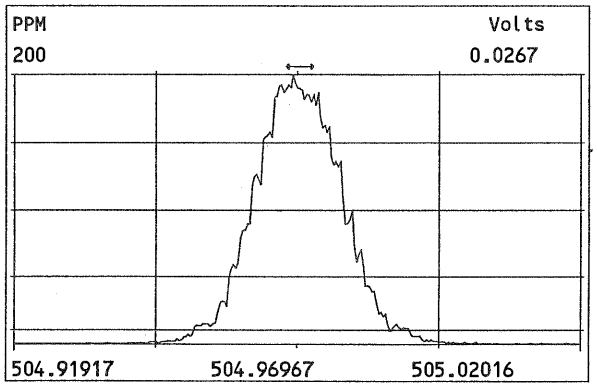


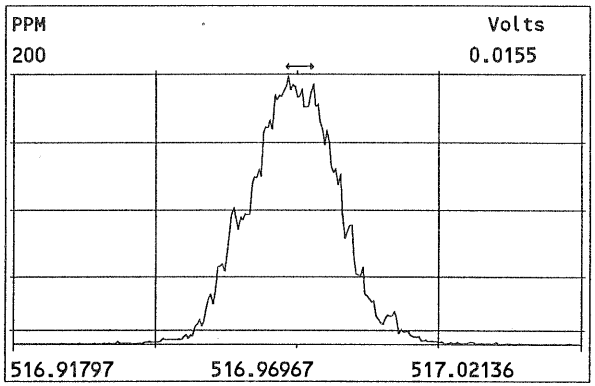












USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 15AUG10M Sam:1 Analysis Date: 15-AUG-10 12:06:40

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	0.75	0.65-0.89	y	9.84	7.80 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	1.64	1.32-1.78	y	47.2	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.36	1.05-1.43	y	49.0	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.37	1.05-1.43	y	46.6	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.40	1.05-1.43	y	50.7	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	49.0	43.0 - 58.0
OCDD	M+2/M+4	0.95	0.76-1.02	y	113	79.0 - 126
2,3,7,8-TCDF	M/M+2	0.71	0.65-0.89	y	8.75	8.40 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.45	1.32-1.78	y	49.1	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.46	1.32-1.78	y	46.1	41.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	y	45.1	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	45.5	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	46.0	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.23	1.05-1.43	y	46.0	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.02	0.88-1.20	y	45.2	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.02	0.88-1.20	y	45.1	43.0 - 58.0
OCDF	M+2/M+4	0.87	0.76-1.02	y	93.0	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: DNJ Date: 8/15/10

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 15AUG10M Sam:1 Analysis Date: 15-AUG-10 12:06:40

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.82	0.65-0.89	y	97.6	82.0 - 121
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.78	1.32-1.78	y	83.6	62.0 - 160
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	94.9	85.0 - 117
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	98.7	85.0 - 118
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.00	0.88-1.20	y	75.2	72.0 - 138
13C-OCDD	M+2/M+4	0.91	0.76-1.02	y	125	96.0 - 415
13C-2,3,7,8-TCDF	M/M+2	0.87	0.65-0.89	y	93.9	71.0 - 140
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.68	1.32-1.78	y	80.3	76.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.66	1.32-1.78	y	83.8	77.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	95.3	76.0 - 131
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	102	70.0 - 143
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	102	73.0 - 137
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.50	0.43-0.59	y	94.0	74.0 - 135
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.40	0.37-0.51	y	79.9	78.0 - 129
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.38	0.37-0.51	y	78.9	77.0 - 129
13C-OCDF	M+2/M+4	0.98	0.76-1.02	y	137	96.0 - 415
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					8.82	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: DLJ Date: 8/15/10

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: FAL3 Initial Calibration Date: 5/12/10

RT Window Data Filename: 15AUG10M Sam:1 Analysis Date: 15-AUG-10 Time: 12:06:40

DB-5 IS Data Filename: 15AUG10M Sam:1 Analysis Date: 15-AUG-10 Time: 12:06:40

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

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:22	1,3,6,8-TCDF (F)	23:01
1,2,8,9-TCDD (L)	28:19	1,2,8,9-TCDF (L)	28:31
1,2,4,7,9-PeCDD (F)	30:12	1,3,4,6,8-PeCDF (F)	28:23
1,2,3,8,9-PeCDD (L)	33:45	1,2,3,8,9-PeCDF (L)	34:11
1,2,4,6,7,9-HxCDD (F)	36:05	1,2,3,4,6,8-HxCDF (F)	35:12
1,2,3,7,8,9-HxCDD (L)	39:09	1,2,3,7,8,9-HxCDF (L)	39:44
1,2,3,4,6,7,9-HpCDD (F)	42:45	1,2,3,4,6,7,8-HpCDF (F)	42:14
1,2,3,4,6,7,8-HpCDD (L)	44:08	1,2,3,4,7,8,9-HpCDF (L)	45:03

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

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

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

Analyst: DN Date: 8/15/10

USEPA - ITD

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 15-AUG-10 12:06:40 CS3 or VER Data Filename: 15AUG10M Sam:1

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989-1.052
13C-2,3,7,8-TCDD		1.022	0.976-1.043
13C-2,3,7,8-TCDF		0.994	0.923-1.103
13C-1,2,3,7,8-PeCDD		1.239	1.000-1.567
13C-1,2,3,7,8-PeCDF		1.175	0.923-1.203
13C-2,3,4,7,8-PeCDF		1.224	0.923-1.303

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

Analyst: DPV Date: 8/15/10

USEPA - ITD

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 15-AUG-10 12:06:40 CS3 or VER Data Filename: 15AUG10M Sam:1

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.001	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.984	0.977-1.000
13C-1,2,3,6,7,8-HxCDD		0.989	0.981-1.003
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975
13C-2,3,4,6,7,8-HxCDF		0.978	0.959-1.021
13C-1,2,3,7,8,9-HxCDF		1.015	0.977-1.047
13C-1,2,3,4,6,7,8-HpCDD		1.128	1.086-1.130
13C-1,2,3,4,6,7,8-HpCDF		1.079	1.043-1.085
13C-1,2,3,4,7,8,9-HpCDF		1.151	1.057-1.154
13C-OCDD		1.269	1.032-1.311
13C-OCDF		1.279	1.000-1.311

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

Analyst: DOJ Date: 8/15/10

FAL ID: ST081510M1 Filename: 15AUG10M Sam:1 Acquired: 15-AUG-10 12:06:40 ICal: PCDDFAL3-5-12-10
Client ID: 1613 CS3 090918J ConCal: ST081510M1 EndCal: ST081510M2
Results: GC Column: DB5 Amount: 1.000 NATO 1989 Tox: 94.3
WHO 1998 Tox: 118 WHO 2005 Tox: 108

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	4.35e+06	0.75 y	27:22	1.04	9.84		2.50	-	-	*
1,2,3,7,8-PeCDD	1.57e+07	1.64 y	33:11	1.05	47.2		2.50	-	-	*
1,2,3,4,7,8-HxCDD	1.30e+07	1.36 y	38:33	1.30	49.0		2.50	-	-	*
1,2,3,6,7,8-HxCDD	1.33e+07	1.37 y	38:43	1.28	46.6		2.50	-	-	*
1,2,3,7,8,9-HxCDD	1.35e+07	1.40 y	39:09	1.25	50.7		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	1.05e+07	1.03 y	44:08	1.35	49.0		2.50	-	-	*
OCDD	1.27e+07	0.95 y	49:41	1.25	113		2.50	-	-	*
2,3,7,8-TCDF	8.68e+06	0.71 y	26:37	1.62	8.75		2.50	-	-	*
1,2,3,7,8-PeCDF	2.19e+07	1.45 y	31:27	0.92	49.1		2.50	-	-	*
2,3,4,7,8-PeCDF	2.06e+07	1.46 y	32:46	0.94	46.1		2.50	-	-	*
1,2,3,4,7,8-HxCDF	1.58e+07	1.26 y	37:09	0.93	45.1		2.50	-	-	*
1,2,3,6,7,8-HxCDF	1.92e+07	1.24 y	37:21	0.84	45.5		2.50	-	-	*
2,3,4,6,7,8-HxCDF	1.74e+07	1.27 y	38:17	0.90	46.0		2.50	-	-	*
1,2,3,7,8,9-HxCDF	1.44e+07	1.23 y	39:44	0.98	46.0		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	1.24e+07	1.02 y	42:14	1.38	45.2		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	1.07e+07	1.02 y	45:03	1.62	45.1		2.50	-	-	*
OCDF	1.27e+07	0.87 y	50:02	0.74	93.0		2.50	-	-	*
										Rec
13C-2,3,7,8-TCDD	4.27e+07	0.82 y	27:21	0.93	97.6					97.6
13C-1,2,3,7,8-PeCDD	3.18e+07	1.78 y	33:10	0.81	83.6					83.6
13C-1,2,3,4,7,8-HxCDD	2.04e+07	1.24 y	38:31	0.95	94.9					94.9
13C-1,2,3,6,7,8-HxCDD	2.24e+07	1.23 y	38:41	1.00	98.7					98.7
13C-1,2,3,4,6,7,8-HpCDD	1.58e+07	1.00 y	44:08	0.92	75.2					75.2
13C-OCDD	1.80e+07	0.91 y	49:39	0.63	125					62.7
13C-2,3,7,8-TCDF	6.13e+07	0.87 y	26:36	0.87	93.9					93.9
13C-1,2,3,7,8-PeCDF	4.87e+07	1.68 y	31:26	0.81	80.3					80.3
13C-2,3,4,7,8-PeCDF	4.74e+07	1.66 y	32:45	0.75	83.8					83.8
13C-1,2,3,4,7,8-HxCDF	3.77e+07	0.52 y	37:08	1.74	95.3					95.3
13C-1,2,3,6,7,8-HxCDF	5.05e+07	0.51 y	37:19	2.17	102					102
13C-2,3,4,6,7,8-HxCDF	4.22e+07	0.50 y	38:16	1.82	102					102
13C-1,2,3,7,8,9-HxCDF	3.18e+07	0.50 y	39:42	1.49	94.0					94.0
13C-1,2,3,4,6,7,8-HpCDF	2.00e+07	0.40 y	42:13	1.10	79.9					79.9
13C-1,2,3,4,7,8,9-HpCDF	1.46e+07	0.38 y	45:03	0.81	78.9					78.9
13C-OCDF	3.69e+07	0.98 y	50:02	1.19	137					68.4
37Cl-2,3,7,8-TCDD	3.87e+06		27:22	0.93	8.82					88.2
13C-1,2,3,4-TCDD	4.72e+07	0.84 y	26:46	-	139					
13C-1,2,3,4-TCDF	7.52e+07	0.88 y	25:30	-	141					
13C-1,2,3,7,8,9-HxCDD	2.28e+07	1.19 y	39:08	-	106					

							Fac	Noise-1	Noise-2	DL		#Hom
Total Tetra-Dioxins	2.31e+07		24:22	1.04	52.3		2.50	-	-	*		14
Total Penta-Dioxins	3.49e+07		30:12	1.05	105		2.50	-	-	*		8
Total Hexa-Dioxins	4.61e+07		36:05	1.27	169		2.50	-	-	*		19
Total Hepta-Dioxins	2.34e+07		42:45	1.35	110		2.50	-	-	*		21
Total Tetra-Furans	4.06e+07		23:01	1.62	40.9		2.50	-	-	*		15
1st Fn. Tot Penta-Furans	3.29e+07		28:23	0.93	73.7		2.50	-	-	*	PeCDF	1
Total Penta-Furans	6.11e+07		30:09	0.93	137		2.50	-	-	*	210	11
Total Hexa-Furans	7.84e+07		35:12	0.90	214		2.50	-	-	*		8
Total Hepta-Furans	2.42e+07		42:14	1.48	94.2		2.50	-	-	*		14

Analyst: DRJ Date: 8/15/10

Frontier Analytical Laboratory - Acquisition Log

Run Name:15AUG10M Instrument: FAL3 GC: DB5 Experiment:PCDD

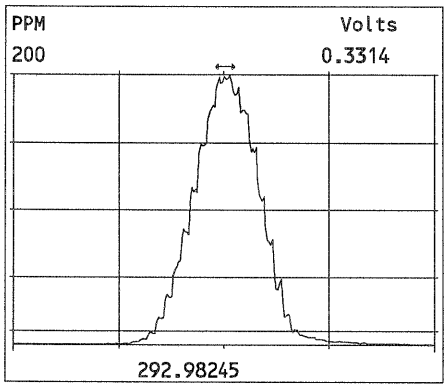
Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
15AUG10M	1	ST081510M1	1613 CS3 090918J	15-AUG-10 12:06:40	ST081510M1	ST081510M2	DV
15AUG10M	2	6273-001-0001-SA	PSB04-0.0-0.5-072810 1:¶	15-AUG-10 13:02:02	ST081510M1	ST081510M2	DV
15AUG10M	3	6273-005-0001-SA	PSB06-0-0.5-072810 1:20	15-AUG-10 13:57:21	ST081510M1	ST081510M2	DV
15AUG10M	4	6273-006-0001-SA	PSB06-1.5-2.0-072810 1:¶	15-AUG-10 14:52:40	ST081510M1	ST081510M2	DV
15AUG10M	5	6273-007-0001-SA	PSB06-1.5-2.0-072810D 1¶	15-AUG-10 15:47:58	ST081510M1	ST081510M2	DV
15AUG10M	6	SB081510M1	Solvent Blank	15-AUG-10 16:43:21	ST081510M1	ST081510M2	DV
15AUG10M	7	6268-003-0001-SA	PSB12-2-4-072810	15-AUG-10 17:38:44	ST081510M1	ST081510M2	DV
15AUG10M	8	6268-002-0001-SA	PSB12-1.5-2.0-072810	15-AUG-10 18:34:04	ST081510M1	ST081510M2	DV
15AUG10M	9	6268-001-0001-SA	PSB12-0-0.5-072810	15-AUG-10 19:29:27	ST081510M1	ST081510M2	DV
15AUG10M	10	SB081510M2	Solvent Blank	15-AUG-10 20:24:46	ST081510M1	ST081510M2	DV
15AUG10M	11	ST081510M2	1613 CS3 090918J	15-AUG-10 21:20:05	ST081510M1	ST081510M2	DV
15AUG10M	12	2079-001-0001-OPR	OPR	15-AUG-10 22:15:23	ST081510M2	ST081510M3	DV
15AUG10M	13	2079-001-0001-MB	Method Blank	15-AUG-10 23:10:37	ST081510M2	ST081510M3	DV
15AUG10M	14	6272-006-0001-SA	PSB3-1.5-2-072910	16-AUG-10 00:05:56	ST081510M2	ST081510M3	DV
15AUG10M	15	6272-004-0001-SA	PSB2-1.5-2-072910	16-AUG-10 01:01:14	ST081510M2	ST081510M3	DV
15AUG10M	16	6272-005-0001-SA	PSB3-0-0.5-072910	16-AUG-10 01:56:35	ST081510M2	ST081510M3	DV
15AUG10M	17	6272-003-0001-SA	PSB2-0-0.5-072910	16-AUG-10 02:51:55	ST081510M2	ST081510M3	DV
15AUG10M	18	6272-001-0001-SA	PSB1-0-0.5-072910	16-AUG-10 03:47:14	ST081510M2	ST081510M3	DV
15AUG10M	19	6272-002-0001-SA	PSB1-1.5-2.0-072910	16-AUG-10 04:42:37	ST081510M2	ST081510M3	DV
15AUG10M	20	6272-002-0002-MS	PSB1-1.5-2.0-072910	16-AUG-10 05:38:00	ST081510M2	ST081510M3	DV
15AUG10M	21	6272-002-0002-MSD	PSB1-1.5-2.0-072910	16-AUG-10 06:33:23	ST081510M2	ST081510M3	DV
15AUG10M	22	ST081510M3	1613 CS3 090918J	16-AUG-10 07:28:46	ST081510M2	ST081510M3	DV

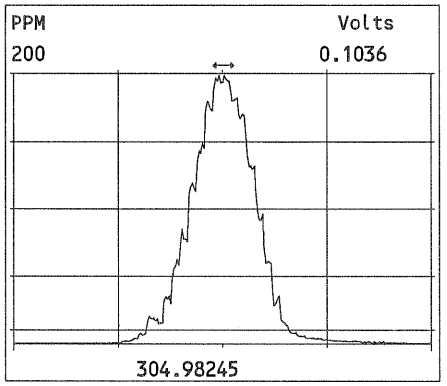
8/16/10

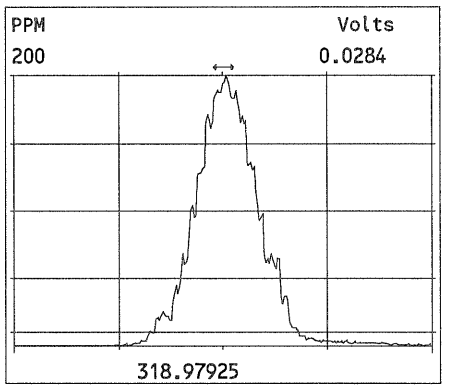
Data Backed Up:_____

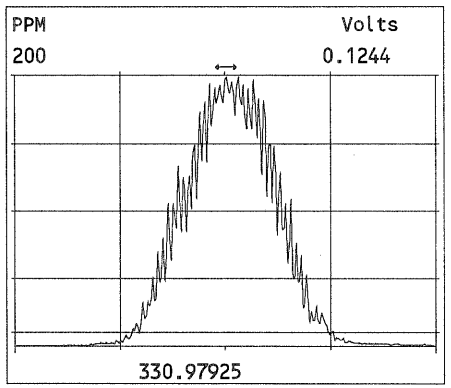
Date:_____

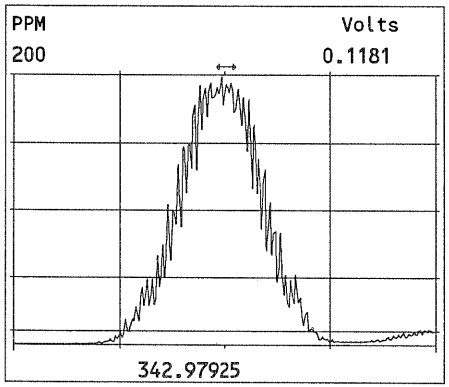
Peak Locate Examination:15-AUG-2010:12:03 File:15AUG10M
Experiment:PCDD Function:1 Reference:PFK

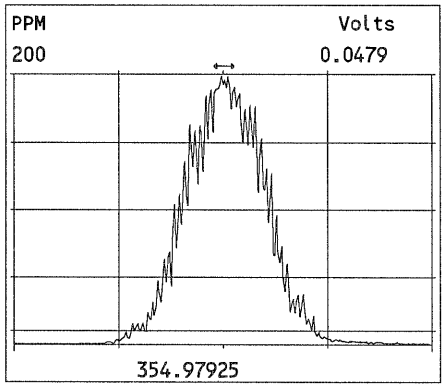


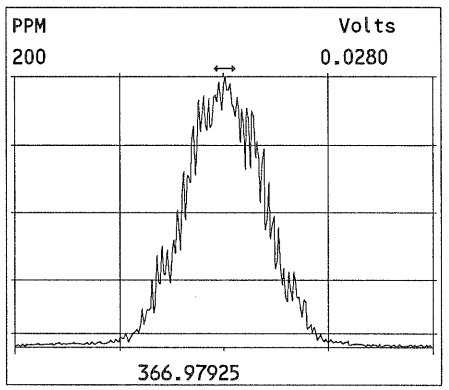


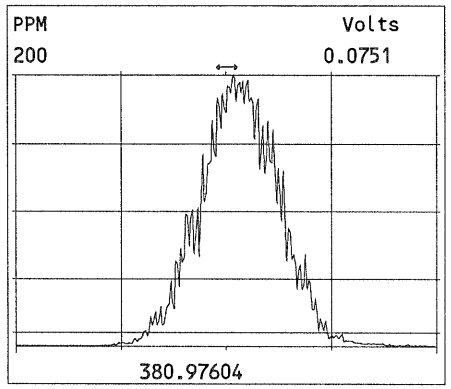


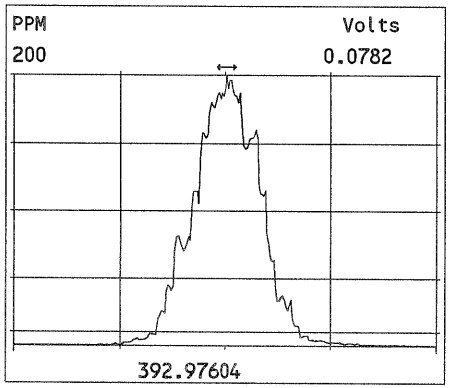


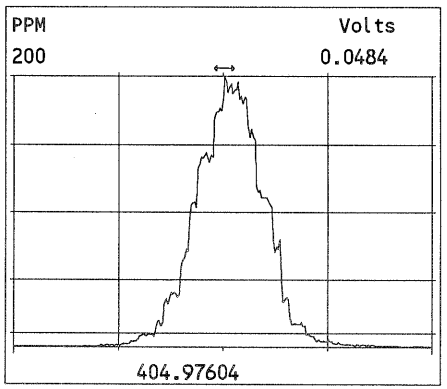


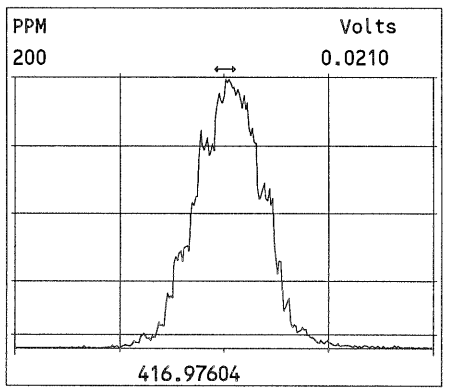




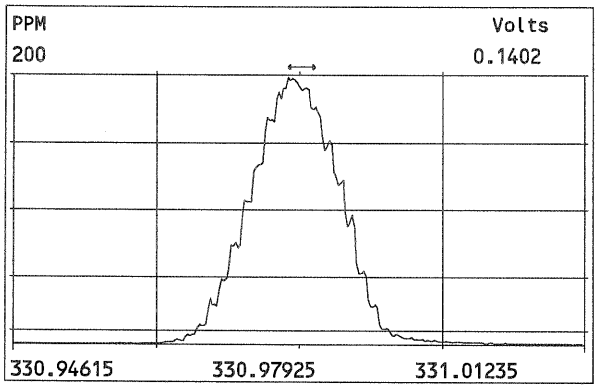


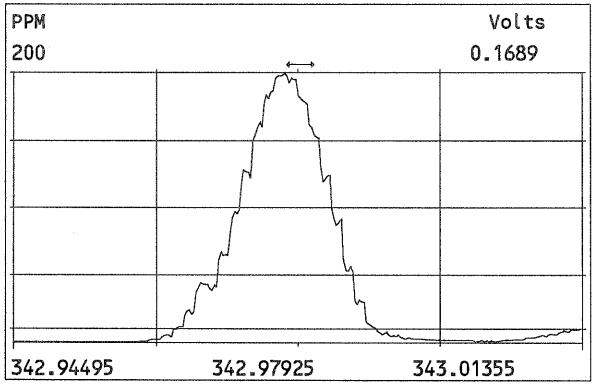


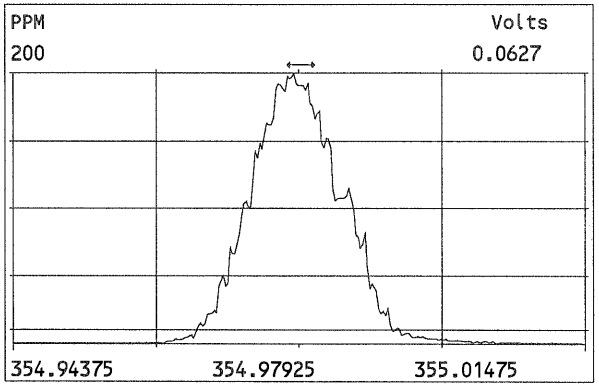


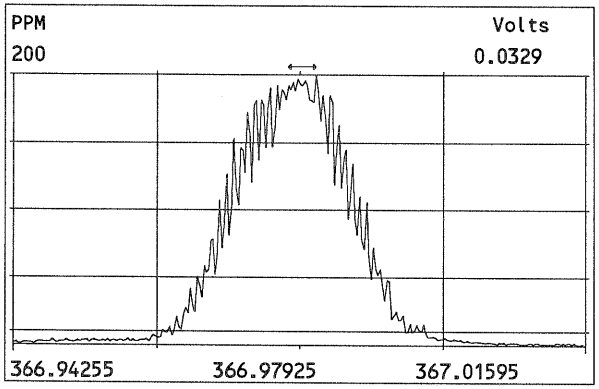


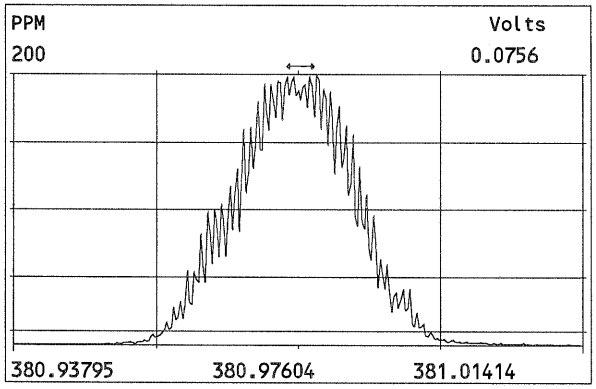
Peak Locate Examination:15-AUG-2010:12:04 File:15AUG10M
Experiment:PCDD Function:2 Reference:PFK

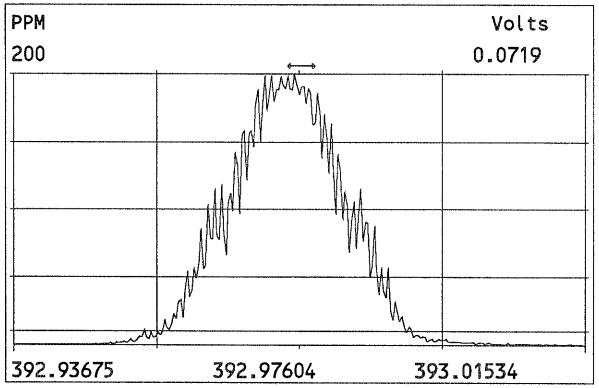


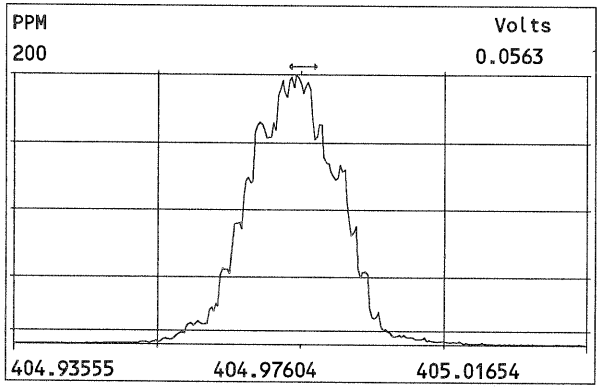


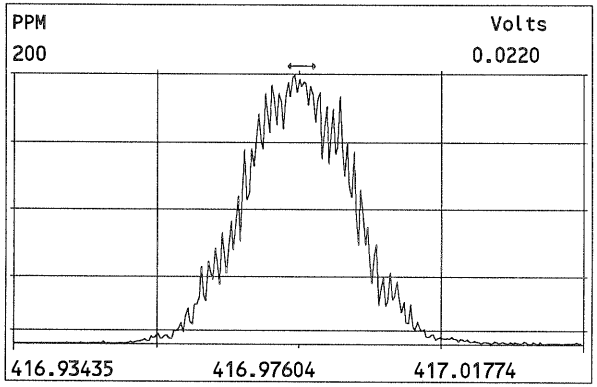




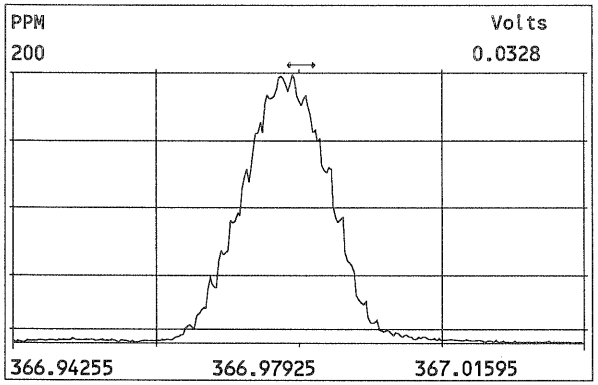


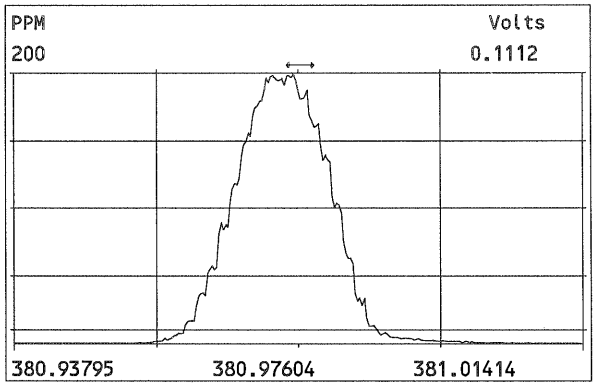


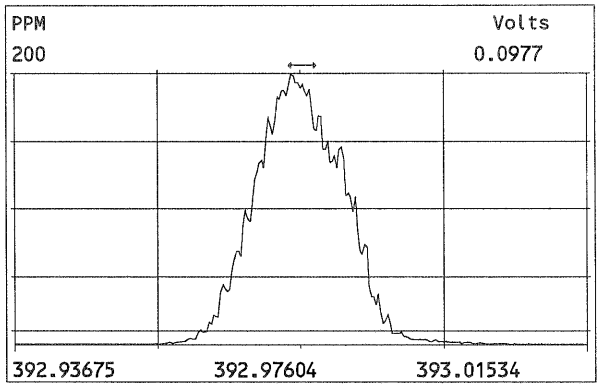


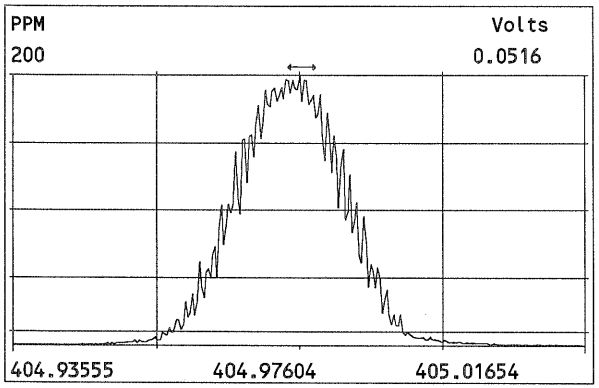


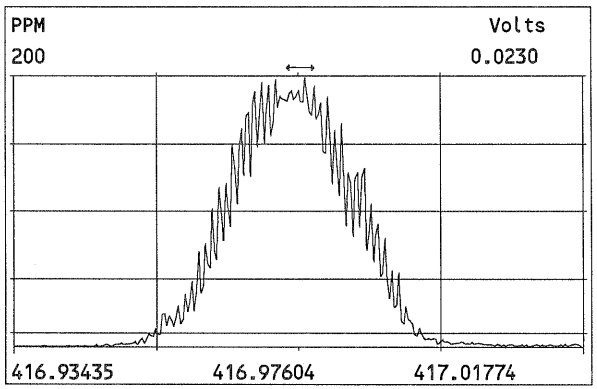
Peak Locate Examination:15-AUG-2010:12:04 File:15AUG10M
Experiment:PCDD Function:3 Reference:PFK

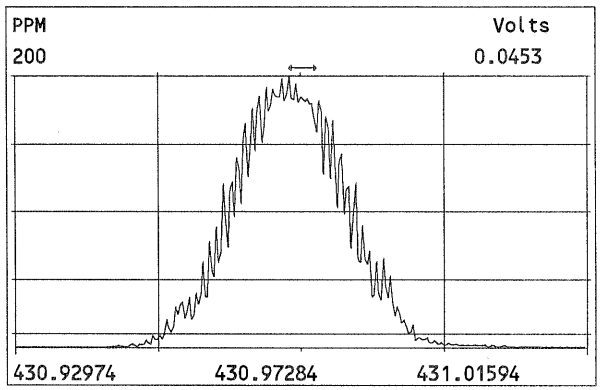


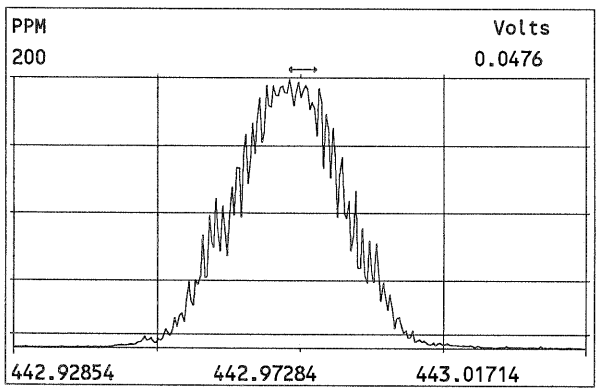


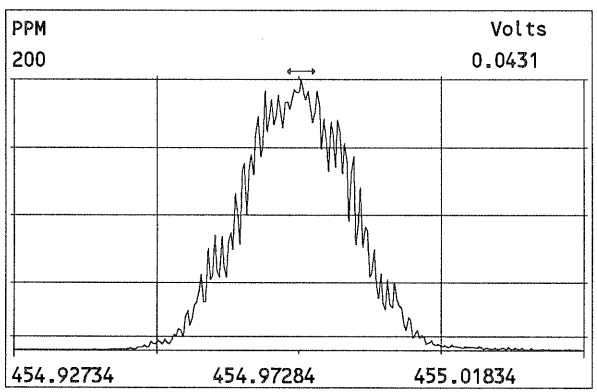




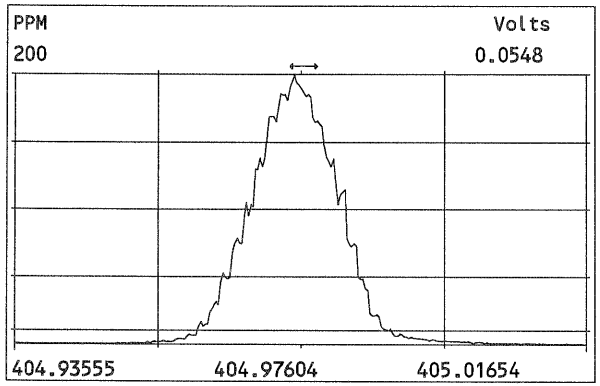


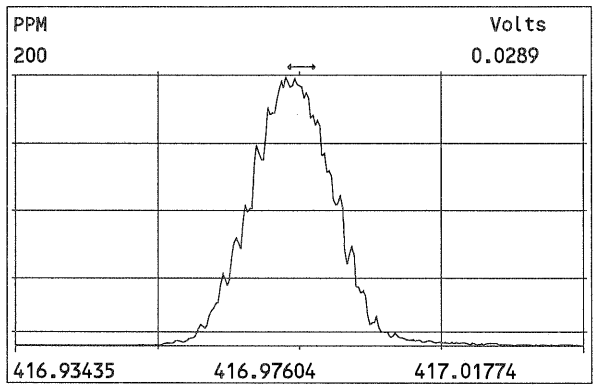


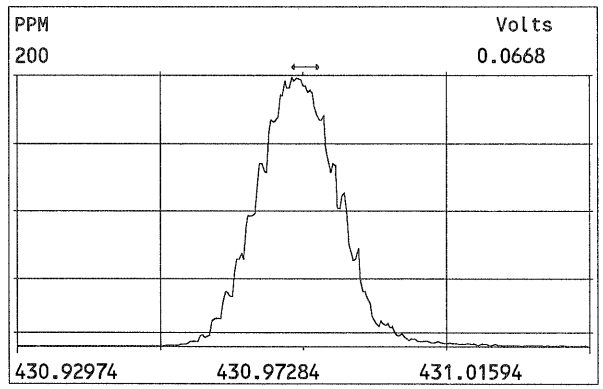


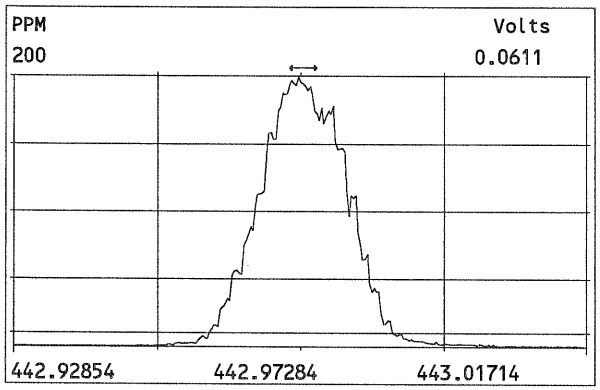


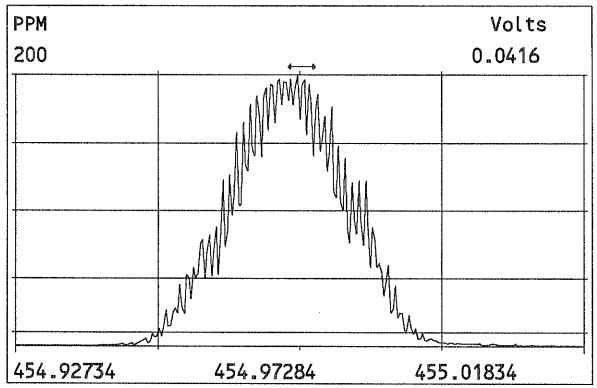
Peak Locate Examination:15-AUG-2010:12:05 File:15AUG10M
Experiment:PCDD Function:4 Reference:PFK

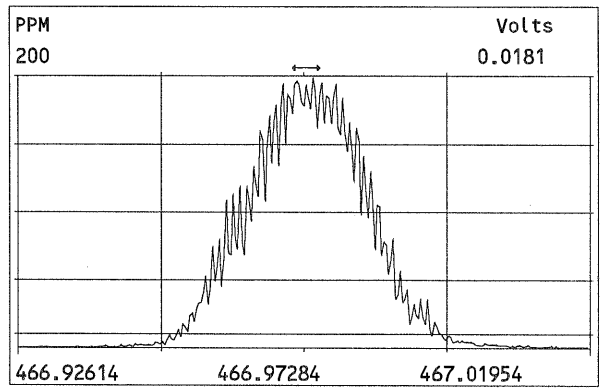


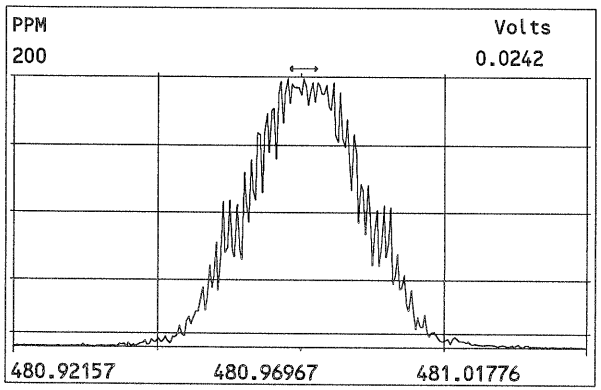




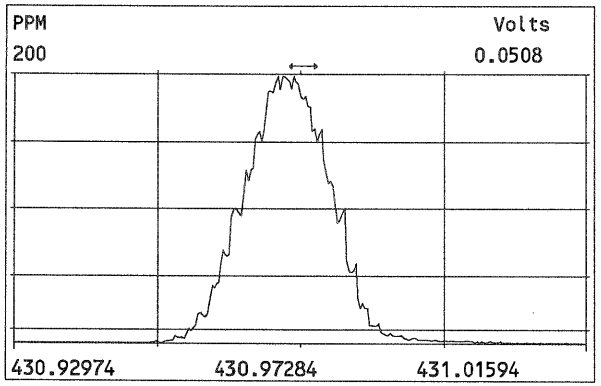


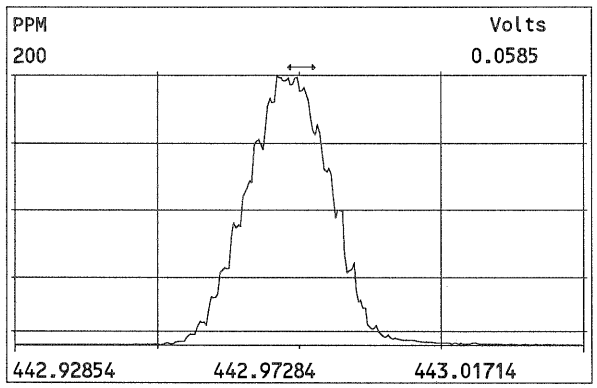


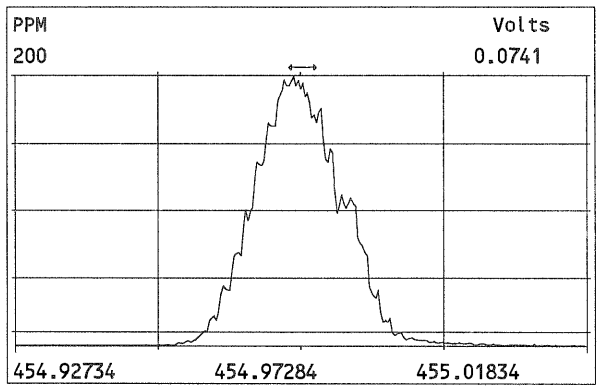


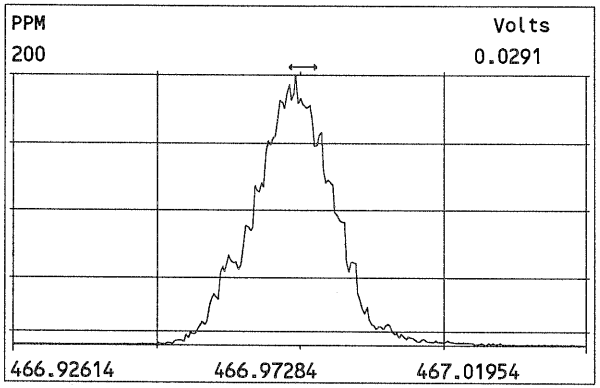


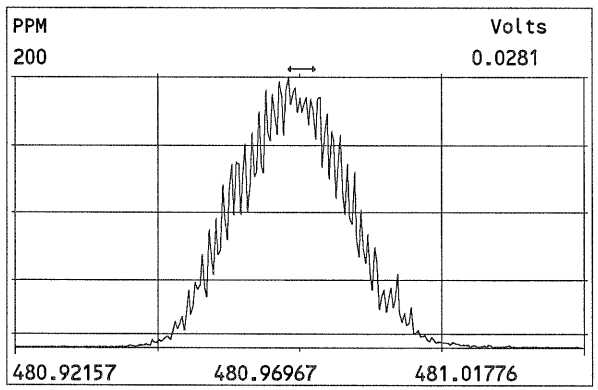
Peak Locate Examination:15-AUG-2010:12:05 File:15AUG10M
Experiment:PCDD Function:5 Reference:PFK

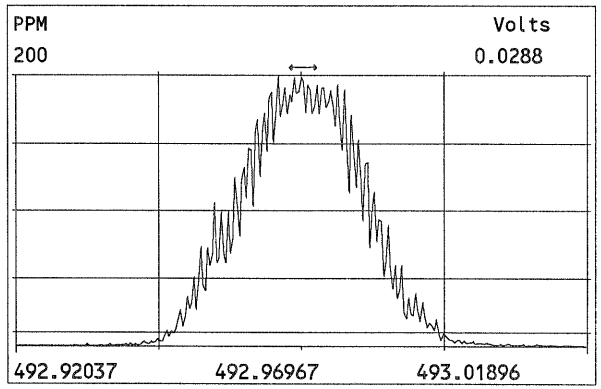


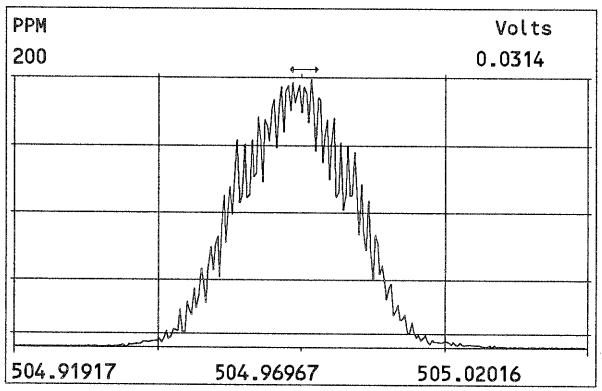


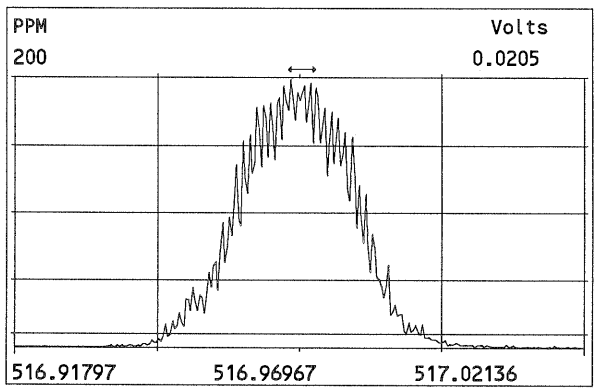




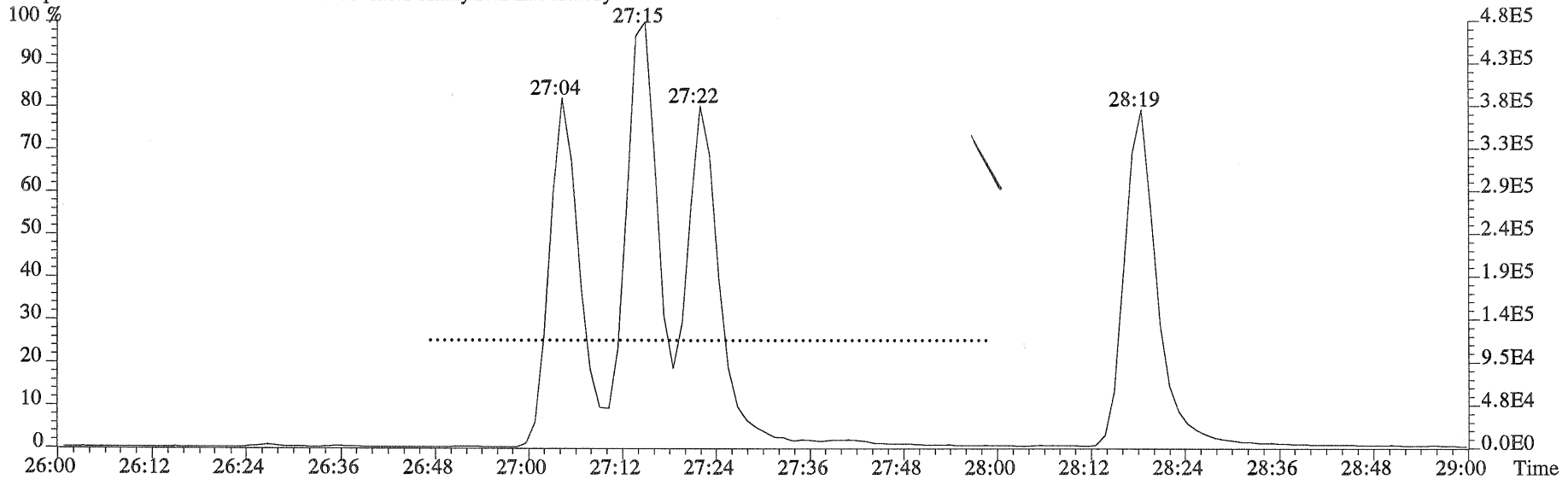




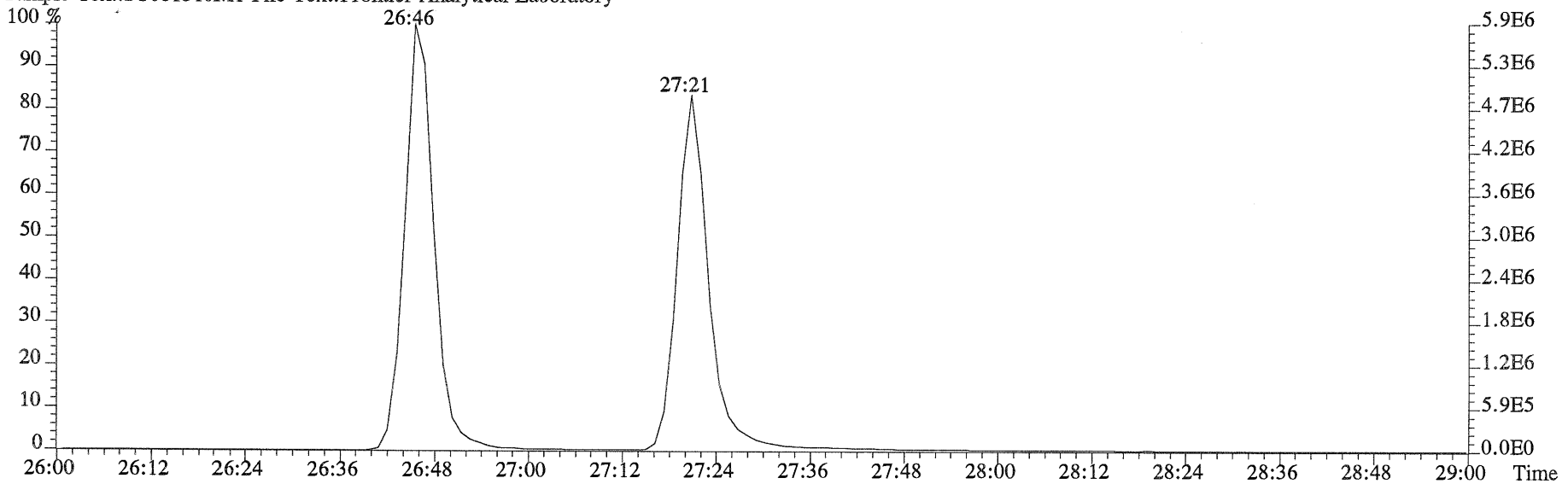




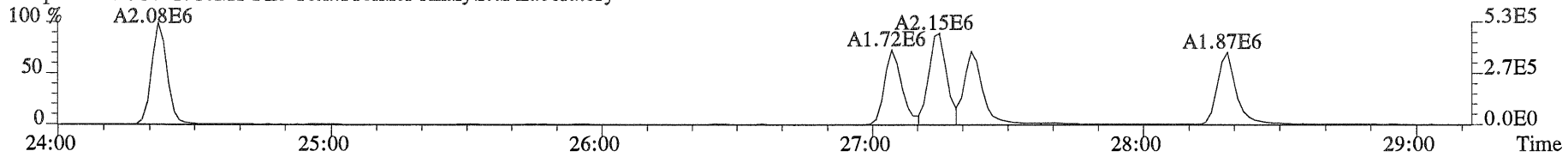
File:15AUG10M #1-357 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
319.8965 Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



File:15AUG10M #1-357 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
333.9339 Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



File:15AUG10M #1-357 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



File:15AUG10M #1-357 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
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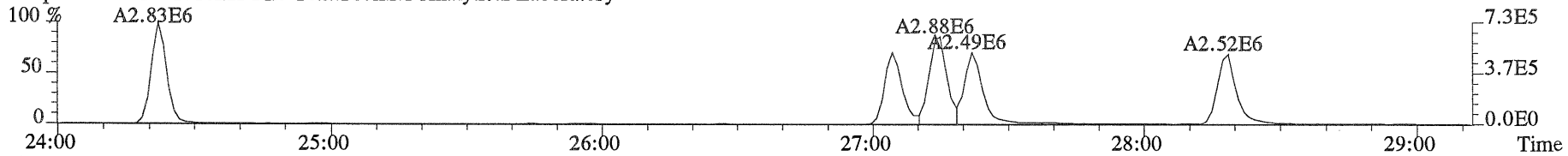
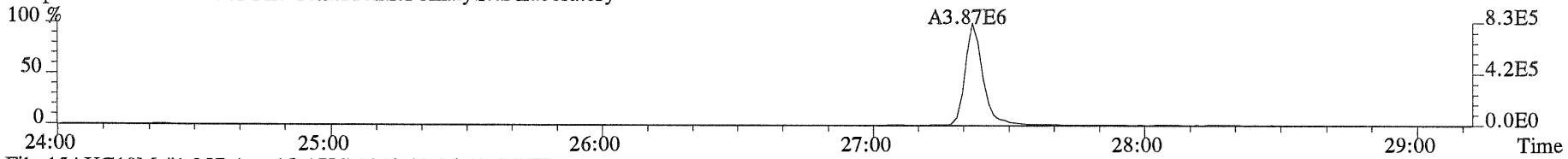
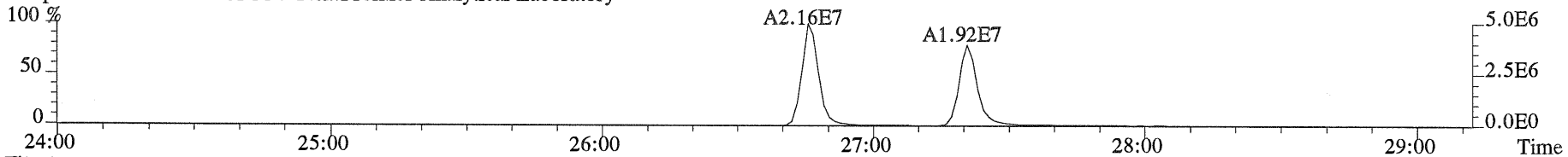
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



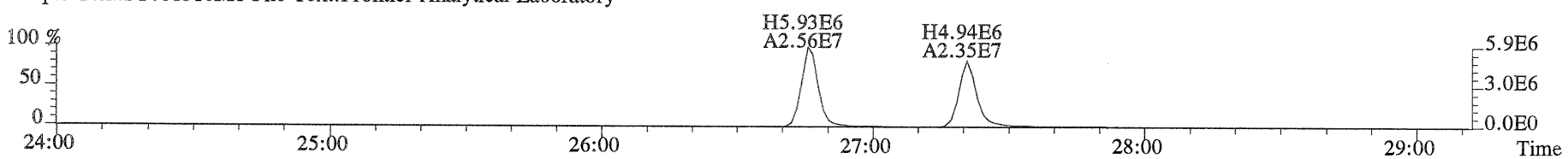
File:15AUG10M #1-357 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



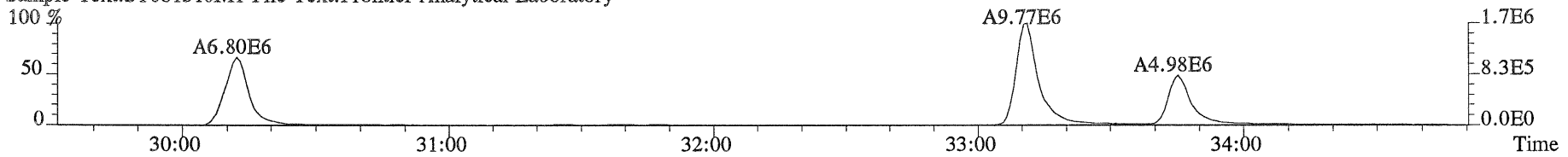
File:15AUG10M #1-357 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



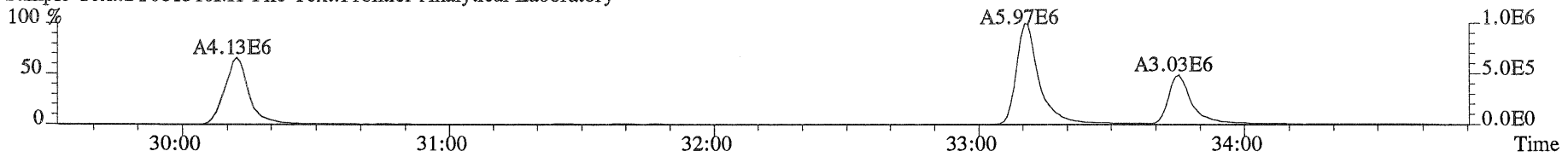
File:15AUG10M #1-357 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



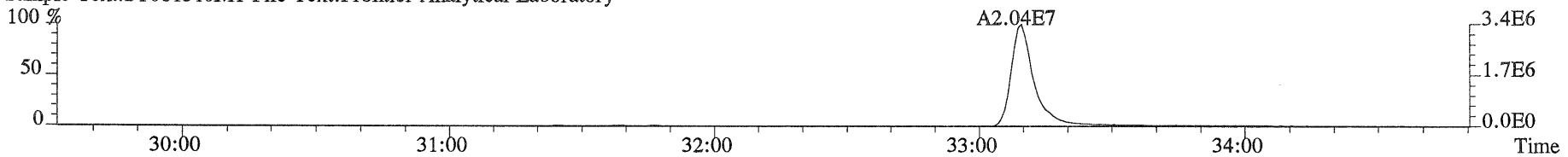
File:15AUG10M #1-412 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



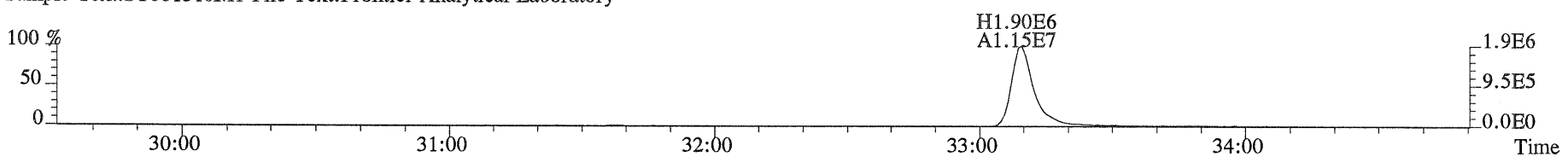
File:15AUG10M #1-412 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
357.8517 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



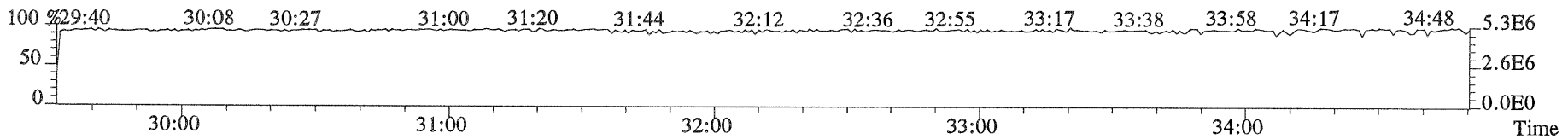
File:15AUG10M #1-412 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



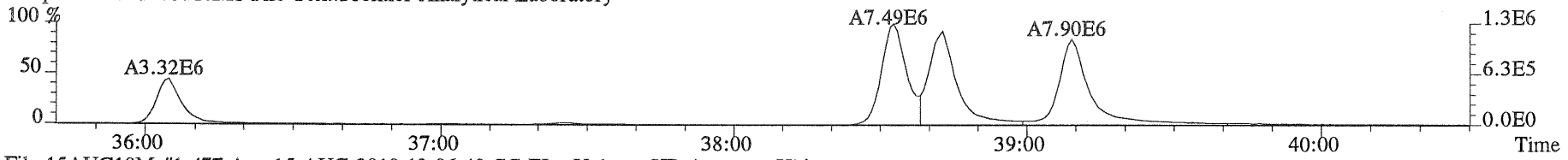
File:15AUG10M #1-412 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
369.8919 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



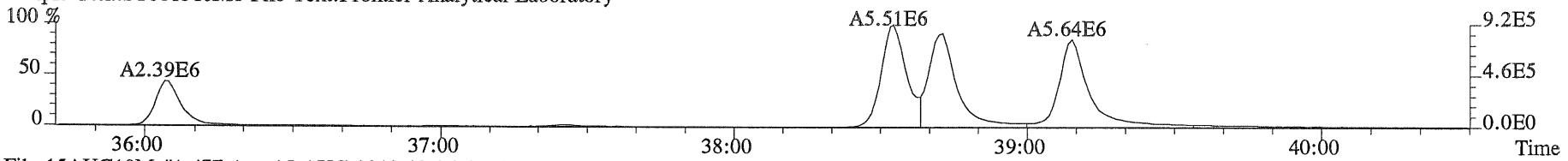
File:15AUG10M #1-412 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
LOCK_MASS_CHECK F:2 Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



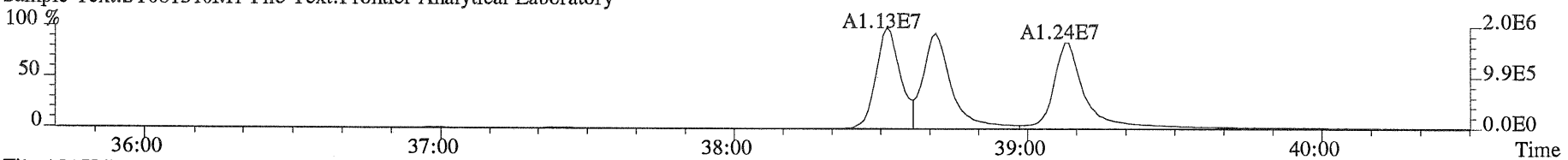
File:15AUG10M #1-477 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



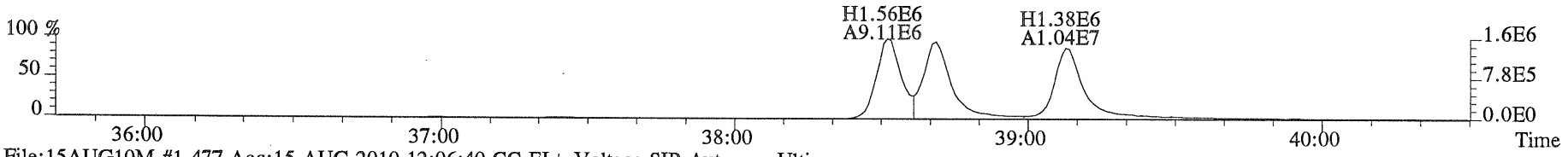
File:15AUG10M #1-477 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



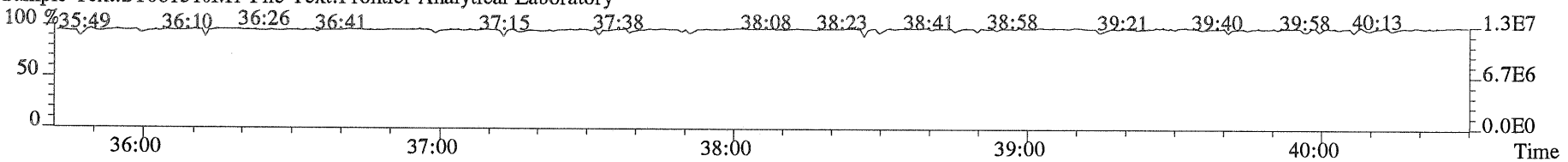
File:15AUG10M #1-477 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



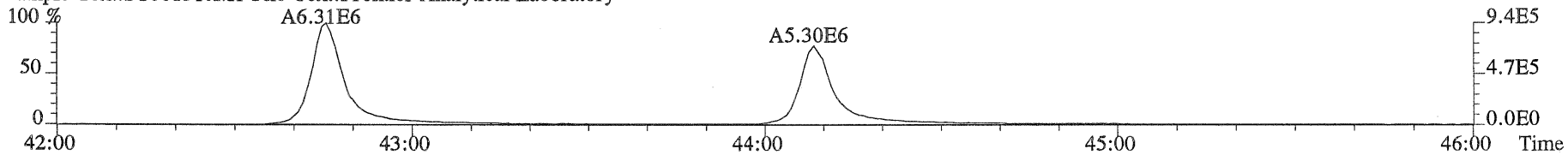
File:15AUG10M #1-477 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



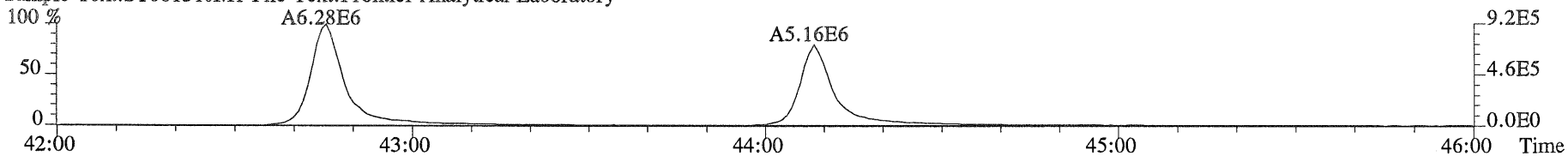
File:15AUG10M #1-477 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
380.9760 F:3 Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



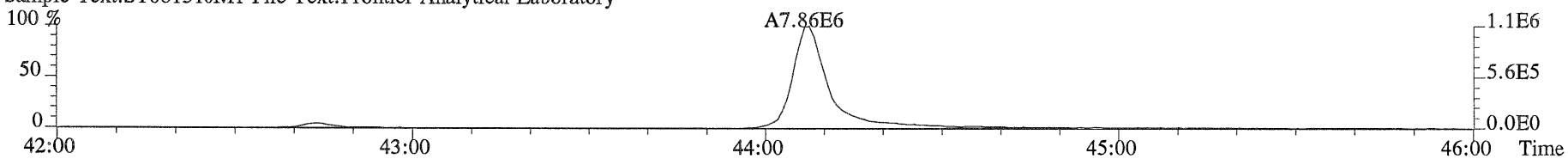
File:15AUG10M #1-541 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



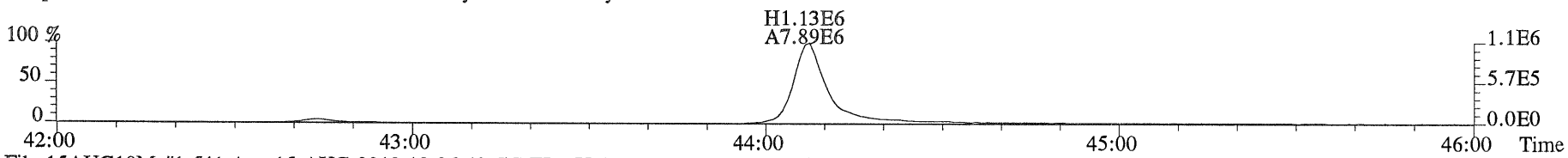
File:15AUG10M #1-541 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



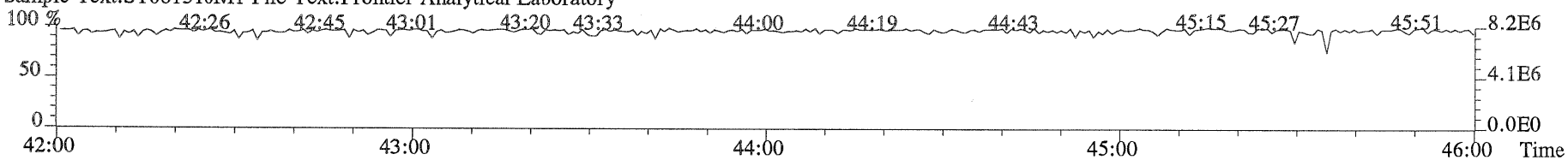
File:15AUG10M #1-541 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



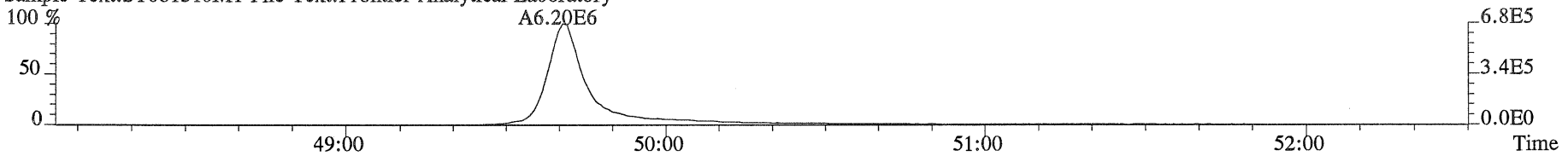
File:15AUG10M #1-541 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



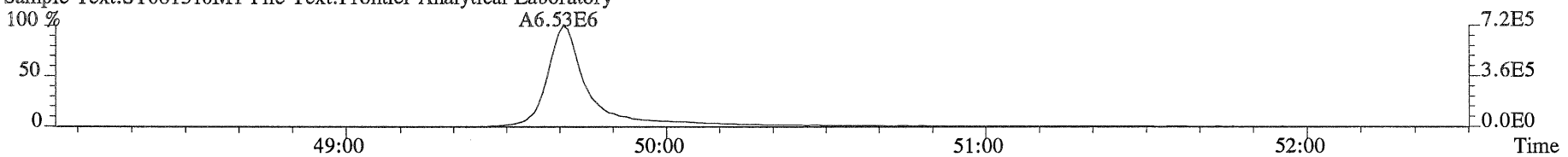
File:15AUG10M #1-541 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
430.9728 F:4 Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



File:15AUG10M #1-347 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



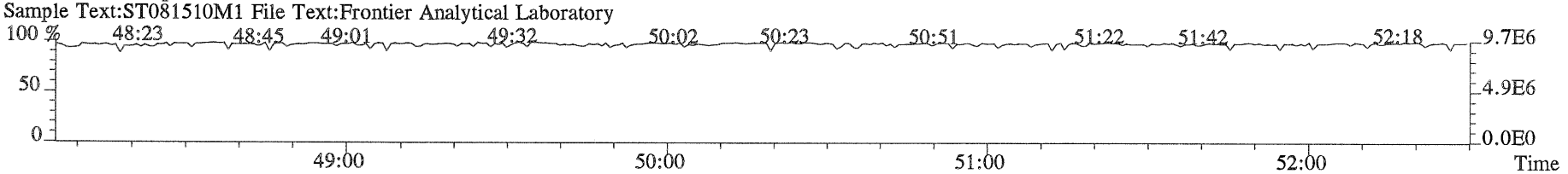
File:15AUG10M #1-347 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



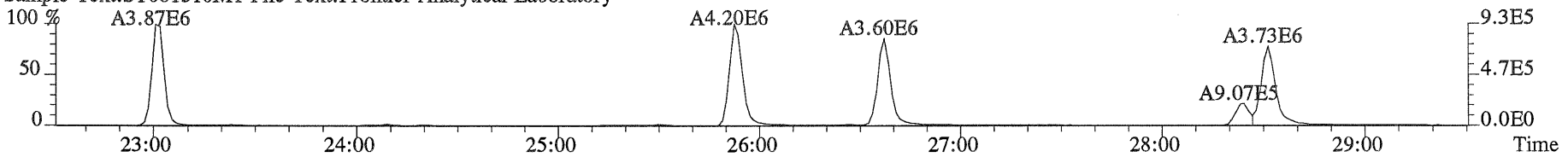
File:15AUG10M #1-347 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory

File:15AUG10M #1-347 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory

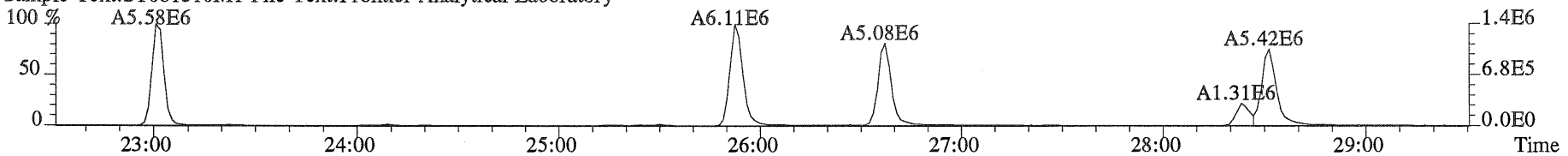
File:15AUG10M #1-347 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
454.9728 F:5 Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



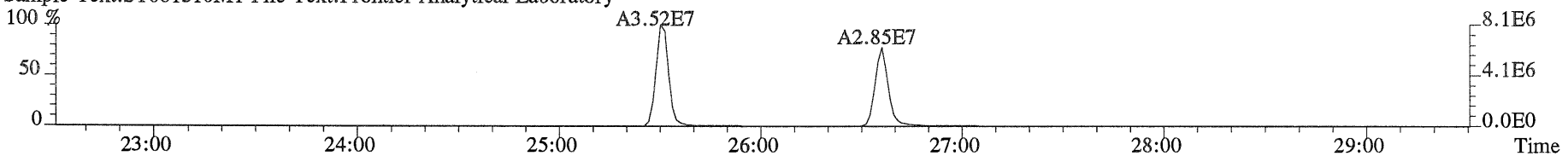
File:15AUG10M #1-357 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



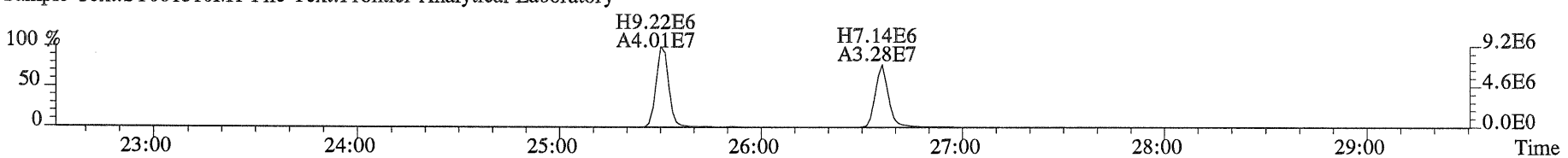
File:15AUG10M #1-357 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



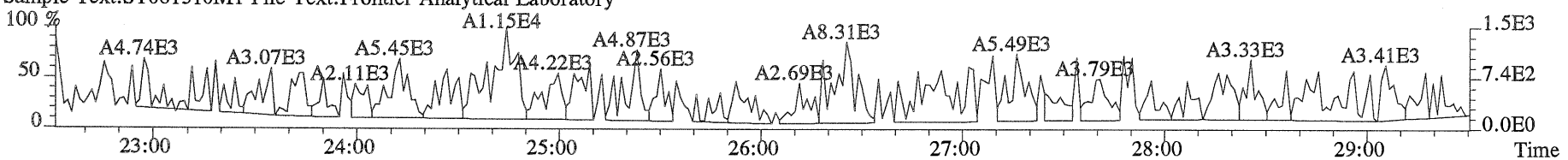
File:15AUG10M #1-357 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



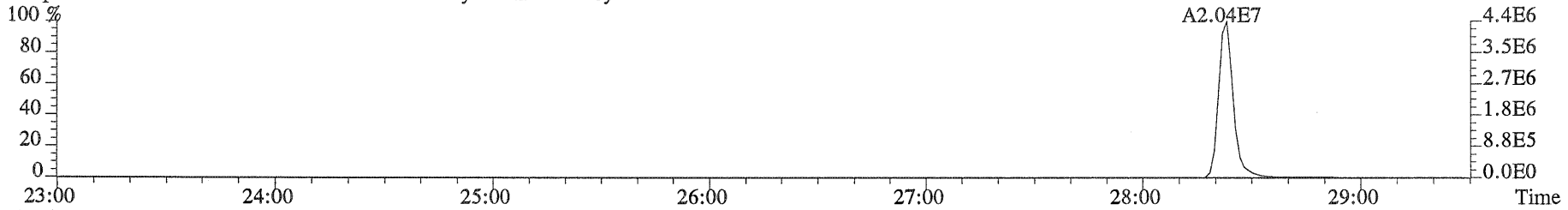
File:15AUG10M #1-357 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



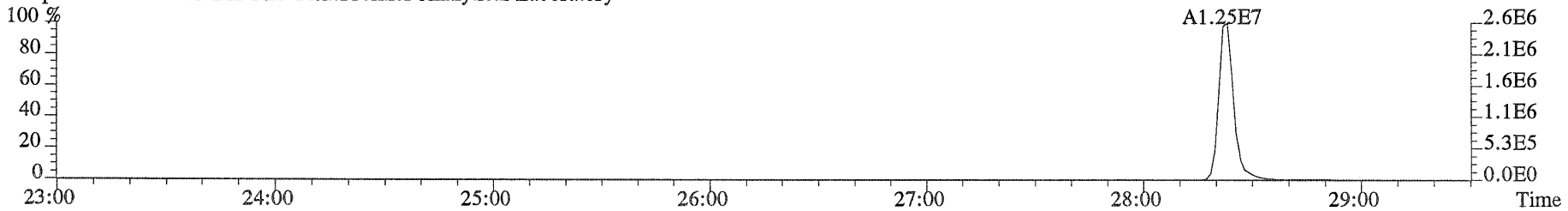
File:15AUG10M #1-357 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



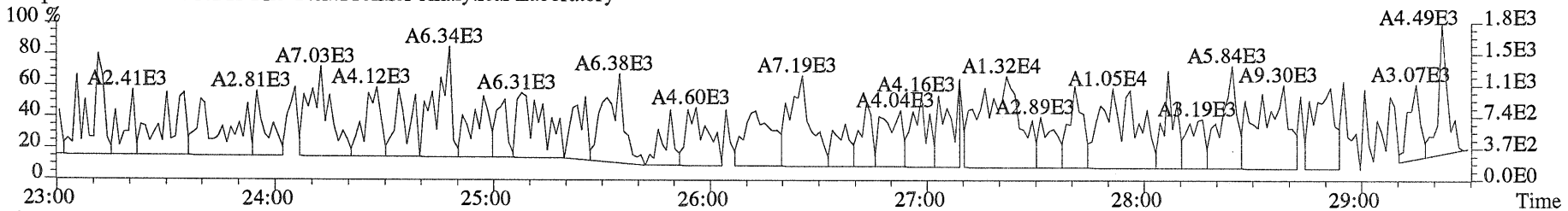
File:15AUG10M #1-357 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



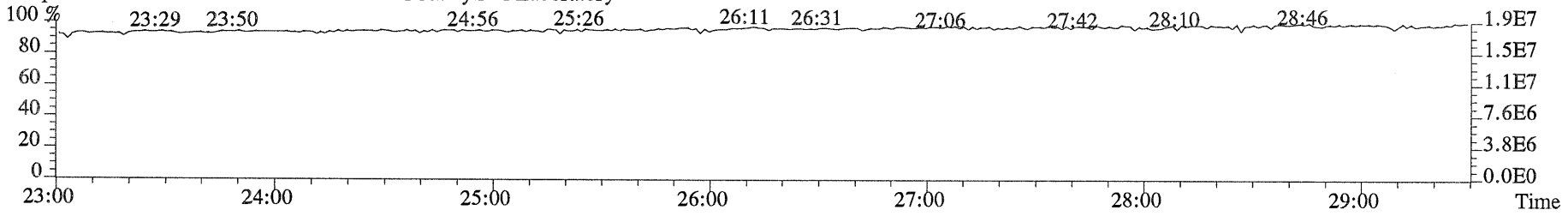
File:15AUG10M #1-357 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
341.8568 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



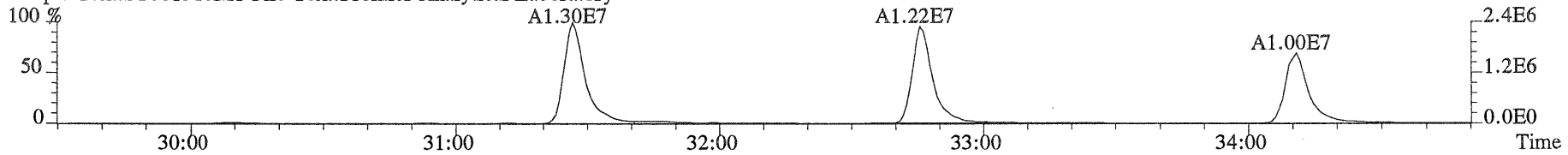
File:15AUG10M #1-357 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



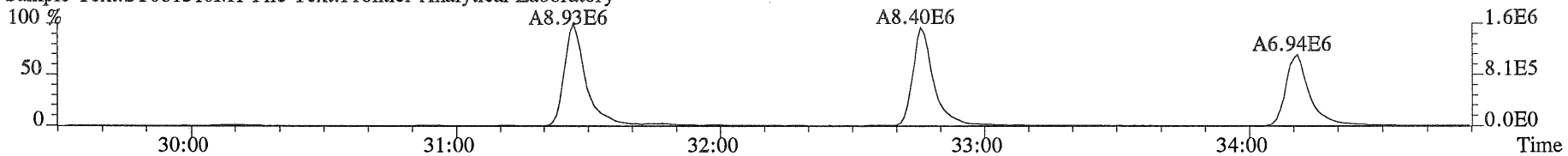
File:15AUG10M #1-357 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
330.9792 Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



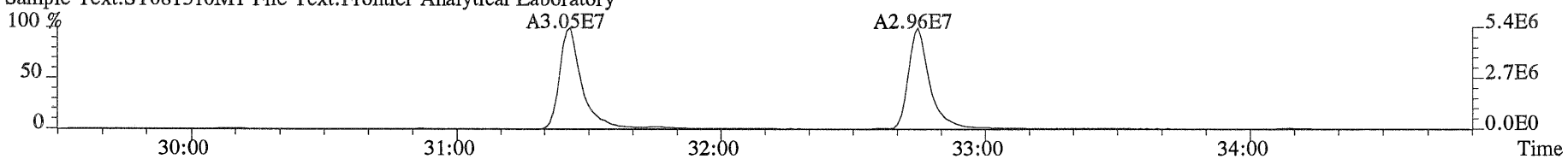
File:15AUG10M #1-412 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



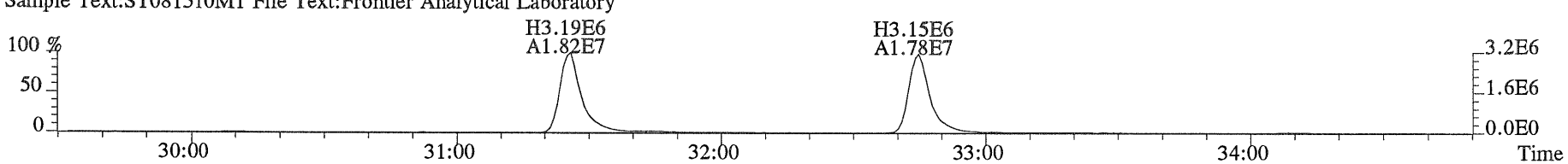
File:15AUG10M #1-412 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



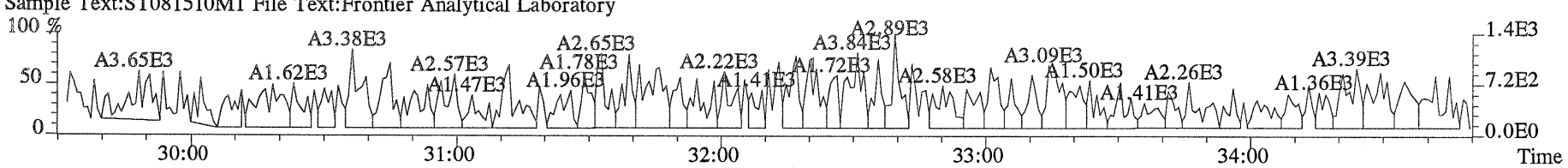
File:15AUG10M #1-412 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



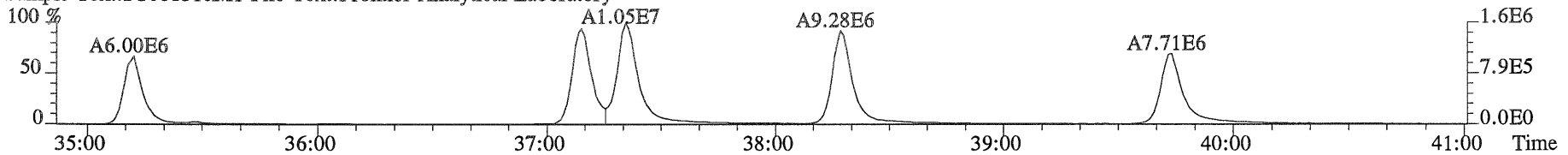
File:15AUG10M #1-412 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
353.8970 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



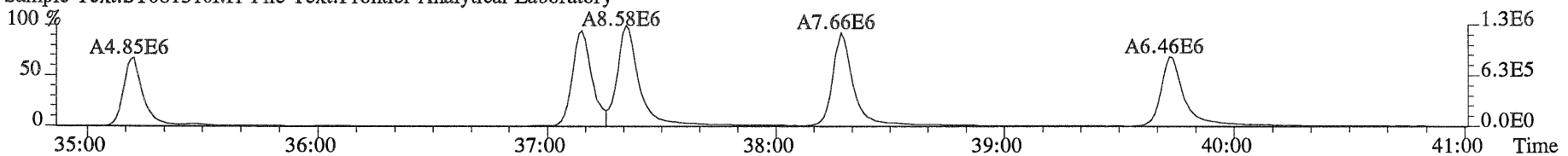
File:15AUG10M #1-412 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



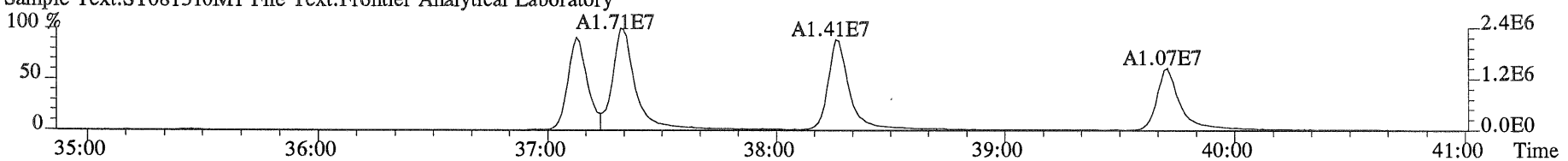
File:15AUG10M #1-477 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
373.8207 F:3 BSUB(10000,15,-3.0) BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



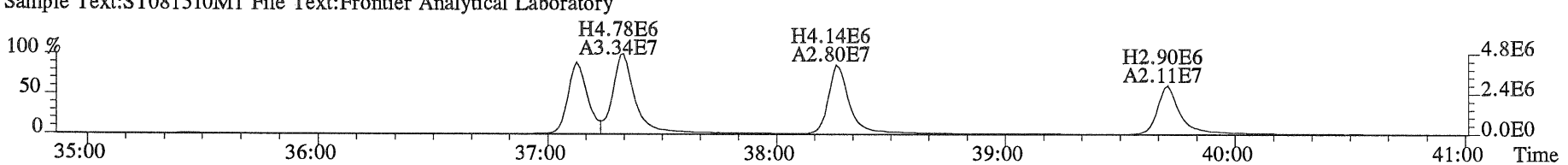
File:15AUG10M #1-477 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
375.8178 F:3 BSUB(10000,15,-3.0) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



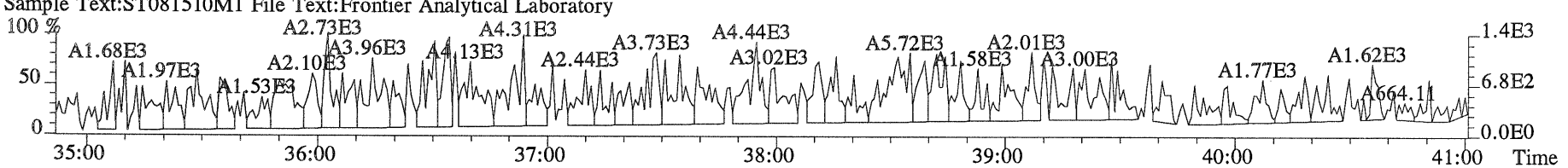
File:15AUG10M #1-477 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
383.8639 F:3 BSUB(10000,15,-3.0) BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



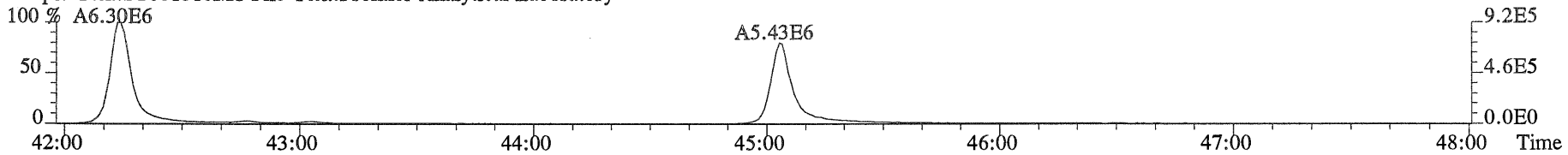
File:15AUG10M #1-477 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
385.8610 F:3 BSUB(10000,15,-3.0) BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



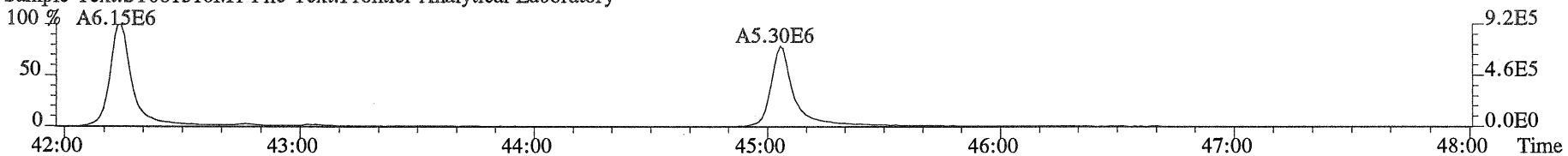
File:15AUG10M #1-477 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
445.7555 F:3 BSUB(10000,15,-3.0) BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



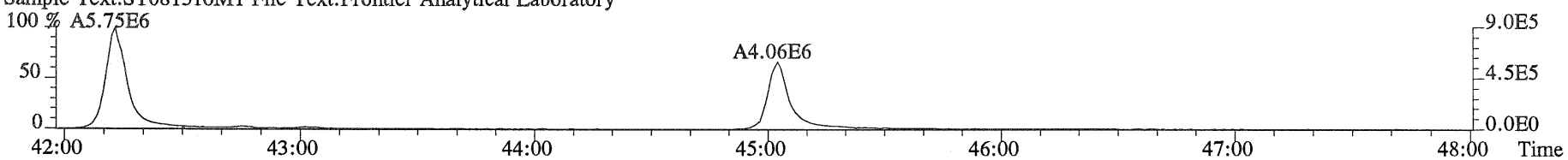
File:15AUG10M #1-541 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



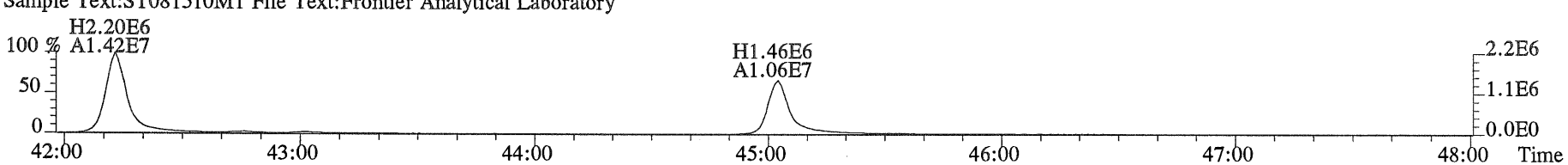
File:15AUG10M #1-541 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



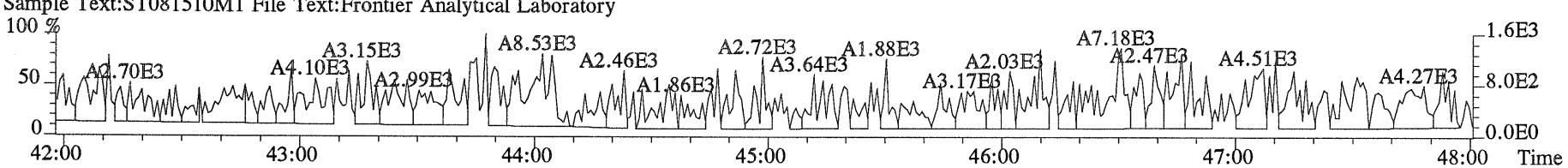
File:15AUG10M #1-541 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



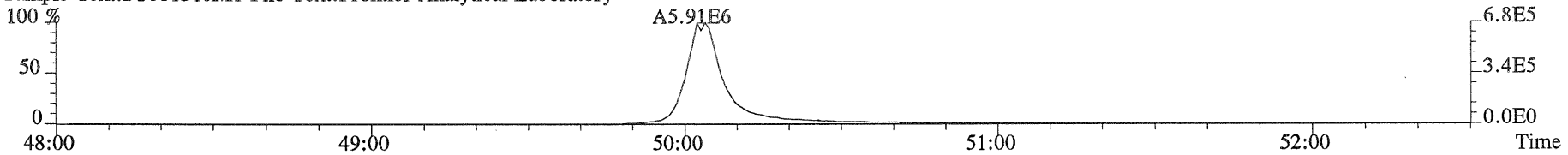
File:15AUG10M #1-541 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



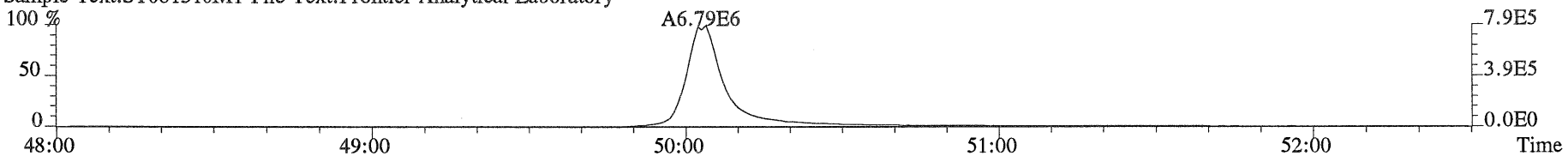
File:15AUG10M #1-541 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



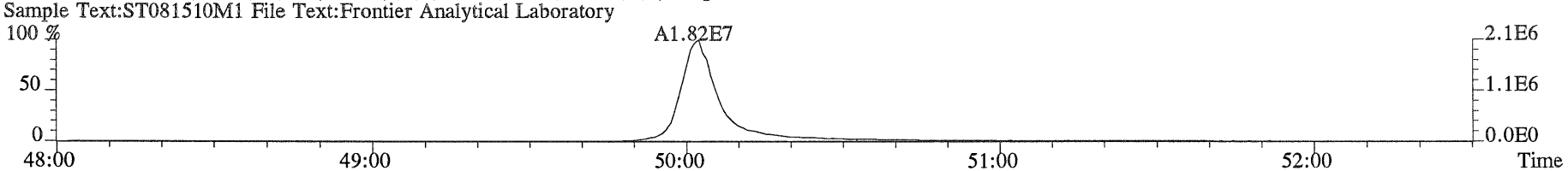
File:15AUG10M #1-347 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



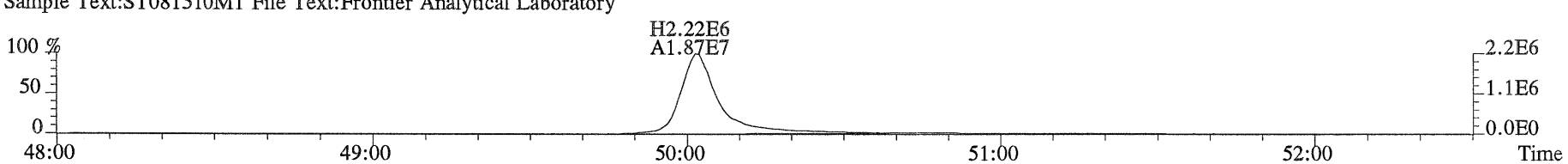
File:15AUG10M #1-347 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



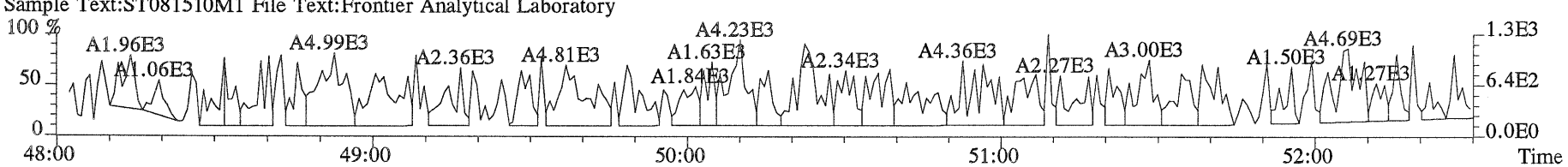
File:15AUG10M #1-347 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory



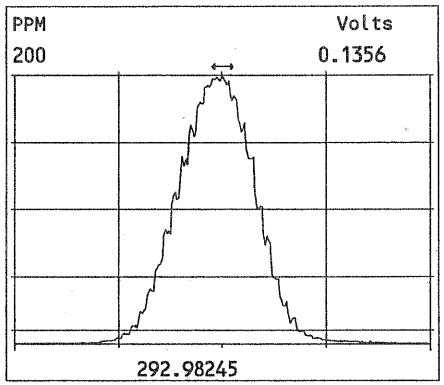
File:15AUG10M #1-347 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory

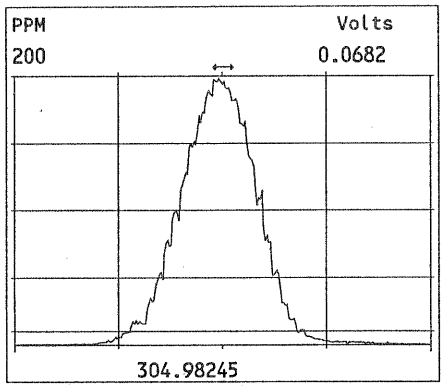


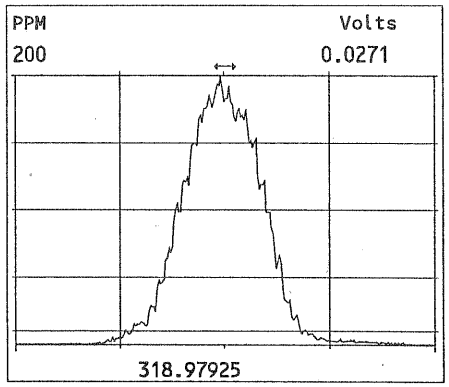
File:15AUG10M #1-347 Acq:15-AUG-2010 12:06:40 GC EI+ Voltage SIR Autospec-Ultima
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M1 File Text:Frontier Analytical Laboratory

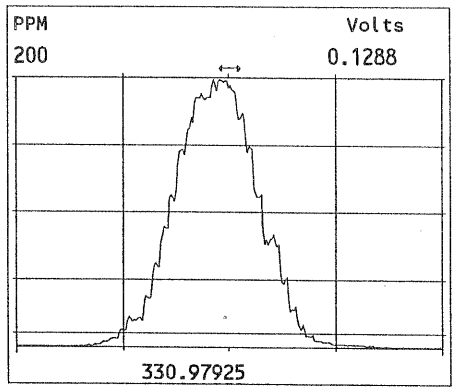


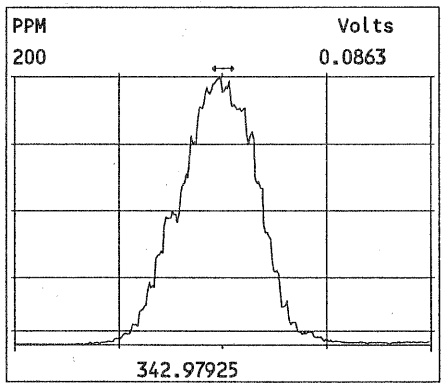
Peak Locate Examination:16-AUG-2010:08:28 File:15AUG10M_RES_CHECK
Experiment:PCDD Function:1 Reference:PFK

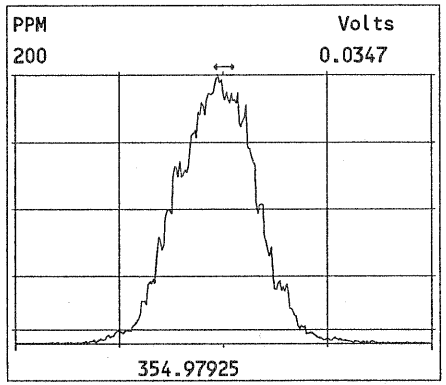


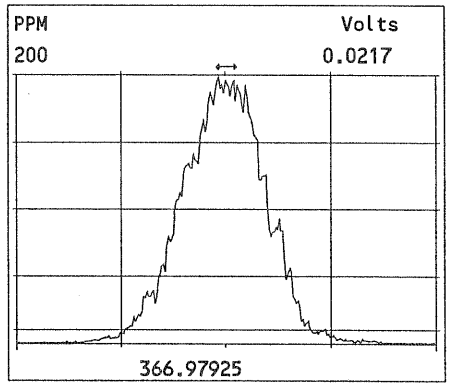


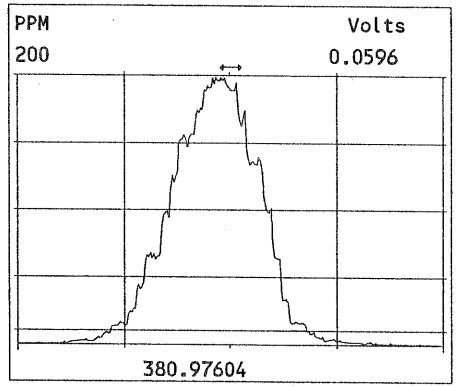


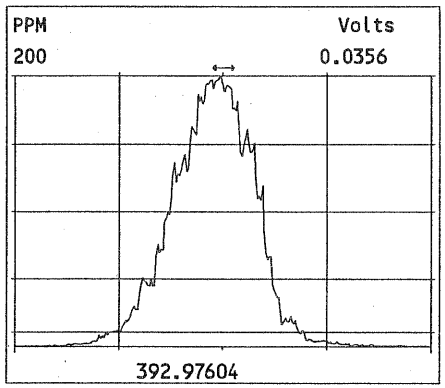


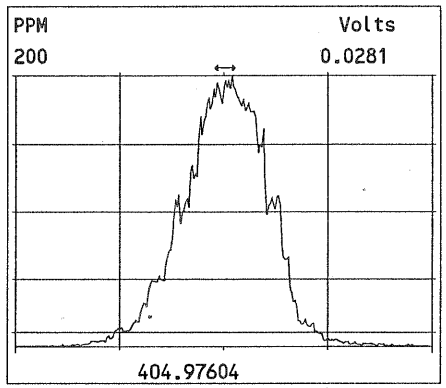


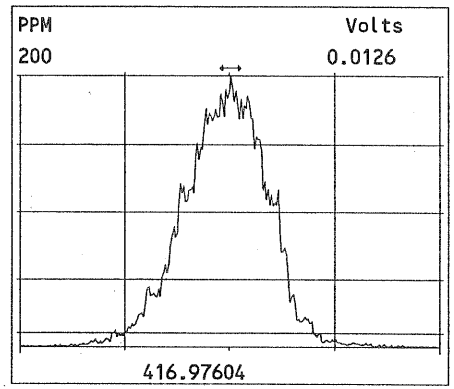




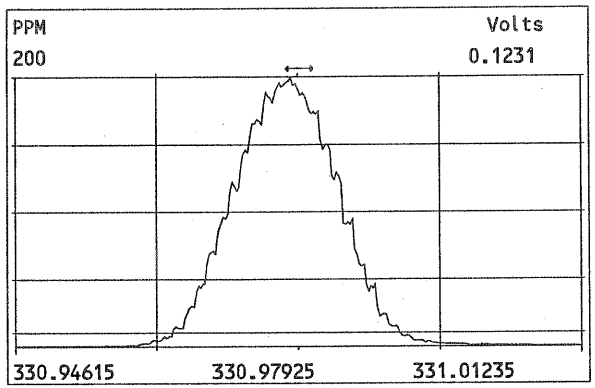


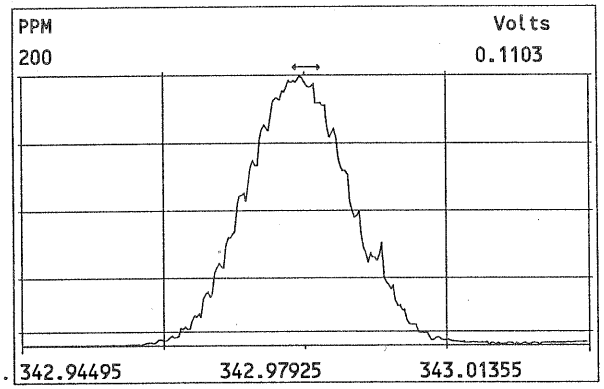


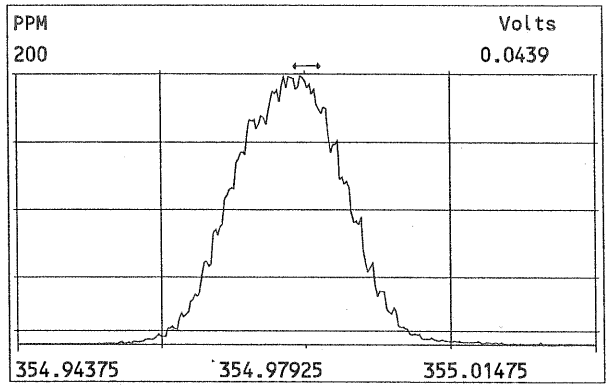


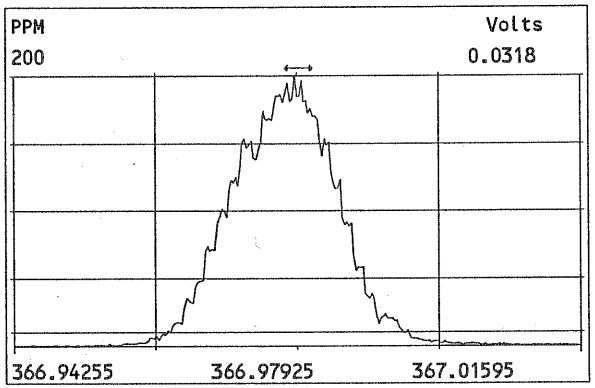


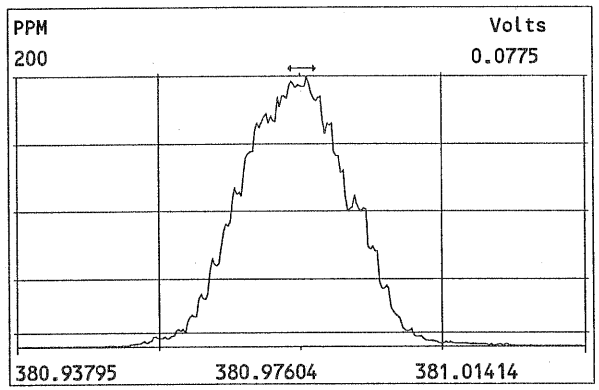
Peak Locate Examination:16-AUG-2010:08:29 File:15AUG10M_RES_CHECK
Experiment:PCDD Function:2 Reference:PFK

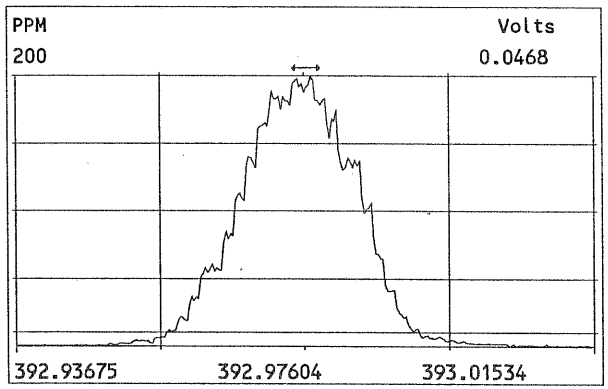


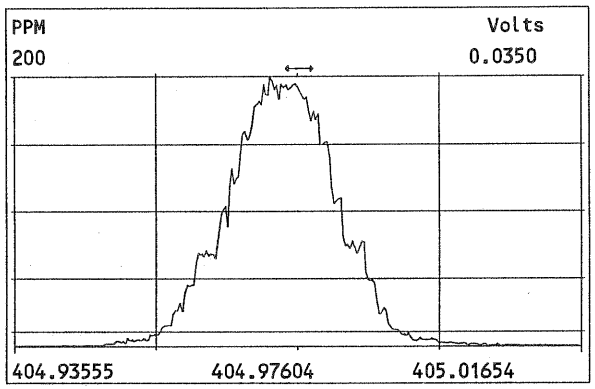


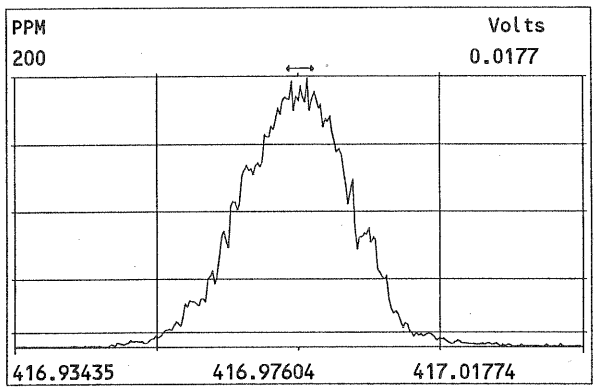




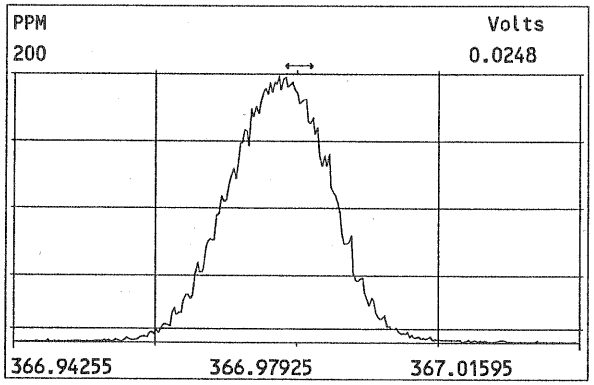


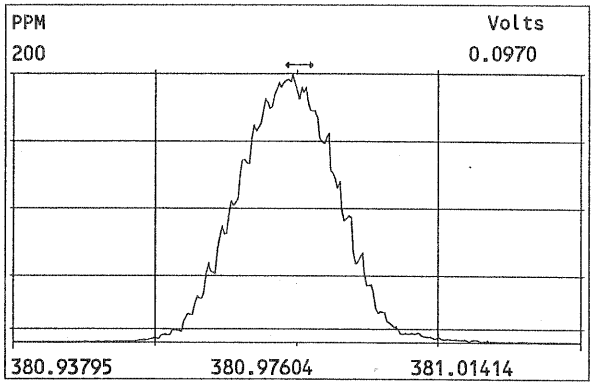


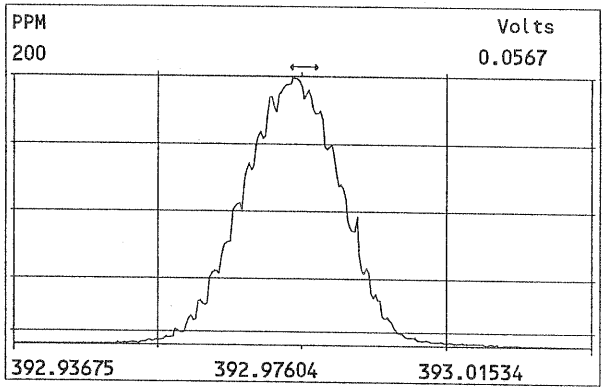


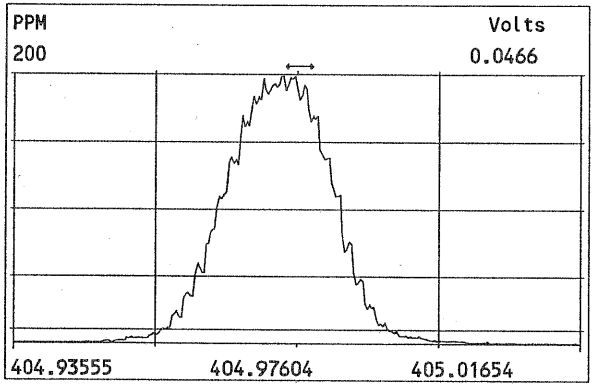


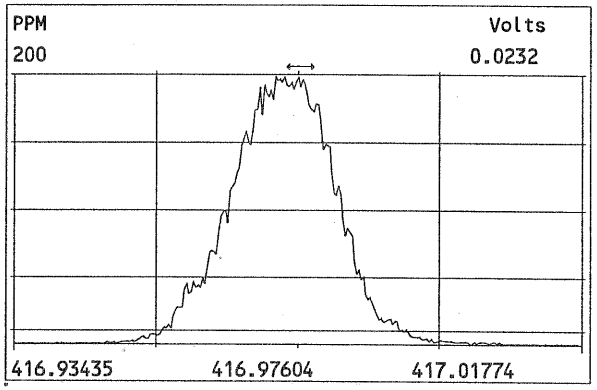
Peak Locate Examination:16-AUG-2010:08:29 File:15AUG10M_RES_CHECK
Experiment:PCDD Function:3 Reference:PFK

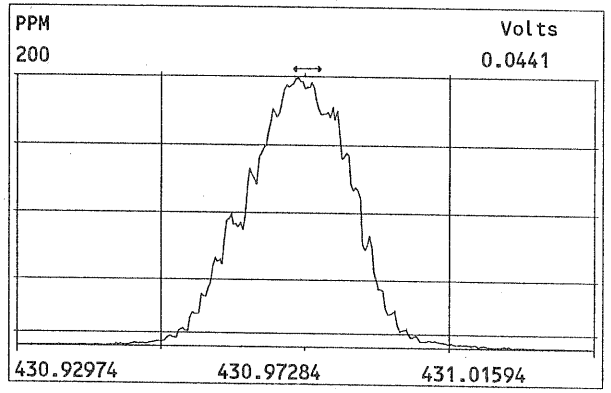


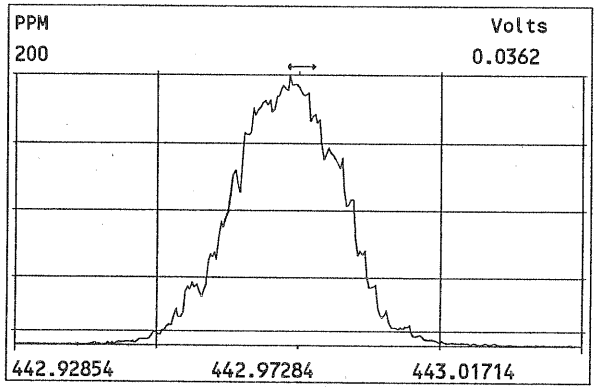


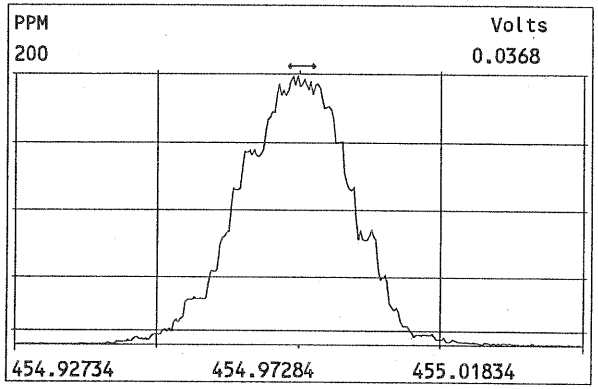




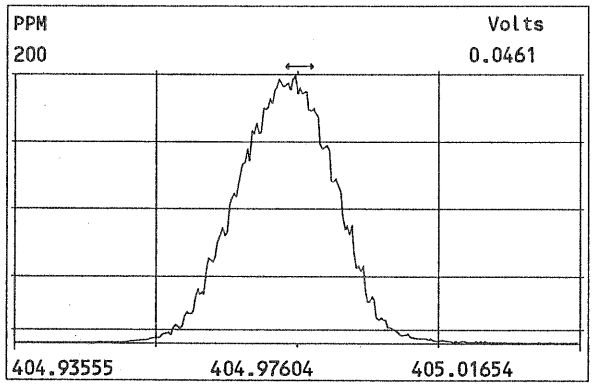


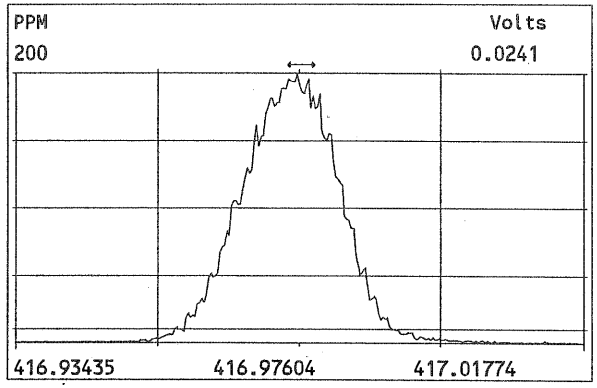


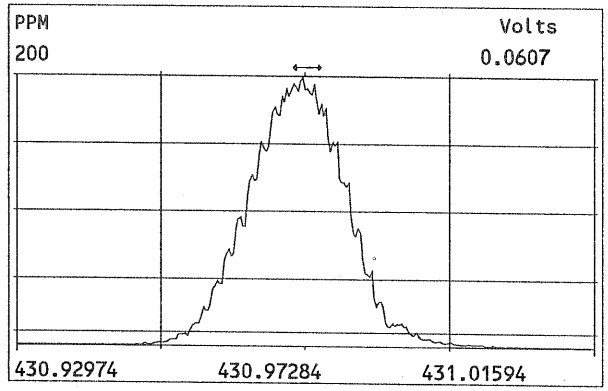


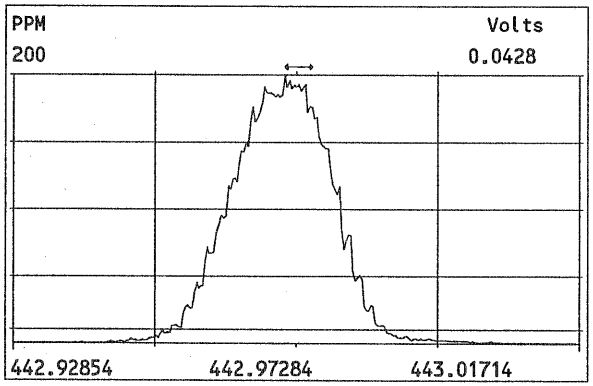


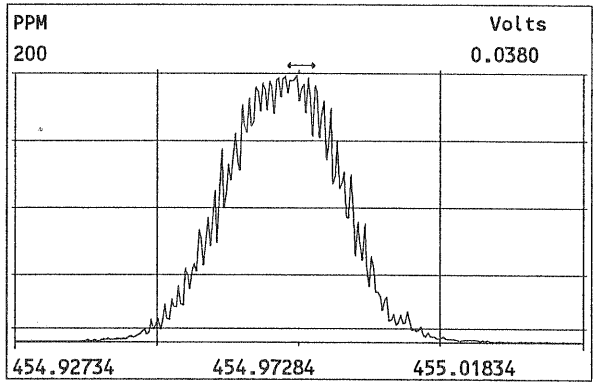
Peak Locate Examination:16-AUG-2010:08:30 File:15AUG10M_RES_CHECK
Experiment:PCDD Function:4 Reference:PFK

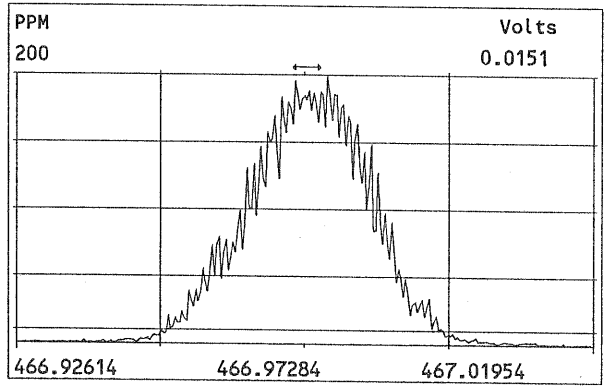


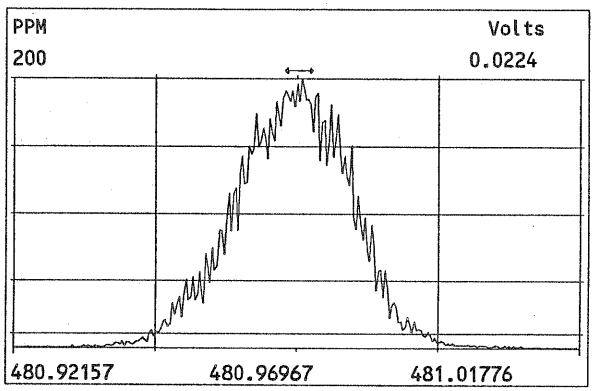




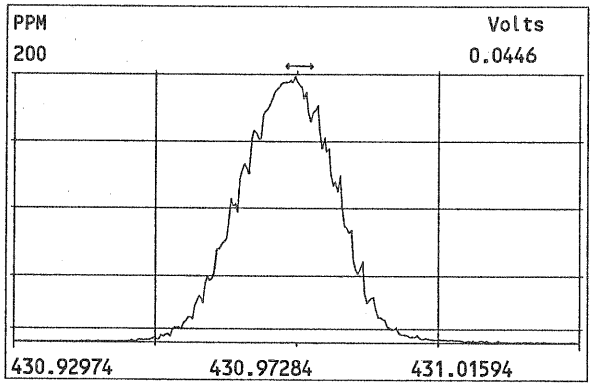


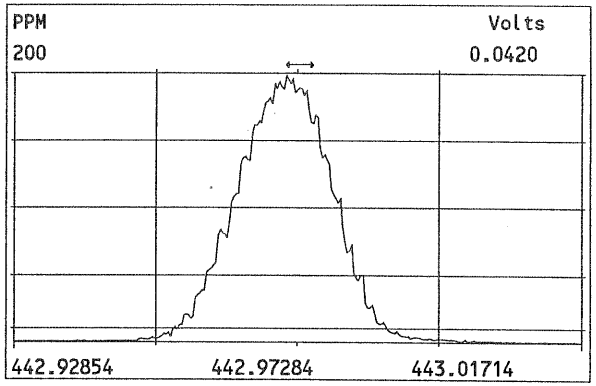


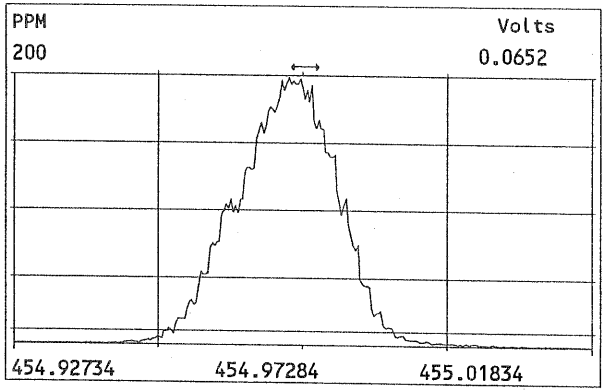


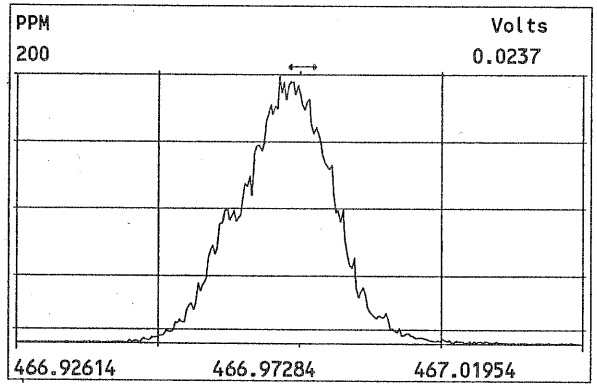


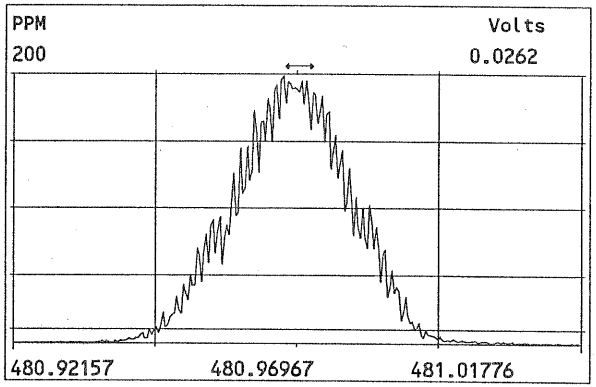
Peak Locate Examination:16-AUG-2010:08:30 File:15AUG10M_RES_CHECK
Experiment:PCDD Function:5 Reference:PFK

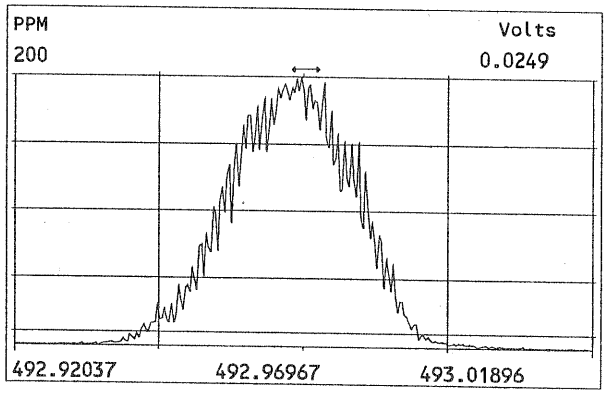


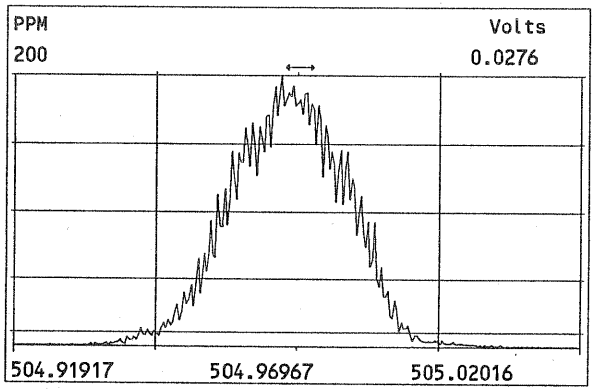


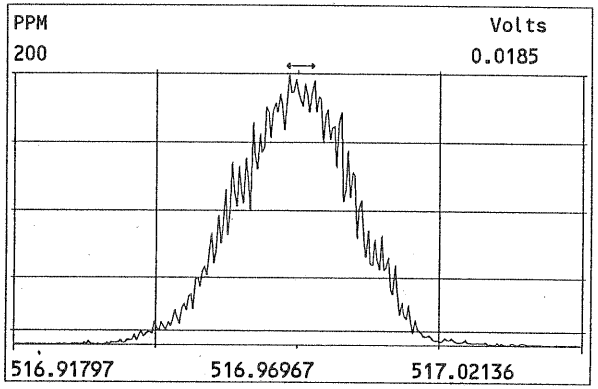












USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 15AUG10M Sam:11 Analysis Date: 15-AUG-10 21:20:05

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	0.75	0.65-0.89	y	10.1	7.80 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	1.60	1.32-1.78	y	48.0	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.38	1.05-1.43	y	47.5	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.39	1.05-1.43	y	49.0	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.37	1.05-1.43	y	51.5	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.01	0.88-1.20	y	47.2	43.0 - 58.0
OCDD	M+2/M+4	0.94	0.76-1.02	y	104	79.0 - 126
2,3,7,8-TCDF	M/M+2	0.70	0.65-0.89	y	8.86	8.40 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.45	1.32-1.78	y	48.8	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.44	1.32-1.78	y	46.4	41.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	y	45.1	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	45.9	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	45.2	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.28	1.05-1.43	y	45.3	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.03	0.88-1.20	y	45.7	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.04	0.88-1.20	y	45.0	43.0 - 58.0
OCDF	M+2/M+4	0.88	0.76-1.02	y	92.0	63.0 - 159

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

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

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

Analyst: _____ Date: 8/16/10

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 15AUG10M Sam:11 Analysis Date: 15-AUG-10 21:20:05

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	y	99.3	82.0 - 121
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.74	1.32-1.78	y	86.8	62.0 - 160
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	102	85.0 - 117
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	96.2	85.0 - 118
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	y	84.4	72.0 - 138
13C-OCDD	M+2/M+4	0.90	0.76-1.02	y	148	96.0 - 415
13C-2,3,7,8-TCDF	M/M+2	0.86	0.65-0.89	y	99.9	71.0 - 140
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.69	1.32-1.78	y	87.6	76.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.65	1.32-1.78	y	89.5	77.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	y	101	76.0 - 131
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	y	97.3	70.0 - 143
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	y	99.7	73.0 - 137
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	y	97.3	74.0 - 135
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.41	0.37-0.51	y	88.3	78.0 - 129
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.40	0.37-0.51	y	85.1	77.0 - 129
13C-OCDF	M+2/M+4	0.95	0.76-1.02	y	150	96.0 - 415
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					9.36	7.80 - 12.8

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

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

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

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

Analyst: _____ Date: 8/16/10

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: FAL3 Initial Calibration Date: 5/12/10

RT Window Data Filename: 15AUG10M Sam:11 Analysis Date: 15-AUG-10 Time: 21:20:05

DB-5 IS Data Filename: 15AUG10M Sam:11 Analysis Date: 15-AUG-10 Time: 21:20:05

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

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:23	1,3,6,8-TCDF (F)	23:02
1,2,8,9-TCDD (L)	28:18	1,2,8,9-TCDF (L)	28:31
1,2,4,7,9-PeCDD (F)	30:12	1,3,4,6,8-PeCDF (F)	28:23
1,2,3,8,9-PeCDD (L)	33:46	1,2,3,8,9-PeCDF (L)	34:11
1,2,4,6,7,9-HxCDD (F)	36:05	1,2,3,4,6,8-HxCDF (F)	35:12
1,2,3,7,8,9-HxCDD (L)	39:09	1,2,3,7,8,9-HxCDF (L)	39:44
1,2,3,4,6,7,9-HpCDD (F)	42:45	1,2,3,4,6,7,8-HpCDF (F)	42:14
1,2,3,4,6,7,8-HpCDD (L)	44:08	1,2,3,4,7,8,9-HpCDF (L)	45:04

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

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

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

Analyst: _____ Date: 8/16/10

USEPA - ITD

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 15-AUG-10 21:20:05 CS3 or VER Data Filename: 15AUG10M Sam:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052
13C-2,3,7,8-TCDD		1.021	0.976-1.043
13C-2,3,7,8-TCDF		0.994	0.923-1.103
13C-1,2,3,7,8-PeCDD		1.239	1.000-1.567
13C-1,2,3,7,8-PeCDF		1.174	0.923-1.203
13C-2,3,4,7,8-PeCDF		1.223	0.923-1.303

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

Analyst: _____ Date: 8/16/10

USEPA - ITD

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 15-AUG-10 21:20:05 CS3 or VER Data Filename: 15AUG10M Sam:11

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.001	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.001	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.984	0.977-1.000
13C-1,2,3,6,7,8-HxCDD		0.989	0.981-1.003
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975
13C-2,3,4,6,7,8-HxCDF		0.978	0.959-1.021
13C-1,2,3,7,8,9-HxCDF		1.015	0.977-1.047
13C-1,2,3,4,6,7,8-HpCDD		1.128	1.086-1.130
13C-1,2,3,4,6,7,8-HpCDF		1.079	1.043-1.085
13C-1,2,3,4,7,8,9-HpCDF		1.151	1.057-1.154
13C-OCDD		1.269	1.032-1.311
13C-OCDF		1.279	1.000-1.311

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

Analyst: _____ Date: 8/16/10

FAL ID: ST081510M2 Filename: 15AUG10M Sam:11 Acquired: 15-AUG-10 21:20:05 ICal: PCDDFAL3-5-12-10
Client ID: 1613 CS3 090918J ConCal: ST081510M1 EndCal: ST081510M2
Results: GC Column: DB5 Amount: 1.000 NATO 1989 Tox: 95.2
WHO 1998 Tox: 119 WHO 2005 Tox: 109

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	4.96e+06	0.75 y	27:23	1.04	10.1		2.50	-	-	*
1,2,3,7,8-PeCDD	1.81e+07	1.60 y	33:11	1.05	48.0		2.50	-	-	*
1,2,3,4,7,8-HxCDD	1.53e+07	1.38 y	38:33	1.30	47.5		2.50	-	-	*
1,2,3,6,7,8-HxCDD	1.53e+07	1.39 y	38:42	1.28	49.0		2.50	-	-	*
1,2,3,7,8,9-HxCDD	1.58e+07	1.37 y	39:09	1.25	51.5		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	1.27e+07	1.01 y	44:08	1.35	47.2		2.50	-	-	*
OCDD	1.56e+07	0.94 y	49:41	1.25	104		2.50	-	-	*
2,3,7,8-TCDF	9.98e+06	0.70 y	26:37	1.62	8.86		2.50	-	-	*
1,2,3,7,8-PeCDF	2.54e+07	1.45 y	31:27	0.92	48.8		2.50	-	-	*
2,3,4,7,8-PeCDF	2.37e+07	1.44 y	32:46	0.94	46.4		2.50	-	-	*
1,2,3,4,7,8-HxCDF	1.89e+07	1.26 y	37:09	0.93	45.1		2.50	-	-	*
1,2,3,6,7,8-HxCDF	2.07e+07	1.27 y	37:22	0.84	45.9		2.50	-	-	*
2,3,4,6,7,8-HxCDF	1.88e+07	1.29 y	38:17	0.90	45.2		2.50	-	-	*
1,2,3,7,8,9-HxCDF	1.65e+07	1.28 y	39:44	0.98	45.3		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	1.57e+07	1.03 y	42:14	1.38	45.7		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	1.30e+07	1.04 y	45:04	1.62	45.0		2.50	-	-	*
OCDF	1.55e+07	0.88 y	50:03	0.74	92.0		2.50	-	-	*
										Rec
13C-2,3,7,8-TCDD	4.74e+07	0.80 y	27:20	0.93	99.3					99.3
13C-1,2,3,7,8-PeCDD	3.61e+07	1.74 y	33:10	0.81	86.8					86.8
13C-1,2,3,4,7,8-HxCDD	2.47e+07	1.25 y	38:31	0.95	102					102
13C-1,2,3,6,7,8-HxCDD	2.45e+07	1.25 y	38:41	1.00	96.2					96.2
13C-1,2,3,4,6,7,8-HpCDD	1.99e+07	1.02 y	44:08	0.92	84.4					84.4
13C-OCDD	2.40e+07	0.90 y	49:40	0.63	148					74.0
13C-2,3,7,8-TCDF	6.97e+07	0.86 y	26:36	0.87	99.9					99.9
13C-1,2,3,7,8-PeCDF	5.67e+07	1.69 y	31:26	0.81	87.6					87.6
13C-2,3,4,7,8-PeCDF	5.40e+07	1.65 y	32:45	0.75	89.5					89.5
13C-1,2,3,4,7,8-HxCDF	4.51e+07	0.54 y	37:08	1.74	101					101
13C-1,2,3,6,7,8-HxCDF	5.40e+07	0.54 y	37:19	2.17	97.3					97.3
13C-2,3,4,6,7,8-HxCDF	4.64e+07	0.54 y	38:16	1.82	99.7					99.7
13C-1,2,3,7,8,9-HxCDF	3.70e+07	0.53 y	39:42	1.49	97.3					97.3
13C-1,2,3,4,6,7,8-HpCDF	2.48e+07	0.41 y	42:13	1.10	88.3					88.3
13C-1,2,3,4,7,8,9-HpCDF	1.78e+07	0.40 y	45:03	0.81	85.1					85.1
13C-OCDF	4.55e+07	0.95 y	50:02	1.19	150					74.9
37Cl-2,3,7,8-TCDD	4.48e+06		27:22	0.93	9.36					93.6
13C-1,2,3,4-TCDD	5.15e+07	0.82 y	26:46	-	152					
13C-1,2,3,4-TCDF	8.03e+07	0.88 y	25:31	-	151					
13C-1,2,3,7,8,9-HxCDD	2.56e+07	1.26 y	39:08	-	119					

						Fac	Noise-1	Noise-2	DL		#Hom
Total Tetra-Dioxins	2.60e+07		24:23	1.04	52.9	2.50	-	-	*		14
Total Penta-Dioxins	4.00e+07		30:12	1.05	106	2.50	-	-	*		6
Total Hexa-Dioxins	5.37e+07		36:05	1.27	171	2.50	-	-	*		17
Total Hepta-Dioxins	2.80e+07		42:45	1.35	104	2.50	-	-	*		2
Total Tetra-Furans	4.36e+07		23:02	1.62	38.7	2.50	-	-	*		16
1st Fn. Tot Penta-Furans	3.52e+07		28:23	0.93	68.4	2.50	-	-	*	PeCDF	1
Total Penta-Furans	7.05e+07		30:08	0.93	137	2.50	-	-	*	205	10
Total Hexa-Furans	8.85e+07		35:12	0.90	214	2.50	-	-	*		12
Total Hepta-Furans	2.95e+07		42:14	1.48	93.3	2.50	-	-	*		15

Analyst: _____ Date: 8/16/10

Frontier Analytical Laboratory - Acquisition Log

Run Name:15AUG10M Instrument: FAL3 GC: DB5 Experiment:PCDD

Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
15AUG10M	1	ST081510M1	1613 CS3 090918J	15-AUG-10 12:06:40	ST081510M1	ST081510M2	DV
15AUG10M	2	6273-001-0001-SA	PSB04-0.0-0.5-072810 1:20	15-AUG-10 13:02:02	ST081510M1	ST081510M2	DV
15AUG10M	3	6273-005-0001-SA	PSB06-0-0.5-072810 1:20	15-AUG-10 13:57:21	ST081510M1	ST081510M2	DV
15AUG10M	4	6273-006-0001-SA	PSB06-1.5-2.0-072810 1:20	15-AUG-10 14:52:40	ST081510M1	ST081510M2	DV
15AUG10M	5	6273-007-0001-SA	PSB06-1.5-2.0-072810D 1:20	15-AUG-10 15:47:58	ST081510M1	ST081510M2	DV
15AUG10M	6	SB081510M1	Solvent Blank	15-AUG-10 16:43:21	ST081510M1	ST081510M2	DV
15AUG10M	7	6268-003-0001-SA	PSB12-2-4-072810	15-AUG-10 17:38:44	ST081510M1	ST081510M2	DV
15AUG10M	8	6268-002-0001-SA	PSB12-1.5-2.0-072810	15-AUG-10 18:34:04	ST081510M1	ST081510M2	DV
15AUG10M	9	6268-001-0001-SA	PSB12-0-0.5-072810	15-AUG-10 19:29:27	ST081510M1	ST081510M2	DV
15AUG10M	10	SB081510M2	Solvent Blank	15-AUG-10 20:24:46	ST081510M1	ST081510M2	DV
15AUG10M	11	ST081510M2	1613 CS3 090918J	15-AUG-10 21:20:05	ST081510M1	ST081510M2	DV
15AUG10M	12	2079-001-0001-OPR	OPR	15-AUG-10 22:15:23	ST081510M2	ST081510M3	DV
15AUG10M	13	2079-001-0001-MB	Method Blank	15-AUG-10 23:10:37	ST081510M2	ST081510M3	DV
15AUG10M	14	6272-006-0001-SA	PSB3-1.5-2-072910	16-AUG-10 00:05:56	ST081510M2	ST081510M3	DV
15AUG10M	15	6272-004-0001-SA	PSB2-1.5-2-072910	16-AUG-10 01:01:14	ST081510M2	ST081510M3	DV
15AUG10M	16	6272-005-0001-SA	PSB3-0-0.5-072910	16-AUG-10 01:56:35	ST081510M2	ST081510M3	DV
15AUG10M	17	6272-003-0001-SA	PSB2-0-0.5-072910	16-AUG-10 02:51:55	ST081510M2	ST081510M3	DV
15AUG10M	18	6272-001-0001-SA	PSB1-0-0.5-072910	16-AUG-10 03:47:14	ST081510M2	ST081510M3	DV
15AUG10M	19	6272-002-0001-SA	PSB1-1.5-2.0-072910	16-AUG-10 04:42:37	ST081510M2	ST081510M3	DV
15AUG10M	20	6272-002-0002-MS	PSB1-1.5-2.0-072910	16-AUG-10 05:38:00	ST081510M2	ST081510M3	DV
15AUG10M	21	6272-002-0002-MSD	PSB1-1.5-2.0-072910	16-AUG-10 06:33:23	ST081510M2	ST081510M3	DV
15AUG10M	22	ST081510M3	1613 CS3 090918J	16-AUG-10 07:28:46	ST081510M2	ST081510M3	DV

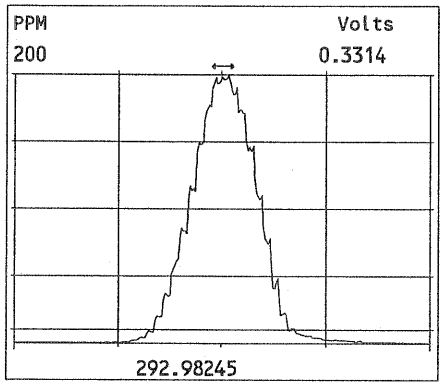
8/16/10

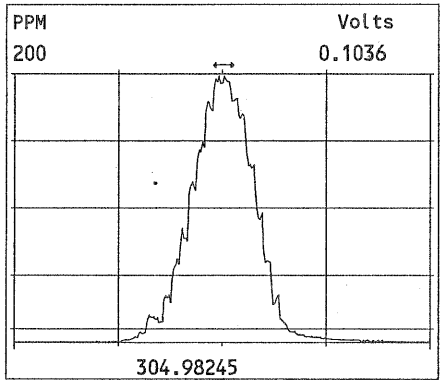
Data Backed Up:_____

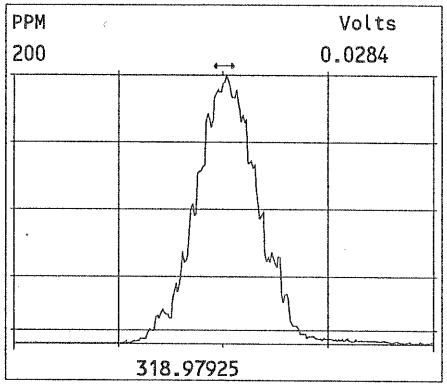
Date:_____

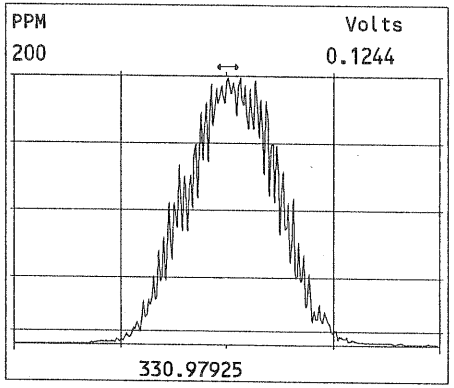
Peak Locate Examination:15-AUG-2010:12:03 File:15AUG10M

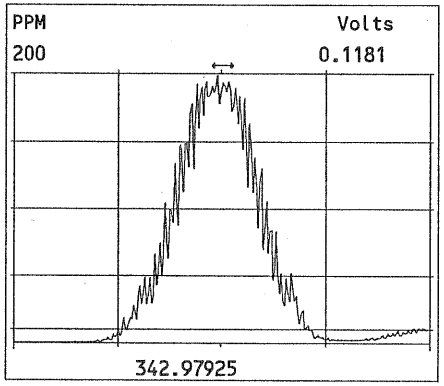
Experiment:PCDD Function:1 Reference:PFK

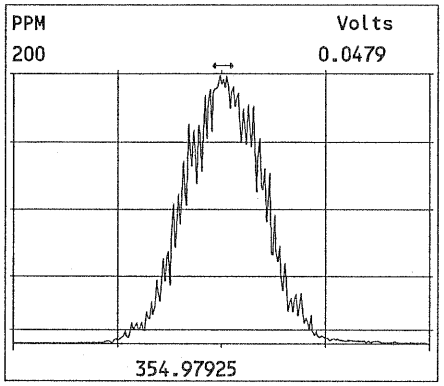


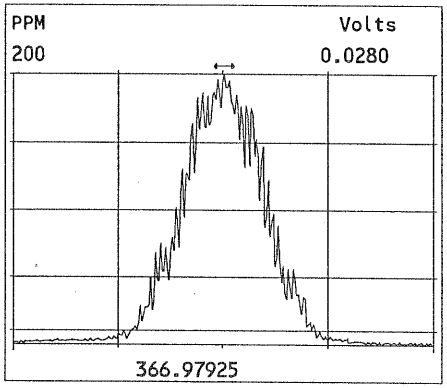


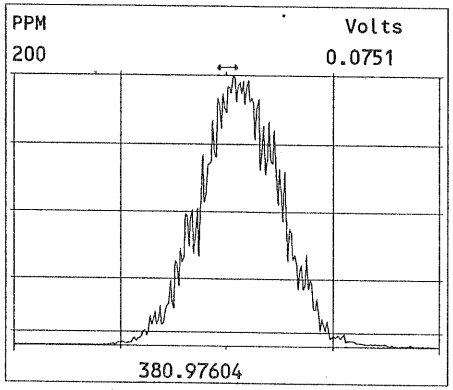


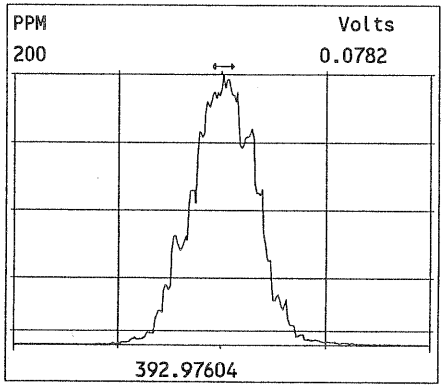


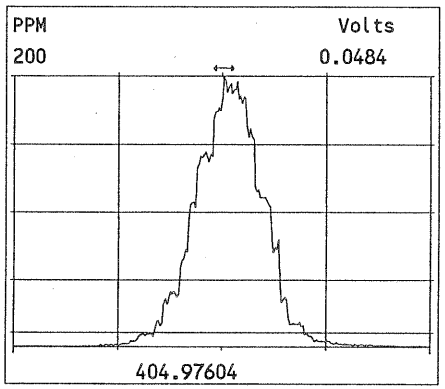


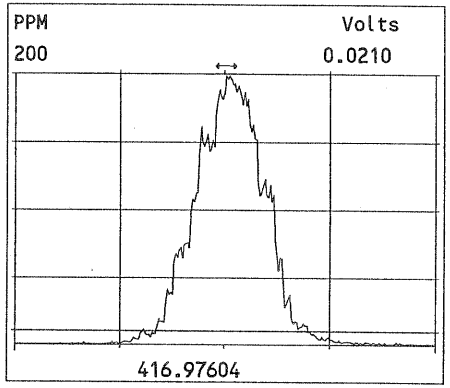




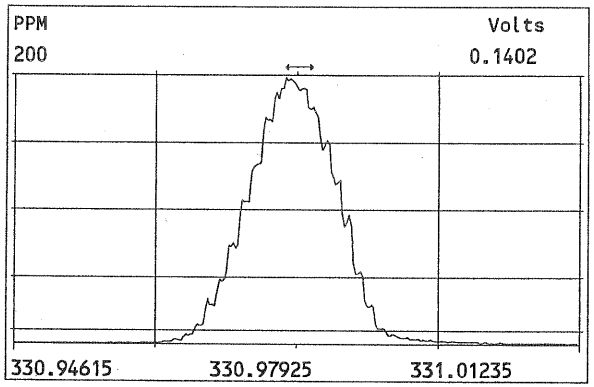


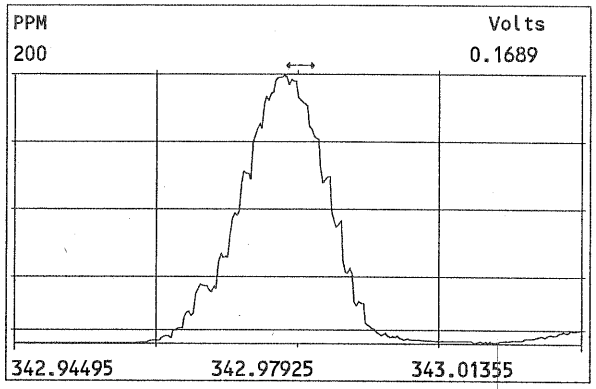


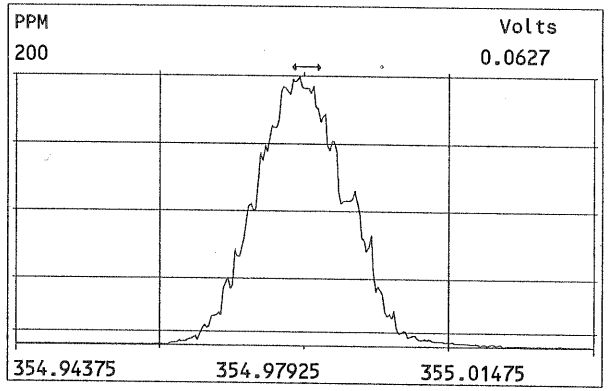


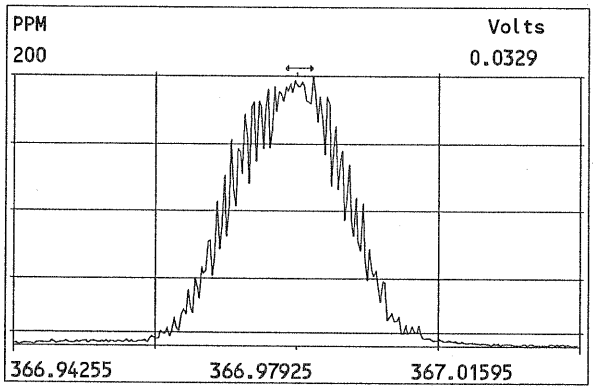


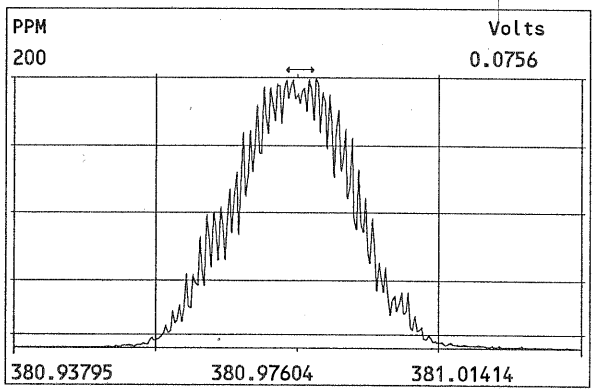
Peak Locate Examination:15-AUG-2010:12:04 File:15AUG10M
Experiment:PCDD Function:2 Reference:PFK

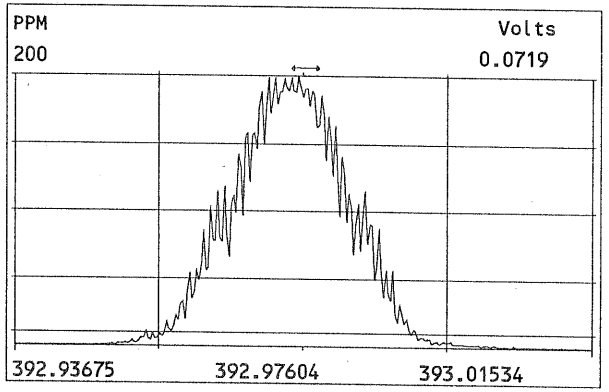


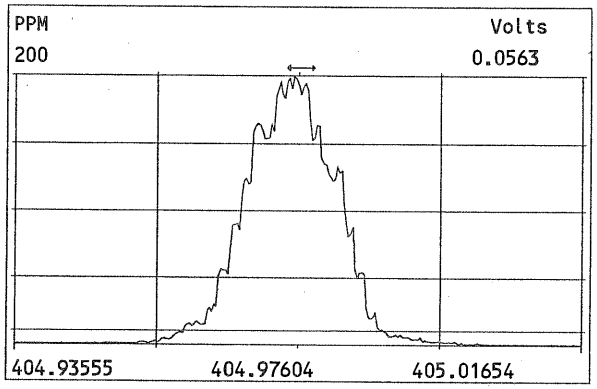


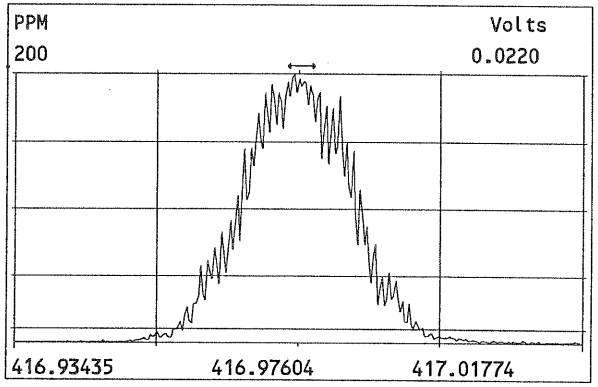




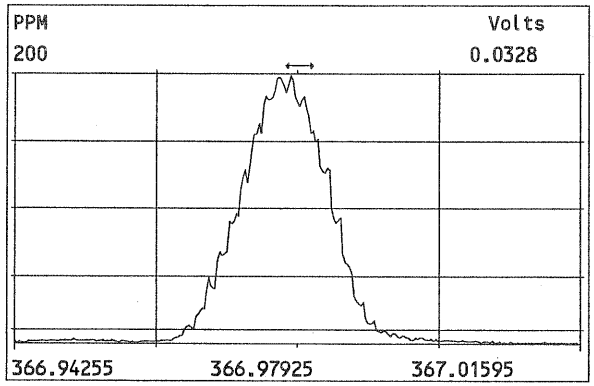


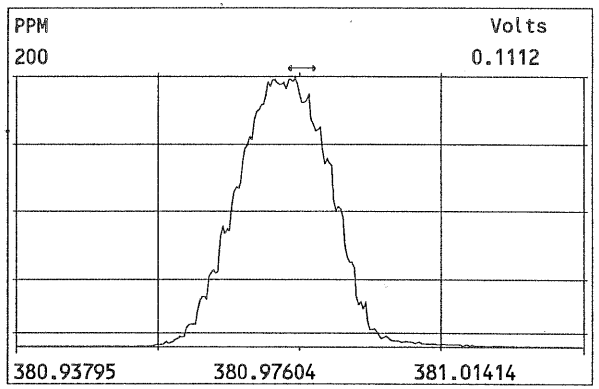


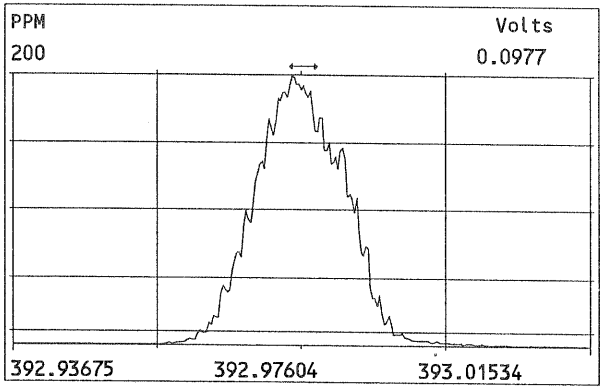


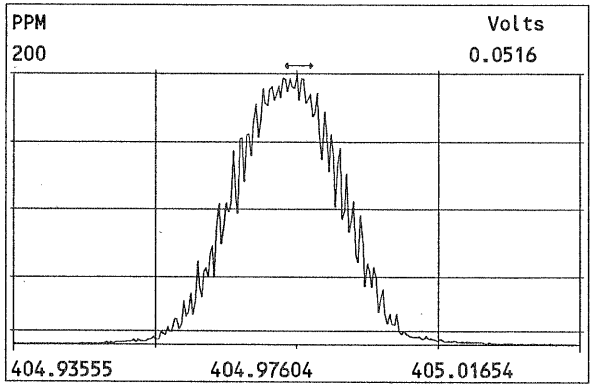


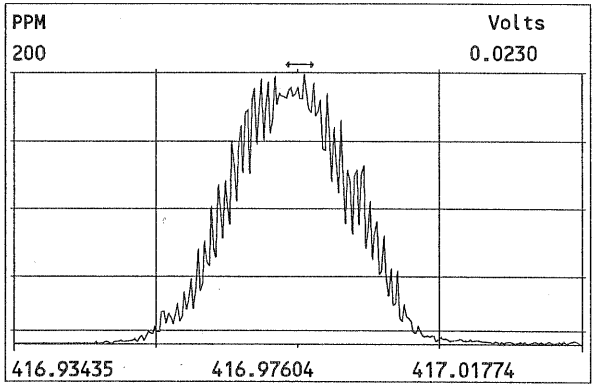
Peak Locate Examination:15-AUG-2010:12:04 File:15AUG10M
Experiment:PCDD Function:3 Reference:PFK

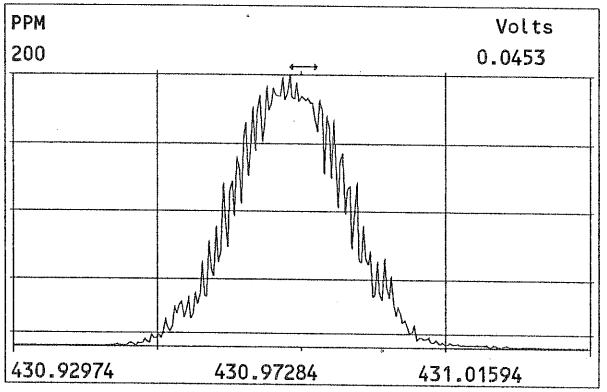


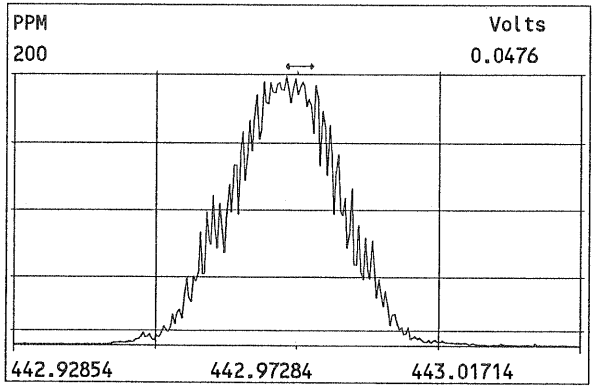


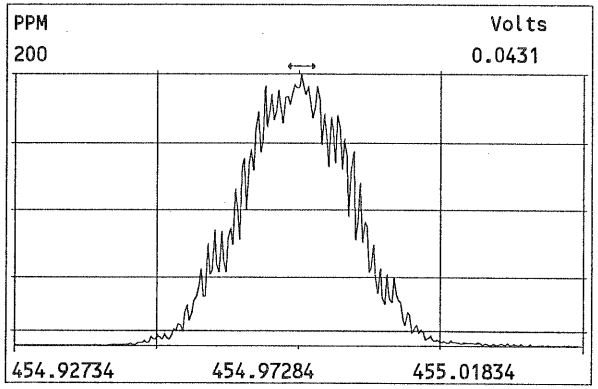




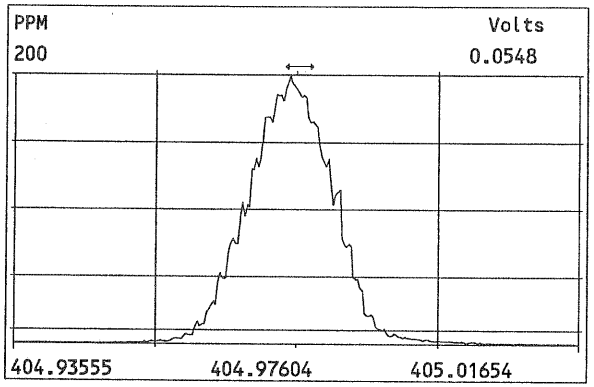


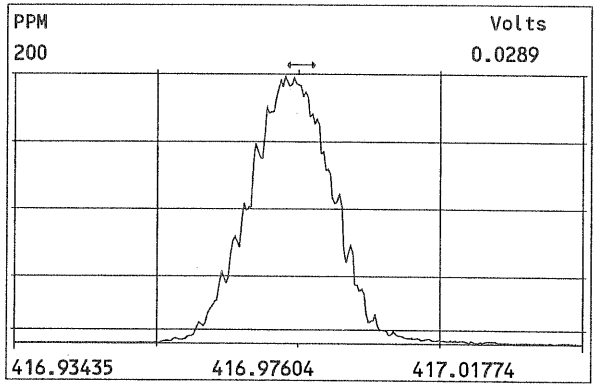


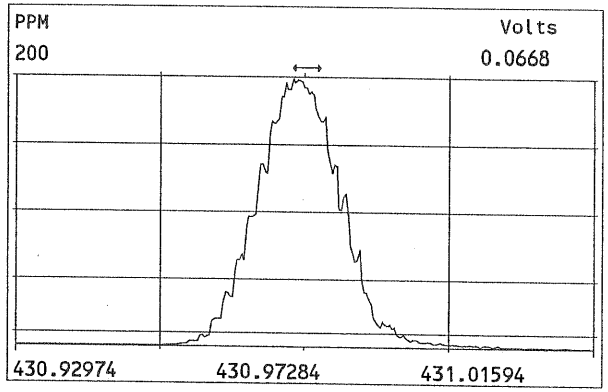


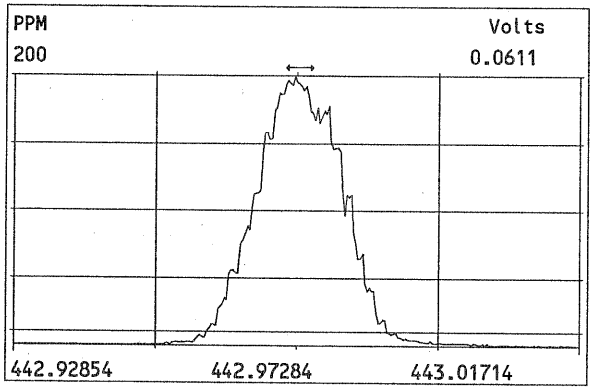


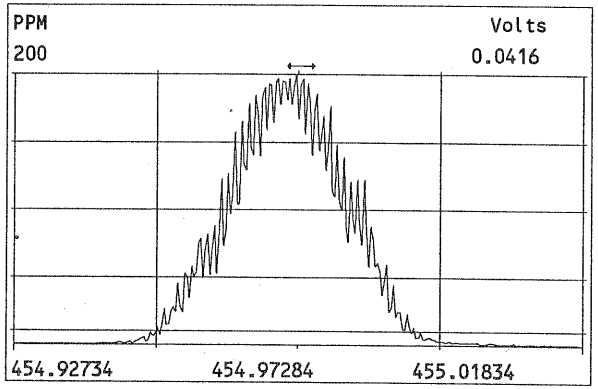
Peak Locate Examination:15-AUG-2010:12:05 File:15AUG10M
Experiment:PCDD Function:4 Reference:PFK

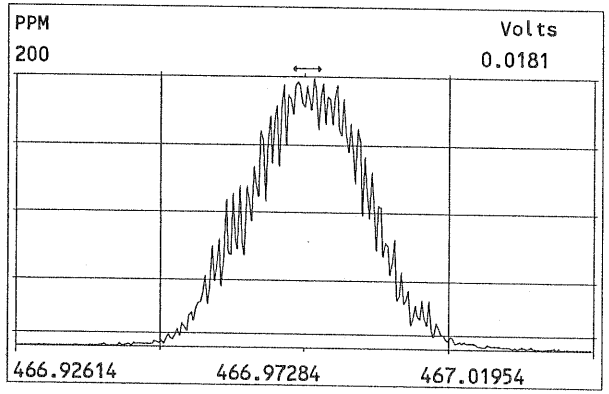


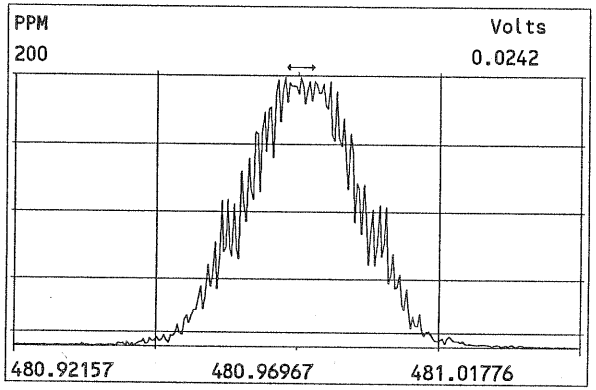




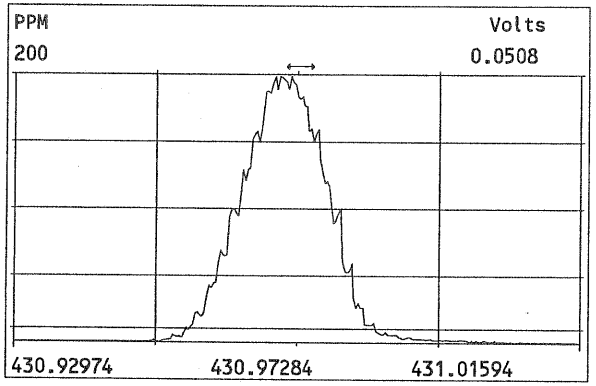


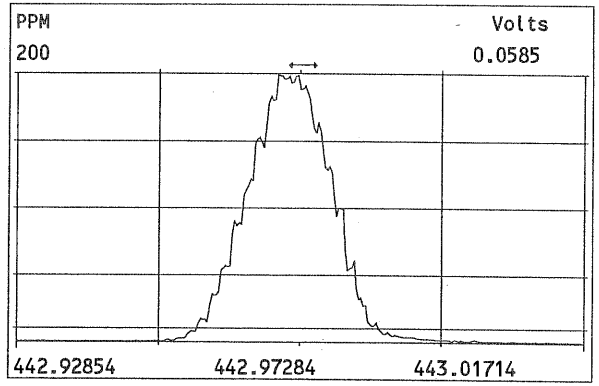


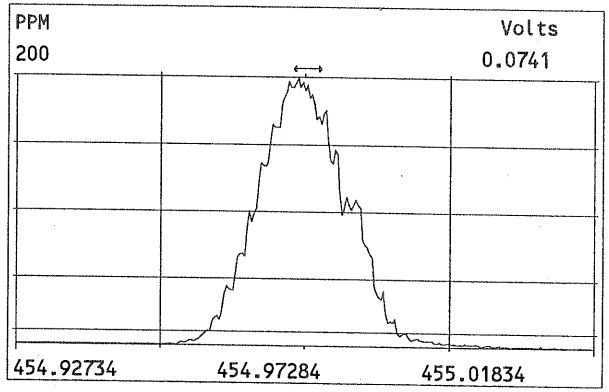


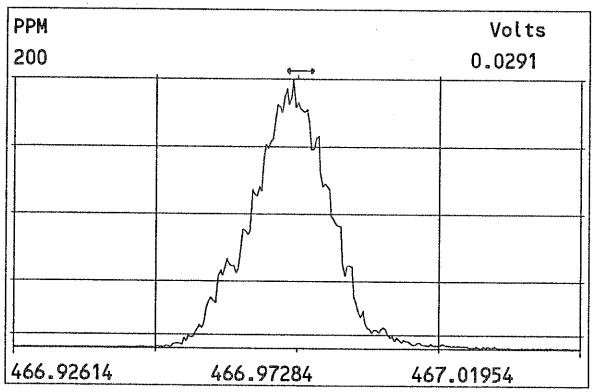


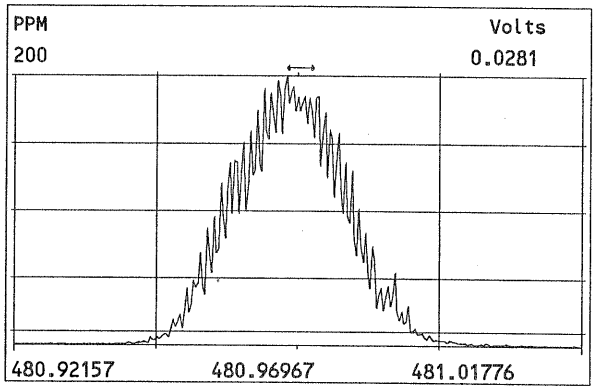
Peak Locate Examination:15-AUG-2010:12:05 File:15AUG10M
Experiment:PCDD Function:5 Reference:PFK

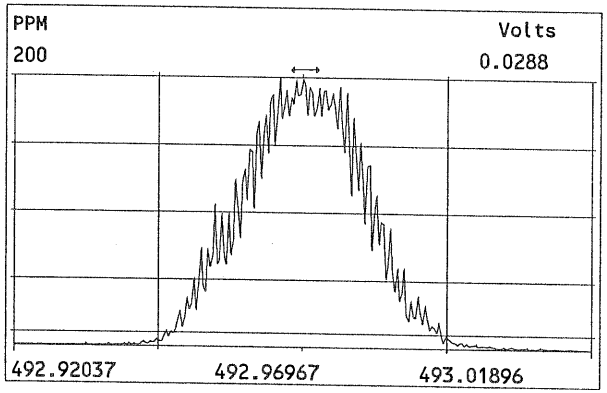


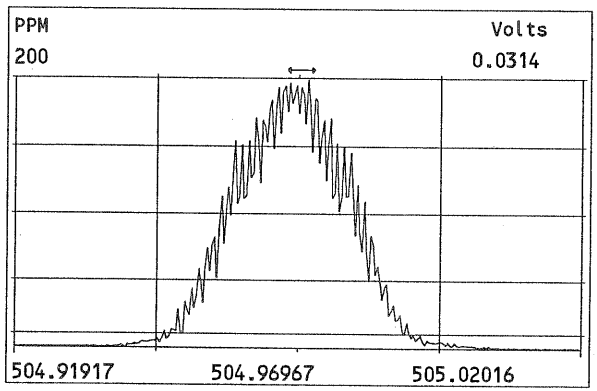


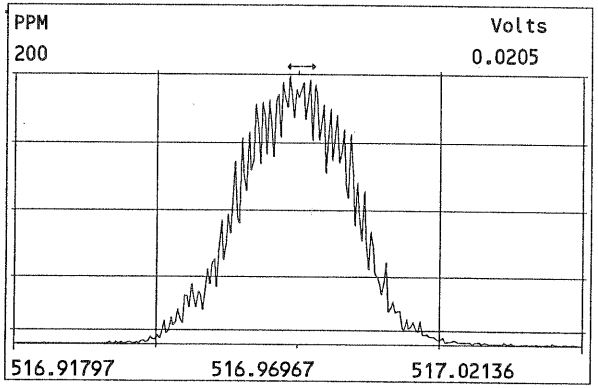




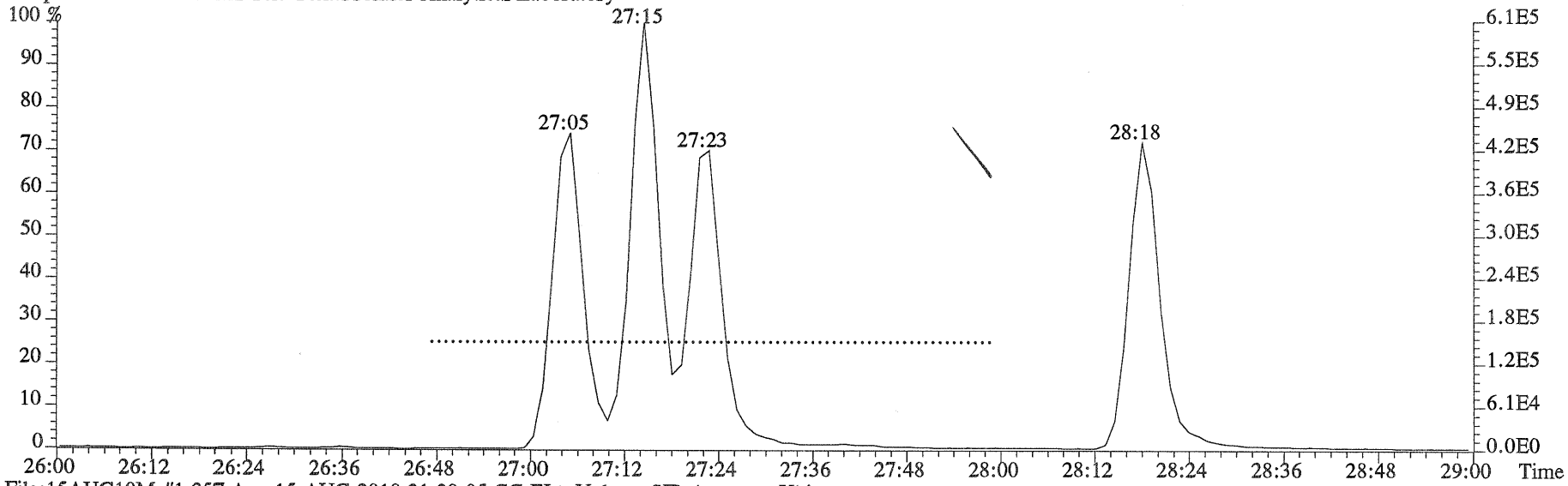




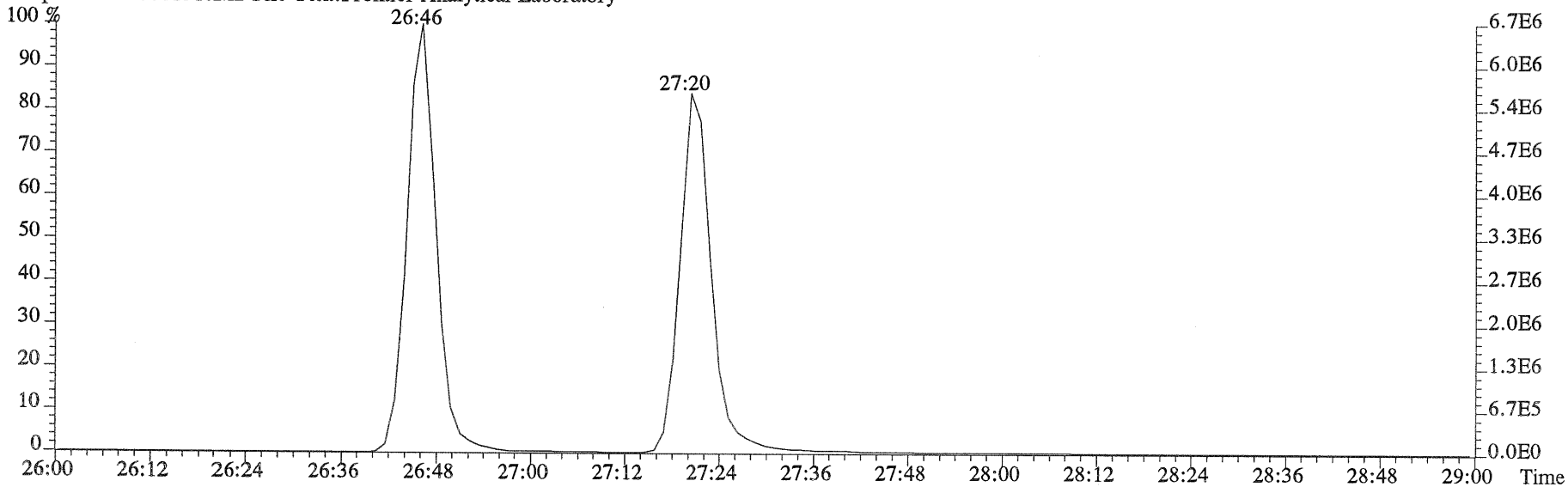




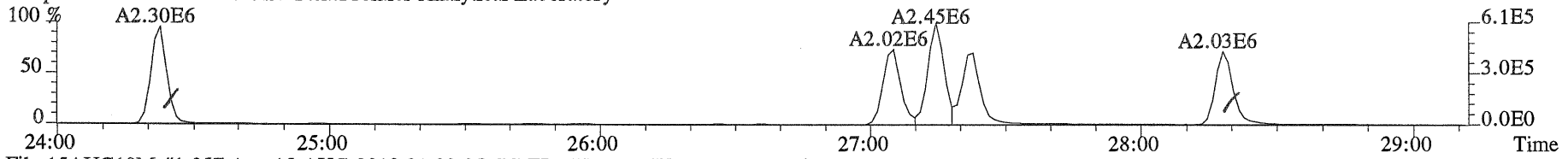
File:15AUG10M #1-357 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:11 Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



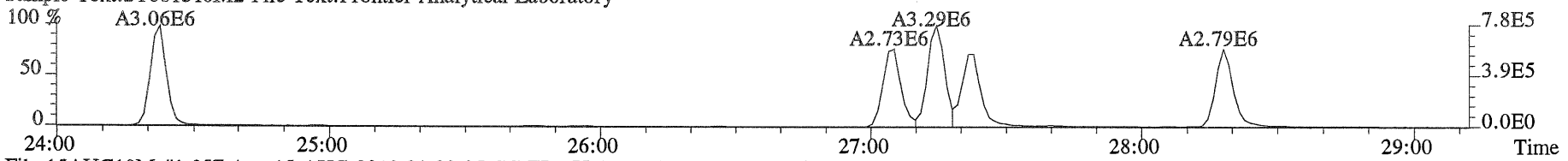
File:15AUG10M #1-357 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:11 Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



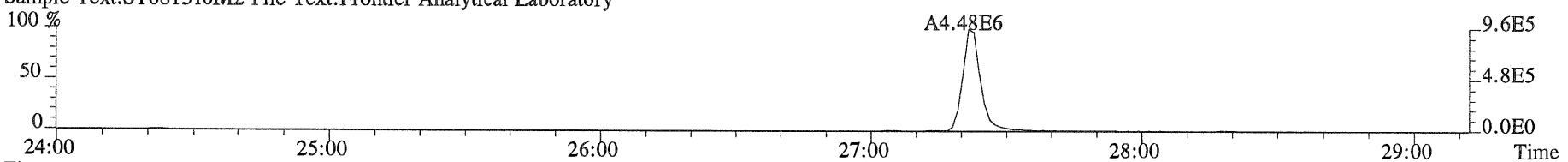
File:15AUG10M #1-357 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



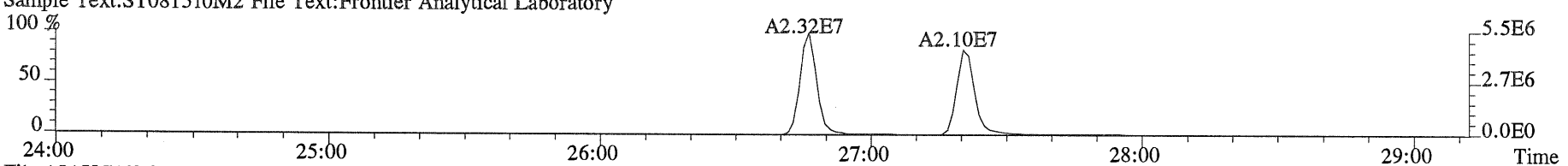
File:15AUG10M #1-357 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



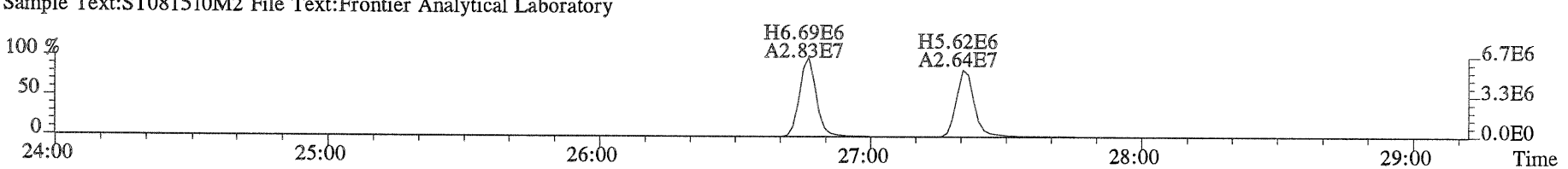
File:15AUG10M #1-357 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



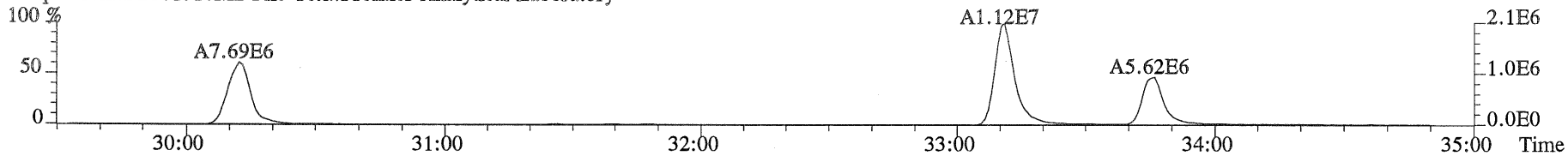
File:15AUG10M #1-357 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



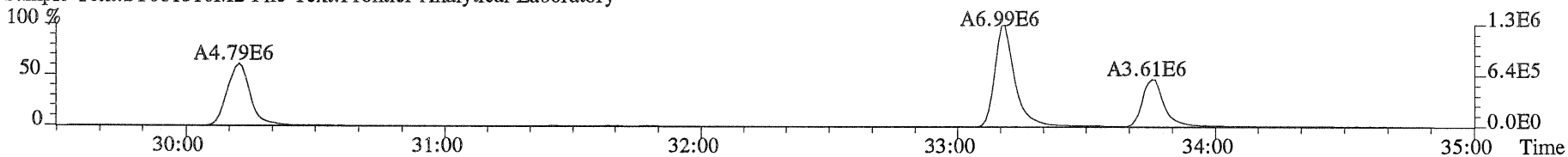
File:15AUG10M #1-357 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



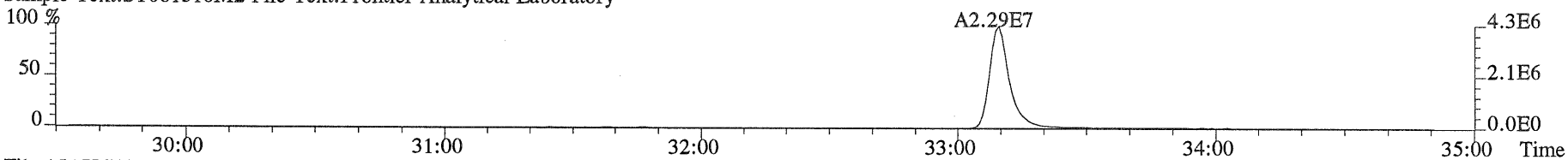
File:15AUG10M #1-411 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



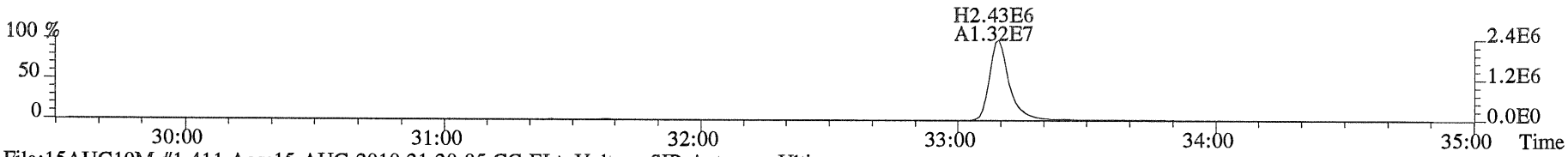
File:15AUG10M #1-411 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



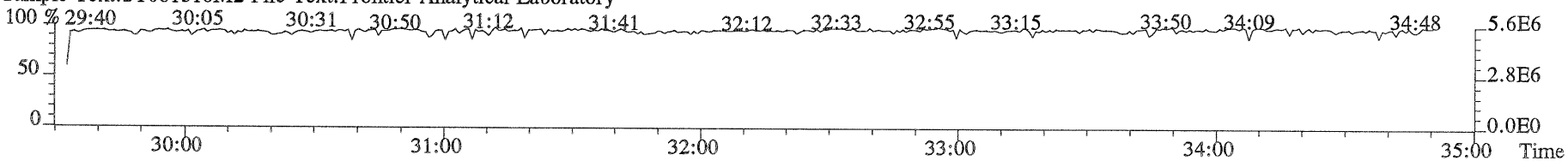
File:15AUG10M #1-411 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



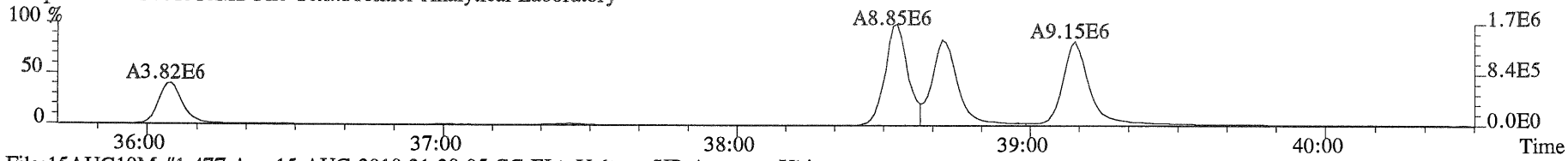
File:15AUG10M #1-411 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



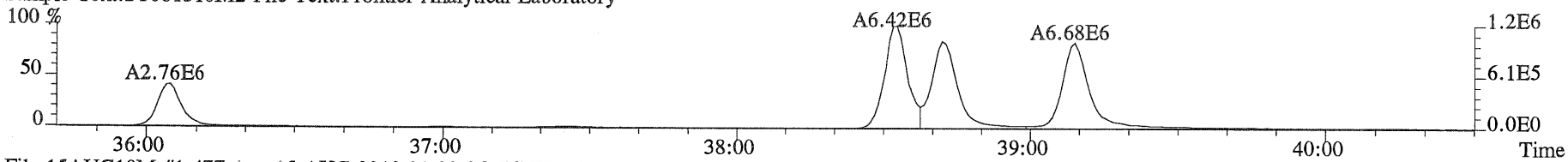
File:15AUG10M #1-411 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:11 F:2 Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



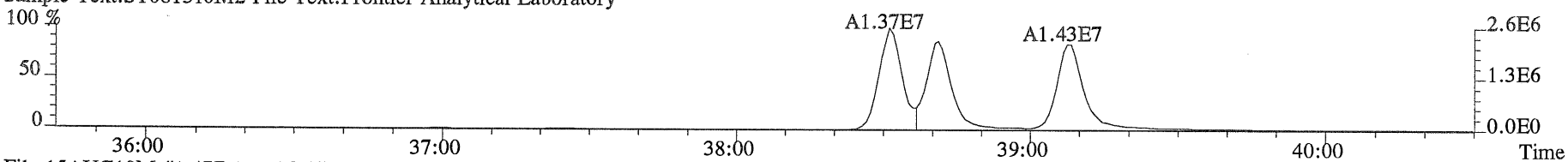
File:15AUG10M #1-477 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



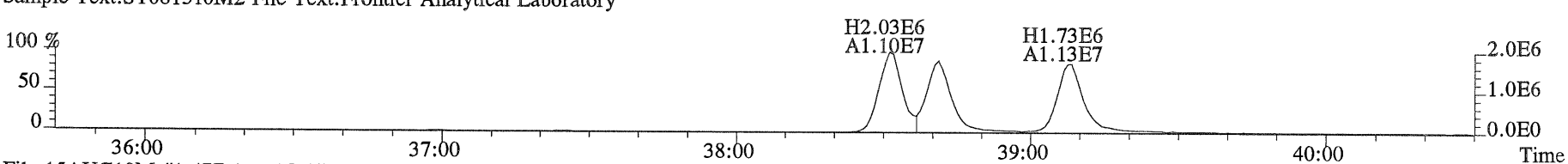
File:15AUG10M #1-477 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



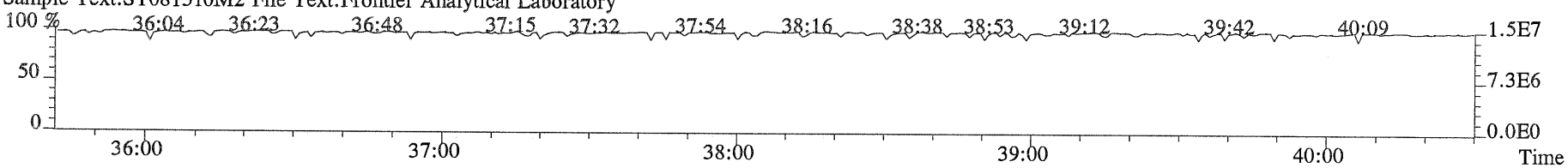
File:15AUG10M #1-477 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



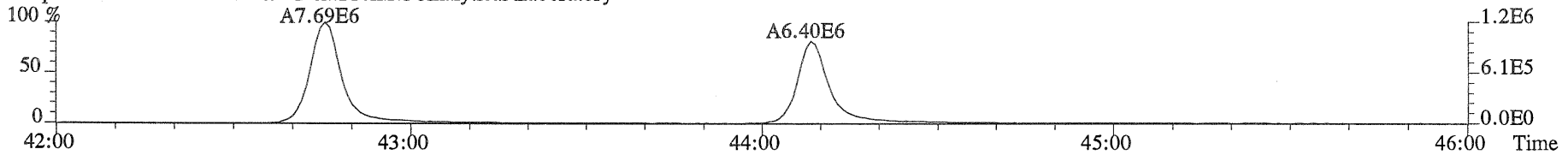
File:15AUG10M #1-477 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



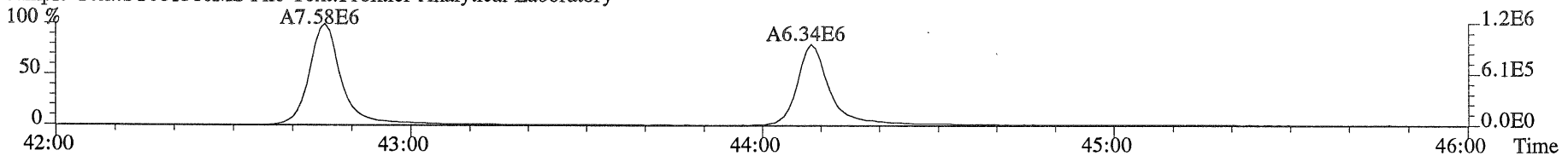
File:15AUG10M #1-477 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:11 F:3 Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



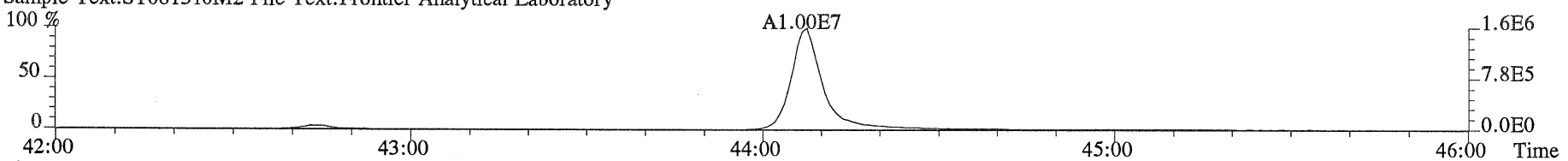
File:15AUG10M #1-541 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



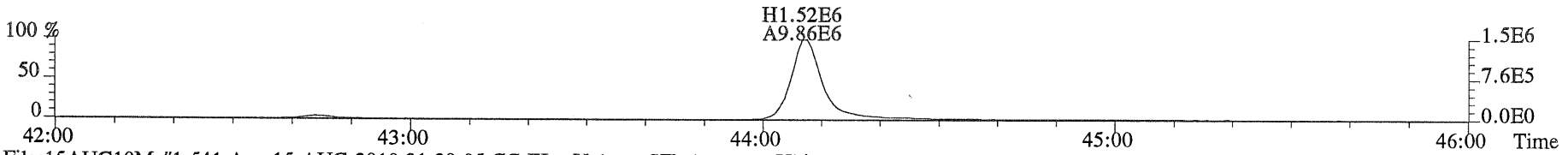
File:15AUG10M #1-541 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



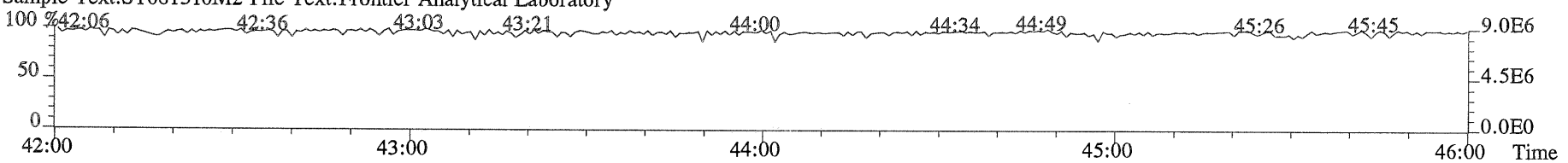
File:15AUG10M #1-541 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



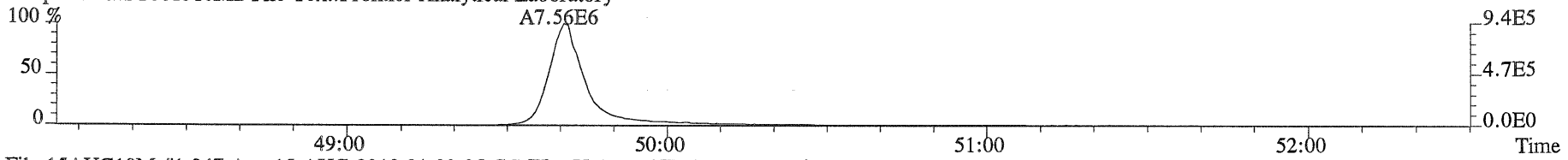
File:15AUG10M #1-541 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



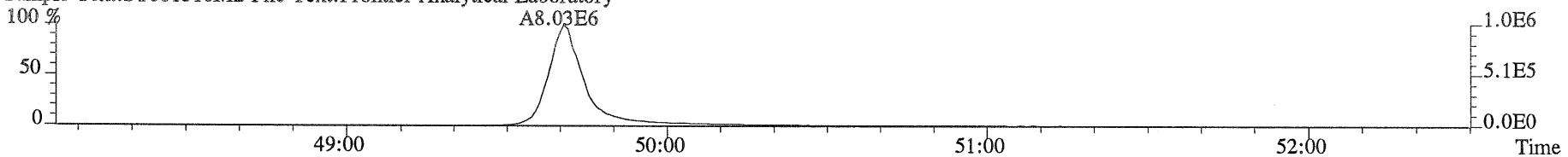
File:15AUG10M #1-541 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:11 F:4 Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



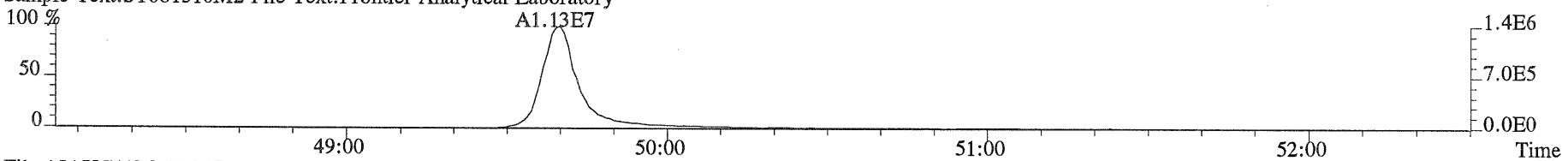
File:15AUG10M #1-347 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



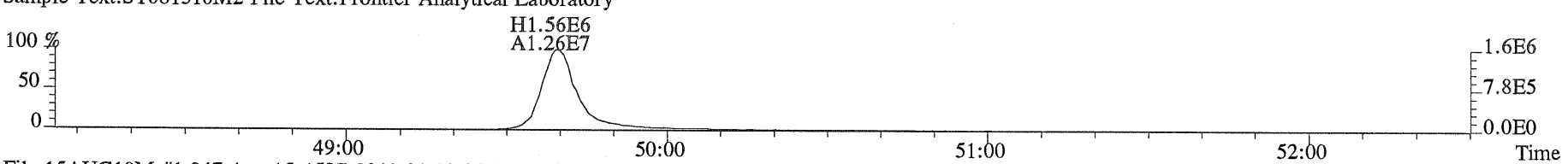
File:15AUG10M #1-347 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



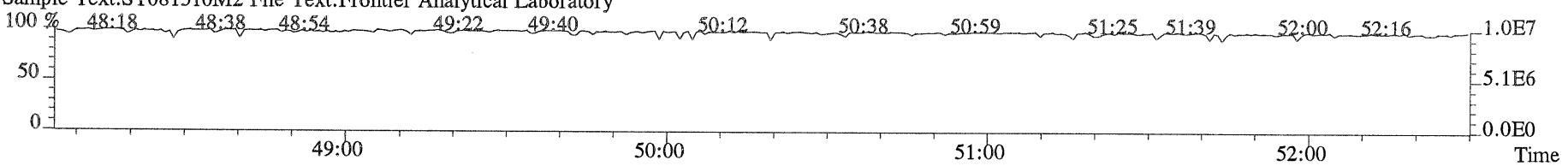
File:15AUG10M #1-347 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



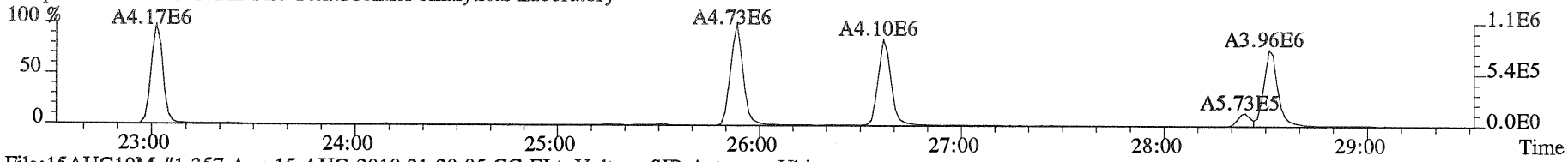
File:15AUG10M #1-347 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



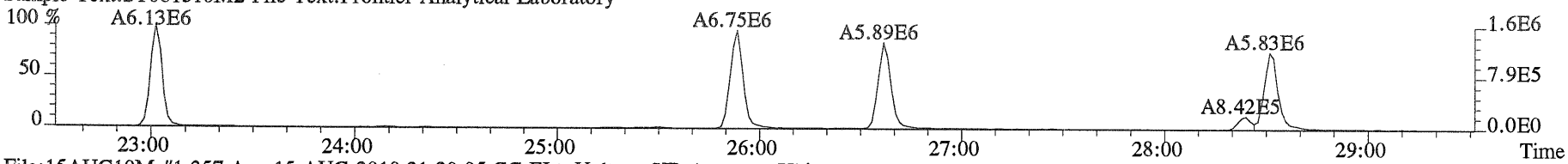
File:15AUG10M #1-347 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:11 F:5 Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



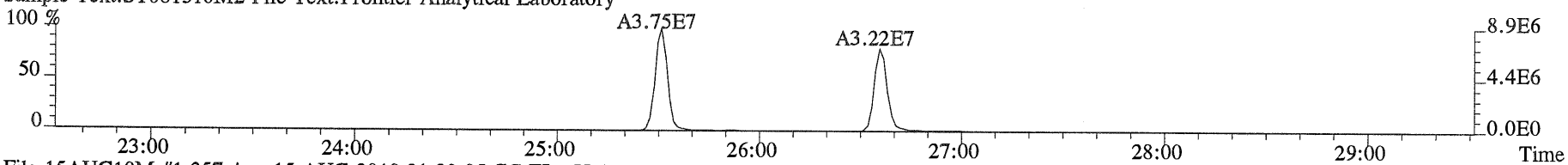
File:15AUG10M #1-357 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



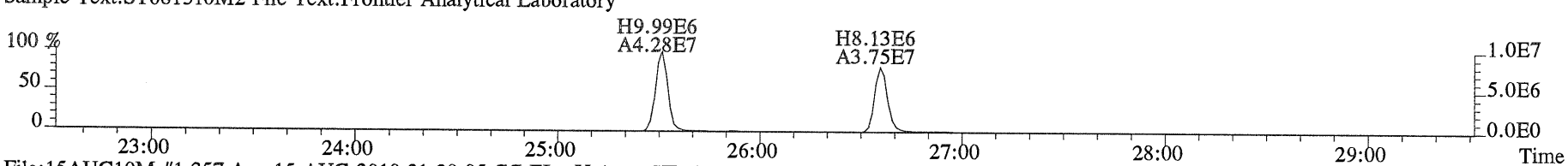
File:15AUG10M #1-357 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



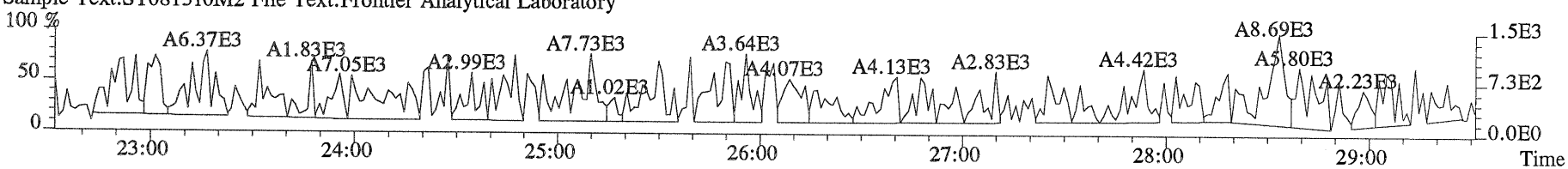
File:15AUG10M #1-357 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



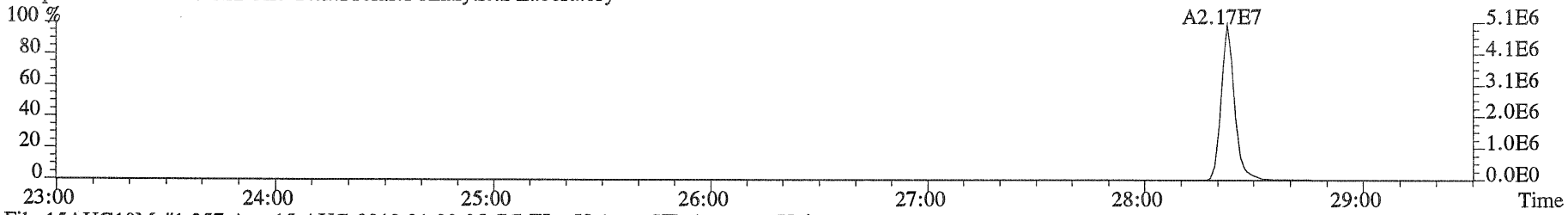
File:15AUG10M #1-357 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



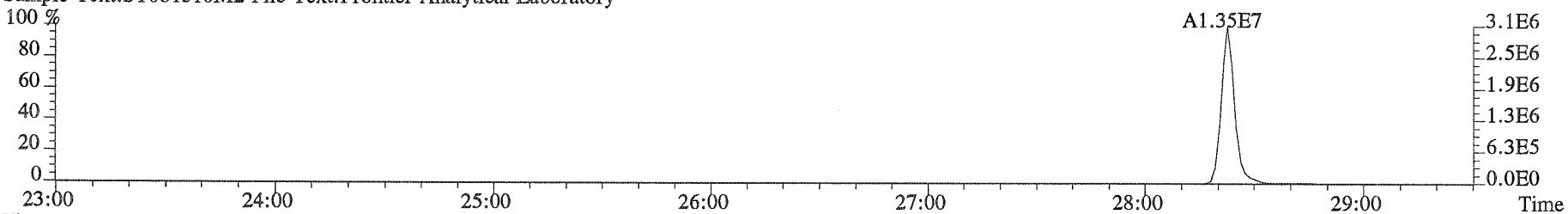
File:15AUG10M #1-357 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



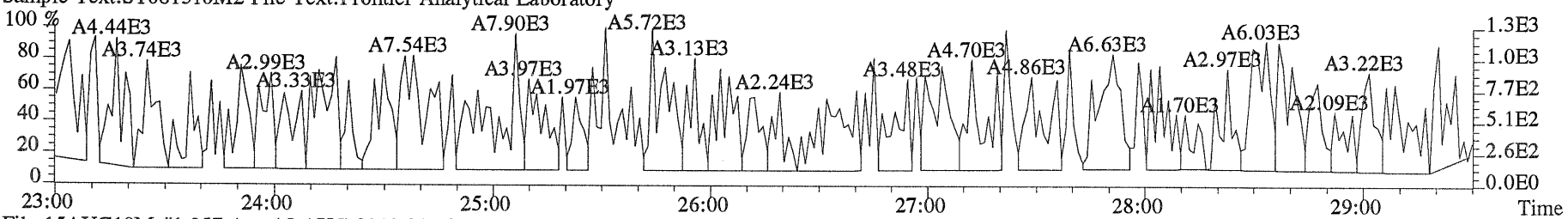
File:15AUG10M #1-357 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



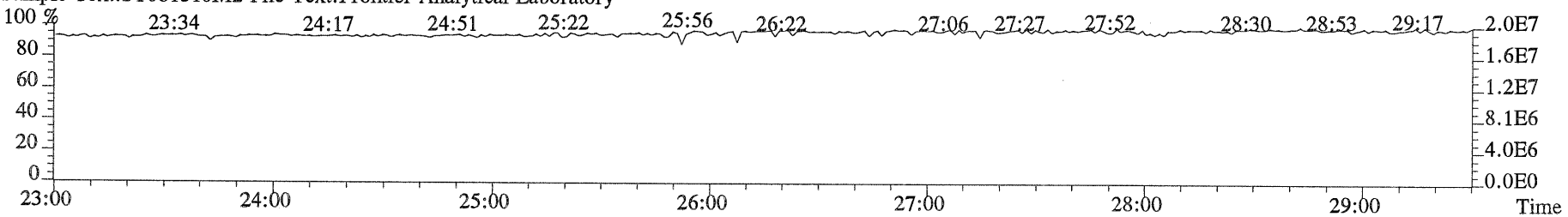
File:15AUG10M #1-357 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



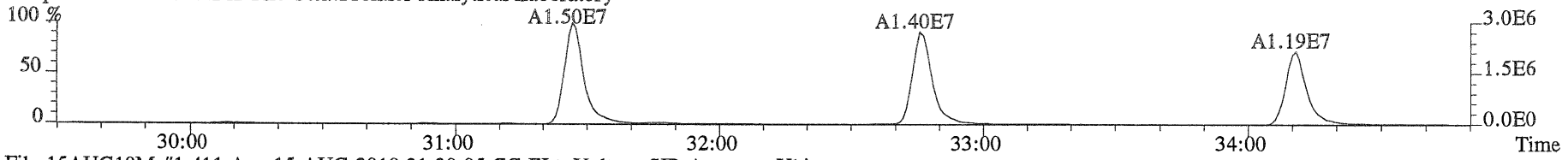
File:15AUG10M #1-357 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:11 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



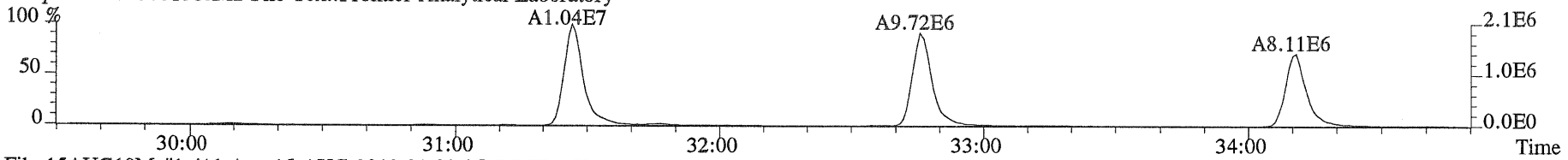
File:15AUG10M #1-357 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:11 Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



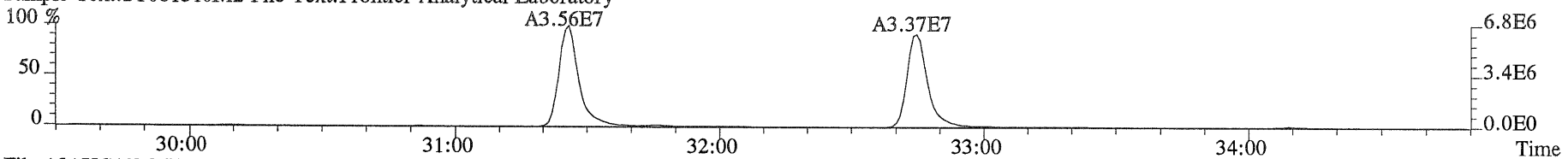
File:15AUG10M #1-411 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



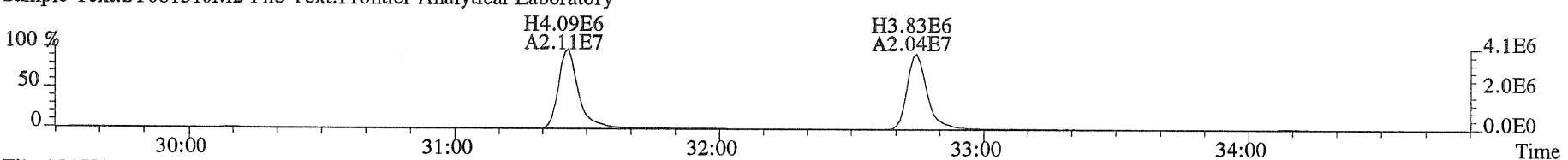
File:15AUG10M #1-411 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



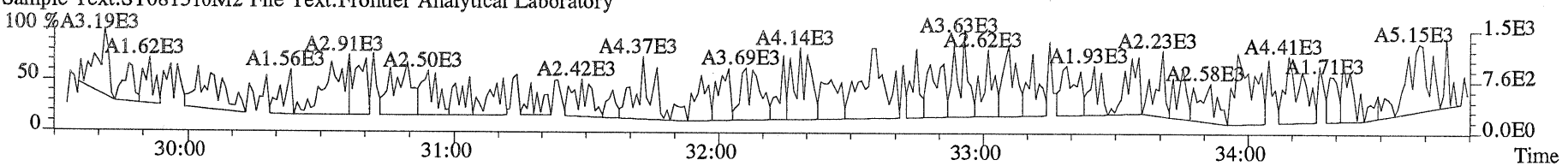
File:15AUG10M #1-411 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



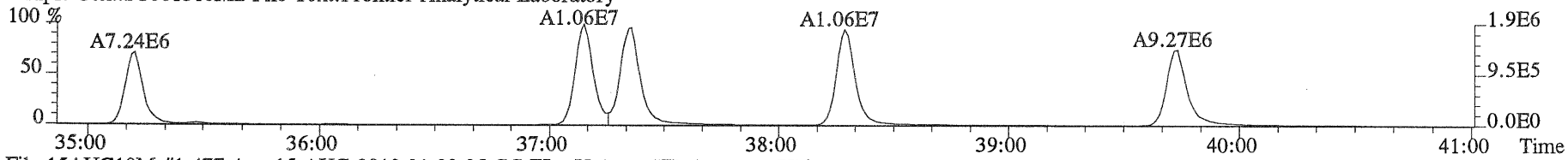
File:15AUG10M #1-411 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



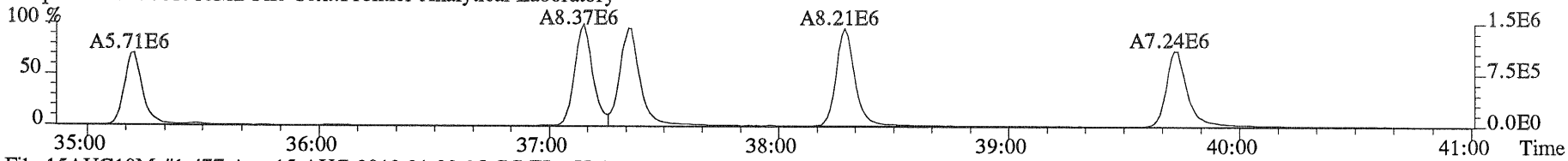
File:15AUG10M #1-411 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:11 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



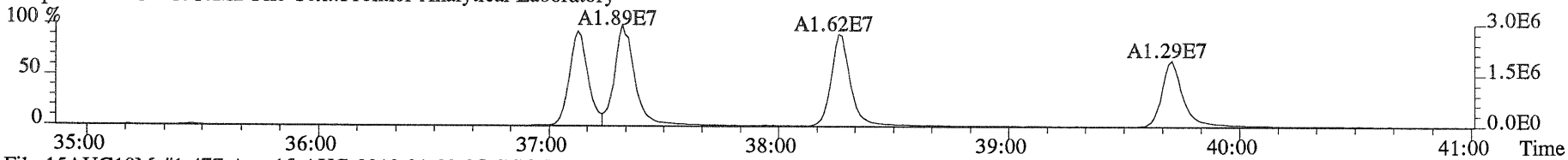
File:15AUG10M #1-477 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



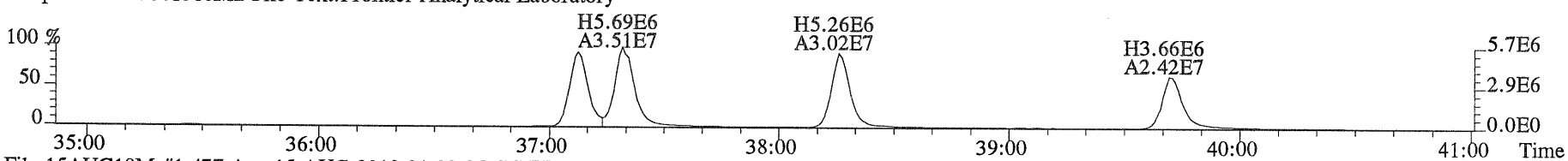
File:15AUG10M #1-477 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



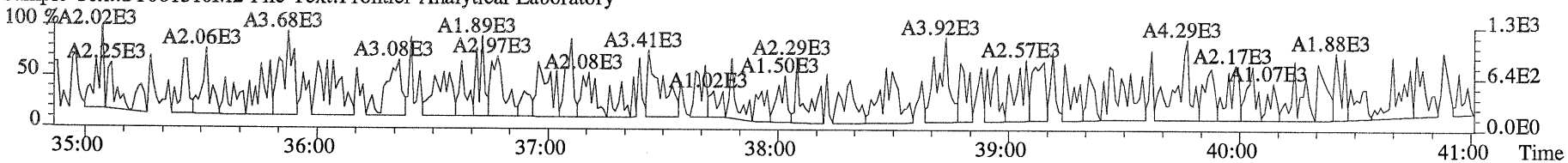
File:15AUG10M #1-477 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



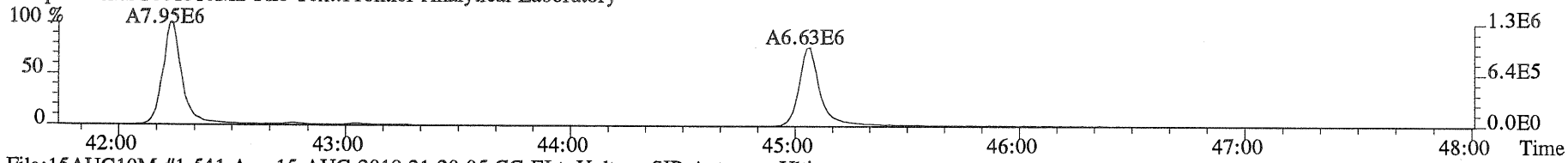
File:15AUG10M #1-477 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



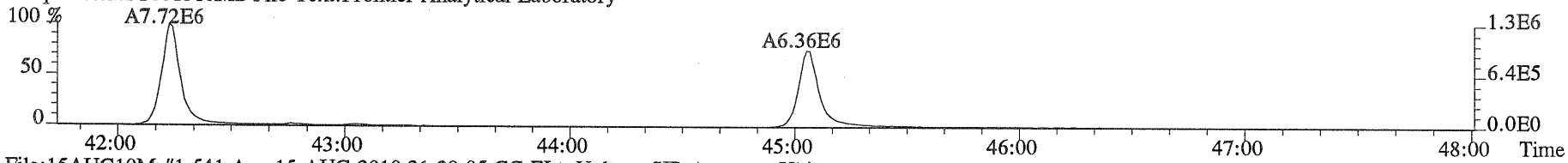
File:15AUG10M #1-477 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:11 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



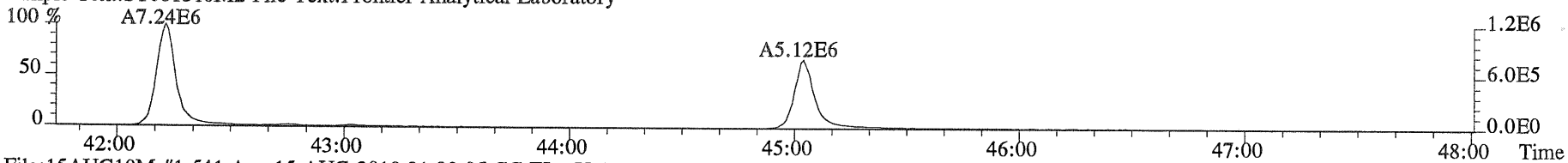
File:15AUG10M #1-541 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



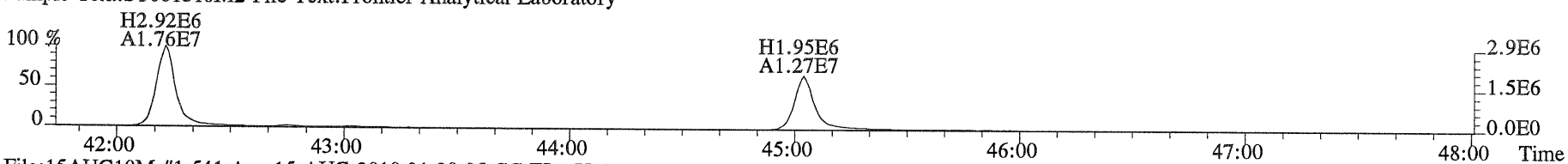
File:15AUG10M #1-541 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



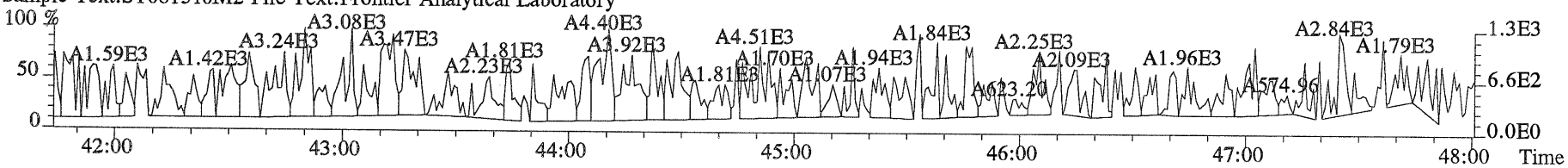
File:15AUG10M #1-541 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



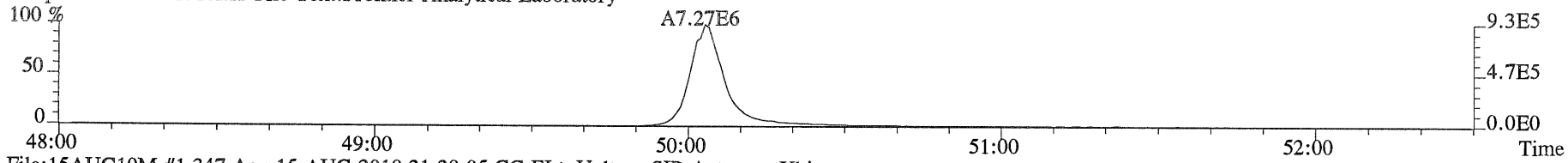
File:15AUG10M #1-541 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



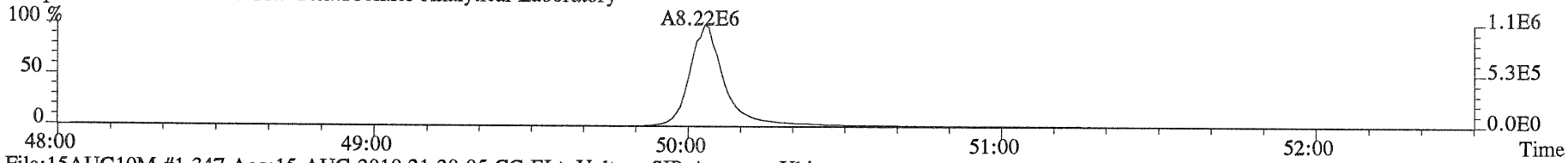
File:15AUG10M #1-541 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:11 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



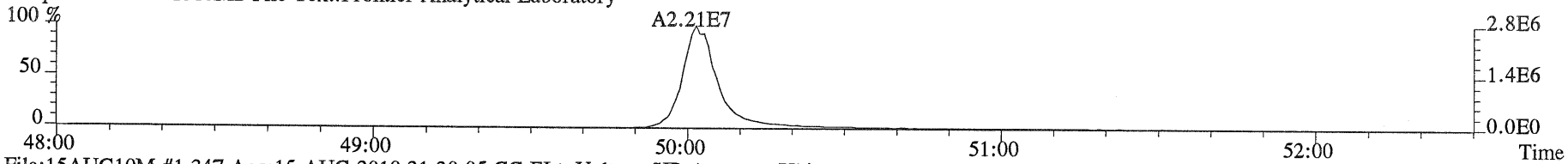
File:15AUG10M #1-347 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



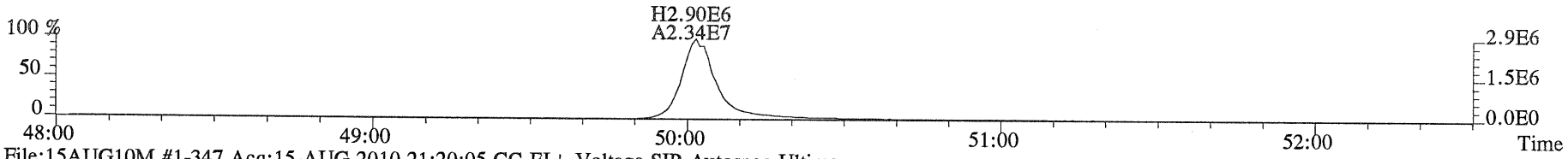
File:15AUG10M #1-347 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



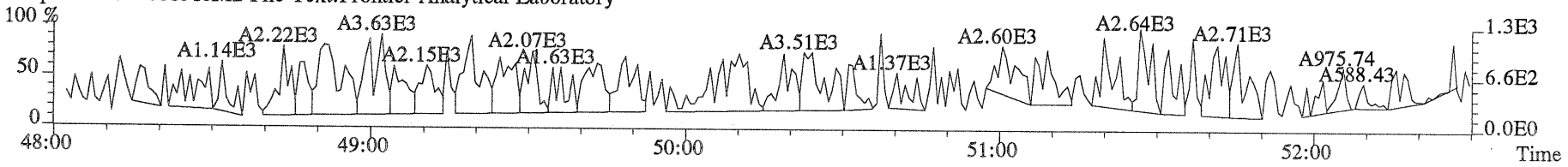
File:15AUG10M #1-347 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory



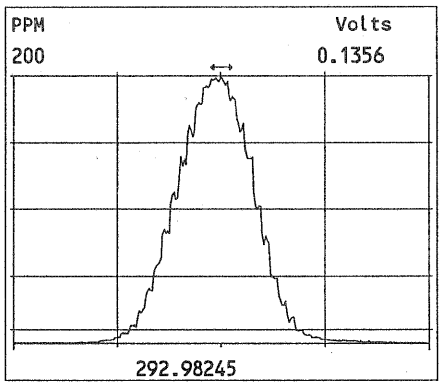
File:15AUG10M #1-347 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory

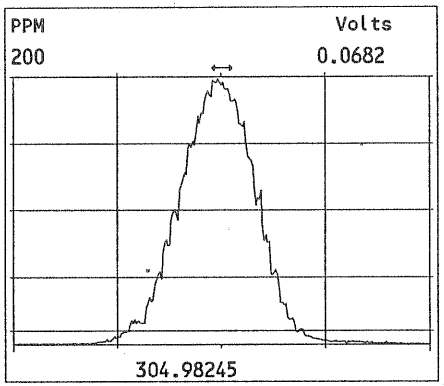


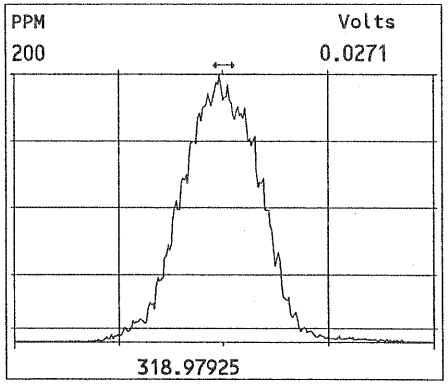
File:15AUG10M #1-347 Acq:15-AUG-2010 21:20:05 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:11 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M2 File Text:Frontier Analytical Laboratory

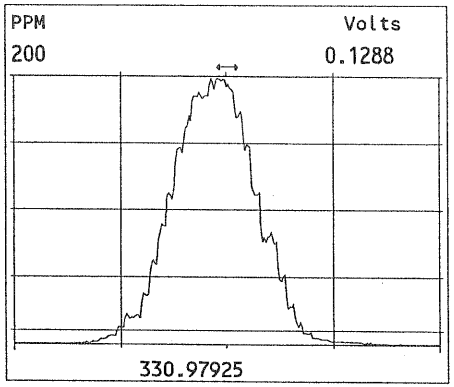


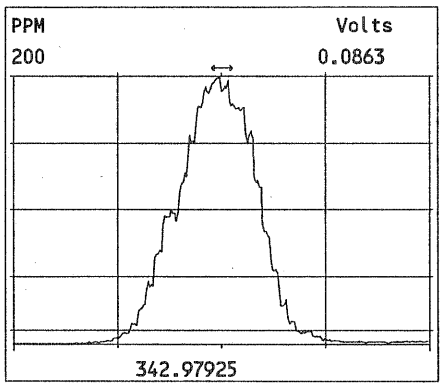
Peak Locate Examination:16-AUG-2010:08:28 File:15AUG10M_RES_CHECK
Experiment:PCDD Function:1 Reference:PFK

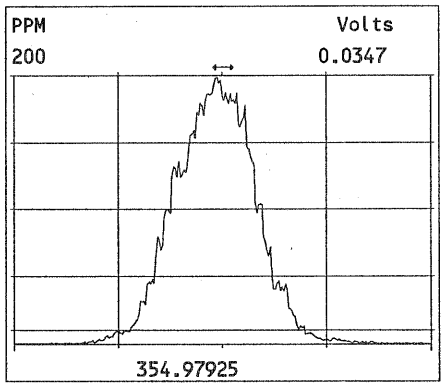


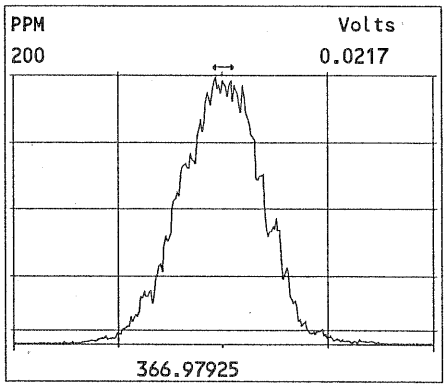


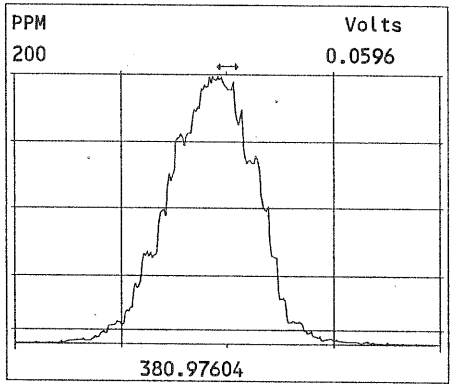


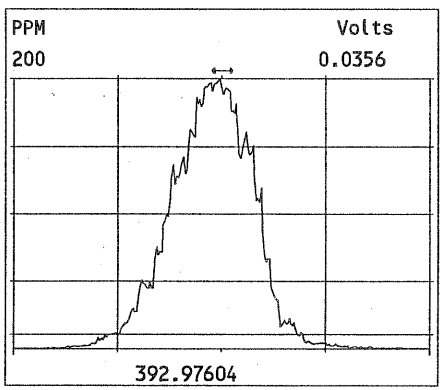


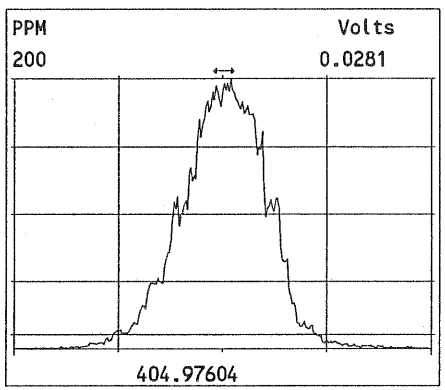


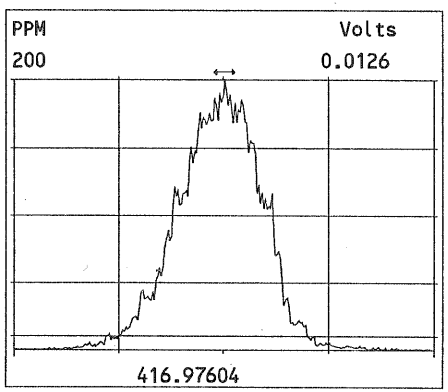




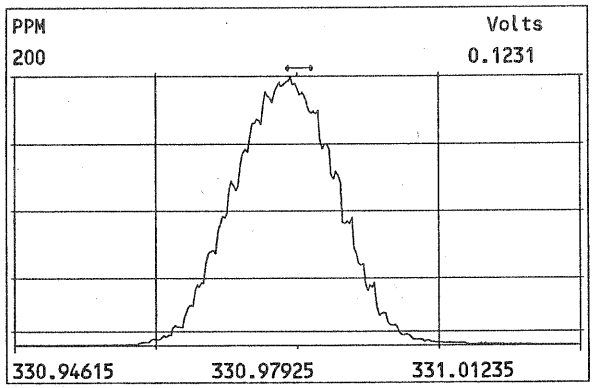


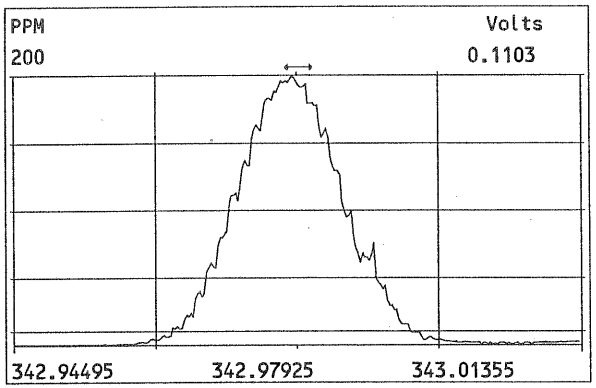


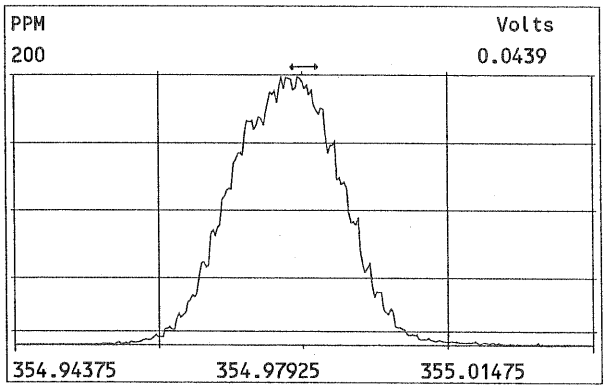


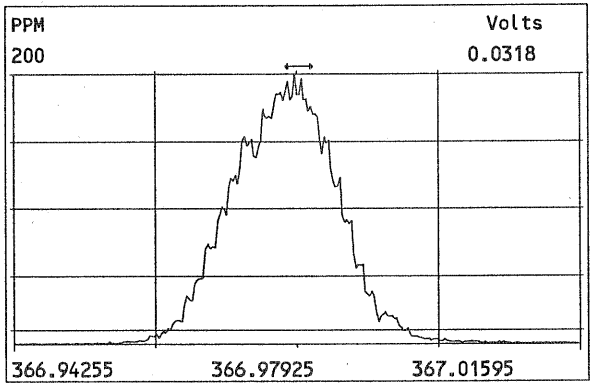


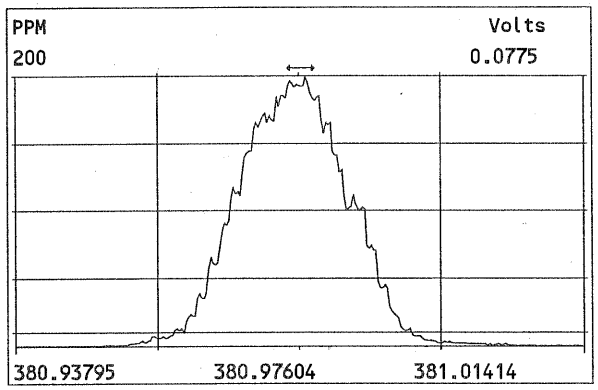
Peak Locate Examination:16-AUG-2010:08:29 File:15AUG10M_RES_CHECK
Experiment:PCDD Function:2 Reference:PFK

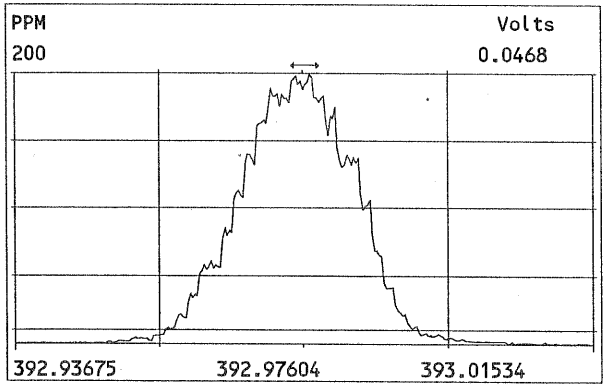


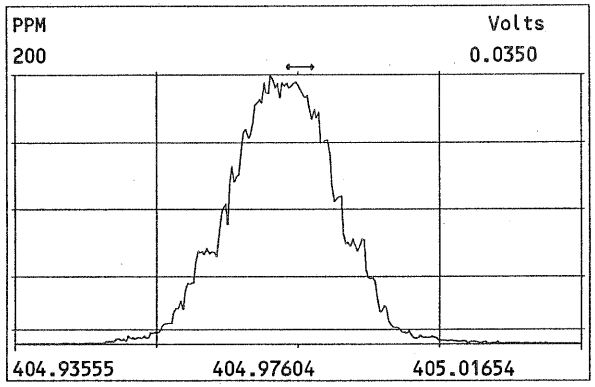


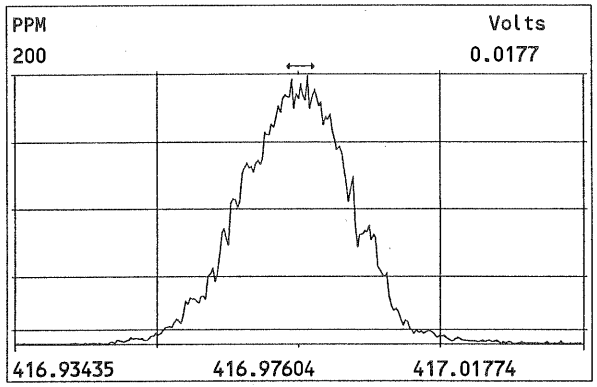




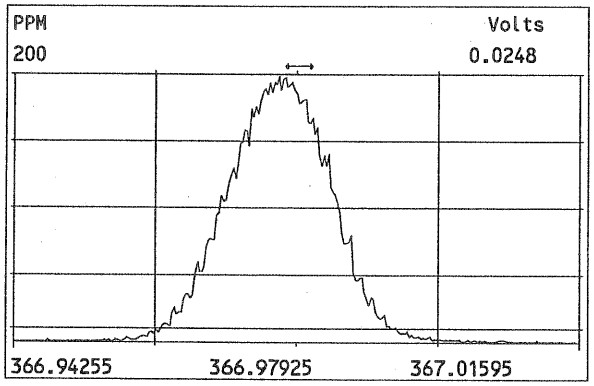


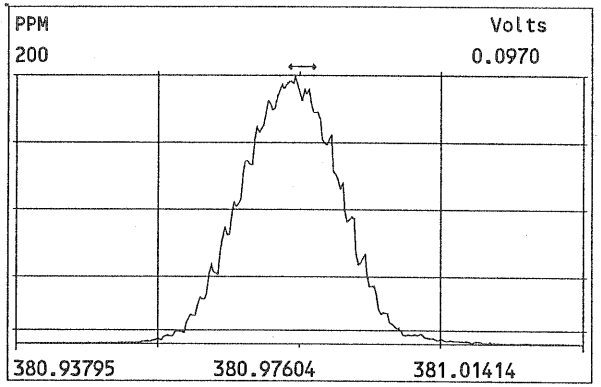


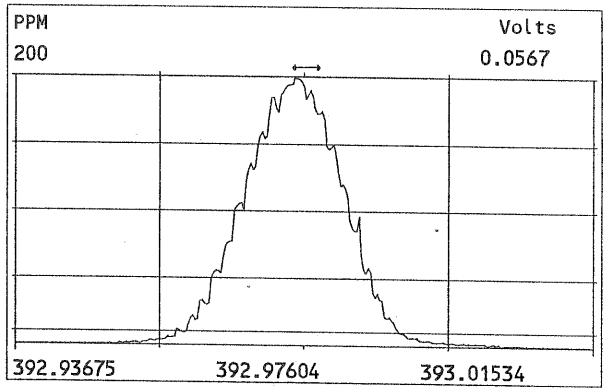


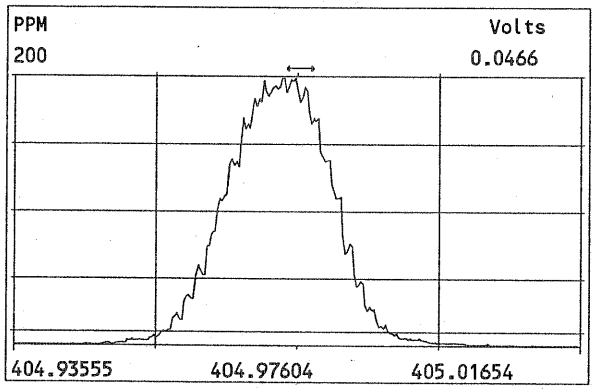


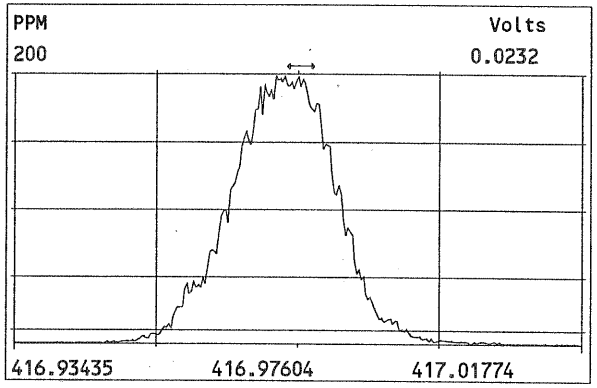
Peak Locate Examination:16-AUG-2010:08:29 File:15AUG10M_RES_CHECK
Experiment:PCDD Function:3 Reference:PFK

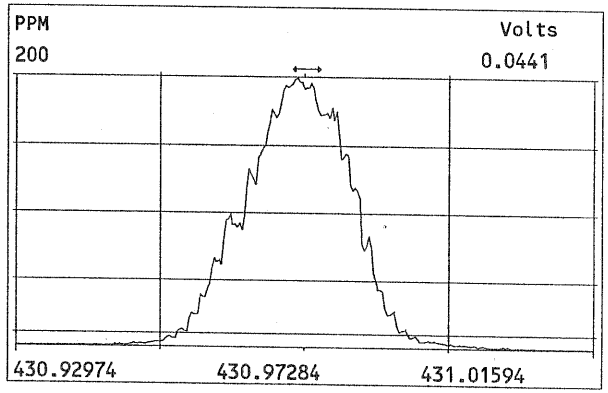


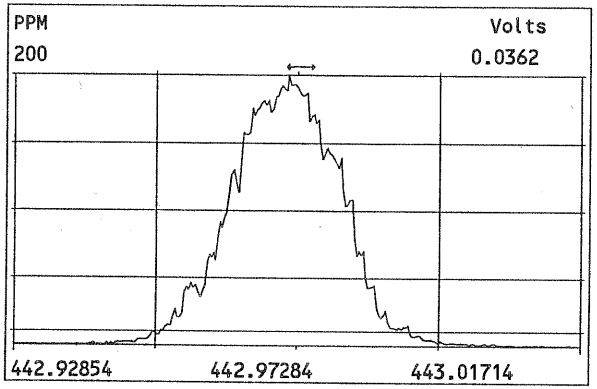


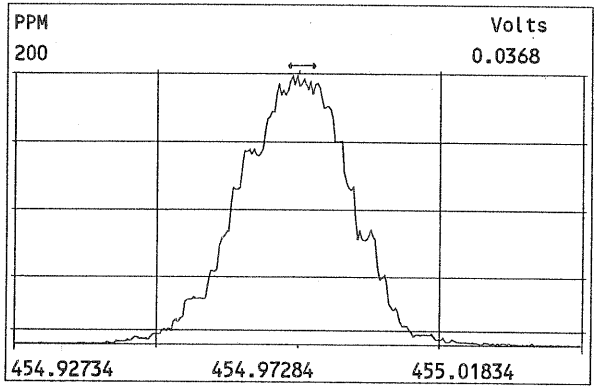




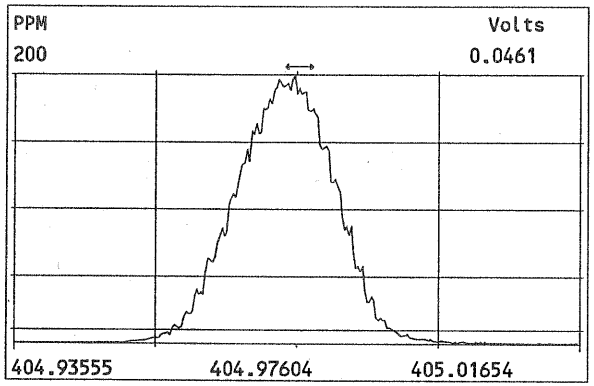


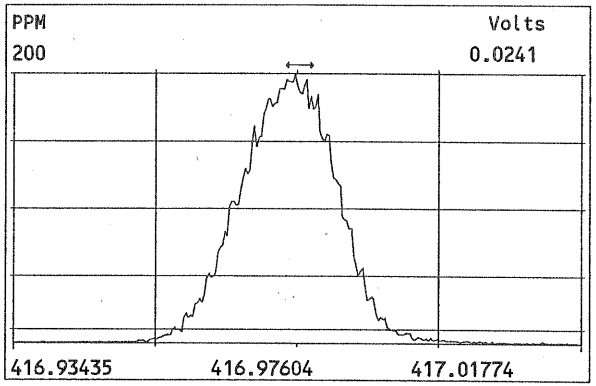


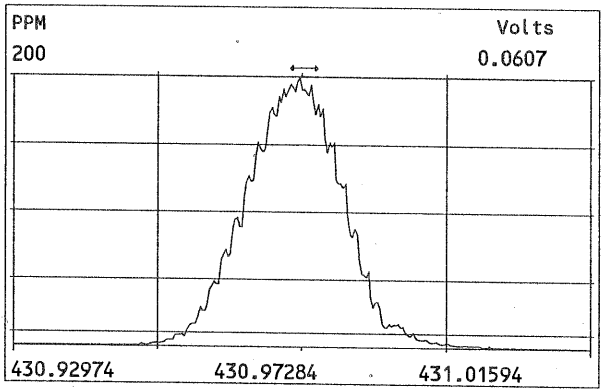


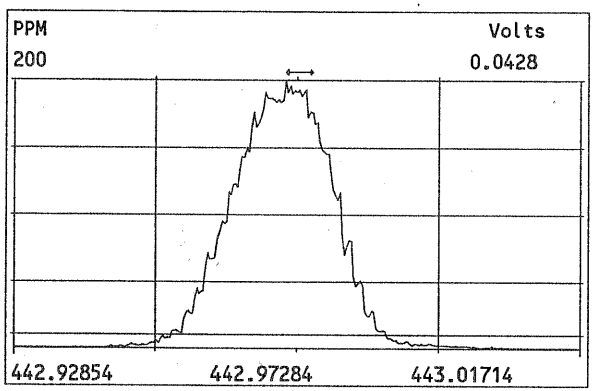


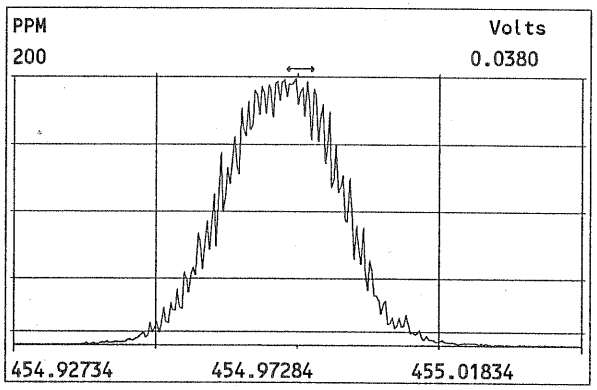
Peak Locate Examination:16-AUG-2010:08:30 File:15AUG10M_RES_CHECK
Experiment:PCDD Function:4 Reference:PFK

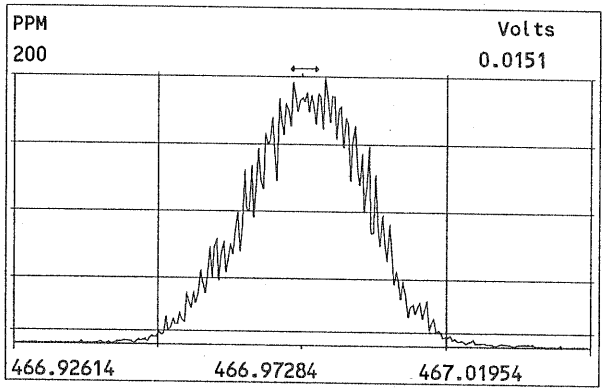


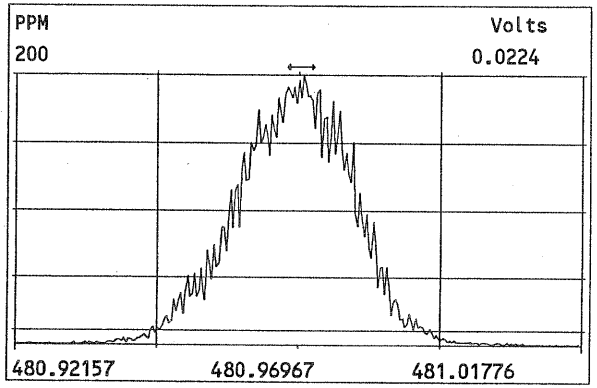




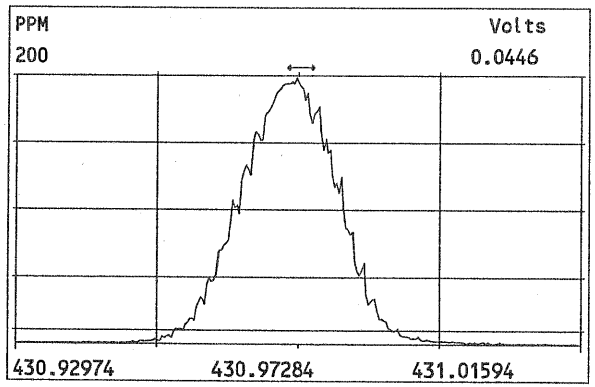


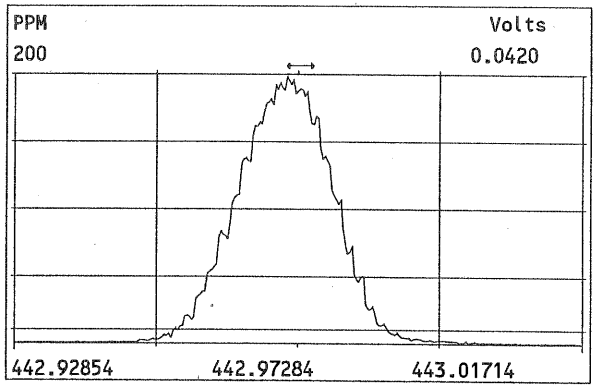


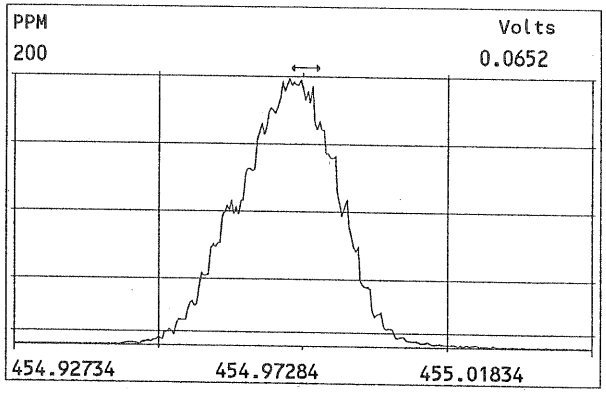


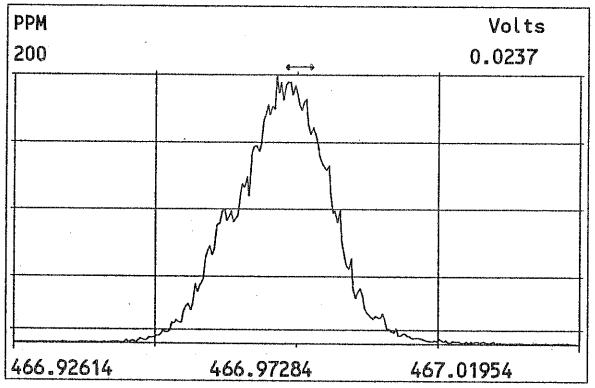


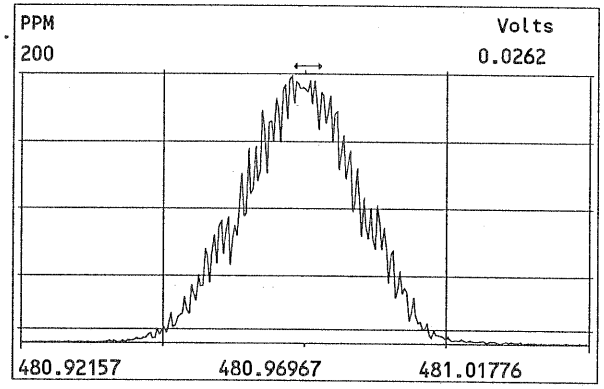
Peak Locate Examination:16-AUG-2010:08:30 File:15AUG10M_RES_CHECK
Experiment:PCDD Function:5 Reference:PFK

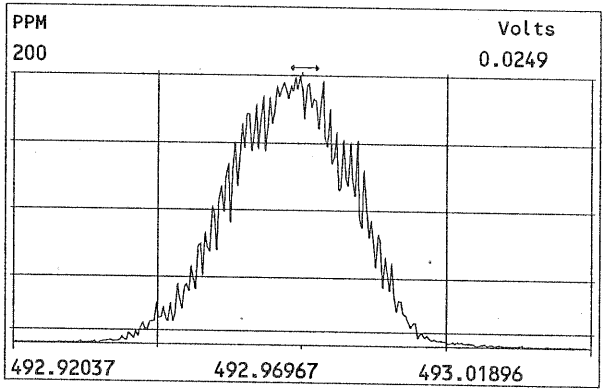


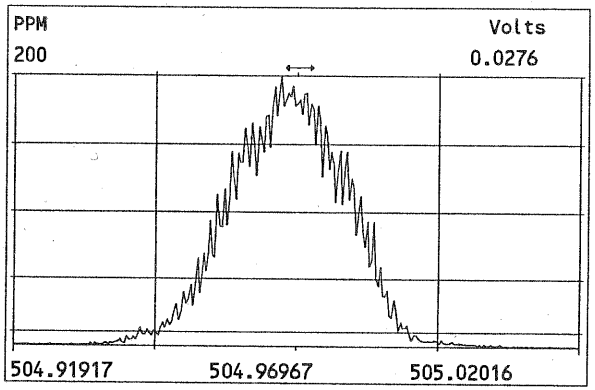


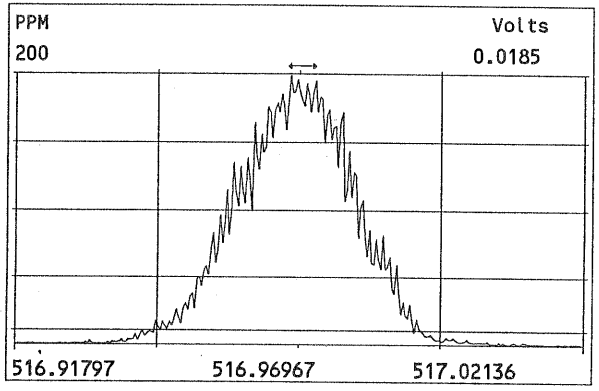












USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 15AUG10M Sam:22 Analysis Date: 16-AUG-10 07:28:46

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	0.74	0.65-0.89	y	9.56	7.80 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	1.63	1.32-1.78	y	47.9	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.42	1.05-1.43	y	49.7	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.35	1.05-1.43	y	48.6	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.42	1.05-1.43	y	51.9	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	y	48.5	43.0 - 58.0
OCDD	M+2/M+4	0.96	0.76-1.02	y	111	79.0 - 126
2,3,7,8-TCDF	M/M+2	0.70	0.65-0.89	y	9.15	8.40 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.44	1.32-1.78	y	50.1	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.42	1.32-1.78	y	47.5	41.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	45.6	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	46.1	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	45.5	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	y	45.7	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.03	0.88-1.20	y	45.8	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	y	44.6	43.0 - 58.0
OCDF	M+2/M+4	0.87	0.76-1.02	y	93.4	63.0 - 159

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

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

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

Analyst: _____ Date: 8/16/10

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

VER Data Filename: 15AUG10M Sam:22 Analysis Date: 16-AUG-10 07:28:46

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.84	0.65-0.89	y	99.4	82.0 - 121
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.75	1.32-1.78	y	89.2	62.0 - 160
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	104	85.0 - 117
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	94.9	85.0 - 118
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	y	86.2	72.0 - 138
13C-OCDD	M+2/M+4	0.90	0.76-1.02	y	149	96.0 - 415
13C-2,3,7,8-TCDF	M/M+2	0.88	0.65-0.89	y	96.8	71.0 - 140
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.69	1.32-1.78	y	88.0	76.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.67	1.32-1.78	y	89.1	77.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	y	107	76.0 - 131
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	y	101	70.0 - 143
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.55	0.43-0.59	y	101	73.0 - 137
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.54	0.43-0.59	y	104	74.0 - 135
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.41	0.37-0.51	y	93.8	78.0 - 129
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.40	0.37-0.51	y	92.4	77.0 - 129
13C-OCDF	M+2/M+4	0.96	0.76-1.02	y	159	96.0 - 415
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					9.17	7.80 - 12.8

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

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

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

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

Analyst: _____ Date: 8/16/10

FORM 5

PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: FAL3 Initial Calibration Date: 5/12/10

RT Window Data Filename: 15AUG10M Sam:22 Analysis Date: 16-AUG-10 Time: 07:28:46

DB-5 IS Data Filename: 15AUG10M Sam:22 Analysis Date: 16-AUG-10 Time: 07:28:46

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

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:22	1,3,6,8-TCDF (F)	23:01
1,2,8,9-TCDD (L)	28:18	1,2,8,9-TCDF (L)	28:31
1,2,4,7,9-PeCDD (F)	30:12	1,3,4,6,8-PeCDF (F)	28:22
1,2,3,8,9-PeCDD (L)	33:45	1,2,3,8,9-PeCDF (L)	34:10
1,2,4,6,7,9-HxCDD (F)	36:04	1,2,3,4,6,8-HxCDF (F)	35:12
1,2,3,7,8,9-HxCDD (L)	39:09	1,2,3,7,8,9-HxCDF (L)	39:44
1,2,3,4,6,7,9-HpCDD (F)	42:45	1,2,3,4,6,7,8-HpCDF (F)	42:14
1,2,3,4,6,7,8-HpCDD (L)	44:08	1,2,3,4,7,8,9-HpCDF (L)	45:03

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

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

COMPARED PEAKS (1)	% VALLEY HEIGHT BETWEEN
	<25%

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

Analyst: _____ Date: 8/16/10

USEPA - ITD

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 16-AUG-10 07:28:46 CS3 or VER Data Filename: 15AUG10M Sam:22

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	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		1.239	1.000-1.567
13C-1,2,3,7,8-PeCDF		1.174	0.923-1.203
13C-2,3,4,7,8-PeCDF		1.223	0.923-1.303

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

Analyst: _____ Date: 8/16/10

USEPA - ITD

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

Analysis Date: 16-AUG-10 07:28:46 CS3 or VER Data Filename: 15AUG10M Sam:22

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	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	1.001	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.984	0.977-1.000
13C-1,2,3,6,7,8-HxCDD		0.989	0.981-1.003
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975
13C-2,3,4,6,7,8-HxCDF		0.978	0.959-1.021
13C-1,2,3,7,8,9-HxCDF		1.015	0.977-1.047
13C-1,2,3,4,6,7,8-HpCDD		1.128	1.086-1.130
13C-1,2,3,4,6,7,8-HpCDF		1.079	1.043-1.085
13C-1,2,3,4,7,8,9-HpCDF		1.151	1.057-1.154
13C-OCDD		1.269	1.032-1.311
13C-OCDF		1.279	1.000-1.311

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

Analyst: _____ Date: 8/16/10

FAL ID: ST081510M3 Filename: 15AUG10M Sam:22 Acquired: 16-AUG-10 07:28:46 ICal: PCDDFAL3-5-12-10
Client ID: 1613 CS3 090918J ConCal: ST081510M2 EndCal: ST081510M3
Results: 6273D GC Column: DB5 Amount: 1.000 NATO 1989 Tox: 95.6
WHO 1998 Tox: 119 WHO 2005 Tox: 109

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	3.76e+06	0.74 y	27:22	1.04	9.56		2.50	-	-	*
1,2,3,7,8-PeCDD	1.49e+07	1.63 y	33:11	1.05	47.9		2.50	-	-	*
1,2,3,4,7,8-HxCDD	1.30e+07	1.42 y	38:32	1.30	49.7		2.50	-	-	*
1,2,3,6,7,8-HxCDD	1.20e+07	1.35 y	38:42	1.28	48.6		2.50	-	-	*
1,2,3,7,8,9-HxCDD	1.28e+07	1.42 y	39:09	1.25	51.9		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	1.06e+07	1.02 y	44:08	1.35	48.5		2.50	-	-	*
OCDD	1.33e+07	0.96 y	49:40	1.25	111		2.50	-	-	*
2,3,7,8-TCDF	8.30e+06	0.70 y	26:36	1.62	9.15		2.50	-	-	*
1,2,3,7,8-PeCDF	2.18e+07	1.44 y	31:26	0.92	50.1		2.50	-	-	*
2,3,4,7,8-PeCDF	2.01e+07	1.42 y	32:46	0.94	47.5		2.50	-	-	*
1,2,3,4,7,8-HxCDF	1.61e+07	1.27 y	37:09	0.93	45.6		2.50	-	-	*
1,2,3,6,7,8-HxCDF	1.73e+07	1.27 y	37:21	0.84	46.1		2.50	-	-	*
2,3,4,6,7,8-HxCDF	1.54e+07	1.24 y	38:18	0.90	45.5		2.50	-	-	*
1,2,3,7,8,9-HxCDF	1.42e+07	1.27 y	39:44	0.98	45.7		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	1.33e+07	1.03 y	42:14	1.38	45.8		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	1.12e+07	1.05 y	45:03	1.62	44.6		2.50	-	-	*
OCDF	1.34e+07	0.87 y	50:03	0.74	93.4		2.50	-	-	*
										Rec
13C-2,3,7,8-TCDD	3.80e+07	0.84 y	27:21	0.93	99.4					99.4
13C-1,2,3,7,8-PeCDD	2.97e+07	1.75 y	33:09	0.81	89.2					89.2
13C-1,2,3,4,7,8-HxCDD	2.01e+07	1.26 y	38:31	0.95	104					104
13C-1,2,3,6,7,8-HxCDD	1.93e+07	1.25 y	38:41	1.00	94.9					94.9
13C-1,2,3,4,6,7,8-HpCDD	1.62e+07	1.02 y	44:07	0.92	86.2					86.2
13C-OCDD	1.92e+07	0.90 y	49:39	0.63	149					74.5
13C-2,3,7,8-TCDF	5.61e+07	0.88 y	26:35	0.87	96.8					96.8
13C-1,2,3,7,8-PeCDF	4.74e+07	1.69 y	31:25	0.81	88.0					88.0
13C-2,3,4,7,8-PeCDF	4.47e+07	1.67 y	32:44	0.75	89.1					89.1
13C-1,2,3,4,7,8-HxCDF	3.81e+07	0.54 y	37:07	1.74	107					107
13C-1,2,3,6,7,8-HxCDF	4.48e+07	0.54 y	37:20	2.17	101					101
13C-2,3,4,6,7,8-HxCDF	3.77e+07	0.55 y	38:16	1.82	101					101
13C-1,2,3,7,8,9-HxCDF	3.17e+07	0.54 y	39:42	1.49	104					104
13C-1,2,3,4,6,7,8-HpCDF	2.10e+07	0.41 y	42:12	1.10	93.8					93.8
13C-1,2,3,4,7,8,9-HpCDF	1.54e+07	0.40 y	45:02	0.81	92.4					92.4
13C-OCDF	3.87e+07	0.96 y	50:02	1.19	159					79.7
37Cl-2,3,7,8-TCDD	3.52e+06		27:22	0.93	9.17					91.7
13C-1,2,3,4-TCDD	4.13e+07	0.84 y	26:46	-	122					
13C-1,2,3,4-TCDF	6.68e+07	0.88 y	25:31	-	125					
13C-1,2,3,7,8,9-HxCDD	2.04e+07	1.25 y	39:07	-	94.8					

						Fac	Noise-1	Noise-2	DL		#Hom
Total Tetra-Dioxins	2.10e+07		24:22	1.04	53.3	2.50	-	-	*		13
Total Penta-Dioxins	3.30e+07		30:12	1.05	106	2.50	-	-	*		12
Total Hexa-Dioxins	4.32e+07		36:04	1.27	172	2.50	-	-	*		9
Total Hepta-Dioxins	2.37e+07		42:45	1.35	108	2.50	-	-	*		21
Total Tetra-Furans	3.66e+07		23:01	1.62	40.3	2.50	-	-	*		12
1st Fn. Tot Penta-Furans	2.65e+07		28:22	0.93	61.8	2.50	-	-	*	PeCDF	1
Total Penta-Furans	5.99e+07		30:08	0.93	140	2.50	-	-	*	202	11
Total Hexa-Furans	7.42e+07		35:12	0.90	215	2.50	-	-	*		10
Total Hepta-Furans	2.47e+07		42:14	1.48	91.4	2.50	-	-	*		20

Analyst: _____ Date: 8/16/10

Frontier Analytical Laboratory - Acquisition Log

Run Name:15AUG10M Instrument: FAL3 GC: DB5 Experiment:PCDD

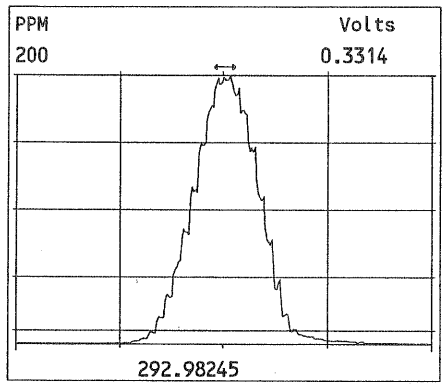
Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
15AUG10M	1	ST081510M1	1613 CS3 090918J	15-AUG-10 12:06:40	ST081510M1	ST081510M2	DV
15AUG10M	2	6273-001-0001-SA	PSB04-0.0-0.5-072810 1:	15-AUG-10 13:02:02	ST081510M1	ST081510M2	DV
15AUG10M	3	6273-005-0001-SA	PSB06-0-0.5-072810 1:20	15-AUG-10 13:57:21	ST081510M1	ST081510M2	DV
15AUG10M	4	6273-006-0001-SA	PSB06-1.5-2.0-072810 1:	15-AUG-10 14:52:40	ST081510M1	ST081510M2	DV
15AUG10M	5	6273-007-0001-SA	PSB06-1.5-2.0-072810D 1	15-AUG-10 15:47:58	ST081510M1	ST081510M2	DV
15AUG10M	6	SB081510M1	Solvent Blank	15-AUG-10 16:43:21	ST081510M1	ST081510M2	DV
15AUG10M	7	6268-003-0001-SA	PSB12-2-4-072810	15-AUG-10 17:38:44	ST081510M1	ST081510M2	DV
15AUG10M	8	6268-002-0001-SA	PSB12-1.5-2.0-072810	15-AUG-10 18:34:04	ST081510M1	ST081510M2	DV
15AUG10M	9	6268-001-0001-SA	PSB12-0-0.5-072810	15-AUG-10 19:29:27	ST081510M1	ST081510M2	DV
15AUG10M	10	SB081510M2	Solvent Blank	15-AUG-10 20:24:46	ST081510M1	ST081510M2	DV
15AUG10M	11	ST081510M2	1613 CS3 090918J	15-AUG-10 21:20:05	ST081510M1	ST081510M2	DV
15AUG10M	12	2079-001-0001-OPR	OPR	15-AUG-10 22:15:23	ST081510M2	ST081510M3	DV
15AUG10M	13	2079-001-0001-MB	Method Blank	15-AUG-10 23:10:37	ST081510M2	ST081510M3	DV
15AUG10M	14	6272-006-0001-SA	PSB3-1.5-2-072910	16-AUG-10 00:05:56	ST081510M2	ST081510M3	DV
15AUG10M	15	6272-004-0001-SA	PSB2-1.5-2-072910	16-AUG-10 01:01:14	ST081510M2	ST081510M3	DV
15AUG10M	16	6272-005-0001-SA	PSB3-0-0.5-072910	16-AUG-10 01:56:35	ST081510M2	ST081510M3	DV
15AUG10M	17	6272-003-0001-SA	PSB2-0-0.5-072910	16-AUG-10 02:51:55	ST081510M2	ST081510M3	DV
15AUG10M	18	6272-001-0001-SA	PSB1-0-0.5-072910	16-AUG-10 03:47:14	ST081510M2	ST081510M3	DV
15AUG10M	19	6272-002-0001-SA	PSB1-1.5-2.0-072910	16-AUG-10 04:42:37	ST081510M2	ST081510M3	DV
15AUG10M	20	6272-002-0002-MS	PSB1-1.5-2.0-072910	16-AUG-10 05:38:00	ST081510M2	ST081510M3	DV
15AUG10M	21	6272-002-0002-MSD	PSB1-1.5-2.0-072910	16-AUG-10 06:33:23	ST081510M2	ST081510M3	DV
15AUG10M	22	ST081510M3	1613 CS3 090918J	16-AUG-10 07:28:46	ST081510M2	ST081510M3	DV

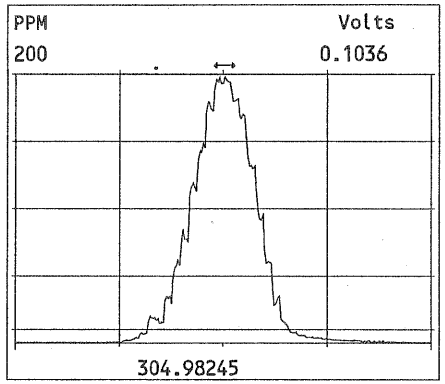
8/16/10

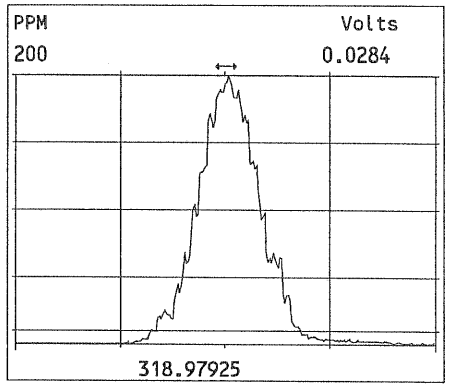
Data Backed Up:_____

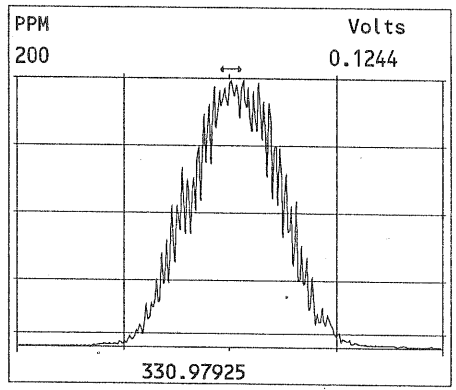
Date:_____

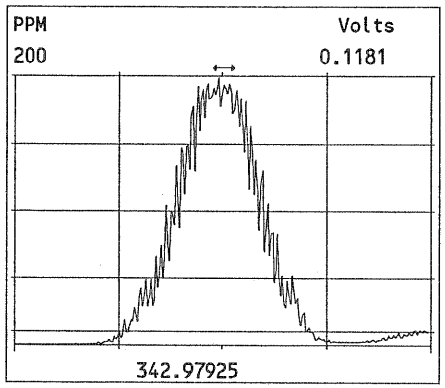
Peak Locate Examination:15-AUG-2010:12:03 File:15AUG10M
Experiment:PCDD Function:1 Reference:PFK

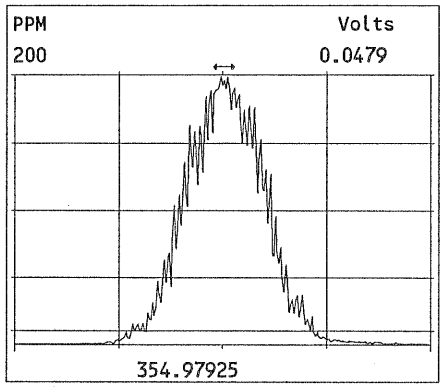


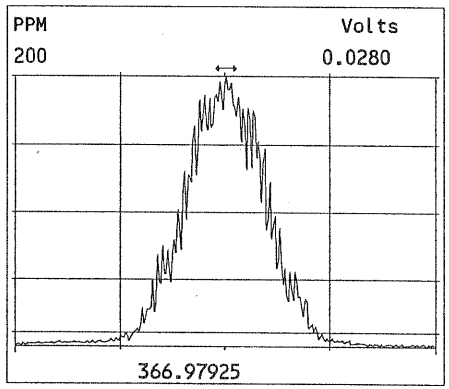


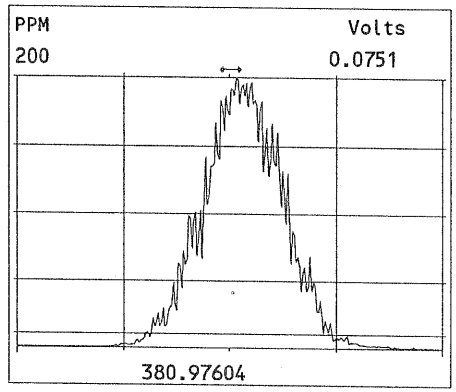


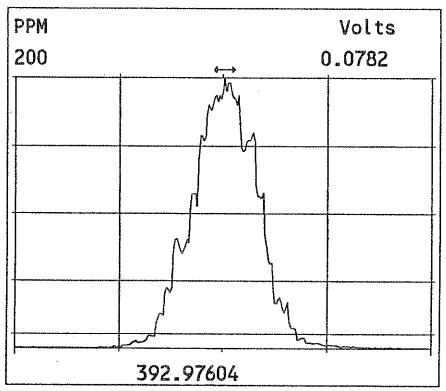


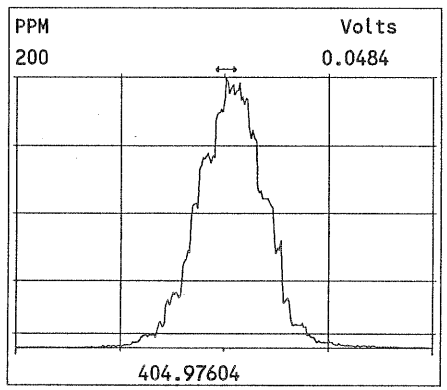


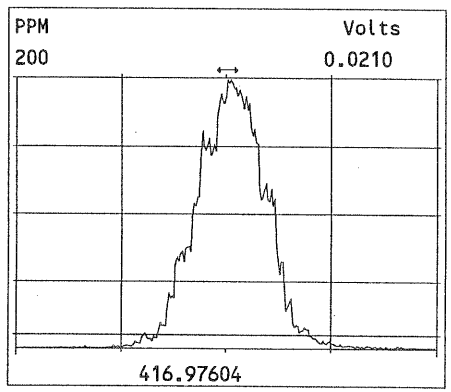




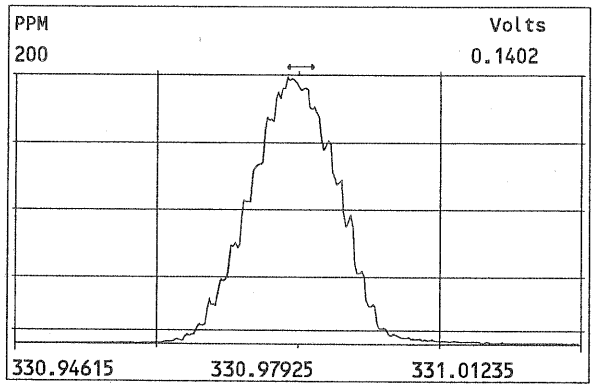


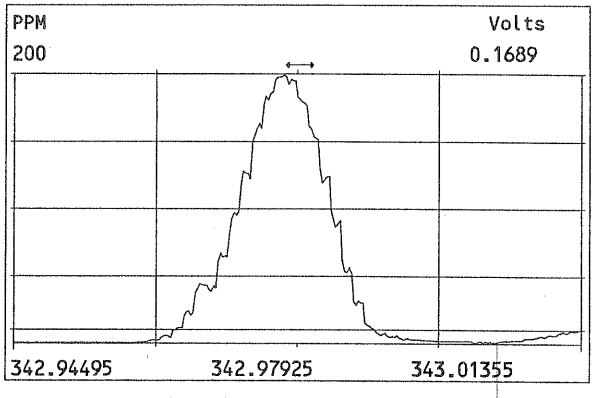


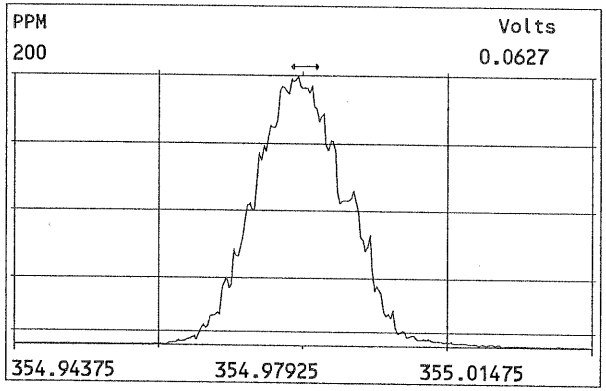


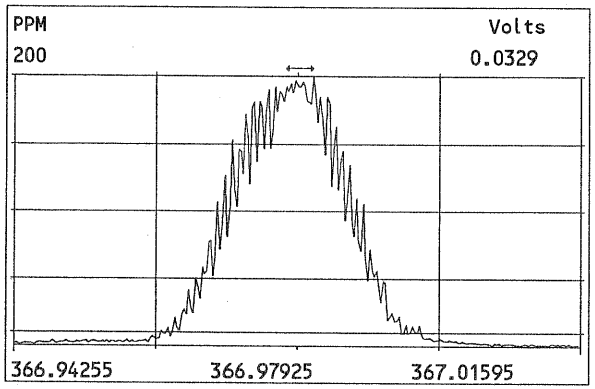


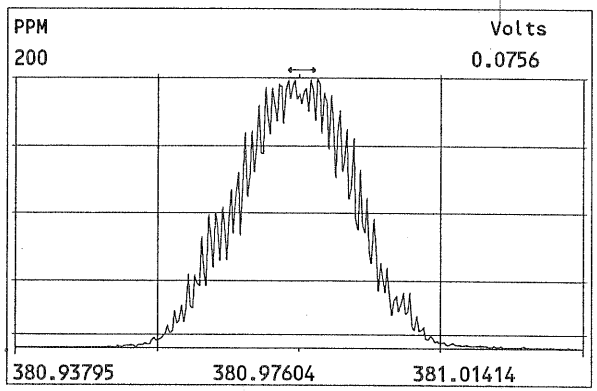
Peak Locate Examination:15-AUG-2010:12:04 File:15AUG10M
Experiment:PCDD Function:2 Reference:PFK

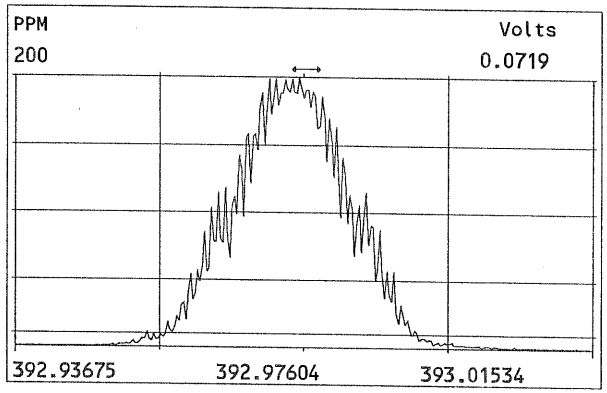


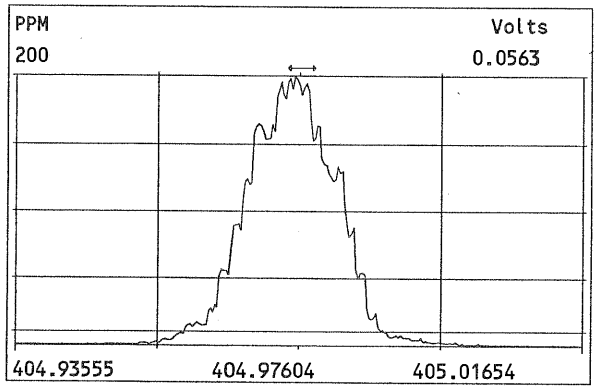


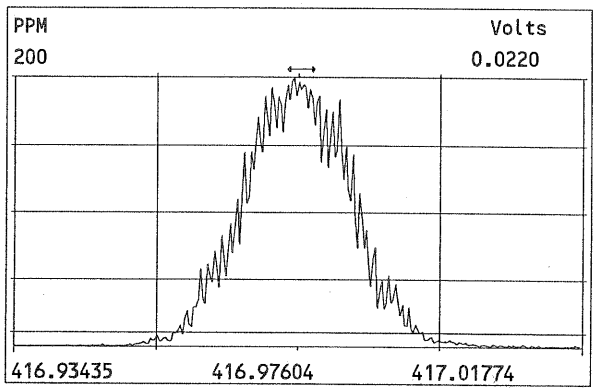




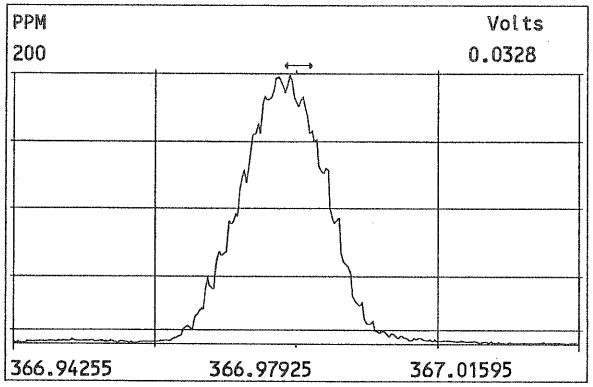


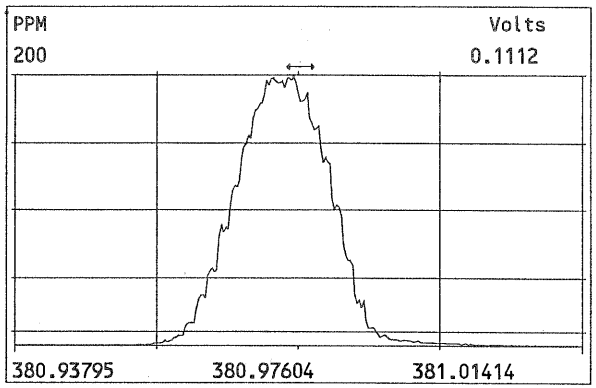


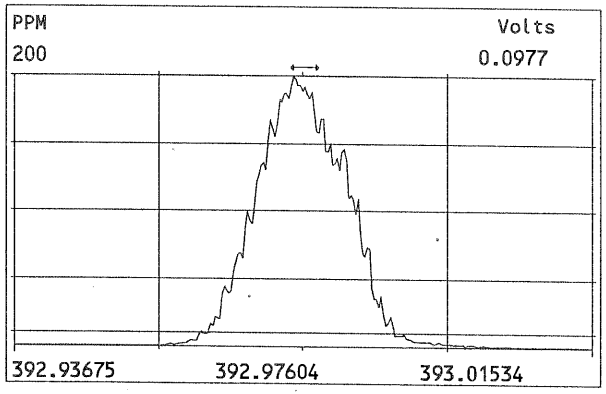


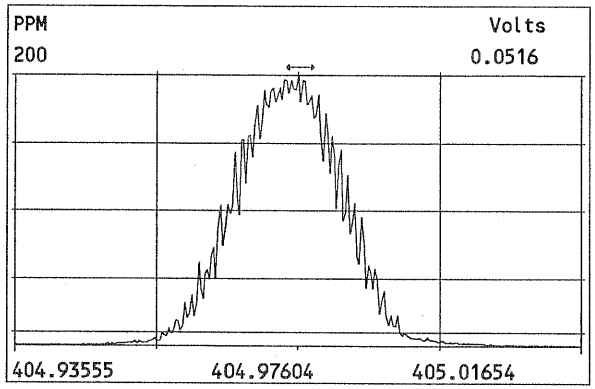


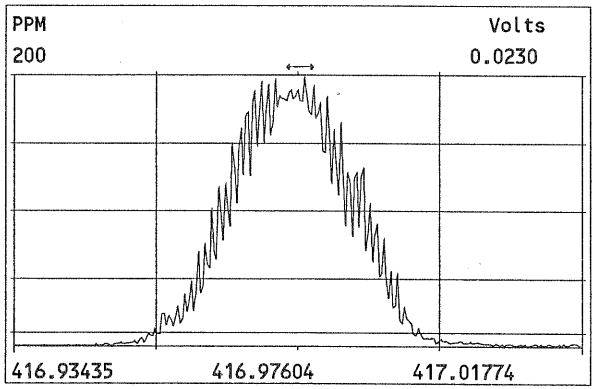
Peak Locate Examination:15-AUG-2010:12:04 File:15AUG10M
Experiment:PCDD Function:3 Reference:PFK

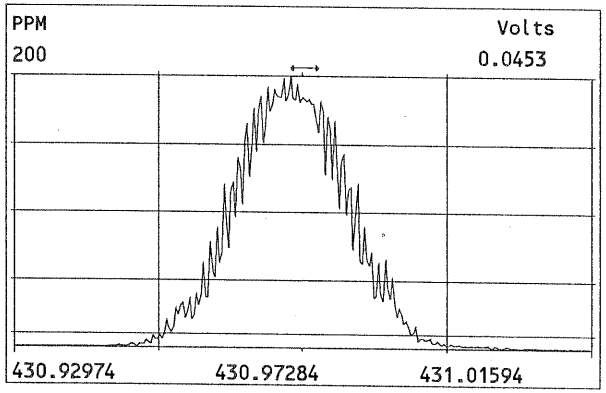


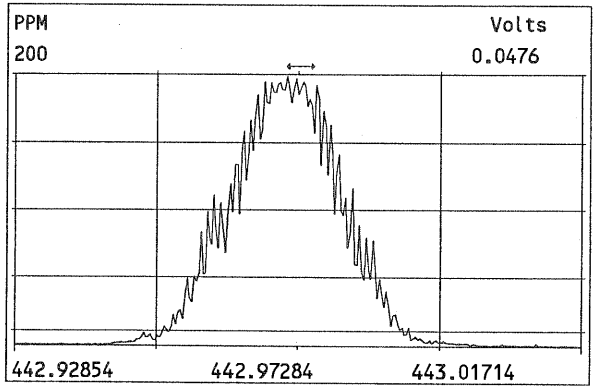


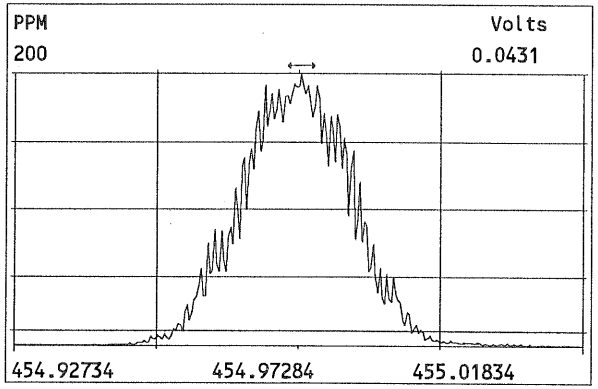




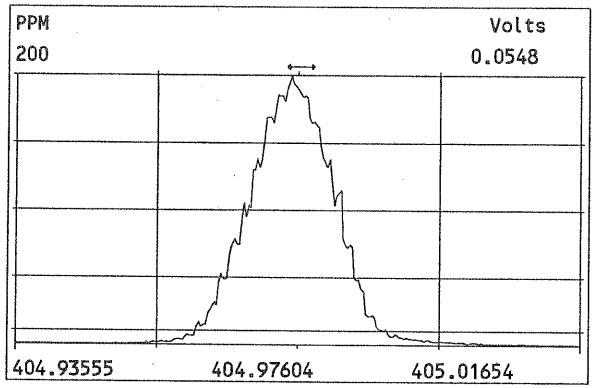


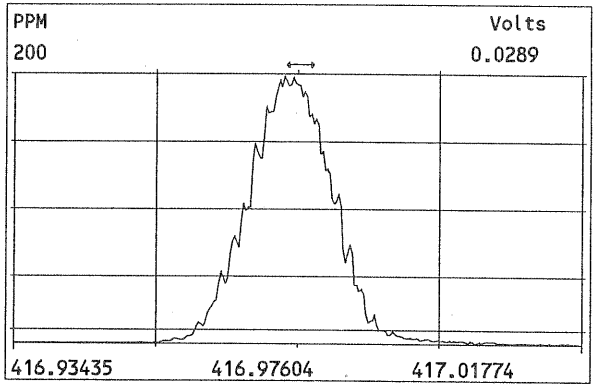


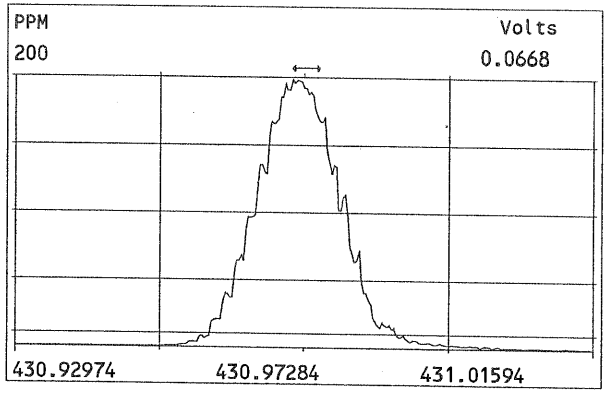


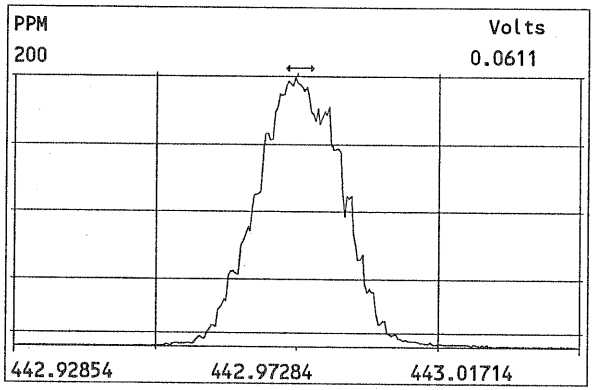


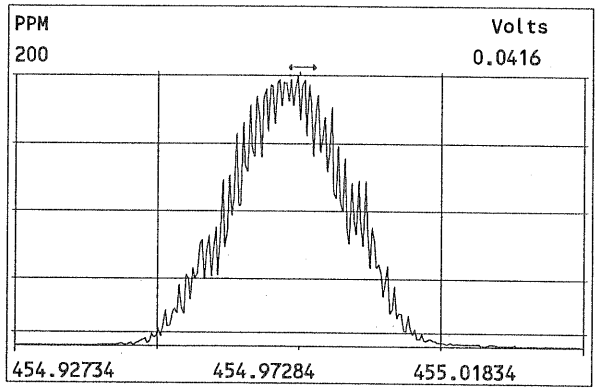
Peak Locate Examination:15-AUG-2010:12:05 File:15AUG10M
Experiment:PCDD Function:4 Reference:PFK

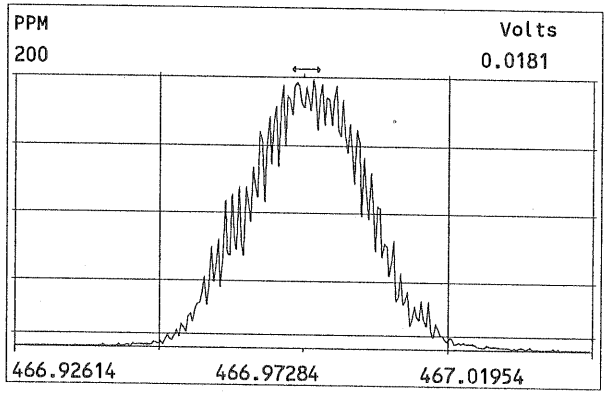


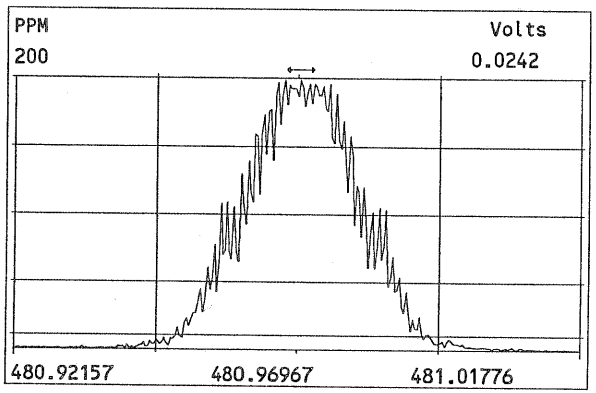




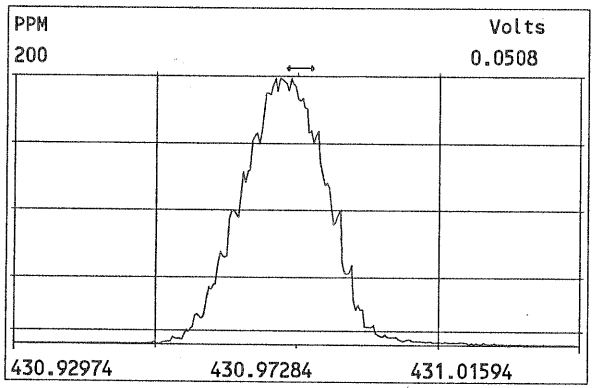


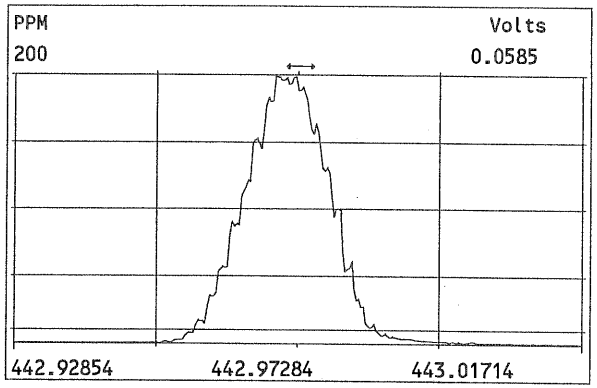


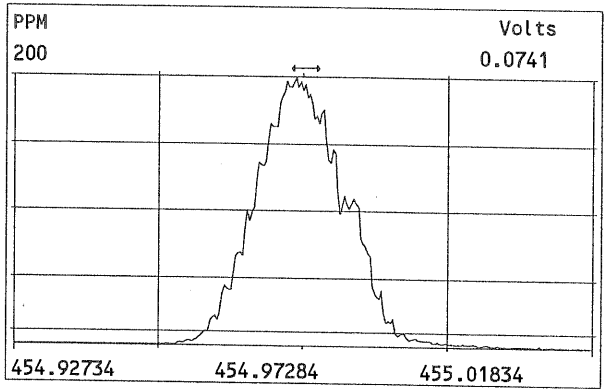


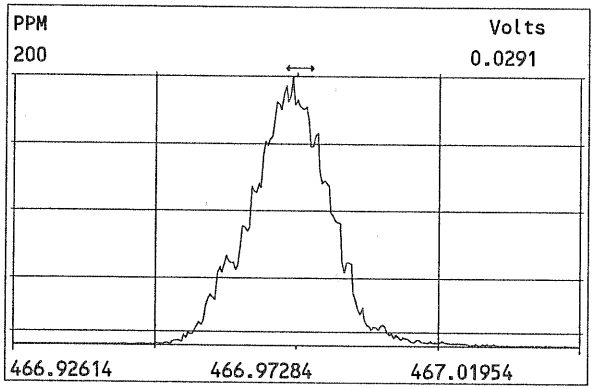


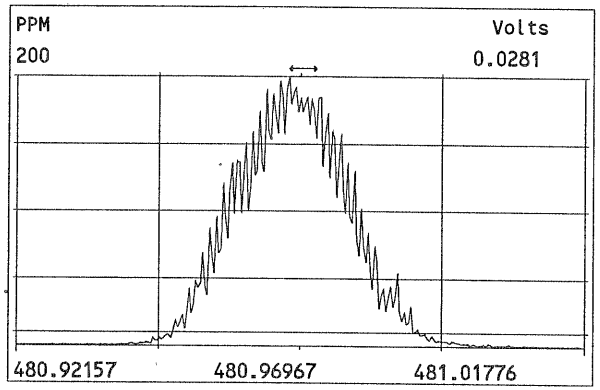
Peak Locate Examination:15-AUG-2010:12:05 File:15AUG10M
Experiment:PCDD Function:5 Reference:PFK

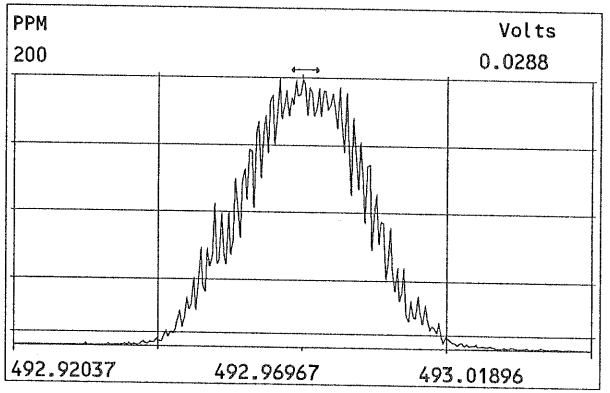


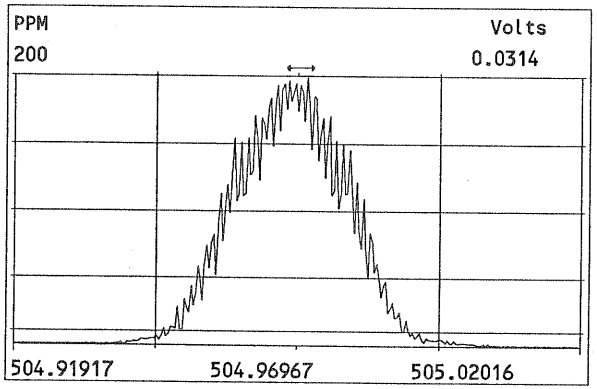


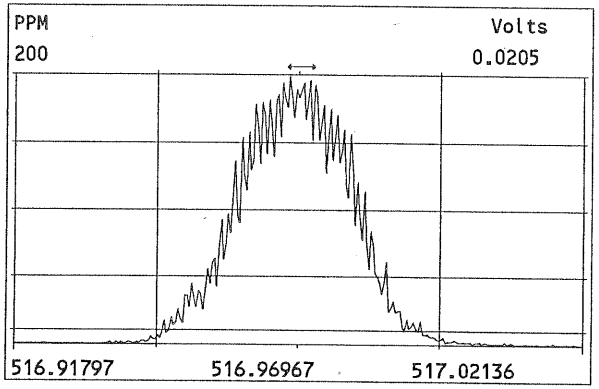




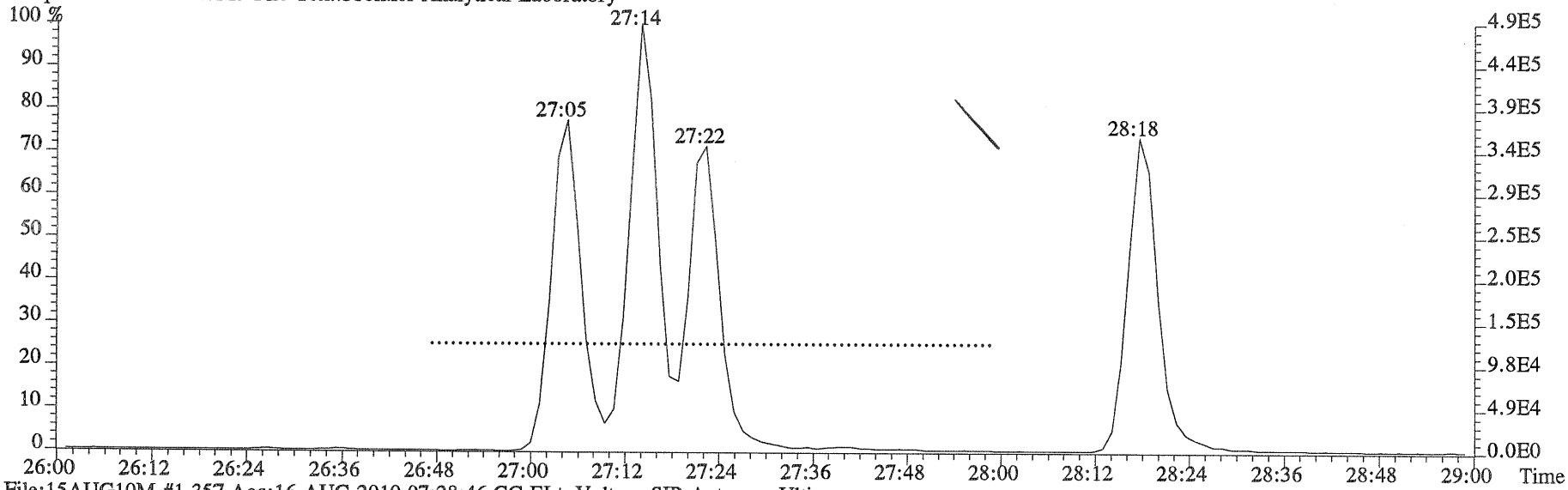




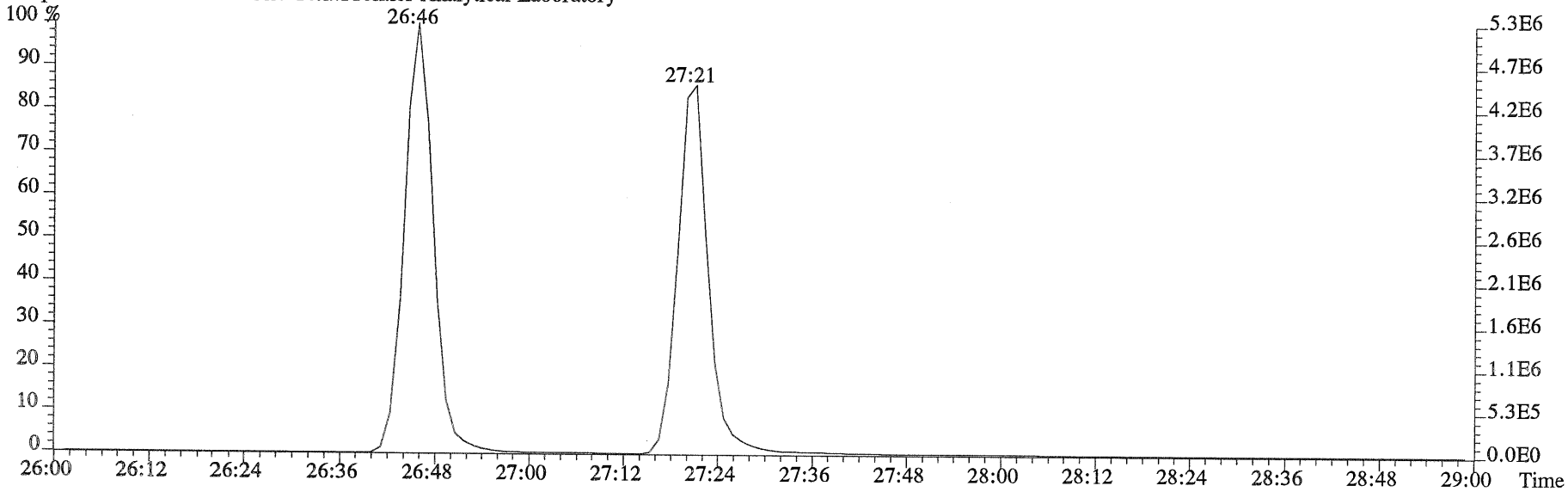




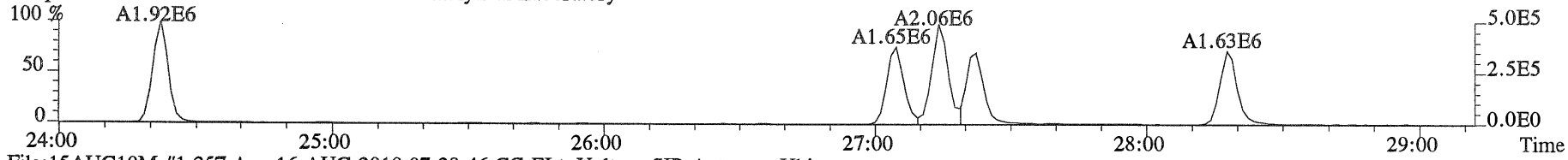
File:15AUG10M #1-357 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:22 Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



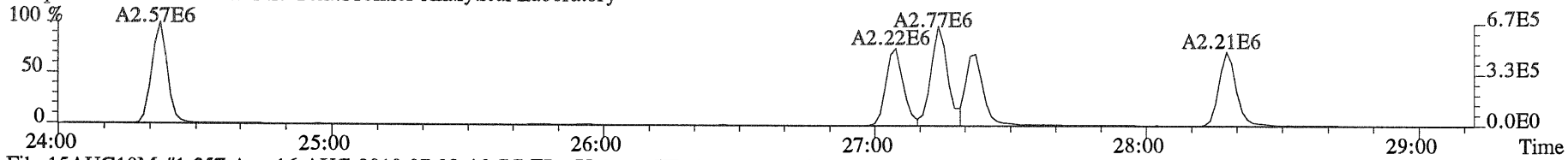
File:15AUG10M #1-357 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:22 Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



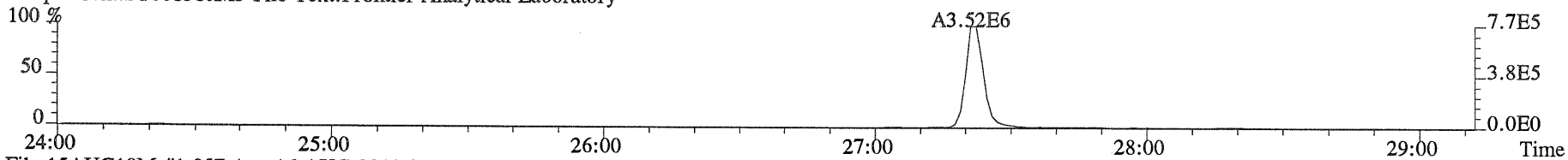
File:15AUG10M #1-357 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:22 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



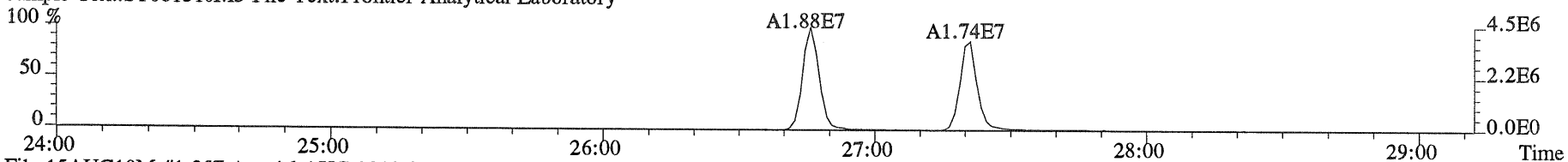
File:15AUG10M #1-357 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:22 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



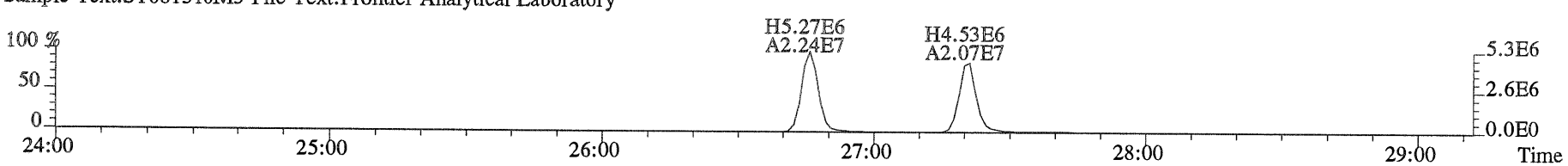
File:15AUG10M #1-357 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:22 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



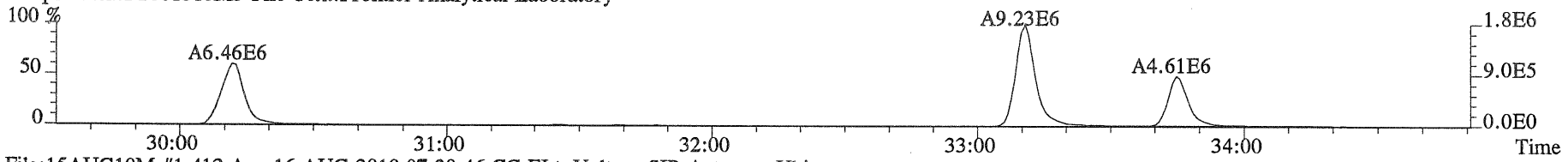
File:15AUG10M #1-357 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:22 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



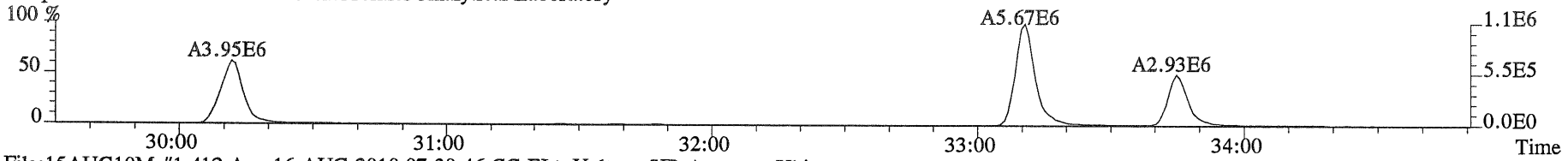
File:15AUG10M #1-357 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:22 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



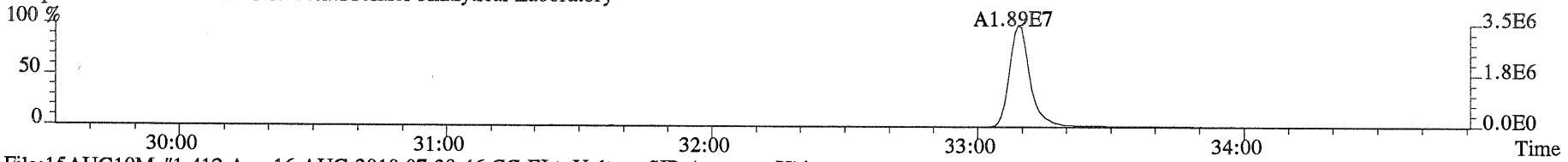
File:15AUG10M #1-412 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:22 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



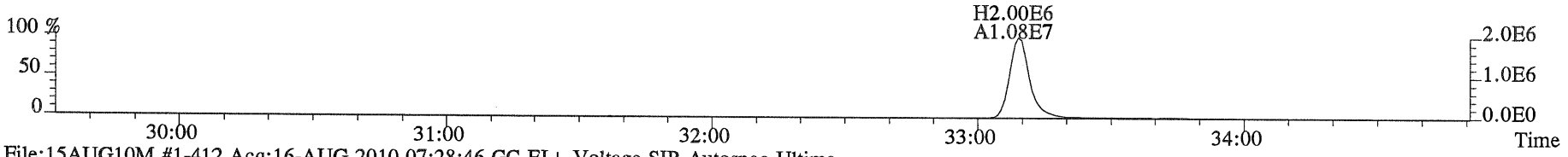
File:15AUG10M #1-412 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:22 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



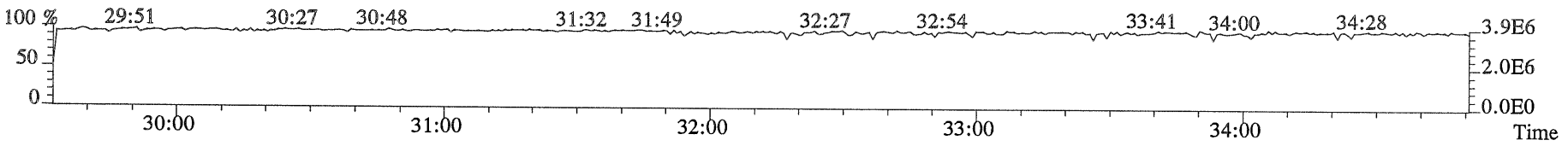
File:15AUG10M #1-412 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:22 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



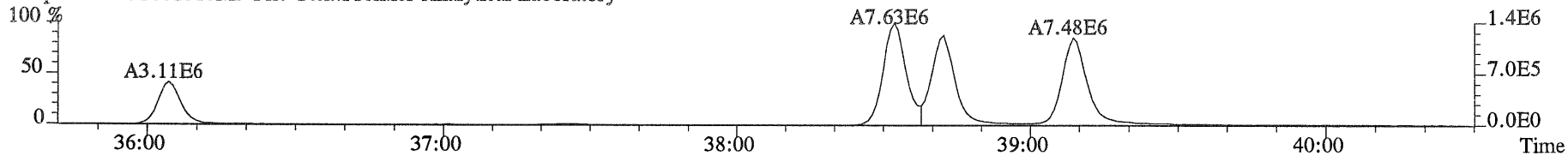
File:15AUG10M #1-412 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:22 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



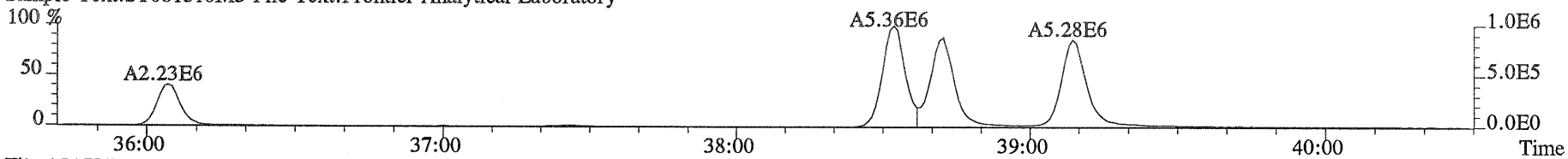
File:15AUG10M #1-412 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:22 F:2 Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



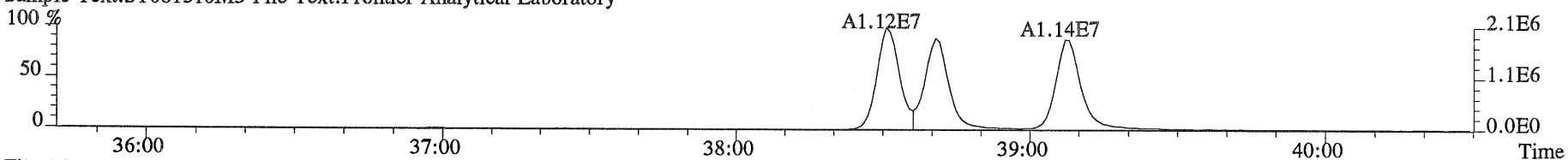
File:15AUG10M #1-476 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:22 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



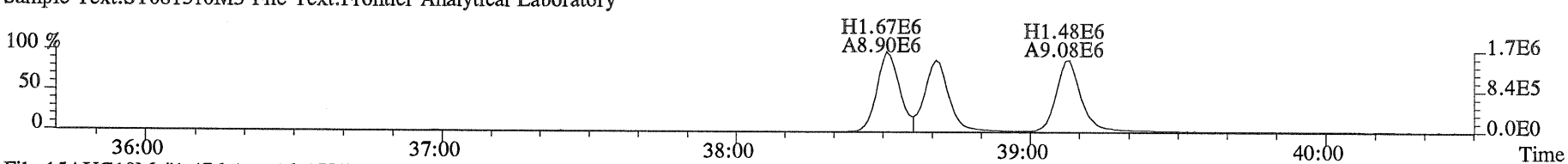
File:15AUG10M #1-476 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:22 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



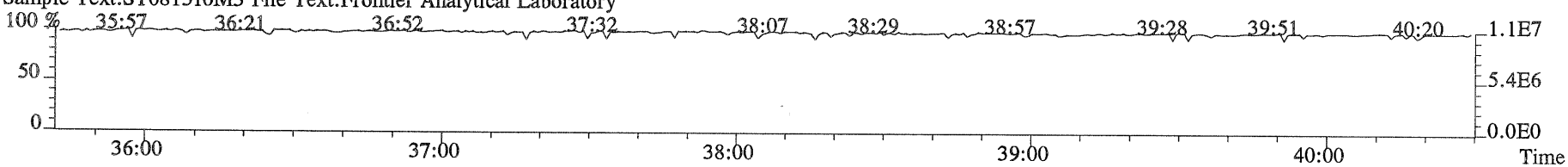
File:15AUG10M #1-476 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:22 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



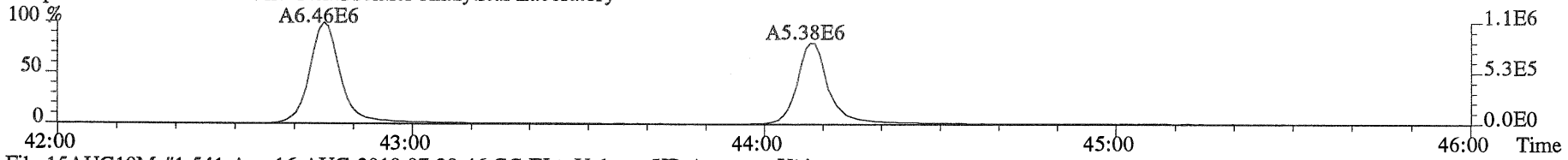
File:15AUG10M #1-476 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:22 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



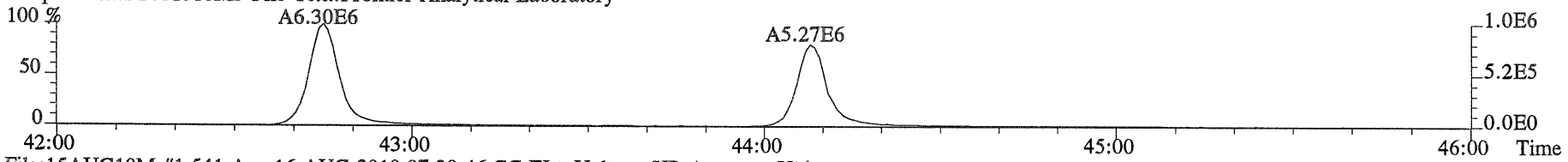
File:15AUG10M #1-476 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:22 F:3 Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



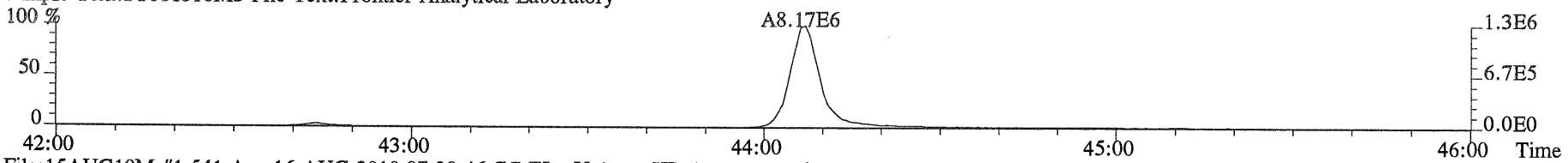
File:15AUG10M #1-541 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:22 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



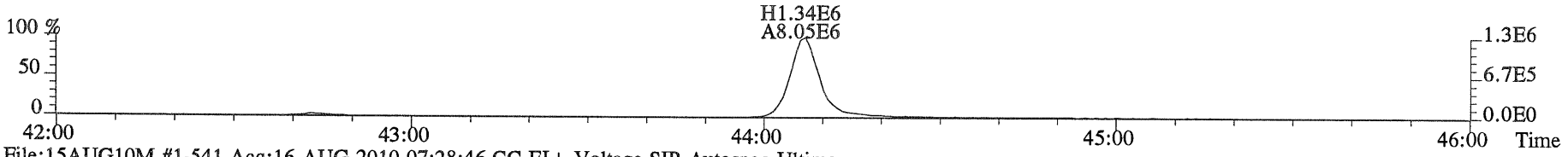
File:15AUG10M #1-541 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:22 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



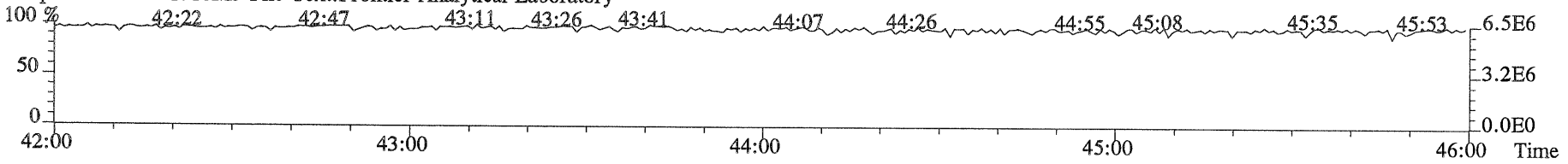
File:15AUG10M #1-541 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:22 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



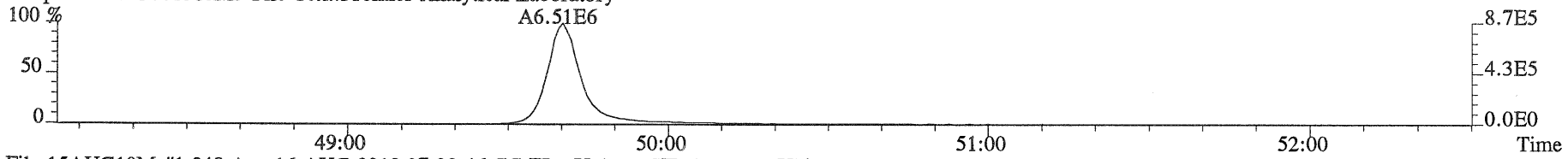
File:15AUG10M #1-541 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:22 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



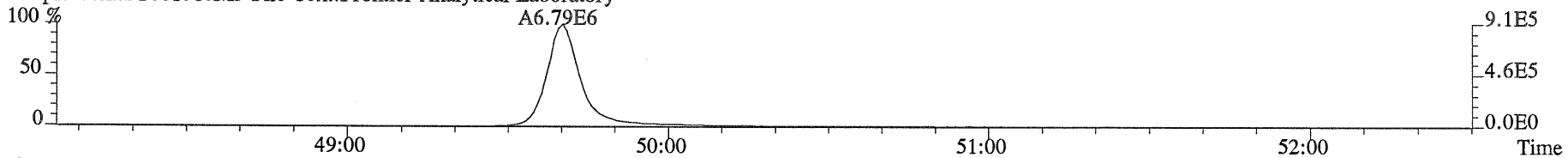
File:15AUG10M #1-541 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:22 F:4 Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



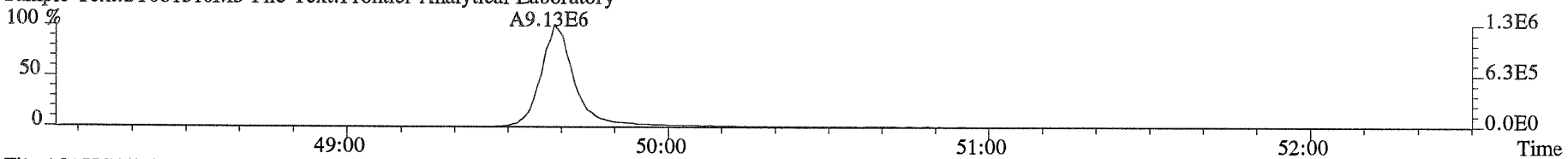
File:15AUG10M #1-348 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:22 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



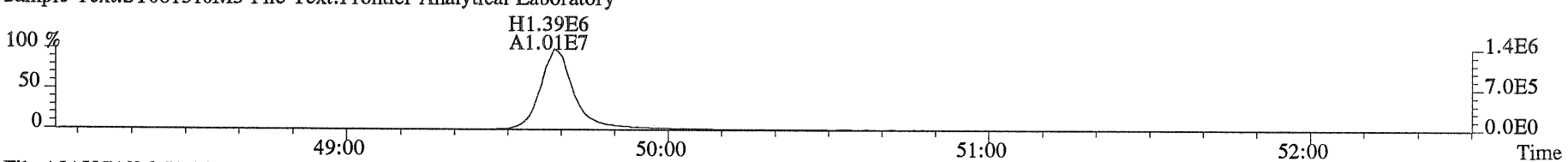
File:15AUG10M #1-348 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:22 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



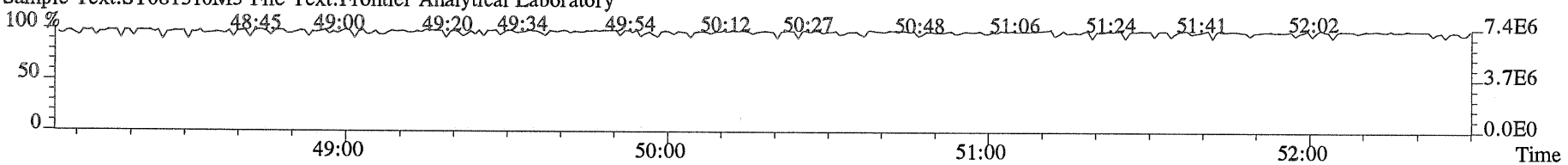
File:15AUG10M #1-348 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:22 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



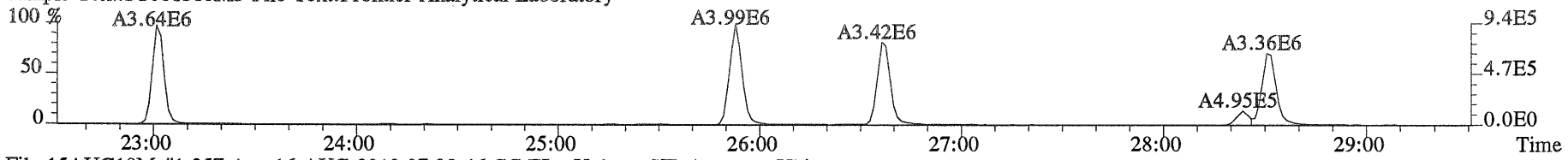
File:15AUG10M #1-348 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:22 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



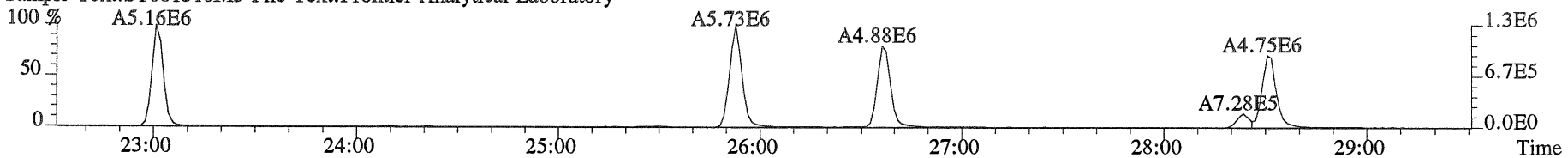
File:15AUG10M #1-348 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:22 F:5 Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



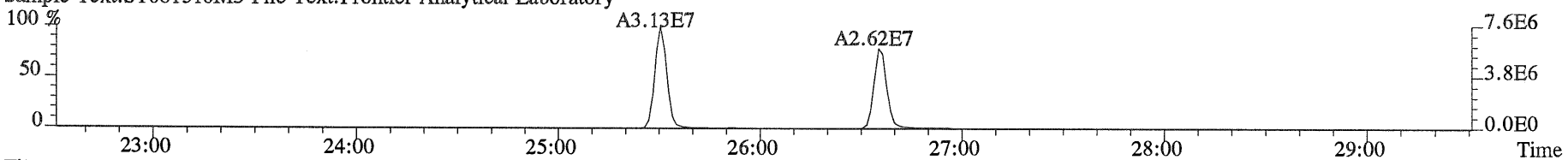
File:15AUG10M #1-357 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:22 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



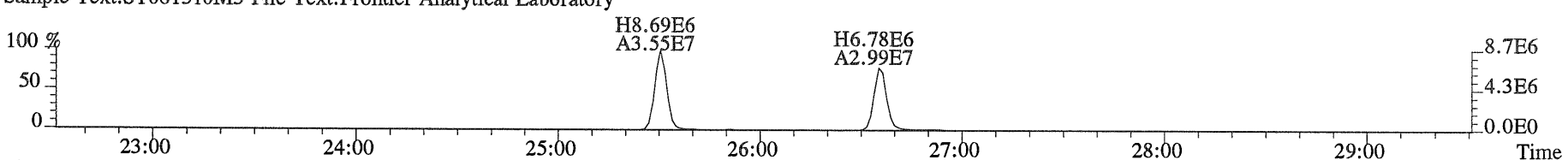
File:15AUG10M #1-357 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:22 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



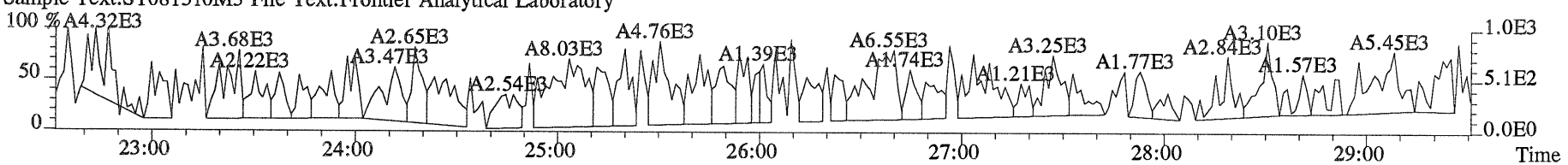
File:15AUG10M #1-357 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:22 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



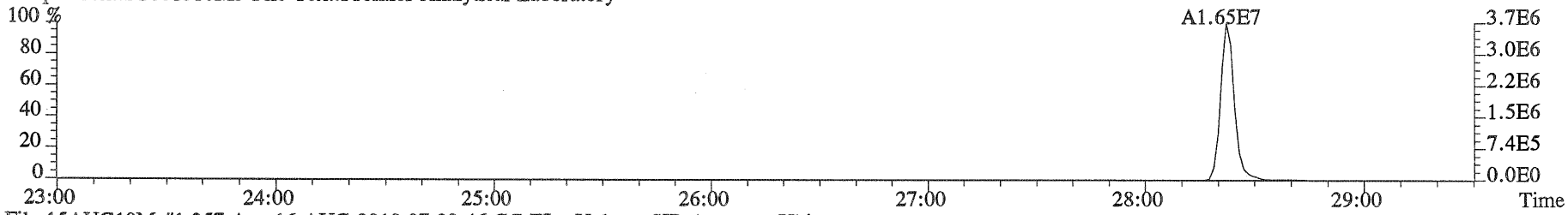
File:15AUG10M #1-357 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:22 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



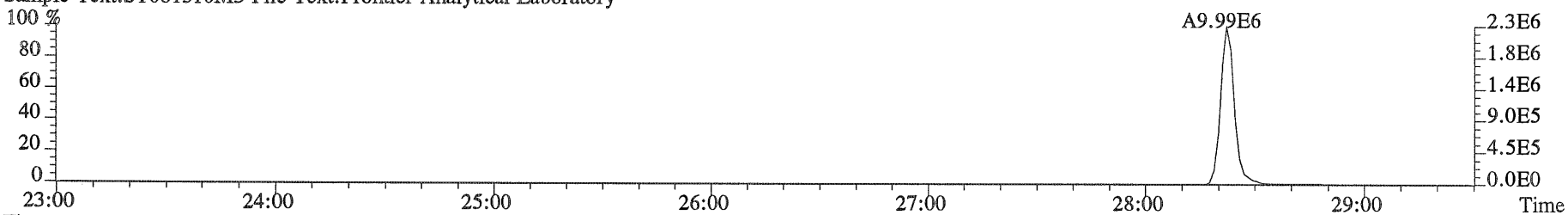
File:15AUG10M #1-357 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:22 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



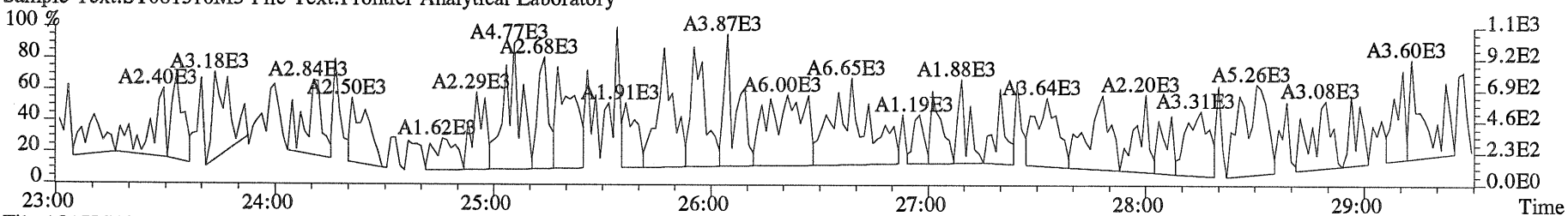
File:15AUG10M #1-357 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:22 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



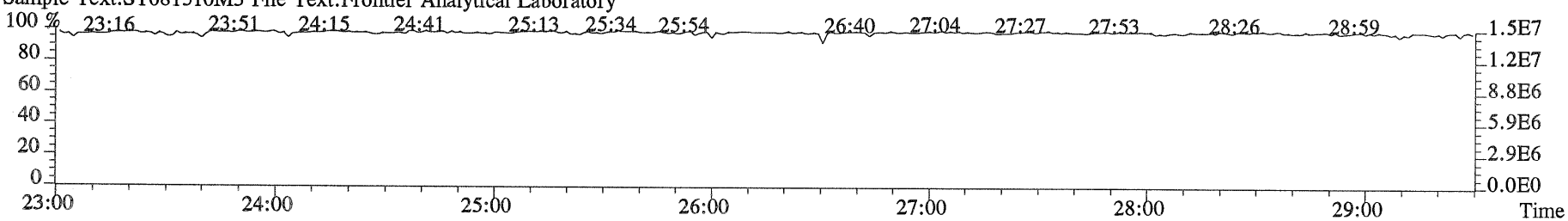
File:15AUG10M #1-357 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:22 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



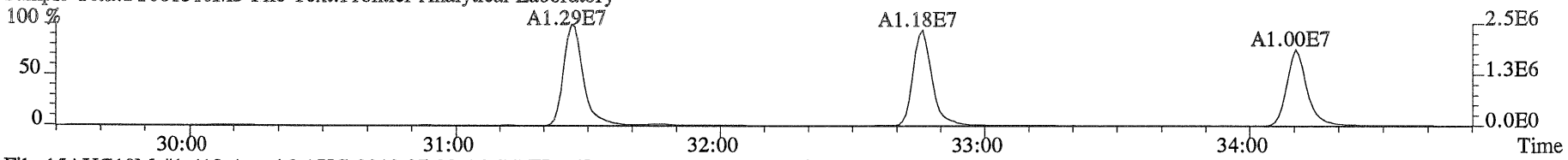
File:15AUG10M #1-357 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:22 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



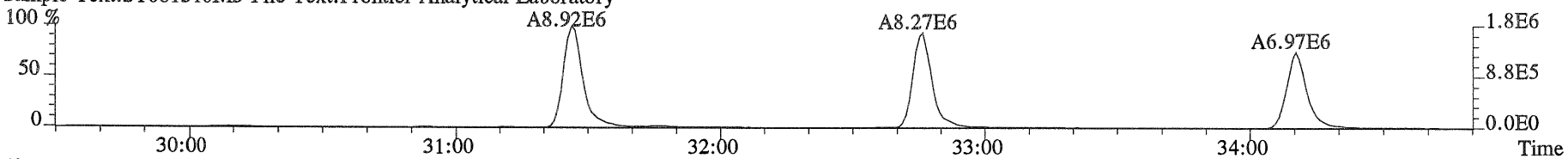
File:15AUG10M #1-357 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:22 Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



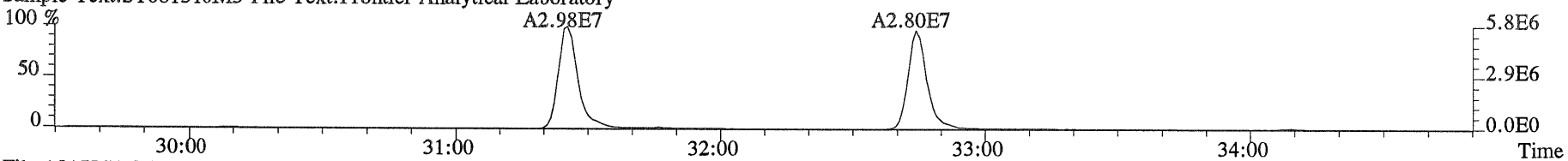
File:15AUG10M #1-412 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:22 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



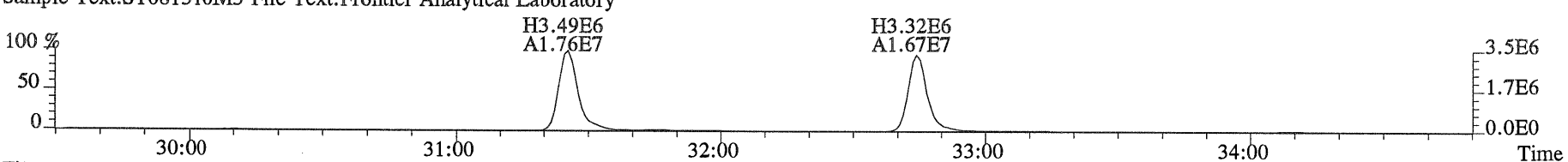
File:15AUG10M #1-412 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:22 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



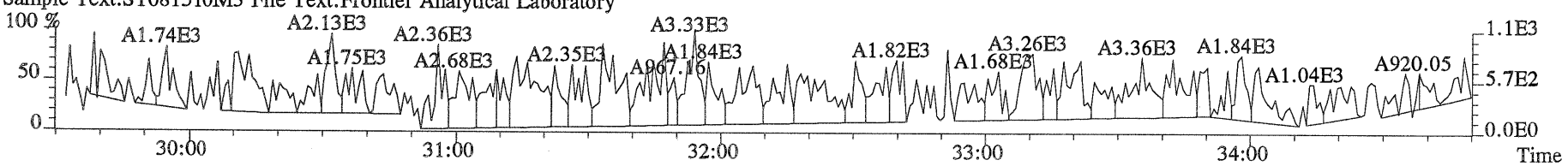
File:15AUG10M #1-412 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:22 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



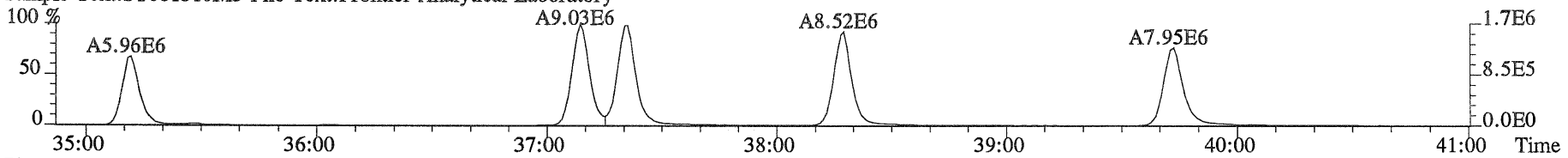
File:15AUG10M #1-412 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:22 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



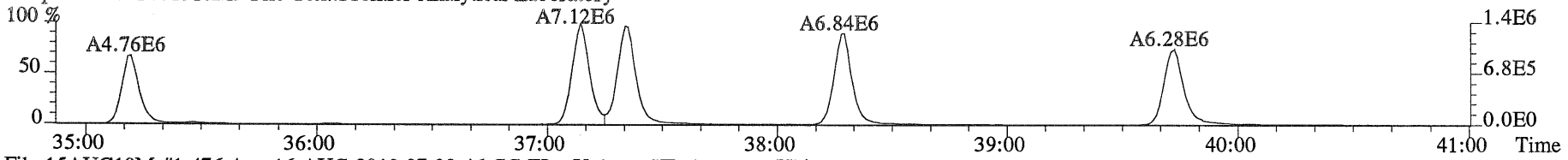
File:15AUG10M #1-412 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:22 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



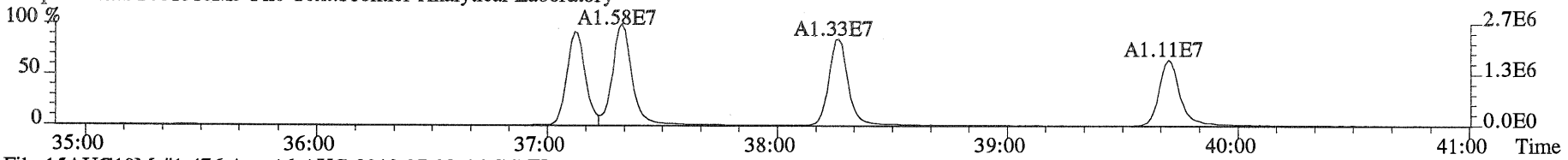
File:15AUG10M #1-476 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:22 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



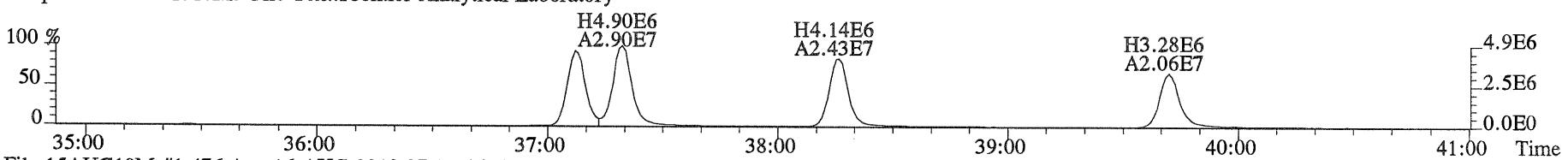
File:15AUG10M #1-476 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:22 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



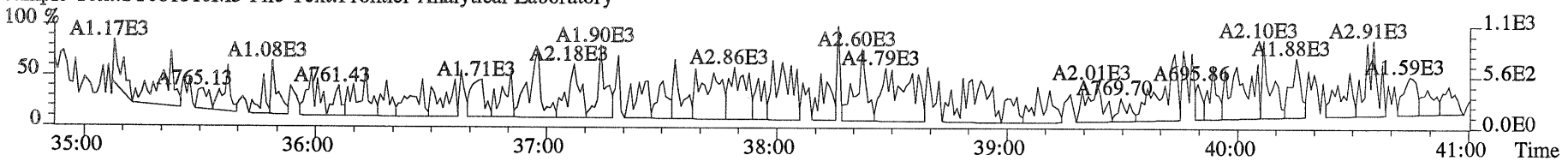
File:15AUG10M #1-476 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:22 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



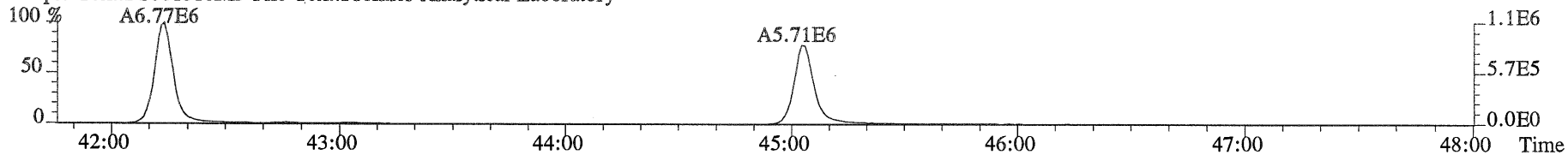
File:15AUG10M #1-476 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:22 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



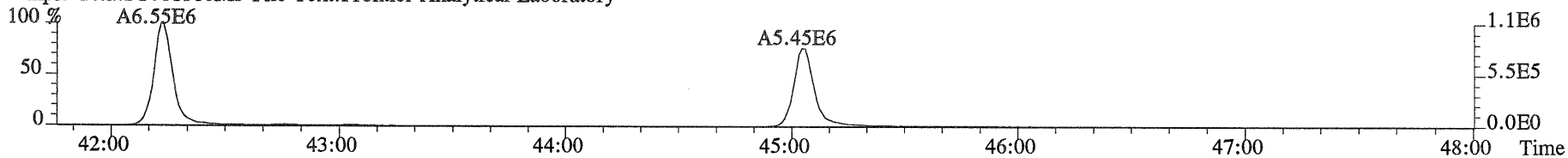
File:15AUG10M #1-476 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:22 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



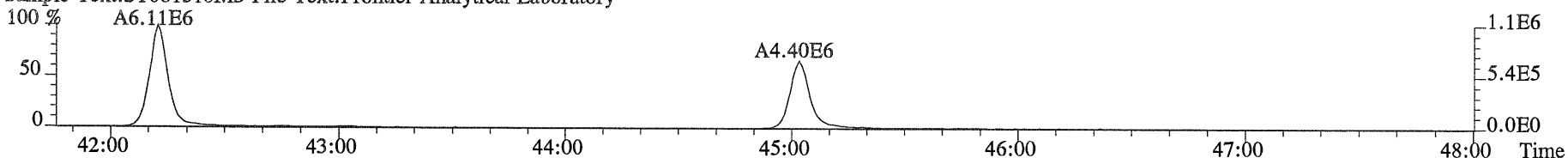
File:15AUG10M #1-541 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:22 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



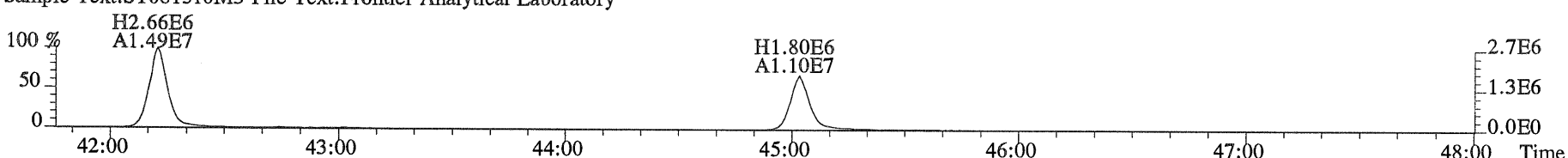
File:15AUG10M #1-541 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:22 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



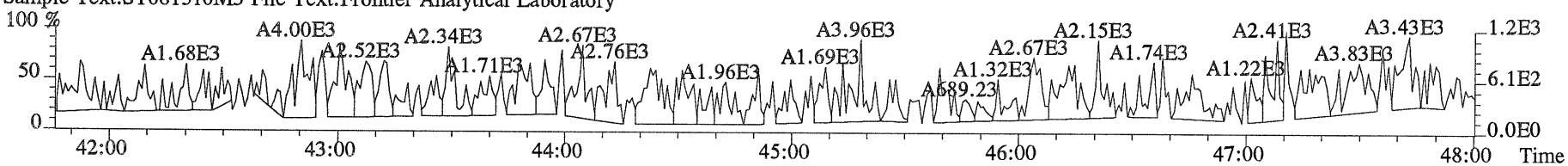
File:15AUG10M #1-541 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:22 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



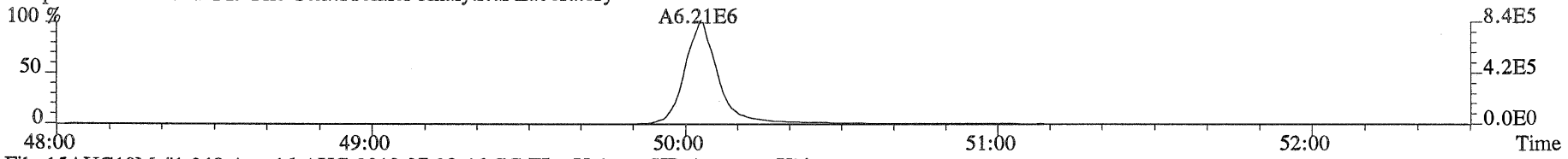
File:15AUG10M #1-541 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:22 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



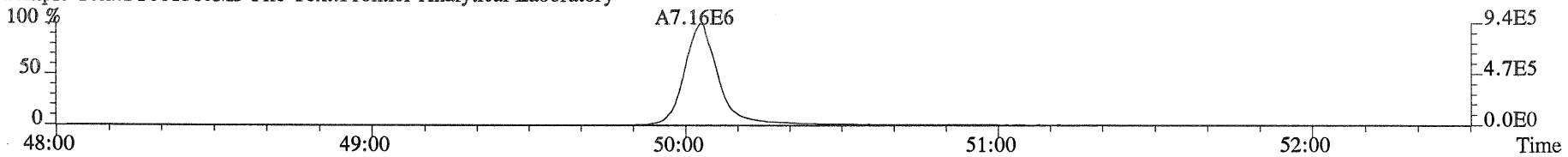
File:15AUG10M #1-541 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:22 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



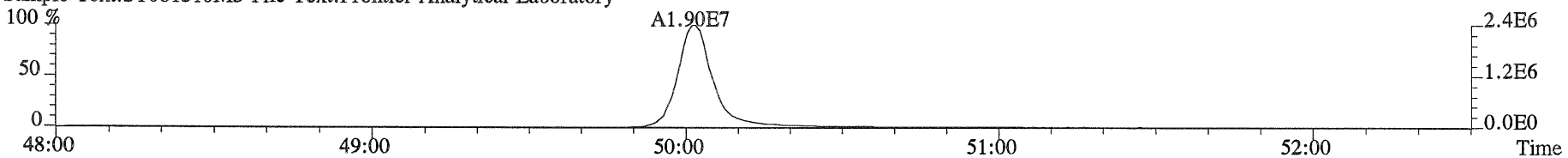
File:15AUG10M #1-348 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:22 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



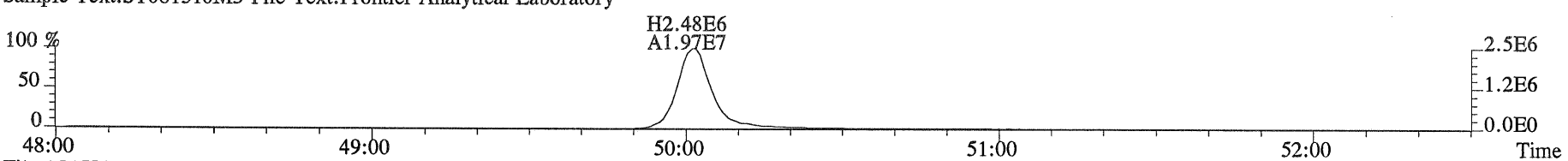
File:15AUG10M #1-348 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:22 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



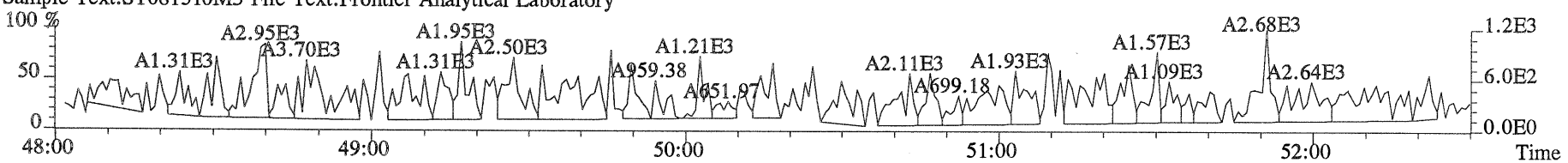
File:15AUG10M #1-348 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:22 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory



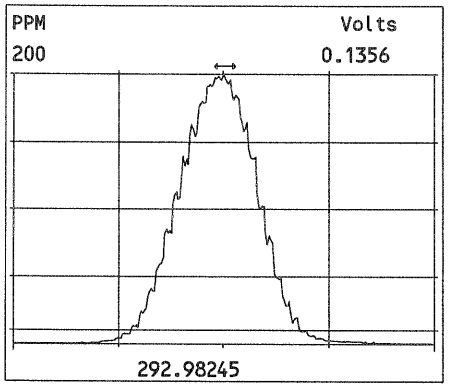
File:15AUG10M #1-348 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:22 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory

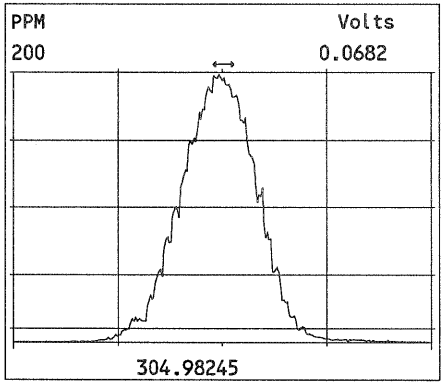


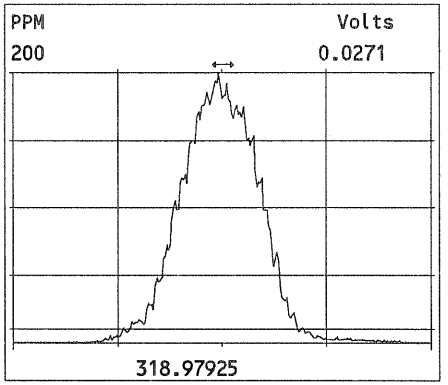
File:15AUG10M #1-348 Acq:16-AUG-2010 07:28:46 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:22 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081510M3 File Text:Frontier Analytical Laboratory

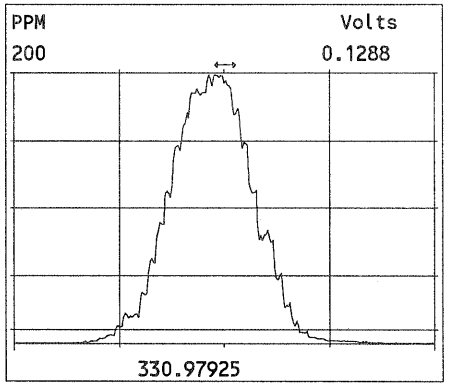


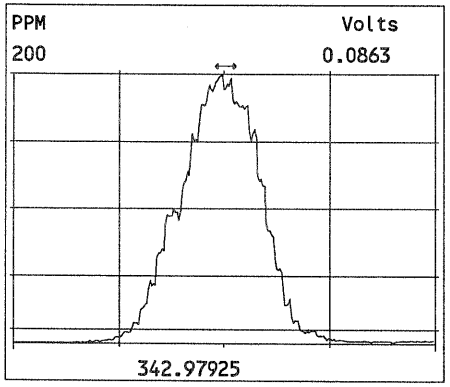
Peak Locate Examination:16-AUG-2010:08:28 File:15AUG10M_RES_CHECK
Experiment:PCDD Function:1 Reference:PFK

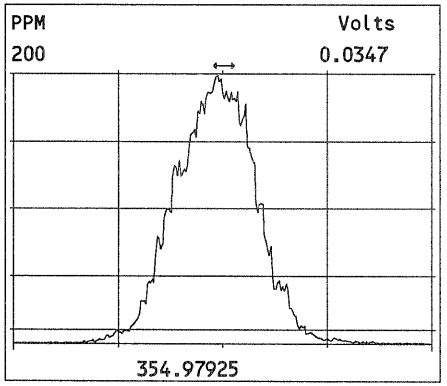


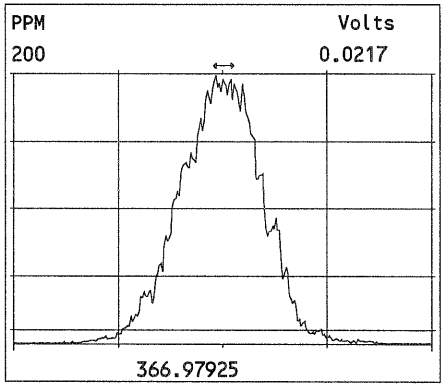


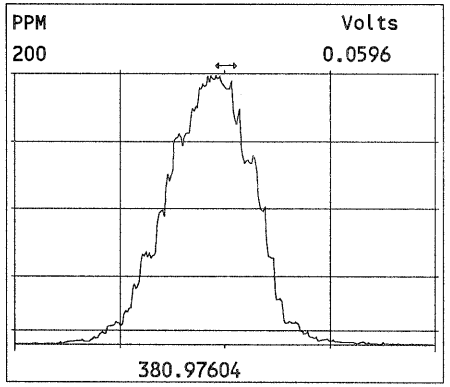


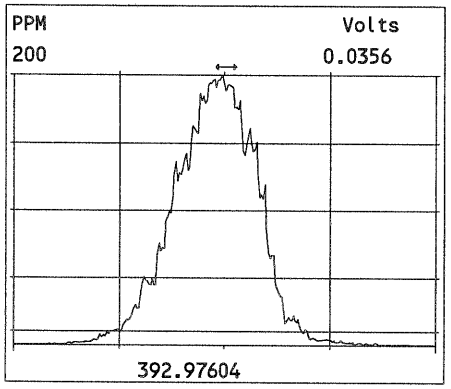


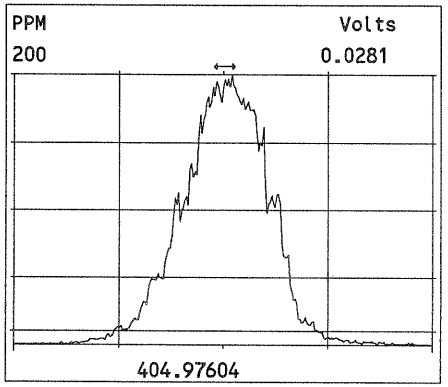


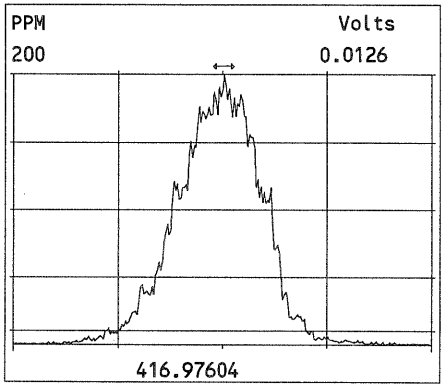




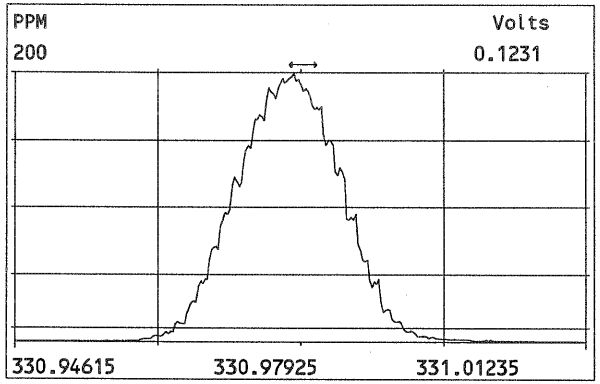


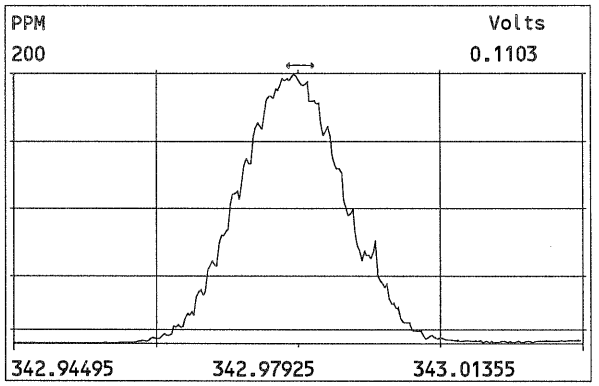


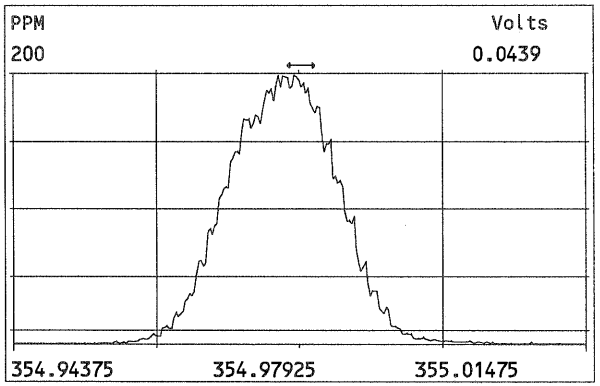


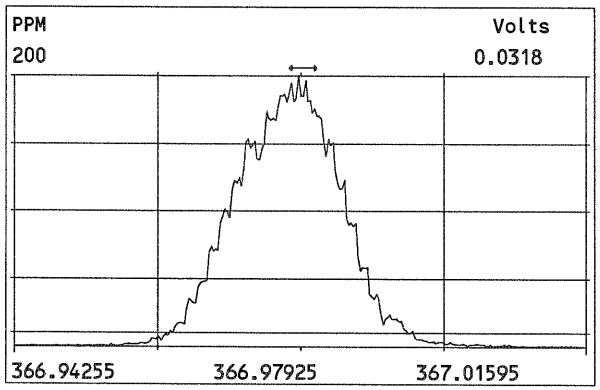


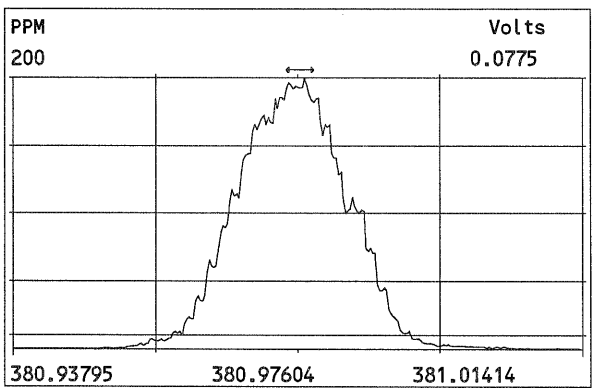
Peak Locate Examination:16-AUG-2010:08:29 File:15AUG10M_RES_CHECK
Experiment:PCDD Function:2 Reference:PFK

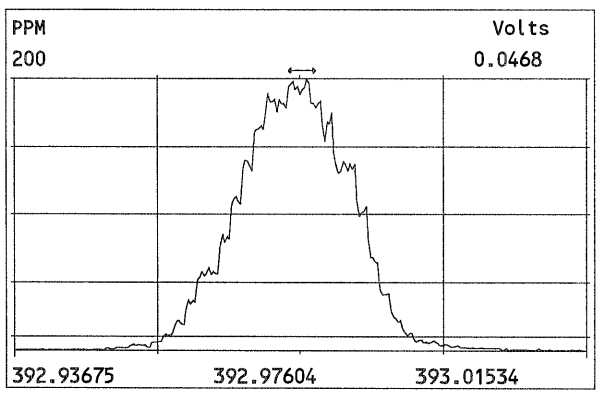


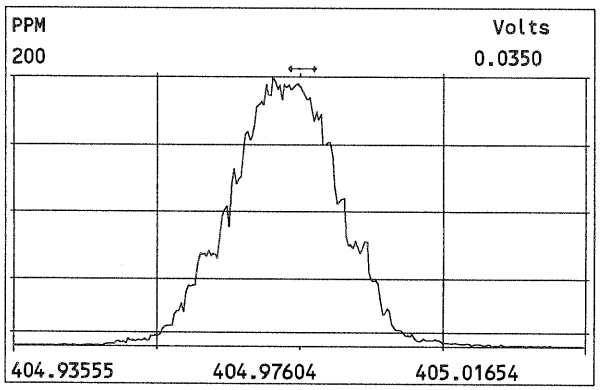


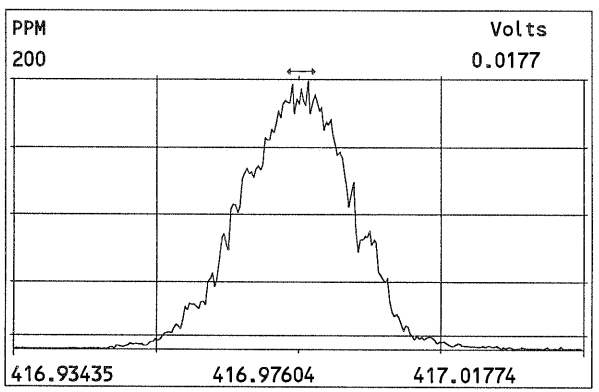




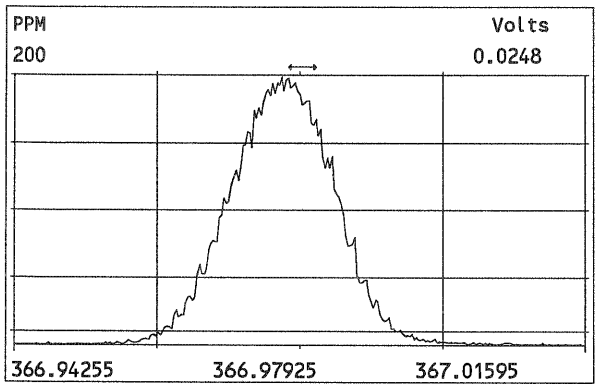


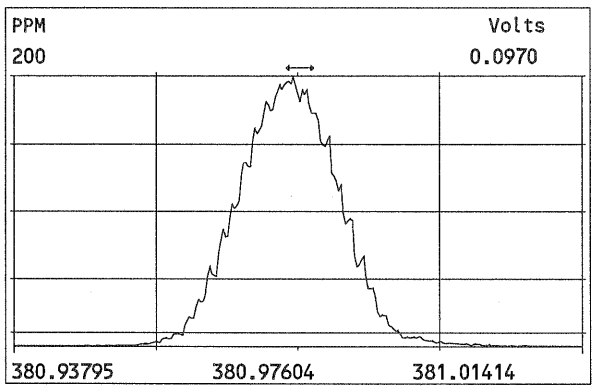


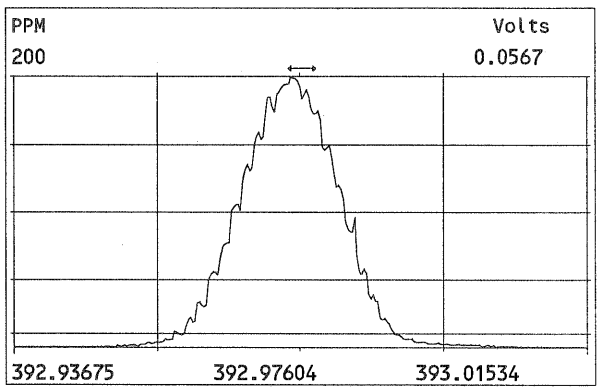


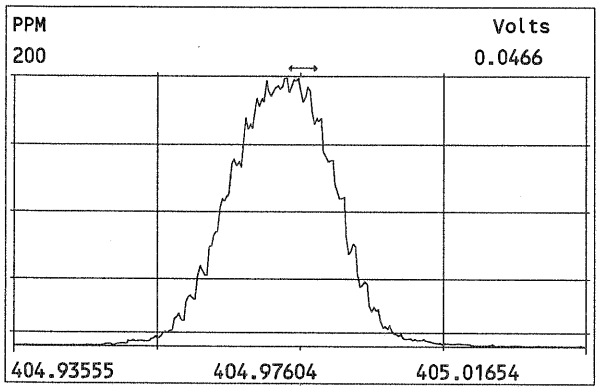


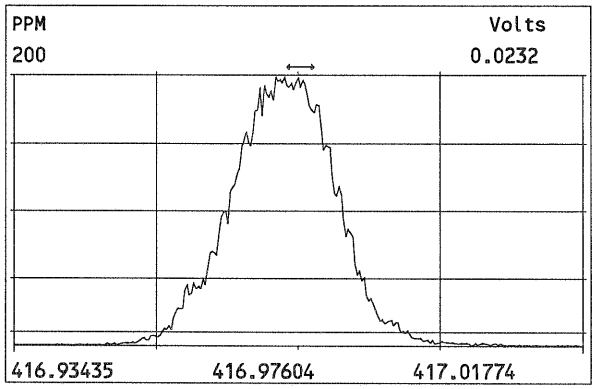
Peak Locate Examination:16-AUG-2010:08:29 File:15AUG10M_RES_CHECK
Experiment:PCDD Function:3 Reference:PFK

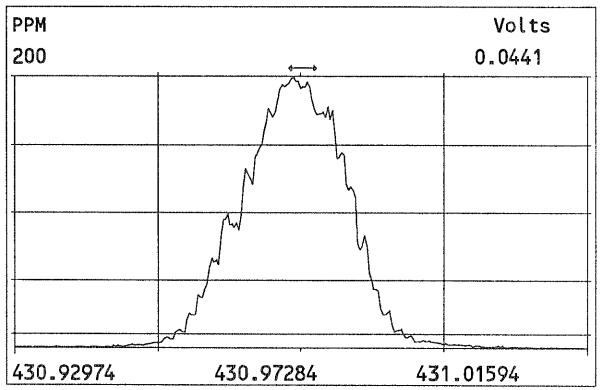


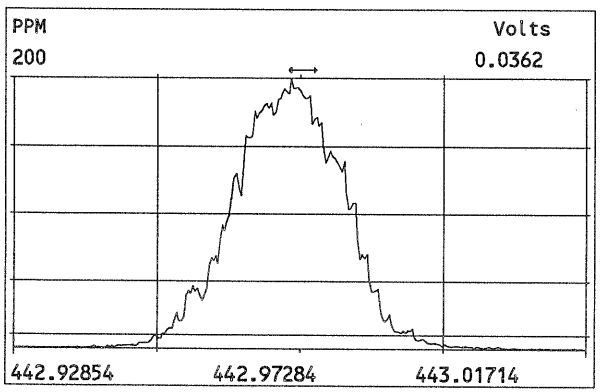


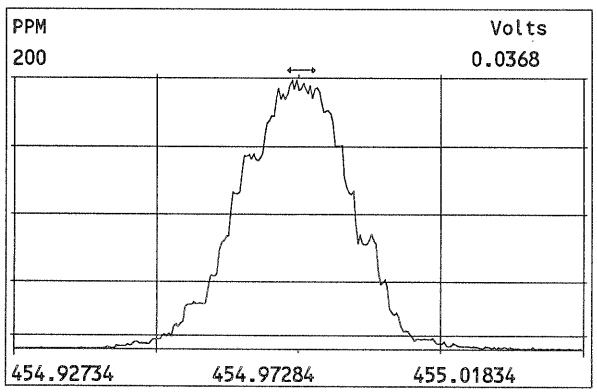




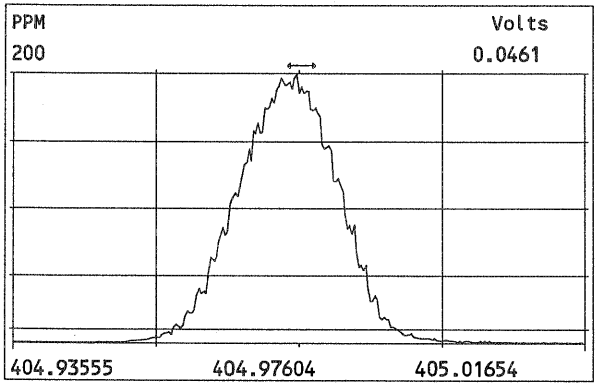


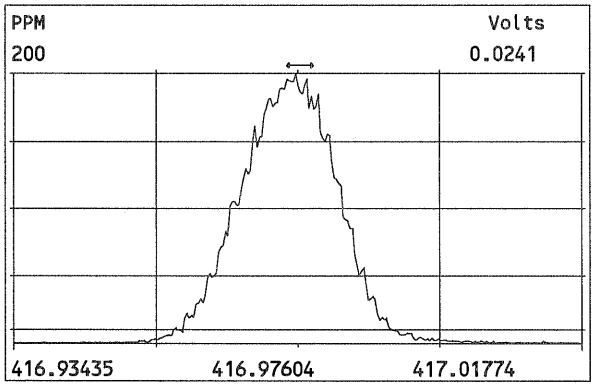


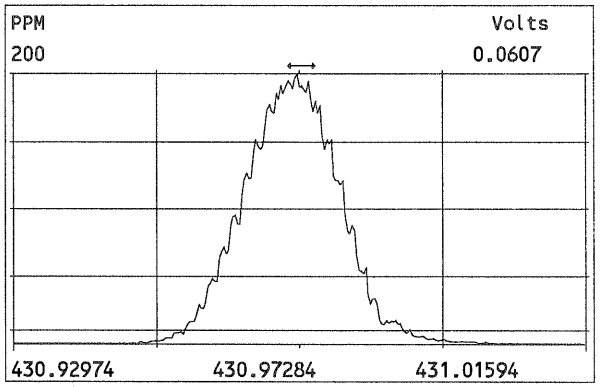


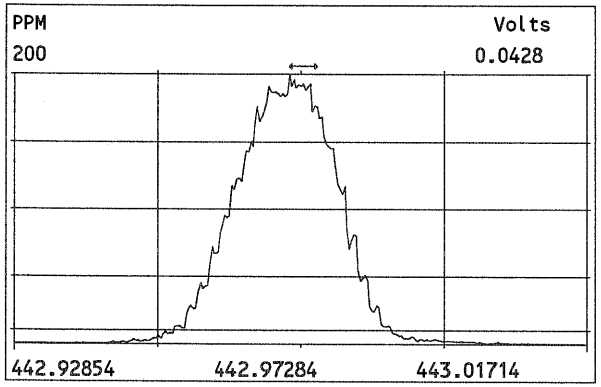


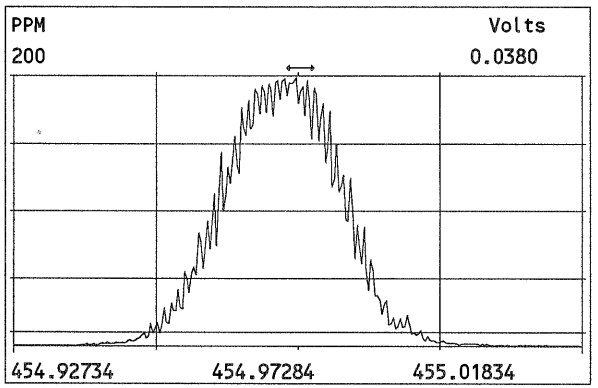
Peak Locate Examination:16-AUG-2010:08:30 File:15AUG10M_RES_CHECK
Experiment:PCDD Function:4 Reference:PFK

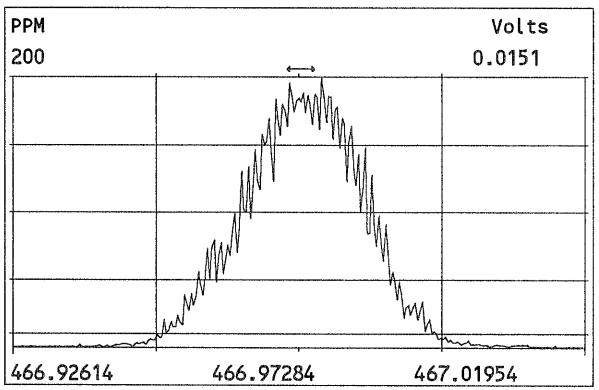


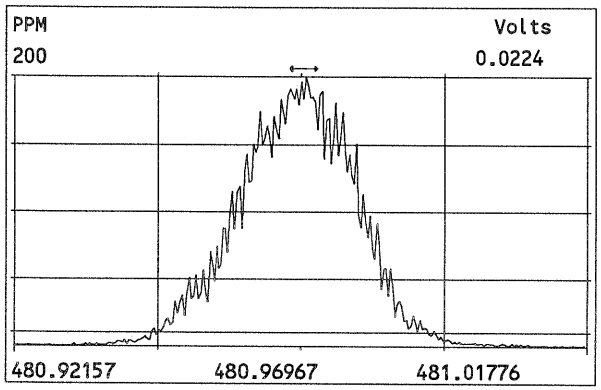






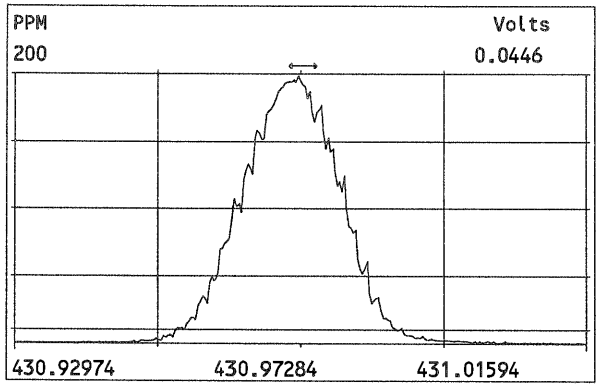


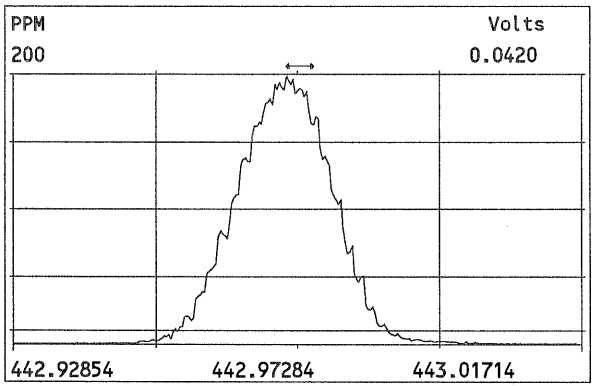


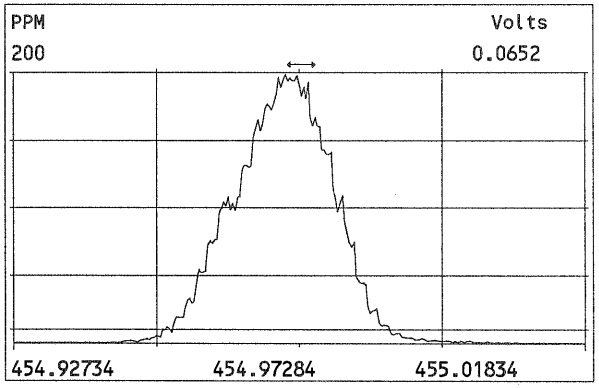


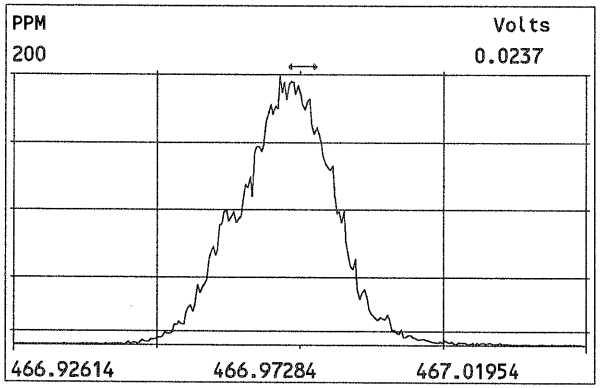
Peak Locate Examination:16-AUG-2010:08:30 File:15AUG10M_RES_CHECK

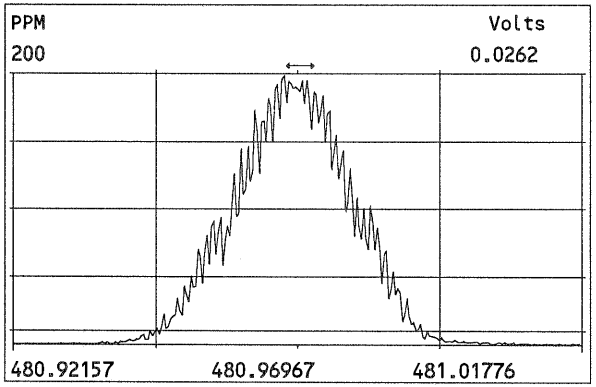
Experiment:PCDD Function:5 Reference:PFK

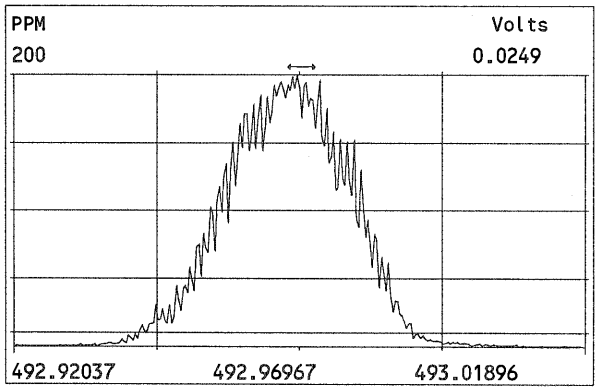


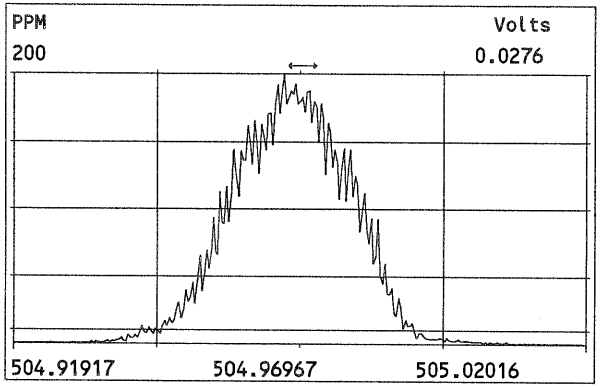


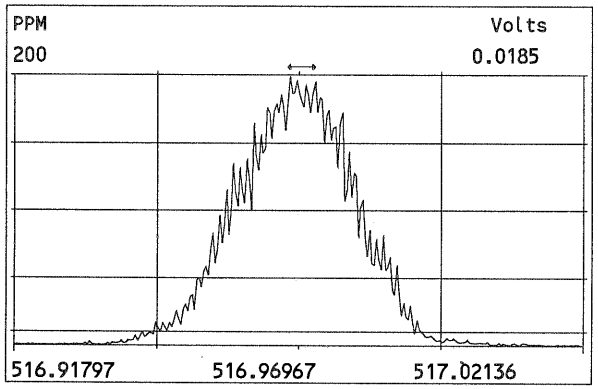












FRONTIER
ANALYTICAL LABORATORY

August 18, 2010

FAL Project: 6272

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 **6272**. This corresponds to your **Lora Lake RI** project under ARI project number **RG61**. Six soil samples were received on 8/3/2010 in good condition. You requested we analyze a matrix spike and matrix spike duplicate (MS/MSD) on sample 6272-002-SA (ARI ID: PSB1-1.5-2.0-072910). All 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 (TEFs) were used to calculate the toxic equivalents (TEQ) on your report. Analytical Resources Incorporated requested a Level IV data package and a turnaround time of fifteen business days for project **6272**.

Please note the analyte levels of OCDD in sample 6272-005-SA (ARI IDs: PSB3-0-0.5-072910) were outside the calibration range. This required a dilution and the results taken from the dilution are noted with the "*" qualifier.

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 chain of custody, our sample login form and the sample photo. 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. You also requested Electronic Data Deliverables (EDD) for this project. The EDD and Level I summary have been sent to you via email. The Level IV report has been sent to you on compact disk. A hardcopy of the data package will not be forwarded unless specifically requested. The attached 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.

FRONTIER
ANALYTICAL LABORATORY

If you have any questions regarding project **6272**, please feel free to contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Bradley B. Silverbush
Director of Operations

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: 6272

Received on: 08/03/2010 Project Due: 08/25/2010 Storage: R1

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time
6272-001-SA	0	RG61	PSB1-0-0.5-072910	EPA 1613 D/F	Soil	07/29/2010	03:59 pm
6272-002-SA	0	RG61	PSB1-1.5-2.0-072910	EPA 1613 D/F	Soil	07/29/2010	04:01 pm
6272-002-MS	0	RG61	PSB1-1.5-2.0-072910	EPA 1613 D/F	Soil	07/29/2010	04:01 pm
6272-002-MSD	0	RG61	PSB1-1.5-2.0-072910	EPA 1613 D/F	Soil	07/29/2010	04:01 pm
6272-003-SA	0	RG61	PSB2-0-0.5-072910	EPA 1613 D/F	Soil	07/29/2010	03:20 pm
6272-004-SA	0	RG61	PSB2-1.5-2-072910	EPA 1613 D/F	Soil	07/29/2010	03:22 pm
6272-005-SA	0	RG61	PSB3-0-0.5-072910	EPA 1613 D/F	Soil	07/29/2010	04:36 pm
6272-006-SA	0	RG61	PSB3-1.5-2-072910	EPA 1613 D/F	Soil	07/29/2010	04:35 pm

FAL Sample ID	Notes
6272-001-SA	'Sue to Kathy: Use sample ID from COC.'
6272-003-SA	'Sue to Kathy: Use sample ID from COC and sampling time from bottle label. '
6272-004-SA	'Sue to Kathy: Use sample ID from e-mail and sampling time from bottle label. '
6272-005-SA	'Sue to Kathy: Use sample ID from COC.'
6272-006-SA	'Sue to Kathy: Use sample ID from COC.'

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

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6272-001-MB
Client ID: Method Blank
Matrix: Soil
Batch No: X2079

Date Extracted: 08-12-2010
Date Received: NA
Amount: 2.00 g

ICal: PCDDFAL3-5-12-10
GC Column: DB5
Units: pg/g

Acquired: 08-15-2010
2005 WHO TEQ: 0.00

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.197		-	0.0262				
1,2,3,7,8-PeCDD	ND	0.313		-	0.0442				
1,2,3,4,7,8-HxCDD	ND	0.417		-	0.0486				
1,2,3,6,7,8-HxCDD	ND	0.492		-	0.0586	Total TCDD	ND	0.197	
1,2,3,7,8,9-HxCDD	ND	0.469		-	0.0529	Total PeCDD	ND	0.313	
1,2,3,4,6,7,8-HpCDD	ND	0.647		-	0.0954	Total HxCDD	ND	0.492	
OCDD	ND	1.68		-	0.154	Total HpCDD	ND	0.647	
2,3,7,8-TCDF	ND	0.0907		-	0.0205				
1,2,3,7,8-PeCDF	ND	0.223		-	0.0298				
2,3,4,7,8-PeCDF	ND	0.219		-	0.0313				
1,2,3,4,7,8-HxCDF	ND	0.251		-	0.0308				
1,2,3,6,7,8-HxCDF	ND	0.263		-	0.0317				
2,3,4,6,7,8-HxCDF	ND	0.292		-	0.0341				
1,2,3,7,8,9-HxCDF	ND	0.361		-	0.0387	Total TCDF	ND	0.0907	
1,2,3,4,6,7,8-HpCDF	ND	0.358		-	0.0418	Total PeCDF	ND	0.223	
1,2,3,4,7,8,9-HpCDF	ND	0.396		-	0.0429	Total HxCDF	ND	0.361	
OCDF	ND	0.952		-	0.105	Total HpCDF	ND	0.396	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	86.1	25.0 - 164	
13C-1,2,3,7,8-PeCDD	88.0	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	89.5	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	86.0	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	68.4	23.0 - 140	
13C-OCDD	48.5	17.0 - 157	
13C-2,3,7,8-TCDF	87.5	24.0 - 169	
13C-1,2,3,7,8-PeCDF	83.0	24.0 - 185	
13C-2,3,4,7,8-PeCDF	86.8	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	95.6	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	90.9	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	87.6	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	88.2	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	73.0	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	82.4	26.0 - 138	
13C-OCDF	56.7	17.0 - 157	

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

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

Analyst: _____
Date: 8/16/10

Reviewed By: _____
Date: 8/20/10

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 6272-001-OPR
Client ID: OPR
Matrix: Soil
Batch No: X2079

Date Extracted: 08-12-2010
Date Received: NA
Amount: 2.00 g

ICal: PCDDFAL3-5-12-10
GC Column: DB5
Units: ng/ml

Acquired: 08-15-2010
2005 WHO TEQ: NA

Compound	Conc	QC Limits	Qual
2,3,7,8-TCDD	8.75	6.70 - 15.8	
1,2,3,7,8-PeCDD	46.3	35.0 - 71.0	
1,2,3,4,7,8-HxCDD	47.7	35.0 - 82.0	
1,2,3,6,7,8-HxCDD	45.9	38.0 - 67.0	
1,2,3,7,8,9-HxCDD	48.1	32.0 - 81.0	
1,2,3,4,6,7,8-HpCDD	47.0	35.0 - 70.0	
OCDD	101	78.0 - 144	
2,3,7,8-TCDF	8.43	7.50 - 15.8	
1,2,3,7,8-PeCDF	46.9	40.0 - 67.0	
2,3,4,7,8-PeCDF	45.8	34.0 - 80.0	
1,2,3,4,7,8-HxCDF	42.9	36.0 - 67.0	
1,2,3,6,7,8-HxCDF	43.4	42.0 - 65.0	
2,3,4,6,7,8-HxCDF	43.2	35.0 - 78.0	
1,2,3,7,8,9-HxCDF	42.9	39.0 - 65.0	
1,2,3,4,6,7,8-HpCDF	42.2	41.0 - 61.0	
1,2,3,4,7,8,9-HpCDF	43.6	39.0 - 69.0	
OCDF	89.6	63.0 - 170	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	92.9	20.0 - 175	
13C-1,2,3,7,8-PeCDD	88.1	21.0 - 227	
13C-1,2,3,4,7,8-HxCDD	96.3	21.0 - 193	
13C-1,2,3,6,7,8-HxCDD	90.5	25.0 - 163	
13C-1,2,3,4,6,7,8-HpCDD	77.0	26.0 - 166	
13C-OCDD	57.6	13.0 - 198	
13C-2,3,7,8-TCDF	94.1	22.0 - 152	
13C-1,2,3,7,8-PeCDF	85.3	21.0 - 192	
13C-2,3,4,7,8-PeCDF	87.6	13.0 - 328	
13C-1,2,3,4,7,8-HxCDF	94.2	19.0 - 202	
13C-1,2,3,6,7,8-HxCDF	89.2	21.0 - 159	
13C-2,3,4,6,7,8-HxCDF	90.7	22.0 - 176	
13C-1,2,3,7,8,9-HxCDF	93.8	17.0 - 205	
13C-1,2,3,4,6,7,8-HpCDF	77.8	21.0 - 158	
13C-1,2,3,4,7,8,9-HpCDF	89.2	20.0 - 186	
13C-OCDF	63.5	13.0 - 198	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	92.3	31.0 - 191	

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: 8/16/10

Reviewed By: _____
Date: 8/20/10