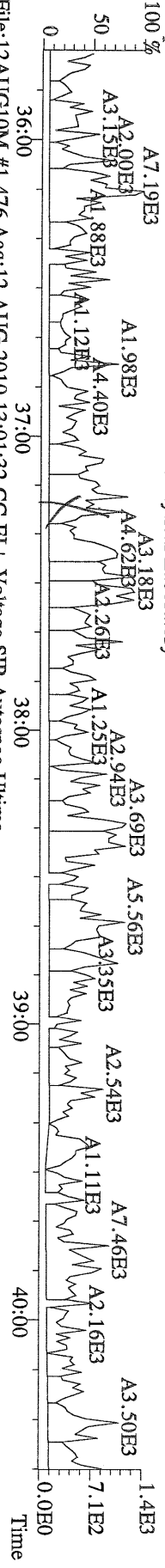
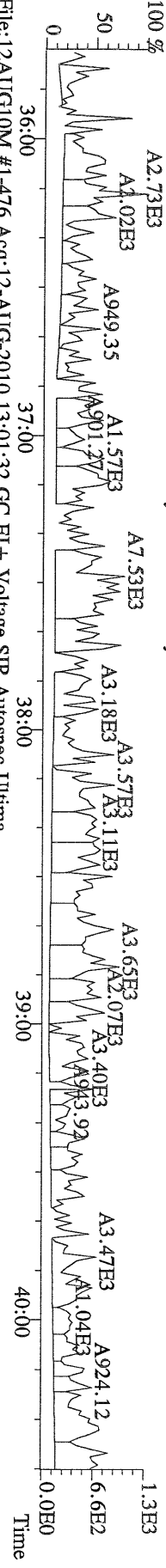


File:12AUG10M #1-476 Acq:12-AUG-2010 13:01:32 GC EI + Voltage SIR Autospec-Ultima
 389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



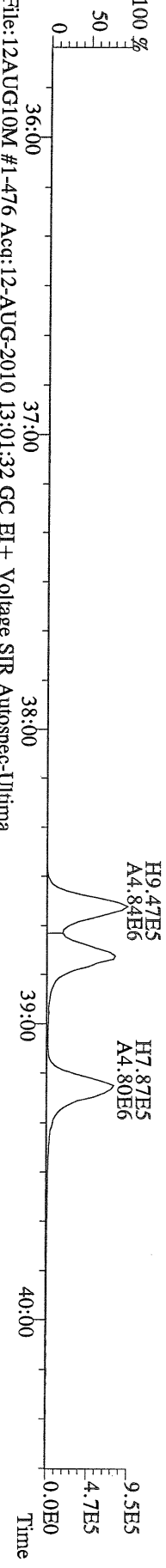
File:12AUG10M #1-476 Acq:12-AUG-2010 13:01:32 GC EI + Voltage SIR Autospec-Ultima
 391.8127 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



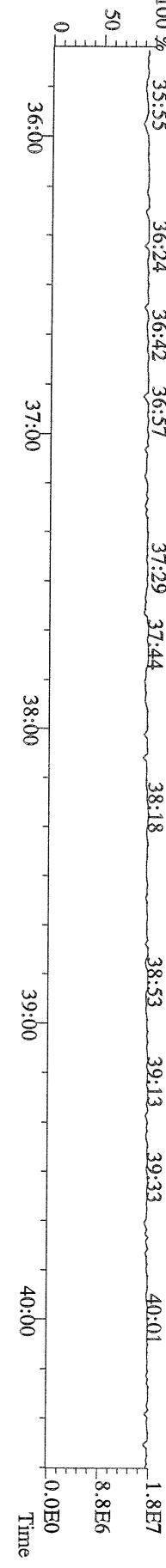
File:12AUG10M #1-476 Acq:12-AUG-2010 13:01:32 GC EI + Voltage SIR Autospec-Ultima
 401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



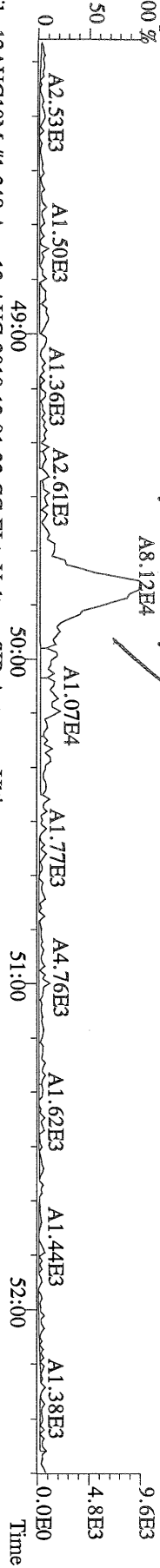
File:12AUG10M #1-476 Acq:12-AUG-2010 13:01:32 GC EI + Voltage SIR Autospec-Ultima
 403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



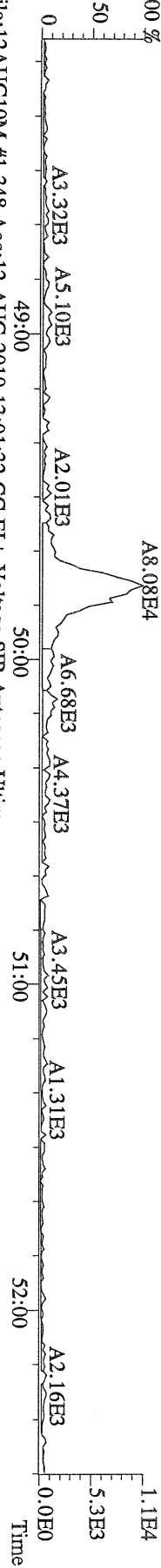
File:12AUG10M #1-476 Acq:12-AUG-2010 13:01:32 GC EI + Voltage SIR Autospec-Ultima
 380.9760 S:3 F:3 Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



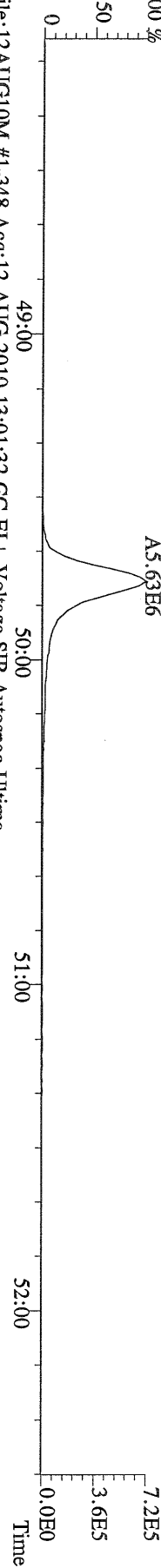
File:12AUG10M #1-348 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Ultima
 457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



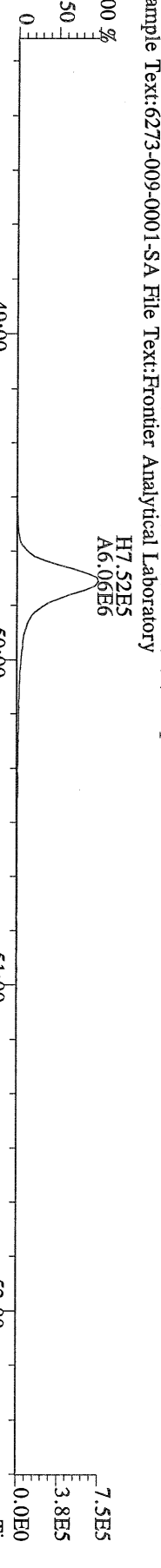
File:12AUG10M #1-348 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Ultima
 459.7348 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



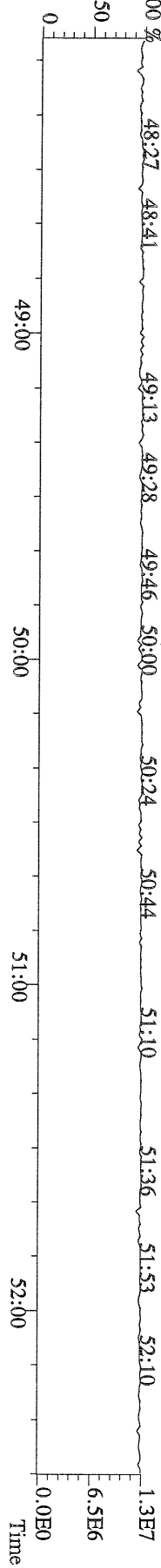
File:12AUG10M #1-348 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Ultima
 469.7780 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



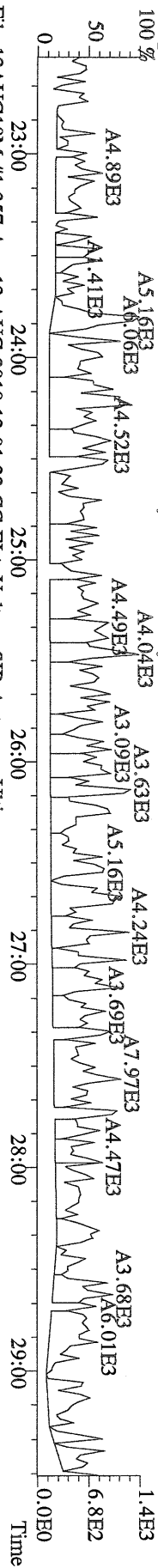
File:12AUG10M #1-348 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Ultima
 471.7750 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



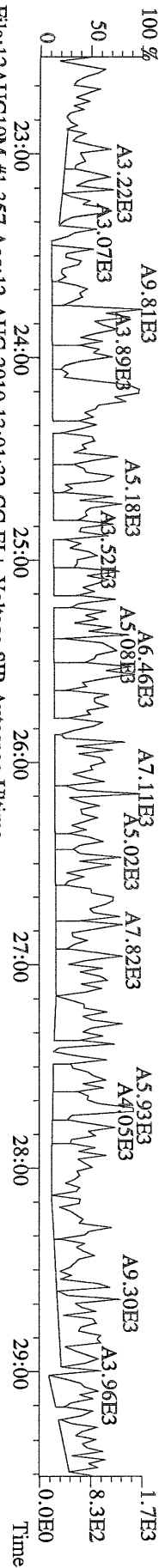
File:12AUG10M #1-348 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Ultima
 454.9728 S:3 F:5 Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



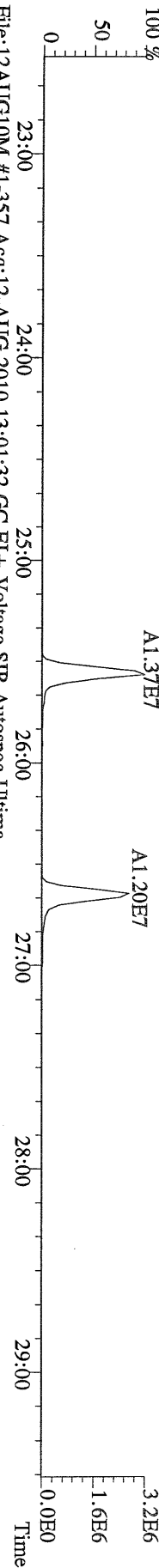
File:12AUG10M #1-357 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



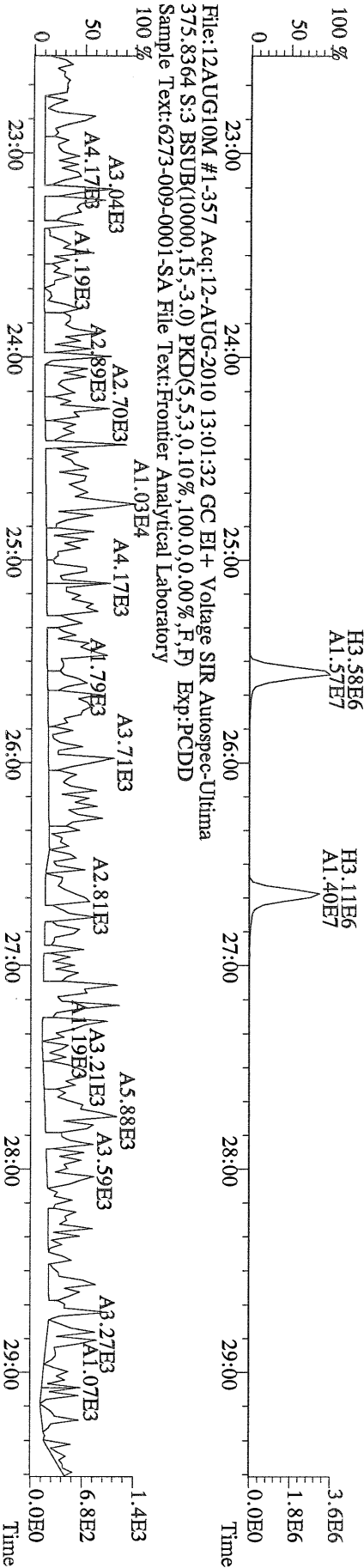
File:12AUG10M #1-357 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



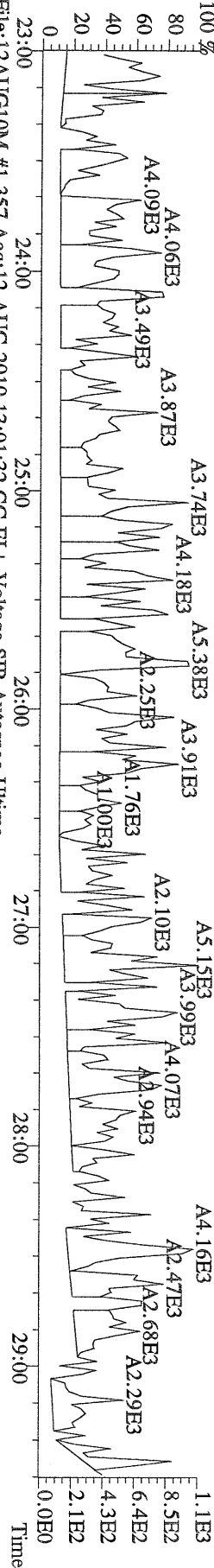
File:12AUG10M #1-357 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



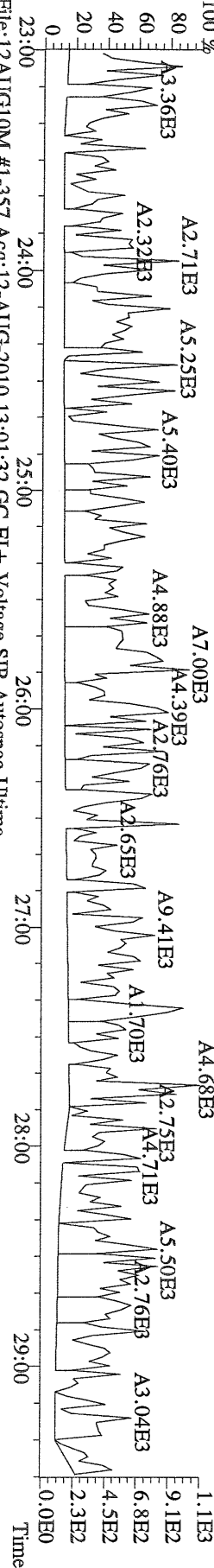
File:12AUG10M #1-357 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



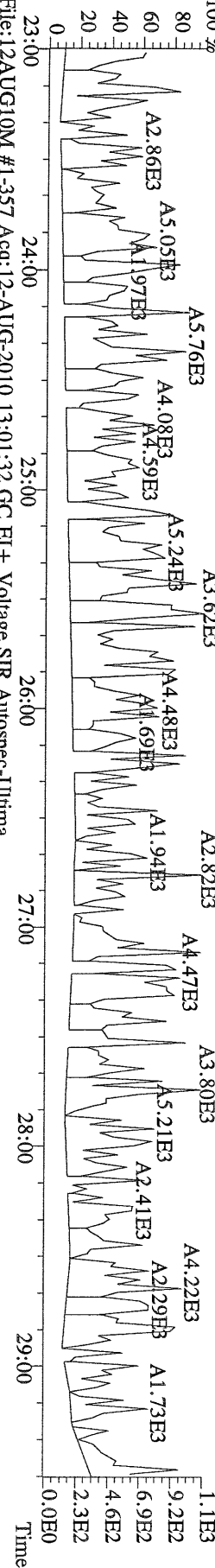
File:12AUG10M #1-357 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



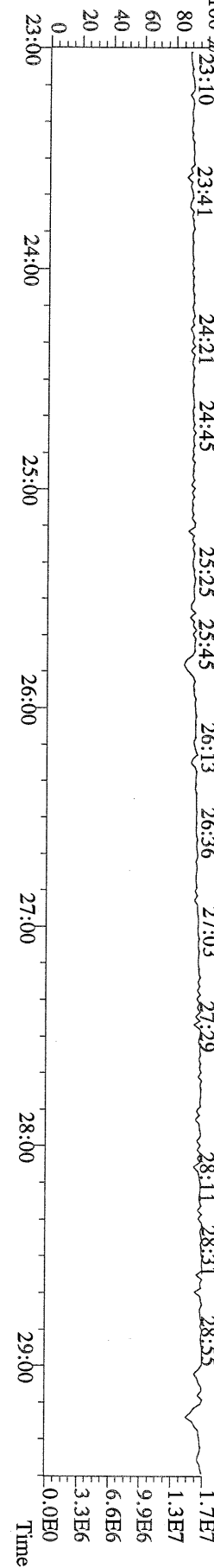
File:12AUG10M #1-357 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Ultima
 341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



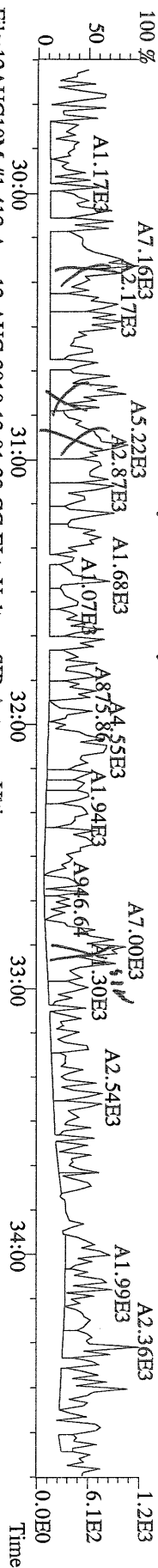
File:12AUG10M #1-357 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Ultima
 409.7974 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



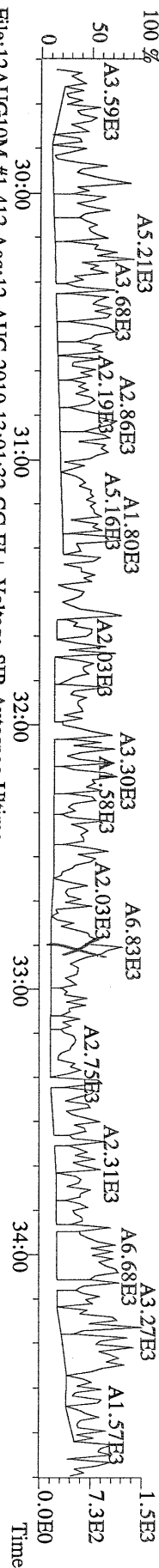
File:12AUG10M #1-357 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Ultima
 330.9792 S:3 Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



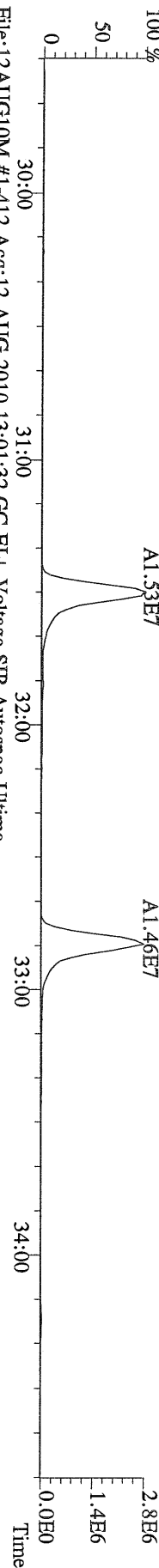
File:12AUG10M #1-412 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Utima
 339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



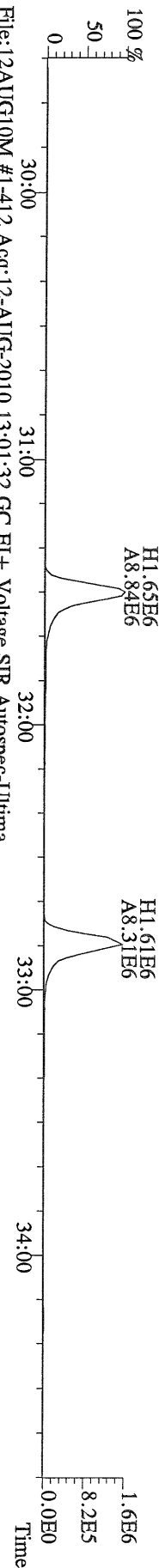
File:12AUG10M #1-412 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Utima
 341.8568 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



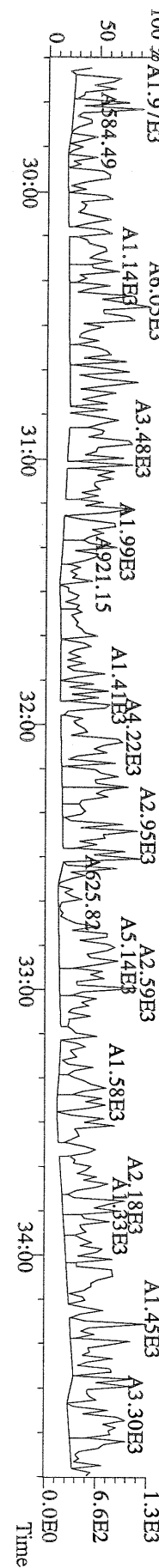
File:12AUG10M #1-412 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Utima
 351.9000 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



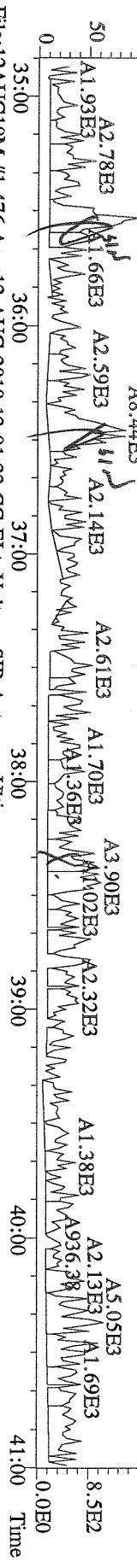
File:12AUG10M #1-412 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Utima
 353.8970 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



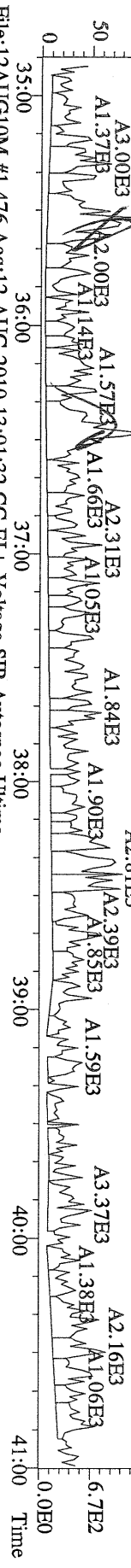
File:12AUG10M #1-412 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Utima
 409.7974 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



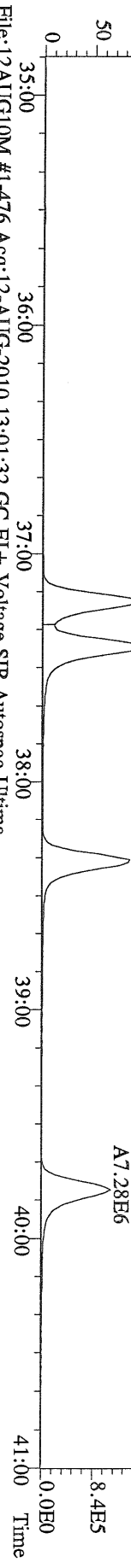
File:12AUG10M #1-476 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Ulhma
 373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



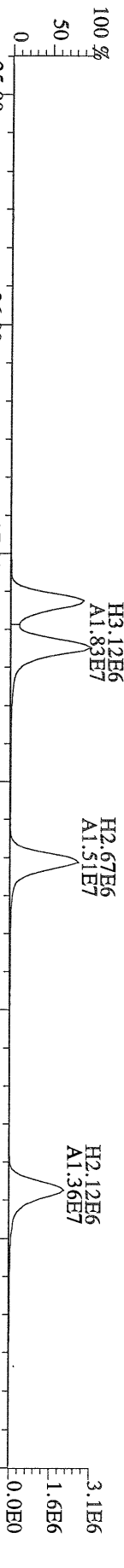
File:12AUG10M #1-476 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Ulhma
 375.8178 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



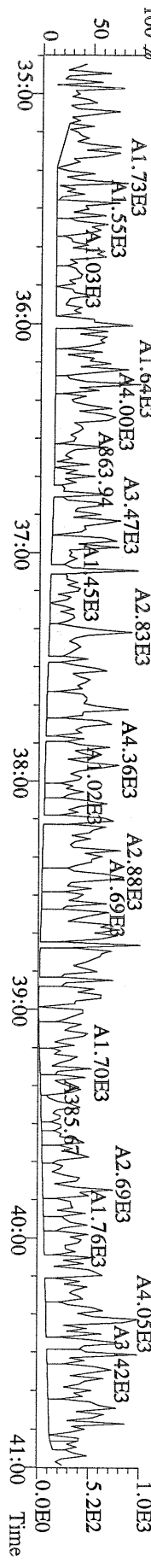
File:12AUG10M #1-476 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Ulhma
 383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



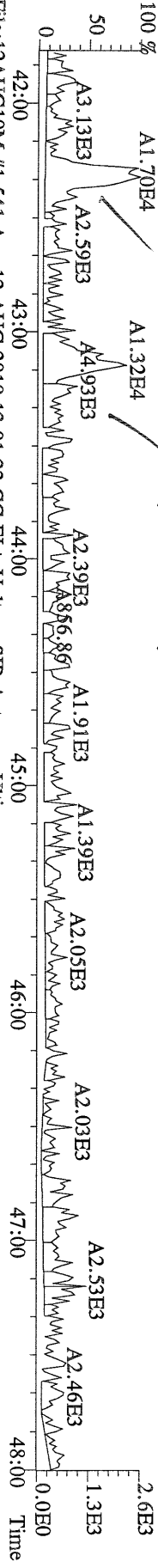
File:12AUG10M #1-476 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Ulhma
 385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



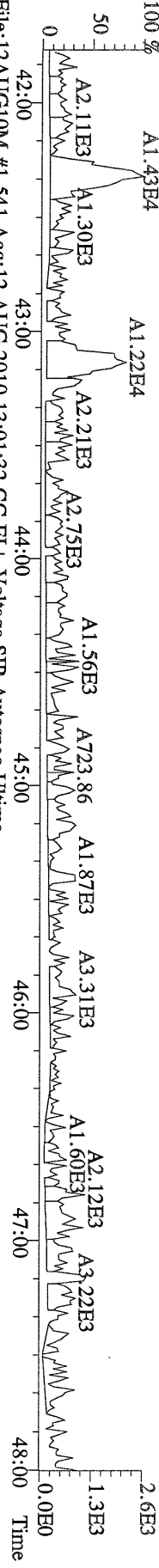
File:12AUG10M #1-476 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Ulhma
 445.7555 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



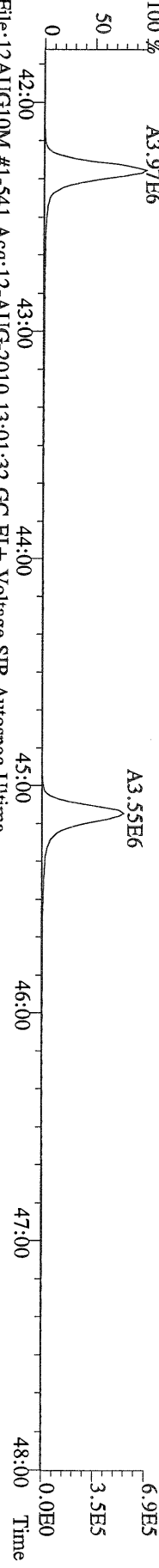
File:12AUG10M #1-541 Acq:12-AUG-2010 13:01:32 GC EI + Voltage SIR Autospec-Ultima
407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



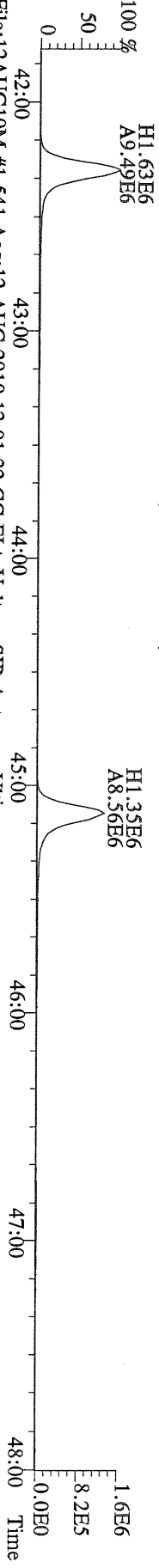
File:12AUG10M #1-541 Acq:12-AUG-2010 13:01:32 GC EI + Voltage SIR Autospec-Ultima
409.7788 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



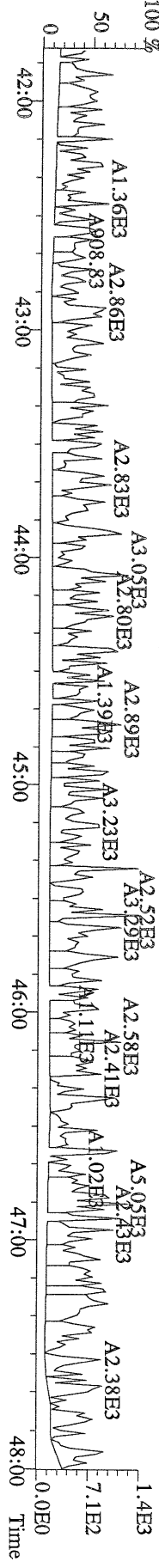
File:12AUG10M #1-541 Acq:12-AUG-2010 13:01:32 GC EI + Voltage SIR Autospec-Ultima
417.8253 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



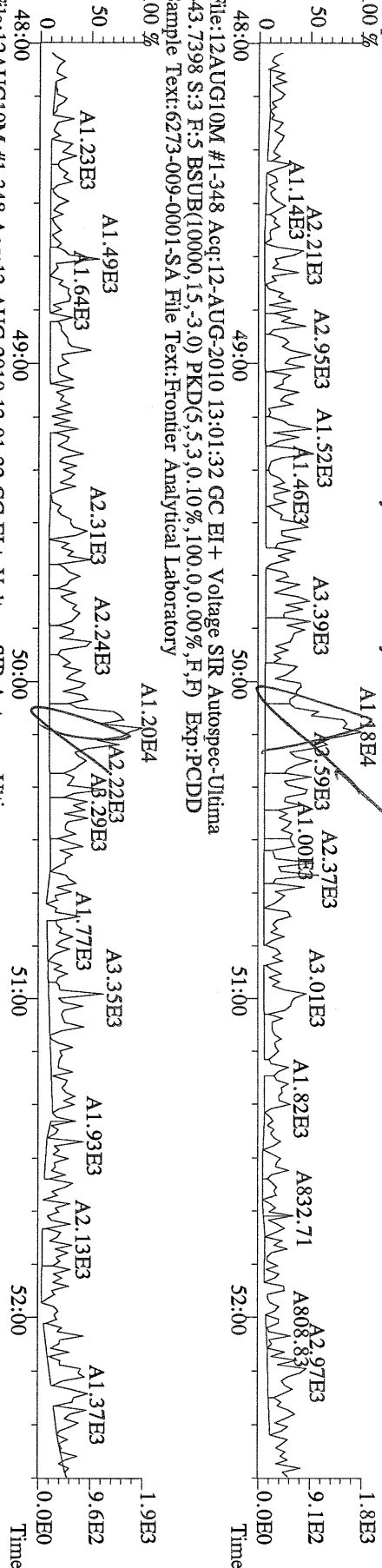
File:12AUG10M #1-541 Acq:12-AUG-2010 13:01:32 GC EI + Voltage SIR Autospec-Ultima
419.8220 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



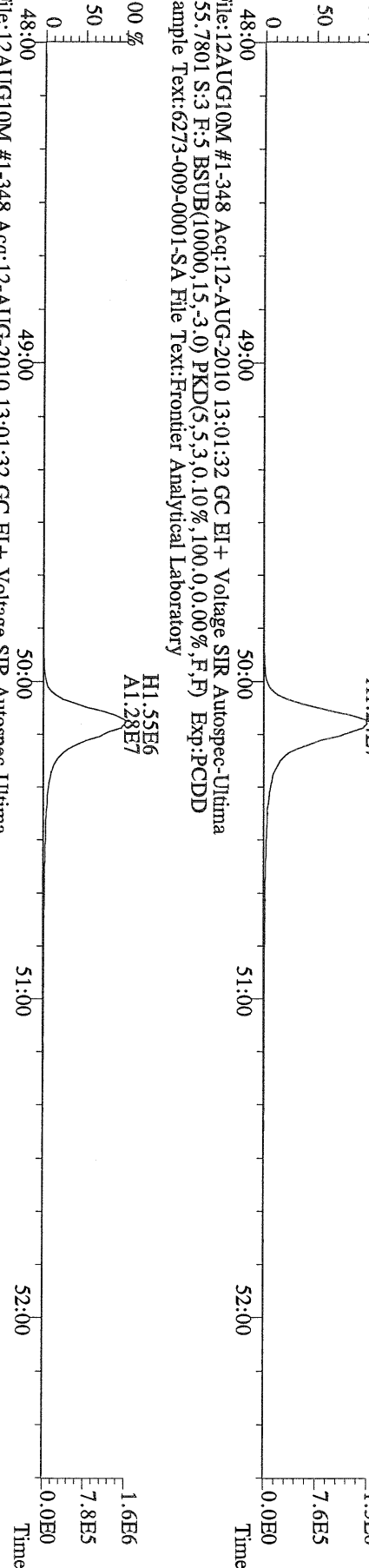
File:12AUG10M #1-541 Acq:12-AUG-2010 13:01:32 GC EI + Voltage SIR Autospec-Ultima
479.7165 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



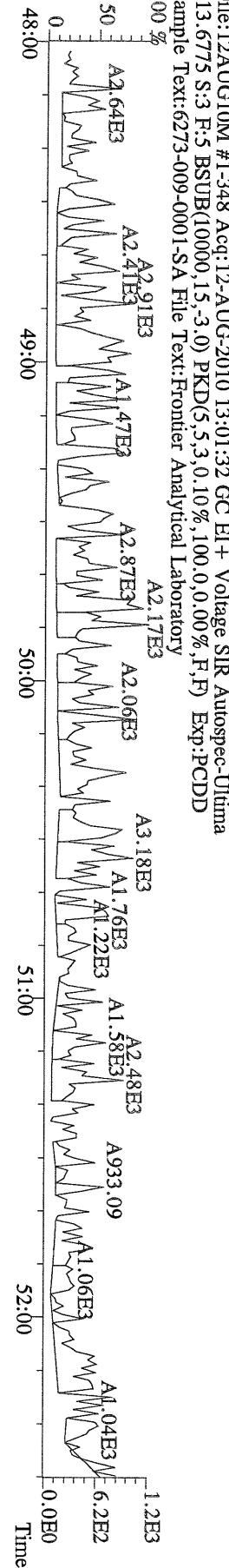
File:12AUG10M #1-348 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Utima
441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



File:12AUG10M #1-348 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Utima
453.7831 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



File:12AUG10M #1-348 Acq:12-AUG-2010 13:01:32 GC EI+ Voltage SIR Autospec-Utima
513.6775 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



FAL ID: 6273-010-0001-SA Filename: 11AUG10M Sam:4 Acquired: 11-AUG-10 12:22:02 ICal: PCDDFAL3-5-12-10
 Client ID: PSB08-0.0-0.5-072810 ConCal: ST081110M1 EndCal: ST081110M2

Results: 2076 GC Column: DB5 Amount: 4.130

NATO 1989 Tox: 0.284
 WHO 1998 Tox: 0.168 WHO 2005 Tox:

0.143
 0.194
 DN
 8/12/10

Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL	DL	
2,3,7,8-TCDD	*	* n	NotFnd	1.04	*		2.50	386	374	0.425	
1,2,3,7,8-PeCDD	*	* n	NotFnd	1.05	*		2.50	500	515	0.611	
1,2,3,4,7,8-HxCDD	*	* n	NotFnd	1.30	*		2.50	562	459	0.632	
1,2,3,6,7,8-HxCDD	*	* n	NotFnd	1.28	*		2.50	562	459	0.764	
1,2,3,7,8,9-HxCDD	*	* n	NotFnd	1.25	*		2.50	562	459	0.716	
1,2,3,4,6,7,8-HpCDD	2.44e+05	0.97 y	44:11	1.35	12.1		2.50	-	-	*	
OCDD	1.33e+06	0.99 y	49:45	1.25	117		2.50	-	-	*	
2,3,7,8-TCDF	*	* n	NotFnd	1.62	*		2.50	441	527	0.261	
1,2,3,7,8-PeCDF	*	* n	NotFnd	0.92	*		2.50	433	479	0.380	
2,3,4,7,8-PeCDF	*	* n	NotFnd	0.94	*		2.50	433	479	0.393	
1,2,3,4,7,8-HxCDF	*	* n	NotFnd	0.93	*		2.50	498	462	0.414	
1,2,3,6,7,8-HxCDF	*	* n	NotFnd	0.84	*		2.50	498	462	0.437	
2,3,4,6,7,8-HxCDF	*	* n	NotFnd	0.90	*		2.50	498	462	0.459	
1,2,3,7,8,9-HxCDF	*	* n	NotFnd	0.98	*		2.50	498	462	0.524	
1,2,3,4,6,7,8-HpCDF	8.08e+04	1.10 y	42:16	1.38	3.37	J	2.50	-	-	*	
1,2,3,4,7,8,9-HpCDF	*	* n	NotFnd	1.62	*		2.50	448	366	0.500	
OCDF	1.64e+05	0.85 y	50:07	0.74	12.1		2.50	-	-	*	
										Rec	
13C-2,3,7,8-TCDD	9.26e+06	0.82 y	27:22	0.93	420					86.8	
13C-1,2,3,7,8-PeCDD	9.70e+06	1.77 y	33:11	0.81	505					104	
13C-1,2,3,4,7,8-HxCDD	7.29e+06	1.22 y	38:34	0.95	441					91.2	
13C-1,2,3,6,7,8-HxCDD	6.42e+06	1.21 y	38:44	1.00	370					76.3	
13C-1,2,3,4,6,7,8-HpCDD	7.19e+06	1.01 y	44:10	0.92	448					92.4	
13C-OCDD	8.76e+06	0.96 y	49:44	0.63	794					82.0	
13C-2,3,7,8-TCDF	1.26e+07	0.87 y	26:36	0.87	347					71.6	
13C-1,2,3,7,8-PeCDF	1.50e+07	1.67 y	31:28	0.81	442					91.3	
13C-2,3,4,7,8-PeCDF	1.45e+07	1.66 y	32:46	0.75	460					95.0	
13C-1,2,3,4,7,8-HxCDF	1.57e+07	0.52 y	37:10	1.74	518					107	
13C-1,2,3,6,7,8-HxCDF	1.80e+07	0.53 y	37:22	2.17	476					98.4	
13C-2,3,4,6,7,8-HxCDF	1.51e+07	0.53 y	38:19	1.82	477					98.6	
13C-1,2,3,7,8,9-HxCDF	1.33e+07	0.53 y	39:45	1.49	512					106	
13C-1,2,3,4,6,7,8-HpCDF	8.40e+06	0.44 y	42:15	1.10	439					90.6	
13C-1,2,3,4,7,8,9-HpCDF	7.26e+06	0.43 y	45:05	0.81	511					105	
13C-OCDF	1.77e+07	0.98 y	50:06	1.19	857					88.5	
37Cl-2,3,7,8-TCDD	3.91e+06		27:23	0.93	177					91.3	
13C-1,2,3,4-TCDD	1.15e+07	0.84 y	26:48	-	8.22						
13C-1,2,3,4-TCDF	2.03e+07	0.88 y	25:31	-	9.23						
13C-1,2,3,7,8,9-HxCDD	8.45e+06	1.23 y	39:11	-	9.49						
							Fac Noise-1	Noise-2	DL	#Hom	
Total Tetra-Dioxins	*		NotFnd	1.04	*		2.50	386	374	0.425	0
Total Penta-Dioxins	*		NotFnd	1.05	*		2.50	500	515	0.611	0
Total Hexa-Dioxins	*		NotFnd	1.27	*		2.50	984	874	1.28	0
Total Hepta-Dioxins	4.70e+05		42:48	1.35	23.3		2.50	-	-	*	2
Total Tetra-Furans	*		NotFnd	1.62	*		2.50	441	527	0.261	0
1st Fn. Tot Penta-Furans	*		NotFnd	0.93	*		2.50	433	479	0.393	PeCDF 0
Total Penta-Furans	*		NotFnd	0.93	*		2.50	433	479	0.393	* 0
Total Hexa-Furans	6.46e+04		35:31	0.90	2.22	J	2.50	-	-	*	2
Total Hepta-Furans	2.67e+05		42:16	1.48	11.1		2.50	-	-	*	2

Analyst: 

Date: 8/12/10

Totals class: Total Hepta-Dioxins

Entry #: 41

Run: 9

File: 11AUG10M

S: 4 I: 1 F: 4

Acquired: 11-AUG-10 12:22:02

Total Concentration: 23.3

Unnamed Concentration: 11.237

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
42:48	1.13e+05	1.13e+05	0.99 y	2.26e+05	11.2	
44:11	1.20e+05	1.23e+05	0.97 y	2.44e+05	12.1	1,2,3,4,6,7,8-HpCDD

Totals class: Total Hexa-Furans

Entry #: 45

Run: 9

File: 11AUG10M

S: 4 I: 1 F: 3

Acquired: 11-AUG-10 12:22:02

Total Concentration: 2.22

Unnamed Concentration: 2.224

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
35:31	1.20e+04	9.91e+03	1.21 y	2.19e+04	0.753	
36:25	2.20e+04	2.07e+04	1.06 y	4.27e+04	1.47	

Totals class: Total Hepta-Furans

Entry #: 46

Run: 9

File: 11AUG10M

S: 4 I: 1 F: 4

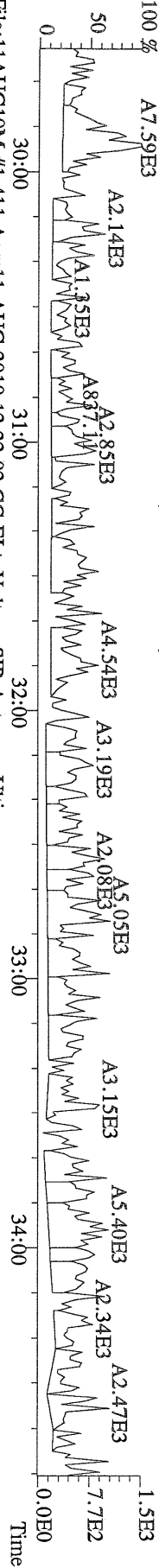
Acquired: 11-AUG-10 12:22:02

Total Concentration: 11.1

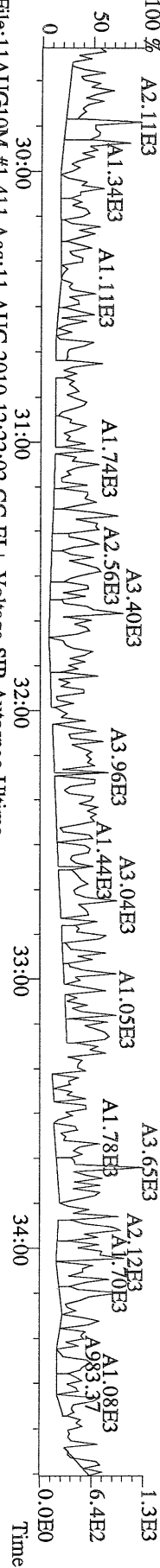
Unnamed Concentration: 7.737

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
42:16	4.23e+04	3.85e+04	1.10 y	8.08e+04	3.37	1,2,3,4,6,7,8-HpCDF
43:06	9.23e+04	9.35e+04	0.99 y	1.86e+05	7.74	

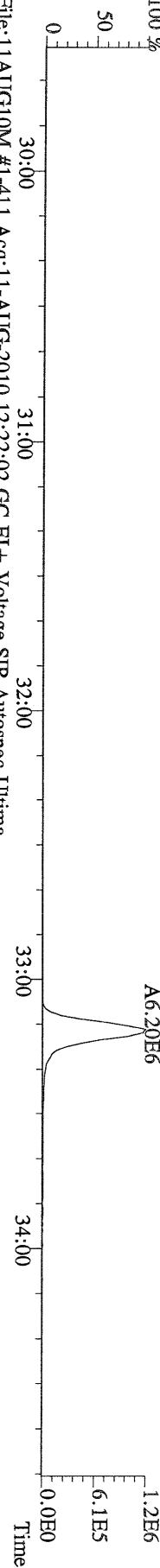
File:11AUG10M #1-411 Acq:11-AUG-2010 12:22:02 GC EI+ Voltage SIR Autospec-Ultime
 355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



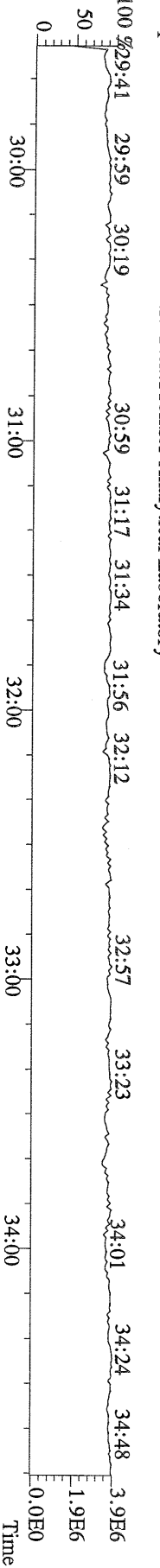
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 357.8517 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



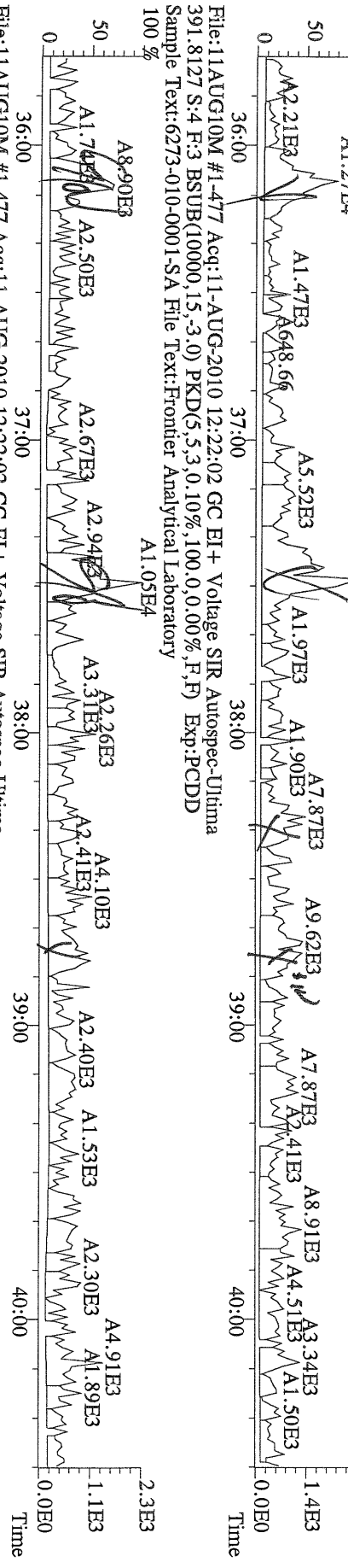
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 369.8919 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



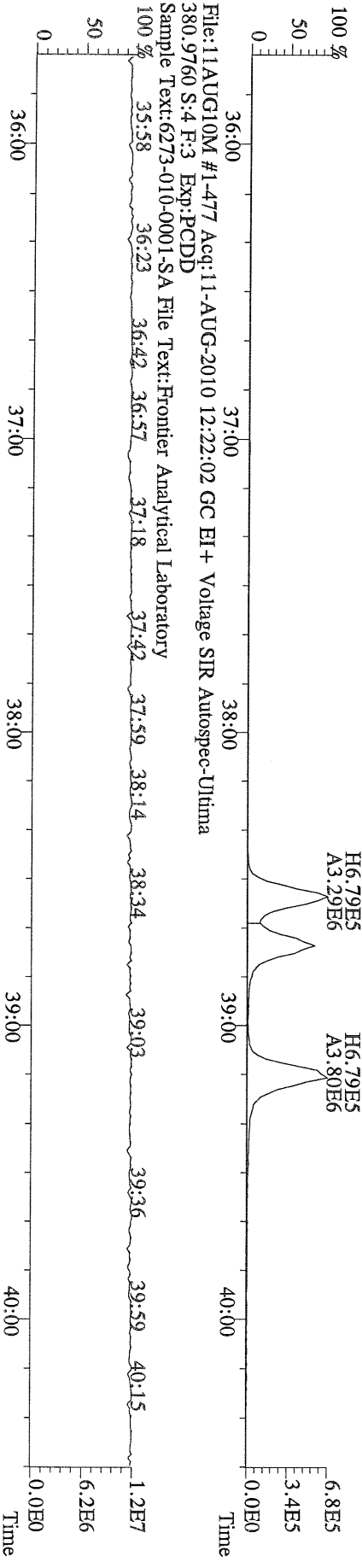
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 366.9792 S:4 F:2 Exp:PCDD
 Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



File:11AUG10M #1-477 Acq:11-AUG-2010 12:22:02 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp.:PCDD
Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



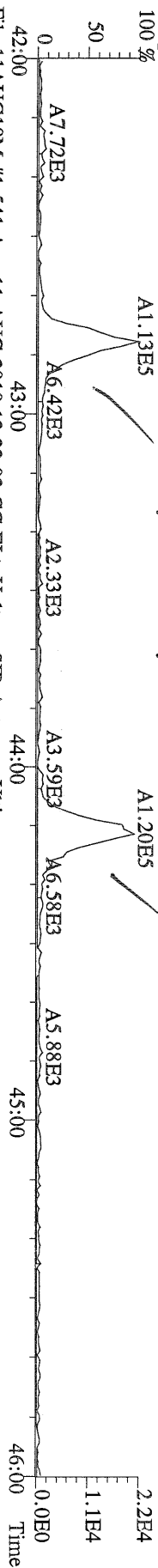
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401.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp.:PCDD
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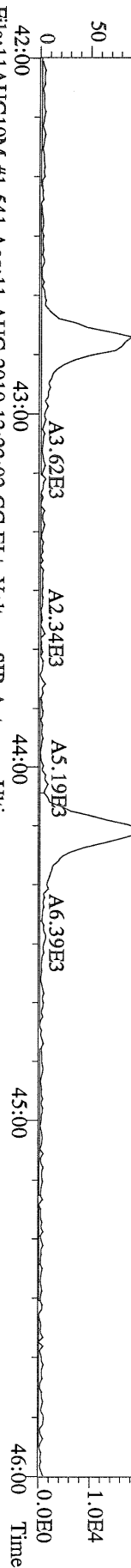
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380.9760 S:4 F:3 Exp.:PCDD
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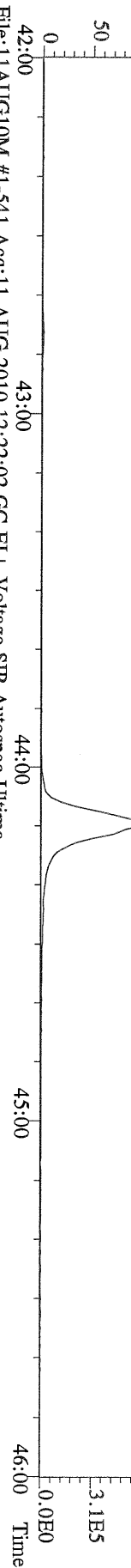
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423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



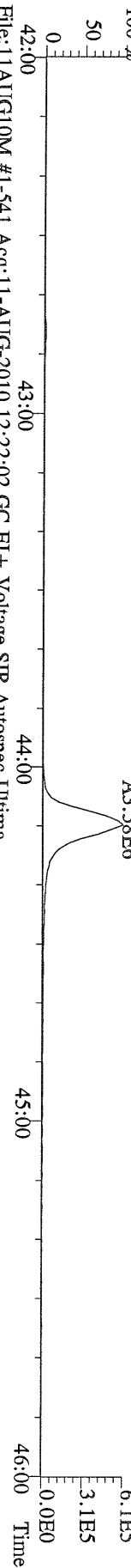
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425.7737 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



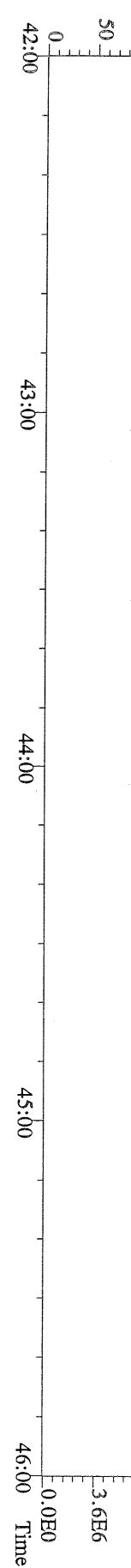
File:11AUG10M #1-541 Acq:11-AUG-2010 12:22:02 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



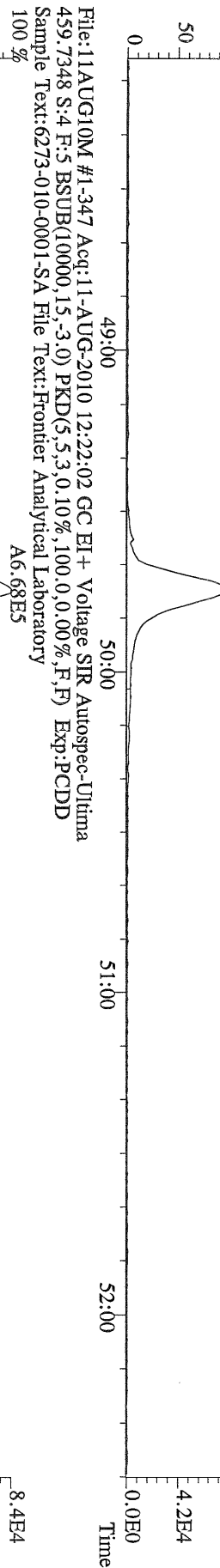
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437.8140 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



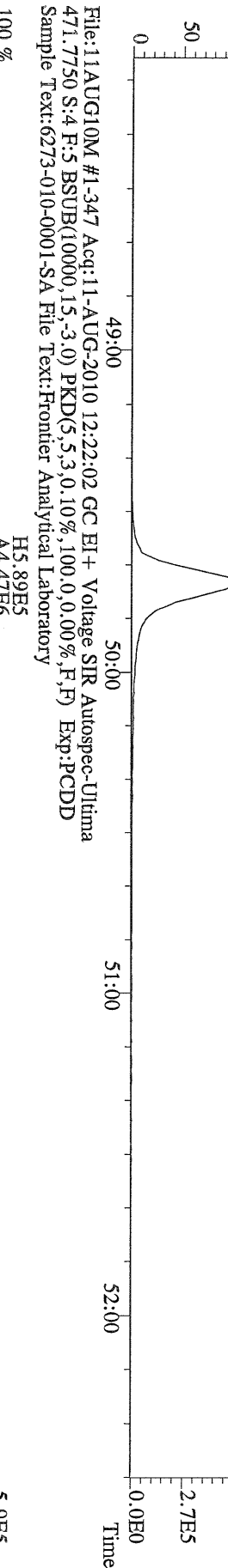
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430.9728 S:4 F:4 Exp:PCDD
Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



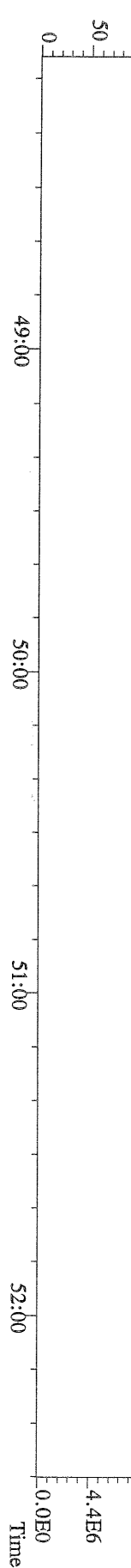
File:11AUG10M #1-347 Acq:11-AUG-2010 12:22:02 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



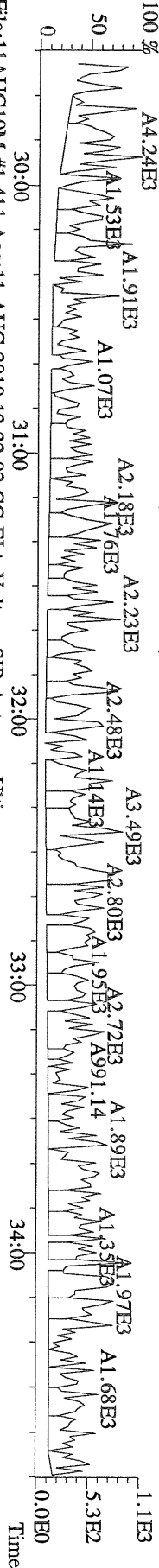
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469.7780 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



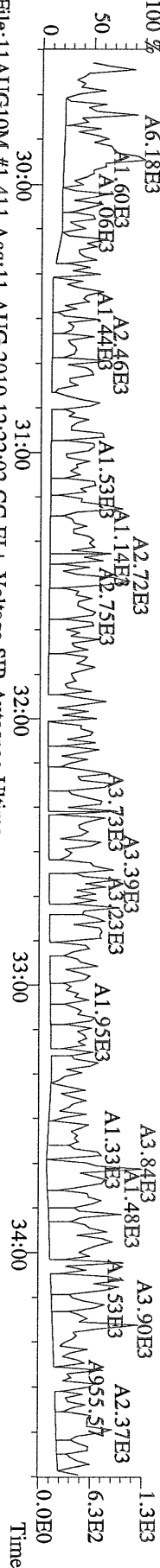
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471.7750 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
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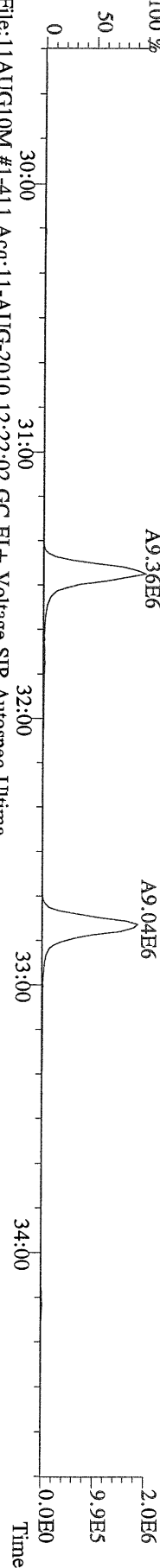
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 339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



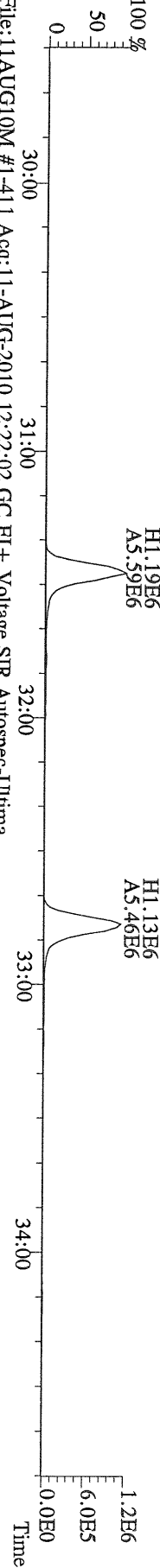
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 341.8568 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



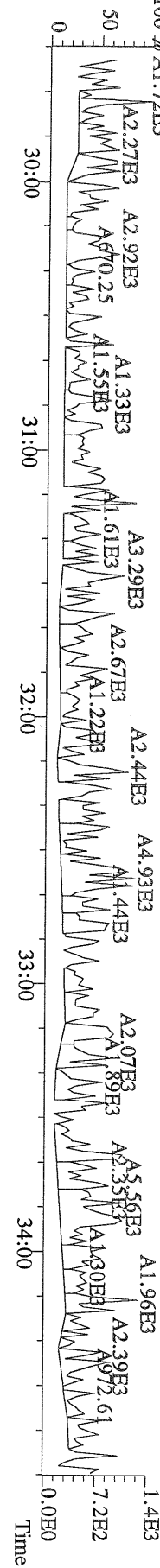
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 351.9000 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



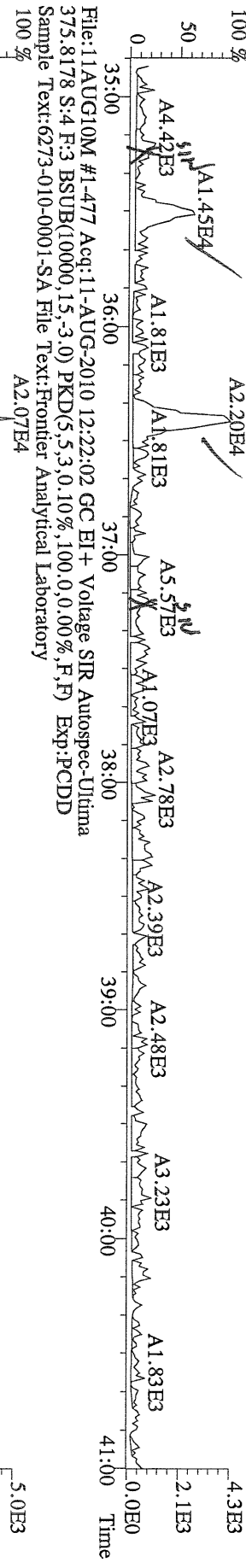
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 409.7974 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



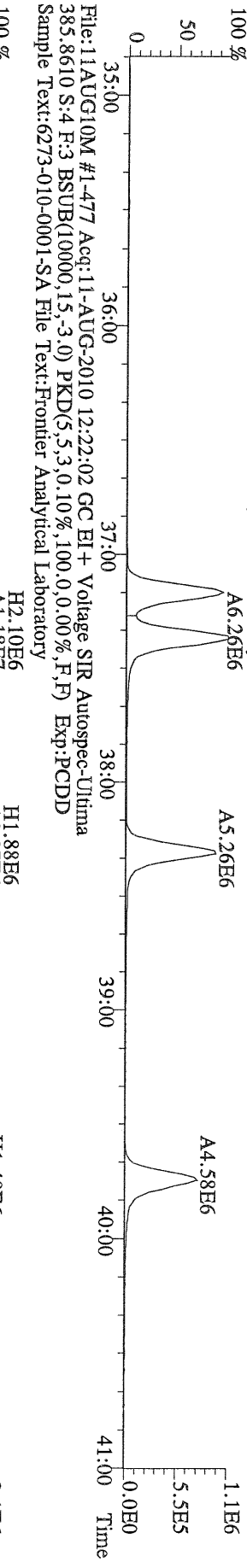
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 Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



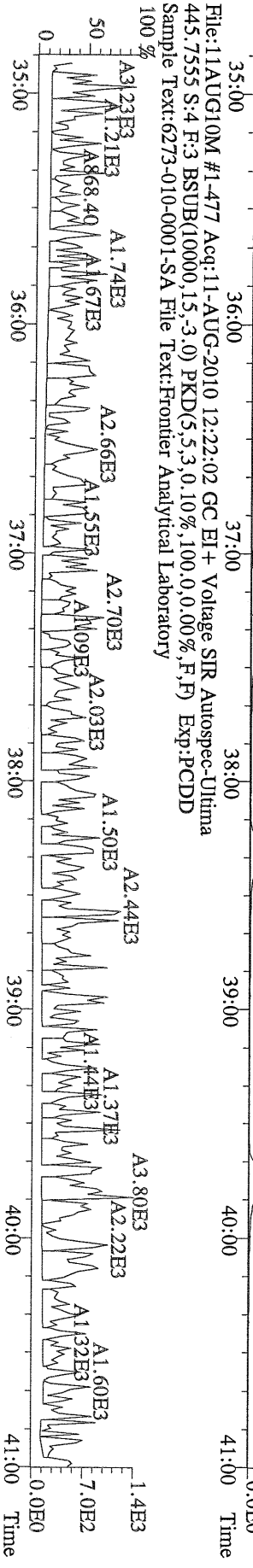
File:11AUG10M #1-477 Acq:11-AUG-2010 12:22:02 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0,100,0,0.00%,F,F) Exp:PCDD
Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



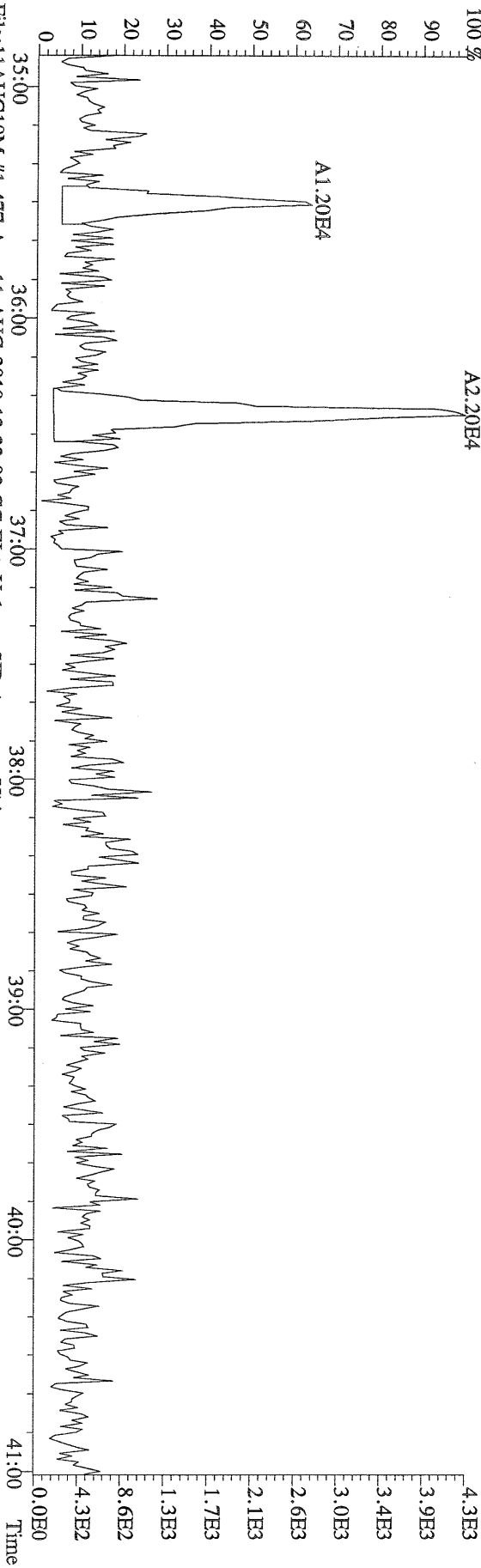
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383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0,100,0,0.00%,F,F) Exp:PCDD
Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



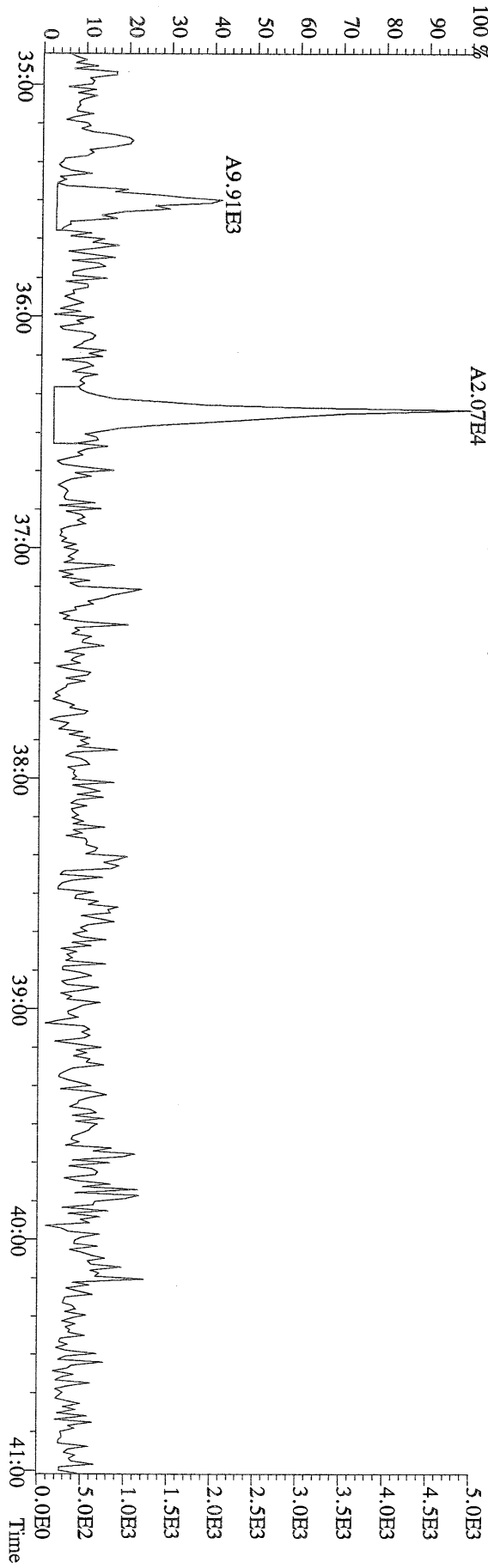
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445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0,100,0,0.00%,F,F) Exp:PCDD
Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



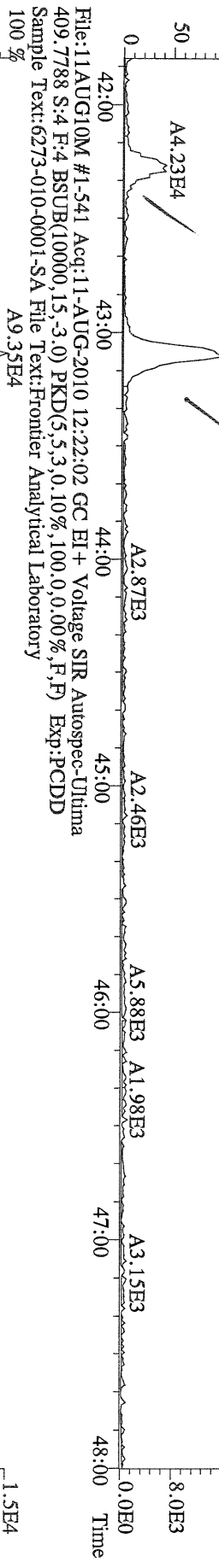
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Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



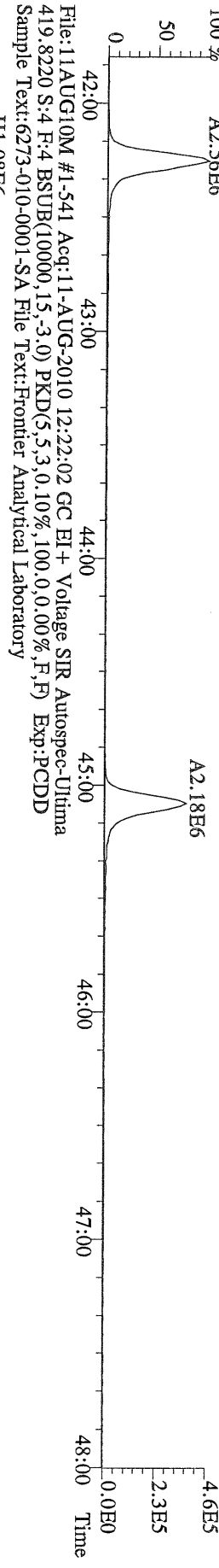
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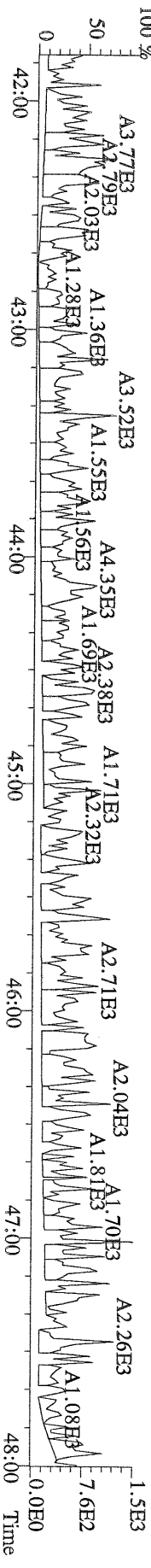
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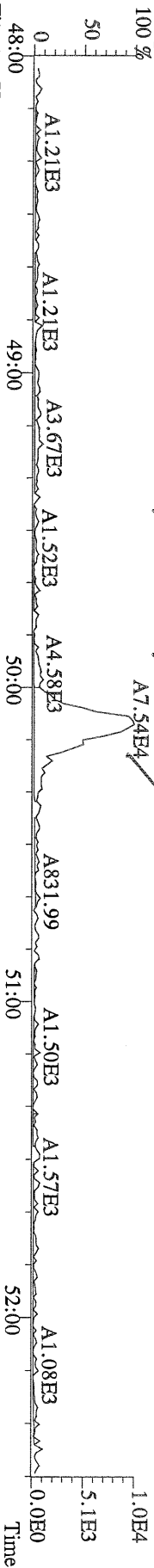
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417.8253 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
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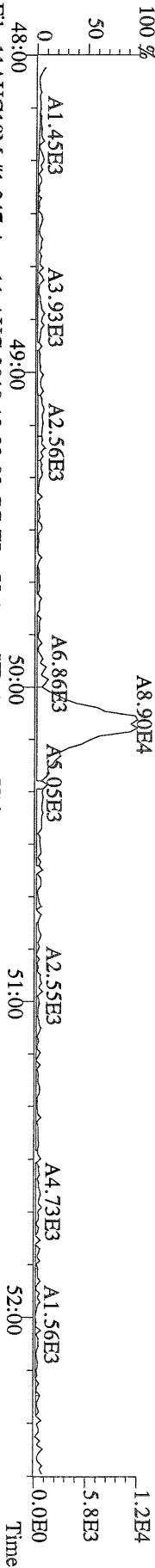
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479.7165 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
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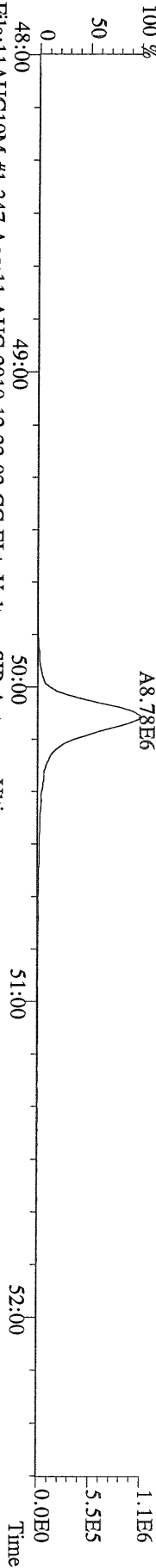
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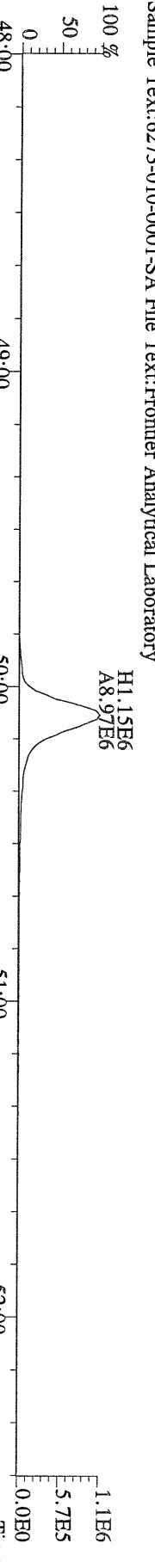
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443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



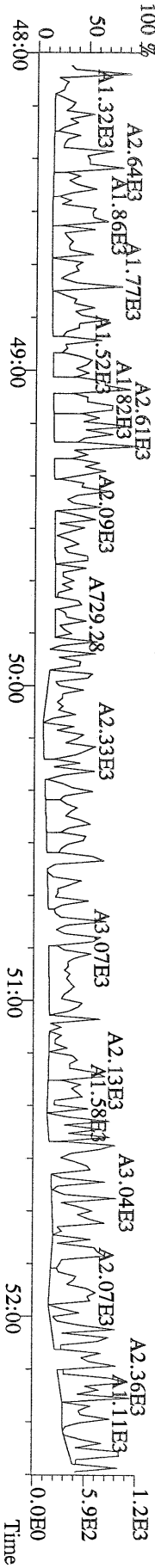
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453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



File:11AUG10M #1-347 Acq:11-AUG-2010 12:22:02 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



File:11AUG10M #1-347 Acq:11-AUG-2010 12:22:02 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-010-0001-SA File Text:Frontier Analytical Laboratory



FAL ID: 6273-011-0001-SA Filename: 12AUG10M Sam:4 Acquired: 12-AUG-10 13:56:54 ICal: PCDDFAL3-5-12-10
 Client ID: PSB08-1.5-2.0-072810 ConCal: ST081010N1 EndCal: ST081010N2
 Results: 6273-09 GC Column: DB5 Amount: 4.160

NATO 1989 Tox: 0.0799
 WHO 1998 Tox: 0.0468 WHO 2005 Tox: 0.0542

Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL	Rec	#Hom
2,3,7,8-TCDD	*	* n	NotFnd	1.04	*		2.50	282	654	0.285	
1,2,3,7,8-PeCDD	*	* n	NotFnd	1.05	*		2.50	594	462	0.410	
1,2,3,4,7,8-HxCDD	*	* n	NotFnd	1.30	*		2.50	818	538	0.532	
1,2,3,6,7,8-HxCDD	*	* n	NotFnd	1.28	*		2.50	818	538	0.630	
1,2,3,7,8,9-HxCDD	*	* n	NotFnd	1.25	*		2.50	818	538	0.599	
1,2,3,4,6,7,8-HpCDD	1.18e+05	1.10 y	44:13	1.35	3.79	J	2.50	-	-	*	
OCDD	5.52e+05	0.99 y	49:46	1.25	35.3		2.50	-	-	*	
2,3,7,8-TCDF	*	* n	NotFnd	1.62	*		2.50	530	505	0.117	
1,2,3,7,8-PeCDF	*	* n	NotFnd	0.92	*		2.50	528	658	0.306	
2,3,4,7,8-PeCDF	*	* n	NotFnd	0.94	*		2.50	528	658	0.299	
1,2,3,4,7,8-HxCDF	*	* n	NotFnd	0.93	*		2.50	487	557	0.271	
1,2,3,6,7,8-HxCDF	*	* n	NotFnd	0.84	*		2.50	487	557	0.284	
2,3,4,6,7,8-HxCDF	*	* n	NotFnd	0.90	*		2.50	487	557	0.308	
1,2,3,7,8,9-HxCDF	*	* n	NotFnd	0.98	*		2.50	487	557	0.367	
1,2,3,4,6,7,8-HpCDF	2.24e+04	1.01 y	42:20	1.38	0.530	J	2.50	-	-	*	
1,2,3,4,7,8,9-HpCDF	*	* n	NotFnd	1.62	*		2.50	411	372	0.281	
OCDF	2.87e+04	0.99 y	50:09	0.74	1.40	J	2.50	-	-	*	
13C-2,3,7,8-TCDD	1.74e+07	0.85 y	27:25	0.93	505					105	
13C-1,2,3,7,8-PeCDD	1.69e+07	1.73 y	33:14	0.81	563					117	
13C-1,2,3,4,7,8-HxCDD	1.22e+07	1.32 y	38:36	0.95	510					106	
13C-1,2,3,6,7,8-HxCDD	1.18e+07	1.32 y	38:46	1.00	470					97.7	
13C-1,2,3,4,6,7,8-HpCDD	1.11e+07	1.01 y	44:12	0.92	474					98.6	
13C-OCDD	1.20e+07	0.93 y	49:46	0.63	751					78.1	
13C-2,3,7,8-TCDF	2.90e+07	0.88 y	26:40	0.87	489					102	
13C-1,2,3,7,8-PeCDF	2.74e+07	1.74 y	31:30	0.81	498					104	
13C-2,3,4,7,8-PeCDF	2.65e+07	1.74 y	32:50	0.75	517					108	
13C-1,2,3,4,7,8-HxCDF	2.71e+07	0.54 y	37:12	1.74	615					128	
13C-1,2,3,6,7,8-HxCDF	3.13e+07	0.55 y	37:25	2.17	571					119	
13C-2,3,4,6,7,8-HxCDF	2.63e+07	0.54 y	38:21	1.82	572					119	
13C-1,2,3,7,8,9-HxCDF	2.25e+07	0.56 y	39:47	1.49	598					124	
13C-1,2,3,4,6,7,8-HpCDF	1.47e+07	0.42 y	42:18	1.10	530					110	
13C-1,2,3,4,7,8,9-HpCDF	1.29e+07	0.42 y	45:07	0.81	623					130	
13C-OCDF	2.67e+07	0.97 y	50:08	1.19	890					92.5	
37Cl-2,3,7,8-TCDD	7.19e+06		27:27	0.93	208					108	
13C-1,2,3,4-TCDD	1.79e+07	0.85 y	26:50	-	12.7						
13C-1,2,3,4-TCDF	3.28e+07	0.87 y	25:34	-	14.8						
13C-1,2,3,7,8,9-HxCDD	1.22e+07	1.32 y	39:12	-	13.6						
Total Tetra-Dioxins	*		NotFnd	1.04	*		2.50	904	1270	0.660	0
Total Penta-Dioxins	*		NotFnd	1.05	*		2.50	594	462	0.410	0
Total Hexa-Dioxins	*		NotFnd	1.27	*		2.50	818	538	0.630	0
Total Hepta-Dioxins	2.40e+05		42:51	1.35	7.71		2.50	-	-	*	2
Total Tetra-Furans	*		NotFnd	1.62	*		2.50	530	505	0.117	0
1st Fn. Tot Penta-Furans	*		NotFnd	0.93	*		2.50	528	658	0.306	0
Total Penta-Furans	*		NotFnd	0.93	*		2.50	528	658	0.306	0
Total Hexa-Furans	2.59e+04		36:29	0.90	0.514	J	2.50	-	-	*	1
Total Hepta-Furans	7.52e+04		42:20	1.48	1.77	J	2.50	-	-	*	2

Analyst: 

Date: 8/12/10

Totals class: Total Hepta-Dioxins

Entry #: 41

Run: 9

File: 12AUG10M

S: 4 I: 1 F: 4

Acquired: 12-AUG-10 13:56:54

Total Concentration: 7.71

Unnamed Concentration: 3.922

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
42:51	6.60e+04	5.60e+04	1.18 y	1.22e+05	3.92	
44:13	6.17e+04	5.62e+04	1.10 y	1.18e+05	3.79	1,2,3,4,6,7,8-HpCDD

Totals class: Total Hexa-Furans

Entry #: 45

Run: 9

File: 12AUG10M

S: 4 I: 1 F: 3

Acquired: 12-AUG-10 13:56:54

Total Concentration: 0.514

Unnamed Concentration: 0.514

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
36:29	1.44e+04	1.16e+04	1.24 y	2.59e+04	0.514	

Totals class: Total Hepta-Furans

Entry #: 46

Run: 9

File: 12AUG10M

S: 4 I: 1 F: 4

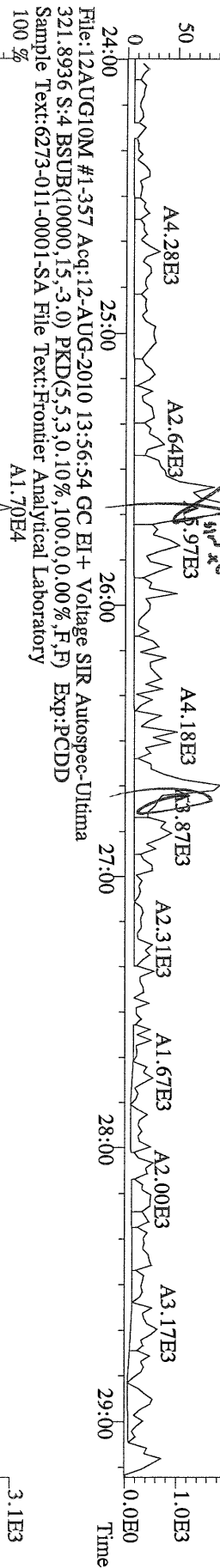
Acquired: 12-AUG-10 13:56:54

Total Concentration: 1.77

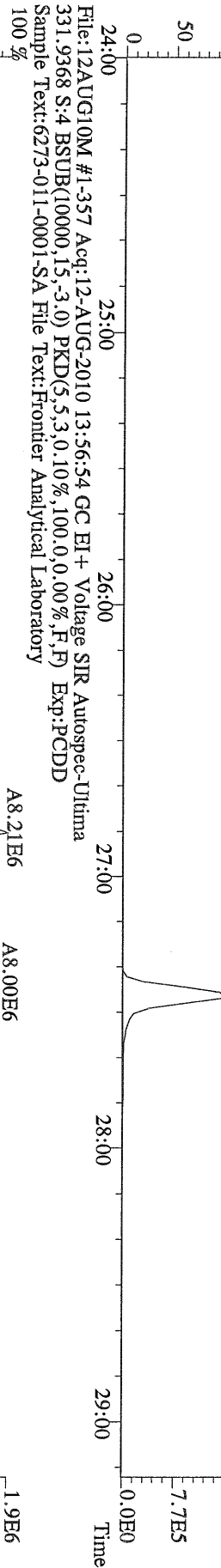
Unnamed Concentration: 1.238

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
42:20	1.13e+04	1.12e+04	1.01 y	2.24e+04	0.530	1,2,3,4,6,7,8-HpCDF
43:09	2.73e+04	2.55e+04	1.07 y	5.28e+04	1.24	

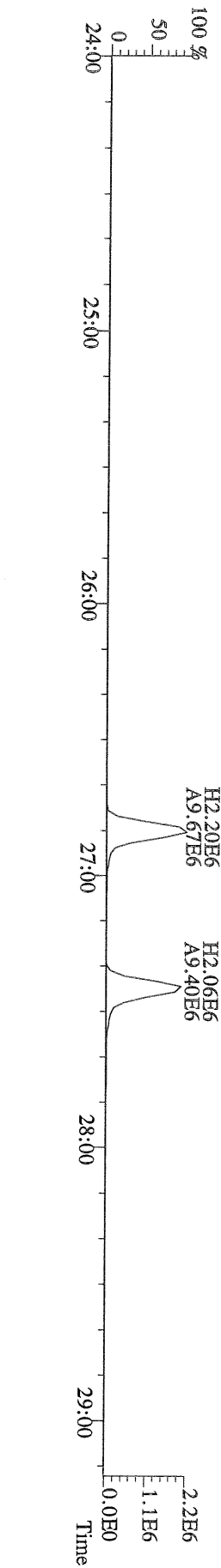
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 319.8965 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



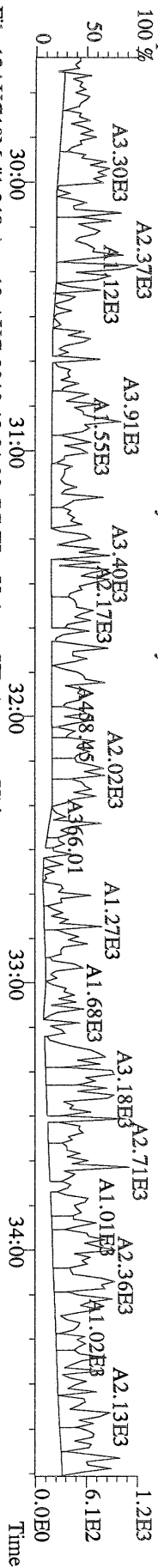
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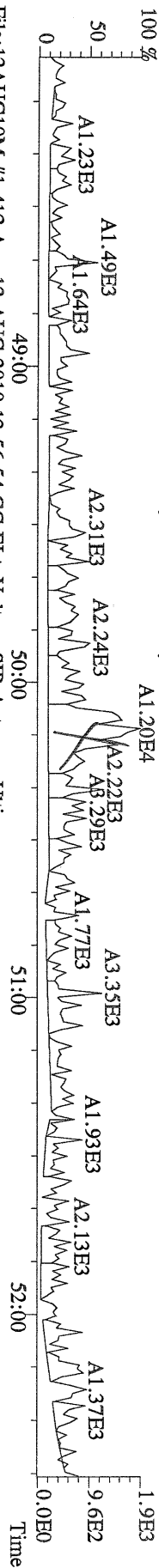
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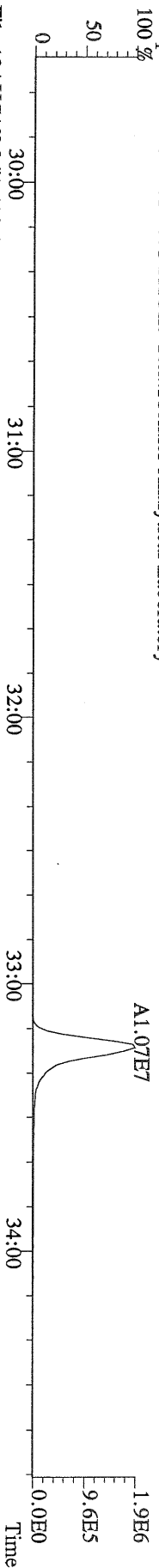
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 Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



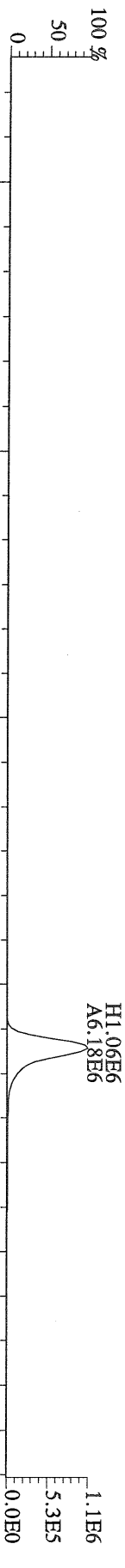
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 443.7398 S:3 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-009-0001-SA File Text:Frontier Analytical Laboratory



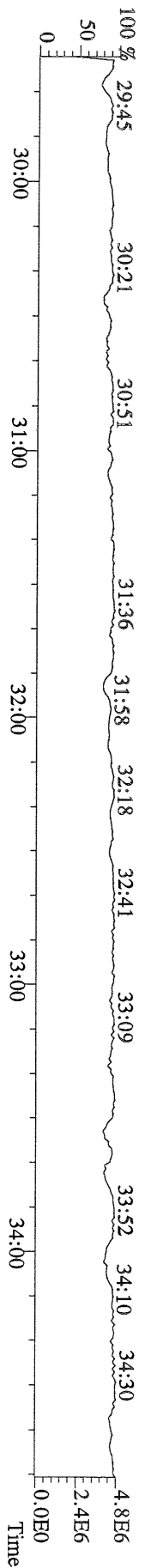
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 Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



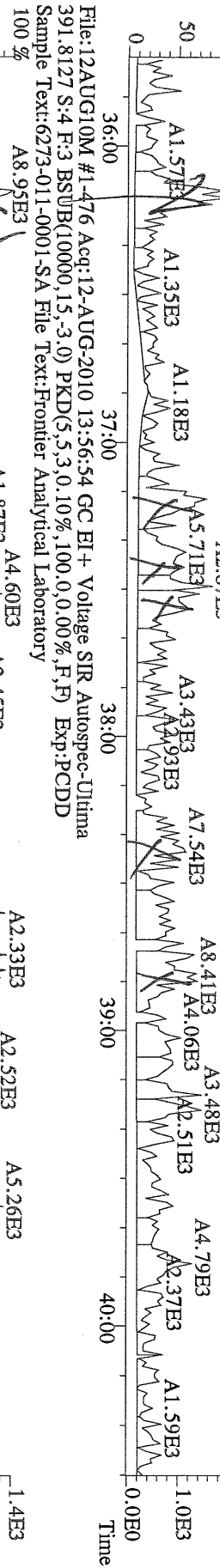
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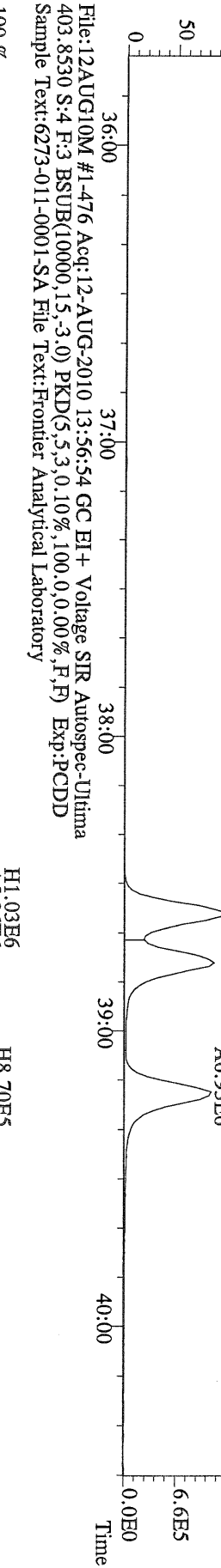
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 Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



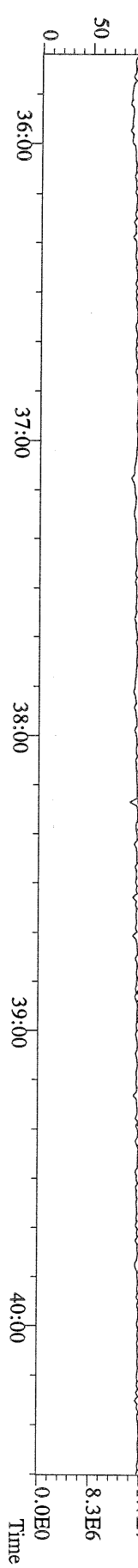
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 389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



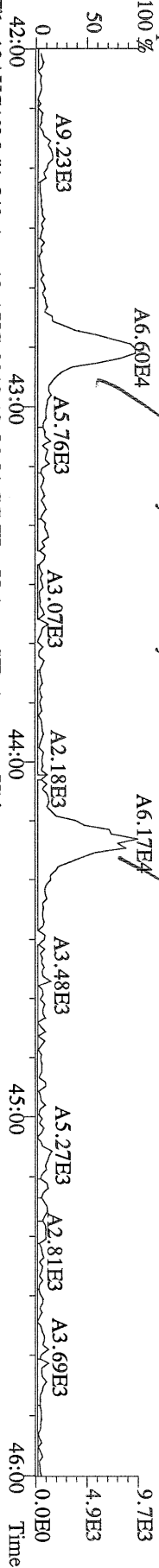
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 401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



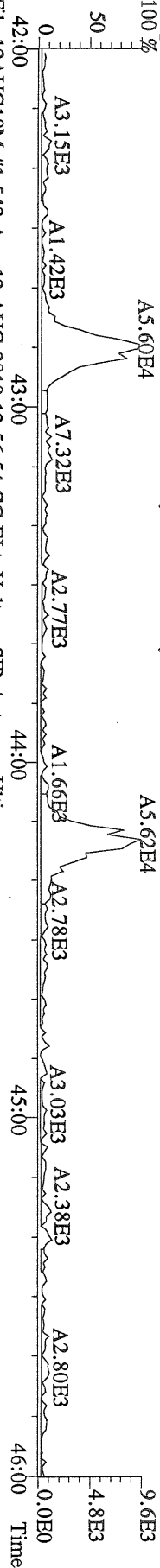
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 Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



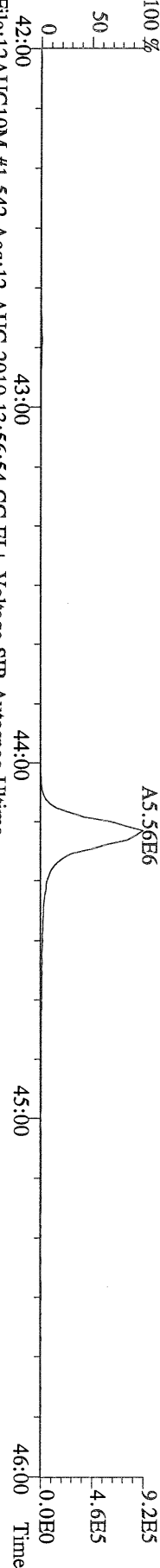
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423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



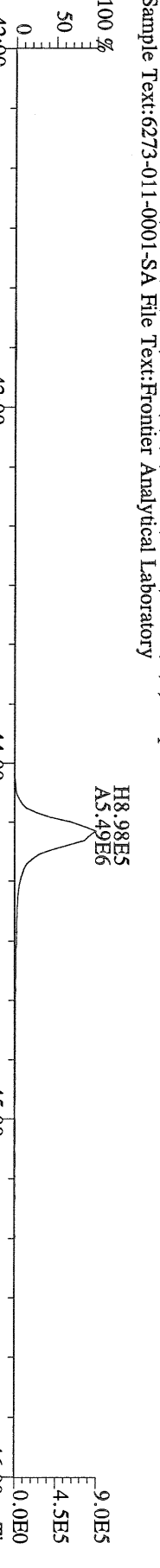
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Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



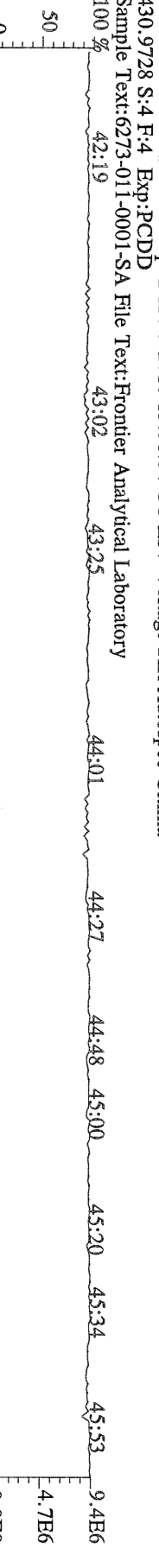
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435.8169 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



File:12AUG10M #1-542 Acq:12-AUG-2010 13:56:54 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory

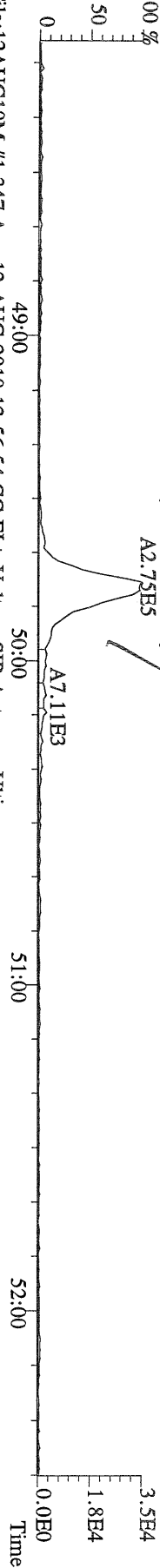


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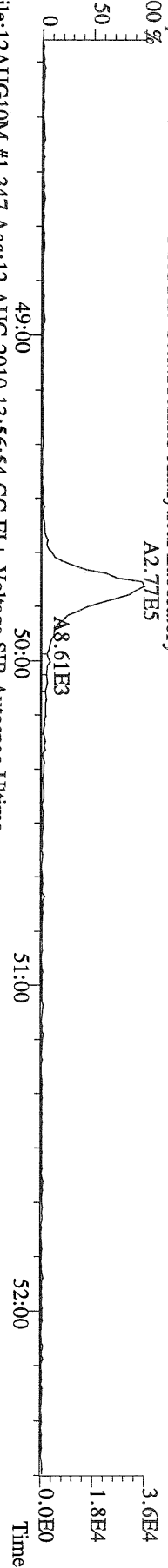


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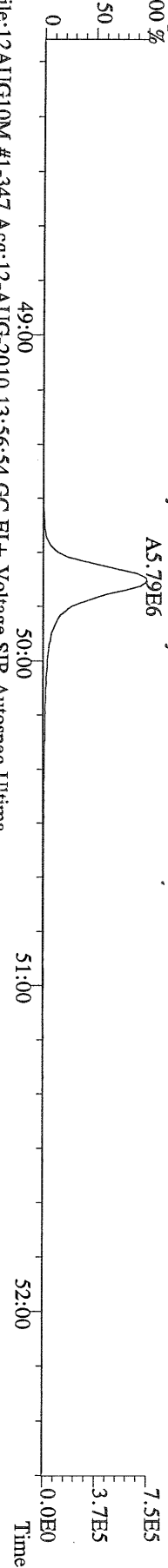
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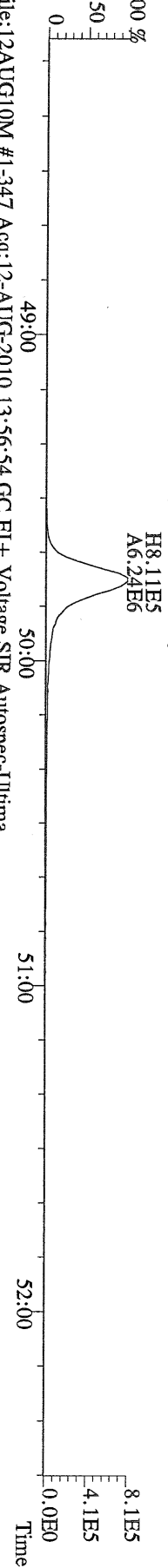
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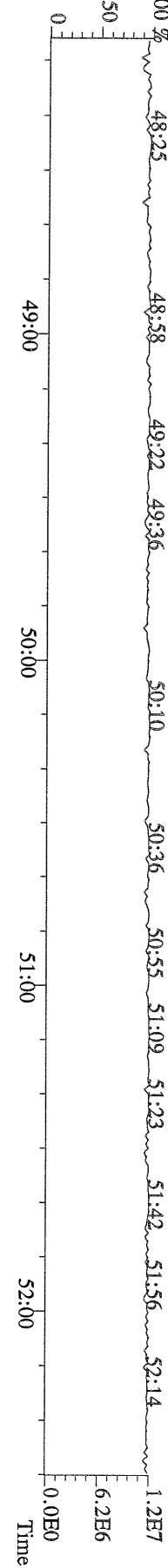
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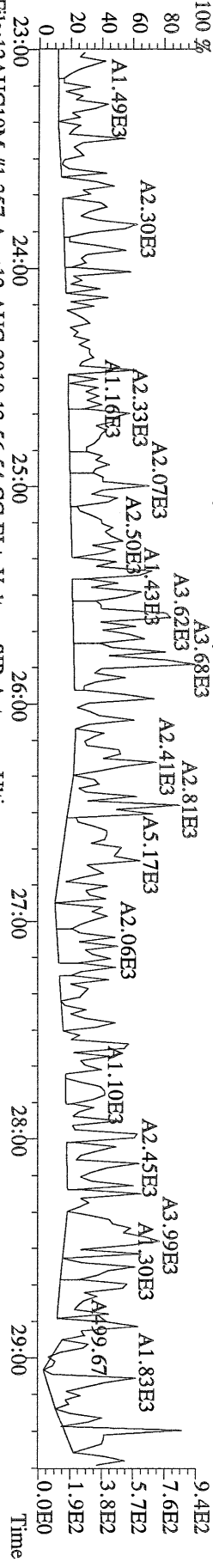
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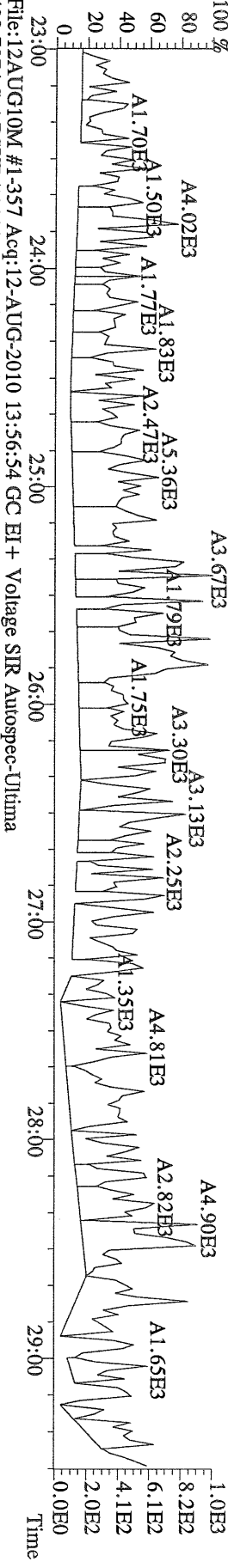
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Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



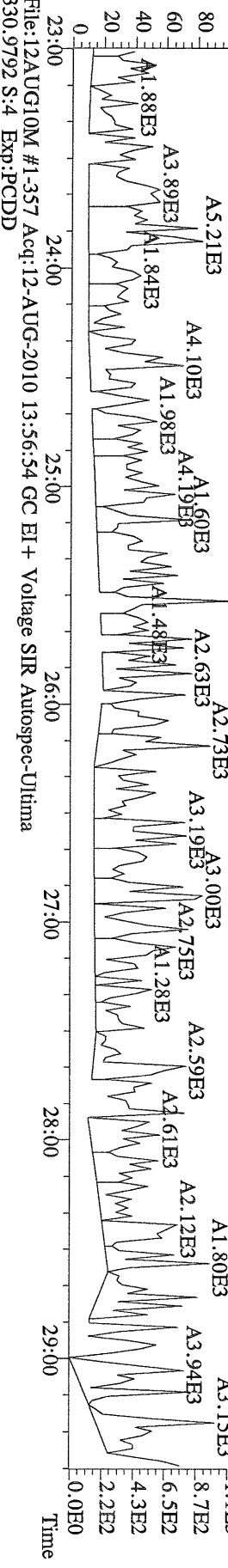
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 Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



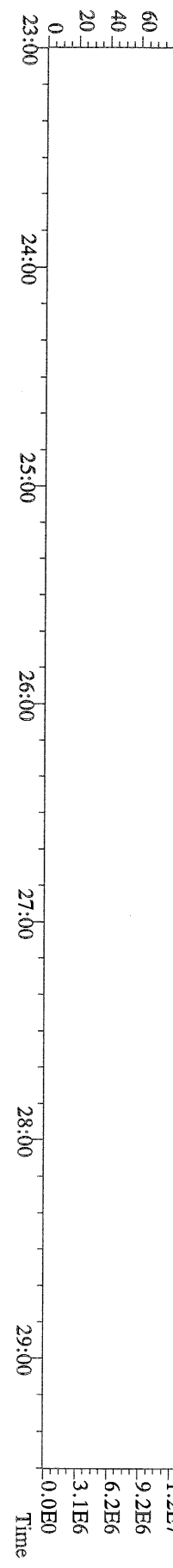
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 Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



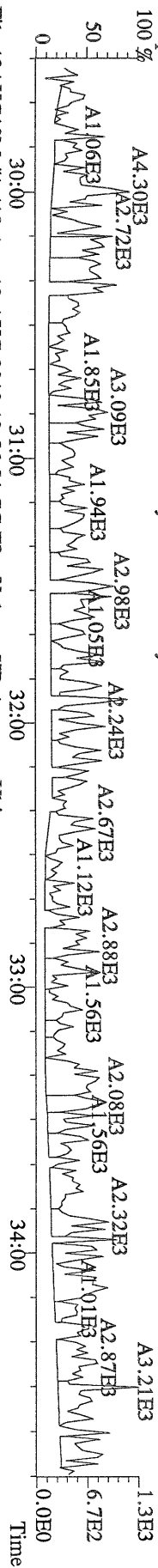
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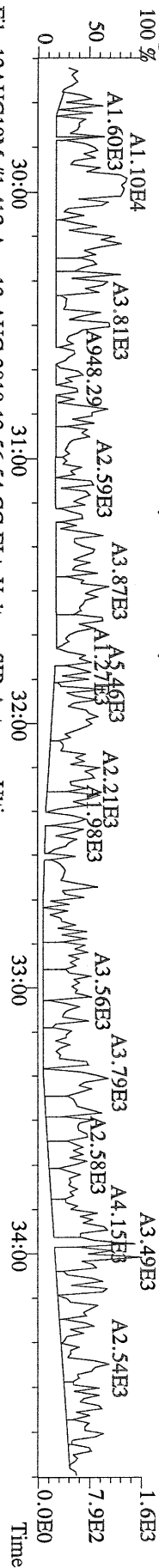
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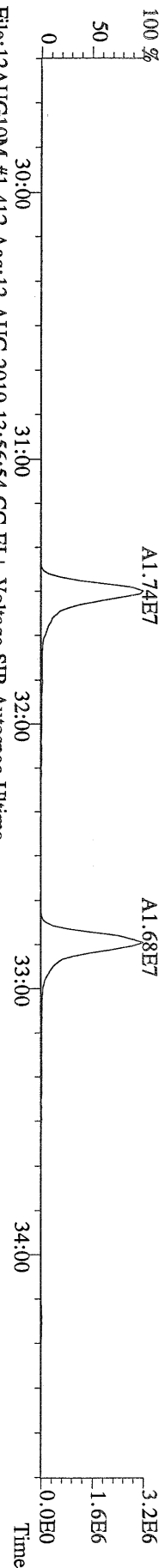
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Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



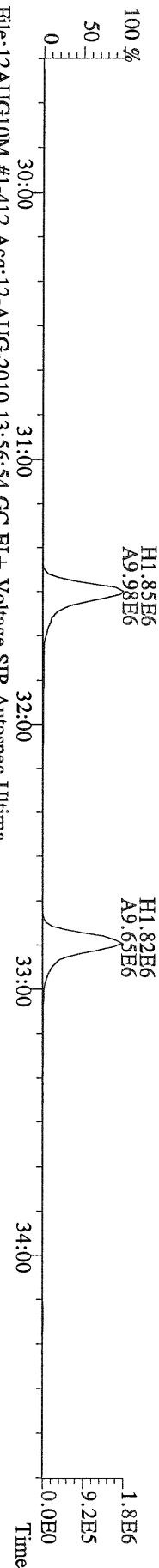
File:12AUG10M #1-412 Acq:12-AUG-2010 13:56:54 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



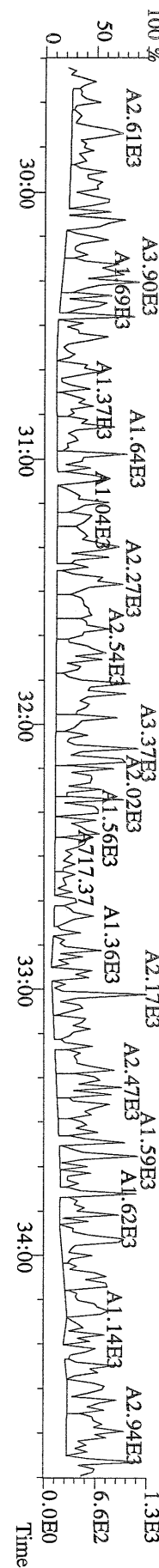
File:12AUG10M #1-412 Acq:12-AUG-2010 13:56:54 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



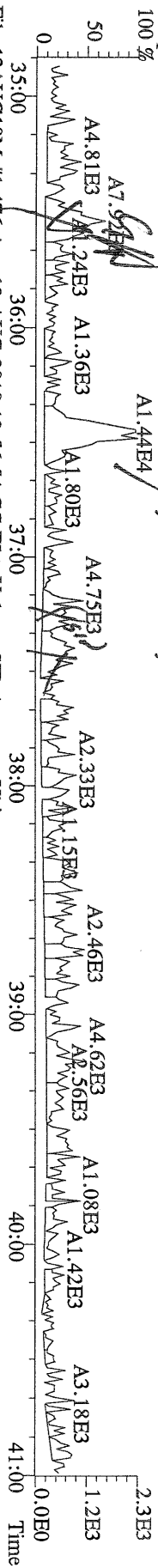
File:12AUG10M #1-412 Acq:12-AUG-2010 13:56:54 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



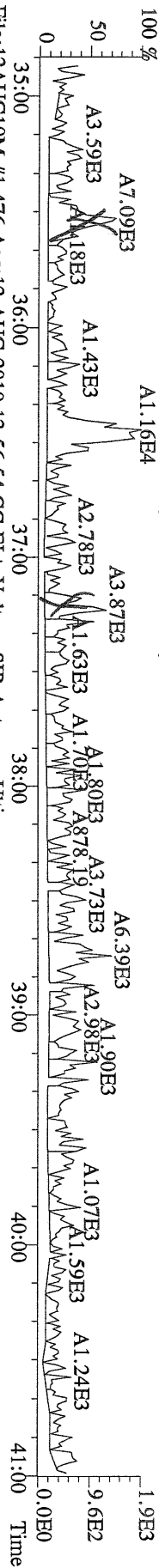
File:12AUG10M #1-412 Acq:12-AUG-2010 13:56:54 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



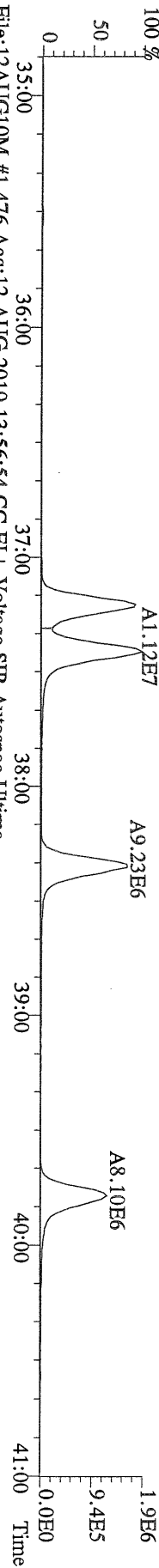
File:12AUG10M #1-476 Acq:12-AUG-2010 13:56:54 GC EI+ Voltage SIR Autospec-Ultima
 373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



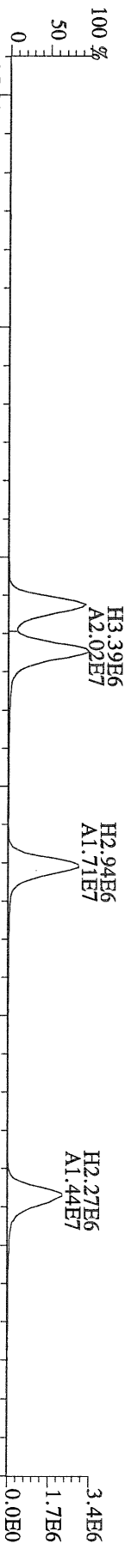
File:12AUG10M #1-476 Acq:12-AUG-2010 13:56:54 GC EI+ Voltage SIR Autospec-Ultima
 375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



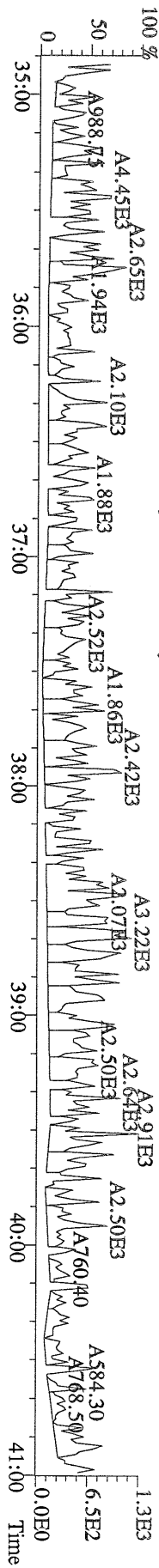
File:12AUG10M #1-476 Acq:12-AUG-2010 13:56:54 GC EI+ Voltage SIR Autospec-Ultima
 383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



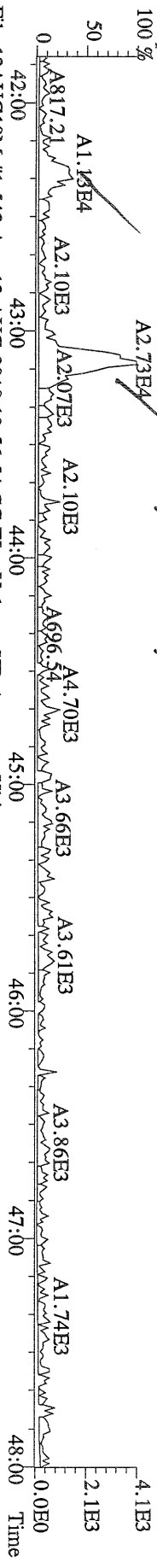
File:12AUG10M #1-476 Acq:12-AUG-2010 13:56:54 GC EI+ Voltage SIR Autospec-Ultima
 385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



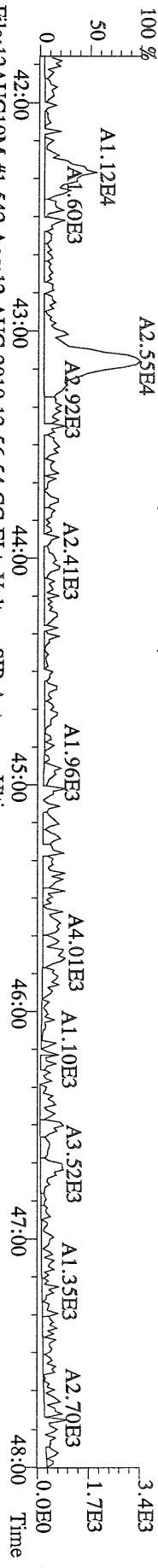
File:12AUG10M #1-476 Acq:12-AUG-2010 13:56:54 GC EI+ Voltage SIR Autospec-Ultima
 445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



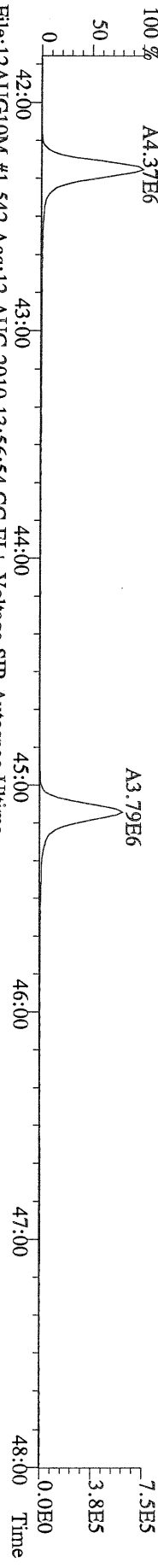
File:12AUG10M #1-542 Acq:12-AUG-2010 13:56:54 GC EI+ Voltage SIR Autospec-Ultima
 407.7818 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



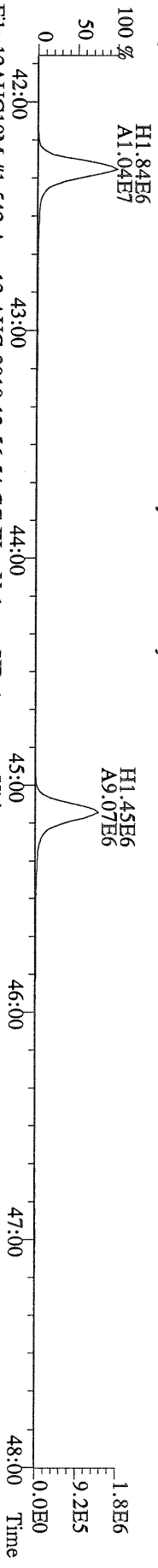
File:12AUG10M #1-542 Acq:12-AUG-2010 13:56:54 GC EI+ Voltage SIR Autospec-Ultima
 409.7788 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



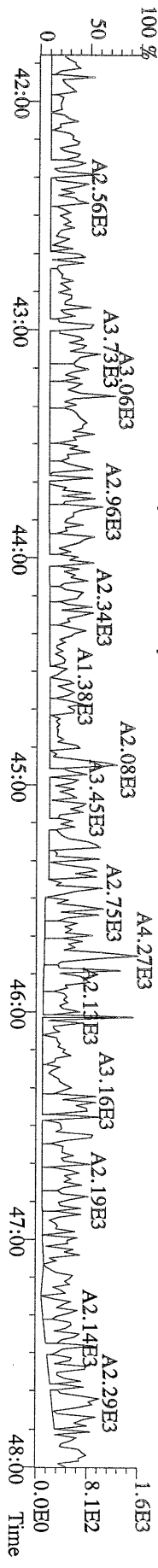
File:12AUG10M #1-542 Acq:12-AUG-2010 13:56:54 GC EI+ Voltage SIR Autospec-Ultima
 417.8253 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



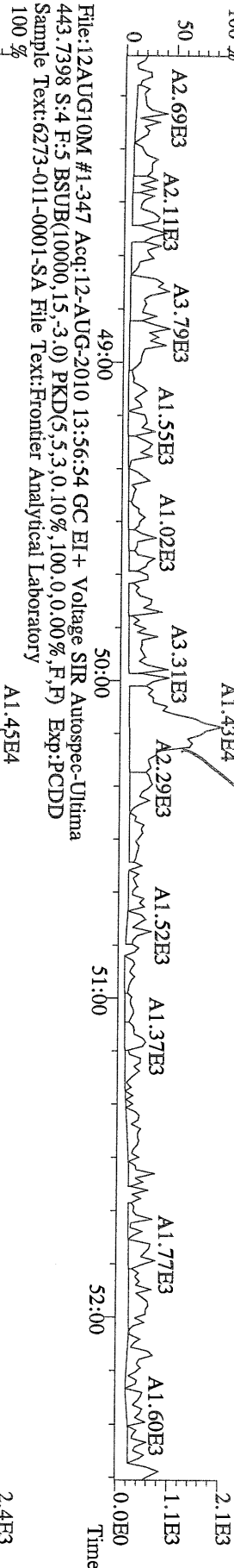
File:12AUG10M #1-542 Acq:12-AUG-2010 13:56:54 GC EI+ Voltage SIR Autospec-Ultima
 419.8220 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



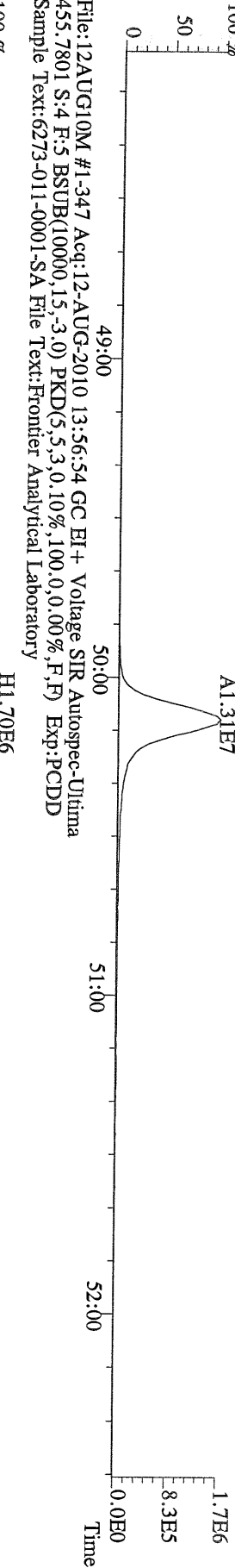
File:12AUG10M #1-542 Acq:12-AUG-2010 13:56:54 GC EI+ Voltage SIR Autospec-Ultima
 479.7165 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



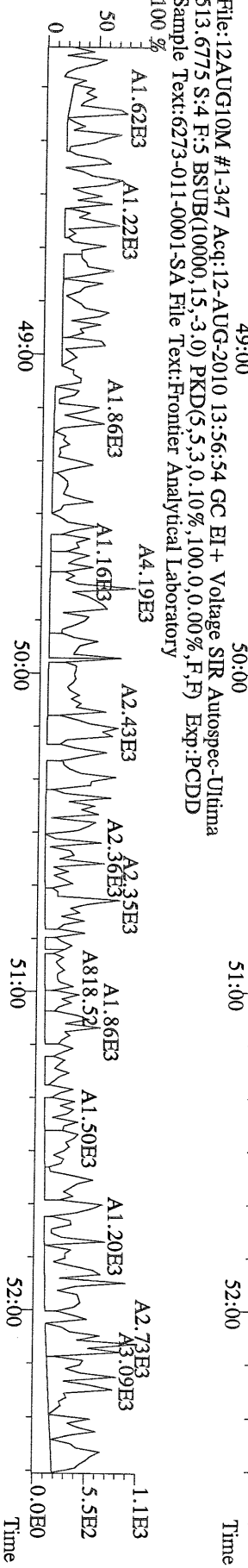
File:12AUG10M #1-347 Acq:12-AUG-2010 13:56:54 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



File:12AUG10M #1-347 Acq:12-AUG-2010 13:56:54 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



File:12AUG10M #1-347 Acq:12-AUG-2010 13:56:54 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:6273-011-0001-SA File Text:Frontier Analytical Laboratory



Frontier Analytical Laboratory

Data Filename: 12MAY10M

Analyte: PCDDFAL3-5-12-10

Cal: PCDDFAL3-5-12-10

Name	RRF	S. D.	%RSD	S1 RRF#1	S2 RRF#2	S3 RRF#3	S4 RRF#4	S5 RRF#5	S6 RRF#6
2,3,7,8-TCDD	1.04	0.0556	5.37 %	1.01	1.12	0.97	1.02	1.01	1.08
1,2,3,7,8-PeCDD	1.05	0.0453	4.33 %	1.02	1.04	1.00	1.01	1.11	1.10
1,2,3,4,7,8-HxCDD	1.30	0.0354	2.72 %	1.27	1.29	1.26	1.30	1.33	1.35
1,2,3,6,7,8-HxCDD	1.28	0.0488	3.82 %	1.25	1.23	1.27	1.24	1.33	1.34
1,2,3,7,8,9-HxCDD	1.25	0.0604	4.84 %	1.26	1.14	1.25	1.24	1.28	1.32
1,2,3,4,6,7,8-HpCDD	1.35	0.0509	3.76 %	1.26	1.33	1.36	1.37	1.40	1.40
OCDD	1.25	0.0756	6.05 %	1.22	1.13	1.24	1.27	1.32	1.33
2,3,7,8-TCDF	1.62	0.0670	4.14 %	1.65	1.74	1.59	1.56	1.57	1.60
1,2,3,7,8-PeCDF	0.92	0.0408	4.45 %	0.89	0.89	0.86	0.94	0.95	0.96
2,3,4,7,8-PeCDF	0.94	0.0433	4.58 %	0.88	0.94	0.92	0.96	1.00	0.97
1,2,3,4,7,8-HxCDF	0.93	0.0447	4.80 %	0.90	0.88	0.90	0.93	0.97	1.00
1,2,3,6,7,8-HxCDF	0.84	0.0498	5.95 %	0.78	0.79	0.83	0.84	0.89	0.90
2,3,4,6,7,8-HxCDF	0.90	0.0469	5.24 %	0.85	0.87	0.86	0.89	0.94	0.96
1,2,3,7,8,9-HxCDF	0.98	0.0559	5.68 %	0.96	0.93	0.93	0.98	1.04	1.06
1,2,3,4,6,7,8-HpCDF	1.38	0.0717	5.19 %	1.32	1.32	1.33	1.38	1.45	1.48
1,2,3,4,7,8,9-HpCDF	1.62	0.104	6.40 %	1.53	1.55	1.56	1.60	1.76	1.75
OCDF	0.74	0.0371	5.02 %	0.70	0.72	0.72	0.73	0.77	0.80
13C-2,3,7,8-TCDD	0.93	0.0199	2.15 %	0.93	0.91	0.90	0.93	0.95	0.95
13C-1,2,3,7,8-PeCDD	0.81	0.0364	4.50 %	0.83	0.78	0.75	0.83	0.80	0.85
13C-1,2,3,4,7,8-HxCDD	0.95	0.0375	3.96 %	0.90	0.90	0.94	0.97	0.97	0.99
13C-1,2,3,6,7,8-HxCDD	1.00	0.0182	1.83 %	0.99	1.02	1.00	1.02	0.99	0.97
13C-1,2,3,4,6,7,8-HpCDD	0.92	0.0204	2.22 %	0.92	0.95	0.93	0.92	0.89	0.92
13C-OCDD	0.63	0.0244	3.86 %	0.64	0.63	0.62	0.64	0.59	0.67
13C-2,3,7,8-TCDF	0.87	0.0146	1.68 %	0.87	0.84	0.87	0.89	0.86	0.88
13C-1,2,3,7,8-PeCDF	0.81	0.0502	6.23 %	0.84	0.76	0.75	0.88	0.78	0.83
13C-2,3,4,7,8-PeCDF	0.75	0.0503	6.69 %	0.81	0.71	0.69	0.81	0.72	0.77
13C-1,2,3,4,7,8-HxCDF	1.74	0.0487	2.80 %	1.67	1.70	1.76	1.80	1.78	1.71
13C-1,2,3,6,7,8-HxCDF	2.17	0.0633	2.92 %	2.11	2.18	2.21	2.25	2.18	2.07
13C-2,3,4,6,7,8-HxCDF	1.82	0.0466	2.57 %	1.78	1.81	1.86	1.87	1.81	1.75
13C-1,2,3,7,8,9-HxCDF	1.49	0.0322	2.17 %	1.43	1.47	1.49	1.52	1.48	1.51
13C-1,2,3,4,6,7,8-HpCDF	1.10	0.0149	1.36 %	1.07	1.10	1.11	1.11	1.09	1.10
13C-1,2,3,4,7,8,9-HpCDF	0.81	0.0231	2.83 %	0.82	0.84	0.81	0.82	0.77	0.82
13C-OCDF	1.19	0.0430	3.63 %	1.20	1.15	1.16	1.18	1.16	1.27
37Cl-2,3,7,8-TCDD	0.93	0.0664	7.14 %	0.89	1.00	0.84	0.89	0.97	1.00
13C-1,2,3,4-TCDD	-	-	- %	-	-	-	-	-	-
13C-1,2,3,4-TCDF	-	-	- %	-	-	-	-	-	-
13C-1,2,3,7,8,9-HxCDD	-	-	- %	-	-	-	-	-	-
Total Tetra-Dioxins	1.04	0.0556	5.37 %	1.01	1.12	0.97	1.02	1.01	1.08
Total Penta-Dioxins	1.05	0.0453	4.33 %	1.02	1.04	1.00	1.01	1.11	1.10
Total Hexa-Dioxins	1.27	0.0431	3.38 %	1.26	1.22	1.26	1.26	1.31	1.34
Total Hepta-Dioxins	1.35	0.0509	3.76 %	1.26	1.33	1.36	1.37	1.40	1.40
Total Tetra-Furans	1.62	0.0670	4.14 %	1.65	1.74	1.59	1.56	1.57	1.60
1st Fn. Tot Penta-Furans	0.93	0.0398	4.28 %	0.88	0.91	0.89	0.95	0.98	0.96
Total Penta-Furans	0.93	0.0398	4.28 %	0.88	0.91	0.89	0.95	0.98	0.96
Total Hexa-Furans	0.90	0.0483	5.34 %	0.86	0.86	0.87	0.90	0.95	0.97
Total Hepta-Furans	1.48	0.0839	5.65 %	1.41	1.42	1.43	1.47	1.58	1.60

Analyst: J

Date: 5/13/10

Run #2 Filename 12MAY10M
Client ID: ST051210M1

S: 2 Acquired: 12-MAY-10 14:18:09 Cal: PCDDFAL3-5-12-10
Analyte: FAL ID: 1613 CS1 090918H

Typ	Name	Amount	Resp	RA	RT	RF	RRF
1 Unk	2,3,7,8-TCDD	0.50	1.68e+05	0.79 y	27:26	-	1.12 y
2 Unk	1,2,3,7,8-PeCDD	2.50	6.69e+05	1.68 y	33:15	-	1.04 y
3 Unk	1,2,3,4,7,8-HxCDD	2.50	5.98e+05	1.29 y	38:34	-	1.29 y
4 Unk	1,2,3,6,7,8-HxCDD	2.50	6.42e+05	1.28 y	38:44	-	1.23 y
5 Unk	1,2,3,7,8,9-HxCDD	2.50	5.62e+05	1.33 y	39:10	-	1.14 y
6 Unk	1,2,3,4,6,7,8-HpCDD	2.50	6.52e+05	1.07 y	44:10	-	1.33 y
7 Unk	OCDD	5.00	7.33e+05	0.93 y	49:40	-	1.13 y
8 Unk	2,3,7,8-TCDF	0.50	3.85e+05	0.67 y	26:41	-	1.74 y
9 Unk	1,2,3,7,8-PeCDF	2.50	8.92e+05	1.44 y	31:30	-	0.894 y
10 Unk	2,3,4,7,8-PeCDF	2.50	8.75e+05	1.46 y	32:49	-	0.935 y
11 Unk	1,2,3,4,7,8-HxCDF	2.50	7.75e+05	1.30 y	37:11	-	0.884 y
12 Unk	1,2,3,6,7,8-HxCDF	2.50	8.85e+05	1.29 y	37:23	-	0.787 y
13 Unk	2,3,4,6,7,8-HxCDF	2.50	8.14e+05	1.28 y	38:19	-	0.873 y
14 Unk	1,2,3,7,8,9-HxCDF	2.50	7.09e+05	1.16 y	39:45	-	0.934 y
15 Unk	1,2,3,4,6,7,8-HpCDF	2.50	7.48e+05	1.04 y	42:14	-	1.32 y
16 Unk	1,2,3,4,7,8,9-HpCDF	2.50	6.73e+05	1.07 y	45:04	-	1.55 y
17 Unk	OCDF	5.00	8.52e+05	0.91 y	50:02	-	0.719 y
18 IS/RT	13C-2,3,7,8-TCDD	100.00	2.98e+07	0.79 y	27:25	-	0.909 y
19 IS	13C-1,2,3,7,8-PeCDD	100.00	2.56e+07	1.78 y	33:13	-	0.782 y
20 IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.86e+07	1.29 y	38:33	-	0.901 y
21 IS	13C-1,2,3,6,7,8-HxCDD	100.00	2.09e+07	1.28 y	38:43	-	1.02 y
22 IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.95e+07	1.02 y	44:08	-	0.948 y
23 IS	13C-OCDD	200.00	2.60e+07	0.92 y	49:39	-	0.632 y
24 IS	13C-2,3,7,8-TCDF	100.00	4.43e+07	0.87 y	26:40	-	0.843 y
25 IS	13C-1,2,3,7,8-PeCDF	100.00	3.99e+07	1.70 y	31:29	-	0.760 y
26 IS	13C-2,3,4,7,8-PeCDF	100.00	3.74e+07	1.70 y	32:48	-	0.712 y
27 IS	13C-1,2,3,4,7,8-HxCDF	100.00	3.51e+07	0.56 y	37:10	-	1.70 y
28 IS	13C-1,2,3,6,7,8-HxCDF	100.00	4.50e+07	0.56 y	37:21	-	2.18 y
29 IS	13C-2,3,4,6,7,8-HxCDF	100.00	3.73e+07	0.54 y	38:18	-	1.81 y
30 IS	13C-1,2,3,7,8,9-HxCDF	100.00	3.04e+07	0.57 y	39:44	-	1.47 y
31 IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	2.27e+07	0.44 y	42:14	-	1.10 y
32 IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.73e+07	0.43 y	45:03	-	0.840 y
33 IS	13C-OCDF	200.00	4.74e+07	0.98 y	50:02	-	1.15 y
34 C/Up	37Cl-2,3,7,8-TCDD	0.50	1.63e+05		27:26	-	0.995 y
35 RS	13C-1,2,3,4-TCDD	100.00	3.28e+07	0.80 y	26:49	3.28e+05	- n
36 RS	13C-1,2,3,4-TCDF	100.00	5.25e+07	0.88 y	25:34	5.25e+05	- n
37 RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	2.06e+07	1.30 y	39:10	2.06e+05	- n
38 Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.12 y
39 Tot	Total Penta-Dioxins	0.00	-	- n	-	-	1.04 y
40 Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.22 y
41 Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.33 y
42 Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.74 y
43 Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.914 y
44 Tot	Total Penta-Furans	0.00	-	- n	-	-	0.914 y
45 Tot	Total Hexa-Furans	0.00	-	- n	-	-	0.862 y
46 Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.42 y

Analyst: 

Date: 5/13/10

Run #3 Filename 12MAY10M
Client ID: ST051210M2

S: 3 Acquired: 12-MAY-10 15:13:32 Cal: PCDDFAL3-5-12-10
Analyte: FAL ID: 1613 CS2 0909181

Typ	Name	Amount	Resp	RA	RT	RF	RRF
1 Unk	2,3,7,8-TCDD	2.00	5.92e+05	0.78 y	27:26	-	0.972 y
2 Unk	1,2,3,7,8-PeCDD	10.00	2.54e+06	1.74 y	33:14	-	1.00 y
3 Unk	1,2,3,4,7,8-HxCDD	10.00	2.35e+06	1.32 y	38:34	-	1.26 y
4 Unk	1,2,3,6,7,8-HxCDD	10.00	2.50e+06	1.31 y	38:44	-	1.27 y
5 Unk	1,2,3,7,8,9-HxCDD	10.00	2.40e+06	1.33 y	39:11	-	1.25 y
6 Unk	1,2,3,4,6,7,8-HpCDD	10.00	2.50e+06	1.04 y	44:10	-	1.36 y
7 Unk	OCDD	20.00	3.06e+06	0.88 y	49:41	-	1.24 y
8 Unk	2,3,7,8-TCDF	2.00	1.46e+06	0.70 y	26:41	-	1.59 y
9 Unk	1,2,3,7,8-PeCDF	10.00	3.43e+06	1.51 y	31:30	-	0.862 y
10 Unk	2,3,4,7,8-PeCDF	10.00	3.37e+06	1.54 y	32:50	-	0.920 y
11 Unk	1,2,3,4,7,8-HxCDF	10.00	3.14e+06	1.28 y	37:11	-	0.897 y
12 Unk	1,2,3,6,7,8-HxCDF	10.00	3.63e+06	1.29 y	37:23	-	0.829 y
13 Unk	2,3,4,6,7,8-HxCDF	10.00	3.17e+06	1.30 y	38:20	-	0.861 y
14 Unk	1,2,3,7,8,9-HxCDF	10.00	2.76e+06	1.32 y	39:46	-	0.931 y
15 Unk	1,2,3,4,6,7,8-HpCDF	10.00	2.94e+06	1.05 y	42:15	-	1.33 y
16 Unk	1,2,3,4,7,8,9-HpCDF	10.00	2.51e+06	1.05 y	45:05	-	1.56 y
17 Unk	OCDF	20.00	3.34e+06	0.88 y	50:04	-	0.725 y
18 IS/RT	13C-2,3,7,8-TCDD	100.00	3.04e+07	0.80 y	27:25	-	0.901 y
19 IS	13C-1,2,3,7,8-PeCDD	100.00	2.54e+07	1.75 y	33:13	-	0.752 y
20 IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.87e+07	1.30 y	38:34	-	0.942 y
21 IS	13C-1,2,3,6,7,8-HxCDD	100.00	1.97e+07	1.31 y	38:44	-	0.996 y
22 IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.84e+07	1.07 y	44:08	-	0.927 y
23 IS	13C-OCDD	200.00	2.47e+07	0.98 y	49:40	-	0.623 y
24 IS	13C-2,3,7,8-TCDF	100.00	4.59e+07	0.88 y	26:40	-	0.867 y
25 IS	13C-1,2,3,7,8-PeCDF	100.00	3.98e+07	1.67 y	31:30	-	0.752 y
26 IS	13C-2,3,4,7,8-PeCDF	100.00	3.66e+07	1.69 y	32:49	-	0.692 y
27 IS	13C-1,2,3,4,7,8-HxCDF	100.00	3.49e+07	0.55 y	37:10	-	1.76 y
28 IS	13C-1,2,3,6,7,8-HxCDF	100.00	4.38e+07	0.55 y	37:22	-	2.21 y
29 IS	13C-2,3,4,6,7,8-HxCDF	100.00	3.69e+07	0.55 y	38:18	-	1.86 y
30 IS	13C-1,2,3,7,8,9-HxCDF	100.00	2.96e+07	0.56 y	39:44	-	1.49 y
31 IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	2.21e+07	0.44 y	42:14	-	1.11 y
32 IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.61e+07	0.43 y	45:03	-	0.814 y
33 IS	13C-OCDF	200.00	4.61e+07	0.96 y	50:03	-	1.16 y
34 C/Up	37Cl-2,3,7,8-TCDD	2.00	5.65e+05		27:26	-	0.836 y
35 RS	13C-1,2,3,4-TCDD	100.00	3.38e+07	0.81 y	26:51	3.38e+05	- n
36 RS	13C-1,2,3,4-TCDF	100.00	5.29e+07	0.88 y	25:34	5.29e+05	- n
37 RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	1.98e+07	1.34 y	39:10	1.98e+05	- n
38 Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	0.972 y
39 Tot	Total Penta-Dioxins	0.00	-	- n	-	-	1.00 y
40 Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.26 y
41 Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.36 y
42 Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.59 y
43 Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.890 y
44 Tot	Total Penta-Furans	0.00	-	- n	-	-	0.890 y
45 Tot	Total Hexa-Furans	0.00	-	- n	-	-	0.874 y
46 Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.43 y

Analyst: 

Date: 5/13/10

Run #4 Filename 12MAY10M
Client ID: ST051210M3

S: 4 Acquired: 12-MAY-10 16:08:51 Cal: PCDDFAL3-5-12-10
Analyte: FAL ID: 1613 CS3 090918J

Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	10.00	3.10e+06	0.78 y	27:27	- 1.02 y
2	Unk	1,2,3,7,8-PeCDD	50.00	1.38e+07	1.70 y	33:15	- 1.01 y
3	Unk	1,2,3,4,7,8-HxCDD	50.00	1.26e+07	1.30 y	38:35	- 1.30 y
4	Unk	1,2,3,6,7,8-HxCDD	50.00	1.26e+07	1.30 y	38:45	- 1.24 y
5	Unk	1,2,3,7,8,9-HxCDD	50.00	1.23e+07	1.28 y	39:11	- 1.24 y
6	Unk	1,2,3,4,6,7,8-HpCDD	50.00	1.26e+07	1.11 y	44:10	- 1.37 y
7	Unk	OCDD	100.00	1.62e+07	0.93 y	49:41	- 1.27 y
8	Unk	2,3,7,8-TCDF	10.00	6.83e+06	0.72 y	26:41	- 1.56 y
9	Unk	1,2,3,7,8-PeCDF	50.00	2.04e+07	1.54 y	31:31	- 0.943 y
10	Unk	2,3,4,7,8-PeCDF	50.00	1.91e+07	1.55 y	32:50	- 0.962 y
11	Unk	1,2,3,4,7,8-HxCDF	50.00	1.67e+07	1.29 y	37:11	- 0.930 y
12	Unk	1,2,3,6,7,8-HxCDF	50.00	1.89e+07	1.30 y	37:24	- 0.842 y
13	Unk	2,3,4,6,7,8-HxCDF	50.00	1.67e+07	1.30 y	38:19	- 0.890 y
14	Unk	1,2,3,7,8,9-HxCDF	50.00	1.49e+07	1.27 y	39:45	- 0.976 y
15	Unk	1,2,3,4,6,7,8-HpCDF	50.00	1.54e+07	1.05 y	42:15	- 1.38 y
16	Unk	1,2,3,4,7,8,9-HpCDF	50.00	1.31e+07	1.05 y	45:04	- 1.60 y
17	Unk	OCDF	100.00	1.73e+07	0.87 y	50:04	- 0.731 y
18	IS/RT	13C-2,3,7,8-TCDD	100.00	3.06e+07	0.80 y	27:25	- 0.927 y
19	IS	13C-1,2,3,7,8-PeCDD	100.00	2.73e+07	1.77 y	33:13	- 0.828 y
20	IS	13C-1,2,3,4,7,8-HxCDD	100.00	1.94e+07	1.29 y	38:33	- 0.966 y
21	IS	13C-1,2,3,6,7,8-HxCDD	100.00	2.04e+07	1.28 y	38:43	- 1.02 y
22	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	1.84e+07	1.06 y	44:09	- 0.917 y
23	IS	13C-OCDD	200.00	2.56e+07	0.91 y	49:41	- 0.638 y
24	IS	13C-2,3,7,8-TCDF	100.00	4.37e+07	0.88 y	26:40	- 0.885 y
25	IS	13C-1,2,3,7,8-PeCDF	100.00	4.32e+07	1.70 y	31:29	- 0.877 y
26	IS	13C-2,3,4,7,8-PeCDF	100.00	3.97e+07	1.71 y	32:49	- 0.805 y
27	IS	13C-1,2,3,4,7,8-HxCDF	100.00	3.60e+07	0.55 y	37:10	- 1.80 y
28	IS	13C-1,2,3,6,7,8-HxCDF	100.00	4.50e+07	0.56 y	37:22	- 2.25 y
29	IS	13C-2,3,4,6,7,8-HxCDF	100.00	3.76e+07	0.55 y	38:19	- 1.87 y
30	IS	13C-1,2,3,7,8,9-HxCDF	100.00	3.05e+07	0.56 y	39:45	- 1.52 y
31	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	2.22e+07	0.43 y	42:14	- 1.11 y
32	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	1.64e+07	0.42 y	45:03	- 0.817 y
33	IS	13C-OCDF	200.00	4.74e+07	0.98 y	50:02	- 1.18 y
34	C/Up	37Cl-2,3,7,8-TCDD	10.00	2.93e+06		27:27	- 0.889 y
35	RS	13C-1,2,3,4-TCDD	100.00	3.30e+07	0.81 y	26:50	3.30e+05 - n
36	RS	13C-1,2,3,4-TCDF	100.00	4.93e+07	0.87 y	25:34	4.93e+05 - n
37	RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	2.00e+07	1.28 y	39:10	2.00e+05 - n
38	Tot	Total Tetra-Dioxins	0.00	-	- n	-	- 1.02 y
39	Tot	Total Penta-Dioxins	0.00	-	- n	-	- 1.01 y
40	Tot	Total Hexa-Dioxins	0.00	-	- n	-	- 1.26 y
41	Tot	Total Hepta-Dioxins	0.00	-	- n	-	- 1.37 y
42	Tot	Total Tetra-Furans	0.00	-	- n	-	- 1.56 y
43	Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	- 0.952 y
44	Tot	Total Penta-Furans	0.00	-	- n	-	- 0.952 y
45	Tot	Total Hexa-Furans	0.00	-	- n	-	- 0.903 y
46	Tot	Total Hepta-Furans	0.00	-	- n	-	- 1.47 y

Analyst: 

Date: 5/13/10

Run #5 Filename 12MAY10M
Client ID: ST051210M4

S: 5 Acquired: 12-MAY-10 17:04:09 Cal: PCDDFAL3-5-12-10
Analyte: FAL ID: 1613 CS4 090918K

Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk 2,3,7,8-TCDD	40.00	1.35e+07	0.77 y	27:27	-	1.01 y
2	Unk 1,2,3,7,8-PeCDD	200.00	6.18e+07	1.68 y	33:15	-	1.11 y
3	Unk 1,2,3,4,7,8-HxCDD	200.00	5.73e+07	1.29 y	38:35	-	1.33 y
4	Unk 1,2,3,6,7,8-HxCDD	200.00	5.85e+07	1.29 y	38:45	-	1.33 y
5	Unk 1,2,3,7,8,9-HxCDD	200.00	5.56e+07	1.22 y	39:12	-	1.28 y
6	Unk 1,2,3,4,6,7,8-HpCDD	200.00	5.49e+07	1.06 y	44:10	-	1.40 y
7	Unk OCDD	400.00	6.95e+07	0.93 y	49:42	-	1.32 y
8	Unk 2,3,7,8-TCDF	40.00	3.08e+07	0.71 y	26:42	-	1.57 y
9	Unk 1,2,3,7,8-PeCDF	200.00	8.42e+07	1.54 y	31:31	-	0.952 y
10	Unk 2,3,4,7,8-PeCDF	200.00	8.22e+07	1.53 y	32:50	-	1.00 y
11	Unk 1,2,3,4,7,8-HxCDF	200.00	7.65e+07	1.28 y	37:12	-	0.968 y
12	Unk 1,2,3,6,7,8-HxCDF	200.00	8.60e+07	1.29 y	37:24	-	0.887 y
13	Unk 2,3,4,6,7,8-HxCDF	200.00	7.59e+07	1.28 y	38:20	-	0.941 y
14	Unk 1,2,3,7,8,9-HxCDF	200.00	6.84e+07	1.31 y	39:46	-	1.04 y
15	Unk 1,2,3,4,6,7,8-HpCDF	200.00	7.01e+07	1.04 y	42:16	-	1.45 y
16	Unk 1,2,3,4,7,8,9-HpCDF	200.00	6.04e+07	1.06 y	45:05	-	1.76 y
17	Unk OCDF	400.00	7.92e+07	0.90 y	50:04	-	0.770 y
18	IS/RT 13C-2,3,7,8-TCDD	100.00	3.32e+07	0.79 y	27:26	-	0.950 y
19	IS 13C-1,2,3,7,8-PeCDD	100.00	2.79e+07	1.72 y	33:14	-	0.799 y
20	IS 13C-1,2,3,4,7,8-HxCDD	100.00	2.16e+07	1.29 y	38:34	-	0.970 y
21	IS 13C-1,2,3,6,7,8-HxCDD	100.00	2.20e+07	1.29 y	38:44	-	0.988 y
22	IS 13C-1,2,3,4,6,7,8-HpCDD	100.00	1.97e+07	1.04 y	44:09	-	0.885 y
23	IS 13C-OCDD	200.00	2.63e+07	0.90 y	49:41	-	0.592 y
24	IS 13C-2,3,7,8-TCDF	100.00	4.90e+07	0.88 y	26:40	-	0.863 y
25	IS 13C-1,2,3,7,8-PeCDF	100.00	4.43e+07	1.69 y	31:30	-	0.779 y
26	IS 13C-2,3,4,7,8-PeCDF	100.00	4.10e+07	1.68 y	32:49	-	0.721 y
27	IS 13C-1,2,3,4,7,8-HxCDF	100.00	3.95e+07	0.55 y	37:10	-	1.78 y
28	IS 13C-1,2,3,6,7,8-HxCDF	100.00	4.85e+07	0.55 y	37:23	-	2.18 y
29	IS 13C-2,3,4,6,7,8-HxCDF	100.00	4.03e+07	0.55 y	38:19	-	1.81 y
30	IS 13C-1,2,3,7,8,9-HxCDF	100.00	3.28e+07	0.57 y	39:44	-	1.48 y
31	IS 13C-1,2,3,4,6,7,8-HpCDF	100.00	2.42e+07	0.43 y	42:15	-	1.09 y
32	IS 13C-1,2,3,4,7,8,9-HpCDF	100.00	1.71e+07	0.44 y	45:04	-	0.772 y
33	IS 13C-OCDF	200.00	5.14e+07	0.98 y	50:03	-	1.16 y
34	C/Up 37Cl-2,3,7,8-TCDD	40.00	1.36e+07		27:27	-	0.970 y
35	RS 13C-1,2,3,4-TCDD	100.00	3.49e+07	0.80 y	26:50	3.49e+05	- n
36	RS 13C-1,2,3,4-TCDF	100.00	5.68e+07	0.88 y	25:35	5.68e+05	- n
37	RS/RT 13C-1,2,3,7,8,9-HxCDD	100.00	2.22e+07	1.30 y	39:10	2.22e+05	- n
38	Tot Total Tetra-Dioxins	0.00	-	- n	-	-	1.01 y
39	Tot Total Penta-Dioxins	0.00	-	- n	-	-	1.11 y
40	Tot Total Hexa-Dioxins	0.00	-	- n	-	-	1.31 y
41	Tot Total Hepta-Dioxins	0.00	-	- n	-	-	1.40 y
42	Tot Total Tetra-Furans	0.00	-	- n	-	-	1.57 y
43	Tot 1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.977 y
44	Tot Total Penta-Furans	0.00	-	- n	-	-	0.977 y
45	Tot Total Hexa-Furans	0.00	-	- n	-	-	0.952 y
46	Tot Total Hepta-Furans	0.00	-	- n	-	-	1.58 y

Analyst: E

Date: 5/13/10

USEPA - ITD

FORM 3A

PCDD/PCDF INITIAL CALIBRATION RELATIVE RESPONSES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/12/10


Instrument ID: FAL3 GC Column ID: DB5

CS0 Data Filename: 12MAY10M S1 CS3 Data Filename: 12MAY10M S4

CS1 Data Filename: 12MAY10M S2 CS4 Data Filename: 12MAY10M S5

CS2 Data Filename: 12MAY10M S3 CS5 Data Filename: 12MAY10M S6

	RELATIVE RESPONSE (RR)						MEAN RR	Cv (%RSD)
	CS1	CS2	CS3	CS4	CS5	CS6		
NATIVE ANALYTES								
2,3,7,8-TCDD	1.01	1.12	0.97	1.02	1.01	1.08	1.04	5.37
1,2,3,7,8-PeCDD	1.02	1.04	1.00	1.01	1.11	1.10	1.05	4.33
1,2,3,4,7,8-HxCDD	1.27	1.29	1.26	1.30	1.33	1.35	1.30	2.72
1,2,3,6,7,8-HxCDD	1.25	1.23	1.27	1.24	1.33	1.34	1.28	3.82
1,2,3,7,8,9-HxCDD	1.26	1.14	1.25	1.24	1.28	1.32	1.25	4.84
1,2,3,4,6,7,8-HpCDD	1.26	1.33	1.36	1.37	1.40	1.40	1.35	3.76
OCDD	1.22	1.13	1.24	1.27	1.32	1.33	1.25	6.05
2,3,7,8-TCDF	1.65	1.74	1.59	1.56	1.57	1.60	1.62	4.14
1,2,3,7,8-PeCDF	0.89	0.89	0.86	0.94	0.95	0.96	0.92	4.45
2,3,4,7,8-PeCDF	0.88	0.94	0.92	0.96	1.00	0.97	0.94	4.58
1,2,3,4,7,8-HxCDF	0.90	0.88	0.90	0.93	0.97	1.00	0.93	4.80
1,2,3,6,7,8-HxCDF	0.78	0.79	0.83	0.84	0.89	0.90	0.84	5.95
2,3,4,6,7,8-HxCDF	0.85	0.87	0.86	0.89	0.94	0.96	0.90	5.24
1,2,3,7,8,9-HxCDF	0.96	0.93	0.93	0.98	1.04	1.06	0.98	5.68
1,2,3,4,6,7,8-HpCDF	1.32	1.32	1.33	1.38	1.45	1.48	1.38	5.19
1,2,3,4,7,8,9-HpCDF	1.53	1.55	1.56	1.60	1.76	1.75	1.62	6.40
OCDF	0.70	0.72	0.72	0.73	0.77	0.80	0.74	5.02

Analyst: 

Date: 5/13/10

USEPA - ITD

FORM 3B

PCDD/PCDF INITIAL CALIBRATION RELATIVE RESPONSES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/12/10

Instrument ID: FAL3

GC Column ID: DB5

CS0 Data Filename: 12MAY10M S1 CS4 Data Filename: 12MAY10M S4

CS1 Data Filename: 12MAY10M S2 CS4 Data Filename: 12MAY10M S5

CS2 Data Filename: 12MAY10M S3 CS5 Data Filename: 12MAY10M S6

Labeled Compounds	RELATIVE RESPONSE (RR)						MEAN RR	Cv (%RSD)
	CS1	CS2	CS3	CS4	CS5	CS6		
13C-2,3,7,8-TCDD	0.93	0.91	0.90	0.93	0.95	0.95	0.93	2.15
13C-1,2,3,7,8-PeCDD	0.83	0.78	0.75	0.83	0.80	0.85	0.81	4.50
13C-1,2,3,4,7,8-HxCDD	0.90	0.90	0.94	0.97	0.97	0.99	0.95	3.96
13C-1,2,3,6,7,8-HxCDD	0.99	1.02	1.00	1.02	0.99	0.97	1.00	1.83
13C-1,2,3,4,6,7,8-HpCDD	0.92	0.95	0.93	0.92	0.89	0.92	0.92	2.22
13C-OCDD	0.64	0.63	0.62	0.64	0.59	0.67	0.63	3.86
13C-2,3,7,8-TCDF	0.87	0.84	0.87	0.89	0.86	0.88	0.87	1.68
13C-1,2,3,7,8-PeCDF	0.84	0.76	0.75	0.88	0.78	0.83	0.81	6.23
13C-2,3,4,7,8-PeCDF	0.81	0.71	0.69	0.81	0.72	0.77	0.75	6.69
13C-1,2,3,4,7,8-HxCDF	1.67	1.70	1.76	1.80	1.78	1.71	1.74	2.80
13C-1,2,3,6,7,8-HxCDF	2.11	2.18	2.21	2.25	2.18	2.07	2.17	2.92
13C-2,3,4,6,7,8-HxCDF	1.78	1.81	1.86	1.87	1.81	1.75	1.82	2.57
13C-1,2,3,7,8,9-HxCDF	1.43	1.47	1.49	1.52	1.48	1.51	1.49	2.17
13C-1,2,3,4,6,7,8-HpCDF	1.07	1.10	1.11	1.11	1.09	1.10	1.10	1.36
13C-1,2,3,4,7,8,9-HpCDF	0.82	0.84	0.81	0.82	0.77	0.82	0.81	2.83
13C-OCDF	1.20	1.15	1.16	1.18	1.16	1.27	1.19	3.63
CLEANUP STANDARD								
37Cl-2,3,7,8-TCDD	0.89	1.00	0.84	0.89	0.97	1.00	0.93	7.14

Analyst: Date: 5/13/10

USEPA - ITD

FORM 3C

PCDD/PCDF INITIAL CALIBRATION ION ABUNDANCE RATIOS

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/12/10

Instrument ID: FAL3 GC Column ID: DB5

CS0 Data Filename: 12MAY10M S1 CS3 Data Filename: 12MAY10M S4

CS1 Data Filename: 12MAY10M S2 CS4 Data Filename: 12MAY10M S5

CS2 Data Filename: 12MAY10M S3 CS5 Data Filename: 12MAY10M S6

NATIVE ANALYTES	M/Z'S FORMING RATIO	ION ABUNDANCE RATIOS						QC LIMITS
		CS1	CS2	CS3	CS4	CS5	CS6	
2,3,7,8-TCDD	M/M+2	0.81	0.79	0.78	0.78	0.77	0.77	0.65-0.89
1,2,3,7,8-PeCDD	M+2/M+4	1.62	1.68	1.74	1.70	1.68	1.67	1.32-1.78
1,2,3,4,7,8-HxCDD	M+2/M+4	1.34	1.29	1.32	1.30	1.29	1.30	1.05-1.43
1,2,3,6,7,8-HxCDD	M+2/M+4	1.31	1.28	1.31	1.30	1.29	1.30	1.05-1.43
1,2,3,7,8,9-HxCDD	M+2/M+4	1.31	1.33	1.33	1.28	1.22	1.30	1.05-1.43
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.14	1.07	1.04	1.11	1.06	1.08	0.88-1.20
OCDD	M+2/M+4	0.97	0.93	0.88	0.93	0.93	0.93	0.76-1.02
2,3,7,8-TCDF	M/M+2	0.69	0.67	0.70	0.72	0.71	0.70	0.65-0.89
1,2,3,7,8-PeCDF	M+2/M+4	1.45	1.44	1.51	1.54	1.54	1.53	1.32-1.78
2,3,4,7,8-PeCDF	M+2/M+4	1.49	1.46	1.54	1.55	1.53	1.53	1.32-1.78
1,2,3,4,7,8-HxCDF	M+2/M+4	1.28	1.30	1.28	1.29	1.28	1.28	1.05-1.43
1,2,3,6,7,8-HxCDF	M+2/M+4	1.32	1.29	1.29	1.30	1.29	1.28	1.05-1.43
2,3,4,6,7,8-HxCDF	M+2/M+4	1.31	1.28	1.30	1.30	1.28	1.28	1.05-1.43
1,2,3,7,8,9-HxCDF	M+2/M+4	1.35	1.16	1.32	1.27	1.31	1.29	1.05-1.43
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.04	1.04	1.05	1.05	1.04	1.05	0.88-1.20
1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.99	1.07	1.05	1.05	1.06	1.05	0.88-1.20
OCDF	M+2/M+4	0.94	0.91	0.88	0.87	0.90	0.88	0.76-1.02

Analyst: 

Date: 5/13/10

USEPA - ITD

FORM 3D

PCDD/PCDF INITIAL CALIBRATION ION ABUNDANCE RATIOS

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 5/12/10

Instrument ID: FAL3

GC Column ID: DB5

CS0 Data Filename: 12MAY10M S1 CS3 Data Filename: 12MAY10M S4

CS1 Data Filename: 12MAY10M S2 CS4 Data Filename: 12MAY10M S5

CS2 Data Filename: 12MAY10M S3 CS5 Data Filename: 12MAY10M S6

Labeled Compounds	M/Z'S FORMING RATIO	ION ABUNDANCE RATIOS						QC LIMITS
		CS1	CS2	CS3	CS4	CS5	CS6	
13C-2,3,7,8-TCDD	M/M+2	0.79	0.79	0.80	0.80	0.79	0.80	0.65-0.89
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.76	1.78	1.75	1.77	1.72	1.75	1.32-1.78
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.30	1.29	1.30	1.29	1.29	1.28	1.05-1.43
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.29	1.28	1.31	1.28	1.29	1.28	1.05-1.43
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	1.02	1.07	1.06	1.04	1.04	0.88-1.20
13C-OCDD	M+2/M+4	0.87	0.92	0.98	0.91	0.90	0.92	0.76-1.02
13C-2,3,7,8-TCDF	M/M+2	0.88	0.87	0.88	0.88	0.88	0.88	0.65-0.89
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.70	1.70	1.67	1.70	1.69	1.66	1.32-1.78
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.67	1.70	1.69	1.71	1.68	1.65	1.32-1.78
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.56	0.56	0.55	0.55	0.55	0.56	0.43-0.59
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.57	0.56	0.55	0.56	0.55	0.56	0.43-0.59
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.57	0.54	0.55	0.55	0.55	0.56	0.43-0.59
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.57	0.57	0.56	0.56	0.57	0.56	0.43-0.59
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.43	0.44	0.44	0.43	0.43	0.44	0.37-0.51
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.43	0.43	0.43	0.42	0.44	0.44	0.37-0.51
13C-OCDF	M+2/M+4	0.99	0.98	0.96	0.98	0.98	0.99	0.76-1.02

Analyst: Date: 5/13/10

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: 12MAY10M Sam:4

Analysis Date: 12-MAY-10 16:08:51

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	y	9.80	7.80 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	1.70	1.32-1.78	y	48.3	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.30	1.05-1.43	y	50.2	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.30	1.05-1.43	y	48.5	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	y	49.6	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.11	0.88-1.20	y	50.6	43.0 - 58.0
OCDD	M+2/M+4	0.93	0.76-1.02	y	101	79.0 - 126
2,3,7,8-TCDF	M/M+2	0.72	0.65-0.89	y	9.66	8.40 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	y	51.5	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	y	50.9	41.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	50.0	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.30	1.05-1.43	y	50.3	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.30	1.05-1.43	y	49.7	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	y	49.6	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	y	50.1	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	y	49.2	43.0 - 58.0
OCDF	M+2/M+4	0.87	0.76-1.02	y	98.8	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: 5/13/10

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: 12MAY10M Sam:4

Analysis Date: 12-MAY-10 16:08:51

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	y	100.0	82.0 - 121
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.77	1.32-1.78	y	103	62.0 - 160
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	102	85.0 - 117
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	102	85.0 - 118
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	y	99.6	72.0 - 138
13C-OCDD	M+2/M+4	0.91	0.76-1.02	y	202	96.0 - 415
13C-2,3,7,8-TCDF	M/M+2	0.88	0.65-0.89	y	102	71.0 - 140
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.70	1.32-1.78	y	109	76.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.71	1.32-1.78	y	107	77.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.55	0.43-0.59	y	103	76.0 - 131
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.56	0.43-0.59	y	104	70.0 - 143
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.55	0.43-0.59	y	103	73.0 - 137
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.56	0.43-0.59	y	102	74.0 - 135
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.43	0.37-0.51	y	101	78.0 - 129
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.42	0.37-0.51	y	100	77.0 - 129
13C-OCDF	M+2/M+4	0.98	0.76-1.02	y	199	96.0 - 415
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					9.55	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: 5/13/10

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: 12MAY10M Sam:4 Analysis Date: 12-MAY-10 Time: 16:08:51
DB-5 IS Data Filename: 12MAY10M Sam:4 Analysis Date: 12-MAY-10 Time: 16:08:51
DB-225 IS Data Filename: Analysis Date: Time:

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:26	1,3,6,8-TCDF (F)	23:05
1,2,8,9-TCDD (L)	28:23	1,2,8,9-TCDF (L)	28:36
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)	34:14
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)	39:11	1,2,3,7,8,9-HxCDF (L)	39:45
1,2,3,4,6,7,9-HpCDD (F)	42:47	1,2,3,4,6,7,8-HpCDF (F)	42:15
1,2,3,4,6,7,8-HpCDD (L)	44:10	1,2,3,4,7,8,9-HpCDF (L)	45:04

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

=====

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT
BETWEEN
COMPARED PEAKS (1)

<25%

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

Analyst: 

Date: 5/13/10

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-MAY-10 16:08:51 CS3 or VER Data Filename: 12MAY10M Sam:4

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	1.000	0.999-1.003
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.989-1.052
13C-2,3,7,8-TCDD		1.021	0.976-1.043
13C-2,3,7,8-TCDF		0.994	0.923-1.103
13C-1,2,3,7,8-PeCDD		1.238	1.000-1.567
13C-1,2,3,7,8-PeCDF		1.173	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: 5/13/10

Results: GC Column: DB5 Amount: 1.000 NATO 1989 Tox: 99.5 WHO 1998 Tox: 123 WHO 2005 Tox: 112

Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL	Rec	#Hom
2,3,7,8-TCDD	3.10e+06	0.78 y	27:27	1.04	9.80	2.50	-	-	*		
1,2,3,7,8-PeCDD	1.38e+07	1.70 y	33:15	1.05	48.3	2.50	-	-	*		
1,2,3,4,7,8-HxCDD	1.26e+07	1.30 y	38:35	1.30	50.2	2.50	-	-	*		
1,2,3,6,7,8-HxCDD	1.26e+07	1.30 y	38:45	1.28	48.5	2.50	-	-	*		
1,2,3,7,8,9-HxCDD	1.23e+07	1.28 y	39:11	1.25	49.6	2.50	-	-	*		
1,2,3,4,6,7,8-HpCDD	1.26e+07	1.11 y	44:10	1.35	50.6	2.50	-	-	*		
OCDD	1.62e+07	0.93 y	49:41	1.25	101	2.50	-	-	*		
2,3,7,8-TCDF	6.83e+06	0.72 y	26:41	1.62	9.66	2.50	-	-	*		
1,2,3,7,8-PeCDF	2.04e+07	1.54 y	31:31	0.92	51.5	2.50	-	-	*		
2,3,4,7,8-PeCDF	1.91e+07	1.55 y	32:50	0.94	50.9	2.50	-	-	*		
1,2,3,4,7,8-HxCDF	1.67e+07	1.29 y	37:11	0.93	50.0	2.50	-	-	*		
1,2,3,6,7,8-HxCDF	1.89e+07	1.30 y	37:24	0.84	50.3	2.50	-	-	*		
2,3,4,6,7,8-HxCDF	1.67e+07	1.30 y	38:19	0.90	49.7	2.50	-	-	*		
1,2,3,7,8,9-HxCDF	1.49e+07	1.27 y	39:45	0.98	49.6	2.50	-	-	*		
1,2,3,4,6,7,8-HpCDF	1.54e+07	1.05 y	42:15	1.38	50.1	2.50	-	-	*		
1,2,3,4,7,8,9-HpCDF	1.31e+07	1.05 y	45:04	1.62	49.2	2.50	-	-	*		
OCDF	1.73e+07	0.87 y	50:04	0.74	98.8	2.50	-	-	*		
13C-2,3,7,8-TCDD	3.06e+07	0.80 y	27:25	0.93	100.0					100.0	
13C-1,2,3,7,8-PeCDD	2.73e+07	1.77 y	33:13	0.81	103					103	
13C-1,2,3,4,7,8-HxCDD	1.94e+07	1.29 y	38:33	0.95	102					102	
13C-1,2,3,6,7,8-HxCDD	2.04e+07	1.28 y	38:43	1.00	102					102	
13C-1,2,3,4,6,7,8-HpCDD	1.84e+07	1.06 y	44:09	0.92	99.6					99.6	
13C-OCDD	2.56e+07	0.91 y	49:41	0.63	202					101	
13C-2,3,7,8-TCDF	4.37e+07	0.88 y	26:40	0.87	102					102	
13C-1,2,3,7,8-PeCDF	4.32e+07	1.70 y	31:29	0.81	109					109	
13C-2,3,4,7,8-PeCDF	3.97e+07	1.71 y	32:49	0.75	107					107	
13C-1,2,3,4,7,8-HxCDF	3.60e+07	0.55 y	37:10	1.74	103					103	
13C-1,2,3,6,7,8-HxCDF	4.50e+07	0.56 y	37:22	2.17	104					104	
13C-2,3,4,6,7,8-HxCDF	3.76e+07	0.55 y	38:19	1.82	103					103	
13C-1,2,3,7,8,9-HxCDF	3.05e+07	0.56 y	39:45	1.49	102					102	
13C-1,2,3,4,6,7,8-HpCDF	2.22e+07	0.43 y	42:14	1.10	101					101	
13C-1,2,3,4,7,8,9-HpCDF	1.64e+07	0.42 y	45:03	0.81	100					100	
13C-OCDF	4.74e+07	0.98 y	50:02	1.19	199					99.7	
37Cl-2,3,7,8-TCDD	2.93e+06		27:27	0.93	9.55					95.5	
13C-1,2,3,4-TCDD	3.30e+07	0.81 y	26:50	-	97.3						
13C-1,2,3,4-TCDF	4.93e+07	0.87 y	25:34	-	92.5						
13C-1,2,3,7,8,9-HxCDD	2.00e+07	1.28 y	39:10	-	92.9						
Total Tetra-Dioxins	1.68e+07		23:16	1.04	53.2	2.50	-	-	*		19
Total Penta-Dioxins	3.09e+07		30:17	1.05	108	2.50	-	-	*		9
Total Hexa-Dioxins	4.33e+07		36:08	1.27	171	2.50	-	-	*		13
Total Hepta-Dioxins	2.73e+07		42:47	1.35	110	2.50	-	-	*		10
Total Tetra-Furans	2.92e+07		23:05	1.62	41.3	2.50	-	-	*		21
1st Fn. Tot Penta-Furans	2.33e+07		28:27	0.93	60.5	2.50	-	-	*	PeCDF	1
Total Penta-Furans	5.64e+07		30:15	0.93	146	2.50	-	-	*	207	9
Total Hexa-Furans	7.98e+07		35:15	0.90	237	2.50	-	-	*		13
Total Hepta-Furans	2.91e+07		42:15	1.48	102	2.50	-	-	*		5

Analyst: 

Date: 5/13/10

Frontier Analytical Laboratory - Acquisition Log

Run Name: 12MAY10M

Instrument: FAL3

GC: DB5

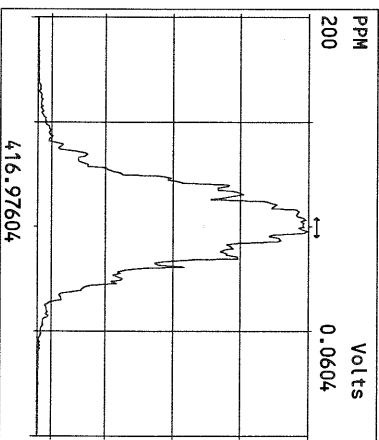
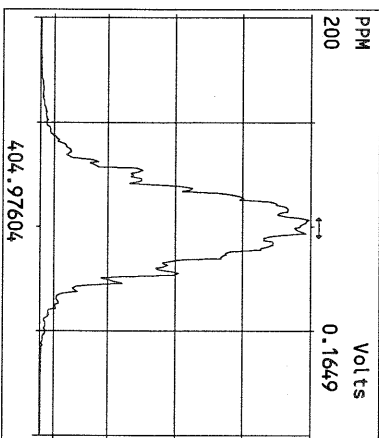
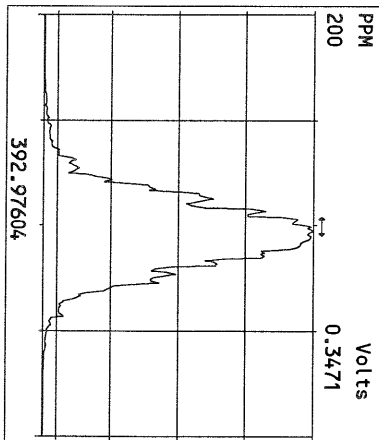
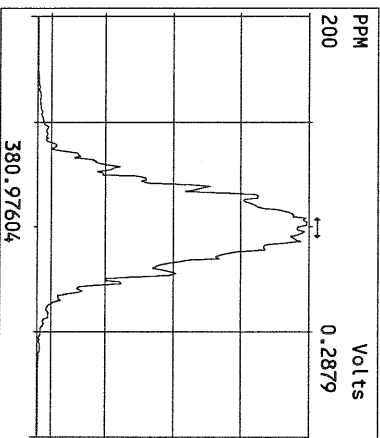
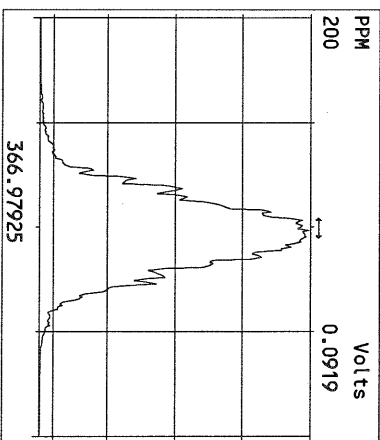
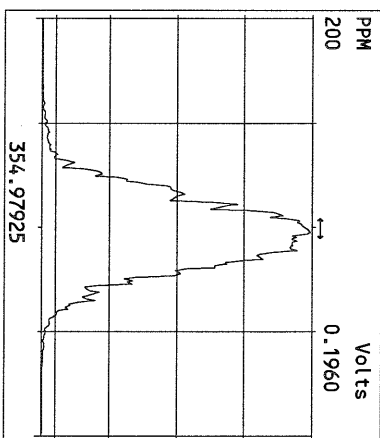
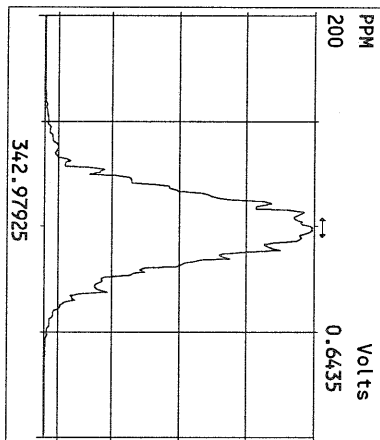
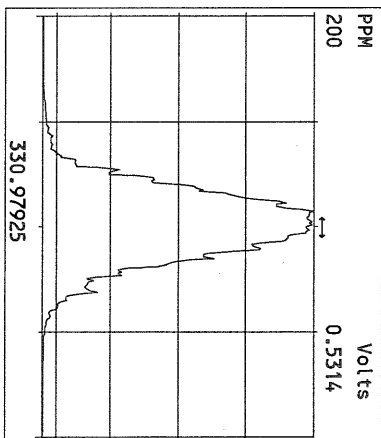
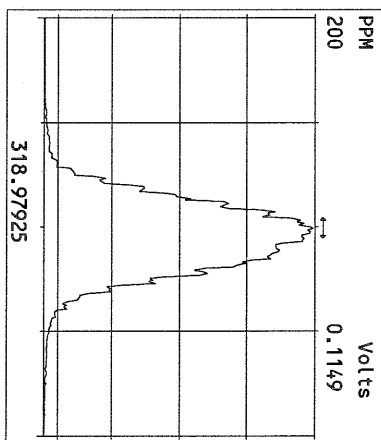
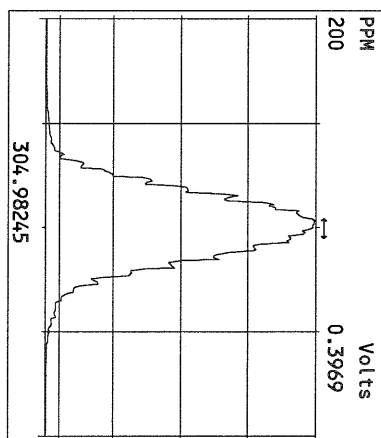
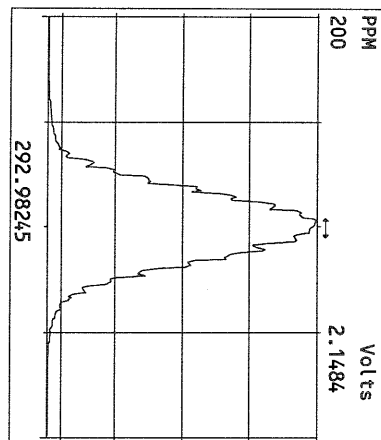
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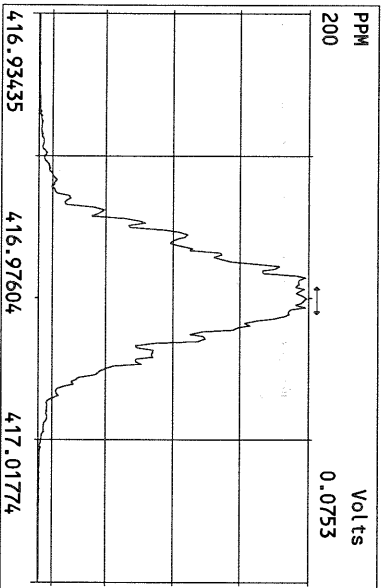
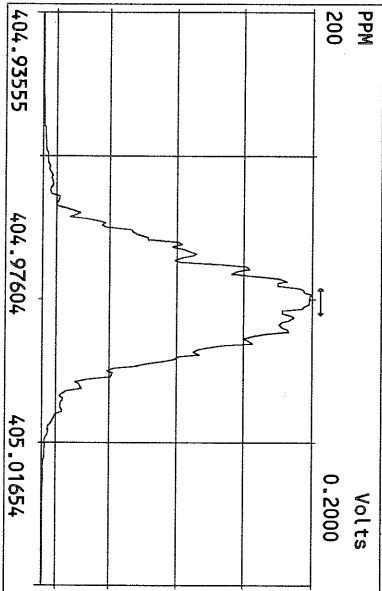
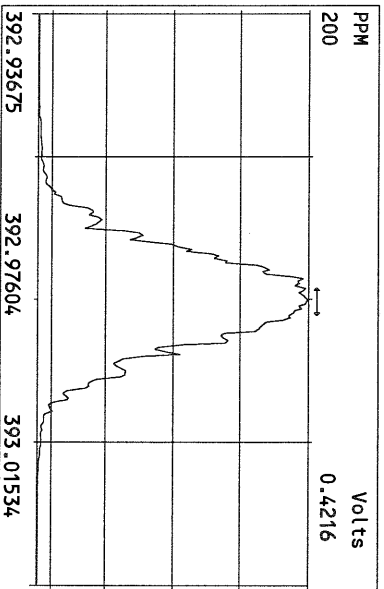
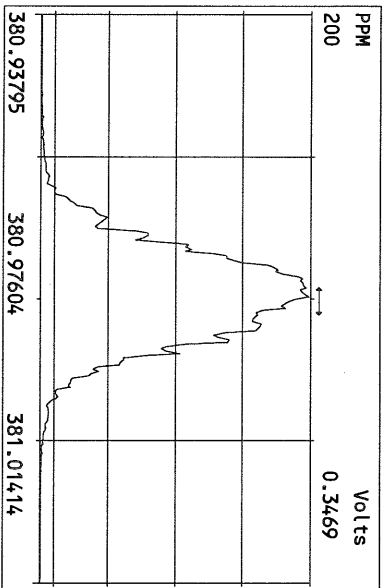
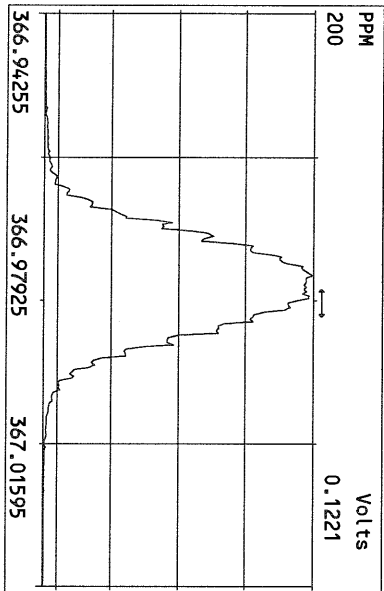
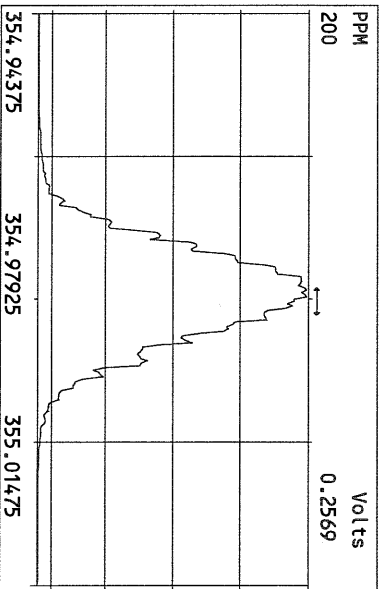
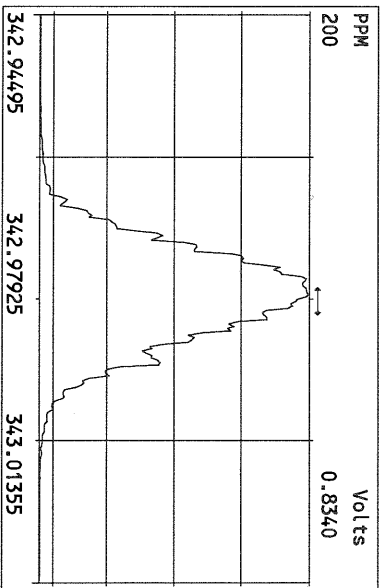
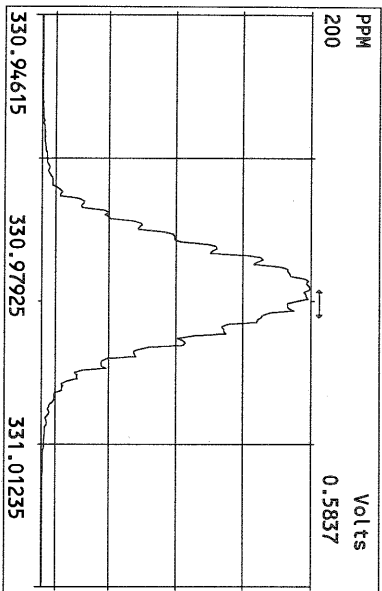
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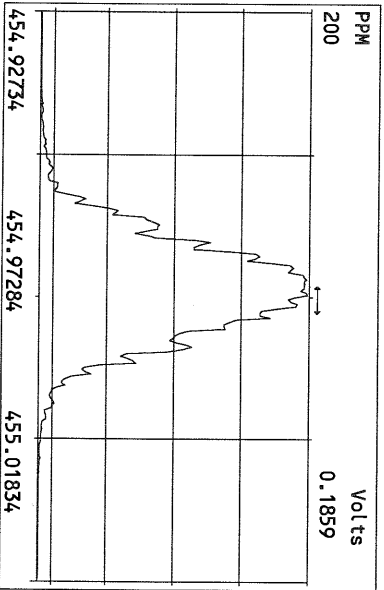
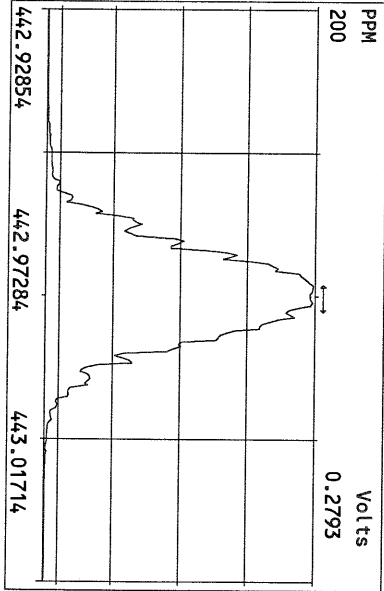
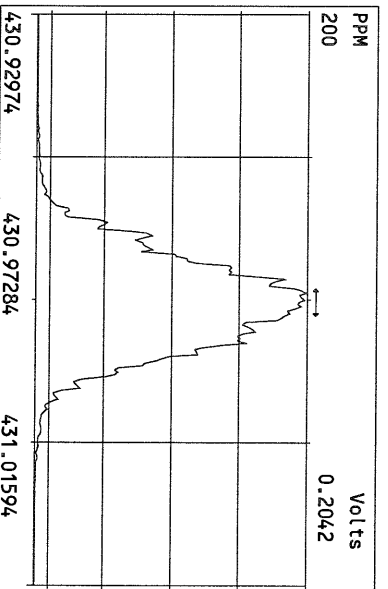
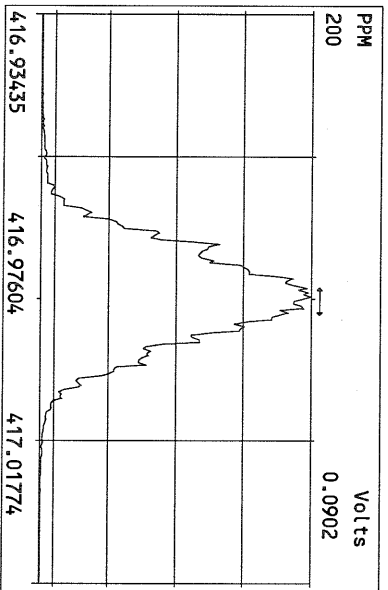
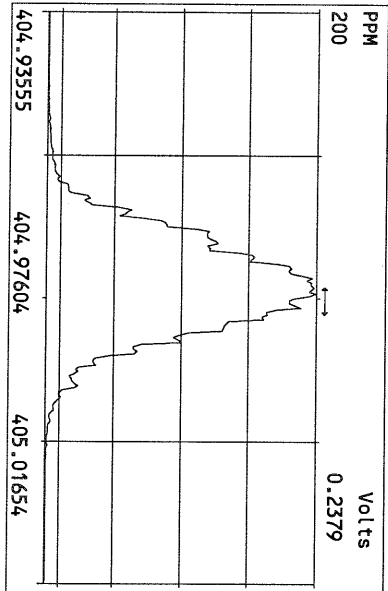
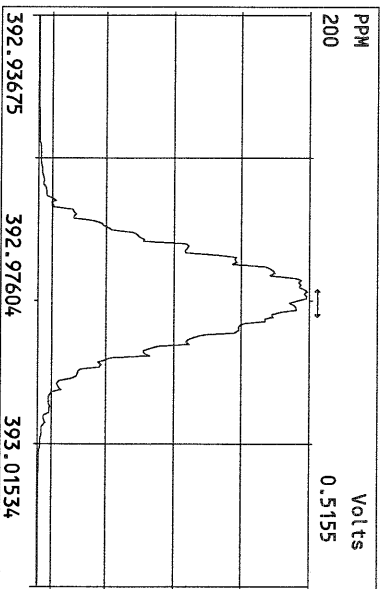
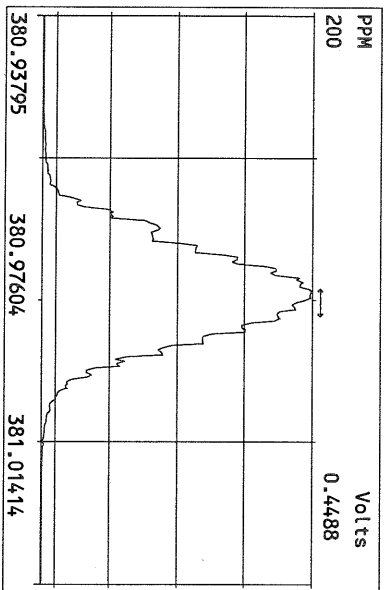
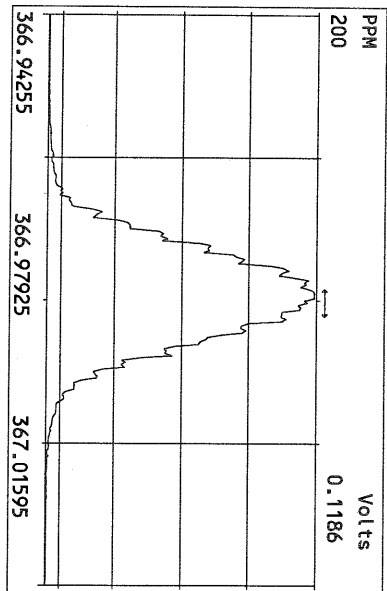
L *5/13/10*

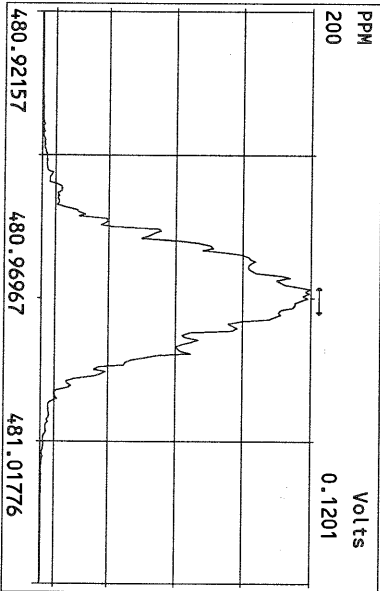
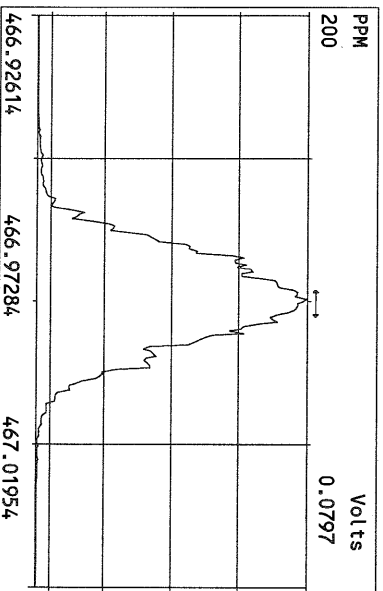
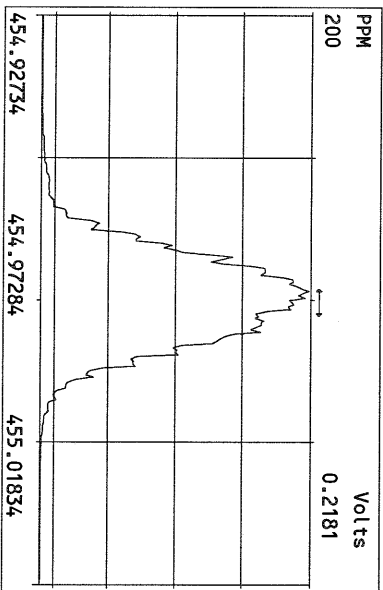
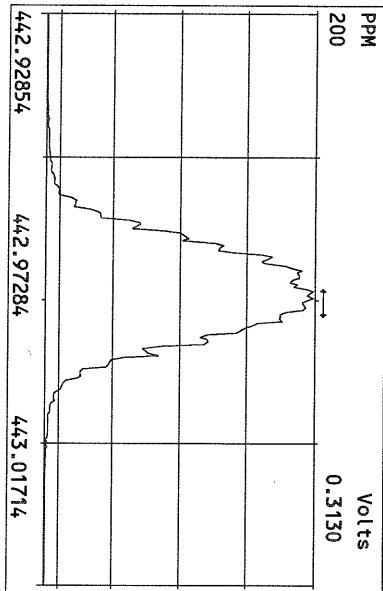
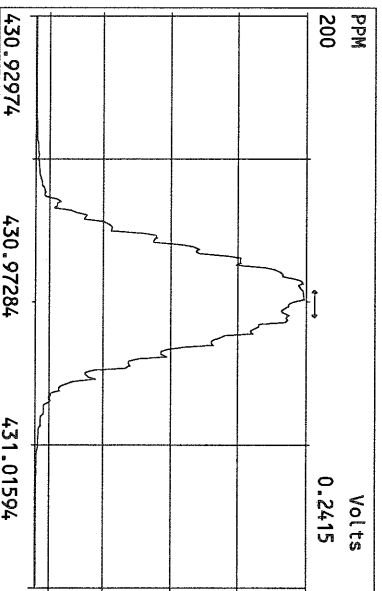
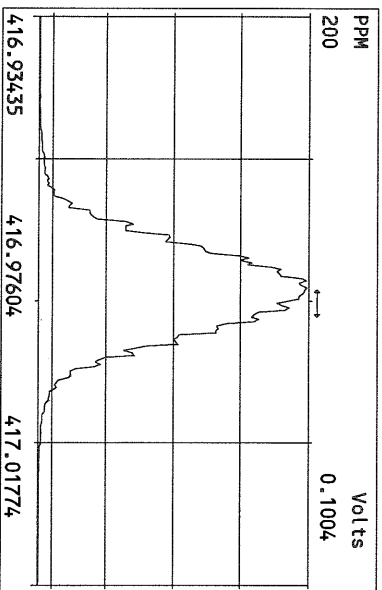
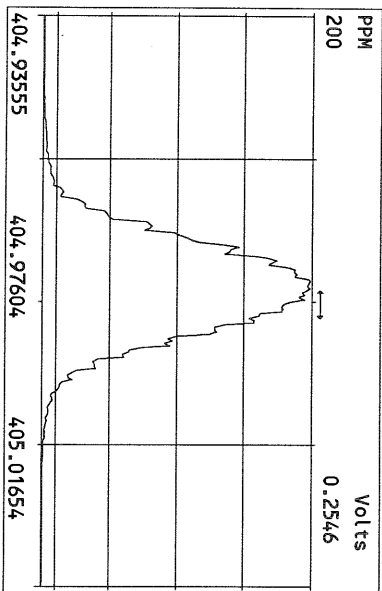
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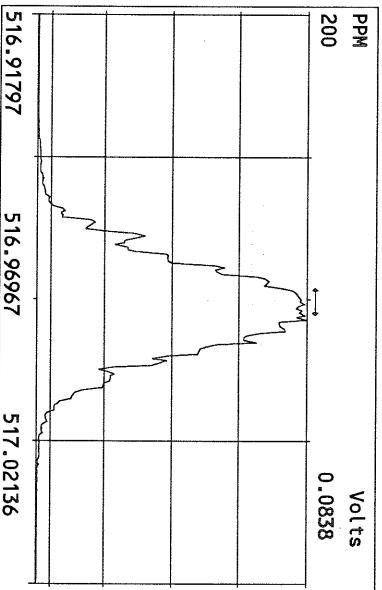
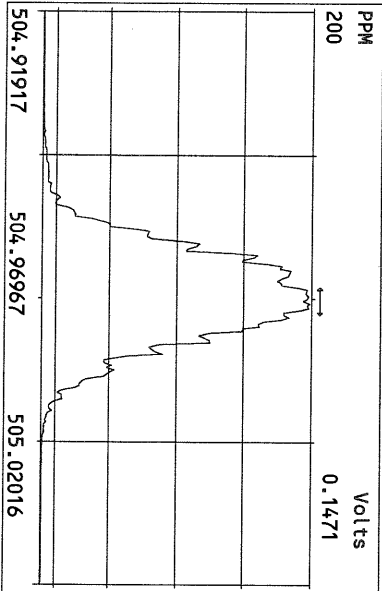
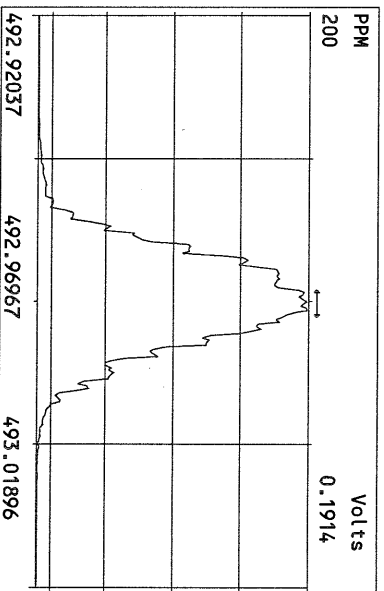
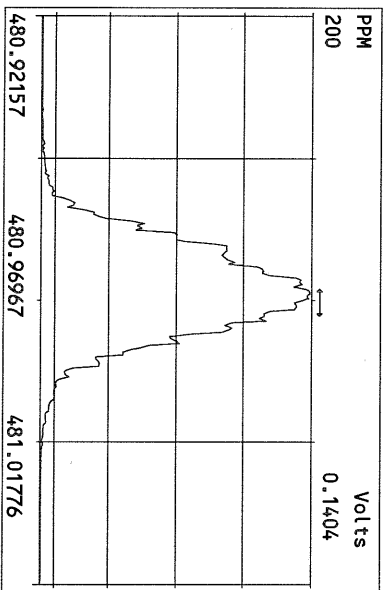
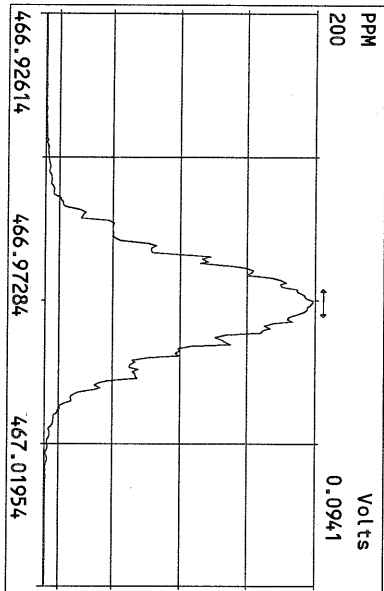
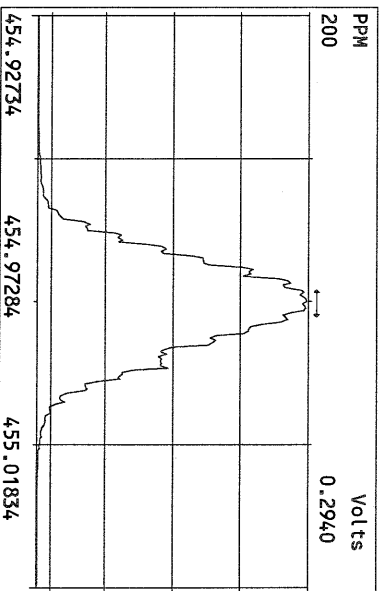
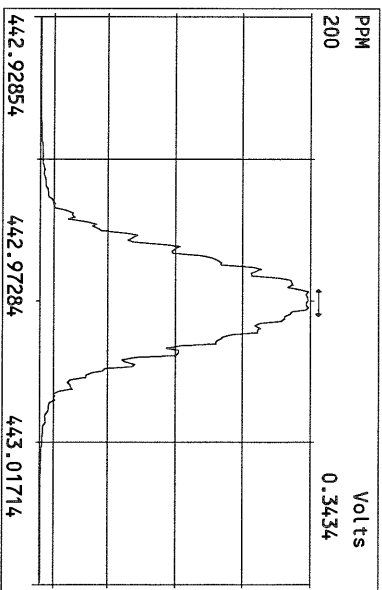
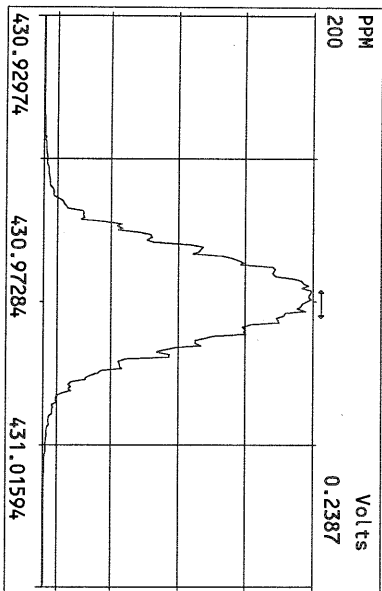
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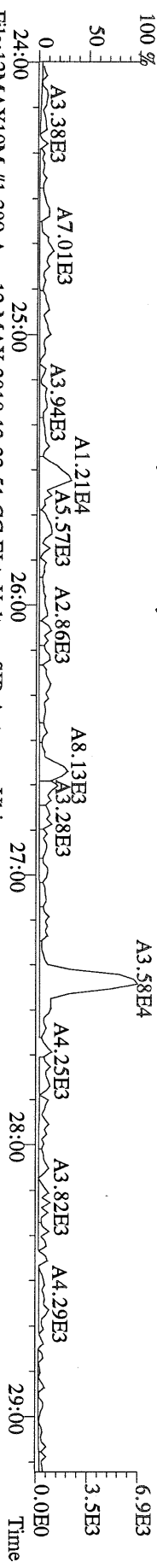




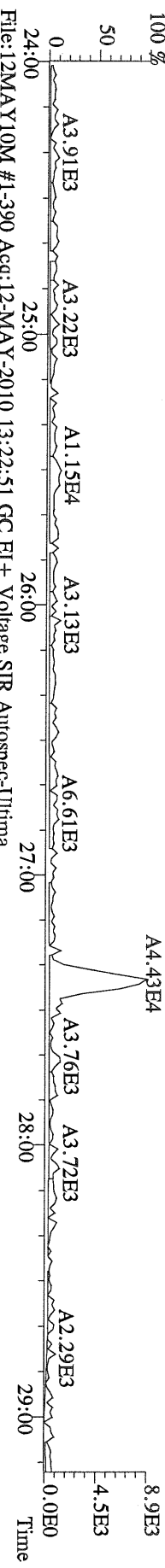




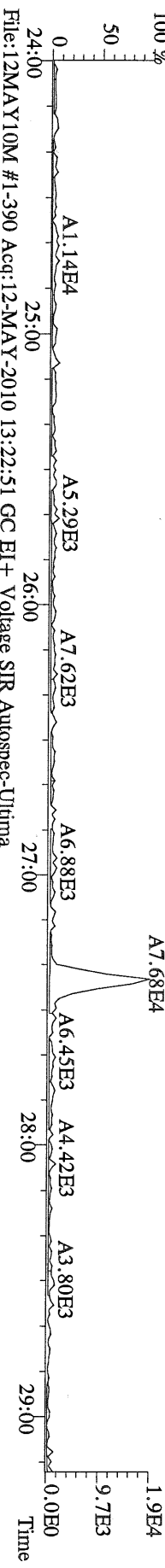
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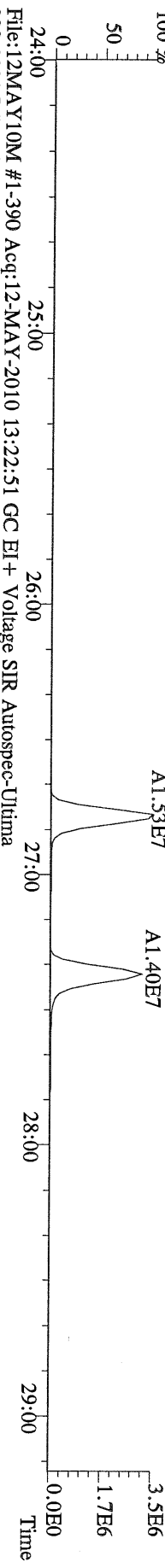
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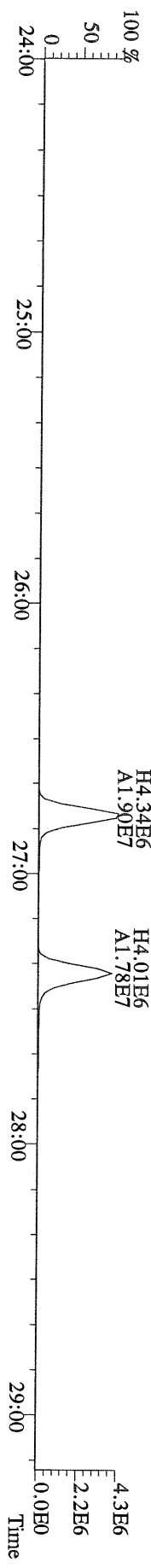
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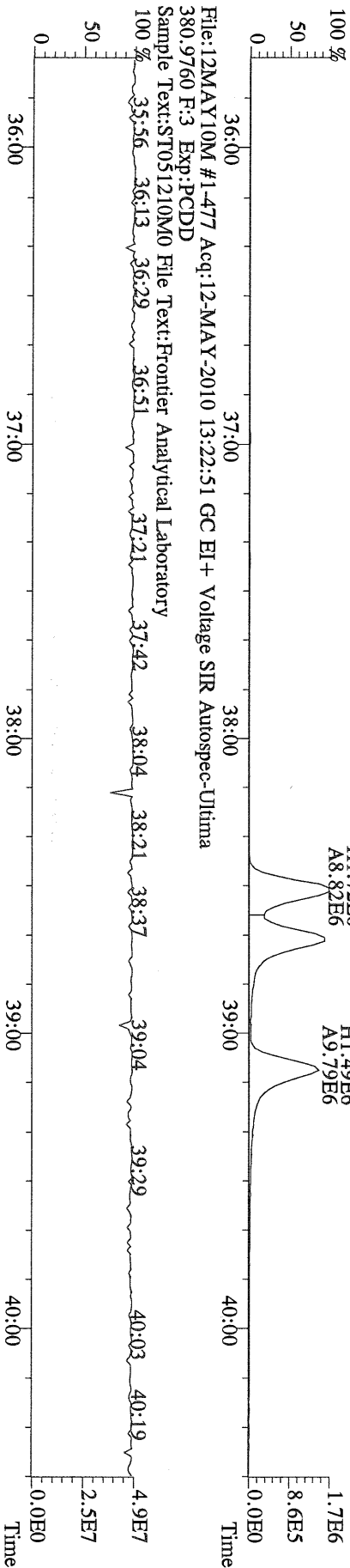
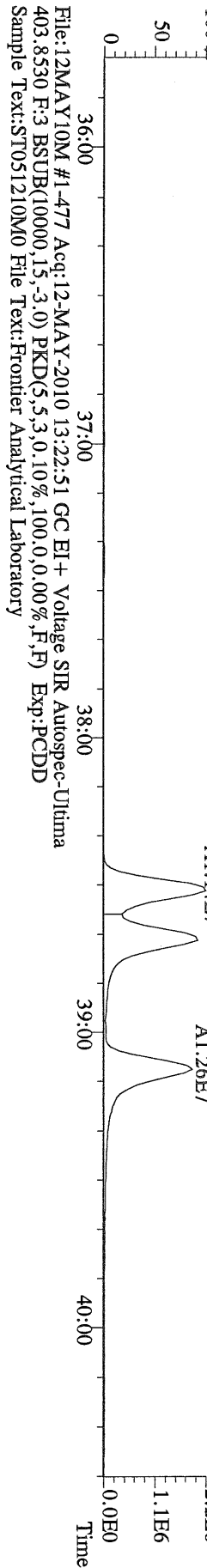
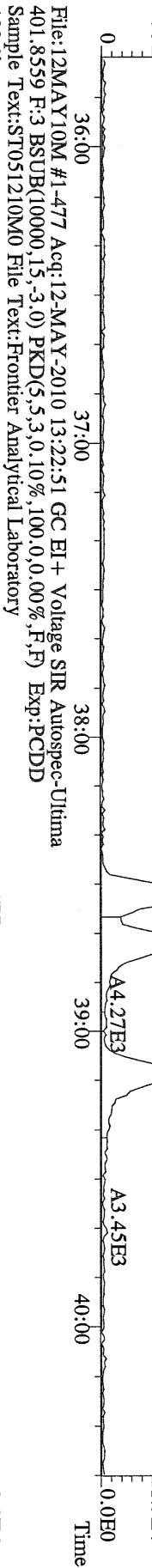
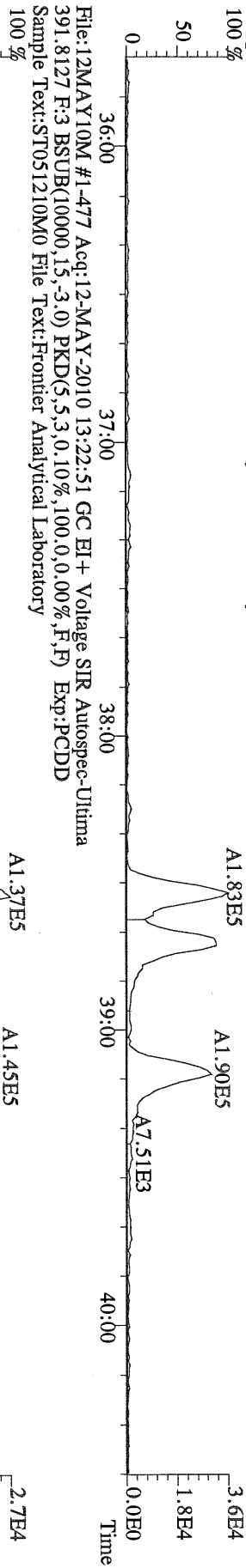
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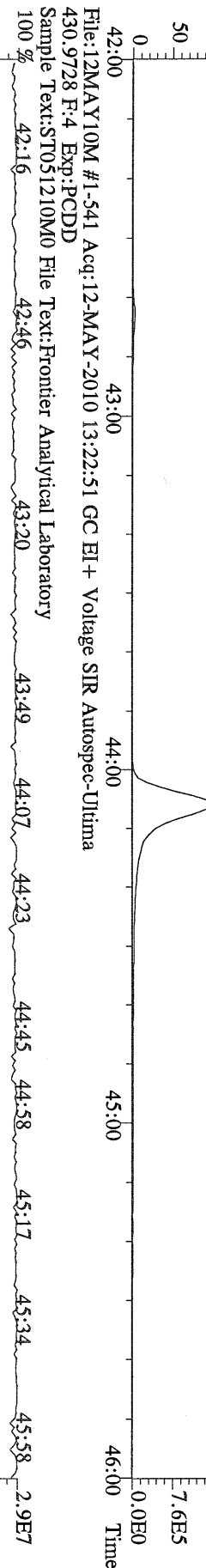
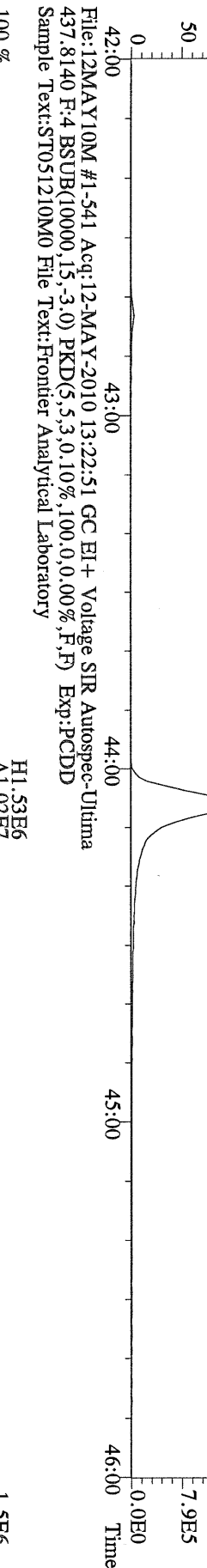
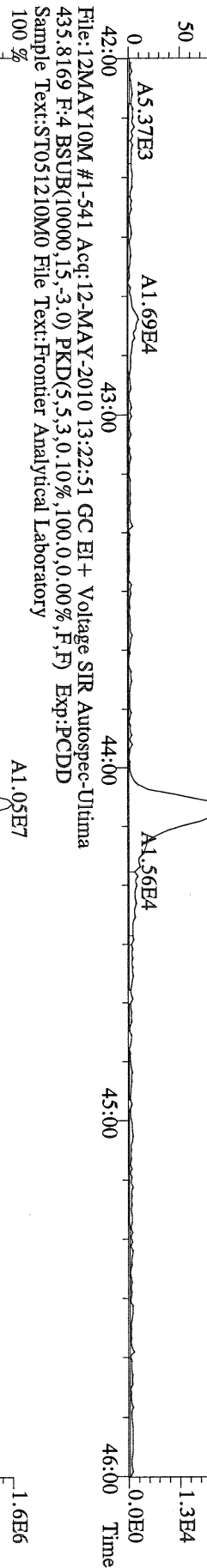
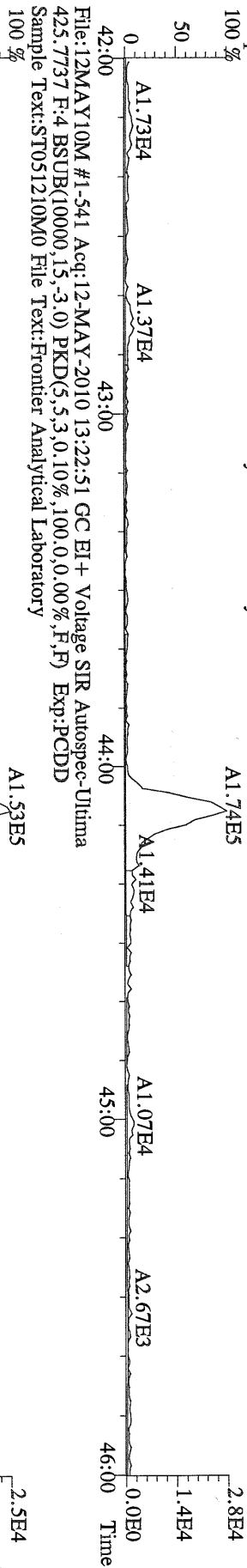
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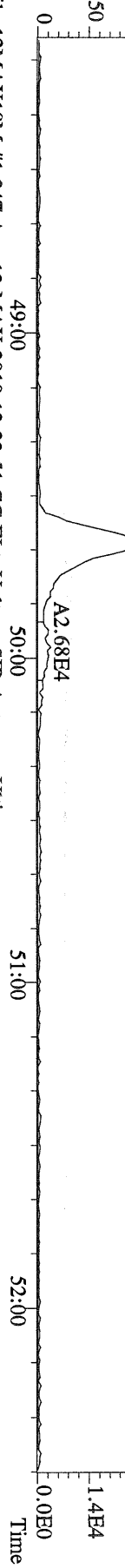


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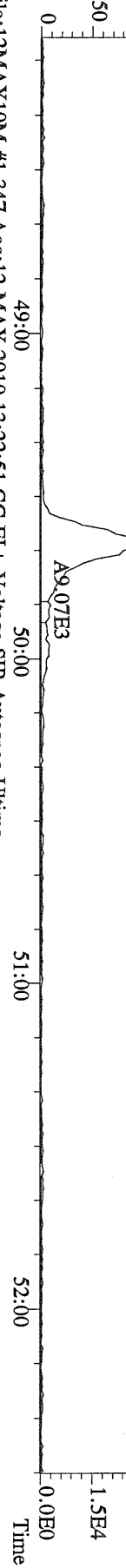


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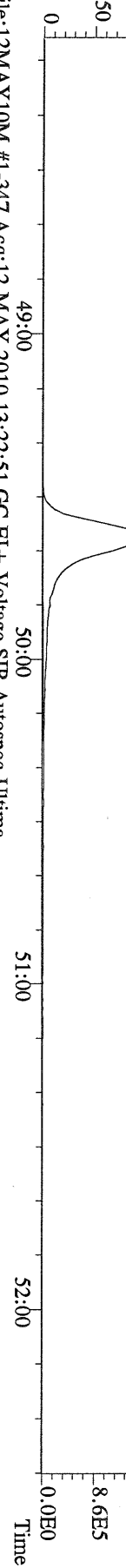
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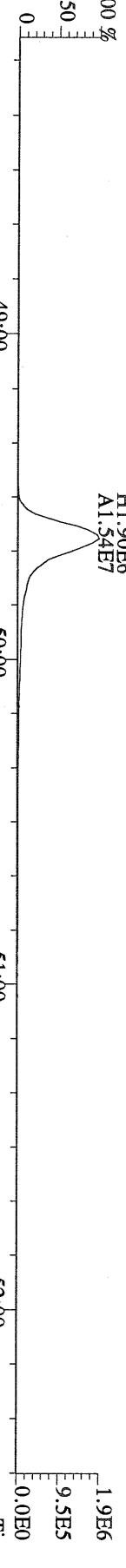
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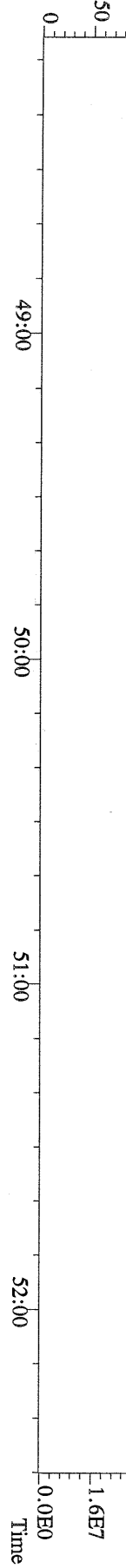
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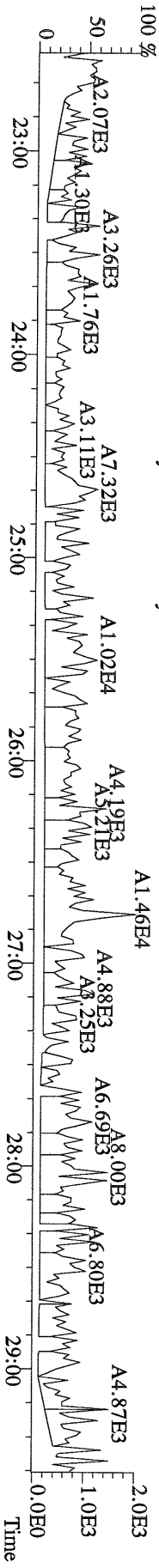
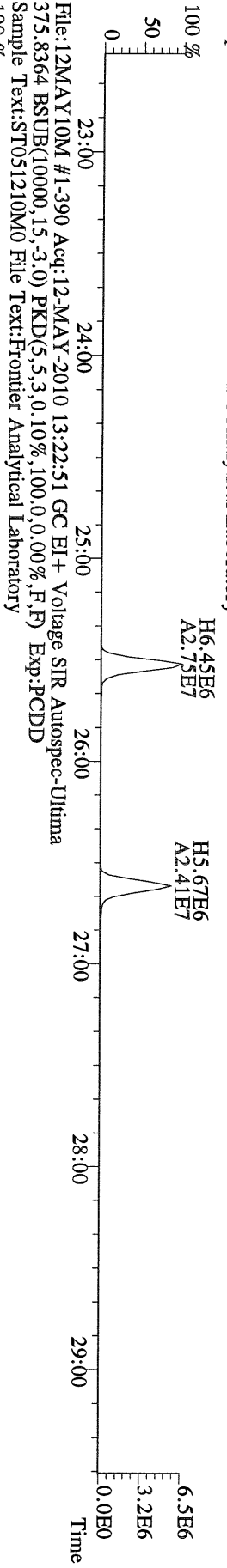
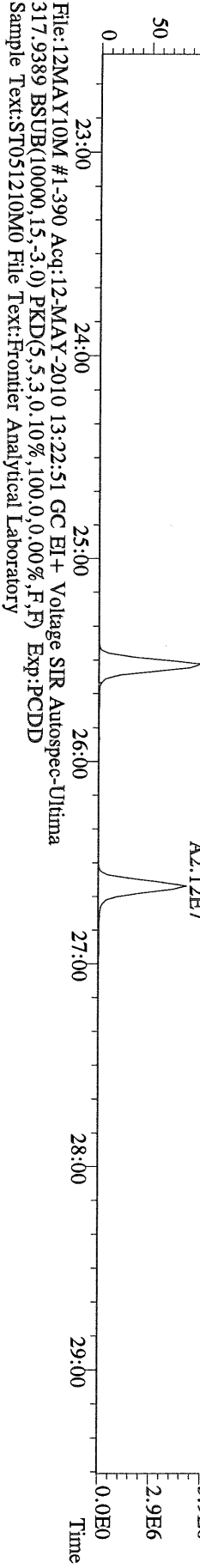
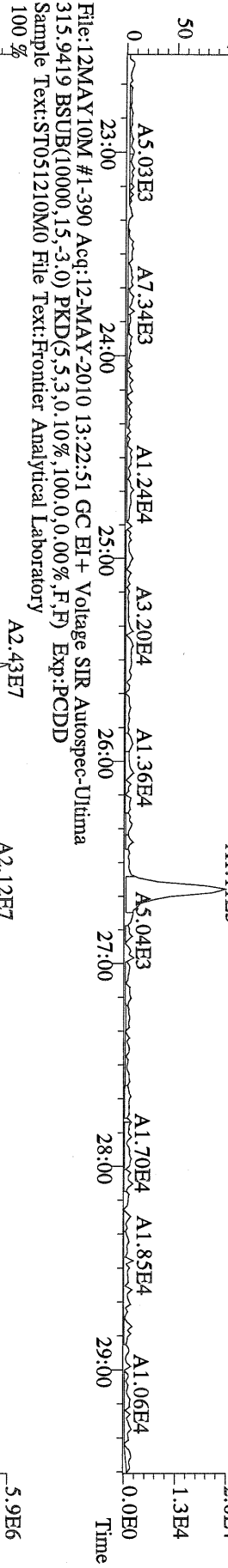
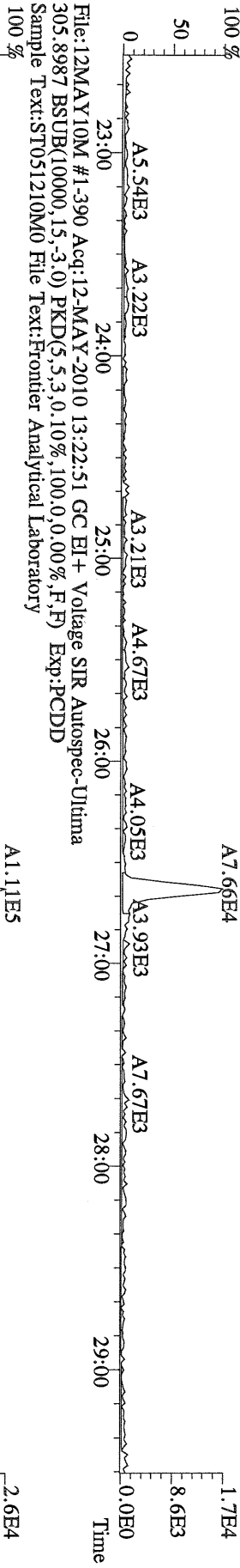
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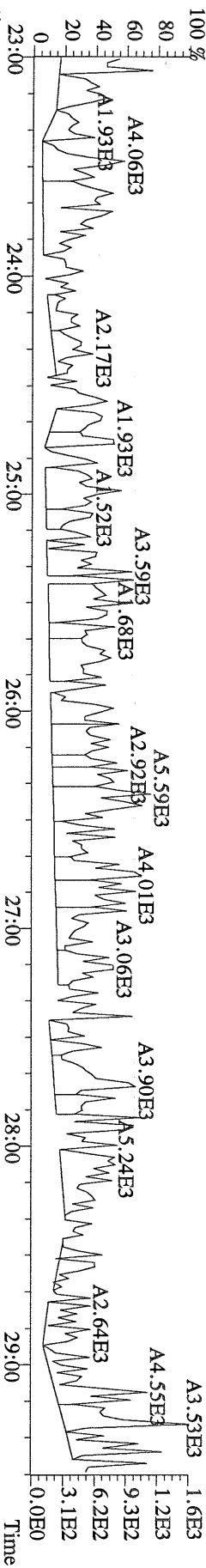
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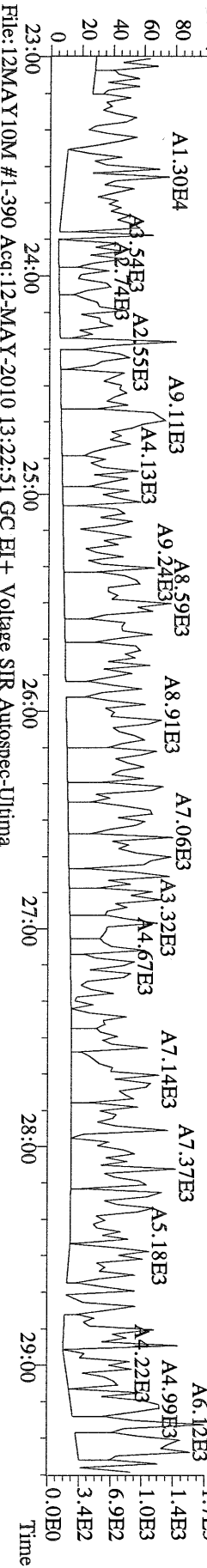
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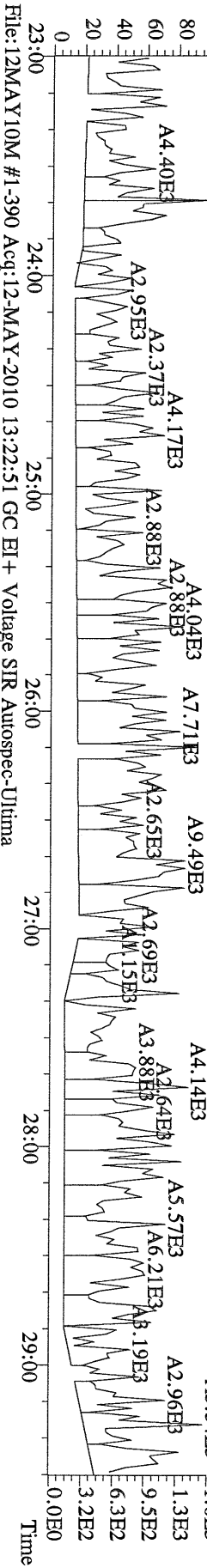
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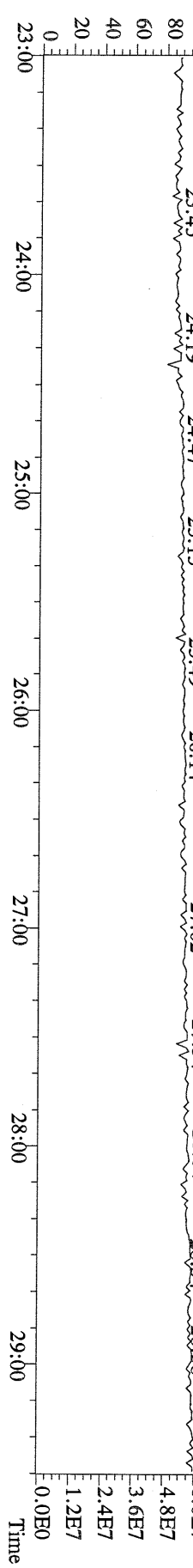
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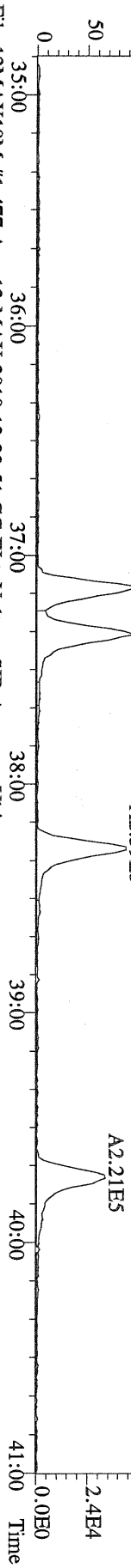
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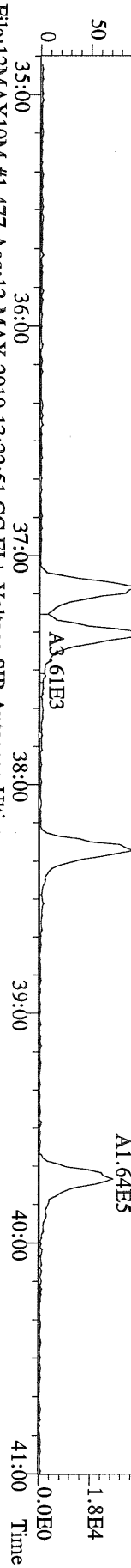
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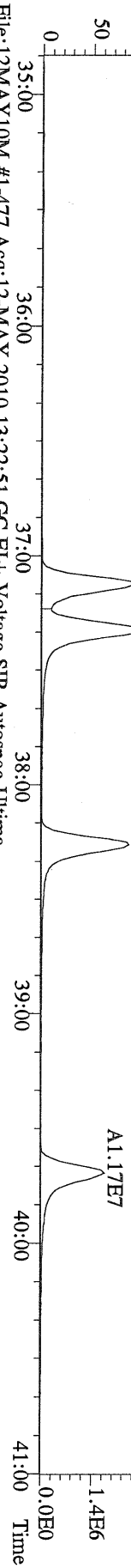
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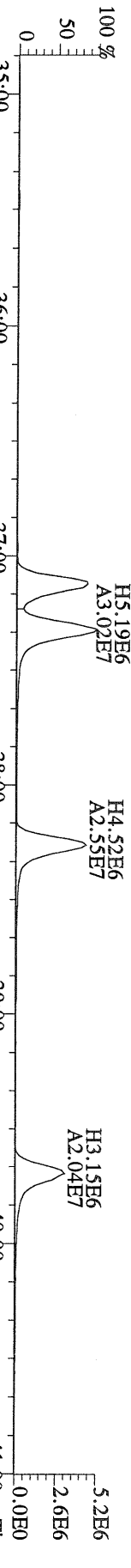
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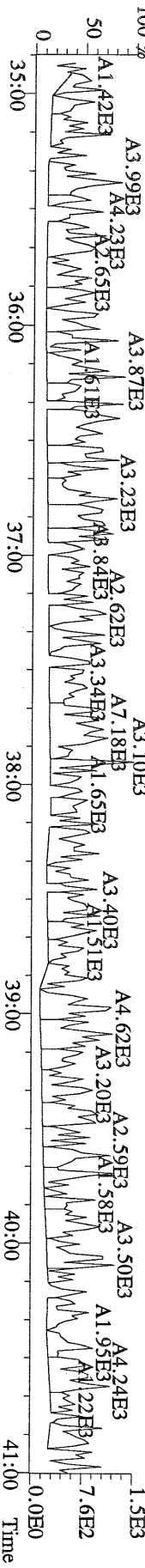
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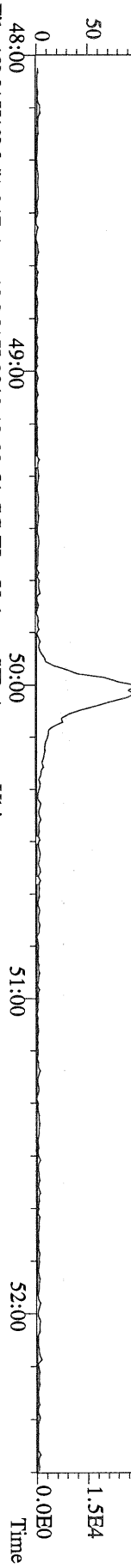
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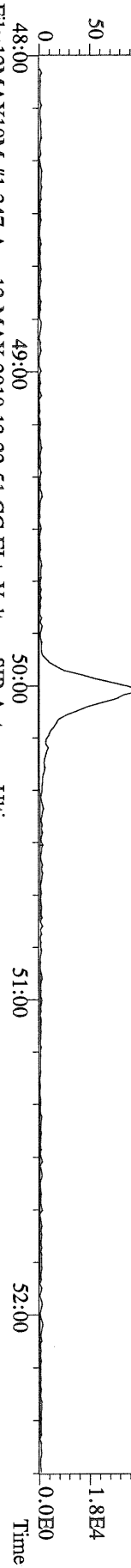
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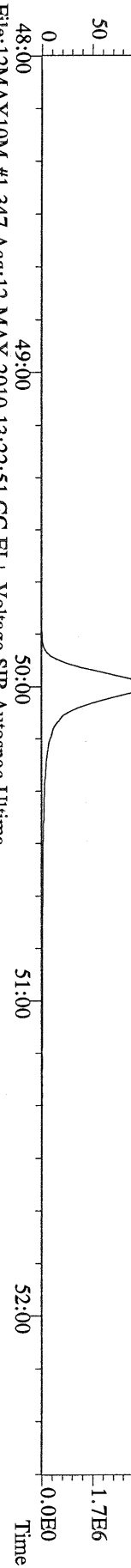
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Sample Text:ST051210M0 File Text:Frontier Analytical Laboratory
100 %



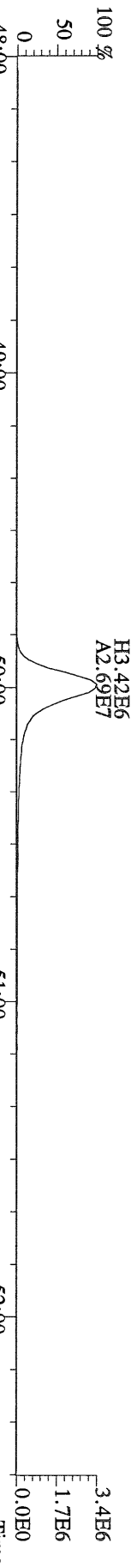
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100 %



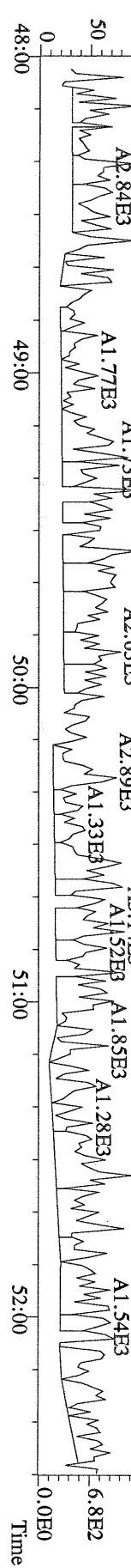
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100 %



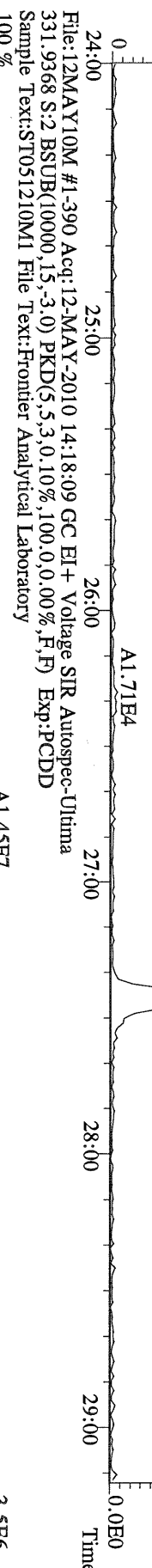
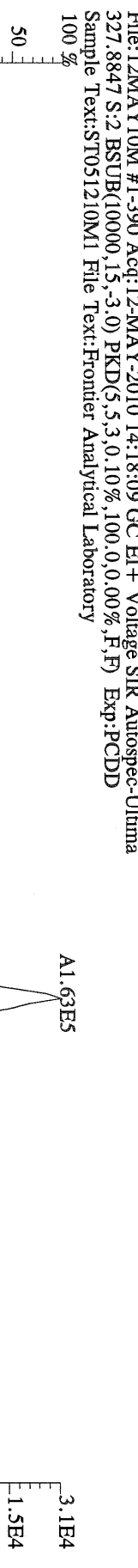
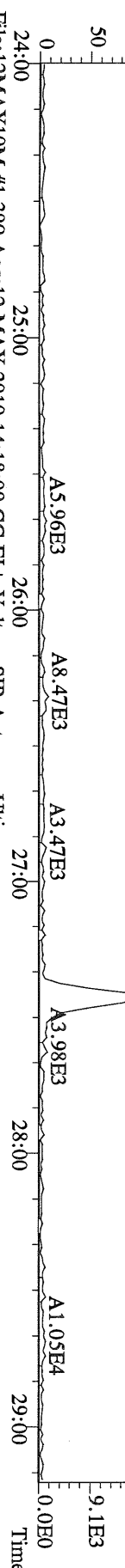
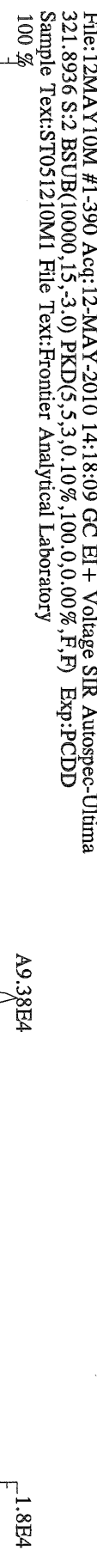
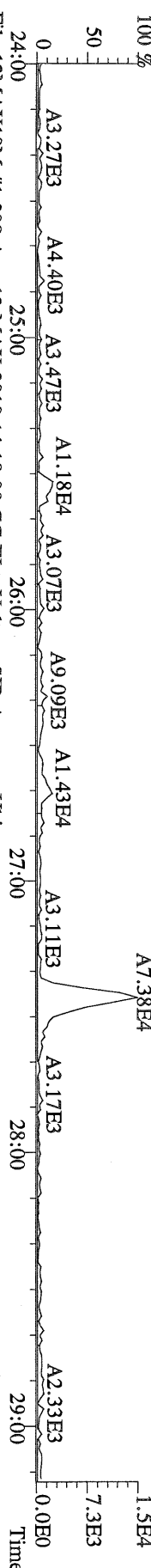
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Sample Text:ST051210M0 File Text:Frontier Analytical Laboratory



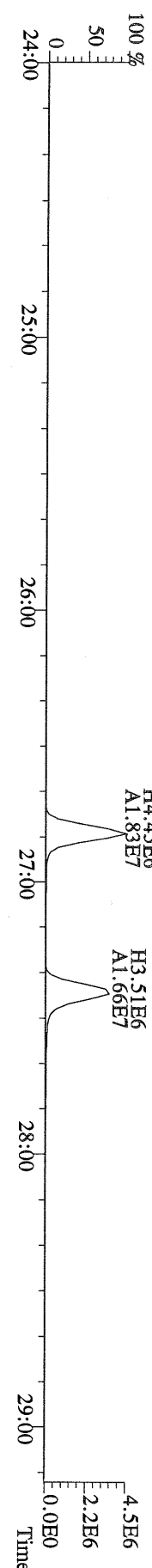
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Sample Text:ST051210M0 File Text:Frontier Analytical Laboratory
100 %



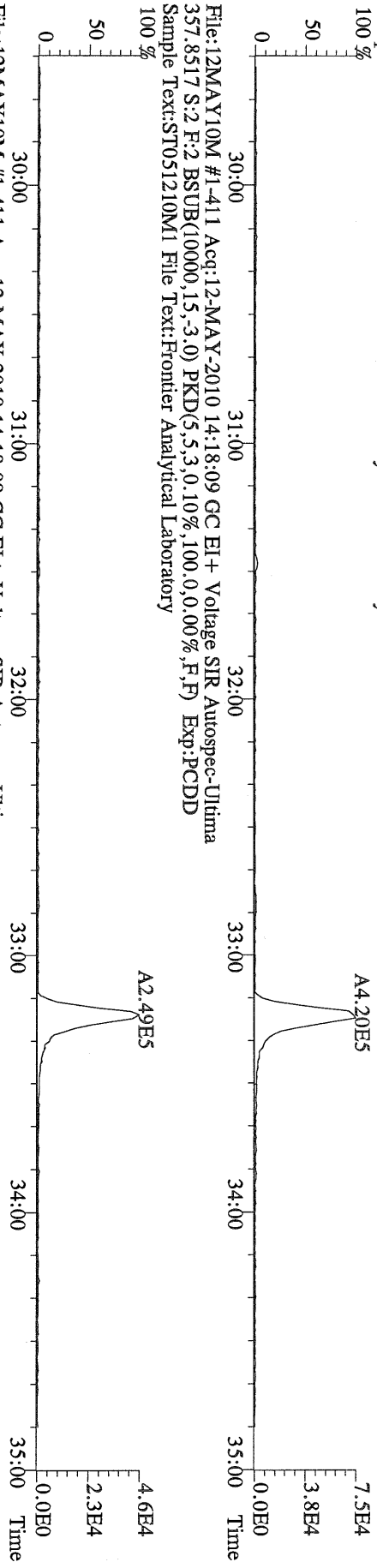
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Sample Text:ST051210M1 File Text:Frontier Analytical Laboratory



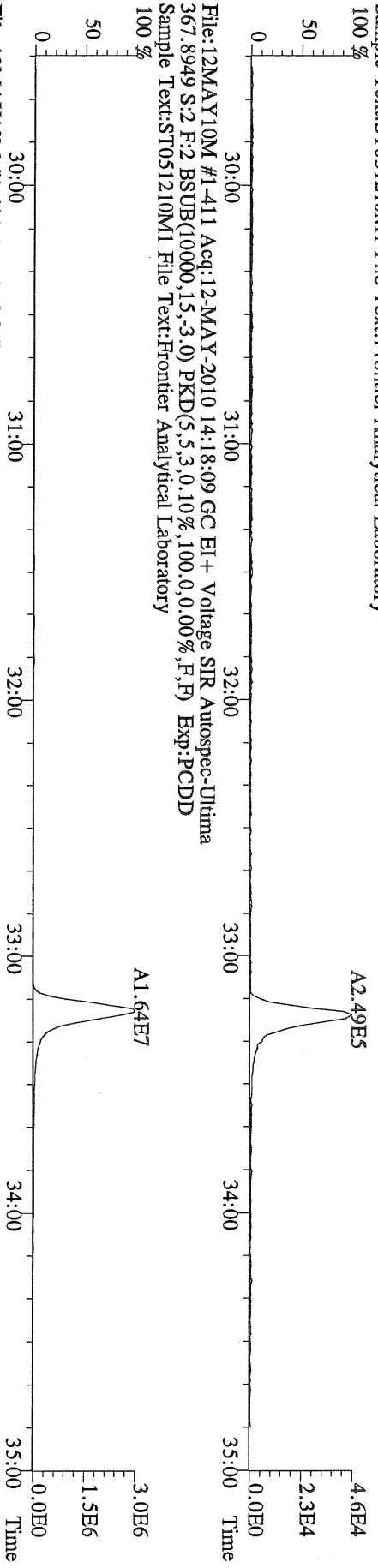
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Sample Text:ST051210M1 File Text:Frontier Analytical Laboratory



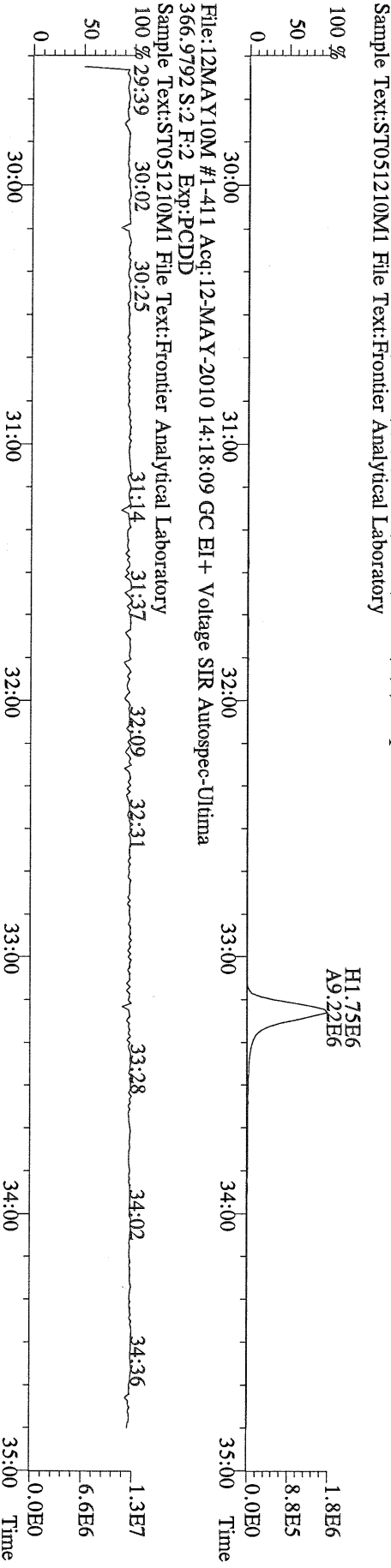
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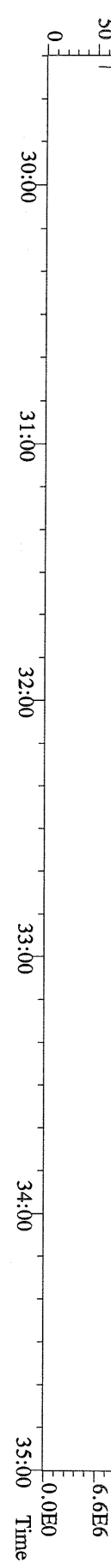
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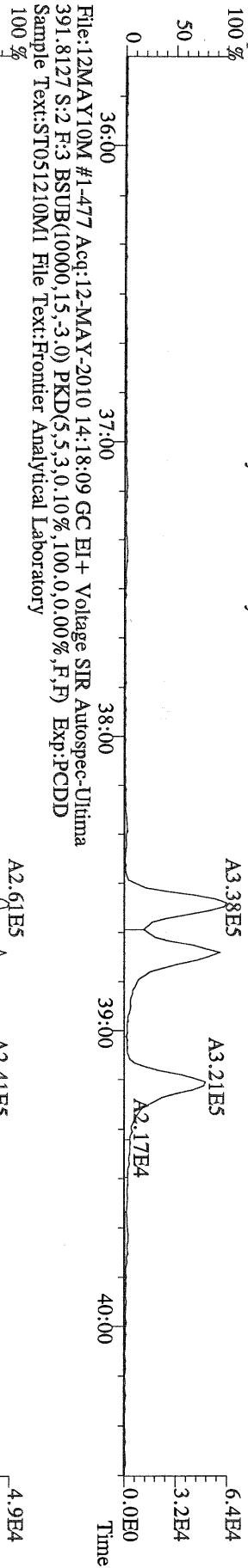
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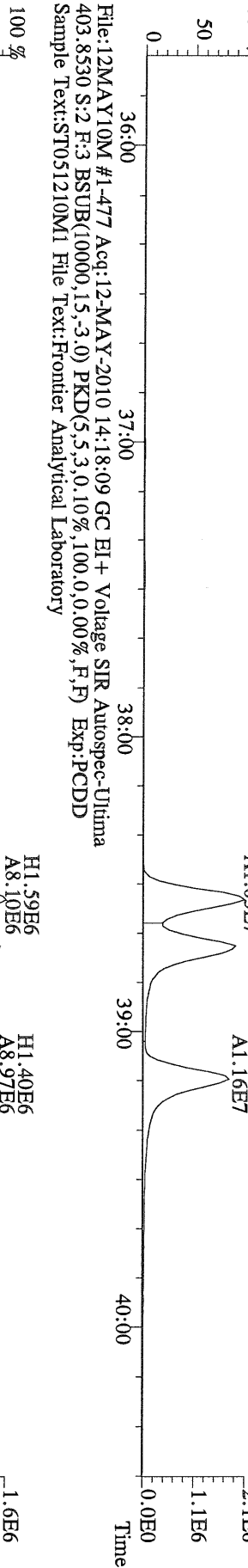
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Sample Text:ST051210M1 File Text:Frontier Analytical Laboratory
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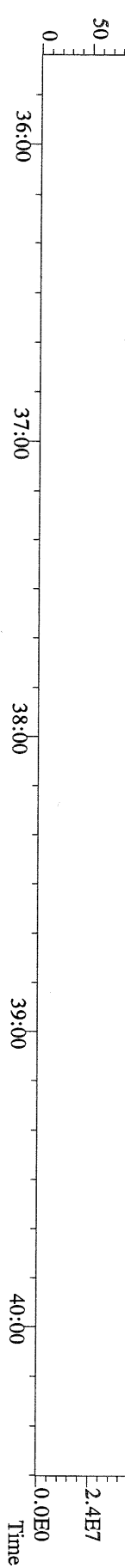
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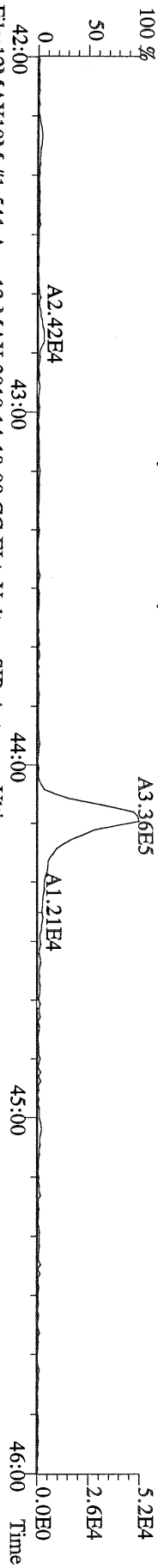
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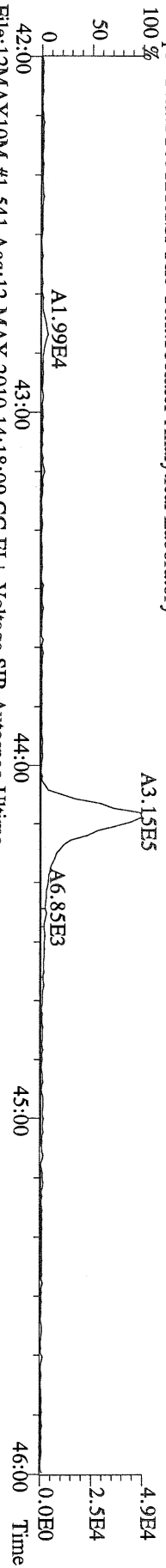
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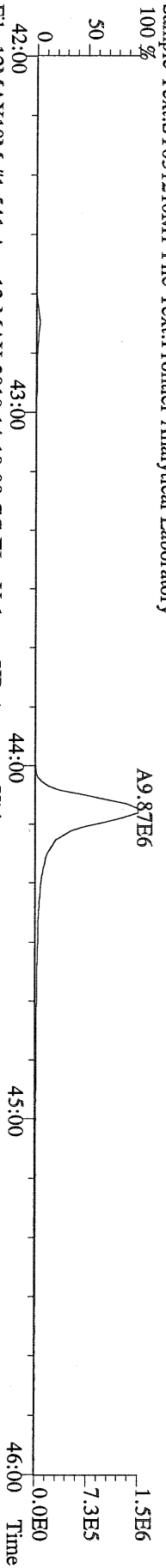
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423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
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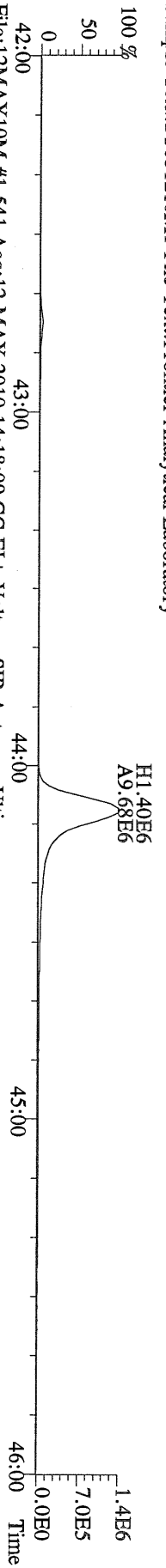
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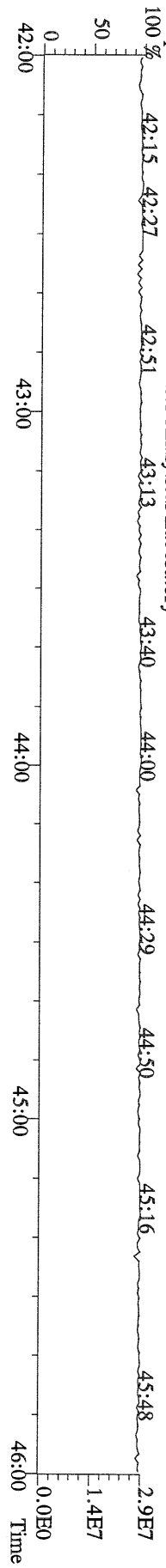
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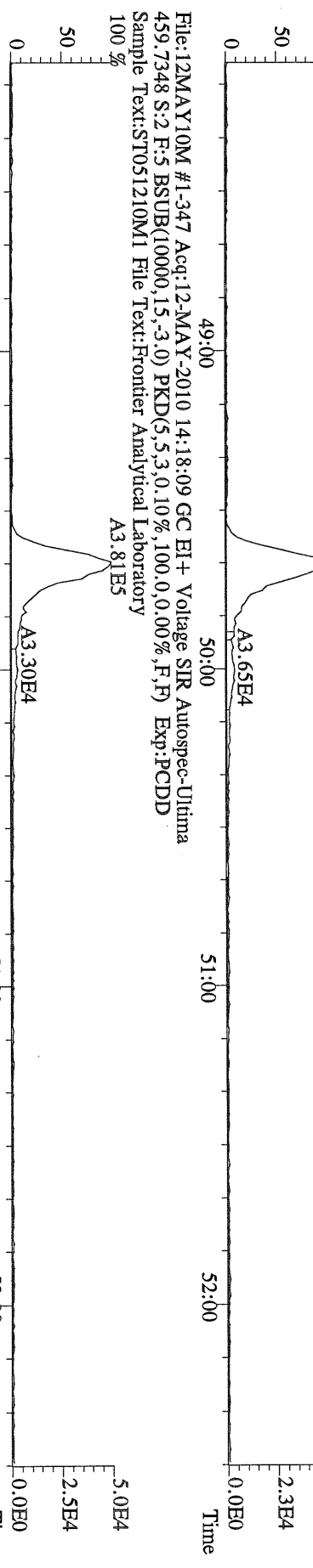
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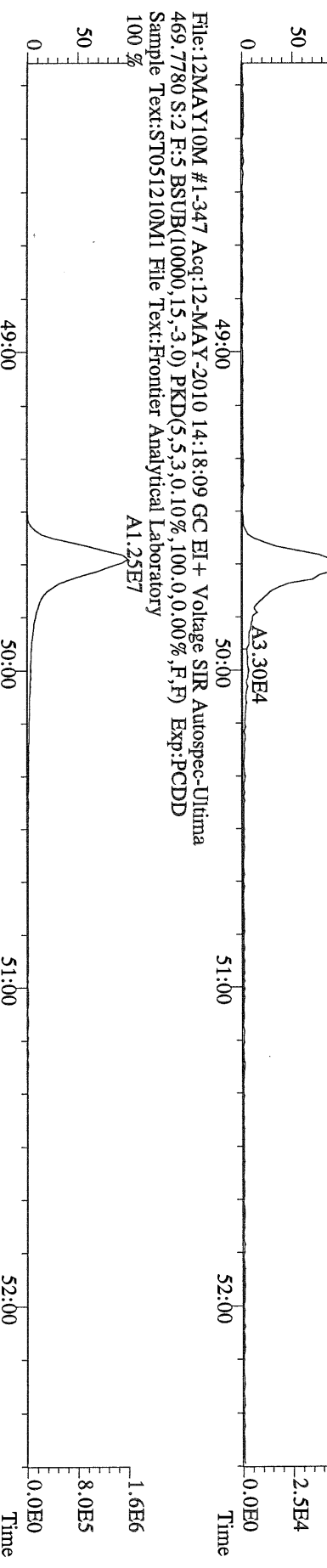
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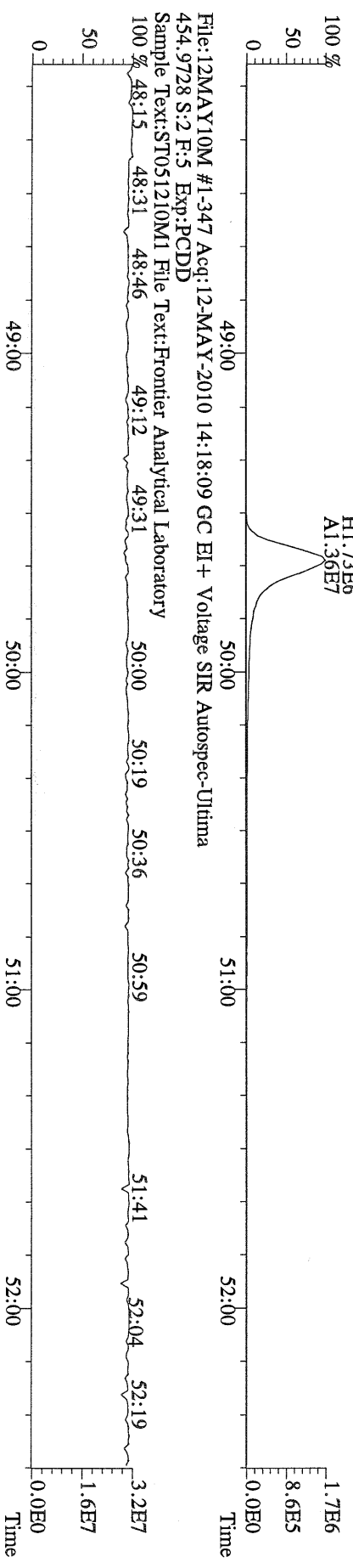
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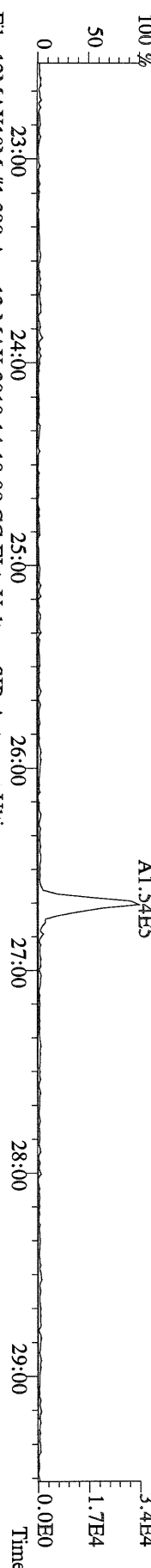
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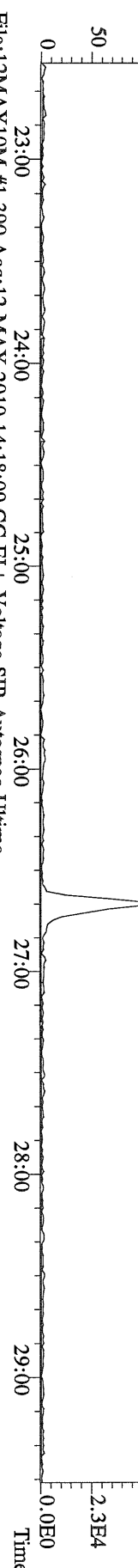
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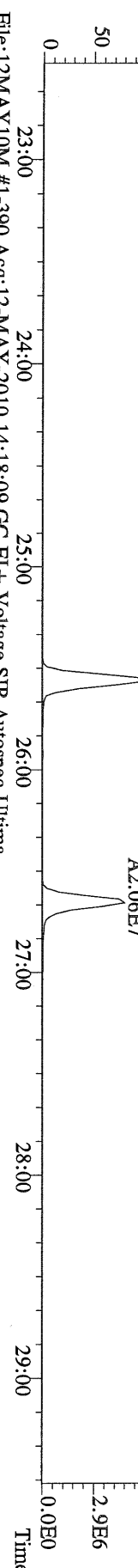
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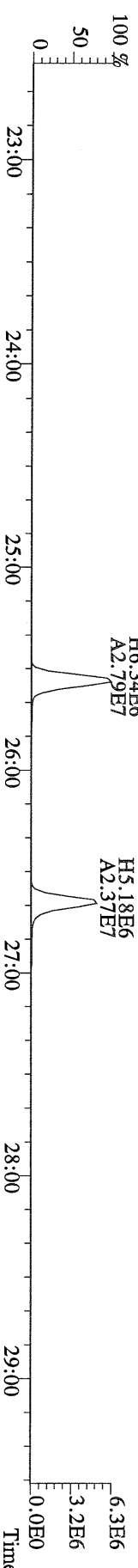
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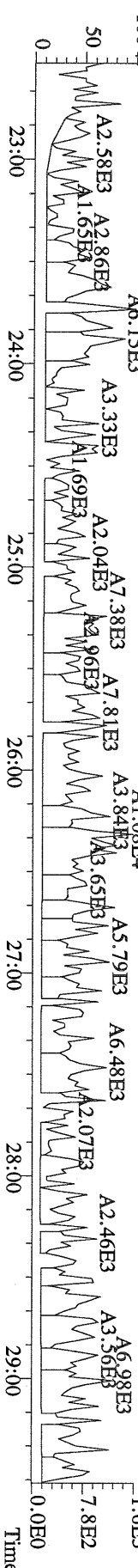
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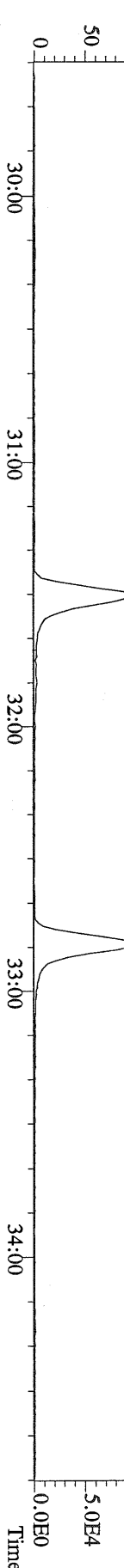
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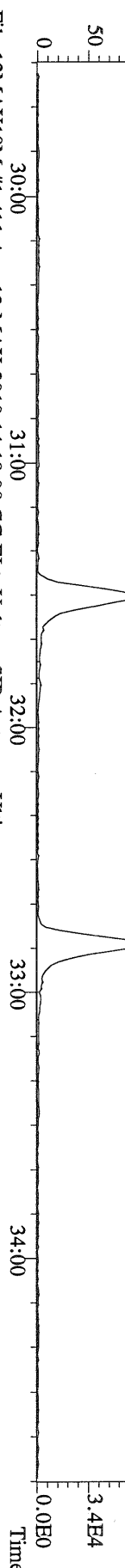
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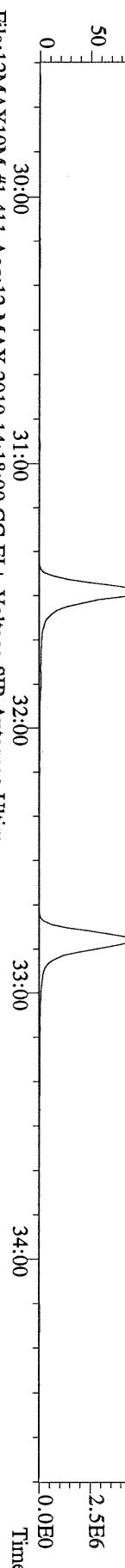
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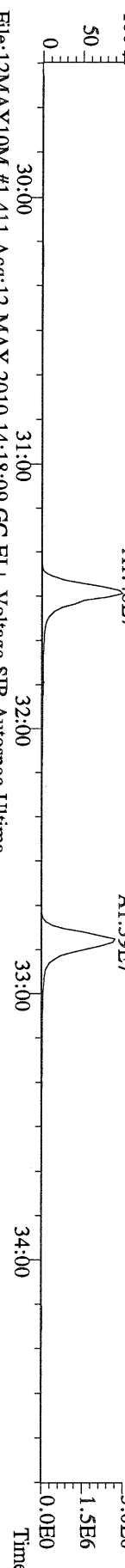
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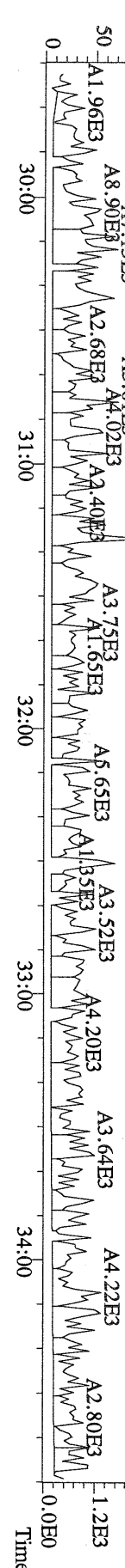
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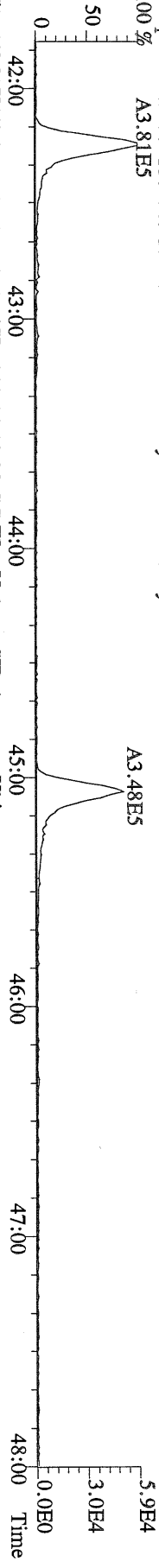
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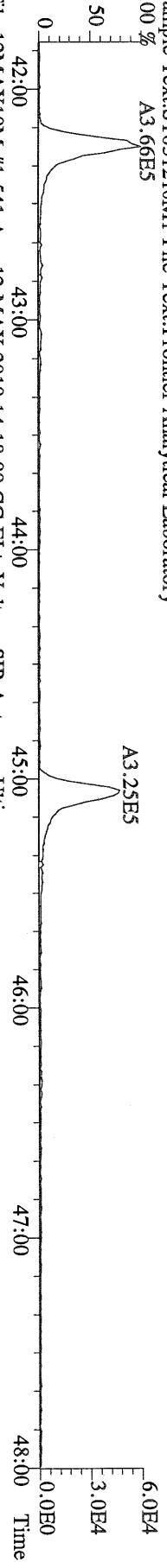
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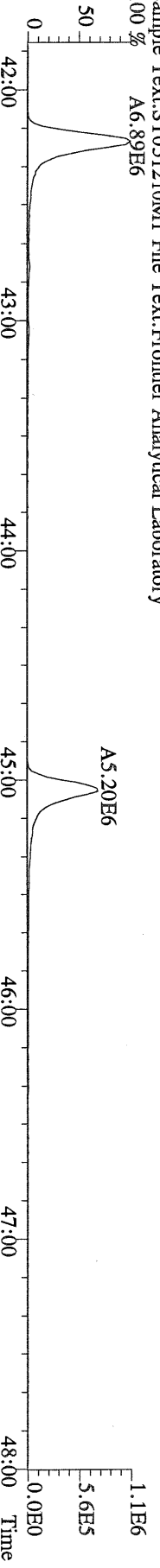
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407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M1 File Text:Frontier Analytical Laboratory
100 % A3.81E5



File:12MAY10M #1-541 Acq:12-MAY-2010 14:18:09 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M1 File Text:Frontier Analytical Laboratory
100 % A3.66E5



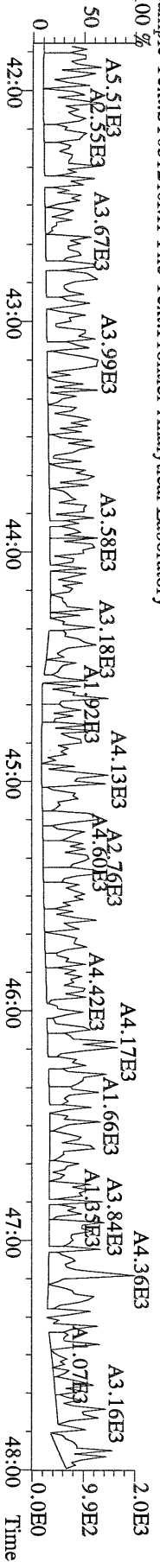
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417.8253 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M1 File Text:Frontier Analytical Laboratory
100 % A6.89E6



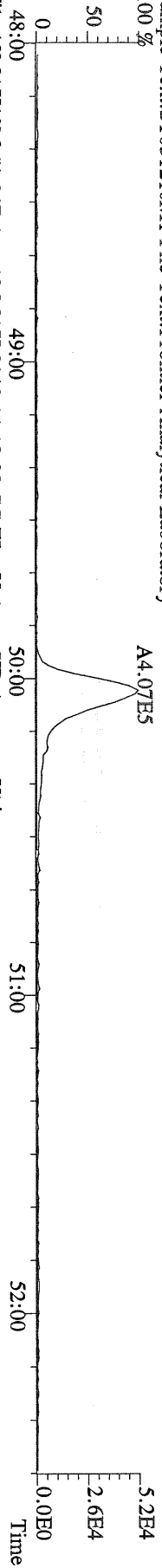
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419.8220 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M1 File Text:Frontier Analytical Laboratory



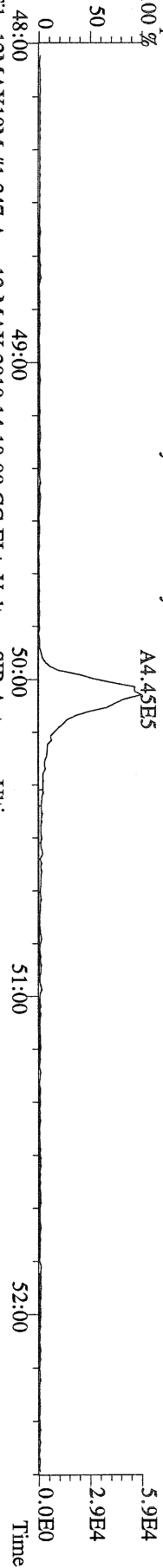
File:12MAY10M #1-541 Acq:12-MAY-2010 14:18:09 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M1 File Text:Frontier Analytical Laboratory



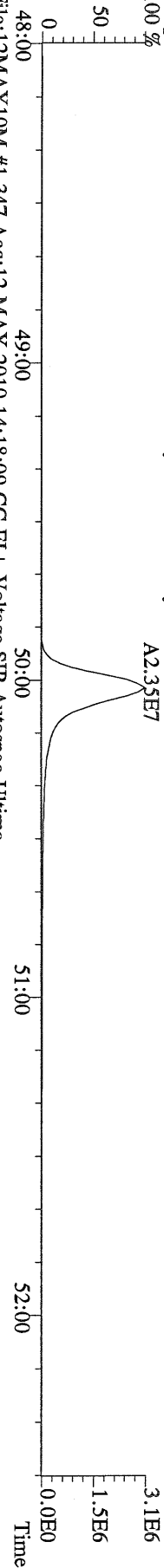
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441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M1 File Text:Frontier Analytical Laboratory
100 %



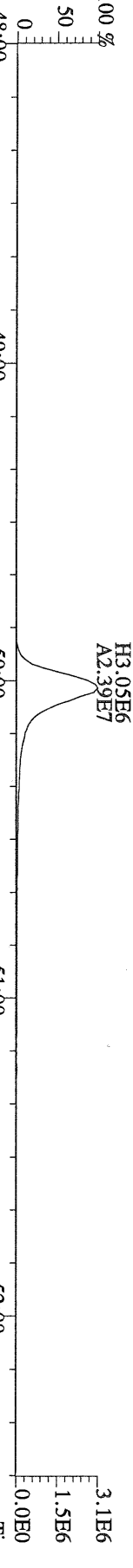
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443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M1 File Text:Frontier Analytical Laboratory
100 %



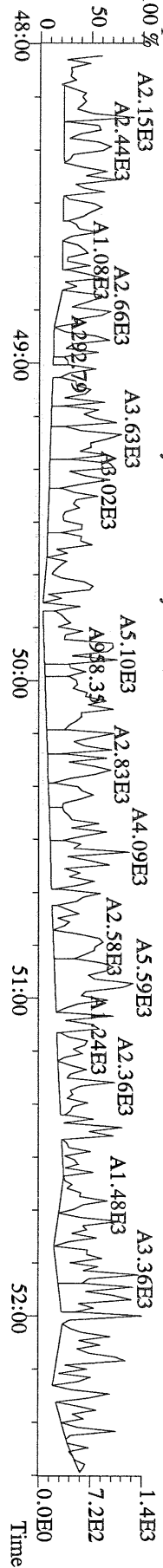
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453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M1 File Text:Frontier Analytical Laboratory
100 %



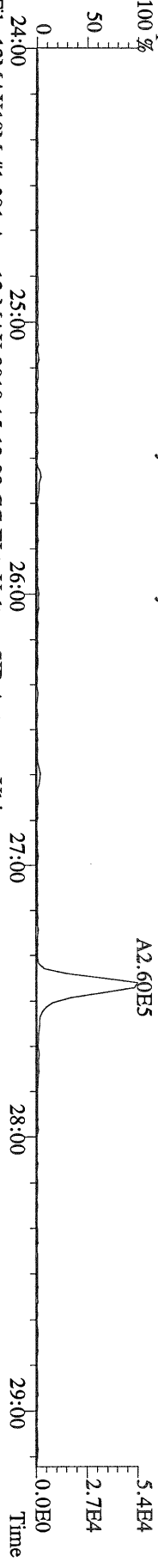
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455.7801 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M1 File Text:Frontier Analytical Laboratory



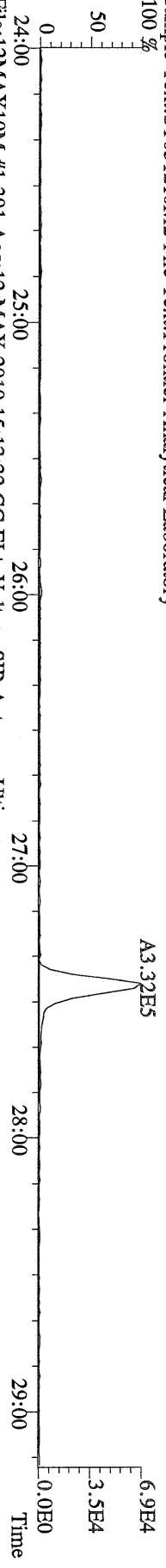
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513.6775 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M1 File Text:Frontier Analytical Laboratory
100 %



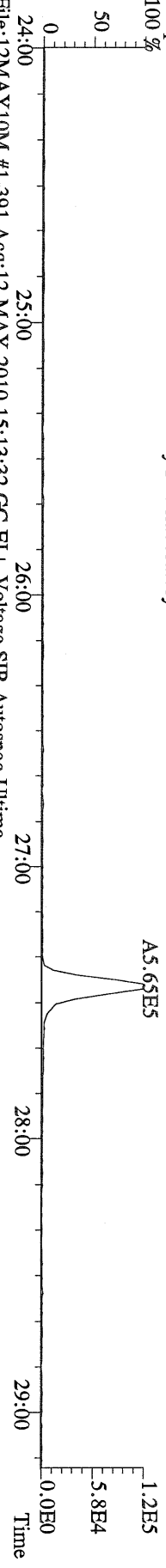
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319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory
100 %



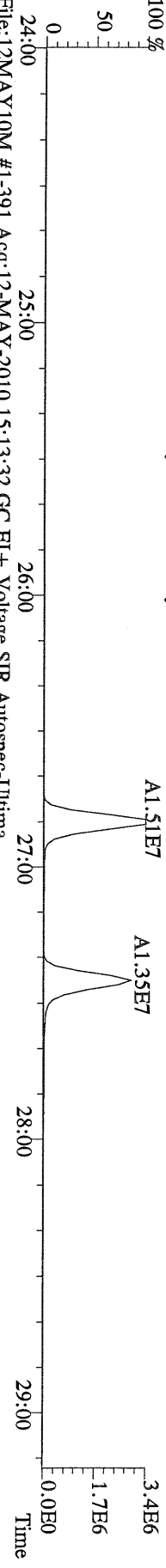
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321.8936 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory
100 %



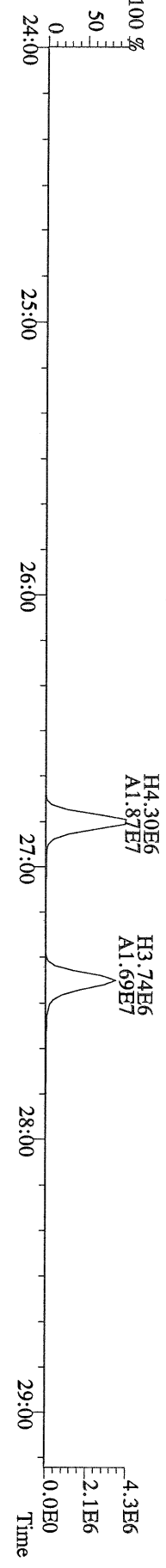
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327.8847 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory
100 %



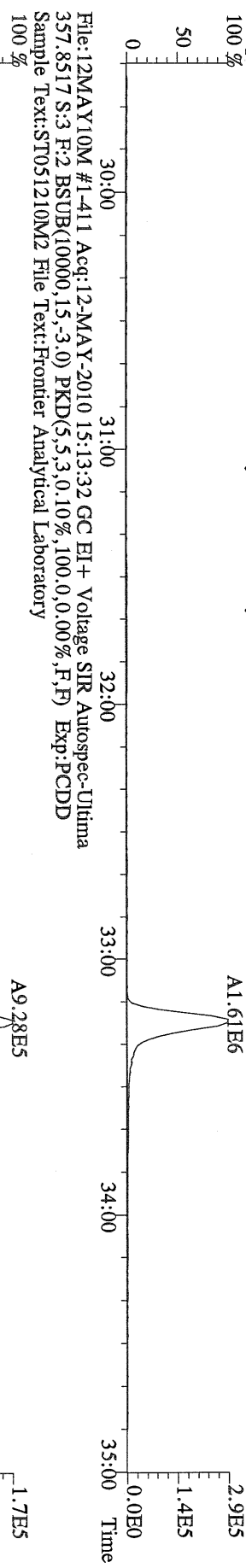
File:12MAY10M #1-391 Acq:12-MAY-2010 15:13:32 GC EI + Voltage SIR Autospec-Ultima
331.9368 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory
100 %



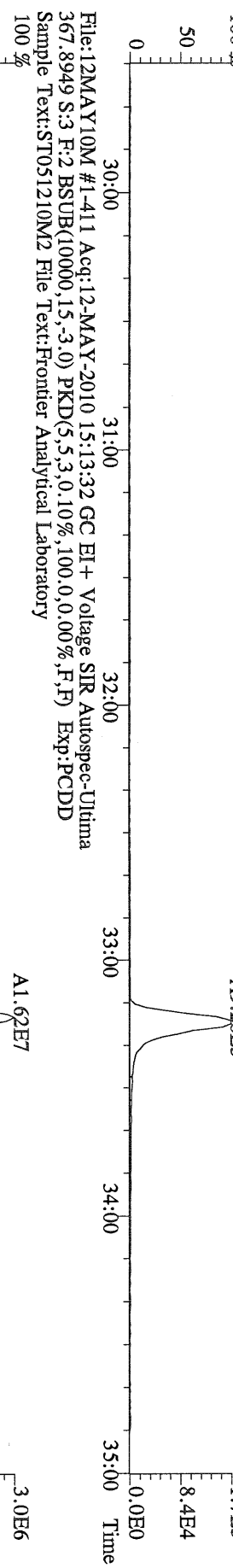
File:12MAY10M #1-391 Acq:12-MAY-2010 15:13:32 GC EI + Voltage SIR Autospec-Ultima
333.9339 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



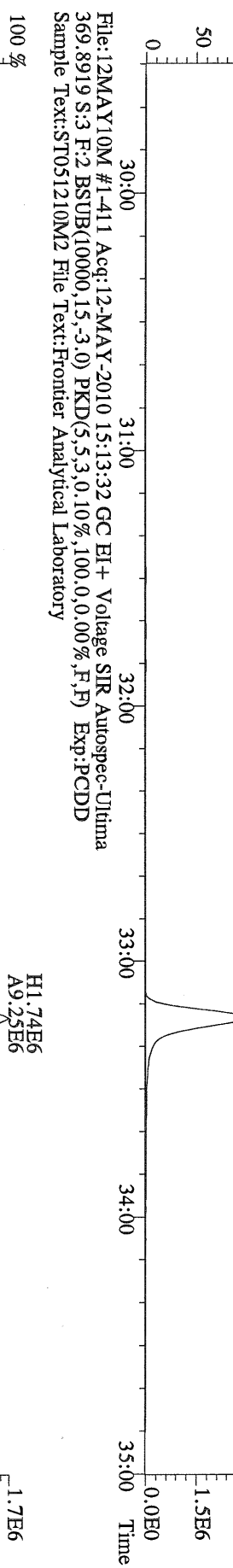
File:12MAY10M #1-411 Acq:12-MAY-2010 15:13:32 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



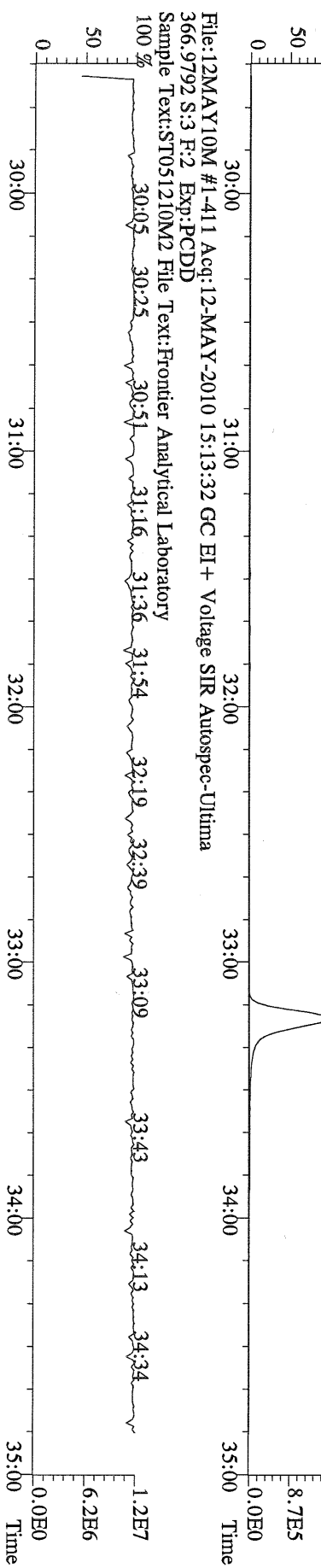
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357.8517 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



File:12MAY10M #1-411 Acq:12-MAY-2010 15:13:32 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory

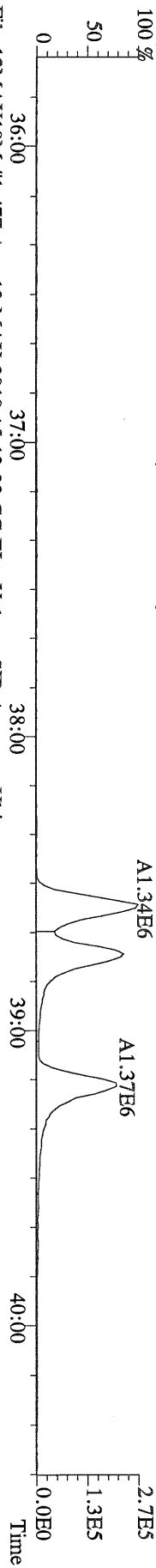


File:12MAY10M #1-411 Acq:12-MAY-2010 15:13:32 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory

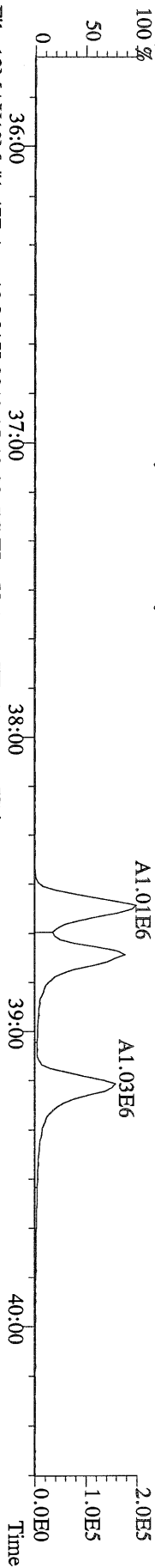


File:12MAY10M #1-411 Acq:12-MAY-2010 15:13:32 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:3 F:2 Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory

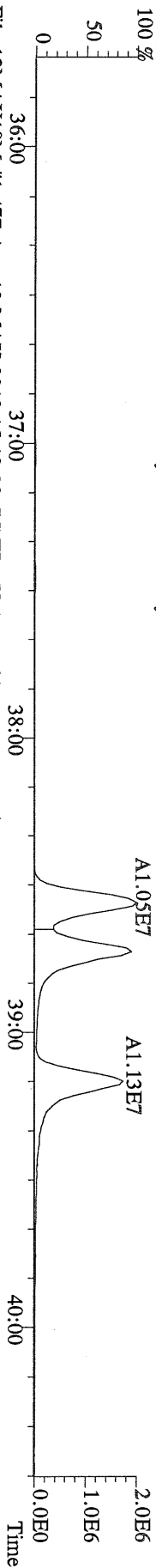
File:12MAY10M #1-477 Acq:12-MAY-2010 15:13:32 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



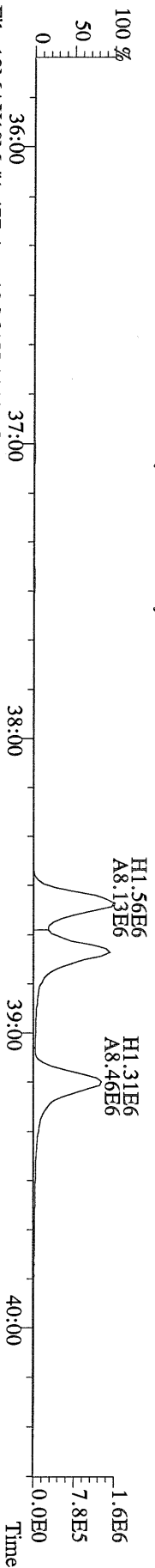
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391.8127 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



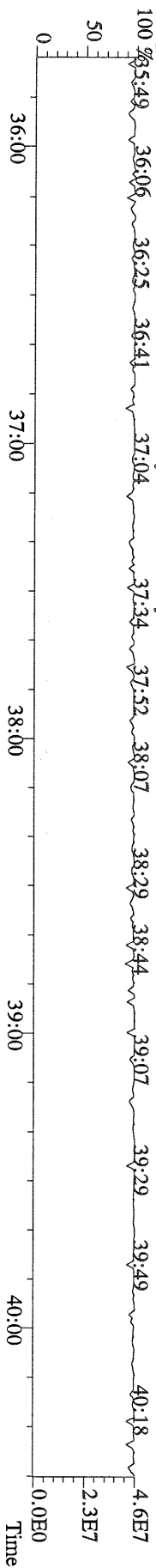
File:12MAY10M #1-477 Acq:12-MAY-2010 15:13:32 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



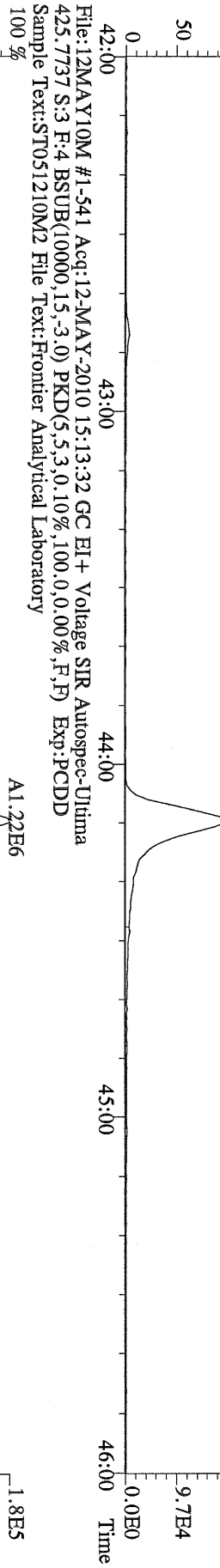
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403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



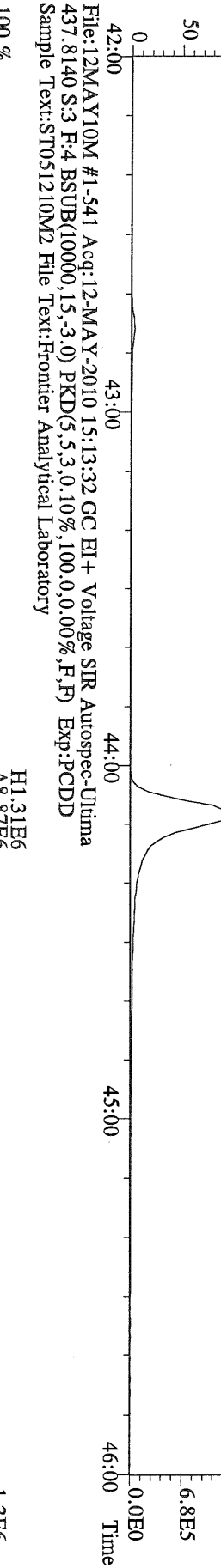
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380.9760 S:3 F:3 Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



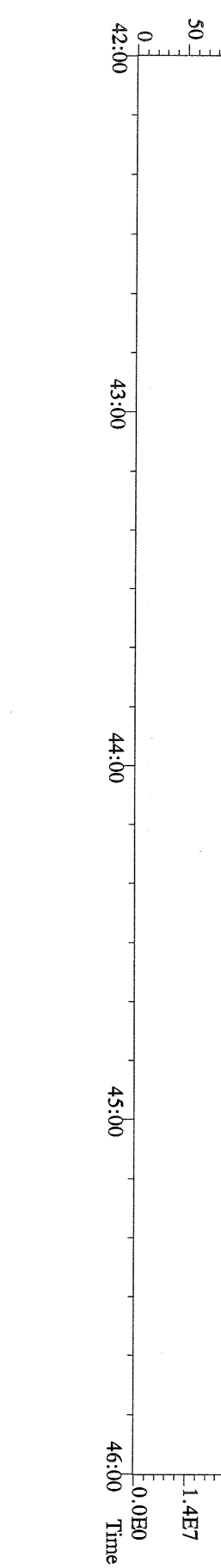
File:12MAY10M #1-541 Acq:12-MAY-2010 15:13:32 GC EI+ Voltage SIR Autospec-Utima
423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



File:12MAY10M #1-541 Acq:12-MAY-2010 15:13:32 GC EI+ Voltage SIR Autospec-Utima
425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



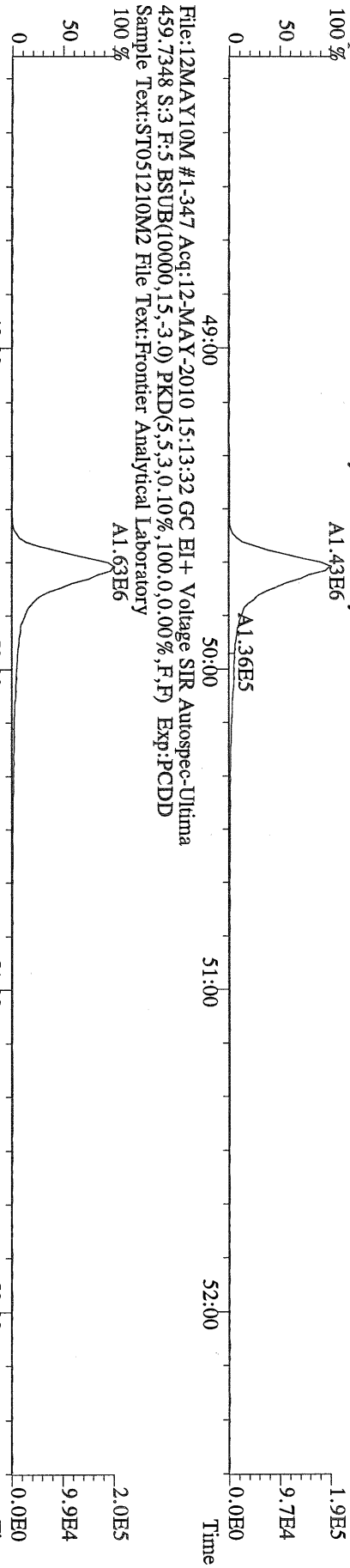
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435.8169 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



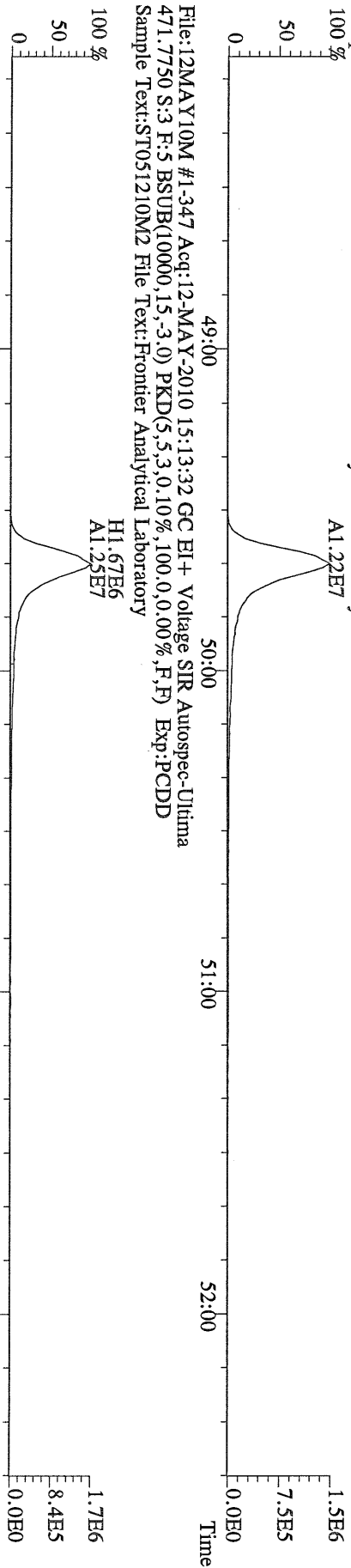
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437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



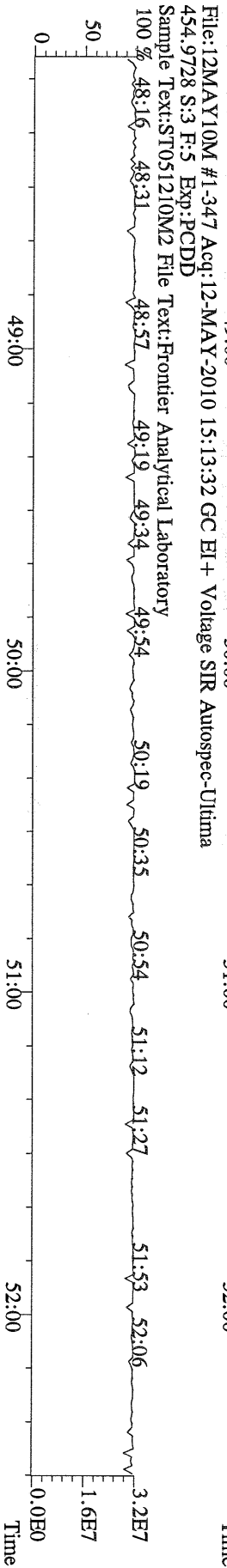
File:12MAY10M #1-347 Acq:12-MAY-2010 15:13:32 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



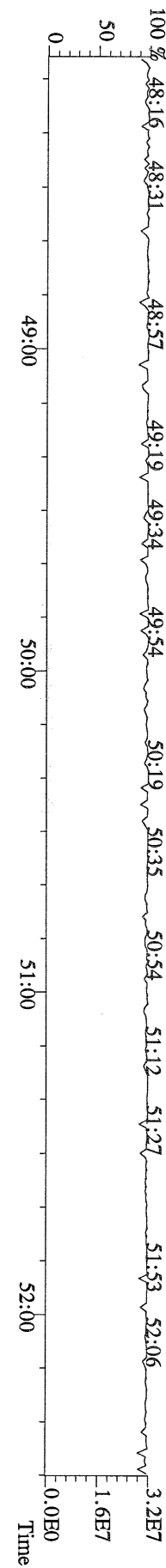
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469.7780 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



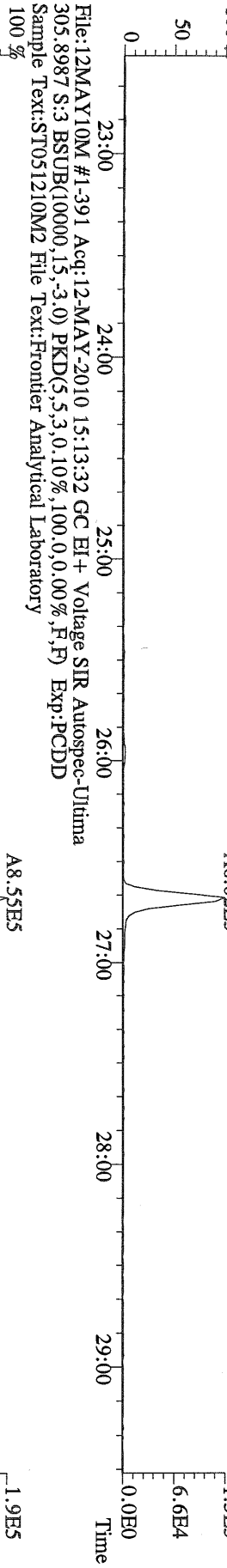
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471.7750 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



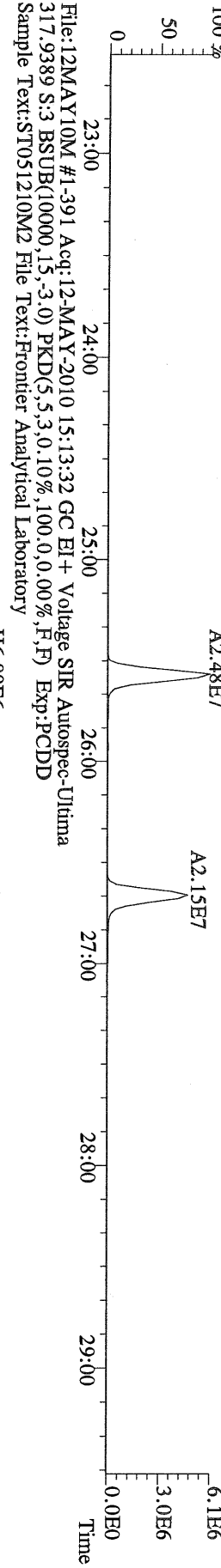
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454.9728 S:3 F:5 Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



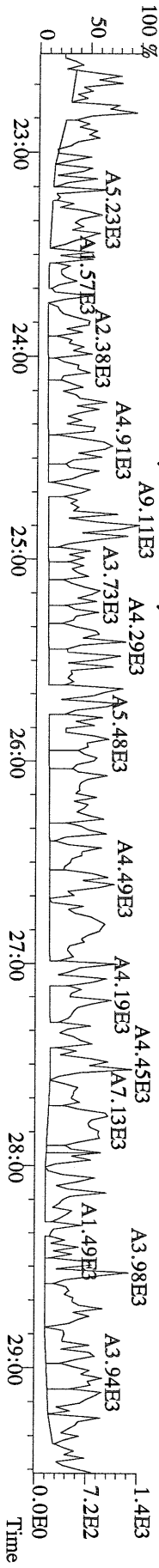
File:12MAY10M #1-391 Acq:12-MAY-2010 15:13:32 GC EI + Voltage SIR Autospec-Utima
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



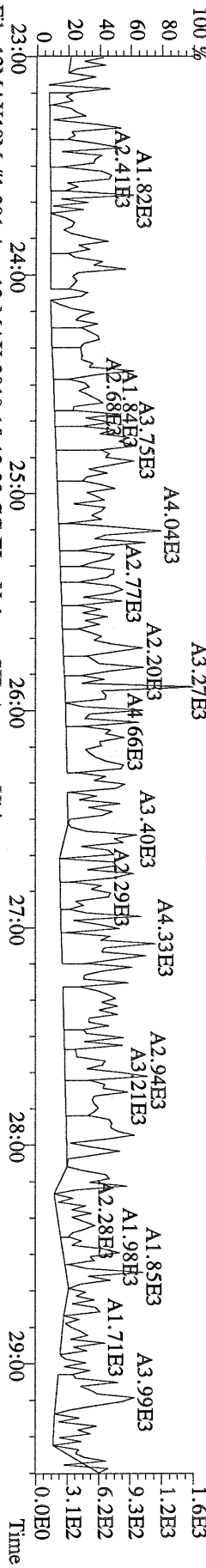
File:12MAY10M #1-391 Acq:12-MAY-2010 15:13:32 GC EI + Voltage SIR Autospec-Utima
315.9419 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



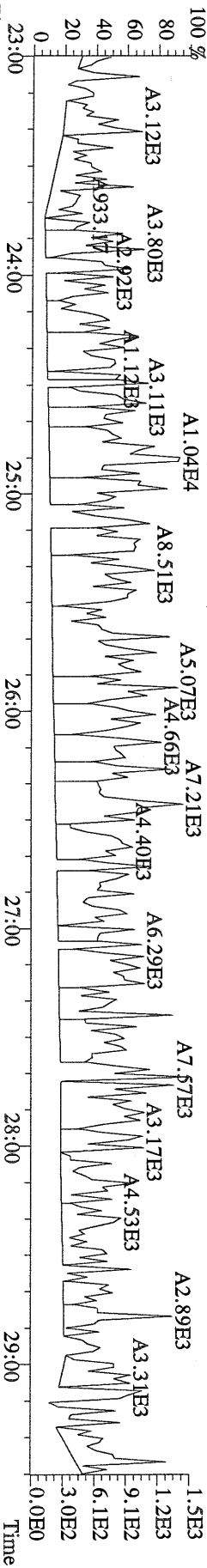
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317.9389 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



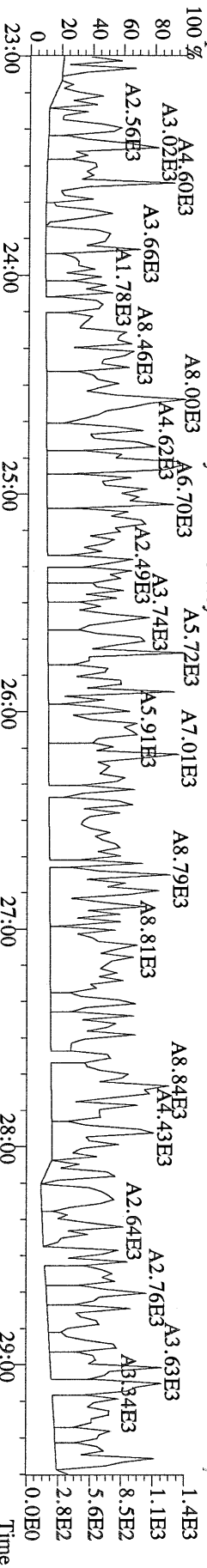
File:12MAY10M #1-391 Acq:12-MAY-2010 15:13:32 GC EI + Voltage SIR Autospec-Utima
 339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



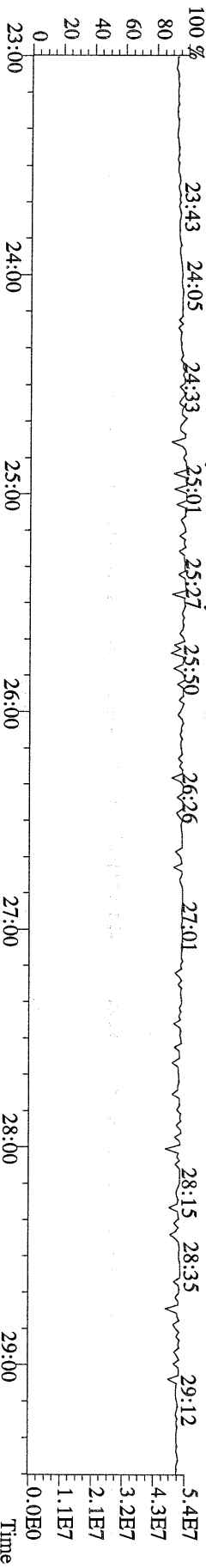
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 341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



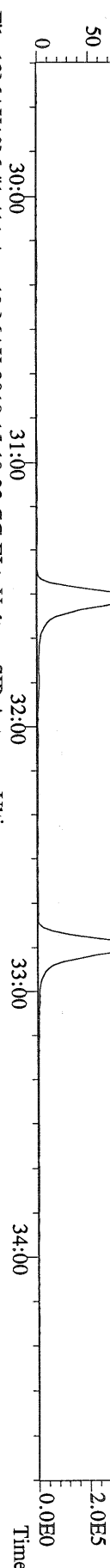
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 409.7974 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



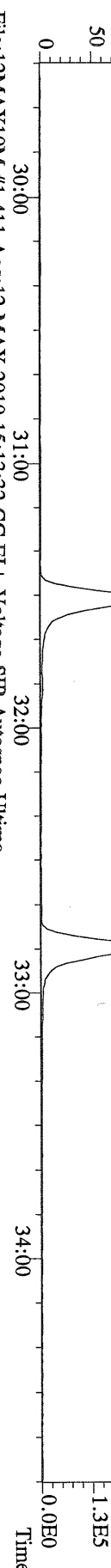
File:12MAY10M #1-391 Acq:12-MAY-2010 15:13:32 GC EI + Voltage SIR Autospec-Utima
 330.9792 S:3 Exp:PCDD
 Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



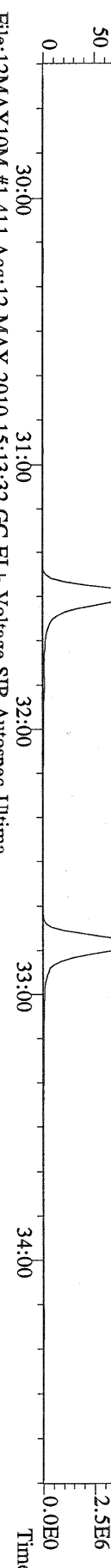
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 339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



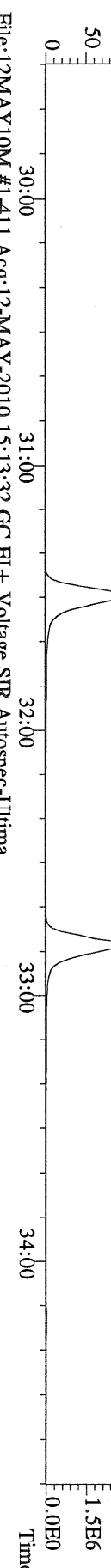
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 341.8568 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
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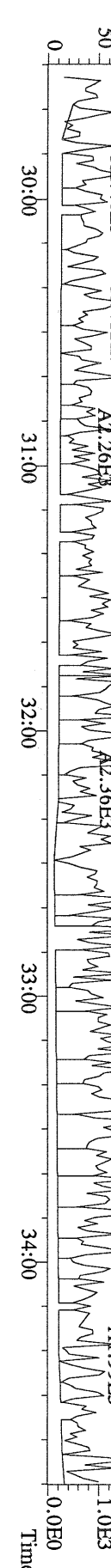
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 351.9000 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



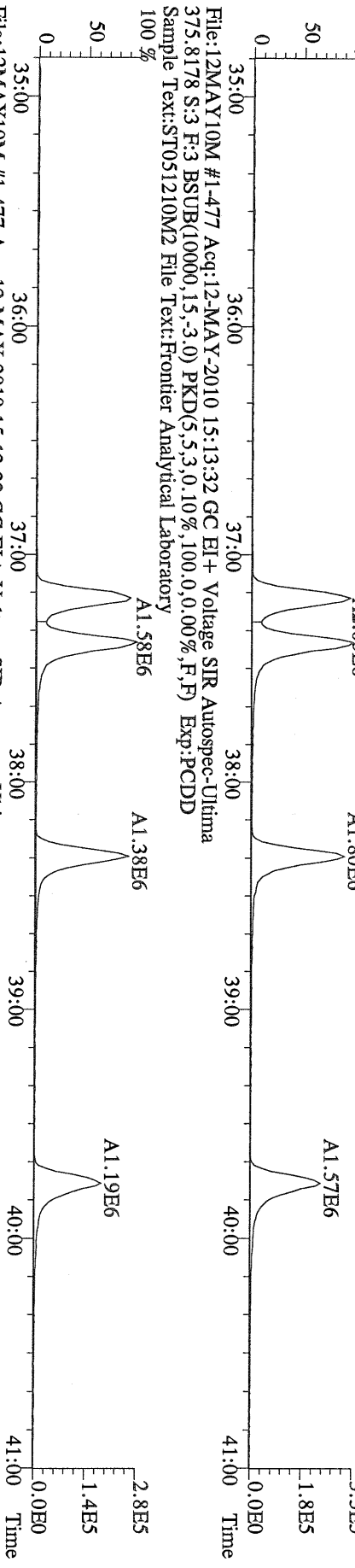
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 353.8970 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



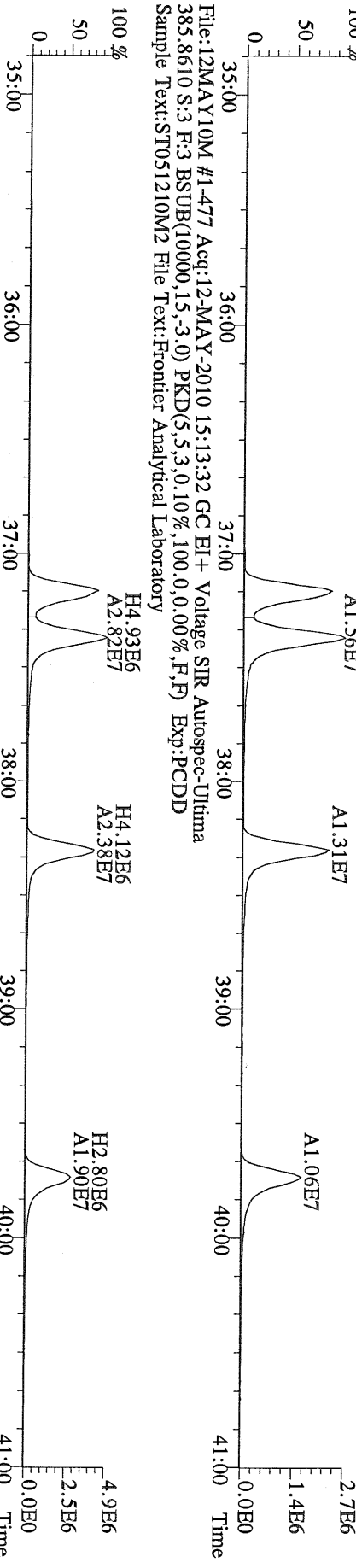
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 409.7974 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



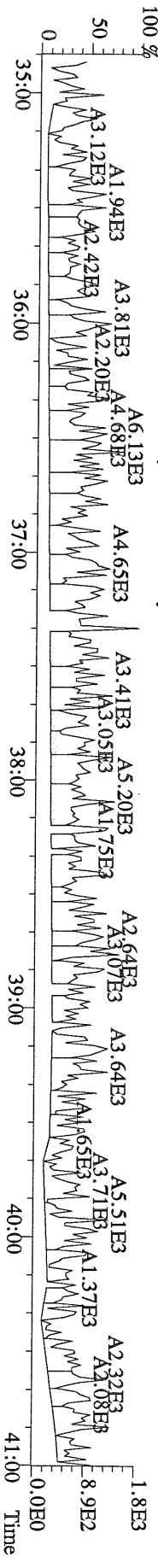
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 373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



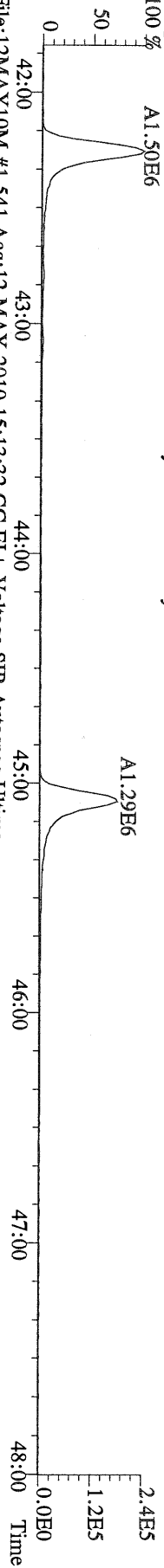
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 383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
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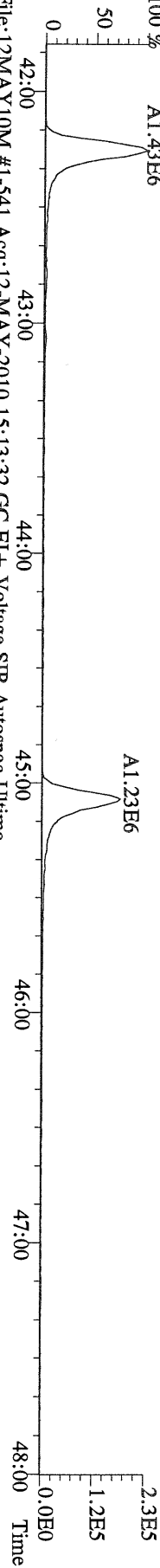
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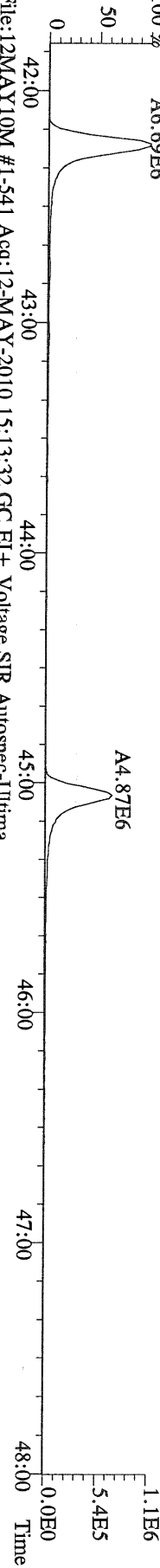
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407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



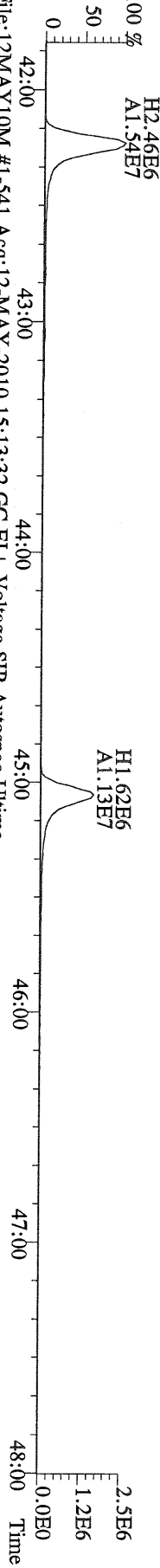
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409.7788 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



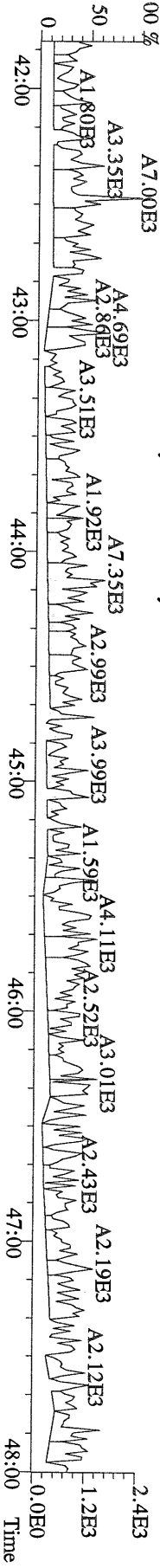
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417.8253 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



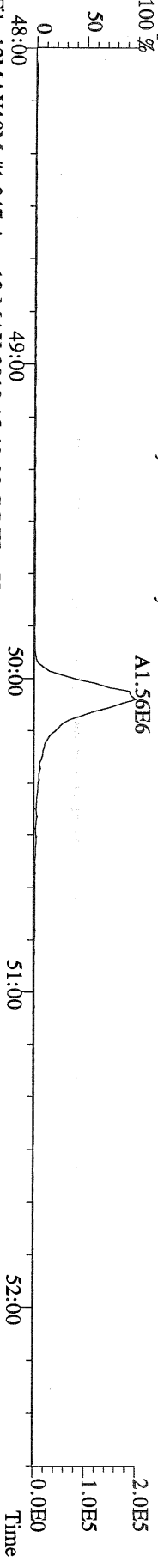
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419.8220 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



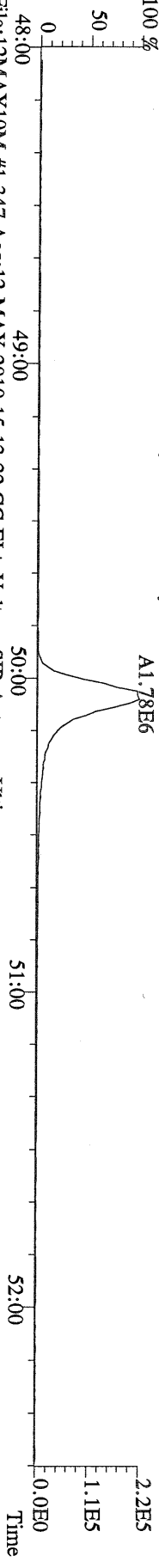
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479.7165 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



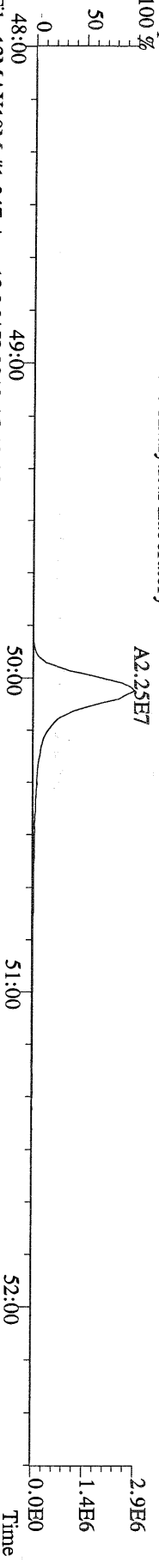
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 441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory
 100 %



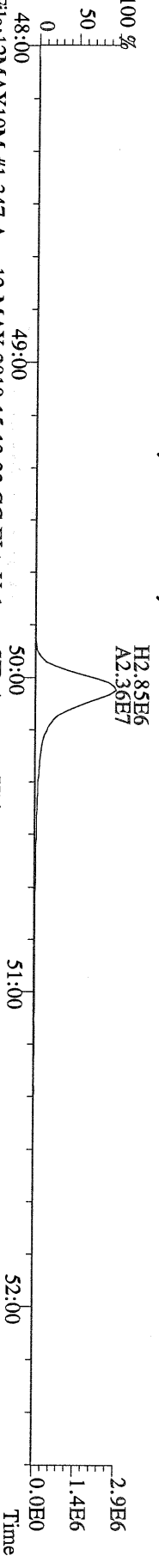
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 443.7398 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory
 100 %



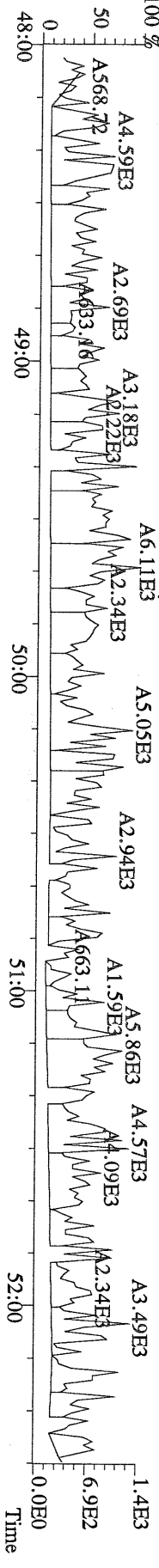
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 453.7831 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory
 100 %



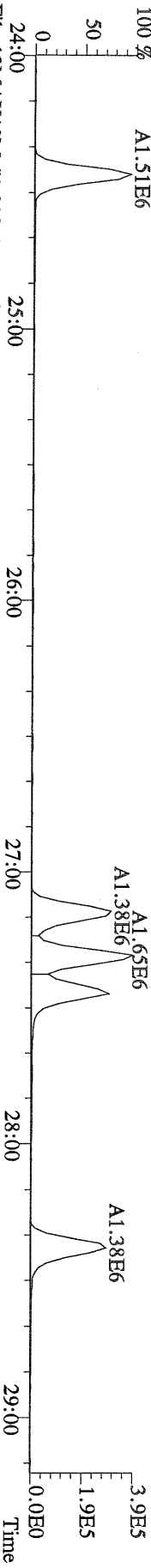
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 455.7801 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory



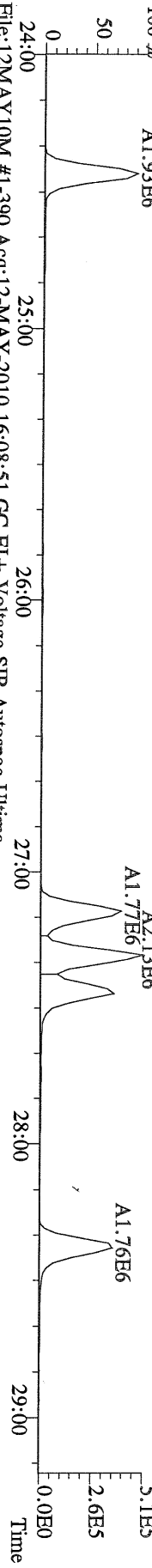
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 513.6775 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M2 File Text:Frontier Analytical Laboratory
 100 %



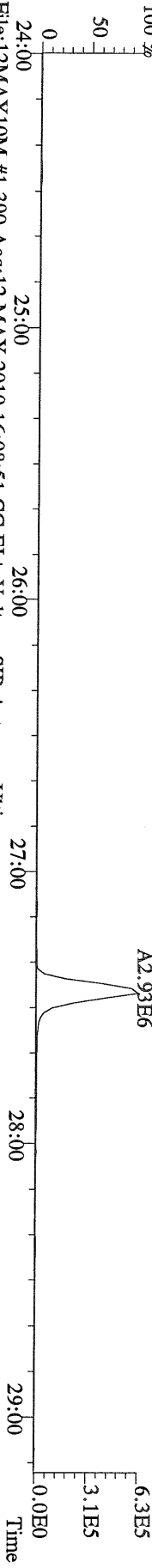
File:12MAY10M #1-390 Acq:12-MAY-2010 16:08:51 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory
100 % A1.51E6



File:12MAY10M #1-390 Acq:12-MAY-2010 16:08:51 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory
100 % A1.93E6



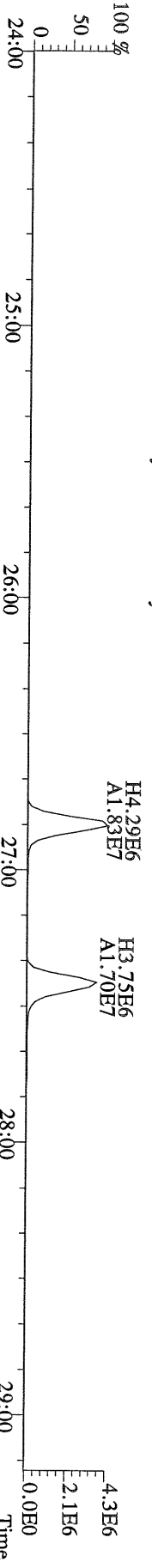
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327.8847 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory
100 % A2.93E6



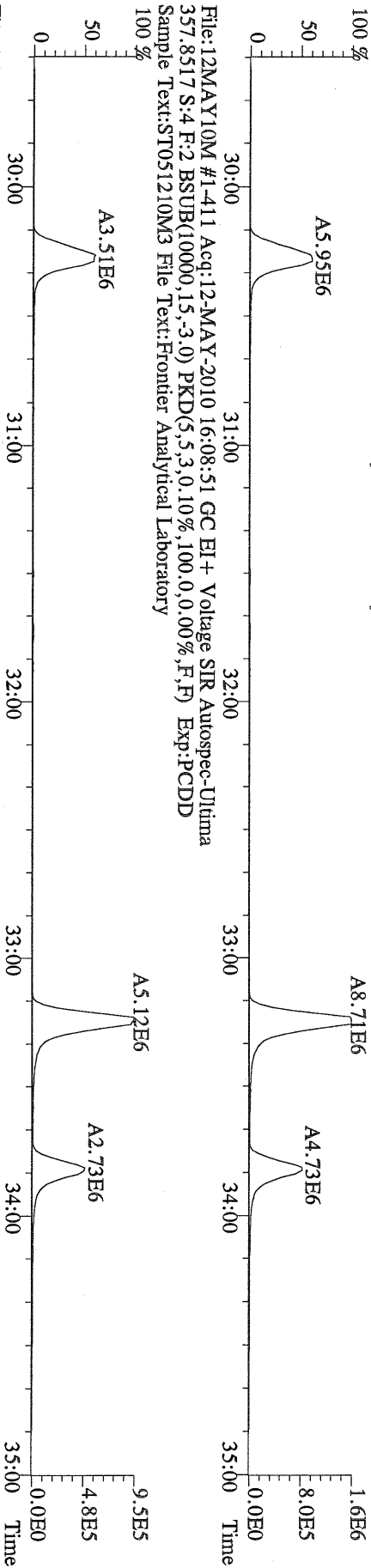
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331.9368 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory
100 % A1.47E7



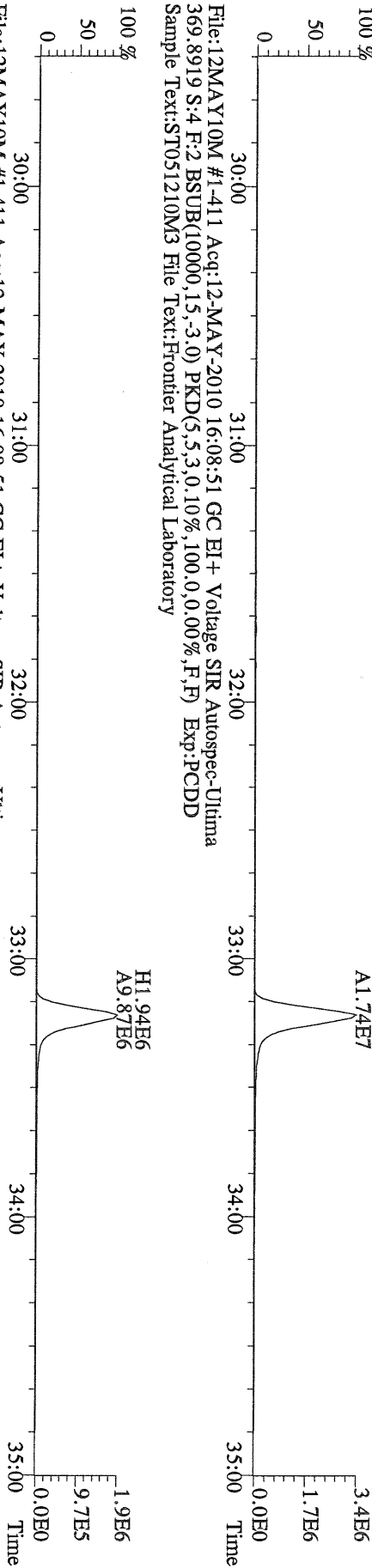
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333.9339 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



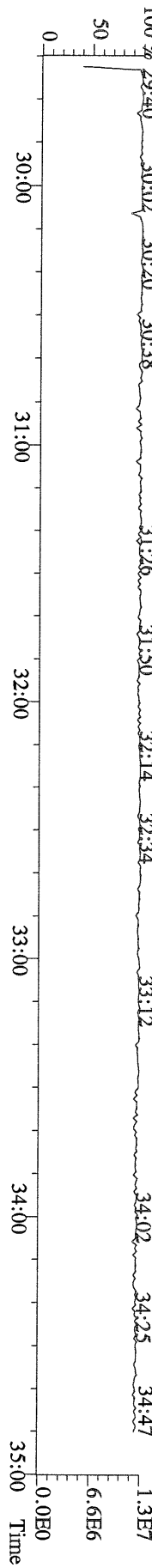
File:12MAY10M #1-411 Acq:12-MAY-2010 16:08:51 GC EI+ Voltage SIR Autospec-Utima
355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



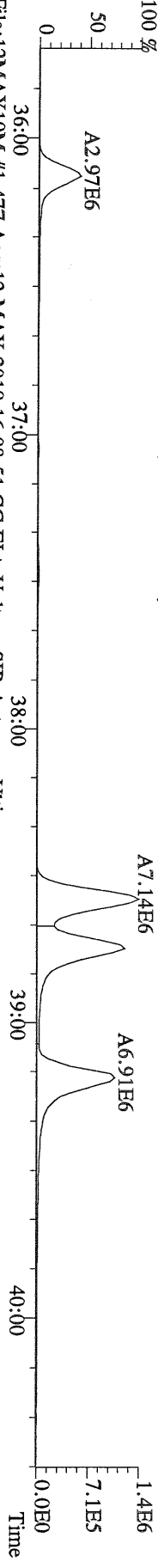
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367.8949 S:4 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



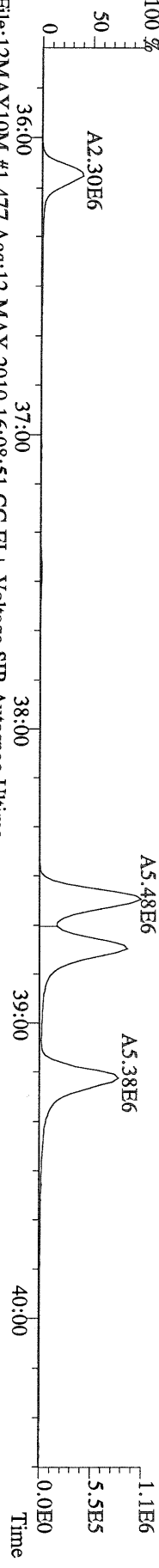
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366.9792 S:4 F:2 Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



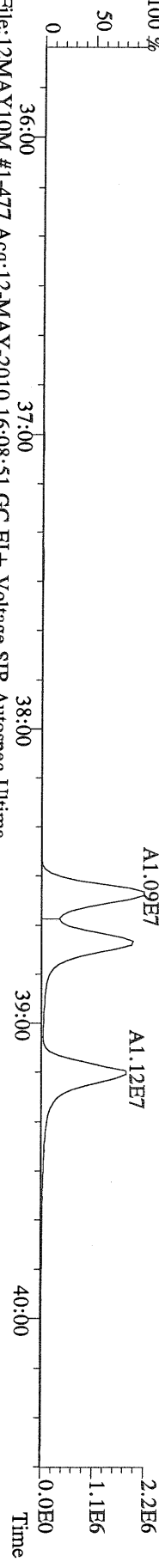
File:12MAY10M #1-477 Acq:12-MAY-2010 16:08:51 GC EI+ Voltage SIR Autospec-Utima
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



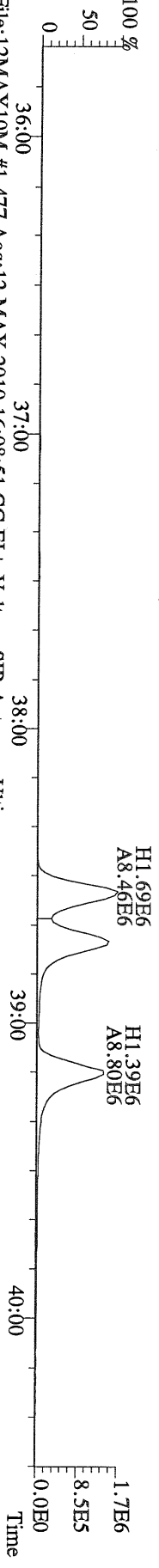
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391.8127 S:4 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



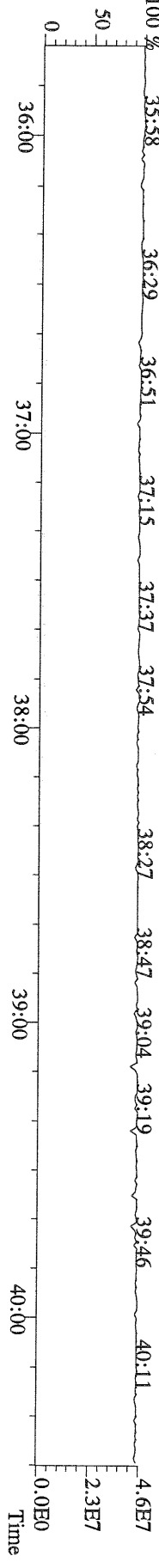
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Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



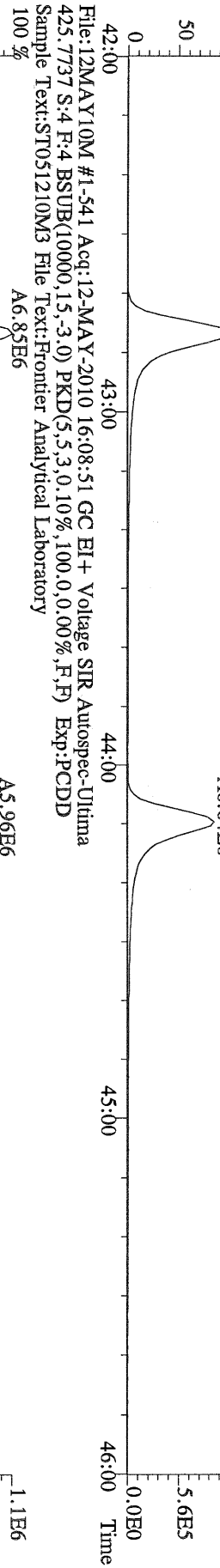
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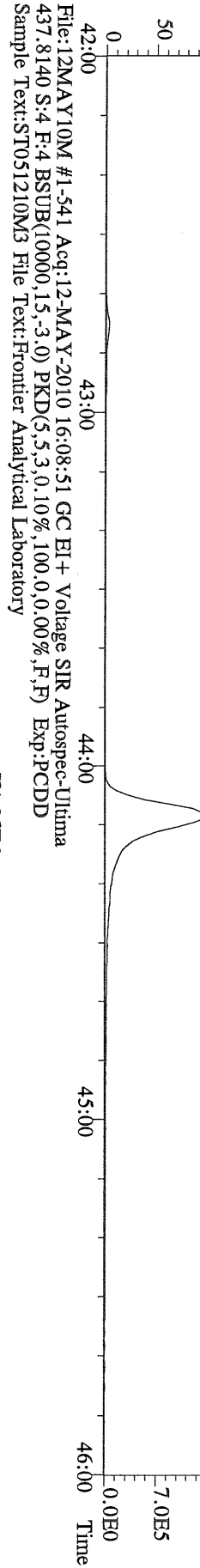
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380.9760 S:4 F:3 Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



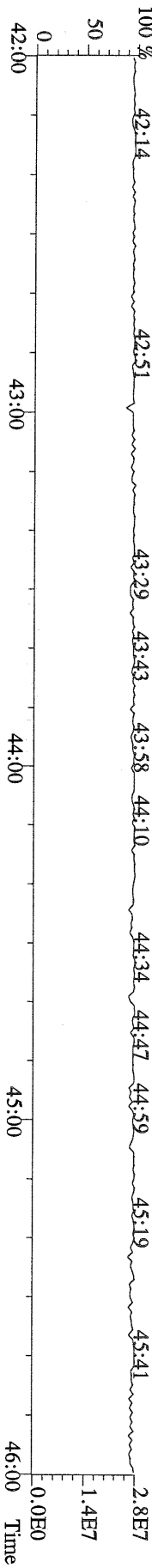
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423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory
100 %



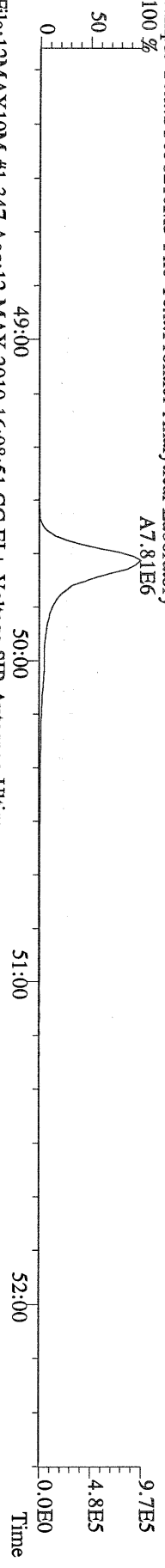
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435.8169 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory
100 %



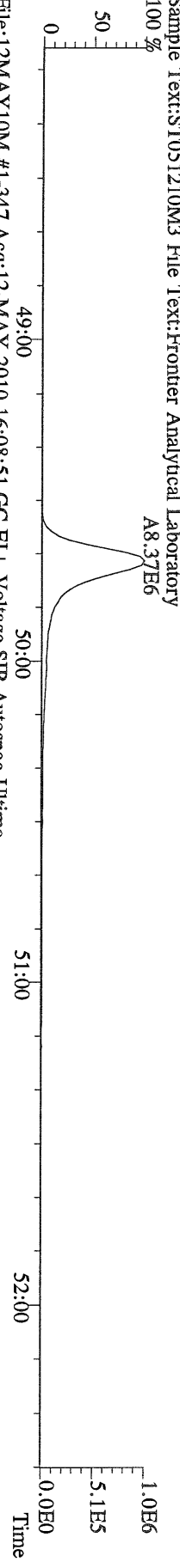
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430.9728 S:4 F:4 Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory
100 %



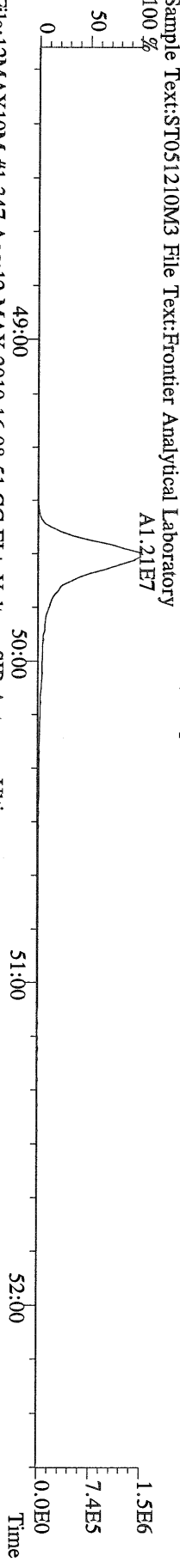
File:12MAY10M #1-347 Acq:12-MAY-2010 16:08:51 GC EI + Voltage SIR Autospec-Ultima
 457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



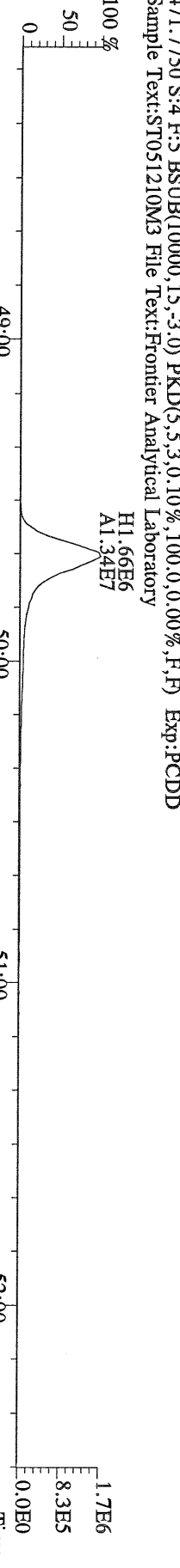
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 459.7348 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



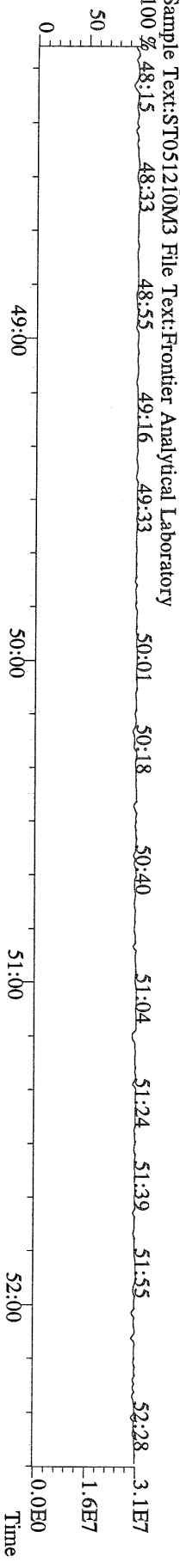
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 469.7780 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



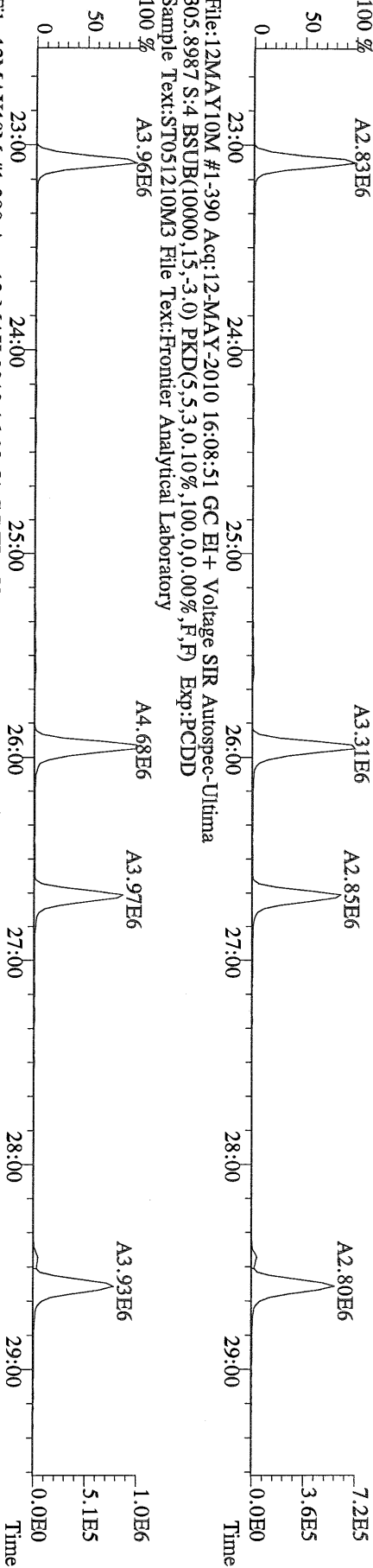
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 471.7750 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



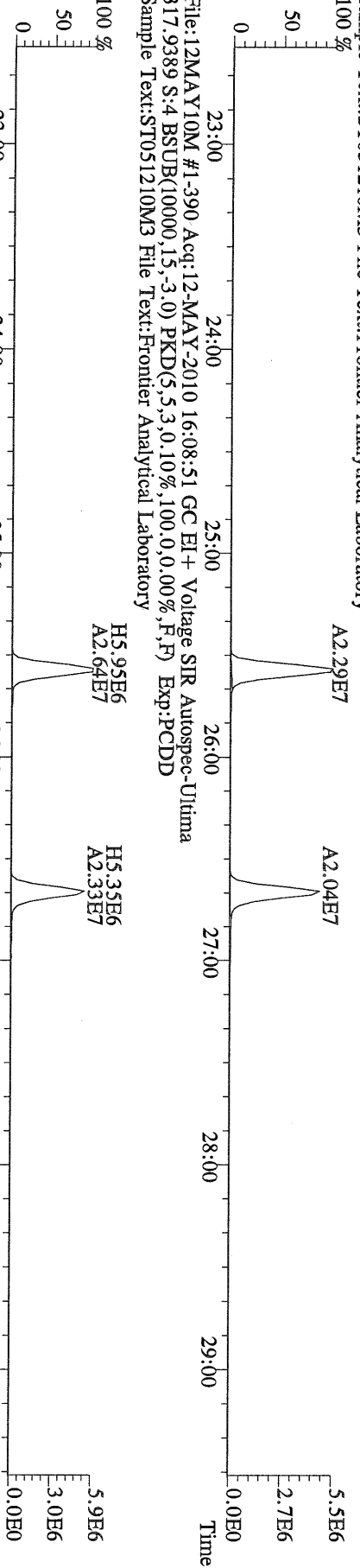
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 454.9728 S:4 F:5 Exp:PCDD
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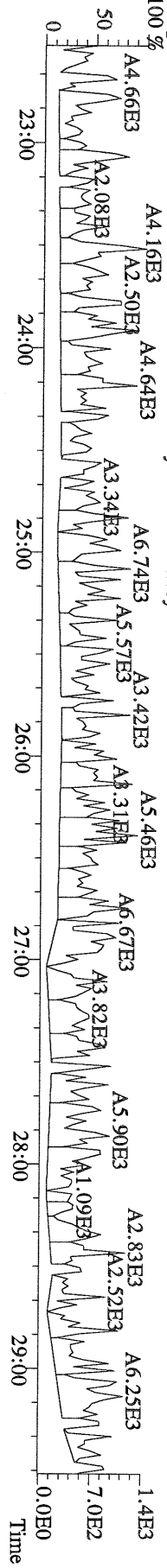
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 303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



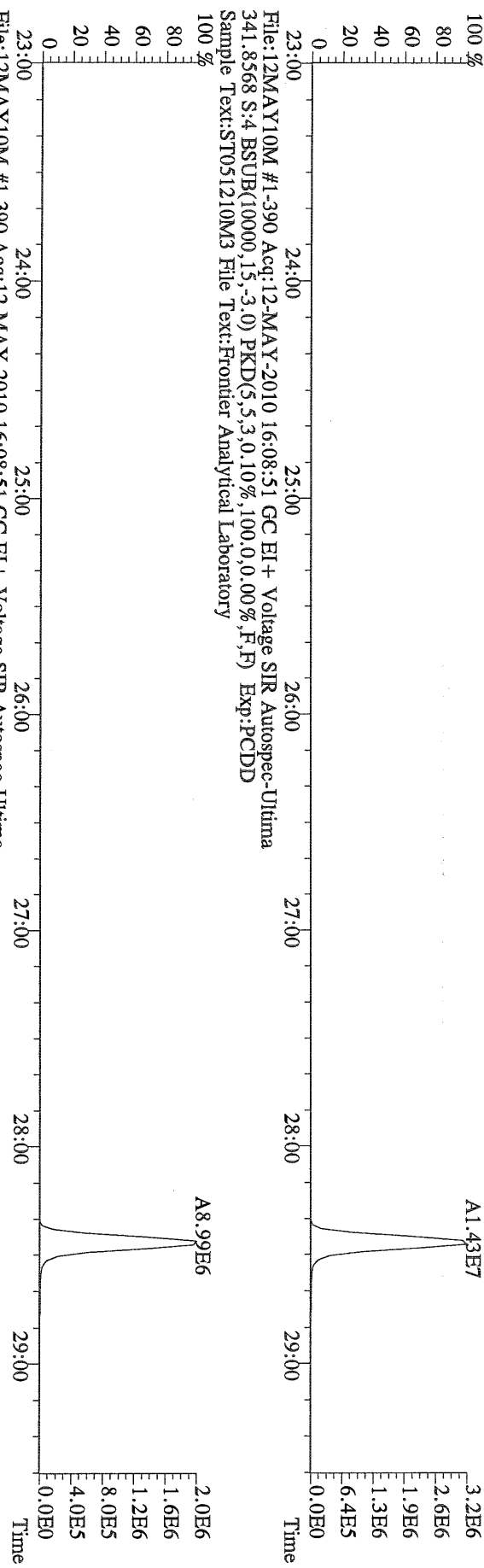
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 315.9419 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



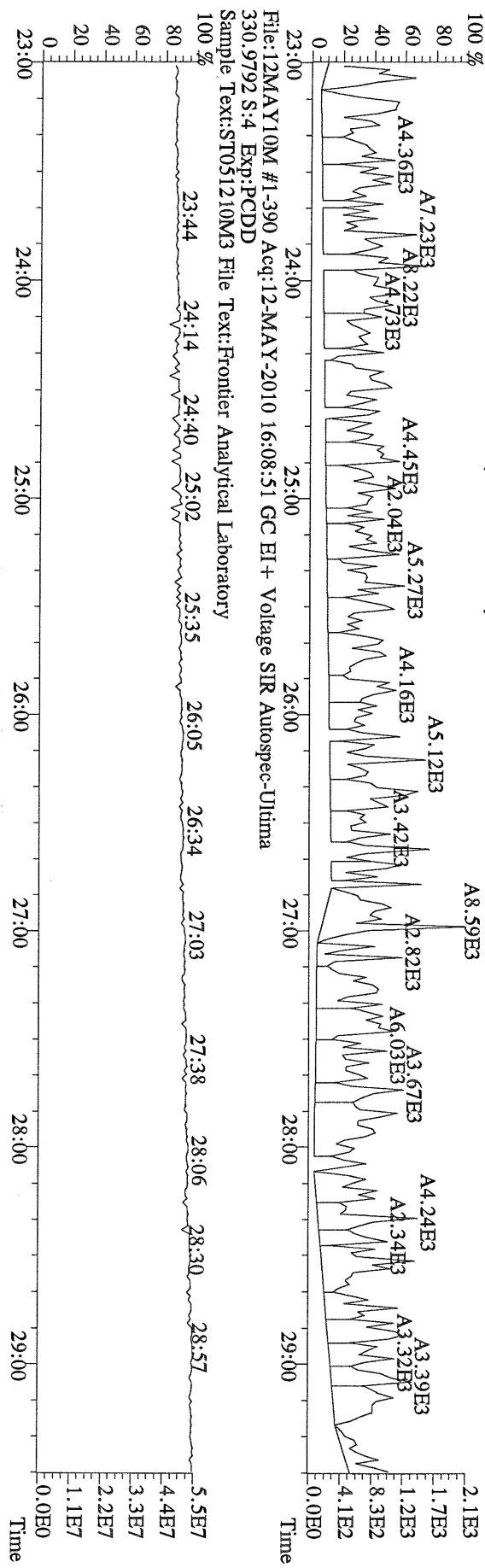
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 375.8364 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
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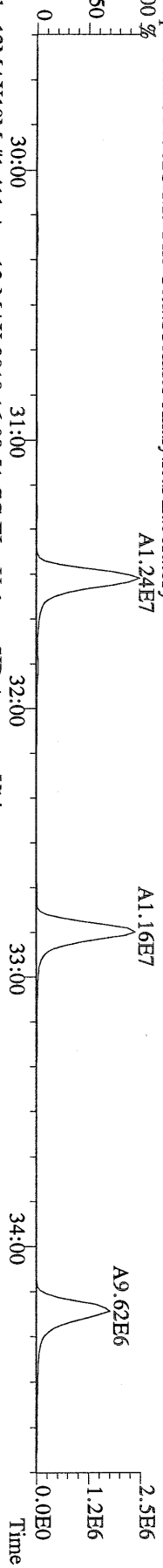
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 339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
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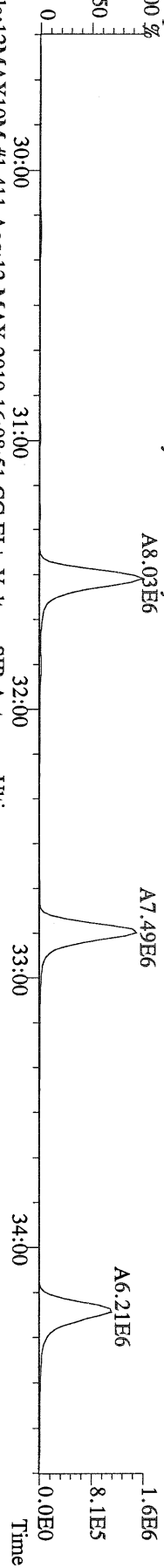
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 409.7974 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



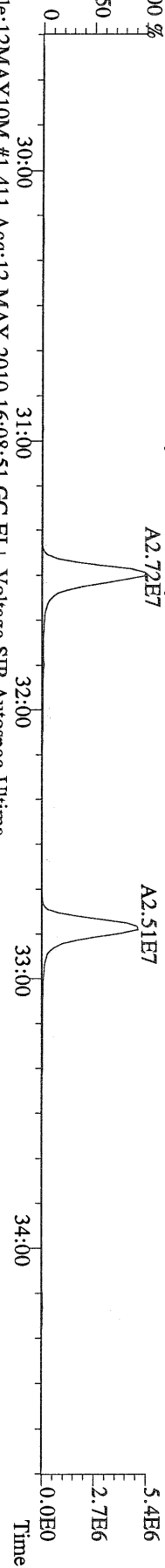
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339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



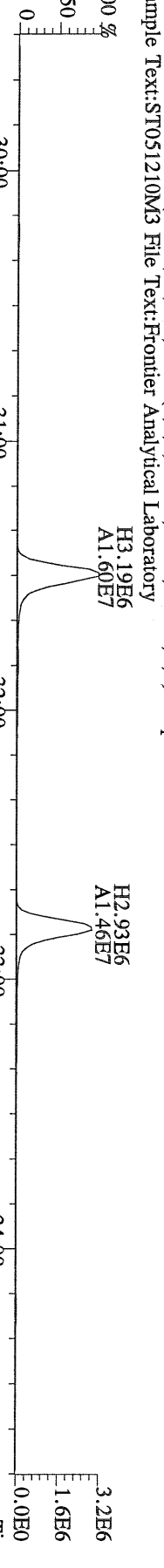
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341.8568 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



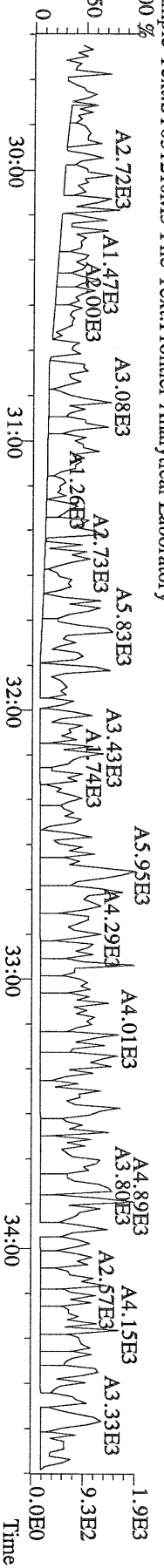
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351.9000 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



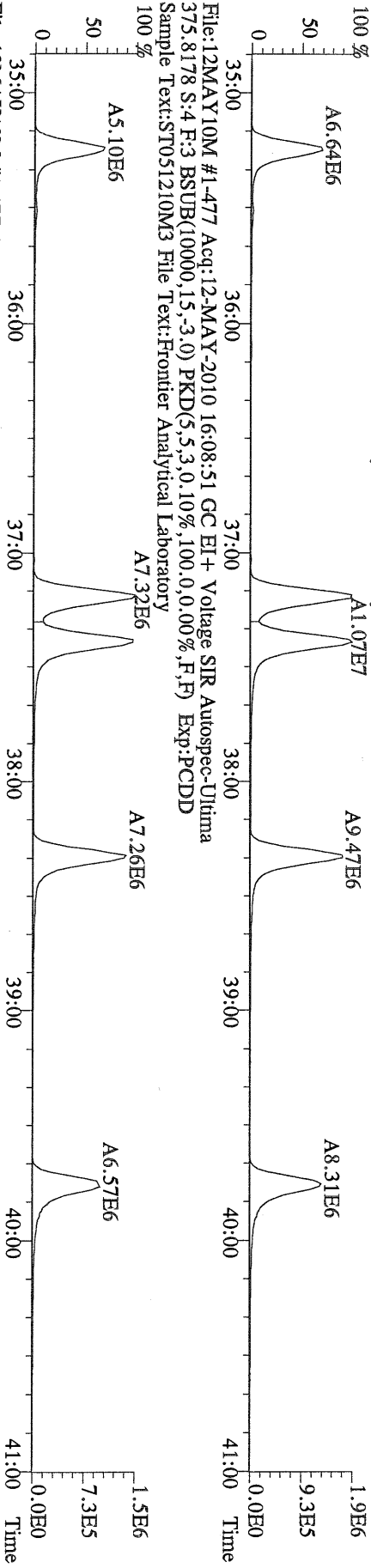
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353.8970 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



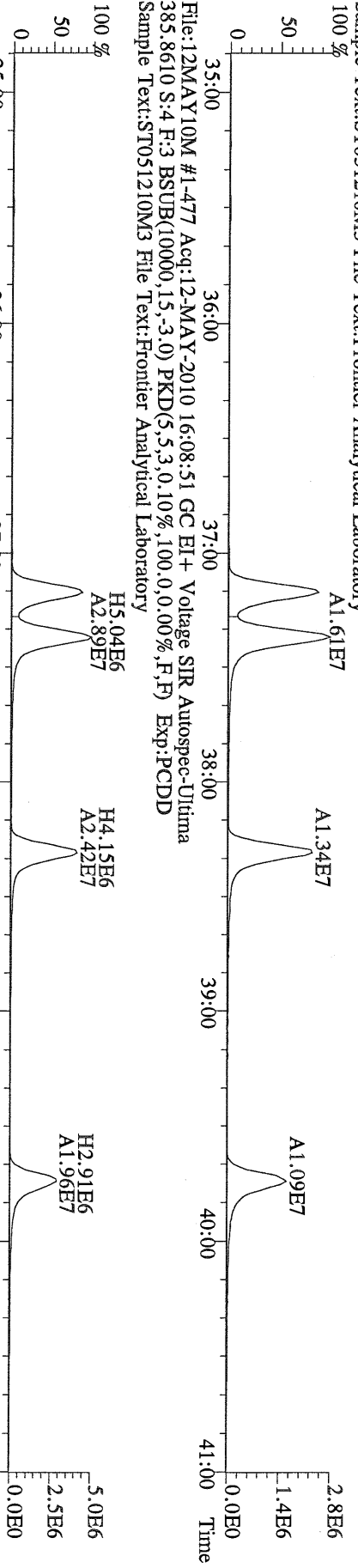
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409.7974 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



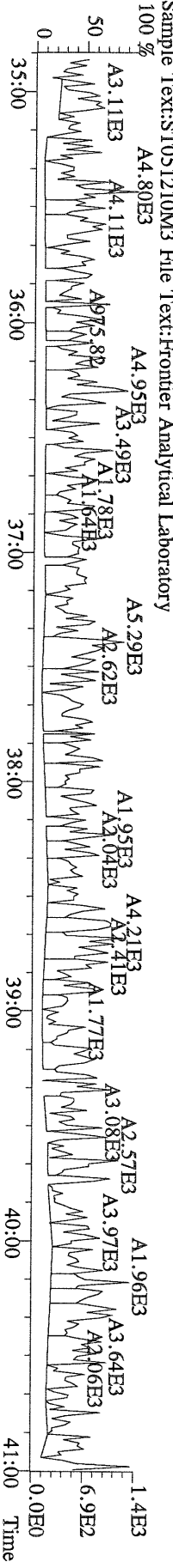
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 373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



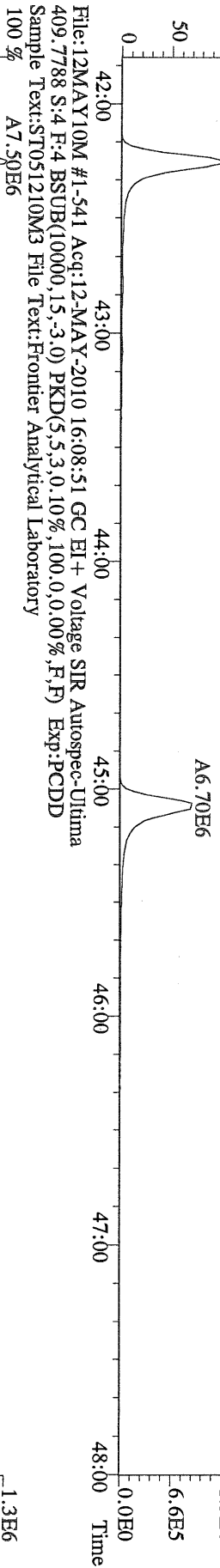
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 383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



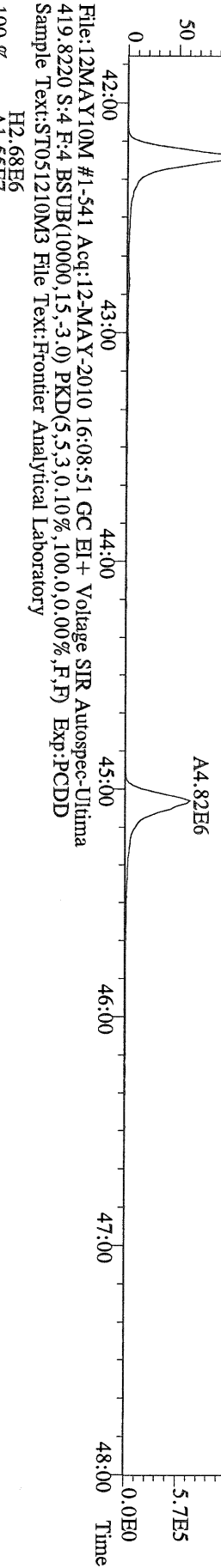
File:12MAY10M #1-477 Acq:12-MAY-2010 16:08:51 GC EI+ Voltage SIR Autospec-Utima
 445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



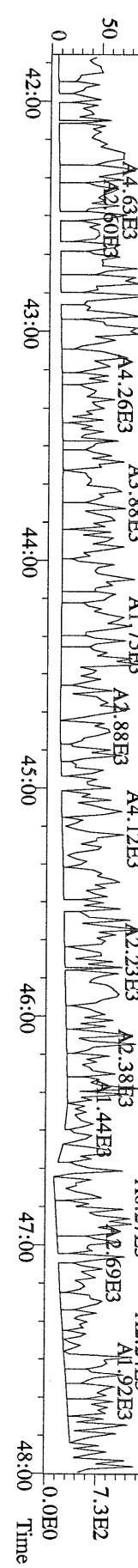
File:12MAY10M #1-541 Acq:12-MAY-2010 16:08:51 GC EI+ Voltage SIR Autospec-Utima
 407.7818 S:4 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



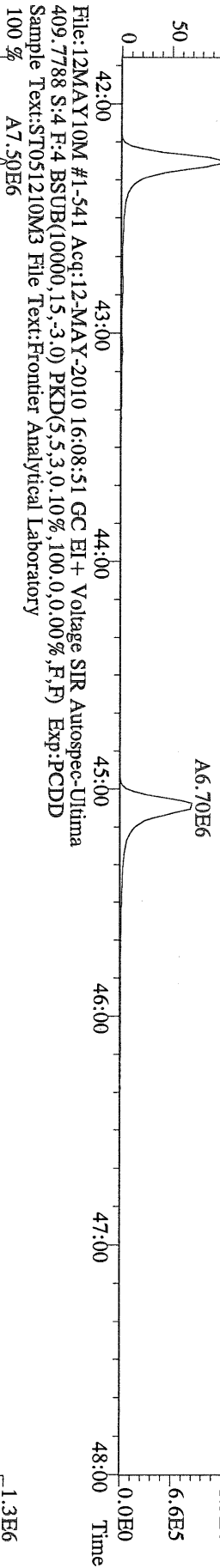
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 417.8253 S:4 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



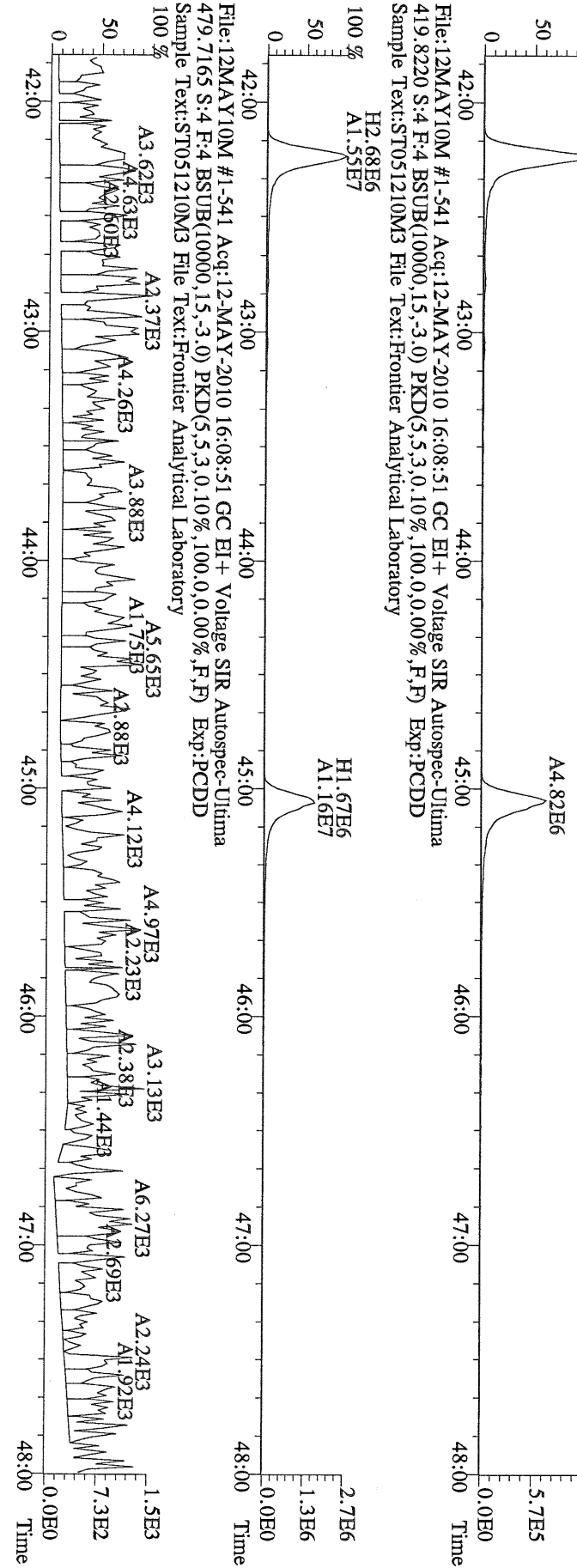
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 419.8220 S:4 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



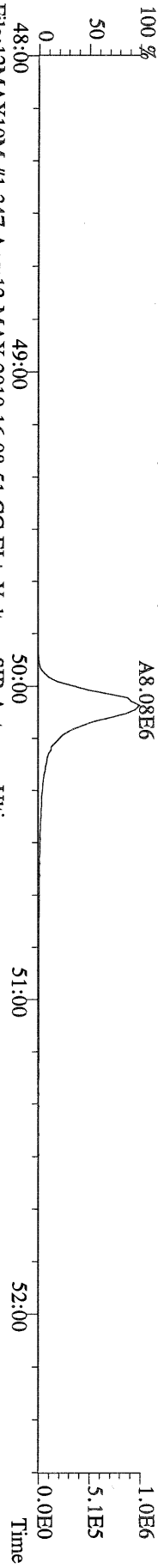
File:12MAY10M #1-541 Acq:12-MAY-2010 16:08:51 GC EI+ Voltage SIR Autospec-Utima
 479.7165 S:4 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



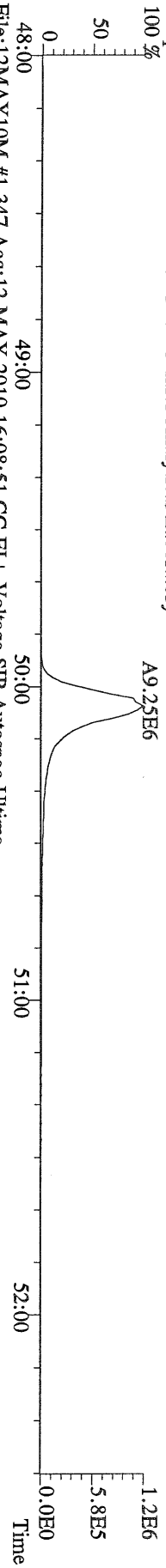
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 479.7165 S:4 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



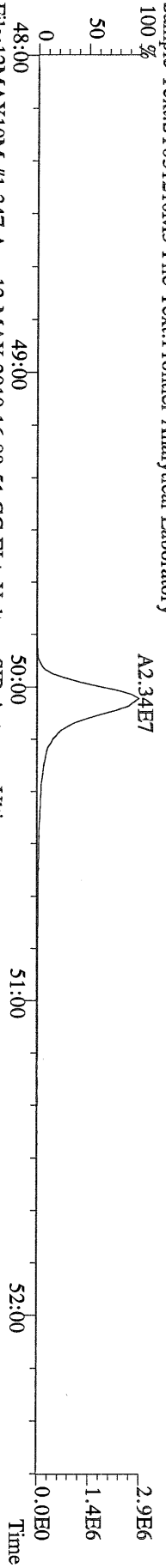
File:12MAY10M #1-347 Acq:12-MAY-2010 16:08:51 GC EI+ Voltage SIR Autospec-Utima
441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



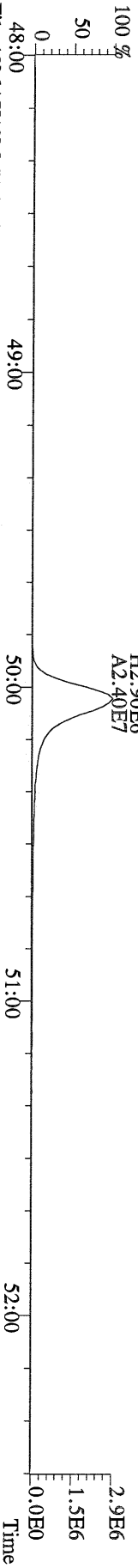
File:12MAY10M #1-347 Acq:12-MAY-2010 16:08:51 GC EI+ Voltage SIR Autospec-Utima
443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



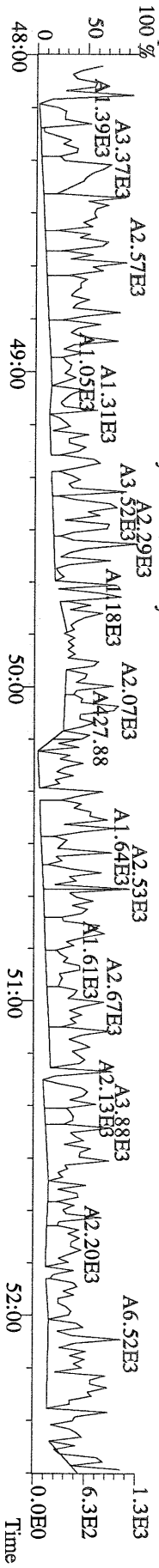
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453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



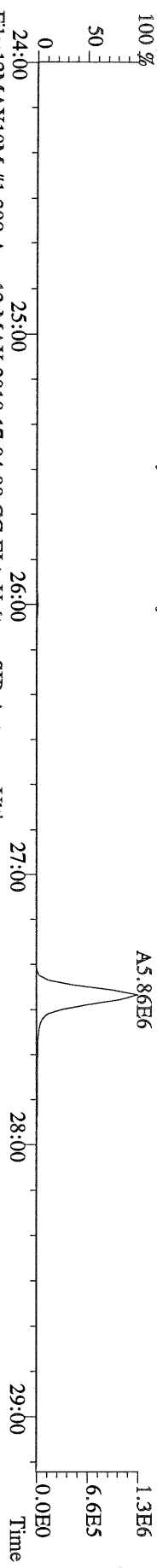
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455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



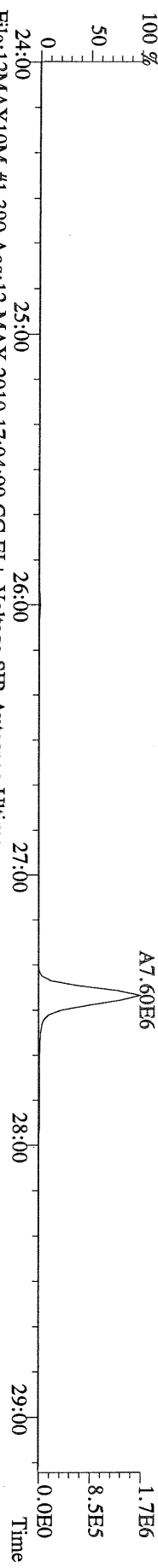
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513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M3 File Text:Frontier Analytical Laboratory



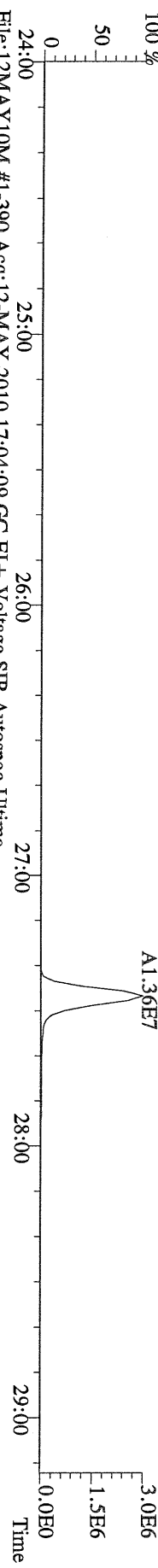
File: 12MAY10M #1-390 Acq: 12-MAY-2010 17:04:09 GC EI + Voltage SIR Autospec-Ultima
319.8965 S: 5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp: PCDD
Sample Text: ST051210M4 File Text: Frontier Analytical Laboratory



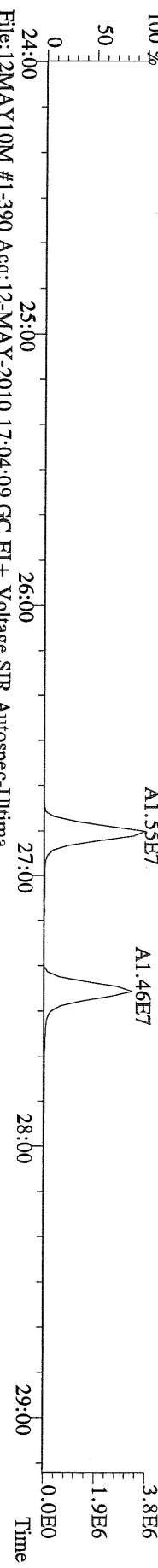
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321.8936 S: 5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp: PCDD
Sample Text: ST051210M4 File Text: Frontier Analytical Laboratory



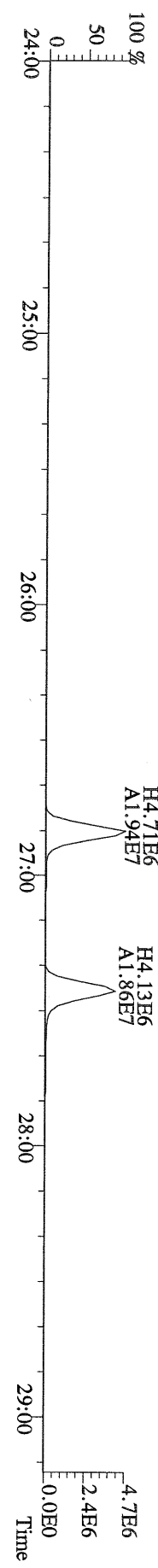
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327.8847 S: 5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp: PCDD
Sample Text: ST051210M4 File Text: Frontier Analytical Laboratory



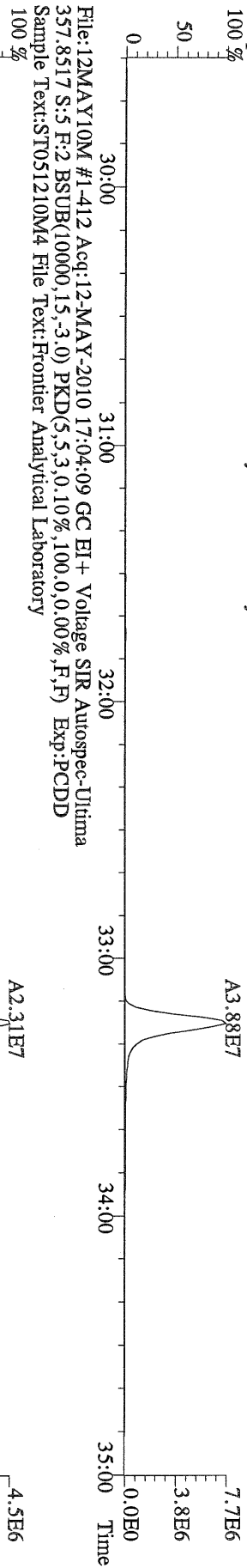
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331.9368 S: 5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp: PCDD
Sample Text: ST051210M4 File Text: Frontier Analytical Laboratory



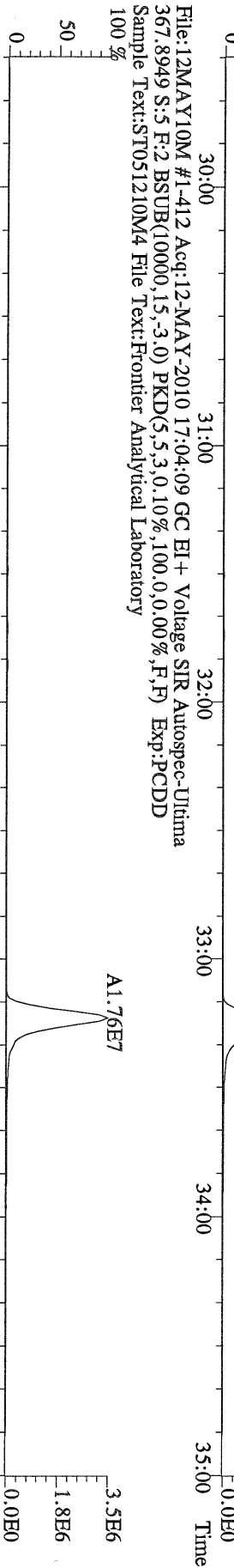
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333.9339 S: 5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp: PCDD
Sample Text: ST051210M4 File Text: Frontier Analytical Laboratory



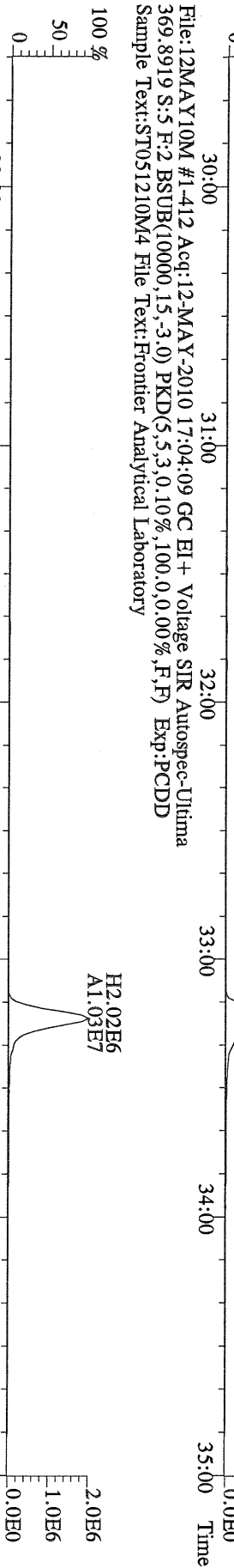
File:12MAY10M #1-412 Acq:12-MAY-2010 17:04:09 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S.5 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



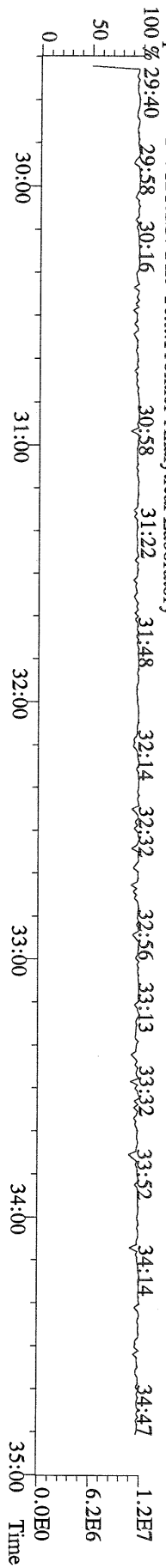
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357.8517 S.5 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



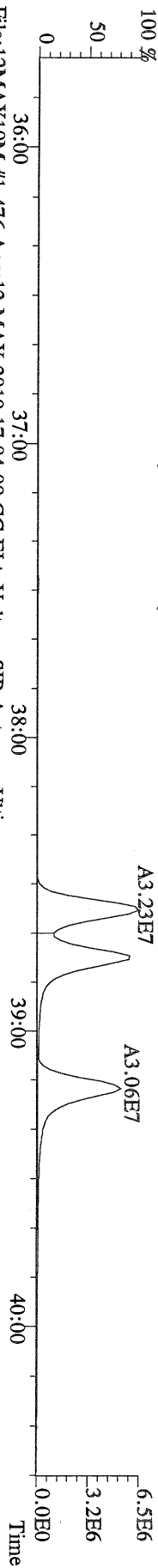
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367.8949 S.5 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



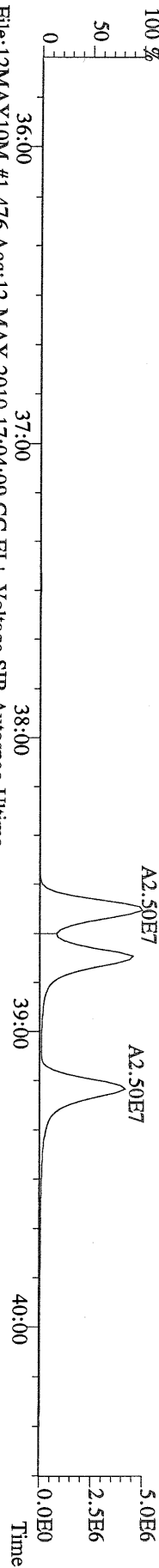
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366.9792 S.5 F:2 Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



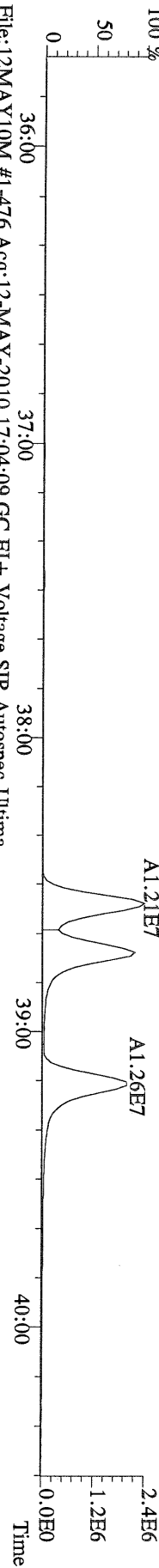
File:12MAY10M #1-476 Acq:12-MAY-2010 17:04:09 GC EI + Voltage SIR Autospec-Ultima
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



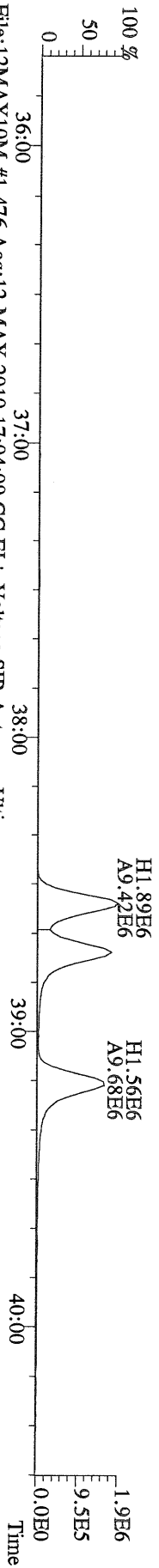
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391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



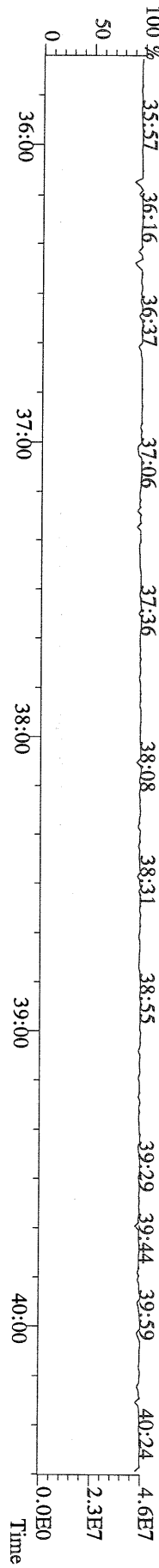
File:12MAY10M #1-476 Acq:12-MAY-2010 17:04:09 GC EI + Voltage SIR Autospec-Ultima
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



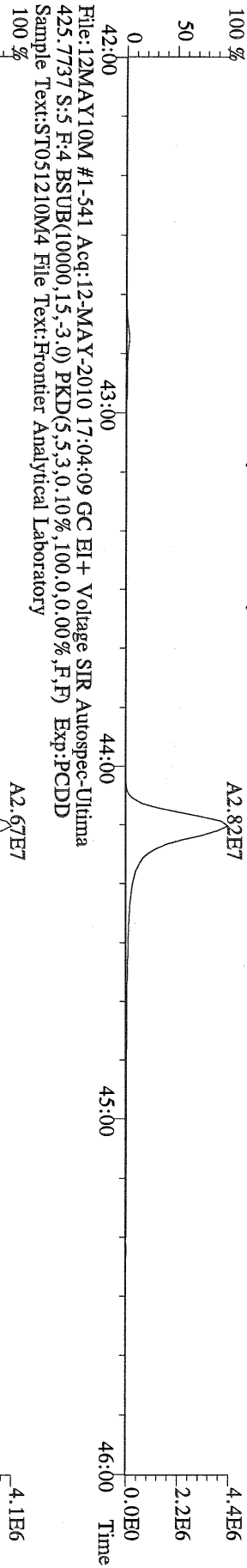
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403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



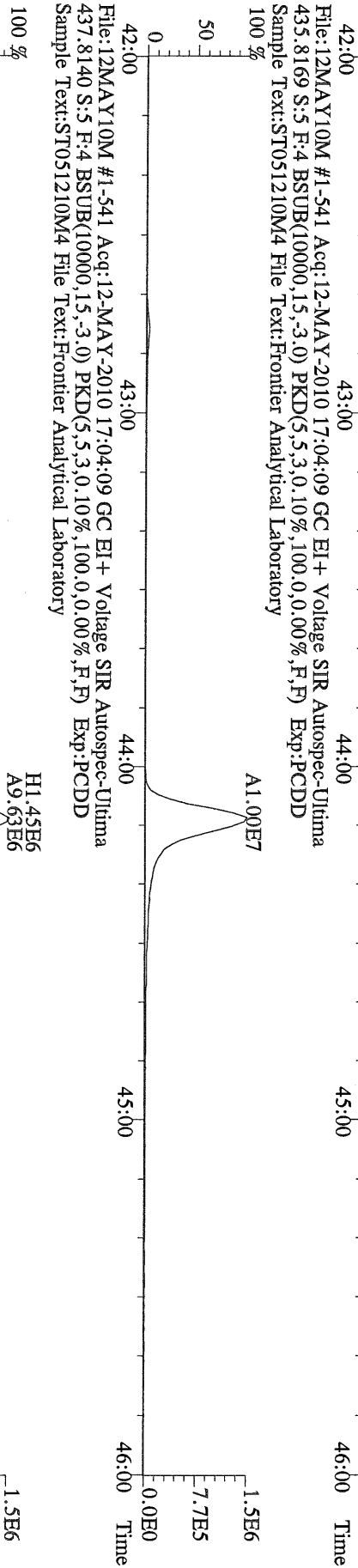
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380.9760 S:5 F:3 Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



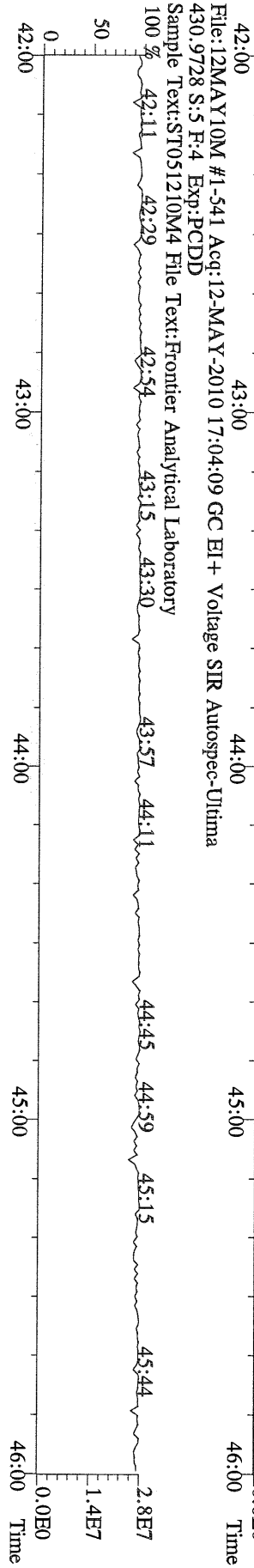
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423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory
100 %



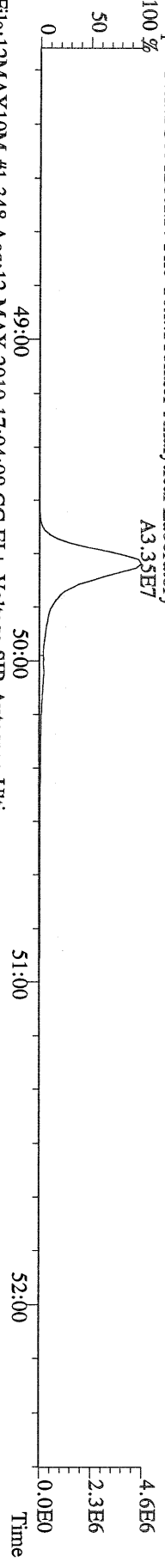
File:12MAY10M #1-541 Acq:12-MAY-2010 17:04:09 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory
100 %



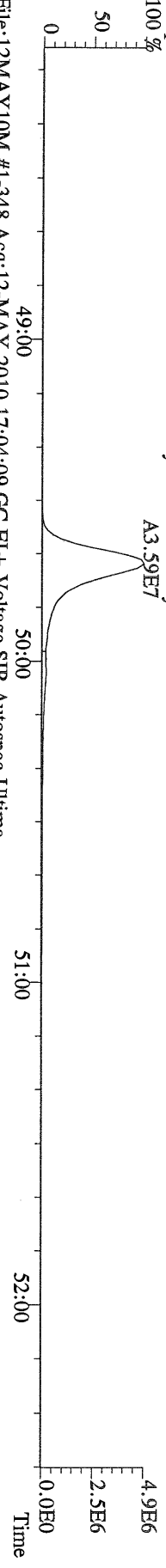
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430.9728 S:5 F:4 Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory
100 %



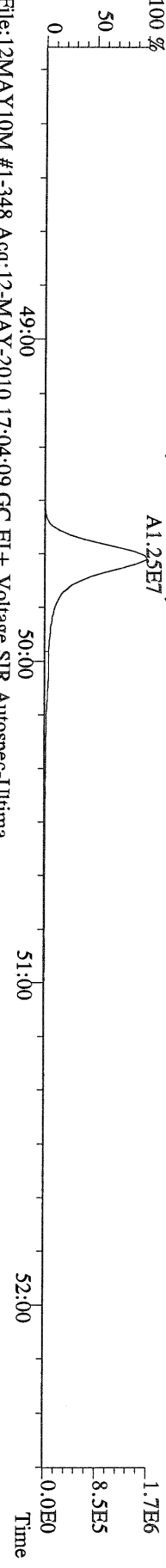
File:12MAY10M #1-348 Acq:12-MAY-2010 17:04:09 GC EI + Voltage SIR Autospec-Utima
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



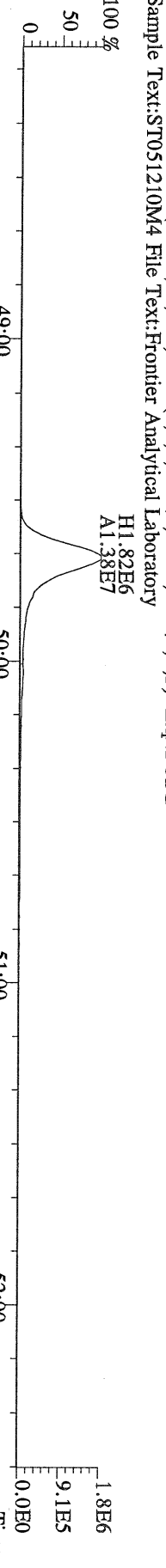
File:12MAY10M #1-348 Acq:12-MAY-2010 17:04:09 GC EI + Voltage SIR Autospec-Utima
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



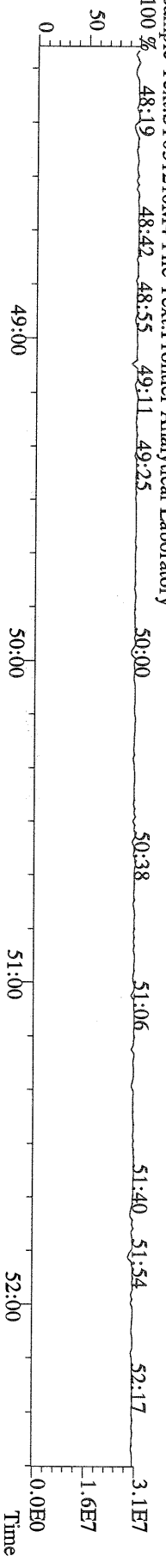
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469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



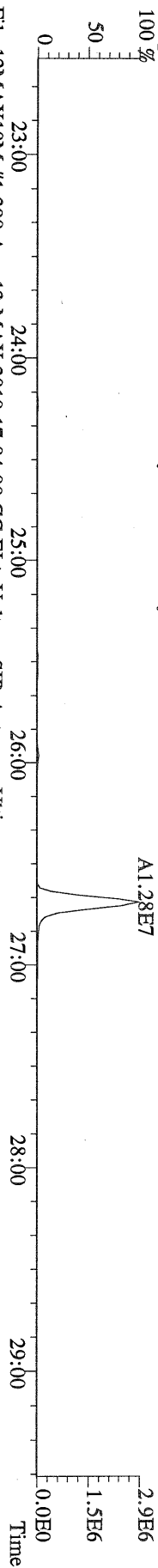
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471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



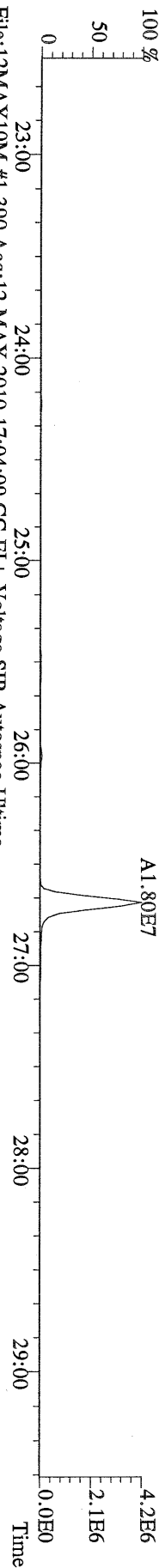
File:12MAY10M #1-348 Acq:12-MAY-2010 17:04:09 GC EI + Voltage SIR Autospec-Utima
454.9728 S:5 F:5 Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



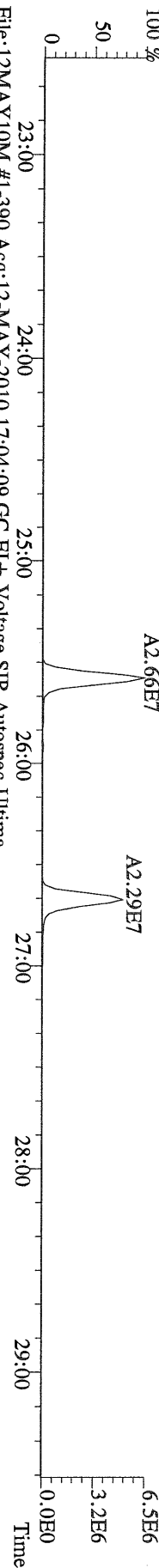
File:12MAY10M #1-390 Acq:12-MAY-2010 17:04:09 GC EI + Voltage SIR Autospec-Ultima
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



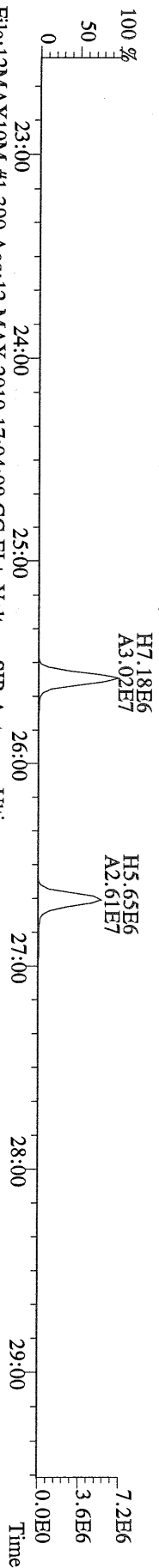
File:12MAY10M #1-390 Acq:12-MAY-2010 17:04:09 GC EI + Voltage SIR Autospec-Ultima
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



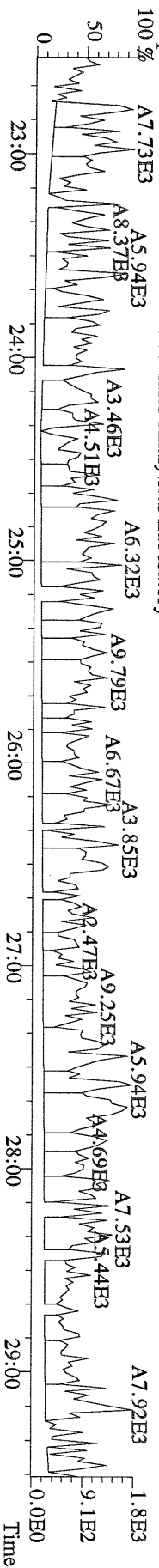
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315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



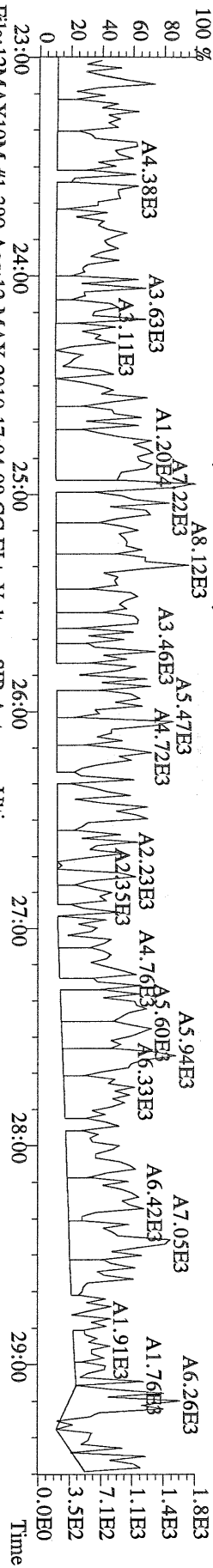
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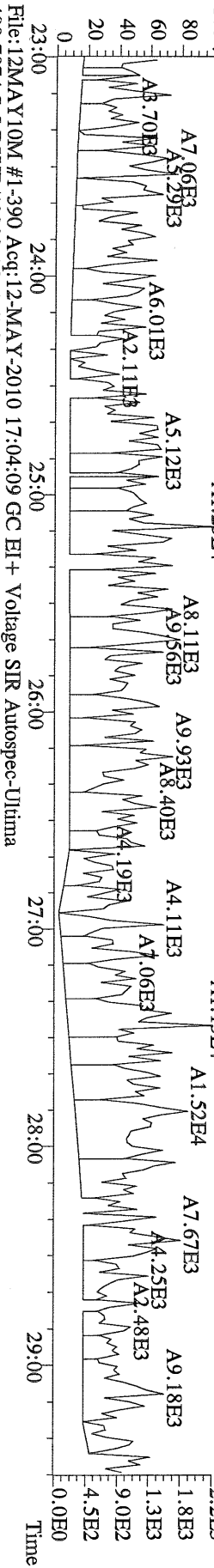
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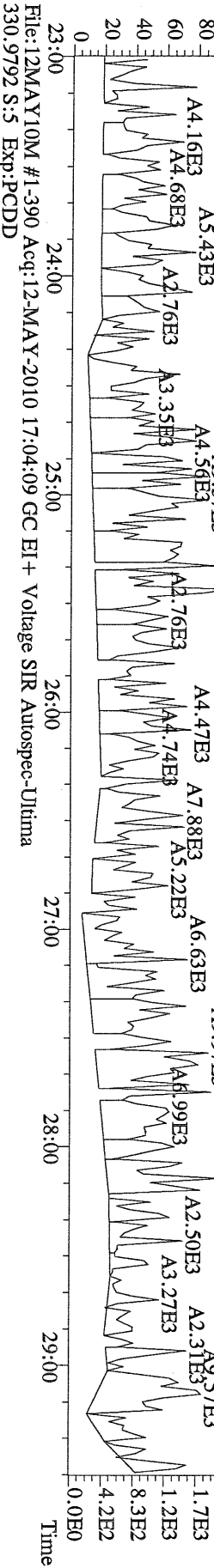
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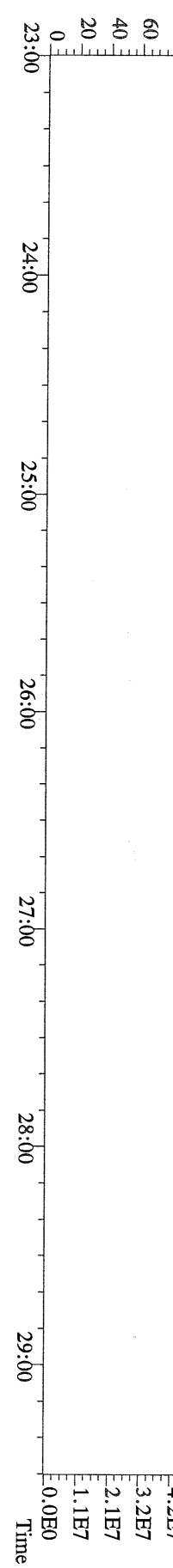
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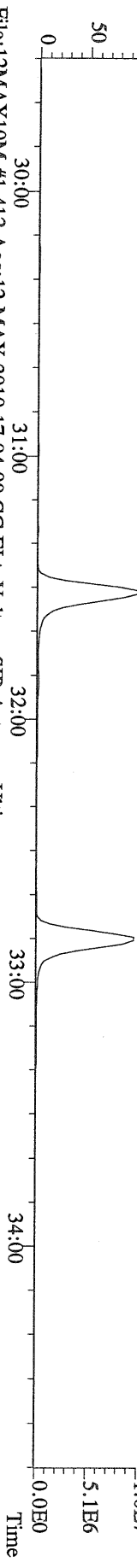
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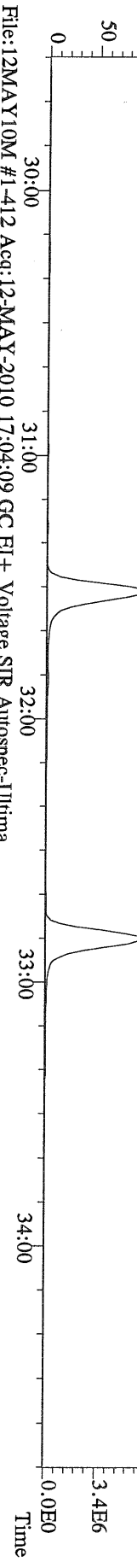
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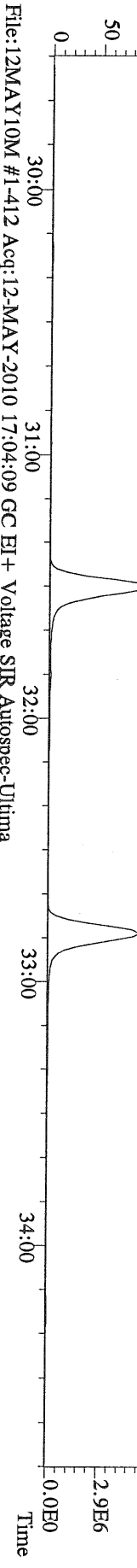
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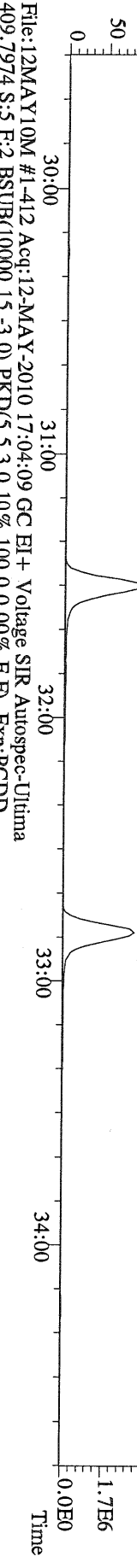
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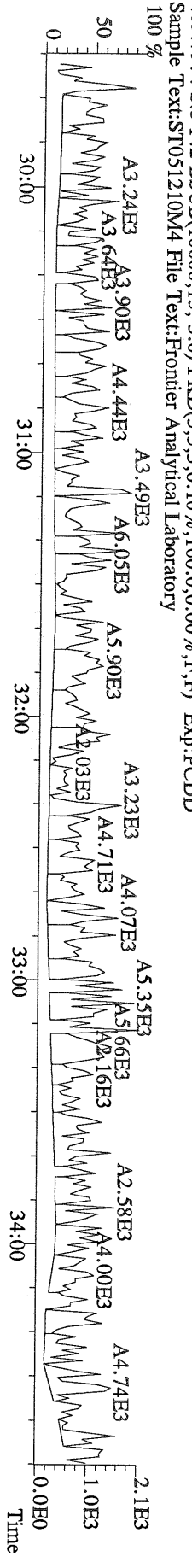
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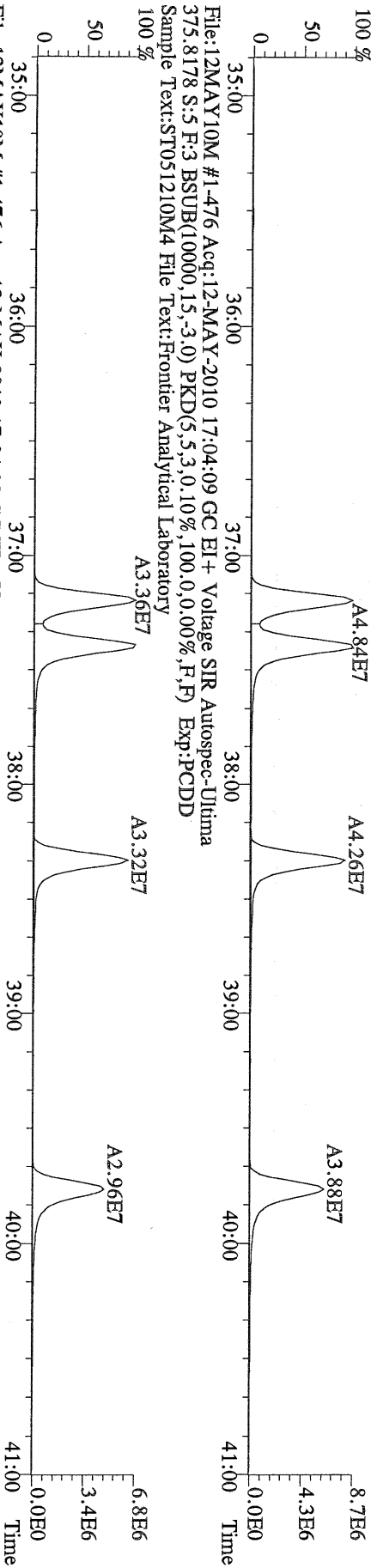
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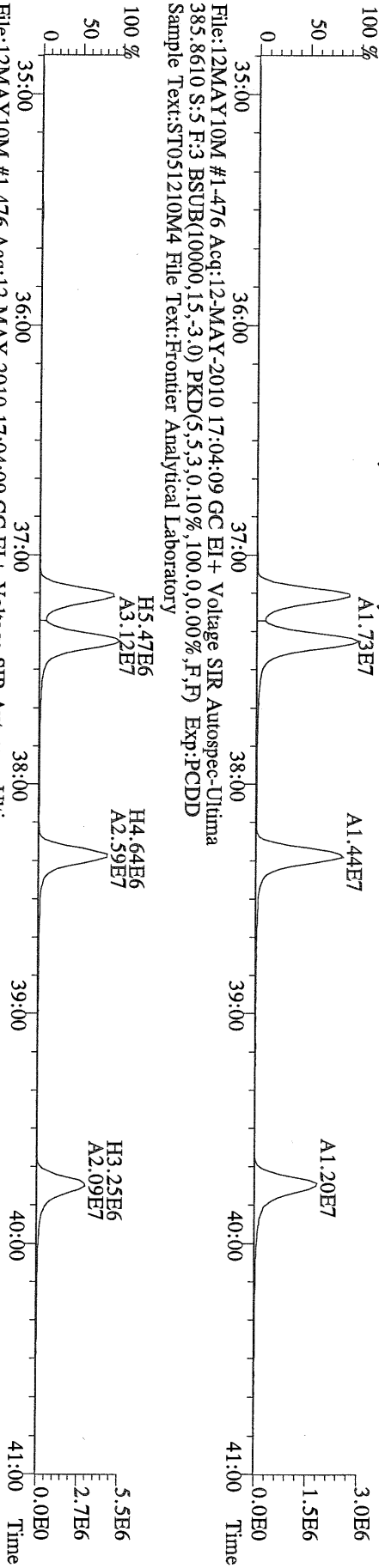
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 Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



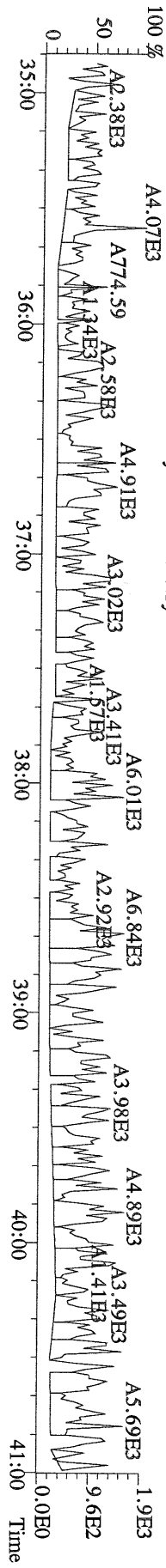
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 373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



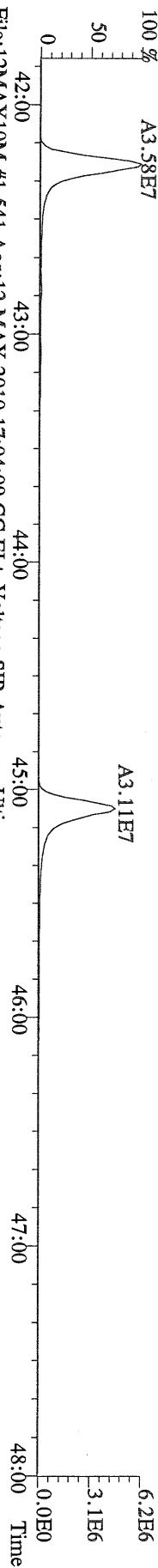
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 383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



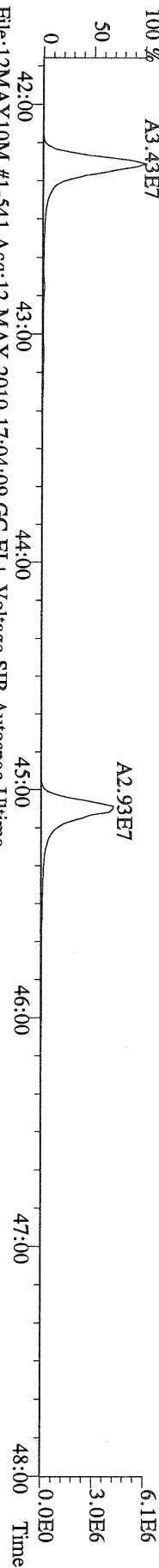
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 Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



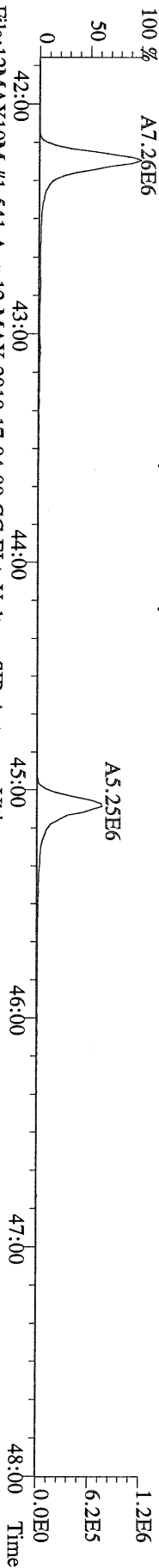
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 407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



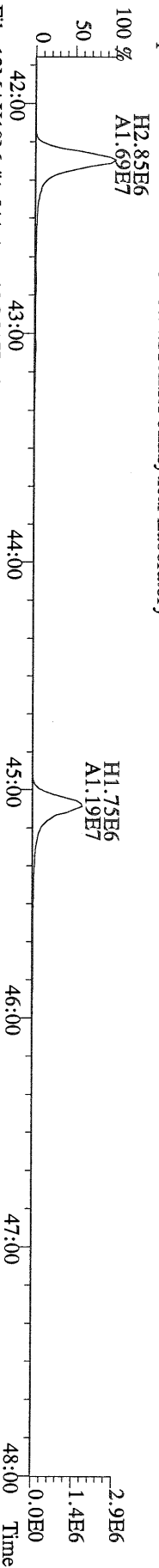
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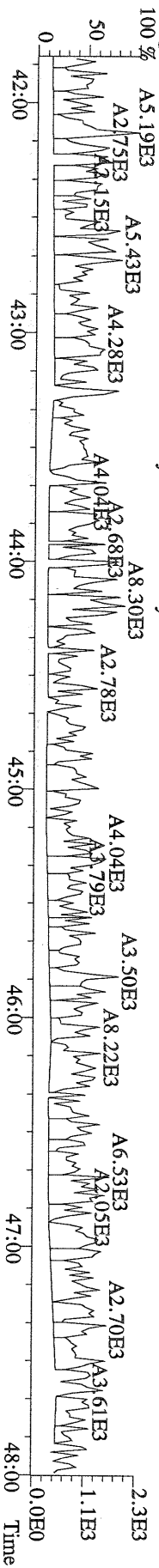
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 417.8253 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



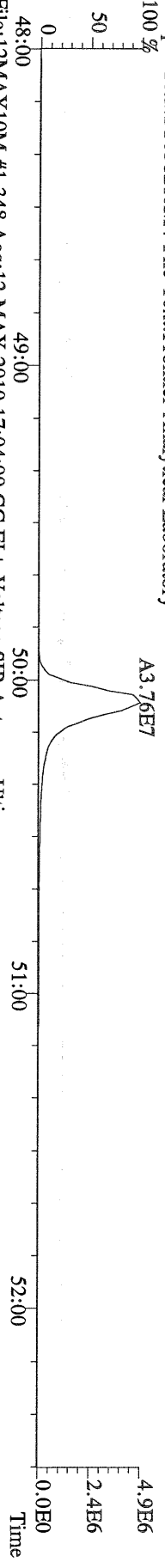
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 419.8220 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
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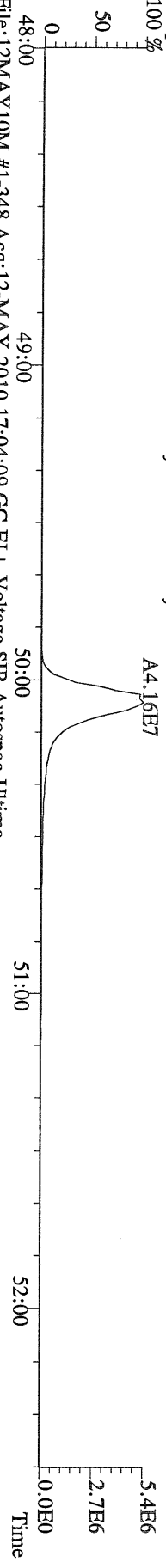
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 479.7165 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



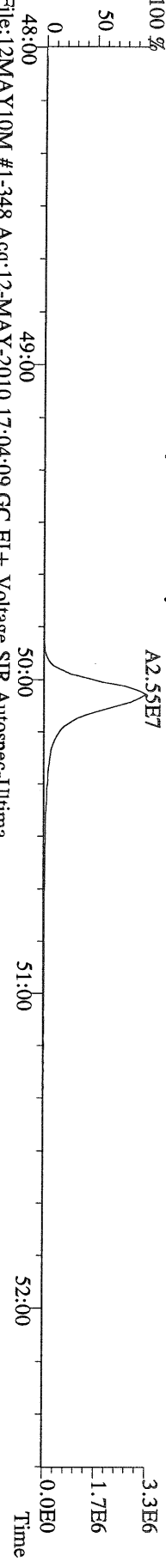
File:12MAY10M #1-348 Acq:12-MAY-2010 17:04:09 GC EI+ Voltage SIR Autospec-Utima
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



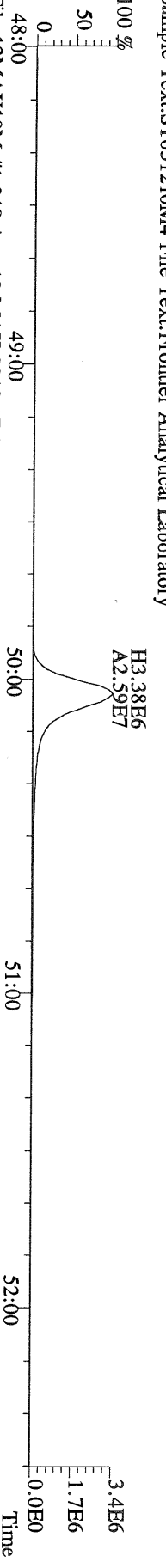
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443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



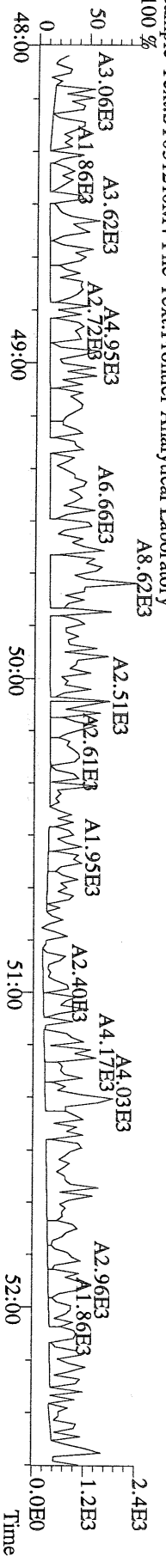
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453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



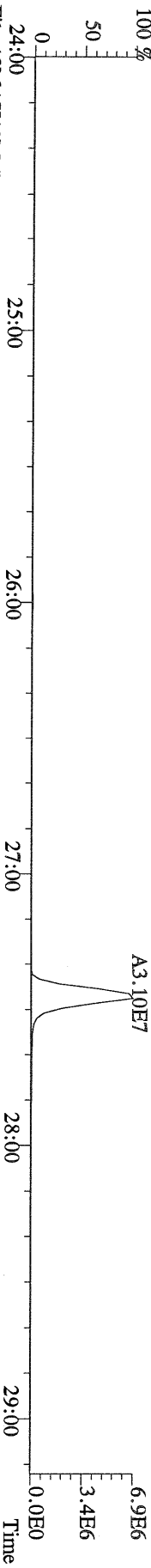
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455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



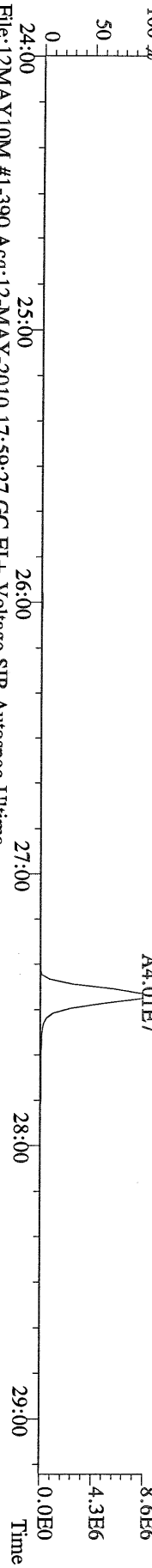
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513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M4 File Text:Frontier Analytical Laboratory



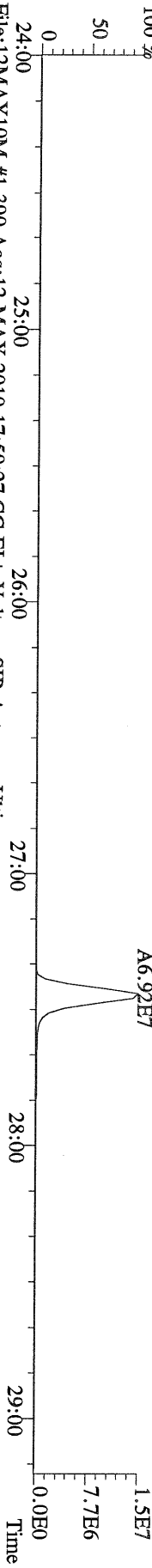
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319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory
100 %



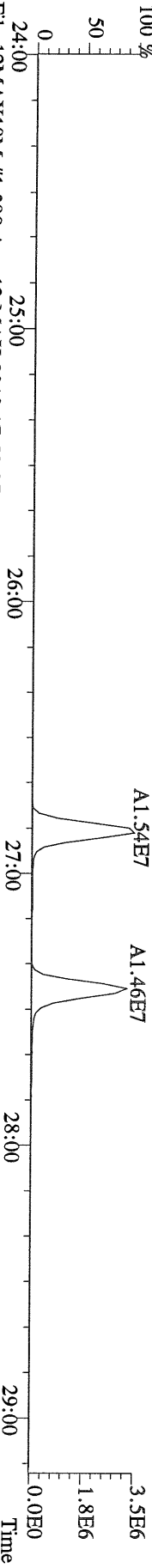
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Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory
100 %



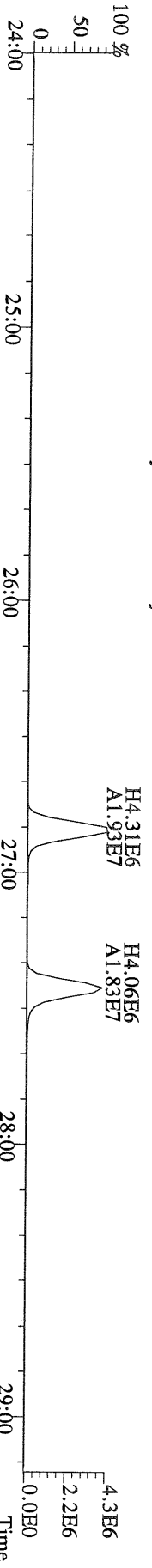
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327.8847 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory
100 %



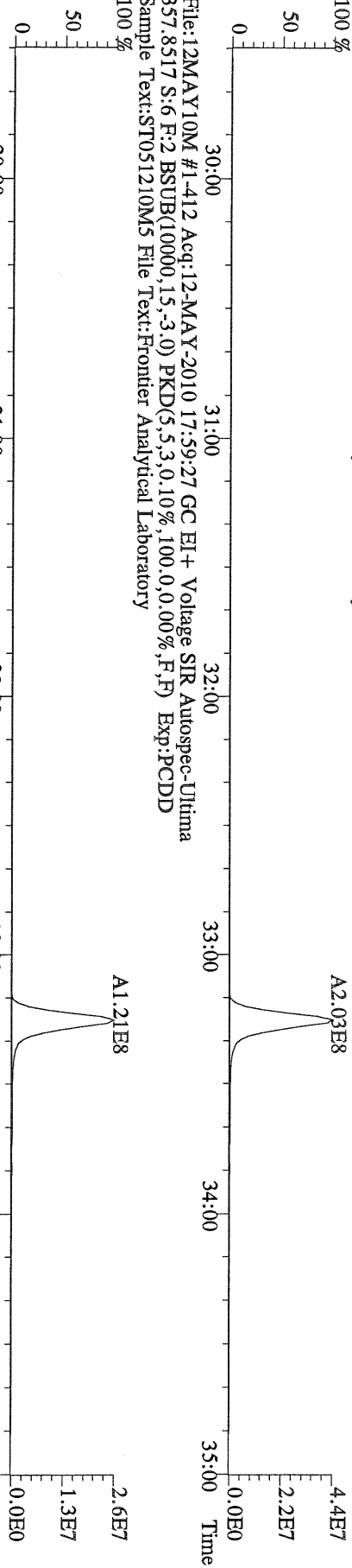
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331.9368 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory
100 %



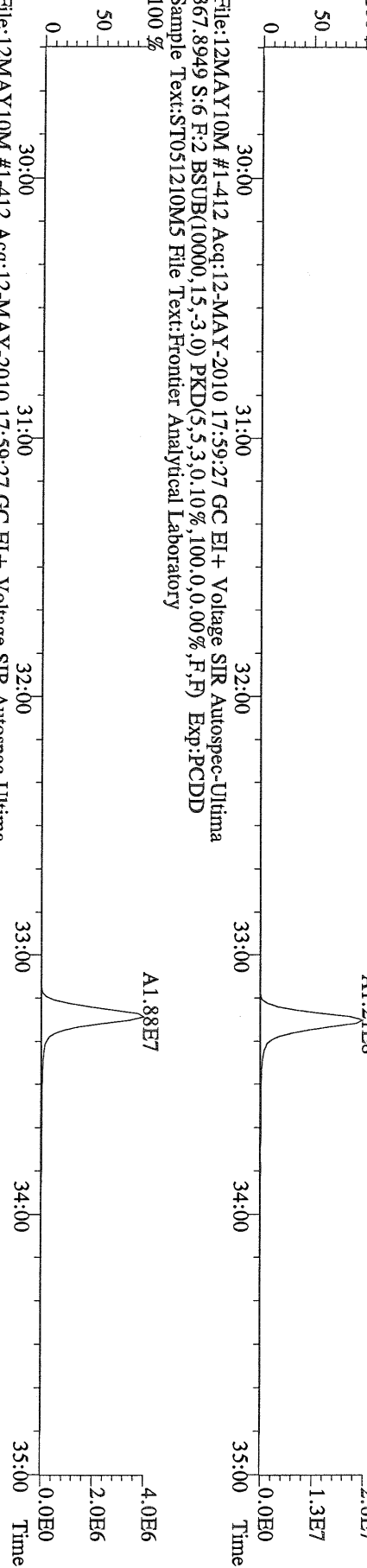
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Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory



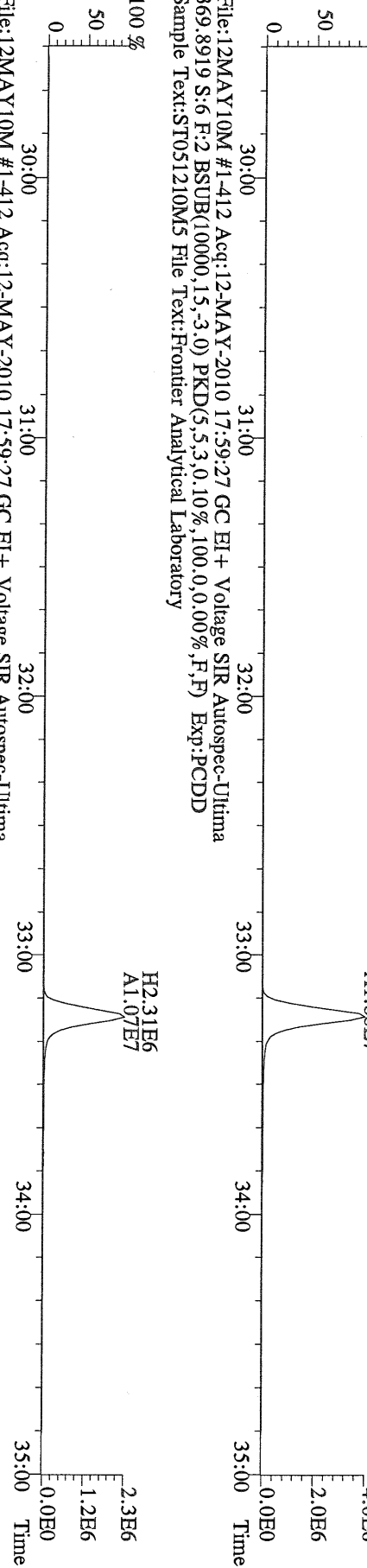
File:12MAY10M #1-412 Acq:12-MAY-2010 17:59:27 GC EI + Voltage SIR Autospec-Utima
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M5 File Text:Fronter Analytical Laboratory



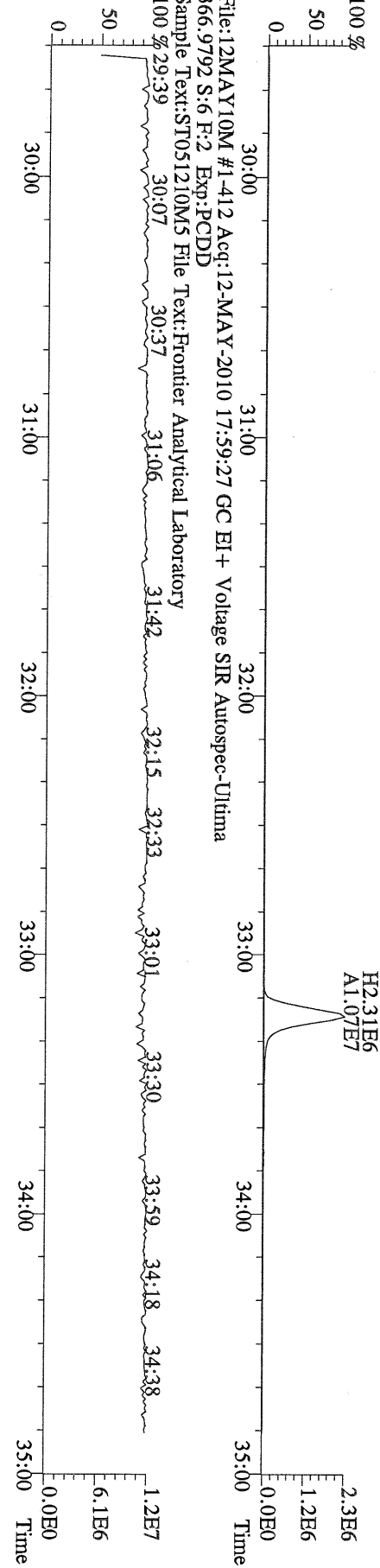
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357.8517 S:6 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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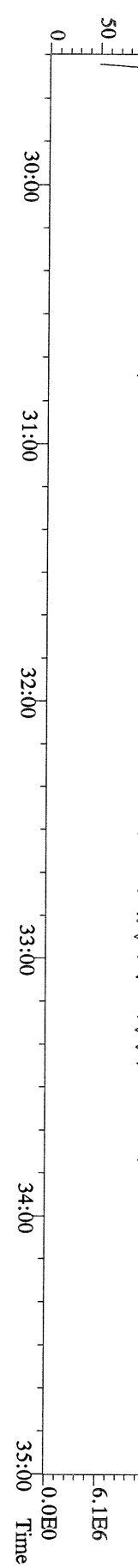
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367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M5 File Text:Fronter Analytical Laboratory



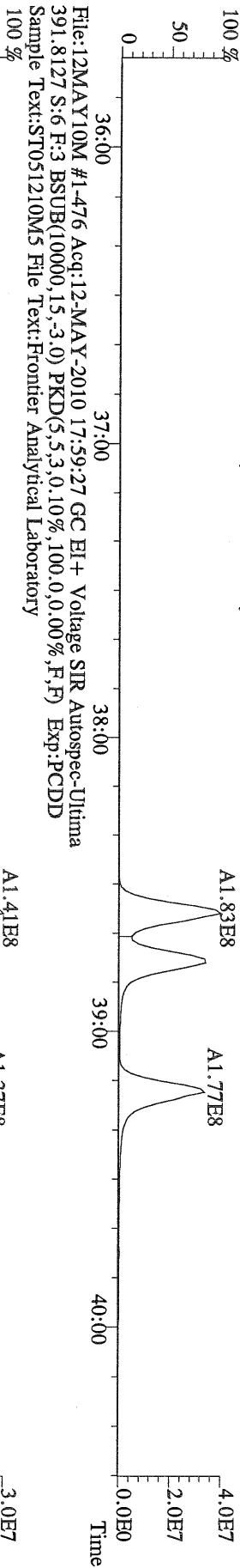
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369.8919 S:6 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M5 File Text:Fronter Analytical Laboratory



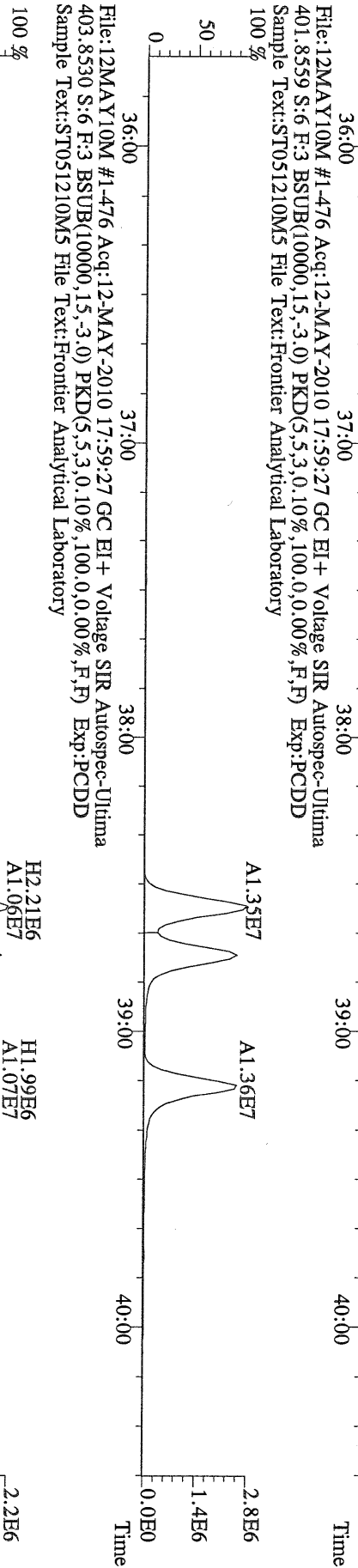
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366.9792 S:6 F:2 Exp:PCDD
Sample Text:ST051210M5 File Text:Fronter Analytical Laboratory



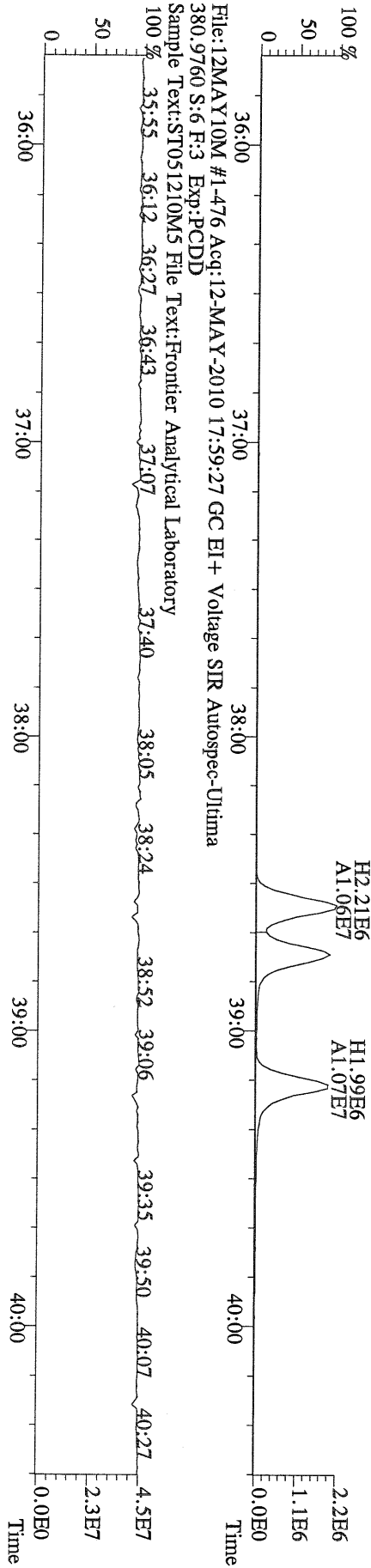
File:12MAY10M #1-476 Acq:12-MAY-2010 17:59:27 GC EI + Voltage SIR Autospec-Ultima
389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory



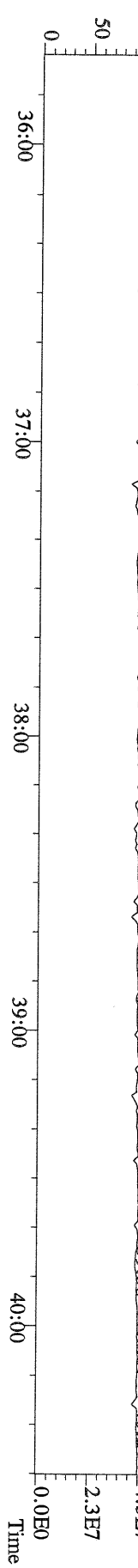
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401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory



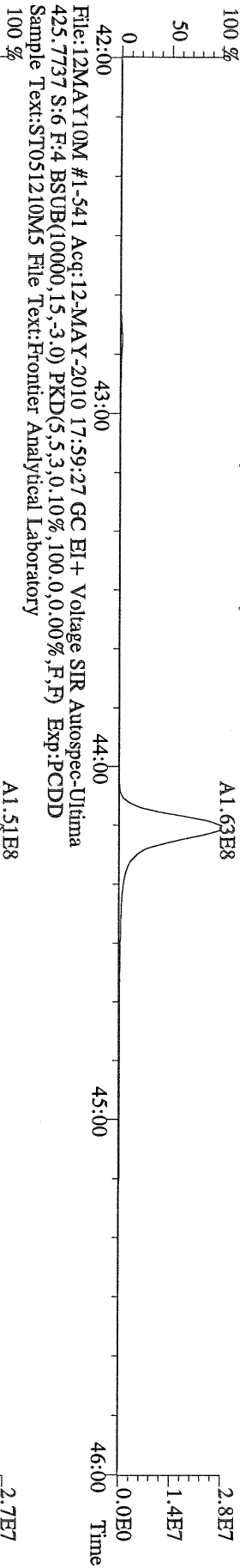
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403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory



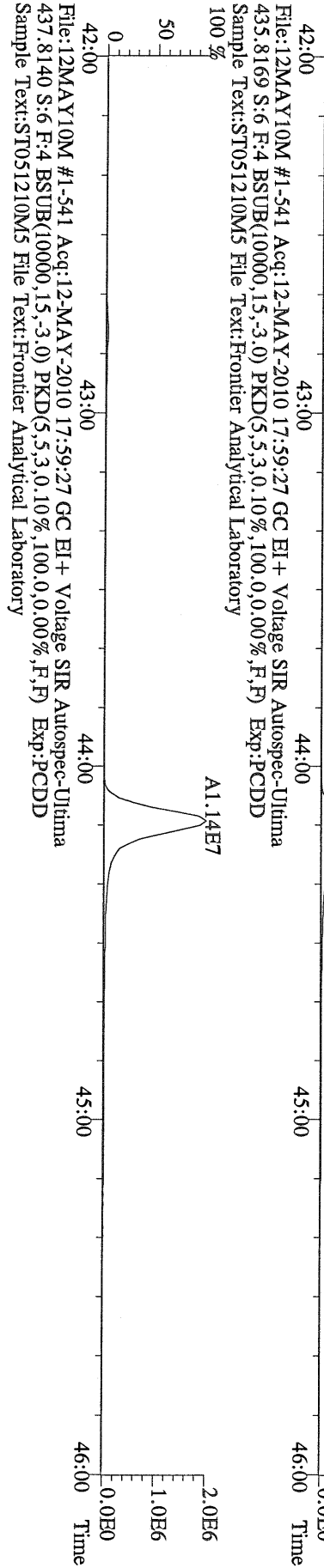
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380.9760 S:6 F:3 Exp:PCDD
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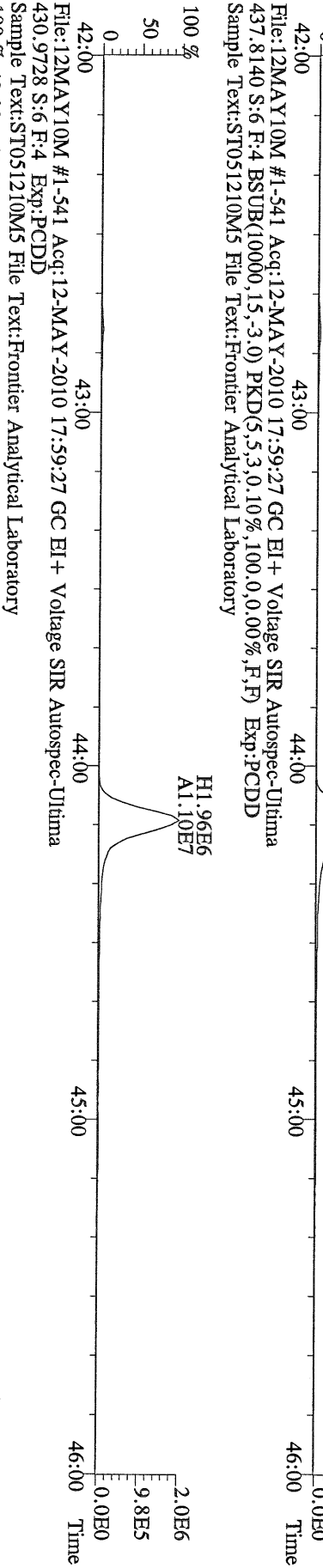
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423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory



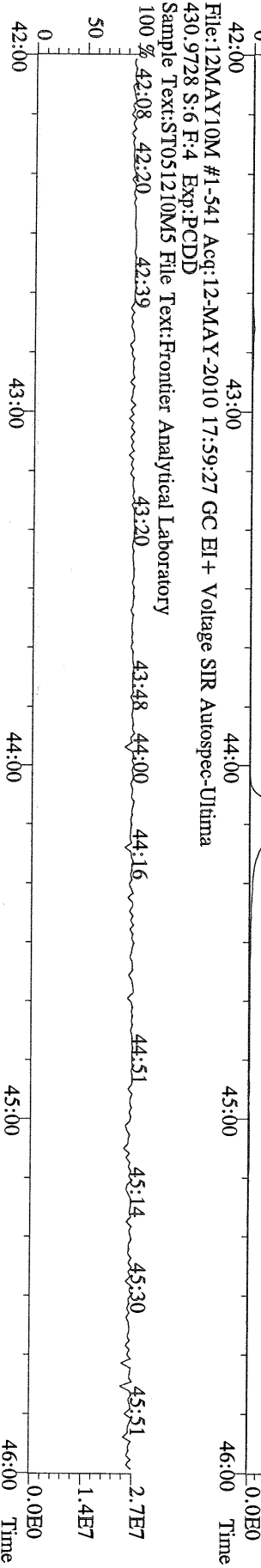
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425.7737 S:6 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory



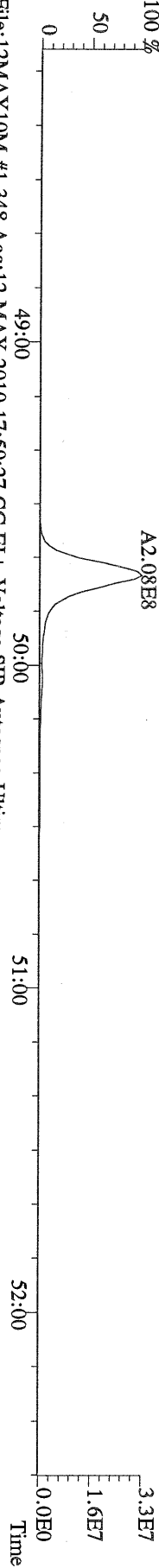
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437.8140 S:6 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory



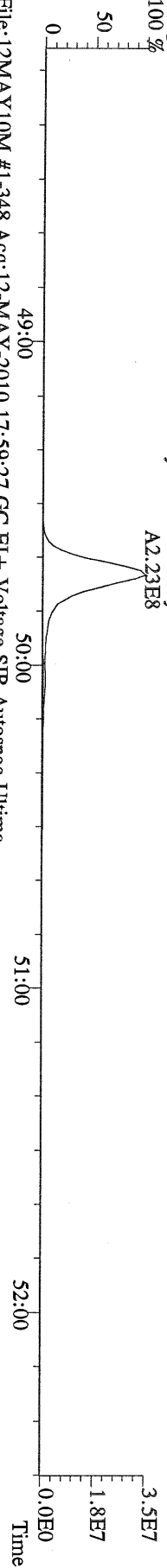
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430.9728 S:6 F:4 Exp:PCDD
Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory



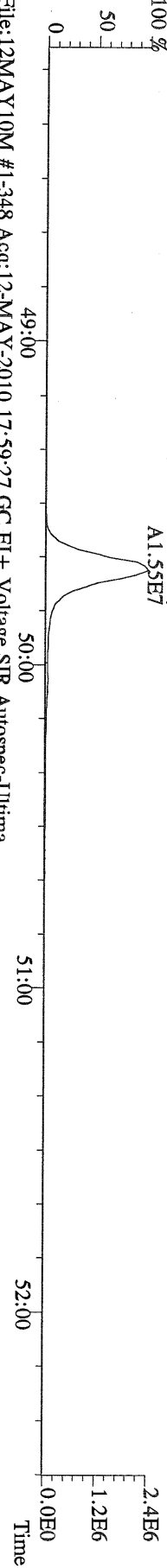
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457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory
100 %



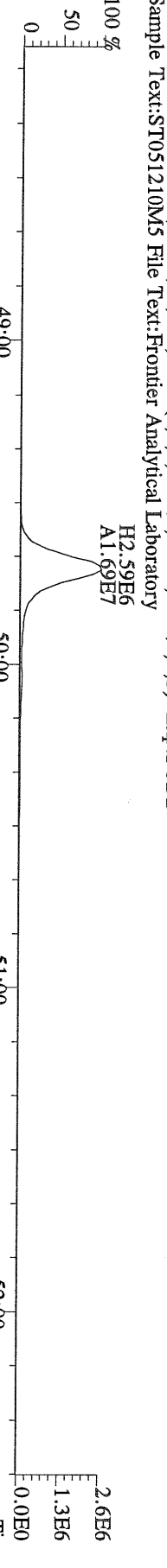
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Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory
100 %



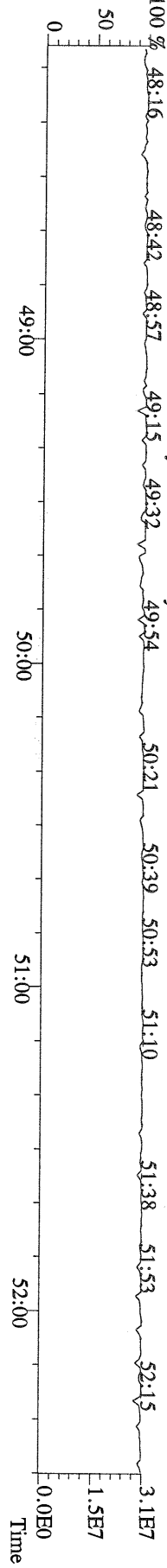
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Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory
100 %



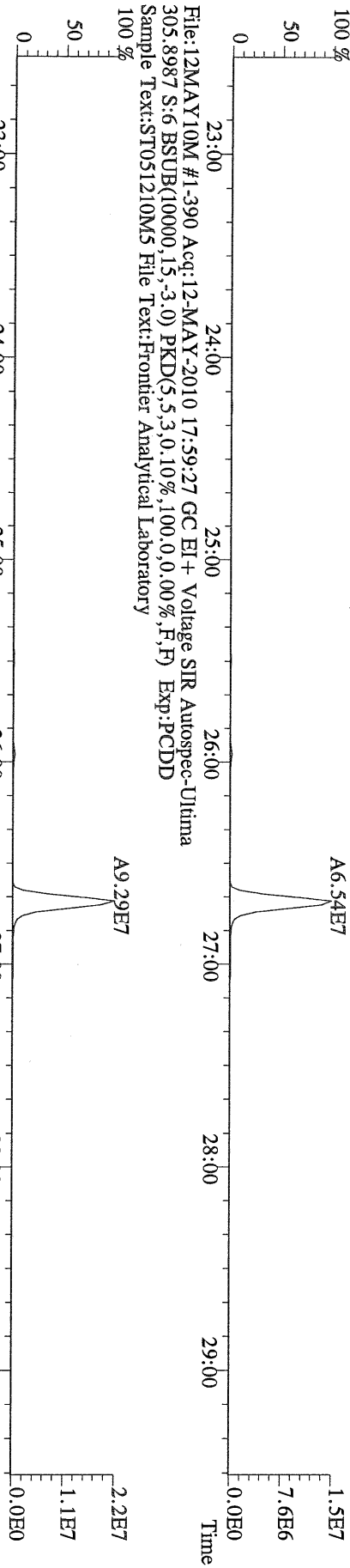
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Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory
100 %



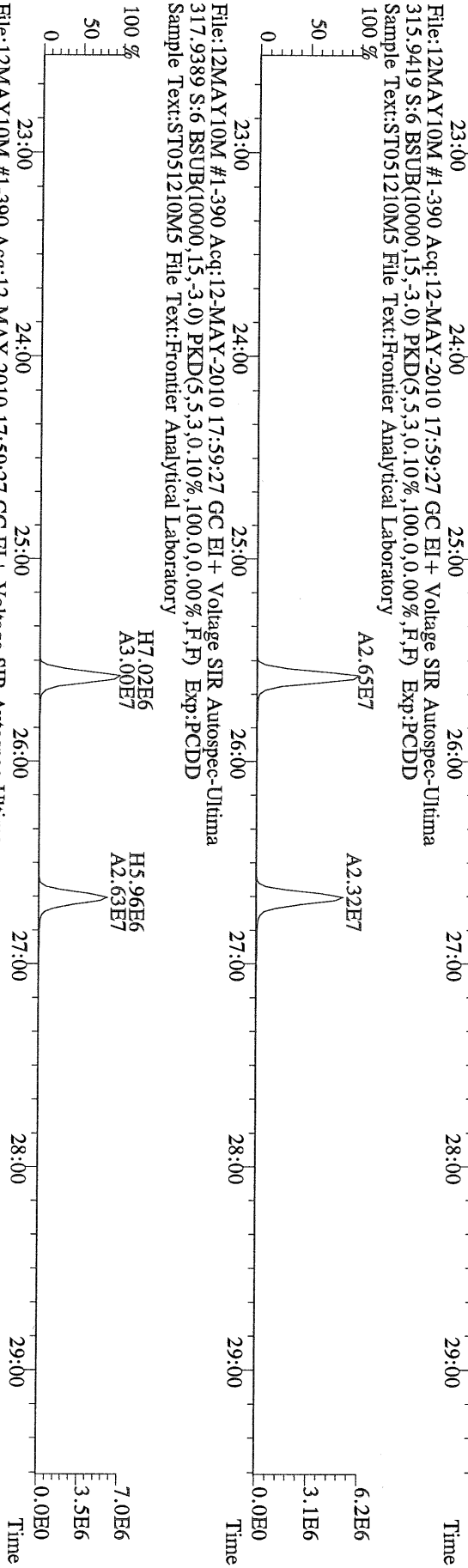
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454.9728 S:6 F:5 Exp:PCDD
Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory
100 %



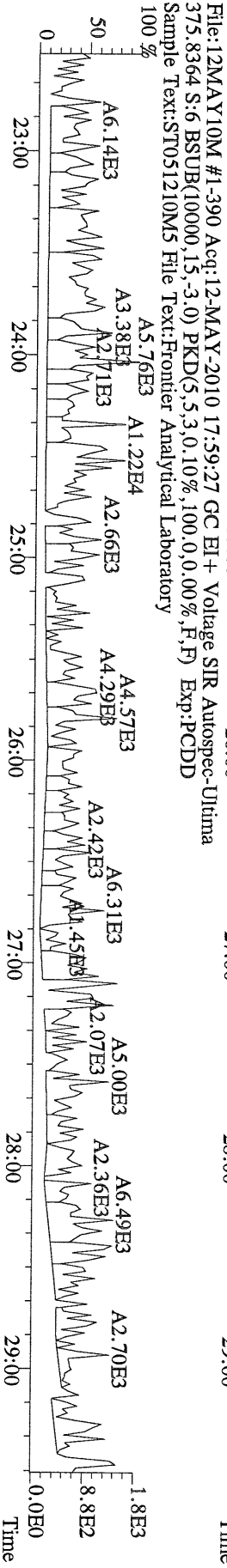
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Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory



File:12MAY10M #1-390 Acq:12-MAY-2010 17:59:27 GC EI + Voltage SIR Autospec-Utima
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory

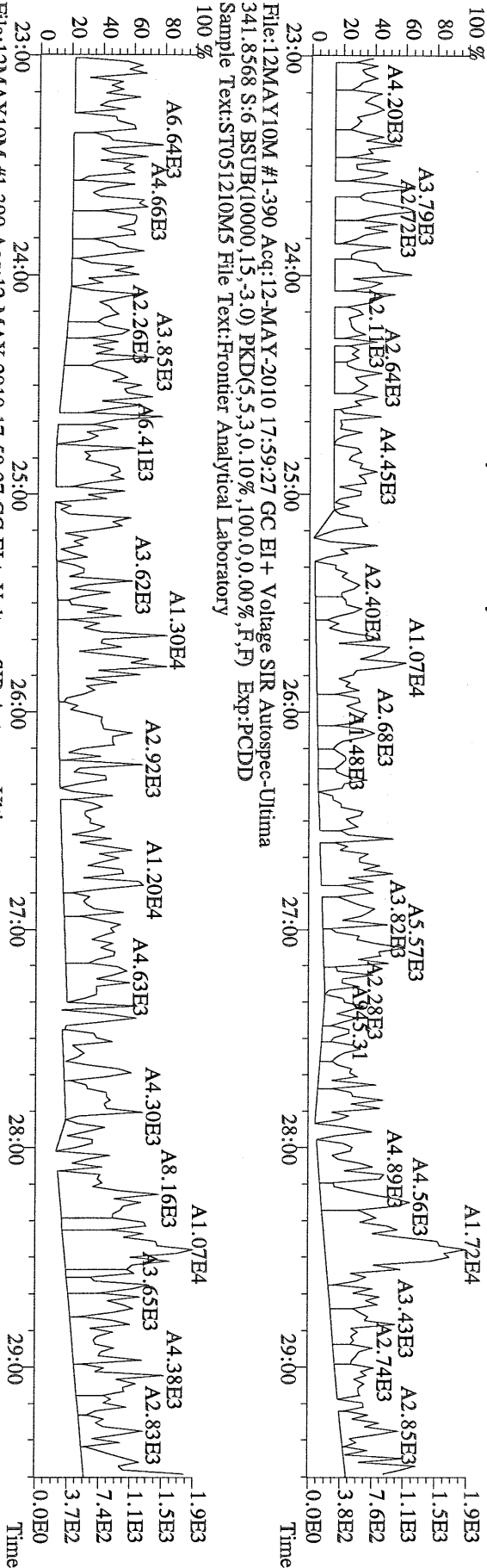


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Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory

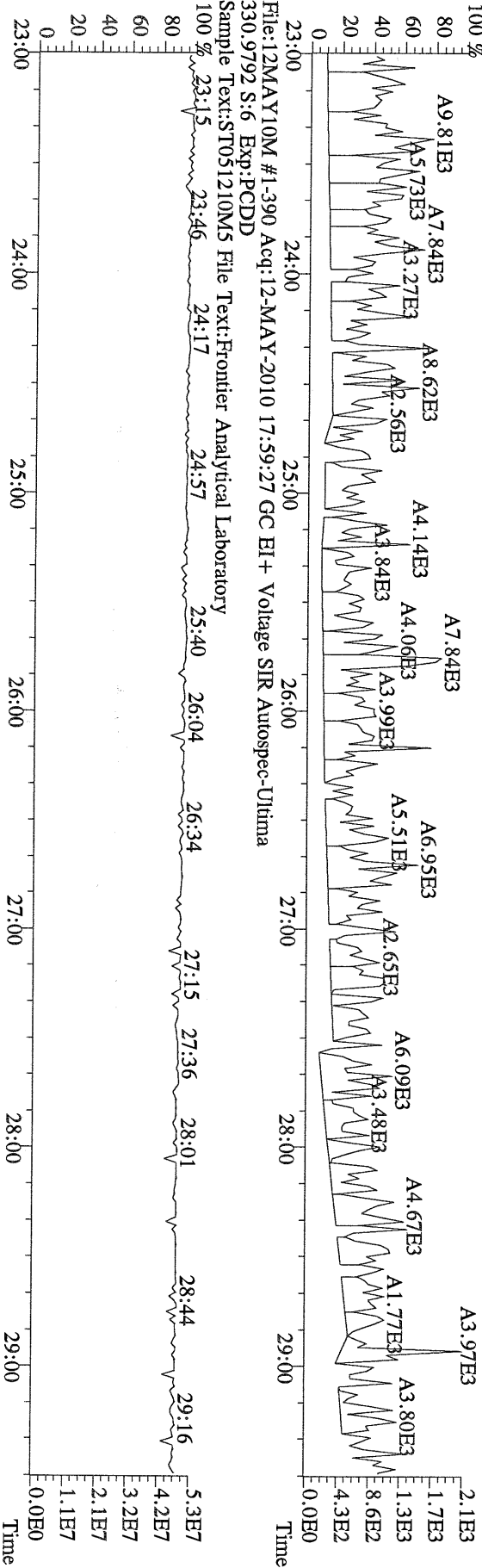


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Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory

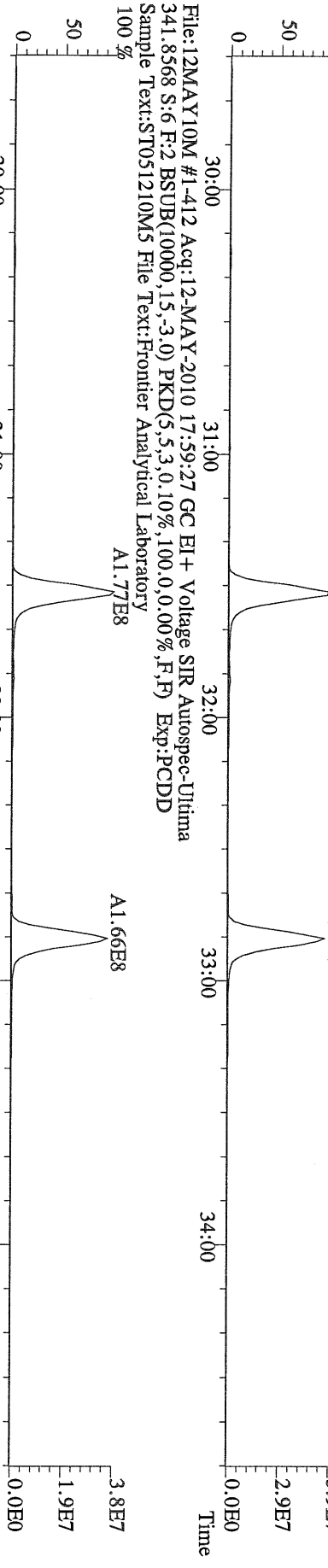
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 339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
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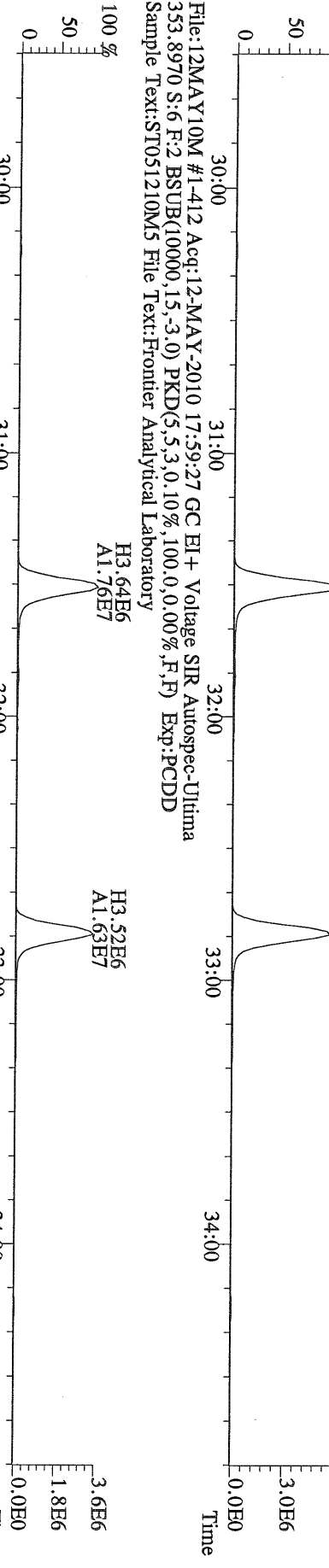
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 409.7974 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory



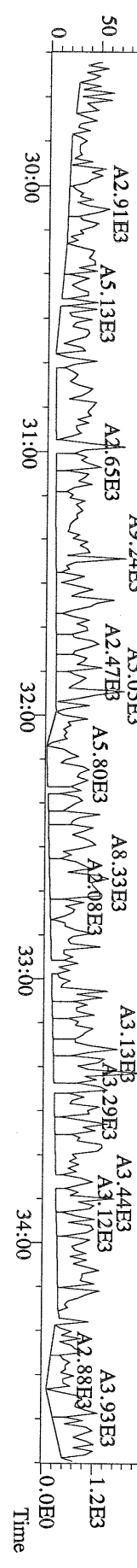
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 Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory



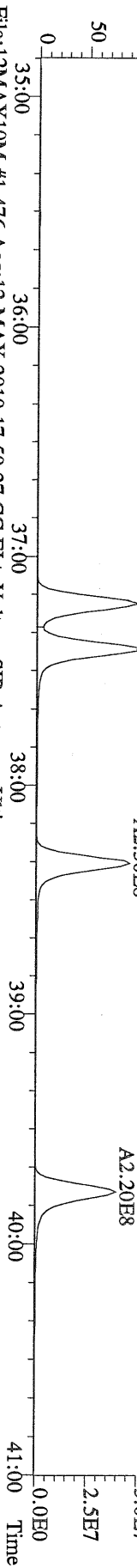
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 351.9000 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory



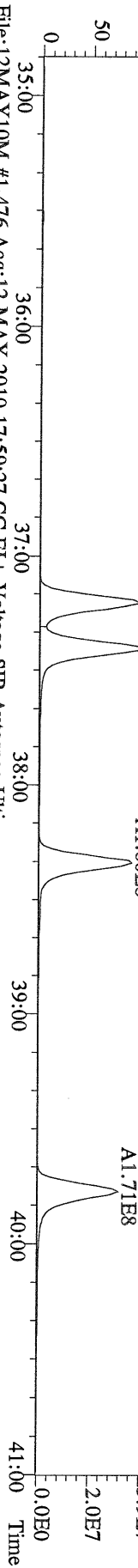
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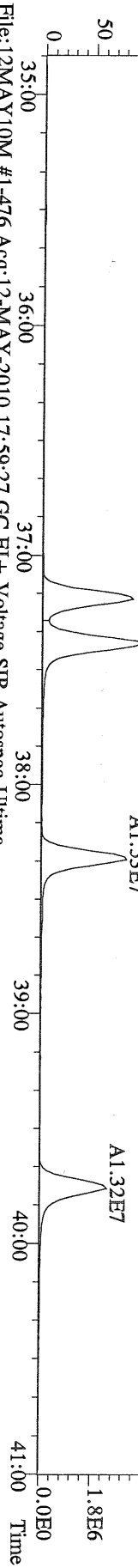
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 373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory



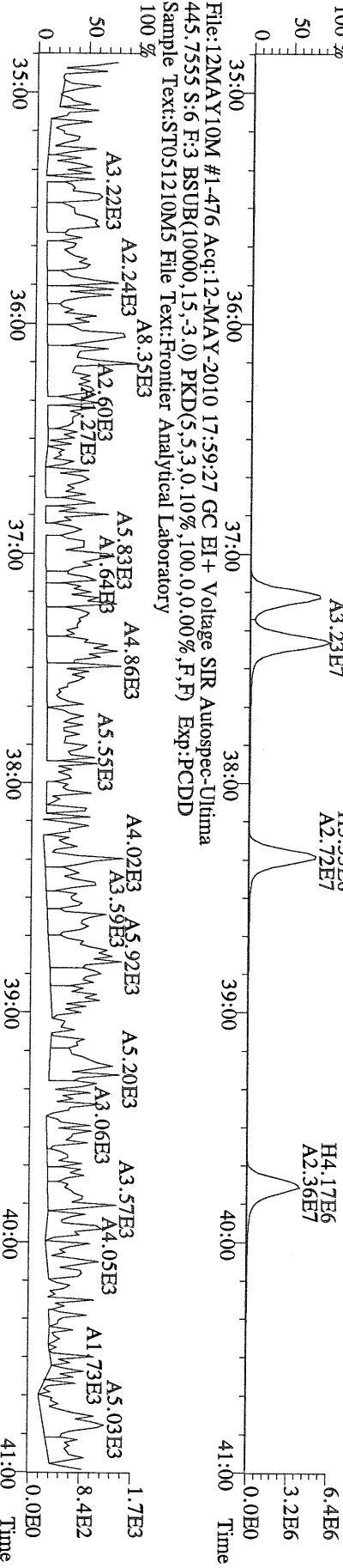
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 375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
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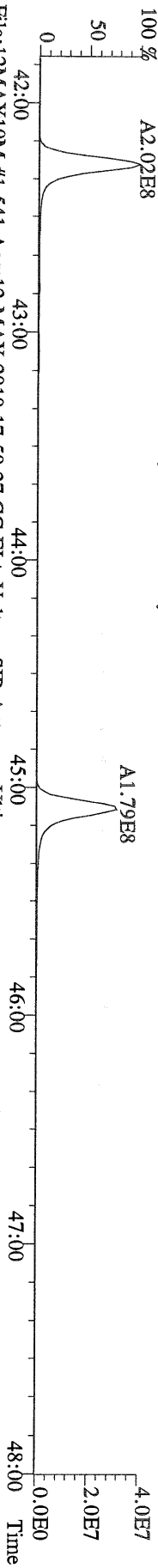
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 385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
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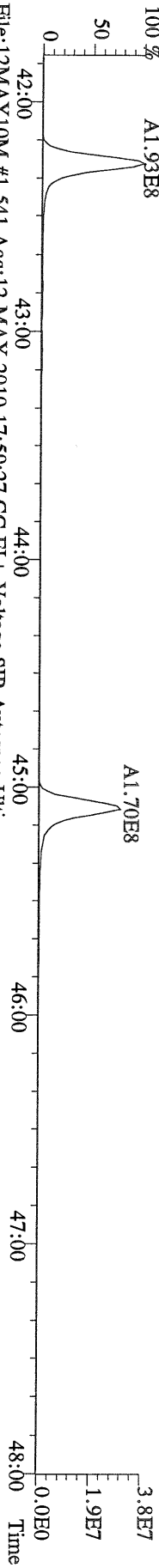
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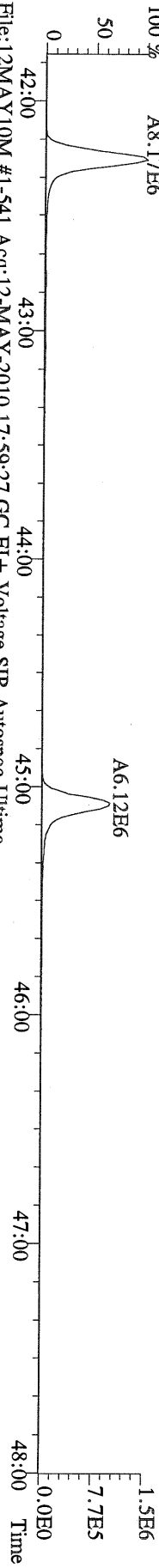
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 407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory



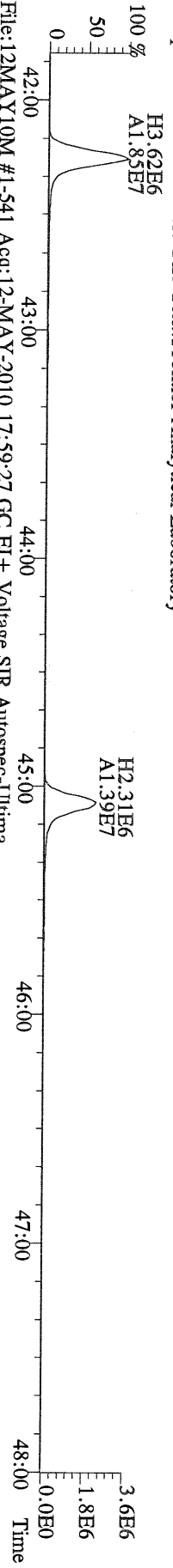
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 Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory



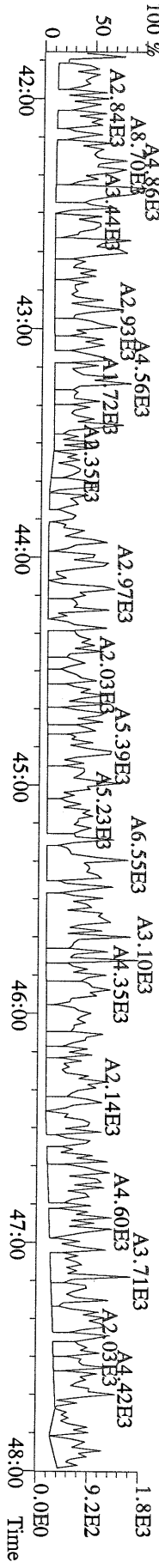
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 Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory



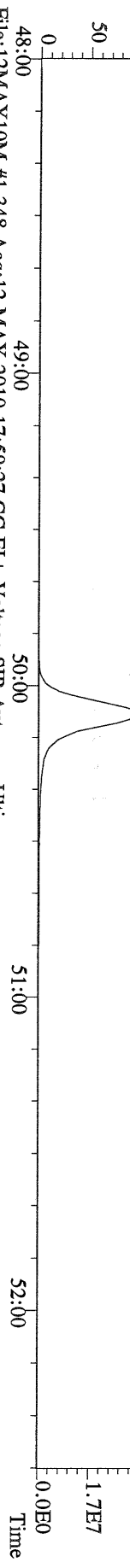
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 419.8220 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory



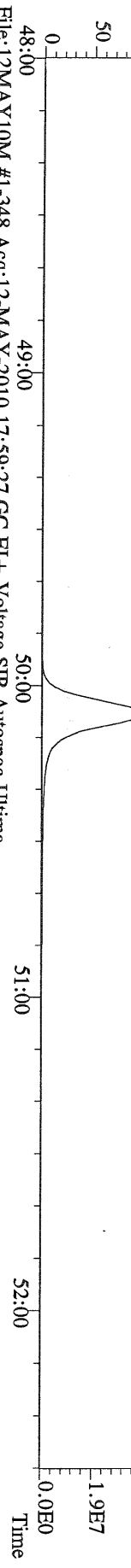
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 479.7165 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory



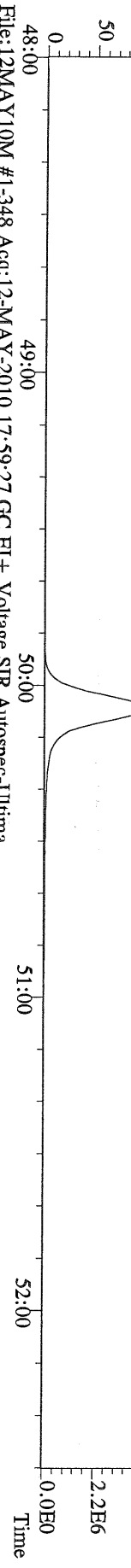
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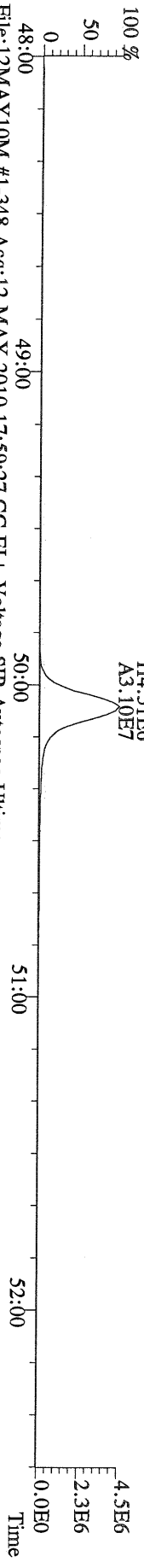
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443.7398 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory



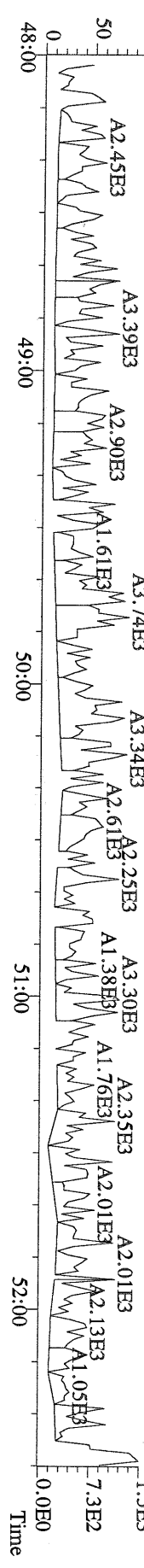
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453.7831 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory

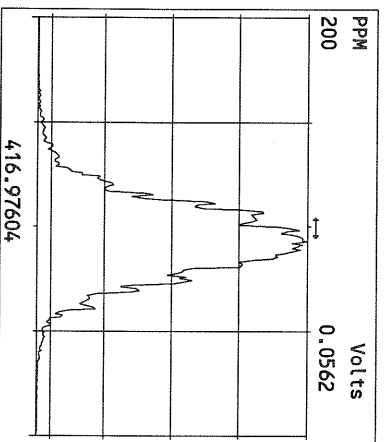
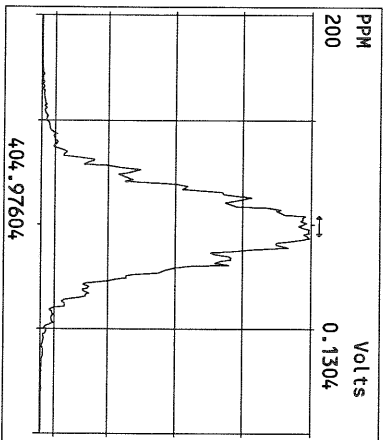
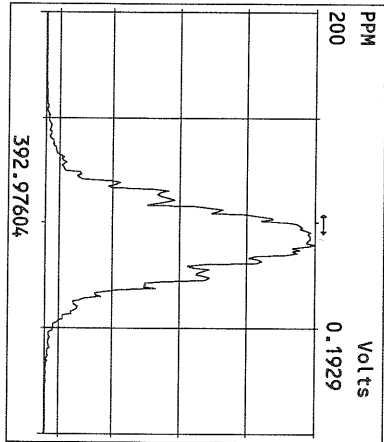
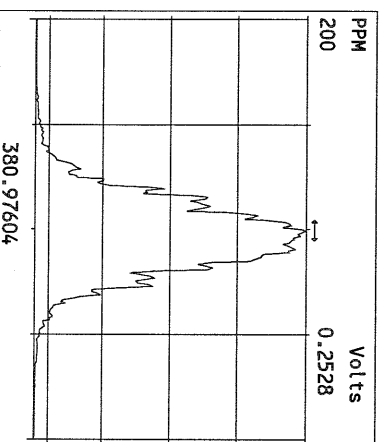
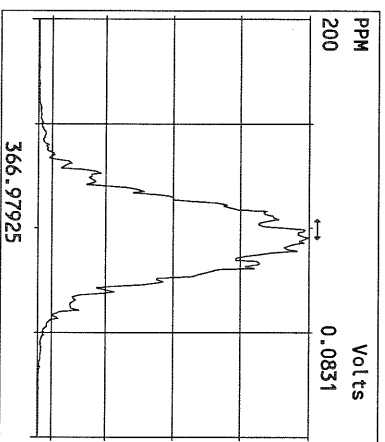
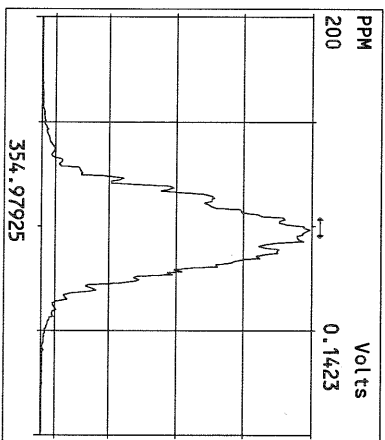
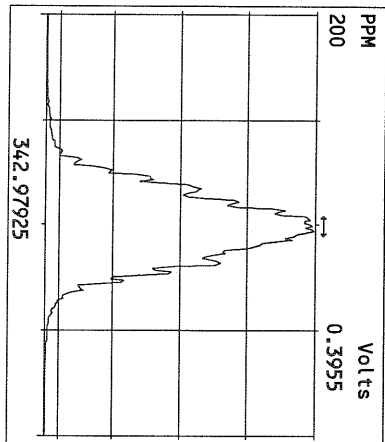
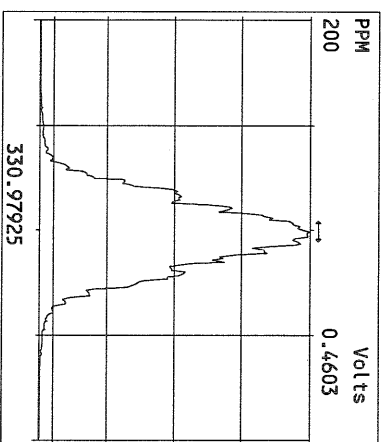
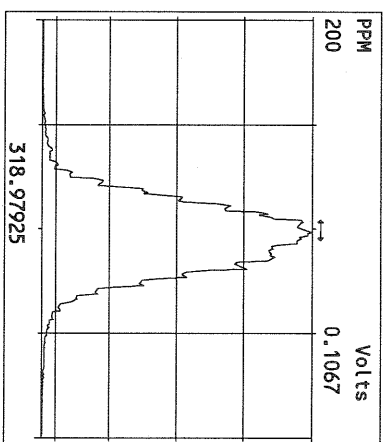
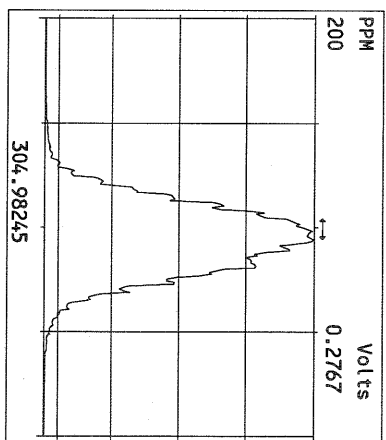
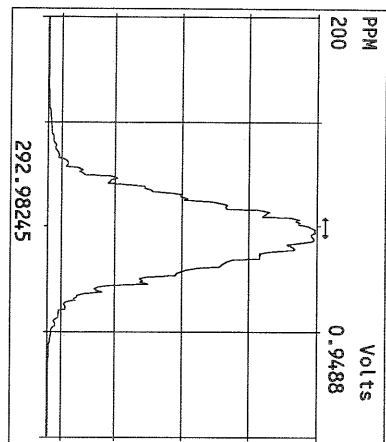


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Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory

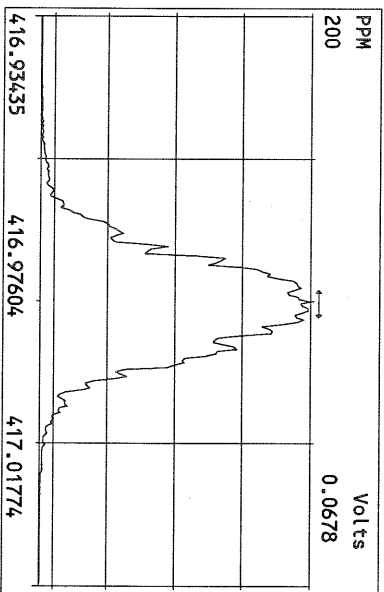
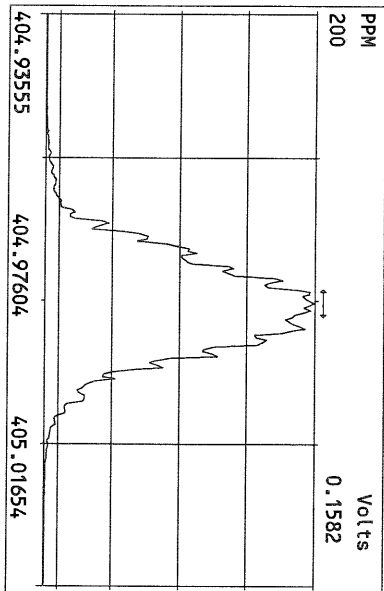
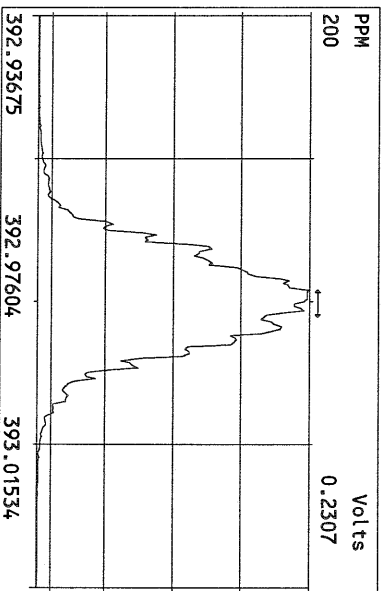
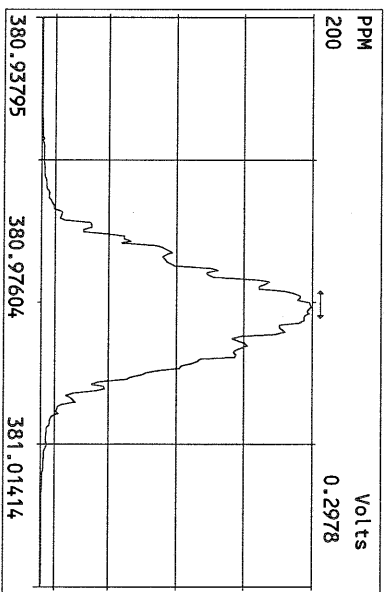
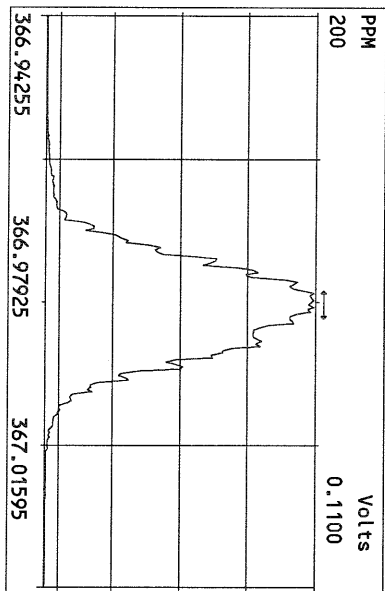
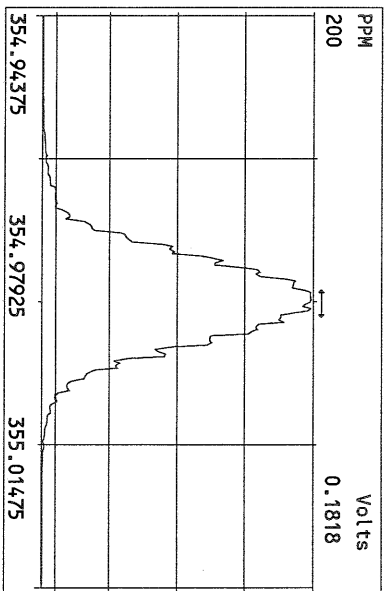
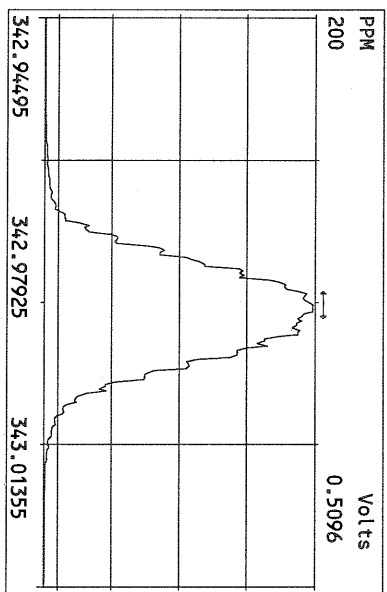
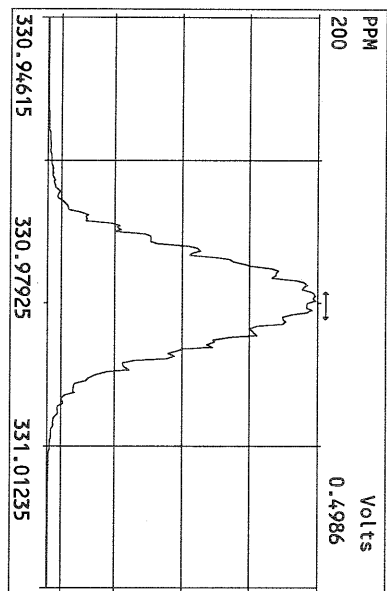


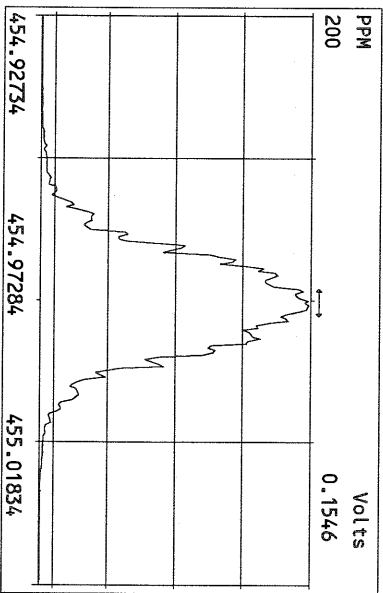
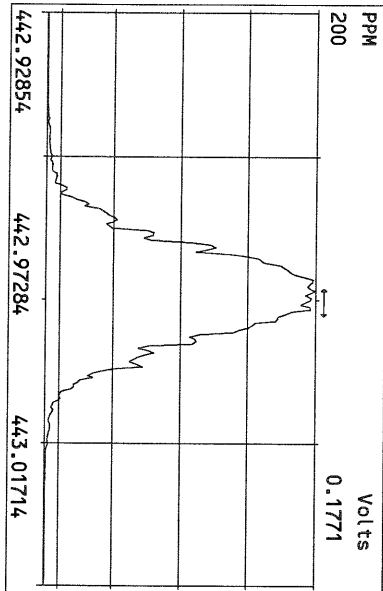
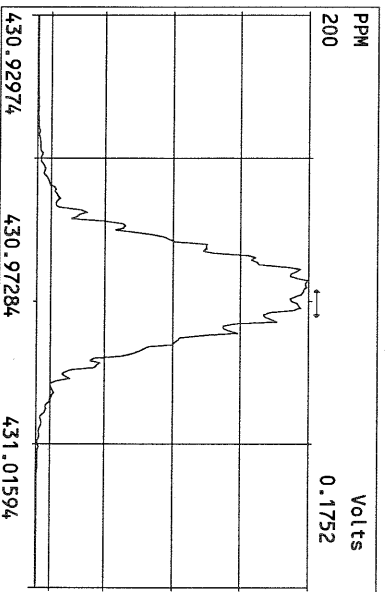
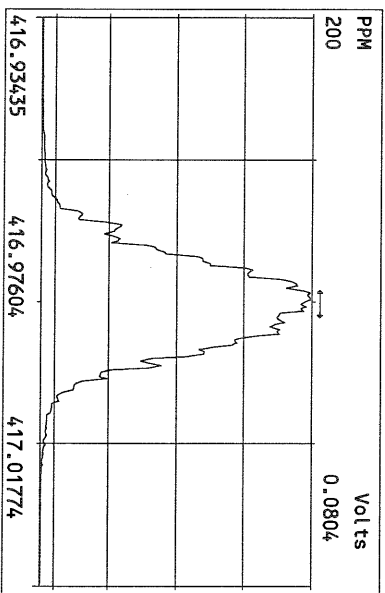
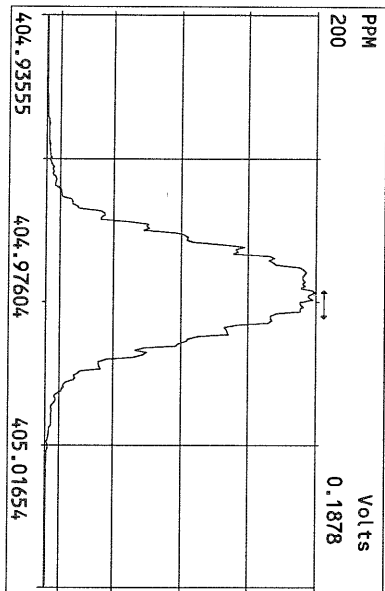
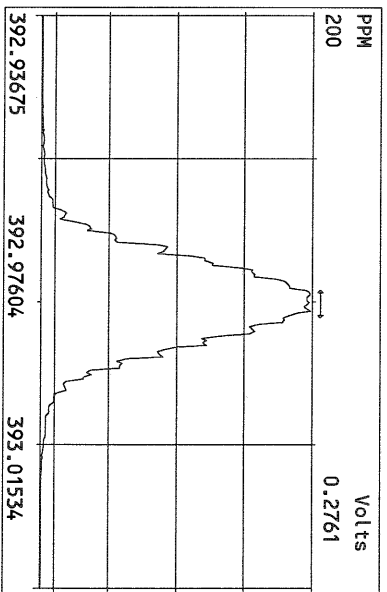
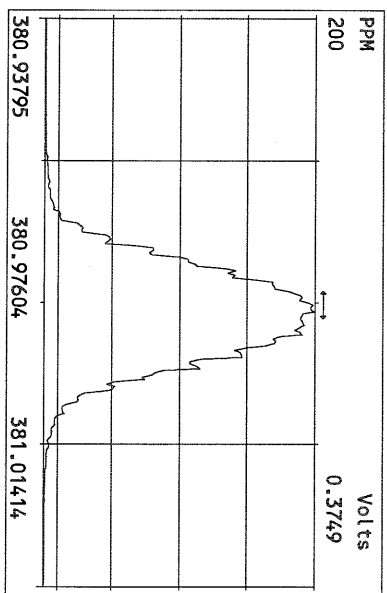
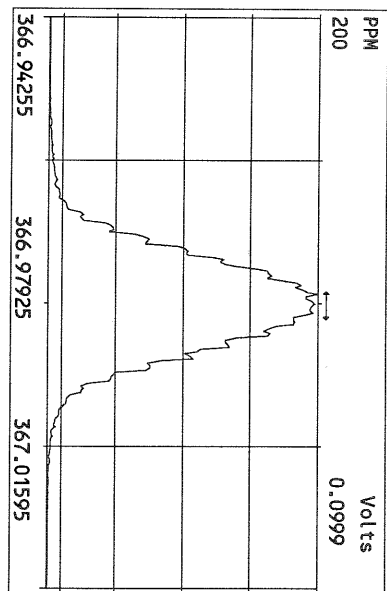
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513.6775 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST051210M5 File Text:Frontier Analytical Laboratory

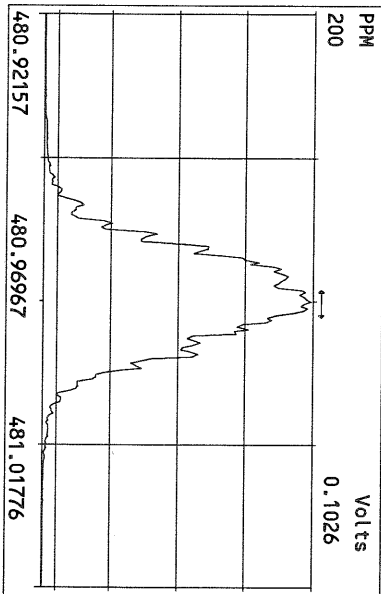
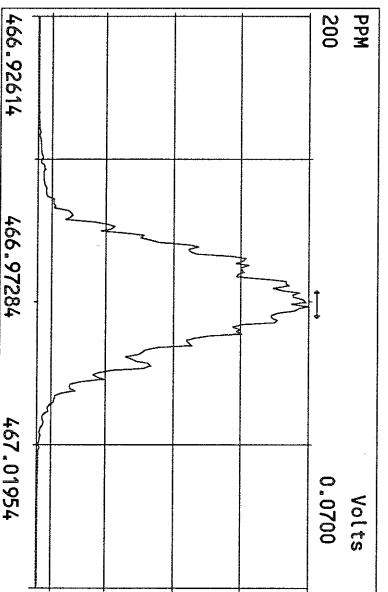
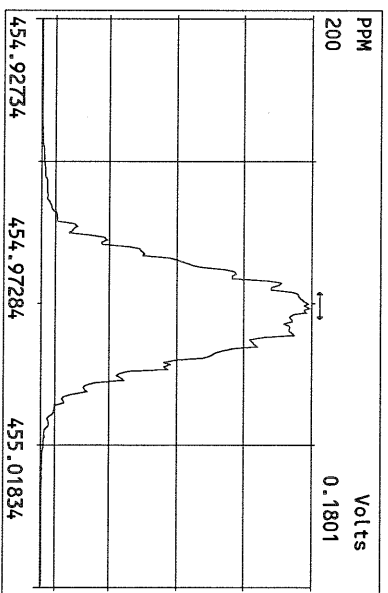
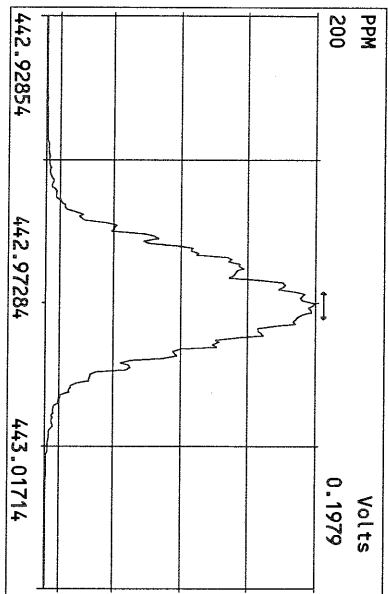
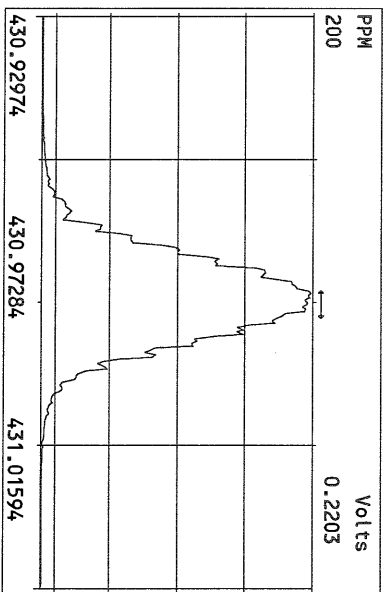
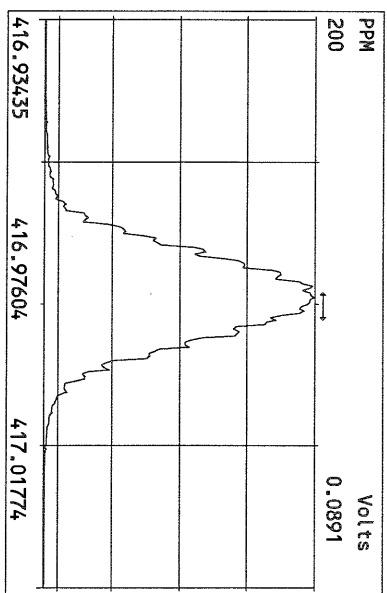
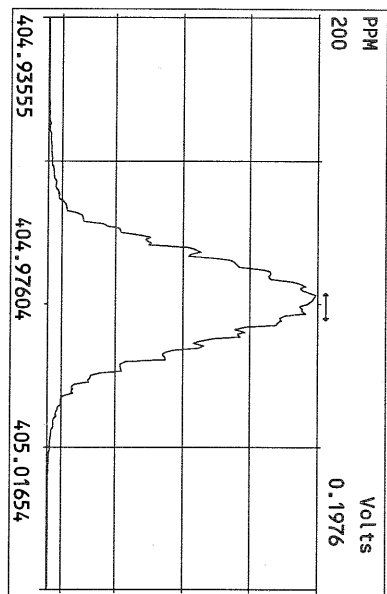


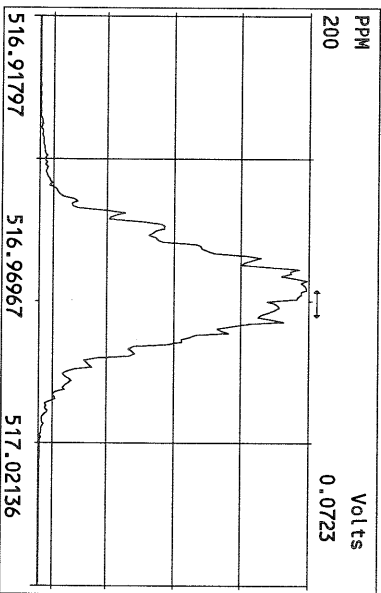
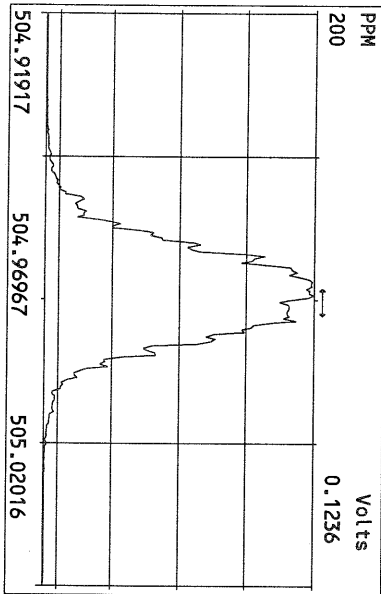
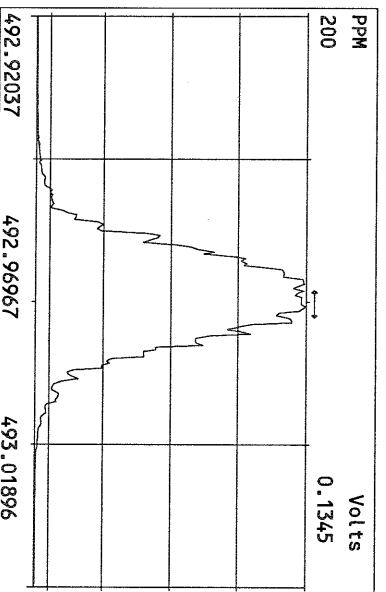
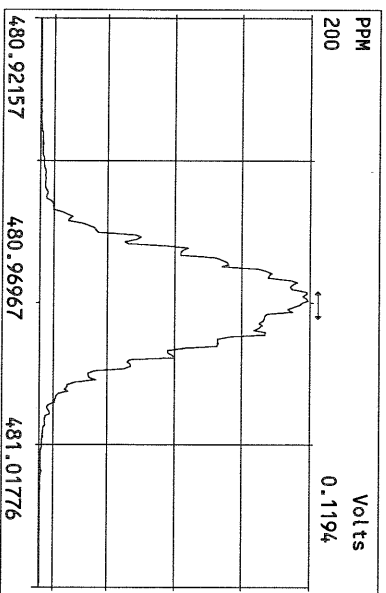
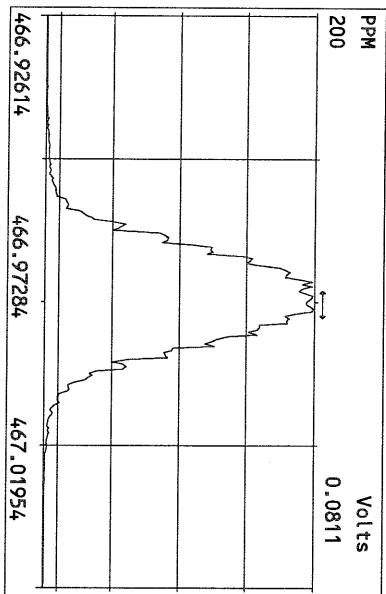
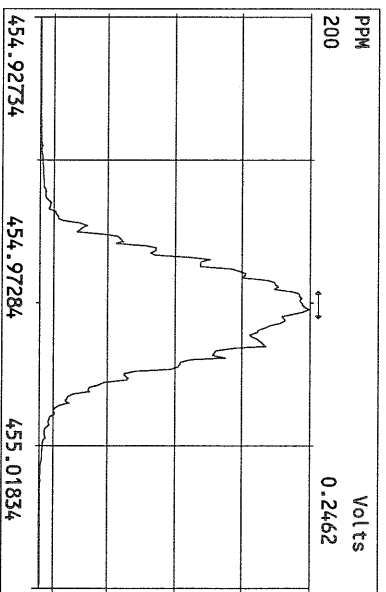
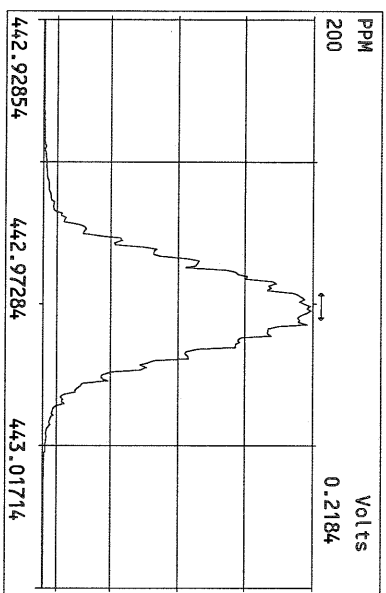
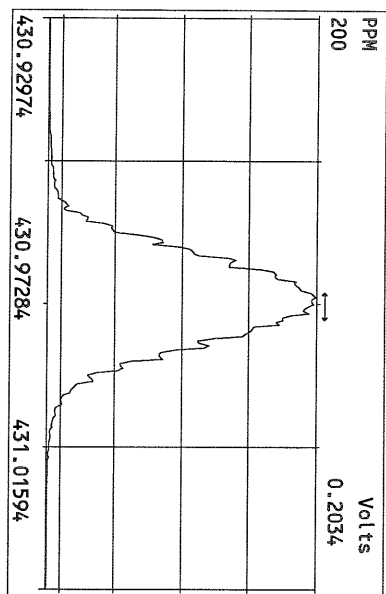


Peak Locate Examination: 12-MAY-2010:20:49 File: 12MAY10M_RES_CHECK
 Experiment: PCDD Function: 2 Reference: PFK









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: 10AUG10N Sam:1

Analysis Date: 10-AUG-10 16:36:41

	M/Z'S	ION	QC	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
	FORMING RATIO (1)	ABUND. RATIO	LIMITS (2)			
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	y	9.53	7.80 - 12.9 ✓
1,2,3,7,8-PeCDD	M+2/M+4	1.58	1.32-1.78	y	48.0	39.0 - 65.0 ✓
1,2,3,4,7,8-HxCDD	M+2/M+4	1.37	1.05-1.43	y	50.4	39.0 - 64.0 ✓
1,2,3,6,7,8-HxCDD	M+2/M+4	1.41	1.05-1.43	y	48.2	39.0 - 64.0 ✓
1,2,3,7,8,9-HxCDD	M+2/M+4	1.41	1.05-1.43	y	50.0	41.0 - 61.0 ✓
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.00	0.88-1.20	y	50.3	43.0 - 58.0 ✓
OCDD	M+2/M+4	0.98	0.76-1.02	y	108	79.0 - 126 ✓
2,3,7,8-TCDF	M/M+2	0.67	0.65-0.89	y	9.17	8.40 - 12.0 ✓
1,2,3,7,8-PeCDF	M+2/M+4	1.48	1.32-1.78	y	50.0	41.0 - 60.0 ✓
2,3,4,7,8-PeCDF	M+2/M+4	1.48	1.32-1.78	y	47.5	41.0 - 60.0 ✓
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	45.3	45.0 - 56.0 ✓
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	44.7	44.0 - 57.0 ✓
2,3,4,6,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	y	45.1	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	1.04	0.88-1.20	y	46.4	45.0 - 55.0 ✓
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.06	0.88-1.20	y	46.2	43.0 - 58.0 ✓
OCDF	M+2/M+4	0.88	0.76-1.02	y	94.0	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: 8/10

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: 10AUG10N Sam:1

Analysis Date: 10-AUG-10 16:36:41

LABELLED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
13C-2,3,7,8-TCDD	M/M+2	0.82	0.65-0.89	y	96.0	82.0 - 121 ✓
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.75	1.32-1.78	y	88.4	62.0 - 160 ✓
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	106	85.0 - 117 ✓
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	97.7	85.0 - 118 ✓
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.01	0.88-1.20	y	84.8	72.0 - 138 ✓
13C-OCDD	M+2/M+4	0.92	0.76-1.02	y	150	96.0 - 415 ✓
13C-2,3,7,8-TCDF	M/M+2	0.87	0.65-0.89	y	97.6	71.0 - 140 ✓
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.69	1.32-1.78	y	92.0	76.0 - 130 ✓
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.69	1.32-1.78	y	92.8	77.0 - 130 ✓
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	110	76.0 - 131 ✓
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	105	70.0 - 143 ✓
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	106	73.0 - 137 ✓
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	y	101	74.0 - 135 ✓
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.43	0.37-0.51	y	87.7	78.0 - 129 ✓
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.43	0.37-0.51	y	84.3	77.0 - 129 ✓
13C-OCDF	M+2/M+4	0.98	0.76-1.02	y	153	96.0 - 415 ✓
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					8.91	7.80 - 12.8 ✓

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

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

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

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

Analyst: Date: 8/11/10

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: 10-AUG-10 16:36:41 CS3 or VER Data Filename: 10AUG10N 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	1.000	0.999-1.002 ✓
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002 ✓
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.001	0.999-1.002 ✓
LABELED COMPOUNDS			
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	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: 8/11/10

Frontier Analytical Laboratory - Acquisition Log

Run Name:10AUG10N

Instrument: FAL3

GC: DB5

Experiment:PCDD

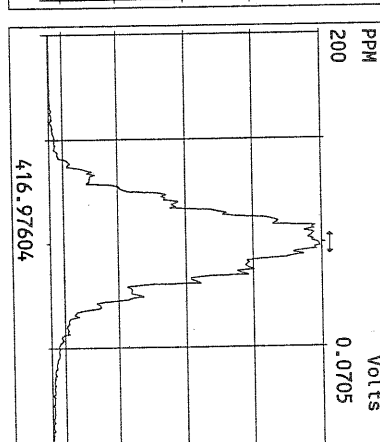
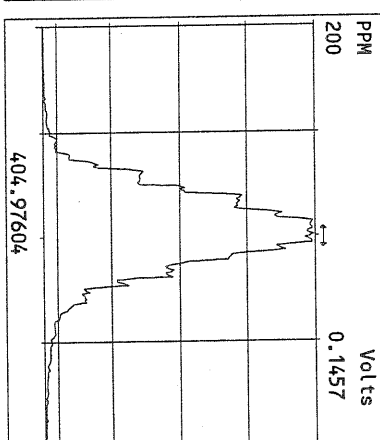
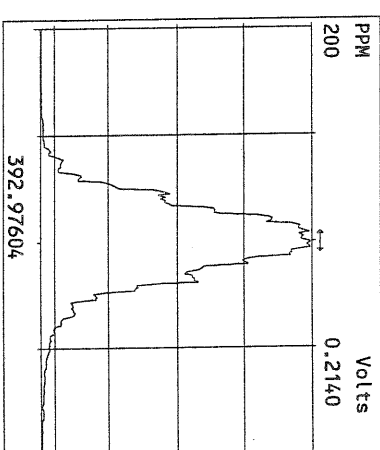
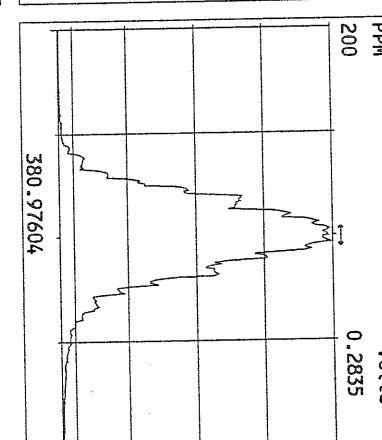
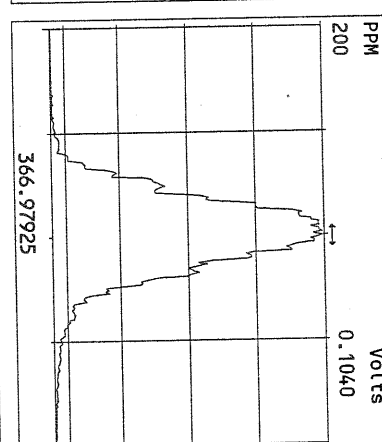
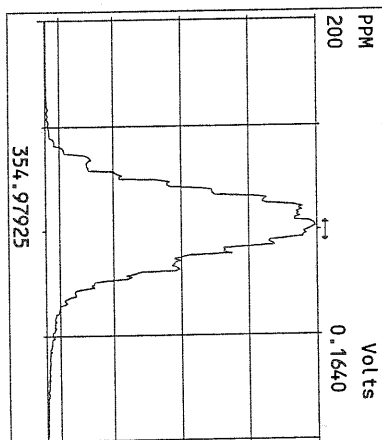
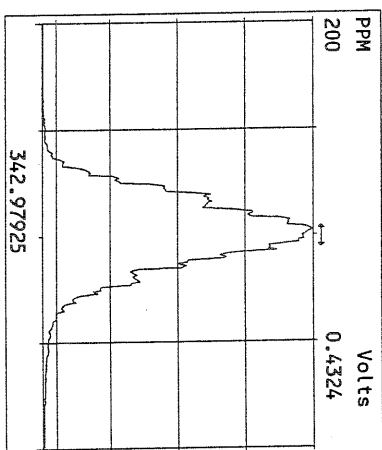
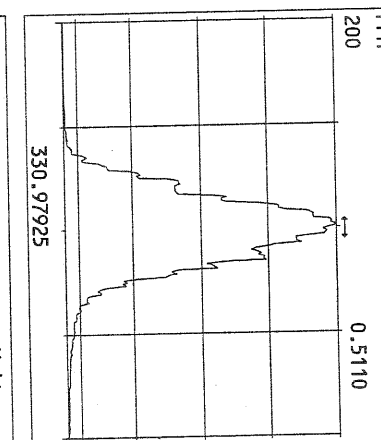
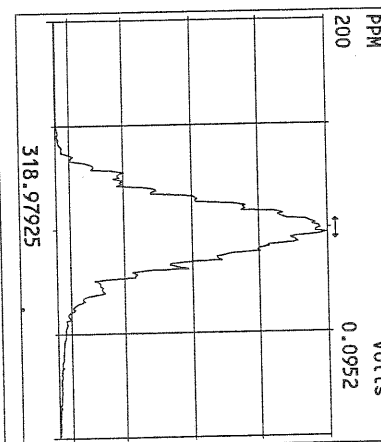
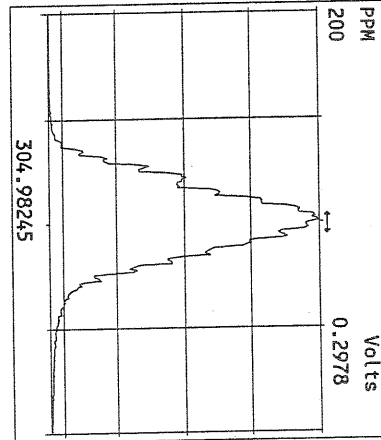
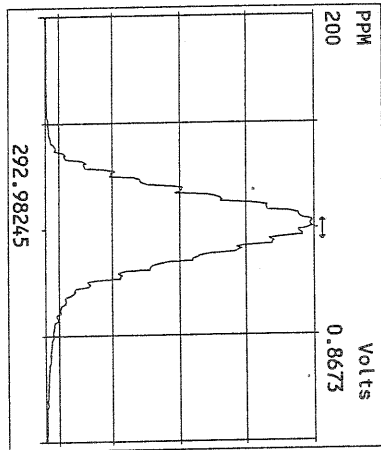
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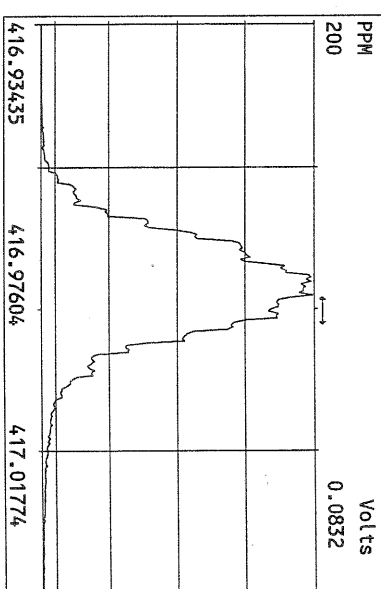
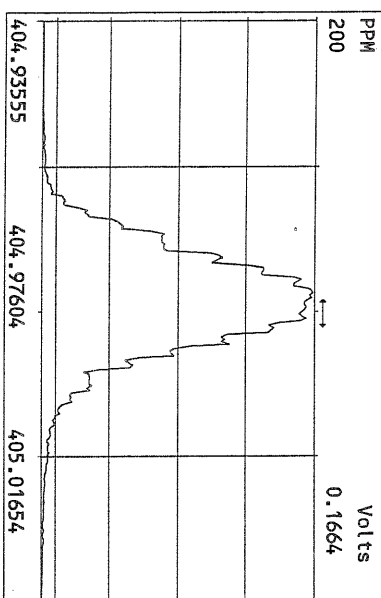
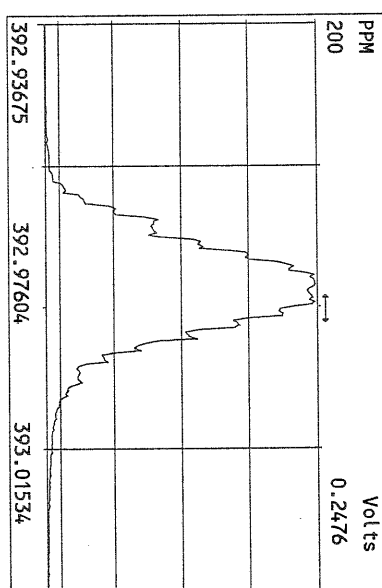
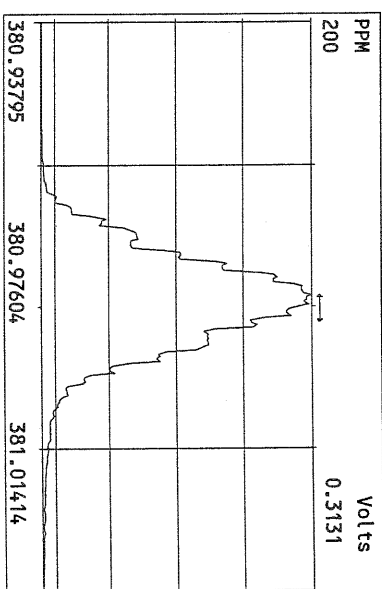
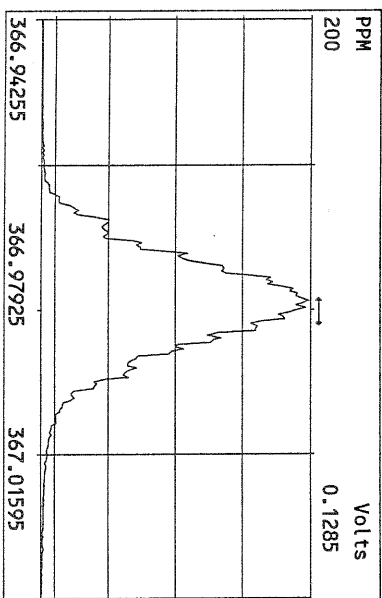
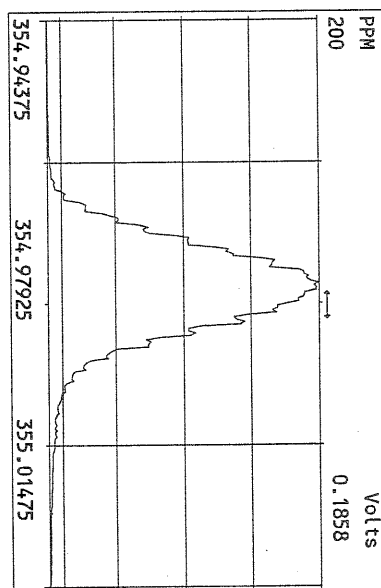
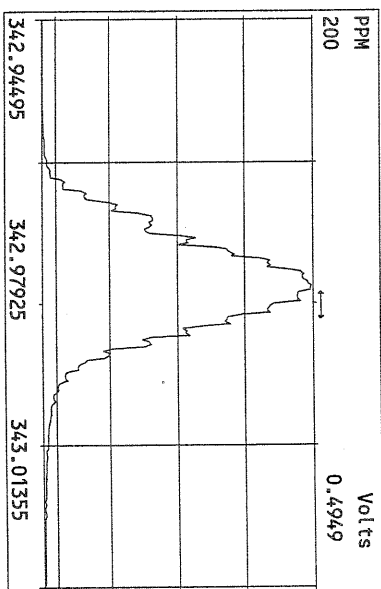
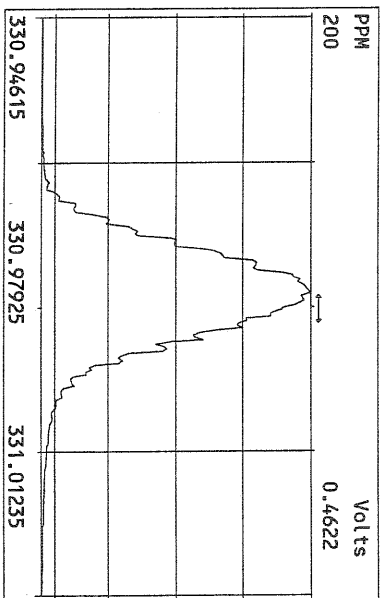
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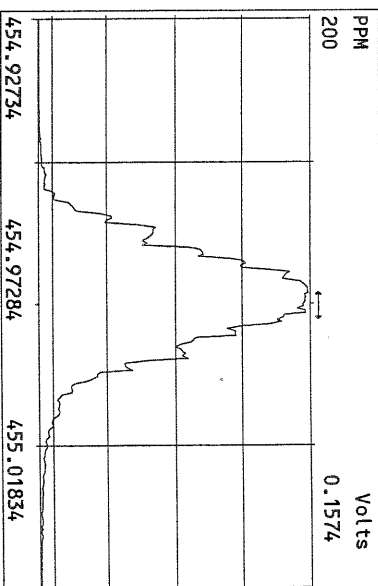
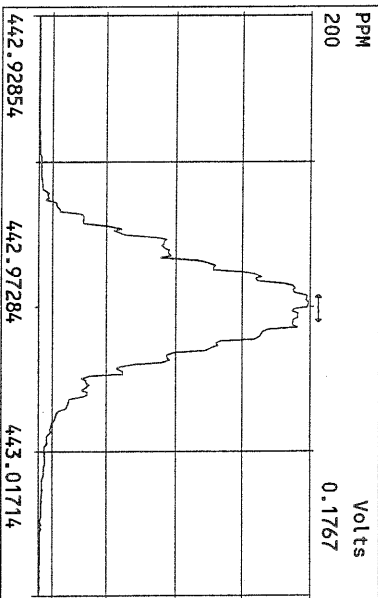
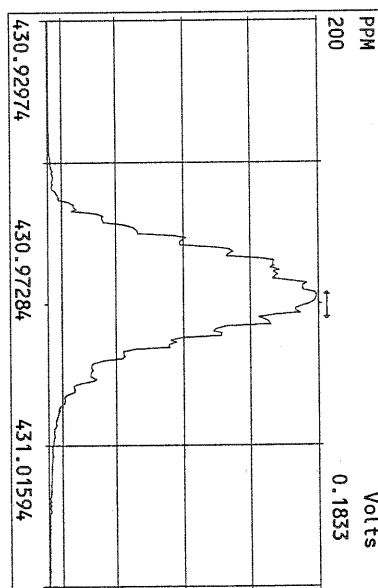
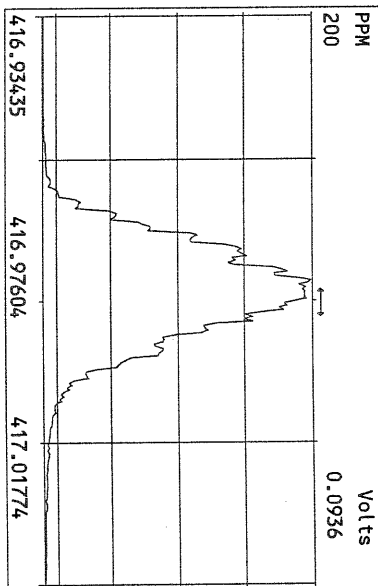
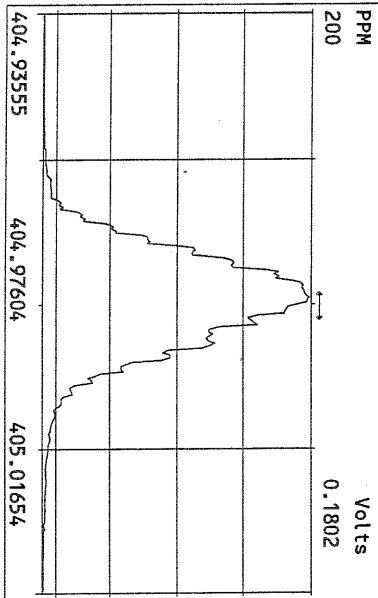
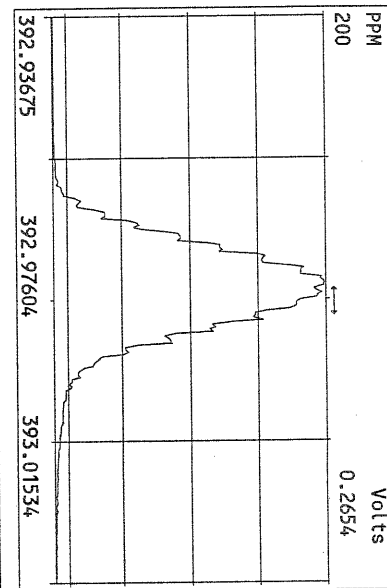
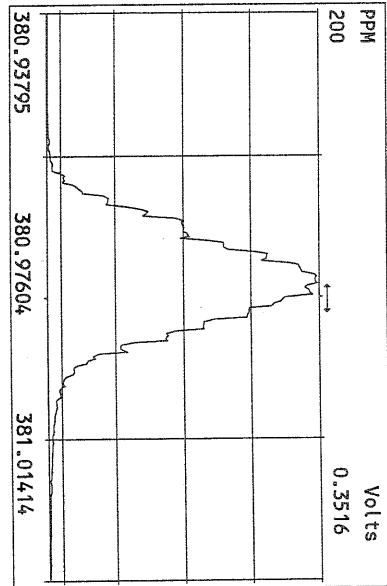
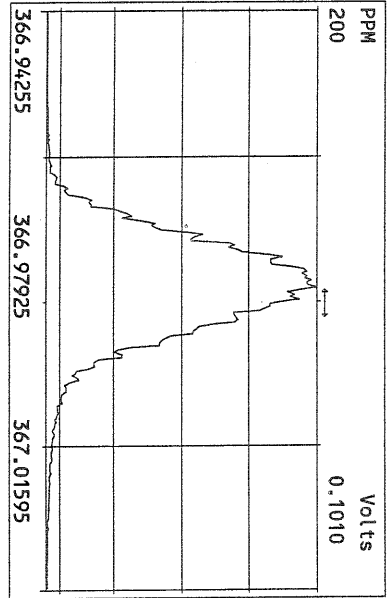
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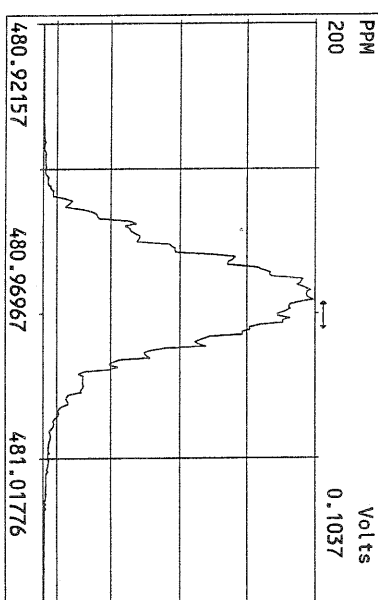
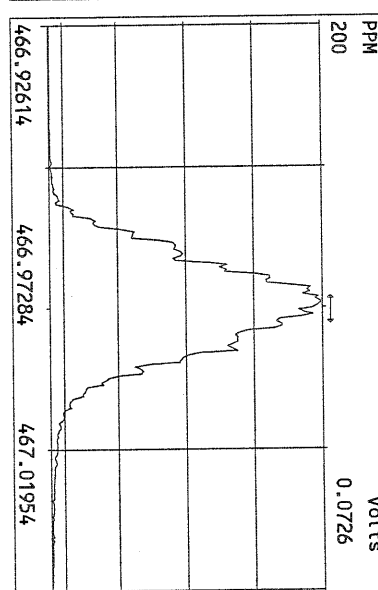
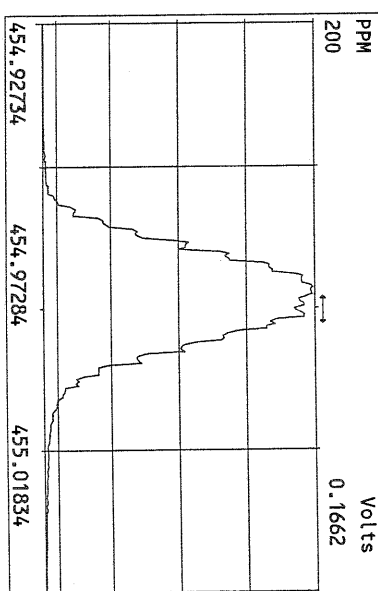
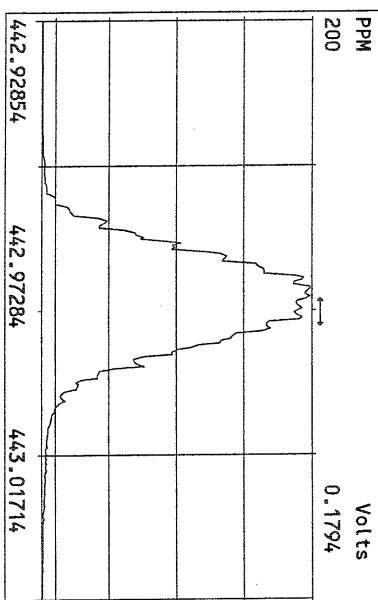
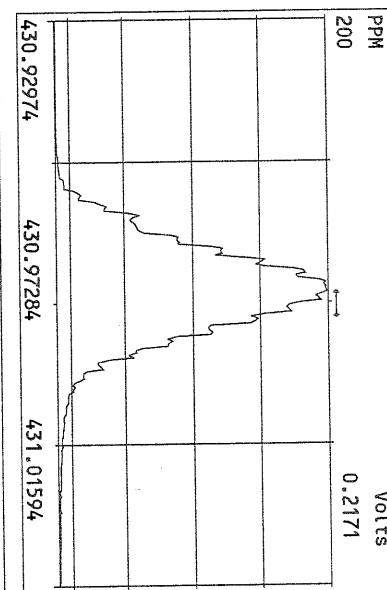
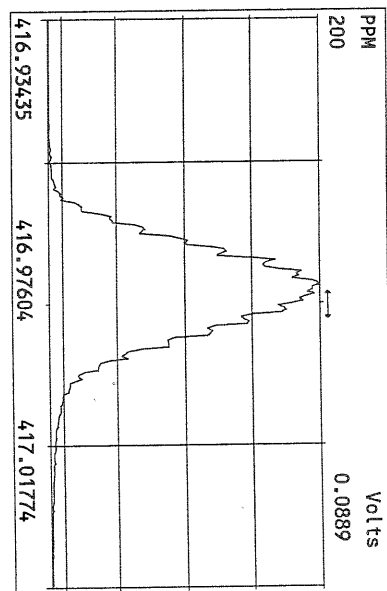
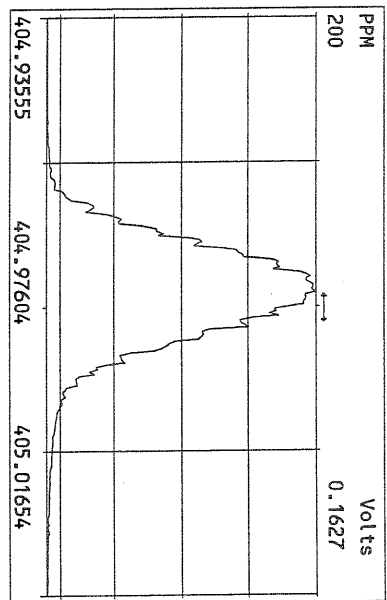
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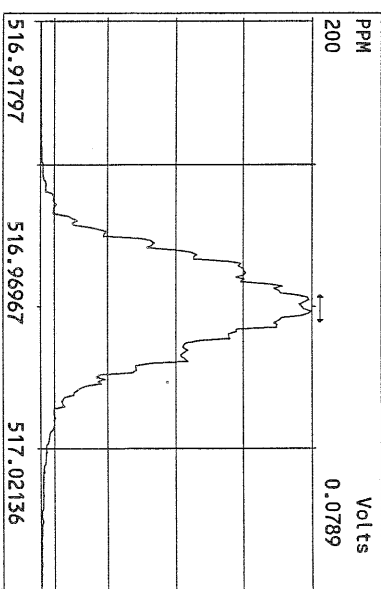
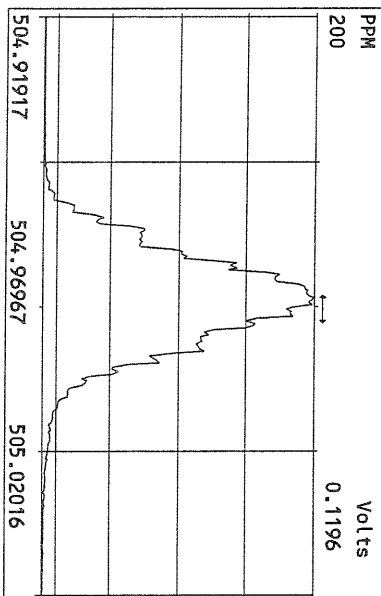
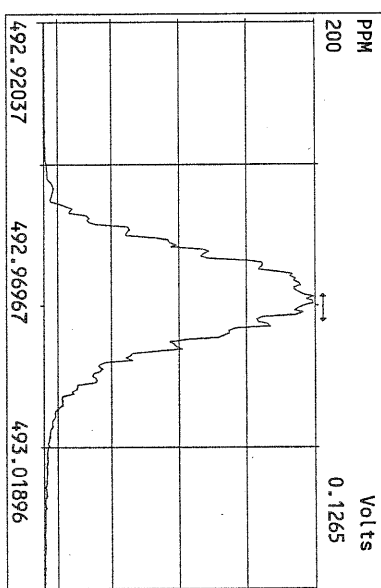
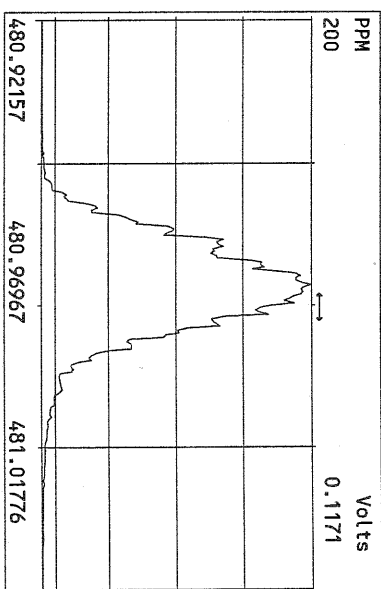
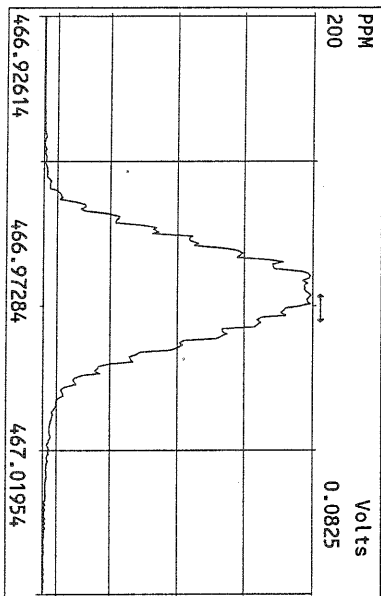
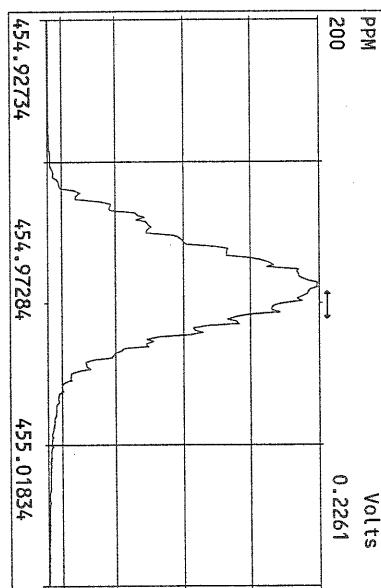
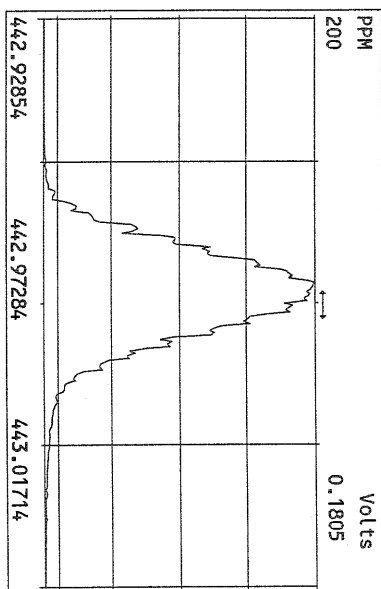
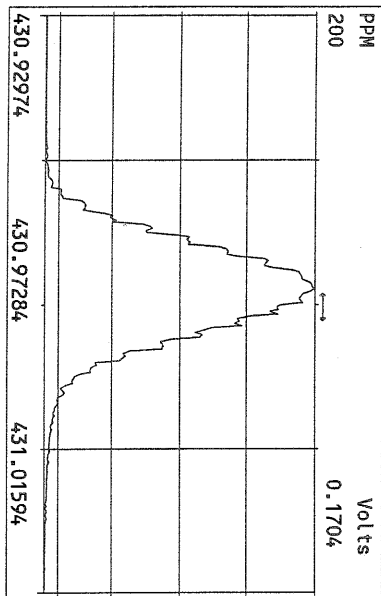




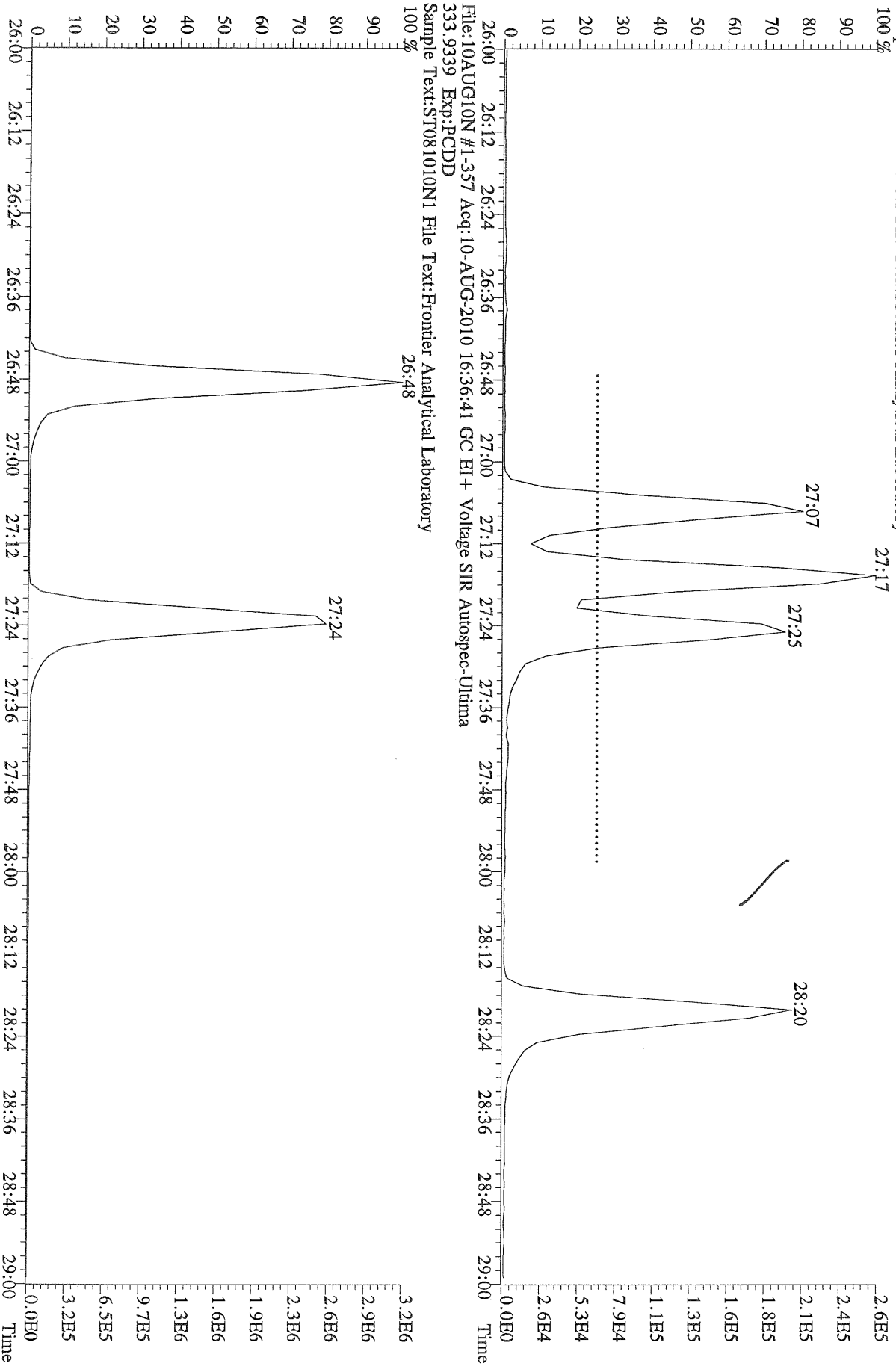


Peak Locate Examination:10-AUG-2010:16:36 File:10AUG10N
Experiment:PCDD Function:4 Reference:PFK

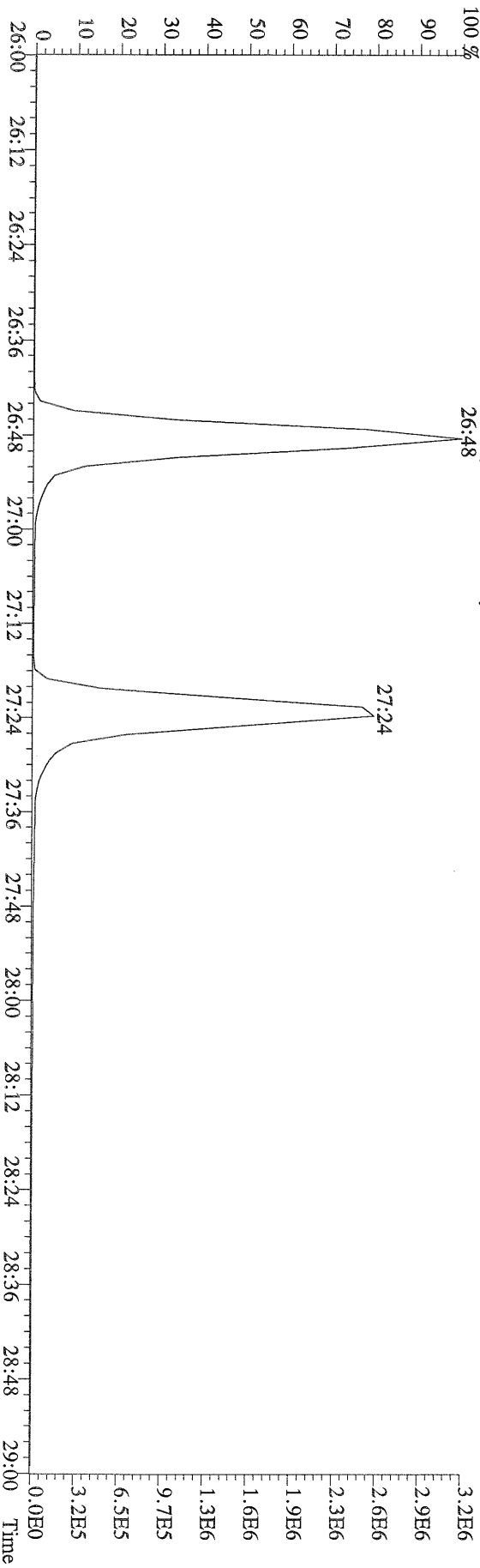




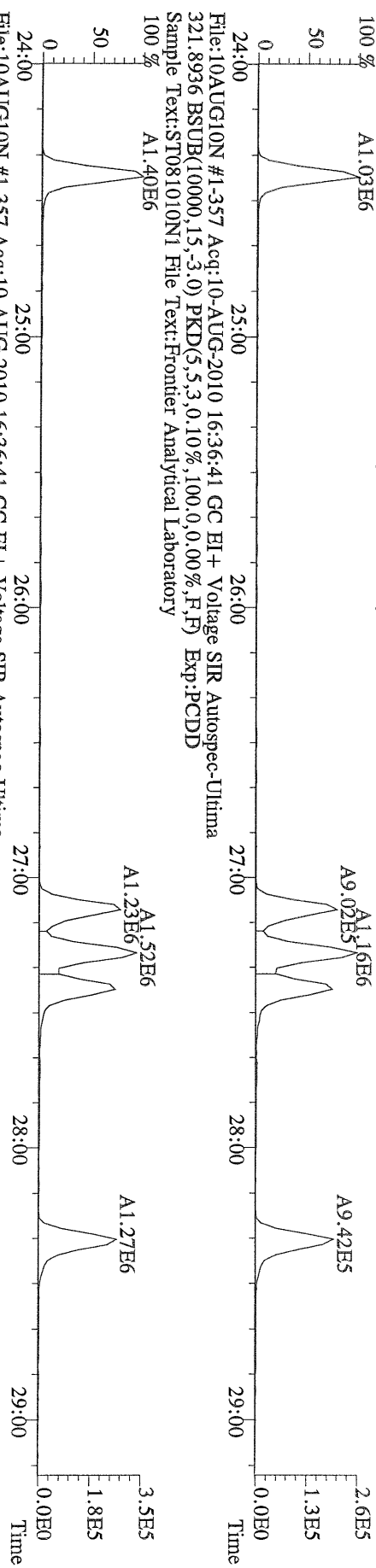
File:10AUG10N1 #1-357 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Utima
319.8965 Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory
100%



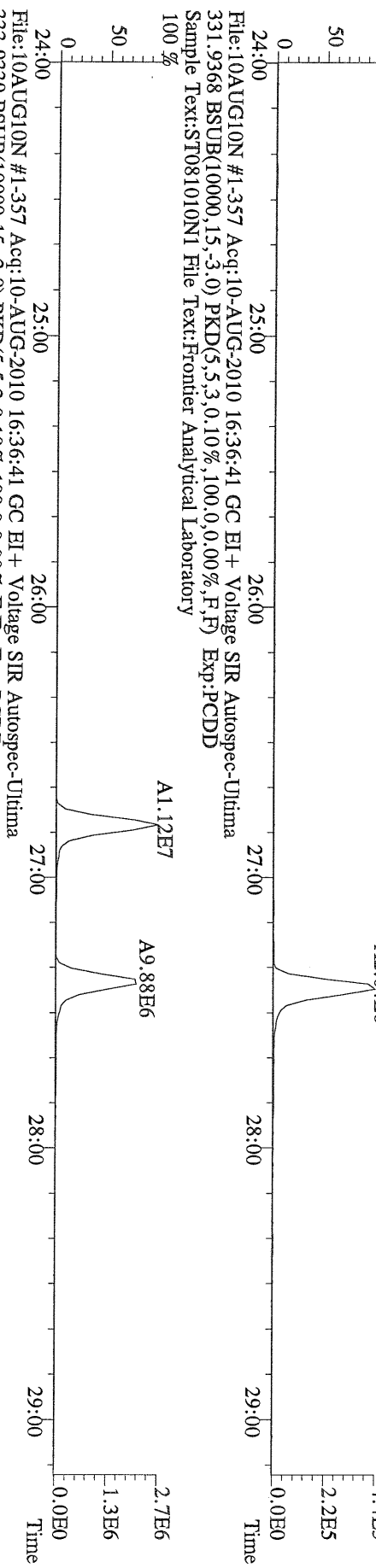
File:10AUG10N1 #1-357 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Utima
333.9339 Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory
100%



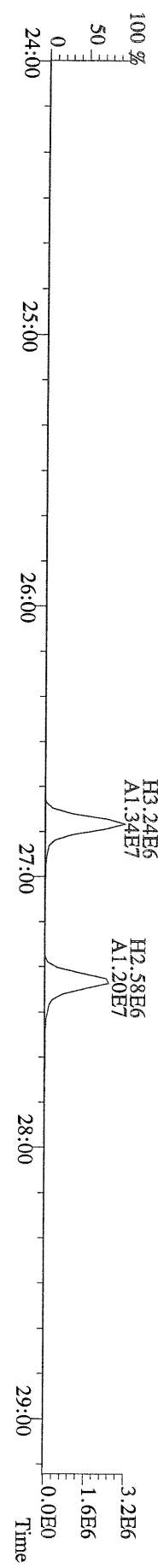
File:10AUG10N #1-357 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Ultima
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



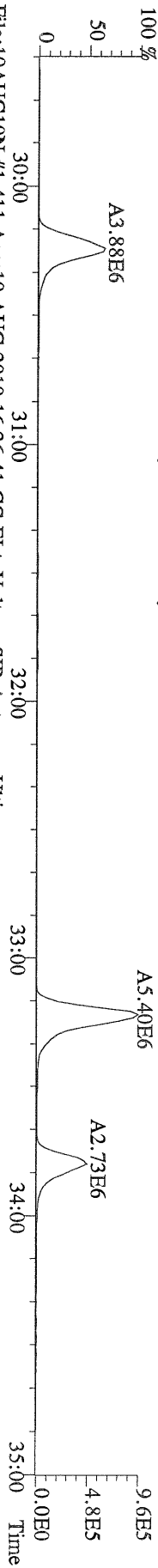
File:10AUG10N #1-357 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Ultima
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



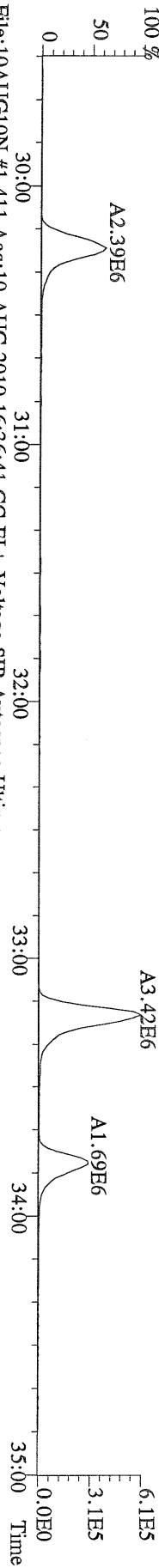
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333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



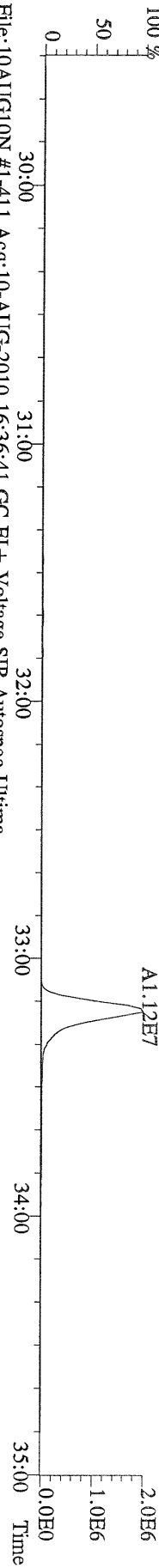
File:10AUG10N #1-411 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Ultima
 355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



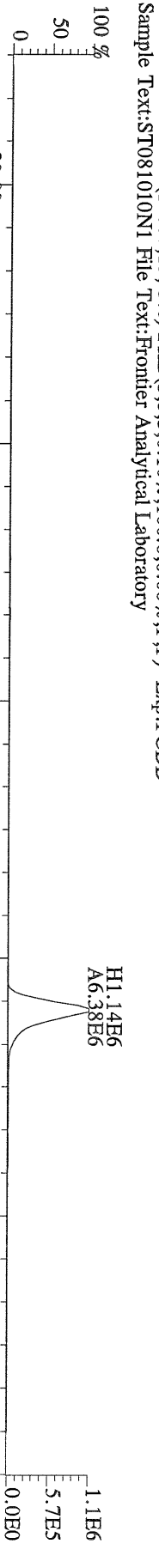
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 357.8517 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



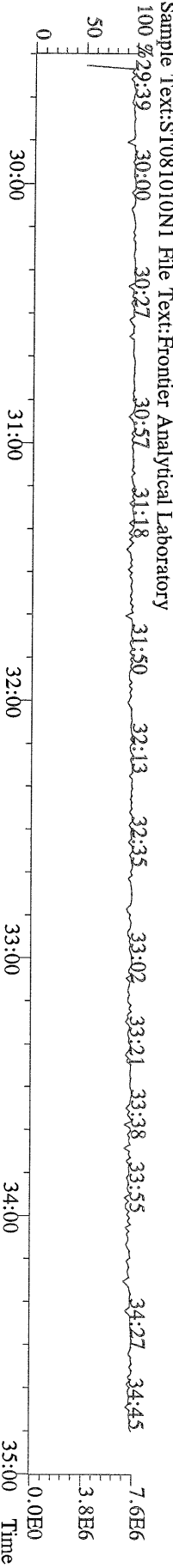
File:10AUG10N #1-411 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Ultima
 367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



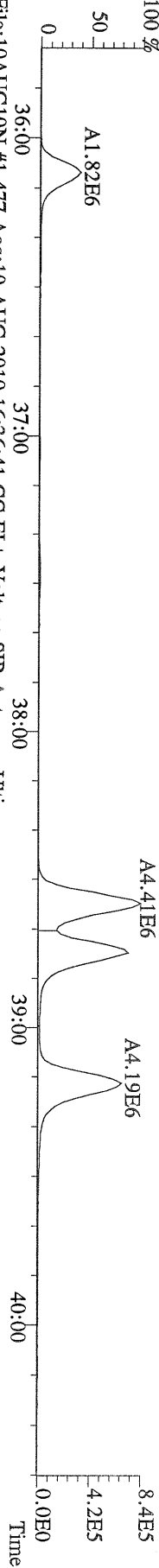
File:10AUG10N #1-411 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Ultima
 369.8919 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



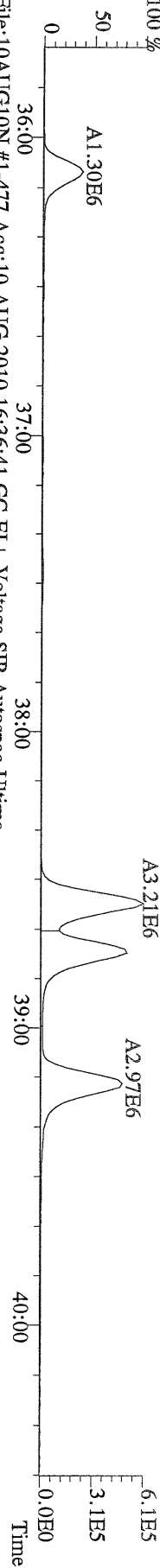
File:10AUG10N #1-411 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Ultima
 366.9792 F:2 Exp:PCDD
 Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



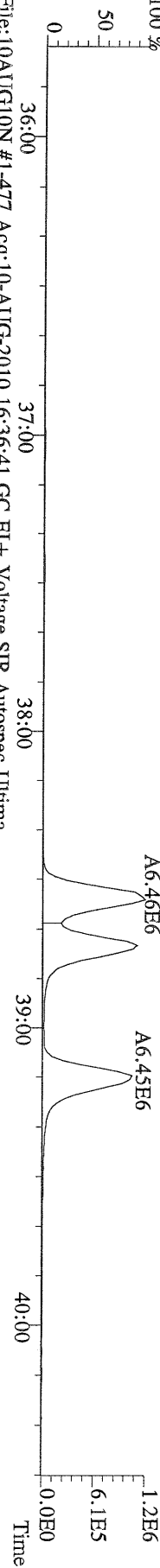
File:10AUG10N #1-477 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Utima
389.8156 F.3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory
100 %



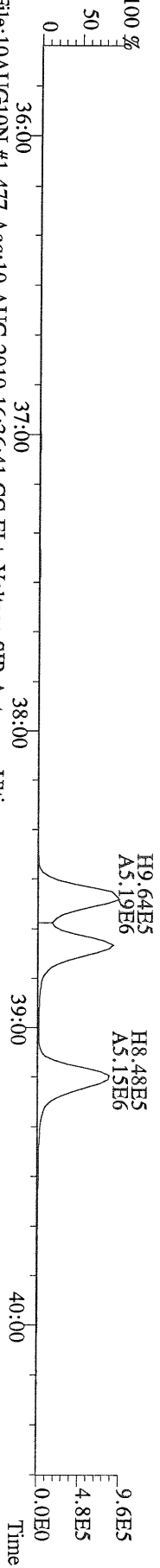
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391.8127 F.3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory
100 %



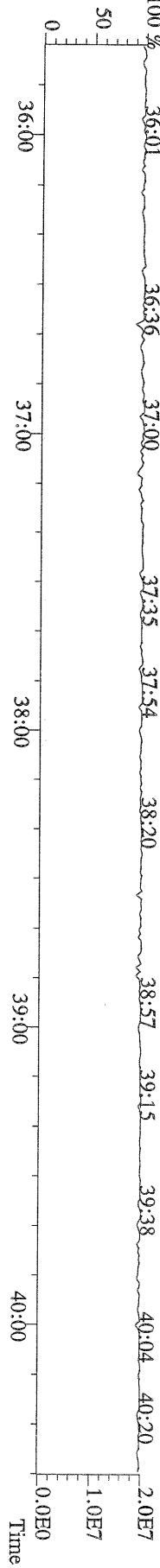
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401.8559 F.3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory
100 %



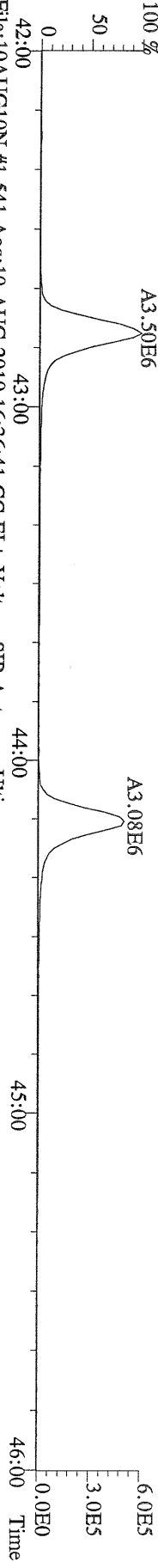
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403.8530 F.3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



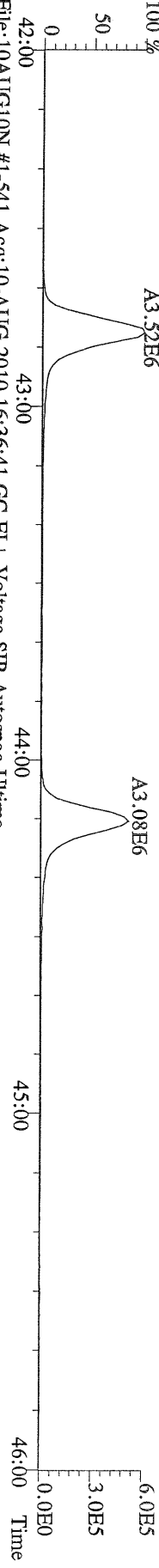
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380.9760 F.3 Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



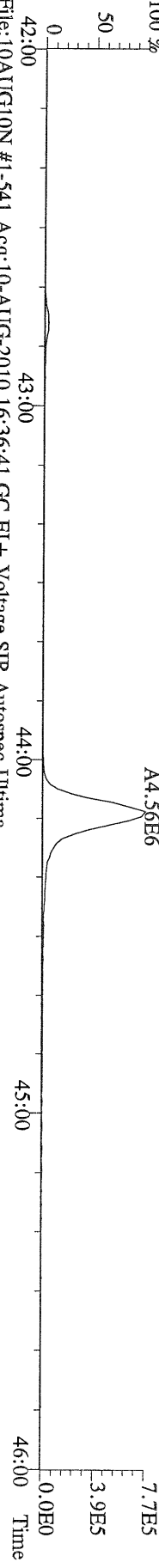
File:10AUG10N #1-541 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Ultima
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



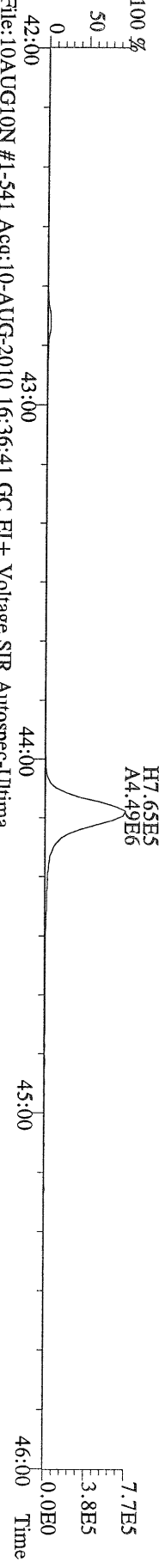
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425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



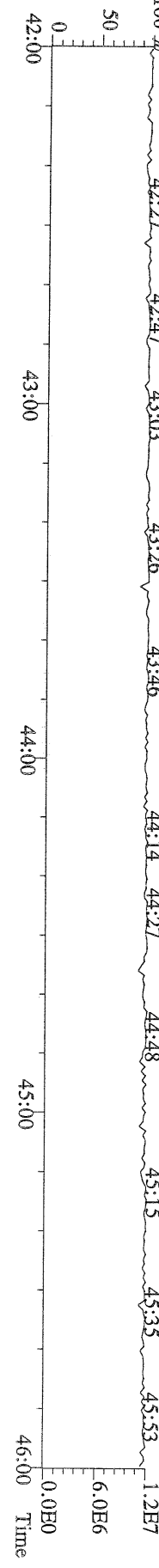
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435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



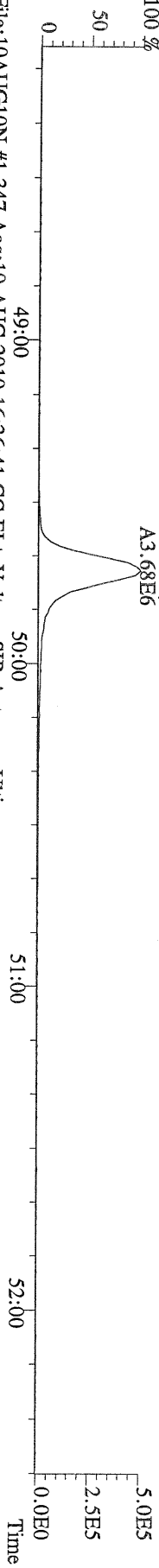
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437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



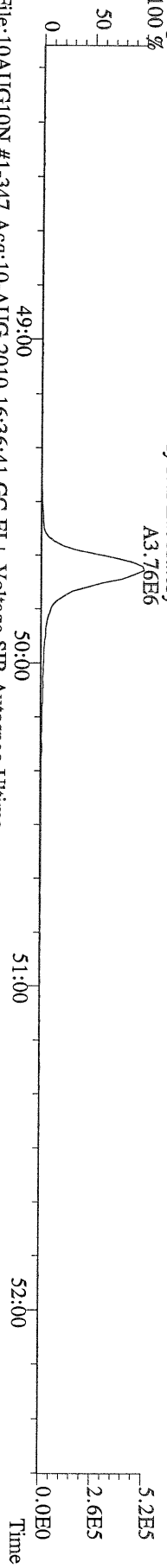
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430.9728 F:4 Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



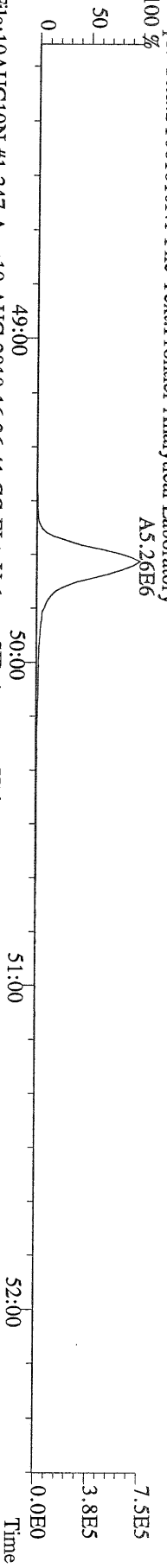
File:10AUG10N #1-347 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Utima
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory
100 %



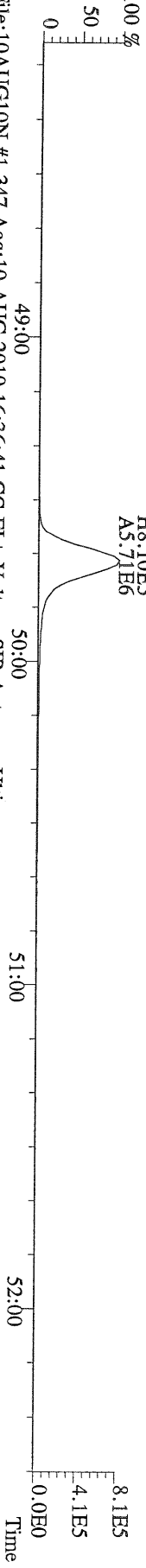
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459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory
100 %



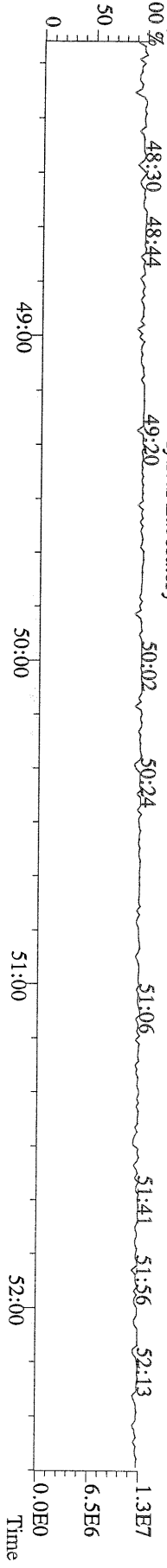
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469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory
100 %



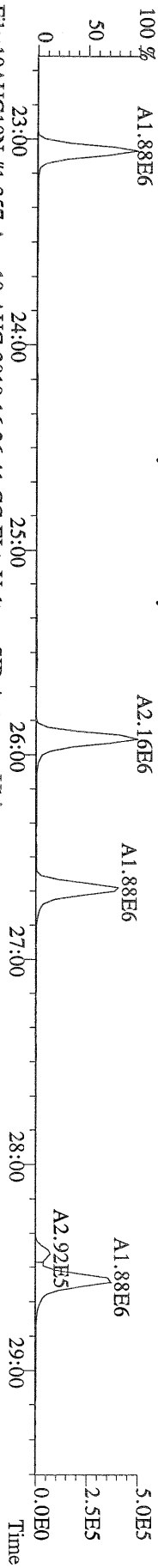
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471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



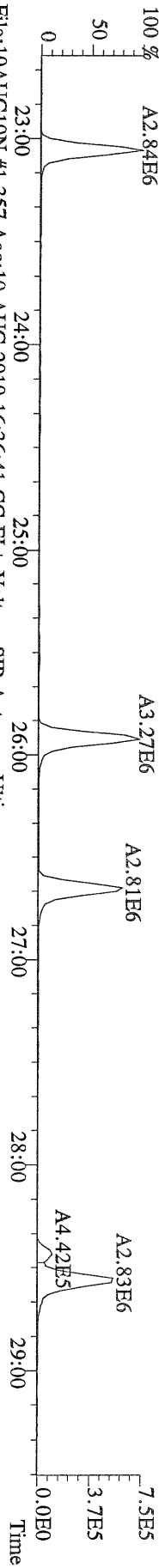
File:10AUG10N #1-347 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Utima
454.9728 F:5 Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



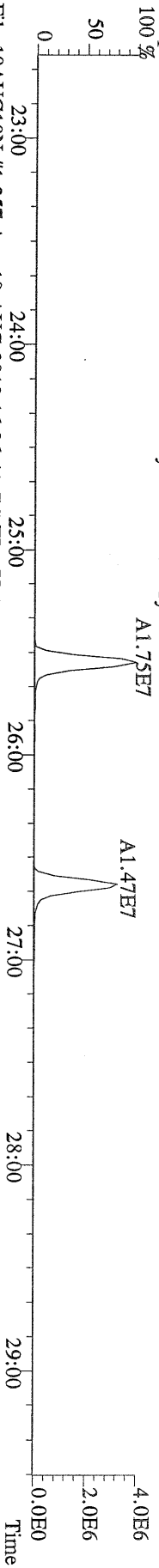
File:10AUG10N #1-357 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Utima
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



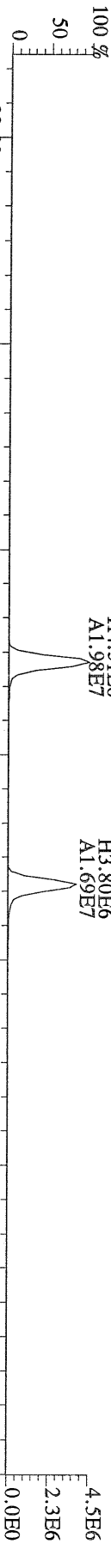
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305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



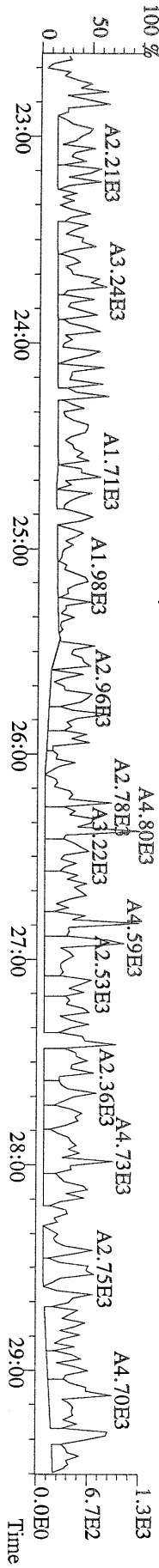
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315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



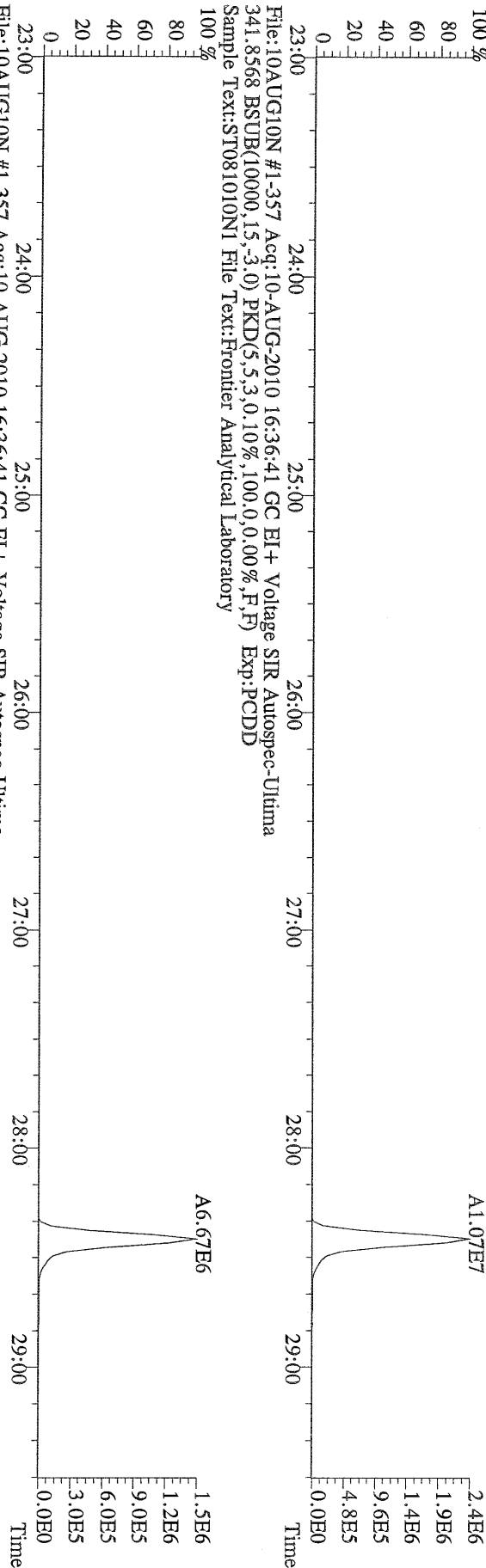
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317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



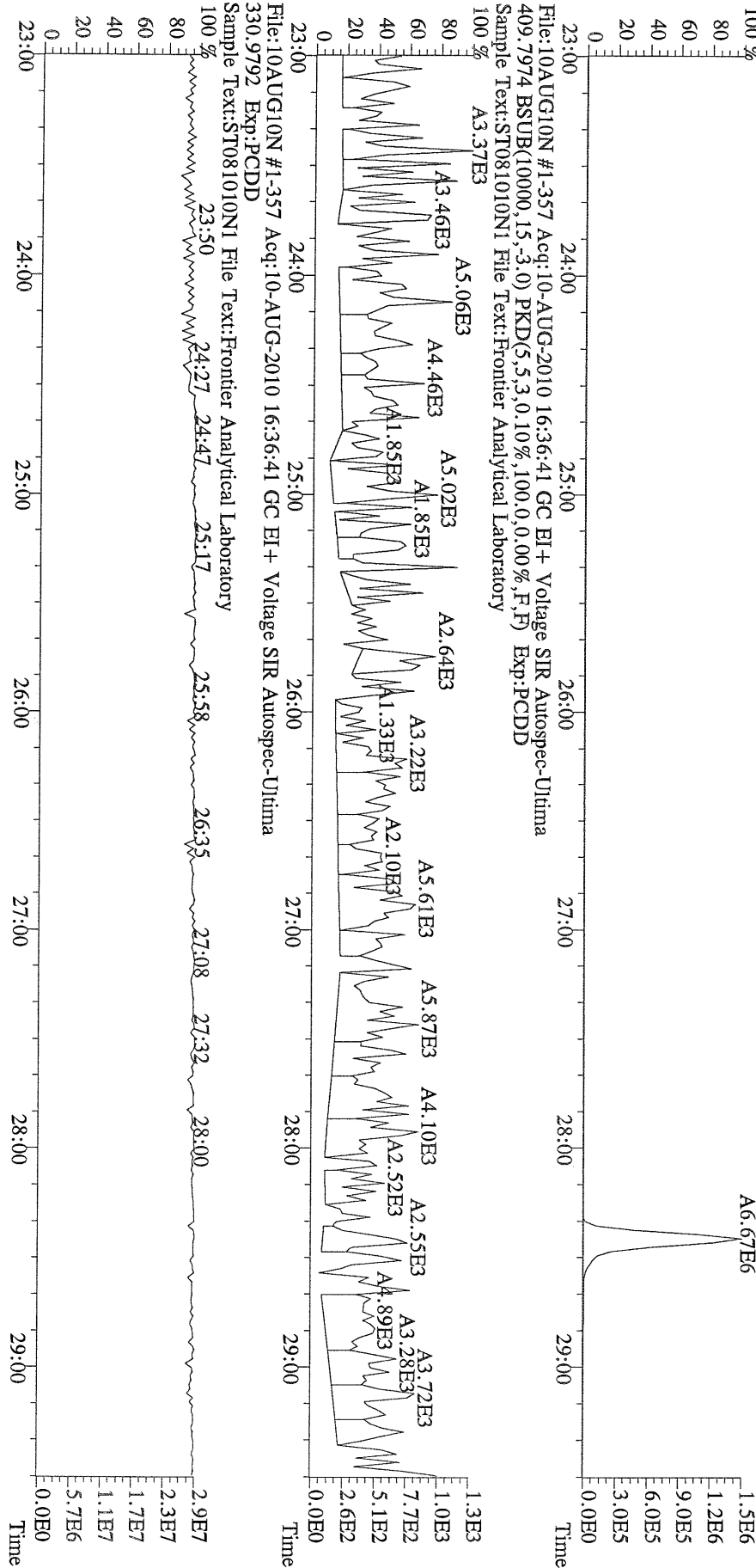
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375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



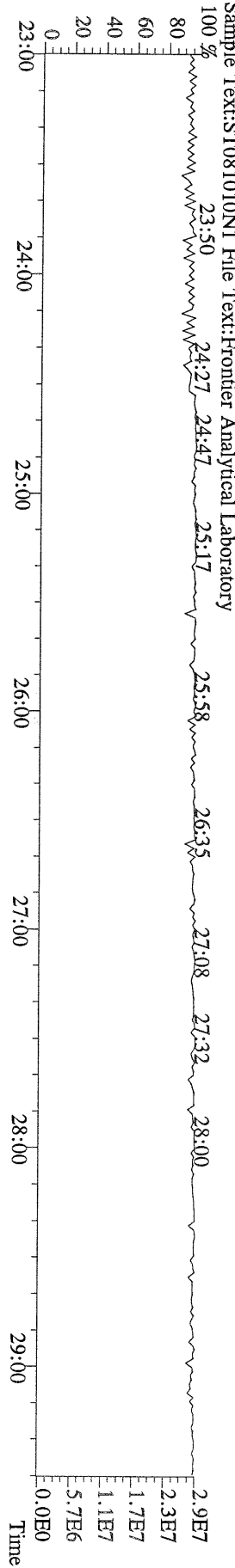
File:10AUG10N #1-357 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



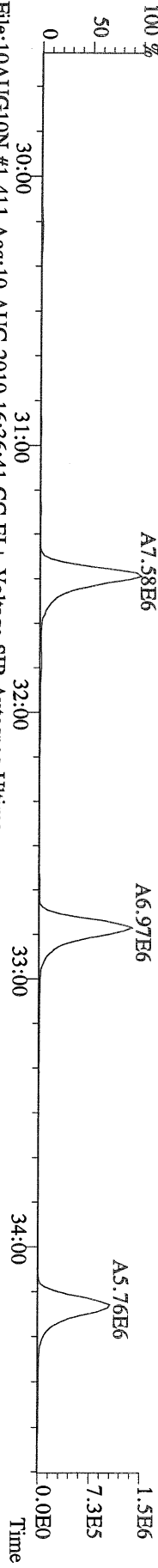
File:10AUG10N #1-357 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Ultima
 341.8568 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



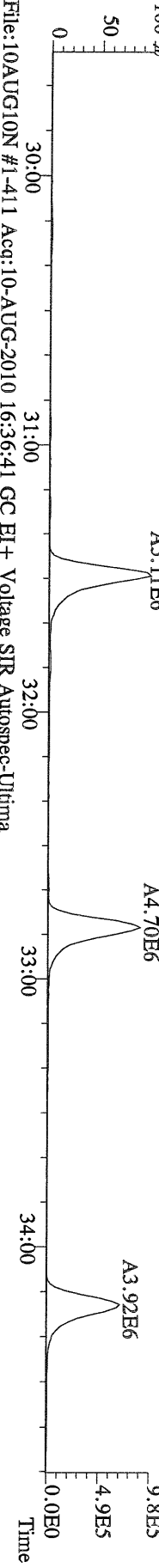
File:10AUG10N #1-357 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Ultima
 330.9792 Exp:PCDD
 Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



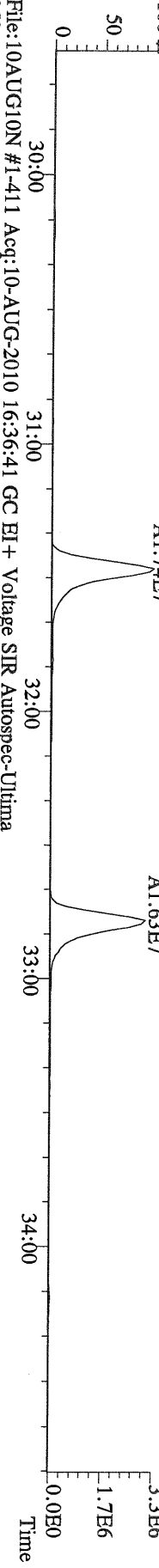
File:10AUG10N #1-411 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0.10%,100,0.00%,F,F) Exp:PCDD
 Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



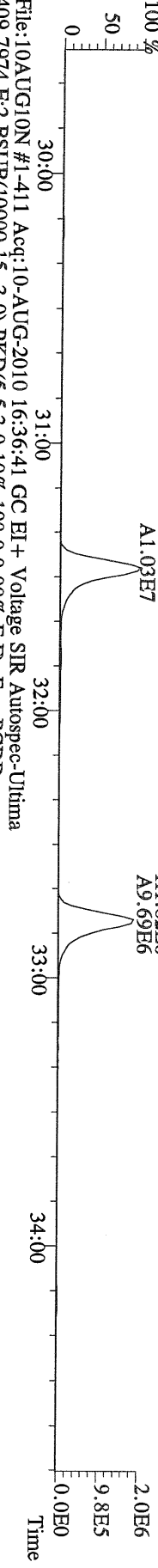
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 341.8568 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0.10%,100,0.00%,F,F) Exp:PCDD
 Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



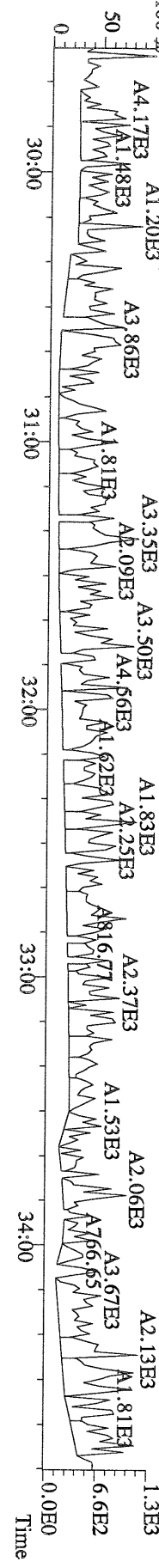
File:10AUG10N #1-411 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Ultima
 351.9000 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0.10%,100,0.00%,F,F) Exp:PCDD
 Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



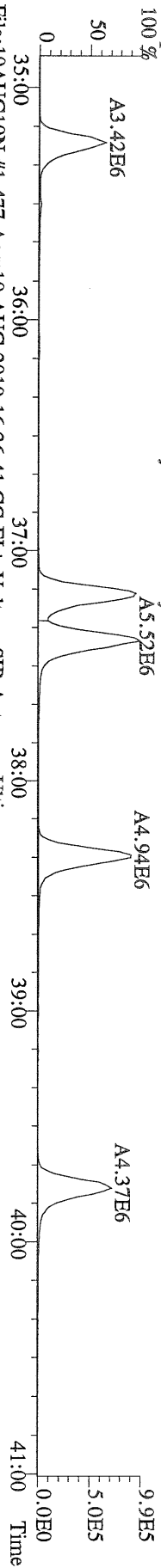
File:10AUG10N #1-411 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Ultima
 353.8970 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0.10%,100,0.00%,F,F) Exp:PCDD
 Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



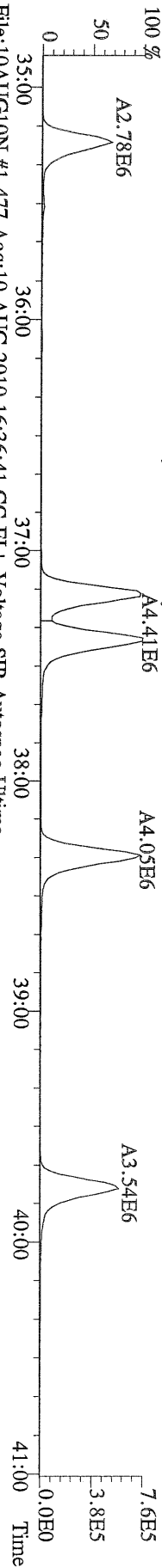
File:10AUG10N #1-411 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Ultima
 409.7974 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0.10%,100,0.00%,F,F) Exp:PCDD
 Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



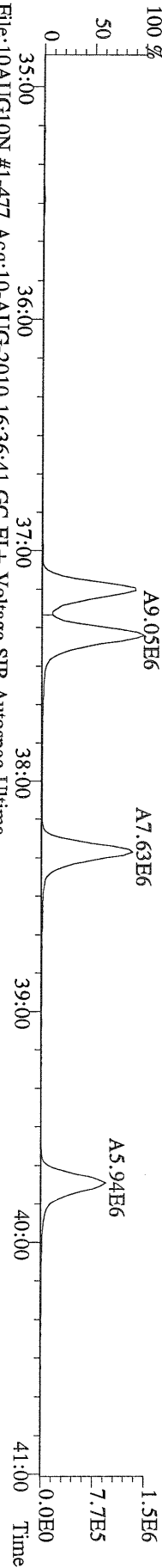
File:10AUG10N1 #1-477 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Utima
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



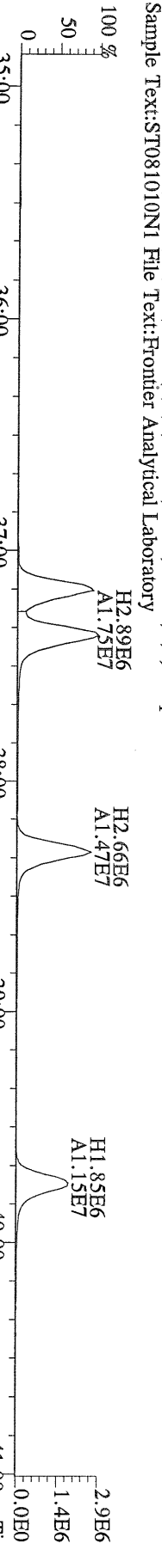
File:10AUG10N1 #1-477 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Utima
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



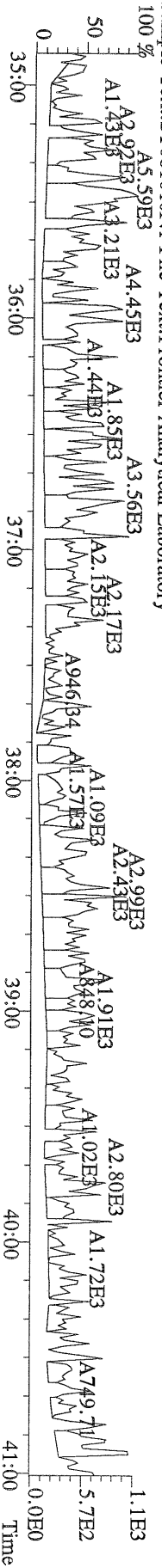
File:10AUG10N1 #1-477 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Utima
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



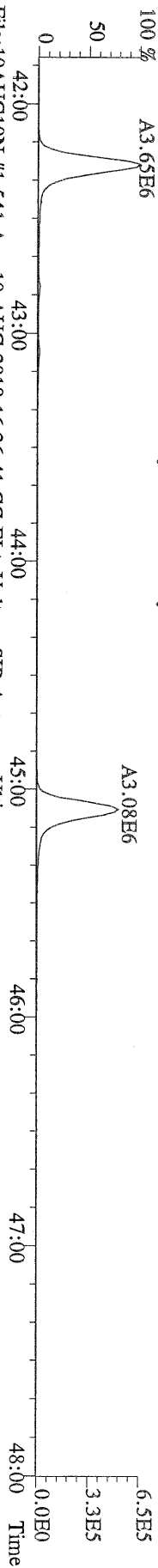
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385.8610 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



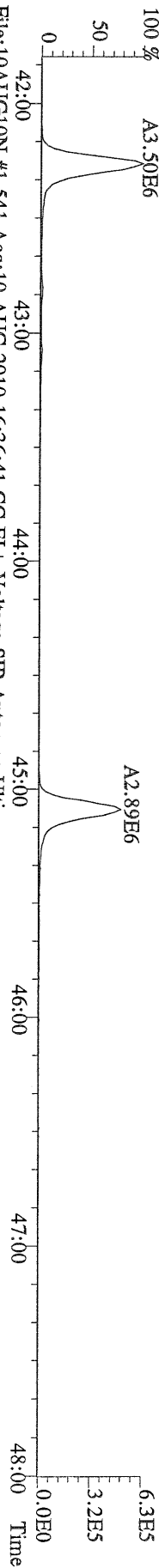
File:10AUG10N1 #1-477 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Utima
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



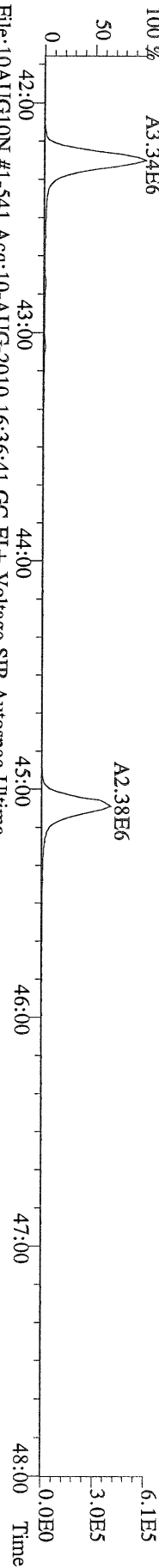
File:10AUG10N #1-541 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Ultima
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



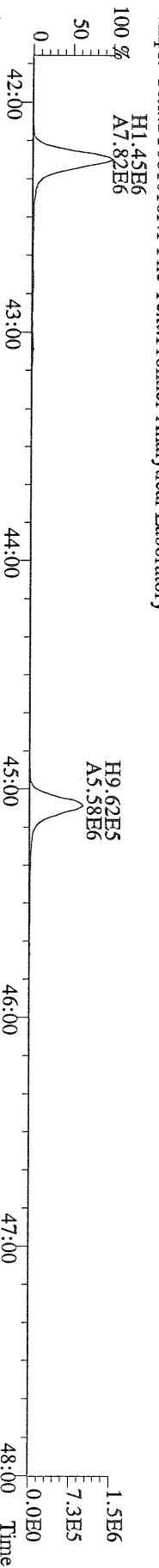
File:10AUG10N #1-541 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Ultima
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



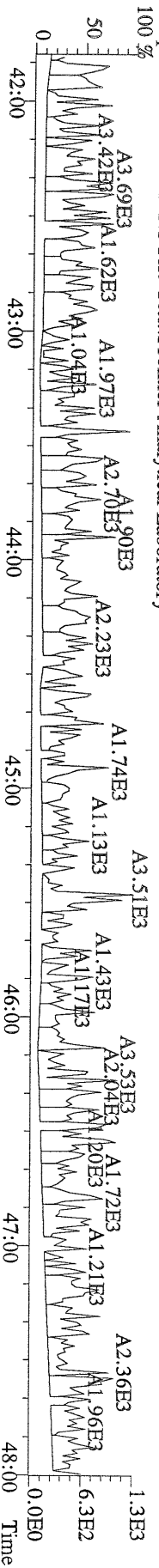
File:10AUG10N #1-541 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Ultima
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



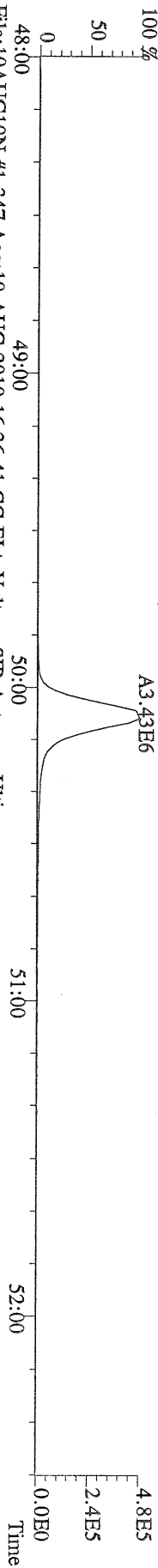
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419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



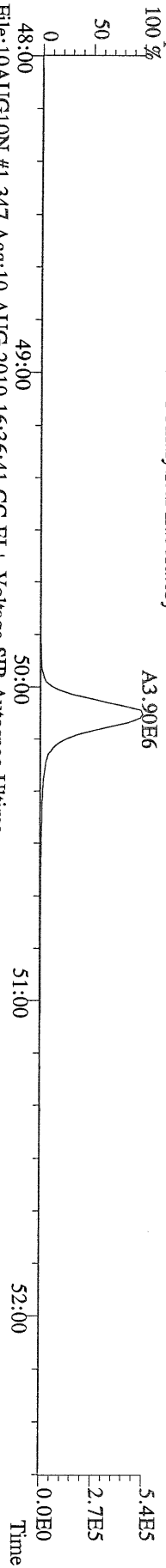
File:10AUG10N #1-541 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Ultima
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory



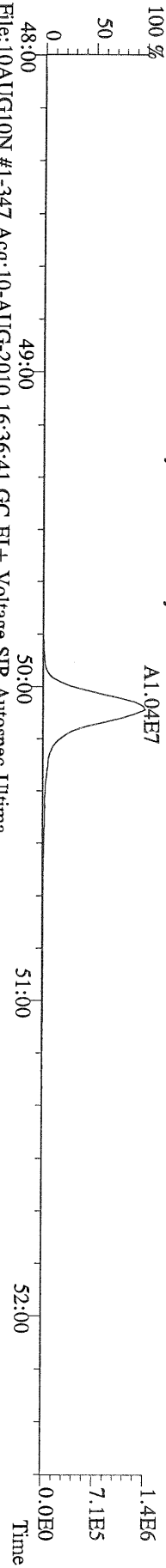
File:10AUG10N #1-347 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Utima
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory
100 %



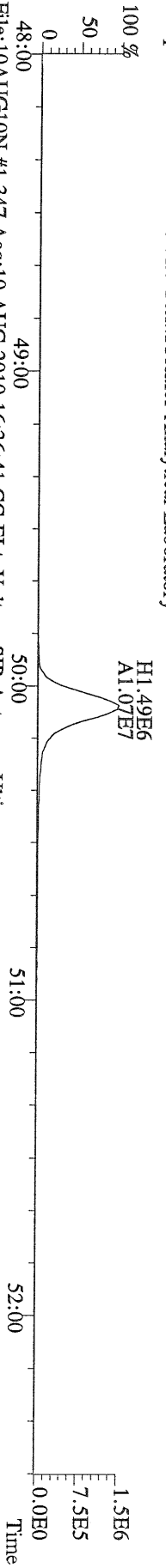
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443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory
100 %



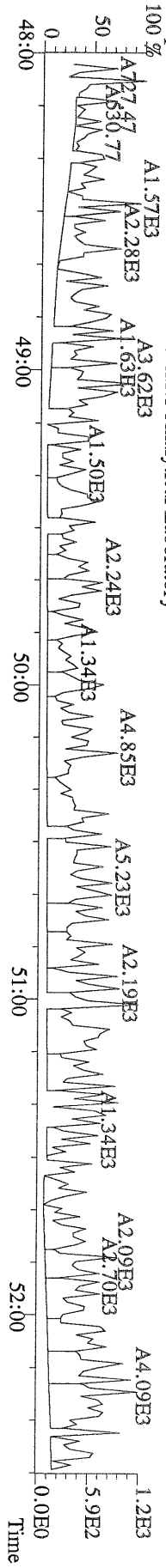
File:10AUG10N #1-347 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Utima
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory
100 %

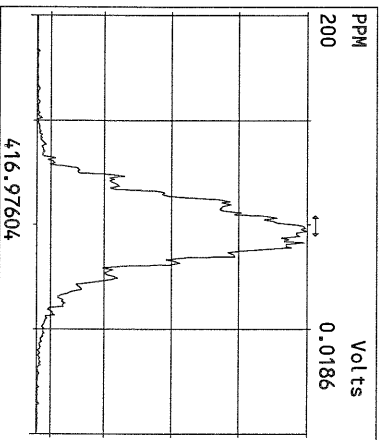
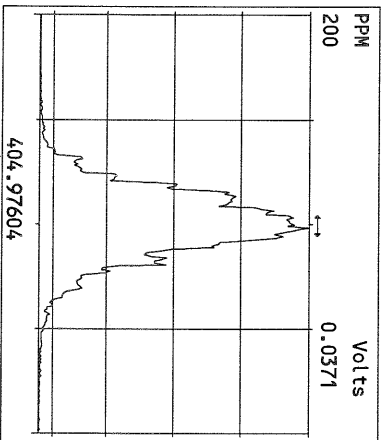
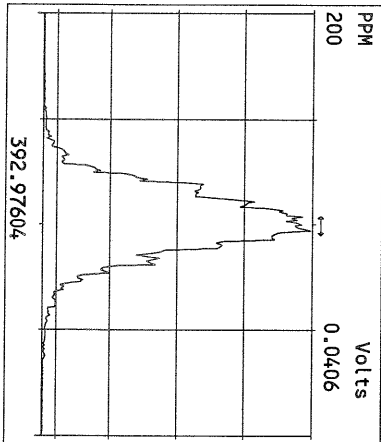
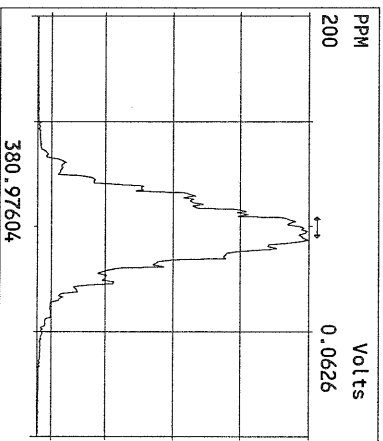
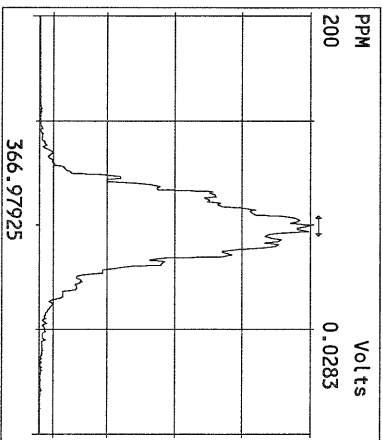
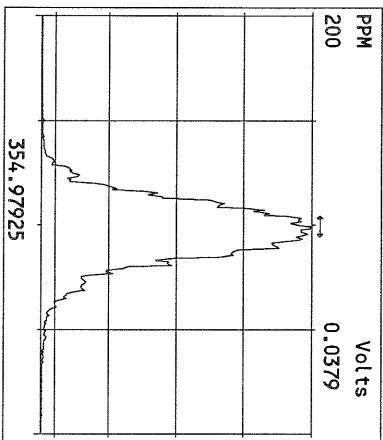
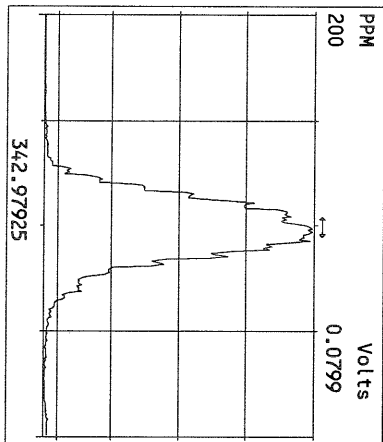
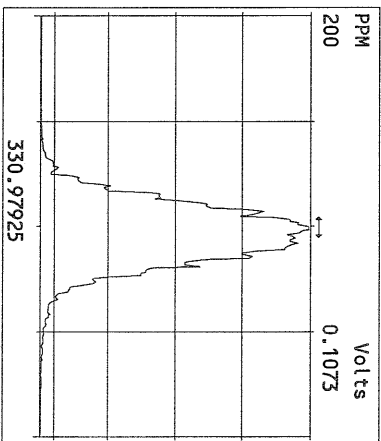
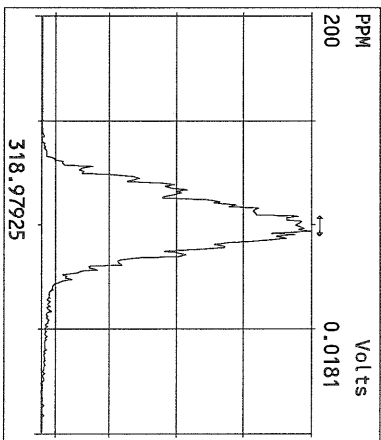
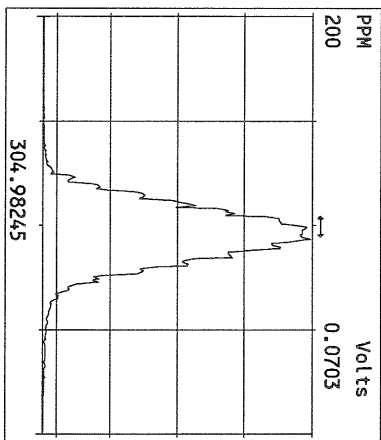
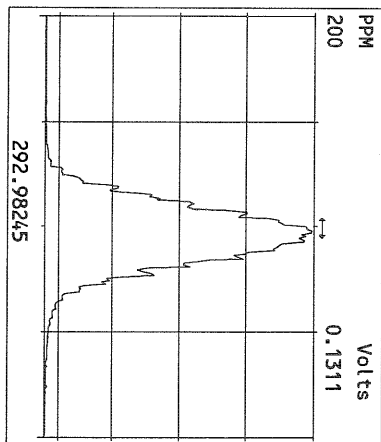


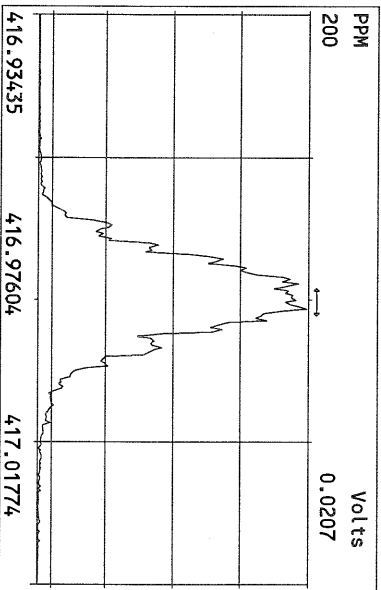
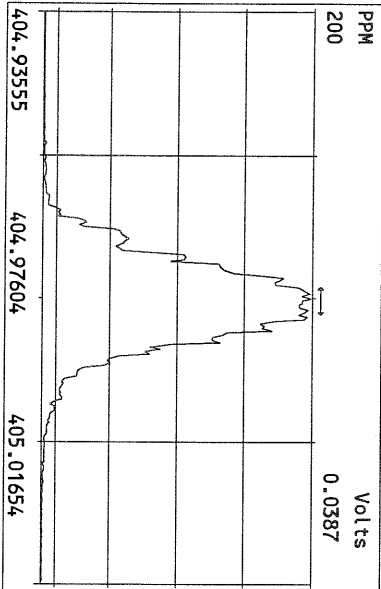
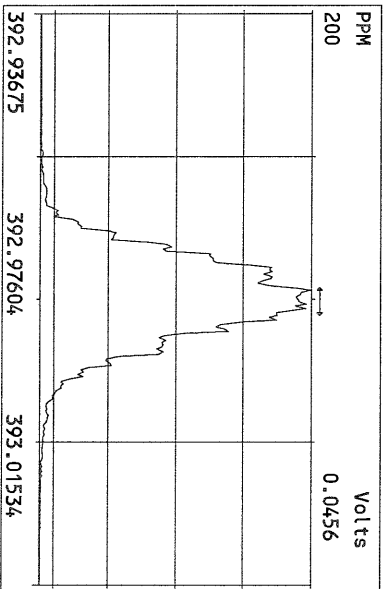
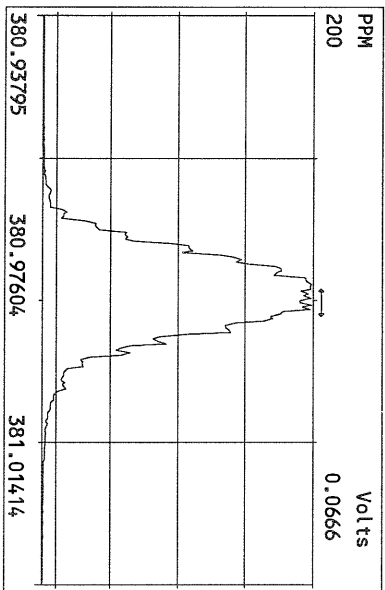
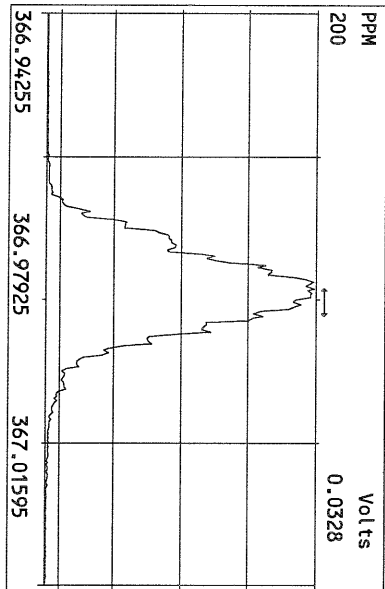
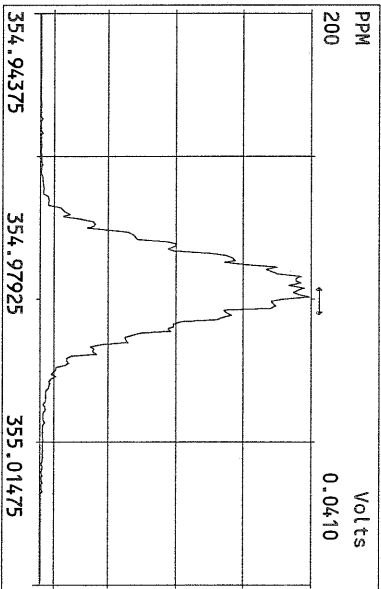
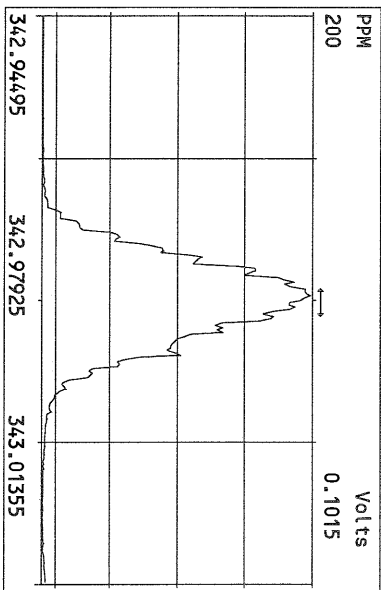
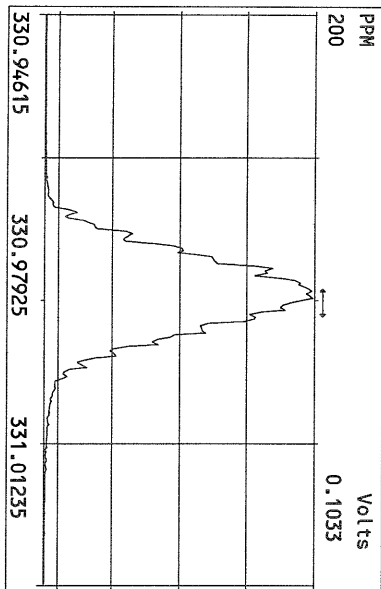
File:10AUG10N #1-347 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Utima
455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory

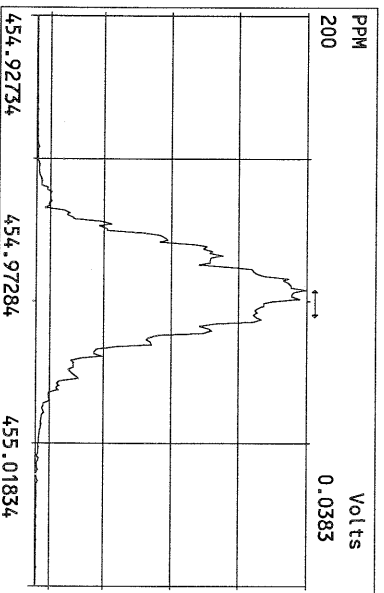
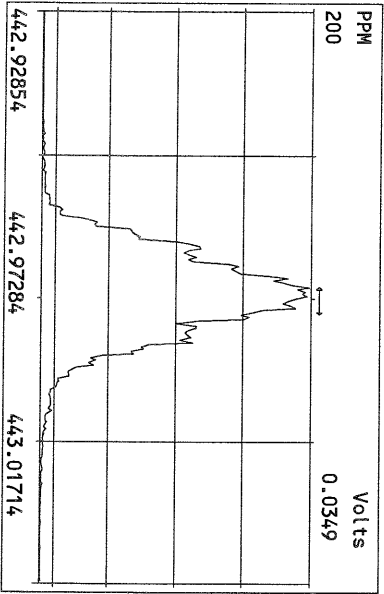
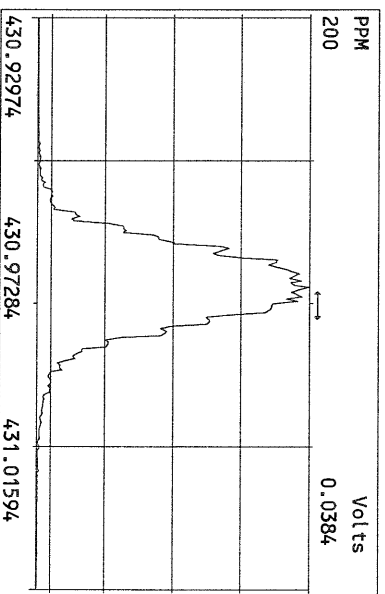
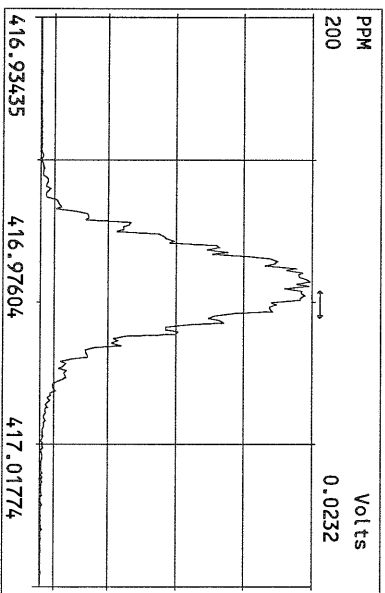
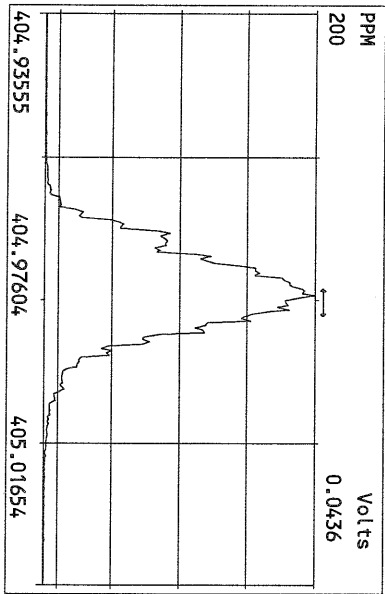
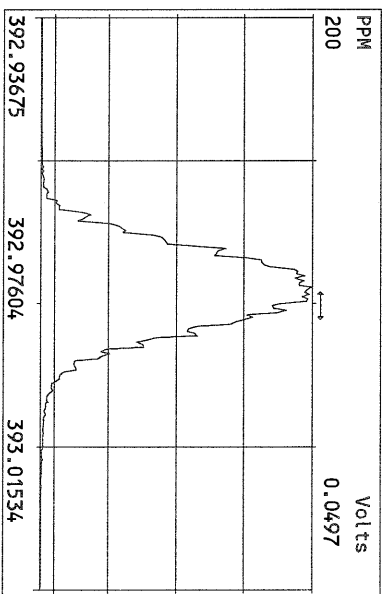
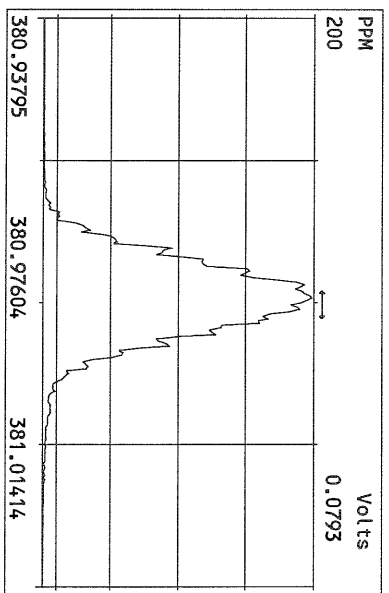
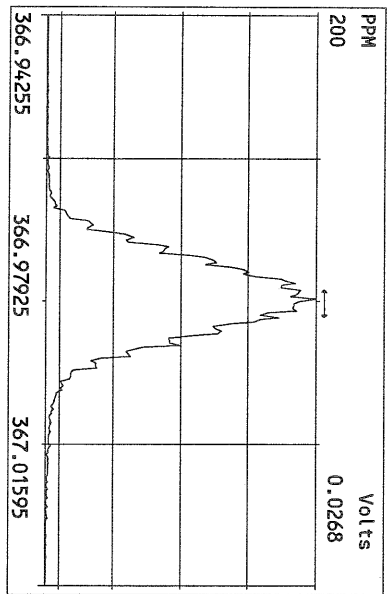


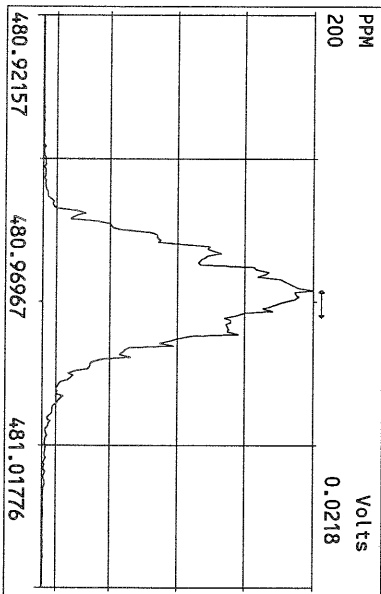
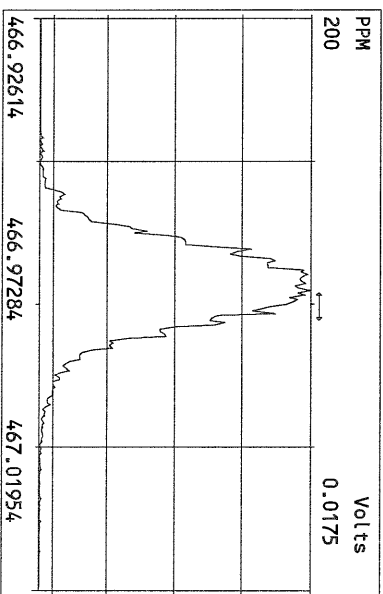
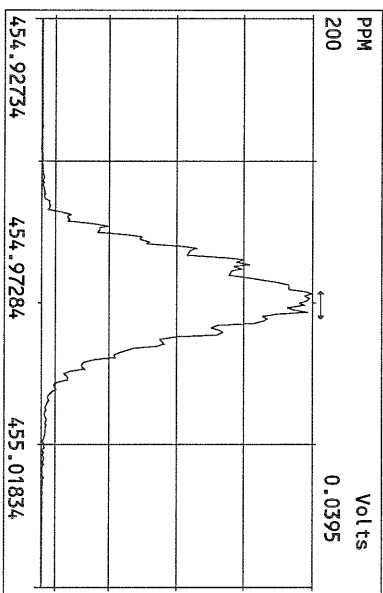
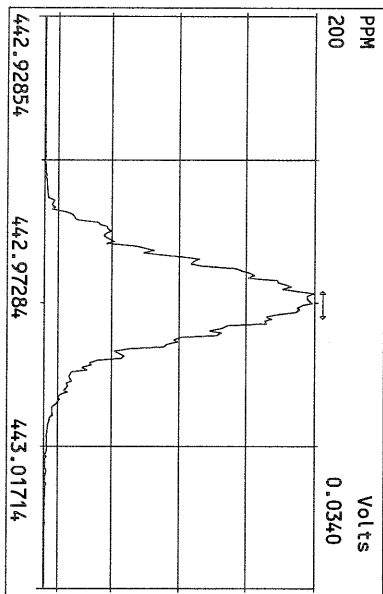
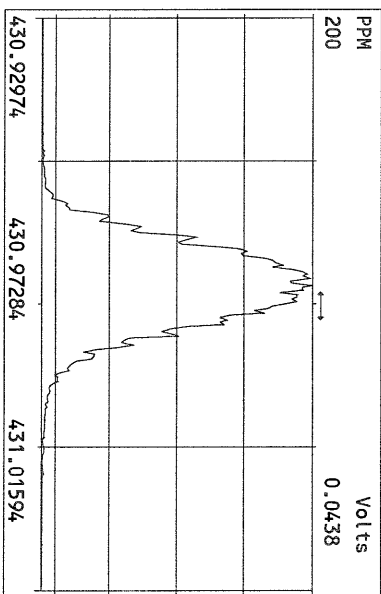
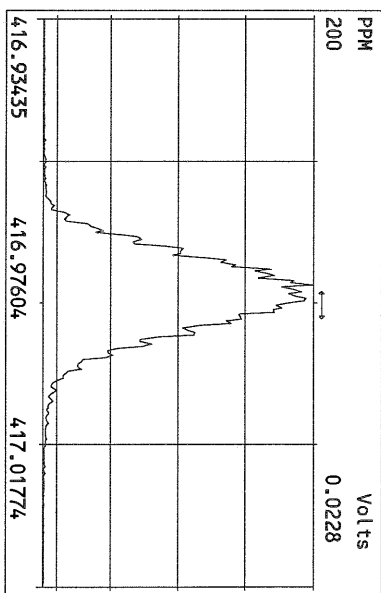
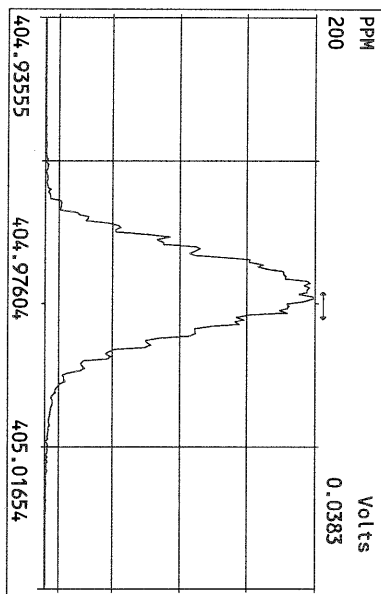
File:10AUG10N #1-347 Acq:10-AUG-2010 16:36:41 GC EI+ Voltage SIR Autospec-Utima
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
Sample Text:ST081010N1 File Text:Frontier Analytical Laboratory

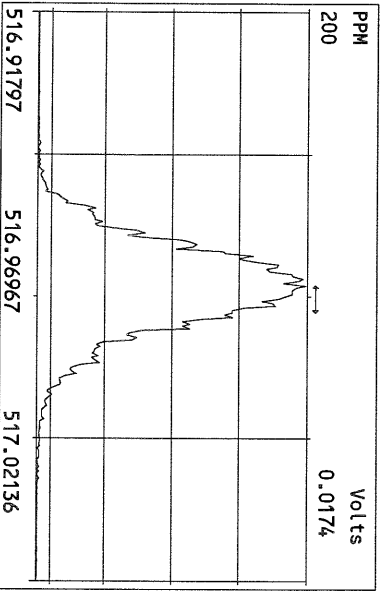
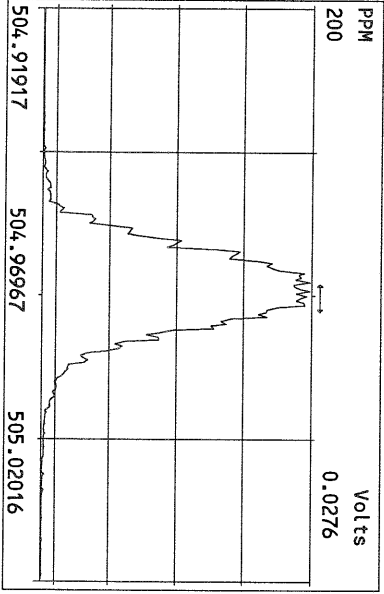
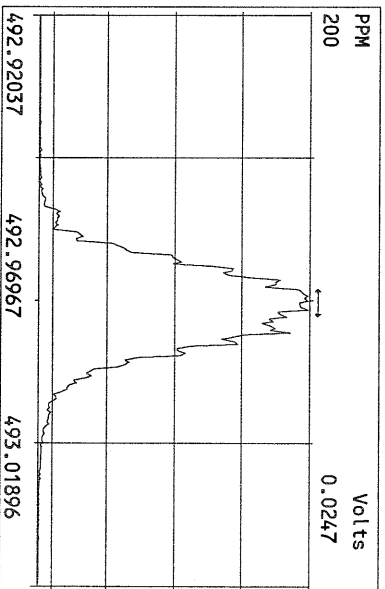
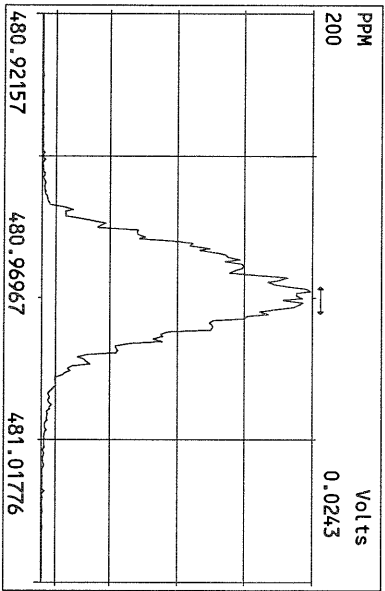
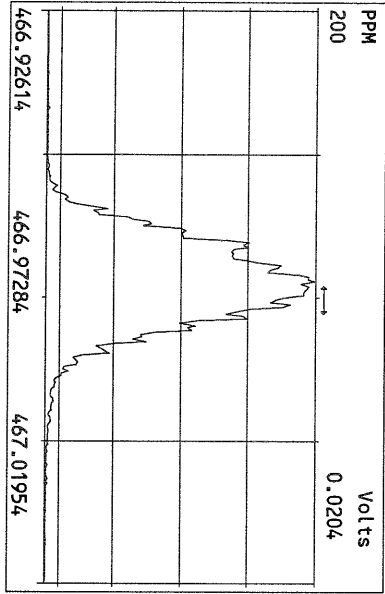
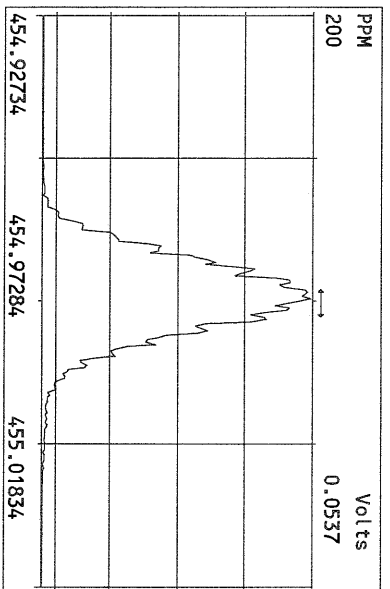
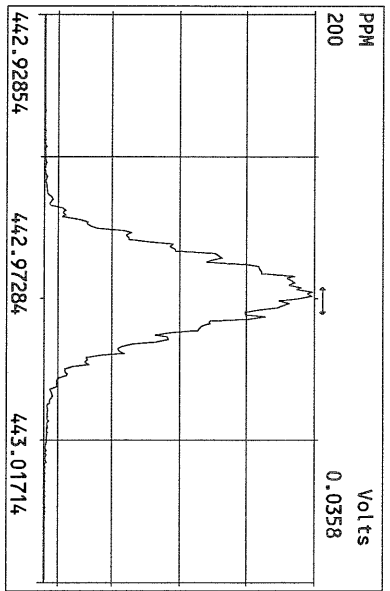
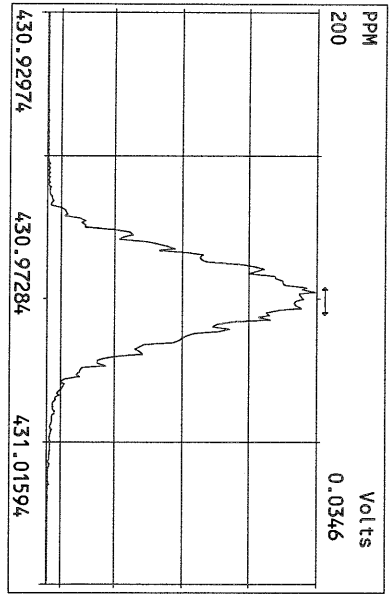












USEPA - ITD

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: 11-AUG-10 06:26:57 CS3 or VER Data Filename: 10AUG10N Sam:16


NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999-1.001 ✓
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998-1.004 ✓
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019 ✓
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001 ✓
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005 ✓
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001 ✓
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001 ✓
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001 ✓
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	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	0.985	0.977-1.000 ✓
13C-1,2,3,6,7,8-HxCDD		0.988	0.981-1.003 ✓
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970 ✓
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975 ✓
13C-2,3,4,6,7,8-HxCDF		0.978	0.959-1.021 ✓
13C-1,2,3,7,8,9-HxCDF		1.015	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: 8/11/10

Results: GC Column: DB5 Amount: 1.000 NATO 1989 Tox: 95.9 WHO 1998 Tox: 120 WHO 2005 Tox: 109

Name	Resp	RA	RT	RRF	Conc	Qual	Fac Noise-1	Noise-2	DL	Rec	#Hom
2,3,7,8-TCDD	2.17e+06	0.75 y	27:24	1.04	9.51		2.50	-	-	*	
1,2,3,7,8-PeCDD	9.17e+06	1.67 y	33:13	1.05	47.6		2.50	-	-	*	
1,2,3,4,7,8-HxCDD	8.60e+06	1.38 y	38:35	1.30	49.0		2.50	-	-	*	
1,2,3,6,7,8-HxCDD	7.69e+06	1.39 y	38:44	1.28	50.0		2.50	-	-	*	
1,2,3,7,8,9-HxCDD	8.41e+06	1.38 y	39:11	1.25	52.7		2.50	-	-	*	
1,2,3,4,6,7,8-HpCDD	7.34e+06	1.02 y	44:10	1.35	50.6		2.50	-	-	*	
OCDD	9.25e+06	0.97 y	49:44	1.25	106		2.50	-	-	*	
2,3,7,8-TCDF	4.60e+06	0.67 y	26:40	1.62	9.24		2.50	-	-	*	
1,2,3,7,8-PeCDF	1.30e+07	1.48 y	31:29	0.92	50.5		2.50	-	-	*	
2,3,4,7,8-PeCDF	1.22e+07	1.48 y	32:49	0.94	48.1		2.50	-	-	*	
1,2,3,4,7,8-HxCDF	1.09e+07	1.23 y	37:11	0.93	45.6		2.50	-	-	*	
1,2,3,6,7,8-HxCDF	1.12e+07	1.22 y	37:23	0.84	45.8		2.50	-	-	*	
2,3,4,6,7,8-HxCDF	1.02e+07	1.24 y	38:19	0.90	45.1		2.50	-	-	*	
1,2,3,7,8,9-HxCDF	9.40e+06	1.23 y	39:45	0.98	46.0		2.50	-	-	*	
1,2,3,4,6,7,8-HpCDF	8.43e+06	1.07 y	42:17	1.38	46.3		2.50	-	-	*	
1,2,3,4,7,8,9-HpCDF	7.51e+06	1.05 y	45:05	1.62	46.3		2.50	-	-	*	
OCDF	9.45e+06	0.89 y	50:06	0.74	97.8		2.50	-	-	*	
13C-2,3,7,8-TCDD	2.20e+07	0.82 y	27:23	0.93	101						101
13C-1,2,3,7,8-PeCDD	1.84e+07	1.77 y	33:12	0.81	96.7						96.7
13C-1,2,3,4,7,8-HxCDD	1.35e+07	1.24 y	38:33	0.95	107						107
13C-1,2,3,6,7,8-HxCDD	1.20e+07	1.23 y	38:43	1.00	90.9						90.9
13C-1,2,3,4,6,7,8-HpCDD	1.07e+07	0.99 y	44:10	0.92	87.4						87.4
13C-OCDD	1.39e+07	0.88 y	49:43	0.63	165						82.7
13C-2,3,7,8-TCDF	3.08e+07	0.85 y	26:38	0.87	102						102
13C-1,2,3,7,8-PeCDF	2.82e+07	1.69 y	31:28	0.81	101						101
13C-2,3,4,7,8-PeCDF	2.69e+07	1.69 y	32:47	0.75	103						103
13C-1,2,3,4,7,8-HxCDF	2.56e+07	0.52 y	37:10	1.74	111						111
13C-1,2,3,6,7,8-HxCDF	2.93e+07	0.52 y	37:22	2.17	102						102
13C-2,3,4,6,7,8-HxCDF	2.53e+07	0.51 y	38:19	1.82	105						105
13C-1,2,3,7,8,9-HxCDF	2.08e+07	0.53 y	39:45	1.49	105						105
13C-1,2,3,4,6,7,8-HpCDF	1.32e+07	0.43 y	42:15	1.10	90.3						90.3
13C-1,2,3,4,7,8,9-HpCDF	9.99e+06	0.44 y	45:05	0.81	92.1						92.1
13C-OCDF	2.61e+07	0.98 y	50:05	1.19	166						82.8
37Cl-2,3,7,8-TCDD	2.05e+06		27:24	0.93	9.37						93.7
13C-1,2,3,4-TCDD	2.36e+07	0.83 y	26:48	-	69.5						
13C-1,2,3,4-TCDF	3.46e+07	0.86 y	25:34	-	65.0						
13C-1,2,3,7,8,9-HxCDD	1.33e+07	1.25 y	39:10	-	61.7						
Total Tetra-Dioxins	1.15e+07		23:11	1.04	50.7		2.50	-	-	*	24
Total Penta-Dioxins	2.02e+07		30:15	1.05	105		2.50	-	-	*	16
Total Hexa-Dioxins	2.83e+07		36:07	1.27	174		2.50	-	-	*	18
Total Hepta-Dioxins	1.59e+07		42:48	1.35	110		2.50	-	-	*	19
Total Tetra-Furans	1.97e+07		23:04	1.62	39.6		2.50	-	-	*	18
1st Fn. Tot Penta-Furans	1.68e+07		28:25	0.93	65.6		2.50	-	-	*	PeCDF 1
Total Penta-Furans	3.68e+07		30:11	0.93	144		2.50	-	-	*	209 11
Total Hexa-Furans	4.87e+07		35:14	0.90	213		2.50	-	-	*	15
Total Hepta-Furans	1.61e+07		42:17	1.48	93.6		2.50	-	-	*	10

Analyst: 

Date: 8/11/10

Frontier Analytical Laboratory - Acquisition Log

Run Name:10AUG10N

Instrument: FAL3

GC: DB5

Experiment:PCDD

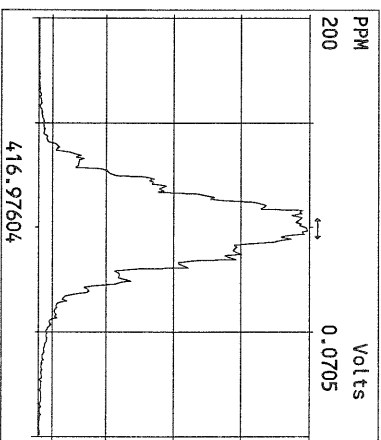
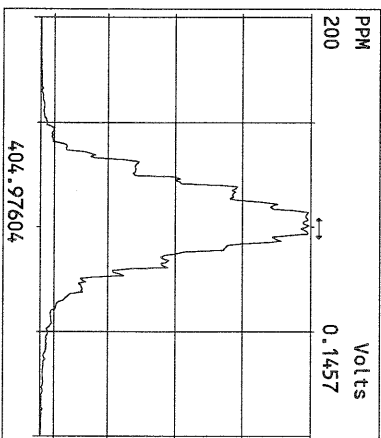
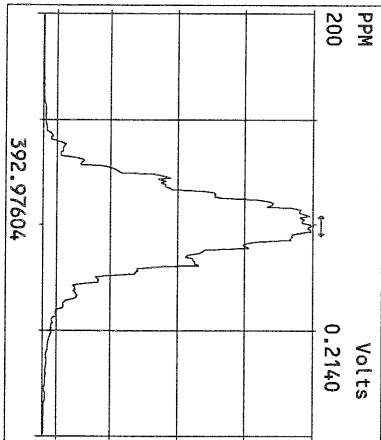
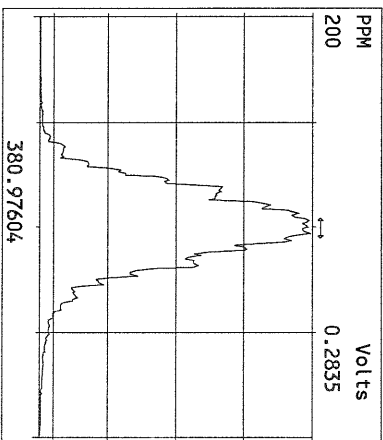
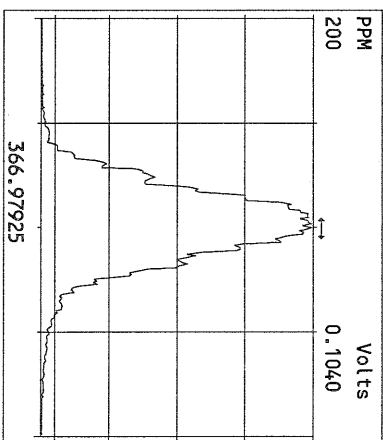
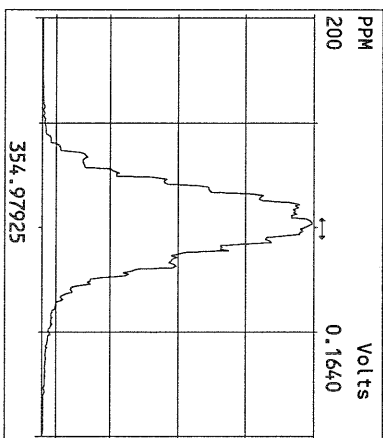
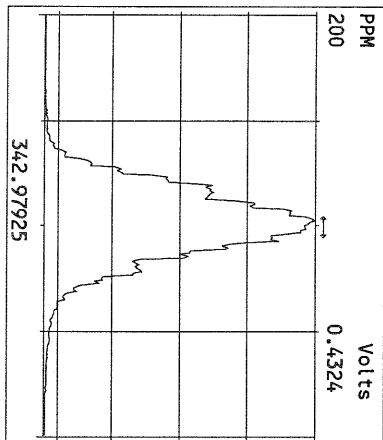
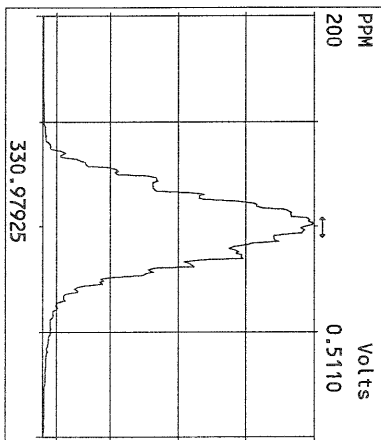
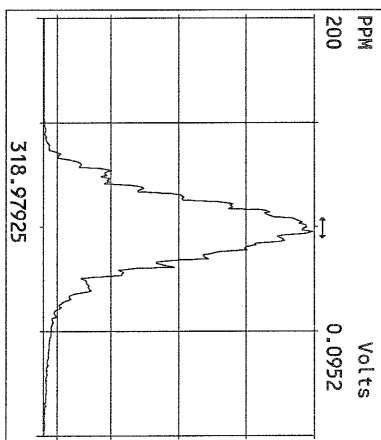
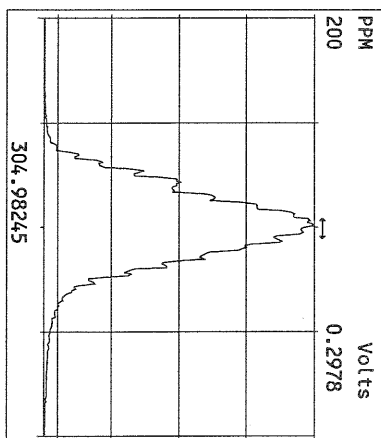
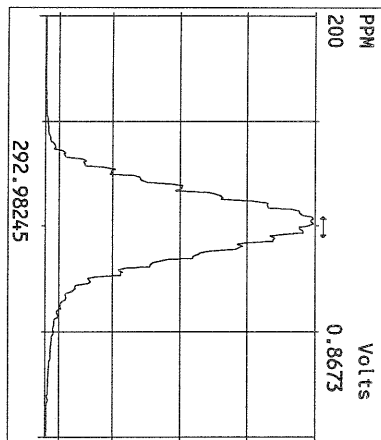
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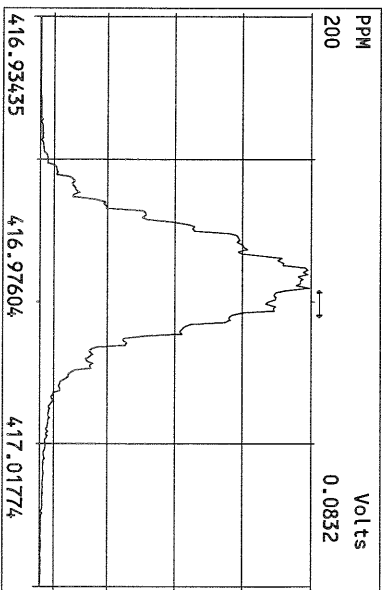
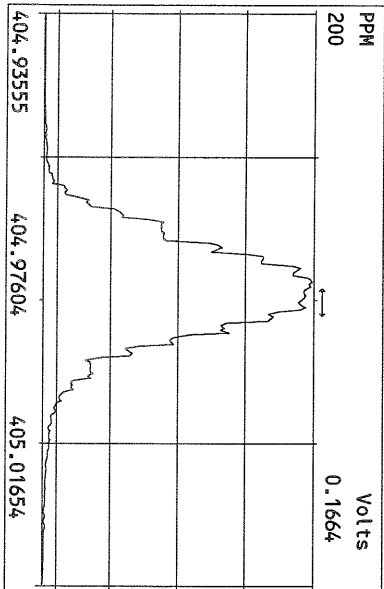
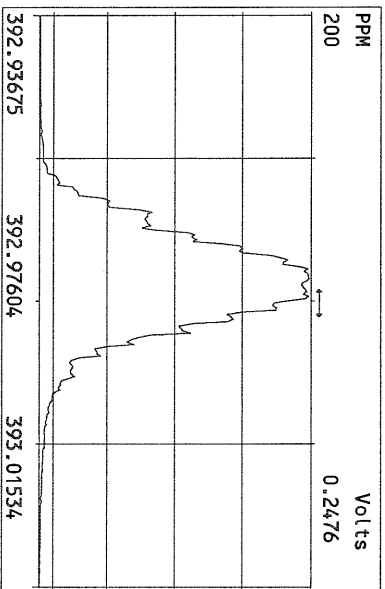
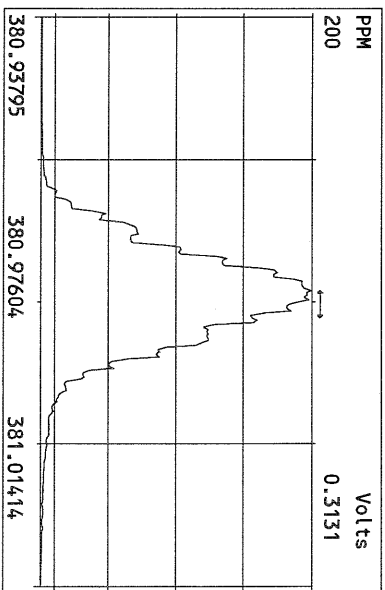
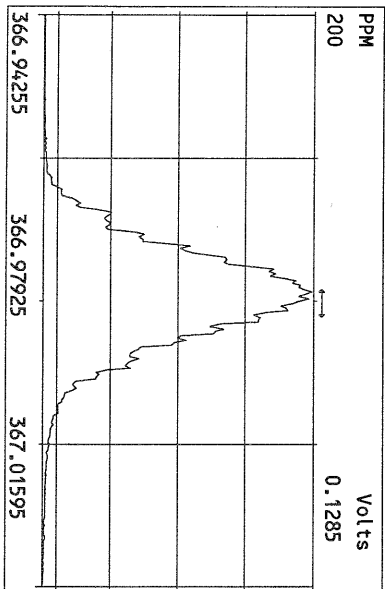
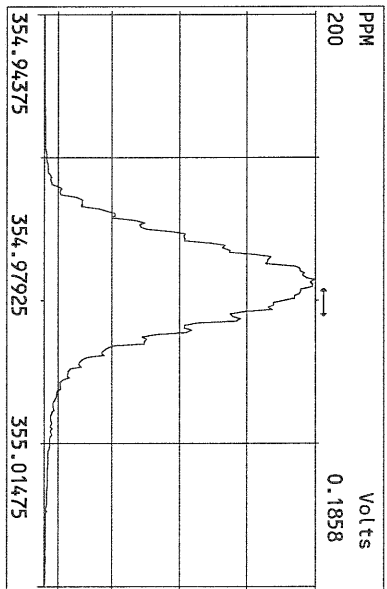
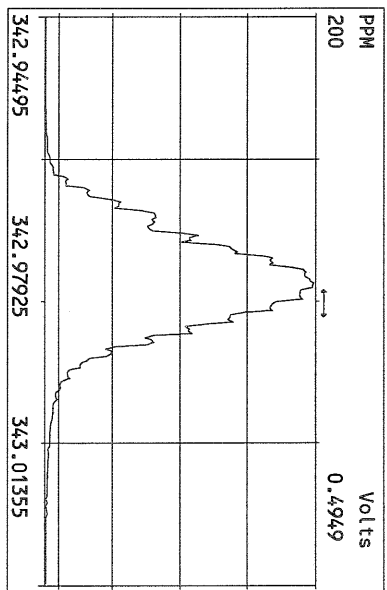
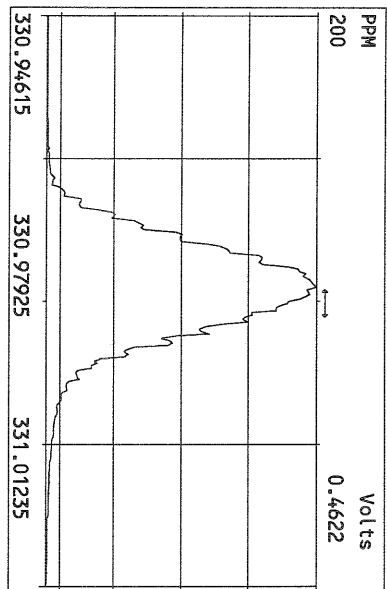
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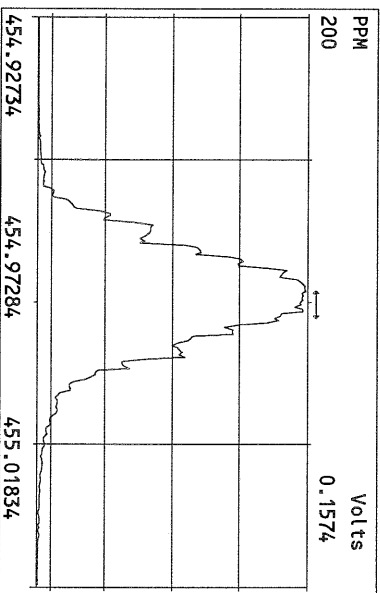
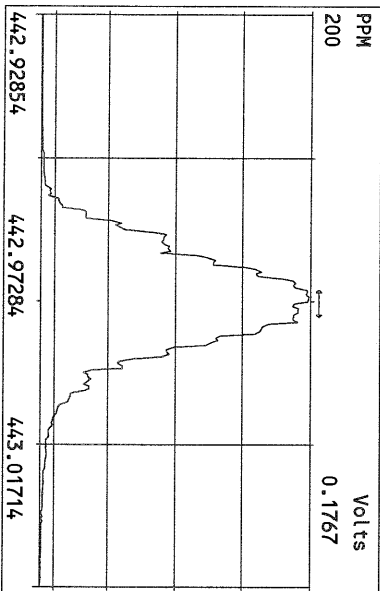
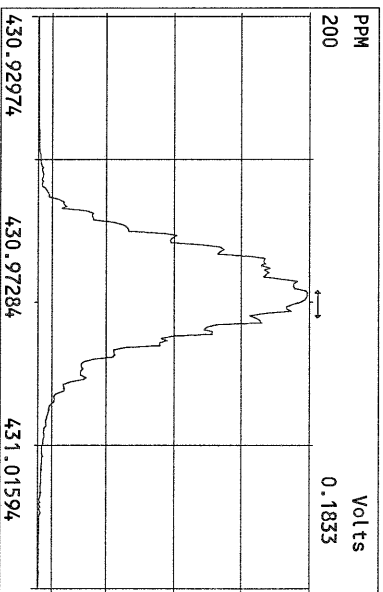
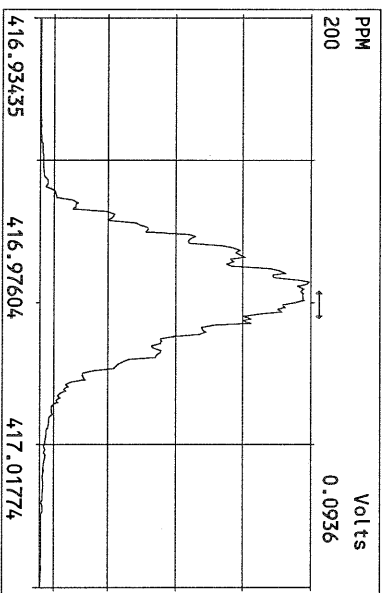
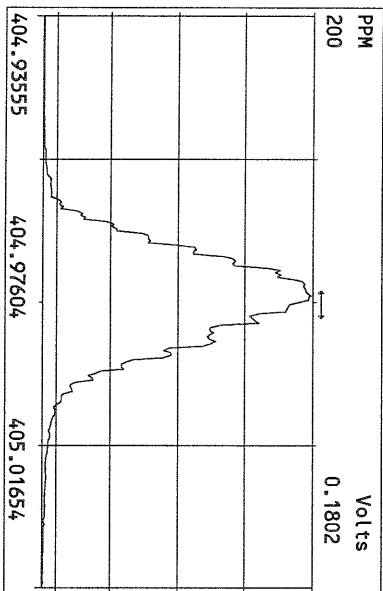
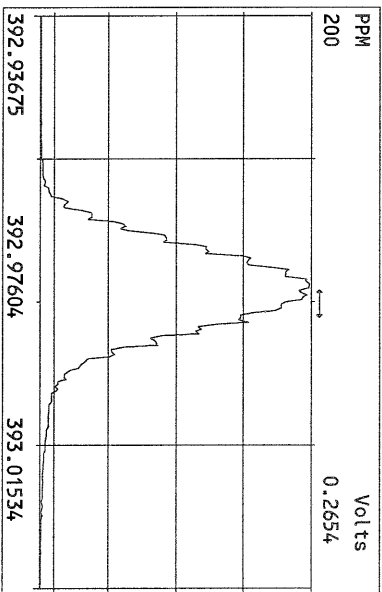
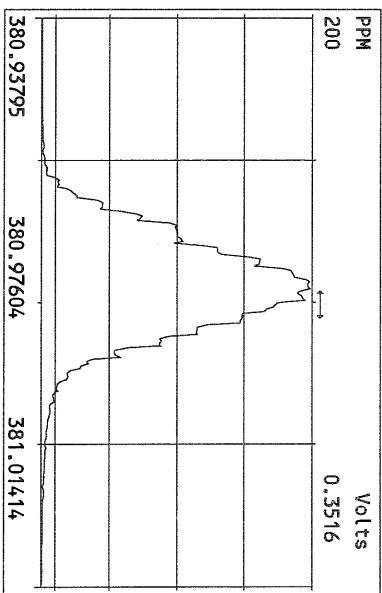
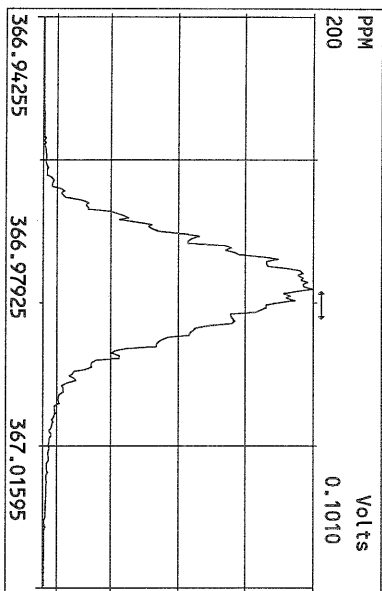
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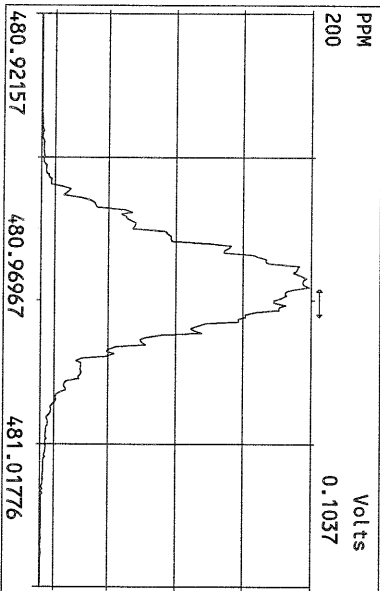
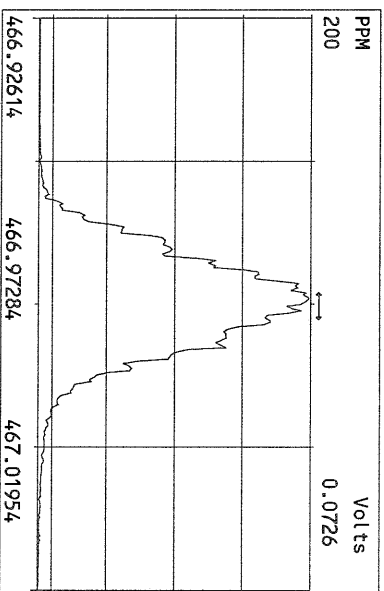
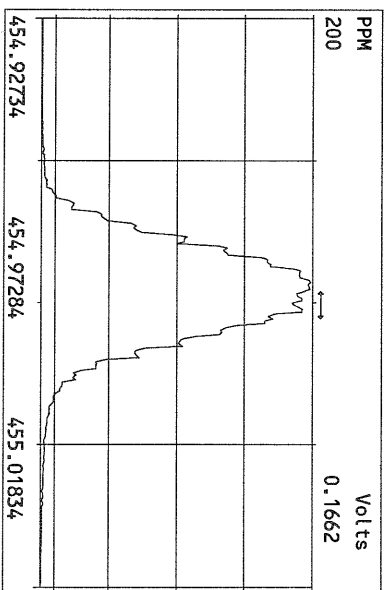
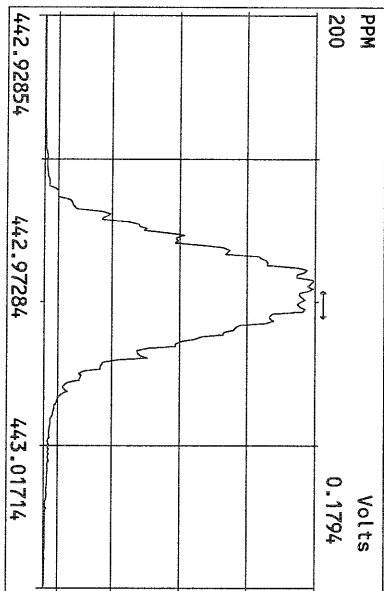
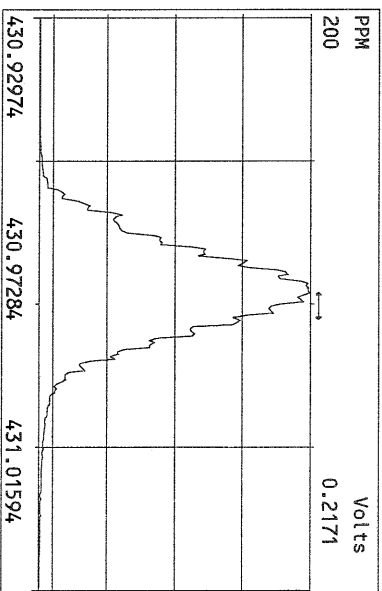
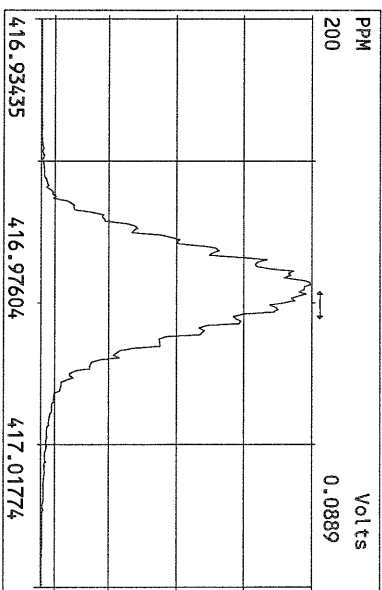
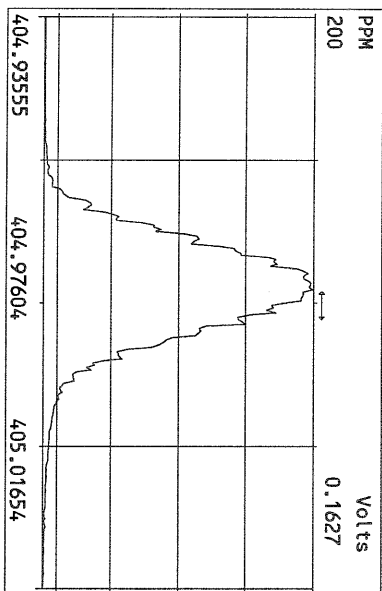
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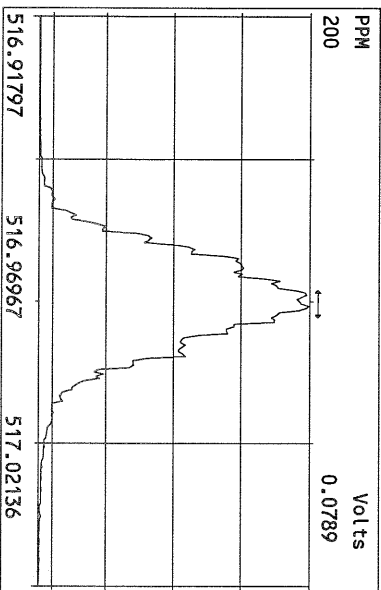
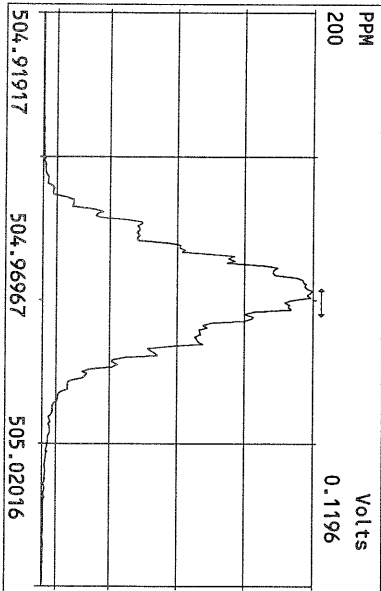
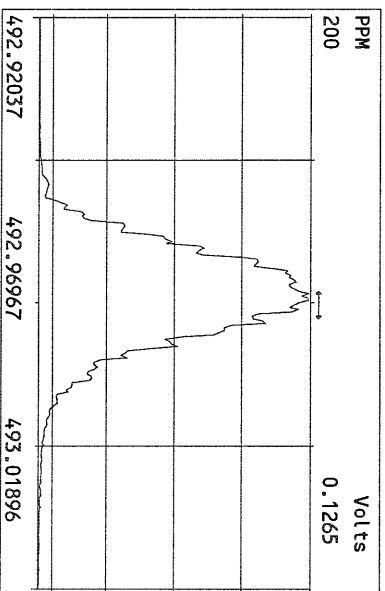
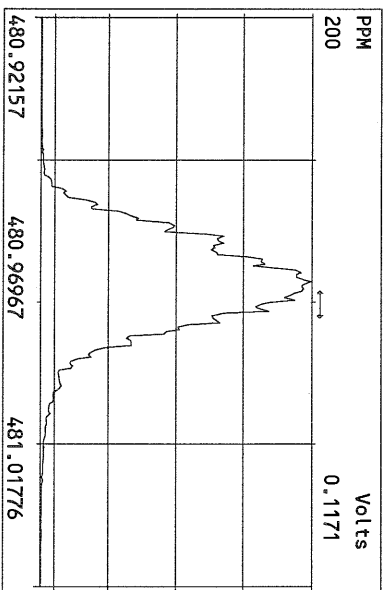
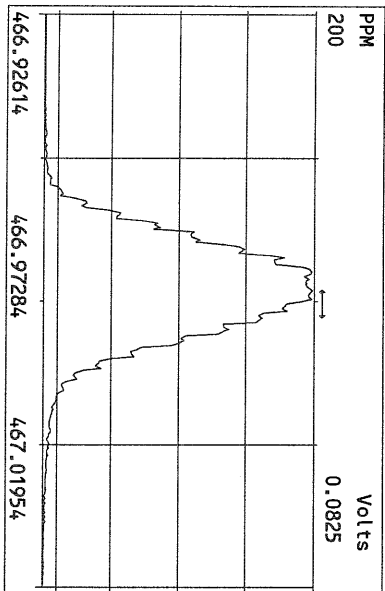
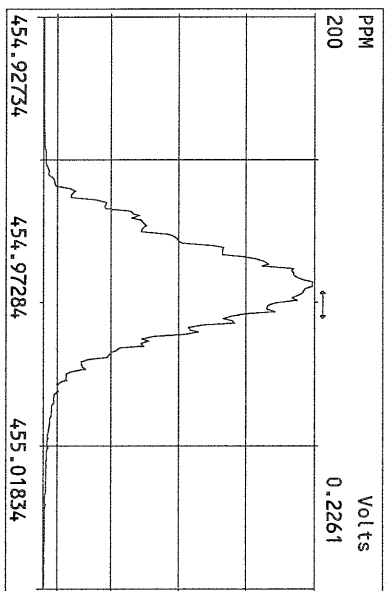
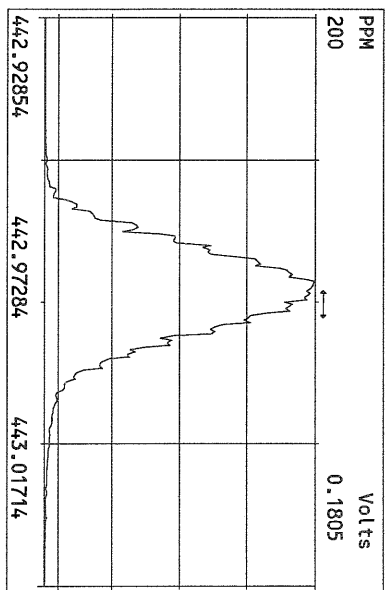
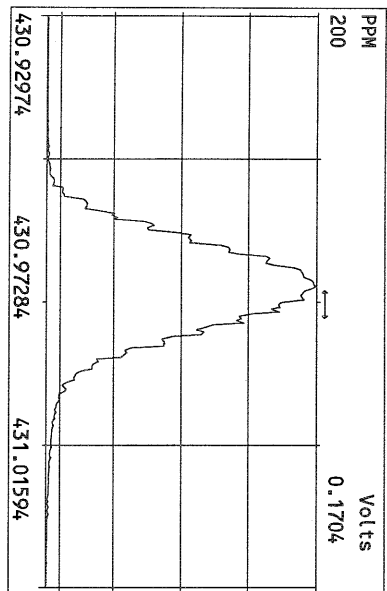
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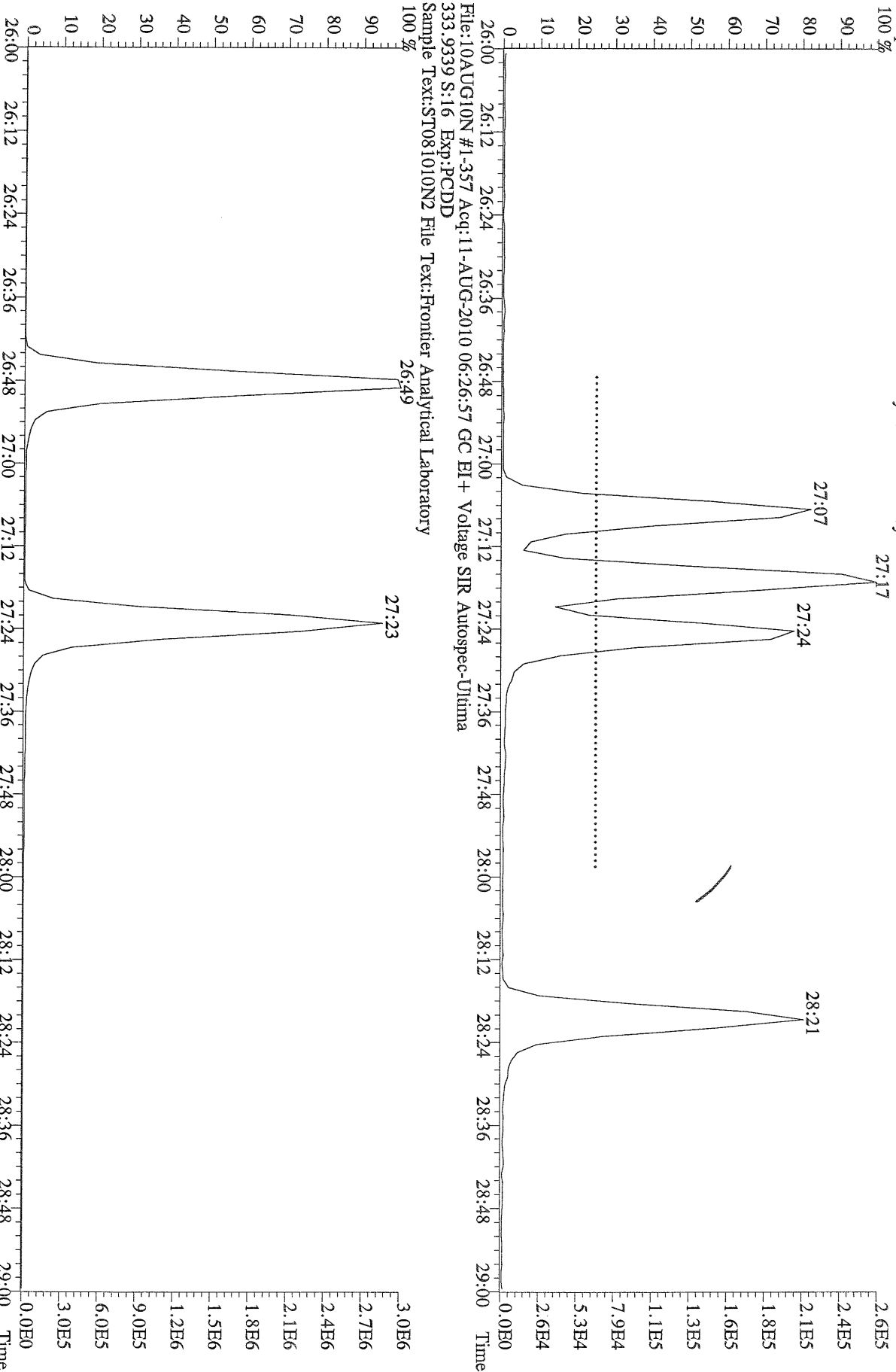






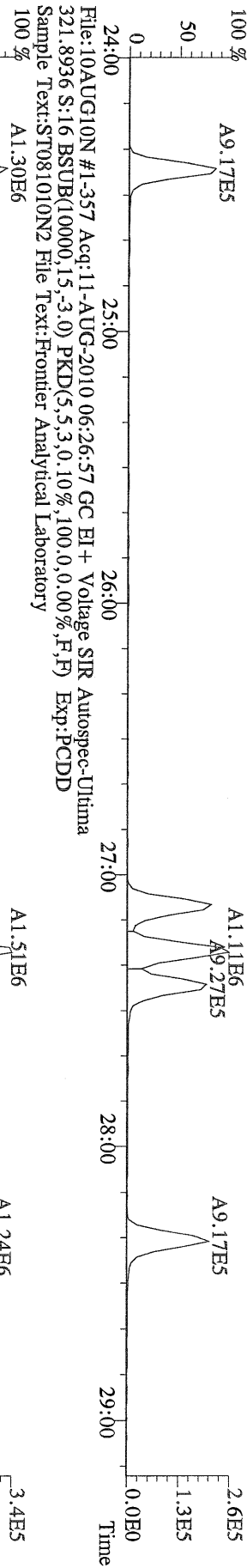


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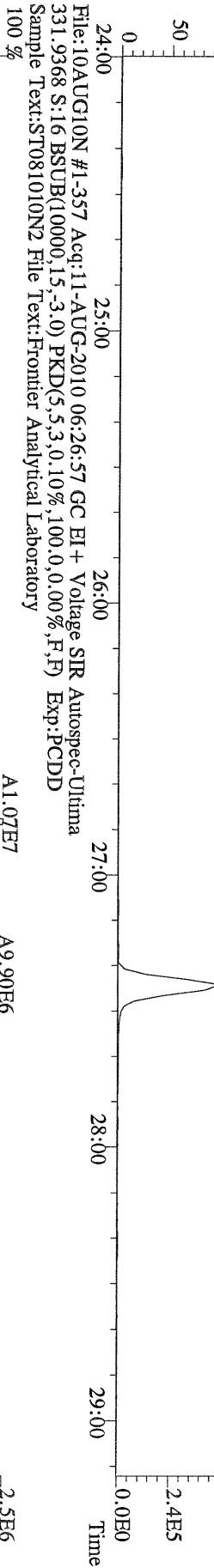


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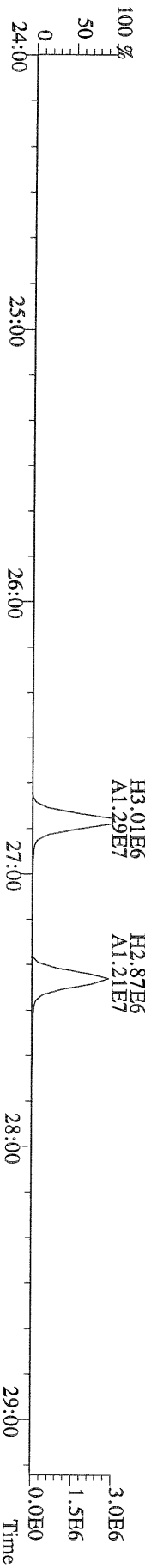
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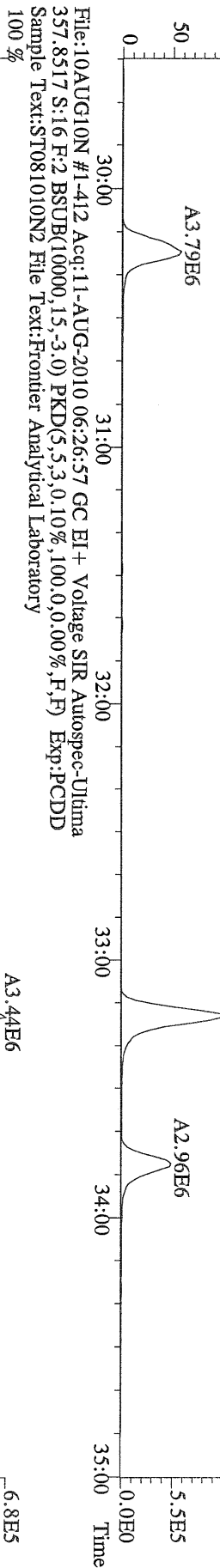
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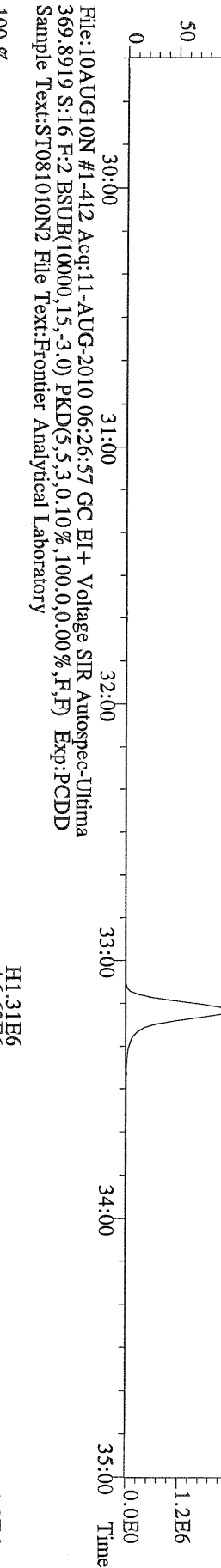
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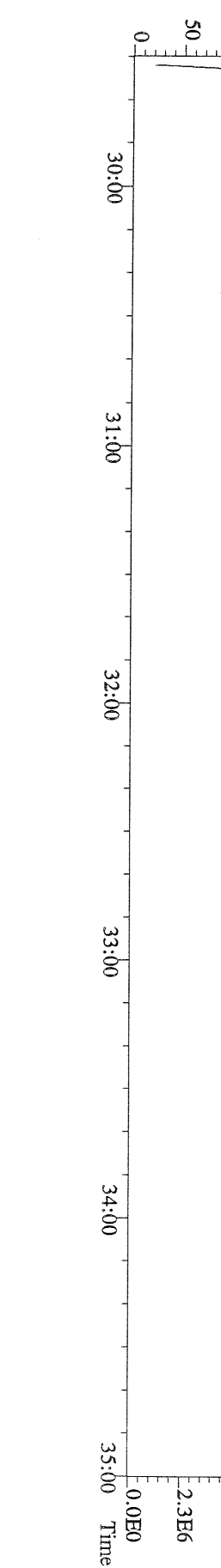
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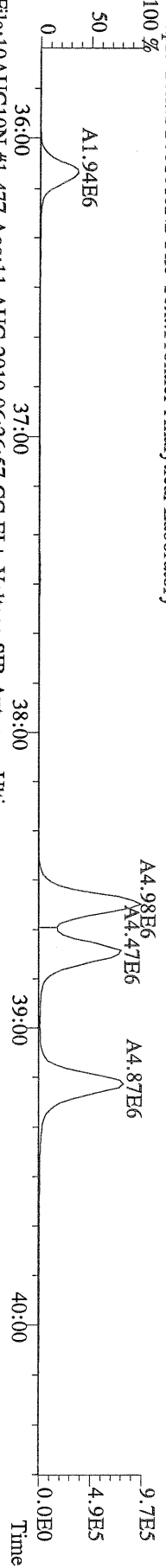
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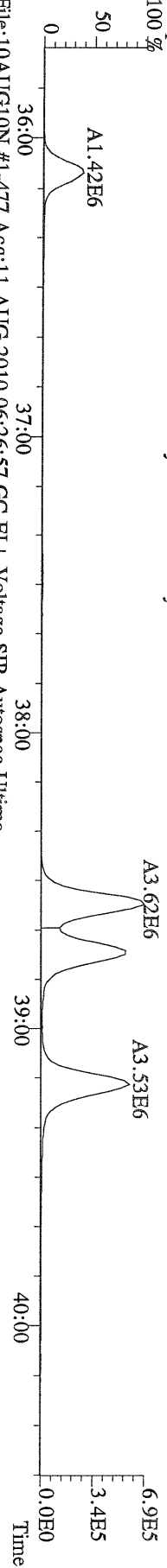
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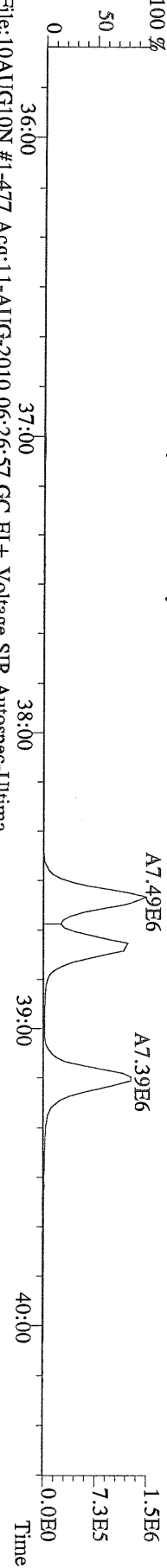
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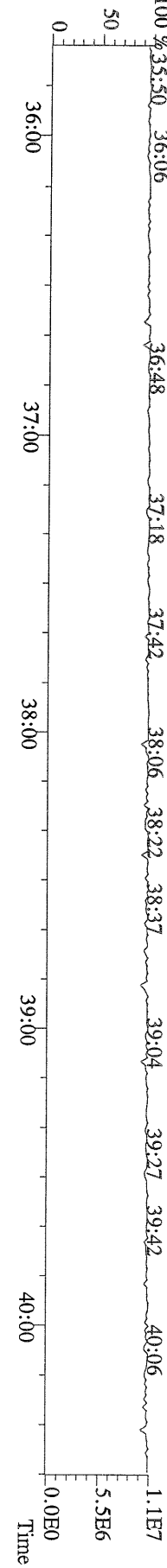
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401.8559 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
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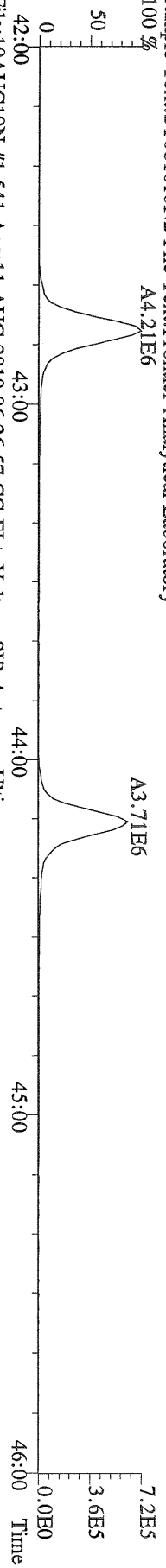
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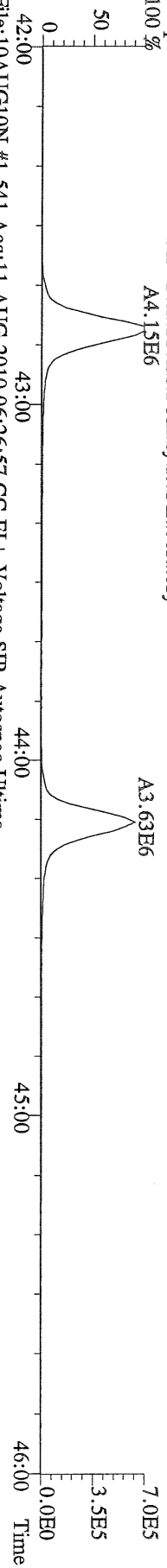
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Sample Text:ST081010N2 File Text:Frontier Analytical Laboratory



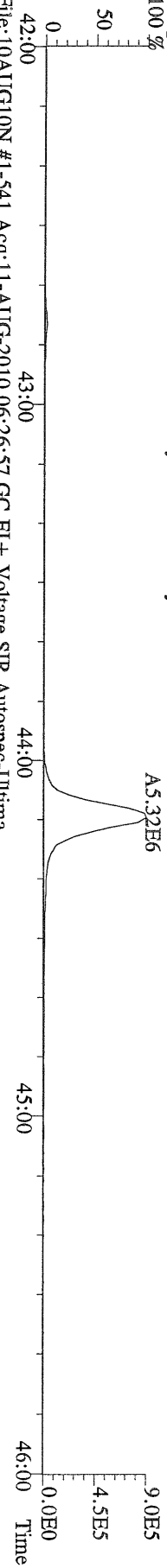
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Sample Text:ST081010N2 File Text:Frontier Analytical Laboratory



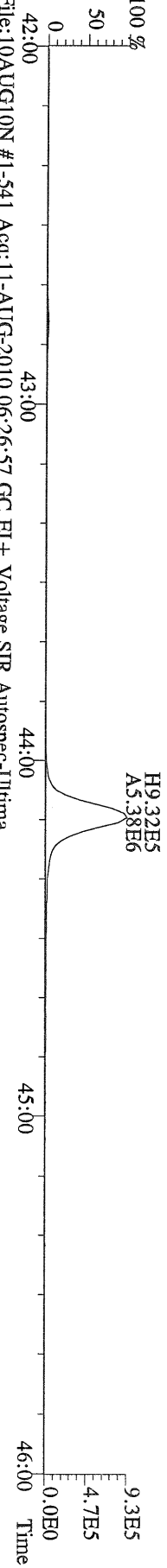
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Sample Text:ST081010N2 File Text:Frontier Analytical Laboratory



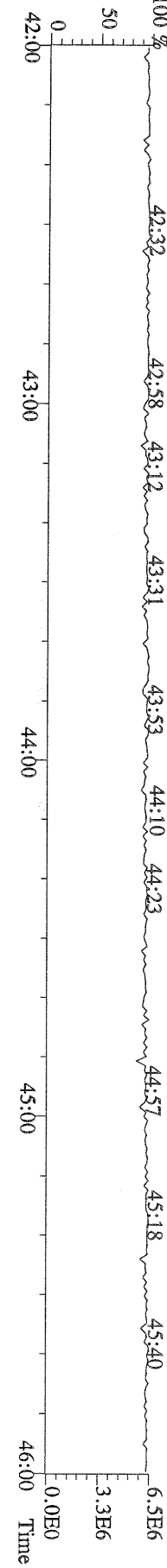
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Sample Text:ST081010N2 File Text:Frontier Analytical Laboratory



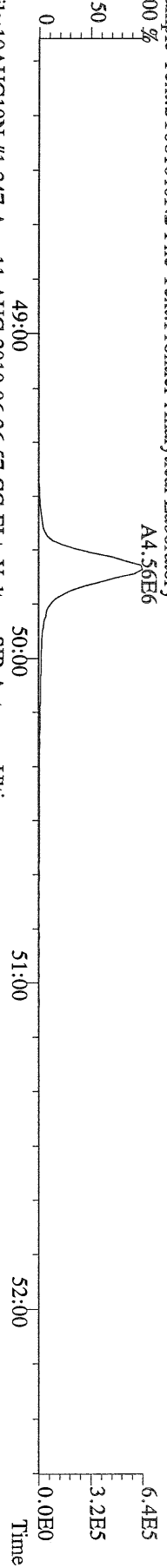
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Sample Text:ST081010N2 File Text:Frontier Analytical Laboratory



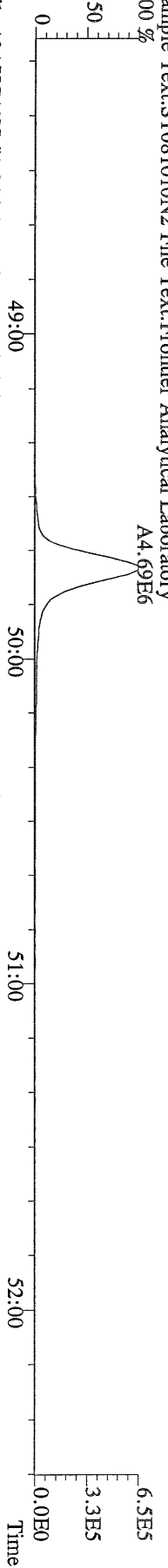
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Sample Text:ST081010N2 File Text:Frontier Analytical Laboratory



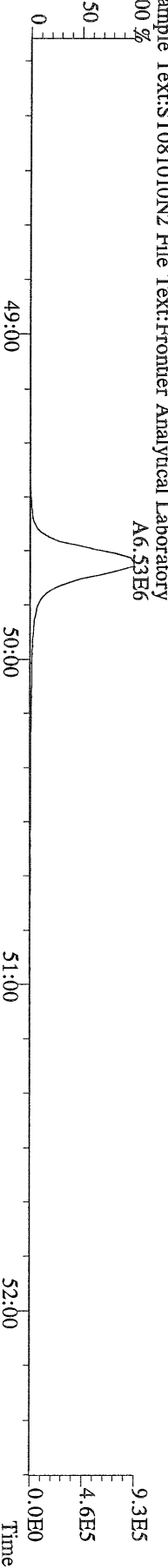
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457.7377 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081010N2 File Text:Frontier Analytical Laboratory
100 %



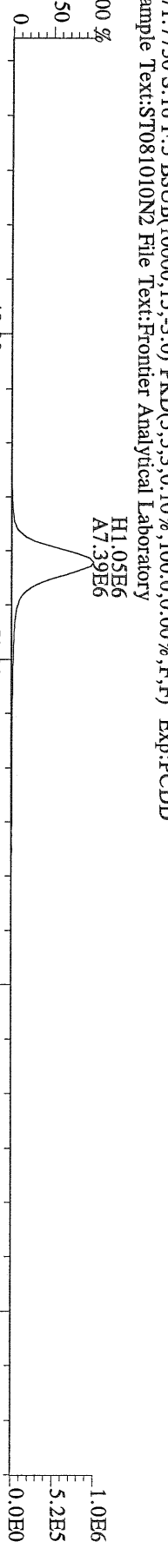
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Sample Text:ST081010N2 File Text:Frontier Analytical Laboratory
100 %



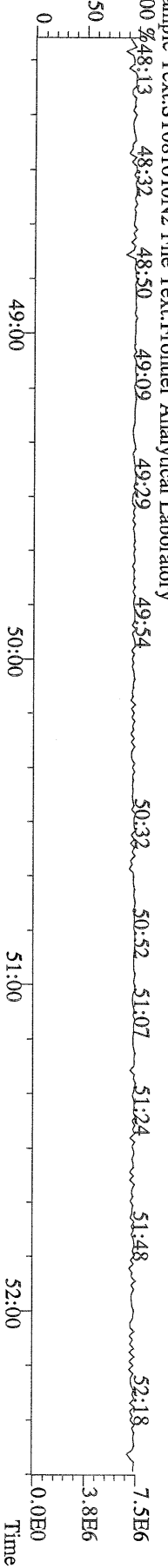
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Sample Text:ST081010N2 File Text:Frontier Analytical Laboratory
100 %



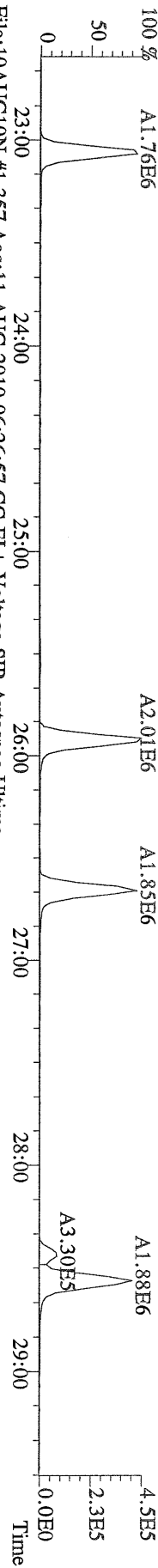
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Sample Text:ST081010N2 File Text:Frontier Analytical Laboratory



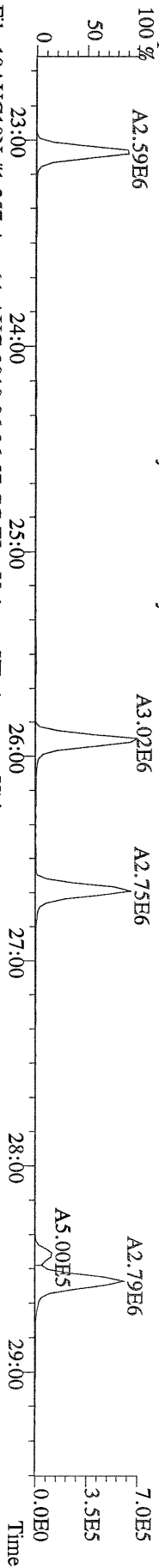
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454.9728 S:16 F:5 Exp:PCDD
Sample Text:ST081010N2 File Text:Frontier Analytical Laboratory



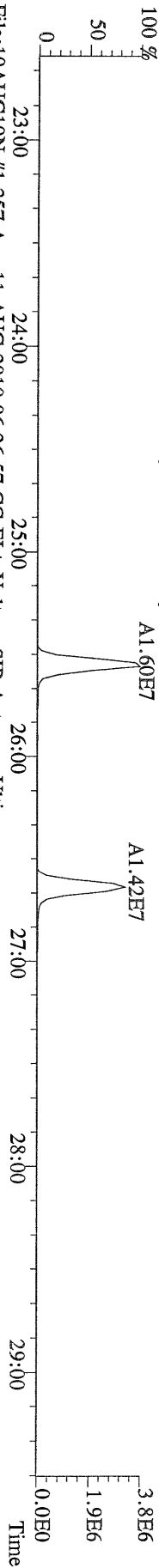
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 303.9016 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST081010N2 File Text:Frontier Analytical Laboratory



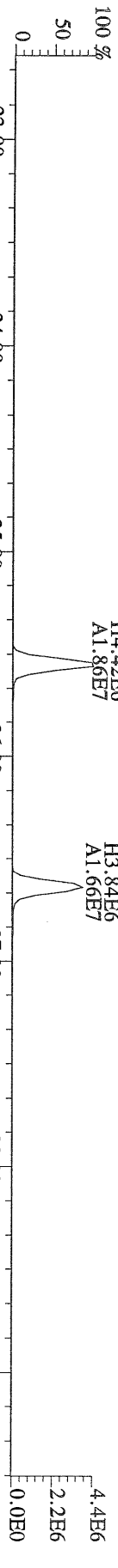
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 305.8987 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST081010N2 File Text:Frontier Analytical Laboratory



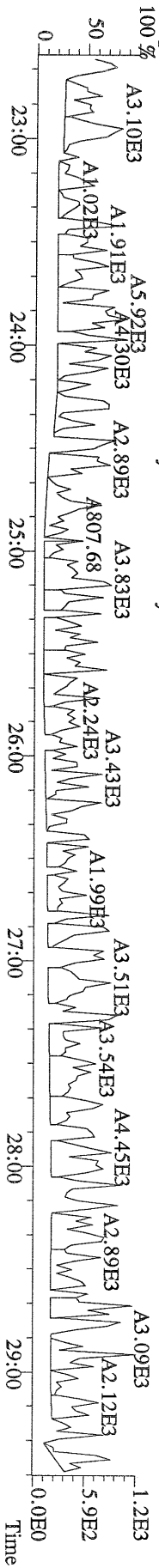
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 315.9419 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
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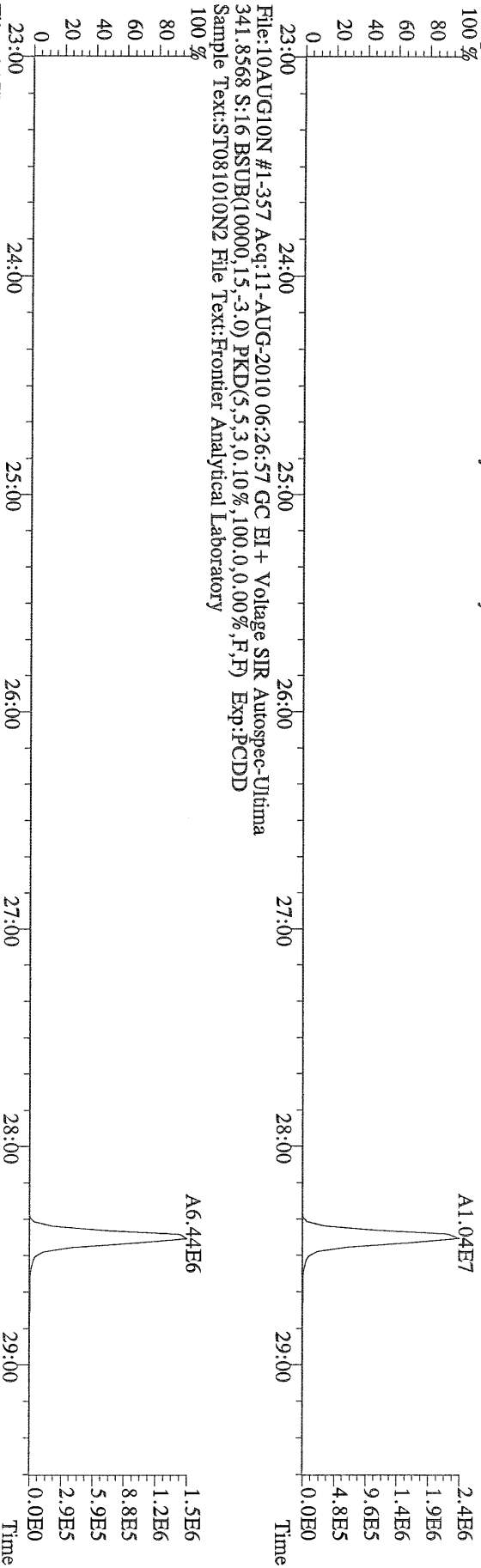
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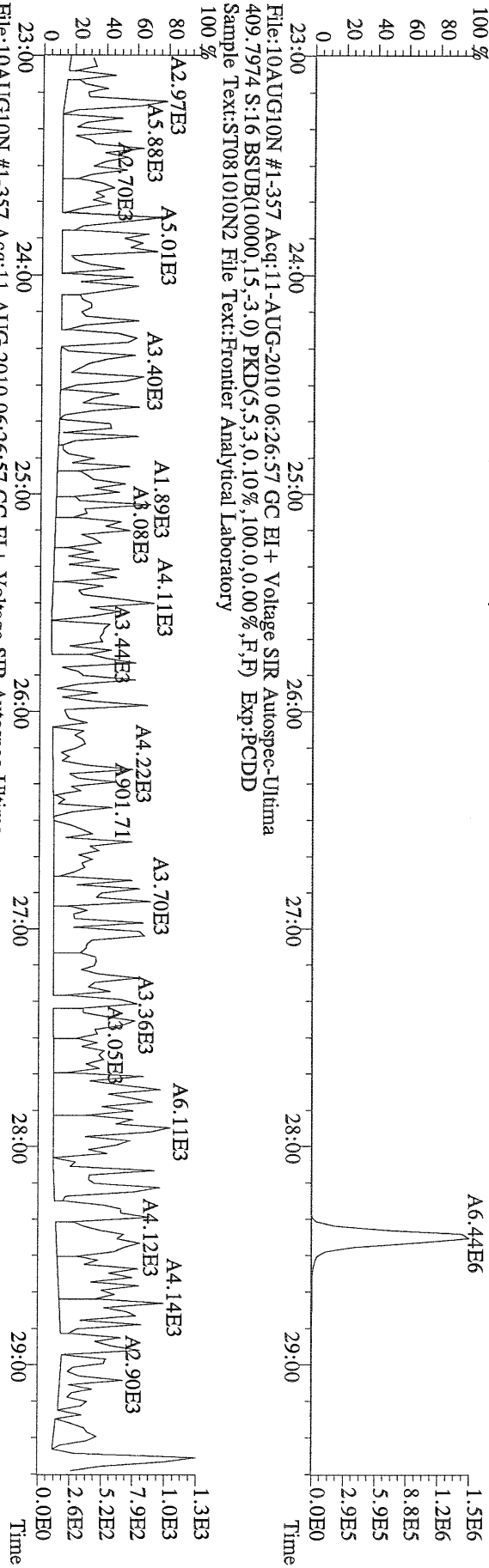
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 375.8364 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
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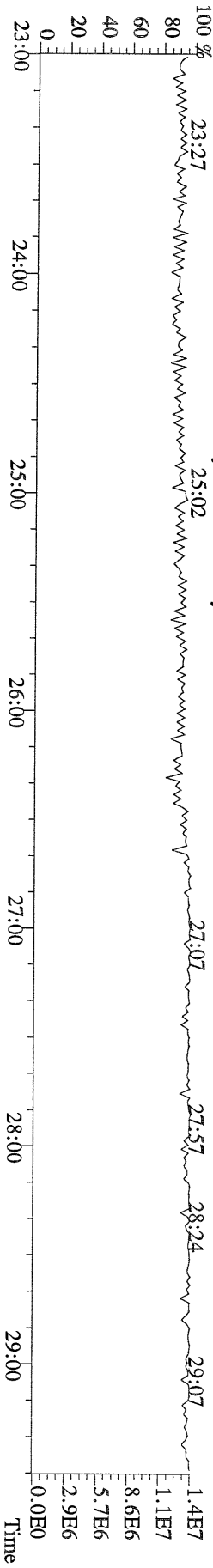
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 339.8597 S:16 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD
 Sample Text:ST081010N2 File Text:Frontier Analytical Laboratory



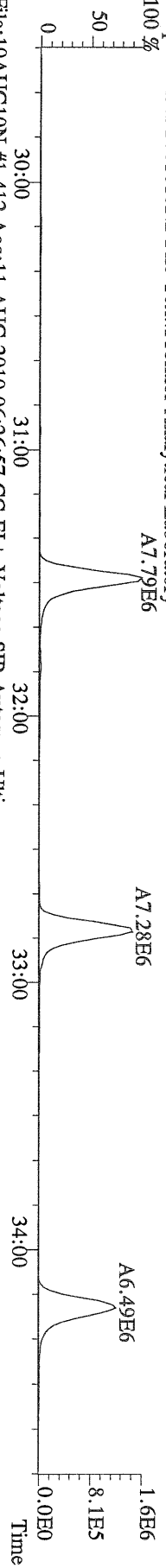
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 Sample Text:ST081010N2 File Text:Frontier Analytical Laboratory



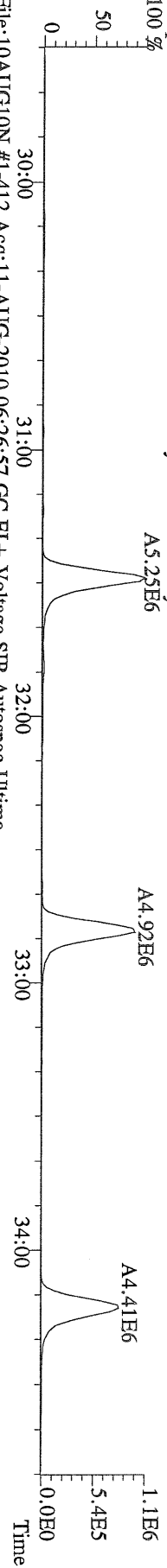
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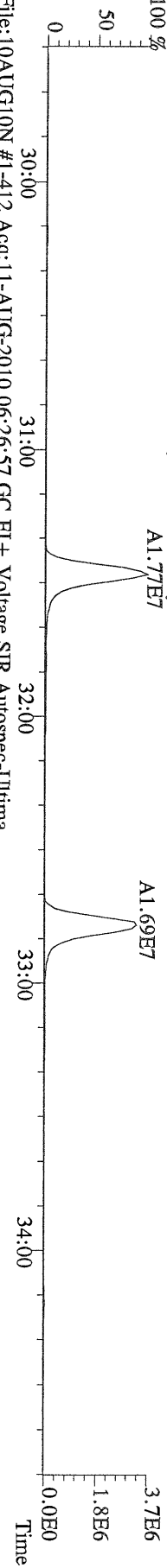
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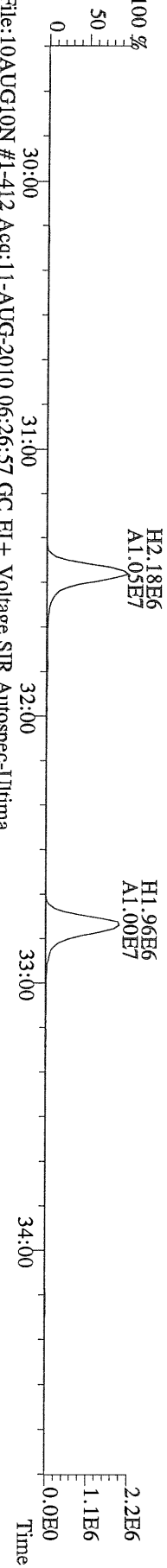
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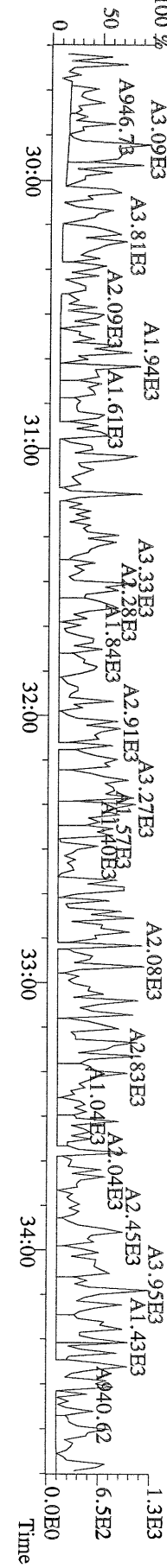
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 351.9000 S:16 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
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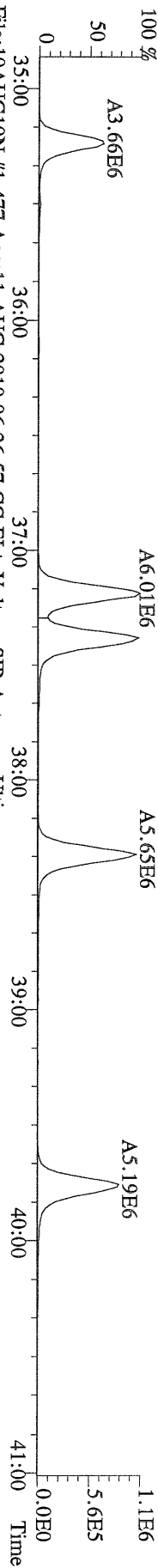
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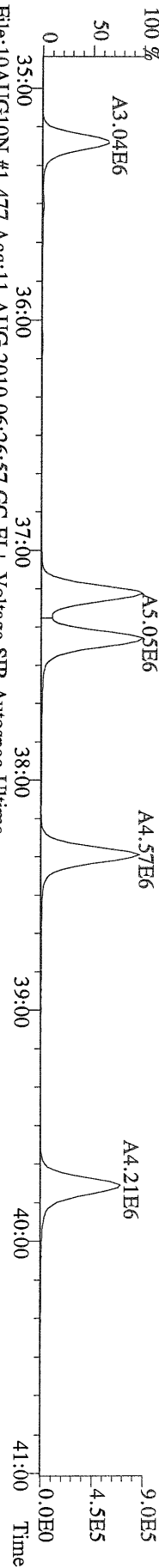
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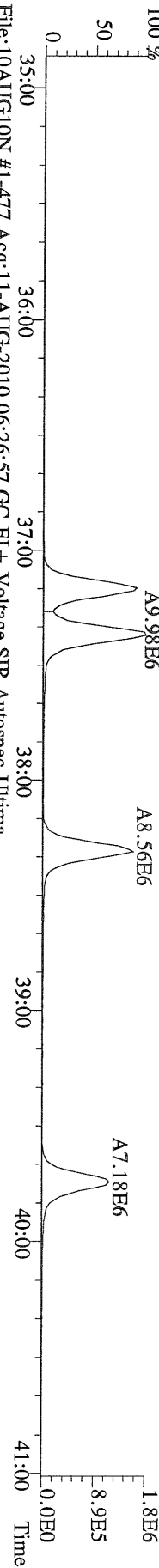
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 373.8207 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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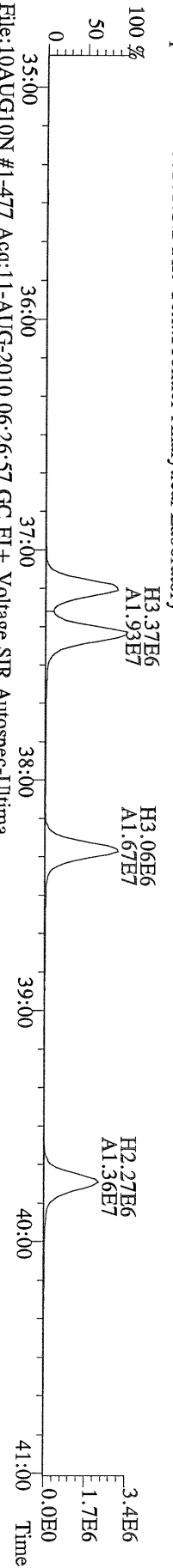
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 375.8178 S:16 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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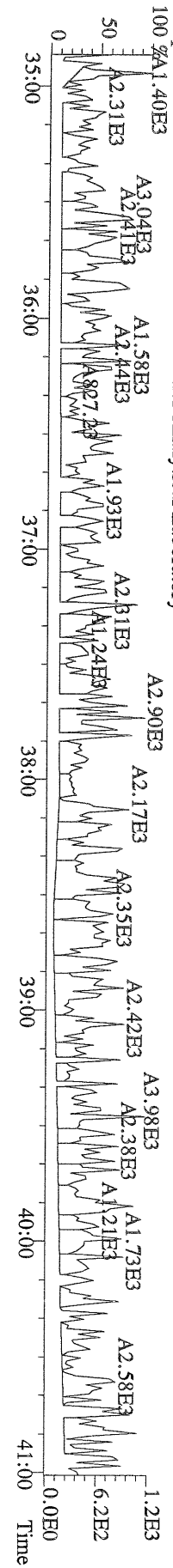
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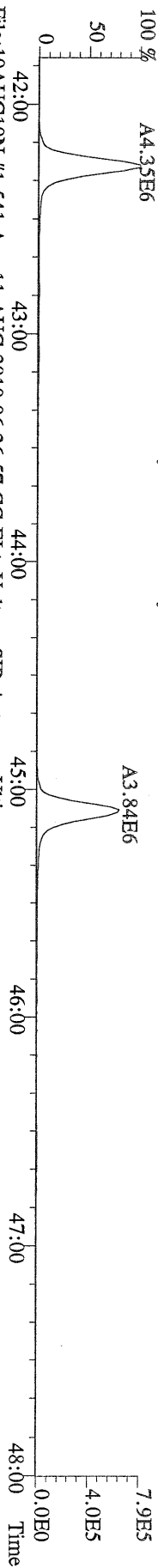
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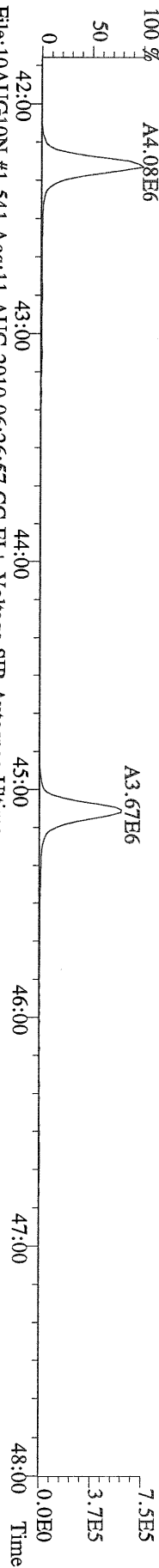
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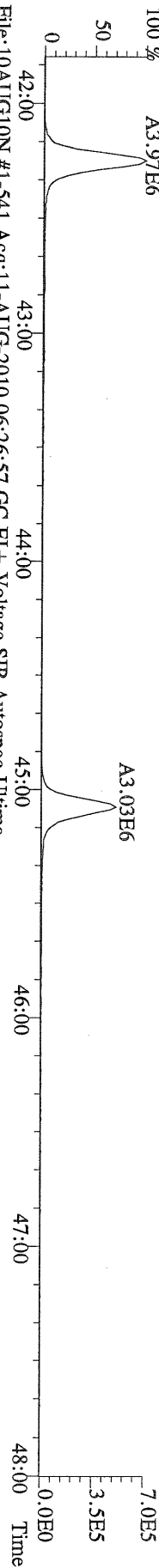
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407.7818 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
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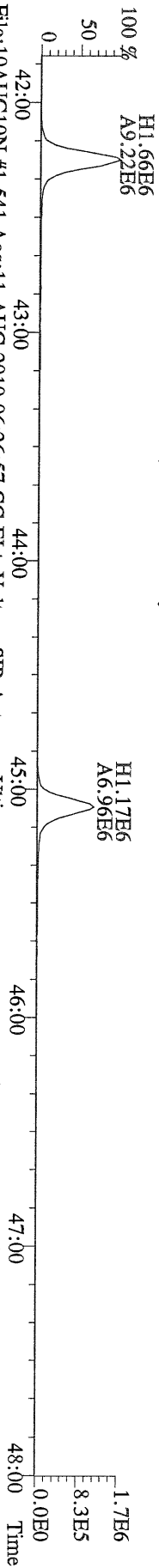
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409.7788 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
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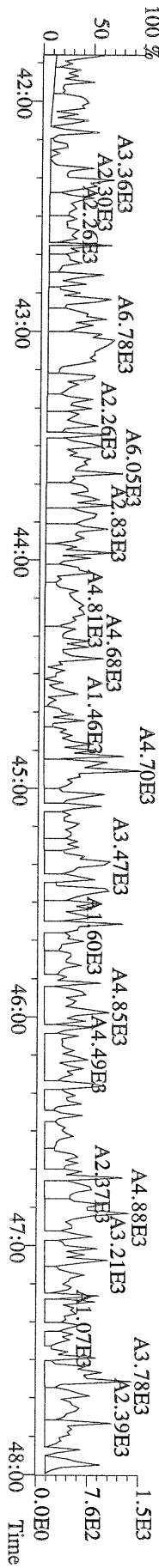
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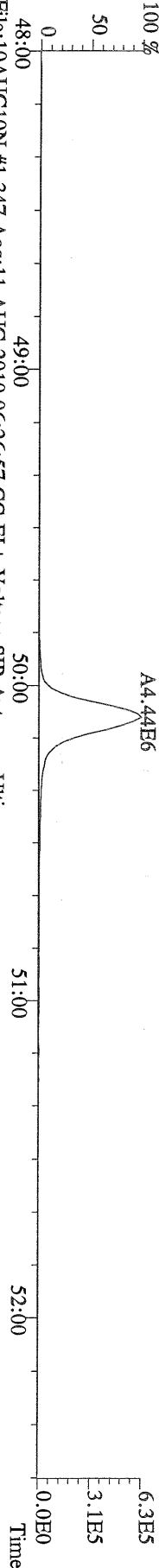
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419.8220 S:16 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
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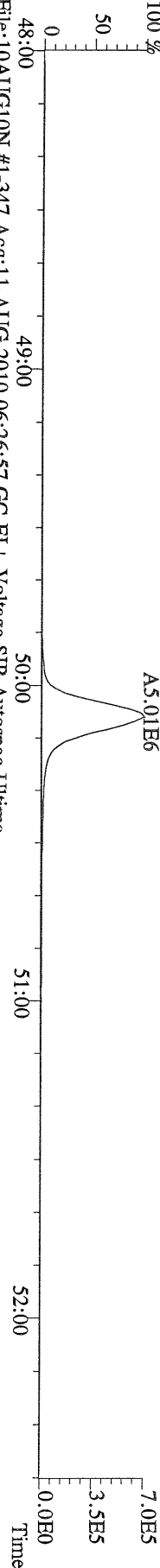
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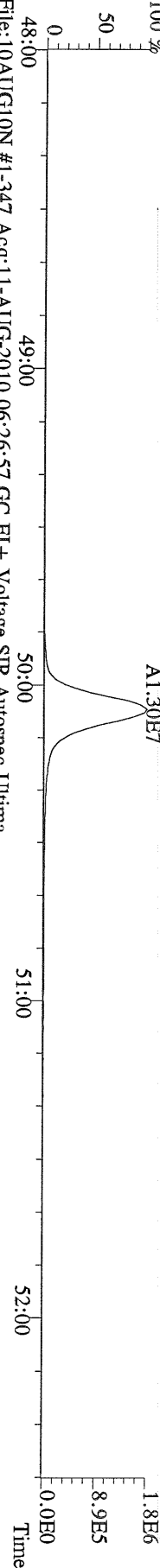
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441.7428 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0,0.00%,F,F) Exp.:PCDD
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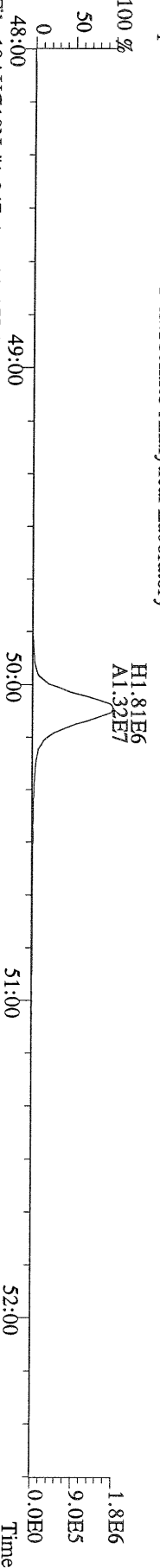
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Sample Text:ST081010N2 File Text:Frontier Analytical Laboratory



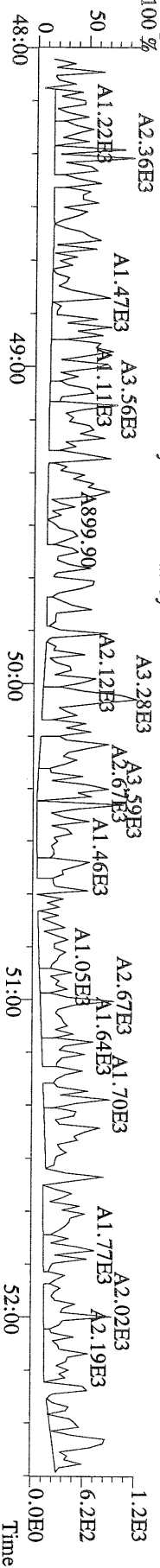
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453.7831 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0,0.00%,F,F) Exp.:PCDD
Sample Text:ST081010N2 File Text:Frontier Analytical Laboratory

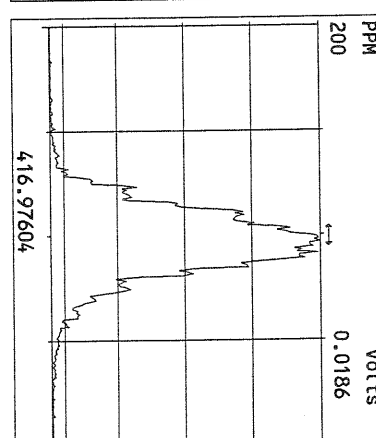
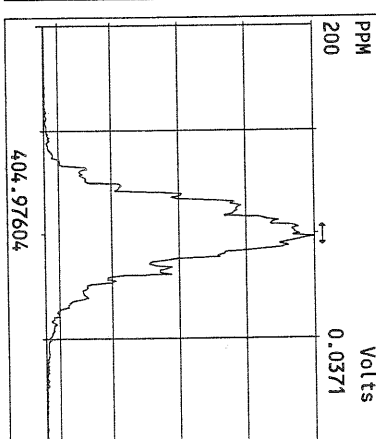
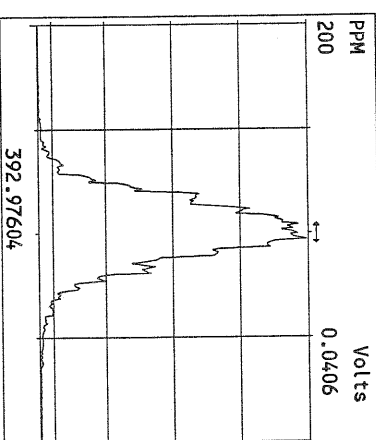
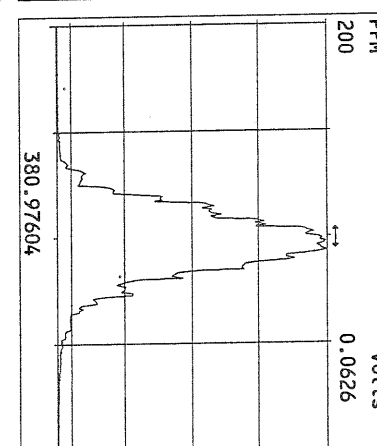
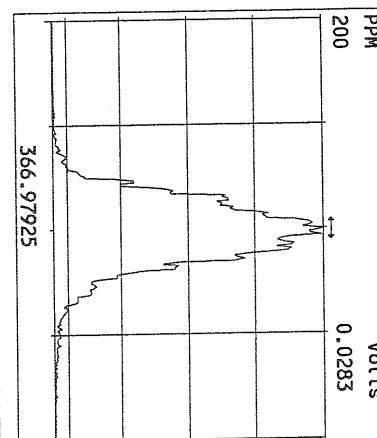
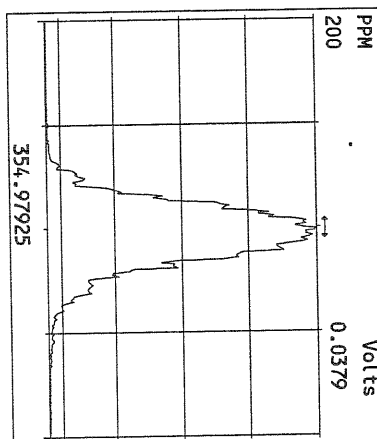
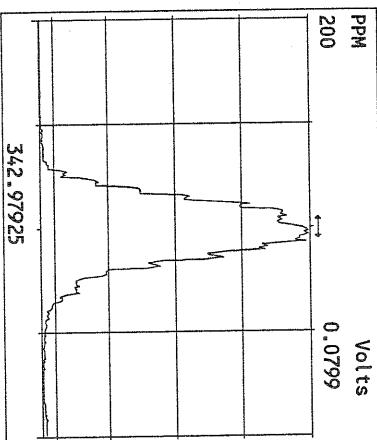
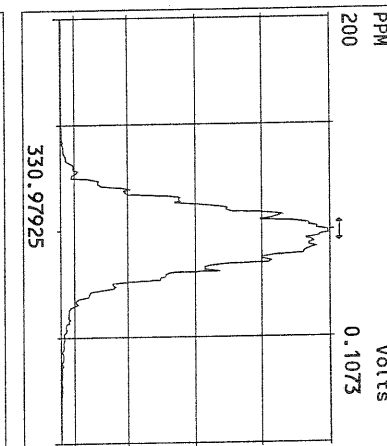
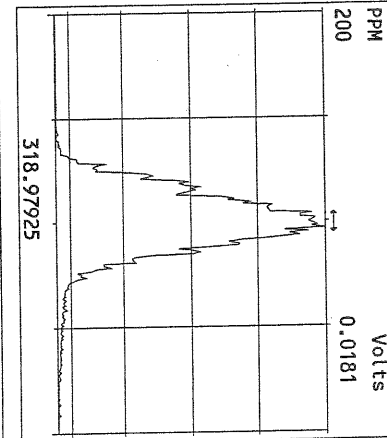
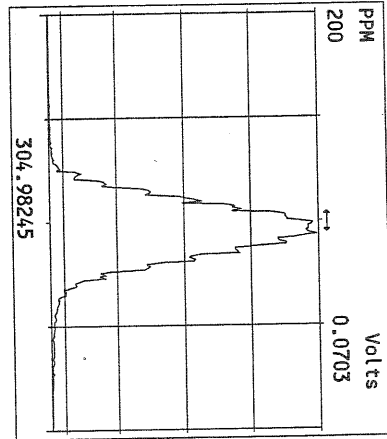
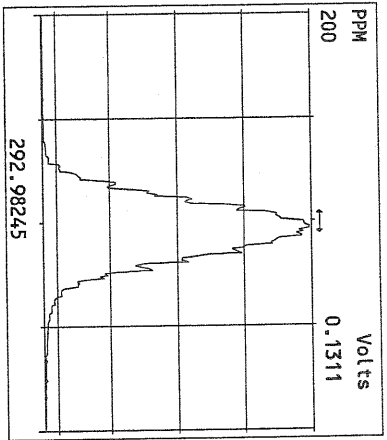


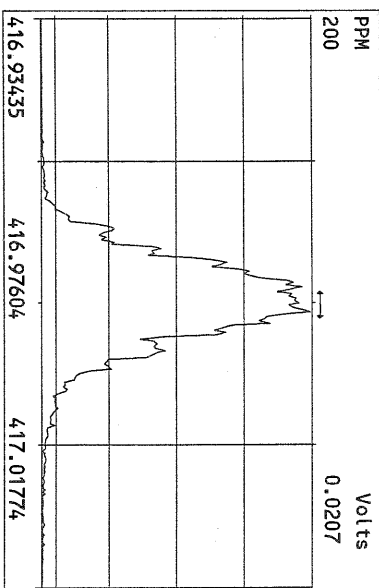
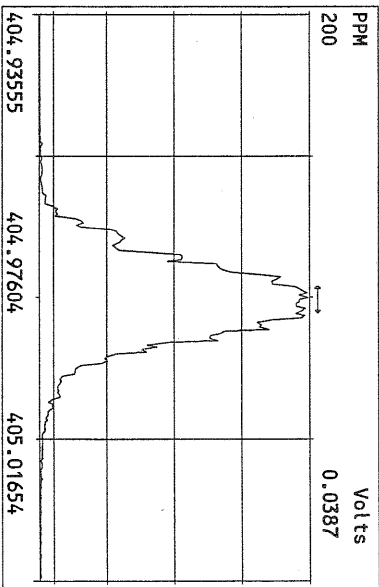
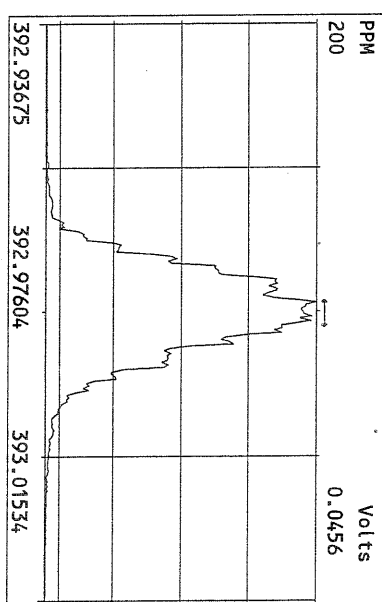
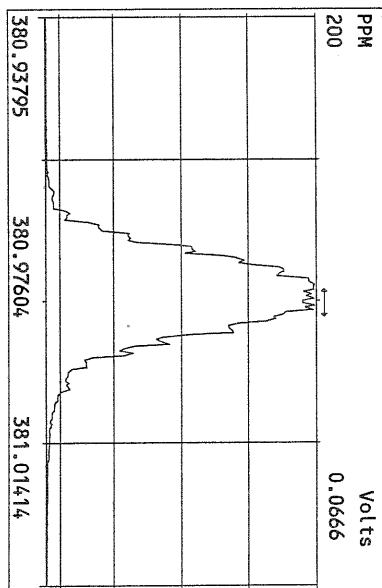
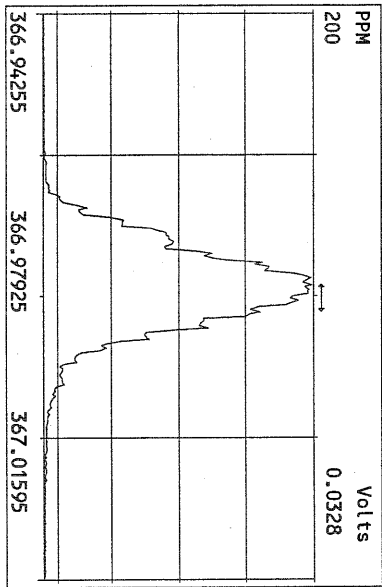
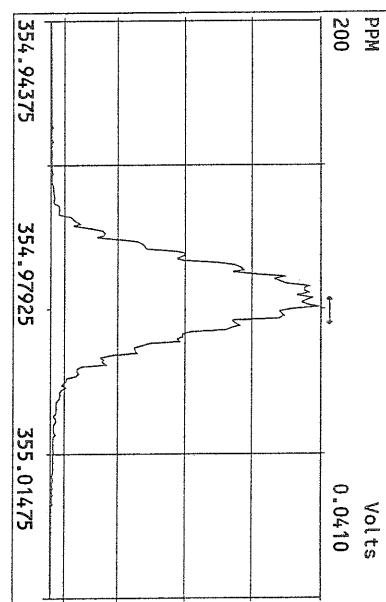
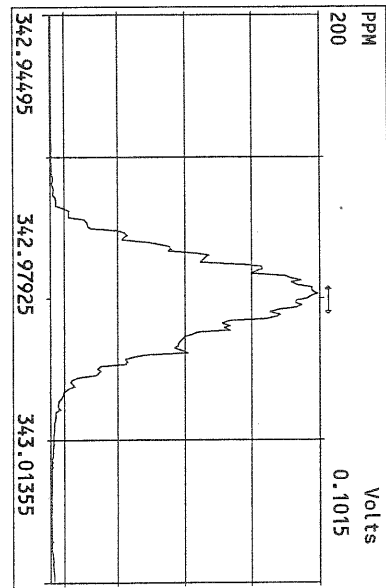
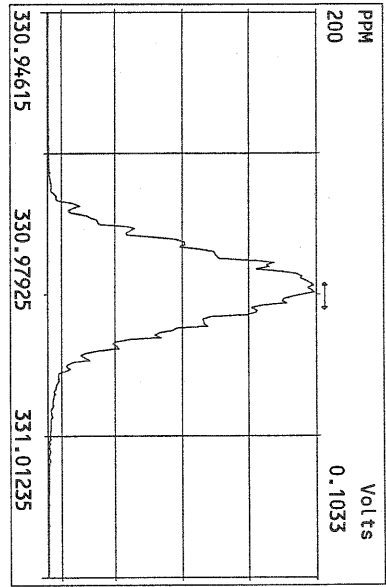
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Sample Text:ST081010N2 File Text:Frontier Analytical Laboratory

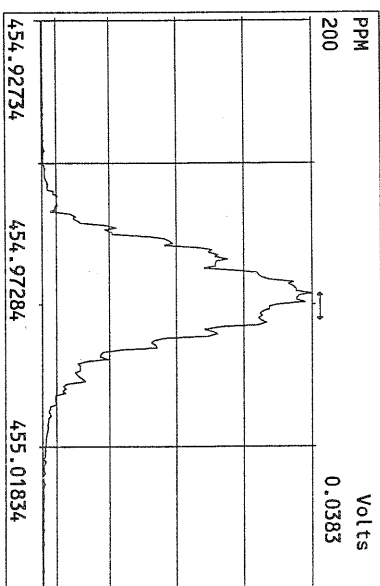
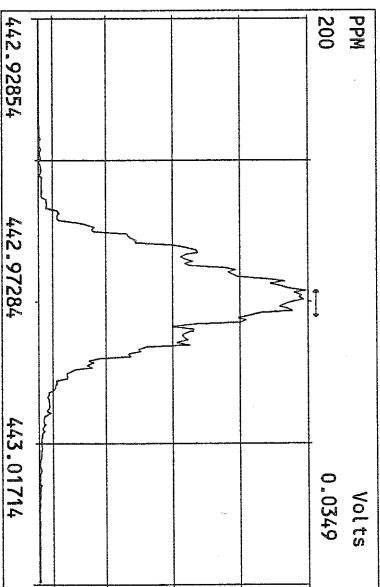
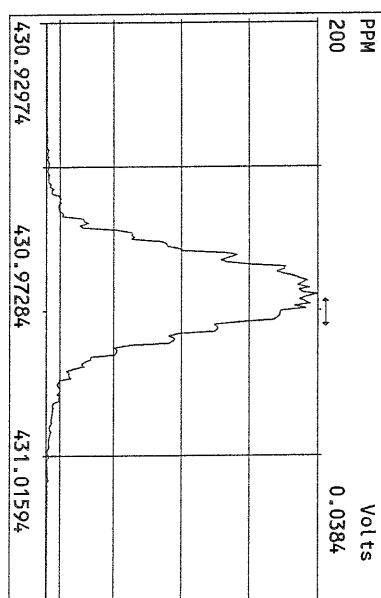
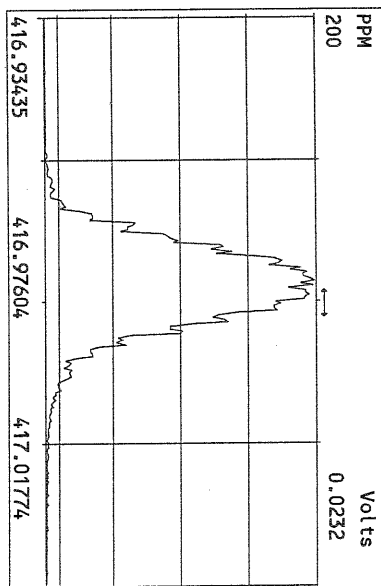
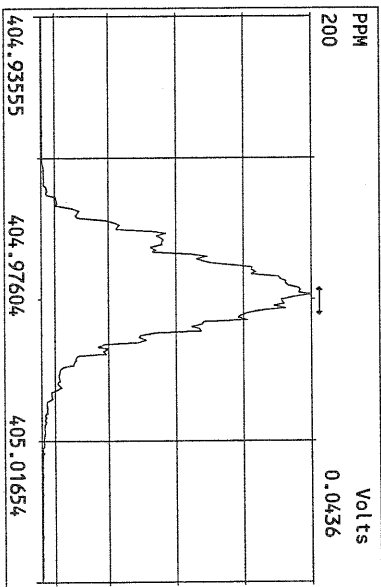
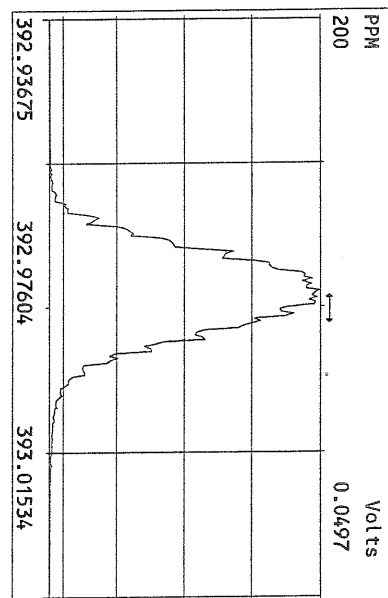
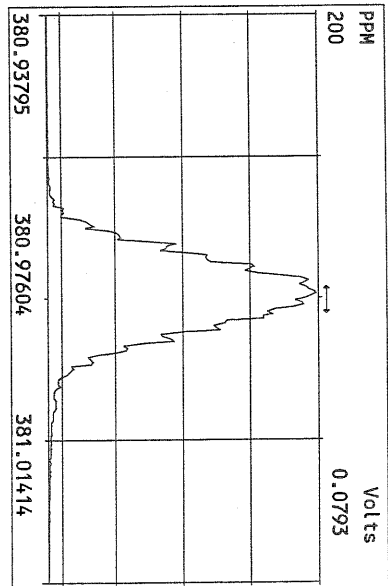
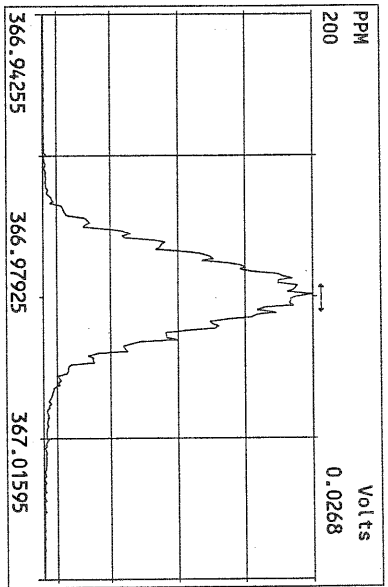


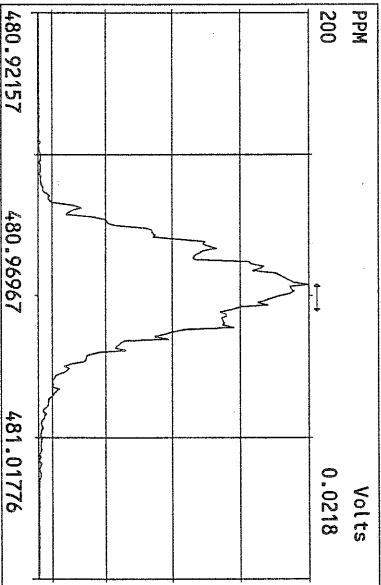
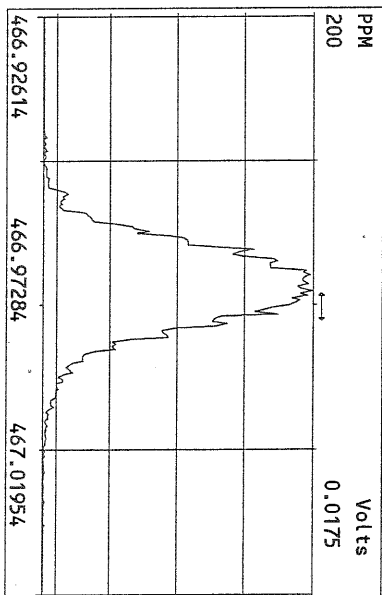
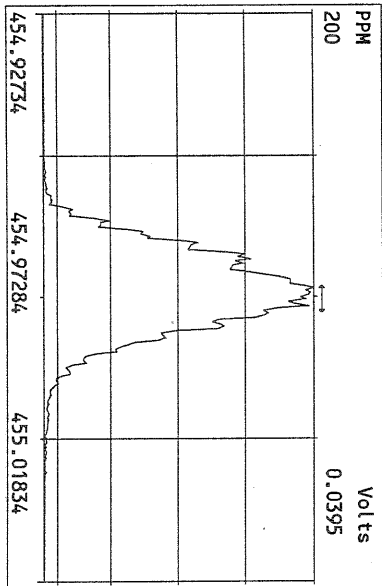
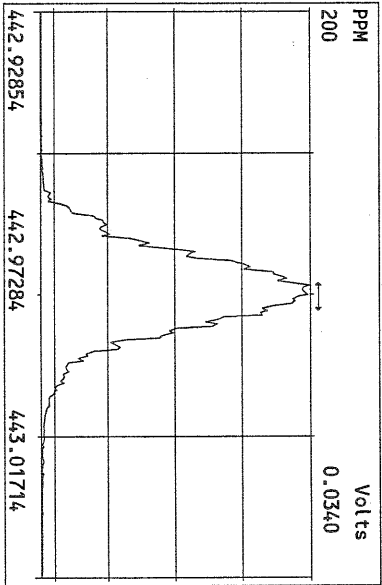
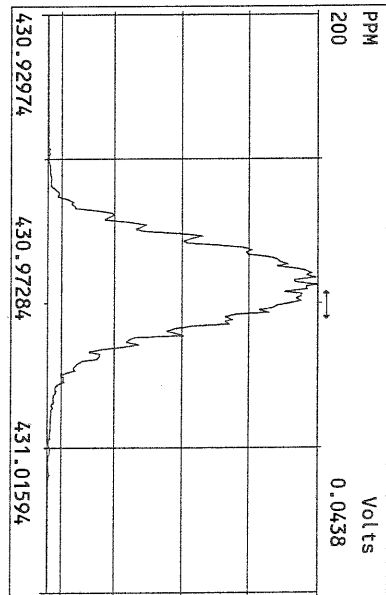
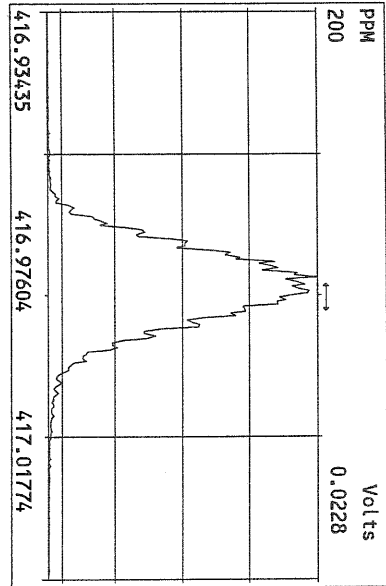
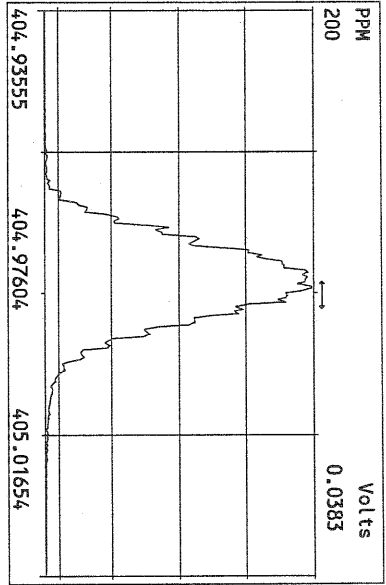
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513.6775 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0,0.00%,F,F) Exp.:PCDD
Sample Text:ST081010N2 File Text:Frontier Analytical Laboratory

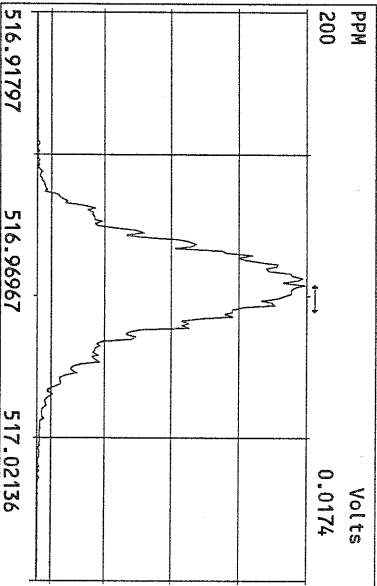
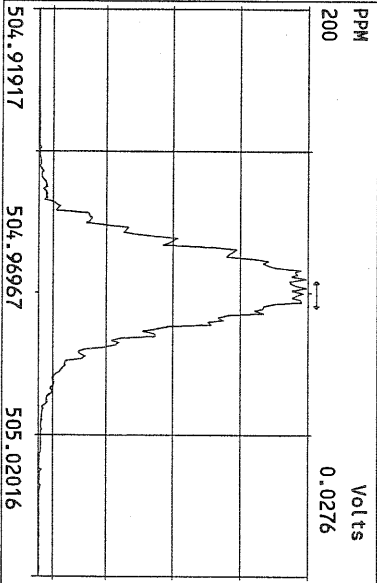
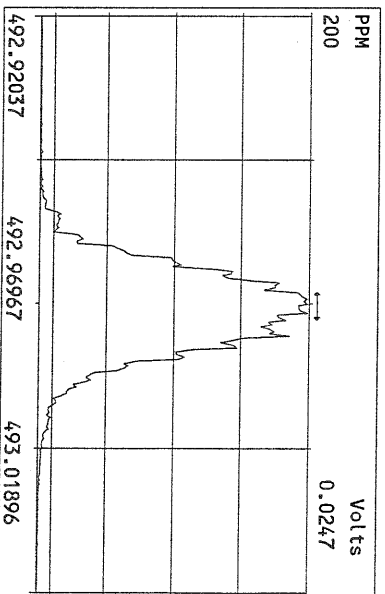
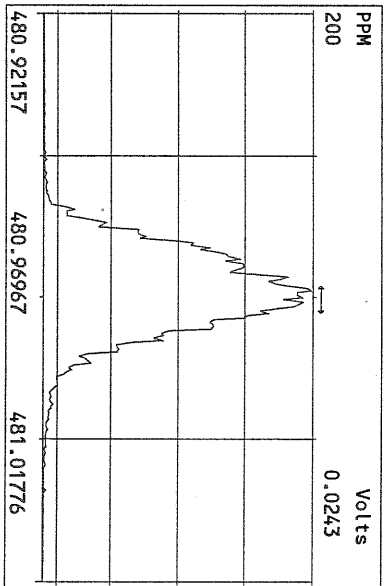
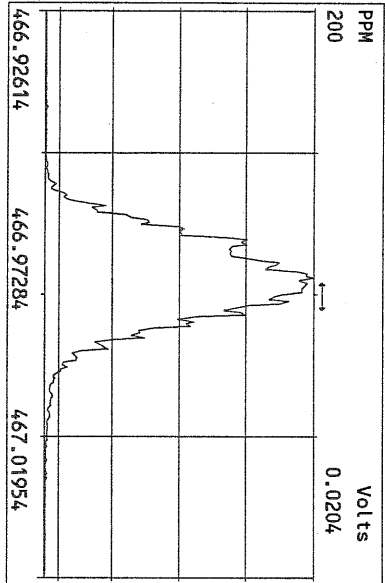
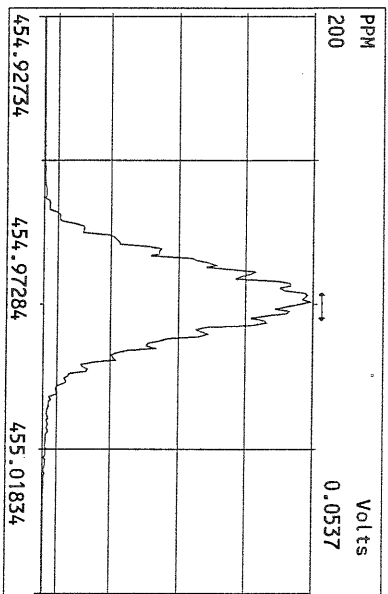
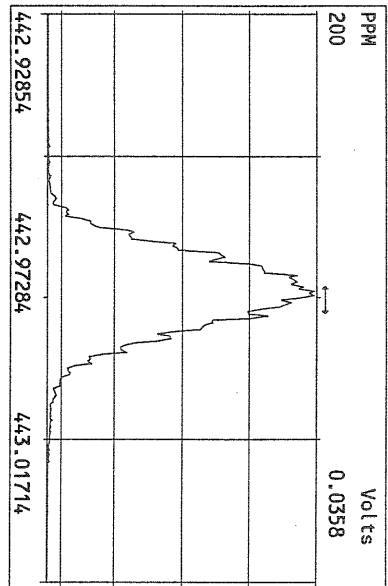
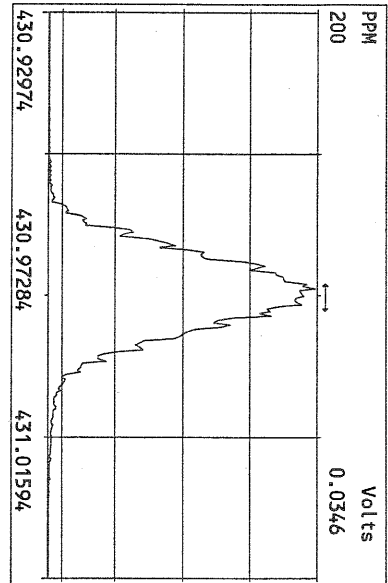












USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 5/12/10

Instrument ID: FAL3

GC Column ID: DB5

VER Data Filename: 11AUG10M Sam:1

Analysis Date: 11-AUG-10 09:36:02

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
NATIVE ANALYTES						
2,3,7,8-TCDD	M/M+2	0.70	0.65-0.89	y	10.7	7.80 - 12.9 ✓
1,2,3,7,8-PeCDD	M+2/M+4	1.60	1.32-1.78	y	51.7	39.0 - 65.0 ✓
1,2,3,4,7,8-HxCDD	M+2/M+4	1.39	1.05-1.43	y	54.5	39.0 - 64.0 ✓
1,2,3,6,7,8-HxCDD	M+2/M+4	1.38	1.05-1.43	y	53.3	39.0 - 64.0 ✓
1,2,3,7,8,9-HxCDD	M+2/M+4	1.38	1.05-1.43	y	54.0	41.0 - 61.0 ✓
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.00	0.88-1.20	y	52.2	43.0 - 58.0 ✓
OCDD	M+2/M+4	0.97	0.76-1.02	y	111	79.0 - 126 ✓
2,3,7,8-TCDF	M/M+2	0.68	0.65-0.89	y	10.2	8.40 - 12.0 ✓
1,2,3,7,8-PeCDF	M+2/M+4	1.50	1.32-1.78	y	53.6	41.0 - 60.0 ✓
2,3,4,7,8-PeCDF	M+2/M+4	1.49	1.32-1.78	y	51.0	41.0 - 60.0 ✓
1,2,3,4,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	48.0	45.0 - 56.0 ✓
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	y	48.6	44.0 - 57.0 ✓
2,3,4,6,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	48.8	44.0 - 57.0 ✓
1,2,3,7,8,9-HxCDF	M+2/M+4	1.26	1.05-1.43	y	49.4	45.0 - 56.0 ✓
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.06	0.88-1.20	y	48.8	45.0 - 55.0 ✓
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.06	0.88-1.20	y	48.7	43.0 - 58.0 ✓
OCDF	M+2/M+4	0.87	0.76-1.02	y	96.8	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: 

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:1

Analysis Date: 11-AUG-10 09:36:02

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
13C-2,3,7,8-TCDD	M/M+2	0.83	0.65-0.89	y	101	82.0 - 121 ✓
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.74	1.32-1.78	y	109	62.0 - 160 ✓
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	109	85.0 - 117 ✓
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	97.9	85.0 - 118 ✓
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	0.99	0.88-1.20	y	106	72.0 - 138 ✓
13C-OCDD	M+2/M+4	0.92	0.76-1.02	y	219	96.0 - 415 ✓
13C-2,3,7,8-TCDF	M/M+2	0.88	0.65-0.89	y	102	71.0 - 140 ✓
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.68	1.32-1.78	y	98.1	76.0 - 130 ✓
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.68	1.32-1.78	y	101	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	115	70.0 - 143 ✓
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	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	123	74.0 - 135 ✓
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.43	0.37-0.51	y	112	78.0 - 129 ✓
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.43	0.37-0.51	y	121	77.0 - 129 ✓
13C-OCDF	M+2/M+4	0.97	0.76-1.02	y	244	96.0 - 415 ✓
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					9.68	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

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: 11-AUG-10 09:36:02

CS3 or VER Data Filename: 11AUG10M

Sam:1

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002 ✓
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003 ✓
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002 ✓
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002 ✓
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	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		1.021	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		1.224	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: 11-AUG-10 09:36:02

CS3 or VER Data Filename: 11AUG10M

Sam:1

NATIVE ANALYTES	RETENTION TIME	RRT	RRT
	REFERENCE		QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	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	1.000	0.999-1.001 ✓
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001 ✓
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999-1.001 ✓
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001 ✓
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	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	0.985	0.977-1.000 ✓
13C-1,2,3,6,7,8-HxCDD		0.989	0.981-1.003 ✓
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970 ✓
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975 ✓
13C-2,3,4,6,7,8-HxCDF		0.978	0.959-1.021 ✓
13C-1,2,3,7,8,9-HxCDF		1.015	0.977-1.047 ✓
13C-1,2,3,4,6,7,8-HpCDD		1.127	1.086-1.130 ✓
13C-1,2,3,4,6,7,8-HpCDF		1.079	1.043-1.085 ✓
13C-1,2,3,4,7,8,9-HpCDF		1.151	1.057-1.154 ✓
13C-OCDD		1.269	1.032-1.311 ✓
13C-OCDF		1.278	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

Frontier Analytical Laboratory - Acquisition Log

Run Name:11AUG10M

Instrument: FAL3

GC: DB5

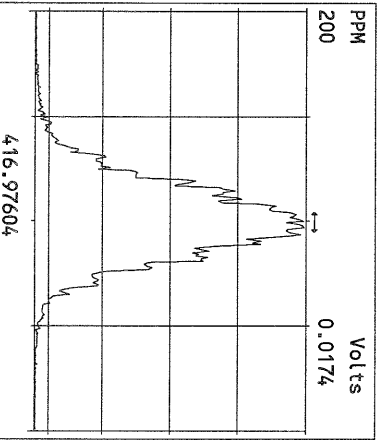
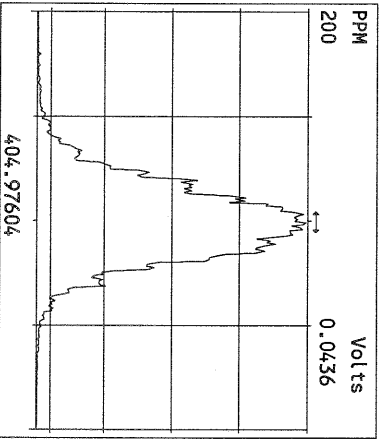
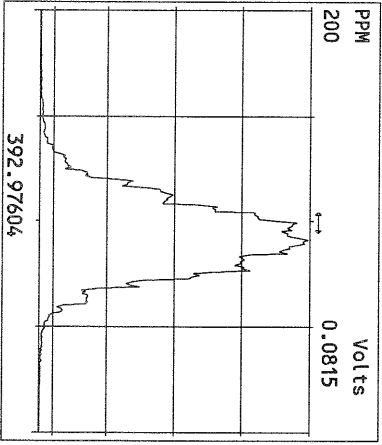
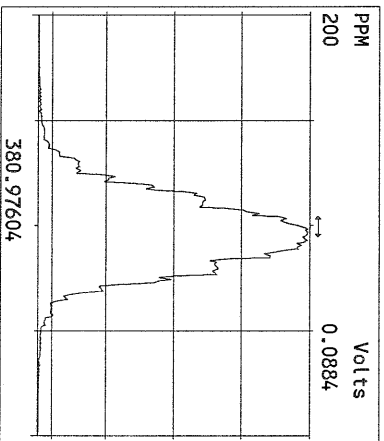
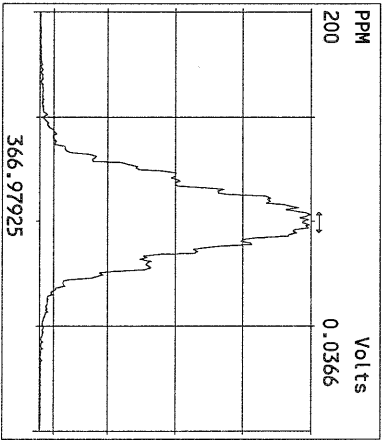
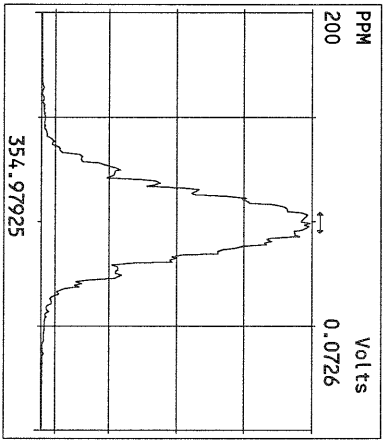
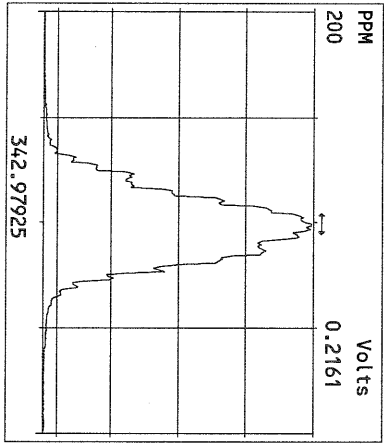
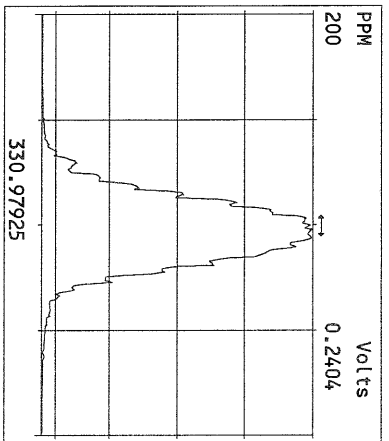
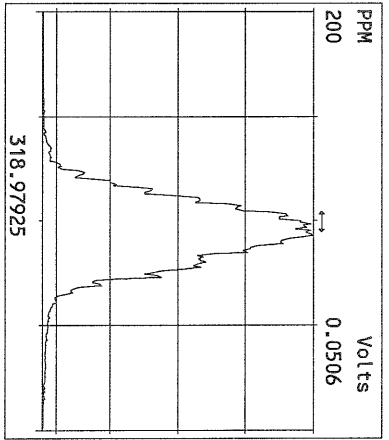
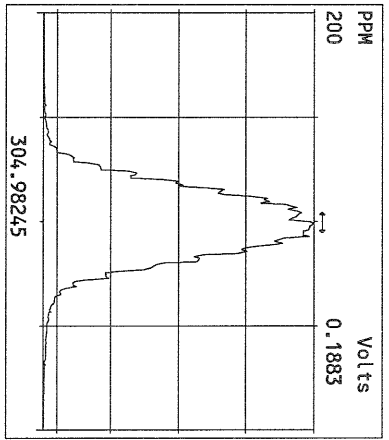
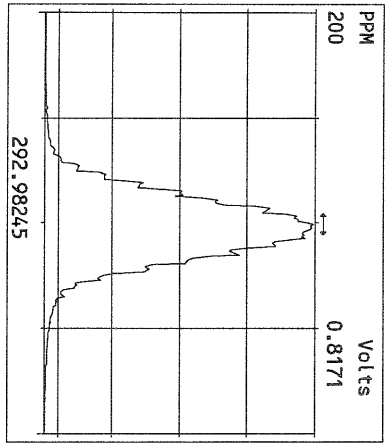
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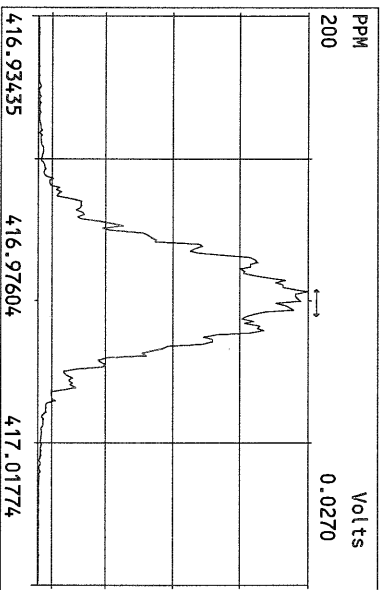
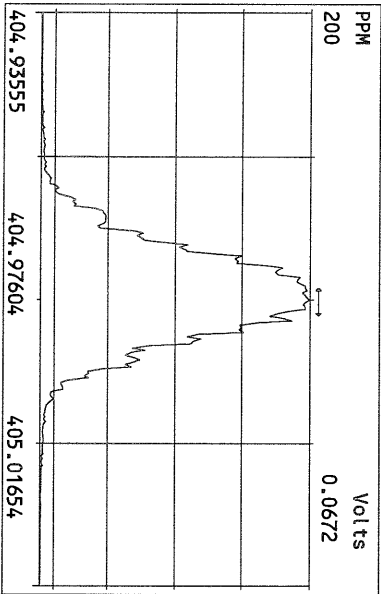
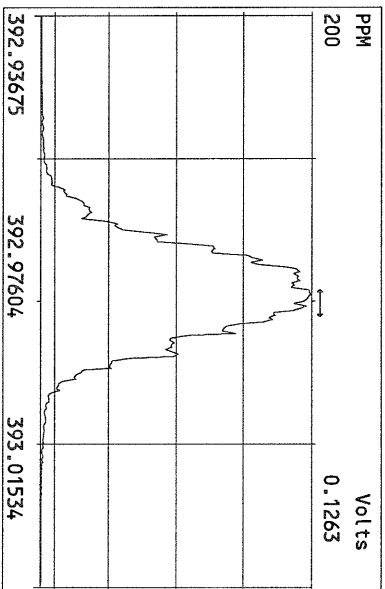
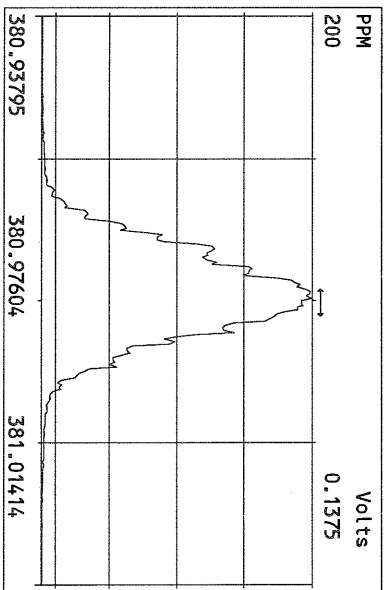
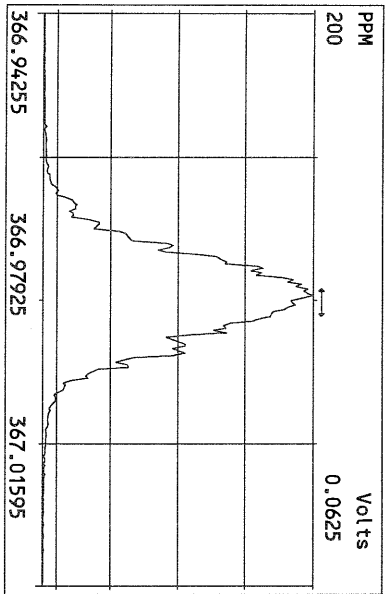
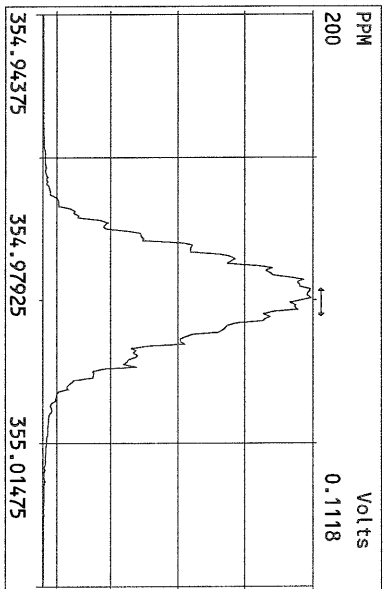
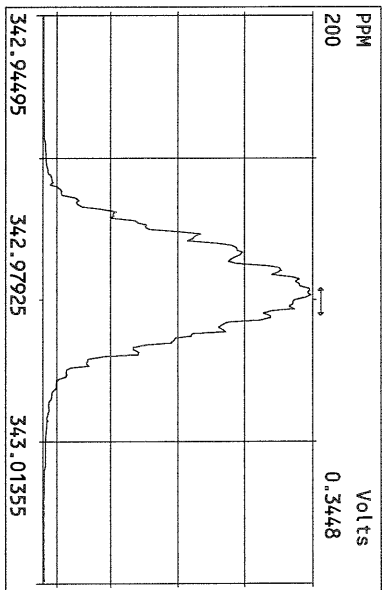
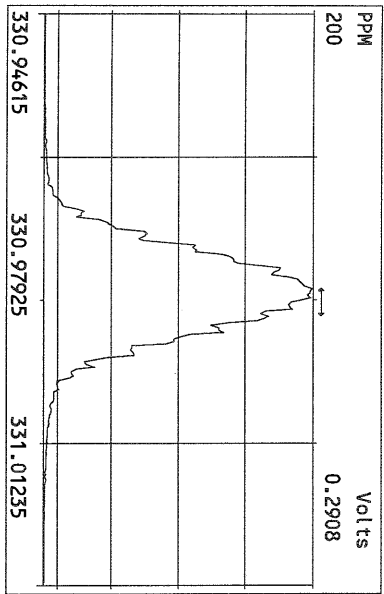
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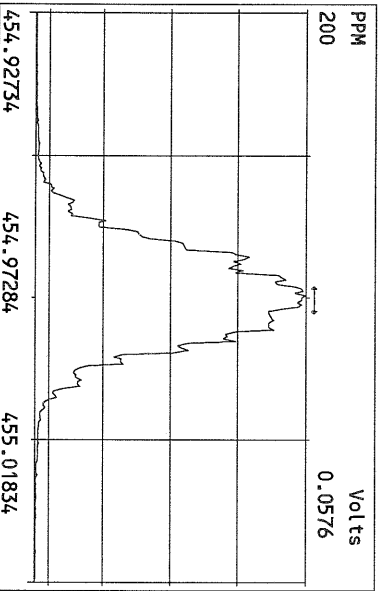
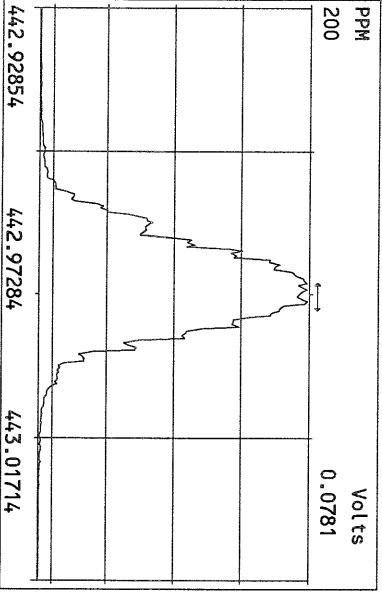
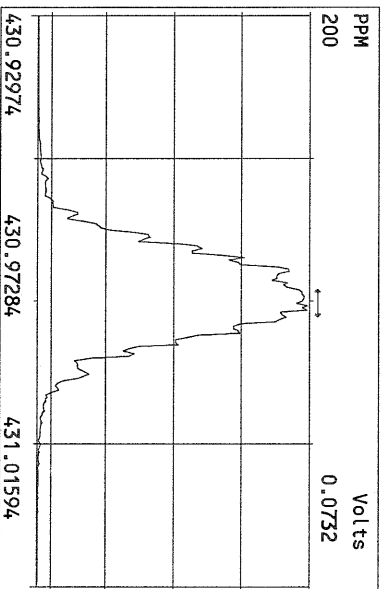
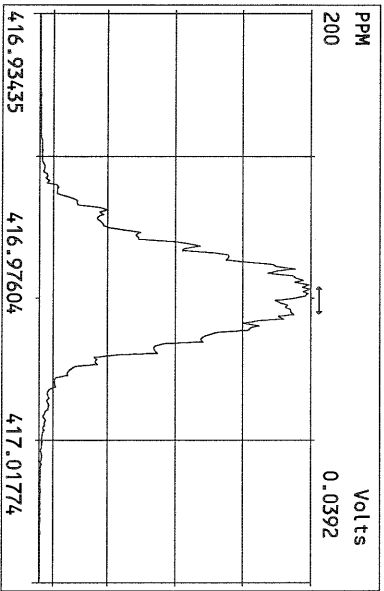
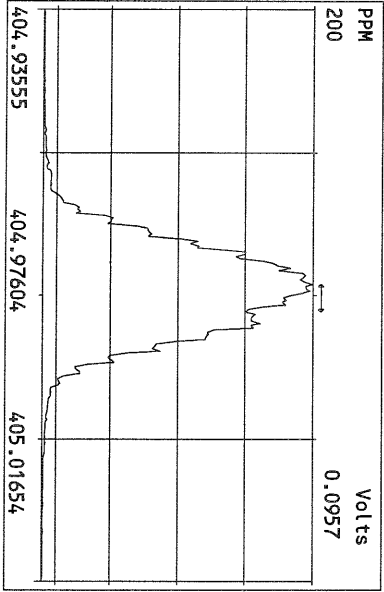
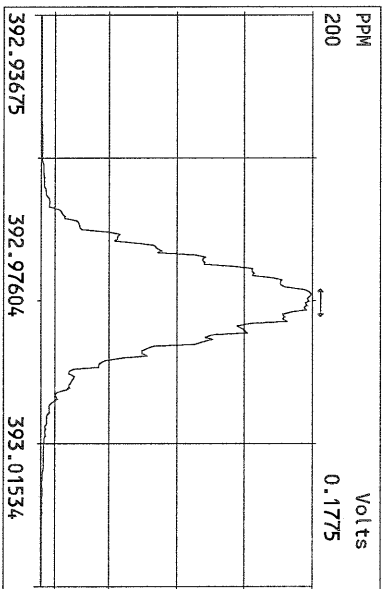
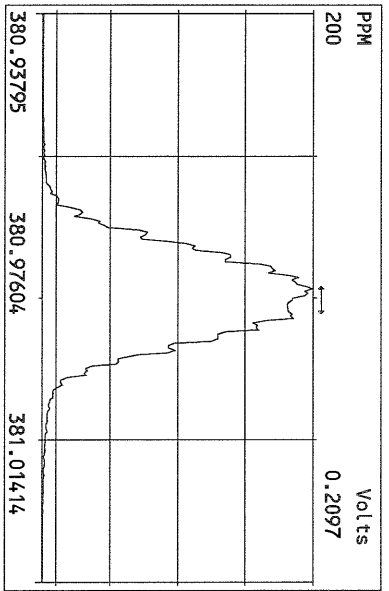
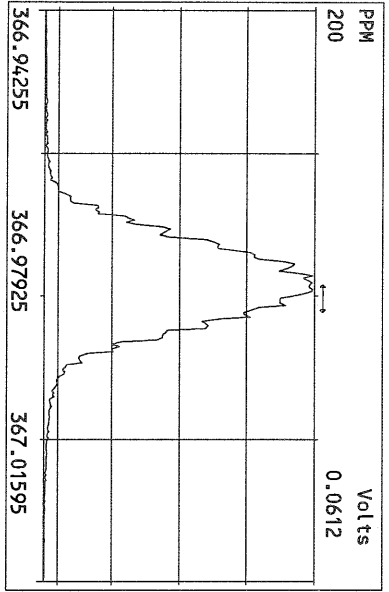
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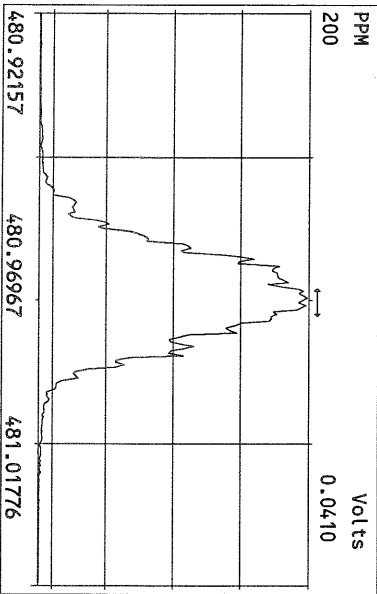
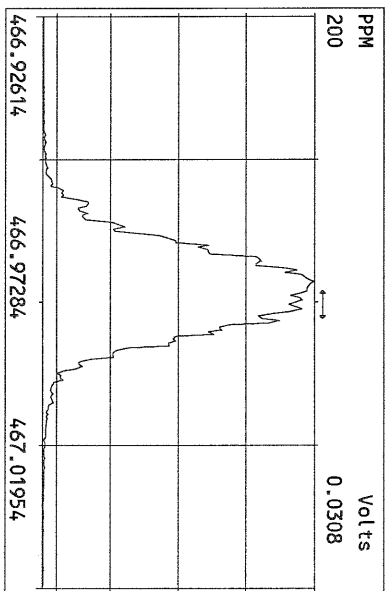
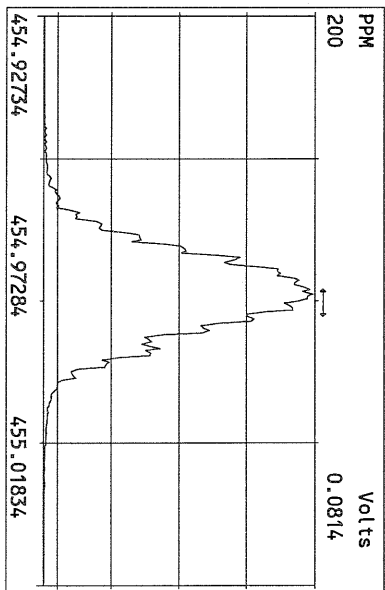
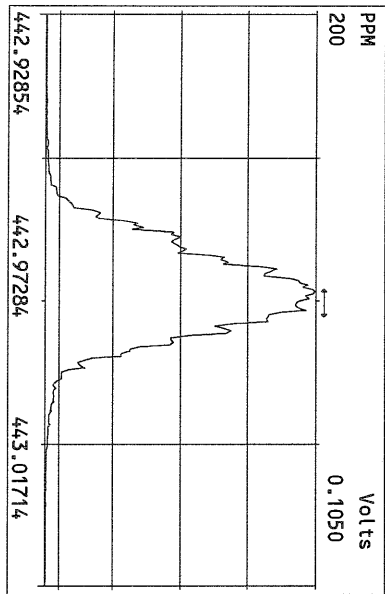
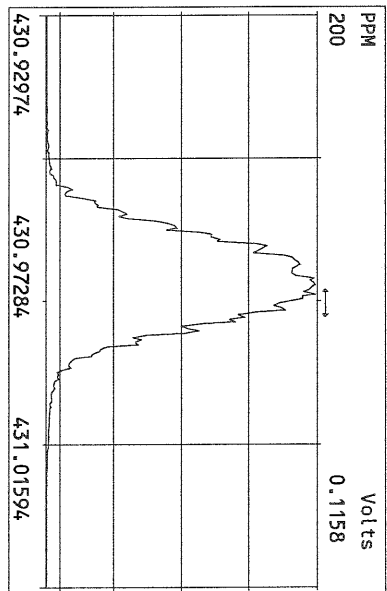
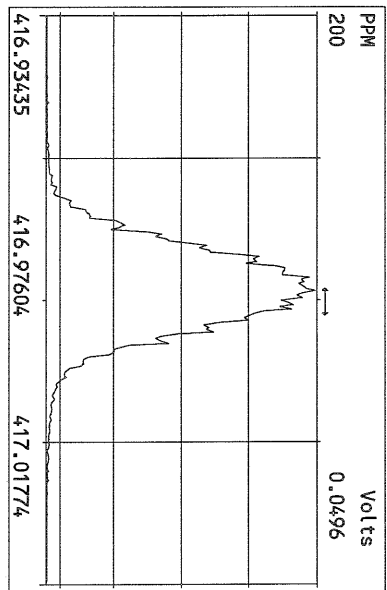
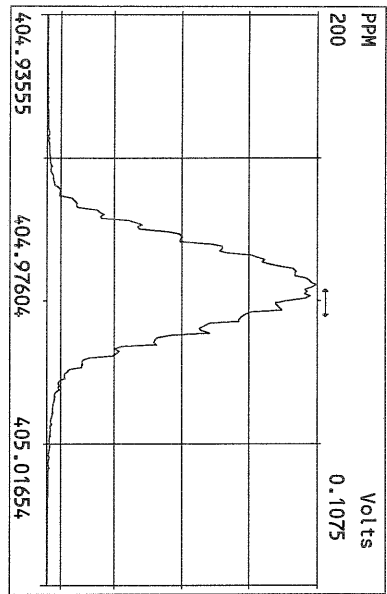
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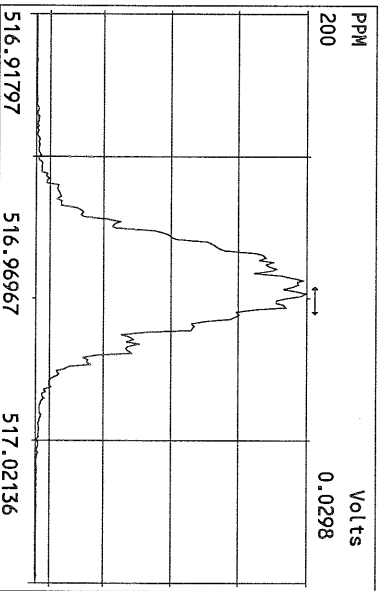
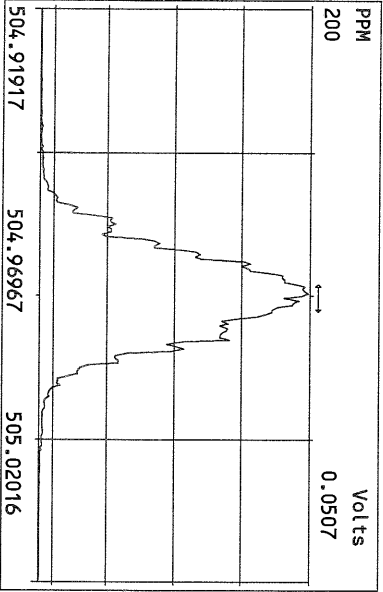
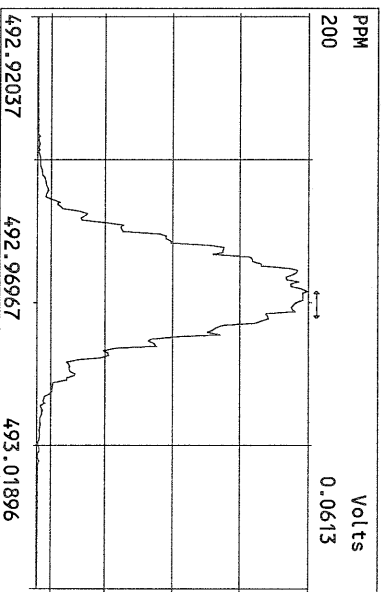
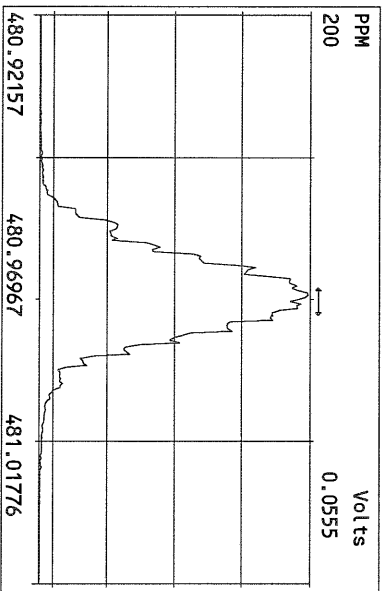
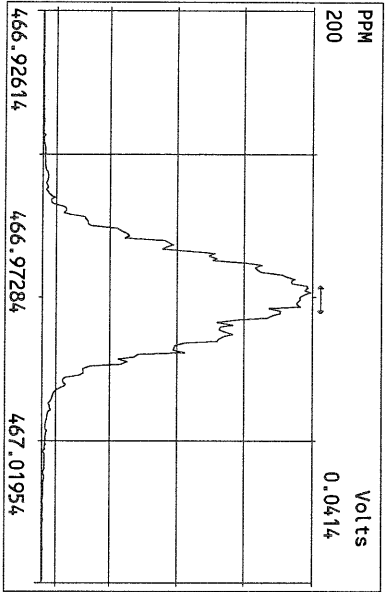
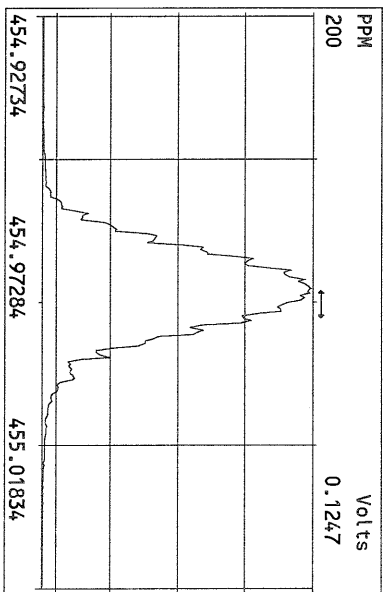
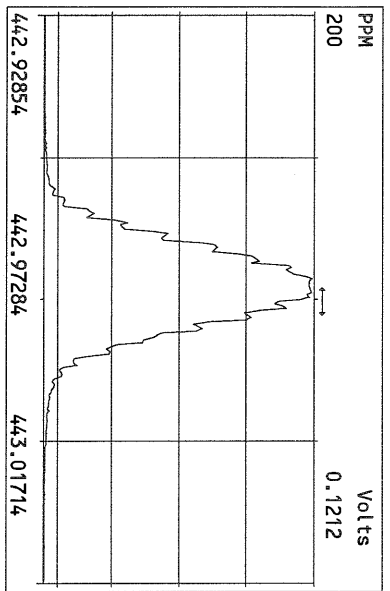
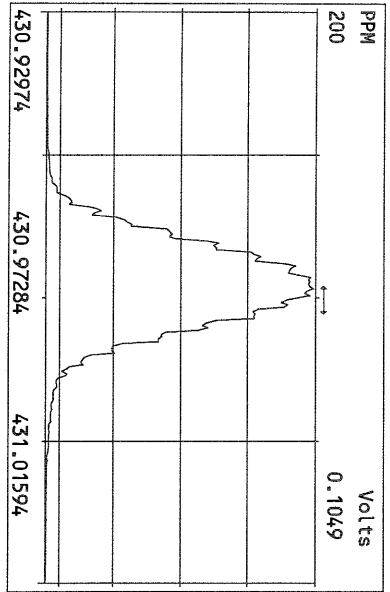
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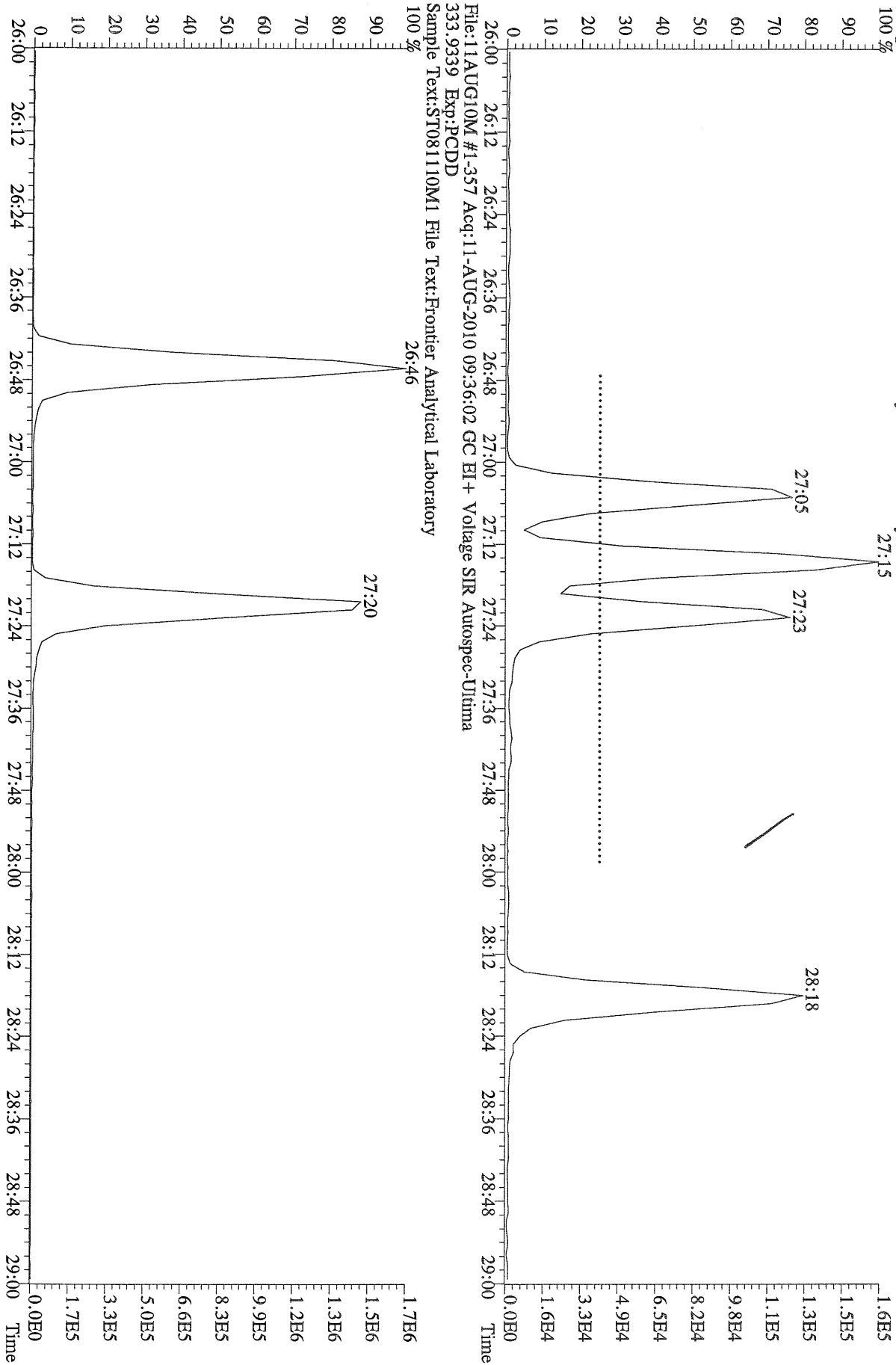






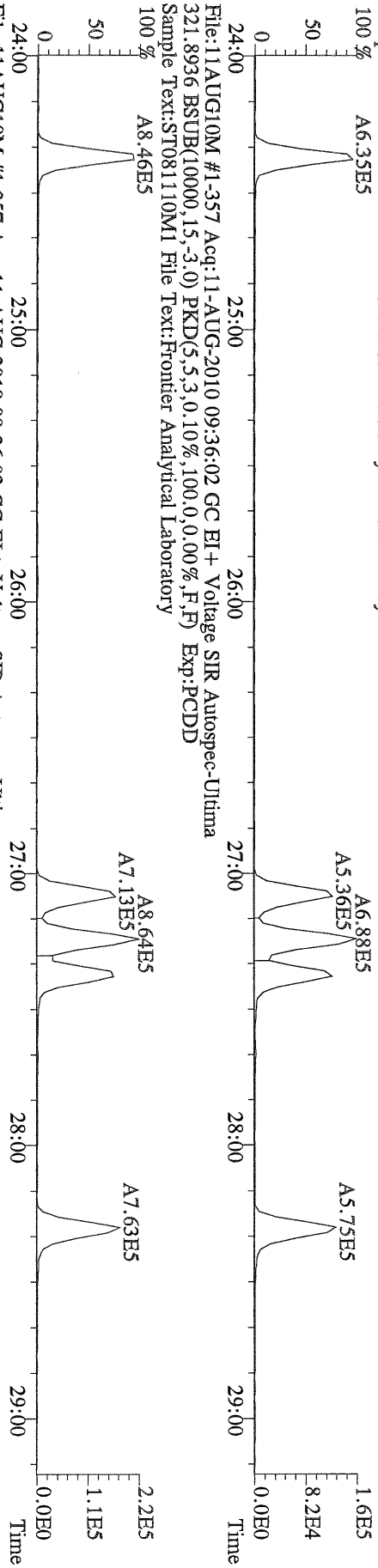


File:11AUG10M #1-357 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
319.8965 Exp:PCDD
Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory

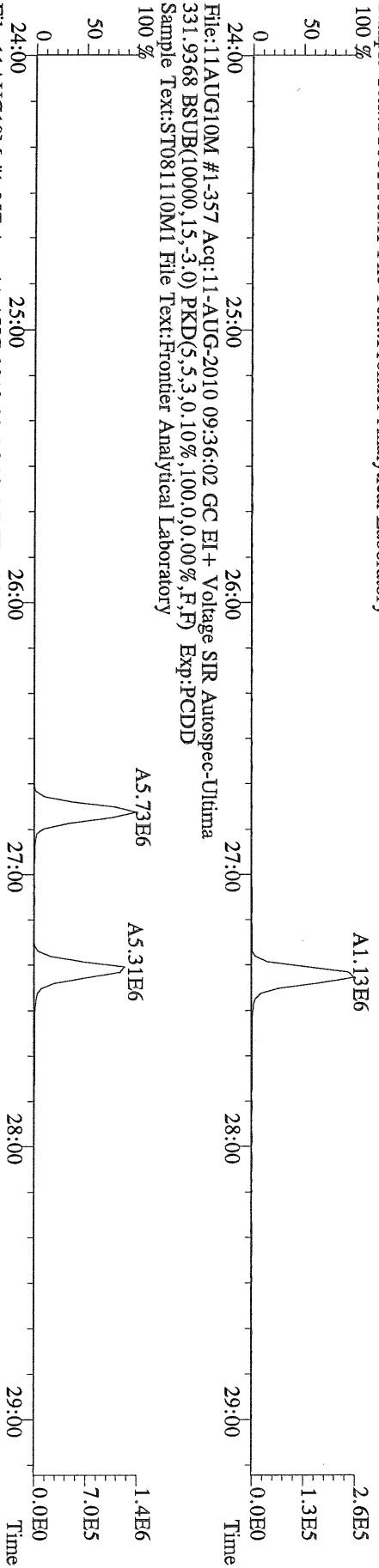


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333.9339 Exp:PCDD
Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory

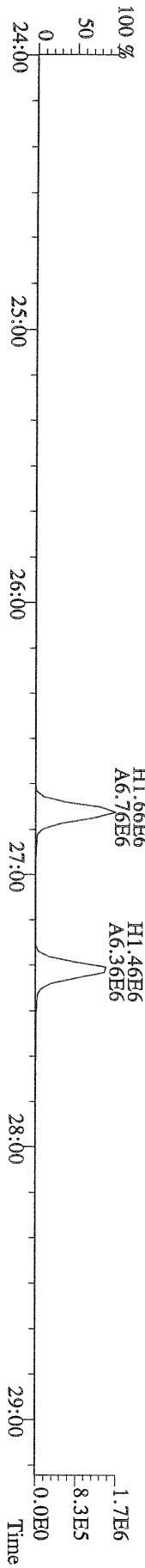
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319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
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100% A6.35E5



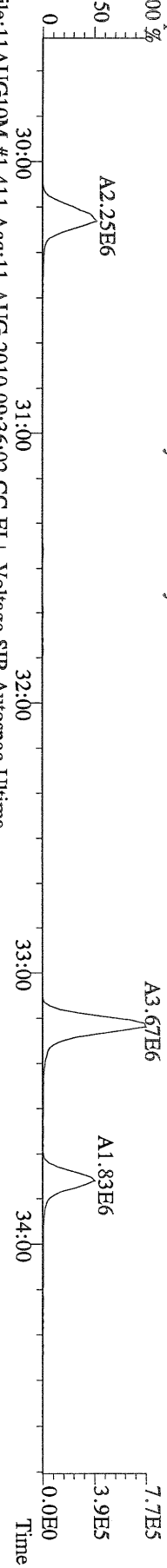
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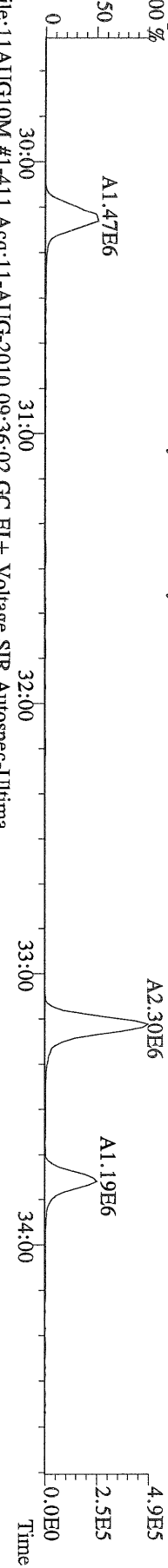
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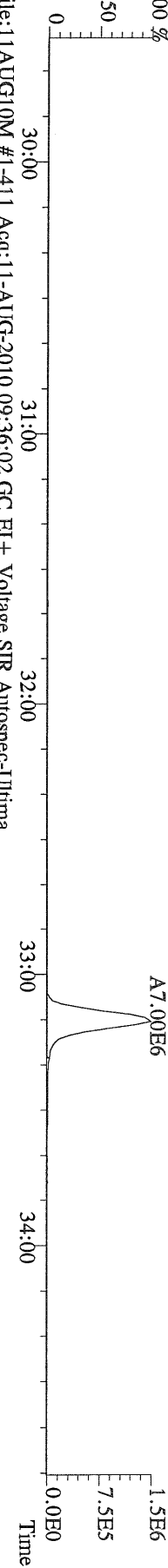
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 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory
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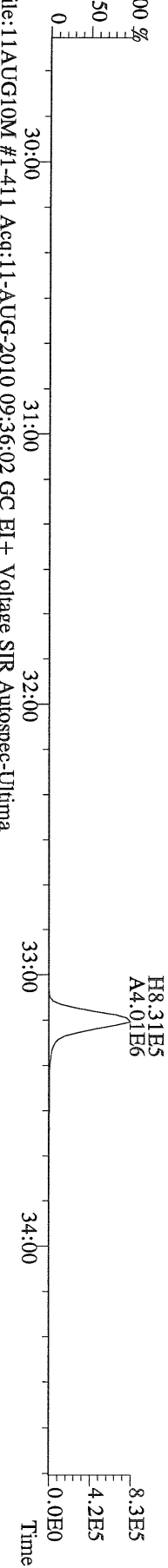
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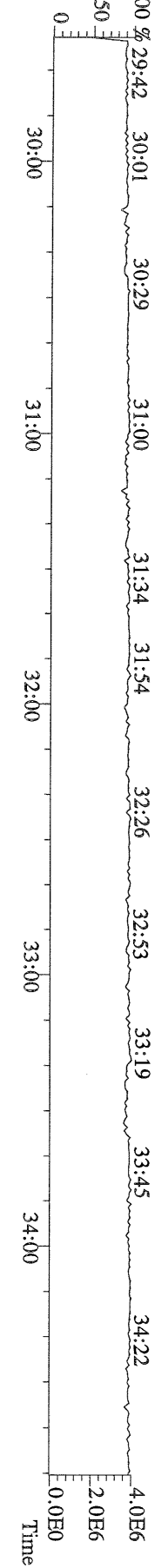
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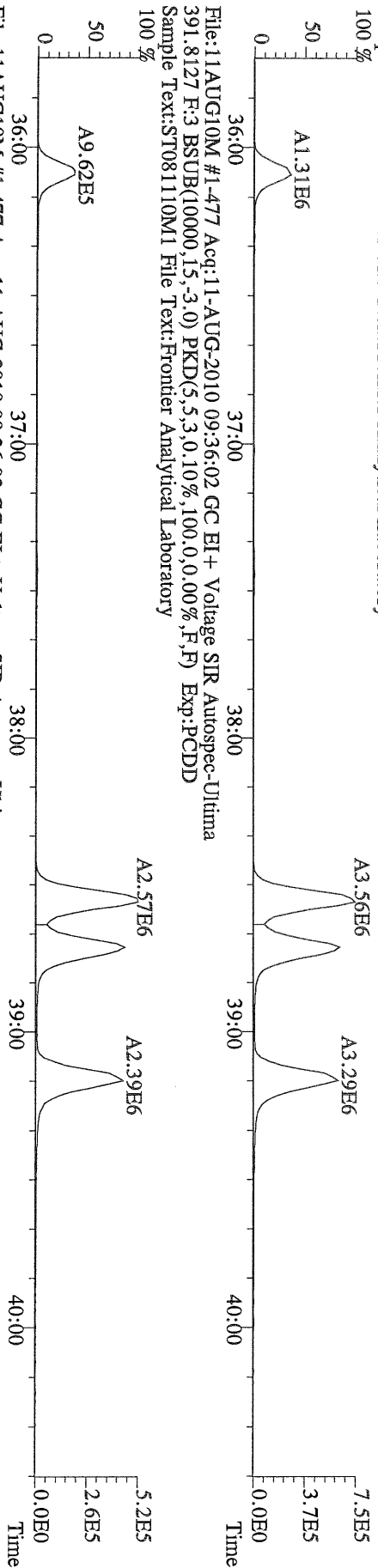
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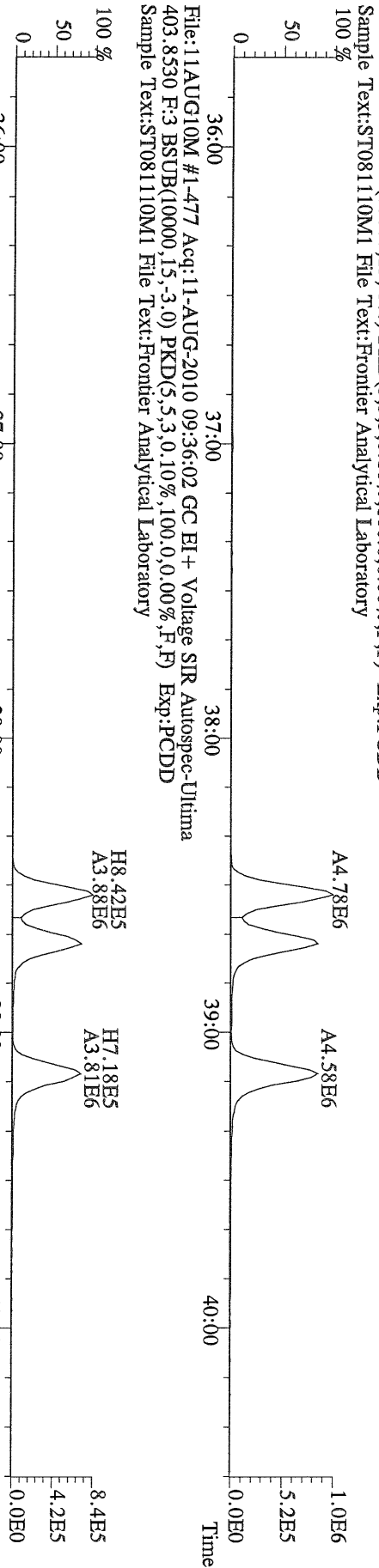
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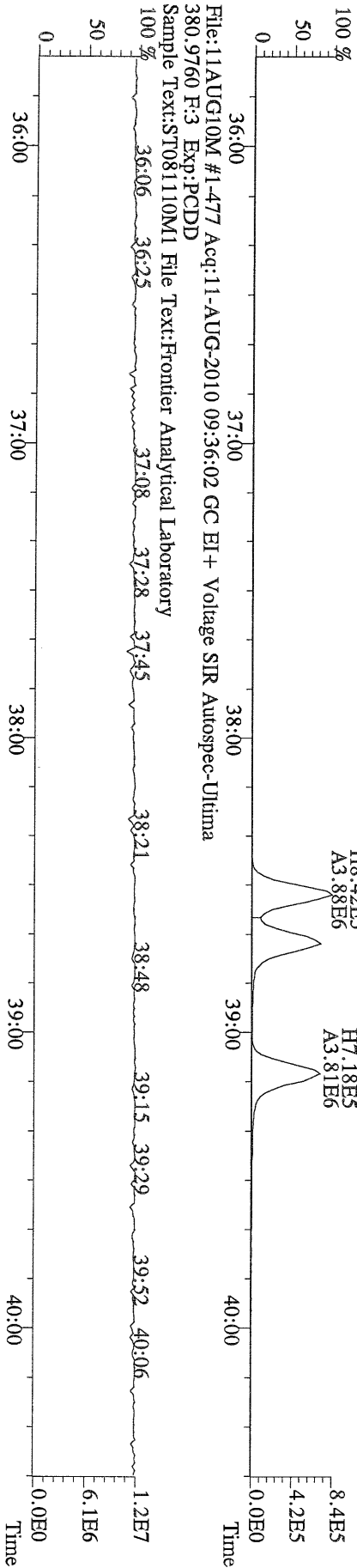
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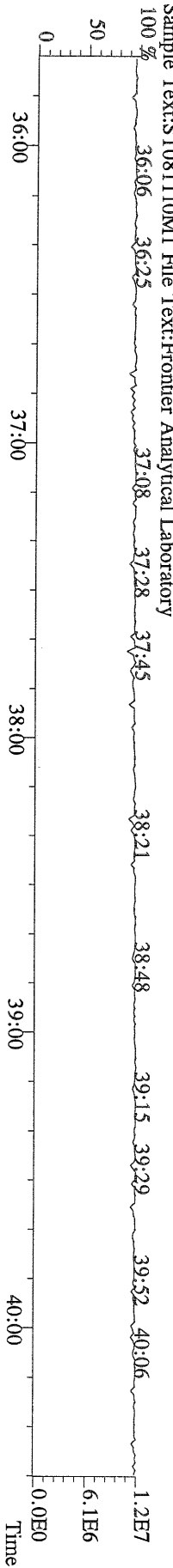
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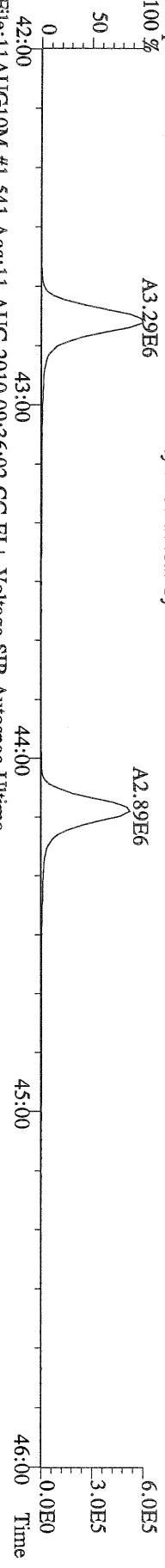
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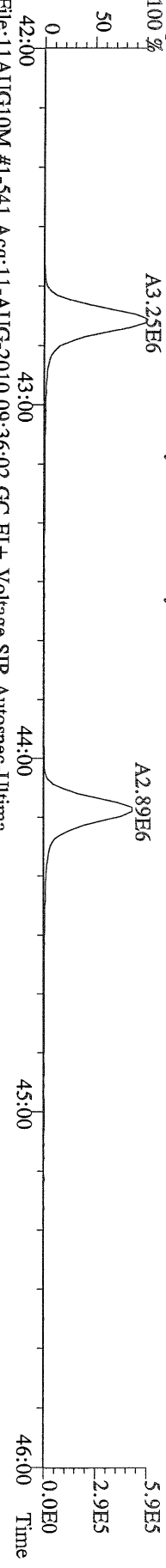
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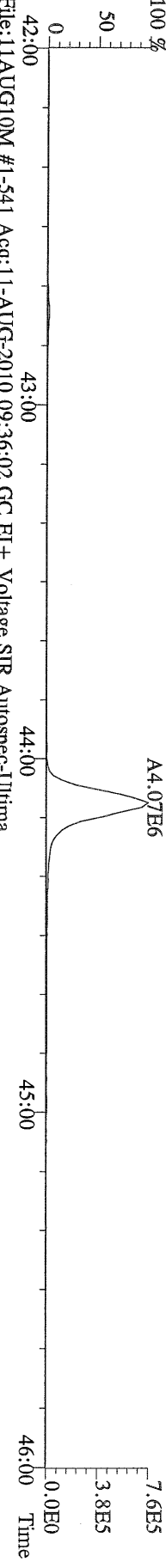
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423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
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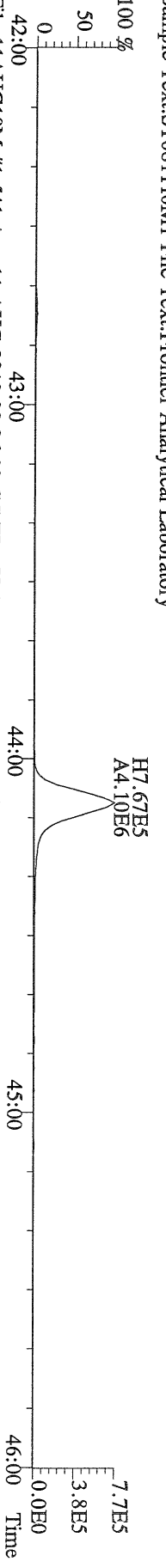
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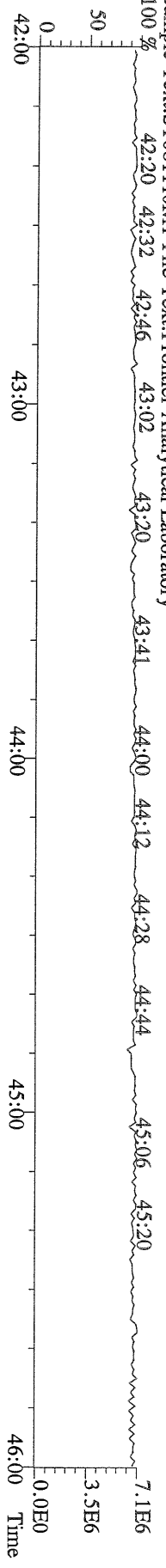
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Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory
100 %



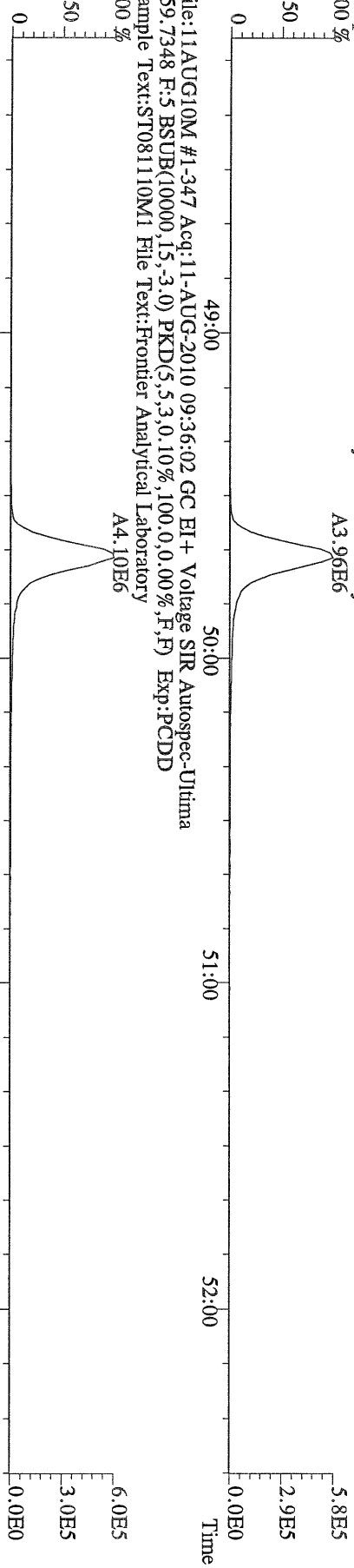
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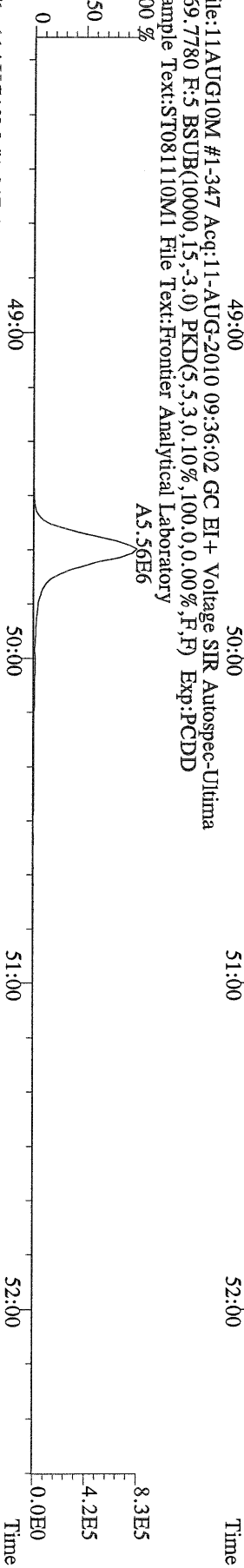
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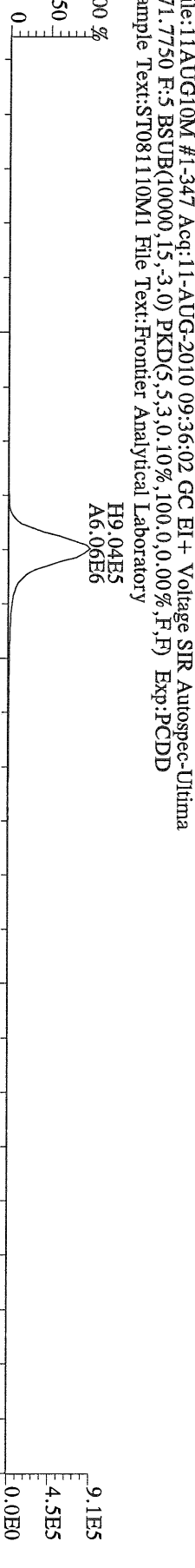
File:11AUG10M #1-347 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory
100 % A3.96E6



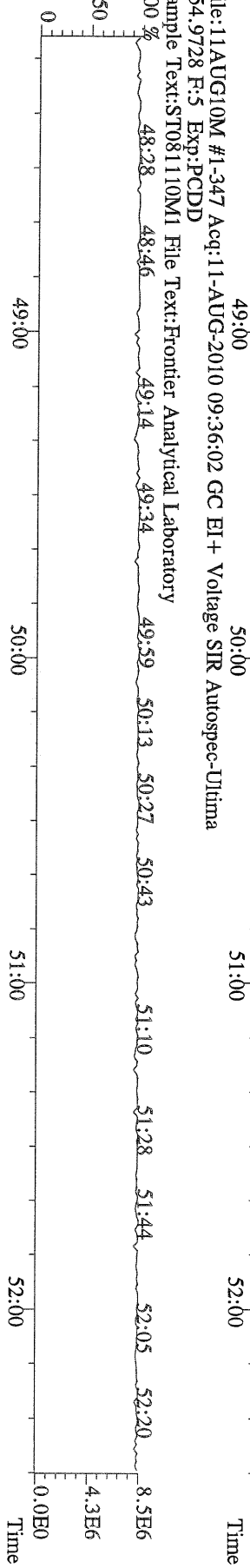
File:11AUG10M #1-347 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory
100 % A4.10E6



File:11AUG10M #1-347 Acq:11-AUG-2010 09:36:02 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:ST081110M1 File Text:Frontier Analytical Laboratory
100 % A5.56E6

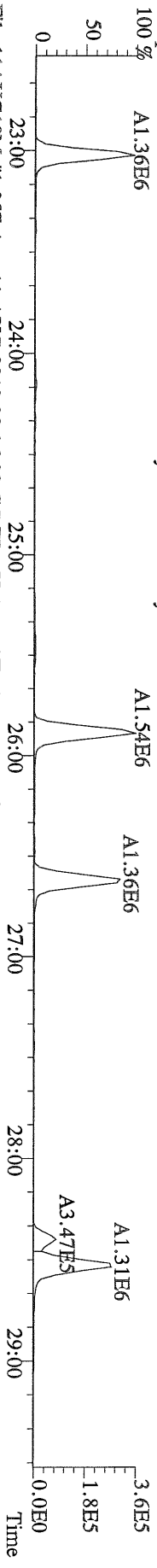


File:11AUG10M #1-347 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory
100 % H9.04E5
A6.06E6

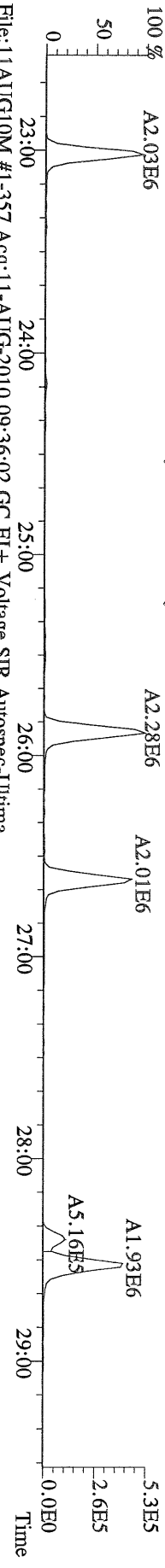


File:11AUG10M #1-347 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
454.9728 F:5 Exp:PCDD
Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory
100 % 48:28 48:46 49:14 49:34 49:59 50:13 50:27 50:43 51:10 51:28 51:44 52:05 52:20

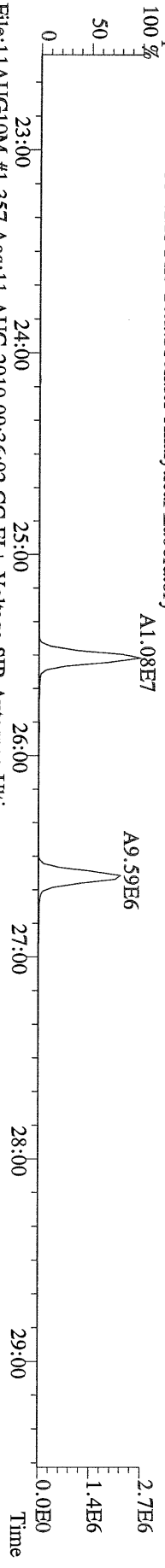
File:11AUG10M #1-357 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



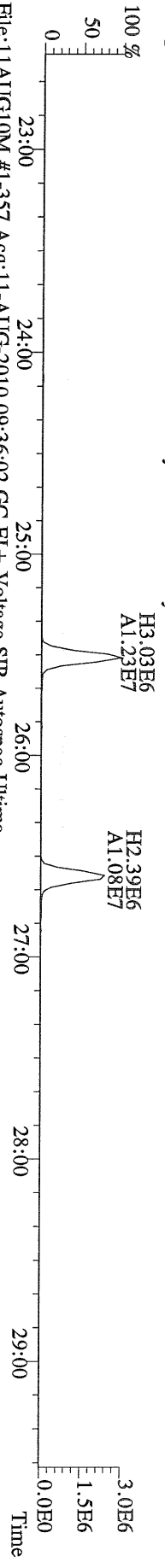
File:11AUG10M #1-357 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



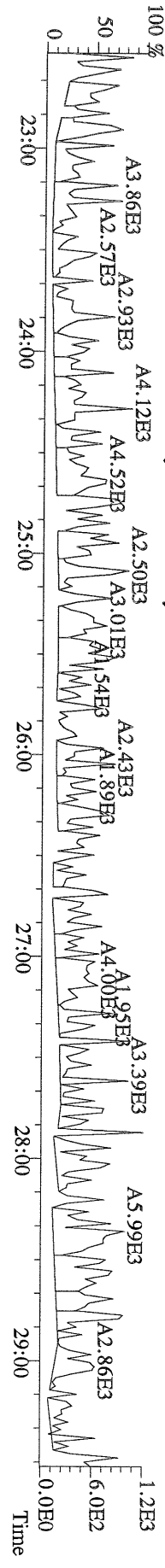
File:11AUG10M #1-357 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



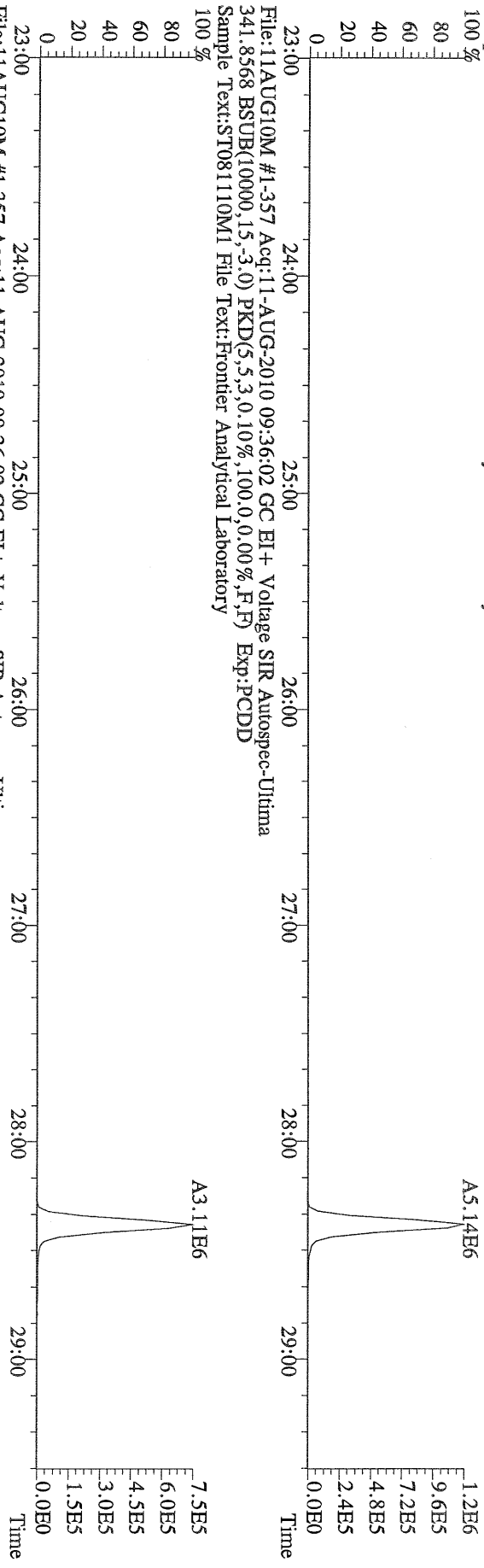
File:11AUG10M #1-357 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



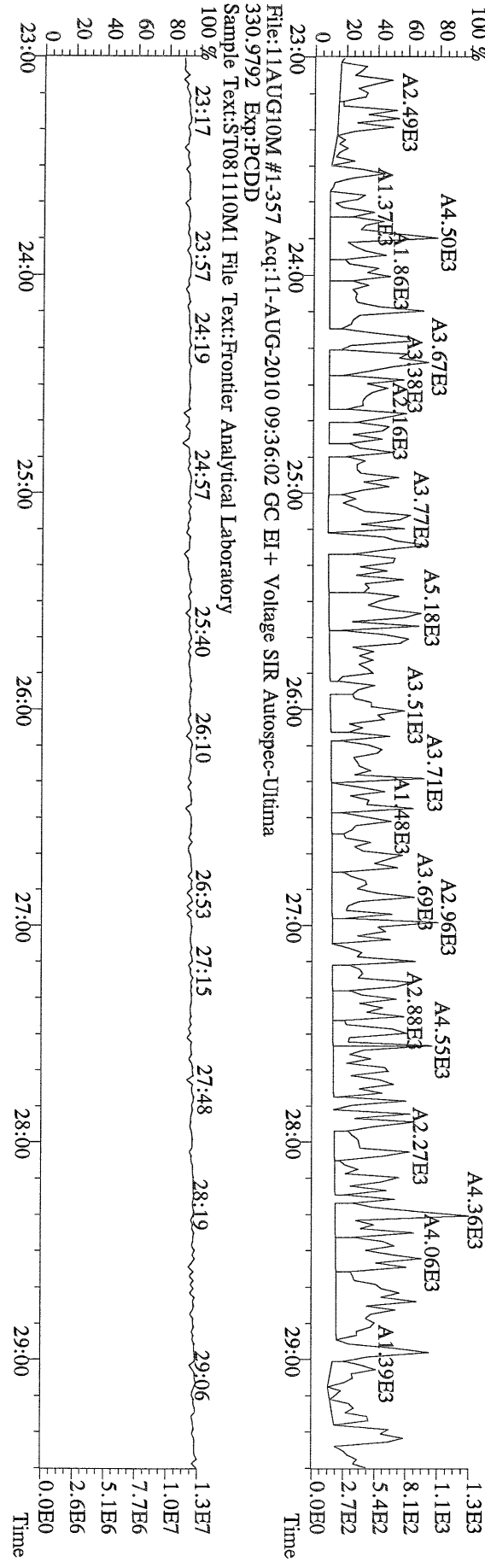
File:11AUG10M #1-357 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



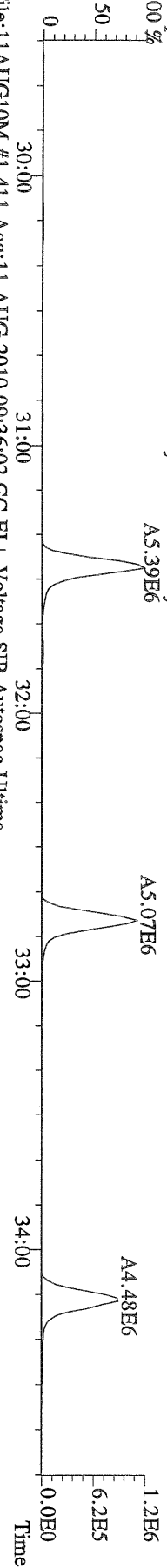
File:11AUG10M #1-357 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 BSUB(10000,15,-3.0) PKD(5,5,3.0,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



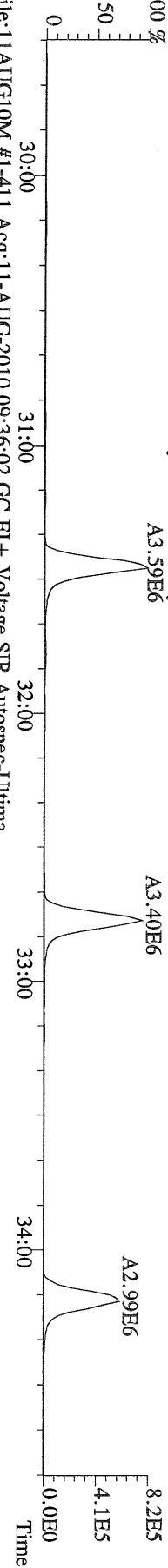
File:11AUG10M #1-357 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 409.7974 BSUB(10000,15,-3.0) PKD(5,5,3.0,100,0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



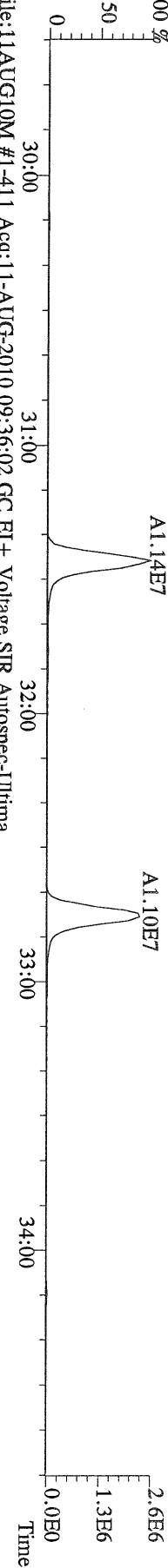
File:11AUG10M #1-411 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



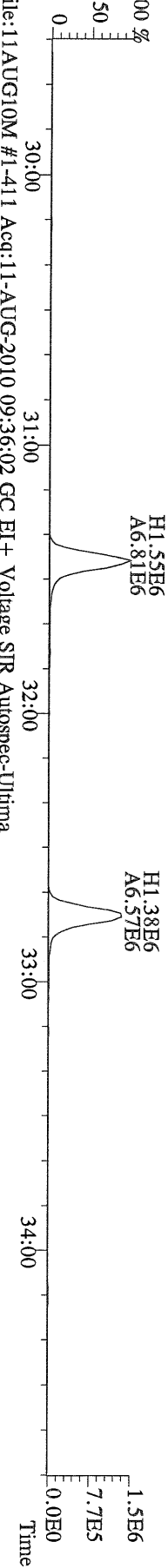
File:11AUG10M #1-411 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



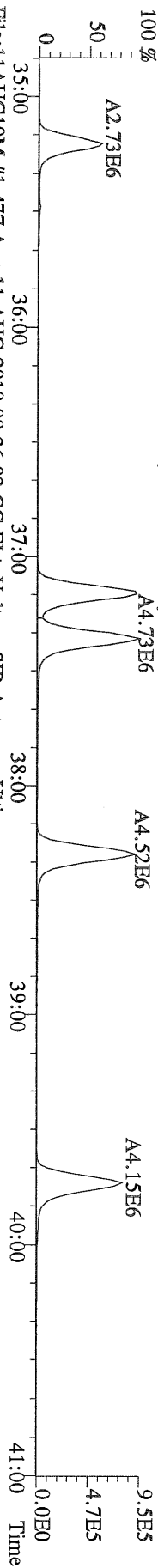
File:11AUG10M #1-411 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



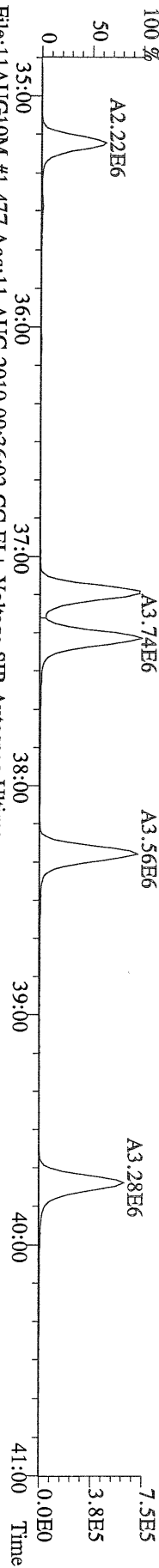
File:11AUG10M #1-411 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



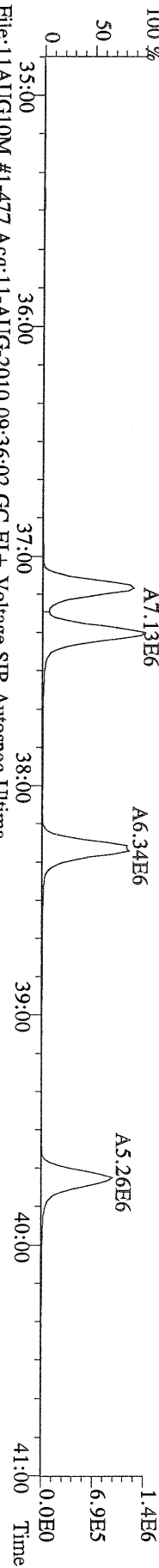
File:11AUG10M #1-477 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



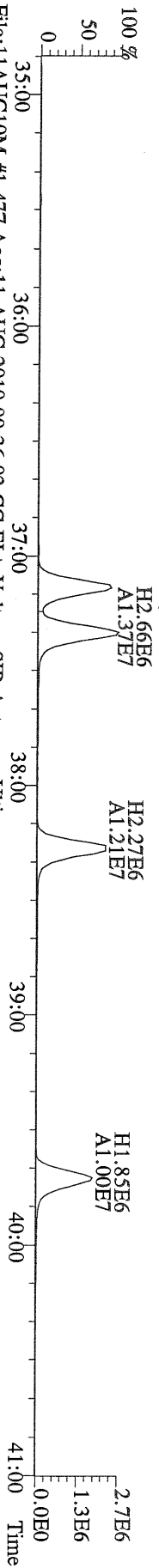
File:11AUG10M #1-477 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



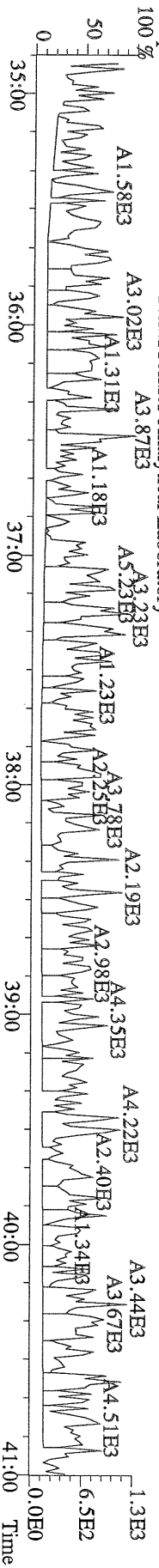
File:11AUG10M #1-477 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



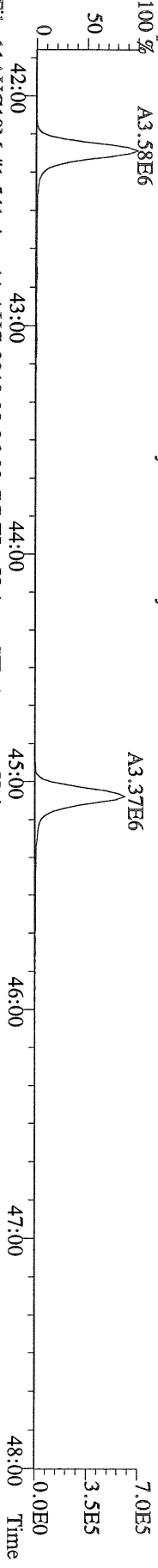
File:11AUG10M #1-477 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



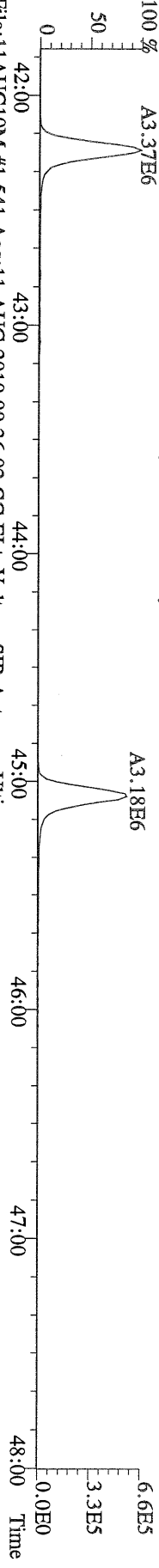
File:11AUG10M #1-477 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



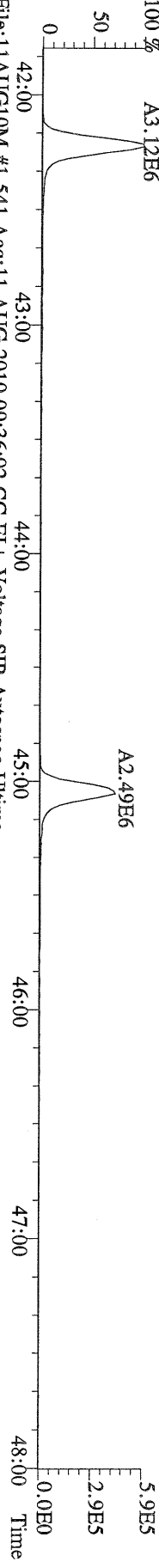
File:11AUG10M #1-541 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



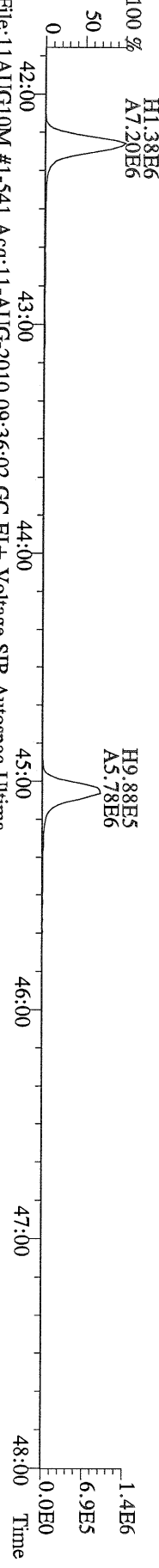
File:11AUG10M #1-541 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



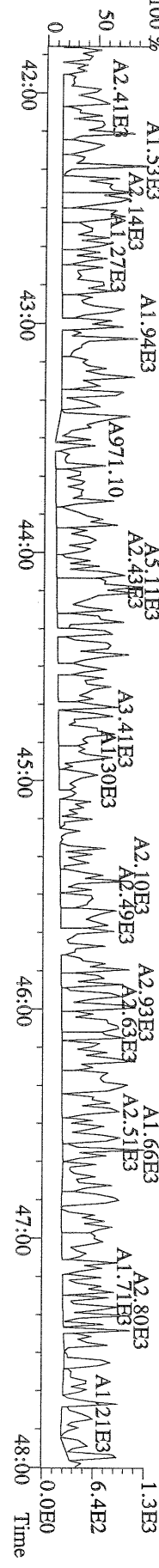
File:11AUG10M #1-541 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



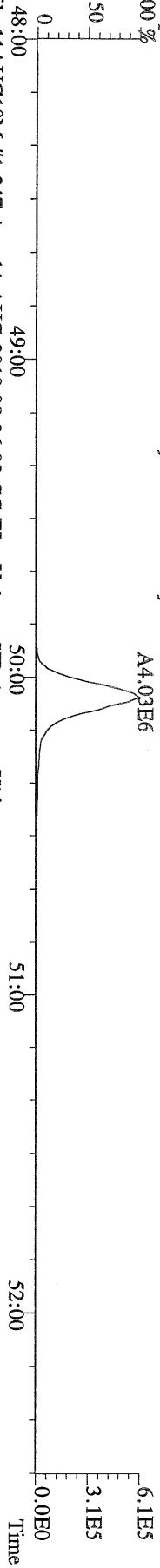
File:11AUG10M #1-541 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



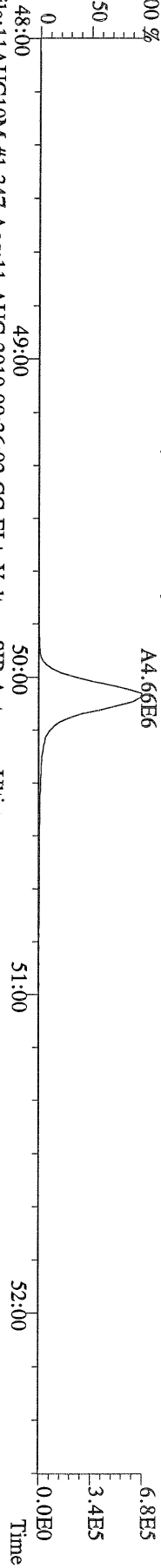
File:11AUG10M #1-541 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



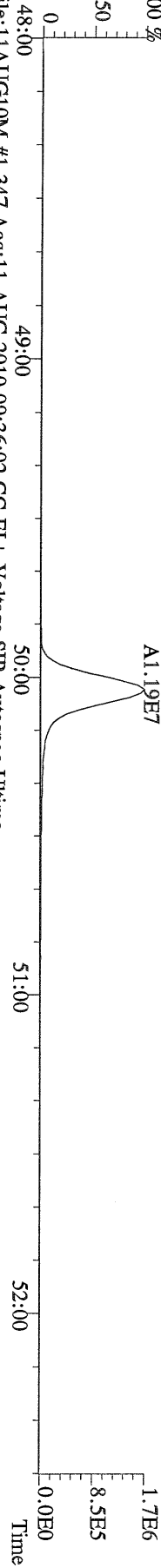
File:11AUG10M #1-347 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



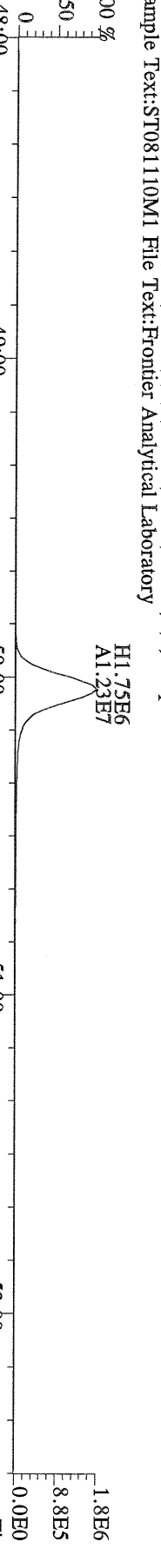
File:11AUG10M #1-347 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



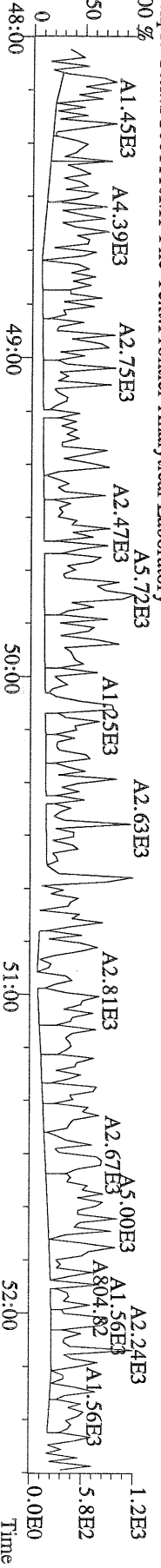
File:11AUG10M #1-347 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory



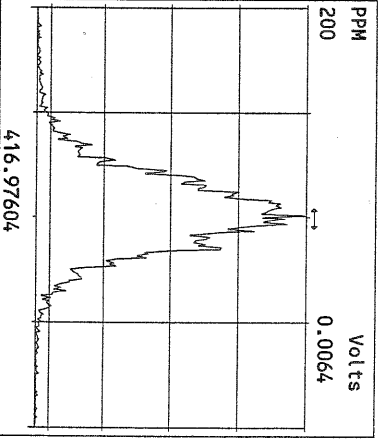
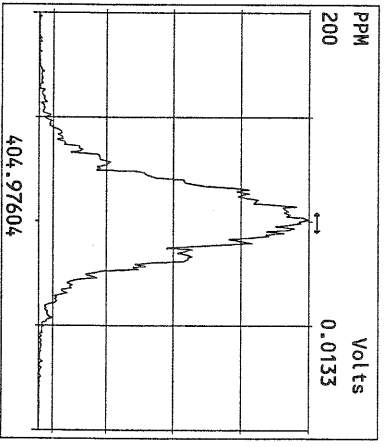
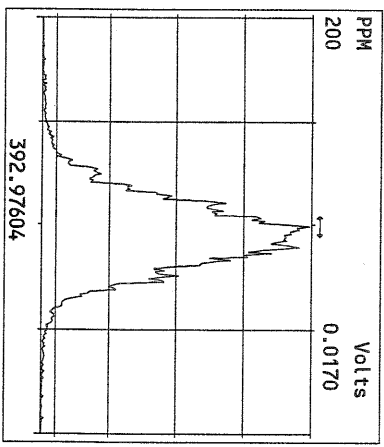
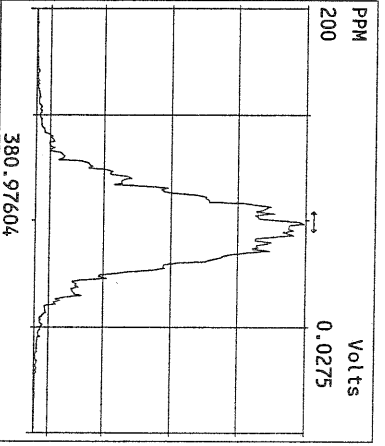
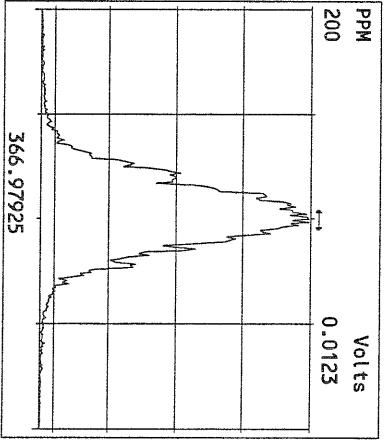
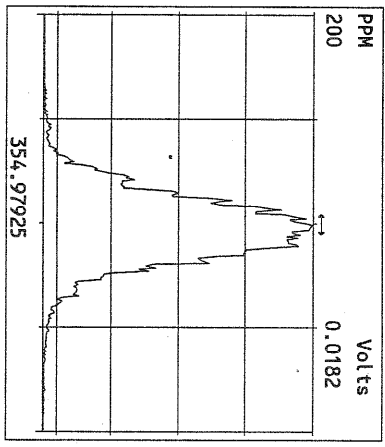
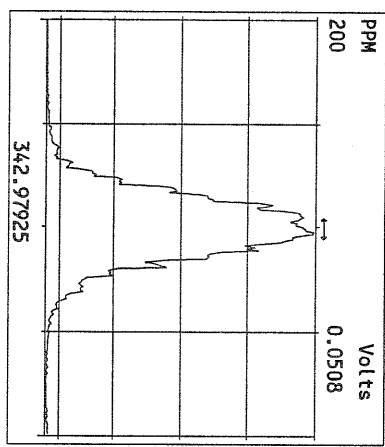
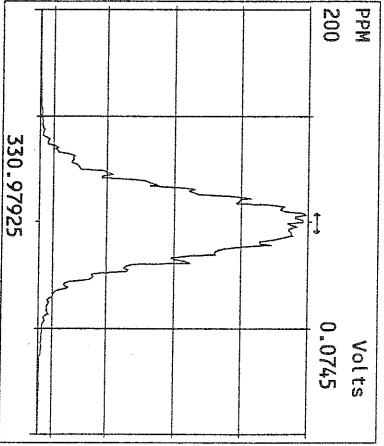
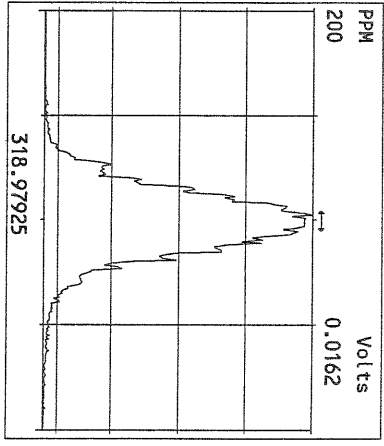
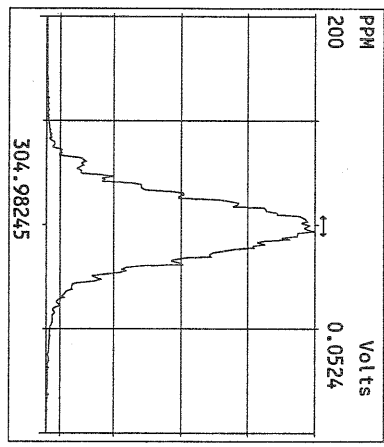
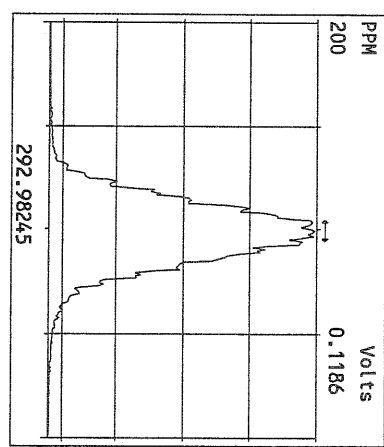
File:11AUG10M #1-347 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory

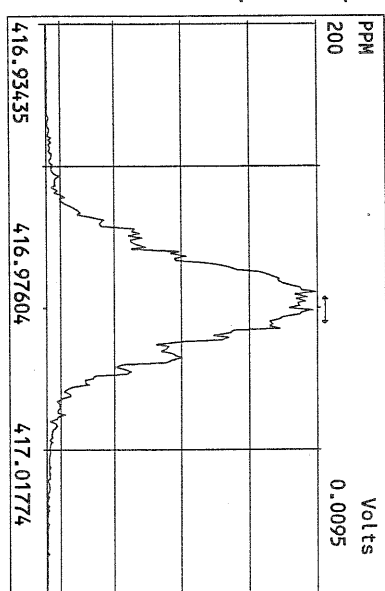
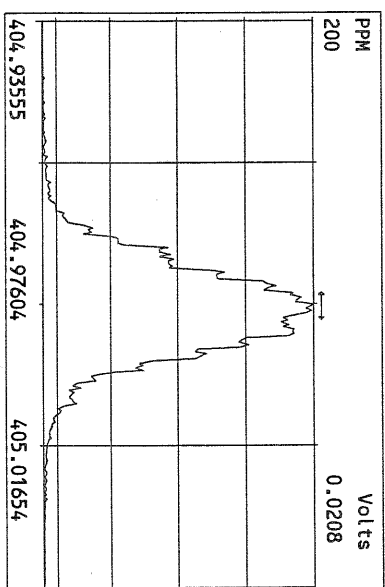
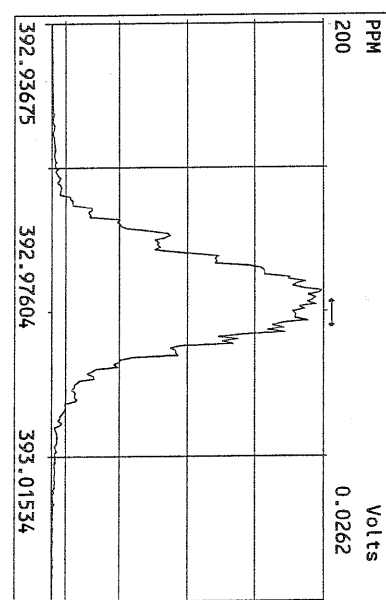
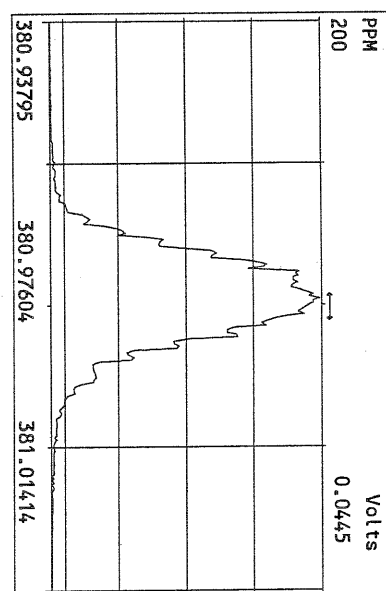
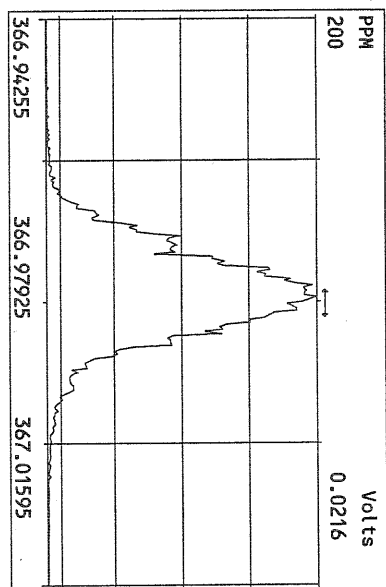
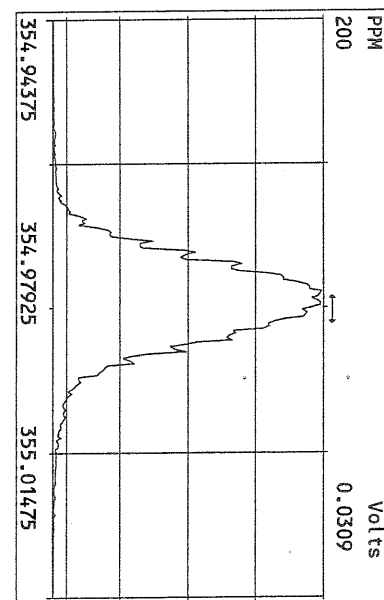
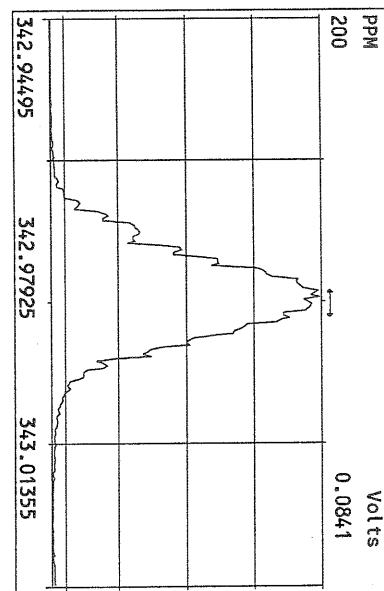
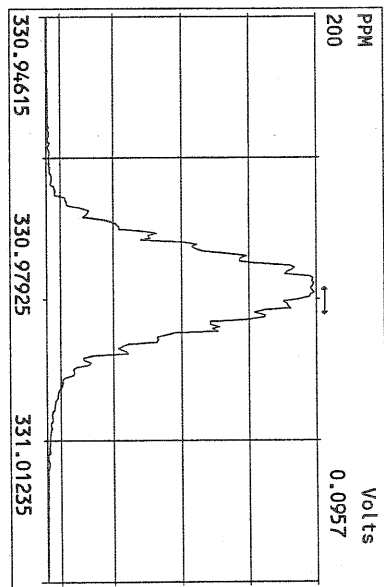


File:11AUG10M #1-347 Acq:11-AUG-2010 09:36:02 GC EI+ Voltage SIR Autospec-Ultima
 513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD
 Sample Text:ST081110M1 File Text:Frontier Analytical Laboratory

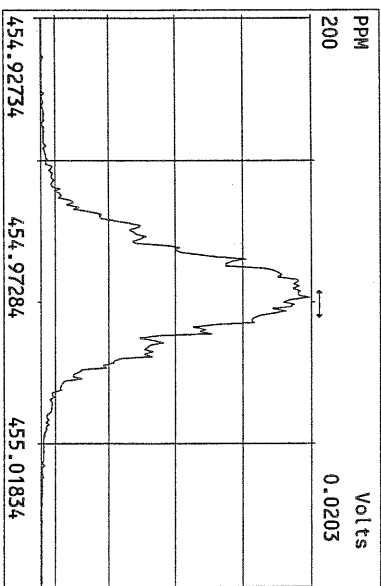
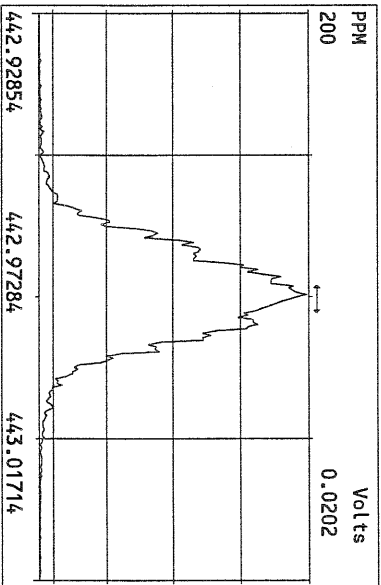
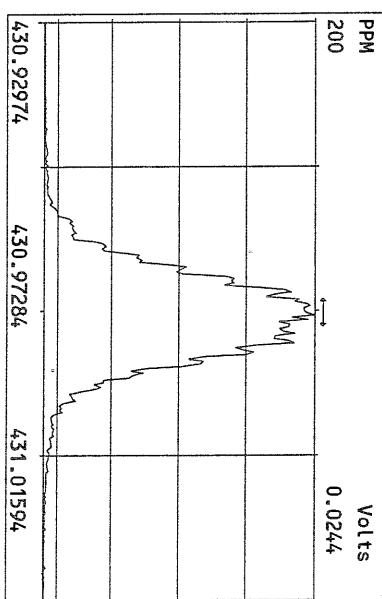
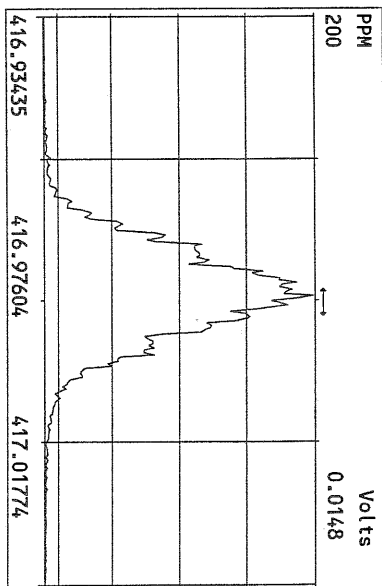
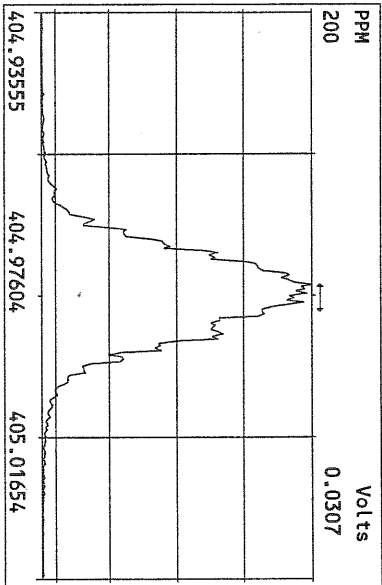
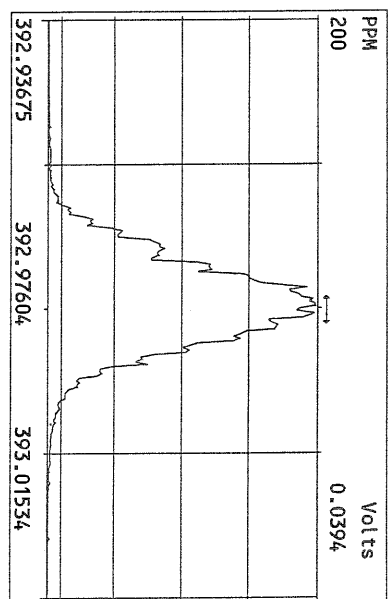
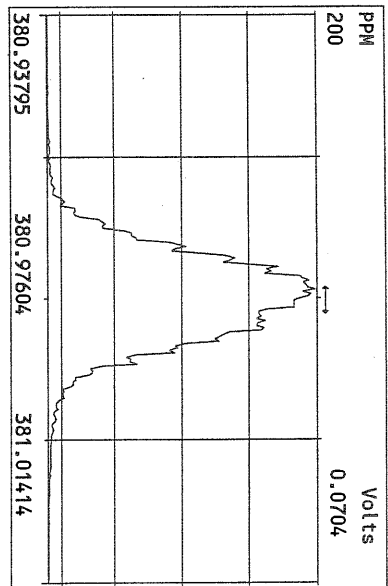
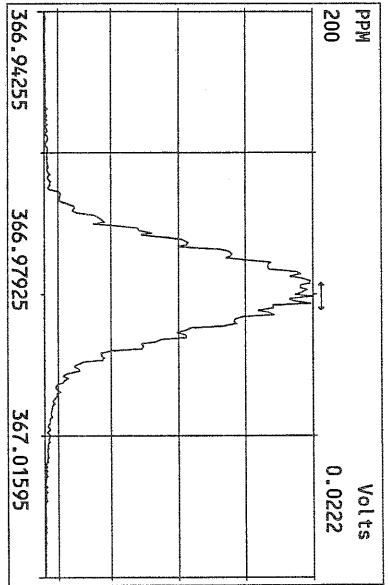


Peak Locate Examination:12-AUG-2010:09:40 File:11AUG10M_RES_CHECK
Experiment:PCDD Function:1 Reference:PK

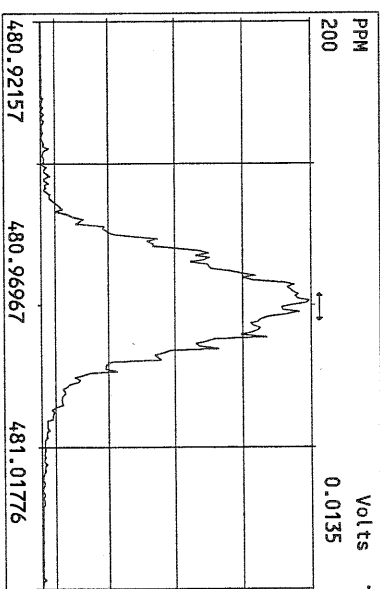
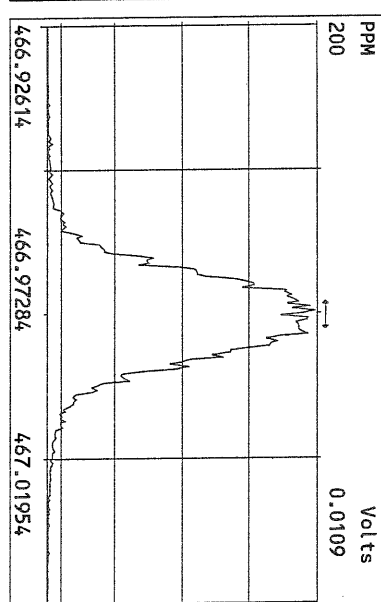
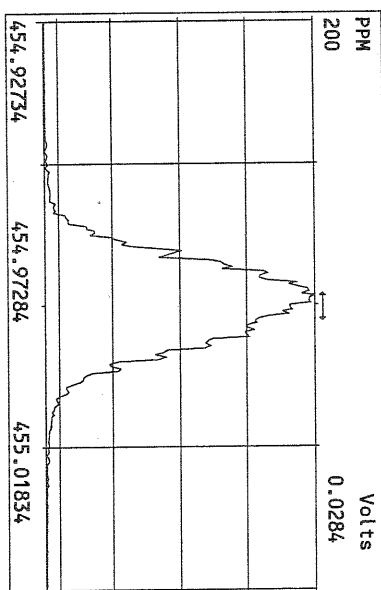
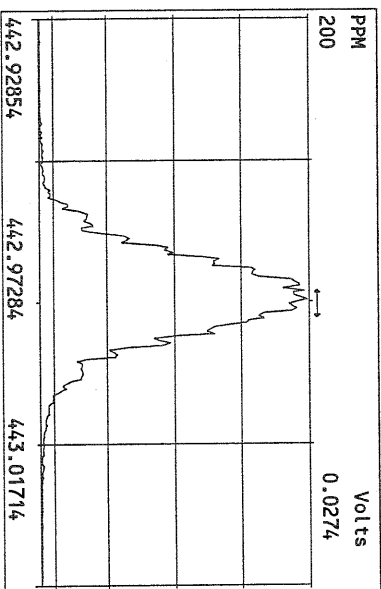
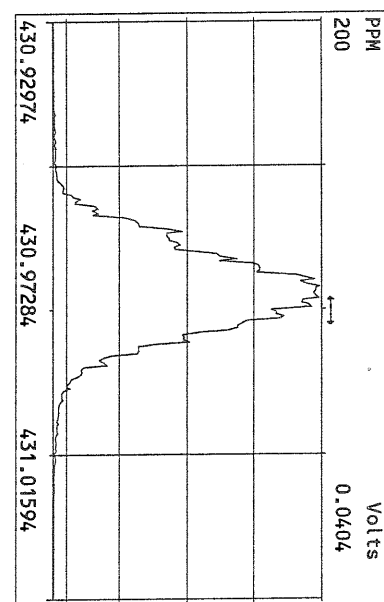
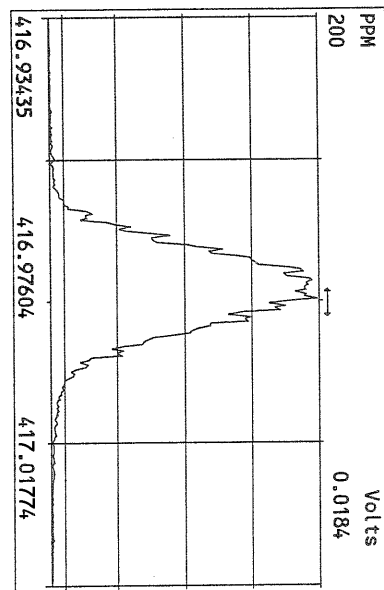
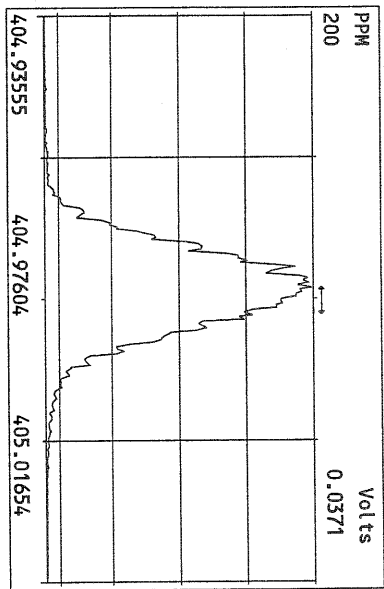


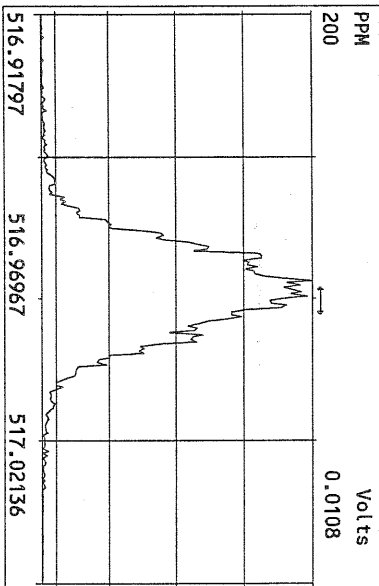
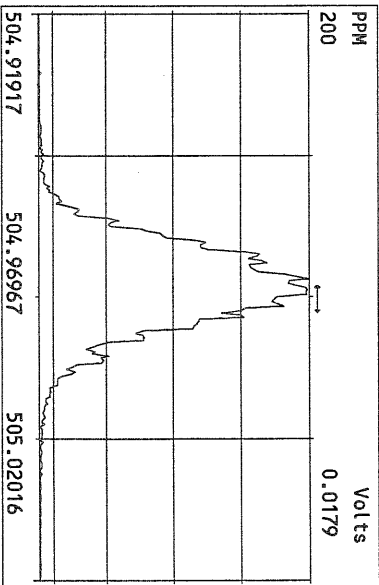
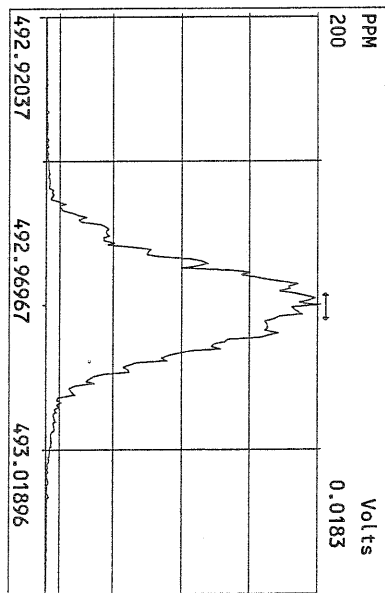
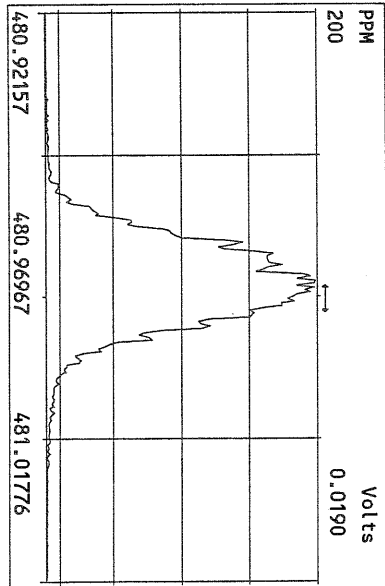
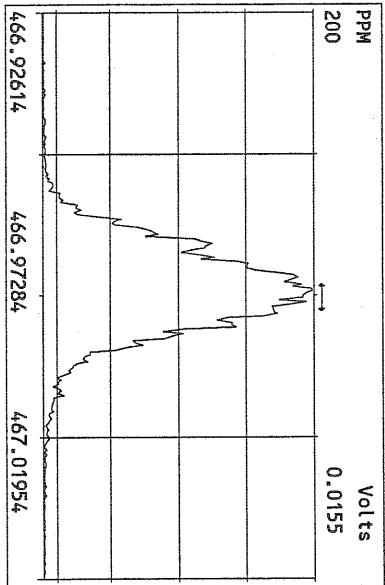
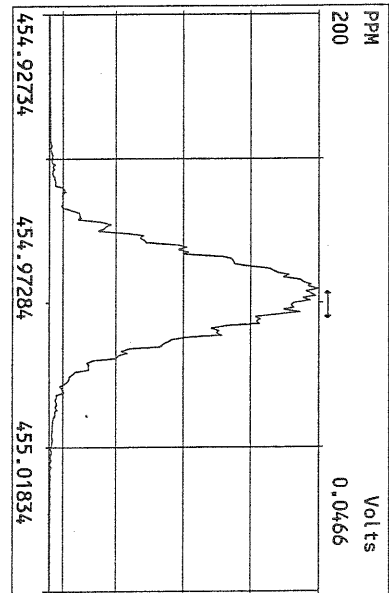
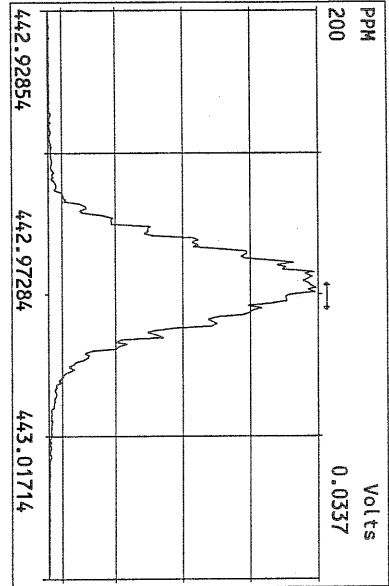
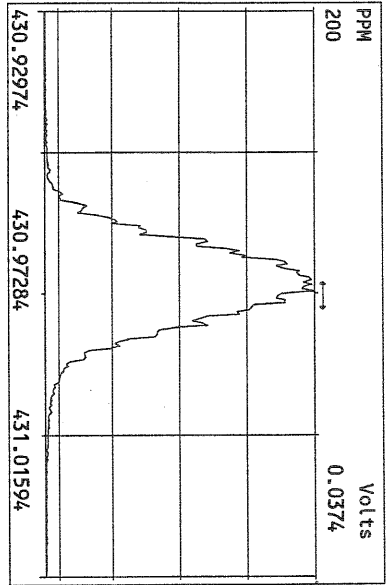


Peak Locate Examination:12-AUG-2010:09:41 File:11AUG10M_RES_CHECK
 Experiment:PCDD Function:3 Reference:PFK



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





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:16

Analysis Date: 11-AUG-10 23:26:18

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	0.77	0.65-0.89	y	10.7	7.80 - 12.9 ✓
1,2,3,7,8-PeCDD	M+2/M+4	1.59	1.32-1.78	y	53.7	39.0 - 65.0 ✓
1,2,3,4,7,8-HxCDD	M+2/M+4	1.38	1.05-1.43	y	55.5	39.0 - 64.0 ✓
1,2,3,6,7,8-HxCDD	M+2/M+4	1.42	1.05-1.43	y	56.5	39.0 - 64.0 ✓
1,2,3,7,8,9-HxCDD	M+2/M+4	1.40	1.05-1.43	y	58.8	41.0 - 61.0 ✓
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	54.3	43.0 - 58.0 ✓
OCDD	M+2/M+4	0.97	0.76-1.02	y	113	79.0 - 126 ✓
2,3,7,8-TCDF	M/M+2	0.67	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	53.9	41.0 - 60.0 ✓
2,3,4,7,8-PeCDF	M+2/M+4	1.48	1.32-1.78	y	52.2	41.0 - 60.0 ✓
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	48.7	45.0 - 56.0 ✓
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	y	50.3	44.0 - 57.0 ✓
2,3,4,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	49.6	44.0 - 57.0 ✓
1,2,3,7,8,9-HxCDF	M+2/M+4	1.23	1.05-1.43	y	49.8	45.0 - 56.0 ✓
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.09	0.88-1.20	y	49.5	45.0 - 55.0 ✓
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.09	0.88-1.20	y	51.8	43.0 - 58.0 ✓
OCDF	M+2/M+4	0.85	0.76-1.02	y	94.4	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: 8/12/10

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:16

Analysis Date: 11-AUG-10 23:26:18

LABELED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
13C-2,3,7,8-TCDD	M/M+2	0.83	0.65-0.89	y	101	82.0 - 121 ✓
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.74	1.32-1.78	y	105	62.0 - 160 ✓
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	97.3	85.0 - 117 ✓
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	87.6	85.0 - 118 ✓
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	108	72.0 - 138 ✓
13C-OCDD	M+2/M+4	0.96	0.76-1.02	y	221	96.0 - 415 ✓
13C-2,3,7,8-TCDF	M/M+2	0.86	0.65-0.89	y	103	71.0 - 140 ✓
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.66	1.32-1.78	y	91.4	76.0 - 130 ✓
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.70	1.32-1.78	y	96.7	77.0 - 130 ✓
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	123	76.0 - 131 ✓
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	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	119	73.0 - 137 ✓
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	125	74.0 - 135 ✓
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	y	117	78.0 - 129 ✓
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	y	124	77.0 - 129 ✓
13C-OCDF	M+2/M+4	0.96	0.76-1.02	y	250	96.0 - 415 ✓
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					9.77	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:16 Analysis Date: 11-AUG-10 Time: 23:26:18
DB-5 IS Data Filename: 11AUG10M Sam:16 Analysis Date: 11-AUG-10 Time: 23:26:18
DB-225 IS Data Filename: Analysis Date: Time:

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:24 ✓	1,3,6,8-TCDF (F)	23:03 ✓
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)	33:46 ✓	1,2,3,8,9-PeCDF (L)	34:12 ✓
1,2,4,6,7,9-HxCDD (F)	36:06 ✓	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)	42:47 ✓	1,2,3,4,6,7,8-HpCDF (F)	42:16 ✓
1,2,3,4,6,7,8-HpCDD (L)	44:10 ✓	1,2,3,4,7,8,9-HpCDF (L)	45:05 ✓

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


=====

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT
BETWEEN
COMPARED PEAKS (1)

<25%

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

Analyst: 

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: 11-AUG-10 23:26:18

CS3 or VER Data Filename: 11AUG10M

Sam:16

NATIVE ANALYTES	RETENTION TIME REFERENCE	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	1.000	0.999-1.001 ✓
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001 ✓
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001 ✓
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001 ✓
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001 ✓
OCDD	13C-OCDD	1.000	0.999-1.001 ✓
OCDF	13C-OCDF	1.000	0.999-1.001 ✓
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.984	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

Name	Resp	RA	RT	RRF	WHO 1998 Tox:		WHO 2005 Tox:		DL
					Conc	Qual	Fac	Noise-1	
2,3,7,8-TCDD	1.45e+06	0.77 y	27:24	1.04	10.7	2.50	-	-	*
1,2,3,7,8-PeCDD	6.65e+06	1.59 y	33:12	1.05	53.7	2.50	-	-	*
1,2,3,4,7,8-HxCDD	6.40e+06	1.38 y	38:35	1.30	55.5	2.50	-	-	*
1,2,3,6,7,8-HxCDD	6.07e+06	1.42 y	38:44	1.28	56.5	2.50	-	-	*
1,2,3,7,8,9-HxCDD	6.34e+06	1.40 y	39:11	1.25	58.8	2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	7.07e+06	1.04 y	44:10	1.35	54.3	2.50	-	-	*
OCDD	9.49e+06	0.97 y	49:43	1.25	113	2.50	-	-	*

2,3,7,8-TCDF	3.88e+06	0.67 y	26:39	1.62	10.3	2.50	-	-	*
1,2,3,7,8-PeCDF	9.54e+06	1.49 y	31:29	0.92	53.9	2.50	-	-	*
2,3,4,7,8-PeCDF	9.40e+06	1.48 y	32:48	0.94	52.2	2.50	-	-	*
1,2,3,4,7,8-HxCDF	9.35e+06	1.27 y	37:11	0.93	48.7	2.50	-	-	*
1,2,3,6,7,8-HxCDF	1.01e+07	1.26 y	37:23	0.84	50.3	2.50	-	-	*
2,3,4,6,7,8-HxCDF	9.23e+06	1.25 y	38:19	0.90	49.6	2.50	-	-	*
1,2,3,7,8,9-HxCDF	8.79e+06	1.23 y	39:45	0.98	49.8	2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	8.48e+06	1.09 y	42:16	1.38	49.5	2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	8.23e+06	1.09 y	45:05	1.62	51.8	2.50	-	-	*
OCDF	1.00e+07	0.85 y	50:05	0.74	94.4	2.50	-	-	*


Rec										
13C-2,3,7,8-TCDD	1.31e+07	0.83 y	27:22	0.93	101					101
13C-1,2,3,7,8-PeCDD	1.18e+07	1.74 y	33:11	0.81	105					105
13C-1,2,3,4,7,8-HxCDD	8.88e+06	1.23 y	38:32	0.95	97.3					97.3
13C-1,2,3,6,7,8-HxCDD	8.41e+06	1.25 y	38:42	1.00	87.6					87.6
13C-1,2,3,4,6,7,8-HpCDD	9.61e+06	1.03 y	44:09	0.92	108					108
13C-OCDD	1.35e+07	0.96 y	49:42	0.63	221					111

13C-2,3,7,8-TCDF	2.34e+07	0.86 y	26:38	0.87	103					103
13C-1,2,3,7,8-PeCDF	1.93e+07	1.66 y	31:27	0.81	91.4					91.4
13C-2,3,4,7,8-PeCDF	1.90e+07	1.70 y	32:47	0.75	96.7					96.7
13C-1,2,3,4,7,8-HxCDF	2.06e+07	0.52 y	37:09	1.74	123					123
13C-1,2,3,6,7,8-HxCDF	2.41e+07	0.52 y	37:21	2.17	115					115
13C-2,3,4,6,7,8-HxCDF	2.08e+07	0.53 y	38:18	1.82	119					119
13C-1,2,3,7,8,9-HxCDF	1.79e+07	0.51 y	39:44	1.49	125					125
13C-1,2,3,4,6,7,8-HpCDF	1.24e+07	0.44 y	42:15	1.10	117					117
13C-1,2,3,4,7,8,9-HpCDF	9.78e+06	0.44 y	45:04	0.81	124					124
13C-OCDF	2.86e+07	0.96 y	50:04	1.19	250					125

37Cl-2,3,7,8-TCDD	1.27e+06		27:24	0.93	9.77					97.7
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13C-1,2,3,4-TCDD	1.40e+07	0.85 y	26:48	-	41.3					
13C-1,2,3,4-TCDF	2.62e+07	0.88 y	25:33	-	49.1					
13C-1,2,3,7,8,9-HxCDD	9.64e+06	1.20 y	39:09	-	44.7					

										Fac	Noise-1	Noise-2	DL	#Hom
Total Tetra-Dioxins	8.13e+06		23:13	1.04	59.7	2.50	-	-	*	22				
Total Penta-Dioxins	1.45e+07		29:54	1.05	117	2.50	-	-	*	10				
Total Hexa-Dioxins	2.15e+07		36:06	1.27	195	2.50	-	-	*	10				
Total Hepta-Dioxins	1.50e+07		42:47	1.35	115	2.50	-	-	*	15				
Total Tetra-Furans	1.67e+07		23:03	1.62	44.2	2.50	-	-	*	17				
1st Fn. Tot Penta-Furans	9.22e+06		28:25	0.93	51.7	2.50	-	-	*	PeCDF 1				
Total Penta-Furans	2.81e+07		30:12	0.93	157	2.50	-	-	*	209 17				
Total Hexa-Furans	4.36e+07		35:13	0.90	231	2.50	-	-	*	20				
Total Hepta-Furans	1.69e+07		42:16	1.48	103	2.50	-	-	*	9				

Analyst:  Date: 8/12/10

Frontier Analytical Laboratory - Acquisition Log

Run Name:11AUG10M

Instrument: FAL3

GC: DB5

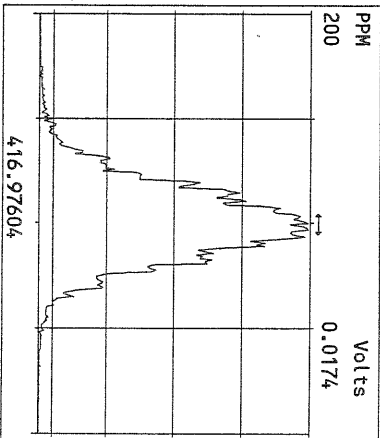
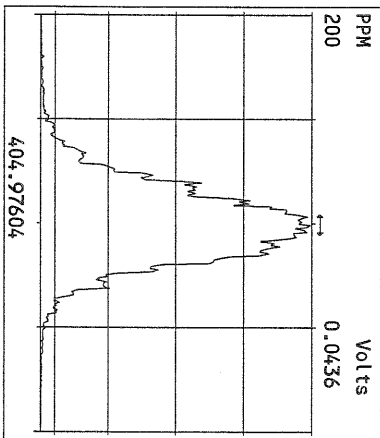
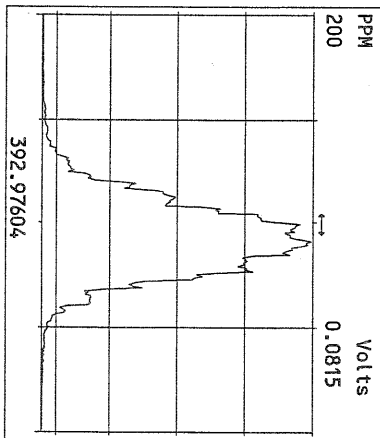
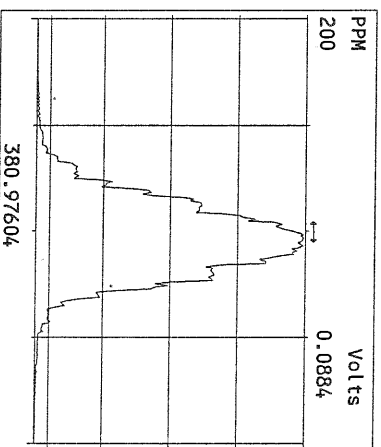
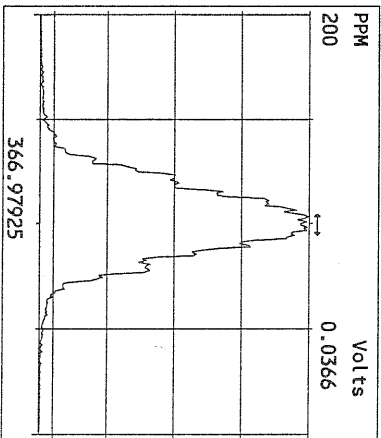
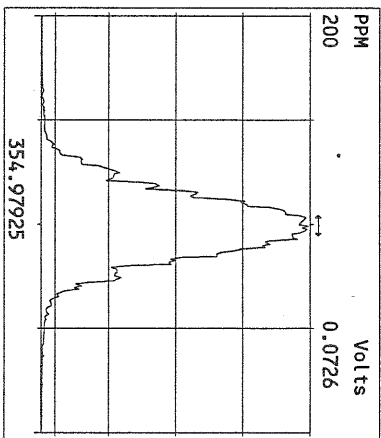
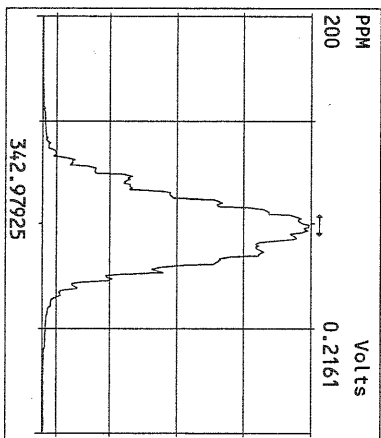
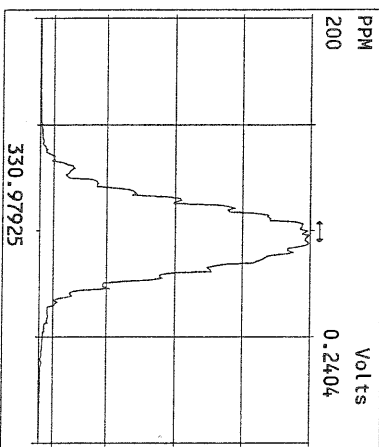
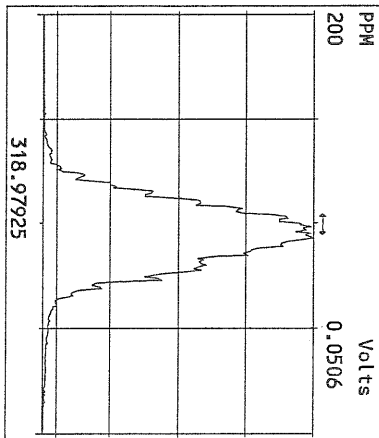
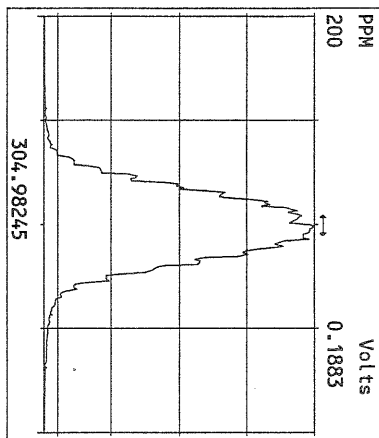
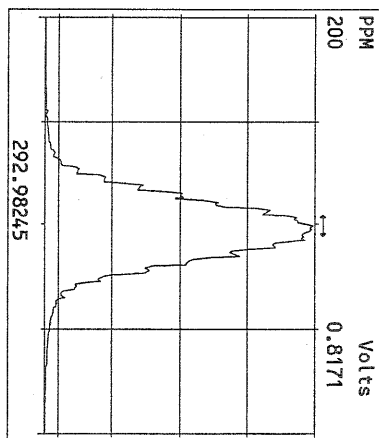
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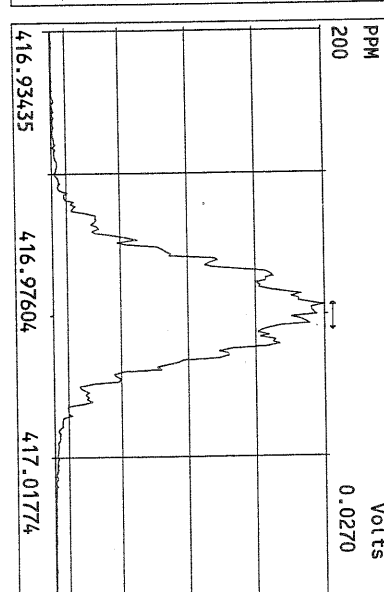
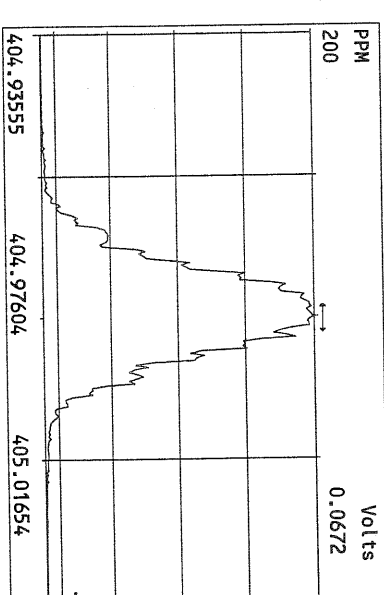
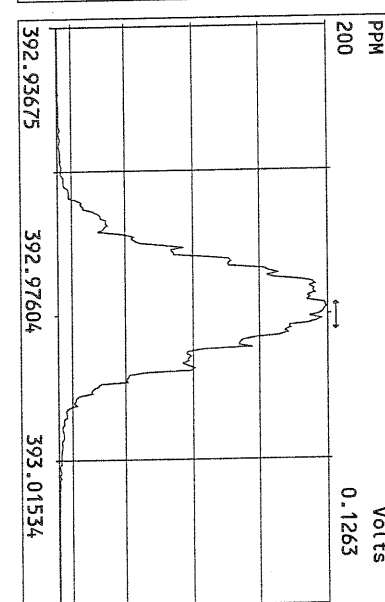
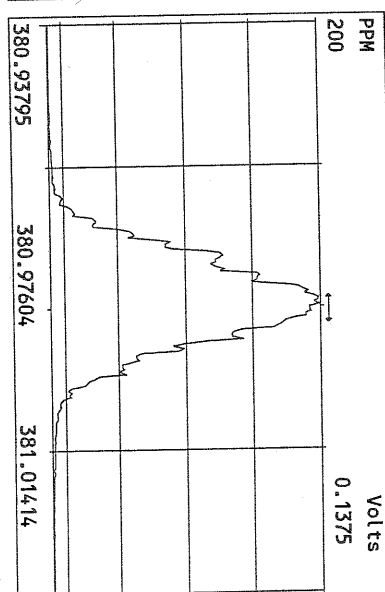
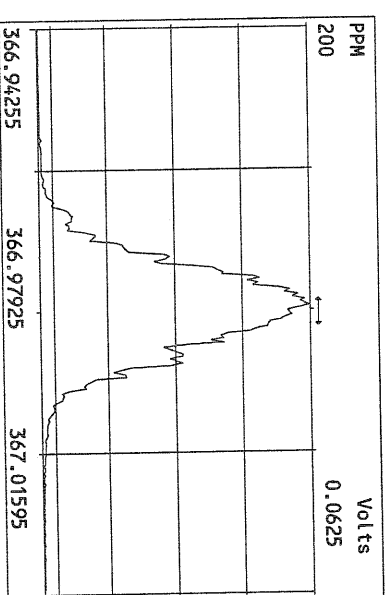
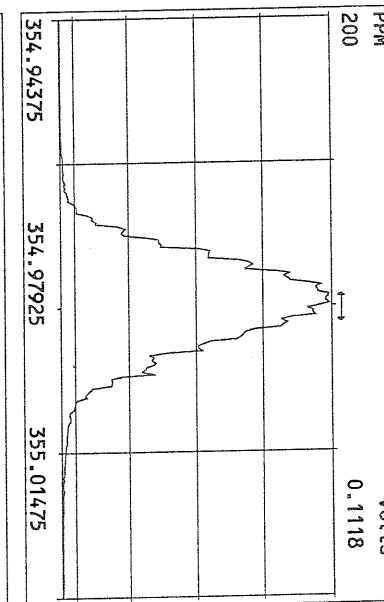
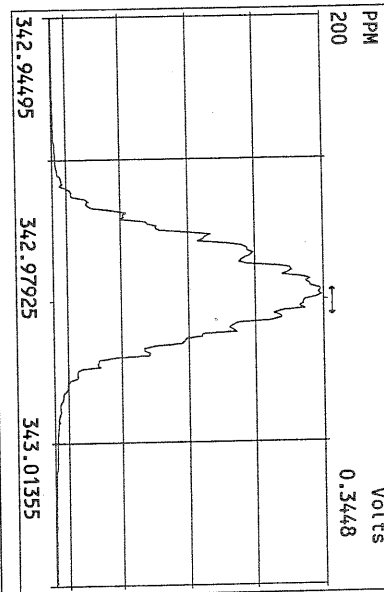
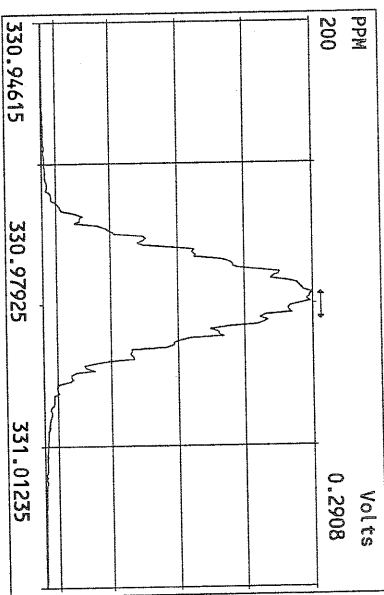
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A 8/12/10

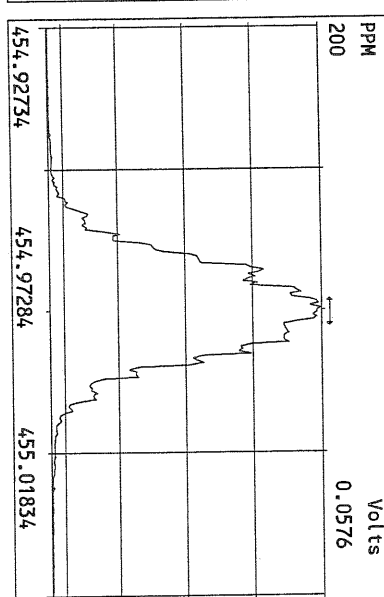
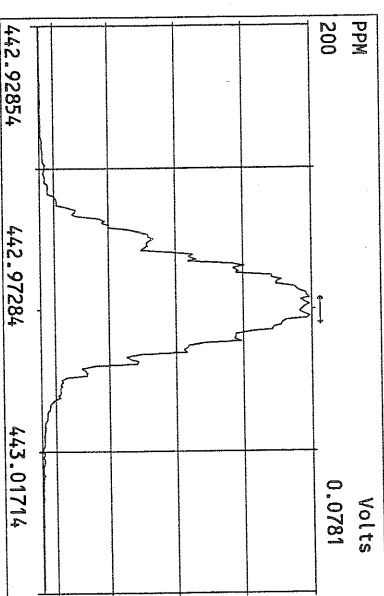
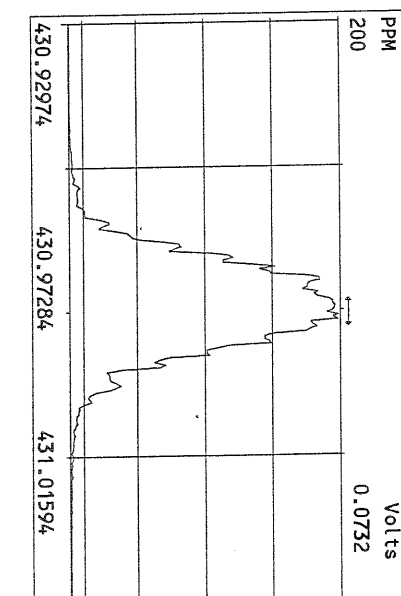
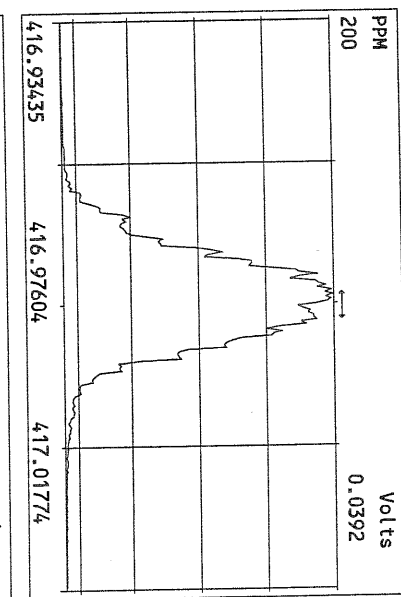
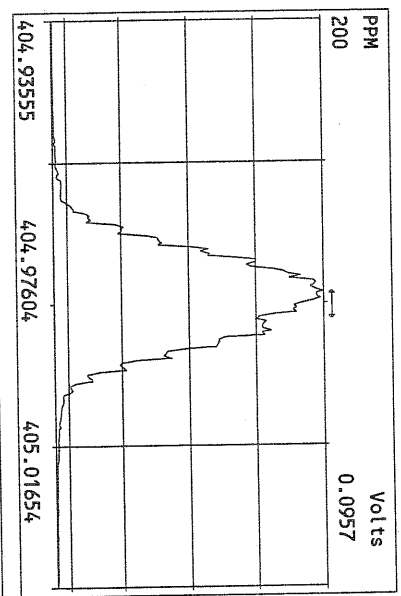
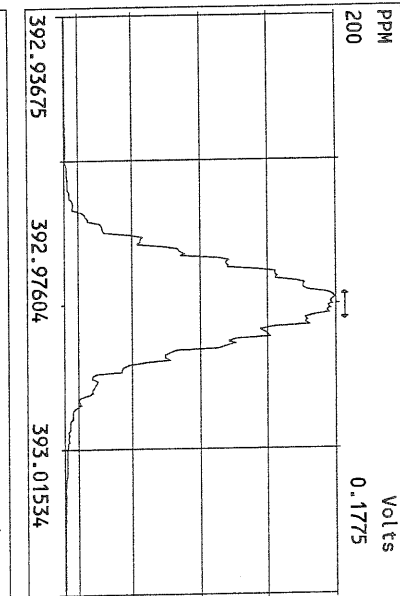
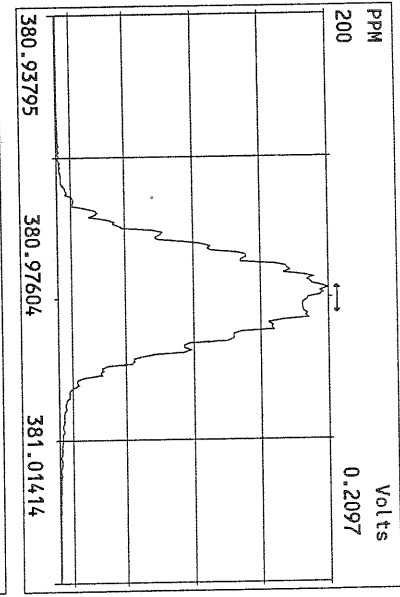
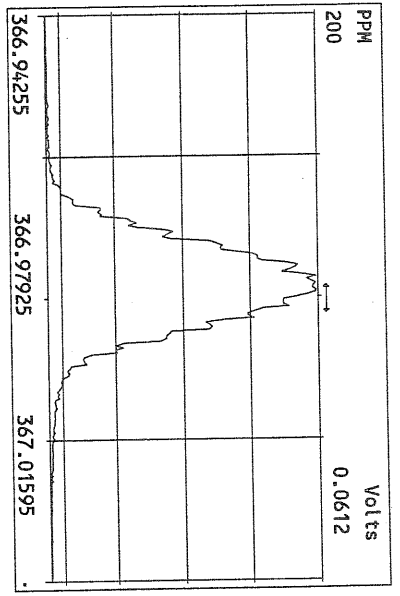
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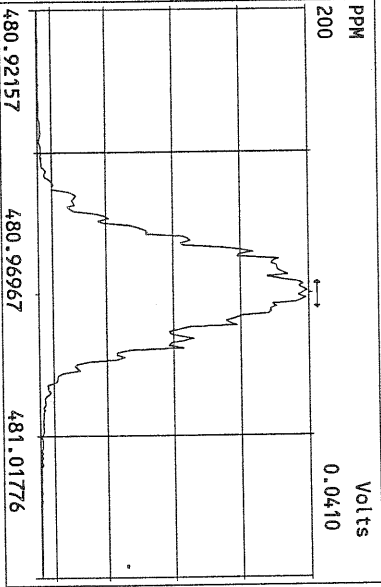
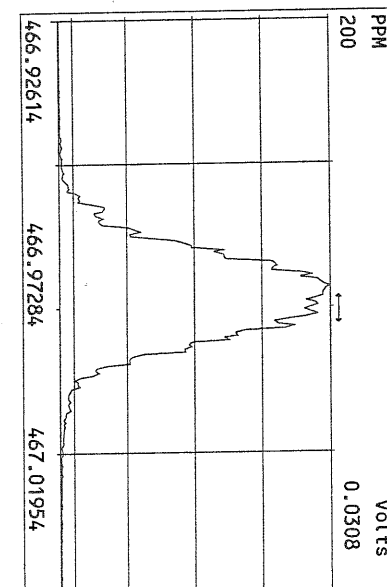
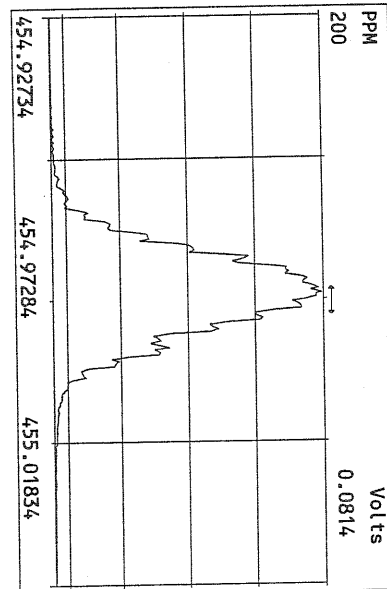
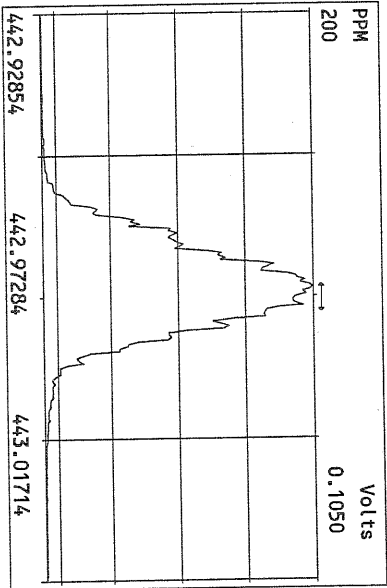
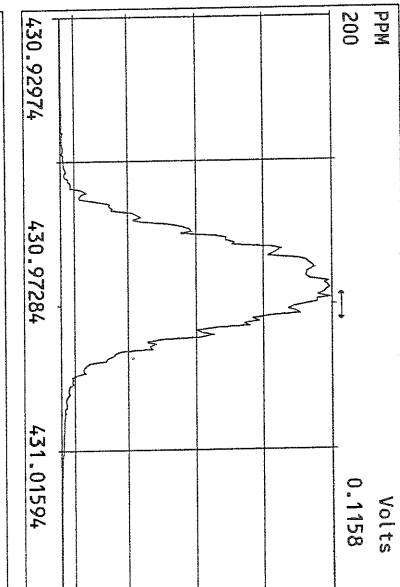
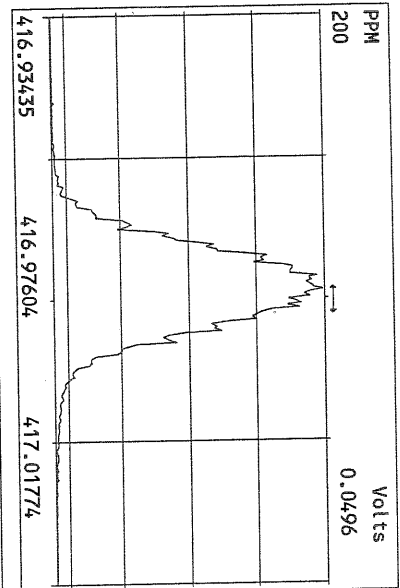
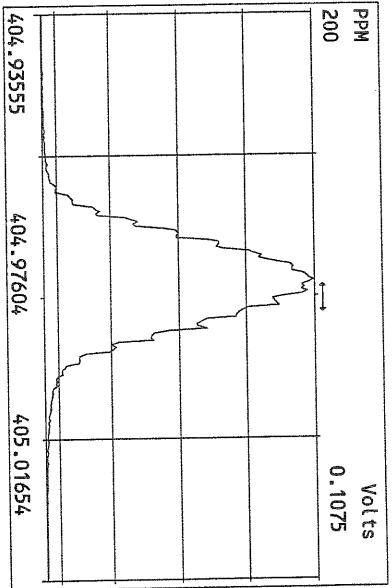


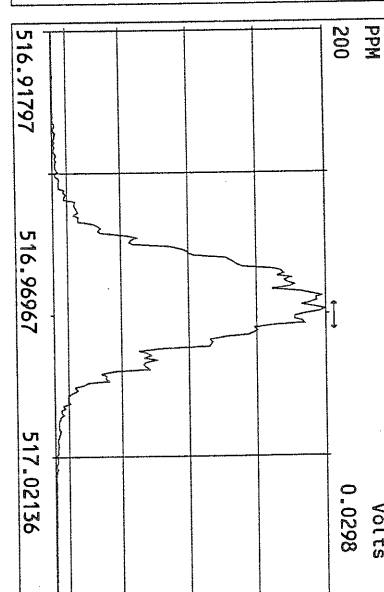
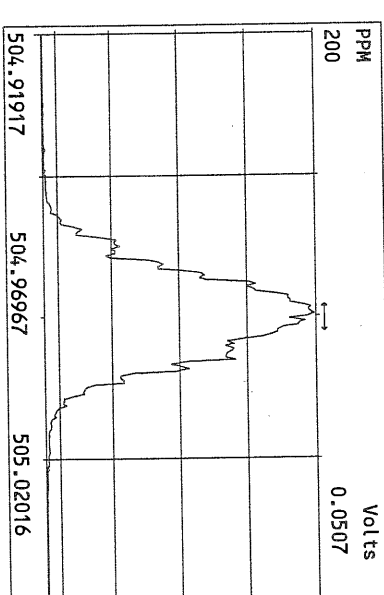
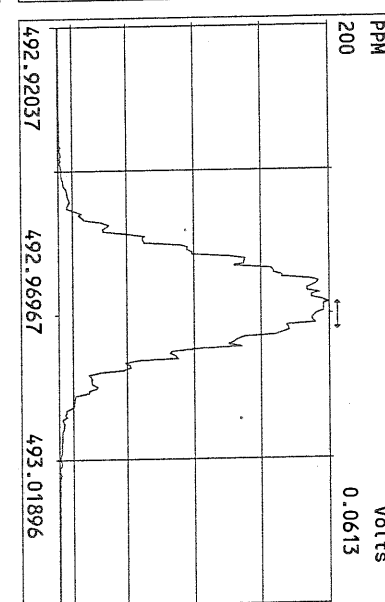
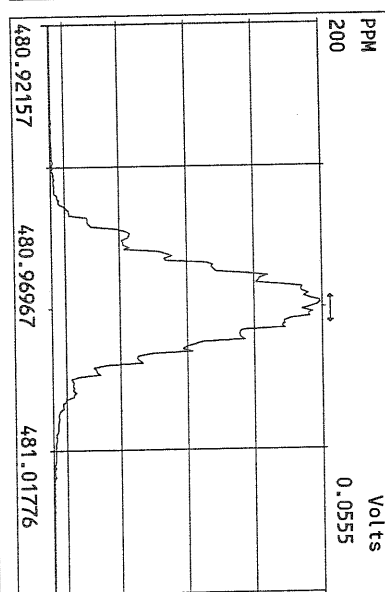
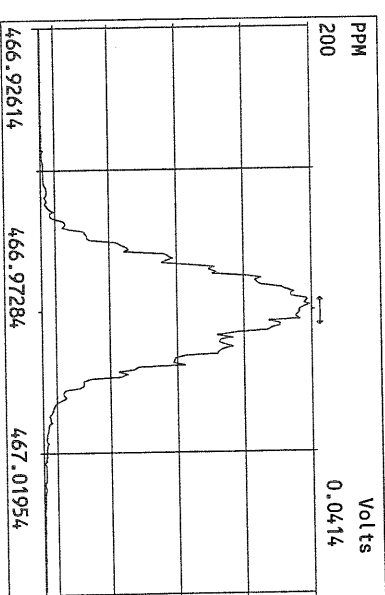
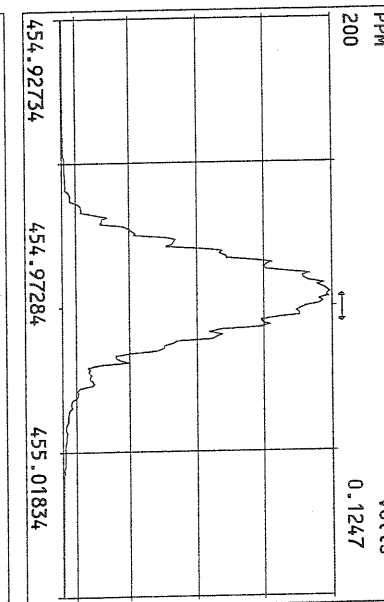
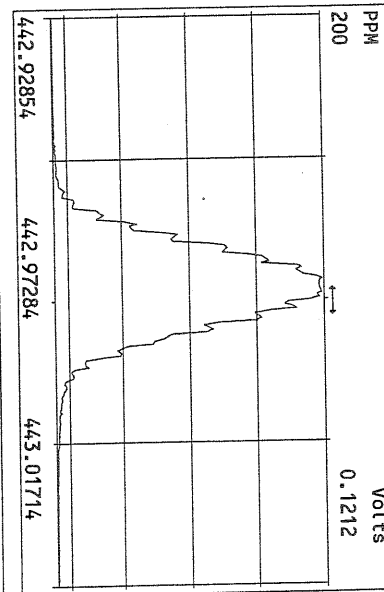
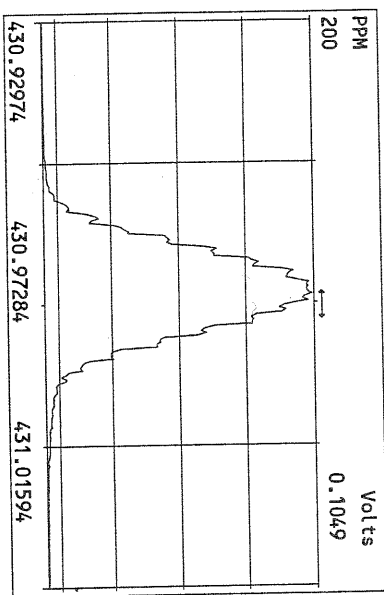


Peak Locate Examination:11-AUG-2010:09:35 File:11AUG10M
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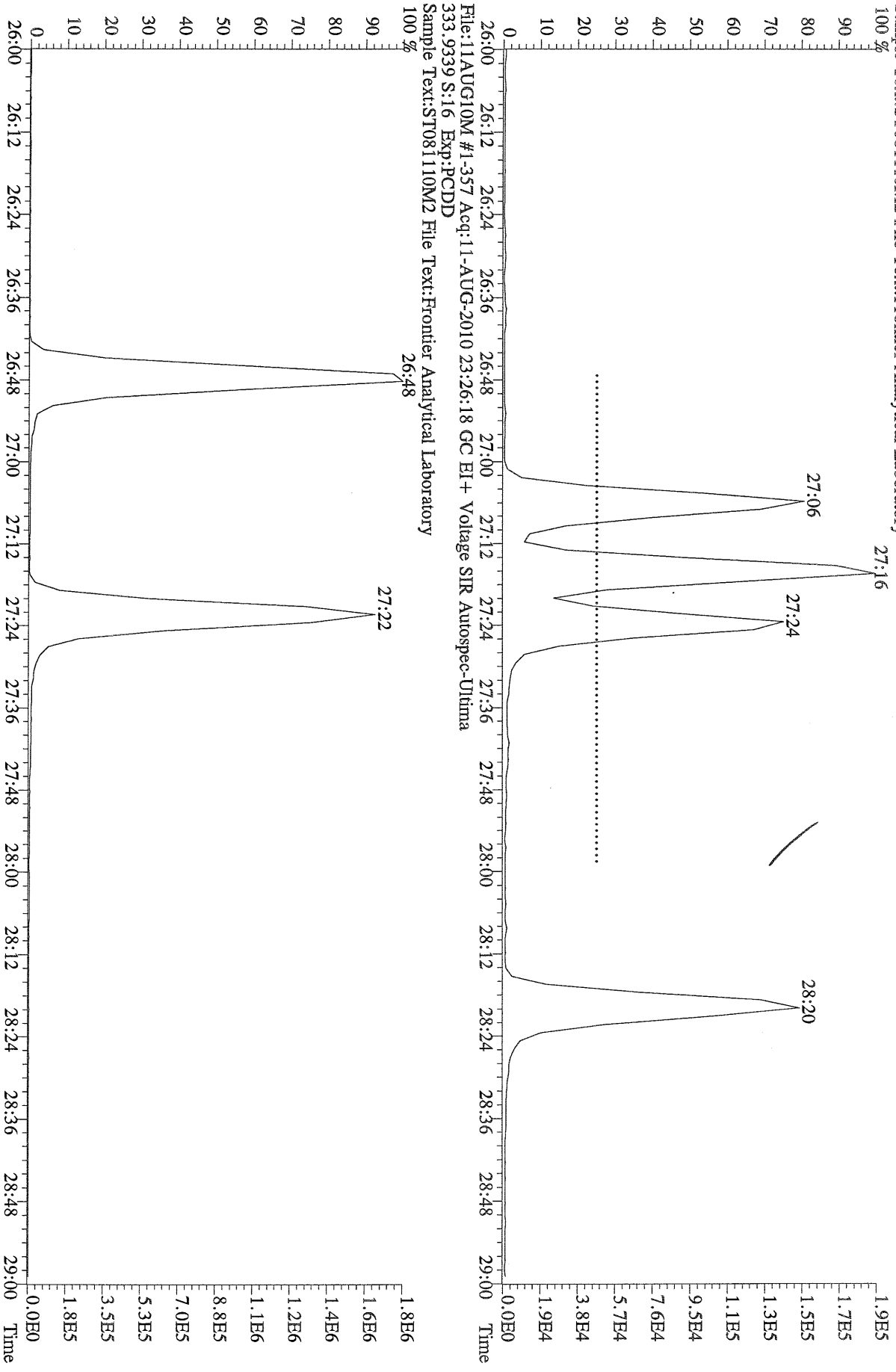


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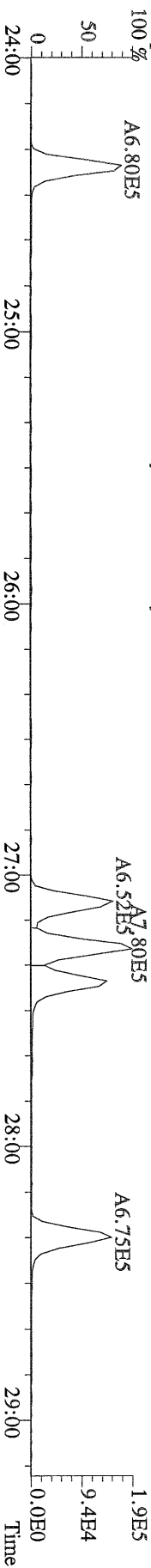
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319.8965 S:16 Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



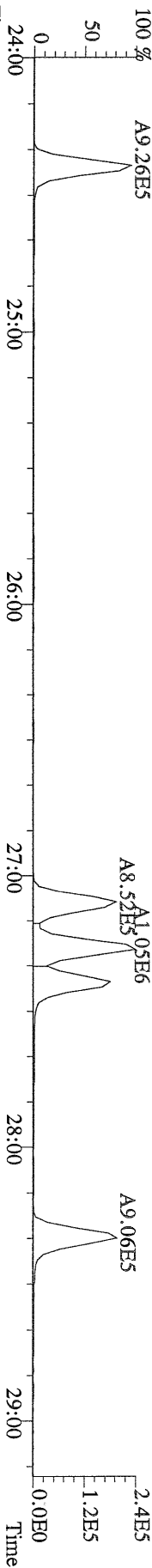
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333.9339 S:16 Exp:PCDD
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1.9E5
1.7E5
1.5E5
1.3E5
1.1E5
9.5E4
7.6E4
5.7E4
3.8E4
1.9E4
0.0E0
1.8E6
1.6E6
1.4E6
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Time

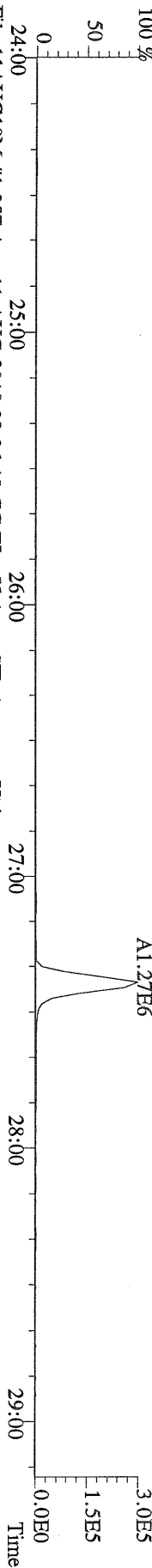
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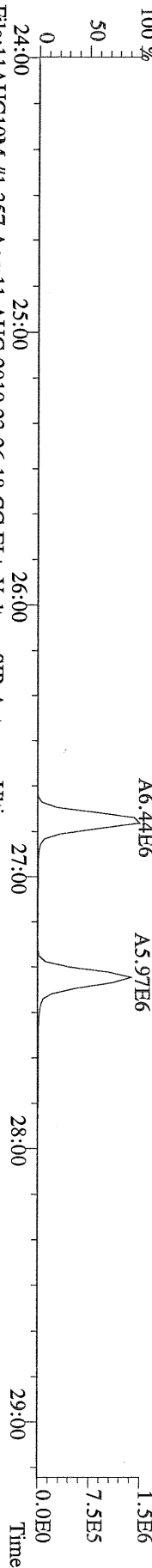
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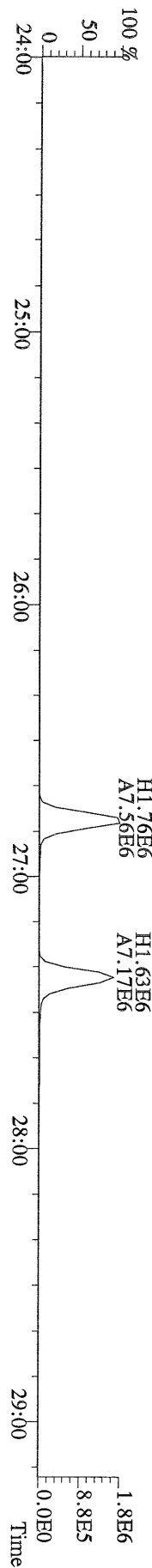
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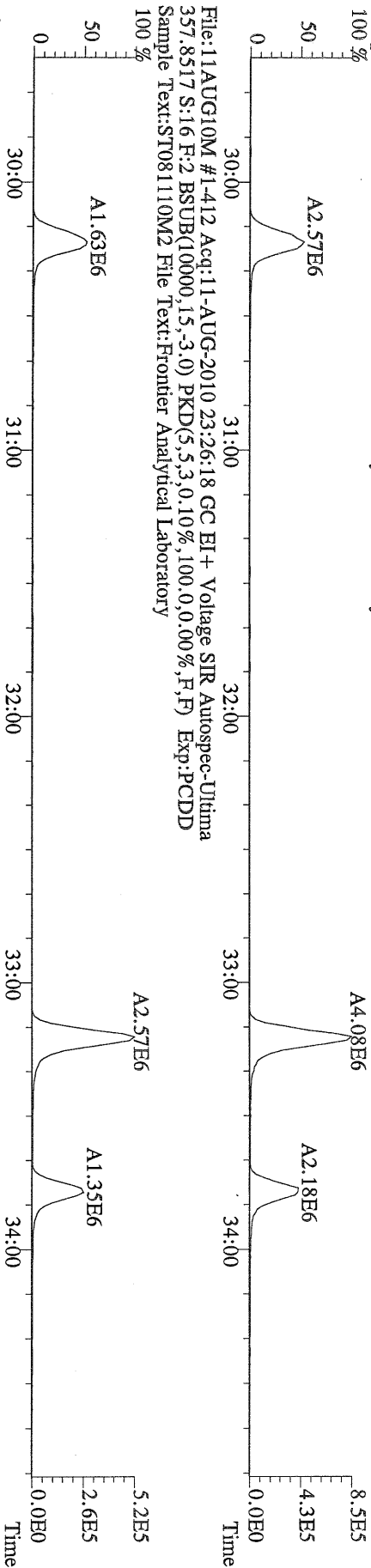
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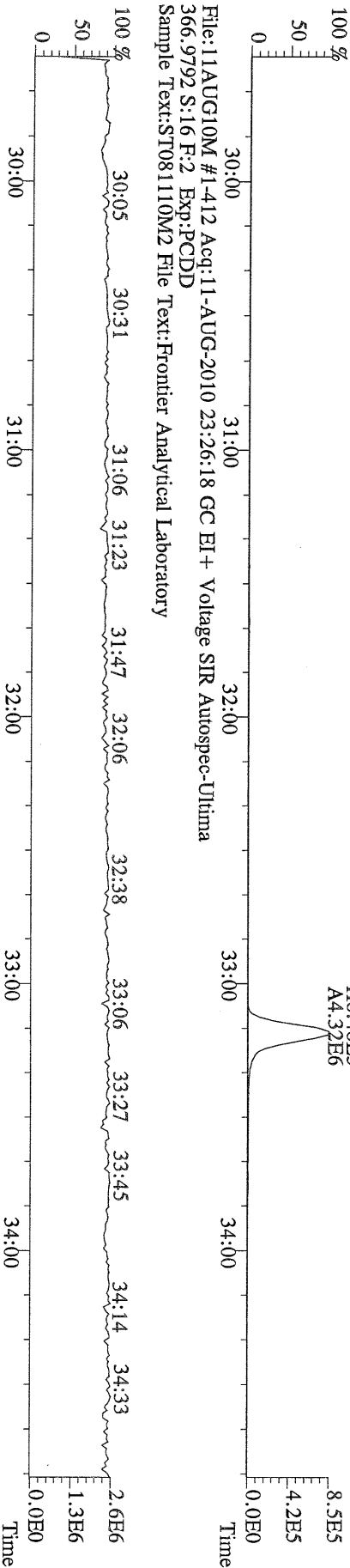
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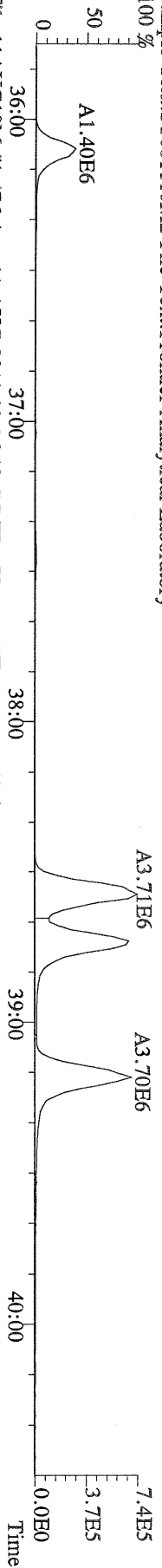
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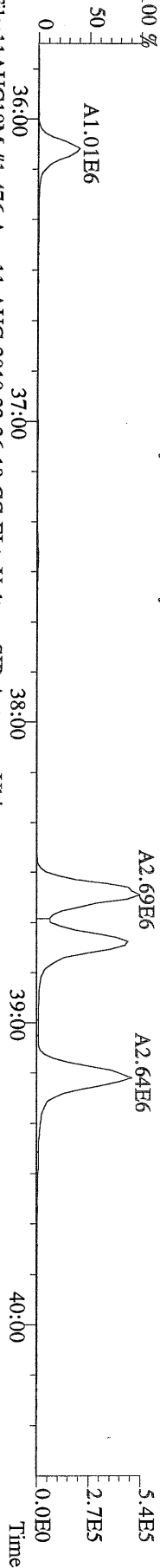
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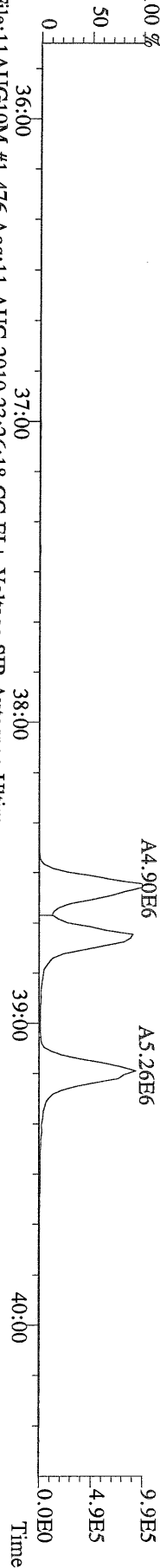
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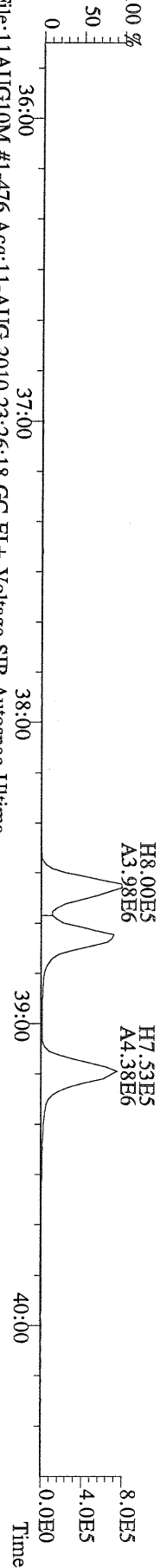
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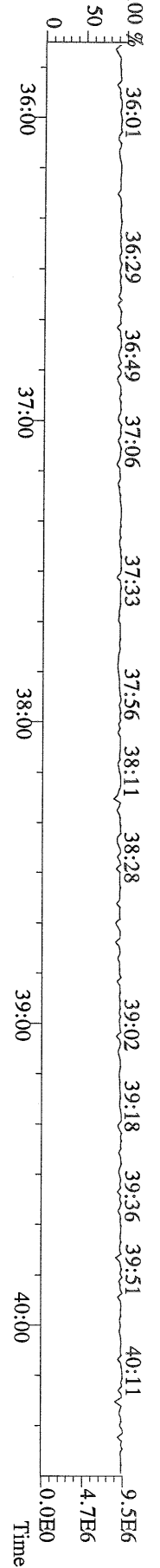
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Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



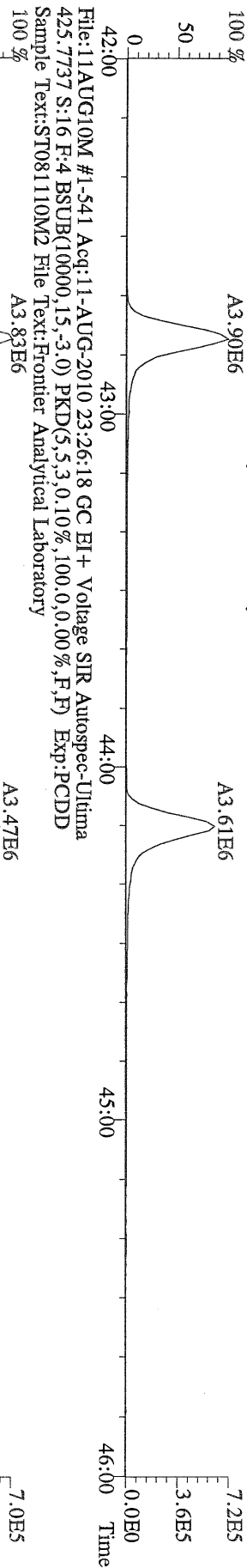
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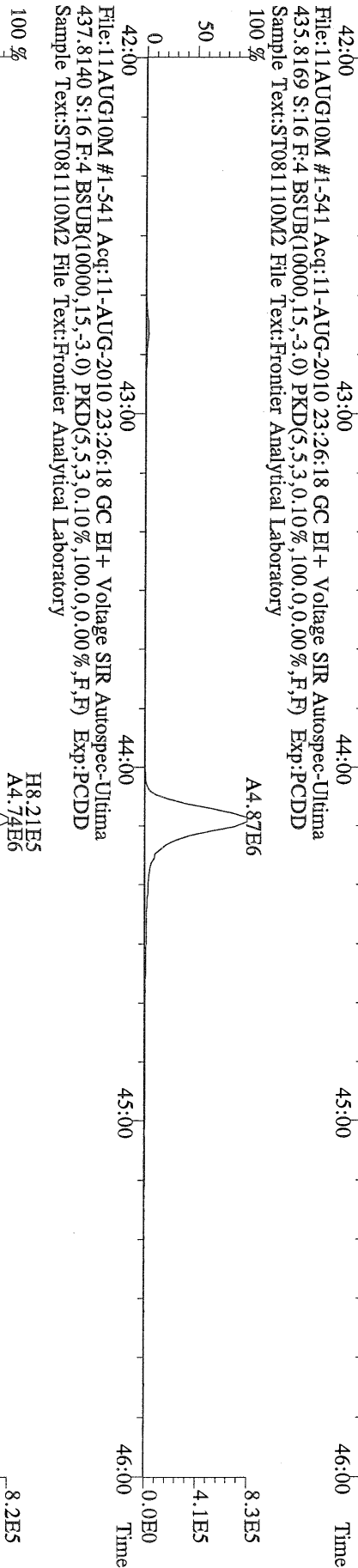
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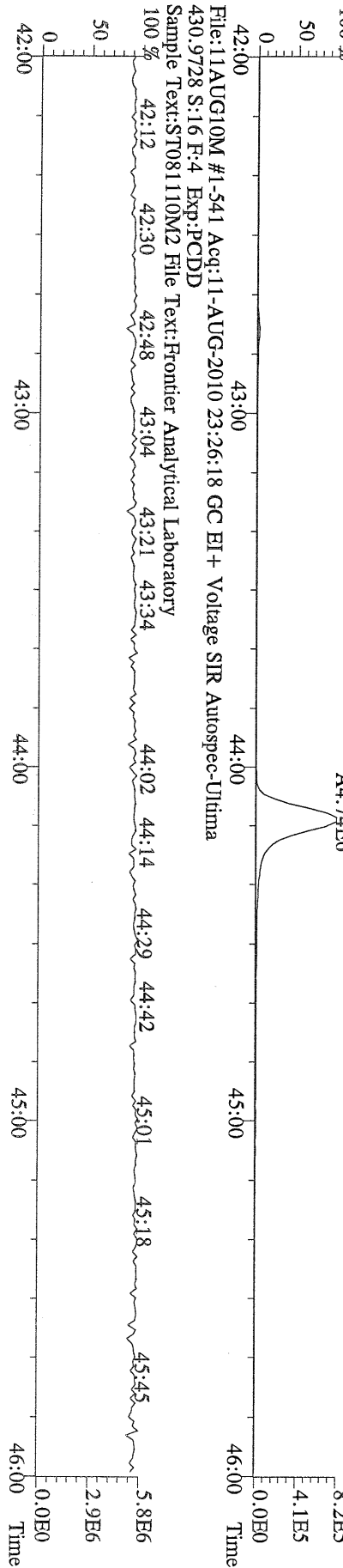
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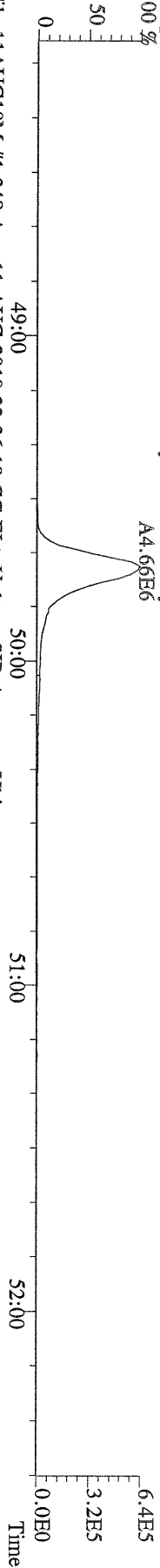
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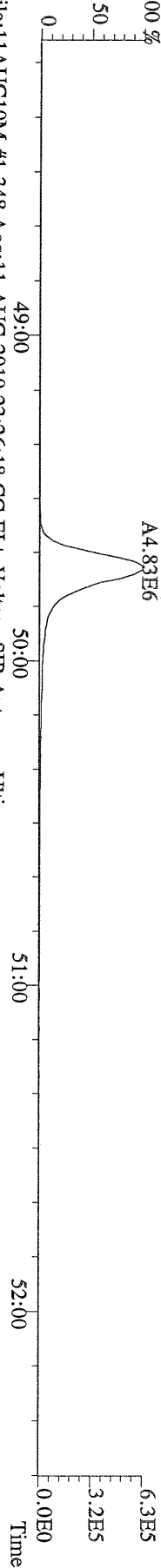
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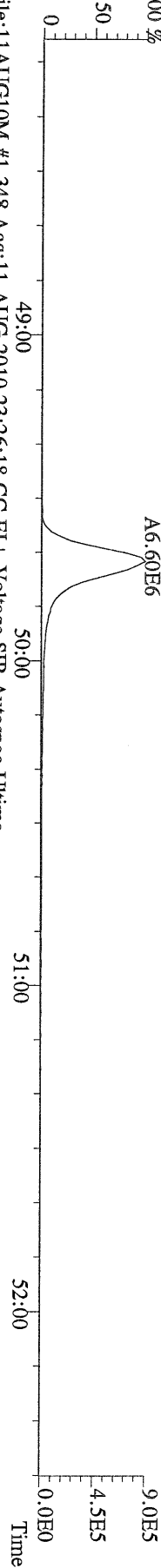
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457.7377 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



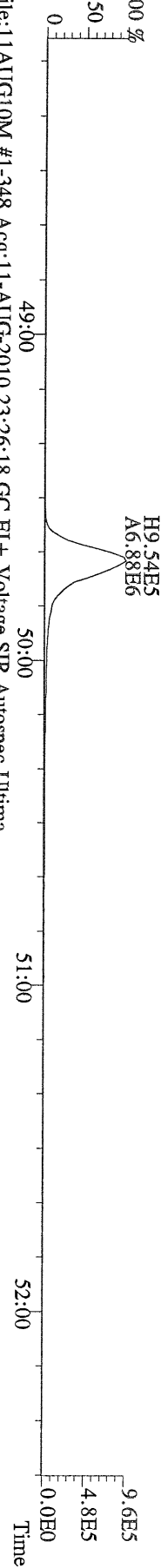
File:11AUG10M #1-348 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:16 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory



File:11AUG10M #1-348 Acq:11-AUG-2010 23:26:18 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:ST081110M2 File Text:Frontier Analytical Laboratory



File:11AUG10M #1-348 Acq:11-AUG-2010 23:26:18 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:ST081110M2 File Text:Frontier Analytical Laboratory



File:11AUG10M #1-348 Acq:11-AUG-2010 23:26:18 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:16 F:5 Exp:PCDD
Sample Text:ST081110M2 File Text:Frontier Analytical Laboratory

