

July 13, 2009

Ms. Kelly Buettner  
Air Toxics LTD.  
180 Blue Ravine Road, Suite.B  
Folsom, CA 95630-1020

Dear Ms. Buettner,

Enclosed are the results for Frontier Analytical Laboratory project **5557**. This corresponds to your project number **103PO333** and purchase order number **0906505C**. Nine PUF/filter samples were received on 6/22/2009 in good condition. On 6/25/2009 you contacted me by e-mail to request that we report and invoice the samples with an "OFF" identification separately. This report contains the results for samples 5557-003-SA, 5557-004-SA, 5557-008-SA and 5557-009-SA (Air Toxics IDs: OFF-03-061809, OFF-04-061809, OFF-04-061709 and OFF-03-061709 respectively). These samples were extracted and analyzed by EPA Method TO-9 for tetra through octa chlorinated dibenzo dioxins and furans. The 1998 World Health Organizations toxic equivalency factors were used to calculate the toxic equivalents (TEQs) on your report. Air Toxics LTD. requested a Level IV data package and a turnaround time of fifteen business days for project **5557**.

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

If you have any questions regarding project **5557**, please feel free to contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

*Daniel P. Vickers*

Daniel P. Vickers  
Director of Air Toxics

## Frontier Analytical Laboratory

### Sample Tracking Log

FAL Project ID: 5557

Received on: 06/22/2009

Project Due: 07/15/2009

Storage: R2

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
5557-001-SA	0	103PO333	CAMU-S1-061809	EPA TO-9 D/F	PUF / Filter	06/18/2009	04:55 pm	06/25/2009
5557-002-SA	0	103PO333	CAMU-S3-061809	EPA TO-9 D/F	PUF / Filter	06/18/2009	05:15 pm	06/25/2009
5557-003-SA	0	103PO333	OFF-03-061809	EPA TO-9 D/F	PUF / Filter	06/18/2009	05:45 pm	06/25/2009
5557-004-SA	0	103PO333	OFF-04-061809	EPA TO-9 D/F	PUF / Filter	06/18/2009	04:40 pm	06/25/2009
5557-005-SA	0	103PO333	CAMU-S1-061609	EPA TO-9 D/F	PUF / Filter	06/16/2009	04:40 pm	06/23/2009
5557-006-SA	0	103PO333	CAMU-S3-061609	EPA TO-9 D/F	PUF / Filter	06/16/2009	05:55 pm	06/23/2009
5557-007-SA	0	103PO333	CAMU-S3-061609BS	EPA TO-9 D/F	PUF / Filter	06/16/2009	05:00 pm	06/23/2009
5557-008-SA	0	103PO333	OFF-04-061709	EPA TO-9 D/F	PUF / Filter	06/17/2009	06:30 pm	06/24/2009
5557-009-SA	0	103PO333	OFF-03-061709	EPA TO-9 D/F	PUF / Filter	06/17/2009	07:00 pm	06/24/2009

FAL Sample ID

Notes

5557-001-SA 'Using hand written sampling time from cartridge for our tracking purposes.'  
 5557-002-SA 'Using sample ID from COC for our tracking purposes.'  
 5557-005-SA 'Using hand written sampling time from cartridge and Sample ID from COC for our tracking purposes.'  
 5557-006-SA 'Using hand written sampling time from cartridge and Sample ID from COC for our tracking purposes.'  
 5557-007-SA 'Using sample ID from COC for our tracking purposes.'  
 5557-008-SA 'Using hand written sampling time from cartridge for our tracking purposes.'  
 5557-009-SA 'Using hand written sampling time from cartridge for our tracking purposes.'

# EPA Method TO-9 PCDD/F



FAL ID: 5557-001-MB  
Client ID: Method Blank  
Matrix: PUF / Filter  
Batch No: X1754

Date Extracted: 06-23-2009  
Date Received: NA  
Amount: 1.00 sample

ICal: AIRFAL3-6-29-09  
GC Column: DB5  
Units: pg/sample

Acquired: 07-09-2009  
WHO TEQ: 0.00

Compound	Conc	DL	Qual	WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.839		-	0.937				
1,2,3,7,8-PeCDD	ND	1.04		-	1.05				
1,2,3,4,7,8-HxCDD	ND	4.44		-	1.70				
1,2,3,6,7,8-HxCDD	ND	4.92		-	1.73	Total TCDD	ND	0.839	
1,2,3,7,8,9-HxCDD	ND	4.52		-	1.65	Total PeCDD	ND	1.04	
1,2,3,4,6,7,8-HpCDD	ND	3.75		-	2.99	Total HxCDD	ND	4.92	
OCDD	ND	9.05		-	4.64	Total HpCDD	ND	3.75	
2,3,7,8-TCDF	ND	2.25		-	0.816				
1,2,3,7,8-PeCDF	ND	2.33		-	1.54				
2,3,4,7,8-PeCDF	ND	2.46		-	1.60				
1,2,3,4,7,8-HxCDF	ND	1.58		-	1.07				
1,2,3,6,7,8-HxCDF	ND	1.55		-	0.956				
2,3,4,6,7,8-HxCDF	ND	1.72		-	1.07				
1,2,3,7,8,9-HxCDF	ND	1.84		-	1.16	Total TCDF	ND	2.25	
1,2,3,4,6,7,8-HpCDF	ND	2.42		-	0.692	Total PeCDF	ND	2.46	
1,2,3,4,7,8,9-HpCDF	ND	3.27		-	0.919	Total HxCDF	ND	1.84	
OCDF	ND	3.05		-	2.95	Total HpCDF	ND	3.27	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	92.9	40.0 - 130	
13C-1,2,3,7,8-PeCDD	102	40.0 - 130	
13C-1,2,3,6,7,8-HxCDD	100	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	110	25.0 - 130	
13C-OCDD	99.5	25.0 - 130	
13C-2,3,7,8-TCDF	99.8	40.0 - 130	
13C-1,2,3,7,8-PeCDF	106	40.0 - 130	
13C-1,2,3,6,7,8-HxCDF	104	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDF	102	25.0 - 130	
13C-OCDF	114	25.0 - 130	
Cleanup Surrogate			
13C-1,2,3,7,8,9-HxCDF	109	40.0 - 130	
Pre-Spike Surrogate			
37Cl-2,3,7,8-TCDD	102	70.0 - 130	
13C-1,2,3,4,7,8-HxCDD	91.7	70.0 - 130	
13C-2,3,4,7,8-PeCDF	107	70.0 - 130	
13C-1,2,3,4,7,8-HxCDF	95.8	70.0 - 130	
13C-1,2,3,4,7,8,9-HpCDF	128	70.0 - 130	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1

B Analyte is present in Method Blank

C Chemical Interference

D Presence of Diphenyl Ethers

E Analyte concentration is above calibration range

F Analyte confirmation on secondary column

J Analyte concentration is below calibration range

M Maximum possible concentration

ND Analyte Not Detected

NP Not Provided

S Sample acceptance criteria not met

X Matrix interferences

\* Result taken from dilution or reinjection

Analyst: 8  
Date: 7/10/09

Reviewed By: [Signature]  
Date: 7/10/09

# EPA Method TO-9 PCDD/F



FAL ID: 5557-001-LCS1/LCS2  
Client ID: LCS1/LCS2  
Matrix: PUF / Filter

Date Extracted: 06-23-2009  
Date Received: NA  
LCS1 Amount: 1.00 sample  
LCS2 Amount: 1.00 sample

ICal: AIRFAL3-6-29-09  
Batch No: X1754  
Units: ng/ml

LCS1 Acquired: 07-09-2009  
LCS2 Acquired: 07-09-2009  
GC Column: DB5

Compound	Amount Spiked (pg)	LCS1 Amount	LCS2 Amount	% RSD	Qual
2,3,7,8-TCDD	200	4.60	4.80	4.26	
1,2,3,7,8-PeCDD	1000	23.8	24.0	0.837	
1,2,3,4,7,8-HxCDD	1000	24.4	25.1	2.83	
1,2,3,6,7,8-HxCDD	1000	26.7	27.3	2.22	
1,2,3,7,8,9-HxCDD	1000	24.4	24.6	0.816	
1,2,3,4,6,7,8-HpCDD	1000	25.5	25.9	1.56	
OCDD	2000	53.8	53.3	0.934	
2,3,7,8-TCDF	200	5.09	5.34	4.79	
1,2,3,7,8-PeCDF	1000	24.5	25.2	2.82	
2,3,4,7,8-PeCDF	1000	25.3	26.7	5.38	
1,2,3,4,7,8-HxCDF	1000	24.9	26.0	4.32	
1,2,3,6,7,8-HxCDF	1000	26.0	26.7	2.66	
2,3,4,6,7,8-HxCDF	1000	23.8	25.9	8.45	
1,2,3,7,8,9-HxCDF	1000	26.5	28.1	5.86	
1,2,3,4,6,7,8-HpCDF	1000	25.9	25.9	0.00	
1,2,3,4,7,8,9-HpCDF	1000	31.2	33.3	6.51	
OCDF	2000	53.5	54.8	2.40	
Internal Standards		% Rec	% Rec	QC Limits	
13C-2,3,7,8-TCDD	4000	91.5	94.5	40.0 - 130	
13C-1,2,3,7,8-PeCDD	4000	102	103	40.0 - 130	
13C-1,2,3,6,7,8-HxCDD	4000	98.4	102	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	4000	99.9	102	25.0 - 130	
13C-OCDD	8000	73.3	85.4	25.0 - 130	
13C-2,3,7,8-TCDF	4000	96.7	99.7	40.0 - 130	
13C-1,2,3,7,8-PeCDF	4000	102	102	40.0 - 130	
13C-1,2,3,6,7,8-HxCDF	4000	103	104	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDF	4000	93.7	99.2	25.0 - 130	
13C-OCDF	8000	89.9	98.9	25.0 - 130	
Cleanup Surrogate					
13C-1,2,3,7,8,9-HxCDF	4000	106	107	40.0 - 130	
Pre Spike Surrogate		% Rec	% Rec	QC Limits	
37Cl-2,3,7,8-TCDD	4000	101	102	70.0 - 130	
13C-1,2,3,4,7,8-HxCDD	4000	89.4	96.3	70.0 - 130	
13C-2,3,4,7,8-PeCDF	4000	103	111	70.0 - 130	
13C-1,2,3,4,7,8-HxCDF	4000	95.0	99.2	70.0 - 130	
13C-1,2,3,4,7,8,9-HpCDF	4000	119	126	70.0 - 130	

Analyst:                       
Date: 7/10/09

Reviewed By:                       
Date: 7/10/09



# EPA Method TO-9 PCDD/F



FAL ID: 5557-003-SA  
Client ID: OFF-03-061809  
Matrix: PUF / Filter  
Batch No: X1754

Date Extracted: 06-23-2009  
Date Received: 06-22-2009  
Amount: 1.00 sample

ICal: AIRFAL3-6-29-09  
GC Column: DB5  
Units: pg/sample

Acquired: 07-09-2009  
WHO TEQ: 0.00253

Compound	Conc	DL	Qual	WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	2.14		-	0.937				
1,2,3,7,8-PeCDD	ND	1.76		-	1.05				
1,2,3,4,7,8-HxCDD	ND	3.05		-	1.70				
1,2,3,6,7,8-HxCDD	ND	3.38		-	1.73	Total TCDD	ND	2.14	
1,2,3,7,8,9-HxCDD	ND	3.11		-	1.65	Total PeCDD	ND	1.76	
1,2,3,4,6,7,8-HpCDD	ND	8.55		-	2.99	Total HxCDD	ND	3.38	
OCDD	25.3	-	J	0.00253	4.64	Total HpCDD	ND	8.55	
2,3,7,8-TCDF	ND	2.37		-	0.816				
1,2,3,7,8-PeCDF	ND	3.03		-	1.54				
2,3,4,7,8-PeCDF	ND	3.20		-	1.60				
1,2,3,4,7,8-HxCDF	ND	1.71		-	1.07				
1,2,3,6,7,8-HxCDF	ND	1.68		-	0.956				
2,3,4,6,7,8-HxCDF	ND	1.86		-	1.07				
1,2,3,7,8,9-HxCDF	ND	1.99		-	1.16	Total TCDF	ND	2.37	
1,2,3,4,6,7,8-HpCDF	ND	3.38		-	0.692	Total PeCDF	ND	3.20	
1,2,3,4,7,8,9-HpCDF	ND	4.57		-	0.919	Total HxCDF	ND	1.99	
OCDF	ND	10.0		-	2.95	Total HpCDF	ND	4.57	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	97.7	40.0 - 130	
13C-1,2,3,7,8-PeCDD	103	40.0 - 130	
13C-1,2,3,6,7,8-HxCDD	101	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	98.9	25.0 - 130	
13C-OCDD	75.5	25.0 - 130	
13C-2,3,7,8-TCDF	97.0	40.0 - 130	
13C-1,2,3,7,8-PeCDF	106	40.0 - 130	
13C-1,2,3,6,7,8-HxCDF	97.3	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDF	86.7	25.0 - 130	
13C-OCDF	83.8	25.0 - 130	
Cleanup Surrogate			
13C-1,2,3,7,8,9-HxCDF	104	40.0 - 130	
Pre-Spike Surrogate			
37Cl-2,3,7,8-TCDD	103	70.0 - 130	
13C-1,2,3,4,7,8-HxCDD	94.2	70.0 - 130	
13C-2,3,4,7,8-PeCDF	106	70.0 - 130	
13C-1,2,3,4,7,8-HxCDF	96.7	70.0 - 130	
13C-1,2,3,4,7,8,9-HpCDF	126	70.0 - 130	

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

Analyst:                       
Date: 7/10/09

Reviewed By:                       
Date: 7/10/09

# EPA Method TO-9 PCDD/F



FAL ID: 5557-004-SA  
Client ID: OFF-04-061809  
Matrix: PUF / Filter  
Batch No: X1754

Date Extracted: 06-23-2009  
Date Received: 06-22-2009  
Amount: 1.00 sample

ICal: AIRFAL3-6-29-09  
GC Column: DB5  
Units: pg/sample

Acquired: 07-09-2009  
WHO TEQ: 1.83

Compound	Conc	DL	Qual	WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	2.35		-	0.937				
1,2,3,7,8-PeCDD	ND	2.88		-	1.05				
1,2,3,4,7,8-HxCDD	ND	6.58		-	1.70				
1,2,3,6,7,8-HxCDD	ND	7.29		-	1.73	Total TCDD	ND	2.35	
1,2,3,7,8,9-HxCDD	ND	6.69		-	1.65	Total PeCDD	ND	2.88	
1,2,3,4,6,7,8-HpCDD	76.0	-		0.760	2.99	Total HxCDD	34.7	-	J
OCDD	545	-		0.0545	4.64	Total HpCDD	162	-	
2,3,7,8-TCDF	ND	4.05		-	0.816				
1,2,3,7,8-PeCDF	ND	3.38		-	1.54				
2,3,4,7,8-PeCDF	ND	3.57		-	1.60				
1,2,3,4,7,8-HxCDF	6.44	-	J	0.644	1.07	Total TCDF	ND	4.05	
1,2,3,6,7,8-HxCDF	ND	3.14		-	0.956	Total PeCDF	11.9	-	J
2,3,4,6,7,8-HxCDF	ND	3.47		-	1.07	Total HxCDF	60.6	-	
1,2,3,7,8,9-HxCDF	ND	3.73		-	1.16	Total HpCDF	80.2	-	
1,2,3,4,6,7,8-HpCDF	36.7	-	J	0.367	0.692				
1,2,3,4,7,8,9-HpCDF	ND	3.92		-	0.919				
OCDF	63.8	-	J	0.00639	2.95				

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	91.8	40.0 - 130	
13C-1,2,3,7,8-PeCDD	100	40.0 - 130	
13C-1,2,3,6,7,8-HxCDD	99.7	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	97.4	25.0 - 130	
13C-OCDD	77.7	25.0 - 130	
13C-2,3,7,8-TCDF	96.6	40.0 - 130	
13C-1,2,3,7,8-PeCDF	95.2	40.0 - 130	
13C-1,2,3,6,7,8-HxCDF	92.6	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDF	80.1	25.0 - 130	
13C-OCDF	84.0	25.0 - 130	
Cleanup Surrogate			
13C-1,2,3,7,8,9-HxCDF	91.0	40.0 - 130	
Pre-Spike Surrogate			
37Cl-2,3,7,8-TCDD	98.9	70.0 - 130	
13C-1,2,3,4,7,8-HxCDD	86.1	70.0 - 130	
13C-2,3,4,7,8-PeCDF	106	70.0 - 130	
13C-1,2,3,4,7,8-HxCDF	93.7	70.0 - 130	
13C-1,2,3,4,7,8,9-HpCDF	117	70.0 - 130	

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

Analyst:   k    
Date:   7/10/09  

Reviewed By:                       
Date:   7/10/09

# EPA Method TO-9 PCDD/F



FAL ID: 5557-008-SA  
Client ID: OFF-04-061709  
Matrix: PUF / Filter  
Batch No: X1754

Date Extracted: 06-23-2009  
Date Received: 06-22-2009  
Amount: 1.00 sample

ICat: AIRFAL3-6-29-09  
GC Column: DB5  
Units: pg/sample

Acquired: 07-09-2009  
WHO TEQ: 3.46

Compound	Conc	DL	Qual	WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	2.59		-	0.937				
1,2,3,7,8-PeCDD	ND	4.02		-	1.05				
1,2,3,4,7,8-HxCDD	ND	4.21		-	1.70				
1,2,3,6,7,8-HxCDD	6.46	-	J	0.646	1.73	Total TCDD	ND	2.59	
1,2,3,7,8,9-HxCDD	ND	4.28		-	1.65	Total PeCDD	ND	4.02	
1,2,3,4,6,7,8-HpCDD	59.4	-		0.594	2.99	Total HxCDD	37.8	-	J
OCDD	494	-		0.0494	4.64	Total HpCDD	129	-	
2,3,7,8-TCDF	ND	4.52		-	0.816				
1,2,3,7,8-PeCDF	ND	5.56		-	1.54				
2,3,4,7,8-PeCDF	ND	5.88		-	1.60				
1,2,3,4,7,8-HxCDF	9.91	-	J	0.991	1.07	Total TCDF	ND	6.33	
1,2,3,6,7,8-HxCDF	6.69	-	J	0.669	0.956	Total PeCDF	17.1	-	J
2,3,4,6,7,8-HxCDF	ND	3.91		-	1.07	Total HxCDF	77.7	-	
1,2,3,7,8,9-HxCDF	ND	4.19		-	1.16	Total HpCDF	86.9	-	
1,2,3,4,6,7,8-HpCDF	41.0	-	J	0.410	0.692				
1,2,3,4,7,8,9-HpCDF	9.33	-	J	0.0933	0.919				
OCDF	85.3	-	J	0.00853	2.95				

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	83.1	40.0 - 130	
13C-1,2,3,7,8-PeCDD	86.7	40.0 - 130	
13C-1,2,3,6,7,8-HxCDD	109	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	103	25.0 - 130	
13C-OCDD	70.0	25.0 - 130	
13C-2,3,7,8-TCDF	84.3	40.0 - 130	
13C-1,2,3,7,8-PeCDF	93.4	40.0 - 130	
13C-1,2,3,6,7,8-HxCDF	103	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDF	88.0	25.0 - 130	
13C-OCDF	78.4	25.0 - 130	
Cleanup Surrogate			
13C-1,2,3,7,8,9-HxCDF	83.5	40.0 - 130	
Pre-Spike Surrogate			
37Cl-2,3,7,8-TCDD	103	70.0 - 130	
13C-1,2,3,4,7,8-HxCDD	92.9	70.0 - 130	
13C-2,3,4,7,8-PeCDF	97.6	70.0 - 130	
13C-1,2,3,4,7,8-HxCDF	99.7	70.0 - 130	
13C-1,2,3,4,7,8,9-HpCDF	114	70.0 - 130	

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

Analyst: 8  
Date: 7/10/09

Reviewed By: 8  
Date: 7/10/09

# EPA Method TO-9 PCDD/F



FAL ID: 5557-009-SA  
Client ID: OFF-03-061709  
Matrix: PUF / Filter  
Batch No: X1754

Date Extracted: 06-23-2009  
Date Received: 06-22-2009  
Amount: 1.00 sample

ICal: AIRFAL3-6-29-09  
GC Column: DB5  
Units: pg/sample

Acquired: 07-10-2009  
WHO TEQ: 0.00297

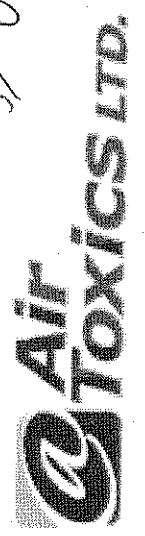
Compound	Conc	DL	Qual	WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	2.42		-	0.937				
1,2,3,7,8-PeCDD	ND	2.58		-	1.05				
1,2,3,4,7,8-HxCDD	ND	3.99		-	1.70				
1,2,3,6,7,8-HxCDD	ND	4.42		-	1.73	Total TCDD	ND	2.42	
1,2,3,7,8,9-HxCDD	ND	4.06		-	1.65	Total PeCDD	ND	2.58	
1,2,3,4,6,7,8-HpCDD	ND	8.77		-	2.99	Total HxCDD	ND	4.42	
OCDD	ND	14.3		-	4.64	Total HpCDD	ND	8.77	
2,3,7,8-TCDF	ND	4.55		-	0.816				
1,2,3,7,8-PeCDF	ND	4.02		-	1.54				
2,3,4,7,8-PeCDF	ND	4.25		-	1.60				
1,2,3,4,7,8-HxCDF	ND	4.92		-	1.07				
1,2,3,6,7,8-HxCDF	ND	4.82		-	0.956				
2,3,4,6,7,8-HxCDF	ND	5.33		-	1.07				
1,2,3,7,8,9-HxCDF	ND	5.72		-	1.16	Total TCDF	ND	4.55	
1,2,3,4,6,7,8-HpCDF	ND	7.32		-	0.692	Total PeCDF	ND	4.25	
1,2,3,4,7,8,9-HpCDF	ND	9.89		-	0.919	Total HxCDF	ND	5.72	
OCDF	29.7	-	J	0.00297	2.95	Total HpCDF	ND	9.89	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	90.6	40.0 - 130	
13C-1,2,3,7,8-PeCDD	93.8	40.0 - 130	
13C-1,2,3,6,7,8-HxCDD	104	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	96.0	25.0 - 130	
13C-OCDD	64.6	25.0 - 130	
13C-2,3,7,8-TCDF	87.1	40.0 - 130	
13C-1,2,3,7,8-PeCDF	98.2	40.0 - 130	
13C-1,2,3,6,7,8-HxCDF	96.2	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDF	81.2	25.0 - 130	
13C-OCDF	71.8	25.0 - 130	
Cleanup Surrogate			
13C-1,2,3,7,8,9-HxCDF	92.2	40.0 - 130	
Pre-Spike Surrogate			
37Cl-2,3,7,8-TCDD	100	70.0 - 130	
13C-1,2,3,4,7,8-HxCDD	92.5	70.0 - 130	
13C-2,3,4,7,8-PeCDF	103	70.0 - 130	
13C-1,2,3,4,7,8-HxCDF	98.3	70.0 - 130	
13C-1,2,3,4,7,8,9-HpCDF	114	70.0 - 130	

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

Analyst: 8  
Date: 7/10/09

Reviewed By: [Signature]  
Date: 7/10/09



# Sims & Co.

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AIR TOXICS LTD.  
180 BLUE RAVINE RD, SUITE B  
FOLSOM, CA 95630-1020  
916-985-1000 main line  
916-985-1020 fax line

## Chain-of-Custody Record

Contact Person Kelly Buettner Company Air Toxics Ltd. Address 180-B Blue Ravine Zip 95630 Phone 916-605-3356 FAX 916-985-1020		City Folsom State CA		Project Information: P.O. # 0906505C Project # 103PO333 Project Name BMI		Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush Specify		Pressurized by: Date: Press. Gas: N2 He			
Collected By: (Signature)				Notes: K.buettner@airtoxics.com							
Lab I.D.	Field Sample I.D.	Canister I.D.	Date & Time	Analysis Requested	Canister Pressure/Vacuum Initial	Canister Pressure/Vacuum Final	Receipt	Final (psi)			
	CAMU-S1-061809		6/18/09 1640	TO-9	"Hg						
	CAMU-S3-061809		6/18/09 1715	TO-9	"Hg						
	OFF-03-061809		6/18/09 1745	TO-9	"Hg						
	OFF-04-061809		6/18/09 1640	TO-9	"Hg						
	CAMU-S1-061609		6/16/09 1755	TO-9	"Hg						
	CAMU-S3-061609		6/16/09 1755	TO-9	"Hg						
	CAMU-S3-061609BS		6/16/09 1700	TO-9	"Hg						
	OFF-04-061709		6/17/09 1821	TO-9	"Hg						
	OFF-03-061709		6/17/09 1837	TO-9	"Hg						
Relinquished By: (Signature) Date/Time Relinquished By: (Signature) Date/Time Relinquished By: (Signature) Date/Time				Received By: (Signature) Date/Time Received By: (Signature) Date/Time Received By: (Signature) Date/Time							
Shipper Name		Air Bill #		Temp ©		Condition		Custody Seals		Work Order #	
Lab Use Only								Yes No None			

## Frontier Analytical Laboratory

### Sample Login Form

FAL Project ID: 5557

Client:	Air Toxics
Client Project ID:	103PO333
Date Received:	06/22/2009
Time Received:	09:26 am
Received By:	DV
Logged In By:	KZ
# of Samples Received:	9
Duplicates:	0
Storage Location:	R2

Method of Delivery:	Courier
Tracking Number:	NA
Shipping Container Received Intact	Yes
Custody seals(s) present?	No
Custody seals(s) intact?	No
Sample Arrival Temperature (C)	0
Cooling Method	Blue Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	Yes
Test for residual Chlorine	No
Thiosulfate Added	No
Earliest Sample Hold Time Expiration	06/23/2009
Adequate Sample Volume	Yes
Anomalies or additional comments:	

**Air Toxics**

Refrain from signing this document unless you are the person responsible for the sample. Refrain from signing this document unless you are the person responsible for the sample. Refrain from signing this document unless you are the person responsible for the sample.

AIR TOXICS LTD.  
150 BLUE RAVINE RD SUITE 11  
FOLSOM, CA 95640-1120  
916-985-1000 main line  
916-985-1020 fax line

0906505-02A C/  
Not Found

0906505-03A C/  
Not Found

Frontier Analytical Laboratory  
5557-001-SA

Client ID: CAMU-51-061809  
Storage: R2 (01 of 01)

CAMU-51-061809

T09 6/18/09 11:55

1215

Frontier Analytical Laboratory  
5557-002-SA

Client ID: CAMU-53-001809  
Storage: R2 (01 of 01)

CAMU-53-001809

T09 6/18/09

1215





Chain-of-Custody Record

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection handling or shipping of these samples. Relinquished signature also indicated agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922.

AIR TOXICS LTD.  
180 BLUE RAVINE RD, SUITE B  
FOLSOM, CA 95630-1020  
916-985-1000 main line  
916-985-1020 fax line

Page 1 of 1

Contact Person Kelly Buettner  
Company Air Toxics Ltd.  
Address 180-B Blue Ravine  
7th DECEMBER

City Folsom

State CA

Project Information:

P.O. # 0906505C  
Project # 103PO333  
District Name PMI

Turn Around Time:

☒ Normal  
☐ Rush

Pressurized by:

Date:

Press. Gas:

0906505-078 C/  
Not Found

0906505-09A C/  
Not Found

Frontier Analytical Laboratory  
5557-003-SA  
Client ID: OFF-03-061809  
Storage: R2 (01 of 01)

Frontier Analytical Laboratory  
5557-004-SA  
Client ID: OFF-04-061809  
Storage: R2 (01 of 01)

OFF-03-061809  
T09 06/18/09

OFF-04-061809  
6/18/09 T09





### Chain-of-Custody Record

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AIR TOXICS LTD.  
180 BLUE RAVINE RD. SUITE D  
DUBLIN, CA 95618-1030  
916-955-1000 main line  
916-955-1020 fax line

Contact Person Kelly Buettner  
Company Air Toxics Ltd.  
Address 180-B Blue Ravine  
Zip 95630  
Phone 916-605-3356

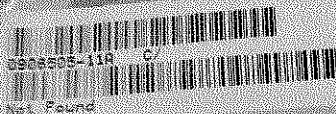
#### Project Information:

#### Turn Around Time:

☒ Normal

#### Prepared by:

Date:



Not Found

Frontier Analytical Laboratory

5557-005-SA

Client ID: CAMU-S1-061609  
Storage: R2 (01 of 01)

CAMUS1-061609

709

6/14/09 1640

CAMUS3-061609

709

1655

Frontier Analytical Laboratory

5557-006-SA

Client ID: CAMU-S3-061609  
Storage: R2 (01 of 01)



CAMUS3-061609

709

6/10/09 1655



### Chain-of-Custody Record

#### Sample Transportation Notice

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AIR TOXICS LTD.  
180 BLUE RAVINE RD. SUITE B  
FOLSOM, CA 95630-1020  
916-985-1000 main line  
916-985-1020 fax line

Page 1 of 1

<b>Contact Person</b> Kelly Buettner <b>Company</b> Air Toxics Ltd. <b>Address</b> 180-B Blue Ravine <b>Zip</b> 95630 <b>Phone</b> 916-005-3356		<b>City</b> Folsom <b>State</b> CA	<b>Project Information:</b> <b>P.O. #</b> 0906505C <b>Project #</b> 103PO333 <b>Project Name</b> BMI	<b>Turn Around Time:</b> <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush Specify _____	<b>Pressurized by:</b> <b>Date:</b> _____ <b>Press. Gas:</b> N2 He
<b>Collected By (Signature)</b> _____					
Lab	Field Sample I.D.	Canister	Date & Time	Analysis Requested	Canister Pressure/Vacuum Initial Final Receipt Final

5557-007  
TO9  
6/10/09

Frontier Analytical Laboratory  
5557-007-SA  
Client ID: CAMU-33-001809B5  
Storage: R2 (1 of 1)

9906505-22R C/  
Not Found

Frontier Analytical Laboratory  
5557-008-SA  
Client ID: OFF-04-061709  
Storage: R2 (1 of 1)

OFF-04-061709  
TO9  
6/17/09 1830



respect to the collection, handling, or shipping of these samples. Relinquished signature also indicated agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922.

916-985-1020 fax line

# Chain-of-Custody Record

<b>Contact Person</b> Kelly Buettner <b>Company</b> Air Toxics Ltd. <b>Address</b> 180-B Blue Ravine <b>Zip</b> 95630 <b>Phone</b> 916-605-3356			<b>City</b> Folsom <b>State</b> CA		<b>Project Information:</b> <b>P.O. #</b> 0906505C <b>Project #</b> 103PO333 <b>Project Name</b> BMI		<b>Turn Around Time:</b> <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush Specify		<b>Pressurized</b> by: Date: Press. Gas: N2 He	
---	--	--	---------------------------------------	--	---	--	--	--	--	--



Frontier Analytical Laboratory  
**5557-009-SA**  
 Client ID: OFF-03-061709  
 Storage: R2 (01 of 01)

OFF-03-061709

TPM 6/17/09

181900

# PROJECT REQUEST SHEET

Project #: 5557 Sample #: 1 - 9 Client Manager: BS  
Client: Air Toxics Hold Time: 06/23/2009  
Matrix: PUF / Filter Extraction Batch: 1754 Due Date: 07/15/2009  
Method: EPA TO-9 D/F Storage: R2  
SOP: SOPs: EP6A Rev.4 IP6A Rev.2

## COMMENTS/INSTRUCTIONS:

Report samples 5557-003-SA, 5557-004-SA, 5557-008-SA  $\frac{1}{2}$  5557-009-SA  
on one report and report the remaining five samples on another  
report. Also invoice separately as per above. SN 6/25/09

Results: 5557  
5557TDF

Extract/s located in box: "NO PINING WAY"

Standards: 5557

Instrument:

DB5

DB225

DB1

Other

FAC-3

Fall

## Cartridge Request Form

Delivery Date Requested: 6/12/2009

invoiced with FAL Project 5528

Client Contact: Kelly Buettner  
Company Name: Air Toxics LTD.  
Company Address: 180 Blue Ravine Road  
Folsom, CA 95630  
Company Phone: (916) 985-1000 Ext.1025  
Company fax: (916) 985-1020  
Company PO #: Reference Quote Number 2347

### Delivery Address/Contact (If different from above)

Contact Name: Ms. Becki Dano  
Site Name: Weston Solutions  
Site Address: 110 West Warm Springs Road  
Henderson, NV 89011  
Site Phone: (702) 641-8660

### Request Information

Check all that apply and enter in Quantity Needed:

- ☐ MM5 Cartridges.....Quantity: DN 6/11/09  
☒ PUF Cartridges.....Quantity: 59  
☐ PUF/XAD Cartridges.....Quantity: \_\_\_\_\_

Number/Size/type of filters Required: 5 quartz fiber 102mm filters (Lot Number: 894862)

Number of Petri dishes requested (if available): 1

Method/s Requested: EPA Method TO-9

### Preparation Information

XAD Lot Number: N/A

PUF Lot Number: 52109  
DN 6/11/09

Pre-Sampling Spike Amount/ID: 25ul of Air-PS (090121A) (2)

Preparation Chemist Initials: DN

Preparation/Spike Date: 6/11/09

Spike Witness Initials: GN/6/6  
(5) (9)

Special Instructions: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Delivery Information

Date Shipped: 6.11.09  
Carrier: Fed-EX  
Service Requested: std overnight  
Air Bill Number: 7966 8521 2938

20165

# EXTRACTION SHEET

Project #: 5557      Extraction Date: 2009-06-23      Extraction Chemist: GN

Method/Analysis: EPA TO-9 D/F

Procedure: SOX      Solvent: Toluene

Sample ID	PUF Lot	Filter Lot	IS	NS	CSS
			Amt: 25.0uL ID: 090121B Vial: <u>GN 6/23/09</u> Chemist/Witness/Date	Amt: 10.0uL ID: 090121C Vial: 2 Chemist/Witness/Date	Amt: 25.0uL ID: 090121D Vial: 3 Chemist/Witness/Date
1754-001-0001-MB*	52109	894862	GN 6/23/09	NA	GN 6/26/09
1754-001-0001-LC1*	52109	894862		GN 6/23/09	
1754-001-0001-LC2*	52109	894862		↓	
5557-001-0001-SA	NO LABEL TO VERIFY	NO LABEL TO VERIFY		NA	
5557-002-0001-SA	"	"			
5557-003-0001-SA	"	"			
5557-004-0001-SA	"	"			
5557-005-0001-SA	"	"			
5557-006-0001-SA	"	"			
5557-007-0001-SA	"	"			
5557-008-0001-SA	"	"			
5557-009-0001-SA	"	"	↓	↓	↓

AX-21 Charcoal Cleaned	033109	Acetone	49098	Acid Alumina	08623DJ	Hexane	49063
Hydrochloric Acid	B08505	Methanol	090272	Methylene Chloride (DCM)	49105	Silica Gel	TA1493434
Sodium Hydroxide	8250	Sodium Sulfate	48273845	Sulfuric Acid	090248	Tetradecane	072385
Toluene	49063	Water	49083	C-18 Empore Discs	320483	Cyclohexane	48149

Comments: \*Spike 25ul-Air-PS(090121A) v3 by GN 6/23/09. witness GG

# CLEANUP SHEET

Project #: 5557

Method/Analysis: EPA TO-9 D/F

Splits:  $6N6/23/09 - \frac{1}{0}$  Split Date:  $6/23/09$  ~~N/A~~  $6N6/23/09$  Final Volume: 20.0uL

[illegible]

Comments:

FAL ID: 1754-001-0001-MB	Filename: 09JUL09M	Sam: 4	Acquired: 9-JUL-09 16:20:15	ICal: AIRFAL3-6-29-09
Client ID: Method Blank			ConCal: ST070909M1	EndCal: ST070909M2
Results:	GC Column: DB5	Amount: 1.000		NATO 1989 Tox: 0.00

NATO 1989 Tox: 0.00  
WHO 1998 Tox: 0.00

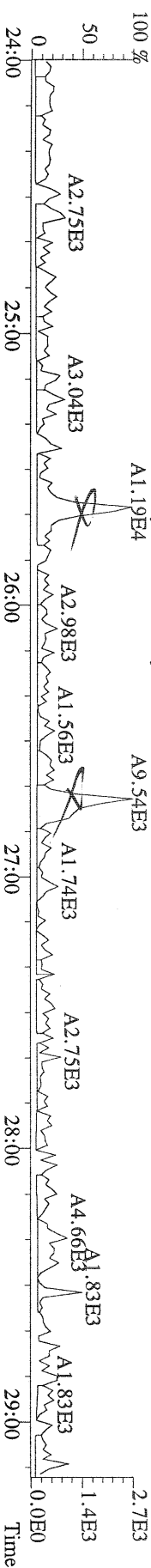
Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise	DL	
2,3,7,8-TCDD	*	* n	NotFnd	1.14	*		2.50	319	0.839	
1,2,3,7,8-PeCDD	*	* n	NotFnd	1.14	*		2.50	184	1.04	
1,2,3,4,7,8-HxCDD	*	* n	NotFnd	1.37	*		2.50	840	4.44	
1,2,3,6,7,8-HxCDD	*	* n	NotFnd	1.24	*		2.50	840	4.92	
1,2,3,7,8,9-HxCDD	*	* n	NotFnd	1.35	*		2.50	840	4.52	
1,2,3,4,6,7,8-HpCDD	*	* n	NotFnd	1.15	*		2.50	657	3.75	
OCDD	*	* n	NotFnd	1.43	*		2.50	908	9.05	
2,3,7,8-TCDF	*	* n	NotFnd	1.14	*		2.50	1450	2.25	
1,2,3,7,8-PeCDF	*	* n	NotFnd	0.90	*		2.50	570	2.33	
2,3,4,7,8-PeCDF	*	* n	NotFnd	0.86	*		2.50	570	2.46	
1,2,3,4,7,8-HxCDF	*	* n	NotFnd	1.02	*		2.50	628	1.58	
1,2,3,6,7,8-HxCDF	*	* n	NotFnd	1.04	*		2.50	628	1.55	
2,3,4,6,7,8-HxCDF	*	* n	NotFnd	0.94	*		2.50	628	1.72	
1,2,3,7,8,9-HxCDF	*	* n	NotFnd	0.88	*		2.50	628	1.84	
1,2,3,4,6,7,8-HpCDF	*	* n	NotFnd	1.51	*		2.50	784	2.42	
1,2,3,4,7,8,9-HpCDF	*	* n	NotFnd	1.11	*		2.50	784	3.27	
OCDF	*	* n	NotFnd	0.87	*		2.50	400	3.05	
13C-2,3,7,8-TCDD	2.67e+07	0.79 y	27:29	1.21	3720					Rec 92.9
13C-1,2,3,7,8-PeCDD	2.02e+07	1.76 y	33:18	0.83	4090					102
13C-1,2,3,6,7,8-HxCDD	1.77e+07	1.24 y	38:51	0.99	4000					100.0
13C-1,2,3,4,6,7,8-HpCDD	2.02e+07	1.06 y	44:18	1.03	4400					110
13C-OCDD	2.26e+07	0.97 y	49:55	0.64	7960					99.5
13C-2,3,7,8-TCDF	4.51e+07	0.88 y	26:44	1.33	3990					99.8
13C-1,2,3,7,8-PeCDF	3.49e+07	1.74 y	31:34	0.96	4250					106
13C-1,2,3,6,7,8-HxCDF	3.25e+07	0.53 y	37:29	1.75	4170					104
13C-1,2,3,4,6,7,8-HpCDF	1.81e+07	0.48 y	42:24	1.00	4060					102
13C-OCDF	4.52e+07	0.96 y	50:17	1.11	9140					114
13C-1,2,3,7,8,9-HxCDF	2.72e+07	0.53 y	39:52	1.40	4370					109
37Cl-2,3,7,8-TCDD	1.51e+07		27:30	0.56	4080					102
13C-1,2,3,4,7,8-HxCDD	1.71e+07	1.23 y	38:41	1.05	3670					91.7
13C-2,3,4,7,8-PeCDF	3.48e+07	1.72 y	32:53	0.93	4280					107
13C-1,2,3,4,7,8-HxCDF	3.10e+07	0.52 y	37:17	1.00	3830					95.8
13C-1,2,3,4,7,8,9-HpCDF	1.91e+07	0.48 y	45:13	0.82	5110					128
13C-1,2,3,4-TCDD	2.37e+07	0.79 y	26:55	-	56.8					
13C-2,3,7,8-TCDF	3.40e+07	0.88 y	25:39	-	50.5					
13C-1,2,3,7,8,9-HxCDD	1.78e+07	1.22 y	39:18	-	60.4					
Total Tetra-Dioxins	*		NotFnd	1.14	*		Fac 2.50	Noise 319	DL 0.839	#Hom 0
Total Penta-Dioxins	*		NotFnd	1.14	*		2.50	184	1.04	0
Total Hexa-Dioxins	*		NotFnd	1.32	*		2.50	840	4.92	0
Total Hepta-Dioxins	*		NotFnd	1.15	*		2.50	657	3.75	0
Total Tetra-Furans	*		NotFnd	1.14	*		2.50	1450	2.25	0
1st Fn. Tot Penta-Furans	*		NotFnd	0.88	*		2.50	570	2.46	0
Total Penta-Furans	*		NotFnd	0.88	*		2.50	570	2.46	0
Total Hexa-Furans	*		NotFnd	0.97	*		2.50	628	1.84	0
Total Hepta-Furans	*		NotFnd	1.31	*		2.50	784	3.27	0
										PeCDF 0.00

Analyst: \_\_\_\_\_

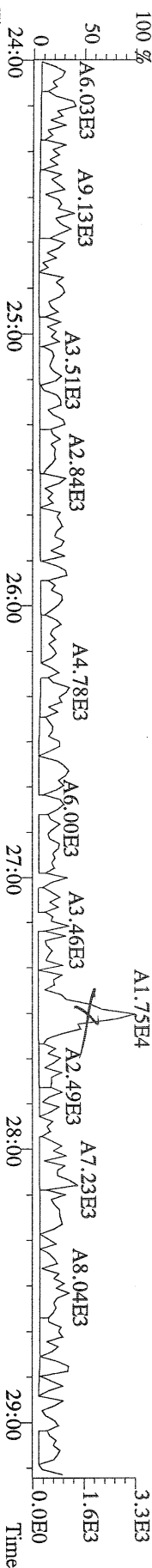
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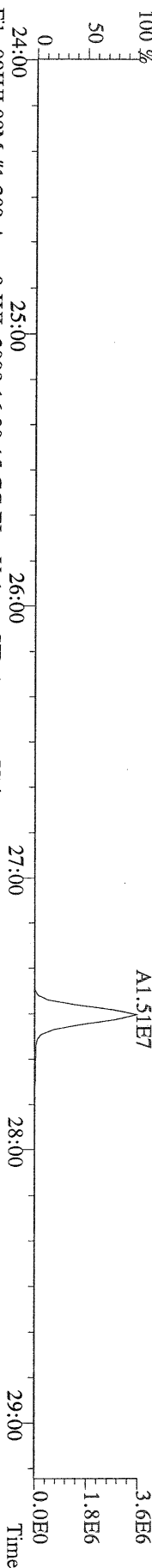
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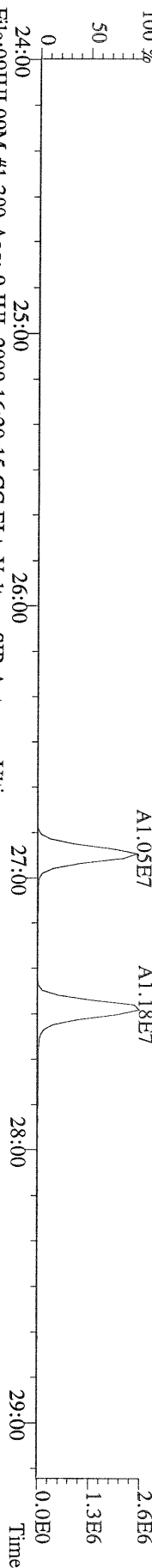
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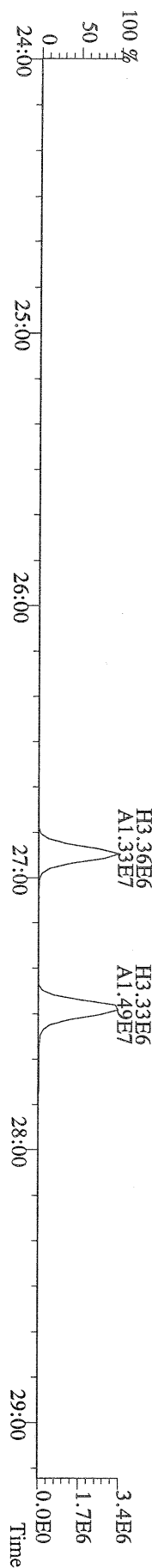
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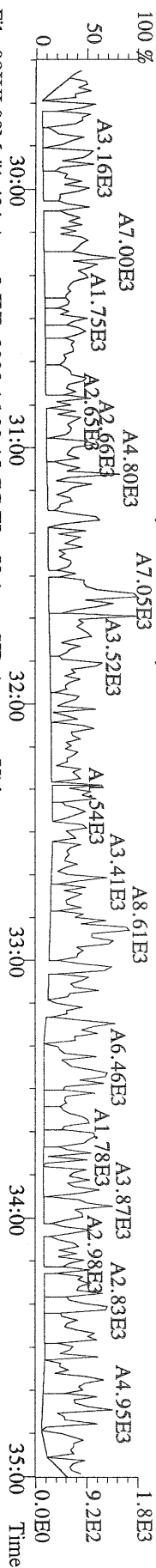
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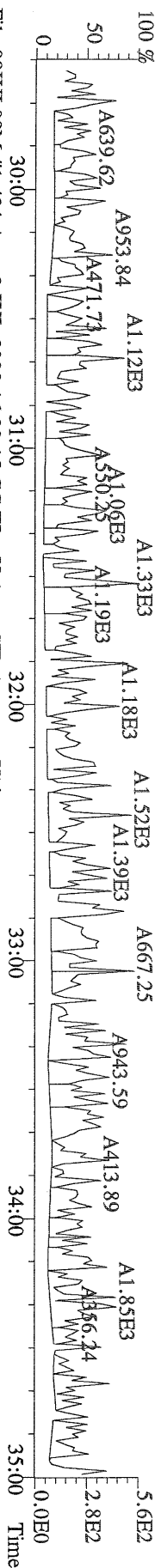
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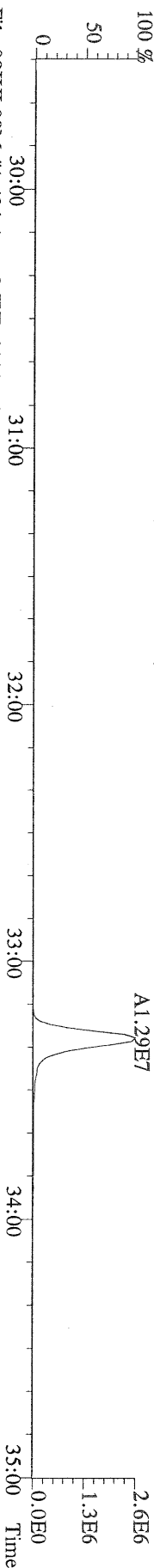
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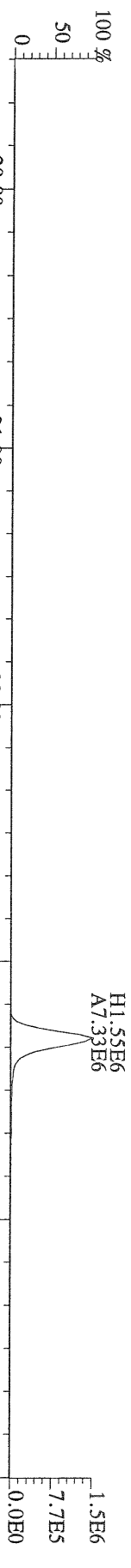
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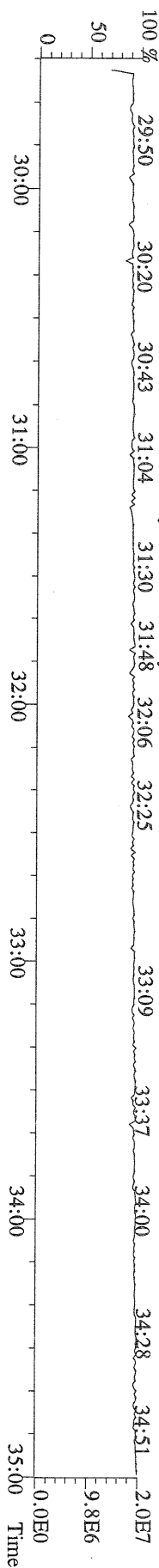
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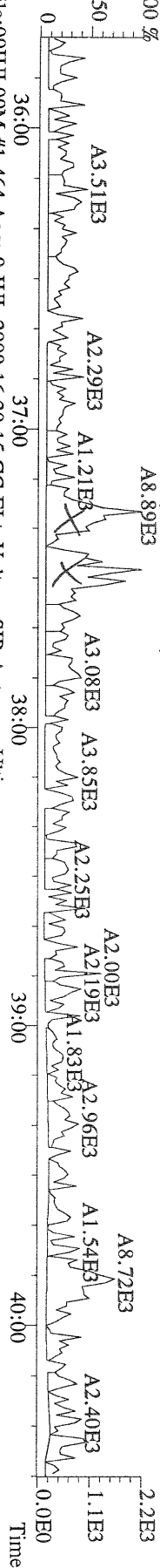
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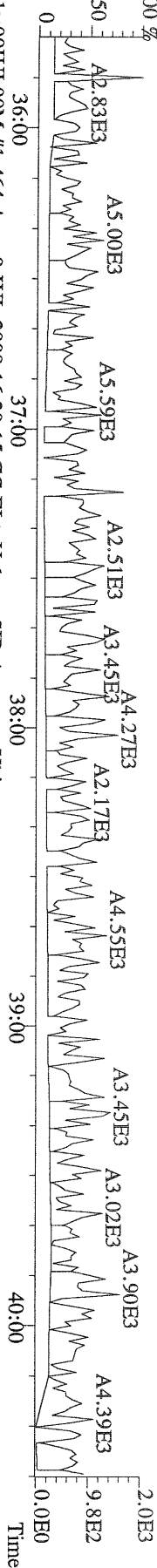
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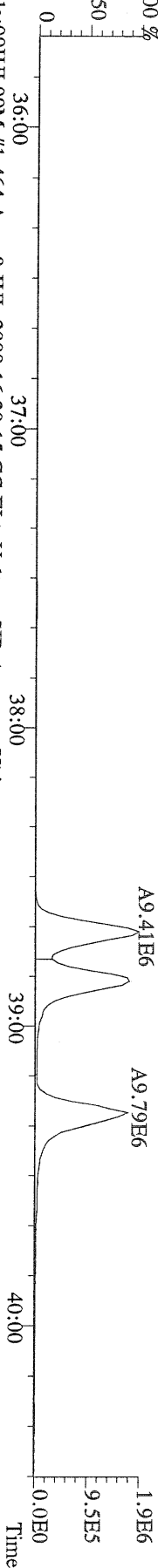
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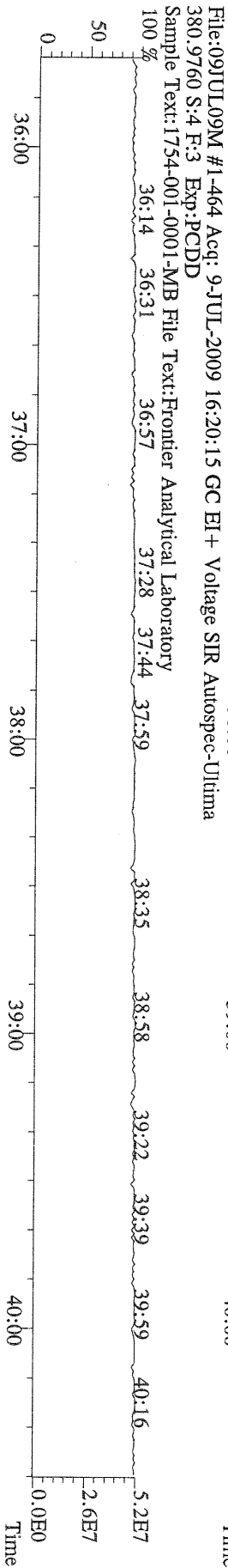
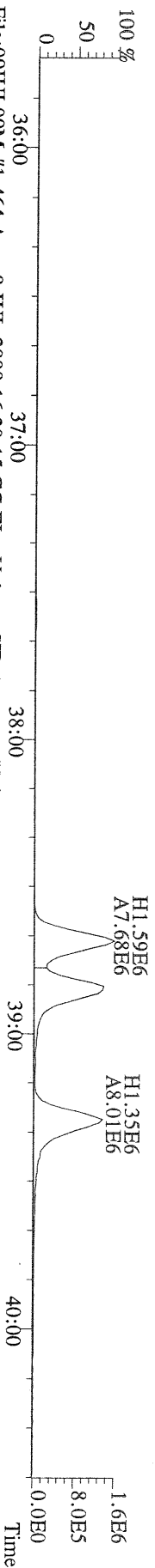
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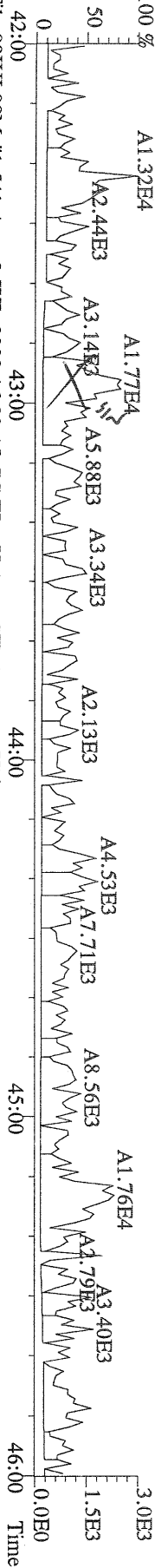
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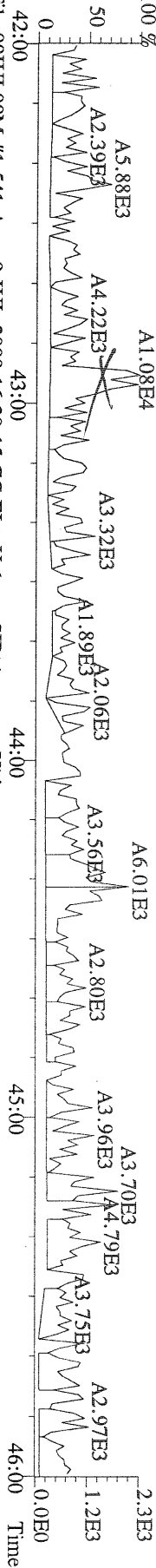
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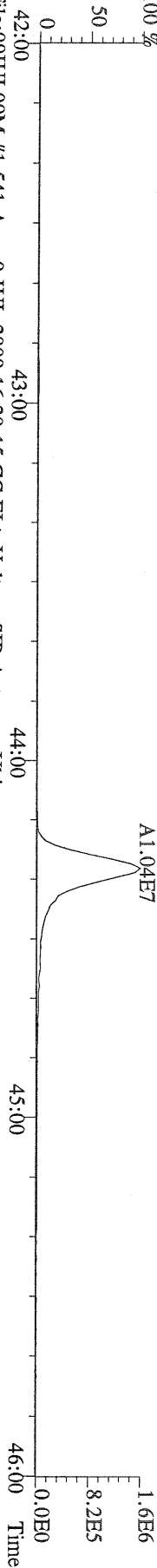
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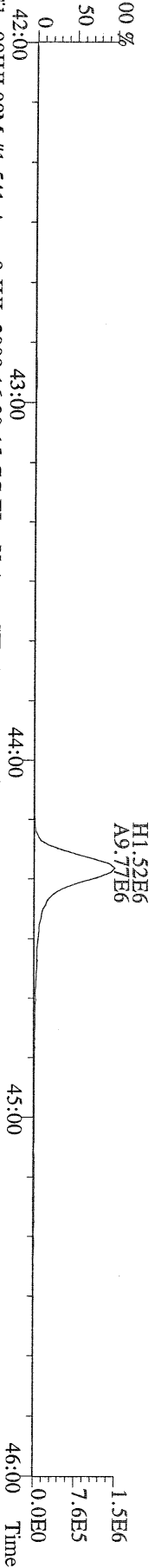
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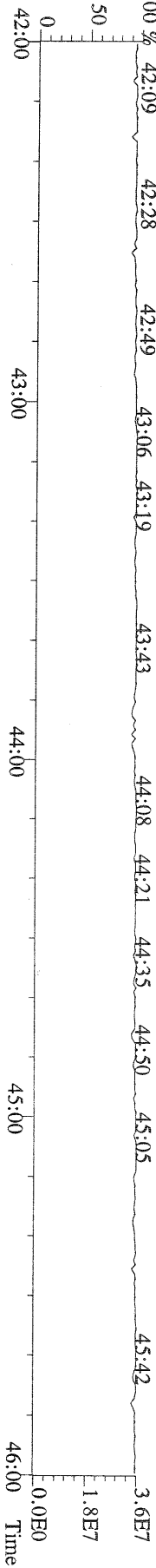
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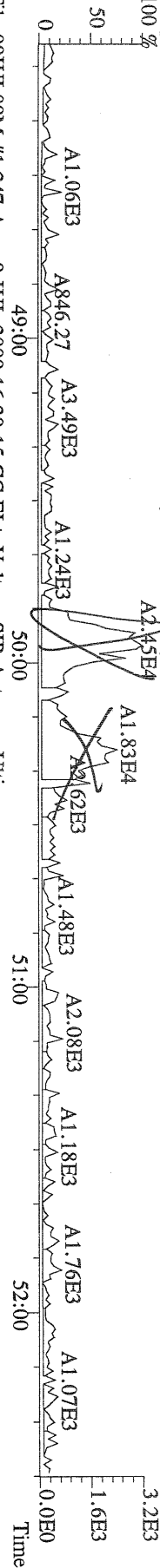
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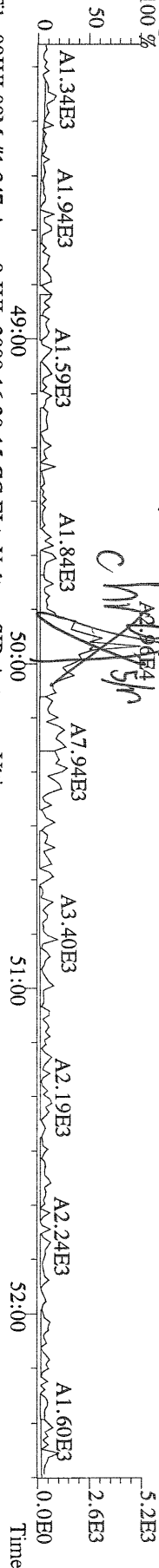
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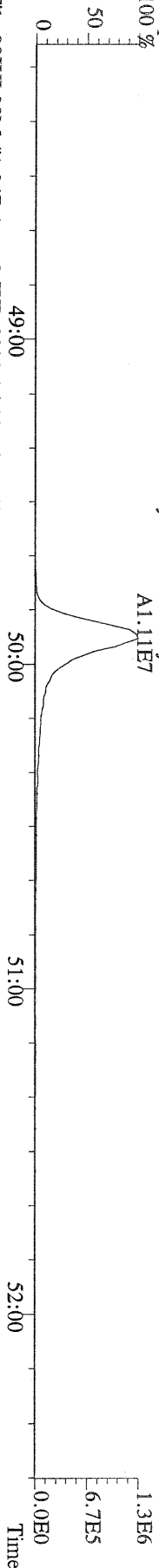
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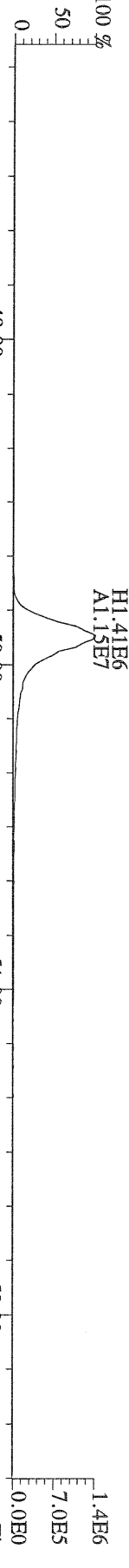
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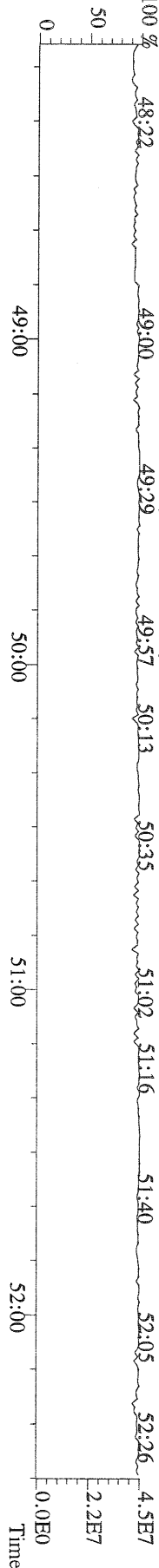
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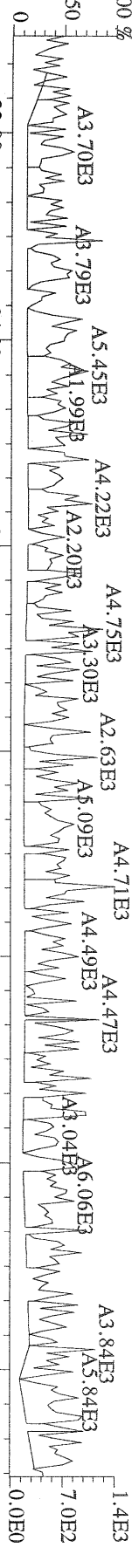
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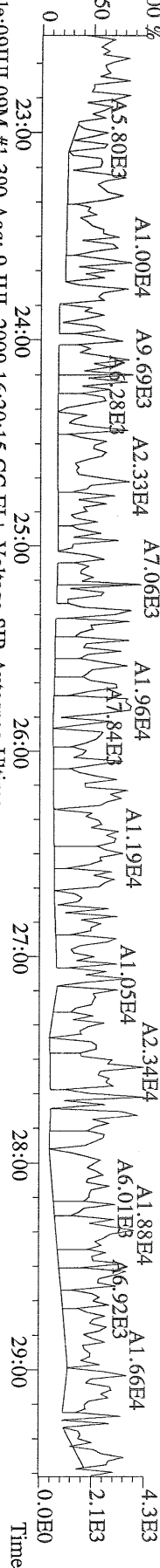
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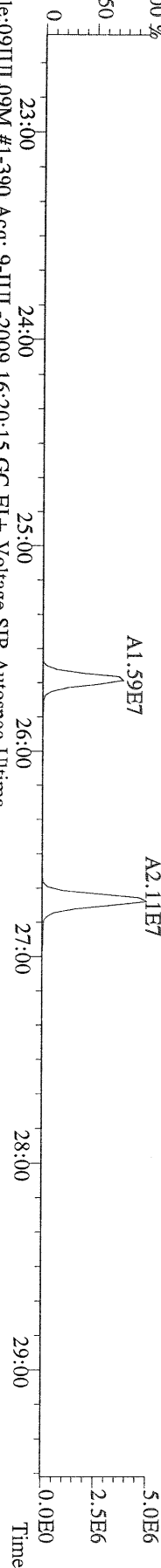
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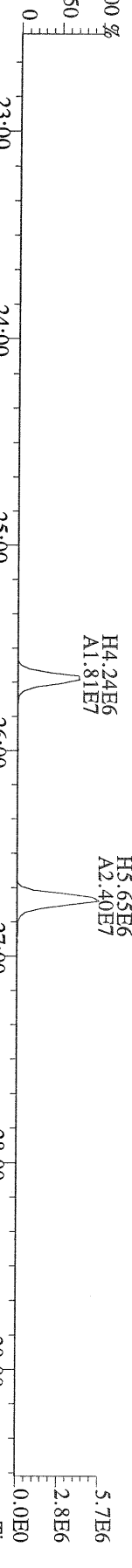
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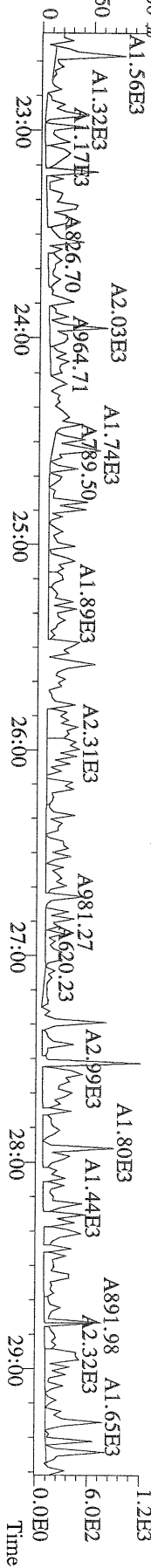
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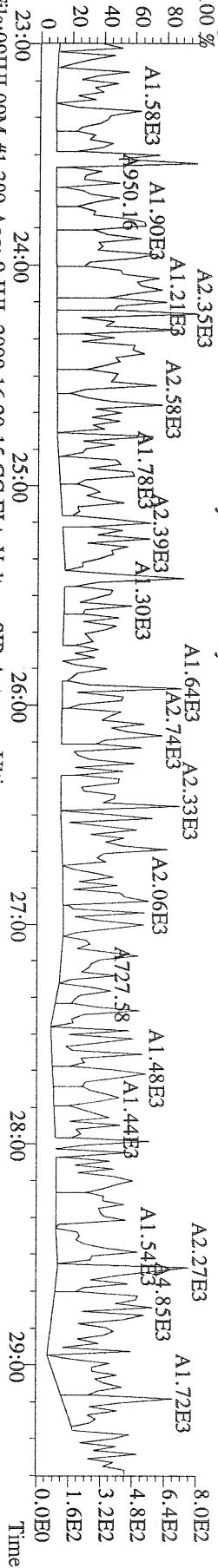
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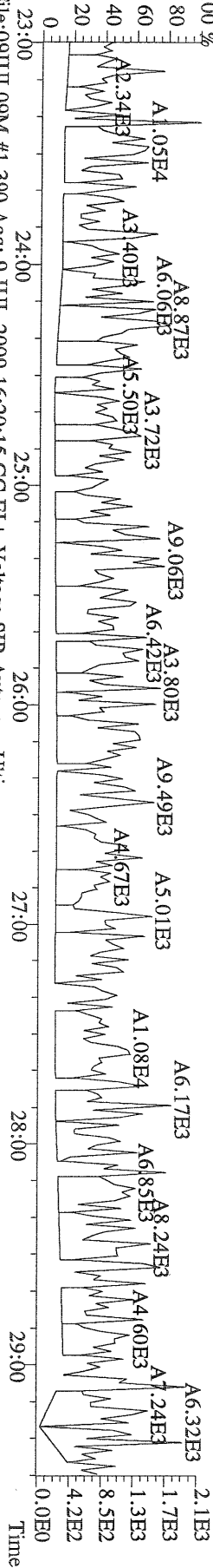
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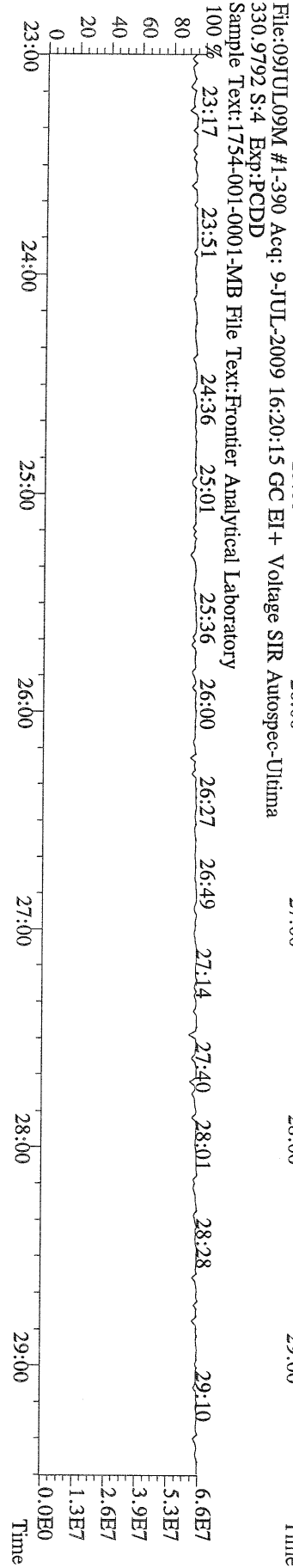
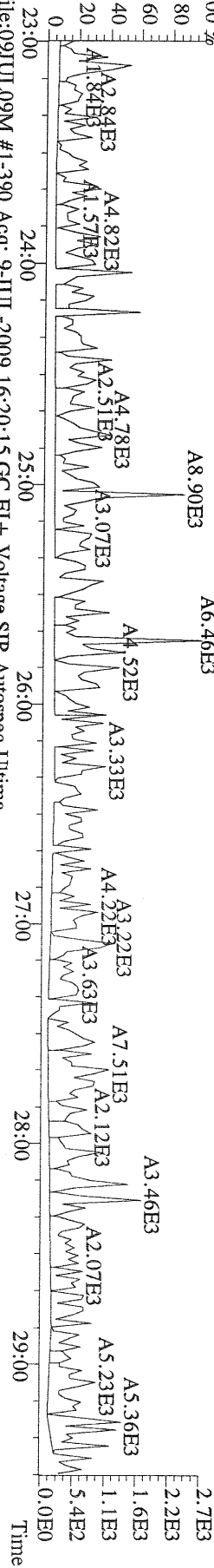
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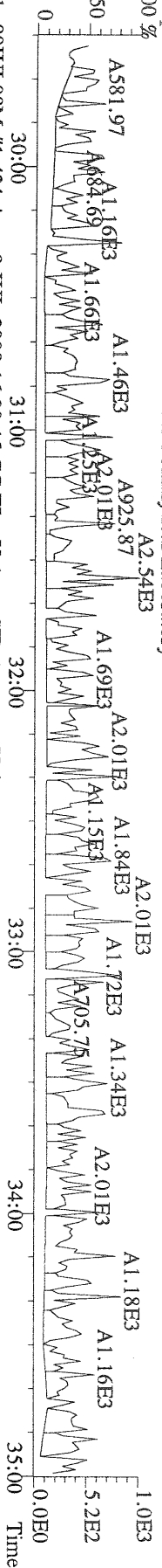
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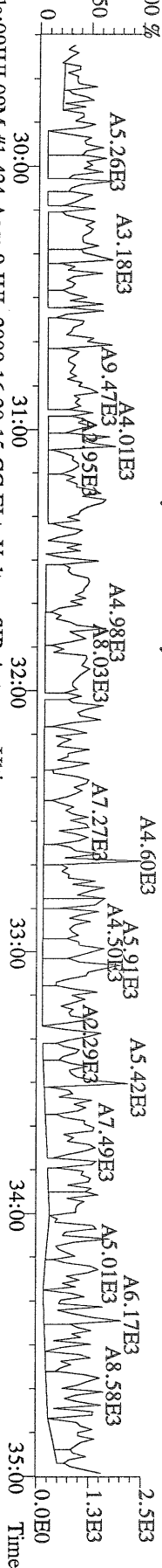
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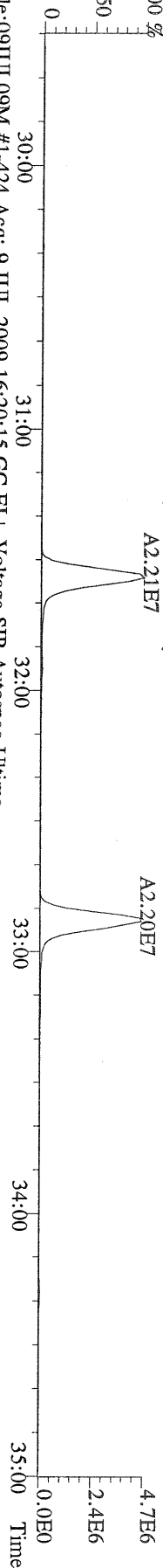
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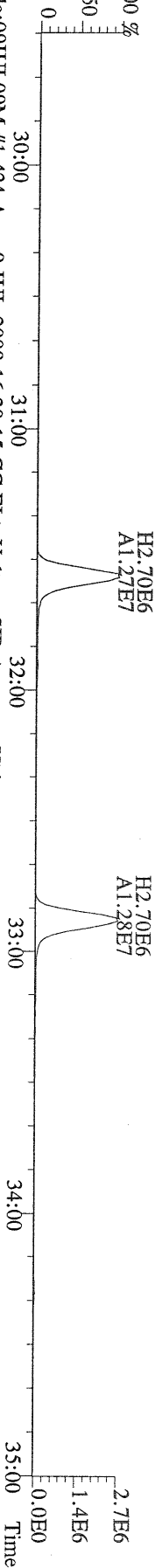
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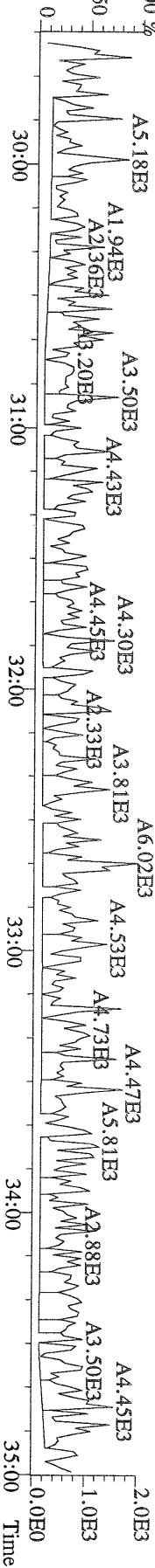
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Sample Text:1754-001-0001-MB File Text:Frontier Analytical Laboratory



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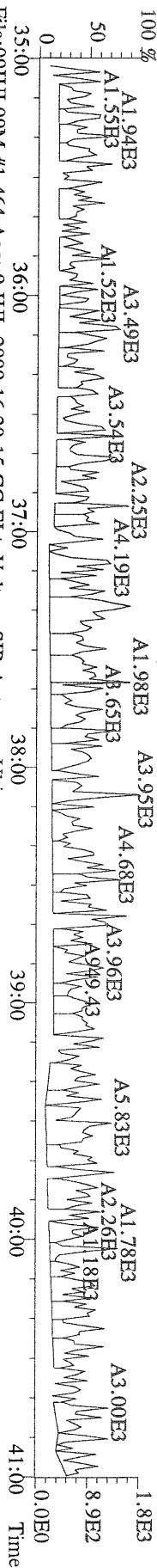


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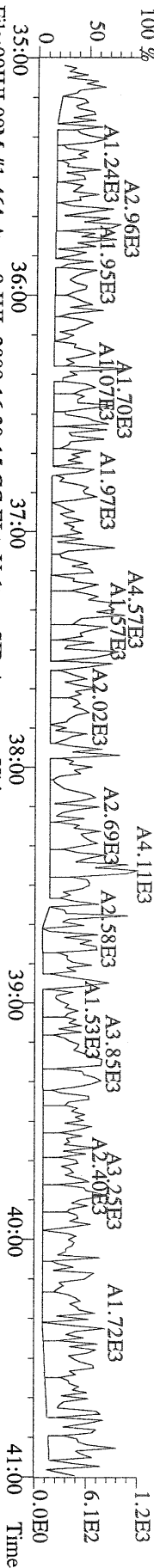




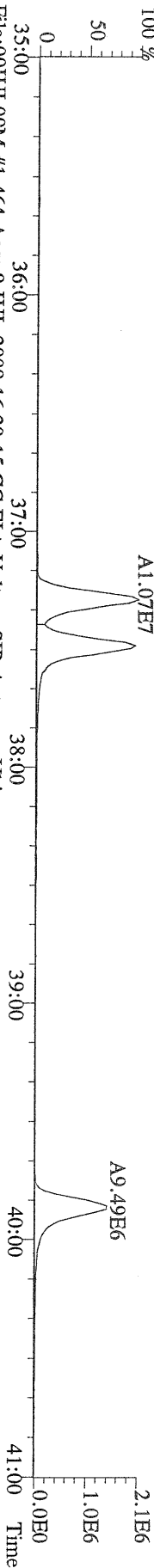
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373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-MB File Text:Frontier Analytical Laboratory



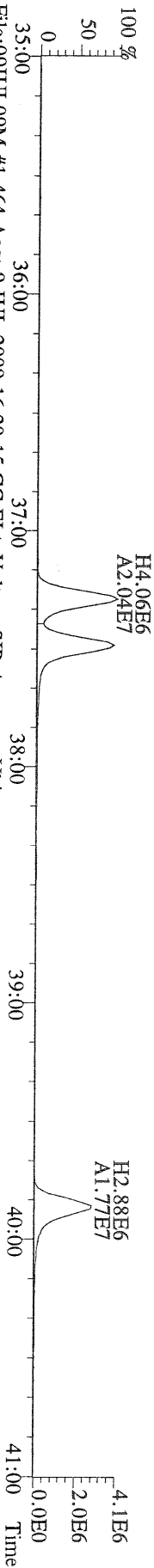
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Sample Text:1754-001-0001-MB File Text:Frontier Analytical Laboratory



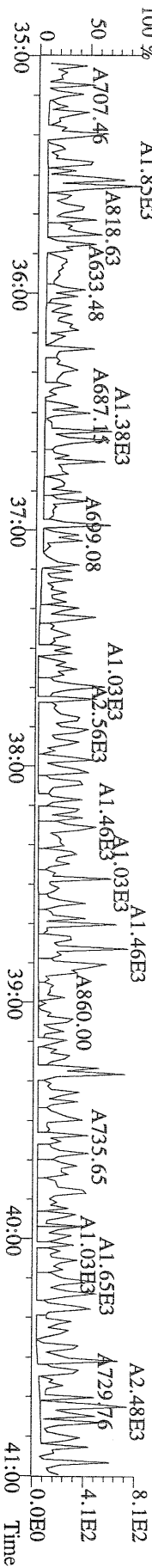
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383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-MB File Text:Frontier Analytical Laboratory



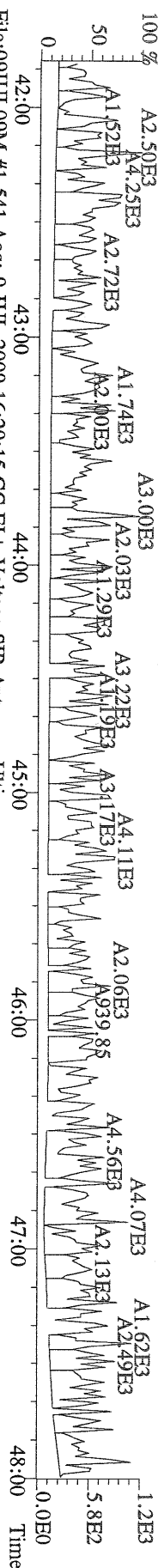
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Sample Text:1754-001-0001-MB File Text:Frontier Analytical Laboratory



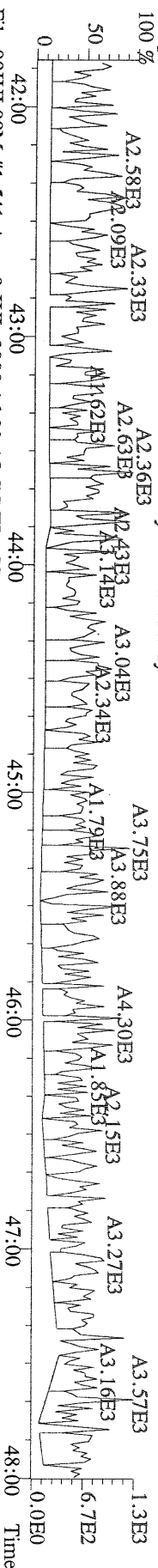
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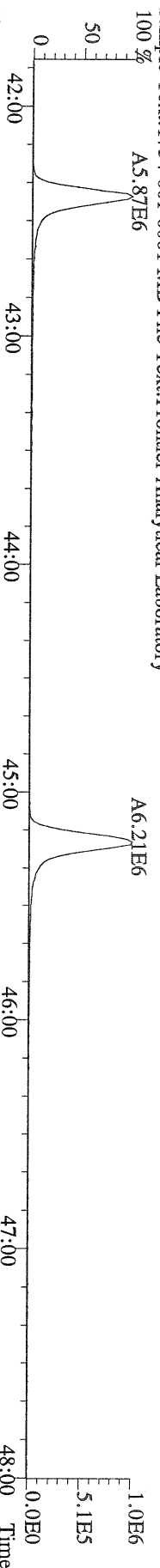
000030 of 000295



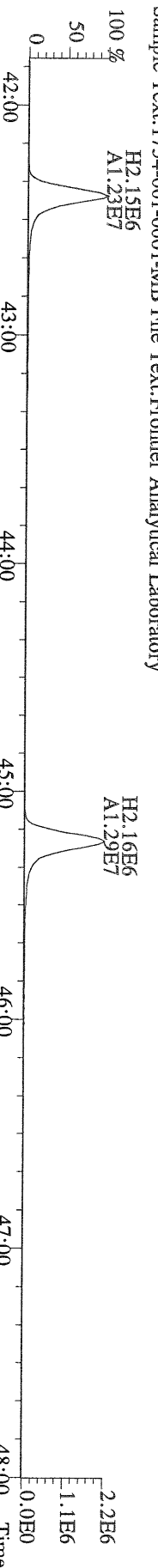
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409.7788 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-MB File Text:Frontier Analytical Laboratory



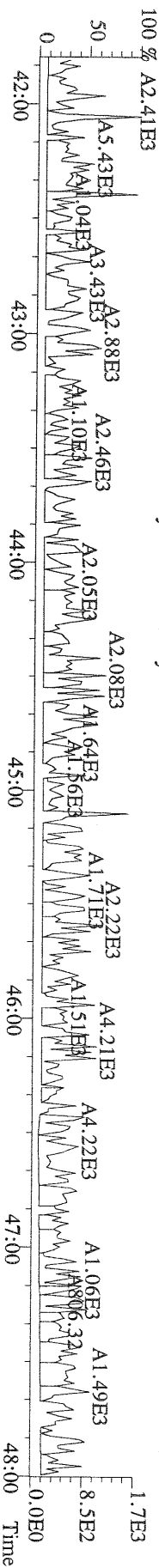
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Sample Text:1754-001-0001-MB File Text:Frontier Analytical Laboratory  
100% A5 87B6 A6



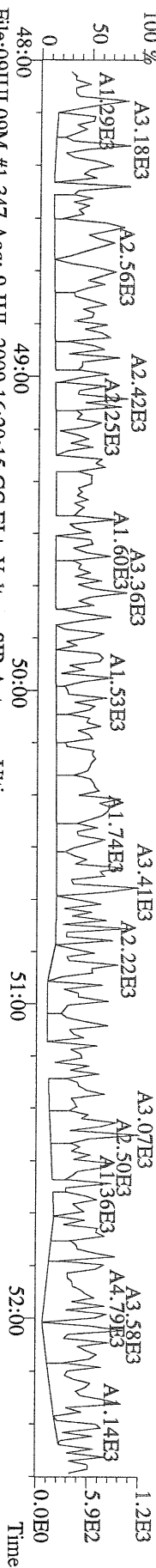
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419.8220 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-MB File Text:Frontier Analytical Laboratory



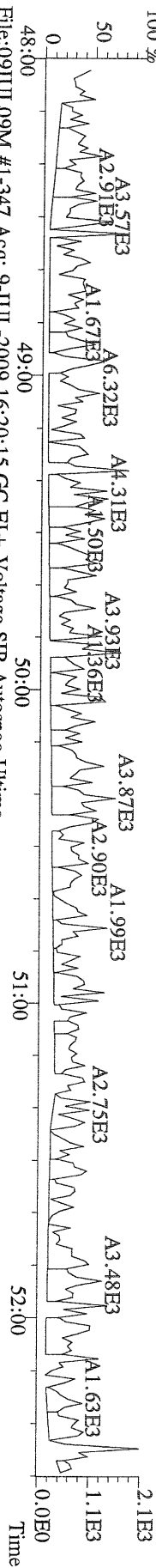
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Sample Text:1754-001-0001-MB File Text:Frontier Analytical Laboratory



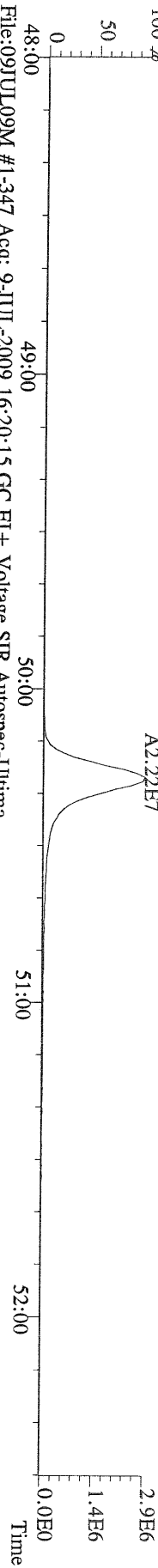
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Sample Text:1754-001-0001-MB File Text:Frontier Analytical Laboratory



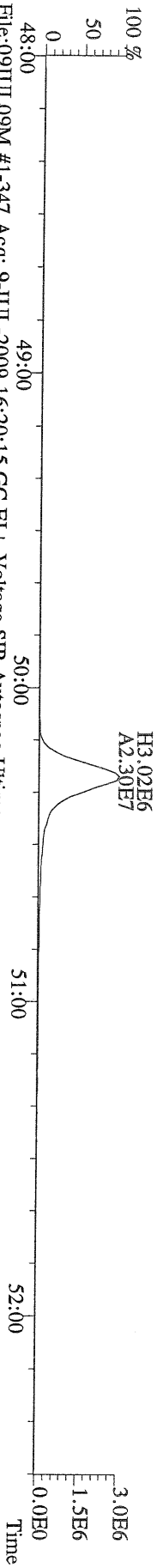
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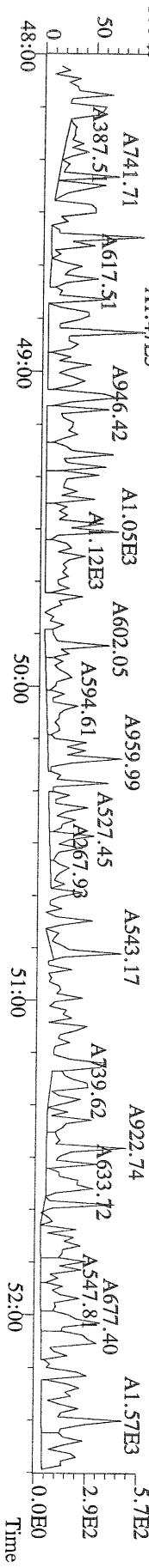
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Sample Text:1754-001-0001-MB File Text:Frontier Analytical Laboratory



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455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-MB File Text:Frontier Analytical Laboratory



File:09JUL09M #1-347 Acq: 9-JUL-2009 16:20:15 GC EI+ Voltage SIR Autospec-Ultima  
513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-MB File Text:Frontier Analytical Laboratory



USEPA - ITD

AIR FORM 8A  
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Frontier Analytical Laboratory Episode No.:  
 Contract No.: SAS No.:  
 Matrix (MM5/PUF): PUF/Filter OPR Data Filename: 09JUL09M Sam:2  
 Ext. Date: 6/23/09 Shift: Day Analysis Date: 9-JUL-09 14:29:30

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (ng/mL)
NATIVE ANALYTES			
2,3,7,8-TCDD	5.00	4.60	3.00 - 7.00 ✓
1,2,3,7,8-PeCDD	25.0	23.8	15.0 - 35.0 ✓
1,2,3,4,7,8-HxCDD	25.0	24.4	15.0 - 35.0 ✓
1,2,3,6,7,8-HxCDD	25.0	26.7	15.0 - 35.0 ✓
1,2,3,7,8,9-HxCDD	25.0	24.4	15.0 - 35.0 ✓
1,2,3,4,6,7,8-HpCDD	25.0	25.5	15.0 - 35.0 ✓
OCDD	50.0	53.8	30.0 - 70.0 ✓
2,3,7,8-TCDF	5.00	5.09	3.00 - 7.00 ✓
1,2,3,7,8-PeCDF	25.0	24.5	15.0 - 35.0 ✓
2,3,4,7,8-PeCDF	25.0	25.3	15.0 - 35.0 ✓
1,2,3,4,7,8-HxCDF	25.0	24.9	15.0 - 35.0 ✓
1,2,3,6,7,8-HxCDF	25.0	26.0	15.0 - 35.0 ✓
2,3,4,6,7,8-HxCDF	25.0	23.8	15.0 - 35.0 ✓
1,2,3,7,8,9-HxCDF	25.0	26.5	15.0 - 35.0 ✓
1,2,3,4,6,7,8-HpCDF	25.0	25.9	15.0 - 35.0 ✓
1,2,3,4,7,8,9-HpCDF	25.0	31.2	15.0 - 35.0 ✓
OCDF	50.0	53.5	30.0 - 70.0 ✓

Analyst: 6Date: 7/10/09

AIR FORM 8B  
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Frontier Analytical Laboratory      Episode No.:  
Contract No.:      SAS No.:  
Matrix (MM5/PUF): PUF/Filter      OPR Data Filename: 09JUL09M    Sam:2  
Ext. Date: 6/23/09    Shift: Day      Analysis Date: 9-JUL-09    14:29:30

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	100	91.5	40.0 - 130 ✓
13C-1,2,3,7,8-PeCDD	100	102	40.0 - 130 ✓
13C-1,2,3,6,7,8-HxCDD	100	98.4	40.0 - 130 ✓
13C-1,2,3,4,6,7,8-HpCDD	100	99.9	40.0 - 130 ✓
13C-OCDD	200	147	50.0 - 260 ✓
13C-2,3,7,8-TCDF	100	96.7	40.0 - 130 ✓
13C-1,2,3,7,8-PeCDF	100	102	40.0 - 130 ✓
13C-1,2,3,6,7,8-HxCDF	100	103	40.0 - 130 ✓
13C-1,2,3,4,6,7,8-HpCDF	100	93.7	40.0 - 130 ✓
13C-OCDF	200	180	50.0 - 260 ✓
CLEANUP STANDARD			
13C-1,2,3,7,8,9-HxCDF	100	106	40.0 - 130 ✓
PRE-SPIKE STANDARD			
37Cl-2,3,7,8-TCDD	100	101	70.0 - 130 ✓
13C-1,2,3,4,7,8-HxCDD	100	89.4	70.0 - 130 ✓
13C-2,3,4,7,8-PeCDF	100	103	70.0 - 130 ✓
13C-1,2,3,4,7,8-HxCDF	100	95.0	70.0 - 130 ✓
13C-1,2,3,4,7,8,9-HpCDF	100	119	70.0 - 130 ✓

Analyst: \_\_\_\_\_

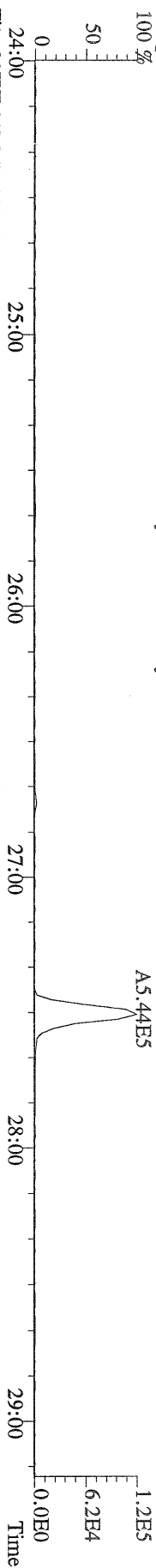
Date: \_\_\_\_\_

NATO 1989 Tox: 49.5  
WHO 1998 Tox: 61.3

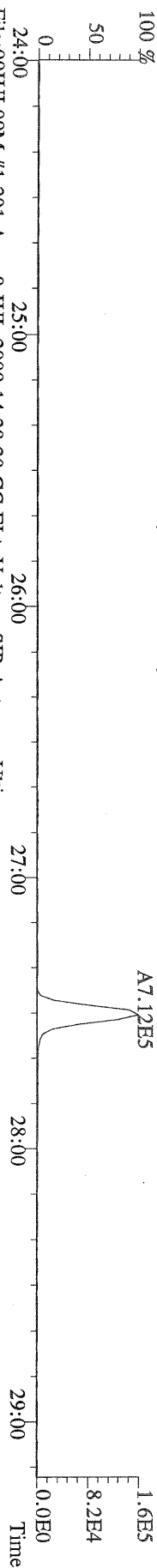
Analyst:

Date:

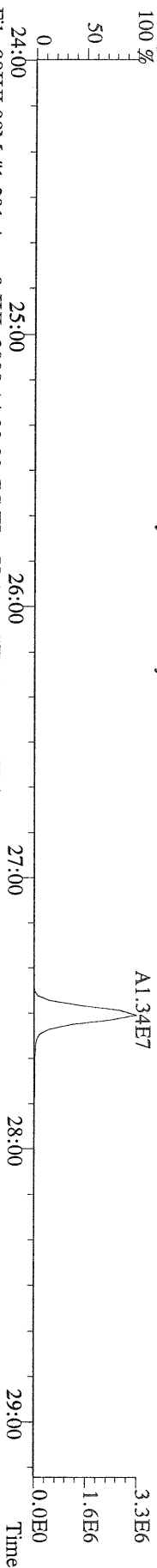
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319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



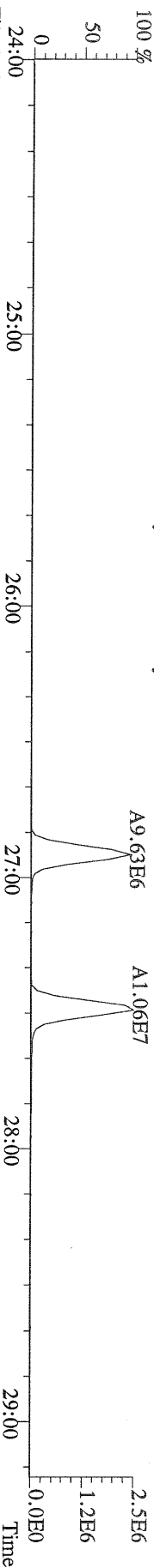
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321.8936 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



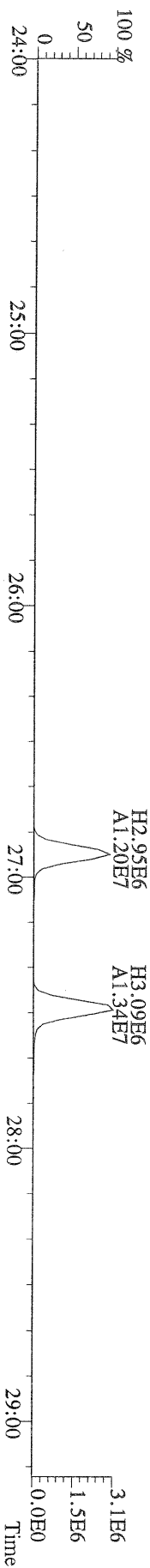
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327.8847 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



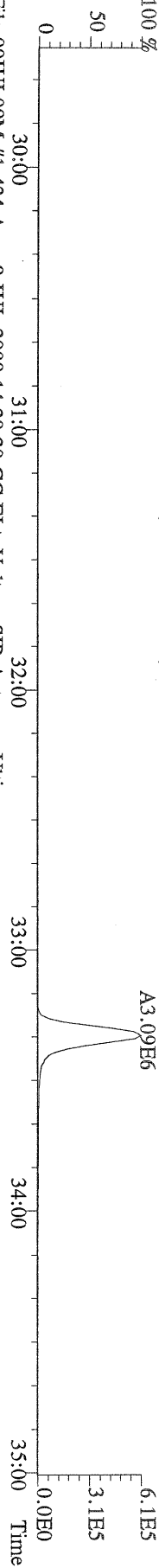
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331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



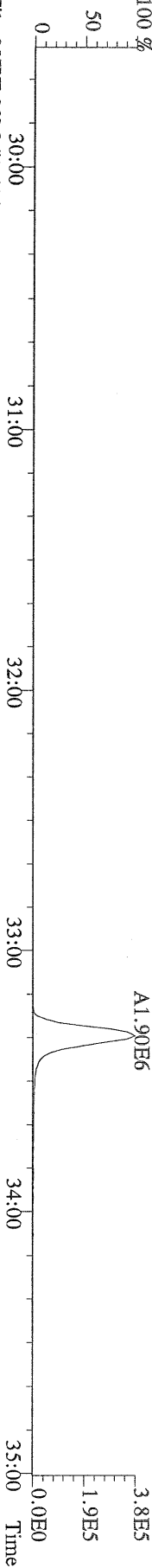
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333.9339 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



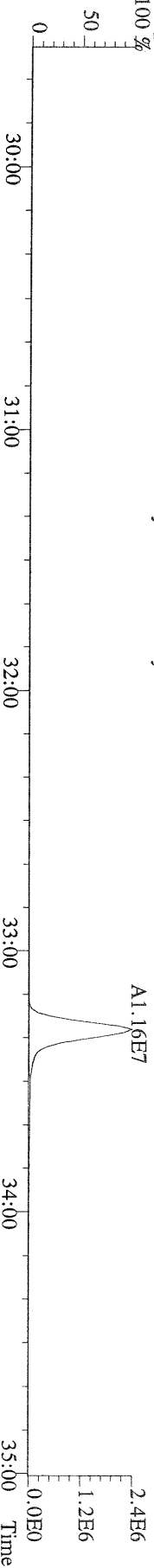
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355.8546 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
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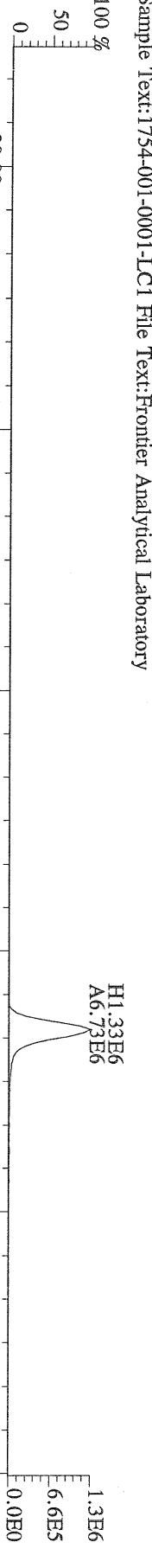
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Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



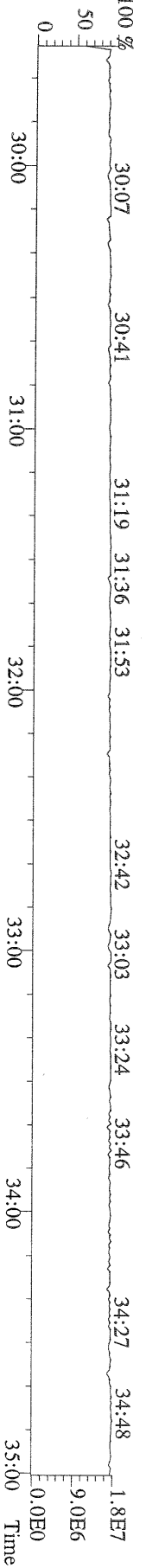
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Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



File:09JUL09M #1-424 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
369.8919 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory

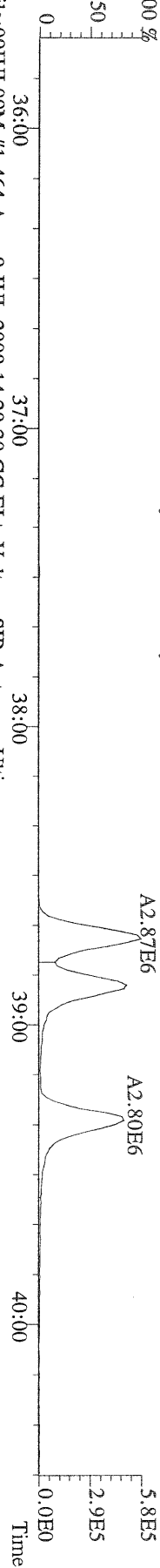


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366.9792 S:2 F:2 Exp:PCDD  
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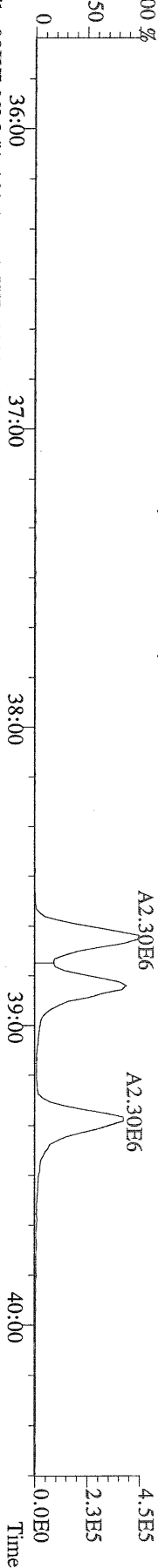




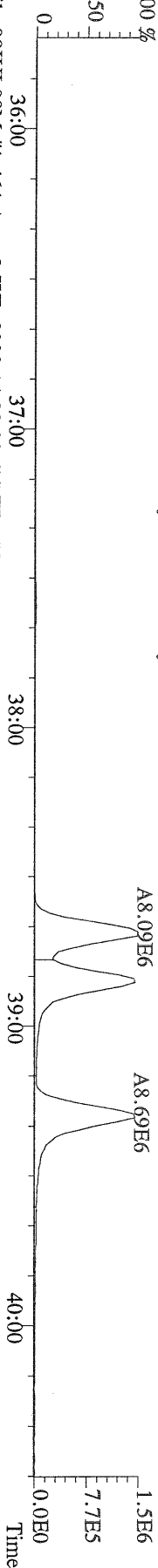
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389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory  
100 %



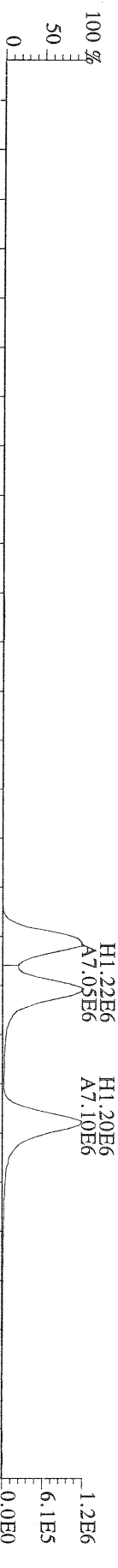
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391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory  
100 %



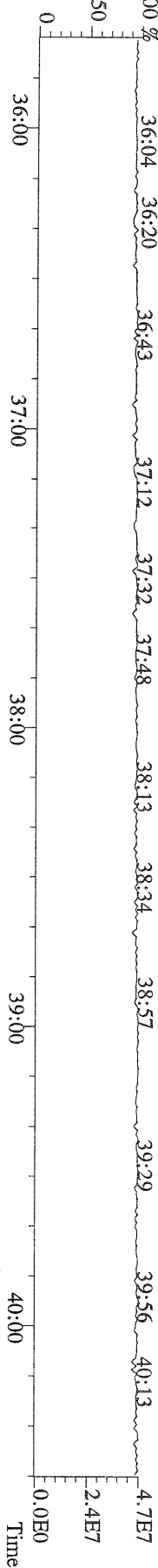
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401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0,0%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory  
100 %



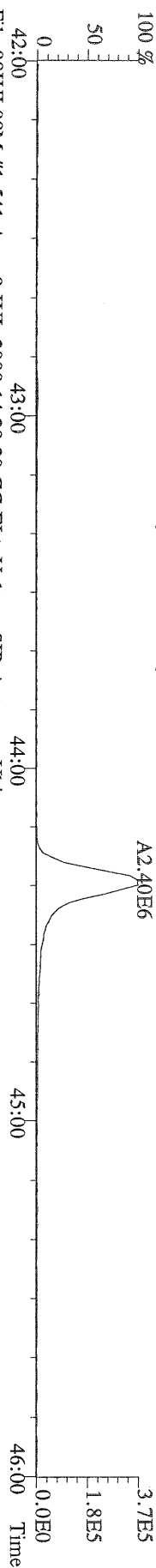
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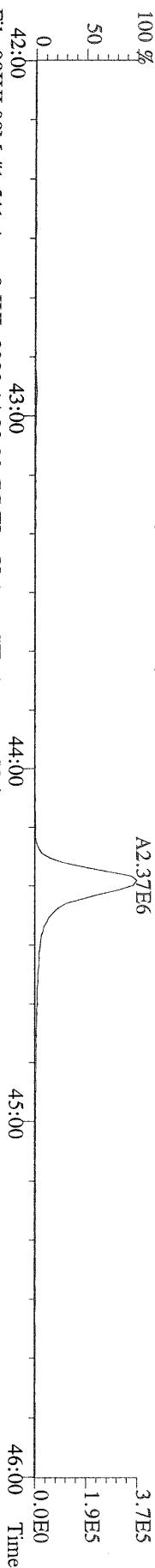
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Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory  
100 %



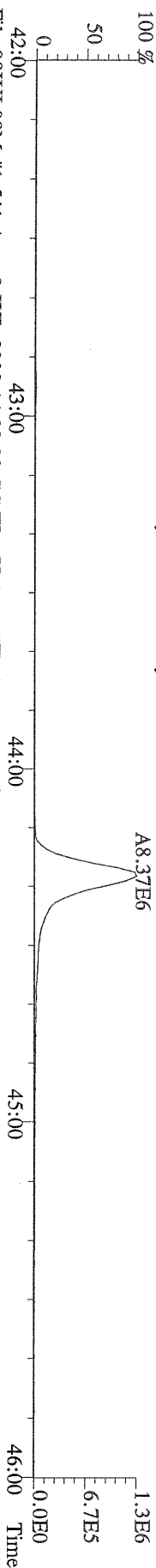
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423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
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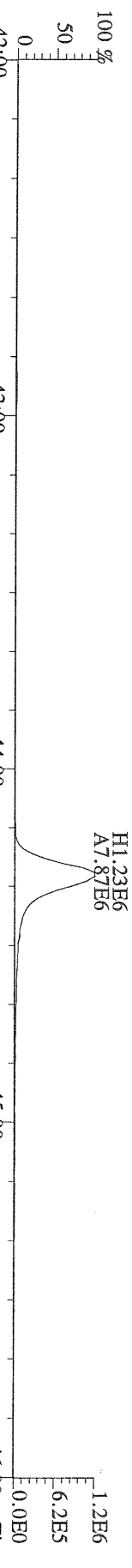
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Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



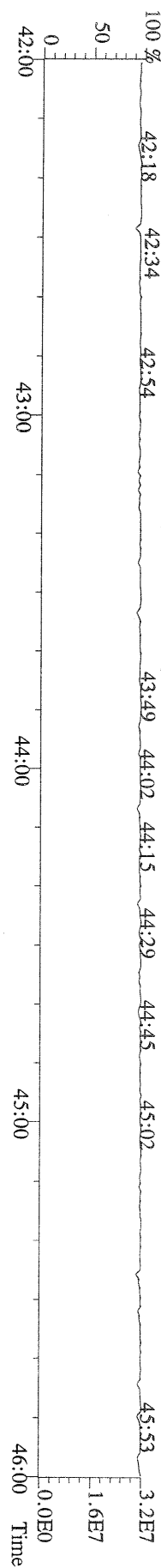
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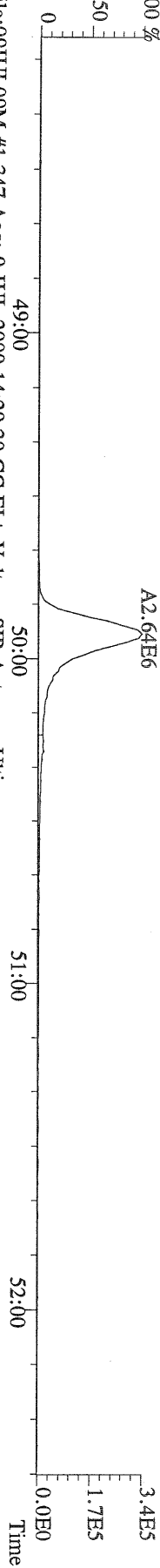
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437.8140 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



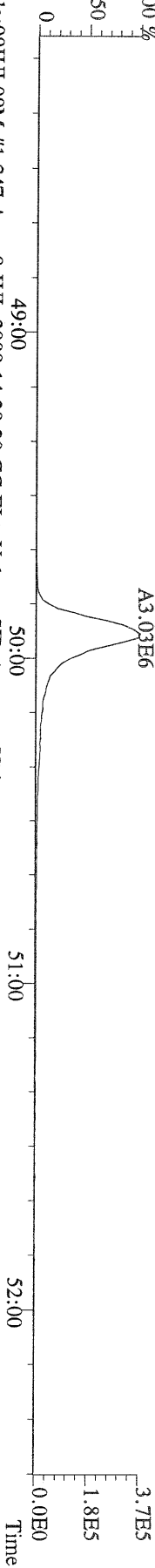
File:09JUL09M #1-541 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
430.9728 S:2 F:4 Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



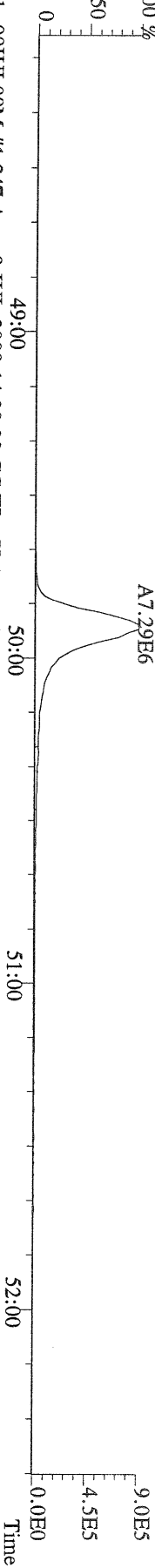
File:09JUL09M #1-347 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



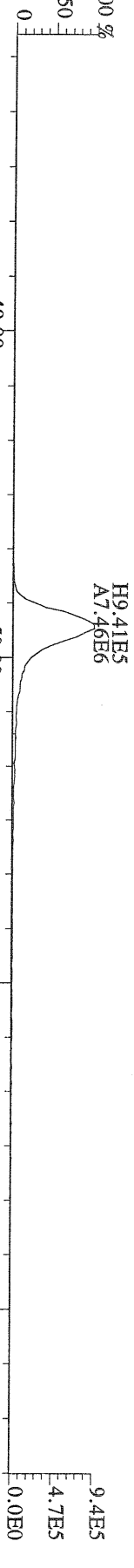
File:09JUL09M #1-347 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
459.7348 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



File:09JUL09M #1-347 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
469.7780 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:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



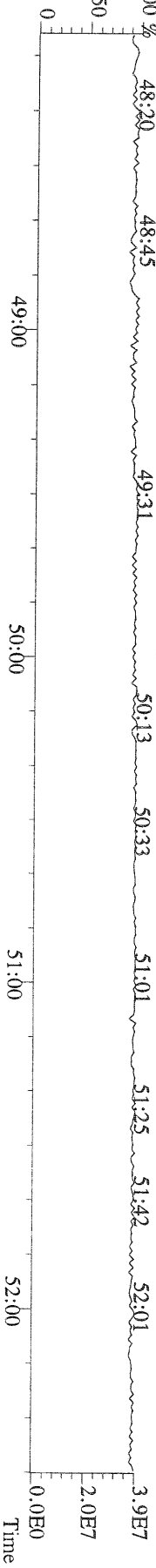
File:09JUL09M #1-347 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
471.7750 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



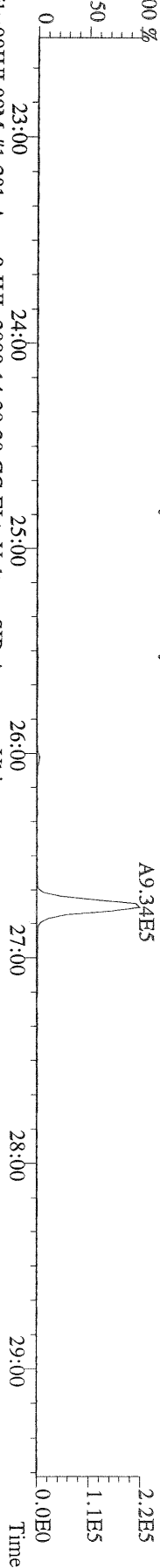
File:09JUL09M #1-347 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima

454.9728 S:2 F:5 Exp:PCDD

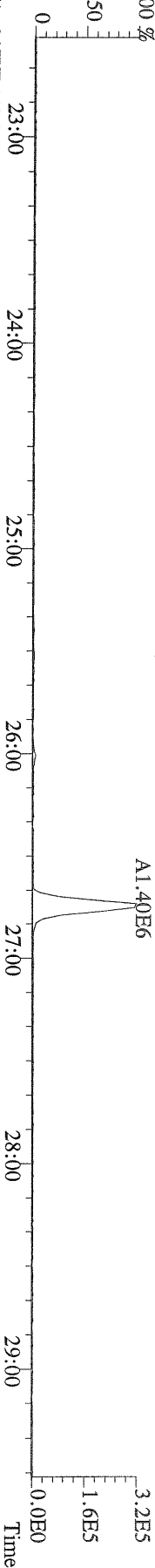
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



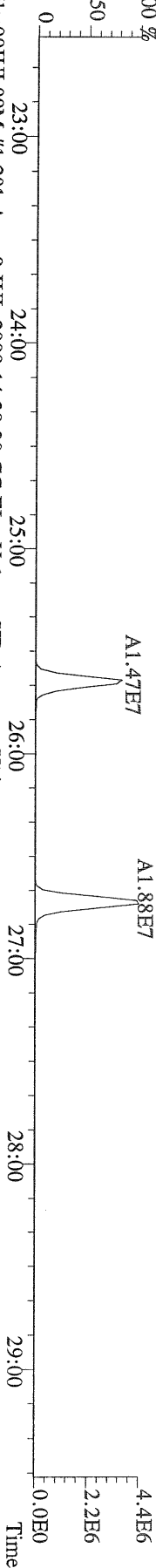
File:09JUL09M #1-391 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



File:09JUL09M #1-391 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



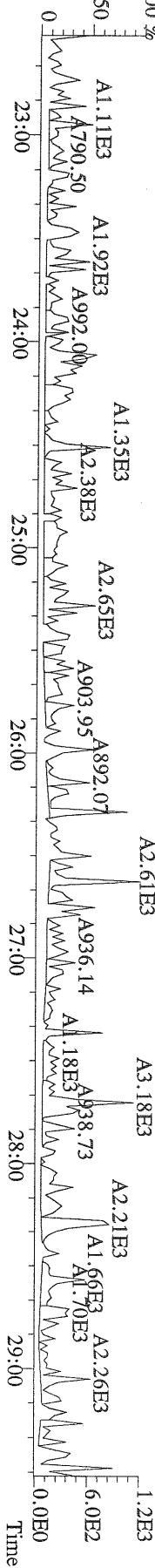
File:09JUL09M #1-391 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
315.9419 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



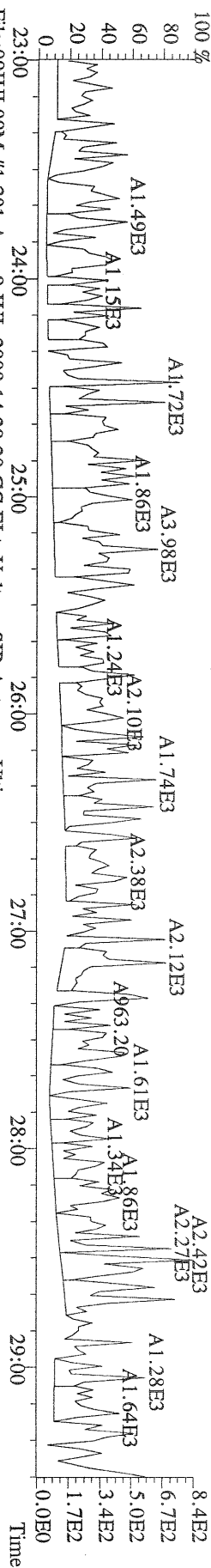
File:09JUL09M #1-391 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
317.9389 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



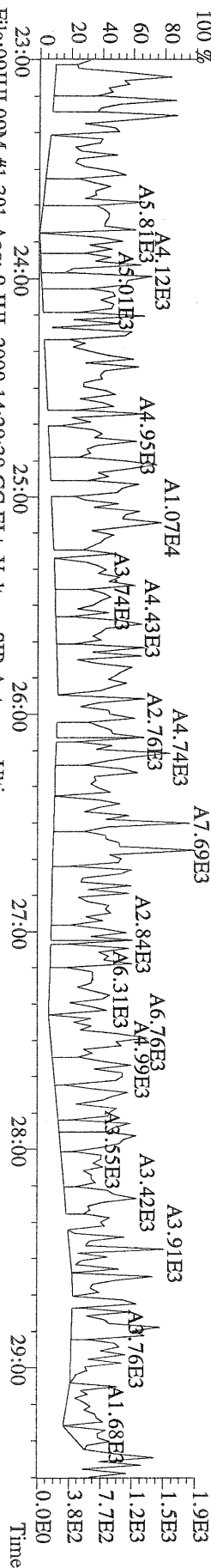
File:09JUL09M #1-391 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
375.8364 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



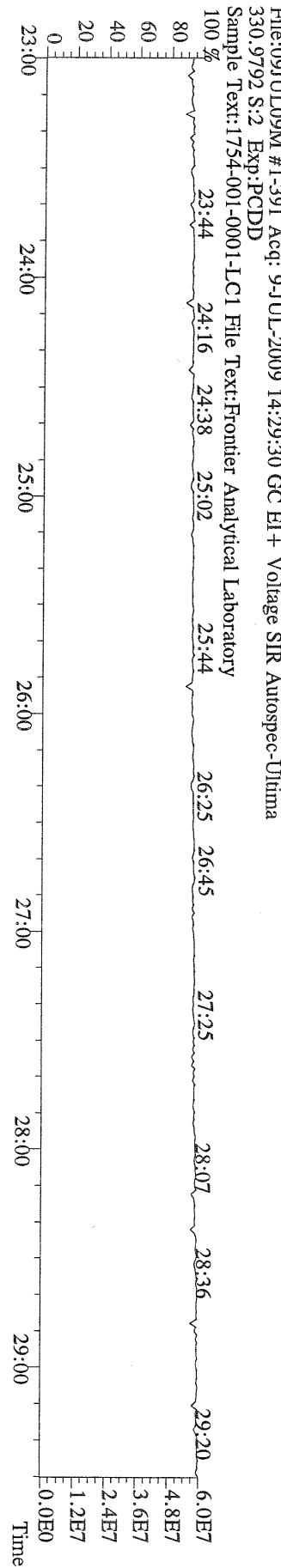
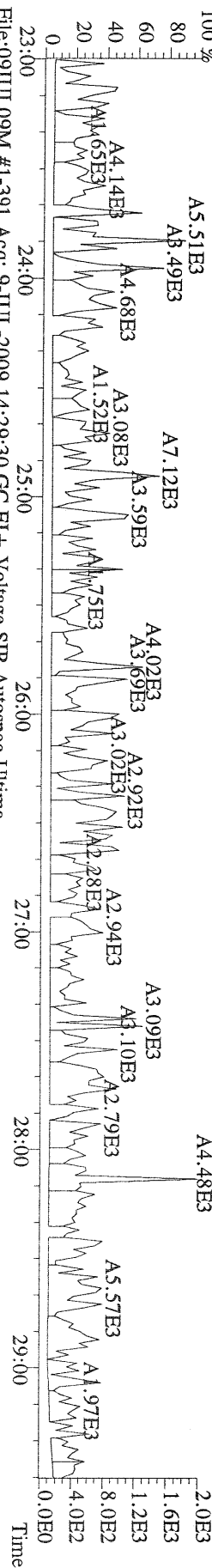
File:09JUL09M #1-391 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



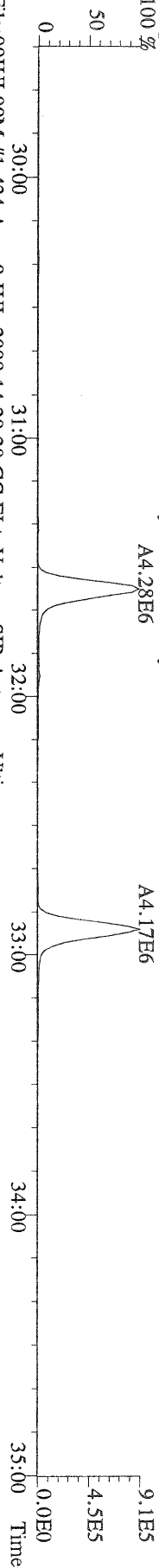
File:09JUL09M #1-391 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
341.8568 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



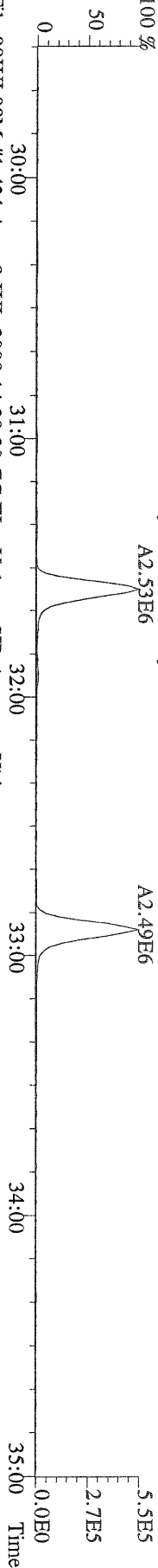
File:09JUL09M #1-391 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
409.7974 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



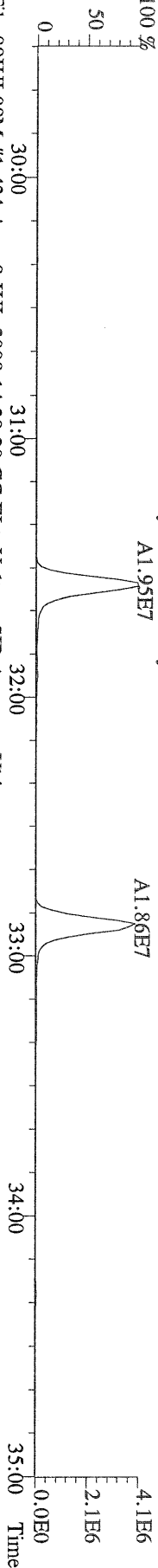
File:09JUL09M #1-424 Acq: 9-JUL-2009 14:29:30 GC EI + Voltage SIR Autospec-Ultima  
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



File:09JUL09M #1-424 Acq: 9-JUL-2009 14:29:30 GC EI + Voltage SIR Autospec-Ultima  
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



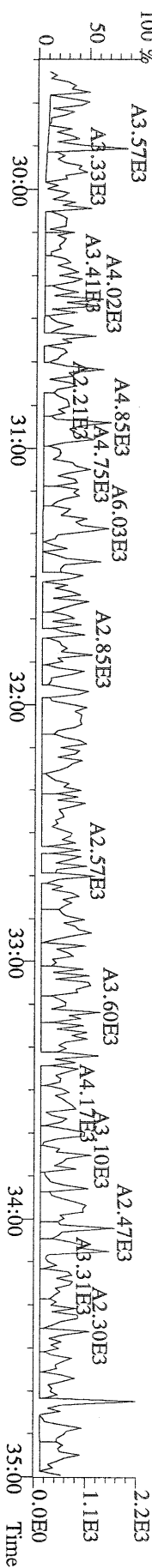
File:09JUL09M #1-424 Acq: 9-JUL-2009 14:29:30 GC EI + Voltage SIR Autospec-Ultima  
351.9000 S:2 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



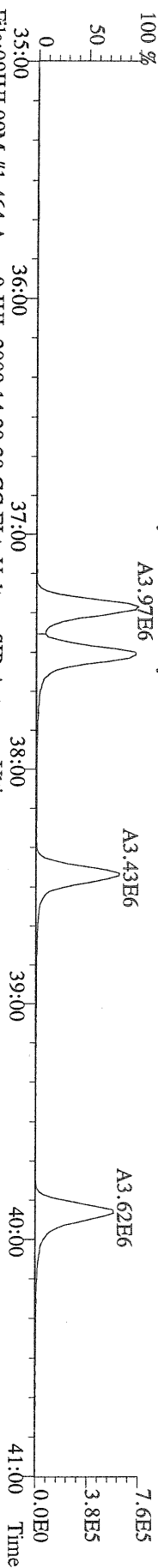
File:09JUL09M #1-424 Acq: 9-JUL-2009 14:29:30 GC EI + Voltage SIR Autospec-Ultima  
353.8970 S:2 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



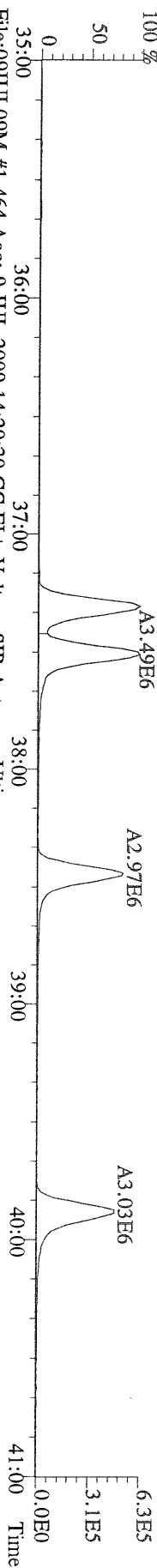
File:09JUL09M #1-424 Acq: 9-JUL-2009 14:29:30 GC EI + Voltage SIR Autospec-Ultima  
409.7974 S:2 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



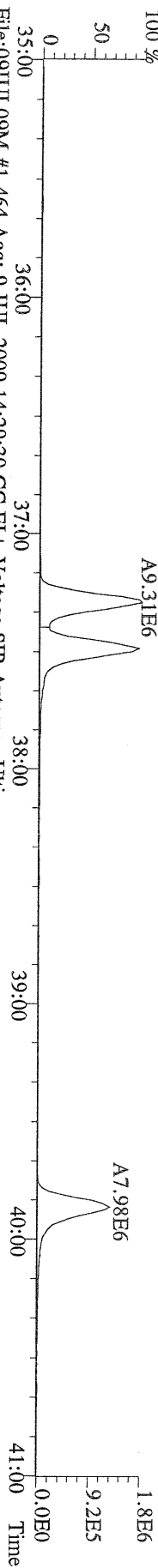
File:09JUL09M #1-464 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



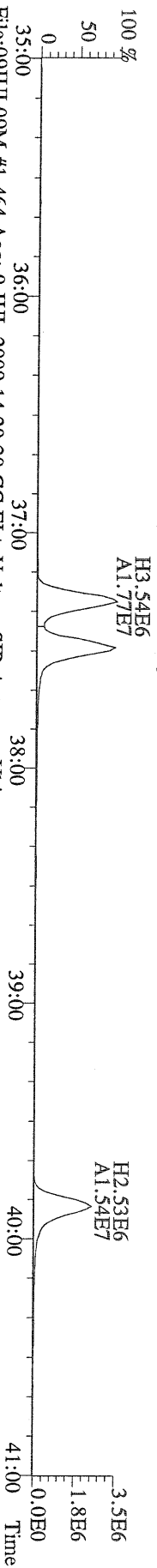
File:09JUL09M #1-464 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



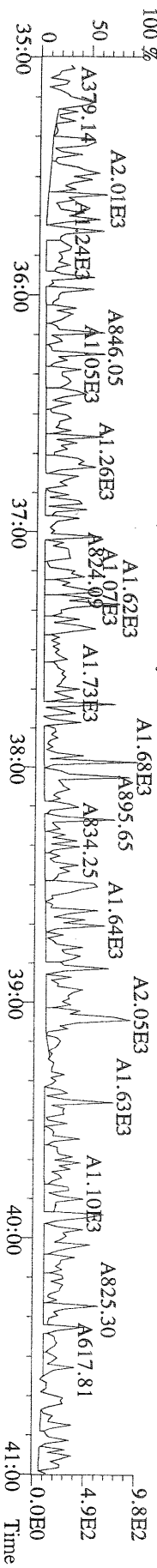
File:09JUL09M #1-464 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



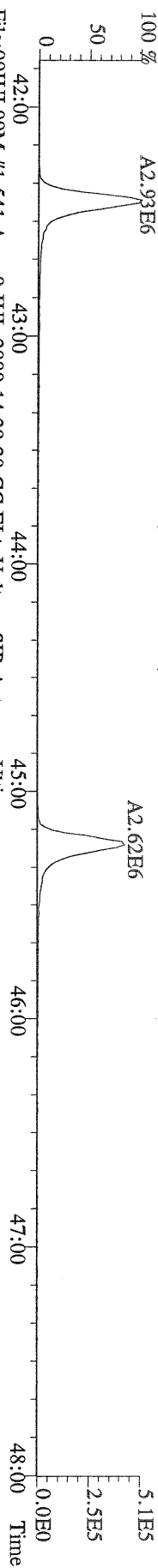
File:09JUL09M #1-464 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



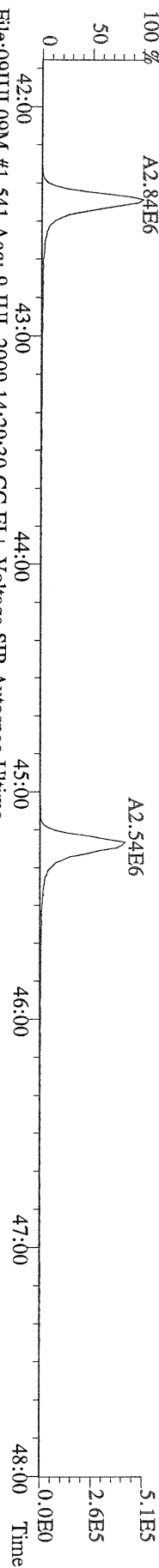
File:09JUL09M #1-464 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



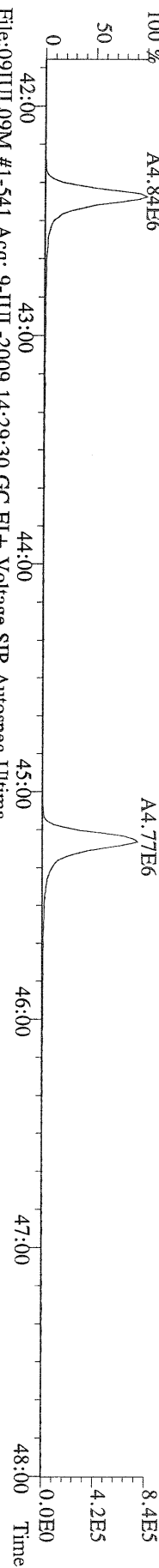
File:09JUL09M #1-541 Acq: 9-JUL-2009 14:29:30 GC EI + Voltage SIR Autospec-Ultima  
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



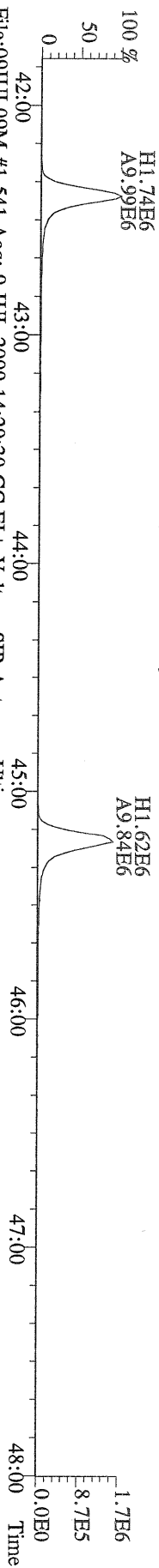
File:09JUL09M #1-541 Acq: 9-JUL-2009 14:29:30 GC EI + Voltage SIR Autospec-Ultima  
409.7788 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



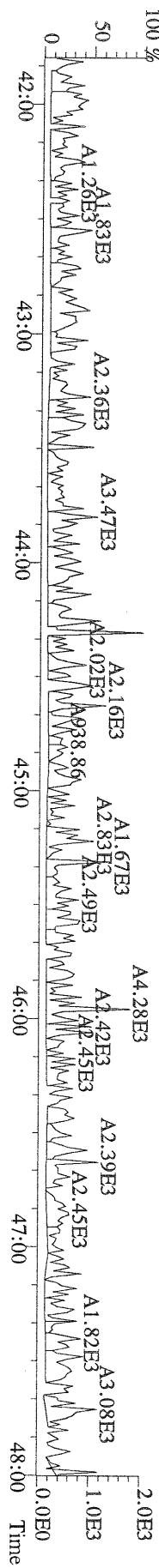
File:09JUL09M #1-541 Acq: 9-JUL-2009 14:29:30 GC EI + Voltage SIR Autospec-Ultima  
417.8253 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



File:09JUL09M #1-541 Acq: 9-JUL-2009 14:29:30 GC EI + Voltage SIR Autospec-Ultima  
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:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory

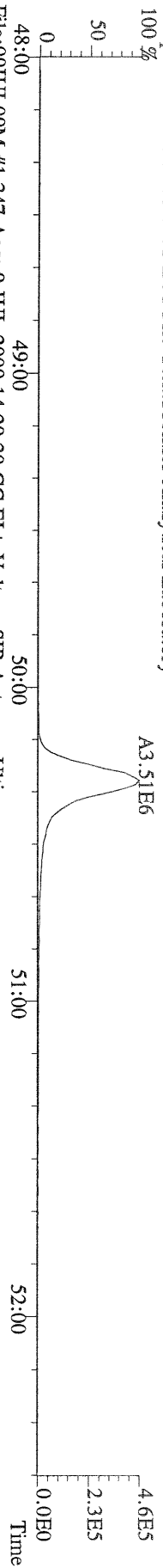


File:09JUL09M #1-541 Acq: 9-JUL-2009 14:29:30 GC EI + Voltage SIR Autospec-Ultima  
479.7165 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory

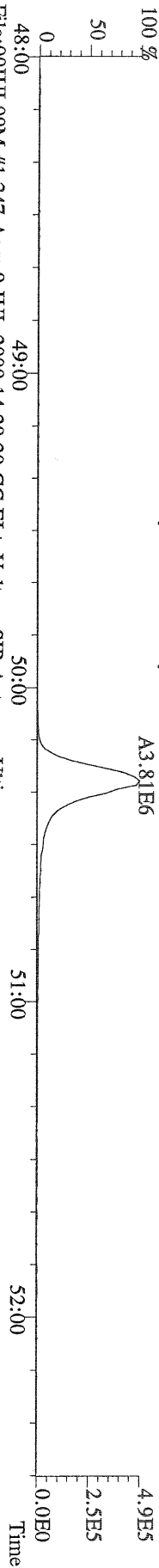




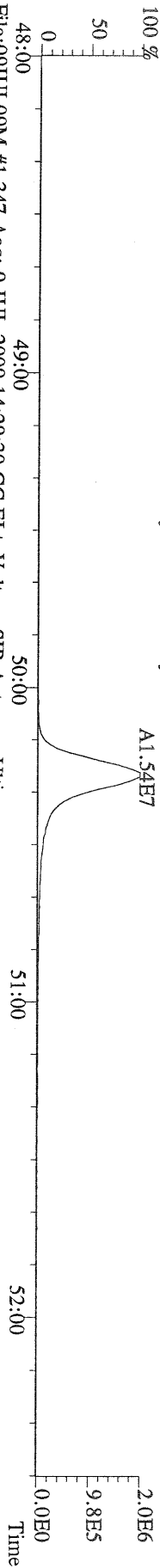
File:09JUL09M #1-347 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
441.7428 S:2 F:5 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



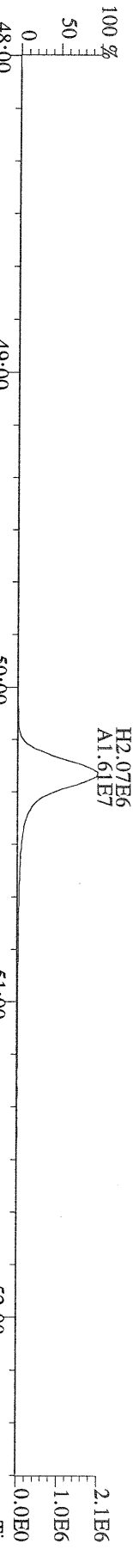
File:09JUL09M #1-347 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
443.7398 S:2 F:5 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



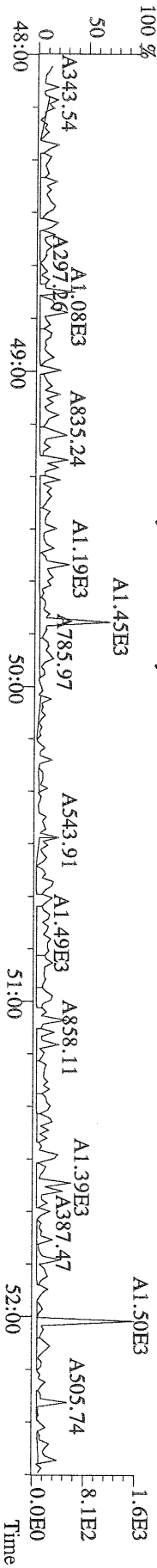
File:09JUL09M #1-347 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
453.7831 S:2 F:5 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



File:09JUL09M #1-347 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
455.7801 S:2 F:5 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



File:09JUL09M #1-347 Acq: 9-JUL-2009 14:29:30 GC EI+ Voltage SIR Autospec-Ultima  
513.6775 S:2 F:5 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC1 File Text:Frontier Analytical Laboratory



USEPA - LTD

Lab Name: Frontier Analytical Laboratory	Episode No.:
Contract No.:	SAS No.:
Matrix (MM5/PUF): PUF/Filter	OPR Data Filename: 09JUL09M Sam:3
Ext. Date: 6/23/09 Shift: Day	Analysis Date: 9-JUL-09 15:24:53

SPIKE	CONC.	OPR CONC.
CONC.	FOUND	LIMITS
(ng/mL)	(ng/mL)	(ng/mL)

2,3,7,8-TCDD	5.00	4.80	3.00 - 7.00 ✓
1,2,3,7,8-PeCDD	25.0	24.0	15.0 - 35.0 ✓
1,2,3,4,7,8-HxCDD	25.0	25.1	15.0 - 35.0 ✓
1,2,3,6,7,8-HxCDD	25.0	27.3	15.0 - 35.0 ✓
1,2,3,7,8,9-HxCDD	25.0	24.6	15.0 - 35.0 ✓
1,2,3,4,6,7,8-HpCDD	25.0	25.9	15.0 - 35.0 ✓
OCDD	50.0	53.3	30.0 - 70.0 ✓
2,3,7,8-TCDF	5.00	5.34	3.00 - 7.00 ✓
1,2,3,7,8-PeCDF	25.0	25.2	15.0 - 35.0 ✓
2,3,4,7,8-PeCDF	25.0	26.7	15.0 - 35.0 ✓
1,2,3,4,7,8-HxCDF	25.0	26.0	15.0 - 35.0 ✓
1,2,3,6,7,8-HxCDF	25.0	26.7	15.0 - 35.0 ✓
2,3,4,6,7,8-HxCDF	25.0	25.9	15.0 - 35.0 ✓
1,2,3,7,8,9-HxCDF	25.0	28.1	15.0 - 35.0 ✓
1,2,3,4,6,7,8-HpCDF	25.0	25.9	15.0 - 35.0 ✓
1,2,3,4,7,8,9-HpCDF	25.0	33.3	15.0 - 35.0 ✓
OCDF	50.0	54.8	30.0 - 70.0 ✓

Analyst:

Date:

AIR FORM 8B  
PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Frontier Analytical Laboratory      Episode No.:  
Contract No.:      SAS No.:  
Matrix (MM5/PUF): PUF/Filter      OPR Data Filename: 09JUL09M      Sam:3  
Ext. Date: 6/23/09      Shift: Day      Analysis Date: 9-JUL-09      15:24:53

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	100	94.5	40.0 - 130 ✓
13C-1,2,3,7,8-PeCDD	100	103	40.0 - 130 ✓
13C-1,2,3,6,7,8-HxCDD	100	102	40.0 - 130 ✓
13C-1,2,3,4,6,7,8-HpCDD	100	102	40.0 - 130 ✓
13C-OCDD	200	171	50.0 - 260 ✓
13C-2,3,7,8-TCDF	100	99.7	40.0 - 130 ✓
13C-1,2,3,7,8-PeCDF	100	102	40.0 - 130 ✓
13C-1,2,3,6,7,8-HxCDF	100	104	40.0 - 130 ✓
13C-1,2,3,4,6,7,8-HpCDF	100	99.2	40.0 - 130 ✓
13C-OCDF	200	198	50.0 - 260 ✓
CLEANUP STANDARD			
13C-1,2,3,7,8,9-HxCDF	100	107	40.0 - 130 ✓
PRE-SPIKE STANDARD			
37Cl-2,3,7,8-TCDD	100	102	70.0 - 130 ✓
13C-1,2,3,4,7,8-HxCDD	100	96.3	70.0 - 130 ✓
13C-2,3,4,7,8-PeCDF	100	111	70.0 - 130 ✓
13C-1,2,3,4,7,8-HxCDF	100	99.2	70.0 - 130 ✓
13C-1,2,3,4,7,8,9-HpCDF	100	126	70.0 - 130 ✓

Analyst:                     

Date: 7/10/09

FAL ID: 1754-001-0001-LC2      Filename: 09JUL09M      Sam:3      Acquired: 9-JUL-09 15:24:53      ICal: AIRFAL3-6-29-09  
Client ID: LCS2      ConCal: ST070909M1      EndCal: ST070909M2  
Results:      GC Column: DB5      Amount: 1.000      NATO 1989 Tox: 51.3

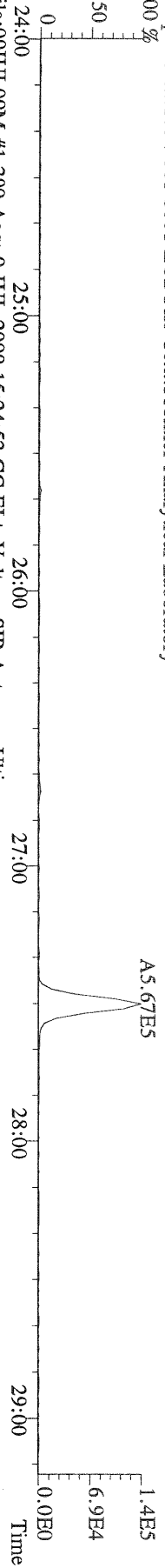
NATO 1989 Tox: 51.3  
WHO 1998 Tox: 63.2

	Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise	DL	
	2,3,7,8-TCDD	1.28e+06	0.79 y	27:30	1.14	4.80		2.50	-	*	
	1,2,3,7,8-PeCDD	4.82e+06	1.64 y	33:20	1.14	24.0		2.50	-	*	
	1,2,3,4,7,8-HxCDD	5.04e+06	1.23 y	38:42	1.37	25.1		2.50	-	*	
	1,2,3,6,7,8-HxCDD	4.94e+06	1.26 y	38:53	1.24	27.3		2.50	-	*	
	1,2,3,7,8,9-HxCDD	4.84e+06	1.24 y	39:19	1.35	24.6		2.50	-	*	
	1,2,3,4,6,7,8-HpCDD	4.55e+06	0.99 y	44:20	1.15	25.9		2.50	-	*	
	OCDD	5.98e+06	0.87 y	49:56	1.43	53.3		2.50	-	*	
	2,3,7,8-TCDF	2.38e+06	0.67 y	26:45	1.14	5.34		2.50	-	*	
	1,2,3,7,8-PeCDF	6.61e+06	1.68 y	31:35	0.90	25.2		2.50	-	*	
	2,3,4,7,8-PeCDF	6.63e+06	1.68 y	32:54	0.86	26.7		2.50	-	*	
	1,2,3,4,7,8-HxCDF	6.96e+06	1.21 y	37:19	1.02	26.0		2.50	-	*	
	1,2,3,6,7,8-HxCDF	7.29e+06	1.20 y	37:30	1.04	26.7		2.50	-	*	
	2,3,4,6,7,8-HxCDF	6.39e+06	1.20 y	38:27	0.94	25.9		2.50	-	*	
	1,2,3,7,8,9-HxCDF	6.45e+06	1.22 y	39:53	0.88	28.1		2.50	-	*	
	1,2,3,4,6,7,8-HpCDF	5.60e+06	1.01 y	42:25	1.51	25.9		2.50	-	*	
	1,2,3,4,7,8,9-HpCDF	5.32e+06	1.03 y	45:14	1.11	33.3		2.50	-	*	
	OCDF	7.54e+06	0.95 y	50:18	0.87	54.8		2.50	-	*	
	13C-2,3,7,8-TCDD	2.34e+07	0.80 y	27:29	1.21	94.5					Rec
	13C-1,2,3,7,8-PeCDD	1.76e+07	1.72 y	33:19	0.83	103					94.5
	13C-1,2,3,6,7,8-HxCDD	1.46e+07	1.24 y	38:51	0.99	102					103
	13C-1,2,3,4,6,7,8-HpCDD	1.52e+07	1.03 y	44:18	1.03	102					102
	13C-OCDD	1.57e+07	0.97 y	49:54	0.64	171					102
	13C-2,3,7,8-TCDF	3.90e+07	0.88 y	26:44	1.33	99.7					85.4
	13C-1,2,3,7,8-PeCDF	2.90e+07	1.73 y	31:34	0.96	102					
	13C-1,2,3,6,7,8-HxCDF	2.62e+07	0.53 y	37:29	1.75	104					99.7
	13C-1,2,3,4,6,7,8-HpCDF	1.43e+07	0.49 y	42:23	1.00	99.2					102
	13C-OCDF	3.17e+07	0.95 y	50:16	1.11	198					104
	13C-1,2,3,7,8,9-HxCDF	2.16e+07	0.53 y	39:51	1.40	107					99.2
	37Cl-2,3,7,8-TCDD	1.33e+07		27:30	0.56	102					98.9
	13C-1,2,3,4,7,8-HxCDD	1.48e+07	1.24 y	38:41	1.05	96.3					
	13C-2,3,4,7,8-PeCDF	3.01e+07	1.70 y	32:53	0.93	111					107
	13C-1,2,3,4,7,8-HxCDF	2.59e+07	0.52 y	37:17	1.00	99.2					
	13C-1,2,3,4,7,8,9-HpCDF	1.49e+07	0.48 y	45:13	0.82	126					102
	13C-1,2,3,4-TCDD	2.05e+07	0.79 y	26:55	-	49.0					96.3
	13C-2,3,7,8-TCDF	2.94e+07	0.88 y	25:38	-	43.7					111
	13C-1,2,3,7,8,9-HxCDD	1.44e+07	1.22 y	39:18	-	49.0					99.2
								Fac	Noise	DL	#Hom
	Total Tetra-Dioxins	1.39e+06		23:18	1.14	5.20		2.50	-	*	22
	Total Penta-Dioxins	4.90e+06		31:34	1.14	24.4		2.50	-	*	15
	Total Hexa-Dioxins	1.51e+07		37:17	1.32	78.2		2.50	-	*	19
	Total Hepta-Dioxins	4.84e+06		41:30	1.15	27.6		2.50	-	*	36
	Total Tetra-Furans	2.72e+06		23:07	1.14	6.10		2.50	-	*	28
1st Fn. Tot	Penta-Furans	8.39e+04		22:48	0.88	0.329		2.50	-	*	29
	Total Penta-Furans	1.35e+07		30:19	0.88	53.1		2.50	-	*	23
	Total Hexa-Furans	2.73e+07		35:37	0.97	108		2.50	-	*	20
	Total Hepta-Furans	1.13e+07		41:38	1.31	61.0		2.50	-	*	37
											PeCDF
											53.4

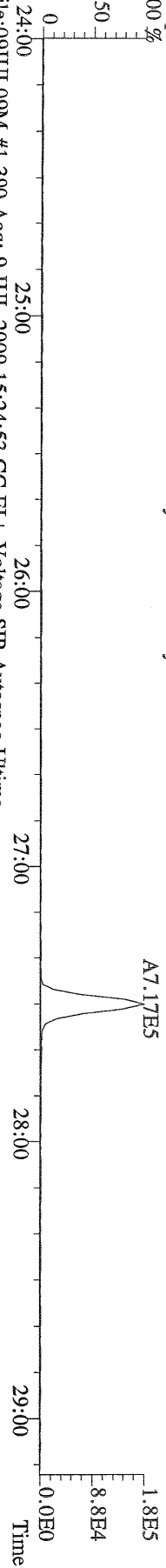
Analyst: \_\_\_\_\_

Date: 7/10/09

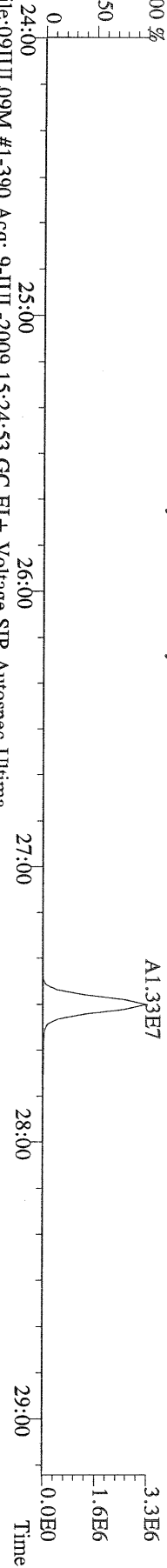
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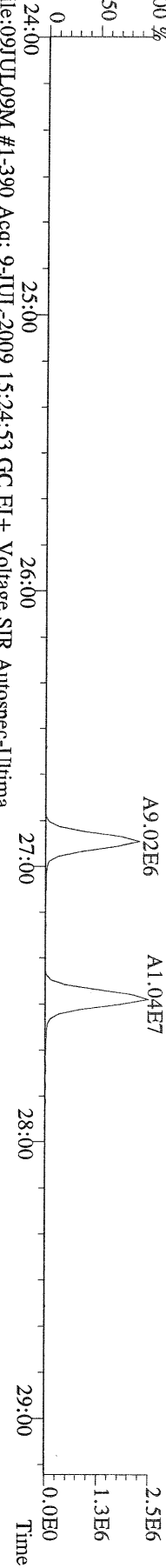
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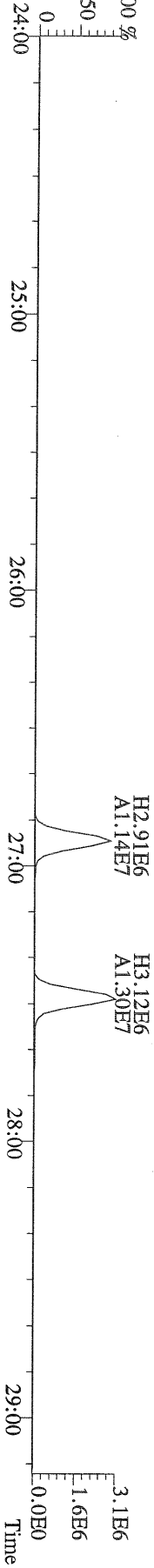
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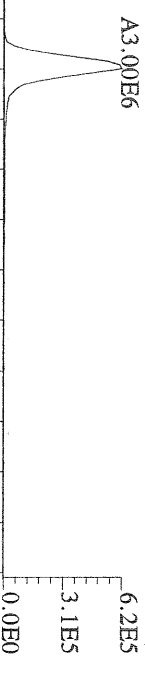
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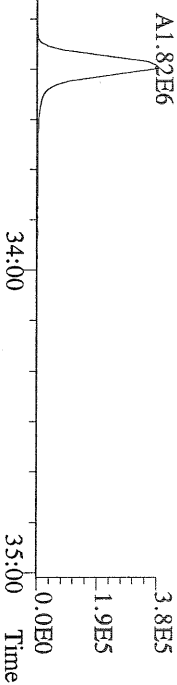
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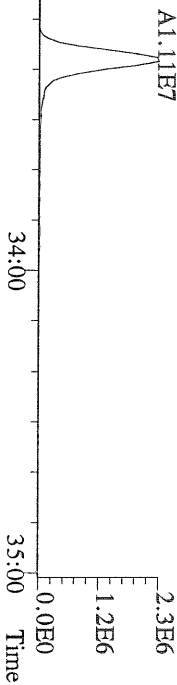
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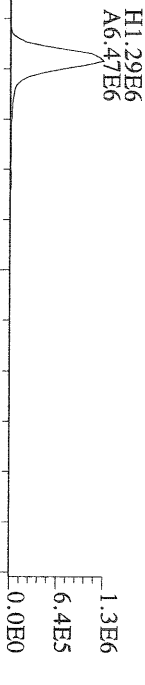
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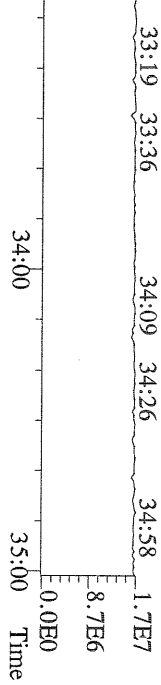
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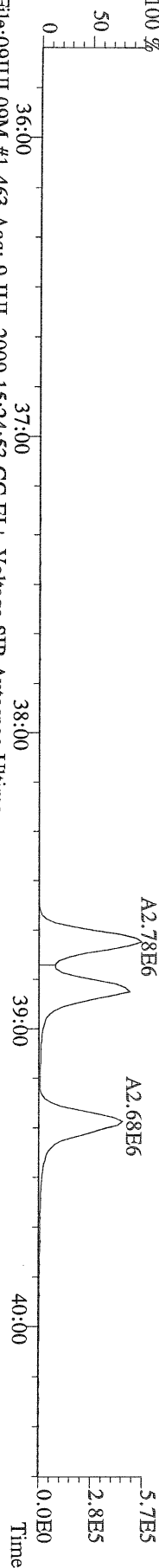
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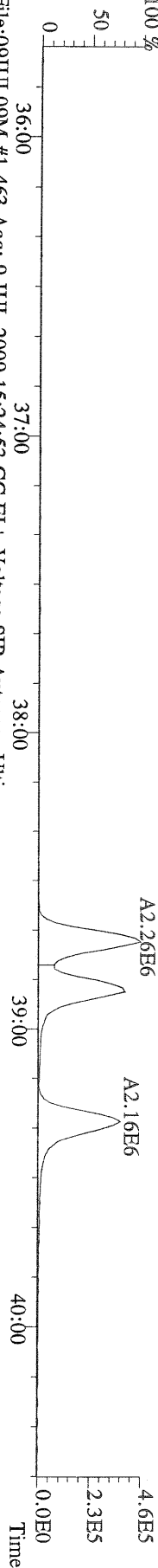
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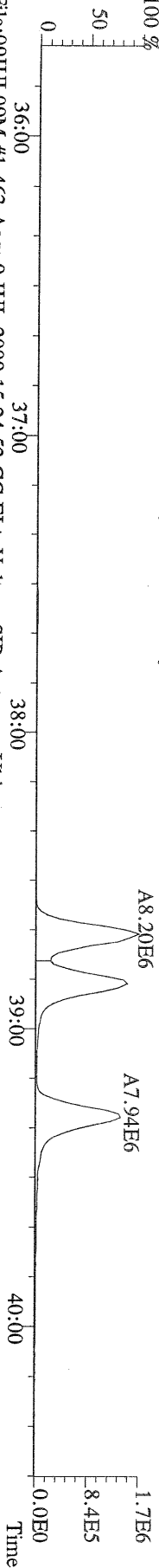
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Sample Text:1754-001-0001-LC2 File Text:Frontier Analytical Laboratory



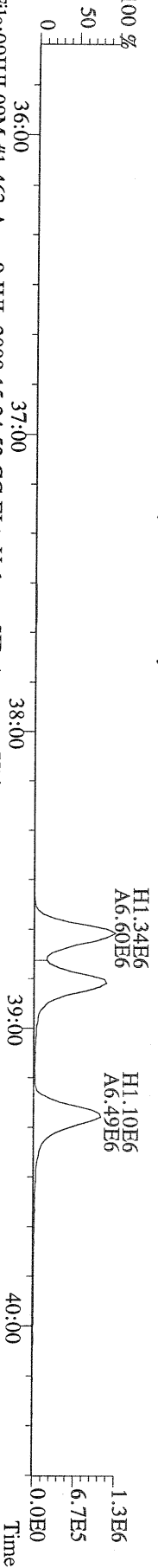
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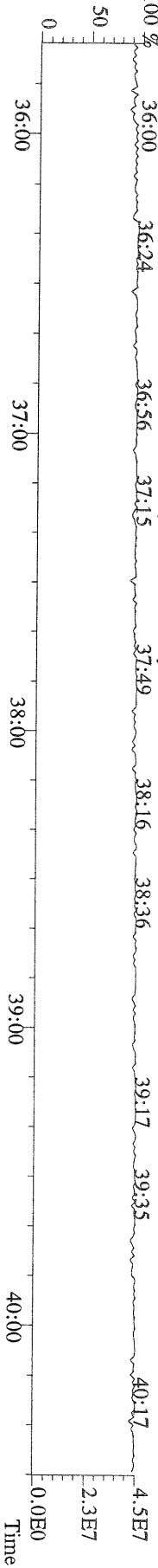
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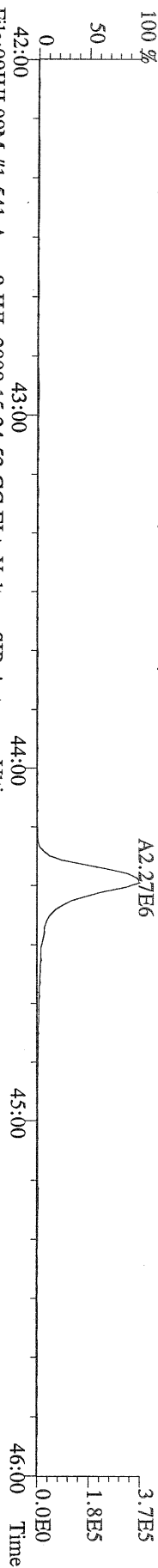
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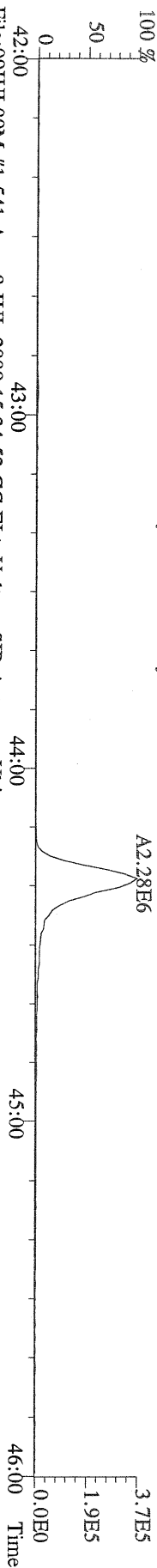
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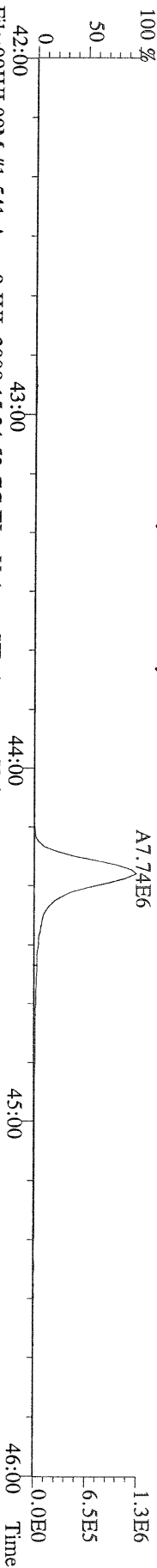
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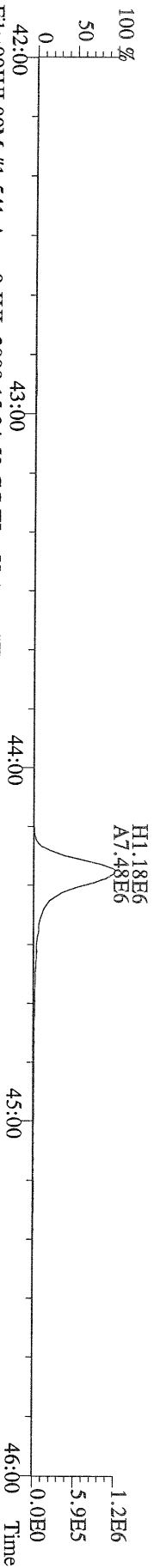
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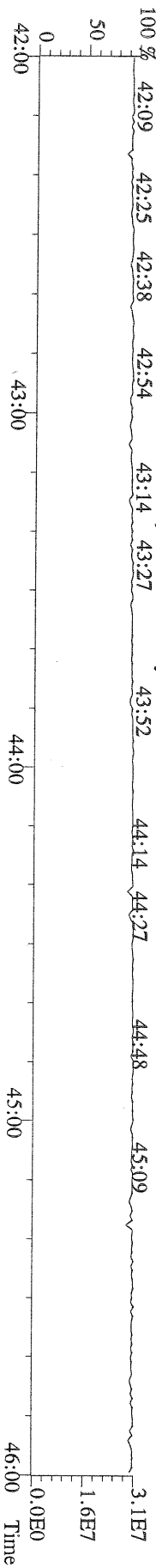
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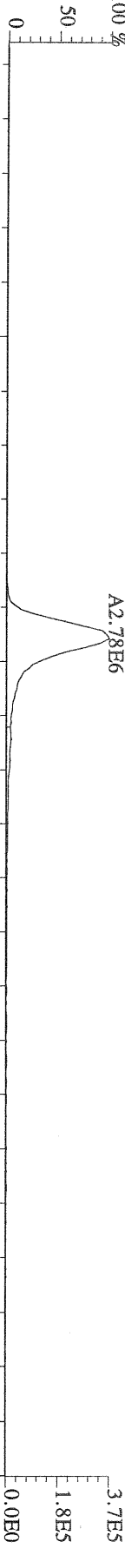


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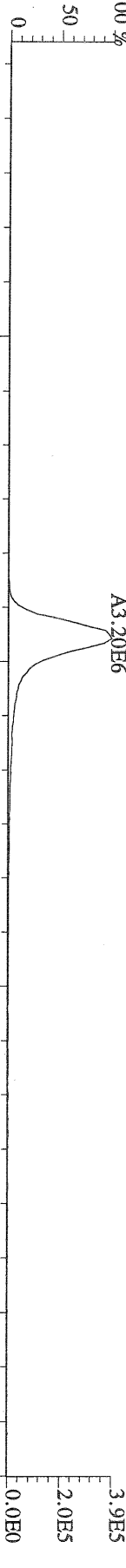




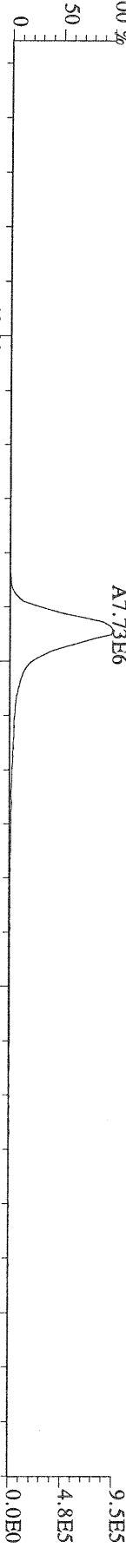
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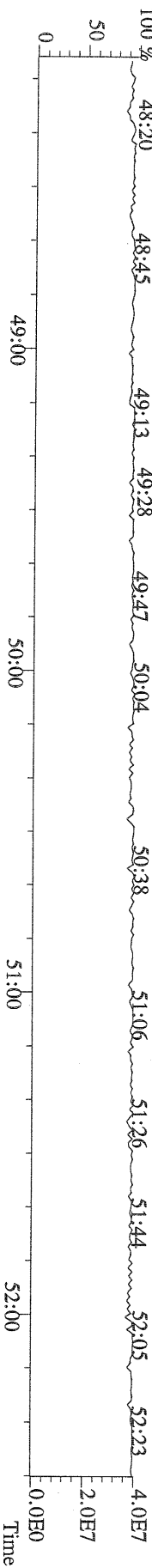
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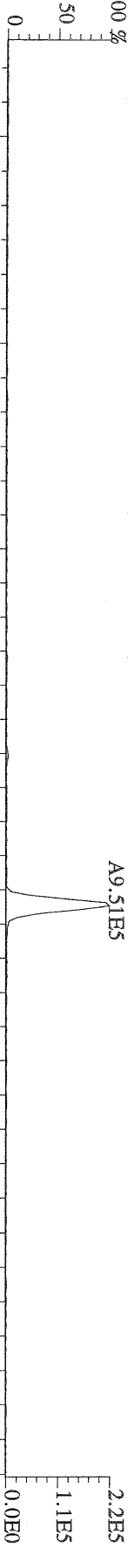
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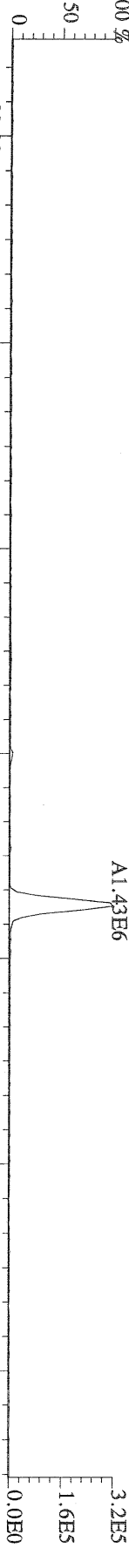
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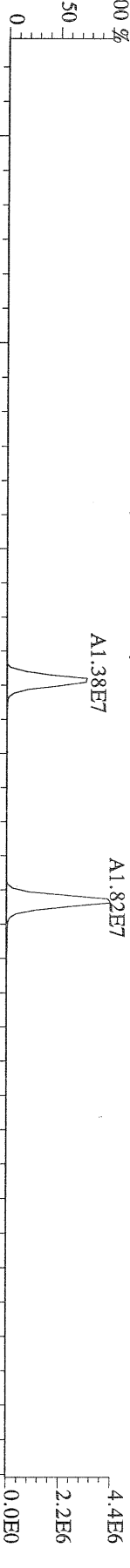
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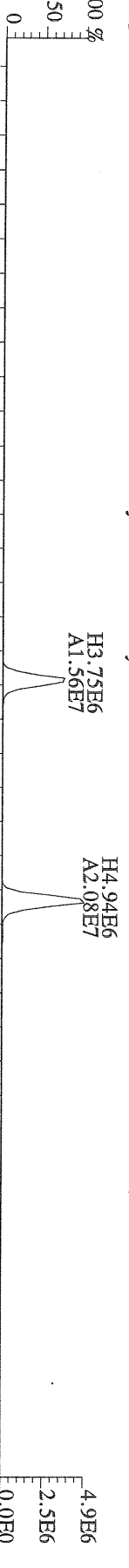
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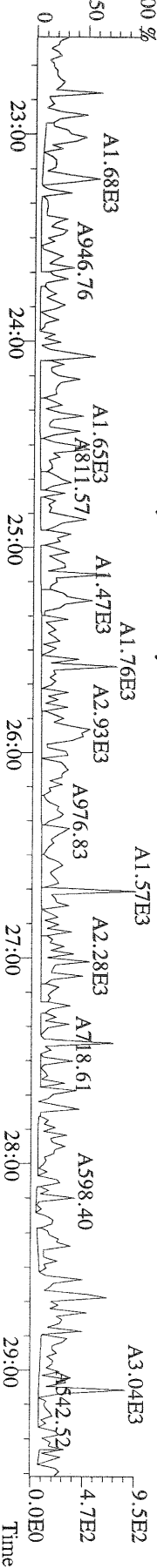
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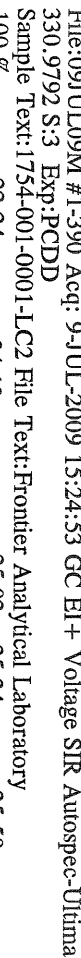
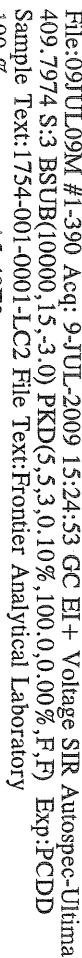
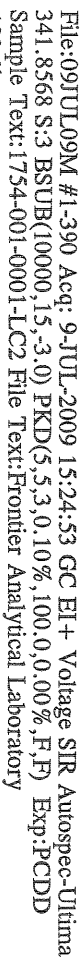
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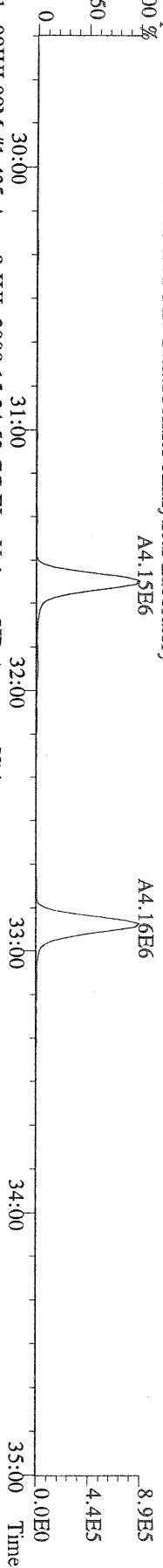
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Sample Text:1754-001-0001-LC2 File Text:Frontier Analytical Laboratory



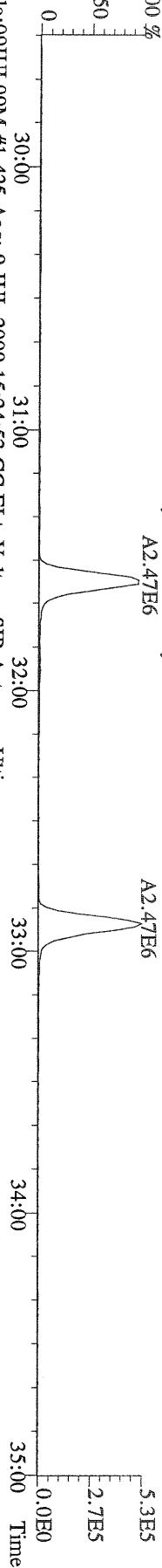
100%



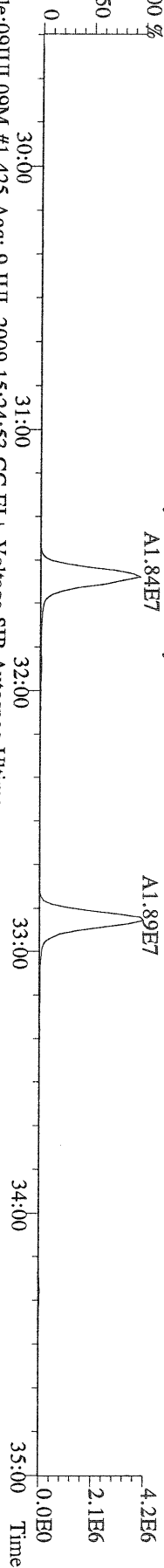
File:09JUL09M #1-425 Acq: 9-JUL-2009 15:24:53 GC EI+ Voltage SIR Autospec-Ultima  
339.8597 S:3 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC2 File Text:Frontier Analytical Laboratory



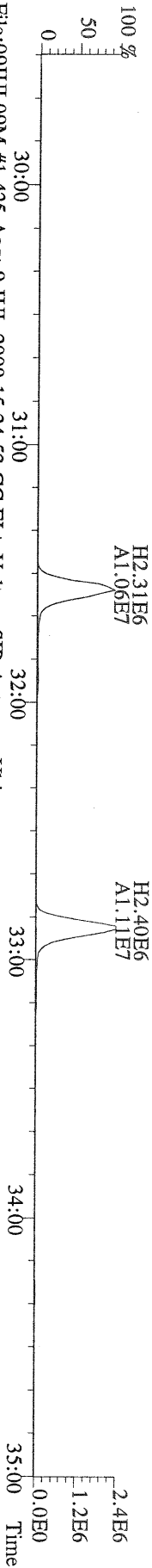
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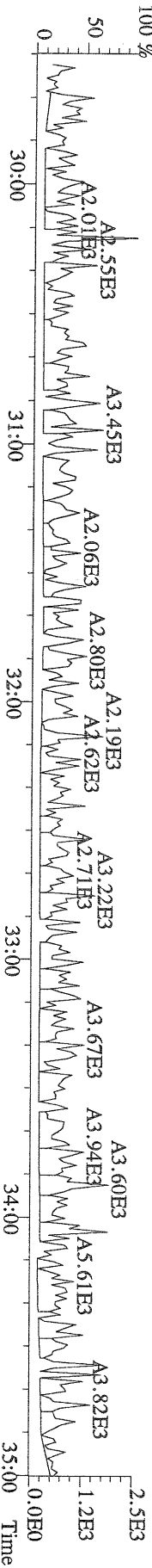
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351.9000 S:3 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC2 File Text:Frontier Analytical Laboratory



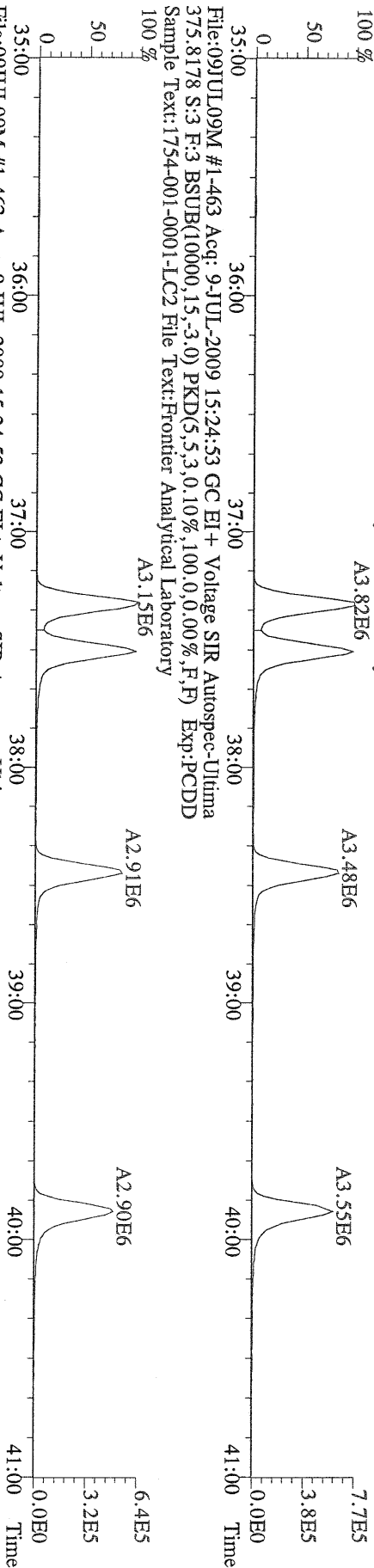
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353.8970 S:3 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
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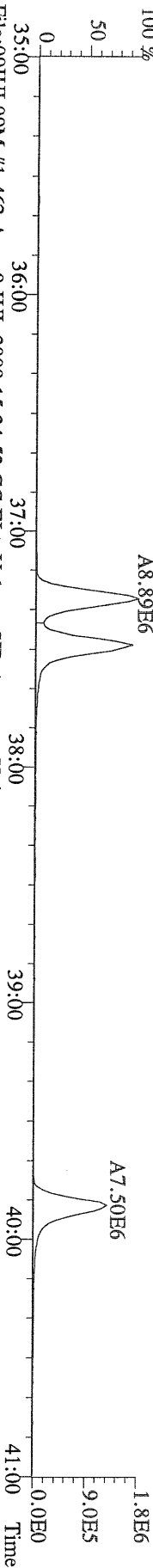
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409.7974 S:3 F:2 BSUB(10000,15,-3,0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC2 File Text:Frontier Analytical Laboratory



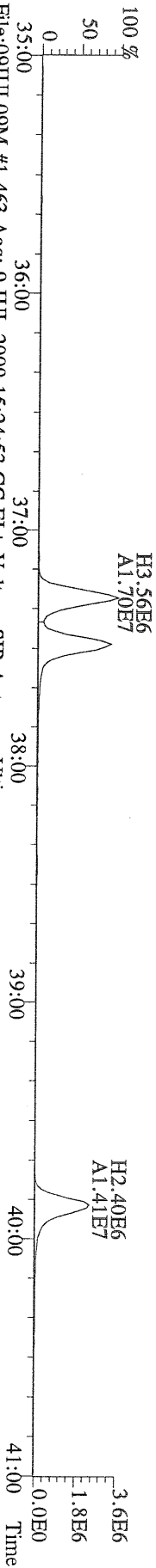
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373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
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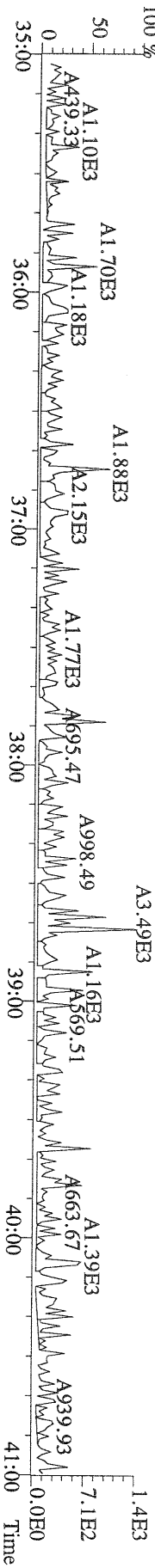
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383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC2 File Text:Frontier Analytical Laboratory



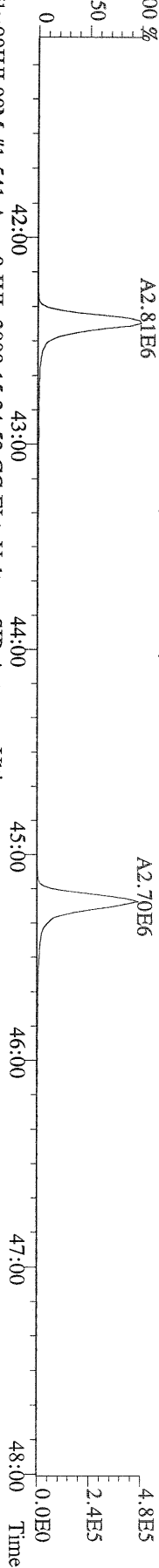
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385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
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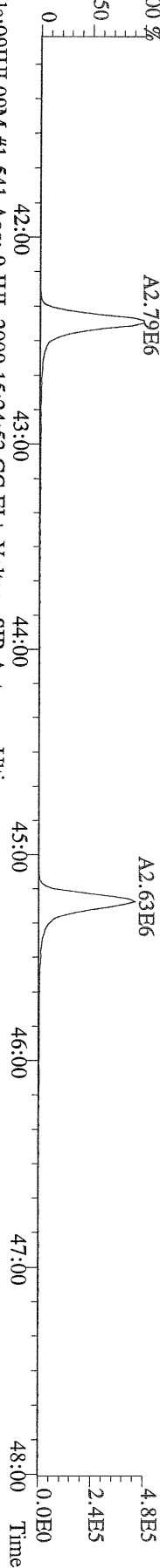
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Sample Text:1754-001-0001-LC2 File Text:Frontier Analytical Laboratory



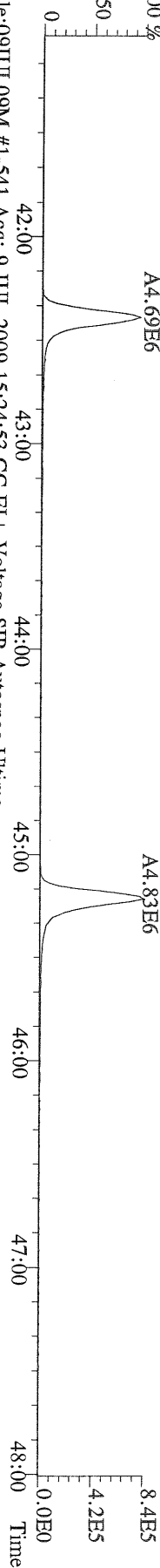
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407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC2 File Text:Fronter Analytical Laboratory



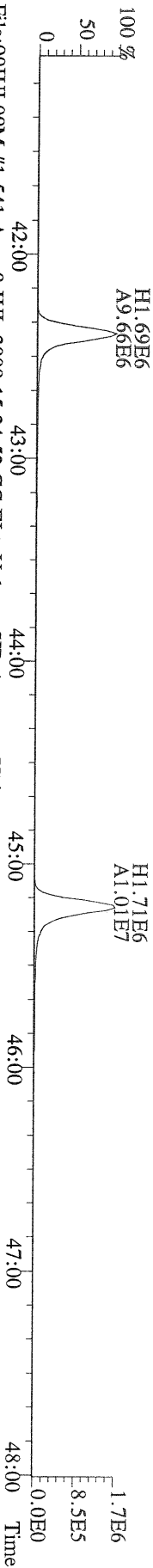
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409.7788 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC2 File Text:Fronter Analytical Laboratory



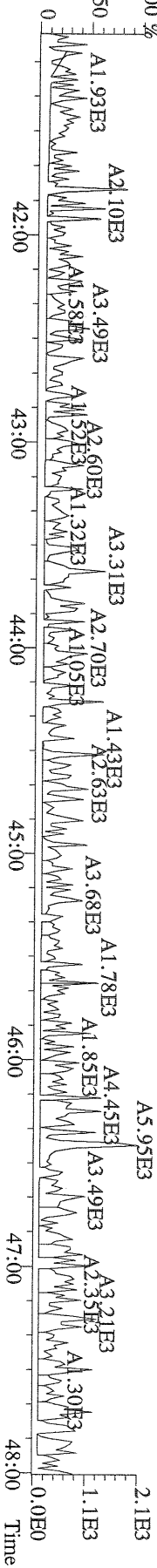
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Sample Text:1754-001-0001-LC2 File Text:Fronter Analytical Laboratory



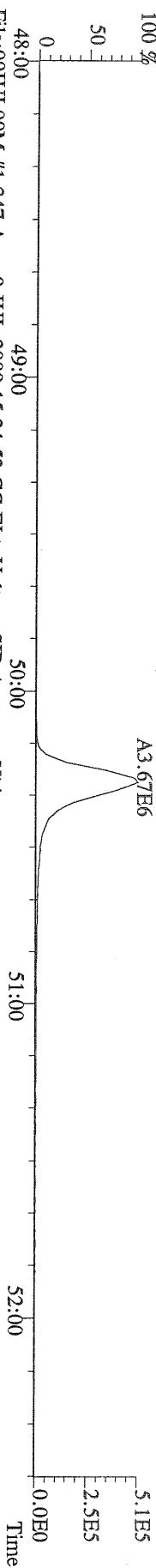
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419.8220 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC2 File Text:Fronter Analytical Laboratory



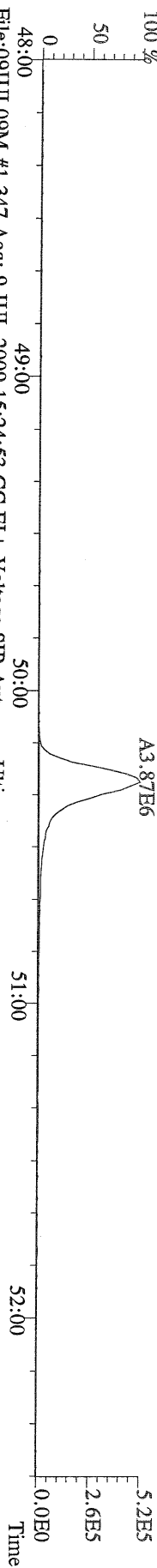
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Sample Text:1754-001-0001-LC2 File Text:Fronter Analytical Laboratory



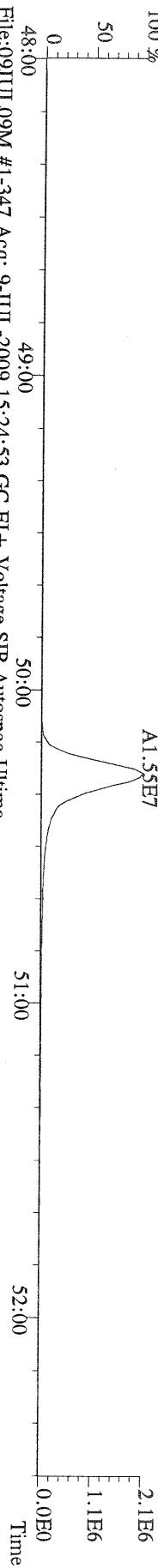
File:09JUL09M #1-347 Acq: 9-JUL-2009 15:24:53 GC EI+ Voltage SIR Autospec-Ultima  
441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC2 File Text:Frontier Analytical Laboratory



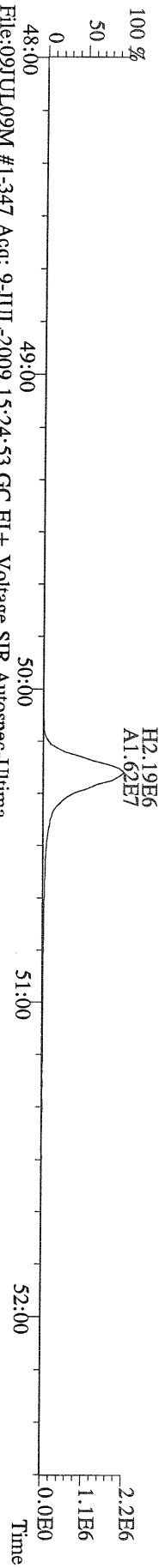
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443.7398 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC2 File Text:Frontier Analytical Laboratory



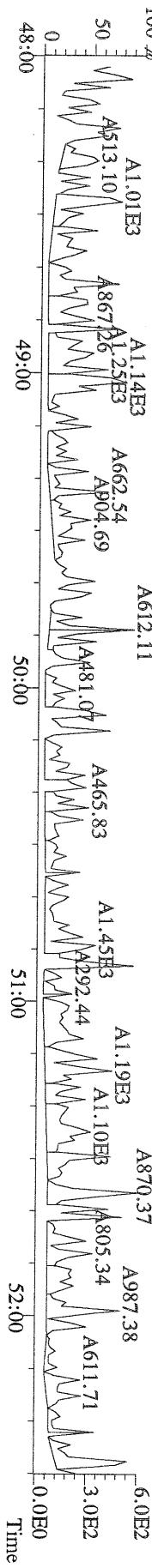
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453.7831 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC2 File Text:Frontier Analytical Laboratory



File:09JUL09M #1-347 Acq: 9-JUL-2009 15:24:53 GC EI+ Voltage SIR Autospec-Ultima  
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:1754-001-0001-LC2 File Text:Frontier Analytical Laboratory



File:09JUL09M #1-347 Acq: 9-JUL-2009 15:24:53 GC EI+ Voltage SIR Autospec-Ultima  
513.6775 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:1754-001-0001-LC2 File Text:Frontier Analytical Laboratory



ICaI: AIRFAI 3-6-29-09

Client ID: OFF-03-061809

ConCaL: ST070909M1

EndCal : ST070909M2

Results: 5557

GC Column: DB5

Amount: 1.000 ✓

NATO 1989 Tox: 0.0253

WHO 1998 Tox:0.00253

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise	DI
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2,3,7,8-TCDD	*	*	n NotFnd	1.14	*	2.50	776	2.14
1,2,3,7,8-PeCDD	*	*	n NotFnd	1.14	*	2.50	252	1.76
1,2,3,4,7,8-HxCDD	*	*	n NotFnd	1.37	*	2.50	523	3.05
1,2,3,6,7,8-HxCDD	*	*	n NotFnd	1.24	*	2.50	523	3.38
1,2,3,7,8,9-HxCDD	*	*	n NotFnd	1.35	*	2.50	523	3.11
1,2,3,4,6,7,8-HpCDD	*	*	n NotFnd	1.15	*	2.50	1220	8.55
OCDD	6.80e+04	0.81	y 49:56	1.43	25.3	J 2.50	-	*

2,3,7,8-TCDF	*	* n NotFnd	1.14	*	2.50	1310	2.37
1,2,3,7,8-PeCDF	*	* n NotFnd	0.90	*	2.50	651	3.03
2,3,4,7,8-PeCDF	*	* n NotFnd	0.86	*	2.50	651	3.20
1,2,3,4,7,8-HxCDF	*	* n NotFnd	1.02	*	2.50	556	1.71
1,2,3,6,7,8-HxCDF	*	* n NotFnd	1.04	*	2.50	556	1.68
2,3,4,6,7,8-HxCDF	*	* n NotFnd	0.94	*	2.50	556	1.86
1,2,3,7,8,9-HxCDF	*	* n NotFnd	0.88	*	2.50	556	1.99
1,2,3,4,6,7,8-HpCDF	*	* n NotFnd	1.51	*	2.50	772	3.38
1,2,3,4,7,8,9-HpCDF	*	* n NotFnd	1.11	*	2.50	772	4.57
OCDF	*	* n NotFnd	0.87	*	2.50	826	10.0

							Rec
13C-2,3,7,8-TCDD	2.46e+07	0.79	y	27:29	1.21	3910	97.7
13C-1,2,3,7,8-PeCDD	1.79e+07	1.69	y	33:19	0.83	4140	103
13C-1,2,3,6,7,8-HxCDD	1.58e+07	1.24	y	38:51	0.99	4050	101
13C-1,2,3,4,6,7,8-HpCDD	1.59e+07	1.04	y	44:18	1.03	3960	98.9
13C-OCDD	1.51e+07	0.94	y	49:55	0.64	6040	75.5

13C-2,3,7,8-TCDF	3.86e+07	0.88	y	26:44	1.33	3880	97.0
13C-1,2,3,7,8-PeCDF	3.05e+07	1.71	y	31:34	0.96	4230	106
13C-1,2,3,6,7,8-HxCDF	2.66e+07	0.51	y	37:29	1.75	3890	97.3
13C-1,2,3,4,6,7,8-HpCDF	1.36e+07	0.47	y	42:24	1.00	3470	86.7
13C-OCDF	2.91e+07	0.95	y	50:18	1.11	6700	83.8

13C-1,2,3,7,8,9-HxCDF	2.29e+07	0.52 y	39:52	1.40	4180	104
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37Cl-2,3,7,8-TCDD	1.41e+07		27:31	0.56	4120	103
13C-1,2,3,4,7,8-HxCDD	1.56e+07	1.24 y	38:41	1.05	3770	94.2
13C-2,3,4,7,8-PeCDF	3.00e+07	1.74 y	32:53	0.93	4230	106
13C-1,2,3,4,7,8-HxCDF	2.56e+07	0.52 y	37:17	1.00	3870	96.7
13C-1,2,3,4,7,8,9-HpCDF	1.41e+07	0.48 y	45:13	0.82	5050	126

13C-1,2,3,4-TCDD	2.08e+07	0.79	y	26:55	-	49.8
13C-2,3,7,8-TCDF	2.99e+07	0.88	y	25:40	-	44.4
13C-1,2,3,7,8,9-HxCDD	1.56e+07	1.20	y	39:18	-	53.0

					Fac	Noise	DL	#Homs
Total Tetra-Dioxins	*	NotFnd	1.14	*	2.50	776	2.14	0
Total Penta-Dioxins	*	NotFnd	1.14	*	2.50	252	1.76	0
Total Hexa-Dioxins	*	NotFnd	1.32	*	2.50	523	3.38	0
Total Hepta-Dioxins	*	NotFnd	1.15	*	2.50	1220	8.55	0

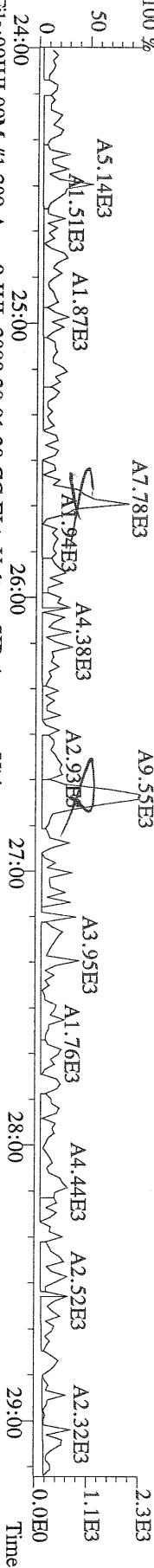
Total Tetra-Furans	*	NotFnd	1.14	*	2.50	1310	2.37	0	
1st Fn. Tot Penta-Furans	*	NotFnd	0.88	*	2.50	651	3.20	0	PeCDF
Total Penta-Furans	*	NotFnd	0.88	*	2.50	651	3.20	0	0.00
Total Hexa-Furans	*	NotFnd	0.97	*	2.50	556	1.99	0	
Total Hepta-Furans	*	NotFnd	1.31	*	2.50	772	4.57	0	

Analyst: \_\_\_\_\_

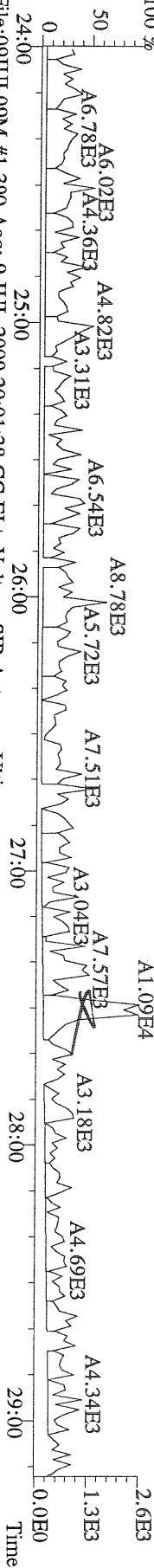
Date: 7/10/09



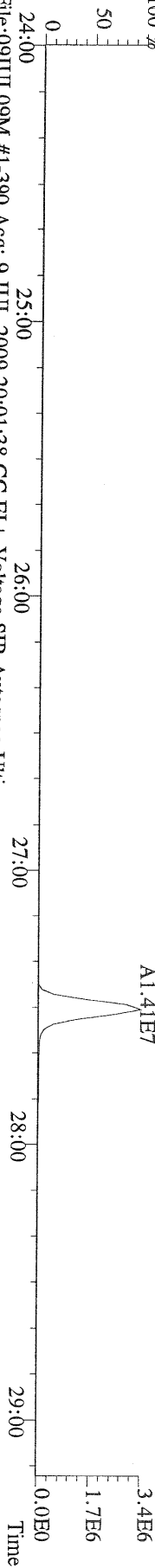
File:09JUL09M #1-390 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
319.8965 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



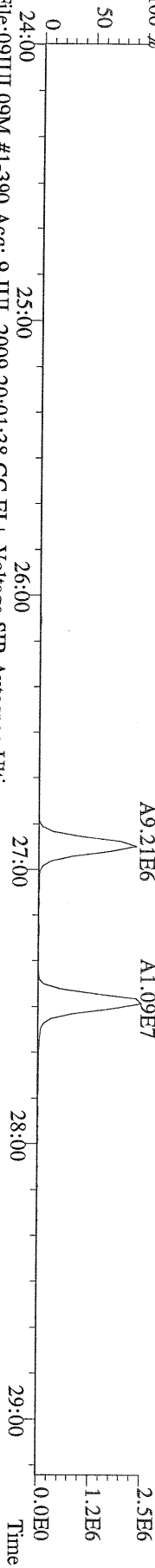
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321.8936 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
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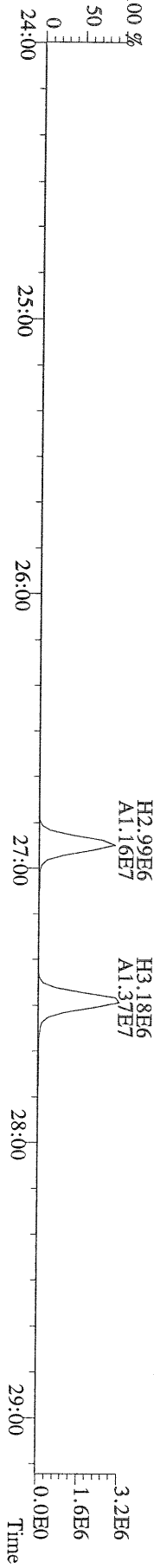
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327.8847 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
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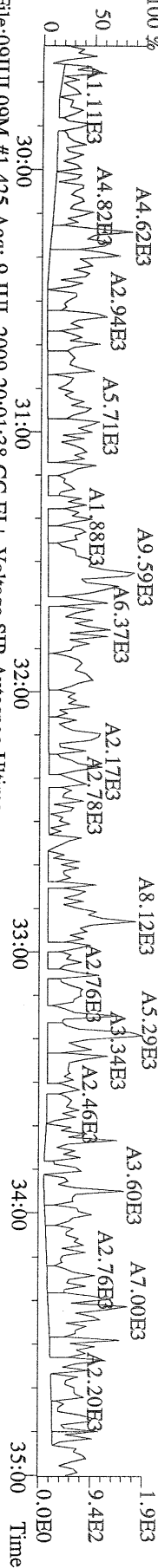
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331.9368 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



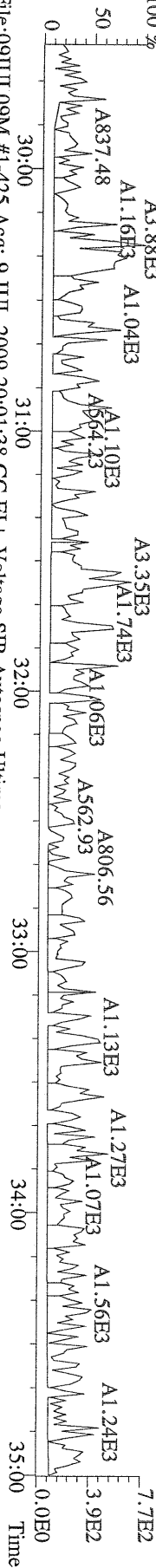
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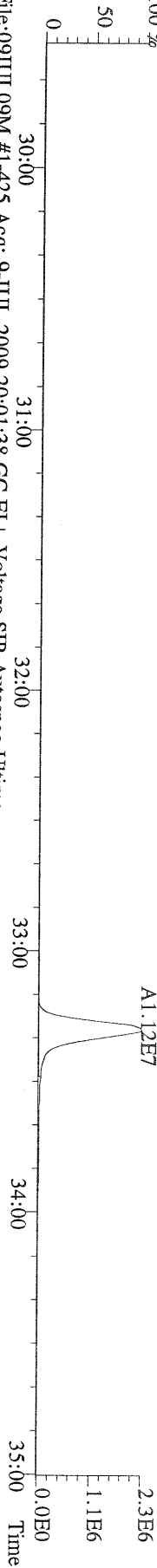
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355.8546 S:8 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



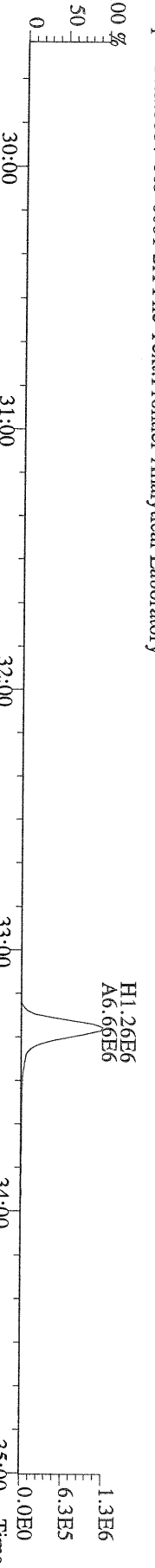
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357.8517 S:8 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



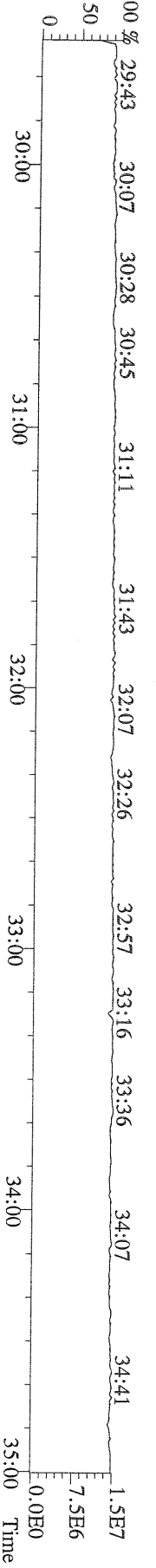
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367.8949 S:8 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



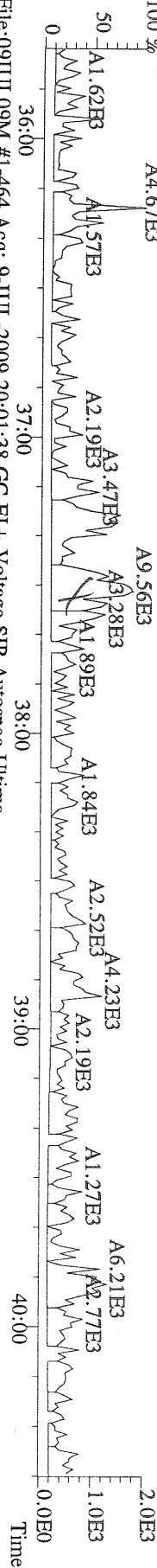
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369.8919 S:8 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



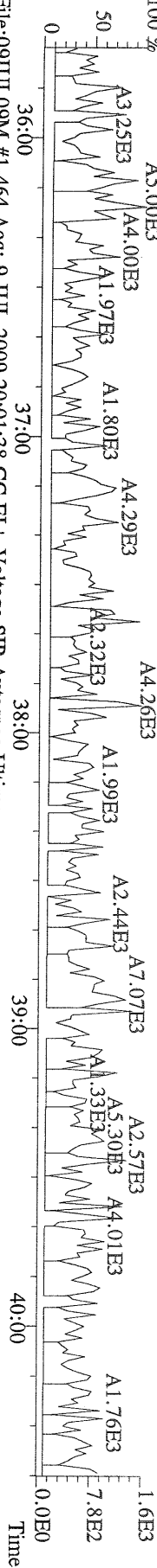
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366.9792 S:8 F:2 Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



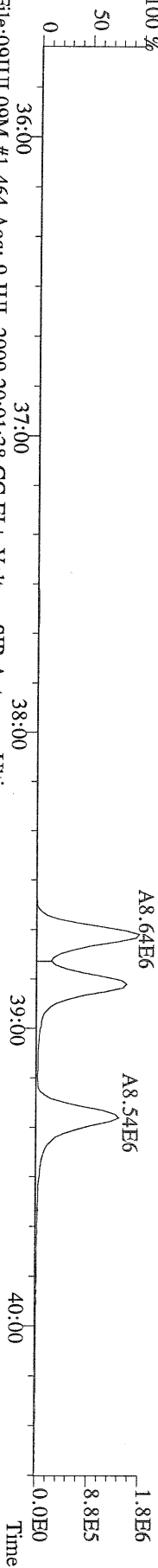
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389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



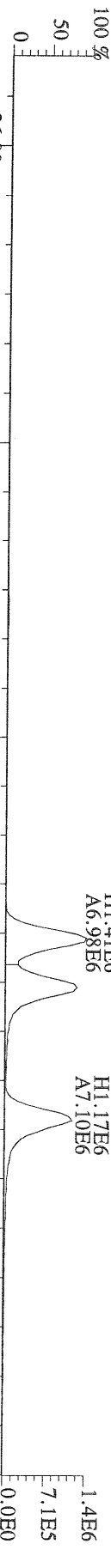
File:09JUL09M #1-464 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
391.8127 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



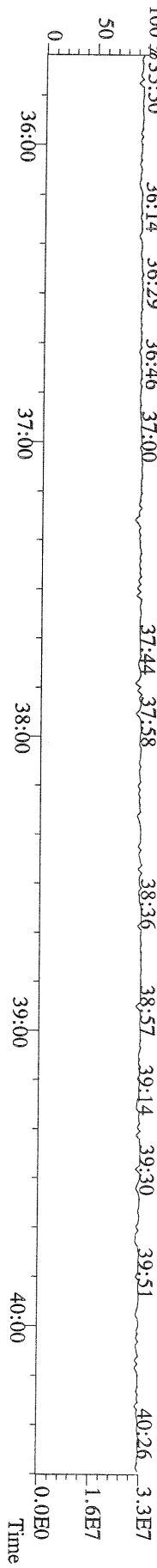
File:09JUL09M #1-464 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



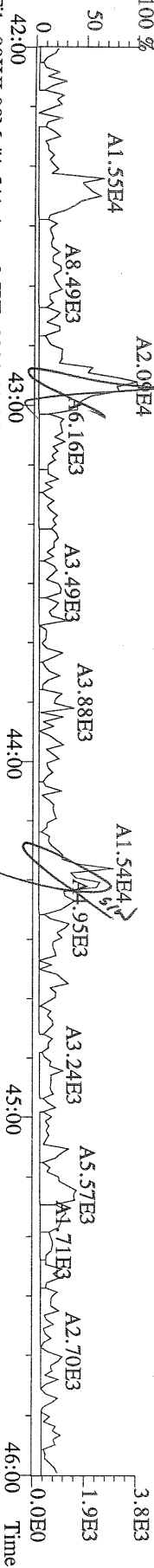
File:09JUL09M #1-464 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
403.8530 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



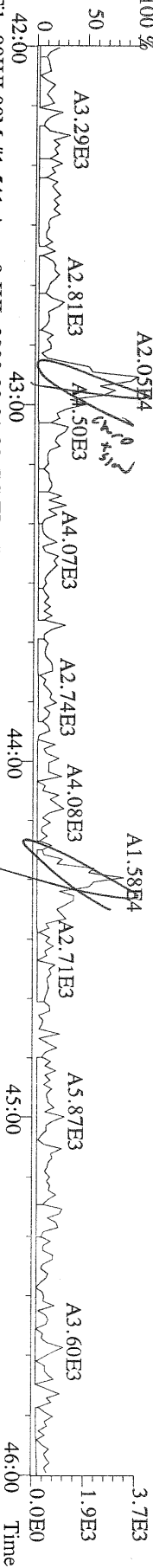
File:09JUL09M #1-464 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
380.9760 S:8 F:3 Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



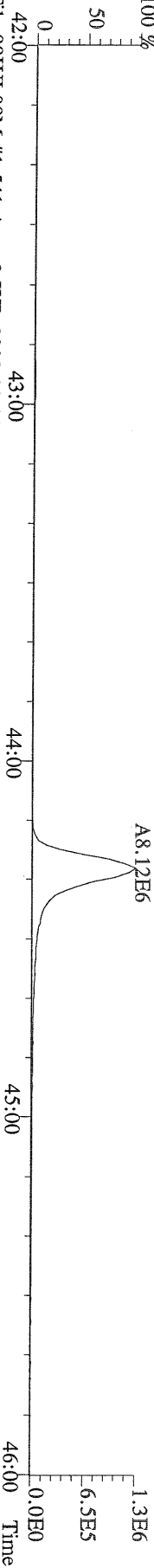
File:09JUL09M #1-541 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
423.7767 S:8 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



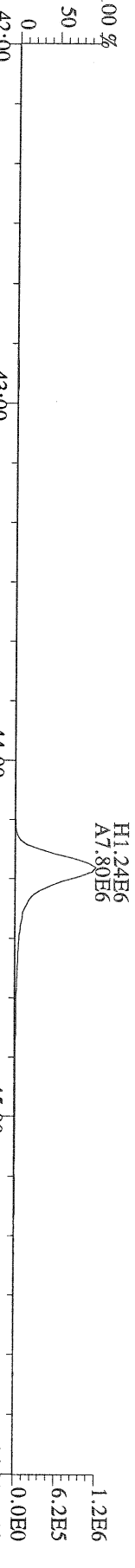
File:09JUL09M #1-541 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
425.7737 S:8 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



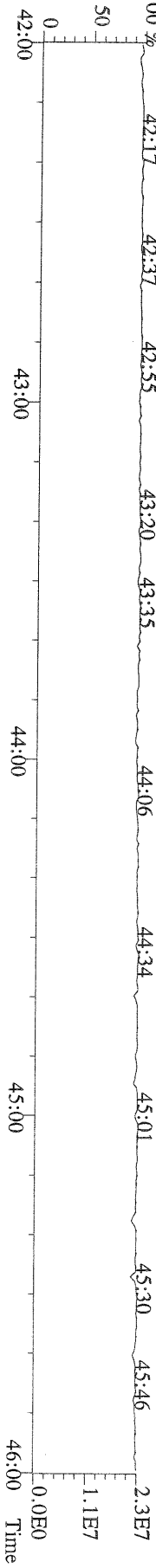
File:09JUL09M #1-541 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
435.8169 S:8 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



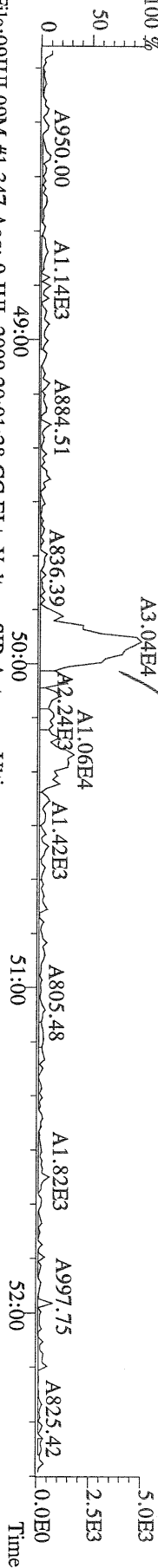
File:09JUL09M #1-541 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
437.8140 S:8 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



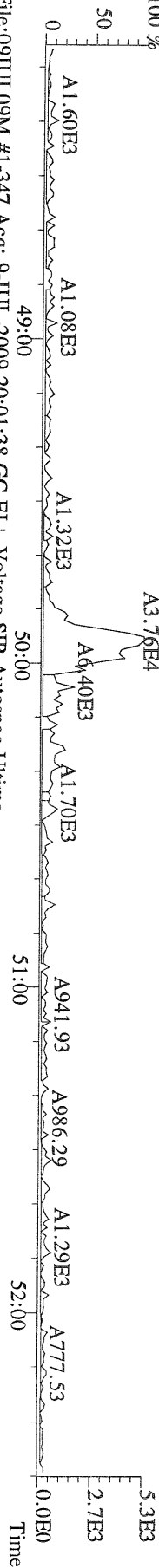
File:09JUL09M #1-541 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
430.9728 S:8 F:4 Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



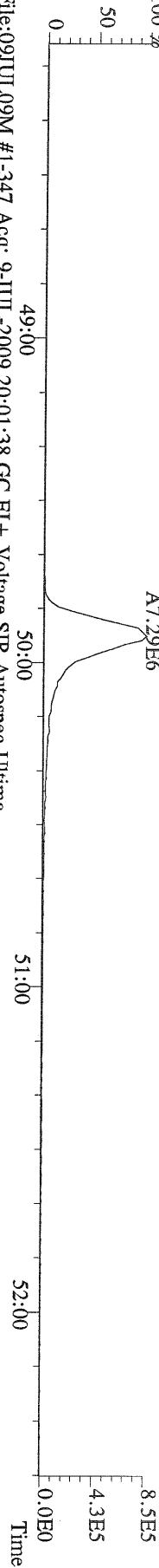
File:09JUL09M #1-347 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
457.7377 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



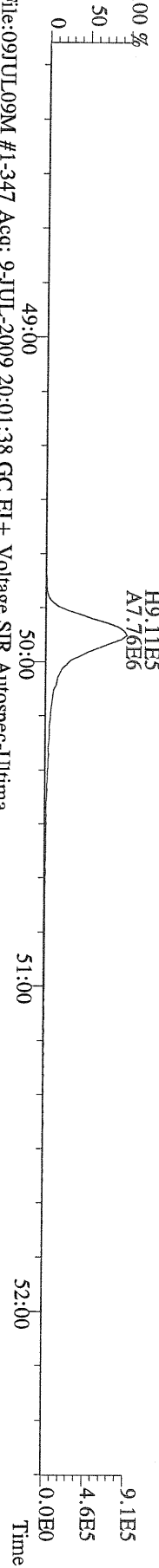
File:09JUL09M #1-347 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
459.7348 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



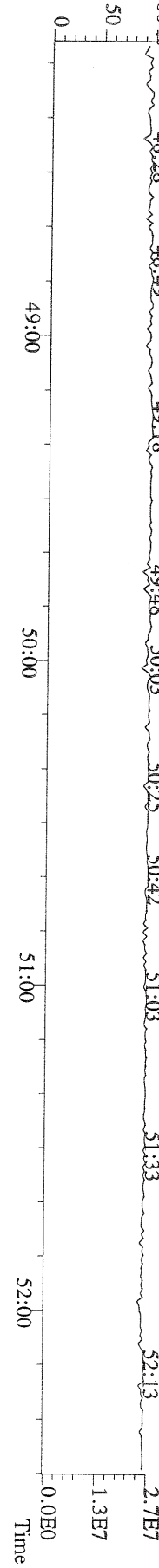
File:09JUL09M #1-347 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
469.7780 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



File:09JUL09M #1-347 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
471.7750 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



File:09JUL09M #1-347 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
454.9728 S:8 F:5 Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



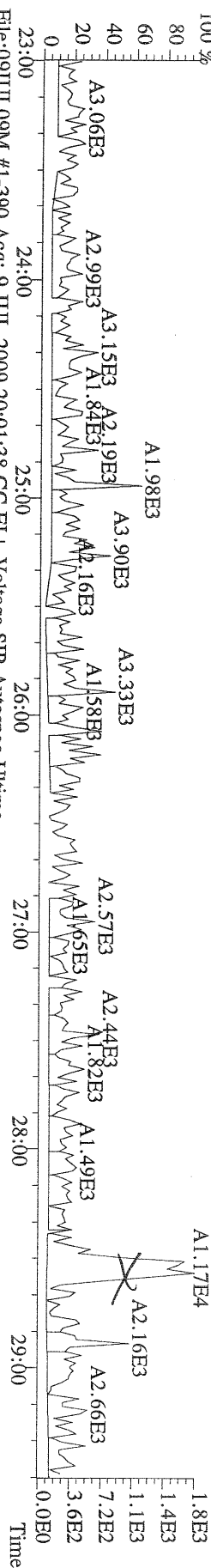
Chromatogram showing two peaks at retention times 26.407 and 26.807 minutes. The y-axis is labeled 'Abundance' and ranges from 0 to 100. The x-axis is labeled 'Time' and ranges from 23:00 to 29:00. The peaks are labeled 'A1.40E7' and 'A1.80E7' respectively.

Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory

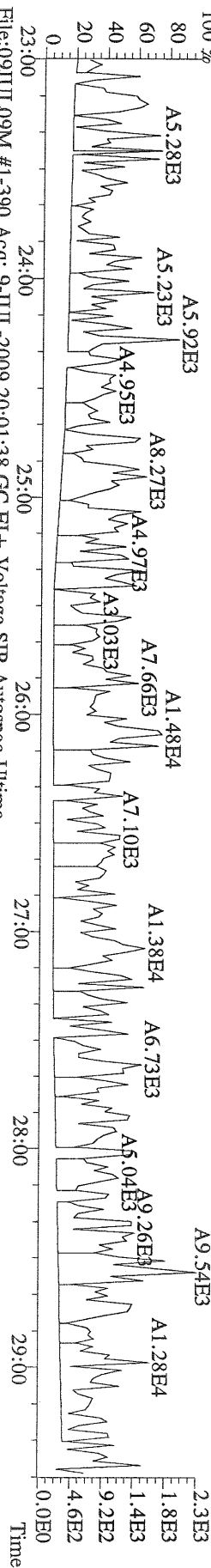
The chromatogram displays two distinct peaks. The first peak is labeled with retention time H3.72E6 and area A1.59E7. The second peak is labeled with retention time H4.85E6 and area A2.06E7. The x-axis represents time in minutes, ranging from 23.00 to 28.00. The y-axis represents intensity, with a scale from 0 to 100%.

Retention Time (min)	Area
26.72	1.59E7
27.06	2.06E7

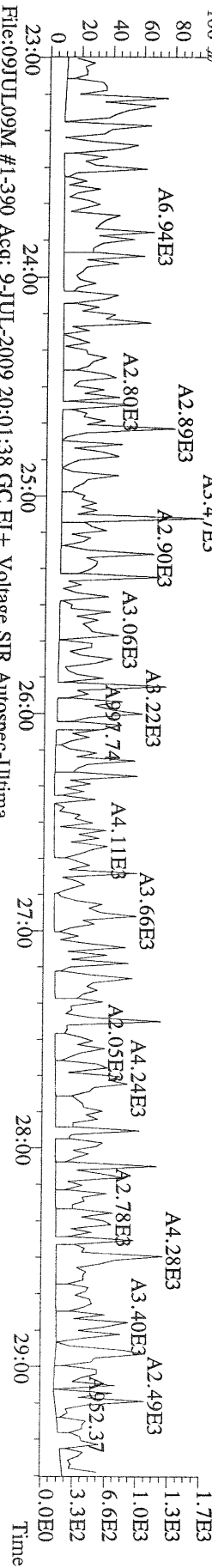
File:09JUL09M #1-390 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Utima  
339.8597 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



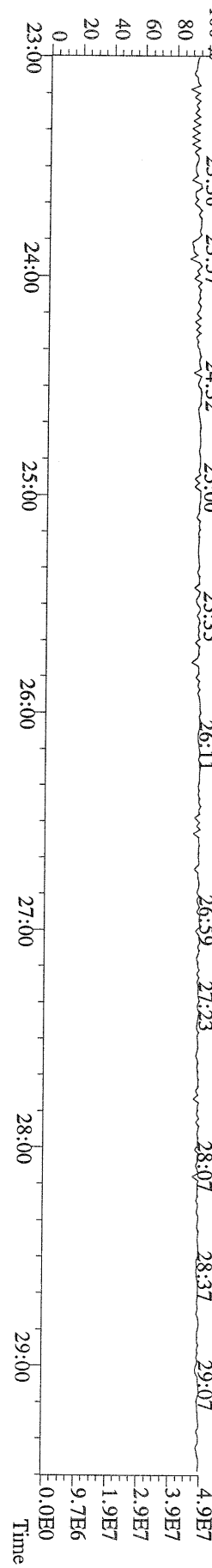
File:09JUL09M #1-390 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Utima  
341.8568 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



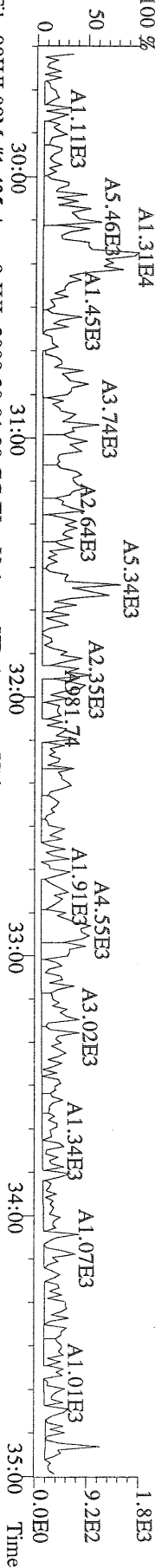
File:09JUL09M #1-390 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Utima  
409.7974 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



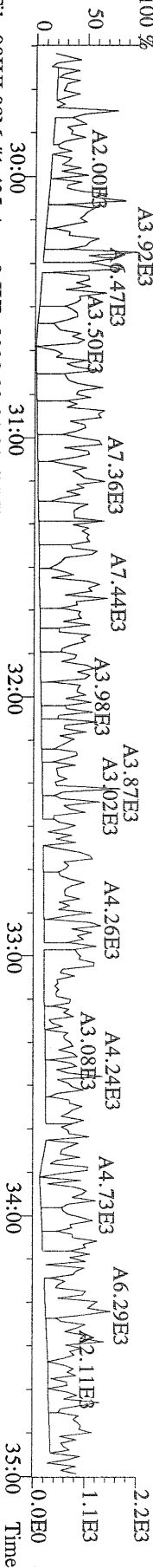
File:09JUL09M #1-390 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Utima  
330.9792 S:8 Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



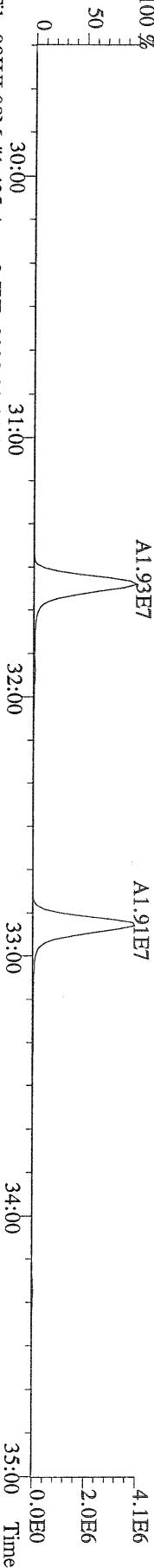
File:09JUL09M #1-425 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



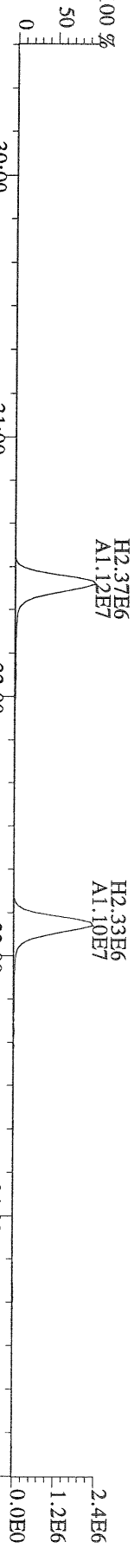
File:09JUL09M #1-425 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
341.8568 S:8 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



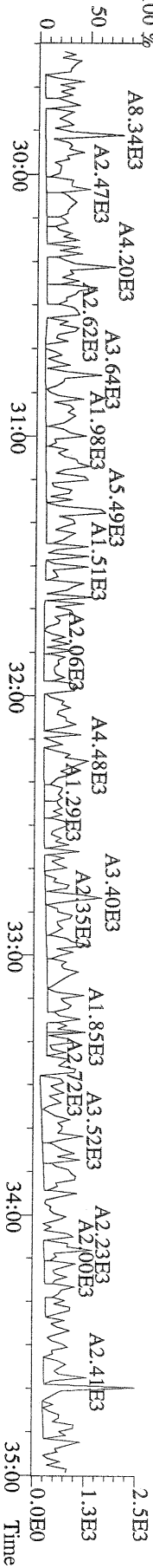
File:09JUL09M #1-425 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
351.9000 S:8 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



File:09JUL09M #1-425 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
353.8970 S:8 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory

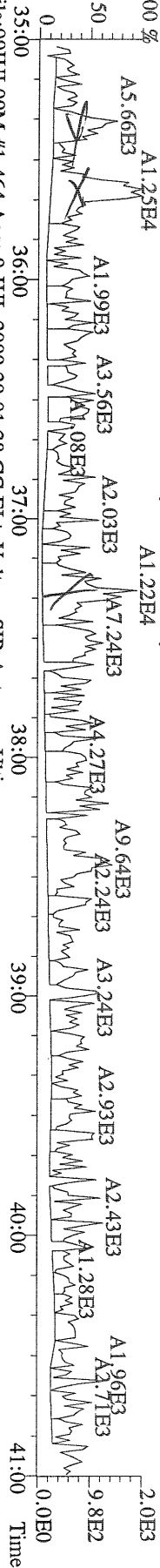


File:09JUL09M #1-425 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
409.7974 S:8 F:2 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory

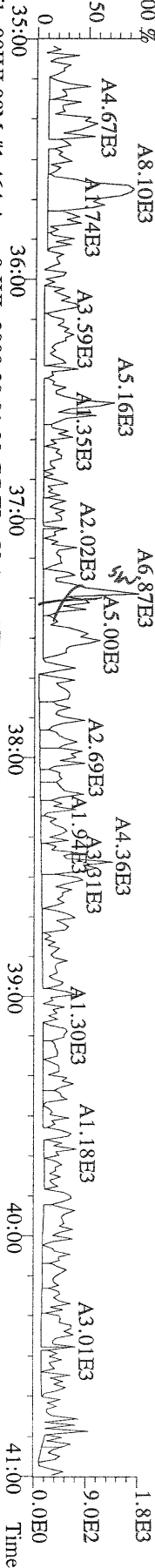




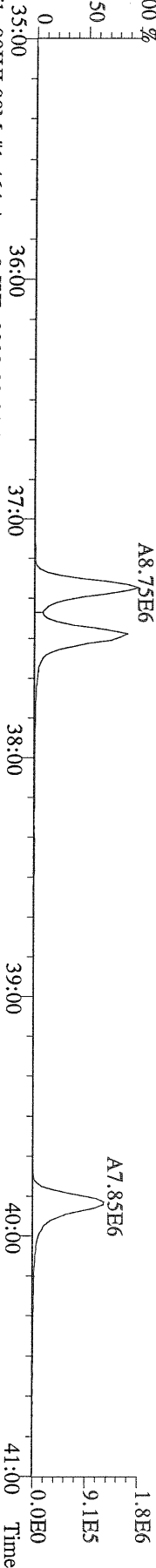
File:09JUL09M #1-464 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Fronter Analytical Laboratory



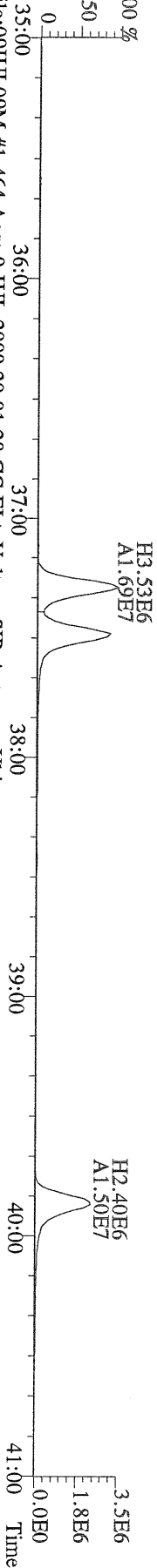
File:09JUL09M #1-464 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
375.8178 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Fronter Analytical Laboratory



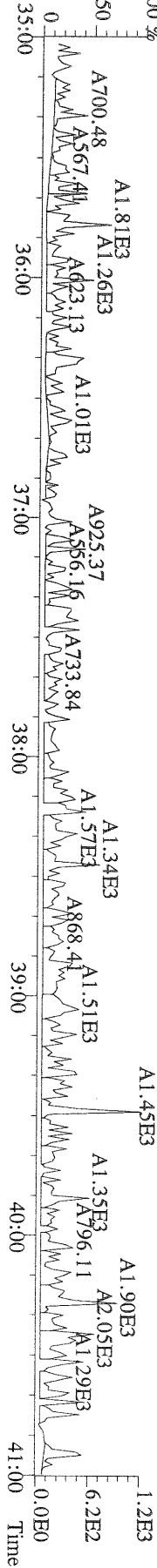
File:09JUL09M #1-464 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Fronter Analytical Laboratory



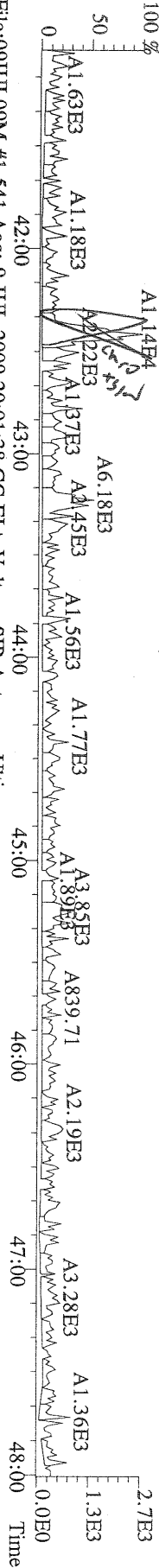
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385.8610 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Fronter Analytical Laboratory



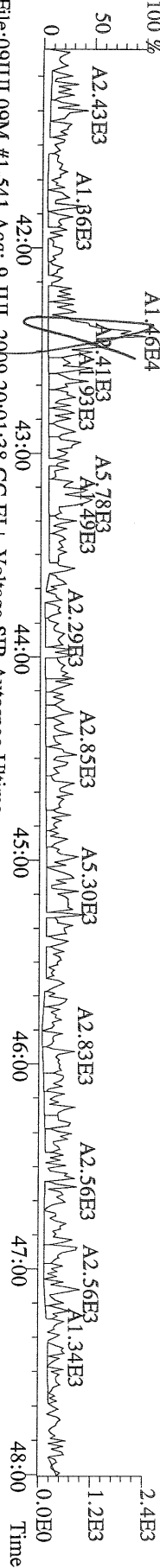
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445.7555 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Fronter Analytical Laboratory



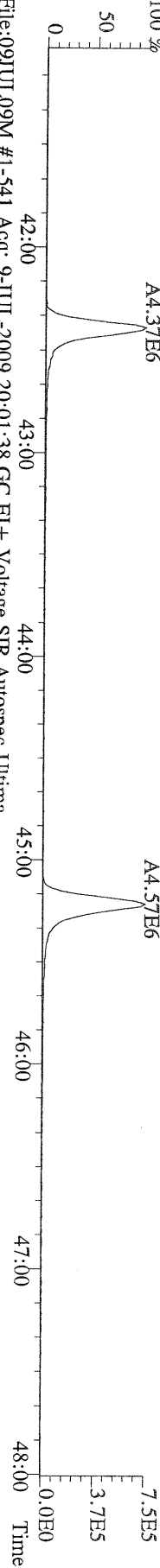
File:09JUL09M #1-541 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Utima  
407.7818 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



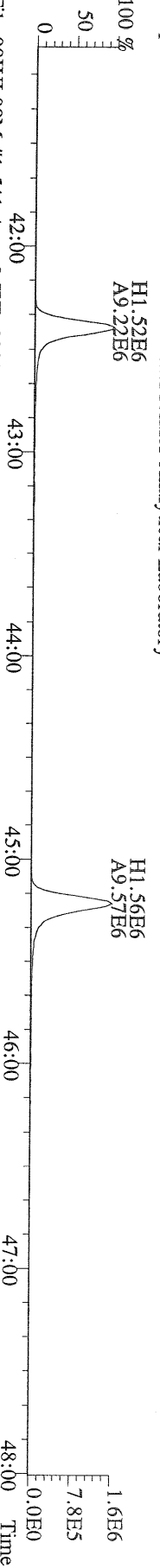
File:09JUL09M #1-541 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Utima  
409.7788 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



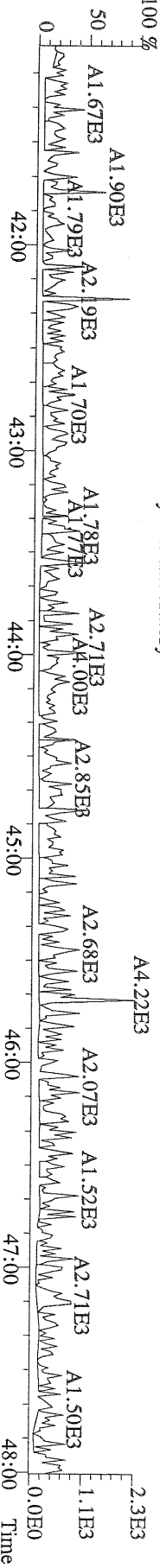
File:09JUL09M #1-541 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Utima  
417.8253 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



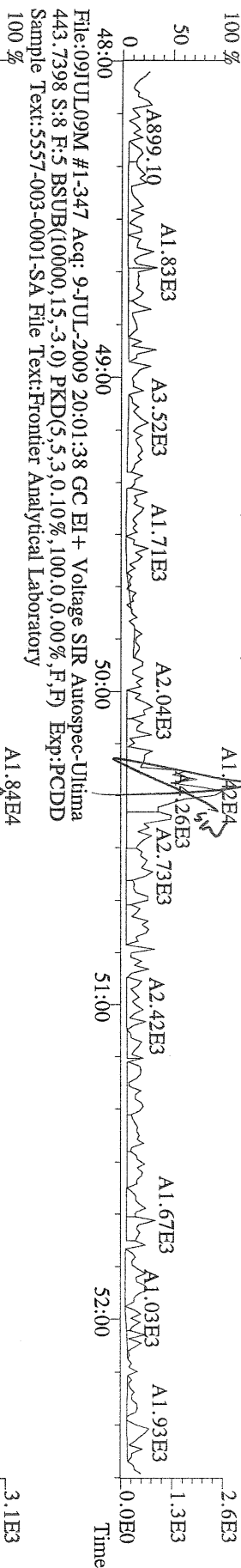
File:09JUL09M #1-541 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Utima  
419.8220 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



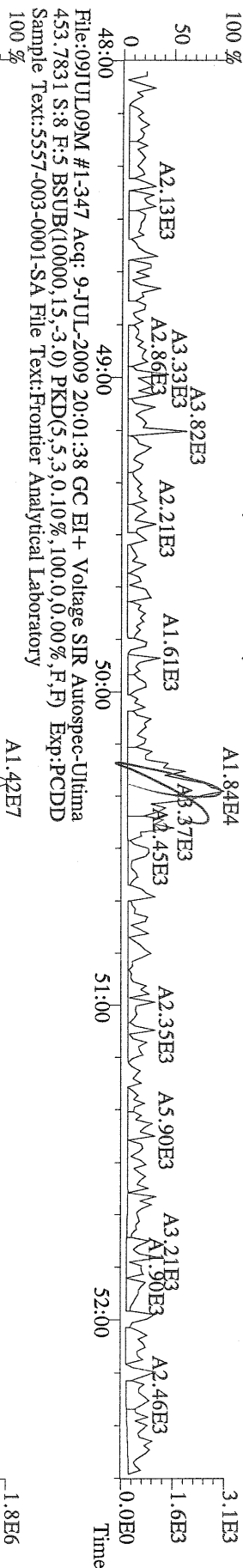
File:09JUL09M #1-541 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Utima  
479.7165 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



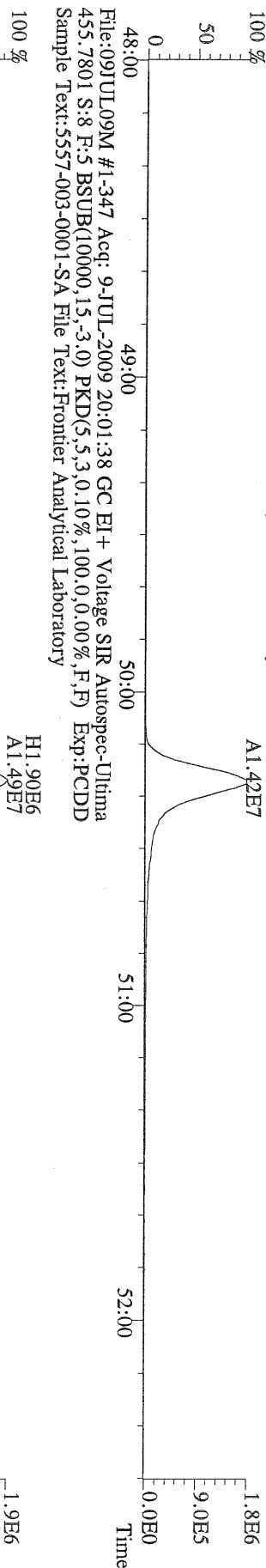
000071 of 000295



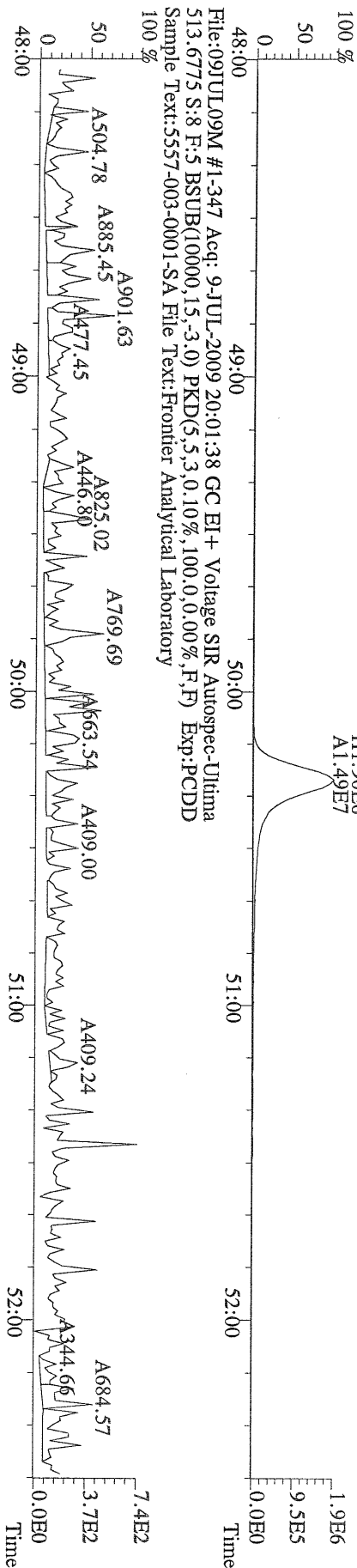
File:09JUL09M #1-347 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
443.7398 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.0,0%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory  
100 %



File:09JUL09M #1-347 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
453.7831 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory  
100 % A1.42E7



48:00 49:00 50:00  
File:09JUL09M #1-347 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
455.7801 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory



48:00 49:00 50:00  
File:09JUL09M #1-347 Acq: 9-JUL-2009 20:01:38 GC EI+ Voltage SIR Autospec-Ultima  
513.6775 S:8 F:5 BSUB(0000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-003-0001-SA File Text:Frontier Analytical Laboratory

NATO 1989 Tox: 2.38  
WHO 1998 Tox: 1.83

Analyst: 6 Date: 7/10/05

Totals class: Total Hexa-Dioxins

Entry #: 39

Run: 16

File: 09JUL09M

S: 9 I: 1 F: 3

Acquired: 9-JUL-09 20:56:57

Total Concentration: 34.7

Unnamed Concentration: 34.732

RT	ml Resp	m2 Resp RA	Resp	Concentration	Name
36:14	4.09e+04	3.28e+04 1.25 y	7.37e+04	15.1	
37:37	5.37e+04	4.21e+04 1.28 y	9.58e+04	19.6	

Totals class: Total Hepta-Dioxins                      Entry #: 40

Run: 16                      File: 09JUL09M                      S: 9 I: 1 F: 4

Acquired: 9-JUL-09 20:56:57

Total Concentration: 162                      Unnamed Concentration: 86.302

RT	ml Resp	m2 Resp RA	Resp	Concentration	Name
42:56	1.80e+05	1.92e+05 0.93 y	3.72e+05	86.3	
44:19	1.63e+05	1.65e+05 0.99 y	3.28e+05	76.0	1,2,3,4,6,7,8-HpCDD

Totals class: 1st Fn. Tot Penta-Furans      Entry #: 42

Run: 16      File: 09JUL09M      S: 9 I: 1 F: 1

Acquired: 9-JUL-09 20:56:57

Total Concentration: 11.9      Unnamed Concentration: 11.921

RT	ml Resp	m2 Resp RA	Resp	Concentration	Name
28:34	4.15e+04	2.85e+04 1.46 y	7.00e+04	11.9	

Totals class: Total Hexa-Furans

Entry #: 44

Run: 16

File: 09JUL09M

S: 9 I: 1 F: 3

Acquired: 9-JUL-09 20:56:57

Total Concentration: 60.6

Unnamed Concentration: 54.167

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
35:21	3.53e+04	2.71e+04	1.30 y	6.24e+04	10.7	
35:37	9.22e+04	7.81e+04	1.18 y	1.70e+05	29.1	
36:31	4.38e+04	4.05e+04	1.08 y	8.43e+04	14.4	
37:19	2.31e+04	1.66e+04	1.39 y	3.97e+04	6.44	1,2,3,4,7,8-HxCDF



Totals class: Total Hepta-Furans

Entry #: 45

Run: 16

File: 09JUL09M

S: 9 I: 1 F: 4

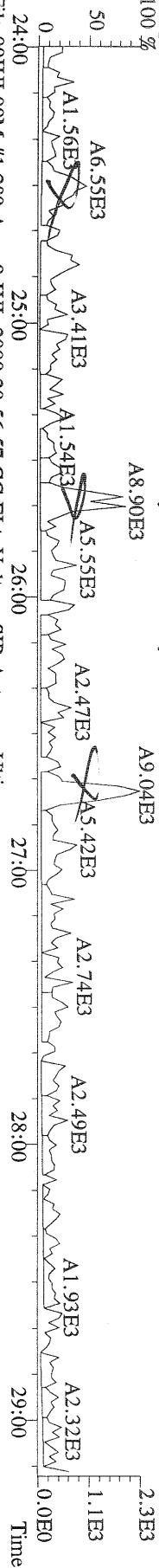
Acquired: 9-JUL-09 20:56:57

Total Concentration: 80.2

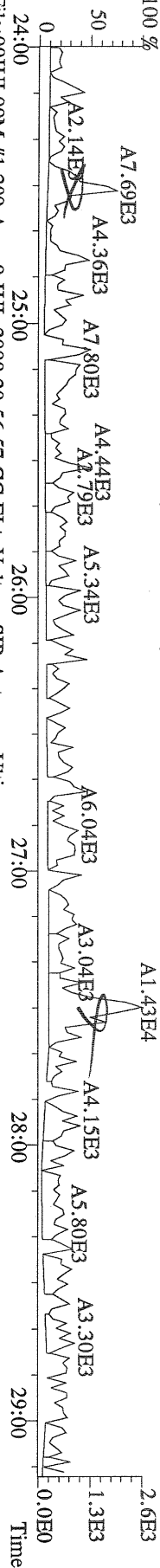
Unnamed Concentration: 43.502

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
42:24	8.61e+04	7.92e+04	1.09 y	1.65e+05	36.7	1,2,3,4,6,7,8-HpCDF
43:14	8.49e+04	8.55e+04	0.99 y	1.70e+05	43.5	

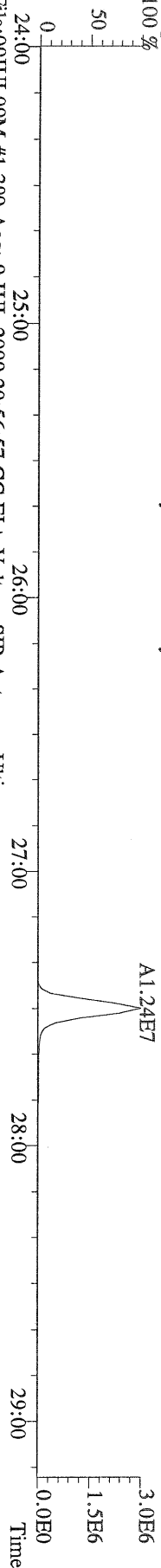
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319.8965 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-004-0001-SA File Text:Frontier Analytical Laboratory



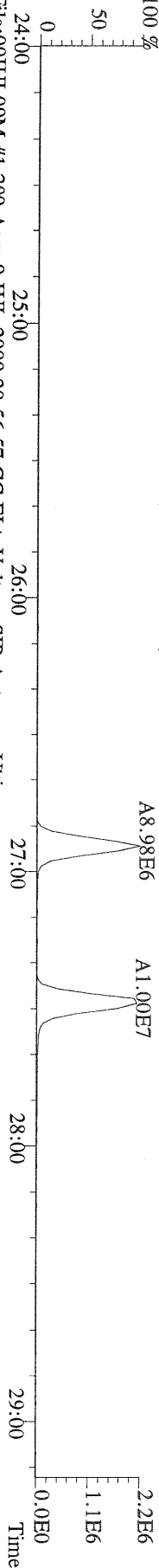
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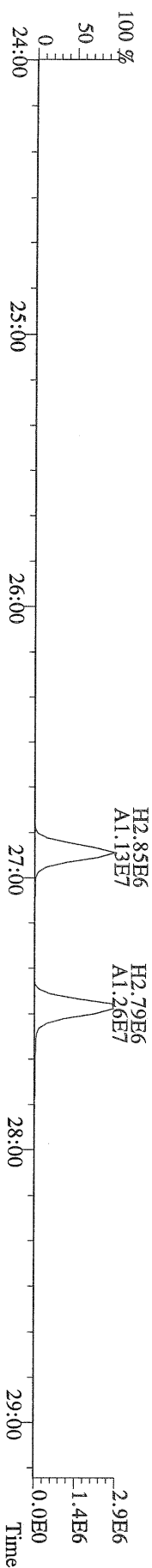
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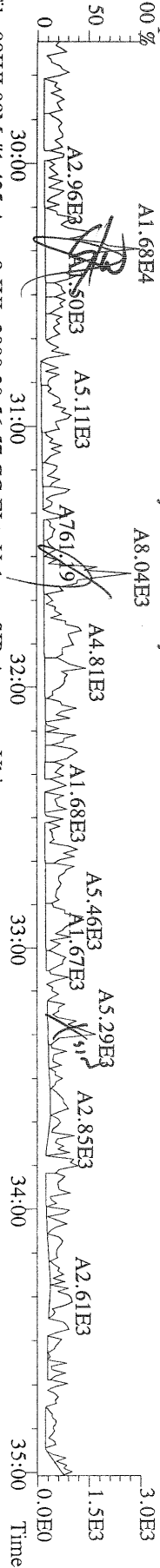
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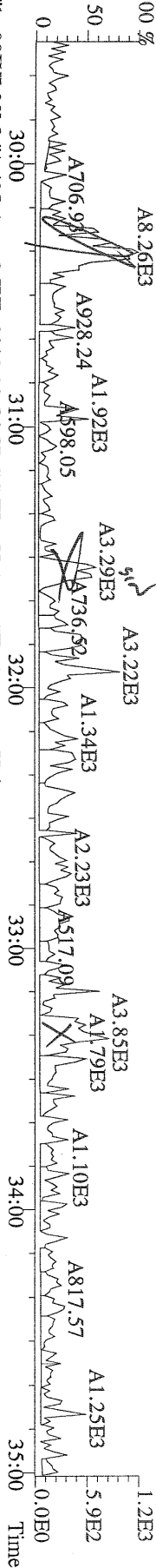
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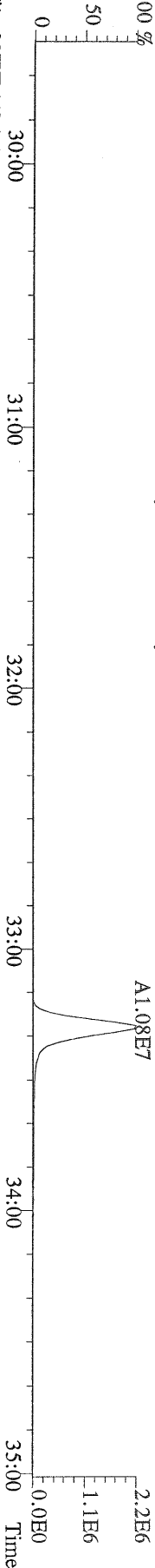
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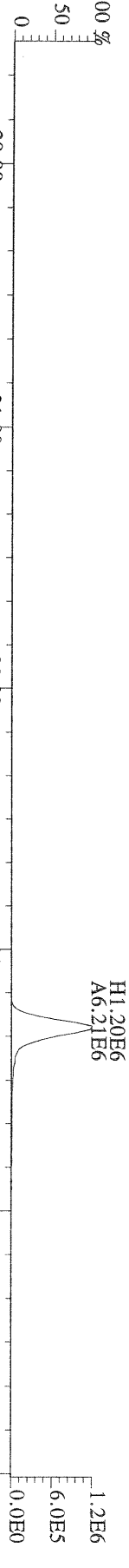
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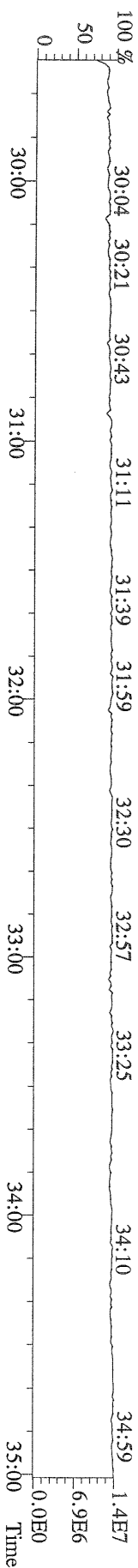
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369.8919 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD  
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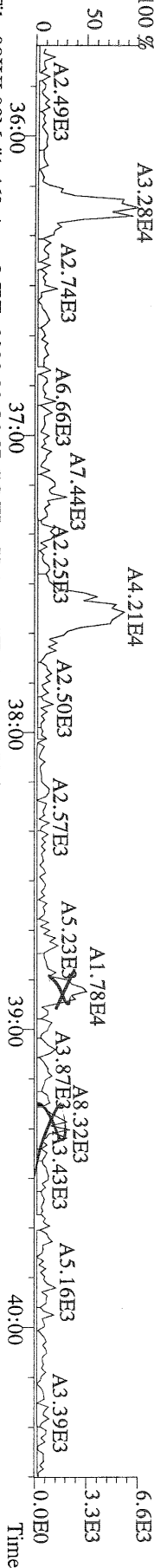
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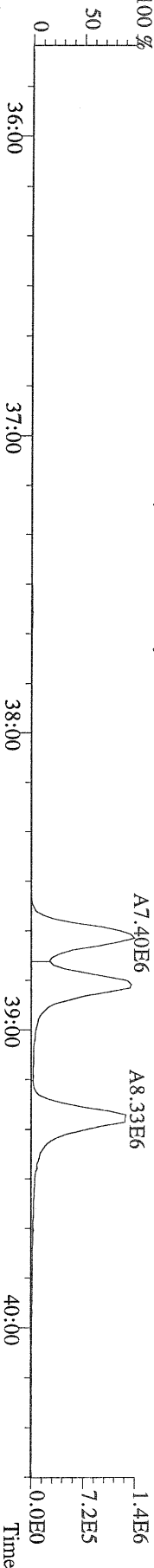
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389.8156 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
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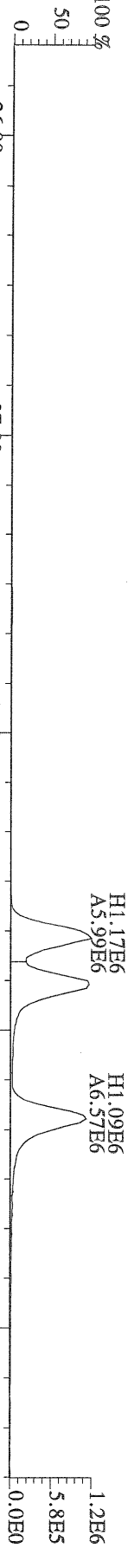
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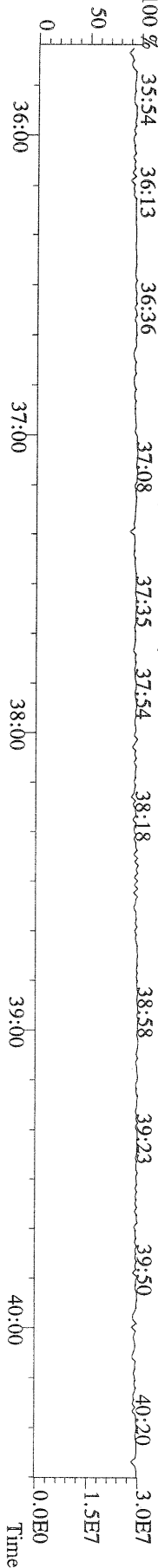
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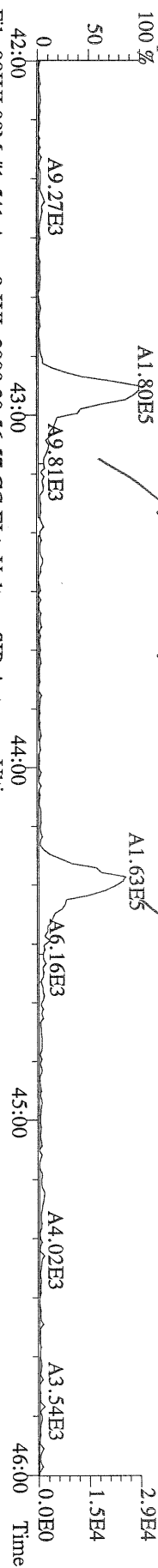
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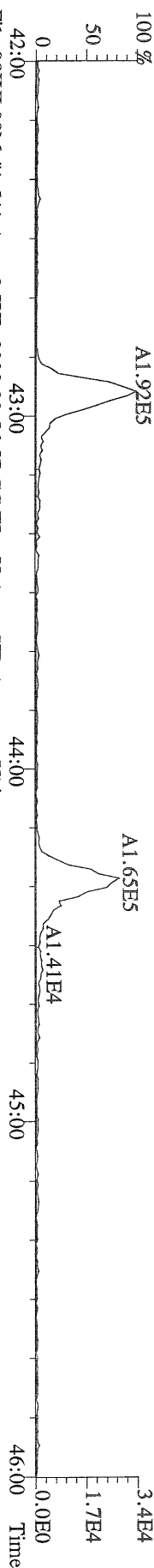
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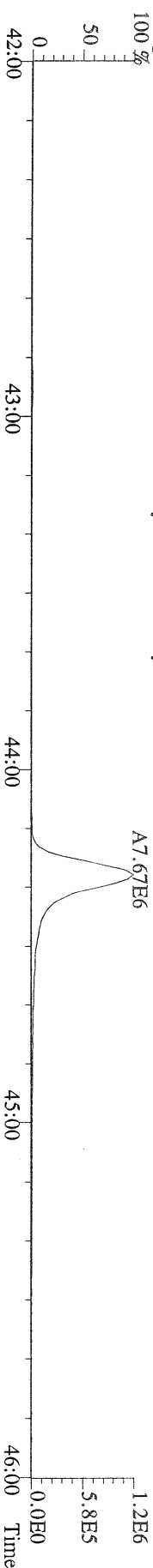
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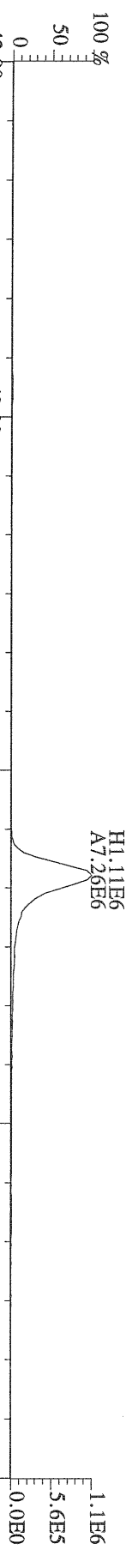
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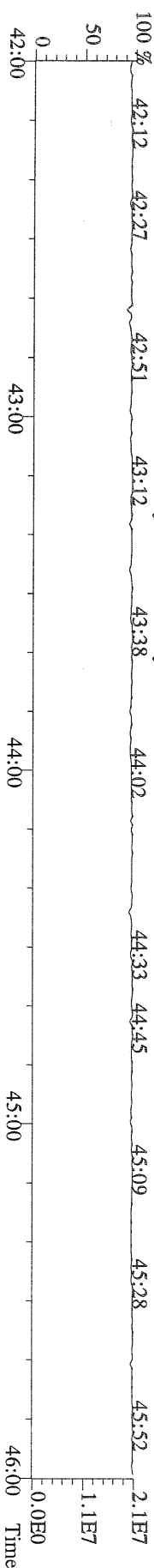
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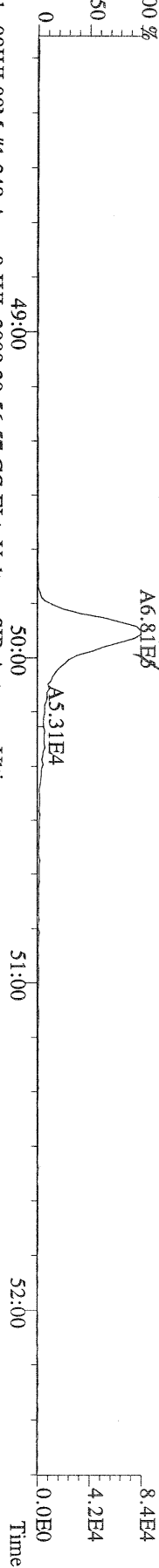
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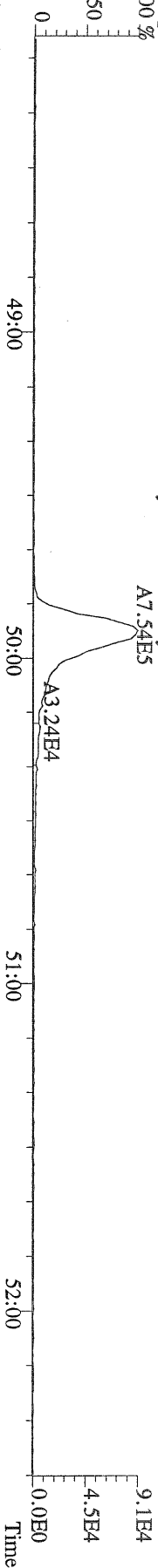
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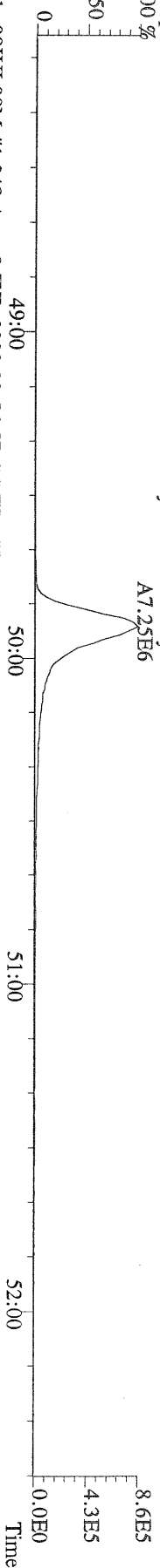
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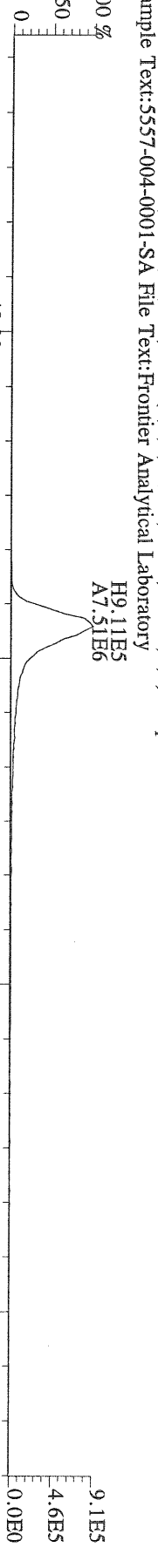
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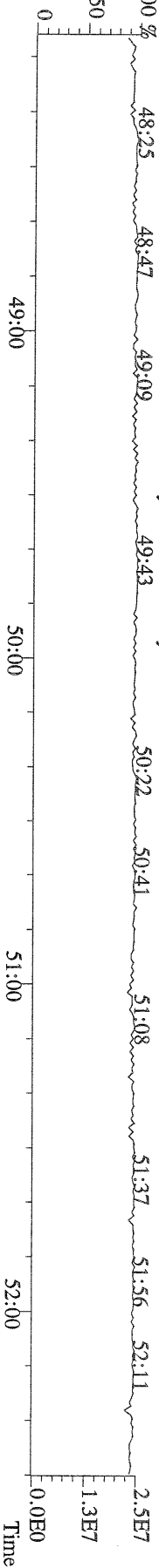
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469.7780 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
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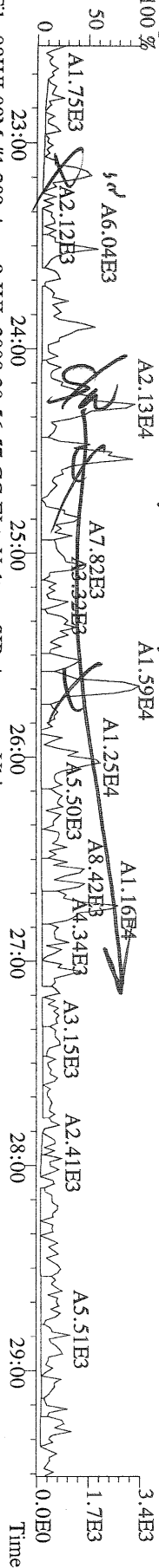
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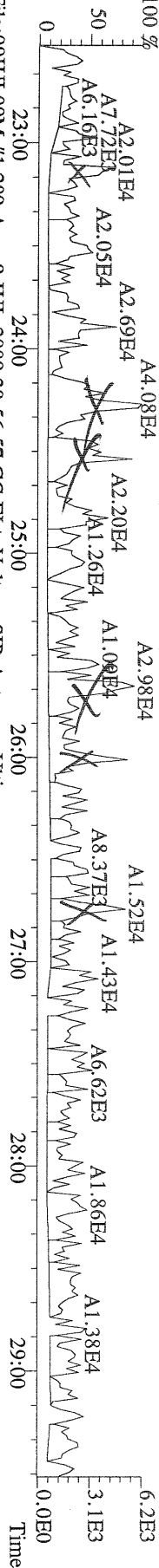
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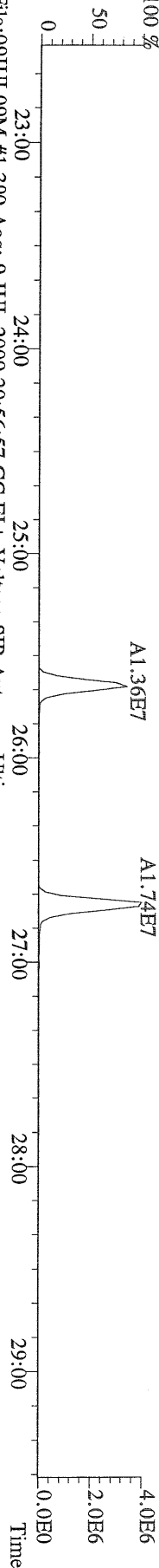
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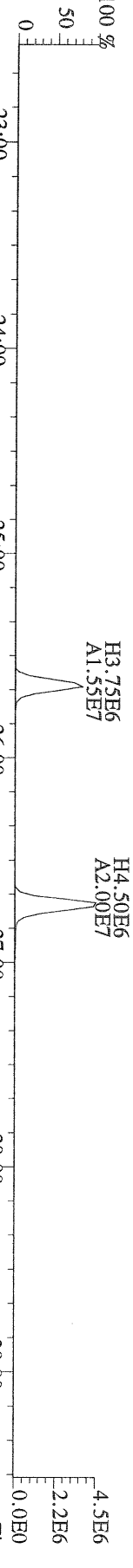
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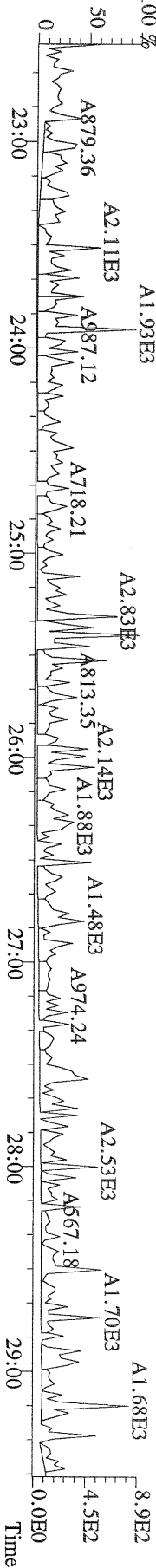
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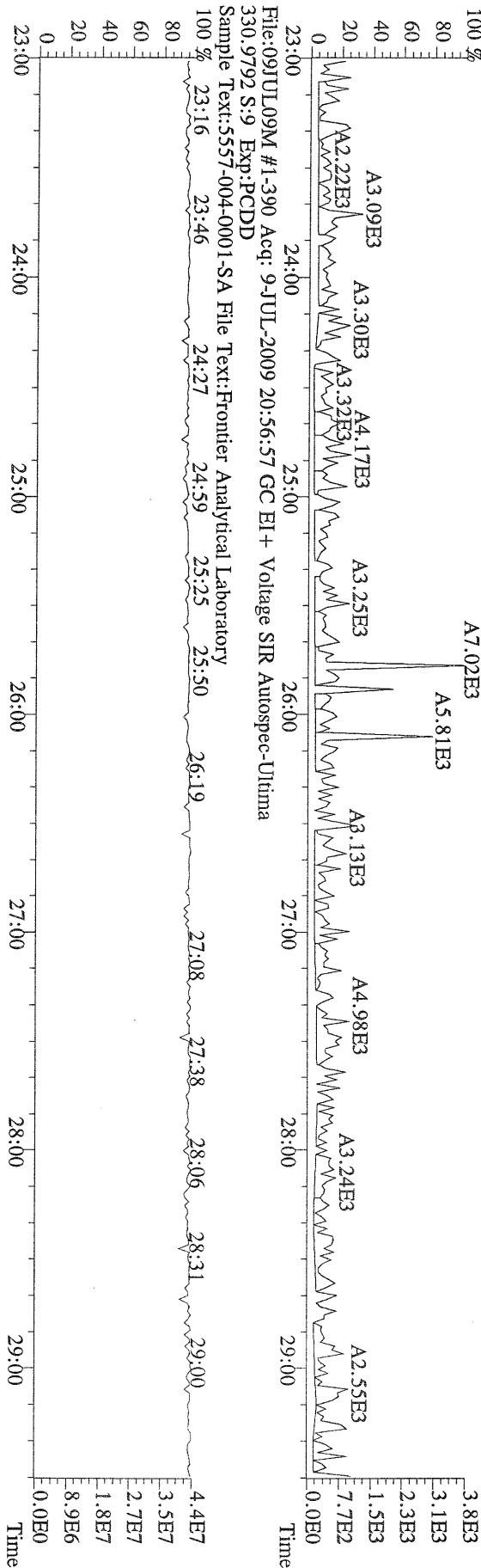
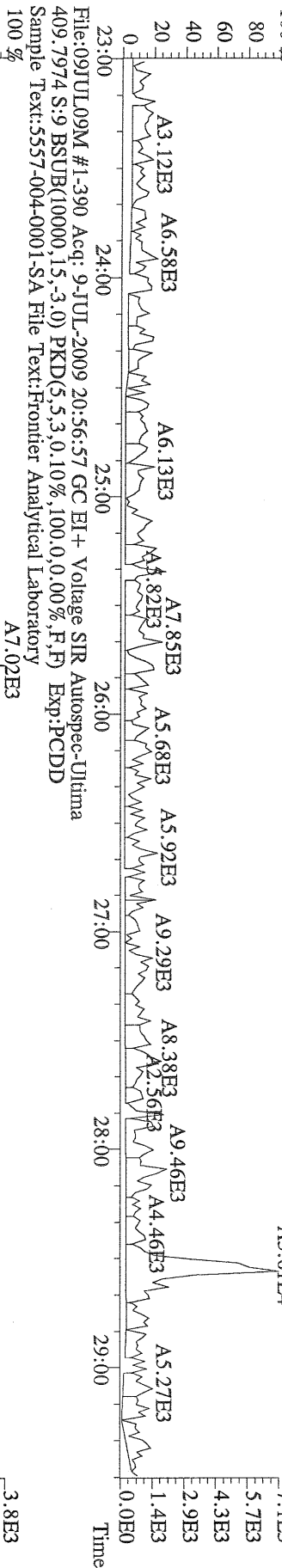
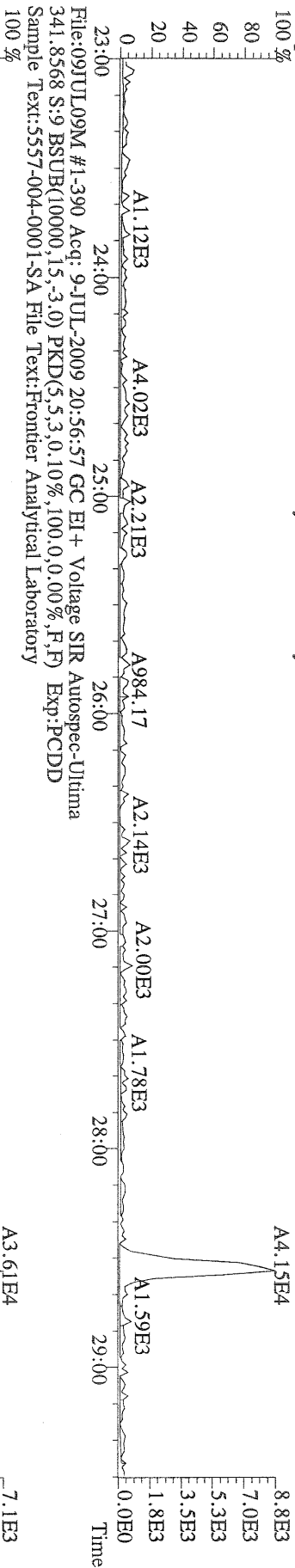
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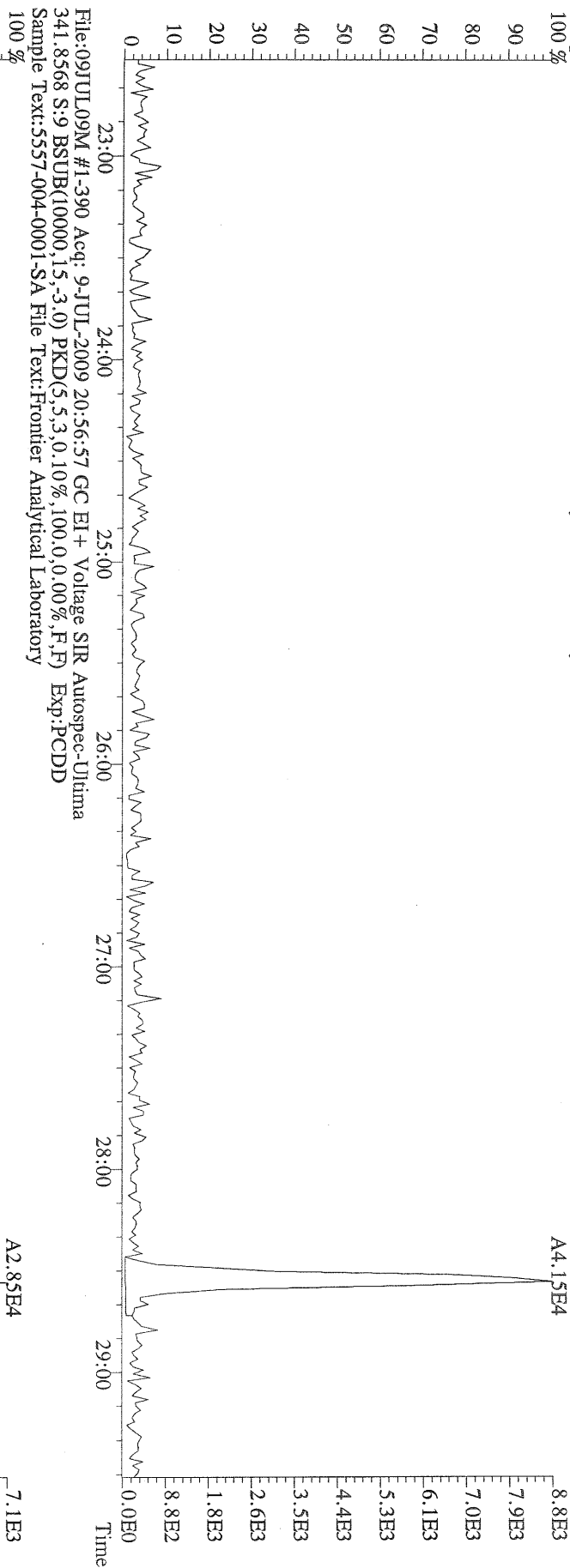


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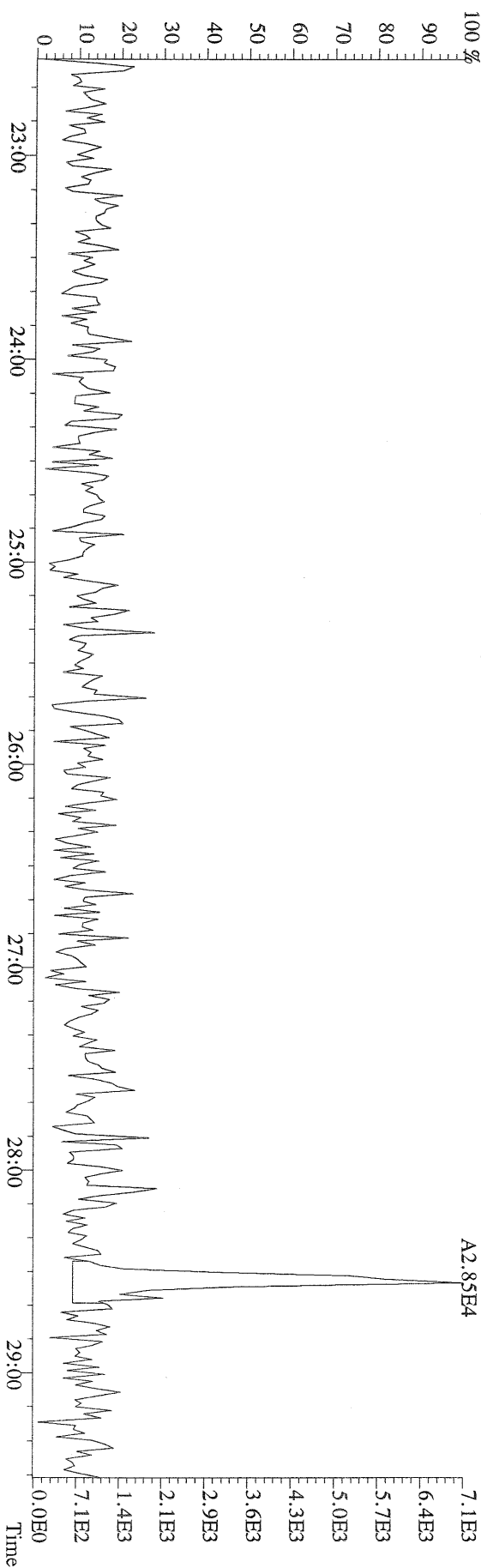




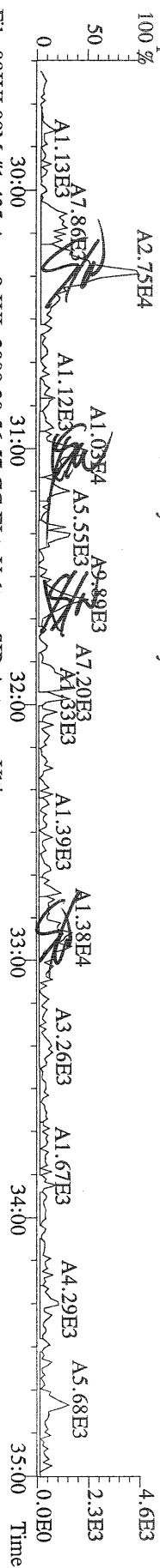
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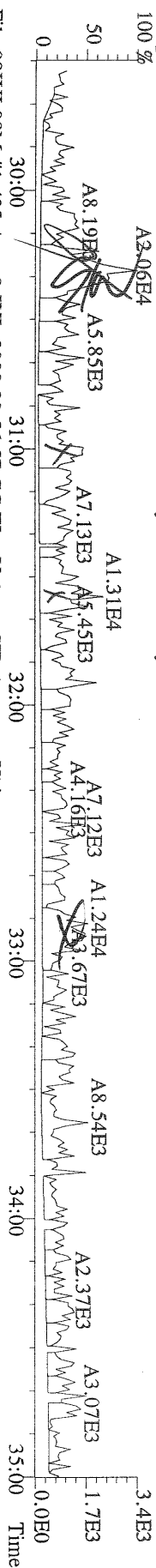
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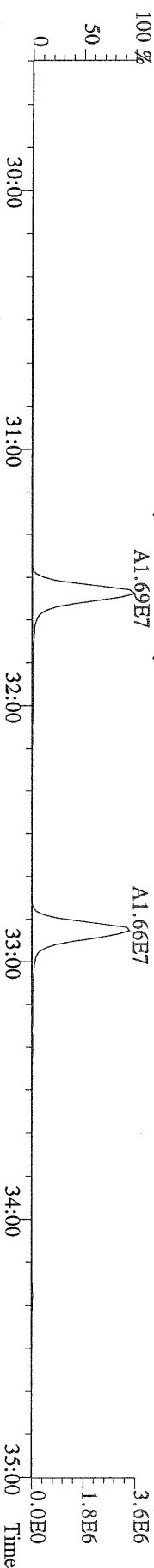
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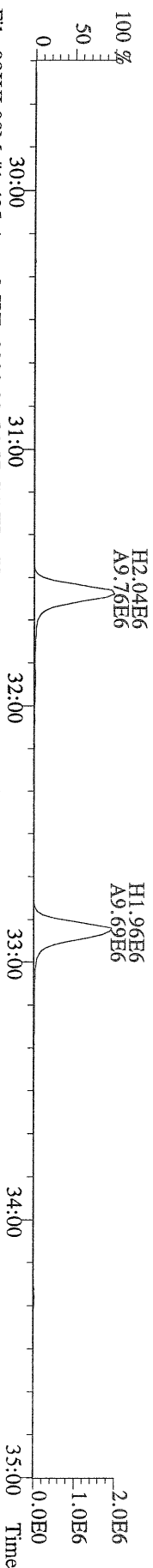
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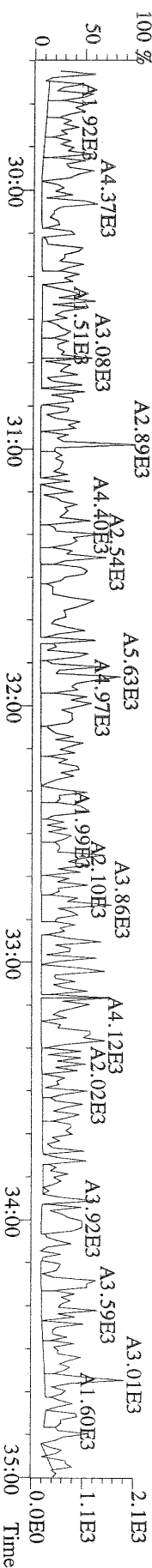
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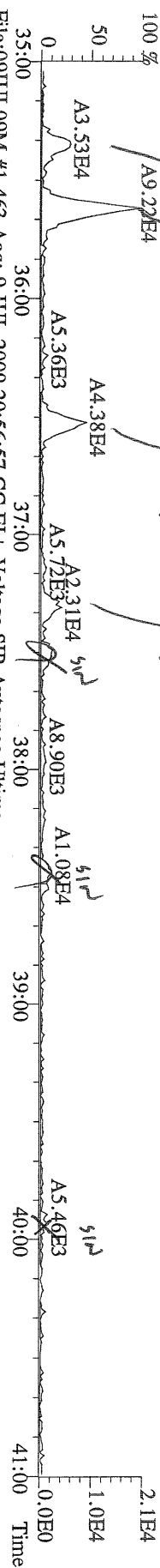
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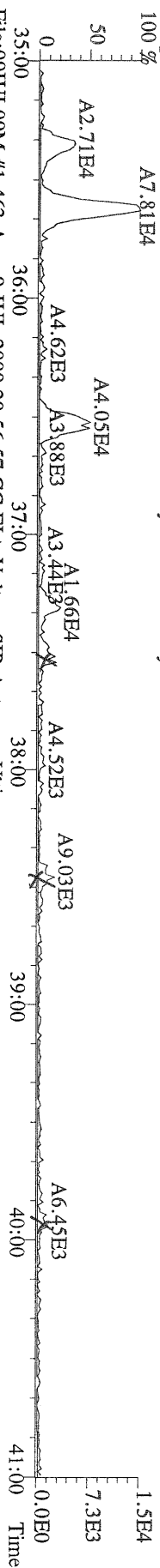
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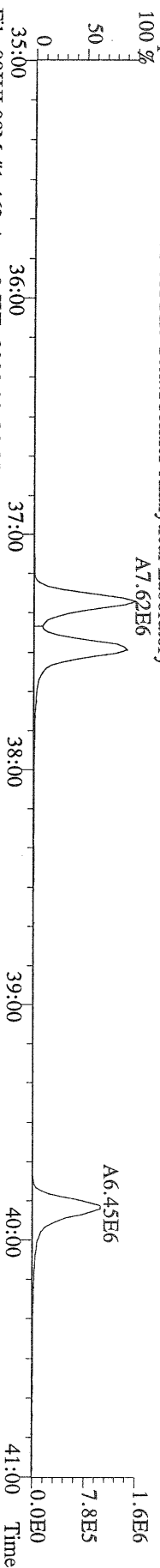
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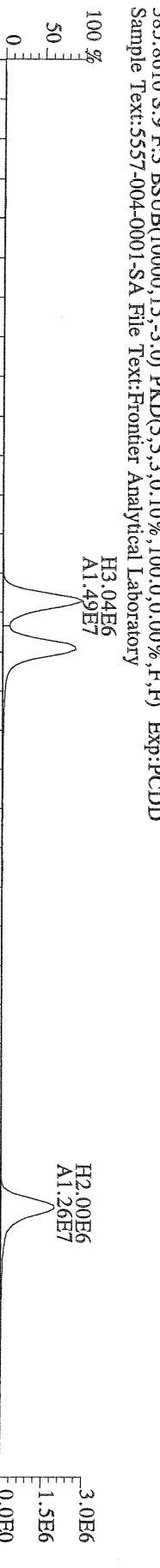
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375.8178 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
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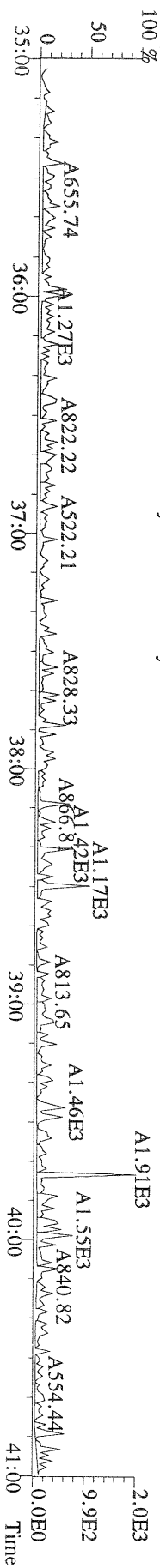
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Sample Text:5557-004-0001-SA File Text:Fronter Analytical Laboratory



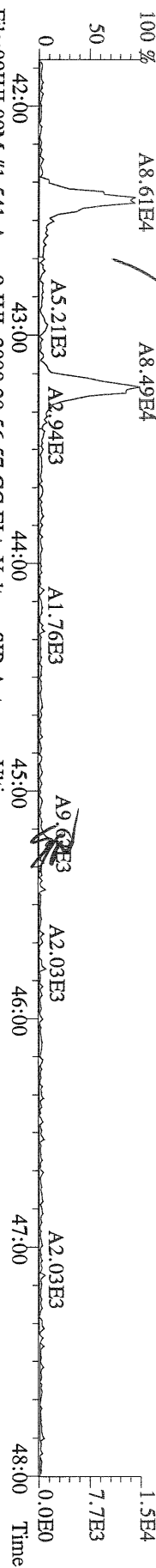
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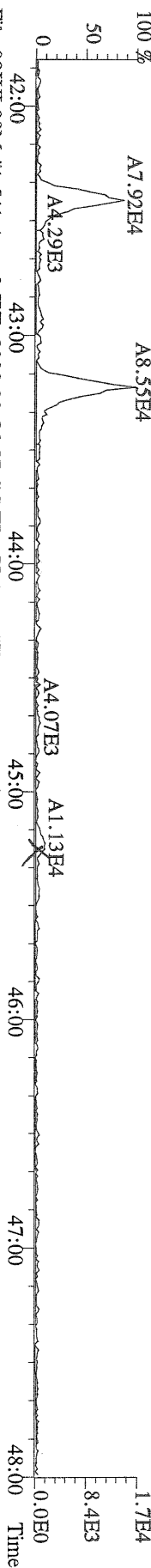
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Sample Text:5557-004-0001-SA File Text:Fronter Analytical Laboratory



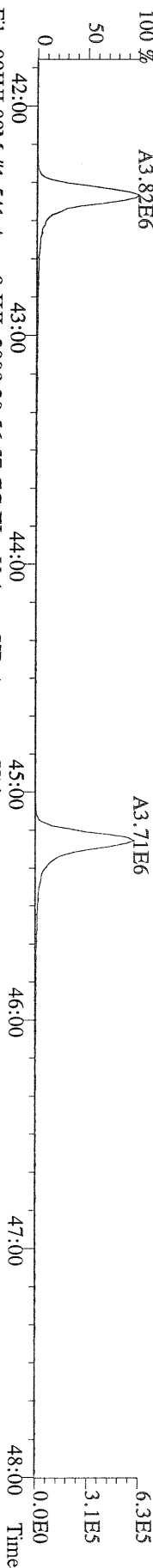
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407.7818 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-004-0001-SA File Text:Frontier Analytical Laboratory



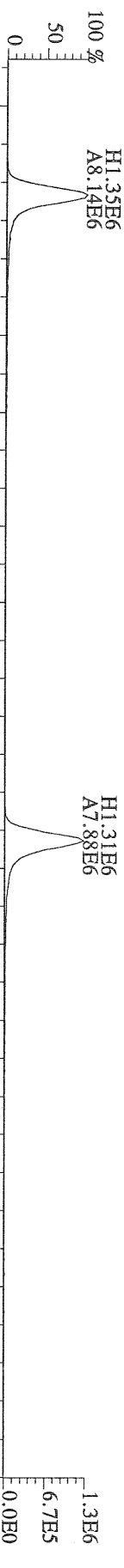
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409.7788 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-004-0001-SA File Text:Frontier Analytical Laboratory



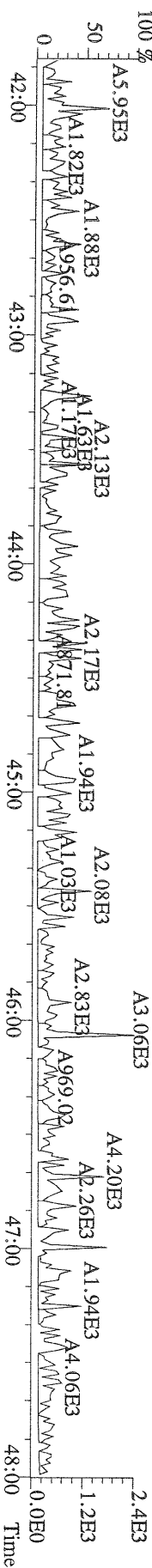
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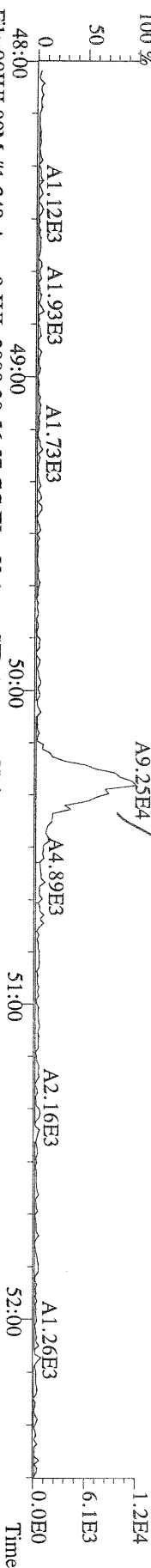
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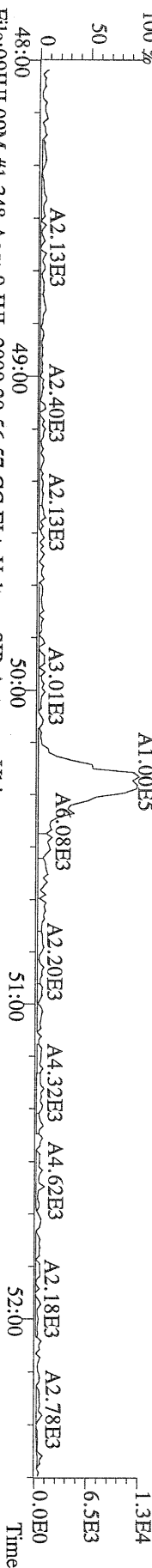
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479.7165 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-004-0001-SA File Text:Frontier Analytical Laboratory



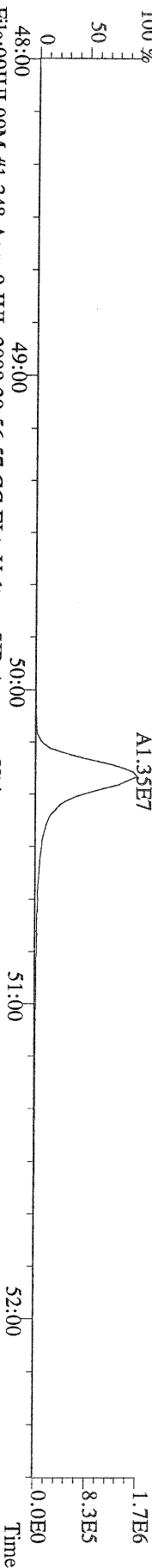
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441.7428 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-004-0001-SA File Text:Frontier Analytical Laboratory  
100 %



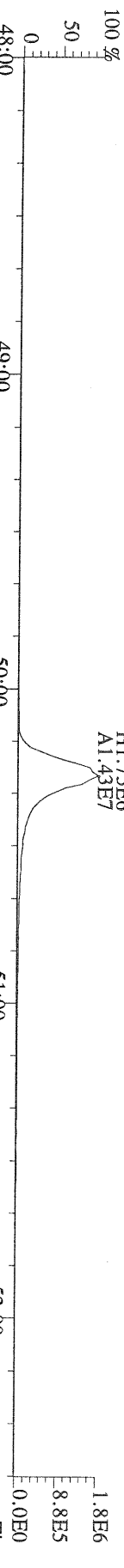
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443.7398 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-004-0001-SA File Text:Frontier Analytical Laboratory  
100 %



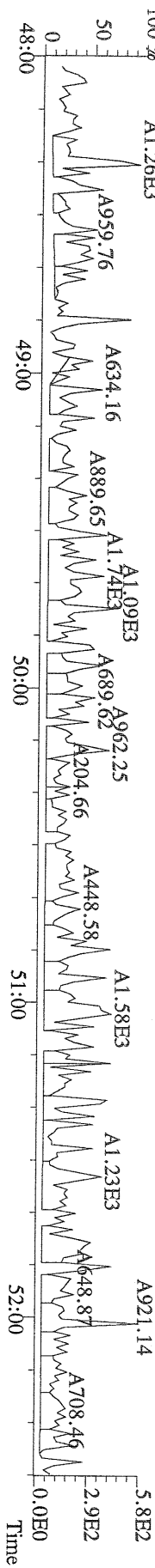
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453.7831 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-004-0001-SA File Text:Frontier Analytical Laboratory  
100 %



File:09JUL09M #1-348 Acq: 9-JUL-2009 20:56:57 GC EI+ Voltage SIR Autospec-Ultima  
455.7801 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-004-0001-SA File Text:Frontier Analytical Laboratory



File:09JUL09M #1-348 Acq: 9-JUL-2009 20:56:57 GC EI+ Voltage SIR Autospec-Ultima  
513.6775 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-004-0001-SA File Text:Frontier Analytical Laboratory  
100 %



FAL ID: 5557-008-0001-SA

Filename: 09JUL09M

Sam:12

Acquired: 9-JUL-09 23:42:37

ICal: AIRFAL3-6-29-09

Client ID: OFF-04-061709

ConCal: ST070909M1

EndCal: ST070909M2

Results: 5557

GC Column: DB5

Amount: 1.000

NATO 1989 Tox: 3.98

WHO 1998 Tox: 3.46

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise	DL	
2,3,7,8-TCDD	*	* n	NotFnd	1.14	*		2.50	681	2.59	
1,2,3,7,8-PeCDD	*	* n	NotFnd	1.14	*		2.50	392	4.02	
1,2,3,4,7,8-HxCDD	*	* n	NotFnd	1.37	*		2.50	451	4.21	
1,2,3,6,7,8-HxCDD	1.99e+04	1.09 y	38:53	1.24	6.46	J	2.50	-	*	
1,2,3,7,8,9-HxCDD	*	* n	NotFnd	1.35	*		2.50	451	4.28	
1,2,3,4,6,7,8-HpCDD	1.67e+05	0.99 y	44:19	1.15	59.4		2.50	-	*	
OCDD	7.18e+05	0.98 y	49:56	1.43	494		2.50	-	*	
2,3,7,8-TCDF	*	* n	NotFnd	1.14	*		2.50	1550	4.52	
1,2,3,7,8-PeCDF	*	* n	NotFnd	0.90	*		2.50	764	5.56	
2,3,4,7,8-PeCDF	*	* n	NotFnd	0.86	*		2.50	764	5.88	
1,2,3,4,7,8-HxCDF	4.17e+04	1.37 y	37:19	1.02	9.91	J	2.50	-	*	
1,2,3,6,7,8-HxCDF	2.87e+04	1.11 y	37:31	1.04	6.69	J	2.50	-	*	
2,3,4,6,7,8-HxCDF	*	* n	NotFnd	0.94	*		2.50	740	3.91	
1,2,3,7,8,9-HxCDF	*	* n	NotFnd	0.88	*		2.50	740	4.19	
1,2,3,4,6,7,8-HpCDF	1.24e+05	0.95 y	42:24	1.51	41.0	J	2.50	-	*	
1,2,3,4,7,8,9-HpCDF	2.09e+04	0.90 y	45:14	1.11	9.33	J	2.50	-	*	
OCDF	1.47e+05	1.01 y	50:18	0.87	85.3	J	2.50	-	*	
13C-2,3,7,8-TCDD	1.70e+07	0.77 y	27:29	1.21	3330					Rec
13C-1,2,3,7,8-PeCDD	1.22e+07	1.74 y	33:18	0.83	3470					83.1
13C-1,2,3,6,7,8-HxCDD	9.95e+06	1.24 y	38:50	0.99	4380					86.7
13C-1,2,3,4,6,7,8-HpCDD	9.72e+06	1.07 y	44:17	1.03	4130					109
13C-OCDD	8.15e+06	0.92 y	49:54	0.64	5600					103
13C-2,3,7,8-TCDF	2.40e+07	0.88 y	26:43	1.33	3370					70.0
13C-1,2,3,7,8-PeCDF	1.93e+07	1.71 y	31:34	0.96	3740					
13C-1,2,3,6,7,8-HxCDF	1.65e+07	0.51 y	37:29	1.75	4120					84.3
13C-1,2,3,4,6,7,8-HpCDF	8.05e+06	0.48 y	42:24	1.00	3520					93.4
13C-OCDF	1.59e+07	0.97 y	50:16	1.11	6270					103
13C-1,2,3,7,8,9-HxCDF	1.07e+07	0.52 y	39:52	1.40	3340					88.0
37Cl-2,3,7,8-TCDD	9.79e+06		27:30	0.56	4140					78.4
13C-1,2,3,4,7,8-HxCDD	9.72e+06	1.21 y	38:40	1.05	3720					
13C-2,3,4,7,8-PeCDF	1.75e+07	1.70 y	32:52	0.93	3900					83.5
13C-1,2,3,4,7,8-HxCDF	1.64e+07	0.52 y	37:18	1.00	3990					103
13C-1,2,3,4,7,8,9-HpCDF	7.60e+06	0.46 y	45:12	0.82	4580					92.9
13C-1,2,3,4-TCDD	1.69e+07	0.78 y	26:54	-	40.5					97.6
13C-2,3,7,8-TCDF	2.14e+07	0.88 y	25:39	-	31.8					99.7
13C-1,2,3,7,8,9-HxCDD	9.14e+06	1.23 y	39:18	-	31.0					114
Total Tetra-Dioxins	*		NotFnd	1.14	*		Fac	Noise	DL	#Hom
Total Penta-Dioxins	*		NotFnd	1.14	*		2.50	681	2.59	0
Total Hexa-Dioxins	1.23e+05		36:14	1.32	37.8	J	2.50	392	4.02	0
Total Hepta-Dioxins	3.62e+05		42:56	1.15	129		2.50	-	*	3
Total Tetra-Furans	*		NotFnd	1.14	*		2.50	2180	6.33	0
1st Fn. Tot Penta-Furans	7.28e+04		28:33	0.88	17.1	J	2.50	-	*	1
Total Penta-Furans	*		NotFnd	0.88	*	J	2.50	-	*	0
Total Hexa-Furans	3.15e+05		35:21	0.97	77.7		2.50	-	*	5
Total Hepta-Furans	2.42e+05		42:24	1.31	86.9		2.50	-	*	3

Analyst: 

Date: 7/10/09

Totals class: Total Hexa-Dioxins

Entry #: 39

Run: 19

File: 09JUL09M

S: 12 I: 1 F: 3

Acquired: 9-JUL-09 23:42:37

Total Concentration: 37.8

Unnamed Concentration: 31.317

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
36:14	2.12e+04	1.99e+04	1.07 y	4.11e+04	12.5	
37:35	3.54e+04	2.64e+04	1.34 y	6.18e+04	18.8	
38:53	1.04e+04	9.54e+03	1.09 y	1.99e+04	6.46	1,2,3,6,7,8-HxCDD

Totals class: Total Hepta-Dioxins

Entry #: 40

Run: 19

File: 09JUL09M

S: 12 I: 1 F: 4

Acquired: 9-JUL-09 23:42:37

Total Concentration: 129

Unnamed Concentration: 69.679

RT	ml Resp	m2 Resp RA	Resp	Concentration	Name
42:56	9.45e+04	1.01e+05 0.93 y	1.96e+05	69.7	
44:19	8.30e+04	8.37e+04 0.99 y	1.67e+05	59.4	1,2,3,4,6,7,8-HpCDD



Totals class: 1st Fn. Tot Penta-Furans      Entry #: 42

Run: 19      File: 09JUL09M      S: 12 I: 1 F: 1  
Acquired: 9-JUL-09 23:42:37

Total Concentration: 17.1      Unnamed Concentration: 17.149

RT	ml Resp	m2 Resp RA	Resp	Concentration	Name
28:33	4.43e+04	2.85e+04 1.56 y	7.28e+04	17.1	

Totals class: Total Hexa-Furans

Entry #: 44

Run: 19

File: 09JUL09M

S: 12 I: 1 F: 3

Acquired: 9-JUL-09 23:42:37

Total Concentration: 77.7

Unnamed Concentration: 61.073

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
35:21	3.08e+04	2.22e+04	1.39 y	5.30e+04	13.3	
35:37	7.06e+04	6.07e+04	1.16 y	1.31e+05	32.9	
36:31	3.33e+04	2.65e+04	1.26 y	5.98e+04	15.0	
37:19	2.41e+04	1.76e+04	1.37 y	4.17e+04	9.91	1,2,3,4,7,8-HxCDF
37:31	1.51e+04	1.36e+04	1.11 y	2.87e+04	6.69	1,2,3,6,7,8-HxCDF

Totals class: Total Hepta-Furans

Entry #: 45

Run: 19

File: 09JUL09M

S: 12 I: 1 F: 4

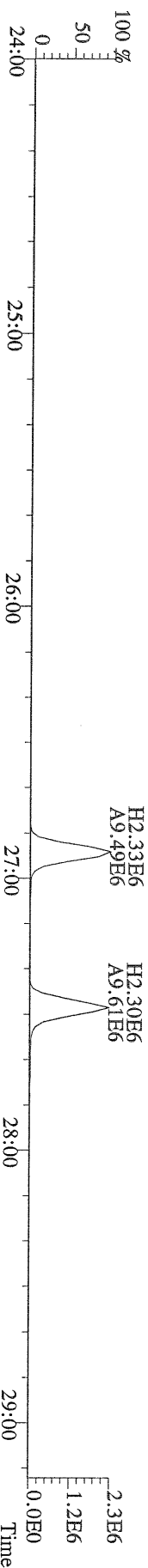
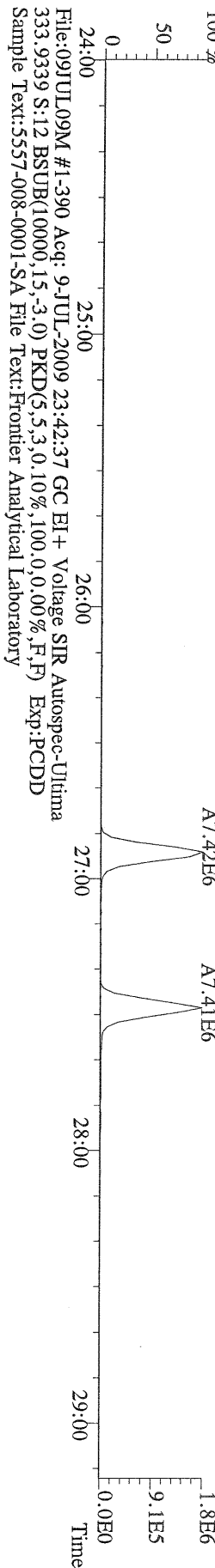
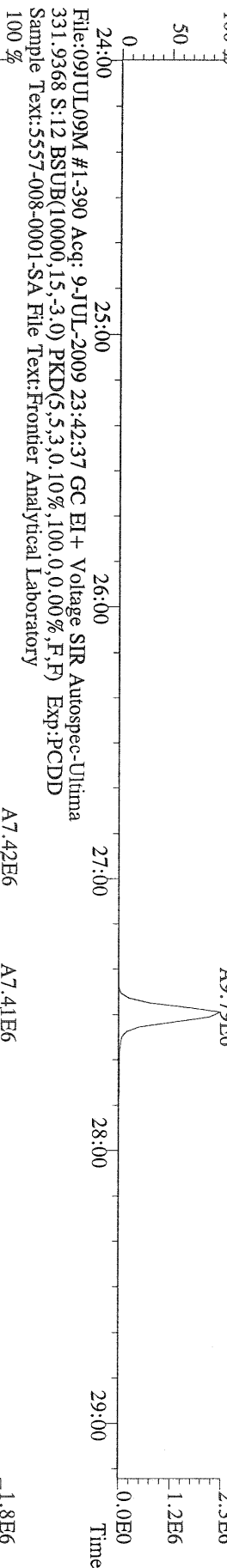
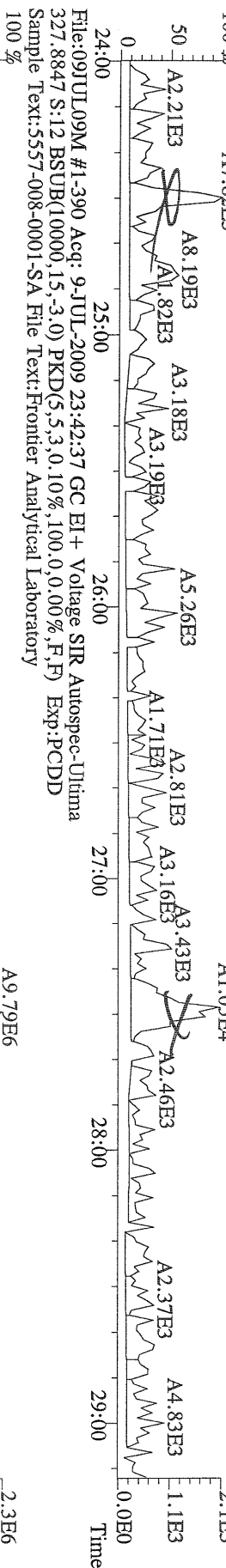
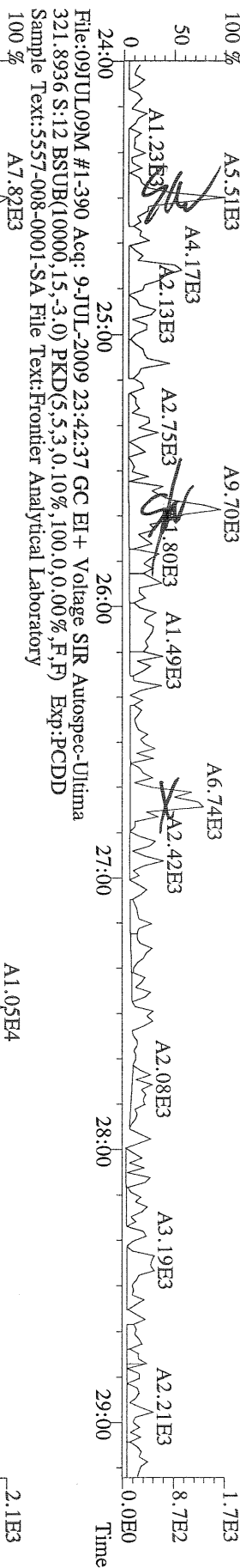
Acquired: 9-JUL-09 23:42:37

Total Concentration: 86.9

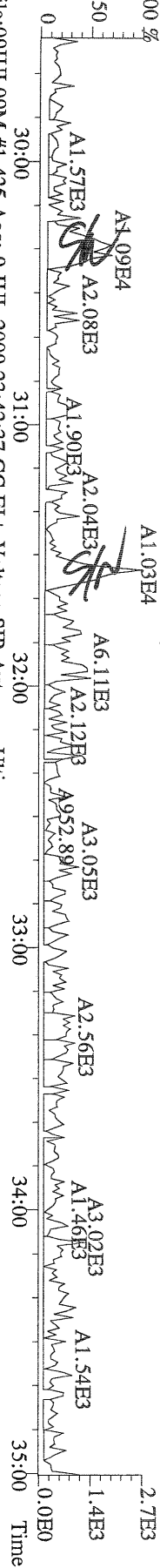
Unnamed Concentration: 36.554

RT	ml Resp	m2 Resp RA	Resp	Concentration	Name
42:24	6.06e+04	6.37e+04 0.95 y	1.24e+05	41.0	1,2,3,4,6,7,8-HpCDF
43:14	4.66e+04	4.99e+04 0.93 y	9.64e+04	36.6	
45:14	9.90e+03	1.10e+04 0.90 y	2.09e+04	9.33	1,2,3,4,7,8,9-HpCDF

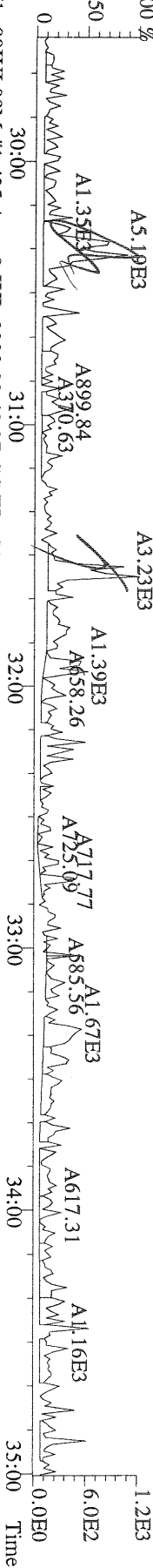
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319.8965 S:12 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



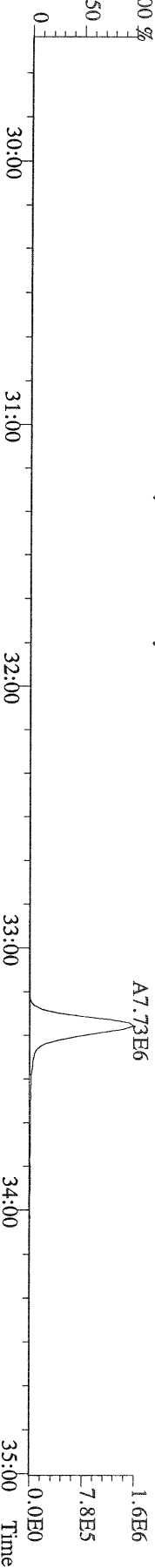
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355.8546 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3.0,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



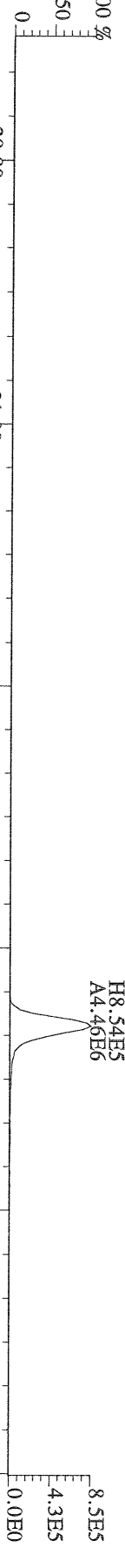
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357.8517 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3.0,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



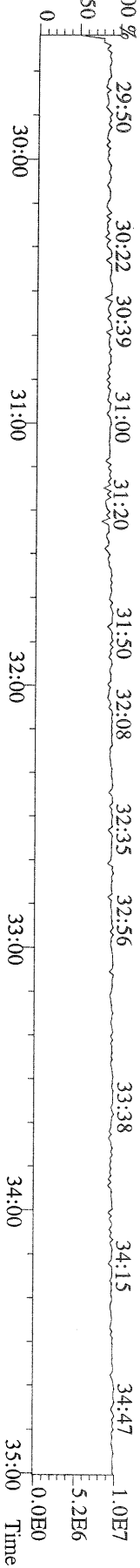
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367.8949 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3.0,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



File:09JUL09M #1-425 Acq: 9-JUL-2009 23:42:37 GC EI+ Voltage SIR Autospec-Ultima  
369.8919 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3.0,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



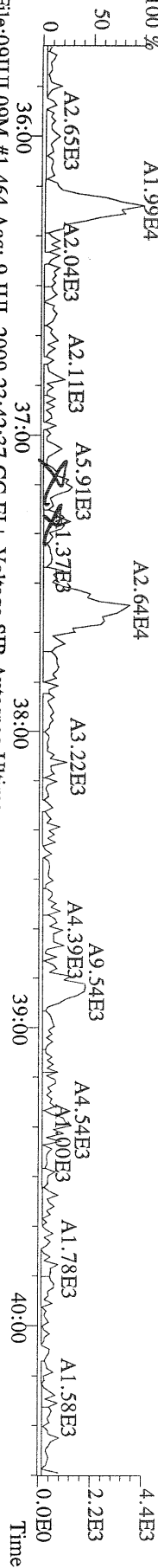
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366.9792 S:12 F:2 Exp:PCDD  
Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



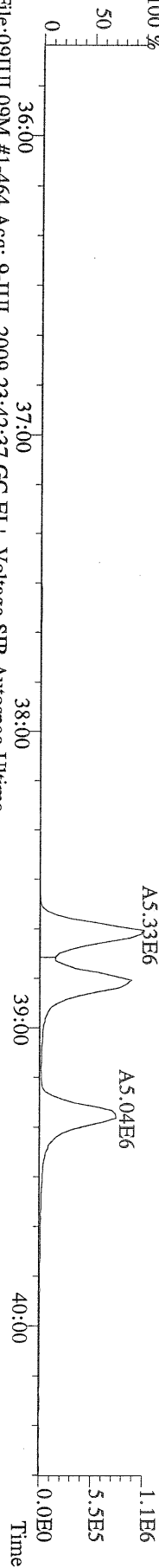
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389.8156 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



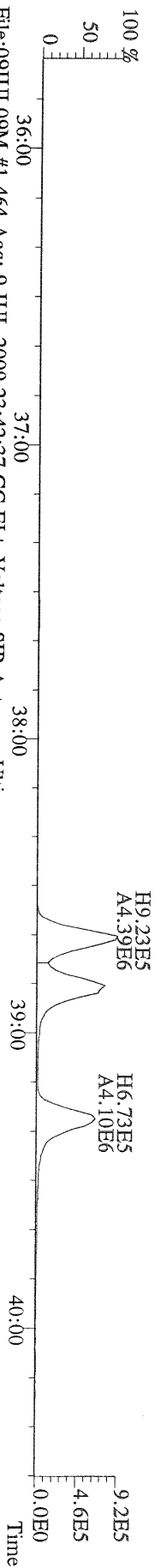
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391.8127 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



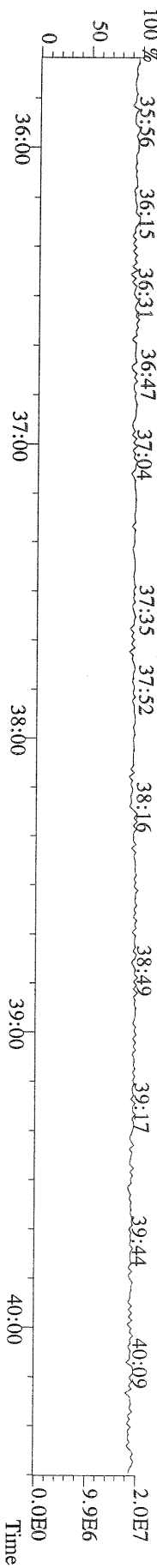
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401.8559 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



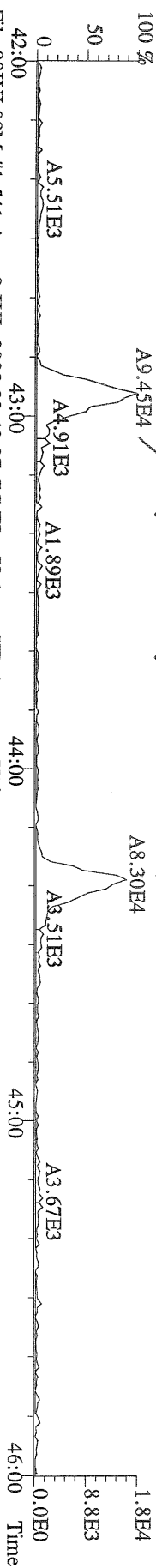
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403.8530 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



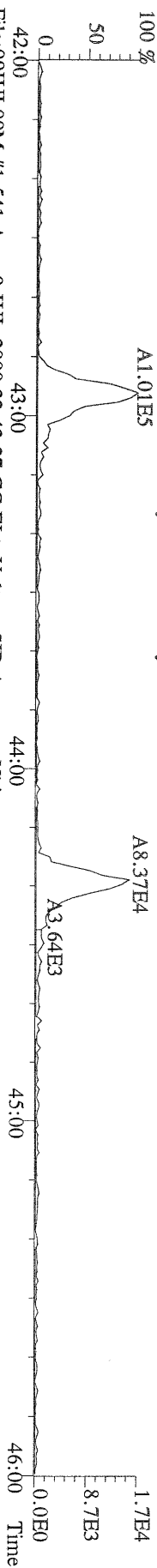
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380.9760 S:12 F:3 Exp:PCDD  
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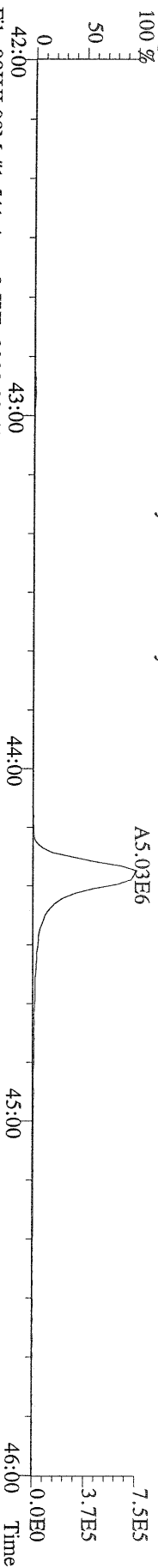
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423.7767 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



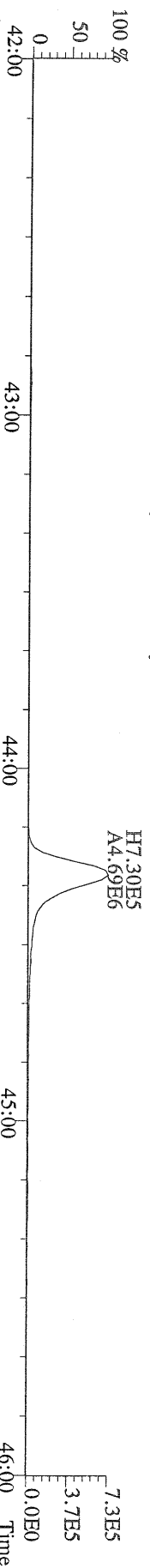
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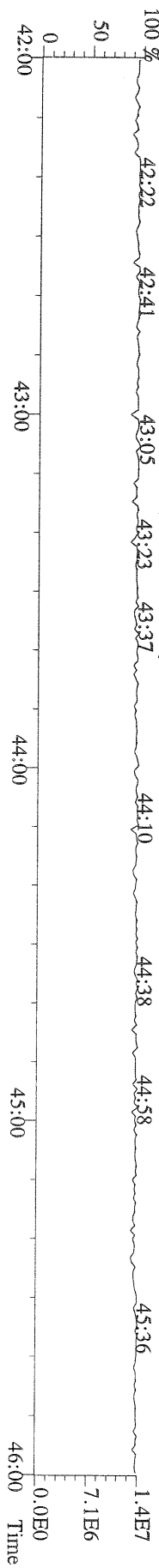
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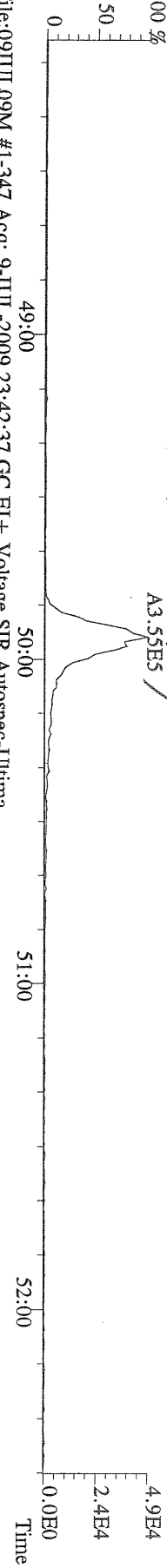
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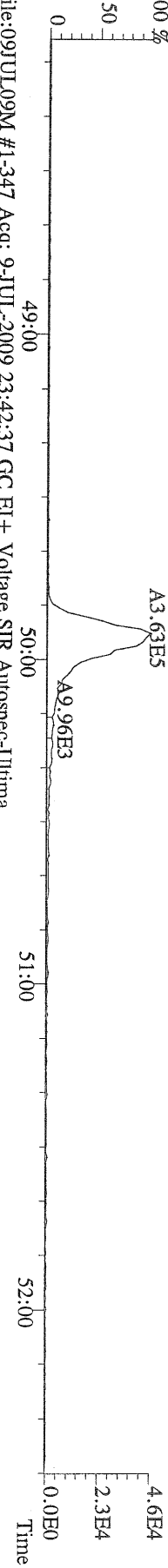
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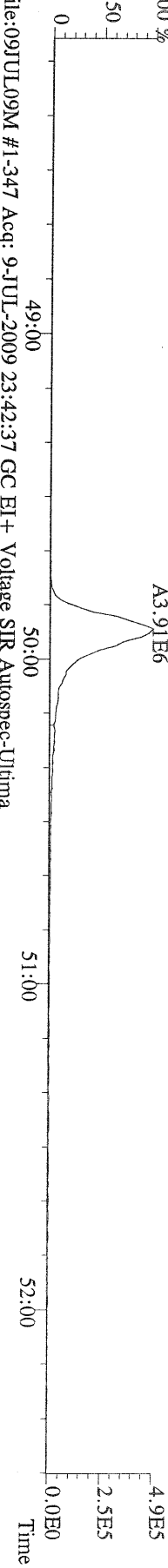
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457.7377 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:PCDD  
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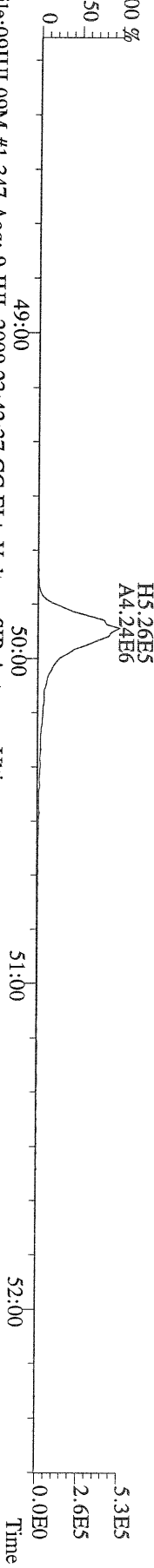
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459.7348 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:PCDD  
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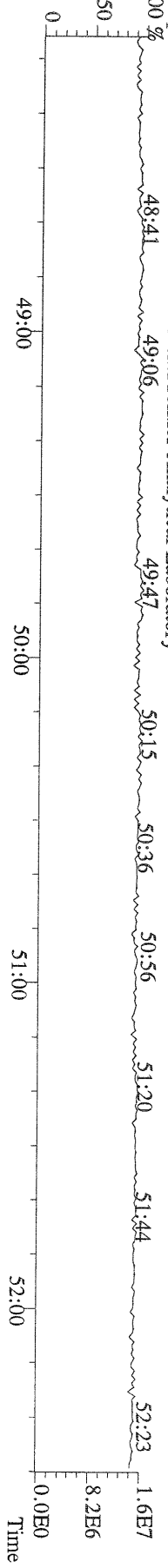
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469.7780 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



File:09JUL09M #1-347 Acq: 9-JUL-2009 23:42:37 GC EI+ Voltage SIR Autospec-Ultima  
471.7750 S:12 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:PCDD  
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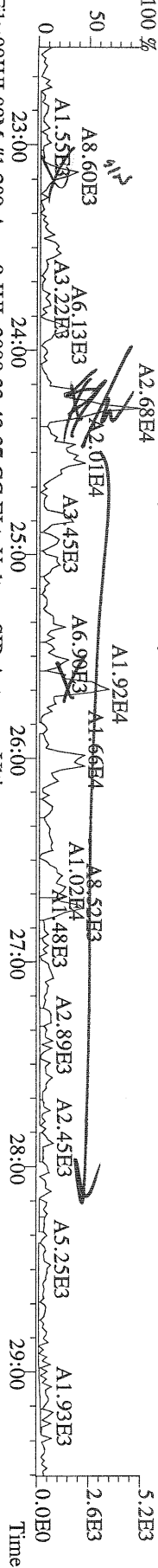


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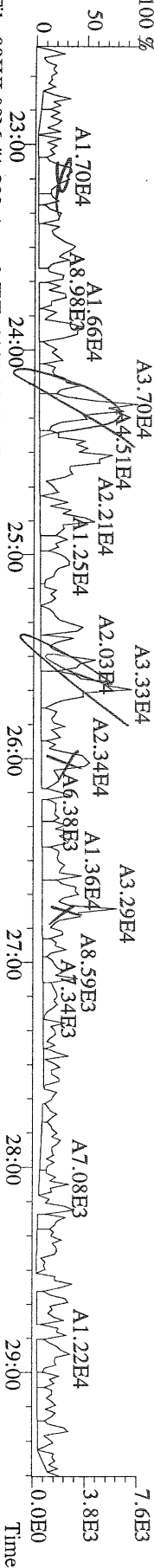




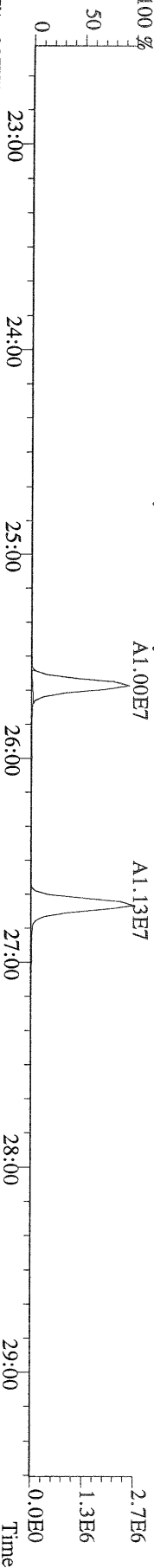
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303.9016 S:12 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



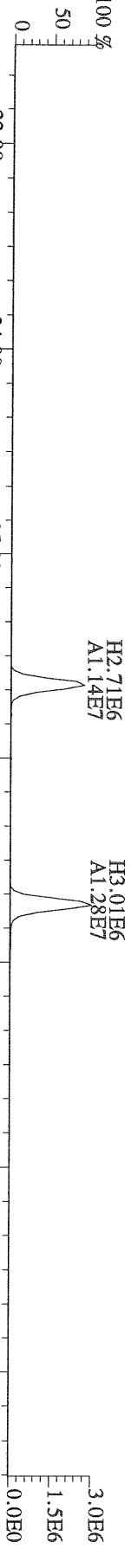
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305.8987 S:12 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
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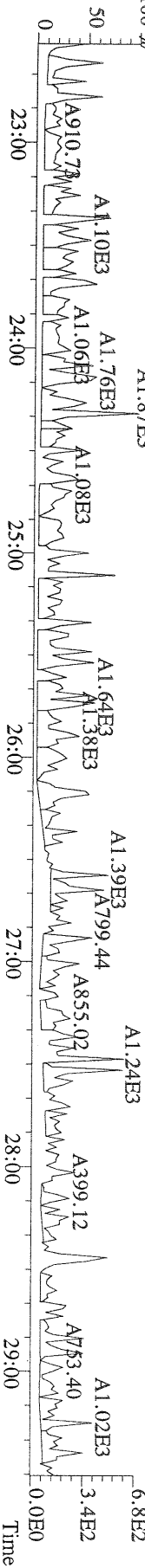
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Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



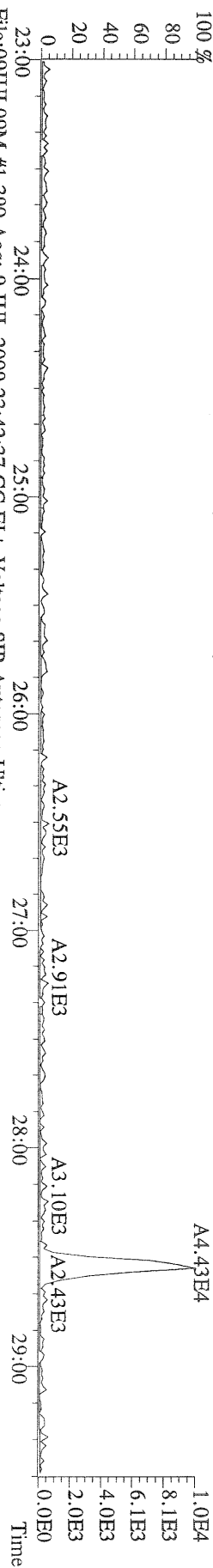
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317.9389 S:12 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
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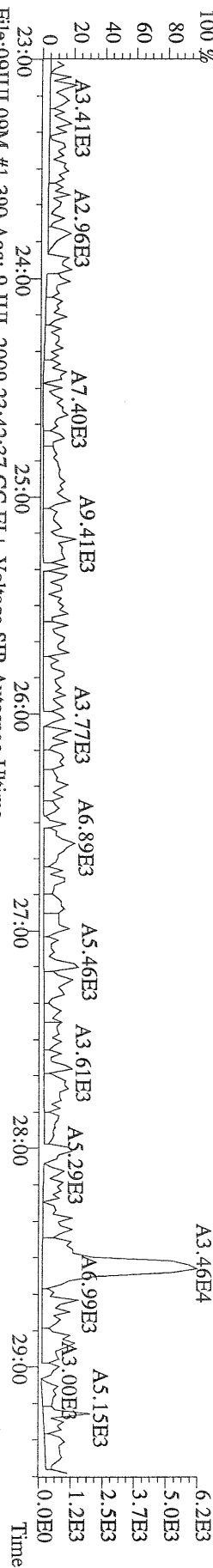
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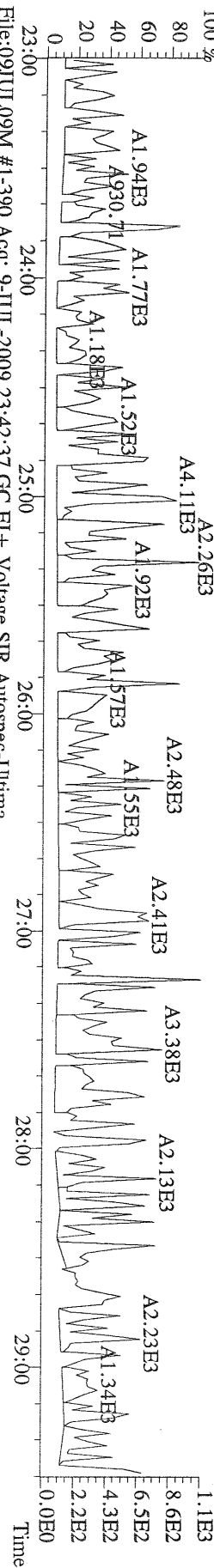
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339.8597 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



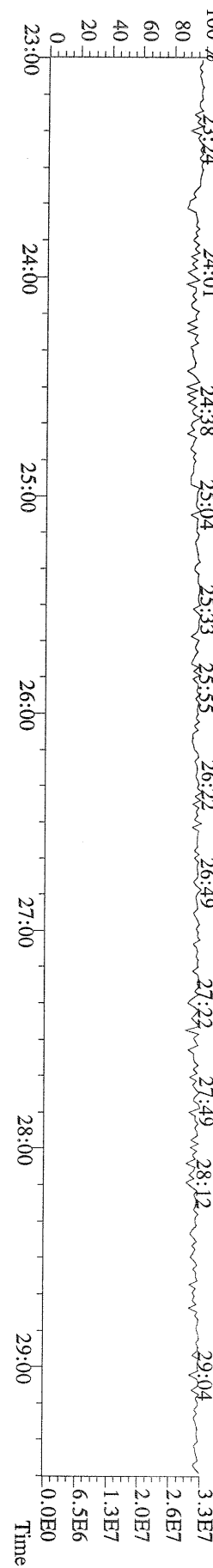
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341.8568 S:12 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



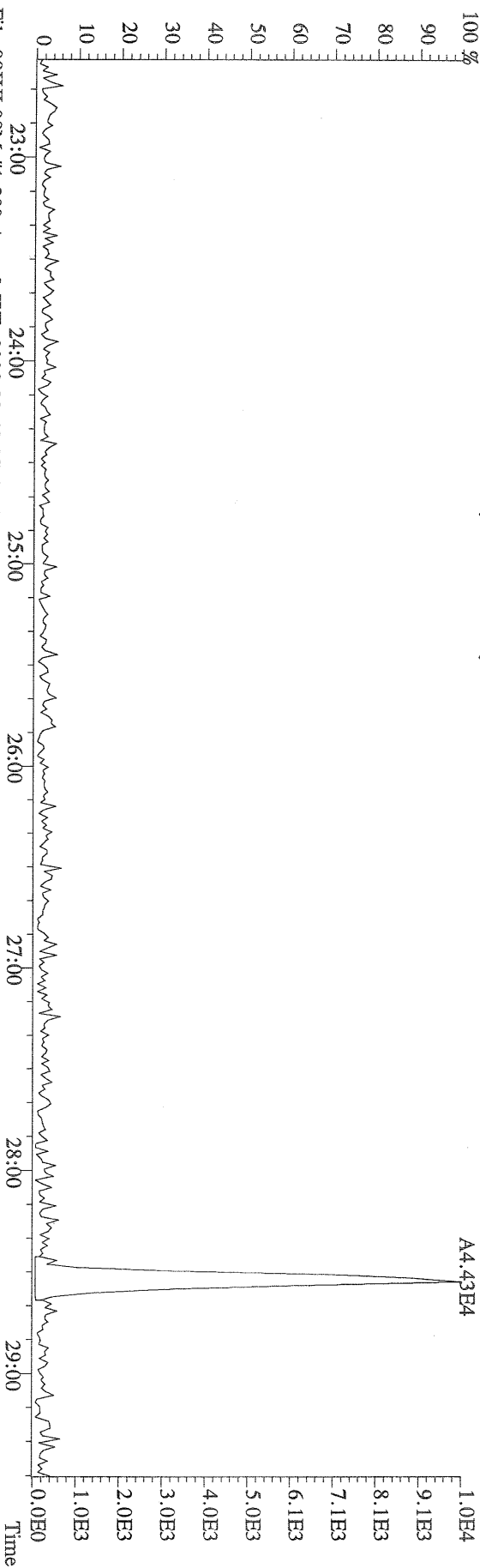
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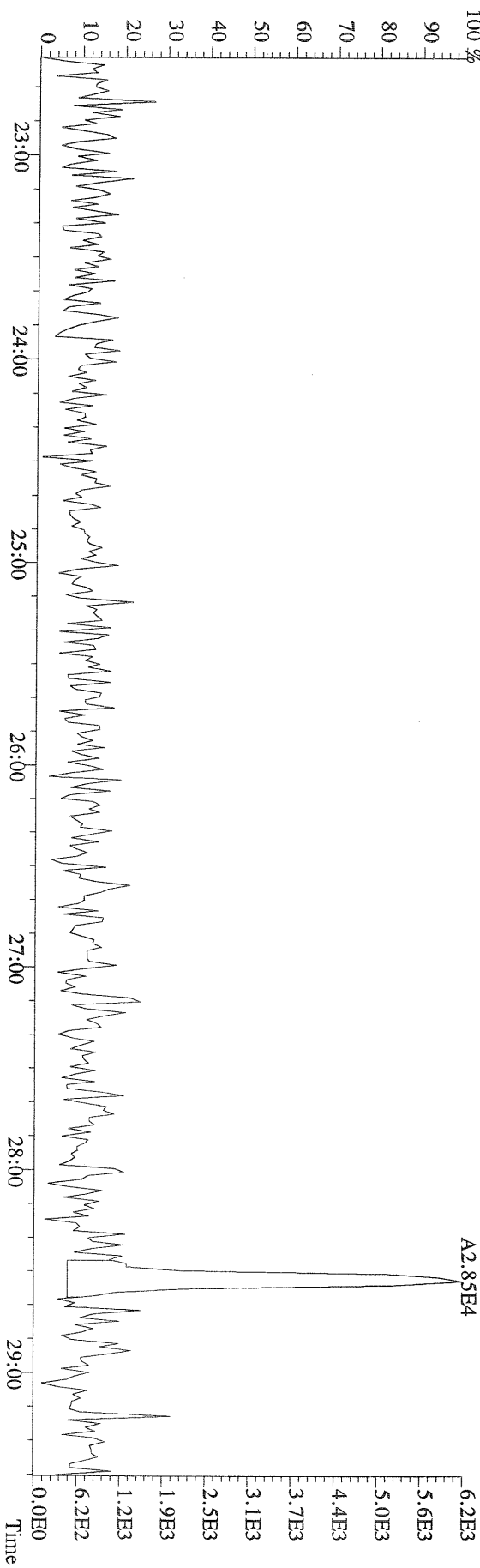
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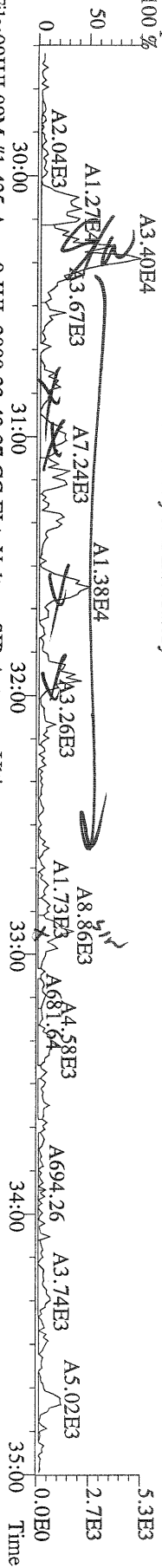
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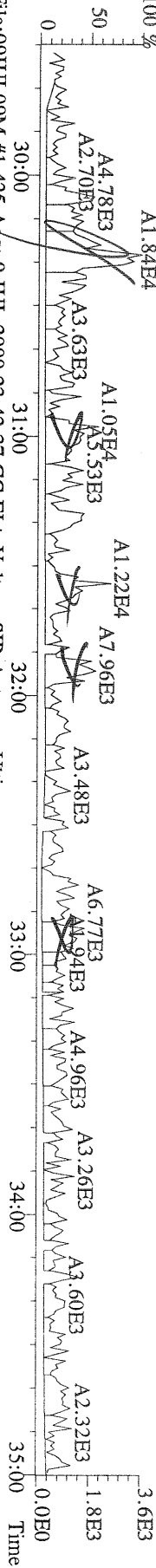
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Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



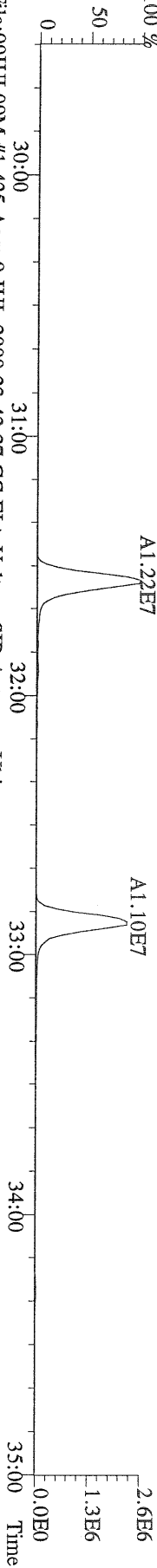
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Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



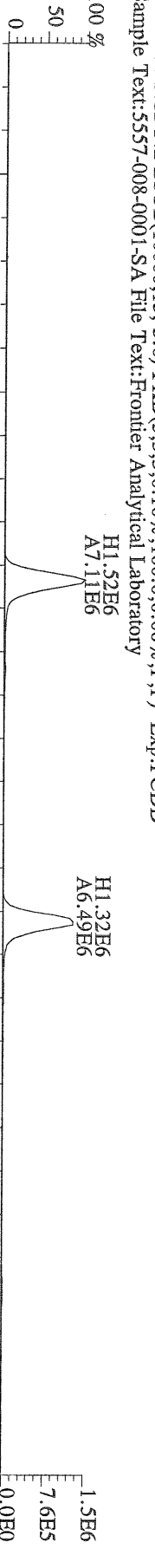
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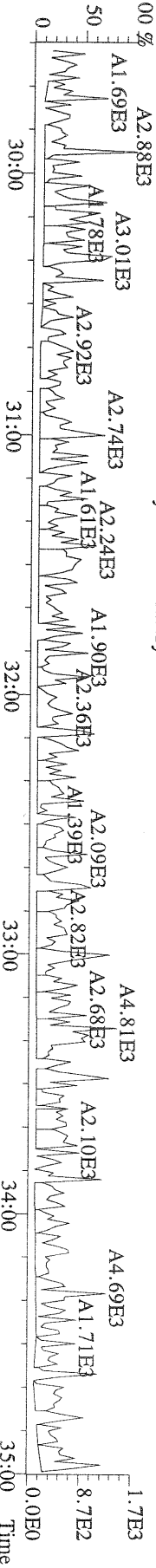
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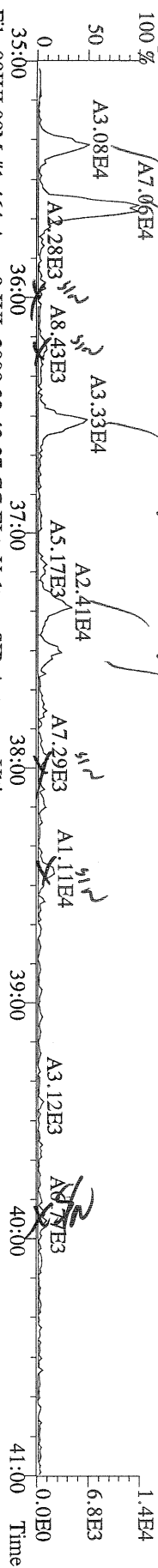
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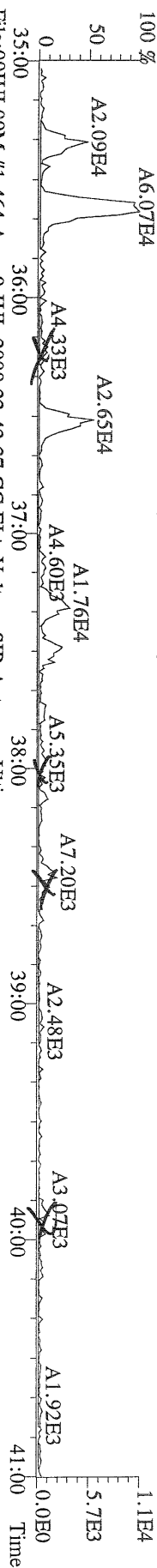
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409.7974 S:12 F:2 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
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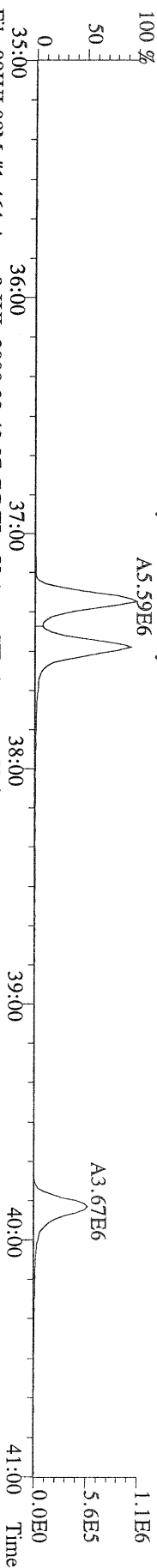
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373.8207 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



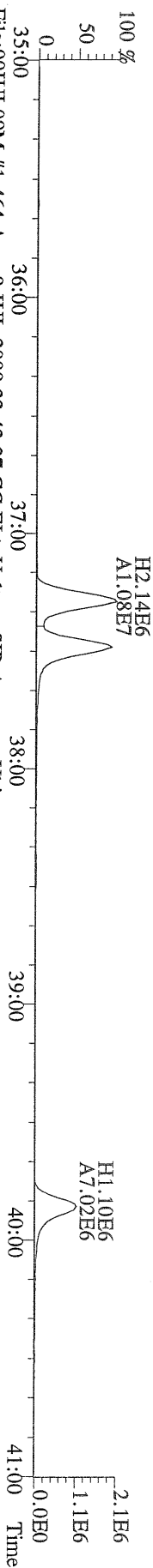
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375.8178 S:12 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



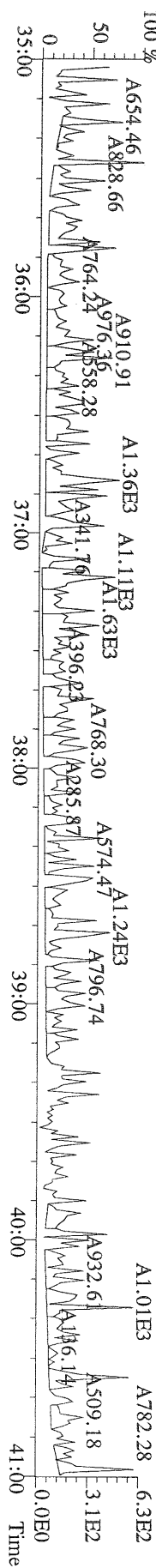
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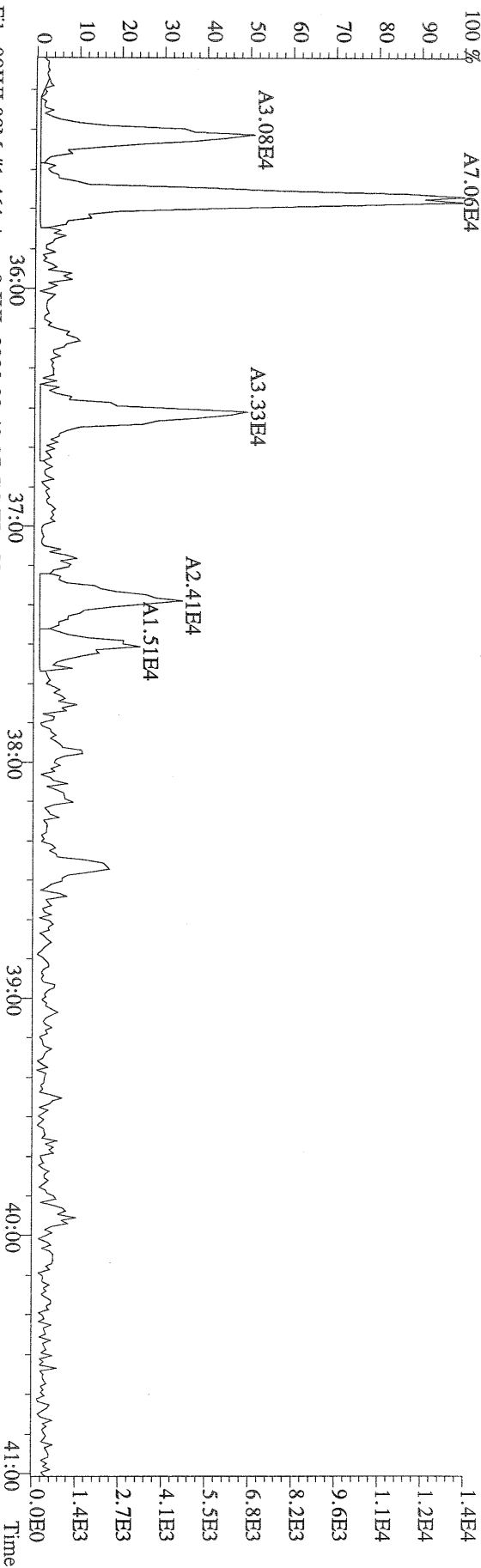
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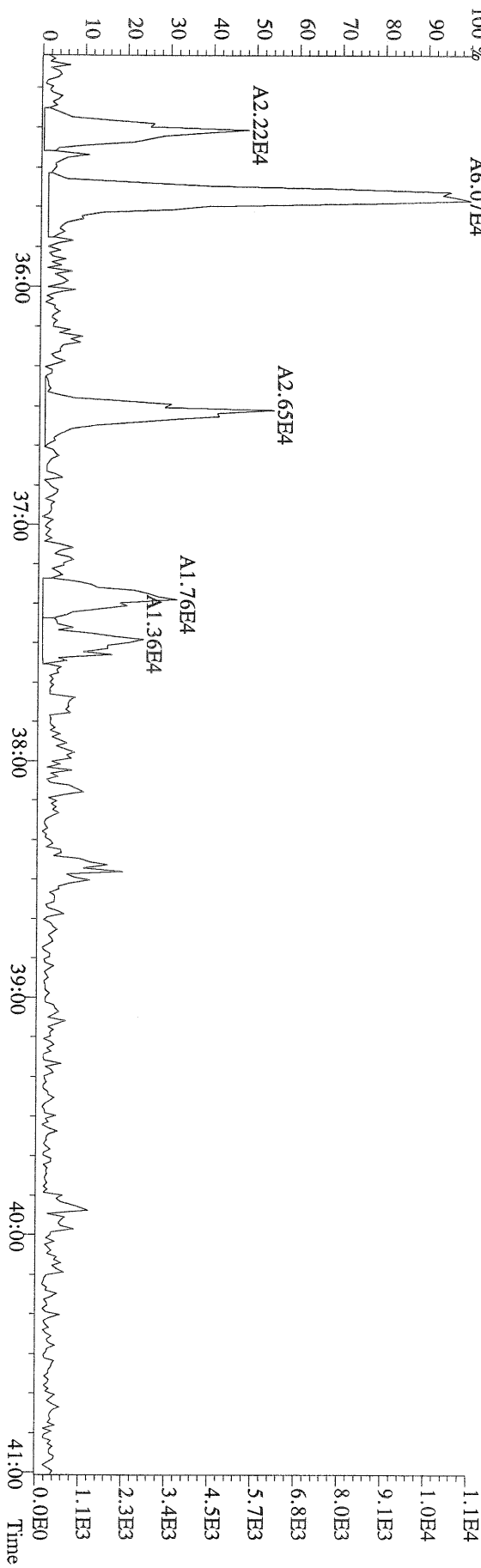
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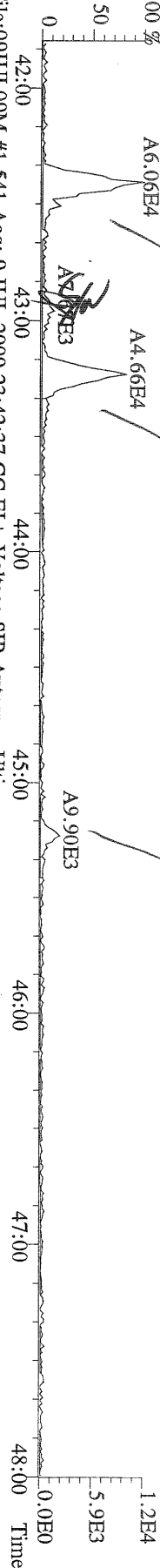
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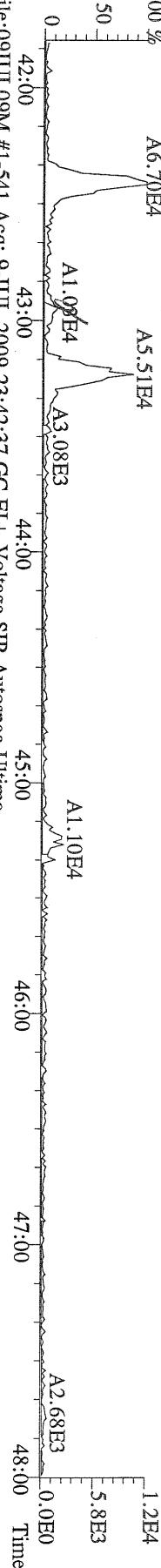
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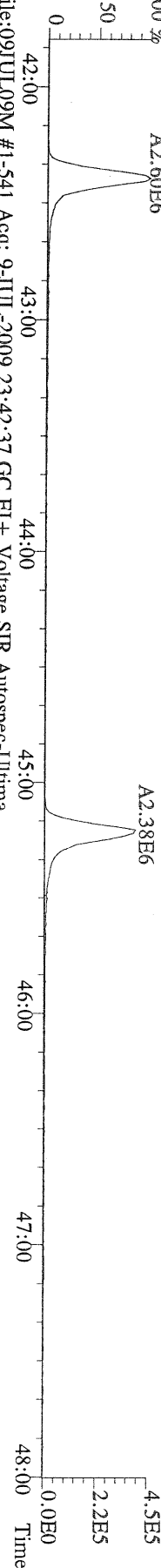
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407.7818 S:12 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
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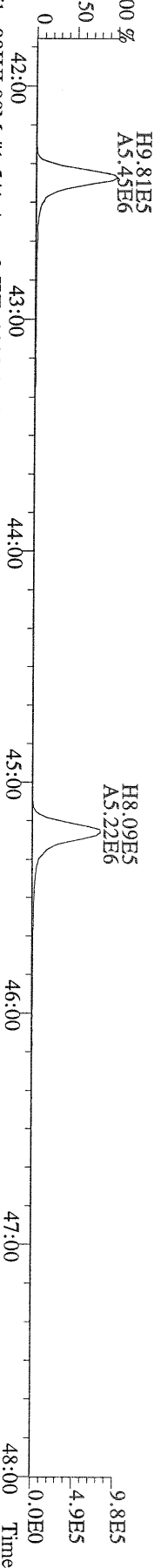
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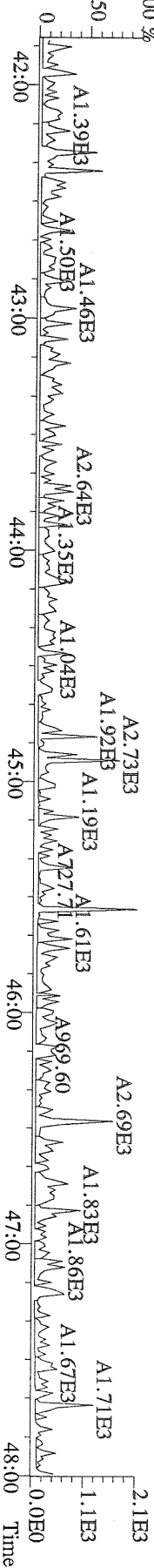
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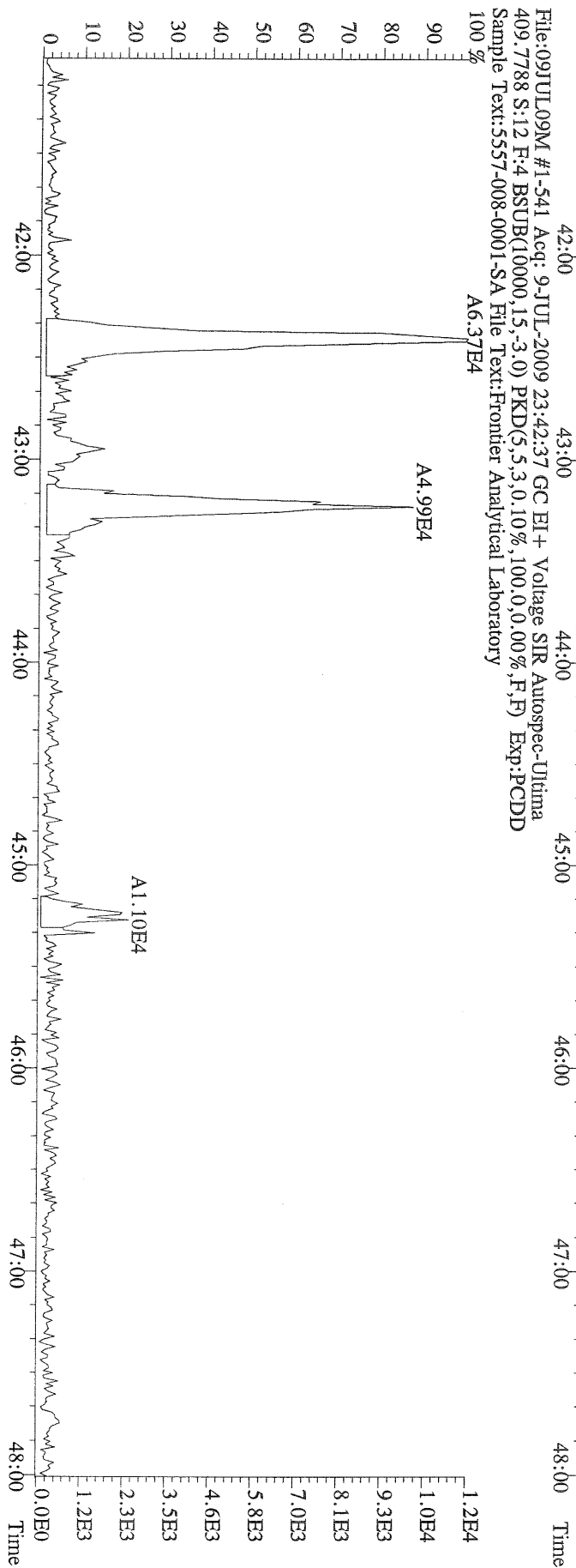
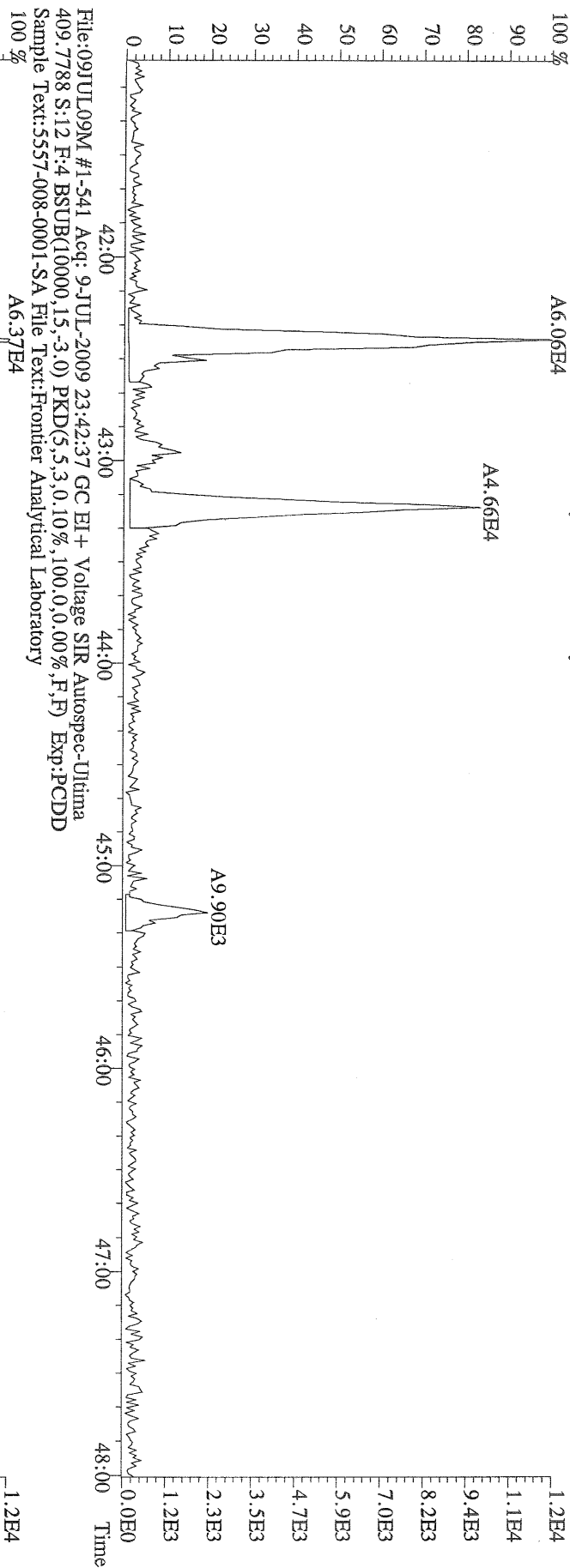
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Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



File:09JUL09M #1-541 Acq: 9-JUL-2009 23:42:37 GC EI+ Voltage SIR Autospec-Utima  
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Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory



File:09JUL09M #1-541 Acq: 9-JUL-2009 23:42:37 GC EI+ Voltage SIR Autospec-Ultima  
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Sample Text:5557-008-0001-SA File Text:Frontier Analytical Laboratory







FAL ID: 5557-009-0001-SA

Filename: 09JUL09M

Sam:13

Acquired: 10-JUL-09 00:37:52

ICal: AIRFAL3-6-29-09

Client ID: OFF-03-061709

ConCal: ST070909M1

EndCal: ST070909M2

Results: 5557

GC Column: DB5

Amount: 1.000

NATO 1989 Tox: 0.0297

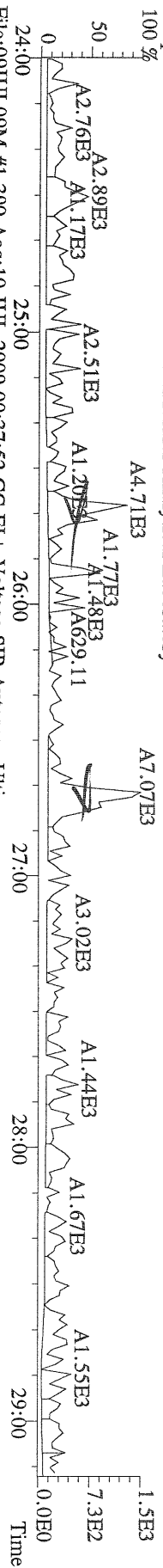
WHO 1998 Tox:0.00297

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise	DL	
2,3,7,8-TCDD	*	* n	NotFnd	1.14	*		2.50	519	2.42	
1,2,3,7,8-PeCDD	*	* n	NotFnd	1.14	*		2.50	216	2.58	
1,2,3,4,7,8-HxCDD	*	* n	NotFnd	1.37	*		2.50	365	3.99	
1,2,3,6,7,8-HxCDD	*	* n	NotFnd	1.24	*		2.50	365	4.42	
1,2,3,7,8,9-HxCDD	*	* n	NotFnd	1.35	*		2.50	365	4.06	
1,2,3,4,6,7,8-HpCDD	*	* n	NotFnd	1.15	*		2.50	600	8.77	
OCDD	*	* n	NotFnd	1.43	*		2.50	413	14.3	
2,3,7,8-TCDF	*	* n	NotFnd	1.14	*		2.50	1200	4.55	
1,2,3,7,8-PeCDF	*	* n	NotFnd	0.90	*		2.50	458	4.02	
2,3,4,7,8-PeCDF	*	* n	NotFnd	0.86	*		2.50	458	4.25	
1,2,3,4,7,8-HxCDF	*	* n	NotFnd	1.02	*		2.50	749	4.92	
1,2,3,6,7,8-HxCDF	*	* n	NotFnd	1.04	*		2.50	749	4.82	
2,3,4,6,7,8-HxCDF	*	* n	NotFnd	0.94	*		2.50	749	5.33	
1,2,3,7,8,9-HxCDF	*	* n	NotFnd	0.88	*		2.50	749	5.72	
1,2,3,4,6,7,8-HpCDF	*	* n	NotFnd	1.51	*		2.50	786	7.32	
1,2,3,4,7,8,9-HpCDF	*	* n	NotFnd	1.11	*		2.50	786	9.89	
OCDF	3.92e+04	0.94 y	50:17	0.87	29.7	J	2.50	-	*	
13C-2,3,7,8-TCDD	1.45e+07	0.78 y	27:29	1.21	3620					Rec
13C-1,2,3,7,8-PeCDD	1.03e+07	1.76 y	33:18	0.83	3750					90.6
13C-1,2,3,6,7,8-HxCDD	7.88e+06	1.22 y	38:51	0.99	4160					93.8
13C-1,2,3,4,6,7,8-HpCDD	7.53e+06	1.04 y	44:19	1.03	3840					104
13C-OCDD	6.28e+06	0.97 y	49:55	0.64	5170					96.0
13C-2,3,7,8-TCDF	1.94e+07	0.88 y	26:44	1.33	3480					64.6
13C-1,2,3,7,8-PeCDF	1.59e+07	1.68 y	31:34	0.96	3930					
13C-1,2,3,6,7,8-HxCDF	1.28e+07	0.52 y	37:30	1.75	3850					87.1
13C-1,2,3,4,6,7,8-HpCDF	6.20e+06	0.47 y	42:24	1.00	3250					98.2
13C-OCDF	1.22e+07	0.98 y	50:17	1.11	5750					96.2
13C-1,2,3,7,8,9-HxCDF	9.86e+06	0.53 y	39:51	1.40	3690					81.2
37Cl-2,3,7,8-TCDD	8.06e+06		27:30	0.56	4010					71.8
13C-1,2,3,4,7,8-HxCDD	7.67e+06	1.20 y	38:41	1.05	3700					
13C-2,3,4,7,8-PeCDF	1.52e+07	1.71 y	32:52	0.93	4120					92.2
13C-1,2,3,4,7,8-HxCDF	1.26e+07	0.50 y	37:17	1.00	3930					100
13C-1,2,3,4,7,8,9-HpCDF	5.84e+06	0.46 y	45:13	0.82	4570					92.5
13C-1,2,3,4-TCDD	1.32e+07	0.79 y	26:55	-	31.6					103
13C-2,3,7,8-TCDF	1.68e+07	0.87 y	25:38	-	24.9					98.3
13C-1,2,3,7,8,9-HxCDD	7.62e+06	1.21 y	39:18	-	25.9					114
Total Tetra-Dioxins	*		NotFnd	1.14	*		Fac	Noise	DL	#Hom
Total Penta-Dioxins	*		NotFnd	1.14	*		2.50	519	2.42	0
Total Hexa-Dioxins	*		NotFnd	1.32	*		2.50	216	2.58	0
Total Hepta-Dioxins	*		NotFnd	1.15	*		2.50	365	4.42	0
Total Tetra-Furans	*		NotFnd	1.14	*		2.50	600	8.77	0
1st Fn. Tot Penta-Furans	*		NotFnd	0.88	*		2.50	1200	4.55	0
Total Penta-Furans	*		NotFnd	0.88	*		2.50	458	4.25	0
Total Hexa-Furans	*		NotFnd	0.97	*		2.50	458	4.25	0
Total Hepta-Furans	*		NotFnd	1.31	*		2.50	749	5.72	0
							2.50	786	9.89	0

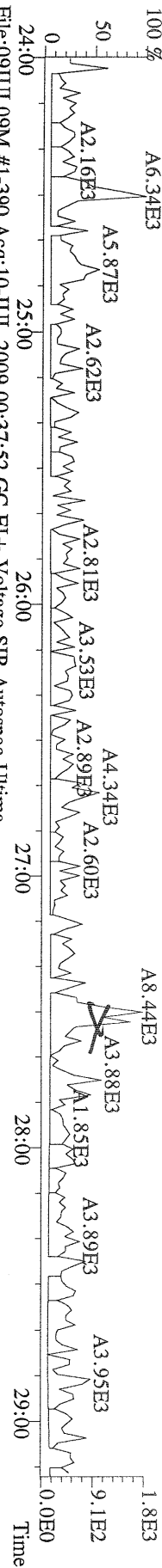
Analyst: 

Date: 7/10/09

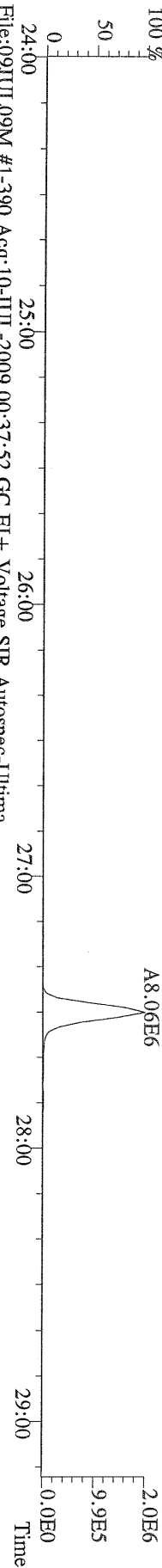
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319.8965 S:13 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



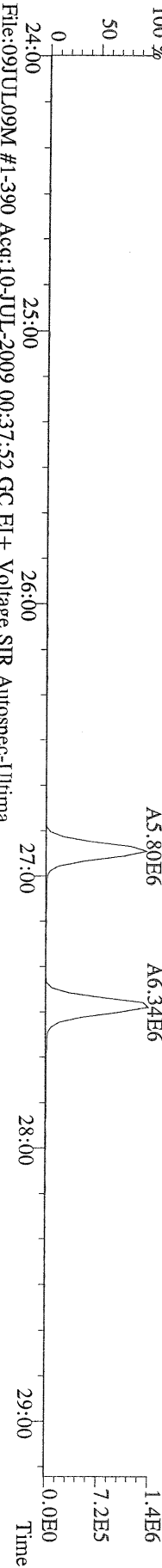
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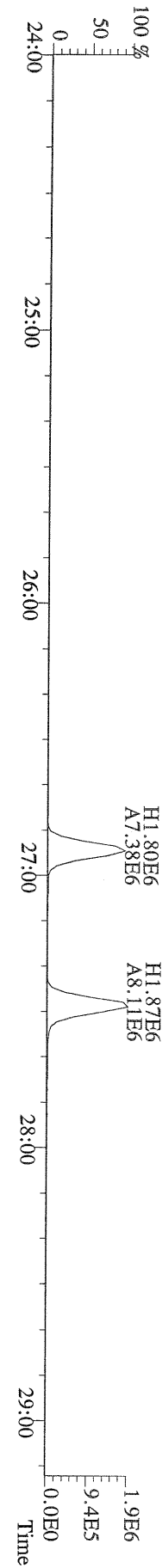
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Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



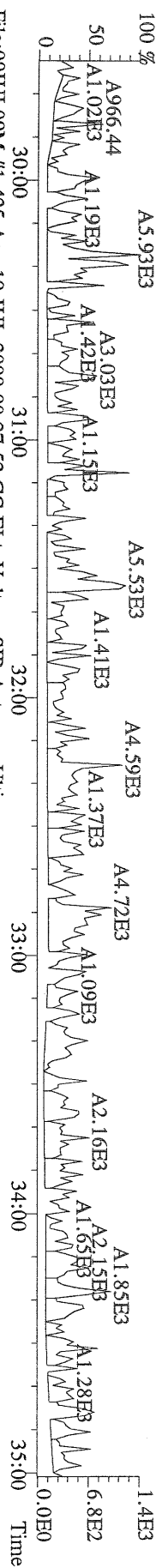
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Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



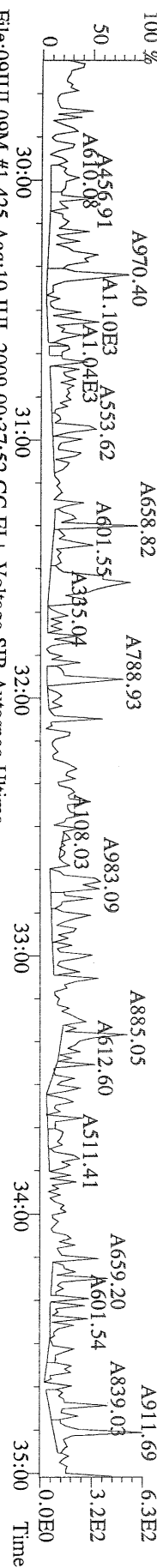
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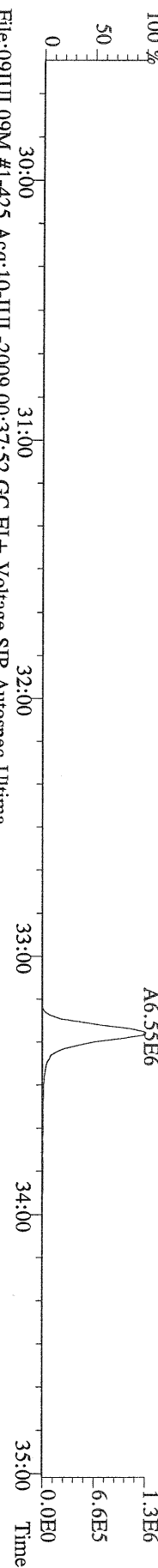
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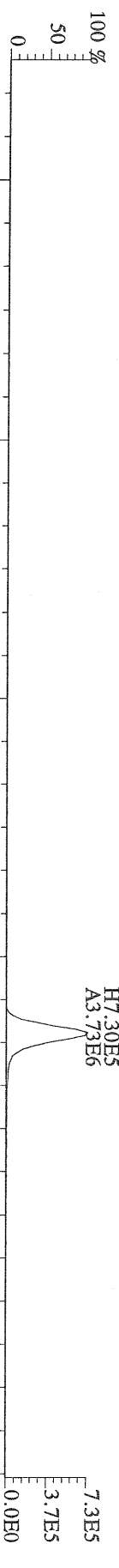
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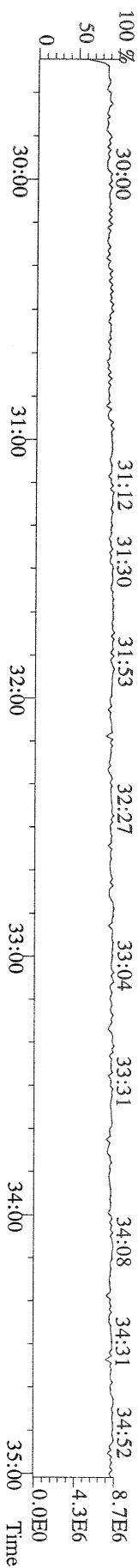
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367.8949 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



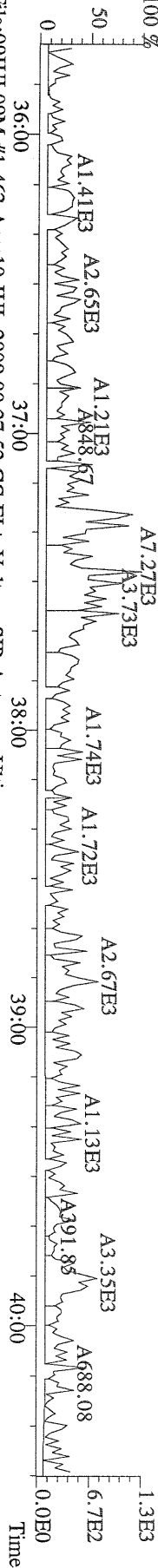
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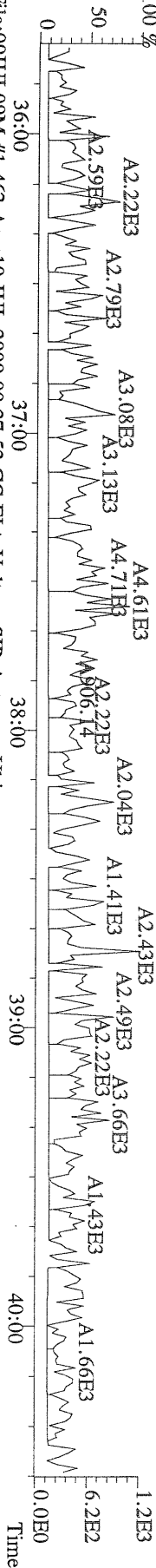
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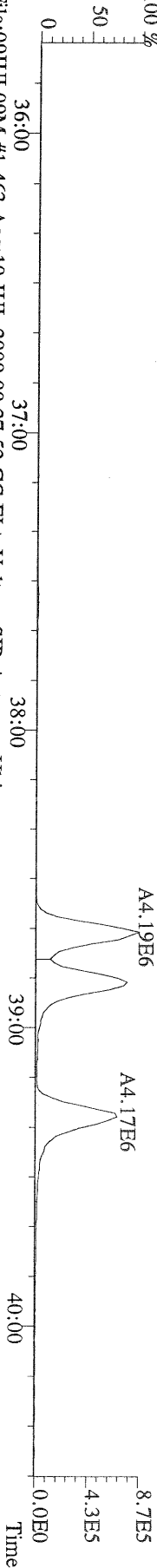
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389.8156 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



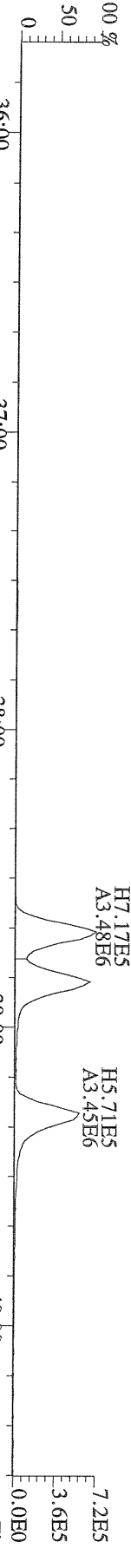
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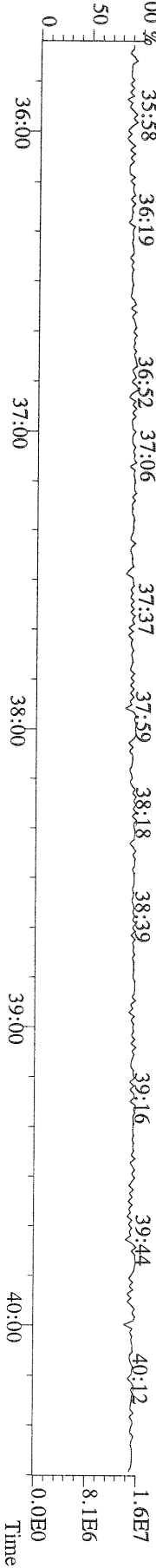
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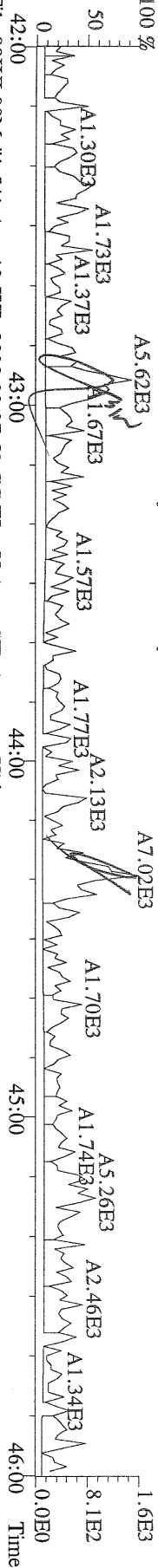
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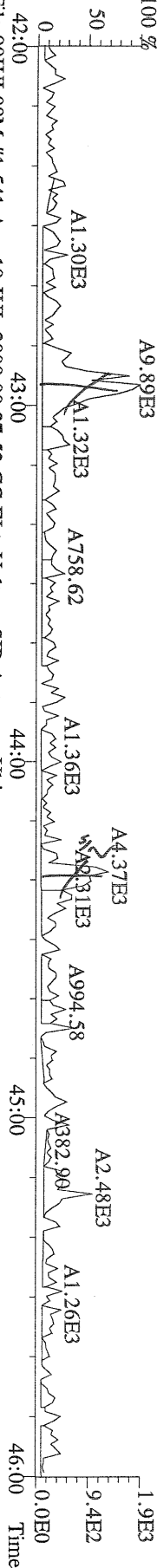
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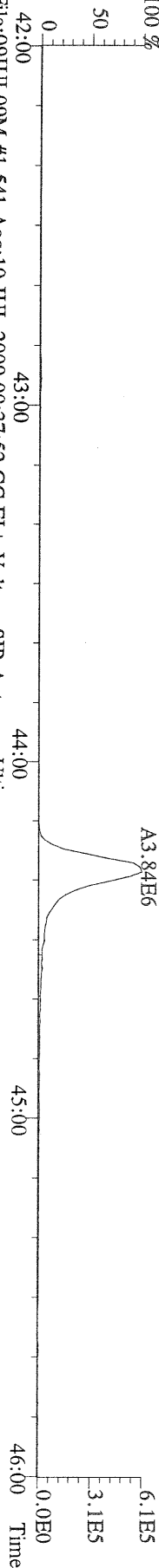
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423.7767 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3.0,100,0.0,0.00%,F,F) Exp:PCDD  
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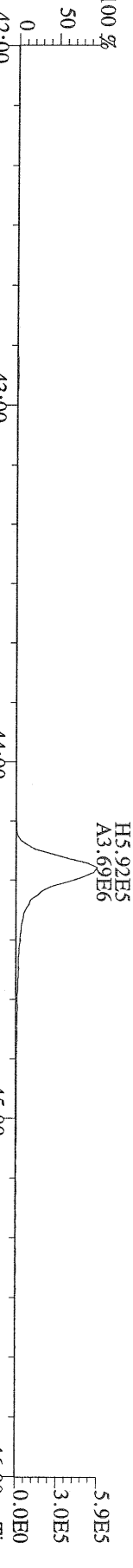
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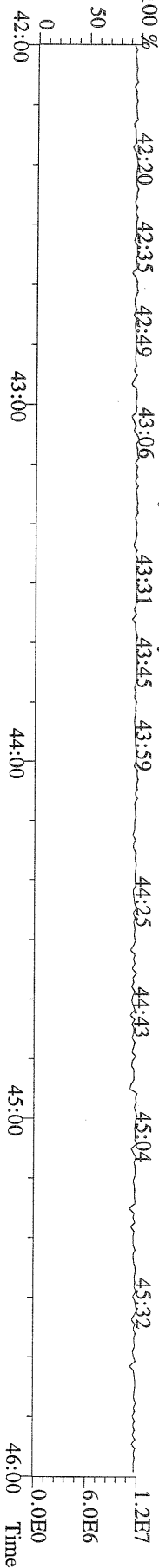
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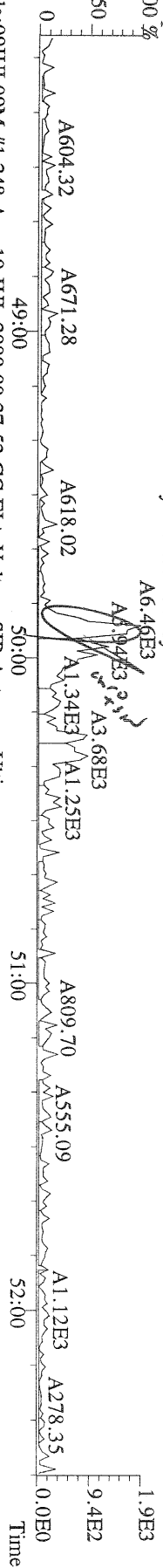
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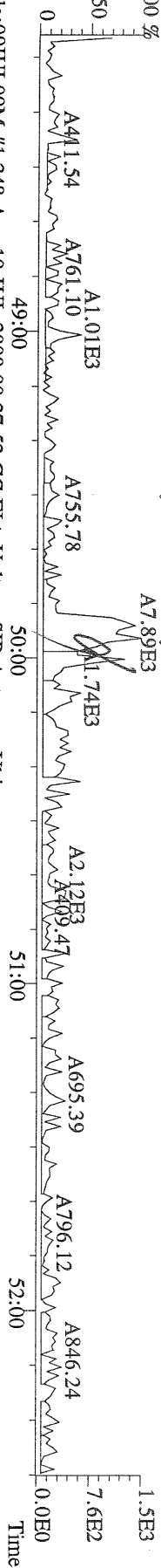
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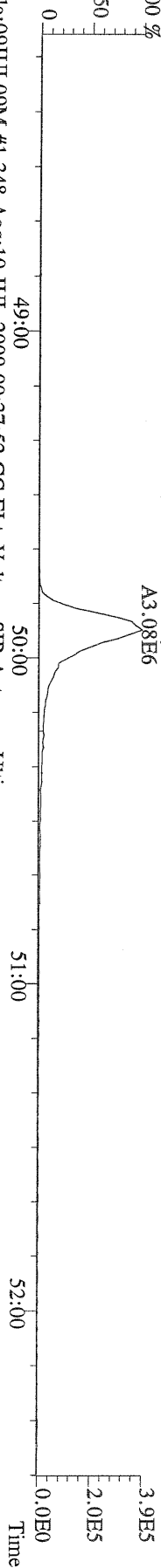
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457.7377 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD  
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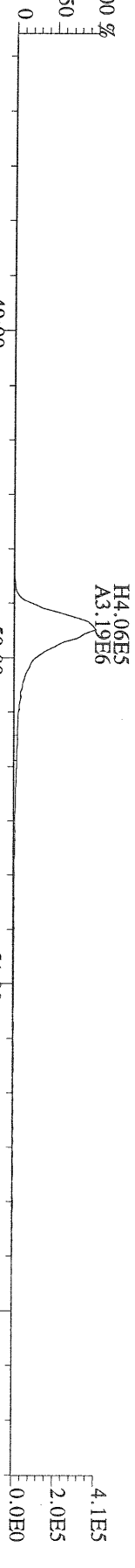
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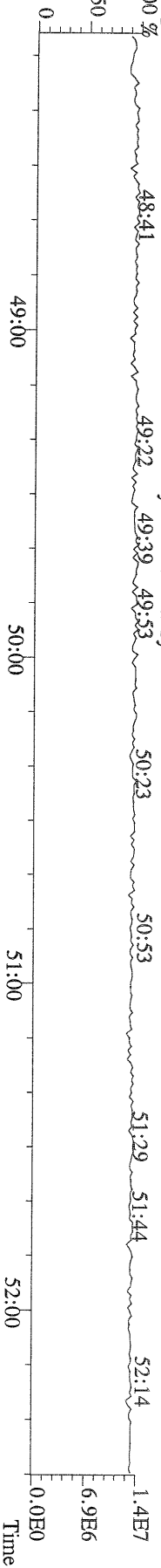
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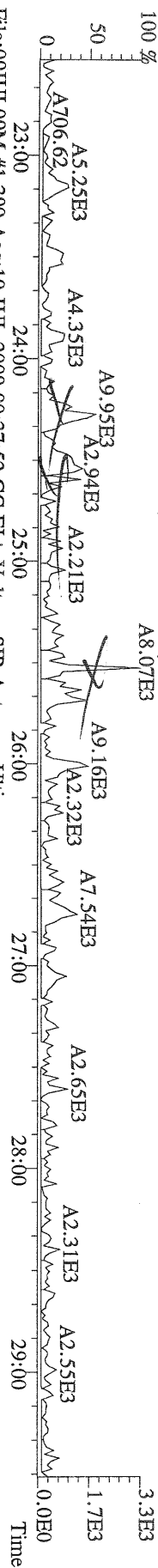
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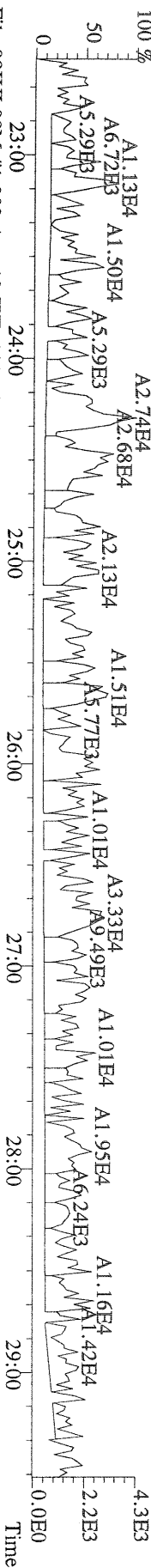
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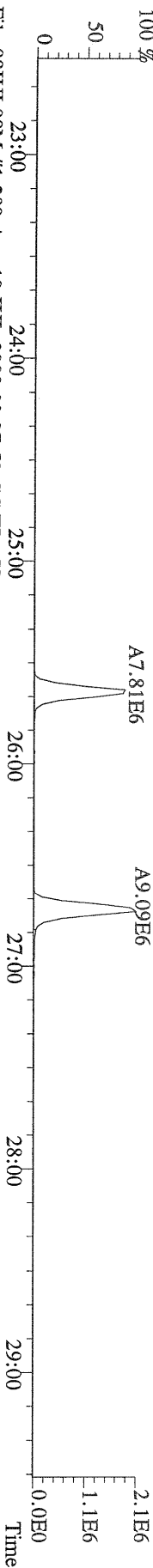
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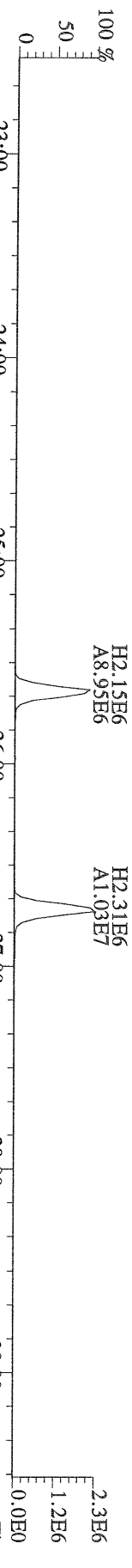
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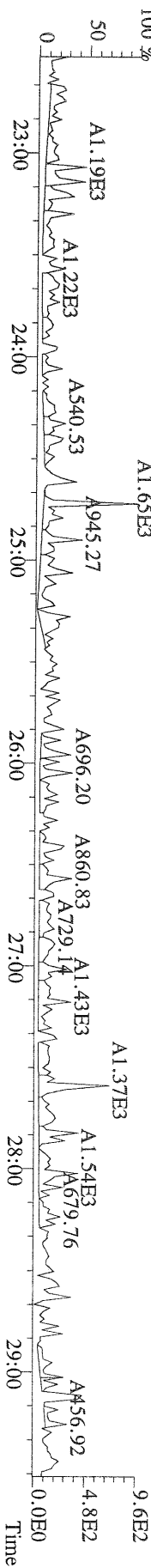
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Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



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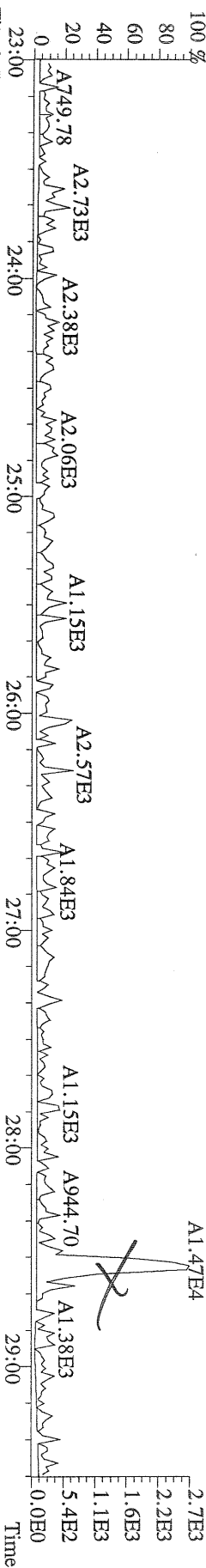


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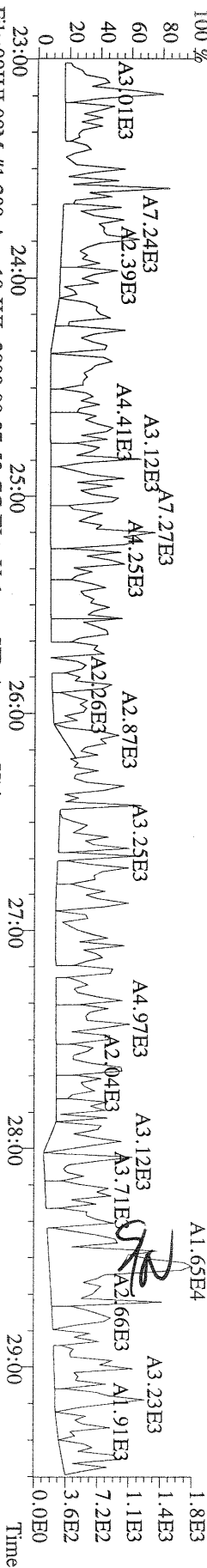




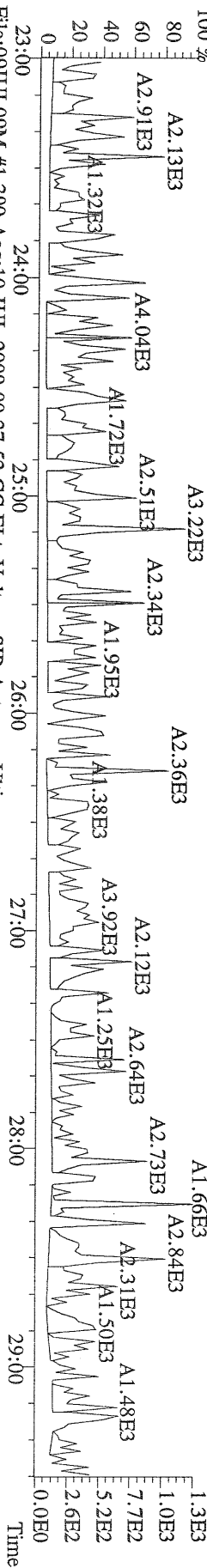
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339.8597 S:13 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
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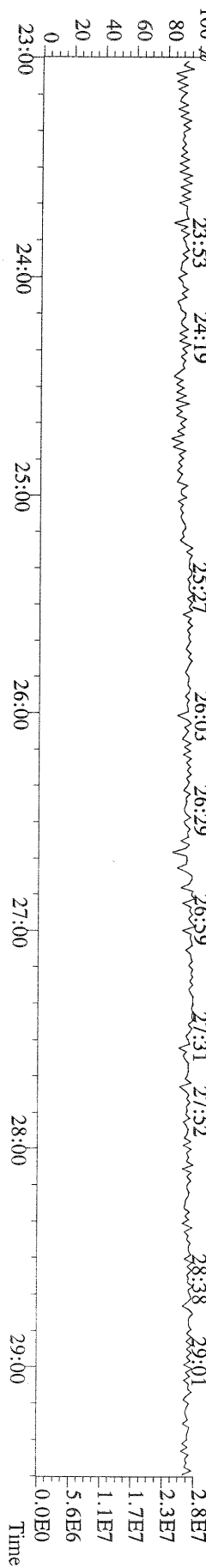
File:09JUL09M #1-390 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
341.8568 S:13 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Fronter Analytical Laboratory



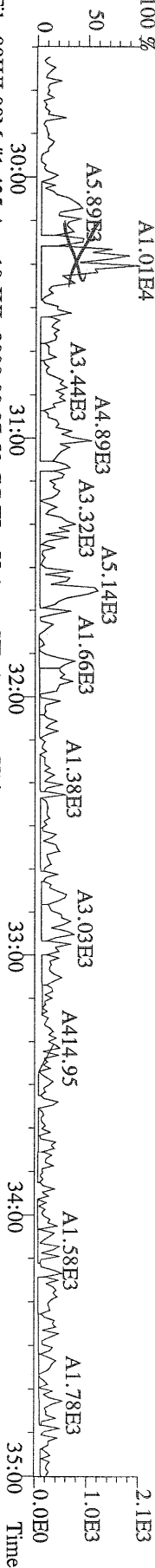
File:09JUL09M #1-390 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
409.7974 S:13 BSUB(10000,15,-3.0) PKD(5,5.3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Fronter Analytical Laboratory



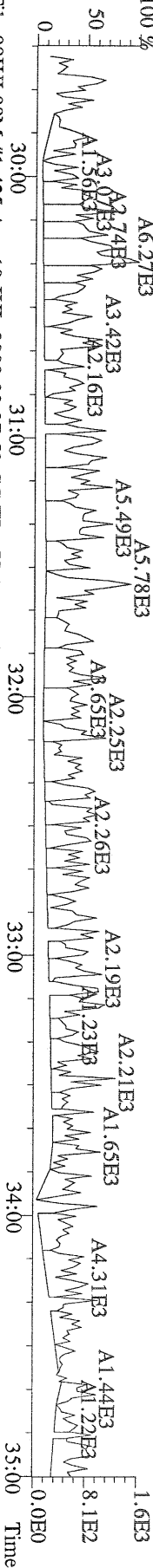
File:09JUL09M #1-390 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
330.9792 S:13 Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Fronter Analytical Laboratory



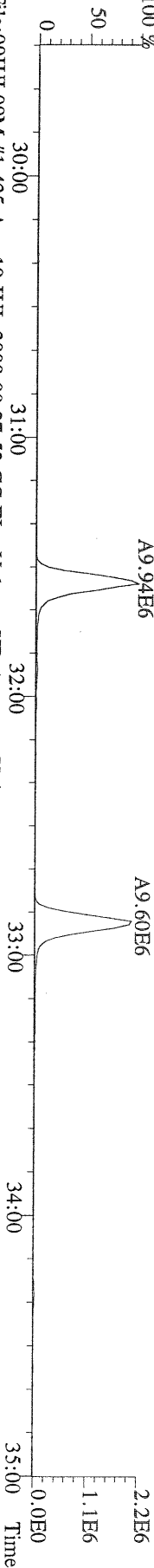
File:09JUL09M #1-425 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
339.8597 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



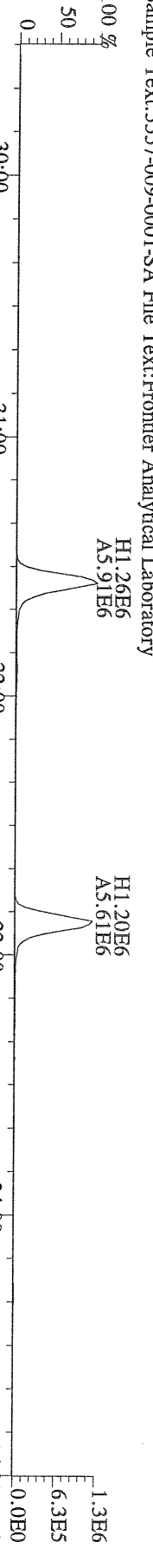
File:09JUL09M #1-425 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
341.8568 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



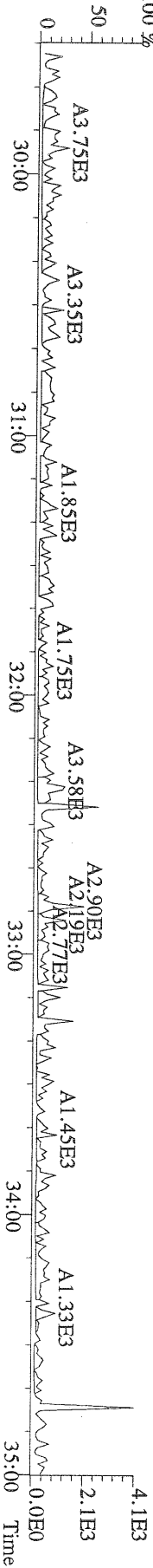
File:09JUL09M #1-425 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
351.9000 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



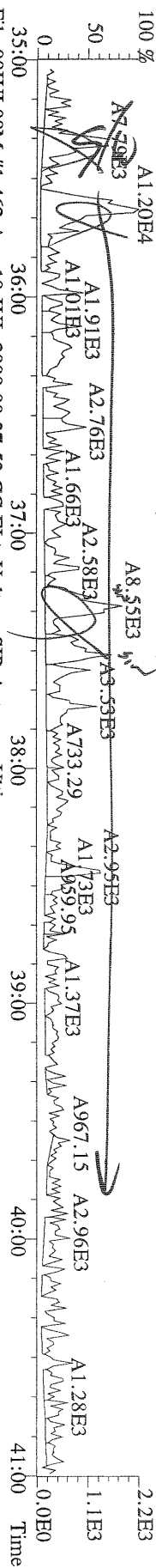
File:09JUL09M #1-425 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
353.8970 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



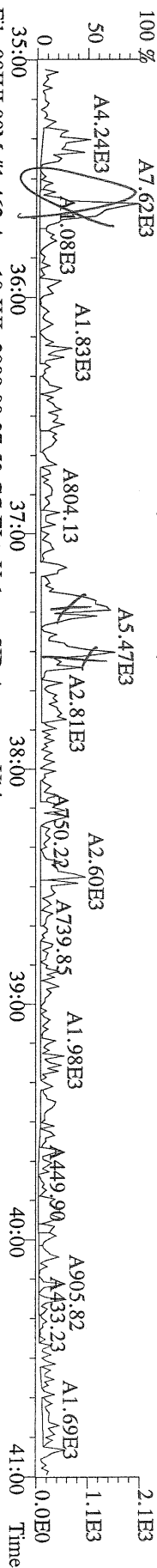
File:09JUL09M #1-425 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
409.7974 S:13 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



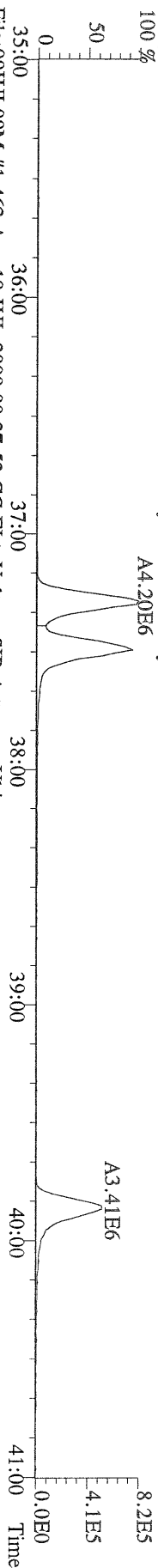
File:09JUL09M #1-463 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
373.8207 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



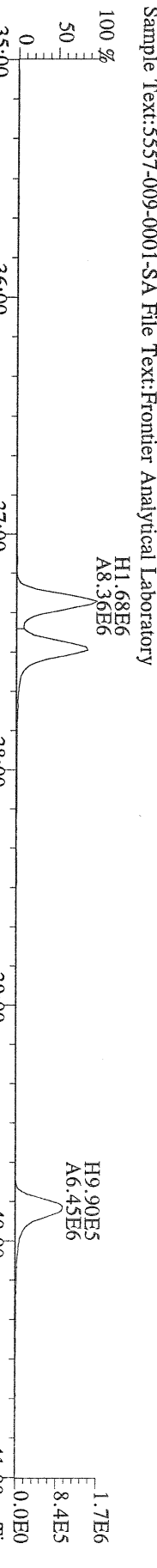
File:09JUL09M #1-463 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
375.8178 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



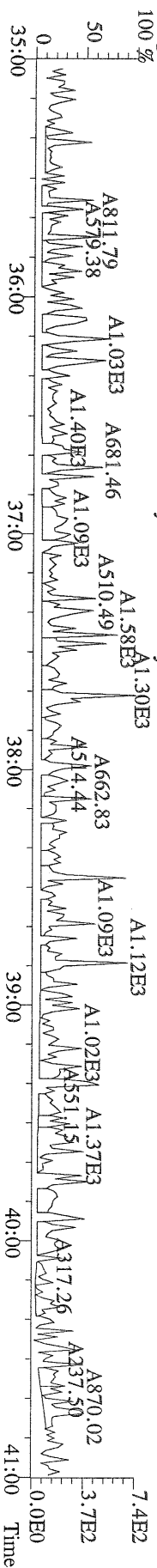
File:09JUL09M #1-463 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
383.8639 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



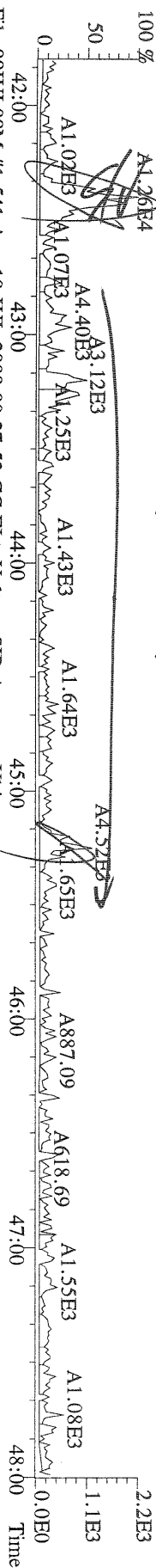
File:09JUL09M #1-463 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
385.8610 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



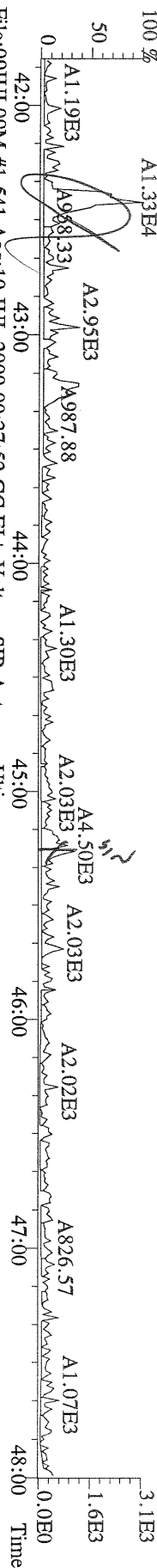
File:09JUL09M #1-463 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
445.7555 S:13 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



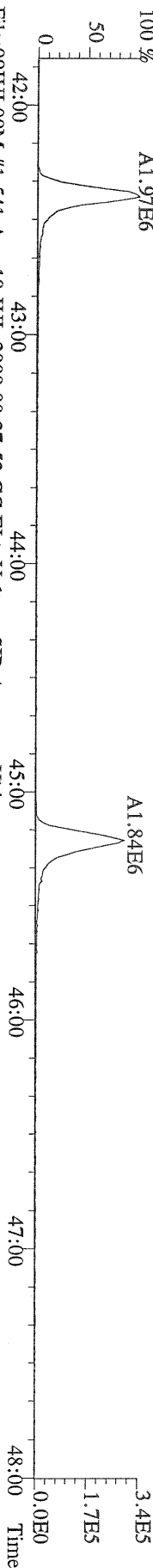
File:09JUL09M #1-541 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
407.7818 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



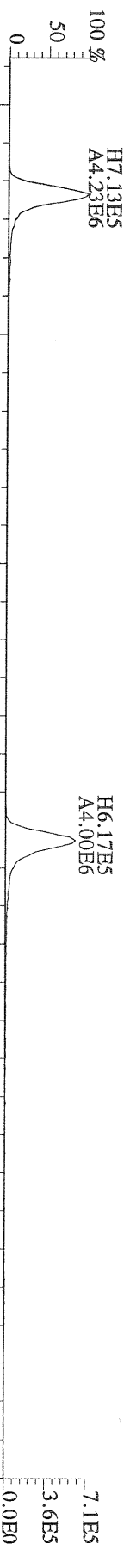
File:09JUL09M #1-541 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
409.7788 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



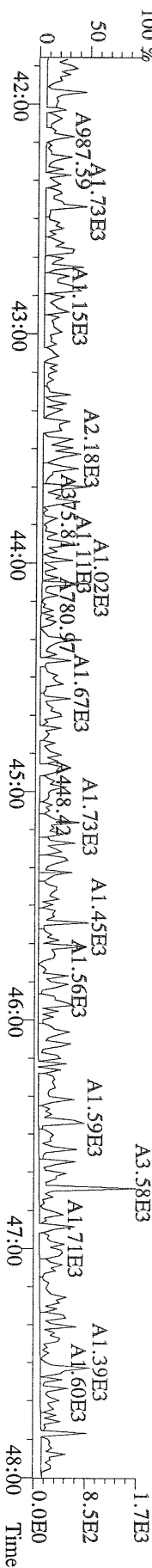
File:09JUL09M #1-541 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
417.8253 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



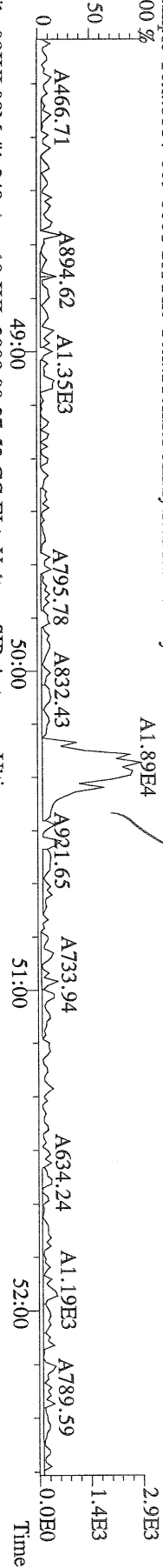
File:09JUL09M #1-541 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
419.8220 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



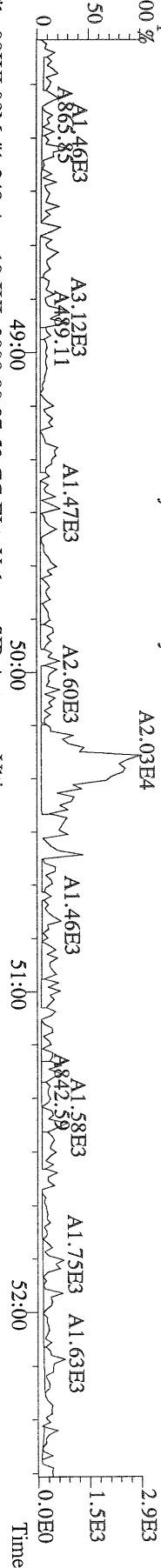
File:09JUL09M #1-541 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
479.7165 S:13 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



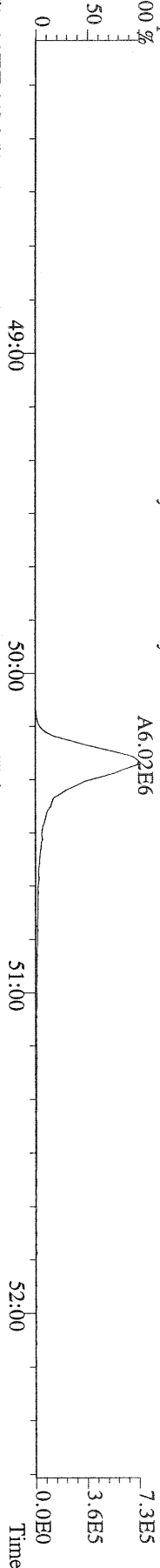
File:09JUL09M #1-348 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
441.7428 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



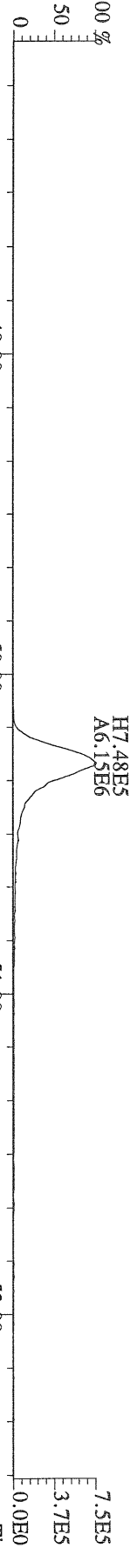
File:09JUL09M #1-348 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
443.7398 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



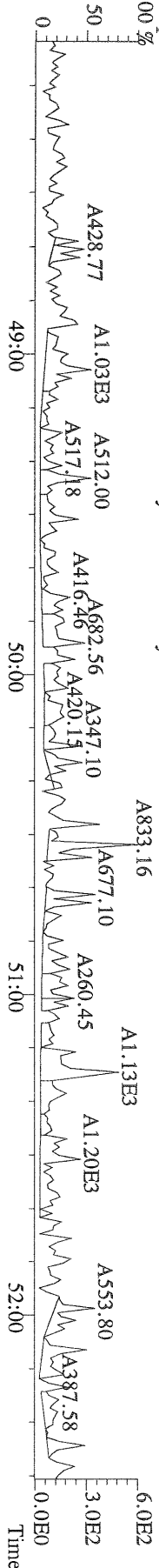
File:09JUL09M #1-348 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
453.7831 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



File:09JUL09M #1-348 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
455.7801 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory



File:09JUL09M #1-348 Acq:10-JUL-2009 00:37:52 GC EI+ Voltage SIR Autospec-Ultima  
513.6775 S:13 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:5557-009-0001-SA File Text:Frontier Analytical Laboratory




## Frontier Analytical Laboratory

Data Filename: 29JUN09M

Analyte: AIRFAL3-6-29-09

Cal: AIRFAL3-6-29-09

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	1.14	0.0770	6.74 %	1.26	1.20	1.16	1.08	1.08	1.08
1,2,3,7,8-PeCDD	1.14	0.0251	2.20 %	1.17	1.17	1.14	1.11	1.13	1.13
1,2,3,4,7,8-HxCDD	1.37	0.0662	4.82 %	1.49	1.41	1.34	1.31	1.35	1.34
1,2,3,6,7,8-HxCDD	1.24	0.0623	5.03 %	1.32	1.31	1.22	1.17	1.21	1.21
1,2,3,7,8,9-HxCDD	1.35	0.0672	4.98 %	1.44	1.44	1.30	1.30	1.32	1.32
1,2,3,4,6,7,8-HpCDD	1.15	0.0482	4.18 %	1.21	1.21	1.16	1.12	1.11	1.11
OCDD	1.43	0.0429	3.00 %	1.49	1.46	1.41	1.38	1.42	1.40
2,3,7,8-TCDF	1.14	0.0814	7.13 %	1.24	1.21	1.18	1.10	1.05	1.06
1,2,3,7,8-PeCDF	0.90	0.0261	2.89 %	0.95	0.92	0.88	0.89	0.89	0.89
2,3,4,7,8-PeCDF	0.86	0.0185	2.16 %	0.88	0.88	0.85	0.83	0.85	0.85
1,2,3,4,7,8-HxCDF	1.02	0.0310	3.04 %	1.06	1.05	1.00	0.97	1.02	1.02
1,2,3,6,7,8-HxCDF	1.04	0.0143	1.37 %	1.05	1.06	1.04	1.02	1.04	1.04
2,3,4,6,7,8-HxCDF	0.94	0.0331	3.51 %	0.97	0.98	0.92	0.89	0.94	0.95
1,2,3,7,8,9-HxCDF	0.88	0.0355	4.04 %	0.91	0.89	0.84	0.83	0.88	0.91
1,2,3,4,6,7,8-HpCDF	1.51	0.0232	1.54 %	1.49	1.54	1.50	1.48	1.51	1.52
1,2,3,4,7,8,9-HpCDF	1.11	0.0296	2.66 %	1.14	1.08	1.15	1.10	1.09	1.13
OCDF	0.87	0.0258	2.97 %	0.91	0.88	0.84	0.84	0.87	0.87
13C-2,3,7,8-TCDD	1.21	0.0159	1.31 %	1.21	1.19	1.21	1.20	1.23	1.22
13C-1,2,3,7,8-PeCDD	0.83	0.0344	4.13 %	0.81	0.79	0.82	0.84	0.84	0.89
13C-1,2,3,6,7,8-HxCDD	0.99	0.0163	1.64 %	0.98	0.98	1.02	1.01	0.99	0.99
13C-1,2,3,4,6,7,8-HpCDD	1.03	0.0166	1.61 %	1.04	1.03	1.05	1.03	1.01	1.01
13C-OCDD	0.64	0.0112	1.76 %	0.64	0.64	0.62	0.64	0.63	0.65
13C-2,3,7,8-TCDF	1.33	0.0145	1.09 %	1.32	1.33	1.33	1.31	1.33	1.36
13C-1,2,3,7,8-PeCDF	0.96	0.0587	6.09 %	0.90	0.91	0.94	0.97	1.00	1.06
13C-1,2,3,6,7,8-HxCDF	1.75	0.0283	1.62 %	1.75	1.73	1.76	1.80	1.75	1.72
13C-1,2,3,4,6,7,8-HpCDF	1.00	0.0267	2.67 %	1.03	1.02	0.96	0.99	0.98	1.02
13C-OCDF	1.11	0.0172	1.55 %	1.10	1.12	1.09	1.11	1.12	1.13
13C-1,2,3,7,8,9-HxCDF	1.40	0.0231	1.65 %	1.41	1.42	1.39	1.37	1.40	1.43
37Cl-2,3,7,8-TCDD	0.56	0.0131	2.35 %	0.54	0.58	0.57	0.55	0.55	0.55
13C-1,2,3,4,7,8-HxCDD	1.05	0.0179	1.71 %	1.03	1.07	1.05	1.03	1.07	1.06
13C-2,3,4,7,8-PeCDF	0.93	0.0207	2.22 %	0.89	0.94	0.95	0.94	0.93	0.94
13C-1,2,3,4,7,8-HxCDF	1.00	0.0264	2.65 %	0.99	1.02	1.03	0.97	0.98	0.97
13C-1,2,3,4,7,8,9-HpCDF	0.82	0.0329	3.99 %	0.79	0.84	0.88	0.82	0.81	0.81
13C-1,2,3,4-TCDD	-	-	- %	-	-	-	-	-	-
13C-1,2,3,4-TCDF	-	-	- %	-	-	-	-	-	-
13C-1,2,3,7,8,9-HxCDD	-	-	- %	-	-	-	-	-	-
Total Tetra-Dioxins	1.14	0.0770	6.74 %	1.26	1.20	1.16	1.08	1.08	1.08
Total Penta-Dioxins	1.14	0.0251	2.20 %	1.17	1.17	1.14	1.11	1.13	1.13
Total Hexa-Dioxins	1.32	0.0638	4.83 %	1.42	1.38	1.29	1.26	1.29	1.29
Total Hepta-Dioxins	1.15	0.0482	4.18 %	1.21	1.21	1.16	1.12	1.11	1.11
Total Tetra-Furans	1.14	0.0814	7.13 %	1.24	1.21	1.18	1.10	1.05	1.06
1st Fn. Tot Penta-Furans	0.88	0.0213	2.42 %	0.92	0.90	0.87	0.86	0.87	0.87
Total Penta-Furans	0.88	0.0213	2.42 %	0.92	0.90	0.87	0.86	0.87	0.87
Total Hexa-Furans	0.97	0.0266	2.74 %	0.99	1.00	0.95	0.93	0.97	0.98
Total Hepta-Furans	1.31	0.0151	1.15 %	1.31	1.31	1.33	1.29	1.30	1.32

Analyst: Date: 6/30/09

Run #1      Filename 29JUN09M  
Client ID: ST062909M0

S: 1

Acquired: 29-JUN-09 09:31:31

Cal: AIRFAL3-6-29-09

Analyte: AIR

FAL ID: AIR CS0 (090121F)

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	0.25	1.41e+05	0.67 y	27:31	-	1.26 y
2	Unk	1,2,3,7,8-PeCDD	1.25	4.37e+05	1.65 y	33:19	-	1.17 y
3	Unk	1,2,3,4,7,8-HxCDD	1.25	4.42e+05	1.30 y	38:41	-	1.49 y
4	Unk	1,2,3,6,7,8-HxCDD	1.25	3.93e+05	1.33 y	38:50	-	1.32 y
5	Unk	1,2,3,7,8,9-HxCDD	1.25	4.27e+05	1.32 y	39:18	-	1.44 y
6	Unk	1,2,3,4,6,7,8-HpCDD	1.25	3.85e+05	0.99 y	44:17	-	1.21 y
7	Unk	OCDD	2.50	5.84e+05	0.88 y	49:51	-	1.49 y
8	Unk	2,3,7,8-TCDF	0.25	2.53e+05	0.67 y	26:47	-	1.24 y
9	Unk	1,2,3,7,8-PeCDF	1.25	6.58e+05	1.50 y	31:36	-	0.951 y
10	Unk	2,3,4,7,8-PeCDF	1.25	6.10e+05	1.48 y	32:54	-	0.881 y
11	Unk	1,2,3,4,7,8-HxCDF	1.25	5.59e+05	1.25 y	37:17	-	1.06 y
12	Unk	1,2,3,6,7,8-HxCDF	1.25	5.53e+05	1.25 y	37:30	-	1.05 y
13	Unk	2,3,4,6,7,8-HxCDF	1.25	5.13e+05	1.27 y	38:26	-	0.969 y
14	Unk	1,2,3,7,8,9-HxCDF	1.25	4.80e+05	1.24 y	39:52	-	0.908 y
15	Unk	1,2,3,4,6,7,8-HpCDF	1.25	4.66e+05	1.06 y	42:23	-	1.49 y
16	Unk	1,2,3,4,7,8,9-HpCDF	1.25	3.57e+05	1.09 y	45:12	-	1.14 y
17	Unk	OCDF	2.50	6.05e+05	0.90 y	50:14	-	0.909 y
18	IS/RT	13C-2,3,7,8-TCDD	100.00	4.47e+07	0.79 y	27:30	-	1.21 y
19	IS	13C-1,2,3,7,8-PeCDD	100.00	2.99e+07	1.72 y	33:18	-	0.806 y
20	IS	13C-1,2,3,6,7,8-HxCDD	100.00	2.37e+07	1.25 y	38:49	-	0.979 y
21	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	2.53e+07	1.05 y	44:16	-	1.04 y
22	IS	13C-OCDD	200.00	3.13e+07	0.90 y	49:50	-	0.645 y
23	IS	13C-2,3,7,8-TCDF	100.00	8.14e+07	0.84 y	26:45	-	1.32 y
24	IS	13C-1,2,3,7,8-PeCDF	100.00	5.54e+07	1.68 y	31:35	-	0.901 y
25	IS	13C-1,2,3,6,7,8-HxCDF	100.00	4.23e+07	0.53 y	37:28	-	1.75 y
26	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	2.51e+07	0.46 y	42:22	-	1.03 y
27	IS	13C-OCDF	200.00	5.32e+07	0.95 y	50:13	-	1.10 y
28	C/Up	13C-1,2,3,7,8,9-HxCDF	100.00	3.41e+07	0.53 y	39:50	-	1.41 y
29	PSS	37Cl-2,3,7,8-TCDD	40.00	9.72e+06		27:31	-	0.544 y
30	PSS	13C-1,2,3,4,7,8-HxCDD	40.00	9.80e+06	1.24 y	38:39	-	1.03 y
31	PSS	13C-2,3,4,7,8-PeCDF	40.00	1.97e+07	1.69 y	32:53	-	0.891 y
32	PSS	13C-1,2,3,4,7,8-HxCDF	40.00	1.68e+07	0.55 y	37:16	-	0.991 y
33	PSS	13C-1,2,3,4,7,8,9-HpCDF	40.00	7.92e+06	0.47 y	45:11	-	0.790 y
34	RS	13C-1,2,3,4-TCDD	100.00	3.70e+07	0.79 y	26:56	3.70e+05	- n
35	RS	13C-1,2,3,4-TCDF	100.00	6.14e+07	0.85 y	25:40	6.14e+05	- n
36	RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	2.43e+07	1.26 y	39:16	2.43e+05	- n
37	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.26 y
38	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	1.17 y
39	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.42 y
40	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.21 y
41	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.24 y
42	Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.916 y
43	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.916 y
44	Tot	Total Hexa-Furans	0.00	-	- n	-	-	0.995 y
45	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.31 y

Analyst: 

Date: 6/30/09

Run #2      Filename 29JUN09M  
Client ID: ST062909M1

S: 2

Acquired: 29-JUN-09 10:26:46

Cal: AIRFAL3-6-29-09

Analyte: AIR

FAL ID: AIR CS1 (090121G)

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	0.50	2.39e+05	0.75 y	27:31	-	1.20 y
2	Unk	1,2,3,7,8-PeCDD	2.50	7.78e+05	1.62 y	33:19	-	1.17 y
3	Unk	1,2,3,4,7,8-HxCDD	2.50	7.73e+05	1.29 y	38:41	-	1.41 y
4	Unk	1,2,3,6,7,8-HxCDD	2.50	7.19e+05	1.29 y	38:51	-	1.31 y
5	Unk	1,2,3,7,8,9-HxCDD	2.50	7.88e+05	1.30 y	39:18	-	1.44 y
6	Unk	1,2,3,4,6,7,8-HpCDD	2.50	7.00e+05	1.01 y	44:18	-	1.21 y
7	Unk	OCDD	5.00	1.05e+06	0.88 y	49:52	-	1.46 y
8	Unk	2,3,7,8-TCDF	0.50	4.35e+05	0.69 y	26:46	-	1.21 y
9	Unk	1,2,3,7,8-PeCDF	2.50	1.14e+06	1.50 y	31:35	-	0.919 y
10	Unk	2,3,4,7,8-PeCDF	2.50	1.08e+06	1.52 y	32:54	-	0.876 y
11	Unk	1,2,3,4,7,8-HxCDF	2.50	1.02e+06	1.31 y	37:18	-	1.05 y
12	Unk	1,2,3,6,7,8-HxCDF	2.50	1.03e+06	1.27 y	37:29	-	1.06 y
13	Unk	2,3,4,6,7,8-HxCDF	2.50	9.41e+05	1.26 y	38:26	-	0.976 y
14	Unk	1,2,3,7,8,9-HxCDF	2.50	8.59e+05	1.32 y	39:52	-	0.891 y
15	Unk	1,2,3,4,6,7,8-HpCDF	2.50	8.75e+05	1.08 y	42:23	-	1.54 y
16	Unk	1,2,3,4,7,8,9-HpCDF	2.50	6.14e+05	1.11 y	45:13	-	1.08 y
17	Unk	OCDF	5.00	1.10e+06	0.87 y	50:14	-	0.882 y
18	IS/RT	13C-2,3,7,8-TCDD	100.00	3.97e+07	0.79 y	27:30	-	1.19 y
19	IS	13C-1,2,3,7,8-PeCDD	100.00	2.65e+07	1.72 y	33:18	-	0.792 y
20	IS	13C-1,2,3,6,7,8-HxCDD	100.00	2.20e+07	1.26 y	38:50	-	0.984 y
21	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	2.31e+07	1.07 y	44:15	-	1.03 y
22	IS	13C-OCDD	200.00	2.86e+07	0.91 y	49:52	-	0.641 y
23	IS	13C-2,3,7,8-TCDF	100.00	7.17e+07	0.84 y	26:45	-	1.33 y
24	IS	13C-1,2,3,7,8-PeCDF	100.00	4.94e+07	1.65 y	31:34	-	0.914 y
25	IS	13C-1,2,3,6,7,8-HxCDF	100.00	3.86e+07	0.53 y	37:28	-	1.73 y
26	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	2.27e+07	0.46 y	42:21	-	1.02 y
27	IS	13C-OCDF	200.00	5.00e+07	0.94 y	50:13	-	1.12 y
28	C/Up	13C-1,2,3,7,8,9-HxCDF	100.00	3.17e+07	0.53 y	39:50	-	1.42 y
29	PSS	37Cl-2,3,7,8-TCDD	60.00	1.37e+07		27:31	-	0.576 y
30	PSS	13C-1,2,3,4,7,8-HxCDD	60.00	1.41e+07	1.28 y	38:40	-	1.07 y
31	PSS	13C-2,3,4,7,8-PeCDF	60.00	2.80e+07	1.67 y	32:53	-	0.943 y
32	PSS	13C-1,2,3,4,7,8-HxCDF	60.00	2.37e+07	0.54 y	37:16	-	1.02 y
33	PSS	13C-1,2,3,4,7,8,9-HpCDF	60.00	1.14e+07	0.46 y	45:11	-	0.837 y
34	RS	13C-1,2,3,4-TCDD	100.00	3.34e+07	0.81 y	26:55	3.34e+05	- n
35	RS	13C-1,2,3,4-TCDF	100.00	5.41e+07	0.83 y	25:40	5.41e+05	- n
36	RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	2.23e+07	1.26 y	39:16	2.23e+05	- n
37	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.20 y
38	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	1.17 y
39	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.38 y
40	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.21 y
41	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.21 y
42	Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.897 y
43	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.897 y
44	Tot	Total Hexa-Furans	0.00	-	- n	-	-	0.996 y
45	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.31 y

Analyst: 

Date: 6/30/09



Run #3      Filename 29JUN09M  
Client ID: ST062909M2

S: 3

Acquired: 29-JUN-09 11:22:08

Cal: AIRFAL3-6-29-09

Analyte: AIR

FAL ID: AIR CS2 (090121H)

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	1.00	5.45e+05	0.73 y	27:32	-	1.16 y
2	Unk	1,2,3,7,8-PeCDD	5.00	1.81e+06	1.65 y	33:19	-	1.14 y
3	Unk	1,2,3,4,7,8-HxCDD	5.00	1.78e+06	1.33 y	38:41	-	1.34 y
4	Unk	1,2,3,6,7,8-HxCDD	5.00	1.62e+06	1.33 y	38:51	-	1.22 y
5	Unk	1,2,3,7,8,9-HxCDD	5.00	1.72e+06	1.27 y	39:17	-	1.30 y
6	Unk	1,2,3,4,6,7,8-HpCDD	5.00	1.58e+06	1.04 y	44:18	-	1.16 y
7	Unk	OCDD	10.00	2.29e+06	0.91 y	49:52	-	1.41 y
8	Unk	2,3,7,8-TCDF	1.00	9.92e+05	0.71 y	26:45	-	1.18 y
9	Unk	1,2,3,7,8-PeCDF	5.00	2.62e+06	1.51 y	31:36	-	0.879 y
10	Unk	2,3,4,7,8-PeCDF	5.00	2.54e+06	1.51 y	32:54	-	0.854 y
11	Unk	1,2,3,4,7,8-HxCDF	5.00	2.31e+06	1.27 y	37:18	-	1.00 y
12	Unk	1,2,3,6,7,8-HxCDF	5.00	2.40e+06	1.28 y	37:29	-	1.04 y
13	Unk	2,3,4,6,7,8-HxCDF	5.00	2.13e+06	1.28 y	38:26	-	0.924 y
14	Unk	1,2,3,7,8,9-HxCDF	5.00	1.94e+06	1.27 y	39:52	-	0.844 y
15	Unk	1,2,3,4,6,7,8-HpCDF	5.00	1.89e+06	1.09 y	42:23	-	1.50 y
16	Unk	1,2,3,4,7,8,9-HpCDF	5.00	1.45e+06	1.09 y	45:12	-	1.15 y
17	Unk	OCDF	10.00	2.38e+06	0.90 y	50:14	-	0.839 y
18	IS/RT	13C-2,3,7,8-TCDD	100.00	4.70e+07	0.80 y	27:29	-	1.21 y
19	IS	13C-1,2,3,7,8-PeCDD	100.00	3.19e+07	1.74 y	33:18	-	0.822 y
20	IS	13C-1,2,3,6,7,8-HxCDD	100.00	2.65e+07	1.28 y	38:50	-	1.02 y
21	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	2.73e+07	1.07 y	44:16	-	1.05 y
22	IS	13C-OCDD	200.00	3.24e+07	0.90 y	49:51	-	0.621 y
23	IS	13C-2,3,7,8-TCDF	100.00	8.43e+07	0.84 y	26:44	-	1.33 y
24	IS	13C-1,2,3,7,8-PeCDF	100.00	5.96e+07	1.67 y	31:34	-	0.940 y
25	IS	13C-1,2,3,6,7,8-HxCDF	100.00	4.60e+07	0.54 y	37:29	-	1.76 y
26	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	2.52e+07	0.47 y	42:22	-	0.964 y
27	IS	13C-OCDF	200.00	5.68e+07	0.94 y	50:13	-	1.09 y
28	C/Up	13C-1,2,3,7,8,9-HxCDF	100.00	3.62e+07	0.53 y	39:50	-	1.39 y
29	PSS	37Cl-2,3,7,8-TCDD	80.00	2.14e+07		27:30	-	0.569 y
30	PSS	13C-1,2,3,4,7,8-HxCDD	80.00	2.23e+07	1.27 y	38:40	-	1.05 y
31	PSS	13C-2,3,4,7,8-PeCDF	80.00	4.52e+07	1.67 y	32:53	-	0.949 y
32	PSS	13C-1,2,3,4,7,8-HxCDF	80.00	3.81e+07	0.53 y	37:16	-	1.03 y
33	PSS	13C-1,2,3,4,7,8,9-HpCDF	80.00	1.78e+07	0.45 y	45:11	-	0.884 y
34	RS	13C-1,2,3,4-TCDD	100.00	3.88e+07	0.80 y	26:55	3.88e+05	- n
35	RS	13C-1,2,3,4-TCDF	100.00	6.34e+07	0.84 y	25:40	6.34e+05	- n
36	RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	2.61e+07	1.26 y	39:16	2.61e+05	- n
37	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.16 y
38	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	1.14 y
39	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.29 y
40	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.16 y
41	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.18 y
42	Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.866 y
43	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.866 y
44	Tot	Total Hexa-Furans	0.00	-	- n	-	-	0.954 y
45	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.33 y


Analyst: 

Date: 6/30/09

Run #4      Filename 29JUN09M  
Client ID: ST062909M3

S: 4      Acquired: 29-JUN-09 12:17:27      Cal: AIRFAL3-6-29-09  
Analyte: AIR      FAL ID: AIR CS3 (0612281)

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	5.00	2.80e+06	0.74 y	27:30	-	1.08 y
2	Unk	1,2,3,7,8-PeCDD	25.00	1.00e+07	1.60 y	33:19	-	1.11 y
3	Unk	1,2,3,4,7,8-HxCDD	25.00	1.01e+07	1.32 y	38:40	-	1.31 y
4	Unk	1,2,3,6,7,8-HxCDD	25.00	8.98e+06	1.32 y	38:50	-	1.17 y
5	Unk	1,2,3,7,8,9-HxCDD	25.00	9.98e+06	1.32 y	39:18	-	1.30 y
6	Unk	1,2,3,4,6,7,8-HpCDD	25.00	8.76e+06	1.00 y	44:17	-	1.12 y
7	Unk	OCDD	50.00	1.34e+07	0.89 y	49:51	-	1.38 y
8	Unk	2,3,7,8-TCDF	5.00	5.02e+06	0.68 y	26:45	-	1.10 y
9	Unk	1,2,3,7,8-PeCDF	25.00	1.50e+07	1.55 y	31:35	-	0.893 y
10	Unk	2,3,4,7,8-PeCDF	25.00	1.40e+07	1.54 y	32:54	-	0.833 y
11	Unk	1,2,3,4,7,8-HxCDF	25.00	1.33e+07	1.29 y	37:18	-	0.975 y
12	Unk	1,2,3,6,7,8-HxCDF	25.00	1.39e+07	1.28 y	37:29	-	1.02 y
13	Unk	2,3,4,6,7,8-HxCDF	25.00	1.21e+07	1.29 y	38:25	-	0.886 y
14	Unk	1,2,3,7,8,9-HxCDF	25.00	1.12e+07	1.28 y	39:52	-	0.826 y
15	Unk	1,2,3,4,6,7,8-HpCDF	25.00	1.11e+07	1.08 y	42:22	-	1.48 y
16	Unk	1,2,3,4,7,8,9-HpCDF	25.00	8.20e+06	1.10 y	45:12	-	1.10 y
17	Unk	OCDF	50.00	1.41e+07	0.91 y	50:14	-	0.843 y
18	IS/RT	13C-2,3,7,8-TCDD	100.00	5.19e+07	0.80 y	27:29	-	1.20 y
19	IS	13C-1,2,3,7,8-PeCDD	100.00	3.61e+07	1.71 y	33:17	-	0.835 y
20	IS	13C-1,2,3,6,7,8-HxCDD	100.00	3.07e+07	1.27 y	38:50	-	1.01 y
21	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	3.13e+07	1.06 y	44:15	-	1.03 y
22	IS	13C-OCDD	200.00	3.89e+07	0.92 y	49:50	-	0.642 y
23	IS	13C-2,3,7,8-TCDF	100.00	9.13e+07	0.83 y	26:44	-	1.31 y
24	IS	13C-1,2,3,7,8-PeCDF	100.00	6.72e+07	1.66 y	31:33	-	0.967 y
25	IS	13C-1,2,3,6,7,8-HxCDF	100.00	5.45e+07	0.54 y	37:28	-	1.80 y
26	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	2.99e+07	0.46 y	42:22	-	0.988 y
27	IS	13C-OCDF	200.00	6.70e+07	0.94 y	50:12	-	1.11 y
28	C/Up	13C-1,2,3,7,8,9-HxCDF	100.00	4.13e+07	0.54 y	39:50	-	1.37 y
29	PSS	37Cl-2,3,7,8-TCDD	100.00	2.83e+07		27:30	-	0.546 y
30	PSS	13C-1,2,3,4,7,8-HxCDD	100.00	3.16e+07	1.28 y	38:39	-	1.03 y
31	PSS	13C-2,3,4,7,8-PeCDF	100.00	6.29e+07	1.66 y	32:52	-	0.936 y
32	PSS	13C-1,2,3,4,7,8-HxCDF	100.00	5.29e+07	0.54 y	37:16	-	0.970 y
33	PSS	13C-1,2,3,4,7,8,9-HpCDF	100.00	2.45e+07	0.47 y	45:10	-	0.818 y
34	RS	13C-1,2,3,4-TCDD	100.00	4.32e+07	0.81 y	26:55	4.32e+05	- n
35	RS	13C-1,2,3,4-TCDF	100.00	6.95e+07	0.84 y	25:39	6.95e+05	- n
36	RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	3.03e+07	1.27 y	39:16	3.03e+05	- n
37	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.08 y
38	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	1.11 y
39	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.26 y
40	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.12 y
41	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.10 y
42	Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.863 y
43	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.863 y
44	Tot	Total Hexa-Furans	0.00	-	- n	-	-	0.927 y
45	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.29 y

Analyst: 

Date: 6/30/09

Run #5      Filename 29JUN09M  
Client ID: ST062909M4

S: 5      Acquired: 29-JUN-09 13:12:53      Cal: AIRFAL3-6-29-09  
Analyte: AIR      FAL ID: AIR CS4 (090121K)


	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	50.00	3.06e+07	0.76 y	27:31	-	1.08 y
2	Unk	1,2,3,7,8-PeCDD	250.00	1.10e+08	1.60 y	33:20	-	1.13 y
3	Unk	1,2,3,4,7,8-HxCDD	250.00	1.12e+08	1.33 y	38:41	-	1.35 y
4	Unk	1,2,3,6,7,8-HxCDD	250.00	9.99e+07	1.32 y	38:51	-	1.21 y
5	Unk	1,2,3,7,8,9-HxCDD	250.00	1.09e+08	1.31 y	39:18	-	1.32 y
6	Unk	1,2,3,4,6,7,8-HpCDD	250.00	9.39e+07	1.02 y	44:17	-	1.11 y
7	Unk	OCDD	500.00	1.48e+08	0.88 y	49:52	-	1.42 y
8	Unk	2,3,7,8-TCDF	50.00	5.15e+07	0.69 y	26:45	-	1.05 y
9	Unk	1,2,3,7,8-PeCDF	250.00	1.65e+08	1.55 y	31:35	-	0.891 y
10	Unk	2,3,4,7,8-PeCDF	250.00	1.56e+08	1.55 y	32:54	-	0.846 y
11	Unk	1,2,3,4,7,8-HxCDF	250.00	1.49e+08	1.28 y	37:17	-	1.02 y
12	Unk	1,2,3,6,7,8-HxCDF	250.00	1.51e+08	1.29 y	37:30	-	1.04 y
13	Unk	2,3,4,6,7,8-HxCDF	250.00	1.37e+08	1.28 y	38:26	-	0.942 y
14	Unk	1,2,3,7,8,9-HxCDF	250.00	1.29e+08	1.27 y	39:52	-	0.883 y
15	Unk	1,2,3,4,6,7,8-HpCDF	250.00	1.24e+08	1.09 y	42:23	-	1.51 y
16	Unk	1,2,3,4,7,8,9-HpCDF	250.00	8.98e+07	1.10 y	45:12	-	1.09 y
17	Unk	OCDF	500.00	1.62e+08	0.90 y	50:14	-	0.867 y
18	IS/RT	13C-2,3,7,8-TCDD	100.00	5.68e+07	0.80 y	27:30	-	1.23 y
19	IS	13C-1,2,3,7,8-PeCDD	100.00	3.89e+07	1.70 y	33:18	-	0.844 y
20	IS	13C-1,2,3,6,7,8-HxCDD	100.00	3.30e+07	1.28 y	38:50	-	0.987 y
21	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	3.37e+07	1.06 y	44:16	-	1.01 y
22	IS	13C-OCDD	200.00	4.19e+07	0.90 y	49:51	-	0.627 y
23	IS	13C-2,3,7,8-TCDF	100.00	9.79e+07	0.83 y	26:44	-	1.33 y
24	IS	13C-1,2,3,7,8-PeCDF	100.00	7.39e+07	1.67 y	31:34	-	1.00 y
25	IS	13C-1,2,3,6,7,8-HxCDF	100.00	5.83e+07	0.54 y	37:28	-	1.75 y
26	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	3.29e+07	0.46 y	42:22	-	0.985 y
27	IS	13C-OCDF	200.00	7.49e+07	0.94 y	50:13	-	1.12 y
28	C/Up	13C-1,2,3,7,8,9-HxCDF	100.00	4.69e+07	0.54 y	39:50	-	1.40 y
29	PSS	37Cl-2,3,7,8-TCDD	120.00	3.77e+07		27:31	-	0.553 y
30	PSS	13C-1,2,3,4,7,8-HxCDD	120.00	4.24e+07	1.27 y	38:40	-	1.07 y
31	PSS	13C-2,3,4,7,8-PeCDF	120.00	8.26e+07	1.64 y	32:52	-	0.932 y
32	PSS	13C-1,2,3,4,7,8-HxCDF	120.00	6.87e+07	0.54 y	37:16	-	0.981 y
33	PSS	13C-1,2,3,4,7,8,9-HpCDF	120.00	3.19e+07	0.46 y	45:11	-	0.807 y
34	RS	13C-1,2,3,4-TCDD	100.00	4.60e+07	0.82 y	26:55	4.60e+05	- n
35	RS	13C-1,2,3,4-TCDF	100.00	7.37e+07	0.83 y	25:40	7.37e+05	- n
36	RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	3.34e+07	1.27 y	39:16	3.34e+05	- n
37	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.08 y
38	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	1.13 y
39	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.29 y
40	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.11 y
41	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.05 y
42	Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.868 y
43	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.868 y
44	Tot	Total Hexa-Furans	0.00	-	- n	-	-	0.971 y
45	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.30 y

Analyst: 

Date: 6/30/09

Run #6      Filename 29JUN09M      S: 6      Acquired: 29-JUN-09 14:08:16      Cal: AIRFAL3-6-29-09  
 Client ID: ST062909M5      Analyte: AIRFAL3-6-29-09      FAL ID: AIR CS5 (090121L)

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	100.00	6.86e+07	0.74 y	27:30	-	1.08 y
2	Unk	1,2,3,7,8-PeCDD	500.00	2.62e+08	1.60 y	33:19	-	1.13 y
3	Unk	1,2,3,4,7,8-HxCDD	500.00	2.68e+08	1.34 y	38:41	-	1.34 y
4	Unk	1,2,3,6,7,8-HxCDD	500.00	2.41e+08	1.33 y	38:51	-	1.21 y
5	Unk	1,2,3,7,8,9-HxCDD	500.00	2.63e+08	1.32 y	39:17	-	1.32 y
6	Unk	1,2,3,4,6,7,8-HpCDD	500.00	2.27e+08	1.02 y	44:17	-	1.11 y
7	Unk	OCDD	1000.00	3.68e+08	0.89 y	49:52	-	1.40 y
8	Unk	2,3,7,8-TCDF	100.00	1.18e+08	0.69 y	26:45	-	1.06 y
9	Unk	1,2,3,7,8-PeCDF	500.00	3.87e+08	1.56 y	31:35	-	0.894 y
10	Unk	2,3,4,7,8-PeCDF	500.00	3.68e+08	1.55 y	32:54	-	0.850 y
11	Unk	1,2,3,4,7,8-HxCDF	500.00	3.53e+08	1.29 y	37:17	-	1.02 y
12	Unk	1,2,3,6,7,8-HxCDF	500.00	3.61e+08	1.29 y	37:30	-	1.04 y
13	Unk	2,3,4,6,7,8-HxCDF	500.00	3.31e+08	1.29 y	38:25	-	0.950 y
14	Unk	1,2,3,7,8,9-HxCDF	500.00	3.18e+08	1.29 y	39:51	-	0.914 y
15	Unk	1,2,3,4,6,7,8-HpCDF	500.00	3.15e+08	1.07 y	42:23	-	1.52 y
16	Unk	1,2,3,4,7,8,9-HpCDF	500.00	2.34e+08	1.08 y	45:11	-	1.13 y
17	Unk	OCDF	1000.00	3.99e+08	0.90 y	50:14	-	0.869 y
18	IS/RT	13C-2,3,7,8-TCDD	100.00	6.37e+07	0.82 y	27:29	-	1.22 y
19	IS	13C-1,2,3,7,8-PeCDD	100.00	4.64e+07	1.71 y	33:18	-	0.891 y
20	IS	13C-1,2,3,6,7,8-HxCDD	100.00	4.00e+07	1.26 y	38:49	-	0.988 y
21	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	4.09e+07	1.06 y	44:16	-	1.01 y
22	IS	13C-OCDD	200.00	5.26e+07	0.89 y	49:51	-	0.650 y
23	IS	13C-2,3,7,8-TCDF	100.00	1.11e+08	0.83 y	26:44	-	1.36 y
24	IS	13C-1,2,3,7,8-PeCDF	100.00	8.66e+07	1.66 y	31:34	-	1.06 y
25	IS	13C-1,2,3,6,7,8-HxCDF	100.00	6.96e+07	0.54 y	37:28	-	1.72 y
26	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	4.15e+07	0.46 y	42:22	-	1.02 y
27	IS	13C-OCDF	200.00	9.19e+07	0.93 y	50:14	-	1.13 y
28	C/Up	13C-1,2,3,7,8,9-HxCDF	100.00	5.78e+07	0.54 y	39:50	-	1.43 y
29	PSS	37Cl-2,3,7,8-TCDD	140.00	4.90e+07		27:30	-	0.550 y
30	PSS	13C-1,2,3,4,7,8-HxCDD	140.00	5.93e+07	1.27 y	38:39	-	1.06 y
31	PSS	13C-2,3,4,7,8-PeCDF	140.00	1.13e+08	1.64 y	32:52	-	0.936 y
32	PSS	13C-1,2,3,4,7,8-HxCDF	140.00	9.49e+07	0.54 y	37:16	-	0.974 y
33	PSS	13C-1,2,3,4,7,8,9-HpCDF	140.00	4.72e+07	0.46 y	45:11	-	0.813 y
34	RS	13C-1,2,3,4-TCDD	100.00	5.21e+07	0.81 y	26:54	5.21e+05	- n
35	RS	13C-1,2,3,4-TCDF	100.00	8.19e+07	0.84 y	25:39	8.19e+05	- n
36	RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	4.05e+07	1.26 y	39:16	4.05e+05	- n
37	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.08 y
38	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	1.13 y
39	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.29 y
40	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.11 y
41	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.06 y
42	Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.872 y
43	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.872 y
44	Tot	Total Hexa-Furans	0.00	-	- n	-	-	0.979 y
45	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.32 y

Analyst: 

Date: 6/30/09

## USEPA - ITD

## AIR FORM 3A

## PCDD/PCDF INITIAL CALIBRATION RELATIVE RESPONSES

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 6/29/09

Instrument ID: FAL3


GC Column ID: DB5

CS0 Data Filename: 29JUN09M S1 CS3 Data Filename: 29JUN09M S4

CS1 Data Filename: 29JUN09M S2 CS4 Data Filename: 29JUN09M S5

CS2 Data Filename: 29JUN09M S3 CS5 Data Filename: 29JUN09M S6

	RELATIVE RESPONSE (RR)						MEAN RR	Cv (%RSD)
	CS1	CS2	CS3	CS4	CS5	CS6		
NATIVE ANALYTES								
2,3,7,8-TCDD	1.26	1.20	1.16	1.08	1.08	1.08	1.14	6.74
1,2,3,7,8-PeCDD	1.17	1.17	1.14	1.11	1.13	1.13	1.14	2.20
1,2,3,4,7,8-HxCDD	1.49	1.41	1.34	1.31	1.35	1.34	1.37	4.82
1,2,3,6,7,8-HxCDD	1.32	1.31	1.22	1.17	1.21	1.21	1.24	5.03
1,2,3,7,8,9-HxCDD	1.44	1.44	1.30	1.30	1.32	1.32	1.35	4.98
1,2,3,4,6,7,8-HpCDD	1.21	1.21	1.16	1.12	1.11	1.11	1.15	4.18
OCDD	1.49	1.46	1.41	1.38	1.42	1.40	1.43	3.00
2,3,7,8-TCDF	1.24	1.21	1.18	1.10	1.05	1.06	1.14	7.13
1,2,3,7,8-PeCDF	0.95	0.92	0.88	0.89	0.89	0.89	0.90	2.89
2,3,4,7,8-PeCDF	0.88	0.88	0.85	0.83	0.85	0.85	0.86	2.16
1,2,3,4,7,8-HxCDF	1.06	1.05	1.00	0.97	1.02	1.02	1.02	3.04
1,2,3,6,7,8-HxCDF	1.05	1.06	1.04	1.02	1.04	1.04	1.04	1.37
2,3,4,6,7,8-HxCDF	0.97	0.98	0.92	0.89	0.94	0.95	0.94	3.51
1,2,3,7,8,9-HxCDF	0.91	0.89	0.84	0.83	0.88	0.91	0.88	4.04
1,2,3,4,6,7,8-HpCDF	1.49	1.54	1.50	1.48	1.51	1.52	1.51	1.54
1,2,3,4,7,8,9-HpCDF	1.14	1.08	1.15	1.10	1.09	1.13	1.11	2.66
OCDF	0.91	0.88	0.84	0.84	0.87	0.87	0.87	2.97

Analyst: Date: 6/30/09

## PCDD/PCDF INITIAL CALIBRATION RELATIVE RESPONSES

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 6/29/09

Instrument ID: FAL3

GC Column ID: DB5

CS0 Data Filename: 29JUN09M S1 CS4 Data Filename: 29JUN09M S4

CS1 Data Filename: 29JUN09M S2 CS4 Data Filename: 29JUN09M S5

CS2 Data Filename: 29JUN09M S3 CS5 Data Filename: 29JUN09M S6

## RELATIVE RESPONSE (RR)

MEAN  
RR Cv  
(%RSD)

CS1 CS2 CS3 CS4 CS5 CS6

## INTERNAL STANDARDS


13C-2,3,7,8-TCDD	1.21	1.19	1.21	1.20	1.23	1.22	1.21	1.31
13C-1,2,3,7,8-PeCDD	0.81	0.79	0.82	0.84	0.84	0.89	0.83	4.13
13C-1,2,3,6,7,8-HxCDD	0.98	0.98	1.02	1.01	0.99	0.99	0.99	1.64
13C-1,2,3,4,6,7,8-HpCDD	1.04	1.03	1.05	1.03	1.01	1.01	1.03	1.61
13C-OCDD	0.64	0.64	0.62	0.64	0.63	0.65	0.64	1.76
13C-2,3,7,8-TCDF	1.32	1.33	1.33	1.31	1.33	1.36	1.33	1.09
13C-1,2,3,7,8-PeCDF	0.90	0.91	0.94	0.97	1.00	1.06	0.96	6.09
13C-1,2,3,6,7,8-HxCDF	1.75	1.73	1.76	1.80	1.75	1.72	1.75	1.62
13C-1,2,3,4,6,7,8-HpCDF	1.03	1.02	0.96	0.99	0.98	1.02	1.00	2.67
13C-OCDF	1.10	1.12	1.09	1.11	1.12	1.13	1.11	1.55

## CLEANUP STANDARD

13C-1,2,3,7,8,9-HxCDF	1.41	1.42	1.39	1.37	1.40	1.43	1.40	1.65
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## PRE-SPIKE STANDARDS

37Cl-2,3,7,8-TCDD	0.54	0.58	0.57	0.55	0.55	0.55	0.56	2.35
13C-1,2,3,4,7,8-HxCDD	1.03	1.07	1.05	1.03	1.07	1.06	1.05	1.71
13C-2,3,4,7,8-PeCDF	0.89	0.94	0.95	0.94	0.93	0.94	0.93	2.22
13C-1,2,3,4,7,8-HxCDF	0.99	1.02	1.03	0.97	0.98	0.97	1.00	2.65
13C-1,2,3,4,7,8,9-HpCDF	0.79	0.84	0.88	0.82	0.81	0.81	0.82	3.99

Analyst: 

Date: 6/30/09

## PCDD/PCDF INITIAL CALIBRATION ION ABUNDANCE RATIOS

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 6/29/09

Instrument ID: FAL3


GC Column ID: DB5

CS0 Data Filename: 29JUN09M S1 CS3 Data Filename: 29JUN09M S4

CS1 Data Filename: 29JUN09M S2 CS4 Data Filename: 29JUN09M S5

CS2 Data Filename: 29JUN09M S3 CS5 Data Filename: 29JUN09M S6

	M/Z'S FORMING RATIO	ION ABUNDANCE RATIOS						QC LIMITS
		CS1	CS2	CS3	CS4	CS5	CS6	
NATIVE ANALYTES								
2,3,7,8-TCDD	M/M+2	0.67	0.75	0.73	0.74	0.76	0.74	0.65-0.89
1,2,3,7,8-PeCDD	M+2/M+4	1.65	1.62	1.65	1.60	1.60	1.60	1.32-1.78
1,2,3,4,7,8-HxCDD	M+2/M+4	1.30	1.29	1.33	1.32	1.33	1.34	1.05-1.43
1,2,3,6,7,8-HxCDD	M+2/M+4	1.33	1.29	1.33	1.32	1.32	1.33	1.05-1.43
1,2,3,7,8,9-HxCDD	M+2/M+4	1.32	1.30	1.27	1.32	1.31	1.32	1.05-1.43
1,2,3,4,6,7,8-HpCDD	M+2/M+4	0.99	1.01	1.04	1.00	1.02	1.02	0.88-1.20
OCDD	M+2/M+4	0.88	0.88	0.91	0.89	0.88	0.89	0.76-1.02
2,3,7,8-TCDF	M/M+2	0.67	0.69	0.71	0.68	0.69	0.69	0.65-0.89
1,2,3,7,8-PeCDF	M+2/M+4	1.50	1.50	1.51	1.55	1.55	1.56	1.32-1.78
2,3,4,7,8-PeCDF	M+2/M+4	1.48	1.52	1.51	1.54	1.55	1.55	1.32-1.78
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.31	1.27	1.29	1.28	1.29	1.05-1.43
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.27	1.28	1.28	1.29	1.29	1.05-1.43
2,3,4,6,7,8-HxCDF	M+2/M+4	1.27	1.26	1.28	1.29	1.28	1.29	1.05-1.43
1,2,3,7,8,9-HxCDF	M+2/M+4	1.24	1.32	1.27	1.28	1.27	1.29	1.05-1.43
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.06	1.08	1.09	1.08	1.09	1.07	0.88-1.20
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.09	1.11	1.09	1.10	1.10	1.08	0.88-1.20
OCDF	M+2/M+4	0.90	0.87	0.90	0.91	0.90	0.90	0.76-1.02

Analyst: Date: 6/30/09

## AIR FORM 3D

## PCDD/PCDF INITIAL CALIBRATION ION ABUNDANCE RATIOS

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 6/29/09

Instrument ID: FAL3

GC Column ID: DB5

CS0 Data Filename: 29JUN09M S1 CS3 Data Filename: 29JUN09M S4

CS1 Data Filename: 29JUN09M S2 CS4 Data Filename: 29JUN09M S5

CS2 Data Filename: 29JUN09M S3 CS5 Data Filename: 29JUN09M S6

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

## INTERNAL STANDARDS


13C-2,3,7,8-TCDD	M/M+2	0.79	0.79	0.80	0.80	0.80	0.82	0.65-0.89
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.72	1.72	1.74	1.71	1.70	1.71	1.32-1.78
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.26	1.28	1.27	1.28	1.26	1.05-1.43
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	1.07	1.07	1.06	1.06	1.06	0.88-1.20
13C-OCDD	M+2/M+4	0.90	0.91	0.90	0.92	0.90	0.89	0.76-1.02
13C-2,3,7,8-TCDF	M/M+2	0.84	0.84	0.84	0.83	0.83	0.83	0.65-0.89
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.68	1.65	1.67	1.66	1.67	1.66	1.32-1.78
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.53	0.54	0.54	0.54	0.54	0.43-0.59
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.46	0.47	0.46	0.46	0.46	0.37-0.51
13C-OCDF	M+2/M+4	0.95	0.94	0.94	0.94	0.94	0.93	0.76-1.02

## CLEANUP STANDARD

13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.53	0.53	0.54	0.54	0.54	
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## PRE-SPIKE STANDARDS

37Cl-2,3,7,8-TCDD	NA	NA	NA	NA	NA	NA	NA	NA
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.28	1.27	1.28	1.27	1.27	1.05-1.43
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.69	1.67	1.67	1.66	1.64	1.64	1.32-1.78
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.55	0.54	0.53	0.54	0.54	0.54	0.43-0.59
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.47	0.46	0.45	0.47	0.46	0.46	0.37-0.51

Analyst: 

Date: 6/30/09



AIR FORM 4A  
 PCDD/PCDF CONTINUING CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 6/29/09


Instrument ID: FAL3

GC Column ID: DB5

VER Data Filename: 29JUN09M Sam:4

Analysis Date: 29-JUN-09 12:17:27

	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	0.74	0.65-0.89	y	4.72	3.75 - 6.25
1,2,3,7,8-PeCDD	M+2/M+4	1.60	1.32-1.78	y	24.3	18.7 - 31.2
1,2,3,4,7,8-HxCDD	M+2/M+4	1.32	1.05-1.43	y	23.8	18.7 - 31.2
1,2,3,6,7,8-HxCDD	M+2/M+4	1.32	1.05-1.43	y	23.6	18.7 - 31.2
1,2,3,7,8,9-HxCDD	M+2/M+4	1.32	1.05-1.43	y	24.1	18.7 - 31.2
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.00	0.88-1.20	y	24.2	18.7 - 31.2
OCDD	M+2/M+4	0.89	0.76-1.02	y	48.3	37.5 - 62.5
2,3,7,8-TCDF	M/M+2	0.68	0.65-0.89	y	4.82	3.75 - 6.25
1,2,3,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	y	24.7	18.7 - 31.2
2,3,4,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	y	24.3	18.7 - 31.2
1,2,3,4,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	23.9	18.7 - 31.2
1,2,3,6,7,8-HxCDF	M+2/M+4	1.28	1.05-1.43	y	24.5	18.7 - 31.2
2,3,4,6,7,8-HxCDF	M+2/M+4	1.29	1.05-1.43	y	23.5	18.7 - 31.2
1,2,3,7,8,9-HxCDF	M+2/M+4	1.28	1.05-1.43	y	23.5	18.7 - 31.2
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.08	0.88-1.20	y	24.5	18.7 - 31.2
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.10	0.88-1.20	y	24.6	18.7 - 31.2
OCDF	M+2/M+4	0.91	0.76-1.02	y	48.6	35.0 - 65.0

Analyst: Date: 6/30/09

AIR FORM 4B  
 PCDD/PCDF CONTINUING CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 6/29/09


Instrument ID: FAL3

GC Column ID: DB5

VER Data Filename: 29JUN09M Sam:4

Analysis Date: 29-JUN-09 12:17:27

	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	y	99.2	75.0 - 125
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.71	1.32-1.78	y	100	70.0 - 130
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	102	75.0 - 125
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	y	100	70.0 - 130
13C-OCDD	M+2/M+4	0.92	0.76-1.02	y	201	140 - 260
13C-2,3,7,8-TCDF	M/M+2	0.83	0.65-0.89	y	98.7	70.0 - 130
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.66	1.32-1.78	y	100	70.0 - 130
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	y	103	70.0 - 130
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	y	98.7	70.0 - 130
13C-OCDF	M+2/M+4	0.94	0.76-1.02	y	199	140 - 260
CLEANUP SURROGATE						
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.54	0.43-0.59	y	97.4	75.0 - 125
PRE-SPIKE SURROGATE						
37Cl-2,3,7,8-TCDD					98.1	75.0 - 125
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	97.9	75.0 - 125
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.66	1.32-1.78	y	101	75.0 - 125
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.54	0.43-0.59	y	97.5	75.0 - 125
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.47	0.37-0.51	y	99.2	75.0 - 125

Analyst: Date: 6/30/09

Air 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: 6/29/09  
RT Window Data Filename: 29JUN09M Sam:4      Analysis Date: 29-JUN-09 Time: 12:17:27  
DB-5 IS Data Filename: 29JUN09M Sam:4      Analysis Date: 29-JUN-09 Time: 12:17:27  
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)	24:31	1,3,6,8-TCDF (F)	23:10
1,2,8,9-TCDD (L)	28:26	1,2,8,9-TCDF (L)	28:39
1,2,4,7,9-PeCDD (F)	30:21	1,3,4,6,8-PeCDF (F)	28:32
1,2,3,8,9-PeCDD (L)	33:54	1,2,3,8,9-PeCDF (L)	34:18
1,2,4,6,7,9-HxCDD (F)	36:13	1,2,3,4,6,8-HxCDF (F)	35:21
1,2,3,7,8,9-HxCDD (L)	39:18	1,2,3,7,8,9-HxCDF (L)	39:52
1,2,3,4,6,7,9-HpCDD (F)	42:55	1,2,3,4,6,7,8-HpCDF (F)	42:22
1,2,3,4,6,7,8-HpCDD (L)	44:17	1,2,3,4,7,8,9-HpCDF (L)	45:12

(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%.

Analyst: 

Date: 6/30/09

FAL ID: ST062909M3      Filename: 29JUN09M      Sam:4      Acquired: 29-JUN-09 12:17:27      ICal: AIRFAL3-6-29-09  
Client ID: AIR CS3 (061228I)      ConCal: NA      EndCal: NA  
Results:      GC Column: DB5      Amount: 1.000      NATO 1989 Tox: 48.3

	Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise	DL	
	2,3,7,8-TCDD	2.80e+06	0.74 y	27:30	1.14	4.72		2.50	-	*	
	1,2,3,7,8-PeCDD	1.00e+07	1.60 y	33:19	1.14	24.3		2.50	-	*	
	1,2,3,4,7,8-HxCDD	1.01e+07	1.32 y	38:40	1.37	23.8		2.50	-	*	
	1,2,3,6,7,8-HxCDD	8.98e+06	1.32 y	38:50	1.24	23.6		2.50	-	*	
	1,2,3,7,8,9-HxCDD	9.98e+06	1.32 y	39:18	1.35	24.1		2.50	-	*	
	1,2,3,4,6,7,8-HpCDD	8.76e+06	1.00 y	44:17	1.15	24.2		2.50	-	*	
	OCDD	1.34e+07	0.89 y	49:51	1.43	48.3		2.50	-	*	
	2,3,7,8-TCDF	5.02e+06	0.68 y	26:45	1.14	4.82		2.50	-	*	
	1,2,3,7,8-PeCDF	1.50e+07	1.55 y	31:35	0.90	24.7		2.50	-	*	
	2,3,4,7,8-PeCDF	1.40e+07	1.54 y	32:54	0.86	24.3		2.50	-	*	
	1,2,3,4,7,8-HxCDF	1.33e+07	1.29 y	37:18	1.02	23.9		2.50	-	*	
	1,2,3,6,7,8-HxCDF	1.39e+07	1.28 y	37:29	1.04	24.5		2.50	-	*	
	2,3,4,6,7,8-HxCDF	1.21e+07	1.29 y	38:25	0.94	23.5		2.50	-	*	
	1,2,3,7,8,9-HxCDF	1.12e+07	1.28 y	39:52	0.88	23.5		2.50	-	*	
	1,2,3,4,6,7,8-HpCDF	1.11e+07	1.08 y	42:22	1.51	24.5		2.50	-	*	
	1,2,3,4,7,8,9-HpCDF	8.20e+06	1.10 y	45:12	1.11	24.6		2.50	-	*	
	OCDF	1.41e+07	0.91 y	50:14	0.87	48.6		2.50	-	*	
											Rec
	13C-2,3,7,8-TCDD	5.19e+07	0.80 y	27:29	1.21	99.2					99.2
	13C-1,2,3,7,8-PeCDD	3.61e+07	1.71 y	33:17	0.83	100					100
	13C-1,2,3,6,7,8-HxCDD	3.07e+07	1.27 y	38:50	0.99	102					102
	13C-1,2,3,4,6,7,8-HpCDD	3.13e+07	1.06 y	44:15	1.03	100					100
	13C-OCDD	3.89e+07	0.92 y	49:50	0.64	201					101
	13C-2,3,7,8-TCDF	9.13e+07	0.83 y	26:44	1.33	98.7					98.7
	13C-1,2,3,7,8-PeCDF	6.72e+07	1.66 y	31:33	0.96	100					100
	13C-1,2,3,6,7,8-HxCDF	5.45e+07	0.54 y	37:28	1.75	103					103
	13C-1,2,3,4,6,7,8-HpCDF	2.99e+07	0.46 y	42:22	1.00	98.7					98.7
	13C-OCDF	6.70e+07	0.94 y	50:12	1.11	199					99.6
	13C-1,2,3,7,8,9-HxCDF	4.13e+07	0.54 y	39:50	1.40	97.4					97.4
	37Cl-2,3,7,8-TCDD	2.83e+07		27:30	0.56	98.1					98.1
	13C-1,2,3,4,7,8-HxCDD	3.16e+07	1.28 y	38:39	1.05	97.9					97.9
	13C-2,3,4,7,8-PeCDF	6.29e+07	1.66 y	32:52	0.93	101					101
	13C-1,2,3,4,7,8-HxCDF	5.29e+07	0.54 y	37:16	1.00	97.5					97.5
	13C-1,2,3,4,7,8,9-HpCDF	2.45e+07	0.47 y	45:10	0.82	99.2					99.2
	13C-1,2,3,4-TCDD	4.32e+07	0.81 y	26:55	-	103					
	13C-1,2,3,4-TCDF	6.95e+07	0.84 y	25:39	-	103					
	13C-1,2,3,7,8,9-HxCDD	3.03e+07	1.27 y	39:16	-	103					
								Fac	Noise	DL	#Hom
	Total Tetra-Dioxins	1.28e+07		23:08	1.14	21.6		2.50	-	*	23
	Total Penta-Dioxins	3.12e+07		30:21	1.14	75.7		2.50	-	*	19
	Total Hexa-Dioxins	4.10e+07		36:13	1.32	101		2.50	-	*	8
	Total Hepta-Dioxins	1.87e+07		42:55	1.15	51.8		2.50	-	*	16
	Total Tetra-Furans	2.01e+07		23:10	1.14	19.3		2.50	-	*	25
1st Fn.	Tot Penta-Furans	1.55e+07		28:32	0.88	26.2		2.50	-	*	1
	Total Penta-Furans	4.25e+07		30:16	0.88	71.8		2.50	-	*	21
	Total Hexa-Furans	6.64e+07		35:21	0.97	126		2.50	-	*	14
	Total Hepta-Furans	1.96e+07		42:22	1.31	50.0		2.50	-	*	7
											PeCDF
											97.9

Analyst:  Date: 6/30/09

## Frontier Analytical Laboratory - Acquisition Log

Run Name:29JUN09M

Instrument: FAL3

GC: DB5

Experiment:PCDD

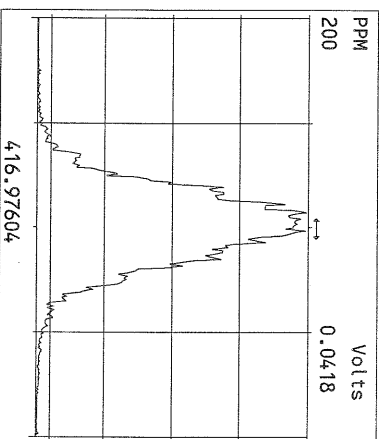
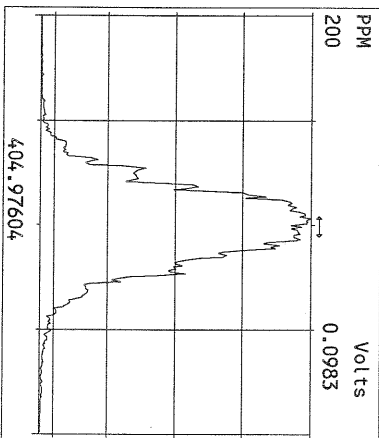
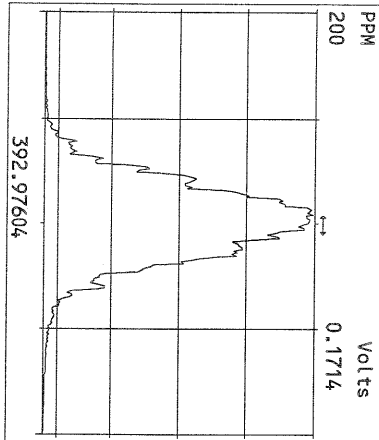
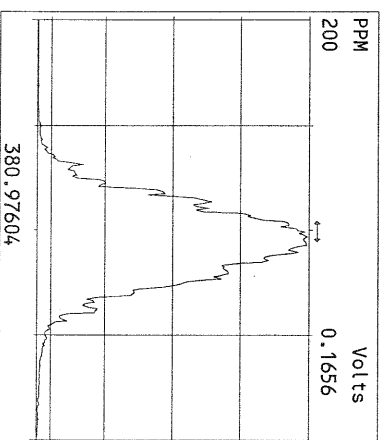
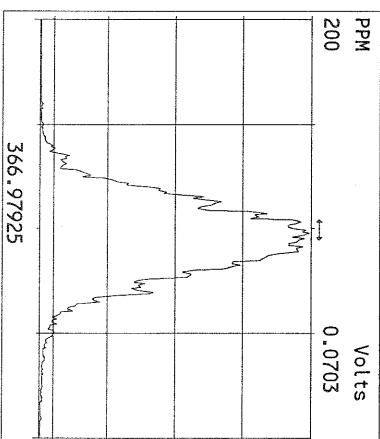
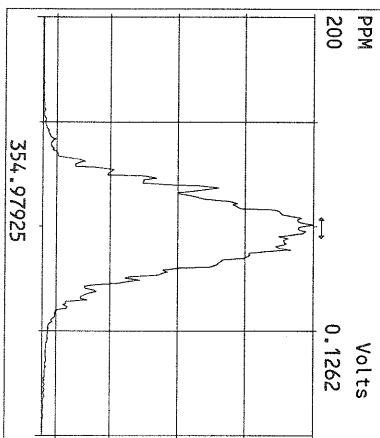
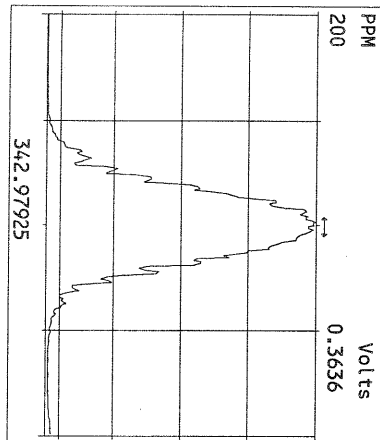
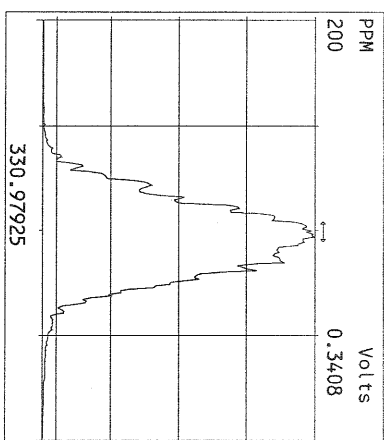
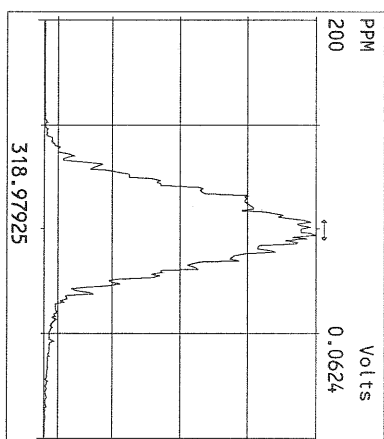
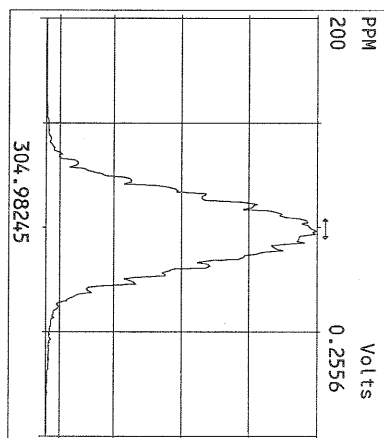
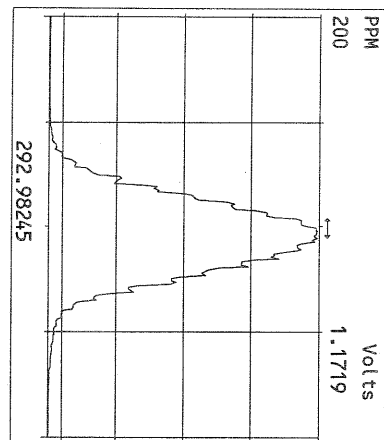
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29JUN09M	2	ST062909M1	AIR CS1 (090121G)	29-JUN-09 10:26:46	NA	NA	TC
29JUN09M	3	ST062909M2	AIR CS2 (090121H)	29-JUN-09 11:22:08	NA	NA	TC
29JUN09M	4	ST062909M3	AIR CS3 (061228I)	29-JUN-09 12:17:27	NA	NA	TC
29JUN09M	5	ST062909M4	AIR CS4 (090121K)	29-JUN-09 13:12:53	NA	NA	TC
29JUN09M	6	ST062909M5	AIR CS5 (090121L)	29-JUN-09 14:08:16	NA	NA	TC
29JUN09M	7	SB062909M1	Solvent Blank	29-JUN-09 15:03:38	NA	NA	TC

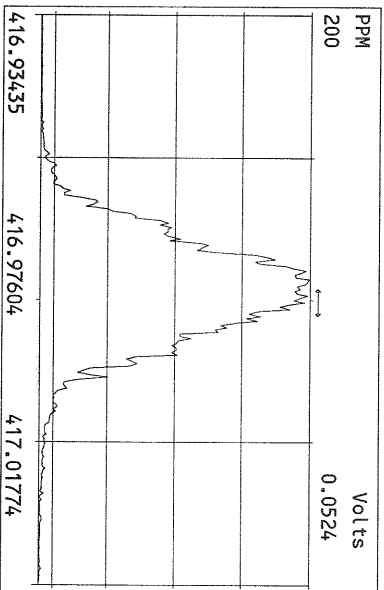
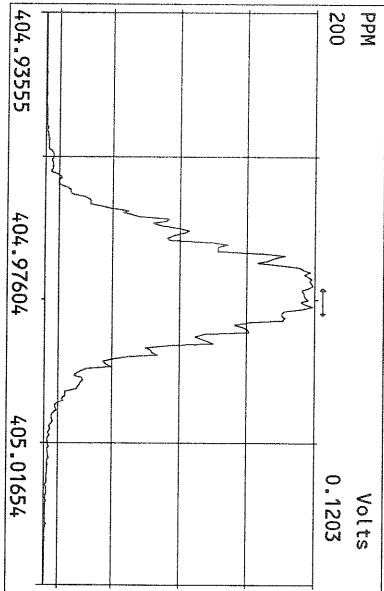
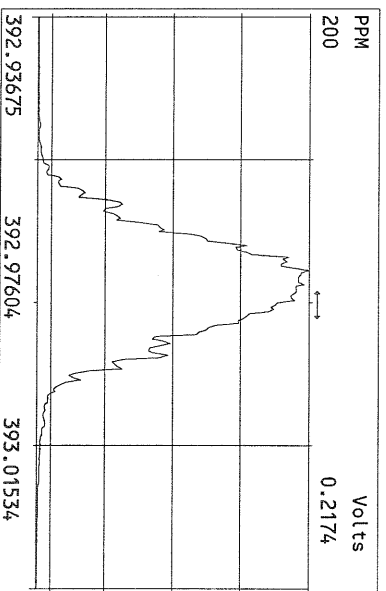
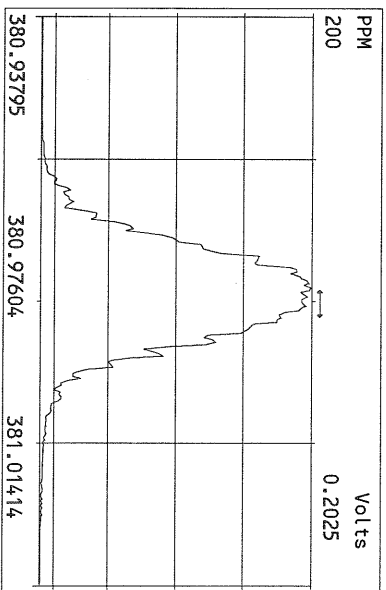
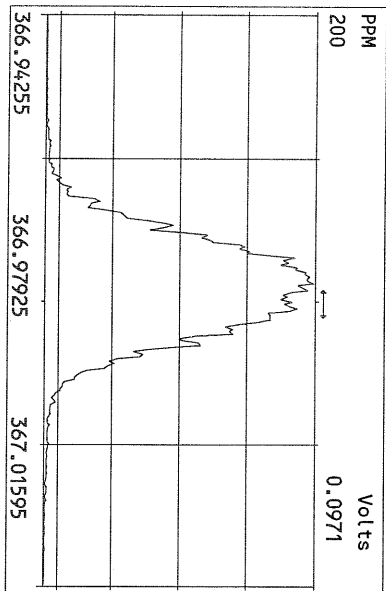
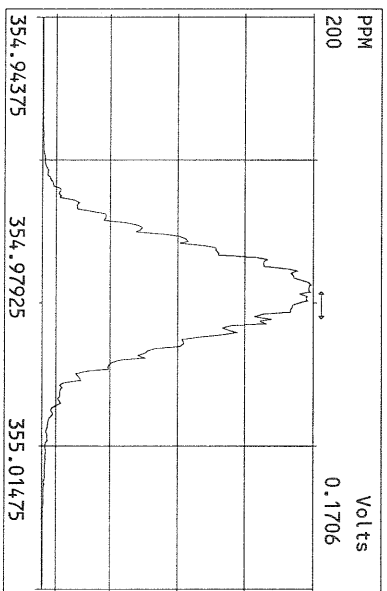
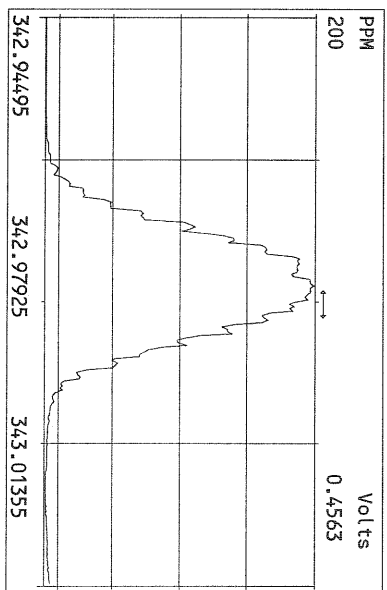
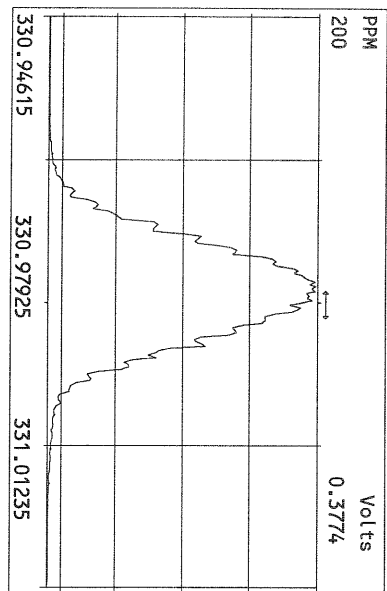


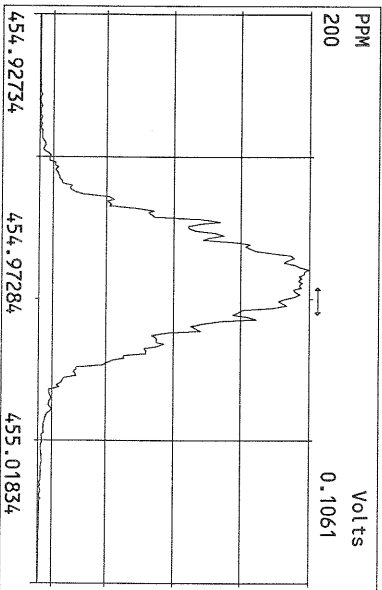
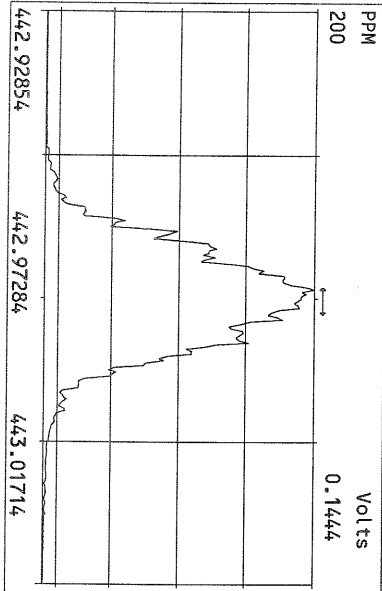
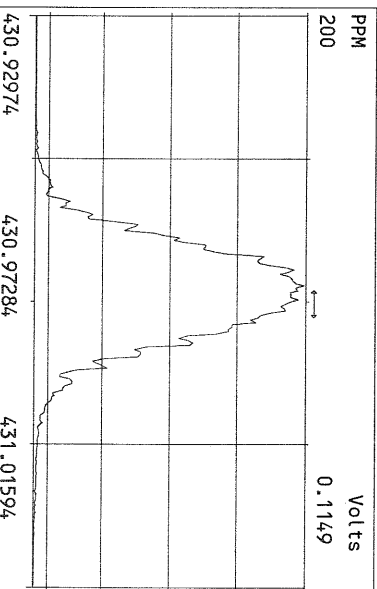
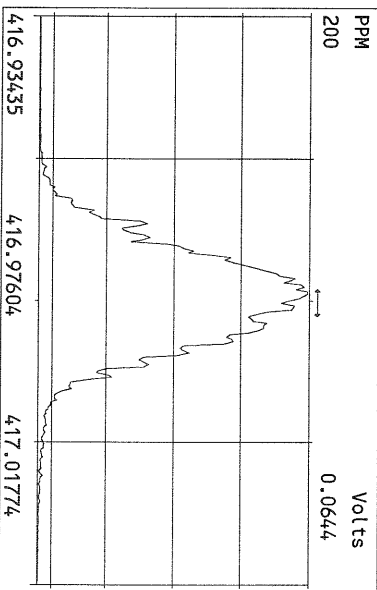
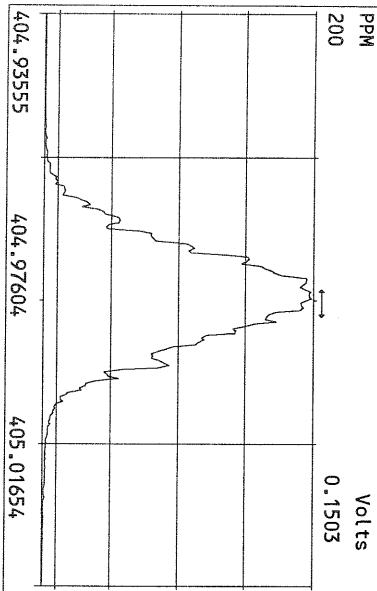
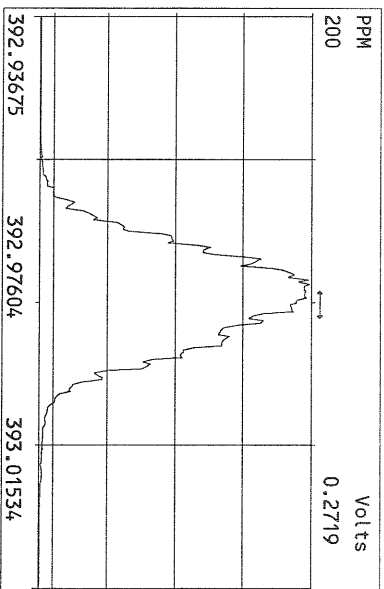
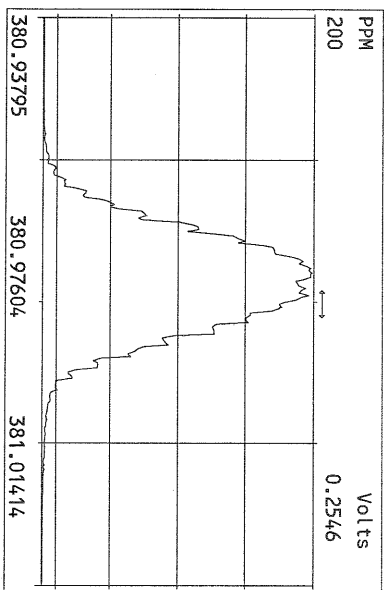
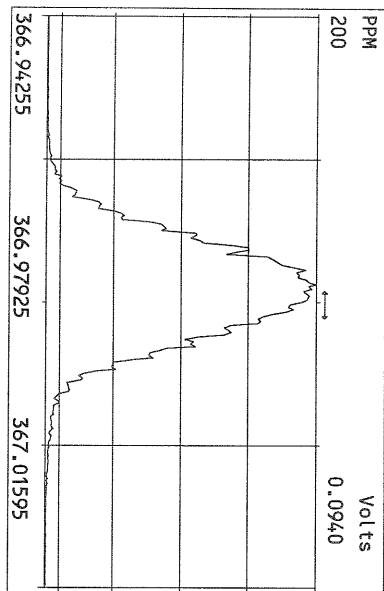
6/30/09

Data Backed Up:\_\_\_\_\_

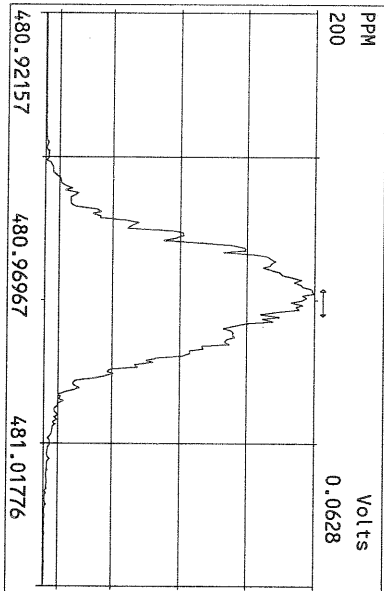
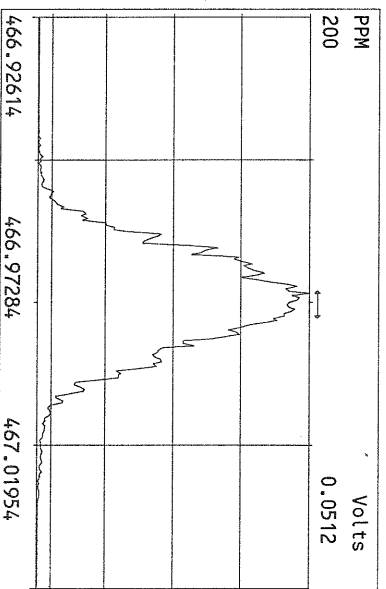
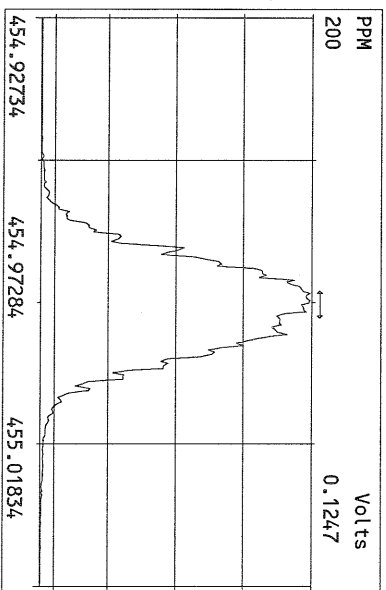
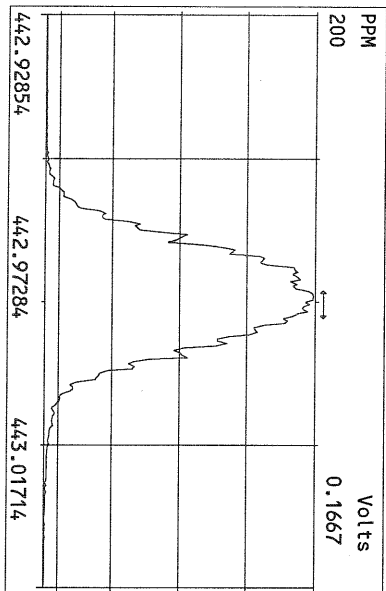
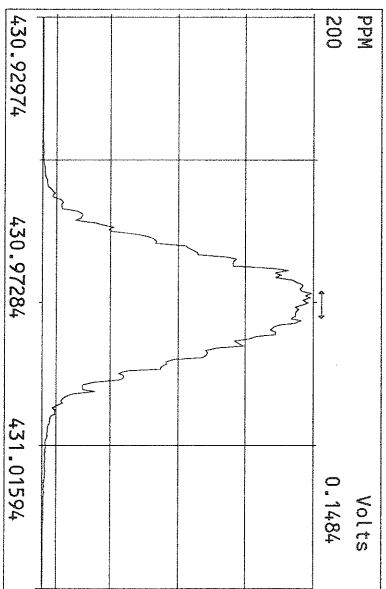
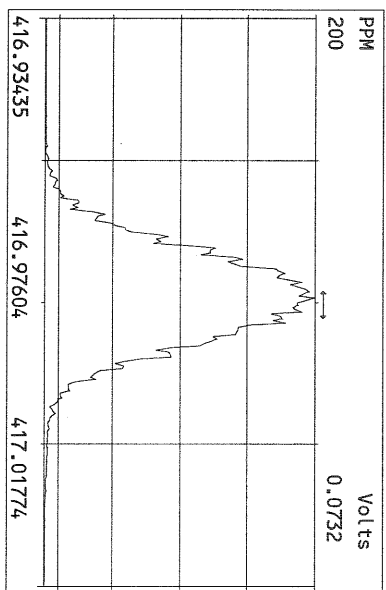
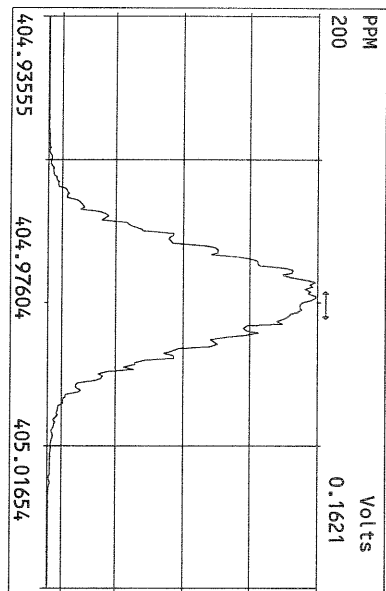
Date:\_\_\_\_\_

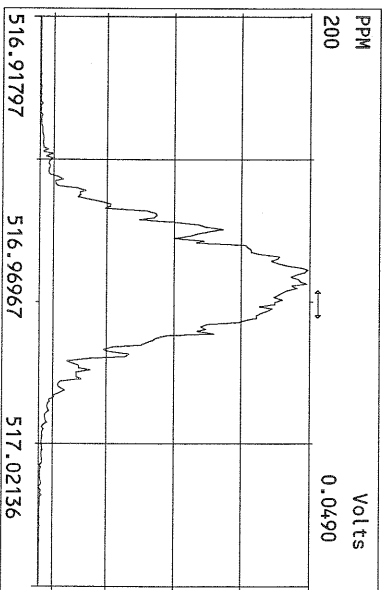
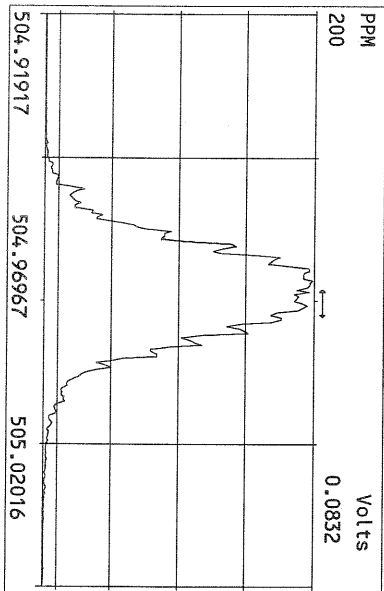
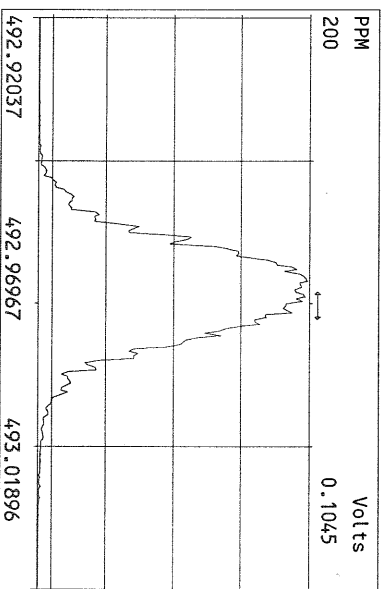
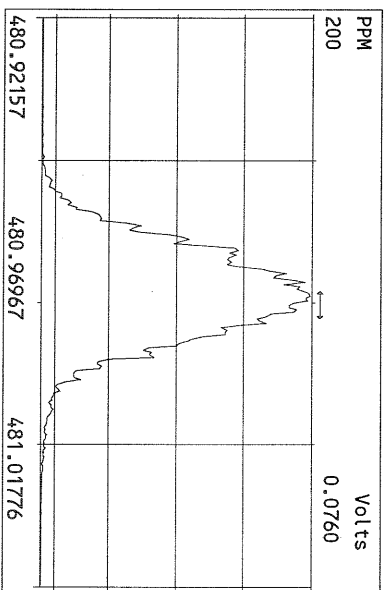
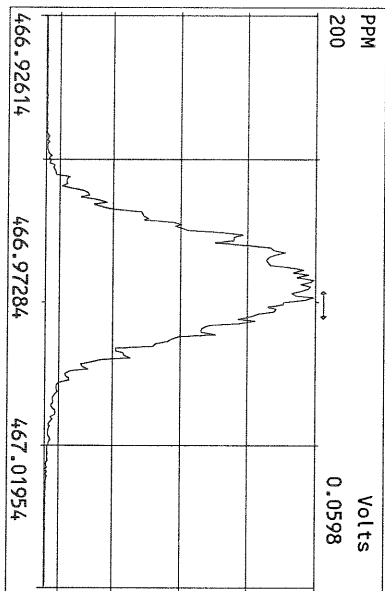
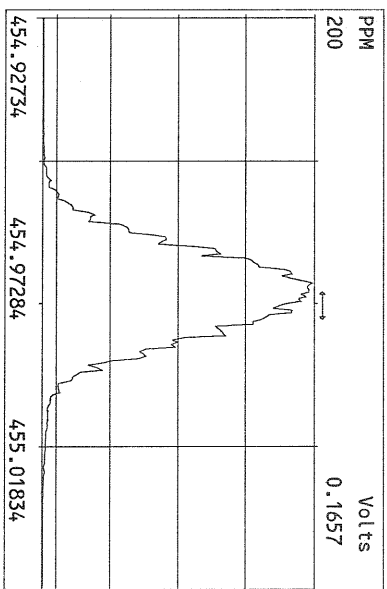
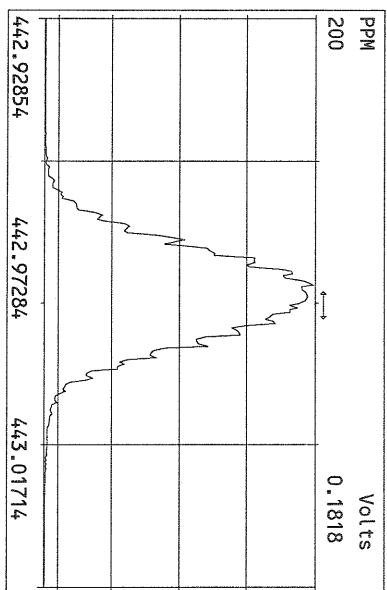
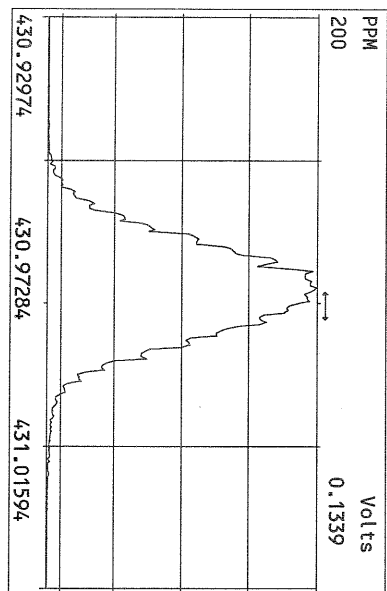




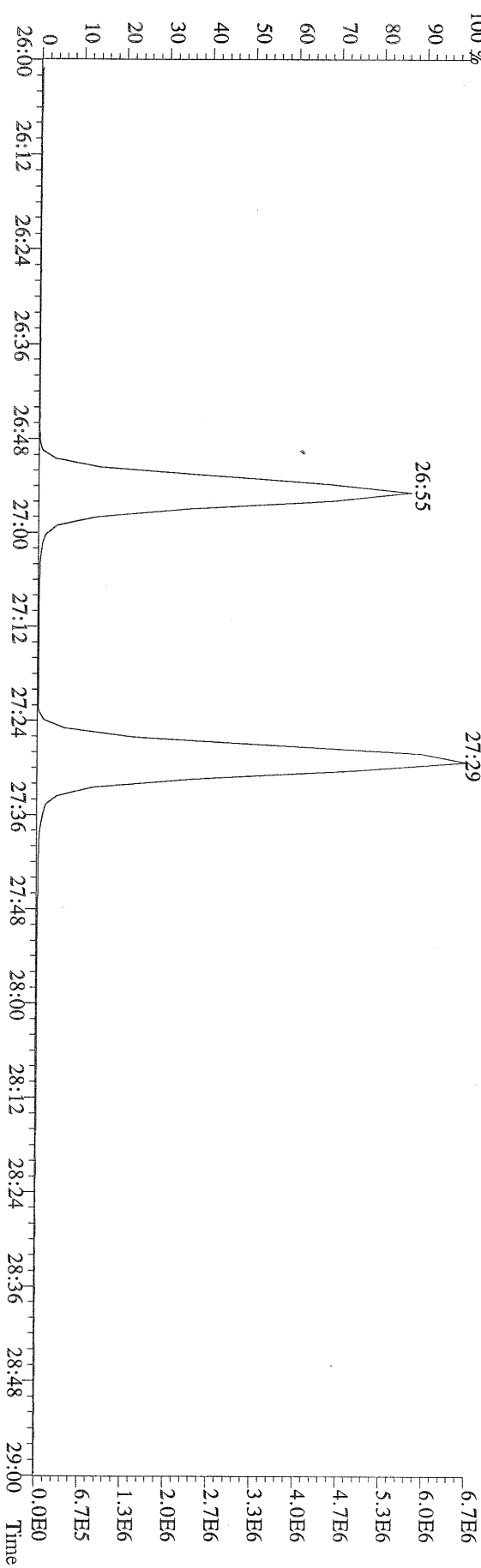
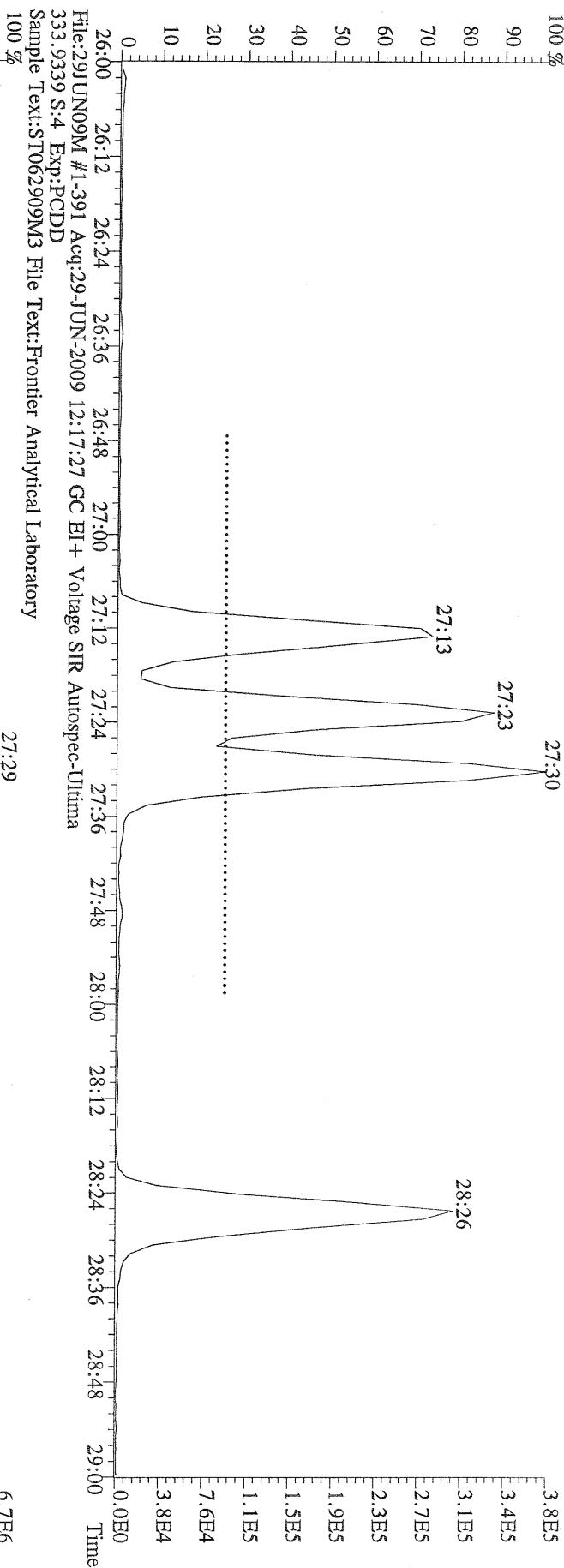




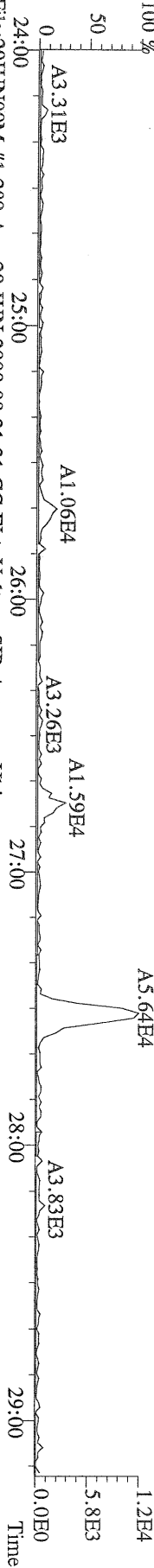




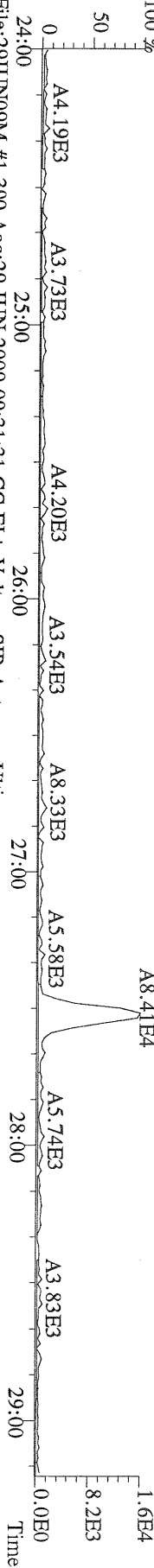
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Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



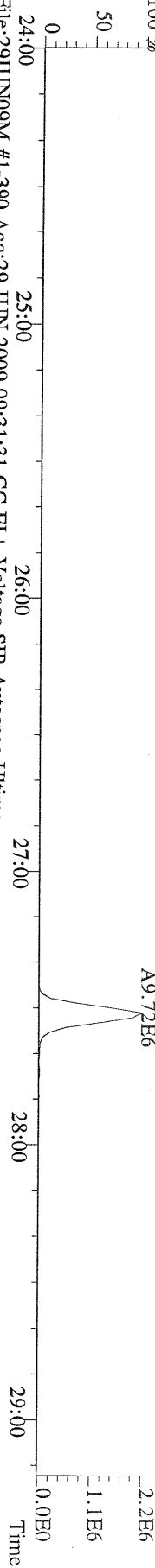
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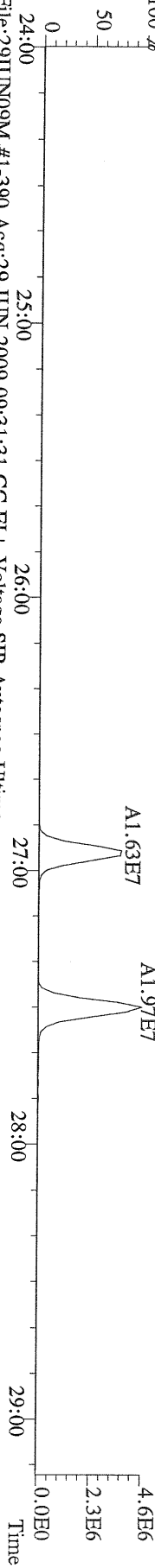
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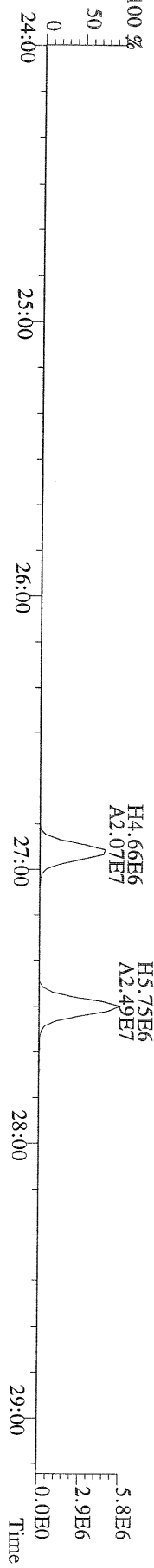
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



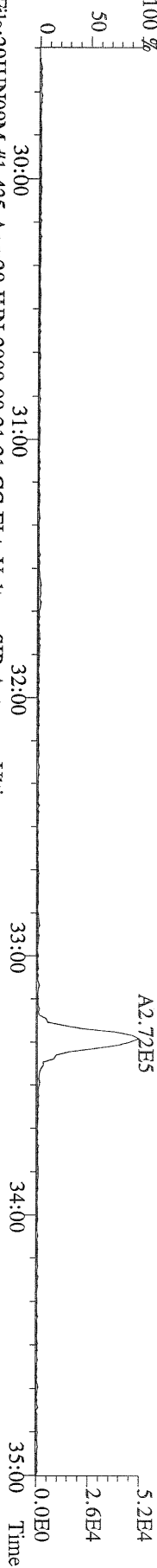
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



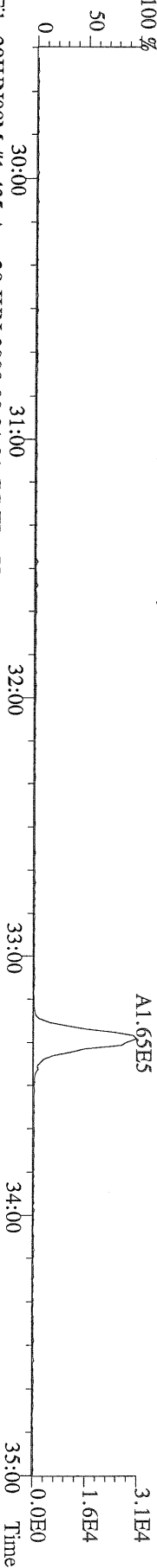
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



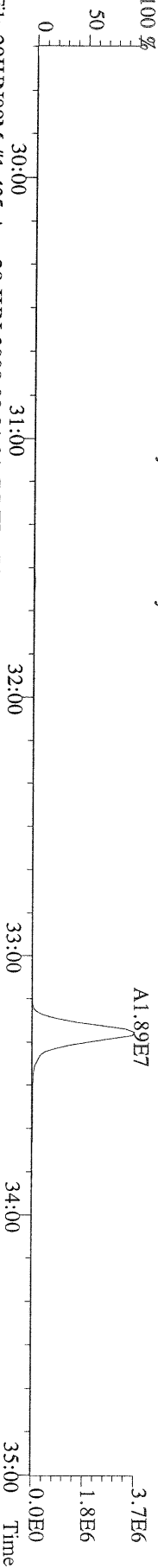
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355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory  
100 %



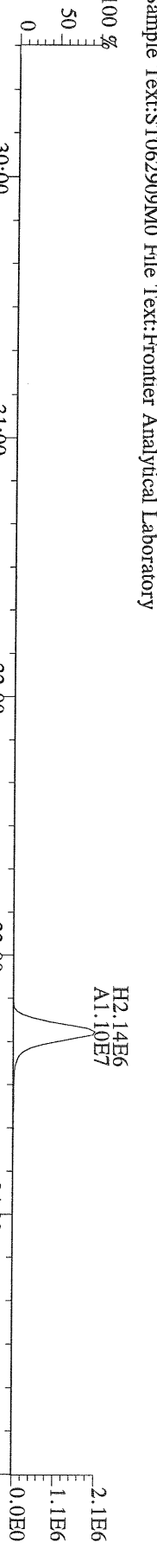
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357.8517 F:2 BSUB(10000,15,-3.0) PKD(5,5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory  
100 %



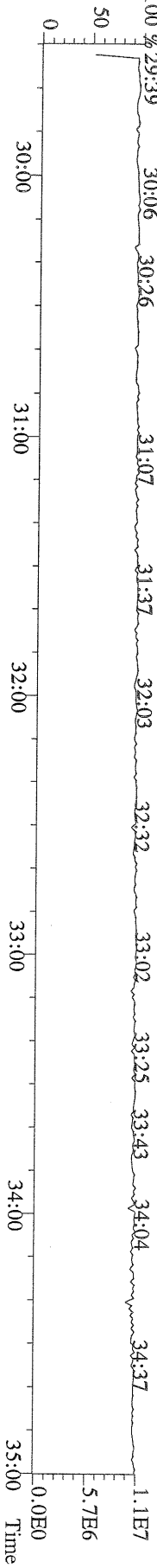
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory  
100 %



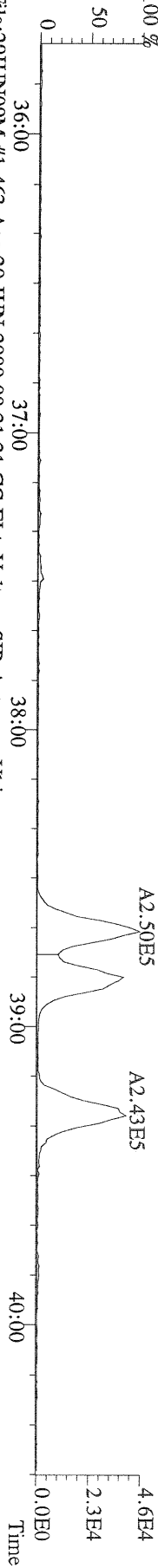
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



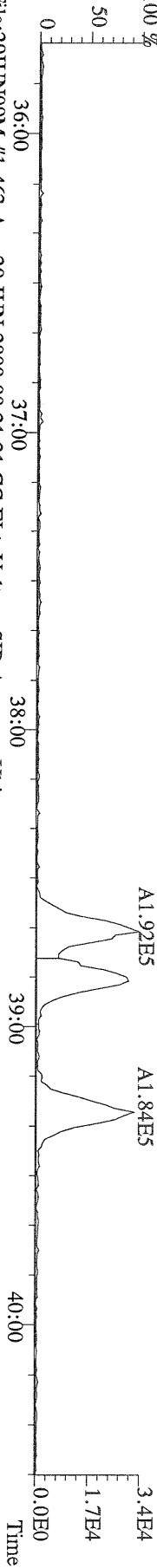
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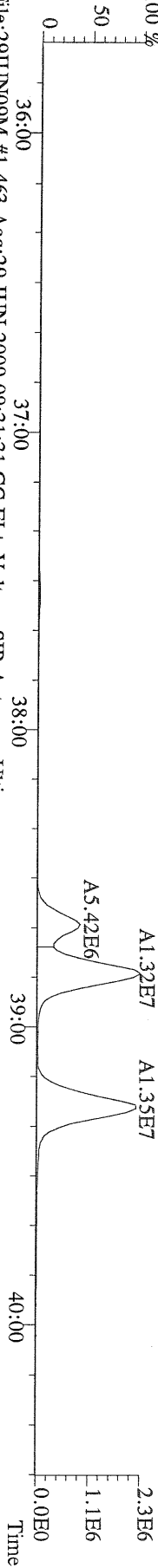
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory  
100 %



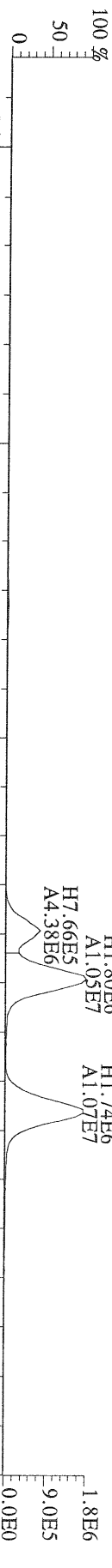
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory  
100 %



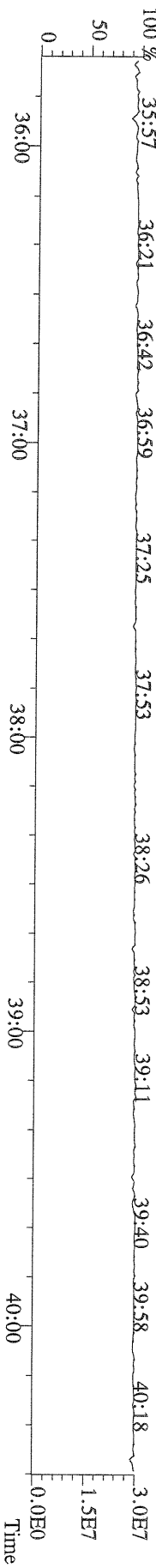
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory  
100 %



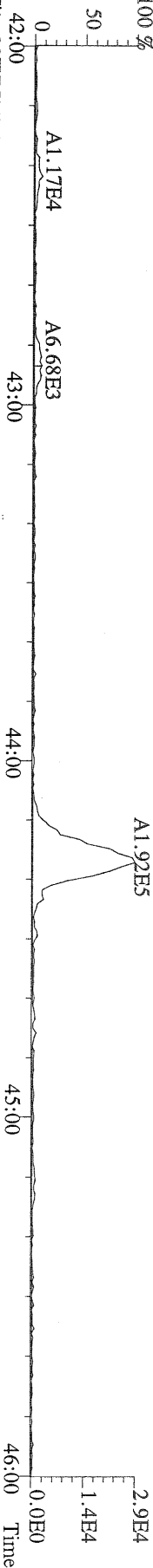
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



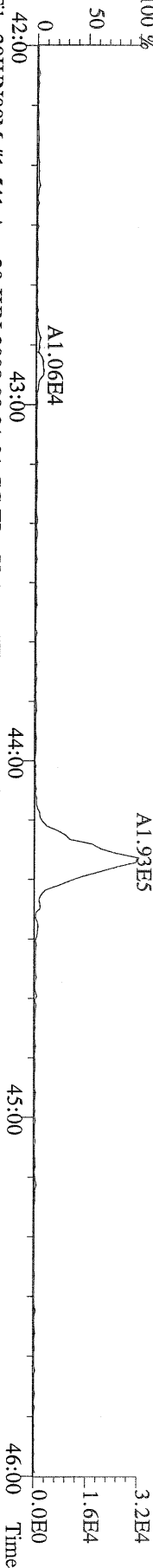
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory  
100 %



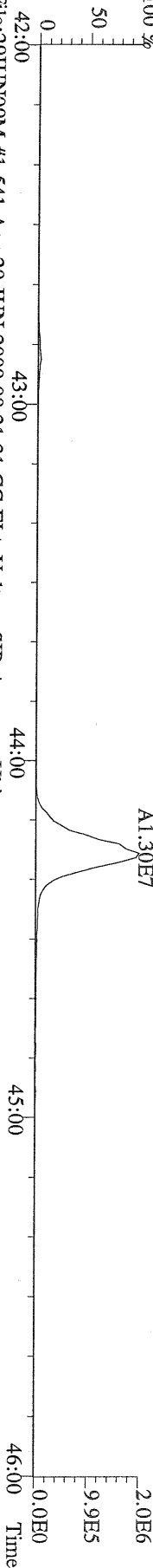
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423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



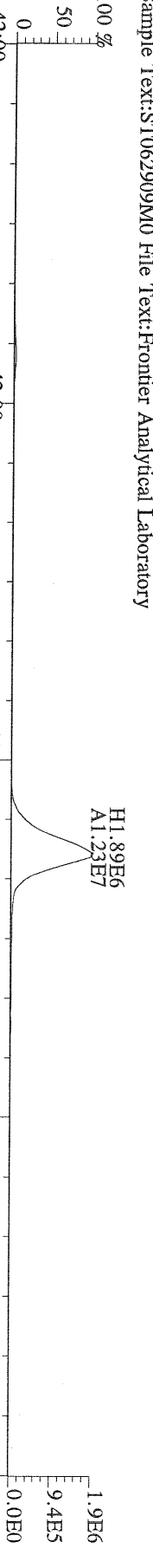
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



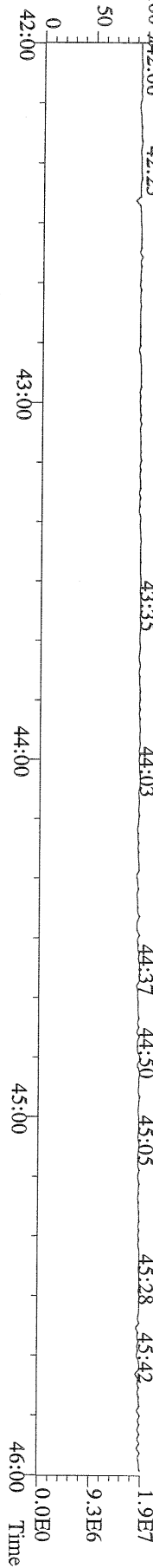
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



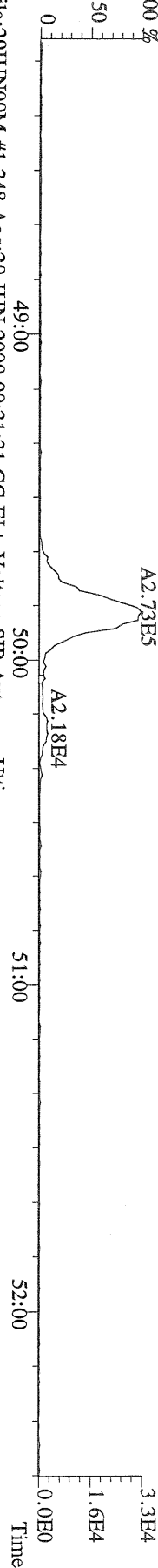
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437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
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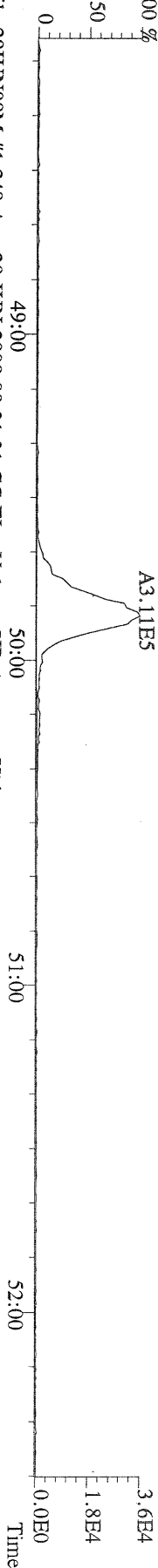
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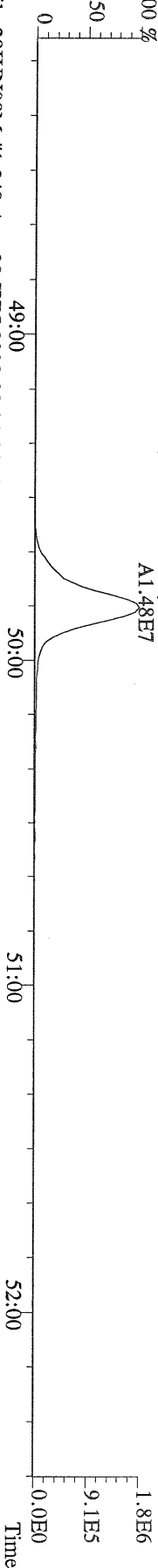
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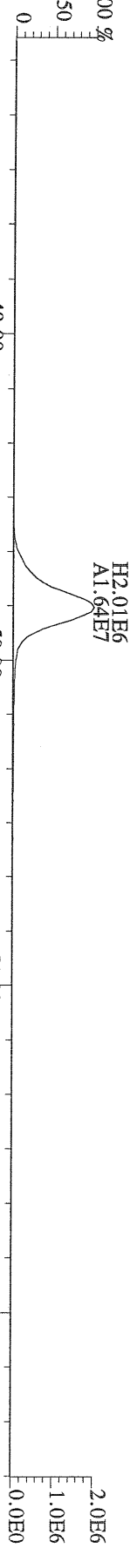
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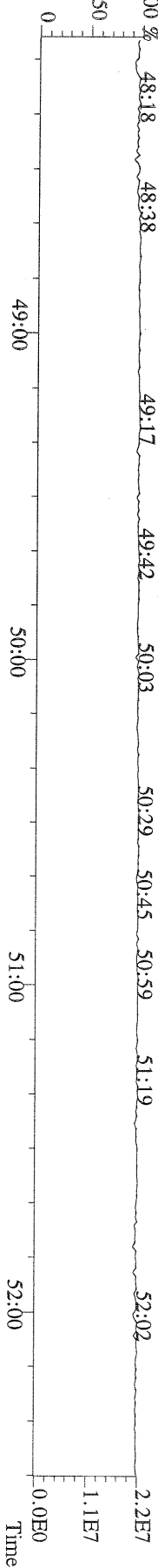
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



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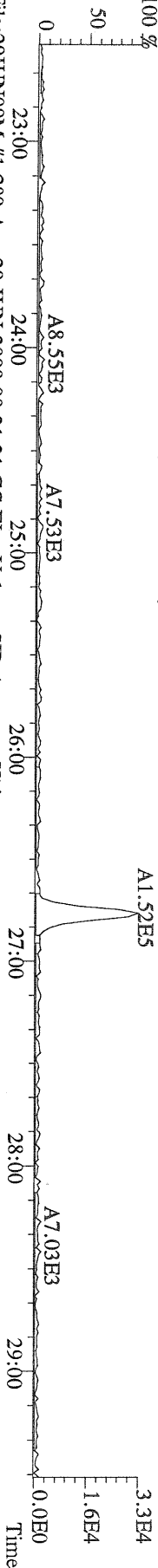




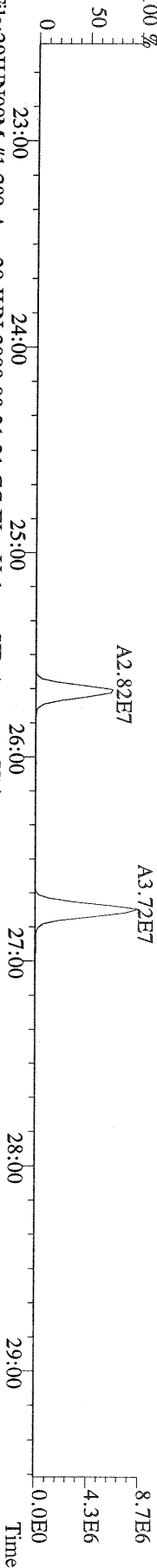
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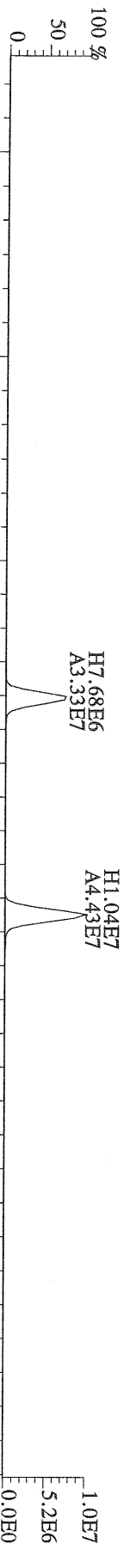
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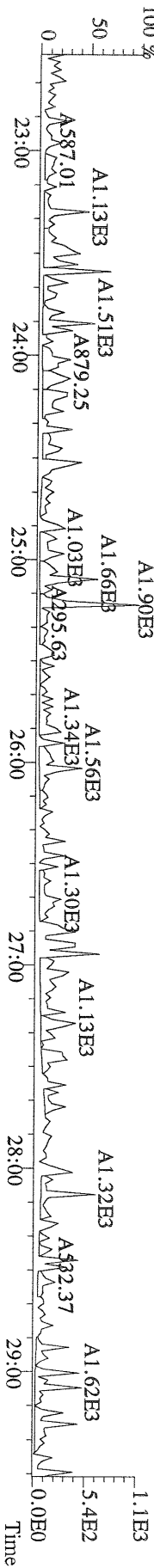
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory  
100 %



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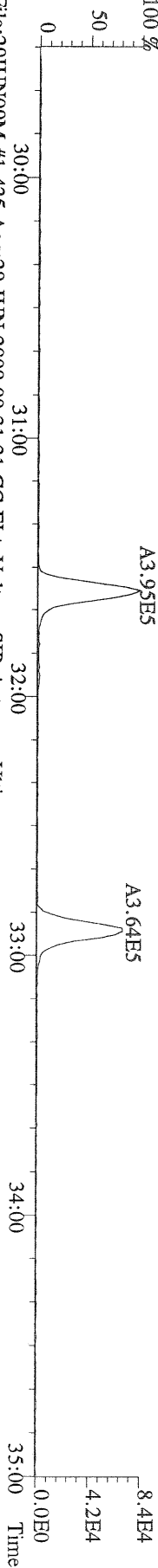


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330.9792 Exp:PCDD  
Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory

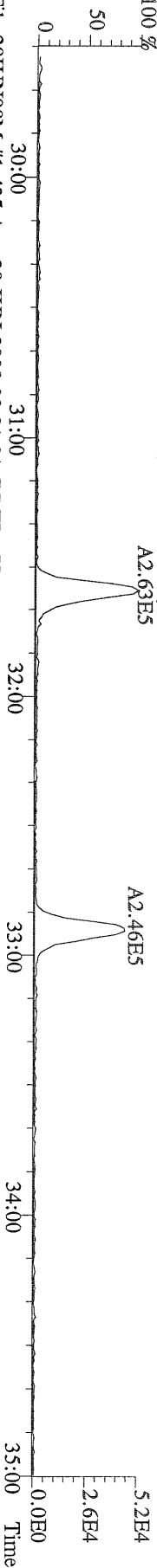
Chromatogram showing detector response (Y-axis, 0 to 100%) versus Time (X-axis, 23:00 to 29:00). The signal is noisy, with several peaks labeled with retention times:

Retention Time
23:31
23:58
24:21
25:02
25:37
26:27
27:18
27:59
28:20
29:03

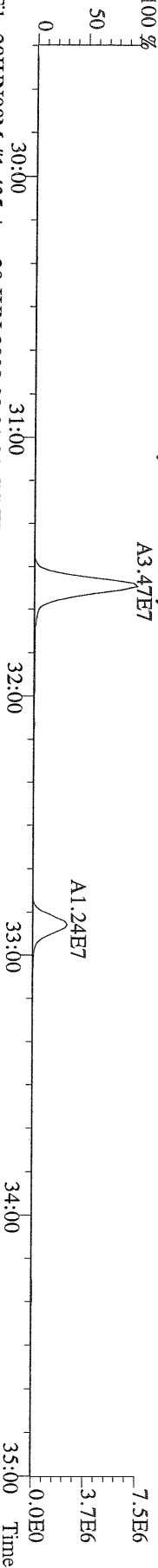
File:29JUN09M #1-425 Acq:29-JUN-2009 09:31:31 GC EI+ Voltage SIR Autospec-Ultima  
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



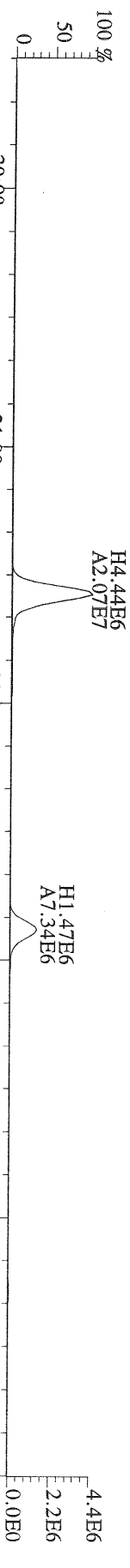
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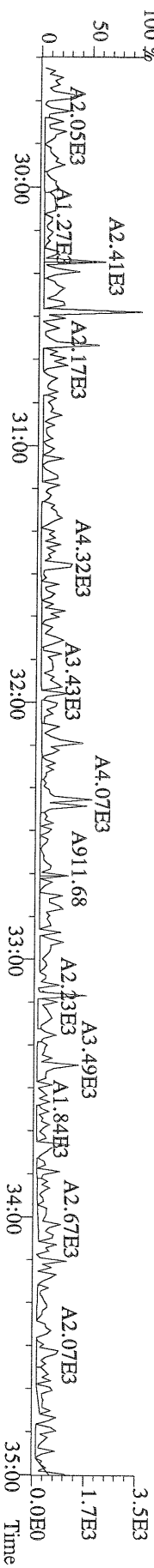
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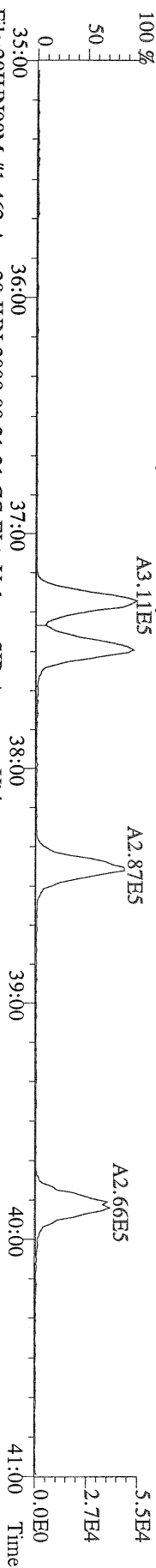
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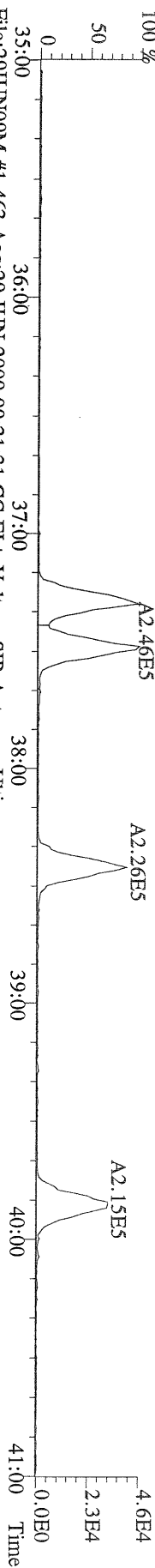
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



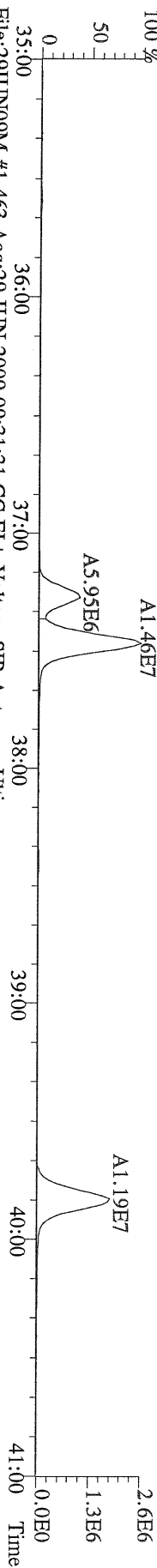
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373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



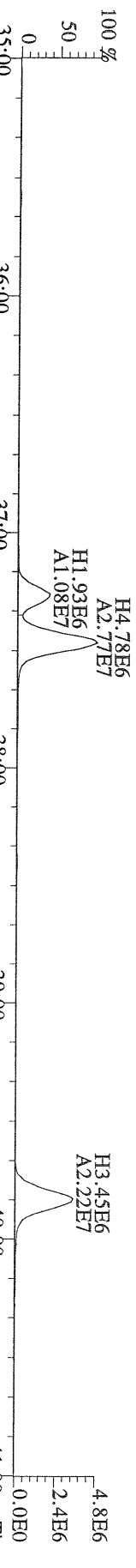
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375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



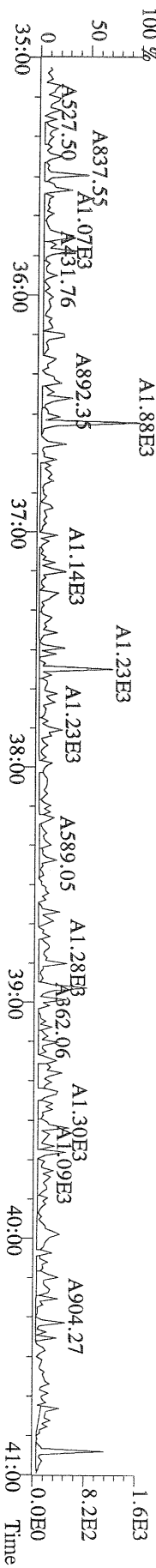
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383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



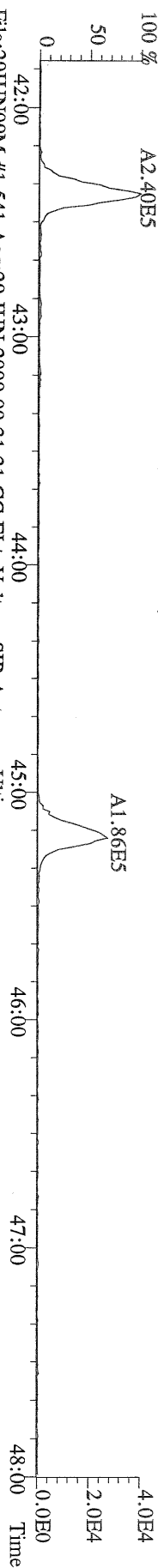
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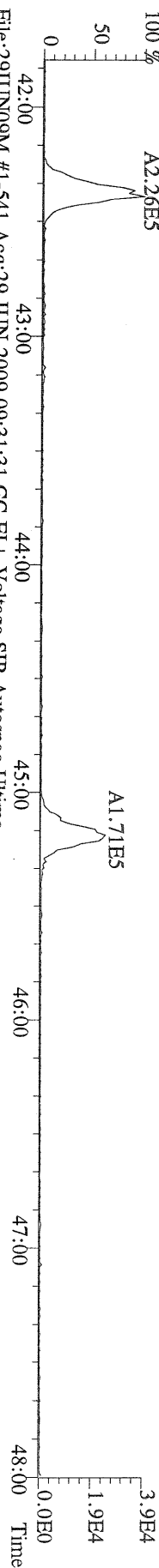
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



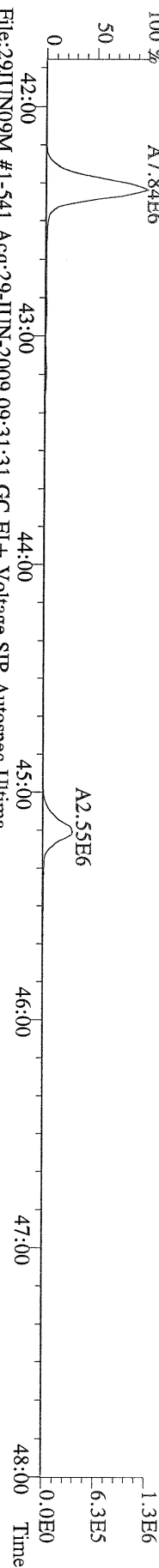
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407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



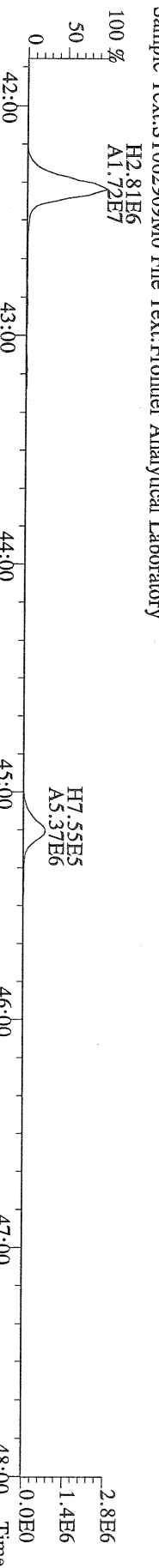
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



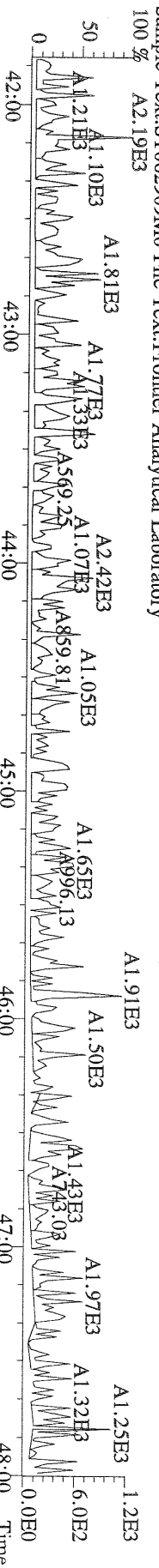
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



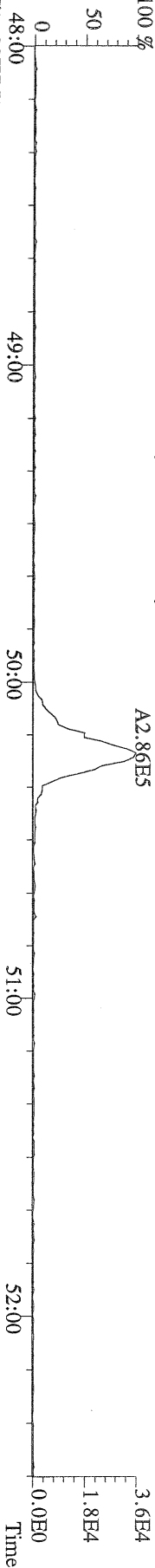
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419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



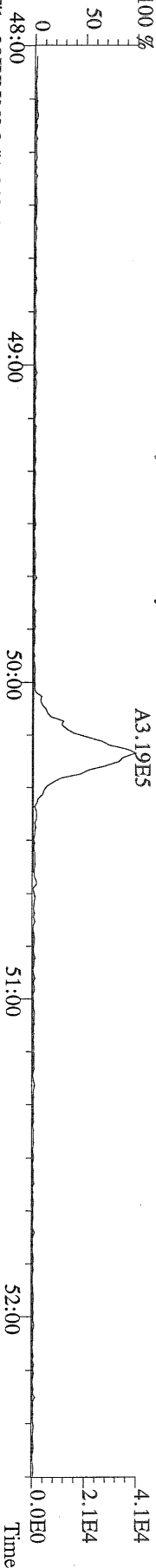
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479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



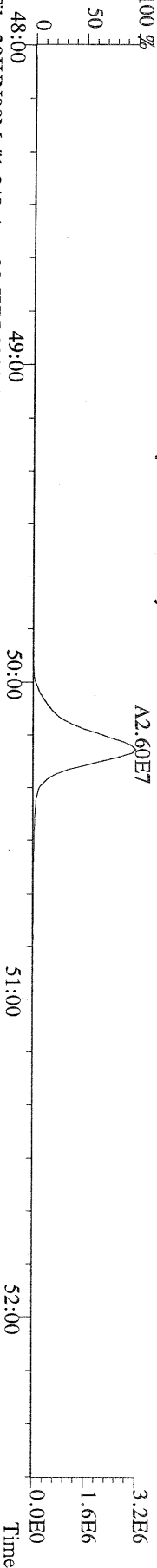
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441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



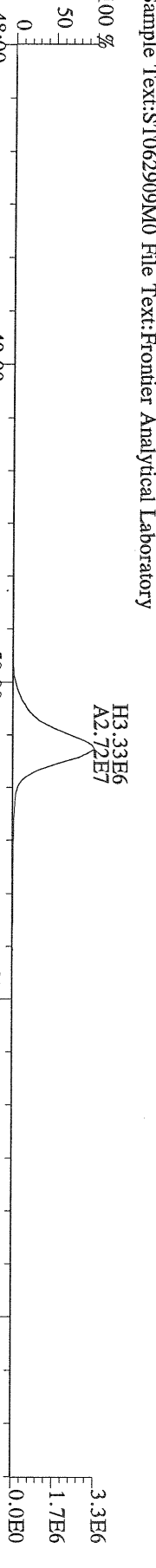
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



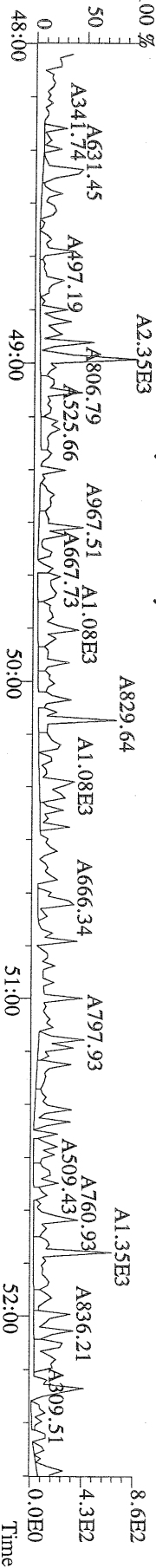
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453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



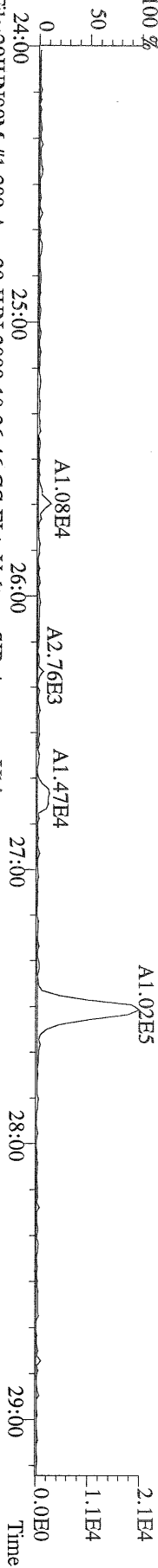
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Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



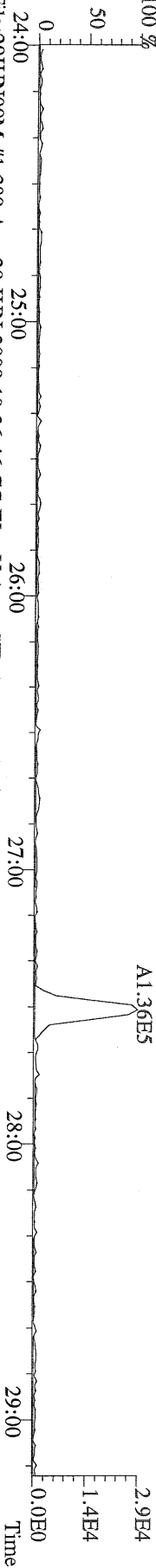
File:29JUN09M #1-348 Acq:29-JUN-2009 09:31:31 GC EI+ Voltage SIR Autospec-Ultima  
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M0 File Text:Frontier Analytical Laboratory



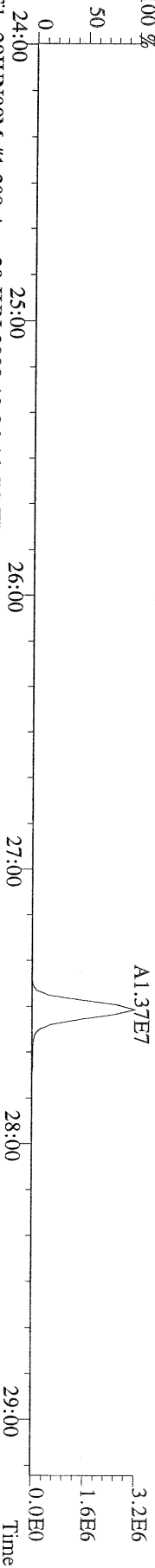
File:29JUN09M #1-390 Acq:29-JUN-2009 10:26:46 GC EI+ Voltage SIR Autospec-Ultima  
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3.0,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory  
100 %



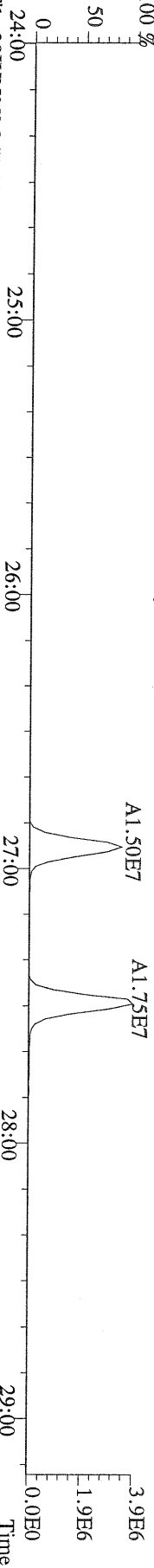
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Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory  
100 %



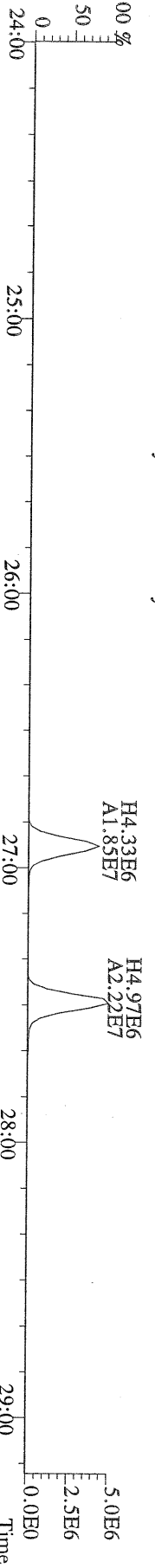
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327.8847 S:2 BSUB(10000,15,-3.0) PKD(5,5,3.0,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory  
100 %



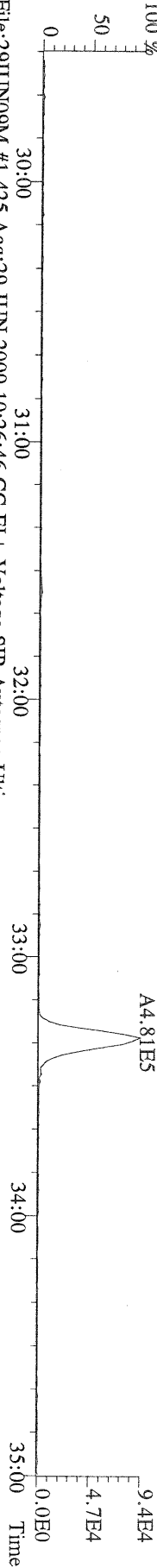
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331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3.0,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory  
100 %



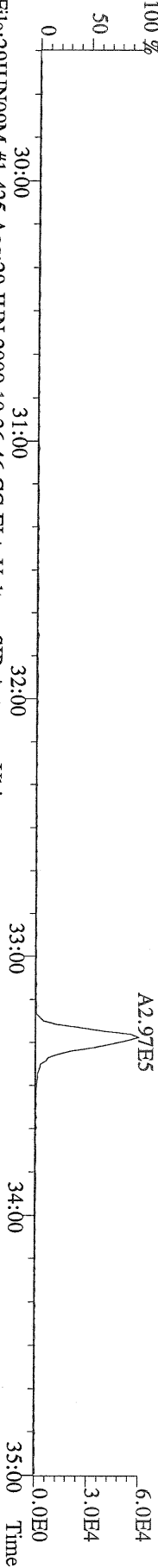
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333.9339 S:2 BSUB(10000,15,-3.0) PKD(5,5,3.0,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



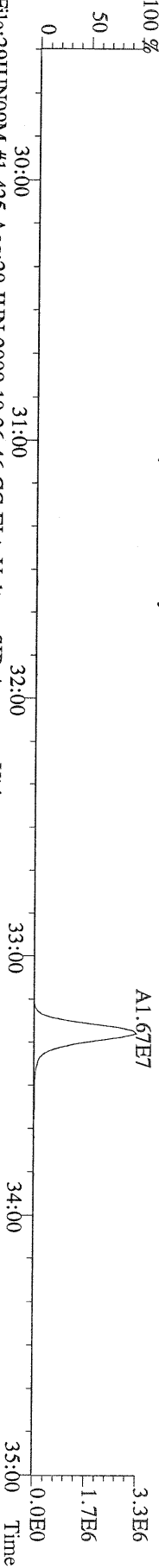
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355.8546 S:2 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory  
100 %



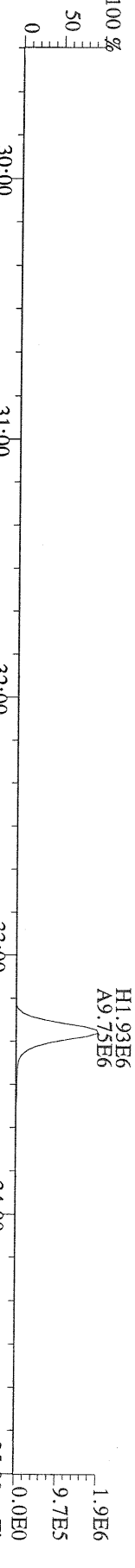
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357.8517 S:2 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory  
100 %



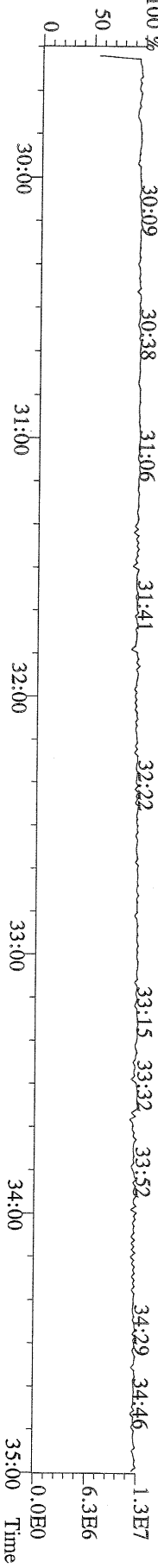
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367.8949 S:2 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory  
100 %



File:29JUN09M #1-425 Acq:29-JUN-2009 10:26:46 GC EI+ Voltage SIR Autospec-Ultima  
369.8919 S:2 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory

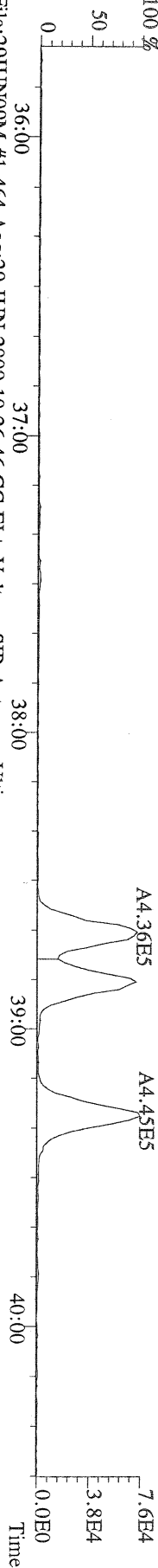


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Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory

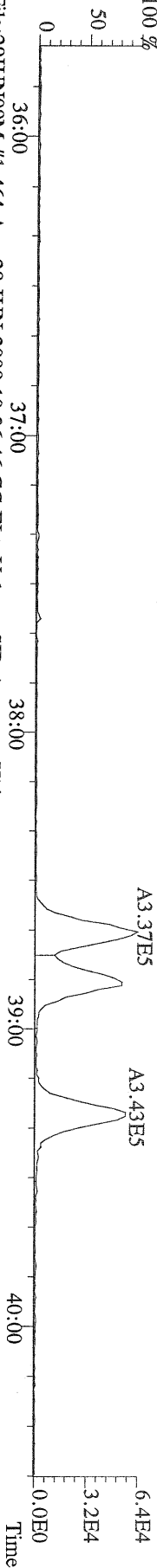




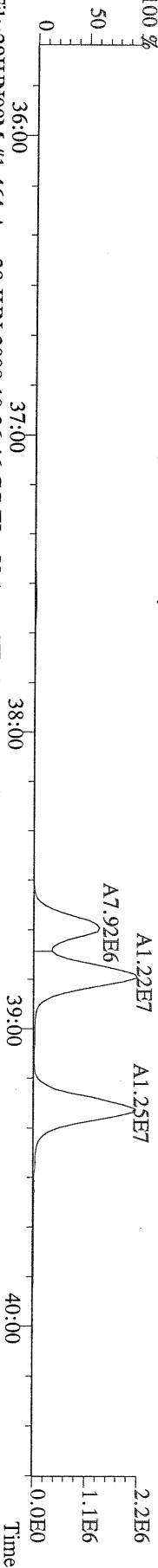
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389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory  
100 %



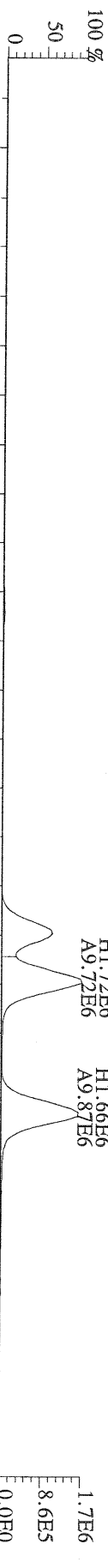
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Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory  
100 %



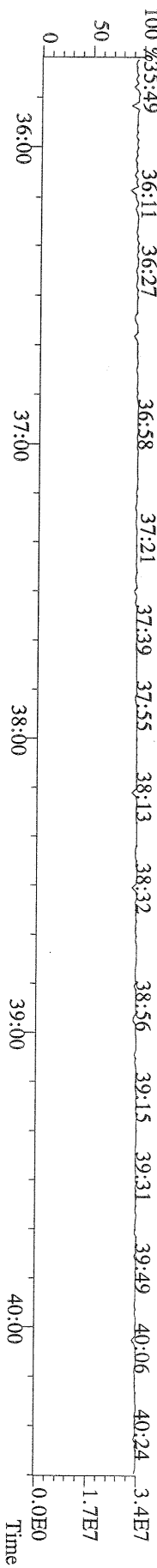
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401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory  
100 %



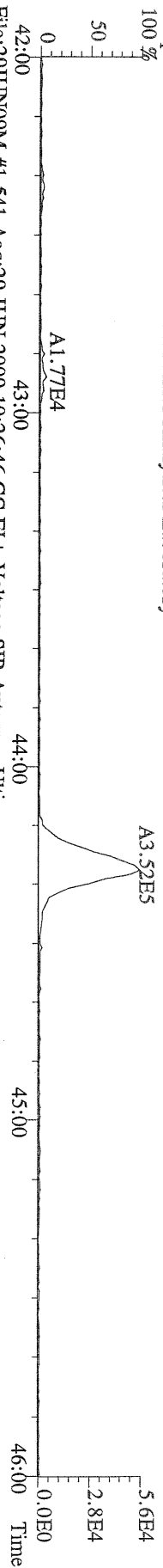
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Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



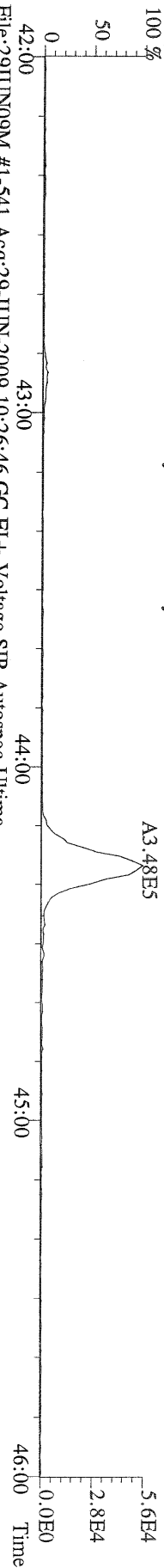
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Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory  
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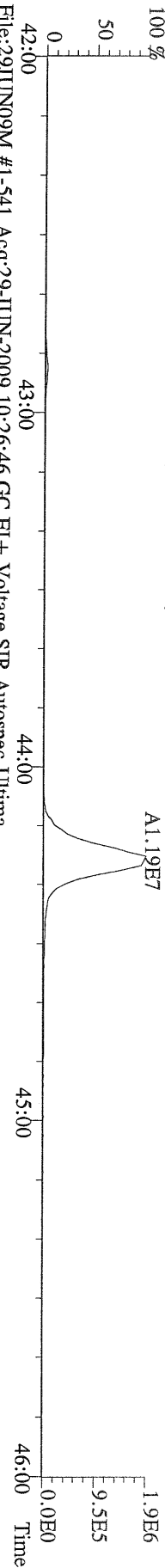
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423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp.:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



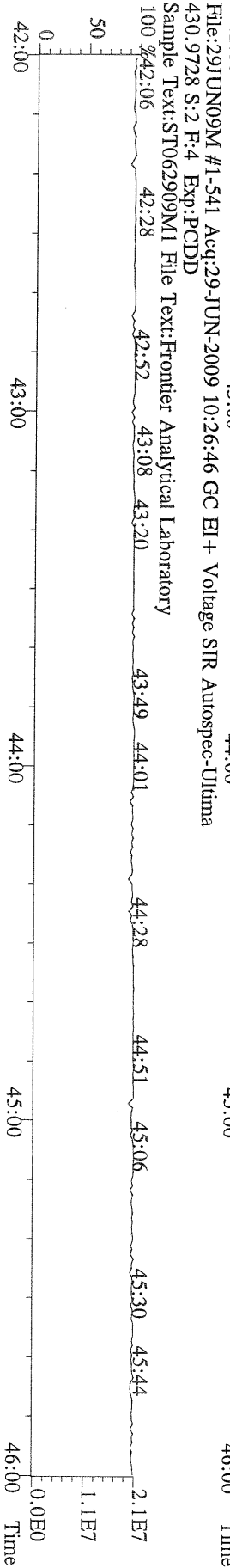
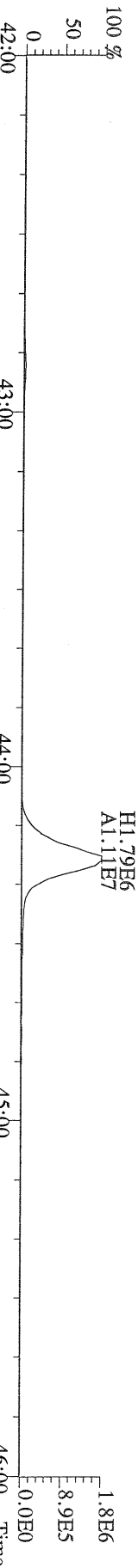
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425.7737 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp.:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



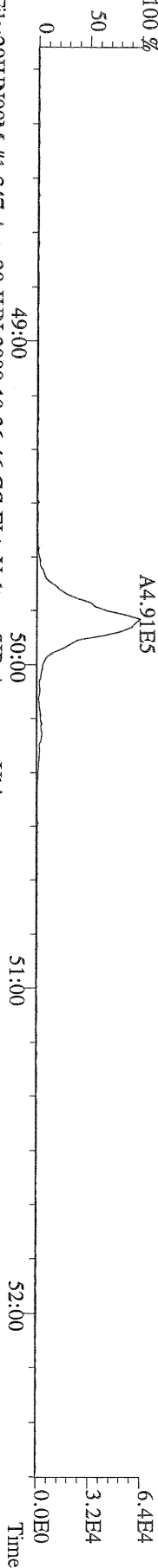
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435.8169 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp.:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



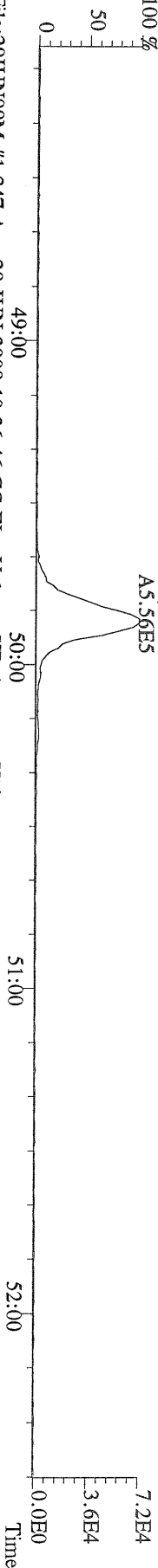
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437.8140 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp.:PCDD  
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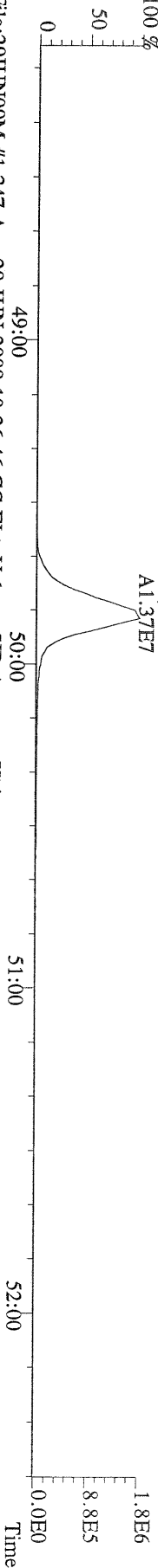
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457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory  
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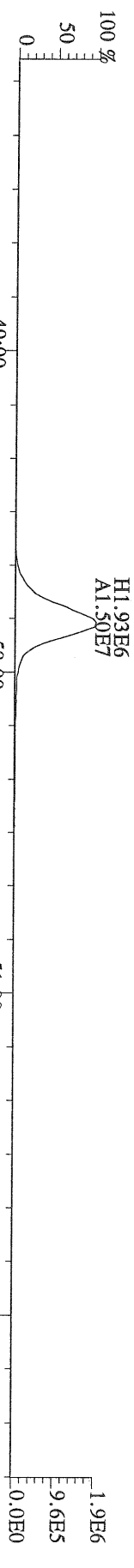
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459.7348 S:2 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory  
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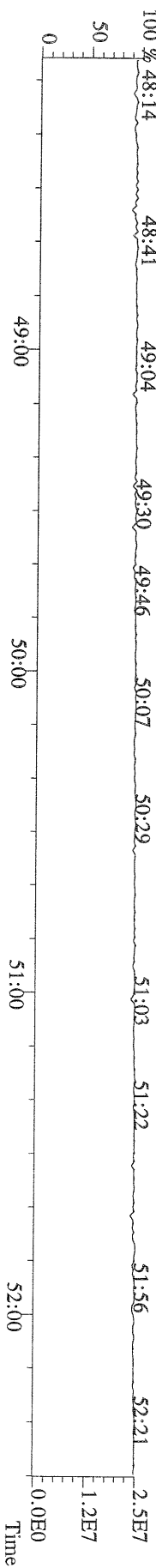
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469.7780 S:2 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory  
100 %



File:29JUN09M #1-347 Acq:29-JUN-2009 10:26:46 GC EI+ Voltage SIR Autospec-Ultima  
471.7750 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:ST062909M1 File Text:Frontier Analytical Laboratory



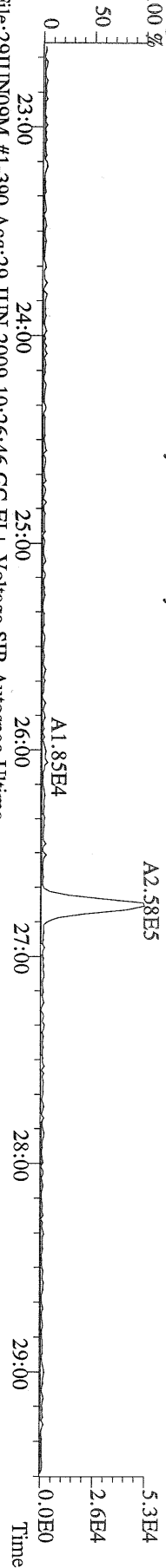
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454.9728 S:2 F:5 Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory  
100 %



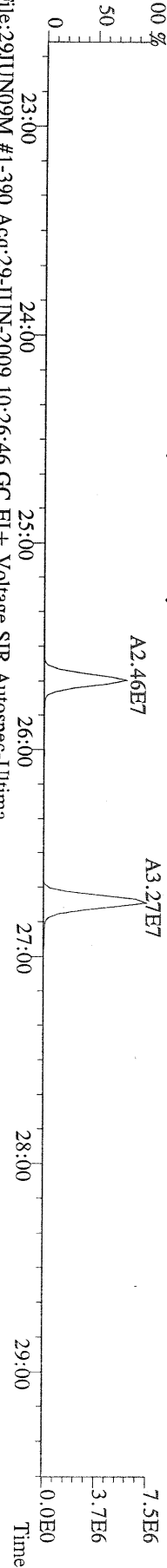
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303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



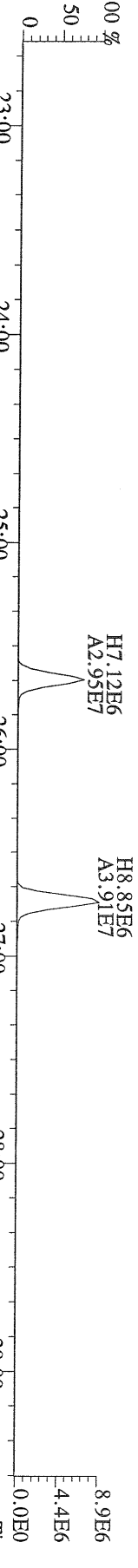
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305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



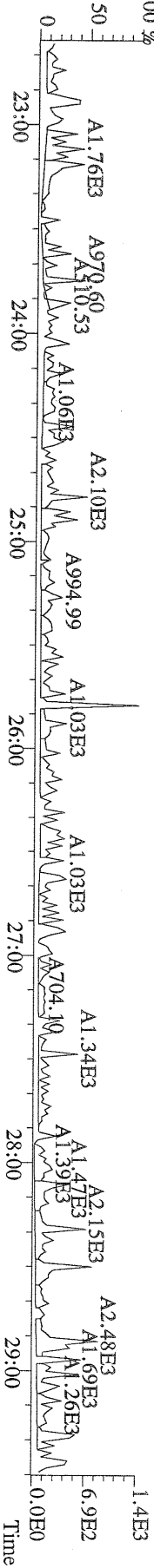
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315.9419 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



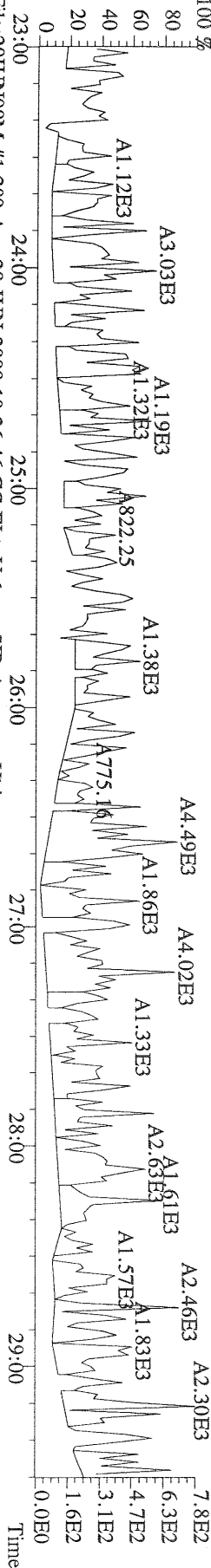
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317.9389 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



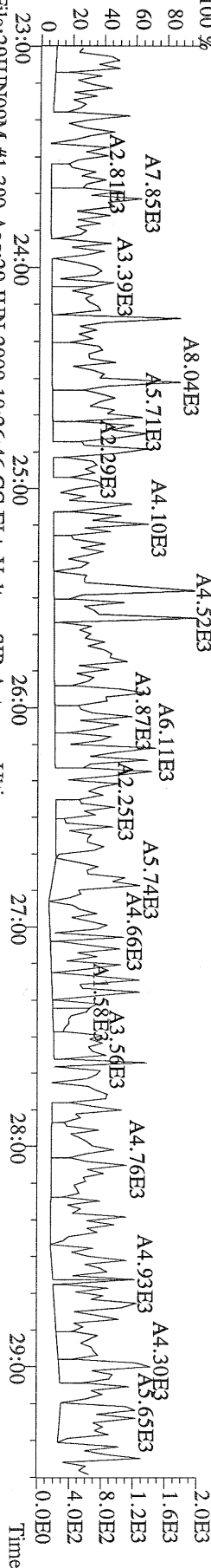
File:29JUN09M #1-390 Acq:29-JUN-2009 10:26:46 GC EI+ Voltage SIR Autospec-Ultima  
375.8364 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



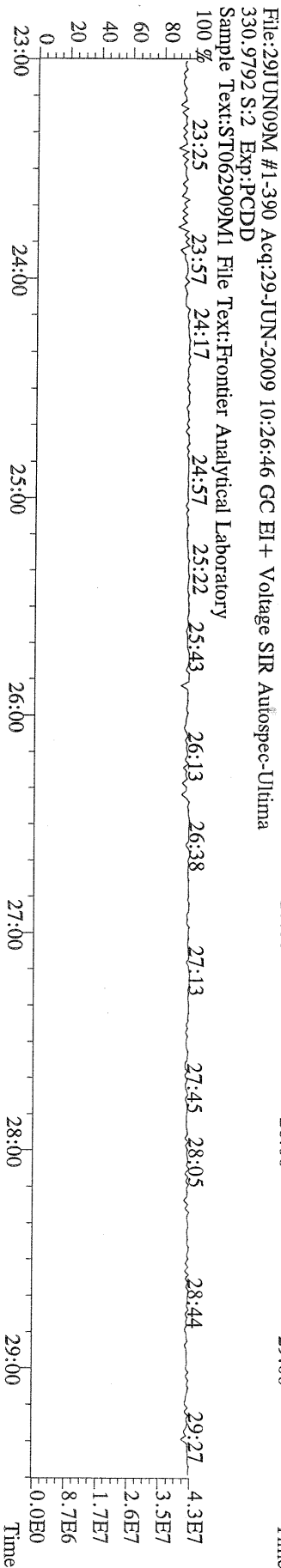
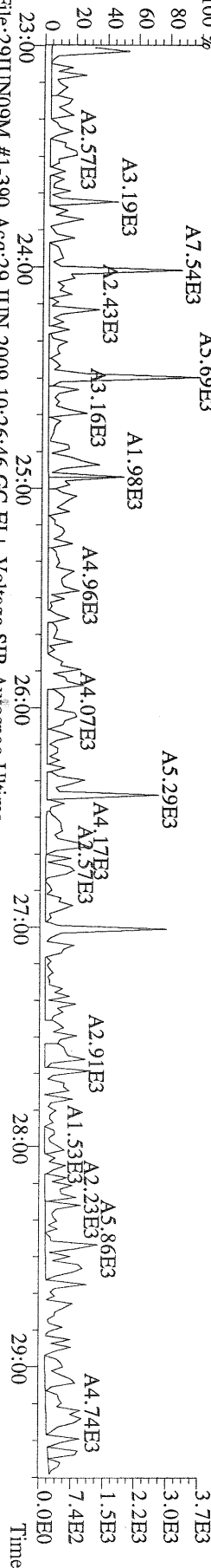
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339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



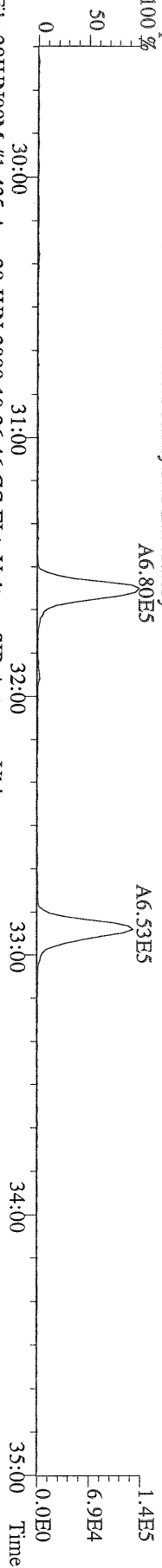
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341.8568 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



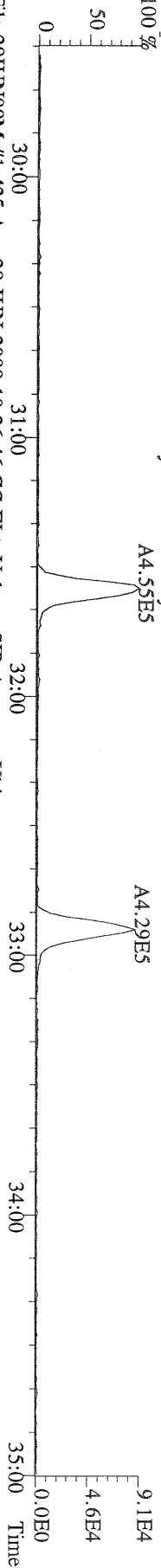
File:29JUN09M #1-390 Acq:29-JUN-2009 10:26:46 GC EI+ Voltage SIR Autospec-Ultima  
409.7974 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



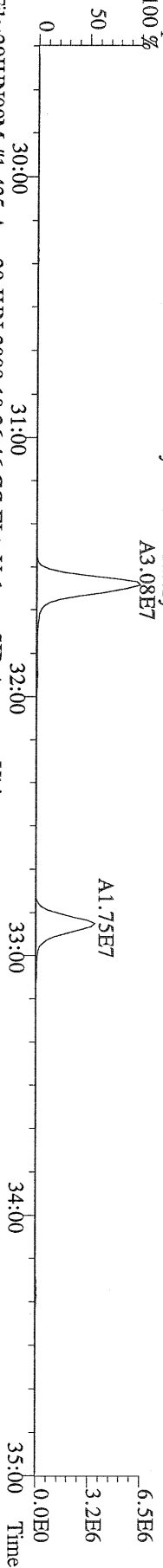
File:29JUN09M #1-425 Acq:29-JUN-2009 10:26:46 GC EI+ Voltage SIR Autospec-Ultima  
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



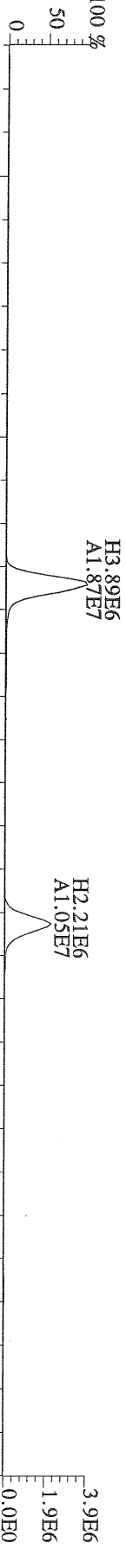
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Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



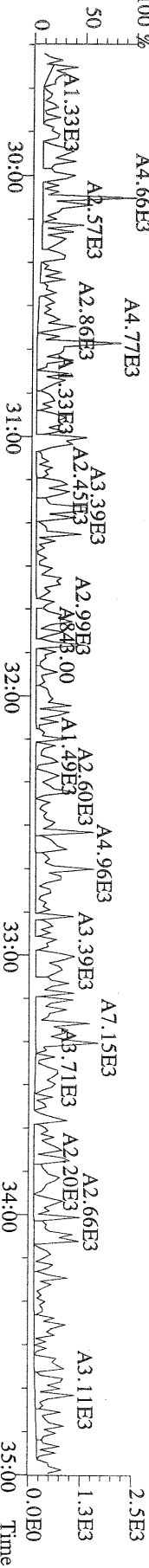
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351.9000 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



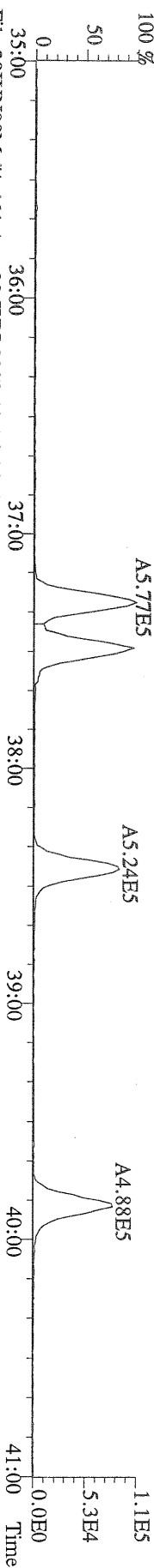
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353.8970 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



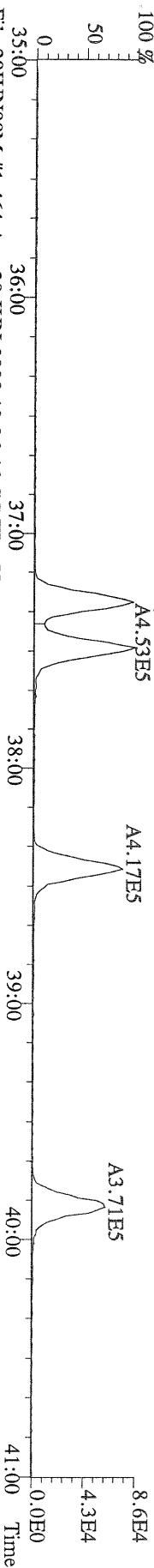
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Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



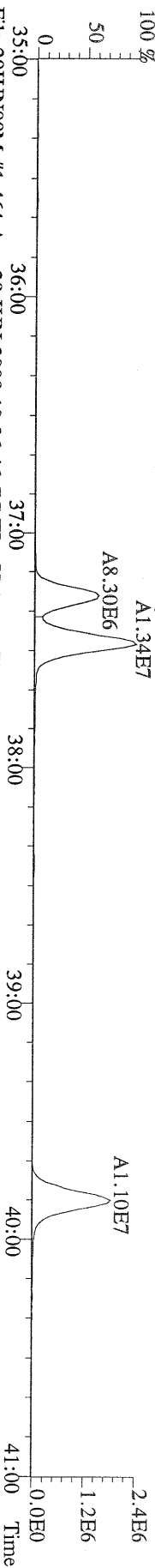
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373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



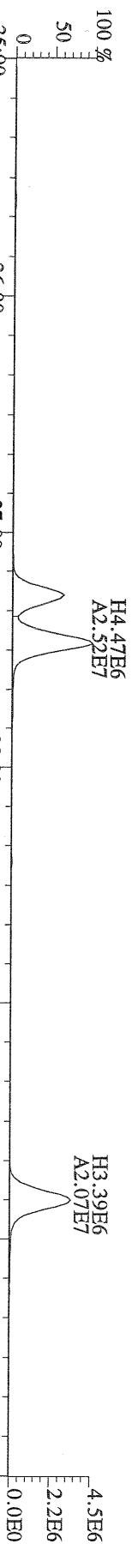
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375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



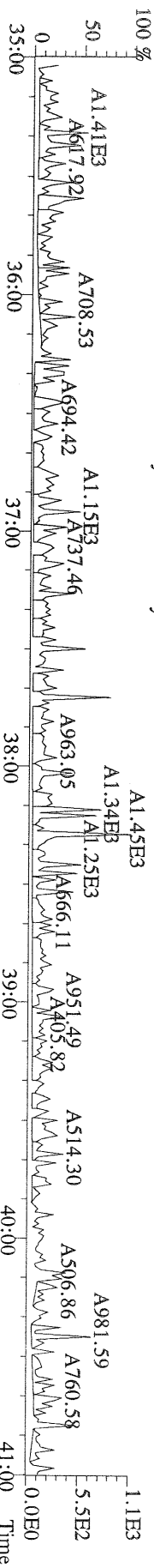
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383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



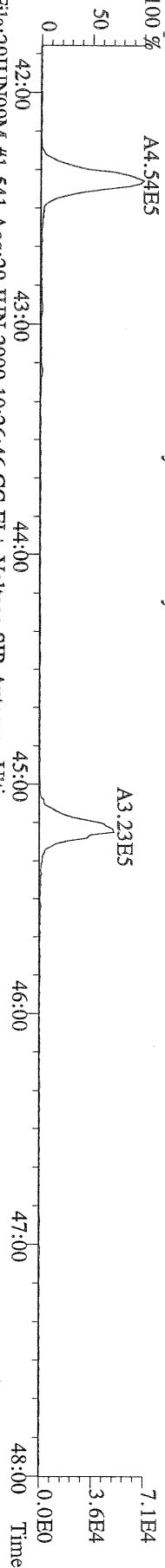
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385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



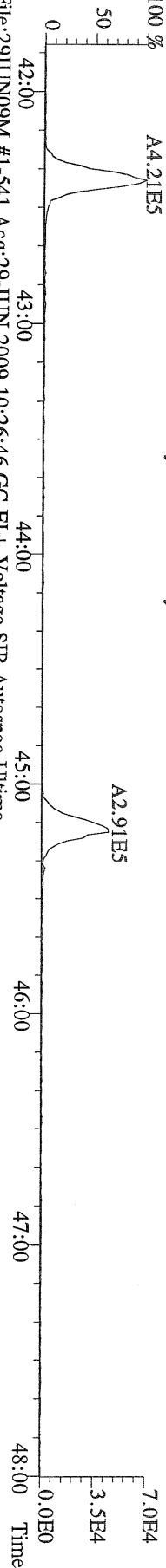
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445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



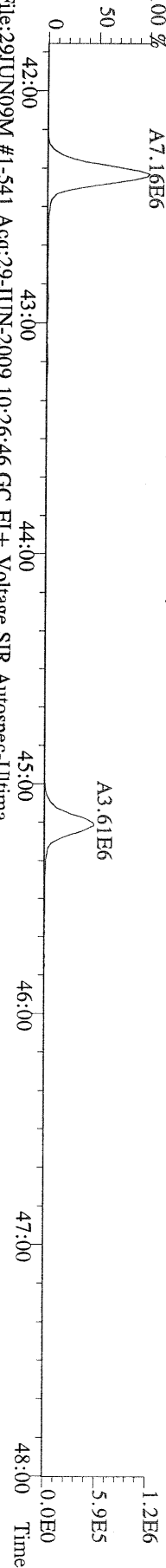
File:29JUN09M #1-541 Acq:29-JUN-2009 10:26:46 GC EI+ Voltage SIR Autospec-Ultima  
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



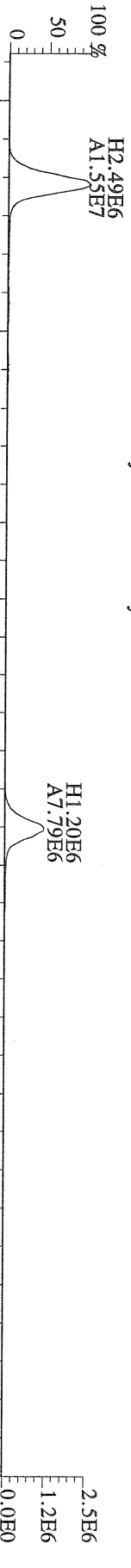
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409.7788 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



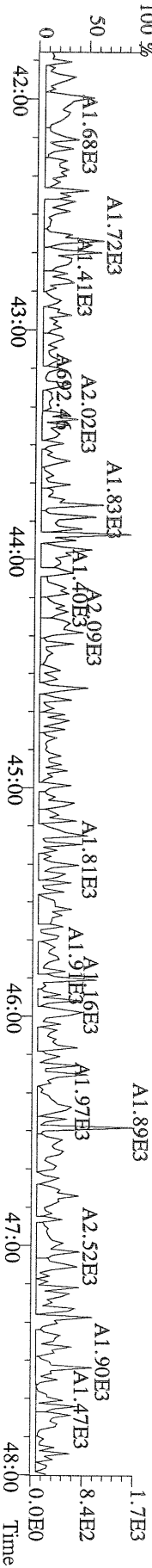
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417.8253 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



File:29JUN09M #1-541 Acq:29-JUN-2009 10:26:46 GC EI+ Voltage SIR Autospec-Ultima  
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:ST062909M1 File Text:Frontier Analytical Laboratory

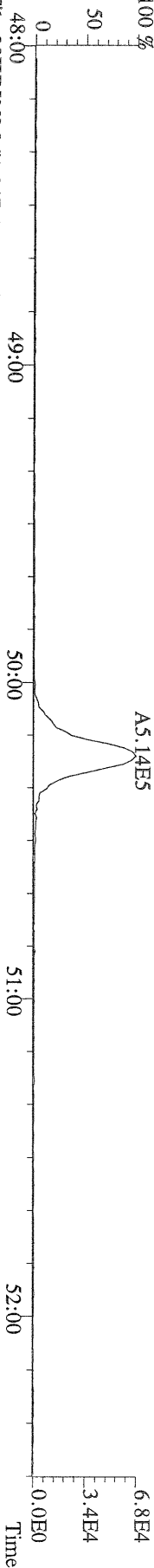


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479.7165 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory

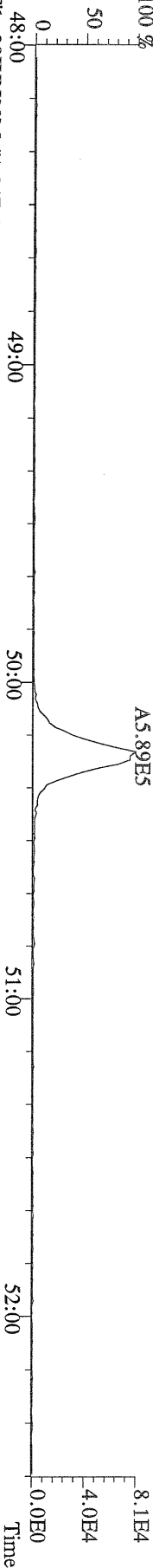




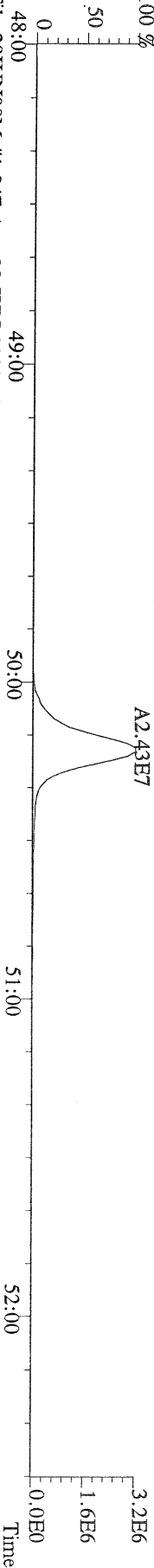
File:29JUN09M #1-347 Acq:29-JUN-2009 10:26:46 GC EI+ Voltage SIR Autospec-Ultima  
441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory  
100 %



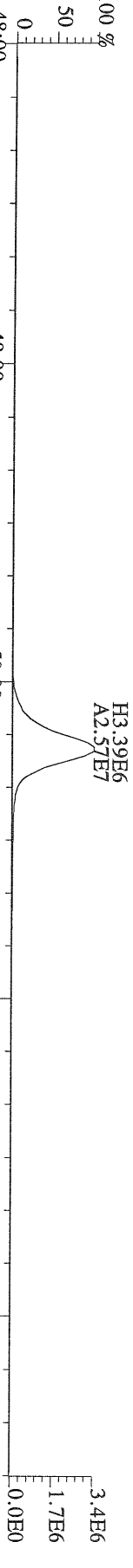
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443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory  
100 %



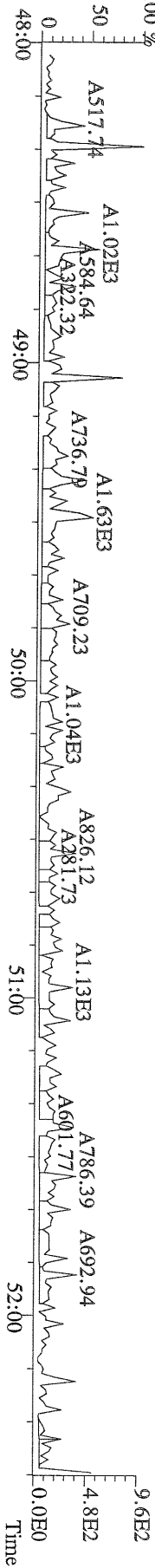
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453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory  
100 %



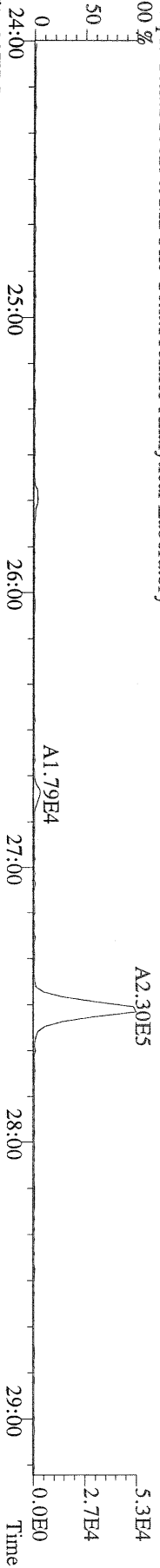
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455.7801 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



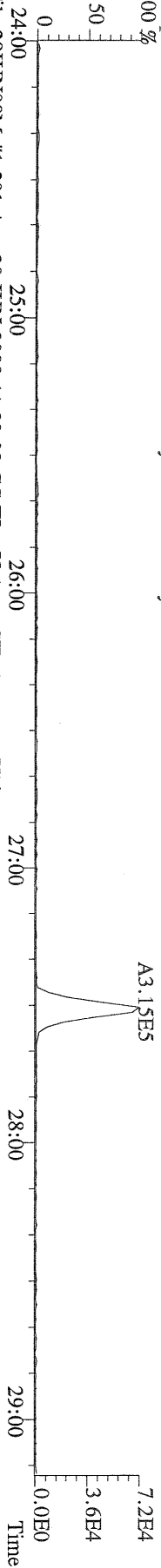
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513.6775 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M1 File Text:Frontier Analytical Laboratory



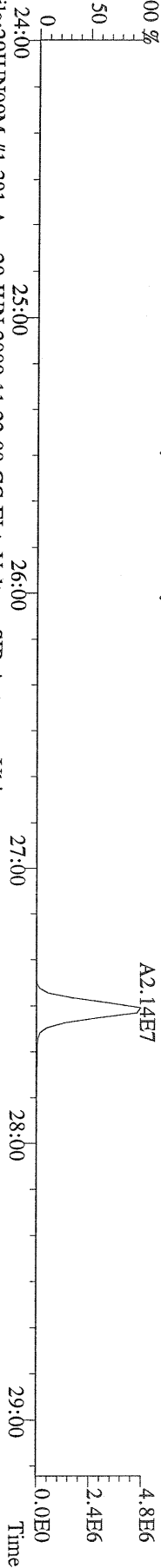
File:29JUN09M #1-391 Acq:29-JUN-2009 11:22:08 GC EI+ Voltage SIR Autospec-Ultima  
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory  
100 %



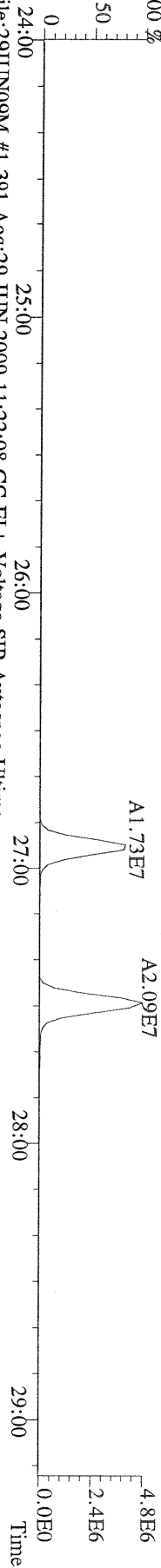
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321.8936 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory  
100 %



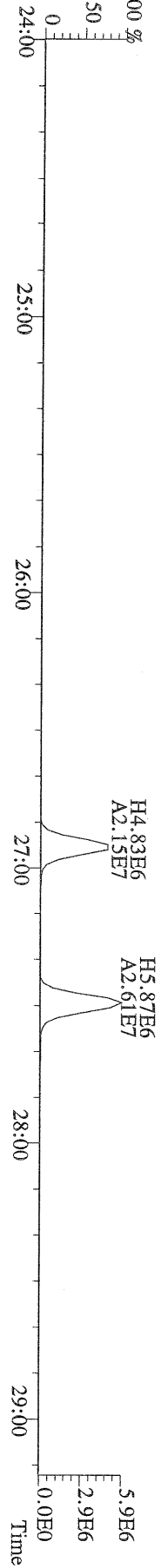
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327.8847 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory  
100 %



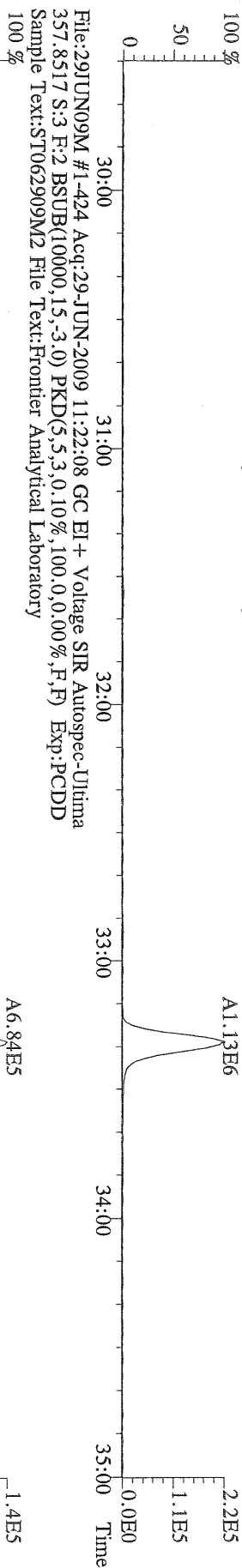
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331.9368 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory  
100 %



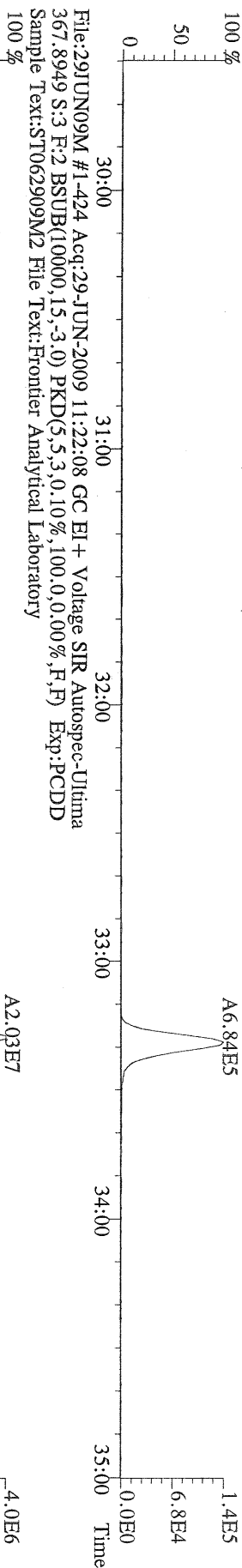
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333.9339 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



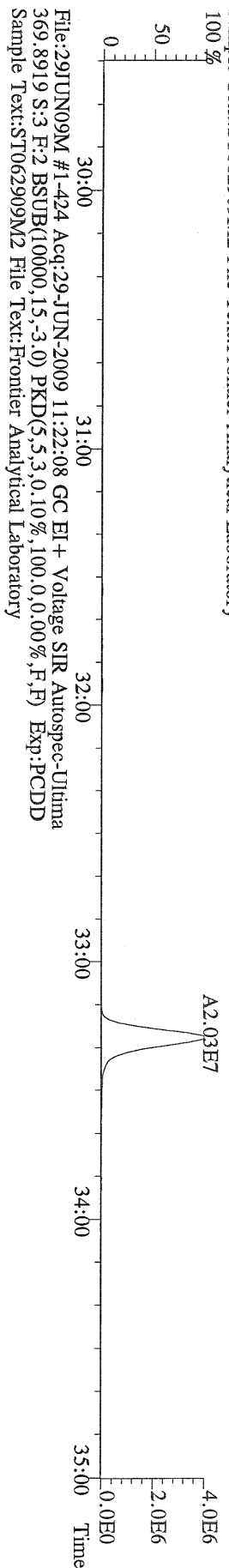
File:29JUN09M #1-424 Acq:29-JUN-2009 11:22:08 GC EI+ Voltage SIR Autospec-Ultima  
355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



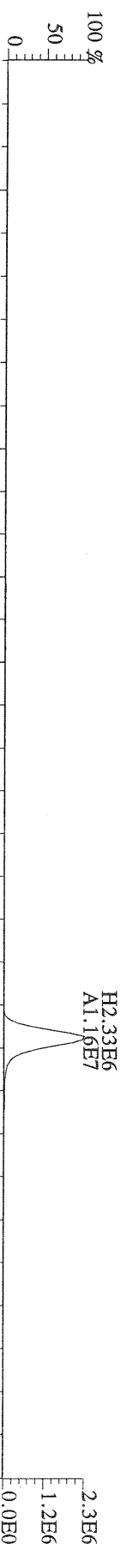
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357.8517 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



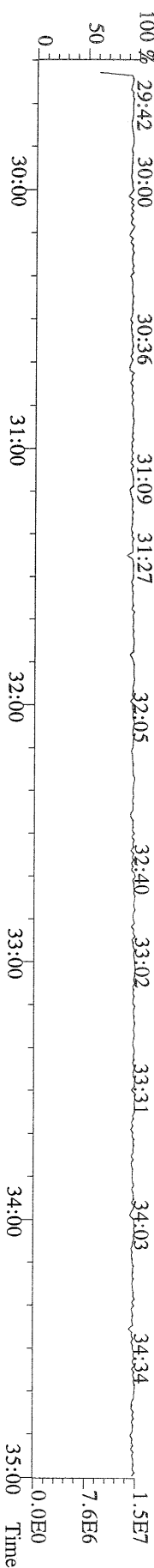
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367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



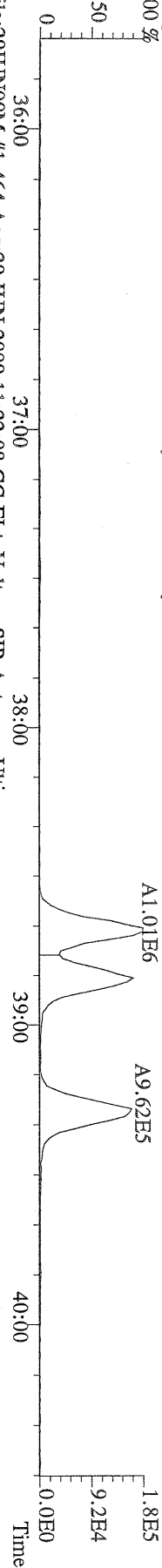
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369.8919 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



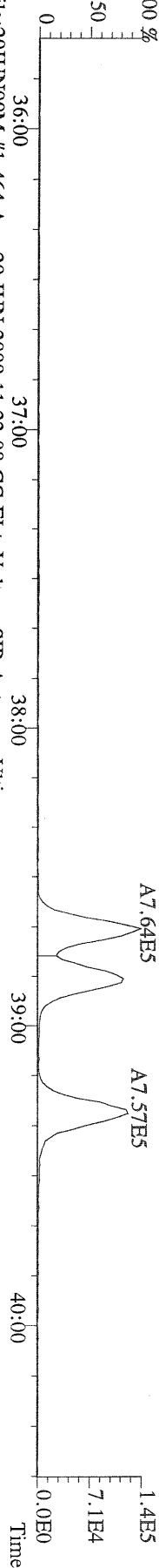
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366.9792 S:3 F:2 Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



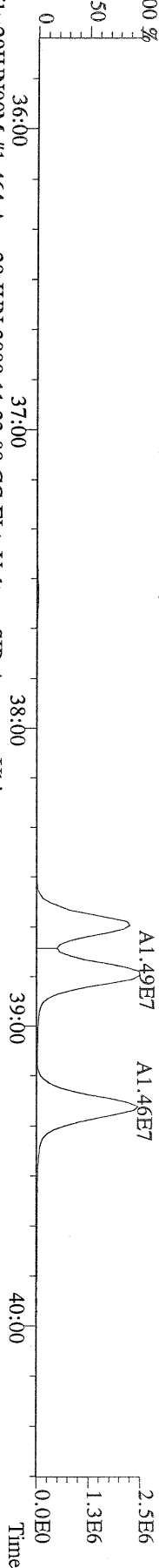
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389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



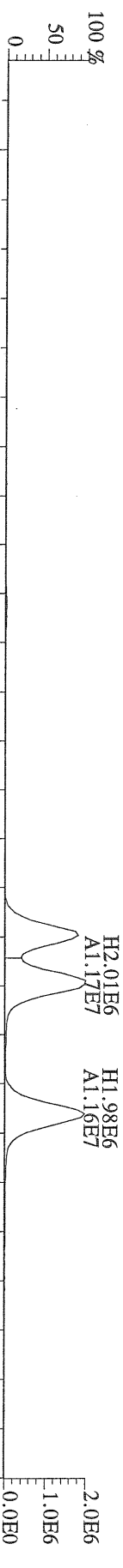
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391.8127 S:3 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



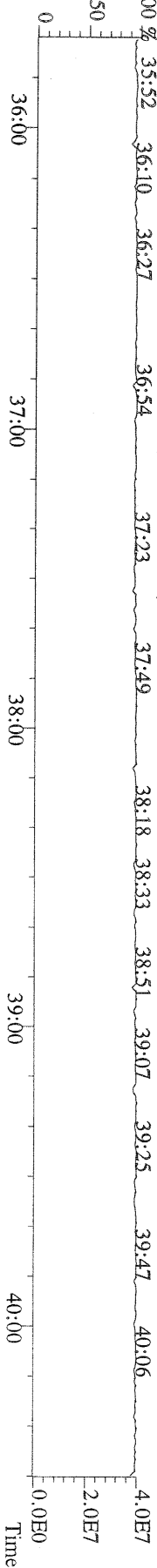
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401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



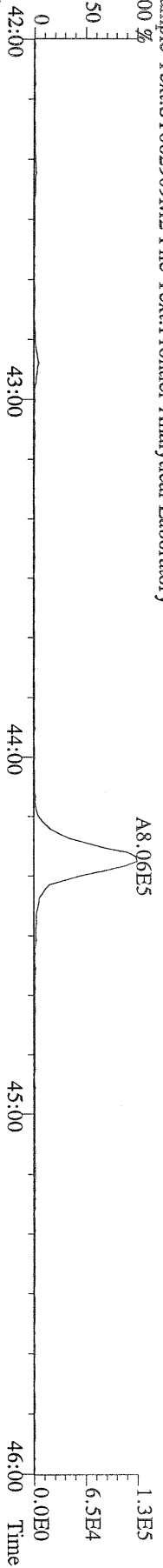
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403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



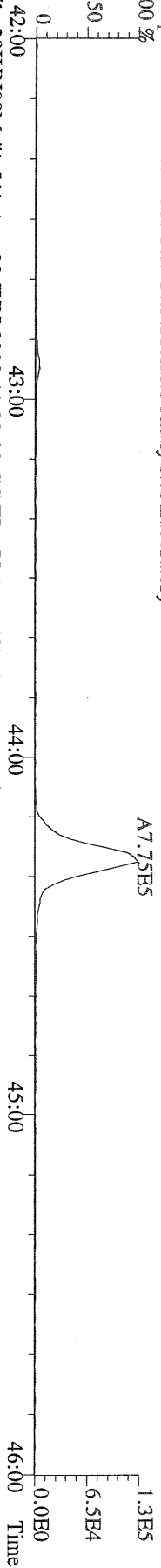
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380.9760 S:3 F:3 Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



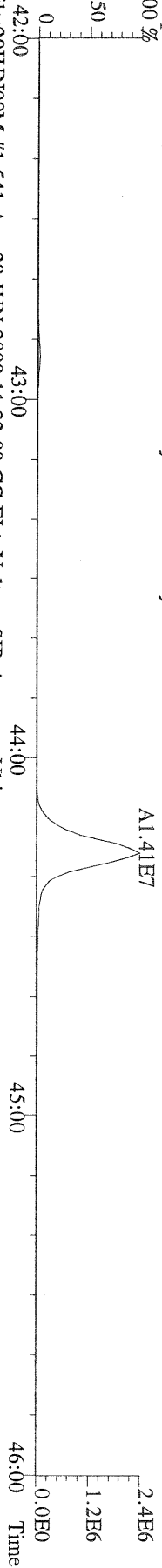
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423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



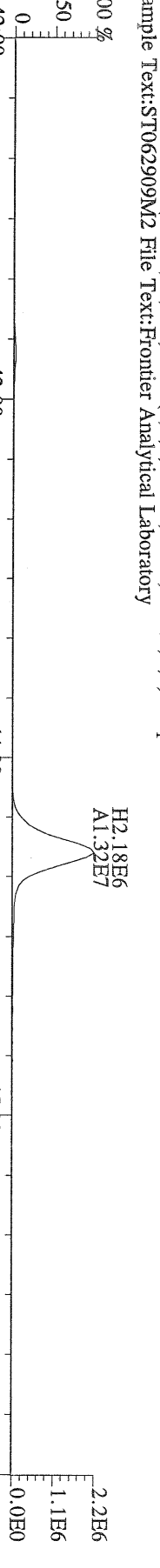
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425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



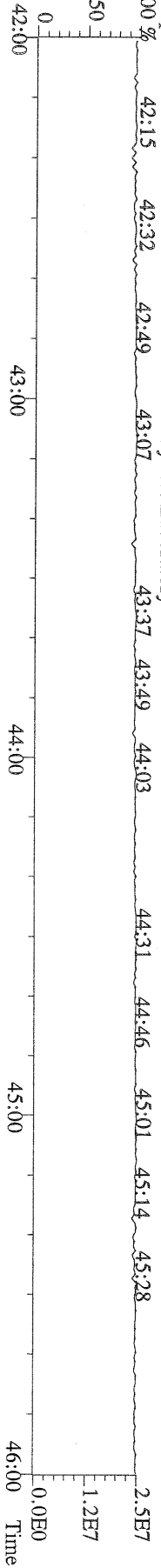
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Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



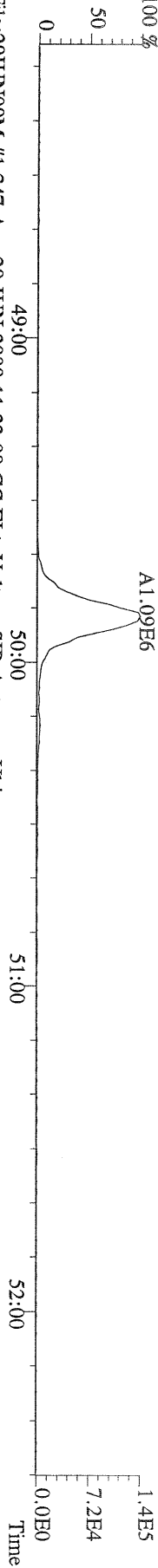
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Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



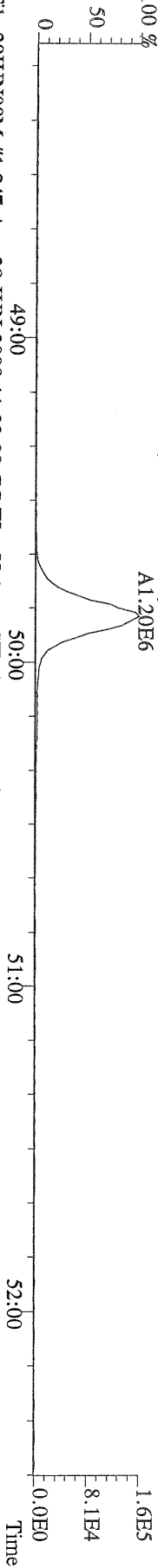
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430.9728 S:3 F:4 Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



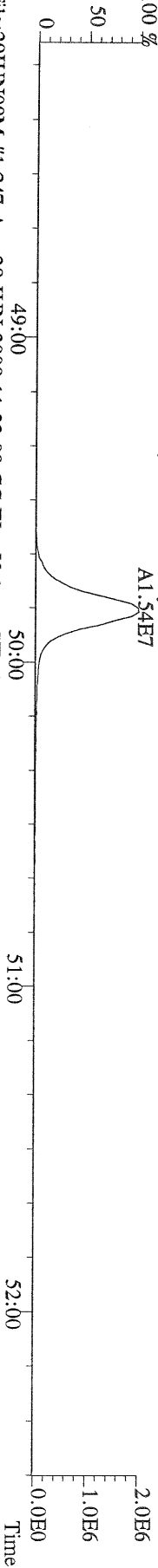
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Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory  
100 %



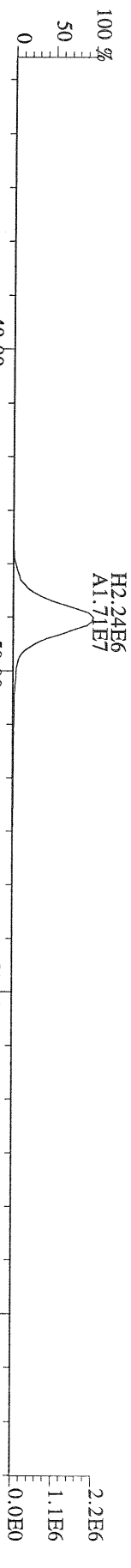
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Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory  
100 %



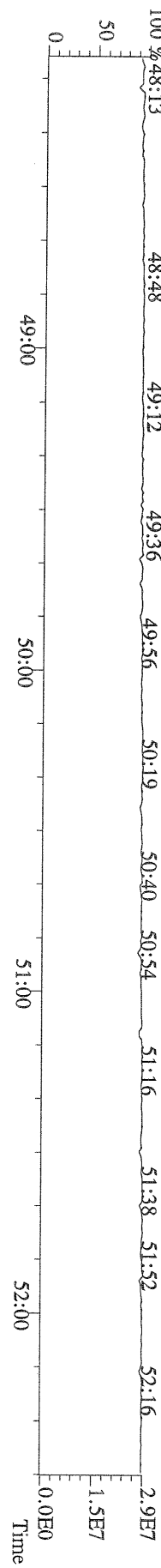
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Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory  
100 %



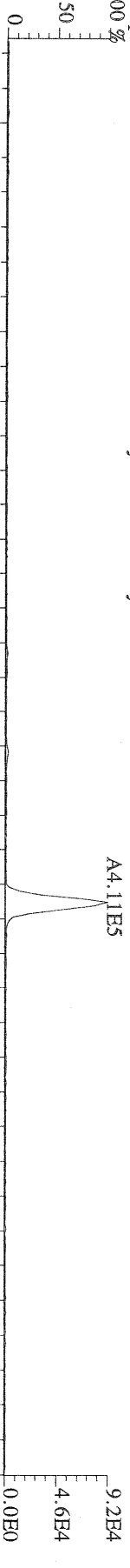
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Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



File:291UN09M #1-347 Acq:29-JUN-2009 11:22:08 GC EI+ Voltage SIR Autospec-Ultima  
454.9728 S:3 F:5 Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



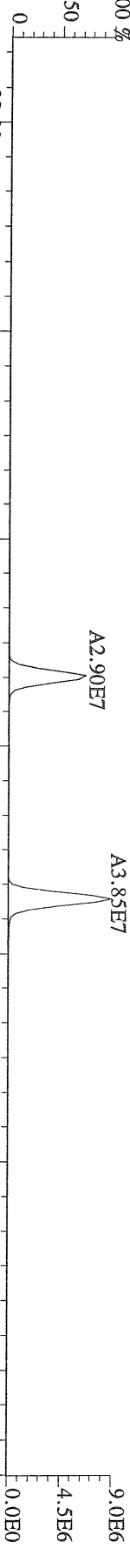
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303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



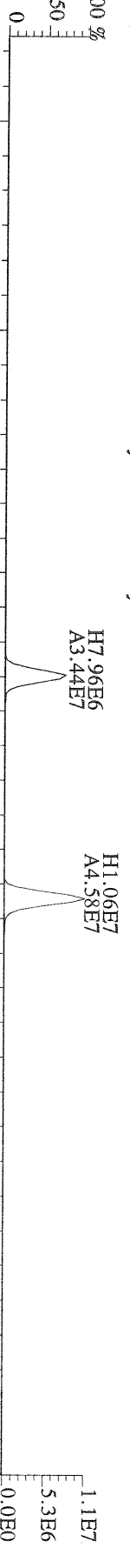
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305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



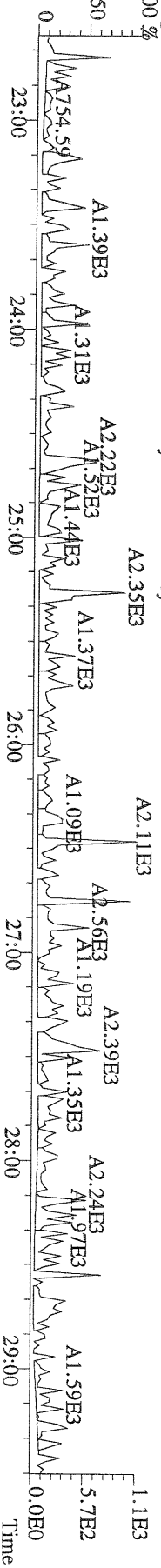
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Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



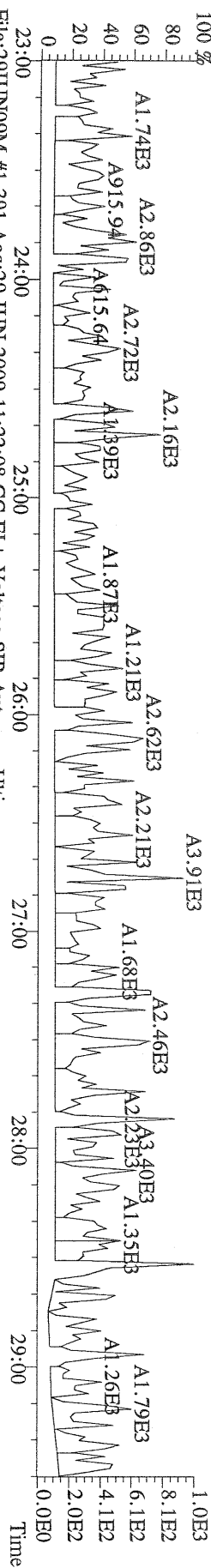
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Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



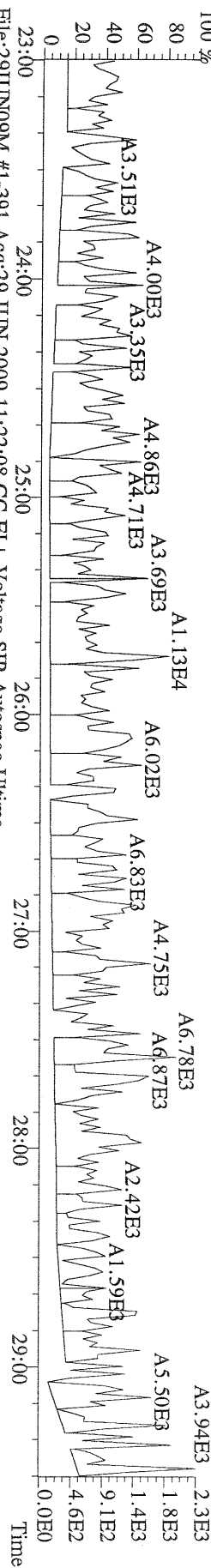
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375.8364 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



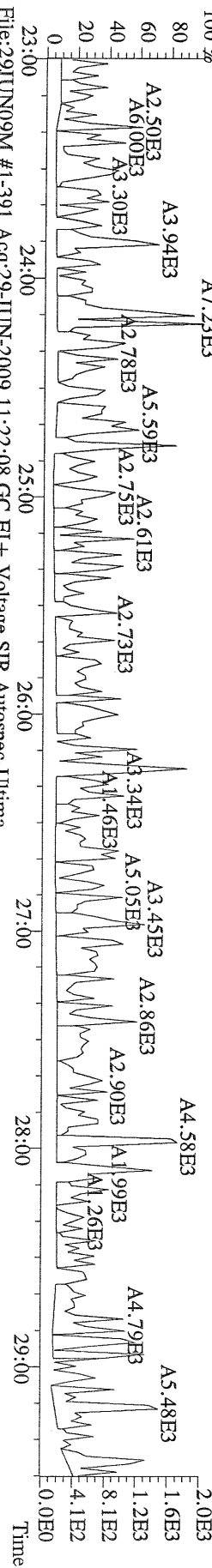
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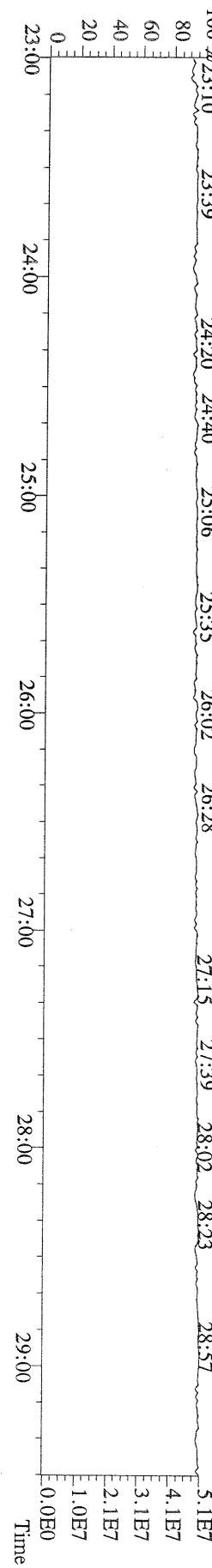
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341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory  
100 %



File:29JUN09M\_#1-391 Acq:29-JUN-2009 11:22:08 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:ST062909M2 File Text:Frontier Analytical Laboratory  
100% A7.23E3

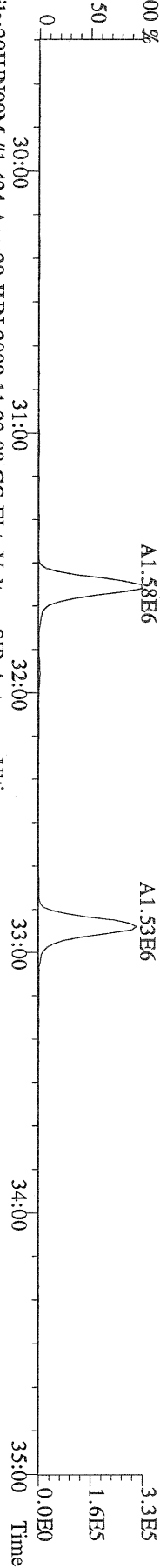


File:291UN09N\_#1-591 Acq:29-1UN-2009 11:22:08 GC EI+ Voltage SIR Autospec-Ultima  
330.9792 S:3 Exp:PCCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory  
100%23:10 23:39 24:20 24:40 25:06 25:35 26:02 26:28

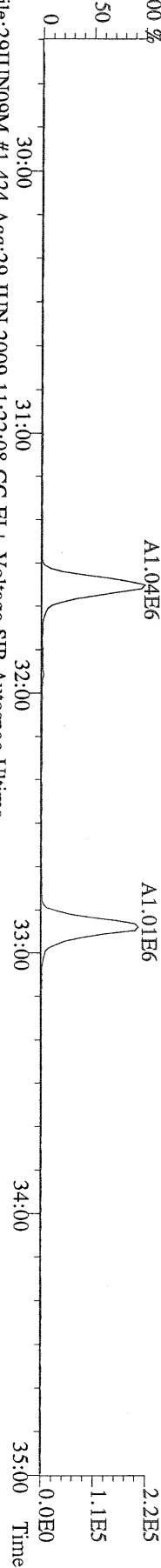




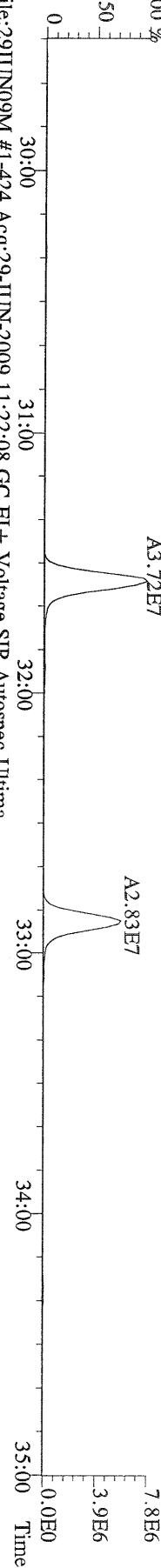
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339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



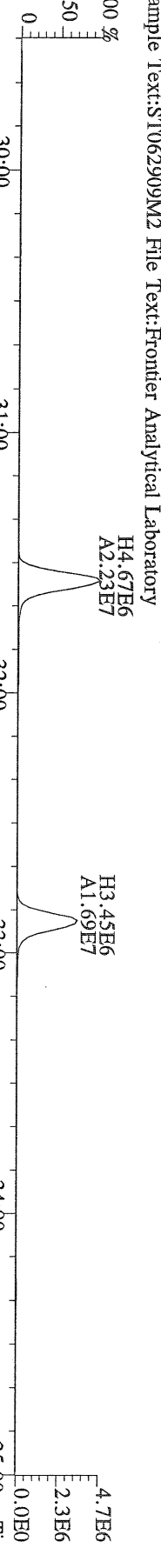
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Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



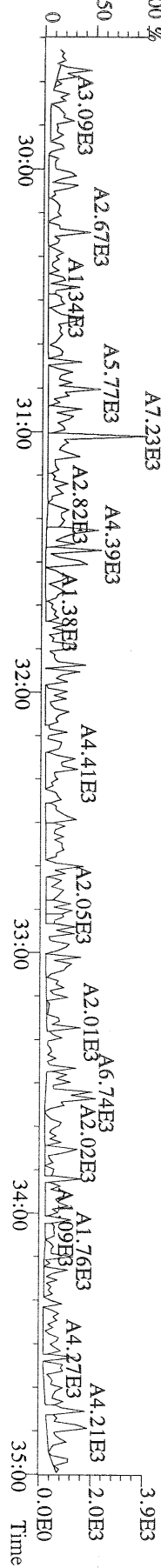
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Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



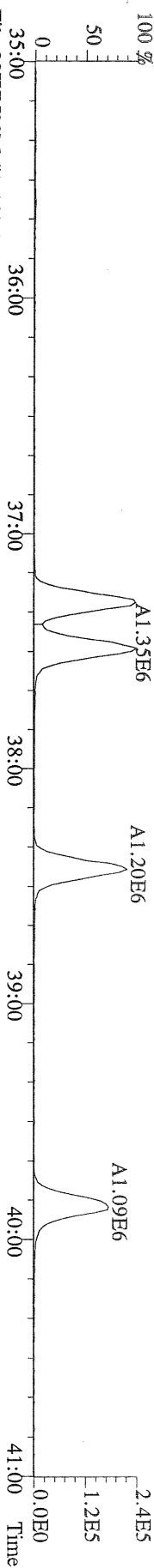
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Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



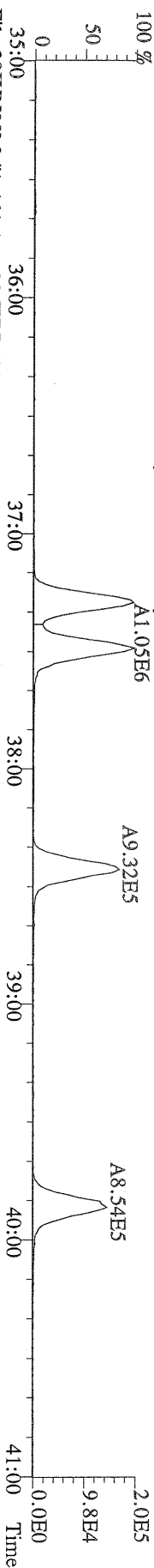
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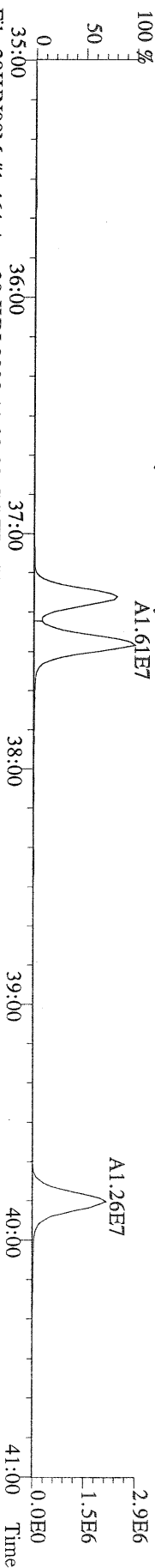
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373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



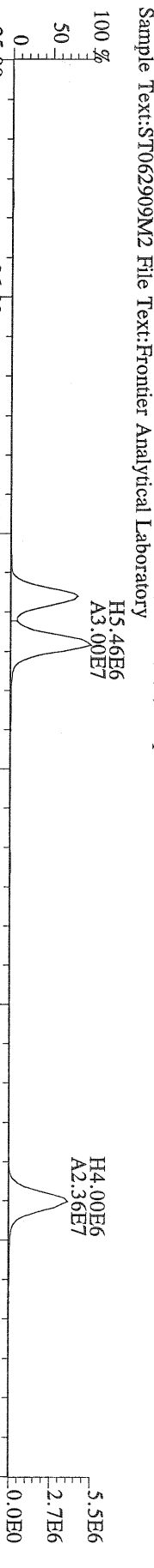
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375.8178 S:3 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



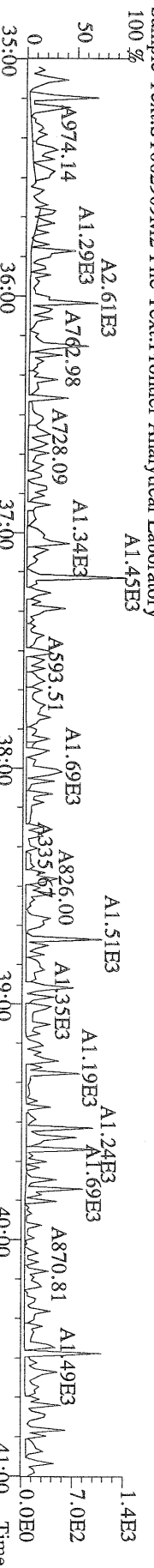
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383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



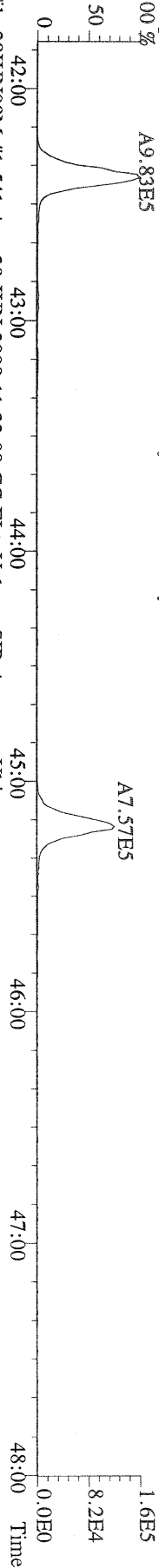
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385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



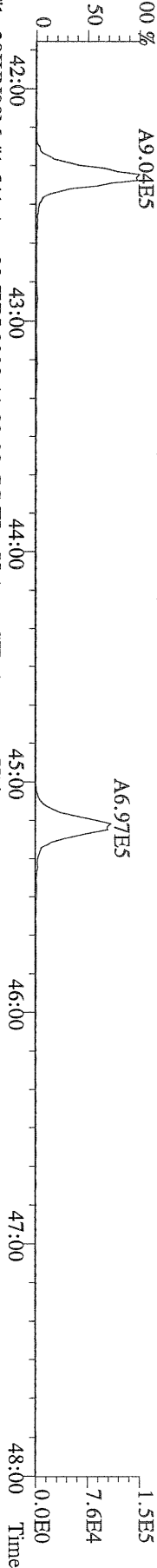
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Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



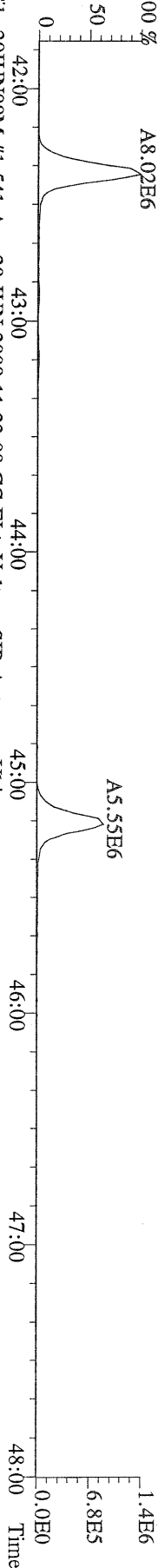
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407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



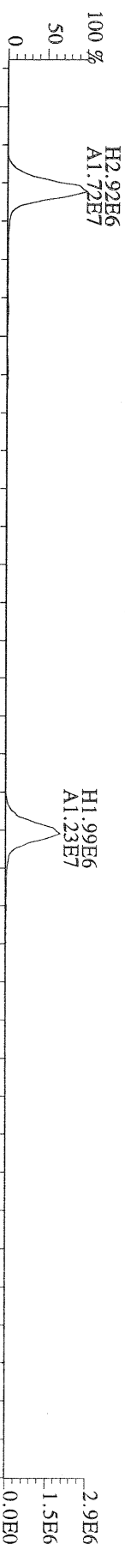
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Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



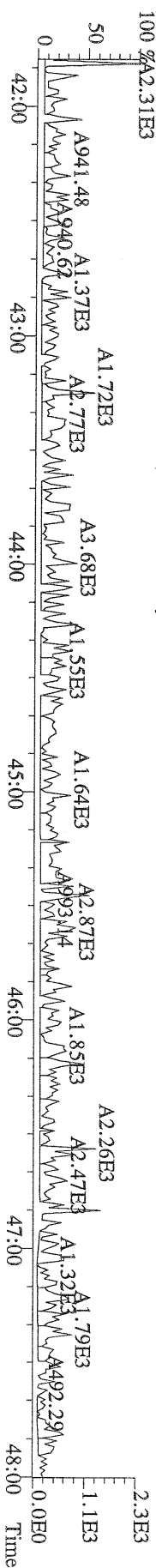
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Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



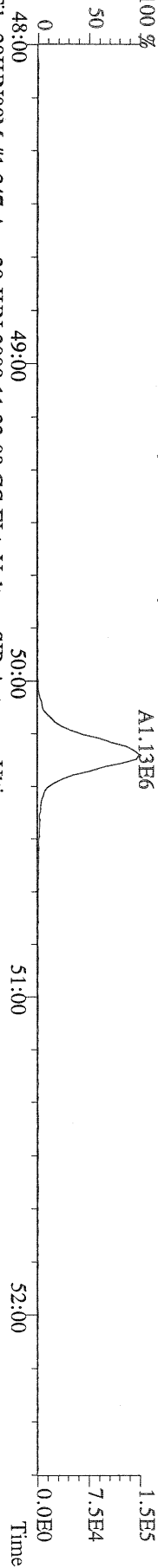
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419.8220 S:3 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



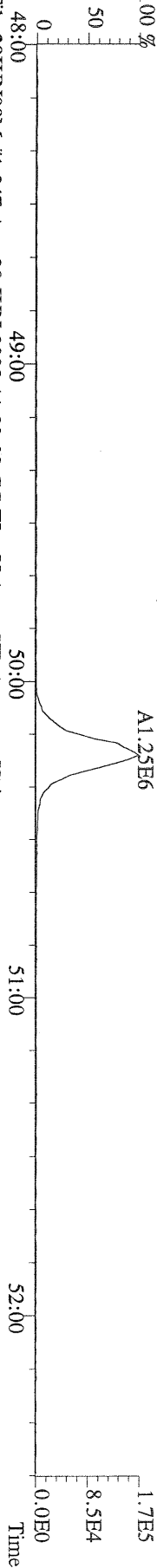
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479.7165 S:3 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
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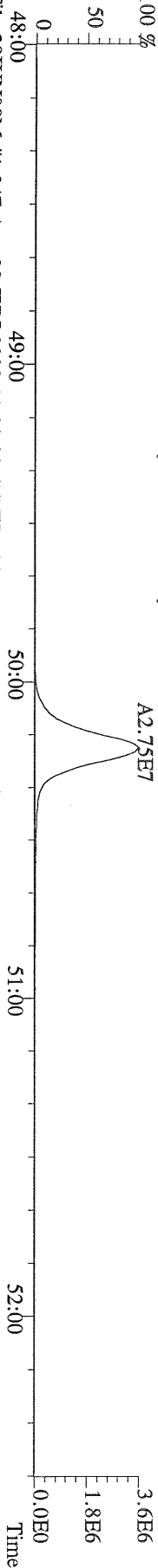
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441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
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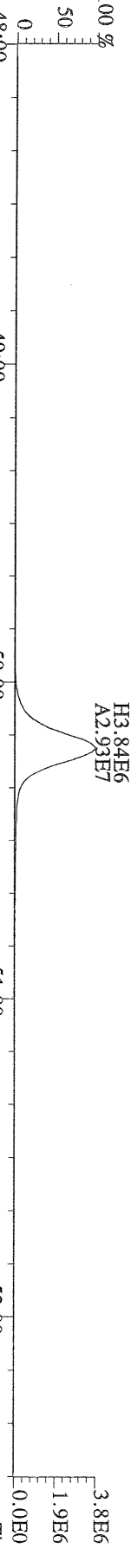
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Sample Text:ST062909M2 File Text:Frontier Analytical Laboratory



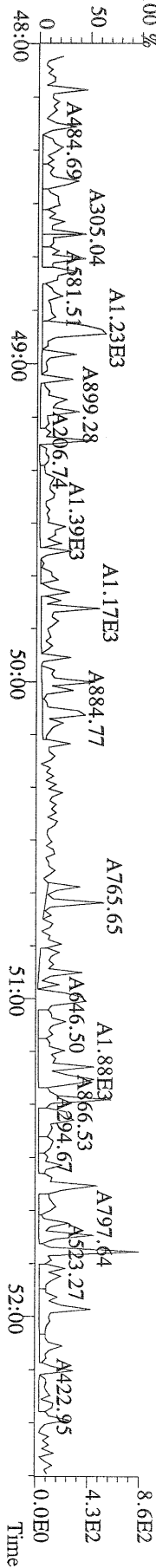
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453.7831 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
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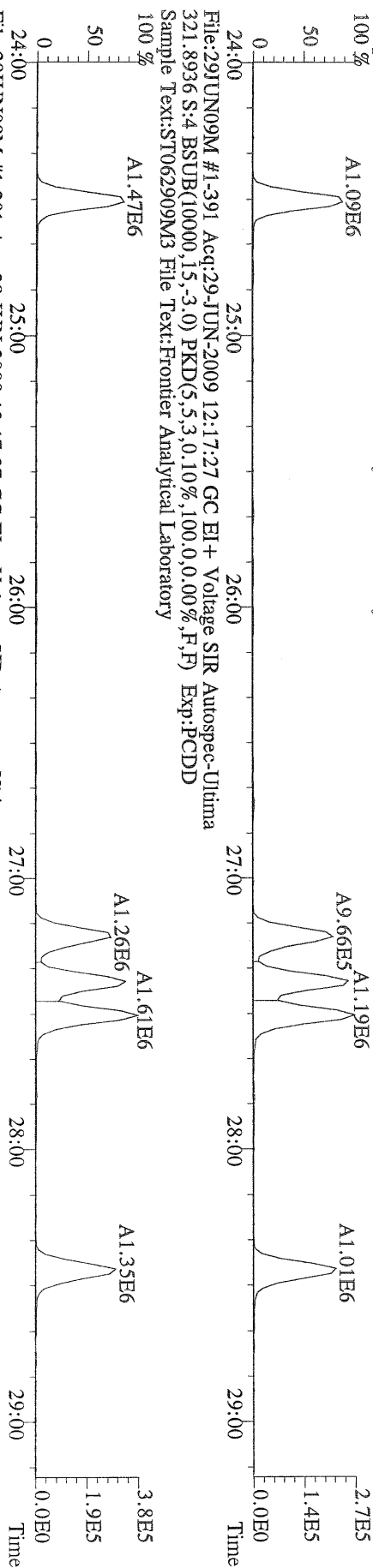
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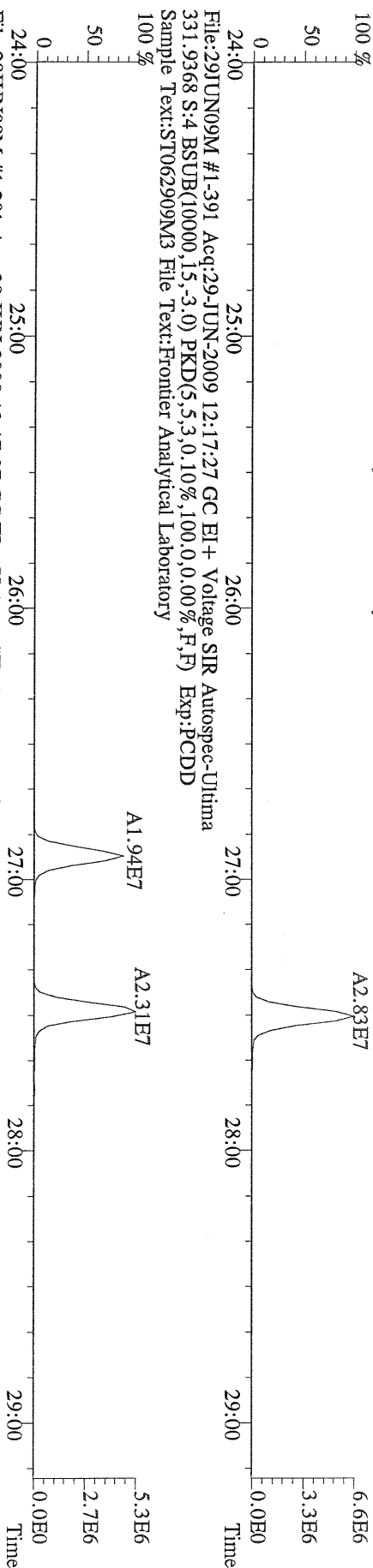
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513.6775 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
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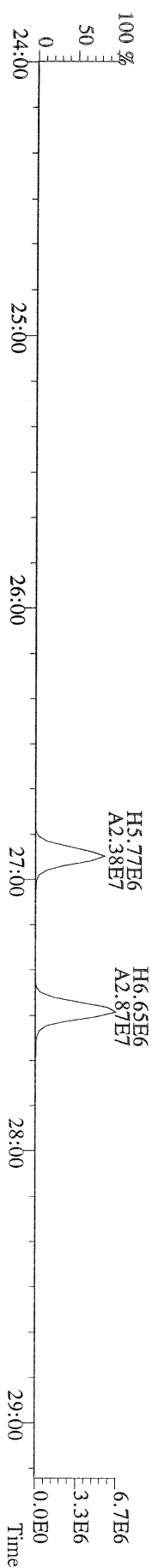
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319.8965 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



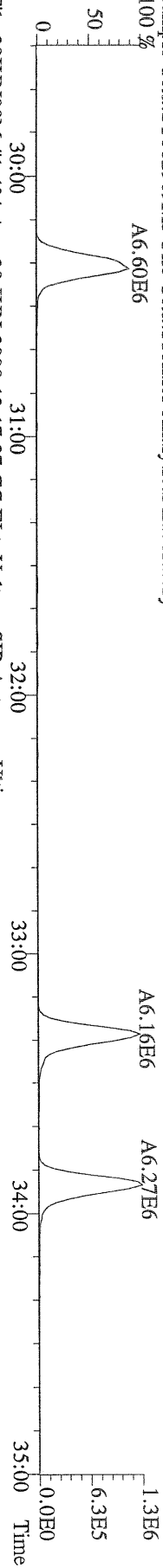
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327.8847 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



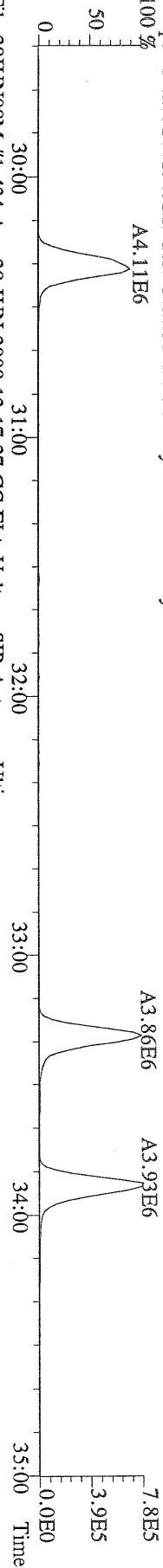
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Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



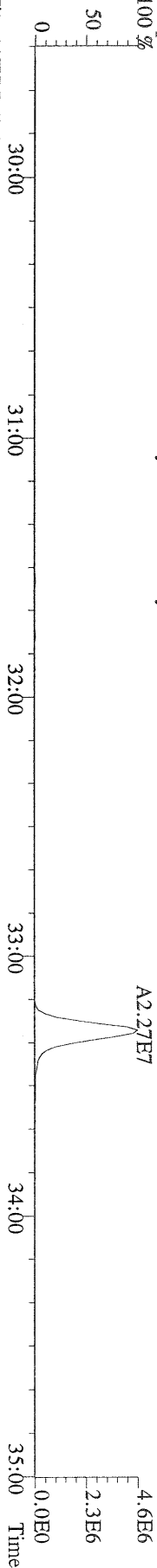
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355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory  
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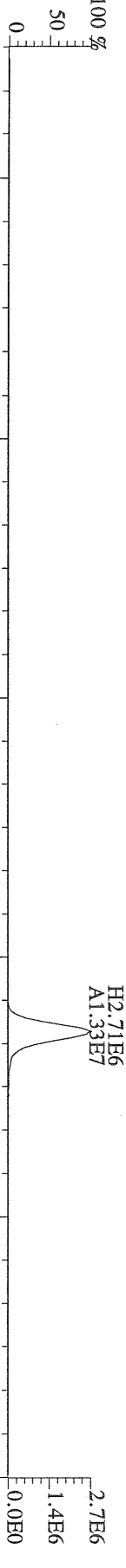
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Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory  
100 %



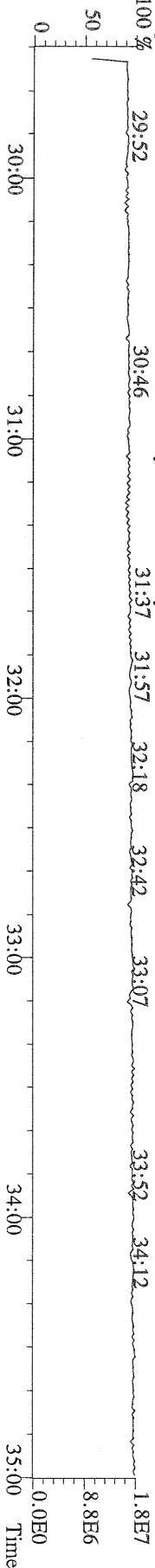
File:29JUN09M #1-424 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
367.8949 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory  
100 %



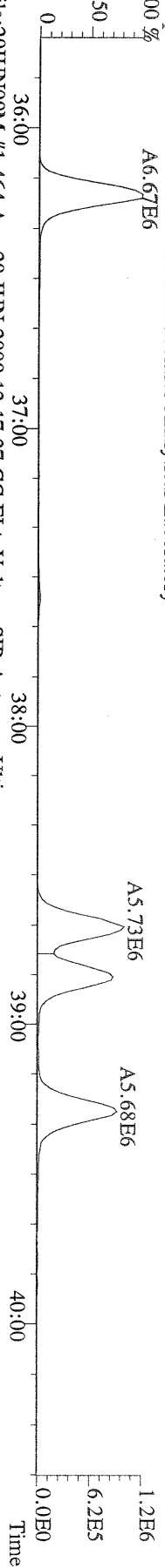
File:29JUN09M #1-424 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
369.8919 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



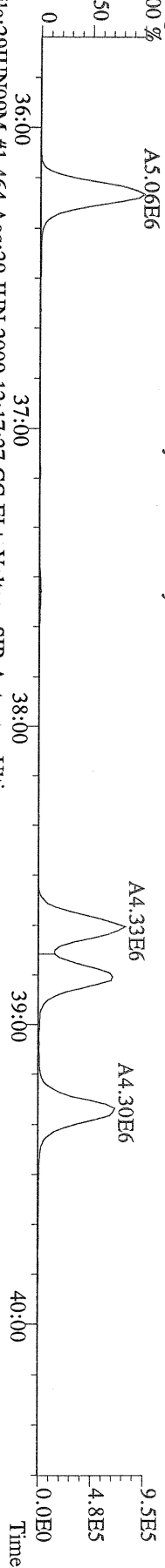
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366.9792 S:4 F:2 Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory  
100 %



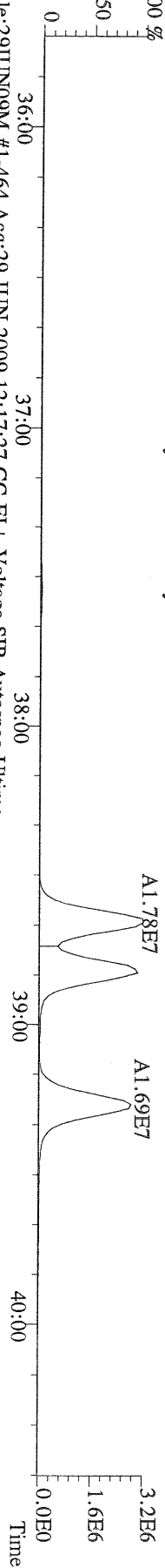
File:29JUN09M #1-464 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



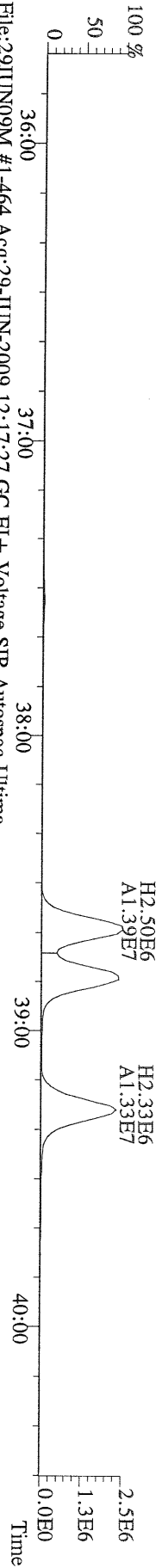
File:29JUN09M #1-464 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
391.8127 S:4 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



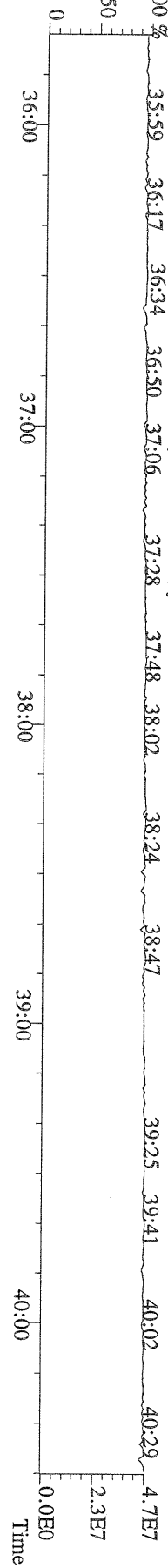
File:29JUN09M #1-464 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



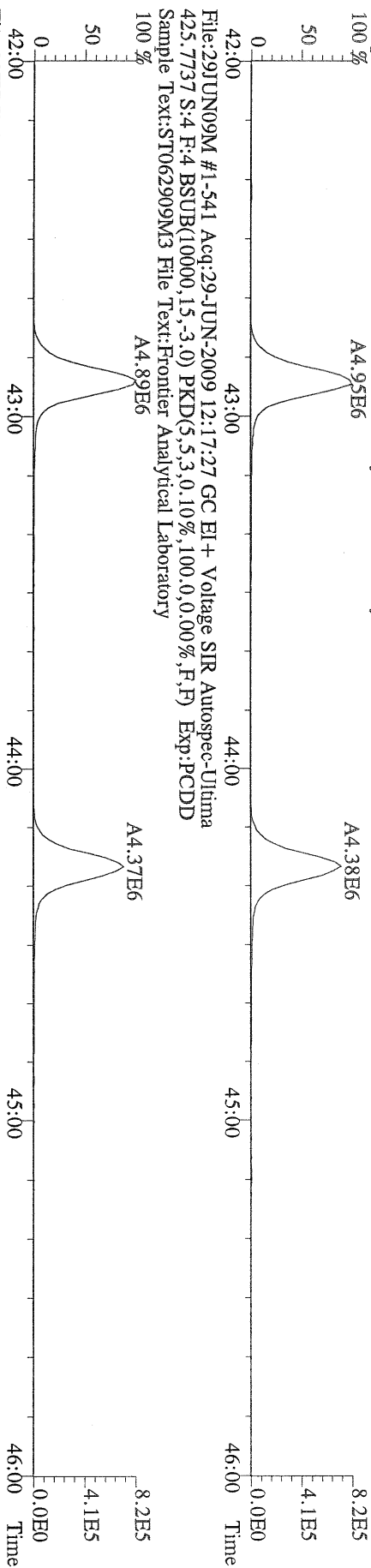
File:29JUN09M #1-464 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



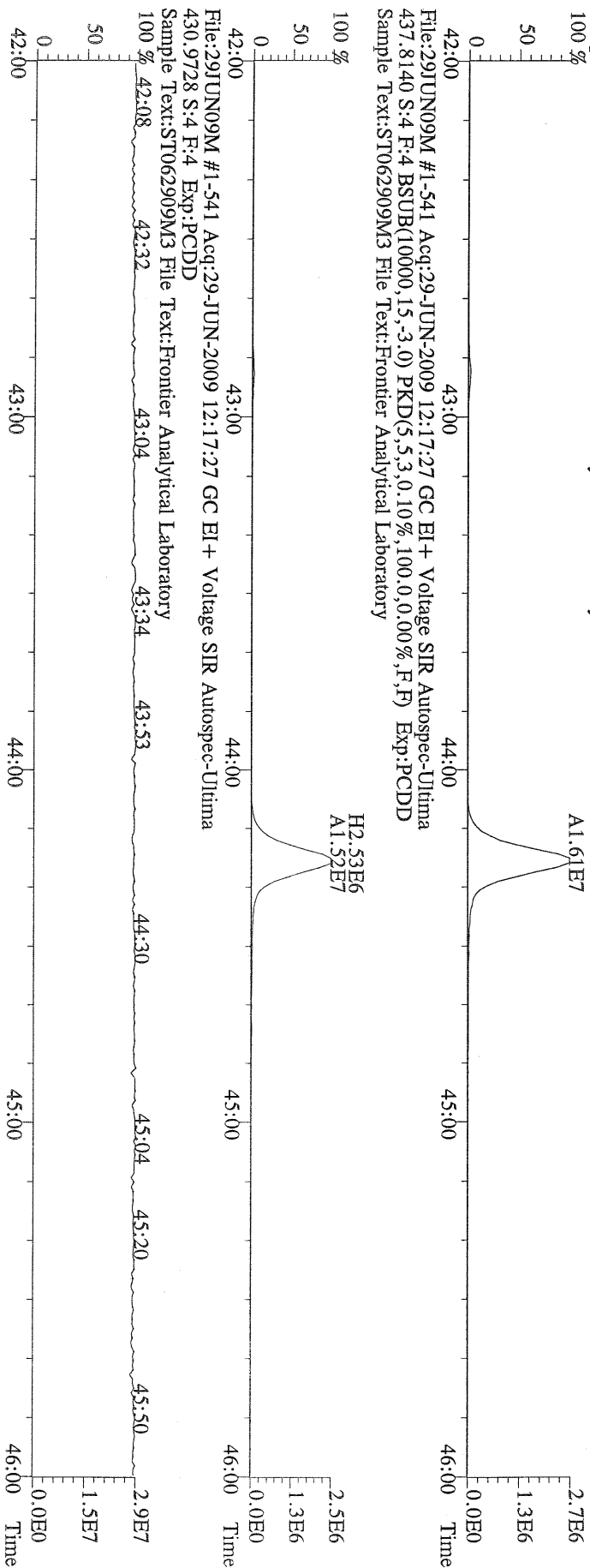
File:29JUN09M #1-464 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
380.9760 S:4 F:3 Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



File:29JUN09M #1-541 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory

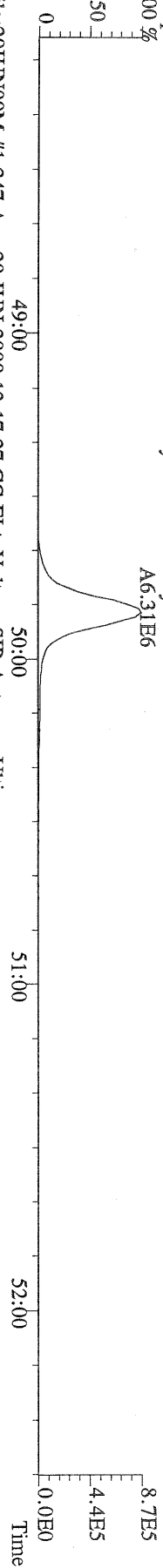


File:29JUN09M #1-541 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
435.8169 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory

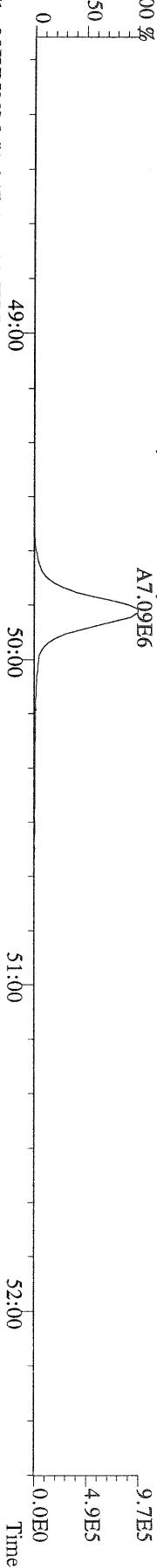




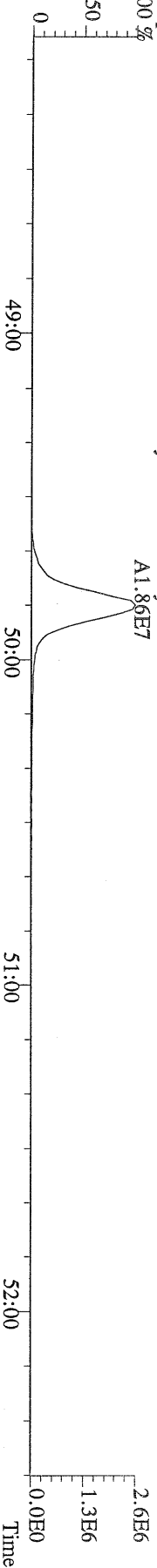
File:29JUN09M #1-347 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



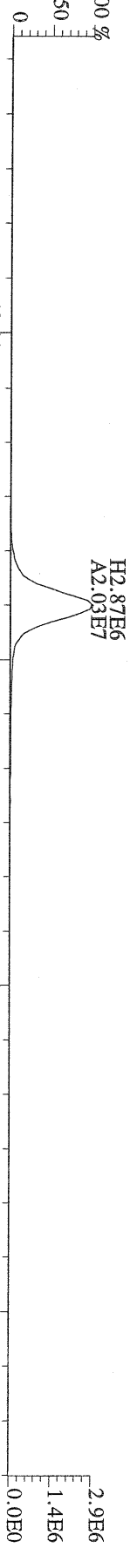
File:29JUN09M #1-347 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
459.7348 S:4 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



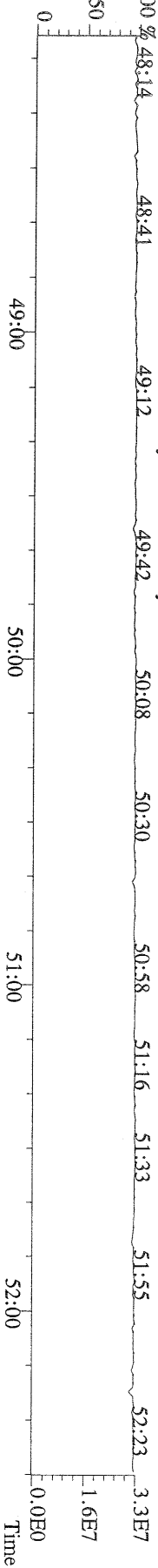
File:29JUN09M #1-347 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
469.7780 S:4 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



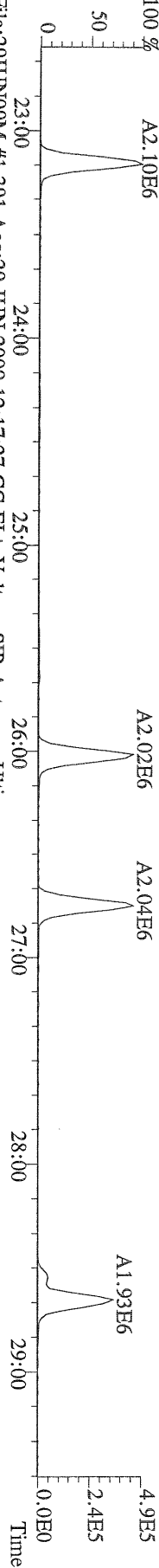
File:29JUN09M #1-347 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
471.7750 S:4 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



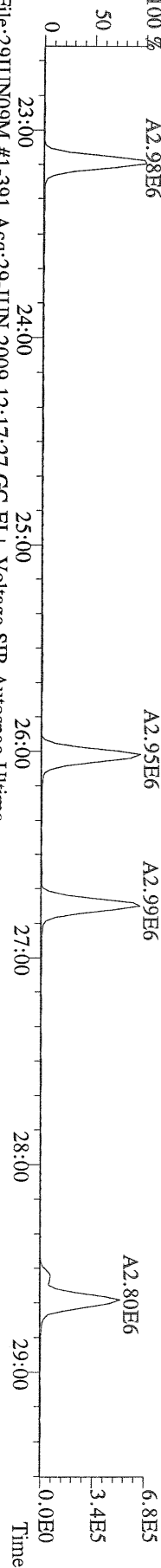
File:29JUN09M #1-347 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
454.9728 S:4 F:5 Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



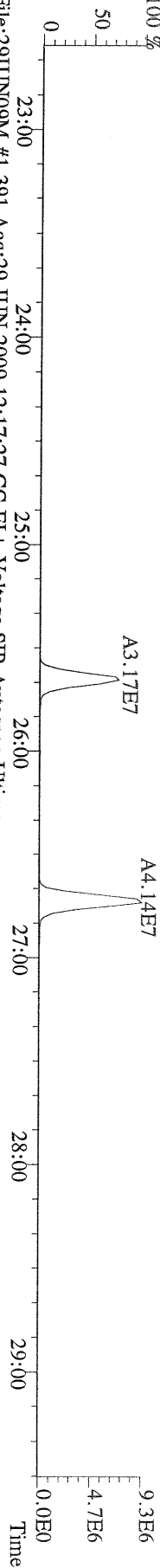
File:29JUN09M #1-391 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



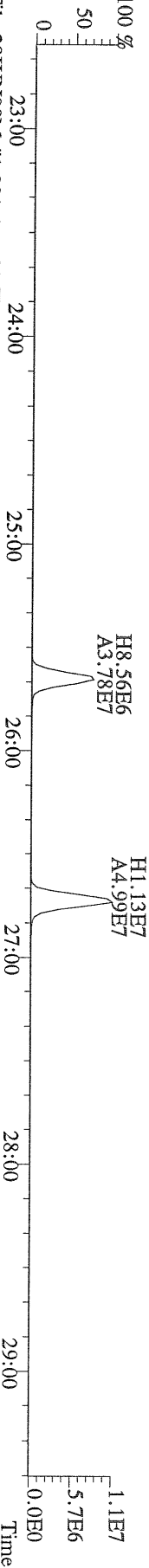
File:29JUN09M #1-391 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
305.8987 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



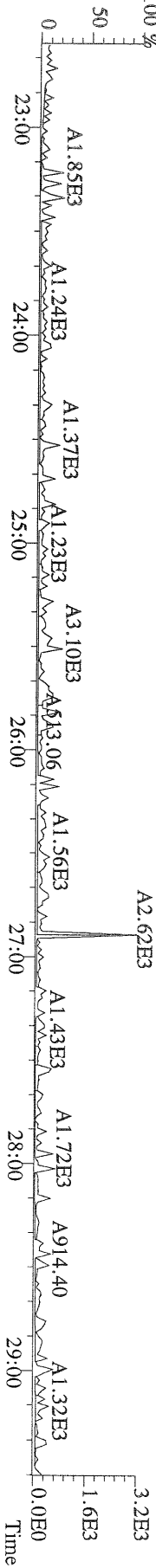
File:29JUN09M #1-391 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
315.9419 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



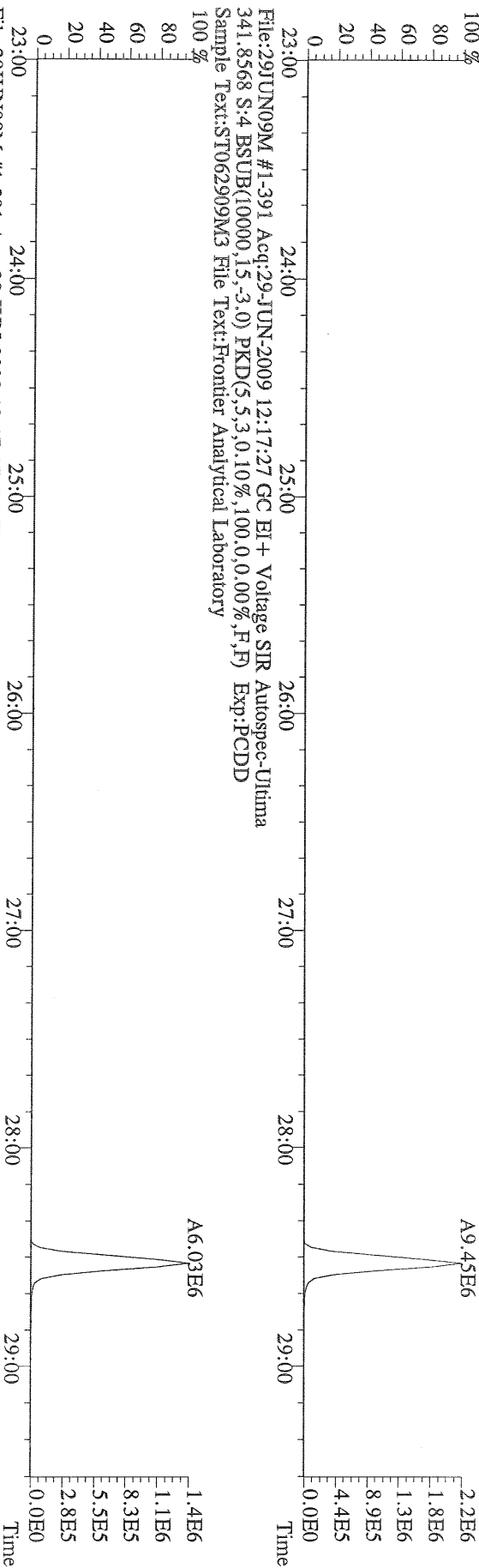
File:29JUN09M #1-391 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
317.9389 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



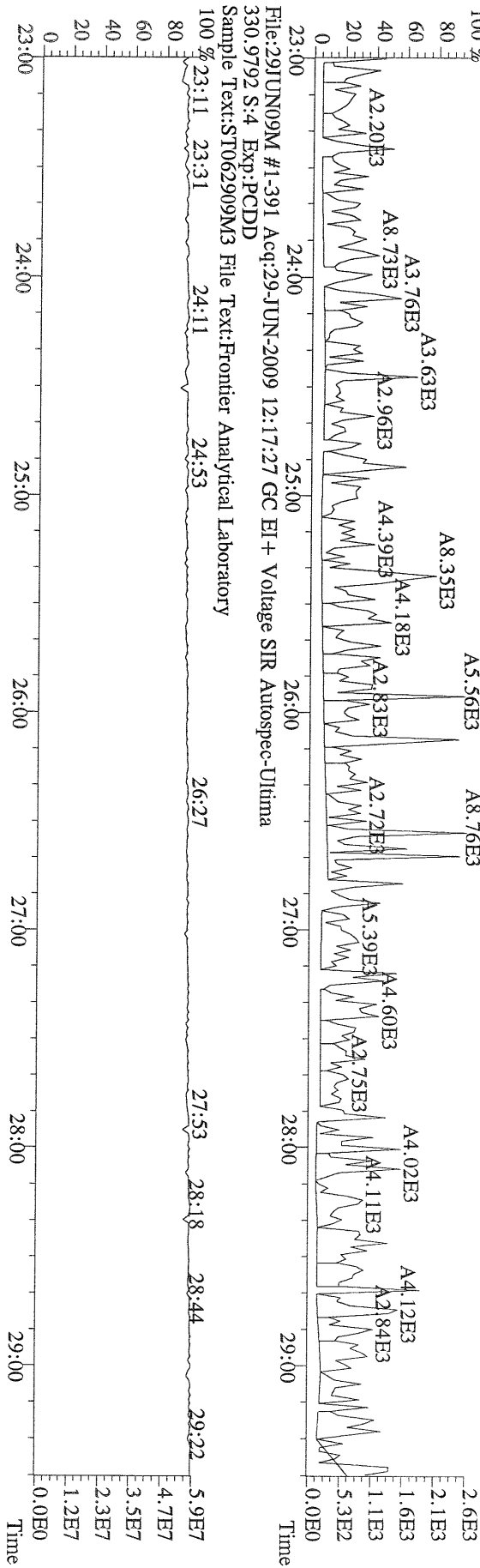
File:29JUN09M #1-391 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
375.8364 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



File:29JUN09M #1-391 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Fronter Analytical Laboratory  
100 %



File:29JUN09M #1-391 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
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:ST062909M3 File Text:Fronter Analytical Laboratory  
100 %



File:29JUN09M #1-424 Acq:29-JUN-2009 12:17:27 GC EI + Voltage SIR Autospec-Ultima  
341.8568 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory

Abundance

Time

30:00 31:00 32:00 33:00 34:00 35:00

A5.88E6

A5.52E6

A5.01E6

100 %

50

0

1.2E6

6.1E5

0.0E0

File:291UN09M #1-424 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
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:ST062909M3 File Text:Frontier Analytical Laboratory

Chromatogram showing two peaks labeled A4.20E7 and A3.92E7. The y-axis is labeled '100 %' and the x-axis is labeled 'Time' with values from 30:00 to 35:00.

File: 29JUN09M #1-424 Acq: 29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
 Sample Text: ST062909M3 File Text: Frontier Analytical Laboratory  
 553.8970 S: 4 F: 2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp: PCDD

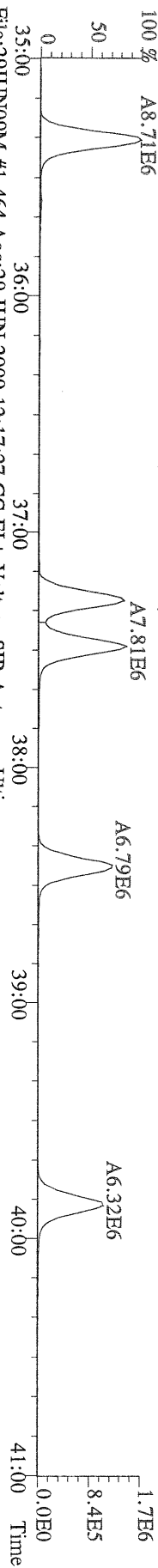
Chromatogram showing two peaks:

- Peak 1: Retention Time 5.41E6, Abundance A2.53E7
- Peak 2: Retention Time 4.98E6, Abundance A2.37E7

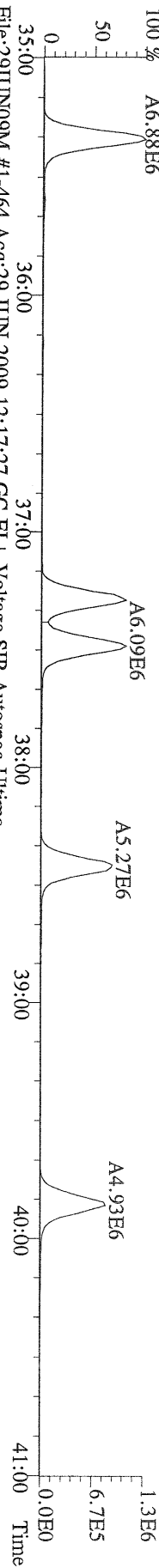
File: 29JUN09M #1-424 Acq: 29-JUN-2009 12:17:27 GC EI + Voltage SIR Autospec-Utima  
109.7974 S: 4 F: 2 BSUB(10000,15,3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp: PCDD  
Sample Text: ST062909M3 File Text: Frontier Analytical Laboratory

Chromatogram plot showing detector response over time. The x-axis is labeled 'Time' and ranges from 30:00 to 35:00. The y-axis is labeled '100 %' and ranges from 0 to 50. The plot shows a noisy baseline with several sharp peaks. Peaks are labeled with their retention times and intensity values in scientific notation. The labels are: A5.37E3, A4.77E3, A3.98E3, A5.81E3, A3.67E3, A4.70E3, A3.98E3, A3.86E3, A4.77E3, A4.04E3, A4.31E3, A3.44E3, A5.21E3, A4.18E3, A8.01E3, and A3.60E3. The peak at 34:01 is the most intense, reaching nearly 50% on the scale.

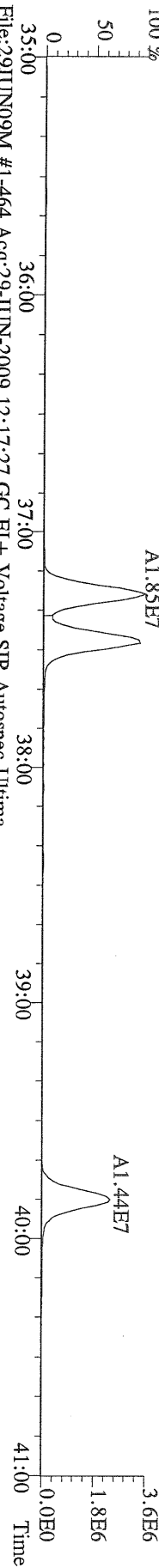
File:29JUN09M #1-464 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



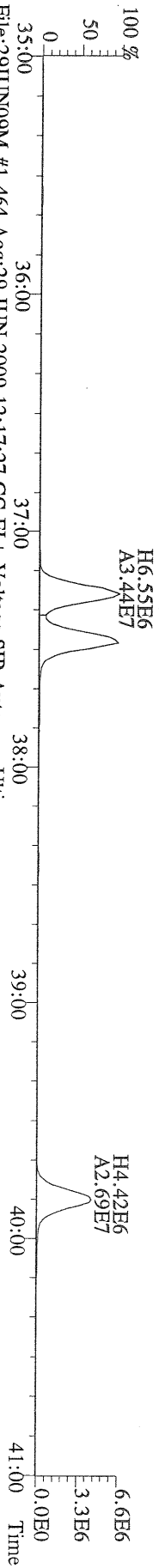
File:29JUN09M #1-464 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



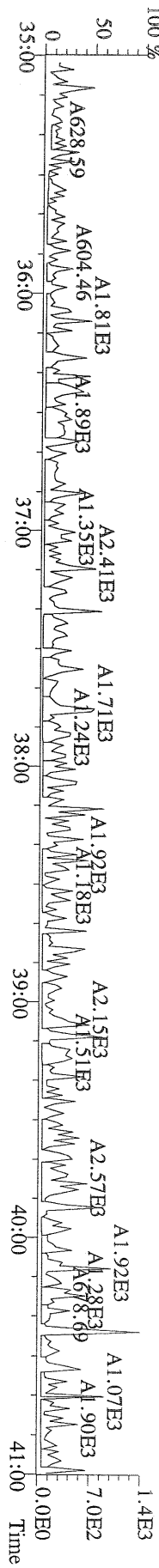
File:29JUN09M #1-464 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



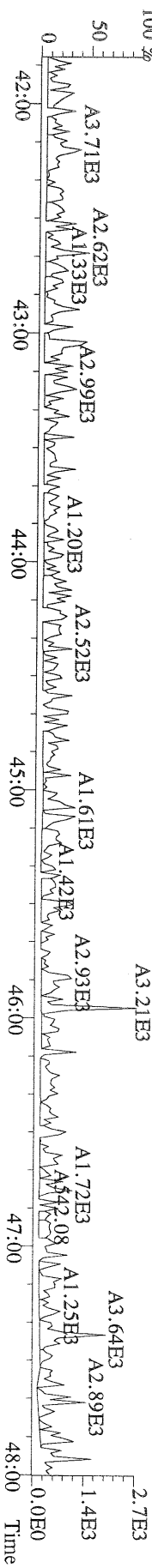
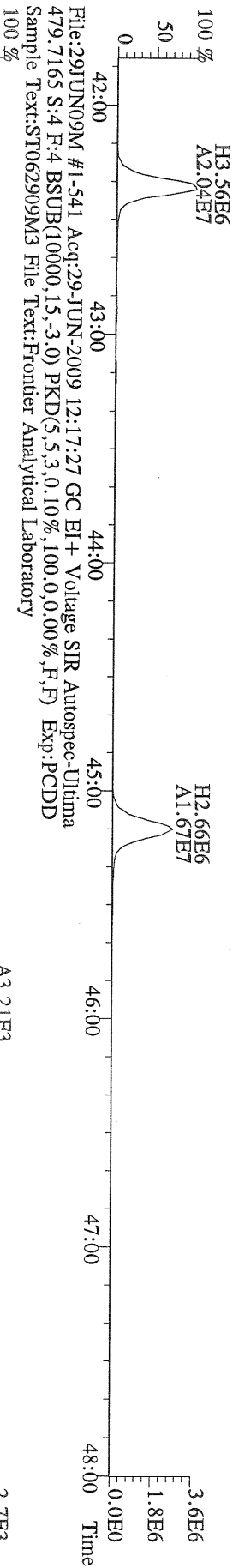
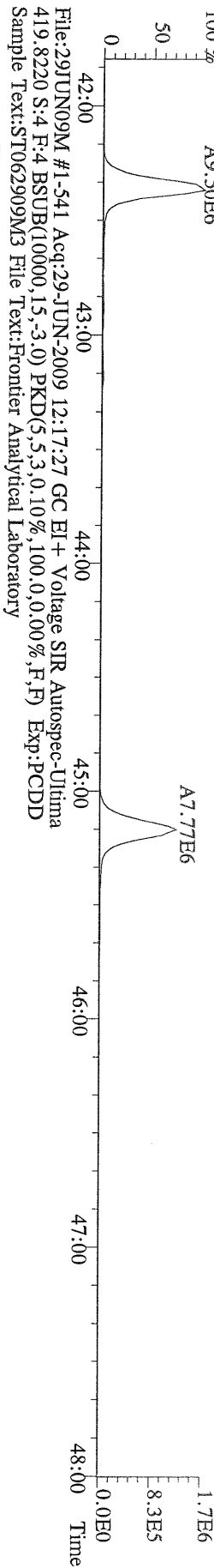
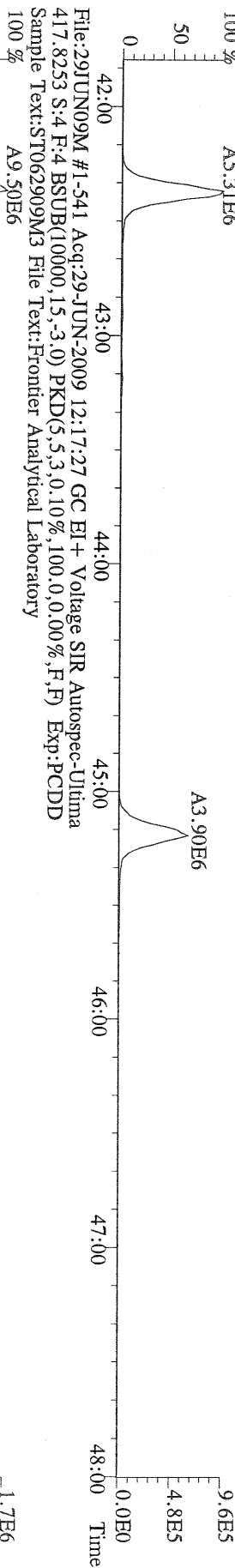
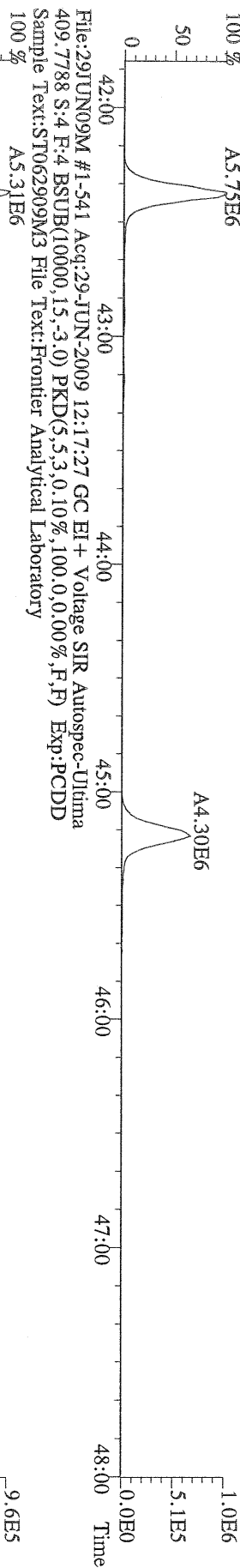
File:29JUN09M #1-464 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



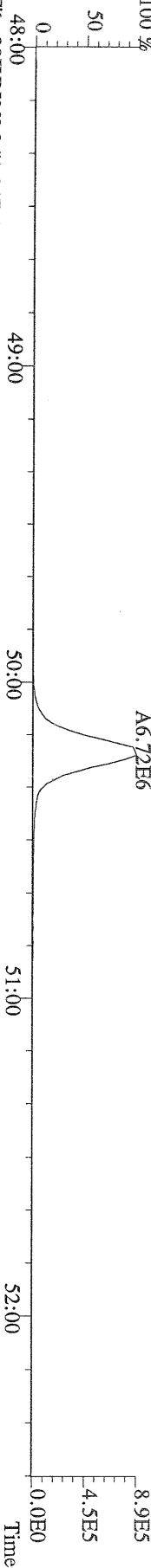
File:29JUN09M #1-464 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



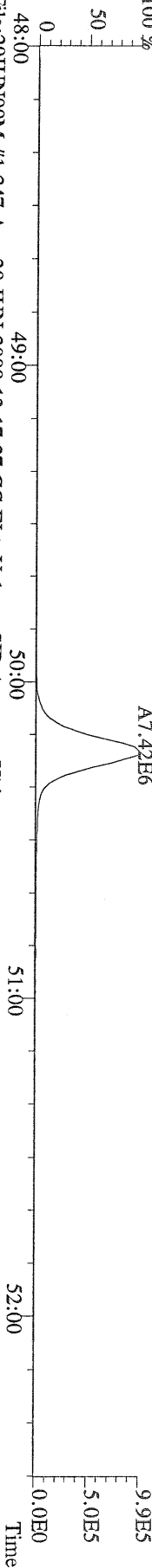
File:29JUN09M #1-541 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
407.7818 S:4 F:4 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



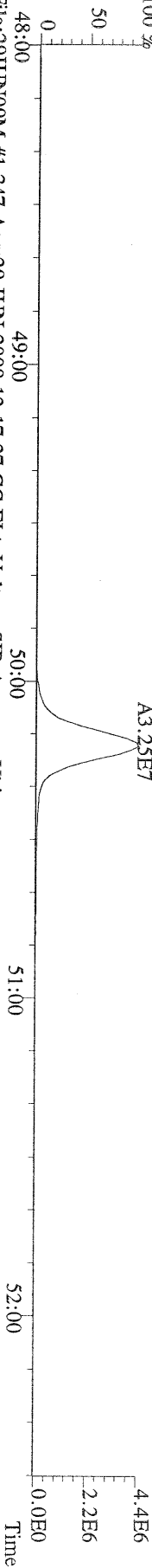
File:29JUN09M #1-347 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory  
100 %



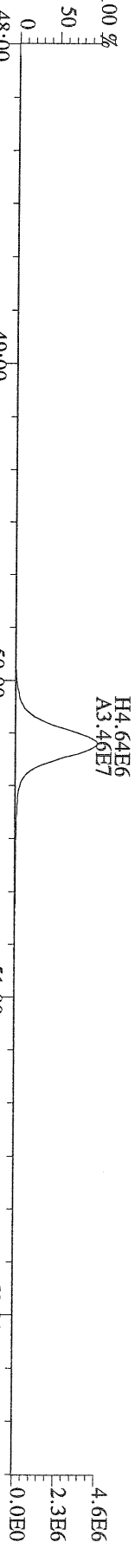
File:29JUN09M #1-347 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory  
100 %



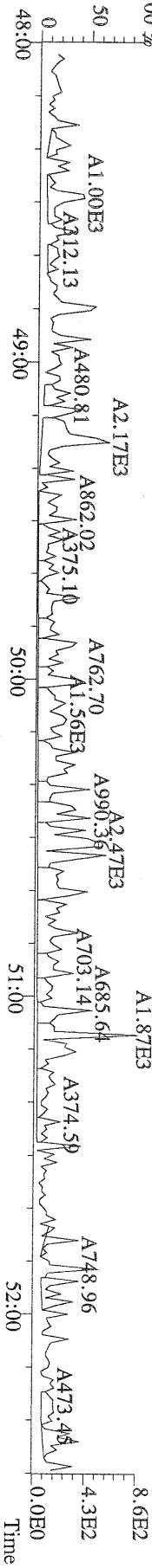
File:29JUN09M #1-347 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory  
100 %



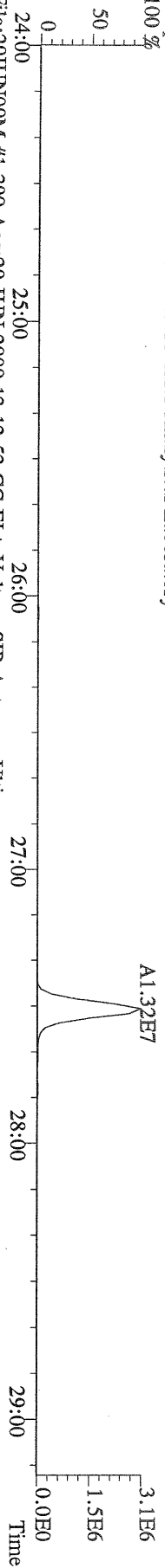
File:29JUN09M #1-347 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



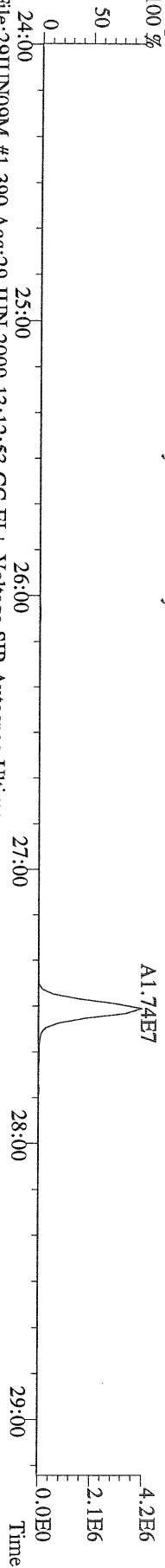
File:29JUN09M #1-347 Acq:29-JUN-2009 12:17:27 GC EI+ Voltage SIR Autospec-Ultima  
513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M3 File Text:Frontier Analytical Laboratory



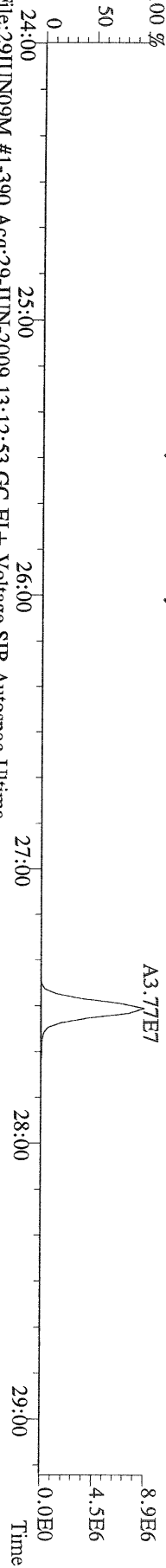
File:29JUN09M #1-390 Acq:29-JUN-2009 13:12:53 GC EI+ Voltage SIR Autospec-Ultima  
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory  
100 %



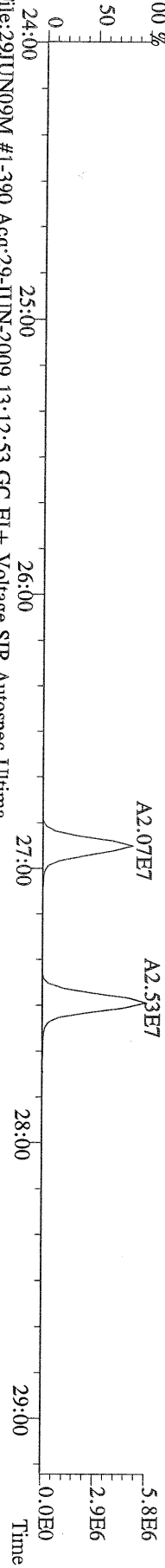
File:29JUN09M #1-390 Acq:29-JUN-2009 13:12:53 GC EI+ Voltage SIR Autospec-Ultima  
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory  
100 %



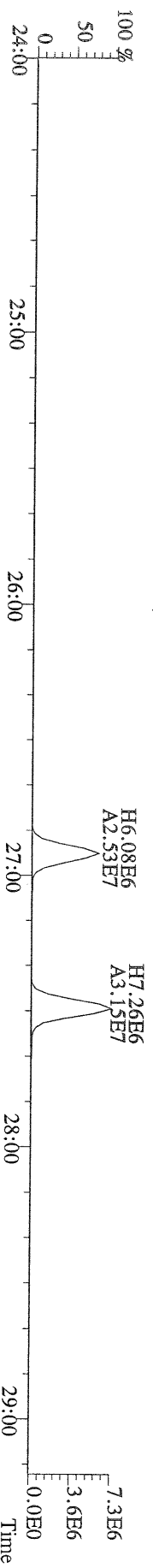
File:29JUN09M #1-390 Acq:29-JUN-2009 13:12:53 GC EI+ Voltage SIR Autospec-Ultima  
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory  
100 %



File:29JUN09M #1-390 Acq:29-JUN-2009 13:12:53 GC EI+ Voltage SIR Autospec-Ultima  
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory  
100 %

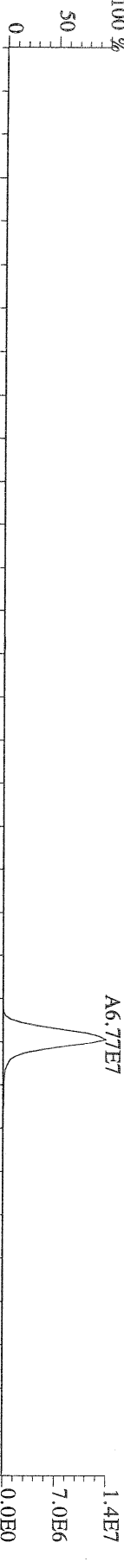


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333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory

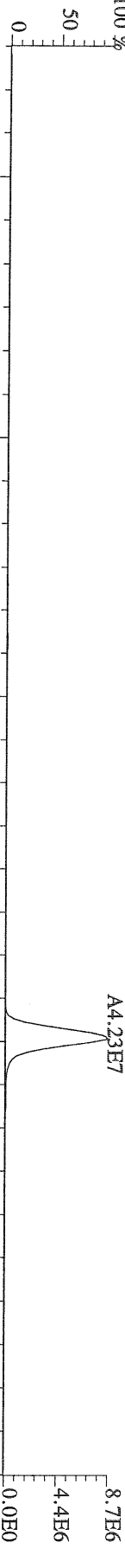




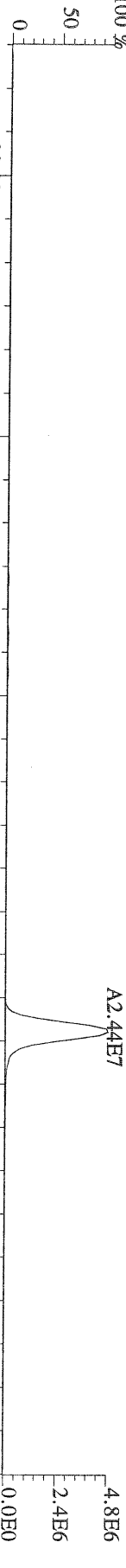
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355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory  
100 %



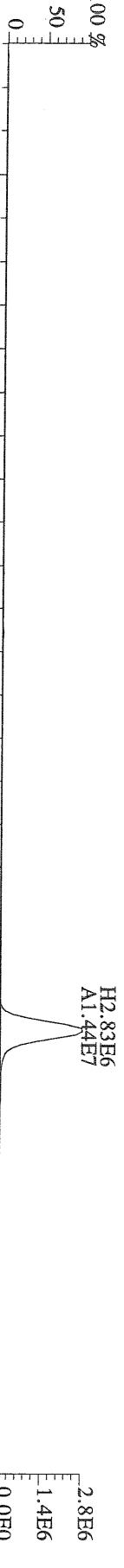
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357.8517 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory  
100 %



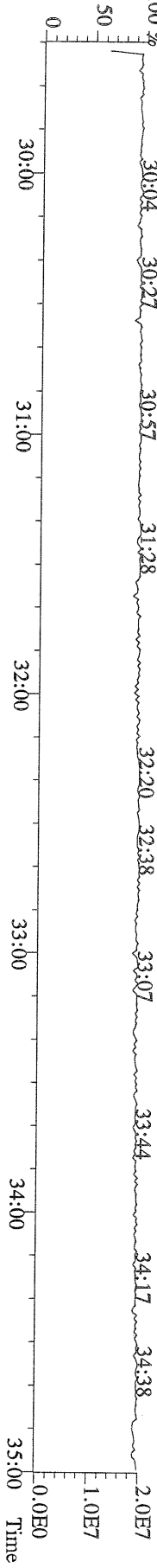
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367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory  
100 %



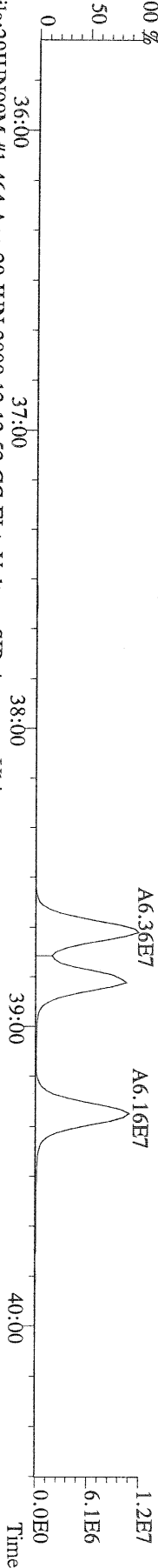
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369.8919 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



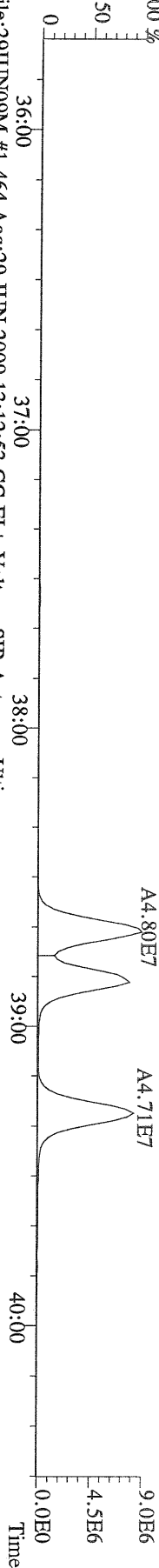
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366.9792 S:5 F:2 Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



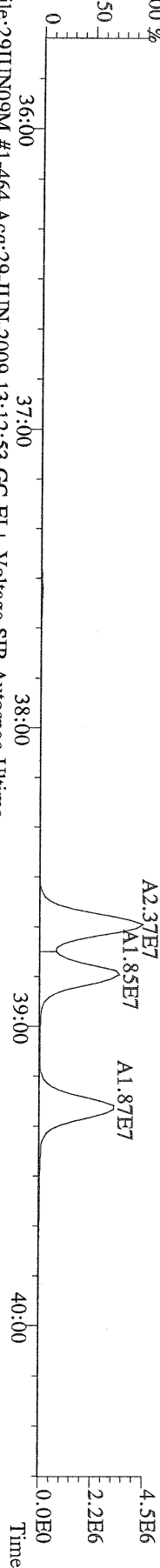
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389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



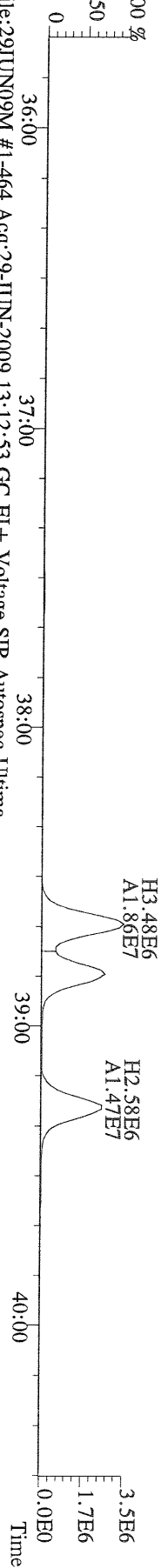
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391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



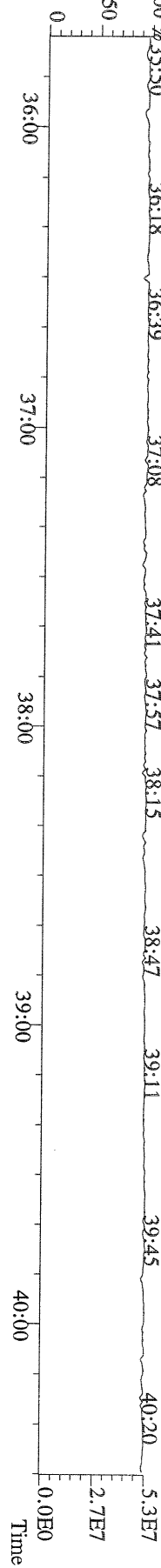
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401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



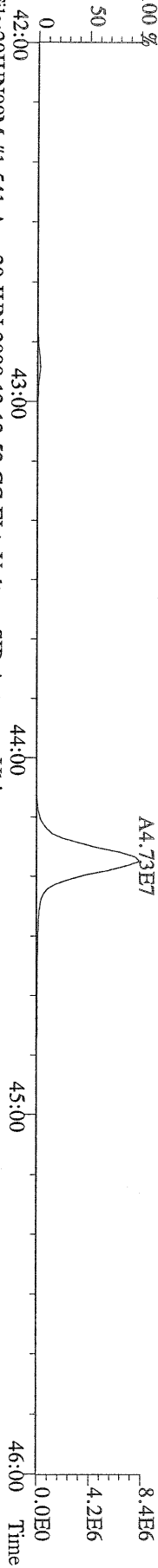
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403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



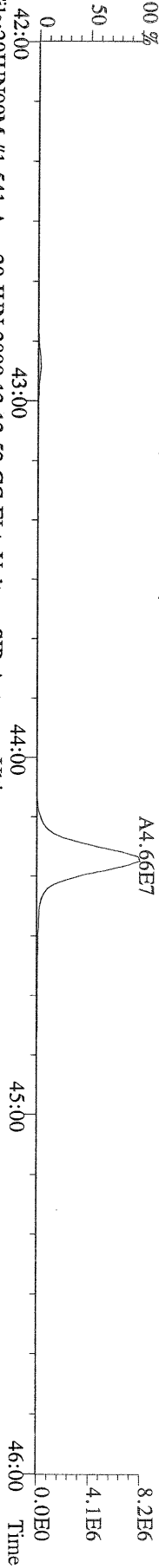
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380.9760 S:5 F:3 Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



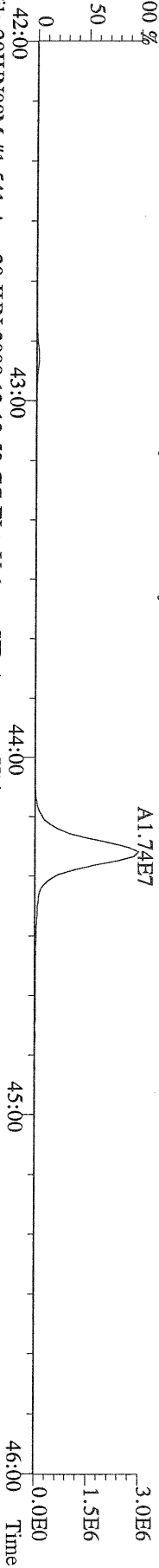
File:29JUN09M #1-541 Acq:29-JUN-2009 13:12:53 GC EI+ Voltage SIR Autospec-Ultima  
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



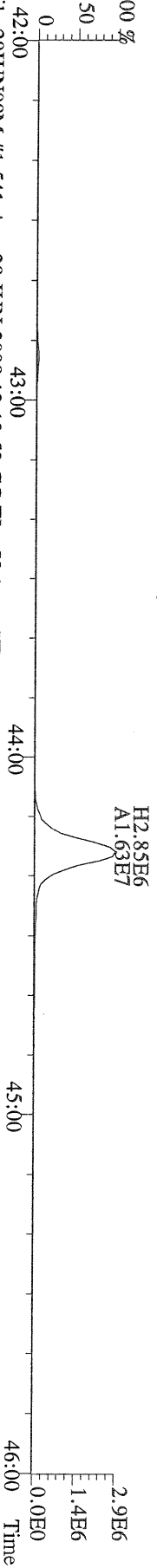
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425.7737 S:5 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



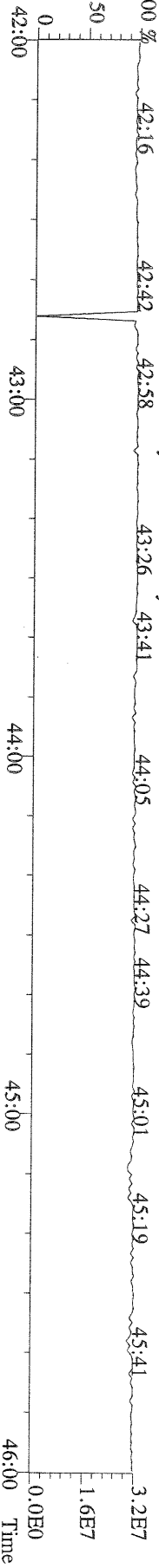
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435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



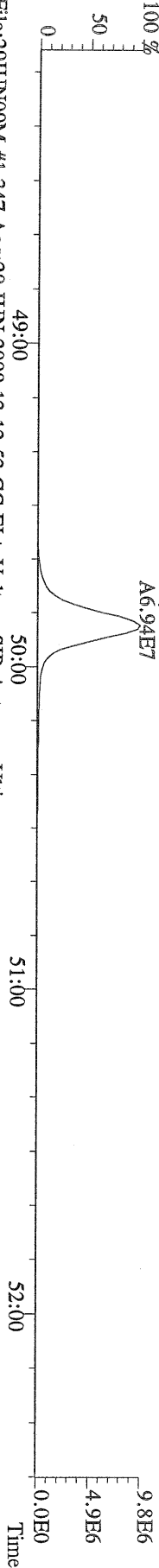
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437.8140 S:5 F:4 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
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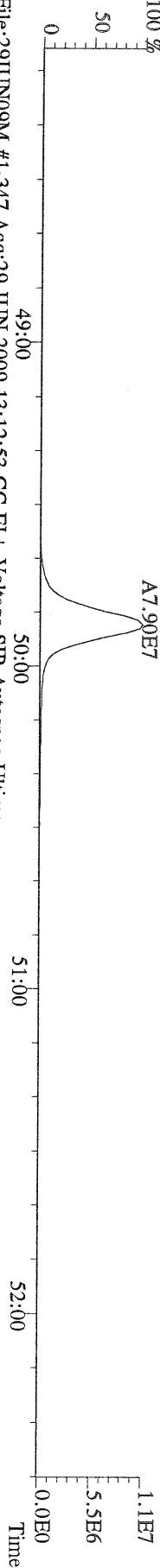
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430.9728 S:5 F:4 Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



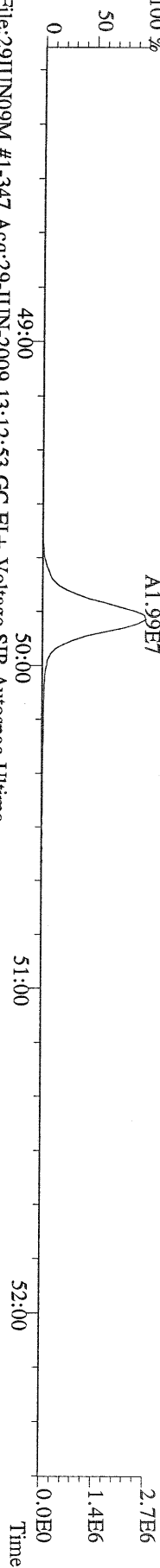
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457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



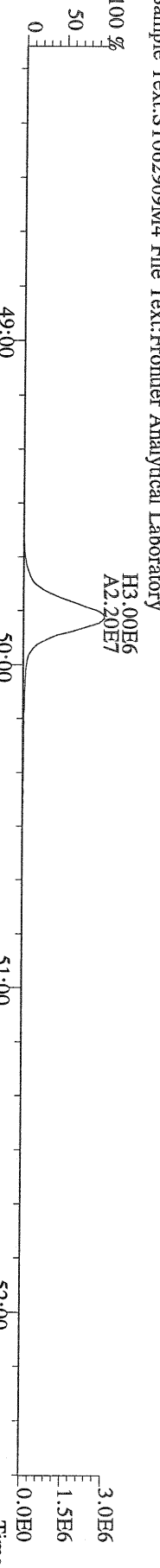
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459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



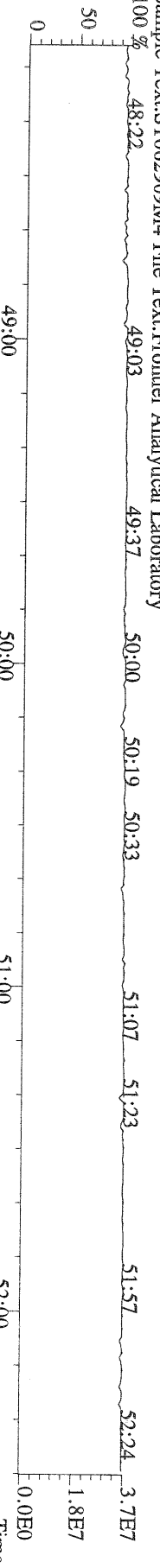
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469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



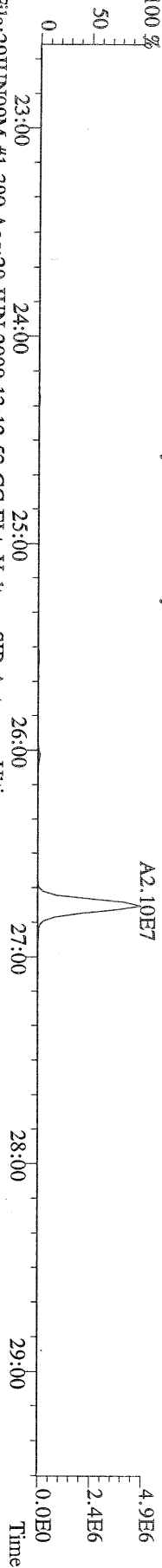
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471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



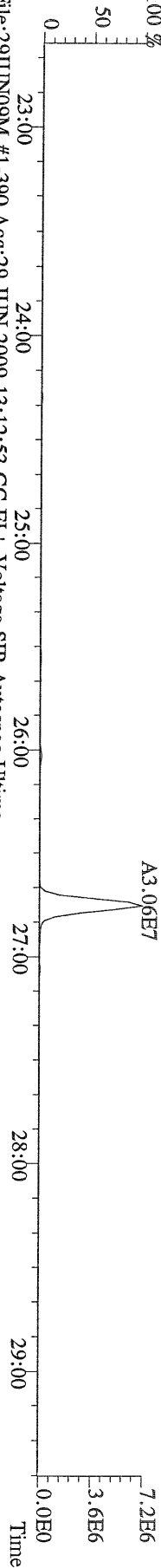
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454.9728 S:5 F:5 Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



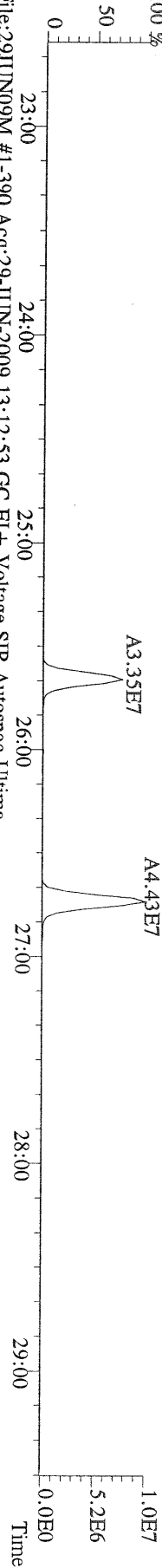
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303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



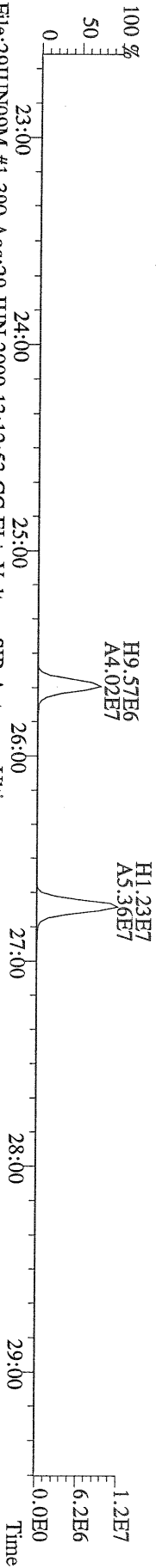
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305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



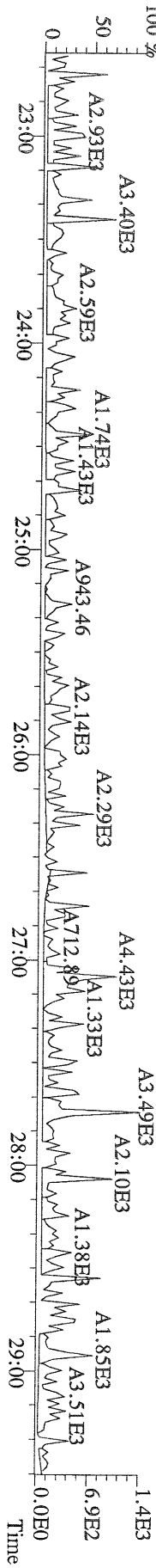
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315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



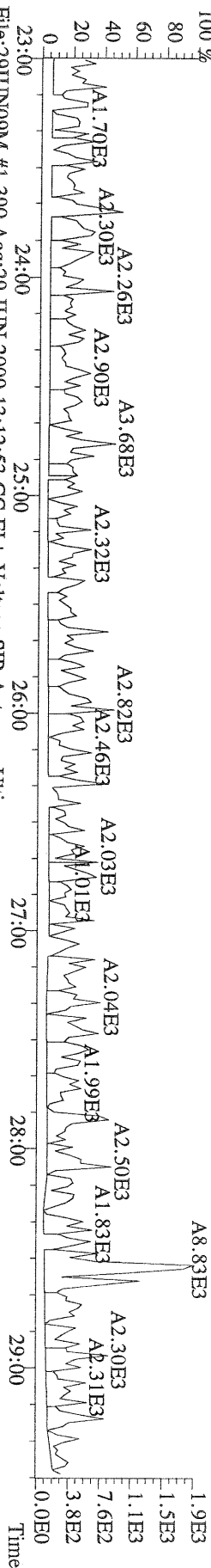
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317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



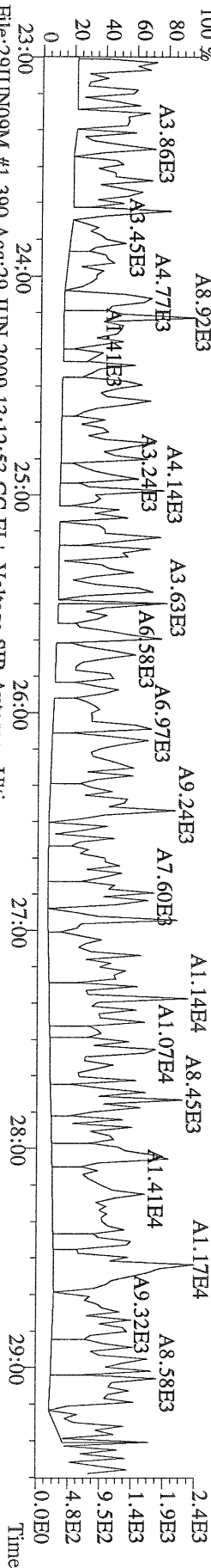
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375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



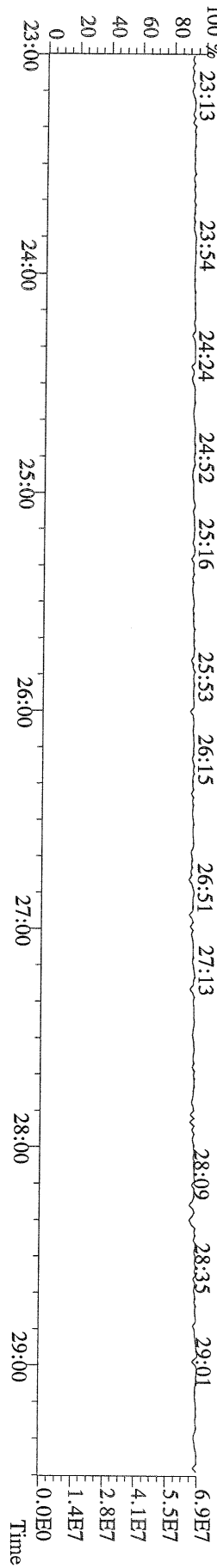
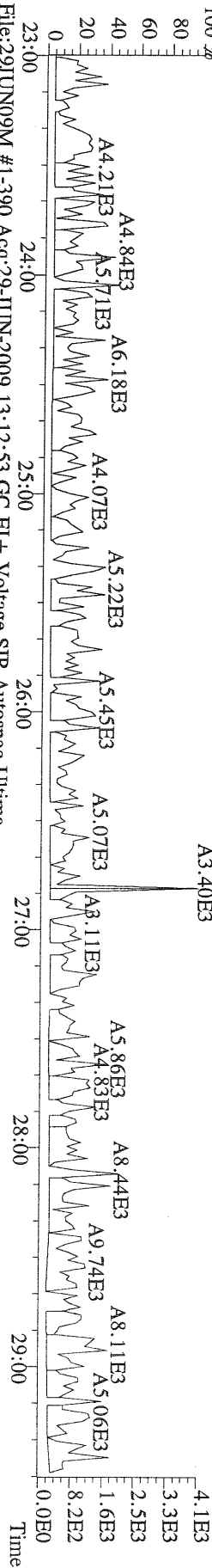
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339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory  
100 %



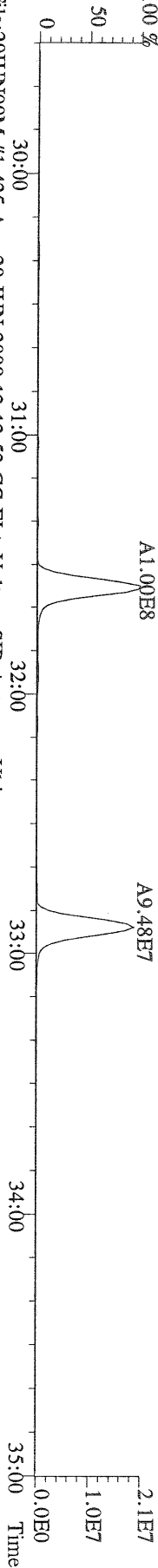
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341.8568 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory  
100 %



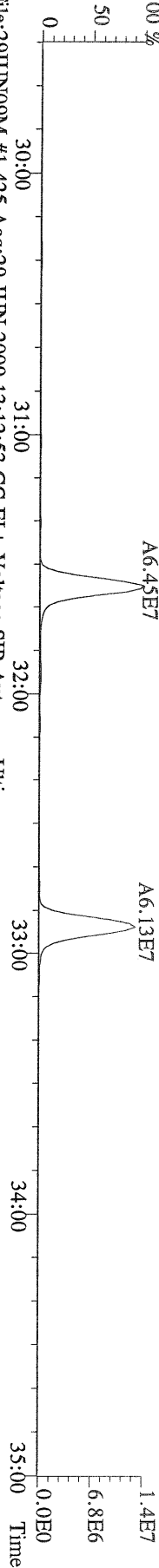
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409.7974 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory  
100 %



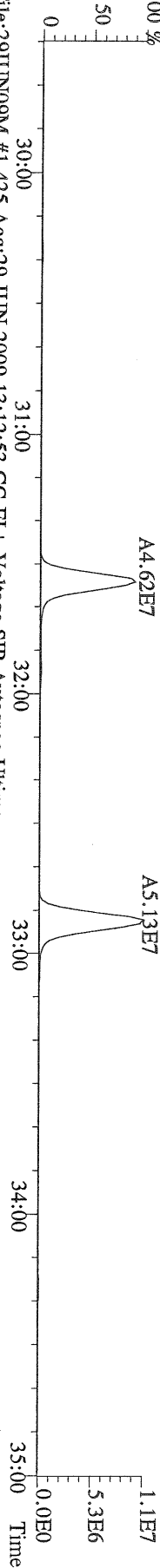
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339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



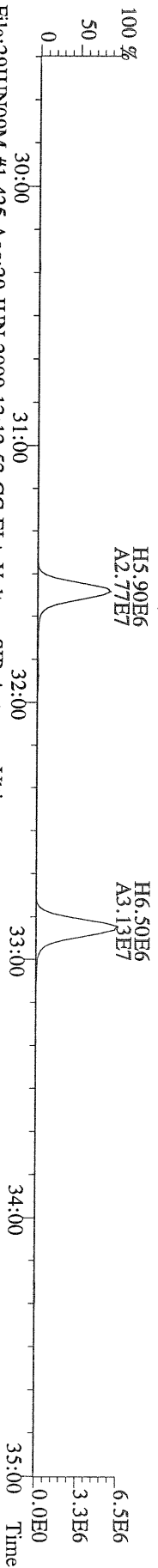
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341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



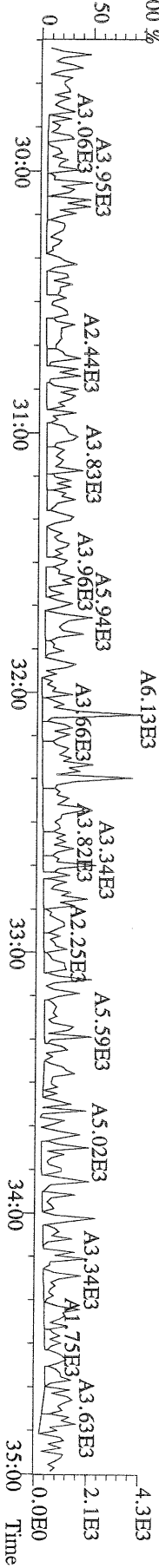
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351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
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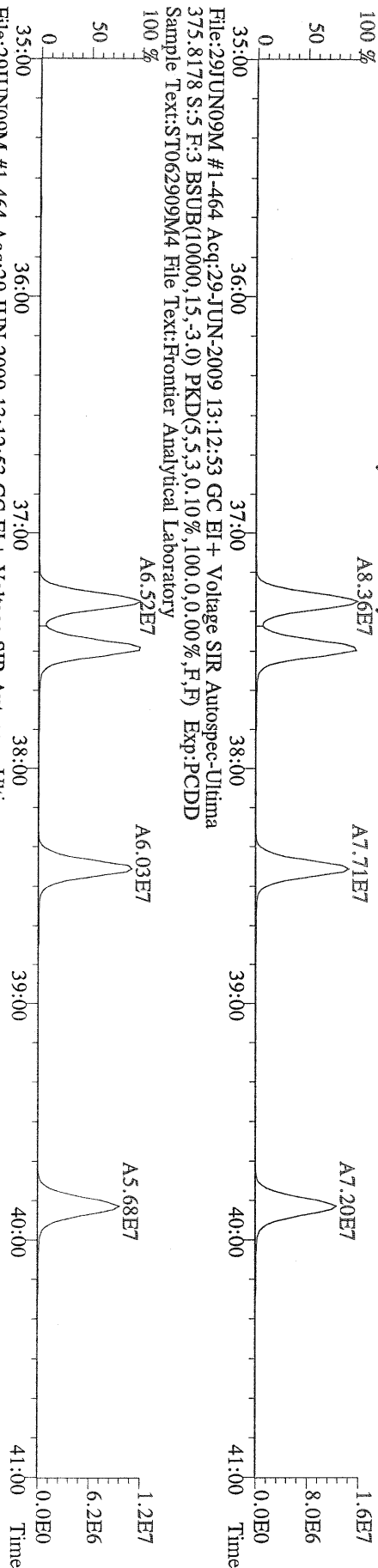
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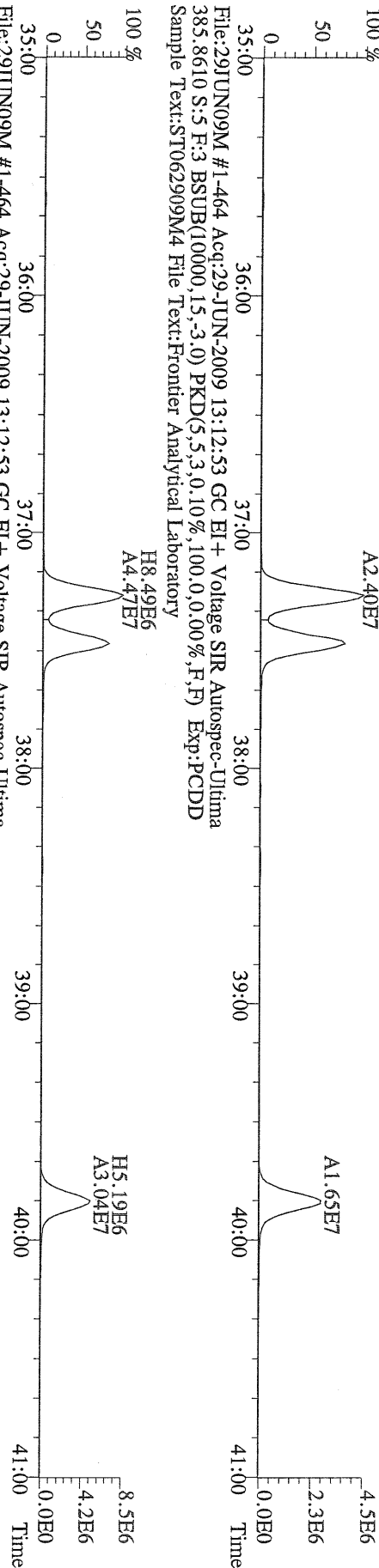
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409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



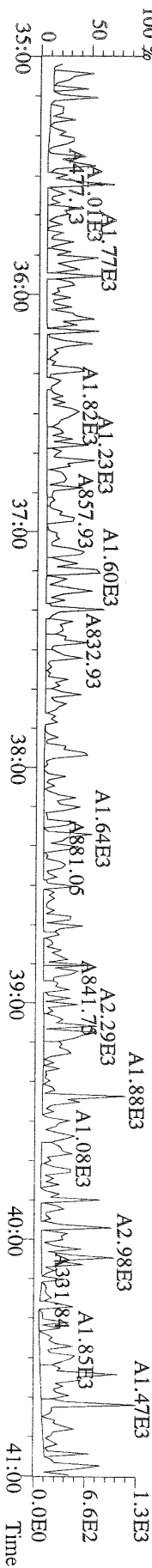
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373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



File:29JUN09M #1-464 Acq:29-JUN-2009 13:12:53 GC EI+ Voltage SIR Autospec-Ultima  
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:ST062909M4 File Text:Frontier Analytical Laboratory

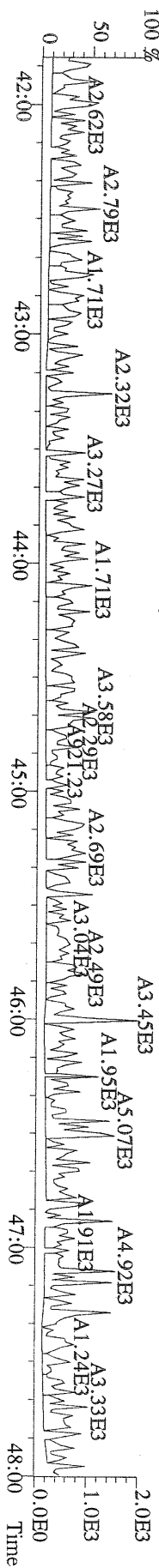
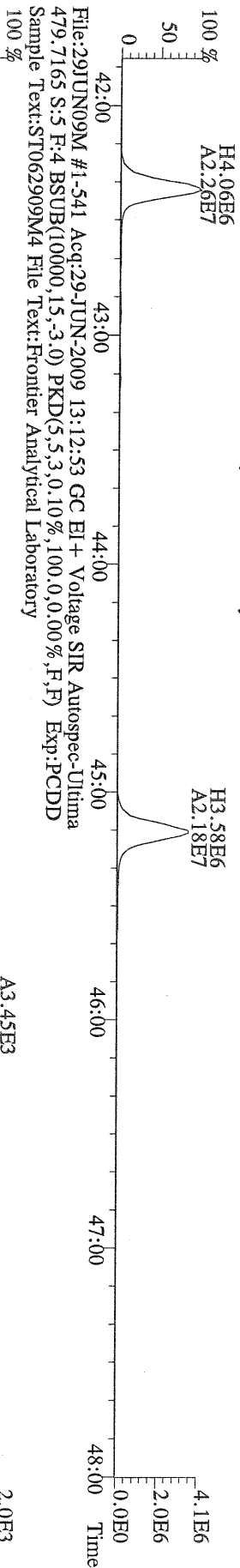
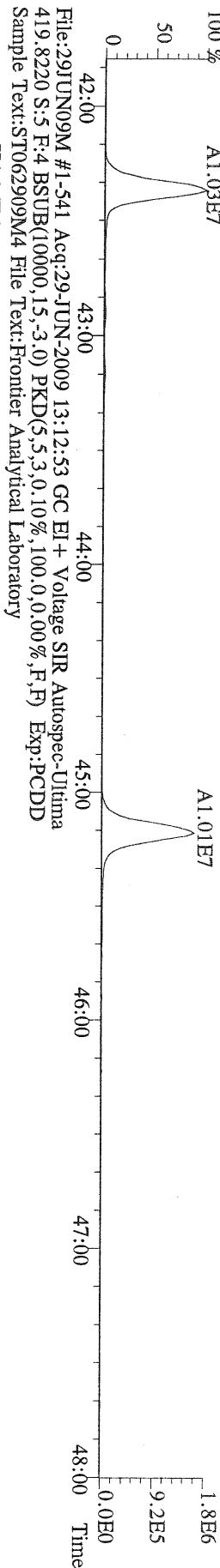
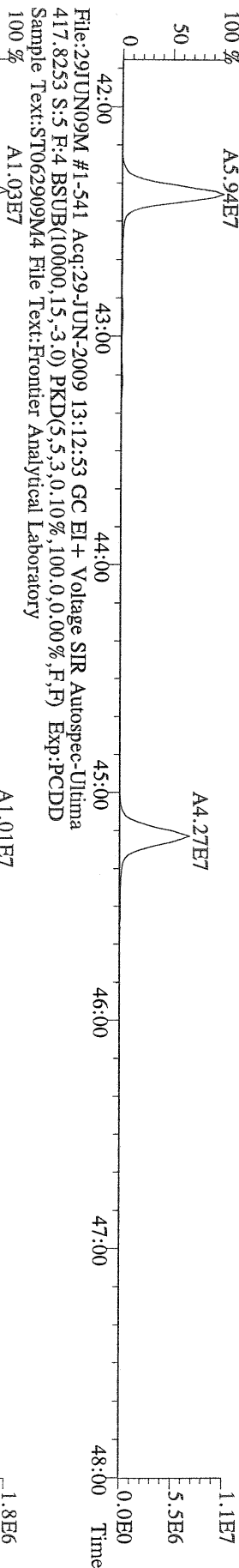
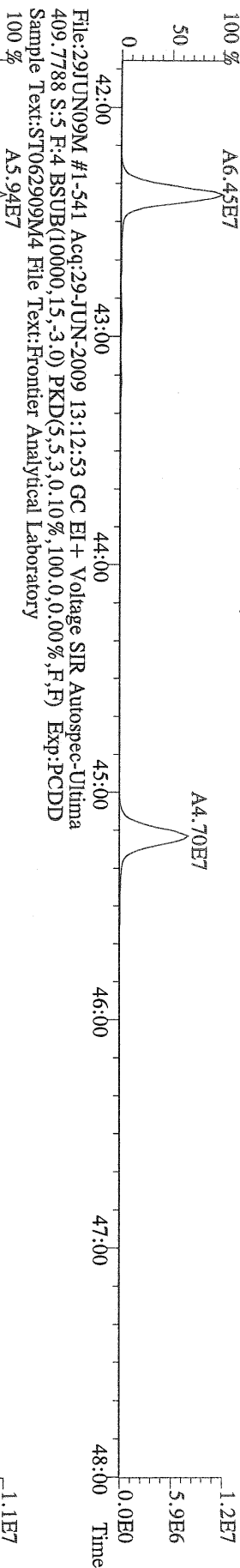


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445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
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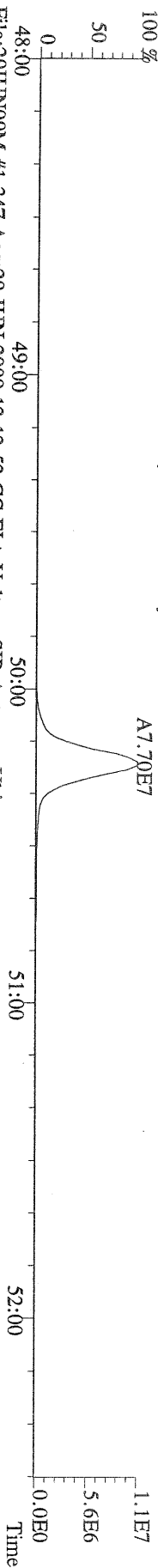




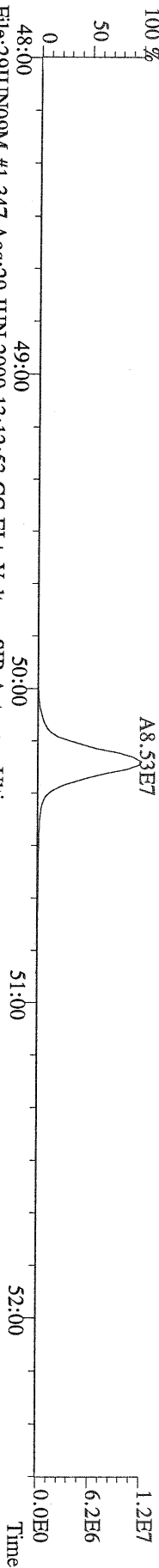
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407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



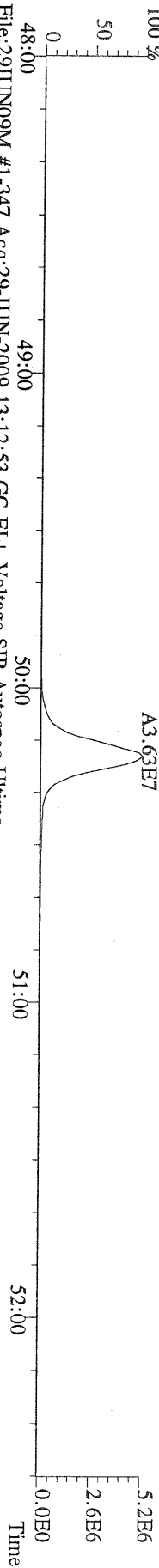
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441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



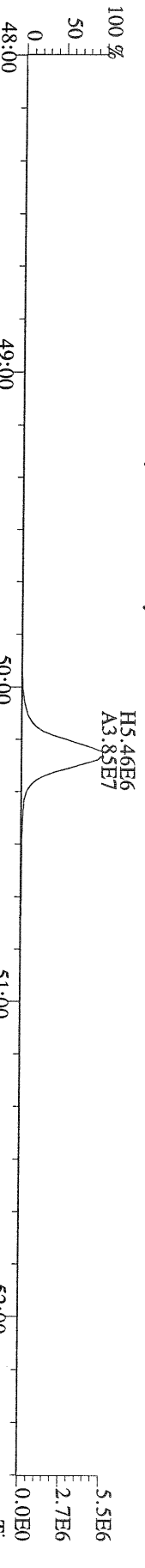
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443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



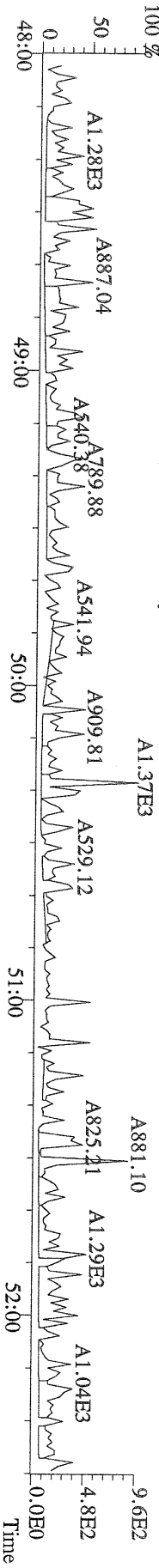
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453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



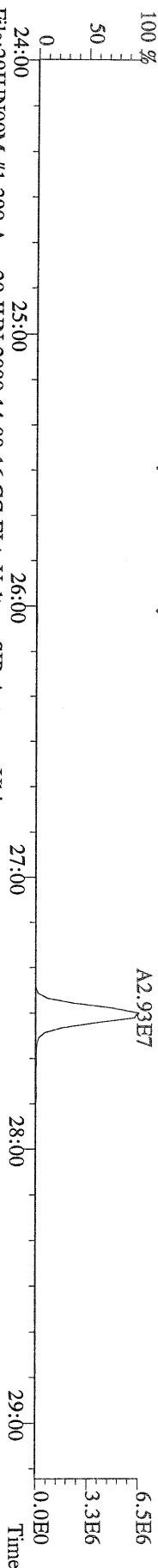
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455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



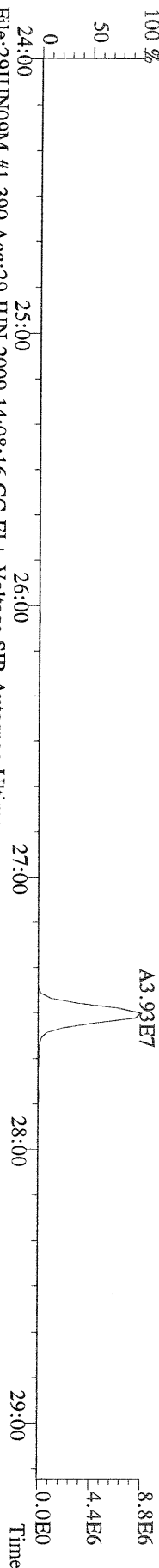
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513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M4 File Text:Frontier Analytical Laboratory



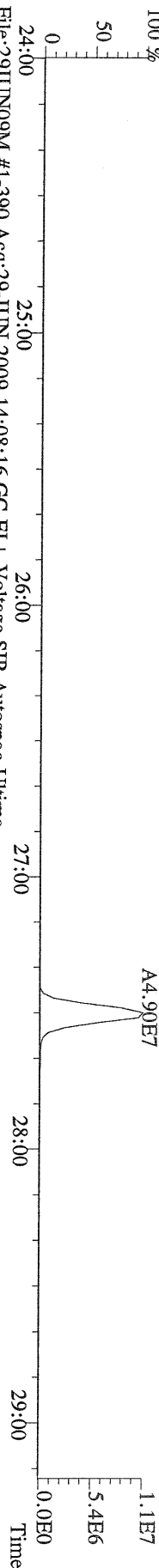
File:29JUN09M #1-390 Acq:29-JUN-2009 14:08:16 GC EI+ Voltage SIR Autospec-Ultima  
319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



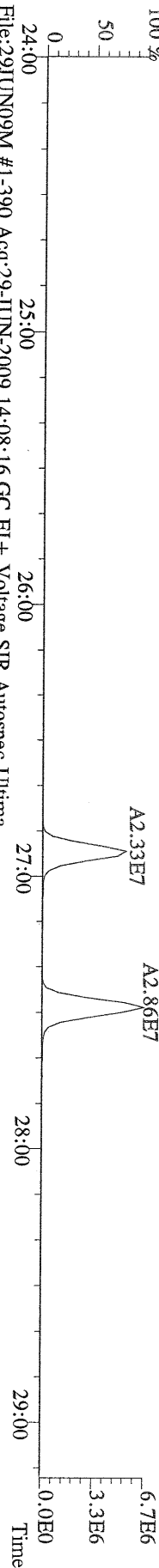
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321.8936 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



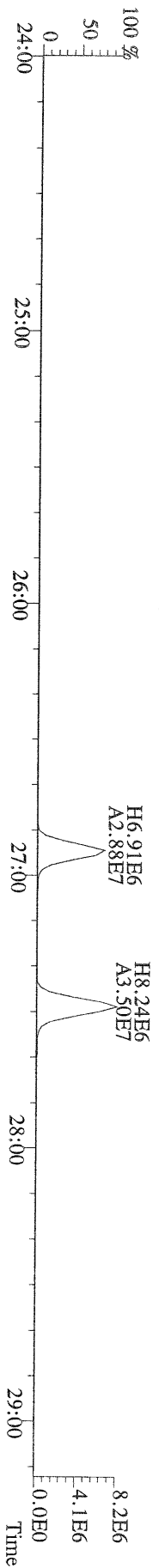
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327.8847 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



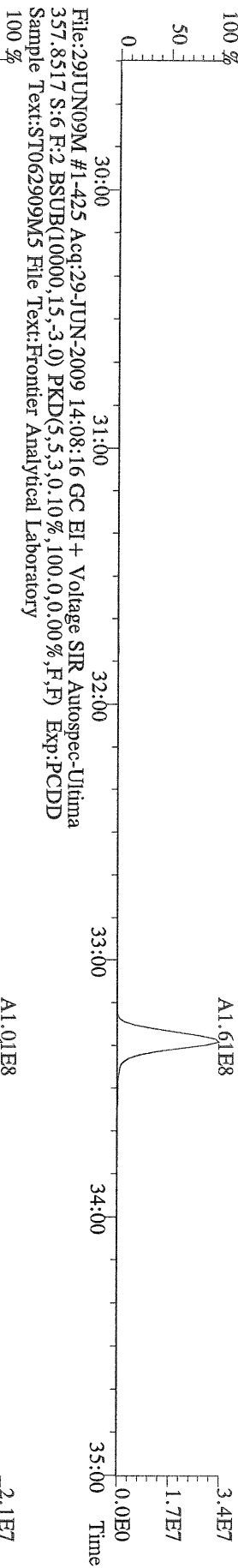
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331.9368 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



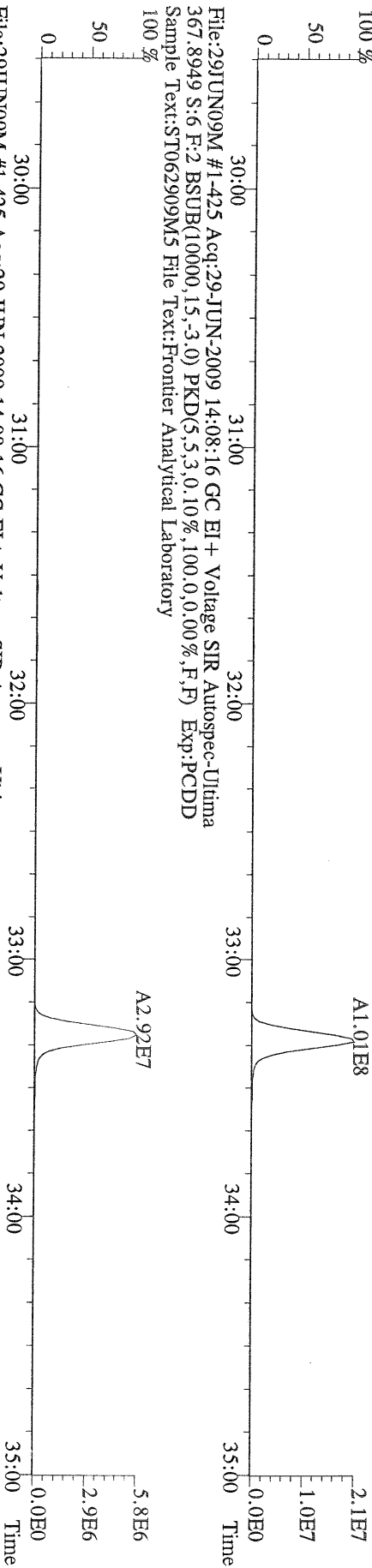
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Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



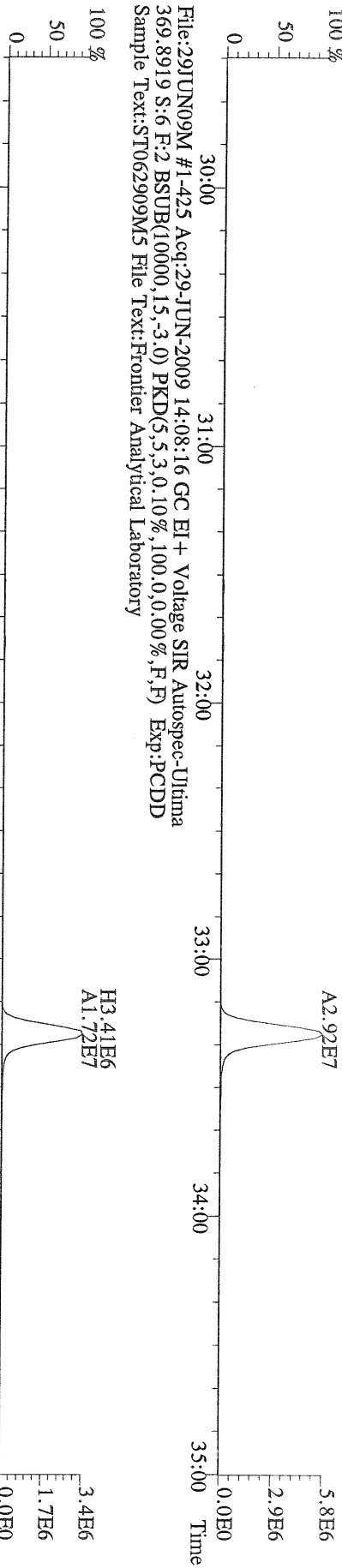
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355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



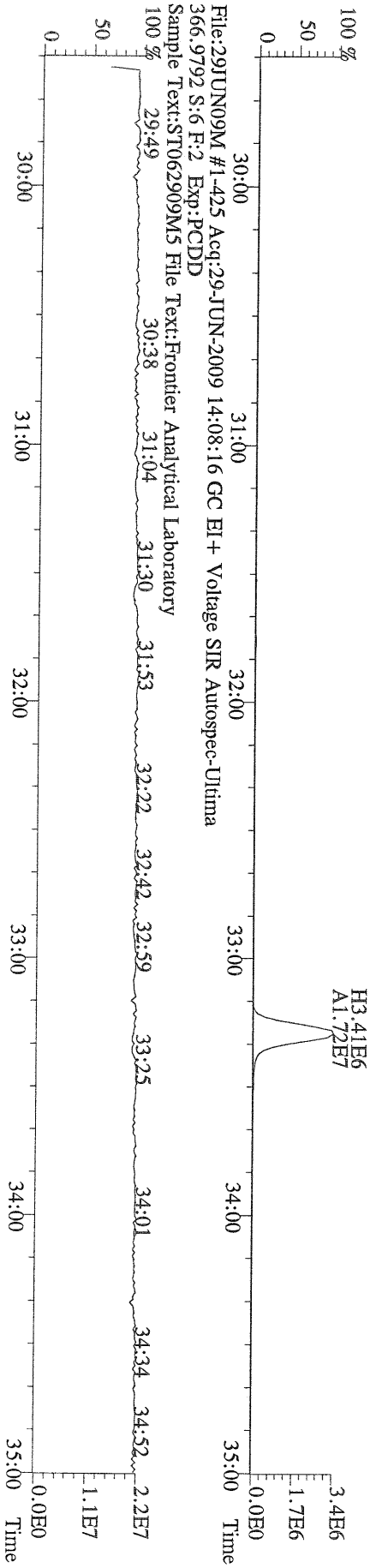
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357.8517 S:6 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



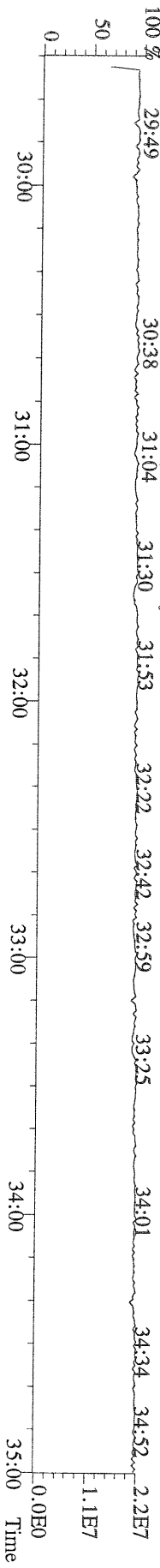
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367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



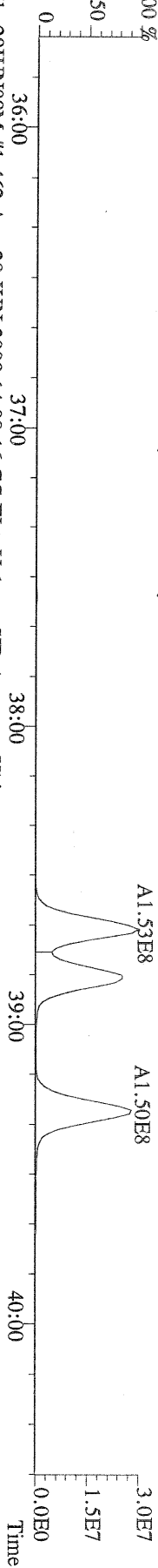
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369.8919 S:6 F:2 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



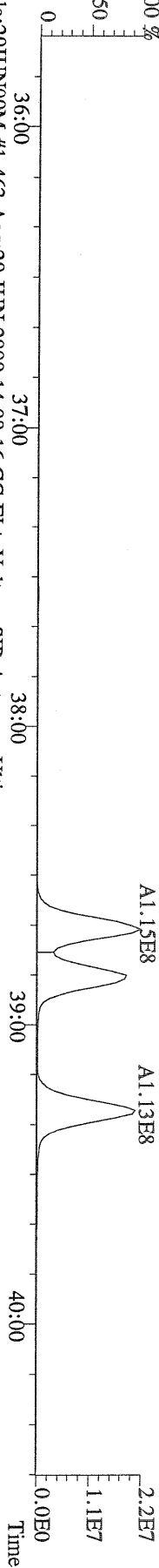
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366.9792 S:6 F:2 Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



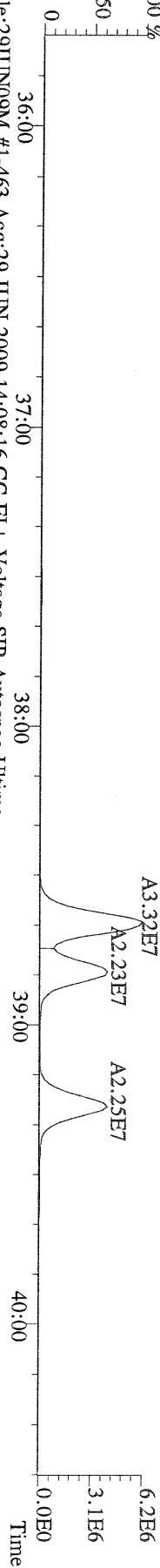
File:29JUN09M #1-463 Acq:29-JUN-2009 14:08:16 GC EI+ Voltage SIR Autospec-Ultima  
389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



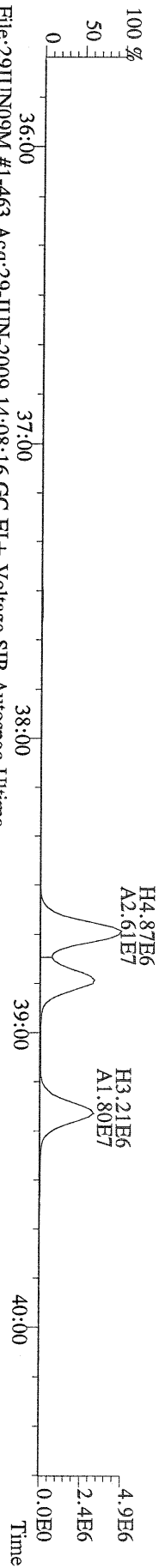
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391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



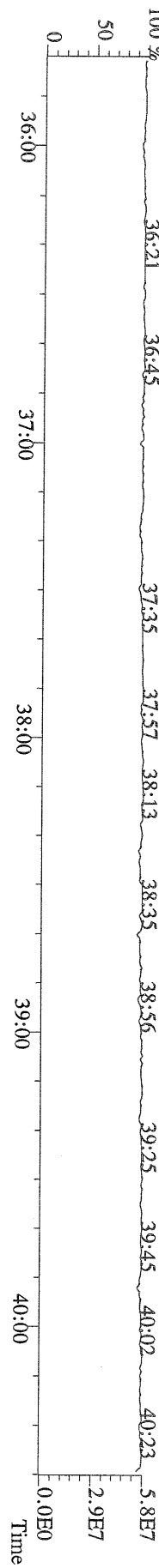
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401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



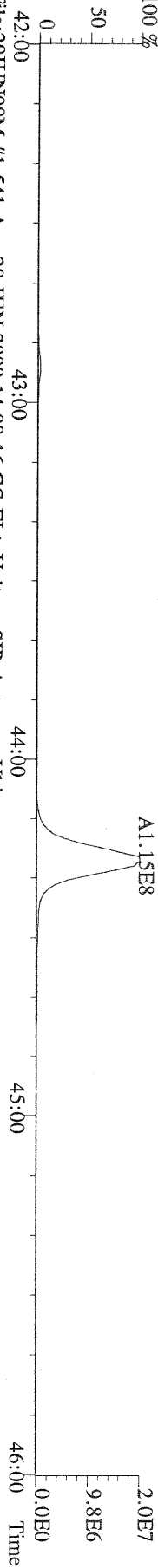
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403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



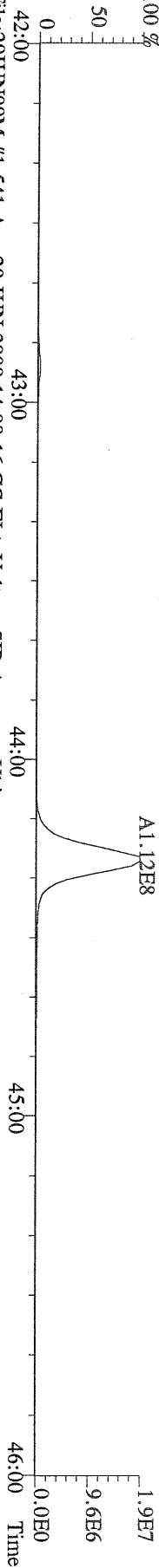
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380.9760 S:6 F:3 Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



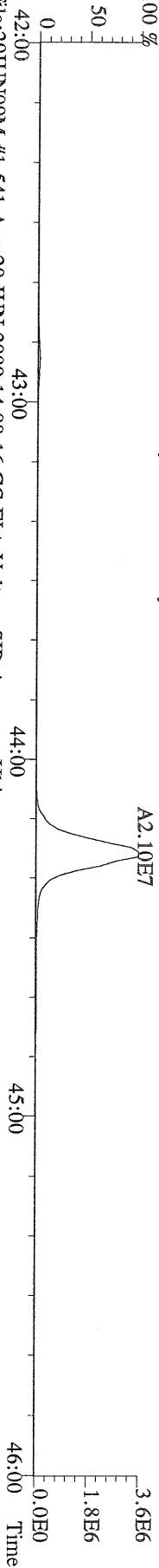
File:29JUN09M #1-541 Acq:29-JUN-2009 14:08:16 GC EI+ Voltage SIR Autospec-Ultima  
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



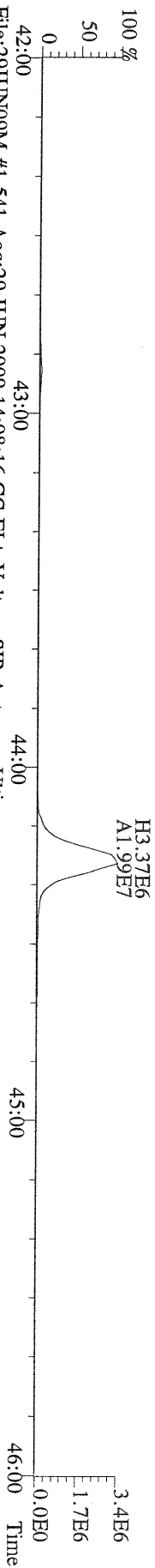
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425.7737 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



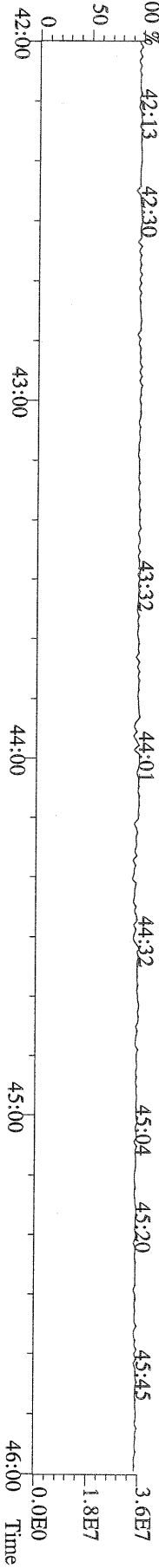
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435.8169 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



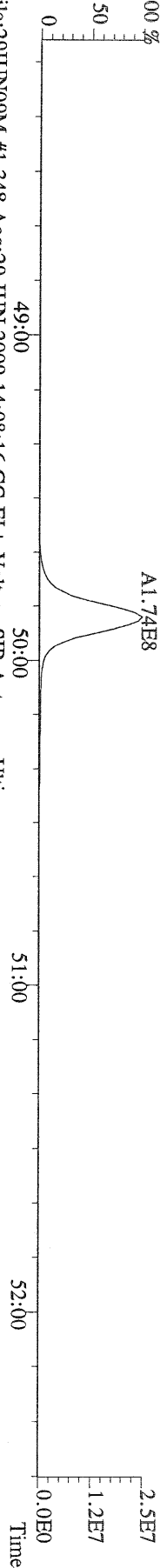
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437.8140 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



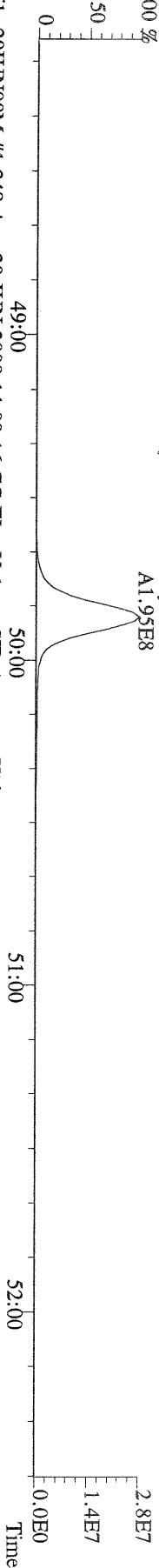
File:29JUN09M #1-541 Acq:29-JUN-2009 14:08:16 GC EI+ Voltage SIR Autospec-Ultima  
430.9728 S:6 F:4 Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



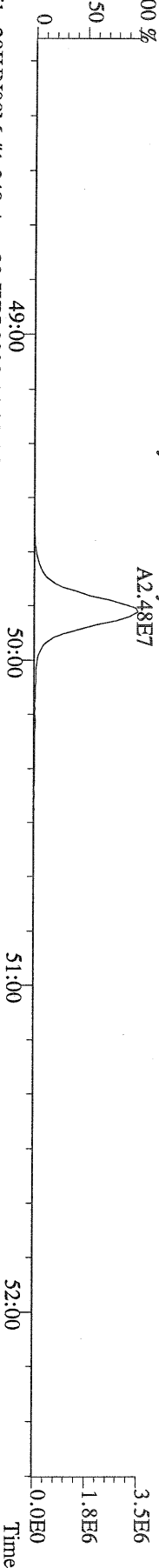
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457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



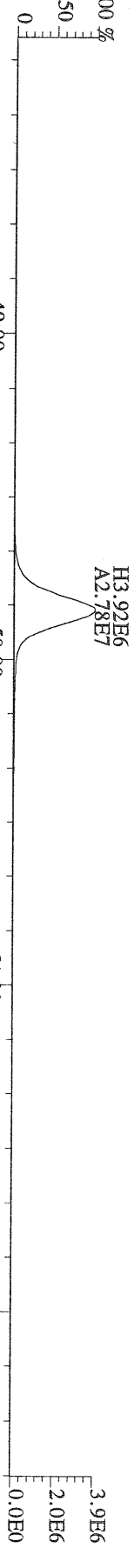
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459.7348 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



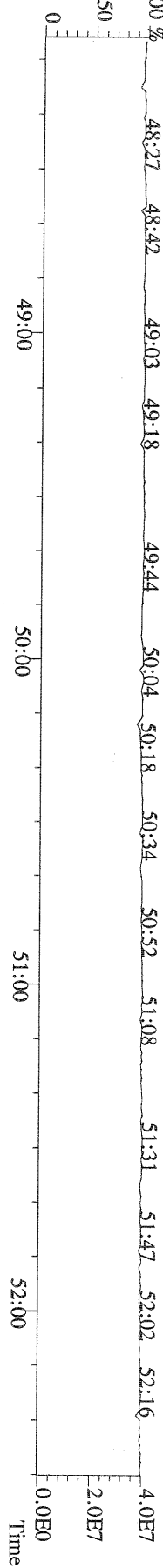
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469.7780 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



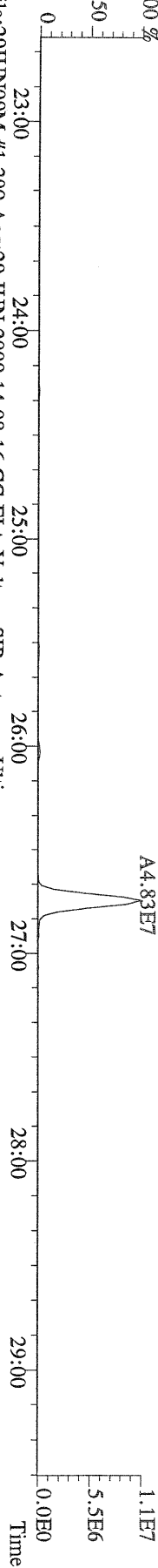
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471.7750 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



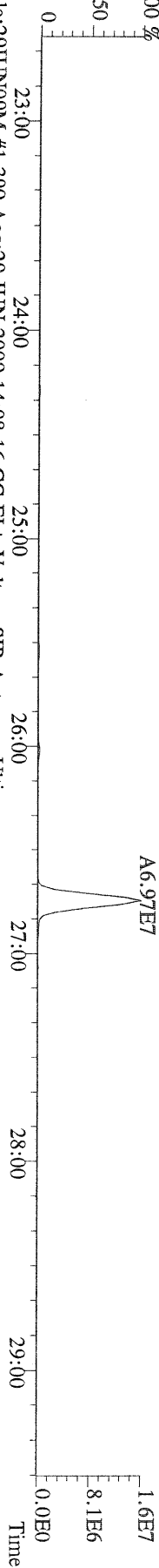
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Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



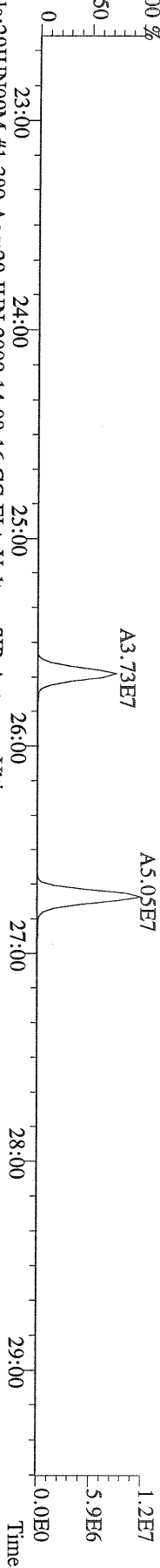
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303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Fronter Analytical Laboratory



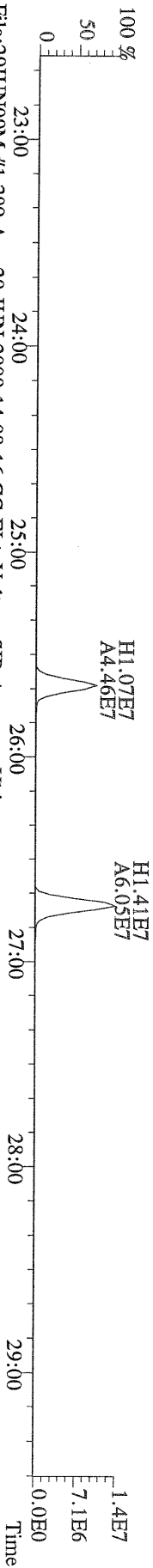
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305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Fronter Analytical Laboratory



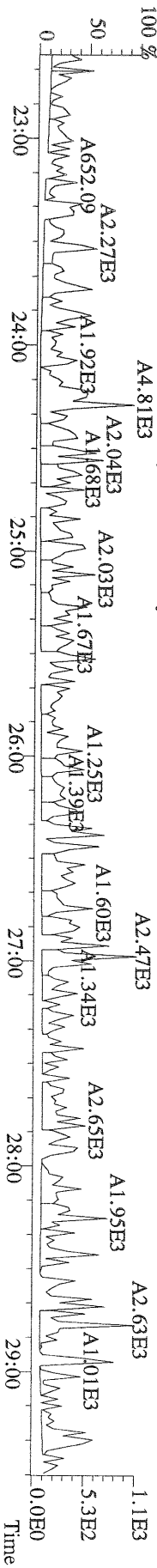
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315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Fronter Analytical Laboratory



File:29JUN09M #1-390 Acq:29-JUN-2009 14:08:16 GC EI + Voltage SIR Autospec-Ultima  
317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Fronter Analytical Laboratory

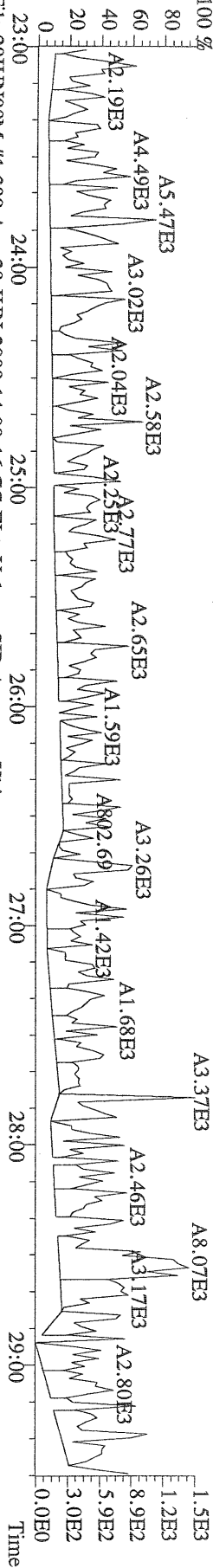


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375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Fronter Analytical Laboratory

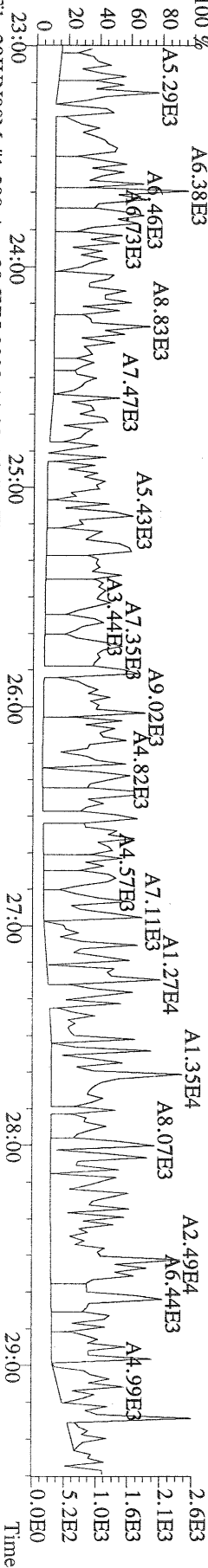




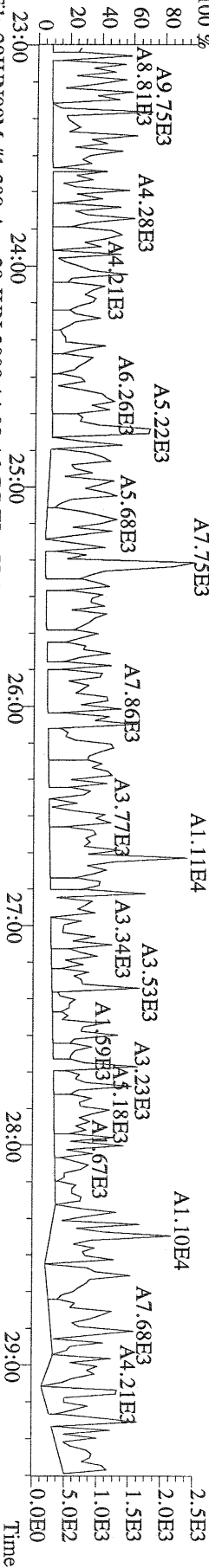
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339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



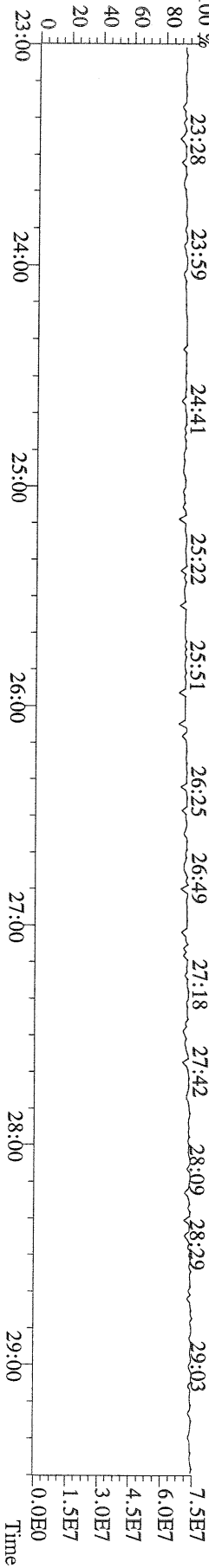
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341.8568 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



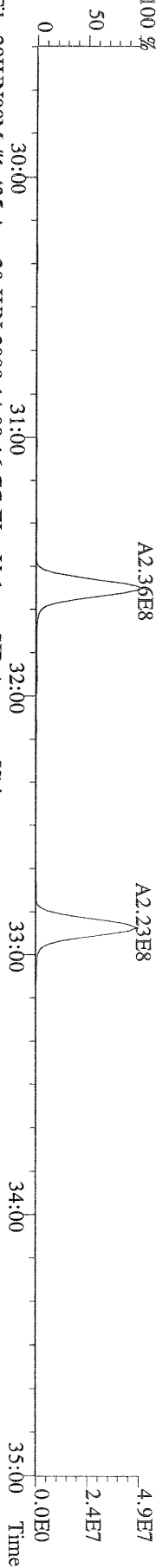
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409.7974 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



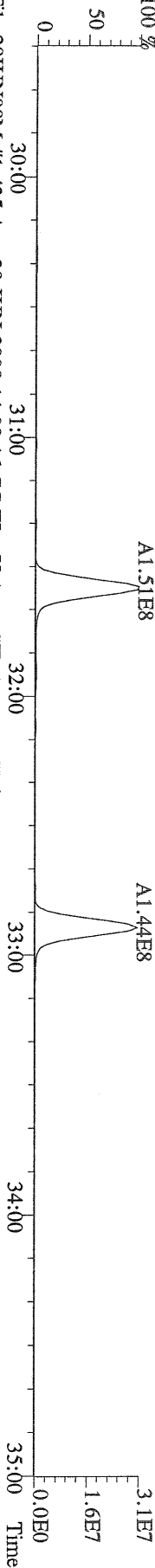
File:29JUN09M #1-390 Acq:29-JUN-2009 14:08:16 GC EI+ Voltage SIR Autospec-Ultima  
330.9792 S:6 Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



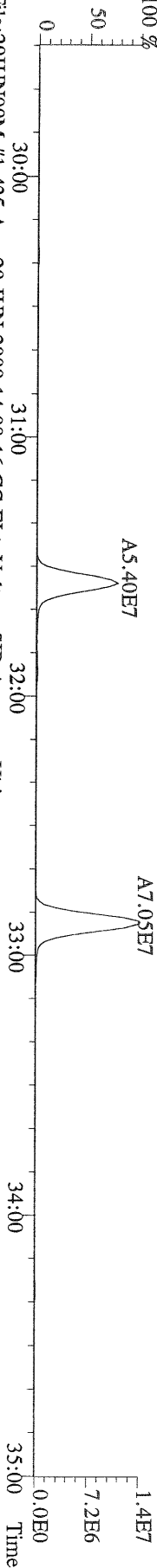
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339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



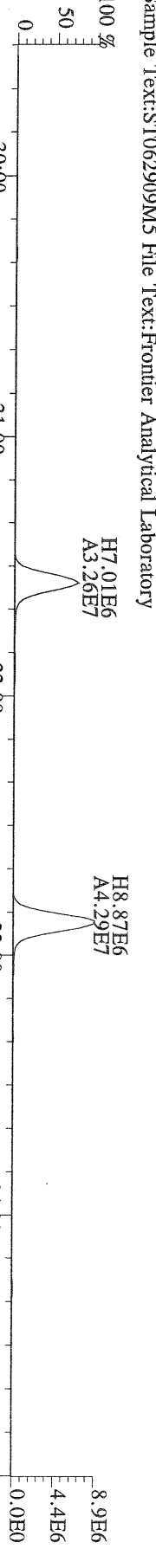
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Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



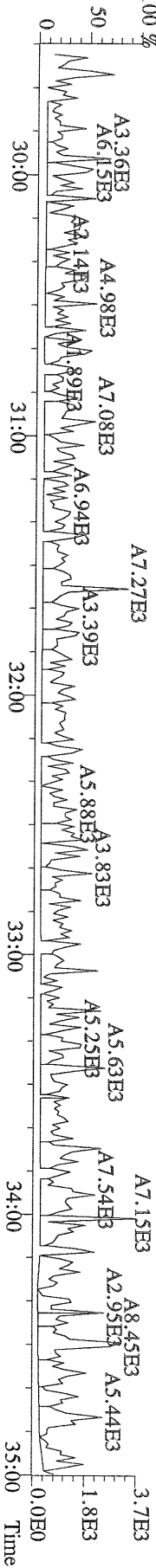
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351.9000 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



File:29JUN09M #1-425 Acq:29-JUN-2009 14:08:16 GC EI+ Voltage SIR Autospec-Ultima  
353.8970 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory

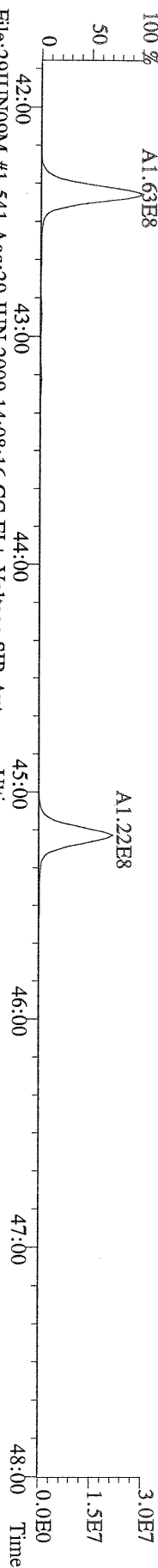


File:29JUN09M #1-425 Acq:29-JUN-2009 14:08:16 GC EI+ Voltage SIR Autospec-Ultima  
409.7974 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory

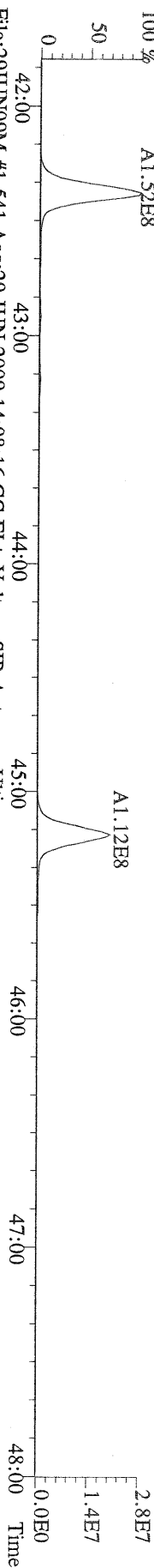




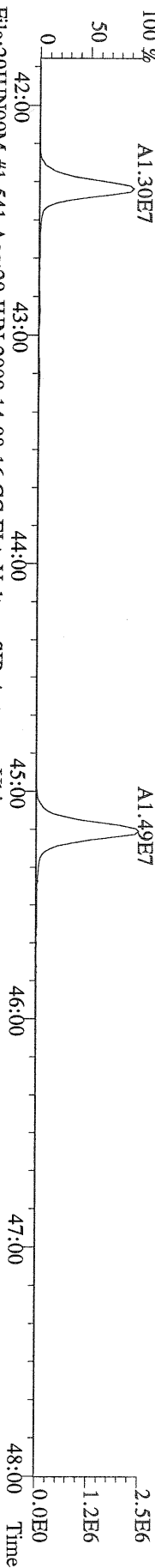
File:29JUN09M #1-541 Acq:29-JUN-2009 14:08:16 GC EI+ Voltage SIR Autospec-Ultima  
407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



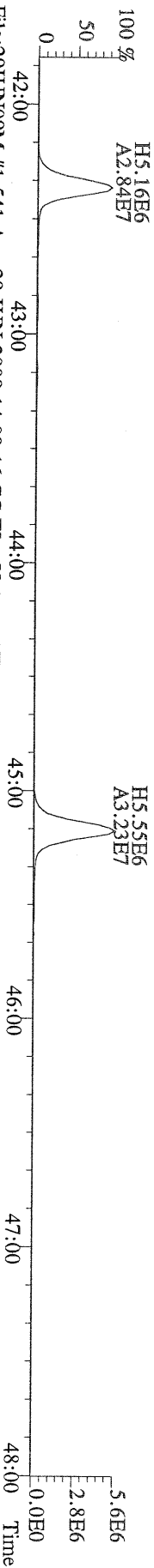
File:29JUN09M #1-541 Acq:29-JUN-2009 14:08:16 GC EI+ Voltage SIR Autospec-Ultima  
409.7788 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



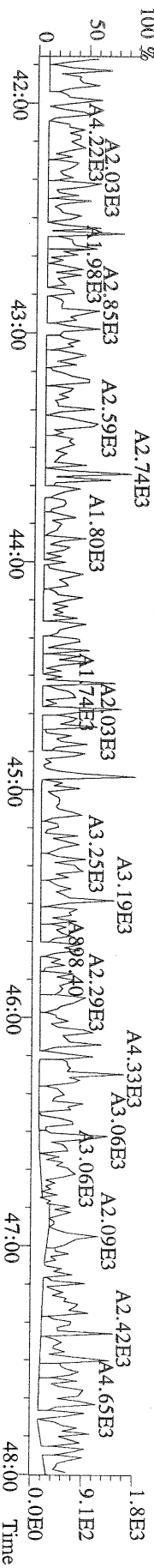
File:29JUN09M #1-541 Acq:29-JUN-2009 14:08:16 GC EI+ Voltage SIR Autospec-Ultima  
417.8253 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



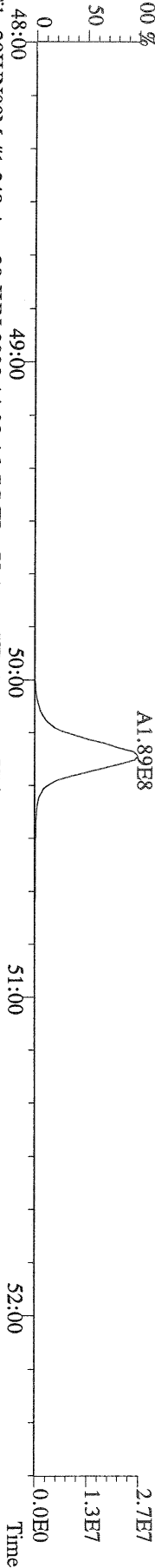
File:29JUN09M #1-541 Acq:29-JUN-2009 14:08:16 GC EI+ Voltage SIR Autospec-Ultima  
419.8220 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



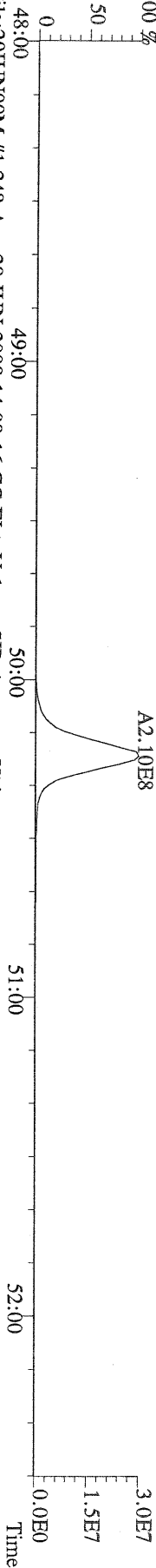
File:29JUN09M #1-541 Acq:29-JUN-2009 14:08:16 GC EI+ Voltage SIR Autospec-Ultima  
479.7165 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



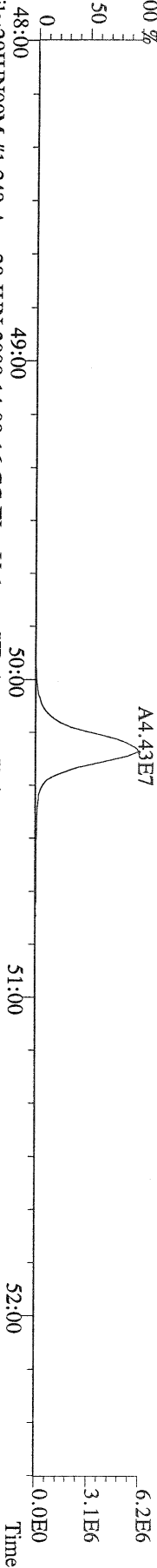
File:29JUN09M #1-348 Acq:29-JUN-2009 14:08:16 GC EI+ Voltage SIR Autospec-Ultima  
441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



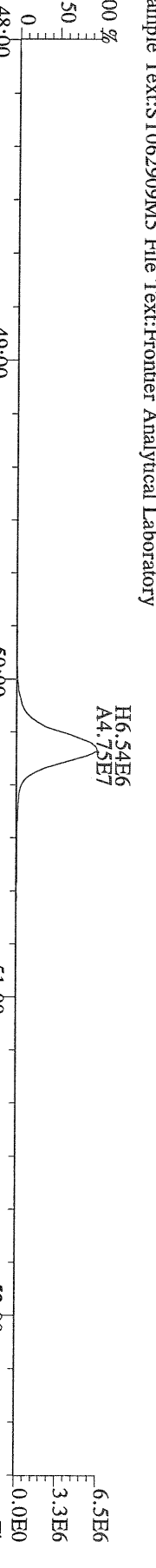
File:29JUN09M #1-348 Acq:29-JUN-2009 14:08:16 GC EI+ Voltage SIR Autospec-Ultima  
443.7398 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory



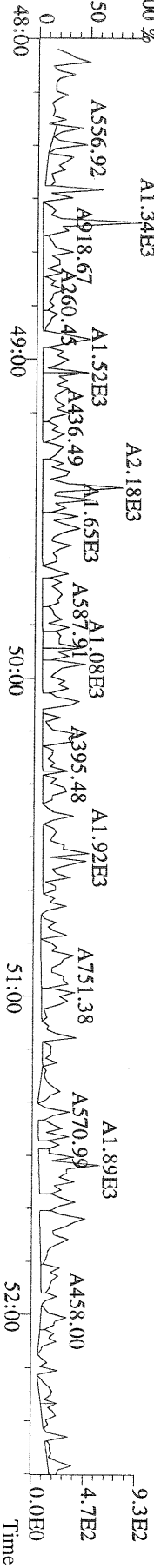
File:29JUN09M #1-348 Acq:29-JUN-2009 14:08:16 GC EI+ Voltage SIR Autospec-Ultima  
453.7831 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory

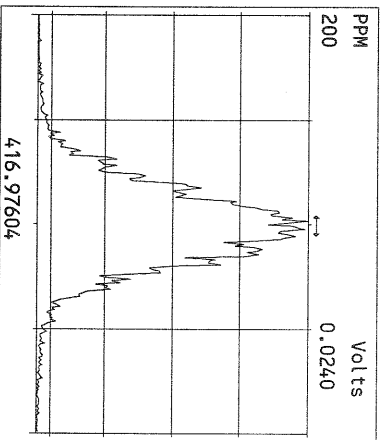
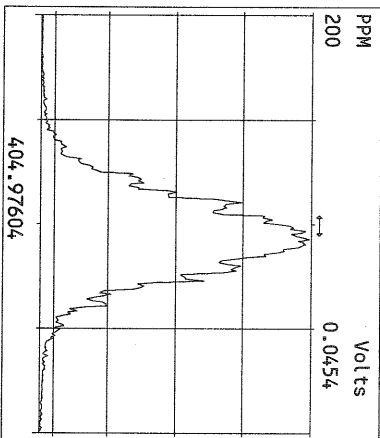
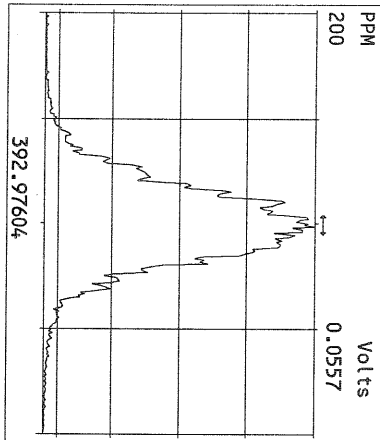
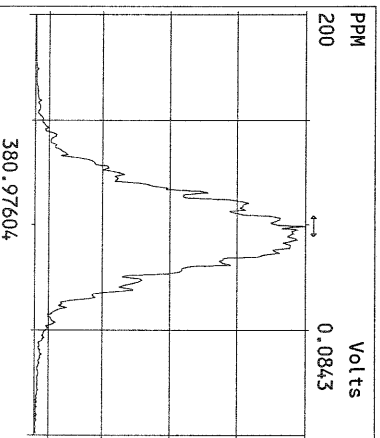
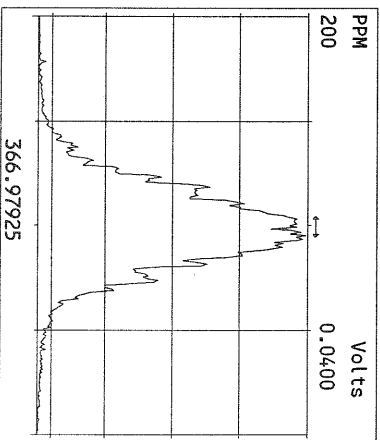
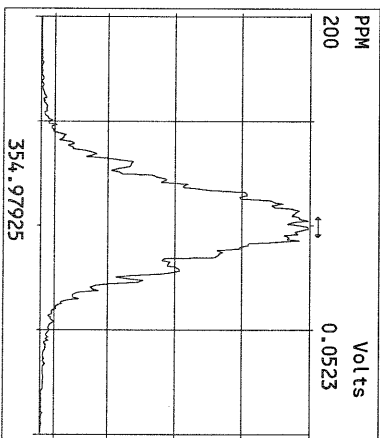
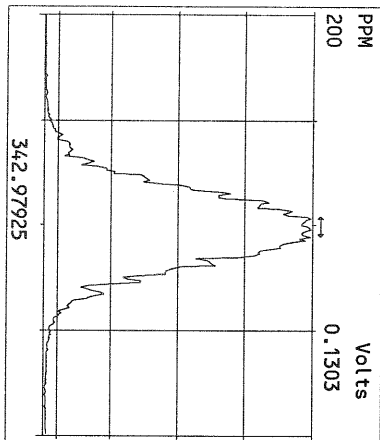
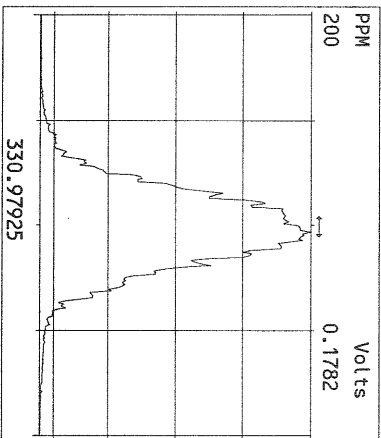
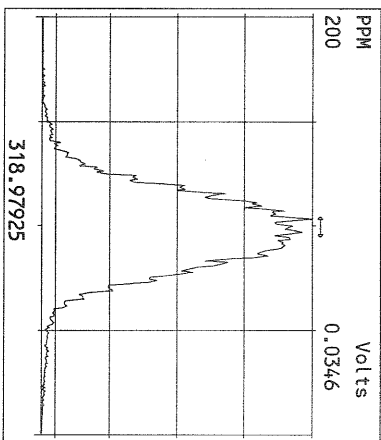
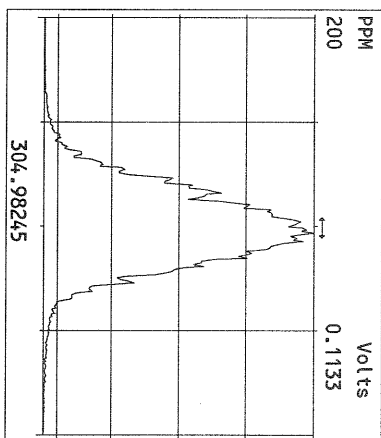
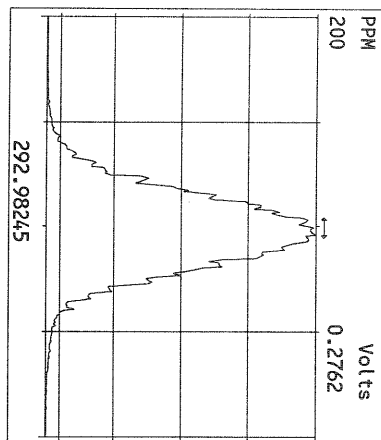


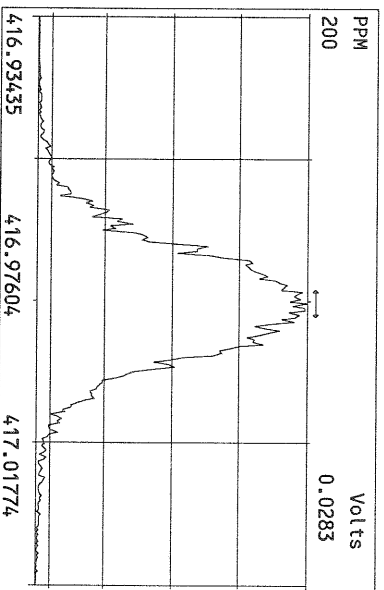
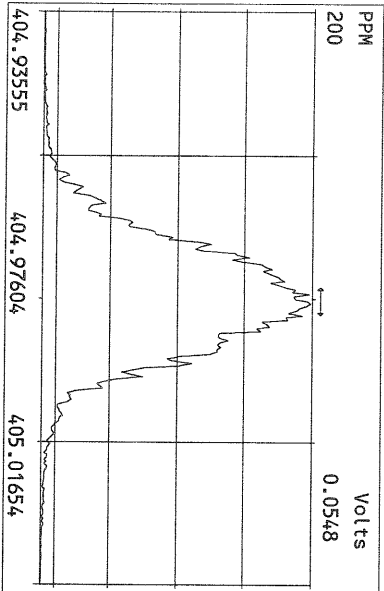
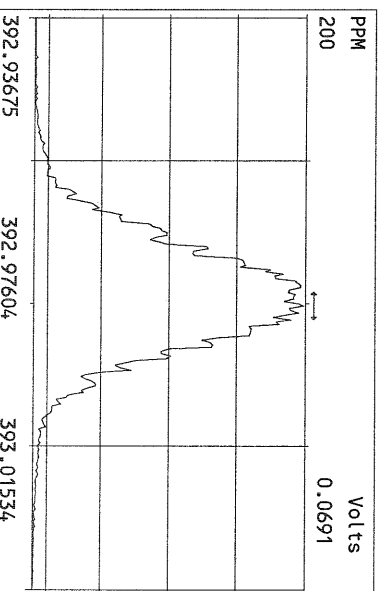
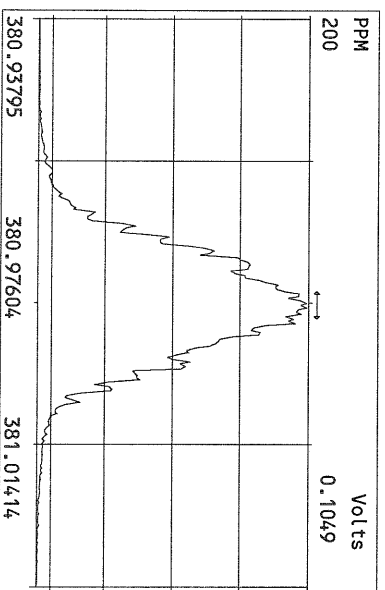
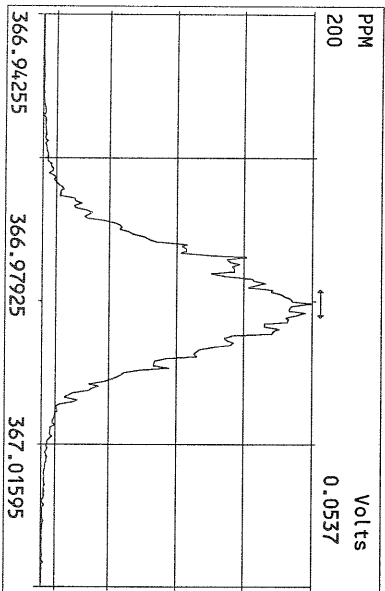
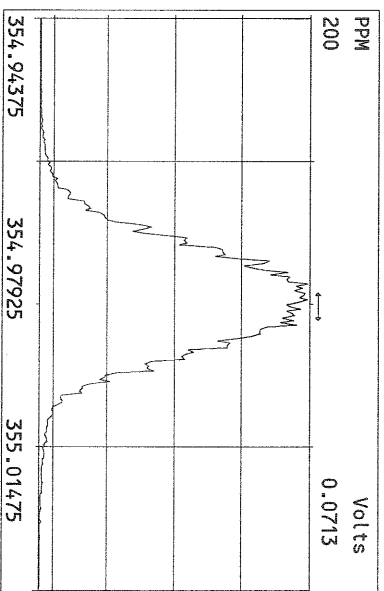
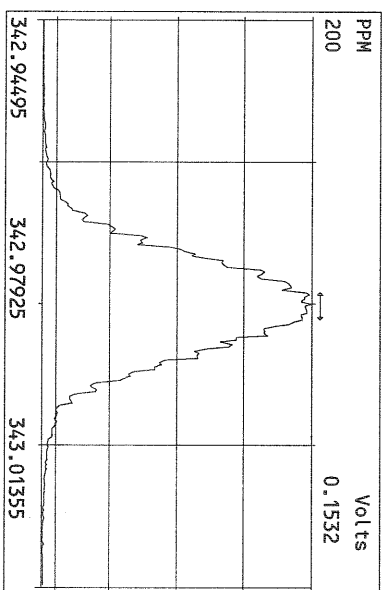
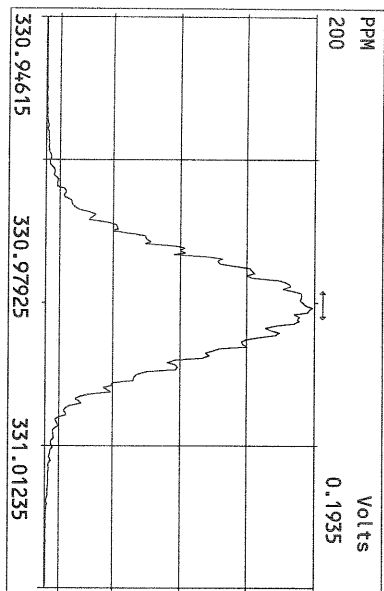
File:29JUN09M #1-348 Acq:29-JUN-2009 14:08:16 GC EI+ Voltage SIR Autospec-Ultima  
455.7801 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory

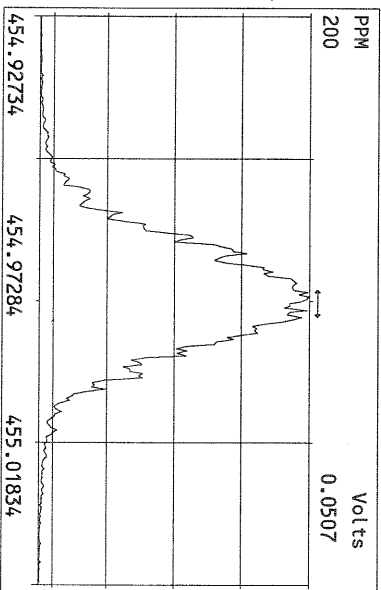
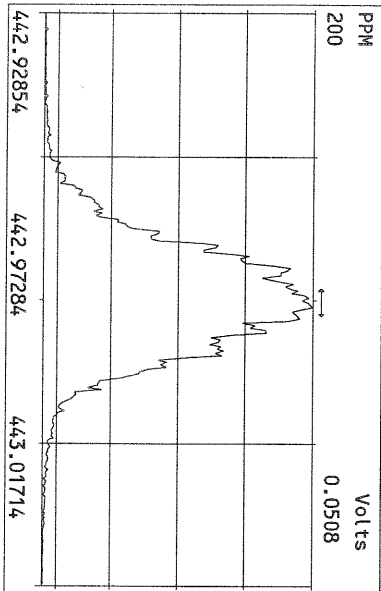
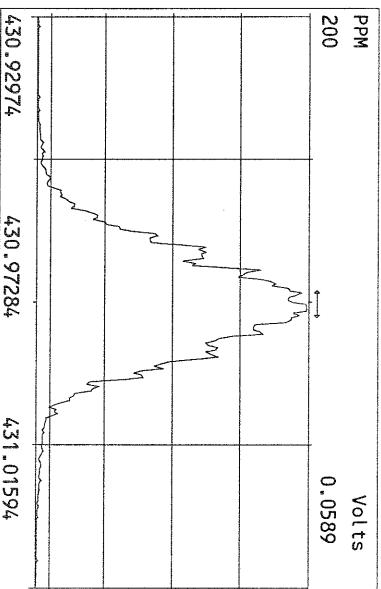
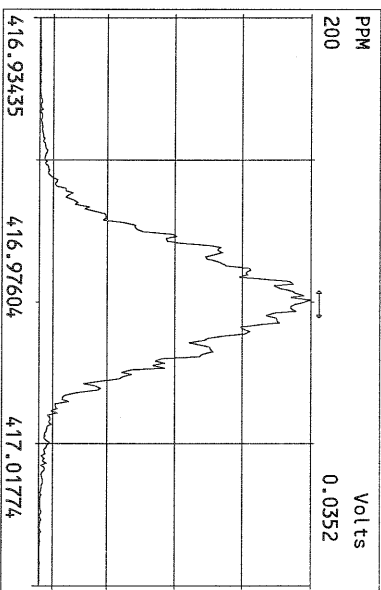
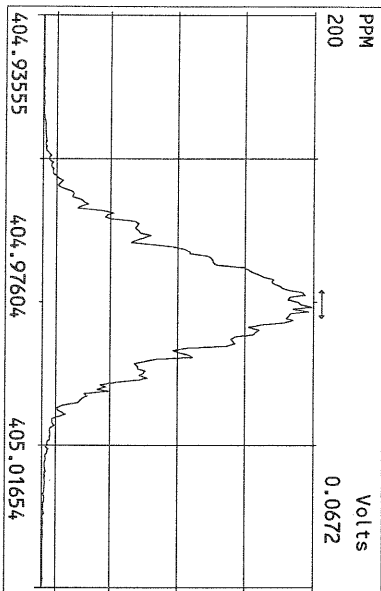
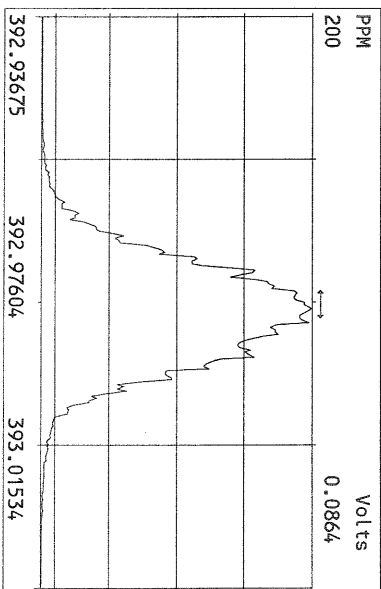
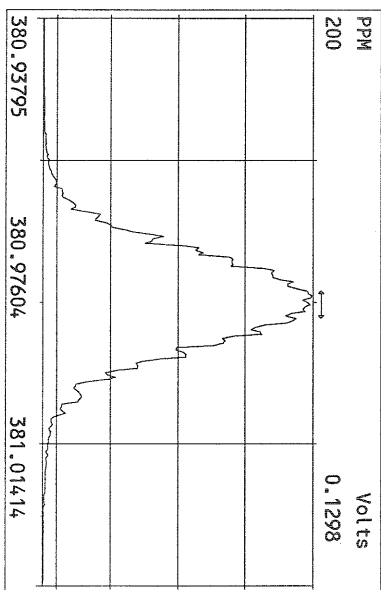
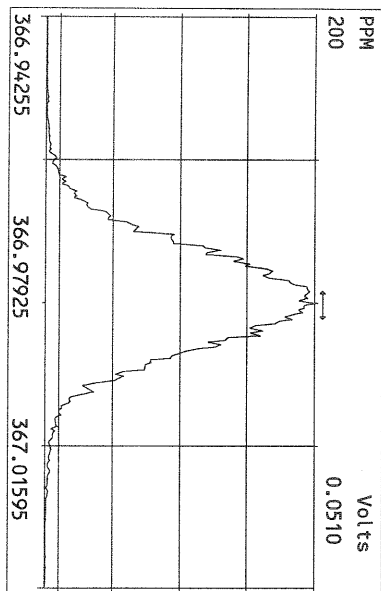


File:29JUN09M #1-348 Acq:29-JUN-2009 14:08:16 GC EI+ Voltage SIR Autospec-Ultima  
513.6775 S:6 F:5 BSUB(10000,15,-3.0) PKD(5.5,3.0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST062909M5 File Text:Frontier Analytical Laboratory

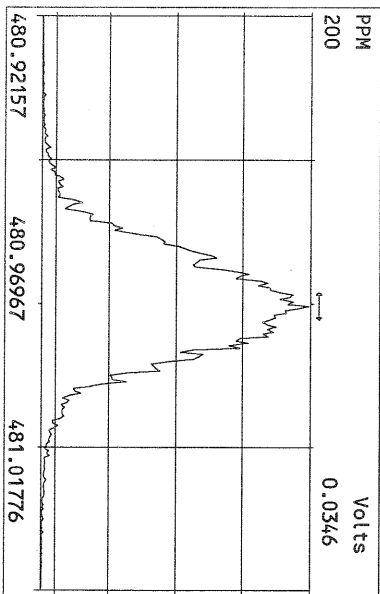
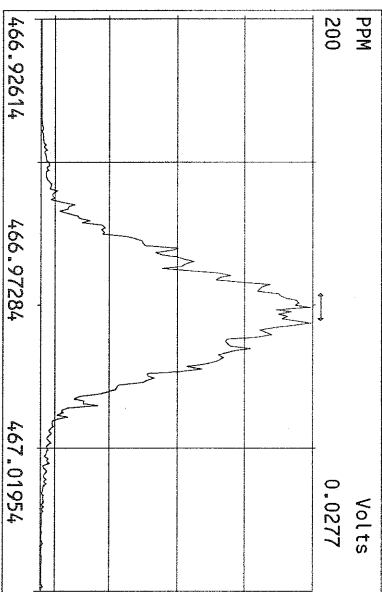
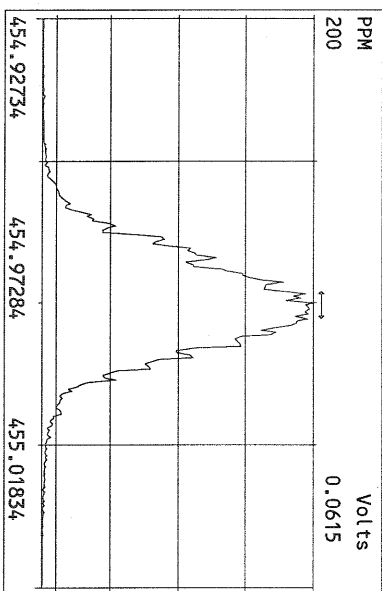
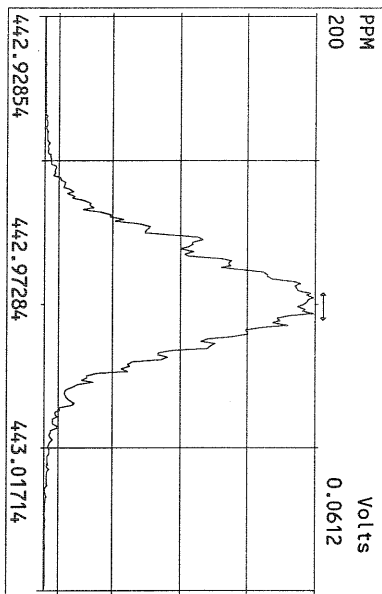
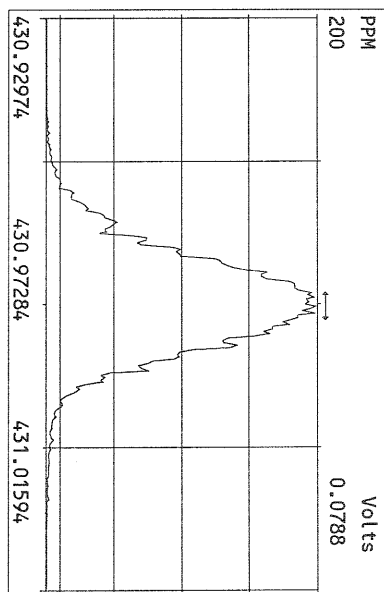
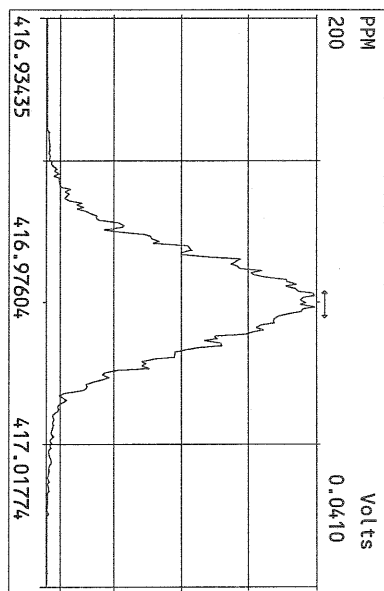
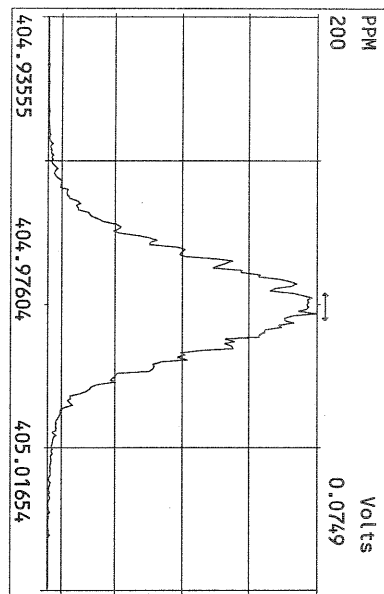


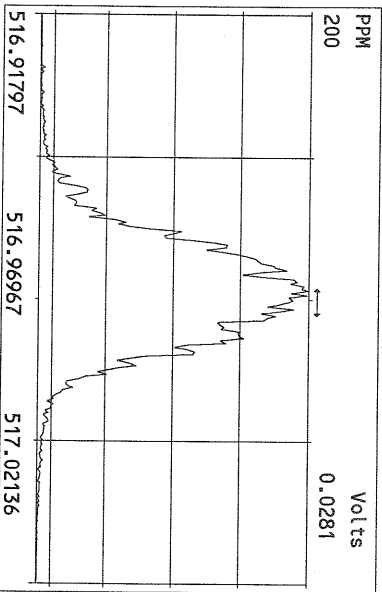
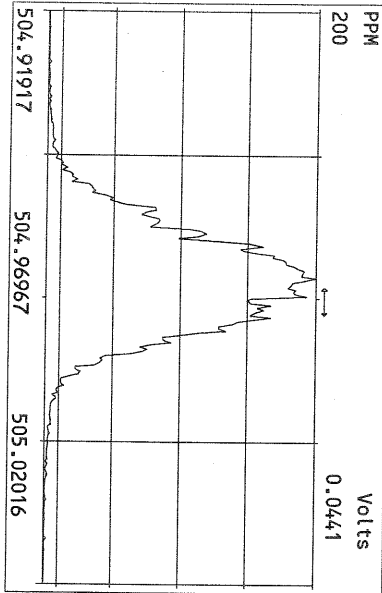
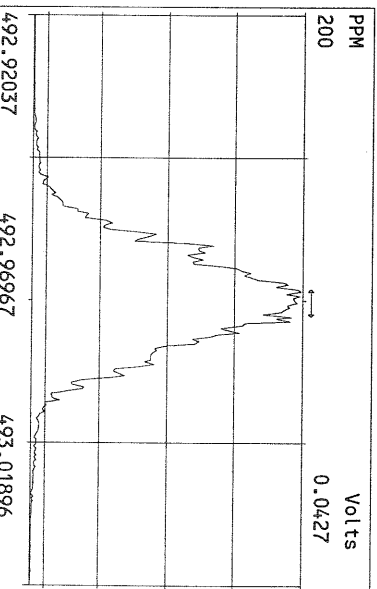
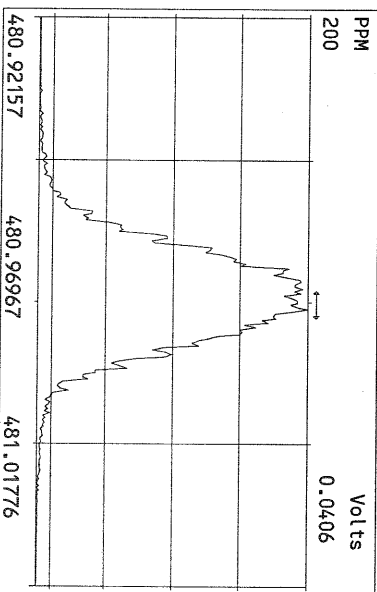
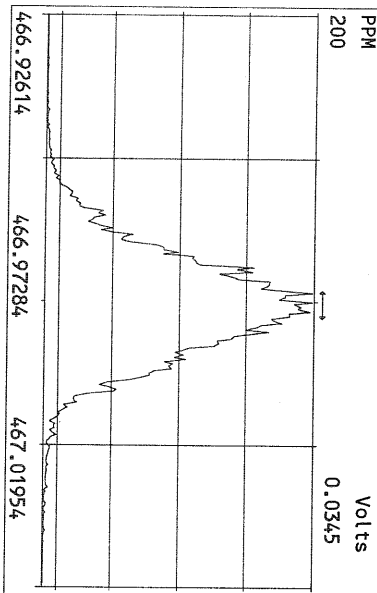
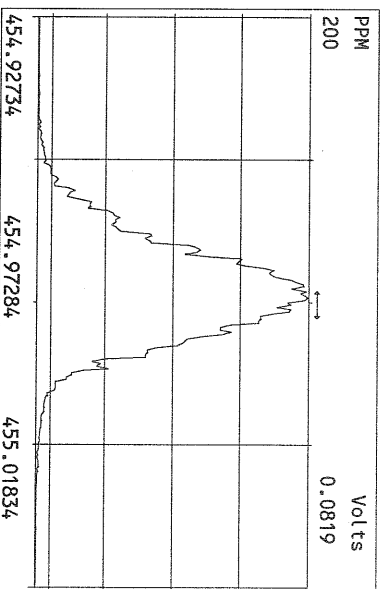
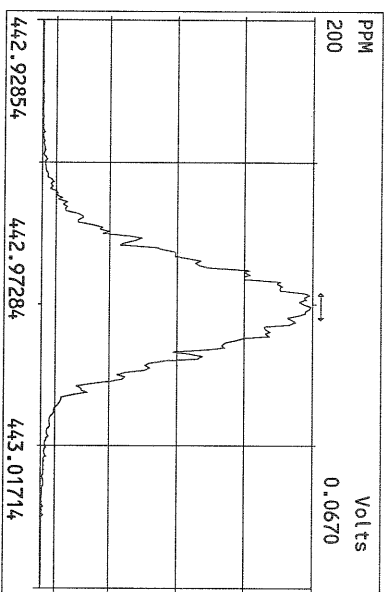
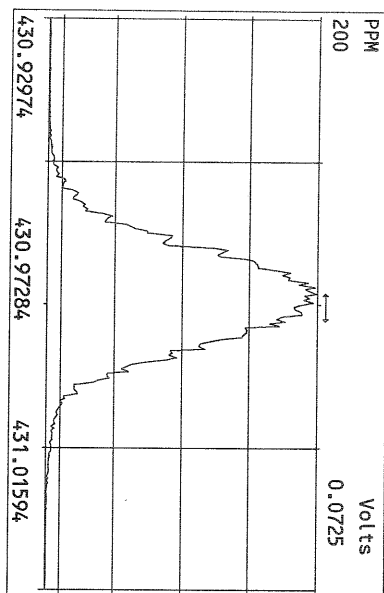












## USEPA - ITD

AIR FORM 4A  
PCDD/PCDF CONTINUING CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 6/29/09


Instrument ID: FAL3

GC Column ID: DB5

VER Data Filename: 09JUL09M Sam:1

Analysis Date: 9-JUL-09 13:34:12

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	4.51	3.75 - 6.25 ✓
1,2,3,7,8-PeCDD	M+2/M+4	1.61	1.32-1.78	y	23.4	18.7 - 31.2 ✓
1,2,3,4,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	y	23.1	18.7 - 31.2 ✓
1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	25.6	18.7 - 31.2 ✓
1,2,3,7,8,9-HxCDD	M+2/M+4	1.21	1.05-1.43	y	24.6	18.7 - 31.2 ✓
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.01	0.88-1.20	y	24.0	18.7 - 31.2 ✓
OCDD	M+2/M+4	0.95	0.76-1.02	y	50.5	37.5 - 62.5 ✓
2,3,7,8-TCDF	M/M+2	0.69	0.65-0.89	y	5.16	3.75 - 6.25 ✓
1,2,3,7,8-PeCDF	M+2/M+4	1.68	1.32-1.78	y	24.4	18.7 - 31.2 ✓
2,3,4,7,8-PeCDF	M+2/M+4	1.68	1.32-1.78	y	24.6	18.7 - 31.2 ✓
1,2,3,4,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	y	23.9	18.7 - 31.2 ✓
1,2,3,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	25.4	18.7 - 31.2 ✓
2,3,4,6,7,8-HxCDF	M+2/M+4	1.19	1.05-1.43	y	24.7	18.7 - 31.2 ✓
1,2,3,7,8,9-HxCDF	M+2/M+4	1.20	1.05-1.43	y	26.2	18.7 - 31.2 ✓
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.01	0.88-1.20	y	25.3	18.7 - 31.2 ✓
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.01	0.88-1.20	y	27.0	18.7 - 31.2 ✓
OCDF	M+2/M+4	0.94	0.76-1.02	y	51.9	35.0 - 65.0 ✓

Analyst: 

Date: 7/9/09

## USEPA - ITD

## AIR FORM 4B

## PCDD/PCDF CONTINUING CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 6/29/09

Instrument ID: FAL3

GC Column ID: DB5

VER Data Filename: 09JUL09M Sam:1

Analysis Date: 9-JUL-09 13:34:12

	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	103	75.0 - 125 ✓
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.76	1.32-1.78	y	110	70.0 - 130 ✓
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	105	75.0 - 125 ✓
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.08	0.88-1.20	y	113	70.0 - 130 ✓
13C-OCDD	M+2/M+4	0.97	0.76-1.02	y	218	140 - 260 ✓
13C-2,3,7,8-TCDF	M/M+2	0.88	0.65-0.89	y	101	70.0 - 130 ✓
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.73	1.32-1.78	y	112	70.0 - 130 ✓
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	109	70.0 - 130 ✓
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.48	0.37-0.51	y	104	70.0 - 130 ✓
13C-OCDF	M+2/M+4	0.96	0.76-1.02	y	222	140 - 260 ✓
CLEANUP SURROGATE						
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	y	110	75.0 - 125 ✓
PRE-SPIKE SURROGATE						
37Cl-2,3,7,8-TCDD					99.8	75.0 - 125 ✓
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	91.5	75.0 - 125 ✓
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.74	1.32-1.78	y	104	75.0 - 125 ✓
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	93.5	75.0 - 125 ✓
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.48	0.37-0.51	y	106	75.0 - 125 ✓

Analyst: 8Date: 7/9/09

Air 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: 6/29/09  
RT Window Data Filename: 09JUL09M Sam:1      Analysis Date: 9-JUL-09 Time: 13:34:12  
DB-5 IS Data Filename: 09JUL09M Sam:1      Analysis Date: 9-JUL-09 Time: 13:34:12  
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)	24:31 ✓	1,3,6,8-TCDF (F)	23:09 ✓
1,2,8,9-TCDD (L)	28:27 ✓	1,2,8,9-TCDF (L)	28:40 ✓
1,2,4,7,9-PeCDD (F)	30:22 ✓	1,3,4,6,8-PeCDF (F)	28:32 ✓
1,2,3,8,9-PeCDD (L)	33:55 ✓	1,2,3,8,9-PeCDF (L)	34:19 ✓
1,2,4,6,7,9-HxCDD (F)	36:15 ✓	1,2,3,4,6,8-HxCDF (F)	35:22 ✓
1,2,3,7,8,9-HxCDD (L)	39:19 ✓	1,2,3,7,8,9-HxCDF (L)	39:53 ✓
1,2,3,4,6,7,9-HpCDD (F)	42:56 ✓	1,2,3,4,6,7,8-HpCDF (F)	42:25 ✓
1,2,3,4,6,7,8-HpCDD (L)	44:19 ✓	1,2,3,4,7,8,9-HpCDF (L)	45:14 ✓

(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%.

Analyst: \_\_\_\_\_

Date: \_\_\_\_\_

NATO 1989 Tox: 48.4  
WHO 1998 Tox: 60.1

Analyst:                      Date: 7/9/09

## Frontier Analytical Laboratory - Acquisition Log

Run Name:09JUL09M

Instrument: FAL3

GC: DB5

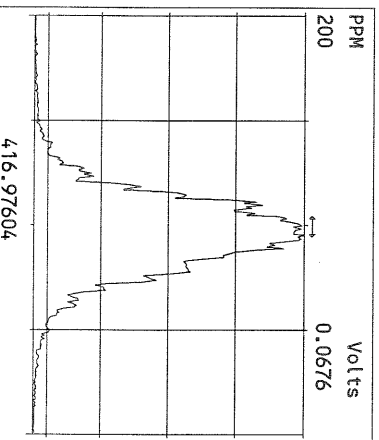
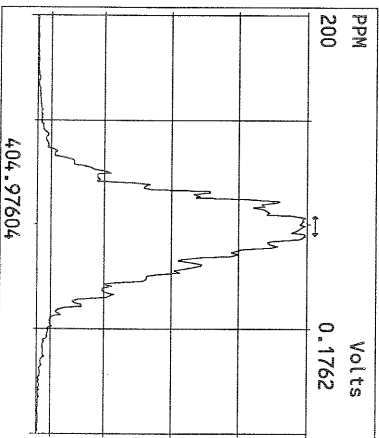
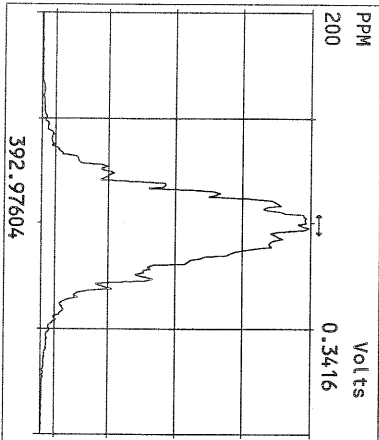
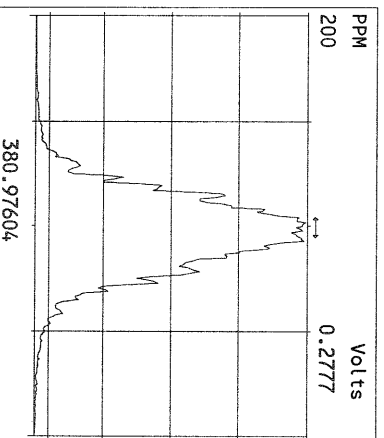
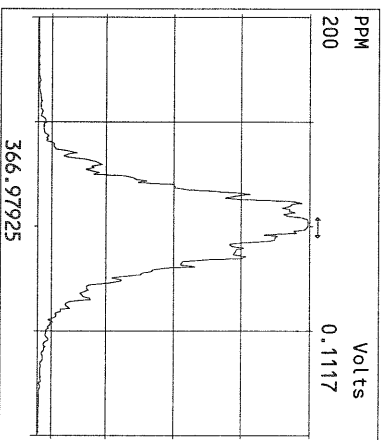
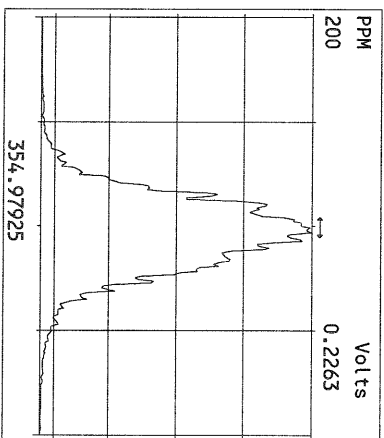
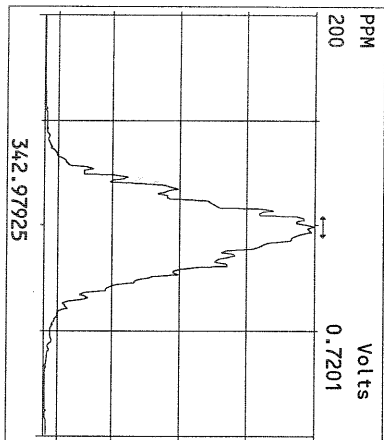
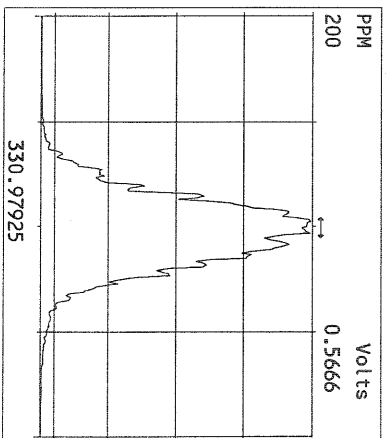
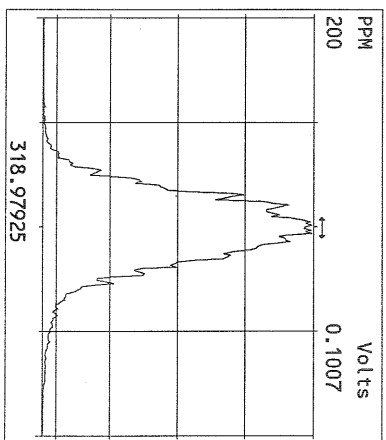
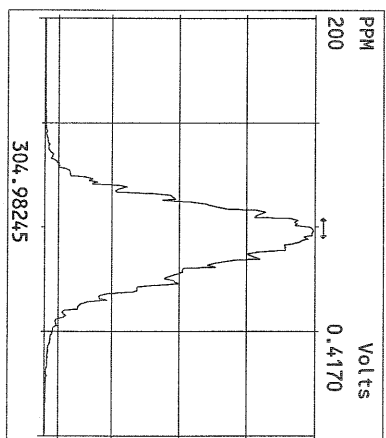
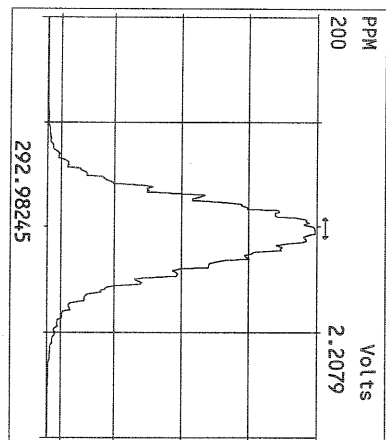
Experiment:PCDD

Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
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09JUL09M	3	1754-001-0001-LC2	LCS2	9-JUL-09 15:24:53	ST070909M1	ST070909M2	BS
09JUL09M	4	1754-001-0001-MB	Method Blank	9-JUL-09 16:20:15	ST070909M1	ST070909M2	BS
09JUL09M	5	5557-007-0001-SA	CAMU-S3-061609BS	9-JUL-09 17:15:38	ST070909M1	ST070909M2	BS
09JUL09M	6	5557-001-0001-SA	CAMU-S1-061809	9-JUL-09 18:11:01	ST070909M1	ST070909M2	BS
09JUL09M	7	5557-002-0001-SA	CAMU-S3-061809	9-JUL-09 19:06:20	ST070909M1	ST070909M2	BS
09JUL09M	8	5557-003-0001-SA	OFF-03-061809	9-JUL-09 20:01:38	ST070909M1	ST070909M2	BS
09JUL09M	9	5557-004-0001-SA	OFF-04-061809	9-JUL-09 20:56:57	ST070909M1	ST070909M2	BS
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09JUL09M	13	5557-009-0001-SA	OFF-03-061709	10-JUL-09 00:37:52	ST070909M1	ST070909M2	BS
09JUL09M	14	SB070909M1	Solvent Blank	10-JUL-09 01:33:07	ST070909M1	ST070909M2	BS
09JUL09M	15	ST070909M2	AIR CS3 (090121I)	10-JUL-09 02:28:22	ST070909M2	ST070909M3	BS
09JUL09M	16	ST070909M3	1613 CS3	10-JUL-09 03:23:39	ST070909M2	ST070909M3	BS
09JUL09M	17	1758-001-0001-LC1	LCS1	10-JUL-09 04:18:54	ST070909M2	ST070909M3	BS
09JUL09M	18	1758-001-0001-LC2	LCS2	10-JUL-09 05:14:08	ST070909M2	ST070909M3	BS
09JUL09M	19	1758-001-0001-MB	Method Blank	10-JUL-09 06:09:24	ST070909M2	ST070909M3	BS
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09JUL09M	21	QC070909M2	FilterQC062609B	10-JUL-09 07:59:52	ST070909M2	ST070909M3	BS
09JUL09M	22	5561-001-0001-SA	OFF03062309	10-JUL-09 08:55:11	ST070909M2	ST070909M3	BS
09JUL09M	23	5561-002-0001-SA	OFF04062309	10-JUL-09 09:50:29	ST070909M2	ST070909M3	BS
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09JUL09M	25	5562-002-0001-SA	CAMUS3062309	10-JUL-09 11:41:00	ST070909M2	ST070909M3	BS
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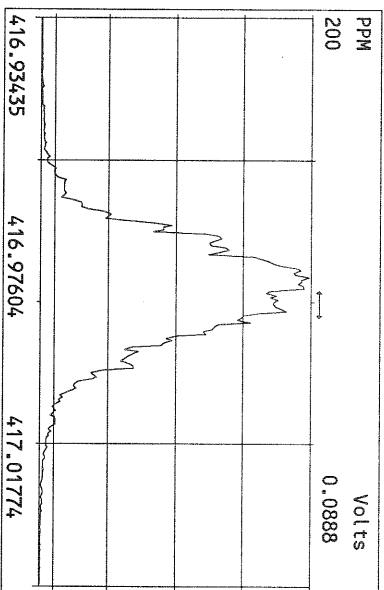
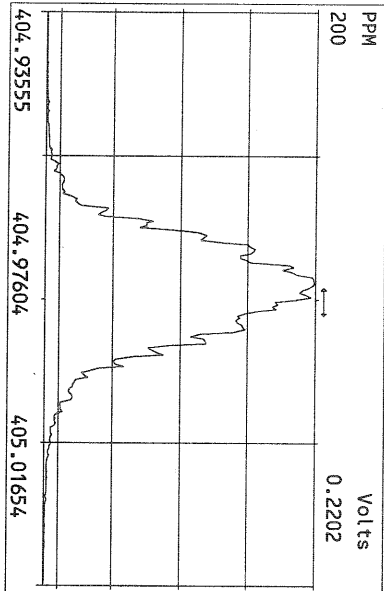
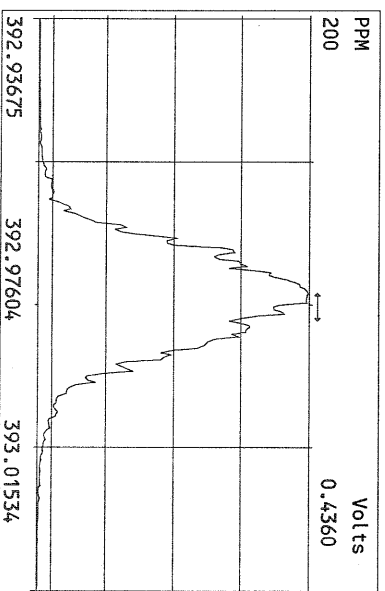
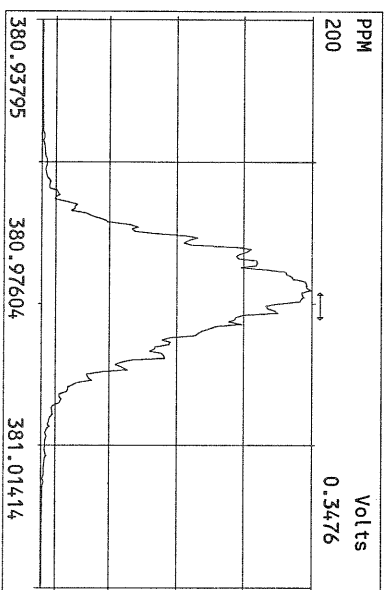
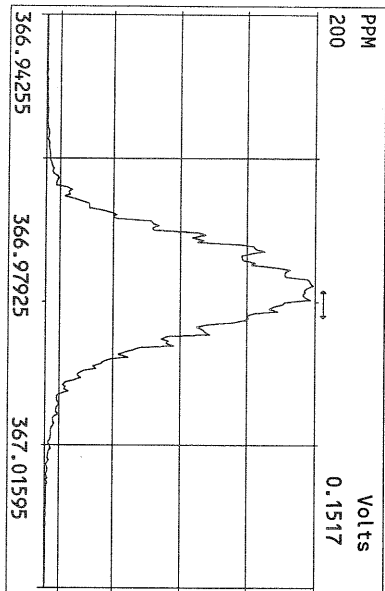
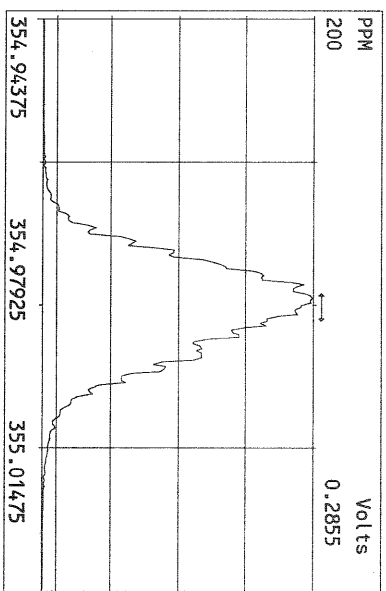
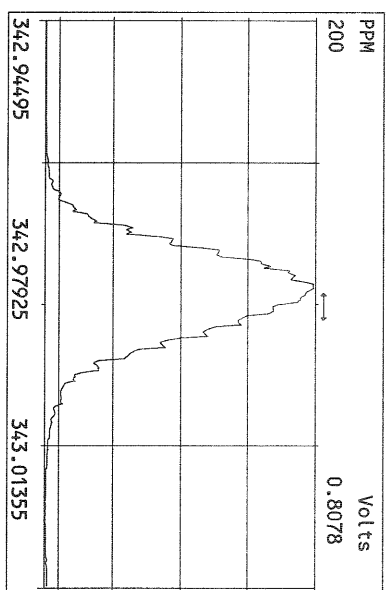
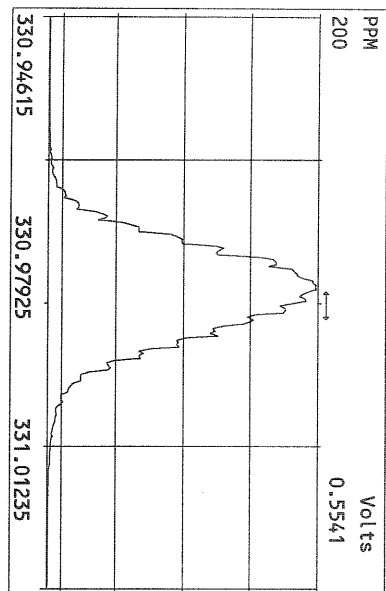
8-11/09

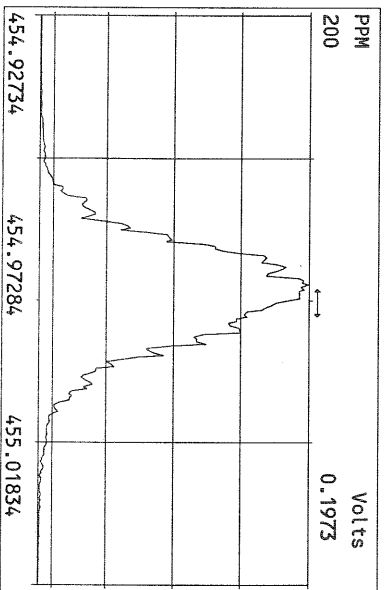
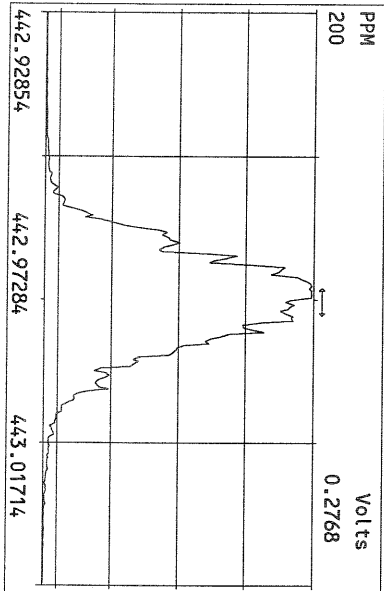
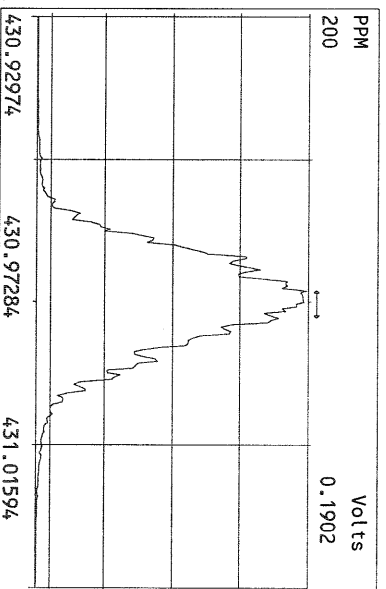
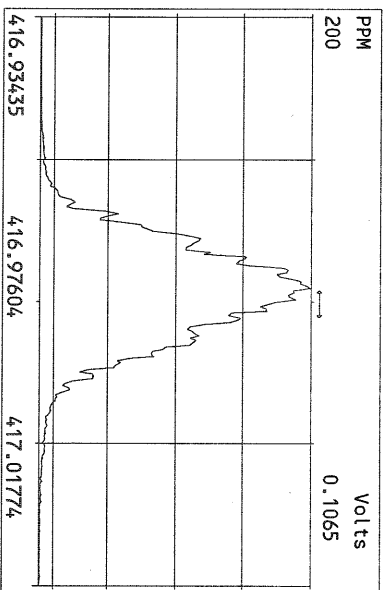
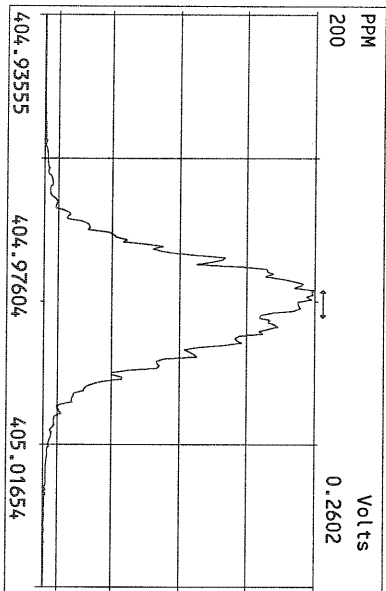
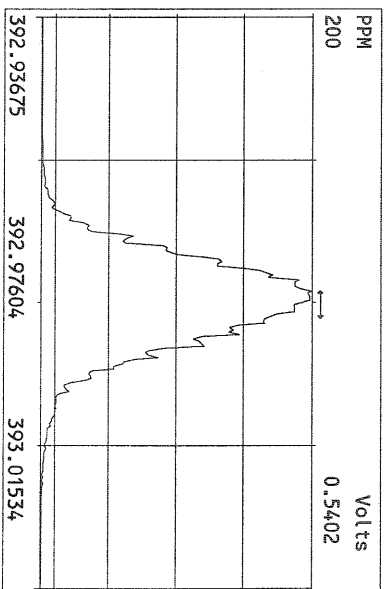
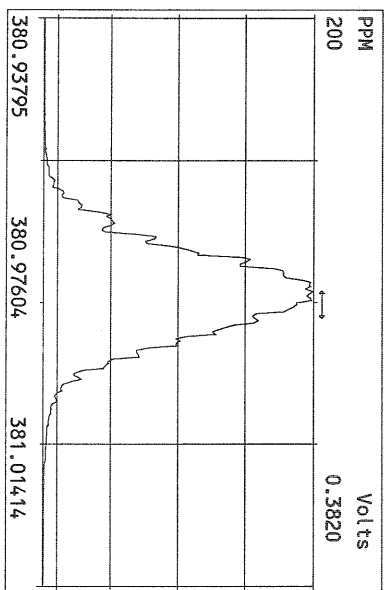
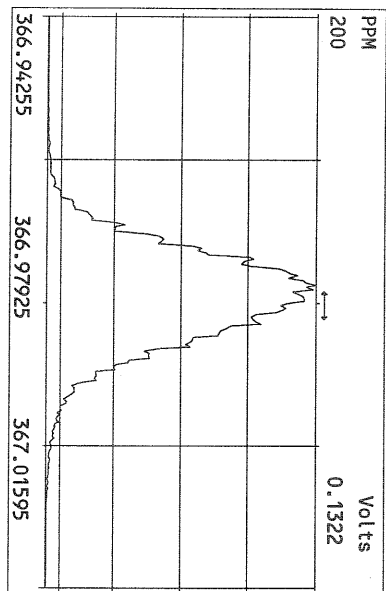
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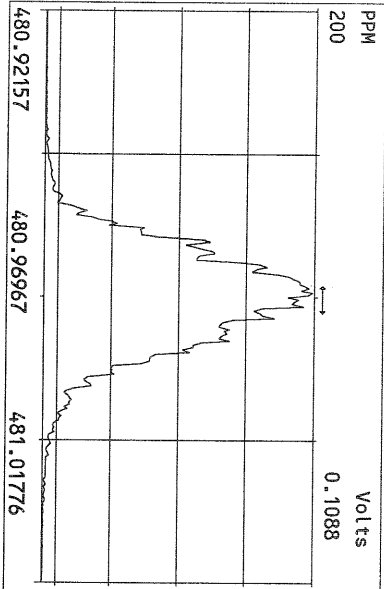
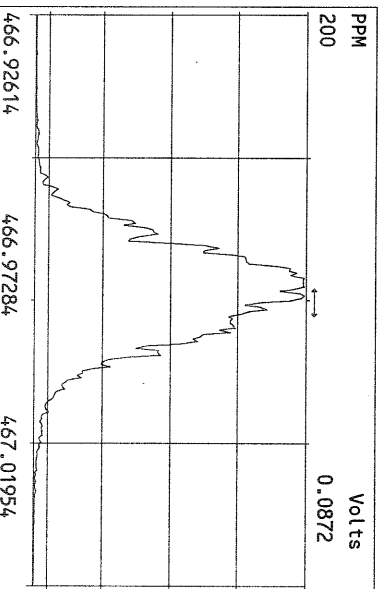
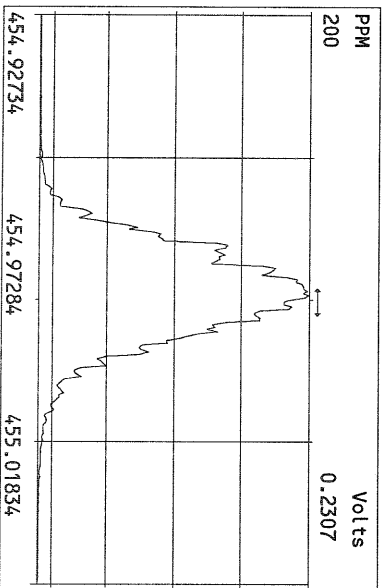
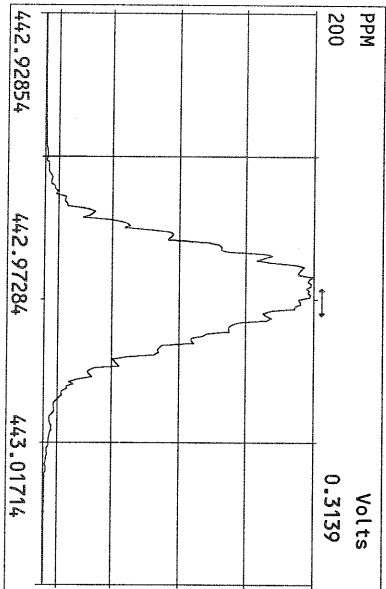
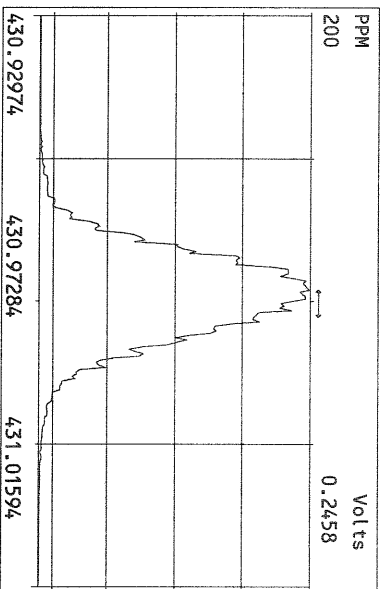
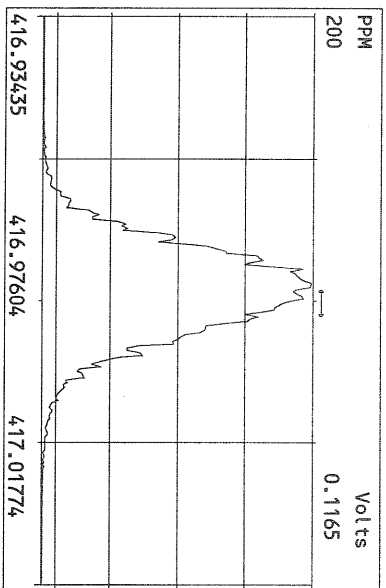
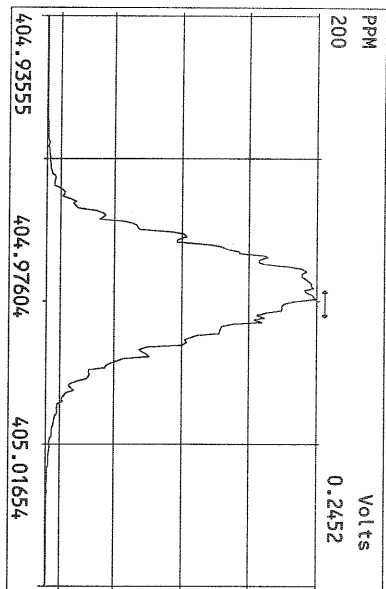
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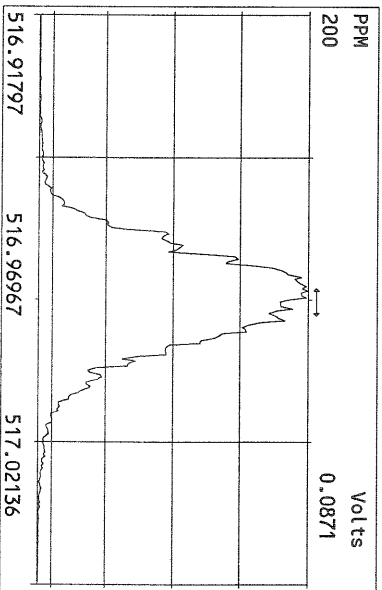
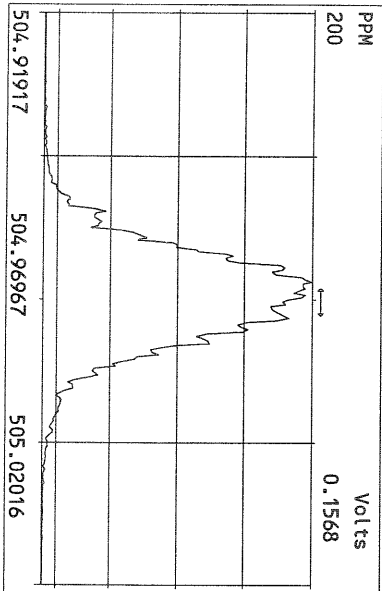
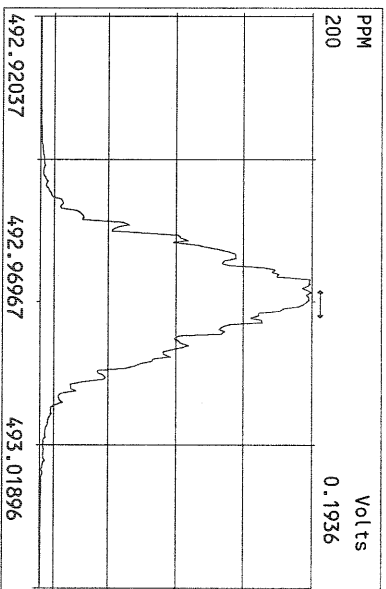
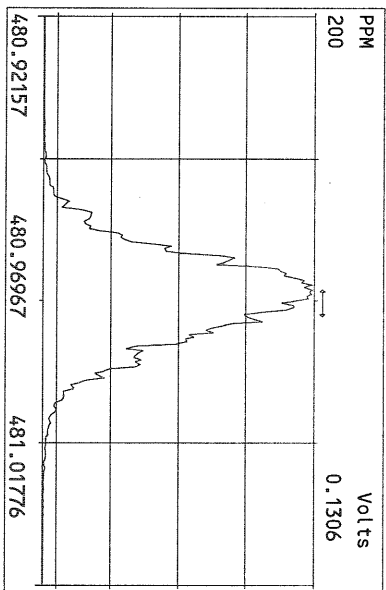
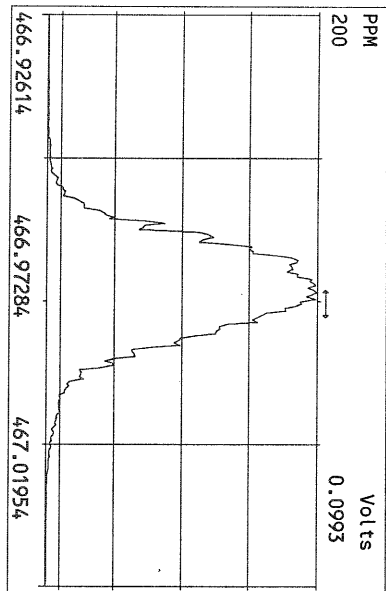
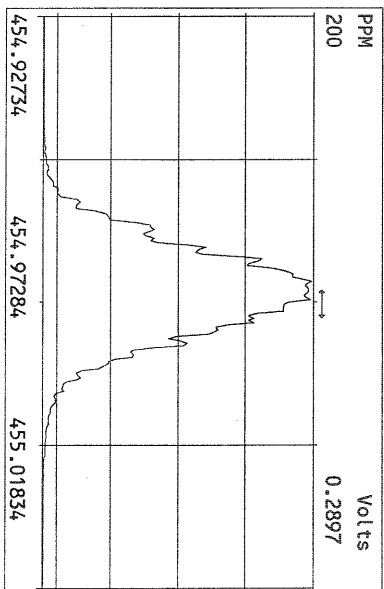
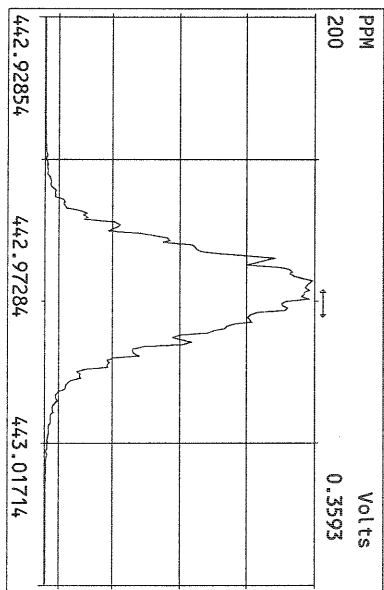
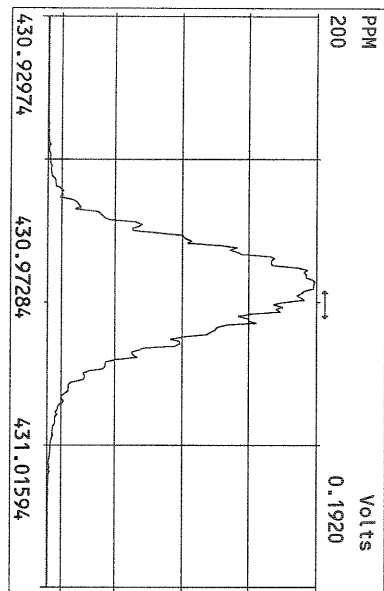




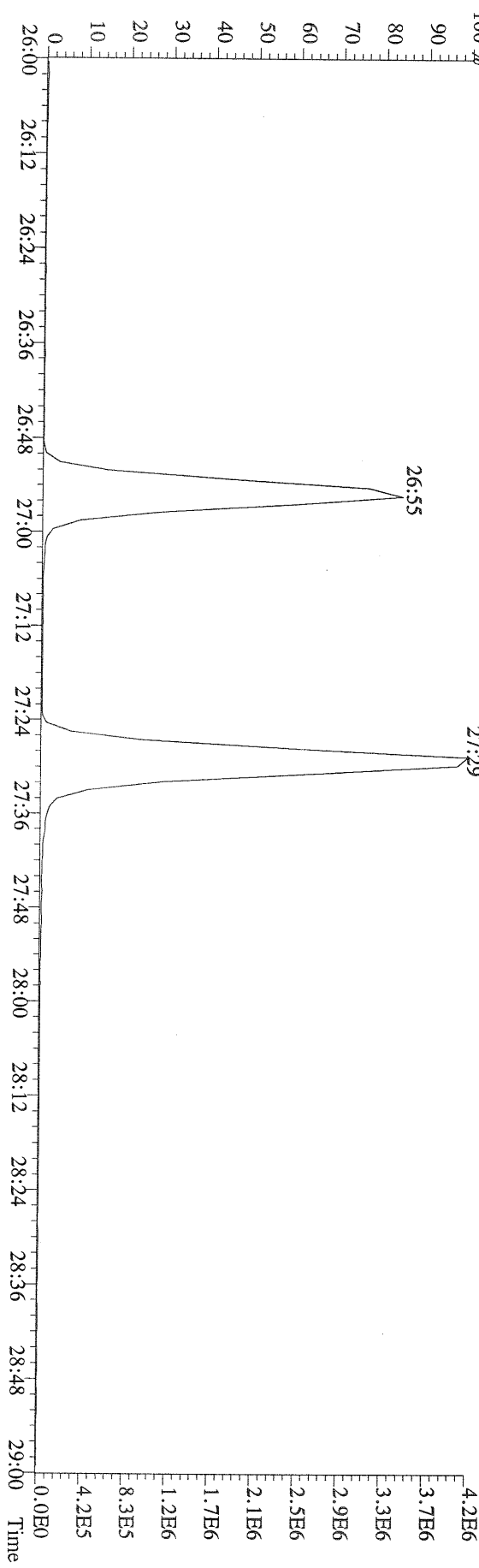
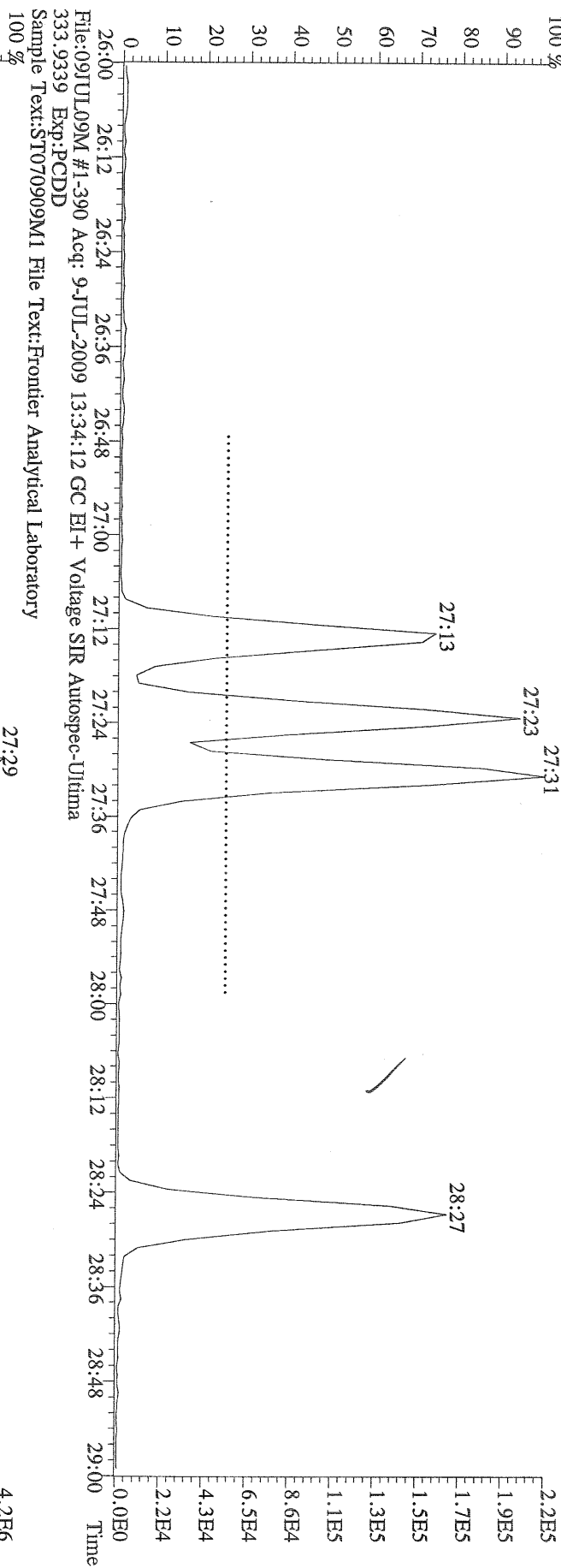




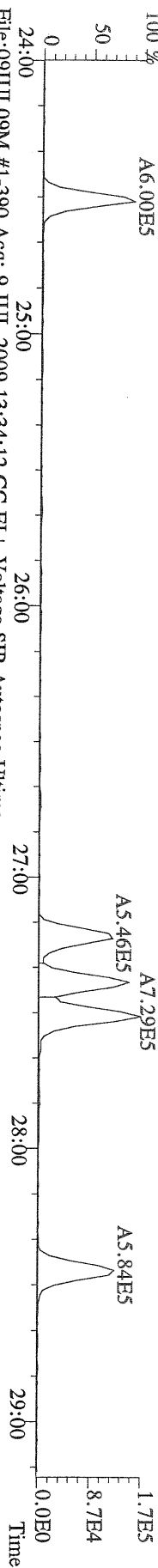




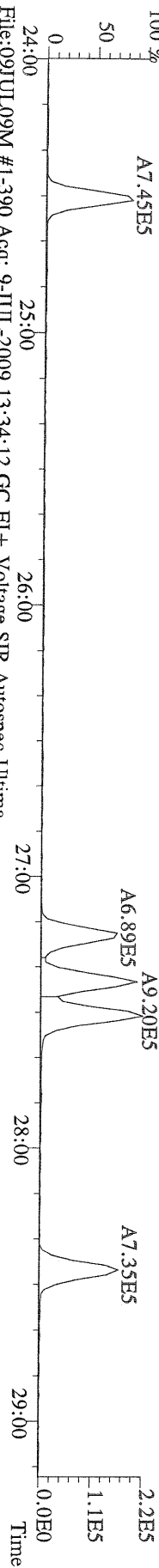
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100 %



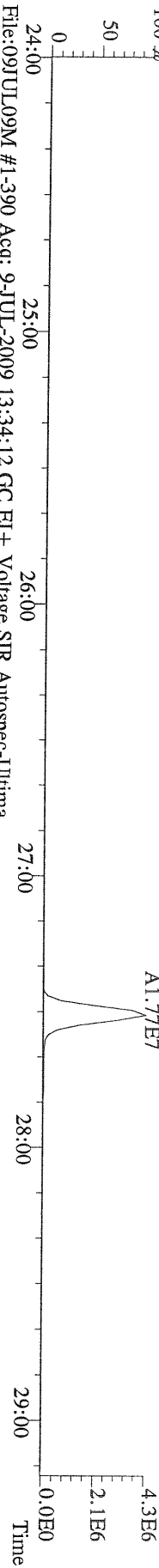
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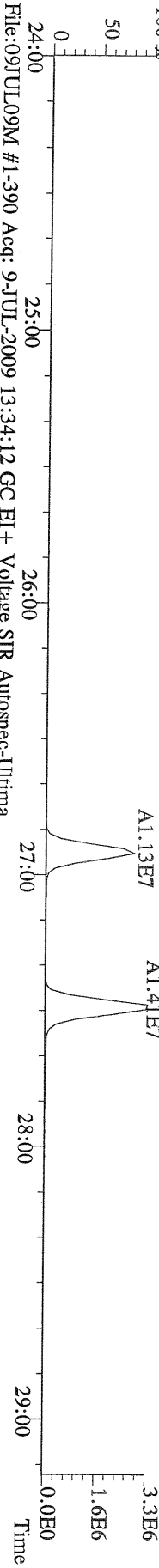
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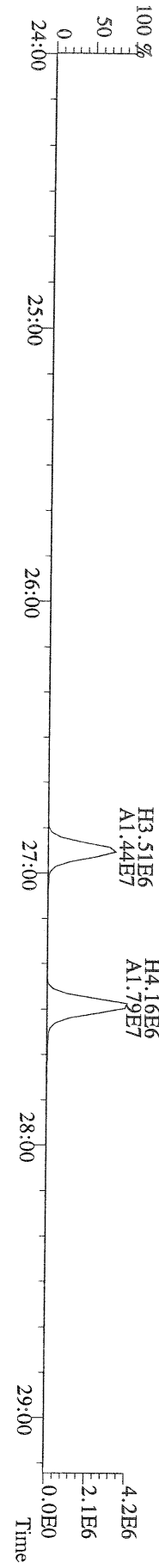
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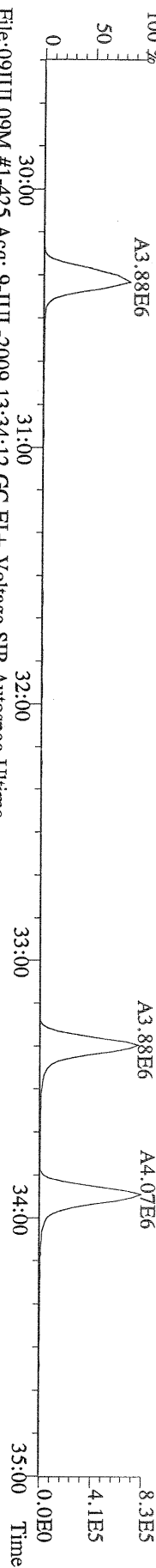
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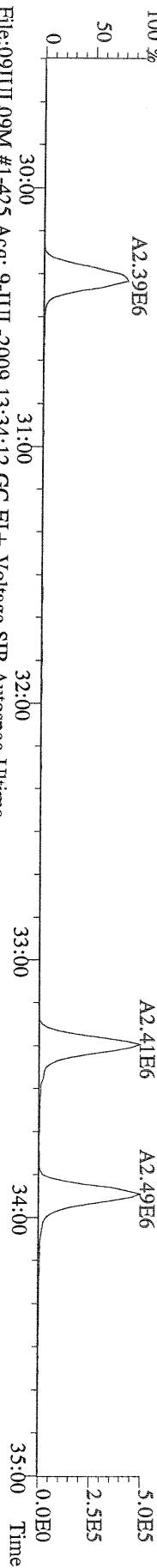
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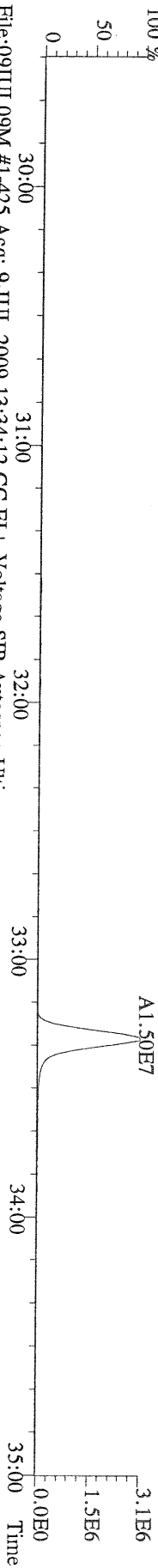
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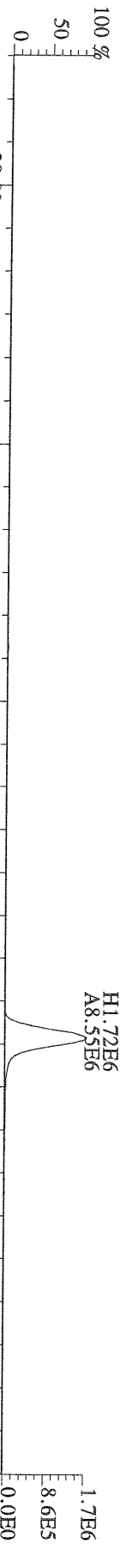
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100 %



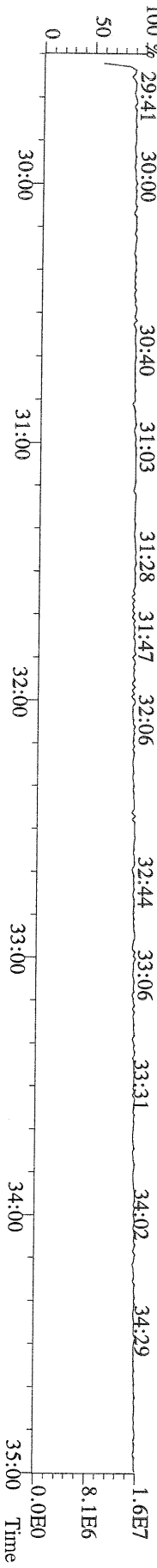
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100 %



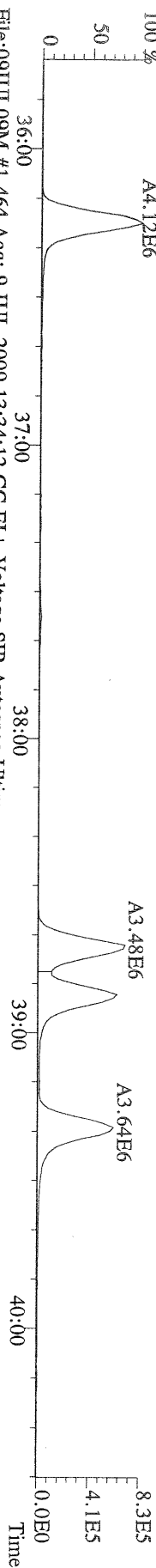
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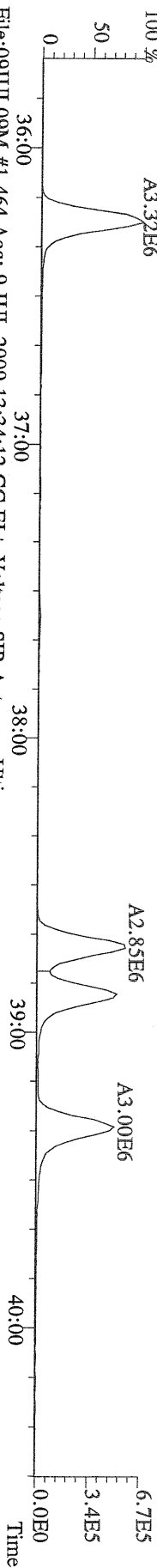
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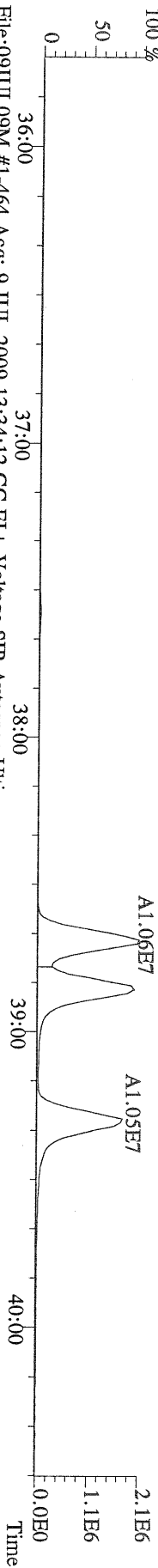
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389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
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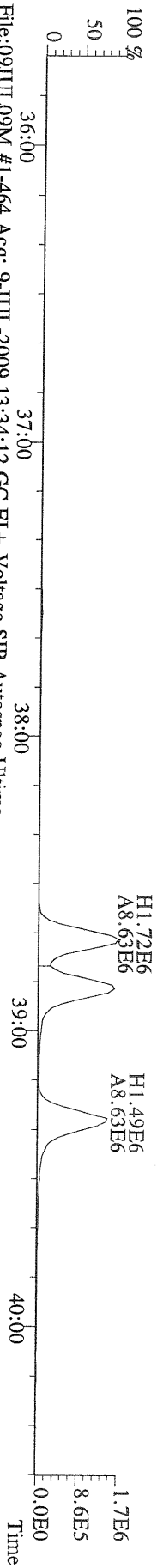
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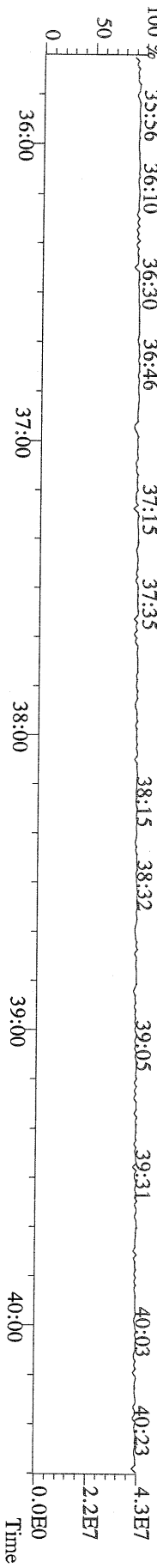
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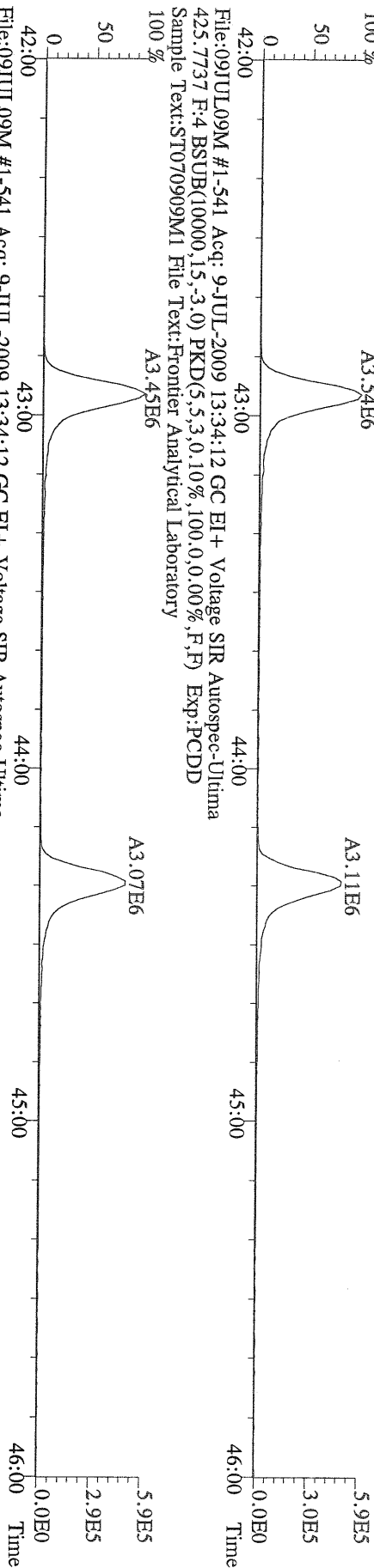


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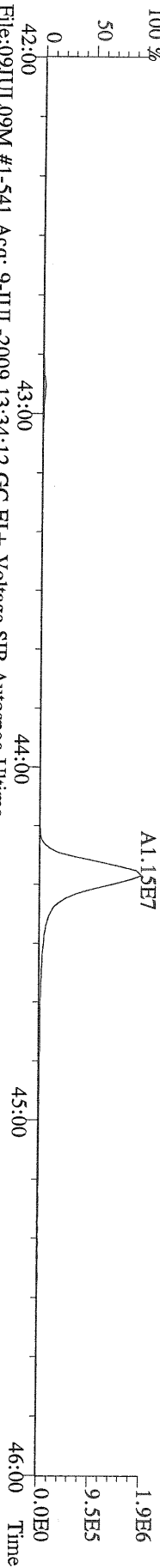




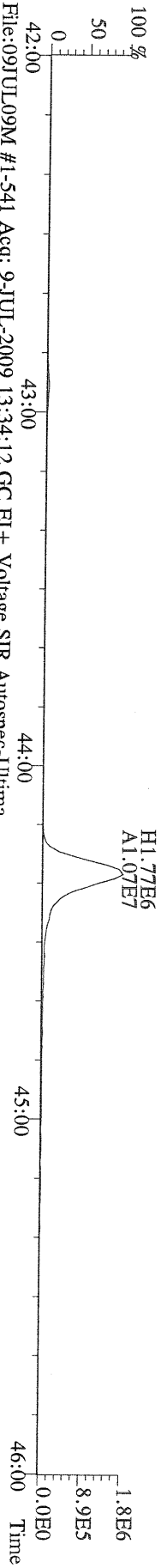
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423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
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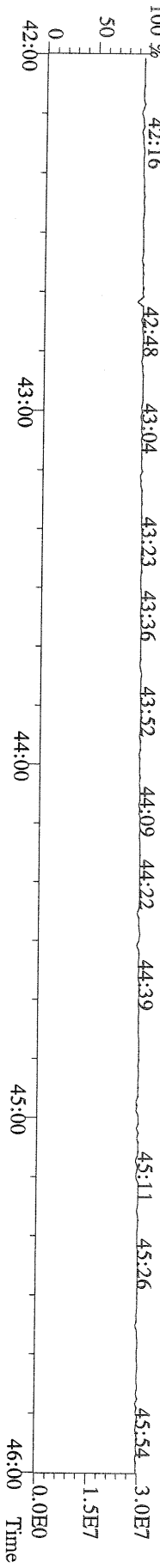
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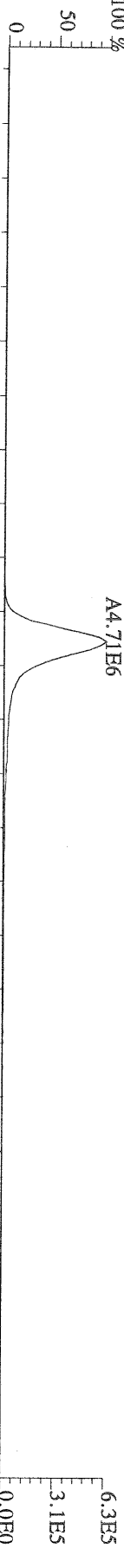
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437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
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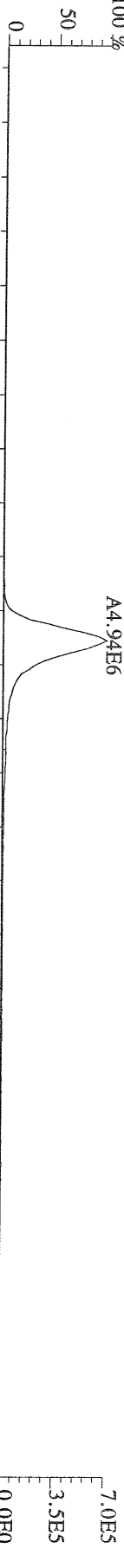
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430.9728 F:4 Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



File:09JUL09M #1-347 Acq: 9-JUL-2009 13:34:12 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:ST070909M1 File Text:Frontier Analytical Laboratory



File:09JUL09M #1-347 Acq: 9-JUL-2009 13:34:12 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:ST070909M1 File Text:Frontier Analytical Laboratory



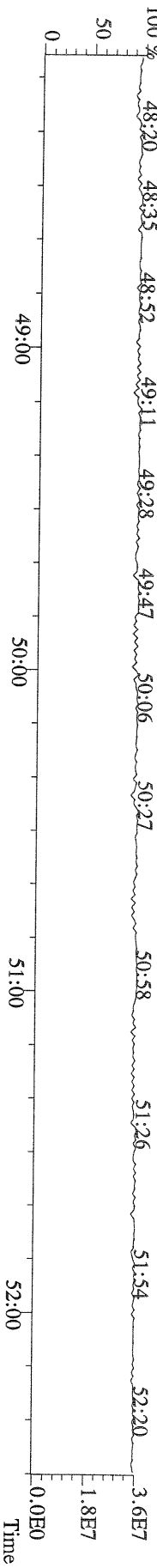
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469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



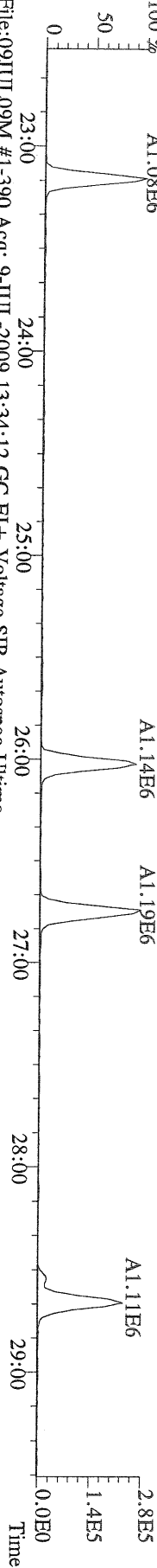
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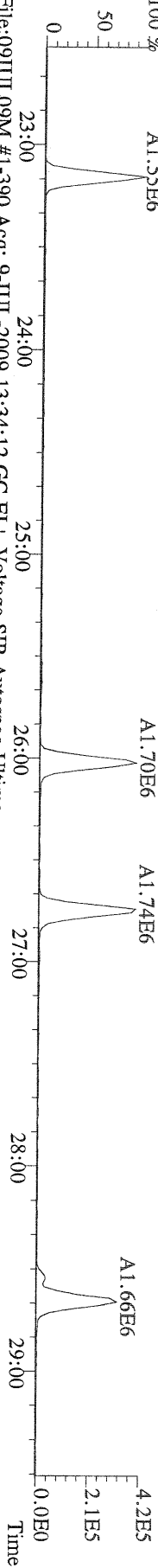
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Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



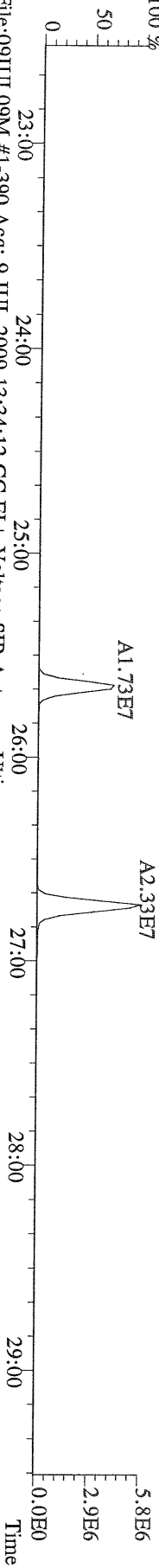
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303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



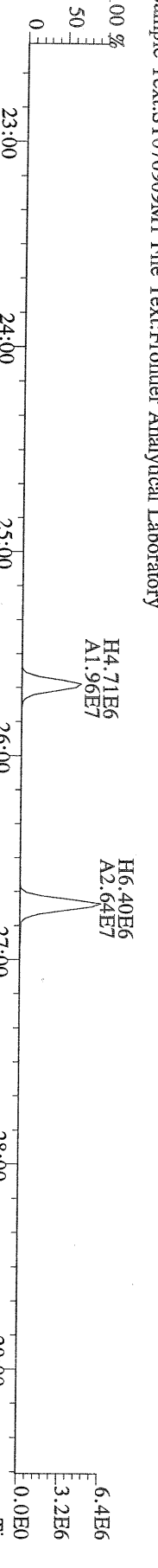
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305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



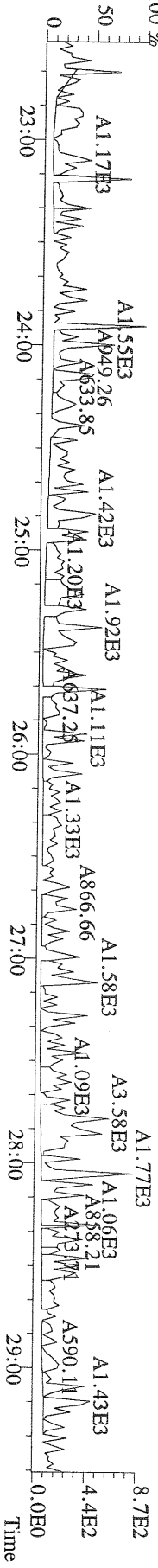
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Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



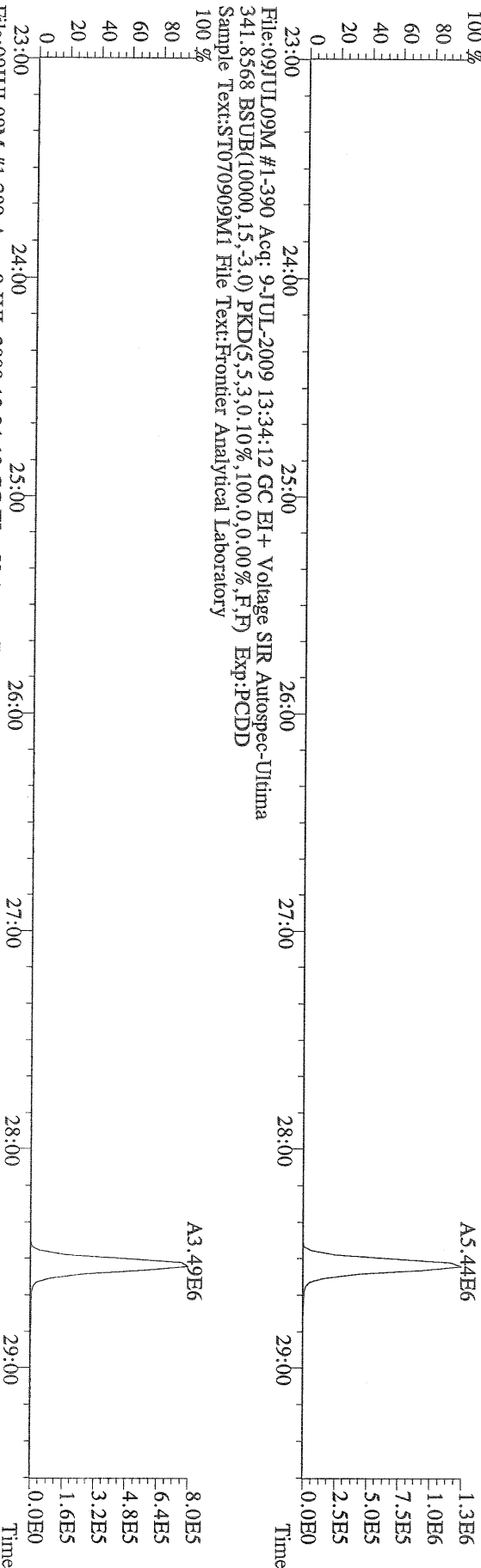
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317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



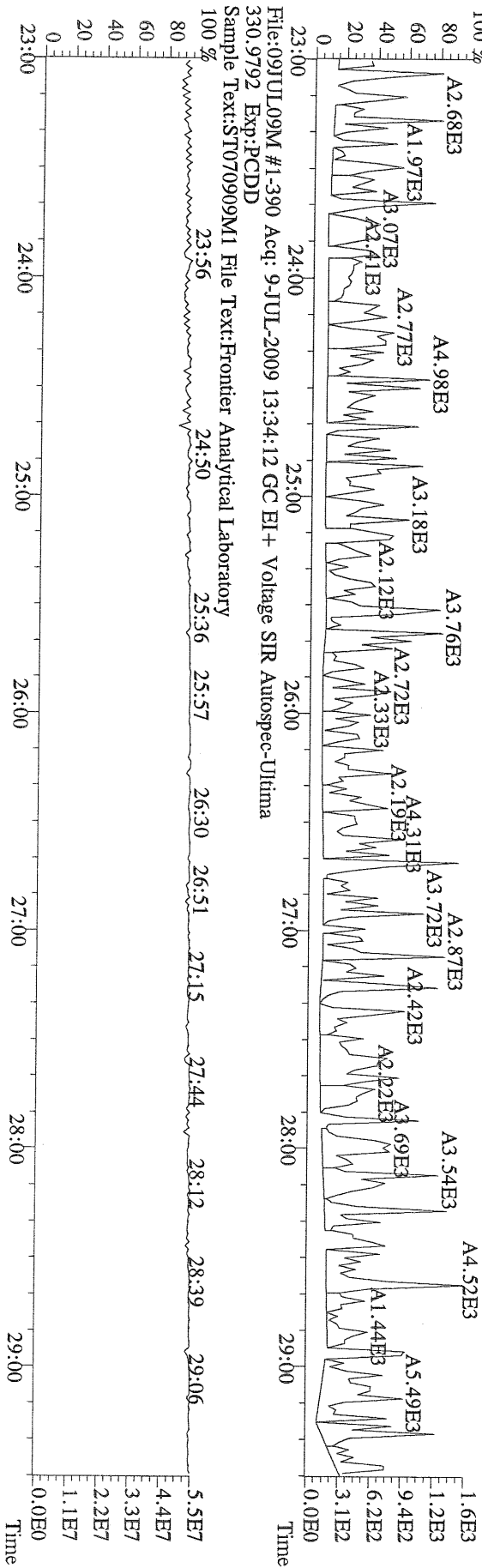
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375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



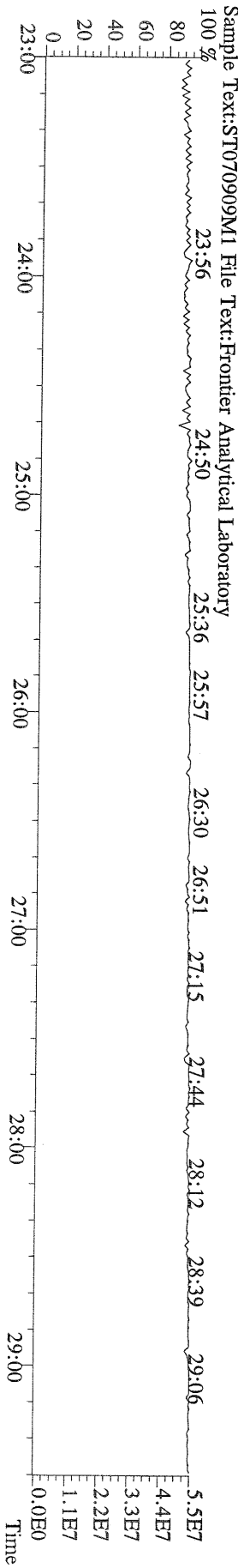
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339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



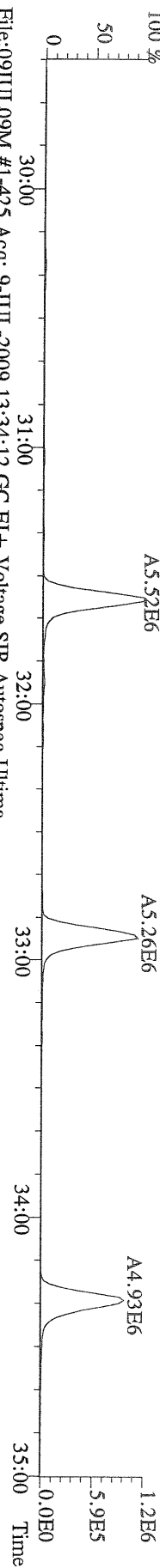
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409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



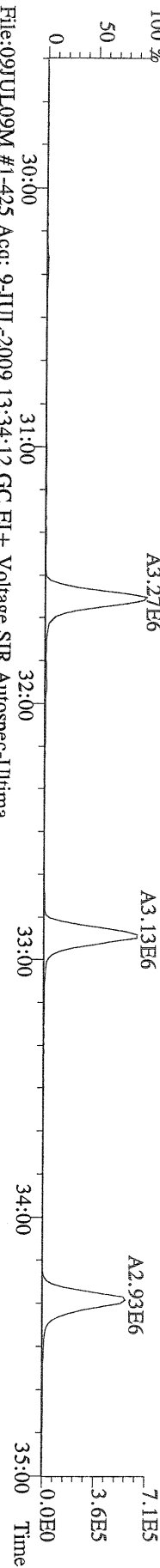
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330.9792 Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



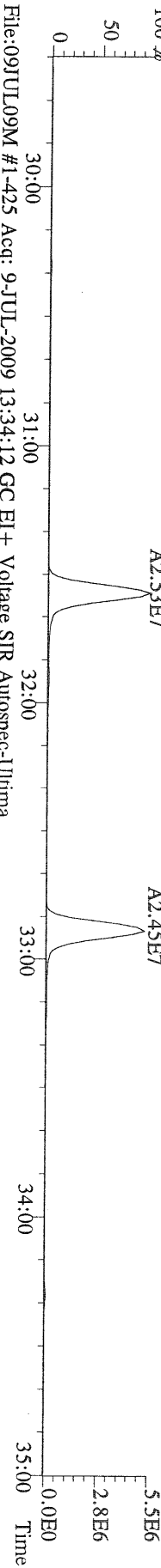
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339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



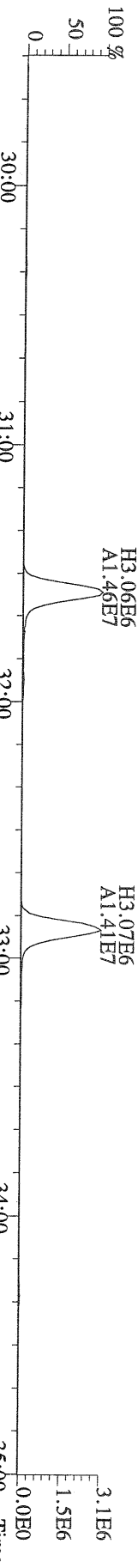
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341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



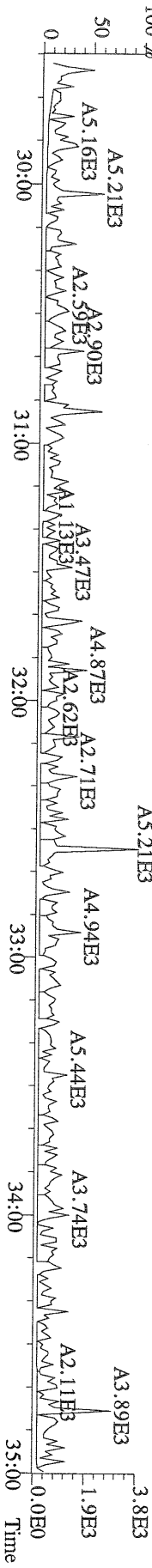
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351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



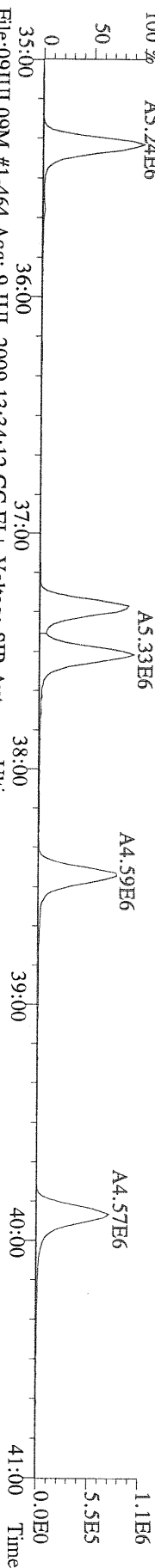
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Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



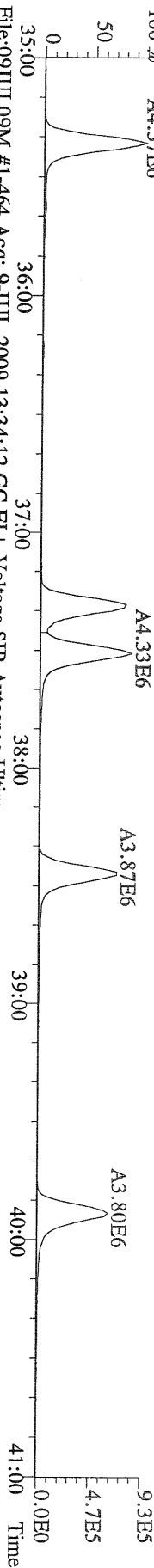
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409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



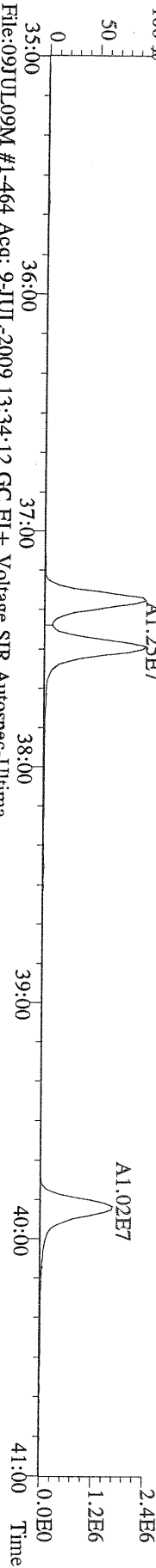
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373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



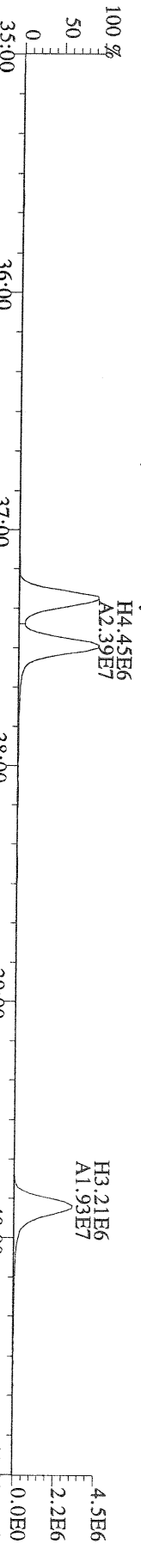
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375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



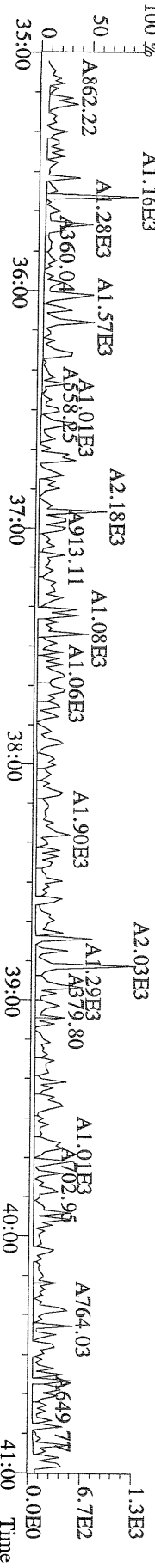
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383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



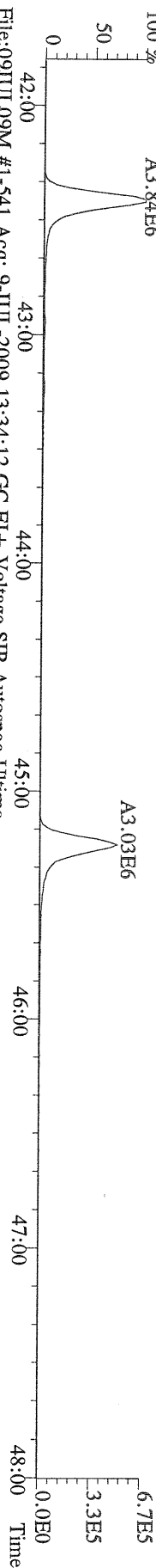
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385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
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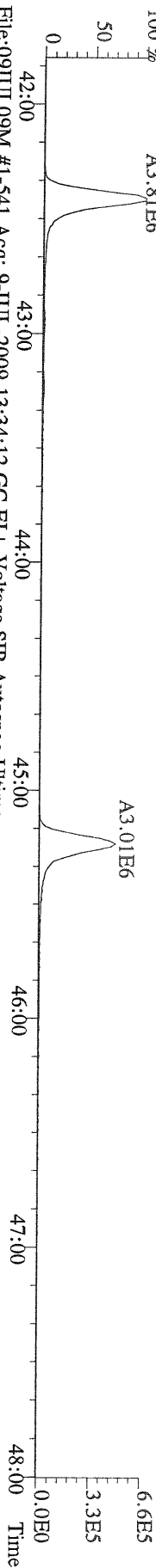
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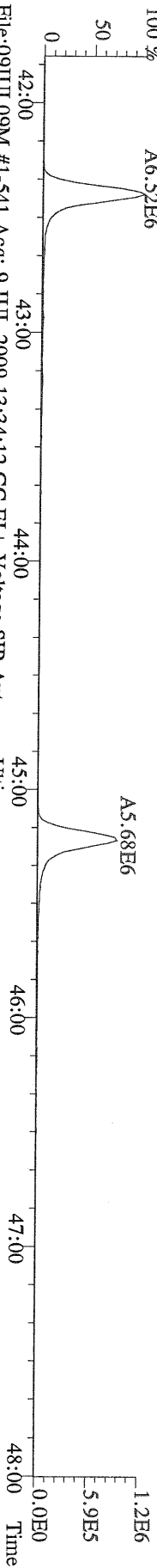
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407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory  
100 %



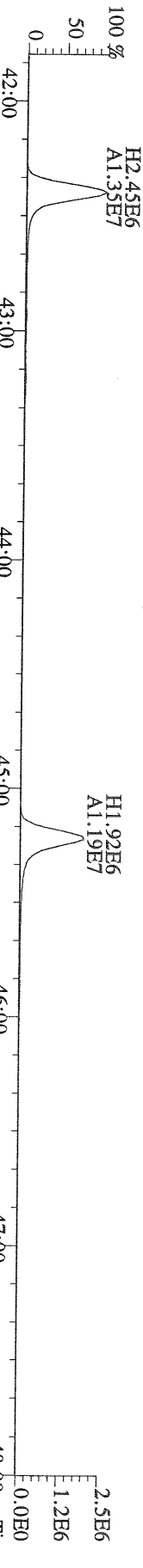
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409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory  
100 %



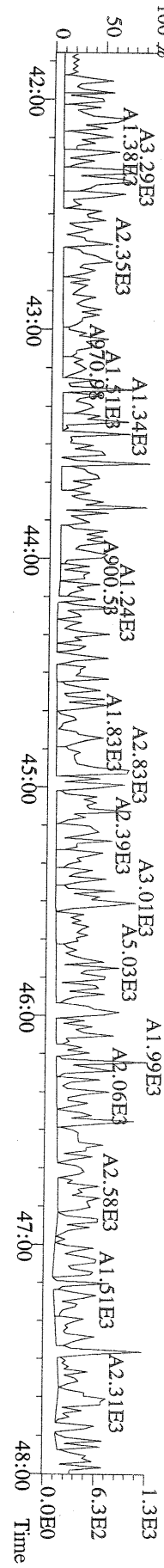
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417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory  
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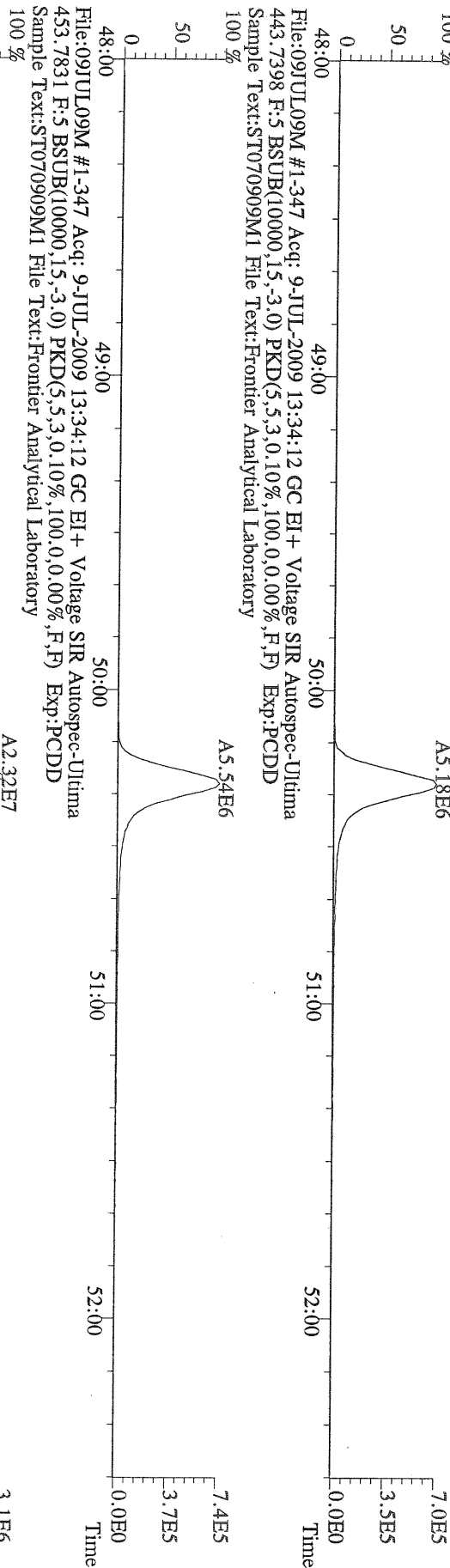
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419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



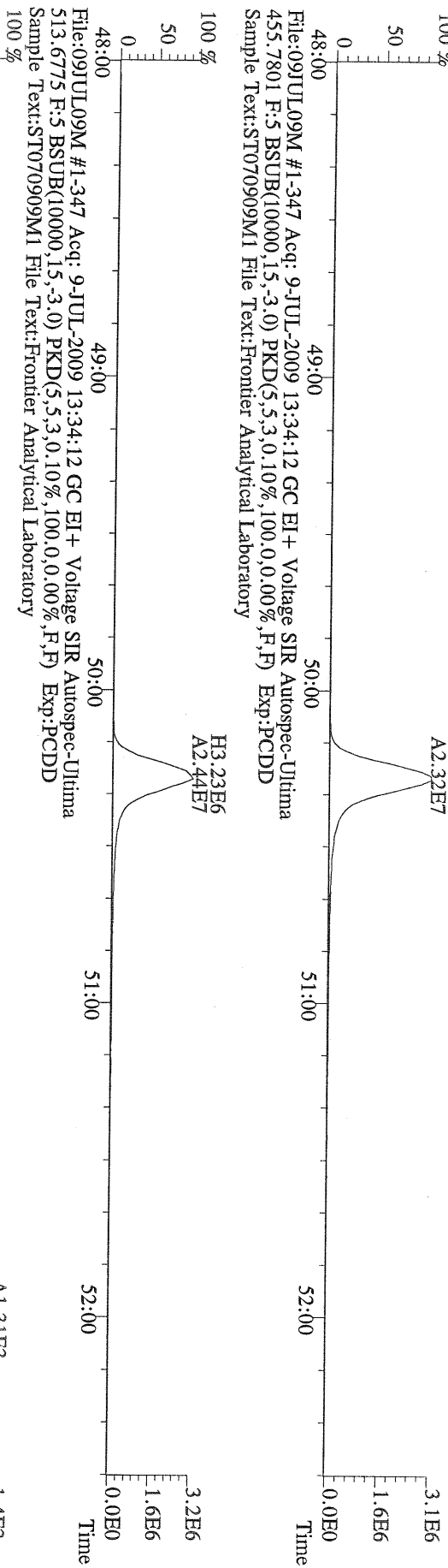
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479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory



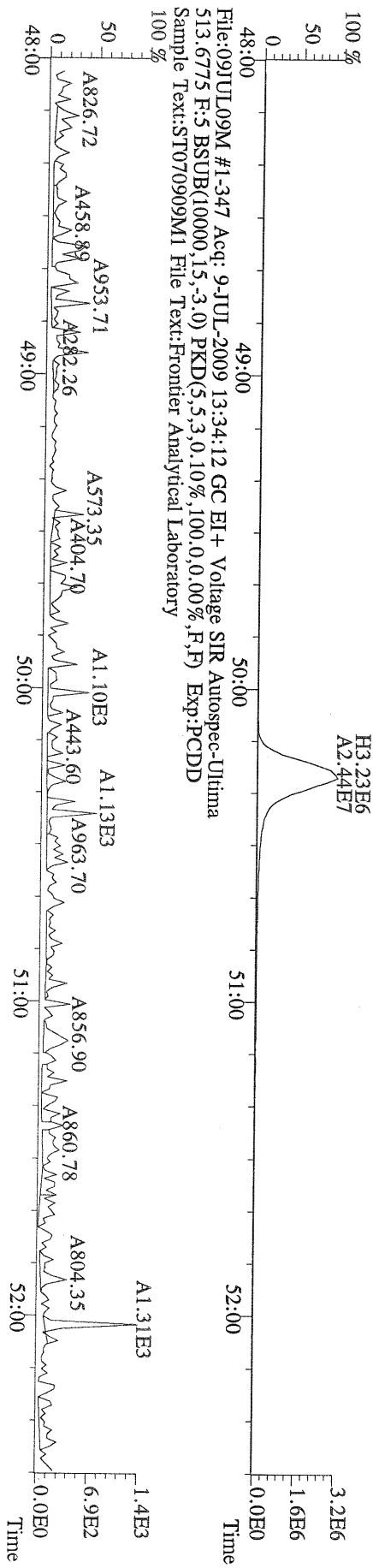
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441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory  
100 %



File:09JUL09M #1-347 Acq: 9-JUL-2009 13:34:12 GC EI+ Voltage SIR Autospec-Ultima  
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory  
100 %

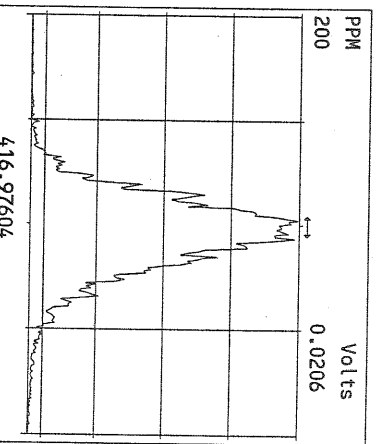
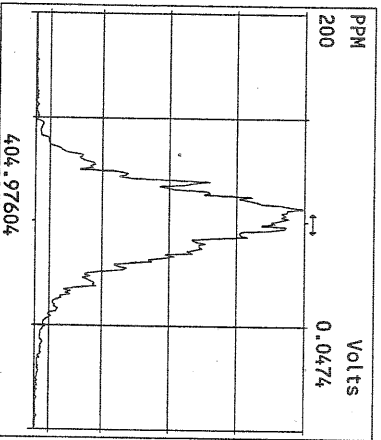
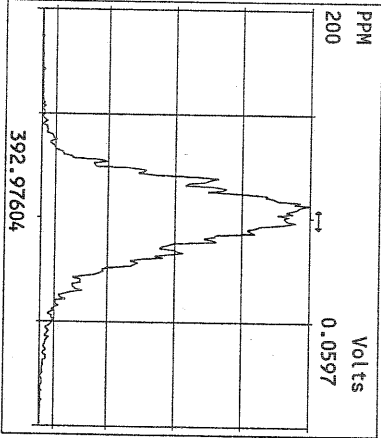
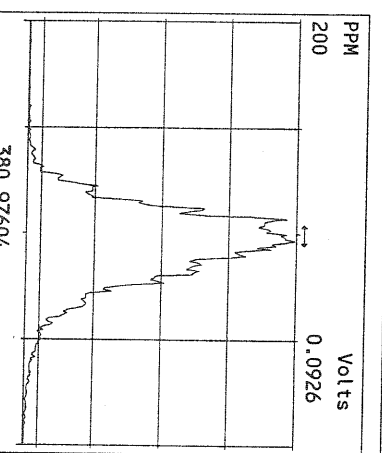
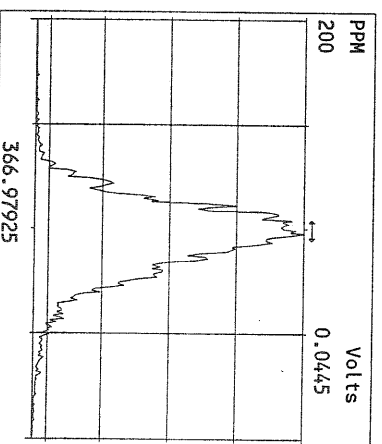
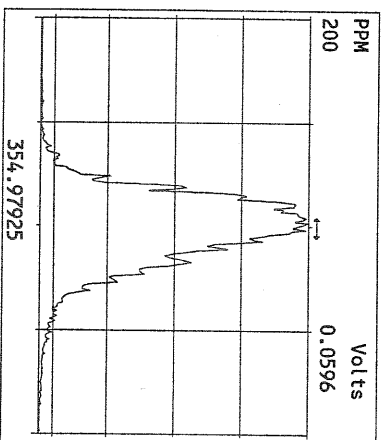
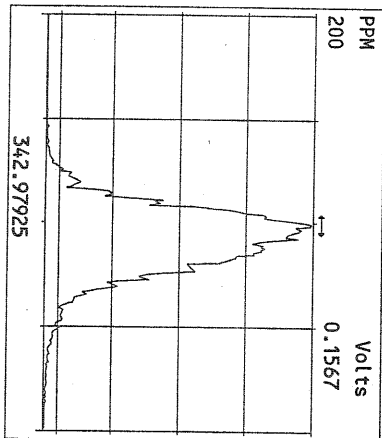
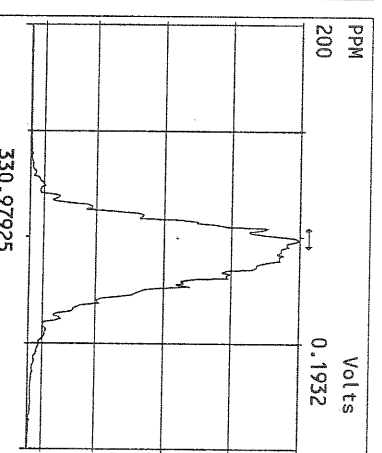
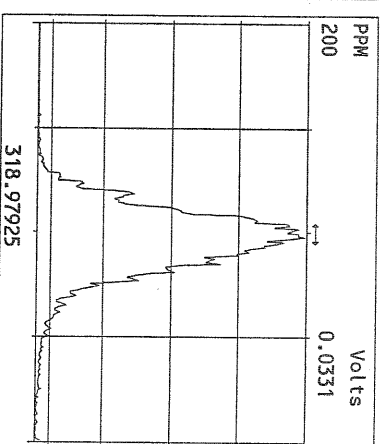
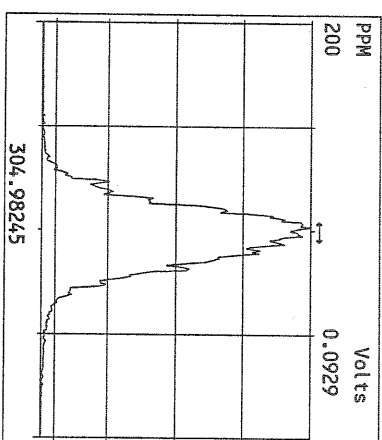
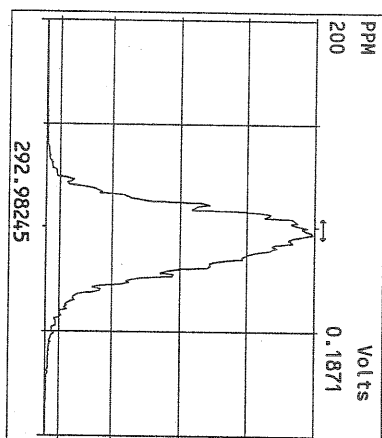


File:09JUL09M #1-347 Acq: 9-JUL-2009 13:34:12 GC EI+ Voltage SIR Autospec-Ultima  
455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
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100 %

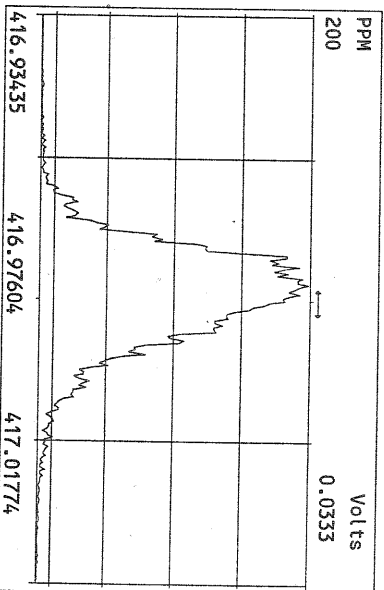
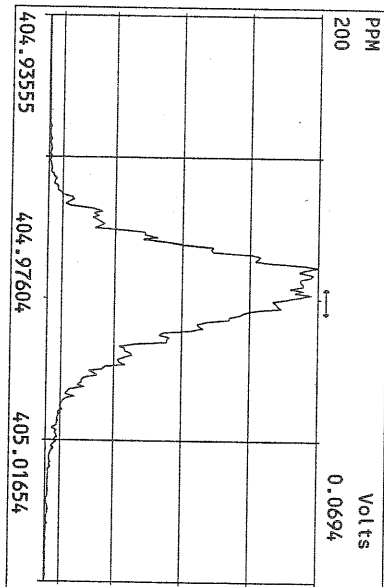
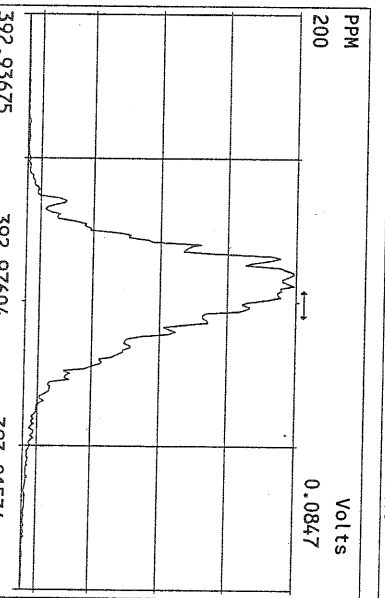
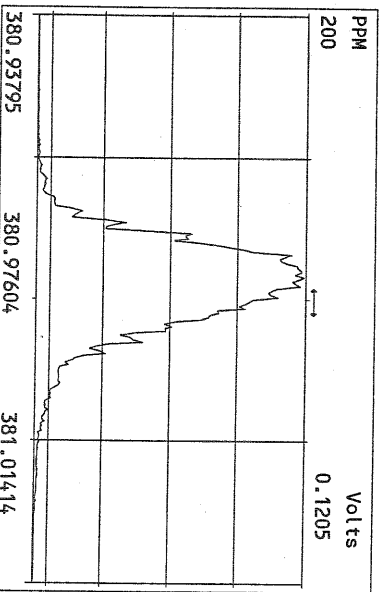
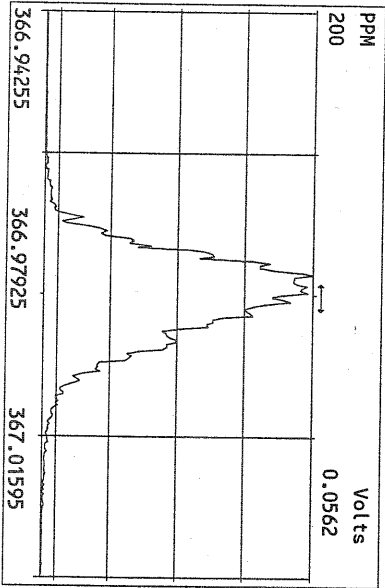
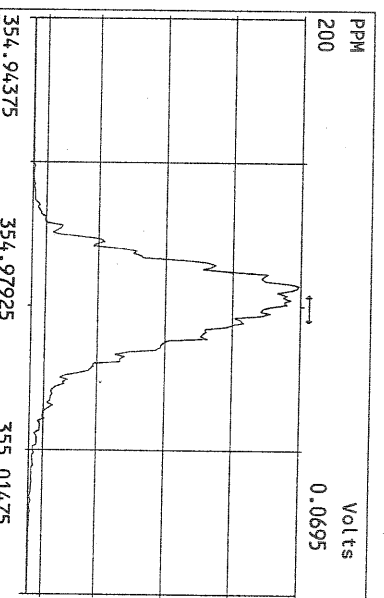
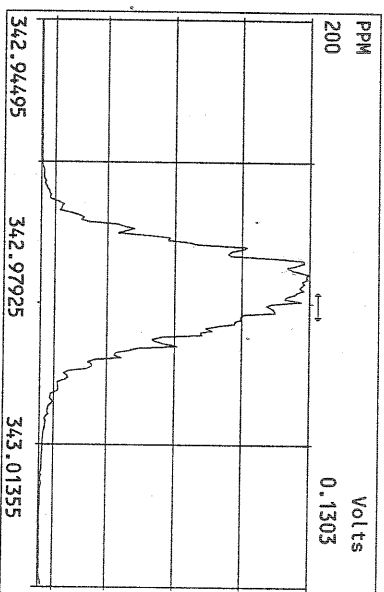
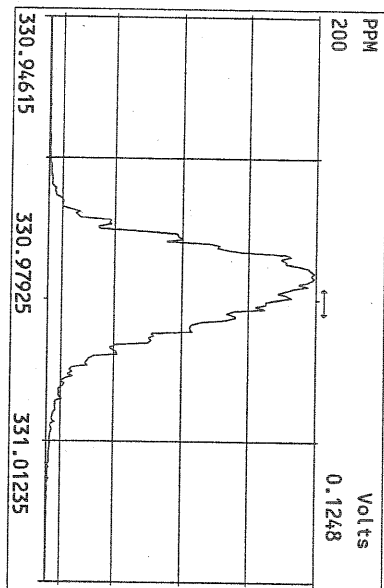


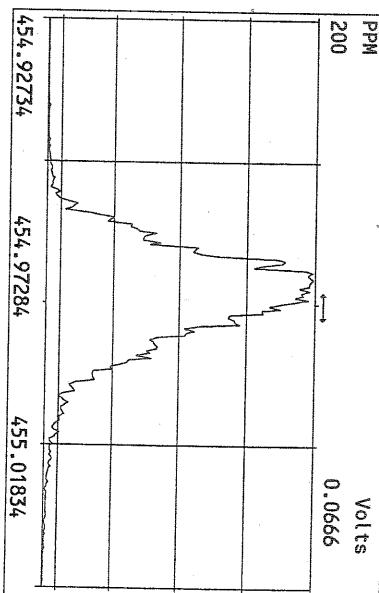
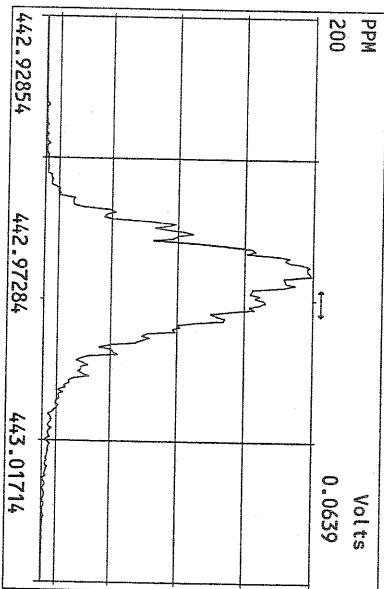
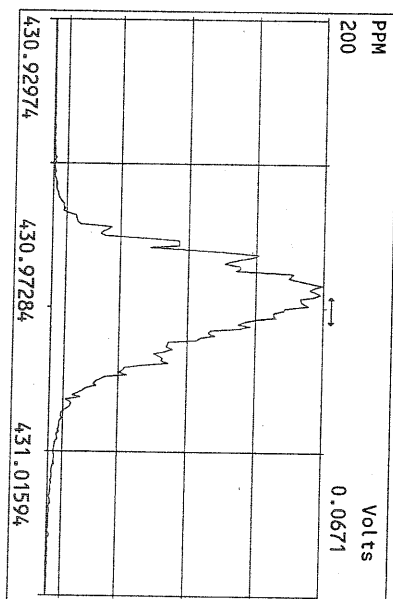
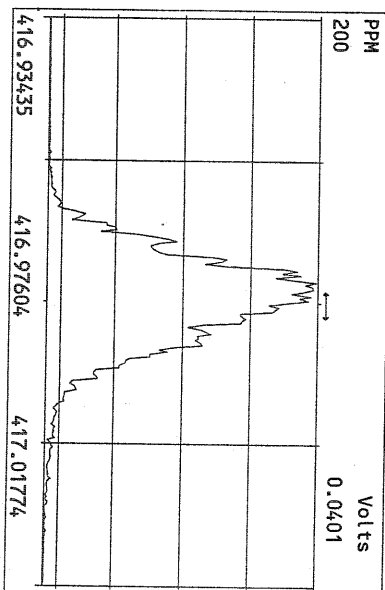
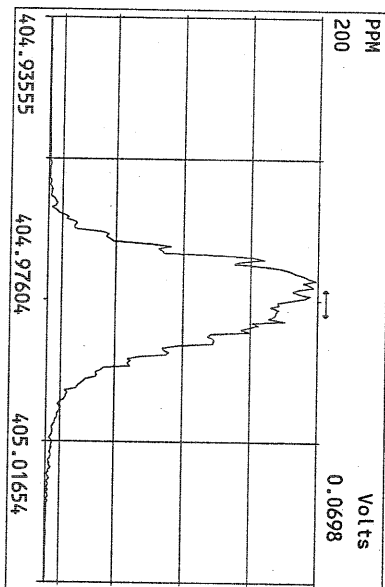
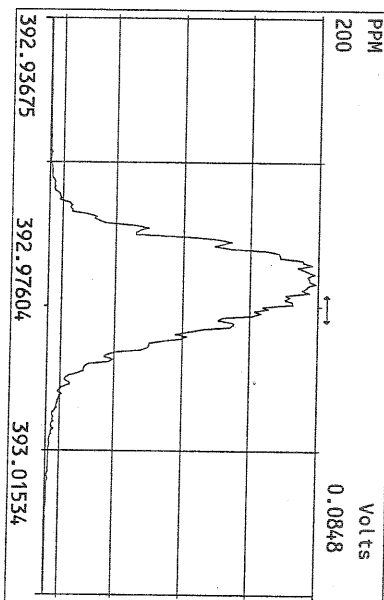
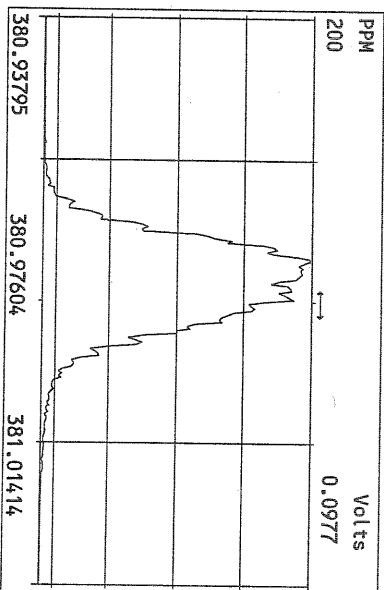
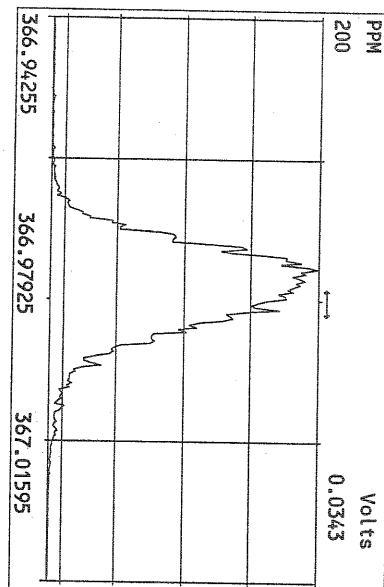
File:09JUL09M #1-347 Acq: 9-JUL-2009 13:34:12 GC EI+ Voltage SIR Autospec-Ultima  
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M1 File Text:Frontier Analytical Laboratory  
100 %

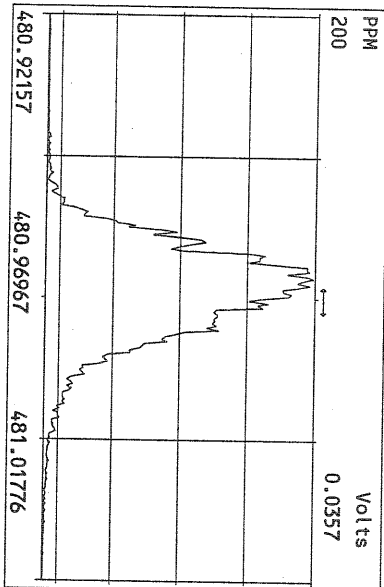
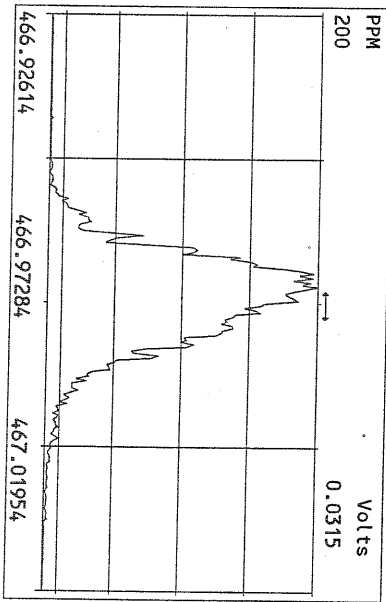
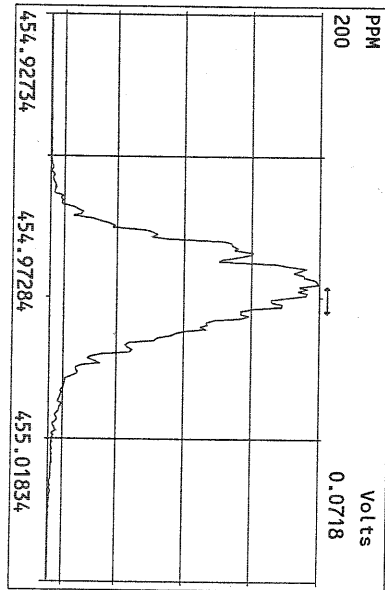
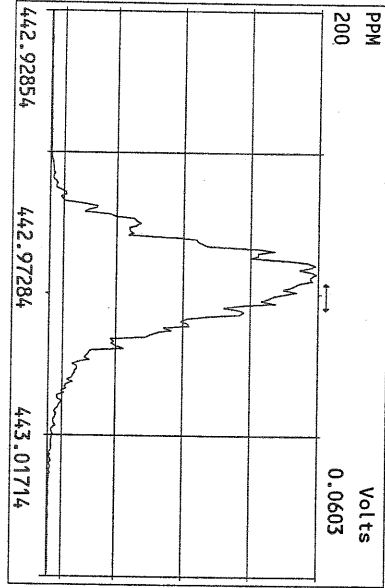
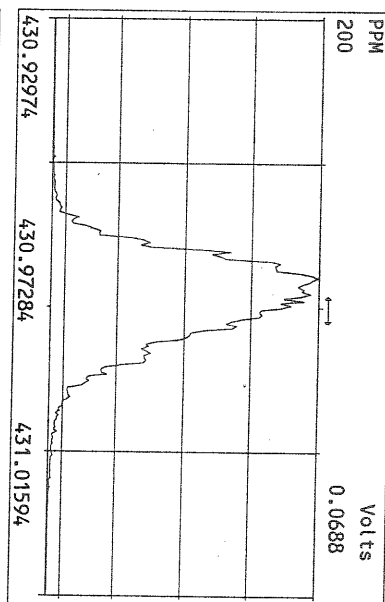
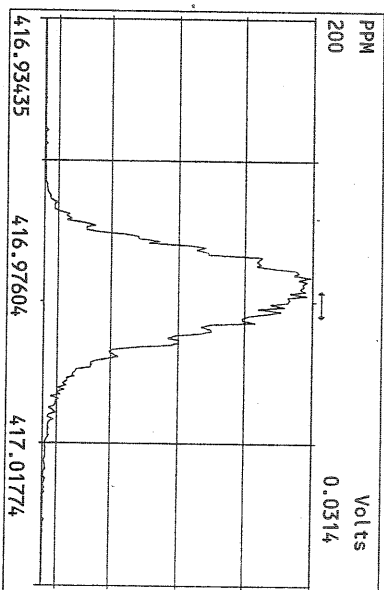
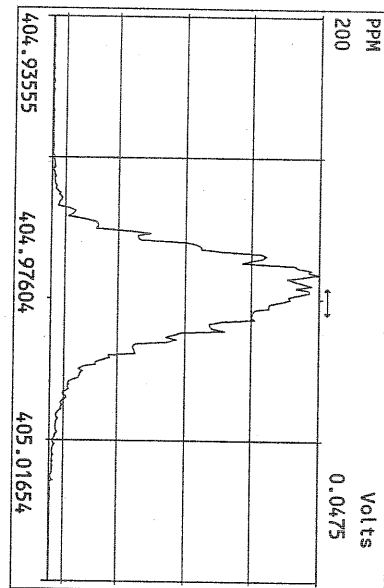




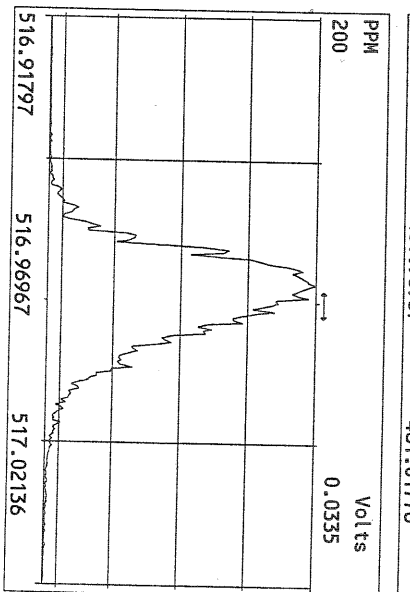
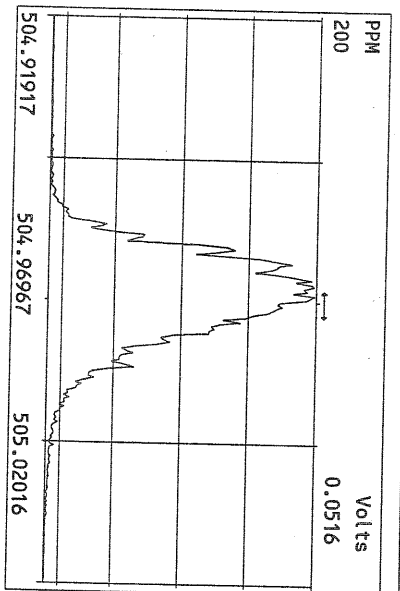
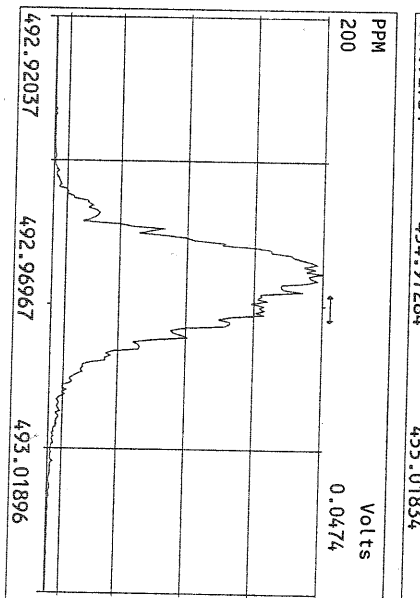
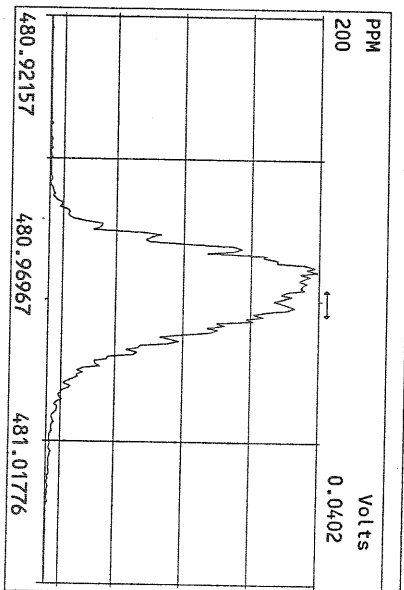
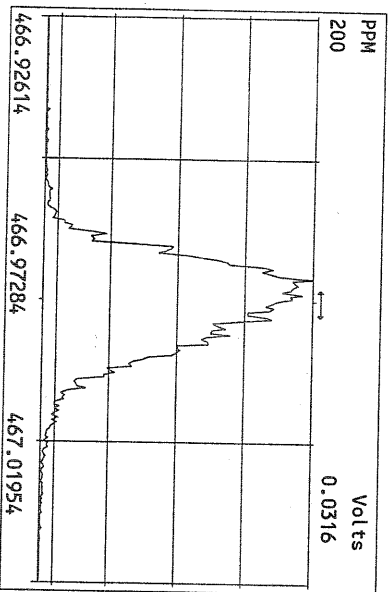
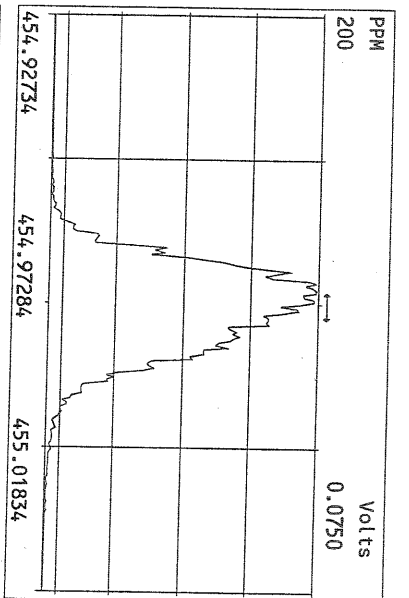
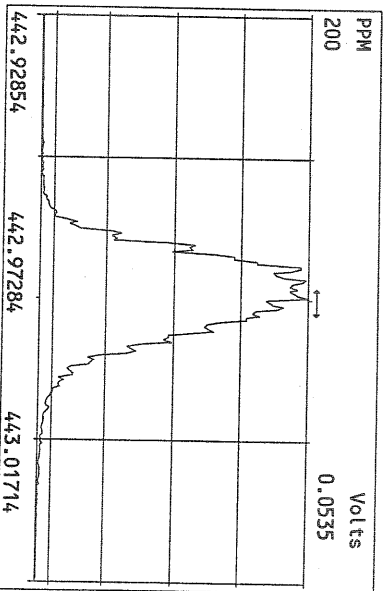
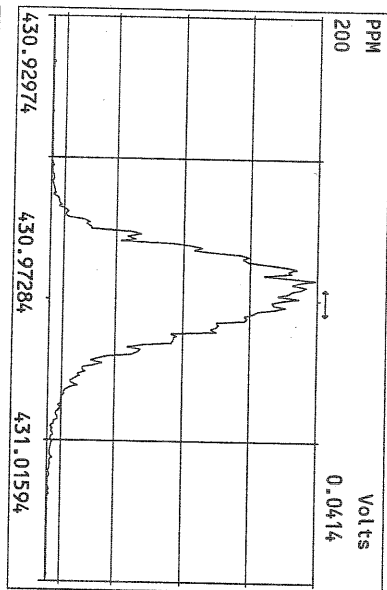
Peak Locate Examination:10-JUL-2009:13:35 File:09JUL09M\_RES\_CHECK  
Experiment:PCDD Function:2 Reference:PFK







Peak Locate Examination:10-JUL-2009:13:36 File:09JUL09M\_RES\_CHECK  
Experiment:PCDD Function:5 Reference:PFK



## USEPA - ITD

AIR FORM 4A  
PCDD/PCDF CONTINUING CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 6/29/09

Instrument ID: FAL3

GC Column ID: DB5

VER Data Filename: 09JUL09M Sam:15

Analysis Date: 10-JUL-09 02:28:22

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	4.01	3.75 - 6.25 ✓
1,2,3,7,8-PeCDD	M+2/M+4	1.63	1.32-1.78	y	21.6	18.7 - 31.2 ✓
1,2,3,4,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	20.7	18.7 - 31.2 ✓
1,2,3,6,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	y	23.3	18.7 - 31.2 ✓
1,2,3,7,8,9-HxCDD	M+2/M+4	1.29	1.05-1.43	y	21.6	18.7 - 31.2 ✓
1,2,3,4,6,7,8-HpCDD	M+2/M+4	0.99	0.88-1.20	y	22.6	18.7 - 31.2 ✓
OCDD	M+2/M+4	0.90	0.76-1.02	y	46.4	37.5 - 62.5 ✓
2,3,7,8-TCDF	M/M+2	0.69	0.65-0.89	y	4.97	3.75 - 6.25 ✓
1,2,3,7,8-PeCDF	M+2/M+4	1.66	1.32-1.78	y	22.2	18.7 - 31.2 ✓
2,3,4,7,8-PeCDF	M+2/M+4	1.65	1.32-1.78	y	22.2	18.7 - 31.2 ✓
1,2,3,4,7,8-HxCDF	M+2/M+4	1.18	1.05-1.43	y	22.0	18.7 - 31.2 ✓
1,2,3,6,7,8-HxCDF	M+2/M+4	1.19	1.05-1.43	y	22.9	18.7 - 31.2 ✓
2,3,4,6,7,8-HxCDF	M+2/M+4	1.19	1.05-1.43	y	22.6	18.7 - 31.2 ✓
1,2,3,7,8,9-HxCDF	M+2/M+4	1.21	1.05-1.43	y	21.8	18.7 - 31.2 ✓
1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.92	0.88-1.20	y	22.2	18.7 - 31.2 ✓
1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.99	0.88-1.20	y	22.4	18.7 - 31.2 ✓
OCDF	M+2/M+4	0.89	0.76-1.02	y	45.8	35.0 - 65.0 ✓

Analyst: 8Date: 7/10/09

## USEPA - ITD

AIR FORM 4B  
PCDD/PCDF CONTINUING CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 6/29/09

Instrument ID: FAL3

GC Column ID: DB5

VER Data Filename: 09JUL09M

Sam:15

Analysis Date: 10-JUL-09 02:28:22

LABELLED COMPOUNDS	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	y	104	75.0 - 125 ✓
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.75	1.32-1.78	y	101	70.0 - 130 ✓
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	113	75.0 - 125 ✓
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.08	0.88-1.20	y	99.5	70.0 - 130 ✓
13C-OCDD	M+2/M+4	0.97	0.76-1.02	y	176	140 - 260 ✓
13C-2,3,7,8-TCDF	M/M+2	0.88	0.65-0.89	y	106	70.0 - 130 ✓
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.70	1.32-1.78	y	108	70.0 - 130 ✓
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	102	70.0 - 130 ✓
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	y	84.4	70.0 - 130 ✓
13C-OCDF	M+2/M+4	0.98	0.76-1.02	y	175	140 - 260 ✓
CLEANUP SURROGATE						
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	y	96.2	75.0 - 125 ✓
PRE-SPIKE SURROGATE						
37Cl-2,3,7,8-TCDD					95.9	75.0 - 125 ✓
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	83.3	75.0 - 125 ✓
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.72	1.32-1.78	y	102	75.0 - 125 ✓
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	91.8	75.0 - 125 ✓
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.42	0.37-0.51	y	99.5	75.0 - 125 ✓

Analyst:                     Date: 7/10/09

Lab Name: Frontier Analytical Laboratory	Episode No.:
Contract No.:	SAS No.:
Instrument ID: FAL3	Initial Calibration Date: 6/29/09
RT Window Data Filename: 09JUL09M Sam:15	Analysis Date: 10-JUL-09 Time: 02:28:22
DB-5 IS Data Filename: 09JUL09M Sam:15	Analysis Date: 10-JUL-09 Time: 02:28:22
DB-225 IS Date Filename:	Analysis Date: Time:

ABSOLUTE		ABSOLUTE	
ISOMERS	RT	ISOMERS	RT
1,3,6,8-TCDD (F)	24:30 ✓	1,3,6,8-TCDF (F)	23:08 ✓
1,2,8,9-TCDD (L)	28:26 ✓	1,2,8,9-TCDF (L)	28:39 ✓
1,2,4,7,9-PeCDD (F)	30:21 ✓	1,3,4,6,8-PeCDF (F)	28:31 ✓
1,2,3,8,9-PeCDD (L)	33:54 ✓	1,2,3,8,9-PeCDF (L)	34:18 ✓
1,2,4,6,7,9-HxCDD (F)	36:14 ✓	1,2,3,4,6,8-HxCDF (F)	35:21 ✓
1,2,3,7,8,9-HxCDD (L)	39:19 ✓	1,2,3,7,8,9-HxCDF (L)	39:53 ✓
1,2,3,4,6,7,9-HpCDD (F)	42:56 ✓	1,2,3,4,6,7,8-HpCDF (F)	42:25 ✓
1,2,3,4,6,7,8-HpCDD (L)	44:20 ✓	1,2,3,4,7,8,9-HpCDF (L)	45:14 ✓

000244 of 000295



Results:

GC Column: DB5

Amount: 1.000

NATO 1989 Tox: 43.8

WHO 1998 Tox: 54.5

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise	DL	
2,3,7,8-TCDD	7.17e+05	0.78 y	27:30	1.14	4.01		2.50	-	*	
1,2,3,7,8-PeCDD	2.57e+06	1.63 y	33:19	1.14	21.6		2.50	-	*	
1,2,3,4,7,8-HxCDD	2.44e+06	1.23 y	38:41	1.37	20.7		2.50	-	*	
1,2,3,6,7,8-HxCDD	2.48e+06	1.22 y	38:52	1.24	23.3		2.50	-	*	
1,2,3,7,8,9-HxCDD	2.51e+06	1.29 y	39:19	1.35	21.6		2.50	-	*	
1,2,3,4,6,7,8-HpCDD	2.05e+06	0.99 y	44:20	1.15	22.6		2.50	-	*	
OCDD	2.83e+06	0.90 y	49:55	1.43	46.4		2.50	-	*	
2,3,7,8-TCDF	1.25e+06	0.69 y	26:44	1.14	4.97		2.50	-	*	
1,2,3,7,8-PeCDF	3.25e+06	1.66 y	31:35	0.90	22.2		2.50	-	*	
2,3,4,7,8-PeCDF	3.08e+06	1.65 y	32:53	0.86	22.2		2.50	-	*	
1,2,3,4,7,8-HxCDF	3.08e+06	1.18 y	37:18	1.02	22.0		2.50	-	*	
1,2,3,6,7,8-HxCDF	3.27e+06	1.19 y	37:31	1.04	22.9		2.50	-	*	
2,3,4,6,7,8-HxCDF	2.91e+06	1.19 y	38:26	0.94	22.6		2.50	-	*	
1,2,3,7,8,9-HxCDF	2.62e+06	1.21 y	39:53	0.88	21.8		2.50	-	*	
1,2,3,4,6,7,8-HpCDF	2.16e+06	0.92 y	42:25	1.51	22.2		2.50	-	*	
1,2,3,4,7,8,9-HpCDF	1.61e+06	0.99 y	45:14	1.11	22.4		2.50	-	*	
OCDF	2.95e+06	0.89 y	50:18	0.87	45.8		2.50	-	*	
13C-2,3,7,8-TCDD	1.57e+07	0.77 y	27:29	1.21	104					Rec
13C-1,2,3,7,8-PeCDD	1.04e+07	1.75 y	33:18	0.83	101					104
13C-1,2,3,6,7,8-HxCDD	8.59e+06	1.21 y	38:51	0.99	113					101
13C-1,2,3,4,6,7,8-HpCDD	7.83e+06	1.08 y	44:18	1.03	99.5					113
13C-OCDD	8.56e+06	0.97 y	49:54	0.64	176					99.5
13C-2,3,7,8-TCDF	2.20e+07	0.88 y	26:43	1.33	106					87.8
13C-1,2,3,7,8-PeCDF	1.61e+07	1.70 y	31:34	0.96	108					
13C-1,2,3,6,7,8-HxCDF	1.37e+07	0.52 y	37:29	1.75	102					106
13C-1,2,3,4,6,7,8-HpCDF	6.46e+06	0.46 y	42:24	1.00	84.4					108
13C-OCDF	1.48e+07	0.98 y	50:17	1.11	175					102
13C-1,2,3,7,8,9-HxCDF	1.03e+07	0.52 y	39:52	1.40	96.2					84.4
37Cl-2,3,7,8-TCDD	8.36e+06		27:30	0.56	95.9					87.3
13C-1,2,3,4,7,8-HxCDD	7.53e+06	1.21 y	38:40	1.05	83.3					
13C-2,3,4,7,8-PeCDF	1.53e+07	1.72 y	32:52	0.93	102					96.2
13C-1,2,3,4,7,8-HxCDF	1.25e+07	0.50 y	37:17	1.00	91.8					
13C-1,2,3,4,7,8,9-HpCDF	5.30e+06	0.42 y	45:12	0.82	99.5					95.9
13C-1,2,3,4-TCDD	1.24e+07	0.78 y	26:54	-	29.8					
13C-2,3,7,8-TCDF	1.56e+07	0.88 y	25:39	-	23.1					
13C-1,2,3,7,8,9-HxCDD	7.65e+06	1.24 y	39:18	-	25.9					
Total Tetra-Dioxins	3.16e+06		22:50	1.14	17.7		Fac	Noise	DL	#Hom
Total Penta-Dioxins	8.11e+06		30:21	1.14	68.0		2.50	-	*	28
Total Hexa-Dioxins	1.07e+07		36:14	1.32	94.6		2.50	-	*	29
Total Hepta-Dioxins	4.50e+06		42:20	1.15	49.8		2.50	-	*	26
Total Tetra-Furans	4.53e+06		22:54	1.14	18.1		2.50	-	*	24
1st Fn. Tot Penta-Furans	4.47e+06		28:31	0.88	31.5		2.50	-	*	20
Total Penta-Furans	9.49e+06		30:17	0.88	66.7		2.50	-	*	1 PeCDF
Total Hexa-Furans	1.58e+07		35:21	0.97	119		2.50	-	*	21 98.2
Total Hepta-Furans	4.04e+06		41:25	1.31	47.8		2.50	-	*	33
										40

Analyst:

Date:

## Frontier Analytical Laboratory - Acquisition Log

Run Name:09JUL09M

Instrument: FAL3

GC: DB5

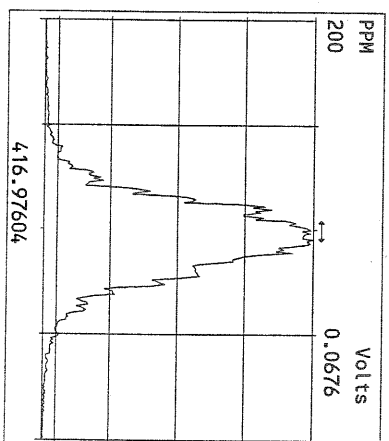
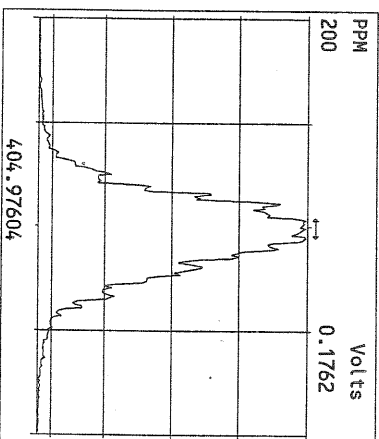
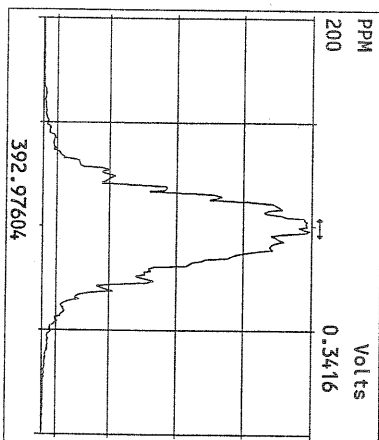
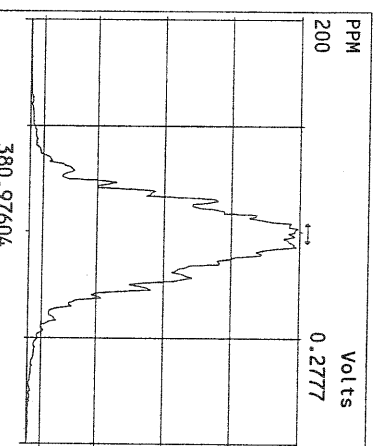
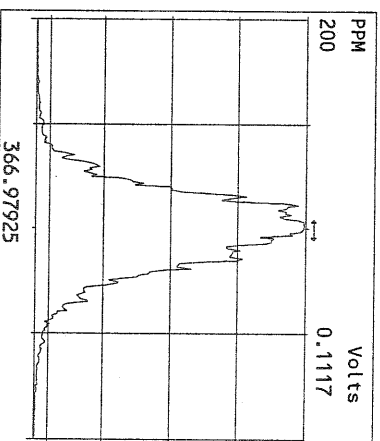
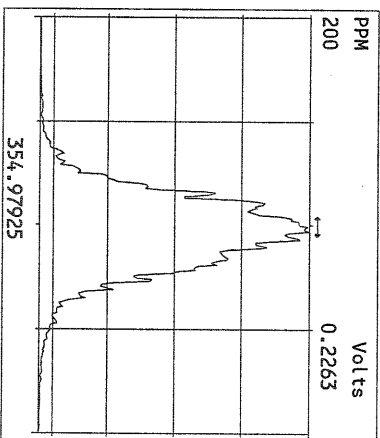
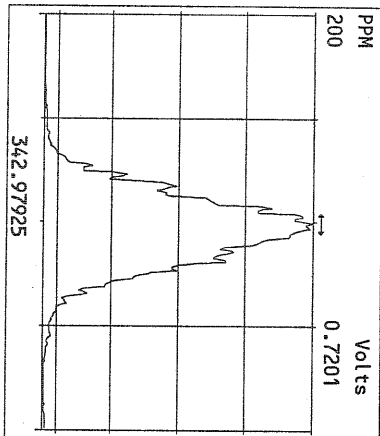
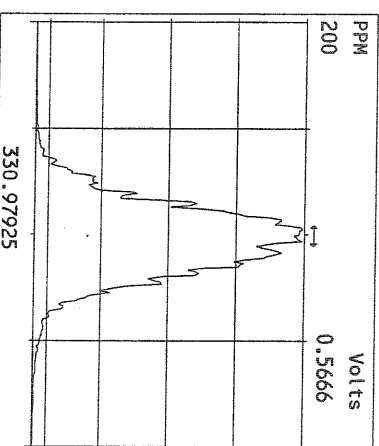
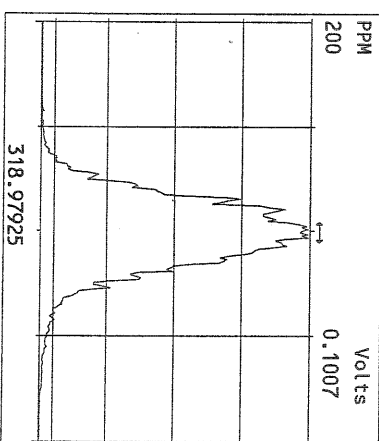
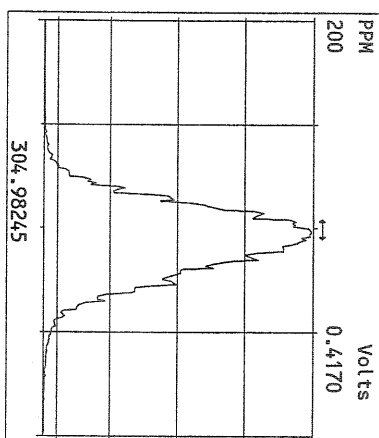
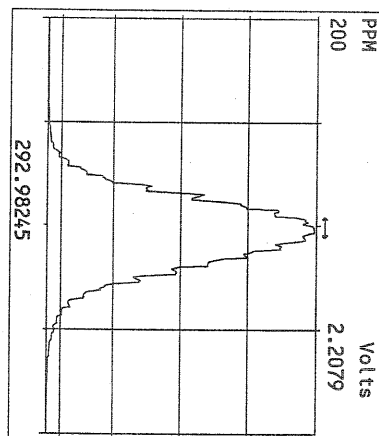
Experiment:PCDD

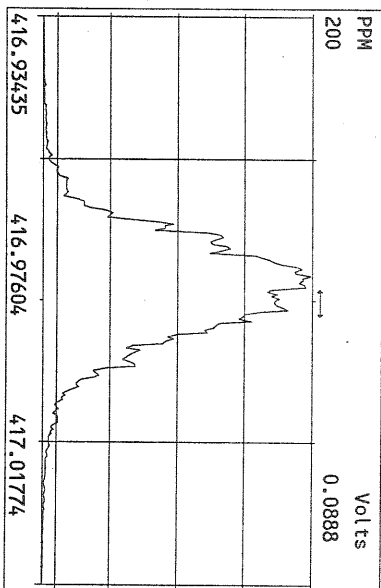
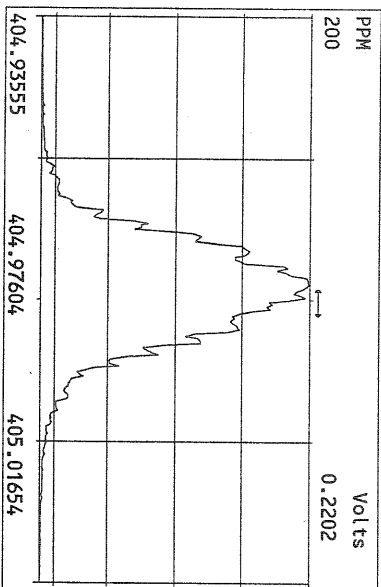
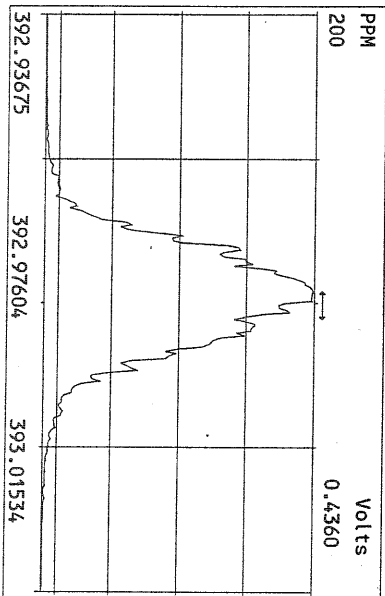
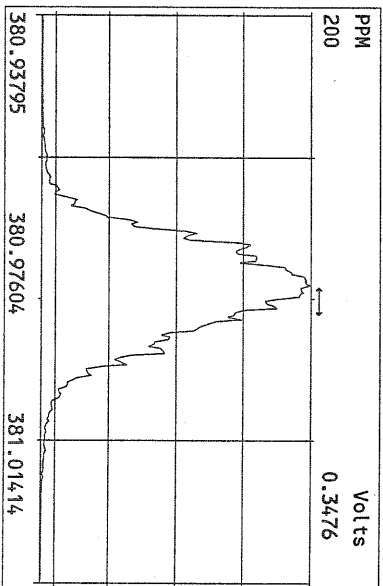
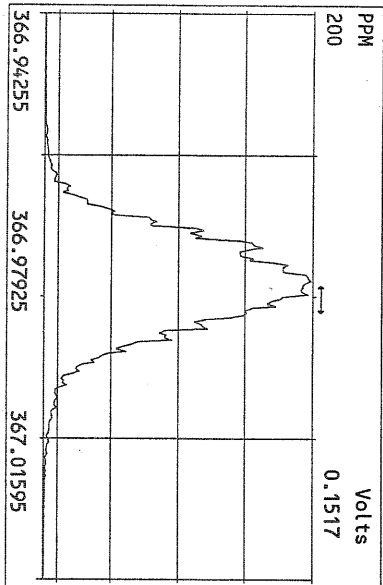
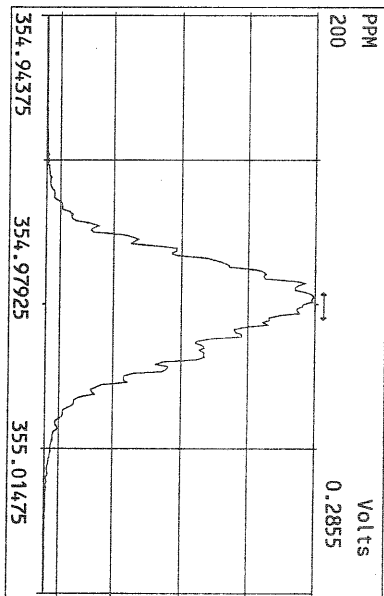
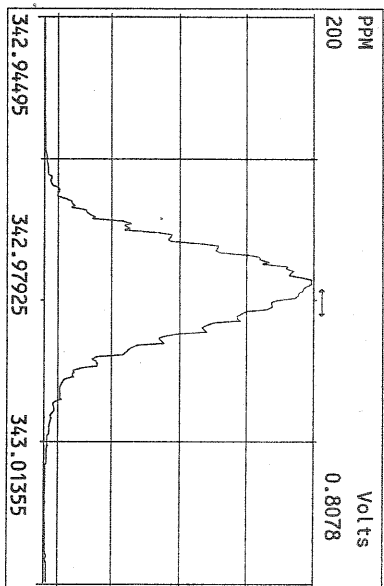
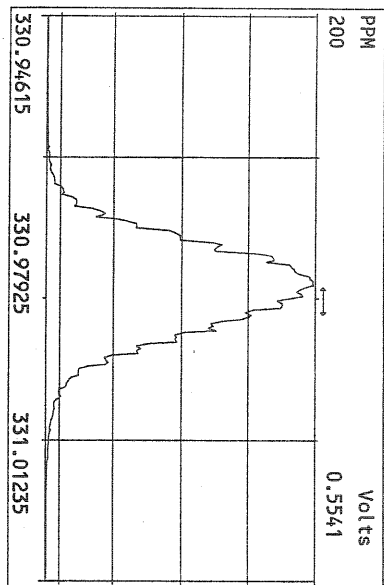
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09JUL09M	2	1754-001-0001-LC1	LCS1	9-JUL-09 14:29:30	ST070909M1	ST070909M2	BS
09JUL09M	3	1754-001-0001-LC2	LCS2	9-JUL-09 15:24:53	ST070909M1	ST070909M2	BS
09JUL09M	4	1754-001-0001-MB	Method Blank	9-JUL-09 16:20:15	ST070909M1	ST070909M2	BS
09JUL09M	5	5557-007-0001-SA	CAMU-S3-061609BS	9-JUL-09 17:15:38	ST070909M1	ST070909M2	BS
09JUL09M	6	5557-001-0001-SA	CAMU-S1-061809	9-JUL-09 18:11:01	ST070909M1	ST070909M2	BS
09JUL09M	7	5557-002-0001-SA	CAMU-S3-061809	9-JUL-09 19:06:20	ST070909M1	ST070909M2	BS
09JUL09M	8	5557-003-0001-SA	OFF-03-061809	9-JUL-09 20:01:38	ST070909M1	ST070909M2	BS
09JUL09M	9	5557-004-0001-SA	OFF-04-061809	9-JUL-09 20:56:57	ST070909M1	ST070909M2	BS
09JUL09M	10	5557-005-0001-SA	CAMU-S1-061609	9-JUL-09 21:52:12	ST070909M1	ST070909M2	BS
09JUL09M	11	5557-006-0001-SA	CAMU-S3-061609	9-JUL-09 22:47:23	ST070909M1	ST070909M2	BS
09JUL09M	12	5557-008-0001-SA	OFF-04-061709	9-JUL-09 23:42:37	ST070909M1	ST070909M2	BS
09JUL09M	13	5557-009-0001-SA	OFF-03-061709	10-JUL-09 00:37:52	ST070909M1	ST070909M2	BS
09JUL09M	14	SB070909M1	Solvent Blank	10-JUL-09 01:33:07	ST070909M1	ST070909M2	BS
09JUL09M	15	ST070909M2	AIR CS3 (090121I)	10-JUL-09 02:28:22	ST070909M2	ST070909M3	BS
09JUL09M	16	ST070909M3	1613 CS3	10-JUL-09 03:23:39	ST070909M2	ST070909M3	BS
09JUL09M	17	1758-001-0001-LC1	LCS1	10-JUL-09 04:18:54	ST070909M2	ST070909M3	BS
09JUL09M	18	1758-001-0001-LC2	LCS2	10-JUL-09 05:14:08	ST070909M2	ST070909M3	BS
09JUL09M	19	1758-001-0001-MB	Method Blank	10-JUL-09 06:09:24	ST070909M2	ST070909M3	BS
09JUL09M	20	QC070909M1	PUFQC062609A	10-JUL-09 07:04:37	ST070909M2	ST070909M3	BS
09JUL09M	21	QC070909M2	FilterQC062609B	10-JUL-09 07:59:52	ST070909M2	ST070909M3	BS
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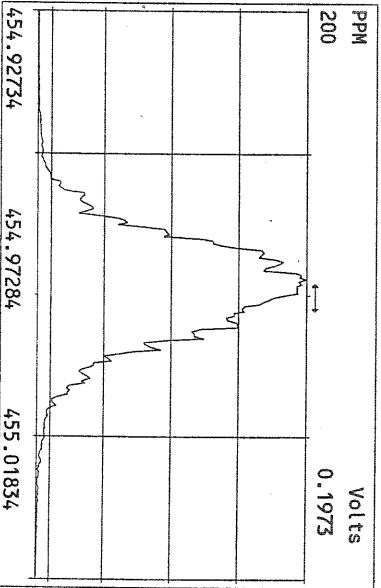
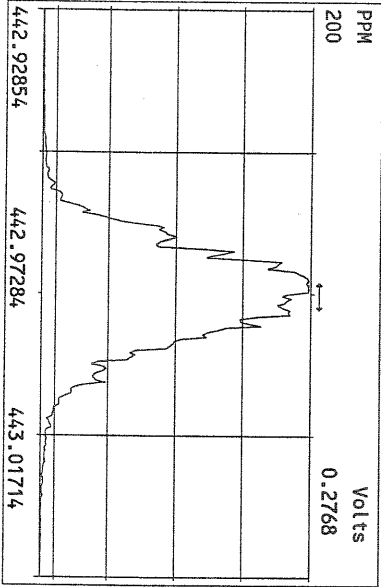
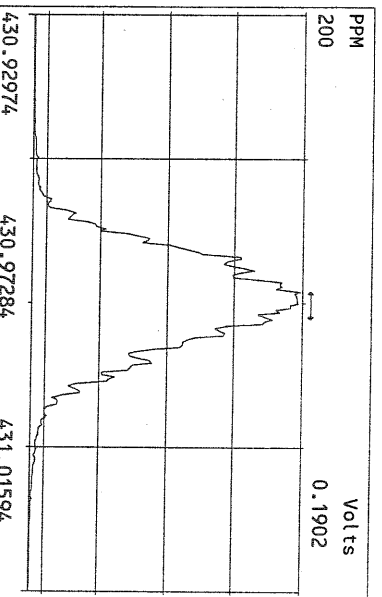
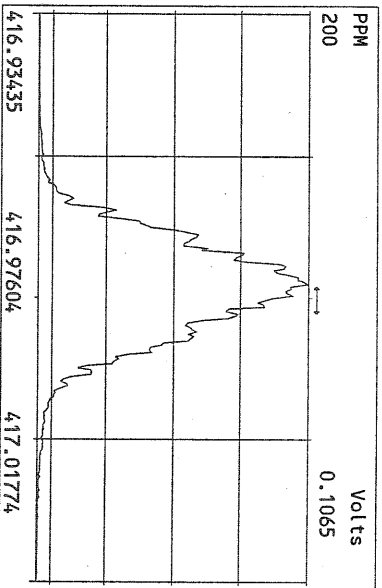
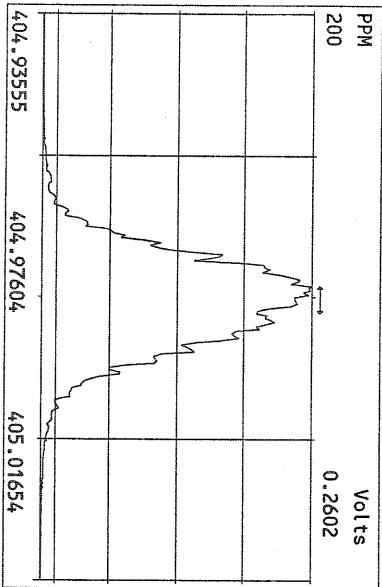
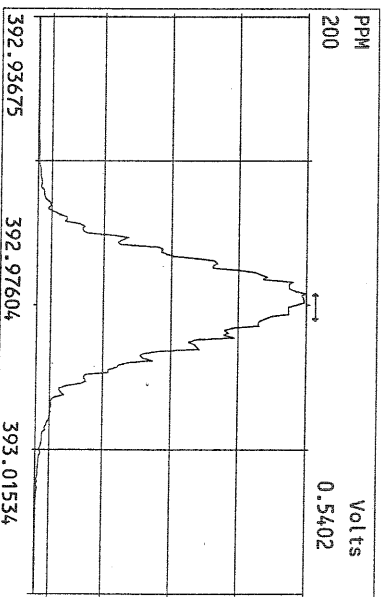
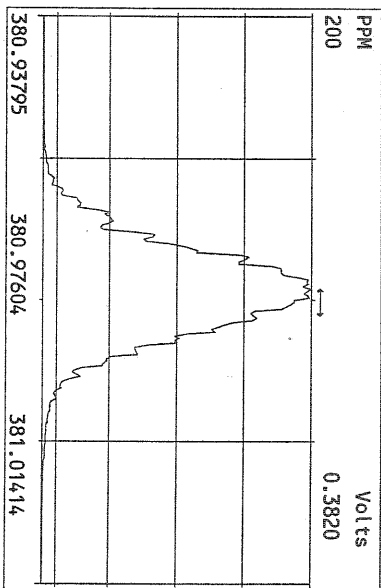
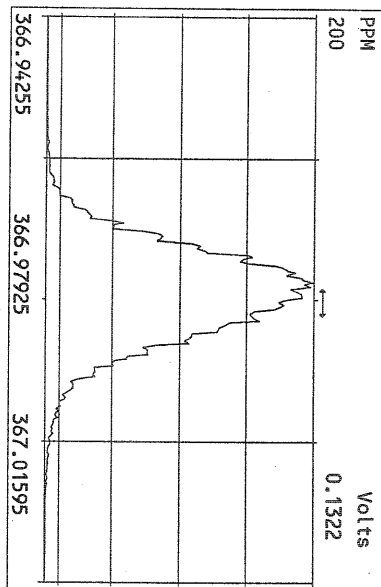
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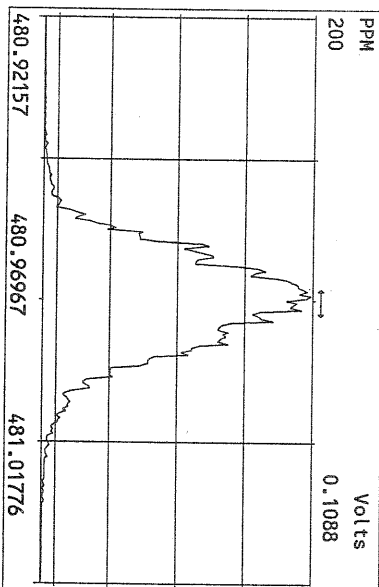
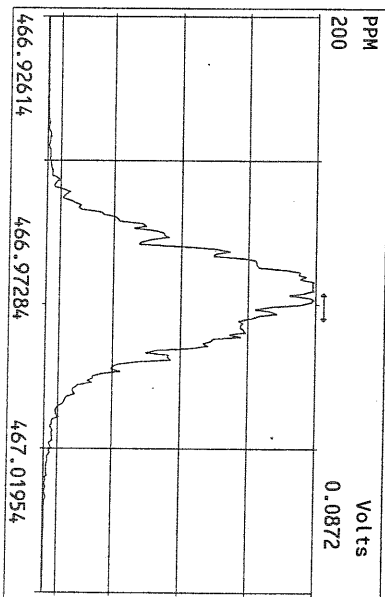
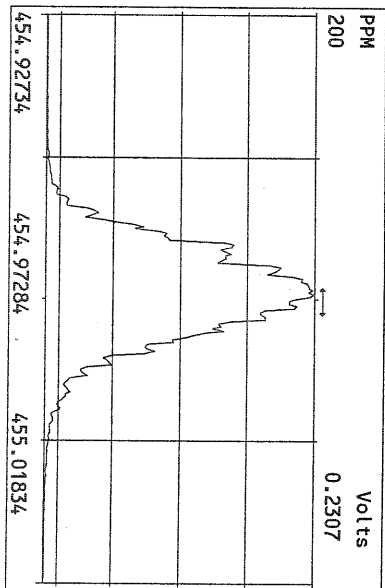
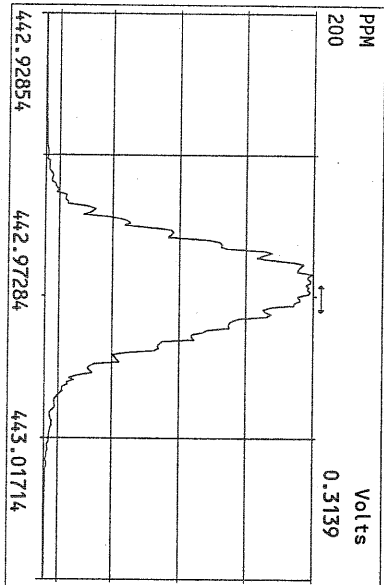
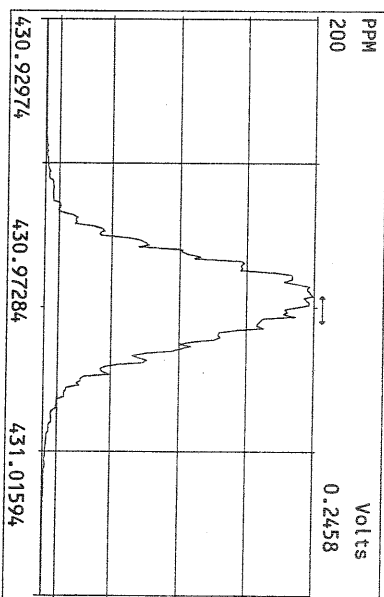
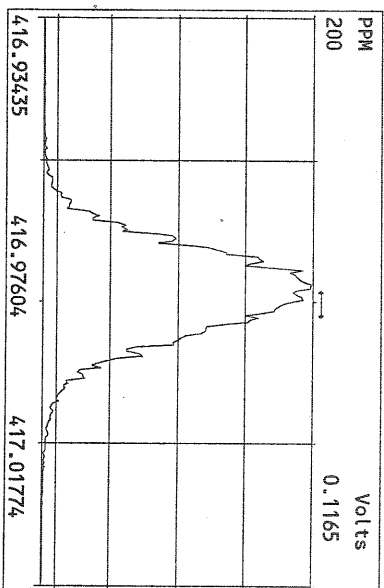
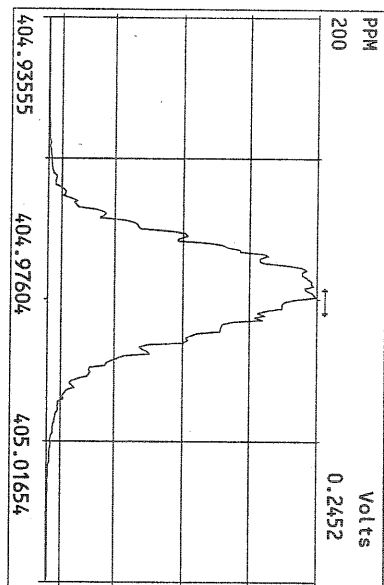
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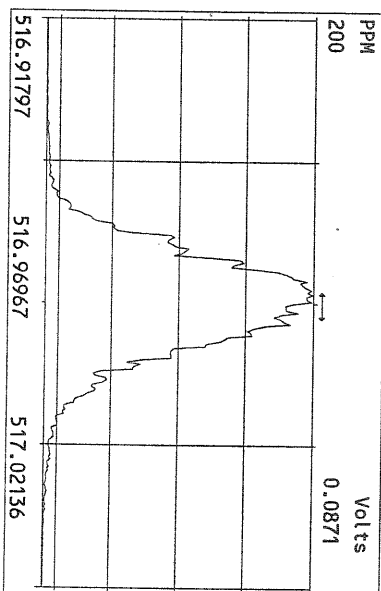
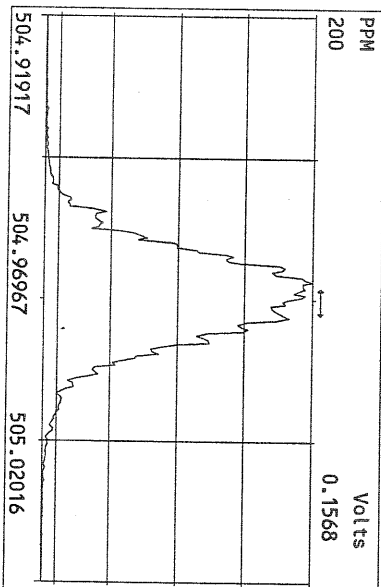
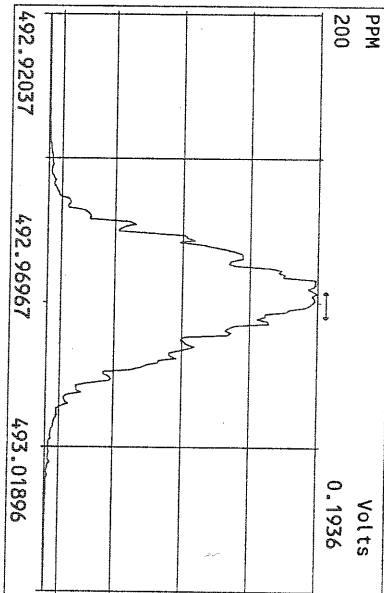
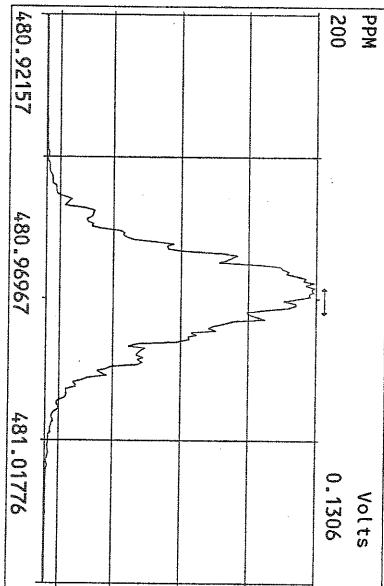
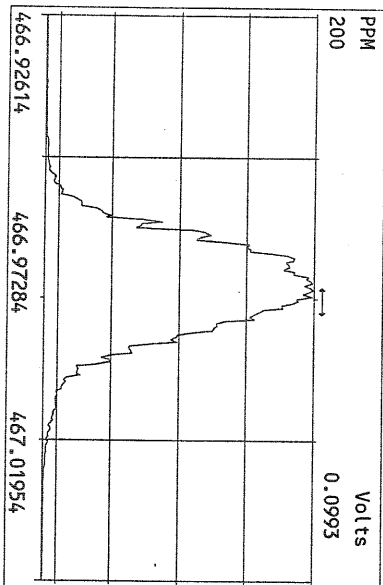
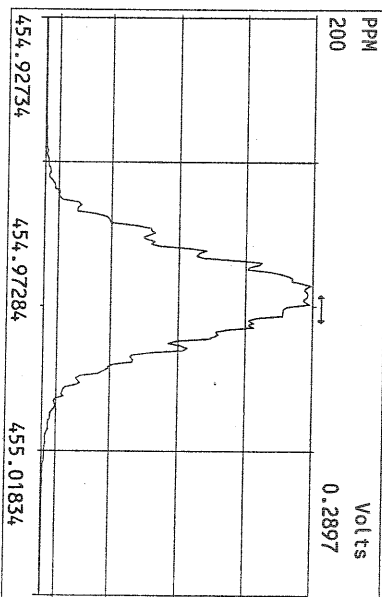
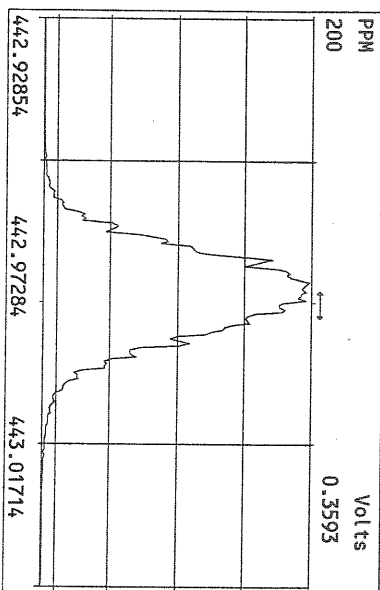
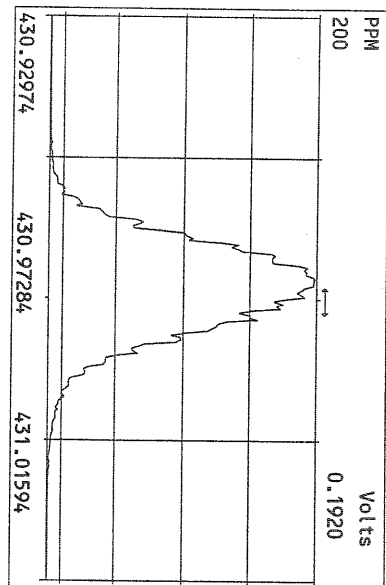
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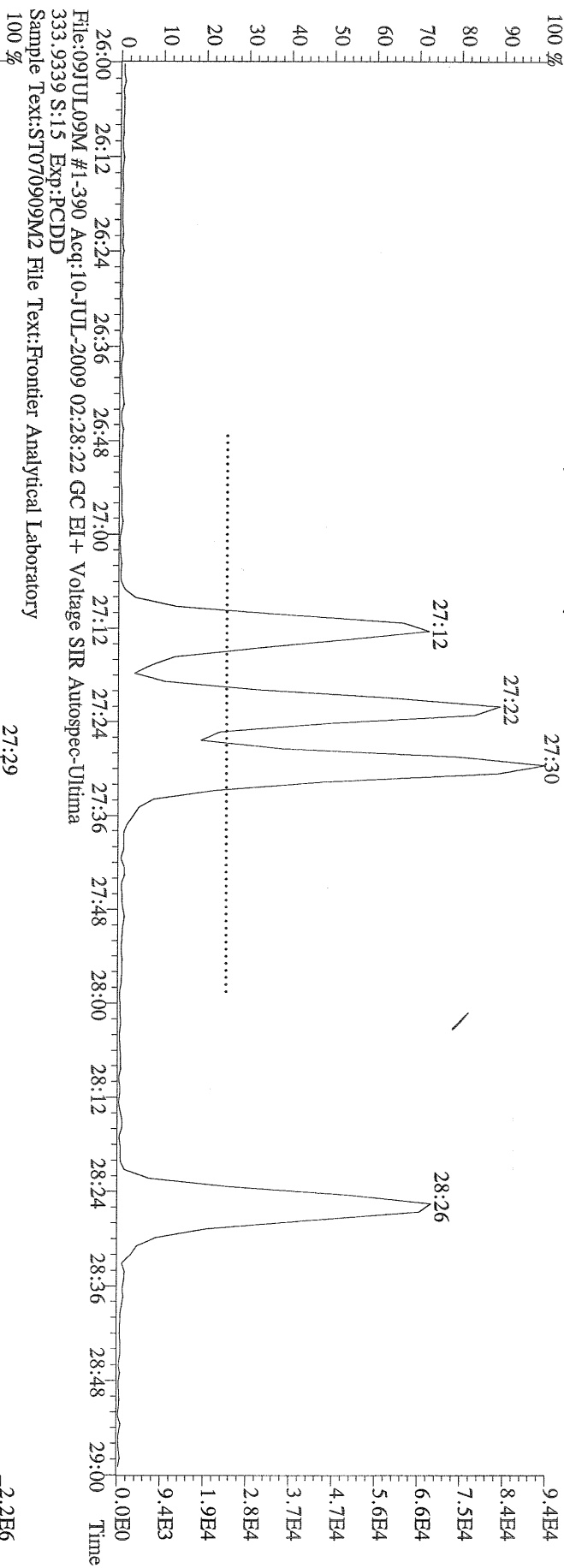




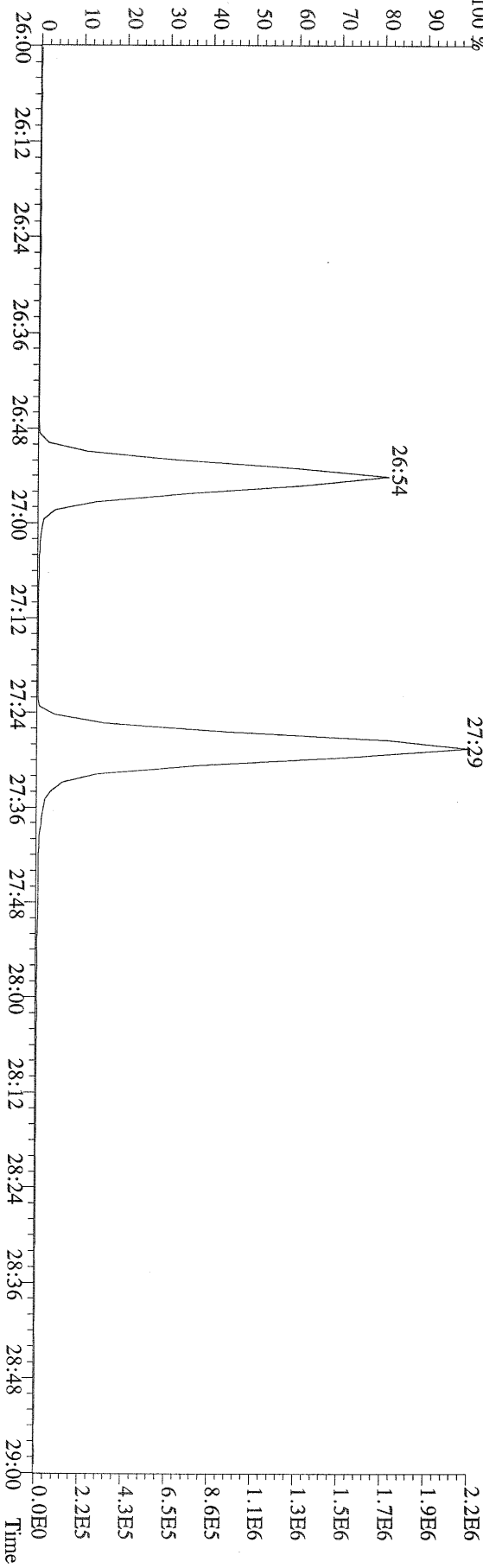




File:09JUL09M #1-390 Acq:10-JUL-2009 02:28:22 GC EI+ Voltage SIR Autospec-Ultima  
321.8936 S:15 Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory

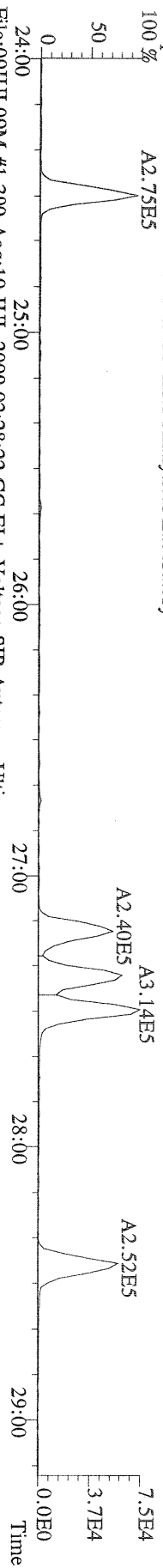


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333.9339 S:15 Exp:PCDD  
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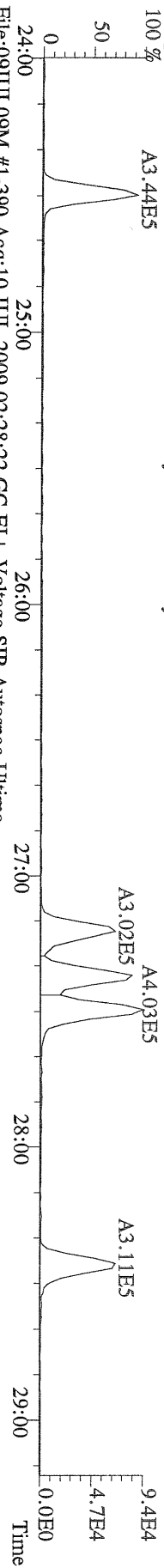




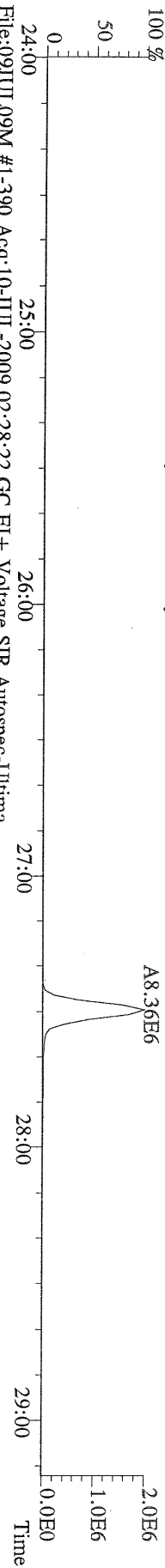
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319.8965 S:1.5 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:PCDD  
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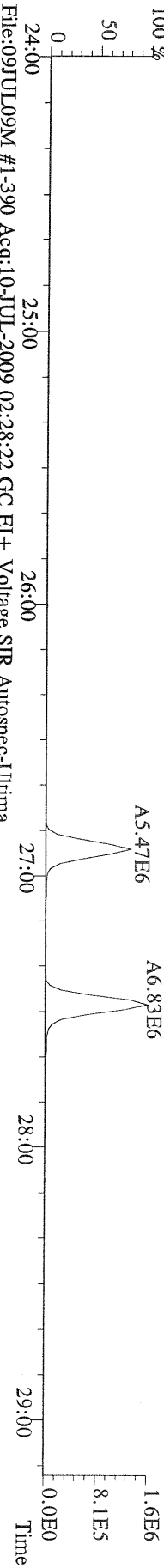
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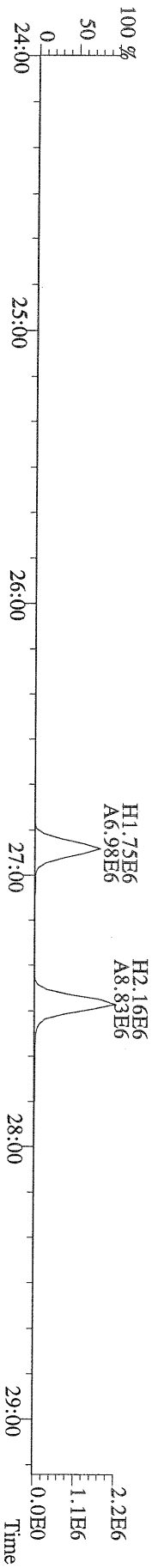
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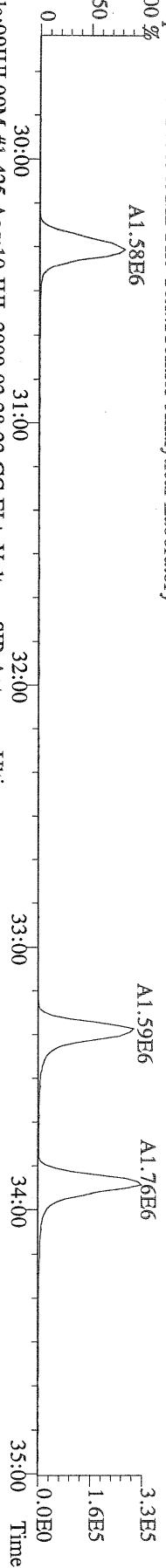
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Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



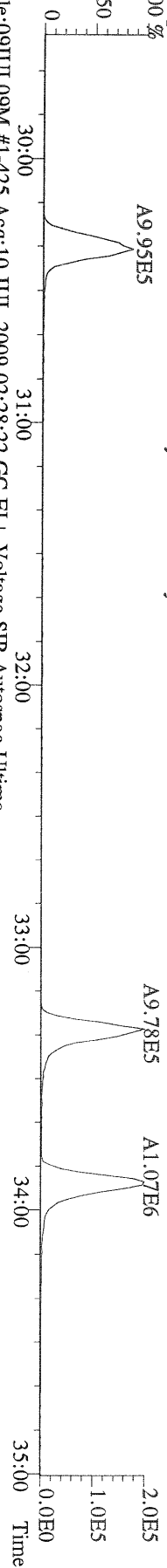
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333.9339 S:1.5 BSUB(10000,15,-3.0) PKD(5,5,3,0,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



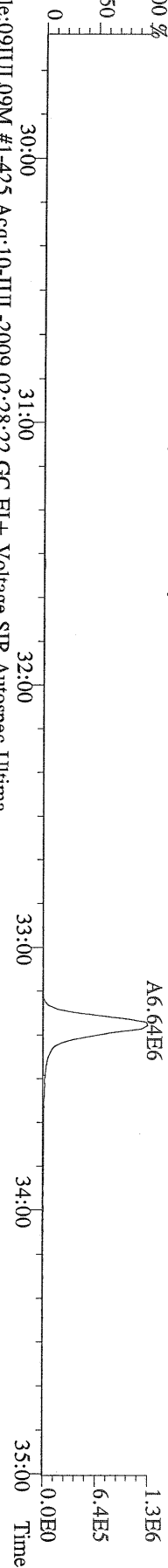
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355.8546 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



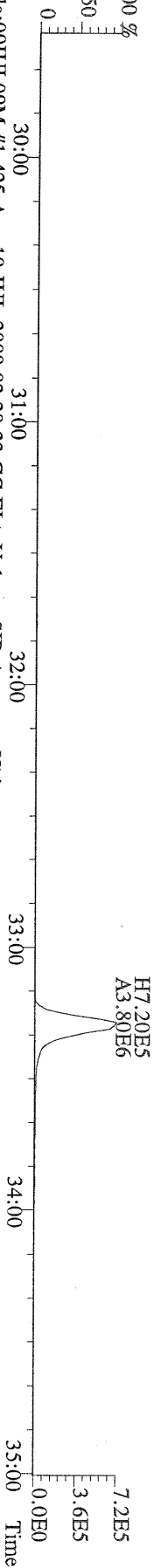
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357.8517 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



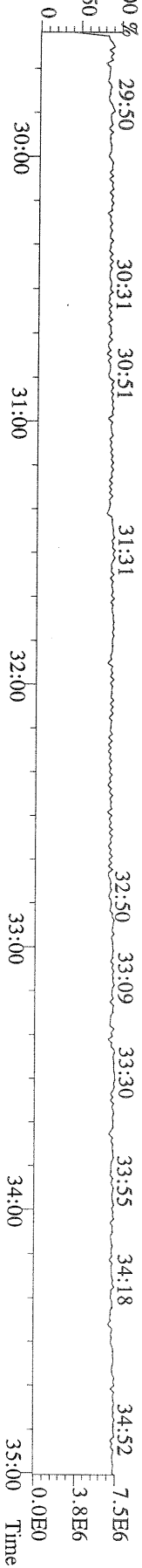
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367.8949 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



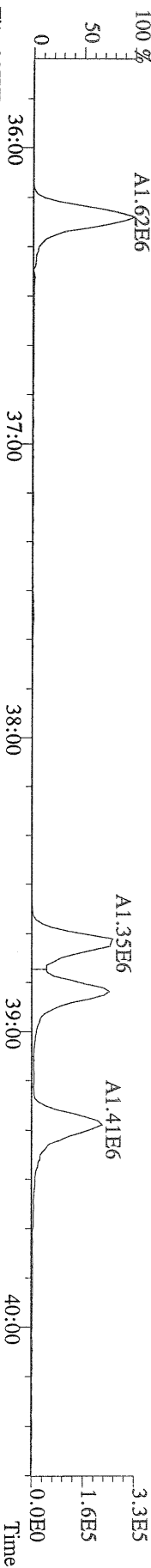
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369.8919 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



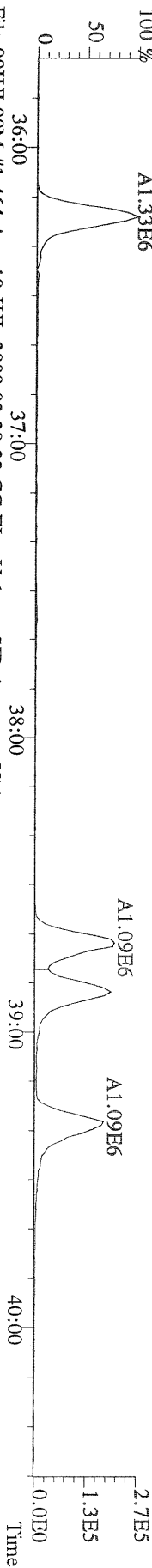
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366.9792 S:15 F:2 Exp:PCDD  
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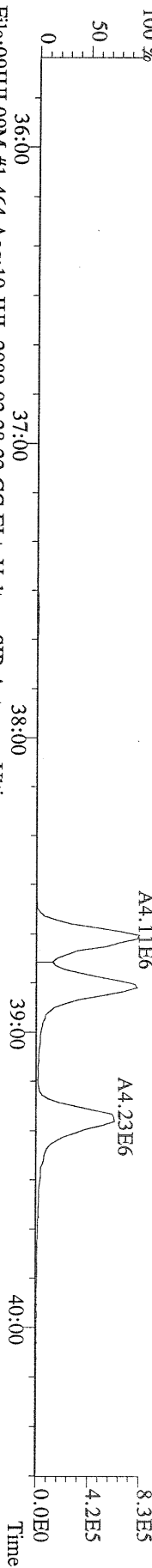
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389.8156 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



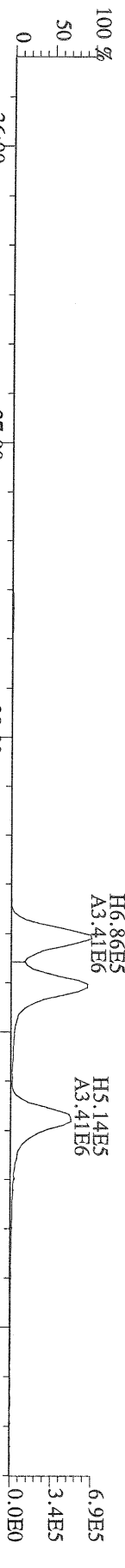
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391.8127 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
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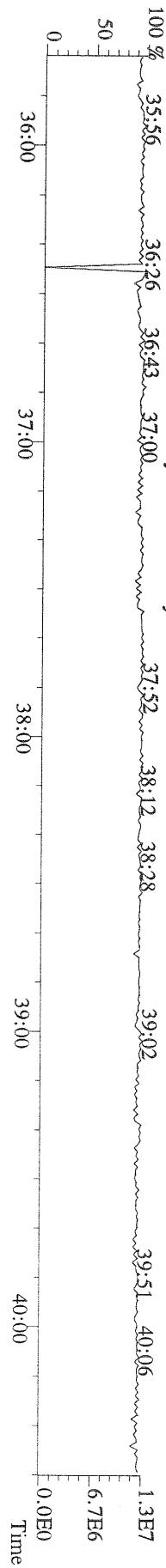
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Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



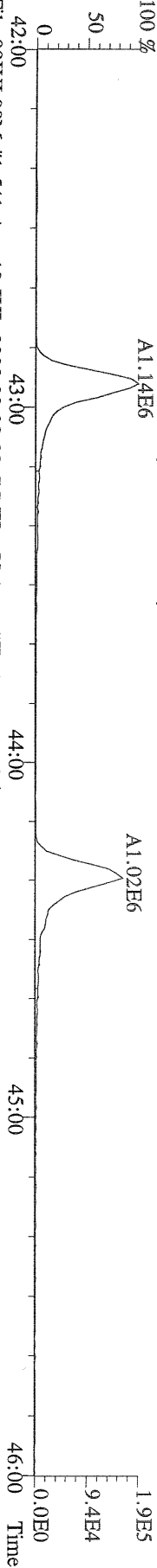
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403.8530 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
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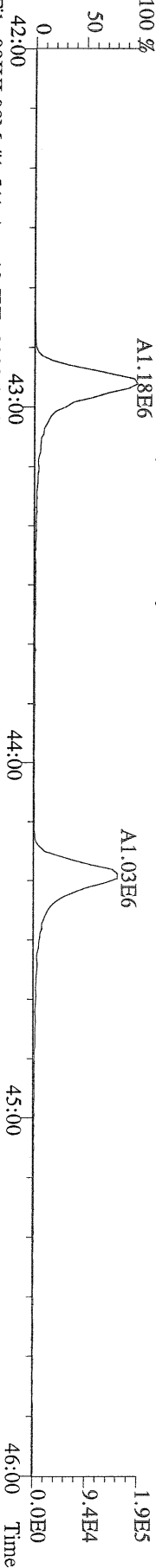
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Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



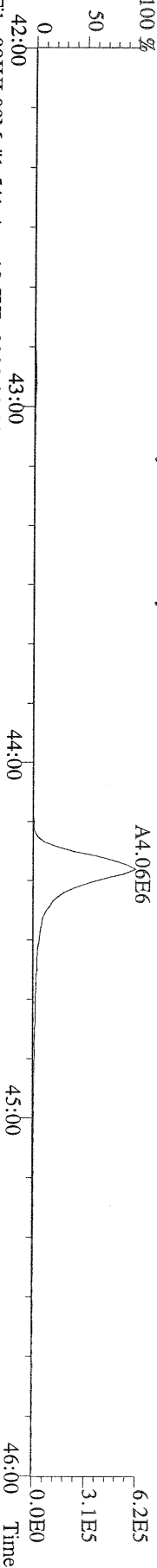
File:09JUL09M #1-541 Acq:10-JUL-2009 02:28:22 GC EI+ Voltage SIR Autospec-Ultima  
423.7767 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp.:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



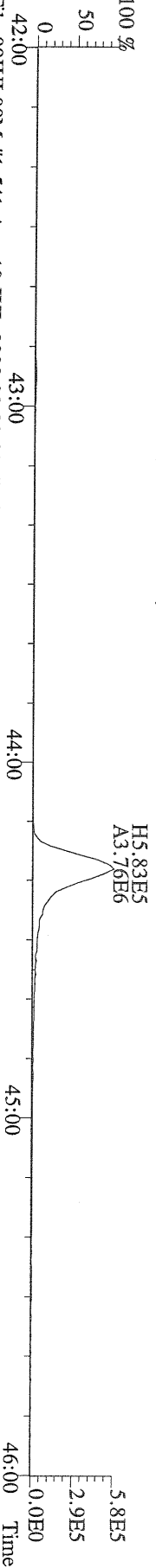
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425.7737 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0,0.00%,F,F) Exp.:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



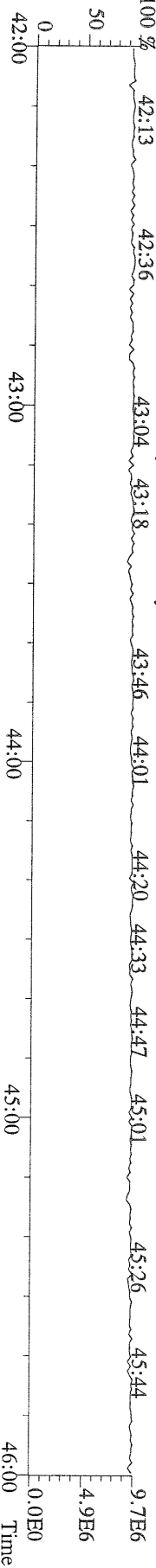
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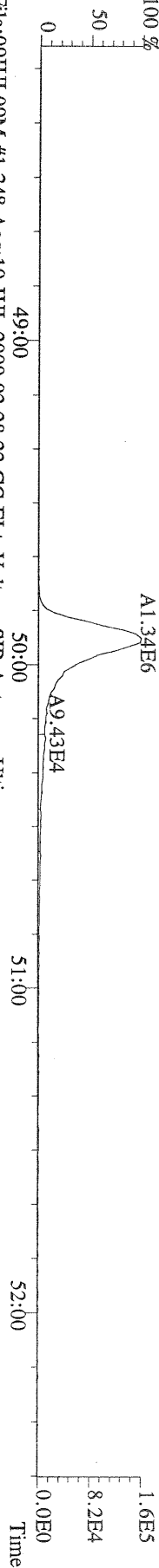
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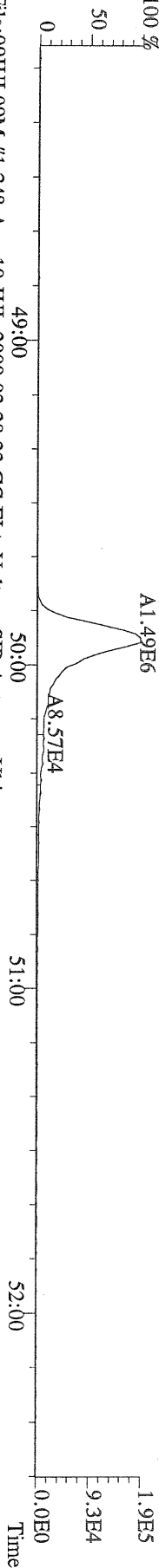
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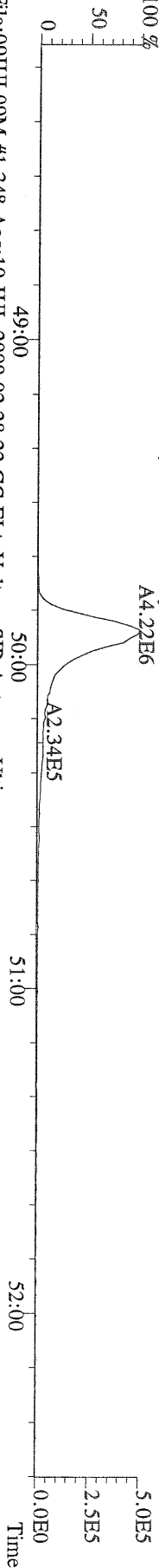
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457.7377 S:1.5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



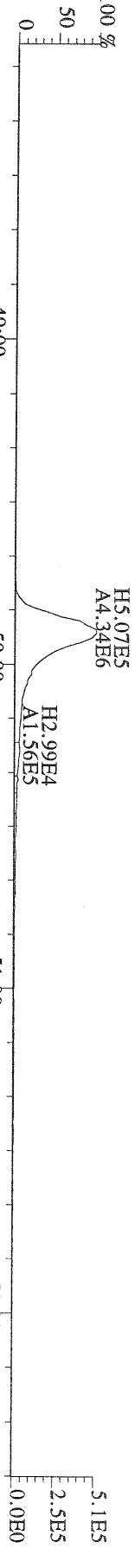
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459.7348 S:1.5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



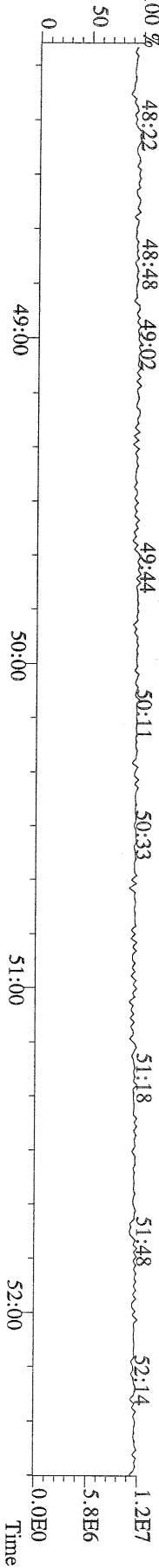
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469.7780 S:1.5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



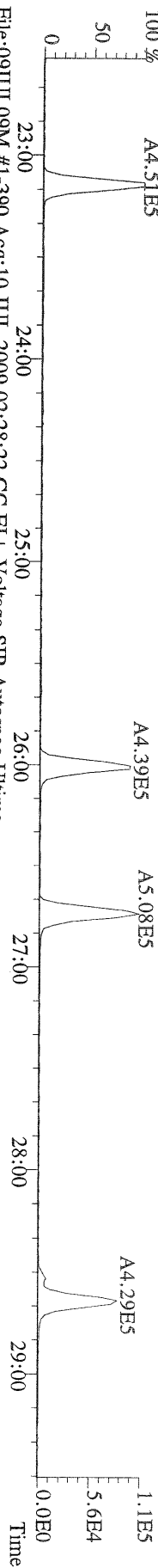
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Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



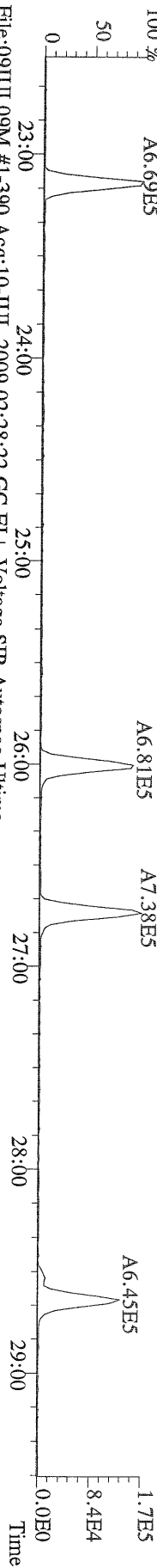
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454.9728 S:1.5 F:5 Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



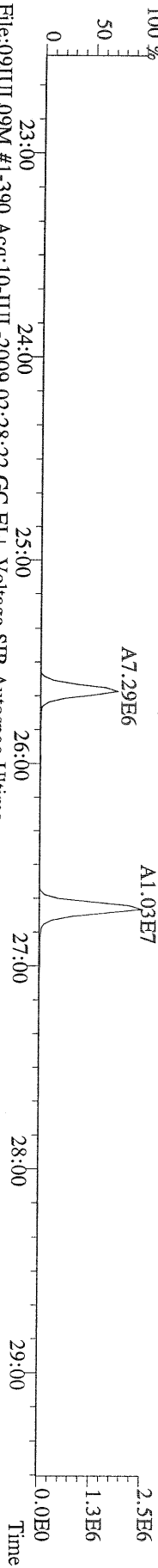
File:09JUL09M #1-390 Acq:10-JUL-2009 02:28:22 GC EI+ Voltage SIR Autospec-Ultima  
303.9016 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



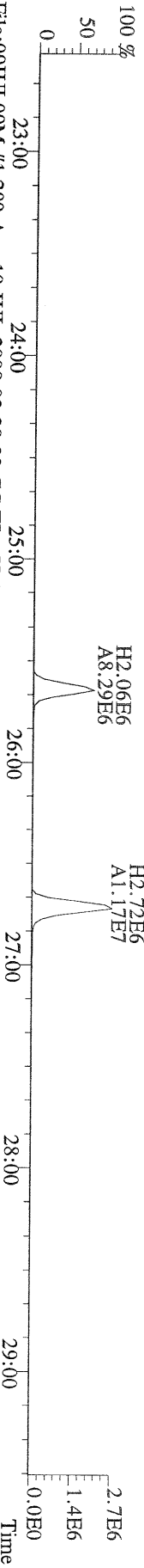
File:09JUL09M #1-390 Acq:10-JUL-2009 02:28:22 GC EI+ Voltage SIR Autospec-Ultima  
305.8987 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



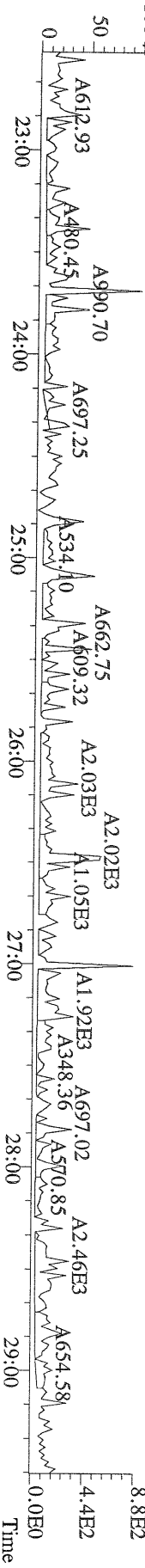
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315.9419 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



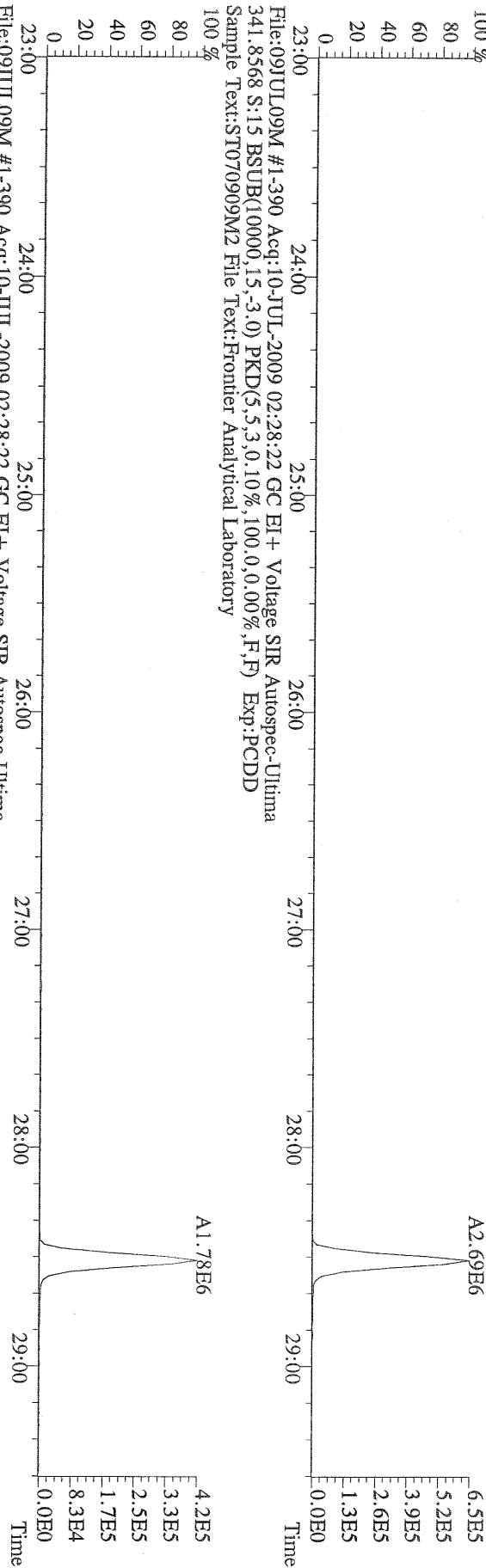
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317.9389 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



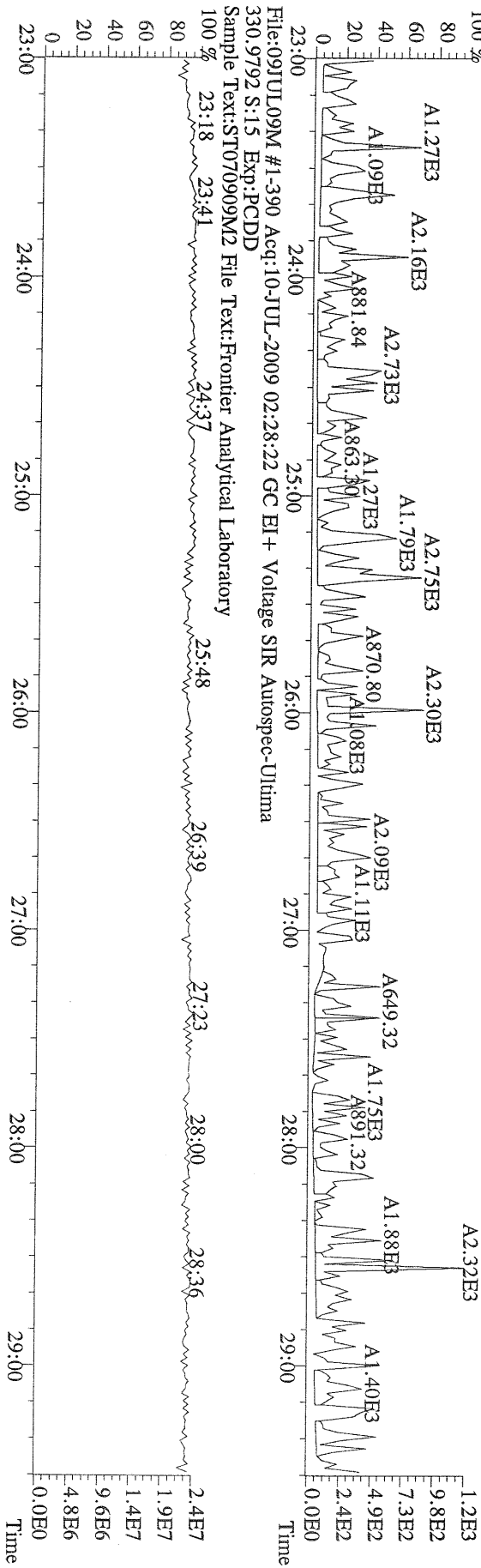
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375.8364 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



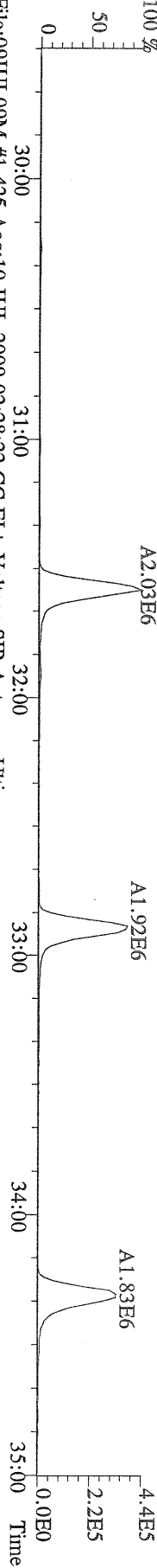
File:09JUL09M #1-390 Acq:10-JUL-2009 02:28:22 GC EI+ Voltage SIR Autospec-Ultima  
339.8597 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



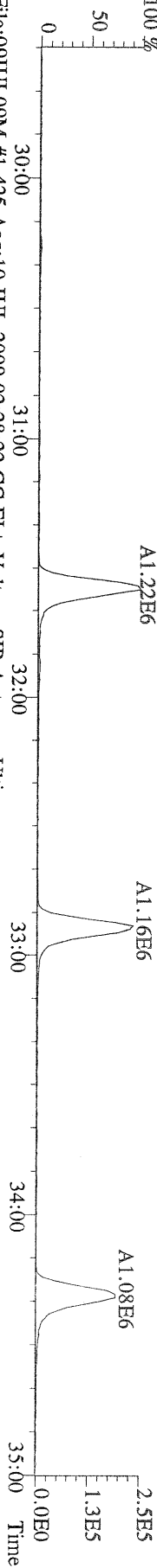
File:09JUL09M #1-390 Acq:10-JUL-2009 02:28:22 GC EI+ Voltage SIR Autospec-Ultima  
409.7974 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



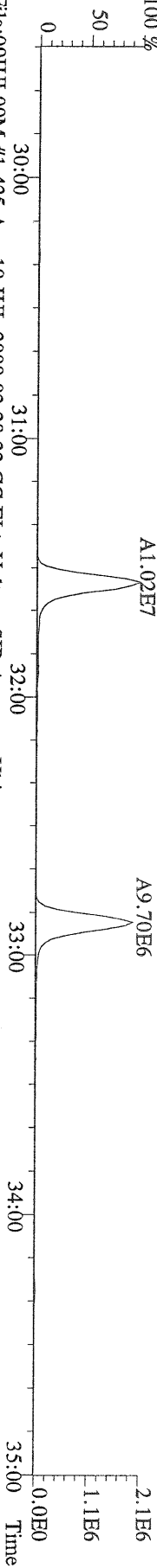
File:09JUL09M #1-425 Acq:10-JUL-2009 02:28:22 GC EI+ Voltage SIR Autospec-Ultima  
339.8597 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



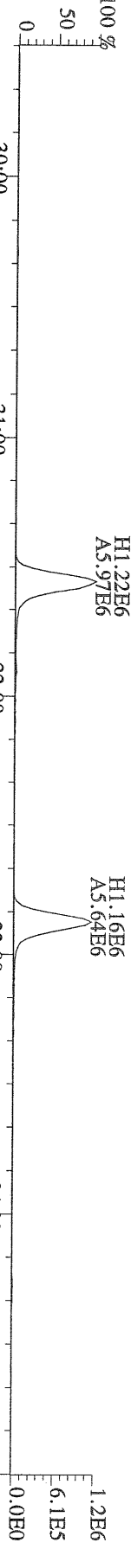
File:09JUL09M #1-425 Acq:10-JUL-2009 02:28:22 GC EI+ Voltage SIR Autospec-Ultima  
341.8568 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



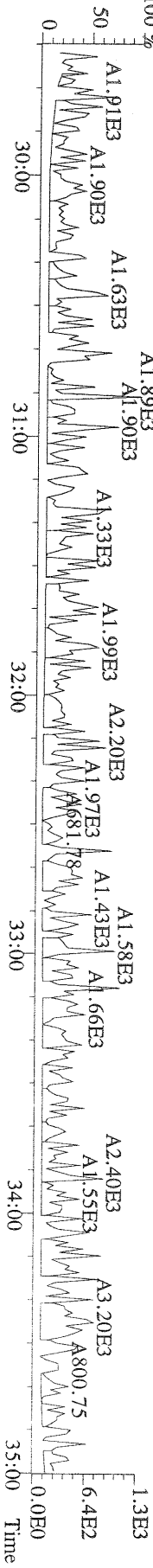
File:09JUL09M #1-425 Acq:10-JUL-2009 02:28:22 GC EI+ Voltage SIR Autospec-Ultima  
351.9000 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



File:09JUL09M #1-425 Acq:10-JUL-2009 02:28:22 GC EI+ Voltage SIR Autospec-Ultima  
353.8970 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory

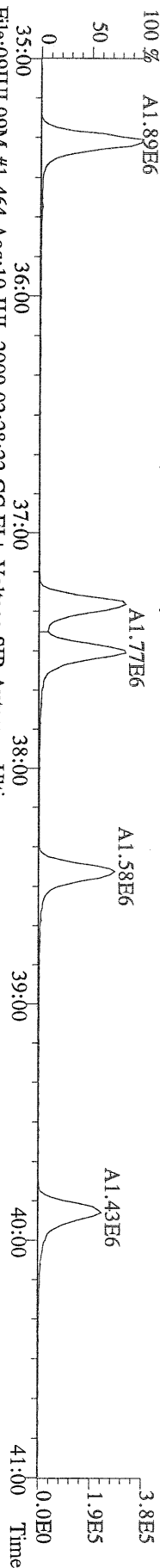


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409.7974 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory

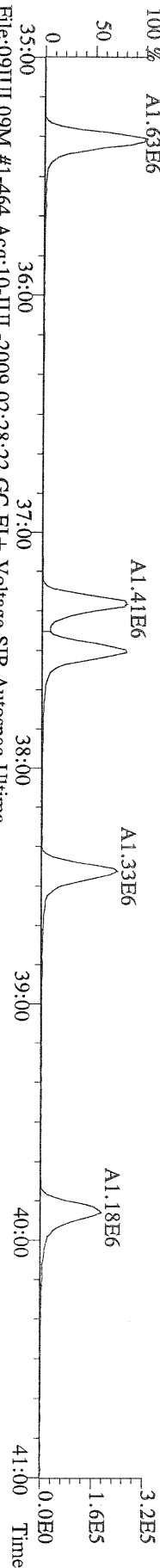




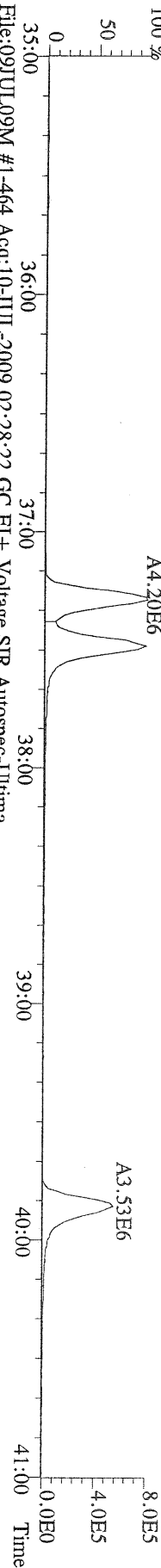
File:09JUL09M #1-464 Acq:10-JUL-2009 02:28:22 GC EI+ Voltage SIR Autospec-Ultima  
373.8207 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



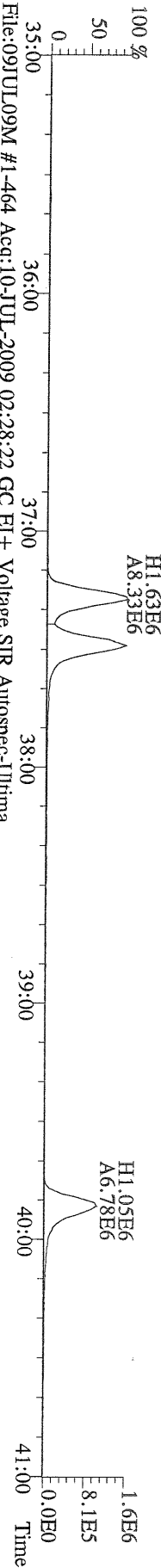
File:09JUL09M #1-464 Acq:10-JUL-2009 02:28:22 GC EI+ Voltage SIR Autospec-Ultima  
375.8178 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



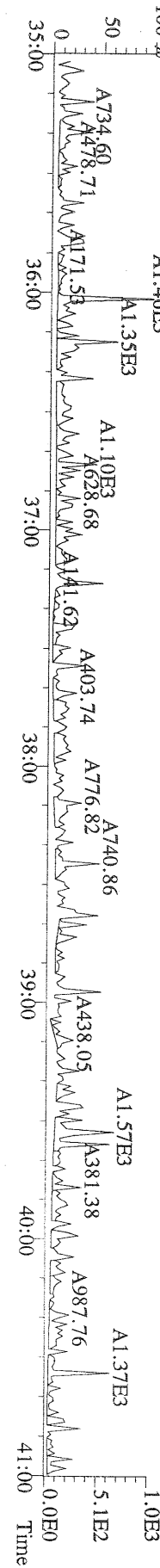
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383.8639 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



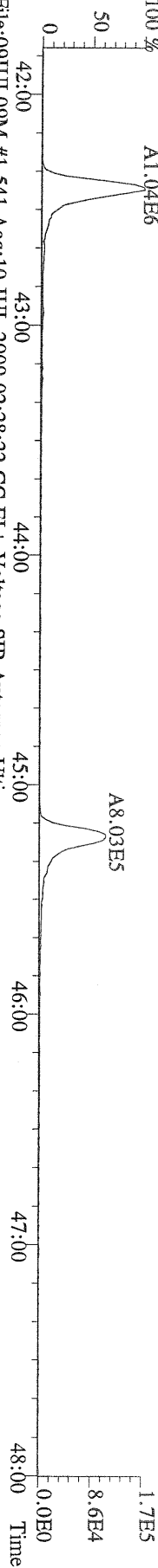
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385.8610 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



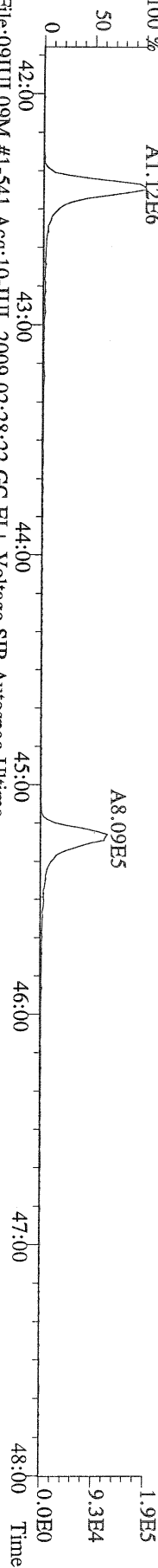
File:09JUL09M #1-464 Acq:10-JUL-2009 02:28:22 GC EI+ Voltage SIR Autospec-Ultima  
445.7555 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



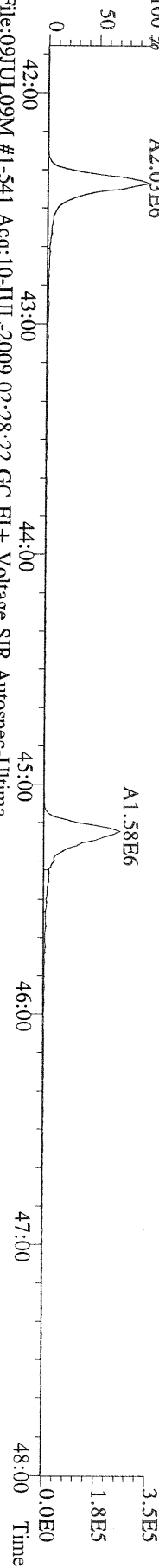
File:09JUL09M #1-541 Acq:10-JUL-2009 02:28:22 GC EI+ Voltage SIR Autospec-Ultima  
407.7818 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



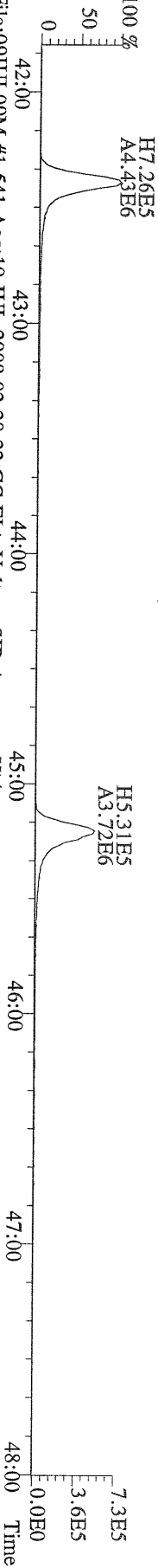
File:09JUL09M #1-541 Acq:10-JUL-2009 02:28:22 GC EI+ Voltage SIR Autospec-Ultima  
409.7788 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



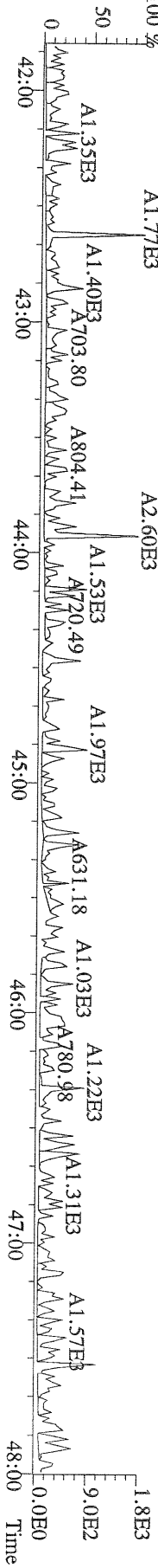
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417.8253 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



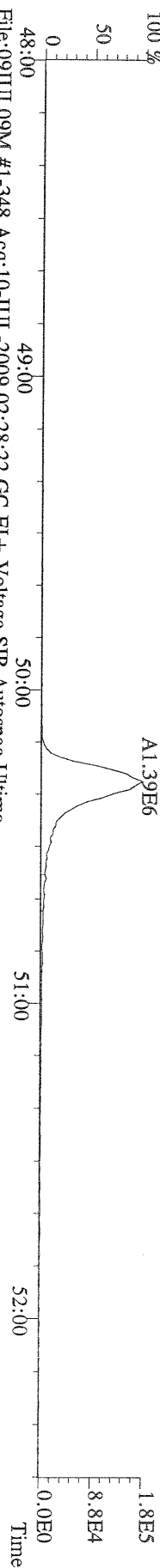
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419.8220 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



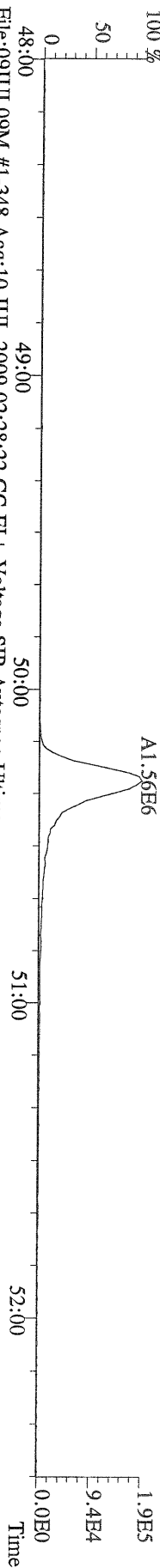
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479.7165 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



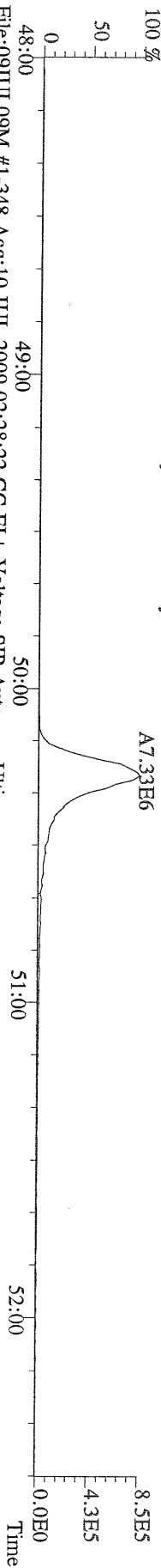
File:09JUL09M #1-348 Acq:10-JUL-2009 02:28:22 GC EI+ Voltage SIR Autospec-Ultima  
441.7428 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



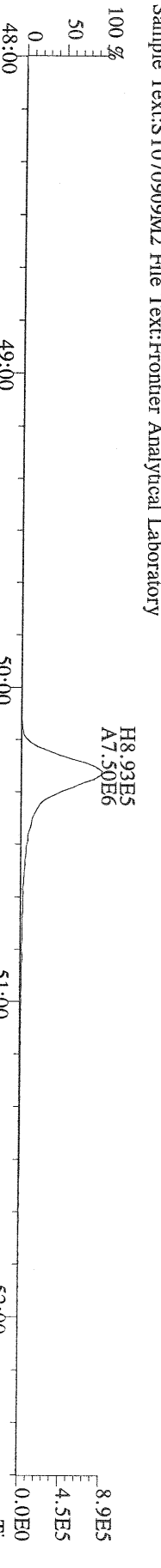
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443.7398 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory



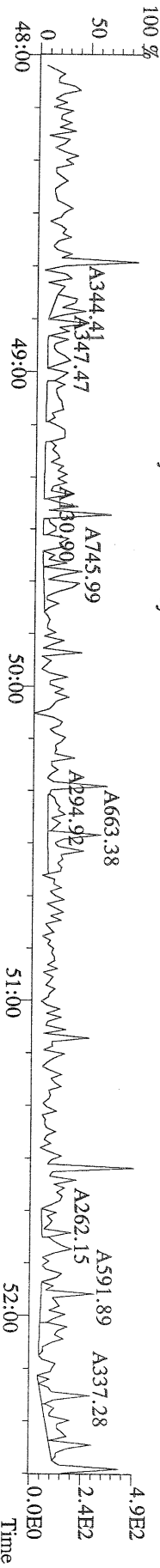
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453.7831 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory

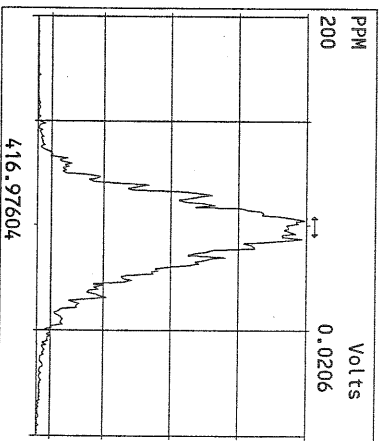
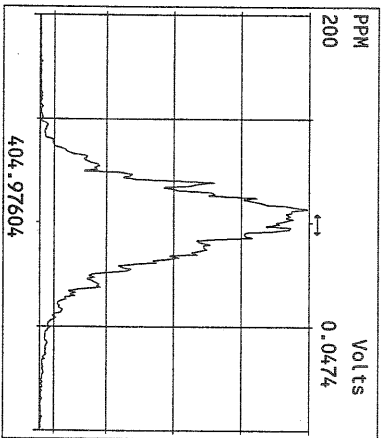
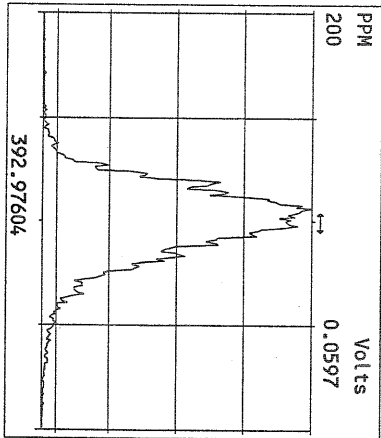
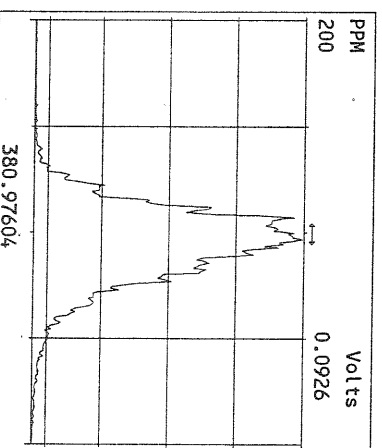
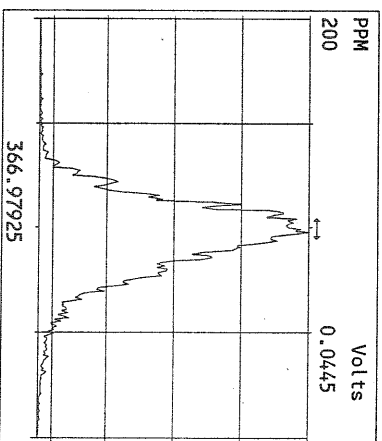
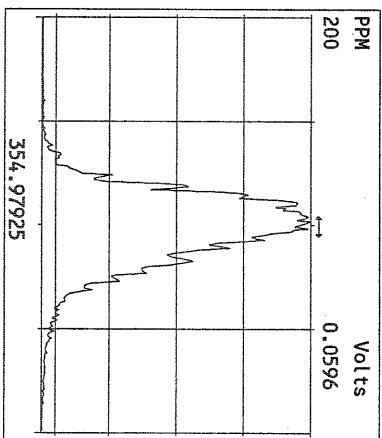
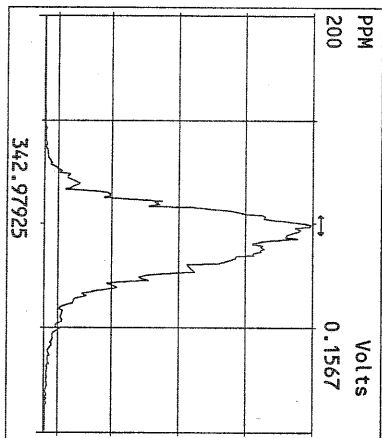
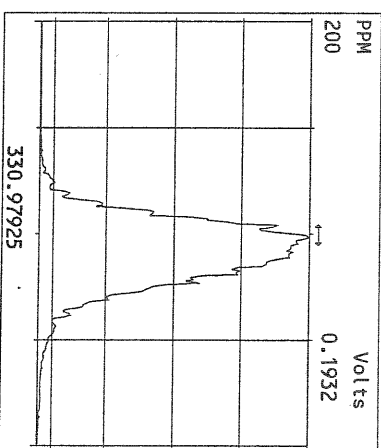
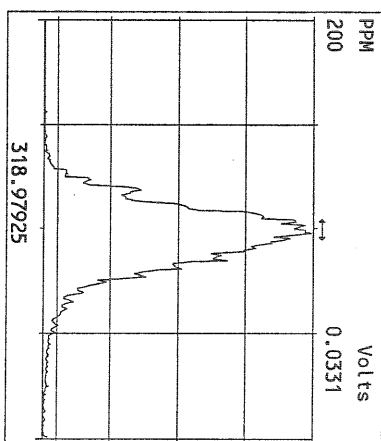
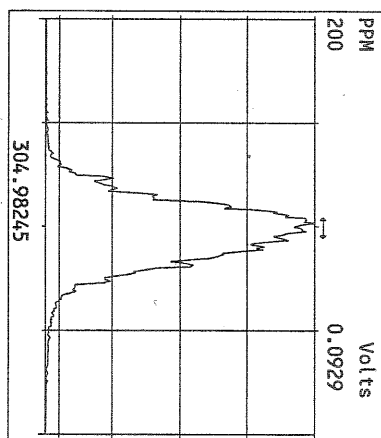
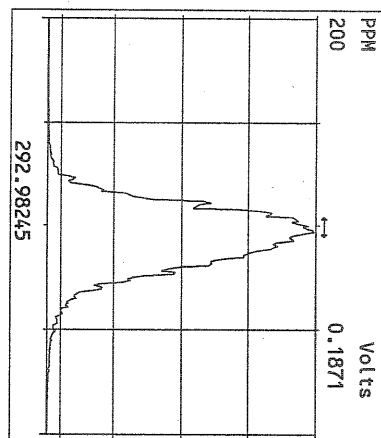


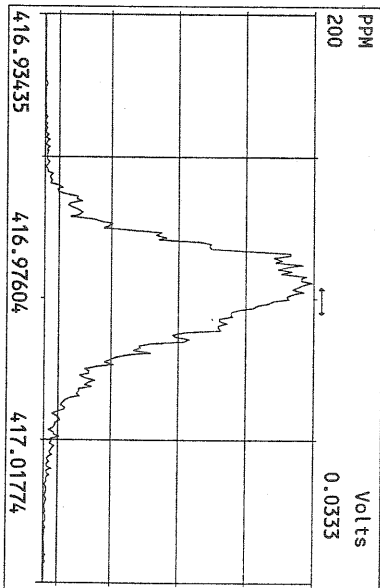
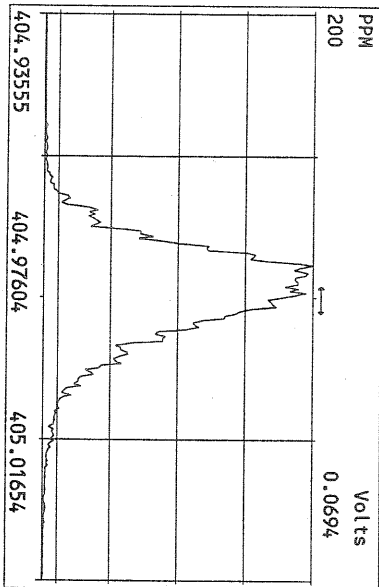
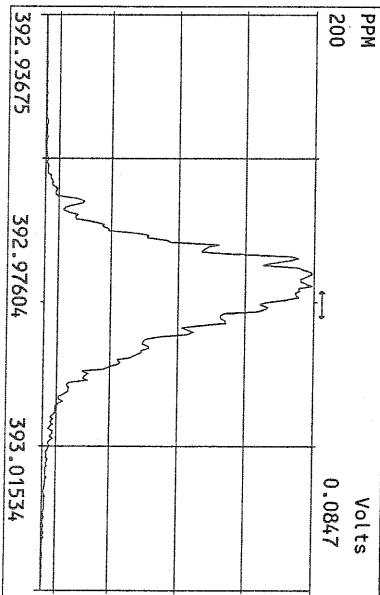
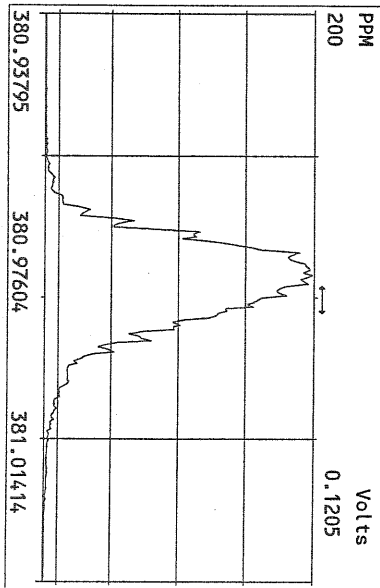
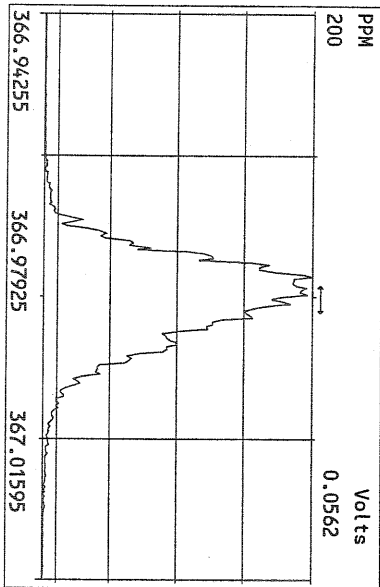
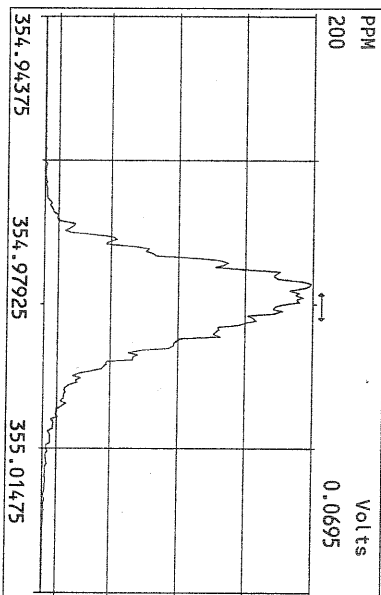
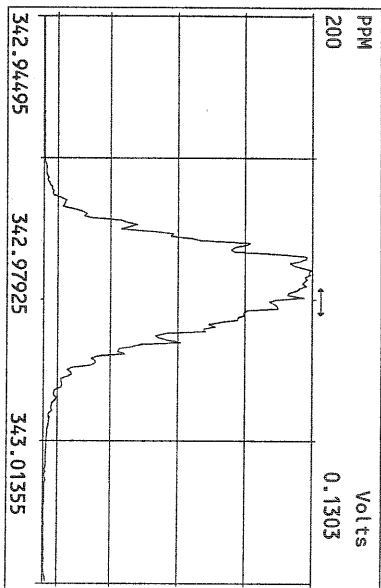
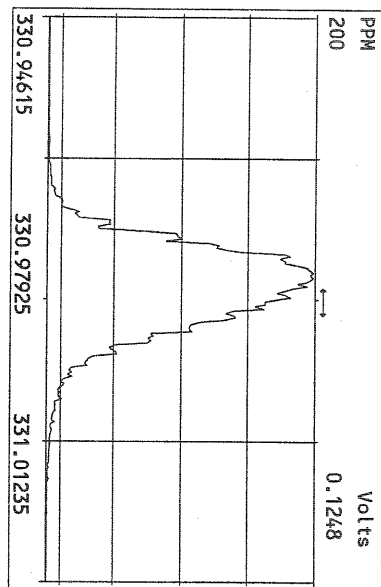
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455.7801 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory

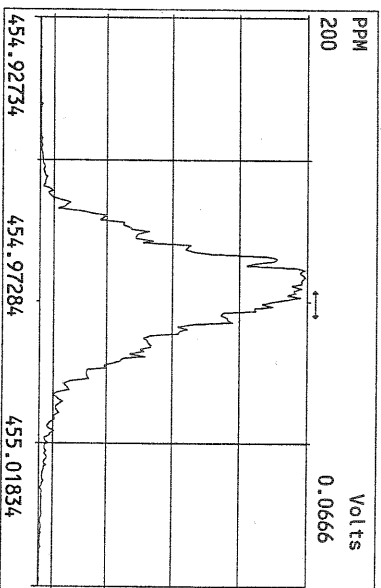
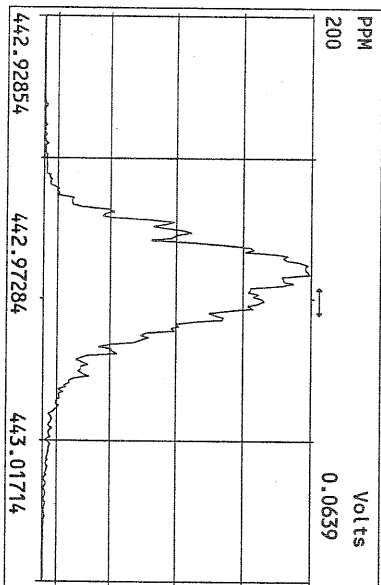
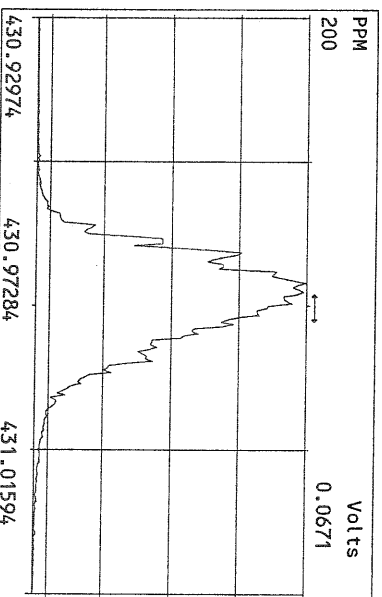
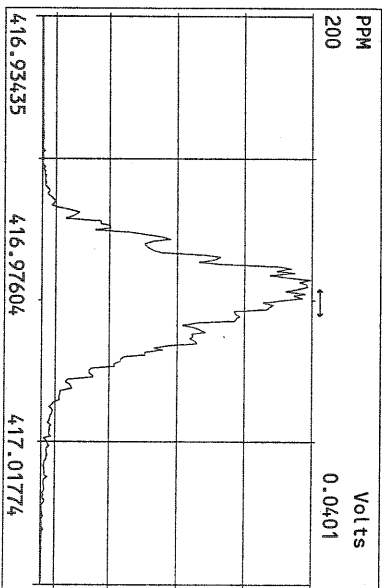
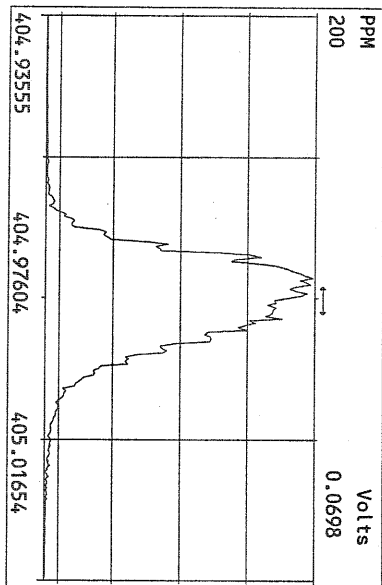
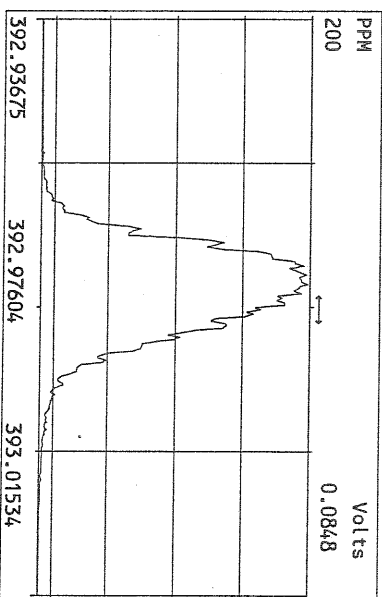
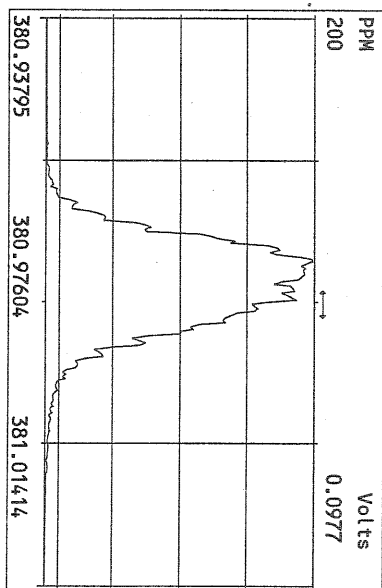
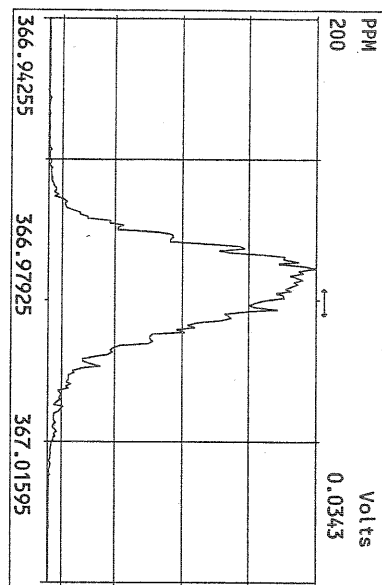


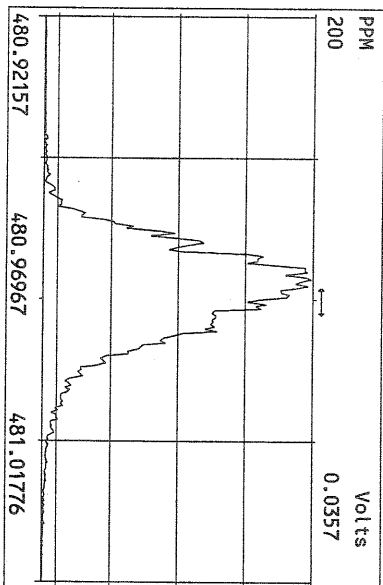
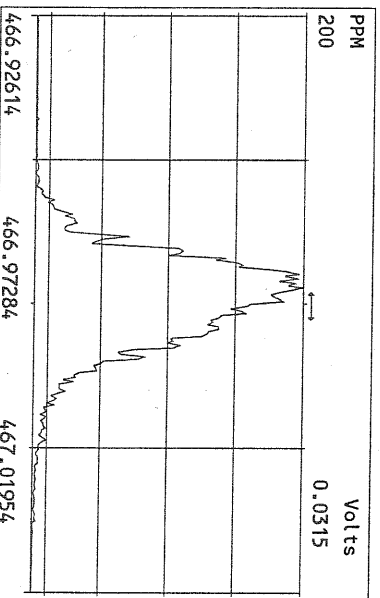
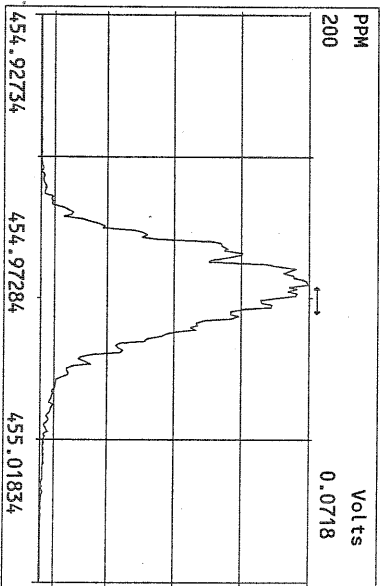
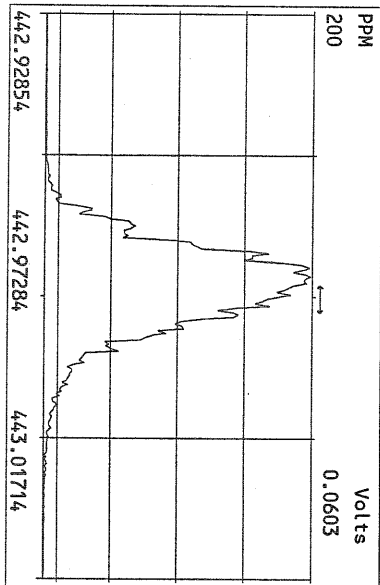
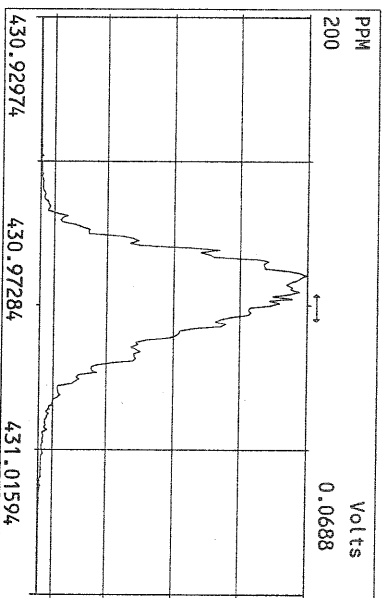
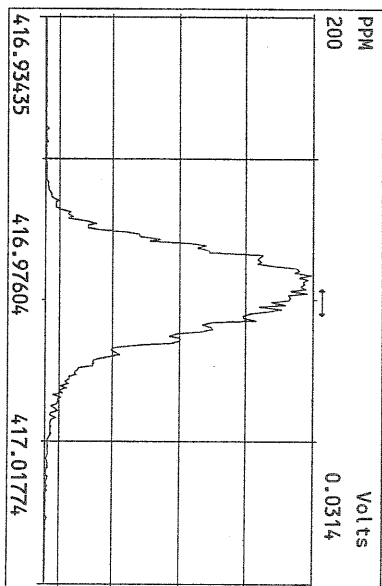
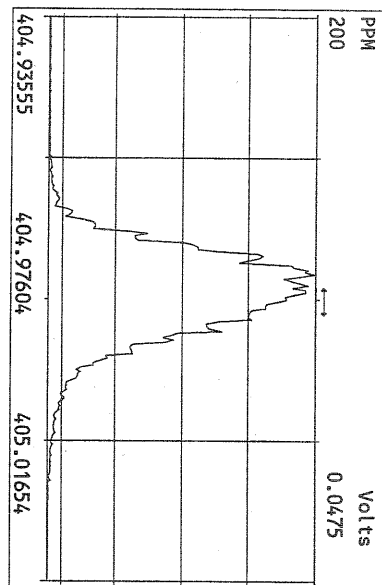
File:09JUL09M #1-348 Acq:10-JUL-2009 02:28:22 GC EI+ Voltage SIR Autospec-Ultima  
513.6775 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M2 File Text:Frontier Analytical Laboratory

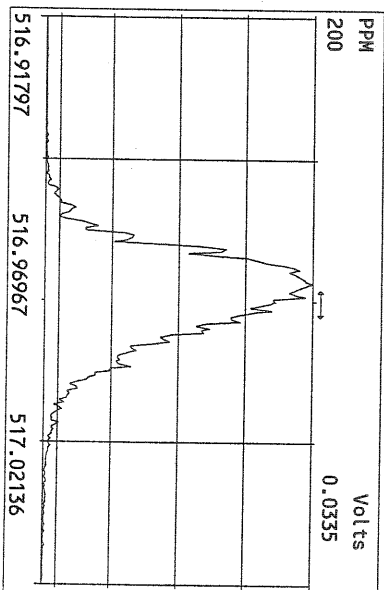
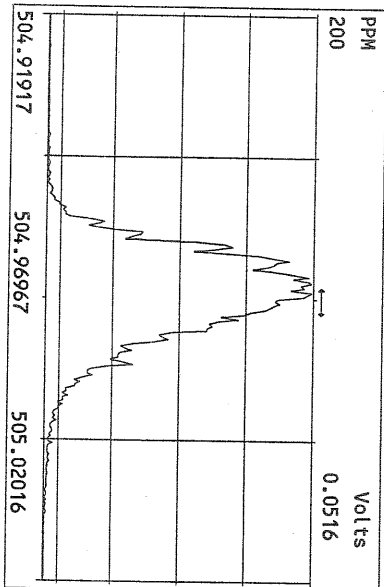
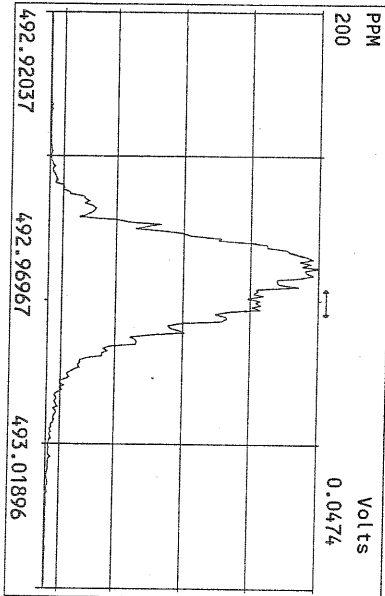
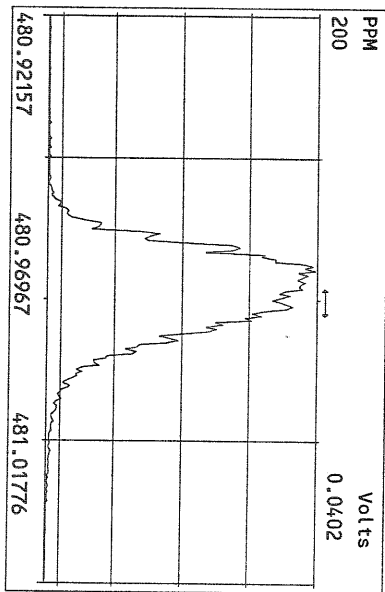
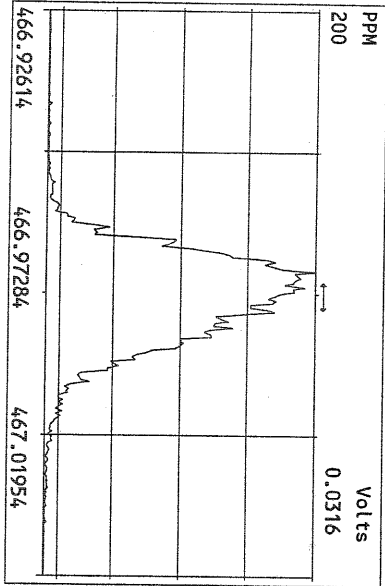
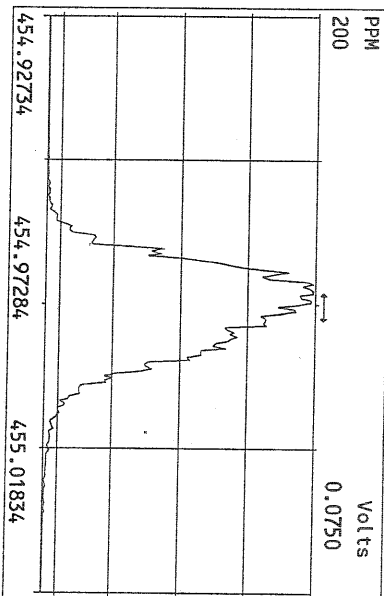
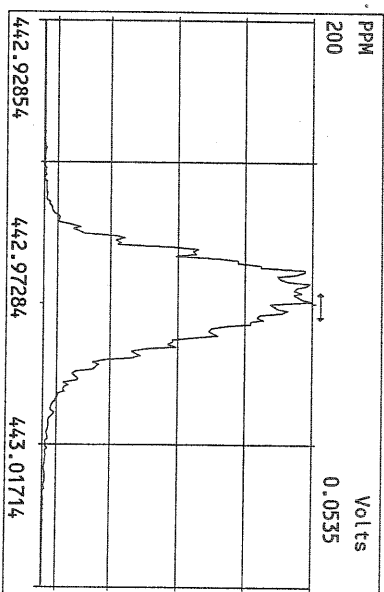
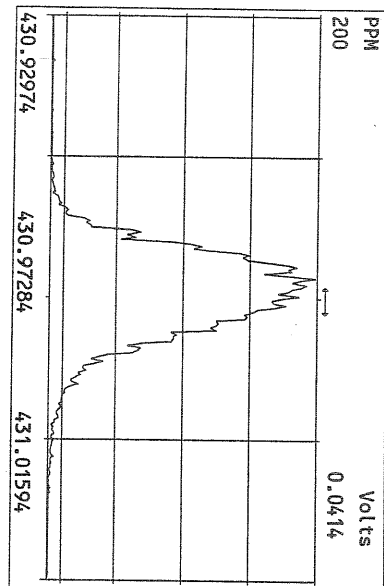














## USEPA - ITD

AIR FORM 4A  
PCDD/PCDF CONTINUING CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 6/29/09

Instrument ID: FAL3

GC Column ID: DB5

VER Data Filename: 09JUL09M Sam:26

Analysis Date: 10-JUL-09 12:36:19

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	0.84	0.65-0.89	y	4.04	3.75 - 6.25 ✓
1,2,3,7,8-PeCDD	M+2/M+4	1.61	1.32-1.78	y	20.6	18.7 - 31.2 ✓
1,2,3,4,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	21.6	18.7 - 31.2 ✓
1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	23.9	18.7 - 31.2 ✓
1,2,3,7,8,9-HxCDD	M+2/M+4	1.23	1.05-1.43	y	22.2	18.7 - 31.2 ✓
1,2,3,4,6,7,8-HpCDD	M+2/M+4	0.98	0.88-1.20	y	22.1	18.7 - 31.2 ✓
OCDD	M+2/M+4	0.91	0.76-1.02	y	47.0	37.5 - 62.5 ✓
2,3,7,8-TCDF	M/M+2	0.66	0.65-0.89	y	4.65	3.75 - 6.25 ✓
1,2,3,7,8-PeCDF	M+2/M+4	1.69	1.32-1.78	y	21.4	18.7 - 31.2 ✓
2,3,4,7,8-PeCDF	M+2/M+4	1.68	1.32-1.78	y	21.6	18.7 - 31.2 ✓
1,2,3,4,7,8-HxCDF	M+2/M+4	1.17	1.05-1.43	y	21.4	18.7 - 31.2 ✓
1,2,3,6,7,8-HxCDF	M+2/M+4	1.19	1.05-1.43	y	22.2	18.7 - 31.2 ✓
2,3,4,6,7,8-HxCDF	M+2/M+4	1.18	1.05-1.43	y	22.9	18.7 - 31.2 ✓
1,2,3,7,8,9-HxCDF	M+2/M+4	1.13	1.05-1.43	y	23.0	18.7 - 31.2 ✓
1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.96	0.88-1.20	y	21.9	18.7 - 31.2 ✓
1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.94	0.88-1.20	y	23.3	18.7 - 31.2 ✓
OCDF	M+2/M+4	0.91	0.76-1.02	y	45.0	35.0 - 65.0 ✓

Analyst: 8Date: 7/10/09

## USEPA - ITD

AIR FORM 4B  
PCDD/PCDF CONTINUING CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory

Episode No.:

Contract No.:

SAS No.:

Initial Calibration Date: 6/29/09

Instrument ID: FAL3

GC Column ID: DB5

VER Data Filename: 09JUL09M

Sam:26

Analysis Date: 10-JUL-09 12:36:19

LABELED COMPOUNDS	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.76	0.65-0.89	y	105	75.0 - 125 ✓
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.72	1.32-1.78	y	107	70.0 - 130 ✓
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.20	1.05-1.43	y	104	75.0 - 125 ✓
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.08	0.88-1.20	y	114	70.0 - 130 ✓
13C-OCDD	M+2/M+4	0.93	0.76-1.02	y	206	140 - 260 ✓
13C-2,3,7,8-TCDF	M/M+2	0.88	0.65-0.89	y	104	70.0 - 130 ✓
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.73	1.32-1.78	y	108	70.0 - 130 ✓
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	92.2	70.0 - 130 ✓
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.46	0.37-0.51	y	90.1	70.0 - 130 ✓
13C-OCDF	M+2/M+4	0.96	0.76-1.02	y	198	140 - 260 ✓
CLEANUP SURROGATE						
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	94.2	75.0 - 125 ✓
PRE-SPIKE SURROGATE						
37Cl-2,3,7,8-TCDD					96.2	75.0 - 125 ✓
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	92.8	75.0 - 125 ✓
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.69	1.32-1.78	y	102	75.0 - 125 ✓
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	95.8	75.0 - 125 ✓
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	y	104	75.0 - 125 ✓

Analyst:                     Date: 7/10/09

Air 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: 6/29/09  
RT Window Data Filename: 09JUL09M Sam:26      Analysis Date: 10-JUL-09 Time: 12:36:19  
DB-5 IS Data Filename: 09JUL09M Sam:26      Analysis Date: 10-JUL-09 Time: 12:36:19  
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)	24:28 ✓	1,3,6,8-TCDF (F)	23:08 ✓
1,2,8,9-TCDD (L)	28:25 ✓	1,2,8,9-TCDF (L)	28:38 ✓
1,2,4,7,9-PeCDD (F)	30:20 ✓	1,3,4,6,8-PeCDF (F)	28:31 ✓
1,2,3,8,9-PeCDD (L)	33:53 ✓	1,2,3,8,9-PeCDF (L)	34:17 ✓
1,2,4,6,7,9-HxCDD (F)	36:14 ✓	1,2,3,4,6,8-HxCDF (F)	35:20 ✓
1,2,3,7,8,9-HxCDD (L)	39:17 ✓	1,2,3,7,8,9-HxCDF (L)	39:52 ✓
1,2,3,4,6,7,9-HpCDD (F)	42:54 ✓	1,2,3,4,6,7,8-HpCDF (F)	42:23 ✓
1,2,3,4,6,7,8-HpCDD (L)	44:18 ✓	1,2,3,4,7,8,9-HpCDF (L)	45:12 ✓

(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%.

Analyst: 8      Date: 7/10/09

WHO 1998 Tox: 53.3

Date: 7/10/09

## Frontier Analytical Laboratory - Acquisition Log

Run Name:09JUL09M

Instrument: FAL3

GC: DB5

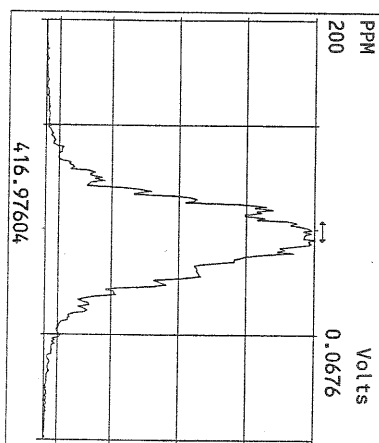
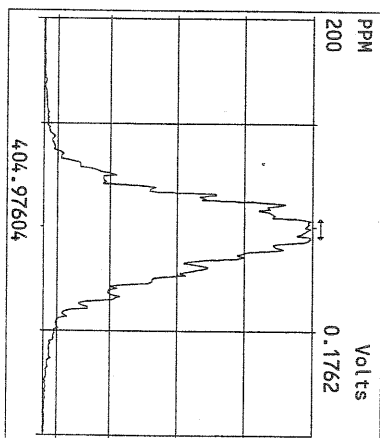
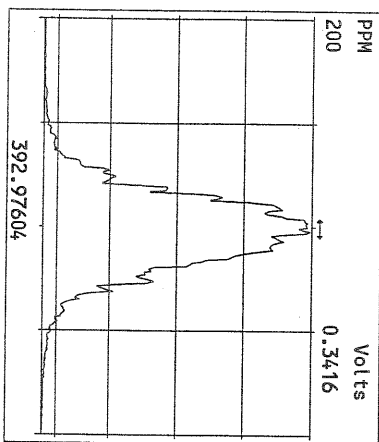
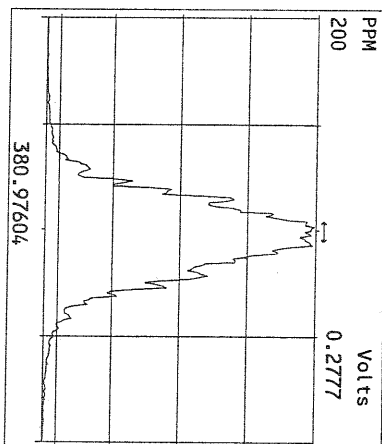
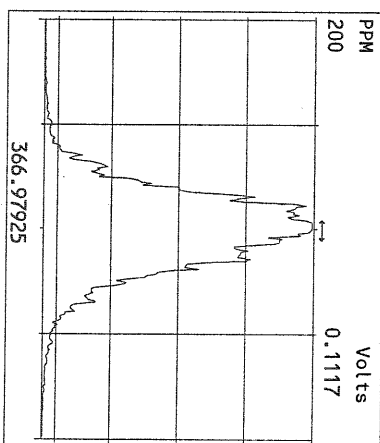
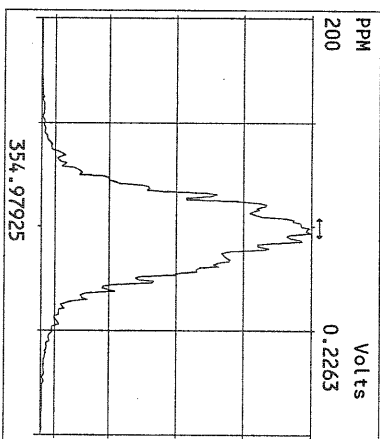
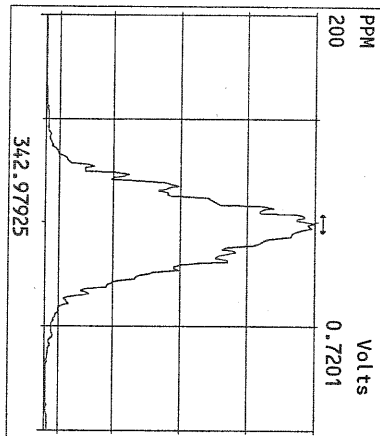
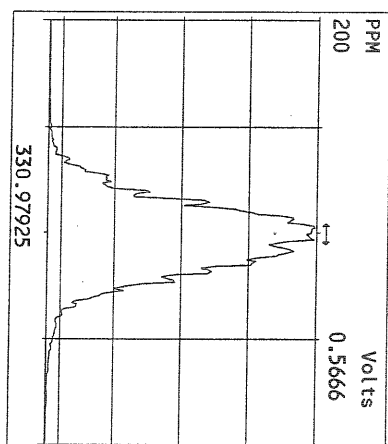
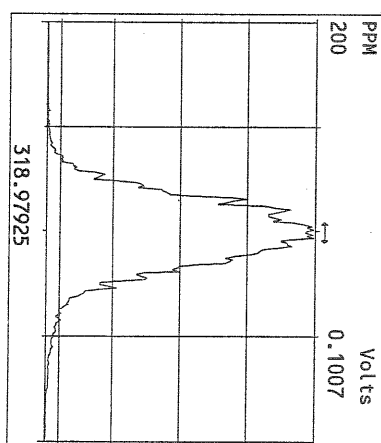
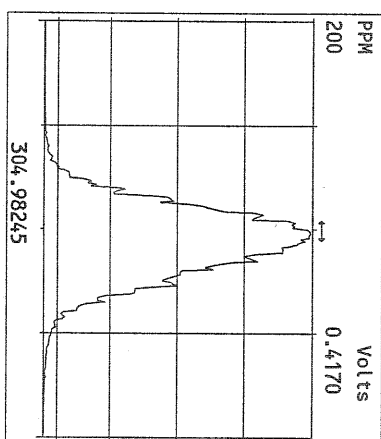
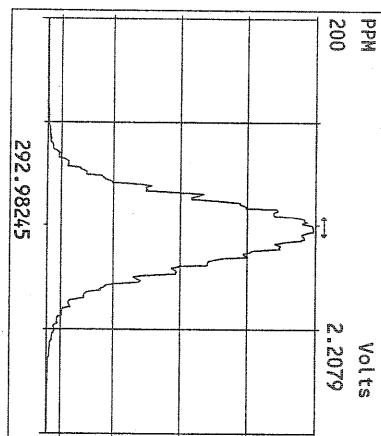
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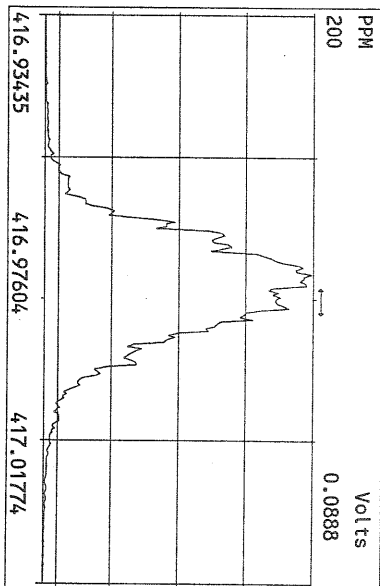
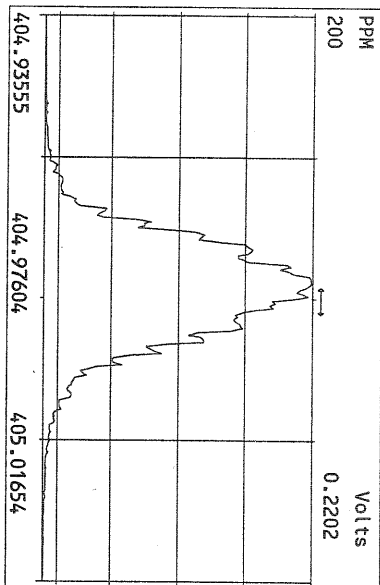
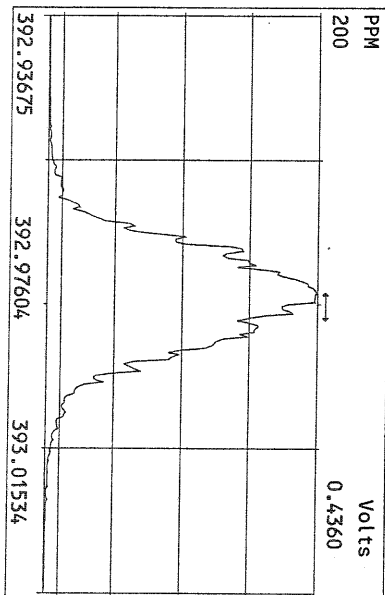
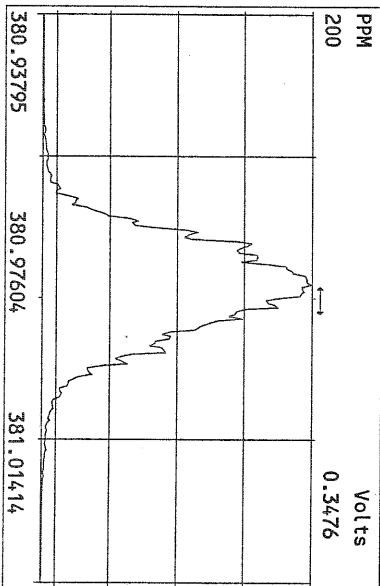
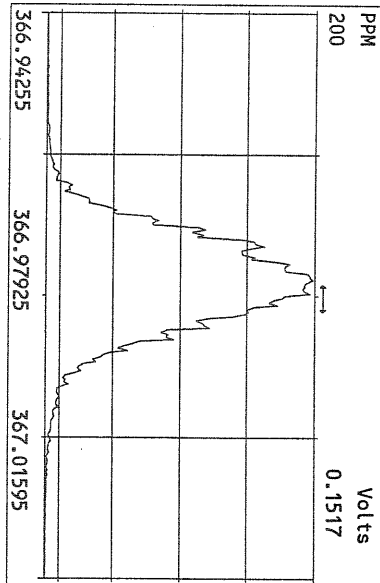
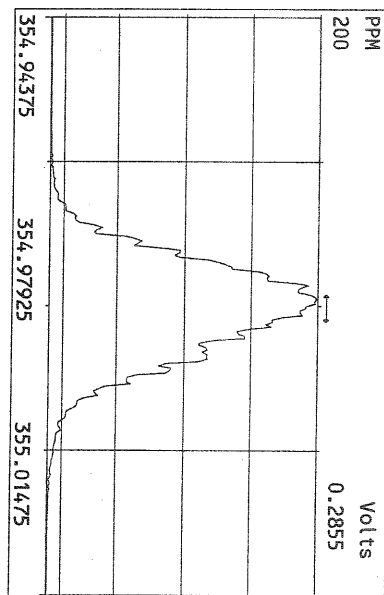
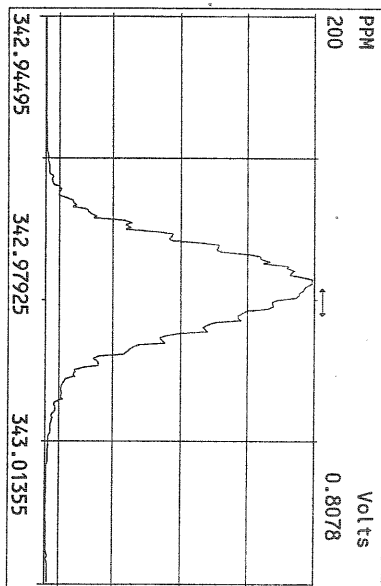
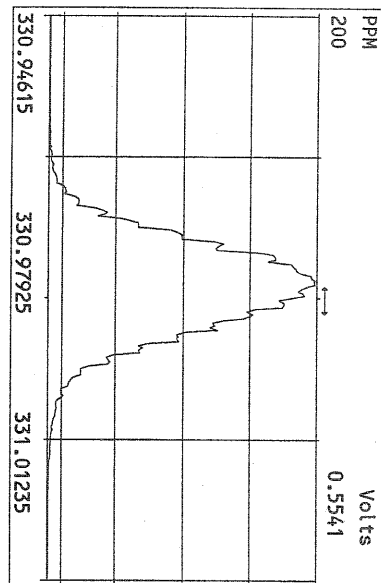
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09JUL09M	3	1754-001-0001-LC2	LCS2	9-JUL-09 15:24:53	ST070909M1	ST070909M2	BS
09JUL09M	4	1754-001-0001-MB	Method Blank	9-JUL-09 16:20:15	ST070909M1	ST070909M2	BS
09JUL09M	5	5557-007-0001-SA	CAMU-S3-061609BS	9-JUL-09 17:15:38	ST070909M1	ST070909M2	BS
09JUL09M	6	5557-001-0001-SA	CAMU-S1-061809	9-JUL-09 18:11:01	ST070909M1	ST070909M2	BS
09JUL09M	7	5557-002-0001-SA	CAMU-S3-061809	9-JUL-09 19:06:20	ST070909M1	ST070909M2	BS
09JUL09M	8	5557-003-0001-SA	OFF-03-061809	9-JUL-09 20:01:38	ST070909M1	ST070909M2	BS
09JUL09M	9	5557-004-0001-SA	OFF-04-061809	9-JUL-09 20:56:57	ST070909M1	ST070909M2	BS
09JUL09M	10	5557-005-0001-SA	CAMU-S1-061609	9-JUL-09 21:52:12	ST070909M1	ST070909M2	BS
09JUL09M	11	5557-006-0001-SA	CAMU-S3-061609	9-JUL-09 22:47:23	ST070909M1	ST070909M2	BS
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09JUL09M	14	SB070909M1	Solvent Blank	10-JUL-09 01:33:07	ST070909M1	ST070909M2	BS
09JUL09M	15	ST070909M2	AIR CS3 (0901211)	10-JUL-09 02:28:22	ST070909M2	ST070909M3	BS
09JUL09M	16	ST070909M3	1613 CS3	10-JUL-09 03:23:39	ST070909M2	ST070909M3	BS
09JUL09M	17	1758-001-0001-LC1	LCS1	10-JUL-09 04:18:54	ST070909M2	ST070909M3	BS
09JUL09M	18	1758-001-0001-LC2	LCS2	10-JUL-09 05:14:08	ST070909M2	ST070909M3	BS
09JUL09M	19	1758-001-0001-MB	Method Blank	10-JUL-09 06:09:24	ST070909M2	ST070909M3	BS
09JUL09M	20	QC070909M1	PUFQC062609A	10-JUL-09 07:04:37	ST070909M2	ST070909M3	BS
09JUL09M	21	QC070909M2	FilterQC062609B	10-JUL-09 07:59:52	ST070909M2	ST070909M3	BS
09JUL09M	22	5561-001-0001-SA	OFF03062309	10-JUL-09 08:55:11	ST070909M2	ST070909M3	BS
09JUL09M	23	5561-002-0001-SA	OFF04062309	10-JUL-09 09:50:29	ST070909M2	ST070909M3	BS
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09JUL09M	25	5562-002-0001-SA	CAMUS3062309	10-JUL-09 11:41:00	ST070909M2	ST070909M3	BS
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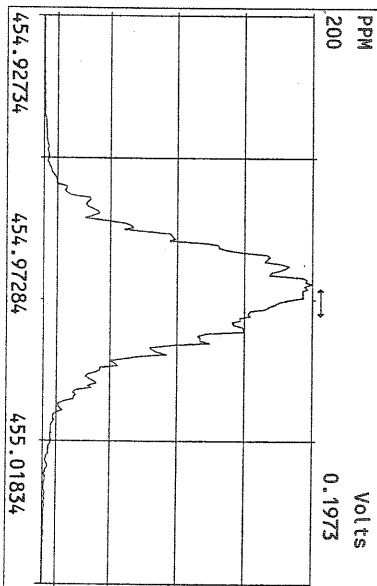
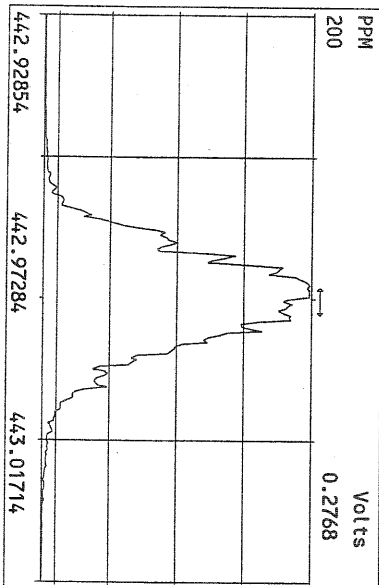
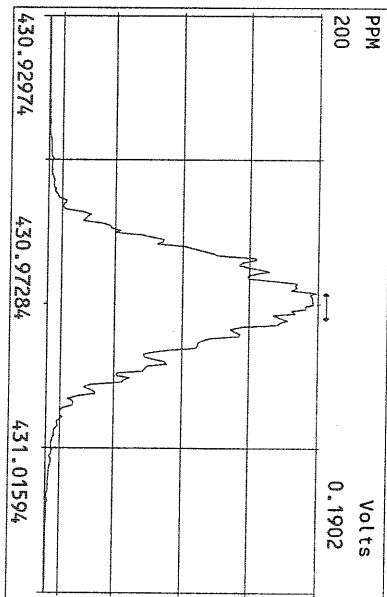
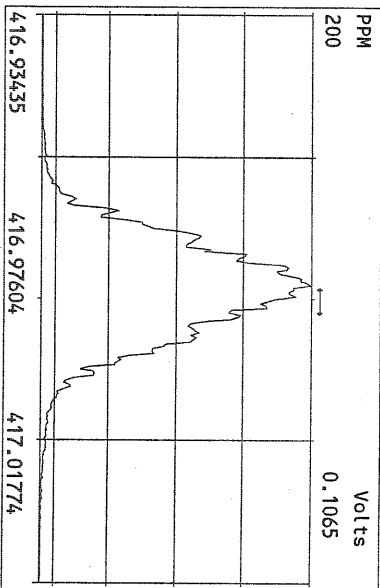
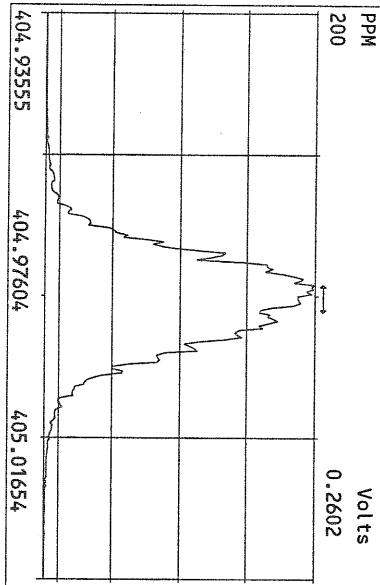
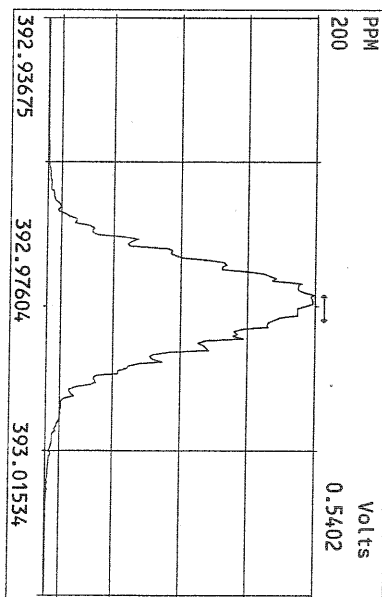
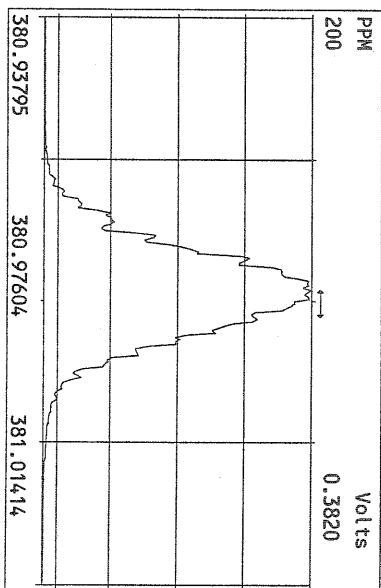
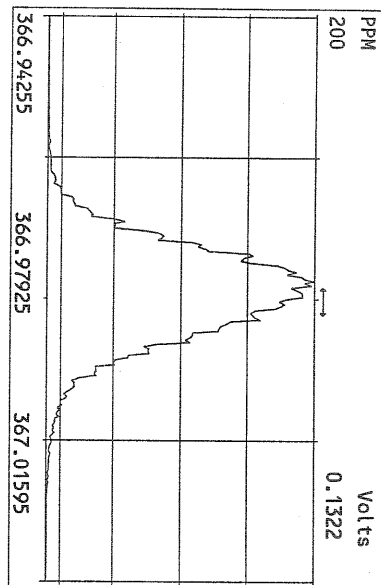
8 7/10/09

Data Backed Up:\_\_\_\_\_

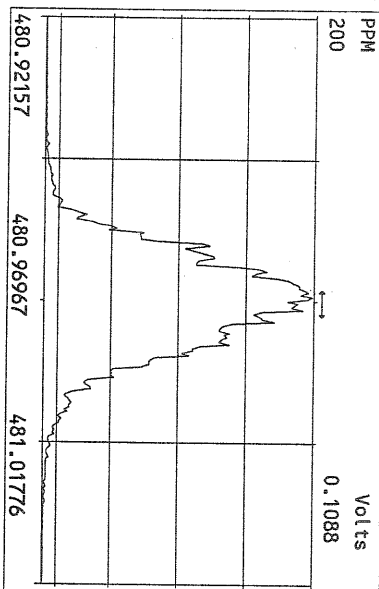
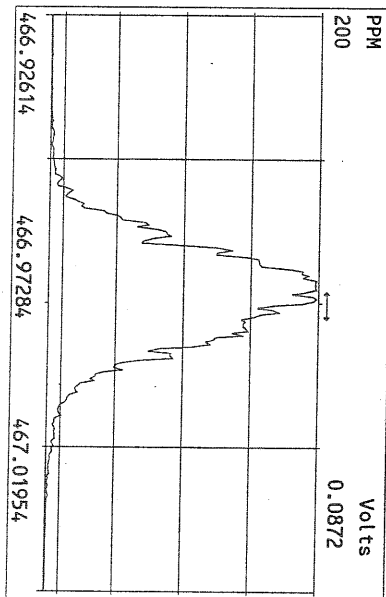
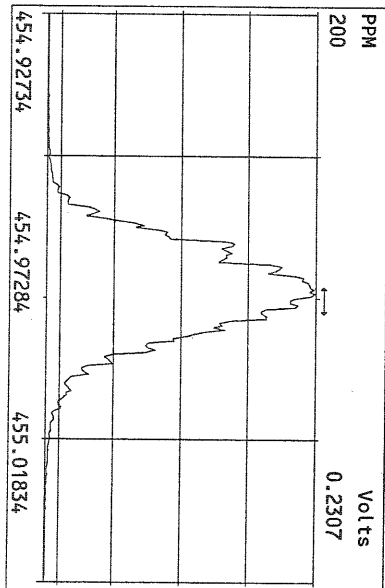
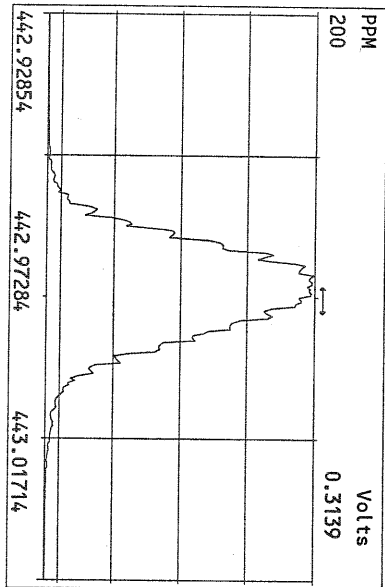
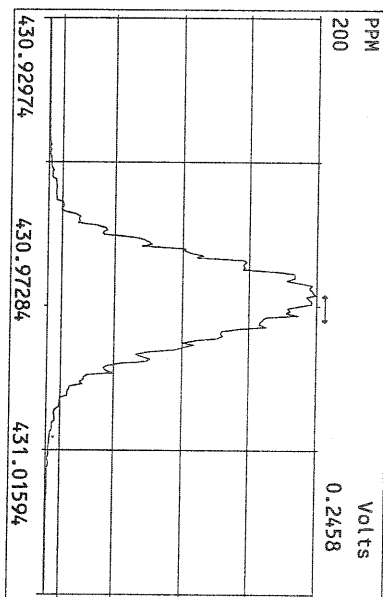
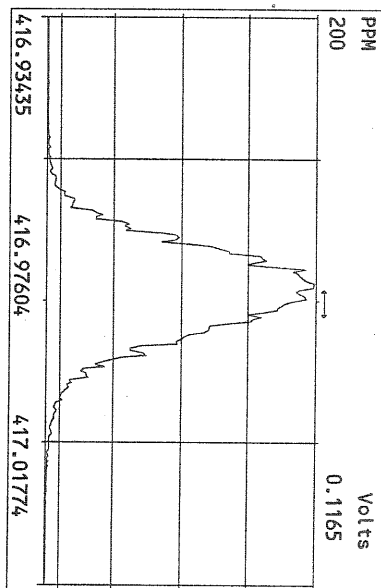
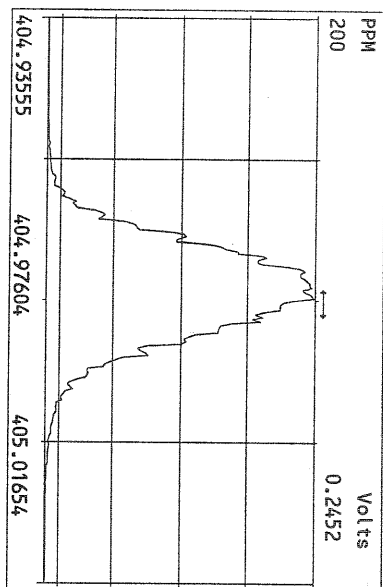
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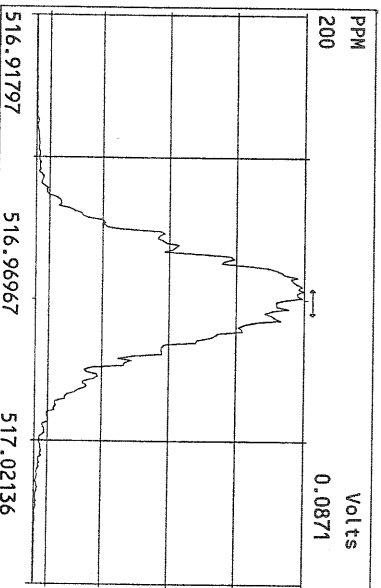
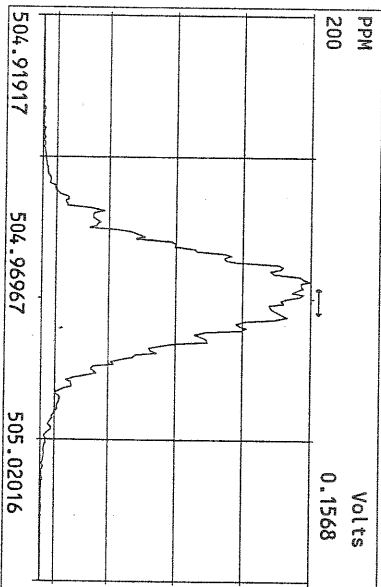
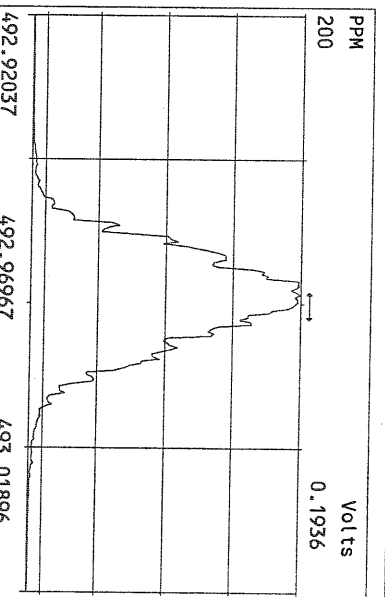
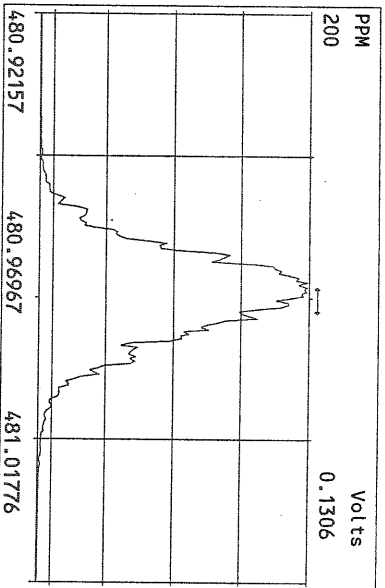
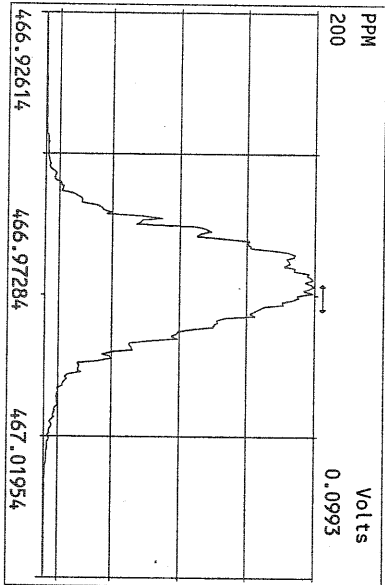
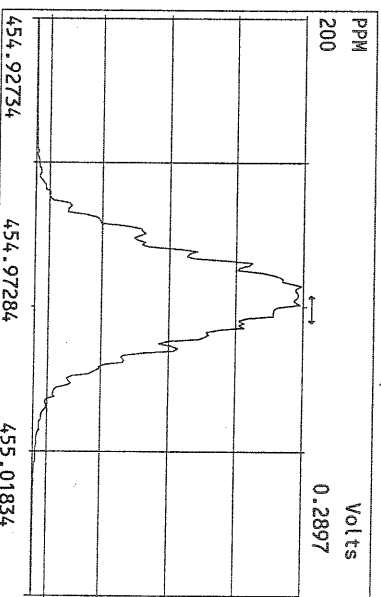
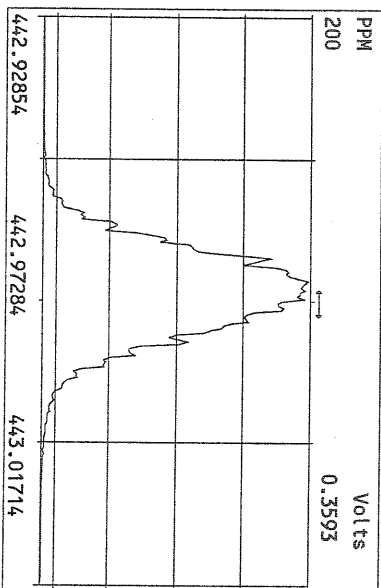
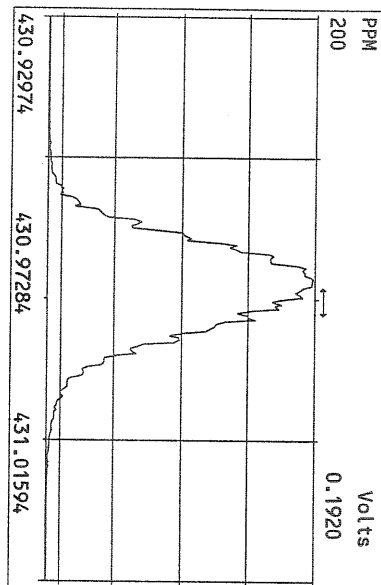




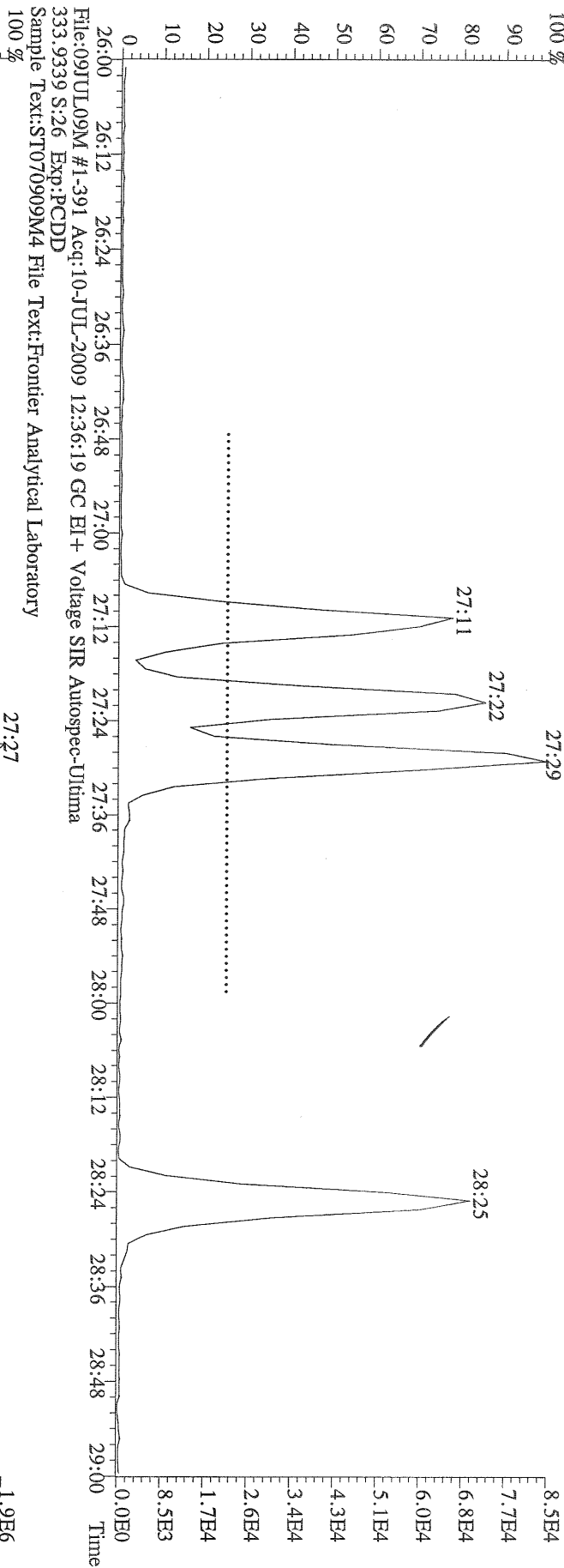




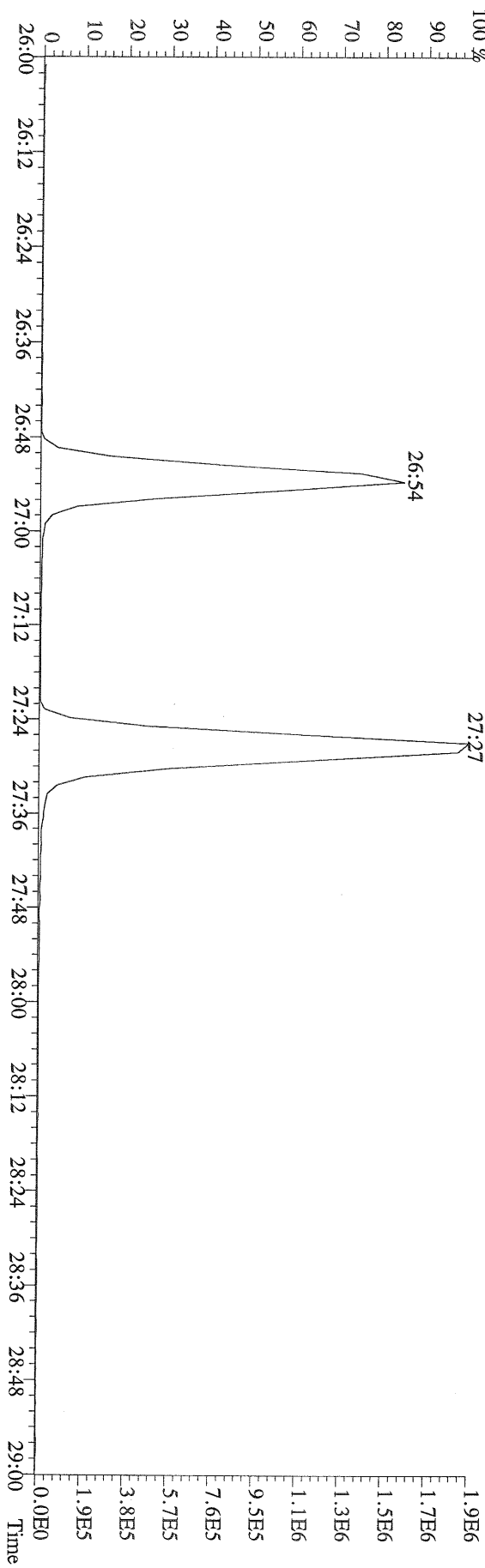




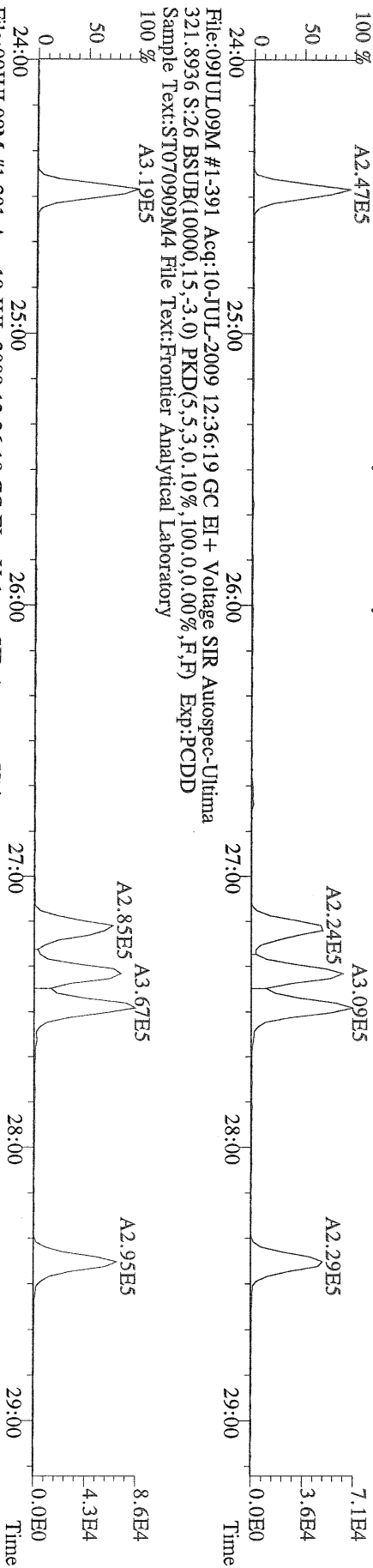
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100 %



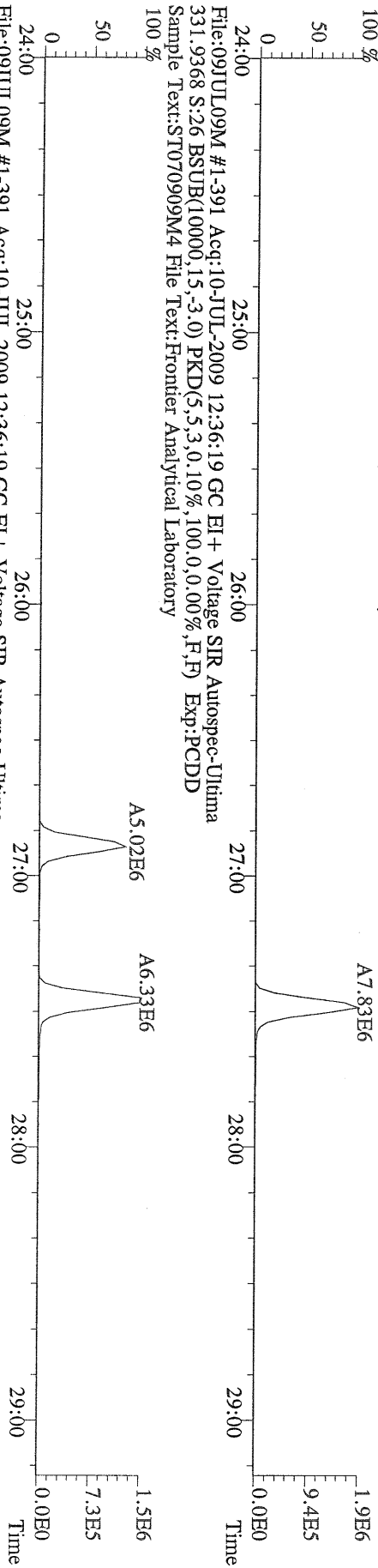
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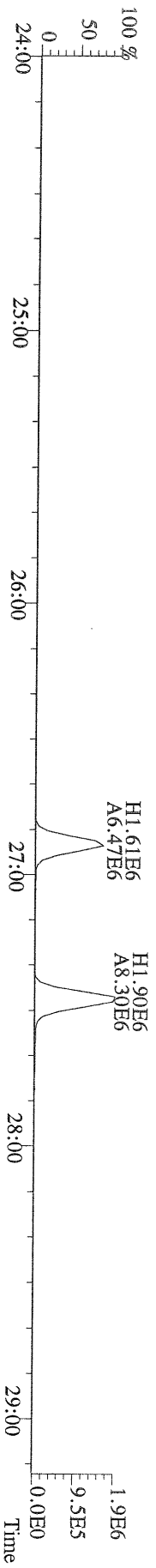
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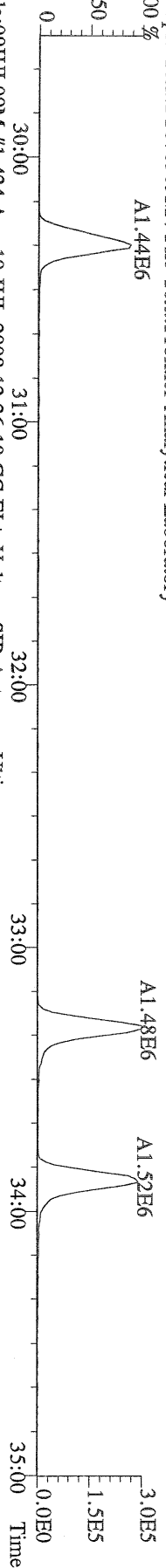
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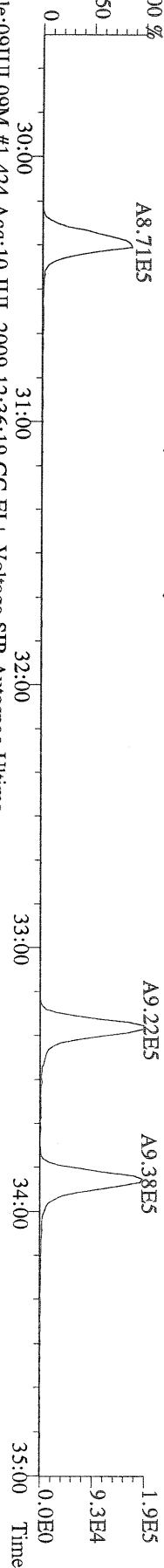
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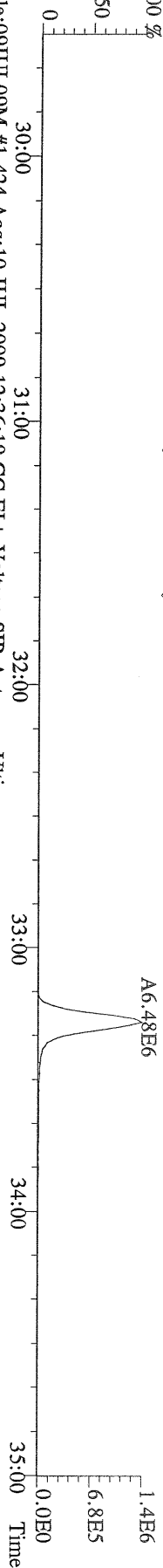
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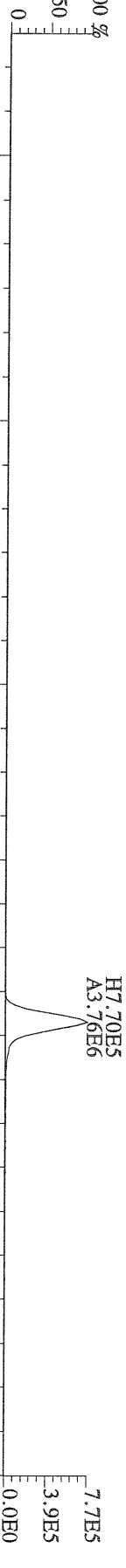
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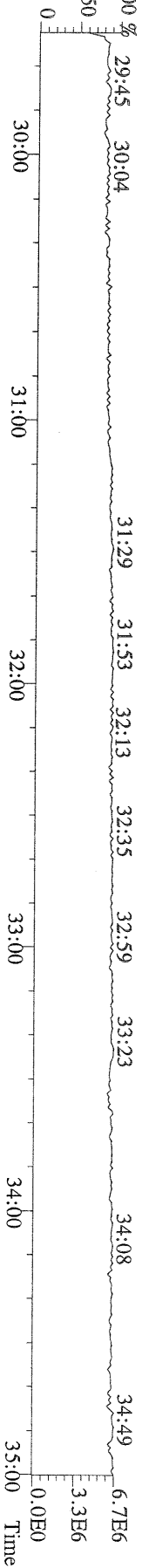
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Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



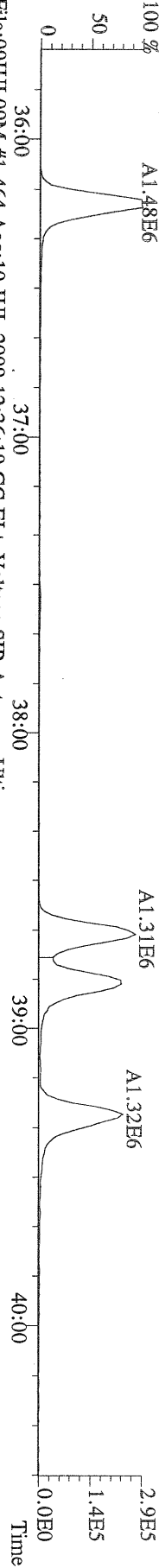
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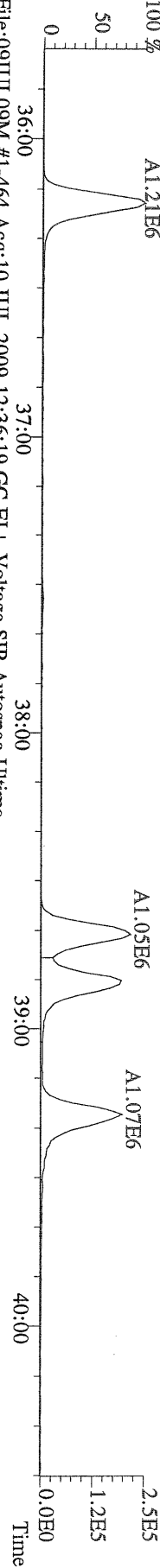
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Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



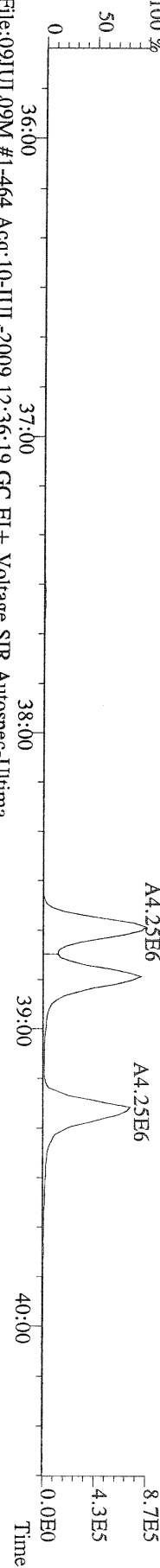
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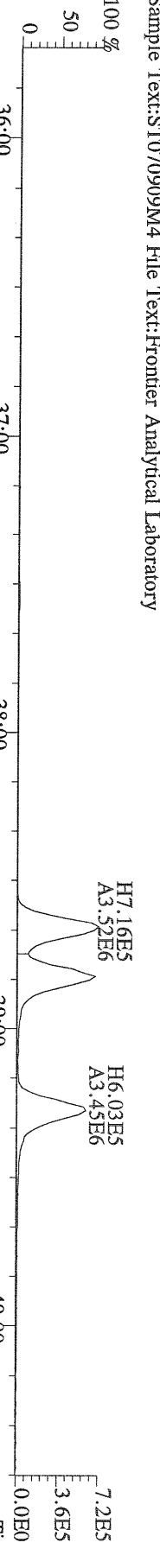
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Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



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401.8559 S:2.6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



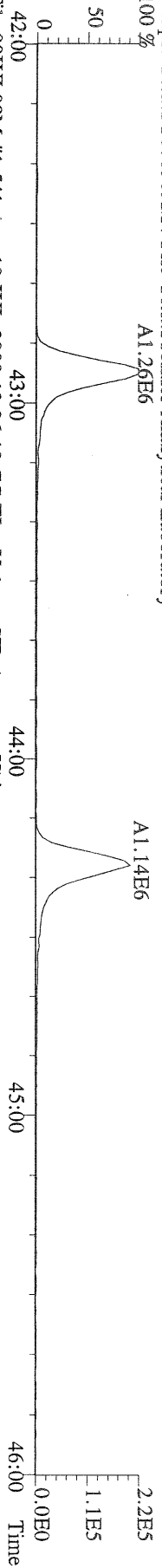
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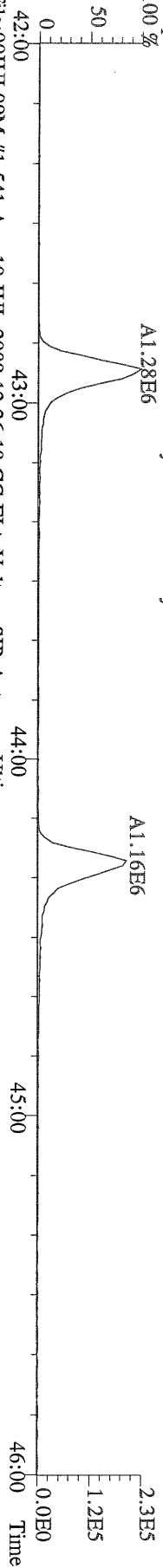
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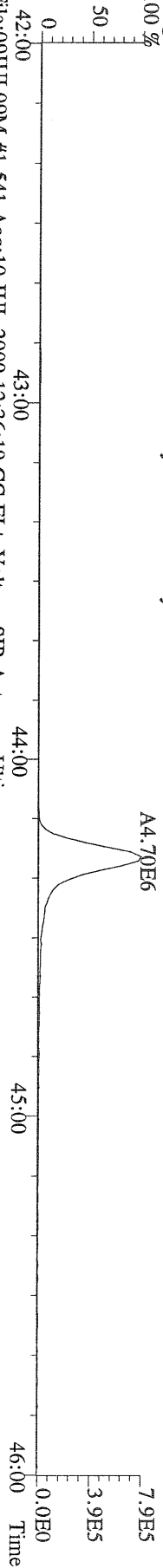
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Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



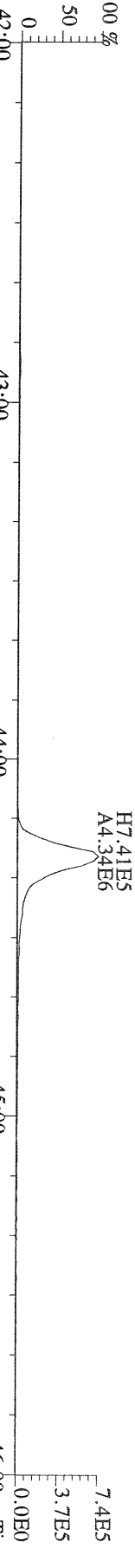
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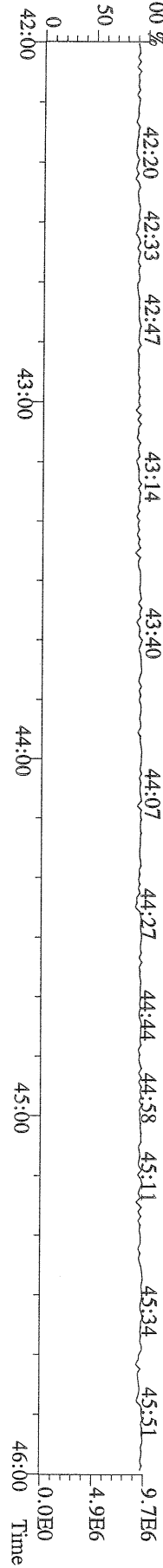
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435.8169 S:2.6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



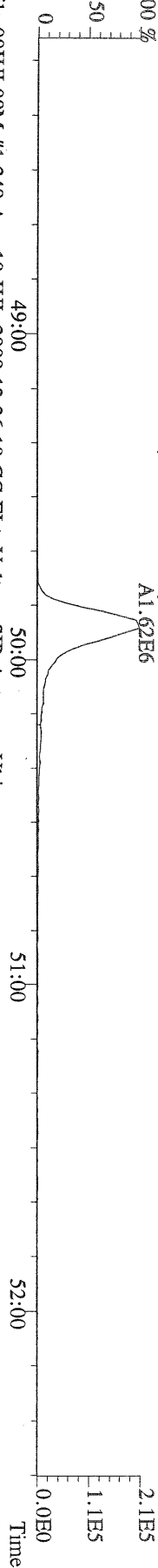
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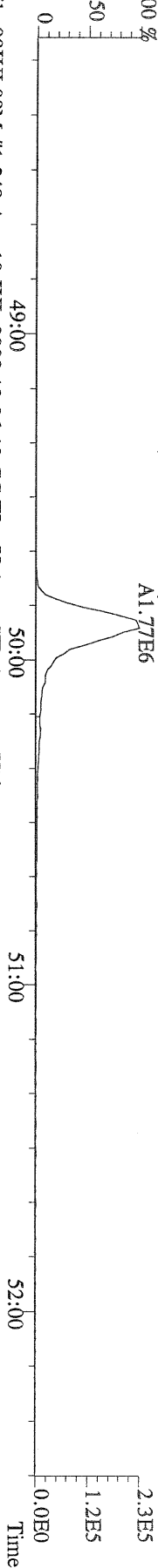
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430.9728 S:2.6 F:4 Exp:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



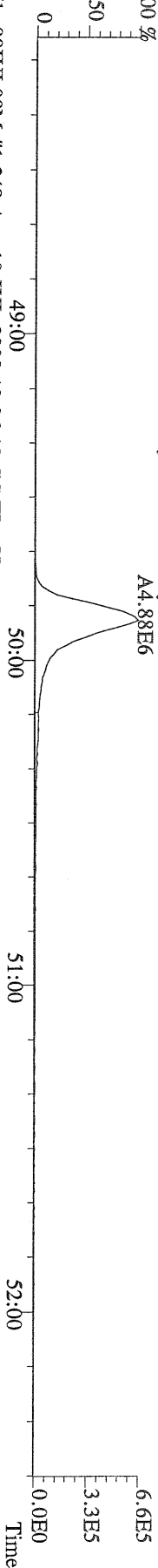
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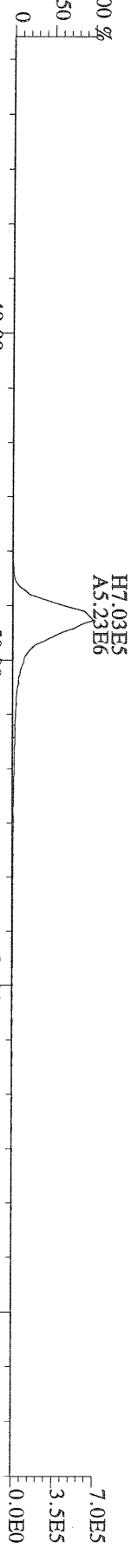
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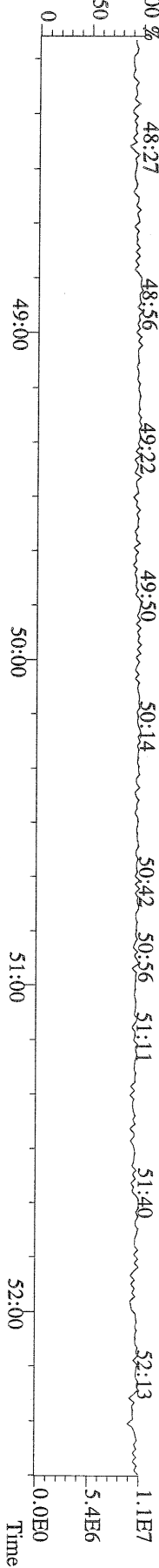
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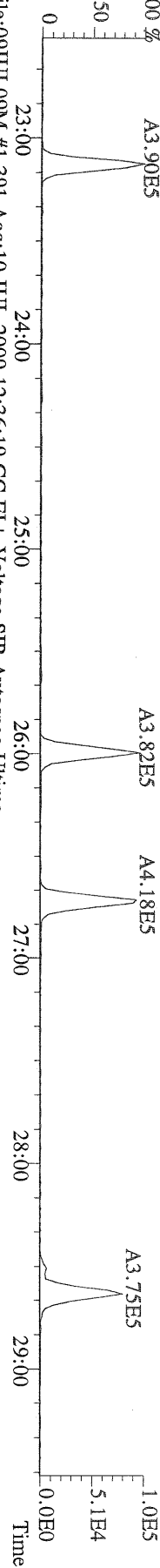


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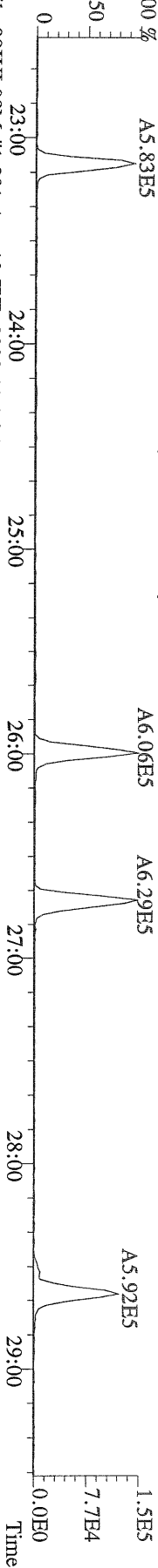




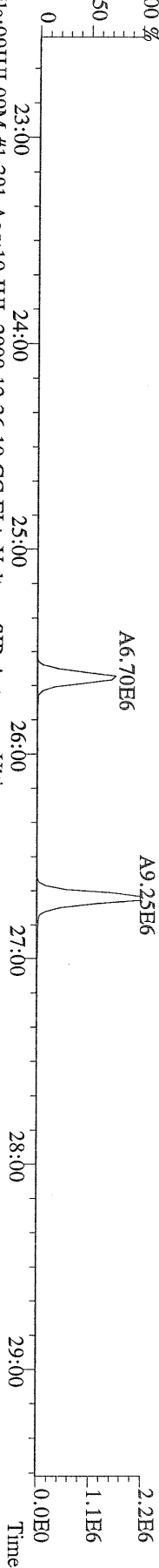
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303.9016 S:2.6 BSUB(10000,15,-3.0) PKD(5,5,3,0,10%,100.0,0.00%,F,F) Exp:PCDD  
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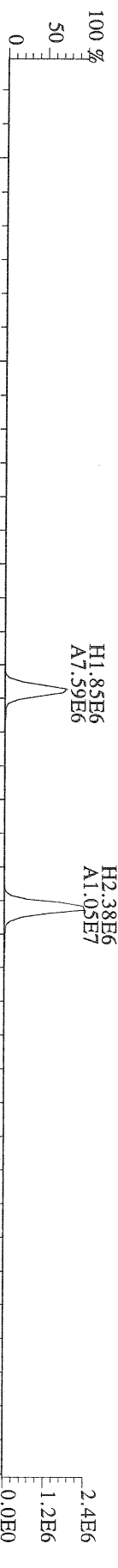
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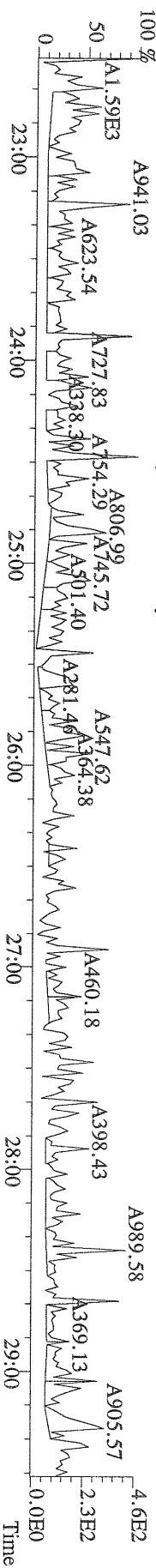
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Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



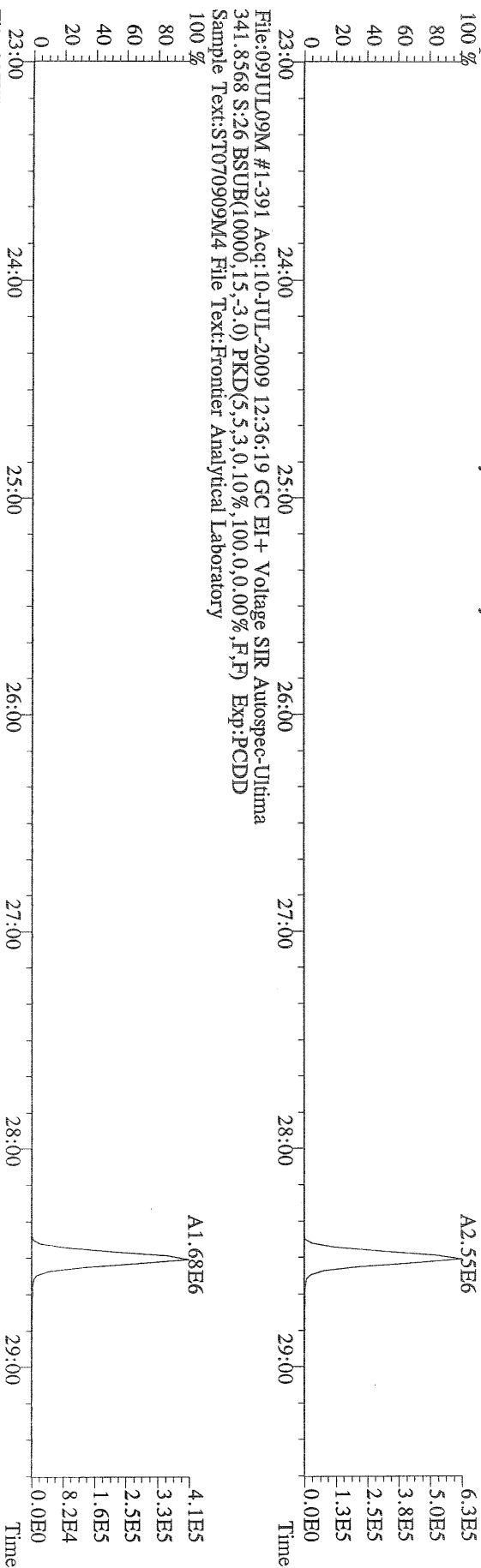
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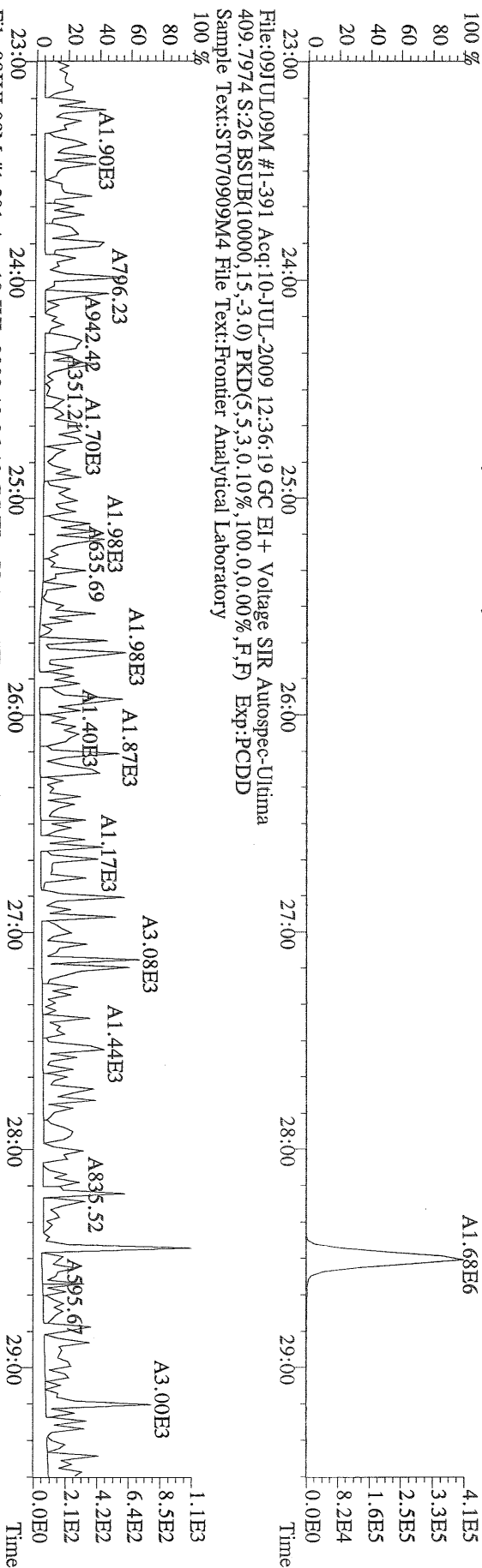
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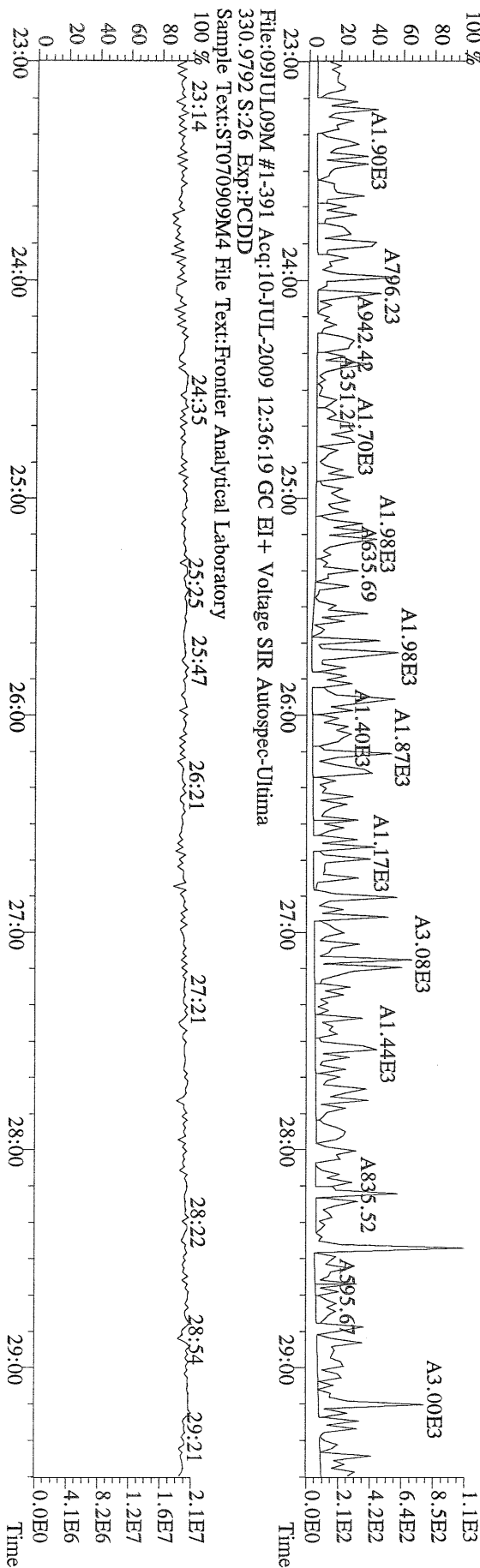
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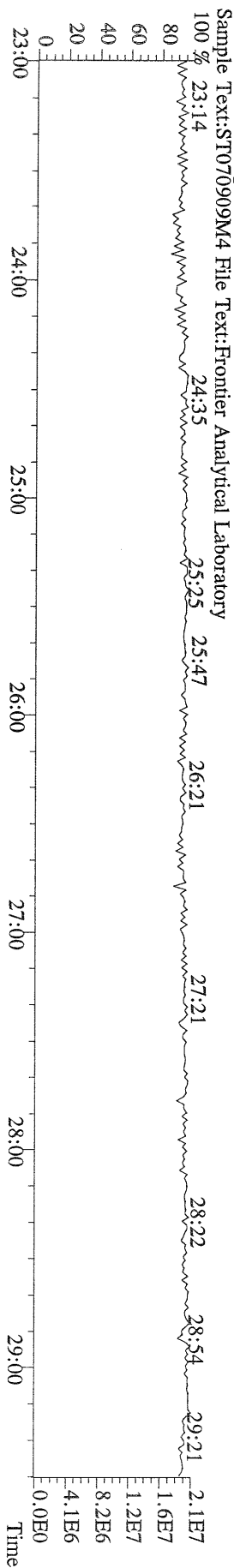
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Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



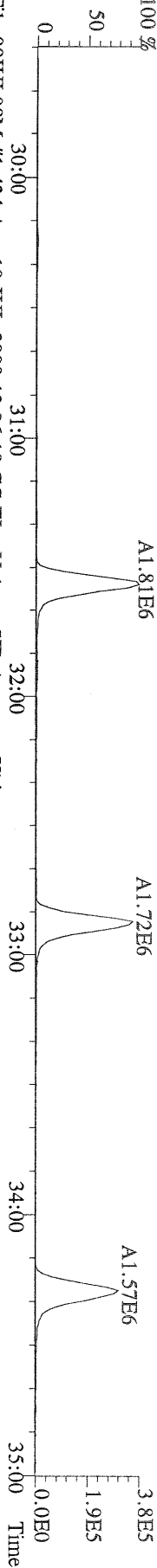
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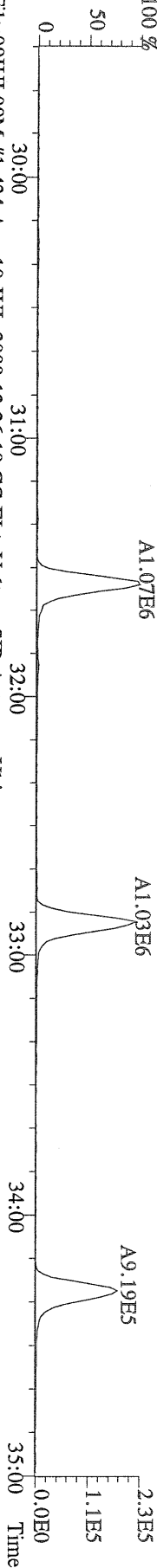
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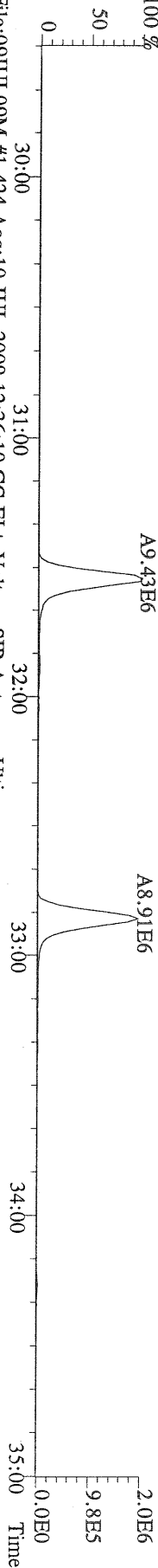
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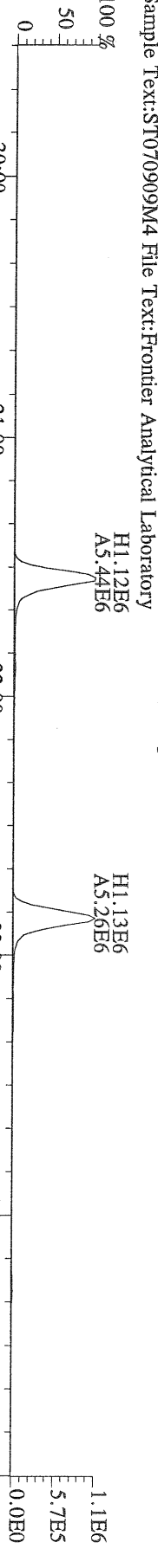
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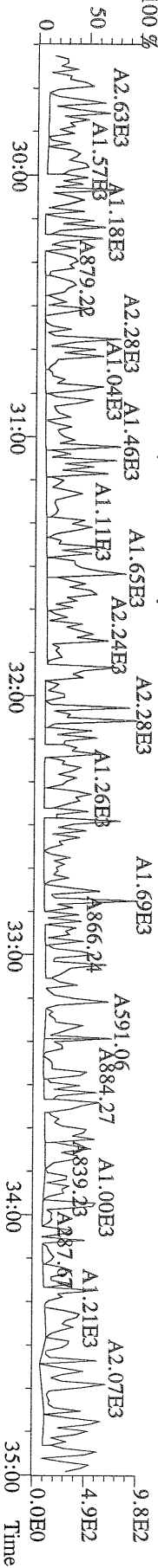
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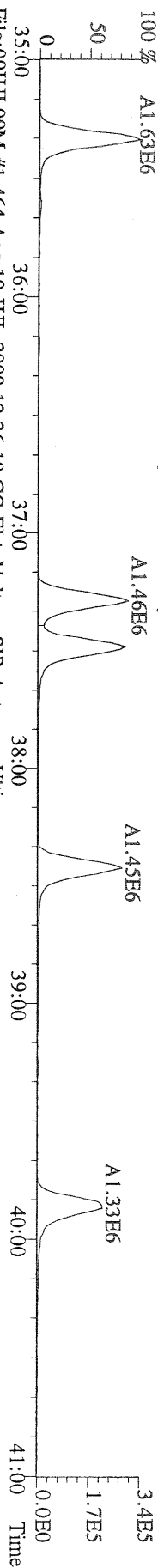
File:09JUL09M #1-424 Acq:10-JUL-2009 12:36:19 GC EI+ Voltage SIR Autospec-Ultima  
353.8970 S:2.6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



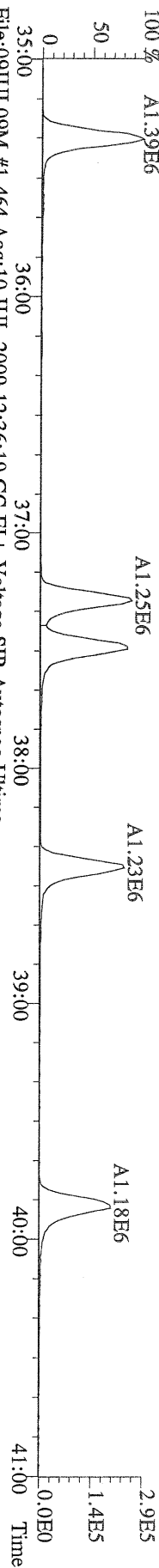
File:09JUL09M #1-424 Acq:10-JUL-2009 12:36:19 GC EI+ Voltage SIR Autospec-Ultima  
409.7974 S:2.6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



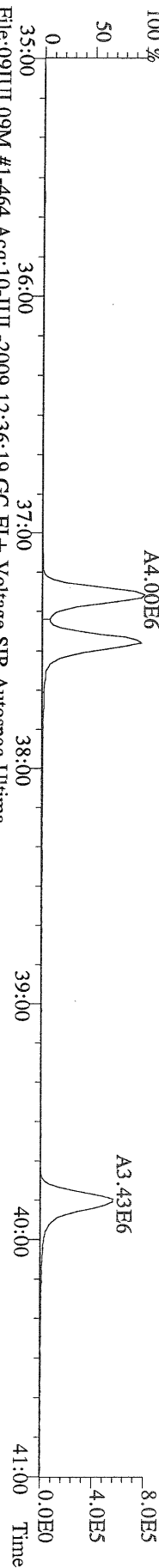
File:09JUL09M #1-464 Acq:10-JUL-2009 12:36:19 GC EI+ Voltage SIR Autospec-Ultima  
373.8207 S:2.6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp.:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



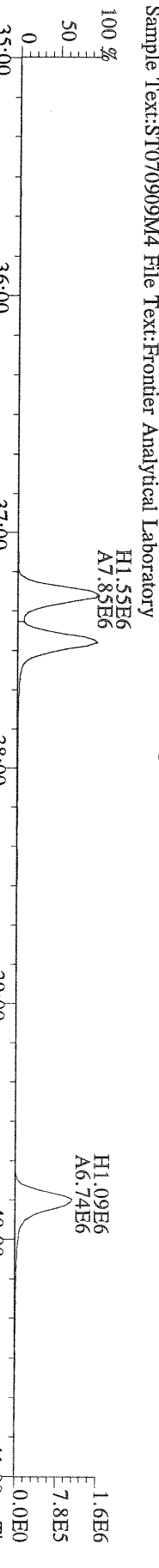
File:09JUL09M #1-464 Acq:10-JUL-2009 12:36:19 GC EI+ Voltage SIR Autospec-Ultima  
375.8178 S:2.6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp.:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



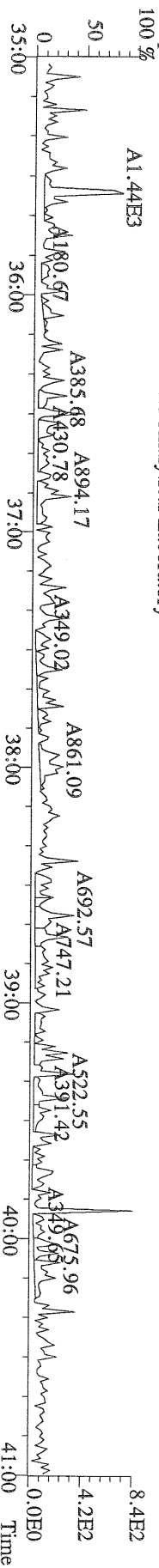
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383.8639 S:2.6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp.:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



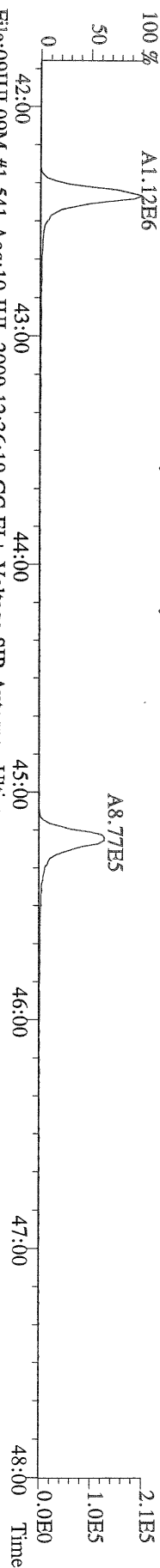
File:09JUL09M #1-464 Acq:10-JUL-2009 12:36:19 GC EI+ Voltage SIR Autospec-Ultima  
385.8610 S:2.6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp.:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



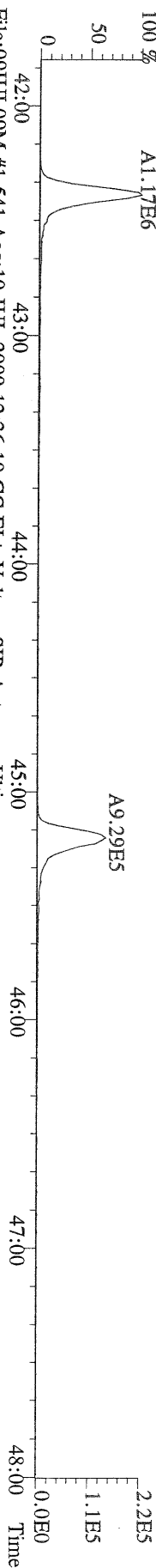
File:09JUL09M #1-464 Acq:10-JUL-2009 12:36:19 GC EI+ Voltage SIR Autospec-Ultima  
445.7555 S:2.6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp.:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



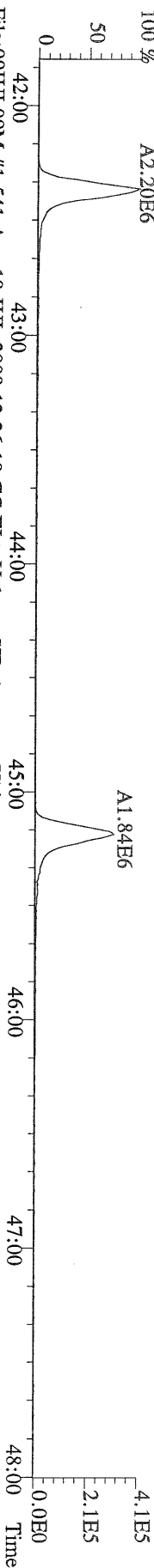
File:09JUL09M #1-541 Acq:10-JUL-2009 12:36:19 GC EI+ Voltage SIR Autospec-Ultima  
407.7818 S:26 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



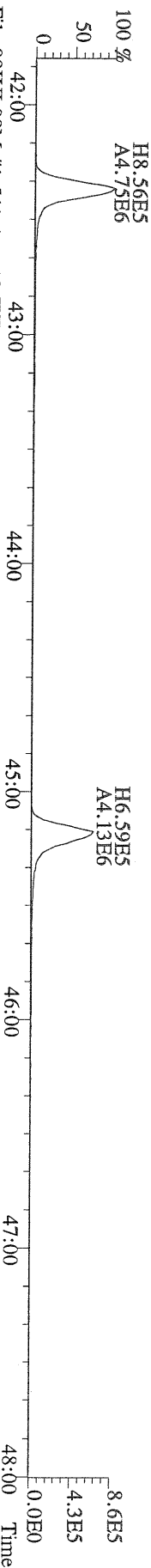
File:09JUL09M #1-541 Acq:10-JUL-2009 12:36:19 GC EI+ Voltage SIR Autospec-Ultima  
409.7788 S:26 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



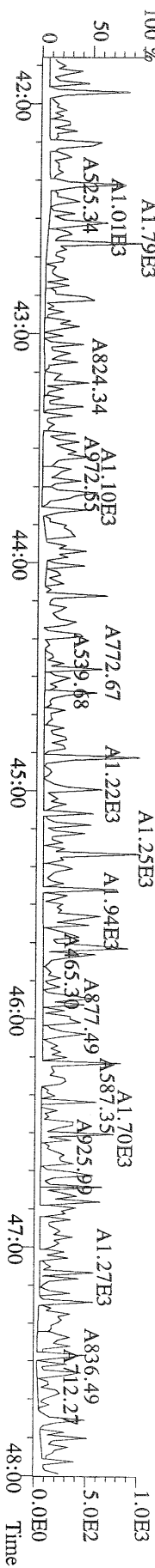
File:09JUL09M #1-541 Acq:10-JUL-2009 12:36:19 GC EI+ Voltage SIR Autospec-Ultima  
417.8253 S:26 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



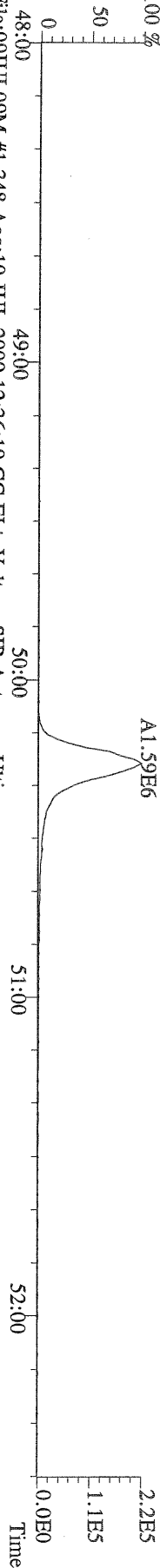
File:09JUL09M #1-541 Acq:10-JUL-2009 12:36:19 GC EI+ Voltage SIR Autospec-Ultima  
419.8220 S:26 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



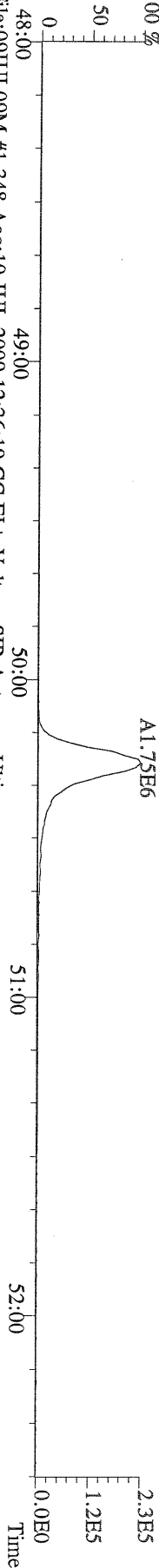
File:09JUL09M #1-541 Acq:10-JUL-2009 12:36:19 GC EI+ Voltage SIR Autospec-Ultima  
479.7165 S:26 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100,0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



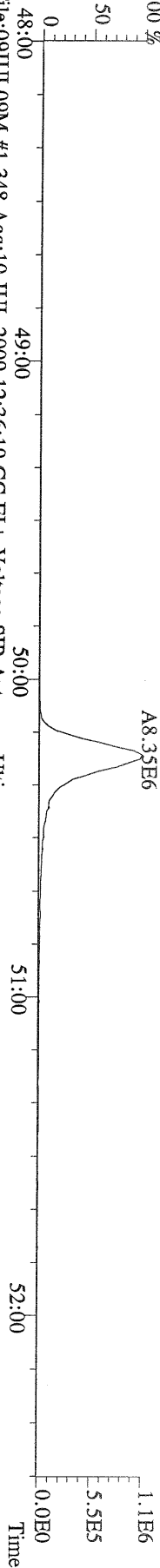
File:09JUL09M #1-348 Acq:10-JUL-2009 12:36:19 GC EI+ Voltage SIR Autospec-Ultima  
441.7428 S:26 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



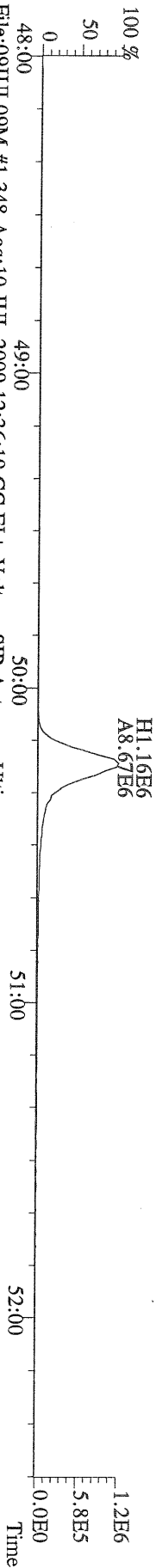
File:09JUL09M #1-348 Acq:10-JUL-2009 12:36:19 GC EI+ Voltage SIR Autospec-Ultima  
443.7398 S:26 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



File:09JUL09M #1-348 Acq:10-JUL-2009 12:36:19 GC EI+ Voltage SIR Autospec-Ultima  
453.7831 S:26 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



File:09JUL09M #1-348 Acq:10-JUL-2009 12:36:19 GC EI+ Voltage SIR Autospec-Ultima  
455.7801 S:26 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory



File:09JUL09M #1-348 Acq:10-JUL-2009 12:36:19 GC EI+ Voltage SIR Autospec-Ultima  
513.6775 S:26 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD  
Sample Text:ST070909M4 File Text:Frontier Analytical Laboratory

