August 31, 2016

Gretchen Heavner, Ph.D.
Floyd Snider
601 Union St. Ste. 600
Seattle, WA 98101

Dear Dr. Heavner,

Enclosed are the results for Frontier Analytical Laboratory project **10095**. These results correspond to your project **LDW ENRIAC Pilot Study** and project number **LY15160310**. Two sediment samples were received on 8/12/2016. These samples were extracted and analyzed following EPA Method 1668C for all 209 polychlorinated biphenyls (PCBs). The total PCB concentration is listed in the upper right hand corner of the first data page (Page 1 of 3) of each EPA Method 1668C sample. In addition, both samples were extracted and analyzed by EPA Method 1613 for tetra through octa chlorinated dibenzo dioxins and furans. The World Health Organizations (WHO) 2005 toxic equivalent Factors (TEFs) were used to determine the toxic equivalent quotient (TEQ) for these samples. The TEQ is located in the upper right hand corner of each EPA Method 1613 data sheet. A turnaround time of fifteen business days was requested for project **10095**.

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 a sample photo. The Laboratory Raw Data section contains our project request sheet, a percent solids sheet, an extraction bench sheet and the cleanup bench sheet. The instrument raw data section contains three sub-sections; the sample results section, the initial calibration section and the continuing/ending calibration section. The sample results sub-section consists of the quantitation summary forms and chromatograms for all samples and QC. The initial calibration sub-section consists of the individual quantitation summary forms and chromatograms for each point of the initial calibration curve as well as an overall quantitation summary form of the initial calibration curve. The continuing/ending calibration sub-section consists of the quantitation summary forms and chromatograms for all beginning and ending calibration injections associated with the samples and QC. The enclosed results are specifically for the sample referenced in this report only. These results meet all National Environmental Laboratory Accreditation Program (NELAP) requirements and shall not be reproduced except in full. Frontier Analytical Laboratory's State of Oregon NELAP certificate number is **4041**. Our State of Washington ELAP certificate number is **C844**. This report and the EDD have been emailed to you. A portable document format (PDF) file of this report on compact disk has also been mailed to you.

If you have any questions regarding project **10095**, please feel free to contact me at 916-934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Bradley B. Silverbush
Director of Operations

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **10095**

Received on: **08/12/2016** Project Due: **09/05/2016** Storage: **R2**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
10095-001-SA	1	LY15160310	LDW-BA-PC-ENRMAT-SAND	EPA 1668 PCB	Sediment	08/09/2016	10:30 am	08/09/2017
10095-001-SA	1	LY15160310	LDW-BA-PC-ENRMAT-SAND	EPA 1613 D/F	Sediment	08/09/2016	10:30 am	08/09/2017
10095-002-SA	1	LY15160310	LDW-BA-PC-ENRMAT-GRUSAND	EPA 1668 PCB	Sediment	08/09/2016	10:45 am	08/09/2017
10095-002-SA	1	LY15160310	LDW-BA-PC-ENRMAT-GRUSAND	EPA 1613 D/F	Sediment	08/09/2016	10:45 am	08/09/2017

FAL Sample ID	Notes
10095-001-SA	Use sampling date from jar label per Gretchen to Kathy.
10095-002-SA	Use sampling date from jar label per Gretchen to Kathy.
10095-001-SA	Use sampling date from jar label per Gretchen to Kathy.
10095-002-SA	Use sampling date from jar label per Gretchen to Kathy.

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

EPA Method 1668
PCBs

FAL ID: 10095-001-MB
Client ID: Method Blank
Matrix: Sediment
Batch No: X3814

Date Extracted: 08-16-2016
Date Received: NA
Amount: 5.00 g

ICal: DAILY209FAL4-8-18-16
GC Column: DB1
Units: pg/g

Acquired: 08-18-2016
Total Conc: 0.00

Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	ND	0.381			PCB-51	ND	0.953		
PCB-2	ND	0.601			PCB-52	ND	0.780	C	69
PCB-3	ND	0.659			PCB-53	ND	0.954		
PCB-4	ND	0.800			PCB-54	ND	0.689		
PCB-5	ND	0.923			PCB-55	ND	0.757		
PCB-6	ND	0.930			PCB-56	ND	1.20	C	60
PCB-7	ND	0.946			PCB-57	ND	0.779		
PCB-8	ND	1.09			PCB-58	ND	0.744		
PCB-9	ND	0.977			PCB-59	-	-	C042	42
PCB-10	ND	0.974			PCB-60	-	-	C056	56
PCB-11	ND	1.15			PCB-61	ND	0.726	C	70
PCB-12	ND	1.08			PCB-62	ND	0.840		
PCB-13	ND	1.23			PCB-63	ND	0.781		
PCB-14	ND	0.979			PCB-64	-	-	C041	41/71/72
PCB-15	ND	1.37			PCB-65	ND	0.776		
PCB-16	ND	0.752			PCB-66	ND	0.745	C	76
PCB-17	ND	0.847			PCB-67	ND	0.853		
PCB-18	ND	0.953			PCB-68	ND	0.752		
PCB-19	ND	0.892			PCB-69	-	-	C052	52
PCB-20	ND	1.55	C	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	ND	1.56			PCB-72	-	-	C041	41/64/71
PCB-23	ND	1.51			PCB-73	ND	0.792		
PCB-24	ND	0.620			PCB-74	ND	0.767		
PCB-25	ND	1.30			PCB-75	-	-	C048	48
PCB-26	ND	1.66			PCB-76	-	-	C066	66
PCB-27	ND	0.675			PCB-77	ND	1.48		
PCB-28	ND	1.32			PCB-78	ND	1.38		
PCB-29	ND	1.61			PCB-79	ND	1.30		
PCB-30	ND	0.632			PCB-80	ND	0.688		
PCB-31	ND	1.66			PCB-81	ND	1.17		
PCB-32	ND	0.764			PCB-82	ND	1.37		
PCB-33	-	-	C020	20/21	PCB-83	ND	0.972	C	112
PCB-34	ND	1.83			PCB-84	ND	1.14	C	92
PCB-35	ND	1.89			PCB-85	ND	0.926	C	116
PCB-36	ND	1.75			PCB-86	ND	1.21		
PCB-37	ND	1.56			PCB-87	ND	0.867	C	117/125
PCB-38	ND	1.65			PCB-88	ND	1.23	C	91
PCB-39	ND	1.75			PCB-89	ND	1.14		
PCB-40	ND	1.29			PCB-90	ND	0.994	C	101
PCB-41	ND	0.770	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	ND	0.827	C	59	PCB-92	-	-	C084	84
PCB-43	ND	1.01	C	49	PCB-93	ND	1.48		
PCB-44	ND	1.13			PCB-94	ND	1.38		
PCB-45	ND	1.09			PCB-95	ND	1.25		
PCB-46	ND	1.15			PCB-96	ND	0.959		
PCB-47	ND	0.835			PCB-97	ND	0.954		
PCB-48	ND	0.799	C	75	PCB-98	ND	1.06	C	102
PCB-49	-	-	C043	43	PCB-99	ND	1.00		
PCB-50	ND	0.944			PCB-100	ND	1.15		

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

EPA Method 1668
PCBs

FAL ID: 10095-001-MB
Client ID: Method Blank
Matrix: Sediment
Batch No: X3814

Date Extracted: 08-16-2016
Date Received: NA
Amount: 5.00 g

ICal: DAILY209FAL4-8-18-16
GC Column: DB1
Units: pg/g

Acquired: 08-18-2016

Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	ND	1.24		
PCB-102	-	-	C098	98	PCB-152	ND	0.840		
PCB-103	ND	1.10			PCB-153	ND	1.04		
PCB-104	ND	0.853			PCB-154	ND	1.03		
PCB-105	ND	1.05			PCB-155	ND	0.757		
PCB-106	ND	0.891	C	118	PCB-156	ND	0.949		
PCB-107	ND	0.867	C	108	PCB-157	ND	1.10		
PCB-108	-	-	C107	107	PCB-158	ND	0.953	C	160
PCB-109	ND	0.840			PCB-159	ND	0.950		
PCB-110	ND	0.752			PCB-160	-	-	C158	158
PCB-111	ND	0.724	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	ND	0.831			PCB-163	-	-	C138	138/164
PCB-114	ND	0.871			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	ND	1.01		
PCB-117	-	-	C087	87/125	PCB-167	ND	0.997		
PCB-118	-	-	C106	106	PCB-168	ND	0.928		
PCB-119	ND	0.784			PCB-169	ND	1.43		
PCB-120	ND	0.771			PCB-170	ND	1.20		
PCB-121	ND	0.993			PCB-171	ND	0.977		
PCB-122	ND	0.899			PCB-172	ND	1.06		
PCB-123	ND	0.801			PCB-173	ND	1.09		
PCB-124	ND	0.928			PCB-174	ND	0.933		
PCB-125	-	-	C087	87/117	PCB-175	ND	0.886		
PCB-126	ND	1.56			PCB-176	ND	0.663		
PCB-127	ND	0.988			PCB-177	ND	1.03		
PCB-128	ND	1.14	C	162	PCB-178	ND	0.937		
PCB-129	ND	1.56			PCB-179	ND	0.625		
PCB-130	ND	1.50			PCB-180	ND	0.803		
PCB-131	ND	1.22	C	133	PCB-181	ND	0.913		
PCB-132	ND	1.08	C	161	PCB-182	ND	0.820	C	187
PCB-133	-	-	C131	131	PCB-183	ND	0.832		
PCB-134	ND	1.23	C	143	PCB-184	ND	0.597		
PCB-135	ND	1.14			PCB-185	ND	0.937		
PCB-136	ND	0.858			PCB-186	ND	0.656		
PCB-137	ND	1.25			PCB-187	-	-	C182	182
PCB-138	ND	0.940	C	163/164	PCB-188	ND	0.649		
PCB-139	ND	1.10	C	149	PCB-189	ND	0.841		
PCB-140	ND	1.17			PCB-190	ND	0.831		
PCB-141	ND	1.22			PCB-191	ND	0.790		
PCB-142	ND	1.38			PCB-192	ND	0.769		
PCB-143	-	-	C134	134	PCB-193	ND	0.731		
PCB-144	ND	1.17			PCB-194	ND	0.856		
PCB-145	ND	0.875			PCB-195	ND	0.928		
PCB-146	ND	1.02	C	165	PCB-196	ND	1.01	C	203
PCB-147	ND	1.13			PCB-197	ND	0.662		
PCB-148	ND	1.23			PCB-198	ND	1.00		
PCB-149	-	-	C139	139	PCB-199	ND	1.15		
PCB-150	ND	0.830			PCB-200	ND	0.712		

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

EPA Method 1668
PCBs

FRONTIER ANALYTICAL LABORATORY

FAL ID: 10095-001-MB
Client ID: Method Blank
Matrix: Sediment
Batch No: X3814

Date Extracted: 08-16-2016
Date Received: NA
Amount: 5.00 g

ICal: DAILY209FAL4-8-18-16
GC Column: DB1
Units: pg/g

Acquired: 08-18-2016

Compound	Conc	DL	Qual	Coeluters
PCB-201	ND	0.711		
PCB-202	ND	0.700		
PCB-203	-	-	C196	196
PCB-204	ND	0.681		
PCB-205	ND	0.674		
PCB-206	ND	0.814		
PCB-207	ND	0.664		
PCB-208	ND	0.617		
PCB-209	ND	0.540		

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	91.1	5.00 - 145	
13C-PCB-3	85.9	5.00 - 145	
13C-PCB-4	97.2	5.00 - 145	
13C-PCB-15	76.8	5.00 - 145	
13C-PCB-19	90.6	5.00 - 145	
13C-PCB-37	81.0	5.00 - 145	
13C-PCB-54	93.1	5.00 - 145	
13C-PCB-77	87.2	10.0 - 145	
13C-PCB-81	87.5	10.0 - 145	
13C-PCB-104	89.2	10.0 - 145	
13C-PCB-105	86.0	10.0 - 145	
13C-PCB-114	97.4	10.0 - 145	
13C-PCB-118	96.3	10.0 - 145	
13C-PCB-123	84.7	10.0 - 145	
13C-PCB-126	92.5	10.0 - 145	
13C-PCB-155	90.8	10.0 - 145	
13C-PCB-156	94.5	10.0 - 145	
13C-PCB-157	100	10.0 - 145	
13C-PCB-167	95.6	10.0 - 145	
13C-PCB-169	95.7	10.0 - 145	
13C-PCB-188	87.9	10.0 - 145	
13C-PCB-189	99.7	10.0 - 145	
13C-PCB-202	94.6	10.0 - 145	
13C-PCB-205	95.3	10.0 - 145	
13C-PCB-206	94.9	10.0 - 145	
13C-PCB-208	87.9	10.0 - 145	
13C-PCB-209	95.7	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	98.6	5.00 - 145	
13C-PCB-111	102	10.0 - 145	
13C-PCB-178	101	10.0 - 145	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Coelution
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
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 at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 8/23/2016

Reviewed By: _____

Date: 8/23/2016

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

EPA Method 1668
PCBs

FAL ID: 10095-001-OPR
Client ID: OPR
Matrix: Sediment
Batch No: X3814

Date Extracted: 08-16-2016
Date Received: NA
Amount: 5.00 g

ICal: DAILY209FAL4-8-18-16
GC Column: DB1
Units: ng/ml

Acquired: 08-18-2016

Compound	% Recovery	QC Limits	Qual
PCB-1	101	60.0 - 135	
PCB-3	106	60.0 - 135	
PCB-4	97.6	60.0 - 135	
PCB-15	95.2	60.0 - 135	
PCB-19	106	60.0 - 135	
PCB-37	93.6	60.0 - 135	
PCB-54	104	60.0 - 135	
PCB-77	108	60.0 - 135	
PCB-81	103	60.0 - 135	
PCB-104	105	60.0 - 135	
PCB-105	97.8	60.0 - 135	
PCB-114	106	60.0 - 135	
PCB-118	106	60.0 - 135	
PCB-123	91.0	60.0 - 135	
PCB-126	94.2	60.0 - 135	
PCB-155	105	60.0 - 135	
PCB-156	102	60.0 - 135	
PCB-157	105	60.0 - 135	
PCB-167	107	60.0 - 135	
PCB-169	109	60.0 - 135	
PCB-188	106	60.0 - 135	
PCB-189	105	60.0 - 135	
PCB-202	110	60.0 - 135	
PCB-205	105	60.0 - 135	
PCB-206	105	60.0 - 135	
PCB-208	106	60.0 - 135	
PCB-209	102	60.0 - 135	

Internal Standards	% Recovery	QC Limits	Qual
13C-PCB-1	86.8	15.0 - 145	
13C-PCB-3	81.1	15.0 - 145	
13C-PCB-4	93.1	15.0 - 145	
13C-PCB-15	80.3	15.0 - 145	
13C-PCB-19	86.0	15.0 - 145	
13C-PCB-37	82.0	15.0 - 145	
13C-PCB-54	86.4	15.0 - 145	
13C-PCB-77	87.0	40.0 - 145	
13C-PCB-81	86.0	40.0 - 145	
13C-PCB-104	86.2	40.0 - 145	
13C-PCB-105	92.9	40.0 - 145	
13C-PCB-114	94.2	40.0 - 145	
13C-PCB-118	89.1	40.0 - 145	
13C-PCB-123	89.2	40.0 - 145	
13C-PCB-126	91.3	40.0 - 145	
13C-PCB-155	89.5	40.0 - 145	
13C-PCB-156	91.3	40.0 - 145	
13C-PCB-157	95.7	40.0 - 145	
13C-PCB-167	91.0	40.0 - 145	
13C-PCB-169	93.7	40.0 - 145	
13C-PCB-188	86.8	40.0 - 145	
13C-PCB-189	97.4	40.0 - 145	
13C-PCB-202	91.5	40.0 - 145	
13C-PCB-205	94.2	40.0 - 145	
13C-PCB-206	96.0	40.0 - 145	
13C-PCB-208	83.1	40.0 - 145	
13C-PCB-209	95.4	40.0 - 145	

Cleanup Surrogate	% Recovery	QC limits	Qual
13C-PCB-28	94.2	15.0 - 145	
13C-PCB-111	93.8	40.0 - 145	
13C-PCB-178	98.5	40.0 - 145	

Analyst: _____

Date: 8/23/2016

Reviewed By: _____

Date: 8/23/2016

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

EPA Method 1668
PCBs

FAL ID: 10095-001-SA
Client ID: LDW-BA-PC-ENRMAT-SAND
Matrix: Sediment
Batch No: X3814

Date Extracted: 08-16-2016
Date Received: 08-12-2016
Amount: 5.05 g
% Solids: 95.76

ICal: DAILY209FAL4-8-18-16
GC Column: DB1
Units: pg/g

Acquired: 08-18-2016
Total Conc: 24.6

Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	ND	0.553			PCB-51	ND	0.775		
PCB-2	ND	0.851			PCB-52	1.75	-	C,J	69
PCB-3	ND	0.914			PCB-53	ND	0.776		
PCB-4	ND	0.403			PCB-54	ND	0.560		
PCB-5	2.74	-	J		PCB-55	ND	0.615		
PCB-6	ND	0.427			PCB-56	ND	0.988	C	60
PCB-7	ND	0.434			PCB-57	ND	0.633		
PCB-8	ND	0.502			PCB-58	ND	0.605		
PCB-9	ND	0.448			PCB-59	-	-	C042	42
PCB-10	ND	0.447			PCB-60	-	-	C056	56
PCB-11	6.61	-			PCB-61	ND	0.590	C	70
PCB-12	ND	0.497			PCB-62	ND	0.683		
PCB-13	ND	0.564			PCB-63	ND	0.635		
PCB-14	ND	0.449			PCB-64	-	-	C041	41/71/72
PCB-15	ND	0.593			PCB-65	ND	0.631		
PCB-16	ND	0.919			PCB-66	ND	0.606	C	76
PCB-17	ND	1.04			PCB-67	ND	0.693		
PCB-18	3.66	-	J		PCB-68	ND	0.612		
PCB-19	ND	1.09			PCB-69	-	-	C052,J	52
PCB-20	2.43	-	C,J	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020,J	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	ND	1.24			PCB-72	-	-	C041	41/64/71
PCB-23	ND	1.20			PCB-73	ND	0.644		
PCB-24	ND	0.759			PCB-74	ND	0.623		
PCB-25	ND	1.04			PCB-75	-	-	C048	48
PCB-26	ND	1.32			PCB-76	-	-	C066	66
PCB-27	ND	0.825			PCB-77	ND	1.24		
PCB-28	3.54	-	J		PCB-78	ND	1.14		
PCB-29	ND	1.28			PCB-79	ND	1.07		
PCB-30	ND	0.773			PCB-80	ND	0.559		
PCB-31	2.22	-	J		PCB-81	ND	0.940		
PCB-32	ND	0.934			PCB-82	ND	1.54		
PCB-33	-	-	C020,J	20/21	PCB-83	ND	1.09	C	112
PCB-34	ND	1.46			PCB-84	ND	1.28	C	92
PCB-35	ND	1.51			PCB-85	ND	1.04	C	116
PCB-36	ND	1.39			PCB-86	ND	1.36		
PCB-37	ND	1.24			PCB-87	ND	0.972	C	117/125
PCB-38	ND	1.31			PCB-88	ND	1.15	C	91
PCB-39	ND	1.39			PCB-89	ND	1.28		
PCB-40	ND	1.05			PCB-90	ND	1.11	C	101
PCB-41	ND	0.626	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	ND	0.672	C	59	PCB-92	-	-	C084	84
PCB-43	ND	0.823	C	49	PCB-93	ND	1.38		
PCB-44	ND	0.916			PCB-94	ND	1.29		
PCB-45	ND	0.890			PCB-95	ND	1.17		
PCB-46	ND	0.934			PCB-96	ND	0.895		
PCB-47	ND	0.678			PCB-97	ND	1.07		
PCB-48	ND	0.649	C	75	PCB-98	ND	0.985	C	102
PCB-49	-	-	C043	43	PCB-99	ND	1.12		
PCB-50	ND	0.768			PCB-100	ND	1.08		

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

EPA Method 1668
PCBs

FRONTIER ANALYTICAL LABORATORY

FAL ID: 10095-001-SA
Client ID: LDW-BA-PC-ENRMAT-SAND
Matrix: Sediment
Batch No: X3814

Date Extracted: 08-16-2016
Date Received: 08-12-2016
Amount: 5.05 g
% Solids: 95.76

ICal: DAILY209FAL4-8-18-16
GC Column: DB1
Units: pg/g

Acquired: 08-18-2016

Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	ND	0.760		
PCB-102	-	-	C098	98	PCB-152	ND	0.704		
PCB-103	ND	1.03			PCB-153	ND	0.642		
PCB-104	ND	0.796			PCB-154	ND	0.867		
PCB-105	ND	0.940			PCB-155	ND	0.635		
PCB-106	ND	0.968	C	118	PCB-156	ND	0.635		
PCB-107	ND	0.864	C	108	PCB-157	ND	0.646		
PCB-108	-	-	C107	107	PCB-158	ND	0.586	C	160
PCB-109	ND	0.941			PCB-159	ND	0.583		
PCB-110	ND	0.843			PCB-160	-	-	C158	158
PCB-111	ND	0.811	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	ND	0.932			PCB-163	-	-	C138	138/164
PCB-114	ND	0.890			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	ND	0.623		
PCB-117	-	-	C087	87/125	PCB-167	ND	0.655		
PCB-118	-	-	C106	106	PCB-168	ND	0.570		
PCB-119	ND	0.878			PCB-169	ND	0.791		
PCB-120	ND	0.864			PCB-170	ND	0.848		
PCB-121	ND	0.927			PCB-171	ND	0.693		
PCB-122	ND	0.896			PCB-172	ND	0.750		
PCB-123	ND	0.785			PCB-173	ND	0.770		
PCB-124	ND	0.924			PCB-174	ND	0.661		
PCB-125	-	-	C087	87/117	PCB-175	ND	0.628		
PCB-126	ND	1.49			PCB-176	ND	0.470		
PCB-127	ND	0.984			PCB-177	ND	0.727		
PCB-128	ND	0.701	C	162	PCB-178	ND	0.664		
PCB-129	ND	0.957			PCB-179	ND	0.443		
PCB-130	ND	0.919			PCB-180	ND	0.569		
PCB-131	ND	0.748	C	133	PCB-181	ND	0.647		
PCB-132	ND	0.664	C	161	PCB-182	ND	0.581	C	187
PCB-133	-	-	C131	131	PCB-183	1.66	-	J	
PCB-134	ND	0.753	C	143	PCB-184	ND	0.423		
PCB-135	ND	0.702			PCB-185	ND	0.664		
PCB-136	ND	0.719			PCB-186	ND	0.465		
PCB-137	ND	0.768			PCB-187	-	-	C182	182
PCB-138	ND	0.577	C	163/164	PCB-188	ND	0.479		
PCB-139	ND	0.678	C	149	PCB-189	ND	0.570		
PCB-140	ND	0.716			PCB-190	ND	0.589		
PCB-141	ND	0.747			PCB-191	ND	0.560		
PCB-142	ND	0.850			PCB-192	ND	0.545		
PCB-143	-	-	C134	134	PCB-193	ND	0.518		
PCB-144	ND	0.721			PCB-194	ND	0.660		
PCB-145	ND	0.734			PCB-195	ND	0.716		
PCB-146	ND	0.624	C	165	PCB-196	ND	1.06	C	203
PCB-147	ND	0.695			PCB-197	ND	0.695		
PCB-148	ND	1.03			PCB-198	ND	1.05		
PCB-149	-	-	C139	139	PCB-199	ND	1.20		
PCB-150	ND	0.696			PCB-200	ND	0.747		

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

EPA Method 1668
PCBs

FRONTIER ANALYTICAL LABORATORY

FAL ID: 10095-001-SA
Client ID: LDW-BA-PC-ENRMAT-SAND
Matrix: Sediment
Batch No: X3814

Date Extracted: 08-16-2016
Date Received: 08-12-2016
Amount: 5.05 g
% Solids: 95.76

ICal: DAILY209FAL4-8-18-16
GC Column: DB1
Units: pg/g

Acquired: 08-18-2016

Compound	Conc	DL	Qual	Coeluters
PCB-201	ND	0.746		
PCB-202	ND	0.735		
PCB-203	-	-	C196	196
PCB-204	ND	0.714		
PCB-205	ND	0.520		
PCB-206	ND	0.912		
PCB-207	ND	0.670		
PCB-208	ND	0.567		
PCB-209	ND	0.547		

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	80.2	5.00 - 145	
13C-PCB-3	77.7	5.00 - 145	
13C-PCB-4	91.0	5.00 - 145	
13C-PCB-15	75.8	5.00 - 145	
13C-PCB-19	78.8	5.00 - 145	
13C-PCB-37	80.9	5.00 - 145	
13C-PCB-54	84.3	5.00 - 145	
13C-PCB-77	82.1	10.0 - 145	
13C-PCB-81	86.0	10.0 - 145	
13C-PCB-104	81.8	10.0 - 145	
13C-PCB-105	83.6	10.0 - 145	
13C-PCB-114	85.7	10.0 - 145	
13C-PCB-118	82.8	10.0 - 145	
13C-PCB-123	76.4	10.0 - 145	
13C-PCB-126	83.6	10.0 - 145	
13C-PCB-155	80.1	10.0 - 145	
13C-PCB-156	81.7	10.0 - 145	
13C-PCB-157	89.0	10.0 - 145	
13C-PCB-167	82.0	10.0 - 145	
13C-PCB-169	87.8	10.0 - 145	
13C-PCB-188	75.1	10.0 - 145	
13C-PCB-189	85.4	10.0 - 145	
13C-PCB-202	74.1	10.0 - 145	
13C-PCB-205	88.0	10.0 - 145	
13C-PCB-206	83.6	10.0 - 145	
13C-PCB-208	84.7	10.0 - 145	
13C-PCB-209	84.8	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	104	5.00 - 145	
13C-PCB-111	102	10.0 - 145	
13C-PCB-178	92.9	10.0 - 145	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Coelution
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
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 at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 8/23/16

Reviewed By: _____

Date: 8/23/16

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

EPA Method 1668
PCBs

FRONTIER ANALYTICAL LABORATORY

FAL ID: 10095-002-SA
Client ID: LDW-BA-PC-ENRMAT-GRUSAND
Matrix: Sediment
Batch No: X3814

Date Extracted: 08-16-2016
Date Received: 08-12-2016
Amount: 5.08 g
% Solids: 97.33

ICal: DAILY209FAL4-8-18-16
GC Column: DB1
Units: pg/g

Acquired: 08-18-2016
Total Conc: 31.7

Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-1	ND	0.430			PCB-51	ND	1.36		
PCB-2	ND	0.651			PCB-52	ND	1.11	C	69
PCB-3	ND	0.695			PCB-53	ND	1.36		
PCB-4	ND	0.396			PCB-54	ND	0.979		
PCB-5	2.88	-	J		PCB-55	ND	0.887		
PCB-6	ND	0.435			PCB-56	ND	0.926	C	60
PCB-7	ND	0.442			PCB-57	ND	0.820		
PCB-8	ND	0.512			PCB-58	ND	0.783		
PCB-9	ND	0.457			PCB-59	-	-	C042	42
PCB-10	ND	0.455			PCB-60	-	-	C056	56
PCB-11	15.5	-			PCB-61	ND	0.764	C	70
PCB-12	ND	0.507			PCB-62	ND	1.19		
PCB-13	ND	0.575			PCB-63	ND	0.823		
PCB-14	ND	0.458			PCB-64	-	-	C041	41/71/72
PCB-15	ND	0.609			PCB-65	ND	1.10		
PCB-16	ND	0.901			PCB-66	ND	0.785	C	76
PCB-17	ND	1.02			PCB-67	ND	0.898		
PCB-18	3.94	-			PCB-68	ND	1.07		
PCB-19	ND	1.07			PCB-69	-	-	C052	52
PCB-20	2.63	-	C,J	21/33	PCB-70	-	-	C061	61
PCB-21	-	-	C020,J	20/33	PCB-71	-	-	C041	41/64/72
PCB-22	ND	1.59			PCB-72	-	-	C041	41/64/71
PCB-23	ND	1.54			PCB-73	ND	1.13		
PCB-24	ND	0.744			PCB-74	ND	0.808		
PCB-25	ND	1.32			PCB-75	-	-	C048	48
PCB-26	ND	1.69			PCB-76	-	-	C066	66
PCB-27	ND	0.809			PCB-77	ND	1.15		
PCB-28	3.20	-	J		PCB-78	ND	1.07		
PCB-29	ND	1.64			PCB-79	ND	1.00		
PCB-30	ND	0.758			PCB-80	ND	0.725		
PCB-31	3.54	-	J		PCB-81	ND	0.887		
PCB-32	ND	0.916			PCB-82	ND	1.56		
PCB-33	-	-	C020,J	20/21	PCB-83	ND	1.11	C	112
PCB-34	ND	1.86			PCB-84	ND	1.30	C	92
PCB-35	ND	1.92			PCB-85	ND	1.05	C	116
PCB-36	ND	1.78			PCB-86	ND	1.38		
PCB-37	ND	1.58			PCB-87	ND	0.986	C	117/125
PCB-38	ND	1.68			PCB-88	ND	1.13	C	91
PCB-39	ND	1.78			PCB-89	ND	1.30		
PCB-40	ND	1.84			PCB-90	ND	1.13	C	101
PCB-41	ND	1.09	C	64/71/72	PCB-91	-	-	C088	88
PCB-42	ND	1.17	C	59	PCB-92	-	-	C084	84
PCB-43	ND	1.44	C	49	PCB-93	ND	1.36		
PCB-44	ND	1.60			PCB-94	ND	1.27		
PCB-45	ND	1.56			PCB-95	ND	1.15		
PCB-46	ND	1.63			PCB-96	ND	0.881		
PCB-47	ND	1.19			PCB-97	ND	1.09		
PCB-48	ND	1.14	C	75	PCB-98	ND	0.970	C	102
PCB-49	-	-	C043	43	PCB-99	ND	1.14		
PCB-50	ND	1.34			PCB-100	ND	1.06		

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

EPA Method 1668
PCBs

FAL ID: 10095-002-SA
Client ID: LDW-BA-PC-ENRMAT-GRUSAND
Matrix: Sediment
Batch No: X3814

Date Extracted: 08-16-2016
Date Received: 08-12-2016
Amount: 5.08 g
% Solids: 97.33

ICal: DAILY209FAL4-8-18-16
GC Column: DB1
Units: pg/g

Acquired: 08-18-2016

Compound	Conc	DL	Qual	Coeluters	Compound	Conc	DL	Qual	Coeluters
PCB-101	-	-	C090	90	PCB-151	ND	0.774		
PCB-102	-	-	C098	98	PCB-152	ND	0.574		
PCB-103	ND	1.01			PCB-153	ND	0.654		
PCB-104	ND	0.784			PCB-154	ND	0.706		
PCB-105	ND	0.850			PCB-155	ND	0.517		
PCB-106	ND	0.758	C	118	PCB-156	ND	0.669		
PCB-107	ND	0.731	C	108	PCB-157	ND	0.687		
PCB-108	-	-	C107	107	PCB-158	ND	0.597	C	160
PCB-109	ND	0.955			PCB-159	ND	0.595		
PCB-110	ND	0.856			PCB-160	-	-	C158	158
PCB-111	ND	0.824	C	115	PCB-161	-	-	C132	132
PCB-112	-	-	C083	83	PCB-162	-	-	C128	128
PCB-113	ND	0.946			PCB-163	-	-	C138	138/164
PCB-114	ND	0.762			PCB-164	-	-	C138	138/163
PCB-115	-	-	C111	111	PCB-165	-	-	C146	146
PCB-116	-	-	C085	85	PCB-166	ND	0.635		
PCB-117	-	-	C087	87/125	PCB-167	ND	0.637		
PCB-118	-	-	C106	106	PCB-168	ND	0.581		
PCB-119	ND	0.892			PCB-169	ND	0.784		
PCB-120	ND	0.877			PCB-170	ND	0.902		
PCB-121	ND	0.913			PCB-171	ND	0.737		
PCB-122	ND	0.758			PCB-172	ND	0.798		
PCB-123	ND	0.670			PCB-173	ND	0.819		
PCB-124	ND	0.782			PCB-174	ND	0.703		
PCB-125	-	-	C087	87/117	PCB-175	ND	0.668		
PCB-126	ND	1.12			PCB-176	ND	0.500		
PCB-127	ND	0.833			PCB-177	ND	0.774		
PCB-128	ND	0.715	C	162	PCB-178	ND	0.706		
PCB-129	ND	0.976			PCB-179	ND	0.471		
PCB-130	ND	0.937			PCB-180	ND	0.605		
PCB-131	ND	0.763	C	133	PCB-181	ND	0.689		
PCB-132	ND	0.677	C	161	PCB-182	ND	0.619	C	187
PCB-133	-	-	C131	131	PCB-183	ND	0.627		
PCB-134	ND	0.768	C	143	PCB-184	ND	0.450		
PCB-135	ND	0.716			PCB-185	ND	0.707		
PCB-136	ND	0.586			PCB-186	ND	0.494		
PCB-137	ND	0.783			PCB-187	-	-	C182	182
PCB-138	ND	0.589	C	163/164	PCB-188	ND	0.475		
PCB-139	ND	0.691	C	149	PCB-189	ND	0.651		
PCB-140	ND	0.730			PCB-190	ND	0.626		
PCB-141	ND	0.762			PCB-191	ND	0.596		
PCB-142	ND	0.867			PCB-192	ND	0.580		
PCB-143	-	-	C134	134	PCB-193	ND	0.551		
PCB-144	ND	0.735			PCB-194	ND	0.618		
PCB-145	ND	0.598			PCB-195	ND	0.670		
PCB-146	ND	0.636	C	165	PCB-196	ND	1.04	C	203
PCB-147	ND	0.709			PCB-197	ND	0.682		
PCB-148	ND	0.842			PCB-198	ND	1.03		
PCB-149	-	-	C139	139	PCB-199	ND	1.18		
PCB-150	ND	0.567			PCB-200	ND	0.733		

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

EPA Method 1668
PCBs

FRONTIER ANALYTICAL LABORATORY

FAL ID: 10095-002-SA
Client ID: LDW-BA-PC-ENRMAT-GRUSAND
Matrix: Sediment
Batch No: X3814

Date Extracted: 08-16-2016
Date Received: 08-12-2016
Amount: 5.08 g
% Solids: 97.33

ICal: DAILY209FAL4-8-18-16
GC Column: DB1
Units: pg/g

Acquired: 08-18-2016

Compound	Conc	DL	Qual	Coeluters
PCB-201	ND	0.732		
PCB-202	ND	0.721		
PCB-203	-	-	C196	196
PCB-204	ND	0.701		
PCB-205	ND	0.487		
PCB-206	ND	0.563		
PCB-207	ND	0.495		
PCB-208	ND	0.487		
PCB-209	ND	0.377		

Internal Standards	% Rec	QC Limits	Qual
13C-PCB-1	86.8	5.00 - 145	
13C-PCB-3	81.4	5.00 - 145	
13C-PCB-4	94.3	5.00 - 145	
13C-PCB-15	83.9	5.00 - 145	
13C-PCB-19	82.7	5.00 - 145	
13C-PCB-37	82.2	5.00 - 145	
13C-PCB-54	91.0	5.00 - 145	
13C-PCB-77	90.9	10.0 - 145	
13C-PCB-81	91.9	10.0 - 145	
13C-PCB-104	84.3	10.0 - 145	
13C-PCB-105	81.3	10.0 - 145	
13C-PCB-114	86.5	10.0 - 145	
13C-PCB-118	90.5	10.0 - 145	
13C-PCB-123	82.2	10.0 - 145	
13C-PCB-126	87.3	10.0 - 145	
13C-PCB-155	83.7	10.0 - 145	
13C-PCB-156	88.6	10.0 - 145	
13C-PCB-157	95.5	10.0 - 145	
13C-PCB-167	90.3	10.0 - 145	
13C-PCB-169	94.6	10.0 - 145	
13C-PCB-188	79.8	10.0 - 145	
13C-PCB-189	93.7	10.0 - 145	
13C-PCB-202	77.1	10.0 - 145	
13C-PCB-205	88.0	10.0 - 145	
13C-PCB-206	88.2	10.0 - 145	
13C-PCB-208	70.9	10.0 - 145	
13C-PCB-209	86.6	10.0 - 145	

Cleanup Surrogates	% Rec	QC Limits	Qual
13C-PCB-28	108	5.00 - 145	
13C-PCB-111	104	10.0 - 145	
13C-PCB-178	95.0	10.0 - 145	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Coelution
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
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 at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 8/23/16

Reviewed By: _____

Date: 8/23/16

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

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 10095-001-MB
Client ID: Method Blank
Matrix: Sediment
Batch No: X3815

Date Extracted: 08-16-2016
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL3-7-20-16
GC Column: DB5
Units: pg/g

Acquired: 08-18-2016
2005 WHO TEQ: 0.00
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.152		-	0.0283				
1,2,3,7,8-PeCDD	ND	0.282		-	0.0480				
1,2,3,4,7,8-HxCDD	ND	0.425		-	0.0492				
1,2,3,6,7,8-HxCDD	ND	0.436		-	0.0556	Total TCDD	ND	0.152	
1,2,3,7,8,9-HxCDD	ND	0.416		-	0.0479	Total PeCDD	ND	0.282	
1,2,3,4,6,7,8-HpCDD	ND	0.513		-	0.0506	Total HxCDD	ND	0.436	
OCDD	ND	0.865		-	0.0831	Total HpCDD	ND	0.513	
2,3,7,8-TCDF	ND	0.124		-	0.0277				
1,2,3,7,8-PeCDF	ND	0.166		-	0.0369				
2,3,4,7,8-PeCDF	ND	0.162		-	0.0402				
1,2,3,4,7,8-HxCDF	ND	0.152		-	0.0326				
1,2,3,6,7,8-HxCDF	ND	0.160		-	0.0340				
2,3,4,6,7,8-HxCDF	ND	0.175		-	0.0402				
1,2,3,7,8,9-HxCDF	ND	0.271		-	0.0449	Total TCDF	ND	0.124	
1,2,3,4,6,7,8-HpCDF	ND	0.257		-	0.0378	Total PeCDF	ND	0.166	
1,2,3,4,7,8,9-HpCDF	ND	0.421		-	0.0456	Total HxCDF	ND	0.271	
OCDF	ND	0.425		-	0.0776	Total HpCDF	ND	0.421	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	87.3	25.0 - 164	
13C-1,2,3,7,8-PeCDD	79.2	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	87.7	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	90.3	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	80.8	23.0 - 140	
13C-OCDD	68.6	17.0 - 157	
13C-2,3,7,8-TCDF	87.3	24.0 - 169	
13C-1,2,3,7,8-PeCDF	76.4	24.0 - 185	
13C-2,3,4,7,8-PeCDF	77.1	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	88.2	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	92.7	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	89.0	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	78.6	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	98.7	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	85.2	26.0 - 138	
13C-OCDF	67.2	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	82.1	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
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 at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 8/24/2016

Reviewed By: _____

Date: 8/25/2016

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

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 10095-001-OPR
Client ID: OPR
Matrix: Sediment
Batch No: X3815

Date Extracted: 08-16-2016
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL3-7-20-16
GC Column: DB5
Units: ng/ml

Acquired: 08-18-2016
2005 WHO TEQ: NA

Compound	Conc	QC Limits	Qual
2,3,7,8-TCDD	10.1	6.70 - 15.8	
1,2,3,7,8-PeCDD	48.3	35.0 - 71.0	
1,2,3,4,7,8-HxCDD	47.8	35.0 - 82.0	
1,2,3,6,7,8-HxCDD	48.0	38.0 - 67.0	
1,2,3,7,8,9-HxCDD	47.6	32.0 - 81.0	
1,2,3,4,6,7,8-HpCDD	49.2	35.0 - 70.0	
OCDD	106	78.0 - 144	
2,3,7,8-TCDF	9.70	7.50 - 15.8	
1,2,3,7,8-PeCDF	49.2	40.0 - 67.0	
2,3,4,7,8-PeCDF	49.4	34.0 - 80.0	
1,2,3,4,7,8-HxCDF	48.0	36.0 - 67.0	
1,2,3,6,7,8-HxCDF	49.5	42.0 - 65.0	
2,3,4,6,7,8-HxCDF	48.1	35.0 - 78.0	
1,2,3,7,8,9-HxCDF	49.5	39.0 - 65.0	
1,2,3,4,6,7,8-HpCDF	49.5	41.0 - 61.0	
1,2,3,4,7,8,9-HpCDF	51.3	39.0 - 69.0	
OCDF	104	63.0 - 170	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	90.2	20.0 - 175	
13C-1,2,3,7,8-PeCDD	80.4	21.0 - 227	
13C-1,2,3,4,7,8-HxCDD	93.5	21.0 - 193	
13C-1,2,3,6,7,8-HxCDD	100	25.0 - 163	
13C-1,2,3,4,6,7,8-HpCDD	83.9	26.0 - 166	
13C-OCDD	71.5	13.0 - 198	
13C-2,3,7,8-TCDF	90.5	22.0 - 152	
13C-1,2,3,7,8-PeCDF	77.6	21.0 - 192	
13C-2,3,4,7,8-PeCDF	79.5	13.0 - 328	
13C-1,2,3,4,7,8-HxCDF	96.8	19.0 - 202	
13C-1,2,3,6,7,8-HxCDF	103	21.0 - 159	
13C-2,3,4,6,7,8-HxCDF	99.5	22.0 - 176	
13C-1,2,3,7,8,9-HxCDF	83.8	17.0 - 205	
13C-1,2,3,4,6,7,8-HpCDF	106	21.0 - 158	
13C-1,2,3,4,7,8,9-HpCDF	88.0	20.0 - 186	
13C-OCDF	70.6	13.0 - 198	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	84.5	31.0 - 191

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
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 at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 8/24/2016

Reviewed By: _____

Date: 8/25/2016

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

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 10095-001-SA	Date Extracted: 08-16-2016	ICal: PCDDFAL3-7-20-16	Acquired: 08-18-2016
Client ID: LDW-BA-PC-ENRMAT-SAND	Date Received: 08-12-2016	GC Column: DB5	2005 WHO TEQ: 0.000867
Matrix: Sediment	Amount: 5.01 g	Units: pg/g	Basis: Dry Weight
Batch No: X3815	% Solids: 95.76		

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.167		-	0.0283				
1,2,3,7,8-PeCDD	ND	0.359		-	0.0480				
1,2,3,4,7,8-HxCDD	ND	0.478		-	0.0492				
1,2,3,6,7,8-HxCDD	ND	0.529		-	0.0556	Total TCDD	0.641	-	J
1,2,3,7,8,9-HxCDD	ND	0.488		-	0.0479	Total PeCDD	ND	0.359	
1,2,3,4,6,7,8-HpCDD	ND	0.648		-	0.0506	Total HxCDD	ND	0.529	
OCDD	2.89	-	J	0.000867	0.0831	Total HpCDD	ND	0.648	
2,3,7,8-TCDF	ND	0.121		-	0.0277				
1,2,3,7,8-PeCDF	ND	0.245		-	0.0369				
2,3,4,7,8-PeCDF	ND	0.243		-	0.0402				
1,2,3,4,7,8-HxCDF	ND	0.183		-	0.0326				
1,2,3,6,7,8-HxCDF	ND	0.186		-	0.0340				
2,3,4,6,7,8-HxCDF	ND	0.216		-	0.0402				
1,2,3,7,8,9-HxCDF	ND	0.291		-	0.0449	Total TCDF	ND	0.121	
1,2,3,4,6,7,8-HpCDF	ND	0.266		-	0.0378	Total PeCDF	ND	0.245	
1,2,3,4,7,8,9-HpCDF	ND	0.415		-	0.0456	Total HxCDF	ND	0.291	
OCDF	ND	0.531		-	0.0776	Total HpCDF	ND	0.415	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	102	25.0 - 164	
13C-1,2,3,7,8-PeCDD	93.6	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	101	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	99.0	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	90.9	23.0 - 140	
13C-OCDD	86.0	17.0 - 157	
13C-2,3,7,8-TCDF	96.6	24.0 - 169	
13C-1,2,3,7,8-PeCDF	87.6	24.0 - 185	
13C-2,3,4,7,8-PeCDF	86.9	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	103	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	104	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	102	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	99.0	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	117	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	107	26.0 - 138	
13C-OCDF	83.4	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	92.5	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
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 at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 8/24/2016

Reviewed By: _____

Date: 8/25/2016

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

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 10095-002-SA	Date Extracted: 08-16-2016	ICal: PCDDFAL3-7-20-16	Acquired: 08-18-2016
Client ID: LDW-BA-PC-ENRMAT-GRUSAND	Date Received: 08-12-2016	GC Column: DB5	2005 WHO TEQ: 0.000603
Matrix: Sediment	Amount: 5.06 g	Units: pg/g	Basis: Dry Weight
Batch No: X3815	% Solids: 97.33		

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.175		-	0.0283				
1,2,3,7,8-PeCDD	ND	0.310		-	0.0480				
1,2,3,4,7,8-HxCDD	ND	0.442		-	0.0492				
1,2,3,6,7,8-HxCDD	ND	0.463		-	0.0556	Total TCDD	0.450	-	J
1,2,3,7,8,9-HxCDD	ND	0.438		-	0.0479	Total PeCDD	ND	0.310	
1,2,3,4,6,7,8-HpCDD	ND	0.588		-	0.0506	Total HxCDD	ND	0.463	
OCDD	2.01	-	J	0.000603	0.0831	Total HpCDD	ND	0.588	
2,3,7,8-TCDF	ND	0.110		-	0.0277				
1,2,3,7,8-PeCDF	ND	0.282		-	0.0369				
2,3,4,7,8-PeCDF	ND	0.288		-	0.0402				
1,2,3,4,7,8-HxCDF	ND	0.226		-	0.0326				
1,2,3,6,7,8-HxCDF	ND	0.237		-	0.0340				
2,3,4,6,7,8-HxCDF	ND	0.259		-	0.0402				
1,2,3,7,8,9-HxCDF	ND	0.353		-	0.0449	Total TCDF	ND	0.110	
1,2,3,4,6,7,8-HpCDF	ND	0.283		-	0.0378	Total PeCDF	ND	0.288	
1,2,3,4,7,8,9-HpCDF	ND	0.461		-	0.0456	Total HxCDF	ND	0.353	
OCDF	ND	0.532		-	0.0776	Total HpCDF	ND	0.461	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	97.1	25.0 - 164	
13C-1,2,3,7,8-PeCDD	87.4	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	100	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	97.2	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	90.5	23.0 - 140	
13C-OCDD	87.8	17.0 - 157	
13C-2,3,7,8-TCDF	97.8	24.0 - 169	
13C-1,2,3,7,8-PeCDF	86.3	24.0 - 185	
13C-2,3,4,7,8-PeCDF	83.9	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	101	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	102	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	98.7	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	96.3	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	119	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	103	26.0 - 138	
13C-OCDF	83.2	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	86.7	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
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 at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 8/24/2016

Reviewed By: _____

Date: 8/25/2016

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

Frontier Analytical Laboratory
5172 Hillsdale Circle
El Dorado Hills, CA 95762
Tel: 916-934-0900
Fax: 916-934-0999

FAL USE ONLY

Laboratory Project No.: 10095

Temperature: 18 °C

Chain of Custody

www.frontieranalytical.com

Please Print in Pen **Page** 1 **of** 1

CLIENT INFORMATION

Company Name: Floyd Snider
Contact Name: Gretchen Heavner
Address: 601 Union St, Ste. 600 Seattle, WA 98101
Phone: 206-292-2078 Fax:
Email: gretchen.heavner@floydsnider.com

INVOICE INFORMATION (if different from client info)

Company Name: Amec Foster Wheeler
Contact Name: Jessica Youngblood
Address: 3500 188th St SW, Suite 601 Lynnwood WA
Phone: 425-921-4008 Fax:
Email: jessica.youngblood@amecfw.com

PROJECT INFORMATION

FAL Quote #: 3102A
P.O. #: CO13106435
Project #: LY15160310
Project Name: LDW ENR/AC Pilot Study
TAT (business days): ☒ 15 ☐ 10 ☐ 5* ☐ 3* (√ one)
* FAL must agree with price and RUSH TAT in writing.

REPORT INFORMATION

Report Level: ☐ I/II ☐ III ☒ IV

☒ EDD: ☐ FAL Basic ☐ Geotracker ☒ Other: FS1 ☐ Custom: Contact FAL

☐ California State Drinking Water Form
System #: Source #:
Sampler: Employer:

REPORT DISTRIBUTION (email only is preferred)

☐ Hardcopy
☒ CD (.pdf including EDDs if requested)
☒ Email (.pdf including EDDs if requested)

ADDITIONAL INSTRUCTIONS

EDD Format should be as developed with Floyd Snider & Saylor Data Solutions

****CONGENERS**
☐ 2,3,7,8-TCDD only
☐ 2,3,7,8-TCDD/F only
☒ PCDD/F (Cl_4-Cl_8)

****TEQ**
☐ 1998 WHO
☐ 2005 WHO
☐ Other

	Sample ID	Date Collected	Time	Matrix	# of containers	EPA 1613**	EPA 8290**	DLM 02.0	EPA 8280**	Appendix IX	EPA TO-9/9A	EPA 23/23A	EPA 1668	FAL 15	Other	Remarks
1	LDW-BA-PC-ENRMAT-Sand	8/10/16	1030	Sediment	2	X							X			Material samples sent
2	LDW-BA-PC-ENRMAT-GRVSAND	8/10/16	1045	Sediment	2	X							X			@ room temp b/c it
3																is not environmental
4																sample.
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

Samples will be disposed of 90 days after sample receipt unless other arrangements have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (Signature and Printed Name)	Date	Time
[signature]	8/10/16		Kathy Zipp KZIPP	8-12-16	1135

Client understands that all terms described in the proposals, quotations, and/or the general terms provided in the current FAL price schedules will be followed.

White Copy – Report
Yellow Copy – Laboratory
Pink Copy - Originator

Frontier Analytical Laboratory

Sample Login Form

FAL Project ID: **10095**

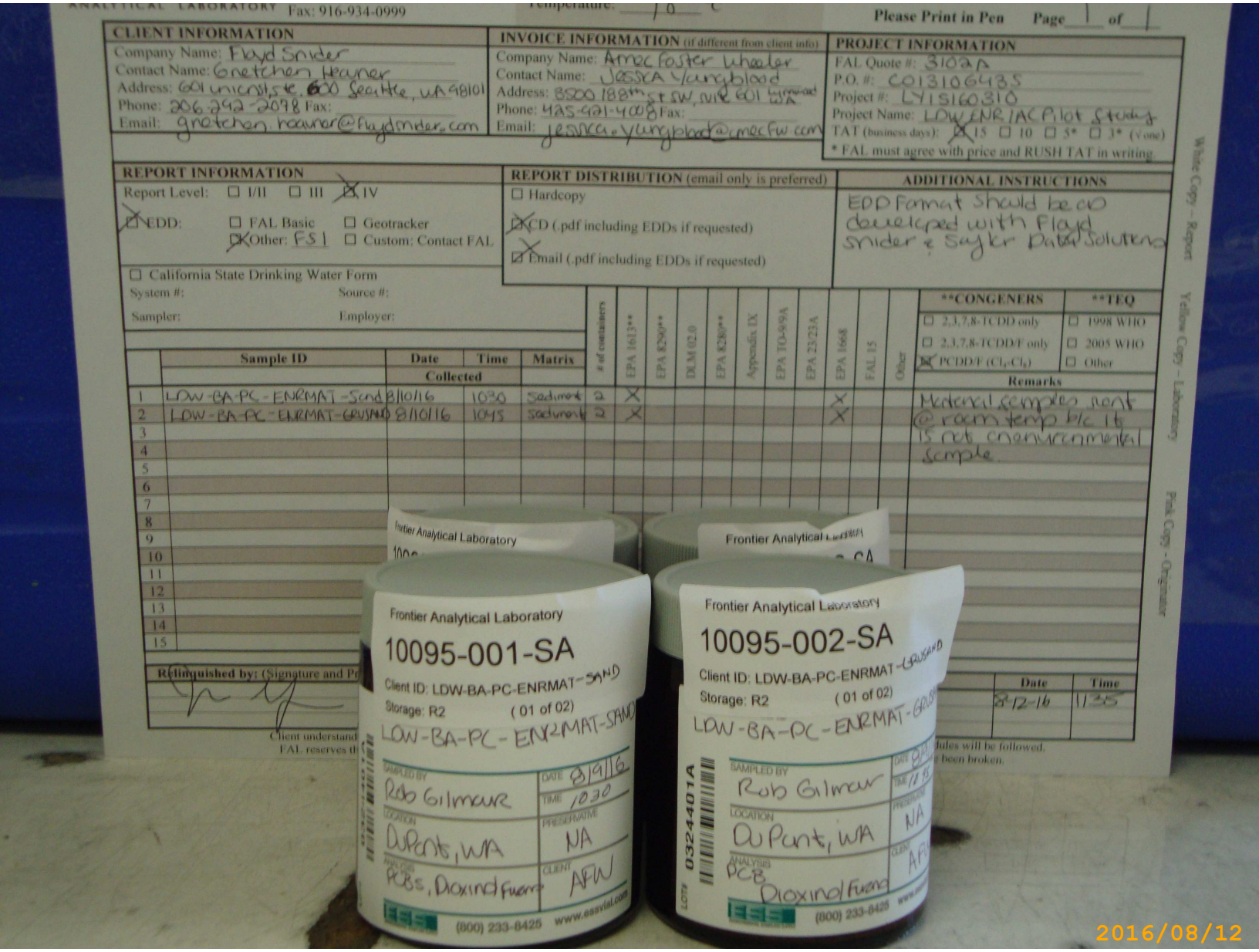
Client:	Floyd | Snider
Client Project ID:	LY15160310
Date Received:	08/12/2016
Time Received:	11:35 am
Received By:	KZ
Logged In By:	KZ
# of Samples Received:	2
Duplicates:	2
Storage Location:	R2

Method of Delivery:	Fed-Ex
Tracking Number:	776962084488
Shipping Container Received Intact	Yes
Custody seals(s) present?	Yes
Custody seals(s) intact?	Yes
Sample Arrival Temperature (C)	18
Cooling Method	Other
Chain Of Custody Present?	Yes
Return Shipping Container To Client	No
Test aqueous sample for residual Chlorine	No
Sodium Thiosulfate Added	No
Adequate Sample Volume	Yes
Appropriate Sample Container	Yes
pH Range of Aqueous Sample	N/A

Anomalies or additional comments:

Please note that the samples were received at a temperature of eighteen degrees Celsius which is outside of the method recommended sample receipt temperature range. Although dioxins/furans and PCBs are considered to be very stable at ambient room temperatures, we are required by NELAP to report this anomaly to you.

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


Fax: 916-934-0999
Please Print in Pen
Page 1 of 1
CLIENT INFORMATION
Company Name: Floyd Snider
Contact Name: Gretchen Heavner
Address: 601 Union St, Ste. 600 Seattle, WA 98101
Phone: 206-292-2078 Fax:
Email: gretchen.heavner@floydsnider.com
INVOICE INFORMATION (if different from client info)
Company Name: Amec Foster Wheeler
Contact Name: Jessica Yungblood
Address: 8500 188th St SW, Suite 601 Lynnwood WA
Phone: 425-921-4008 Fax:
Email: jessica.yungblood@amecfw.com
PROJECT INFORMATION
FAL Quote #: 3102A
P.O. #: C013106435
Project #: LY15160310
Project Name: LDW ENR/AC Pilot Study
TAT (business days): 15 10 5* 3* (Y/N)
* FAL must agree with price and RUSH TAT in writing
REPORT INFORMATION
Report Level: I/II III IV
EDD: FAL Basic Geotracker
Other: FS1 Custom: Contact FAL
California State Drinking Water Form
System #: Source #:
Sampler: Employer:
REPORT DISTRIBUTION (email only is preferred)
Hardcopy
CD (.pdf including EDDs if requested)
Email (.pdf including EDDs if requested)
ADDITIONAL INSTRUCTIONS
EDD Format should be co developed with Floyd Snider & Sayler Data Solutions
**CONGENERS
2,3,7,8-TCDD only
2,3,7,8-TCDD/F only
PCDD/F (C4-C8)
**TEQ
1998 WHO
2005 WHO
Other
Sample ID | Date Collected | Time | Matrix | # of containers | EPA 1613** | EPA 8290** | DLM 02.0 | EPA 8280** | Appendix IX | EPA TO-9/9A | EPA 23/23A | EPA 1668 | FAL 15 | Other
1 LDW-BA-PC-ENRMAT-Sand 8/10/16 1030 Sediment 2 X X
2 LDW-BA-PC-ENRMAT-GRVSAND 8/10/16 1045 Sediment 2 X X
Remarks
Material samples sent @ room temp b/c it is not environmental sample.
Relinquished by: (Signature and Pr
Date 8-12-16 Time 1135
Frontier Analytical Laboratory
10095-001-SA
Client ID: LDW-BA-PC-ENRMAT-SAND
Storage: R2 (01 of 02)
LDW-BA-PC-ENRMAT-SAND
SAMPLED BY Rob Gilmour
DATE 8/9/16
TIME 1030
LOCATION DuPont, WA
PRESERVATIVE NA
ANALYSIS PCBs, Dioxin/Furans
CLIENT AFW
(800) 233-8425 www.essvial.com
Frontier Analytical Laboratory
10095-002-SA
Client ID: LDW-BA-PC-ENRMAT-GRVSAND
Storage: R2 (01 of 02)
LDW-BA-PC-ENRMAT-GRVSAND
SAMPLED BY Rob Gilmour
LOCATION DuPont, WA
PRESERVATIVE NA
ANALYSIS PCB Dioxin/Furans
CLIENT AFW
LOT# 0324401A
(800) 233-8425

2016/08/12

Frontier Analytical Laboratory

PROJECT REQUEST SHEET

Project #:	10095	Sample #:	1 - 2	Client Manager:	BS
Client:	Floyd | Snider			Hold Time:	08/09/2017
Matrix:	Sediment	Extraction Batch:	3814	Due Date:	09/05/2016
Method:	EPA 1668 PCB			Storage:	R2
SOP:	SOPs: EP1A Rev.9 IP1A Rev.6				

COMMENTS/INSTRUCTIONS:

Results: 10095

Extract/s located in box: Alive

Standards: 11/19/5

Instrument:
DB5 ____
DB225 ____
DB1 FAL-V
Other ____

Sample #	Sample Sample Control -- Prep		Extract Prep -- Instrument		Extract Instrument -- Storage	
	Initial	Date	Initial	Date	Initial	Date
10095-001-0001-SA						
10095-002-0001-SA						

Frontier Analytical Laboratory
Percent Solids

FAL Project: 10095

Sample ID	Chemist	Date	Wet Sample Weight (g)	Dry Sample Weight (g)	% Solids	5g ~~10g~~ RR 8.15.16 Equiv	Wet Wt Oven Temp	Dry Wt Oven Temp	Boat Wt (gms)
10095-001-0001-SA	RR	8.15.16	7.79g	7.46g	95.76%	5.22g	112°c	110°c	1.28g
10095-001-D002-SA	* SEE OTHER PAPER FOR % SOLIDS								RR 8.15.16
10095-002-0001-SA	RR	8.15.16	8.62g	8.39g	97.33%	5.14g	112°c	110°c	1.29g
10095-002-D002-SA	* SEE OTHER PAPER FOR % SOLIDS								RR 8.15.16

% Solids Summary:

Non-Filtered Determination

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

Filtered Determination

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

% Solids calculation

% solids = aliquot after drying/aliquot before drying x 100

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

Frontier Analytical Laboratory
EXTRACTION SHEET

Project #: 10095 Extraction Date: 2016-08-16 Extraction Chemist: RR

Method/Analysis: EPA 1668 PCB

Procedure: SOX Solvent: DCM (Methylene Chloride)

Sample ID	Wet wt. (g/L)	Dry wt. (g/L)	IS Amt: 10.0uL ID: R160602A Vial: 3 Chemist/Witness/Date	NS Amt: 10.0uL ID: 160705A Vial: 1 Chemist/Witness/Date	CSS Amt: 10.0uL ID: R160707A Vial: 1 Chemist/Witness/Date
03814-001-0001-MB	(5.00g)	(5.00g)	RR 8.16.16	— NA —	RR 8.17.16
03814-001-0001-OPR	(5.00g)	(5.00g)	↓	RR 8.16.16	↓
10095-001-0001-SA	5.27g	5.05g	↓	NA	↓
10095-002-0001-SA	5.22g	5.08g	↓	↓	↓

AX-21 Charcoal Cleaned	130410	Acetone	158570	Acid Alumina	A0347591	Hexane	161098
Methanol	161218	Methylene Chloride (DCM)	161693	Silica Gel	TA1975634	Sodium Hydroxide 1N	151965
Sodium Sulfate	16B100005	Sulfuric Acid	158403	Tetradecane	157561	Toluene	56097
Water	162916	C-18 Empore Discs	320850D	Cyclohexane	55211		

Comments:

Frontier Analytical Laboratory
CLEANUP SHEET

Project #: 10095

Method/Analysis: EPA 1668 PCB

Splits: 0 Split Date: N/A Final Volume: 100uL

Sample ID	Cleanup 1 MSG	Cleanup 2 NA	Cleanup 3 NA	RS Amt: 10.0uL ID: 160812A Vial: 1
	Chemist/Date	Chemist/Date	Chemist/Date	Chemist/Witness/Date
03814-001-0001-MB	RR 8·17·16	NA	NA	RR 8·17·16
03814-001-0001-OPR	↓	↓	↓	↓
10095-001-0001-SA				
10095-002-0001-SA				

AX-21 Charcoal Cleaned	130410	Acetone	158570	Acid Alumina	A0347591	Hexane	161098
Methanol	161218	Methylene Chloride (DCM)	161693	Silica Gel	TA1975634	Sodium Hydroxide 1N	151965
Sodium Sulfate	16B100005	Sulfuric Acid	158403	Tetradecane	157561	Toluene	56097
Water	162916	C-18 Empore Discs	320850D	Cyclohexane	55211		

Comments:

Frontier Analytical Laboratory

PROJECT REQUEST SHEET

Project #:	10095	Sample #:	1 - 2	Client Manager:	BS
Client:	Floyd | Snider			Hold Time:	08/09/2017
Matrix:	Sediment	Extraction Batch:	3815	Due Date:	09/05/2016
Method:	EPA 1613 D/F			Storage:	R2
SOP:	SOPs: EP2A Rev.12 IP2A Rev.14				

COMMENTS/INSTRUCTIONS:

Results: 10095

Extract/s located in box: Sunshine

Standards: 10097

Instrument:
DB5 Fal3
DB225 ____
DB1 ____
Other ____

Sample #	Sample Sample Control -- Prep		Extract Prep -- Instrument		Extract Instrument -- Storage	
	Initial	Date	Initial	Date	Initial	Date
10095-001-D002-SA						
10095-002-D002-SA						

Frontier Analytical Laboratory
Percent Solids

FAL Project: 10095

Sample ID	Chemist	Date	Wet Sample Weight (g)	Dry Sample Weight (g)	% Solids	5g ~~10g~~ RR 8.15.16 Equiv	Wet Wt Oven Temp	Dry Wt Oven Temp	Boat Wt (gms)
10095-001-0001-SA	* SEE OTHER	PAPER	FOR	%	SOLIDS		RR 8.15.16		RR 8.15.16
10095-001-D002-SA	RR	8.15.16	7.79g	7.46g	95.76%	5.22g	112°c	110°c	1.28g
10095-002-0001-SA	* SEE	OTHER	PAPER	FOR	% SOLIDS				RR 8.15.16
10095-002-D002-SA	RR	8.15.16	8.62g	8.39g	97.33%	5.14g	112°c	110°c	1.29g

% Solids Summary:

Non-Filtered Determination

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

Filtered Determination

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

% Solids calculation

% solids = aliquot after drying/aliquot before drying x 100

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

Frontier Analytical Laboratory
EXTRACTION SHEET

Project #: 10095 Extraction Date: 2016-08-16 Extraction Chemist: RR

Method/Analysis: EPA 1613 D/F

Procedure: SPE/SOX Solvent: Toluene

Sample ID	Wet wt. (g/L)	Dry wt. (g/L)	IS Amt: 10.0uL ID: 160711A Vial: 1 Chemist/Witness/Date	NS Amt: 10.0uL ID: 160711B Vial: 1 Chemist/Witness/Date	CSS Amt: 10.0uL ID: 160711C Vial: 1 Chemist/Witness/Date
03815-001-0001-MB					
03815-001-0001-OPR					
10095-001-D002-SA	5.23g	5.01g	RR 8-16-16	NA	RR 8-17-16
10095-002-D002-SA	5.20g	5.06g	↓ ↓ ↓	↓	↓ ↓ ↓

AX-21 Charcoal Cleaned	130410	Acetone	158570	Acid Alumina	A0347591	Hexane	161098
Methanol	161218	Methylene Chloride (DCM)	161693	Silica Gel	TA1975634	Sodium Hydroxide 1N	151965
Sodium Sulfate	16B100005	Sulfuric Acid	158403	Tetradecane	157561	Toluene	56097
Water	162916	C-18 Empore Discs	320850D	Cyclohexane	55211		

Comments:

Frontier Analytical Laboratory
CLEANUP SHEET

Project #: 10095

Method/Analysis: EPA 1613 D/F

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

Sample ID	Cleanup 1	Cleanup 2	Cleanup 3	RS
	AP	MSG·AA	CC	Amt: 10.0uL ID: 160711D Vial: 2
	Chemist/Date	Chemist/Date	Chemist/Date	Chemist/Witness/Date
03815-001-0001-MB				
03815-001-0001-OPR				
10095-001-D002-SA	NA	RR 8·17·16	RR 8·17·16	RR [illegible] 8·17·16
10095-002-D002-SA	↓	↓	↓	↓ ↓ ↓

0087

AX-21 Charcoal Cleaned	130410	Acetone	158570	Acid Alumina	A0347591	Hexane	161098
Methanol	161218	Methylene Chloride (DCM)	161693	Silica Gel	TA1975634	Sodium Hydroxide 1N	151965
Sodium Sulfate	16B100005	Sulfuric Acid	158403	Tetradecane	157561	Toluene	56097
Water	162916	C-18 Empore Discs	320850D	Cyclohexane	55211		

Comments:

FAL ID: 03814-001-0001-MB Filename: 18AUG16Z Sam:4 Acquired: 18-AUG-16 19:50:48 ICal: DAILY209FAL4-8-18-16
Client ID: Method Blank ConCal: ST081816Z1 EndCal: ST081816Z2
Results: 10051X GC Column: DB1 Amount: 5.000

Name	Resp	RA		RT	RRF	Conc	Qual	Noise-1	Noise-2	DL	Rec
PCB-1	*	*	n	NotFnd	1.04	*		546	456	0.381	
13C-PCB-1	4.77e+07	3.15	y	14:28	1.11	1820					91.1
PCB-2	*	*	n	NotFnd	0.90	*		546	456	0.601	
PCB-3	*	*	n	NotFnd	1.07	*		546	456	0.659	
13C-PCB-3	4.16e+07	3.15	y	16:58	1.03	1720					85.9
PCB-4	*	*	n	NotFnd	1.22	*		654	711	0.800	
PCB-10	*	*	n	NotFnd	1.42	*		654	711	0.974	
13C-PCB-4	2.63e+07	1.59	y	18:08	0.58	1940					97.2
PCB-9	*	*	n	NotFnd	1.42	*		654	711	0.977	
PCB-7	*	*	n	NotFnd	1.46	*		654	711	0.946	
PCB-6	*	*	n	NotFnd	1.49	*		654	711	0.930	
PCB-8	*	*	n	NotFnd	1.26	*		654	711	1.09	
PCB-5	*	*	n	NotFnd	1.50	*		654	711	0.923	
PCB-14	*	*	n	NotFnd	1.41	*		654	711	0.979	
PCB-11	*	*	n	NotFnd	1.21	*		654	711	1.15	
PCB-13	*	*	n	NotFnd	1.13	*		654	711	1.23	
PCB-12	*	*	n	NotFnd	1.28	*		654	711	1.08	
PCB-15	*	*	n	NotFnd	1.26	*		654	711	1.37	
13C-PCB-15	3.20e+07	1.55	y	23:46	0.88	1540					76.8
PCB-19	*	*	n	NotFnd	1.07	*		741	472	0.892	
PCB-30	*	*	n	NotFnd	1.51	*		741	472	0.632	
PCB-18	*	*	n	NotFnd	1.00	*		741	472	0.953	
PCB-17	*	*	n	NotFnd	1.13	*		741	472	0.847	
PCB-27	*	*	n	NotFnd	1.41	*		741	472	0.675	
PCB-24	*	*	n	NotFnd	1.54	*		741	472	0.620	
PCB-16	*	*	n	NotFnd	1.27	*		741	472	0.752	
PCB-32	*	*	n	NotFnd	1.25	*		741	472	0.764	
13C-PCB-19	2.52e+07	1.11	y	22:01	0.59	1810					90.6
13C-PCB-9	4.71e+07	1.61	y	19:50	-	9.68					
PCB-34	*	*	n	NotFnd	1.08	*		621	436	1.83	
PCB-23	*	*	n	NotFnd	1.30	*		621	436	1.51	
PCB-29	*	*	n	NotFnd	1.22	*		621	436	1.61	
PCB-26	*	*	n	NotFnd	1.18	*		621	436	1.66	
PCB-25	*	*	n	NotFnd	1.51	*		621	436	1.30	
PCB-31	*	*	n	NotFnd	1.18	*		621	436	1.66	
PCB-28	*	*	n	NotFnd	1.49	*		621	436	1.32	
PCB-20	*	*	n	NotFnd	1.27	*		621	436	1.55	Co-elute PCB 21/33
PCB-21	*	*	n	NotFnd	1.27	*		621	436	1.55	Co-elute PCB 20/33
PCB-33	*	*	n	NotFnd	1.27	*		621	436	1.55	Co-elute PCB 20/21
PCB-22	*	*	n	NotFnd	1.26	*		621	436	1.56	
PCB-36	*	*	n	NotFnd	1.13	*		621	436	1.75	
PCB-39	*	*	n	NotFnd	1.13	*		621	436	1.75	
PCB-38	*	*	n	NotFnd	1.19	*		621	436	1.65	
PCB-35	*	*	n	NotFnd	1.04	*		621	436	1.89	
PCB-37	*	*	n	NotFnd	1.27	*		621	436	1.56	
13C-PCB-37	2.62e+07	1.08	y	30:25	1.22	1620					81.0

PCB-54	*	*	n	NotFnd	1.08	*	512	628	0.689	
PCB-50	*	*	n	NotFnd	0.79	*	512	628	0.944	
PCB-53	*	*	n	NotFnd	0.78	*	512	628	0.954	
PCB-51	*	*	n	NotFnd	0.78	*	512	628	0.953	
PCB-45	*	*	n	NotFnd	0.68	*	512	628	1.09	
PCB-46	*	*	n	NotFnd	0.65	*	512	628	1.15	
PCB-52	*	*	n	NotFnd	0.95	*	512	628	0.780	Co-elute PCB 69
PCB-69	*	*	n	NotFnd	0.95	*	512	628	0.780	Co-elute PCB 52
PCB-73	*	*	n	NotFnd	0.94	*	512	628	0.792	
PCB-43	*	*	n	NotFnd	0.73	*	512	628	1.01	Co-elute PCB 49
PCB-49	*	*	n	NotFnd	0.73	*	512	628	1.01	Co-elute PCB 43
PCB-47	*	*	n	NotFnd	0.89	*	512	628	0.835	
PCB-48	*	*	n	NotFnd	0.93	*	512	628	0.799	Co-elute PCB 75
PCB-75	*	*	n	NotFnd	0.93	*	512	628	0.799	Co-elute PCB 48
PCB-65	*	*	n	NotFnd	0.96	*	512	628	0.776	
PCB-62	*	*	n	NotFnd	0.88	*	512	628	0.840	
PCB-44	*	*	n	NotFnd	0.66	*	512	628	1.13	
PCB-42	*	*	n	NotFnd	0.90	*	512	628	0.827	Co-elute PCB 59
PCB-59	*	*	n	NotFnd	0.90	*	512	628	0.827	Co-elute PCB 42
PCB-72	*	*	n	NotFnd	0.96	*	512	628	0.770	Co-elute PCB 41/71/64
PCB-41	*	*	n	NotFnd	0.96	*	512	628	0.770	Co-elute PCB 72/71/64
PCB-71	*	*	n	NotFnd	0.96	*	512	628	0.770	Co-elute PCB 72/41/64
PCB-64	*	*	n	NotFnd	0.96	*	512	628	0.770	Co-elute PCB 72/41/71
PCB-68	*	*	n	NotFnd	0.99	*	512	628	0.752	
PCB-40	*	*	n	NotFnd	0.57	*	512	628	1.29	
PCB-57	*	*	n	NotFnd	0.95	*	512	628	0.779	
PCB-67	*	*	n	NotFnd	0.87	*	512	628	0.853	
PCB-58	*	*	n	NotFnd	1.00	*	512	628	0.744	
PCB-63	*	*	n	NotFnd	0.95	*	512	628	0.781	
PCB-74	*	*	n	NotFnd	0.97	*	512	628	0.767	
PCB-61	*	*	n	NotFnd	1.02	*	512	628	0.726	Co-elute PCB 70
PCB-70	*	*	n	NotFnd	1.02	*	512	628	0.726	Co-elute PCB 61
PCB-76	*	*	n	NotFnd	1.00	*	512	628	0.745	Co-elute PCB 66
PCB-66	*	*	n	NotFnd	1.00	*	512	628	0.745	Co-elute PCB 76
PCB-80	*	*	n	NotFnd	1.08	*	512	628	0.688	
PCB-55	*	*	n	NotFnd	0.98	*	512	628	0.757	
13C-PCB-54	3.08e+07	0.79	y	25:33	1.24	1860				93.1
PCB-104	*	*	n	NotFnd	1.14	*	476	511	0.853	
PCB-96	*	*	n	NotFnd	1.01	*	476	511	0.959	
PCB-103	*	*	n	NotFnd	0.88	*	476	511	1.10	
PCB-100	*	*	n	NotFnd	0.84	*	476	511	1.15	
PCB-94	*	*	n	NotFnd	0.70	*	476	511	1.38	
PCB-98	*	*	n	NotFnd	0.92	*	476	511	1.06	Co-elute PCB 102
PCB-102	*	*	n	NotFnd	0.92	*	476	511	1.06	Co-elute PCB 98
PCB-95	*	*	n	NotFnd	0.78	*	476	511	1.25	
PCB-93	*	*	n	NotFnd	0.65	*	476	511	1.48	
PCB-88	*	*	n	NotFnd	0.79	*	476	511	1.23	Co-elute PCB 91
PCB-91	*	*	n	NotFnd	0.79	*	476	511	1.23	Co-elute PCB 88
PCB-121	*	*	n	NotFnd	0.98	*	476	511	0.993	
13C-PCB-104	2.06e+07	1.65	y	29:58	0.87	1780				89.2
13C-PCB-28	3.84e+07	1.07	y	26:40	1.47	1970				98.6
13C-PCB-52	2.65e+07	0.79	y	28:54	-	9.52				

PCB-56	*	*	n	NotFnd	1.24	*	424	505	1.20	Co-elute PCB 60
PCB-60	*	*	n	NotFnd	1.24	*	424	505	1.20	Co-elute PCB 56
PCB-79	*	*	n	NotFnd	1.14	*	424	505	1.30	
PCB-78	*	*	n	NotFnd	1.08	*	424	505	1.38	
PCB-81	*	*	n	NotFnd	1.18	*	424	505	1.17	
13C-PCB-81	2.21e+07	0.80	y	36:08	1.07	1750				87.5
PCB-77	*	*	n	NotFnd	1.08	*	424	505	1.48	
13C-PCB-77	2.24e+07	0.80	y	36:43	1.09	1740				87.2
PCB-155	*	*	n	NotFnd	1.07	*	436	432	0.757	
PCB-150	*	*	n	NotFnd	0.98	*	436	432	0.830	
PCB-152	*	*	n	NotFnd	0.97	*	436	432	0.840	
PCB-145	*	*	n	NotFnd	0.93	*	436	432	0.875	
PCB-136	*	*	n	NotFnd	0.95	*	436	432	0.858	
PCB-148	*	*	n	NotFnd	0.66	*	436	432	1.23	
PCB-154	*	*	n	NotFnd	0.79	*	436	432	1.03	
13C-PCB-155	2.28e+07	1.29	y	34:08	1.06	1820				90.8
13C-PCB-111	2.73e+07	1.60	y	36:13	1.13	2050				102
13C-PCB-101	2.36e+07	1.58	y	34:35	-	9.53				
PCB-84	*	*	n	NotFnd	0.84	*	344	489	1.14	Co-elute PCB 92
PCB-92	*	*	n	NotFnd	0.84	*	344	489	1.14	Co-elute PCB 84
PCB-89	*	*	n	NotFnd	0.84	*	344	489	1.14	
PCB-90	*	*	n	NotFnd	0.96	*	344	489	0.994	Co-elute PCB 101
PCB-101	*	*	n	NotFnd	0.96	*	344	489	0.994	Co-elute PCB 90
PCB-113	*	*	n	NotFnd	1.15	*	344	489	0.831	
PCB-99	*	*	n	NotFnd	0.96	*	344	489	1.00	
PCB-119	*	*	n	NotFnd	1.22	*	344	489	0.784	
PCB-83	*	*	n	NotFnd	0.99	*	344	489	0.972	Co-elute PCB 112
PCB-112	*	*	n	NotFnd	0.99	*	344	489	0.972	Co-elute PCB 83
PCB-109	*	*	n	NotFnd	1.14	*	344	489	0.840	
PCB-97	*	*	n	NotFnd	1.00	*	344	489	0.954	
PCB-86	*	*	n	NotFnd	0.79	*	344	489	1.21	
PCB-125	*	*	n	NotFnd	1.11	*	344	489	0.867	Co-elute PCB 87/117
PCB-87	*	*	n	NotFnd	1.11	*	344	489	0.867	Co-elute PCB 125/117
PCB-117	*	*	n	NotFnd	1.11	*	344	489	0.867	Co-elute PCB 125/87
PCB-111	*	*	n	NotFnd	1.32	*	344	489	0.724	Co-elute PCB 115
PCB-115	*	*	n	NotFnd	1.32	*	344	489	0.724	Co-elute PCB 111
PCB-85	*	*	n	NotFnd	1.03	*	344	489	0.926	Co-elute PCB 116
PCB-116	*	*	n	NotFnd	1.03	*	344	489	0.926	Co-elute PCB 85
PCB-120	*	*	n	NotFnd	1.24	*	344	489	0.771	
PCB-110	*	*	n	NotFnd	1.27	*	344	489	0.752	
PCB-82	*	*	n	NotFnd	0.70	*	344	489	1.37	
PCB-124	*	*	n	NotFnd	1.10	*	460	423	0.928	
PCB-108	*	*	n	NotFnd	1.17	*	460	423	0.867	Co-elute PCB 107
PCB-107	*	*	n	NotFnd	1.17	*	460	423	0.867	Co-elute PCB 108
PCB-123	*	*	n	NotFnd	1.24	*	460	423	0.801	
13C-PCB-123	1.93e+07	1.60	y	38:17	1.09	1690				84.7
PCB-118	*	*	n	NotFnd	1.08	*	460	423	0.891	Co-elute PCB 106
PCB-106	*	*	n	NotFnd	1.08	*	460	423	0.891	Co-elute PCB 118
13C-PCB-118	2.38e+07	1.62	y	38:27	1.19	1930				96.3
PCB-114	*	*	n	NotFnd	1.08	*	460	423	0.871	
13C-PCB-114	2.26e+07	1.62	y	39:05	1.11	1950				97.4
PCB-122	*	*	n	NotFnd	1.13	*	460	423	0.899	
PCB-105	*	*	n	NotFnd	1.13	*	460	423	1.05	
13C-PCB-105	2.03e+07	1.60	y	39:54	1.14	1720				86.0

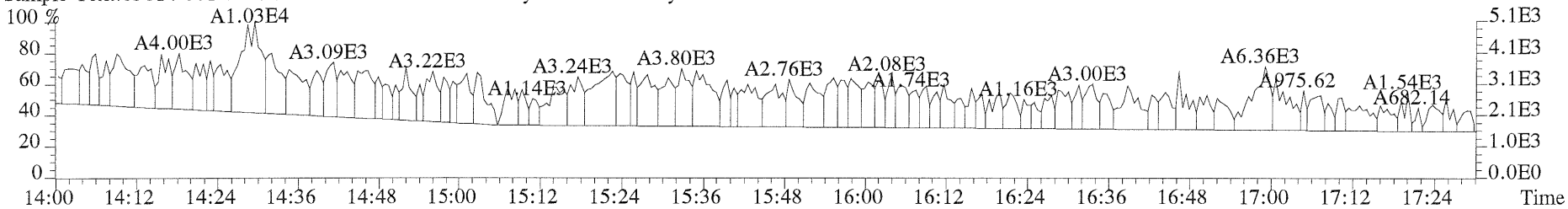
PCB-127	*	*	n	NotFnd	1.03	*		460	423	0.988	
PCB-126	*	*	n	NotFnd	1.14	*		460	423	1.56	
13C-PCB-126	1.87e+07	1.57	y	42:04	0.97	1850					92.5
PCB-151	*	*	n	NotFnd	0.86	*		496	396	1.24	
PCB-135	*	*	n	NotFnd	0.94	*		496	396	1.14	
PCB-144	*	*	n	NotFnd	0.91	*		496	396	1.17	
PCB-147	*	*	n	NotFnd	0.94	*		496	396	1.13	
PCB-139	*	*	n	NotFnd	0.97	*		496	396	1.10	Co-elute PCB 149
PCB-149	*	*	n	NotFnd	0.97	*		496	396	1.10	Co-elute PCB 139
PCB-140	*	*	n	NotFnd	0.92	*		496	396	1.17	
PCB-143	*	*	n	NotFnd	0.87	*		496	396	1.23	Co-elute PCB 134
PCB-134	*	*	n	NotFnd	0.87	*		496	396	1.23	Co-elute PCB 143
PCB-131	*	*	n	NotFnd	0.88	*		496	396	1.22	Co-elute PCB 133
PCB-133	*	*	n	NotFnd	0.88	*		496	396	1.22	Co-elute PCB 131
PCB-142	*	*	n	NotFnd	0.77	*		496	396	1.38	
PCB-165	*	*	n	NotFnd	1.05	*		496	396	1.02	Co-elute PCB 146
PCB-146	*	*	n	NotFnd	1.05	*		496	396	1.02	Co-elute PCB 165
PCB-161	*	*	n	NotFnd	0.99	*		496	396	1.08	Co-elute PCB 132
PCB-132	*	*	n	NotFnd	0.99	*		496	396	1.08	Co-elute PCB 161
PCB-153	*	*	n	NotFnd	1.02	*		496	396	1.04	
PCB-168	*	*	n	NotFnd	1.15	*		496	396	0.928	
PCB-141	*	*	n	NotFnd	0.88	*		496	396	1.22	
PCB-137	*	*	n	NotFnd	0.86	*		496	396	1.25	
PCB-130	*	*	n	NotFnd	0.71	*		496	396	1.50	
PCB-138	*	*	n	NotFnd	1.14	*		496	396	0.940	Co-elute PCB 163/164
PCB-163	*	*	n	NotFnd	1.14	*		496	396	0.940	Co-elute PCB 138/164
PCB-164	*	*	n	NotFnd	1.14	*		496	396	0.940	Co-elute PCB 138/163
PCB-158	*	*	n	NotFnd	1.12	*		496	396	0.953	Co-elute PCB 160
PCB-160	*	*	n	NotFnd	1.12	*		496	396	0.953	Co-elute PCB 158
PCB-129	*	*	n	NotFnd	0.69	*		496	396	1.56	
PCB-166	*	*	n	NotFnd	1.05	*		496	396	1.01	
PCB-159	*	*	n	NotFnd	1.13	*		496	396	0.950	
PCB-128	*	*	n	NotFnd	0.94	*		496	396	1.14	Co-elute PCB 162
PCB-162	*	*	n	NotFnd	0.94	*		496	396	1.14	Co-elute PCB 128
PCB-167	*	*	n	NotFnd	0.96	*		496	396	0.997	
13C-PCB-167	2.28e+07	1.27	y	43:21	1.14	1910					95.6
PCB-156	*	*	n	NotFnd	1.04	*		496	396	0.949	
13C-PCB-156	2.11e+07	1.29	y	44:35	1.07	1890					94.5
PCB-157	*	*	n	NotFnd	0.96	*		496	396	1.10	
13C-PCB-157	2.26e+07	1.25	y	44:50	1.09	2000					100.0
PCB-169	*	*	n	NotFnd	0.92	*		496	396	1.43	
13C-PCB-169	1.84e+07	1.29	y	46:45	0.92	1910					95.7

FAL ID: 03814-001-0001-MB Filename: 18AUG16Z Sam:4 Acquired: 18-AUG-16 19:50:48 ICal: DAILY209FAL4-8-18-16
Client ID: Method Blank ConCal: ST081816Z1 EndCal: ST081816Z2
Results: 10051X GC Column: DB1 Amount: 5.000

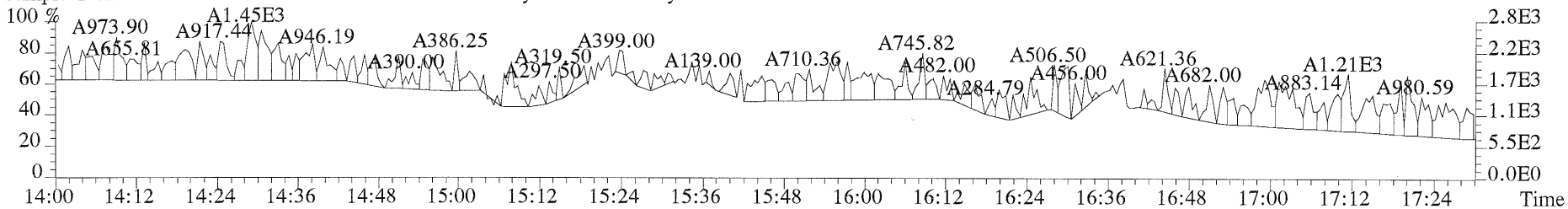
PCB-188	*	*	n	NotFnd	1.12	*	536	316	0.649	
13C-PCB-188	2.28e+07	1.09	y	39:37	1.25	1760				87.9
PCB-184	*	*	n	NotFnd	1.35	*	536	316	0.597	
PCB-179	*	*	n	NotFnd	1.29	*	536	316	0.625	
PCB-176	*	*	n	NotFnd	1.22	*	536	316	0.663	
PCB-186	*	*	n	NotFnd	1.23	*	536	316	0.656	
PCB-178	*	*	n	NotFnd	0.86	*	536	316	0.937	
PCB-175	*	*	n	NotFnd	0.91	*	536	316	0.886	
PCB-187	*	*	n	NotFnd	0.99	*	536	316	0.820	Co-elute PCB 182
PCB-182	*	*	n	NotFnd	0.99	*	536	316	0.820	Co-elute PCB 187
PCB-183	*	*	n	NotFnd	0.97	*	536	316	0.832	
PCB-185	*	*	n	NotFnd	0.86	*	536	316	0.937	
PCB-174	*	*	n	NotFnd	0.87	*	536	316	0.933	
PCB-181	*	*	n	NotFnd	0.89	*	536	316	0.913	
PCB-177	*	*	n	NotFnd	0.79	*	536	316	1.03	
PCB-171	*	*	n	NotFnd	0.83	*	536	316	0.977	
PCB-173	*	*	n	NotFnd	0.74	*	536	316	1.09	
PCB-172	*	*	n	NotFnd	0.76	*	536	316	1.06	
PCB-192	*	*	n	NotFnd	1.05	*	536	316	0.769	
PCB-180	*	*	n	NotFnd	1.01	*	536	316	0.803	
PCB-193	*	*	n	NotFnd	1.11	*	536	316	0.731	
PCB-191	*	*	n	NotFnd	1.02	*	536	316	0.790	
PCB-170	*	*	n	NotFnd	0.68	*	536	316	1.20	
PCB-190	*	*	n	NotFnd	0.97	*	536	316	0.831	
PCB-189	*	*	n	NotFnd	1.09	*	536	316	0.841	
13C-PCB-189	1.70e+07	1.10	y	48:23	0.82	1990				99.7
PCB-202	*	*	n	NotFnd	1.00	*	256	356	0.700	
PCB-201	*	*	n	NotFnd	0.99	*	256	356	0.711	
PCB-204	*	*	n	NotFnd	1.03	*	256	356	0.681	
PCB-197	*	*	n	NotFnd	1.06	*	256	356	0.662	
PCB-200	*	*	n	NotFnd	0.99	*	256	356	0.712	
PCB-198	*	*	n	NotFnd	0.70	*	256	356	1.00	
PCB-199	*	*	n	NotFnd	0.61	*	256	356	1.15	
PCB-203	*	*	n	NotFnd	0.70	*	256	356	1.01	Co-elute PCB 196
PCB-196	*	*	n	NotFnd	0.70	*	256	356	1.01	Co-elute PCB 203
13C-PCB-202	1.76e+07	0.91	y	44:44	0.89	1890				94.6
13C-PCB-178	1.70e+07	1.08	y	42:15	0.81	2020				101
13C-PCB-138	2.08e+07	1.27	y	41:29	-	9.92				
PCB-195	*	*	n	NotFnd	0.75	*	312	392	0.928	
PCB-194	*	*	n	NotFnd	0.81	*	312	392	0.856	
PCB-205	*	*	n	NotFnd	1.03	*	312	392	0.674	
13C-PCB-205	1.74e+07	0.92	y	50:01	1.25	1910				95.3
PCB-208	*	*	n	NotFnd	0.92	*	300	328	0.617	
13C-PCB-208	1.76e+07	0.78	y	49:05	1.37	1760				87.9
PCB-207	*	*	n	NotFnd	1.01	*	300	328	0.664	
PCB-206	*	*	n	NotFnd	0.99	*	300	328	0.814	
13C-PCB-206	1.27e+07	0.78	y	51:13	0.92	1900				94.9
PCB-209	*	*	n	NotFnd	1.07	*	356	312	0.540	
13C-PCB-209	2.00e+07	1.19	y	52:24	1.43	1910				95.7
13C-PCB-194	1.46e+07	0.94	y	49:47	-	10.5				

Analyst: [illegible] Date: 8/19/16

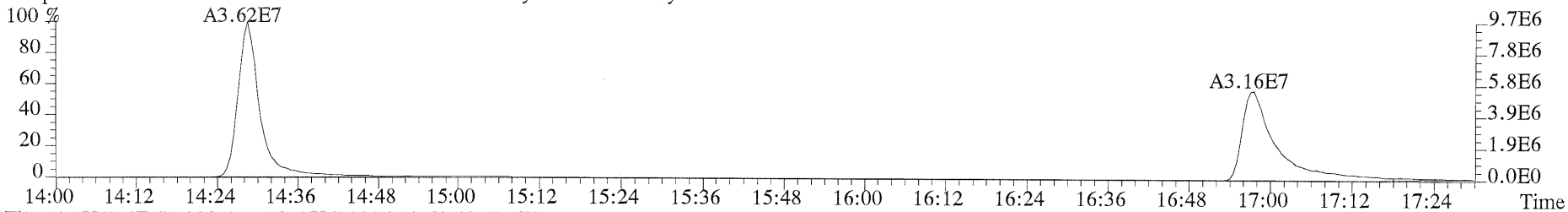
File:18AUG16Z #1-900 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
188.0393 S:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



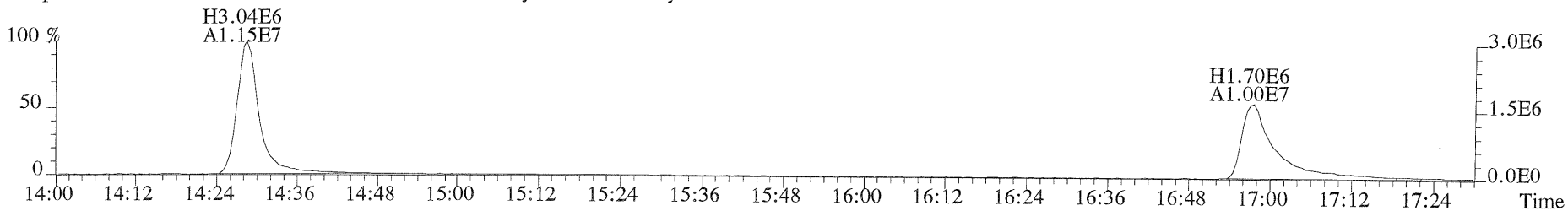
File:18AUG16Z #1-900 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
190.0363 S:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



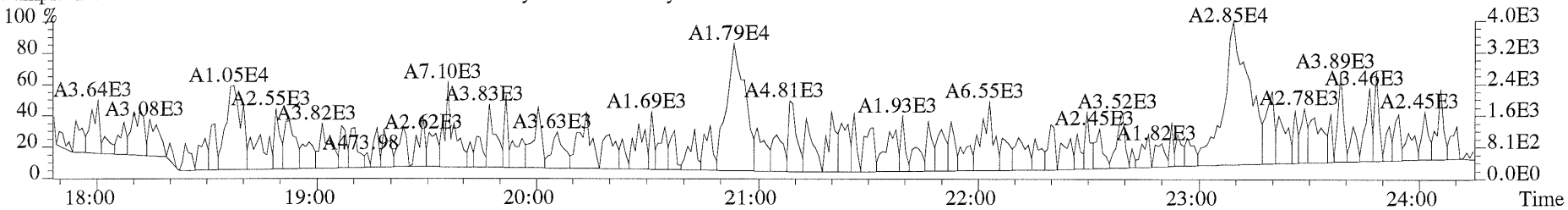
File:18AUG16Z #1-900 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
200.0795 S:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



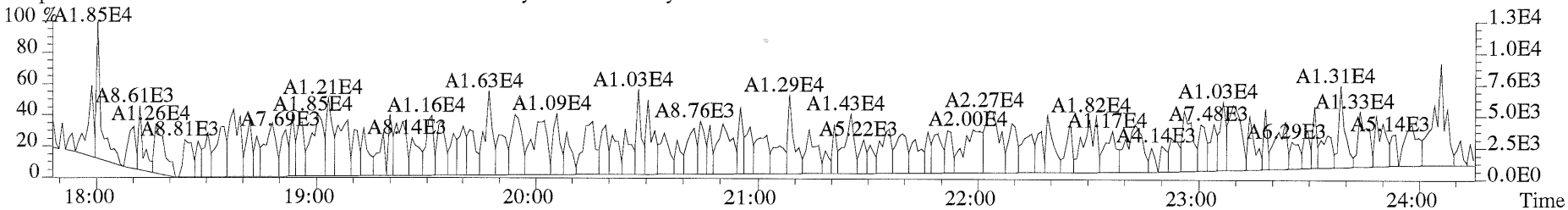
File:18AUG16Z #1-900 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
202.0766 S:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



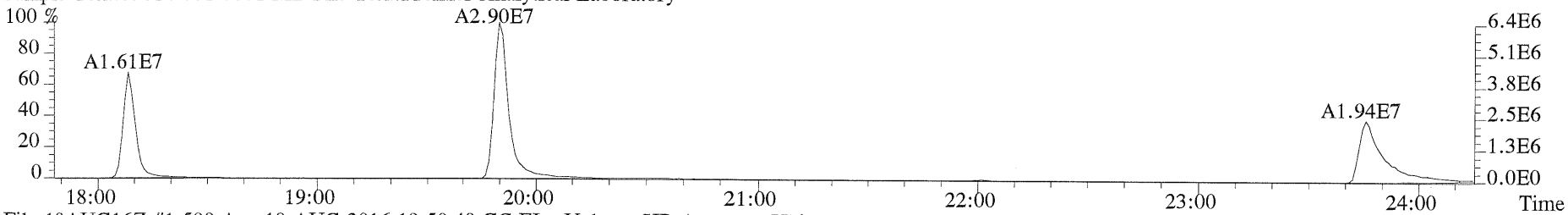
File:18AUG16Z #1-509 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
222.0003 S:4 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



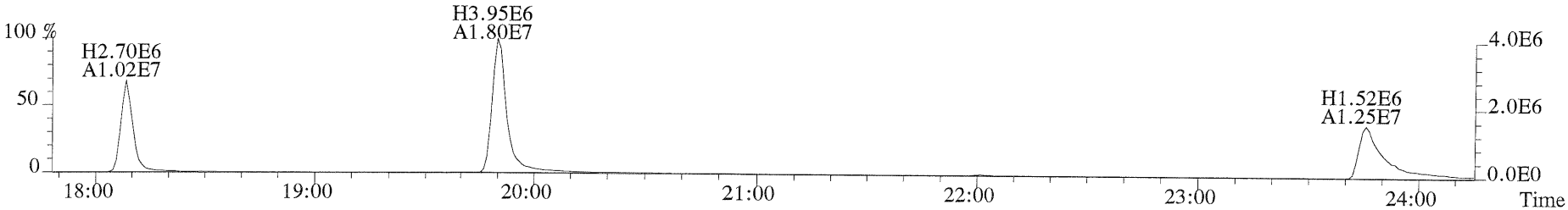
File:18AUG16Z #1-509 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
223.9974 S:4 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



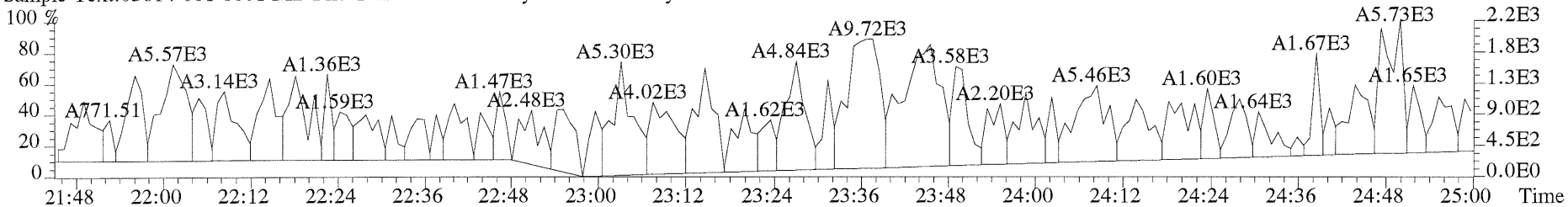
File:18AUG16Z #1-509 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
234.0406 S:4 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



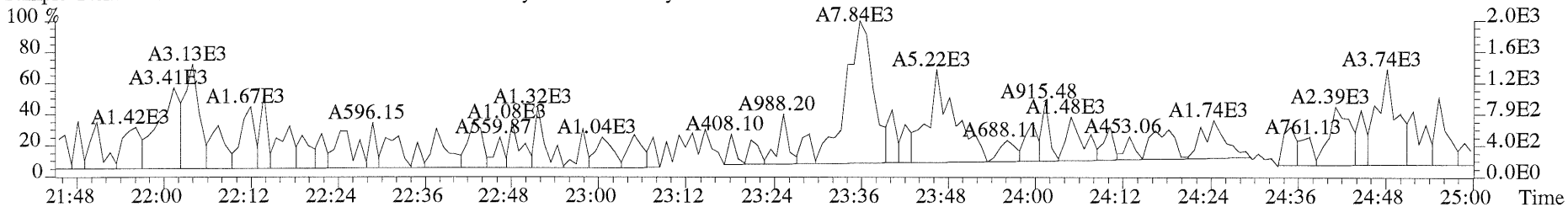
File:18AUG16Z #1-509 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
236.0376 S:4 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



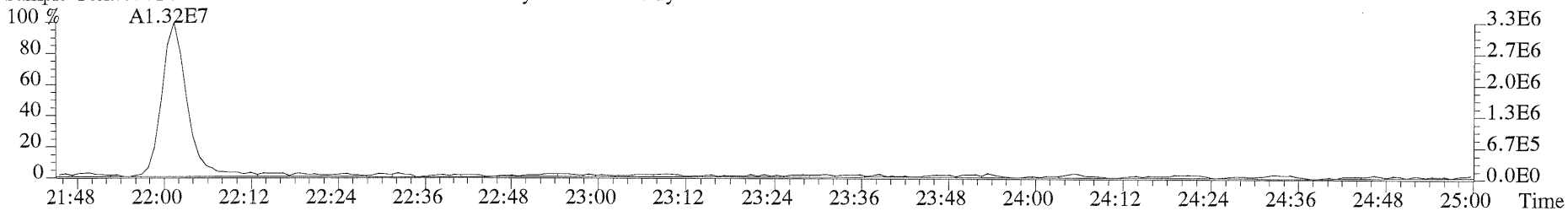
File:18AUG16Z #1-509 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:4 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



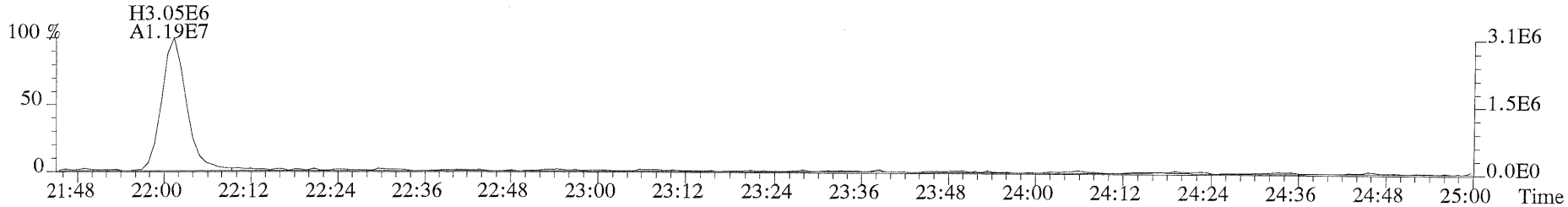
File:18AUG16Z #1-509 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:4 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



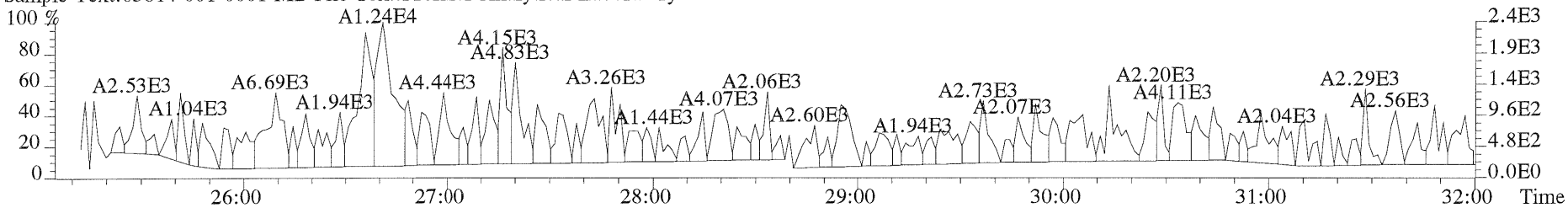
File:18AUG16Z #1-509 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:4 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



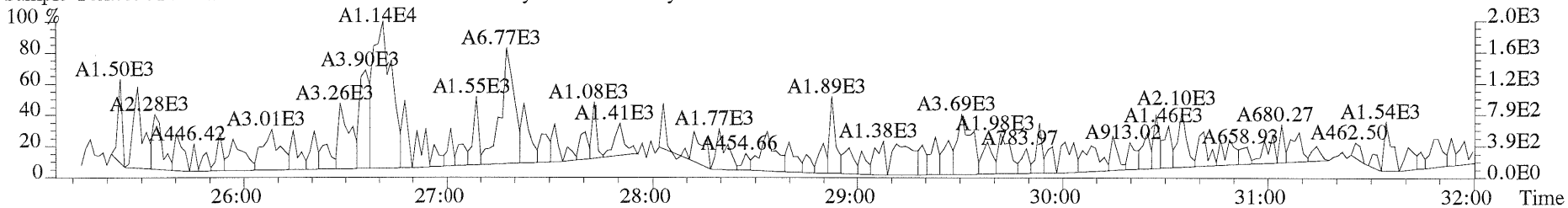
File:18AUG16Z #1-509 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:4 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



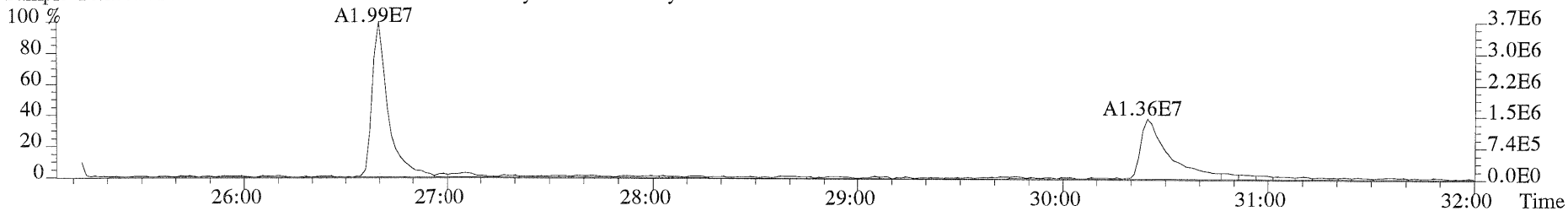
File:18AUG16Z #1-403 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



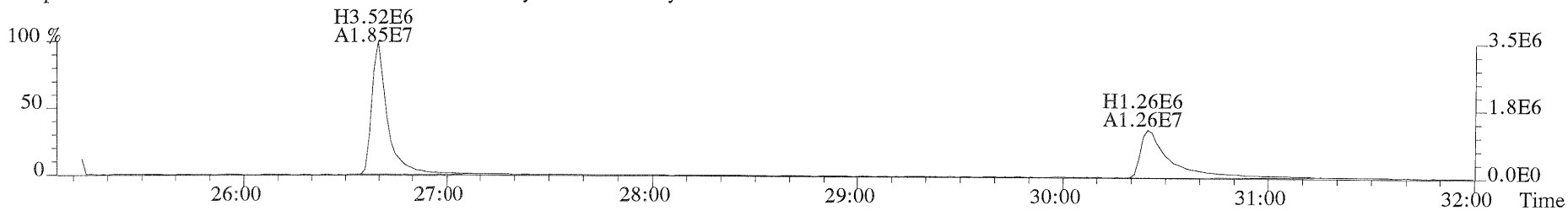
File:18AUG16Z #1-403 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



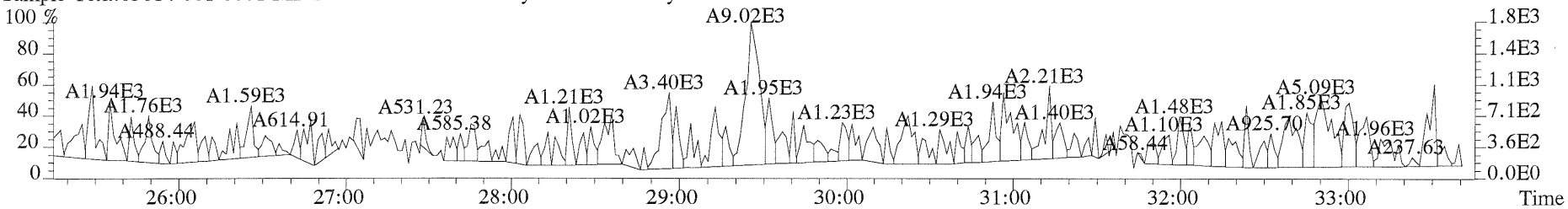
File:18AUG16Z #1-403 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



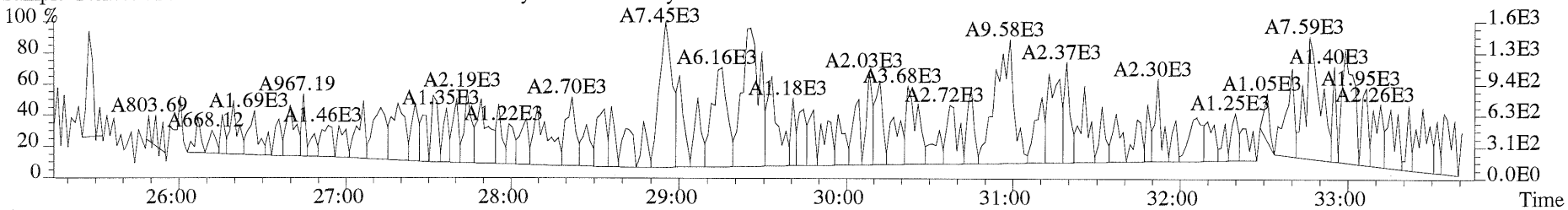
File:18AUG16Z #1-403 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



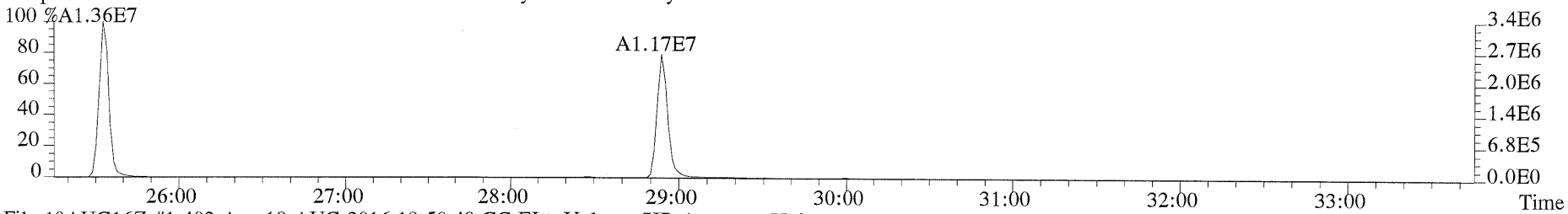
File:18AUG16Z #1-403 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



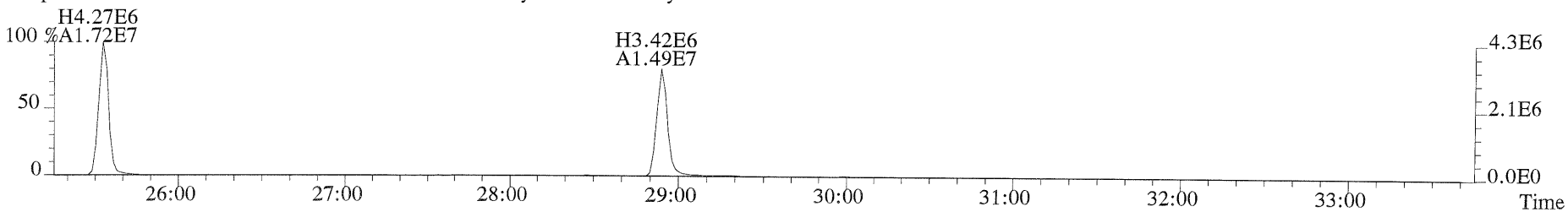
File:18AUG16Z #1-403 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



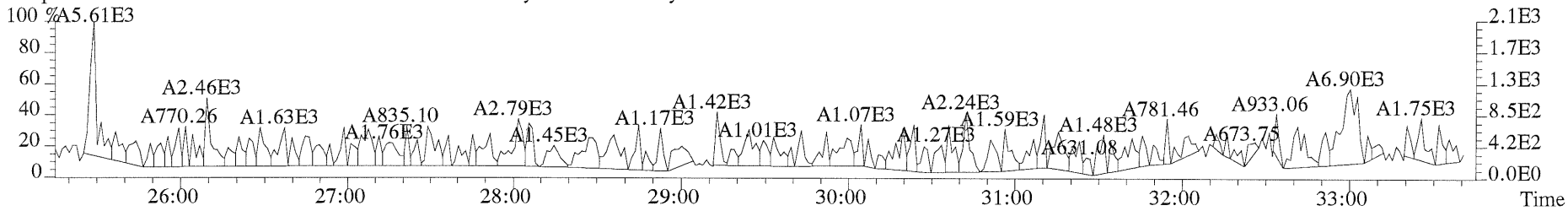
File:18AUG16Z #1-403 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



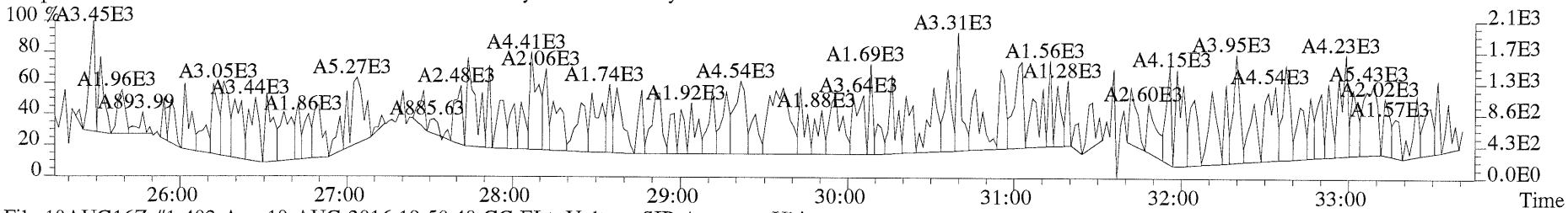
File:18AUG16Z #1-403 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



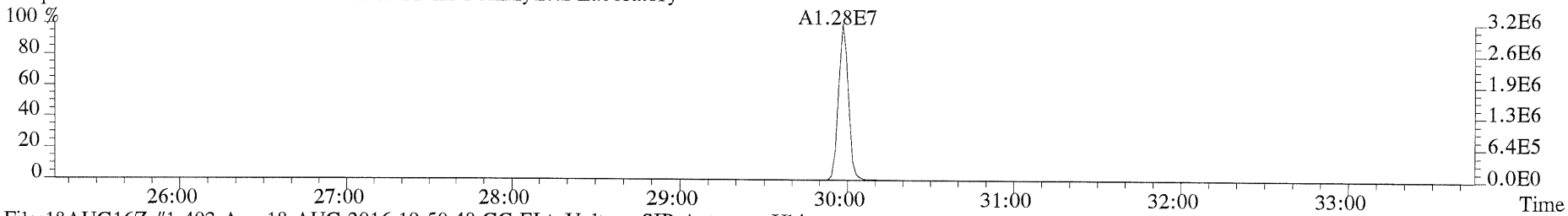
File:18AUG16Z #1-403 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



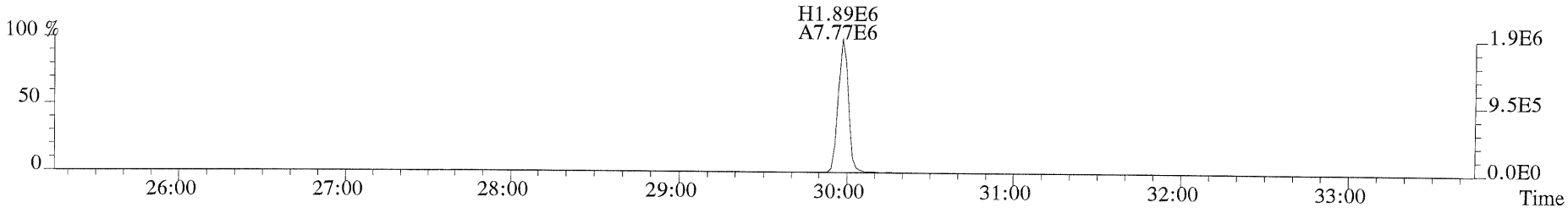
File:18AUG16Z #1-403 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



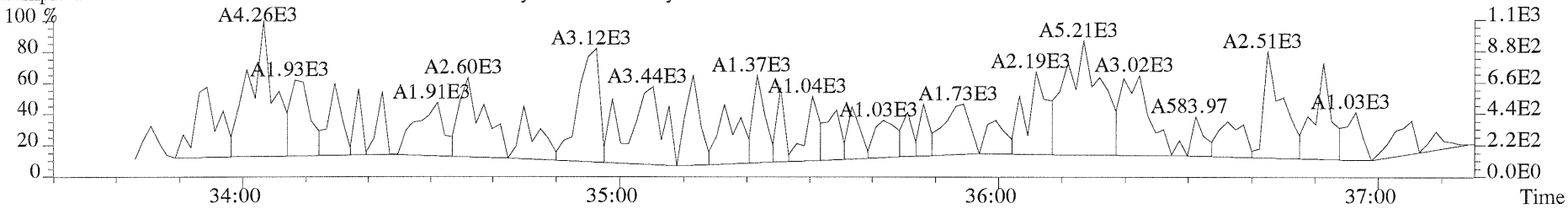
File:18AUG16Z #1-403 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



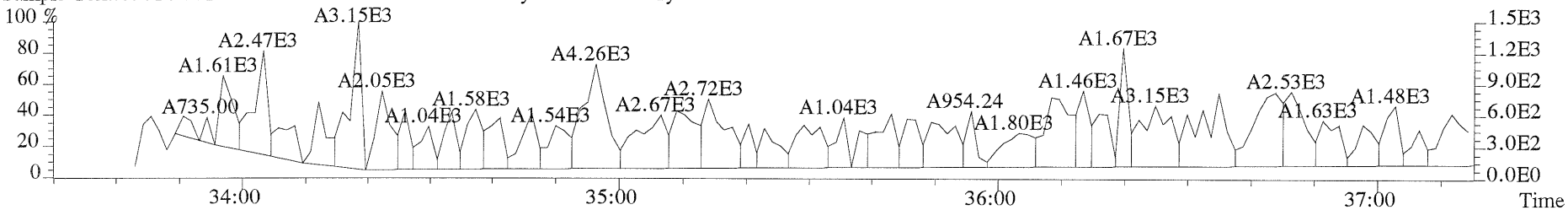
File:18AUG16Z #1-403 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



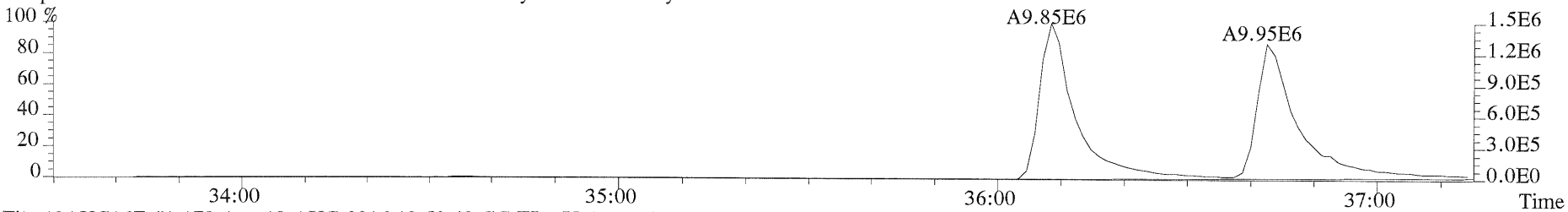
File:18AUG16Z #1-179 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



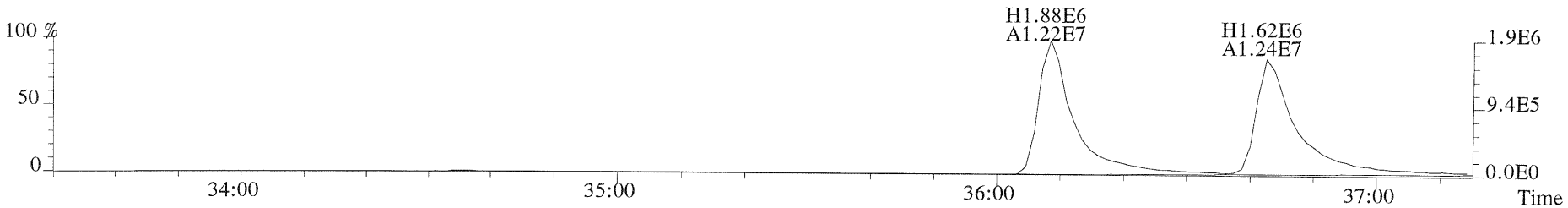
File:18AUG16Z #1-179 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



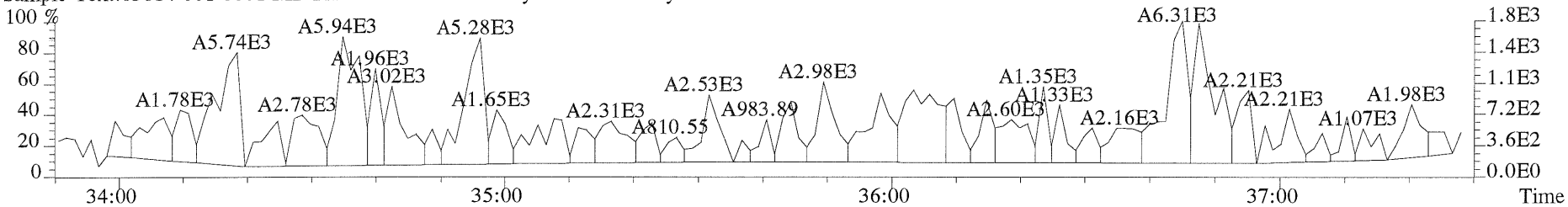
File:18AUG16Z #1-179 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



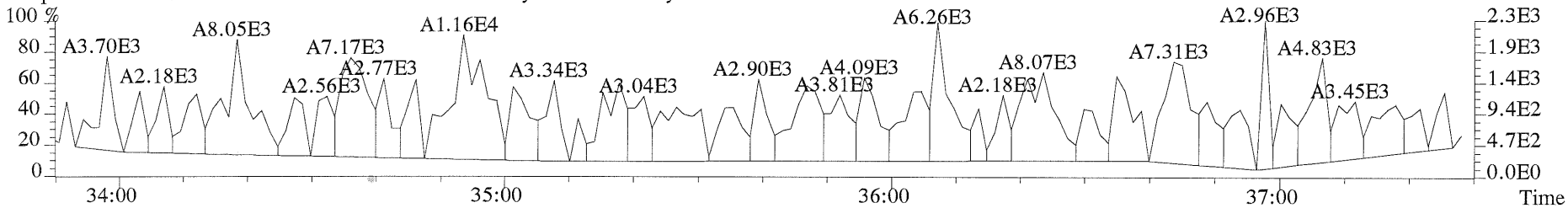
File:18AUG16Z #1-179 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



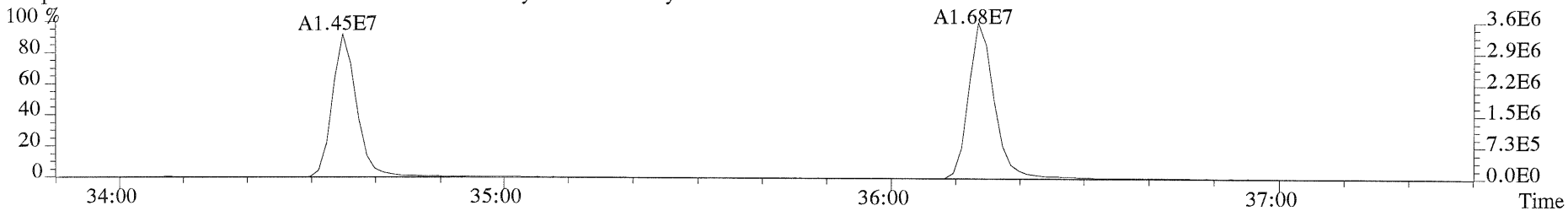
File:18AUG16Z #1-179 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



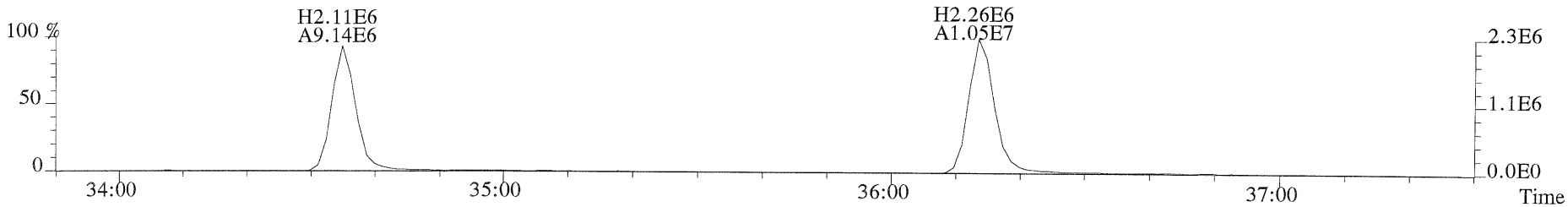
File:18AUG16Z #1-179 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



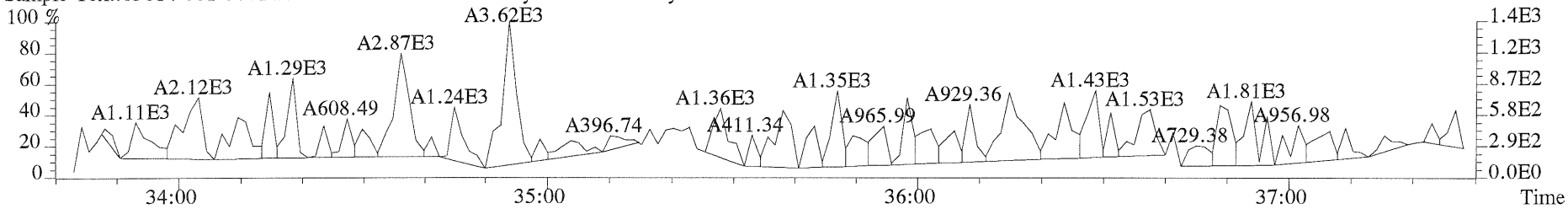
File:18AUG16Z #1-179 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



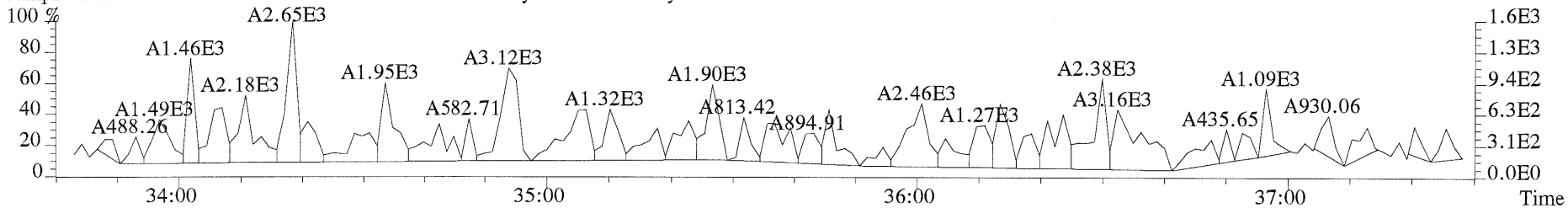
File:18AUG16Z #1-179 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



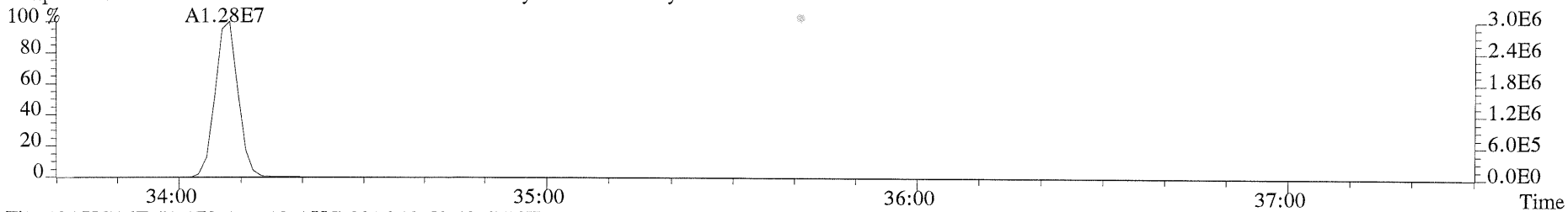
File:18AUG16Z #1-179 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



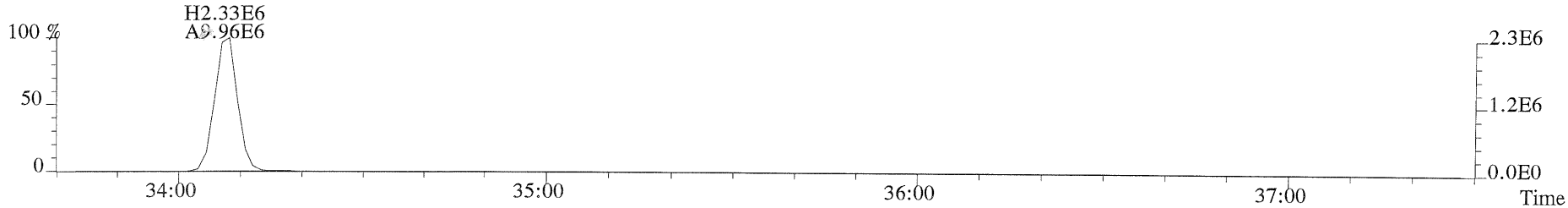
File:18AUG16Z #1-179 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



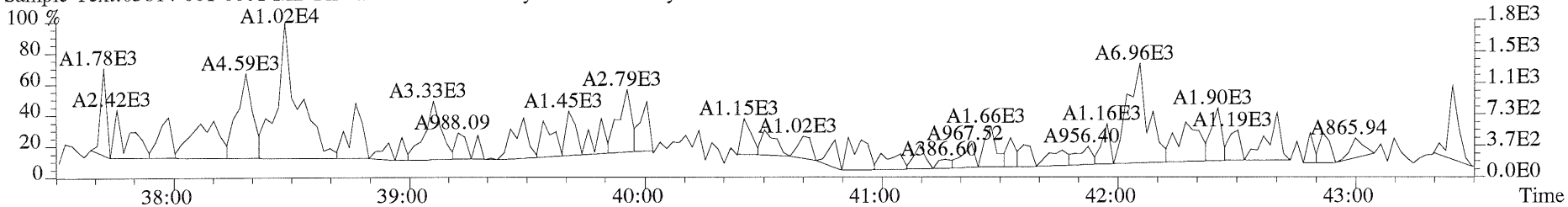
File:18AUG16Z #1-179 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



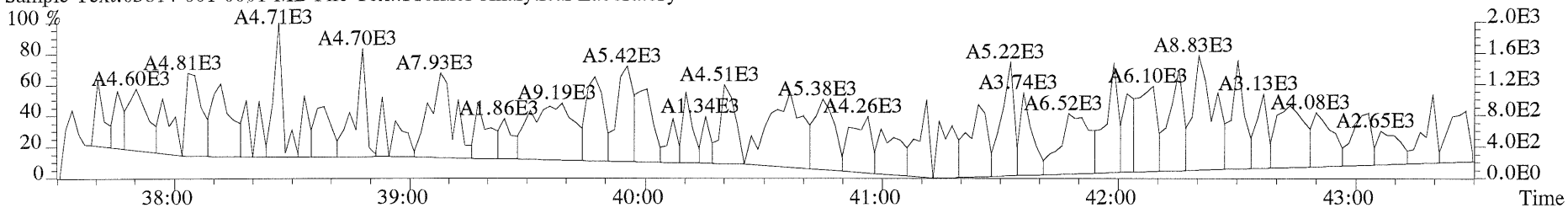
File:18AUG16Z #1-179 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



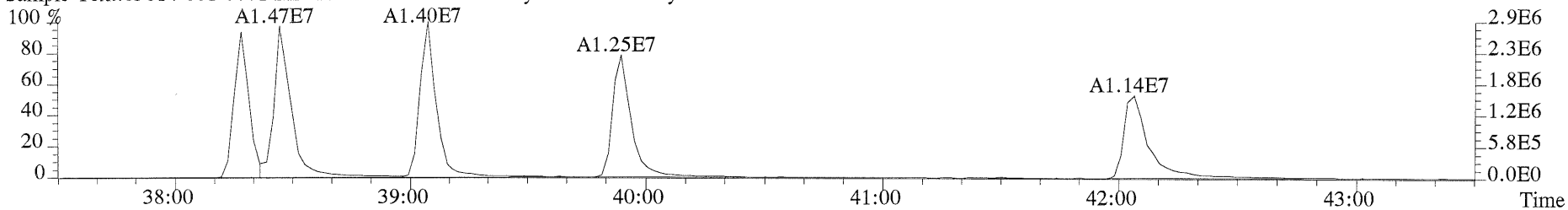
File:18AUG16Z #1-411 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



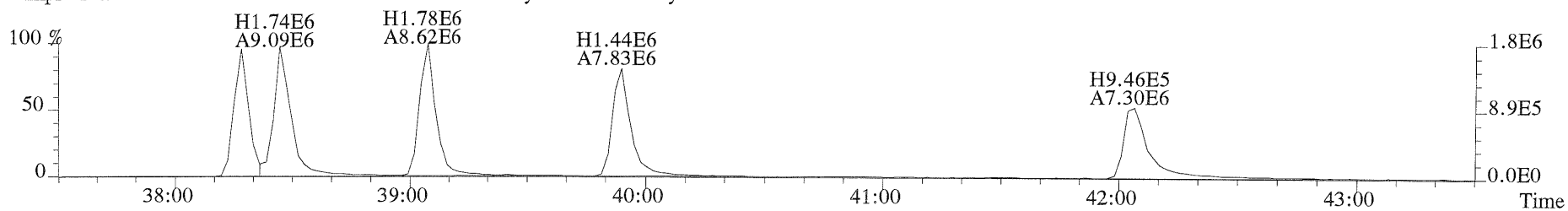
File:18AUG16Z #1-411 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



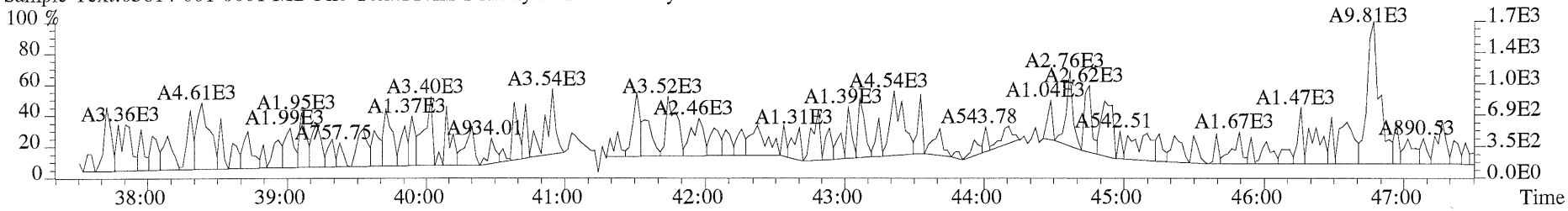
File:18AUG16Z #1-411 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



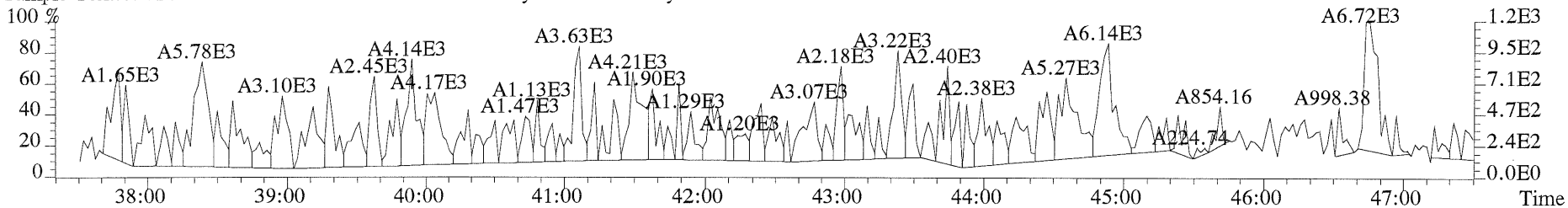
File:18AUG16Z #1-411 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



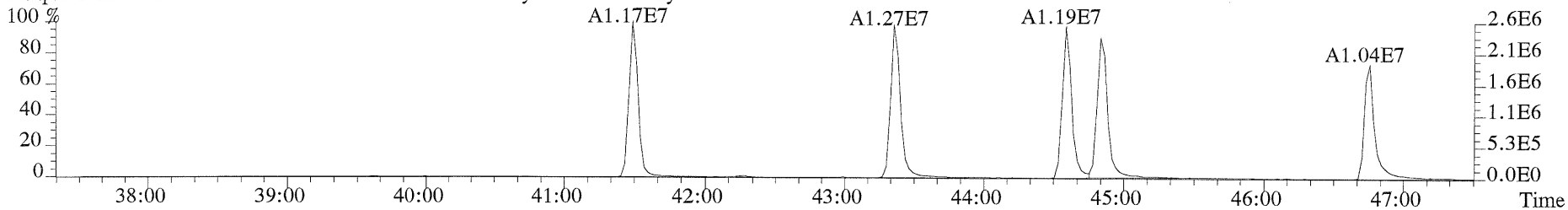
File:18AUG16Z #1-411 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



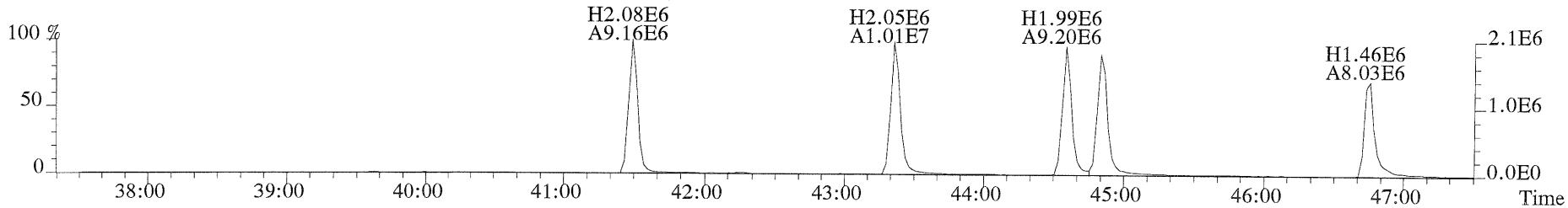
File:18AUG16Z #1-411 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



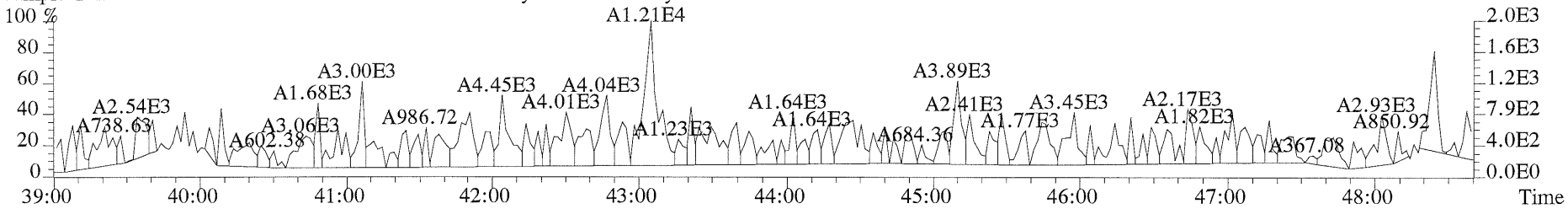
File:18AUG16Z #1-411 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



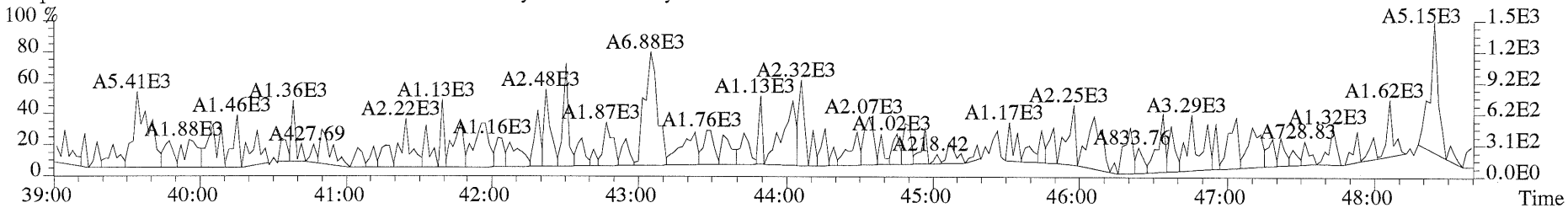
File:18AUG16Z #1-411 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



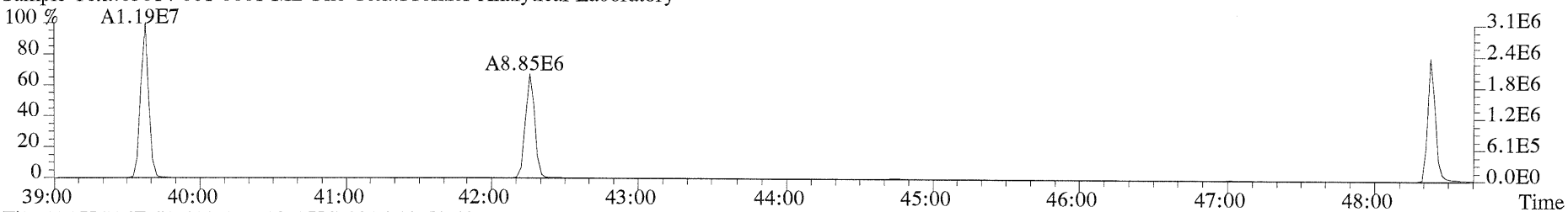
File:18AUG16Z #1-411 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
393.8025 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



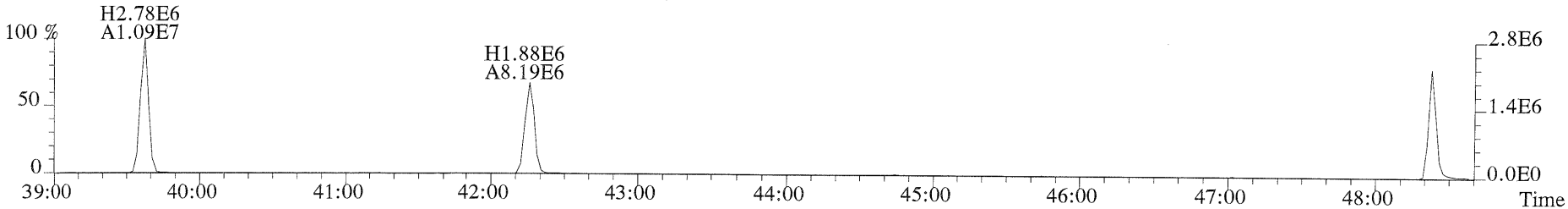
File:18AUG16Z #1-411 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
395.7995 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



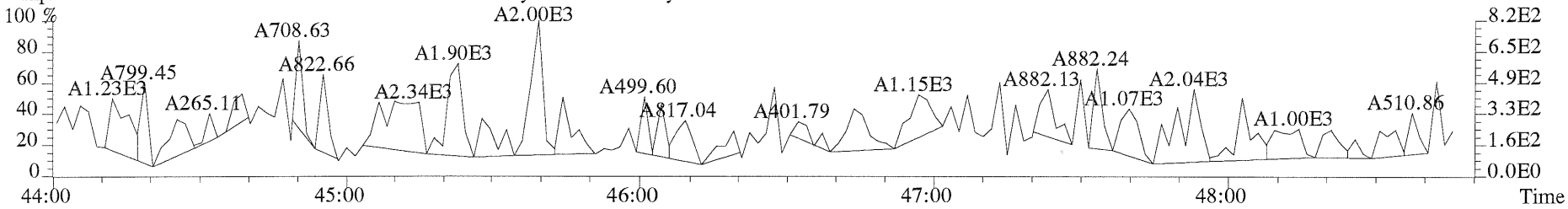
File:18AUG16Z #1-411 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
405.8428 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



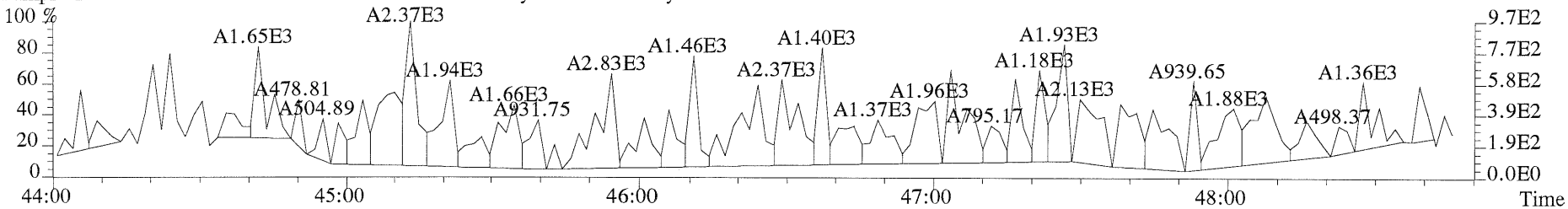
File:18AUG16Z #1-411 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
407.8398 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



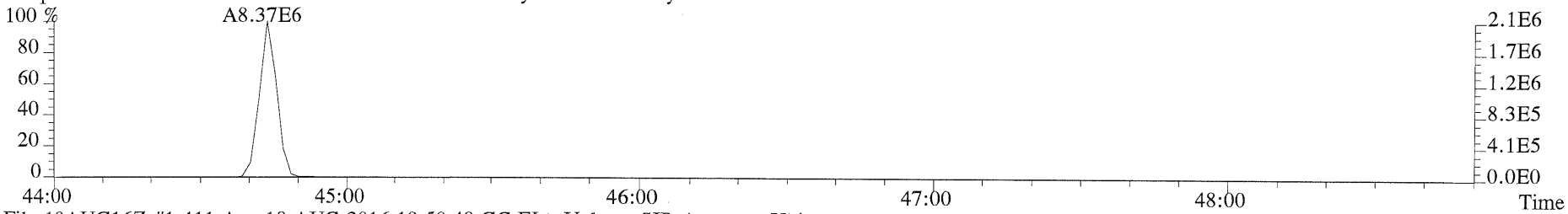
File:18AUG16Z #1-411 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



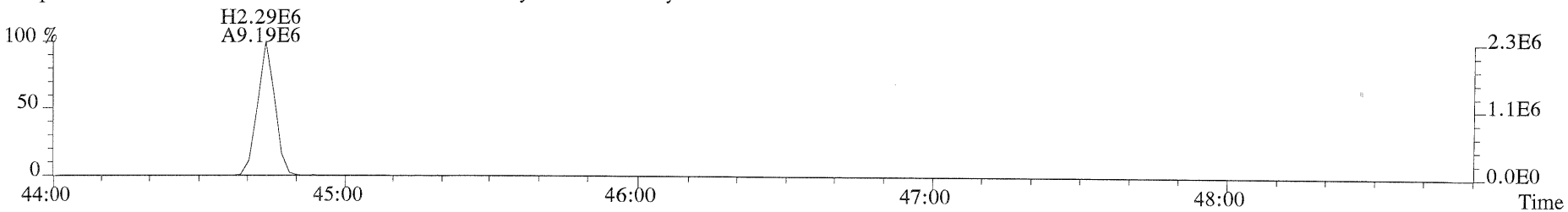
File:18AUG16Z #1-411 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



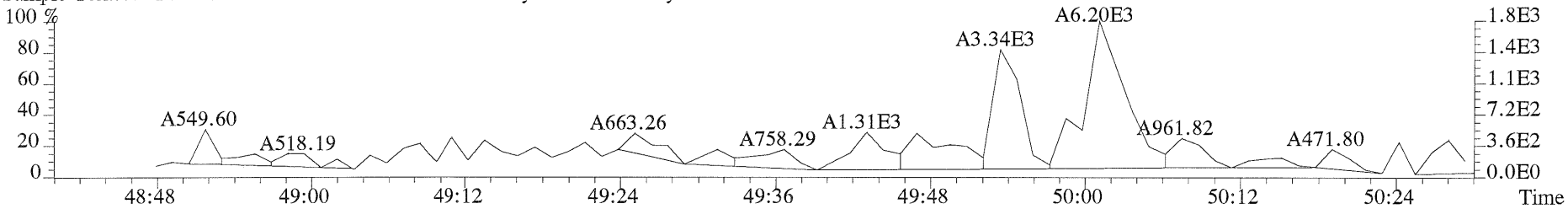
File:18AUG16Z #1-411 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



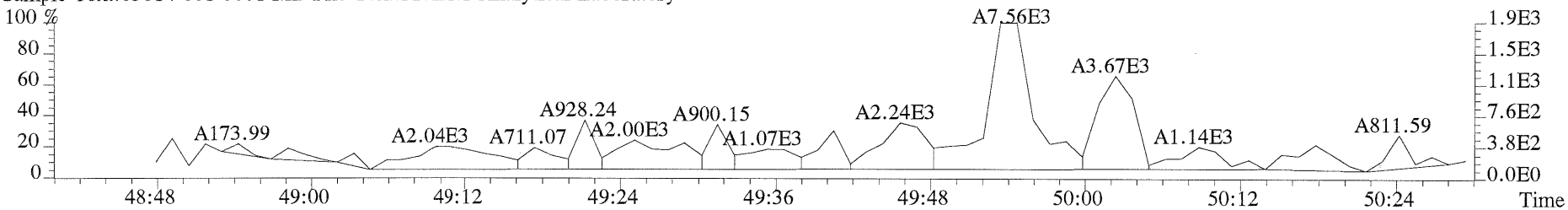
File:18AUG16Z #1-411 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



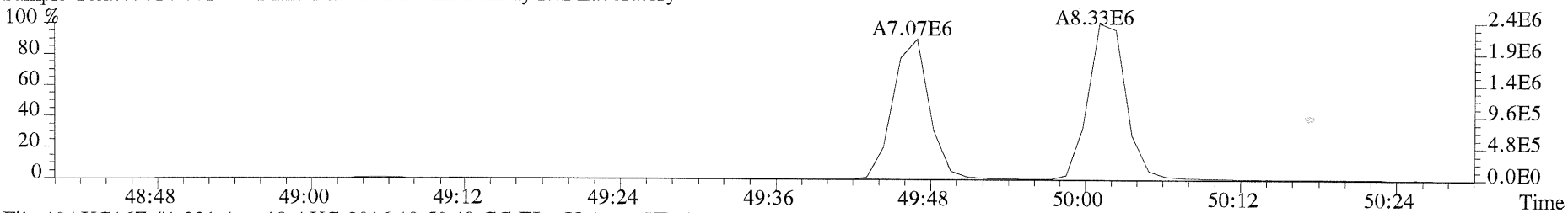
File:18AUG16Z #1-221 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



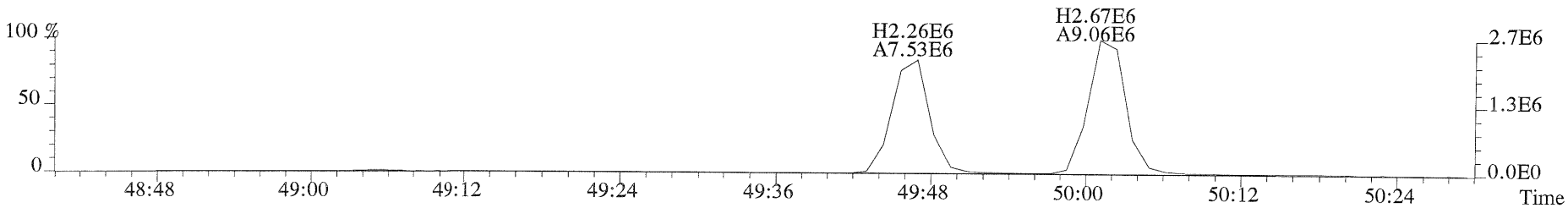
File:18AUG16Z #1-221 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



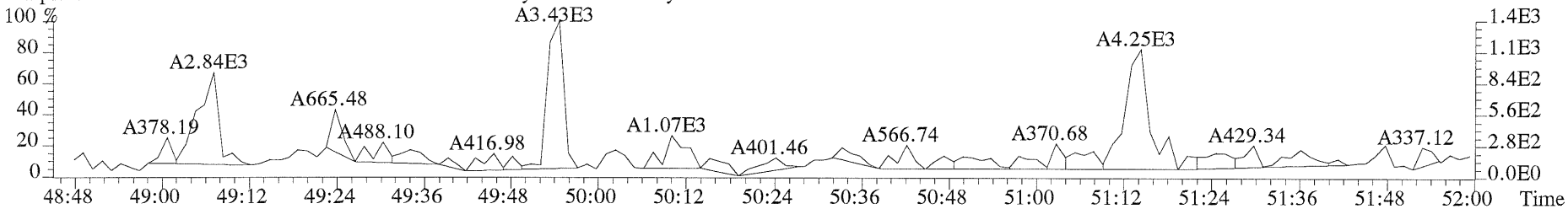
File:18AUG16Z #1-221 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



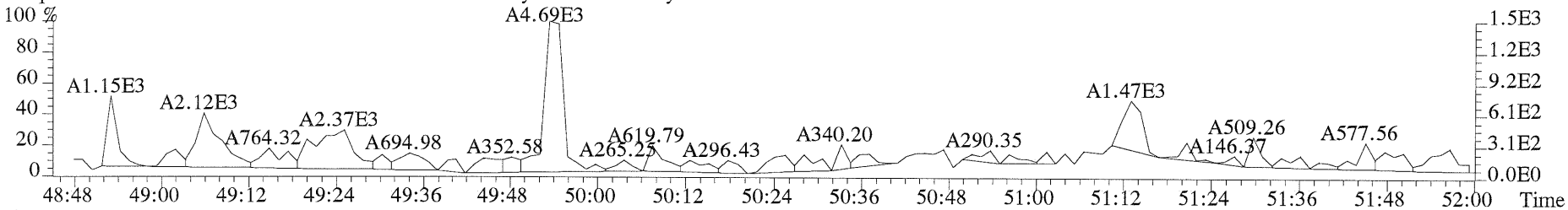
File:18AUG16Z #1-221 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



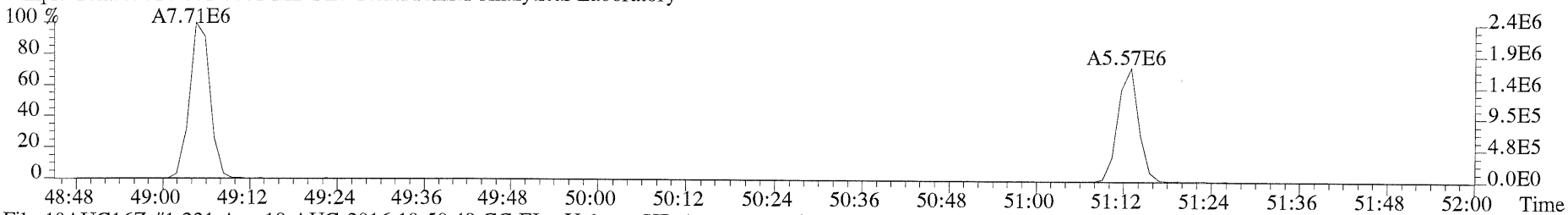
File:18AUG16Z #1-221 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
463.7216 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



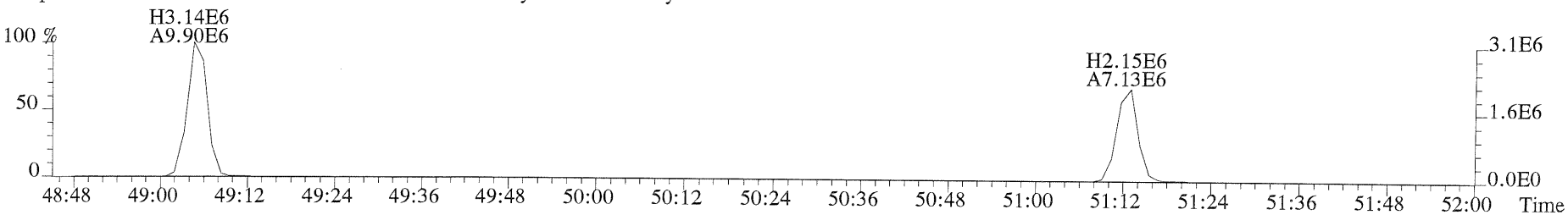
File:18AUG16Z #1-221 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
465.7187 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



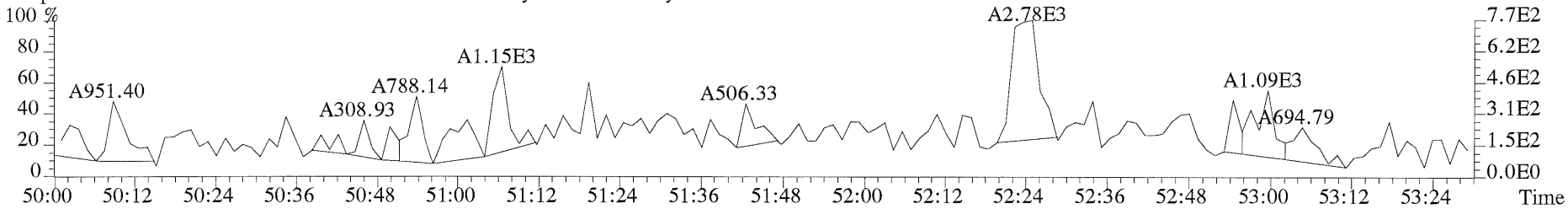
File:18AUG16Z #1-221 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
473.7648 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



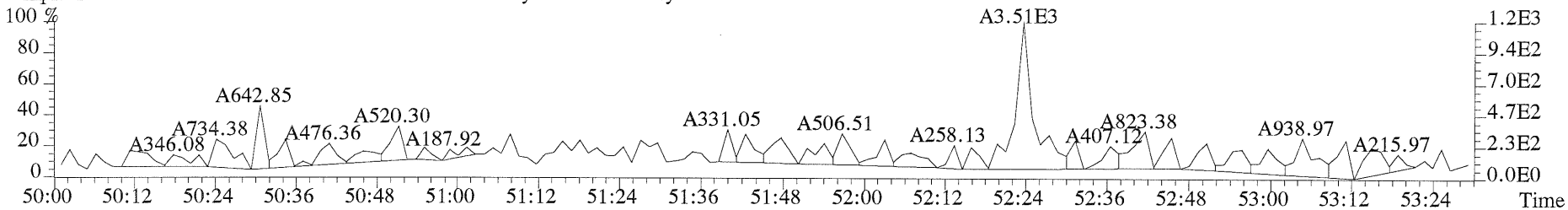
File:18AUG16Z #1-221 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
475.7619 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



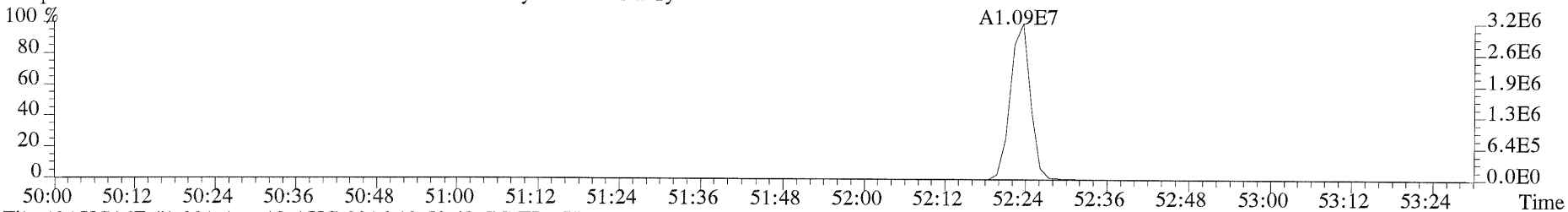
File:18AUG16Z #1-221 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
497.6826 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



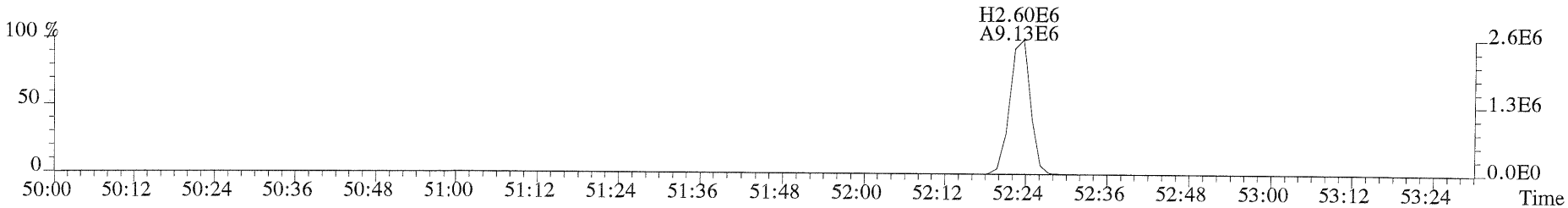
File:18AUG16Z #1-221 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
499.6797 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



File:18AUG16Z #1-221 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
509.7229 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



File:18AUG16Z #1-221 Acq:18-AUG-2016 19:50:48 GC EI+ Voltage SIR Autospec-Ultima
511.7199 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-MB File Text:Frontier Analytical Laboratory



03814.001.0001.OPR

USEPA - ITD

FORM 8A
209 PCB ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): Sediment OPR Data Filename: 18AUG16Z Sam:3

Ext. Date: 8/16/16 Shift: Day Analysis Date: 18-AUG-16 18:50:50

	SPIKE CONC. (ng/mL)	CONC REC	OPR CONC. LIMITS (CONC)
NATIVE ANALYTES			
PCB-1	50	50.4	30.0 - 67.5
PCB-3	50	52.9	30.0 - 67.5
PCB-4	50	48.8	30.0 - 67.5
PCB-15	50	47.6	30.0 - 67.5
PCB-19	50	52.9	30.0 - 67.5
PCB-37	50	46.8	30.0 - 67.5
PCB-54	50	52.0	30.0 - 67.5
PCB-77	50	54.0	30.0 - 67.5
PCB-81	50	51.6	30.0 - 67.5
PCB-104	50	52.5	30.0 - 67.5
PCB-105	50	48.9	30.0 - 67.5
PCB-114	50	52.8	30.0 - 67.5
PCB-118	50	52.9	30.0 - 67.5
PCB-123	50	45.5	30.0 - 67.5
PCB-126	50	47.1	30.0 - 67.5
PCB-155	50	52.3	30.0 - 67.5
PCB-156	50	50.9	30.0 - 67.5
PCB-157	50	52.7	30.0 - 67.5
PCB-167	50	53.3	30.0 - 67.5
PCB-169	50	54.4	30.0 - 67.5
PCB-188	50	52.9	30.0 - 67.5
PCB-189	50	52.5	30.0 - 67.5
PCB-202	50	55.2	30.0 - 67.5
PCB-205	50	52.3	30.0 - 67.5
PCB-206	50	52.6	30.0 - 67.5
PCB-208	50	53.1	30.0 - 67.5
PCB-209	50	50.8	30.0 - 67.5

Analyst: [illegible] Date: 8/19/16

USEPA - ITD

FORM 8B
209 PCB ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): Sediment OPR Data Filename: 18AUG16Z Sam:3

Ext. Date: 8/16/16 Shift: Day Analysis Date: 18-AUG-16 18:50:50

	SPIKE CONC. (ng/mL)	RECOVERY (%)	OPR CONC. LIMITS (%)
LABELED COMPOUNDS			
13C-PCB-1	100	86.8	15.0 - 145
13C-PCB-3	100	81.1	15.0 - 145
13C-PCB-4	100	93.1	15.0 - 145
13C-PCB-15	100	80.3	15.0 - 145
13C-PCB-19	100	86.0	15.0 - 145
13C-PCB-37	100	82.0	15.0 - 145
13C-PCB-54	100	86.4	15.0 - 145
13C-PCB-77	100	87.0	40.0 - 145
13C-PCB-81	100	86.0	40.0 - 145
13C-PCB-104	100	86.2	40.0 - 145
13C-PCB-105	100	92.9	40.0 - 145
13C-PCB-114	100	94.2	40.0 - 145
13C-PCB-118	100	89.1	40.0 - 145
13C-PCB-123	100	89.2	40.0 - 145
13C-PCB-126	100	91.3	40.0 - 145
13C-PCB-155	100	89.5	40.0 - 145
13C-PCB-156	100	91.3	40.0 - 145
13C-PCB-157	100	95.7	40.0 - 145
13C-PCB-167	100	91.0	40.0 - 145
13C-PCB-169	100	93.7	40.0 - 145
13C-PCB-188	100	86.8	40.0 - 145
13C-PCB-189	100	97.4	40.0 - 145
13C-PCB-202	100	91.5	40.0 - 145
13C-PCB-205	100	94.2	40.0 - 145
13C-PCB-206	100	96.0	40.0 - 145
13C-PCB-208	100	83.1	40.0 - 145
13C-PCB-209	100	95.4	40.0 - 145
CLEANUP STANDARDS			
13C-PCB-28	100	94.2	15.0 - 145
13C-PCB-111	100	93.8	40.0 - 145
13C-PCB-178	100	98.5	40.0 - 145

Analyst: _____ Date: 8/19/16

FAL ID: 03814-001-0001-OPR Filename: 18AUG16Z Sam:3 Acquired: 18-AUG-16 18:50:50 ICal: DAILY209FAL4-8-18-16
Client ID: OPR ConCal: ST081816Z1 EndCal: ST081816Z2
Results: 10051X GC Column: DB1 Amount: 1.000

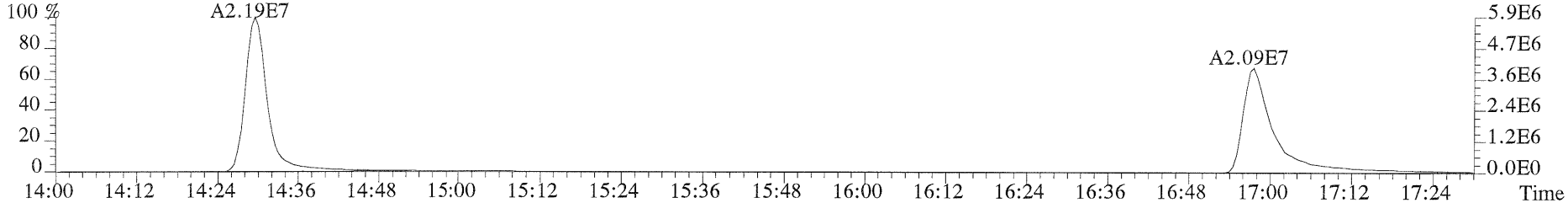
Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL	Rec
PCB-1	2.88e+07	3.21 y	14:30	1.04	50.4		2.50	-	-	*	
13C-PCB-1	5.50e+07	3.16 y	14:28	1.11	86.8		2.50				86.8
PCB-3	2.69e+07	3.46 y	16:58	1.07	52.9		2.50	-	-	*	
13C-PCB-3	4.76e+07	3.15 y	16:57	1.03	81.1		2.50				81.1
PCB-4	1.81e+07	1.57 y	18:09	1.22	48.8		2.50	-	-	*	
13C-PCB-4	3.05e+07	1.61 y	18:08	0.58	93.1		2.50				93.1
PCB-15	2.43e+07	1.57 y	23:45	1.26	47.6		2.50	-	-	*	
13C-PCB-15	4.05e+07	1.69 y	23:43	0.88	80.3		2.50				80.3
PCB-19	1.64e+07	1.05 y	22:02	1.07	52.9		2.50	-	-	*	
13C-PCB-19	2.89e+07	1.05 y	22:01	0.59	86.0		2.50				86.0
13C-PCB-9	5.70e+07	1.61 y	19:50	-	58.6		2.50				
PCB-37	1.95e+07	1.05 y	30:24	1.27	46.8		2.50	-	-	*	
13C-PCB-37	3.29e+07	1.06 y	30:22	1.22	82.0		2.50				82.0
PCB-54	1.99e+07	0.78 y	25:34	1.08	52.0		2.50	-	-	*	
13C-PCB-54	3.54e+07	0.80 y	25:33	1.24	86.4		2.50				86.4
PCB-104	1.48e+07	1.60 y	29:60	1.14	52.5		2.50	-	-	*	
13C-PCB-104	2.47e+07	1.58 y	29:58	0.87	86.2		2.50				86.2
13C-PCB-28	4.55e+07	1.04 y	26:39	1.47	94.2		2.50				94.2
13C-PCB-52	3.29e+07	0.79 y	28:54	-	59.0		2.50				
PCB-81	1.61e+07	0.79 y	36:08	1.18	51.6		2.50	-	-	*	
13C-PCB-81	2.64e+07	0.82 y	36:07	1.07	86.0		2.50				86.0
PCB-77	1.58e+07	0.79 y	36:43	1.08	54.0		2.50	-	-	*	
13C-PCB-77	2.71e+07	0.77 y	36:41	1.09	87.0		2.50				87.0
PCB-155	1.53e+07	1.27 y	34:08	1.07	52.3		2.50	-	-	*	
13C-PCB-155	2.73e+07	1.29 y	34:07	1.06	89.5		2.50				89.5
13C-PCB-111	3.04e+07	1.58 y	36:14	1.13	93.8		2.50				93.8
13C-PCB-101	2.87e+07	1.60 y	34:35	-	57.9		2.50				
PCB-123	1.37e+07	1.57 y	38:17	1.24	45.5		2.50	-	-	*	
13C-PCB-123	2.42e+07	1.59 y	38:17	1.09	89.2		2.50				89.2
PCB-118	1.50e+07	1.55 y	38:28	1.08	52.9		2.50	-	-	*	
13C-PCB-118	2.62e+07	1.61 y	38:27	1.19	89.1		2.50				89.1
PCB-114	1.48e+07	1.57 y	39:05	1.08	52.8		2.50	-	-	*	
13C-PCB-114	2.60e+07	1.61 y	39:05	1.11	94.2		2.50				94.2
PCB-105	1.44e+07	1.53 y	39:54	1.13	48.9		2.50	-	-	*	
13C-PCB-105	2.62e+07	1.59 y	39:52	1.14	92.9		2.50				92.9
PCB-126	1.18e+07	1.58 y	42:04	1.14	47.1		2.50	-	-	*	
13C-PCB-126	2.20e+07	1.63 y	42:02	0.97	91.3		2.50				91.3
PCB-167	1.33e+07	1.29 y	43:23	0.96	53.3		2.50	-	-	*	
13C-PCB-167	2.58e+07	1.25 y	43:21	1.14	91.0		2.50				91.0
PCB-156	1.28e+07	1.26 y	44:35	1.04	50.9		2.50	-	-	*	
13C-PCB-156	2.43e+07	1.26 y	44:35	1.07	91.3		2.50				91.3
PCB-157	1.30e+07	1.23 y	44:52	0.96	52.7		2.50	-	-	*	
13C-PCB-157	2.58e+07	1.26 y	44:50	1.09	95.7		2.50				95.7
PCB-169	1.08e+07	1.25 y	46:45	0.92	54.4		2.50	-	-	*	
13C-PCB-169	2.15e+07	1.29 y	46:44	0.92	93.7		2.50				93.7
PCB-188	1.60e+07	1.05 y	39:39	1.12	52.9		2.50	-	-	*	
13C-PCB-188	2.68e+07	1.07 y	39:38	1.25	86.8		2.50				86.8
PCB-189	1.13e+07	1.05 y	48:24	1.09	52.5		2.50	-	-	*	
13C-PCB-189	1.97e+07	1.10 y	48:23	0.82	97.4		2.50				97.4
PCB-202	1.12e+07	0.89 y	44:45	1.00	55.2		2.50	-	-	*	
13C-PCB-202	2.02e+07	0.93 y	44:44	0.89	91.5		2.50				91.5
13C-PCB-178	1.98e+07	1.06 y	42:16	0.81	98.5		2.50				98.5
13C-PCB-138	2.48e+07	1.26 y	41:29	-	59.1		2.50				

FAL ID: 03814-001-0001-OPR Filename: 18AUG16Z Sam:3 Acquired: 18-AUG-16 18:50:50 ICal: DAILY209FAL4-8-18-16 2 of 2
Client ID: OPR ConCal: ST081816Z1 EndCal: ST081816Z2
Results: 10051X GC Column: DB1 Amount: 1.000

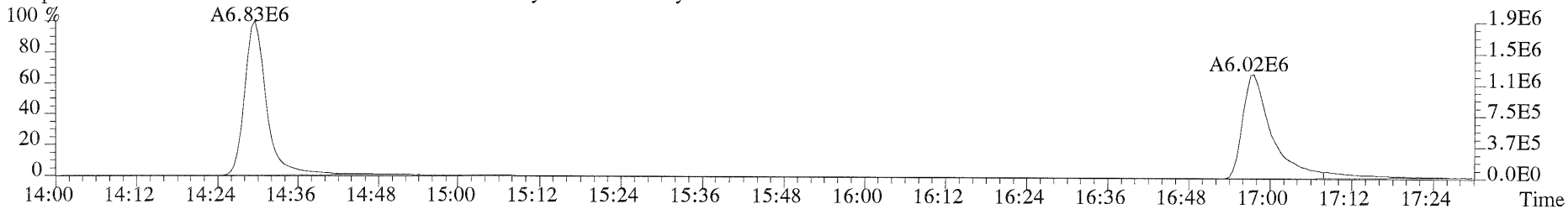
PCB-205	1.07e+07	0.89 y	50:02	1.03	52.3	2.50	-	-	*	
13C-PCB-205	1.99e+07	0.92 y	50:01	1.25	94.2	2.50				94.2
PCB-208	9.46e+06	1.42 y	49:06	0.92	53.1	2.50	-	-	*	
13C-PCB-208	1.93e+07	0.77 y	49:05	1.37	83.1	2.50				83.1
PCB-206	7.76e+06	1.40 y	51:13	0.99	52.6	2.50	-	-	*	
13C-PCB-206	1.49e+07	0.80 y	51:13	0.92	96.0	2.50				96.0
PCB-209	1.25e+07	1.19 y	52:24	1.07	50.8	2.50	-	-	*	
13C-PCB-209	2.31e+07	1.22 y	52:24	1.43	95.4	2.50				95.4
13C-PCB-194	1.69e+07	0.93 y	49:46	-	60.8	2.50				

Analyst: _____ Date: 8/19/16

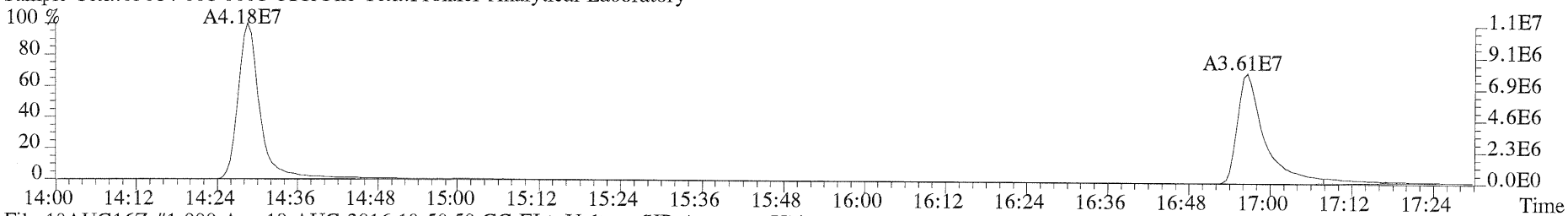
File:18AUG16Z #1-900 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
188.0393 S:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



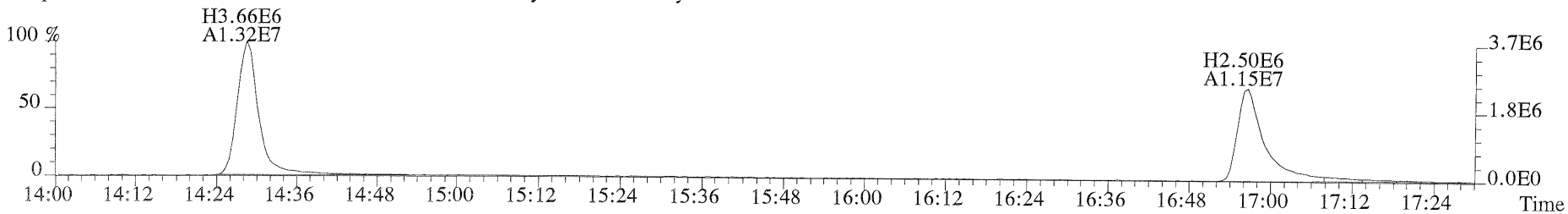
File:18AUG16Z #1-900 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
190.0363 S:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



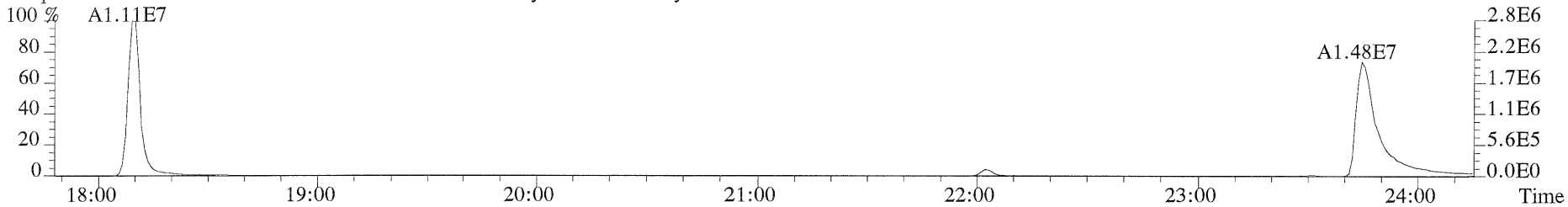
File:18AUG16Z #1-900 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
200.0795 S:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



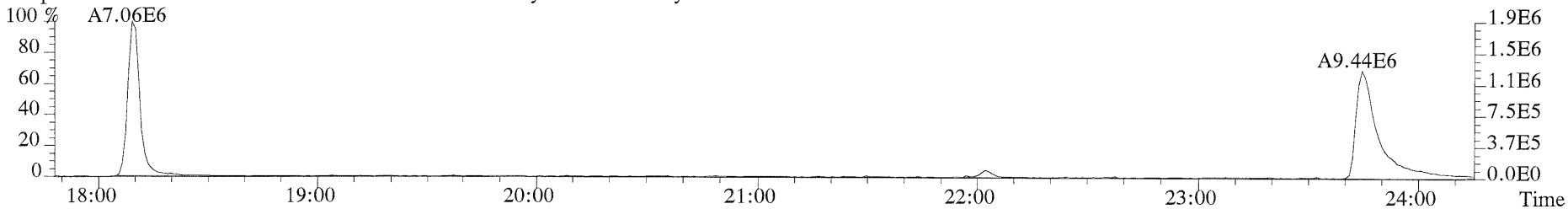
File:18AUG16Z #1-900 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
202.0766 S:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



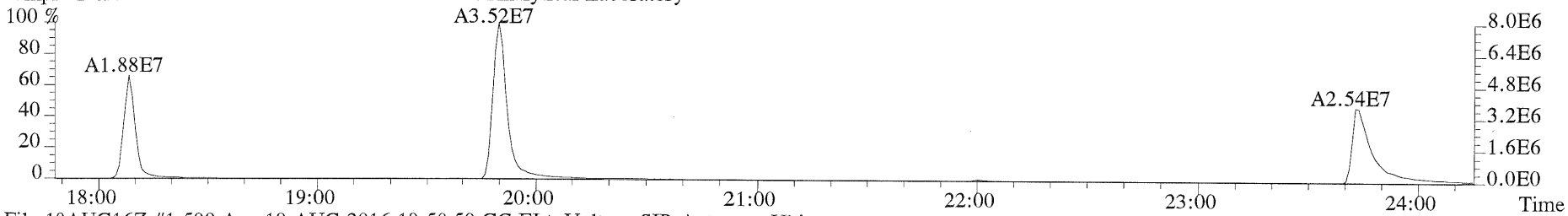
File:18AUG16Z #1-509 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
222.0003 S:3 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



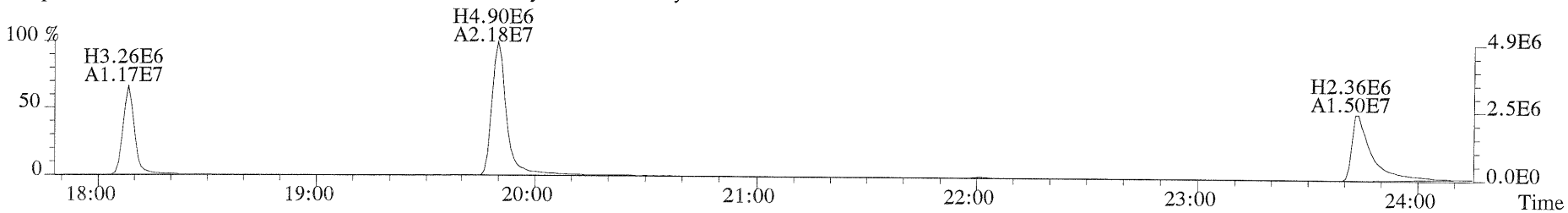
File:18AUG16Z #1-509 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
223.9974 S:3 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



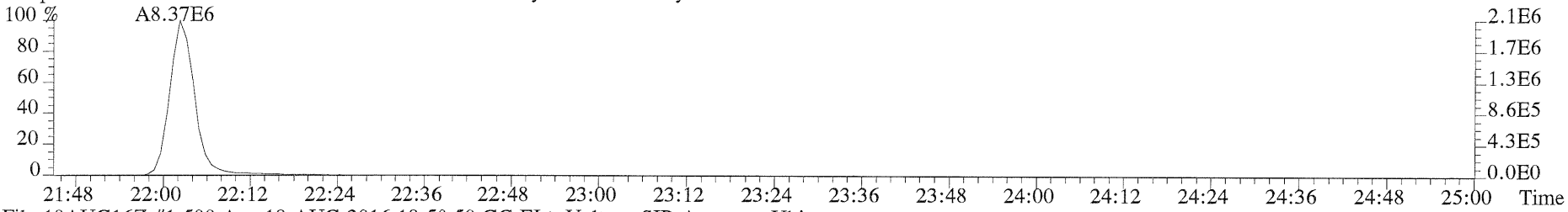
File:18AUG16Z #1-509 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
234.0406 S:3 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



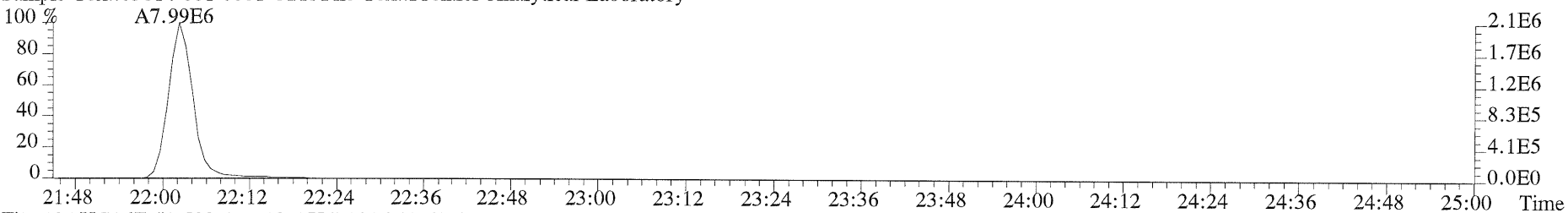
File:18AUG16Z #1-509 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
236.0376 S:3 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



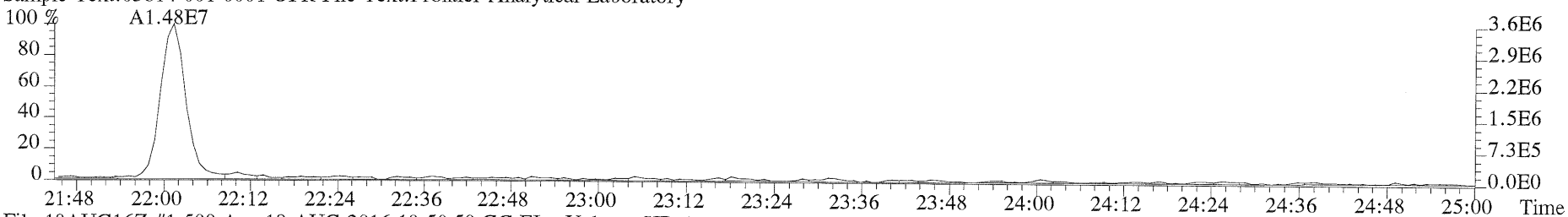
File:18AUG16Z #1-509 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:3 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



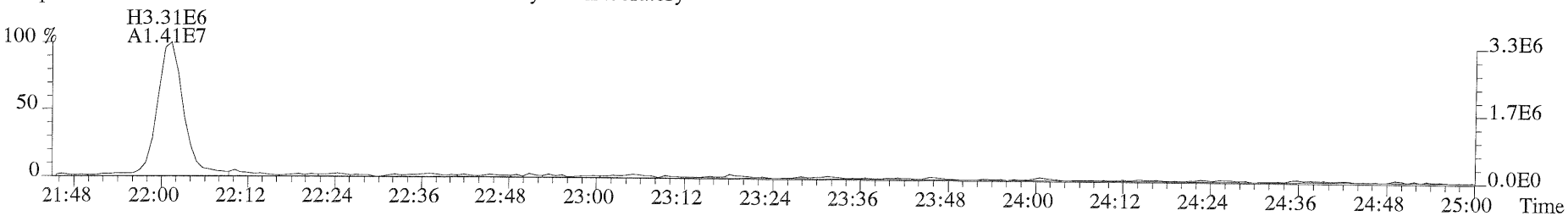
File:18AUG16Z #1-509 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:3 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



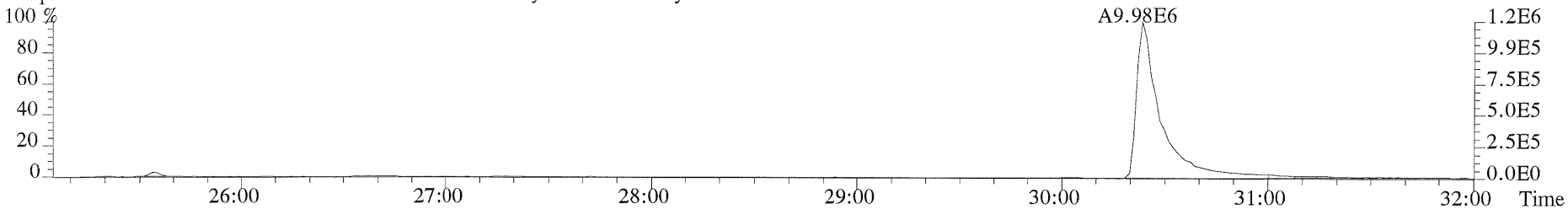
File:18AUG16Z #1-509 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:3 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



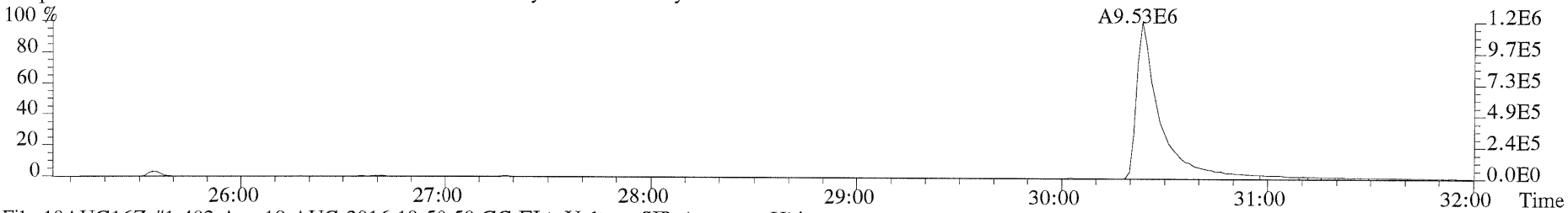
File:18AUG16Z #1-509 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:3 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



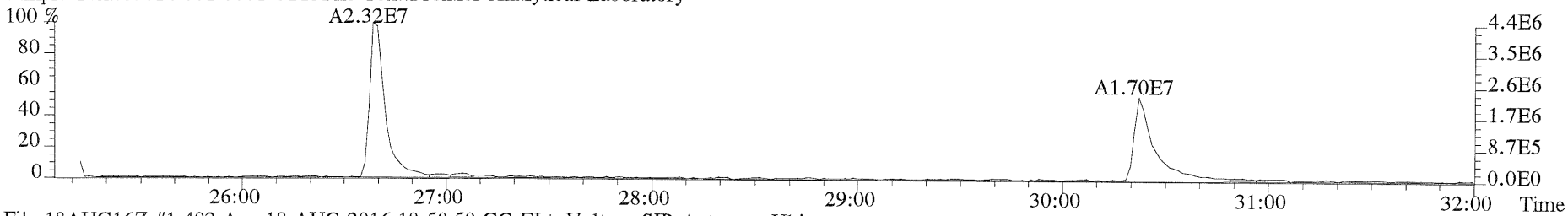
File:18AUG16Z #1-403 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



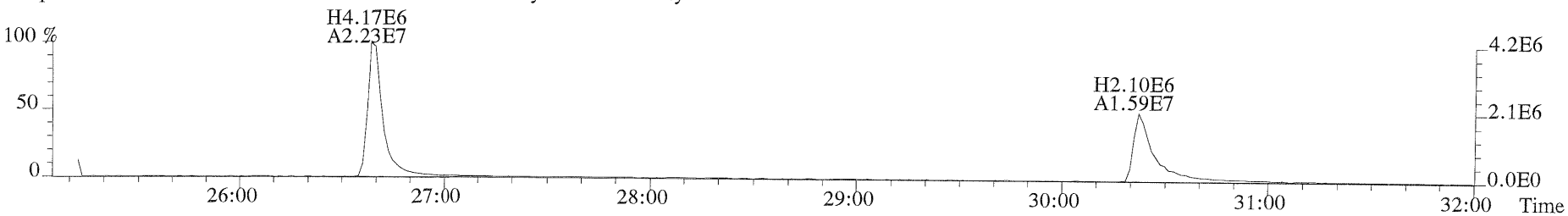
File:18AUG16Z #1-403 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



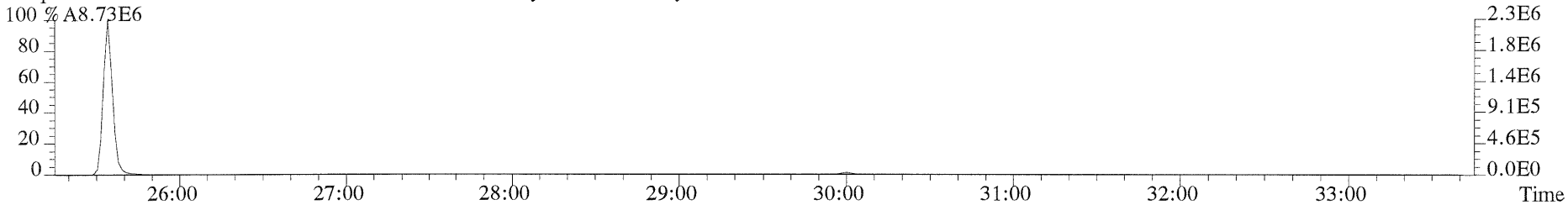
File:18AUG16Z #1-403 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



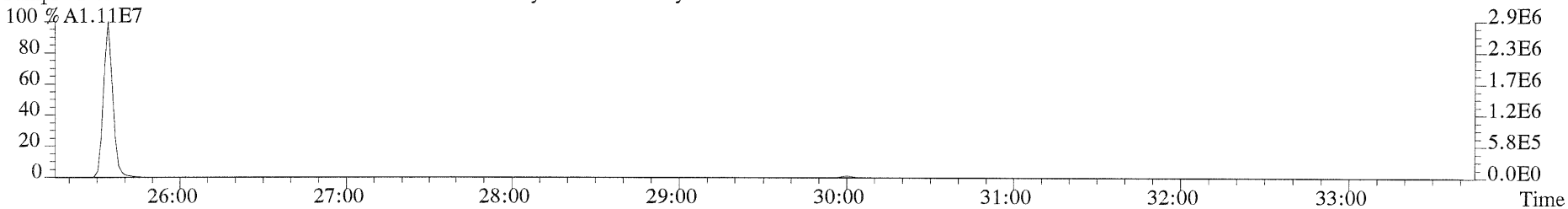
File:18AUG16Z #1-403 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



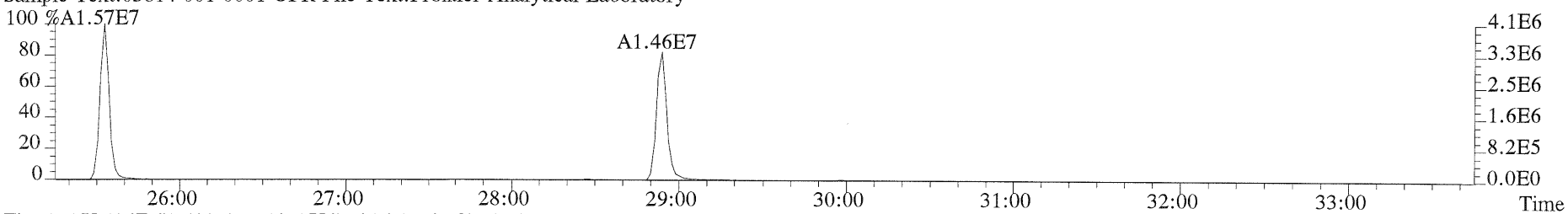
File:18AUG16Z #1-403 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



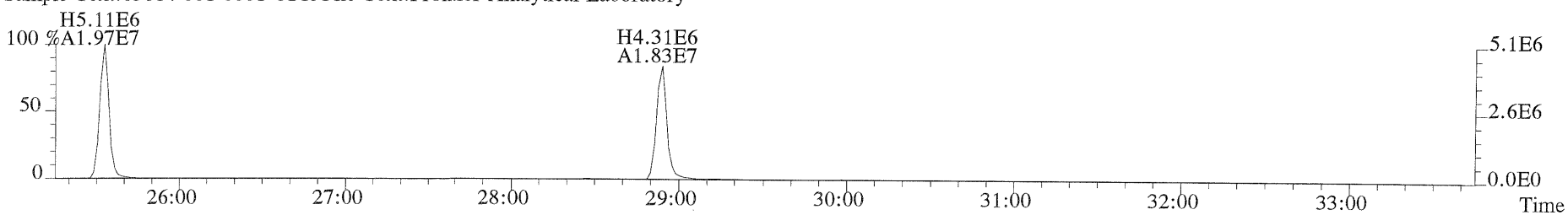
File:18AUG16Z #1-403 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



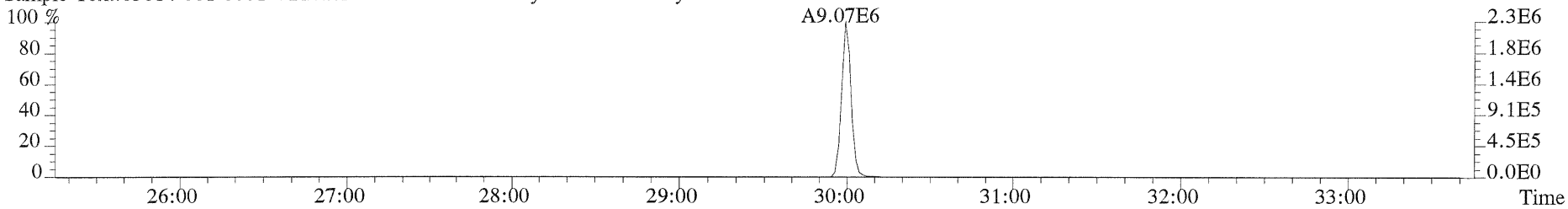
File:18AUG16Z #1-403 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



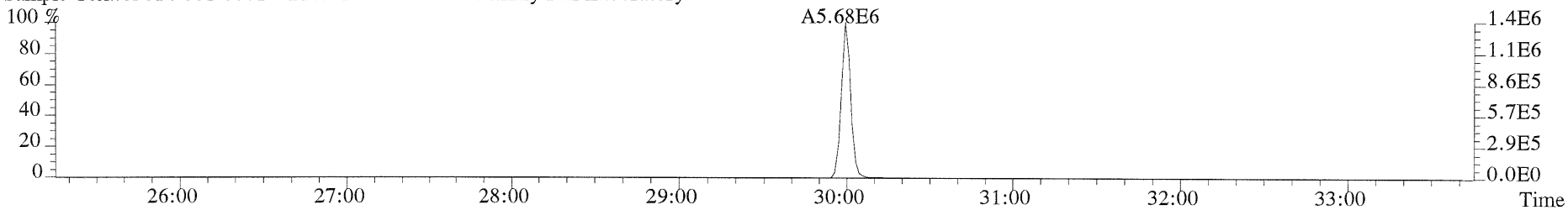
File:18AUG16Z #1-403 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



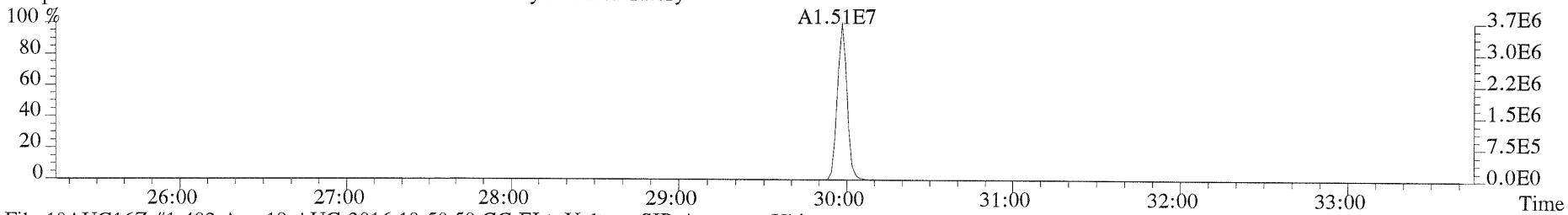
File:18AUG16Z #1-403 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



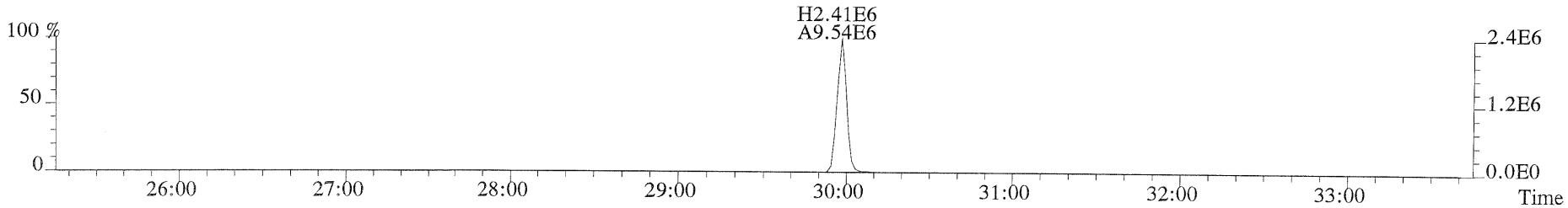
File:18AUG16Z #1-403 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



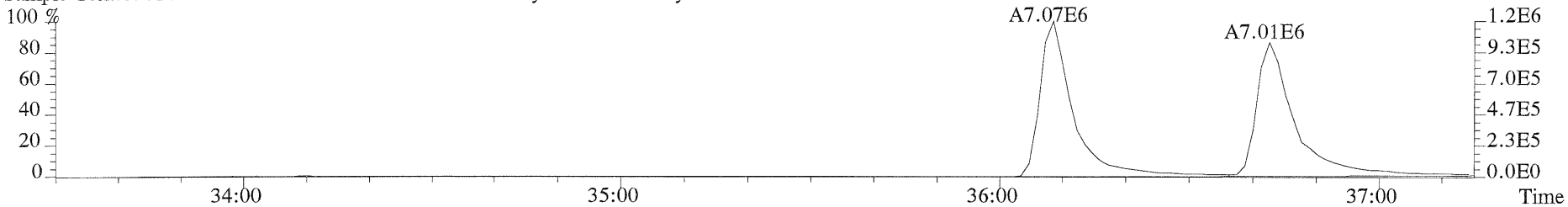
File:18AUG16Z #1-403 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



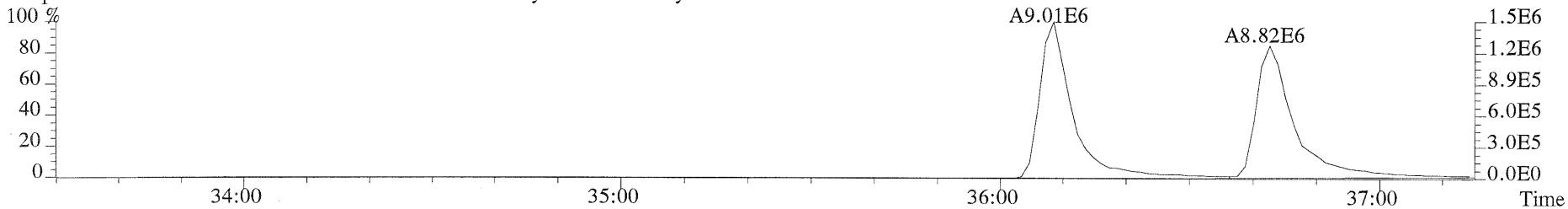
File:18AUG16Z #1-403 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



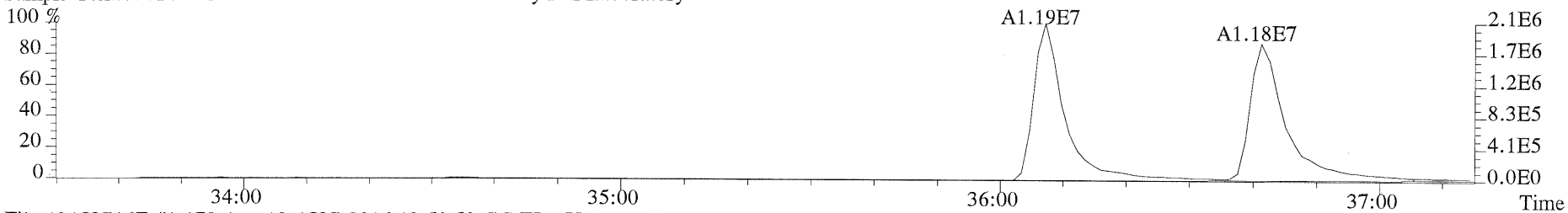
File:18AUG16Z #1-179 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



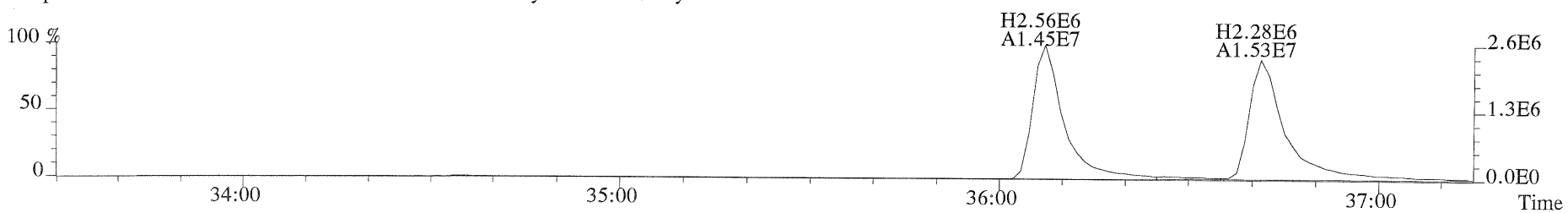
File:18AUG16Z #1-179 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



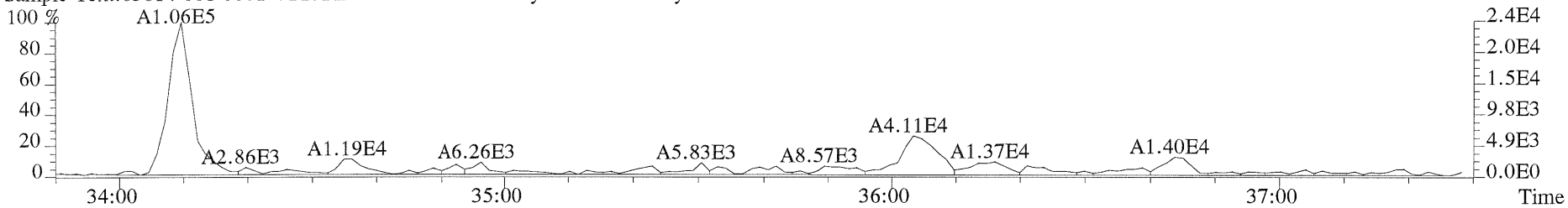
File:18AUG16Z #1-179 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



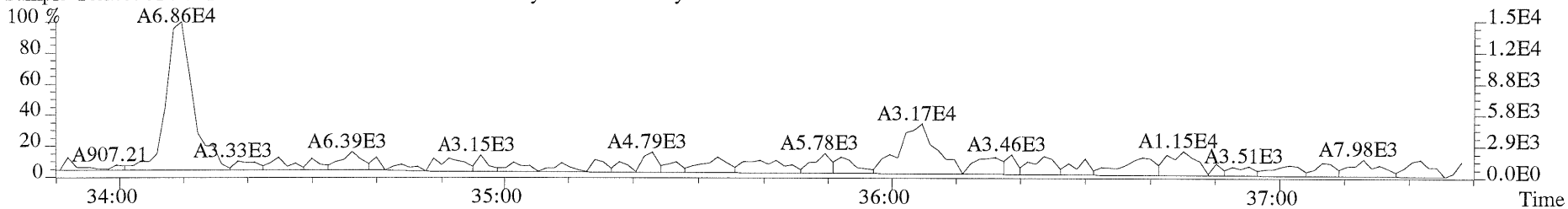
File:18AUG16Z #1-179 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



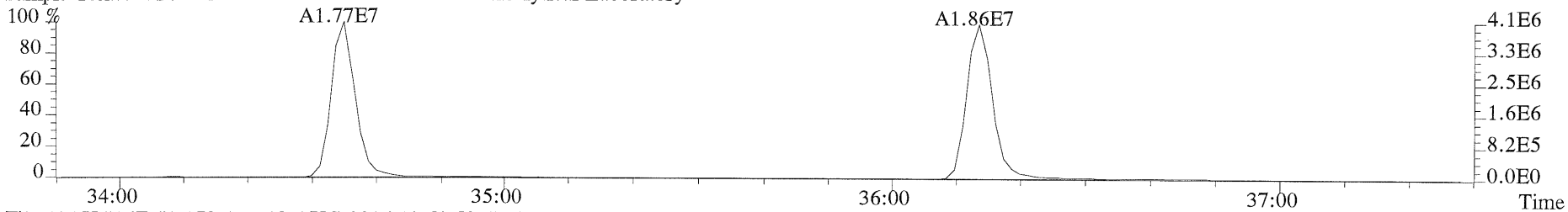
File:18AUG16Z #1-179 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



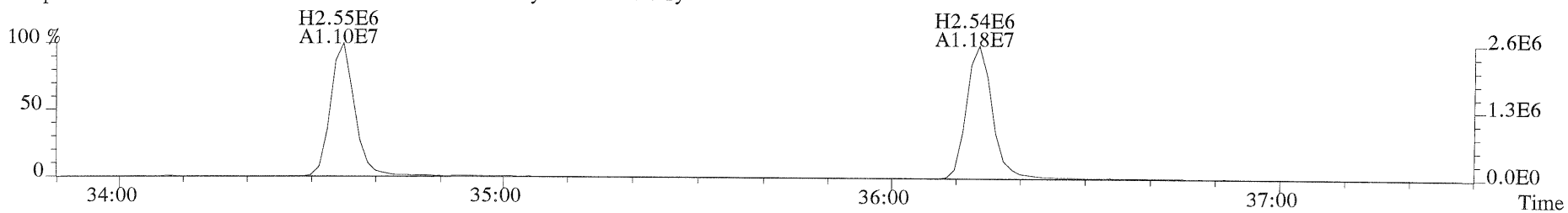
File:18AUG16Z #1-179 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



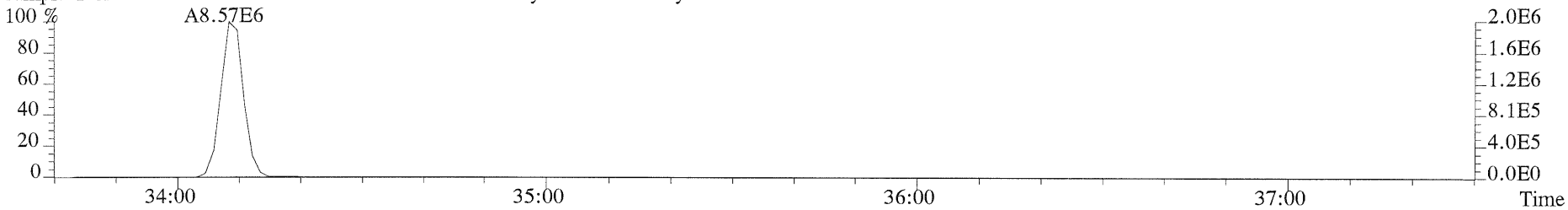
File:18AUG16Z #1-179 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



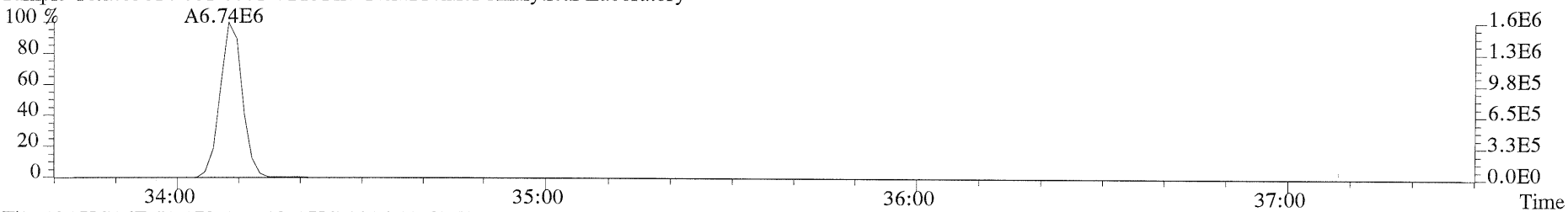
File:18AUG16Z #1-179 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



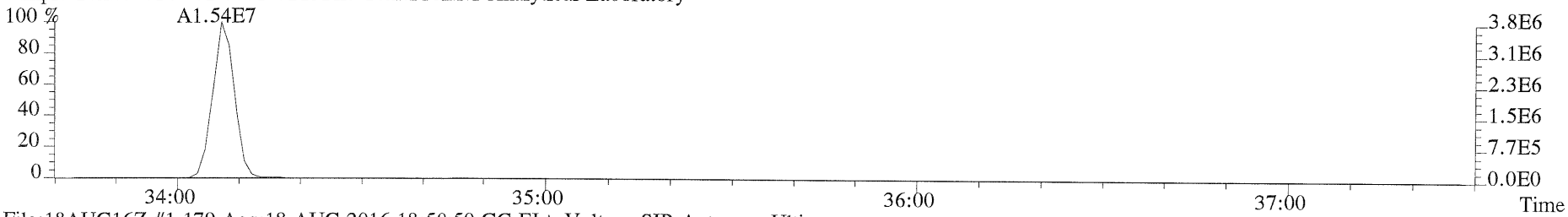
File:18AUG16Z #1-179 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



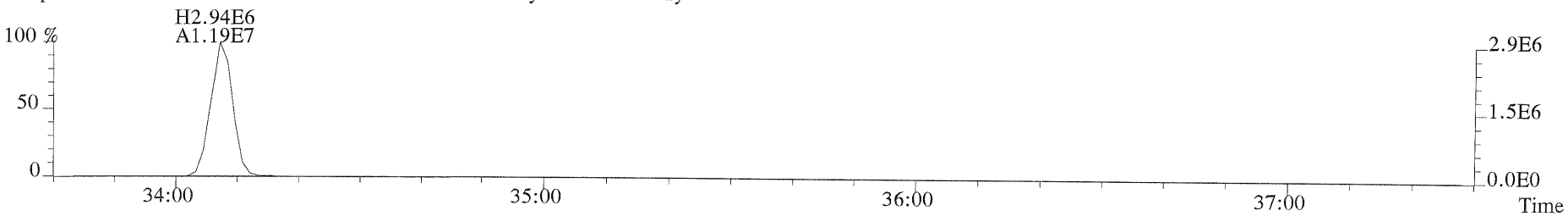
File:18AUG16Z #1-179 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



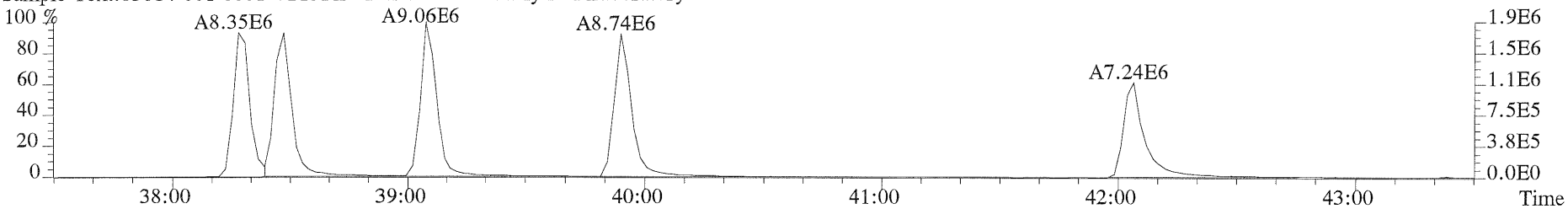
File:18AUG16Z #1-179 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



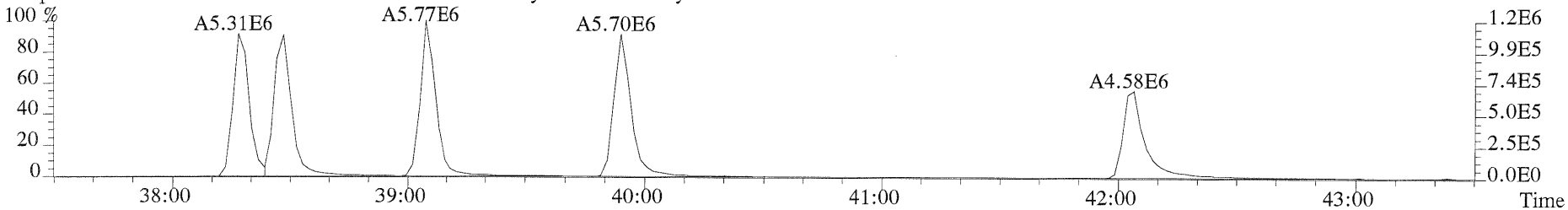
File:18AUG16Z #1-179 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



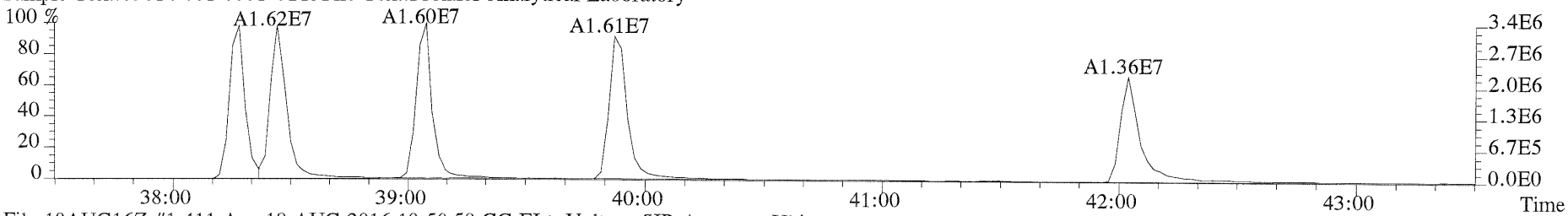
File:18AUG16Z #1-411 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



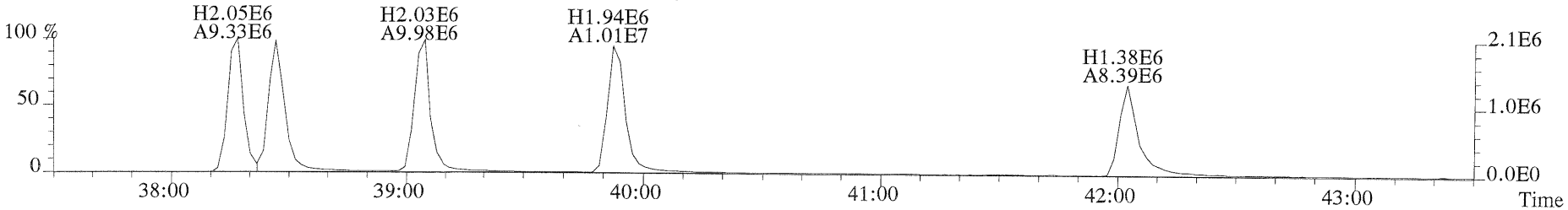
File:18AUG16Z #1-411 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



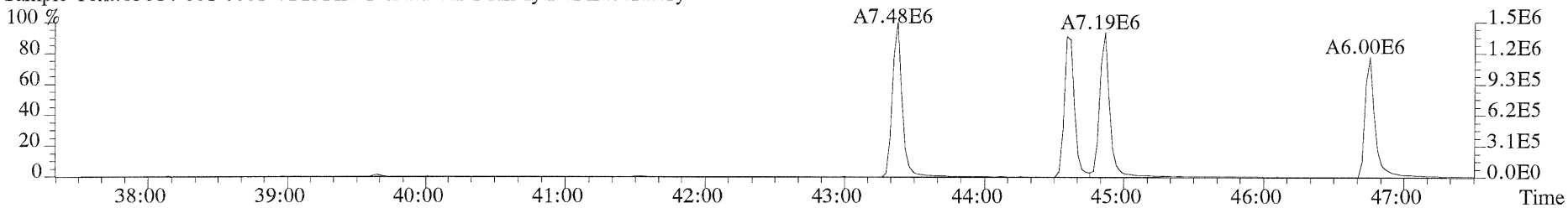
File:18AUG16Z #1-411 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



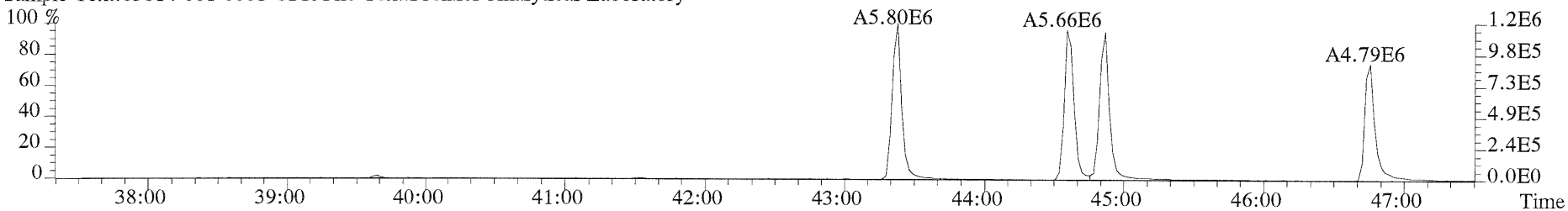
File:18AUG16Z #1-411 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



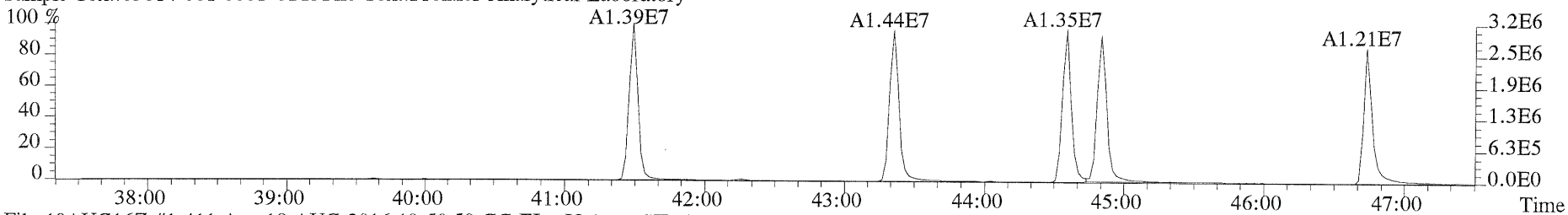
File:18AUG16Z #1-411 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



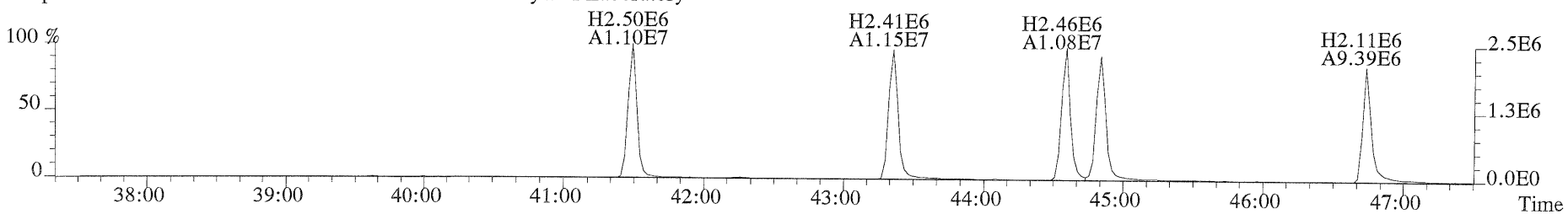
File:18AUG16Z #1-411 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



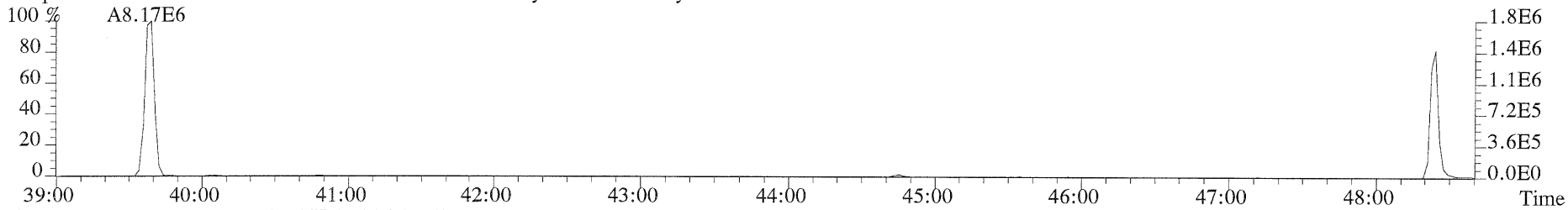
File:18AUG16Z #1-411 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



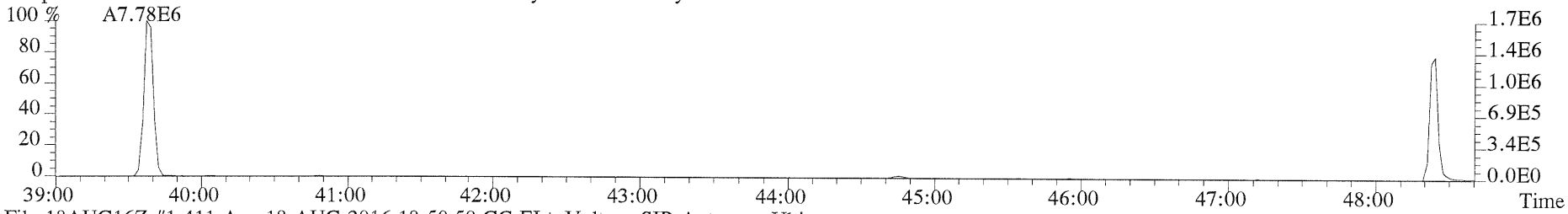
File:18AUG16Z #1-411 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



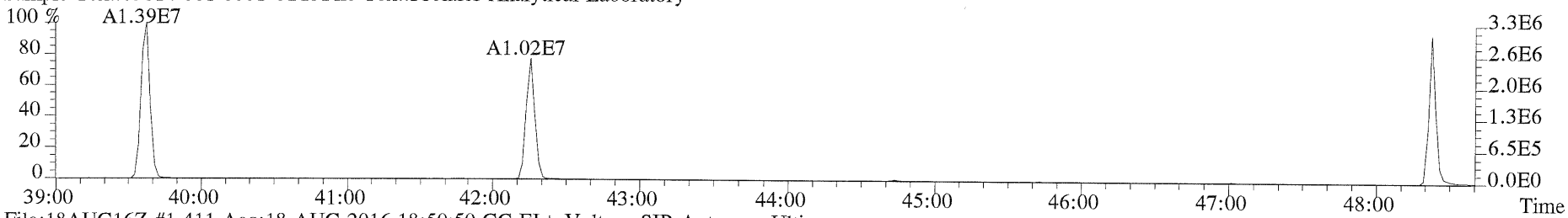
File:18AUG16Z #1-411 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
393.8025 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



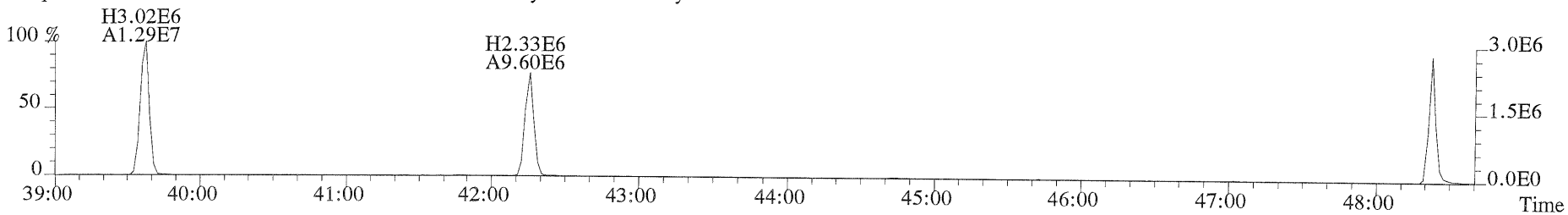
File:18AUG16Z #1-411 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
395.7995 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



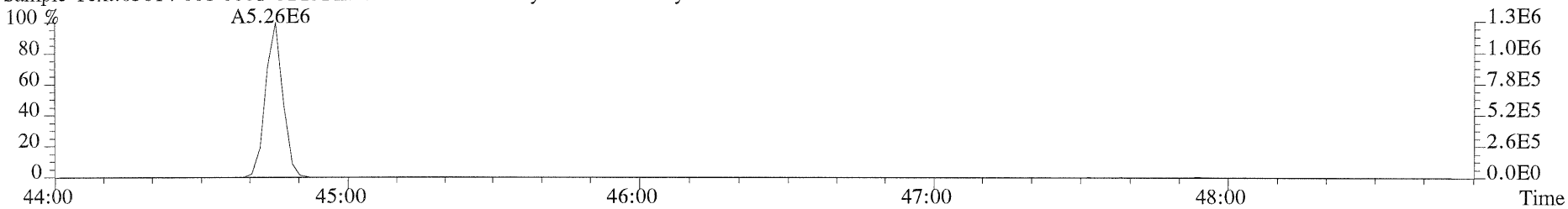
File:18AUG16Z #1-411 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
405.8428 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



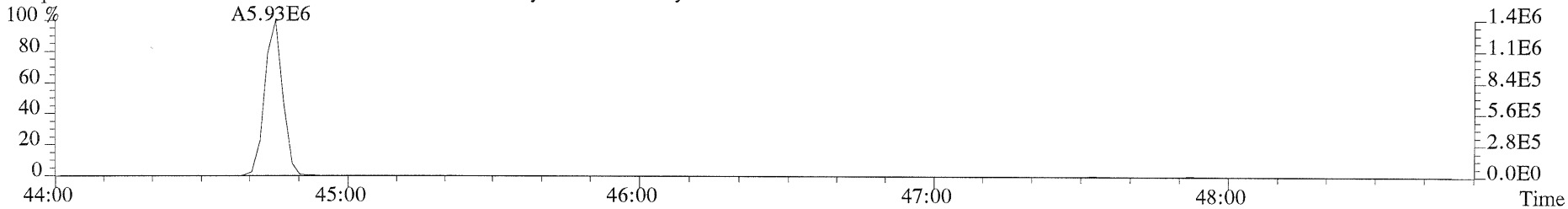
File:18AUG16Z #1-411 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
407.8398 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



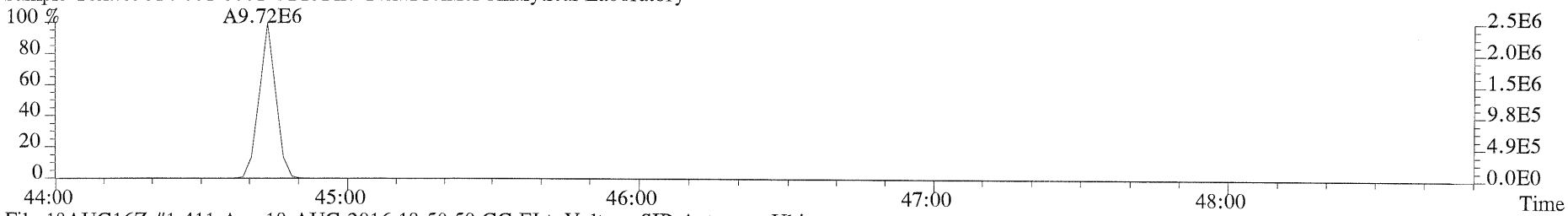
File:18AUG16Z #1-411 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



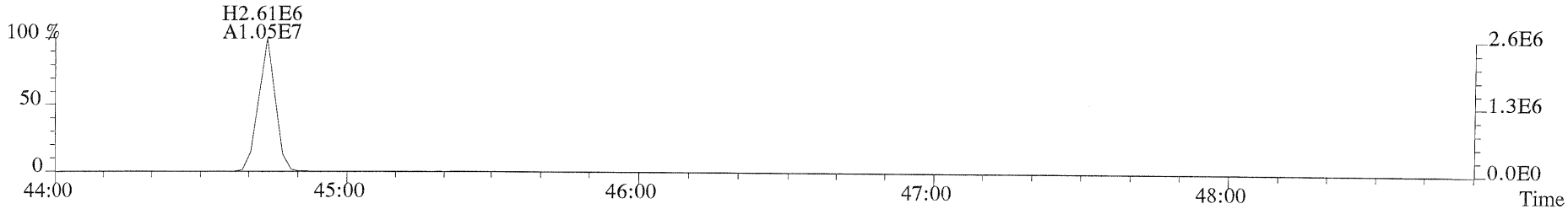
File:18AUG16Z #1-411 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



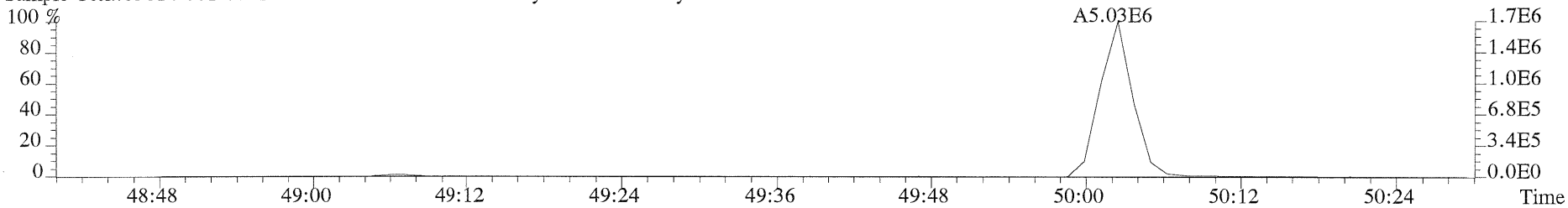
File:18AUG16Z #1-411 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



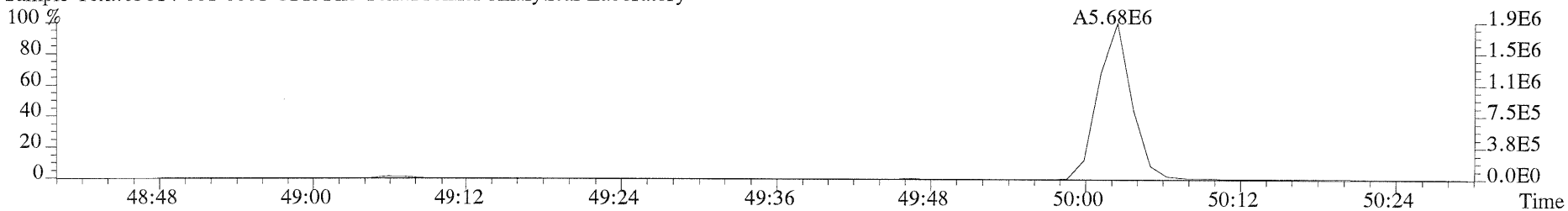
File:18AUG16Z #1-411 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



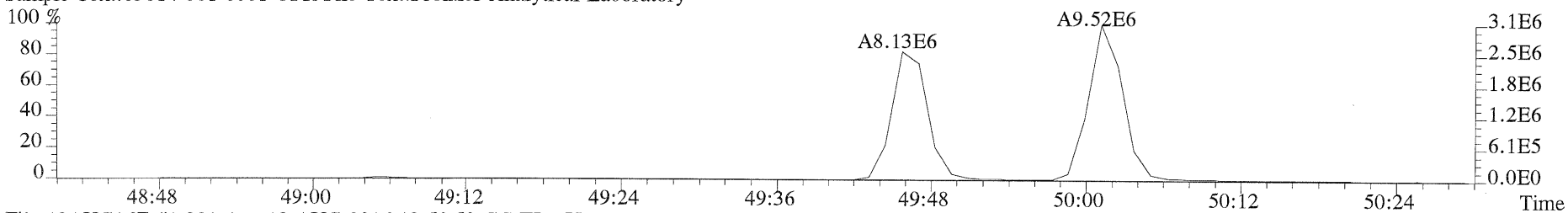
File:18AUG16Z #1-221 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



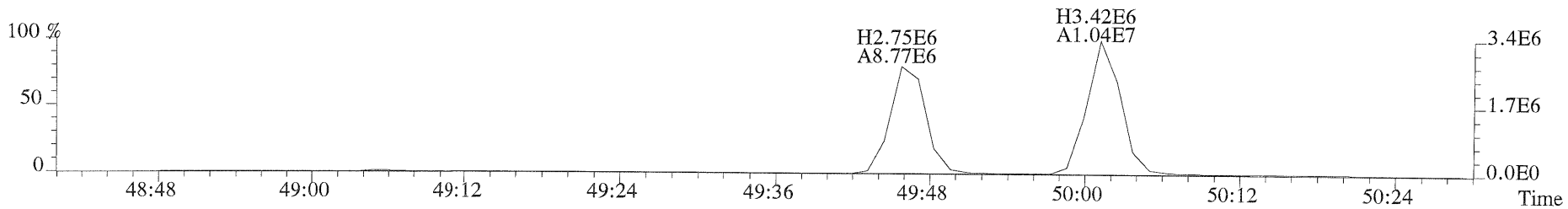
File:18AUG16Z #1-221 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



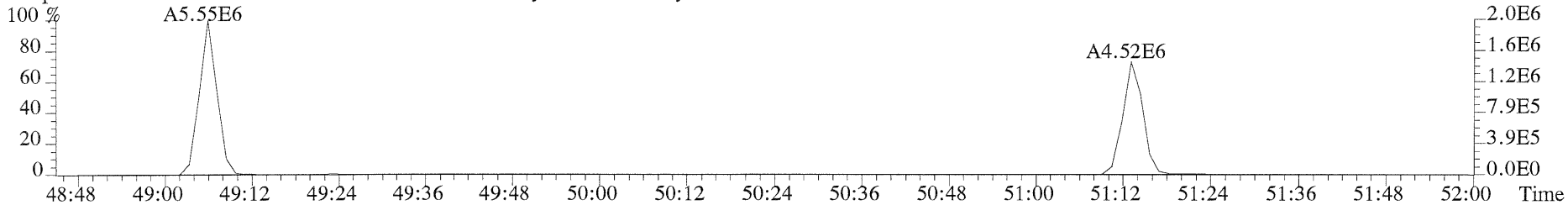
File:18AUG16Z #1-221 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



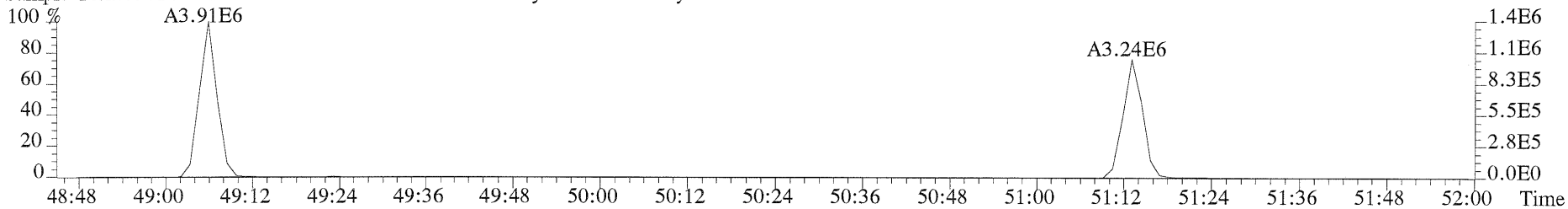
File:18AUG16Z #1-221 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



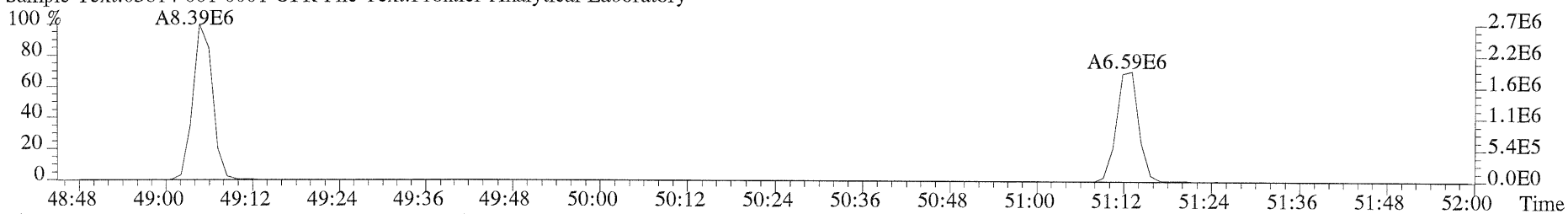
File:18AUG16Z #1-221 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
463.7216 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



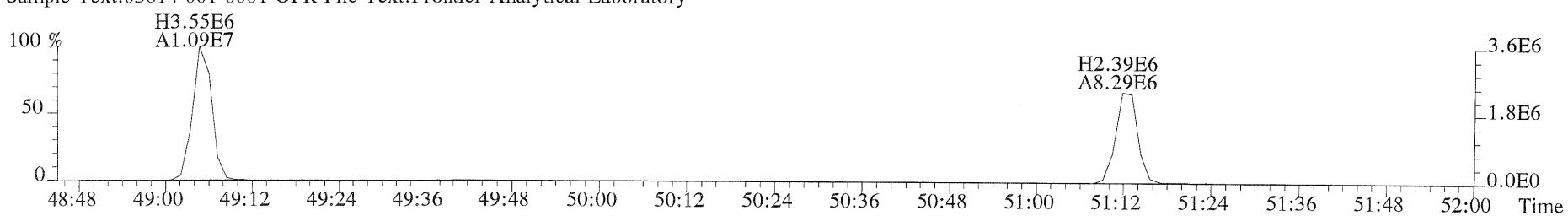
File:18AUG16Z #1-221 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
465.7187 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



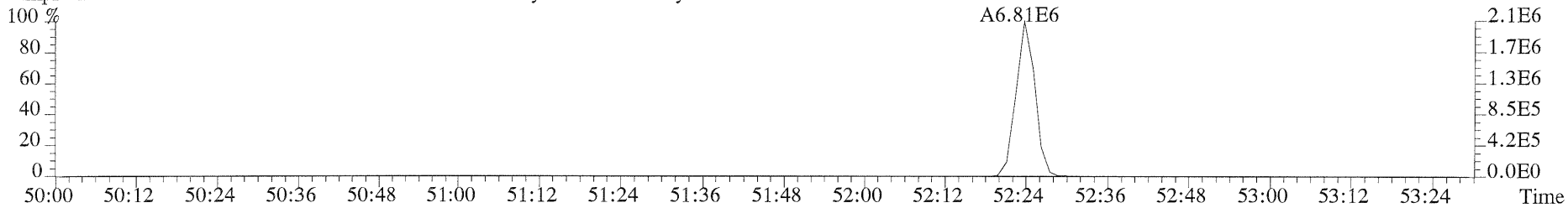
File:18AUG16Z #1-221 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
473.7648 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



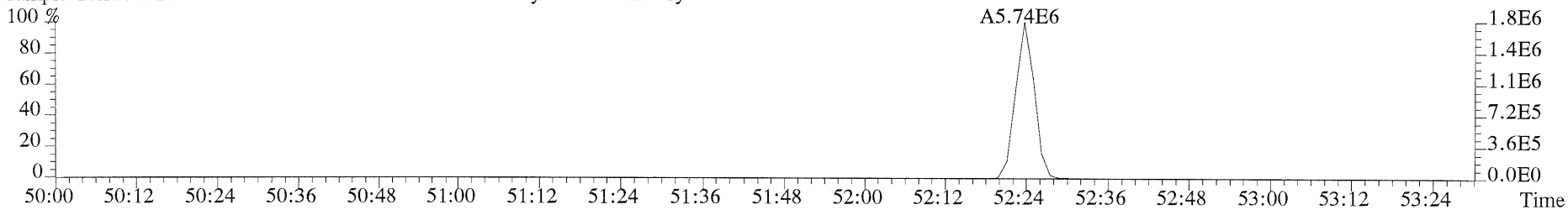
File:18AUG16Z #1-221 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
475.7619 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



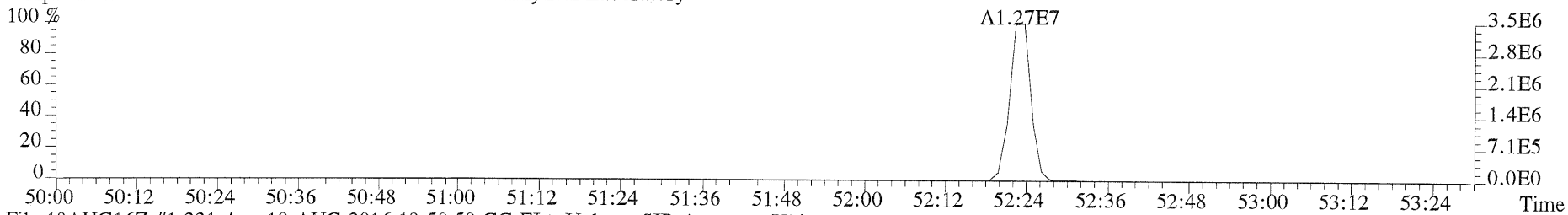
File:18AUG16Z #1-221 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
497.6826 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



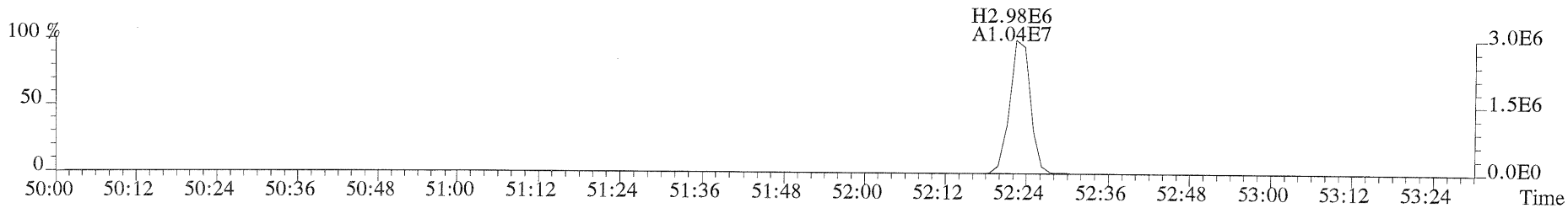
File:18AUG16Z #1-221 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
499.6797 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



File:18AUG16Z #1-221 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
509.7229 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



File:18AUG16Z #1-221 Acq:18-AUG-2016 18:50:50 GC EI+ Voltage SIR Autospec-Ultima
511.7199 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:03814-001-0001-OPR File Text:Frontier Analytical Laboratory



FAL ID: 03815-001-0001-MB Filename: 18AUG16M Sam:3 Acquired: 18-AUG-16 10:30:39 ICal: PCDDFAL3-7-20-16
Client ID: Method Blank ConCal: ST081816M1 EndCal: ST081816M2
Results: GC Golumn: DB5MS Amount: 5.000 NATO 1989 Tox: 0.00
Instrument ID: FAL3 WHO 1998 Tox: 0.00 WHO 2005 Tox: 0.00

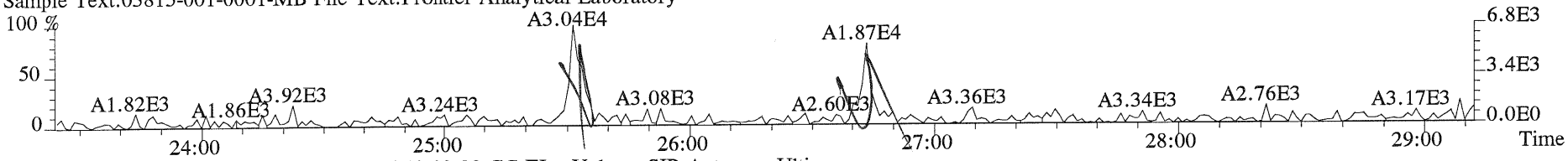
Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	*	* n	NotFnd	1.16	*		2.50	496	606	0.152
1,2,3,7,8-PeCDD	*	* n	NotFnd	1.00	*		2.50	879	428	0.282
1,2,3,4,7,8-HxCDD	*	* n	NotFnd	1.08	*		2.50	884	689	0.425
1,2,3,6,7,8-HxCDD	*	* n	NotFnd	1.08	*		2.50	884	689	0.436
1,2,3,7,8,9-HxCDD	*	* n	NotFnd	1.12	*		2.50	884	689	0.416
1,2,3,4,6,7,8-HpCDD	*	* n	NotFnd	1.04	*		2.50	702	540	0.513
OCDD	*	* n	NotFnd	1.05	*		2.50	494	621	0.865
2,3,7,8-TCDF	*	* n	NotFnd	1.11	*		2.50	717	753	0.124
1,2,3,7,8-PeCDF	*	* n	NotFnd	0.96	*		2.50	455	699	0.166
2,3,4,7,8-PeCDF	*	* n	NotFnd	0.95	*		2.50	455	699	0.162
1,2,3,4,7,8-HxCDF	*	* n	NotFnd	1.11	*		2.50	459	408	0.152
1,2,3,6,7,8-HxCDF	*	* n	NotFnd	1.07	*		2.50	459	408	0.160
2,3,4,6,7,8-HxCDF	*	* n	NotFnd	1.04	*		2.50	459	408	0.175
1,2,3,7,8,9-HxCDF	*	* n	NotFnd	1.03	*		2.50	459	408	0.271
1,2,3,4,6,7,8-HpCDF	*	* n	NotFnd	1.30	*		2.50	664	421	0.257
1,2,3,4,7,8,9-HpCDF	*	* n	NotFnd	1.23	*		2.50	664	421	0.421
OCDF	*	* n	NotFnd	0.89	*		2.50	322	334	0.425

						Rec
13C-2,3,7,8-TCDD	3.30e+07	0.79 y	27:28	0.98	349	87.3
13C-1,2,3,7,8-PeCDD	2.74e+07	1.57 y	33:20	0.90	317	79.2
13C-1,2,3,4,7,8-HxCDD	1.95e+07	1.20 y	38:41	0.88	351	87.7
13C-1,2,3,6,7,8-HxCDD	2.19e+07	1.28 y	38:51	0.96	361	90.3
13C-1,2,3,4,6,7,8-HpCDD	1.69e+07	1.08 y	44:15	0.83	323	80.8
13C-OCDD	2.30e+07	0.86 y	49:47	0.66	549	68.6
13C-2,3,7,8-TCDF	5.23e+07	0.79 y	26:43	1.01	349	87.3
13C-1,2,3,7,8-PeCDF	4.19e+07	1.53 y	31:35	0.92	306	76.4
13C-2,3,4,7,8-PeCDF	4.18e+07	1.56 y	32:57	0.91	308	77.1
13C-1,2,3,4,7,8-HxCDF	2.81e+07	0.53 y	37:17	1.26	353	88.2
13C-1,2,3,6,7,8-HxCDF	3.43e+07	0.53 y	37:29	1.46	371	92.7
13C-2,3,4,6,7,8-HxCDF	2.98e+07	0.54 y	38:27	1.32	356	89.0
13C-1,2,3,7,8,9-HxCDF	2.29e+07	0.53 y	39:54	1.15	315	78.6
13C-1,2,3,4,6,7,8-HpCDF	2.28e+07	0.47 y	42:21	0.91	395	98.7
13C-1,2,3,4,7,8,9-HpCDF	1.63e+07	0.45 y	45:13	0.76	341	85.2
13C-OCDF	3.18e+07	0.93 y	50:14	0.93	538	67.2
37Cl-2,3,7,8-TCDD	1.15e+07		27:29	0.90	131	82.1
13C-1,2,3,4-TCDD	3.85e+07	0.79 y	26:49	-	14.4	
13C-1,2,3,4-TCDF	5.96e+07	0.80 y	25:32	-	15.5	
13C-1,2,3,7,8,9-HxCDD	2.53e+07	1.28 y	39:18	-	11.6	

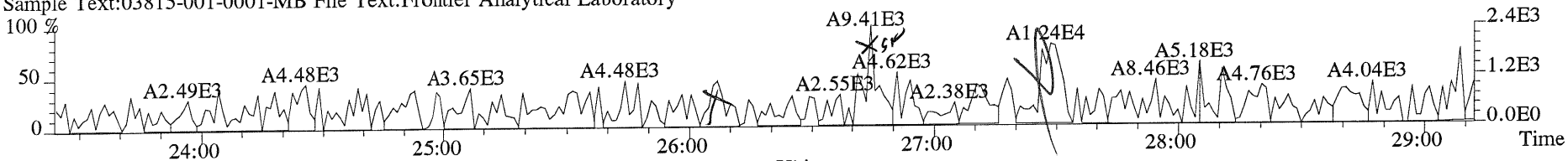
						Fac	Noise-1	Noise-2	DL	#Hom
Total Tetra-Dioxins	*		NotFnd	1.16	*	2.50	496	606	0.152	0
Total Penta-Dioxins	*		NotFnd	1.00	*	2.50	879	428	0.282	0
Total Hexa-Dioxins	*		NotFnd	1.09	*	2.50	884	689	0.436	0
Total Hepta-Dioxins	*		NotFnd	1.04	*	2.50	702	540	0.513	0
Total Tetra-Furans	*		NotFnd	1.11	*	2.50	717	753	0.124	0
1st Fn. Tot Penta-Furans	*		NotFnd	0.95	*	2.50	455	699	0.166 PeCDF	0
Total Penta-Furans	*		NotFnd	0.95	*	2.50	455	699	0.166 *	0
Total Hexa-Furans	*		NotFnd	1.06	*	2.50	459	408	0.271	0
Total Hepta-Furans	*		NotFnd	1.27	*	2.50	664	421	0.421	0

Analyst: _____ Date: 8/19/16

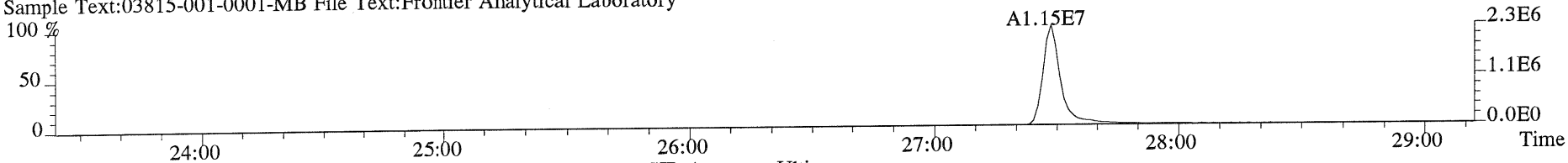
File:18AUG16M #1-399 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



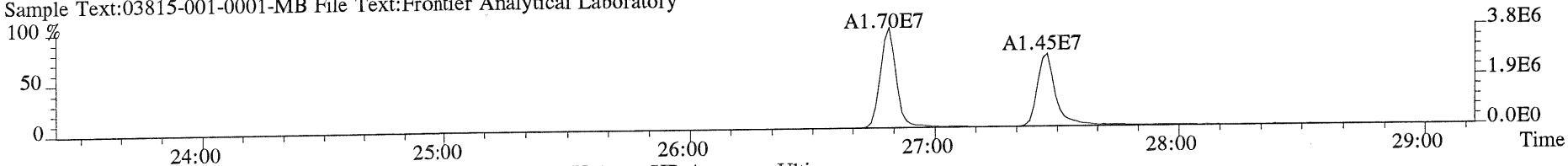
File:18AUG16M #1-399 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



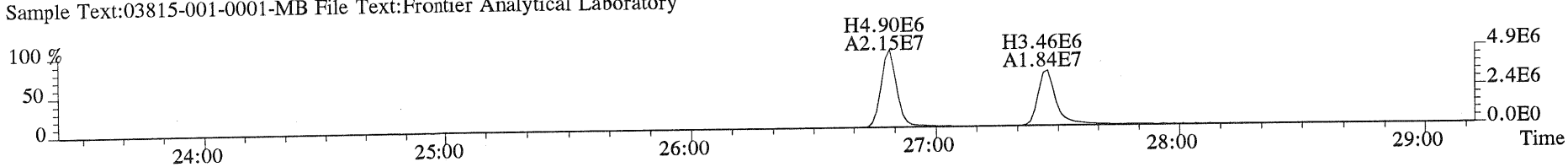
File:18AUG16M #1-399 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



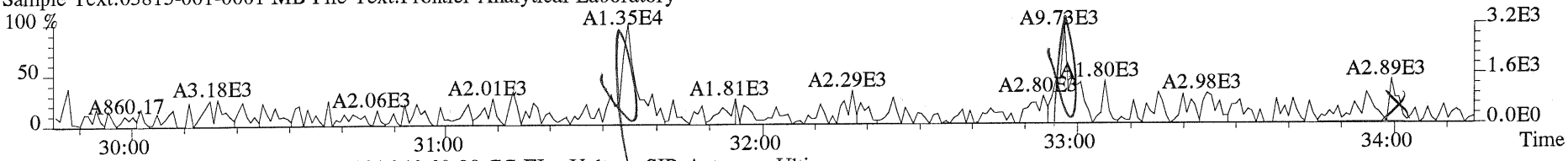
File:18AUG16M #1-399 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



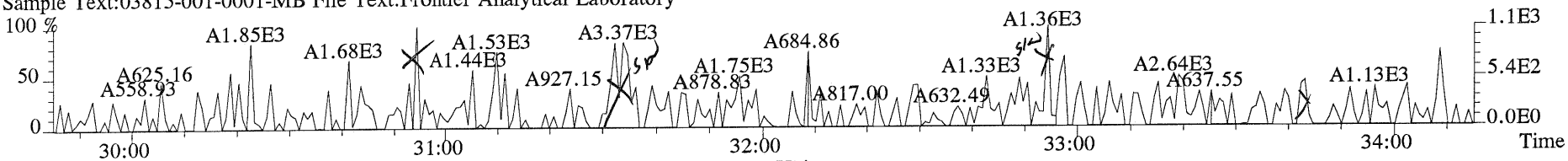
File:18AUG16M #1-399 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



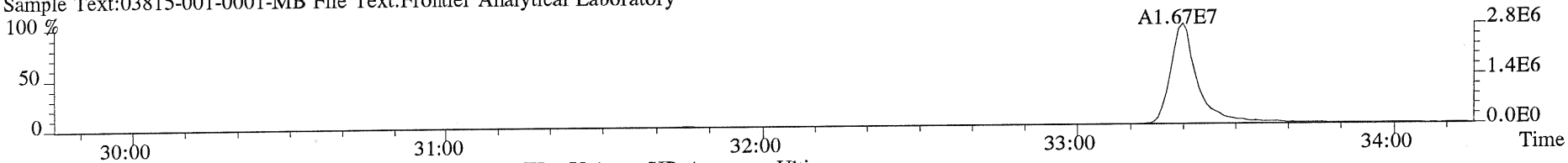
File:18AUG16M #1-411 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



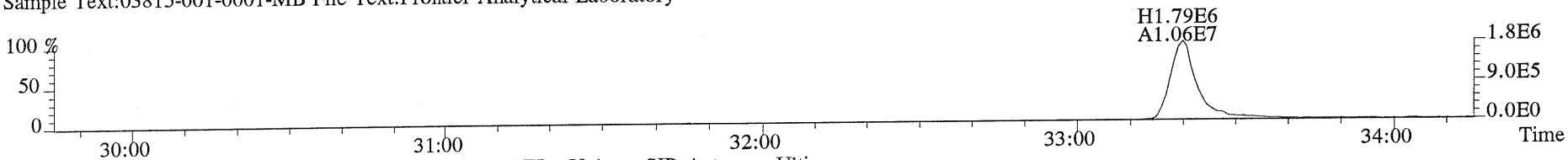
File:18AUG16M #1-411 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



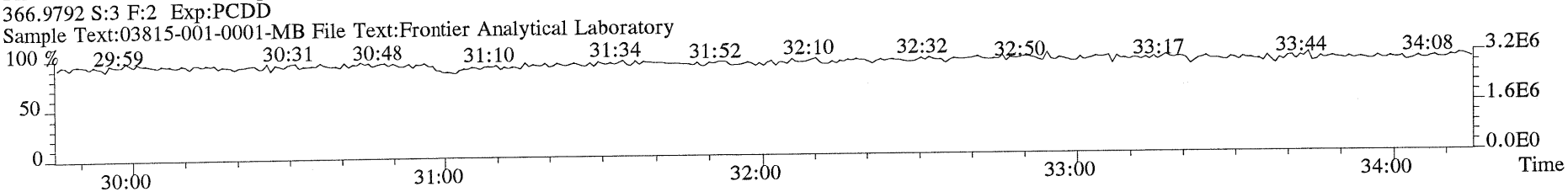
File:18AUG16M #1-411 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



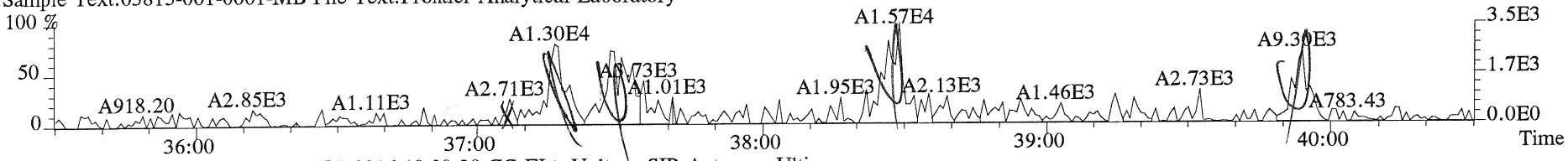
File:18AUG16M #1-411 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



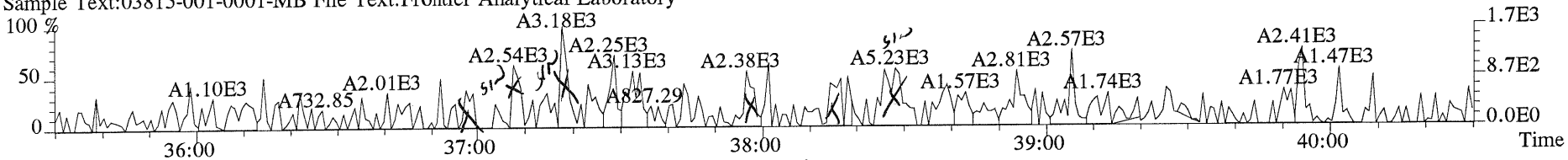
File:18AUG16M #1-411 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:3 F:2 Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



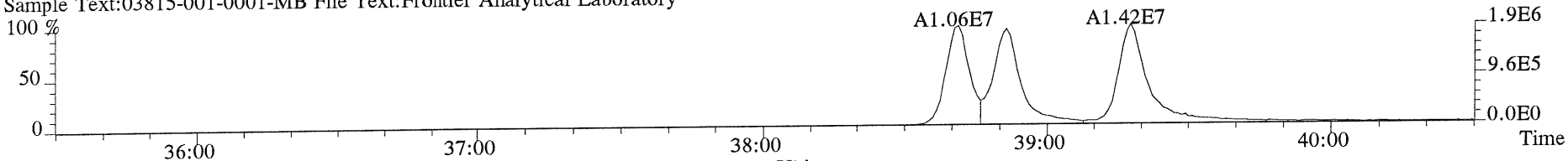
File:18AUG16M #1-495 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



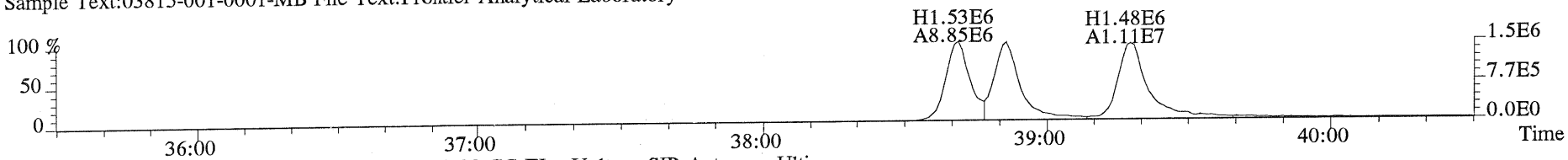
File:18AUG16M #1-495 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



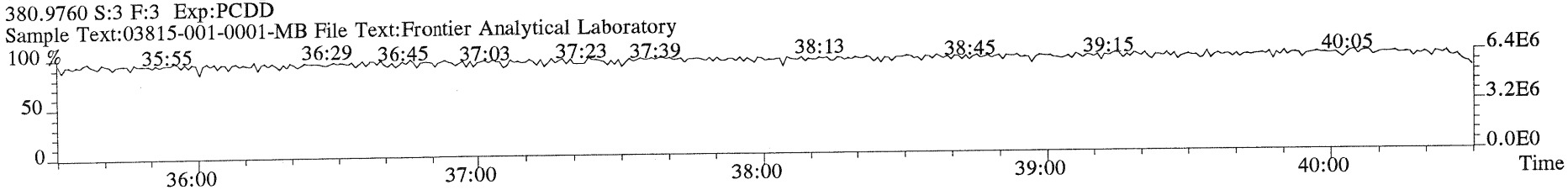
File:18AUG16M #1-495 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



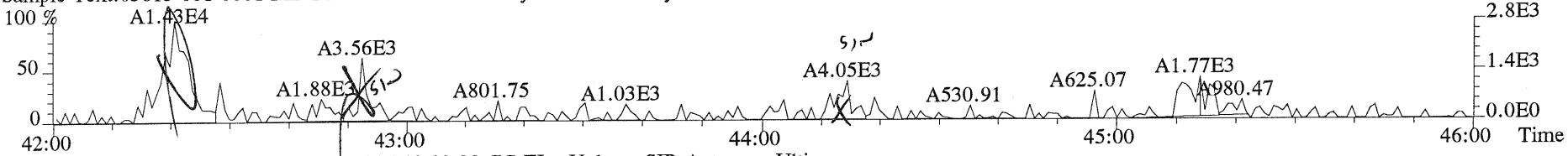
File:18AUG16M #1-495 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



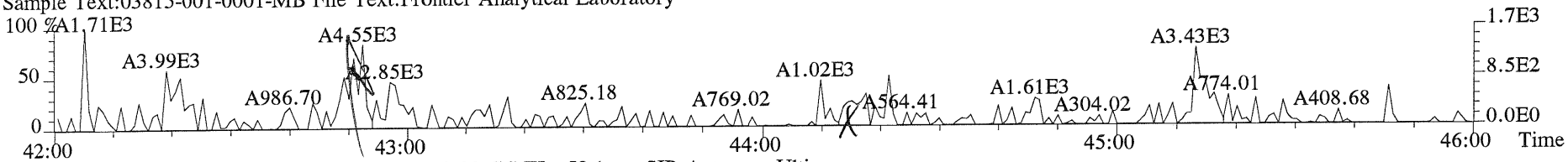
File:18AUG16M #1-495 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:3 F:3 Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



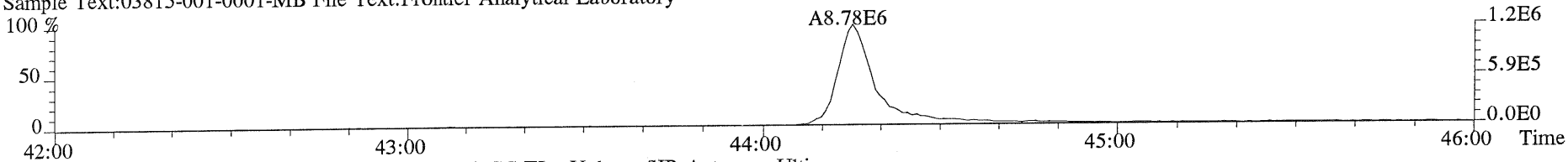
File:18AUG16M #1-521 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



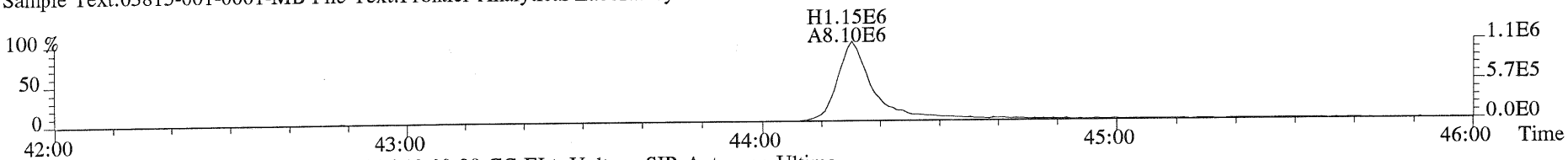
File:18AUG16M #1-521 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



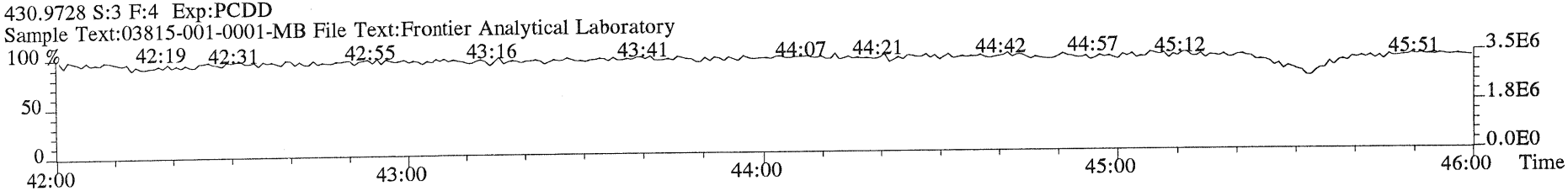
File:18AUG16M #1-521 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



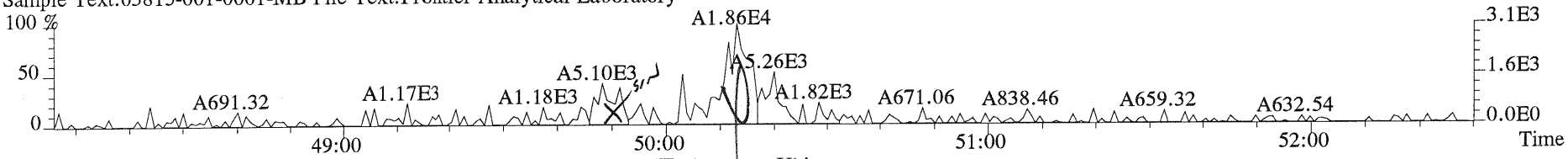
File:18AUG16M #1-521 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



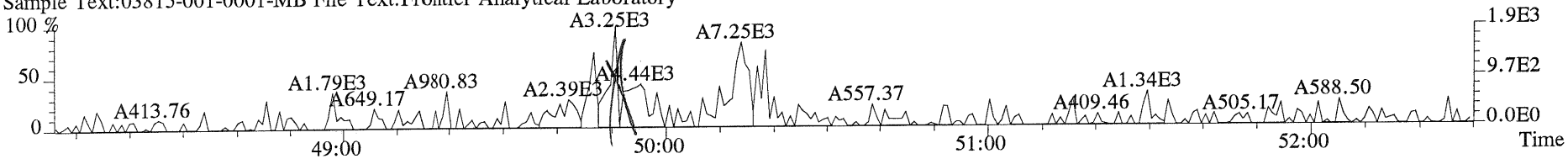
File:18AUG16M #1-521 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:3 F:4 Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



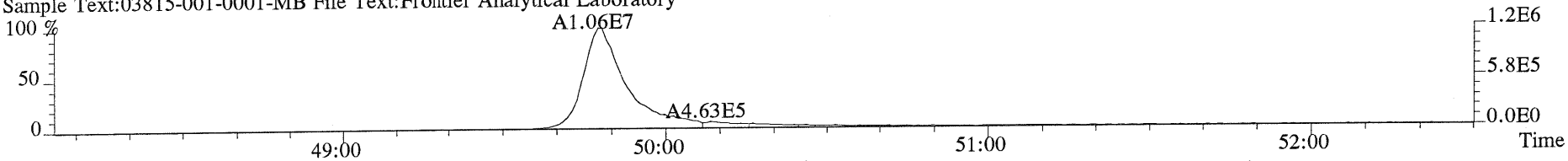
File:18AUG16M #1-361 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



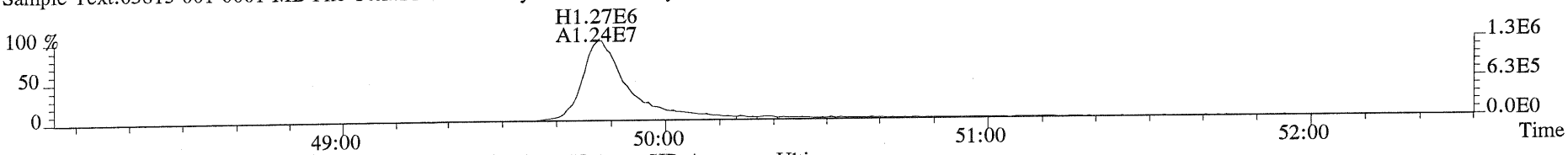
File:18AUG16M #1-361 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



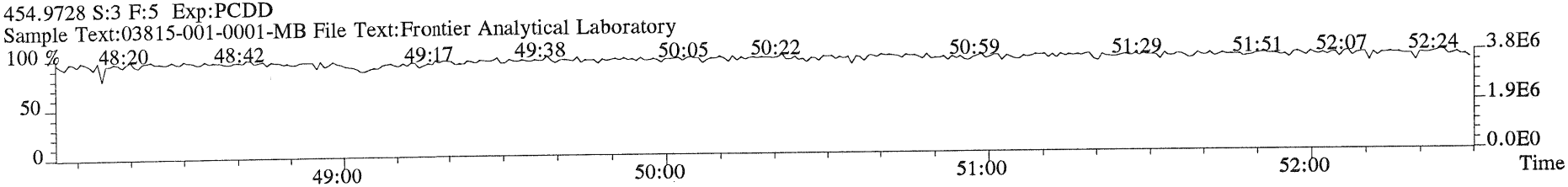
File:18AUG16M #1-361 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



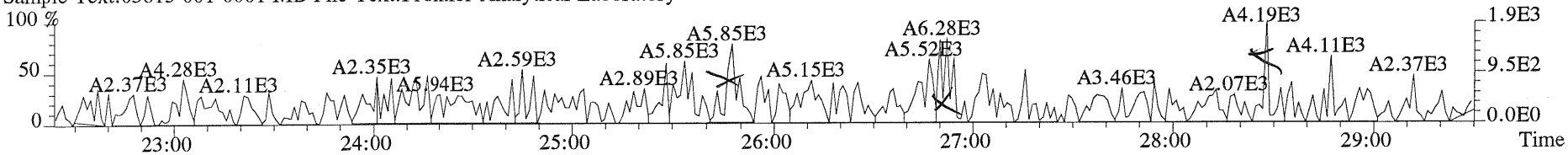
File:18AUG16M #1-361 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



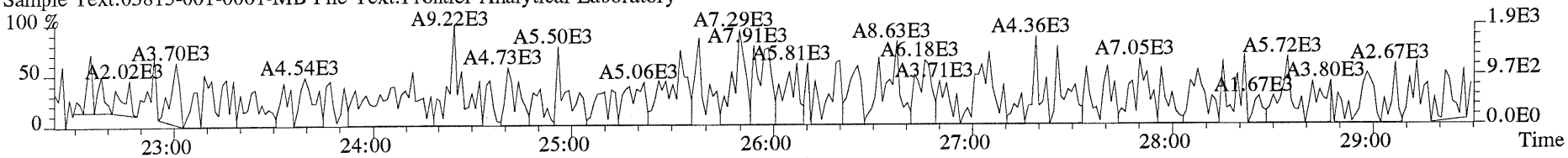
File:18AUG16M #1-361 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:3 F:5 Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



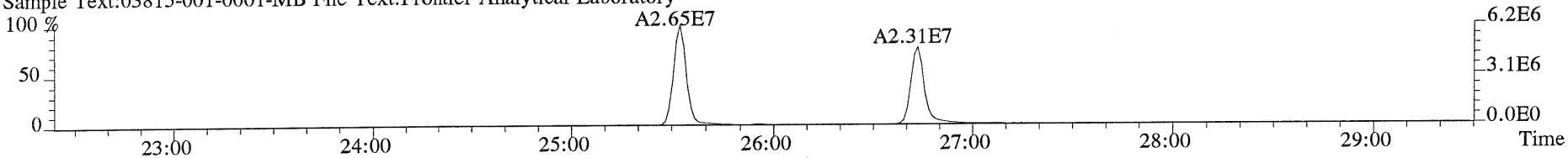
File:18AUG16M #1-399 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



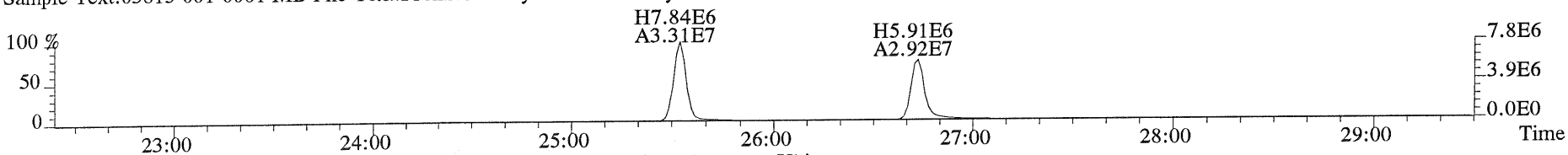
File:18AUG16M #1-399 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



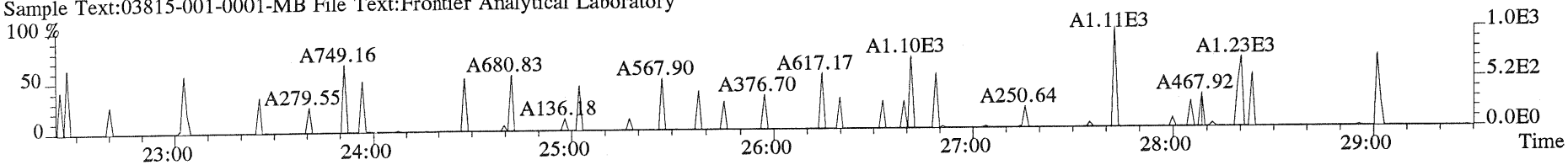
File:18AUG16M #1-399 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



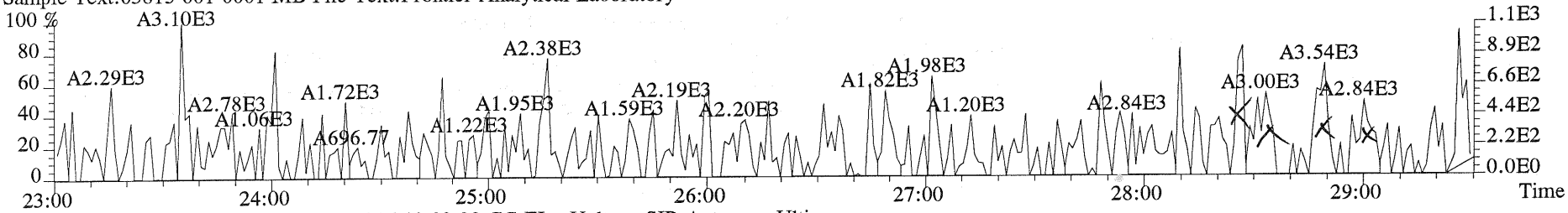
File:18AUG16M #1-399 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



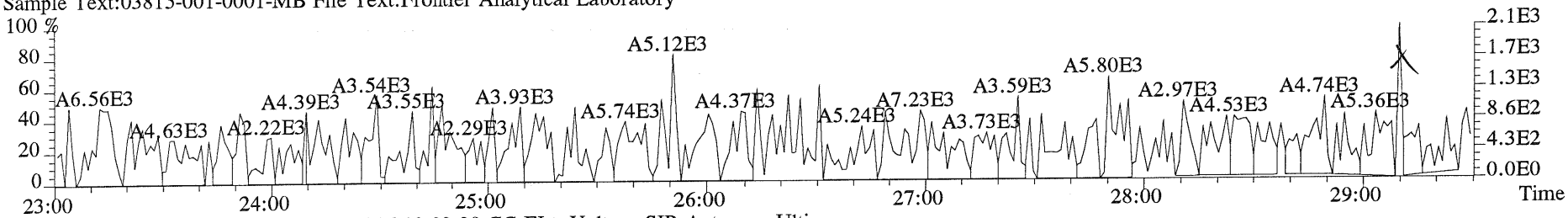
File:18AUG16M #1-399 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



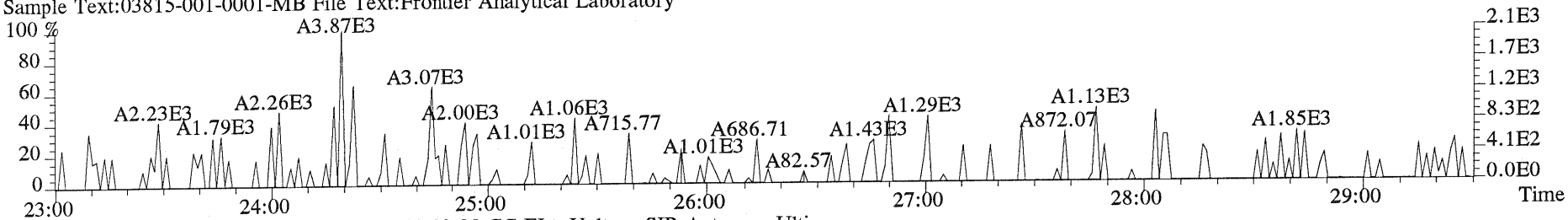
File:18AUG16M #1-399 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



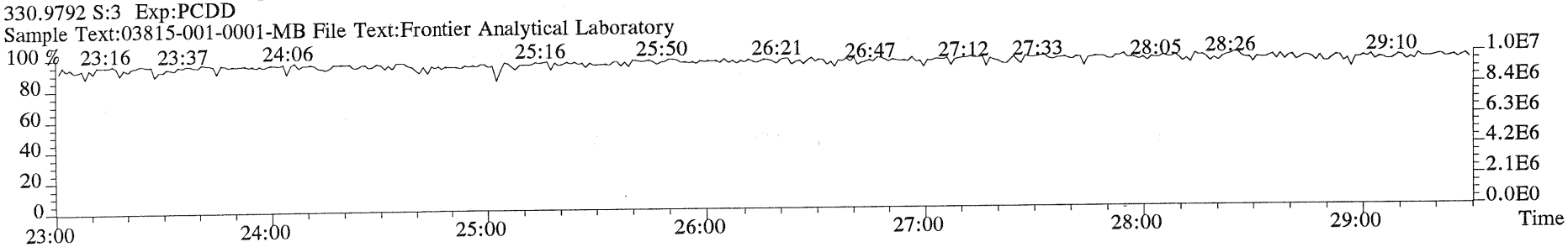
File:18AUG16M #1-399 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



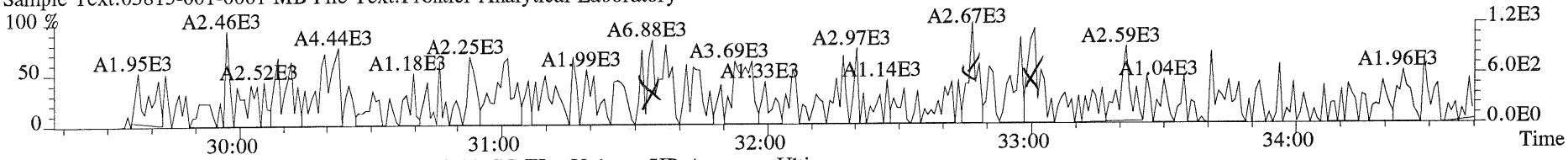
File:18AUG16M #1-399 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



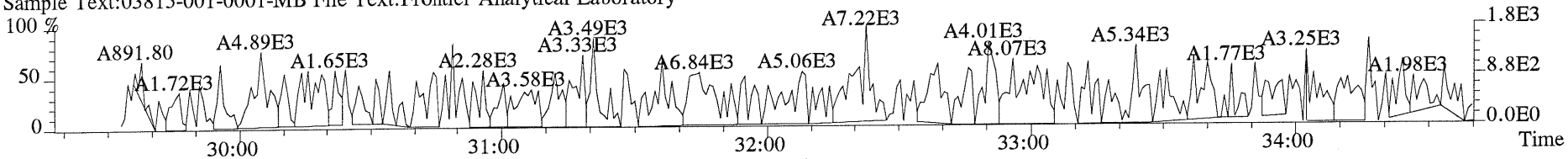
File:18AUG16M #1-399 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:3 Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



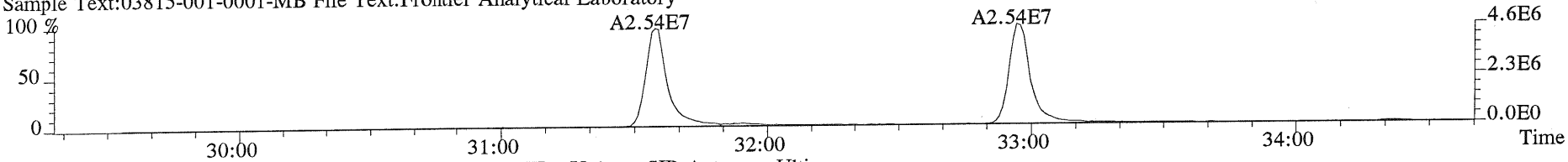
File:18AUG16M #1-411 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



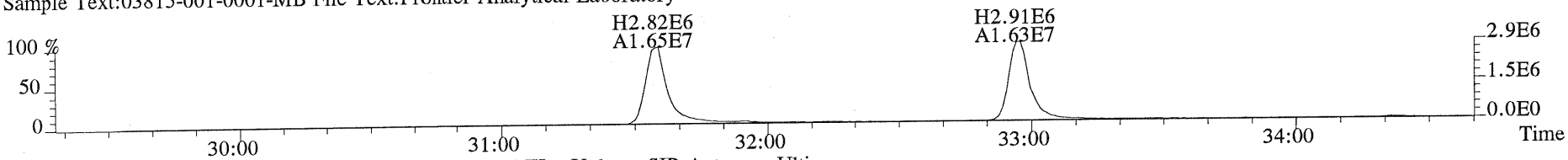
File:18AUG16M #1-411 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



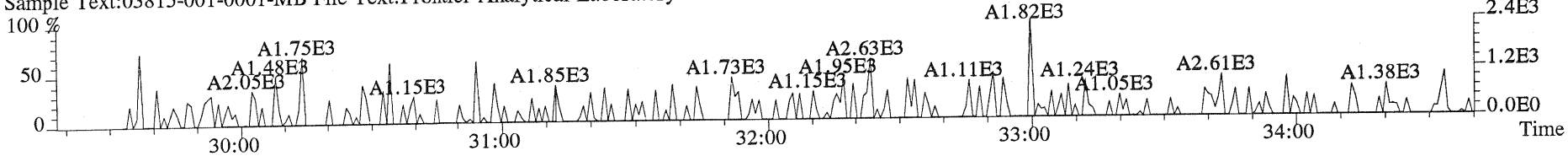
File:18AUG16M #1-411 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



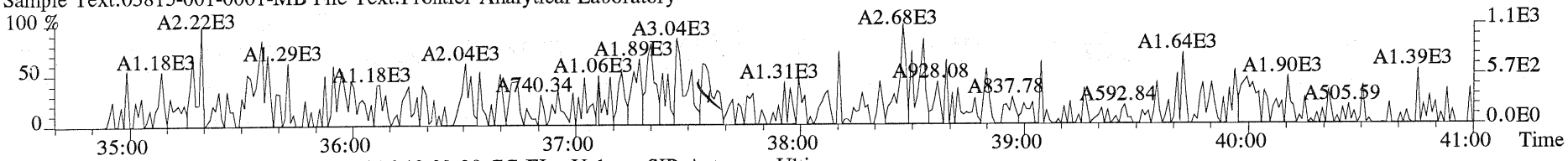
File:18AUG16M #1-411 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



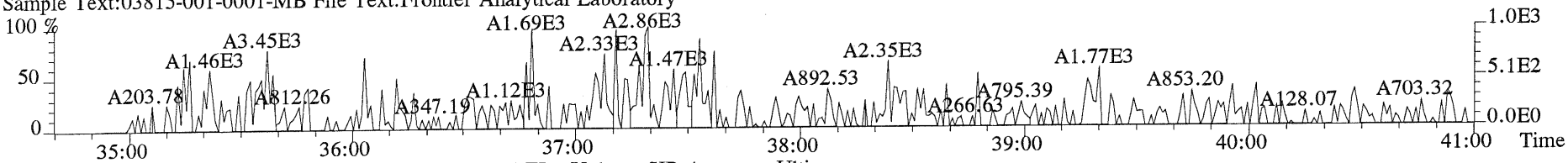
File:18AUG16M #1-411 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



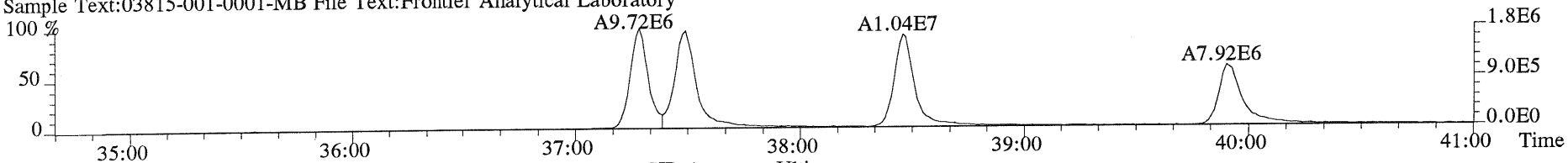
File:18AUG16M #1-495 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



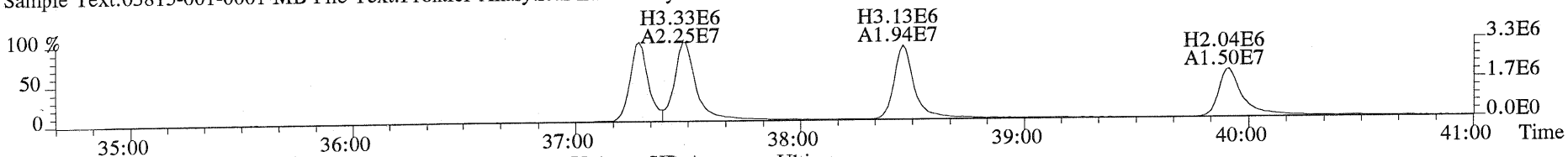
File:18AUG16M #1-495 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



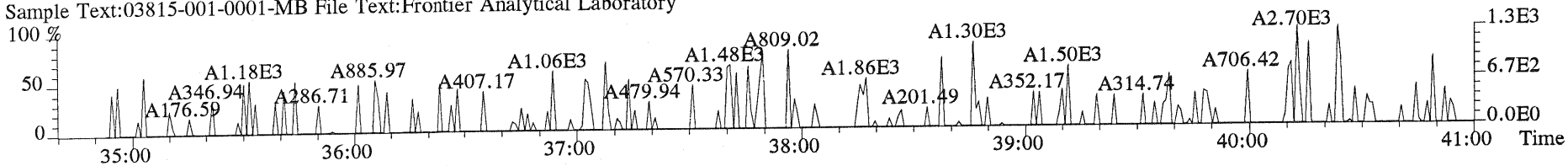
File:18AUG16M #1-495 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



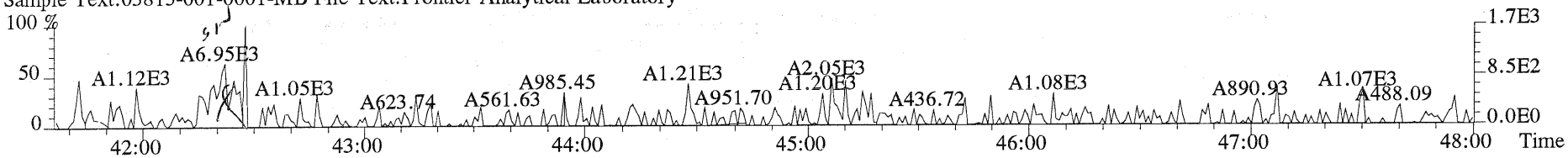
File:18AUG16M #1-495 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



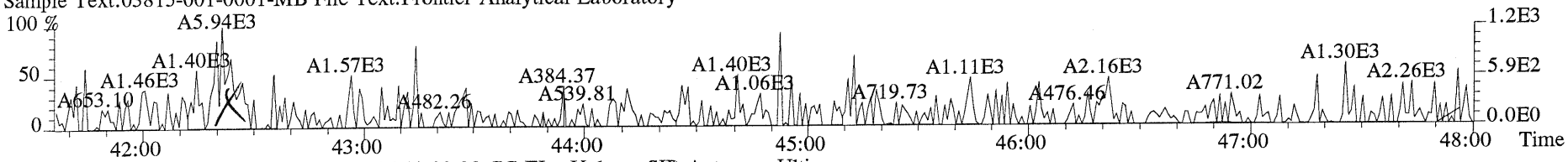
File:18AUG16M #1-495 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



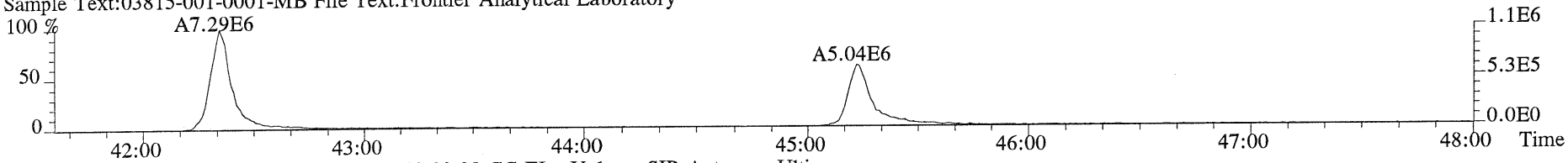
File:18AUG16M #1-521 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



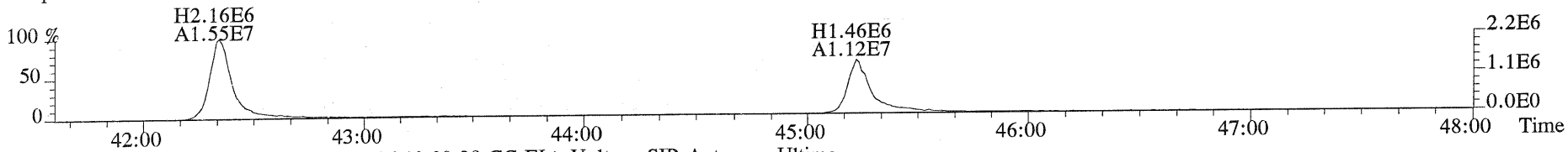
File:18AUG16M #1-521 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



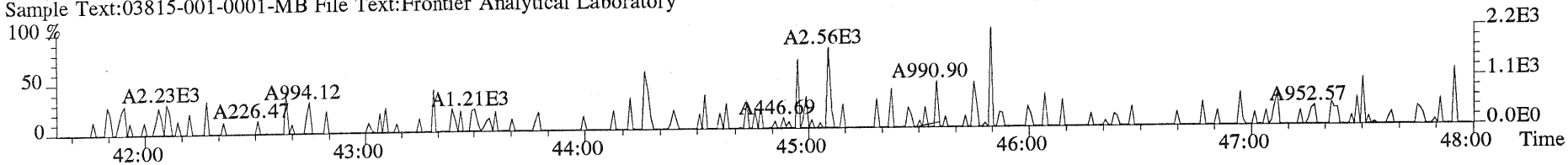
File:18AUG16M #1-521 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



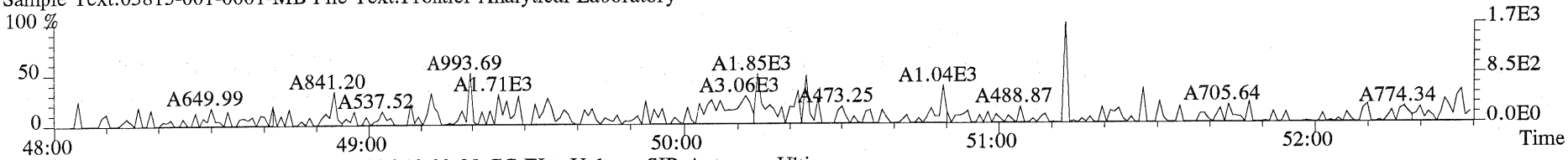
File:18AUG16M #1-521 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



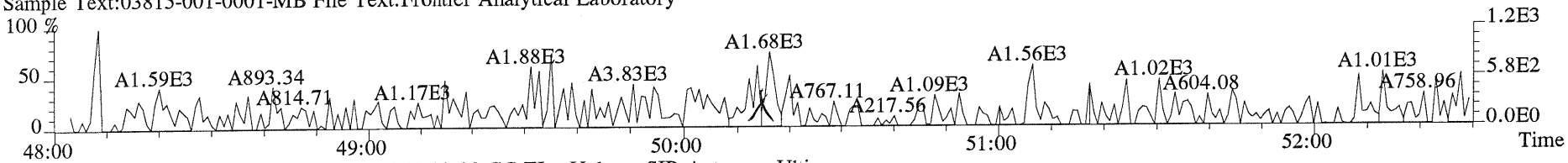
File:18AUG16M #1-521 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



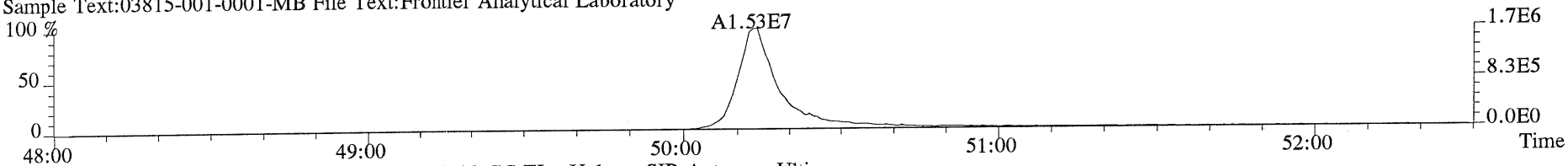
File:18AUG16M #1-361 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



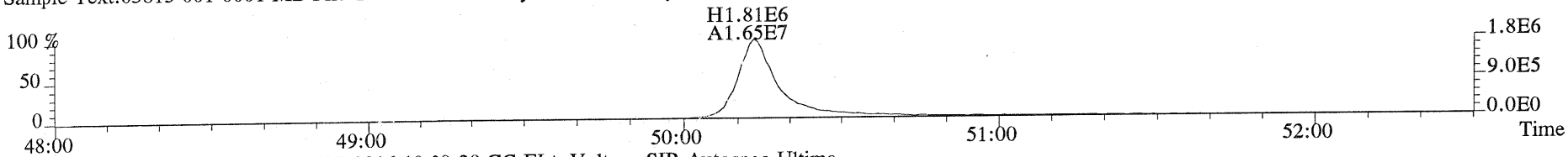
File:18AUG16M #1-361 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



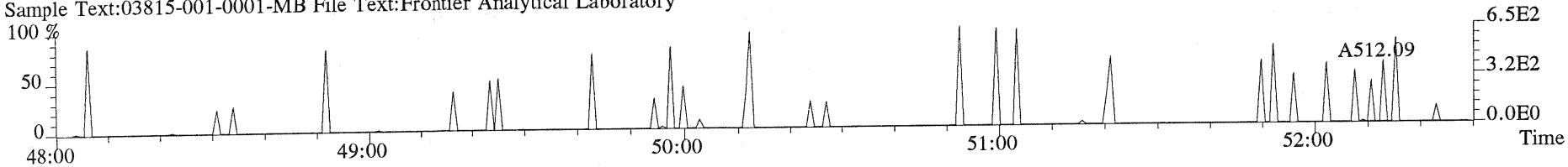
File:18AUG16M #1-361 Acq:18-AUG-2016 10:30:39 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-MB File Text:Frontier Analytical Laboratory



File:18AUG16M #1-361 Acq:18-AUG-2016 10:30:39 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:03815-001-0001-MB File Text:Frontier Analytical Laboratory



File:18AUG16M #1-361 Acq:18-AUG-2016 10:30:39 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:03815-001-0001-MB File Text:Frontier Analytical Laboratory



03815.001.0001.OPR

USEPA - ITD

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

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): Solid OPR Data Filename: 18AUG16M Sam:2

Ext. Date: 8/16/16 Shift: Day Analysis Date: 18-AUG-16 09:35:46

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
NATIVE ANALYTES			
2,3,7,8-TCDD	10	10.1	6.70 - 15.8
1,2,3,7,8-PeCDD	50	48.3	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	47.8	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	48.0	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	47.6	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	49.2	35.0 - 70.0
OCDD	100	106	78.0 - 144
2,3,7,8-TCDF	10	9.70	7.50 - 15.8
1,2,3,7,8-PeCDF	50	49.2	40.0 - 67.0
2,3,4,7,8-PeCDF	50	49.4	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	48.0	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	49.5	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	48.1	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	49.5	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	49.5	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	51.3	39.0 - 69.0
OCDF	100	104	63.0 - 170

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

Analyst: _____ Date: 8/19/16

USEPA - ITD

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

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Matrix (aqueous/solid/leachate): Solid OPR Data Filename: 18AUG16M Sam:2

Ext. Date: 8/16/16 Shift: Day Analysis Date: 18-AUG-16 09:35:46

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	90.2	20.0 - 175
13C-1,2,3,7,8-PeCDD	100	80.4	21.0 - 227
13C-1,2,3,4,7,8-HxCDD	100	93.5	21.0 - 193
13C-1,2,3,6,7,8-HxCDD	100	100	25.0 - 163
13C-1,2,3,4,6,7,8-HpCDD	100	83.9	26.0 - 166
13C-OCDD	200	143	26.0 - 397
13C-2,3,7,8-TCDF	100	90.5	22.0 - 152
13C-1,2,3,7,8-PeCDF	100	77.6	21.0 - 192
13C-2,3,4,7,8-PeCDF	100	79.5	13.0 - 328
13C-1,2,3,4,7,8-HxCDF	100	96.8	19.0 - 202
13C-1,2,3,6,7,8-HxCDF	100	103	21.0 - 159
13C-2,3,4,6,7,8-HxCDF	100	99.5	22.0 - 176
13C-1,2,3,7,8,9-HxCDF	100	83.8	17.0 - 205
13C-1,2,3,4,6,7,8-HpCDF	100	106	21.0 - 158
13C-1,2,3,4,7,8,9-HpCDF	100	88.0	20.0 - 186
13C-OCDF	200	141	26.0 - 397
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	33.8	12.4 - 76.4

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

Analyst: [signature] Date: 8/19/16

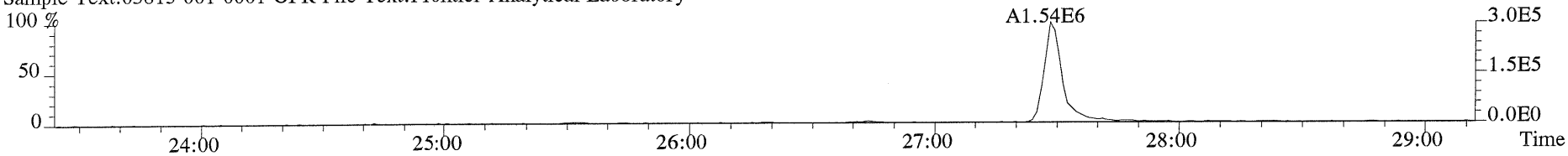
FAL ID: 03815-001-0001-OPR Filename: 18AUG16M Sam:2 Acquired: 18-AUG-16 09:35:46 ICal: PCDDFAL3-7-20-16
Client ID: OPR ConCal: ST081816M1 EndCal: ST081816M2
Results: GC Golumn: DB5MS Amount: 1.000 NATO 1989 Tox: 97.9
Instrument ID: FAL3 WHO 1998 Tox: 122 WHO 2005 Tox: 111

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	3.56e+06	0.76 y	27:28	1.16	10.1		2.50	-	-	*
1,2,3,7,8-PeCDD	1.20e+07	1.51 y	33:21	1.00	48.3		2.50	-	-	*
1,2,3,4,7,8-HxCDD	8.79e+06	1.24 y	38:42	1.08	47.8		2.50	-	-	*
1,2,3,6,7,8-HxCDD	1.03e+07	1.24 y	38:53	1.08	48.0		2.50	-	-	*
1,2,3,7,8,9-HxCDD	9.83e+06	1.22 y	39:19	1.12	47.6		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	7.37e+06	0.95 y	44:16	1.04	49.2		2.50	-	-	*
OCDD	1.10e+07	0.91 y	49:49	1.05	106		2.50	-	-	*
2,3,7,8-TCDF	5.14e+06	0.75 y	26:45	1.11	9.70		2.50	-	-	*
1,2,3,7,8-PeCDF	1.77e+07	1.50 y	31:36	0.96	49.2		2.50	-	-	*
2,3,4,7,8-PeCDF	1.79e+07	1.53 y	32:59	0.95	49.4		2.50	-	-	*
1,2,3,4,7,8-HxCDF	1.34e+07	1.20 y	37:18	1.11	48.0		2.50	-	-	*
1,2,3,6,7,8-HxCDF	1.66e+07	1.22 y	37:31	1.07	49.5		2.50	-	-	*
2,3,4,6,7,8-HxCDF	1.37e+07	1.20 y	38:29	1.04	48.1		2.50	-	-	*
1,2,3,7,8,9-HxCDF	1.02e+07	1.22 y	39:56	1.03	49.5		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	1.30e+07	1.03 y	42:22	1.30	49.5		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	8.70e+06	1.04 y	45:14	1.23	51.3		2.50	-	-	*
OCDF	1.27e+07	0.90 y	50:14	0.89	104		2.50	-	-	*
										Rec
13C-2,3,7,8-TCDD	3.04e+07	0.80 y	27:27	0.98	90.2					90.2
13C-1,2,3,7,8-PeCDD	2.48e+07	1.61 y	33:20	0.90	80.4					80.4
13C-1,2,3,4,7,8-HxCDD	1.70e+07	1.31 y	38:41	0.88	93.5					93.5
13C-1,2,3,6,7,8-HxCDD	2.00e+07	1.19 y	38:51	0.96	100					100
13C-1,2,3,4,6,7,8-HpCDD	1.44e+07	1.07 y	44:15	0.83	83.9					83.9
13C-OCDD	1.97e+07	0.87 y	49:47	0.66	143					71.5
13C-2,3,7,8-TCDF	4.79e+07	0.80 y	26:43	1.01	90.5					90.5
13C-1,2,3,7,8-PeCDF	3.76e+07	1.54 y	31:35	0.92	77.6					77.6
13C-2,3,4,7,8-PeCDF	3.80e+07	1.58 y	32:57	0.91	79.5					79.5
13C-1,2,3,4,7,8-HxCDF	2.53e+07	0.54 y	37:17	1.26	96.8					96.8
13C-1,2,3,6,7,8-HxCDF	3.14e+07	0.54 y	37:29	1.46	103					103
13C-2,3,4,6,7,8-HxCDF	2.74e+07	0.53 y	38:27	1.32	99.5					99.5
13C-1,2,3,7,8,9-HxCDF	2.01e+07	0.54 y	39:55	1.15	83.8					83.8
13C-1,2,3,4,6,7,8-HpCDF	2.01e+07	0.47 y	42:20	0.91	106					106
13C-1,2,3,4,7,8,9-HpCDF	1.38e+07	0.45 y	45:14	0.76	88.0					88.0
13C-OCDF	2.74e+07	0.90 y	50:13	0.93	141					70.6
37Cl-2,3,7,8-TCDD	1.05e+07		27:28	0.90	33.8					84.5
13C-1,2,3,4-TCDD	3.44e+07	0.79 y	26:49	-	64.2					
13C-1,2,3,4-TCDF	5.26e+07	0.79 y	25:32	-	68.6					
13C-1,2,3,7,8,9-HxCDD	2.08e+07	1.29 y	39:17	-	47.4					

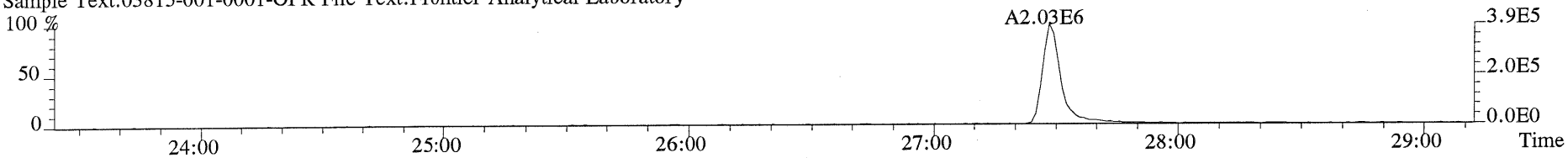
												#Hom
							Fac	Noise-1	Noise-2	DL		
Total Tetra-Dioxins	3.85e+06		22:32	1.16	10.9		2.50	-	-	*		27
Total Penta-Dioxins	1.23e+07		30:15	1.00	49.5		2.50	-	-	*		13
Total Hexa-Dioxins	2.95e+07		38:08	1.09	146		2.50	-	-	*		14
Total Hepta-Dioxins	7.84e+06		42:51	1.04	52.3		2.50	-	-	*		29
Total Tetra-Furans	5.35e+06		23:09	1.11	10.1		2.50	-	-	*		22
1st Fn. Tot Penta-Furans	1.22e+05		22:53	0.95	0.338		2.50	-	-	*	PeCDF	27
Total Penta-Furans	3.68e+07		30:20	0.95	102		2.50	-	-	*	102	17
Total Hexa-Furans	5.48e+07		35:34	1.06	198		2.50	-	-	*		16
Total Hepta-Furans	2.20e+07		42:22	1.27	102		2.50	-	-	*		25

Analyst: _____ Date: 8/19/16

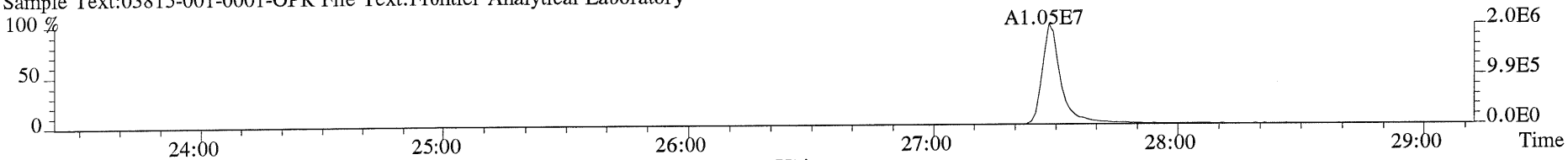
File:18AUG16M #1-400 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



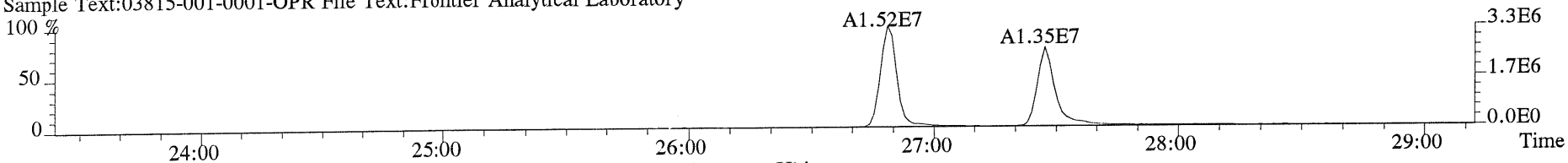
File:18AUG16M #1-400 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



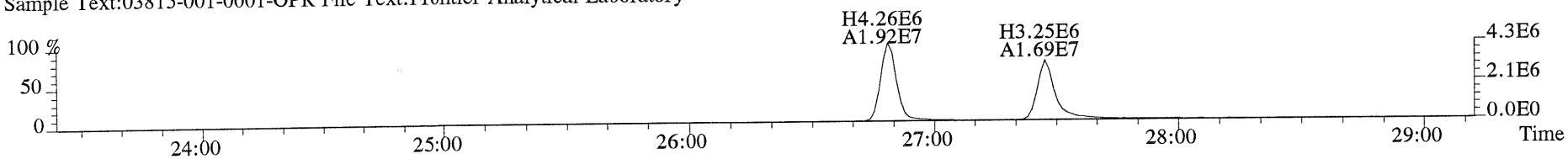
File:18AUG16M #1-400 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



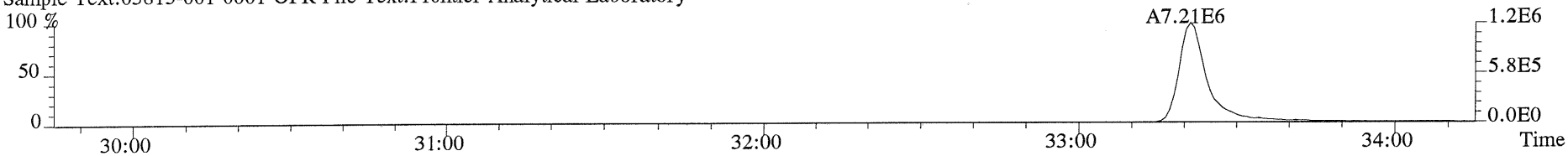
File:18AUG16M #1-400 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



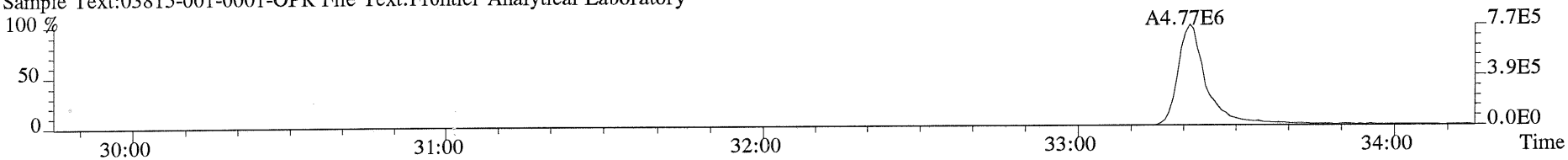
File:18AUG16M #1-400 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



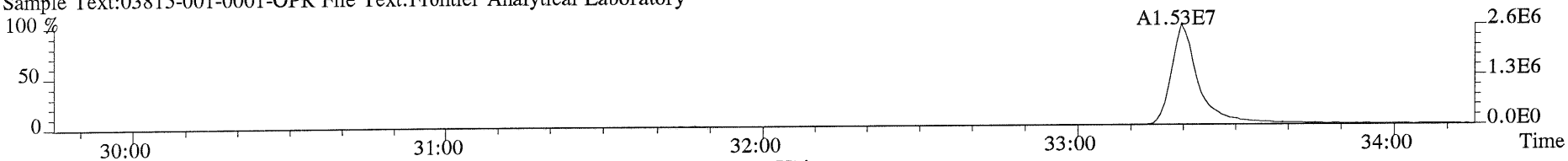
File:18AUG16M #1-411 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



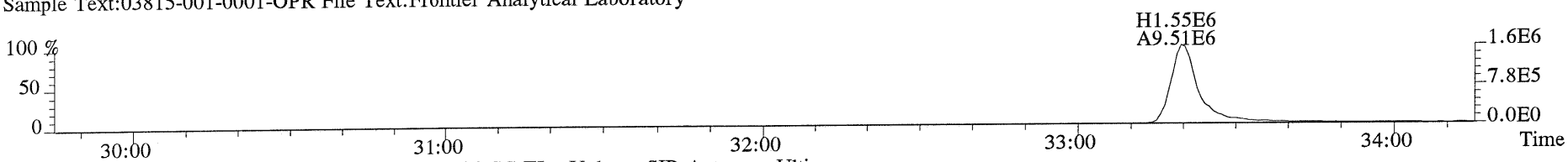
File:18AUG16M #1-411 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



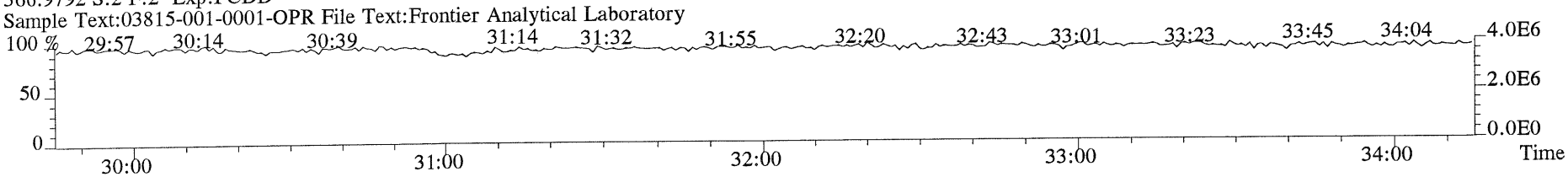
File:18AUG16M #1-411 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



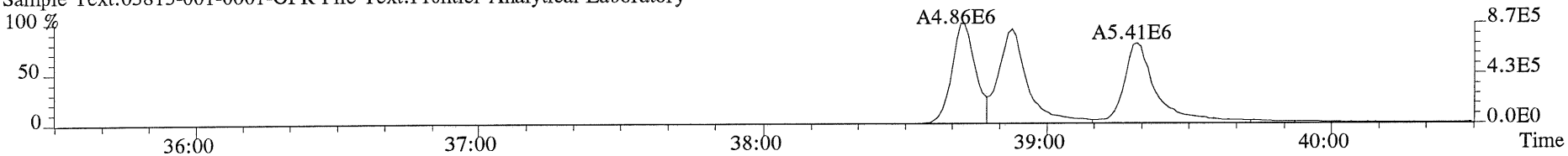
File:18AUG16M #1-411 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



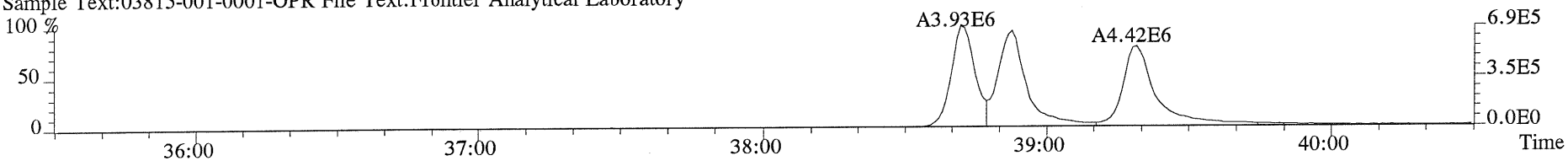
File:18AUG16M #1-411 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:2 F:2 Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



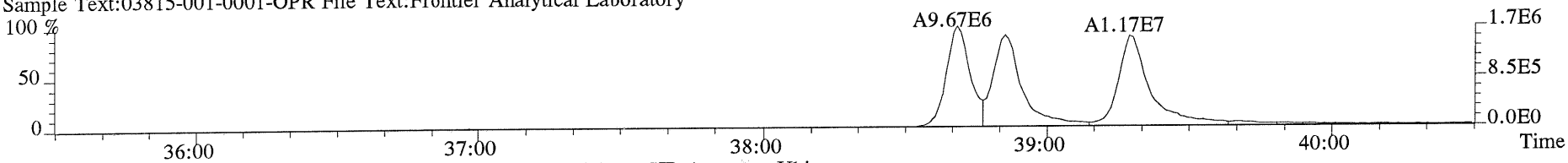
File:18AUG16M #1-494 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



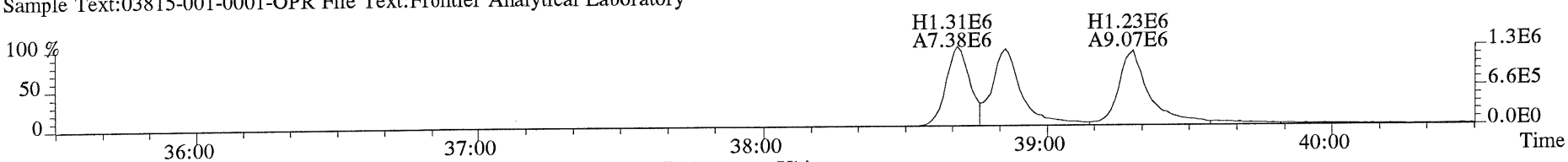
File:18AUG16M #1-494 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



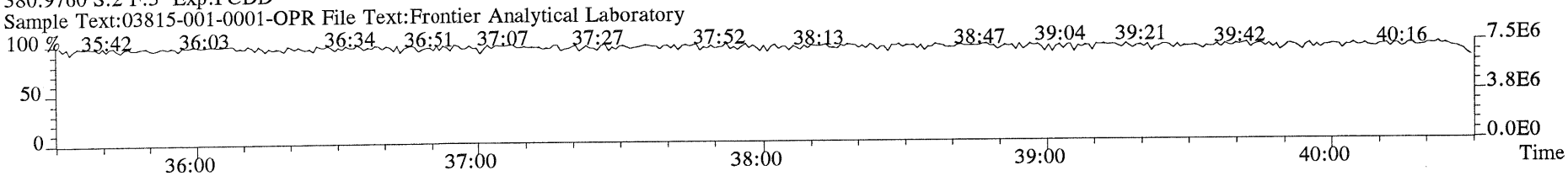
File:18AUG16M #1-494 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



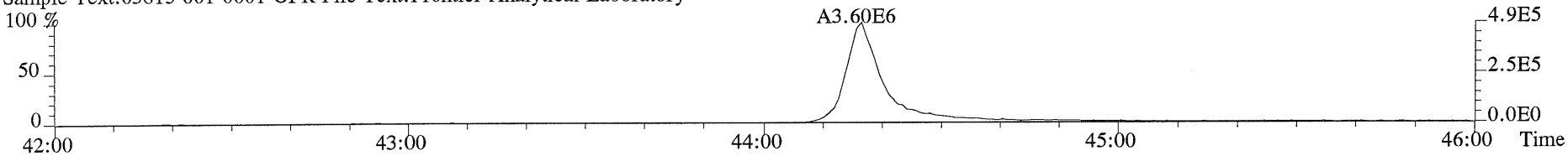
File:18AUG16M #1-494 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



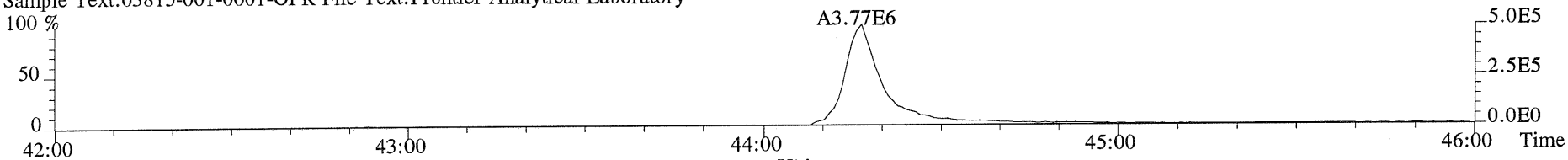
File:18AUG16M #1-494 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:2 F:3 Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



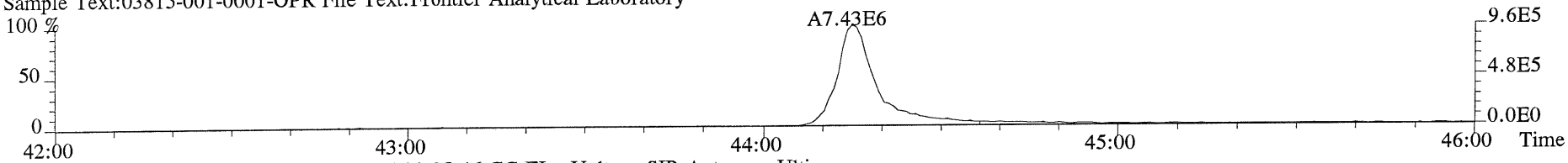
File:18AUG16M #1-520 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



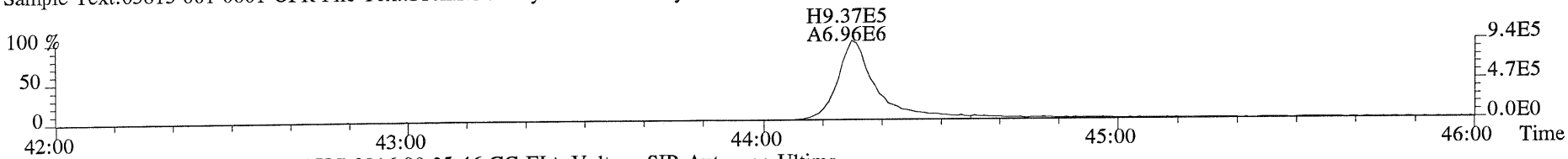
File:18AUG16M #1-520 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



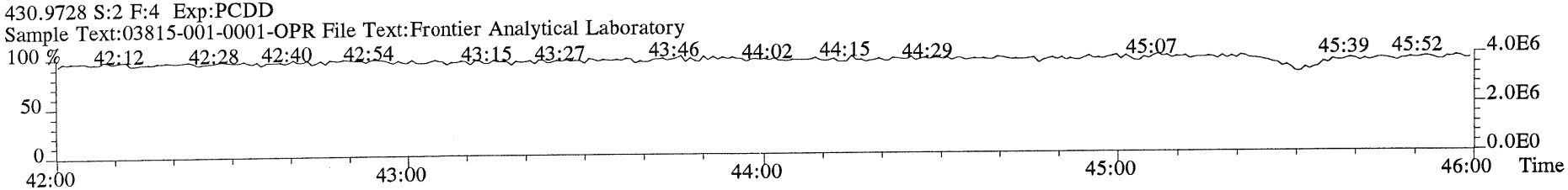
File:18AUG16M #1-520 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



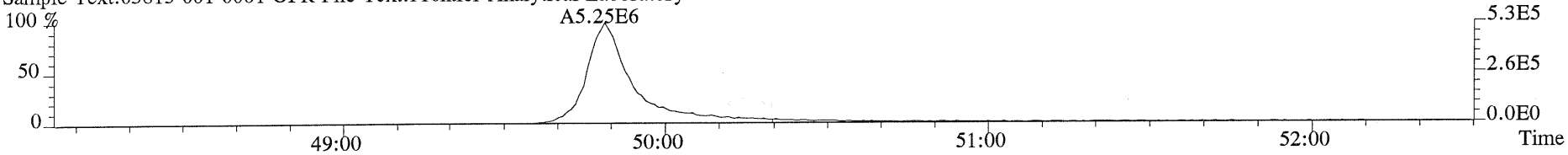
File:18AUG16M #1-520 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



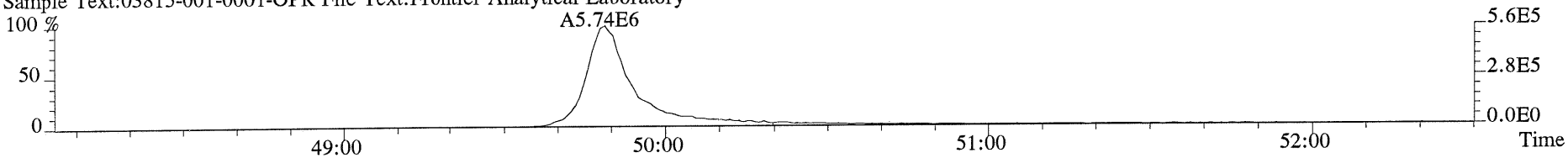
File:18AUG16M #1-520 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:2 F:4 Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



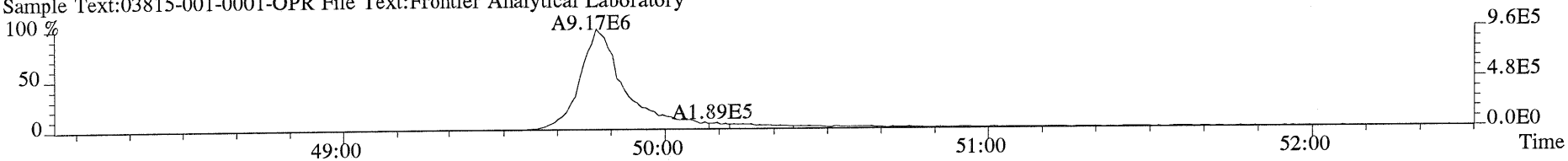
File:18AUG16M #1-360 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



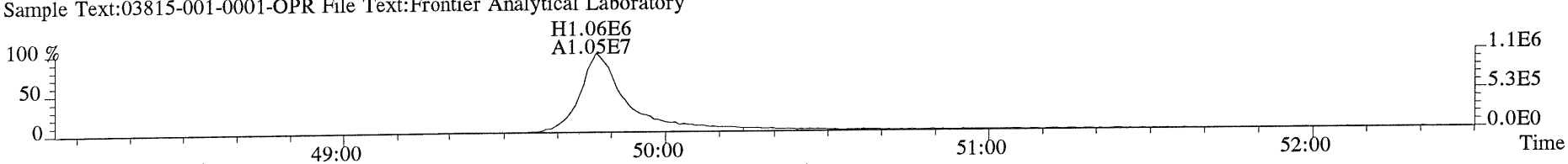
File:18AUG16M #1-360 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



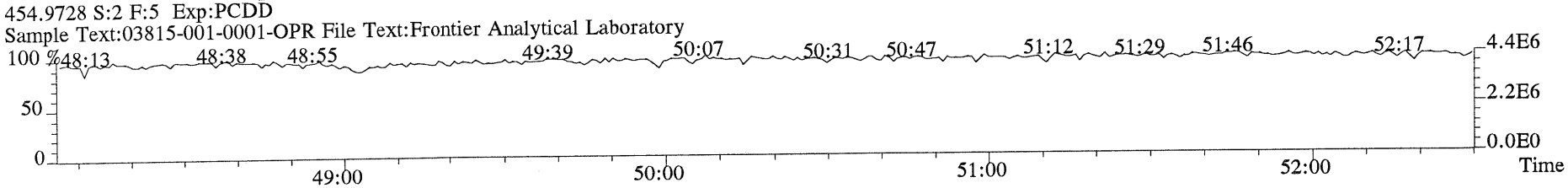
File:18AUG16M #1-360 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



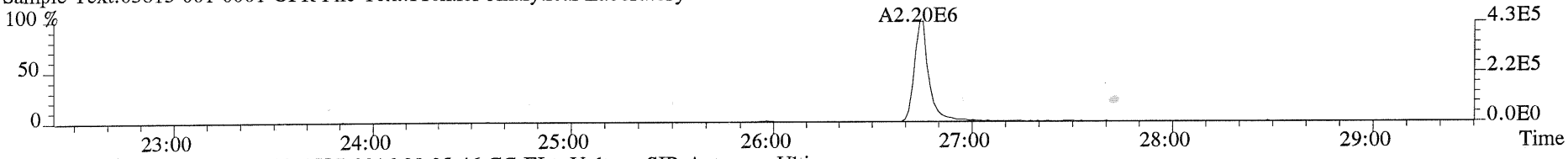
File:18AUG16M #1-360 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



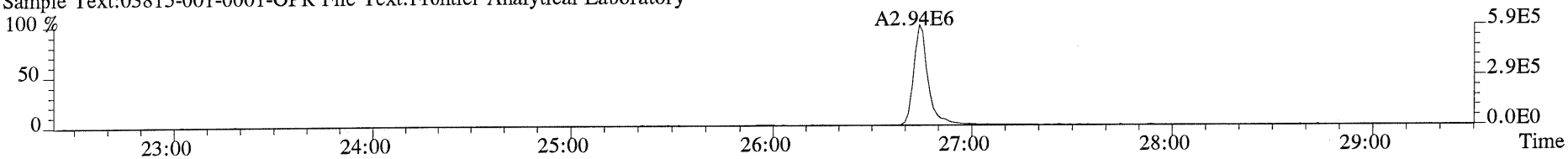
File:18AUG16M #1-360 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:2 F:5 Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



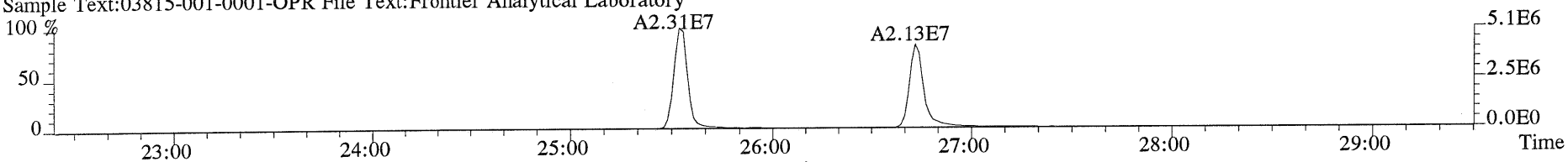
File:18AUG16M #1-400 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



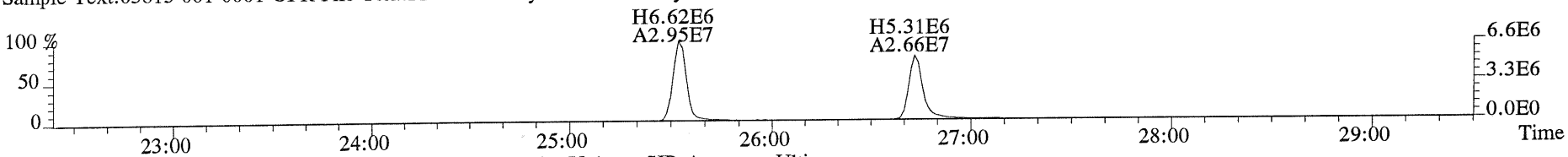
File:18AUG16M #1-400 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



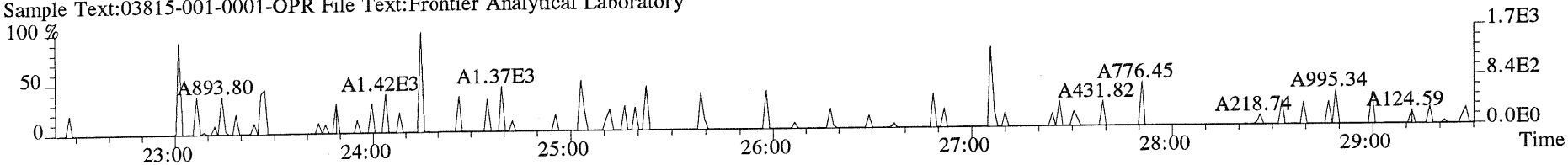
File:18AUG16M #1-400 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



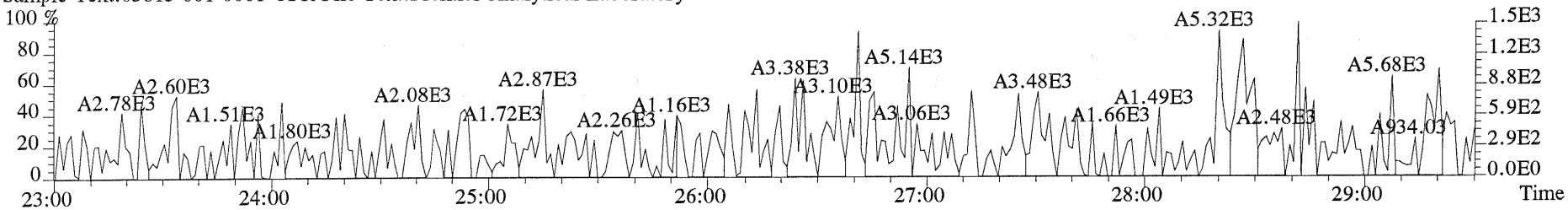
File:18AUG16M #1-400 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



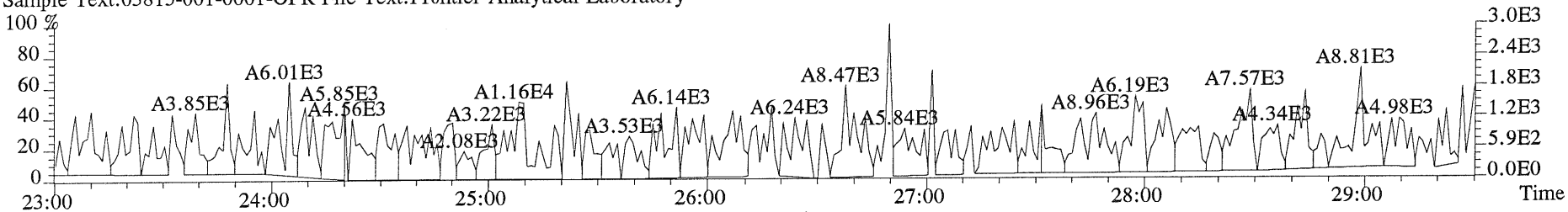
File:18AUG16M #1-400 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



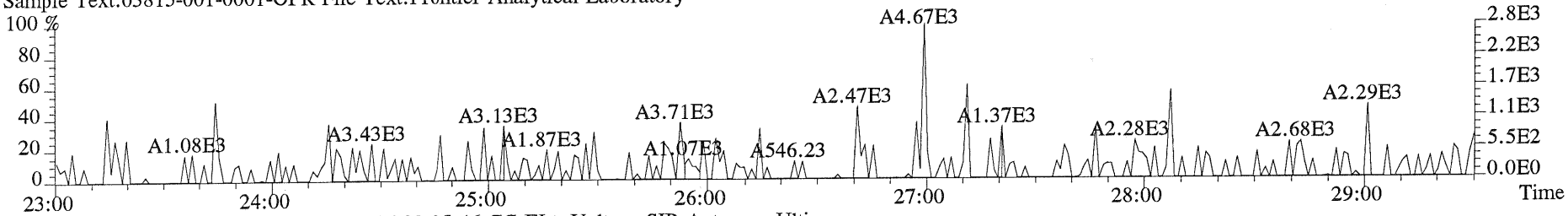
File:18AUG16M #1-400 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



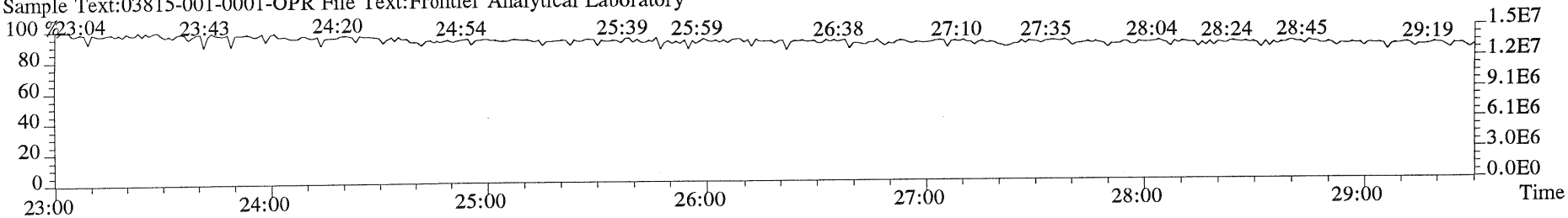
File:18AUG16M #1-400 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



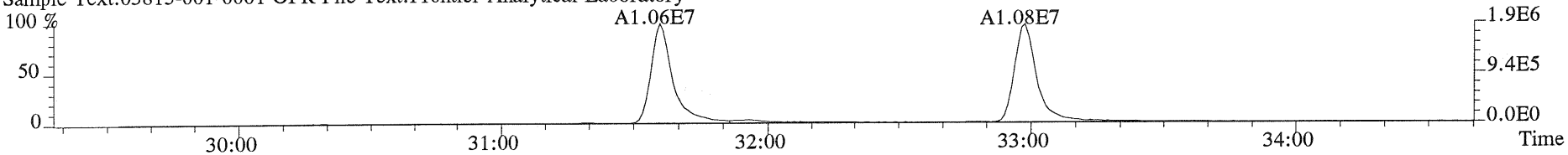
File:18AUG16M #1-400 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



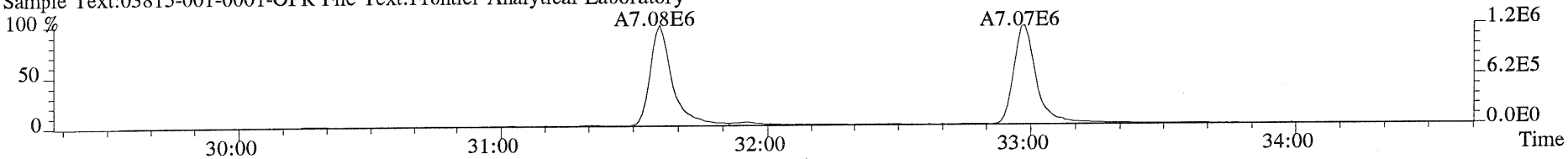
File:18AUG16M #1-400 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:2 Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



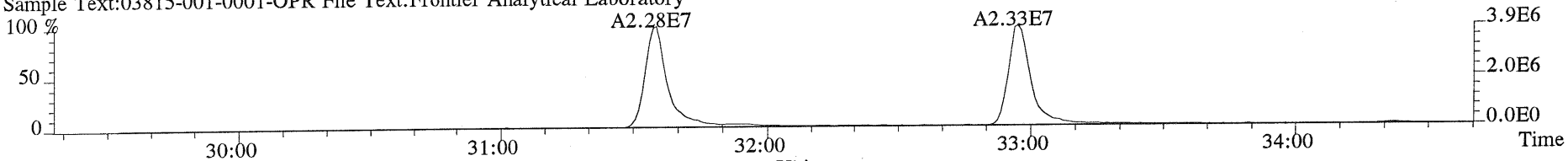
File:18AUG16M #1-411 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



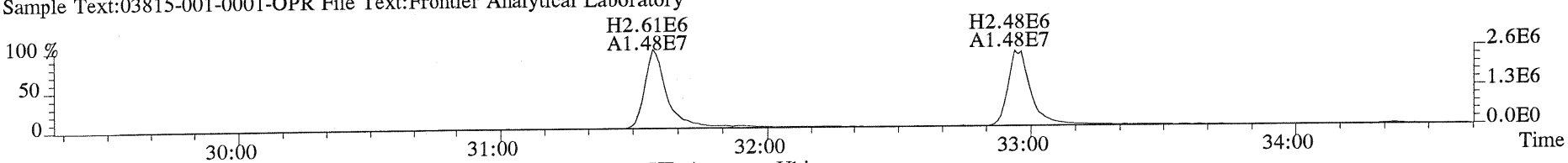
File:18AUG16M #1-411 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



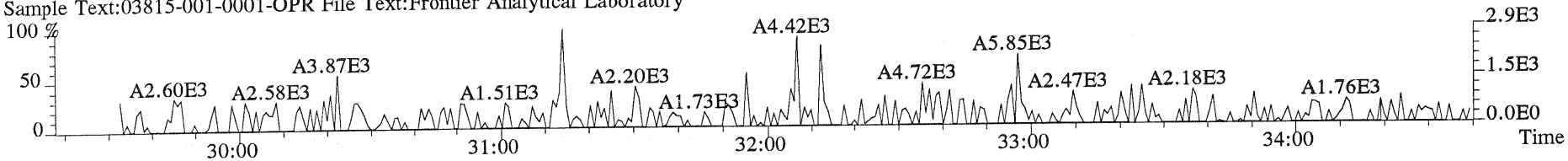
File:18AUG16M #1-411 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



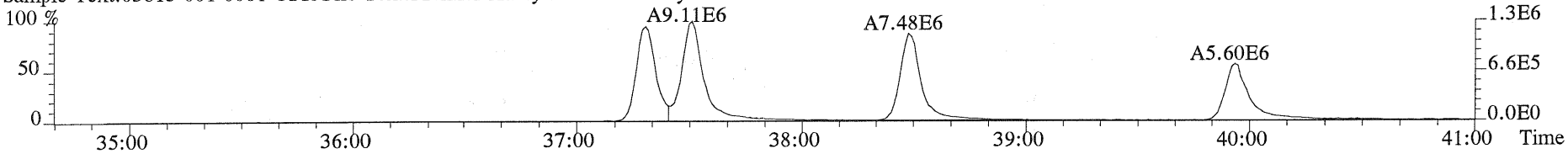
File:18AUG16M #1-411 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



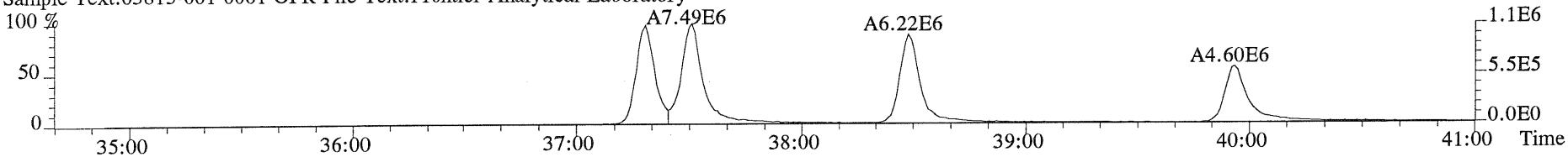
File:18AUG16M #1-411 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



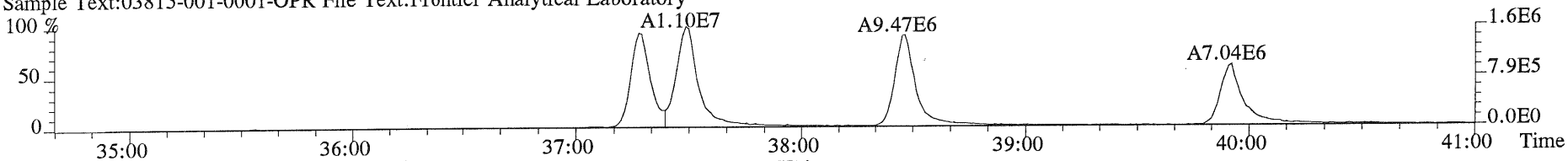
File:18AUG16M #1-494 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



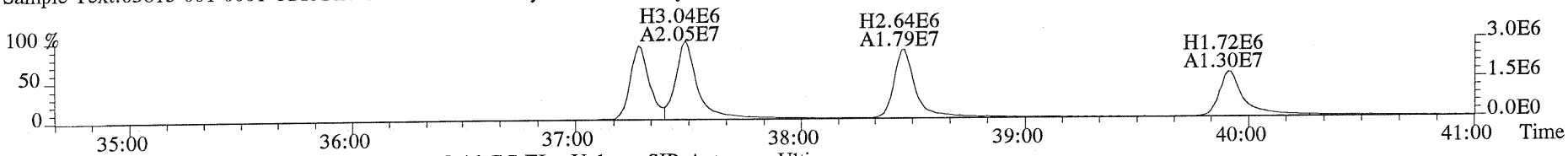
File:18AUG16M #1-494 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



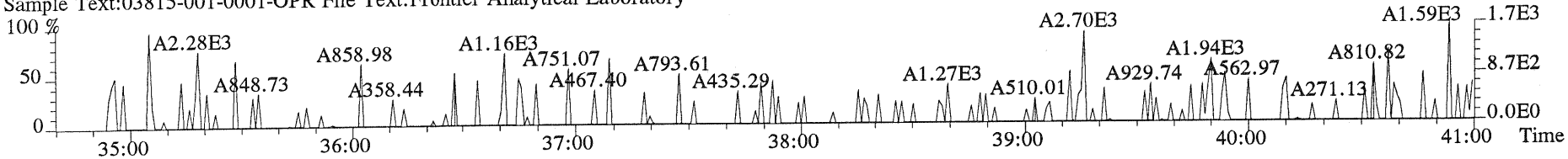
File:18AUG16M #1-494 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



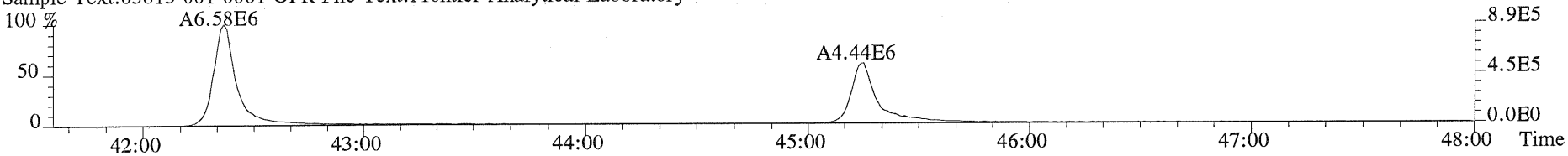
File:18AUG16M #1-494 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



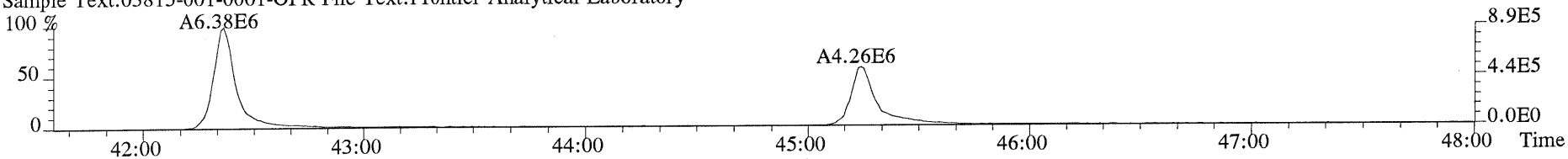
File:18AUG16M #1-494 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



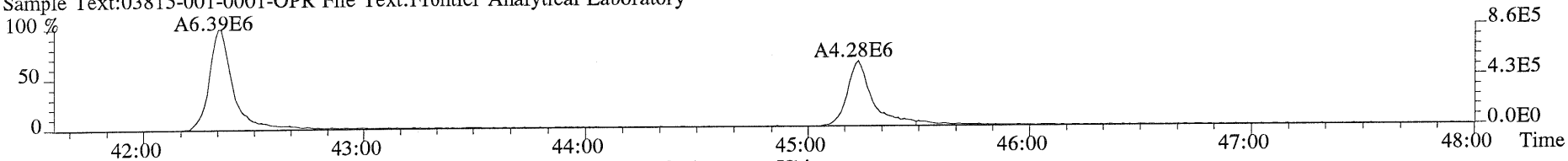
File:18AUG16M #1-520 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



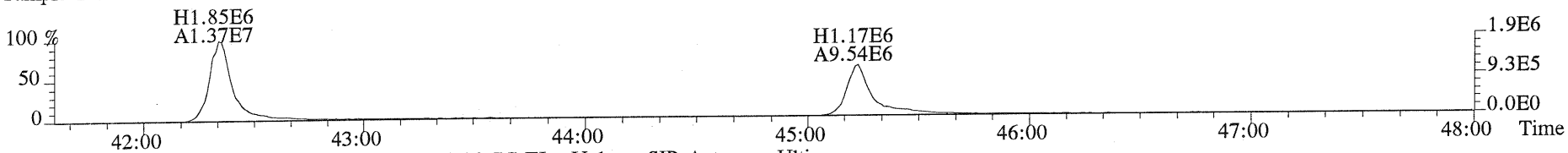
File:18AUG16M #1-520 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



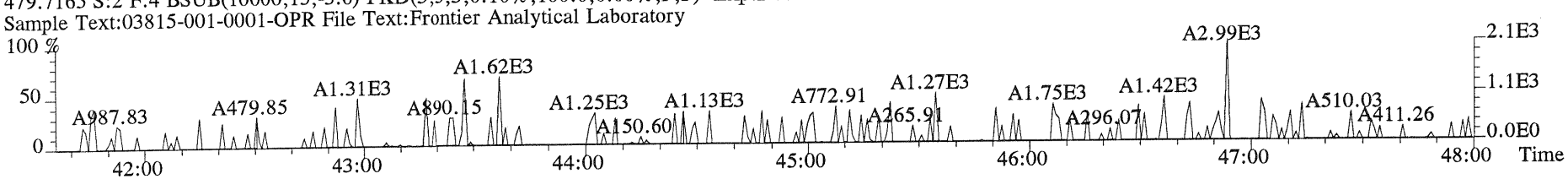
File:18AUG16M #1-520 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



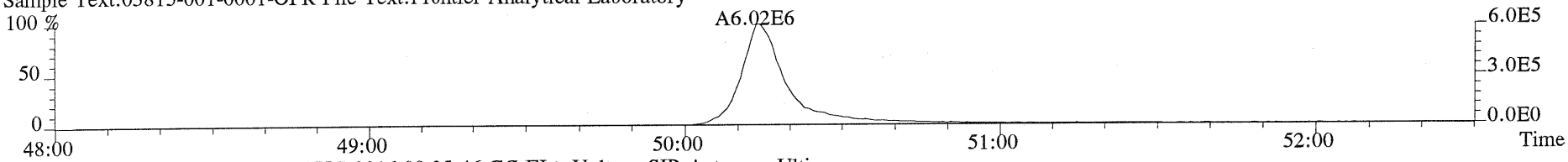
File:18AUG16M #1-520 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



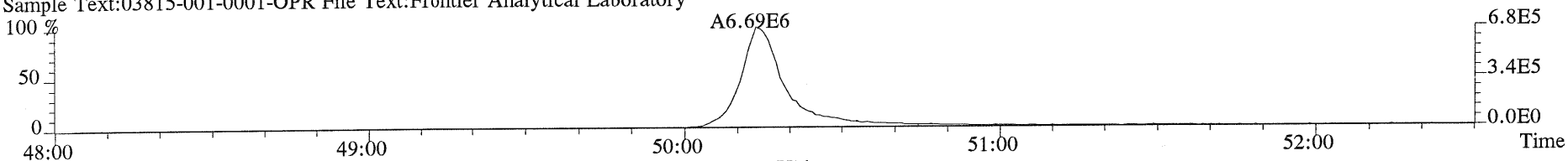
File:18AUG16M #1-520 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



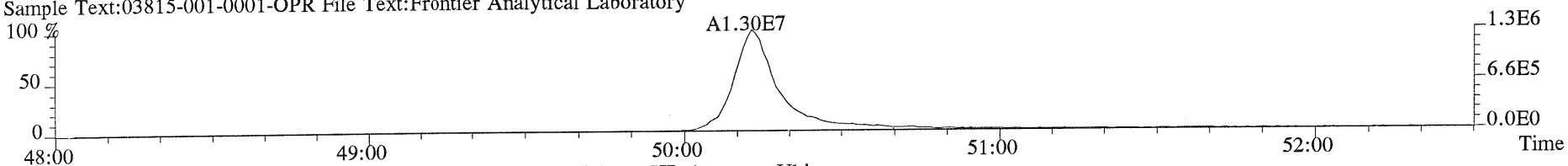
File:18AUG16M #1-360 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



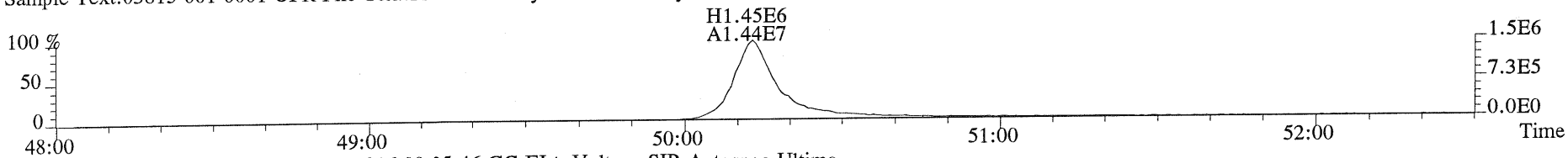
File:18AUG16M #1-360 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



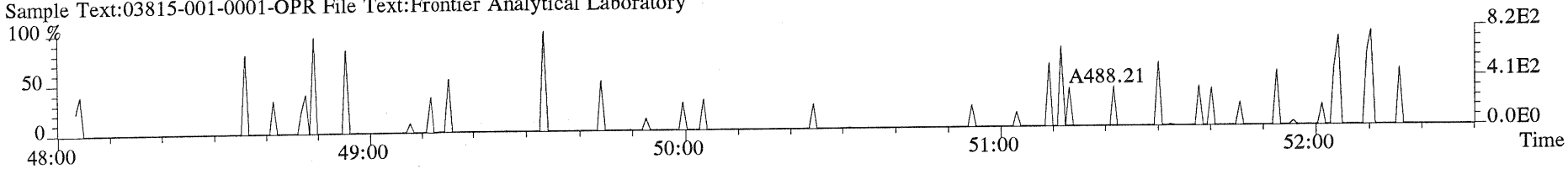
File:18AUG16M #1-360 Acq:18-AUG-2016 09:35:46 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



File:18AUG16M #1-360 Acq:18-AUG-2016 09:35:46 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:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



File:18AUG16M #1-360 Acq:18-AUG-2016 09:35:46 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:03815-001-0001-OPR File Text:Frontier Analytical Laboratory



FAL ID: 10095-001-0001-SA Filename: 18AUG16Z Sam:6 Acquired: 18-AUG-16 21:50:41 ICal: DAILY209FAL4-8-18-16
Client ID: LDW-BA-PC-ENRMAT-SAND ConCal: ST081816Z1 EndCal: ST081816Z2
Results: 10051X GC Column: DB1 Amount: 5.050

Name	Resp	RA		RT	RRF	Conc	Qual	Noise-1	Noise-2	DL	Rec	
PCB-1	*	*	n	NotFnd	1.04	*		1070	359	0.553		
13C-PCB-1	4.54e+07	3.13	y	14:29	1.11	1590					80.2	
PCB-2	*	*	n	NotFnd	0.90	*		1070	359	0.851		
PCB-3	*	*	n	NotFnd	1.07	*		1070	359	0.914		
13C-PCB-3	4.07e+07	3.18	y	16:58	1.03	1540					77.7	
PCB-4	*	*	n	NotFnd	1.22	*		289	394	0.403		
PCB-10	*	*	n	NotFnd	1.42	*		289	394	0.447		
13C-PCB-4	2.67e+07	1.61	y	18:09	0.58	1800					91.0	
PCB-9	*	*	n	NotFnd	1.42	*		289	394	0.448		
PCB-7	*	*	n	NotFnd	1.46	*		289	394	0.434		
PCB-6	*	*	n	NotFnd	1.49	*		289	394	0.427		
PCB-8	*	*	n	NotFnd	1.26	*		289	394	0.502		
PCB-5	6.30e+04	1.55	y	20:55	1.50	2.74	J	-	-	*		
PCB-14	*	*	n	NotFnd	1.41	*		289	394	0.449		
PCB-11	1.22e+05	1.40	y	23:09	1.21	6.61		-	-	*		
PCB-13	*	*	n	NotFnd	1.13	*		289	394	0.564		
PCB-12	*	*	n	NotFnd	1.28	*		289	394	0.497		
PCB-15	*	*	n	NotFnd	1.26	*		289	394	0.593		
13C-PCB-15	3.41e+07	1.67	y	23:45	0.88	1500					75.8	
PCB-19	*	*	n	NotFnd	1.07	*		928	456	1.09		
PCB-30	*	*	n	NotFnd	1.51	*		928	456	0.773		
PCB-18	4.38e+04	0.97	y	23:37	1.00	3.66	J	-	-	*		
PCB-17	*	*	n	NotFnd	1.13	*		928	456	1.04		
PCB-27	*	*	n	NotFnd	1.41	*		928	456	0.825		
PCB-24	*	*	n	NotFnd	1.54	*		928	456	0.759		
PCB-16	*	*	n	NotFnd	1.27	*		928	456	0.919		
PCB-32	*	*	n	NotFnd	1.25	*		928	456	0.934		
13C-PCB-19	2.37e+07	1.10	y	22:02	0.59	1560					78.8	
13C-PCB-9	5.09e+07	1.63	y	19:51	-	10.4						
PCB-34	*	*	n	NotFnd	1.08	*		585	404	1.46		
PCB-23	*	*	n	NotFnd	1.30	*		585	404	1.20		
PCB-29	*	*	n	NotFnd	1.22	*		585	404	1.28		
PCB-26	*	*	n	NotFnd	1.18	*		585	404	1.32		
PCB-25	*	*	n	NotFnd	1.51	*		585	404	1.04		
PCB-31	3.71e+04	1.45	n	26:36	1.18	2.22	J	-	-	*		
PCB-28	7.42e+04	1.04	y	26:41	1.49	3.54	J	-	-	*		
PCB-20	4.33e+04	1.11	y	27:18	1.27	2.43	J	-	-	*		Co-elute PCB 21/33
PCB-21	4.33e+04	1.11	y	27:18	1.27	2.43	J	-	-	*		Co-elute PCB 20/33
PCB-33	4.33e+04	1.11	y	27:18	1.27	2.43	J	-	-	*		Co-elute PCB 20/21
PCB-22	*	*	n	NotFnd	1.26	*		585	404	1.24		
PCB-36	*	*	n	NotFnd	1.13	*		585	404	1.39		
PCB-39	*	*	n	NotFnd	1.13	*		585	404	1.39		
PCB-38	*	*	n	NotFnd	1.19	*		585	404	1.31		
PCB-35	*	*	n	NotFnd	1.04	*		585	404	1.51		
PCB-37	*	*	n	NotFnd	1.27	*		585	404	1.24		
13C-PCB-37	2.79e+07	1.07	y	30:25	1.22	1600					80.9	

PCB-54	*	*	n	NotFnd	1.08	*		444	464	0.560	
PCB-50	*	*	n	NotFnd	0.79	*		444	464	0.768	
PCB-53	*	*	n	NotFnd	0.78	*		444	464	0.776	
PCB-51	*	*	n	NotFnd	0.78	*		444	464	0.775	
PCB-45	*	*	n	NotFnd	0.68	*		444	464	0.890	
PCB-46	*	*	n	NotFnd	0.65	*		444	464	0.934	
PCB-52	2.50e+04	0.77	y	28:57	0.95	1.75	J	-	-	*	Co-elute PCB 69
PCB-69	2.50e+04	0.77	y	28:57	0.95	1.75	J	-	-	*	Co-elute PCB 52
PCB-73	*	*	n	NotFnd	0.94	*		444	464	0.644	
PCB-43	*	*	n	NotFnd	0.73	*		444	464	0.823	Co-elute PCB 49
PCB-49	*	*	n	NotFnd	0.73	*		444	464	0.823	Co-elute PCB 43
PCB-47	*	*	n	NotFnd	0.89	*		444	464	0.678	
PCB-48	*	*	n	NotFnd	0.93	*		444	464	0.649	Co-elute PCB 75
PCB-75	*	*	n	NotFnd	0.93	*		444	464	0.649	Co-elute PCB 48
PCB-65	*	*	n	NotFnd	0.96	*		444	464	0.631	
PCB-62	*	*	n	NotFnd	0.88	*		444	464	0.683	
PCB-44	*	*	n	NotFnd	0.66	*		444	464	0.916	
PCB-42	*	*	n	NotFnd	0.90	*		444	464	0.672	Co-elute PCB 59
PCB-59	*	*	n	NotFnd	0.90	*		444	464	0.672	Co-elute PCB 42
PCB-72	*	*	n	NotFnd	0.96	*		444	464	0.626	Co-elute PCB 41/71/64
PCB-41	*	*	n	NotFnd	0.96	*		444	464	0.626	Co-elute PCB 72/71/64
PCB-71	*	*	n	NotFnd	0.96	*		444	464	0.626	Co-elute PCB 72/41/64
PCB-64	*	*	n	NotFnd	0.96	*		444	464	0.626	Co-elute PCB 72/41/71
PCB-68	*	*	n	NotFnd	0.99	*		444	464	0.612	
PCB-40	*	*	n	NotFnd	0.57	*		444	464	1.05	
PCB-57	*	*	n	NotFnd	0.95	*		444	464	0.633	
PCB-67	*	*	n	NotFnd	0.87	*		444	464	0.693	
PCB-58	*	*	n	NotFnd	1.00	*		444	464	0.605	
PCB-63	*	*	n	NotFnd	0.95	*		444	464	0.635	
PCB-74	*	*	n	NotFnd	0.97	*		444	464	0.623	
PCB-61	*	*	n	NotFnd	1.02	*		444	464	0.590	Co-elute PCB 70
PCB-70	*	*	n	NotFnd	1.02	*		444	464	0.590	Co-elute PCB 61
PCB-76	*	*	n	NotFnd	1.00	*		444	464	0.606	Co-elute PCB 66
PCB-66	*	*	n	NotFnd	1.00	*		444	464	0.606	Co-elute PCB 76
PCB-80	*	*	n	NotFnd	1.08	*		444	464	0.559	
PCB-55	*	*	n	NotFnd	0.98	*		444	464	0.615	
13C-PCB-54	2.97e+07	0.79	y	25:33	1.24	1670					84.3
PCB-104	*	*	n	NotFnd	1.14	*		328	592	0.796	
PCB-96	*	*	n	NotFnd	1.01	*		328	592	0.895	
PCB-103	*	*	n	NotFnd	0.88	*		328	592	1.03	
PCB-100	*	*	n	NotFnd	0.84	*		328	592	1.08	
PCB-94	*	*	n	NotFnd	0.70	*		328	592	1.29	
PCB-98	*	*	n	NotFnd	0.92	*		328	592	0.985	Co-elute PCB 102
PCB-102	*	*	n	NotFnd	0.92	*		328	592	0.985	Co-elute PCB 98
PCB-95	*	*	n	NotFnd	0.78	*		328	592	1.17	
PCB-93	*	*	n	NotFnd	0.65	*		328	592	1.38	
PCB-88	*	*	n	NotFnd	0.79	*		328	592	1.15	Co-elute PCB 91
PCB-91	*	*	n	NotFnd	0.79	*		328	592	1.15	Co-elute PCB 88
PCB-121	*	*	n	NotFnd	0.98	*		328	592	0.927	
13C-PCB-104	2.01e+07	1.63	y	29:59	0.87	1620					81.8
13C-PCB-28	4.29e+07	1.12	y	26:40	1.47	2050					104
13C-PCB-52	2.83e+07	0.80	y	28:54	-	10.0					

PCB-56	*	*	n	NotFnd	1.24	*		388	456	0.988	Co-elute PCB 60
PCB-60	*	*	n	NotFnd	1.24	*		388	456	0.988	Co-elute PCB 56
PCB-79	*	*	n	NotFnd	1.14	*		388	456	1.07	
PCB-78	*	*	n	NotFnd	1.08	*		388	456	1.14	
PCB-81	*	*	n	NotFnd	1.18	*		388	456	0.940	
13C-PCB-81	2.41e+07	0.80	y	36:09	1.07	1700					86.0
PCB-77	*	*	n	NotFnd	1.08	*		388	456	1.24	
13C-PCB-77	2.33e+07	0.82	y	36:43	1.09	1620					82.1
PCB-155	*	*	n	NotFnd	1.07	*		408	304	0.635	
PCB-150	*	*	n	NotFnd	0.98	*		408	304	0.696	
PCB-152	*	*	n	NotFnd	0.97	*		408	304	0.704	
PCB-145	*	*	n	NotFnd	0.93	*		408	304	0.734	
PCB-136	*	*	n	NotFnd	0.95	*		408	304	0.719	
PCB-148	*	*	n	NotFnd	0.66	*		408	304	1.03	
PCB-154	*	*	n	NotFnd	0.79	*		408	304	0.867	
13C-PCB-155	2.23e+07	1.29	y	34:09	1.06	1590					80.1
13C-PCB-111	3.00e+07	1.62	y	36:14	1.13	2010					102
13C-PCB-101	2.62e+07	1.63	y	34:35	-	10.5					
PCB-84	*	*	n	NotFnd	0.84	*		388	584	1.28	Co-elute PCB 92
PCB-92	*	*	n	NotFnd	0.84	*		388	584	1.28	Co-elute PCB 84
PCB-89	*	*	n	NotFnd	0.84	*		388	584	1.28	
PCB-90	*	*	n	NotFnd	0.96	*		388	584	1.11	Co-elute PCB 101
PCB-101	*	*	n	NotFnd	0.96	*		388	584	1.11	Co-elute PCB 90
PCB-113	*	*	n	NotFnd	1.15	*		388	584	0.932	
PCB-99	*	*	n	NotFnd	0.96	*		388	584	1.12	
PCB-119	*	*	n	NotFnd	1.22	*		388	584	0.878	
PCB-83	*	*	n	NotFnd	0.99	*		388	584	1.09	Co-elute PCB 112
PCB-112	*	*	n	NotFnd	0.99	*		388	584	1.09	Co-elute PCB 83
PCB-109	*	*	n	NotFnd	1.14	*		388	584	0.941	
PCB-97	*	*	n	NotFnd	1.00	*		388	584	1.07	
PCB-86	*	*	n	NotFnd	0.79	*		388	584	1.36	
PCB-125	*	*	n	NotFnd	1.11	*		388	584	0.972	Co-elute PCB 87/117
PCB-87	*	*	n	NotFnd	1.11	*		388	584	0.972	Co-elute PCB 125/117
PCB-117	*	*	n	NotFnd	1.11	*		388	584	0.972	Co-elute PCB 125/87
PCB-111	*	*	n	NotFnd	1.32	*		388	584	0.811	Co-elute PCB 115
PCB-115	*	*	n	NotFnd	1.32	*		388	584	0.811	Co-elute PCB 111
PCB-85	*	*	n	NotFnd	1.03	*		388	584	1.04	Co-elute PCB 116
PCB-116	*	*	n	NotFnd	1.03	*		388	584	1.04	Co-elute PCB 85
PCB-120	*	*	n	NotFnd	1.24	*		388	584	0.864	
PCB-110	*	*	n	NotFnd	1.27	*		388	584	0.843	
PCB-82	*	*	n	NotFnd	0.70	*		388	584	1.54	
PCB-124	*	*	n	NotFnd	1.10	*		344	572	0.924	
PCB-108	*	*	n	NotFnd	1.17	*		344	572	0.864	Co-elute PCB 107
PCB-107	*	*	n	NotFnd	1.17	*		344	572	0.864	Co-elute PCB 108
PCB-123	*	*	n	NotFnd	1.24	*		344	572	0.785	
13C-PCB-123	2.02e+07	1.63	y	38:18	1.09	1510					76.4
PCB-118	*	*	n	NotFnd	1.08	*		344	572	0.968	Co-elute PCB 106
PCB-106	*	*	n	NotFnd	1.08	*		344	572	0.968	Co-elute PCB 118
13C-PCB-118	2.37e+07	1.63	y	38:27	1.19	1640					82.8
PCB-114	*	*	n	NotFnd	1.08	*		344	572	0.890	
13C-PCB-114	2.31e+07	1.63	y	39:05	1.11	1700					85.7
PCB-122	*	*	n	NotFnd	1.13	*		344	572	0.896	
PCB-105	*	*	n	NotFnd	1.13	*		344	572	0.940	
13C-PCB-105	2.30e+07	1.62	y	39:55	1.14	1660					83.6

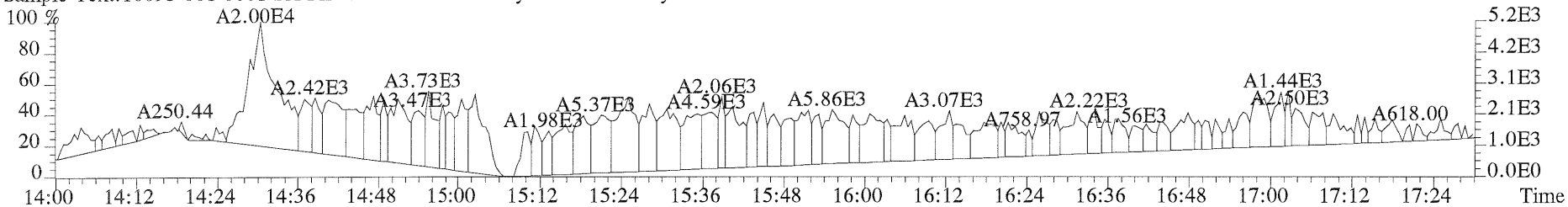
PCB-127	*	*	n	NotFnd	1.03	*		344	572	0.984	
PCB-126	*	*	n	NotFnd	1.14	*		344	572	1.49	
13C-PCB-126	1.97e+07	1.64	y	42:05	0.97	1660					83.6
PCB-151	*	*	n	NotFnd	0.86	*		320	284	0.760	
PCB-135	*	*	n	NotFnd	0.94	*		320	284	0.702	
PCB-144	*	*	n	NotFnd	0.91	*		320	284	0.721	
PCB-147	*	*	n	NotFnd	0.94	*		320	284	0.695	
PCB-139	*	*	n	NotFnd	0.97	*		320	284	0.678	Co-elute PCB 149
PCB-149	*	*	n	NotFnd	0.97	*		320	284	0.678	Co-elute PCB 139
PCB-140	*	*	n	NotFnd	0.92	*		320	284	0.716	
PCB-143	*	*	n	NotFnd	0.87	*		320	284	0.753	Co-elute PCB 134
PCB-134	*	*	n	NotFnd	0.87	*		320	284	0.753	Co-elute PCB 143
PCB-131	*	*	n	NotFnd	0.88	*		320	284	0.748	Co-elute PCB 133
PCB-133	*	*	n	NotFnd	0.88	*		320	284	0.748	Co-elute PCB 131
PCB-142	*	*	n	NotFnd	0.77	*		320	284	0.850	
PCB-165	*	*	n	NotFnd	1.05	*		320	284	0.624	Co-elute PCB 146
PCB-146	*	*	n	NotFnd	1.05	*		320	284	0.624	Co-elute PCB 165
PCB-161	*	*	n	NotFnd	0.99	*		320	284	0.664	Co-elute PCB 132
PCB-132	*	*	n	NotFnd	0.99	*		320	284	0.664	Co-elute PCB 161
PCB-153	*	*	n	NotFnd	1.02	*		320	284	0.642	
PCB-168	*	*	n	NotFnd	1.15	*		320	284	0.570	
PCB-141	*	*	n	NotFnd	0.88	*		320	284	0.747	
PCB-137	*	*	n	NotFnd	0.86	*		320	284	0.768	
PCB-130	*	*	n	NotFnd	0.71	*		320	284	0.919	
PCB-138	*	*	n	NotFnd	1.14	*		320	284	0.577	Co-elute PCB 163/164
PCB-163	*	*	n	NotFnd	1.14	*		320	284	0.577	Co-elute PCB 138/164
PCB-164	*	*	n	NotFnd	1.14	*		320	284	0.577	Co-elute PCB 138/163
PCB-158	*	*	n	NotFnd	1.12	*		320	284	0.586	Co-elute PCB 160
PCB-160	*	*	n	NotFnd	1.12	*		320	284	0.586	Co-elute PCB 158
PCB-129	*	*	n	NotFnd	0.69	*		320	284	0.957	
PCB-166	*	*	n	NotFnd	1.05	*		320	284	0.623	
PCB-159	*	*	n	NotFnd	1.13	*		320	284	0.583	
PCB-128	*	*	n	NotFnd	0.94	*		320	284	0.701	Co-elute PCB 162
PCB-162	*	*	n	NotFnd	0.94	*		320	284	0.701	Co-elute PCB 128
PCB-167	*	*	n	NotFnd	0.96	*		320	284	0.655	
13C-PCB-167	2.27e+07	1.27	y	43:22	1.14	1620					82.0
PCB-156	*	*	n	NotFnd	1.04	*		320	284	0.635	
13C-PCB-156	2.12e+07	1.27	y	44:36	1.07	1620					81.7
PCB-157	*	*	n	NotFnd	0.96	*		320	284	0.646	
13C-PCB-157	2.34e+07	1.25	y	44:51	1.09	1760					89.0
PCB-169	*	*	n	NotFnd	0.92	*		320	284	0.791	
13C-PCB-169	1.96e+07	1.30	y	46:45	0.92	1740					87.8

FAL ID: 10095-001-0001-SA Filename: 18AUG16Z Sam:6 Acquired: 18-AUG-16 21:50:41 ICal: DAILY209FAL4-8-18-16
Client ID: LDW-BA-PC-ENRMAT-SAND ConCal: ST081816Z1 EndCal: ST081816Z2
Results: 10051X GC Column: DB1 Amount: 5.050

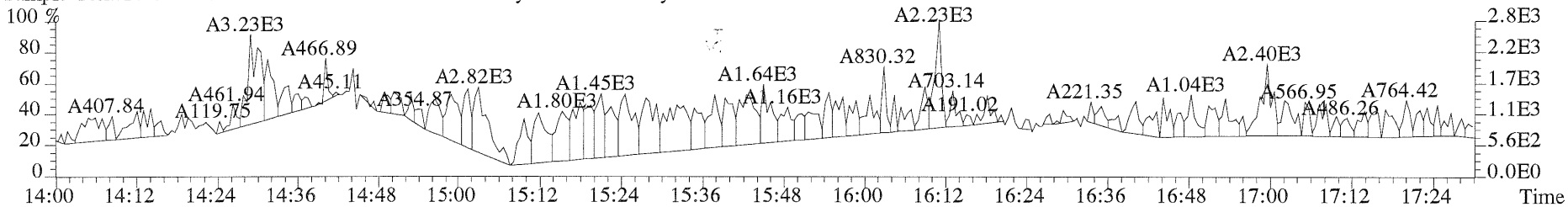
PCB-188	*	*	n	NotFnd	1.12	*		360	248	0.479	
13C-PCB-188	2.26e+07	1.05	y	39:38	1.25	1490					75.1
PCB-184	*	*	n	NotFnd	1.35	*		360	248	0.423	
PCB-179	*	*	n	NotFnd	1.29	*		360	248	0.443	
PCB-176	*	*	n	NotFnd	1.22	*		360	248	0.470	
PCB-186	*	*	n	NotFnd	1.23	*		360	248	0.465	
PCB-178	*	*	n	NotFnd	0.86	*		360	248	0.664	
PCB-175	*	*	n	NotFnd	0.91	*		360	248	0.628	
PCB-187	*	*	n	NotFnd	0.99	*		360	248	0.581	Co-elute PCB 182
PCB-182	*	*	n	NotFnd	0.99	*		360	248	0.581	Co-elute PCB 187
PCB-183	1.61e+04	1.20	y	43:06	0.97	1.66	J	-	-	*	
PCB-185	*	*	n	NotFnd	0.86	*		360	248	0.664	
PCB-174	*	*	n	NotFnd	0.87	*		360	248	0.661	
PCB-181	*	*	n	NotFnd	0.89	*		360	248	0.647	
PCB-177	*	*	n	NotFnd	0.79	*		360	248	0.727	
PCB-171	*	*	n	NotFnd	0.83	*		360	248	0.693	
PCB-173	*	*	n	NotFnd	0.74	*		360	248	0.770	
PCB-172	*	*	n	NotFnd	0.76	*		360	248	0.750	
PCB-192	*	*	n	NotFnd	1.05	*		360	248	0.545	
PCB-180	*	*	n	NotFnd	1.01	*		360	248	0.569	
PCB-193	*	*	n	NotFnd	1.11	*		360	248	0.518	
PCB-191	*	*	n	NotFnd	1.02	*		360	248	0.560	
PCB-170	*	*	n	NotFnd	0.68	*		360	248	0.848	
PCB-190	*	*	n	NotFnd	0.97	*		360	248	0.589	
PCB-189	*	*	n	NotFnd	1.09	*		360	248	0.570	
13C-PCB-189	1.69e+07	1.08	y	48:23	0.82	1690					85.4
PCB-202	*	*	n	NotFnd	1.00	*		252	324	0.735	
PCB-201	*	*	n	NotFnd	0.99	*		252	324	0.746	
PCB-204	*	*	n	NotFnd	1.03	*		252	324	0.714	
PCB-197	*	*	n	NotFnd	1.06	*		252	324	0.695	
PCB-200	*	*	n	NotFnd	0.99	*		252	324	0.747	
PCB-198	*	*	n	NotFnd	0.70	*		252	324	1.05	
PCB-199	*	*	n	NotFnd	0.61	*		252	324	1.20	
PCB-203	*	*	n	NotFnd	0.70	*		252	324	1.06	Co-elute PCB 196
PCB-196	*	*	n	NotFnd	0.70	*		252	324	1.06	Co-elute PCB 203
13C-PCB-202	1.60e+07	0.91	y	44:44	0.89	1470					74.1
13C-PCB-178	1.82e+07	1.08	y	42:16	0.81	1840					92.9
13C-PCB-138	2.42e+07	1.29	y	41:30	-	11.4					
PCB-195	*	*	n	NotFnd	0.75	*		324	268	0.716	
PCB-194	*	*	n	NotFnd	0.81	*		324	268	0.660	
PCB-205	*	*	n	NotFnd	1.03	*		324	268	0.520	
13C-PCB-205	1.64e+07	0.92	y	50:02	1.25	1740					88.0
PCB-208	*	*	n	NotFnd	0.92	*		316	308	0.567	
13C-PCB-208	1.74e+07	0.79	y	49:05	1.37	1680					84.7
PCB-207	*	*	n	NotFnd	1.01	*		316	308	0.670	
PCB-206	*	*	n	NotFnd	0.99	*		316	308	0.912	
13C-PCB-206	1.15e+07	0.78	y	51:12	0.92	1660					83.6
PCB-209	*	*	n	NotFnd	1.07	*		316	308	0.547	
13C-PCB-209	1.81e+07	1.21	y	52:23	1.43	1680					84.8
13C-PCB-194	1.49e+07	0.92	y	49:46	-	10.6					

Analyst: _____ Date: 8/19/16

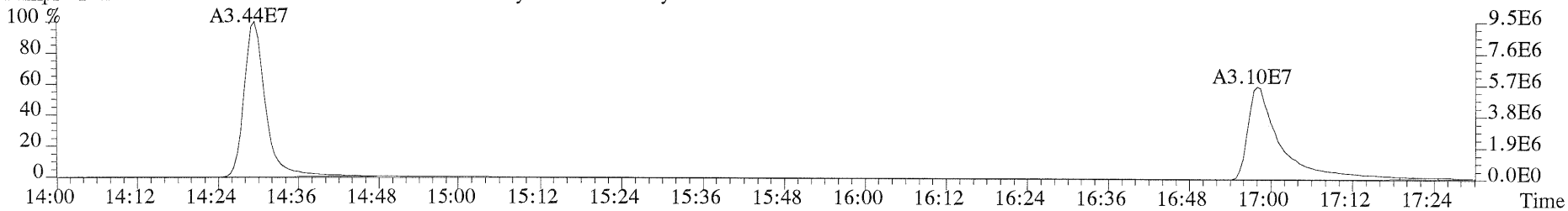
File:18AUG16Z #1-901 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
188.0393 S:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



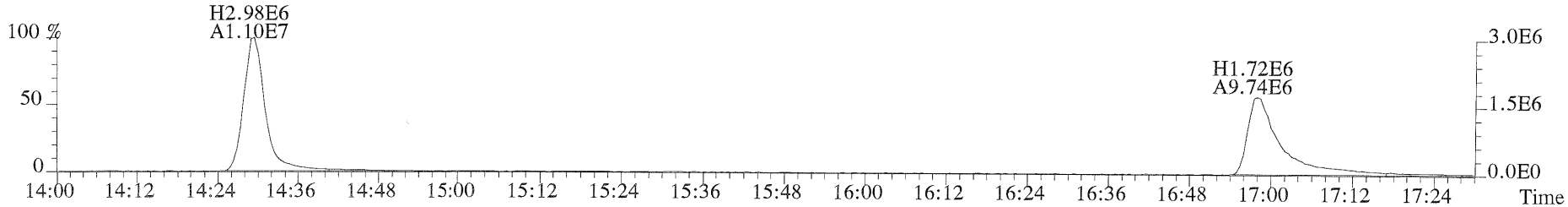
File:18AUG16Z #1-901 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
190.0363 S:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



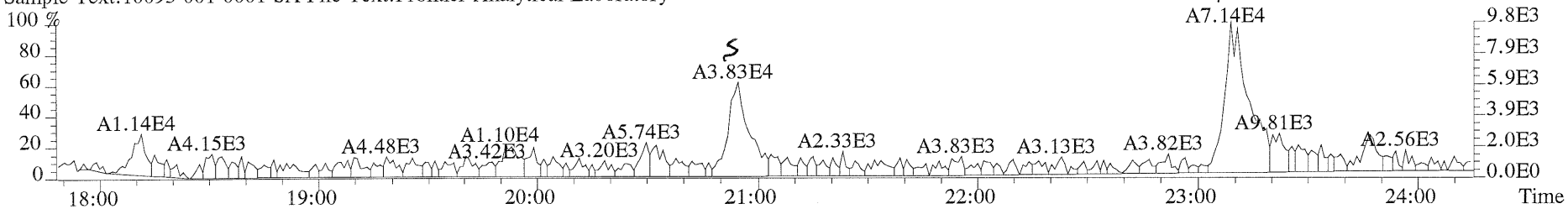
File:18AUG16Z #1-901 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
200.0795 S:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



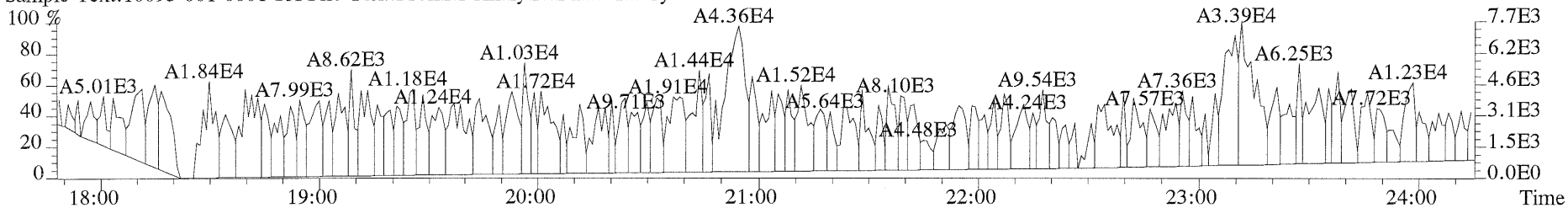
File:18AUG16Z #1-901 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
202.0766 S:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



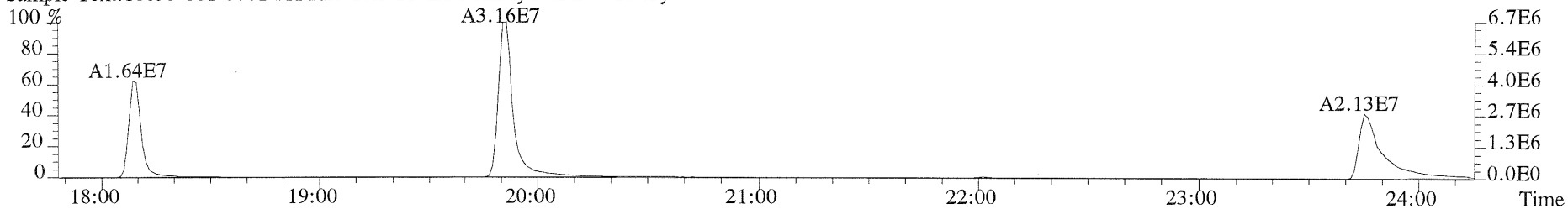
File:18AUG16Z #1-509 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
222.0003 S:6 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



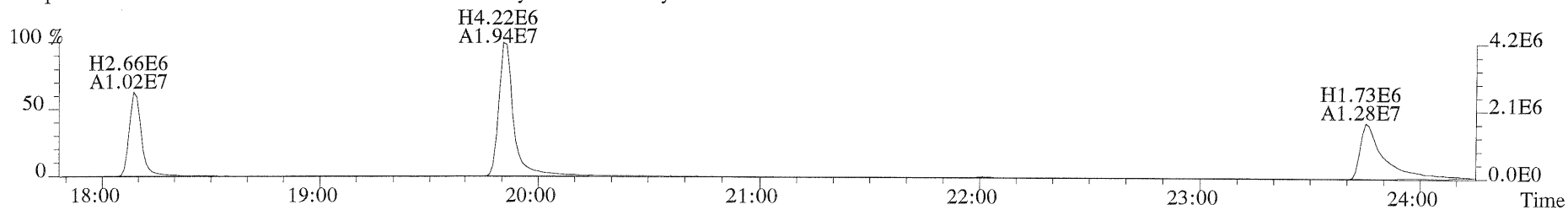
File:18AUG16Z #1-509 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
223.9974 S:6 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



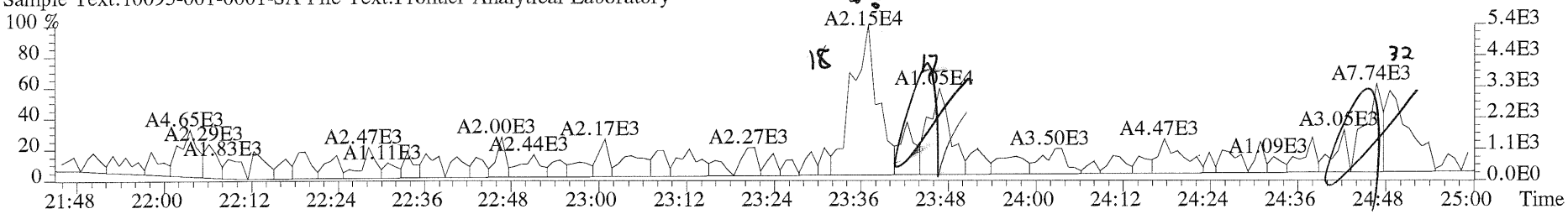
File:18AUG16Z #1-509 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
234.0406 S:6 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



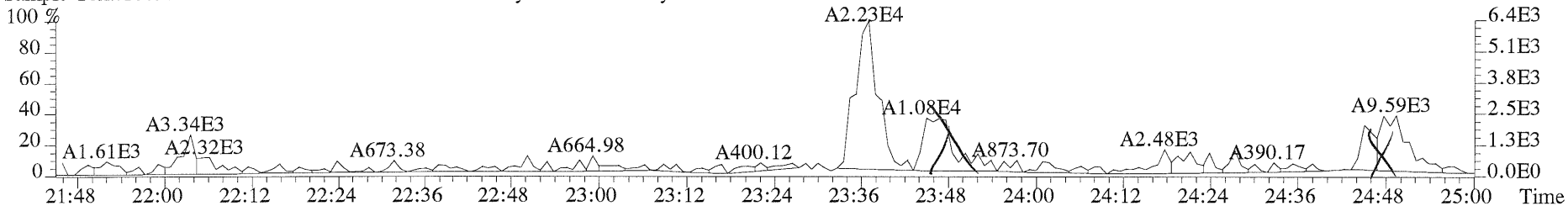
File:18AUG16Z #1-509 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
236.0376 S:6 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



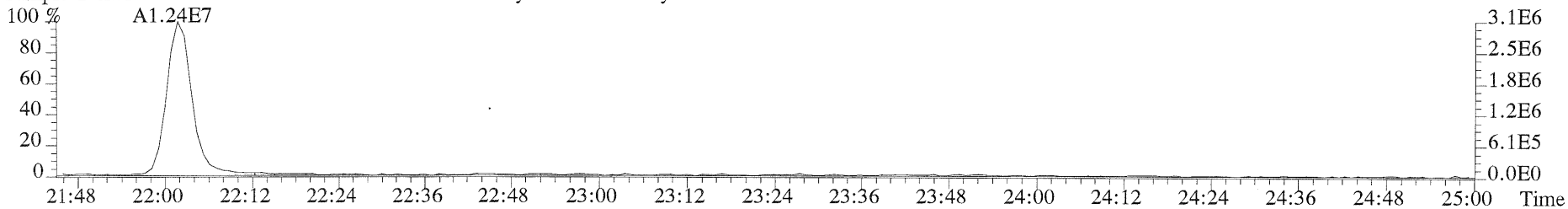
File:18AUG16Z #1-509 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:6 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



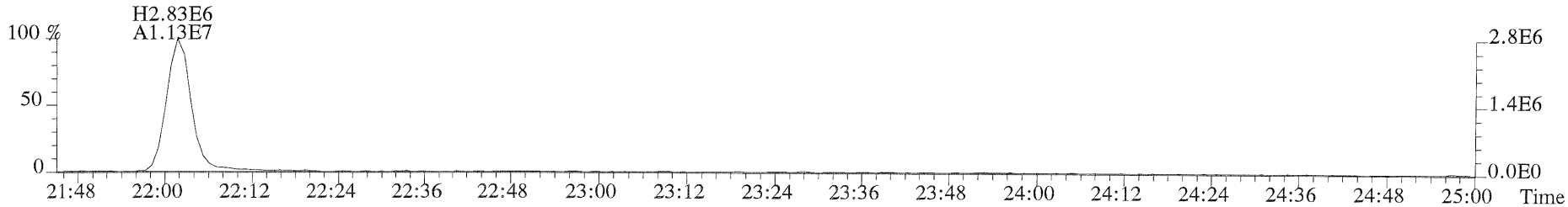
File:18AUG16Z #1-509 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:6 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



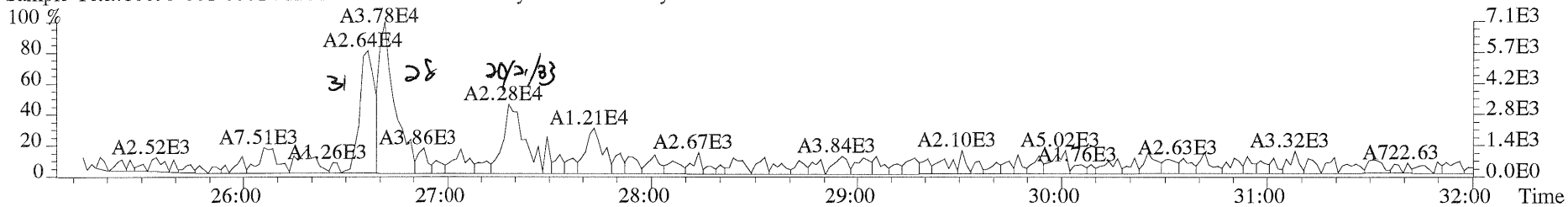
File:18AUG16Z #1-509 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:6 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



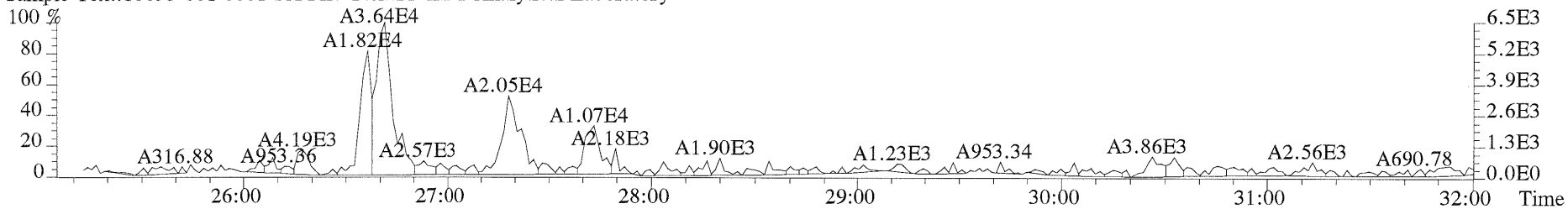
File:18AUG16Z #1-509 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:6 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



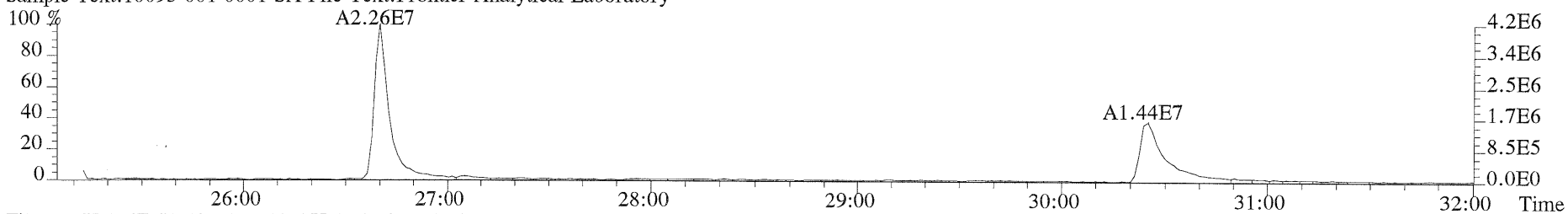
File:18AUG16Z #1-403 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



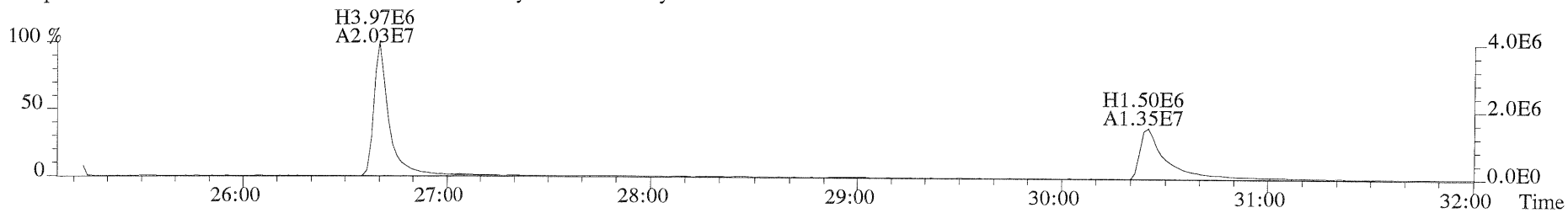
File:18AUG16Z #1-403 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



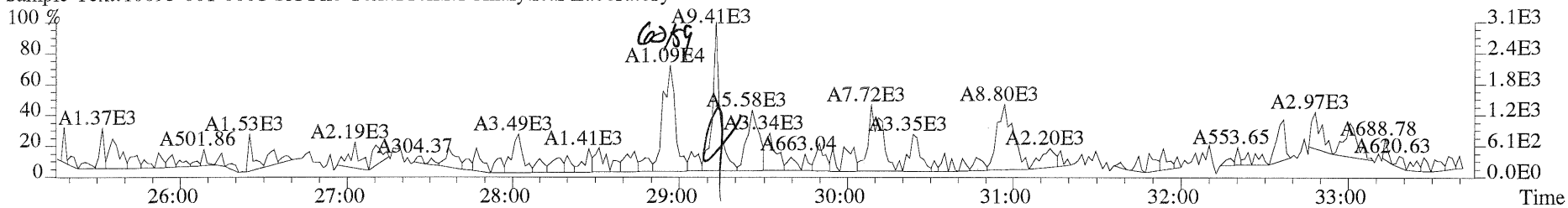
File:18AUG16Z #1-403 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



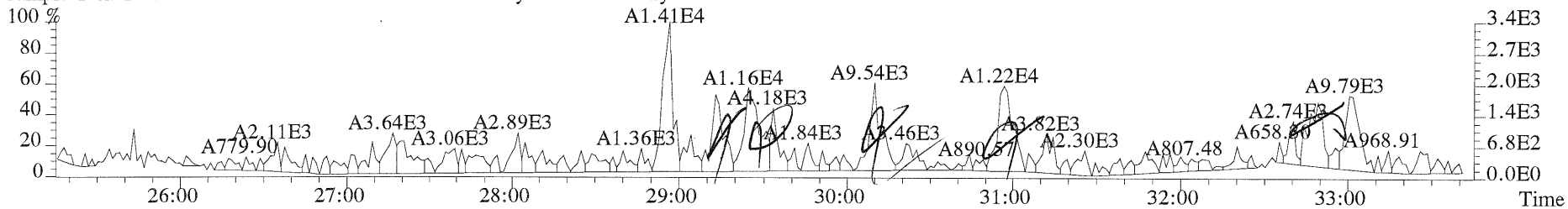
File:18AUG16Z #1-403 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



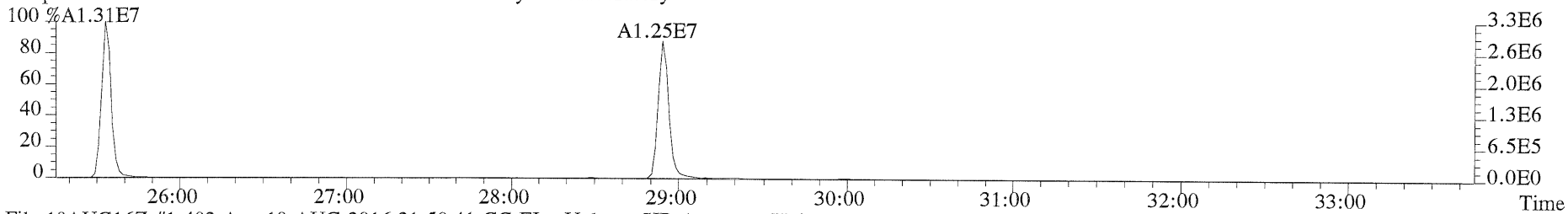
File:18AUG16Z #1-403 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



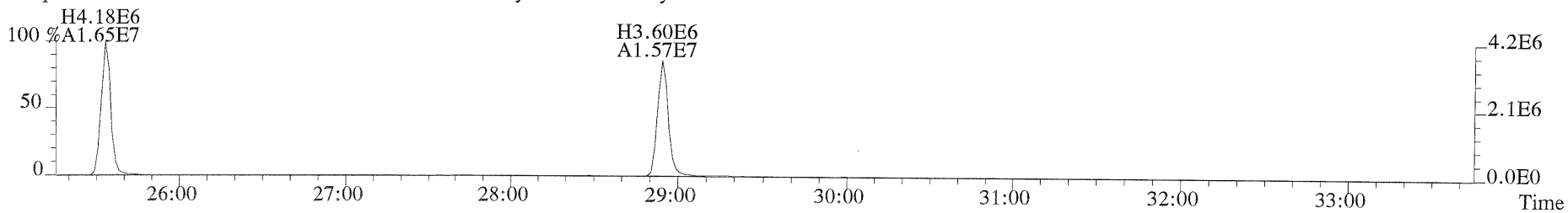
File:18AUG16Z #1-403 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



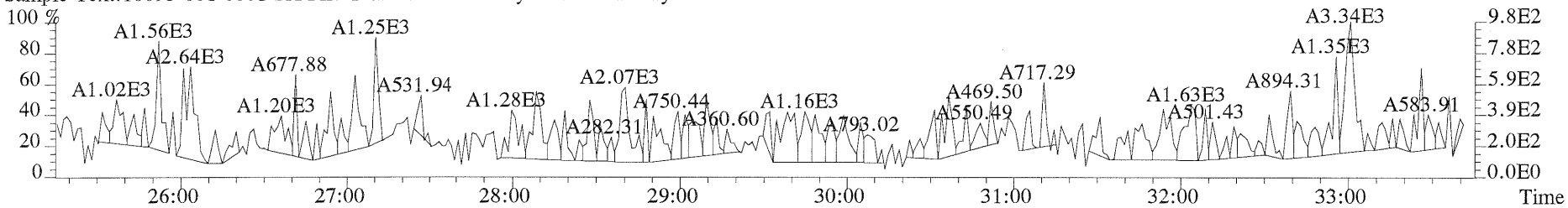
File:18AUG16Z #1-403 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



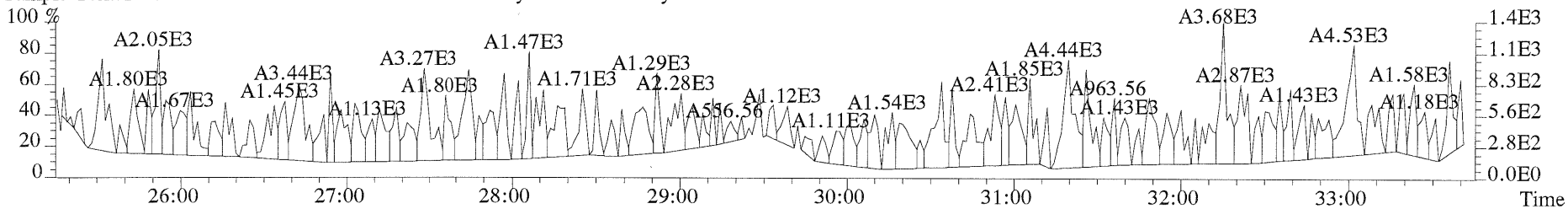
File:18AUG16Z #1-403 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



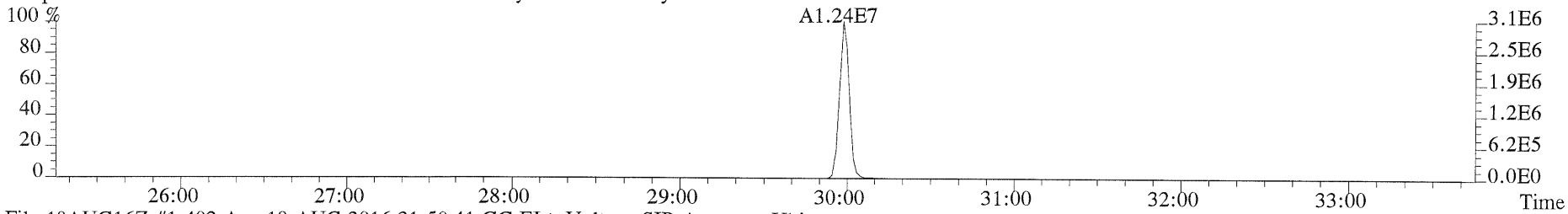
File:18AUG16Z #1-403 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



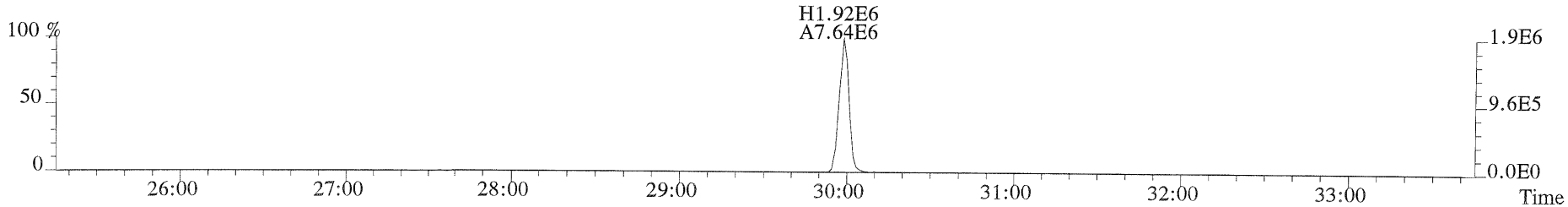
File:18AUG16Z #1-403 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



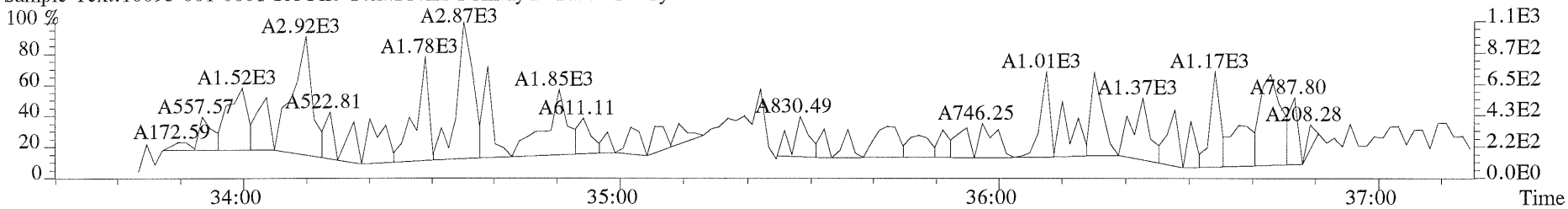
File:18AUG16Z #1-403 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



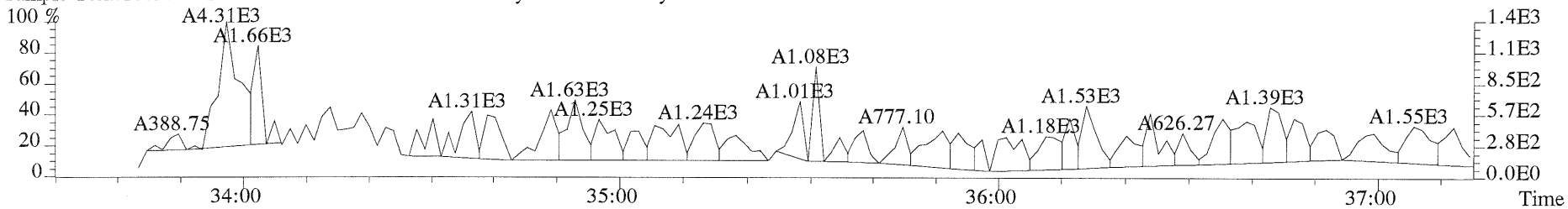
File:18AUG16Z #1-403 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



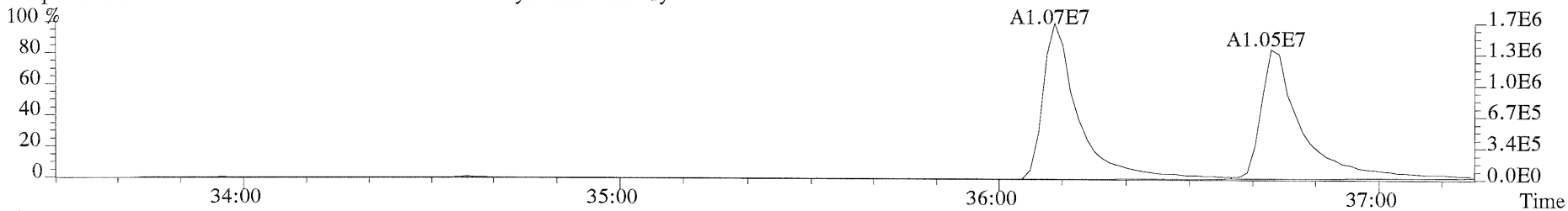
File:18AUG16Z #1-178 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



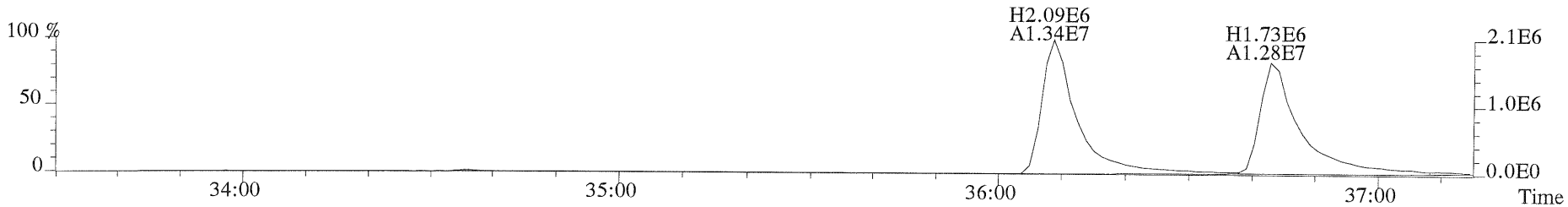
File:18AUG16Z #1-178 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



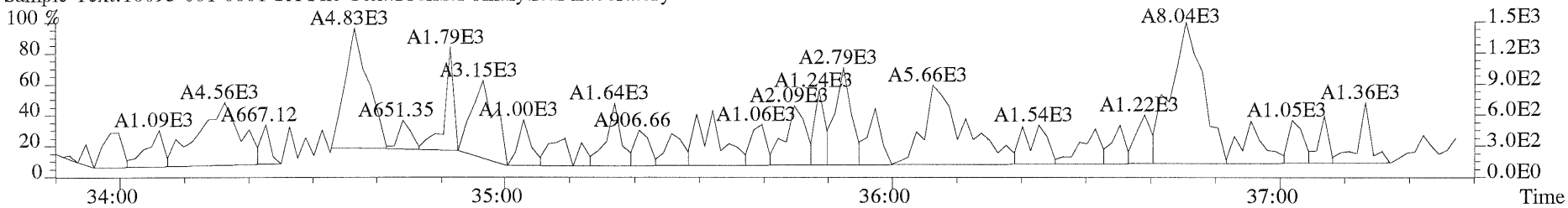
File:18AUG16Z #1-178 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



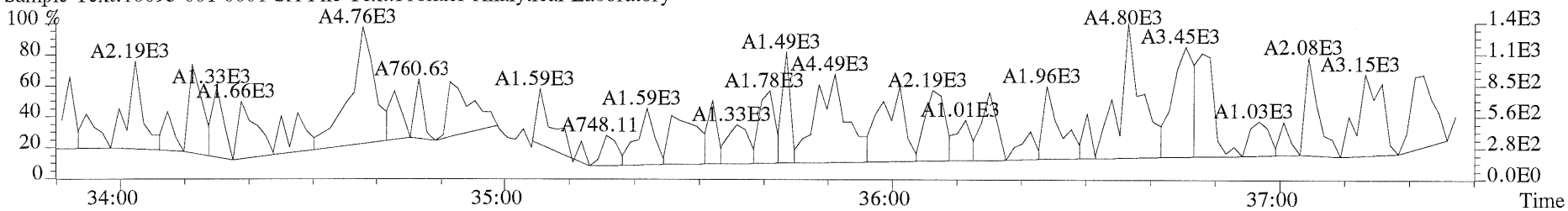
File:18AUG16Z #1-178 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



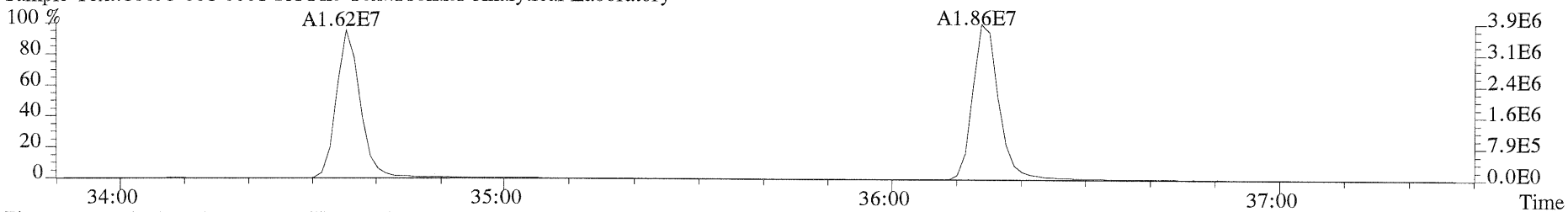
File:18AUG16Z #1-178 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



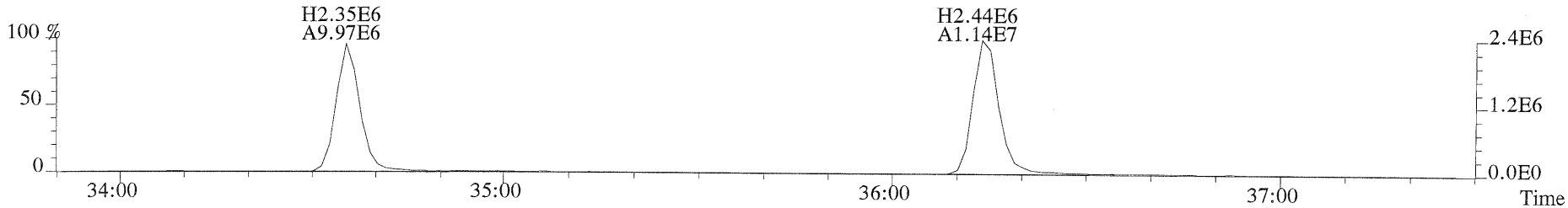
File:18AUG16Z #1-178 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



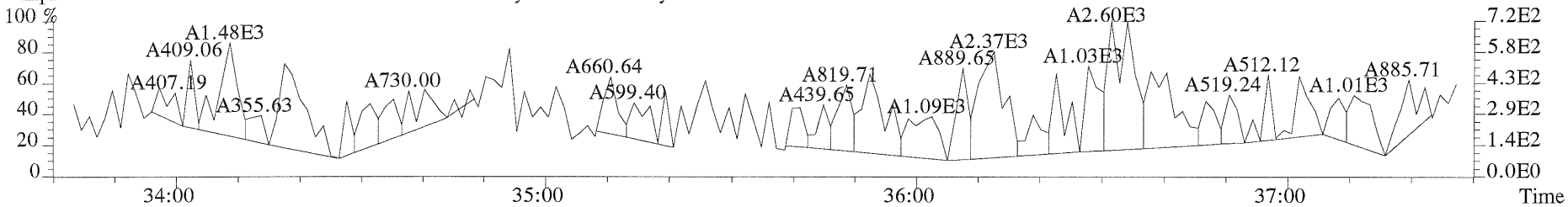
File:18AUG16Z #1-178 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



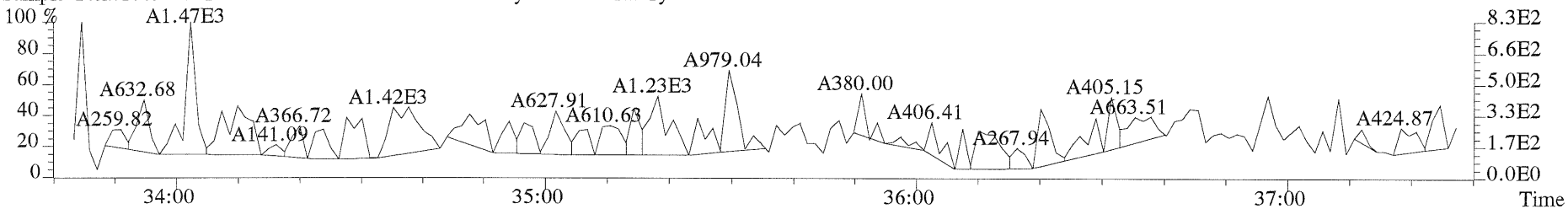
File:18AUG16Z #1-178 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



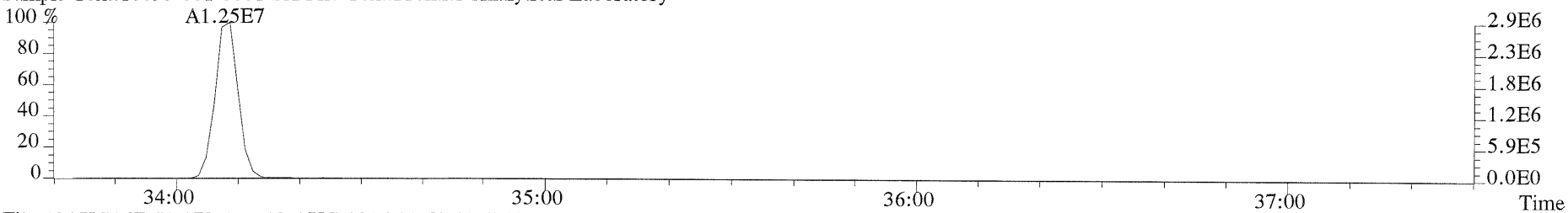
File:18AUG16Z #1-178 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



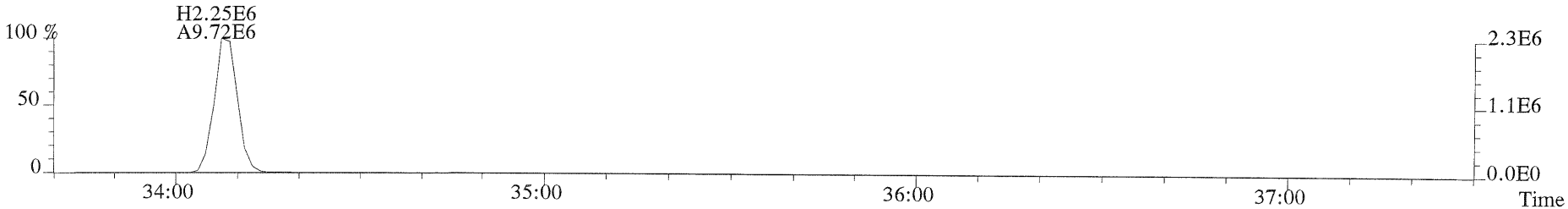
File:18AUG16Z #1-178 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



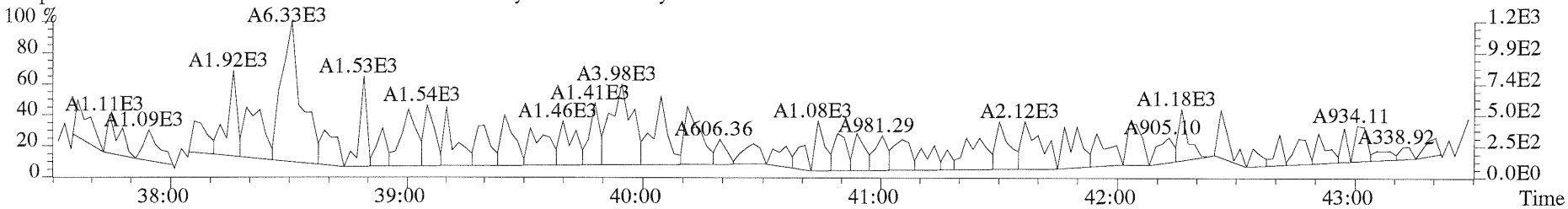
File:18AUG16Z #1-178 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



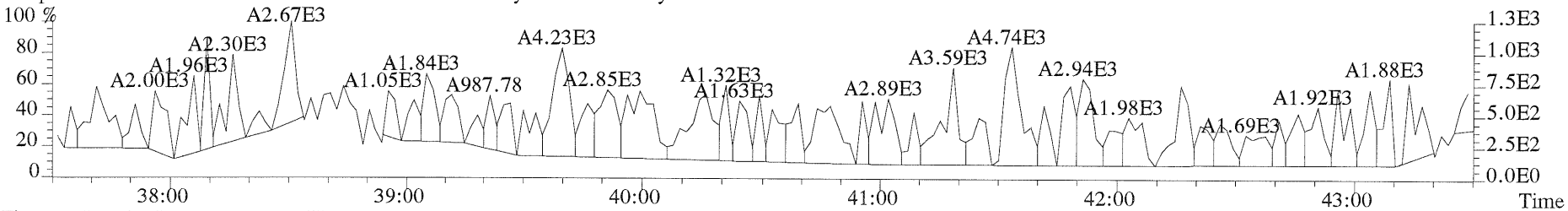
File:18AUG16Z #1-178 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



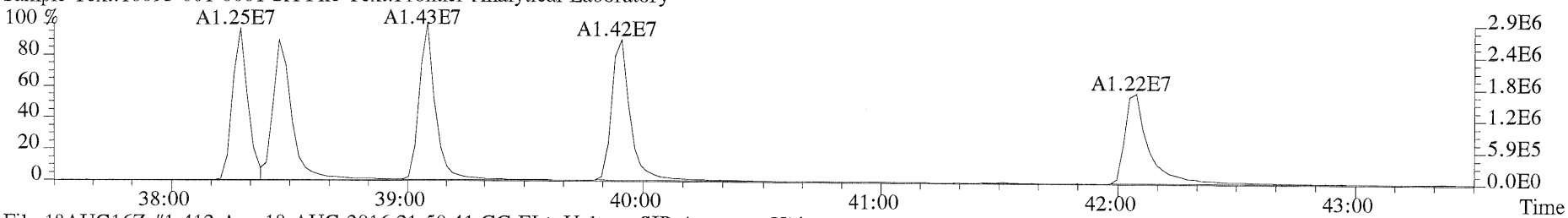
File:18AUG16Z #1-412 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



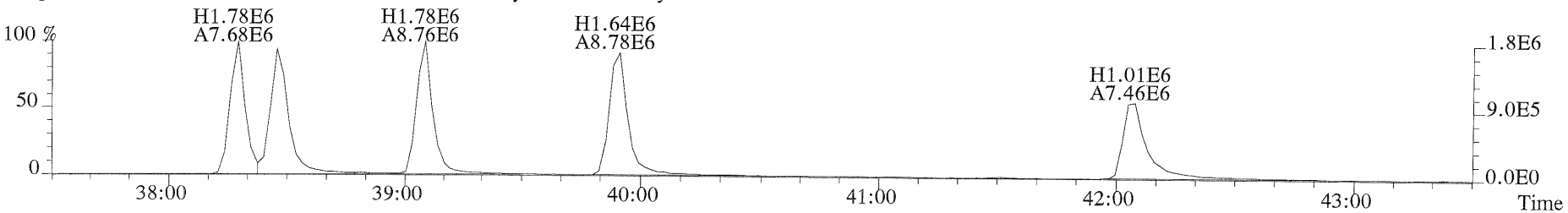
File:18AUG16Z #1-412 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



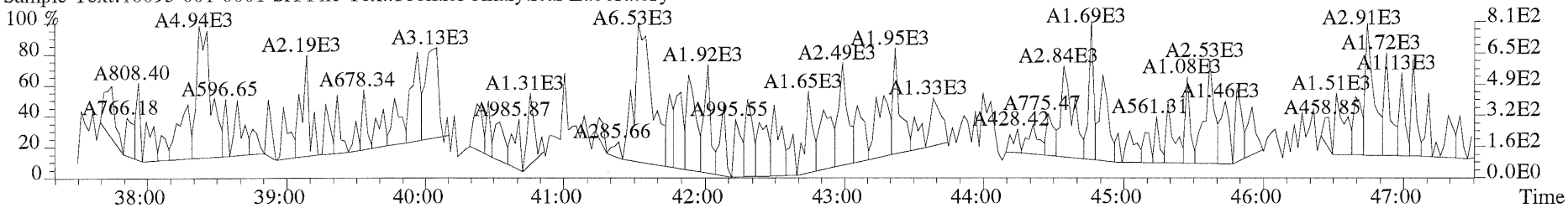
File:18AUG16Z #1-412 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



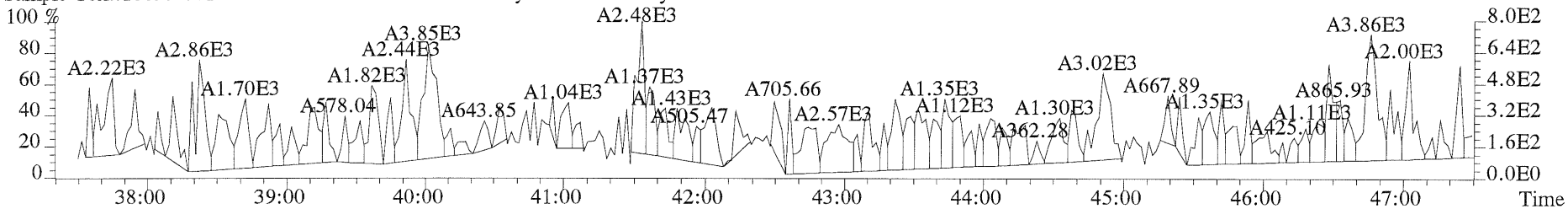
File:18AUG16Z #1-412 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



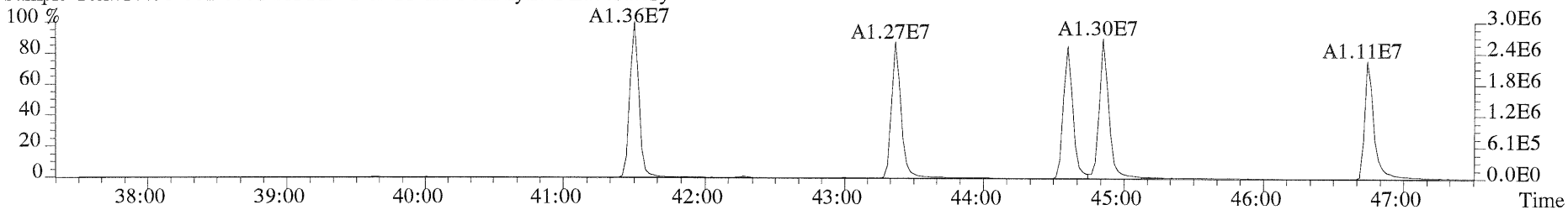
File:18AUG16Z #1-412 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



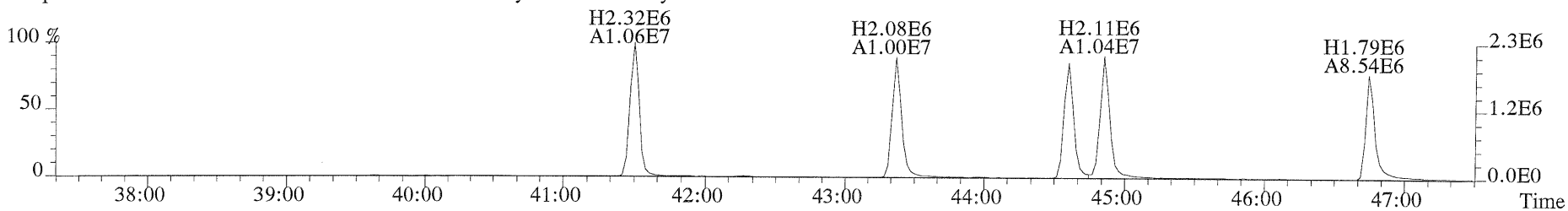
File:18AUG16Z #1-412 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



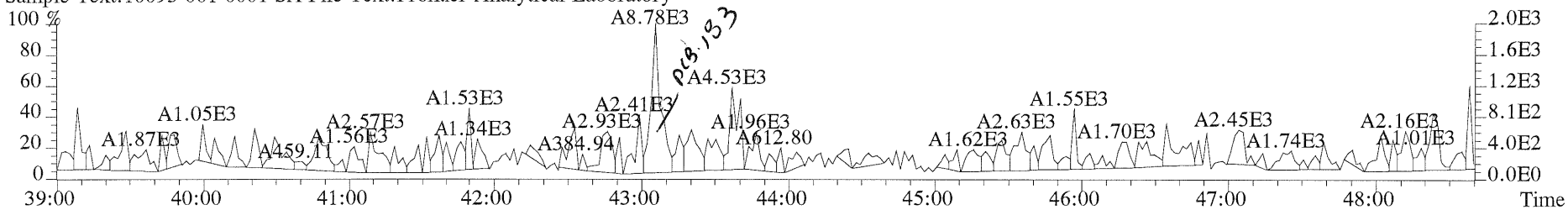
File:18AUG16Z #1-412 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



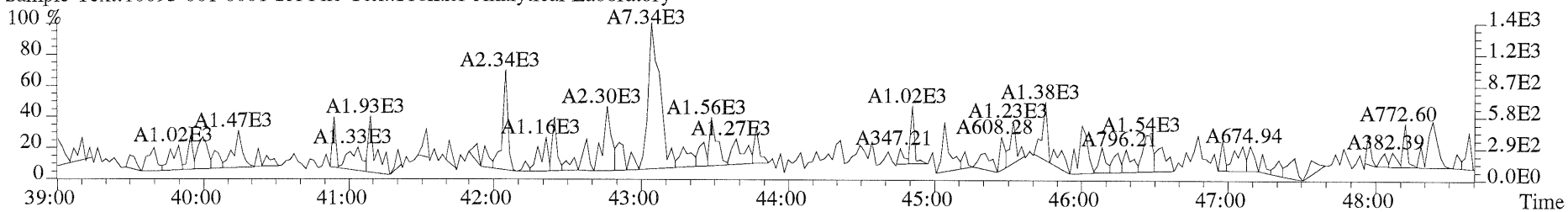
File:18AUG16Z #1-412 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



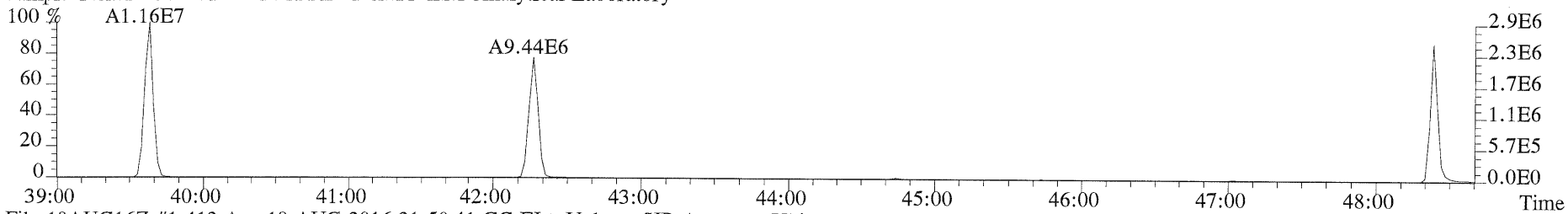
File:18AUG16Z #1-412 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
393.8025 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



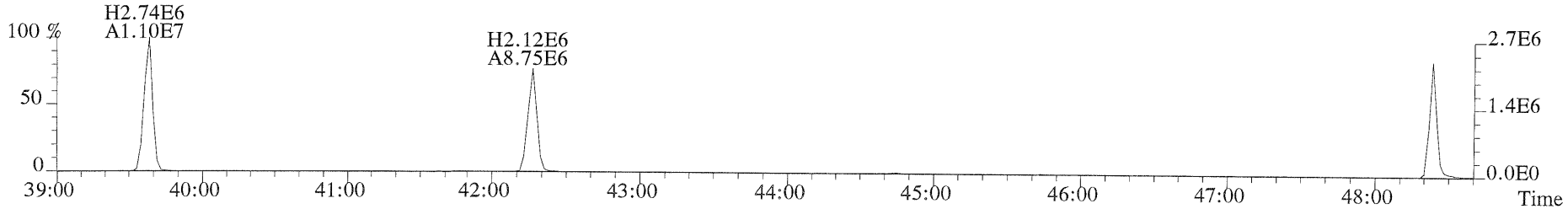
File:18AUG16Z #1-412 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
395.7995 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



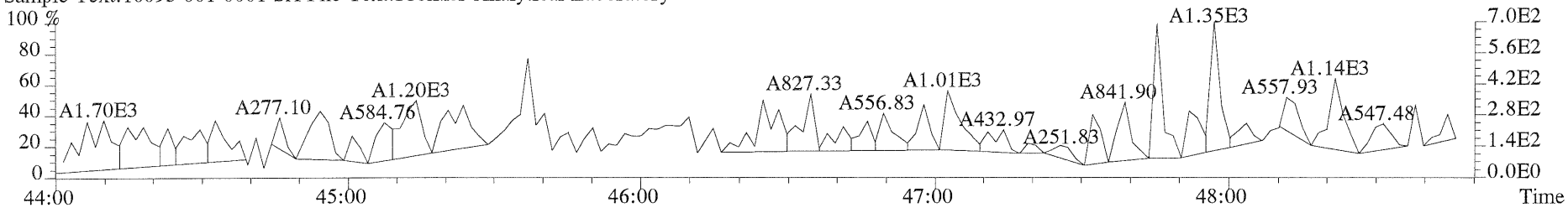
File:18AUG16Z #1-412 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
405.8428 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



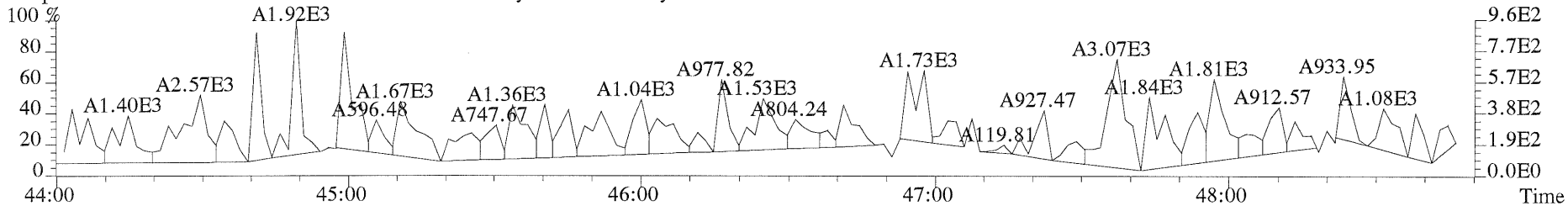
File:18AUG16Z #1-412 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
407.8398 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



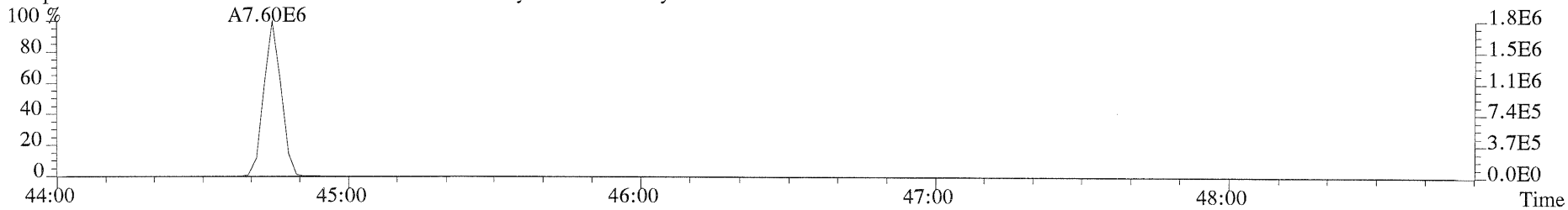
File:18AUG16Z #1-412 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



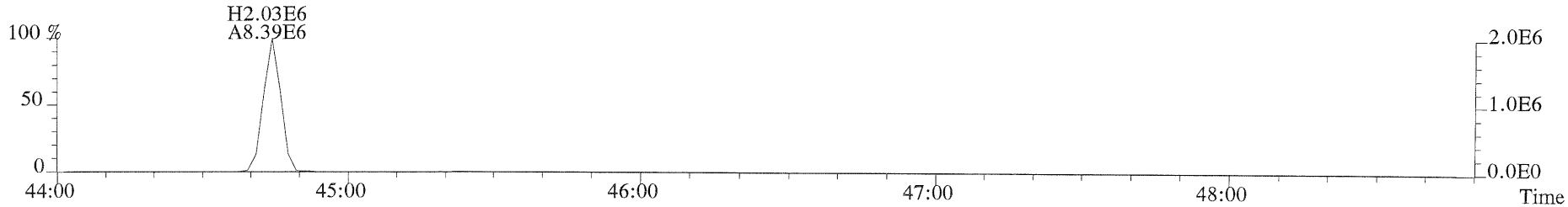
File:18AUG16Z #1-412 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



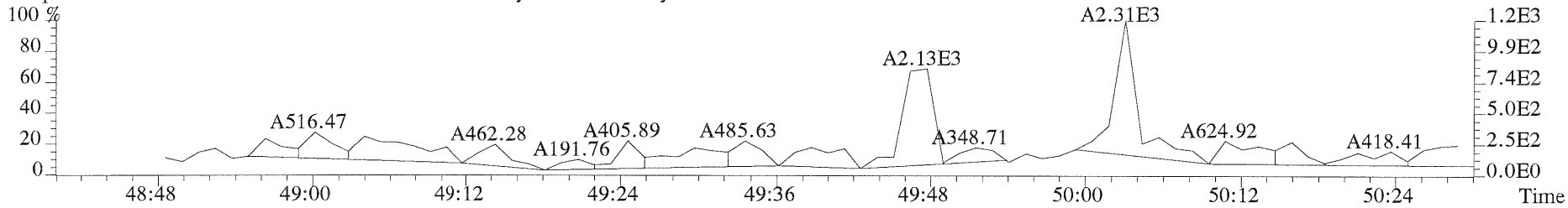
File:18AUG16Z #1-412 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



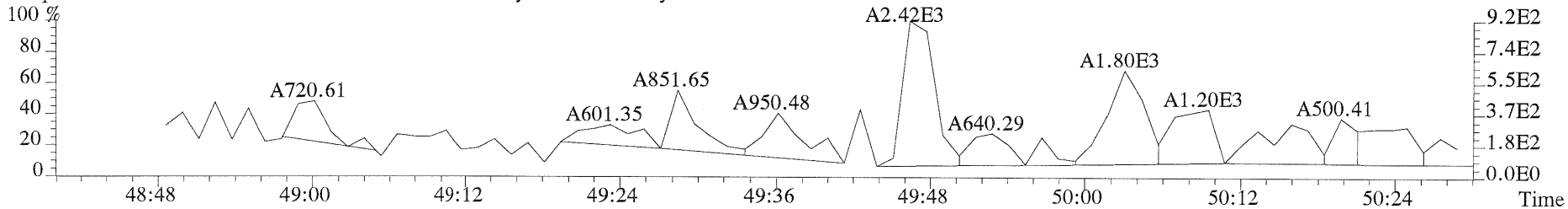
File:18AUG16Z #1-412 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



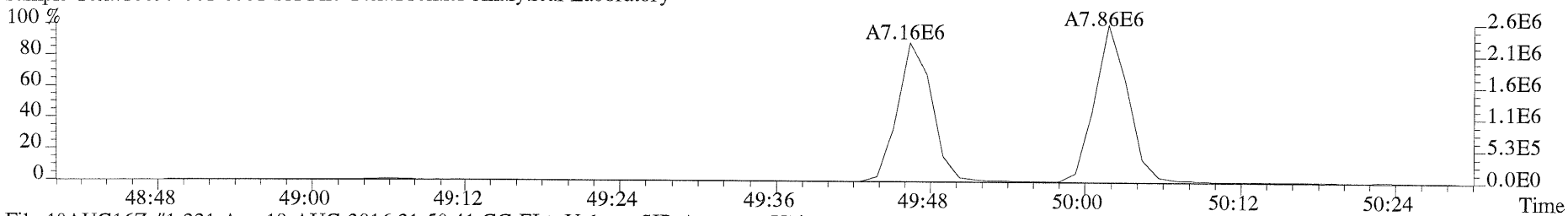
File:18AUG16Z #1-221 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



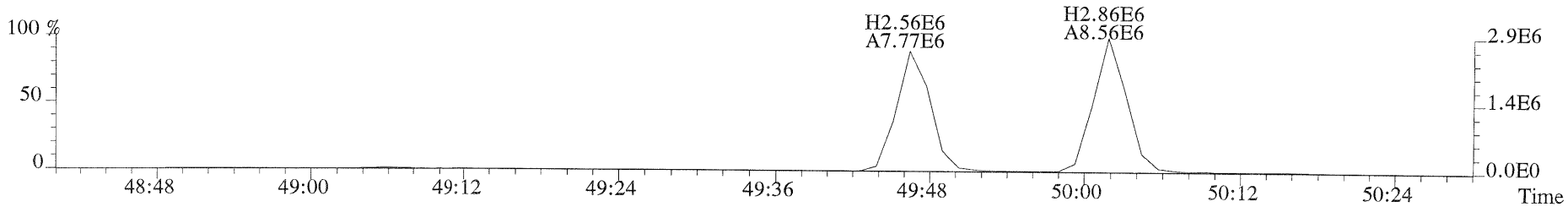
File:18AUG16Z #1-221 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



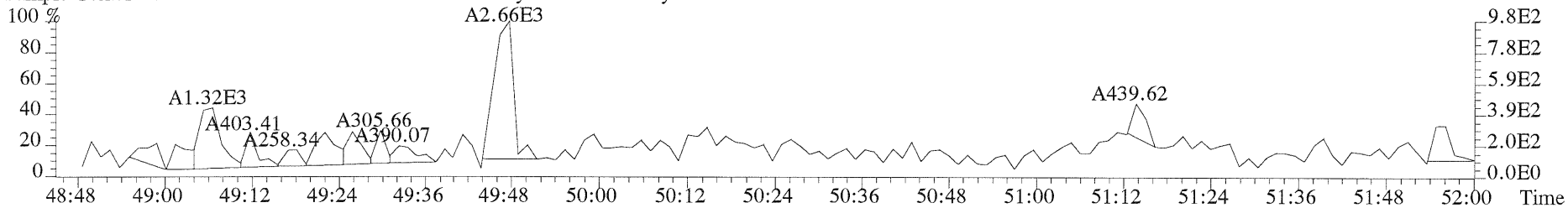
File:18AUG16Z #1-221 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



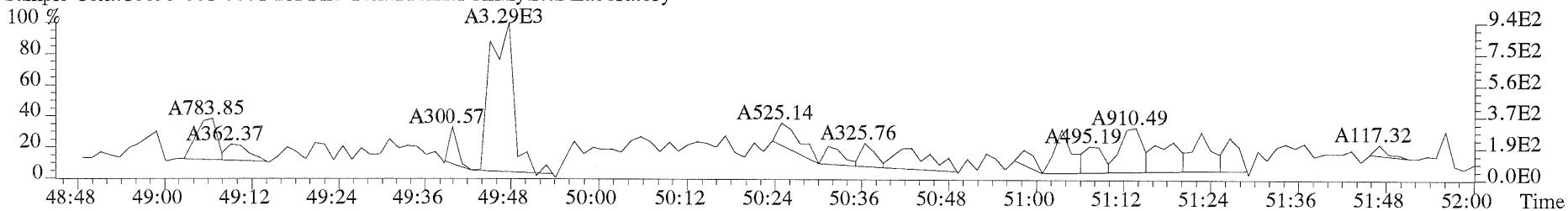
File:18AUG16Z #1-221 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



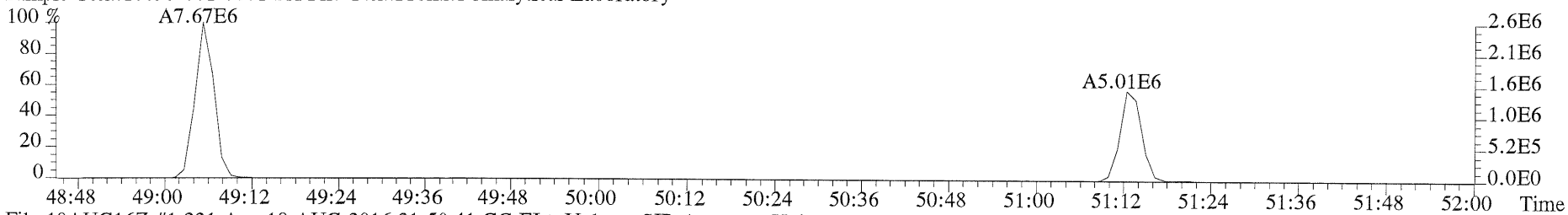
File:18AUG16Z #1-221 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
463.7216 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



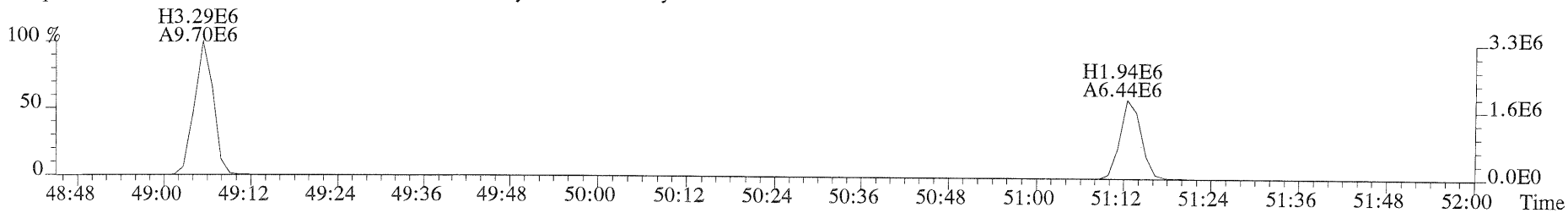
File:18AUG16Z #1-221 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
465.7187 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



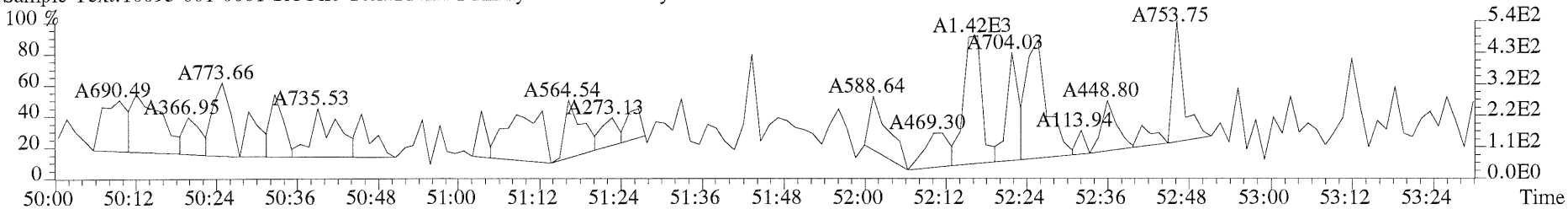
File:18AUG16Z #1-221 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
473.7648 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



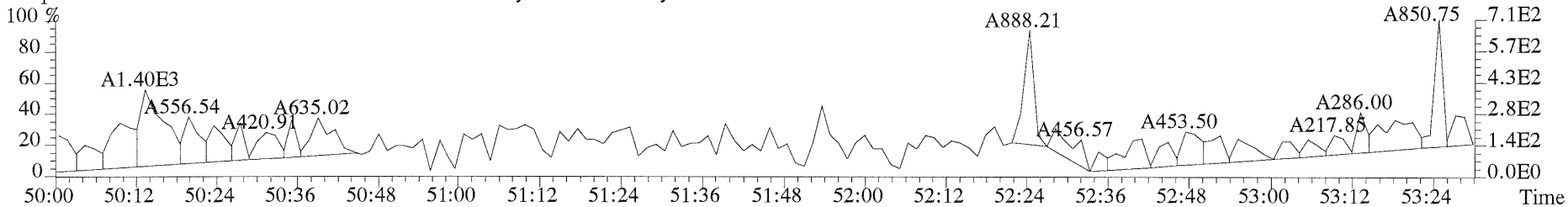
File:18AUG16Z #1-221 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
475.7619 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



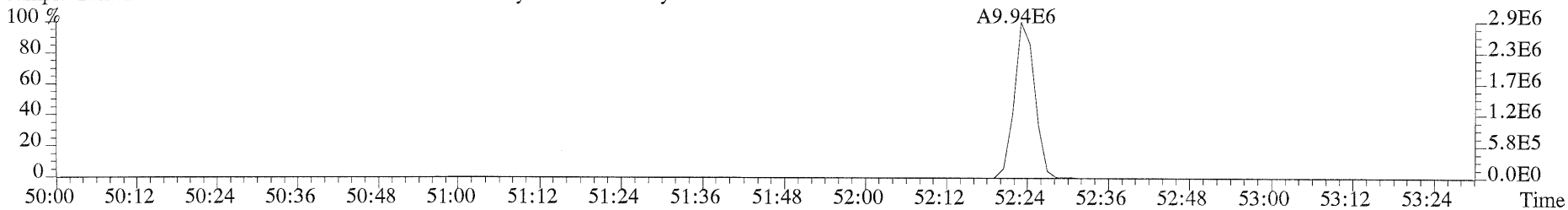
File:18AUG16Z #1-221 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
497.6826 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



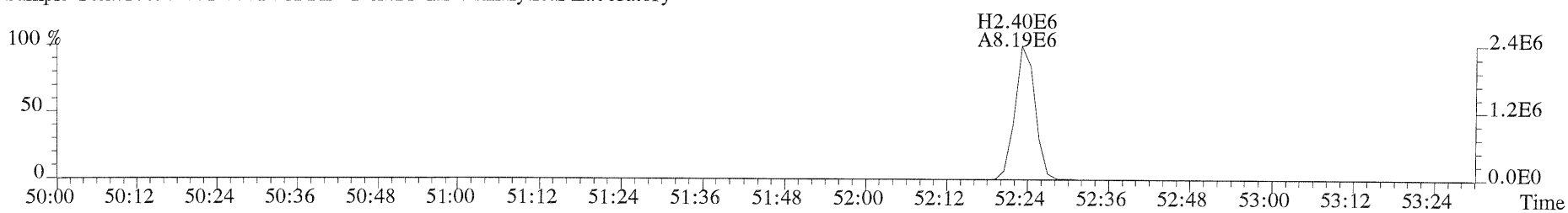
File:18AUG16Z #1-221 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
499.6797 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



File:18AUG16Z #1-221 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
509.7229 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



File:18AUG16Z #1-221 Acq:18-AUG-2016 21:50:41 GC EI+ Voltage SIR Autospec-Ultima
511.7199 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-001-0001-SA File Text:Frontier Analytical Laboratory



FAL ID: 10095-002-0001-SA Filename: 18AUG16Z Sam:7 Acquired: 18-AUG-16 22:50:38 ICal: DAILY209FAL4-8-18-16
Client ID: LDW-BA-PC-ENRMAT-GRUSAND ConCal: ST081816Z1 EndCal: ST081816Z2
Results: 10051X GC Column: DB1 Amount: 5.080

Name	Resp	RA		RT	RRF	Conc	Qual	Noise-1	Noise-2	DL	Rec	
PCB-1	*	*	n	NotFnd	1.04	*		741	285	0.430		
13C-PCB-1	4.29e+07	3.13	y	14:30	1.11	1710					86.8	
PCB-2	*	*	n	NotFnd	0.90	*		741	285	0.651		
PCB-3	*	*	n	NotFnd	1.07	*		741	285	0.695		
13C-PCB-3	3.72e+07	3.29	y	16:58	1.03	1600					81.4	
PCB-4	*	*	n	NotFnd	1.22	*		263	374	0.396		
PCB-10	*	*	n	NotFnd	1.42	*		263	374	0.455		
13C-PCB-4	2.41e+07	1.60	y	18:09	0.58	1860					94.3	
PCB-9	*	*	n	NotFnd	1.42	*		263	374	0.457		
PCB-7	*	*	n	NotFnd	1.46	*		263	374	0.442		
PCB-6	*	*	n	NotFnd	1.49	*		263	374	0.435		
PCB-8	*	*	n	NotFnd	1.26	*		263	374	0.512		
PCB-5	6.26e+04	1.57	y	20:54	1.50	2.88	J	-	-	*		
PCB-14	*	*	n	NotFnd	1.41	*		263	374	0.458		
PCB-11	2.71e+05	1.48	y	23:10	1.21	15.5		-	-	*		
PCB-13	*	*	n	NotFnd	1.13	*		263	374	0.575		
PCB-12	*	*	n	NotFnd	1.28	*		263	374	0.507		
PCB-15	*	*	n	NotFnd	1.26	*		263	374	0.609		
13C-PCB-15	3.30e+07	1.70	y	23:46	0.88	1650					83.9	
PCB-19	*	*	n	NotFnd	1.07	*		784	436	1.07		
PCB-30	*	*	n	NotFnd	1.51	*		784	436	0.758		
PCB-18	4.35e+04	1.04	y	23:37	1.00	3.94		-	-	*		
PCB-17	*	*	n	NotFnd	1.13	*		784	436	1.02		
PCB-27	*	*	n	NotFnd	1.41	*		784	436	0.809		
PCB-24	*	*	n	NotFnd	1.54	*		784	436	0.744		
PCB-16	*	*	n	NotFnd	1.27	*		784	436	0.901		
PCB-32	*	*	n	NotFnd	1.25	*		784	436	0.916		
13C-PCB-19	2.17e+07	1.07	y	22:01	0.59	1630					82.7	
13C-PCB-9	4.45e+07	1.61	y	19:51	-	9.01						
PCB-34	*	*	n	NotFnd	1.08	*		728	424	1.86		
PCB-23	*	*	n	NotFnd	1.30	*		728	424	1.54		
PCB-29	*	*	n	NotFnd	1.22	*		728	424	1.64		
PCB-26	*	*	n	NotFnd	1.18	*		728	424	1.69		
PCB-25	*	*	n	NotFnd	1.51	*		728	424	1.32		
PCB-31	5.37e+04	1.15	y	26:36	1.18	3.54	J	-	-	*		
PCB-28	6.10e+04	0.90	y	26:41	1.49	3.20	J	-	-	*		
PCB-20	4.27e+04	1.17	y	27:18	1.27	2.63	J	-	-	*		Co-elute PCB 21/33
PCB-21	4.27e+04	1.17	y	27:18	1.27	2.63	J	-	-	*		Co-elute PCB 20/33
PCB-33	4.27e+04	1.17	y	27:18	1.27	2.63	J	-	-	*		Co-elute PCB 20/21
PCB-22	*	*	n	NotFnd	1.26	*		728	424	1.59		
PCB-36	*	*	n	NotFnd	1.13	*		728	424	1.78		
PCB-39	*	*	n	NotFnd	1.13	*		728	424	1.78		
PCB-38	*	*	n	NotFnd	1.19	*		728	424	1.68		
PCB-35	*	*	n	NotFnd	1.04	*		728	424	1.92		
PCB-37	*	*	n	NotFnd	1.27	*		728	424	1.58		
13C-PCB-37	2.52e+07	1.09	y	30:25	1.22	1620					82.2	

PCB-54	*	*	n	NotFnd	1.08	*	658	797	0.979	
PCB-50	*	*	n	NotFnd	0.79	*	658	797	1.34	
PCB-53	*	*	n	NotFnd	0.78	*	658	797	1.36	
PCB-51	*	*	n	NotFnd	0.78	*	658	797	1.36	
PCB-45	*	*	n	NotFnd	0.68	*	658	797	1.56	
PCB-46	*	*	n	NotFnd	0.65	*	658	797	1.63	
PCB-52	*	*	n	NotFnd	0.95	*	658	797	1.11	Co-elute PCB 69
PCB-69	*	*	n	NotFnd	0.95	*	658	797	1.11	Co-elute PCB 52
PCB-73	*	*	n	NotFnd	0.94	*	658	797	1.13	
PCB-43	*	*	n	NotFnd	0.73	*	658	797	1.44	Co-elute PCB 49
PCB-49	*	*	n	NotFnd	0.73	*	658	797	1.44	Co-elute PCB 43
PCB-47	*	*	n	NotFnd	0.89	*	658	797	1.19	
PCB-48	*	*	n	NotFnd	0.93	*	658	797	1.14	Co-elute PCB 75
PCB-75	*	*	n	NotFnd	0.93	*	658	797	1.14	Co-elute PCB 48
PCB-65	*	*	n	NotFnd	0.96	*	658	797	1.10	
PCB-62	*	*	n	NotFnd	0.88	*	658	797	1.19	
PCB-44	*	*	n	NotFnd	0.66	*	658	797	1.60	
PCB-42	*	*	n	NotFnd	0.90	*	658	797	1.17	Co-elute PCB 59
PCB-59	*	*	n	NotFnd	0.90	*	658	797	1.17	Co-elute PCB 42
PCB-72	*	*	n	NotFnd	0.96	*	658	797	1.09	Co-elute PCB 41/71/64
PCB-41	*	*	n	NotFnd	0.96	*	658	797	1.09	Co-elute PCB 72/71/64
PCB-71	*	*	n	NotFnd	0.96	*	658	797	1.09	Co-elute PCB 72/41/64
PCB-64	*	*	n	NotFnd	0.96	*	658	797	1.09	Co-elute PCB 72/41/71
PCB-68	*	*	n	NotFnd	0.99	*	658	797	1.07	
PCB-40	*	*	n	NotFnd	0.57	*	658	797	1.84	
PCB-57	*	*	n	NotFnd	0.95	*	658	420	0.820	
PCB-67	*	*	n	NotFnd	0.87	*	658	420	0.898	
PCB-58	*	*	n	NotFnd	1.00	*	658	420	0.783	
PCB-63	*	*	n	NotFnd	0.95	*	658	420	0.823	
PCB-74	*	*	n	NotFnd	0.97	*	658	420	0.808	
PCB-61	*	*	n	NotFnd	1.02	*	658	420	0.764	Co-elute PCB 70
PCB-70	*	*	n	NotFnd	1.02	*	658	420	0.764	Co-elute PCB 61
PCB-76	*	*	n	NotFnd	1.00	*	658	420	0.785	Co-elute PCB 66
PCB-66	*	*	n	NotFnd	1.00	*	658	420	0.785	Co-elute PCB 76
PCB-80	*	*	n	NotFnd	1.08	*	658	420	0.725	
PCB-55	*	*	n	NotFnd	0.98	*	658	541	0.887	
13C-PCB-54	2.85e+07	0.79	y	25:34	1.24	1790				91.0
PCB-104	*	*	n	NotFnd	1.14	*	300	500	0.784	
PCB-96	*	*	n	NotFnd	1.01	*	300	500	0.881	
PCB-103	*	*	n	NotFnd	0.88	*	300	500	1.01	
PCB-100	*	*	n	NotFnd	0.84	*	300	500	1.06	
PCB-94	*	*	n	NotFnd	0.70	*	300	500	1.27	
PCB-98	*	*	n	NotFnd	0.92	*	300	500	0.970	Co-elute PCB 102
PCB-102	*	*	n	NotFnd	0.92	*	300	500	0.970	Co-elute PCB 98
PCB-95	*	*	n	NotFnd	0.78	*	300	500	1.15	
PCB-93	*	*	n	NotFnd	0.65	*	300	500	1.36	
PCB-88	*	*	n	NotFnd	0.79	*	300	500	1.13	Co-elute PCB 91
PCB-91	*	*	n	NotFnd	0.79	*	300	500	1.13	Co-elute PCB 88
PCB-121	*	*	n	NotFnd	0.98	*	300	500	0.913	
13C-PCB-104	1.84e+07	1.65	y	29:59	0.87	1660				84.3
13C-PCB-28	3.99e+07	1.11	y	26:40	1.47	2130				108
13C-PCB-52	2.51e+07	0.80	y	28:55	-	8.87				

PCB-56	*	*	n	NotFnd	1.24	*	340	404	0.926	Co-elute PCB 60
PCB-60	*	*	n	NotFnd	1.24	*	340	404	0.926	Co-elute PCB 56
PCB-79	*	*	n	NotFnd	1.14	*	340	404	1.00	
PCB-78	*	*	n	NotFnd	1.08	*	340	404	1.07	
PCB-81	*	*	n	NotFnd	1.18	*	340	404	0.887	
13C-PCB-81	2.31e+07	0.80	y	36:08	1.07	1810				91.9
PCB-77	*	*	n	NotFnd	1.08	*	340	404	1.15	
13C-PCB-77	2.32e+07	0.80	y	36:44	1.09	1790				90.9
PCB-155	*	*	n	NotFnd	1.07	*	288	300	0.517	
PCB-150	*	*	n	NotFnd	0.98	*	288	300	0.567	
PCB-152	*	*	n	NotFnd	0.97	*	288	300	0.574	
PCB-145	*	*	n	NotFnd	0.93	*	288	300	0.598	
PCB-136	*	*	n	NotFnd	0.95	*	288	300	0.586	
PCB-148	*	*	n	NotFnd	0.66	*	288	300	0.842	
PCB-154	*	*	n	NotFnd	0.79	*	288	300	0.706	
13C-PCB-155	2.09e+07	1.27	y	34:08	1.06	1650				83.7
13C-PCB-111	2.76e+07	1.62	y	36:15	1.13	2060				104
13C-PCB-101	2.35e+07	1.58	y	34:35	-	9.32				
PCB-84	*	*	n	NotFnd	0.84	*	388	564	1.30	Co-elute PCB 92
PCB-92	*	*	n	NotFnd	0.84	*	388	564	1.30	Co-elute PCB 84
PCB-89	*	*	n	NotFnd	0.84	*	388	564	1.30	
PCB-90	*	*	n	NotFnd	0.96	*	388	564	1.13	Co-elute PCB 101
PCB-101	*	*	n	NotFnd	0.96	*	388	564	1.13	Co-elute PCB 90
PCB-113	*	*	n	NotFnd	1.15	*	388	564	0.946	
PCB-99	*	*	n	NotFnd	0.96	*	388	564	1.14	
PCB-119	*	*	n	NotFnd	1.22	*	388	564	0.892	
PCB-83	*	*	n	NotFnd	0.99	*	388	564	1.11	Co-elute PCB 112
PCB-112	*	*	n	NotFnd	0.99	*	388	564	1.11	Co-elute PCB 83
PCB-109	*	*	n	NotFnd	1.14	*	388	564	0.955	
PCB-97	*	*	n	NotFnd	1.00	*	388	564	1.09	
PCB-86	*	*	n	NotFnd	0.79	*	388	564	1.38	
PCB-125	*	*	n	NotFnd	1.11	*	388	564	0.986	Co-elute PCB 87/117
PCB-87	*	*	n	NotFnd	1.11	*	388	564	0.986	Co-elute PCB 125/117
PCB-117	*	*	n	NotFnd	1.11	*	388	564	0.986	Co-elute PCB 125/87
PCB-111	*	*	n	NotFnd	1.32	*	388	564	0.824	Co-elute PCB 115
PCB-115	*	*	n	NotFnd	1.32	*	388	564	0.824	Co-elute PCB 111
PCB-85	*	*	n	NotFnd	1.03	*	388	564	1.05	Co-elute PCB 116
PCB-116	*	*	n	NotFnd	1.03	*	388	564	1.05	Co-elute PCB 85
PCB-120	*	*	n	NotFnd	1.24	*	388	564	0.877	
PCB-110	*	*	n	NotFnd	1.27	*	388	564	0.856	
PCB-82	*	*	n	NotFnd	0.70	*	388	564	1.56	
PCB-124	*	*	n	NotFnd	1.10	*	276	472	0.782	
PCB-108	*	*	n	NotFnd	1.17	*	276	472	0.731	Co-elute PCB 107
PCB-107	*	*	n	NotFnd	1.17	*	276	472	0.731	Co-elute PCB 108
PCB-123	*	*	n	NotFnd	1.24	*	276	472	0.670	
13C-PCB-123	1.99e+07	1.59	y	38:17	1.09	1620				82.2
PCB-118	*	*	n	NotFnd	1.08	*	276	472	0.758	Co-elute PCB 106
PCB-106	*	*	n	NotFnd	1.08	*	276	472	0.758	Co-elute PCB 118
13C-PCB-118	2.37e+07	1.66	y	38:28	1.19	1780				90.5
PCB-114	*	*	n	NotFnd	1.08	*	276	472	0.762	
13C-PCB-114	2.13e+07	1.58	y	39:04	1.11	1700				86.5
PCB-122	*	*	n	NotFnd	1.13	*	276	472	0.758	
PCB-105	*	*	n	NotFnd	1.13	*	276	472	0.850	
13C-PCB-105	2.04e+07	1.58	y	39:54	1.14	1600				81.3

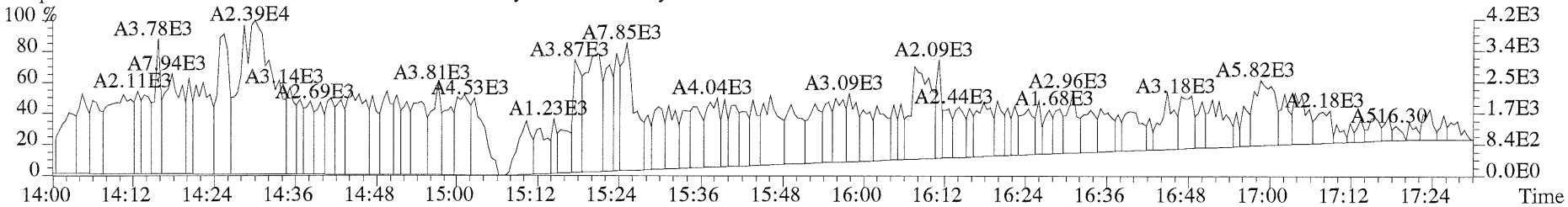
PCB-127	*	*	n	NotFnd	1.03	*		276	472	0.833	
PCB-126	*	*	n	NotFnd	1.14	*		276	472	1.12	
13C-PCB-126	1.88e+07	1.58	y	42:04	0.97	1720					87.3
PCB-151	*	*	n	NotFnd	0.86	*		304	276	0.774	
PCB-135	*	*	n	NotFnd	0.94	*		304	276	0.716	
PCB-144	*	*	n	NotFnd	0.91	*		304	276	0.735	
PCB-147	*	*	n	NotFnd	0.94	*		304	276	0.709	
PCB-139	*	*	n	NotFnd	0.97	*		304	276	0.691	Co-elute PCB 149
PCB-149	*	*	n	NotFnd	0.97	*		304	276	0.691	Co-elute PCB 139
PCB-140	*	*	n	NotFnd	0.92	*		304	276	0.730	
PCB-143	*	*	n	NotFnd	0.87	*		304	276	0.768	Co-elute PCB 134
PCB-134	*	*	n	NotFnd	0.87	*		304	276	0.768	Co-elute PCB 143
PCB-131	*	*	n	NotFnd	0.88	*		304	276	0.763	Co-elute PCB 133
PCB-133	*	*	n	NotFnd	0.88	*		304	276	0.763	Co-elute PCB 131
PCB-142	*	*	n	NotFnd	0.77	*		304	276	0.867	
PCB-165	*	*	n	NotFnd	1.05	*		304	276	0.636	Co-elute PCB 146
PCB-146	*	*	n	NotFnd	1.05	*		304	276	0.636	Co-elute PCB 165
PCB-161	*	*	n	NotFnd	0.99	*		304	276	0.677	Co-elute PCB 132
PCB-132	*	*	n	NotFnd	0.99	*		304	276	0.677	Co-elute PCB 161
PCB-153	*	*	n	NotFnd	1.02	*		304	276	0.654	
PCB-168	*	*	n	NotFnd	1.15	*		304	276	0.581	
PCB-141	*	*	n	NotFnd	0.88	*		304	276	0.762	
PCB-137	*	*	n	NotFnd	0.86	*		304	276	0.783	
PCB-130	*	*	n	NotFnd	0.71	*		304	276	0.937	
PCB-138	*	*	n	NotFnd	1.14	*		304	276	0.589	Co-elute PCB 163/164
PCB-163	*	*	n	NotFnd	1.14	*		304	276	0.589	Co-elute PCB 138/164
PCB-164	*	*	n	NotFnd	1.14	*		304	276	0.589	Co-elute PCB 138/163
PCB-158	*	*	n	NotFnd	1.12	*		304	276	0.597	Co-elute PCB 160
PCB-160	*	*	n	NotFnd	1.12	*		304	276	0.597	Co-elute PCB 158
PCB-129	*	*	n	NotFnd	0.69	*		304	276	0.976	
PCB-166	*	*	n	NotFnd	1.05	*		304	276	0.635	
PCB-159	*	*	n	NotFnd	1.13	*		304	276	0.595	
PCB-128	*	*	n	NotFnd	0.94	*		304	276	0.715	Co-elute PCB 162
PCB-162	*	*	n	NotFnd	0.94	*		304	276	0.715	Co-elute PCB 128
PCB-167	*	*	n	NotFnd	0.96	*		304	276	0.637	
13C-PCB-167	2.28e+07	1.28	y	43:23	1.14	1780					90.3
PCB-156	*	*	n	NotFnd	1.04	*		304	276	0.669	
13C-PCB-156	2.10e+07	1.28	y	44:37	1.07	1740					88.6
PCB-157	*	*	n	NotFnd	0.96	*		304	276	0.687	
13C-PCB-157	2.29e+07	1.27	y	44:52	1.09	1880					95.5
PCB-169	*	*	n	NotFnd	0.92	*		304	276	0.784	
13C-PCB-169	1.93e+07	1.20	y	46:45	0.92	1860					94.6

FAL ID: 10095-002-0001-SA Filename: 18AUG16Z Sam:7 Acquired: 18-AUG-16 22:50:38 ICal: DAILY209FAL4-8-18-16
Client ID: LDW-BA-PC-ENRMAT-GRUSAND ConCal: ST081816Z1 EndCal: ST081816Z2
Results: 10051X GC Column: DB1 Amount: 5.080

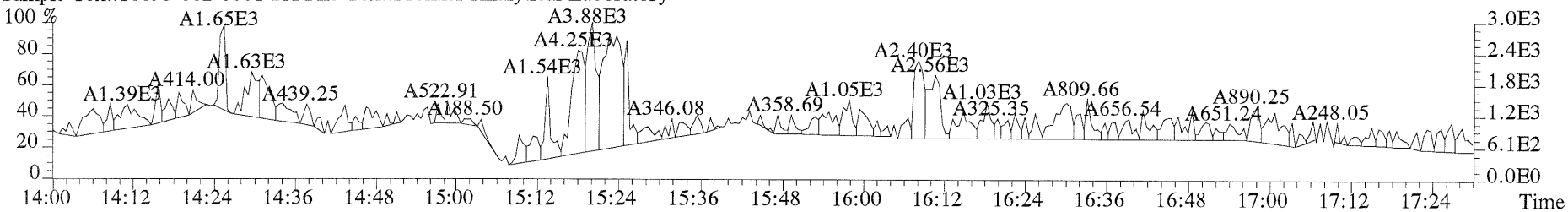
PCB-188	*	*	n	NotFnd	1.12	*	368	216	0.475	
13C-PCB-188	2.20e+07	1.07	y	39:37	1.25	1570				79.8
PCB-184	*	*	n	NotFnd	1.35	*	368	216	0.450	
PCB-179	*	*	n	NotFnd	1.29	*	368	216	0.471	
PCB-176	*	*	n	NotFnd	1.22	*	368	216	0.500	
PCB-186	*	*	n	NotFnd	1.23	*	368	216	0.494	
PCB-178	*	*	n	NotFnd	0.86	*	368	216	0.706	
PCB-175	*	*	n	NotFnd	0.91	*	368	216	0.668	
PCB-187	*	*	n	NotFnd	0.99	*	368	216	0.619	Co-elute PCB 182
PCB-182	*	*	n	NotFnd	0.99	*	368	216	0.619	Co-elute PCB 187
PCB-183	*	*	n	NotFnd	0.97	*	368	216	0.627	
PCB-185	*	*	n	NotFnd	0.86	*	368	216	0.707	
PCB-174	*	*	n	NotFnd	0.87	*	368	216	0.703	
PCB-181	*	*	n	NotFnd	0.89	*	368	216	0.689	
PCB-177	*	*	n	NotFnd	0.79	*	368	216	0.774	
PCB-171	*	*	n	NotFnd	0.83	*	368	216	0.737	
PCB-173	*	*	n	NotFnd	0.74	*	368	216	0.819	
PCB-172	*	*	n	NotFnd	0.76	*	368	216	0.798	
PCB-192	*	*	n	NotFnd	1.05	*	368	216	0.580	
PCB-180	*	*	n	NotFnd	1.01	*	368	216	0.605	
PCB-193	*	*	n	NotFnd	1.11	*	368	216	0.551	
PCB-191	*	*	n	NotFnd	1.02	*	368	216	0.596	
PCB-170	*	*	n	NotFnd	0.68	*	368	216	0.902	
PCB-190	*	*	n	NotFnd	0.97	*	368	216	0.626	
PCB-189	*	*	n	NotFnd	1.09	*	368	216	0.651	
13C-PCB-189	1.69e+07	1.12	y	48:23	0.82	1850				93.7
PCB-202	*	*	n	NotFnd	1.00	*	212	280	0.721	
PCB-201	*	*	n	NotFnd	0.99	*	212	280	0.732	
PCB-204	*	*	n	NotFnd	1.03	*	212	280	0.701	
PCB-197	*	*	n	NotFnd	1.06	*	212	280	0.682	
PCB-200	*	*	n	NotFnd	0.99	*	212	280	0.733	
PCB-198	*	*	n	NotFnd	0.70	*	212	280	1.03	
PCB-199	*	*	n	NotFnd	0.61	*	212	280	1.18	
PCB-203	*	*	n	NotFnd	0.70	*	212	280	1.04	Co-elute PCB 196
PCB-196	*	*	n	NotFnd	0.70	*	212	280	1.04	Co-elute PCB 203
13C-PCB-202	1.52e+07	0.91	y	44:45	0.89	1520				77.1
13C-PCB-178	1.70e+07	1.07	y	42:15	0.81	1870				95.0
13C-PCB-138	2.21e+07	1.28	y	41:31	-	10.4				
PCB-195	*	*	n	NotFnd	0.75	*	212	304	0.670	
PCB-194	*	*	n	NotFnd	0.81	*	212	304	0.618	
PCB-205	*	*	n	NotFnd	1.03	*	212	304	0.487	
13C-PCB-205	1.57e+07	0.91	y	50:02	1.25	1730				88.0
PCB-208	*	*	n	NotFnd	0.92	*	232	200	0.487	
13C-PCB-208	1.39e+07	0.77	y	49:06	1.37	1400				70.9
PCB-207	*	*	n	NotFnd	1.01	*	232	200	0.495	
PCB-206	*	*	n	NotFnd	0.99	*	232	200	0.563	
13C-PCB-206	1.15e+07	0.79	y	51:13	0.92	1740				88.2
PCB-209	*	*	n	NotFnd	1.07	*	228	232	0.377	
13C-PCB-209	1.77e+07	1.21	y	52:24	1.43	1710				86.6
13C-PCB-194	1.43e+07	0.92	y	49:47	-	10.1				

Analyst: _____ Date: 8/23/16

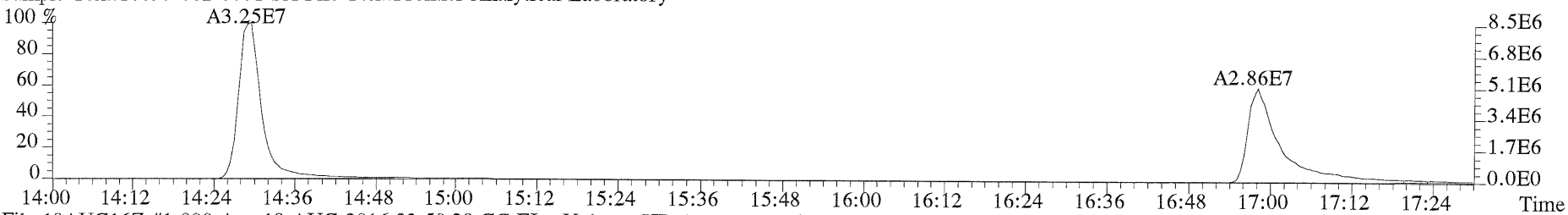
File:18AUG16Z #1-900 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
188.0393 S:7 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



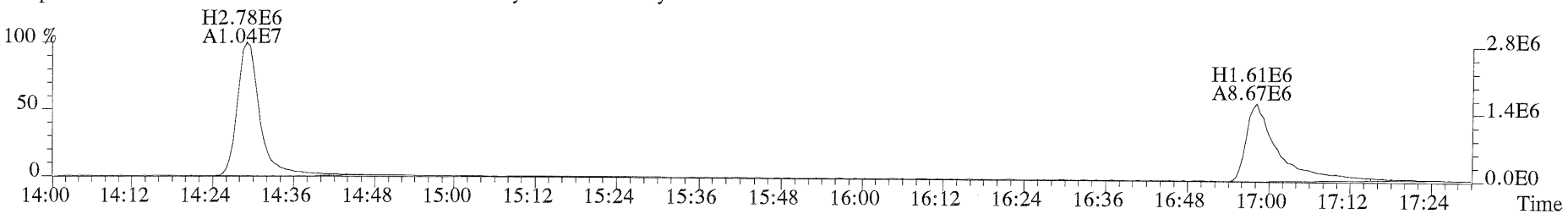
File:18AUG16Z #1-900 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
190.0363 S:7 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



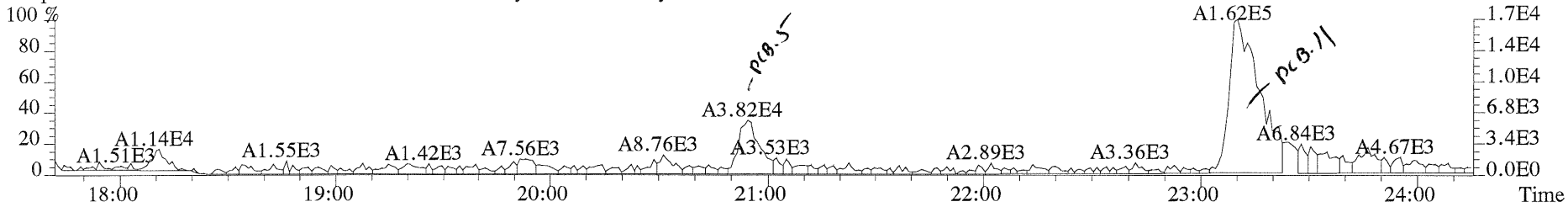
File:18AUG16Z #1-900 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
200.0795 S:7 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



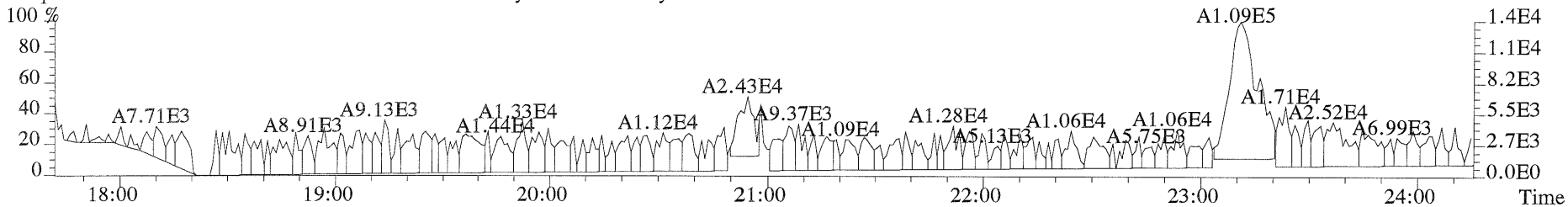
File:18AUG16Z #1-900 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
202.0766 S:7 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



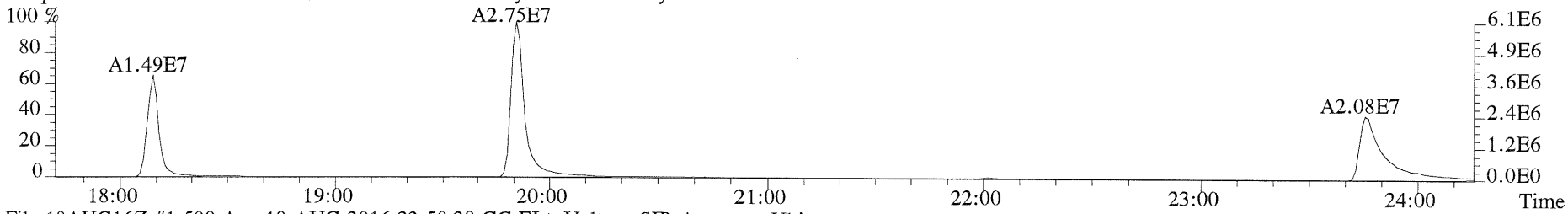
File:18AUG16Z #1-509 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
222.0003 S:7 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



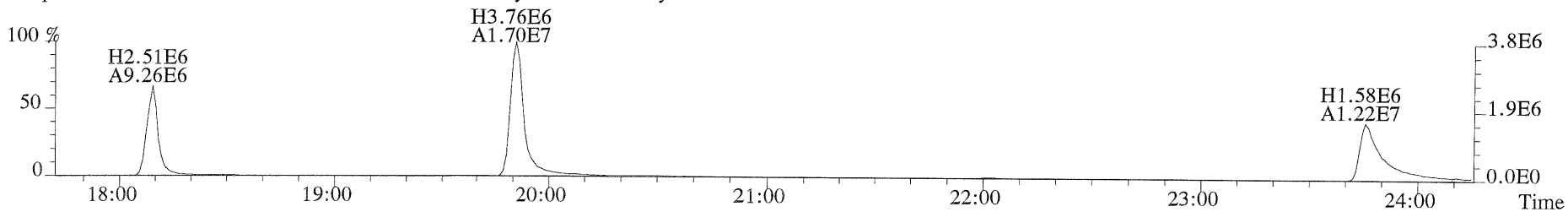
File:18AUG16Z #1-509 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
223.9974 S:7 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



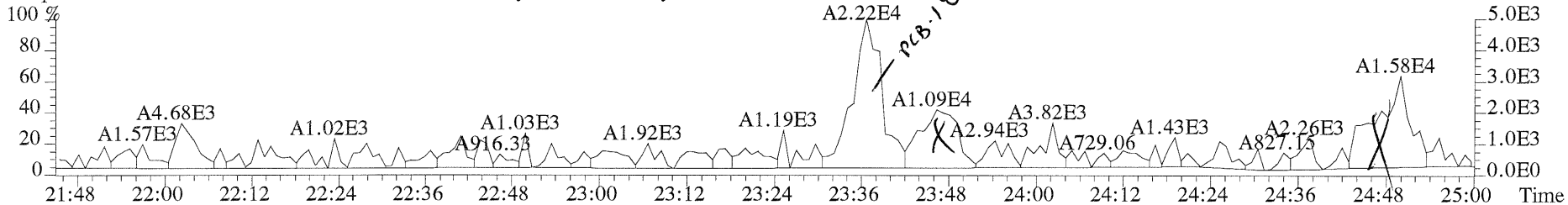
File:18AUG16Z #1-509 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
234.0406 S:7 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



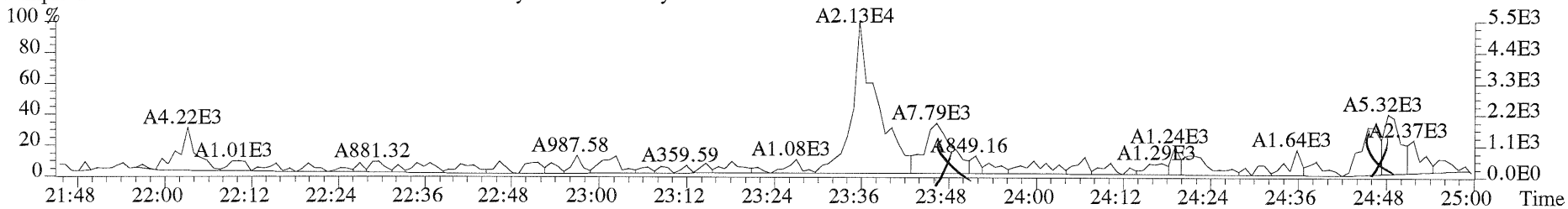
File:18AUG16Z #1-509 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
236.0376 S:7 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



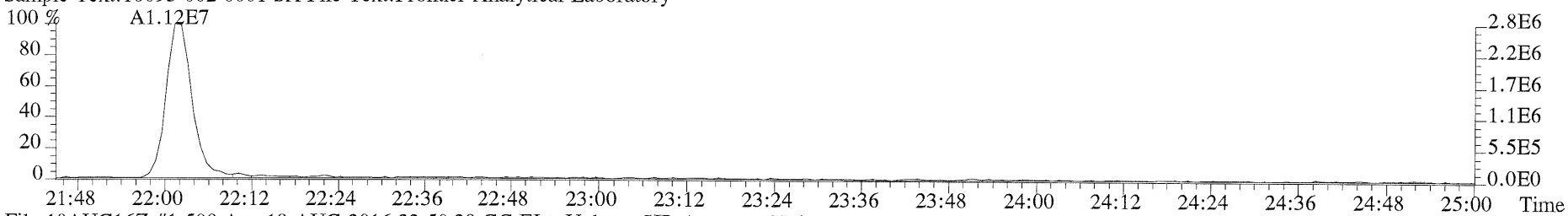
File:18AUG16Z #1-509 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:7 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



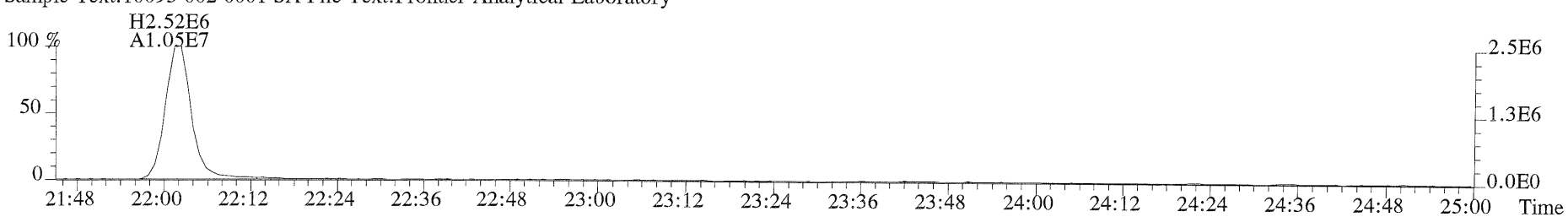
File:18AUG16Z #1-509 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:7 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



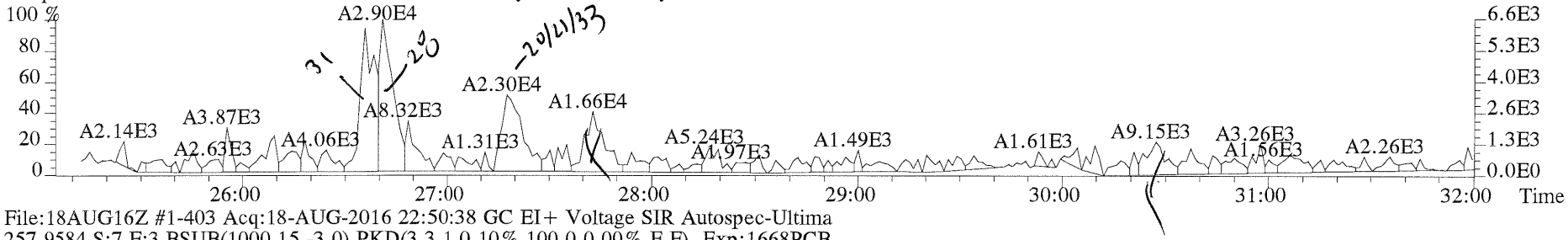
File:18AUG16Z #1-509 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:7 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



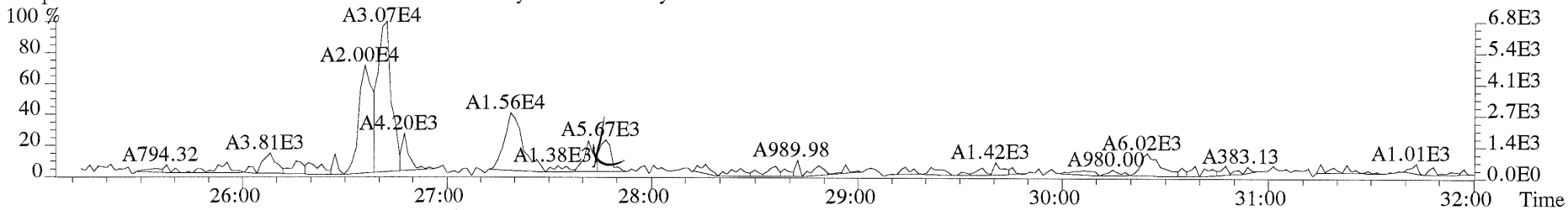
File:18AUG16Z #1-509 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:7 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



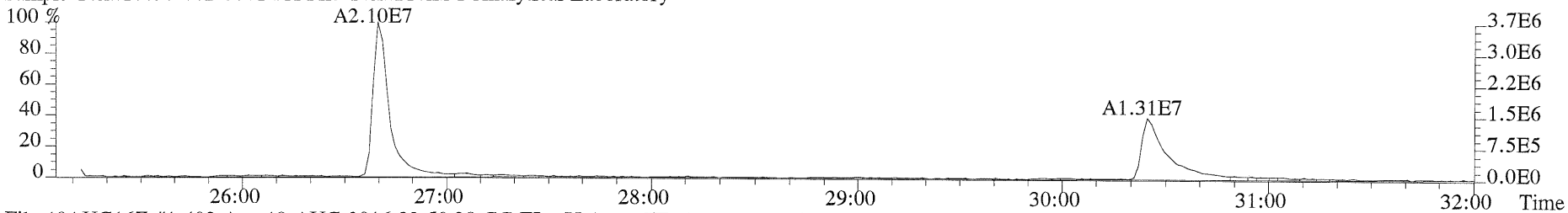
File:18AUG16Z #1-403 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:7 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



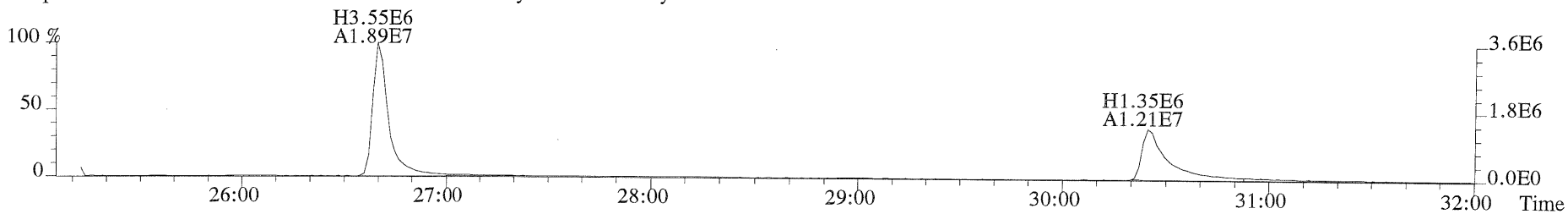
File:18AUG16Z #1-403 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:7 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



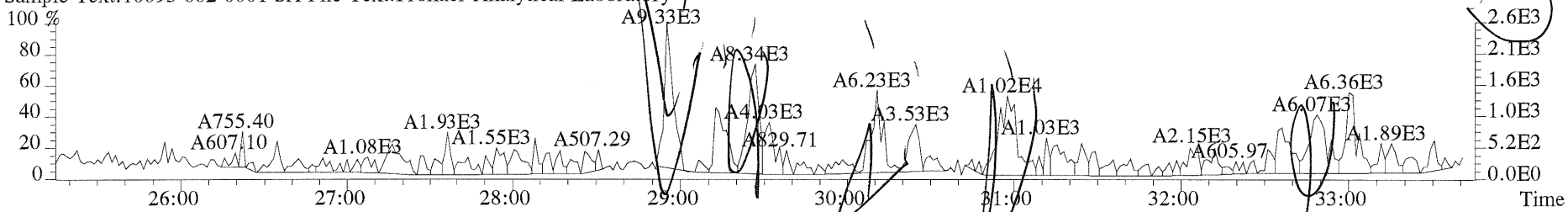
File:18AUG16Z #1-403 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:7 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



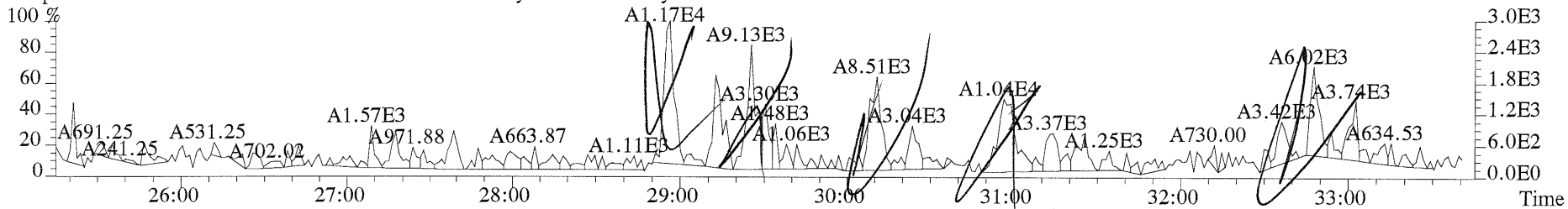
File:18AUG16Z #1-403 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:7 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



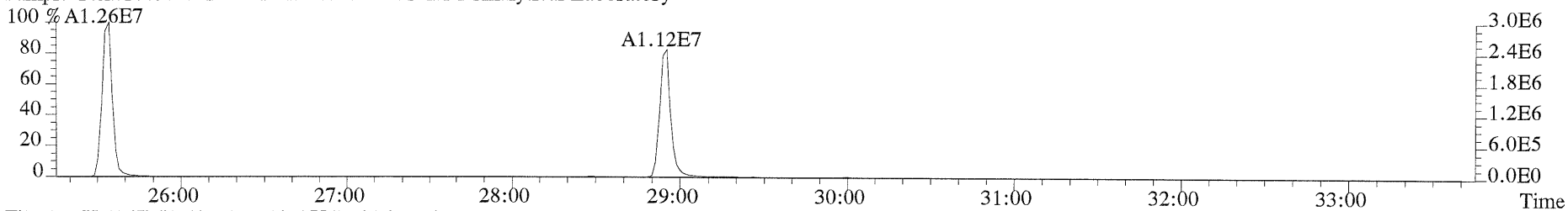
File:18AUG16Z #1-403 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:7 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



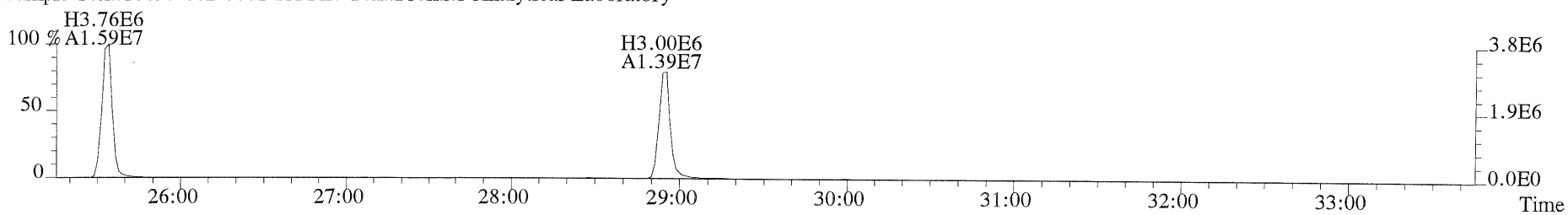
File:18AUG16Z #1-403 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:7 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



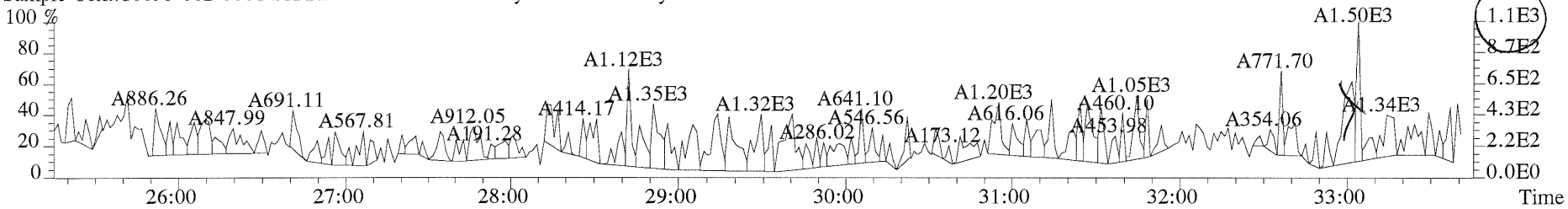
File:18AUG16Z #1-403 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:7 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



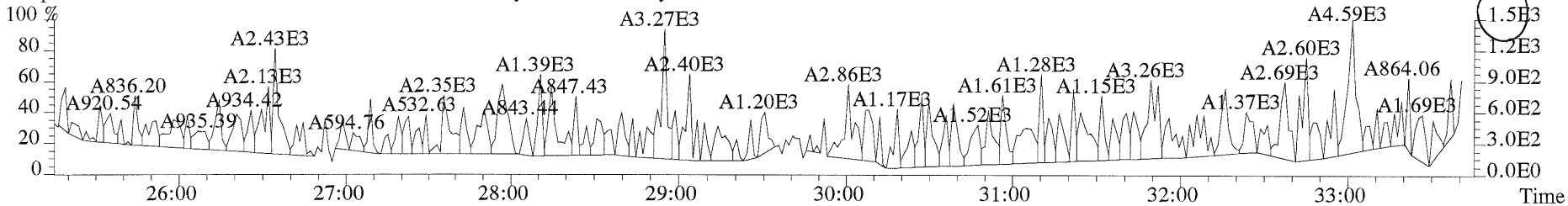
File:18AUG16Z #1-403 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:7 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



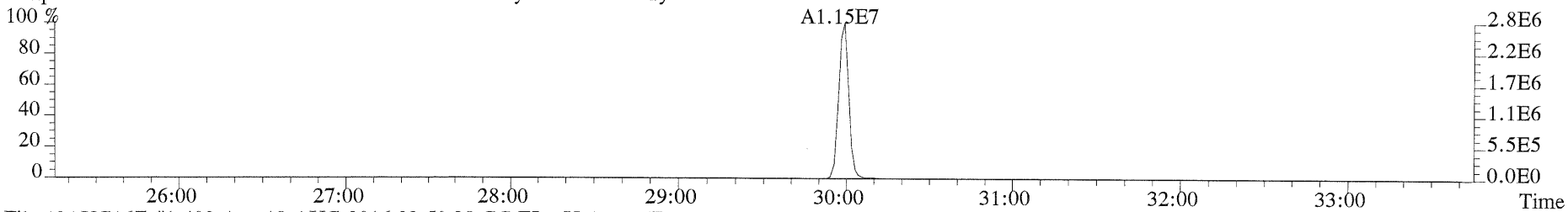
File:18AUG16Z #1-403 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:7 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



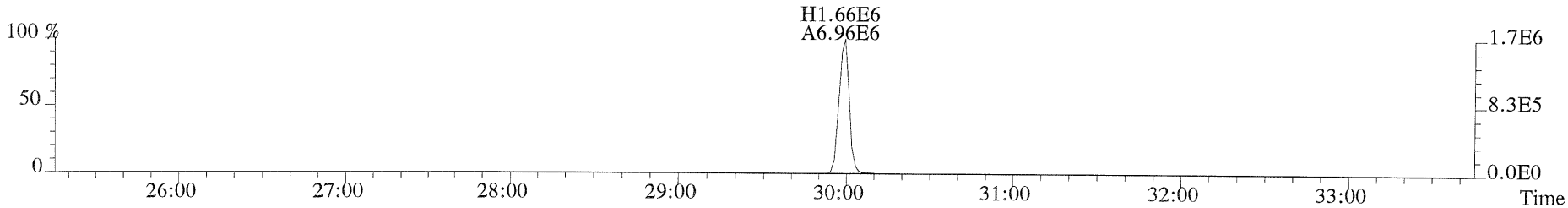
File:18AUG16Z #1-403 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:7 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



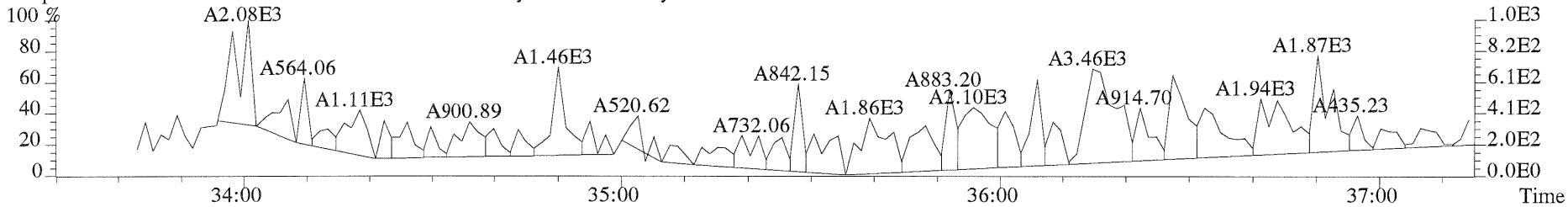
File:18AUG16Z #1-403 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:7 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



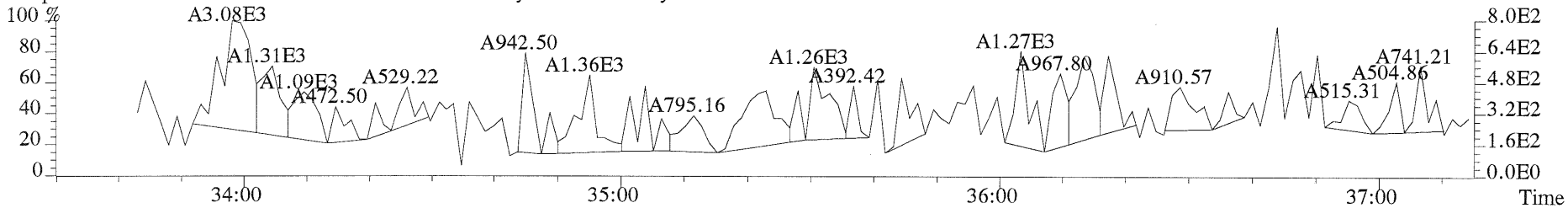
File:18AUG16Z #1-403 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:7 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



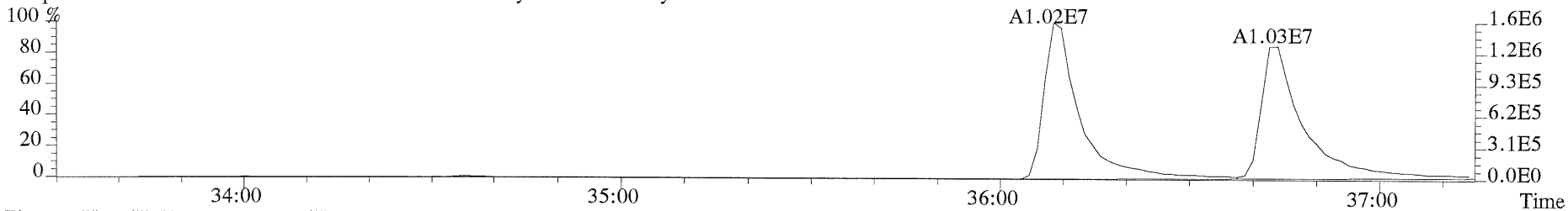
File:18AUG16Z #1-179 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:7 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



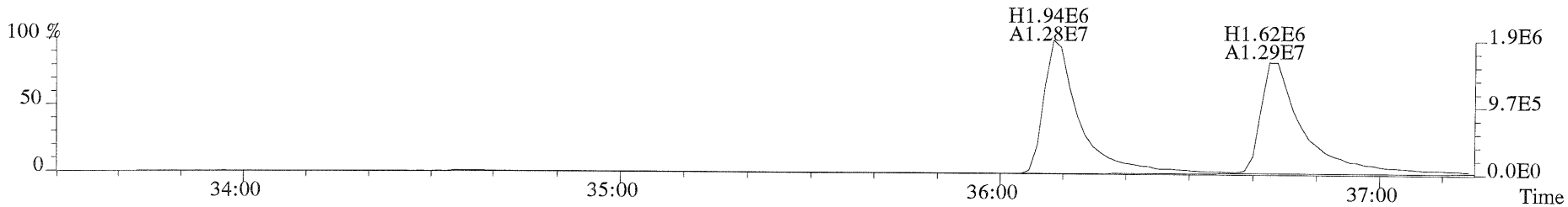
File:18AUG16Z #1-179 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:7 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



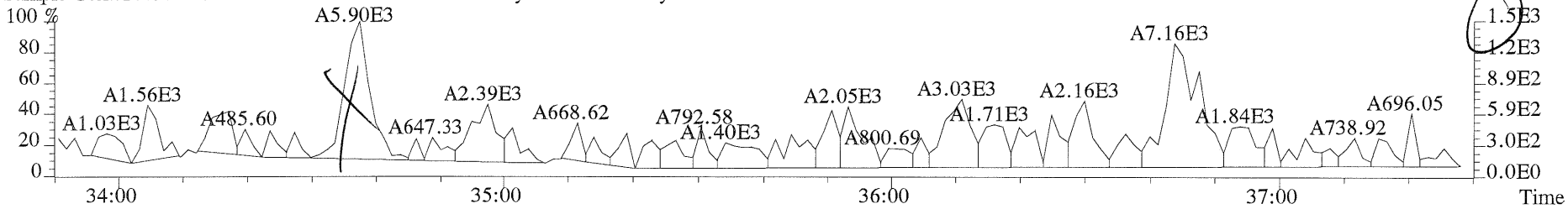
File:18AUG16Z #1-179 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:7 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



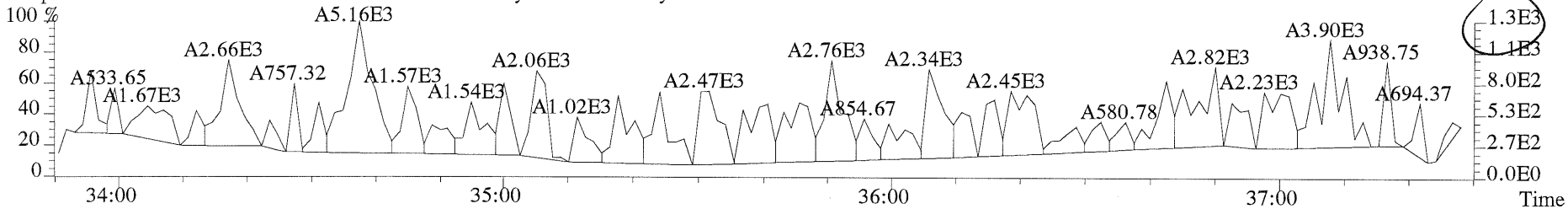
File:18AUG16Z #1-179 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:7 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



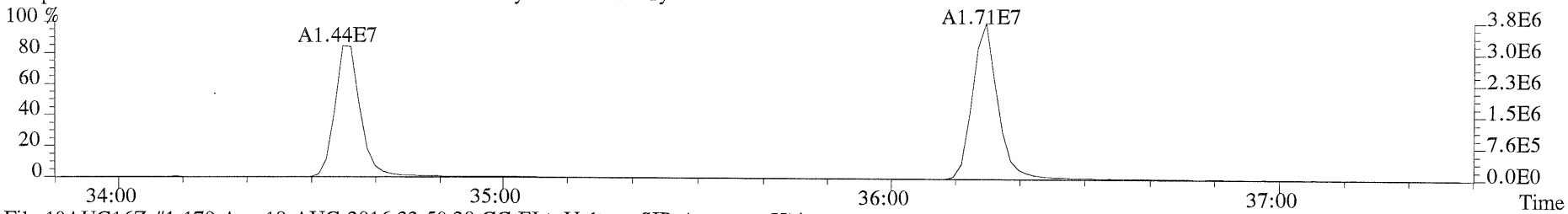
File:18AUG16Z #1-179 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:7 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



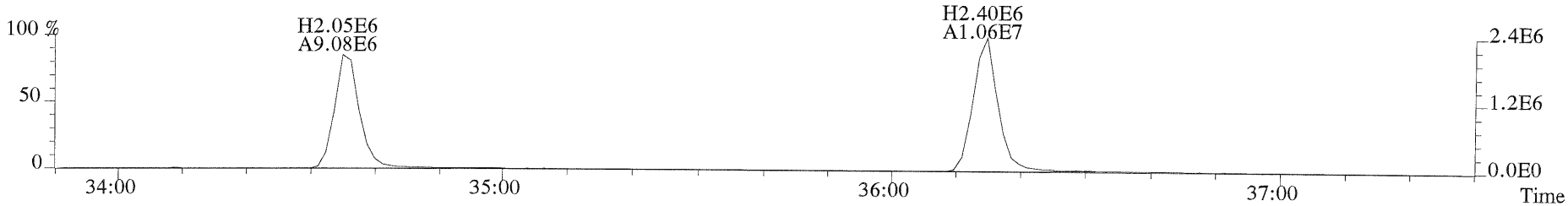
File:18AUG16Z #1-179 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:7 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



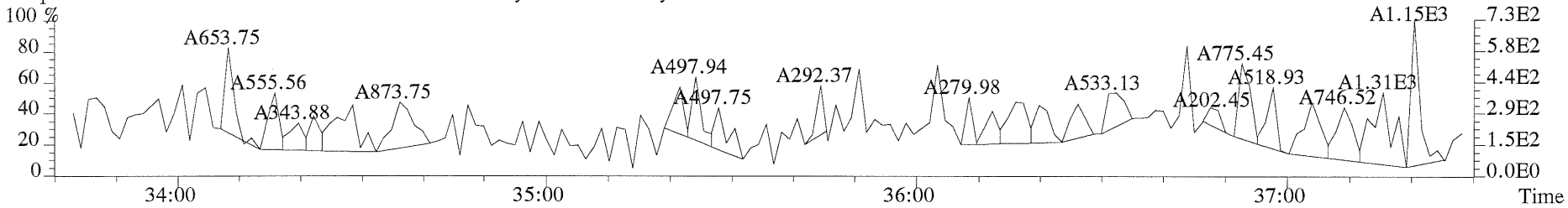
File:18AUG16Z #1-179 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:7 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



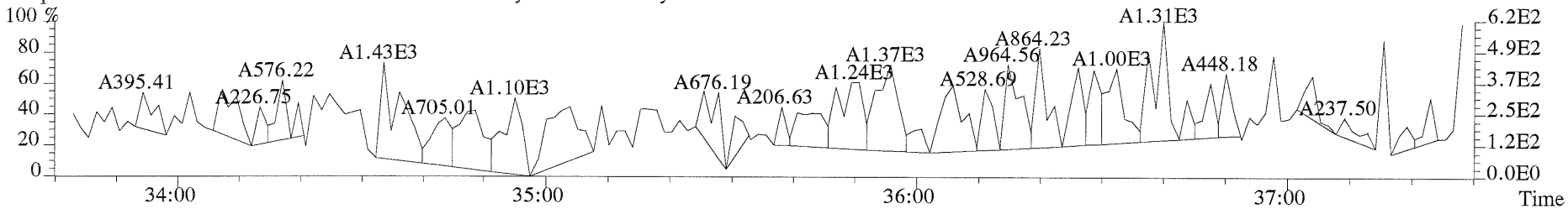
File:18AUG16Z #1-179 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:7 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



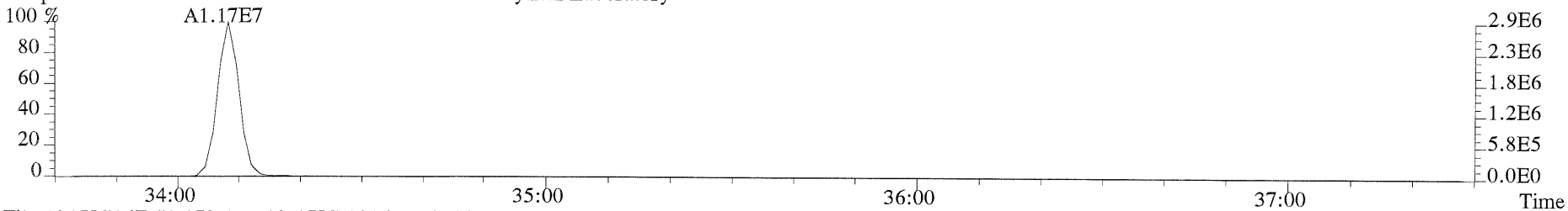
File:18AUG16Z #1-179 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:7 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



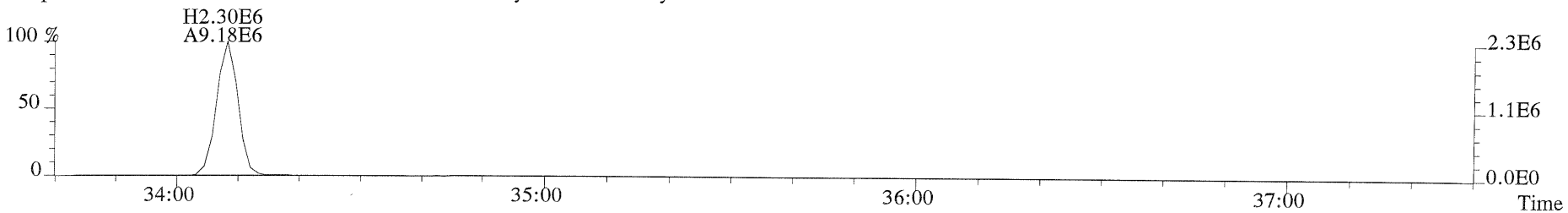
File:18AUG16Z #1-179 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:7 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



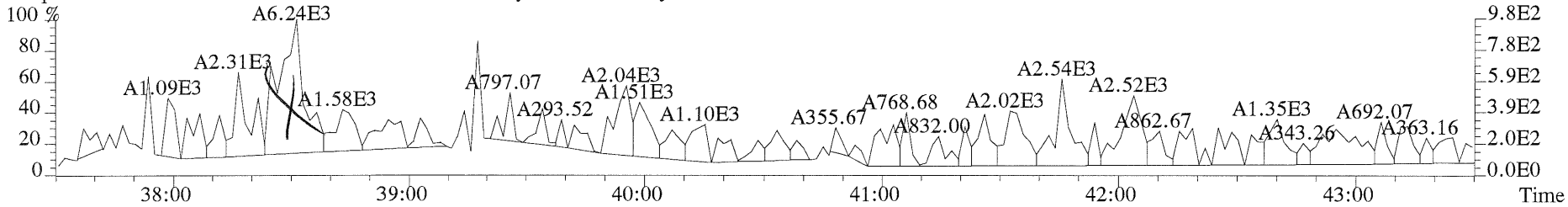
File:18AUG16Z #1-179 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:7 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



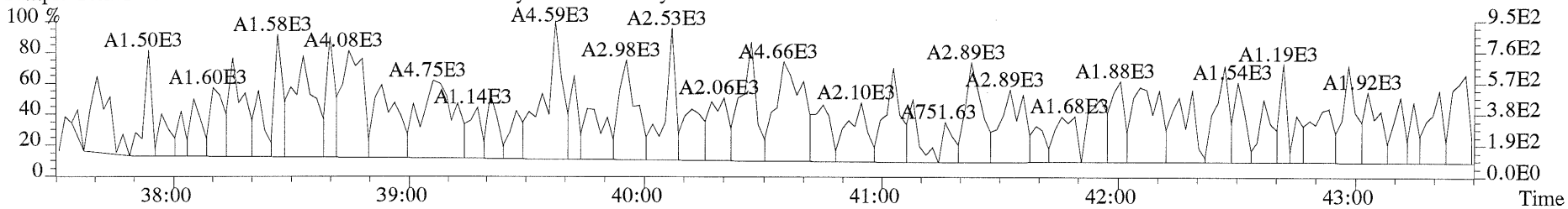
File:18AUG16Z #1-179 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:7 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



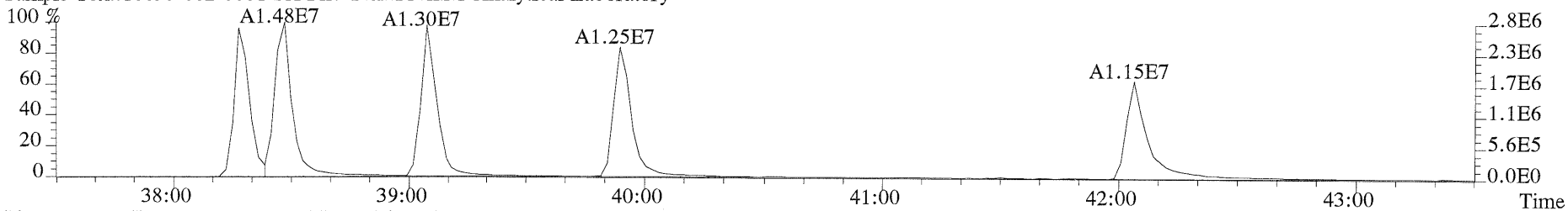
File:18AUG16Z #1-411 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:7 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



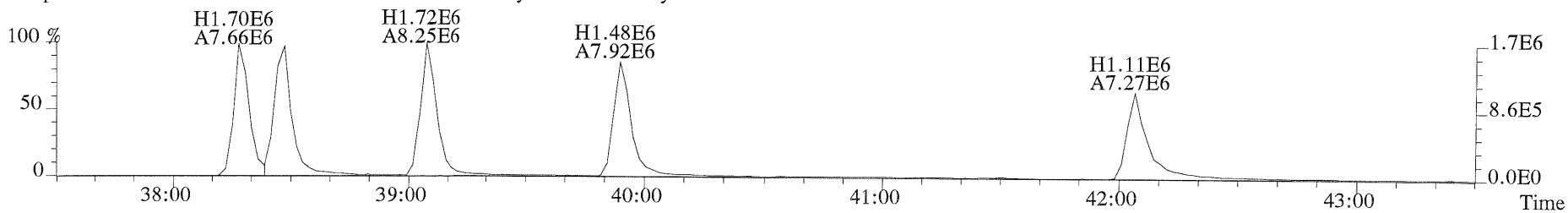
File:18AUG16Z #1-411 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:7 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



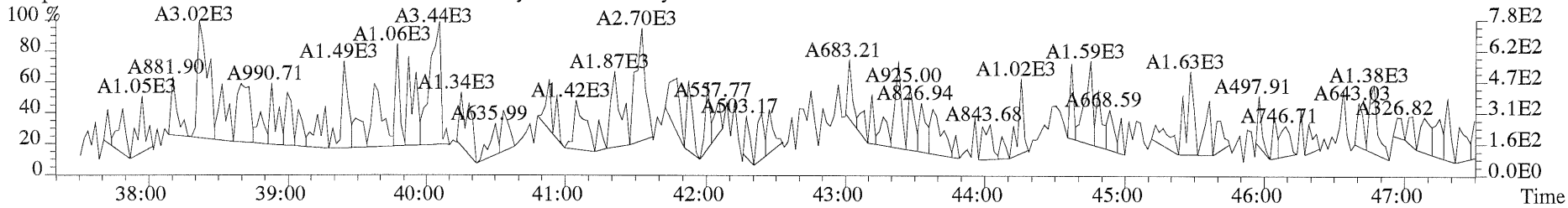
File:18AUG16Z #1-411 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:7 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



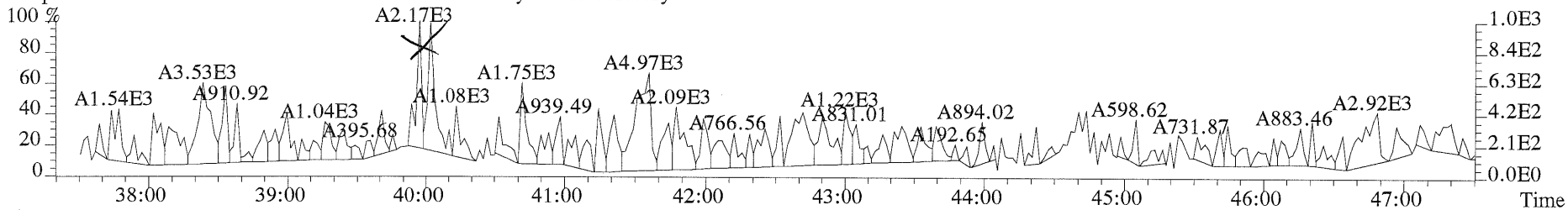
File:18AUG16Z #1-411 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:7 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



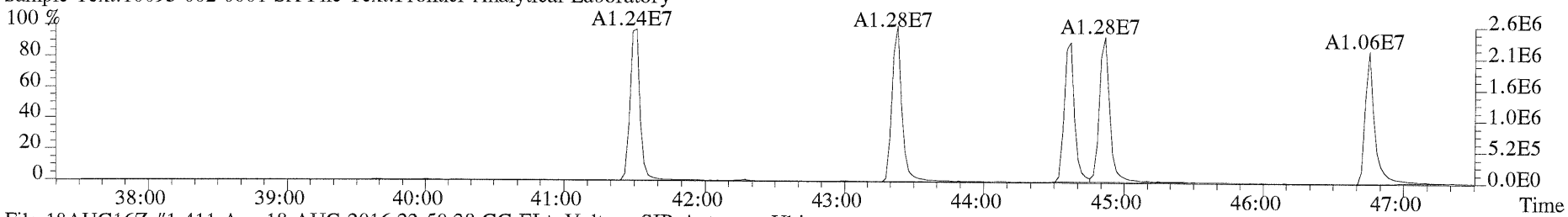
File:18AUG16Z #1-411 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:7 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



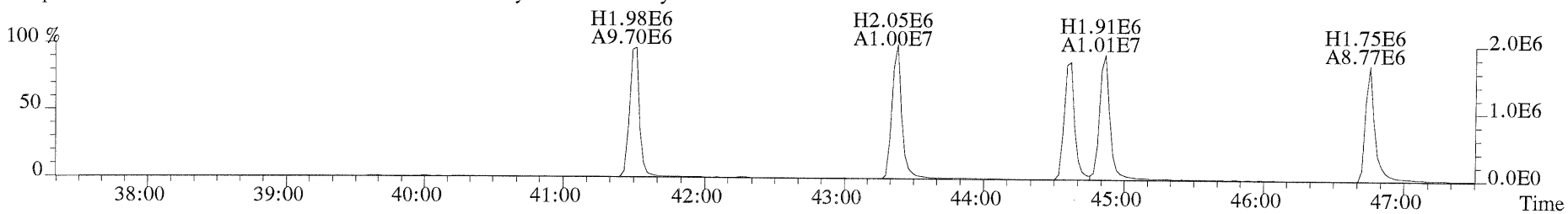
File:18AUG16Z #1-411 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:7 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



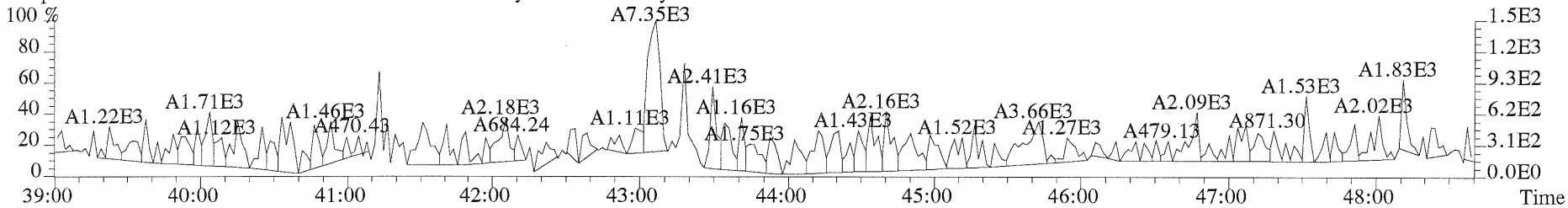
File:18AUG16Z #1-411 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:7 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



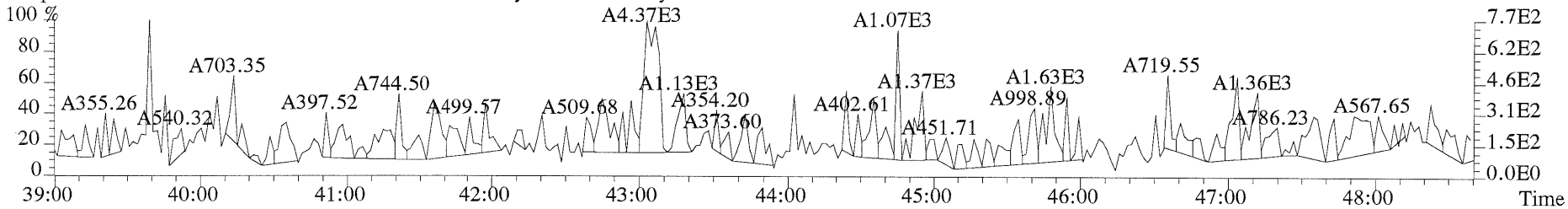
File:18AUG16Z #1-411 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:7 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



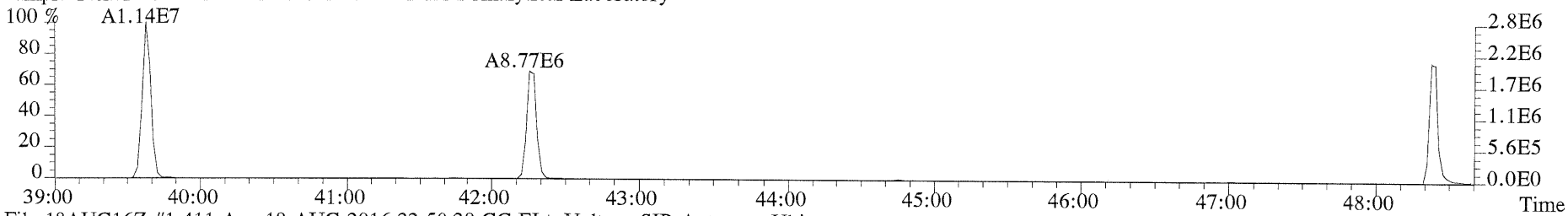
File:18AUG16Z #1-411 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
393.8025 S:7 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



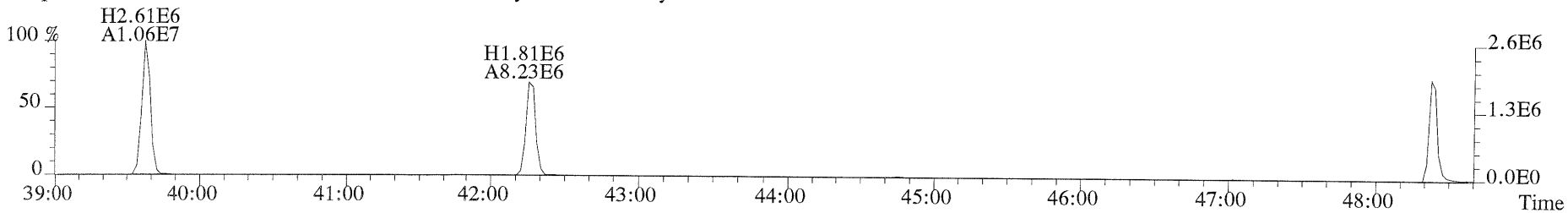
File:18AUG16Z #1-411 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
395.7995 S:7 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



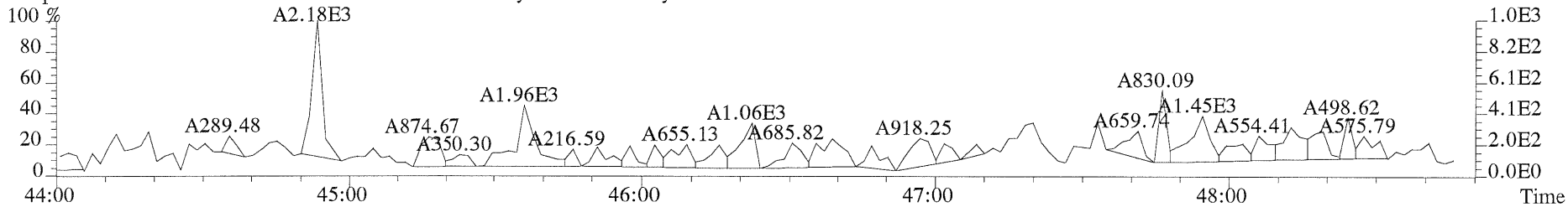
File:18AUG16Z #1-411 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
405.8428 S:7 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



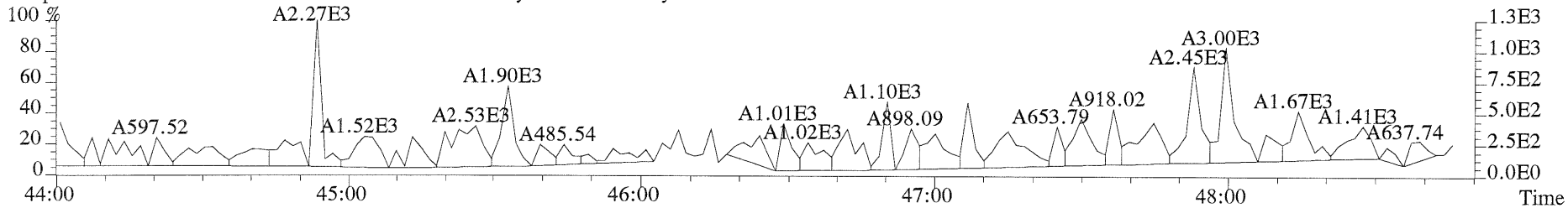
File:18AUG16Z #1-411 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
407.8398 S:7 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



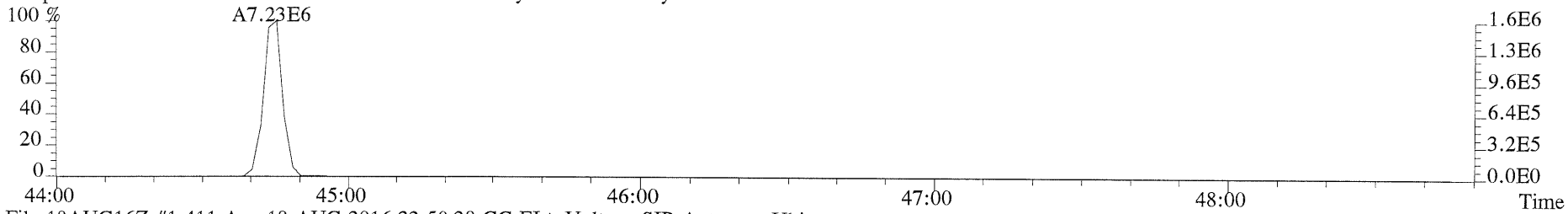
File:18AUG16Z #1-411 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:7 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



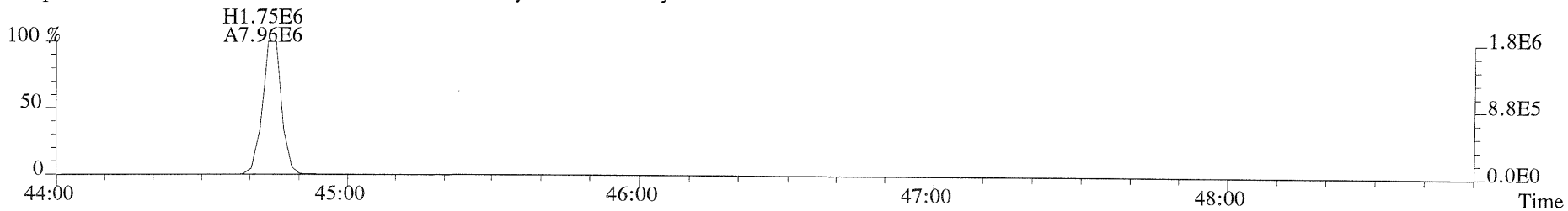
File:18AUG16Z #1-411 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:7 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



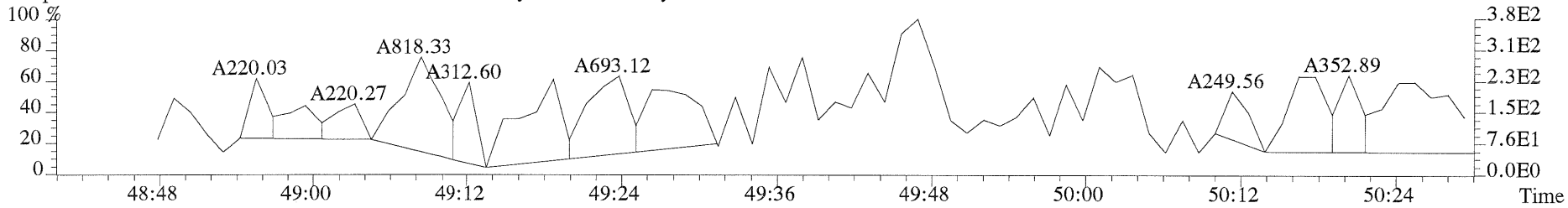
File:18AUG16Z #1-411 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:7 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



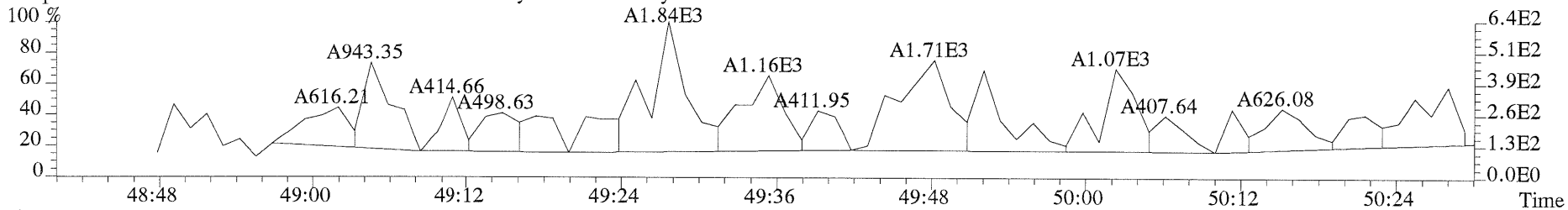
File:18AUG16Z #1-411 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:7 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



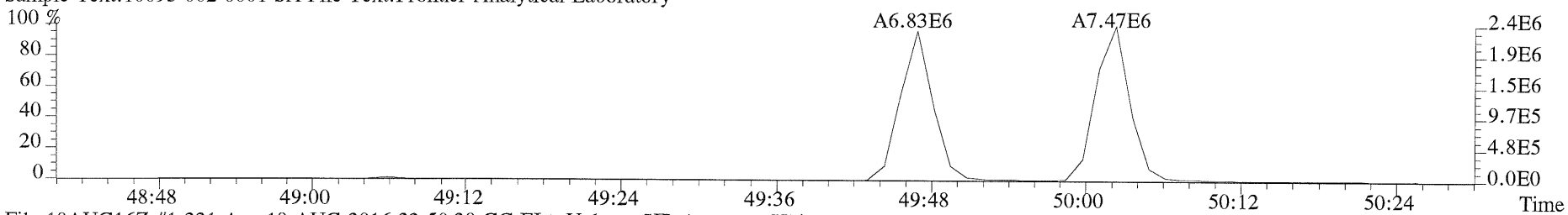
File:18AUG16Z #1-221 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:7 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



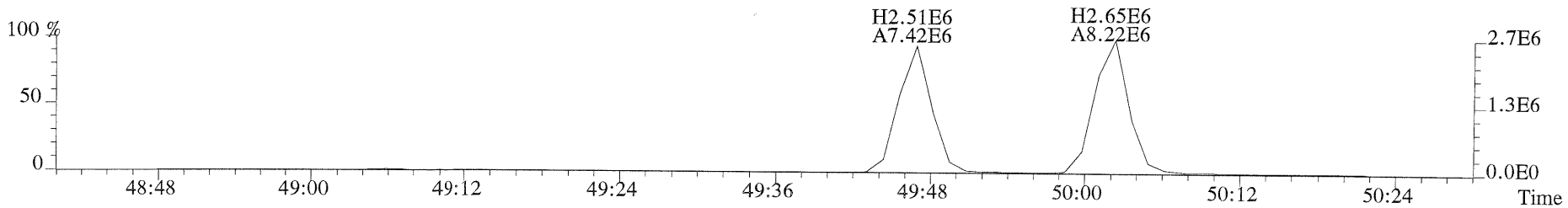
File:18AUG16Z #1-221 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:7 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



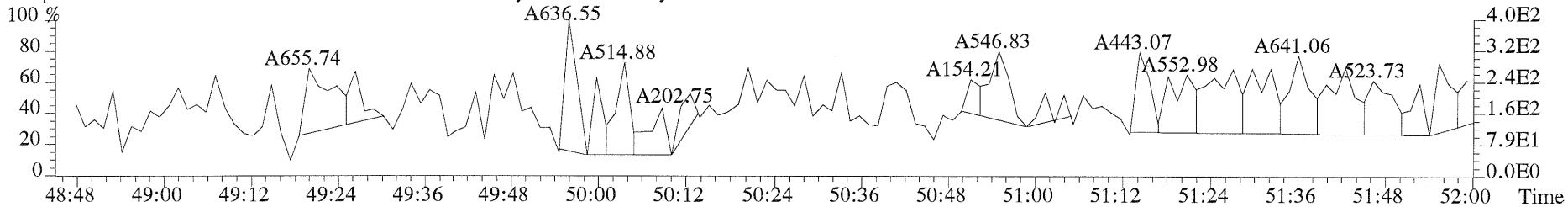
File:18AUG16Z #1-221 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:7 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



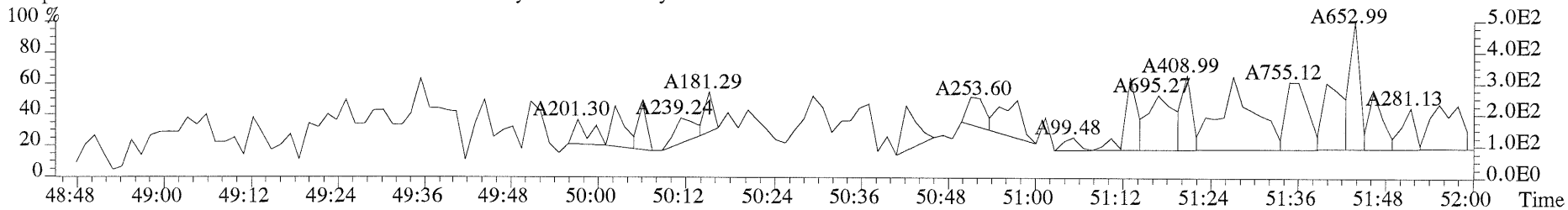
File:18AUG16Z #1-221 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:7 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



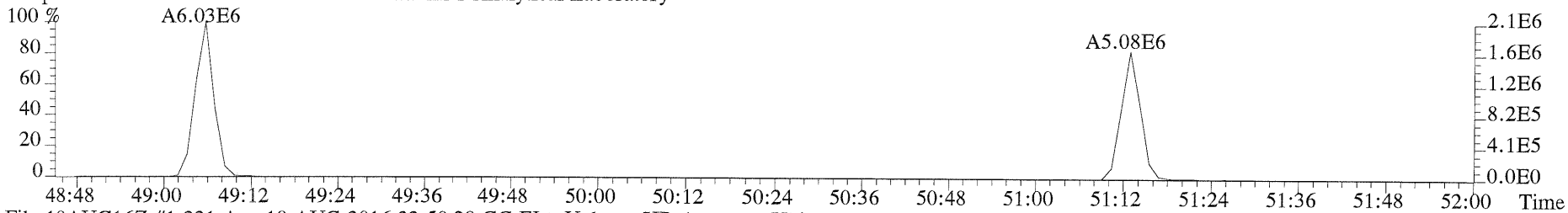
File:18AUG16Z #1-221 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
463.7216 S:7 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



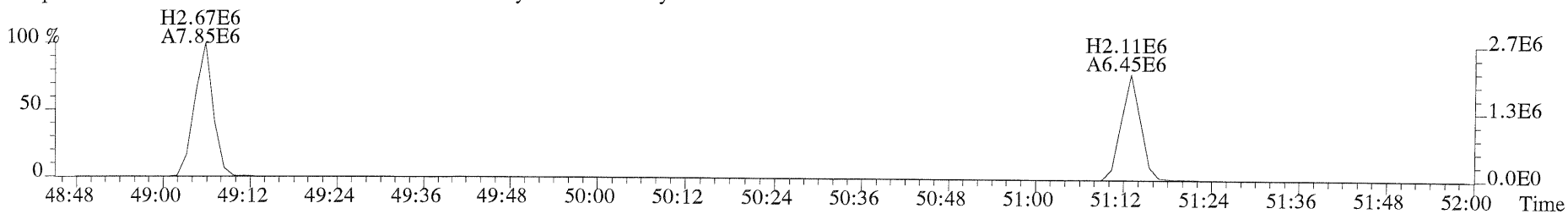
File:18AUG16Z #1-221 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
465.7187 S:7 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



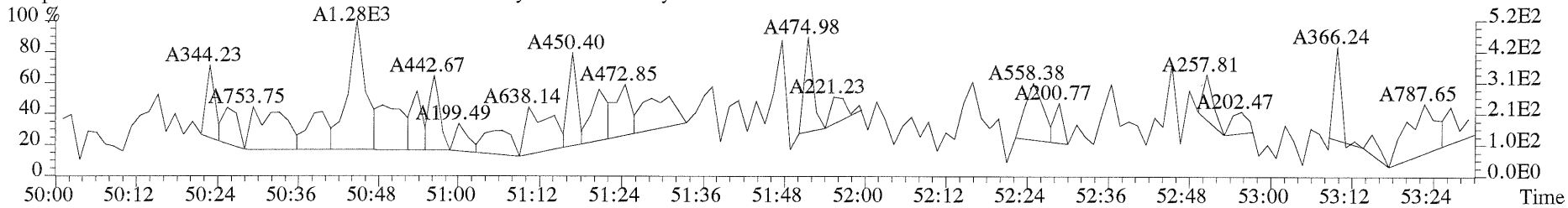
File:18AUG16Z #1-221 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
473.7648 S:7 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



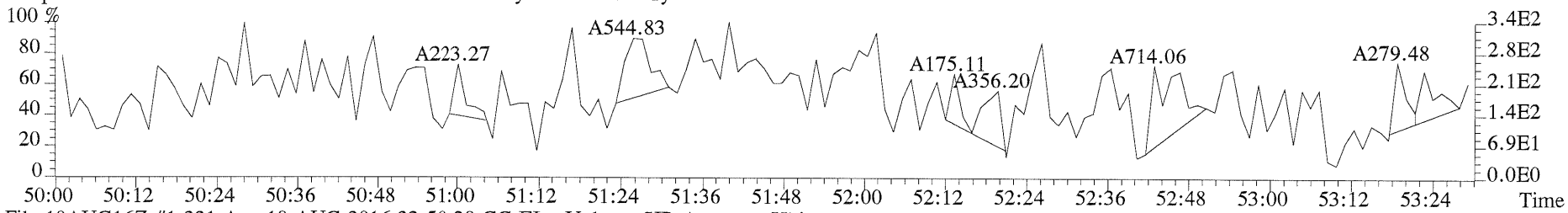
File:18AUG16Z #1-221 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
475.7619 S:7 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



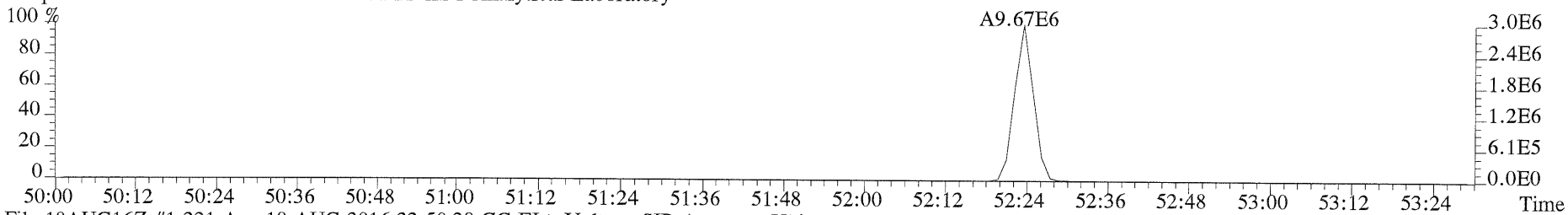
File:18AUG16Z #1-221 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
497.6826 S:7 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



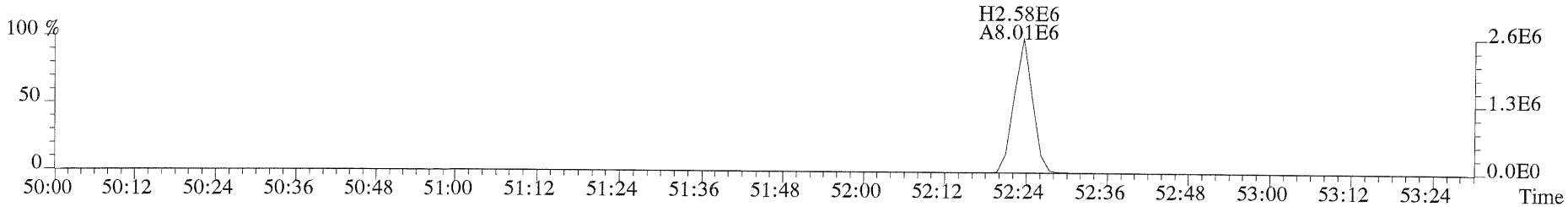
File:18AUG16Z #1-221 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
499.6797 S:7 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



File:18AUG16Z #1-221 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
509.7229 S:7 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



File:18AUG16Z #1-221 Acq:18-AUG-2016 22:50:38 GC EI+ Voltage SIR Autospec-Ultima
511.7199 S:7 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:10095-002-0001-SA File Text:Frontier Analytical Laboratory



FAL ID: 10095-001-D002-SA Filename: 18AUG16M Sam:9 Acquired: 18-AUG-16 16:00:03 ICal: PCDDFAL3-7-20-16
Client ID: LDW-BA-PC-ENRMAT-SAND ConCal: ST081816M1 EndCal: ST081816M2
Results: 10095 GC Golumn: DB5MS Amount: 5.010 NATO 1989 Tox: 0.00289
Instrument ID: FAL3 WHO 1998 Tox: 0.000289 WHO 2005 Tox: 0.000866 .000867 8/24/16

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	*	* n	NotFnd	1.16	*		2.50	688	824	0.167
1,2,3,7,8-PeCDD	*	* n	NotFnd	1.00	*		2.50	1270	817	0.359
1,2,3,4,7,8-HxCDD	*	* n	NotFnd	1.08	*		2.50	1520	688	0.478
1,2,3,6,7,8-HxCDD	*	* n	NotFnd	1.08	*		2.50	1520	688	0.529
1,2,3,7,8,9-HxCDD	*	* n	NotFnd	1.12	*		2.50	1520	688	0.488
1,2,3,4,6,7,8-HpCDD	*	* n	NotFnd	1.04	*		2.50	1010	811	0.648
OCDD	1.12e+05	0.84 y	49:48	1.05	2.89	J	2.50	-	-	*
2,3,7,8-TCDF	*	* n	NotFnd	1.11	*		2.50	953	790	0.121
1,2,3,7,8-PeCDF	*	* n	NotFnd	0.96	*		2.50	1170	985	0.245
2,3,4,7,8-PeCDF	*	* n	NotFnd	0.95	*		2.50	1170	985	0.243
1,2,3,4,7,8-HxCDF	*	* n	NotFnd	1.11	*		2.50	732	514	0.183
1,2,3,6,7,8-HxCDF	*	* n	NotFnd	1.07	*		2.50	732	514	0.186
2,3,4,6,7,8-HxCDF	*	* n	NotFnd	1.04	*		2.50	732	514	0.216
1,2,3,7,8,9-HxCDF	*	* n	NotFnd	1.03	*		2.50	732	514	0.291
1,2,3,4,6,7,8-HpCDF	*	* n	NotFnd	1.30	*		2.50	744	625	0.266
1,2,3,4,7,8,9-HpCDF	*	* n	NotFnd	1.23	*		2.50	744	625	0.415
OCDF	*	* n	NotFnd	0.89	*		2.50	490	489	0.531
										Rec
13C-2,3,7,8-TCDD	3.72e+07	0.80 y	27:27	0.98	407					102
13C-1,2,3,7,8-PeCDD	3.13e+07	1.59 y	33:20	0.90	374					93.6
13C-1,2,3,4,7,8-HxCDD	2.27e+07	1.26 y	38:41	0.88	404					101
13C-1,2,3,6,7,8-HxCDD	2.43e+07	1.27 y	38:51	0.96	395					99.0
13C-1,2,3,4,6,7,8-HpCDD	1.92e+07	1.04 y	44:16	0.83	363					90.9
13C-OCDD	2.92e+07	0.91 y	49:47	0.66	687					86.0
13C-2,3,7,8-TCDF	5.86e+07	0.81 y	26:43	1.01	386					96.6
13C-1,2,3,7,8-PeCDF	4.86e+07	1.57 y	31:35	0.92	350					87.6
13C-2,3,4,7,8-PeCDF	4.76e+07	1.55 y	32:57	0.91	347					86.9
13C-1,2,3,4,7,8-HxCDF	3.33e+07	0.53 y	37:17	1.26	412					103
13C-1,2,3,6,7,8-HxCDF	3.89e+07	0.52 y	37:29	1.46	414					104
13C-2,3,4,6,7,8-HxCDF	3.45e+07	0.52 y	38:27	1.32	406					102
13C-1,2,3,7,8,9-HxCDF	2.92e+07	0.53 y	39:55	1.15	395					99.0
13C-1,2,3,4,6,7,8-HpCDF	2.74e+07	0.45 y	42:21	0.91	469					117
13C-1,2,3,4,7,8,9-HpCDF	2.07e+07	0.47 y	45:14	0.76	426					107
13C-OCDF	3.99e+07	0.91 y	50:14	0.93	666					83.4
37Cl-2,3,7,8-TCDD	1.25e+07		27:29	0.90	148					92.5
13C-1,2,3,4-TCDD	3.72e+07	0.80 y	26:49	-	13.9					
13C-1,2,3,4-TCDF	6.02e+07	0.80 y	25:32	-	15.7					
13C-1,2,3,7,8,9-HxCDD	2.56e+07	1.29 y	39:18	-	11.7					
							Fac	Noise-1	Noise-2	DL	#Hom
Total Tetra-Dioxins	6.93e+04		25:38	1.16	0.641	J	2.50	-	-	*	1
Total Penta-Dioxins	*		NotFnd	1.00	*		2.50	1270	817	0.359	0
Total Hexa-Dioxins	*		NotFnd	1.09	*		2.50	1520	688	0.529	0
Total Hepta-Dioxins	*		NotFnd	1.04	*		2.50	1010	811	0.648	0
Total Tetra-Furans	*		NotFnd	1.11	*		2.50	953	790	0.121	0
1st Fn. Tot Penta-Furans	*		NotFnd	0.95	*		2.50	1170	985	0.245 PeCDF	0
Total Penta-Furans	*		NotFnd	0.95	*		2.50	1170	985	0.245 *	0
Total Hexa-Furans	*		NotFnd	1.06	*		2.50	732	514	0.291	0
Total Hepta-Furans	*		NotFnd	1.27	*		2.50	744	625	0.415	0

Analyst: _____ Date: 8/23/16

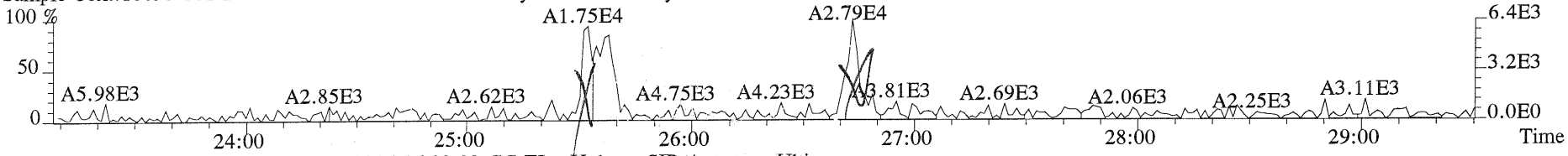
Totals class: Total Tetra-Dioxins Entry #: 38

Run: 16 File: 18AUG16M S: 9 I: 1 F: 1
Acquired: 18-AUG-16 16:00:03

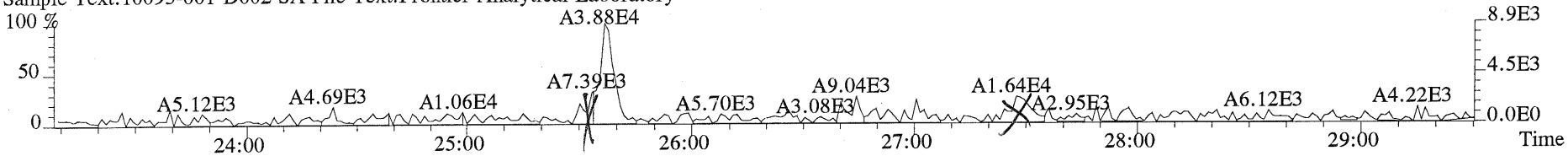
Total Concentration: 0.641 Unnamed Concentration: 0.641

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
25:38	3.05e+04	3.88e+04	0.79 y	6.93e+04	0.641	

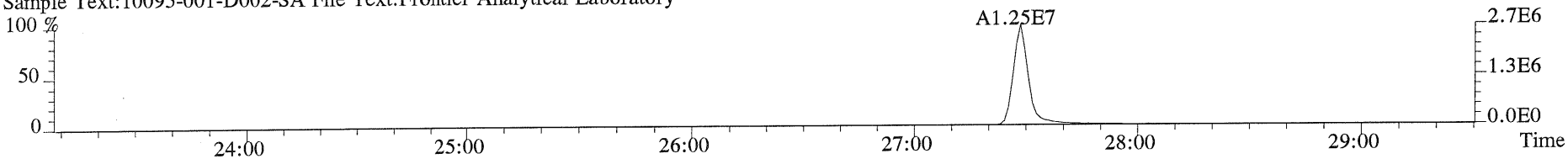
File:18AUG16M #1-399 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



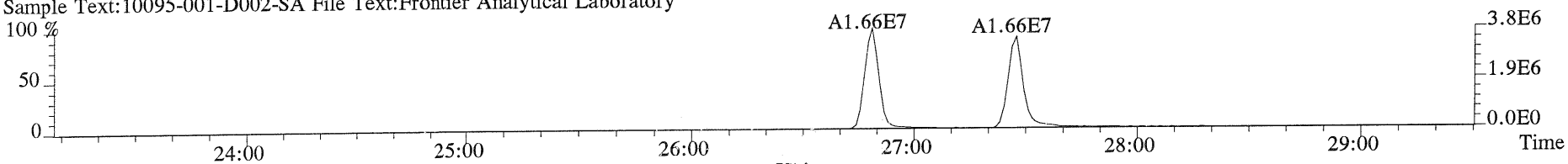
File:18AUG16M #1-399 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



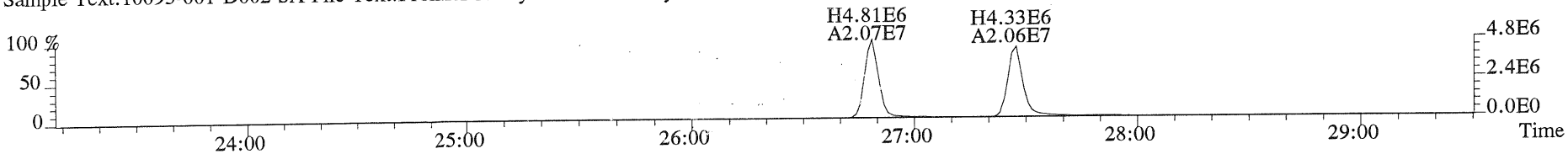
File:18AUG16M #1-399 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



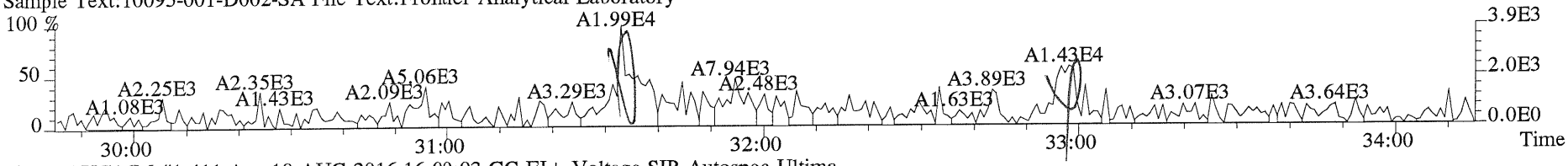
File:18AUG16M #1-399 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



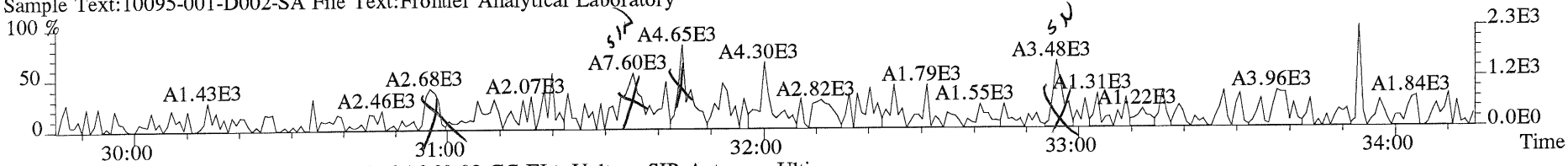
File:18AUG16M #1-399 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



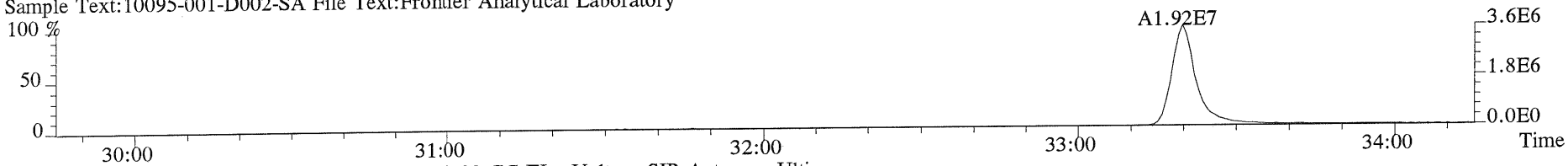
File:18AUG16M #1-411 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



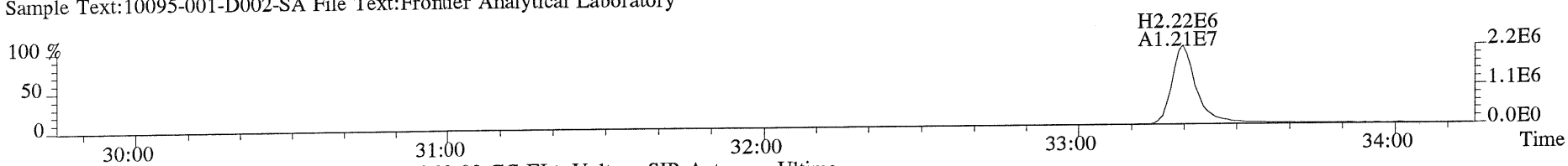
File:18AUG16M #1-411 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



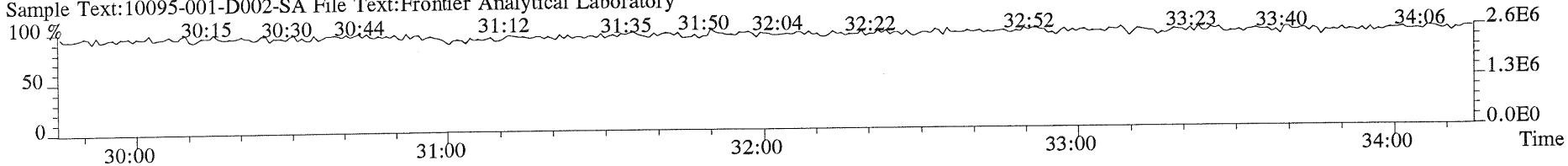
File:18AUG16M #1-411 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



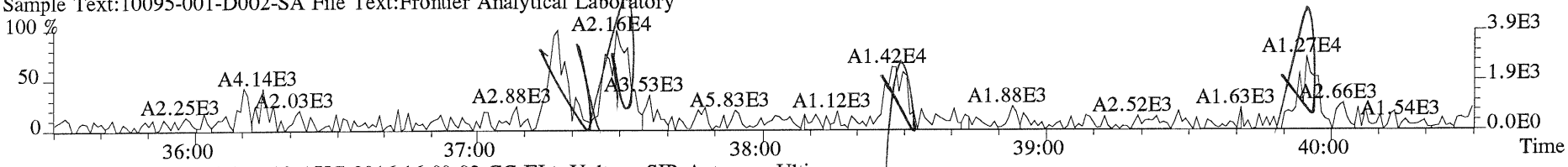
File:18AUG16M #1-411 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



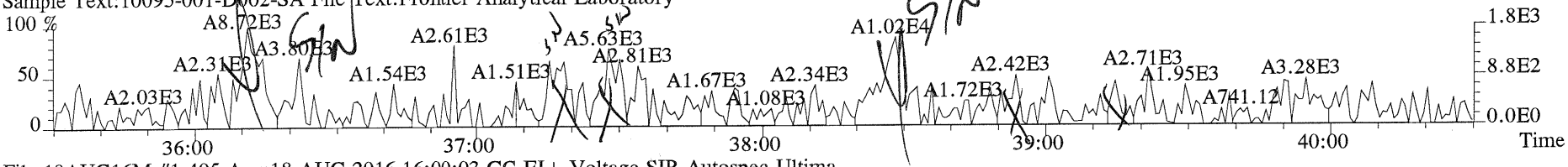
File:18AUG16M #1-411 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:9 F:2 Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



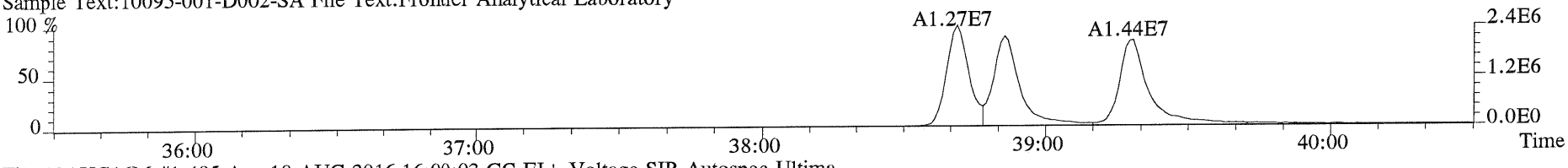
File:18AUG16M #1-495 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



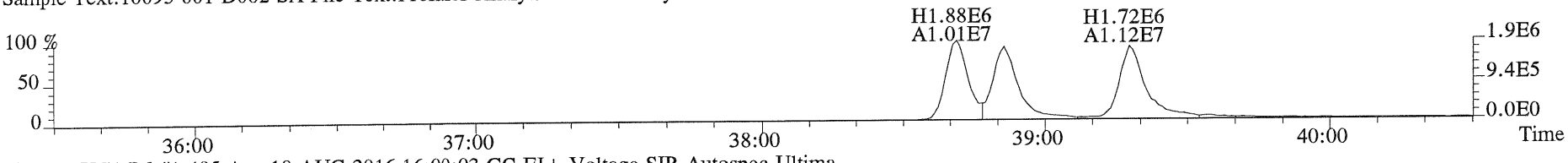
File:18AUG16M #1-495 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



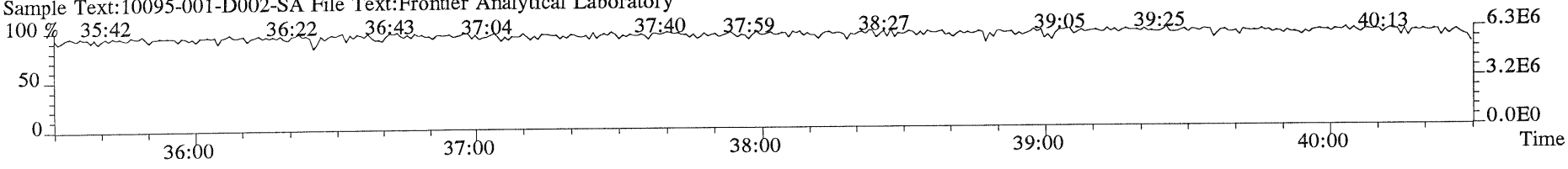
File:18AUG16M #1-495 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



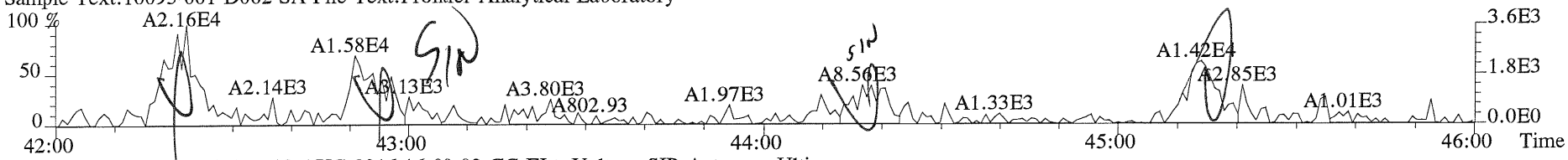
File:18AUG16M #1-495 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



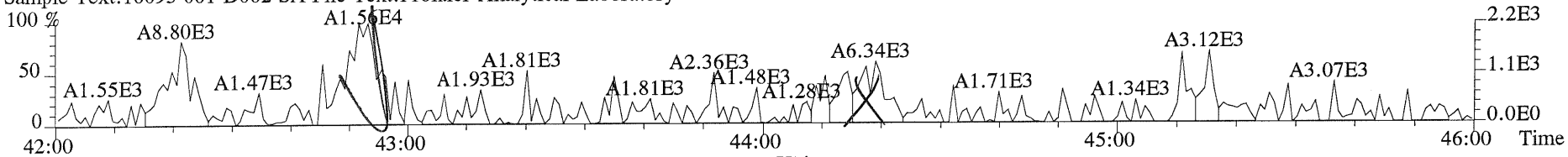
File:18AUG16M #1-495 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:9 F:3 Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



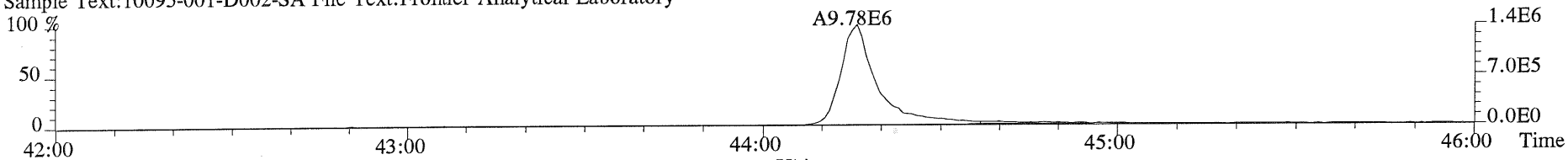
File:18AUG16M #1-521 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



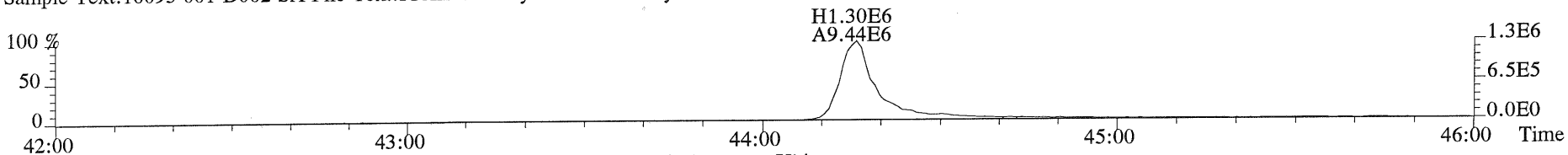
File:18AUG16M #1-521 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



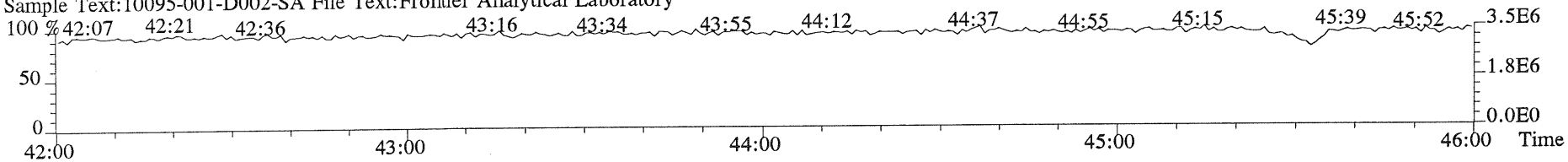
File:18AUG16M #1-521 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



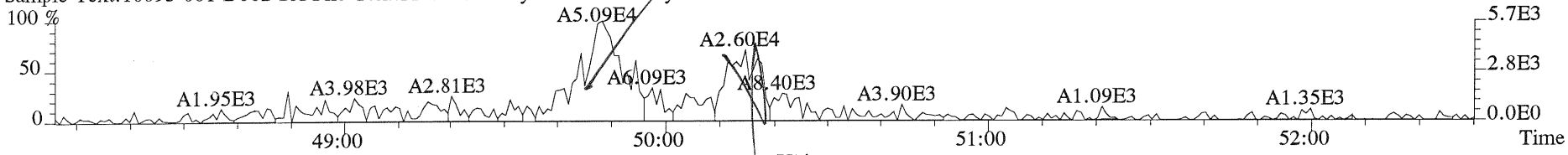
File:18AUG16M #1-521 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



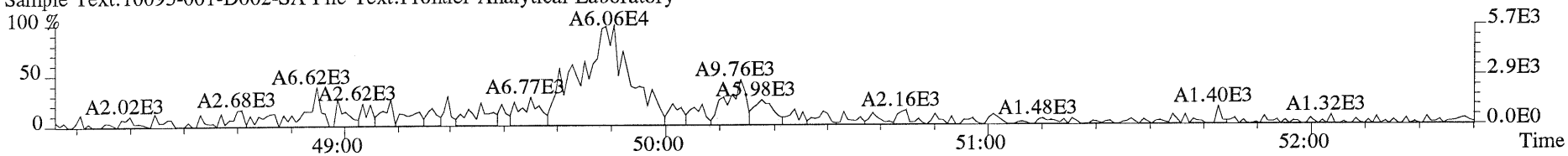
File:18AUG16M #1-521 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:9 F:4 Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



File:18AUG16M #1-362 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
457.7377 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:10095-001-D002-SA File Text:Frontier Analytical Laboratory

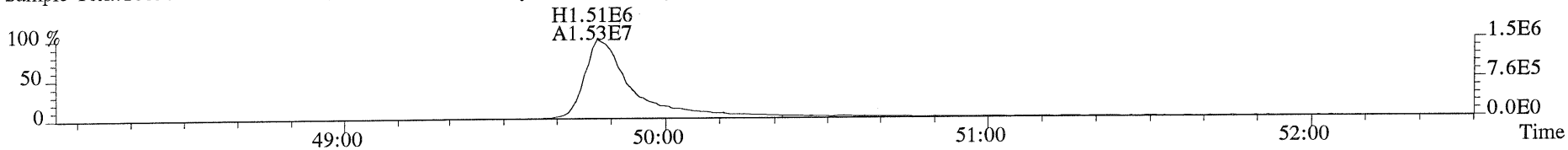


File:18AUG16M #1-362 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory

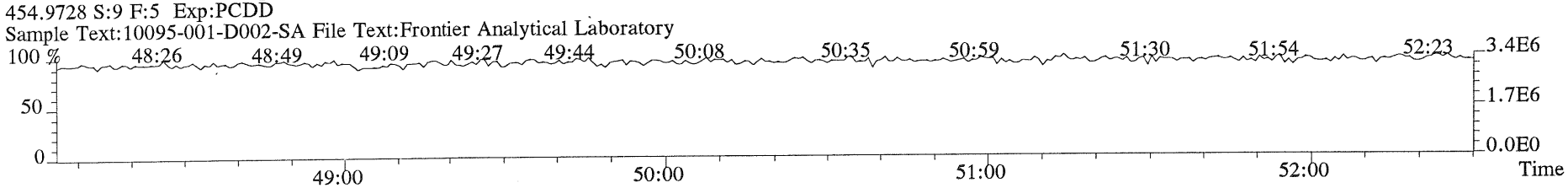


File:18AUG16M #1-362 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory

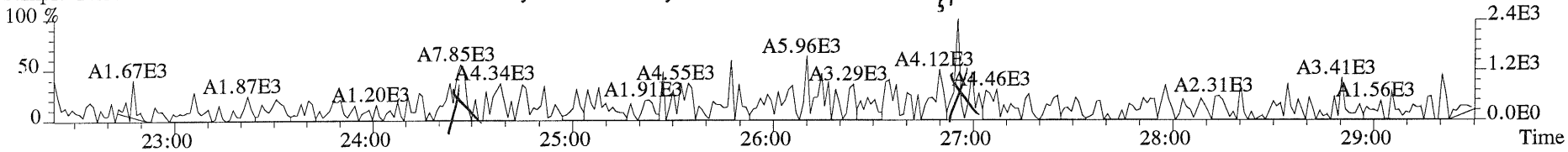
File:18AUG16M #1-362 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



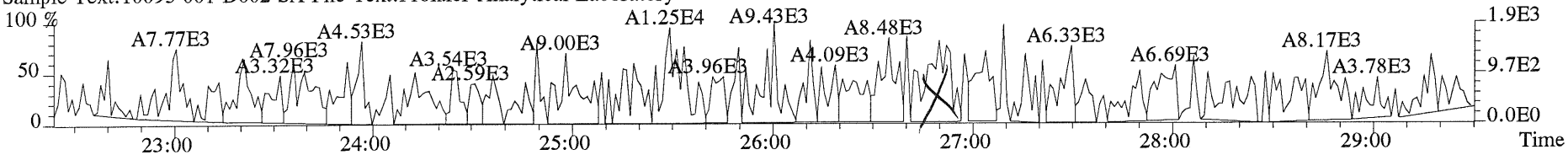
File:18AUG16M #1-362 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:9 F:5 Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



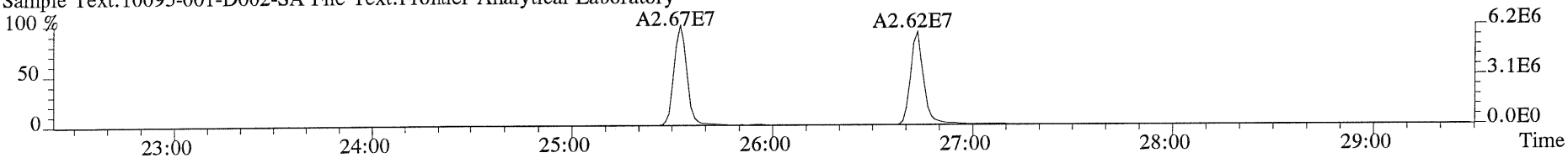
File:18AUG16M #1-399 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



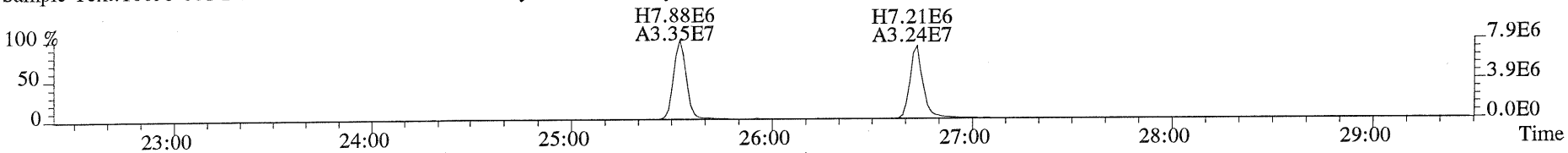
File:18AUG16M #1-399 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



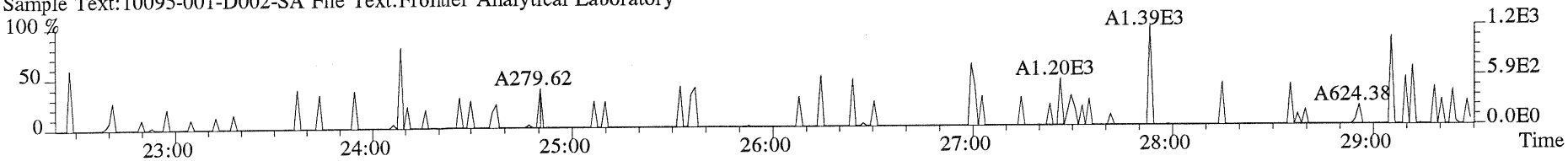
File:18AUG16M #1-399 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



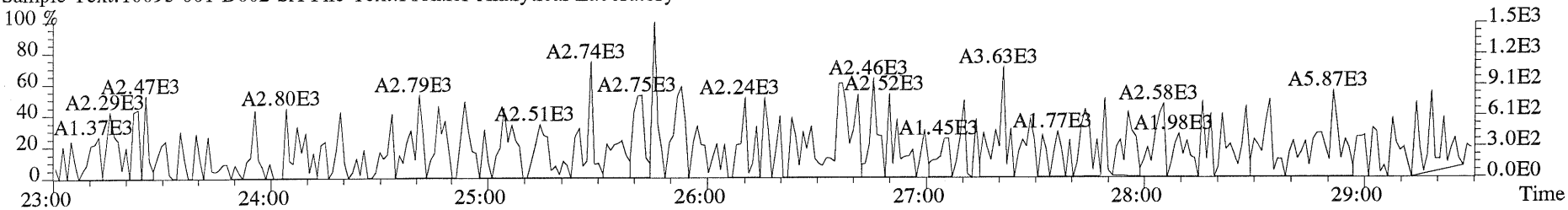
File:18AUG16M #1-399 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



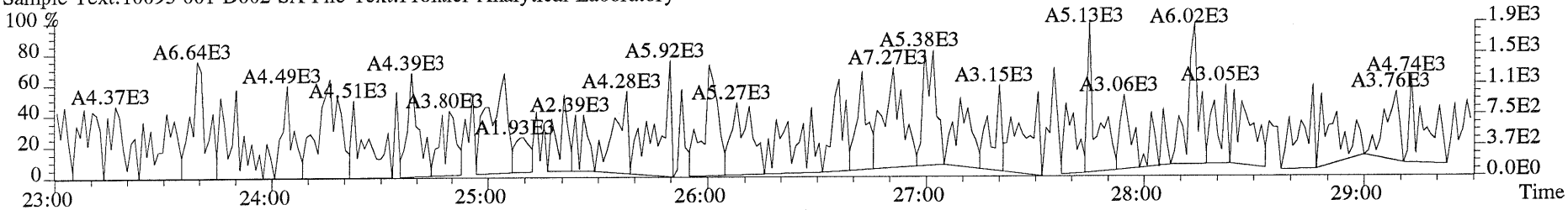
File:18AUG16M #1-399 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



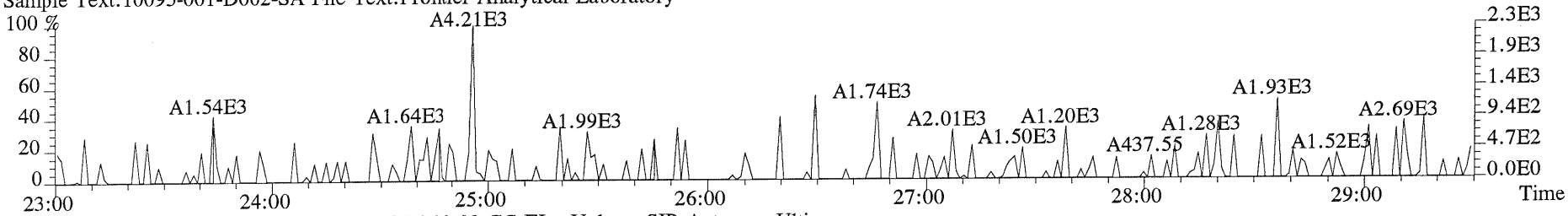
File:18AUG16M #1-399 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



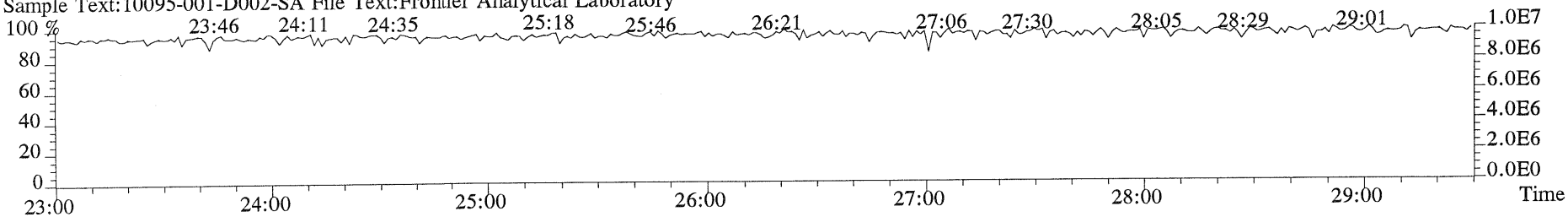
File:18AUG16M #1-399 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



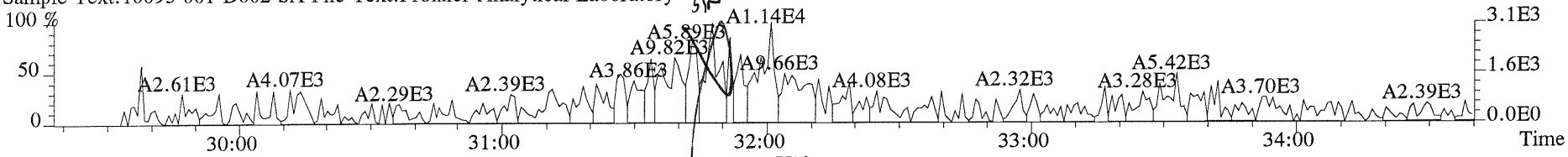
File:18AUG16M #1-399 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



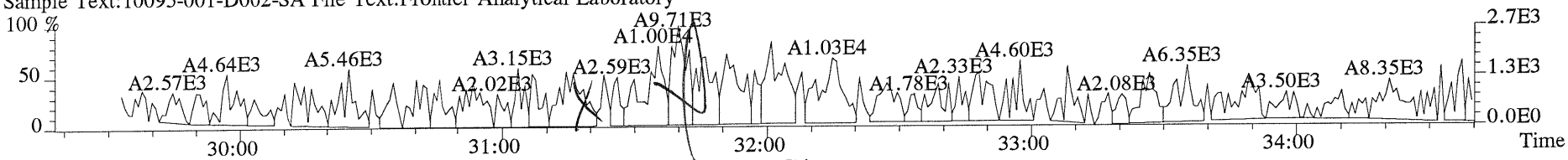
File:18AUG16M #1-399 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:9 Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



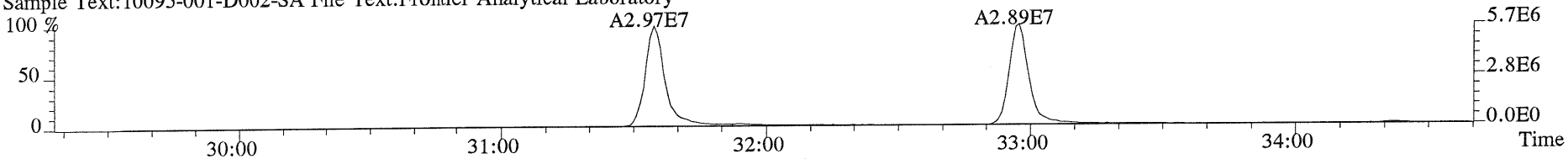
File:18AUG16M #1-411 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



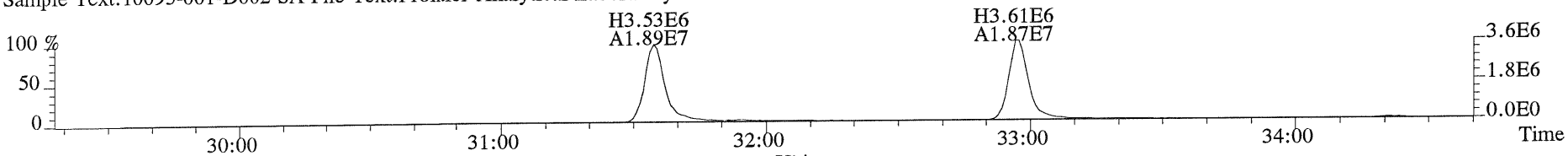
File:18AUG16M #1-411 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



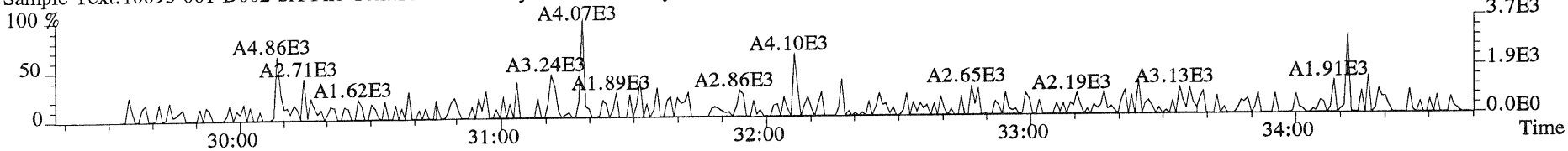
File:18AUG16M #1-411 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



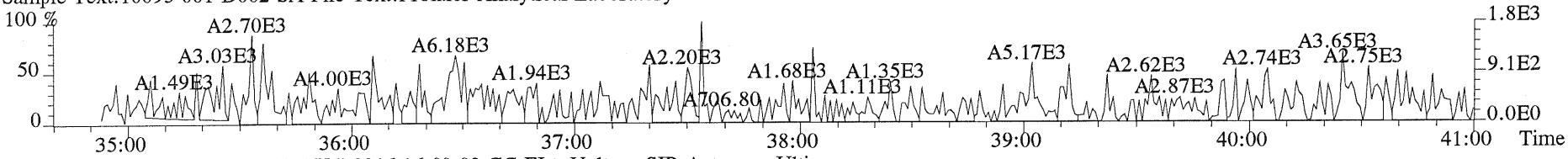
File:18AUG16M #1-411 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



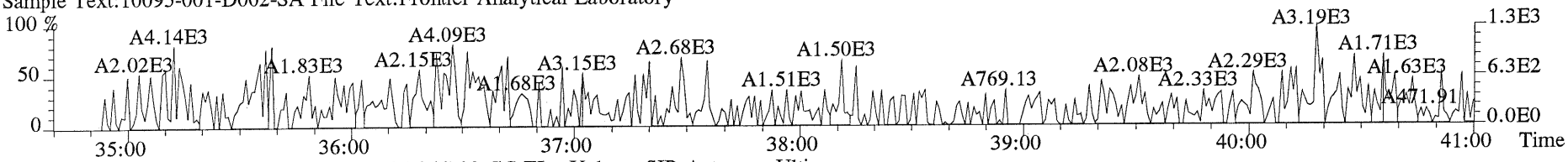
File:18AUG16M #1-411 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



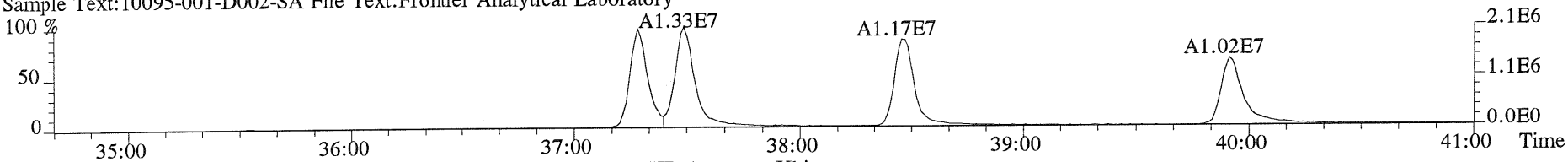
File:18AUG16M #1-495 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



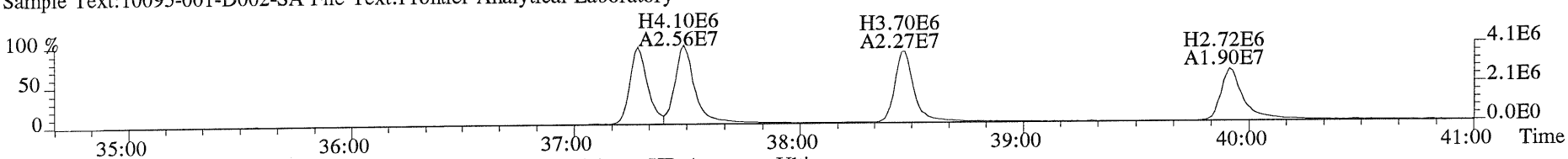
File:18AUG16M #1-495 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



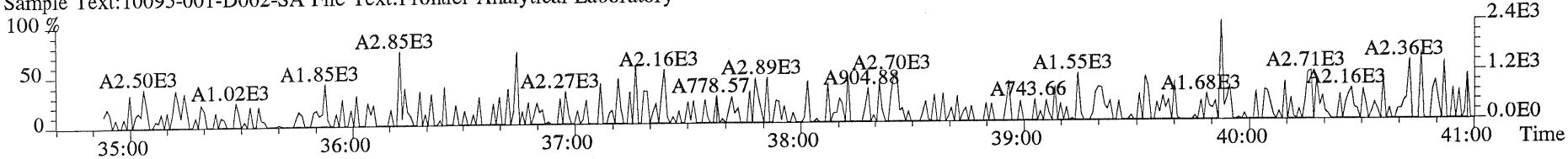
File:18AUG16M #1-495 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



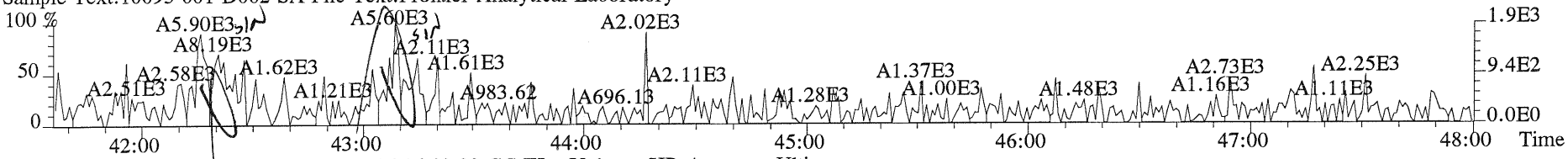
File:18AUG16M #1-495 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



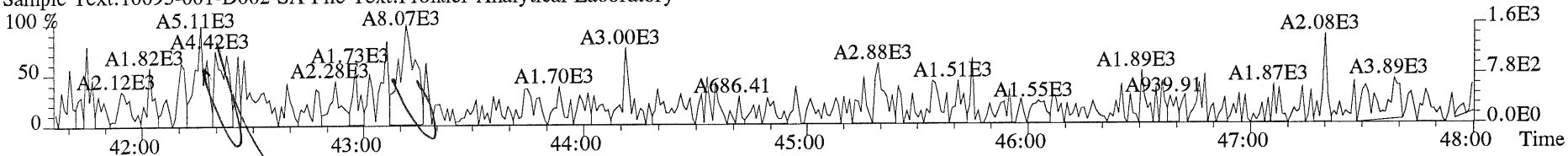
File:18AUG16M #1-495 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



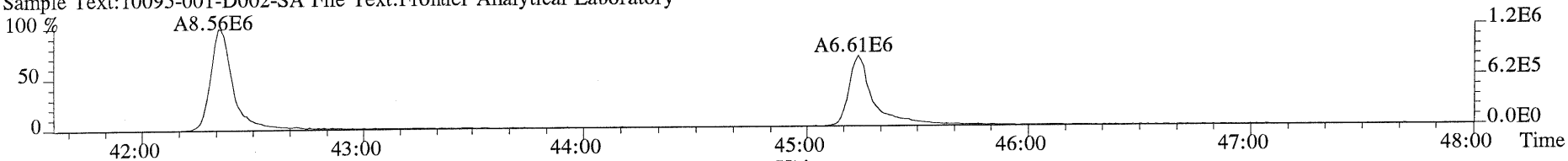
File:18AUG16M #1-521 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



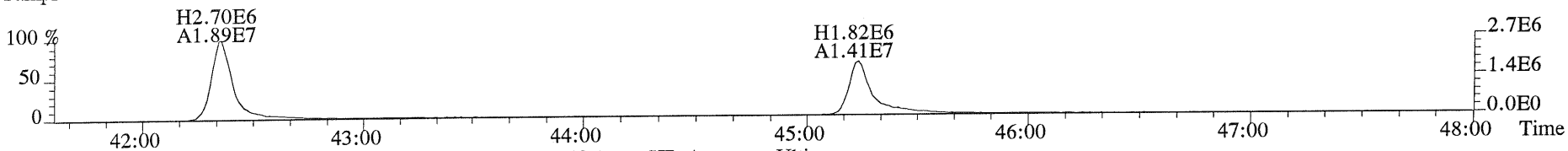
File:18AUG16M #1-521 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



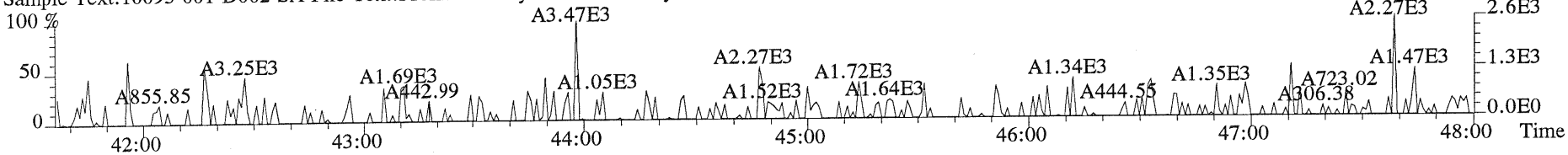
File:18AUG16M #1-521 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



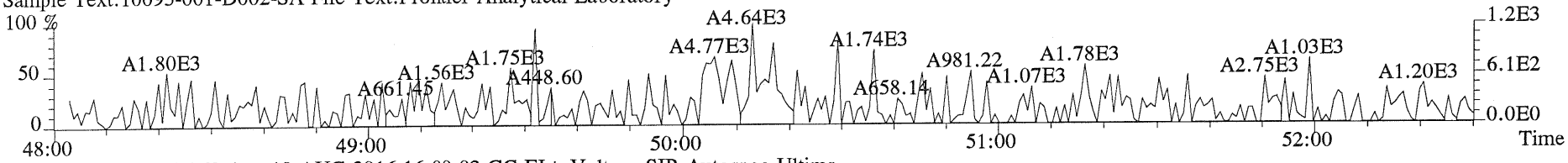
File:18AUG16M #1-521 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



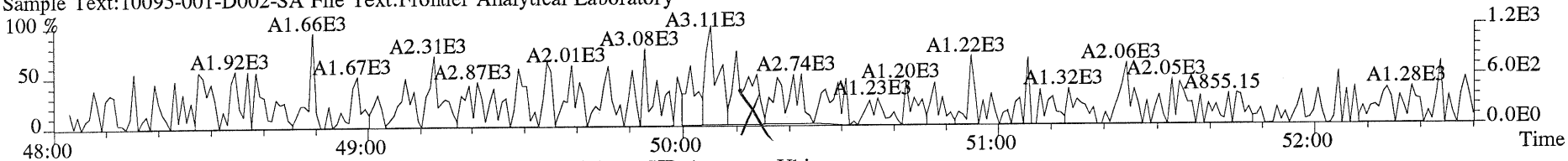
File:18AUG16M #1-521 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:9 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



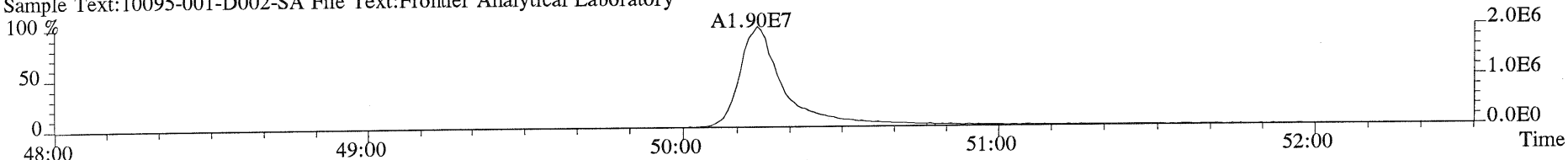
File:18AUG16M #1-362 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



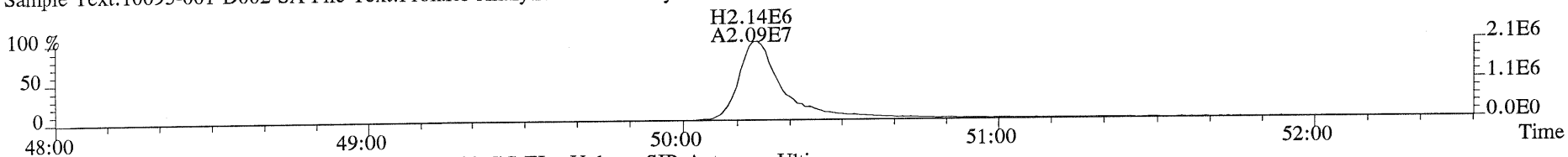
File:18AUG16M #1-362 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



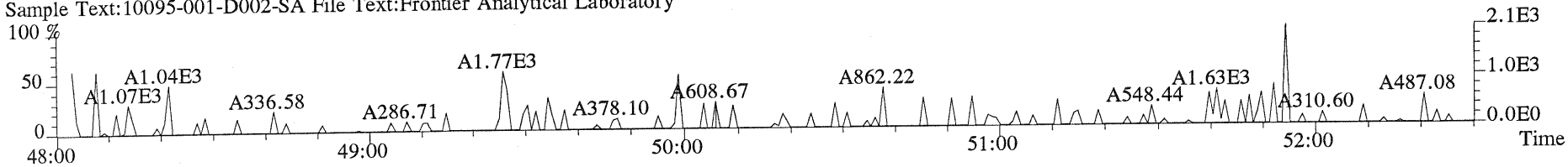
File:18AUG16M #1-362 Acq:18-AUG-2016 16:00:03 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-001-D002-SA File Text:Frontier Analytical Laboratory



File:18AUG16M #1-362 Acq:18-AUG-2016 16:00:03 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:10095-001-D002-SA File Text:Frontier Analytical Laboratory



File:18AUG16M #1-362 Acq:18-AUG-2016 16:00:03 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:10095-001-D002-SA File Text:Frontier Analytical Laboratory



FAL ID: 10095-002-D002-SA Filename: 18AUG16M Sam:10 Acquired: 18-AUG-16 16:54:58 ICal: PCDDFAL3-7-20-16
Client ID: LDW-BA-PC-ENRMAT-GRUSAND ConCal: ST081816M1 EndCal: ST081816M2
Results: 10095 GC Golumn: DB5MS Amount: 5.060 NATO 1989 Tox: 0.00201
Instrument ID: FAL3 WHO 1998 Tox: 0.000201 WHO 2005 Tox: 0.000603

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	*	* n	NotFnd	1.16	*		2.50	660	760	0.175
1,2,3,7,8-PeCDD	*	* n	NotFnd	1.00	*		2.50	989	660	0.310
1,2,3,4,7,8-HxCDD	*	* n	NotFnd	1.08	*		2.50	1200	645	0.442
1,2,3,6,7,8-HxCDD	*	* n	NotFnd	1.08	*		2.50	1200	645	0.463
1,2,3,7,8,9-HxCDD	*	* n	NotFnd	1.12	*		2.50	1200	645	0.438
1,2,3,4,6,7,8-HpCDD	*	* n	NotFnd	1.04	*		2.50	702	860	0.588
OCDD	7.62e+04	0.88 y	49:48	1.05	2.01	J	2.50	-	-	*
2,3,7,8-TCDF	*	* n	NotFnd	1.11	*		2.50	516	952	0.110
1,2,3,7,8-PeCDF	*	* n	NotFnd	0.96	*		2.50	1430	846	0.282
2,3,4,7,8-PeCDF	*	* n	NotFnd	0.95	*		2.50	1430	846	0.288
1,2,3,4,7,8-HxCDF	*	* n	NotFnd	1.11	*		2.50	718	742	0.226
1,2,3,6,7,8-HxCDF	*	* n	NotFnd	1.07	*		2.50	718	742	0.237
2,3,4,6,7,8-HxCDF	*	* n	NotFnd	1.04	*		2.50	718	742	0.259
1,2,3,7,8,9-HxCDF	*	* n	NotFnd	1.03	*		2.50	718	742	0.353
1,2,3,4,6,7,8-HpCDF	*	* n	NotFnd	1.30	*		2.50	815	626	0.283
1,2,3,4,7,8,9-HpCDF	*	* n	NotFnd	1.23	*		2.50	815	626	0.461
OCDF	*	* n	NotFnd	0.89	*		2.50	399	559	0.532
										Rec
13C-2,3,7,8-TCDD	3.46e+07	0.80 y	27:27	0.98	384					97.1
13C-1,2,3,7,8-PeCDD	2.85e+07	1.61 y	33:20	0.90	346					87.4
13C-1,2,3,4,7,8-HxCDD	2.14e+07	1.25 y	38:41	0.88	396					100
13C-1,2,3,6,7,8-HxCDD	2.27e+07	1.25 y	38:51	0.96	384					97.2
13C-1,2,3,4,6,7,8-HpCDD	1.82e+07	1.03 y	44:15	0.83	358					90.5
13C-OCDD	2.84e+07	0.91 y	49:47	0.66	694					87.8
13C-2,3,7,8-TCDF	5.64e+07	0.80 y	26:42	1.01	387					97.8
13C-1,2,3,7,8-PeCDF	4.55e+07	1.56 y	31:35	0.92	341					86.3
13C-2,3,4,7,8-PeCDF	4.37e+07	1.60 y	32:57	0.91	332					83.9
13C-1,2,3,4,7,8-HxCDF	3.10e+07	0.52 y	37:17	1.26	400					101
13C-1,2,3,6,7,8-HxCDF	3.64e+07	0.52 y	37:29	1.46	404					102
13C-2,3,4,6,7,8-HxCDF	3.19e+07	0.52 y	38:27	1.32	390					98.7
13C-1,2,3,7,8,9-HxCDF	2.71e+07	0.52 y	39:55	1.15	381					96.3
13C-1,2,3,4,6,7,8-HpCDF	2.64e+07	0.44 y	42:21	0.91	470					119
13C-1,2,3,4,7,8,9-HpCDF	1.90e+07	0.50 y	45:14	0.76	408					103
13C-OCDF	3.79e+07	0.92 y	50:13	0.93	658					83.2
37Cl-2,3,7,8-TCDD	1.14e+07		27:29	0.90	137					86.7
13C-1,2,3,4-TCDD	3.64e+07	0.80 y	26:49	-	13.4					
13C-1,2,3,4-TCDF	5.73e+07	0.80 y	25:32	-	14.7					
13C-1,2,3,7,8,9-HxCDD	2.44e+07	1.25 y	39:18	-	11.0					

							Fac	Noise-1	Noise-2	DL	#Hom
Total Tetra-Dioxins	4.57e+04		25:37	1.16	0.450	J	2.50	-	-	*	1
Total Penta-Dioxins	*		NotFnd	1.00	*		2.50	989	660	0.310	0
Total Hexa-Dioxins	*		NotFnd	1.09	*		2.50	1200	645	0.463	0
Total Hepta-Dioxins	*		NotFnd	1.04	*		2.50	702	860	0.588	0
Total Tetra-Furans	*		NotFnd	1.11	*		2.50	516	952	0.110	0
1st Fn. Tot Penta-Furans	*		NotFnd	0.95	*		2.50	1430	846	0.288 PeCDF	0
Total Penta-Furans	*		NotFnd	0.95	*		2.50	1430	846	0.288 *	0
Total Hexa-Furans	*		NotFnd	1.06	*		2.50	718	742	0.353	0
Total Hepta-Furans	*		NotFnd	1.27	*		2.50	815	626	0.461	0

Analyst: _____ Date: 8/23/16

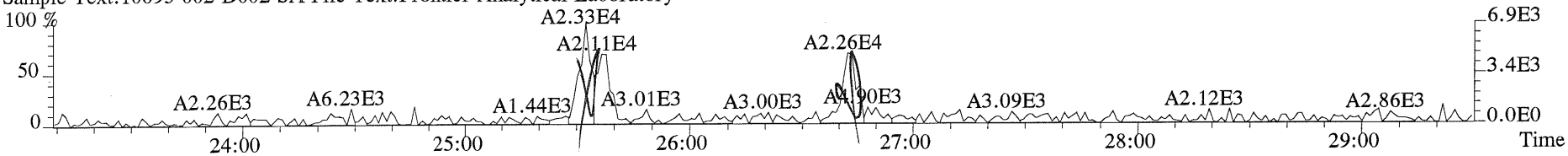
Totals class: Total Tetra-Dioxins Entry #: 38

Run: 17 File: 18AUG16M S: 10 I: 1 F: 1
Acquired: 18-AUG-16 16:54:58

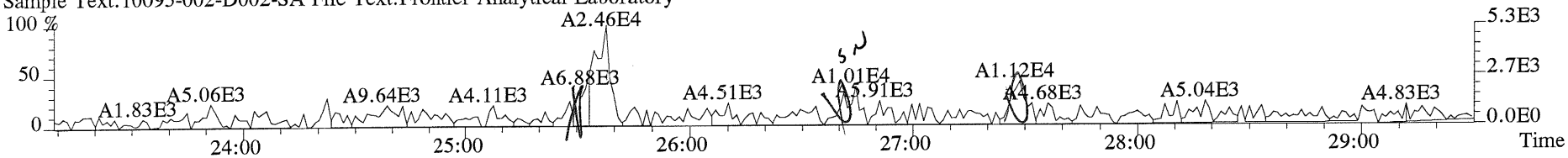
Total Concentration: 0.450 Unnamed Concentration: 0.450

RT	ml Resp	m2 Resp	RA	Resp	Concentration	Name
25:37	2.11e+04	2.46e+04	0.86 y	4.57e+04	0.450	

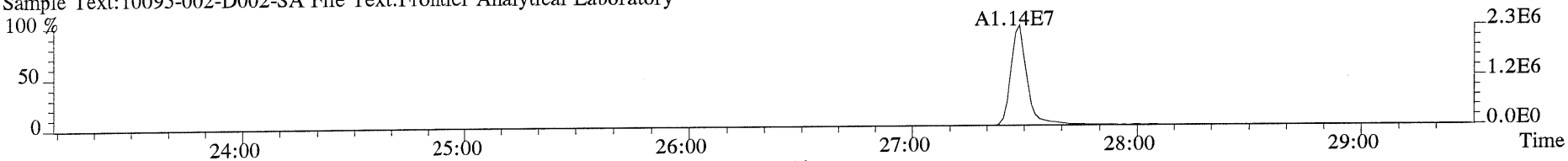
File:18AUG16M #1-399 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



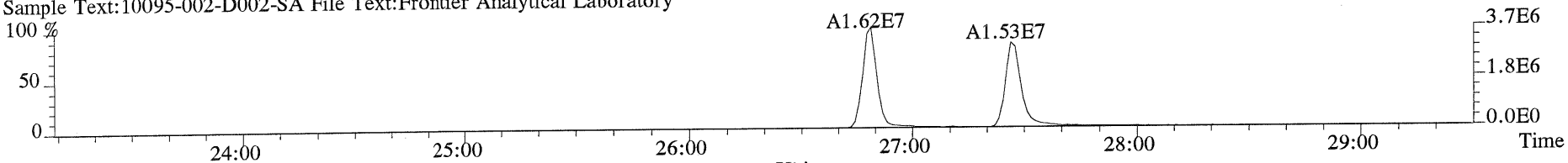
File:18AUG16M #1-399 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



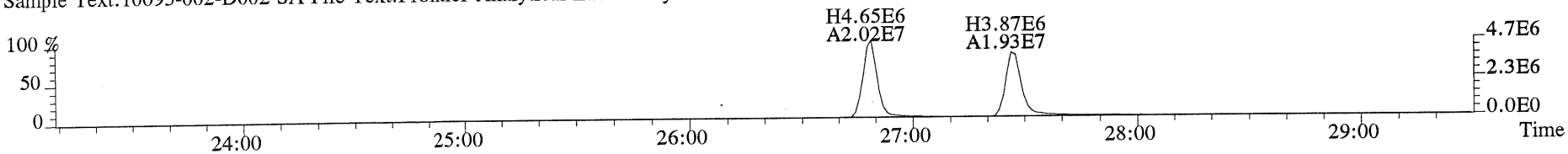
File:18AUG16M #1-399 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



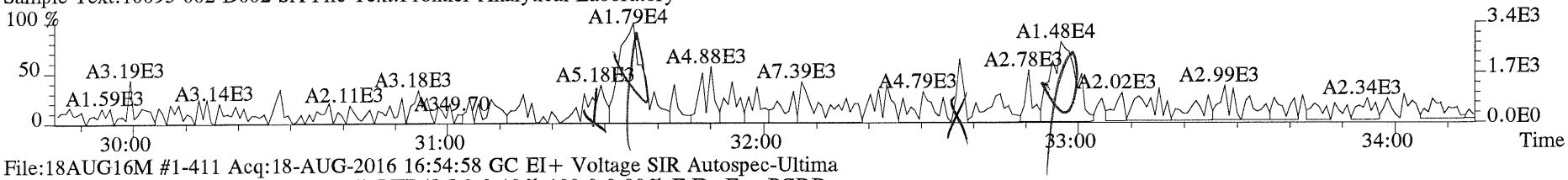
File:18AUG16M #1-399 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



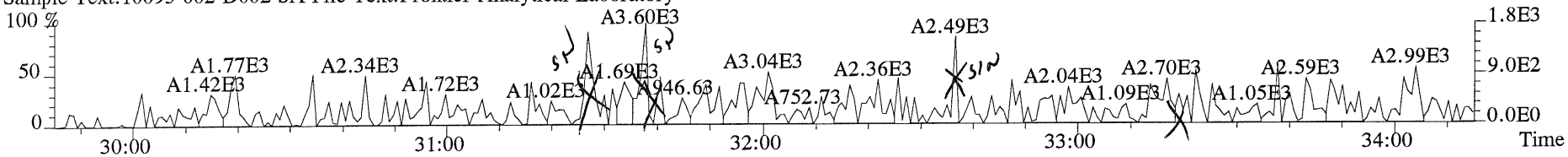
File:18AUG16M #1-399 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



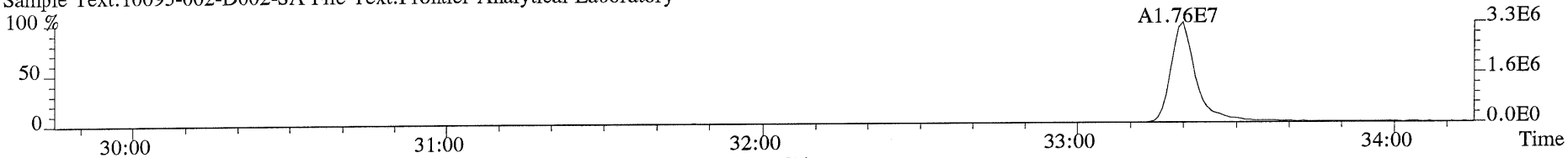
File:18AUG16M #1-411 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



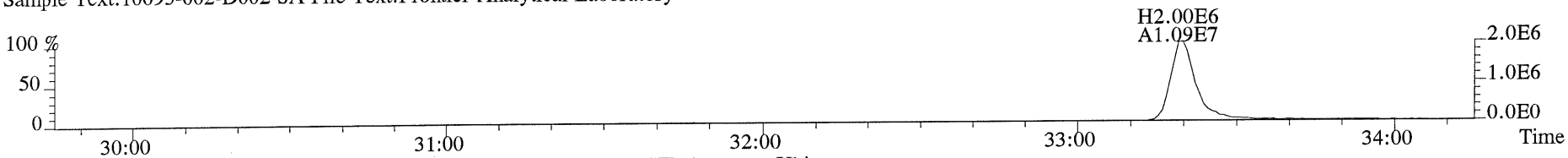
File:18AUG16M #1-411 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



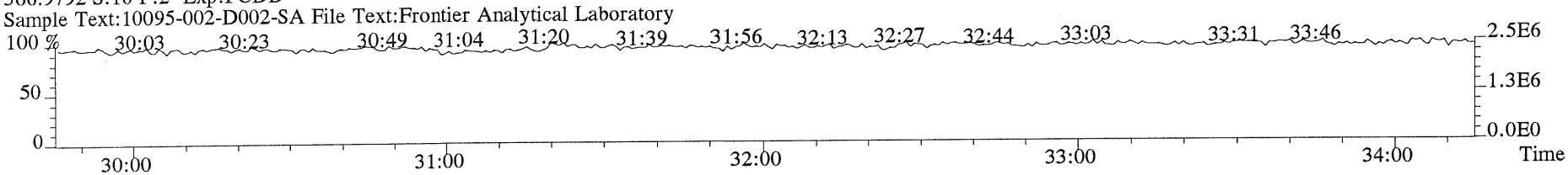
File:18AUG16M #1-411 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



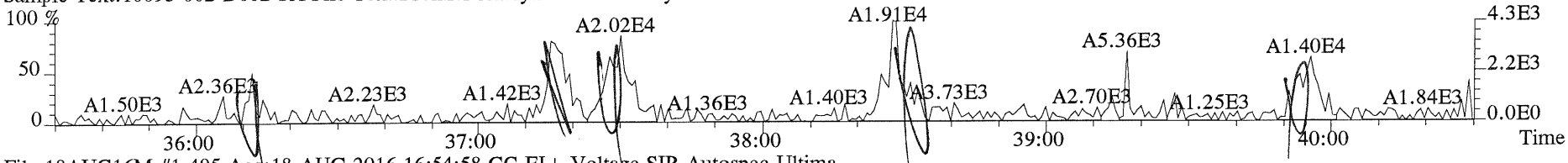
File:18AUG16M #1-411 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



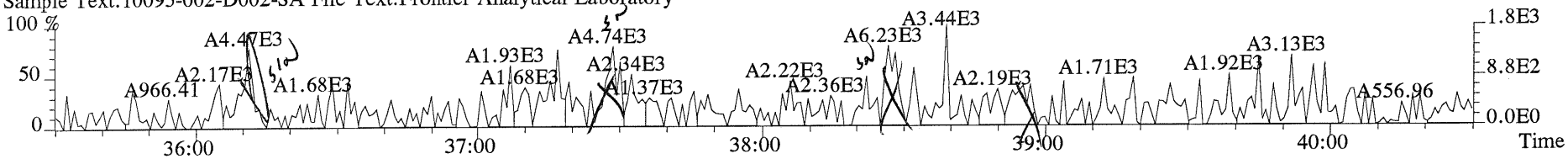
File:18AUG16M #1-411 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:10 F:2 Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



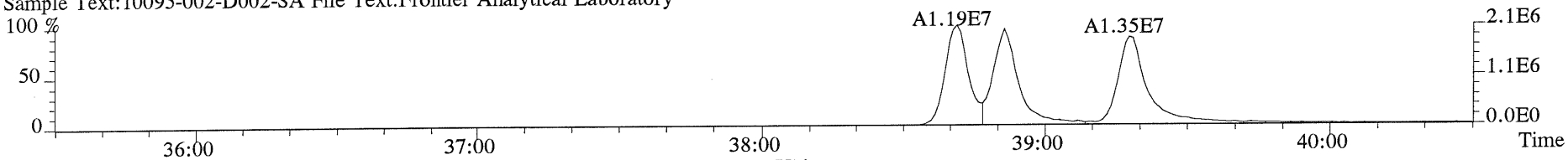
File:18AUG16M #1-495 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



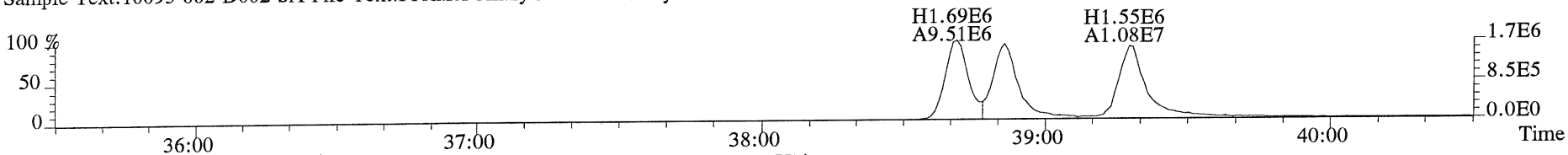
File:18AUG16M #1-495 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



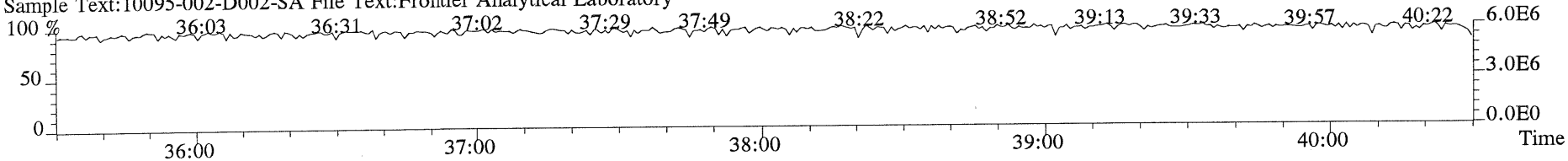
File:18AUG16M #1-495 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



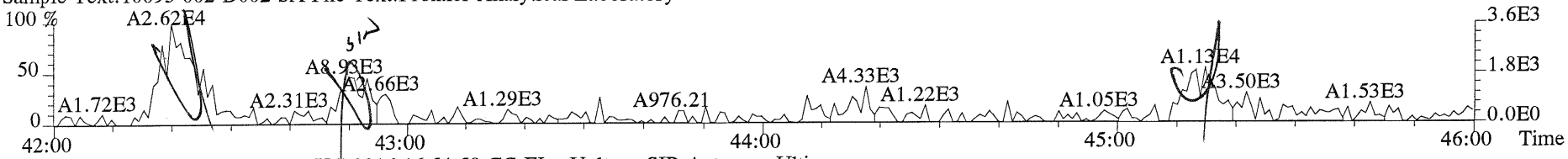
File:18AUG16M #1-495 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



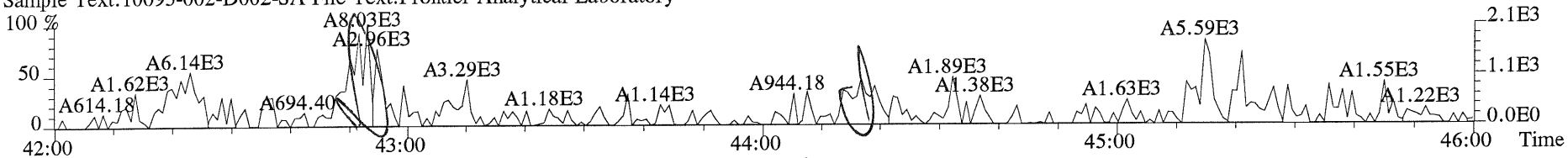
File:18AUG16M #1-495 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:10 F:3 Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



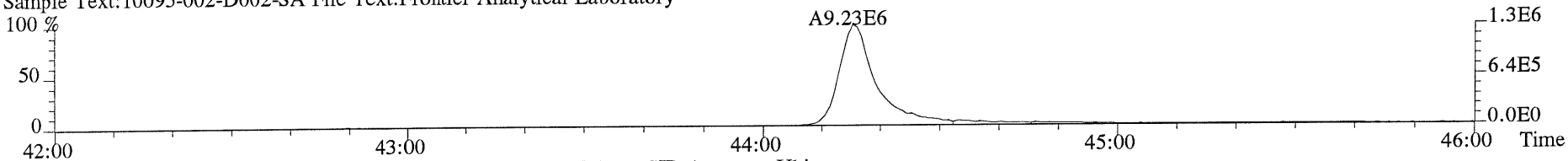
File:18AUG16M #1-521 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



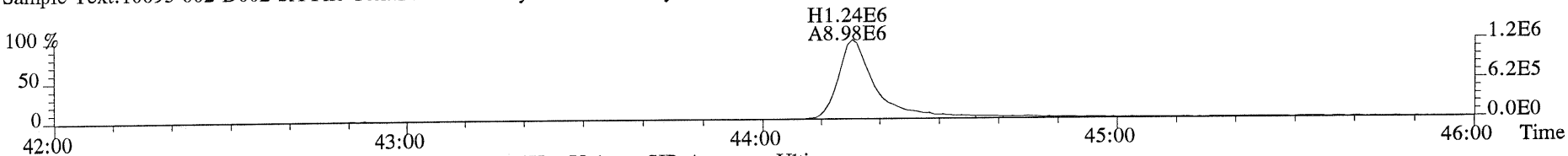
File:18AUG16M #1-521 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



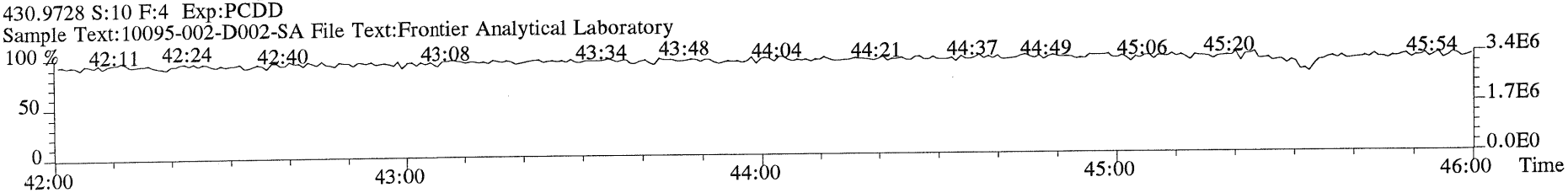
File:18AUG16M #1-521 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



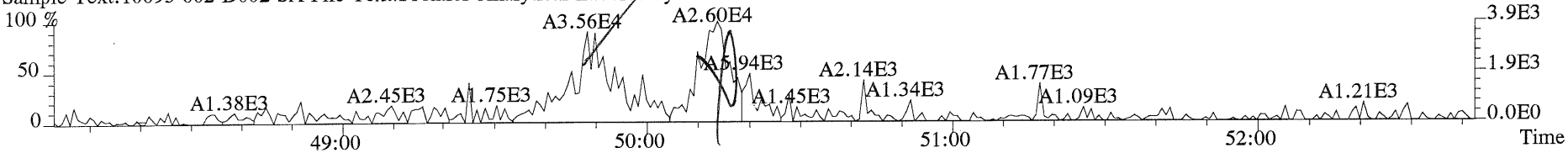
File:18AUG16M #1-521 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



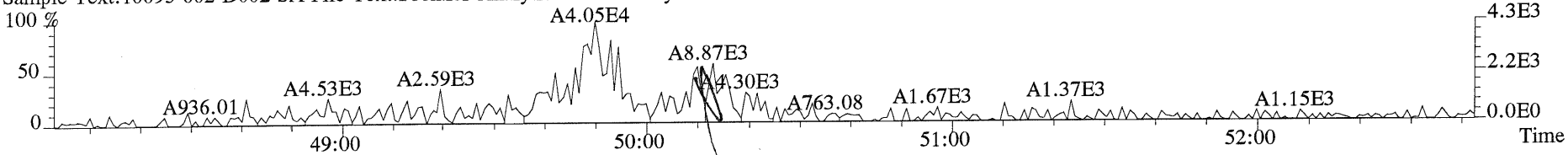
File:18AUG16M #1-521 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:10 F:4 Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



File:18AUG16M #1-362 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory

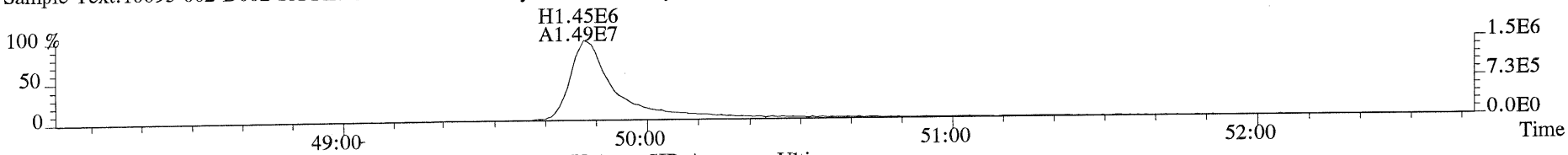


File:18AUG16M #1-362 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory

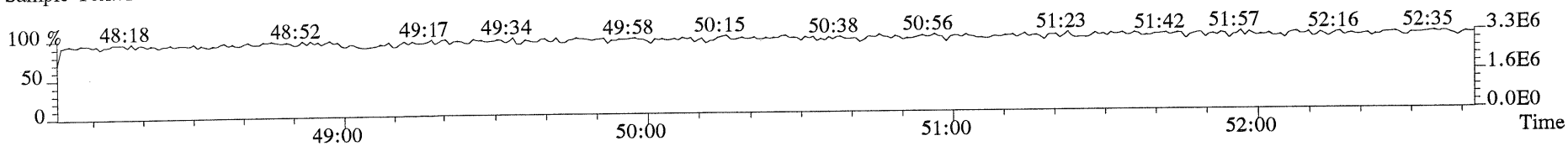


File:18AUG16M #1-362 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory

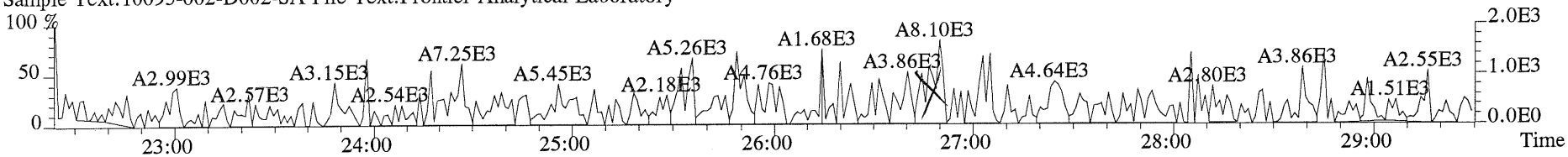
File:18AUG16M #1-362 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



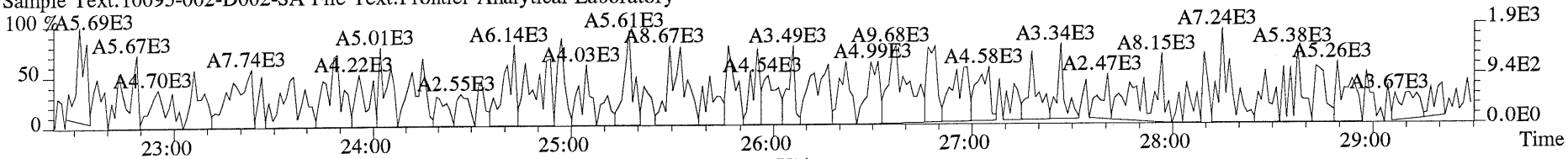
File:18AUG16M #1-362 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:10 F:5 Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



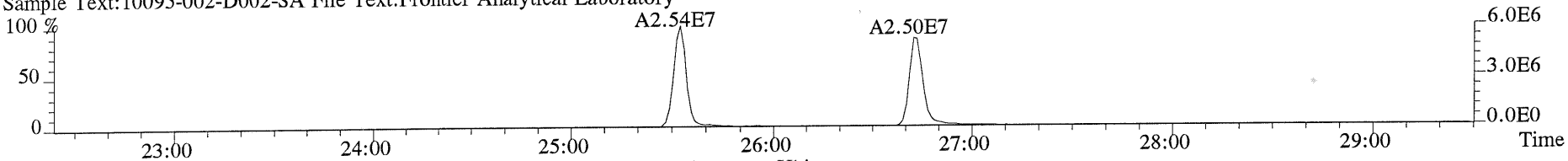
File:18AUG16M #1-399 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



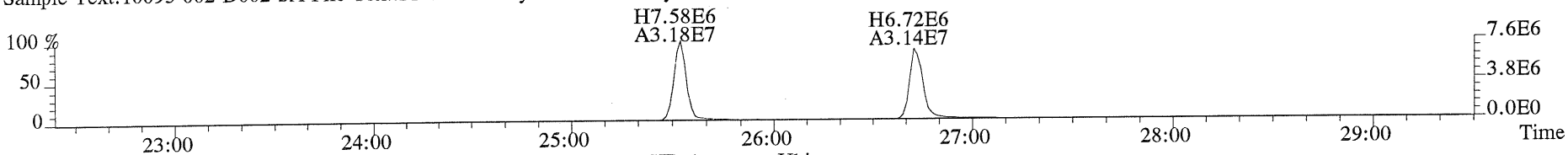
File:18AUG16M #1-399 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



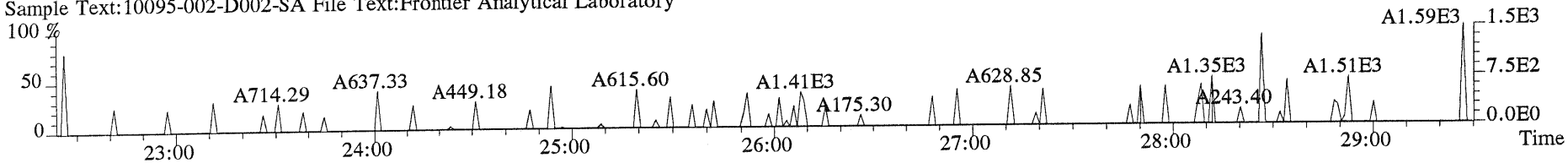
File:18AUG16M #1-399 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



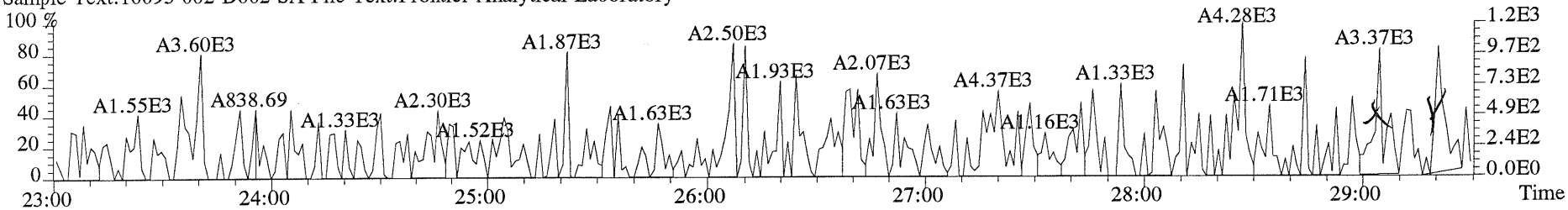
File:18AUG16M #1-399 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



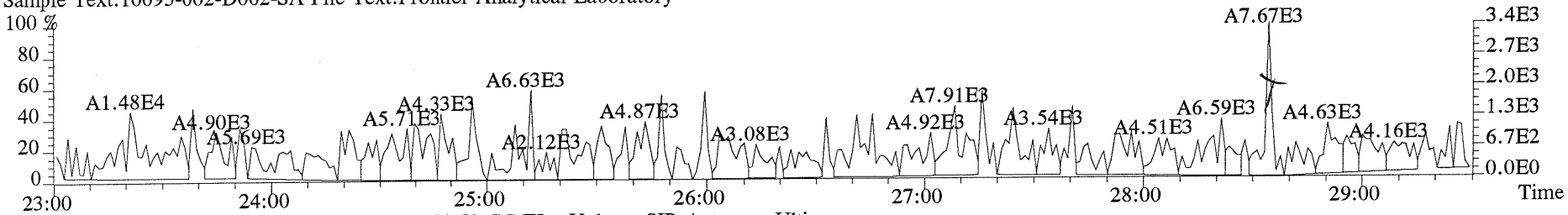
File:18AUG16M #1-399 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



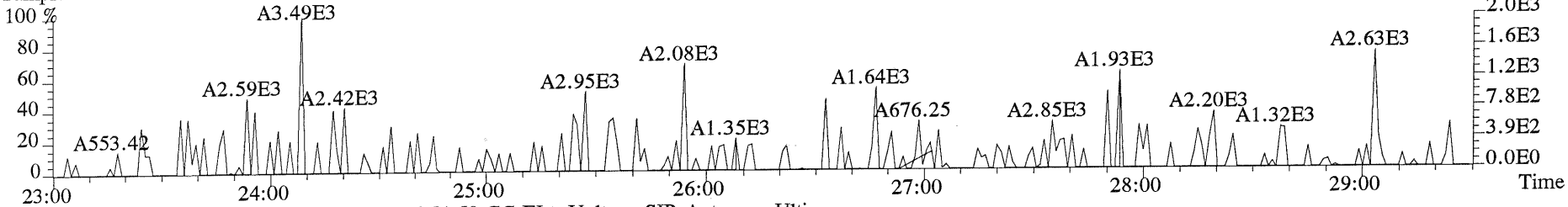
File:18AUG16M #1-399 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



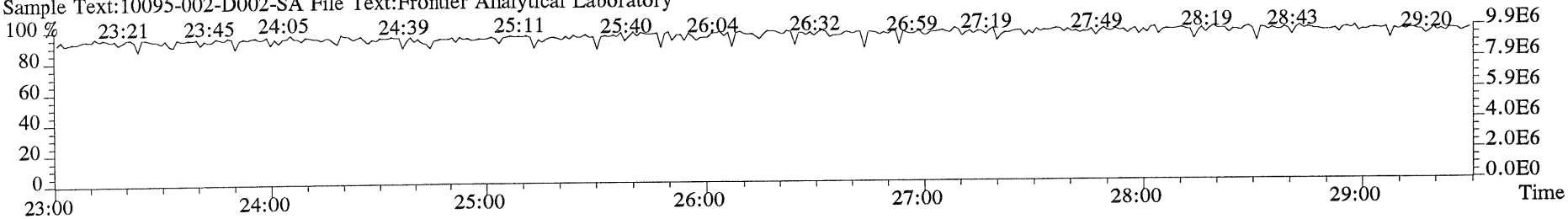
File:18AUG16M #1-399 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



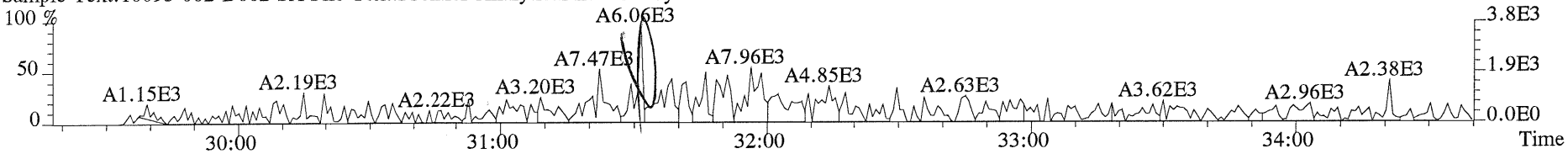
File:18AUG16M #1-399 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:10 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



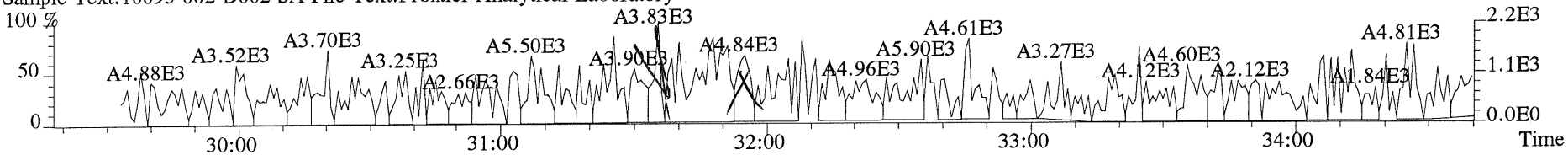
File:18AUG16M #1-399 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:10 Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



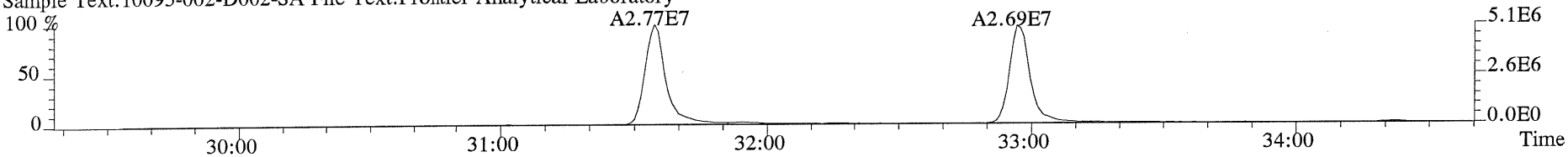
File:18AUG16M #1-411 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



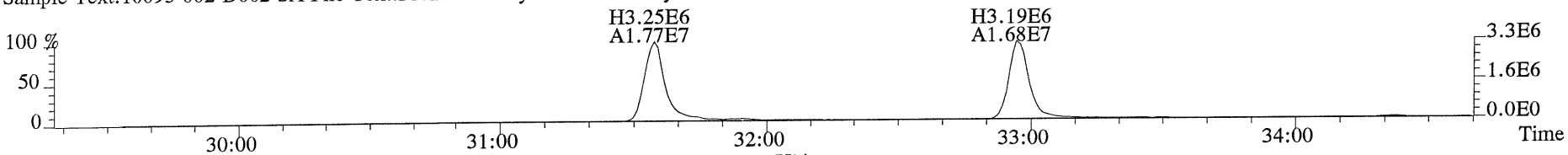
File:18AUG16M #1-411 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



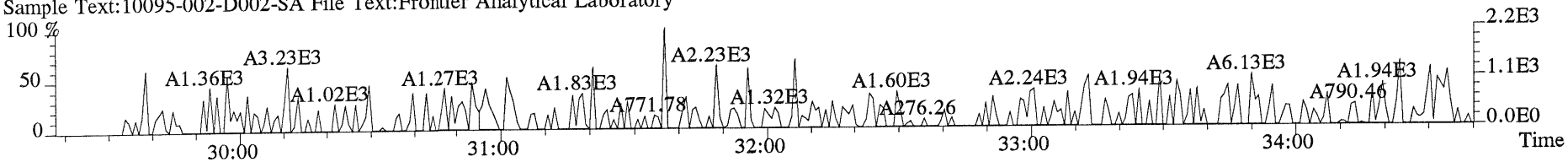
File:18AUG16M #1-411 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



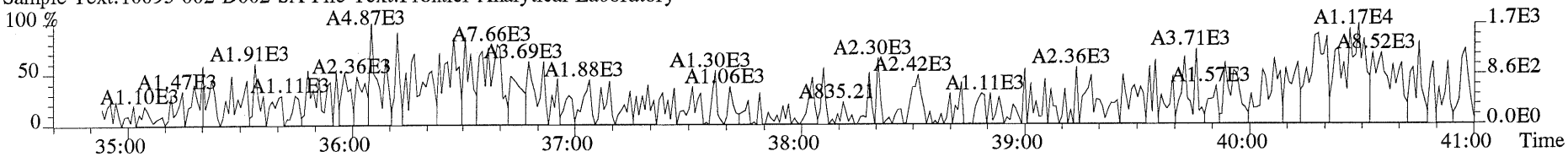
File:18AUG16M #1-411 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



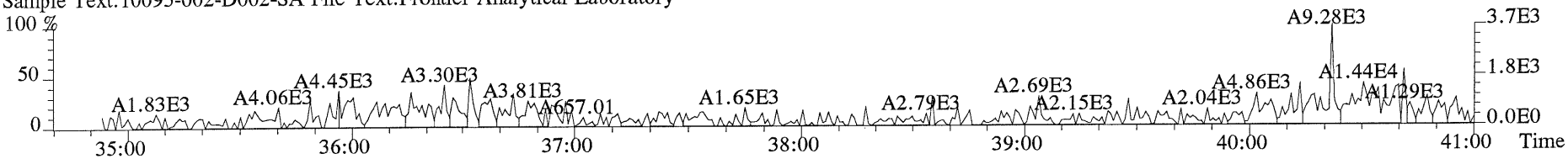
File:18AUG16M #1-411 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:10 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



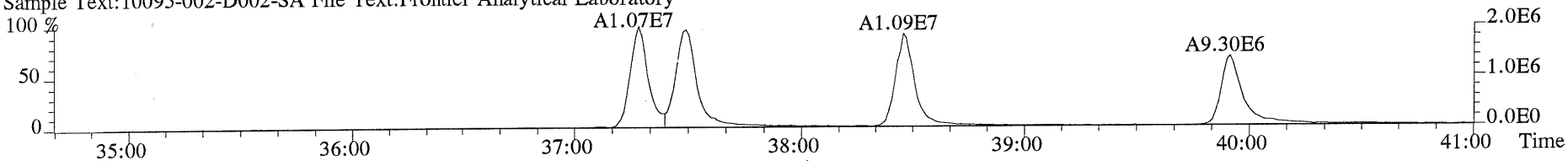
File:18AUG16M #1-495 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



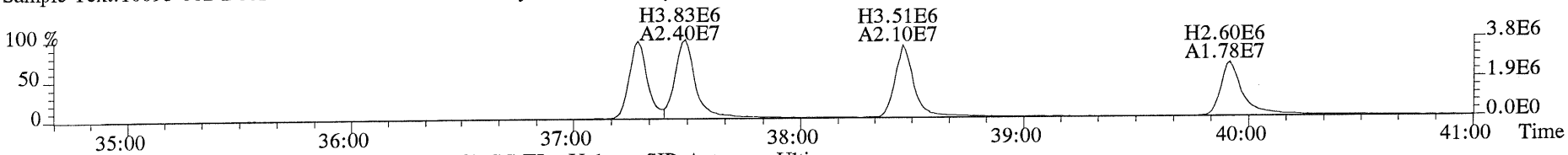
File:18AUG16M #1-495 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



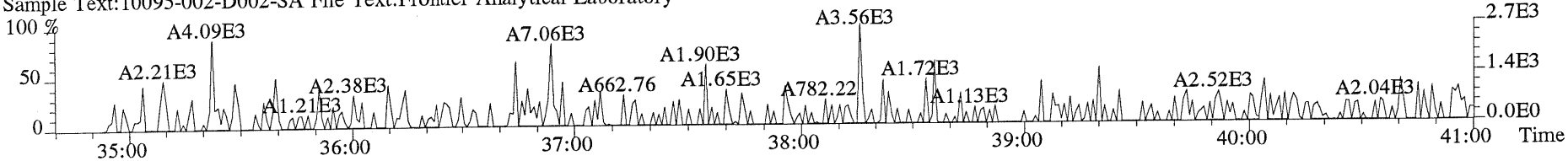
File:18AUG16M #1-495 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



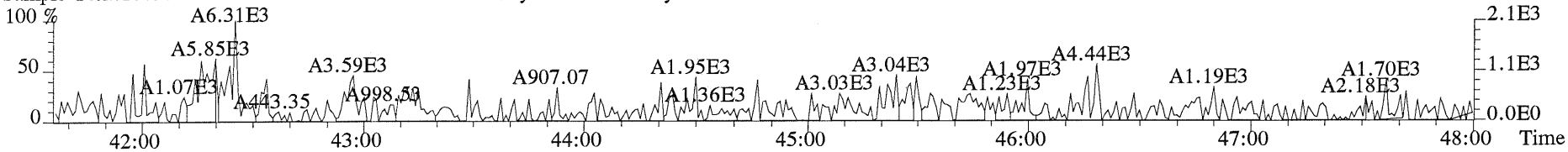
File:18AUG16M #1-495 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



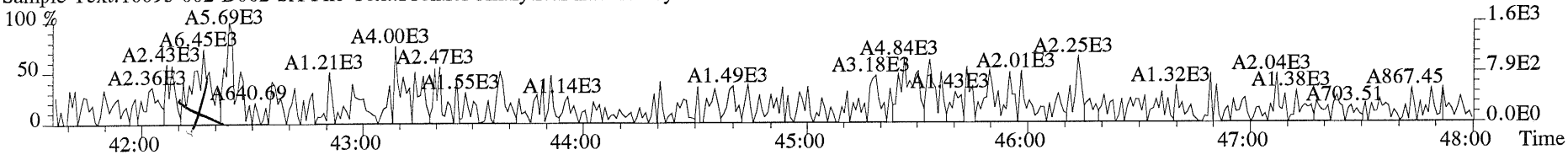
File:18AUG16M #1-495 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:10 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



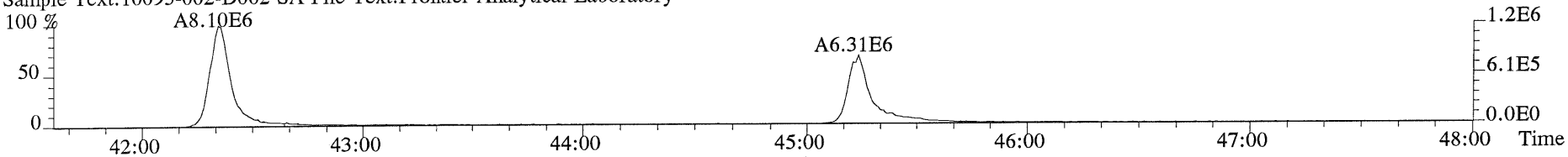
File:18AUG16M #1-521 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



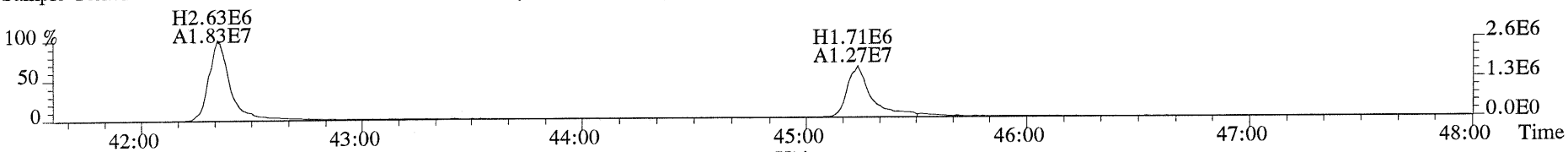
File:18AUG16M #1-521 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



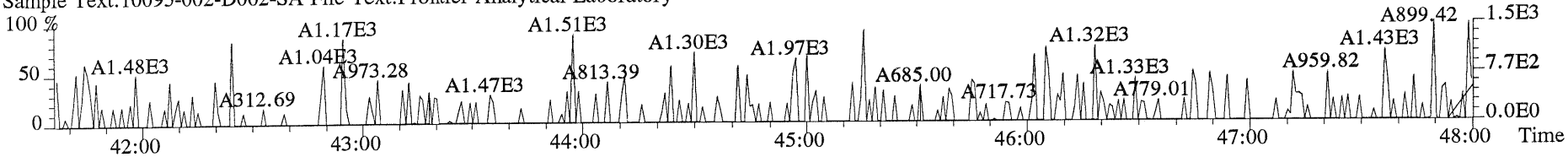
File:18AUG16M #1-521 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



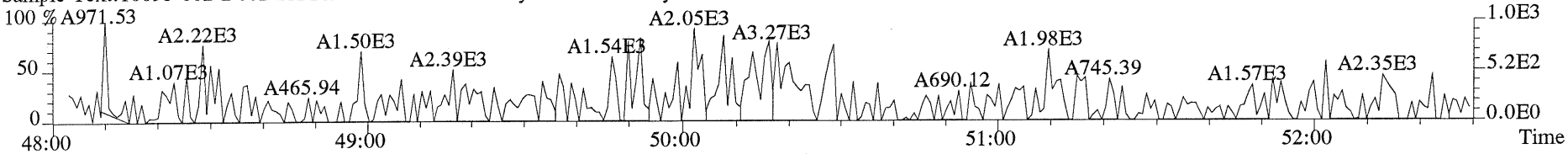
File:18AUG16M #1-521 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



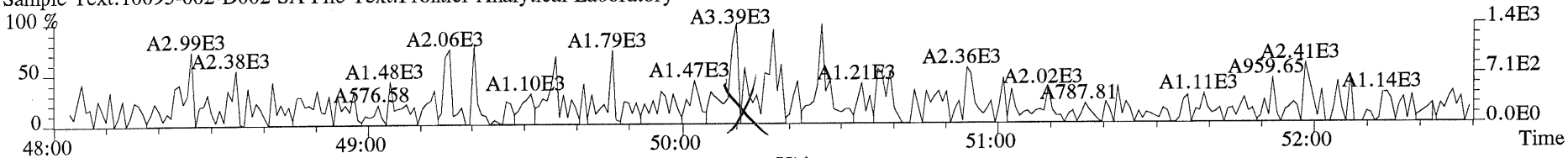
File:18AUG16M #1-521 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:10 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



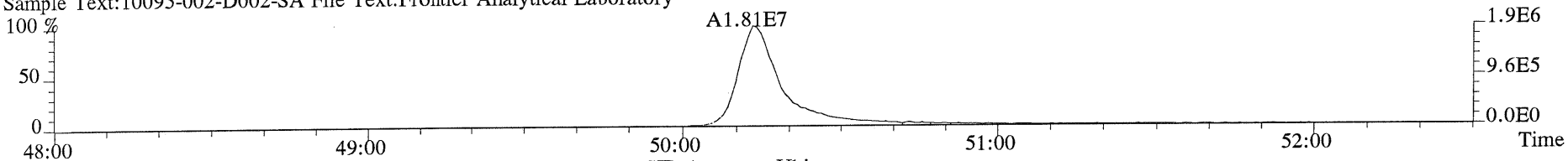
File:18AUG16M #1-362 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



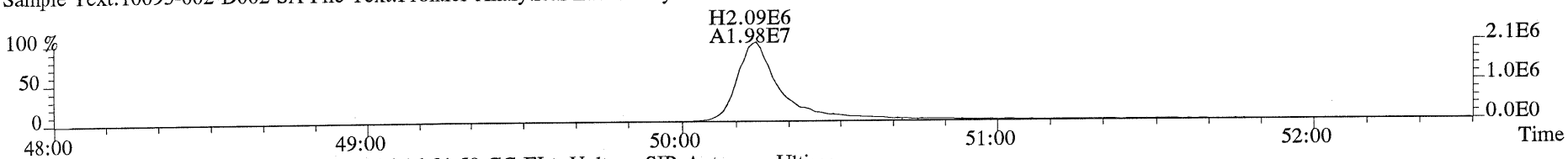
File:18AUG16M #1-362 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



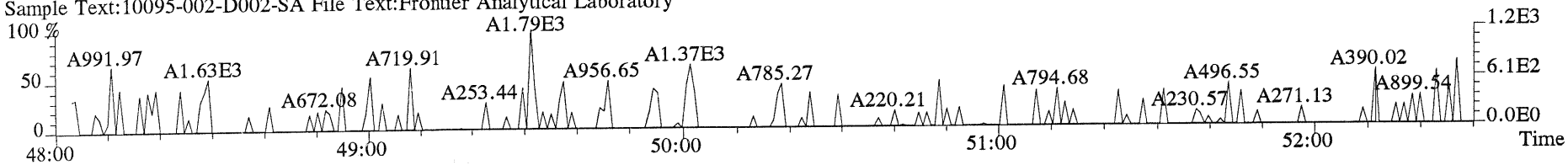
File:18AUG16M #1-362 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



File:18AUG16M #1-362 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



File:18AUG16M #1-362 Acq:18-AUG-2016 16:54:58 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:10 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:10095-002-D002-SA File Text:Frontier Analytical Laboratory



Frontier Analytical Laboratory

Data Filename: 11AUG16Z

Analyte: 1668FAL4-8-11-16 Cal: 1668FAL4-8-11-16

Name	RRF	S. D.	%RSD	S2 RRF#1	S3 RRF#2	S4 RRF#3	S1 RRF#4	S5 RRF#5	S6 RRF#6
PCB-1	1.05	0.0632	6.02 %	1.15	1.09	1.02	1.02	1.04	0.98
13C-PCB-1	1.14	0.0410	3.61 %	1.12	1.11	1.14	1.12	1.12	1.22
PCB-3	1.05	0.0605	5.78 %	1.15	1.09	1.02	1.00	1.01	1.01
13C-PCB-3	1.11	0.0465	4.20 %	1.04	1.08	1.10	1.12	1.11	1.19
PCB-4	1.14	0.0394	3.47 %	1.20	1.14	1.13	1.07	1.14	1.14
13C-PCB-4	0.68	0.0184	2.72 %	0.67	0.68	0.66	0.66	0.68	0.71
PCB-15	1.09	0.0250	2.30 %	1.08	1.10	1.07	1.06	1.11	1.12
13C-PCB-15	1.02	0.0428	4.18 %	0.96	1.03	1.03	1.01	1.03	1.09
PCB-19	1.16	0.0996	8.57 %	1.36	1.17	1.12	1.11	1.10	1.10
13C-PCB-19	0.61	0.0258	4.20 %	0.61	0.60	0.59	0.61	0.63	0.66
13C-PCB-9	-	-	- %	-	-	-	-	-	-
PCB-37	1.14	0.0359	3.14 %	1.11	1.16	1.15	1.09	1.14	1.19
13C-PCB-37	1.38	0.0521	3.79 %	1.32	1.33	1.39	1.34	1.40	1.46
PCB-54	1.05	0.00869	0.827 %	1.04	1.06	1.05	1.05	1.05	1.05
13C-PCB-54	1.25	0.0234	1.87 %	1.24	1.25	1.25	1.23	1.25	1.30
PCB-104	1.14	0.0827	7.24 %	1.29	1.19	1.09	1.09	1.10	1.10
13C-PCB-104	0.91	0.0275	3.02 %	0.89	0.88	0.91	0.90	0.92	0.96
13C-PCB-28	1.48	0.0521	3.51 %	1.46	1.47	1.59	1.47	1.46	1.45
13C-PCB-52	-	-	- %	-	-	-	-	-	-
PCB-81	1.14	0.0578	5.05 %	1.24	1.10	1.09	1.12	1.14	1.18
13C-PCB-81	1.27	0.0513	4.04 %	1.21	1.30	1.31	1.22	1.25	1.33
PCB-77	1.10	0.0223	2.03 %	1.11	1.11	1.10	1.06	1.09	1.13
13C-PCB-77	1.27	0.0698	5.49 %	1.25	1.16	1.27	1.27	1.31	1.37
PCB-155	1.11	0.0299	2.70 %	1.13	1.16	1.10	1.08	1.09	1.10
13C-PCB-155	1.09	0.0331	3.04 %	1.08	1.06	1.05	1.09	1.09	1.15
13C-PCB-111	1.25	0.0232	1.85 %	1.29	1.23	1.23	1.26	1.25	1.26
13C-PCB-101	-	-	- %	-	-	-	-	-	-
PCB-123	1.05	0.0594	5.64 %	1.10	0.96	1.02	1.03	1.11	1.10
13C-PCB-123	1.20	0.0903	7.51 %	1.16	1.14	1.13	1.17	1.26	1.36
PCB-118	1.07	0.0668	6.26 %	1.15	1.01	0.97	1.05	1.10	1.11
13C-PCB-118	1.31	0.0467	3.56 %	1.29	1.26	1.31	1.29	1.33	1.40
PCB-114	1.08	0.0497	4.59 %	1.17	1.06	1.05	1.04	1.09	1.10
13C-PCB-114	1.23	0.0671	5.44 %	1.20	1.16	1.19	1.22	1.30	1.33
PCB-105	1.08	0.0285	2.64 %	1.12	1.10	1.05	1.05	1.07	1.09
13C-PCB-105	1.24	0.0676	5.45 %	1.23	1.17	1.18	1.22	1.29	1.35
PCB-126	1.07	0.0569	5.33 %	1.16	1.03	1.01	1.05	1.05	1.12
13C-PCB-126	1.17	0.0581	4.96 %	1.11	1.15	1.18	1.12	1.19	1.27
PCB-167	0.98	0.0399	4.07 %	1.02	0.92	0.94	0.99	1.00	1.01
13C-PCB-167	1.24	0.0563	4.54 %	1.23	1.19	1.18	1.23	1.29	1.32
PCB-156	1.01	0.0204	2.02 %	1.04	0.99	0.99	1.00	1.02	1.03
13C-PCB-156	1.18	0.0698	5.92 %	1.17	1.11	1.10	1.17	1.24	1.28
PCB-157	0.96	0.0298	3.09 %	0.97	0.92	0.93	0.98	0.98	0.98
13C-PCB-157	1.22	0.0554	4.52 %	1.22	1.17	1.18	1.19	1.27	1.31
PCB-169	1.00	0.0446	4.47 %	1.09	0.98	0.96	0.98	0.99	0.99
13C-PCB-169	1.11	0.0792	7.15 %	1.12	1.01	1.04	1.10	1.17	1.22
PCB-188	1.09	0.0340	3.11 %	1.14	1.13	1.08	1.06	1.07	1.07
13C-PCB-188	1.22	0.105	8.61 %	1.25	1.09	1.11	1.24	1.30	1.36
PCB-189	1.14	0.0734	6.44 %	1.29	1.13	1.10	1.12	1.11	1.09
13C-PCB-189	0.97	0.0705	7.28 %	0.98	0.89	0.89	0.95	1.04	1.06
PCB-202	1.05	0.0311	2.95 %	1.12	1.06	1.03	1.04	1.05	1.04
13C-PCB-202	0.88	0.0771	8.80 %	0.87	0.78	0.81	0.87	0.95	0.98
13C-PCB-178	0.77	0.0487	6.32 %	0.79	0.71	0.71	0.78	0.82	0.81
13C-PCB-138	-	-	- %	-	-	-	-	-	-

PCB-205	1.02	0.0843	8.29	%	1.09	0.92	0.91	1.01	1.09	1.07
13C-PCB-205	1.38	0.0559	4.05	%	1.32	1.43	1.44	1.32	1.35	1.42
PCB-208	0.93	0.0183	1.97	%	0.96	0.94	0.93	0.90	0.93	0.93
13C-PCB-208	1.31	0.113	8.63	%	1.29	1.16	1.26	1.31	1.35	1.51
PCB-206	0.94	0.0197	2.11	%	0.97	0.93	0.91	0.93	0.94	0.94
13C-PCB-206	1.01	0.0466	4.60	%	1.01	0.97	0.96	1.03	1.01	1.09
PCB-209	1.10	0.109	9.87	%	1.25	0.98	0.97	1.14	1.14	1.14
13C-PCB-209	1.34	0.0712	5.32	%	1.28	1.44	1.41	1.30	1.26	1.33
13C-PCB-194	-	-	-	%	-	-	-	-	-	-

Analyst: _____ Date: 8/12/16

Run #1 Filename 11AUG16Z S: 2 Acquired: 11-AUG-16 12:25:59 Cal: 1668FAL4-8-11-16
Client ID: ST081116Z0 Analyte: FAL ID: 1668 CS0 R151116A CS0001

	Typ	Name	Amount	Resp	RA	RT	RF	RRF	
1	Unk	PCB-1	0.20	2.49e+05	3.29 y	14:28	-	1.15	y
2	IS/RT	13C-PCB-1	100.00	1.08e+08	3.11 y	14:27	-	1.12	y
3	Unk	PCB-3	0.20	2.32e+05	3.25 y	16:54	-	1.15	y
4	IS/RT	13C-PCB-3	100.00	1.01e+08	3.12 y	16:53	-	1.04	y
5	Unk	PCB-4	0.20	1.55e+05	1.34 y	18:07	-	1.20	y
6	IS/RT	13C-PCB-4	100.00	6.45e+07	1.58 y	18:06	-	0.668	y
7	Unk	PCB-15	0.20	2.00e+05	1.52 y	23:40	-	1.08	y
8	IS/RT	13C-PCB-15	100.00	9.25e+07	1.59 y	23:39	-	0.957	y
9	Unk	PCB-19	0.20	1.60e+05	1.18 y	22:00	-	1.36	y
10	IS/RT	13C-PCB-19	100.00	5.88e+07	1.10 y	21:58	-	0.609	y
11	RS	13C-PCB-9	100.00	9.67e+07	1.59 y	19:46	9.67e+05	-	n
12	Unk	PCB-37	0.20	1.75e+05	1.07 y	30:19	-	1.11	y
13	IS	13C-PCB-37	100.00	7.84e+07	1.08 y	30:18	-	1.32	y
14	Unk	PCB-54	0.20	1.52e+05	0.77 y	25:31	-	1.04	y
15	IS/RT	13C-PCB-54	100.00	7.32e+07	0.80 y	25:29	-	1.24	y
16	Unk	PCB-104	0.20	1.37e+05	1.44 y	29:57	-	1.29	y
17	IS	13C-PCB-104	100.00	5.29e+07	1.59 y	29:56	-	0.894	y
18	C/Up	13C-PCB-28	100.00	8.66e+07	1.06 y	26:35	-	1.46	y
19	RS	13C-PCB-52	100.00	5.92e+07	0.78 y	28:50	5.92e+05	-	n
20	Unk	PCB-81	0.20	1.54e+05	0.81 y	36:04	-	1.24	y
21	IS	13C-PCB-81	100.00	6.20e+07	0.80 y	36:03	-	1.21	y
22	Unk	PCB-77	0.20	1.43e+05	0.75 y	36:38	-	1.11	y
23	IS/RT	13C-PCB-77	100.00	6.40e+07	0.80 y	36:37	-	1.25	y
24	Unk	PCB-155	0.20	1.26e+05	1.32 y	34:06	-	1.13	y
25	IS	13C-PCB-155	100.00	5.57e+07	1.27 y	34:05	-	1.08	y
26	C/Up	13C-PCB-111	100.00	6.63e+07	1.58 y	36:10	-	1.29	y
27	RS	13C-PCB-101	100.00	5.14e+07	1.61 y	34:32	5.14e+05	-	n
28	Unk	PCB-123	0.20	1.22e+05	1.57 y	38:14	-	1.10	y
29	IS	13C-PCB-123	100.00	5.53e+07	1.57 y	38:13	-	1.16	y
30	Unk	PCB-118	0.20	1.41e+05	1.39 y	38:24	-	1.15	y
31	IS	13C-PCB-118	100.00	6.13e+07	1.57 y	38:24	-	1.29	y
32	Unk	PCB-114	0.20	1.34e+05	1.32 y	39:02	-	1.17	y
33	IS	13C-PCB-114	100.00	5.73e+07	1.57 y	39:00	-	1.20	y
34	Unk	PCB-105	0.20	1.31e+05	1.42 y	39:51	-	1.12	y
35	IS	13C-PCB-105	100.00	5.86e+07	1.59 y	39:50	-	1.23	y
36	Unk	PCB-126	0.20	1.23e+05	1.40 y	42:00	-	1.16	y
37	IS	13C-PCB-126	100.00	5.31e+07	1.57 y	41:58	-	1.11	y
38	Unk	PCB-167	0.20	1.20e+05	1.37 y	43:19	-	1.02	y
39	IS	13C-PCB-167	100.00	5.87e+07	1.25 y	43:17	-	1.23	y
40	Unk	PCB-156	0.20	1.16e+05	1.32 y	44:33	-	1.04	y
41	IS	13C-PCB-156	100.00	5.59e+07	1.25 y	44:31	-	1.17	y
42	Unk	PCB-157	0.20	1.13e+05	1.37 y	44:48	-	0.973	y
43	IS	13C-PCB-157	100.00	5.81e+07	1.27 y	44:48	-	1.22	y
44	Unk	PCB-169	0.20	1.16e+05	1.19 y	46:41	-	1.09	y
45	IS	13C-PCB-169	100.00	5.32e+07	1.27 y	46:41	-	1.12	y
46	Unk	PCB-188	0.20	1.36e+05	1.01 y	39:35	-	1.14	y
47	IS	13C-PCB-188	100.00	5.94e+07	1.06 y	39:35	-	1.25	y
48	Unk	PCB-189	0.20	1.20e+05	1.04 y	48:20	-	1.29	y
49	IS	13C-PCB-189	100.00	4.67e+07	1.04 y	48:20	-	0.981	y
50	Unk	PCB-202	0.20	9.21e+04	0.78 y	44:43	-	1.12	y
51	IS	13C-PCB-202	100.00	4.13e+07	0.91 y	44:41	-	0.867	y
52	C/Up	13C-PCB-178	100.00	3.74e+07	1.05 y	42:13	-	0.785	y
53	RS	13C-PCB-138	100.00	4.76e+07	1.26 y	41:27	4.76e+05	-	n

54	Unk	PCB-205	0.20	1.02e+05	0.82 y	50:01	-	1.09	y	
55	IS	13C-PCB-205	100.00	4.66e+07	0.91 y	49:59	-	1.32	y	
56	Unk	PCB-208	0.20	8.70e+04	1.50 y	49:04	-	0.960	y	
57	IS	13C-PCB-208	100.00	4.53e+07	0.79 y	49:03	-	1.29	y	
58	Unk	PCB-206	0.20	6.89e+04	1.34 y	51:11	-	0.972	y	
59	IS	13C-PCB-206	100.00	3.55e+07	0.77 y	51:10	-	1.01	y	
60	Unk	PCB-209	0.20	1.13e+05	1.19 y	52:22	-	1.25	y	
61	IS	13C-PCB-209	100.00	4.52e+07	1.20 y	52:21	-	1.28	y	
62	RS	13C-PCB-194	100.00	3.53e+07	0.91 y	49:44	3.53e+05	-	n	

Analyst: [illegible] Date: 8/12/16

Run #2 Filename 11AUG16Z S: 3 Acquired: 11-AUG-16 13:25:54 Cal: 1668FAL4-8-11-16
Client ID: ST081116Z1 Analyte: FAL ID: 1668 CS1 R121023B CS0101

	Typ	Name	Amount	Resp	RA	RT	RF	RRF	
1	Unk	PCB-1	1.00	1.93e+06	3.03 y	14:26	-	1.09	y
2	IS/RT	13C-PCB-1	100.00	1.77e+08	3.11 y	14:25	-	1.11	y
3	Unk	PCB-3	1.00	1.88e+06	3.01 y	16:53	-	1.09	y
4	IS/RT	13C-PCB-3	100.00	1.72e+08	3.06 y	16:51	-	1.08	y
5	Unk	PCB-4	1.00	1.22e+06	1.43 y	18:06	-	1.14	y
6	IS/RT	13C-PCB-4	100.00	1.07e+08	1.58 y	18:05	-	0.676	y
7	Unk	PCB-15	1.00	1.78e+06	1.57 y	23:38	-	1.10	y
8	IS/RT	13C-PCB-15	100.00	1.63e+08	1.59 y	23:38	-	1.03	y
9	Unk	PCB-19	1.00	1.11e+06	1.08 y	21:59	-	1.17	y
10	IS/RT	13C-PCB-19	100.00	9.46e+07	1.12 y	21:57	-	0.597	y
11	RS	13C-PCB-9	100.00	1.59e+08	1.59 y	19:45	1.59e+06	-	n
12	Unk	PCB-37	1.00	1.49e+06	1.06 y	30:18	-	1.16	y
13	IS	13C-PCB-37	100.00	1.28e+08	1.06 y	30:16	-	1.33	y
14	Unk	PCB-54	1.00	1.27e+06	0.77 y	25:31	-	1.06	y
15	IS/RT	13C-PCB-54	100.00	1.20e+08	0.79 y	25:29	-	1.25	y
16	Unk	PCB-104	1.00	1.00e+06	1.53 y	29:56	-	1.19	y
17	IS	13C-PCB-104	100.00	8.45e+07	1.60 y	29:55	-	0.882	y
18	C/Up	13C-PCB-28	100.00	1.41e+08	1.07 y	26:34	-	1.47	y
19	RS	13C-PCB-52	100.00	9.58e+07	0.79 y	28:49	9.58e+05	-	n
20	Unk	PCB-81	1.00	1.19e+06	0.79 y	36:03	-	1.10	y
21	IS	13C-PCB-81	100.00	1.09e+08	0.78 y	36:01	-	1.30	y
22	Unk	PCB-77	1.00	1.09e+06	0.86 y	36:37	-	1.11	y
23	IS/RT	13C-PCB-77	100.00	9.75e+07	0.79 y	36:35	-	1.16	y
24	Unk	PCB-155	1.00	1.03e+06	1.28 y	34:05	-	1.16	y
25	IS	13C-PCB-155	100.00	8.88e+07	1.27 y	34:04	-	1.06	y
26	C/Up	13C-PCB-111	100.00	1.03e+08	1.59 y	36:09	-	1.23	y
27	RS	13C-PCB-101	100.00	8.39e+07	1.62 y	34:30	8.39e+05	-	n
28	Unk	PCB-123	1.00	9.33e+05	1.44 y	38:13	-	0.959	y
29	IS	13C-PCB-123	100.00	9.74e+07	1.57 y	38:13	-	1.14	y
30	Unk	PCB-118	1.00	1.09e+06	1.50 y	38:24	-	1.01	y
31	IS	13C-PCB-118	100.00	1.08e+08	1.58 y	38:22	-	1.26	y
32	Unk	PCB-114	1.00	1.04e+06	1.51 y	39:00	-	1.06	y
33	IS	13C-PCB-114	100.00	9.89e+07	1.58 y	39:00	-	1.16	y
34	Unk	PCB-105	1.00	1.10e+06	1.51 y	39:50	-	1.10	y
35	IS	13C-PCB-105	100.00	1.00e+08	1.60 y	39:48	-	1.17	y
36	Unk	PCB-126	1.00	1.01e+06	1.46 y	41:58	-	1.03	y
37	IS	13C-PCB-126	100.00	9.86e+07	1.60 y	41:56	-	1.15	y
38	Unk	PCB-167	1.00	9.34e+05	1.22 y	43:19	-	0.921	y
39	IS	13C-PCB-167	100.00	1.01e+08	1.24 y	43:17	-	1.19	y
40	Unk	PCB-156	1.00	9.37e+05	1.25 y	44:33	-	0.987	y
41	IS	13C-PCB-156	100.00	9.49e+07	1.25 y	44:31	-	1.11	y
42	Unk	PCB-157	1.00	9.20e+05	1.22 y	44:48	-	0.918	y
43	IS	13C-PCB-157	100.00	1.00e+08	1.25 y	44:46	-	1.17	y
44	Unk	PCB-169	1.00	8.46e+05	1.28 y	46:41	-	0.983	y
45	IS	13C-PCB-169	100.00	8.61e+07	1.26 y	46:40	-	1.01	y
46	Unk	PCB-188	1.00	1.05e+06	1.06 y	39:35	-	1.13	y
47	IS	13C-PCB-188	100.00	9.27e+07	1.05 y	39:33	-	1.09	y
48	Unk	PCB-189	1.00	8.61e+05	1.04 y	48:20	-	1.13	y
49	IS	13C-PCB-189	100.00	7.62e+07	1.05 y	48:20	-	0.892	y
50	Unk	PCB-202	1.00	7.07e+05	0.90 y	44:41	-	1.06	y
51	IS	13C-PCB-202	100.00	6.69e+07	0.91 y	44:39	-	0.784	y
52	C/Up	13C-PCB-178	100.00	6.07e+07	1.04 y	42:11	-	0.711	y
53	RS	13C-PCB-138	100.00	8.54e+07	1.26 y	41:25	8.54e+05	-	n

54	Unk	PCB-205	1.00	7.88e+05	0.88 y	49:59	-	0.924	y	
55	IS	13C-PCB-205	100.00	8.53e+07	0.91 y	49:59	-	1.43	y	
56	Unk	PCB-208	1.00	6.53e+05	1.41 y	49:04	-	0.939	y	
57	IS	13C-PCB-208	100.00	6.95e+07	0.79 y	49:03	-	1.16	y	
58	Unk	PCB-206	1.00	5.38e+05	1.32 y	51:11	-	0.926	y	
59	IS	13C-PCB-206	100.00	5.81e+07	0.78 y	51:10	-	0.973	y	
60	Unk	PCB-209	1.00	8.45e+05	1.16 y	52:21	-	0.982	y	
61	IS	13C-PCB-209	100.00	8.61e+07	1.21 y	52:21	-	1.44	y	
62	RS	13C-PCB-194	100.00	5.98e+07	0.92 y	49:44	5.98e+05	-	n	

Analyst: [illegible] Date: 8/12/16

Run #3 Filename 11AUG16Z S: 4 Acquired: 11-AUG-16 14:25:51 Cal: 1668FAL4-8-11-16
Client ID: ST081116Z2 Analyte: FAL ID: 1668 CS2 R130426B CS0201

	Typ	Name	Amount	Resp	RA	RT	RF	RRF	
1	Unk	PCB-1	5.00	1.17e+07	3.09 y	14:27	-	1.02	y
2	IS/RT	13C-PCB-1	100.00	2.30e+08	3.11 y	14:26	-	1.14	y
3	Unk	PCB-3	5.00	1.14e+07	3.11 y	16:52	-	1.02	y
4	IS/RT	13C-PCB-3	100.00	2.23e+08	3.06 y	16:52	-	1.10	y
5	Unk	PCB-4	5.00	7.52e+06	1.51 y	18:06	-	1.13	y
6	IS/RT	13C-PCB-4	100.00	1.33e+08	1.59 y	18:04	-	0.661	y
7	Unk	PCB-15	5.00	1.11e+07	1.61 y	23:39	-	1.07	y
8	IS/RT	13C-PCB-15	100.00	2.08e+08	1.60 y	23:38	-	1.03	y
9	Unk	PCB-19	5.00	6.64e+06	1.04 y	21:59	-	1.12	y
10	IS/RT	13C-PCB-19	100.00	1.18e+08	1.10 y	21:57	-	0.586	y
11	RS	13C-PCB-9	100.00	2.02e+08	1.57 y	19:46	2.02e+06	-	n
12	Unk	PCB-37	5.00	9.61e+06	1.07 y	30:17	-	1.15	y
13	IS	13C-PCB-37	100.00	1.67e+08	1.10 y	30:15	-	1.39	y
14	Unk	PCB-54	5.00	7.91e+06	0.78 y	25:31	-	1.05	y
15	IS/RT	13C-PCB-54	100.00	1.50e+08	0.79 y	25:28	-	1.25	y
16	Unk	PCB-104	5.00	5.89e+06	1.58 y	29:56	-	1.09	y
17	IS	13C-PCB-104	100.00	1.09e+08	1.59 y	29:54	-	0.906	y
18	C/Up	13C-PCB-28	100.00	1.90e+08	1.17 y	26:34	-	1.59	y
19	RS	13C-PCB-52	100.00	1.20e+08	0.78 y	28:49	1.20e+06	-	n
20	Unk	PCB-81	5.00	7.65e+06	0.77 y	36:03	-	1.09	y
21	IS	13C-PCB-81	100.00	1.40e+08	0.79 y	36:01	-	1.31	y
22	Unk	PCB-77	5.00	7.47e+06	0.79 y	36:37	-	1.10	y
23	IS/RT	13C-PCB-77	100.00	1.35e+08	0.79 y	36:36	-	1.27	y
24	Unk	PCB-155	5.00	6.21e+06	1.27 y	34:05	-	1.10	y
25	IS	13C-PCB-155	100.00	1.13e+08	1.26 y	34:04	-	1.05	y
26	C/Up	13C-PCB-111	100.00	1.32e+08	1.59 y	36:09	-	1.23	y
27	RS	13C-PCB-101	100.00	1.07e+08	1.59 y	34:30	1.07e+06	-	n
28	Unk	PCB-123	5.00	6.20e+06	1.52 y	38:13	-	1.02	y
29	IS	13C-PCB-123	100.00	1.22e+08	1.57 y	38:12	-	1.13	y
30	Unk	PCB-118	5.00	6.85e+06	1.52 y	38:23	-	0.971	y
31	IS	13C-PCB-118	100.00	1.41e+08	1.61 y	38:23	-	1.31	y
32	Unk	PCB-114	5.00	6.76e+06	1.54 y	39:01	-	1.05	y
33	IS	13C-PCB-114	100.00	1.29e+08	1.58 y	38:59	-	1.19	y
34	Unk	PCB-105	5.00	6.69e+06	1.53 y	39:50	-	1.05	y
35	IS	13C-PCB-105	100.00	1.28e+08	1.60 y	39:49	-	1.18	y
36	Unk	PCB-126	5.00	6.45e+06	1.56 y	41:57	-	1.01	y
37	IS	13C-PCB-126	100.00	1.27e+08	1.60 y	41:57	-	1.18	y
38	Unk	PCB-167	5.00	5.99e+06	1.22 y	43:18	-	0.940	y
39	IS	13C-PCB-167	100.00	1.27e+08	1.25 y	43:18	-	1.18	y
40	Unk	PCB-156	5.00	5.91e+06	1.28 y	44:32	-	0.992	y
41	IS	13C-PCB-156	100.00	1.19e+08	1.24 y	44:30	-	1.10	y
42	Unk	PCB-157	5.00	5.93e+06	1.24 y	44:47	-	0.932	y
43	IS	13C-PCB-157	100.00	1.27e+08	1.24 y	44:47	-	1.18	y
44	Unk	PCB-169	5.00	5.37e+06	1.24 y	46:40	-	0.960	y
45	IS	13C-PCB-169	100.00	1.12e+08	1.25 y	46:40	-	1.04	y
46	Unk	PCB-188	5.00	6.50e+06	1.07 y	39:34	-	1.08	y
47	IS	13C-PCB-188	100.00	1.20e+08	1.06 y	39:34	-	1.11	y
48	Unk	PCB-189	5.00	5.29e+06	1.06 y	48:21	-	1.10	y
49	IS	13C-PCB-189	100.00	9.65e+07	1.06 y	48:19	-	0.893	y
50	Unk	PCB-202	5.00	4.47e+06	0.88 y	44:42	-	1.03	y
51	IS	13C-PCB-202	100.00	8.70e+07	0.91 y	44:40	-	0.805	y
52	C/Up	13C-PCB-178	100.00	7.68e+07	1.05 y	42:12	-	0.711	y
53	RS	13C-PCB-138	100.00	1.08e+08	1.25 y	41:26	1.08e+06	-	n

54	Unk	PCB-205	5.00	4.98e+06	0.87 y	49:59	-	0.908	y	
55	IS	13C-PCB-205	100.00	1.10e+08	0.90 y	49:58	-	1.44	y	
56	Unk	PCB-208	5.00	4.43e+06	1.43 y	49:03	-	0.926	y	
57	IS	13C-PCB-208	100.00	9.57e+07	0.79 y	49:03	-	1.26	y	
58	Unk	PCB-206	5.00	3.34e+06	1.37 y	51:10	-	0.913	y	
59	IS	13C-PCB-206	100.00	7.31e+07	0.78 y	51:10	-	0.962	y	
60	Unk	PCB-209	5.00	5.15e+06	1.19 y	52:21	-	0.965	y	
61	IS	13C-PCB-209	100.00	1.07e+08	1.19 y	52:19	-	1.41	y	
62	RS	13C-PCB-194	100.00	7.60e+07	0.92 y	49:44	7.60e+05	-	n	

Analyst: [illegible] Date: 8/18/16

Run #4 Filename 11AUG16Z S: 1 Acquired: 11-AUG-16 11:26:03 Cal: 1668FAL4-8-11-16
Client ID: ST081116Z3 Analyte: FAL ID: 1668 CS3 R150603A CS0301

	Typ	Name	Amount	Resp	RA		RT	RF	RRF	
1	Unk	PCB-1	50.00	6.56e+07	3.10	y	14:26	-	1.02	y
2	IS/RT	13C-PCB-1	100.00	1.29e+08	3.05	y	14:25	-	1.12	y
3	Unk	PCB-3	50.00	6.47e+07	3.15	y	16:52	-	1.00	y
4	IS/RT	13C-PCB-3	100.00	1.29e+08	3.19	y	16:51	-	1.12	y
5	Unk	PCB-4	50.00	4.08e+07	1.52	y	18:05	-	1.07	y
6	IS/RT	13C-PCB-4	100.00	7.61e+07	1.56	y	18:04	-	0.657	y
7	Unk	PCB-15	50.00	6.23e+07	1.56	y	23:39	-	1.06	y
8	IS/RT	13C-PCB-15	100.00	1.17e+08	1.57	y	23:38	-	1.01	y
9	Unk	PCB-19	50.00	3.92e+07	1.04	y	21:59	-	1.11	y
10	IS/RT	13C-PCB-19	100.00	7.06e+07	1.09	y	21:57	-	0.610	y
11	RS	13C-PCB-9	100.00	1.16e+08	1.59	y	19:45	1.16e+06	-	n
12	Unk	PCB-37	50.00	5.25e+07	1.04	y	30:18	-	1.09	y
13	IS	13C-PCB-37	100.00	9.62e+07	1.14	y	30:16	-	1.34	y
14	Unk	PCB-54	50.00	4.61e+07	0.78	y	25:31	-	1.05	y
15	IS/RT	13C-PCB-54	100.00	8.82e+07	0.79	y	25:29	-	1.23	y
16	Unk	PCB-104	50.00	3.51e+07	1.56	y	29:56	-	1.09	y
17	IS	13C-PCB-104	100.00	6.45e+07	1.60	y	29:55	-	0.898	y
18	C/Up	13C-PCB-28	100.00	1.06e+08	1.10	y	26:34	-	1.47	y
19	RS	13C-PCB-52	100.00	7.18e+07	0.78	y	28:51	7.18e+05	-	n
20	Unk	PCB-81	50.00	4.21e+07	0.78	y	36:04	-	1.12	y
21	IS	13C-PCB-81	100.00	7.50e+07	0.79	y	36:03	-	1.22	y
22	Unk	PCB-77	50.00	4.15e+07	0.78	y	36:37	-	1.06	y
23	IS/RT	13C-PCB-77	100.00	7.80e+07	0.80	y	36:37	-	1.27	y
24	Unk	PCB-155	50.00	3.60e+07	1.27	y	34:06	-	1.08	y
25	IS	13C-PCB-155	100.00	6.68e+07	1.26	y	34:05	-	1.09	y
26	C/Up	13C-PCB-111	100.00	7.73e+07	1.58	y	36:10	-	1.26	y
27	RS	13C-PCB-101	100.00	6.14e+07	1.60	y	34:32	6.14e+05	-	n
28	Unk	PCB-123	50.00	3.39e+07	1.51	y	38:15	-	1.03	y
29	IS	13C-PCB-123	100.00	6.56e+07	1.57	y	38:13	-	1.17	y
30	Unk	PCB-118	50.00	3.82e+07	1.52	y	38:25	-	1.05	y
31	IS	13C-PCB-118	100.00	7.25e+07	1.58	y	38:23	-	1.29	y
32	Unk	PCB-114	50.00	3.56e+07	1.53	y	39:01	-	1.04	y
33	IS	13C-PCB-114	100.00	6.87e+07	1.58	y	39:01	-	1.22	y
34	Unk	PCB-105	50.00	3.61e+07	1.54	y	39:50	-	1.05	y
35	IS	13C-PCB-105	100.00	6.87e+07	1.60	y	39:49	-	1.22	y
36	Unk	PCB-126	50.00	3.31e+07	1.58	y	41:59	-	1.05	y
37	IS	13C-PCB-126	100.00	6.32e+07	1.57	y	41:59	-	1.12	y
38	Unk	PCB-167	50.00	3.42e+07	1.23	y	43:19	-	0.992	y
39	IS	13C-PCB-167	100.00	6.90e+07	1.25	y	43:18	-	1.23	y
40	Unk	PCB-156	50.00	3.30e+07	1.22	y	44:33	-	1.00	y
41	IS	13C-PCB-156	100.00	6.60e+07	1.27	y	44:32	-	1.17	y
42	Unk	PCB-157	50.00	3.30e+07	1.25	y	44:48	-	0.983	y
43	IS	13C-PCB-157	100.00	6.71e+07	1.25	y	44:46	-	1.19	y
44	Unk	PCB-169	50.00	3.04e+07	1.28	y	46:42	-	0.984	y
45	IS	13C-PCB-169	100.00	6.18e+07	1.24	y	46:42	-	1.10	y
46	Unk	PCB-188	50.00	3.71e+07	1.05	y	39:35	-	1.06	y
47	IS	13C-PCB-188	100.00	6.98e+07	1.06	y	39:34	-	1.24	y
48	Unk	PCB-189	50.00	3.02e+07	1.06	y	48:22	-	1.12	y
49	IS	13C-PCB-189	100.00	5.37e+07	1.04	y	48:20	-	0.954	y
50	Unk	PCB-202	50.00	2.56e+07	0.88	y	44:43	-	1.04	y
51	IS	13C-PCB-202	100.00	4.92e+07	0.91	y	44:42	-	0.875	y
52	C/Up	13C-PCB-178	100.00	4.39e+07	1.05	y	42:13	-	0.781	y
53	RS	13C-PCB-138	100.00	5.63e+07	1.25	y	41:26	5.63e+05	-	n

54	Unk	PCB-205	50.00	2.70e+07	0.88 y	50:01	-	1.01	y	
55	IS	13C-PCB-205	100.00	5.33e+07	0.90 y	49:59	-	1.32	y	
56	Unk	PCB-208	50.00	2.39e+07	1.45 y	49:04	-	0.904	y	
57	IS	13C-PCB-208	100.00	5.30e+07	0.79 y	49:03	-	1.31	y	
58	Unk	PCB-206	50.00	1.94e+07	1.40 y	51:11	-	0.934	y	
59	IS	13C-PCB-206	100.00	4.16e+07	0.79 y	51:10	-	1.03	y	
60	Unk	PCB-209	50.00	2.98e+07	1.18 y	52:22	-	1.14	y	
61	IS	13C-PCB-209	100.00	5.25e+07	1.20 y	52:21	-	1.30	y	
62	RS	13C-PCB-194	100.00	4.03e+07	0.90 y	49:44	4.03e+05	-	n	

Analyst: [illegible] Date: 5/12/16

Run #5 Filename 11AUG16Z S: 5 Acquired: 11-AUG-16 15:25:47 Cal: 1668FAL4-8-11-16
Client ID: ST081116Z4 Analyte: FAL ID: 1668 CS4 R151116B CS0401

	Typ	Name	Amount	Resp	RA	RT	RF	RRF	
1	Unk	PCB-1	400.00	6.07e+08	3.22 y	14:26	-	1.04	y
2	IS/RT	13C-PCB-1	100.00	1.47e+08	3.05 y	14:25	-	1.12	y
3	Unk	PCB-3	400.00	5.90e+08	3.10 y	16:52	-	1.01	y
4	IS/RT	13C-PCB-3	100.00	1.46e+08	3.20 y	16:51	-	1.11	y
5	Unk	PCB-4	400.00	4.09e+08	1.57 y	18:06	-	1.14	y
6	IS/RT	13C-PCB-4	100.00	9.00e+07	1.57 y	18:04	-	0.685	y
7	Unk	PCB-15	400.00	6.01e+08	1.57 y	23:38	-	1.11	y
8	IS/RT	13C-PCB-15	100.00	1.35e+08	1.58 y	23:37	-	1.03	y
9	Unk	PCB-19	400.00	3.63e+08	1.04 y	21:59	-	1.10	y
10	IS/RT	13C-PCB-19	100.00	8.25e+07	1.10 y	21:57	-	0.628	y
11	RS	13C-PCB-9	100.00	1.31e+08	1.60 y	19:46	1.31e+06	-	n
12	Unk	PCB-37	400.00	5.21e+08	1.01 y	30:17	-	1.14	y
13	IS	13C-PCB-37	100.00	1.14e+08	1.09 y	30:15	-	1.40	y
14	Unk	PCB-54	400.00	4.28e+08	0.78 y	25:31	-	1.05	y
15	IS/RT	13C-PCB-54	100.00	1.02e+08	0.79 y	25:30	-	1.25	y
16	Unk	PCB-104	400.00	3.30e+08	1.58 y	29:56	-	1.10	y
17	IS	13C-PCB-104	100.00	7.48e+07	1.60 y	29:55	-	0.919	y
18	C/Up	13C-PCB-28	100.00	1.19e+08	1.07 y	26:35	-	1.46	y
19	RS	13C-PCB-52	100.00	8.14e+07	0.79 y	28:49	8.14e+05	-	n
20	Unk	PCB-81	400.00	4.07e+08	0.77 y	36:01	-	1.14	y
21	IS	13C-PCB-81	100.00	8.97e+07	0.80 y	36:01	-	1.25	y
22	Unk	PCB-77	400.00	4.08e+08	0.78 y	36:36	-	1.09	y
23	IS/RT	13C-PCB-77	100.00	9.38e+07	0.80 y	36:34	-	1.31	y
24	Unk	PCB-155	400.00	3.41e+08	1.27 y	34:05	-	1.09	y
25	IS	13C-PCB-155	100.00	7.84e+07	1.27 y	34:04	-	1.09	y
26	C/Up	13C-PCB-111	100.00	8.99e+07	1.60 y	36:09	-	1.25	y
27	RS	13C-PCB-101	100.00	7.17e+07	1.62 y	34:30	7.17e+05	-	n
28	Unk	PCB-123	400.00	3.62e+08	1.54 y	38:13	-	1.11	y
29	IS	13C-PCB-123	100.00	8.19e+07	1.58 y	38:11	-	1.26	y
30	Unk	PCB-118	400.00	3.79e+08	1.54 y	38:23	-	1.10	y
31	IS	13C-PCB-118	100.00	8.62e+07	1.57 y	38:21	-	1.33	y
32	Unk	PCB-114	400.00	3.66e+08	1.54 y	39:01	-	1.09	y
33	IS	13C-PCB-114	100.00	8.39e+07	1.60 y	38:59	-	1.30	y
34	Unk	PCB-105	400.00	3.57e+08	1.54 y	39:49	-	1.07	y
35	IS	13C-PCB-105	100.00	8.36e+07	1.59 y	39:49	-	1.29	y
36	Unk	PCB-126	400.00	3.24e+08	1.53 y	41:57	-	1.05	y
37	IS	13C-PCB-126	100.00	7.74e+07	1.59 y	41:55	-	1.19	y
38	Unk	PCB-167	400.00	3.35e+08	1.24 y	43:18	-	1.00	y
39	IS	13C-PCB-167	100.00	8.36e+07	1.26 y	43:18	-	1.29	y
40	Unk	PCB-156	400.00	3.30e+08	1.24 y	44:32	-	1.02	y
41	IS	13C-PCB-156	100.00	8.06e+07	1.27 y	44:30	-	1.24	y
42	Unk	PCB-157	400.00	3.23e+08	1.26 y	44:47	-	0.983	y
43	IS	13C-PCB-157	100.00	8.20e+07	1.26 y	44:47	-	1.27	y
44	Unk	PCB-169	400.00	2.99e+08	1.25 y	46:40	-	0.989	y
45	IS	13C-PCB-169	100.00	7.56e+07	1.23 y	46:40	-	1.17	y
46	Unk	PCB-188	400.00	3.62e+08	1.05 y	39:35	-	1.07	y
47	IS	13C-PCB-188	100.00	8.43e+07	1.06 y	39:34	-	1.30	y
48	Unk	PCB-189	400.00	2.98e+08	1.06 y	48:21	-	1.11	y
49	IS	13C-PCB-189	100.00	6.71e+07	1.05 y	48:19	-	1.04	y
50	Unk	PCB-202	400.00	2.57e+08	0.89 y	44:42	-	1.05	y
51	IS	13C-PCB-202	100.00	6.14e+07	0.90 y	44:40	-	0.948	y
52	C/Up	13C-PCB-178	100.00	5.33e+07	1.06 y	42:12	-	0.822	y
53	RS	13C-PCB-138	100.00	6.48e+07	1.26 y	41:26	6.48e+05	-	n

54	Unk	PCB-205	400.00	2.92e+08	0.88	y	49:59	-	1.09	y	
55	IS	13C-PCB-205	100.00	6.68e+07	0.91	y	49:58	-	1.35	y	
56	Unk	PCB-208	400.00	2.48e+08	1.42	y	49:03	-	0.928	y	
57	IS	13C-PCB-208	100.00	6.68e+07	0.79	y	49:03	-	1.35	y	
58	Unk	PCB-206	400.00	1.89e+08	1.41	y	51:10	-	0.938	y	
59	IS	13C-PCB-206	100.00	5.04e+07	0.78	y	51:10	-	1.01	y	
60	Unk	PCB-209	400.00	2.86e+08	1.18	y	52:21	-	1.14	y	
61	IS	13C-PCB-209	100.00	6.27e+07	1.19	y	52:19	-	1.26	y	
62	RS	13C-PCB-194	100.00	4.97e+07	0.92	y	49:44	4.97e+05	-	n	

Analyst: [illegible] Date: 8/12/16

Run #6 Filename 11AUG16Z S: 6 Acquired: 11-AUG-16 16:25:44 Cal: 1668FAL4-8-11-16
Client ID: ST081116Z5 Analyte: 1668FAL4-8-11-16 FAL ID: 1668 CS5 R130426C CS0501

	Typ	Name	Amount	Resp	RA		RT	RF	RRF	
1	Unk	PCB-1	2000.00	2.77e+09	3.13	y	14:24	-	0.980	y
2	IS/RT	13C-PCB-1	100.00	1.41e+08	3.09	y	14:23	-	1.22	y
3	Unk	PCB-3	2000.00	2.77e+09	3.08	y	16:52	-	1.01	y
4	IS/RT	13C-PCB-3	100.00	1.37e+08	3.12	y	16:51	-	1.19	y
5	Unk	PCB-4	2000.00	1.87e+09	1.57	y	18:06	-	1.14	y
6	IS/RT	13C-PCB-4	100.00	8.19e+07	1.59	y	18:04	-	0.707	y
7	Unk	PCB-15	2000.00	2.84e+09	1.58	y	23:39	-	1.12	y
8	IS/RT	13C-PCB-15	100.00	1.26e+08	1.58	y	23:38	-	1.09	y
9	Unk	PCB-19	2000.00	1.68e+09	1.04	y	21:59	-	1.10	y
10	IS/RT	13C-PCB-19	100.00	7.64e+07	1.09	y	21:58	-	0.659	y
11	RS	13C-PCB-9	100.00	1.16e+08	1.61	y	19:46	1.16e+06	-	n
12	Unk	PCB-37	2000.00	2.50e+09	1.05	y	30:16	-	1.19	y
13	IS	13C-PCB-37	100.00	1.05e+08	1.09	y	30:16	-	1.46	y
14	Unk	PCB-54	2000.00	1.96e+09	0.78	y	25:31	-	1.05	y
15	IS/RT	13C-PCB-54	100.00	9.30e+07	0.79	y	25:29	-	1.30	y
16	Unk	PCB-104	2000.00	1.52e+09	1.56	y	29:57	-	1.10	y
17	IS	13C-PCB-104	100.00	6.89e+07	1.59	y	29:56	-	0.960	y
18	C/Up	13C-PCB-28	100.00	1.04e+08	1.07	y	26:36	-	1.45	y
19	RS	13C-PCB-52	100.00	7.18e+07	0.78	y	28:50	7.18e+05	-	n
20	Unk	PCB-81	2000.00	1.97e+09	0.78	y	36:03	-	1.18	y
21	IS	13C-PCB-81	100.00	8.33e+07	0.80	y	36:01	-	1.33	y
22	Unk	PCB-77	2000.00	1.93e+09	0.77	y	36:37	-	1.13	y
23	IS/RT	13C-PCB-77	100.00	8.57e+07	0.80	y	36:35	-	1.37	y
24	Unk	PCB-155	2000.00	1.57e+09	1.28	y	34:06	-	1.10	y
25	IS	13C-PCB-155	100.00	7.15e+07	1.27	y	34:05	-	1.15	y
26	C/Up	13C-PCB-111	100.00	7.85e+07	1.59	y	36:10	-	1.26	y
27	RS	13C-PCB-101	100.00	6.24e+07	1.60	y	34:32	6.24e+05	-	n
28	Unk	PCB-123	2000.00	1.68e+09	1.54	y	38:14	-	1.10	y
29	IS	13C-PCB-123	100.00	7.67e+07	1.59	y	38:13	-	1.36	y
30	Unk	PCB-118	2000.00	1.75e+09	1.55	y	38:24	-	1.11	y
31	IS	13C-PCB-118	100.00	7.89e+07	1.59	y	38:23	-	1.40	y
32	Unk	PCB-114	2000.00	1.66e+09	1.56	y	39:00	-	1.10	y
33	IS	13C-PCB-114	100.00	7.54e+07	1.59	y	39:00	-	1.33	y
34	Unk	PCB-105	2000.00	1.66e+09	1.54	y	39:50	-	1.09	y
35	IS	13C-PCB-105	100.00	7.61e+07	1.59	y	39:48	-	1.35	y
36	Unk	PCB-126	2000.00	1.61e+09	1.58	y	41:58	-	1.12	y
37	IS	13C-PCB-126	100.00	7.20e+07	1.61	y	41:57	-	1.27	y
38	Unk	PCB-167	2000.00	1.50e+09	1.25	y	43:19	-	1.01	y
39	IS	13C-PCB-167	100.00	7.47e+07	1.25	y	43:17	-	1.32	y
40	Unk	PCB-156	2000.00	1.48e+09	1.24	y	44:33	-	1.03	y
41	IS	13C-PCB-156	100.00	7.22e+07	1.26	y	44:31	-	1.28	y
42	Unk	PCB-157	2000.00	1.46e+09	1.25	y	44:48	-	0.985	y
43	IS	13C-PCB-157	100.00	7.42e+07	1.26	y	44:46	-	1.31	y
44	Unk	PCB-169	2000.00	1.36e+09	1.24	y	46:41	-	0.988	y
45	IS	13C-PCB-169	100.00	6.89e+07	1.26	y	46:40	-	1.22	y
46	Unk	PCB-188	2000.00	1.64e+09	1.05	y	39:35	-	1.07	y
47	IS	13C-PCB-188	100.00	7.66e+07	1.06	y	39:35	-	1.36	y
48	Unk	PCB-189	2000.00	1.31e+09	1.04	y	48:20	-	1.09	y
49	IS	13C-PCB-189	100.00	5.99e+07	1.04	y	48:20	-	1.06	y
50	Unk	PCB-202	2000.00	1.16e+09	0.88	y	44:43	-	1.04	y
51	IS	13C-PCB-202	100.00	5.54e+07	0.90	y	44:41	-	0.981	y
52	C/Up	13C-PCB-178	100.00	4.59e+07	1.06	y	42:13	-	0.813	y
53	RS	13C-PCB-138	100.00	5.65e+07	1.25	y	41:27	5.65e+05	-	n

54	Unk	PCB-205	2000.00	1.25e+09	0.87	y	49:59	-	1.07	y	
55	IS	13C-PCB-205	100.00	5.85e+07	0.92	y	49:59	-	1.42	y	
56	Unk	PCB-208	2000.00	1.16e+09	1.38	y	49:04	-	0.931	y	
57	IS	13C-PCB-208	100.00	6.20e+07	0.78	y	49:03	-	1.51	y	
58	Unk	PCB-206	2000.00	8.49e+08	1.38	y	51:11	-	0.943	y	
59	IS	13C-PCB-206	100.00	4.50e+07	0.78	y	51:10	-	1.09	y	
60	Unk	PCB-209	2000.00	1.25e+09	1.18	y	52:21	-	1.14	y	
61	IS	13C-PCB-209	100.00	5.48e+07	1.20	y	52:21	-	1.33	y	
62	RS	13C-PCB-194	100.00	4.12e+07	0.91	y	49:44	4.12e+05	-	n	

Analyst: _____ Date: 8/10/16

USEPA - ITD

FORM 4A
209 PCB CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 8/11/16

Instrument ID: FAL4 GC Column ID: DB1

VER Data Filename: 11AUG16Z Sam:1 Analysis Date: 11-AUG-16 11:26:03

NATIVE ANALYTES	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	M/M+2	3.10	2.66-3.60	y	48.3	37.5 - 62.5
PCB-3	M/M+2	3.15	2.66-3.60	y	47.8	37.5 - 62.5
PCB-4	M/M+2	1.52	1.33-1.79	y	47.2	37.5 - 62.5
PCB-15	M/M+2	1.56	1.33-1.79	y	48.7	37.5 - 62.5
PCB-19	M/M+2	1.04	0.88-1.20	y	47.9	37.5 - 62.5
PCB-37	M/M+2	1.04	0.88-1.20	y	47.8	37.5 - 62.5
PCB-54	M/M+2	0.78	0.65-0.89	y	49.8	37.5 - 62.5
PCB-77	M/M+2	0.78	0.65-0.89	y	48.3	37.5 - 62.5
PCB-81	M/M+2	0.78	0.65-0.89	y	49.0	37.5 - 62.5
PCB-104	M+2/M+4	1.56	1.32-1.78	y	47.6	37.5 - 62.5
PCB-105	M+2/M+4	1.54	1.32-1.78	y	48.6	37.5 - 62.5
PCB-114	M+2/M+4	1.53	1.32-1.78	y	47.8	37.5 - 62.5
PCB-118	M+2/M+4	1.52	1.32-1.78	y	49.5	37.5 - 62.5
PCB-123	M+2/M+4	1.51	1.32-1.78	y	49.1	37.5 - 62.5
PCB-126	M+2/M+4	1.58	1.32-1.78	y	49.0	37.5 - 62.5
PCB-155	M+2/M+4	1.27	1.05-1.43	y	48.6	37.5 - 62.5
PCB-156	M+2/M+4	1.22	1.05-1.43	y	49.5	37.5 - 62.5
PCB-157	M+2/M+4	1.25	1.05-1.43	y	51.1	37.5 - 62.5
PCB-167	M+2/M+4	1.23	1.05-1.43	y	50.6	37.5 - 62.5
PCB-169	M+2/M+4	1.28	1.05-1.43	y	49.3	37.5 - 62.5
PCB-188	M+2/M+4	1.05	0.89-1.21	y	48.7	37.5 - 62.5
PCB-189	M+2/M+4	1.06	0.89-1.21	y	49.3	37.5 - 62.5
PCB-202	M+2/M+4	0.88	0.76-1.02	y	49.3	37.5 - 62.5
PCB-205	M+2/M+4	0.88	0.76-1.02	y	49.7	37.5 - 62.5
PCB-206	M+4/M+6	1.40	1.13-1.53	y	49.8	37.5 - 62.5
PCB-208	M+4/M+6	1.45	1.13-1.53	y	48.5	37.5 - 62.5
PCB-209	M+4/M+6	1.18	0.99-1.33	y	51.5	37.5 - 62.5

Analyst: [signature] Date: 8/12/16

USEPA - ITD

FORM 4B
209 PCB CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 8/11/16

Instrument ID: FAL4 GC Column ID: DB1

VER Data Filename: 11AUG16Z Sam:1 Analysis Date: 11-AUG-16 11:26:03

	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL)
LABELED COMPOUNDS						
13C-PCB-1	M/M+2	3.05	2.66-3.60	y	98.2	50.0 - 145
13C-PCB-3	M/M+2	3.19	2.66-3.60	y	101	50.0 - 145
13C-PCB-4	M/M+2	1.56	1.33-1.79	y	97.2	50.0 - 145
13C-PCB-15	M/M+2	1.57	1.33-1.79	y	98.9	50.0 - 145
13C-PCB-19	M/M+2	1.09	0.88-1.20	y	99.2	50.0 - 145
13C-PCB-37	M/M+2	1.14	0.88-1.20	y	97.4	50.0 - 145
13C-PCB-54	M/M+2	0.79	0.65-0.89	y	98.0	50.0 - 145
13C-PCB-77	M/M+2	0.80	0.65-0.89	y	100.0	50.0 - 145
13C-PCB-81	M/M+2	0.79	0.65-0.89	y	96.2	50.0 - 145
13C-PCB-104	M+2/M+4	1.60	1.32-1.78	y	98.7	50.0 - 145
13C-PCB-105	M+2/M+4	1.60	1.32-1.78	y	98.5	50.0 - 145
13C-PCB-114	M+2/M+4	1.58	1.32-1.78	y	99.0	50.0 - 145
13C-PCB-118	M+2/M+4	1.58	1.32-1.78	y	98.2	50.0 - 145
13C-PCB-123	M+2/M+4	1.57	1.32-1.78	y	96.9	50.0 - 145
13C-PCB-126	M+2/M+4	1.57	1.32-1.78	y	95.7	50.0 - 145
13C-PCB-155	M+2/M+4	1.26	1.05-1.43	y	100	50.0 - 145
13C-PCB-156	M+2/M+4	1.27	1.05-1.43	y	99.4	50.0 - 145
13C-PCB-157	M+2/M+4	1.25	1.05-1.43	y	97.4	50.0 - 145
13C-PCB-167	M+2/M+4	1.25	1.05-1.43	y	98.8	50.0 - 145
13C-PCB-169	M+2/M+4	1.24	1.05-1.43	y	99.2	50.0 - 145
13C-PCB-188	M+2/M+4	1.06	0.89-1.21	y	101	50.0 - 145
13C-PCB-189	M+2/M+4	1.04	0.89-1.21	y	98.4	50.0 - 145
13C-PCB-202	M+2/M+4	0.91	0.76-1.02	y	99.8	50.0 - 145
13C-PCB-205	M+2/M+4	0.90	0.76-1.02	y	95.9	50.0 - 145
13C-PCB-206	M+2/M+4	0.79	0.65-0.89	y	102	50.0 - 145
13C-PCB-208	M+2/M+4	0.79	0.65-0.89	y	100	50.0 - 145
13C-PCB-209	M+4/M+6	1.20	0.99-1.33	y	97.3	50.0 - 145
CLEANUP STANDARDS						
13C-PCB-28	M/M+2	1.10	0.88-1.20	y	99.2	65.0 - 135
13C-PCB-111	M+2/M+4	1.58	1.32-1.78	y	101	75.0 - 125
13C-PCB-178	M+2/M+4	1.05	0.89-1.21	y	101	75.0 - 125

Analyst: _____ Date: 8/18/16

FAL ID: ST081116Z3 Filename: 11AUG16Z Sam:1 Acquired: 11-AUG-16 11:26:03 ICal: 1668FAL4-8-11-16
Client ID: 1668 CS3 R150603A CS0301 ConCal: NA EndCal: NA
Results: GC Column: DB1 Amount: 1.000

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL	Rec
PCB-1	6.56e+07	3.10 y	14:26	1.05	48.3		2.50	-	-	*	-
13C-PCB-1	1.29e+08	3.05 y	14:25	1.14	98.2		2.50				98.2
PCB-3	6.47e+07	3.15 y	16:52	1.05	47.8		2.50	-	-	*	-
13C-PCB-3	1.29e+08	3.19 y	16:51	1.11	101		2.50				101
PCB-4	4.08e+07	1.52 y	18:05	1.14	47.2		2.50	-	-	*	-
13C-PCB-4	7.61e+07	1.56 y	18:04	0.68	97.2		2.50				97.2
PCB-15	6.23e+07	1.56 y	23:39	1.09	48.7		2.50	-	-	*	-
13C-PCB-15	1.17e+08	1.57 y	23:38	1.02	98.9		2.50				98.9
PCB-19	3.92e+07	1.04 y	21:59	1.16	47.9		2.50	-	-	*	-
13C-PCB-19	7.06e+07	1.09 y	21:57	0.61	99.2		2.50				99.2
13C-PCB-9	1.16e+08	1.59 y	19:45	-	84.8		2.50				
PCB-37	5.25e+07	1.04 y	30:18	1.14	47.8		2.50	-	-	*	-
13C-PCB-37	9.62e+07	1.14 y	30:16	1.38	97.4		2.50				97.4
PCB-54	4.61e+07	0.78 y	25:31	1.05	49.8		2.50	-	-	*	-
13C-PCB-54	8.82e+07	0.79 y	25:29	1.25	98.0		2.50				98.0
PCB-104	3.51e+07	1.56 y	29:56	1.14	47.6		2.50	-	-	*	-
13C-PCB-104	6.45e+07	1.60 y	29:55	0.91	98.7		2.50				98.7
13C-PCB-28	1.06e+08	1.10 y	26:34	1.48	99.2		2.50				99.2
13C-PCB-52	7.18e+07	0.78 y	28:51	-	86.2		2.50				
PCB-81	4.21e+07	0.78 y	36:04	1.14	49.0		2.50	-	-	*	-
13C-PCB-81	7.50e+07	0.79 y	36:03	1.27	96.2		2.50				96.2
PCB-77	4.15e+07	0.78 y	36:37	1.10	48.3		2.50	-	-	*	-
13C-PCB-77	7.80e+07	0.80 y	36:37	1.27	100.0		2.50				100.0
PCB-155	3.60e+07	1.27 y	34:06	1.11	48.6		2.50	-	-	*	-
13C-PCB-155	6.68e+07	1.26 y	34:05	1.09	100		2.50				100
13C-PCB-111	7.73e+07	1.58 y	36:10	1.25	101		2.50				101
13C-PCB-101	6.14e+07	1.60 y	34:32	-	84.1		2.50				
PCB-123	3.39e+07	1.51 y	38:15	1.05	49.1		2.50	-	-	*	-
13C-PCB-123	6.56e+07	1.57 y	38:13	1.20	96.9		2.50				96.9
PCB-118	3.82e+07	1.52 y	38:25	1.07	49.5		2.50	-	-	*	-
13C-PCB-118	7.25e+07	1.58 y	38:23	1.31	98.2		2.50				98.2
PCB-114	3.56e+07	1.53 y	39:01	1.08	47.8		2.50	-	-	*	-
13C-PCB-114	6.87e+07	1.58 y	39:01	1.23	99.0		2.50				99.0
PCB-105	3.61e+07	1.54 y	39:50	1.08	48.6		2.50	-	-	*	-
13C-PCB-105	6.87e+07	1.60 y	39:49	1.24	98.5		2.50				98.5
PCB-126	3.31e+07	1.58 y	41:59	1.07	49.0		2.50	-	-	*	-
13C-PCB-126	6.32e+07	1.57 y	41:59	1.17	95.7		2.50				95.7
PCB-167	3.42e+07	1.23 y	43:19	0.98	50.6		2.50	-	-	*	-
13C-PCB-167	6.90e+07	1.25 y	43:18	1.24	98.8		2.50				98.8
PCB-156	3.30e+07	1.22 y	44:33	1.01	49.5		2.50	-	-	*	-
13C-PCB-156	6.60e+07	1.27 y	44:32	1.18	99.4		2.50				99.4
PCB-157	3.30e+07	1.25 y	44:48	0.96	51.1		2.50	-	-	*	-
13C-PCB-157	6.71e+07	1.25 y	44:46	1.22	97.4		2.50				97.4
PCB-169	3.04e+07	1.28 y	46:42	1.00	49.3		2.50	-	-	*	-
13C-PCB-169	6.18e+07	1.24 y	46:42	1.11	99.2		2.50				99.2
PCB-188	3.71e+07	1.05 y	39:35	1.09	48.7		2.50	-	-	*	-
13C-PCB-188	6.98e+07	1.06 y	39:34	1.22	101		2.50				101
PCB-189	3.02e+07	1.06 y	48:22	1.14	49.3		2.50	-	-	*	-
13C-PCB-189	5.37e+07	1.04 y	48:20	0.97	98.4		2.50				98.4
PCB-202	2.56e+07	0.88 y	44:43	1.05	49.3		2.50	-	-	*	-
13C-PCB-202	4.92e+07	0.91 y	44:42	0.88	99.8		2.50				99.8
13C-PCB-178	4.39e+07	1.05 y	42:13	0.77	101		2.50				101
13C-PCB-138	5.63e+07	1.25 y	41:26	-	80.7		2.50				

FAL ID: ST081116Z3 Filename: 11AUG16Z Sam:1 Acquired: 11-AUG-16 11:26:03 ICal: 1668FAL4-8-11-16
Client ID: 1668 CS3 R150603A CS0301 ConCal: NA EndCal: NA
Results: GC Column: DB1 Amount: 1.000

PCB-205	2.70e+07	0.88	y	50:01	1.02	49.7	2.50	-	-	*	-
13C-PCB-205	5.33e+07	0.90	y	49:59	1.38	95.9	2.50				95.9
PCB-208	2.39e+07	1.45	y	49:04	0.93	48.5	2.50	-	-	*	-
13C-PCB-208	5.30e+07	0.79	y	49:03	1.31	100	2.50				100
PCB-206	1.94e+07	1.40	y	51:11	0.94	49.8	2.50	-	-	*	-
13C-PCB-206	4.16e+07	0.79	y	51:10	1.01	102	2.50				102
PCB-209	2.98e+07	1.18	y	52:22	1.10	51.5	2.50	-	-	*	-
13C-PCB-209	5.25e+07	1.20	y	52:21	1.34	97.3	2.50				97.3
13C-PCB-194	4.03e+07	0.90	y	49:44	-	80.0	2.50				

Analyst: [illegible] Date: 8/12/16

Frontier Analytical Laboratory - Acquisition Log

Run Name:11AUG16Z Instrument: FAL4 GC: DB1MS Experiment:1668PCB

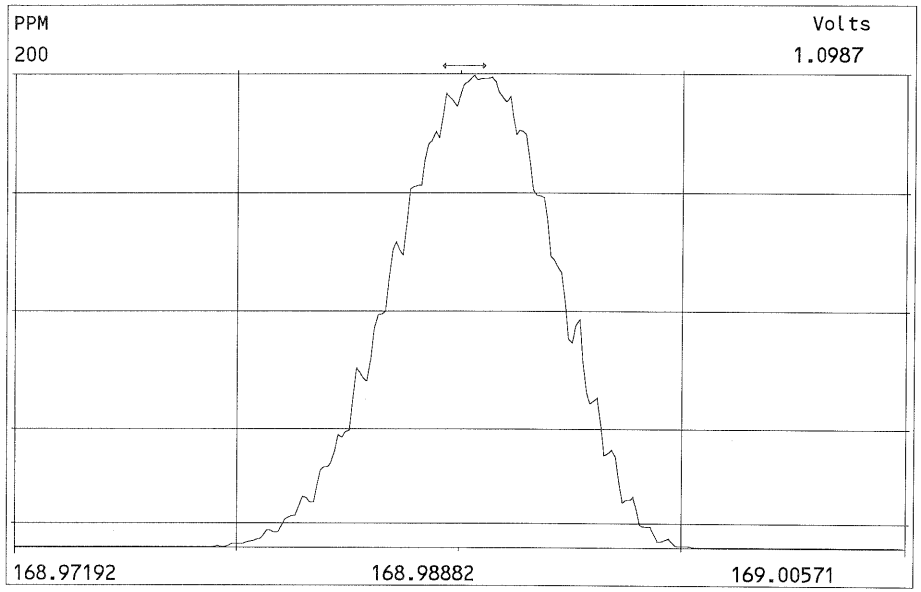
Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
11AUG16Z	1	ST081116Z3	1668 CS3 R150603A CS0301	11-AUG-16 11:26:03	NA	NA	BS
11AUG16Z	2	ST081116Z0	1668 CS0 R151116A CS0001	11-AUG-16 12:25:59	NA	NA	BS
11AUG16Z	3	ST081116Z1	1668 CS1 R121023B CS0101	11-AUG-16 13:25:54	NA	NA	BS
11AUG16Z	4	ST081116Z2	1668 CS2 R130426B CS0201	11-AUG-16 14:25:51	NA	NA	BS
11AUG16Z	5	ST081116Z4	1668 CS4 R151116B CS0401	11-AUG-16 15:25:47	NA	NA	BS
11AUG16Z	6	ST081116Z5	1668 CS5 R130426C CS0501	11-AUG-16 16:25:44	NA	NA	BS
11AUG16Z	7	SB081116Z1	Solvent Blank	11-AUG-16 17:25:40	NA	NA	BS
11AUG16Z	8	QC081116Z1	QCS	11-AUG-16 18:25:35	NA	NA	BS
11AUG16Z	9	ST081116Z6	1668 CS3 R150603A CS0351	11-AUG-16 19:25:30	ST081116Z6	ST081116Z7	BS
11AUG16Z	10	SS081116Z1	DAILY 209 151201A CS20951	11-AUG-16 20:25:24	ST081116Z6	ST081116Z7	BS
11AUG16Z	11	03802-001-0001-LC1	CLCS02	11-AUG-16 21:25:17	ST081116Z6	ST081116Z7	BS
11AUG16Z	12	03802-001-0001-LC2	CLCSD02	11-AUG-16 22:25:09	ST081116Z6	ST081116Z7	BS
11AUG16Z	13	03807-001-0001-LC1	CLCS07	11-AUG-16 23:25:02	ST081116Z6	ST081116Z7	BS
11AUG16Z	14	03807-001-0001-LC2	CLCSD07	12-AUG-16 00:24:55	ST081116Z6	ST081116Z7	BS
11AUG16Z	15	03802-001-0001-MB	CBLK02	12-AUG-16 01:24:48	ST081116Z6	ST081116Z7	BS
11AUG16Z	16	03807-001-0001-MB	CBLK07	12-AUG-16 02:24:42	ST081116Z6	ST081116Z7	BS
11AUG16Z	17	10066-001-0001-SA	PX2603	12-AUG-16 03:24:35	ST081116Z6	ST081116Z7	BS
11AUG16Z	18	10066-003-0001-SA	PX2605	12-AUG-16 04:24:28	ST081116Z6	ST081116Z7	BS
11AUG16Z	19	SB081116Z2	Solvent Blank	12-AUG-16 05:24:20	ST081116Z6	ST081116Z7	BS
11AUG16Z	20	ST081116Z7	1668 CS3 150603A CS0352	12-AUG-16 06:24:12	ST081116Z6	ST081116Z7	BS

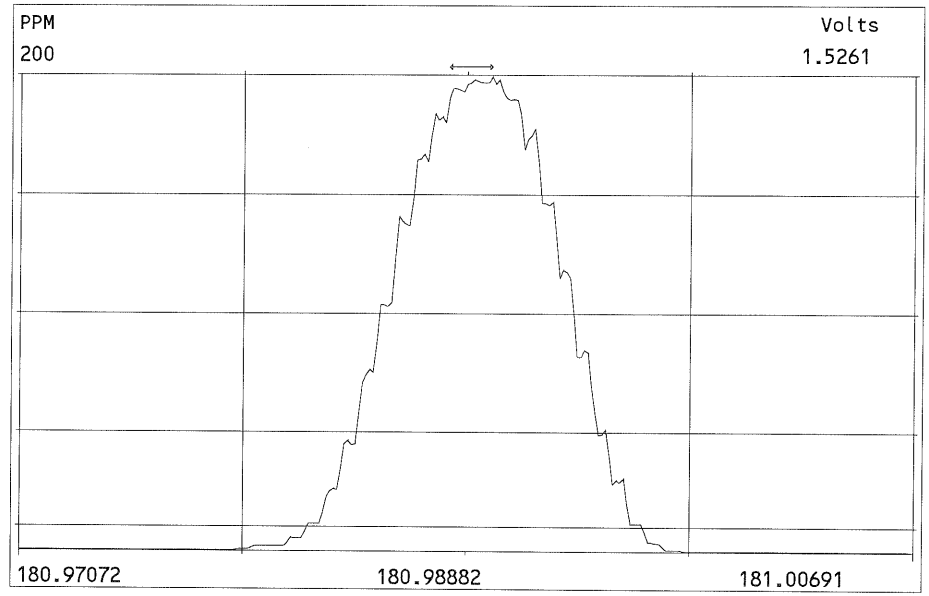
8/12/16

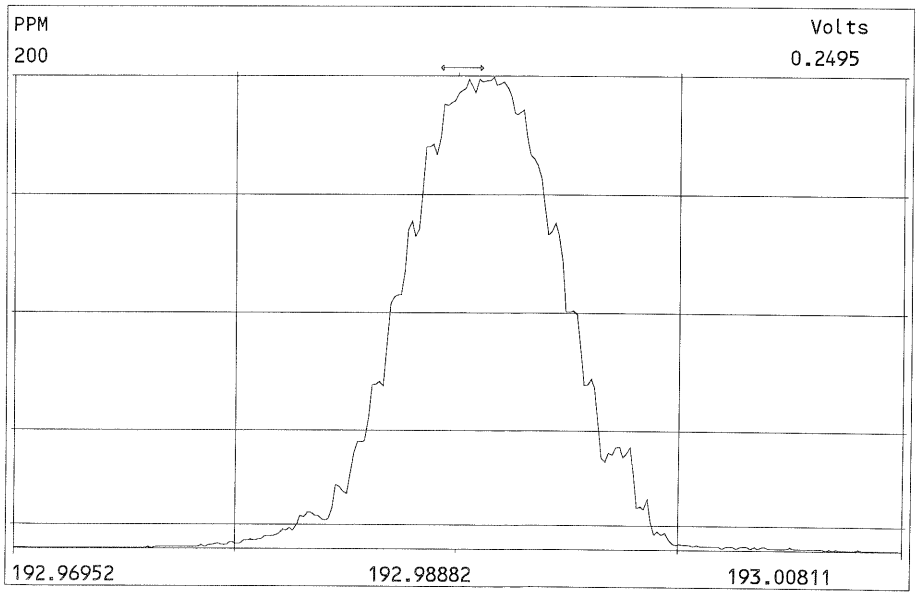
Data Backed Up:_____

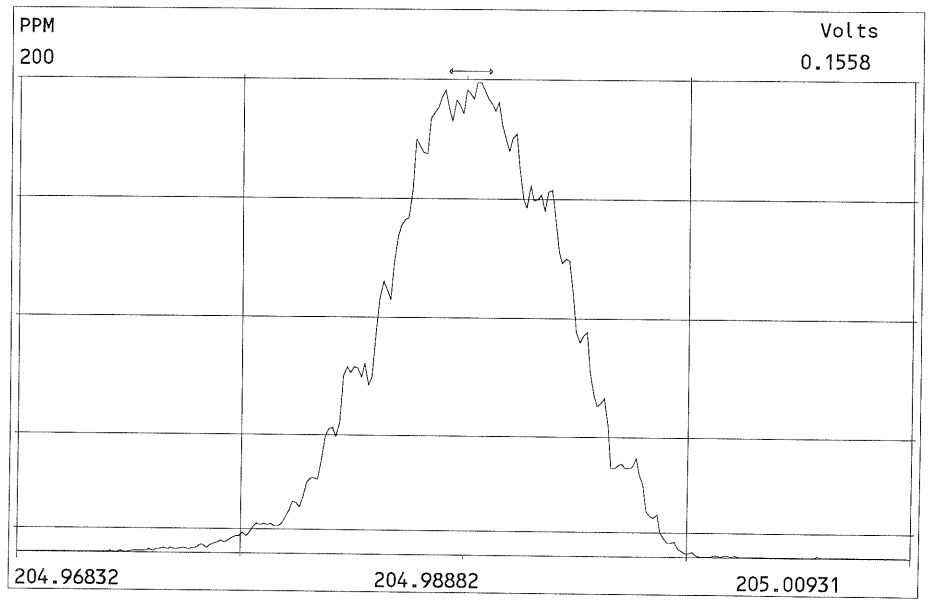
Date:_____

Peak Locate Examination:11-AUG-2016:11:21 File:11AUG16Z PFK-01
Experiment:1668PCB Function:1 Reference:PFK



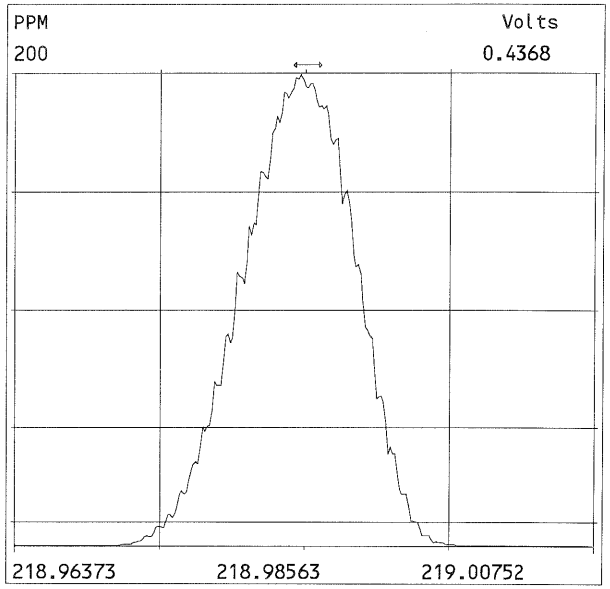


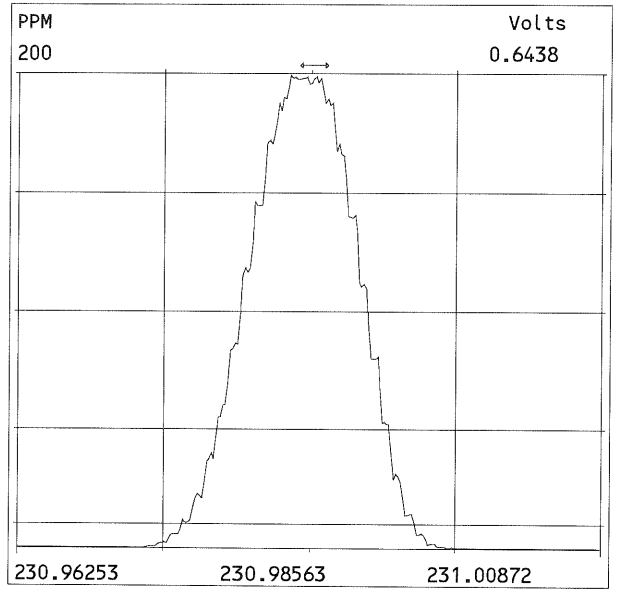


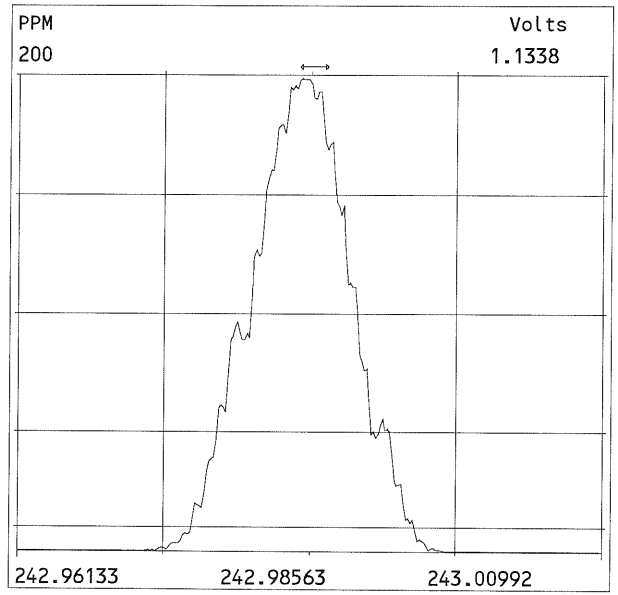


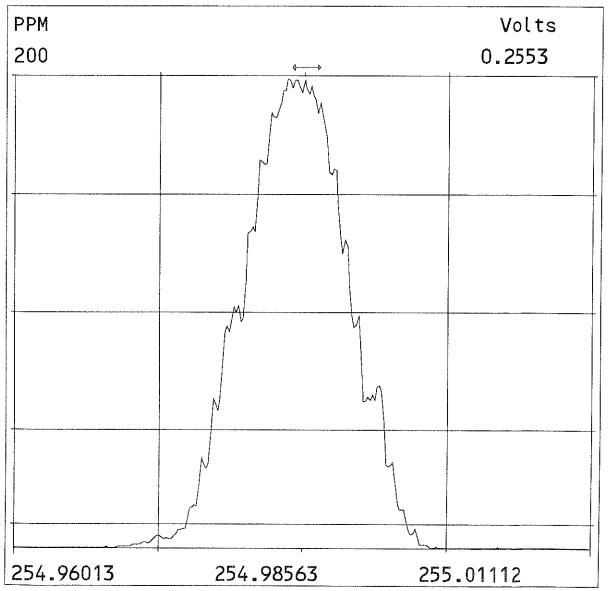
Peak Locate Examination:11-AUG-2016:11:22 File:11AUG16Z PFK01

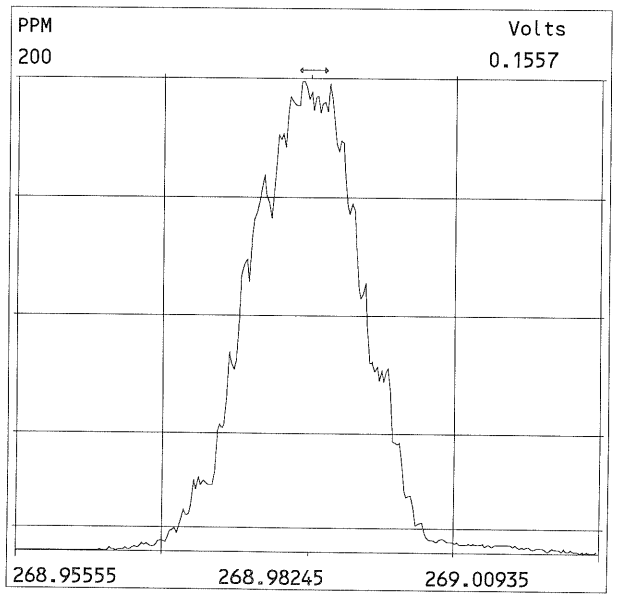
Experiment:1668PCB Function:2 Reference:PFK

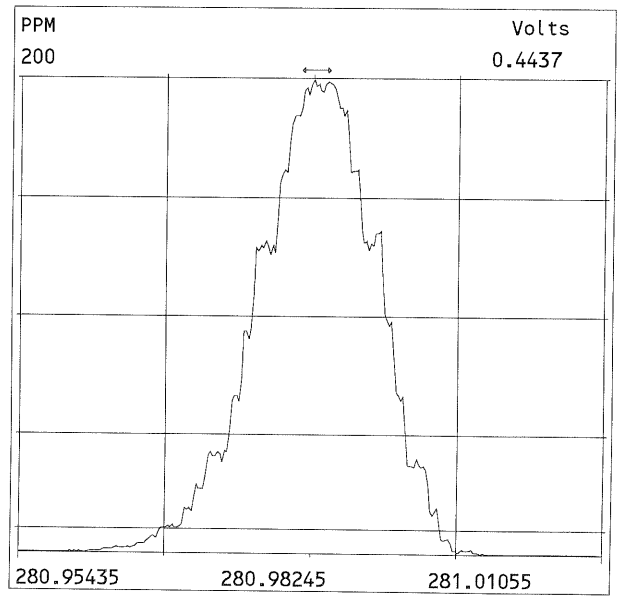






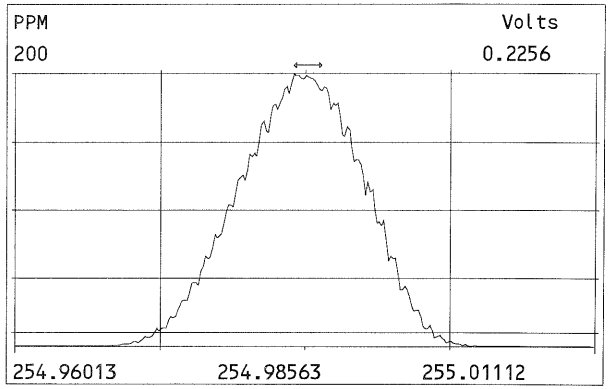


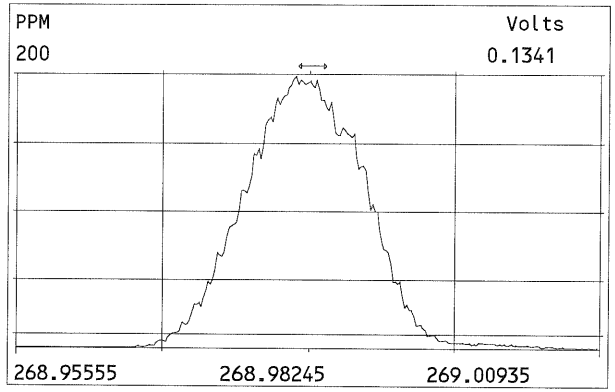


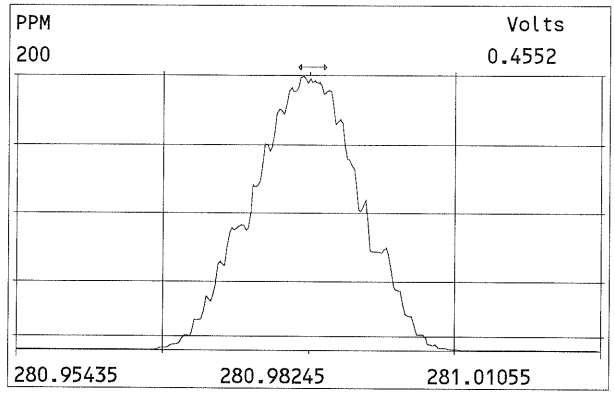


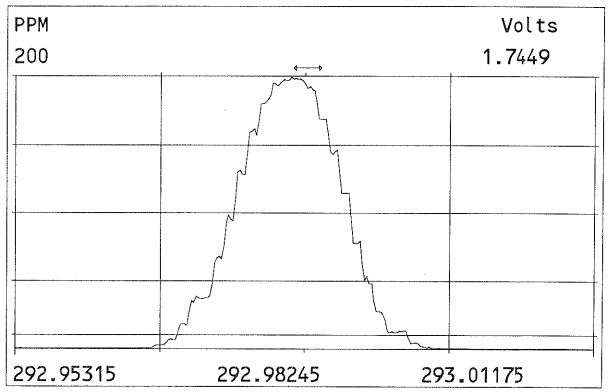
Peak Locate Examination:11-AUG-2016:11:22 File:11AUG16Z PFK01

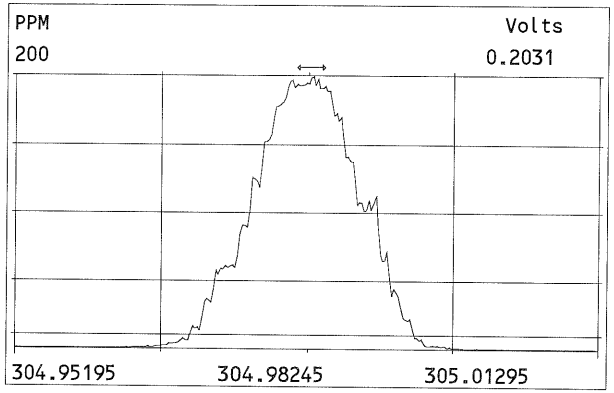
Experiment:1668PCB Function:3 Reference:PFK

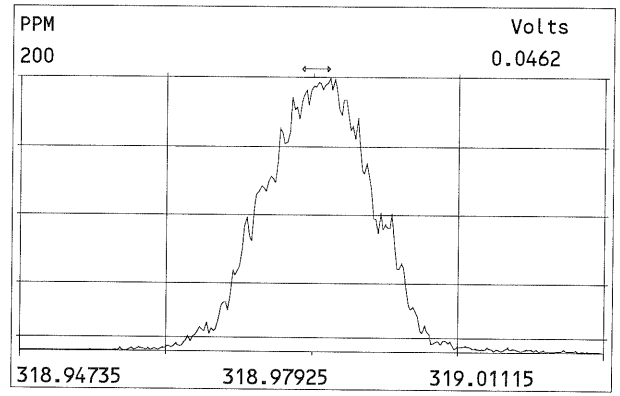


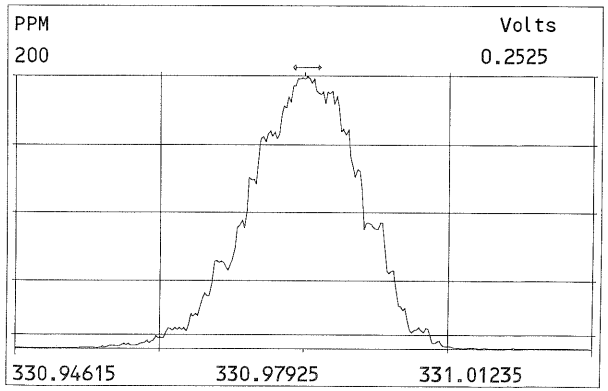


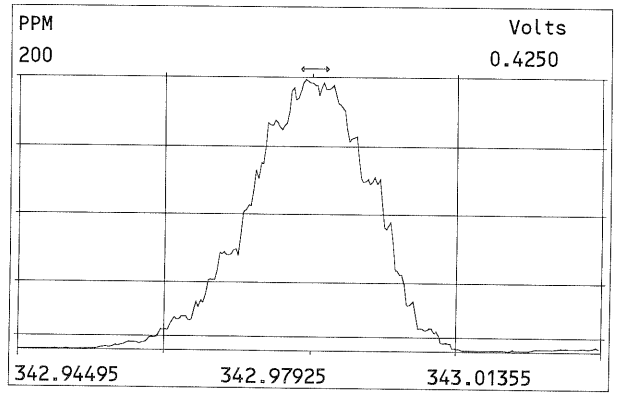






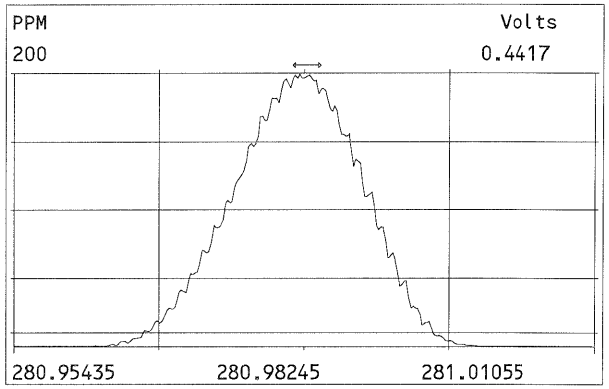


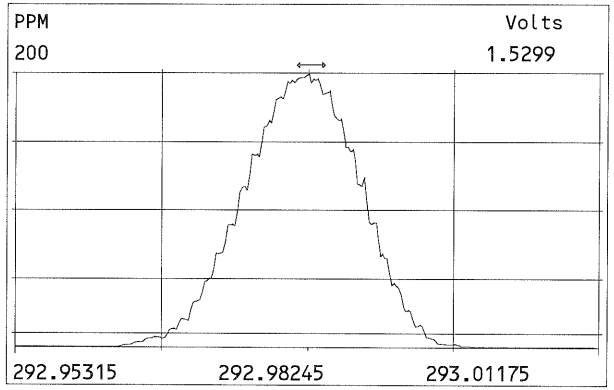


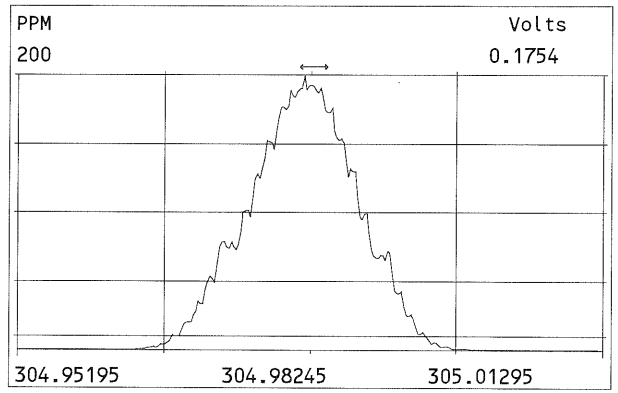


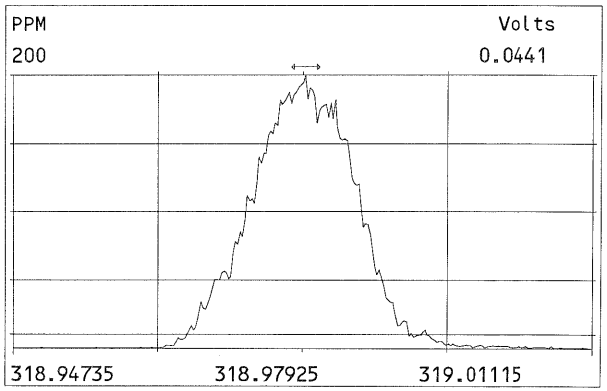
Peak Locate Examination:11-AUG-2016:11:23 File:11AUG16Z PFK01

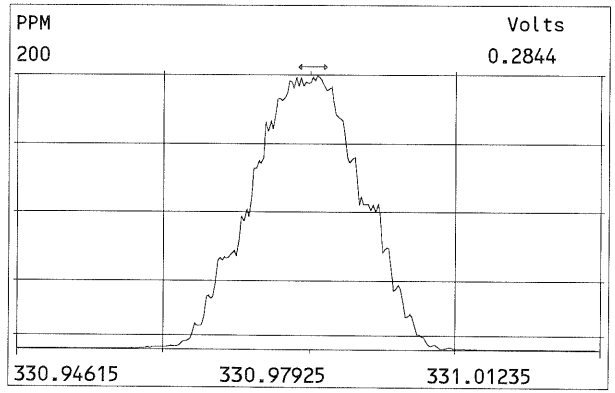
Experiment:1668PCB Function:4 Reference:PFK

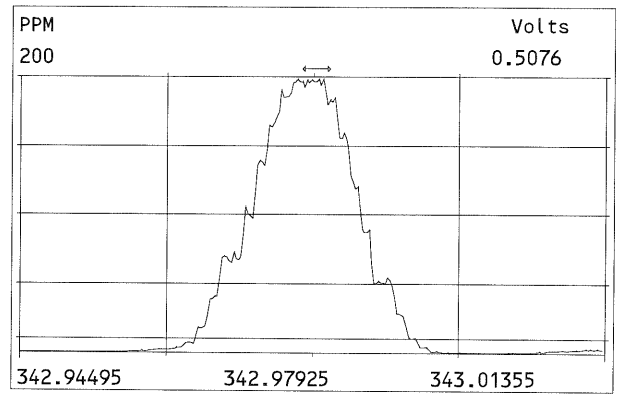


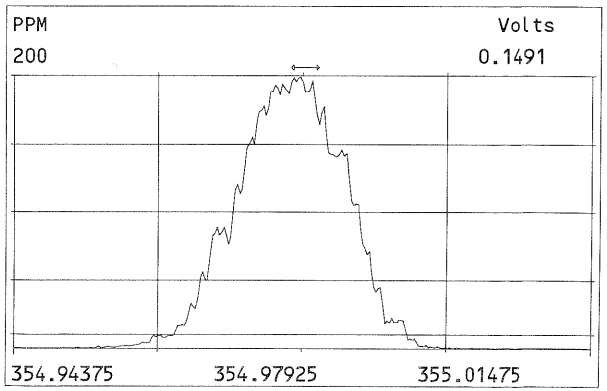


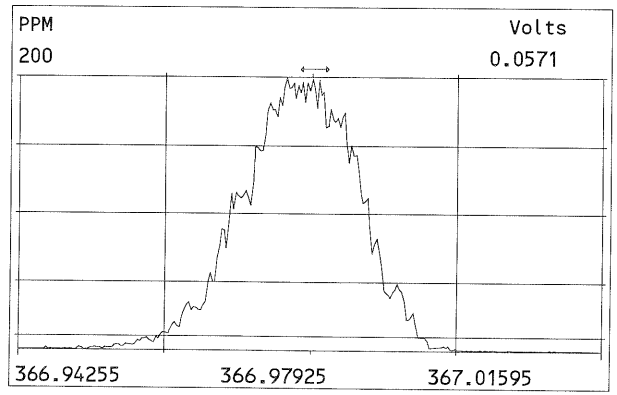


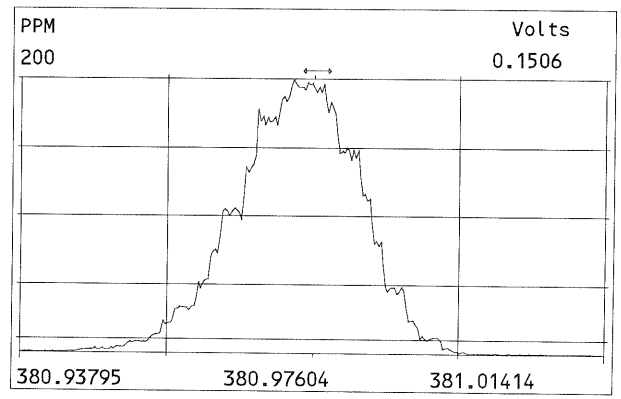




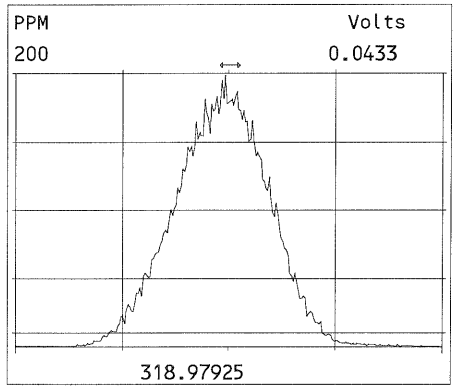


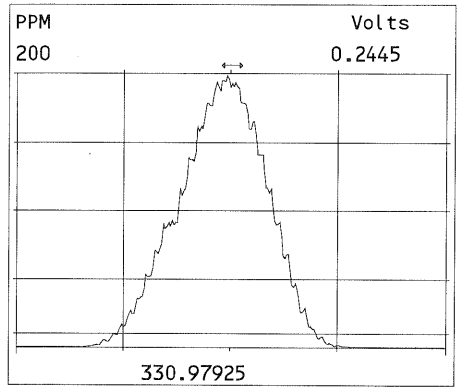


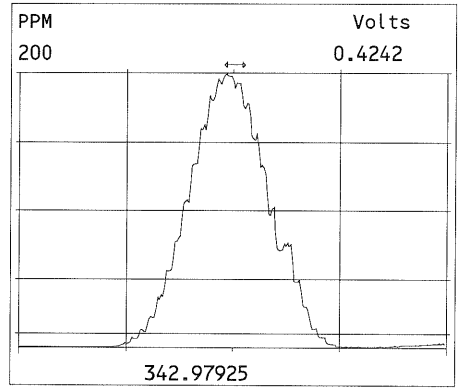


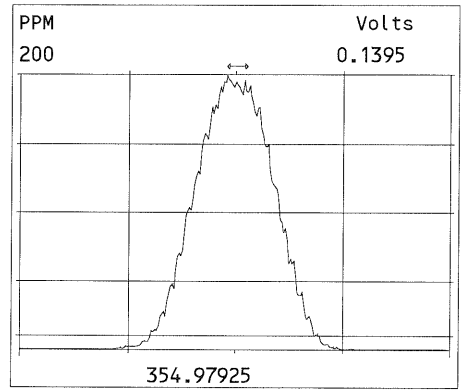


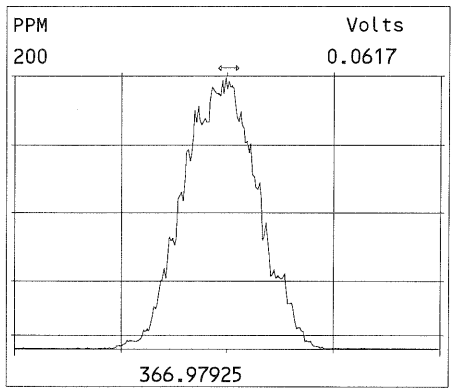
Peak Locate Examination:11-AUG-2016:11:24 File:11AUG16Z PFK01
Experiment:1668PCB Function:5 Reference:PFK

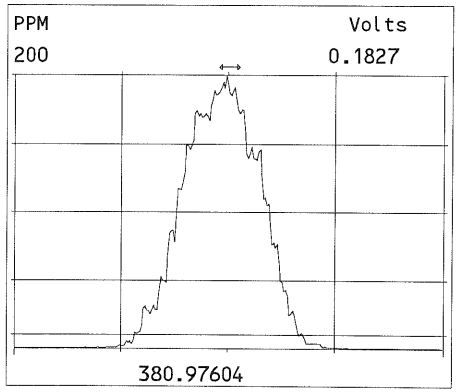


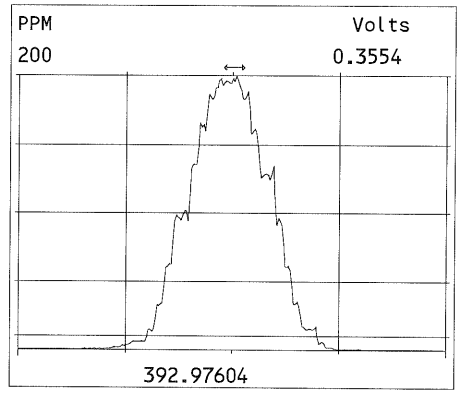


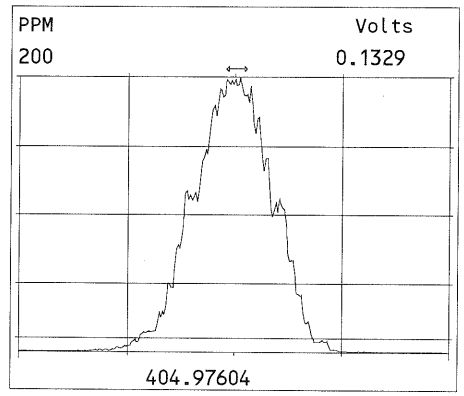


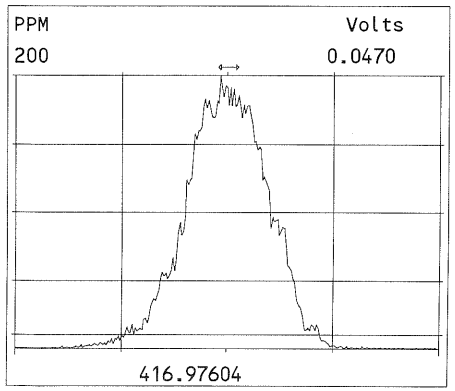


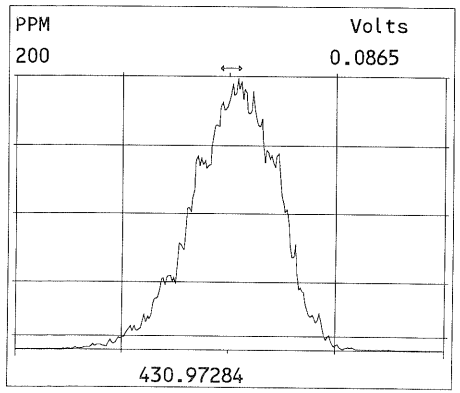


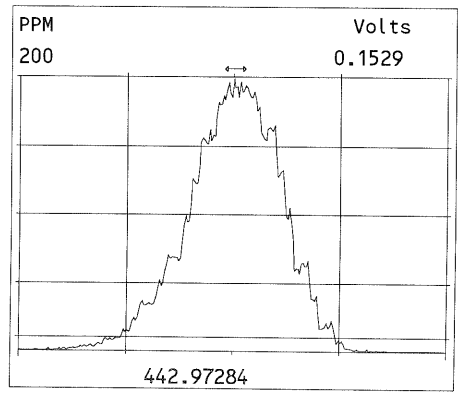






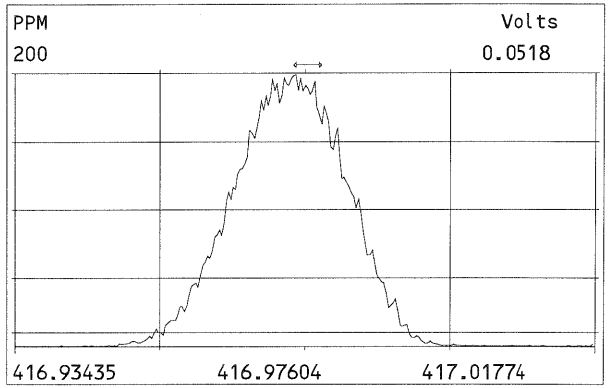


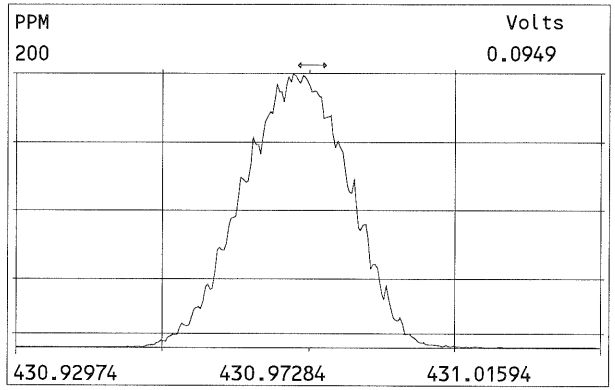


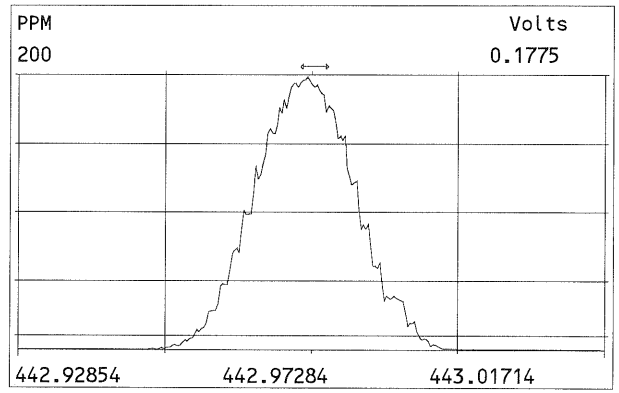


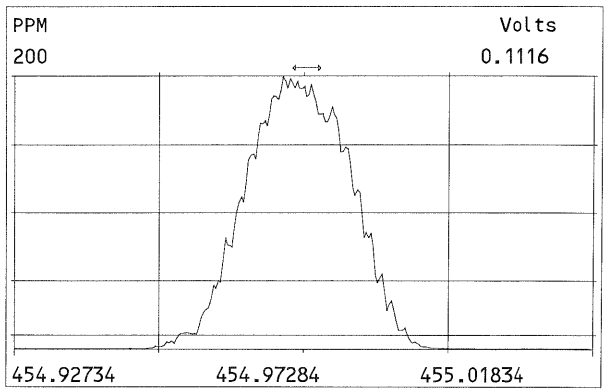
Peak Locate Examination:11-AUG-2016:11:25 File:11AUG16Z PFK01

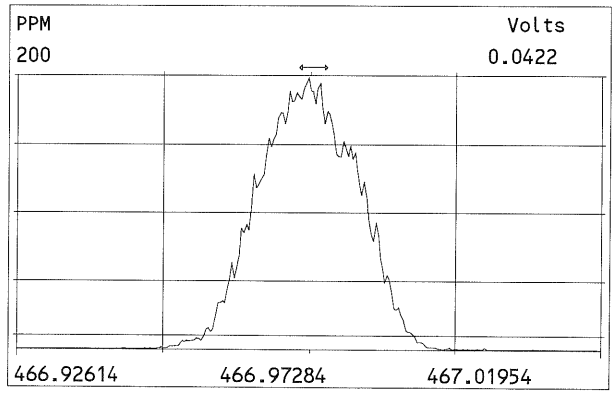
Experiment:1668PCB Function:6 Reference:PFK

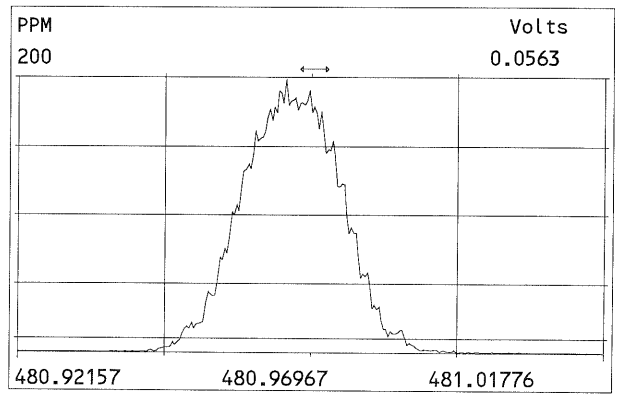


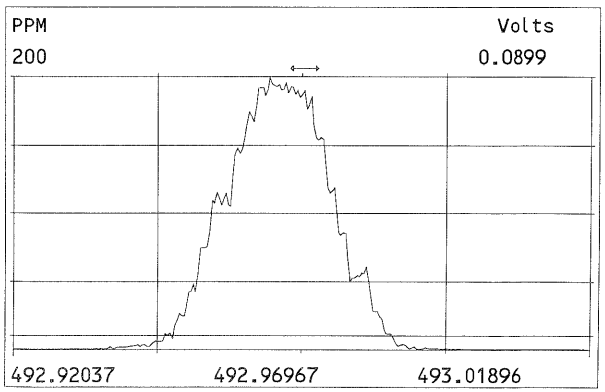


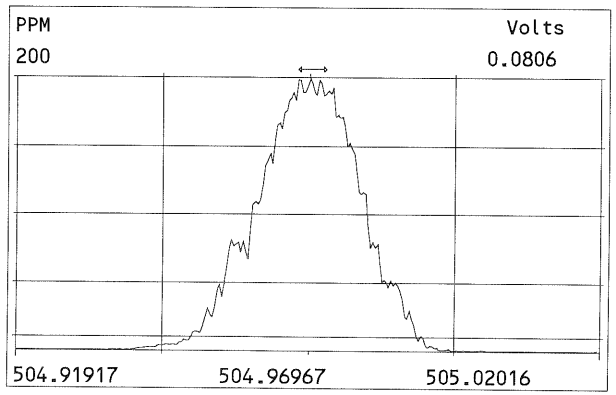


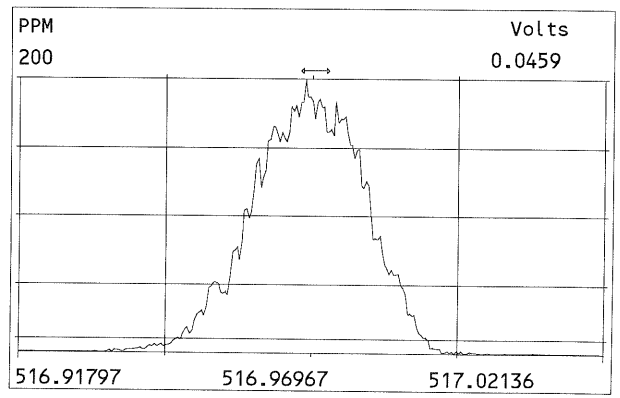




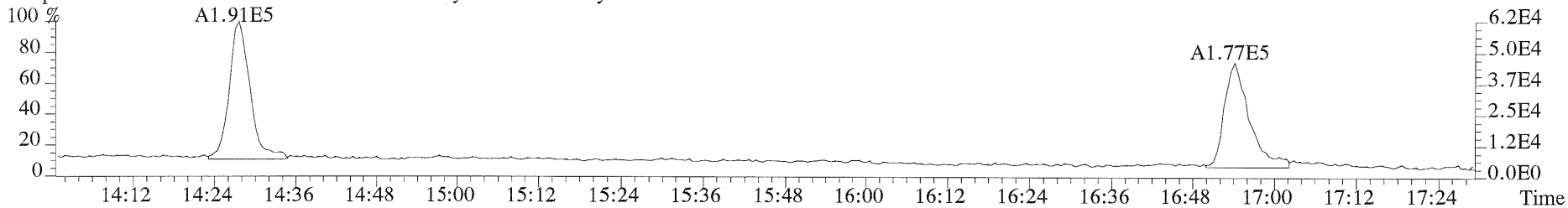




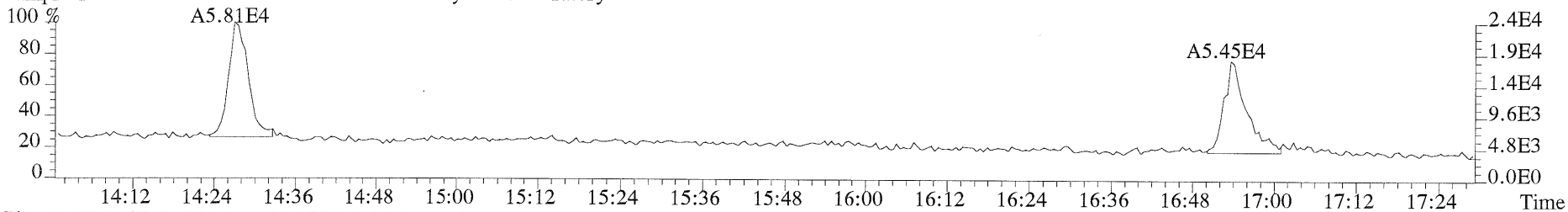




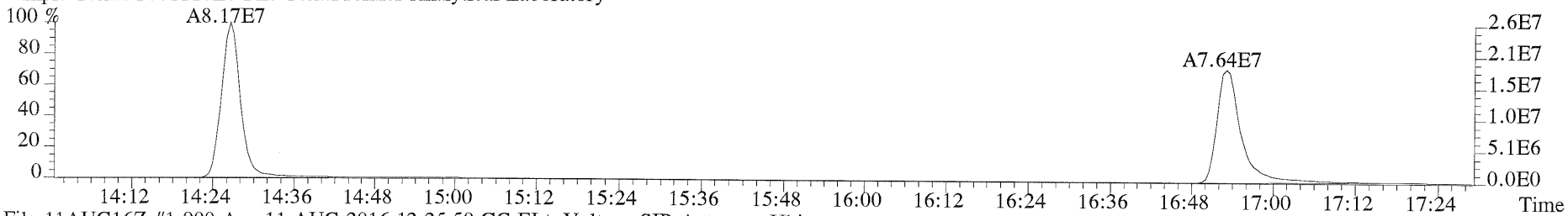
File:11AUG16Z #1-900 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
188.0393 S:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



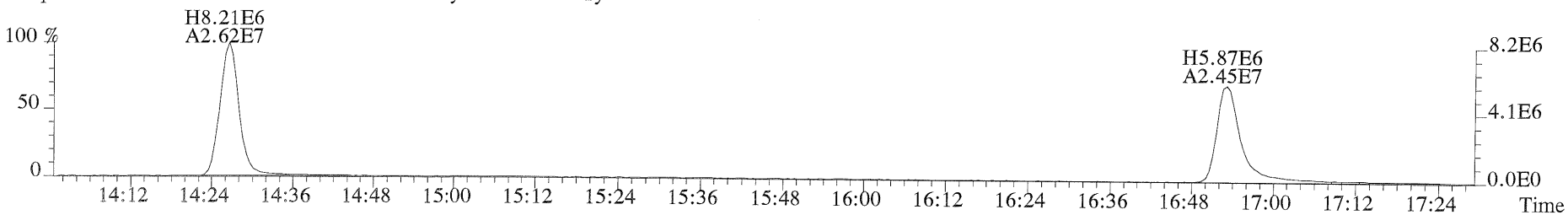
File:11AUG16Z #1-900 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
190.0363 S:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



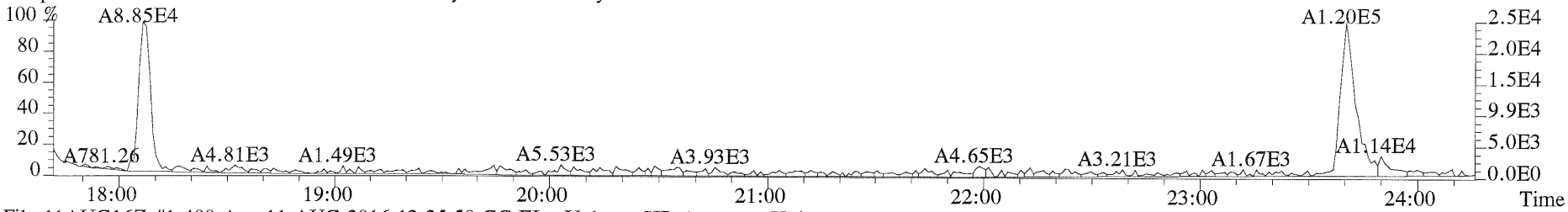
File:11AUG16Z #1-900 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
200.0795 S:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



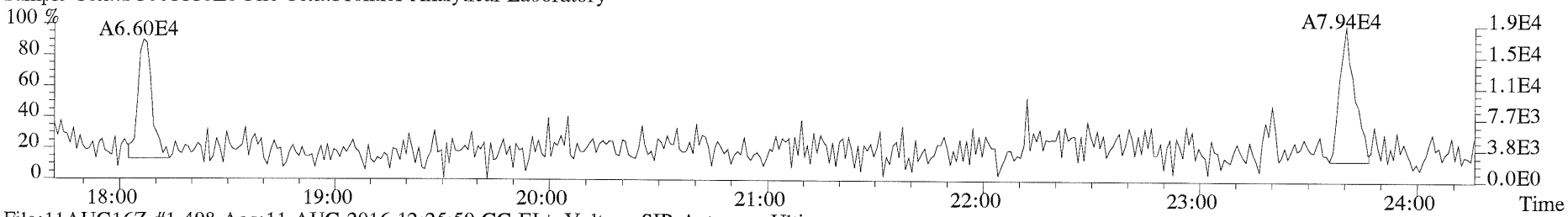
File:11AUG16Z #1-900 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
202.0766 S:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



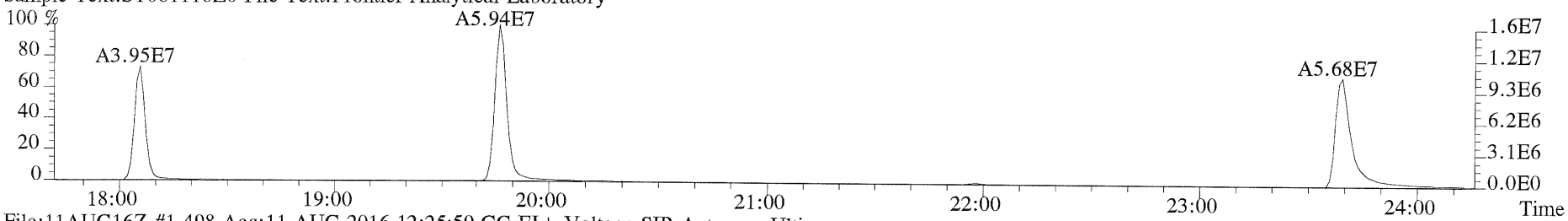
File:11AUG16Z #1-498 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
222.0003 S:2 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



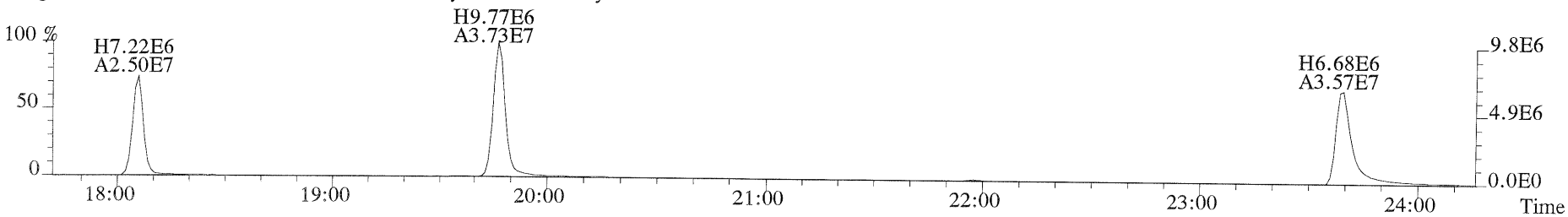
File:11AUG16Z #1-498 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
223.9974 S:2 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



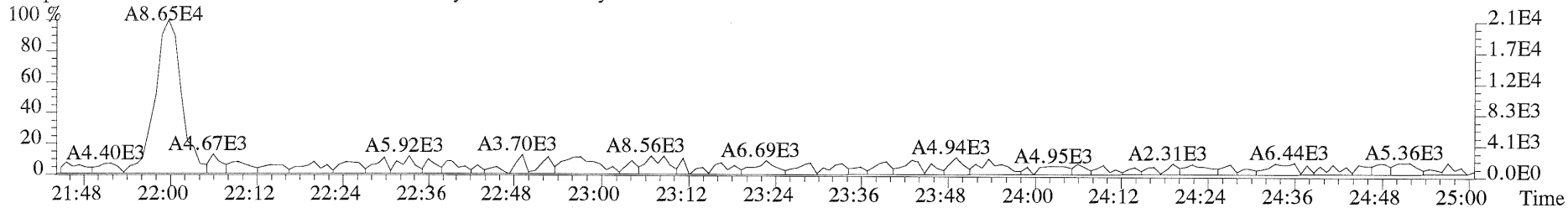
File:11AUG16Z #1-498 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
234.0406 S:2 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



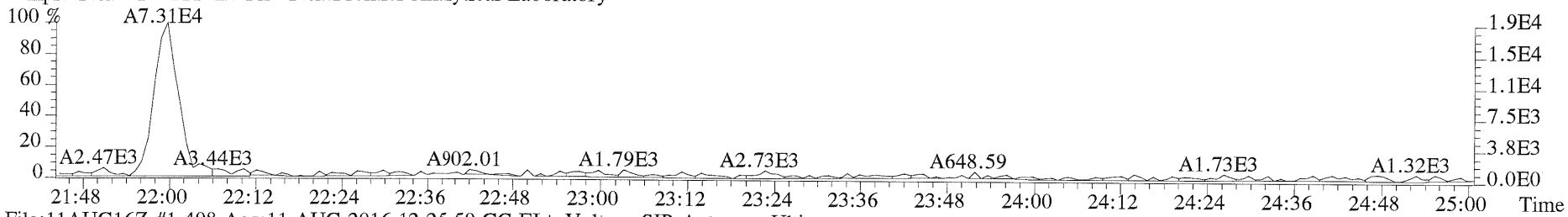
File:11AUG16Z #1-498 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
236.0376 S:2 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



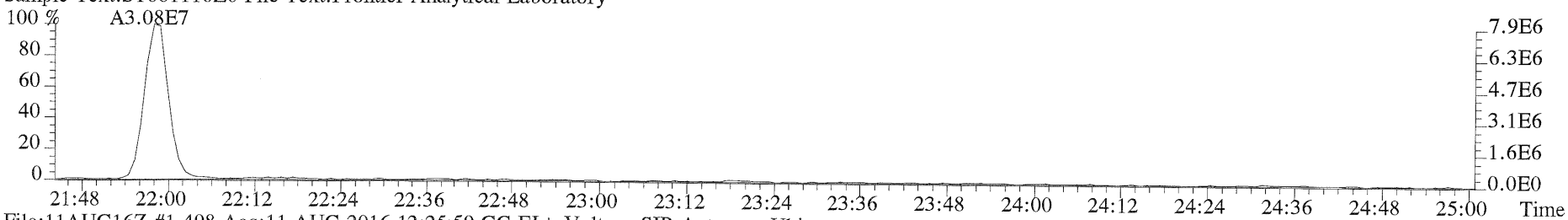
File:11AUG16Z #1-498 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:2 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



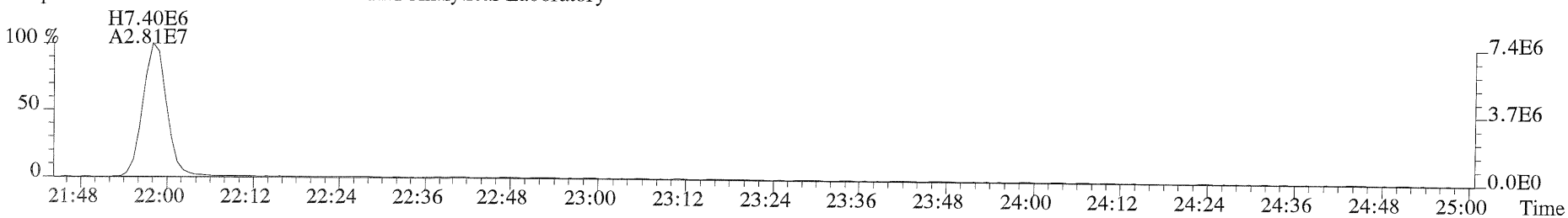
File:11AUG16Z #1-498 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:2 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



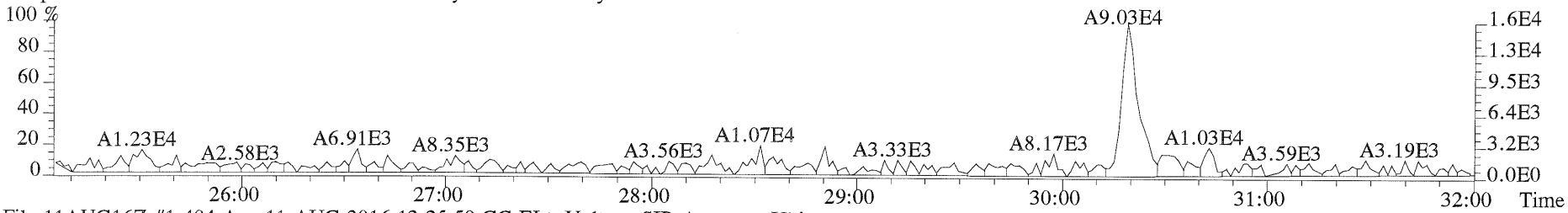
File:11AUG16Z #1-498 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:2 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



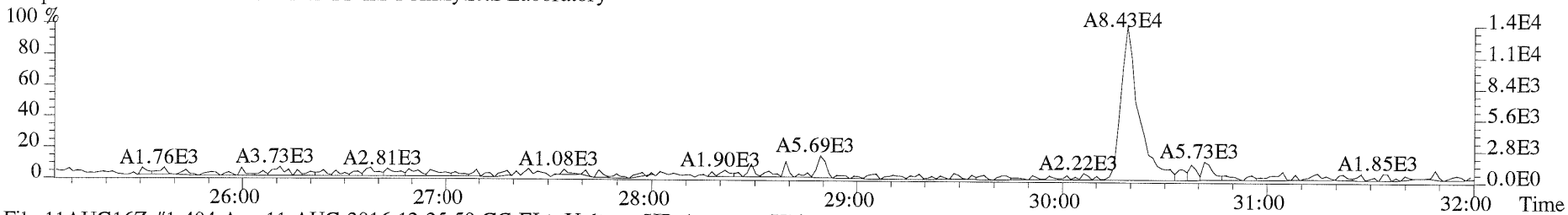
File:11AUG16Z #1-498 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:2 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



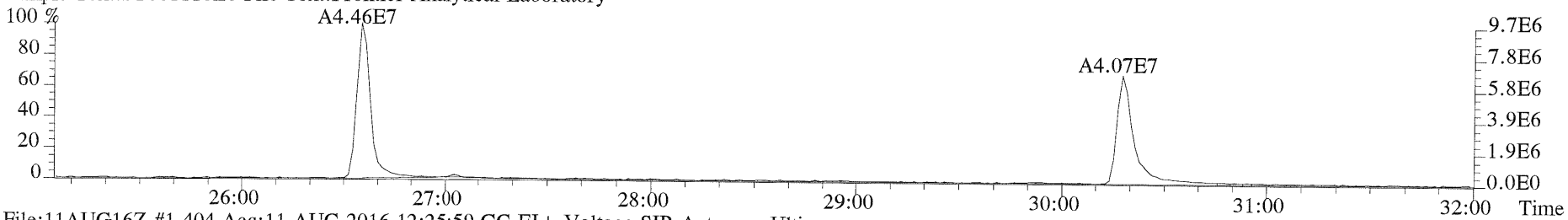
File:11AUG16Z #1-404 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:2 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



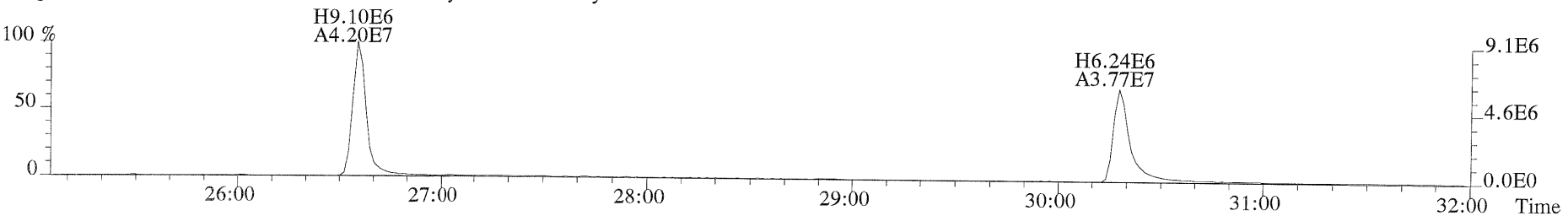
File:11AUG16Z #1-404 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:2 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



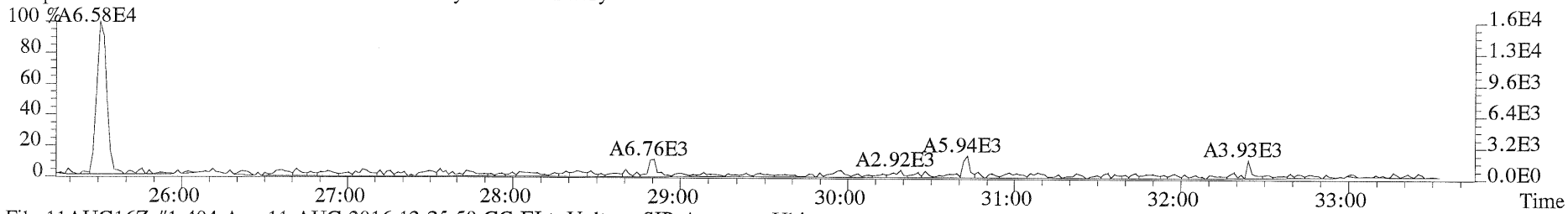
File:11AUG16Z #1-404 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:2 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



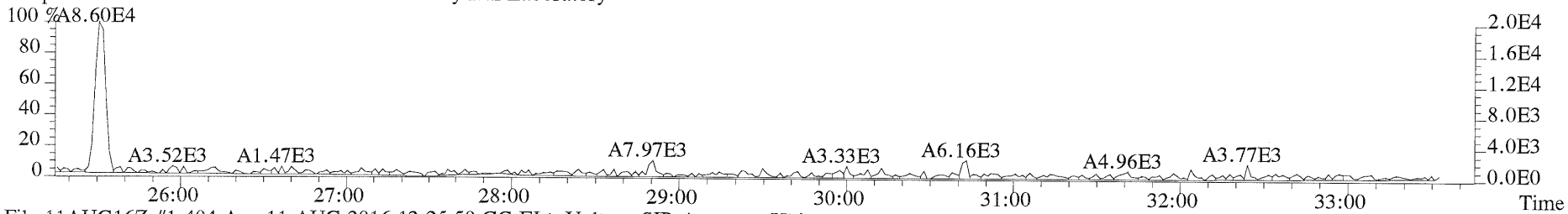
File:11AUG16Z #1-404 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:2 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



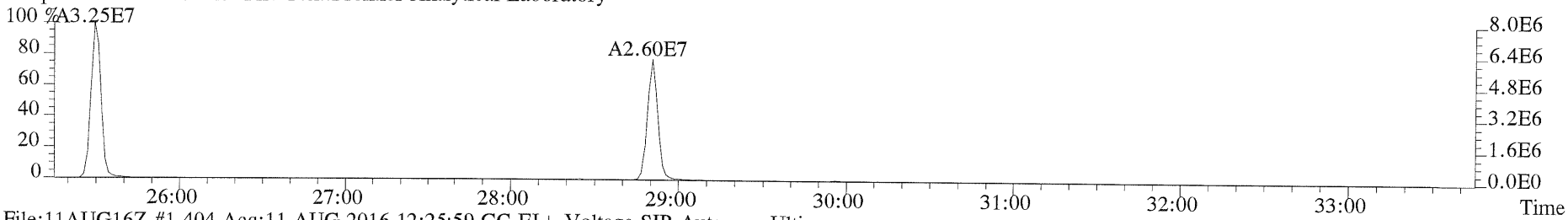
File:11AUG16Z #1-404 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:2 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



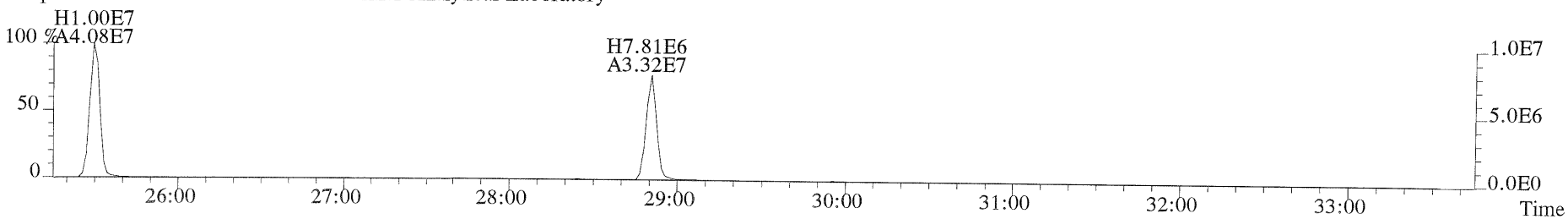
File:11AUG16Z #1-404 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:2 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



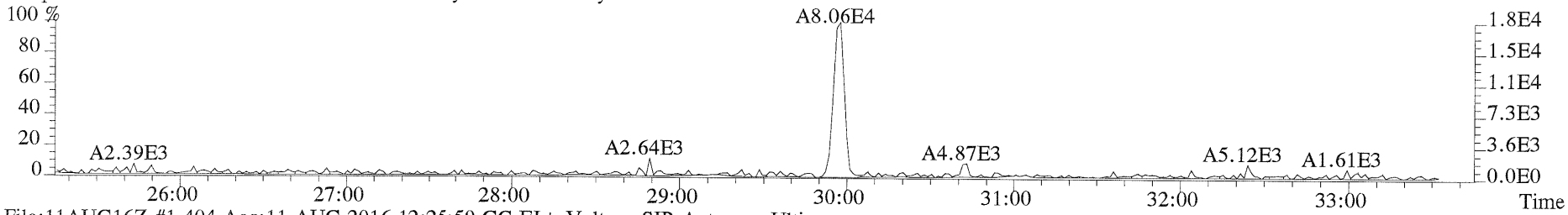
File:11AUG16Z #1-404 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:2 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



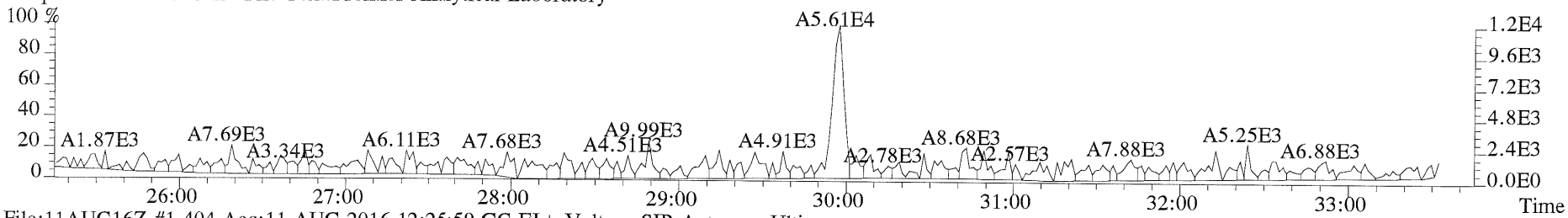
File:11AUG16Z #1-404 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:2 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



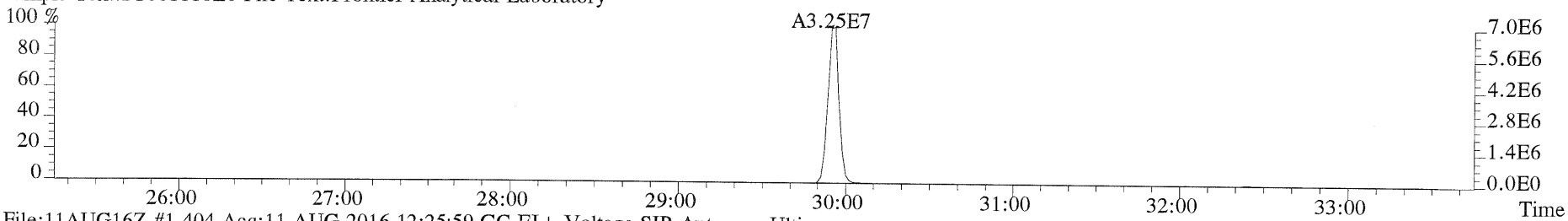
File:11AUG16Z #1-404 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:2 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



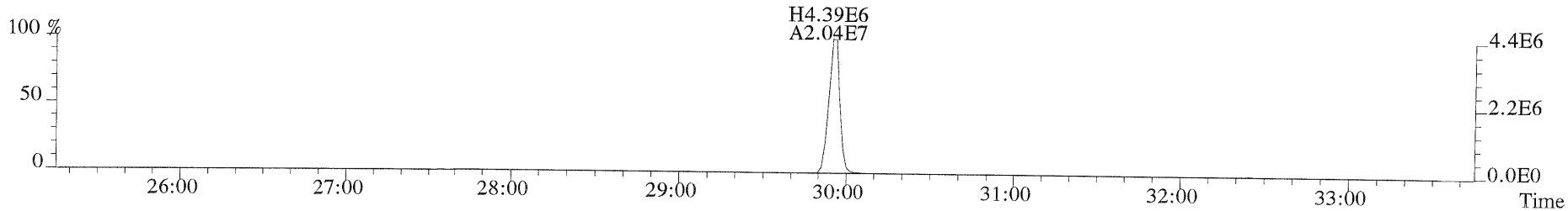
File:11AUG16Z #1-404 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:2 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



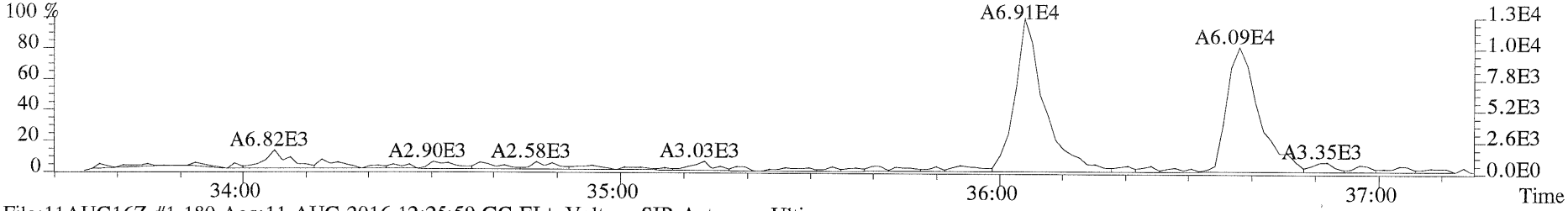
File:11AUG16Z #1-404 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:2 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



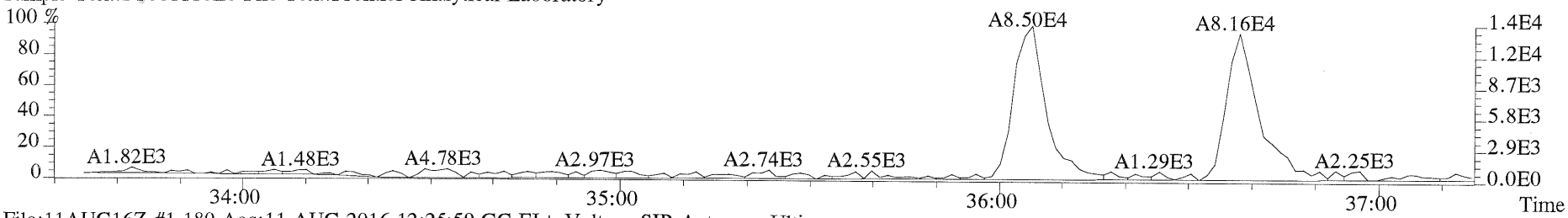
File:11AUG16Z #1-404 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:2 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



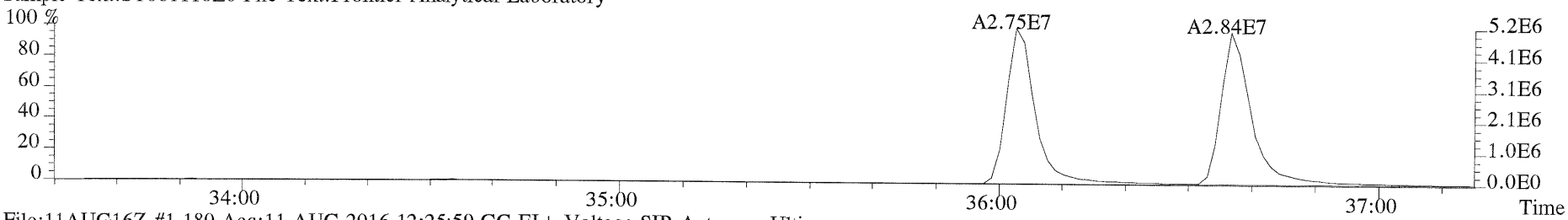
File:11AUG16Z #1-180 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



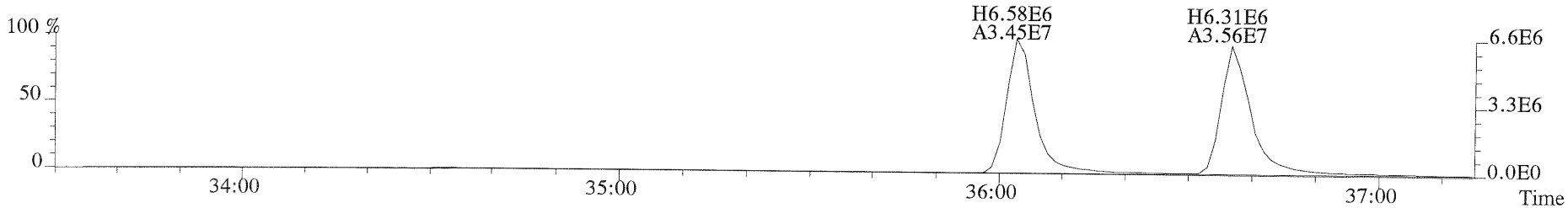
File:11AUG16Z #1-180 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



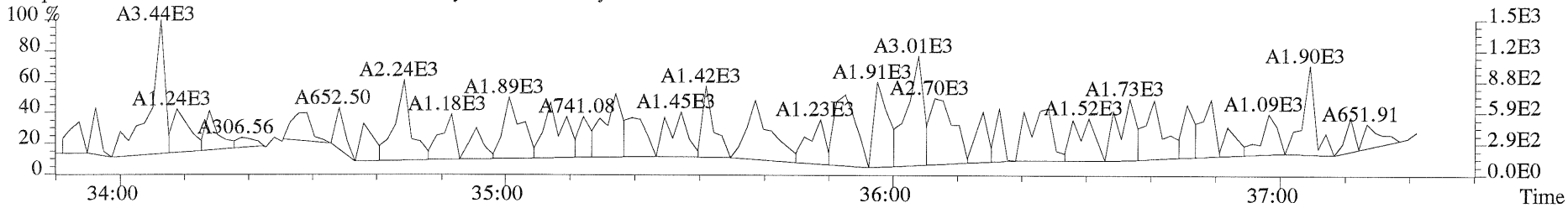
File:11AUG16Z #1-180 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



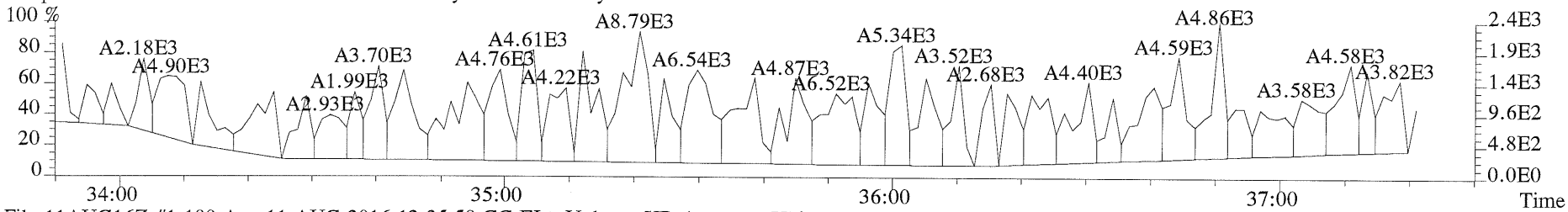
File:11AUG16Z #1-180 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



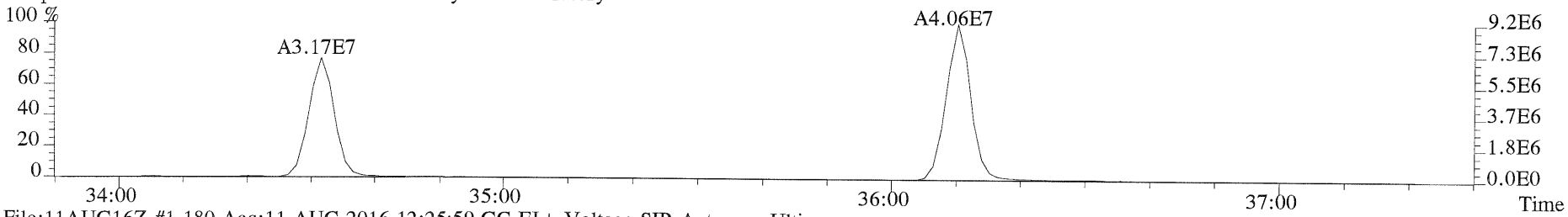
File:11AUG16Z #1-180 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



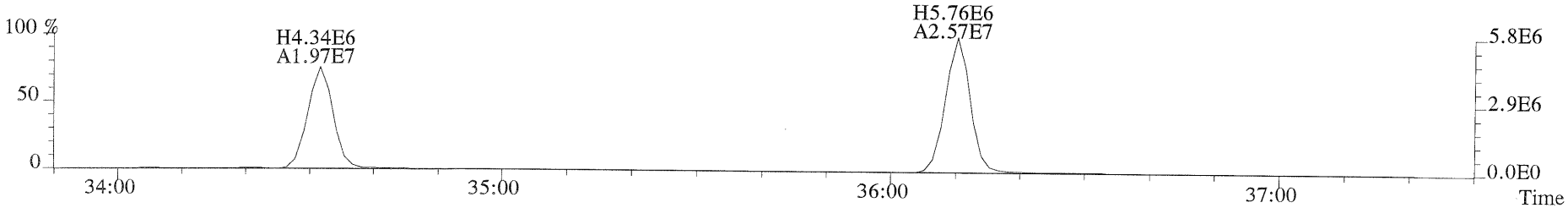
File:11AUG16Z #1-180 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



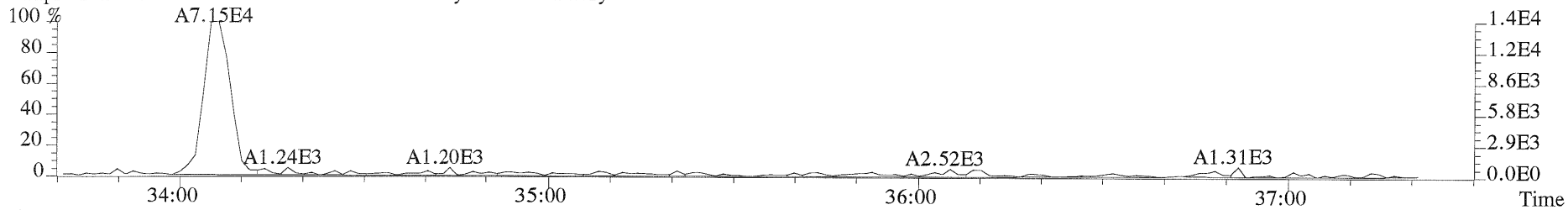
File:11AUG16Z #1-180 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



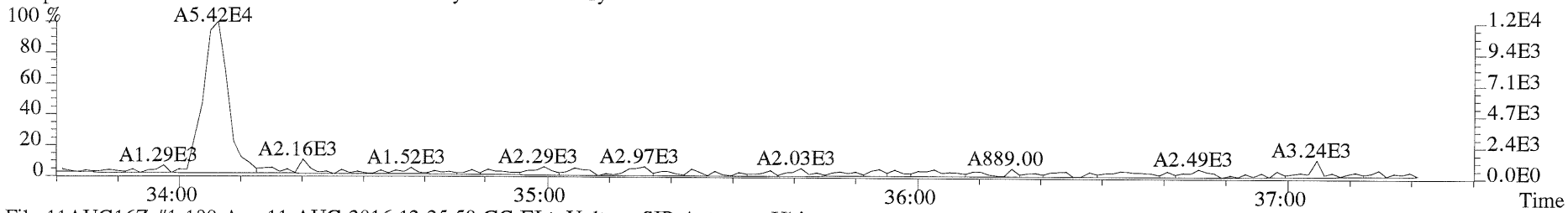
File:11AUG16Z #1-180 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



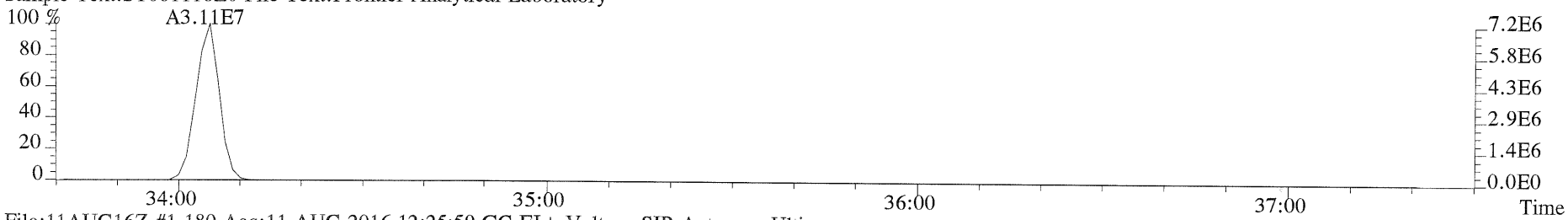
File:11AUG16Z #1-180 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



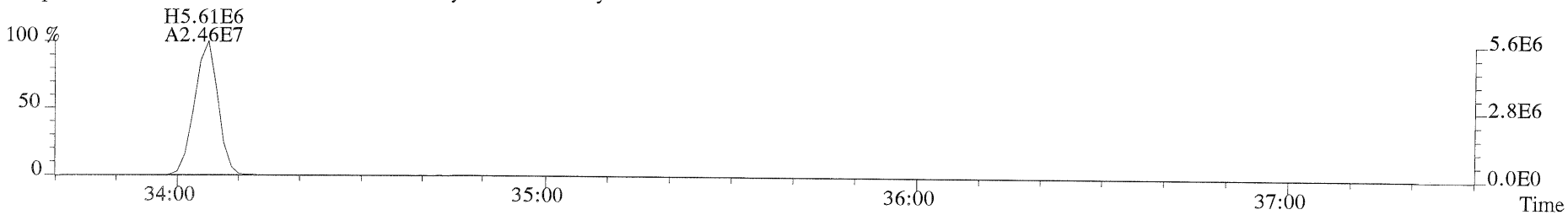
File:11AUG16Z #1-180 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



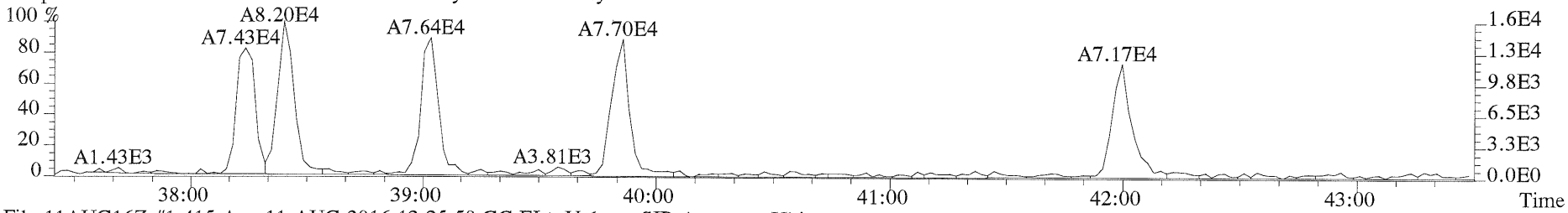
File:11AUG16Z #1-180 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



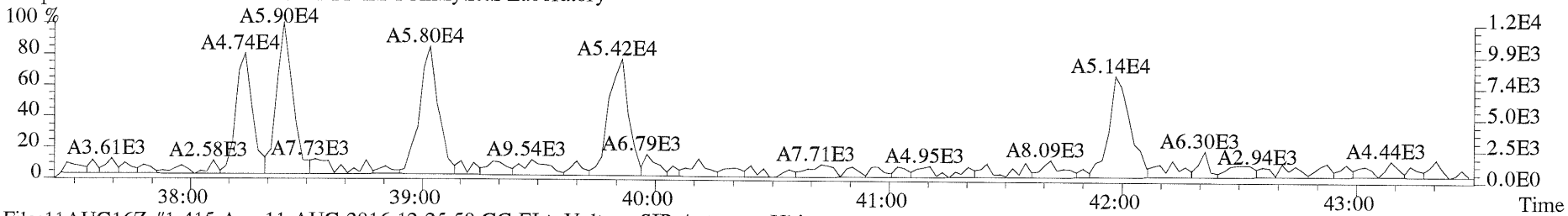
File:11AUG16Z #1-180 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



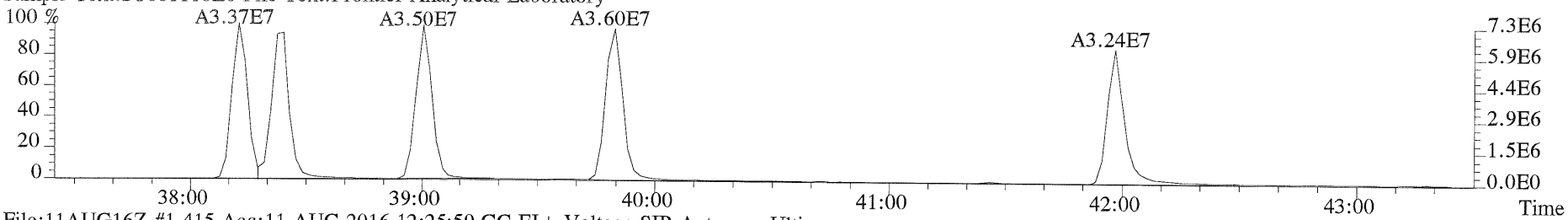
File:11AUG16Z #1-415 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:2 F:5 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



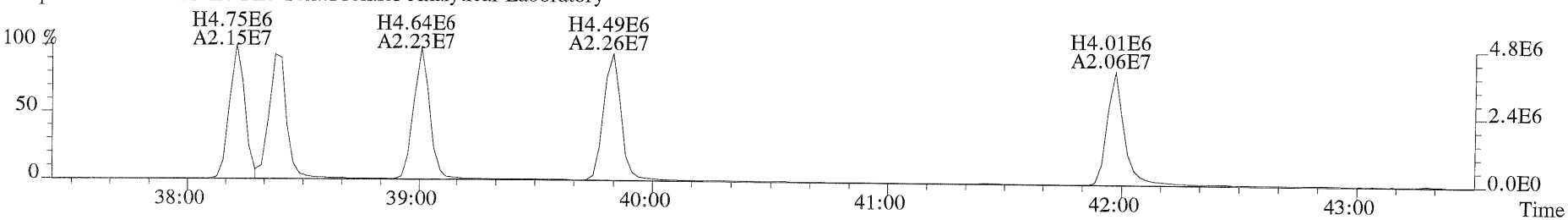
File:11AUG16Z #1-415 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:2 F:5 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



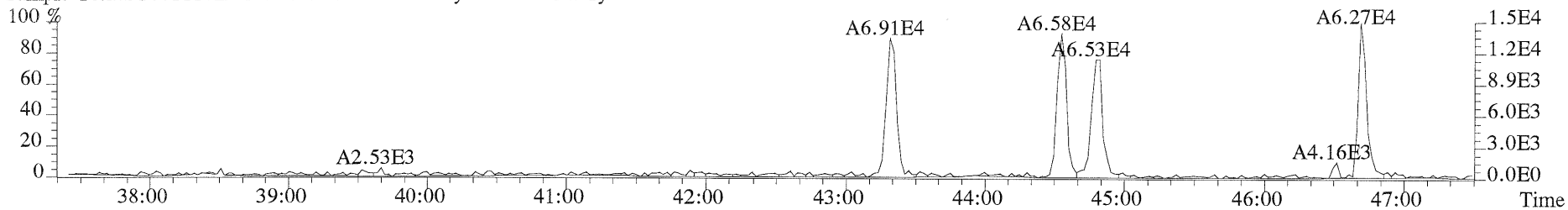
File:11AUG16Z #1-415 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:2 F:5 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



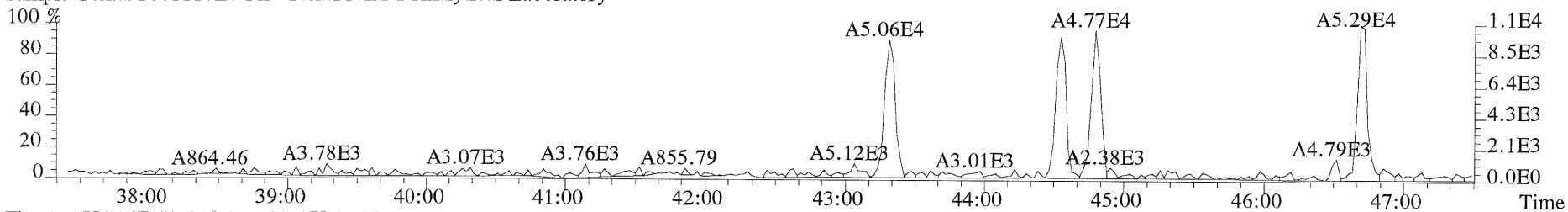
File:11AUG16Z #1-415 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:2 F:5 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



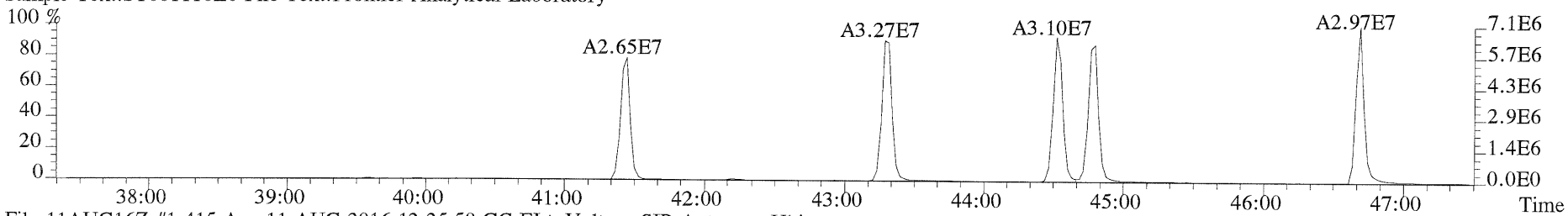
File:11AUG16Z #1-415 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



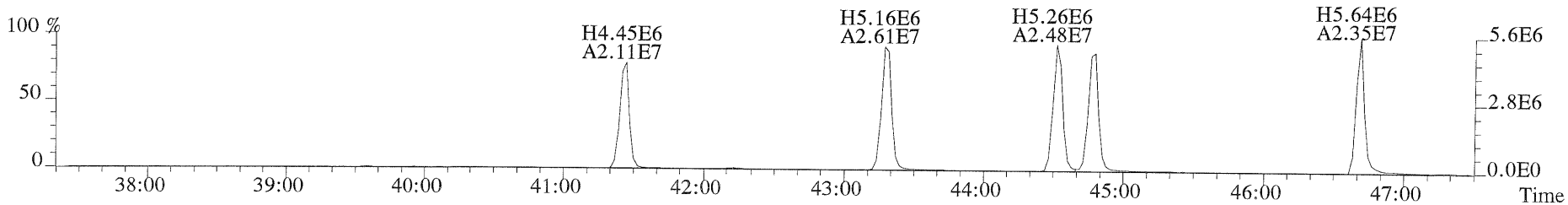
File:11AUG16Z #1-415 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



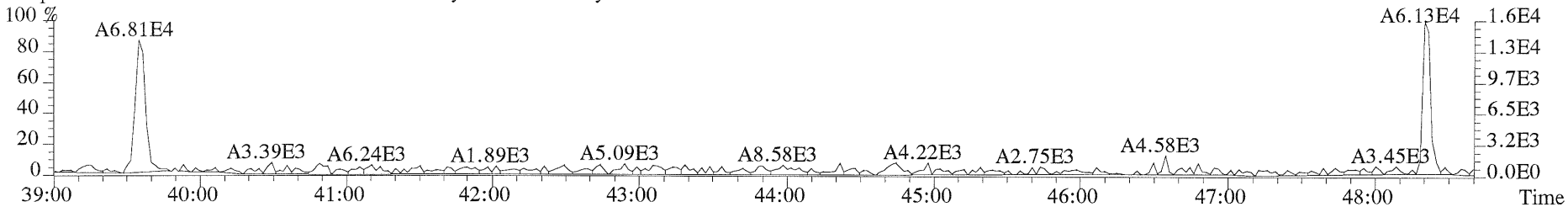
File:11AUG16Z #1-415 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



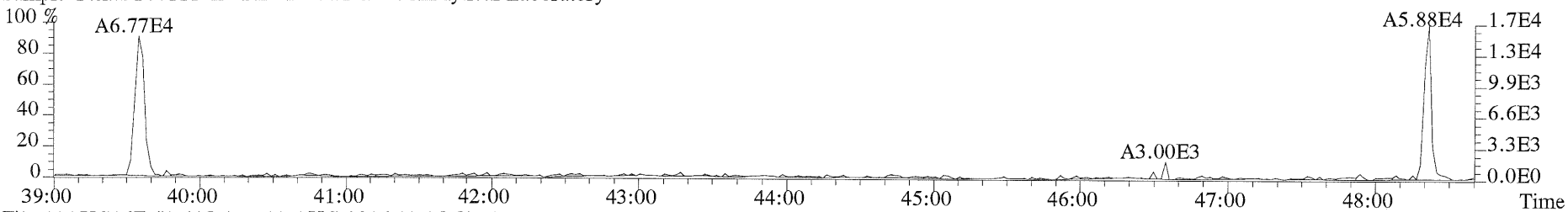
File:11AUG16Z #1-415 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



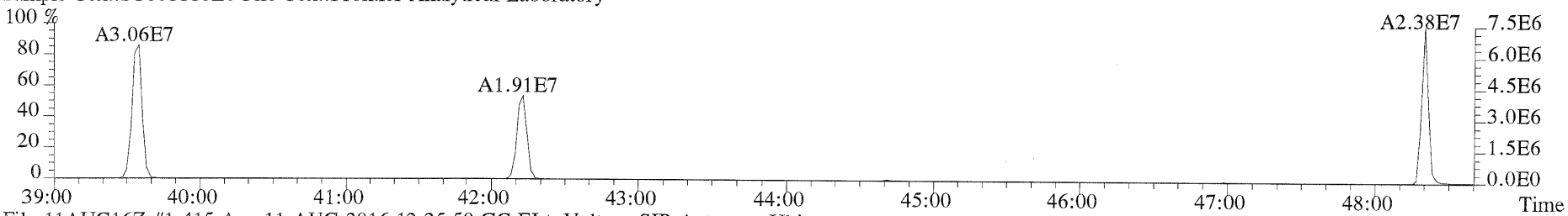
File:11AUG16Z #1-415 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
393.8025 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



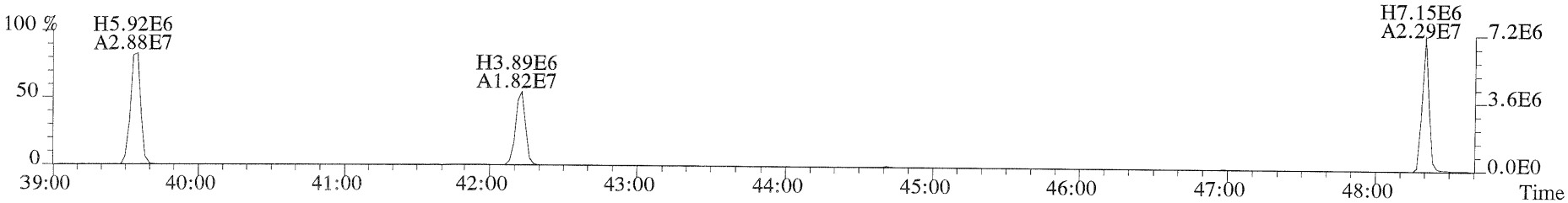
File:11AUG16Z #1-415 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
395.7995 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



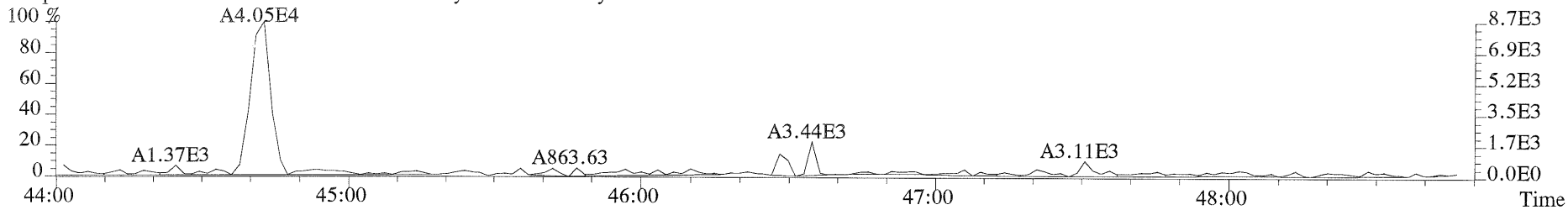
File:11AUG16Z #1-415 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
405.8428 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



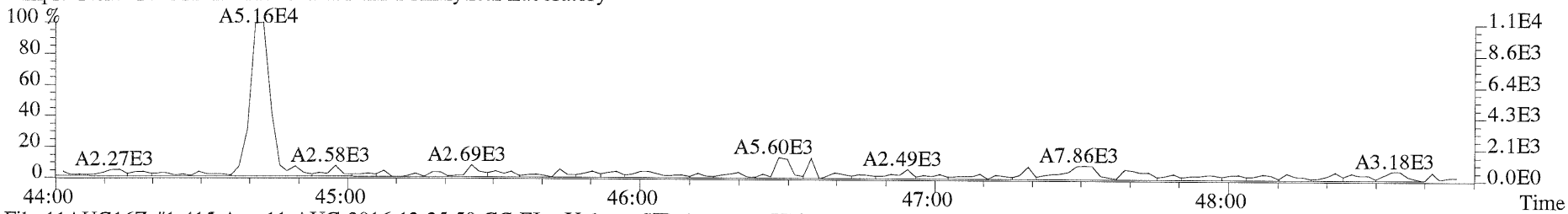
File:11AUG16Z #1-415 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
407.8398 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



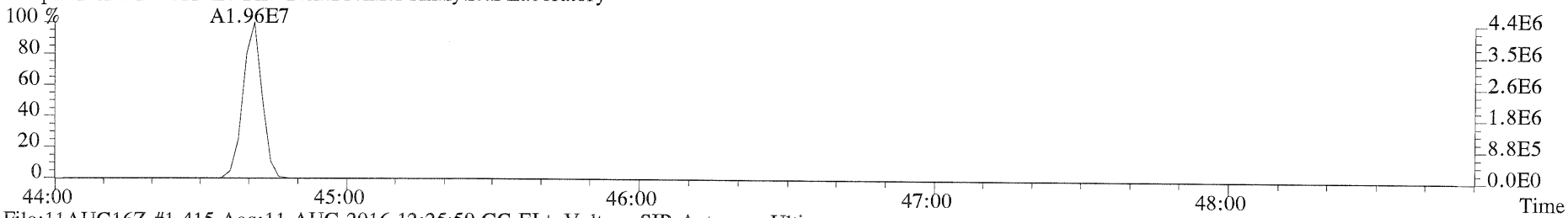
File:11AUG16Z #1-415 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



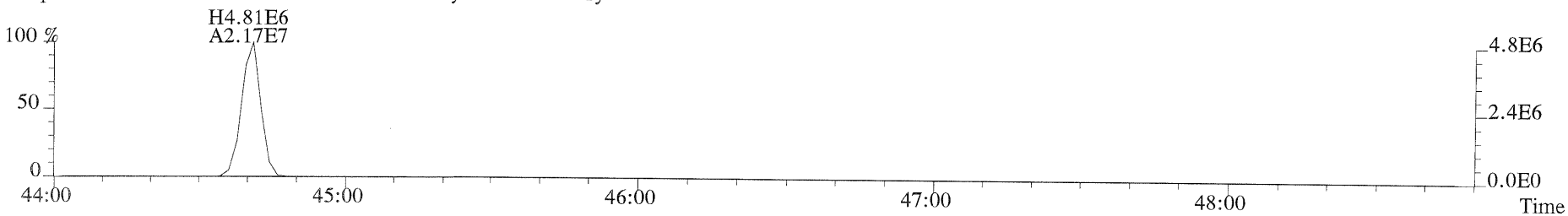
File:11AUG16Z #1-415 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



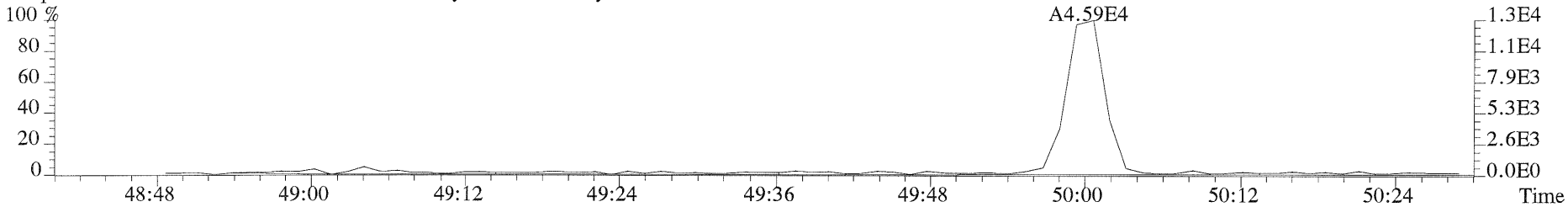
File:11AUG16Z #1-415 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



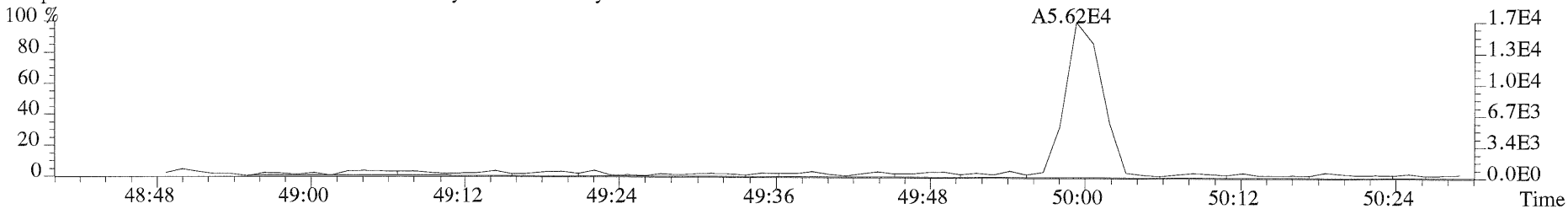
File:11AUG16Z #1-415 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



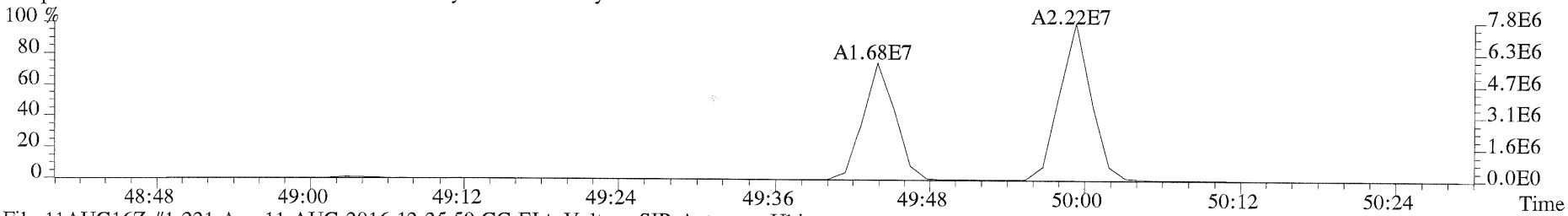
File:11AUG16Z #1-221 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



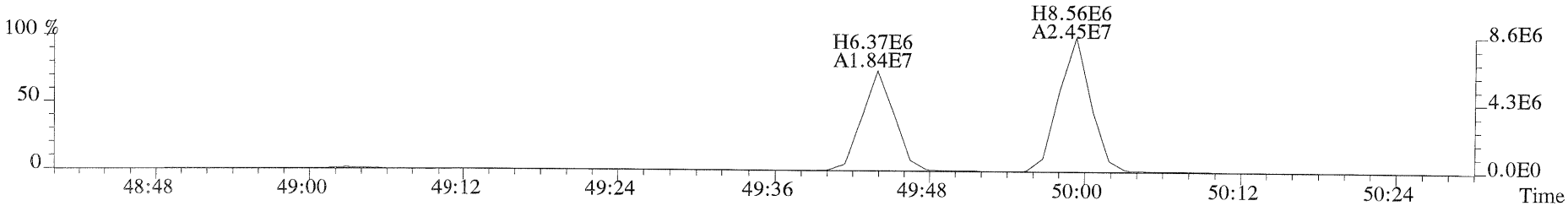
File:11AUG16Z #1-221 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



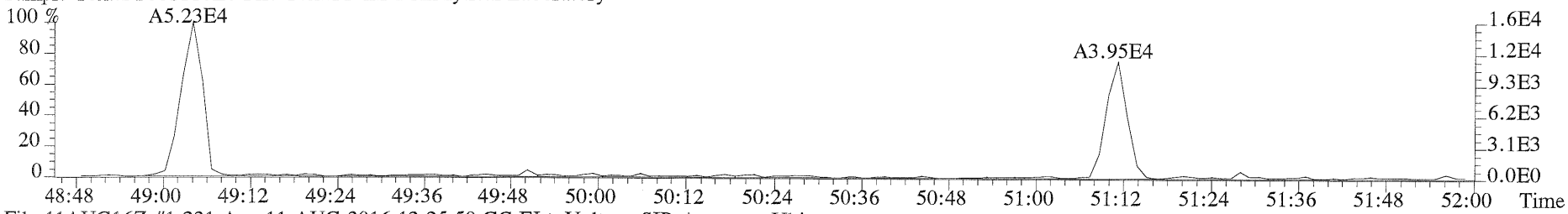
File:11AUG16Z #1-221 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



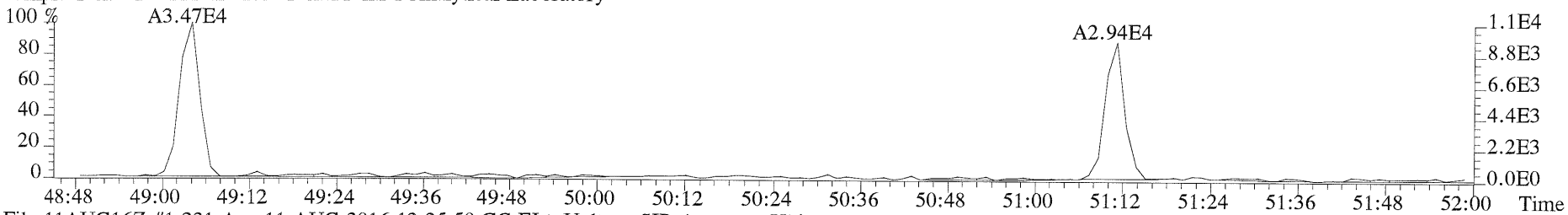
File:11AUG16Z #1-221 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



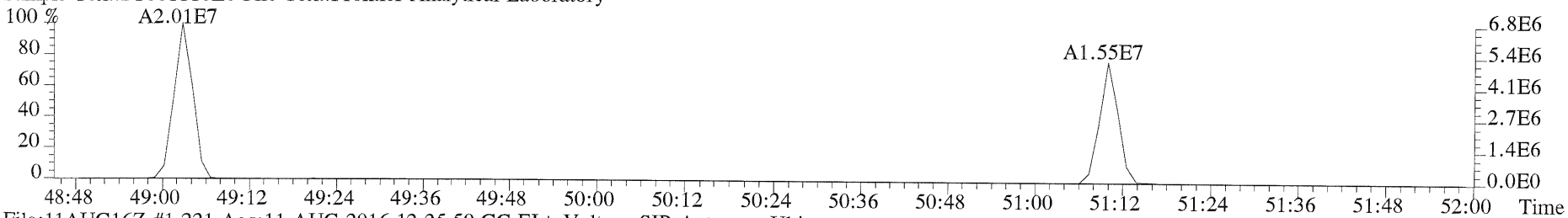
File:11AUG16Z #1-221 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
463.7216 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



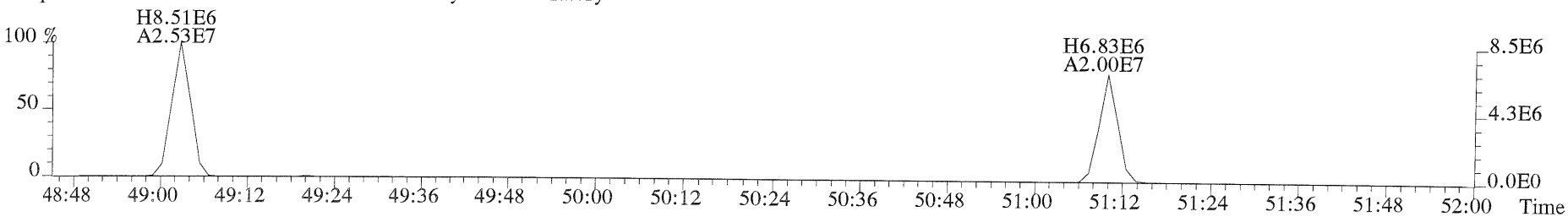
File:11AUG16Z #1-221 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
465.7187 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



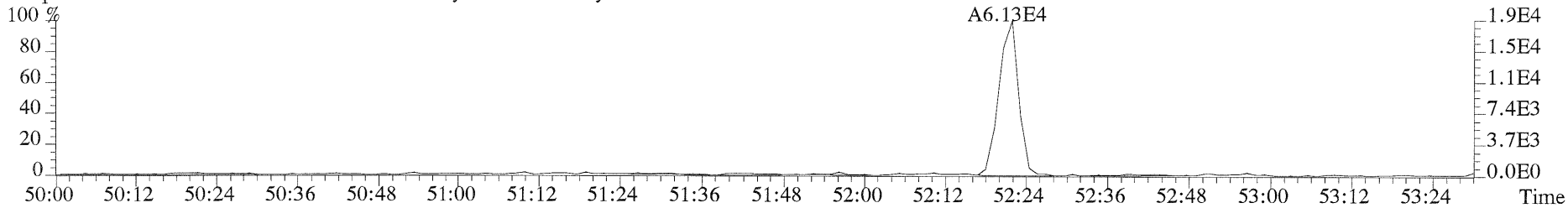
File:11AUG16Z #1-221 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
473.7648 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



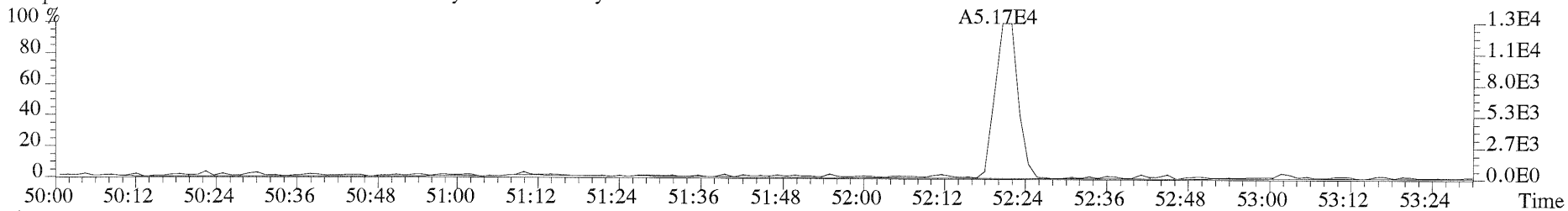
File:11AUG16Z #1-221 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
475.7619 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



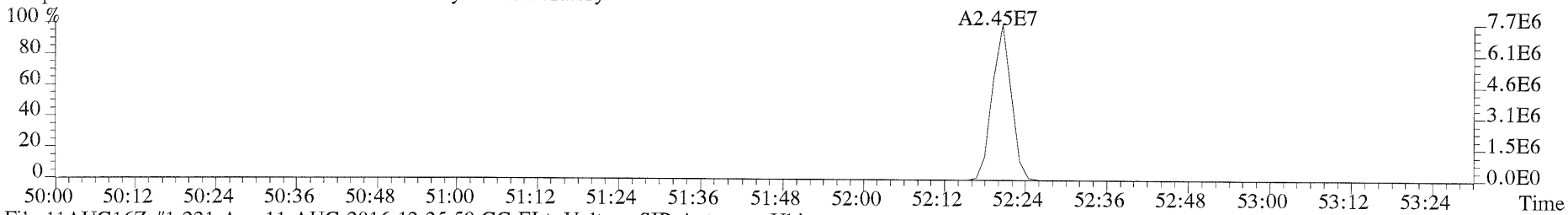
File:11AUG16Z #1-221 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
497.6826 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



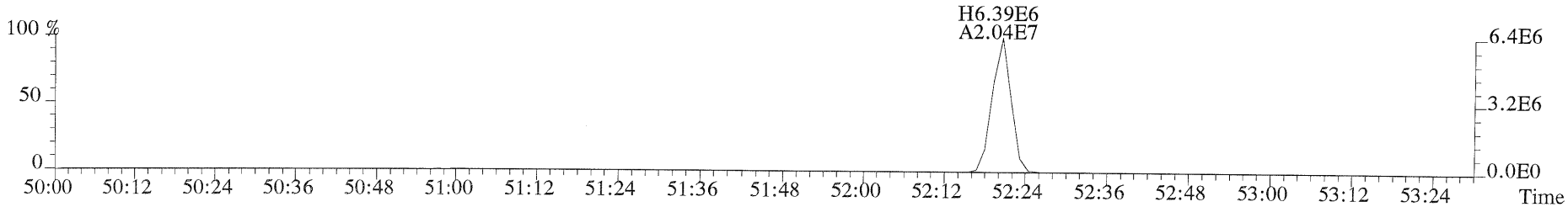
File:11AUG16Z #1-221 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
499.6797 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



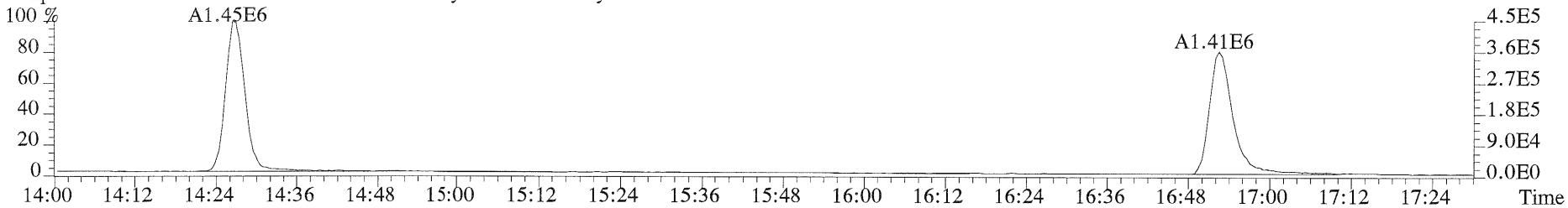
File:11AUG16Z #1-221 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
509.7229 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



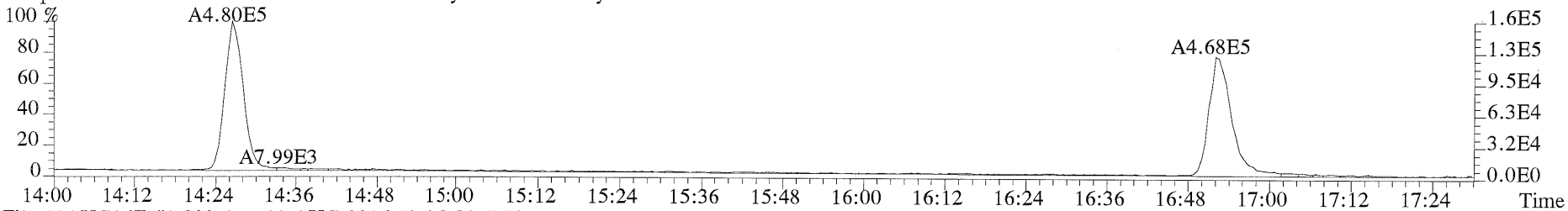
File:11AUG16Z #1-221 Acq:11-AUG-2016 12:25:59 GC EI+ Voltage SIR Autospec-Ultima
511.7199 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z0 File Text:Frontier Analytical Laboratory



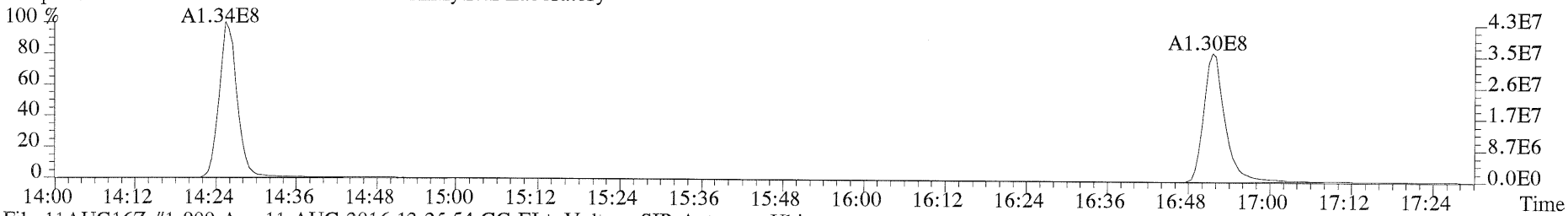
File:11AUG16Z #1-900 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
188.0393 S:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



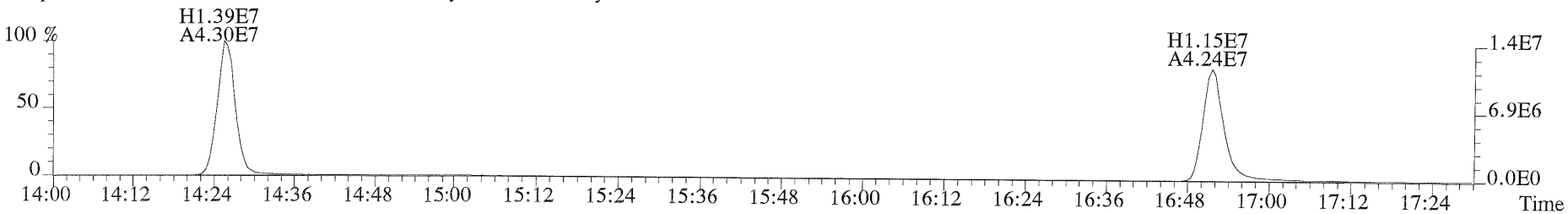
File:11AUG16Z #1-900 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
190.0363 S:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



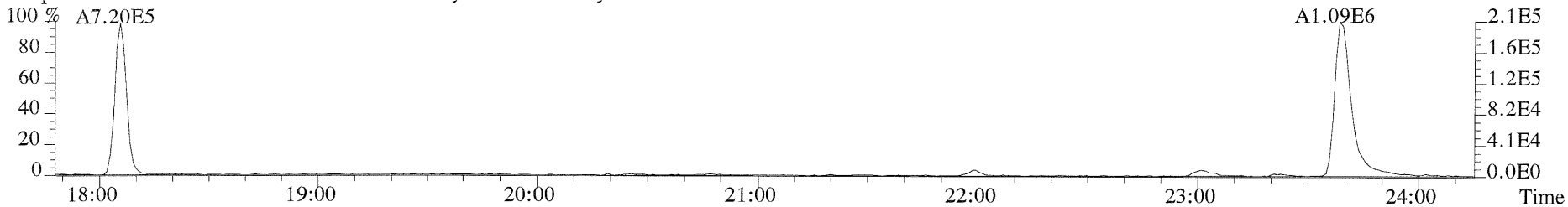
File:11AUG16Z #1-900 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
200.0795 S:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



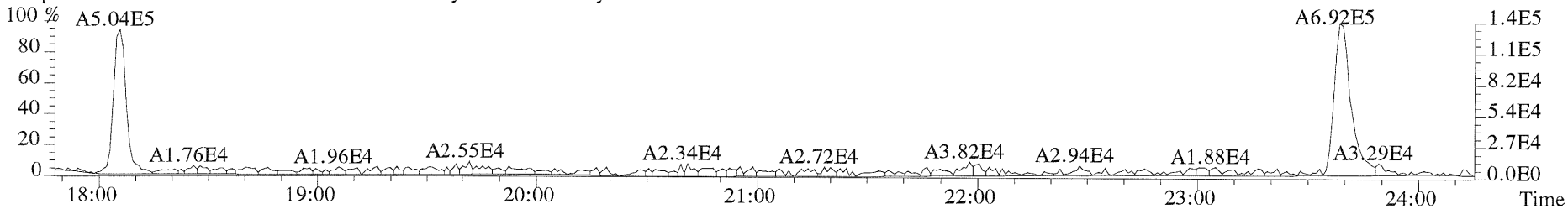
File:11AUG16Z #1-900 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
202.0766 S:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



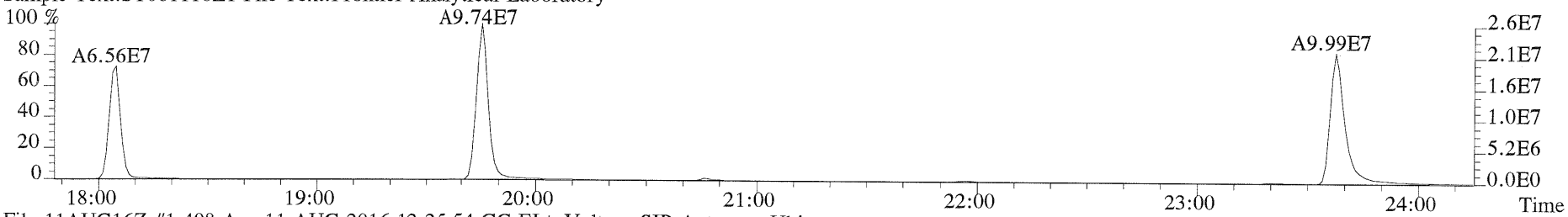
File:11AUG16Z #1-498 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
222.0003 S:3 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



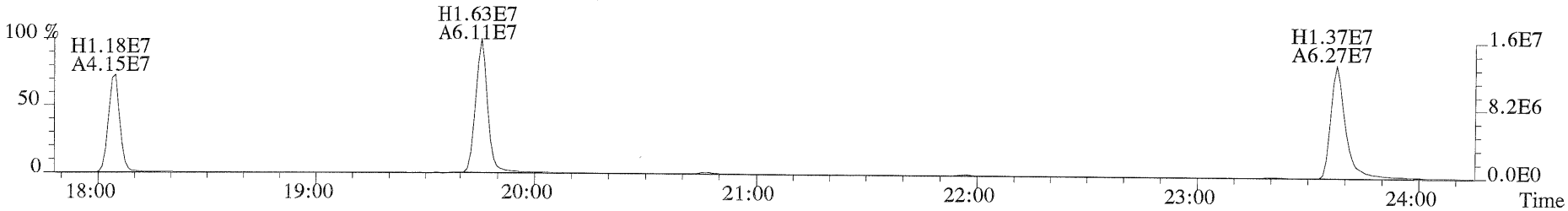
File:11AUG16Z #1-498 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
223.9974 S:3 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



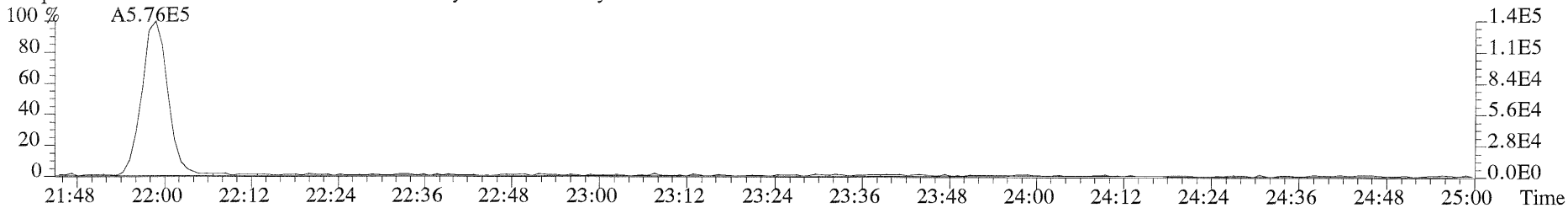
File:11AUG16Z #1-498 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
234.0406 S:3 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



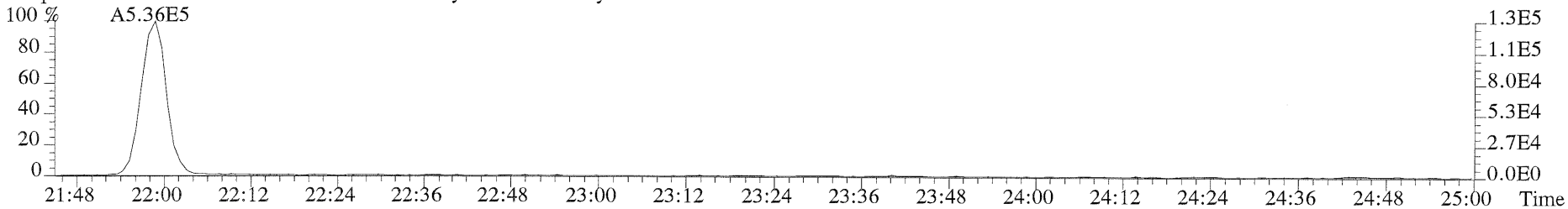
File:11AUG16Z #1-498 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
236.0376 S:3 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



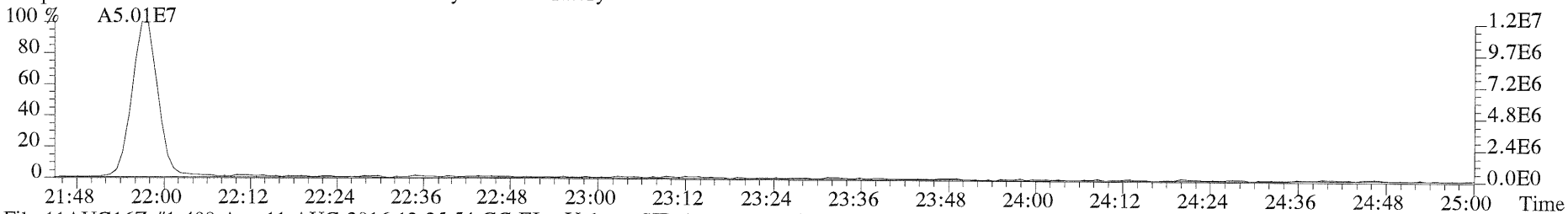
File:11AUG16Z #1-498 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:3 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



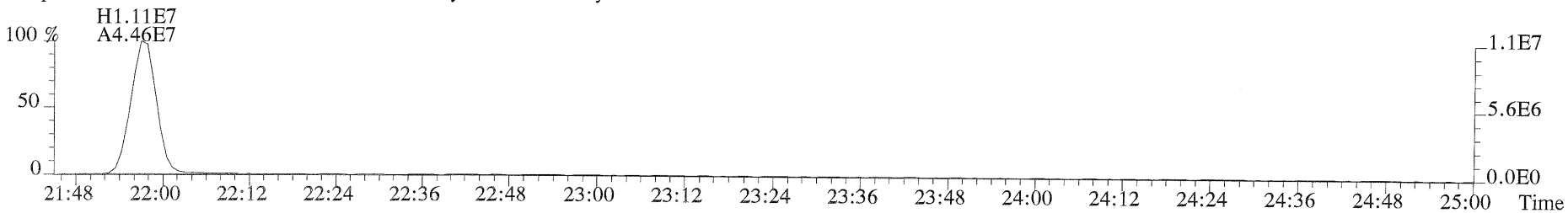
File:11AUG16Z #1-498 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:3 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



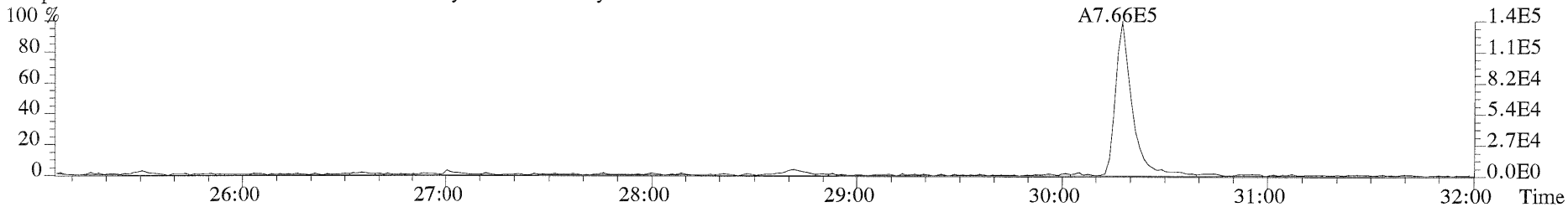
File:11AUG16Z #1-498 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:3 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



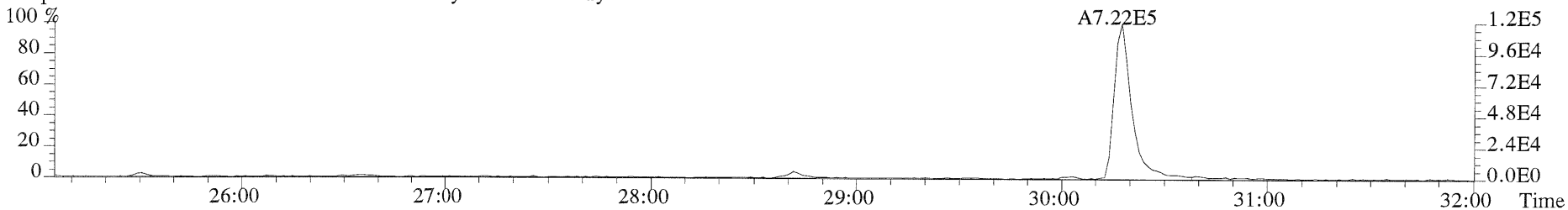
File:11AUG16Z #1-498 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:3 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



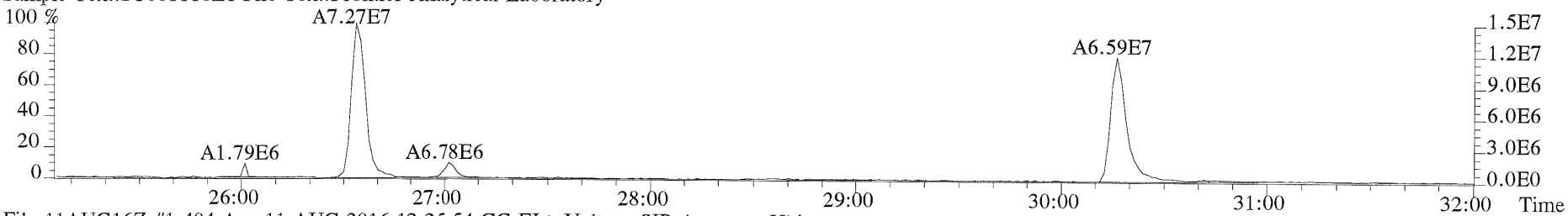
File:11AUG16Z #1-404 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



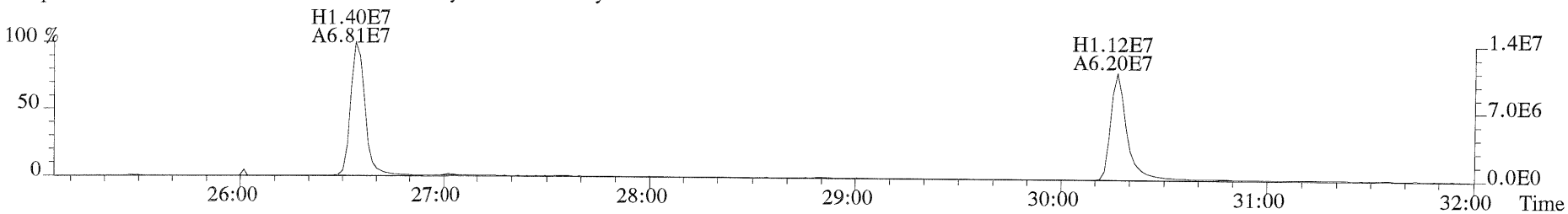
File:11AUG16Z #1-404 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



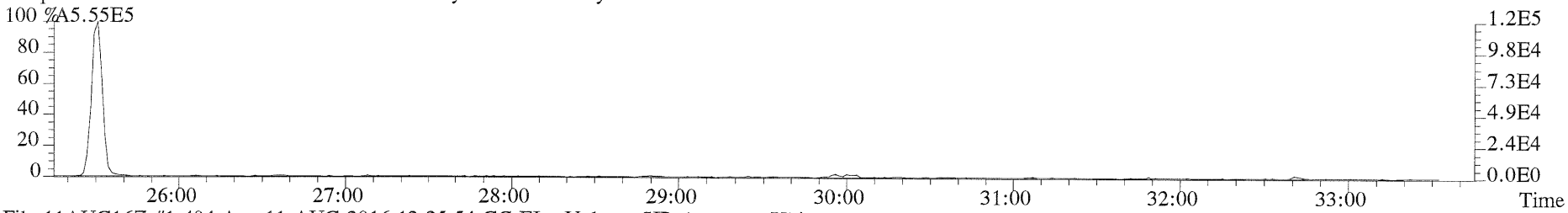
File:11AUG16Z #1-404 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



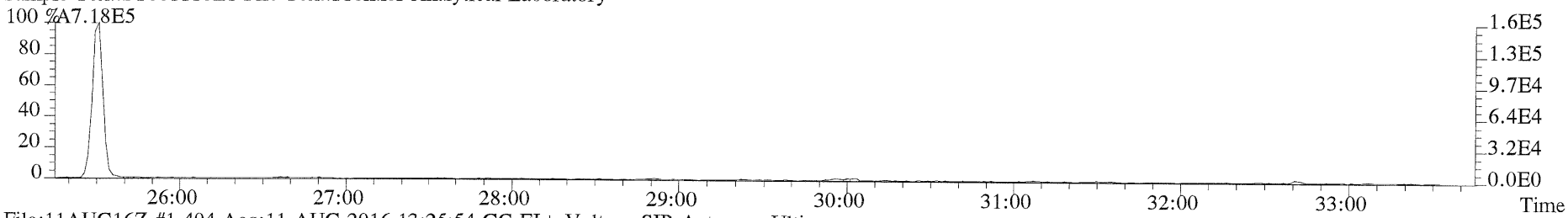
File:11AUG16Z #1-404 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



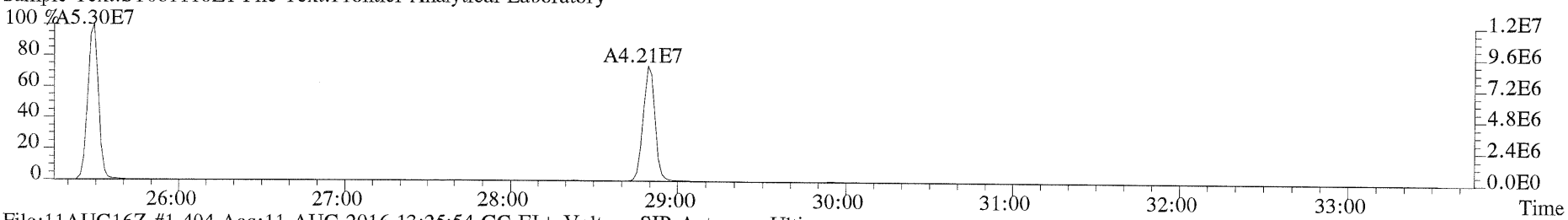
File:11AUG16Z #1-404 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



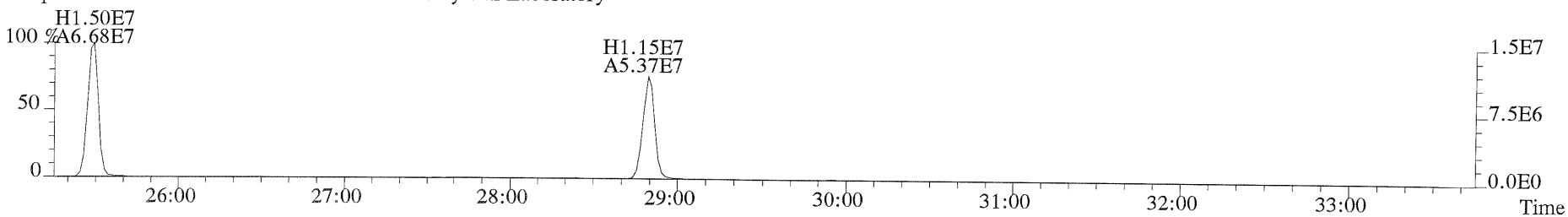
File:11AUG16Z #1-404 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



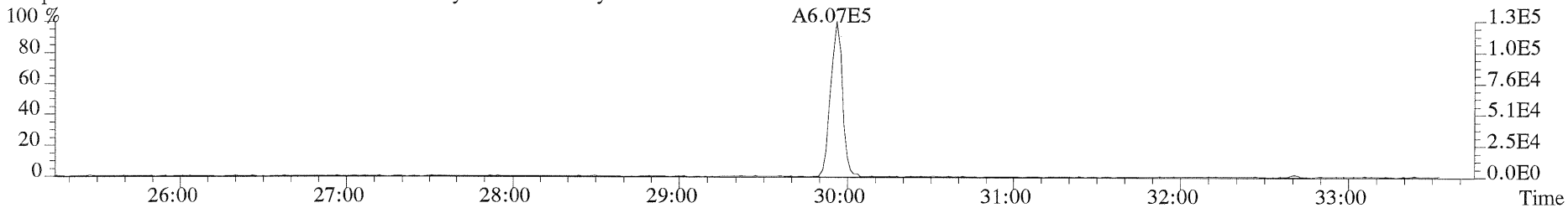
File:11AUG16Z #1-404 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



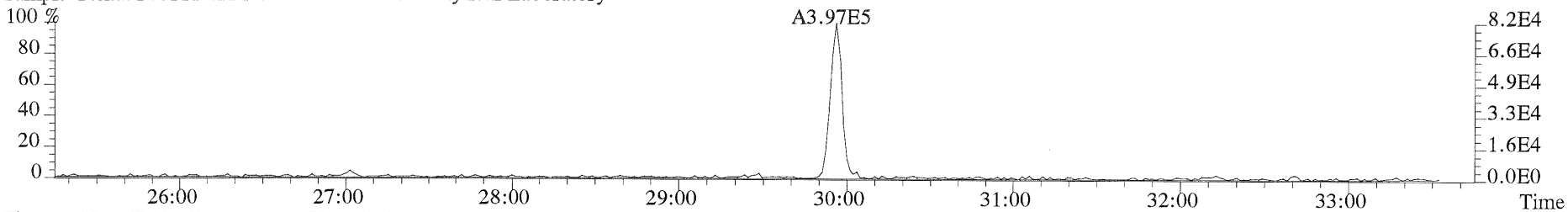
File:11AUG16Z #1-404 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



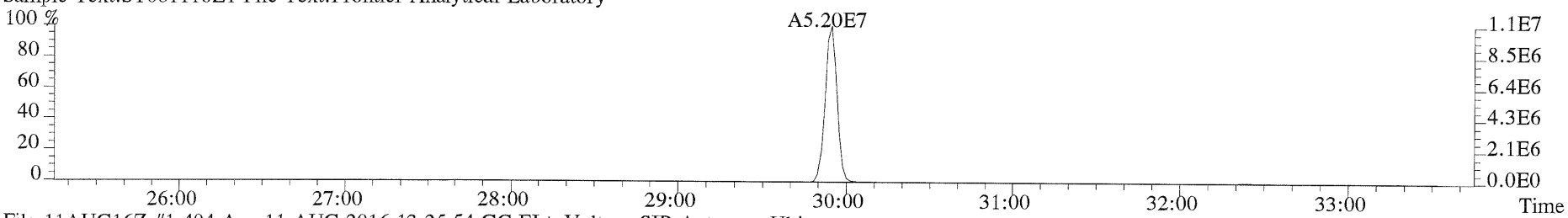
File:11AUG16Z #1-404 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



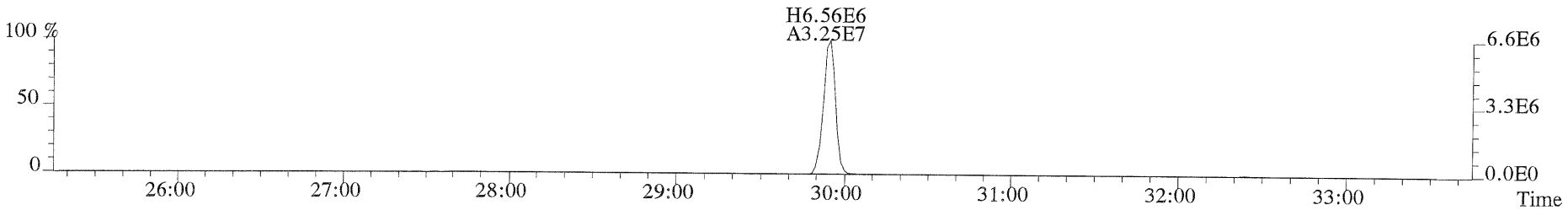
File:11AUG16Z #1-404 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



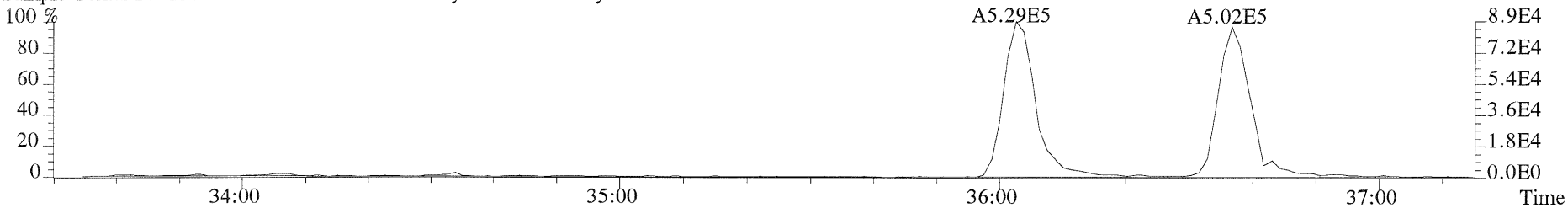
File:11AUG16Z #1-404 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



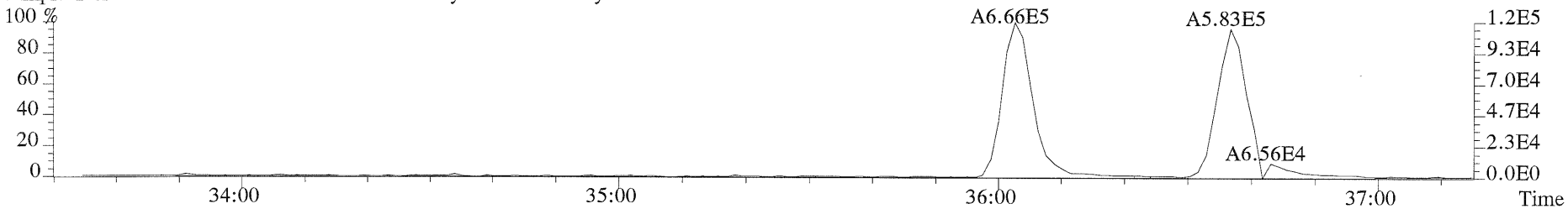
File:11AUG16Z #1-404 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:3 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



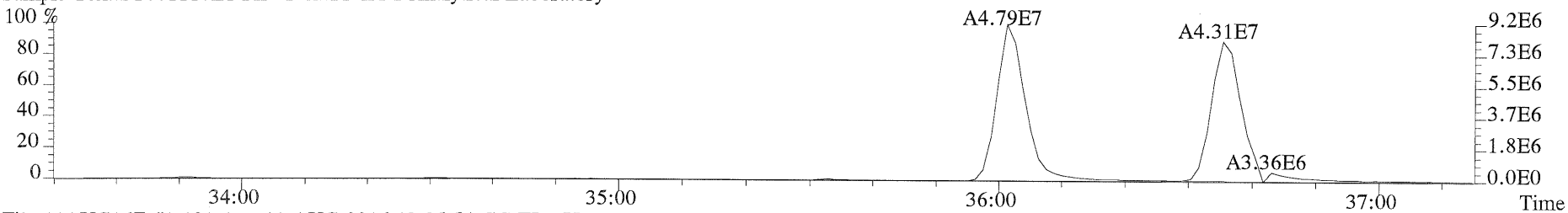
File:11AUG16Z #1-181 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



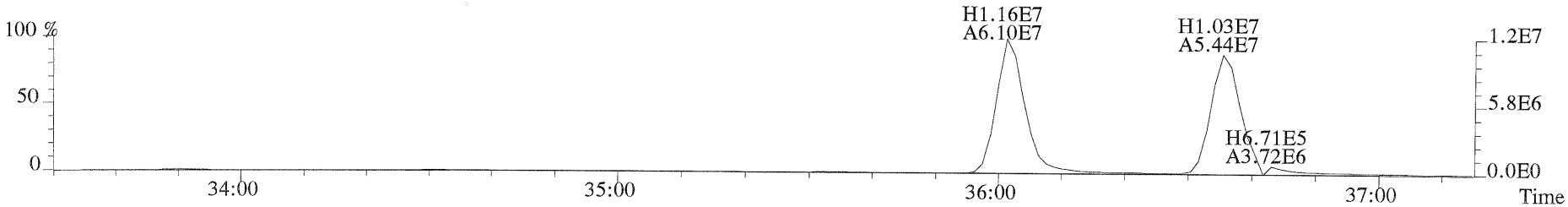
File:11AUG16Z #1-181 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



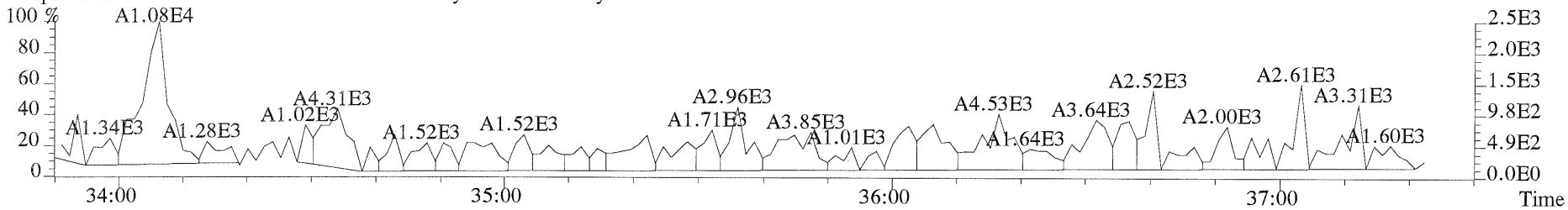
File:11AUG16Z #1-181 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



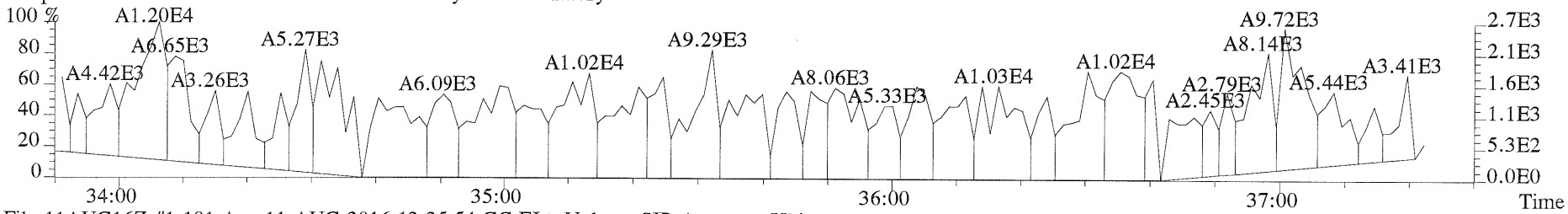
File:11AUG16Z #1-181 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



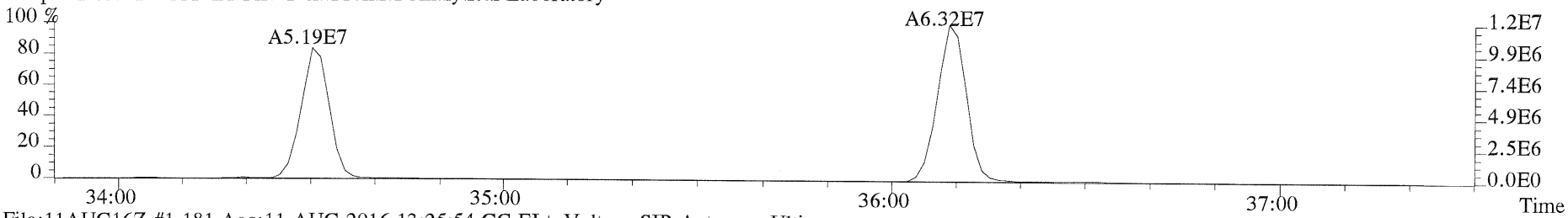
File:11AUG16Z #1-181 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



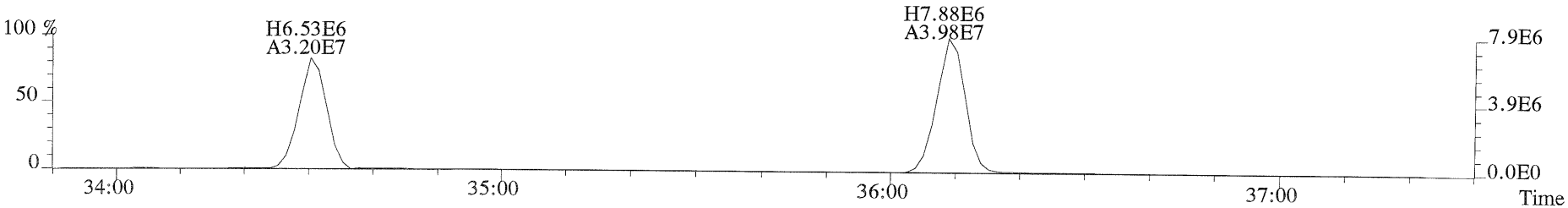
File:11AUG16Z #1-181 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



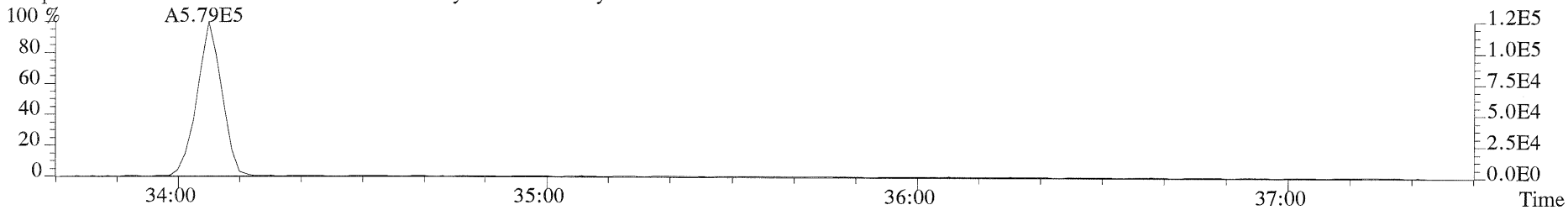
File:11AUG16Z #1-181 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



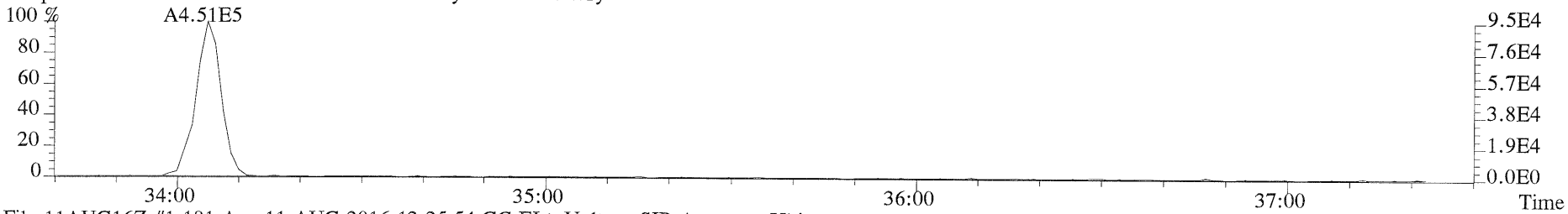
File:11AUG16Z #1-181 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



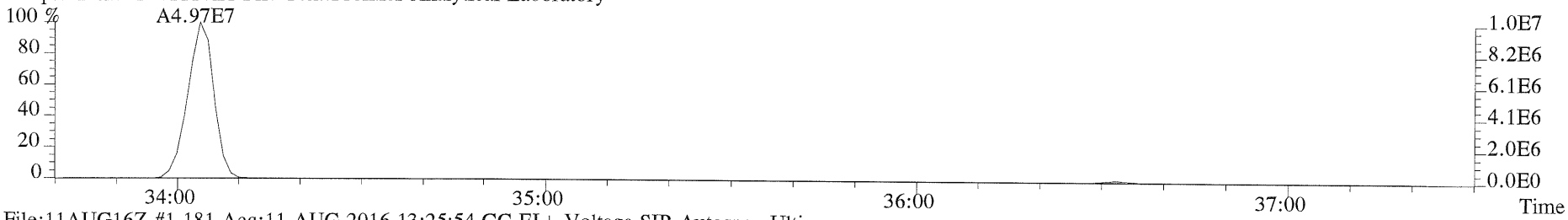
File:11AUG16Z #1-181 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



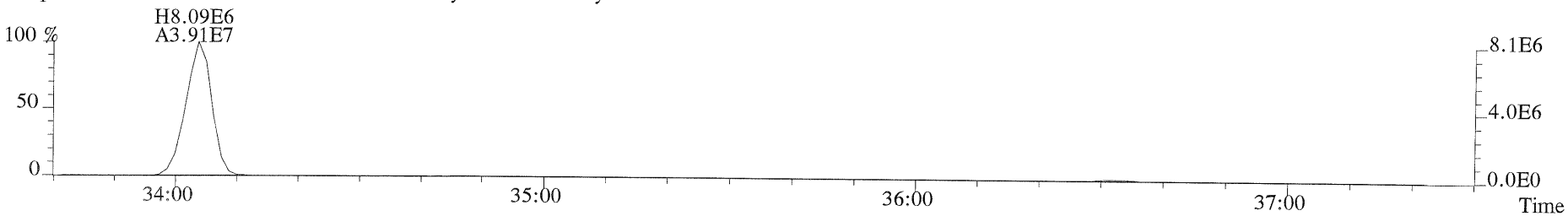
File:11AUG16Z #1-181 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



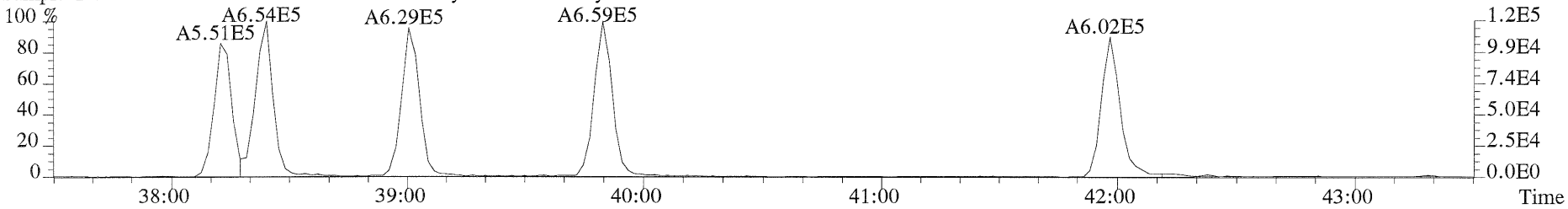
File:11AUG16Z #1-181 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



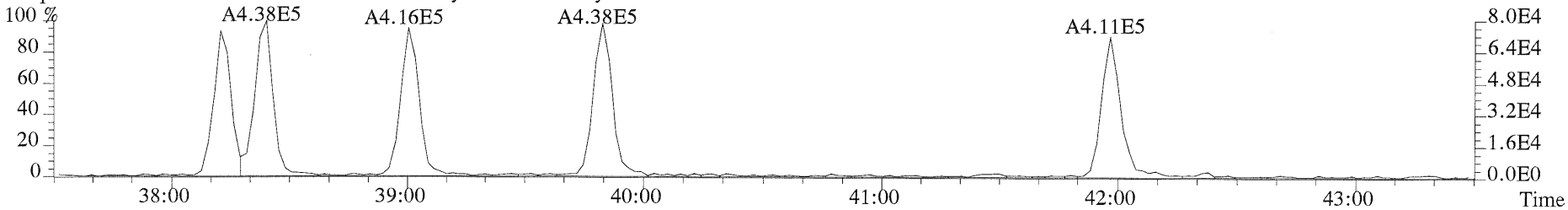
File:11AUG16Z #1-181 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:3 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



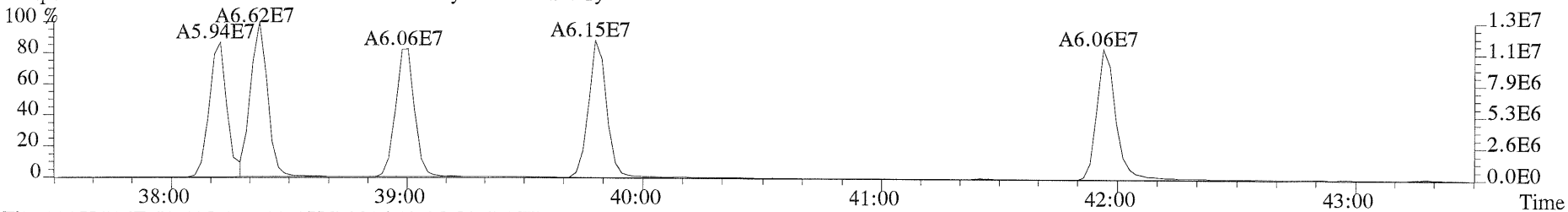
File:11AUG16Z #1-415 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



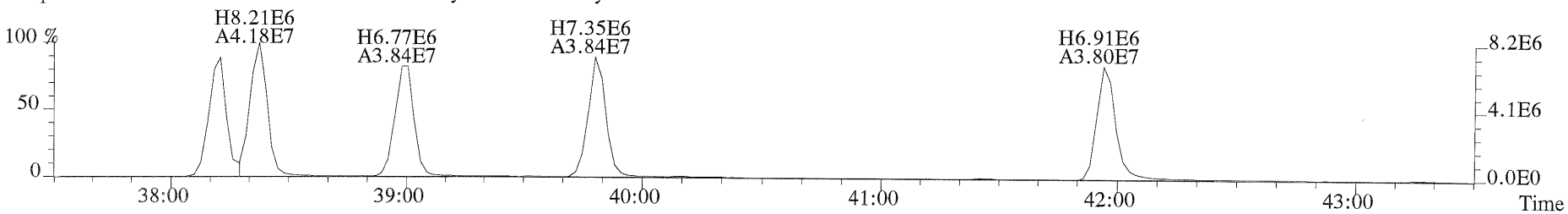
File:11AUG16Z #1-415 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



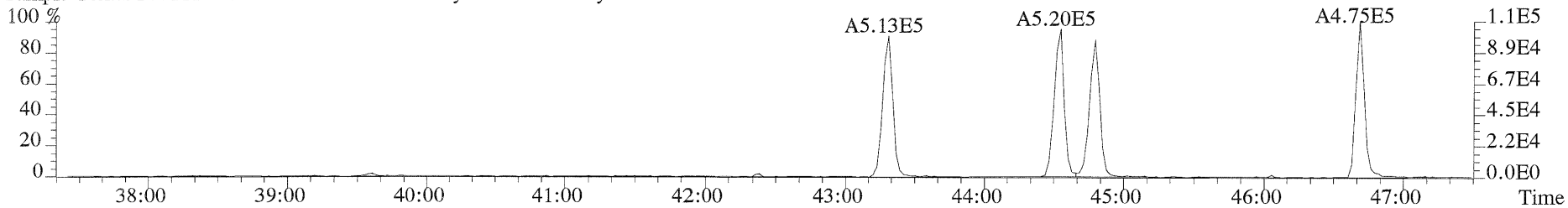
File:11AUG16Z #1-415 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



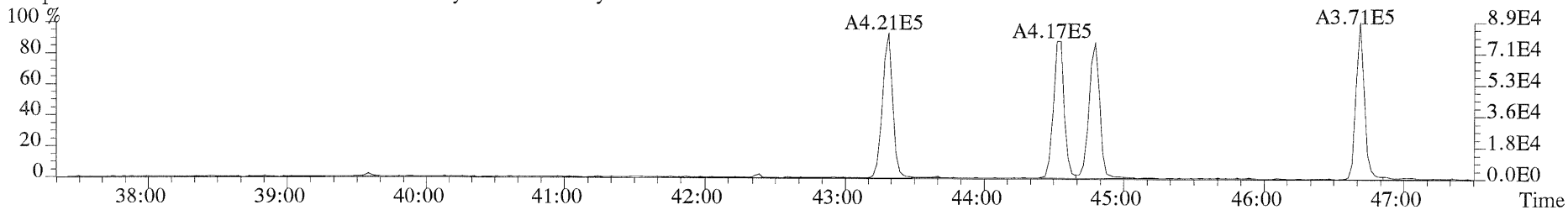
File:11AUG16Z #1-415 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



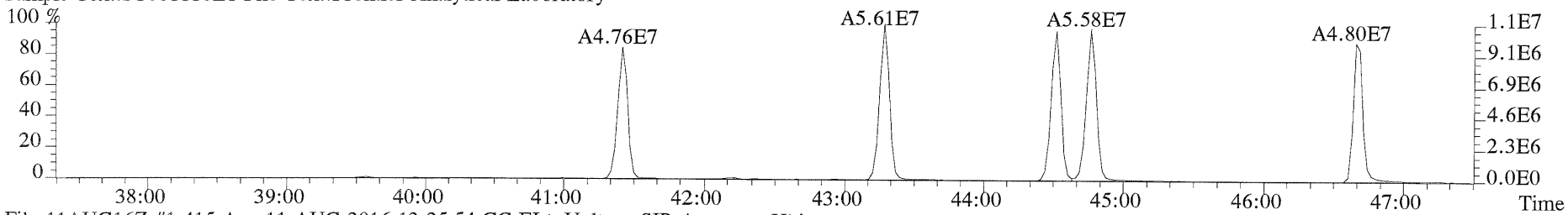
File:11AUG16Z #1-415 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



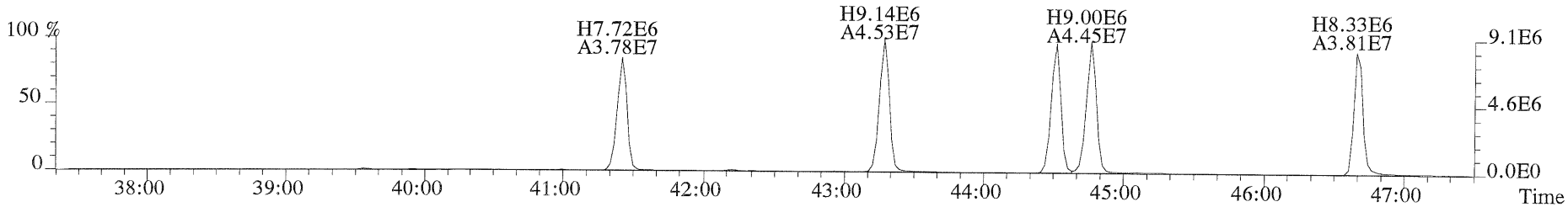
File:11AUG16Z #1-415 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



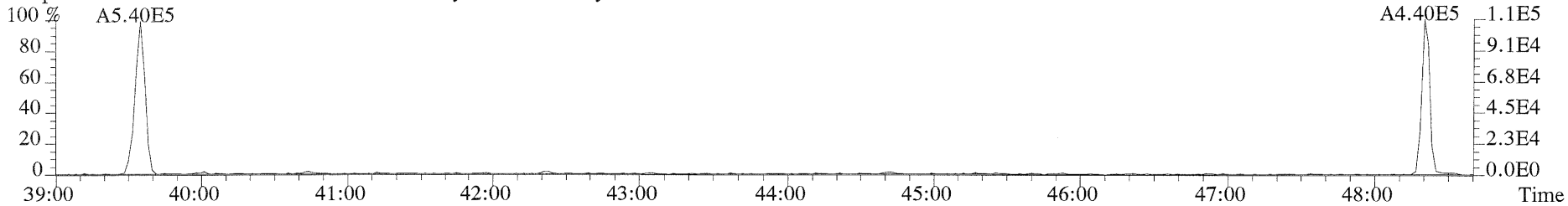
File:11AUG16Z #1-415 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



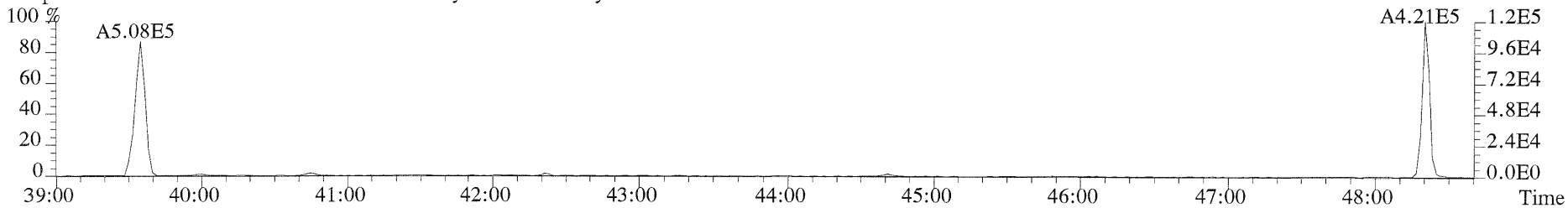
File:11AUG16Z #1-415 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



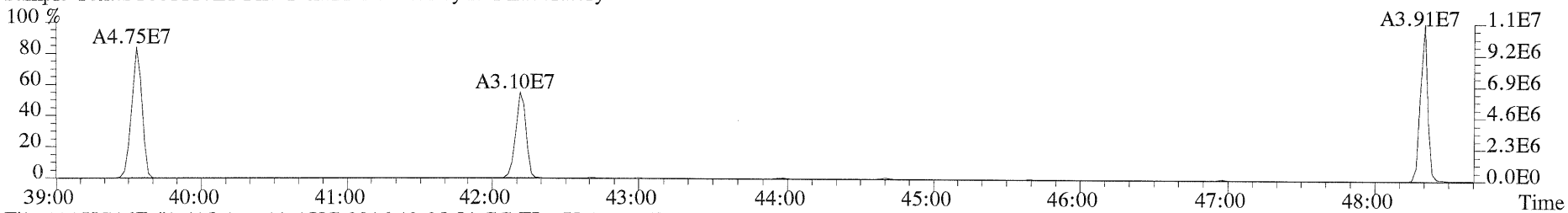
File:11AUG16Z #1-415 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
393.8025 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



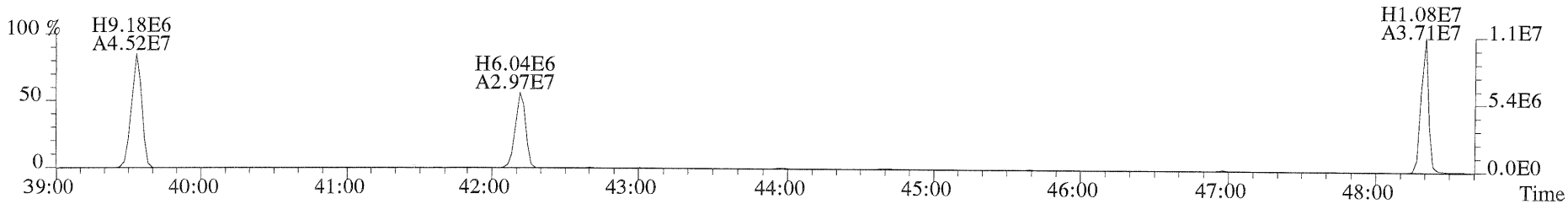
File:11AUG16Z #1-415 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
395.7995 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



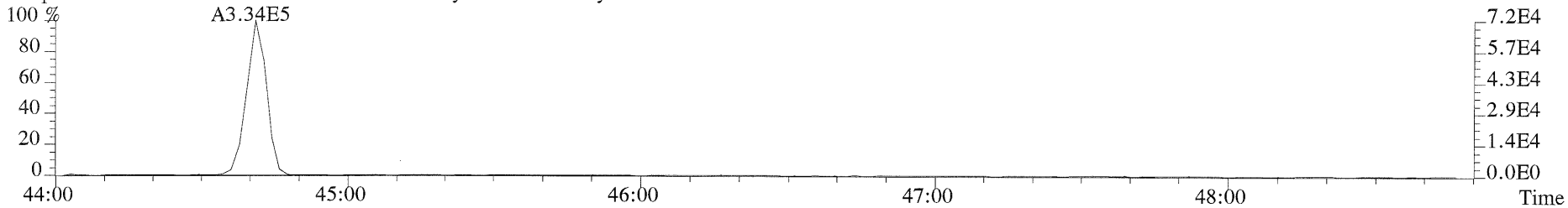
File:11AUG16Z #1-415 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
405.8428 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



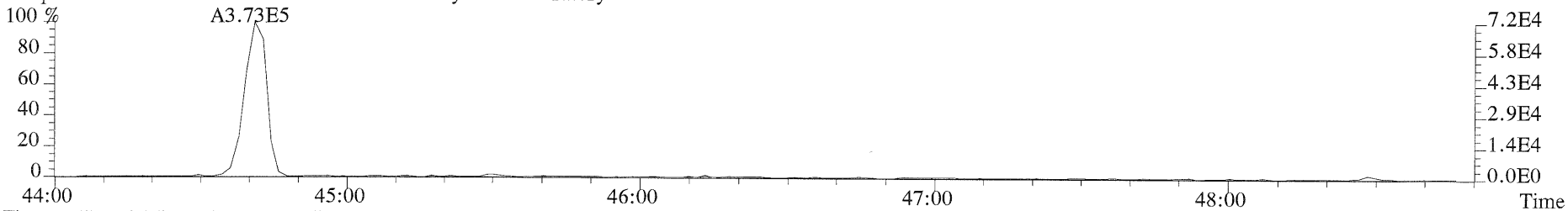
File:11AUG16Z #1-415 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
407.8398 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



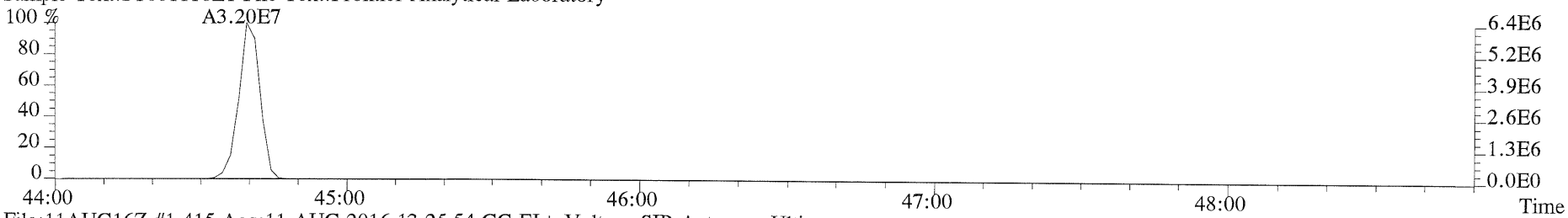
File:11AUG16Z #1-415 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



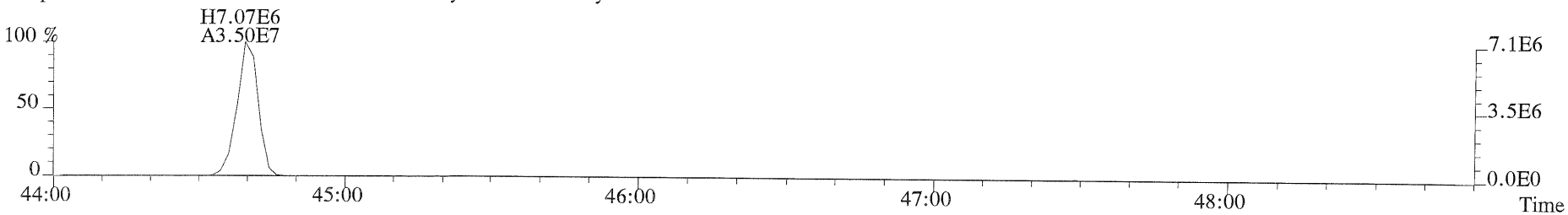
File:11AUG16Z #1-415 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



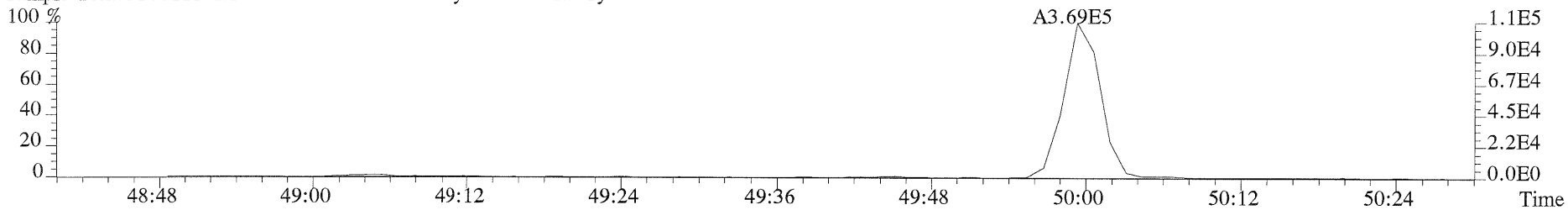
File:11AUG16Z #1-415 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



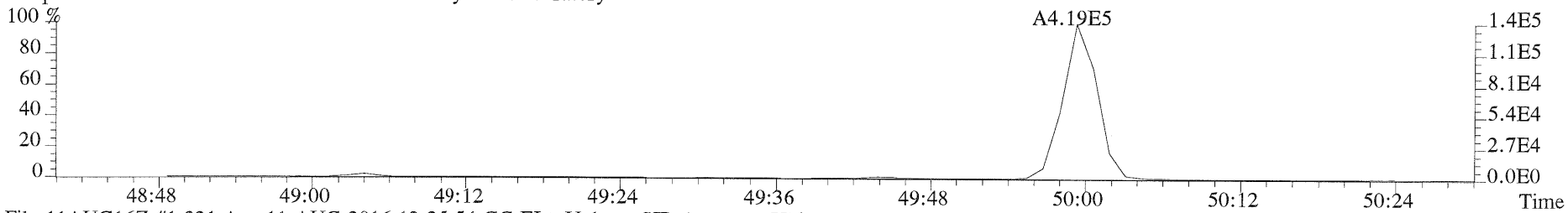
File:11AUG16Z #1-415 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:3 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



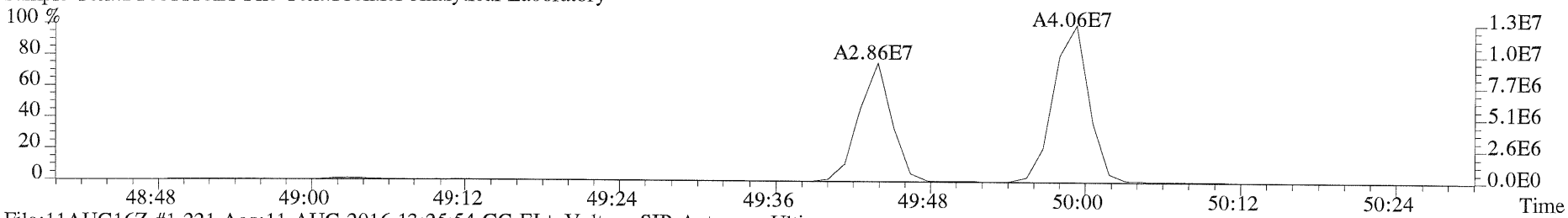
File:11AUG16Z #1-221 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



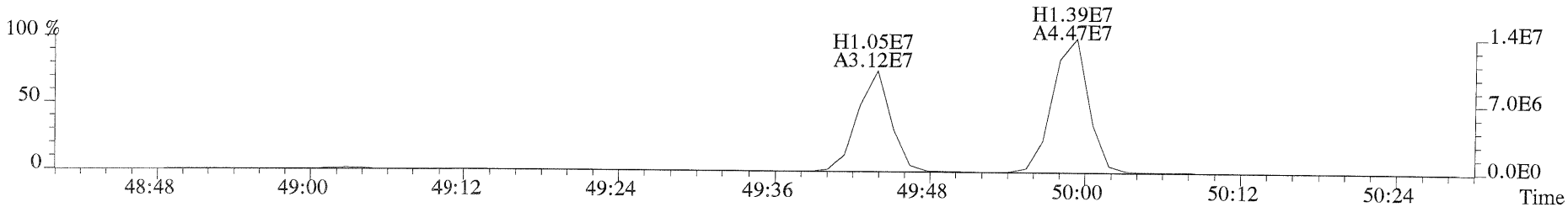
File:11AUG16Z #1-221 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



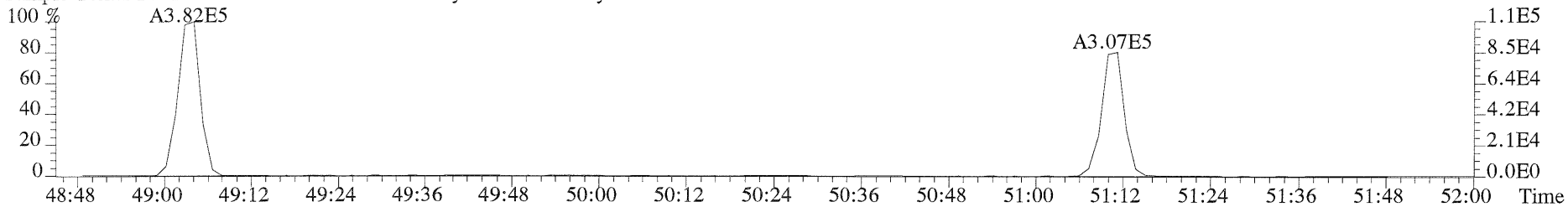
File:11AUG16Z #1-221 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



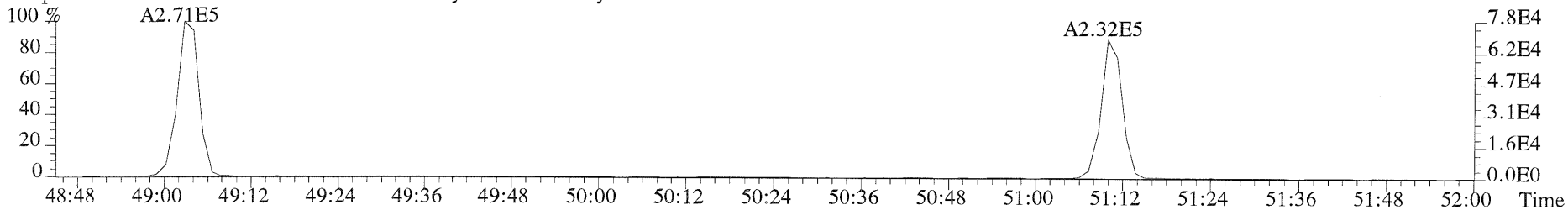
File:11AUG16Z #1-221 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



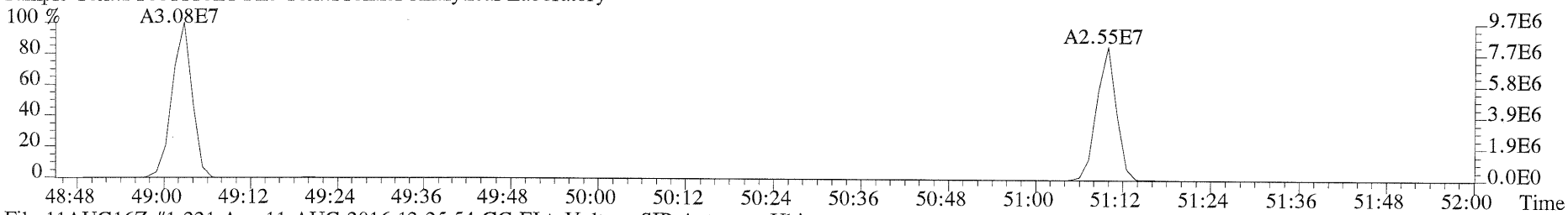
File:11AUG16Z #1-221 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
463.7216 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



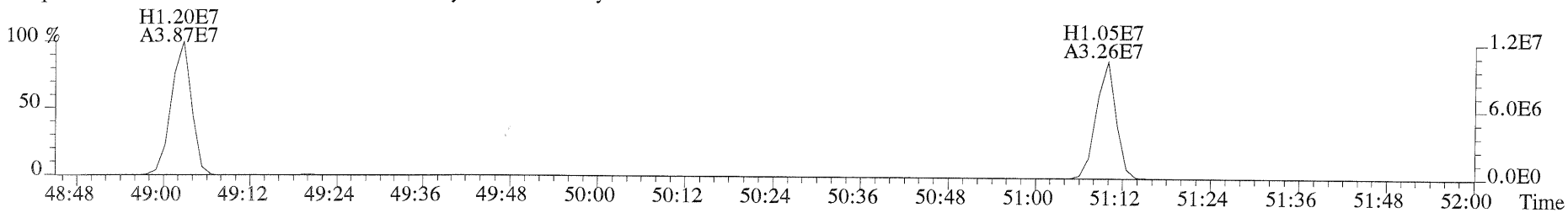
File:11AUG16Z #1-221 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
465.7187 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



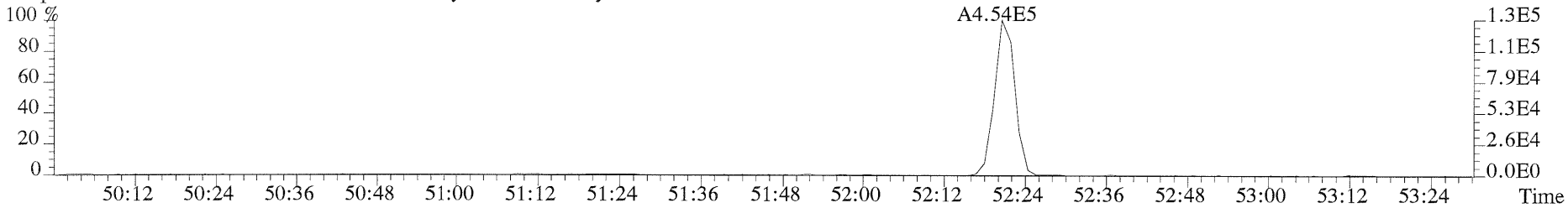
File:11AUG16Z #1-221 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
473.7648 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



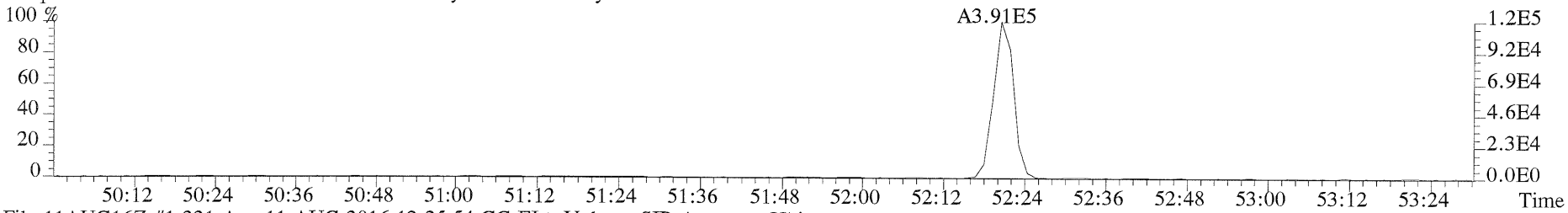
File:11AUG16Z #1-221 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
475.7619 S:3 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



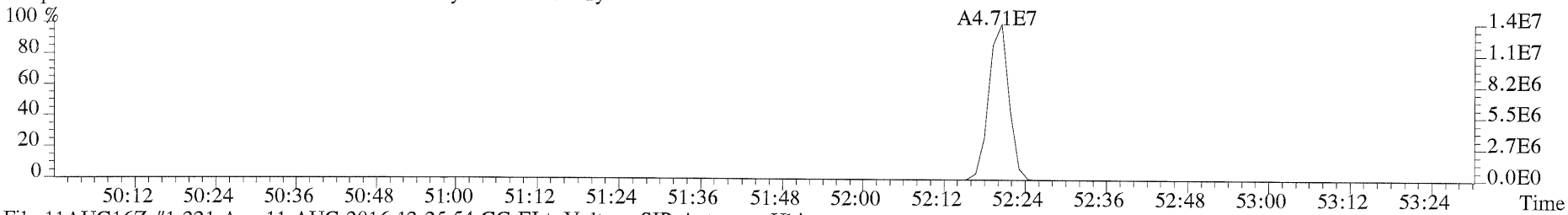
File:11AUG16Z #1-221 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
497.6826 S:3 F:6 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



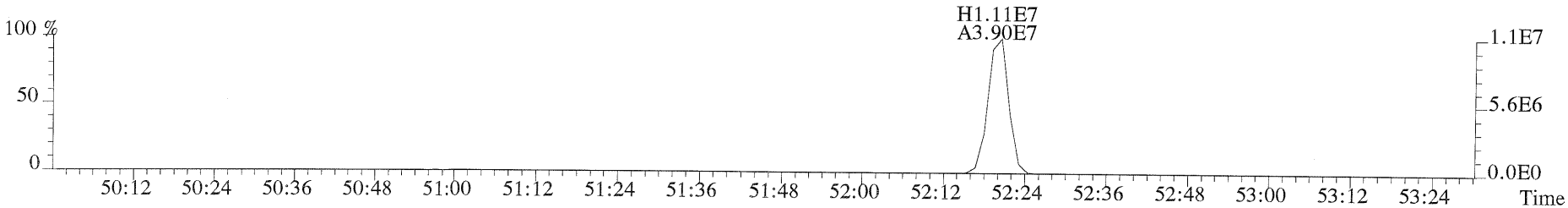
File:11AUG16Z #1-221 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
499.6797 S:3 F:6 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



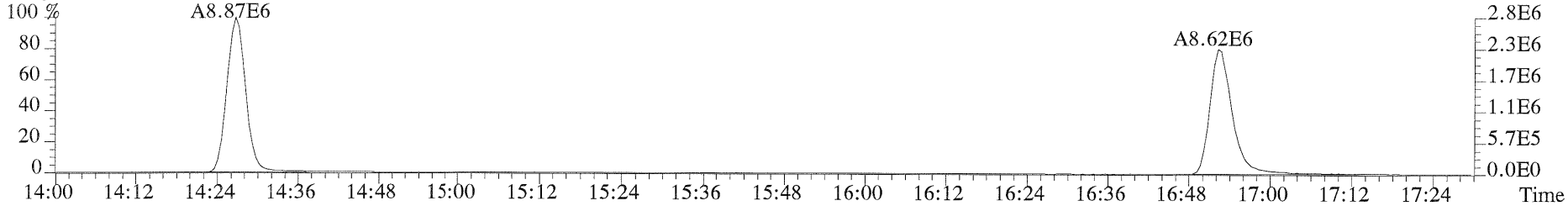
File:11AUG16Z #1-221 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
509.7229 S:3 F:6 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



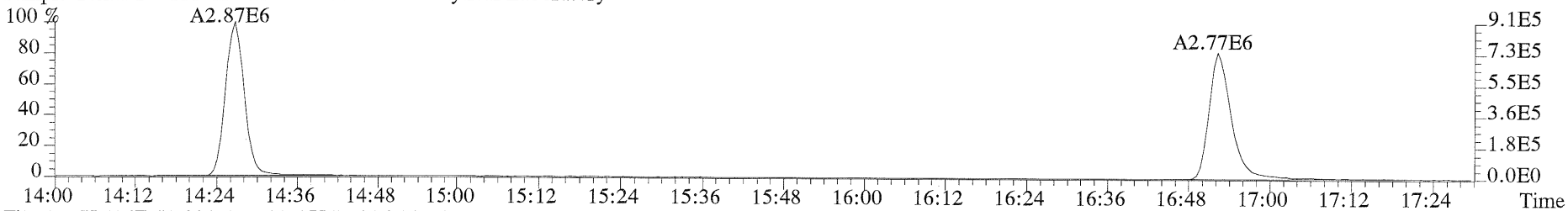
File:11AUG16Z #1-221 Acq:11-AUG-2016 13:25:54 GC EI+ Voltage SIR Autospec-Ultima
511.7199 S:3 F:6 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z1 File Text:Frontier Analytical Laboratory



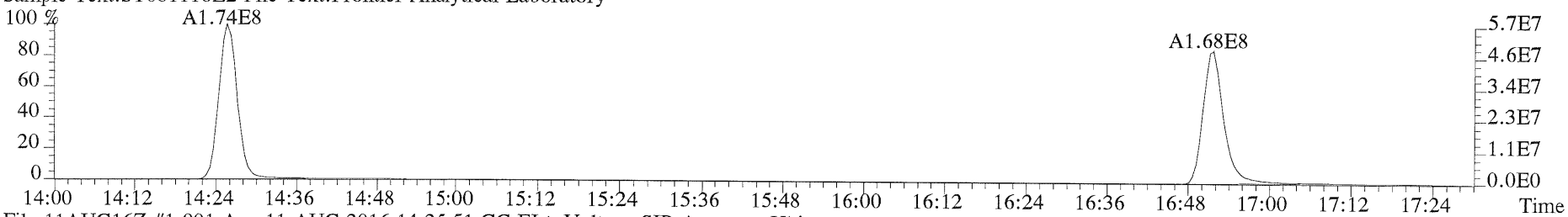
File:11AUG16Z #1-901 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
188.0393 S:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



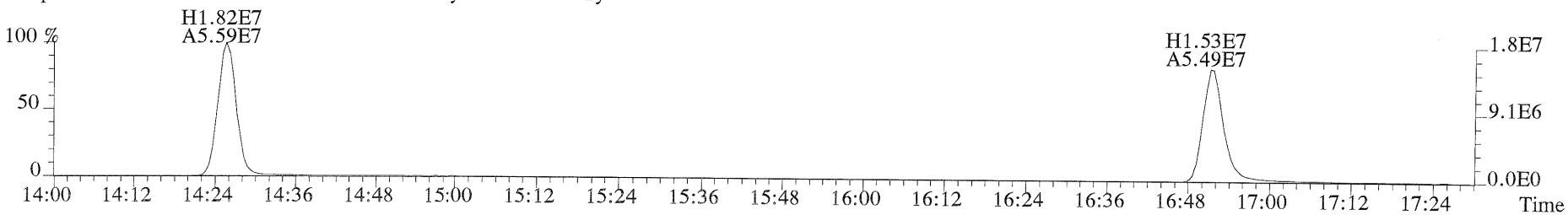
File:11AUG16Z #1-901 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
190.0363 S:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



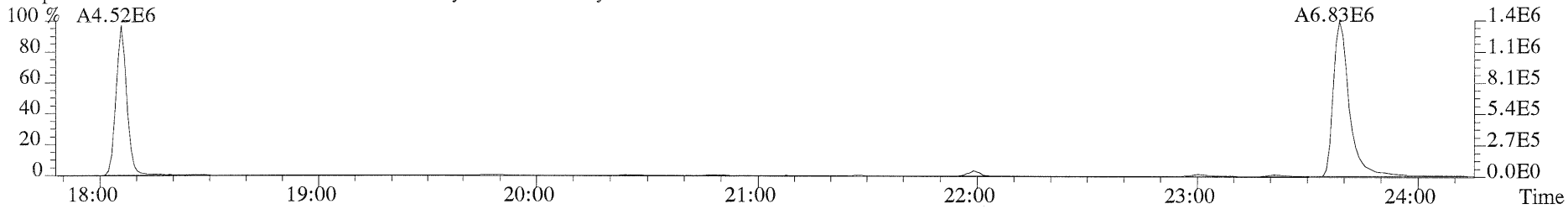
File:11AUG16Z #1-901 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
200.0795 S:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



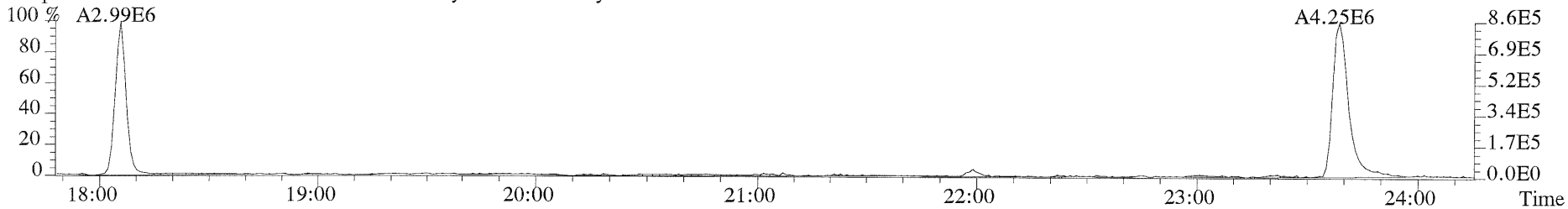
File:11AUG16Z #1-901 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
202.0766 S:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



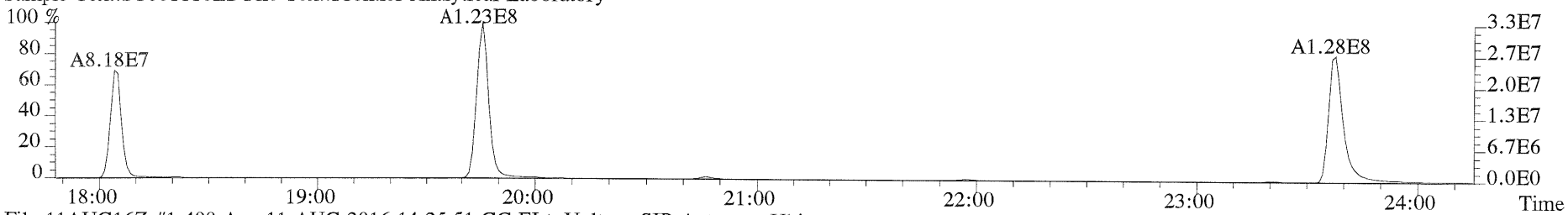
File:11AUG16Z #1-498 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
222.0003 S:4 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



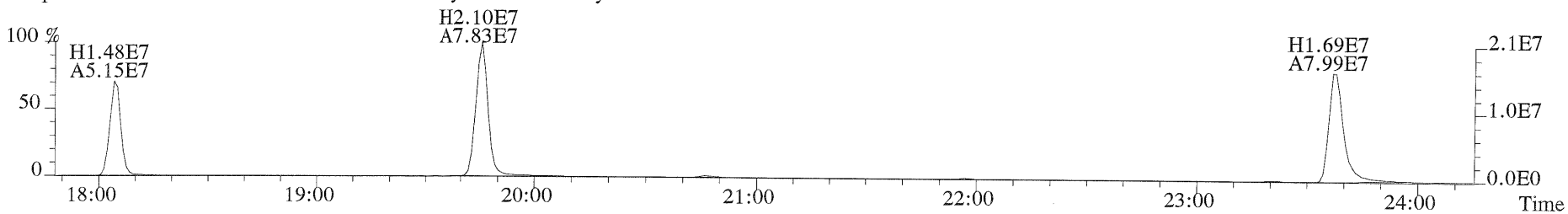
File:11AUG16Z #1-498 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
223.9974 S:4 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



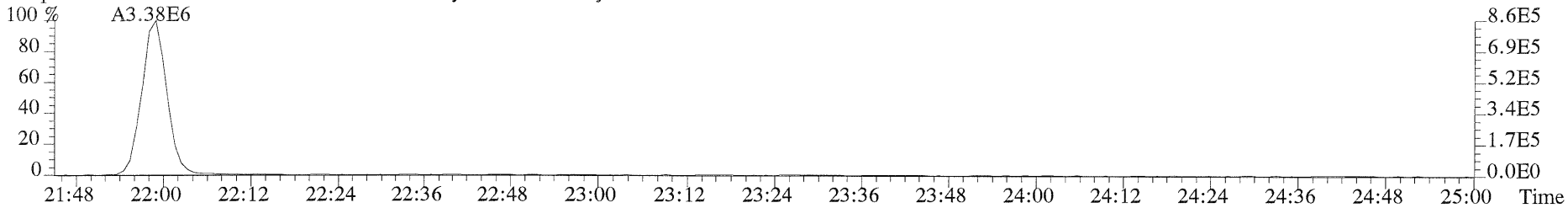
File:11AUG16Z #1-498 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
234.0406 S:4 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



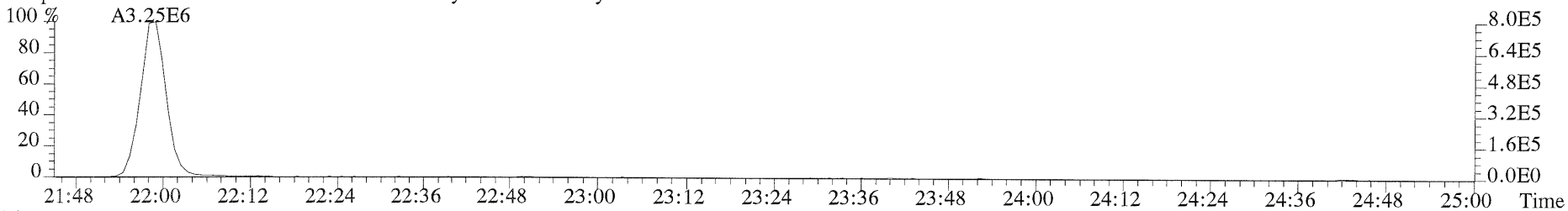
File:11AUG16Z #1-498 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
236.0376 S:4 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



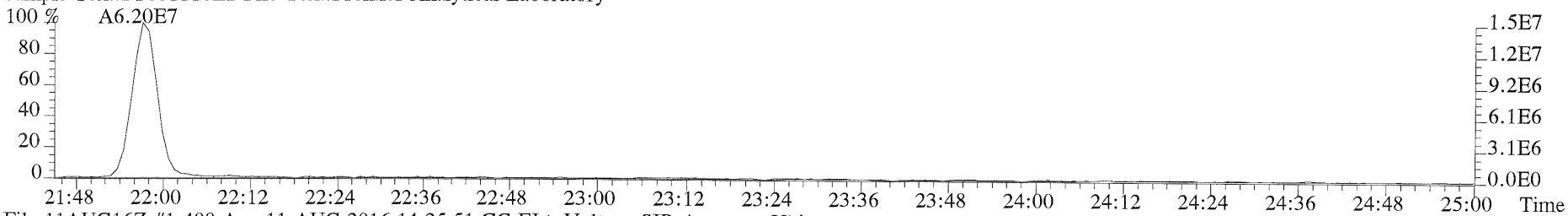
File:11AUG16Z #1-498 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:4 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



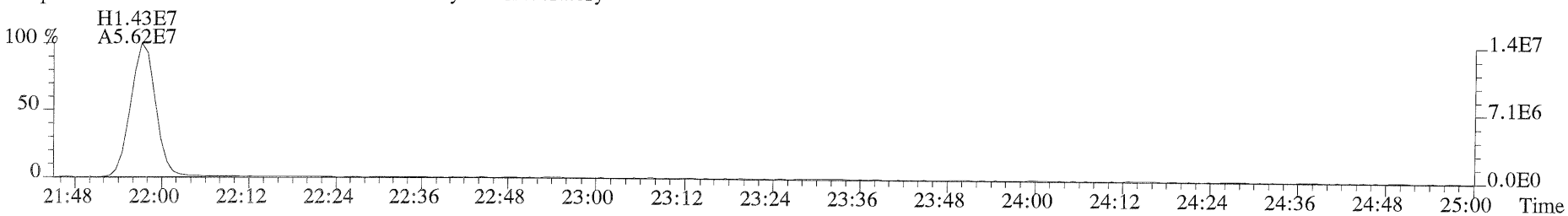
File:11AUG16Z #1-498 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:4 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



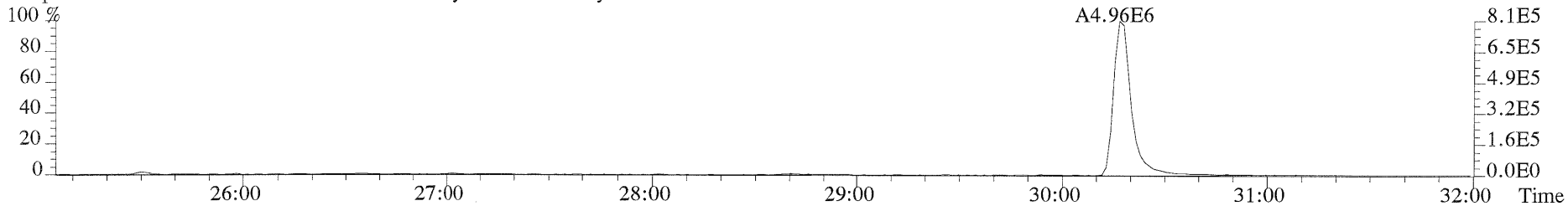
File:11AUG16Z #1-498 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:4 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



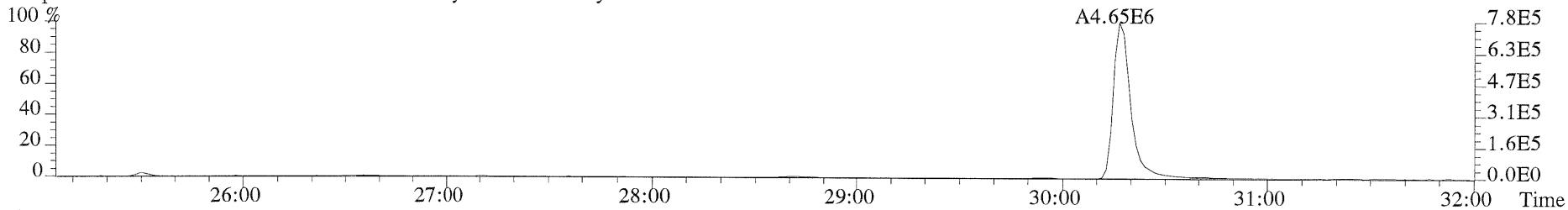
File:11AUG16Z #1-498 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:4 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



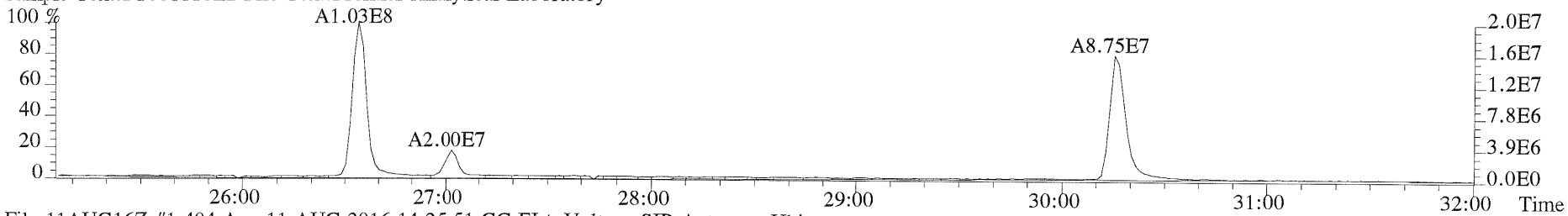
File:11AUG16Z #1-404 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



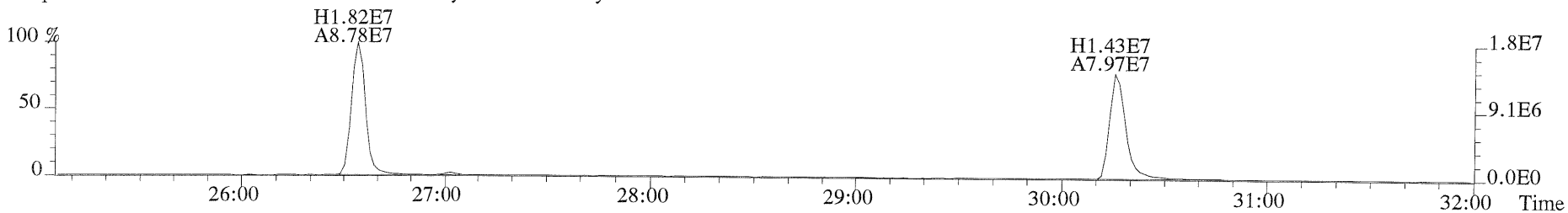
File:11AUG16Z #1-404 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



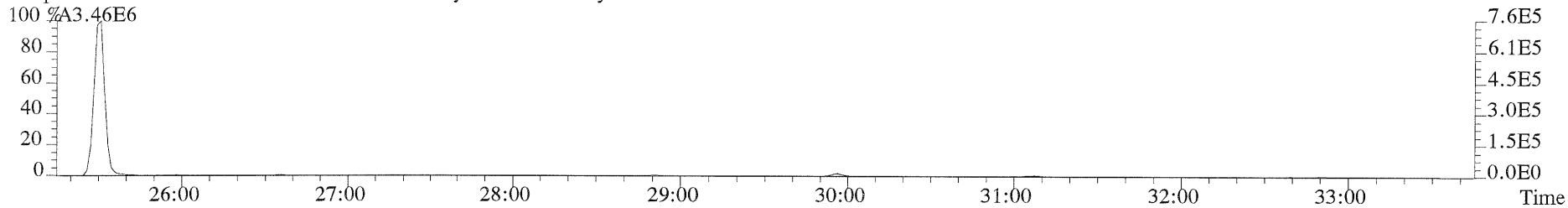
File:11AUG16Z #1-404 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



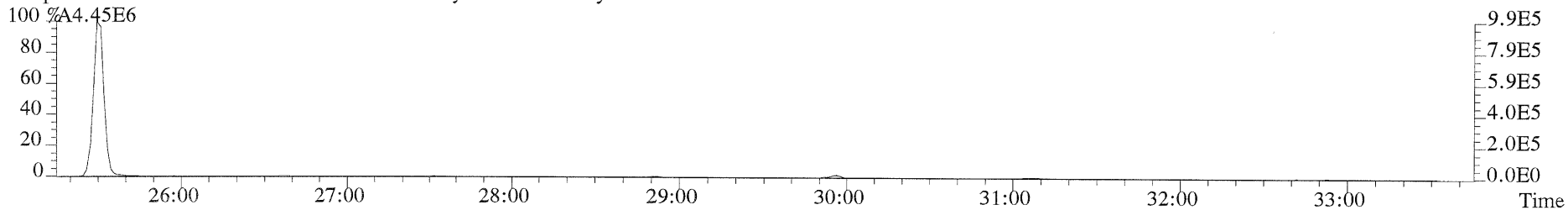
File:11AUG16Z #1-404 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



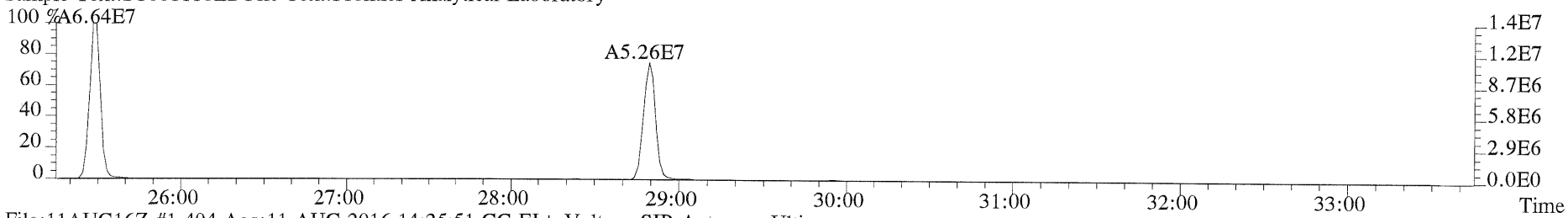
File:11AUG16Z #1-404 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



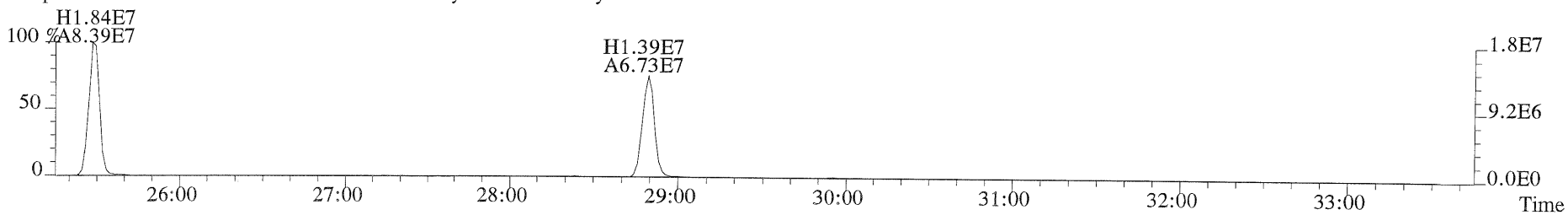
File:11AUG16Z #1-404 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



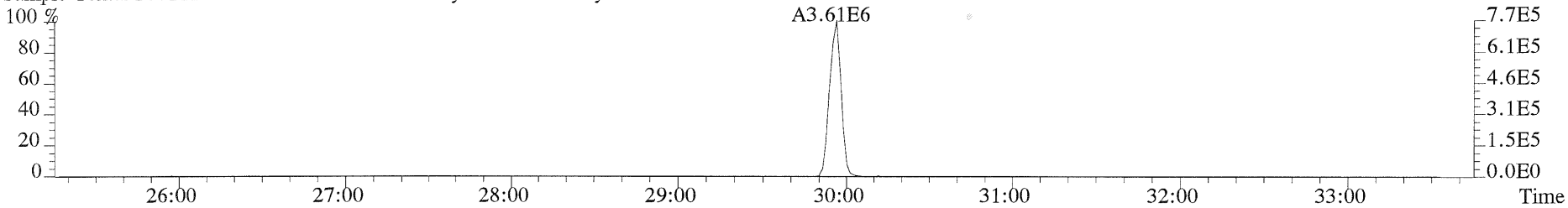
File:11AUG16Z #1-404 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



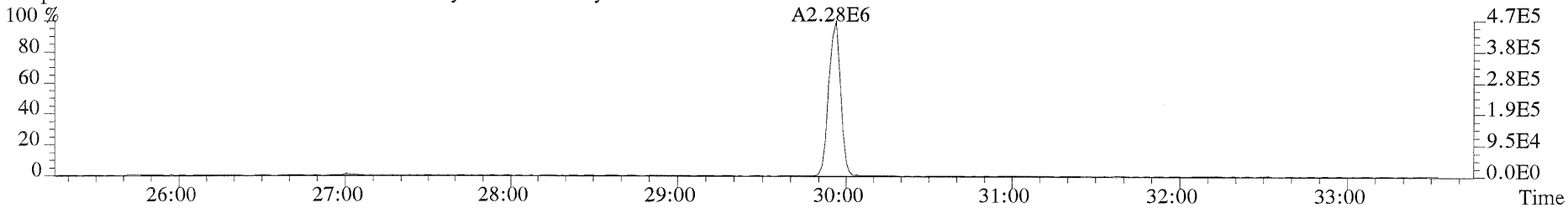
File:11AUG16Z #1-404 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



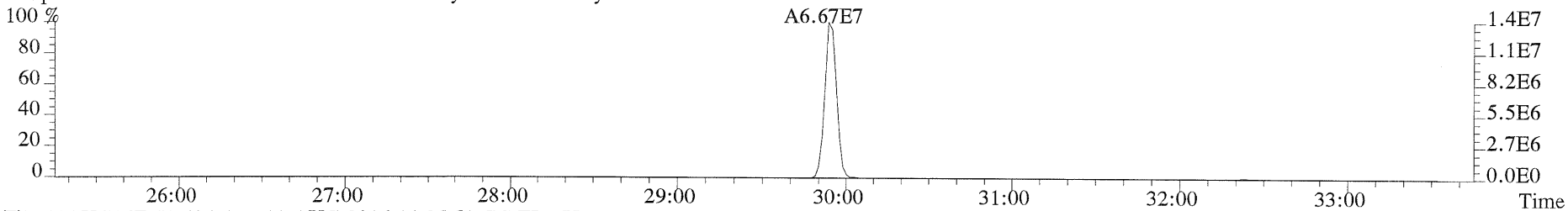
File:11AUG16Z #1-404 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



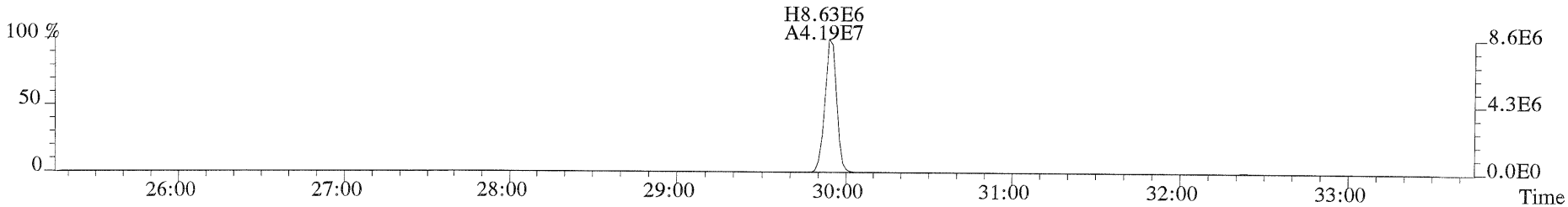
File:11AUG16Z #1-404 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



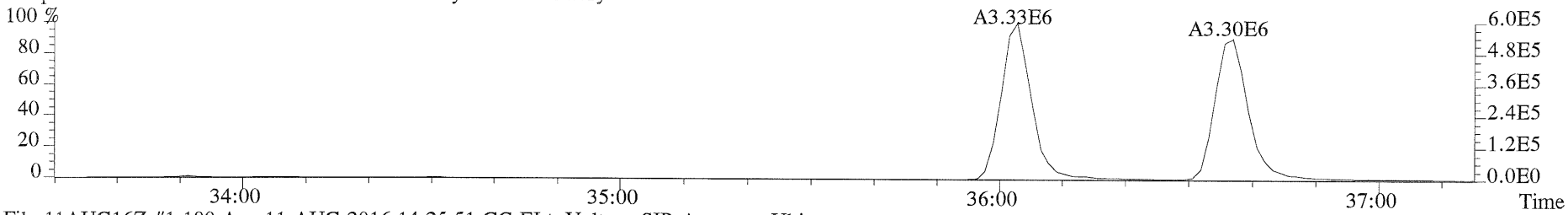
File:11AUG16Z #1-404 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



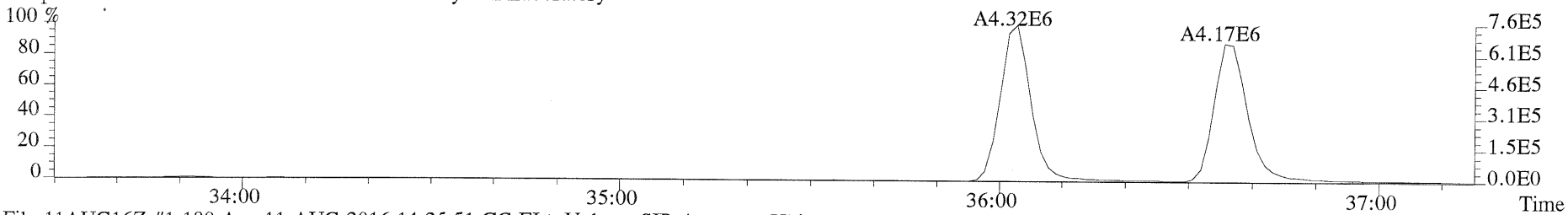
File:11AUG16Z #1-404 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:4 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



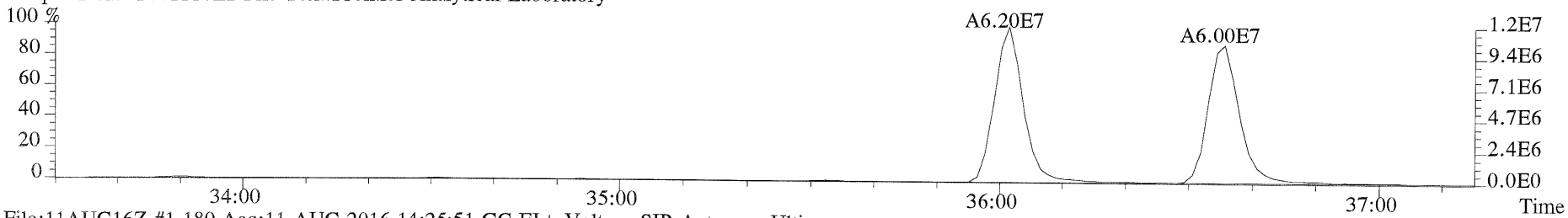
File:11AUG16Z #1-180 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



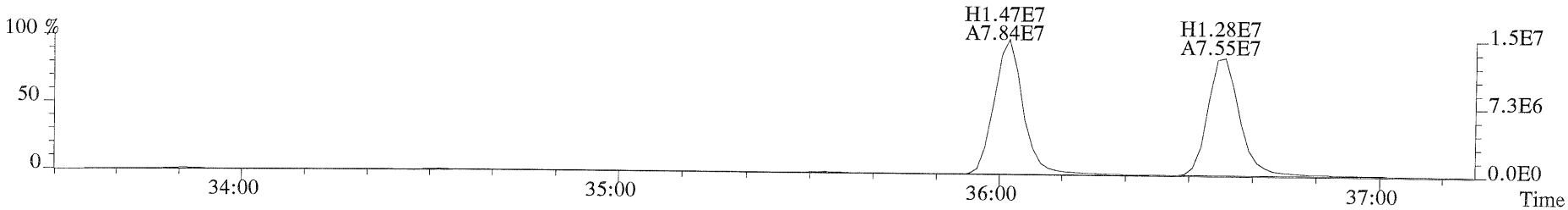
File:11AUG16Z #1-180 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



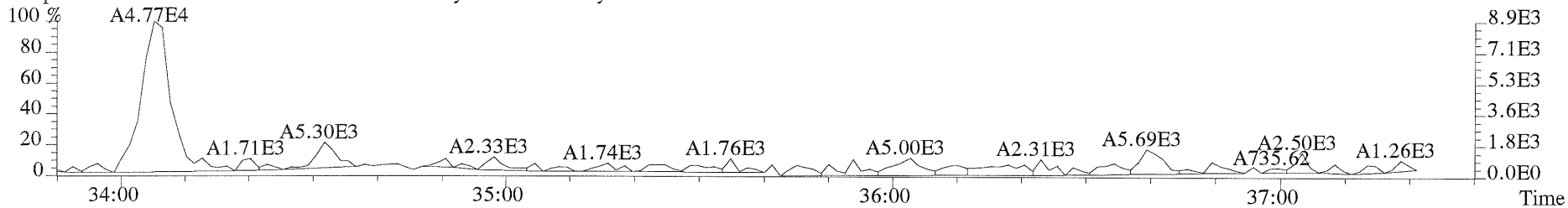
File:11AUG16Z #1-180 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



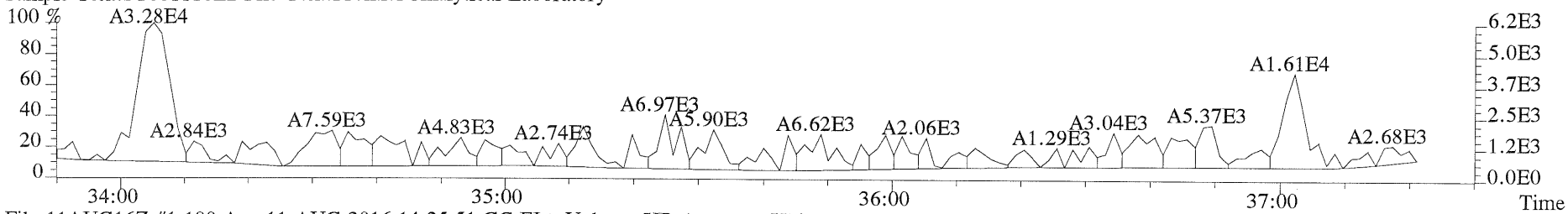
File:11AUG16Z #1-180 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



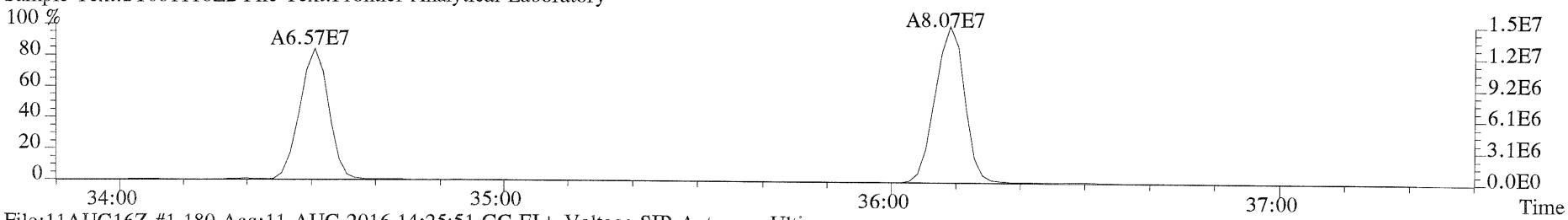
File:11AUG16Z #1-180 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



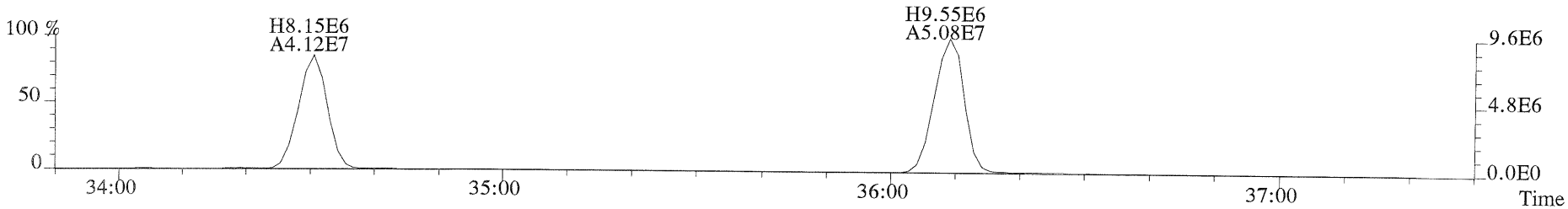
File:11AUG16Z #1-180 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



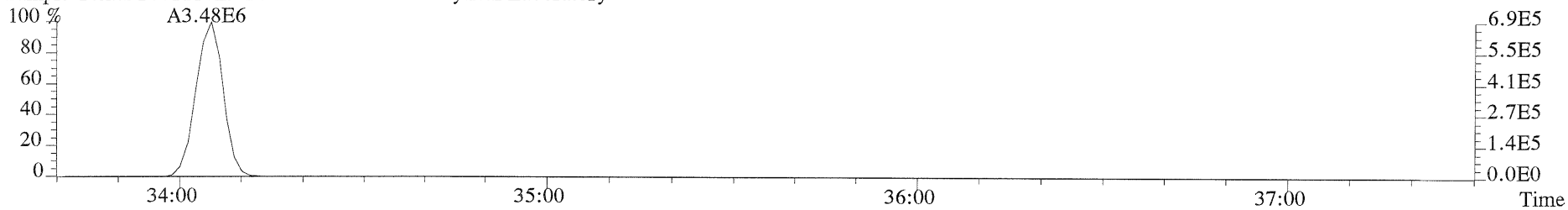
File:11AUG16Z #1-180 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



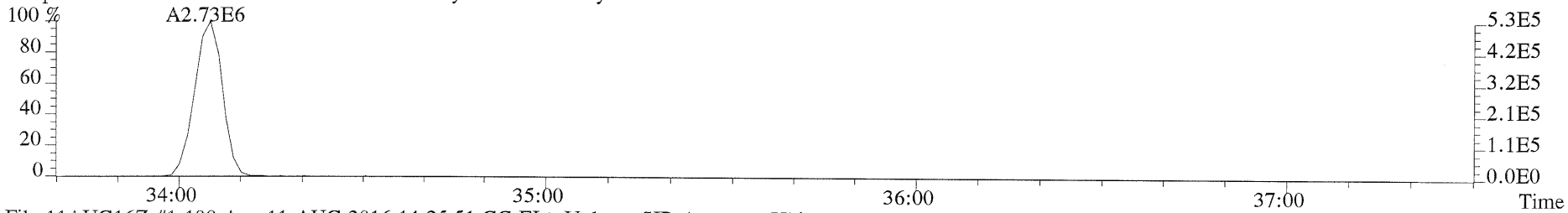
File:11AUG16Z #1-180 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



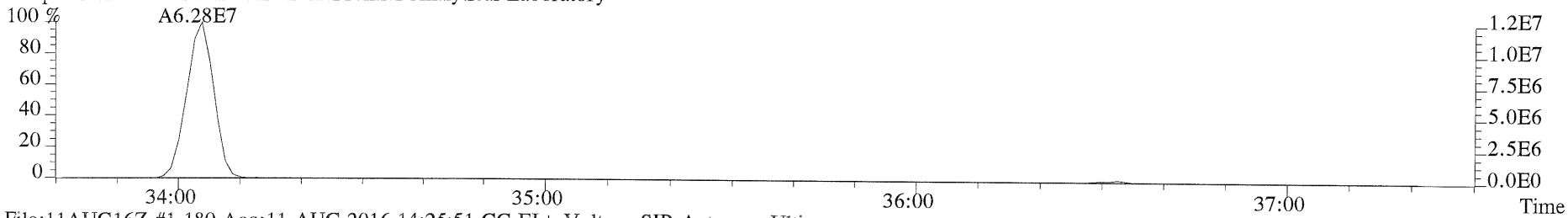
File:11AUG16Z #1-180 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



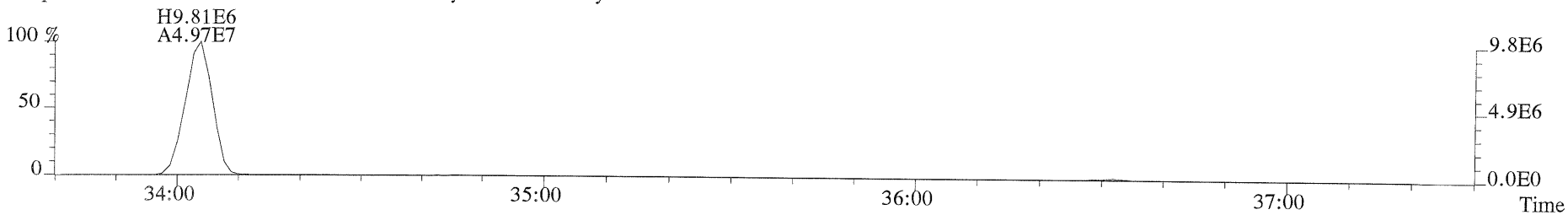
File:11AUG16Z #1-180 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



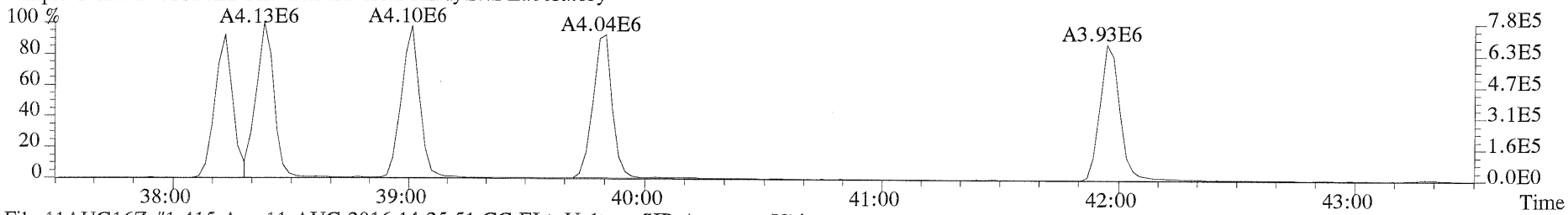
File:11AUG16Z #1-180 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



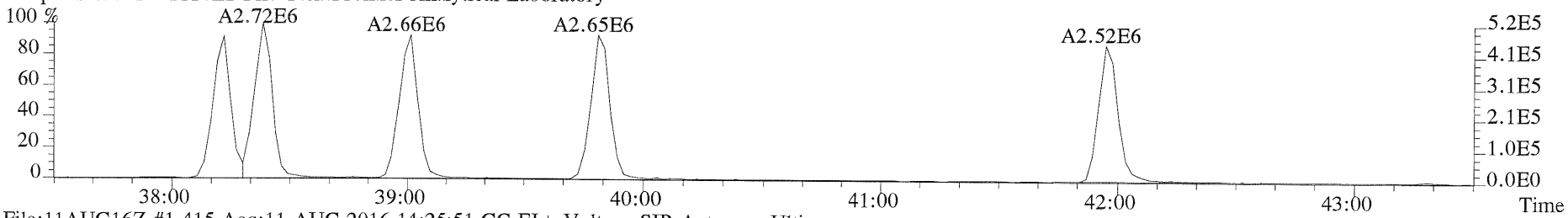
File:11AUG16Z #1-180 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:4 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



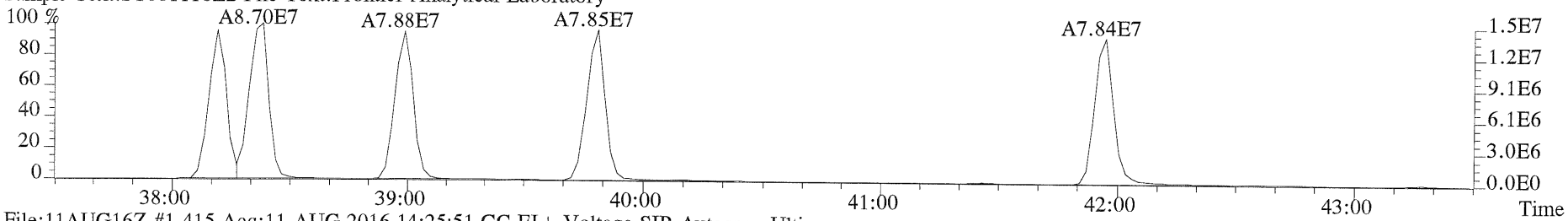
File:11AUG16Z #1-415 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



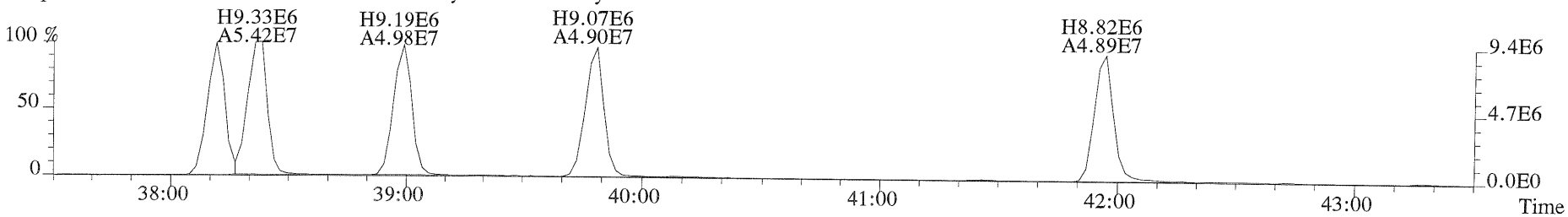
File:11AUG16Z #1-415 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



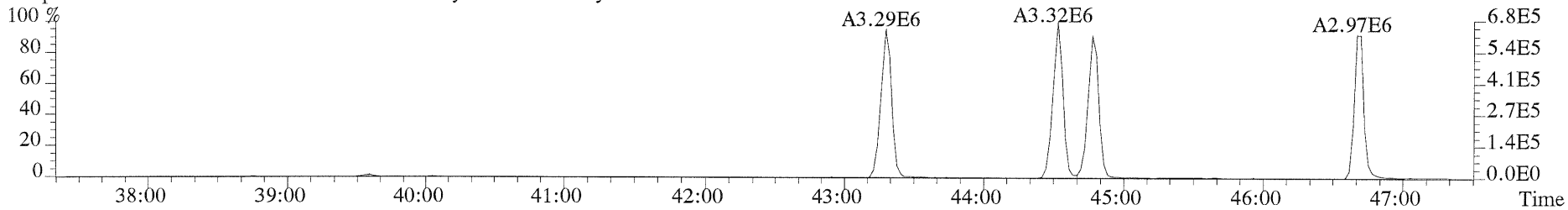
File:11AUG16Z #1-415 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



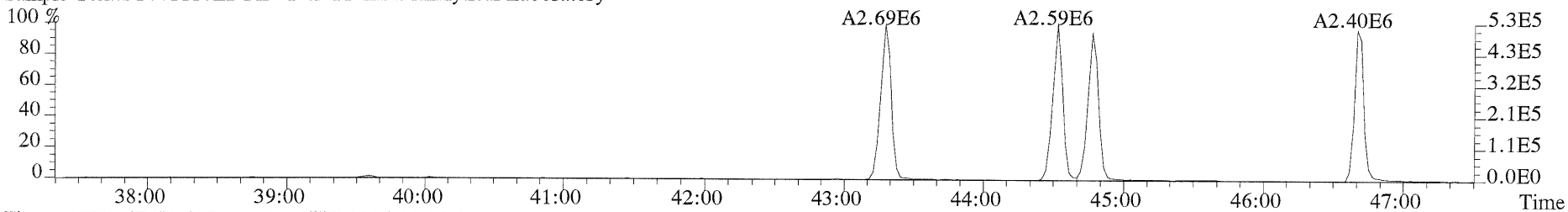
File:11AUG16Z #1-415 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



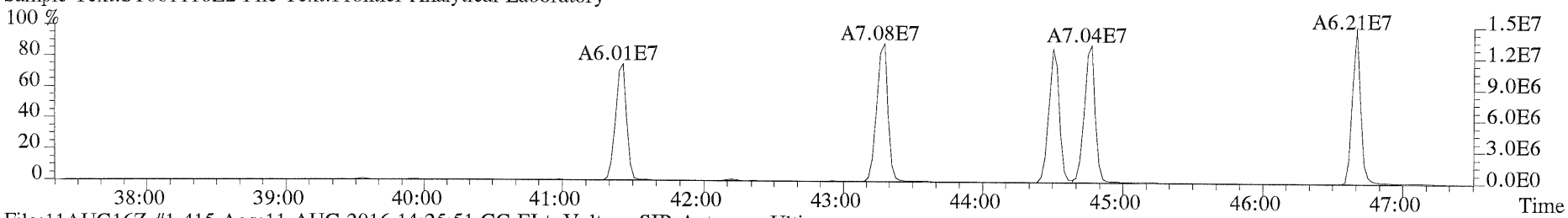
File:11AUG16Z #1-415 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



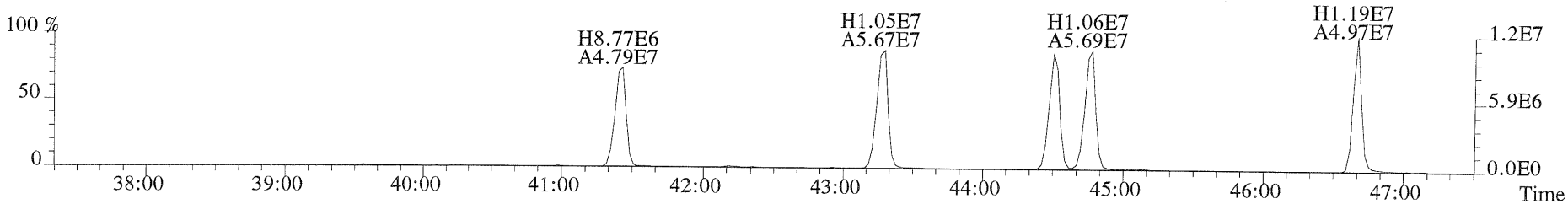
File:11AUG16Z #1-415 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



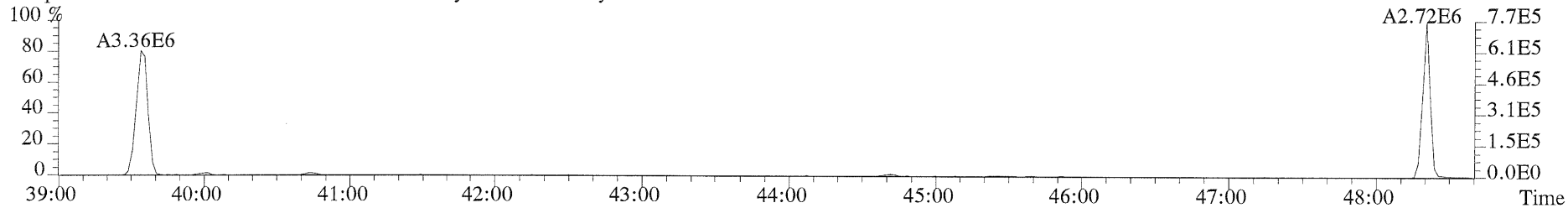
File:11AUG16Z #1-415 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



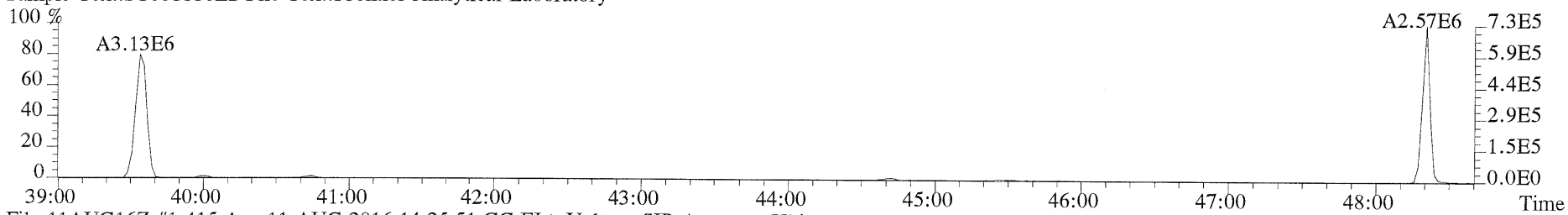
File:11AUG16Z #1-415 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



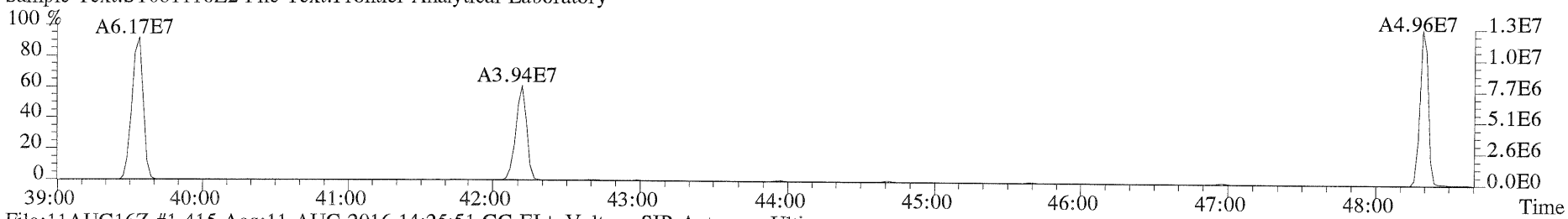
File:11AUG16Z #1-415 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
393.8025 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



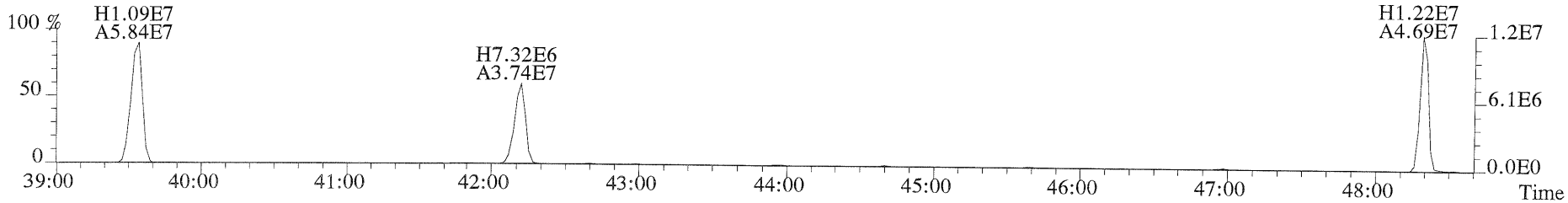
File:11AUG16Z #1-415 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
395.7995 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



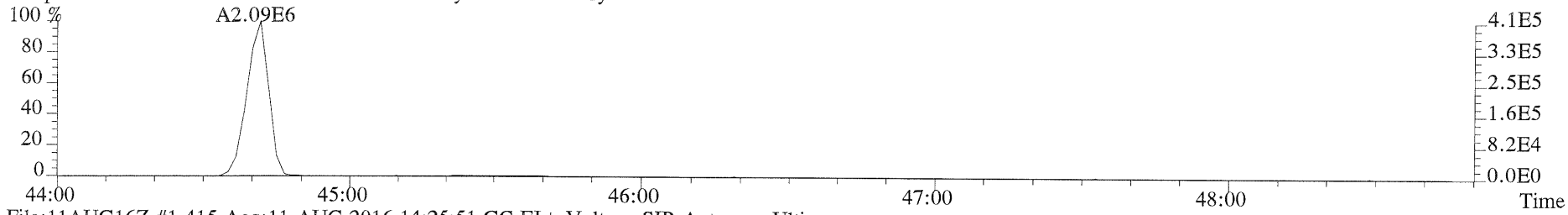
File:11AUG16Z #1-415 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
405.8428 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



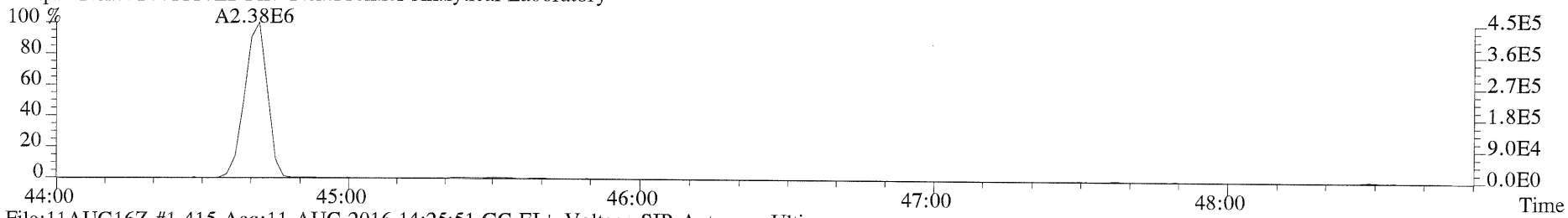
File:11AUG16Z #1-415 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
407.8398 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



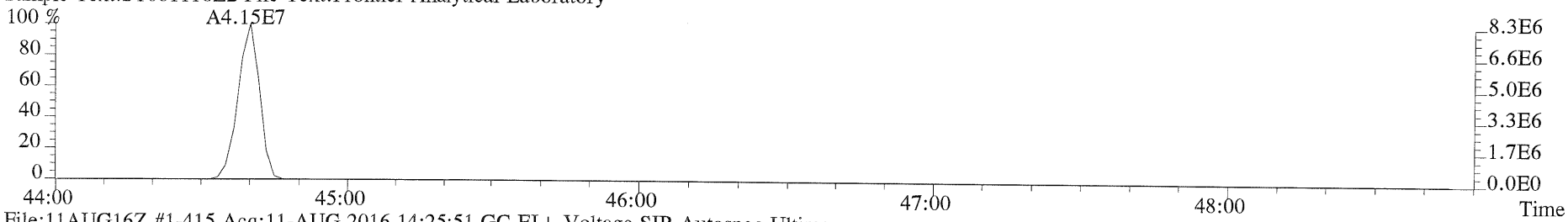
File:11AUG16Z #1-415 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



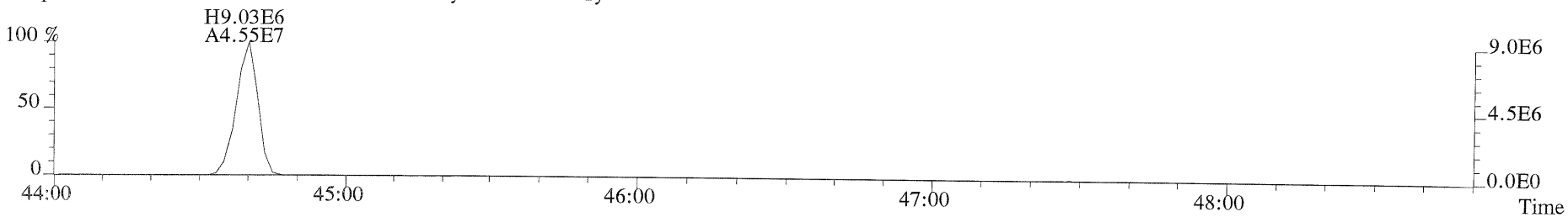
File:11AUG16Z #1-415 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



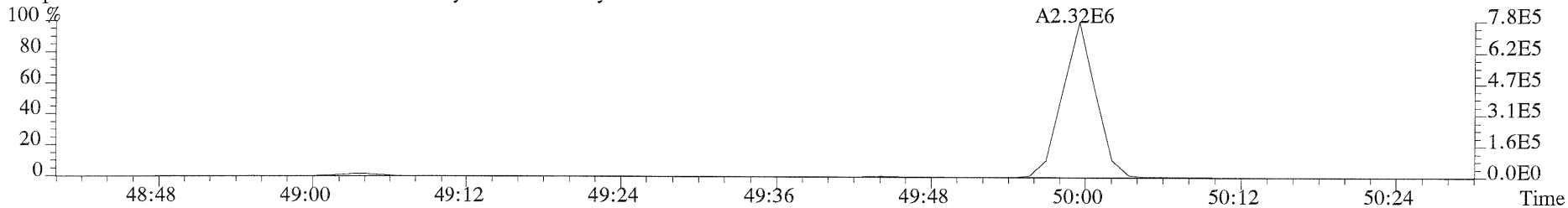
File:11AUG16Z #1-415 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



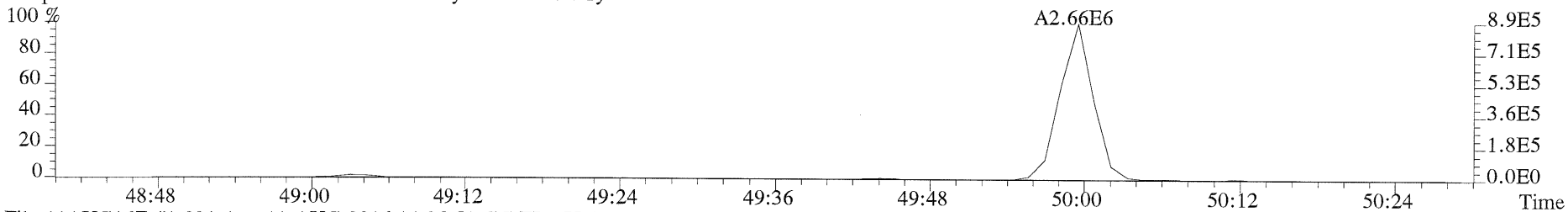
File:11AUG16Z #1-415 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:4 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



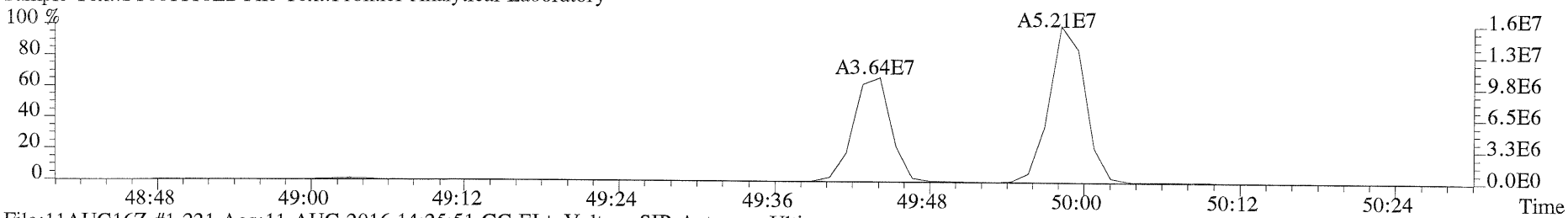
File:11AUG16Z #1-221 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



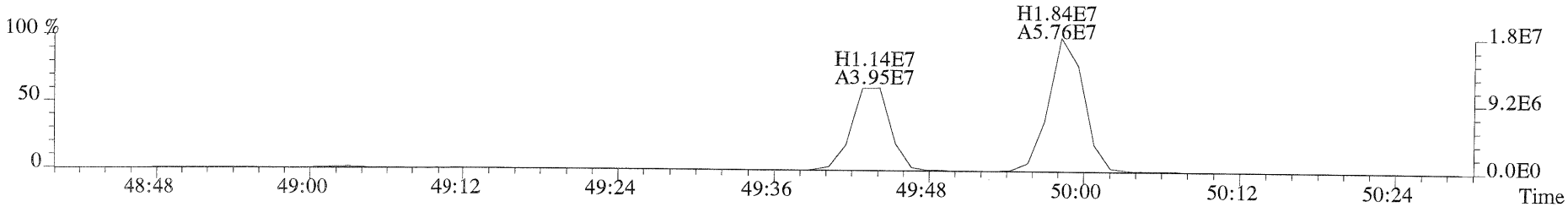
File:11AUG16Z #1-221 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



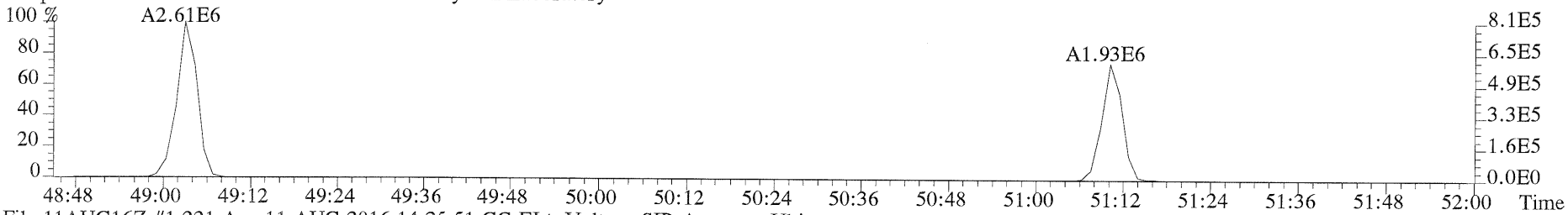
File:11AUG16Z #1-221 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



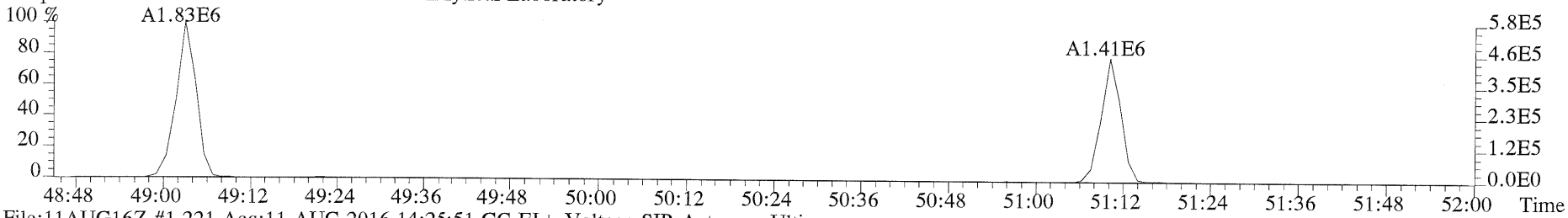
File:11AUG16Z #1-221 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



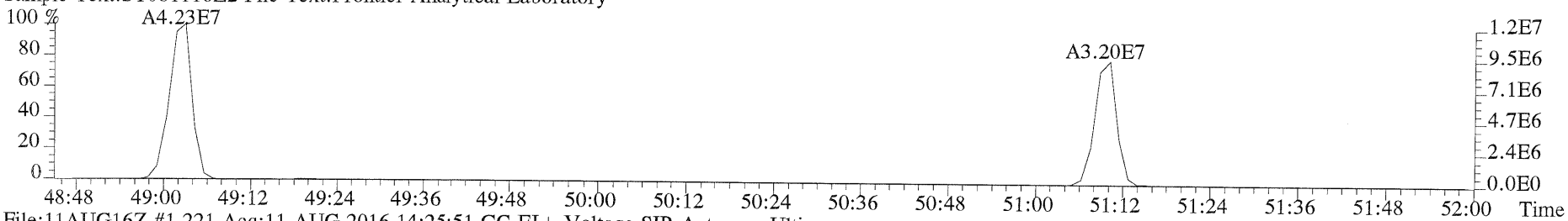
File:11AUG16Z #1-221 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
463.7216 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



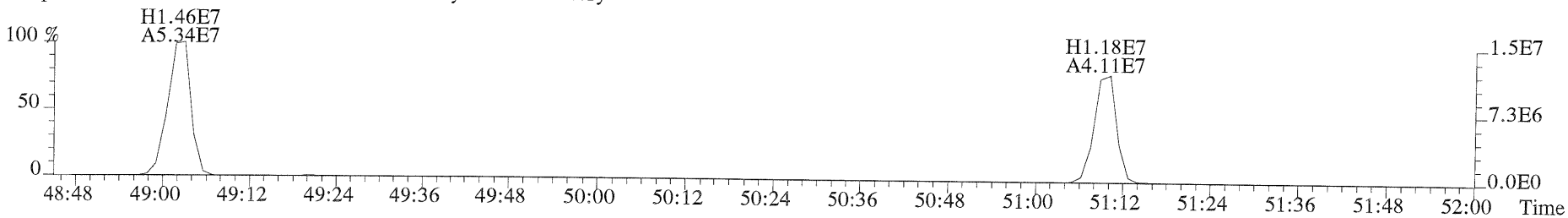
File:11AUG16Z #1-221 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
465.7187 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



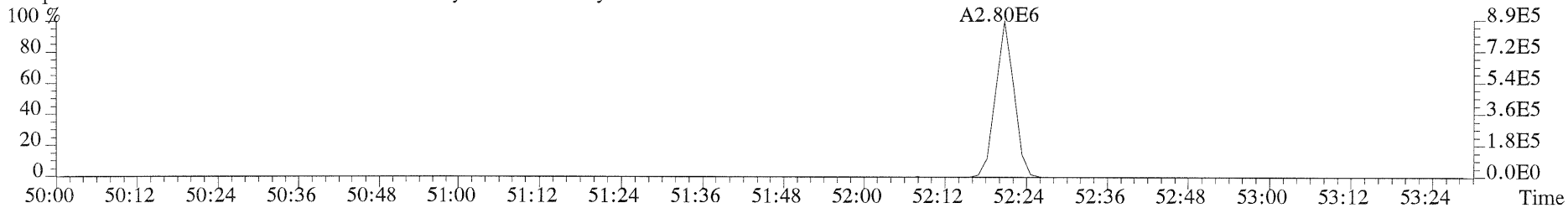
File:11AUG16Z #1-221 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
473.7648 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



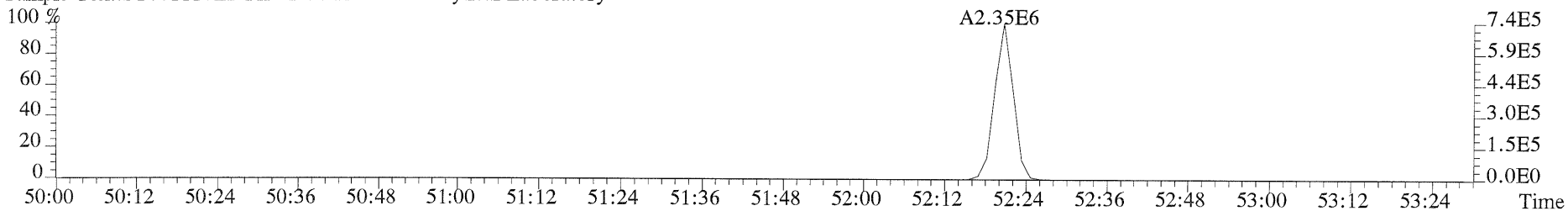
File:11AUG16Z #1-221 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
475.7619 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



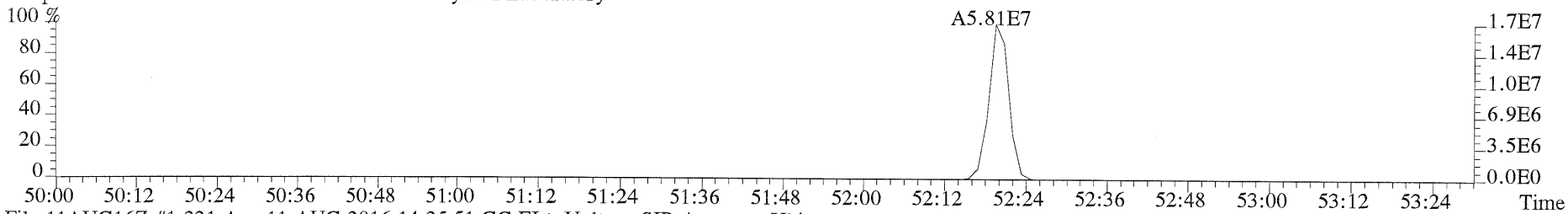
File:11AUG16Z #1-221 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
497.6826 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



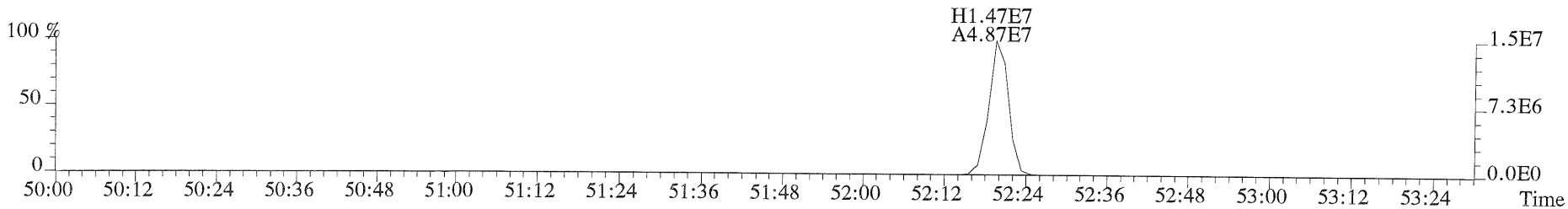
File:11AUG16Z #1-221 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
499.6797 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



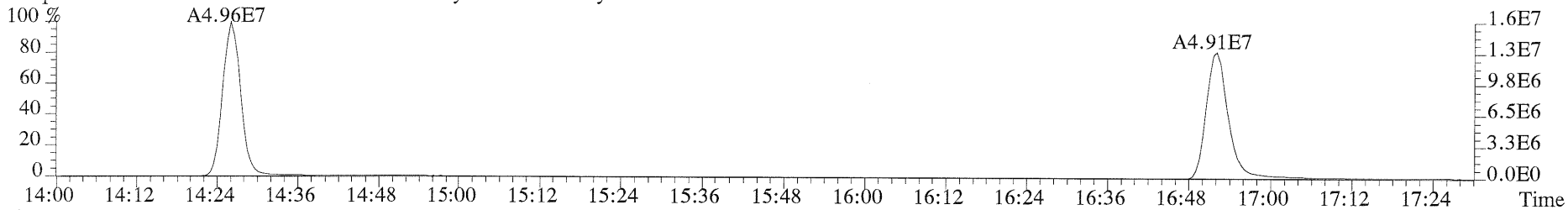
File:11AUG16Z #1-221 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
509.7229 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



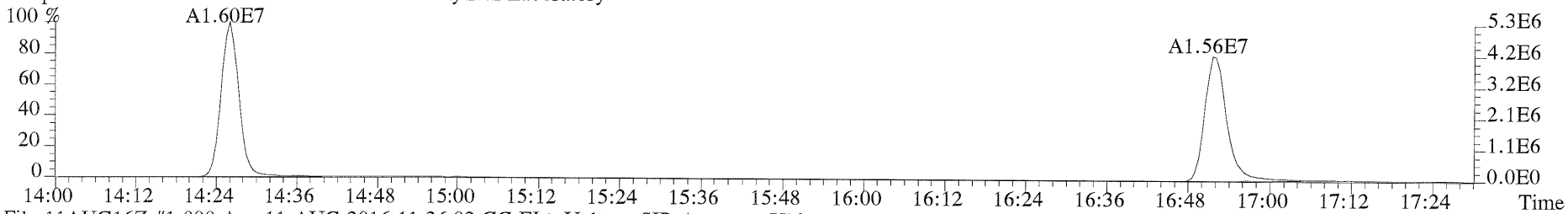
File:11AUG16Z #1-221 Acq:11-AUG-2016 14:25:51 GC EI+ Voltage SIR Autospec-Ultima
511.7199 S:4 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z2 File Text:Frontier Analytical Laboratory



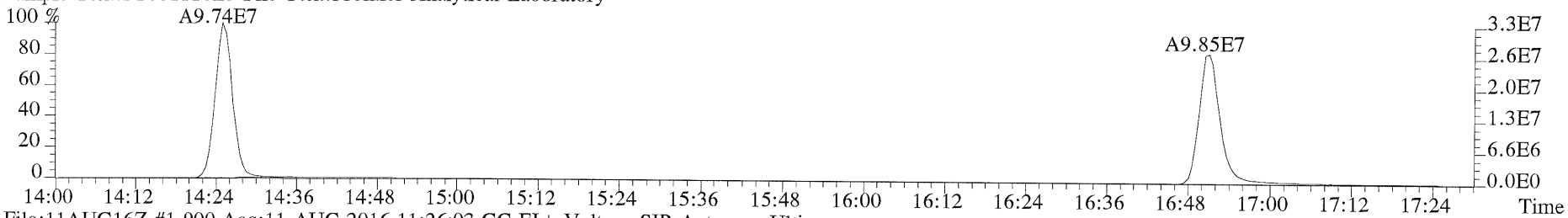
File:11AUG16Z #1-900 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
188.0393 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



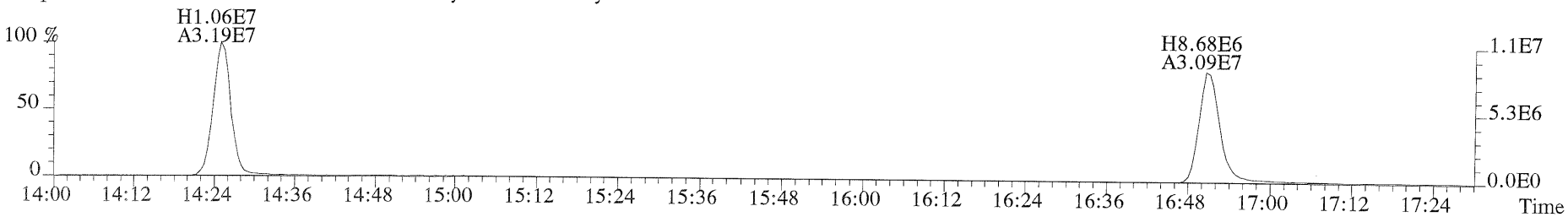
File:11AUG16Z #1-900 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
190.0363 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



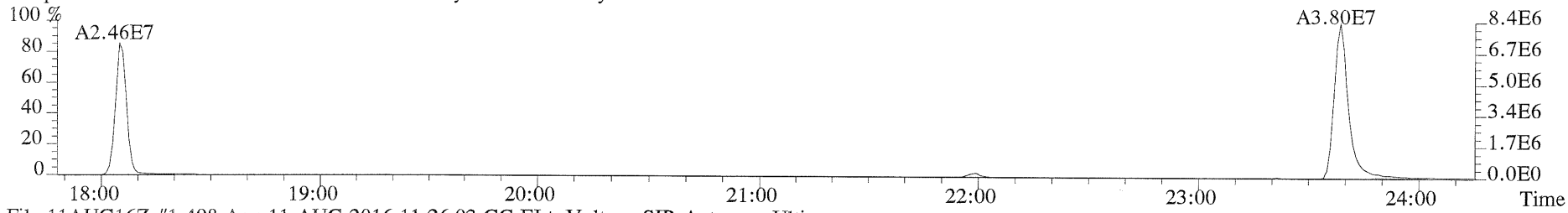
File:11AUG16Z #1-900 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
200.0795 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



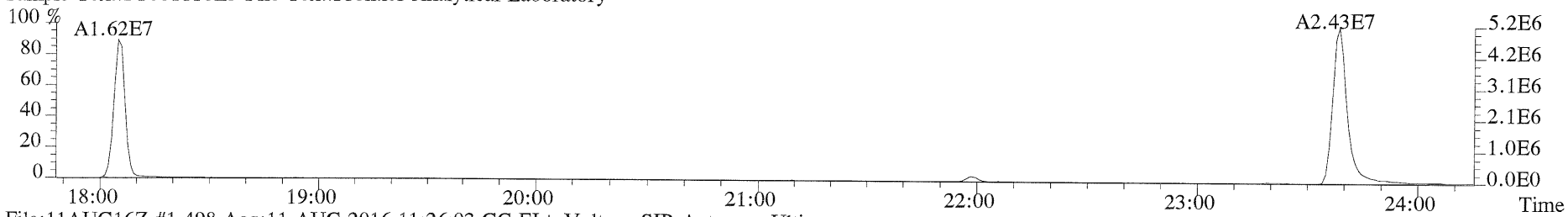
File:11AUG16Z #1-900 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
202.0766 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



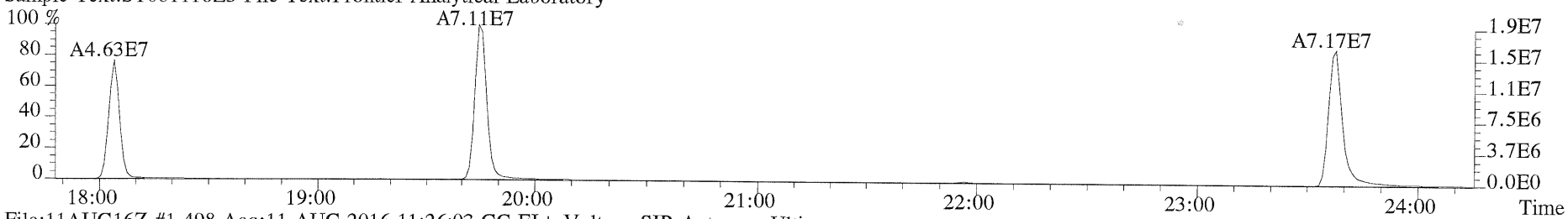
File:11AUG16Z #1-498 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
222.0003 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



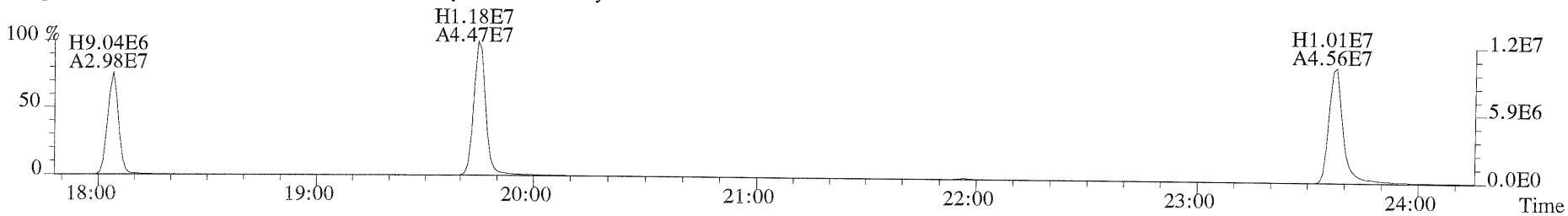
File:11AUG16Z #1-498 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
223.9974 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



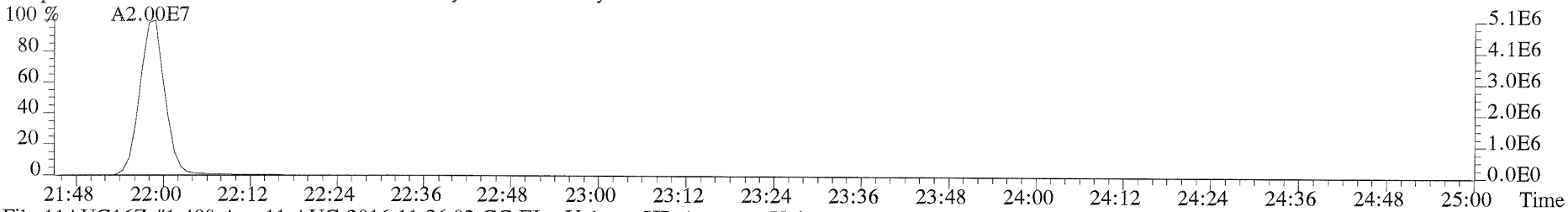
File:11AUG16Z #1-498 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
234.0406 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



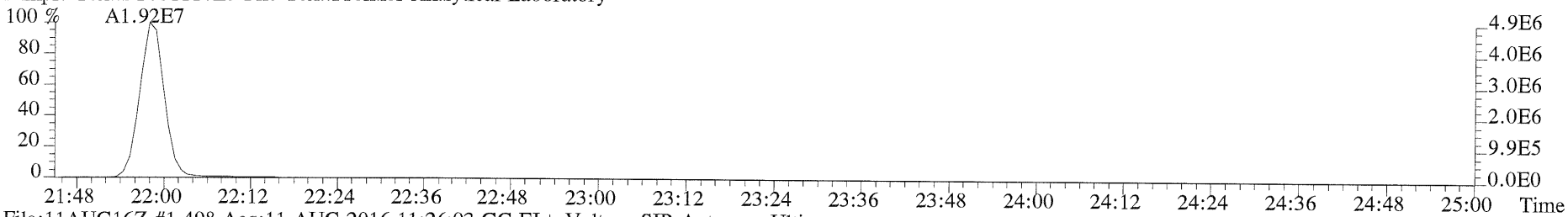
File:11AUG16Z #1-498 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
236.0376 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



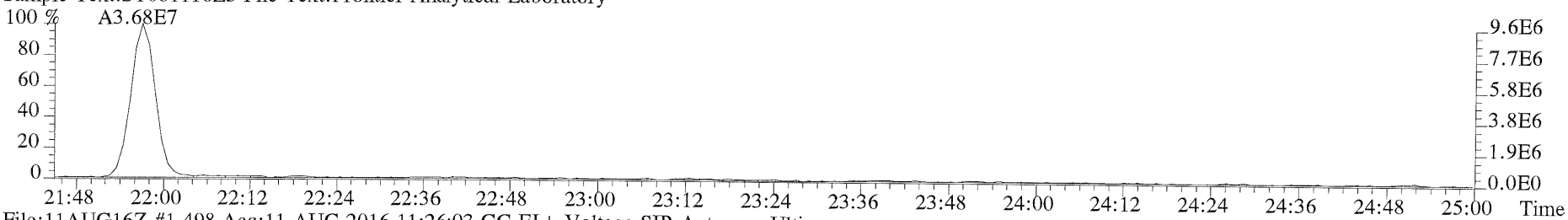
File:11AUG16Z #1-498 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
255.9613 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



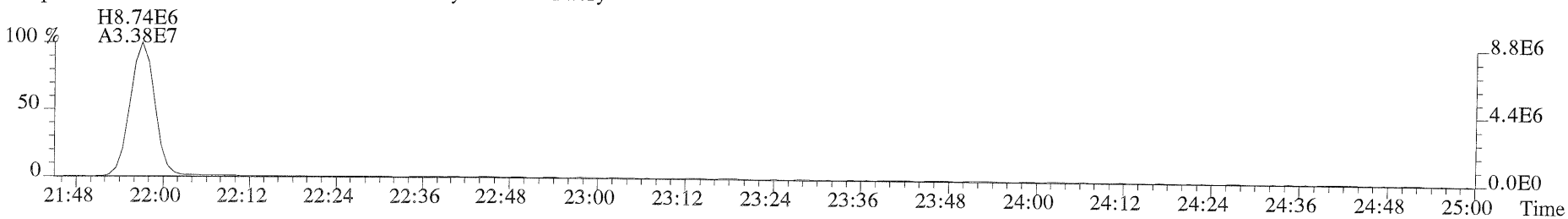
File:11AUG16Z #1-498 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
257.9584 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



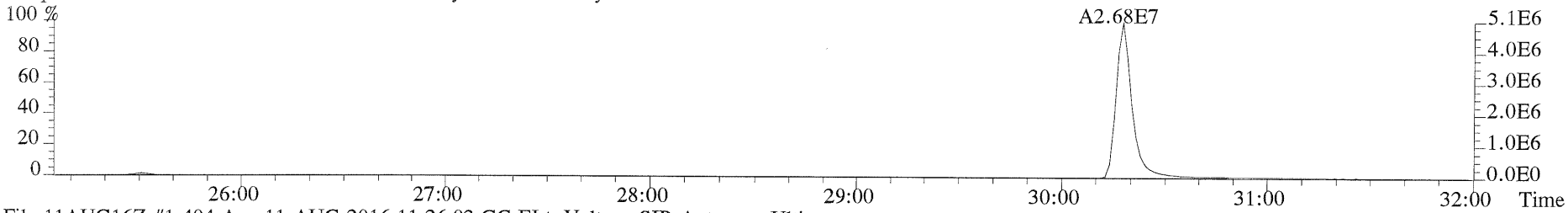
File:11AUG16Z #1-498 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
268.0016 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



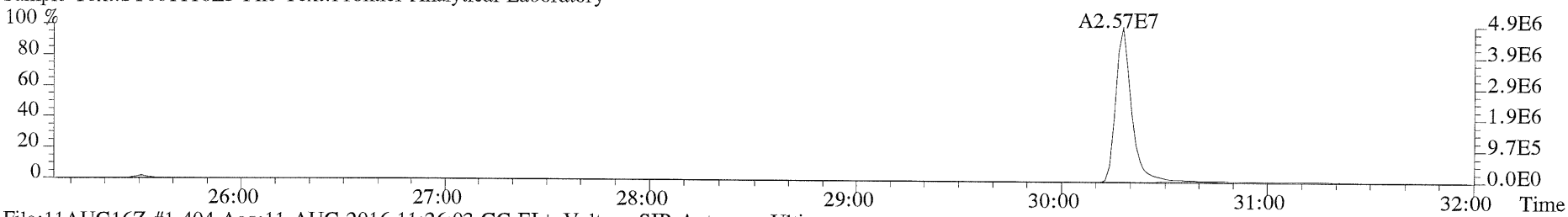
File:11AUG16Z #1-498 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
269.9986 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



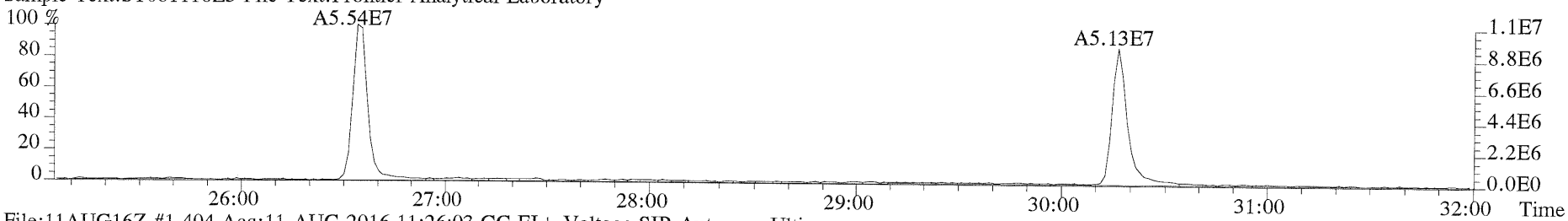
File:11AUG16Z #1-404 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
255.9613 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



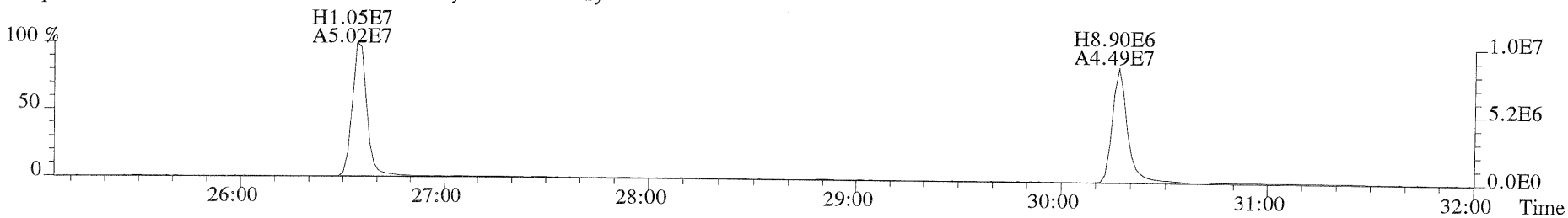
File:11AUG16Z #1-404 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
257.9584 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



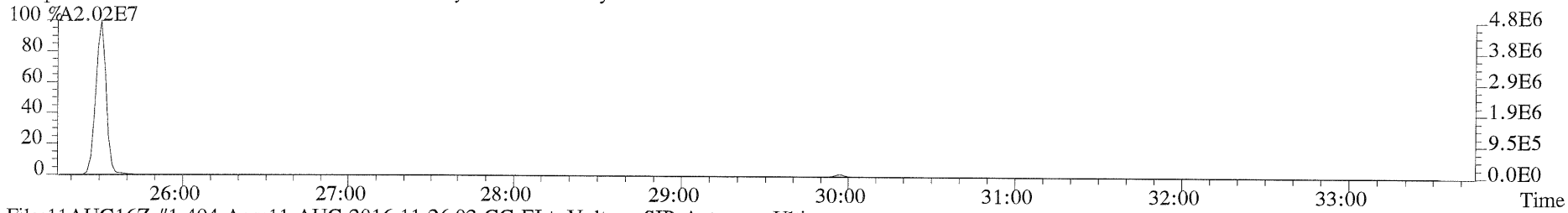
File:11AUG16Z #1-404 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
268.0016 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



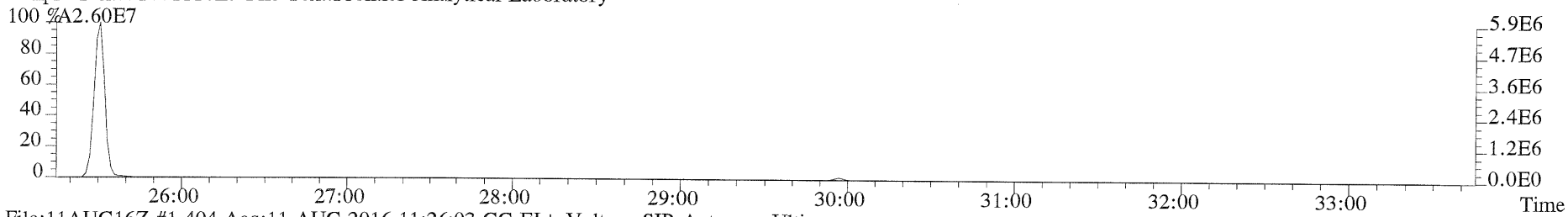
File:11AUG16Z #1-404 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
269.9986 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



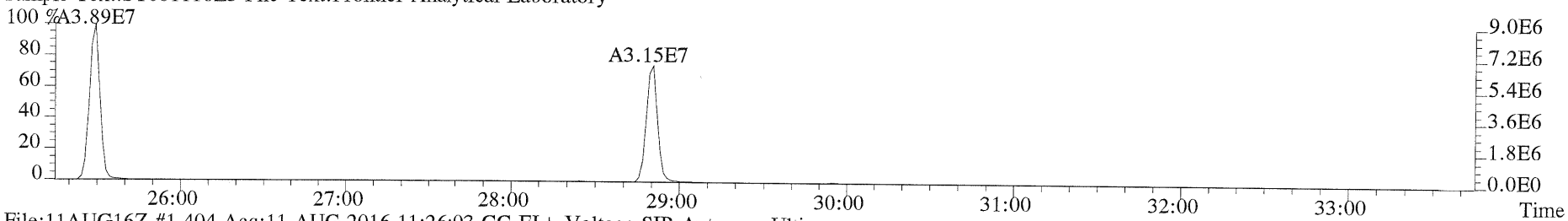
File:11AUG16Z #1-404 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
289.9224 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



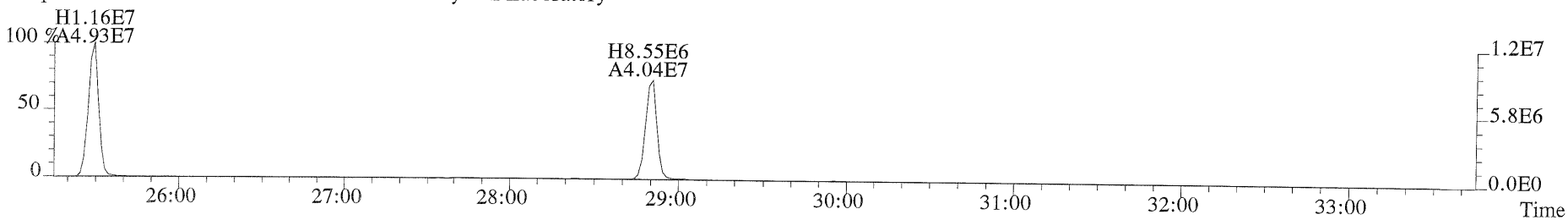
File:11AUG16Z #1-404 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
291.9194 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



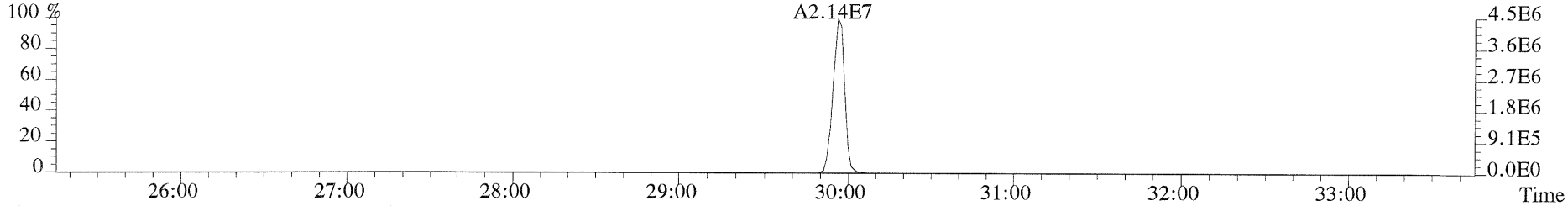
File:11AUG16Z #1-404 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
301.9626 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



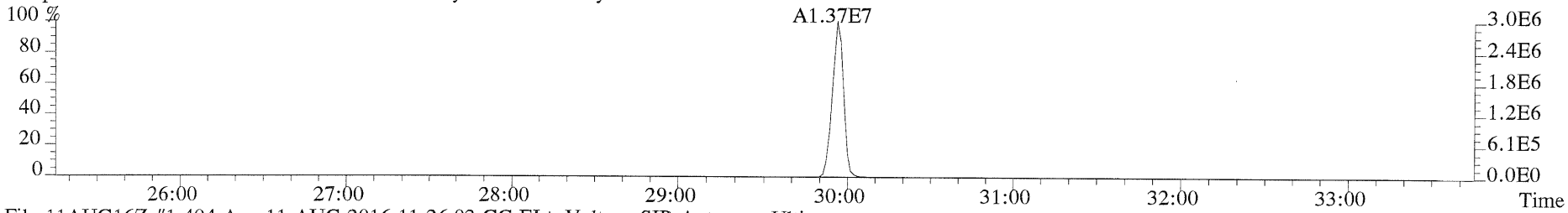
File:11AUG16Z #1-404 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
303.9597 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



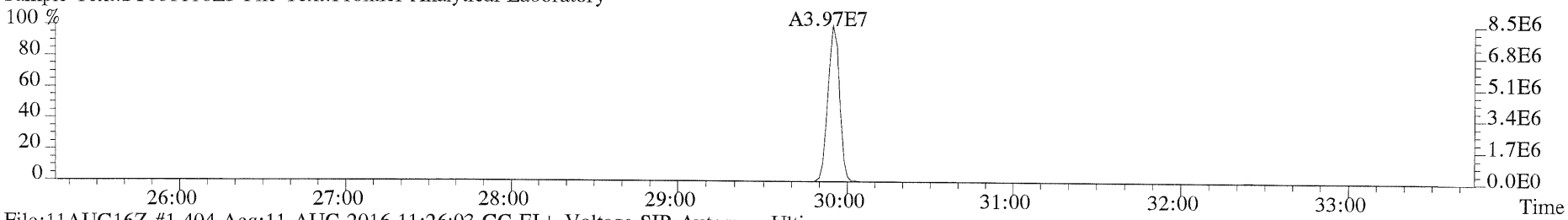
File:11AUG16Z #1-404 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
325.8804 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



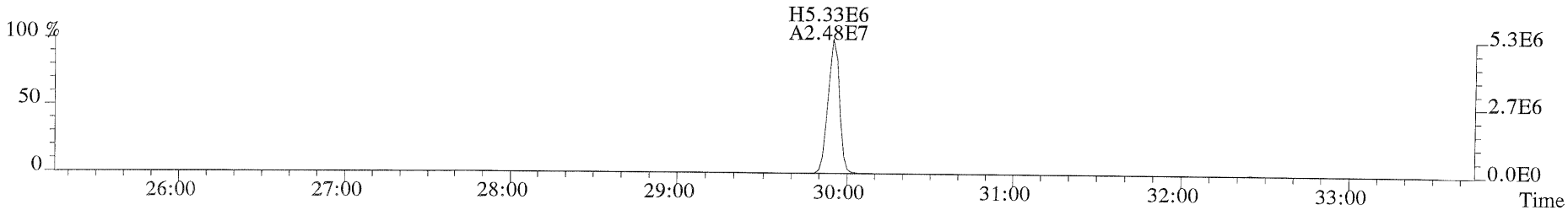
File:11AUG16Z #1-404 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
327.8775 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



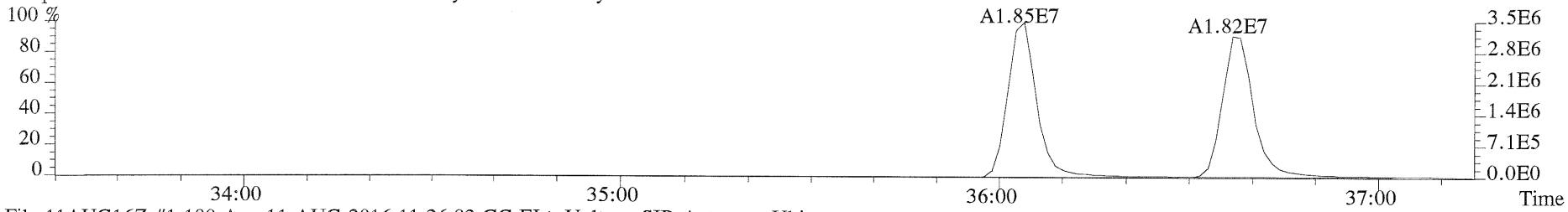
File:11AUG16Z #1-404 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
337.9207 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



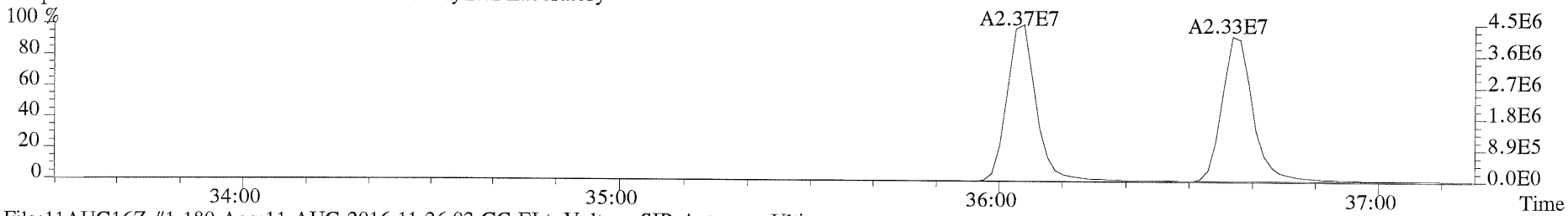
File:11AUG16Z #1-404 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
339.9178 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



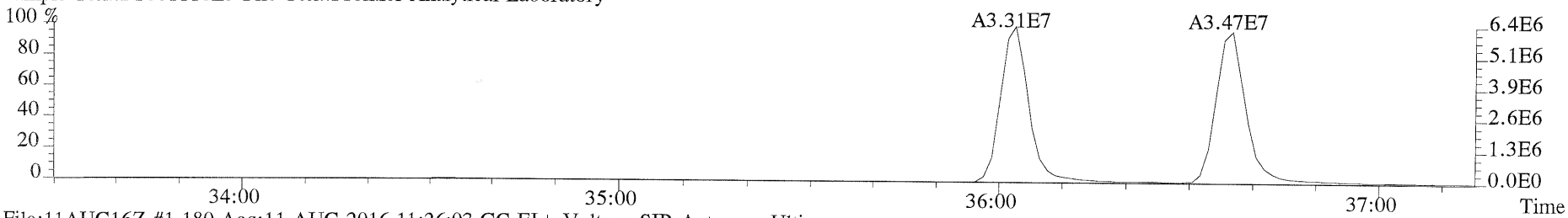
File:11AUG16Z #1-180 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
289.9224 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



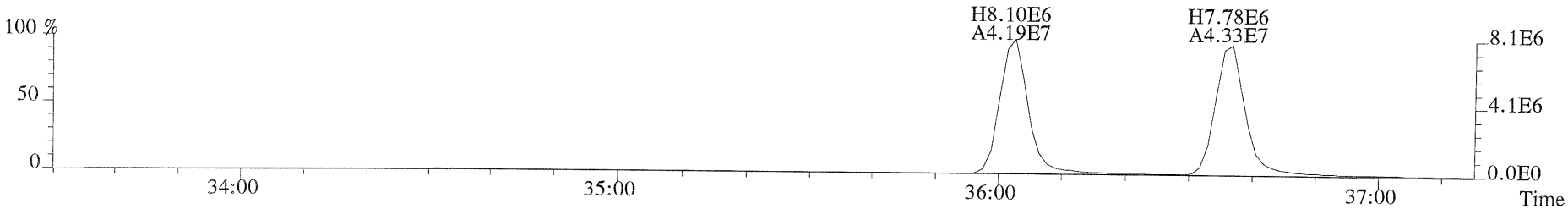
File:11AUG16Z #1-180 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
291.9194 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



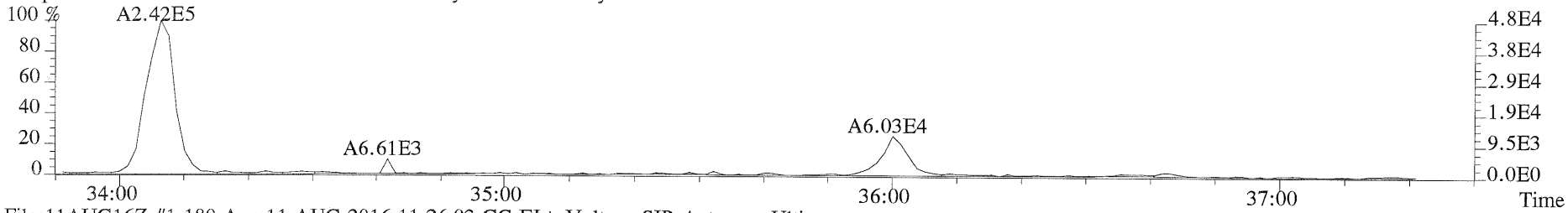
File:11AUG16Z #1-180 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
301.9626 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



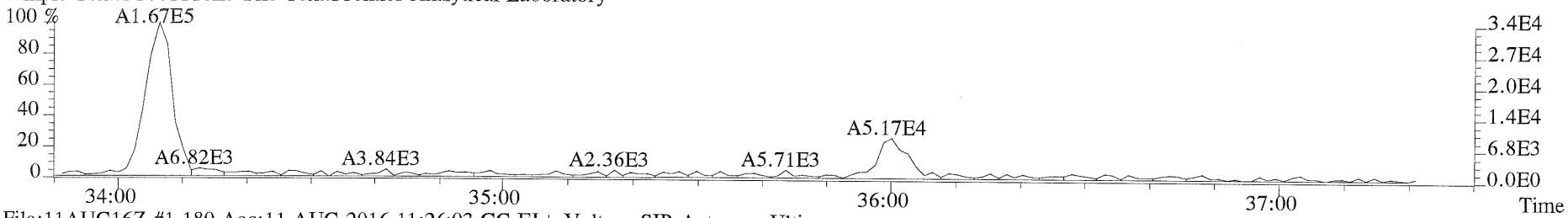
File:11AUG16Z #1-180 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
303.9597 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



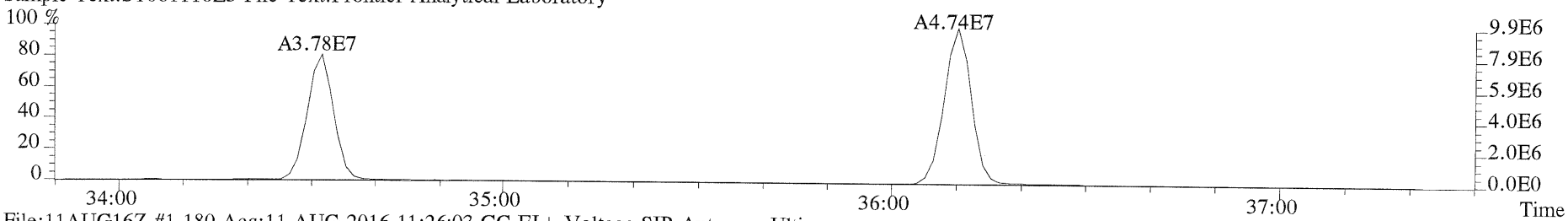
File:11AUG16Z #1-180 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
325.8804 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



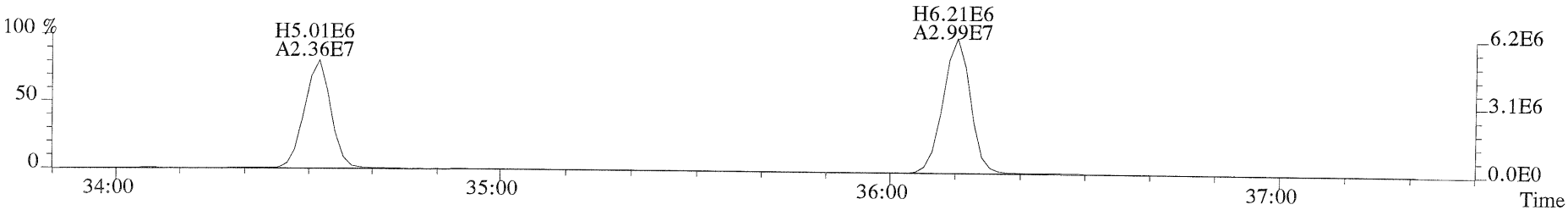
File:11AUG16Z #1-180 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
327.8775 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



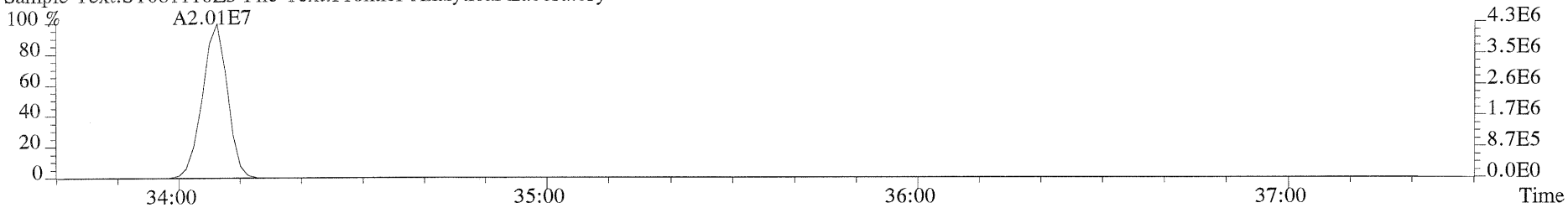
File:11AUG16Z #1-180 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
337.9207 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



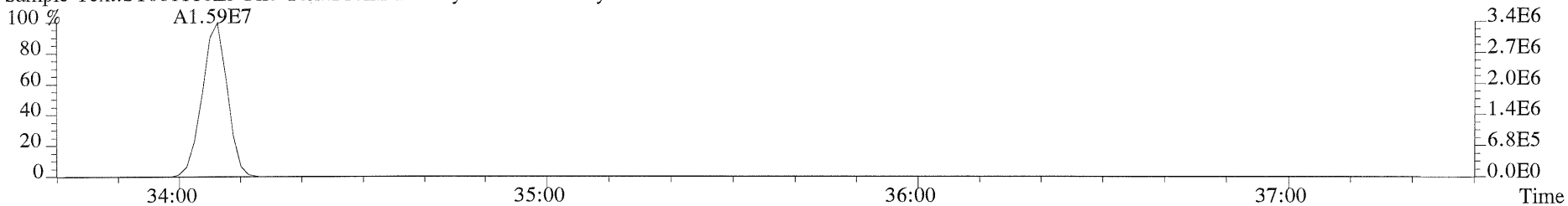
File:11AUG16Z #1-180 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
339.9178 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



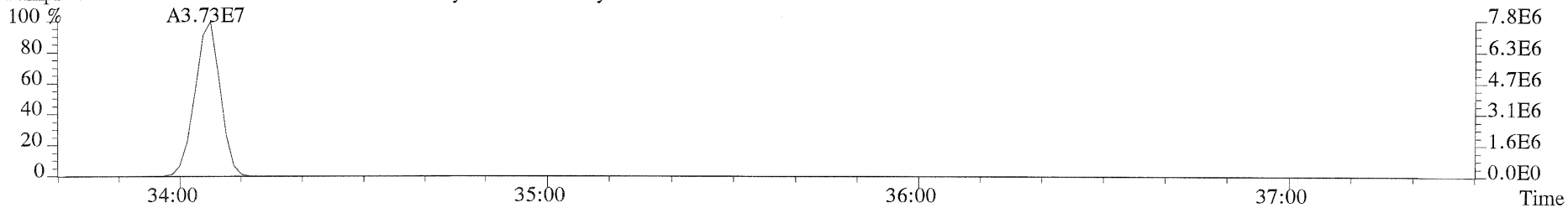
File:11AUG16Z #1-180 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
359.8415 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



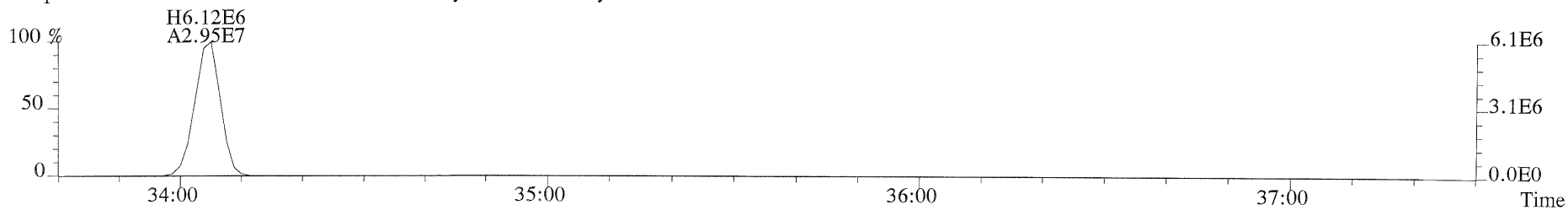
File:11AUG16Z #1-180 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
361.8385 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



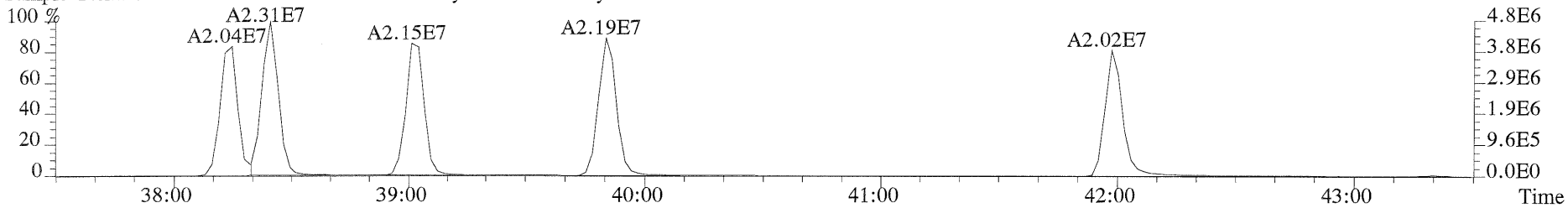
File:11AUG16Z #1-180 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
371.8817 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



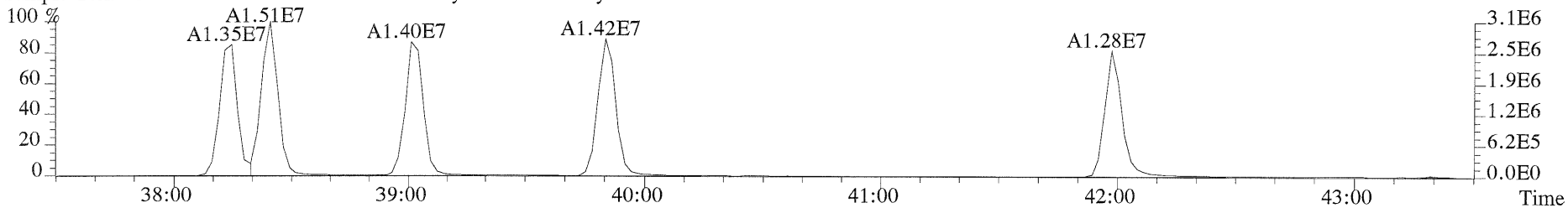
File:11AUG16Z #1-180 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
373.8788 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



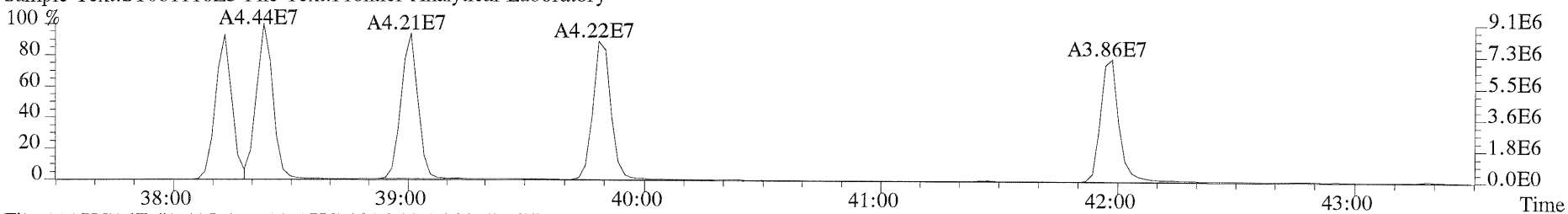
File:11AUG16Z #1-415 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
325.8804 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



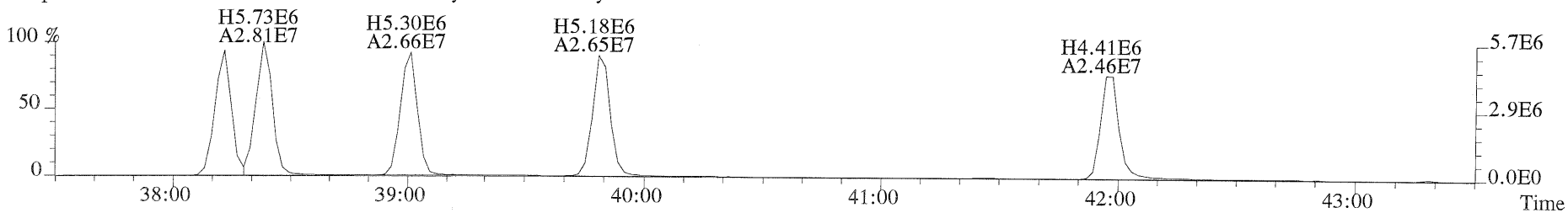
File:11AUG16Z #1-415 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
327.8775 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



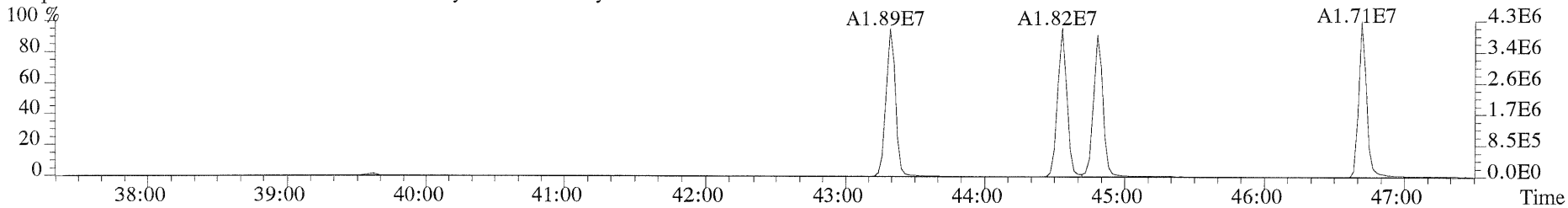
File:11AUG16Z #1-415 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
337.9207 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



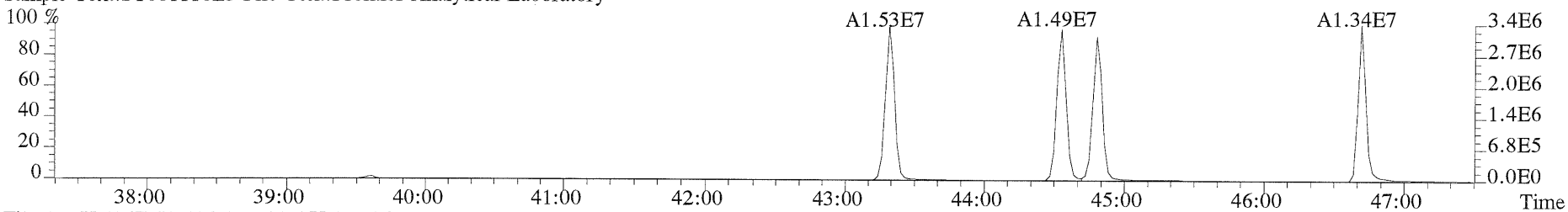
File:11AUG16Z #1-415 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
339.9178 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



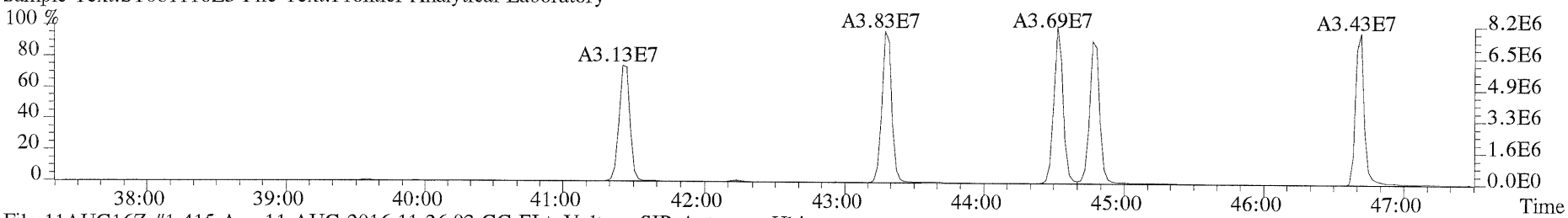
File:11AUG16Z #1-415 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
359.8415 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



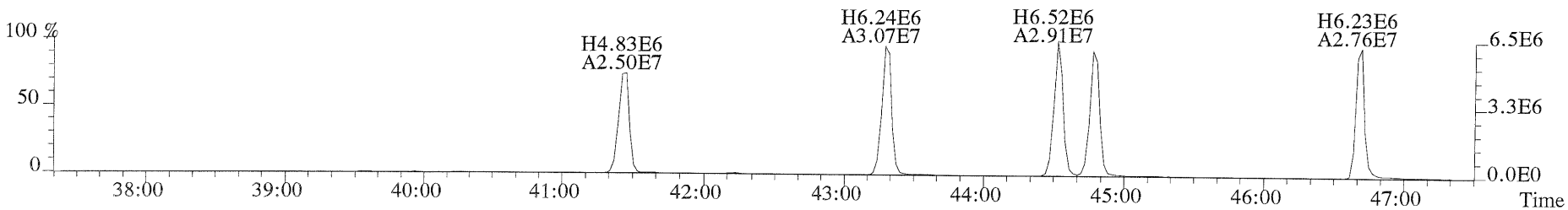
File:11AUG16Z #1-415 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
361.8385 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



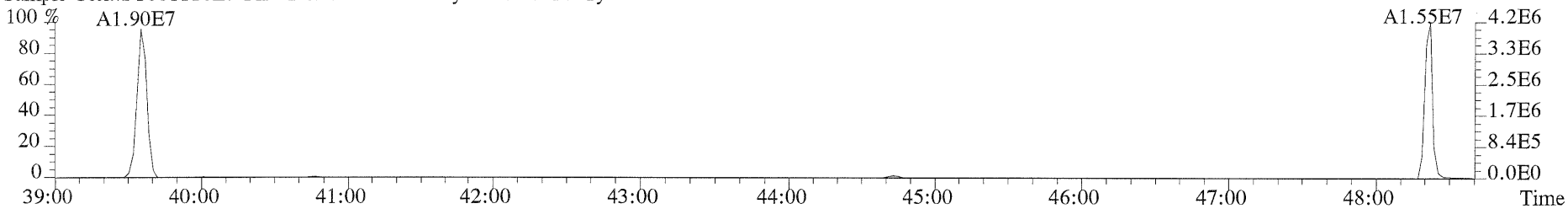
File:11AUG16Z #1-415 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
371.8817 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



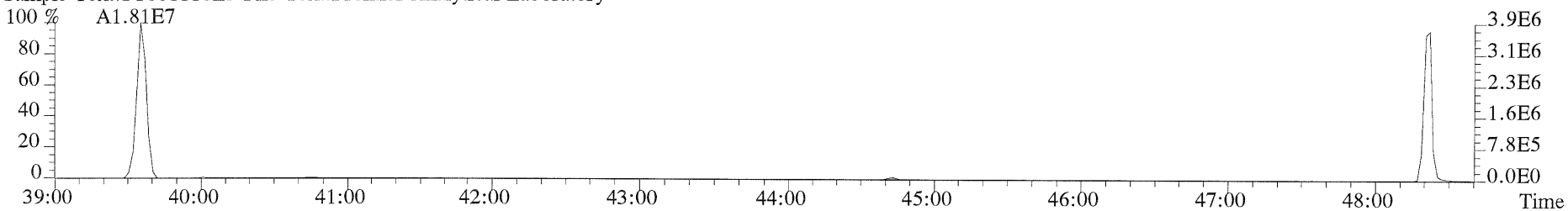
File:11AUG16Z #1-415 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
373.8788 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



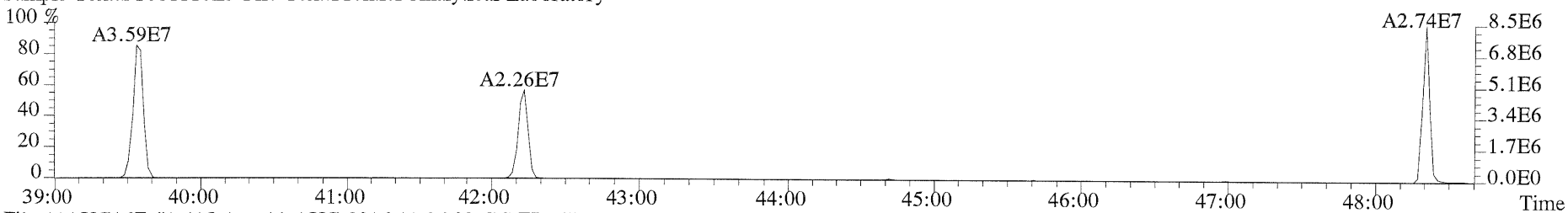
File:11AUG16Z #1-415 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
393.8025 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



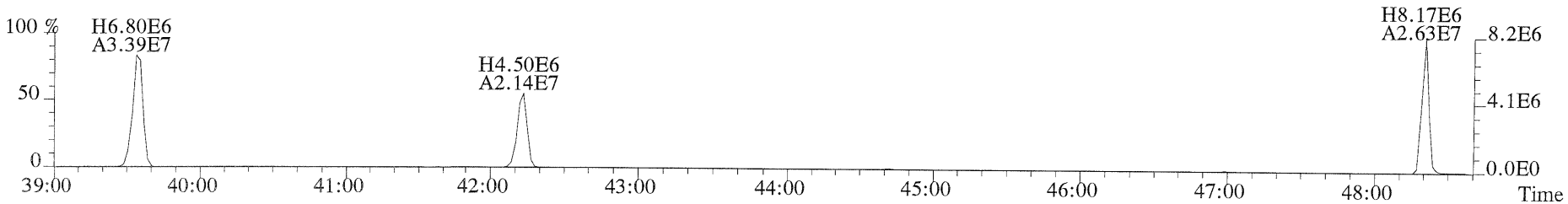
File:11AUG16Z #1-415 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
395.7995 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



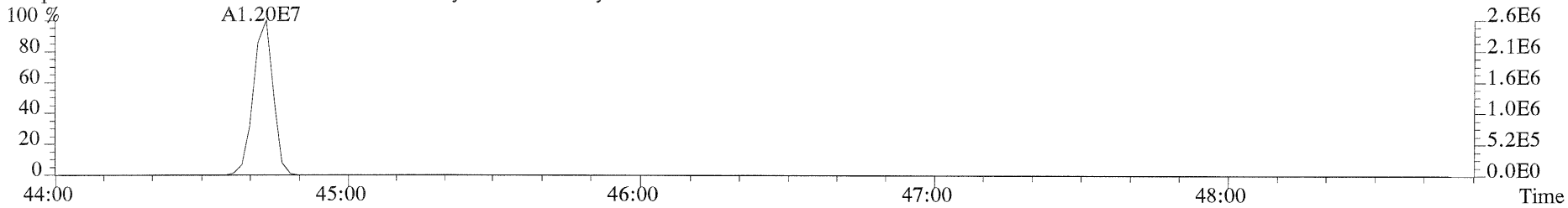
File:11AUG16Z #1-415 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
405.8428 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



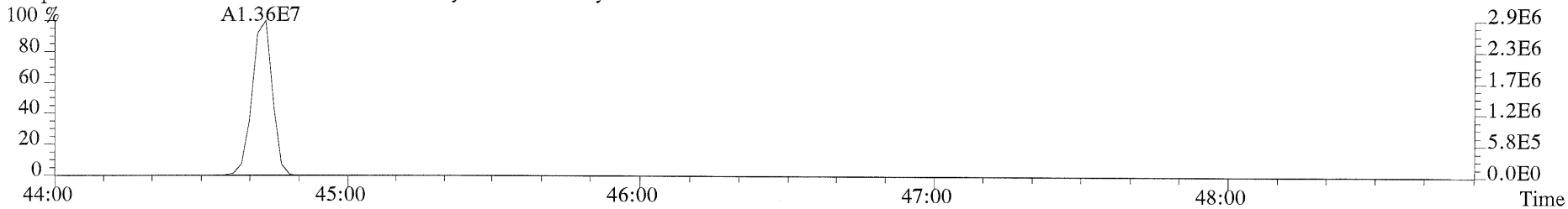
File:11AUG16Z #1-415 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
407.8398 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



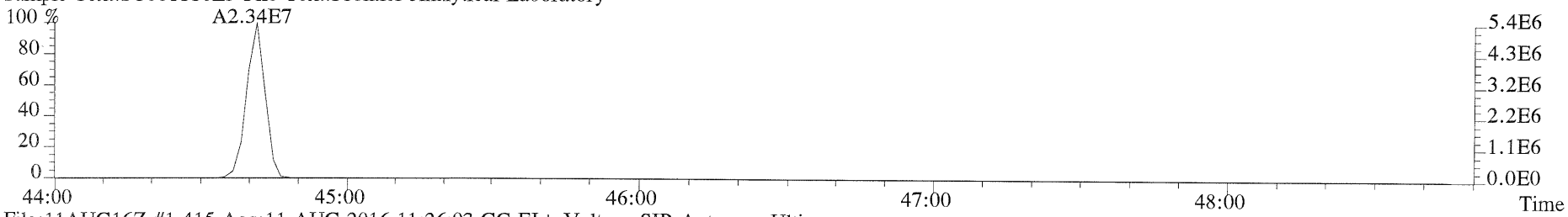
File:11AUG16Z #1-415 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
427.7635 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



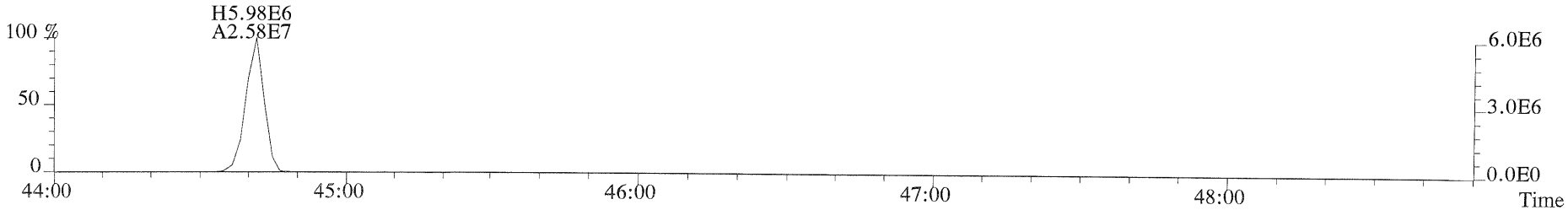
File:11AUG16Z #1-415 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
429.7606 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



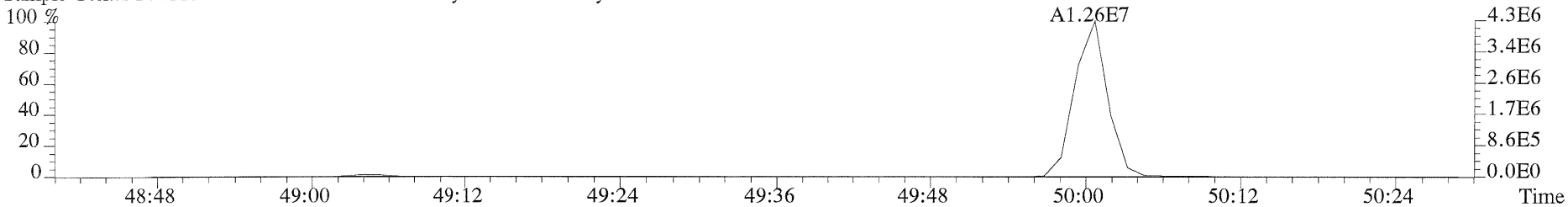
File:11AUG16Z #1-415 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
439.8038 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



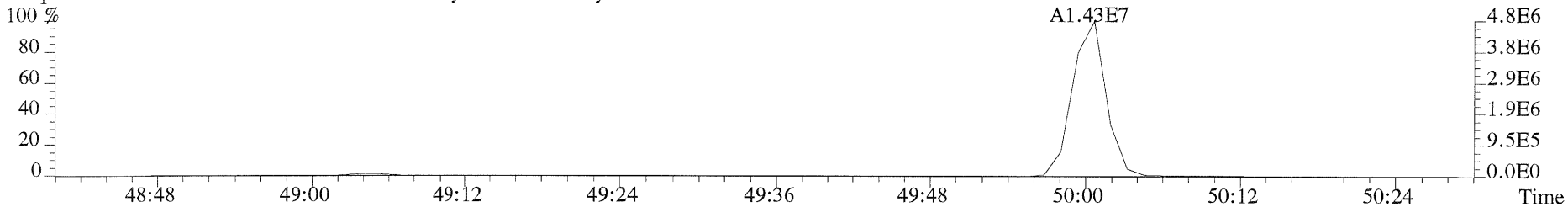
File:11AUG16Z #1-415 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
441.8008 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



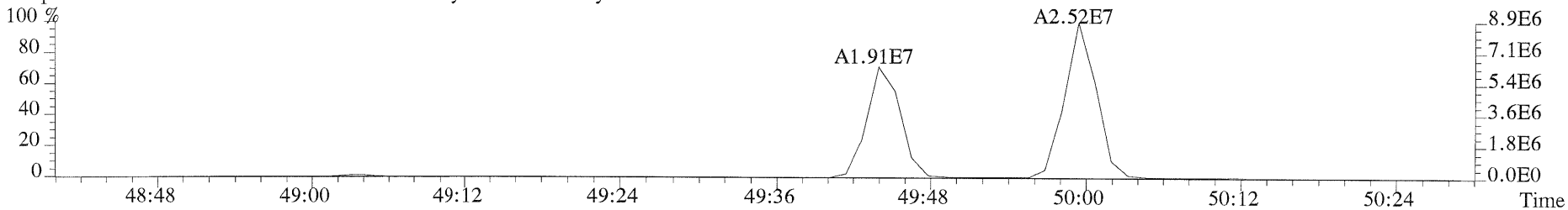
File:11AUG16Z #1-222 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
427.7635 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



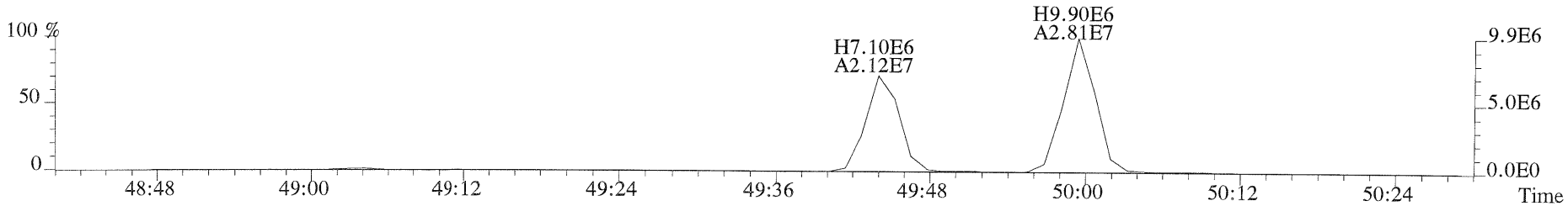
File:11AUG16Z #1-222 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
429.7606 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



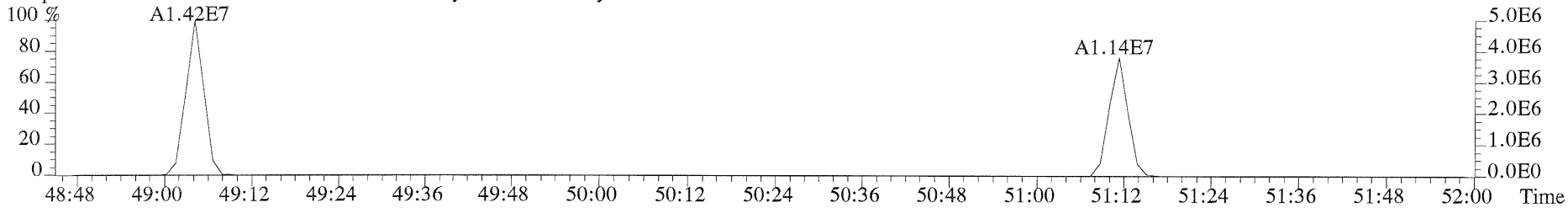
File:11AUG16Z #1-222 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
439.8038 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



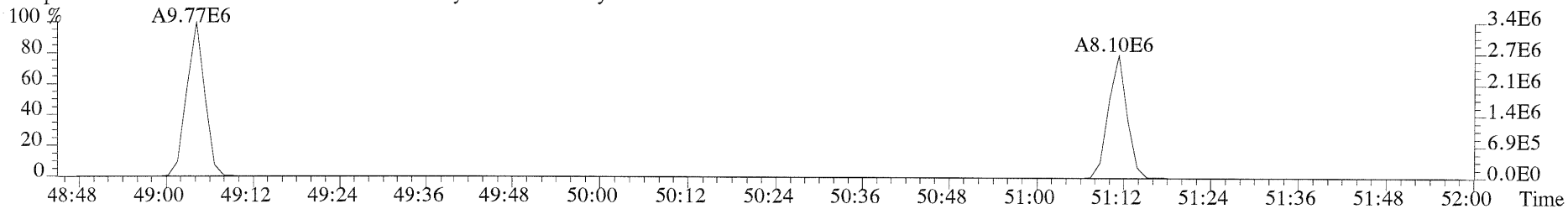
File:11AUG16Z #1-222 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
441.8008 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



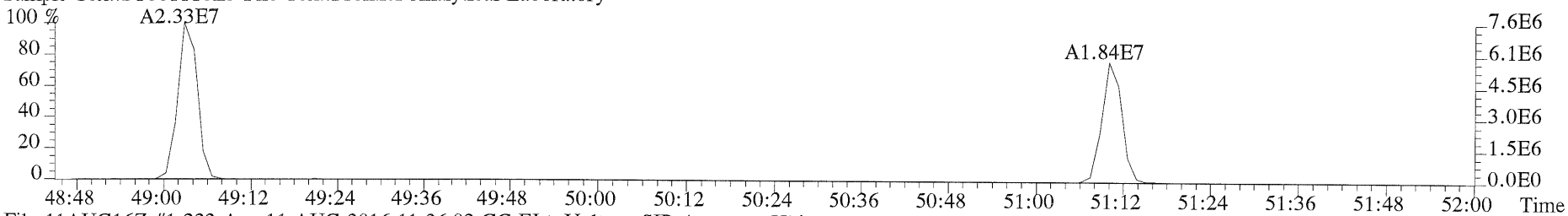
File:11AUG16Z #1-222 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
463.7216 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



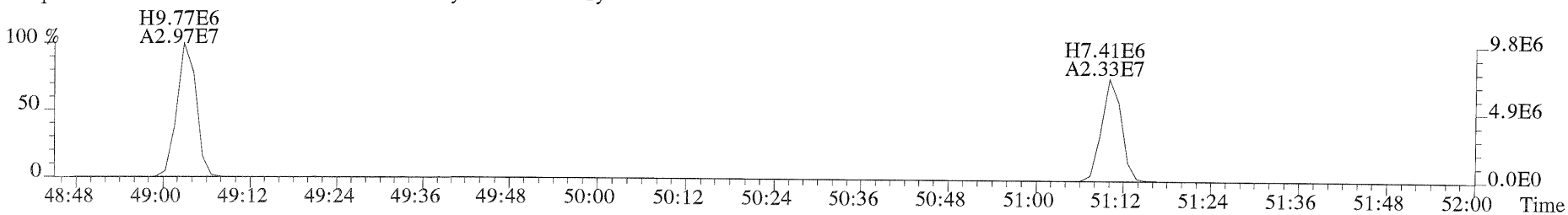
File:11AUG16Z #1-222 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
465.7187 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



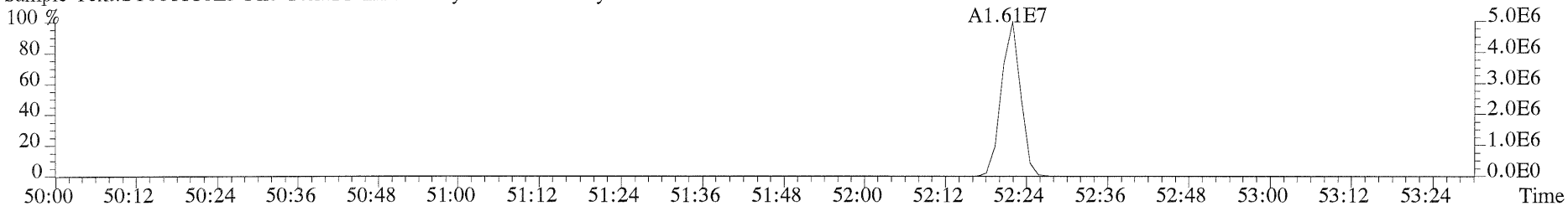
File:11AUG16Z #1-222 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
473.7648 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



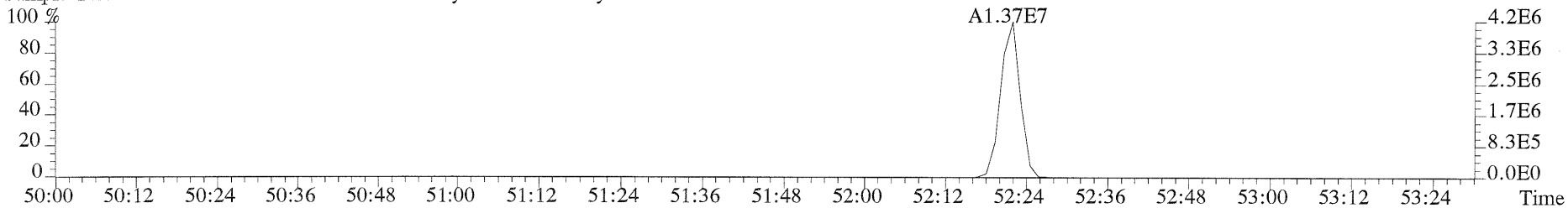
File:11AUG16Z #1-222 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
475.7619 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



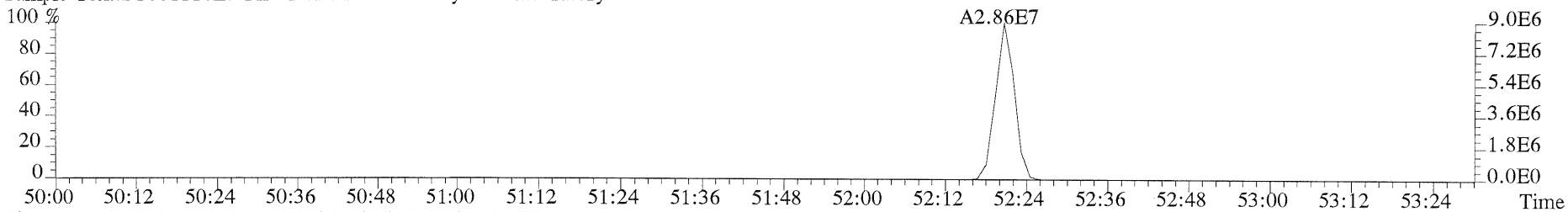
File:11AUG16Z #1-222 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
497.6826 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



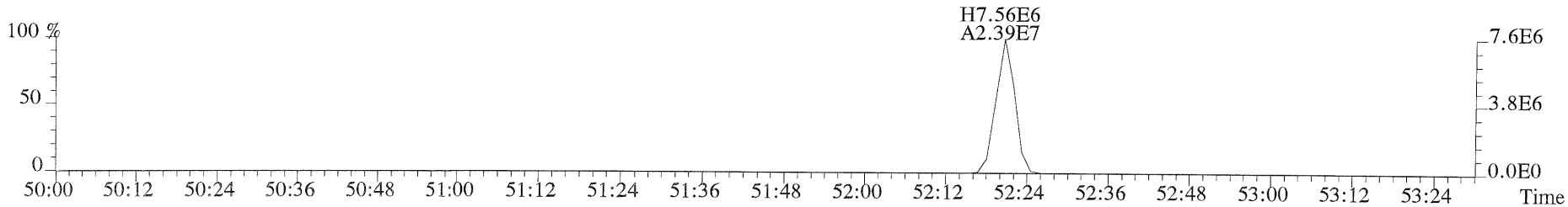
File:11AUG16Z #1-222 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
499.6797 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



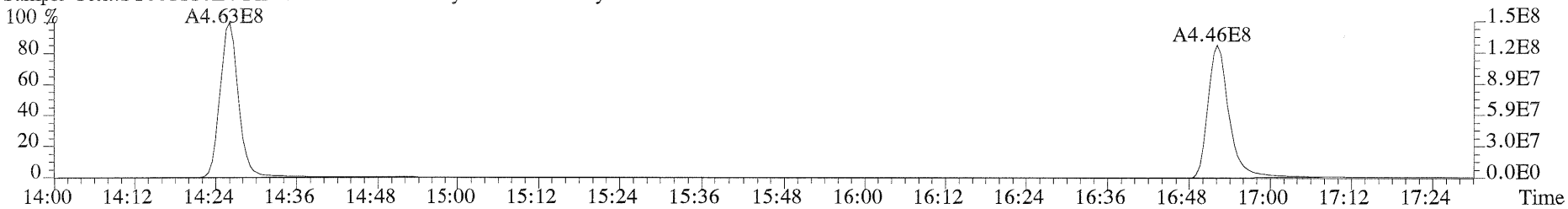
File:11AUG16Z #1-222 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
509.7229 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



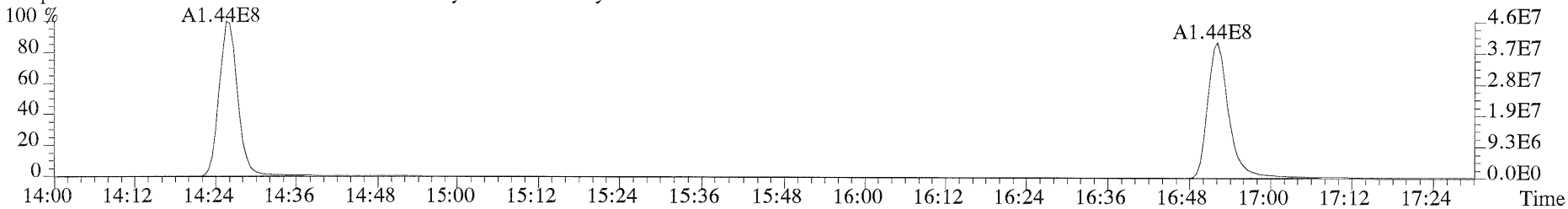
File:11AUG16Z #1-222 Acq:11-AUG-2016 11:26:03 GC EI+ Voltage SIR Autospec-Ultima
511.7199 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z3 File Text:Frontier Analytical Laboratory



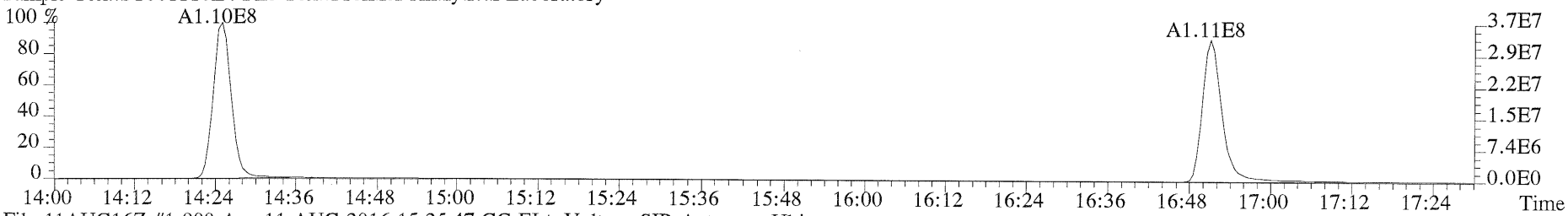
File:11AUG16Z #1-900 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
188.0393 S:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



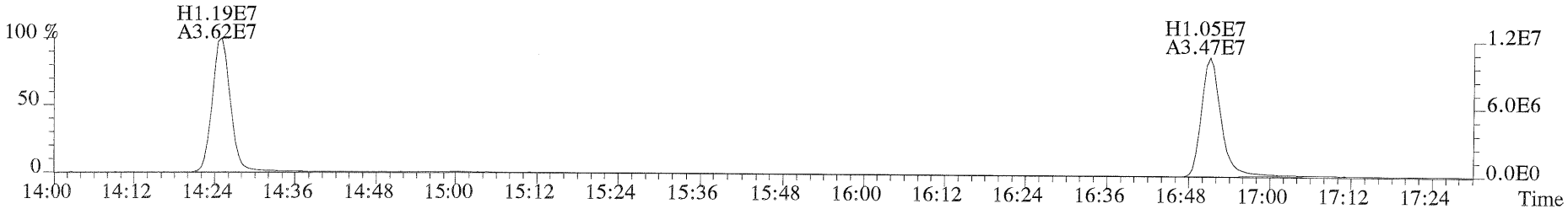
File:11AUG16Z #1-900 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
190.0363 S:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



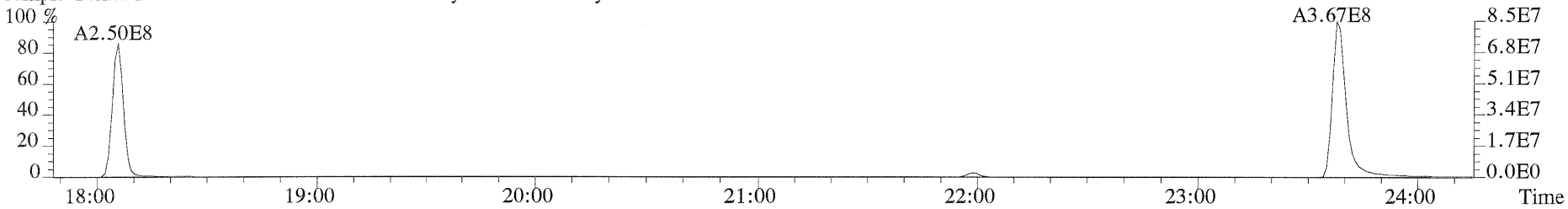
File:11AUG16Z #1-900 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
200.0795 S:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



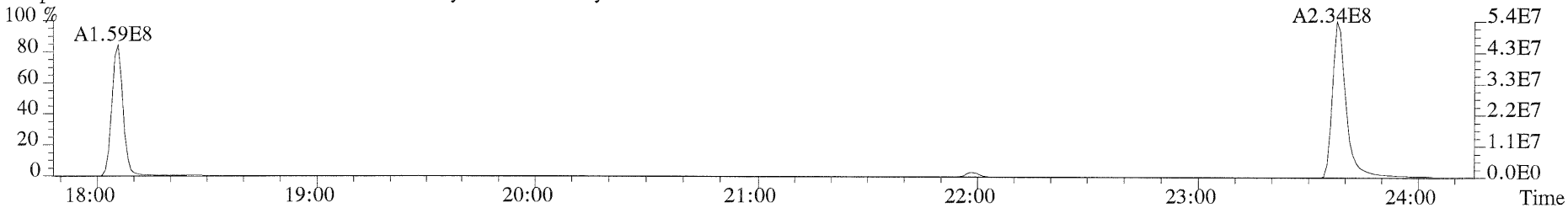
File:11AUG16Z #1-900 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
202.0766 S:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



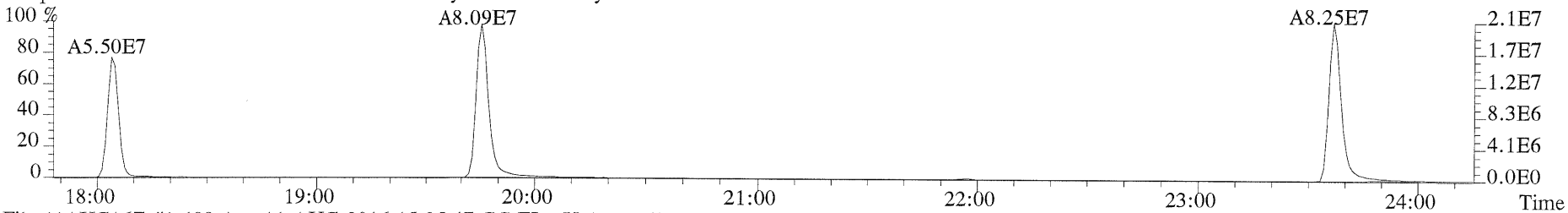
File:11AUG16Z #1-498 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
222.0003 S:5 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



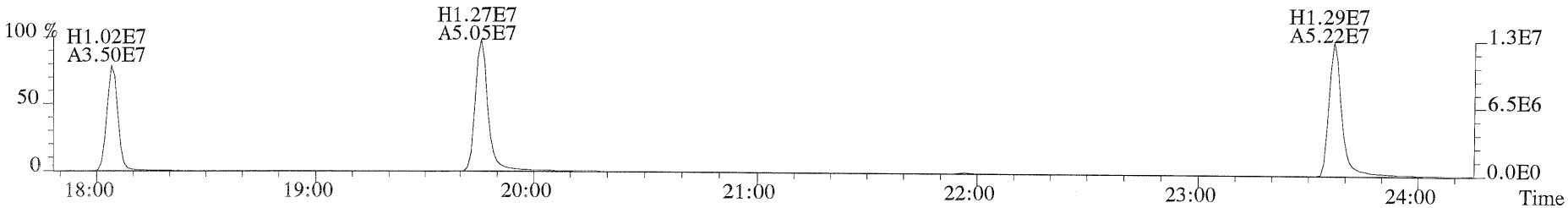
File:11AUG16Z #1-498 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
223.9974 S:5 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



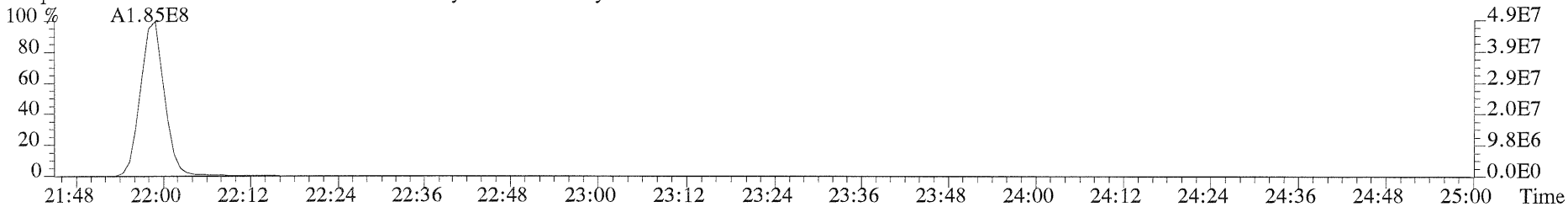
File:11AUG16Z #1-498 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
234.0406 S:5 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



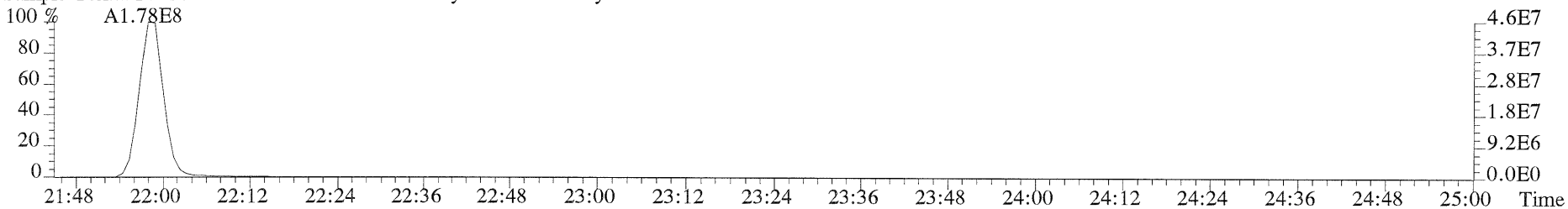
File:11AUG16Z #1-498 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
236.0376 S:5 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



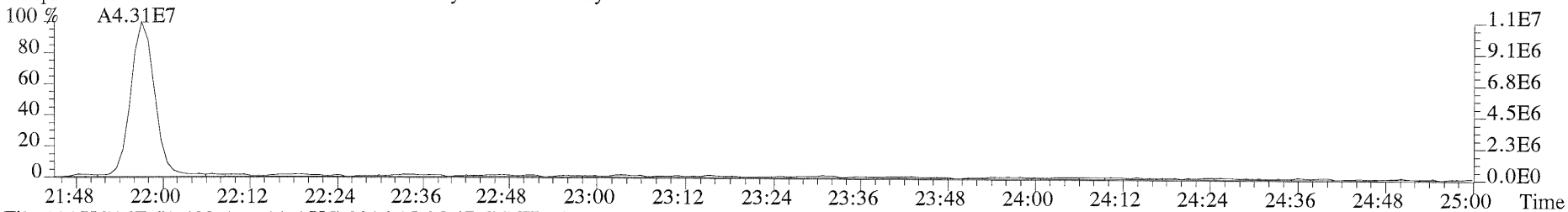
File:11AUG16Z #1-498 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:5 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



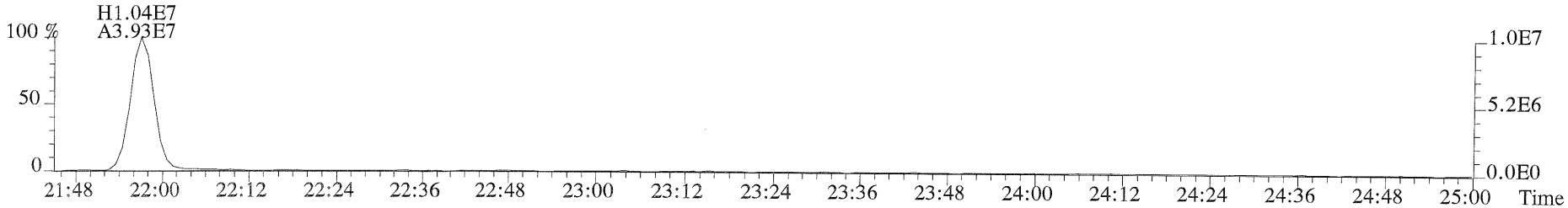
File:11AUG16Z #1-498 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:5 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



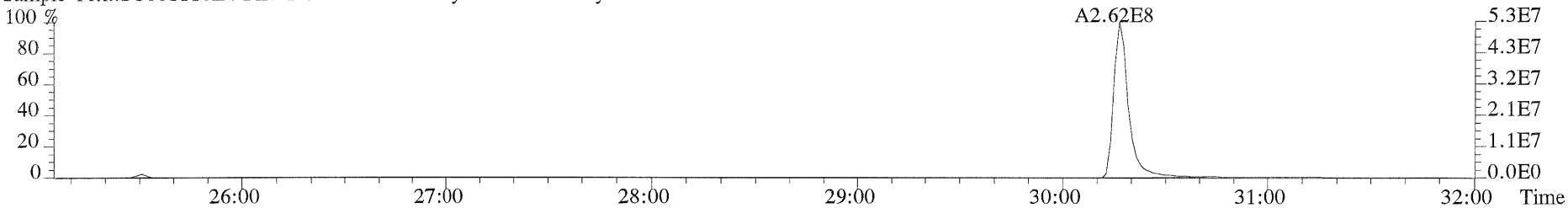
File:11AUG16Z #1-498 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:5 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



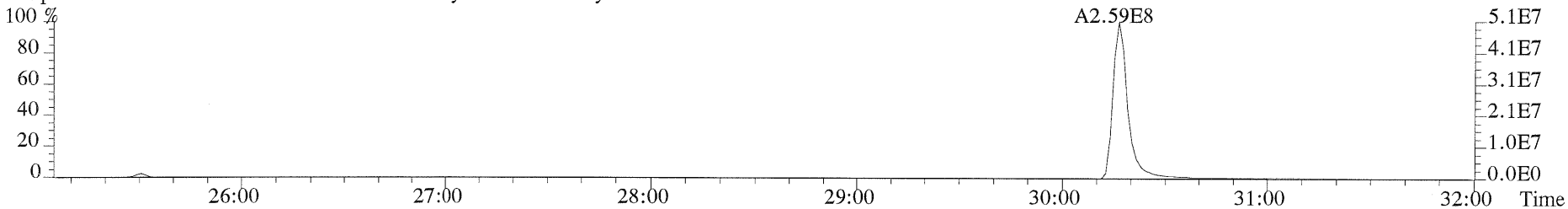
File:11AUG16Z #1-498 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:5 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



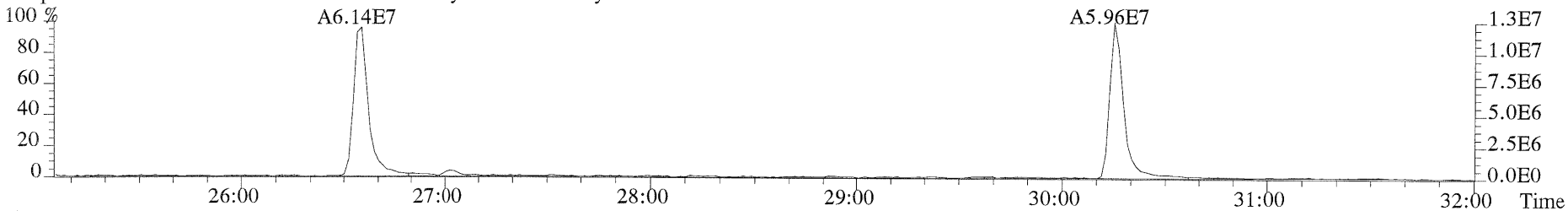
File:11AUG16Z #1-404 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:5 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



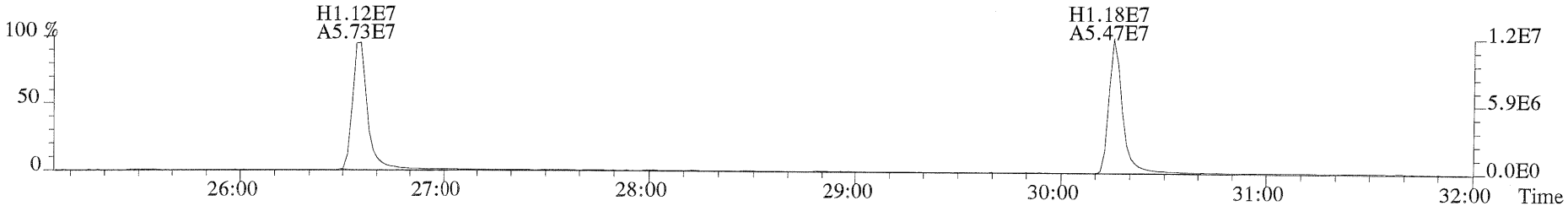
File:11AUG16Z #1-404 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:5 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



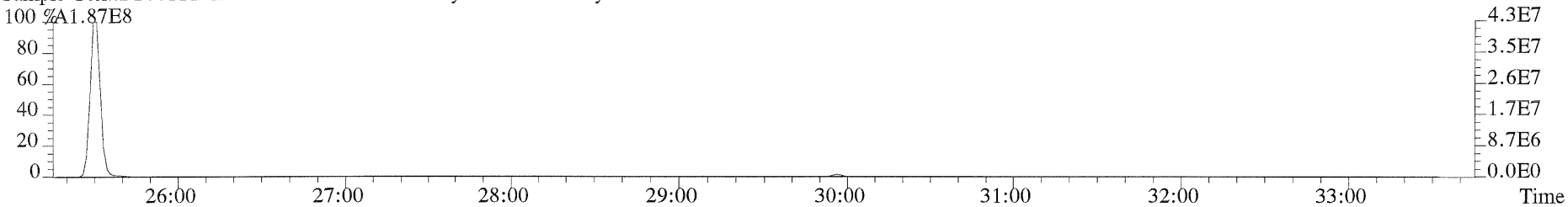
File:11AUG16Z #1-404 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:5 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



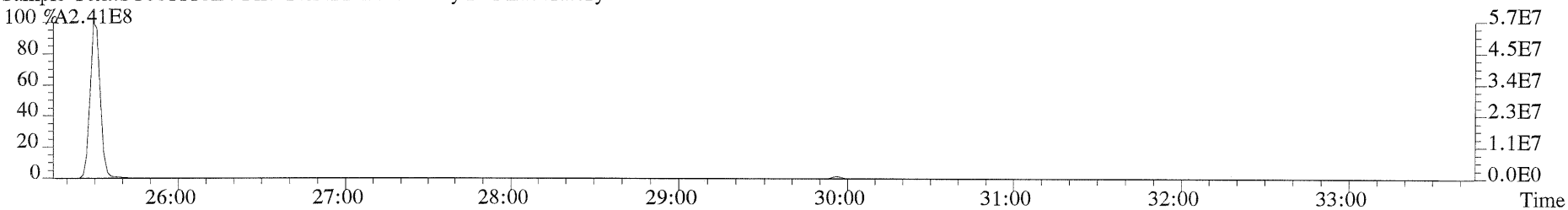
File:11AUG16Z #1-404 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:5 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



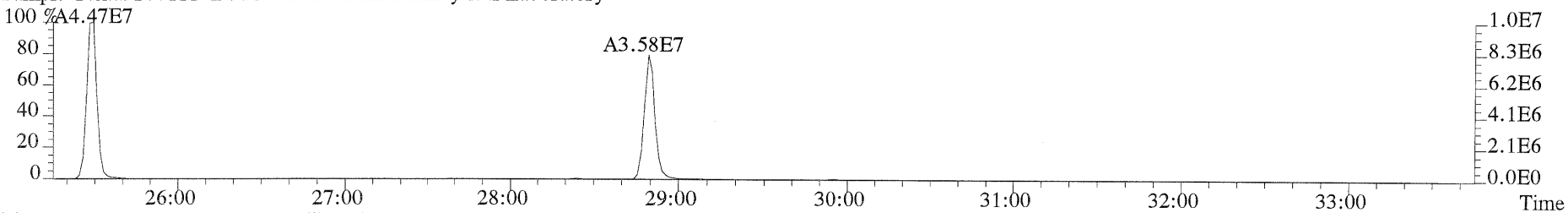
File:11AUG16Z #1-404 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:5 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



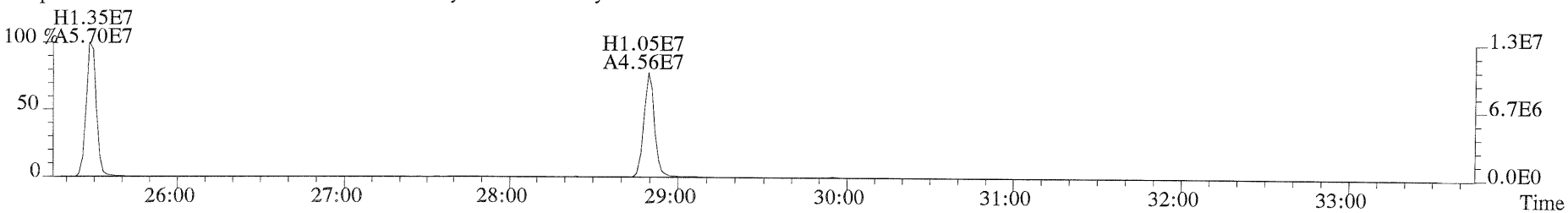
File:11AUG16Z #1-404 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:5 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



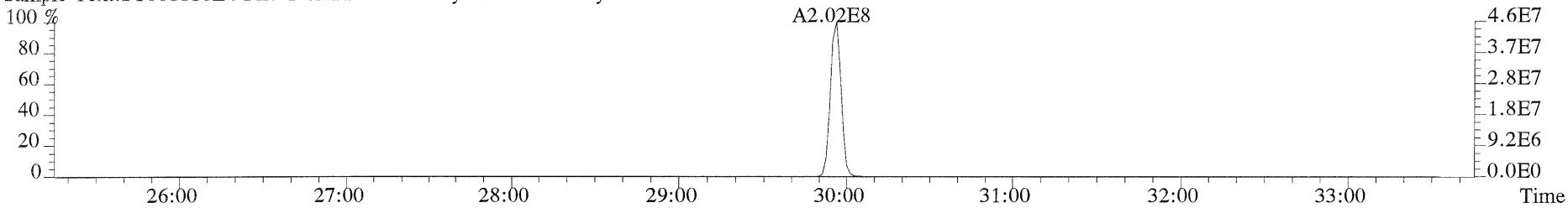
File:11AUG16Z #1-404 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:5 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



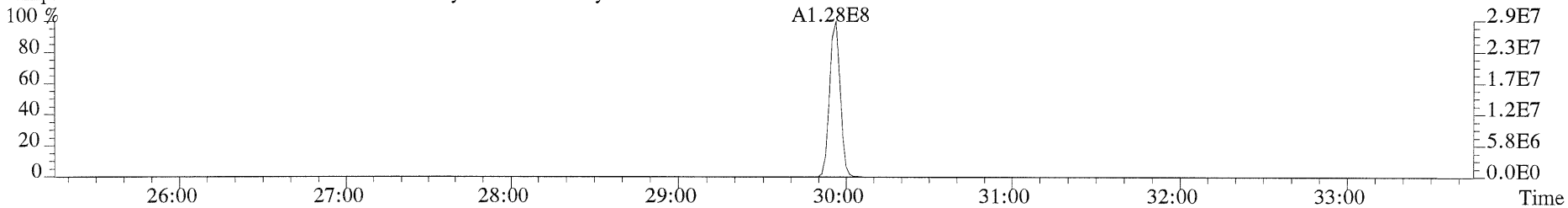
File:11AUG16Z #1-404 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:5 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



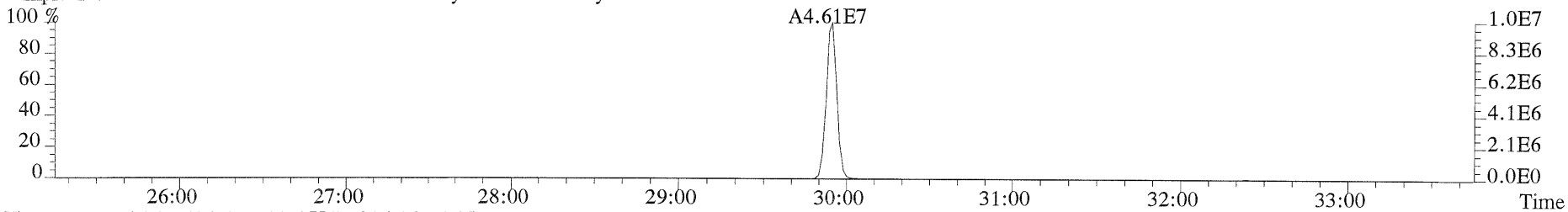
File:11AUG16Z #1-404 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:5 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



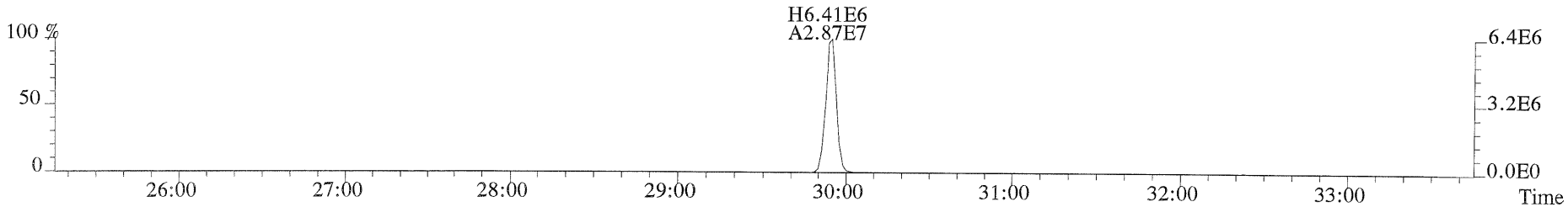
File:11AUG16Z #1-404 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:5 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



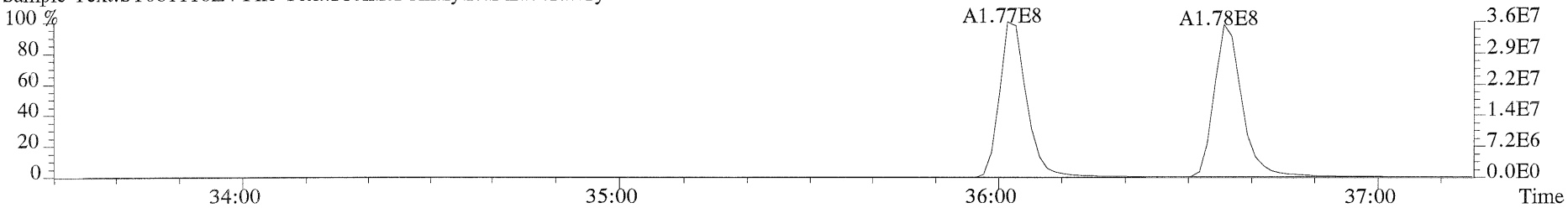
File:11AUG16Z #1-404 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:5 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



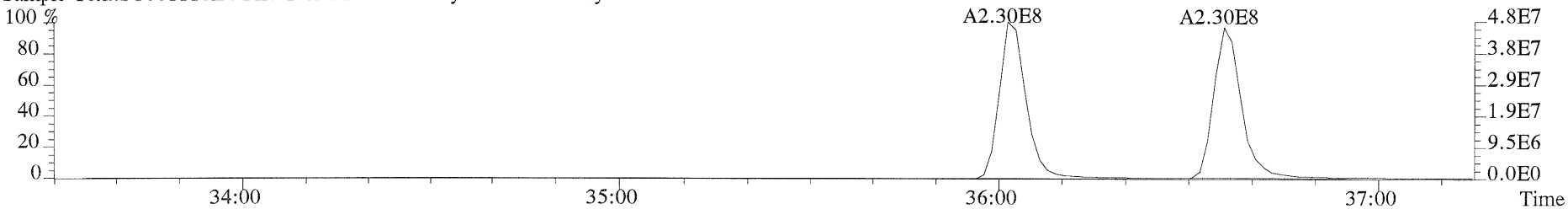
File:11AUG16Z #1-404 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:5 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



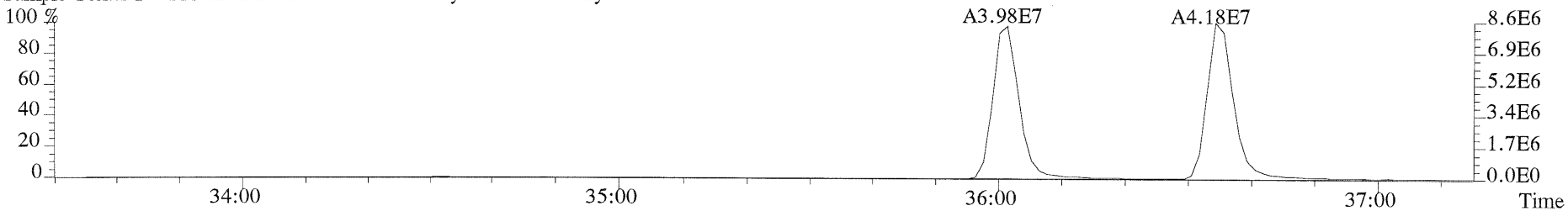
File:11AUG16Z #1-180 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:5 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



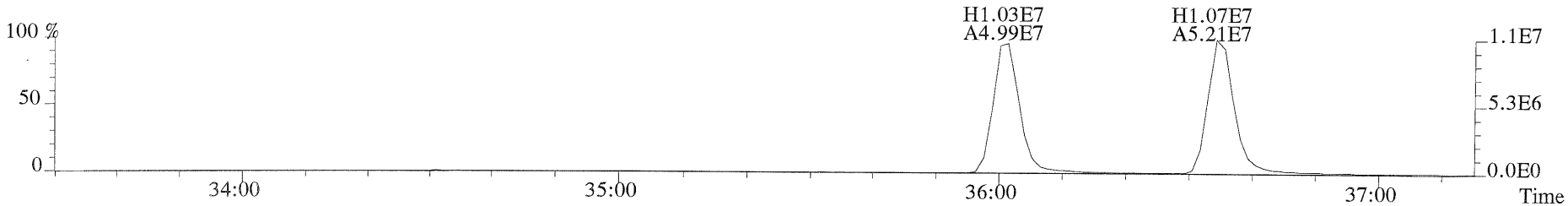
File:11AUG16Z #1-180 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:5 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



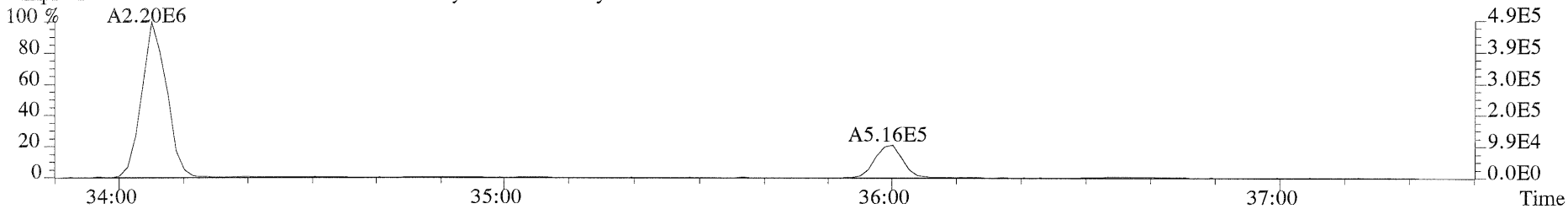
File:11AUG16Z #1-180 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:5 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



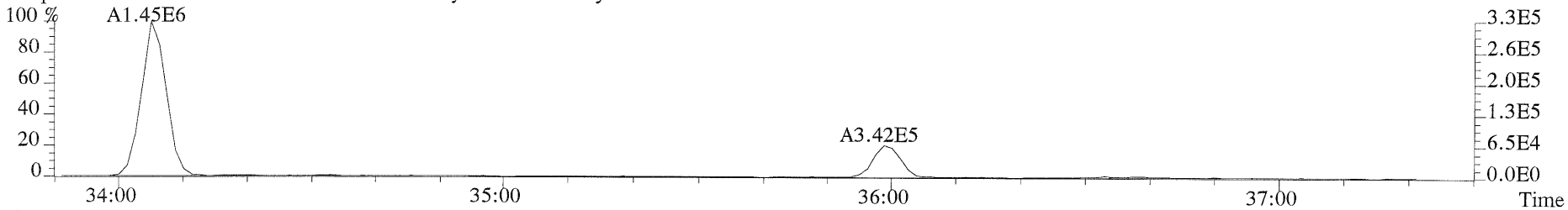
File:11AUG16Z #1-180 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:5 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



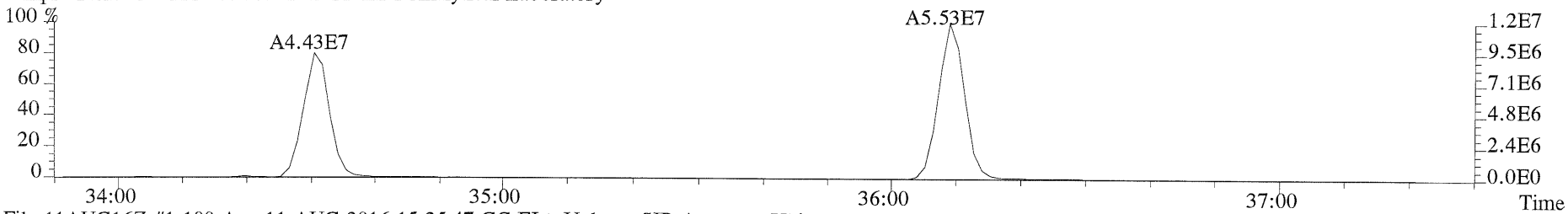
File:11AUG16Z #1-180 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:5 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



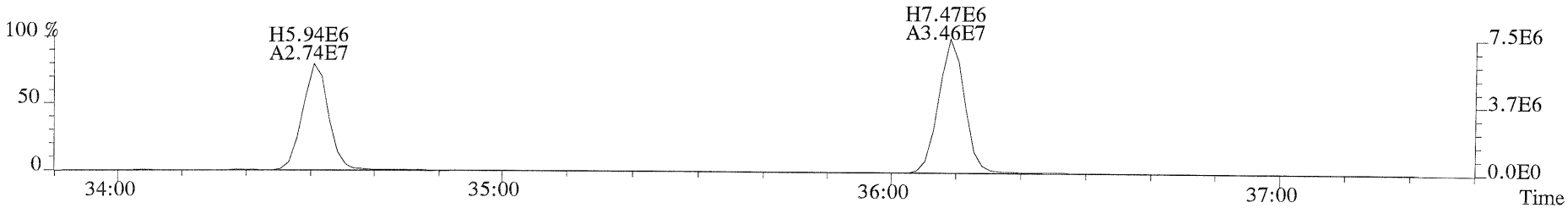
File:11AUG16Z #1-180 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:5 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



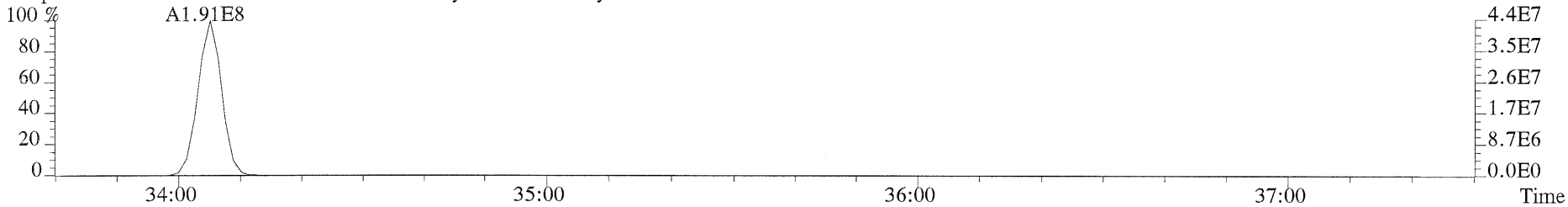
File:11AUG16Z #1-180 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:5 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



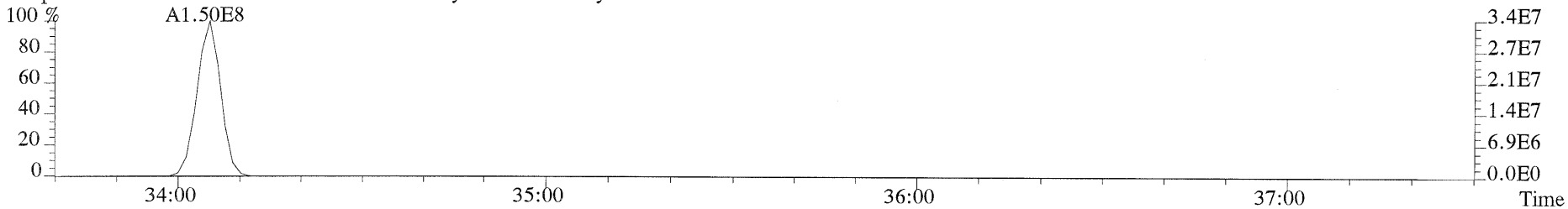
File:11AUG16Z #1-180 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:5 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



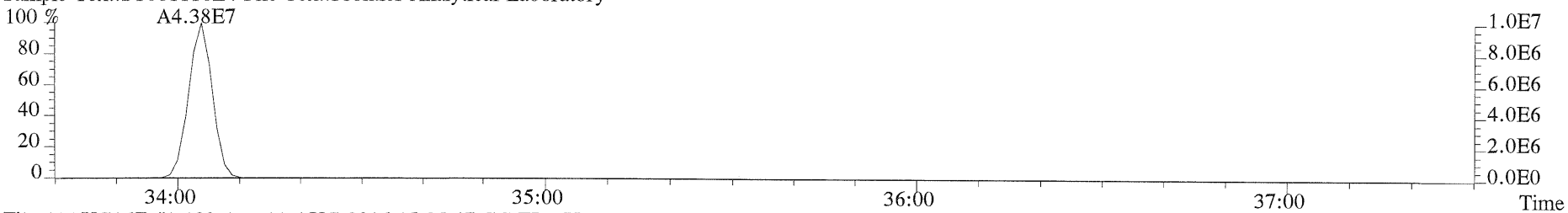
File:11AUG16Z #1-180 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:5 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



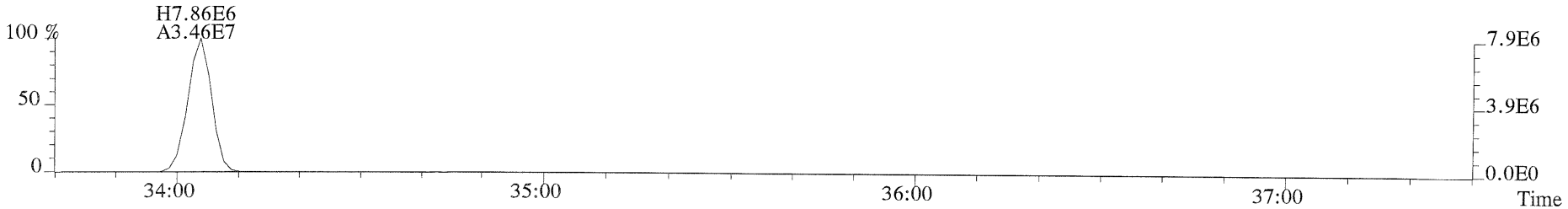
File:11AUG16Z #1-180 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:5 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



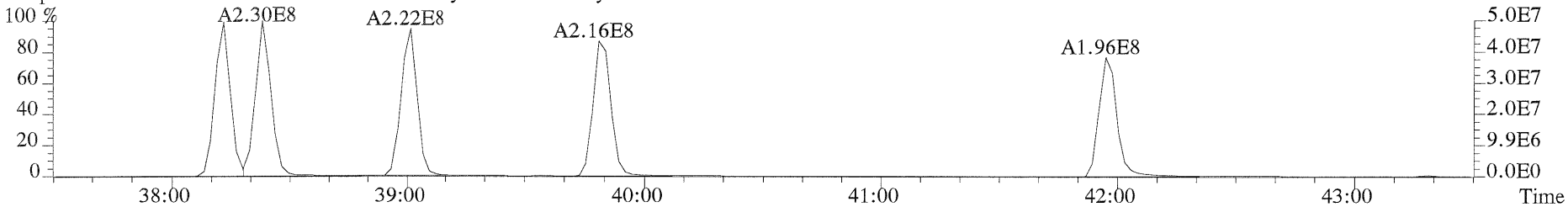
File:11AUG16Z #1-180 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:5 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



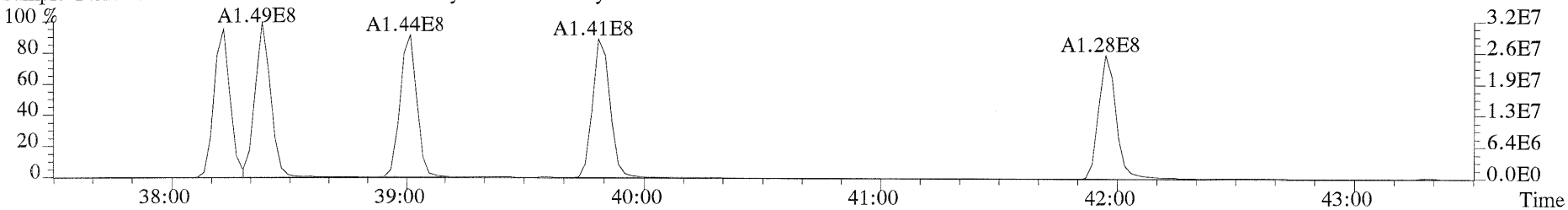
File:11AUG16Z #1-180 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:5 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



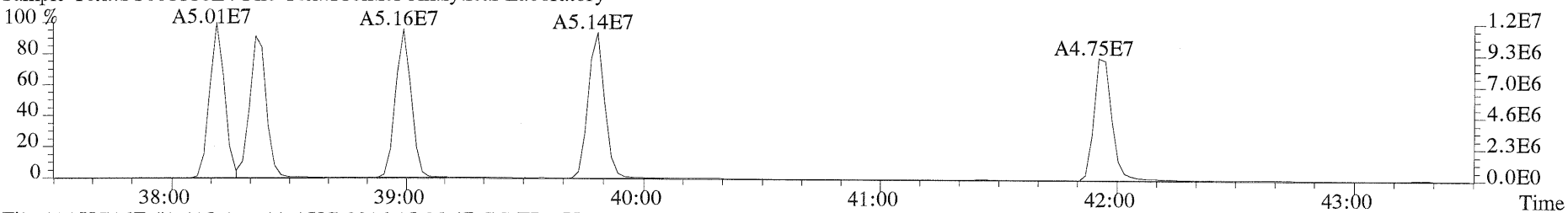
File:11AUG16Z #1-415 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:5 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



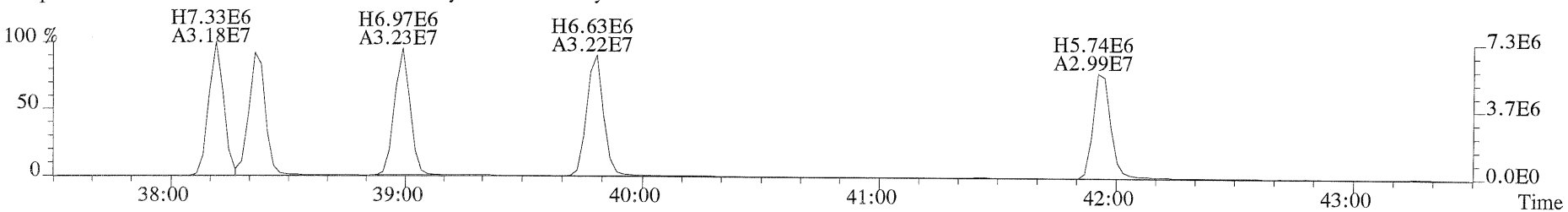
File:11AUG16Z #1-415 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:5 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



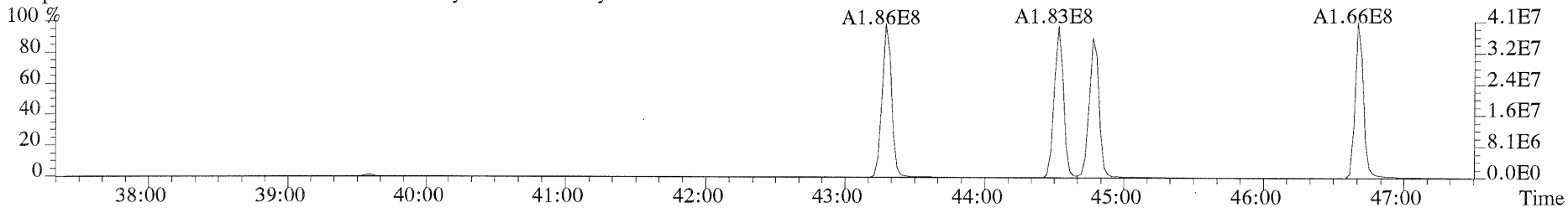
File:11AUG16Z #1-415 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:5 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



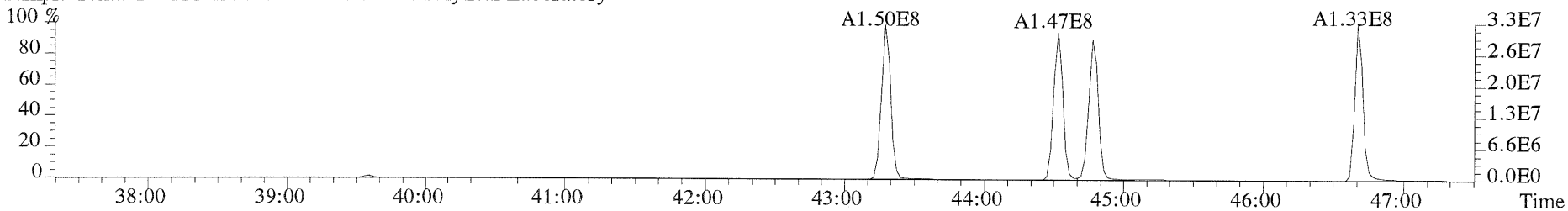
File:11AUG16Z #1-415 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:5 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



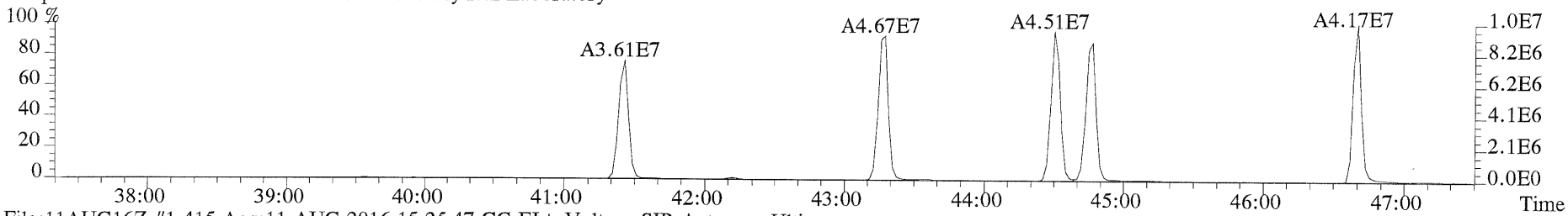
File:11AUG16Z #1-415 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:5 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



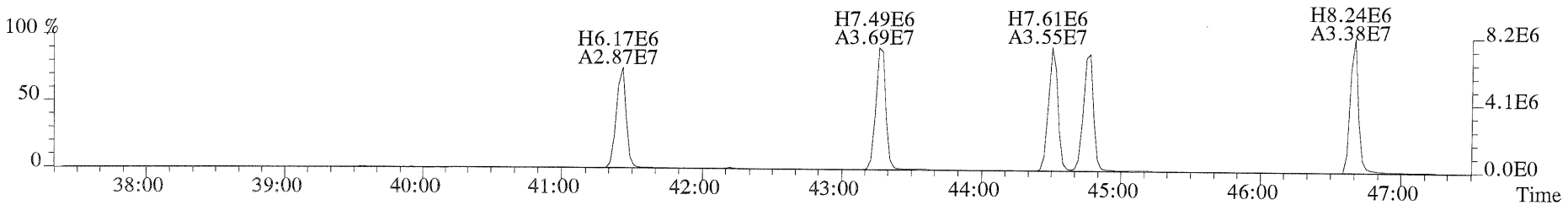
File:11AUG16Z #1-415 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:5 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



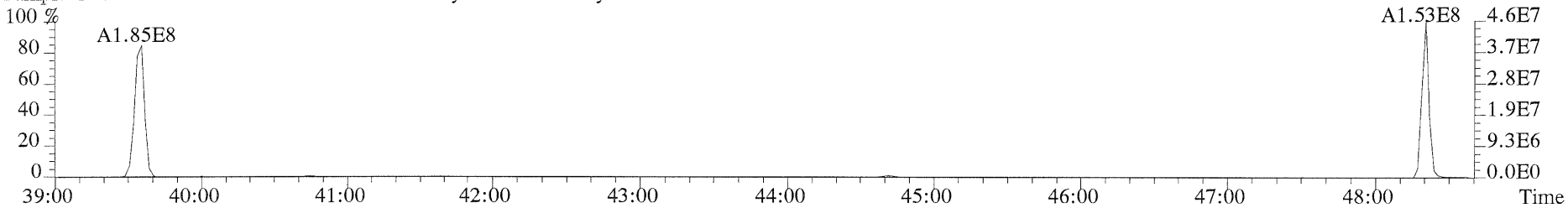
File:11AUG16Z #1-415 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:5 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



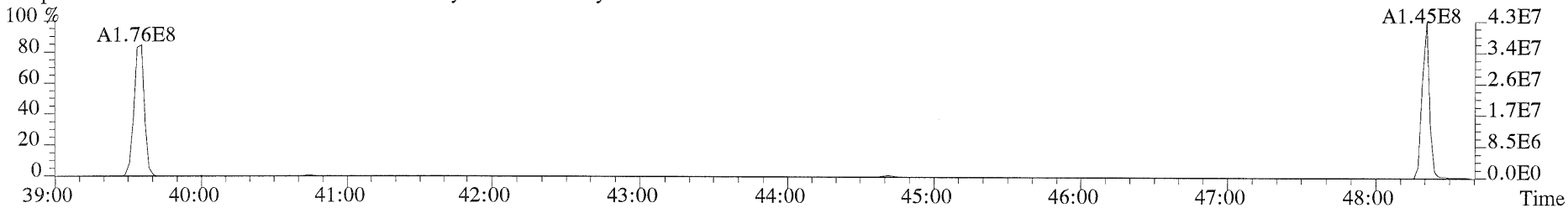
File:11AUG16Z #1-415 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:5 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



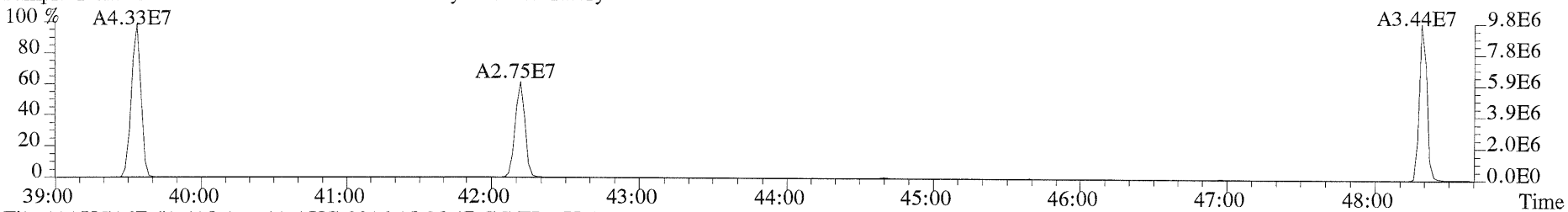
File:11AUG16Z #1-415 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
393.8025 S:5 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



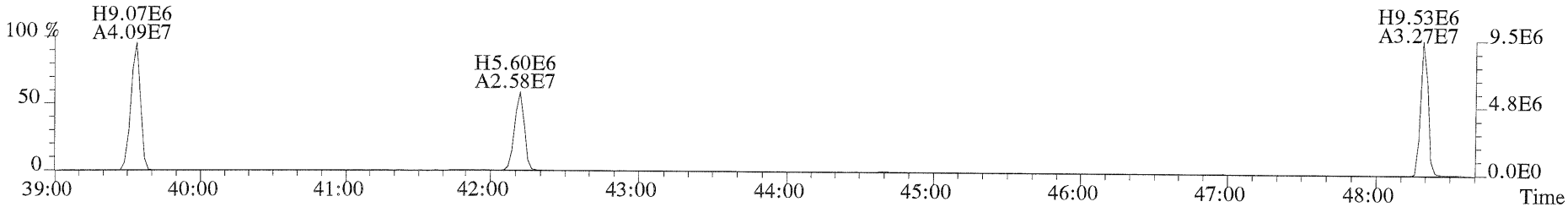
File:11AUG16Z #1-415 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
395.7995 S:5 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



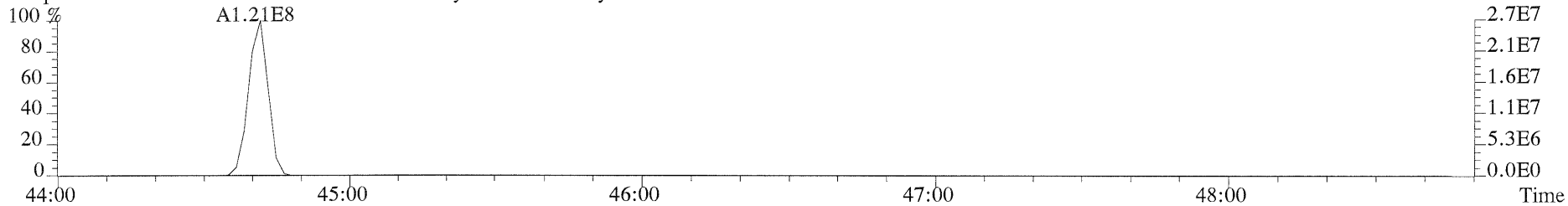
File:11AUG16Z #1-415 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
405.8428 S:5 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



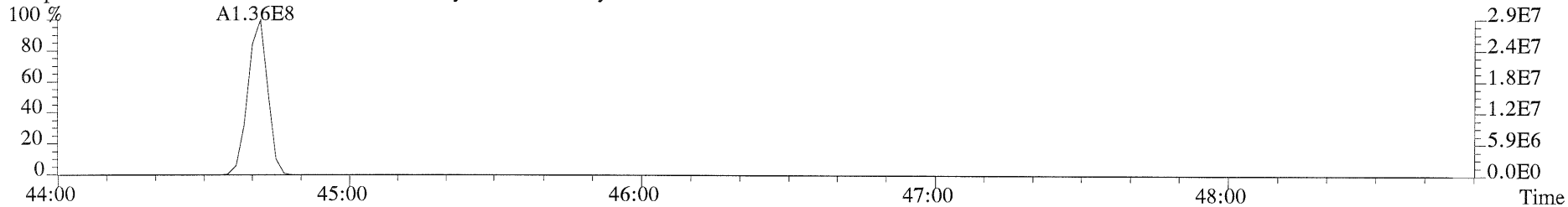
File:11AUG16Z #1-415 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
407.8398 S:5 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



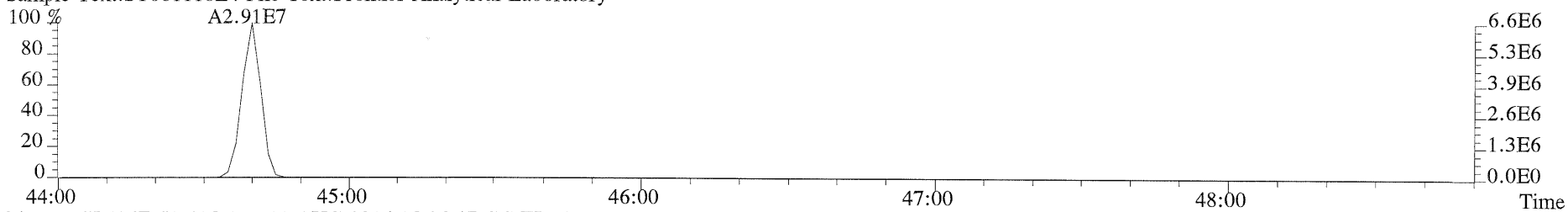
File:11AUG16Z #1-415 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:5 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



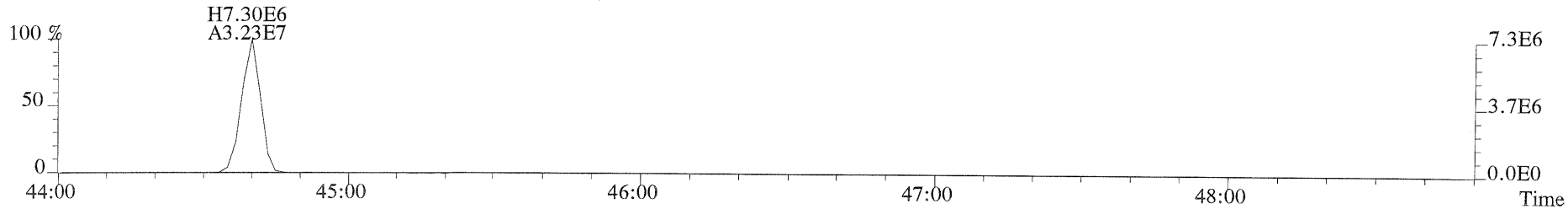
File:11AUG16Z #1-415 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:5 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



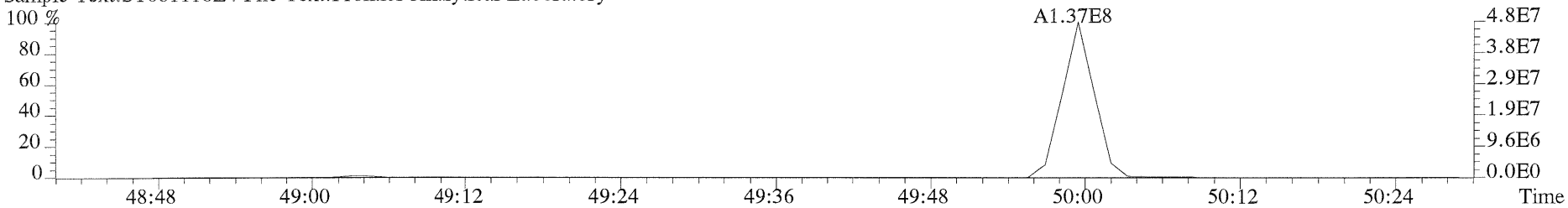
File:11AUG16Z #1-415 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:5 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



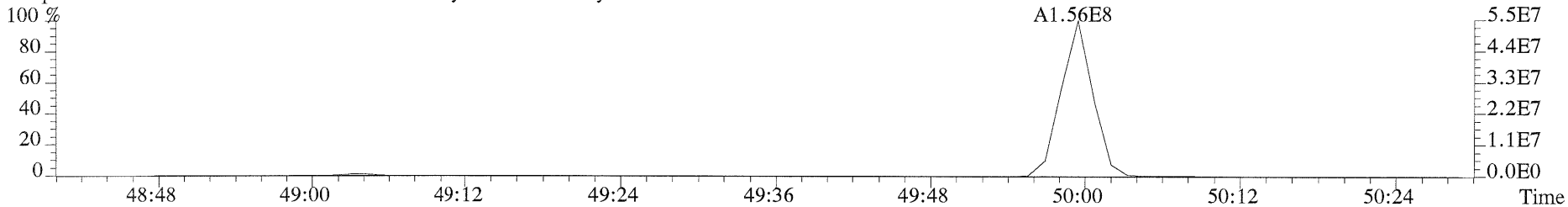
File:11AUG16Z #1-415 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:5 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



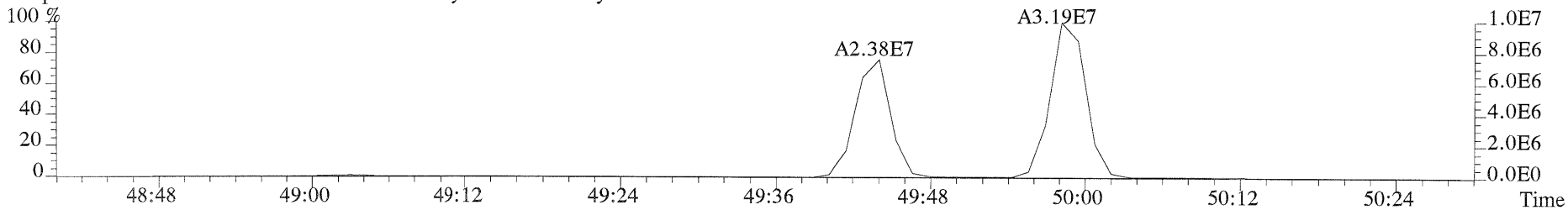
File:11AUG16Z #1-221 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:5 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



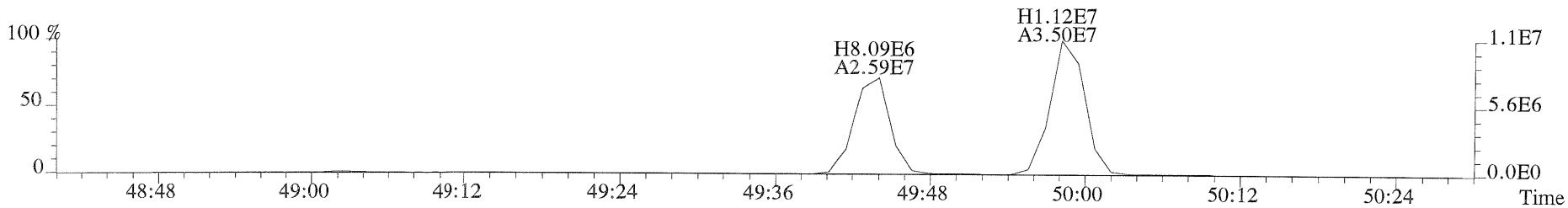
File:11AUG16Z #1-221 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:5 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



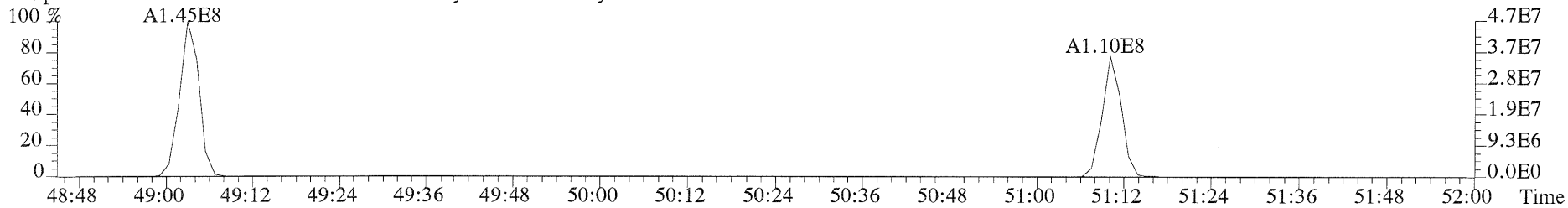
File:11AUG16Z #1-221 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:5 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



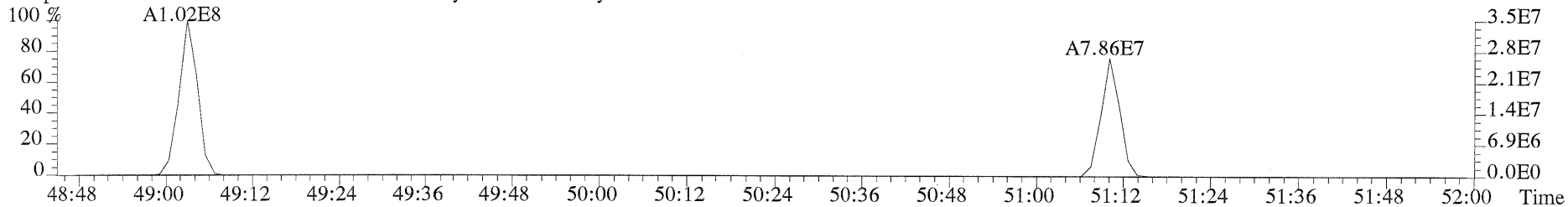
File:11AUG16Z #1-221 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:5 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



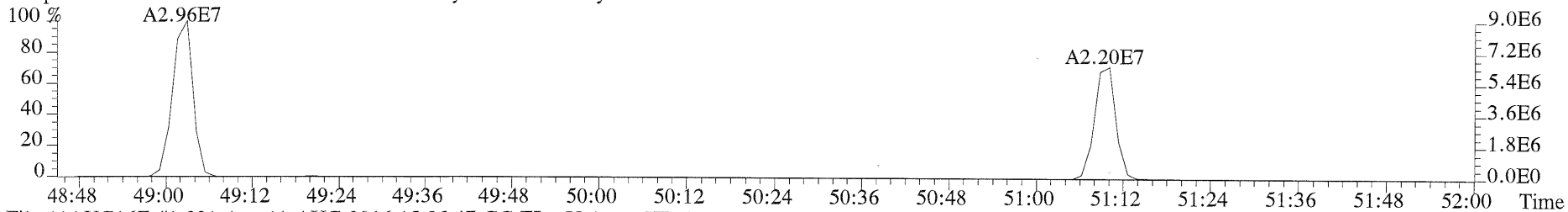
File:11AUG16Z #1-221 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
463.7216 S:5 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



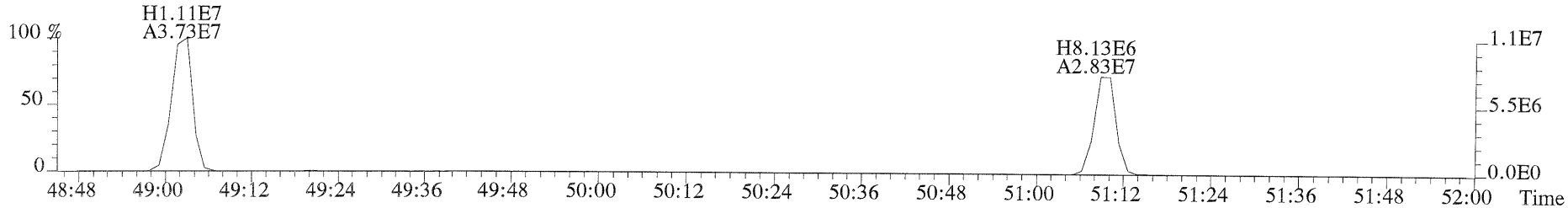
File:11AUG16Z #1-221 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
465.7187 S:5 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



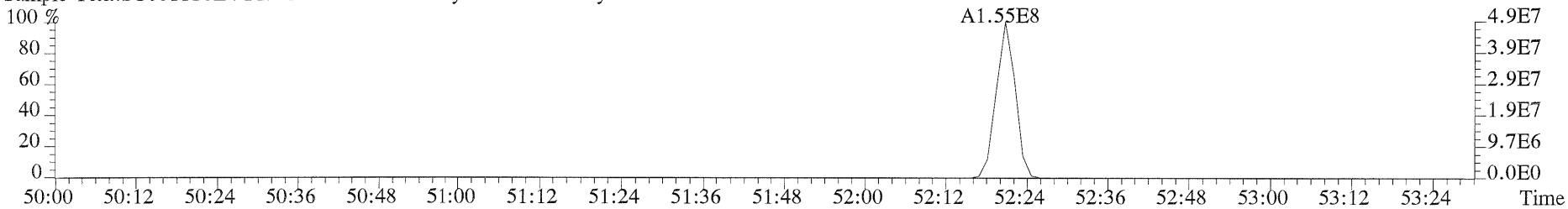
File:11AUG16Z #1-221 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
473.7648 S:5 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



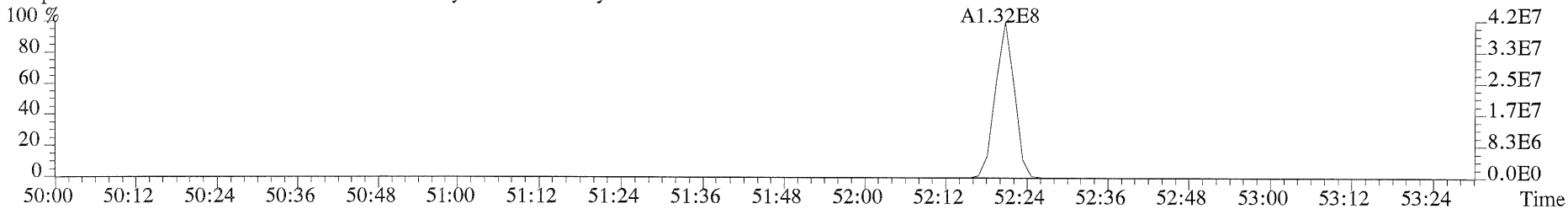
File:11AUG16Z #1-221 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
475.7619 S:5 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



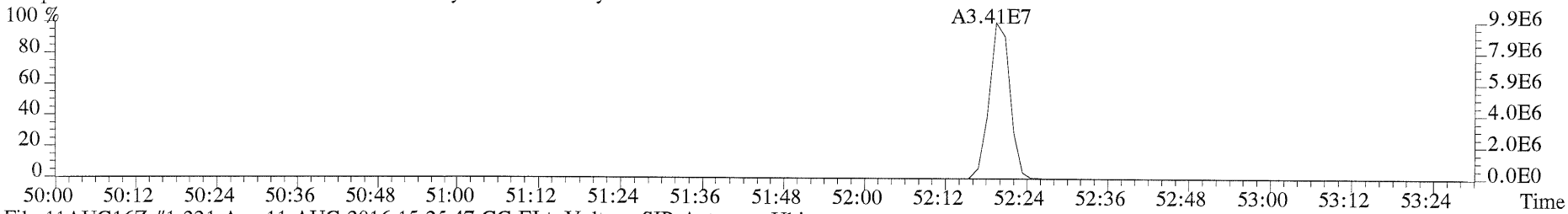
File:11AUG16Z #1-221 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
497.6826 S:5 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



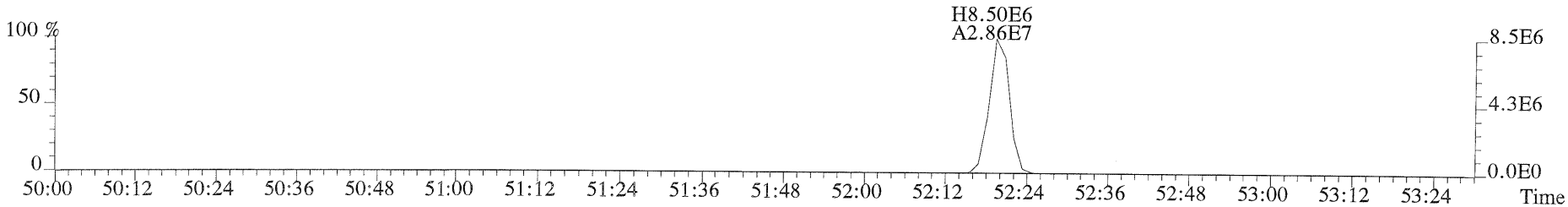
File:11AUG16Z #1-221 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
499.6797 S:5 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



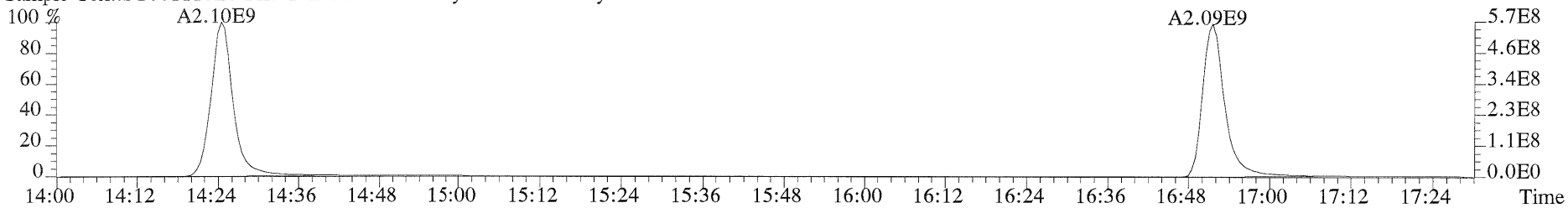
File:11AUG16Z #1-221 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
509.7229 S:5 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



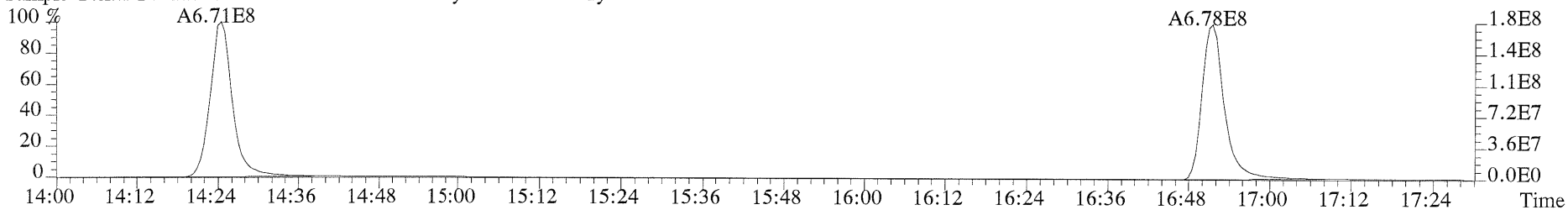
File:11AUG16Z #1-221 Acq:11-AUG-2016 15:25:47 GC EI+ Voltage SIR Autospec-Ultima
511.7199 S:5 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z4 File Text:Frontier Analytical Laboratory



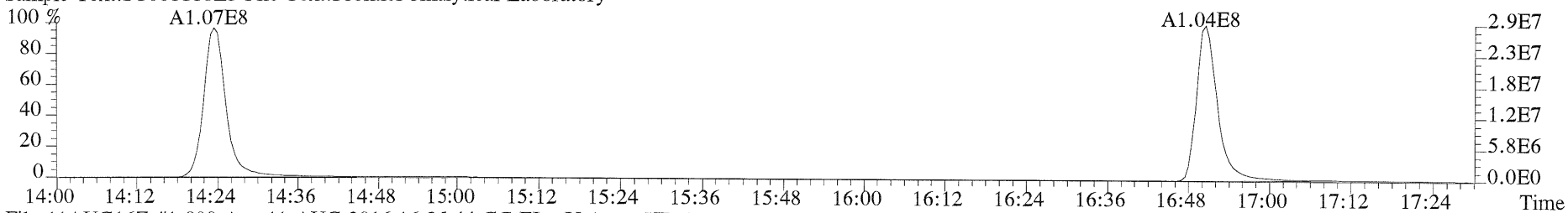
File:11AUG16Z #1-900 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
188.0393 S:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



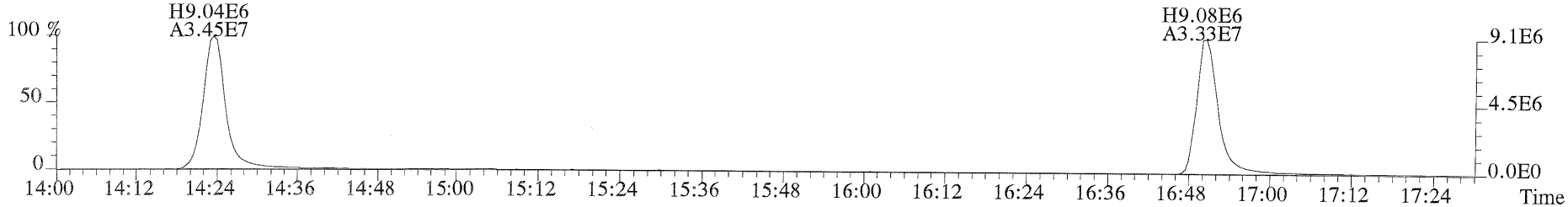
File:11AUG16Z #1-900 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
190.0363 S:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



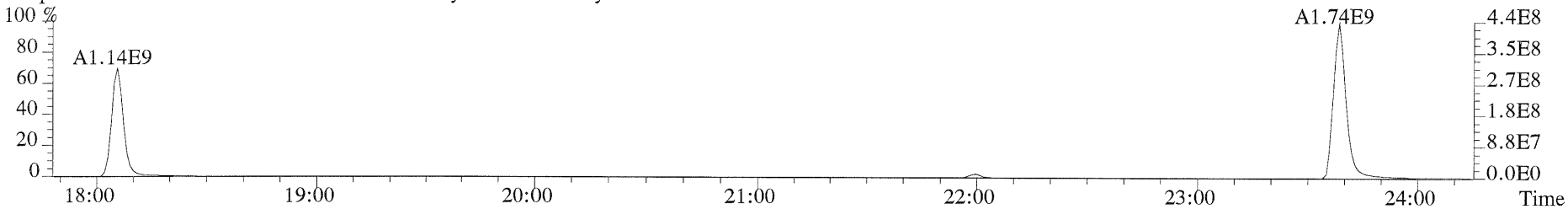
File:11AUG16Z #1-900 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
200.0795 S:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



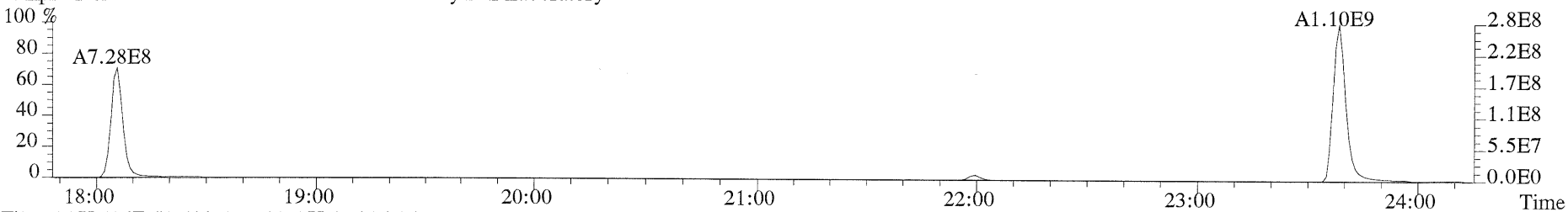
File:11AUG16Z #1-900 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
202.0766 S:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



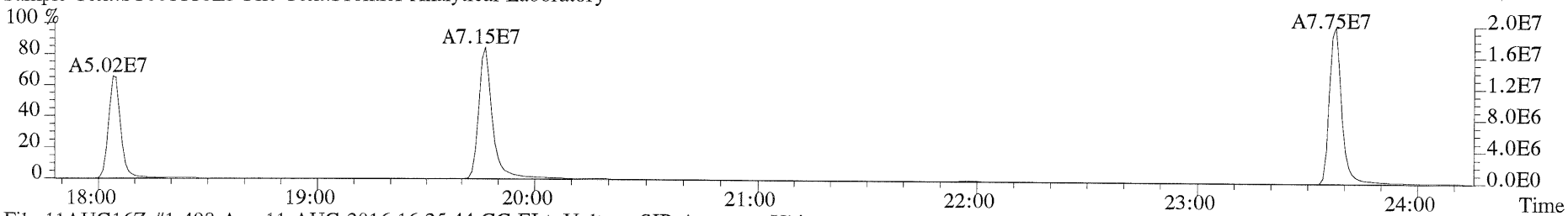
File:11AUG16Z #1-498 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
222.0003 S:6 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



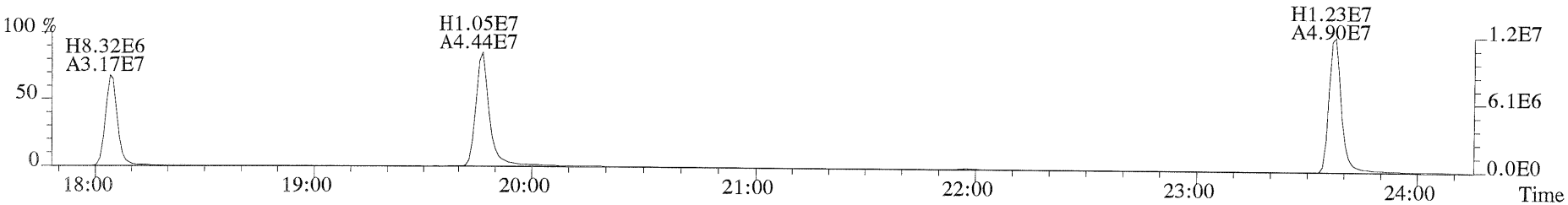
File:11AUG16Z #1-498 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
223.9974 S:6 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



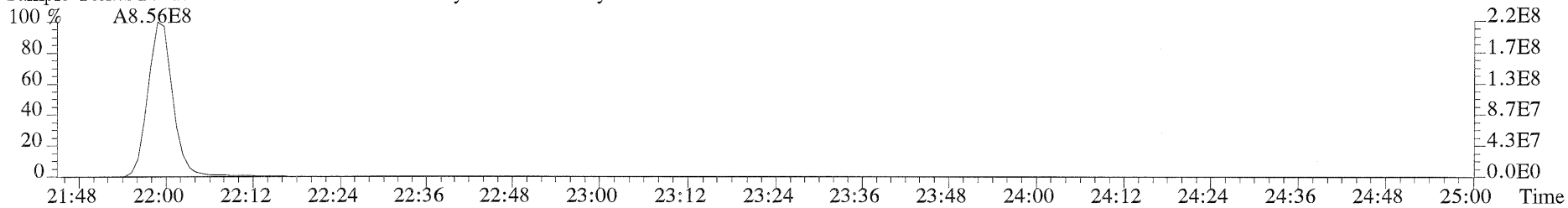
File:11AUG16Z #1-498 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
234.0406 S:6 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



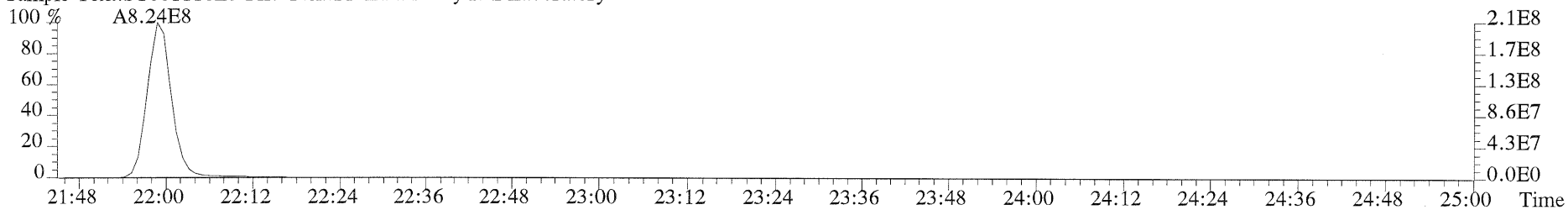
File:11AUG16Z #1-498 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
236.0376 S:6 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



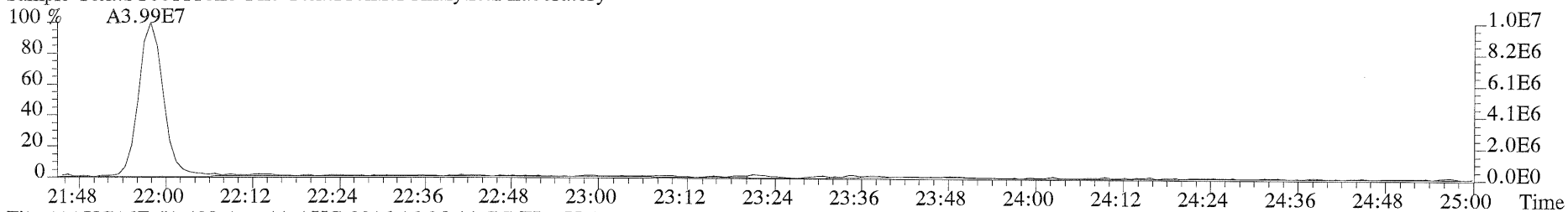
File:11AUG16Z #1-498 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:6 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



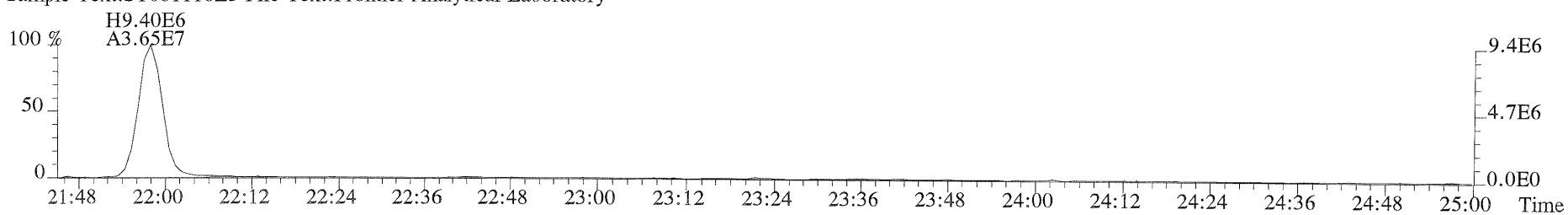
File:11AUG16Z #1-498 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:6 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



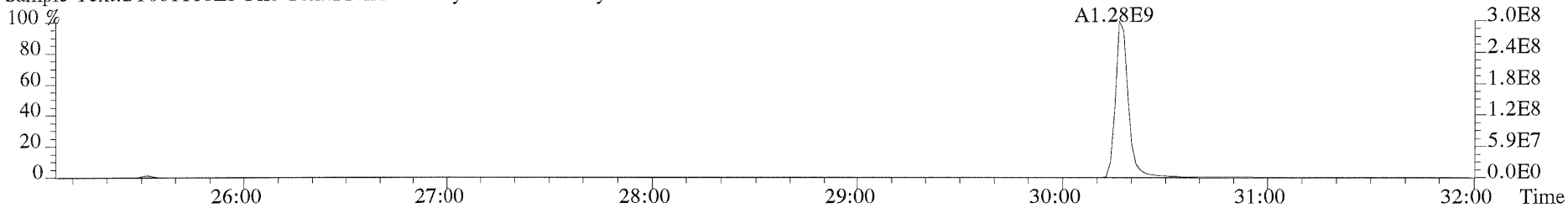
File:11AUG16Z #1-498 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:6 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



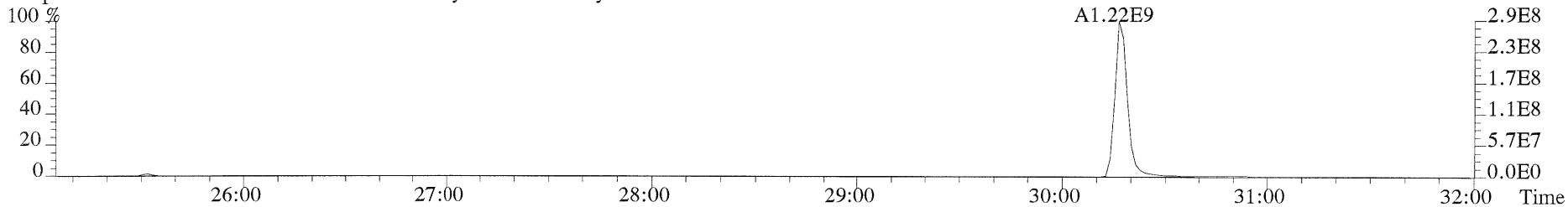
File:11AUG16Z #1-498 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:6 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



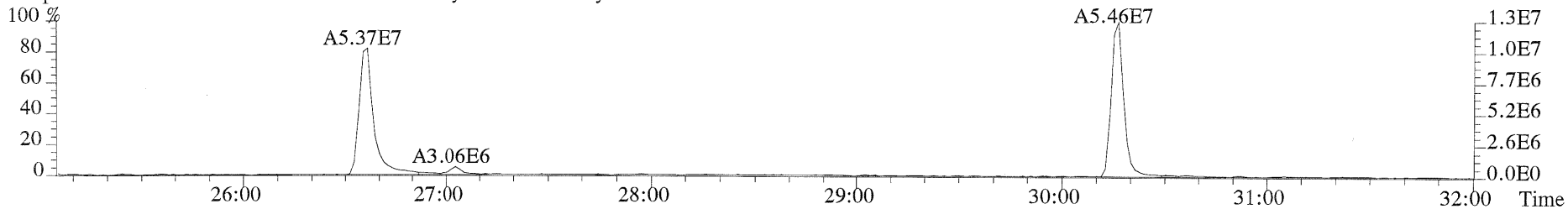
File:11AUG16Z #1-404 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



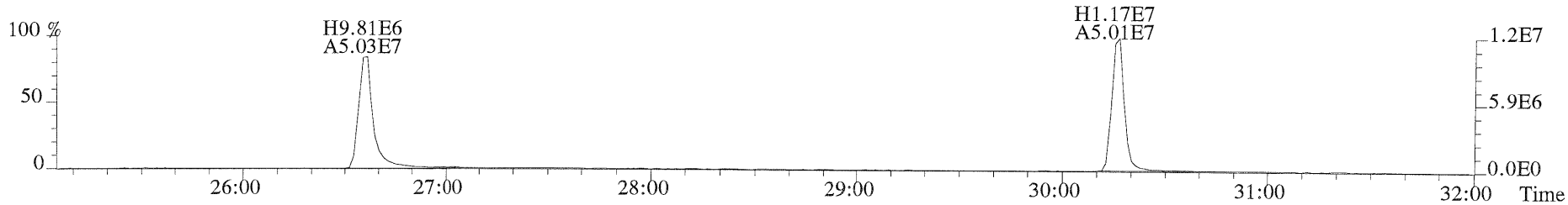
File:11AUG16Z #1-404 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



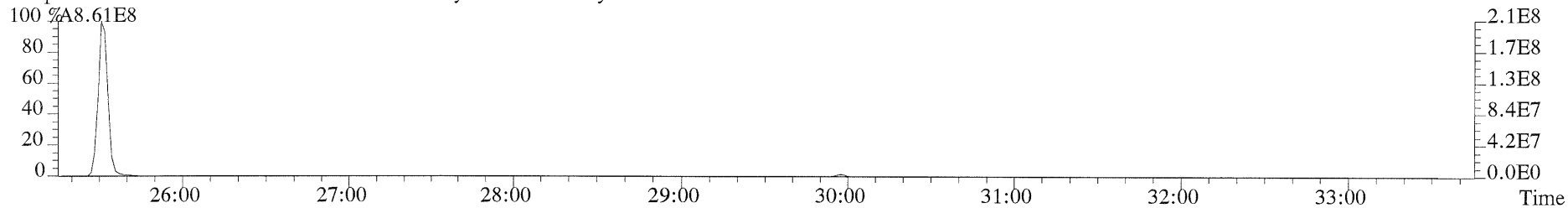
File:11AUG16Z #1-404 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



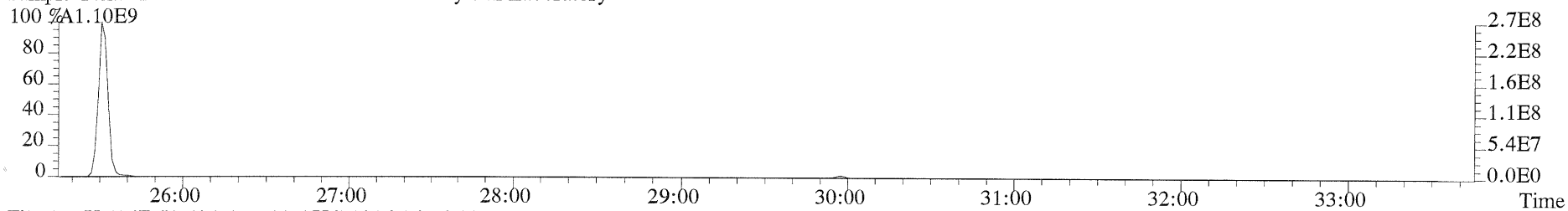
File:11AUG16Z #1-404 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



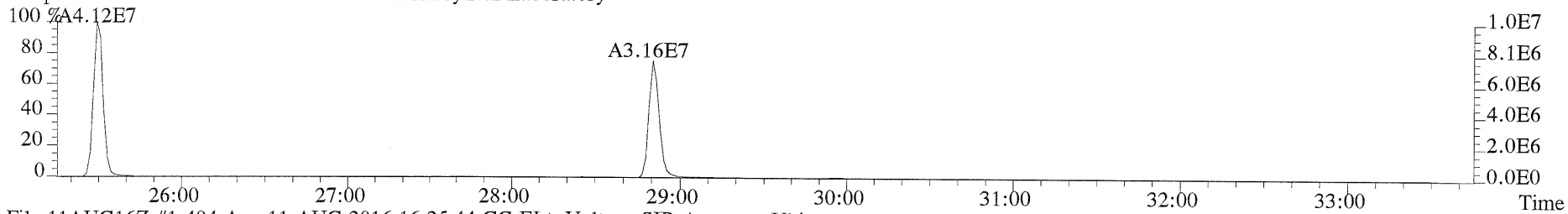
File:11AUG16Z #1-404 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



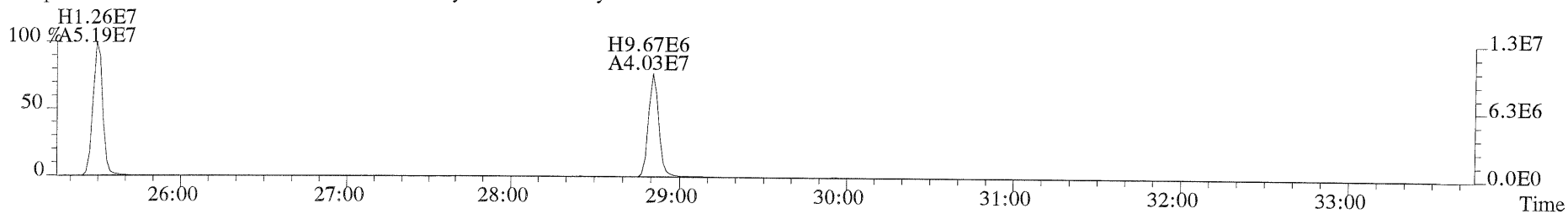
File:11AUG16Z #1-404 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



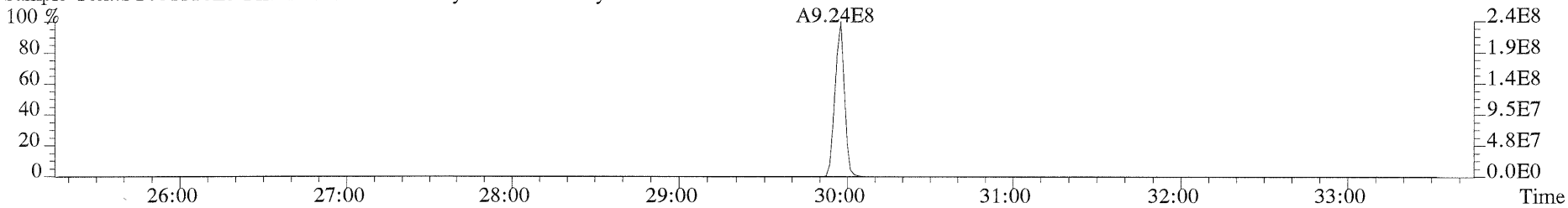
File:11AUG16Z #1-404 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



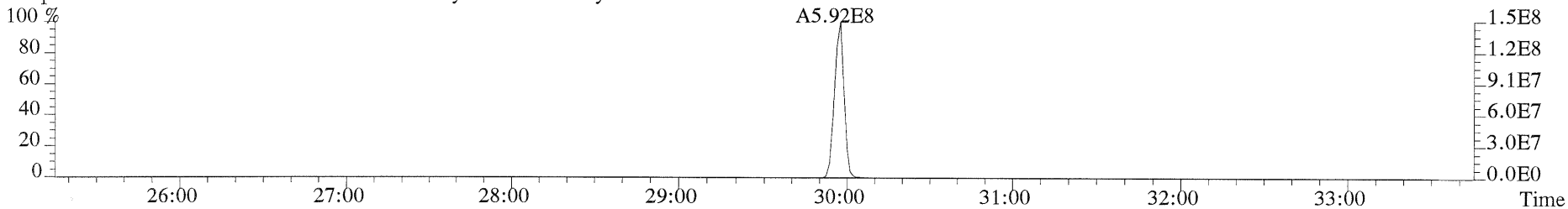
File:11AUG16Z #1-404 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



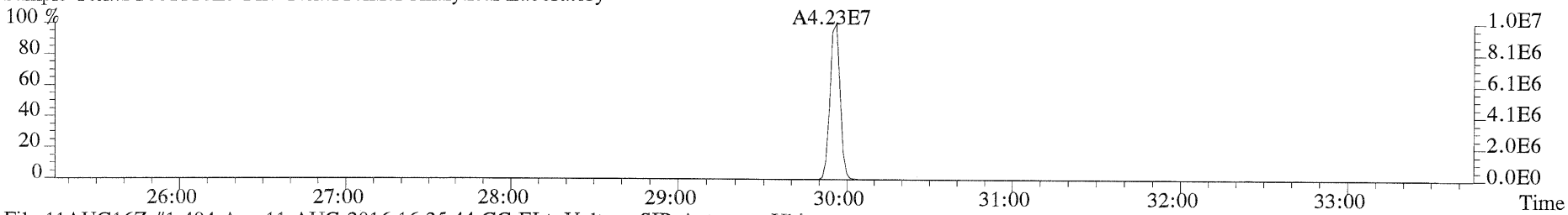
File:11AUG16Z #1-404 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



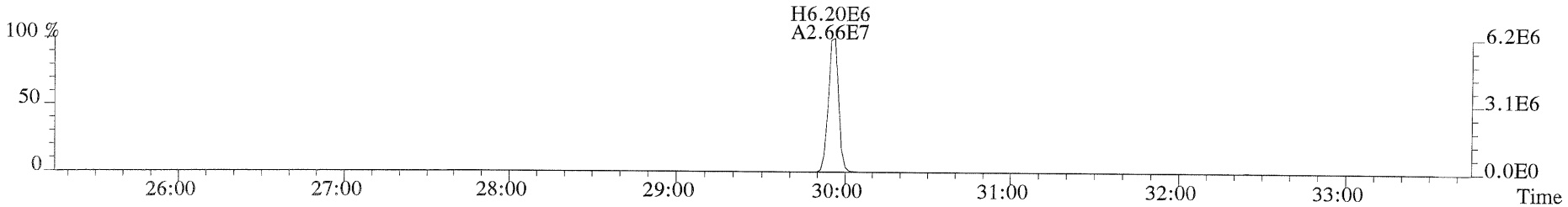
File:11AUG16Z #1-404 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



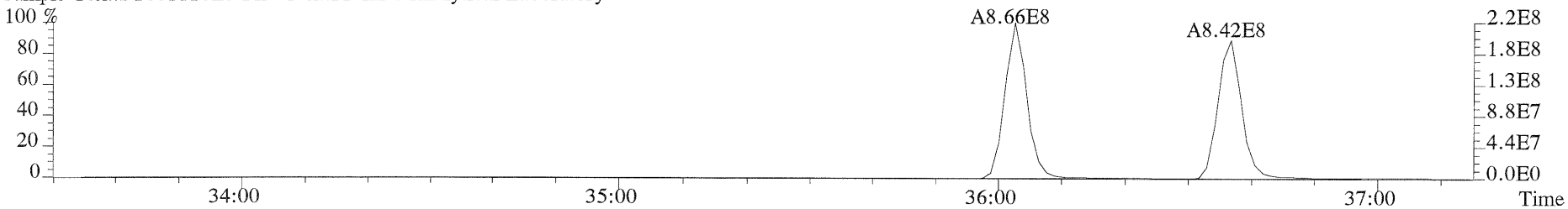
File:11AUG16Z #1-404 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



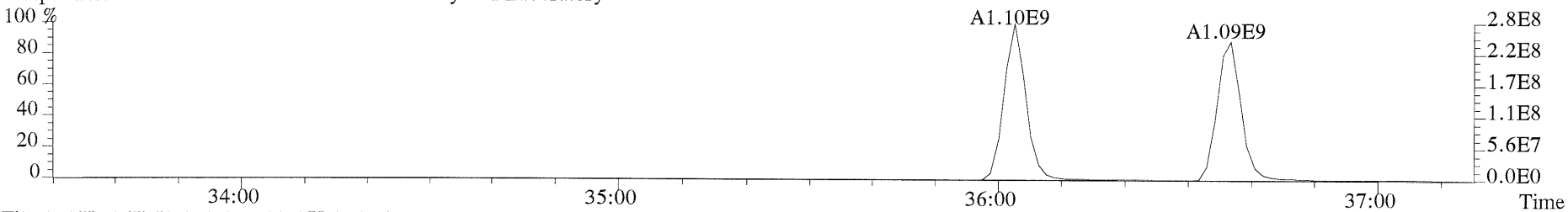
File:11AUG16Z #1-404 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:6 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



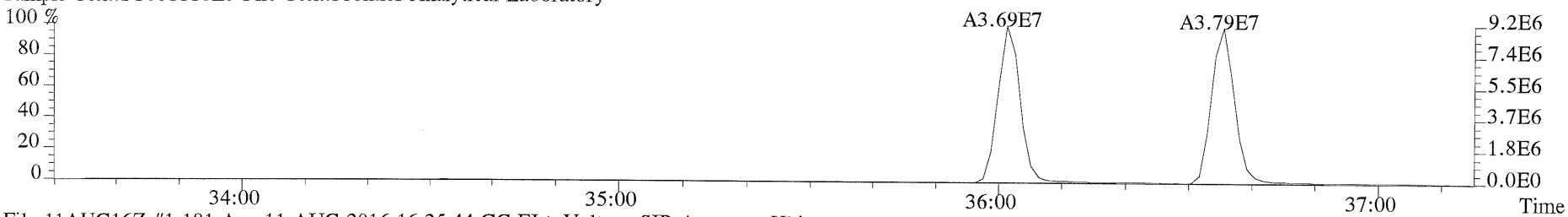
File:11AUG16Z #1-181 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



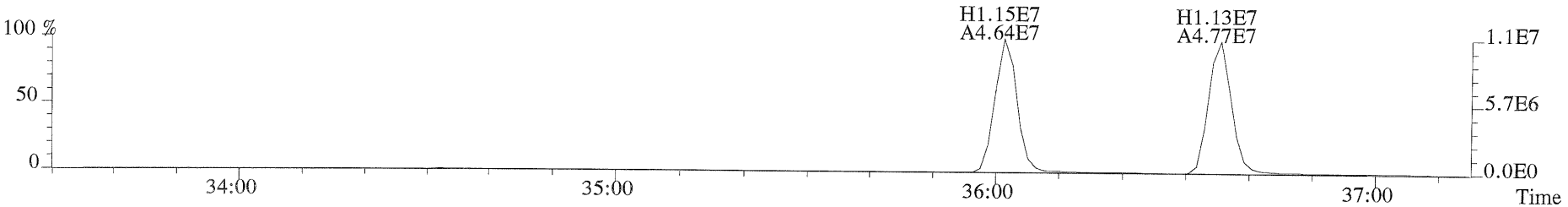
File:11AUG16Z #1-181 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



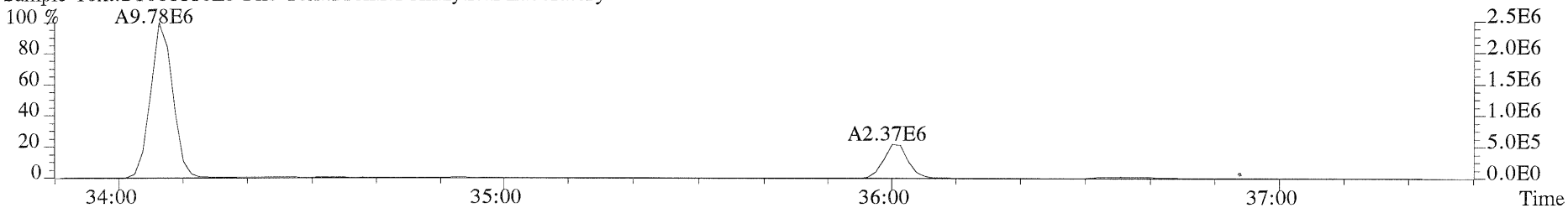
File:11AUG16Z #1-181 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



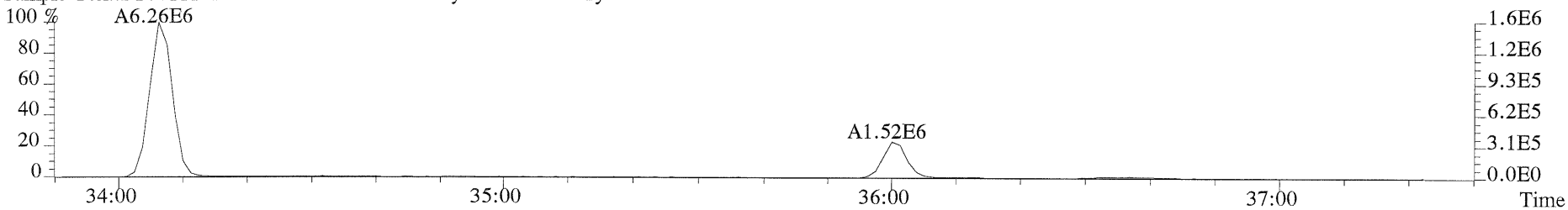
File:11AUG16Z #1-181 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



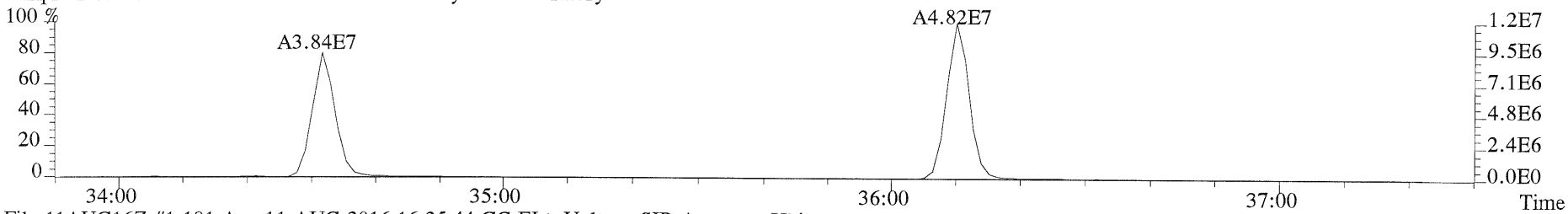
File:11AUG16Z #1-181 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



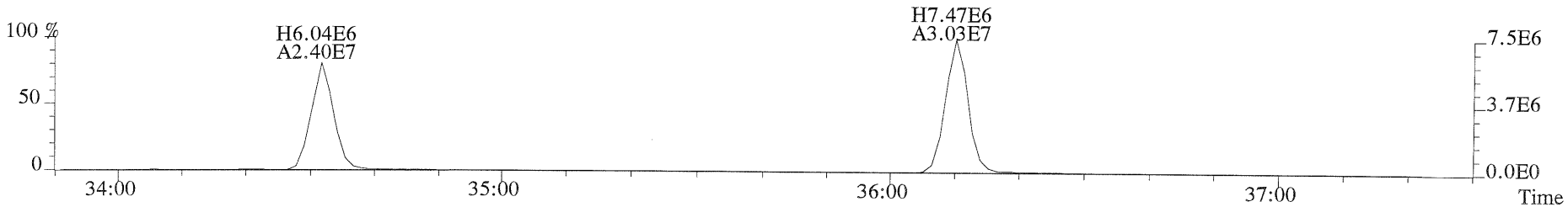
File:11AUG16Z #1-181 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



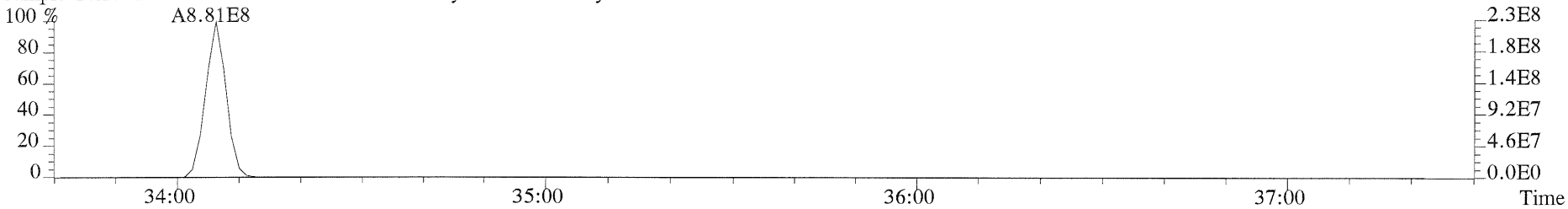
File:11AUG16Z #1-181 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



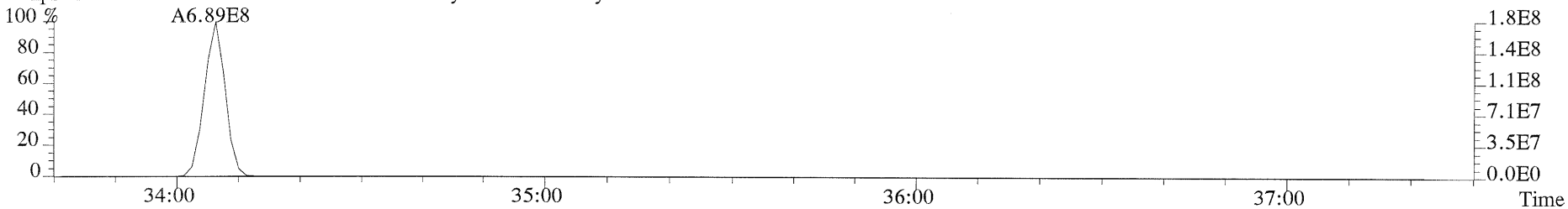
File:11AUG16Z #1-181 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



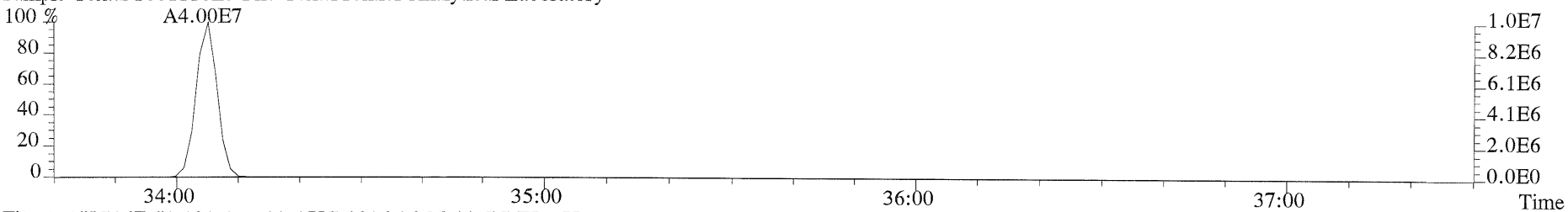
File:11AUG16Z #1-181 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



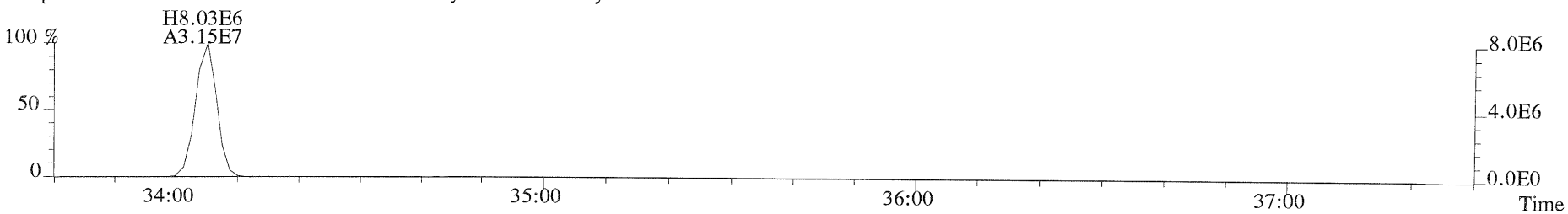
File:11AUG16Z #1-181 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



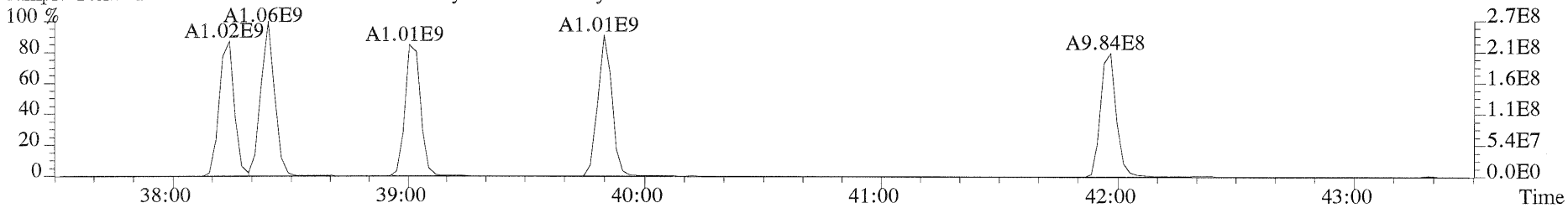
File:11AUG16Z #1-181 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



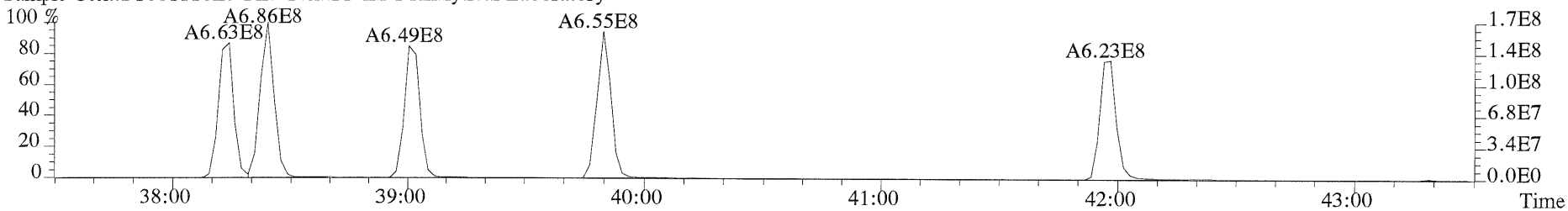
File:11AUG16Z #1-181 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:6 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



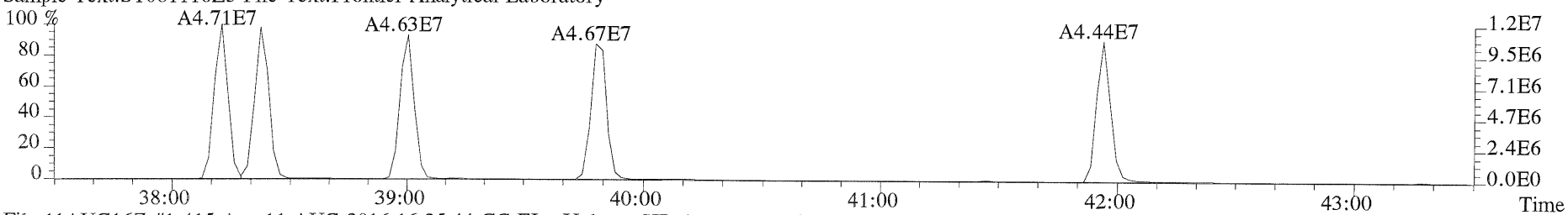
File:11AUG16Z #1-415 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



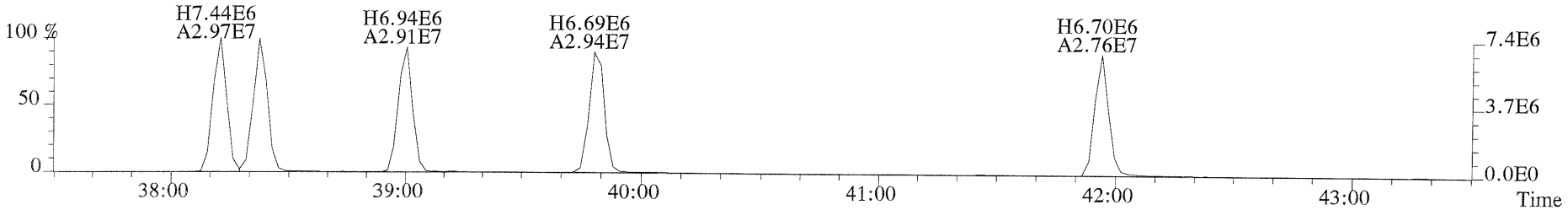
File:11AUG16Z #1-415 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



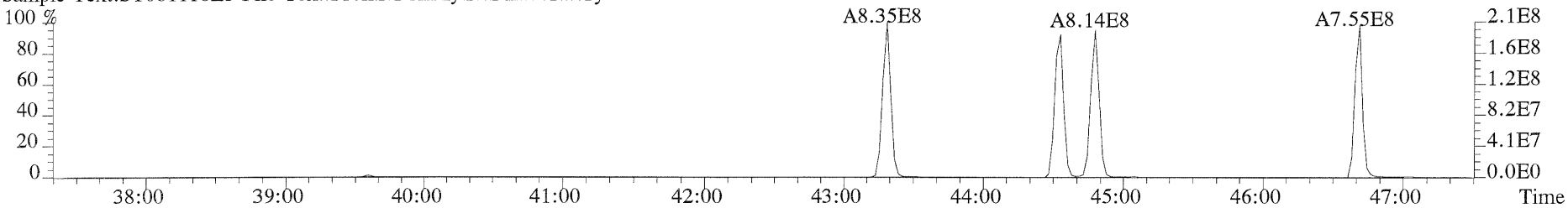
File:11AUG16Z #1-415 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



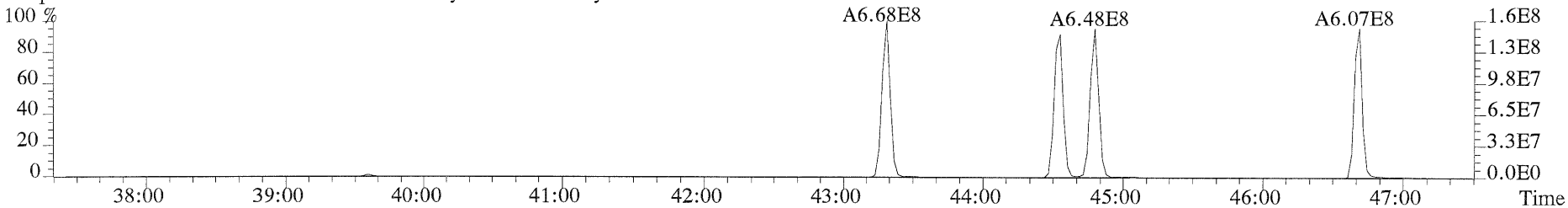
File:11AUG16Z #1-415 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



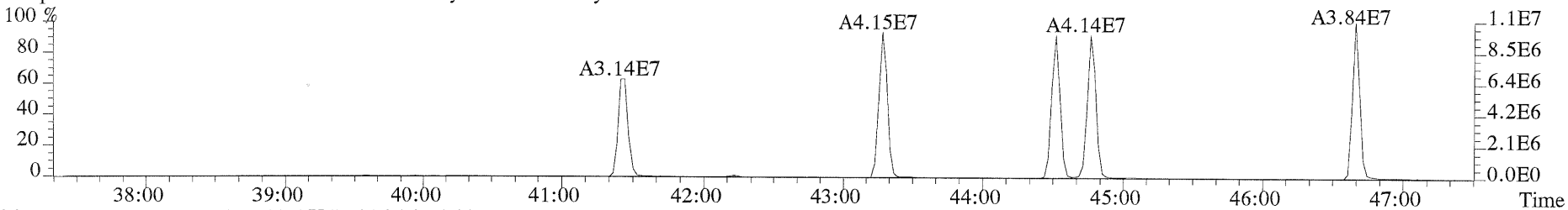
File:11AUG16Z #1-415 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



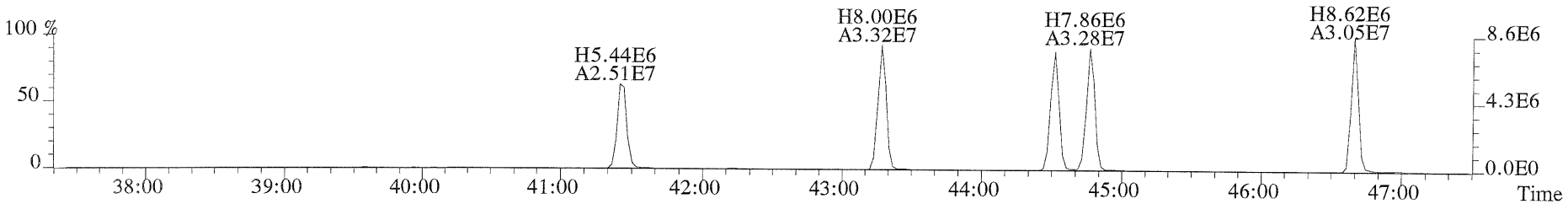
File:11AUG16Z #1-415 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



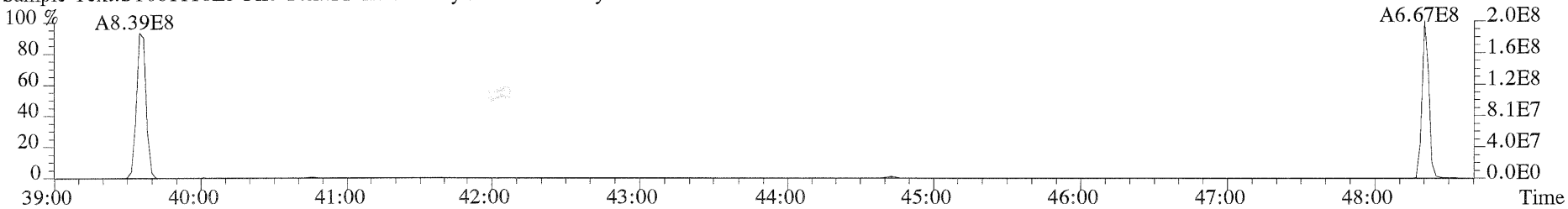
File:11AUG16Z #1-415 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



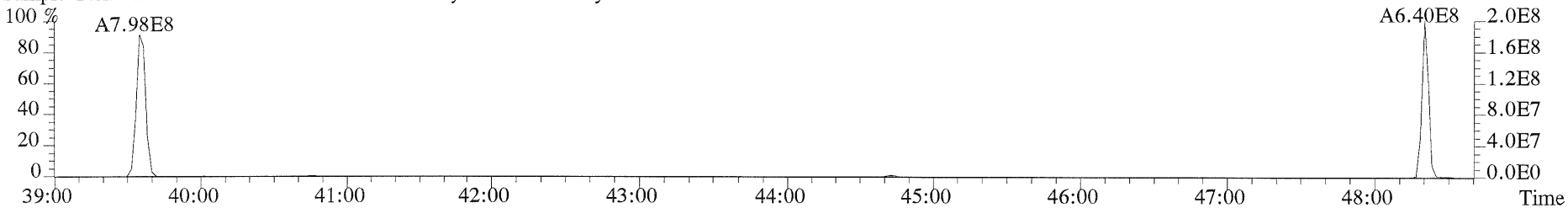
File:11AUG16Z #1-415 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



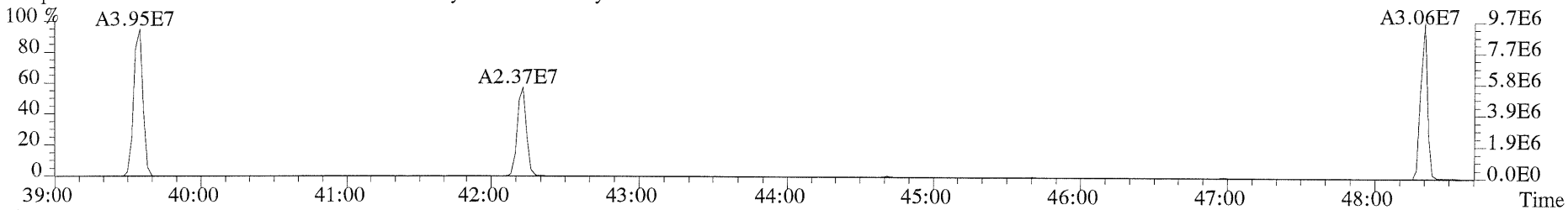
File:11AUG16Z #1-415 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
393.8025 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



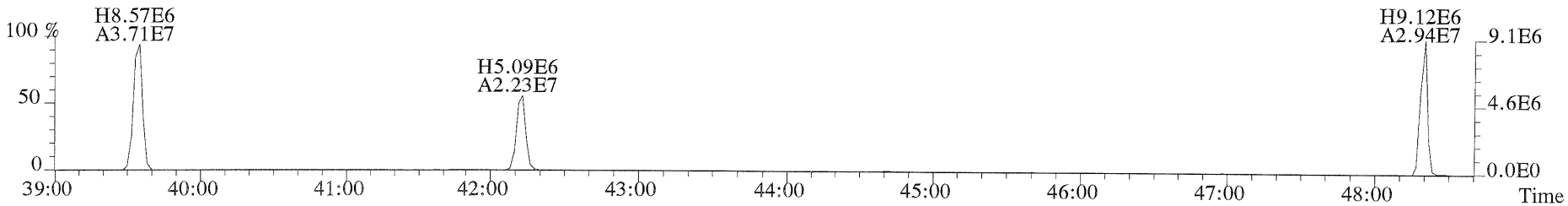
File:11AUG16Z #1-415 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
395.7995 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



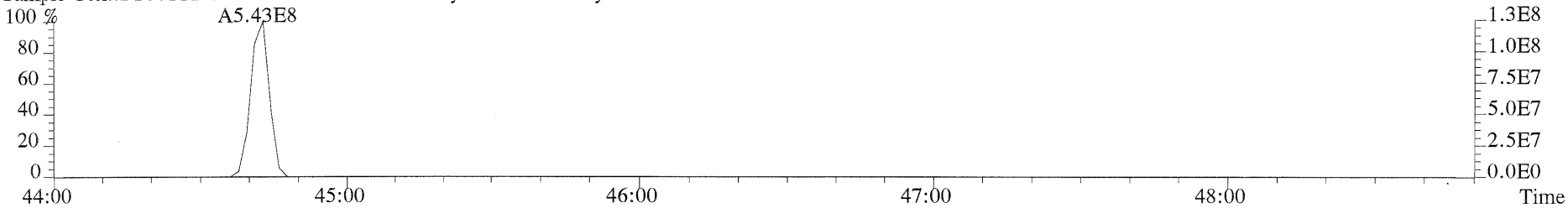
File:11AUG16Z #1-415 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
405.8428 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



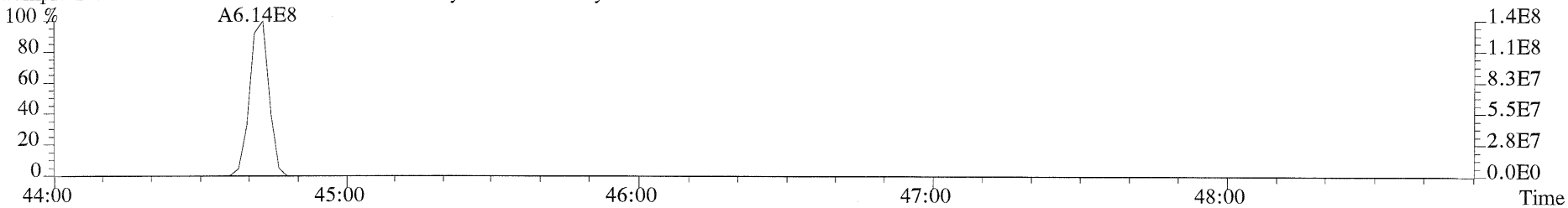
File:11AUG16Z #1-415 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
407.8398 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



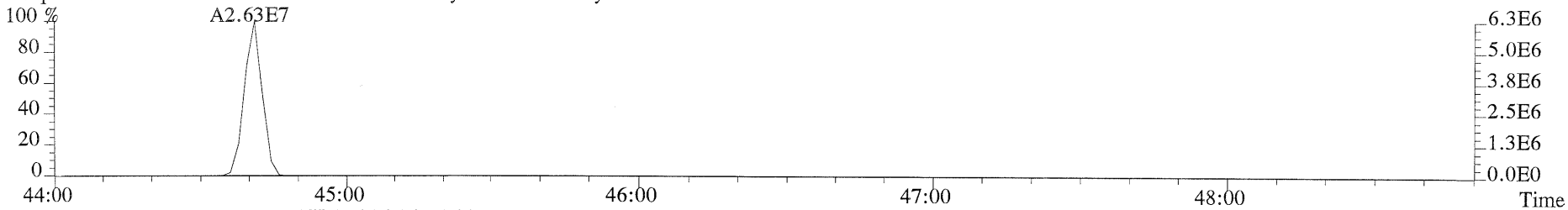
File:11AUG16Z #1-415 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



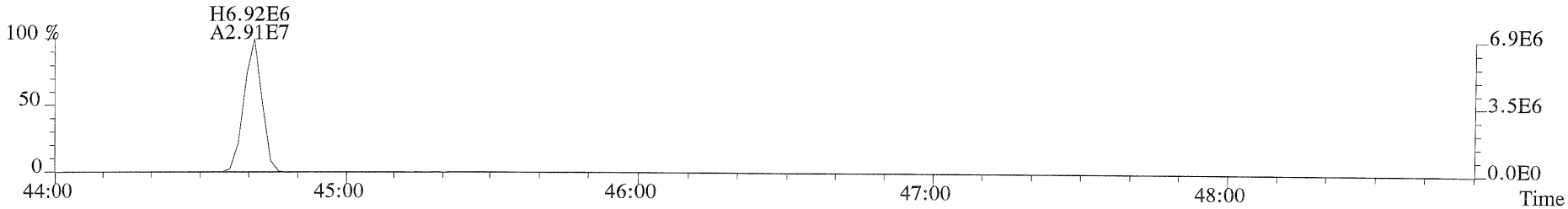
File:11AUG16Z #1-415 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



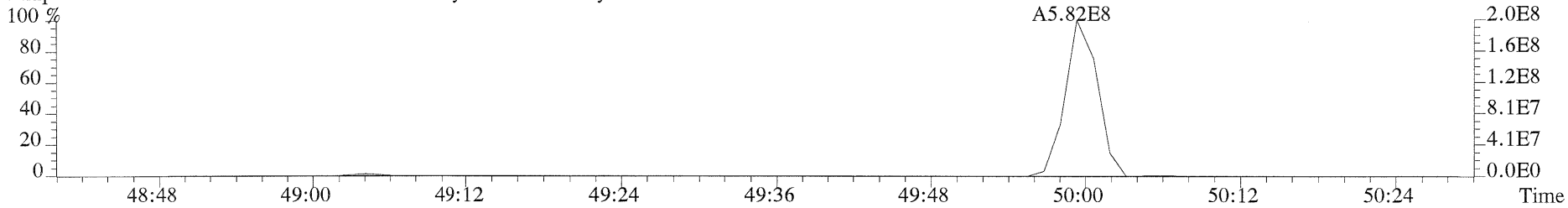
File:11AUG16Z #1-415 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



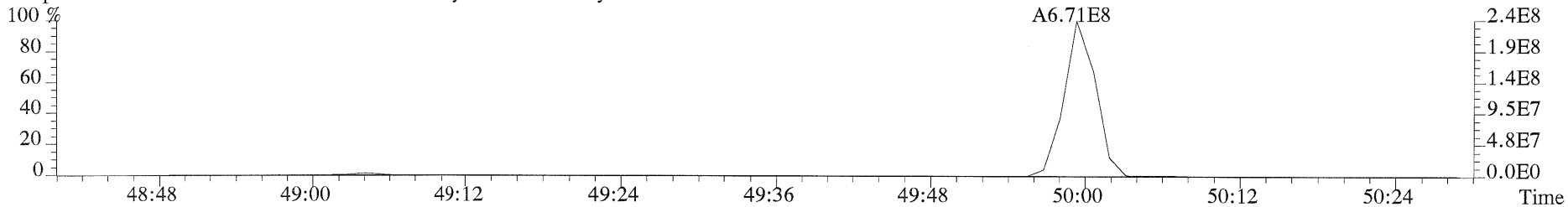
File:11AUG16Z #1-415 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:6 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



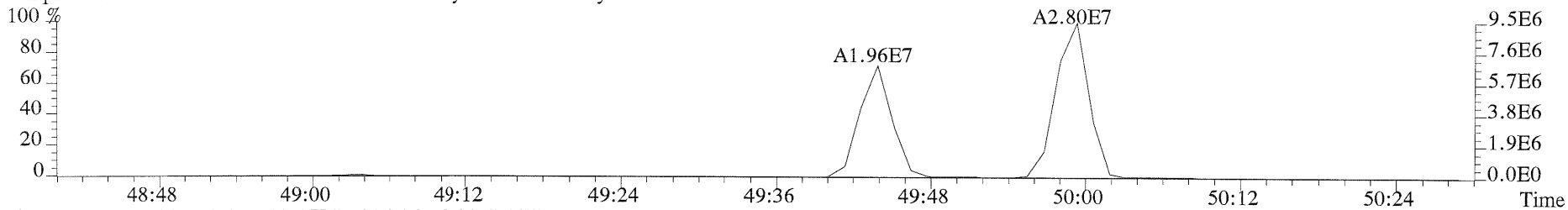
File:11AUG16Z #1-221 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



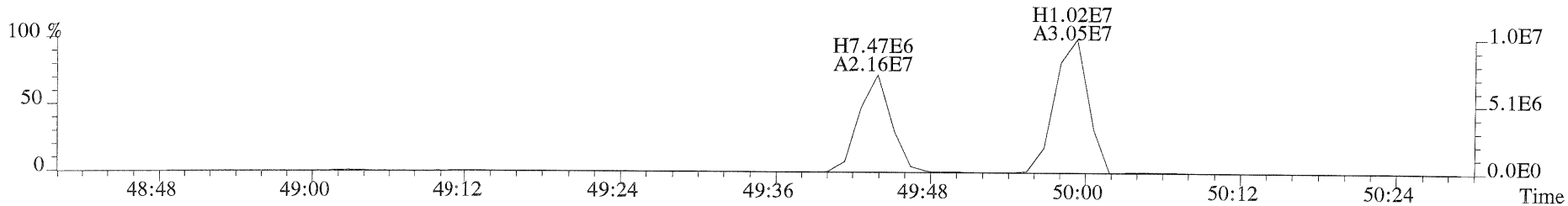
File:11AUG16Z #1-221 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



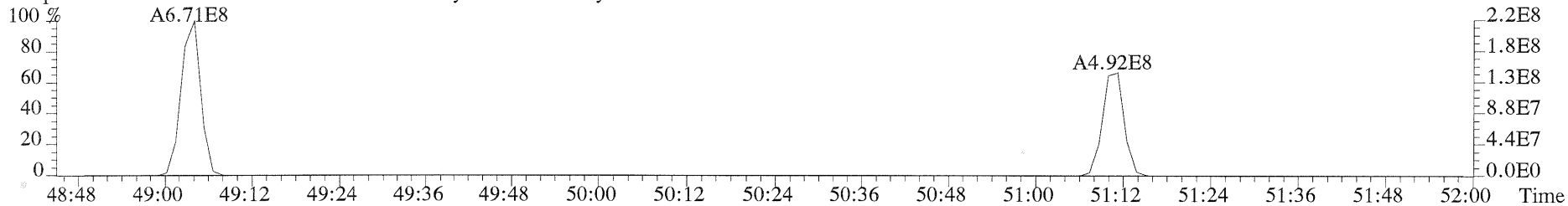
File:11AUG16Z #1-221 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



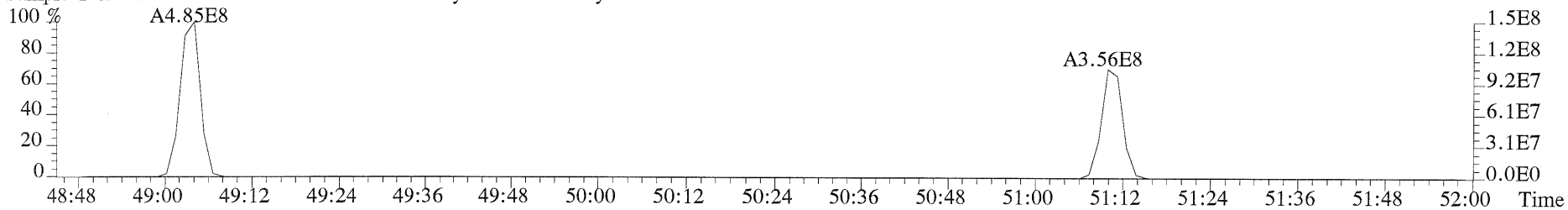
File:11AUG16Z #1-221 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



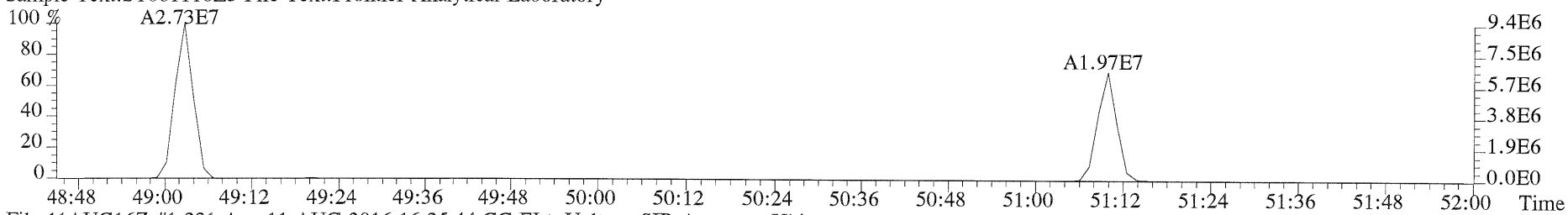
File:11AUG16Z #1-221 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
463.7216 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



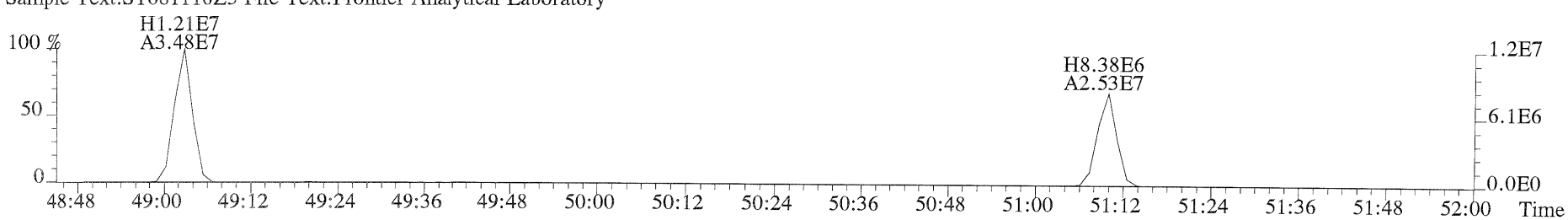
File:11AUG16Z #1-221 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
465.7187 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



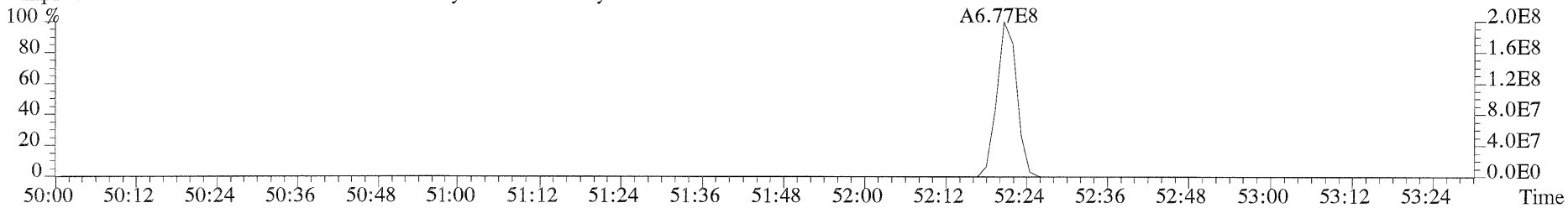
File:11AUG16Z #1-221 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
473.7648 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



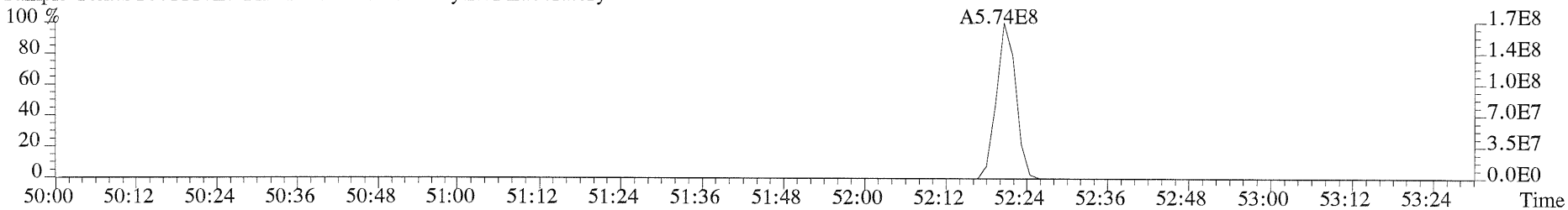
File:11AUG16Z #1-221 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
475.7619 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



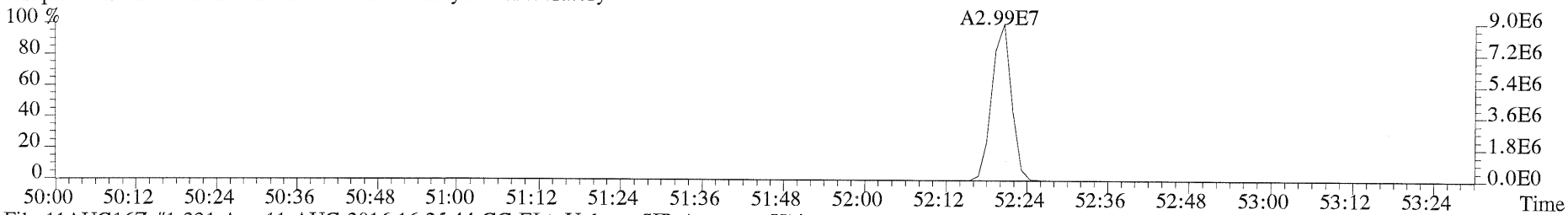
File:11AUG16Z #1-221 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
497.6826 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



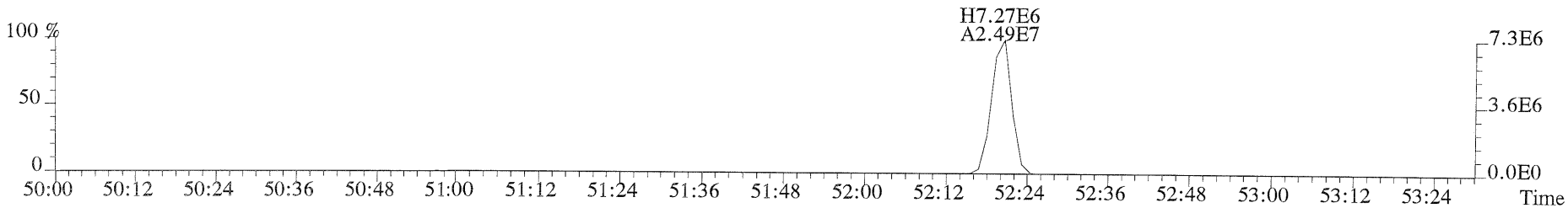
File:11AUG16Z #1-221 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
499.6797 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory



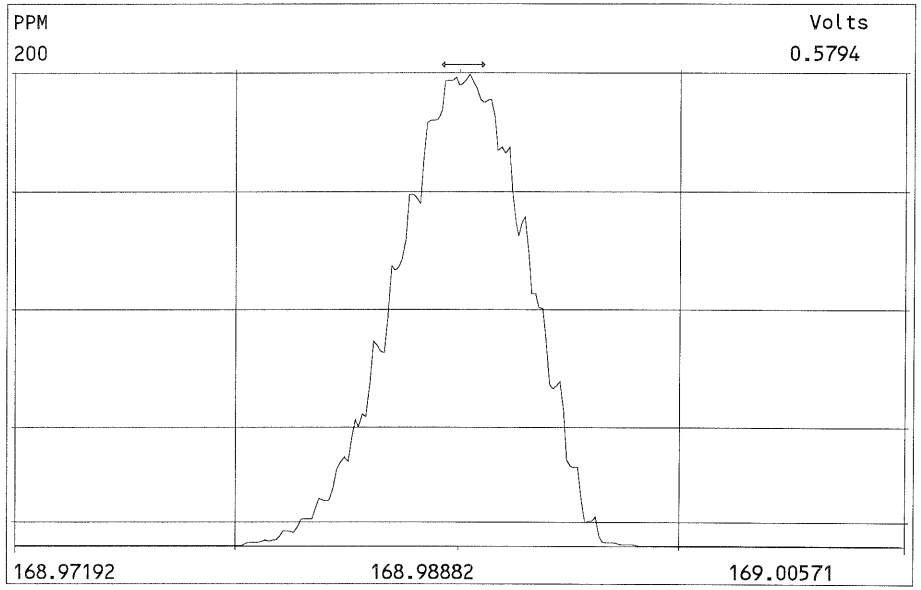
File:11AUG16Z #1-221 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
509.7229 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory

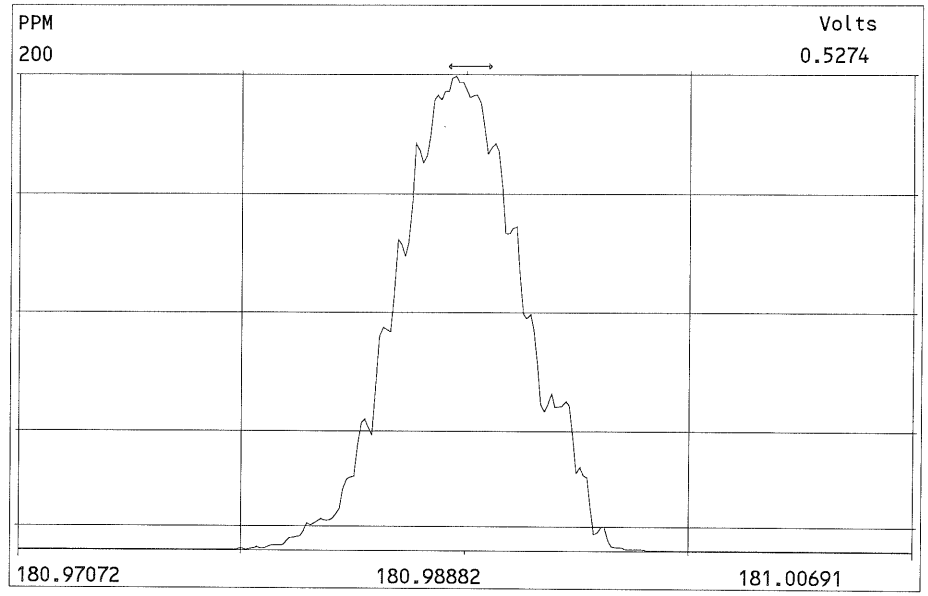


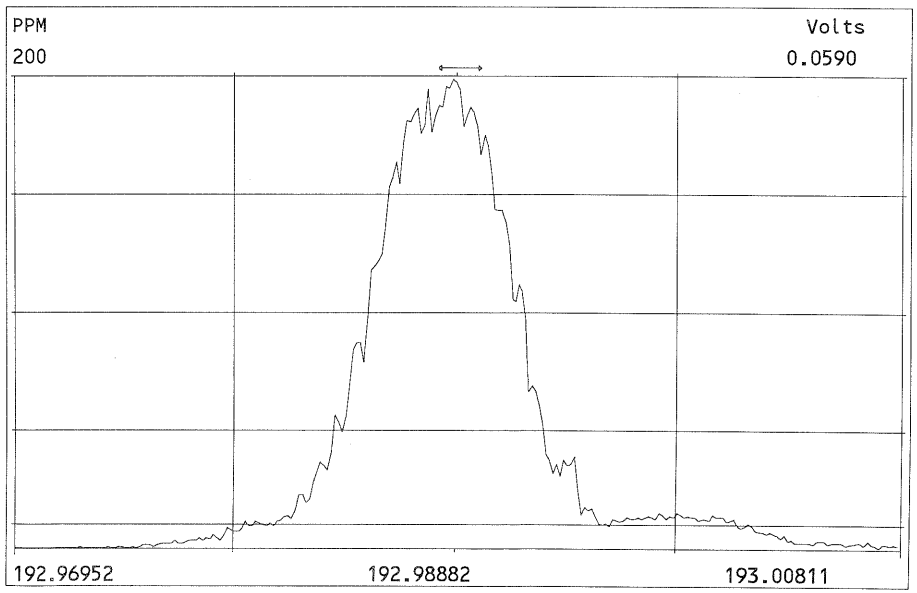
File:11AUG16Z #1-221 Acq:11-AUG-2016 16:25:44 GC EI+ Voltage SIR Autospec-Ultima
511.7199 S:6 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081116Z5 File Text:Frontier Analytical Laboratory

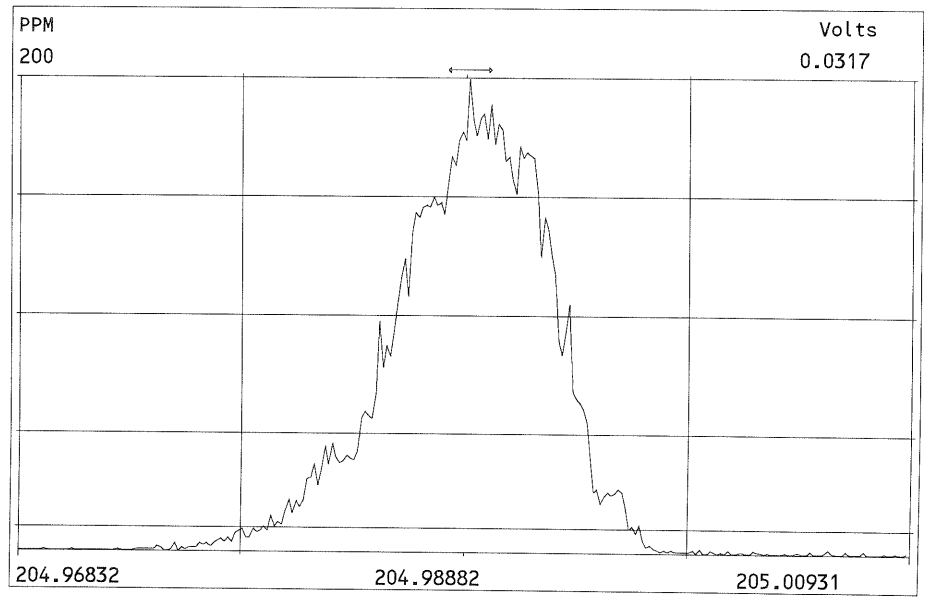


Peak Locate Examination:12-AUG-2016:07:42 File:11AUG16Z_RES_CHECK_PFK02
Experiment:1668PCB Function:1 Reference:PFK

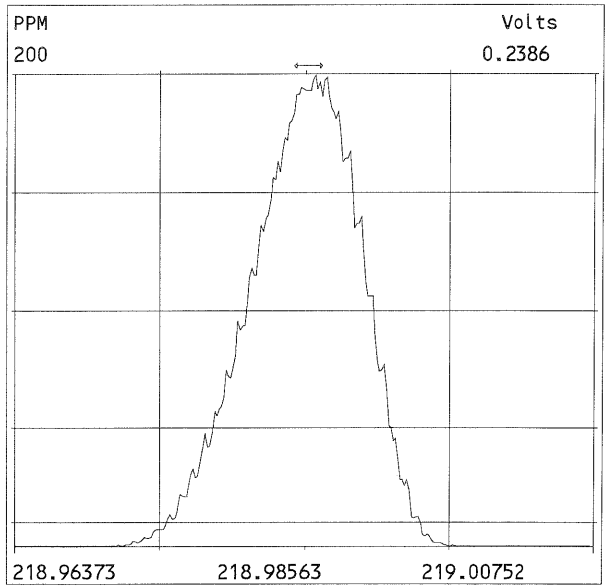


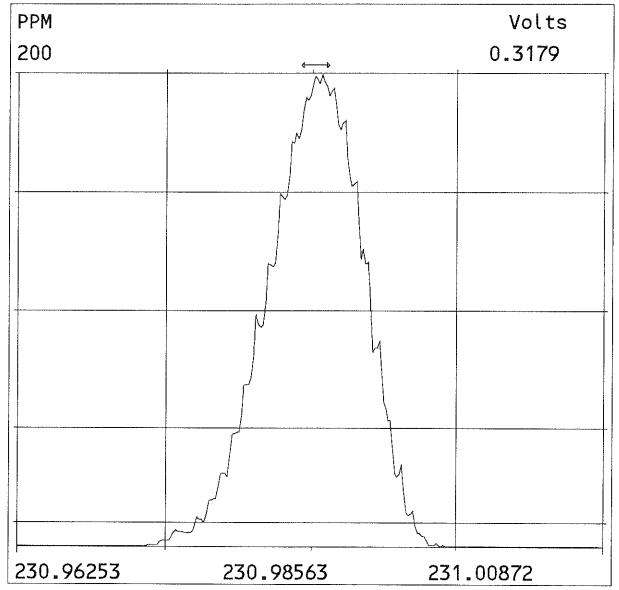


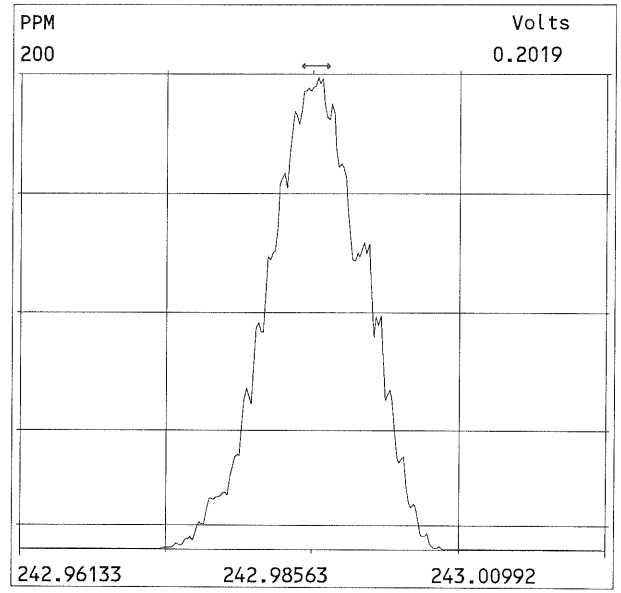


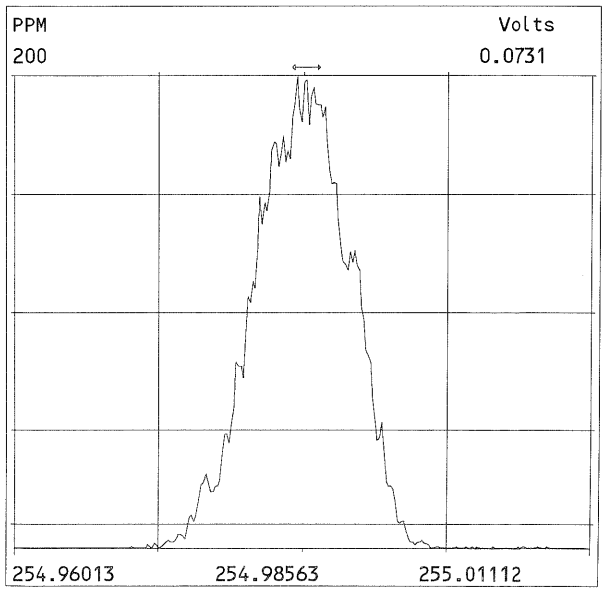


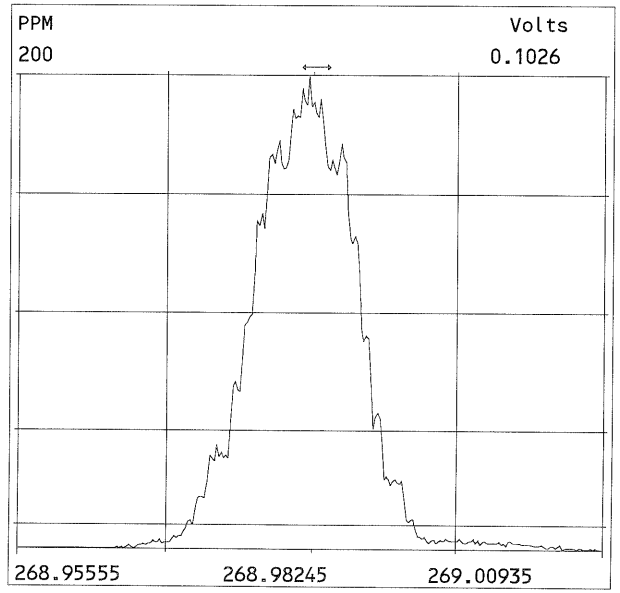
Peak Locate Examination:12-AUG-2016:07:42 File:11AUG16Z_RES_CHECK_PFK02
Experiment:1668PCB Function:2 Reference:PFK

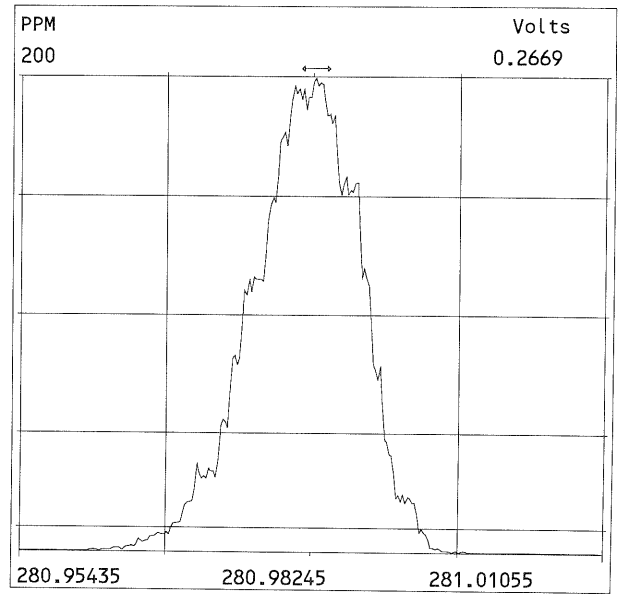




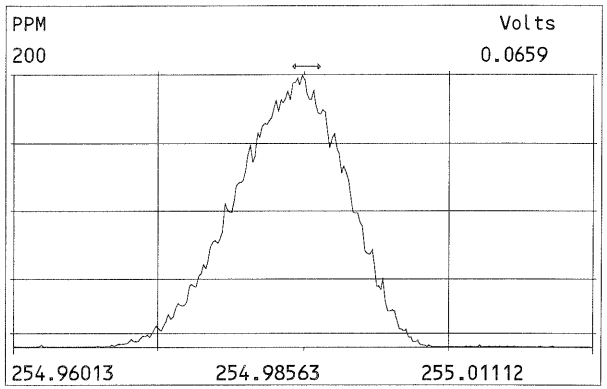


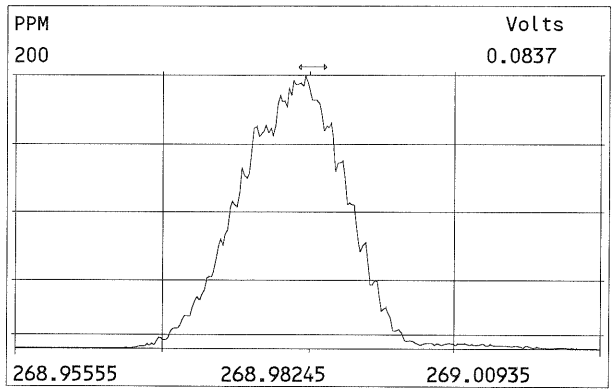


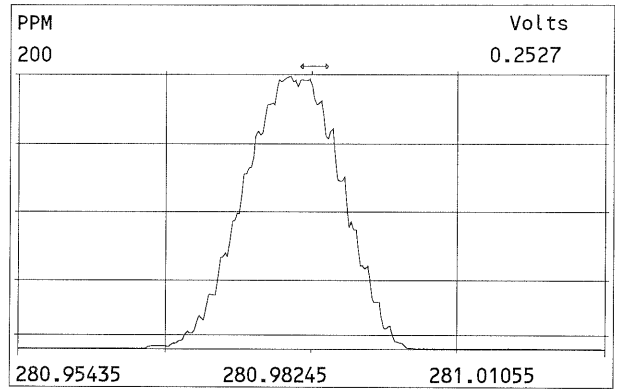


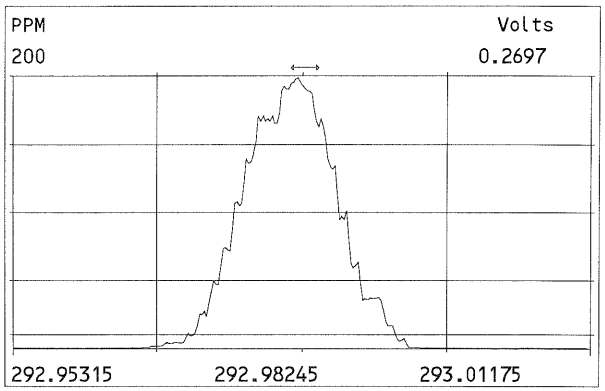


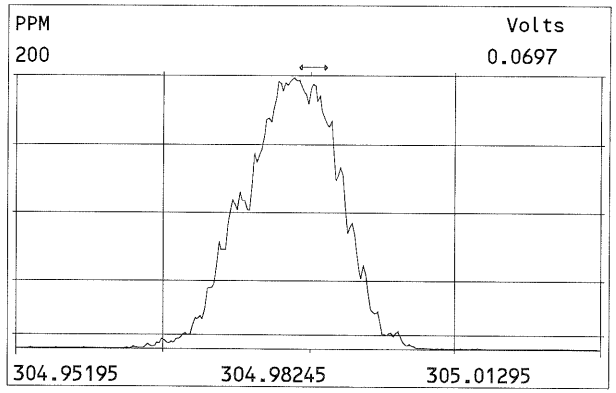
Peak Locate Examination:12-AUG-2016:07:43 File:11AUG16Z_RES_CHECK_PFK02
Experiment:1668PCB Function:3 Reference:PFK

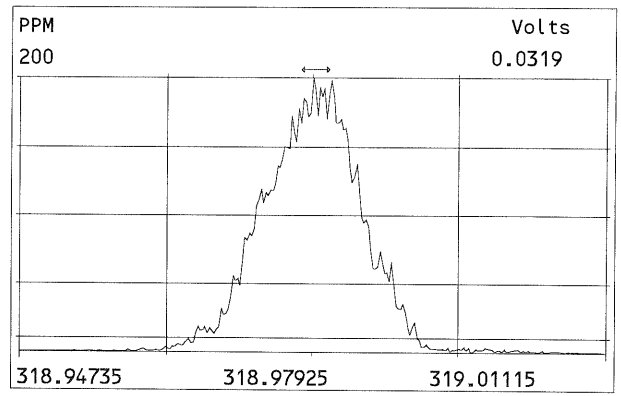


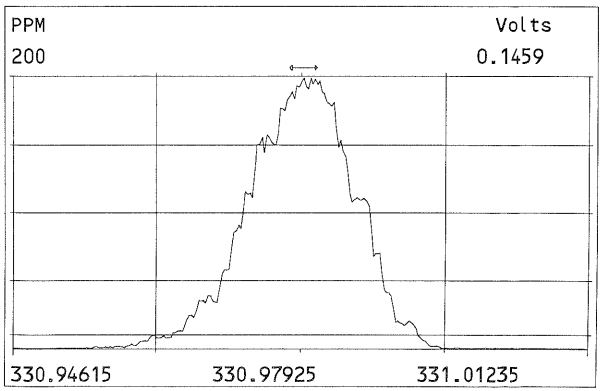


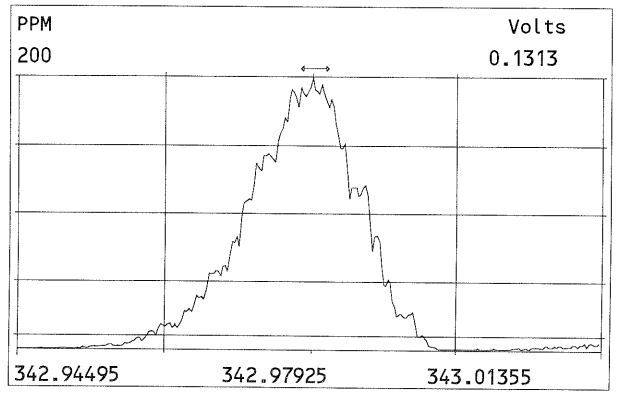




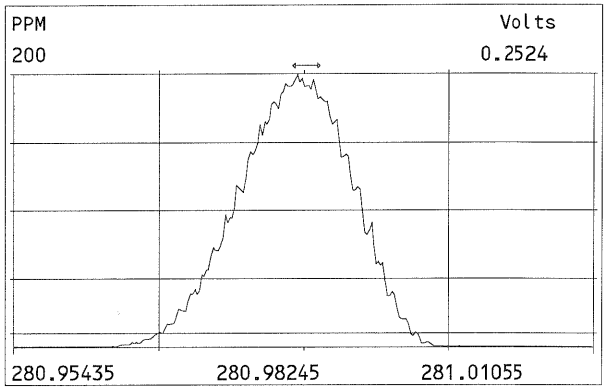


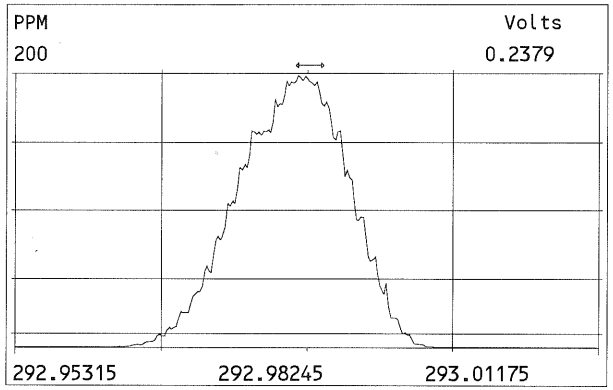


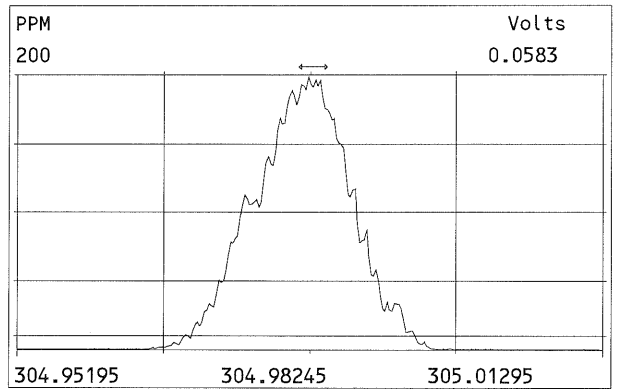


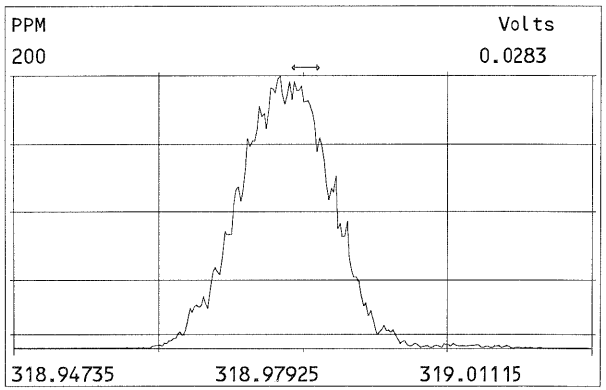


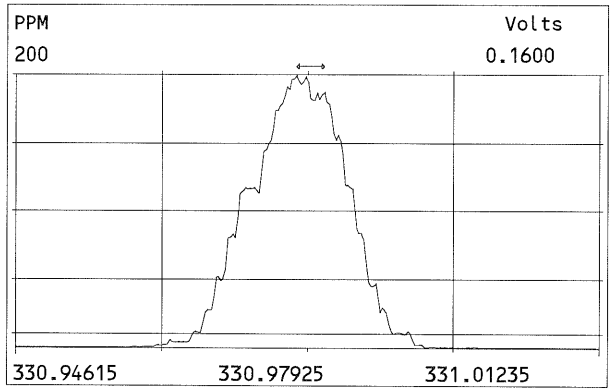
Peak Locate Examination:12-AUG-2016:07:43 File:11AUG16Z_RES_CHECK_PFK02
Experiment:1668PCB Function:4 Reference:PFK

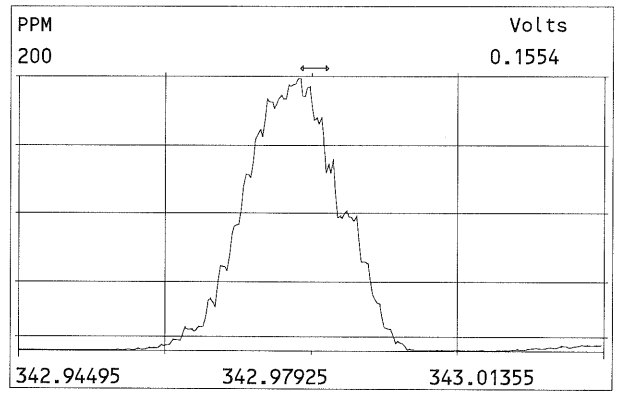


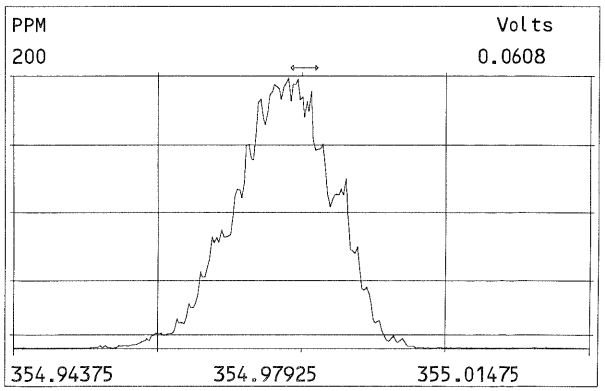


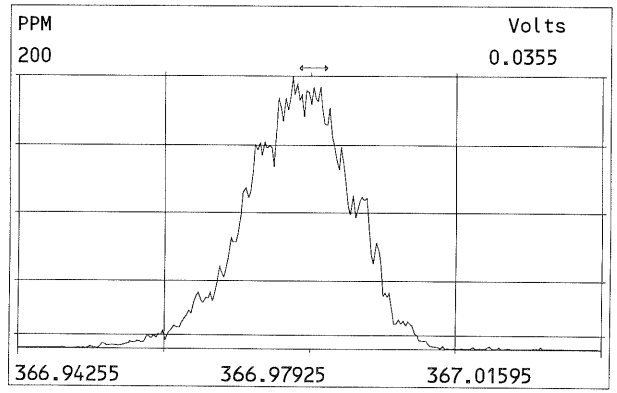


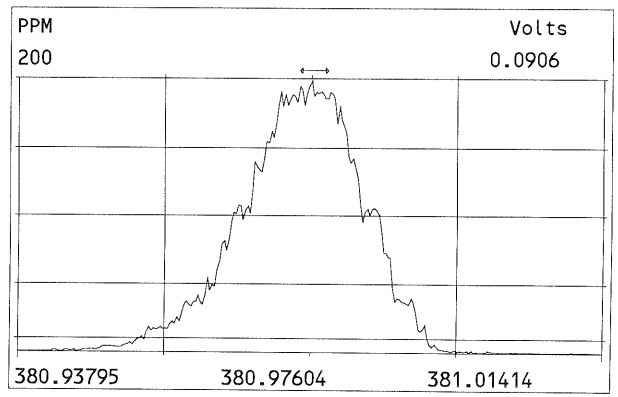




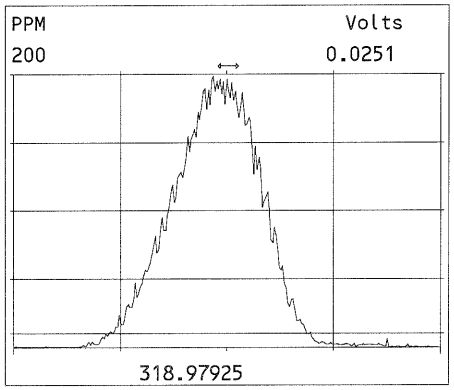


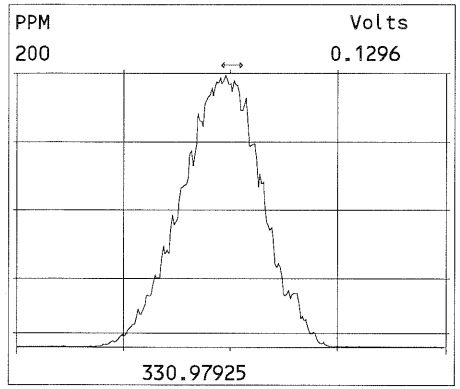


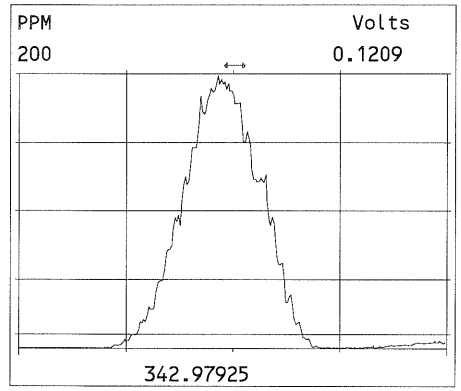


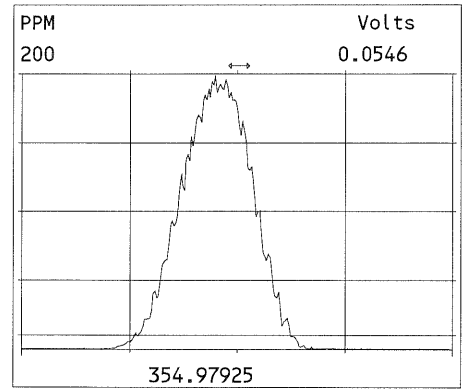


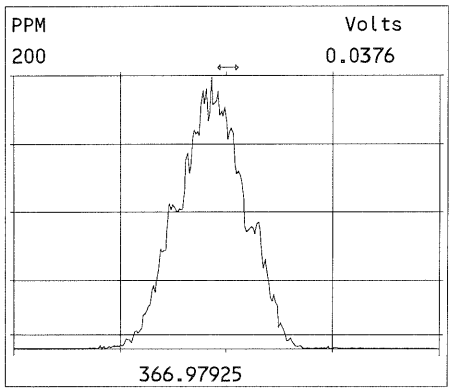
Peak Locate Examination:12-AUG-2016:07:44 File:11AUG16Z_RES_CHECK_PFK02
Experiment:1668PCB Function:5 Reference:PFK

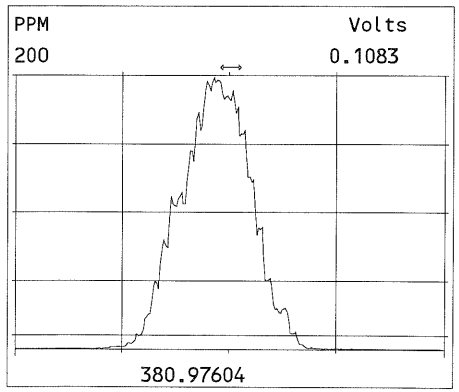


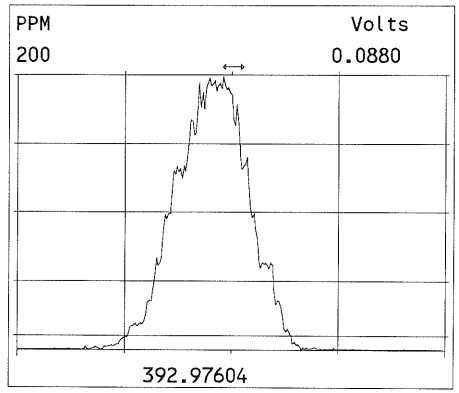


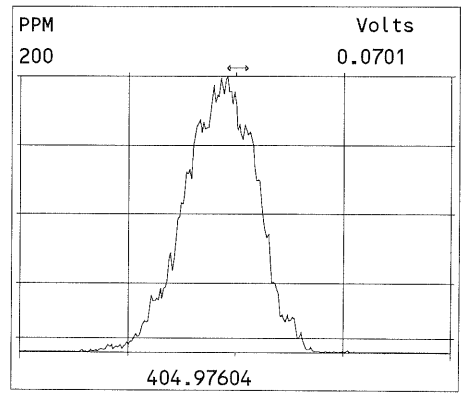


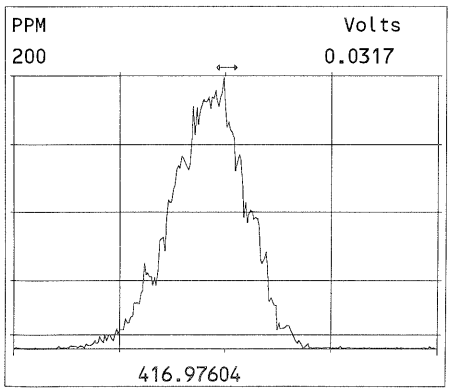


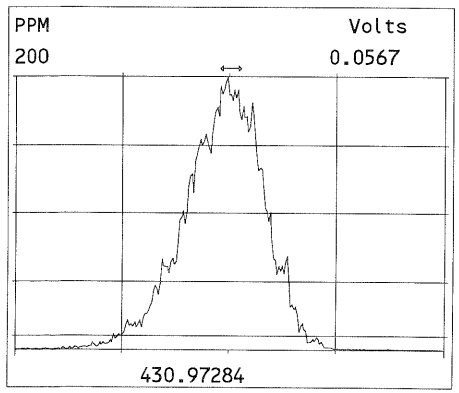


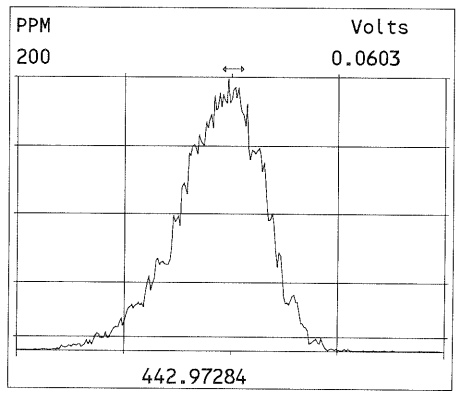




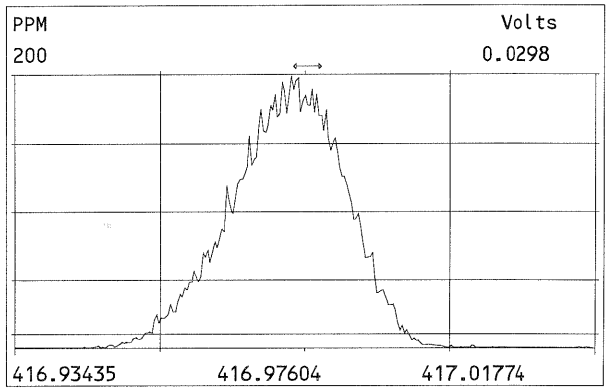


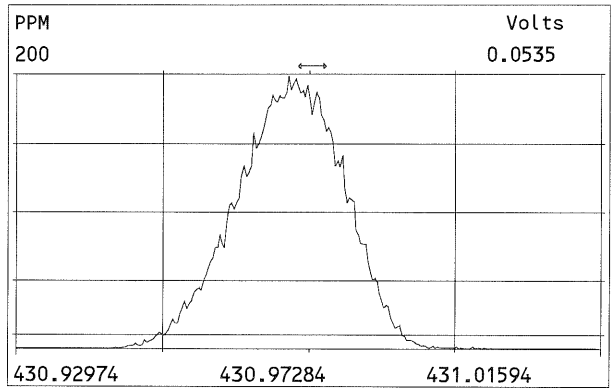


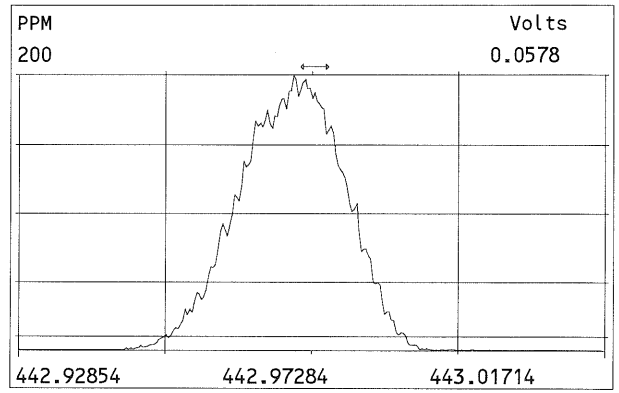


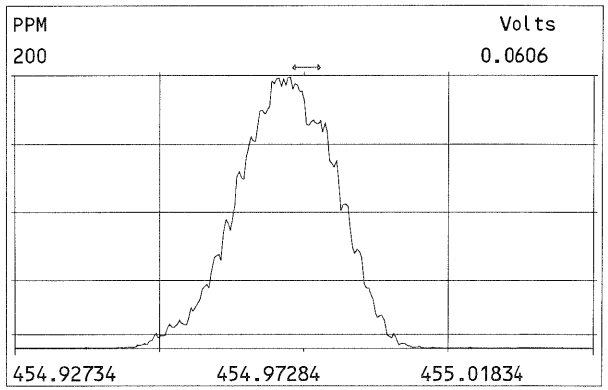


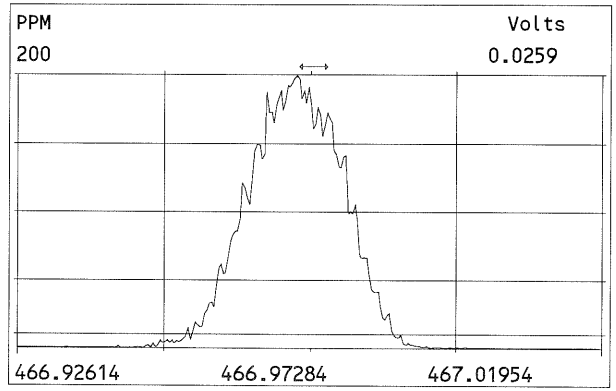
Peak Locate Examination:12-AUG-2016:07:44 File:11AUG16Z_RES_CHECK_PFK02
Experiment:1668PCB Function:6 Reference:PFK

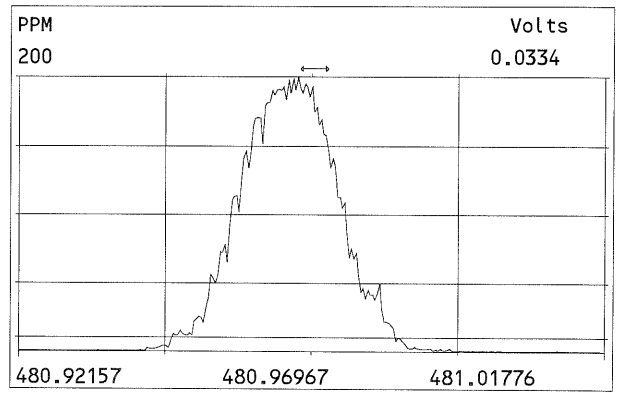


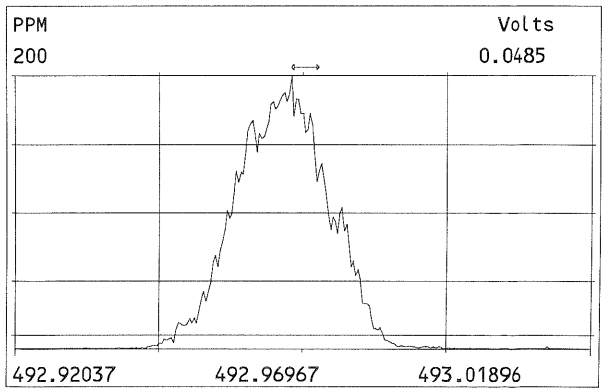


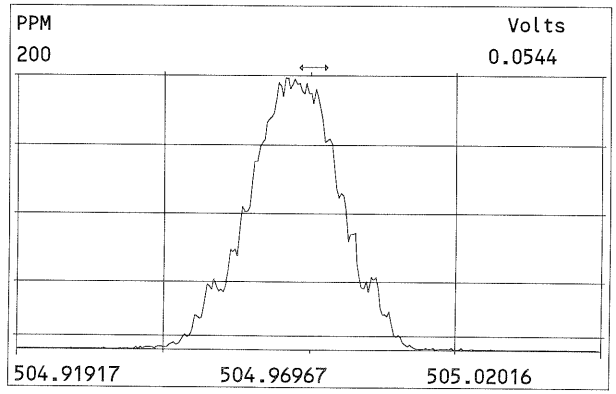


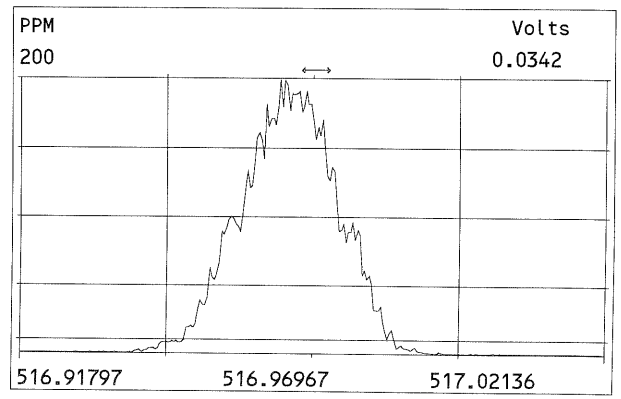












Frontier Analytical Laboratory

Data Filename: 20JUL16M

Analyte: PCDD

Cal: PCDDFAL3-7-20-16

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	1.16	0.106	9.14 %	1.27	1.27	1.16	1.18	1.08	1.00
1,2,3,7,8-PeCDD	1.00	0.0718	7.18 %	1.09	1.08	1.02	0.96	0.93	0.93
1,2,3,4,7,8-HxCDD	1.08	0.0902	8.35 %	1.19	1.15	1.14	1.01	0.99	0.99
1,2,3,6,7,8-HxCDD	1.08	0.104	9.67 %	1.20	1.20	1.08	0.99	0.98	1.01
1,2,3,7,8,9-HxCDD	1.12	0.0525	4.71 %	1.13	1.21	1.13	1.08	1.07	1.07
1,2,3,4,6,7,8-HpCDD	1.04	0.0588	5.64 %	1.09	1.11	1.07	1.01	1.00	0.96
OCDD	1.05	0.0520	4.93 %	1.12	1.11	1.06	1.04	1.00	1.00
2,3,7,8-TCDF	1.11	0.108	9.81 %	1.25	1.21	1.13	1.06	0.98	1.00
1,2,3,7,8-PeCDF	0.96	0.0526	5.50 %	1.03	1.01	0.97	0.93	0.90	0.91
2,3,4,7,8-PeCDF	0.95	0.0692	7.26 %	1.05	1.02	0.95	0.89	0.89	0.90
1,2,3,4,7,8-HxCDF	1.11	0.0778	7.03 %	1.20	1.19	1.14	1.03	1.04	1.05
1,2,3,6,7,8-HxCDF	1.07	0.0558	5.23 %	1.13	1.11	1.11	1.02	1.01	1.03
2,3,4,6,7,8-HxCDF	1.04	0.0565	5.43 %	1.09	1.10	1.09	0.99	0.99	0.99
1,2,3,7,8,9-HxCDF	1.03	0.0608	5.92 %	1.10	1.08	1.05	0.96	0.98	0.98
1,2,3,4,6,7,8-HpCDF	1.30	0.0659	5.07 %	1.37	1.35	1.36	1.25	1.23	1.24
1,2,3,4,7,8,9-HpCDF	1.23	0.0499	4.07 %	1.27	1.27	1.27	1.19	1.18	1.17
OCDF	0.89	0.0346	3.89 %	0.91	0.93	0.91	0.87	0.84	0.87
13C-2,3,7,8-TCDD	0.98	0.0230	2.35 %	1.01	1.00	0.98	0.94	0.97	0.98
13C-1,2,3,7,8-PeCDD	0.90	0.0326	3.63 %	0.85	0.88	0.91	0.88	0.92	0.95
13C-1,2,3,4,7,8-HxCDD	0.88	0.0144	1.65 %	0.87	0.87	0.88	0.87	0.87	0.90
13C-1,2,3,6,7,8-HxCDD	0.96	0.0187	1.95 %	1.00	0.95	0.96	0.96	0.95	0.94
13C-1,2,3,4,6,7,8-HpCDD	0.83	0.0265	3.21 %	0.85	0.80	0.82	0.80	0.81	0.87
13C-OCDD	0.66	0.0423	6.38 %	0.63	0.64	0.66	0.63	0.68	0.74
13C-2,3,7,8-TCDF	1.01	0.0451	4.48 %	1.09	0.99	1.00	1.02	0.97	0.97
13C-1,2,3,7,8-PeCDF	0.92	0.0283	3.07 %	0.87	0.93	0.91	0.93	0.94	0.95
13C-2,3,4,7,8-PeCDF	0.91	0.0332	3.65 %	0.86	0.92	0.88	0.93	0.92	0.95
13C-1,2,3,4,7,8-HxCDF	1.26	0.0104	0.827 %	1.26	1.27	1.26	1.26	1.24	1.26
13C-1,2,3,6,7,8-HxCDF	1.46	0.0332	2.27 %	1.51	1.47	1.47	1.48	1.41	1.44
13C-2,3,4,6,7,8-HxCDF	1.32	0.0315	2.38 %	1.37	1.34	1.32	1.29	1.30	1.33
13C-1,2,3,7,8,9-HxCDF	1.15	0.0282	2.45 %	1.16	1.14	1.13	1.16	1.13	1.20
13C-1,2,3,4,6,7,8-HpCDF	0.91	0.0185	2.02 %	0.92	0.90	0.91	0.89	0.90	0.94
13C-1,2,3,4,7,8,9-HpCDF	0.76	0.0196	2.60 %	0.76	0.75	0.74	0.74	0.75	0.79
13C-OCDF	0.93	0.0648	6.94 %	0.88	0.91	0.91	0.89	0.96	1.06
37Cl-2,3,7,8-TCDD	0.90	0.0629	6.96 %	0.97	0.97	0.93	0.88	0.83	0.84
13C-1,2,3,4-TCDD	-	-	- %	-	-	-	-	-	-
13C-1,2,3,4-TCDF	-	-	- %	-	-	-	-	-	-
13C-1,2,3,7,8,9-HxCDD	-	-	- %	-	-	-	-	-	-
Total Tetra-Dioxins	1.16	0.106	9.14 %	1.27	1.27	1.16	1.18	1.08	1.00
Total Penta-Dioxins	1.00	0.0718	7.18 %	1.09	1.08	1.02	0.96	0.93	0.93
Total Hexa-Dioxins	1.09	0.0794	7.28 %	1.17	1.19	1.12	1.03	1.01	1.03
Total Hepta-Dioxins	1.04	0.0588	5.64 %	1.09	1.11	1.07	1.01	1.00	0.96
Total Tetra-Furans	1.11	0.108	9.81 %	1.25	1.21	1.13	1.06	0.98	1.00
1st Fn. Tot Penta-Furans	0.95	0.0604	6.33 %	1.04	1.01	0.96	0.91	0.90	0.91
Total Penta-Furans	0.95	0.0604	6.33 %	1.04	1.01	0.96	0.91	0.90	0.91
Total Hexa-Furans	1.06	0.0618	5.82 %	1.13	1.12	1.10	1.00	1.01	1.01
Total Hepta-Furans	1.27	0.0586	4.63 %	1.33	1.31	1.32	1.22	1.21	1.21

Analyst: _____ Date: 7/21/16

Run #1 Filename 20JUL16M S: 1 Acquired: 20-JUL-16 09:36:19 Cal: PCDDFAL3-7-20-16
Client ID: ST072016MO Analyte: FAL ID: 1613 CSO 160711G

	Typ	Name	Amount	Resp	RA	RT		RF	RRF	
1	Unk	2,3,7,8-TCDD	0.25	2.04e+05	0.76 y	27:29		-	1.27	y
2	Unk	1,2,3,7,8-PeCDD	1.25	7.36e+05	1.52 y	33:20		-	1.09	y
3	Unk	1,2,3,4,7,8-HxCDD	1.25	6.30e+05	1.32 y	38:40		-	1.19	y
4	Unk	1,2,3,6,7,8-HxCDD	1.25	7.27e+05	1.26 y	38:50		-	1.20	y
5	Unk	1,2,3,7,8,9-HxCDD	1.25	6.40e+05	1.18 y	39:17		-	1.13	y
6	Unk	1,2,3,4,6,7,8-HpCDD	1.25	5.64e+05	1.00 y	44:13		-	1.09	y
7	Unk	OCDD	2.50	8.56e+05	1.02 y	49:43		-	1.12	y
8	Unk	2,3,7,8-TCDF	0.25	3.08e+05	0.75 y	26:44		-	1.25	y
9	Unk	1,2,3,7,8-PeCDF	1.25	1.01e+06	1.65 y	31:34		-	1.03	y
10	Unk	2,3,4,7,8-PeCDF	1.25	1.03e+06	1.66 y	32:57		-	1.05	y
11	Unk	1,2,3,4,7,8-HxCDF	1.25	9.22e+05	1.24 y	37:16		-	1.20	y
12	Unk	1,2,3,6,7,8-HxCDF	1.25	1.04e+06	1.28 y	37:28		-	1.13	y
13	Unk	2,3,4,6,7,8-HxCDF	1.25	9.08e+05	1.19 y	38:26		-	1.09	y
14	Unk	1,2,3,7,8,9-HxCDF	1.25	7.76e+05	1.31 y	39:54		-	1.10	y
15	Unk	1,2,3,4,6,7,8-HpCDF	1.25	7.69e+05	1.05 y	42:18		-	1.37	y
16	Unk	1,2,3,4,7,8,9-HpCDF	1.25	5.86e+05	1.01 y	45:11		-	1.27	y
17	Unk	OCDF	2.50	9.80e+05	0.80 y	50:09		-	0.913	y
18	IS/RT	13C-2,3,7,8-TCDD	100.00	6.40e+07	0.79 y	27:27		-	1.01	y
19	IS	13C-1,2,3,7,8-PeCDD	100.00	5.42e+07	1.61 y	33:19		-	0.855	y
20	IS	13C-1,2,3,4,7,8-HxCDD	100.00	4.23e+07	1.27 y	38:39		-	0.869	y
21	IS	13C-1,2,3,6,7,8-HxCDD	100.00	4.85e+07	1.27 y	38:49		-	0.995	y
22	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	4.12e+07	1.07 y	44:11		-	0.846	y
23	IS	13C-OCDD	200.00	6.12e+07	0.89 y	49:42		-	0.629	y
24	IS	13C-2,3,7,8-TCDF	100.00	9.86e+07	0.80 y	26:43		-	1.09	y
25	IS	13C-1,2,3,7,8-PeCDF	100.00	7.88e+07	1.57 y	31:33		-	0.870	y
26	IS	13C-2,3,4,7,8-PeCDF	100.00	7.79e+07	1.57 y	32:56		-	0.860	y
27	IS	13C-1,2,3,4,7,8-HxCDF	100.00	6.15e+07	0.52 y	37:14		-	1.26	y
28	IS	13C-1,2,3,6,7,8-HxCDF	100.00	7.35e+07	0.52 y	37:27		-	1.51	y
29	IS	13C-2,3,4,6,7,8-HxCDF	100.00	6.68e+07	0.52 y	38:25		-	1.37	y
30	IS	13C-1,2,3,7,8,9-HxCDF	100.00	5.63e+07	0.53 y	39:52		-	1.16	y
31	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	4.48e+07	0.49 y	42:17		-	0.920	y
32	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	3.68e+07	0.48 y	45:10		-	0.757	y
33	IS	13C-OCDF	200.00	8.58e+07	0.94 y	50:07		-	0.881	y
34	C/Up	37Cl-2,3,7,8-TCDD	0.25	1.54e+05		27:29		-	0.971	y
35	RS	13C-1,2,3,4-TCDD	100.00	6.35e+07	0.80 y	26:49	6.35e+05	-		n
36	RS	13C-1,2,3,4-TCDF	100.00	9.05e+07	0.80 y	25:33	9.05e+05	-		n
37	RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	4.87e+07	1.31 y	39:14	4.87e+05	-		n
38	Tot	Total Tetra-Dioxins	0.00	-	- n	-		-	1.27	y
39	Tot	Total Penta-Dioxins	0.00	-	- n	-		-	1.09	y
40	Tot	Total Hexa-Dioxins	0.00	-	- n	-		-	1.17	y
41	Tot	Total Hepta-Dioxins	0.00	-	- n	-		-	1.09	y
42	Tot	Total Tetra-Furans	0.00	-	- n	-		-	1.25	y
43	Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-		-	1.04	y
44	Tot	Total Penta-Furans	0.00	-	- n	-		-	1.04	y
45	Tot	Total Hexa-Furans	0.00	-	- n	-		-	1.13	y
46	Tot	Total Hepta-Furans	0.00	-	- n	-		-	1.33	y

Analyst: [signature] Date: 7/21/16

Run #2 Filename 20JUL16M S: 2 Acquired: 20-JUL-16 10:31:12 Cal: PCDDFAL3-7-20-16
Client ID: ST072016M1 Analyte: FAL ID: 1613 CS1 160711H

	Typ	Name	Amount	Resp	RA	RT	RF	RRF	
1	Unk	2,3,7,8-TCDD	0.50	3.36e+05	0.79 y	27:28	-	1.27	y
2	Unk	1,2,3,7,8-PeCDD	2.50	1.27e+06	1.63 y	33:21	-	1.08	y
3	Unk	1,2,3,4,7,8-HxCDD	2.50	1.06e+06	1.28 y	38:41	-	1.15	y
4	Unk	1,2,3,6,7,8-HxCDD	2.50	1.20e+06	1.28 y	38:51	-	1.20	y
5	Unk	1,2,3,7,8,9-HxCDD	2.50	1.16e+06	1.25 y	39:16	-	1.21	y
6	Unk	1,2,3,4,6,7,8-HpCDD	2.50	9.37e+05	0.94 y	44:13	-	1.11	y
7	Unk	OCDD	5.00	1.49e+06	0.84 y	49:44	-	1.11	y
8	Unk	2,3,7,8-TCDF	0.50	4.45e+05	0.73 y	26:45	-	1.21	y
9	Unk	1,2,3,7,8-PeCDF	2.50	1.74e+06	1.60 y	31:34	-	1.01	y
10	Unk	2,3,4,7,8-PeCDF	2.50	1.73e+06	1.63 y	32:57	-	1.02	y
11	Unk	1,2,3,4,7,8-HxCDF	2.50	1.58e+06	1.24 y	37:16	-	1.19	y
12	Unk	1,2,3,6,7,8-HxCDF	2.50	1.71e+06	1.27 y	37:29	-	1.11	y
13	Unk	2,3,4,6,7,8-HxCDF	2.50	1.55e+06	1.26 y	38:27	-	1.10	y
14	Unk	1,2,3,7,8,9-HxCDF	2.50	1.29e+06	1.26 y	39:53	-	1.08	y
15	Unk	1,2,3,4,6,7,8-HpCDF	2.50	1.27e+06	1.04 y	42:18	-	1.35	y
16	Unk	1,2,3,4,7,8,9-HpCDF	2.50	1.00e+06	0.98 y	45:11	-	1.27	y
17	Unk	OCDF	5.00	1.78e+06	0.90 y	50:09	-	0.934	y
18	IS/RT	13C-2,3,7,8-TCDD	100.00	5.32e+07	0.79 y	27:26	-	0.998	y
19	IS	13C-1,2,3,7,8-PeCDD	100.00	4.69e+07	1.59 y	33:18	-	0.880	y
20	IS	13C-1,2,3,4,7,8-HxCDD	100.00	3.66e+07	1.28 y	38:39	-	0.871	y
21	IS	13C-1,2,3,6,7,8-HxCDD	100.00	3.99e+07	1.27 y	38:49	-	0.949	y
22	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	3.37e+07	1.07 y	44:12	-	0.802	y
23	IS	13C-OCDD	200.00	5.36e+07	0.89 y	49:41	-	0.638	y
24	IS	13C-2,3,7,8-TCDF	100.00	7.38e+07	0.80 y	26:42	-	0.994	y
25	IS	13C-1,2,3,7,8-PeCDF	100.00	6.94e+07	1.57 y	31:33	-	0.934	y
26	IS	13C-2,3,4,7,8-PeCDF	100.00	6.81e+07	1.58 y	32:55	-	0.916	y
27	IS	13C-1,2,3,4,7,8-HxCDF	100.00	5.32e+07	0.53 y	37:15	-	1.27	y
28	IS	13C-1,2,3,6,7,8-HxCDF	100.00	6.17e+07	0.52 y	37:27	-	1.47	y
29	IS	13C-2,3,4,6,7,8-HxCDF	100.00	5.64e+07	0.53 y	38:25	-	1.34	y
30	IS	13C-1,2,3,7,8,9-HxCDF	100.00	4.77e+07	0.52 y	39:52	-	1.14	y
31	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	3.79e+07	0.49 y	42:17	-	0.901	y
32	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	3.16e+07	0.49 y	45:10	-	0.751	y
33	IS	13C-OCDF	200.00	7.61e+07	0.93 y	50:08	-	0.906	y
34	C/Up	37Cl-2,3,7,8-TCDD	0.50	2.59e+05		27:28	-	0.972	y
35	RS	13C-1,2,3,4-TCDD	100.00	5.33e+07	0.80 y	26:49	5.33e+05	-	n
36	RS	13C-1,2,3,4-TCDF	100.00	7.43e+07	0.80 y	25:33	7.43e+05	-	n
37	RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	4.20e+07	1.31 y	39:15	4.20e+05	-	n
38	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.27	y
39	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	1.08	y
40	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.19	y
41	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.11	y
42	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.21	y
43	Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	1.01	y
44	Tot	Total Penta-Furans	0.00	-	- n	-	-	1.01	y
45	Tot	Total Hexa-Furans	0.00	-	- n	-	-	1.12	y
46	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.31	y

Analyst: [signature] Date: 7/21/16

Run #3 Filename 20JUL16M S: 3 Acquired: 20-JUL-16 11:26:01 Cal: PCDDFAL3-7-20-16
Client ID: ST072016M2 Analyte: FAL ID: 1613 CS2 160711I

	Typ	Name	Amount	Resp	RA	RT	RF	RRF	
1	Unk	2,3,7,8-TCDD	2.00	1.20e+06	0.82 y	27:29	-	1.16	y
2	Unk	1,2,3,7,8-PeCDD	10.00	4.91e+06	1.58 y	33:20	-	1.02	y
3	Unk	1,2,3,4,7,8-HxCDD	10.00	4.26e+06	1.25 y	38:41	-	1.14	y
4	Unk	1,2,3,6,7,8-HxCDD	10.00	4.42e+06	1.27 y	38:51	-	1.08	y
5	Unk	1,2,3,7,8,9-HxCDD	10.00	4.42e+06	1.32 y	39:17	-	1.13	y
6	Unk	1,2,3,4,6,7,8-HpCDD	10.00	3.72e+06	1.00 y	44:14	-	1.07	y
7	Unk	OCDD	20.00	5.95e+06	0.88 y	49:44	-	1.06	y
8	Unk	2,3,7,8-TCDF	2.00	1.76e+06	0.77 y	26:44	-	1.13	y
9	Unk	1,2,3,7,8-PeCDF	10.00	6.84e+06	1.60 y	31:34	-	0.967	y
10	Unk	2,3,4,7,8-PeCDF	10.00	6.50e+06	1.61 y	32:57	-	0.950	y
11	Unk	1,2,3,4,7,8-HxCDF	10.00	6.09e+06	1.21 y	37:16	-	1.14	y
12	Unk	1,2,3,6,7,8-HxCDF	10.00	6.90e+06	1.23 y	37:29	-	1.11	y
13	Unk	2,3,4,6,7,8-HxCDF	10.00	6.06e+06	1.23 y	38:27	-	1.09	y
14	Unk	1,2,3,7,8,9-HxCDF	10.00	5.01e+06	1.22 y	39:54	-	1.05	y
15	Unk	1,2,3,4,6,7,8-HpCDF	10.00	5.26e+06	1.04 y	42:18	-	1.36	y
16	Unk	1,2,3,4,7,8,9-HpCDF	10.00	3.99e+06	1.01 y	45:11	-	1.27	y
17	Unk	OCDF	20.00	7.05e+06	0.91 y	50:09	-	0.909	y
18	IS/RT	13C-2,3,7,8-TCDD	100.00	5.20e+07	0.80 y	27:27	-	0.979	y
19	IS	13C-1,2,3,7,8-PeCDD	100.00	4.82e+07	1.57 y	33:18	-	0.907	y
20	IS	13C-1,2,3,4,7,8-HxCDD	100.00	3.74e+07	1.26 y	38:39	-	0.884	y
21	IS	13C-1,2,3,6,7,8-HxCDD	100.00	4.08e+07	1.26 y	38:50	-	0.963	y
22	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	3.49e+07	1.05 y	44:12	-	0.823	y
23	IS	13C-OCDD	200.00	5.61e+07	0.91 y	49:43	-	0.662	y
24	IS	13C-2,3,7,8-TCDF	100.00	7.76e+07	0.80 y	26:43	-	0.995	y
25	IS	13C-1,2,3,7,8-PeCDF	100.00	7.07e+07	1.59 y	31:33	-	0.906	y
26	IS	13C-2,3,4,7,8-PeCDF	100.00	6.85e+07	1.58 y	32:56	-	0.878	y
27	IS	13C-1,2,3,4,7,8-HxCDF	100.00	5.33e+07	0.52 y	37:15	-	1.26	y
28	IS	13C-1,2,3,6,7,8-HxCDF	100.00	6.21e+07	0.52 y	37:27	-	1.47	y
29	IS	13C-2,3,4,6,7,8-HxCDF	100.00	5.58e+07	0.53 y	38:25	-	1.32	y
30	IS	13C-1,2,3,7,8,9-HxCDF	100.00	4.78e+07	0.53 y	39:53	-	1.13	y
31	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	3.85e+07	0.49 y	42:17	-	0.909	y
32	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	3.14e+07	0.47 y	45:10	-	0.740	y
33	IS	13C-OCDF	200.00	7.75e+07	0.91 y	50:08	-	0.915	y
34	C/Up	37Cl-2,3,7,8-TCDD	2.00	9.88e+05		27:28	-	0.931	y
35	RS	13C-1,2,3,4-TCDD	100.00	5.31e+07	0.80 y	26:50	5.31e+05	-	n
36	RS	13C-1,2,3,4-TCDF	100.00	7.80e+07	0.80 y	25:33	7.80e+05	-	n
37	RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	4.24e+07	1.27 y	39:15	4.24e+05	-	n
38	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.16	y
39	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	1.02	y
40	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.12	y
41	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.07	y
42	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.13	y
43	Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.959	y
44	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.959	y
45	Tot	Total Hexa-Furans	0.00	-	- n	-	-	1.10	y
46	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.32	y

Analyst: [signature] Date: 7/21/16

Run #4 Filename 20JUL16M S: 4 Acquired: 20-JUL-16 12:20:54 Cal: PCDDFAL3-7-20-16
Client ID: ST072016M3 Analyte: FAL ID: 1613 CS3 160711J

	Typ	Name	Amount	Resp	RA	RT	RF	RRF	
1	Unk	2,3,7,8-TCDD	10.00	5.57e+06	0.80 y	27:29	-	1.18	y
2	Unk	1,2,3,7,8-PeCDD	50.00	2.11e+07	1.55 y	33:20	-	0.960	y
3	Unk	1,2,3,4,7,8-HxCDD	50.00	1.79e+07	1.26 y	38:41	-	1.01	y
4	Unk	1,2,3,6,7,8-HxCDD	50.00	1.91e+07	1.26 y	38:51	-	0.985	y
5	Unk	1,2,3,7,8,9-HxCDD	50.00	2.01e+07	1.25 y	39:16	-	1.08	y
6	Unk	1,2,3,4,6,7,8-HpCDD	50.00	1.65e+07	0.95 y	44:13	-	1.01	y
7	Unk	OCDD	100.00	2.67e+07	0.82 y	49:44	-	1.04	y
8	Unk	2,3,7,8-TCDF	10.00	7.61e+06	0.75 y	26:45	-	1.06	y
9	Unk	1,2,3,7,8-PeCDF	50.00	3.03e+07	1.59 y	31:35	-	0.929	y
10	Unk	2,3,4,7,8-PeCDF	50.00	2.91e+07	1.60 y	32:57	-	0.894	y
11	Unk	1,2,3,4,7,8-HxCDF	50.00	2.63e+07	1.23 y	37:16	-	1.03	y
12	Unk	1,2,3,6,7,8-HxCDF	50.00	3.04e+07	1.25 y	37:29	-	1.02	y
13	Unk	2,3,4,6,7,8-HxCDF	50.00	2.57e+07	1.23 y	38:27	-	0.989	y
14	Unk	1,2,3,7,8,9-HxCDF	50.00	2.24e+07	1.27 y	39:54	-	0.956	y
15	Unk	1,2,3,4,6,7,8-HpCDF	50.00	2.26e+07	1.04 y	42:18	-	1.25	y
16	Unk	1,2,3,4,7,8,9-HpCDF	50.00	1.78e+07	1.00 y	45:11	-	1.19	y
17	Unk	OCDF	100.00	3.13e+07	0.90 y	50:09	-	0.866	y
18	IS/RT	13C-2,3,7,8-TCDD	100.00	4.72e+07	0.80 y	27:28	-	0.944	y
19	IS	13C-1,2,3,7,8-PeCDD	100.00	4.39e+07	1.57 y	33:18	-	0.877	y
20	IS	13C-1,2,3,4,7,8-HxCDD	100.00	3.52e+07	1.27 y	38:39	-	0.870	y
21	IS	13C-1,2,3,6,7,8-HxCDD	100.00	3.89e+07	1.27 y	38:49	-	0.961	y
22	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	3.25e+07	1.07 y	44:12	-	0.804	y
23	IS	13C-OCDD	200.00	5.11e+07	0.90 y	49:42	-	0.632	y
24	IS	13C-2,3,7,8-TCDF	100.00	7.17e+07	0.80 y	26:43	-	1.02	y
25	IS	13C-1,2,3,7,8-PeCDF	100.00	6.52e+07	1.58 y	31:33	-	0.931	y
26	IS	13C-2,3,4,7,8-PeCDF	100.00	6.51e+07	1.57 y	32:56	-	0.930	y
27	IS	13C-1,2,3,4,7,8-HxCDF	100.00	5.10e+07	0.52 y	37:15	-	1.26	y
28	IS	13C-1,2,3,6,7,8-HxCDF	100.00	5.99e+07	0.53 y	37:27	-	1.48	y
29	IS	13C-2,3,4,6,7,8-HxCDF	100.00	5.20e+07	0.53 y	38:24	-	1.29	y
30	IS	13C-1,2,3,7,8,9-HxCDF	100.00	4.69e+07	0.52 y	39:52	-	1.16	y
31	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	3.61e+07	0.48 y	42:17	-	0.893	y
32	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	2.99e+07	0.49 y	45:09	-	0.739	y
33	IS	13C-OCDF	200.00	7.23e+07	0.93 y	50:08	-	0.894	y
34	C/Up	37Cl-2,3,7,8-TCDD	10.00	4.42e+06		27:29	-	0.882	y
35	RS	13C-1,2,3,4-TCDD	100.00	5.01e+07	0.79 y	26:49	5.01e+05	-	n
36	RS	13C-1,2,3,4-TCDF	100.00	7.00e+07	0.80 y	25:34	7.00e+05	-	n
37	RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	4.05e+07	1.25 y	39:15	4.05e+05	-	n
38	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.18	y
39	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	0.960	y
40	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.03	y
41	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	1.01	y
42	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.06	y
43	Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.911	y
44	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.911	y
45	Tot	Total Hexa-Furans	0.00	-	- n	-	-	0.999	y
46	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.22	y

Analyst: [illegible] Date: 7/21/16

Run #5 Filename 20JUL16M S: 5 Acquired: 20-JUL-16 13:15:47 Cal: PCDDFAL3-7-20-16
Client ID: ST072016M4 Analyte: FAL ID: 1613 CS4 160711K

	Typ	Name	Amount	Resp	RA	RT	RF	RRF	
1	Unk	2,3,7,8-TCDD	40.00	2.20e+07	0.79 y	27:29	-	1.08	y
2	Unk	1,2,3,7,8-PeCDD	200.00	9.01e+07	1.58 y	33:21	-	0.930	y
3	Unk	1,2,3,4,7,8-HxCDD	200.00	7.82e+07	1.26 y	38:41	-	0.989	y
4	Unk	1,2,3,6,7,8-HxCDD	200.00	8.45e+07	1.26 y	38:51	-	0.975	y
5	Unk	1,2,3,7,8,9-HxCDD	200.00	8.87e+07	1.25 y	39:17	-	1.07	y
6	Unk	1,2,3,4,6,7,8-HpCDD	200.00	7.39e+07	0.98 y	44:13	-	0.999	y
7	Unk	OCDD	400.00	1.24e+08	0.93 y	49:44	-	1.00	y
8	Unk	2,3,7,8-TCDF	40.00	2.93e+07	0.77 y	26:45	-	0.983	y
9	Unk	1,2,3,7,8-PeCDF	200.00	1.29e+08	1.61 y	31:35	-	0.896	y
10	Unk	2,3,4,7,8-PeCDF	200.00	1.27e+08	1.59 y	32:57	-	0.895	y
11	Unk	1,2,3,4,7,8-HxCDF	200.00	1.18e+08	1.25 y	37:16	-	1.04	y
12	Unk	1,2,3,6,7,8-HxCDF	200.00	1.30e+08	1.24 y	37:29	-	1.01	y
13	Unk	2,3,4,6,7,8-HxCDF	200.00	1.17e+08	1.23 y	38:27	-	0.989	y
14	Unk	1,2,3,7,8,9-HxCDF	200.00	1.02e+08	1.24 y	39:53	-	0.984	y
15	Unk	1,2,3,4,6,7,8-HpCDF	200.00	1.02e+08	1.02 y	42:18	-	1.23	y
16	Unk	1,2,3,4,7,8,9-HpCDF	200.00	8.12e+07	1.06 y	45:11	-	1.18	y
17	Unk	OCDF	400.00	1.47e+08	0.91 y	50:09	-	0.843	y
18	IS/RT	13C-2,3,7,8-TCDD	100.00	5.13e+07	0.80 y	27:28	-	0.968	y
19	IS	13C-1,2,3,7,8-PeCDD	100.00	4.84e+07	1.57 y	33:19	-	0.915	y
20	IS	13C-1,2,3,4,7,8-HxCDD	100.00	3.96e+07	1.28 y	38:39	-	0.865	y
21	IS	13C-1,2,3,6,7,8-HxCDD	100.00	4.33e+07	1.25 y	38:49	-	0.948	y
22	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	3.70e+07	1.07 y	44:12	-	0.809	y
23	IS	13C-OCDD	200.00	6.22e+07	0.94 y	49:43	-	0.680	y
24	IS	13C-2,3,7,8-TCDF	100.00	7.46e+07	0.79 y	26:43	-	0.969	y
25	IS	13C-1,2,3,7,8-PeCDF	100.00	7.21e+07	1.59 y	31:33	-	0.937	y
26	IS	13C-2,3,4,7,8-PeCDF	100.00	7.12e+07	1.57 y	32:56	-	0.925	y
27	IS	13C-1,2,3,4,7,8-HxCDF	100.00	5.66e+07	0.52 y	37:15	-	1.24	y
28	IS	13C-1,2,3,6,7,8-HxCDF	100.00	6.45e+07	0.52 y	37:27	-	1.41	y
29	IS	13C-2,3,4,6,7,8-HxCDF	100.00	5.93e+07	0.53 y	38:25	-	1.30	y
30	IS	13C-1,2,3,7,8,9-HxCDF	100.00	5.18e+07	0.53 y	39:53	-	1.13	y
31	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	4.12e+07	0.49 y	42:17	-	0.901	y
32	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	3.44e+07	0.49 y	45:10	-	0.753	y
33	IS	13C-OCDF	200.00	8.75e+07	0.91 y	50:09	-	0.956	y
34	C/Up	37Cl-2,3,7,8-TCDD	40.00	1.77e+07		27:29	-	0.834	y
35	RS	13C-1,2,3,4-TCDD	100.00	5.29e+07	0.80 y	26:50	5.29e+05	-	n
36	RS	13C-1,2,3,4-TCDF	100.00	7.70e+07	0.82 y	25:34	7.70e+05	-	n
37	RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	4.57e+07	1.30 y	39:16	4.57e+05	-	n
38	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.08	y
39	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	0.930	y
40	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.01	y
41	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	0.999	y
42	Tot	Total Tetra-Furans	0.00	-	- n	-	-	0.983	y
43	Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.896	y
44	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.896	y
45	Tot	Total Hexa-Furans	0.00	-	- n	-	-	1.01	y
46	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.21	y

Analyst: R Date: 7/21/16

Run #6 Filename 20JUL16M S: 6 Acquired: 20-JUL-16 14:10:41 Cal: PCDDFAL3-7-20-16
Client ID: ST072016M5 Analyte: PCDD FAL ID: 1613 CS5 160711L

	Typ	Name	Amount	Resp	RA	RT	RF	RRF	
1	Unk	2,3,7,8-TCDD	200.00	9.53e+07	0.78 y	27:29	-	1.00	y
2	Unk	1,2,3,7,8-PeCDD	1000.00	4.27e+08	1.60 y	33:21	-	0.930	y
3	Unk	1,2,3,4,7,8-HxCDD	1000.00	3.92e+08	1.26 y	38:41	-	0.995	y
4	Unk	1,2,3,6,7,8-HxCDD	1000.00	4.16e+08	1.26 y	38:51	-	1.01	y
5	Unk	1,2,3,7,8,9-HxCDD	1000.00	4.32e+08	1.26 y	39:17	-	1.07	y
6	Unk	1,2,3,4,6,7,8-HpCDD	1000.00	3.64e+08	1.00 y	44:14	-	0.963	y
7	Unk	OCDD	2000.00	6.43e+08	0.88 y	49:45	-	0.997	y
8	Unk	2,3,7,8-TCDF	200.00	1.37e+08	0.76 y	26:45	-	1.00	y
9	Unk	1,2,3,7,8-PeCDF	1000.00	6.07e+08	1.59 y	31:35	-	0.910	y
10	Unk	2,3,4,7,8-PeCDF	1000.00	6.03e+08	1.57 y	32:57	-	0.903	y
11	Unk	1,2,3,4,7,8-HxCDF	1000.00	5.77e+08	1.24 y	37:17	-	1.05	y
12	Unk	1,2,3,6,7,8-HxCDF	1000.00	6.44e+08	1.23 y	37:29	-	1.03	y
13	Unk	2,3,4,6,7,8-HxCDF	1000.00	5.73e+08	1.24 y	38:27	-	0.988	y
14	Unk	1,2,3,7,8,9-HxCDF	1000.00	5.16e+08	1.22 y	39:54	-	0.983	y
15	Unk	1,2,3,4,6,7,8-HpCDF	1000.00	5.12e+08	1.02 y	42:18	-	1.24	y
16	Unk	1,2,3,4,7,8,9-HpCDF	1000.00	4.04e+08	1.01 y	45:12	-	1.17	y
17	Unk	OCDF	2000.00	8.02e+08	0.90 y	50:11	-	0.871	y
18	IS/RT	13C-2,3,7,8-TCDD	100.00	4.75e+07	0.79 y	27:28	-	0.978	y
19	IS	13C-1,2,3,7,8-PeCDD	100.00	4.59e+07	1.57 y	33:19	-	0.946	y
20	IS	13C-1,2,3,4,7,8-HxCDD	100.00	3.94e+07	1.27 y	38:40	-	0.904	y
21	IS	13C-1,2,3,6,7,8-HxCDD	100.00	4.12e+07	1.27 y	38:50	-	0.945	y
22	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	3.78e+07	1.07 y	44:13	-	0.868	y
23	IS	13C-OCDD	200.00	6.45e+07	0.92 y	49:44	-	0.740	y
24	IS	13C-2,3,7,8-TCDF	100.00	6.83e+07	0.80 y	26:43	-	0.969	y
25	IS	13C-1,2,3,7,8-PeCDF	100.00	6.67e+07	1.59 y	31:34	-	0.946	y
26	IS	13C-2,3,4,7,8-PeCDF	100.00	6.67e+07	1.59 y	32:56	-	0.947	y
27	IS	13C-1,2,3,4,7,8-HxCDF	100.00	5.50e+07	0.52 y	37:15	-	1.26	y
28	IS	13C-1,2,3,6,7,8-HxCDF	100.00	6.28e+07	0.52 y	37:28	-	1.44	y
29	IS	13C-2,3,4,6,7,8-HxCDF	100.00	5.81e+07	0.52 y	38:26	-	1.33	y
30	IS	13C-1,2,3,7,8,9-HxCDF	100.00	5.25e+07	0.52 y	39:53	-	1.20	y
31	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	4.11e+07	0.47 y	42:18	-	0.944	y
32	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	3.45e+07	0.49 y	45:10	-	0.793	y
33	IS	13C-OCDF	200.00	9.20e+07	0.94 y	50:09	-	1.06	y
34	C/Up	37Cl-2,3,7,8-TCDD	200.00	8.12e+07		27:29	-	0.836	y
35	RS	13C-1,2,3,4-TCDD	100.00	4.85e+07	0.81 y	26:50	4.85e+05	-	n
36	RS	13C-1,2,3,4-TCDF	100.00	7.05e+07	0.80 y	25:33	7.05e+05	-	n
37	RS/RT	13C-1,2,3,7,8,9-HxCDD	100.00	4.36e+07	1.29 y	39:16	4.36e+05	-	n
38	Tot	Total Tetra-Dioxins	0.00	-	- n	-	-	1.00	y
39	Tot	Total Penta-Dioxins	0.00	-	- n	-	-	0.930	y
40	Tot	Total Hexa-Dioxins	0.00	-	- n	-	-	1.03	y
41	Tot	Total Hepta-Dioxins	0.00	-	- n	-	-	0.963	y
42	Tot	Total Tetra-Furans	0.00	-	- n	-	-	1.00	y
43	Tot	1st Fn. Tot Penta-Furans	0.00	-	- n	-	-	0.907	y
44	Tot	Total Penta-Furans	0.00	-	- n	-	-	0.907	y
45	Tot	Total Hexa-Furans	0.00	-	- n	-	-	1.01	y
46	Tot	Total Hepta-Furans	0.00	-	- n	-	-	1.21	y

Analyst: [illegible] Date: 7/21/16

USEPA - ITD

FORM 3A
PCDD/PCDF INITIAL CALIBRATION RELATIVE RESPONSES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 7/20/16

Instrument ID: FAL3 GC Column ID: DB5

CS0 Data Filename: 20JUL16M S1 CS3 Data Filename: 20JUL16M S4

CS1 Data Filename: 20JUL16M S2 CS4 Data Filename: 20JUL16M S5

CS2 Data Filename: 20JUL16M S3 CS5 Data Filename: 20JUL16M S6

	RELATIVE RESPONSE (RR)						MEAN RR	Cv (%RSD)
	CS1	CS2	CS3	CS4	CS5	CS6		
NATIVE ANALYTES								
2,3,7,8-TCDD	1.27	1.27	1.16	1.18	1.08	1.00	1.16	9.14
1,2,3,7,8-PeCDD	1.09	1.08	1.02	0.96	0.93	0.93	1.00	7.18
1,2,3,4,7,8-HxCDD	1.19	1.15	1.14	1.01	0.99	0.99	1.08	8.35
1,2,3,6,7,8-HxCDD	1.20	1.20	1.08	0.99	0.98	1.01	1.08	9.67
1,2,3,7,8,9-HxCDD	1.13	1.21	1.13	1.08	1.07	1.07	1.12	4.71
1,2,3,4,6,7,8-HpCDD	1.09	1.11	1.07	1.01	1.00	0.96	1.04	5.64
OCDD	1.12	1.11	1.06	1.04	1.00	1.00	1.05	4.93
2,3,7,8-TCDF	1.25	1.21	1.13	1.06	0.98	1.00	1.11	9.81
1,2,3,7,8-PeCDF	1.03	1.01	0.97	0.93	0.90	0.91	0.96	5.50
2,3,4,7,8-PeCDF	1.05	1.02	0.95	0.89	0.89	0.90	0.95	7.26
1,2,3,4,7,8-HxCDF	1.20	1.19	1.14	1.03	1.04	1.05	1.11	7.03
1,2,3,6,7,8-HxCDF	1.13	1.11	1.11	1.02	1.01	1.03	1.07	5.23
2,3,4,6,7,8-HxCDF	1.09	1.10	1.09	0.99	0.99	0.99	1.04	5.43
1,2,3,7,8,9-HxCDF	1.10	1.08	1.05	0.96	0.98	0.98	1.03	5.92
1,2,3,4,6,7,8-HpCDF	1.37	1.35	1.36	1.25	1.23	1.24	1.30	5.07
1,2,3,4,7,8,9-HpCDF	1.27	1.27	1.27	1.19	1.18	1.17	1.23	4.07
OCDF	0.91	0.93	0.91	0.87	0.84	0.87	0.89	3.89

Analyst: R Date: 7/21/16

USEPA - ITD

FORM 3B
PCDD/PCDF INITIAL CALIBRATION RELATIVE RESPONSES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 7/20/16

Instrument ID: FAL3 GC Column ID: DB5

CS0 Data Filename: 20JUL16M S1 CS4 Data Filename: 20JUL16M S4

CS1 Data Filename: 20JUL16M S2 CS4 Data Filename: 20JUL16M S5

CS2 Data Filename: 20JUL16M S3 CS5 Data Filename: 20JUL16M S6

	RELATIVE RESPONSE (RR)						MEAN RR	Cv (%RSD)
	CS1	CS2	CS3	CS4	CS5	CS6		
LABELED COMPOUNDS								
13C-2,3,7,8-TCDD	1.01	1.00	0.98	0.94	0.97	0.98	0.98	2.35
13C-1,2,3,7,8-PeCDD	0.85	0.88	0.91	0.88	0.92	0.95	0.90	3.63
13C-1,2,3,4,7,8-HxCDD	0.87	0.87	0.88	0.87	0.87	0.90	0.88	1.65
13C-1,2,3,6,7,8-HxCDD	1.00	0.95	0.96	0.96	0.95	0.94	0.96	1.95
13C-1,2,3,4,6,7,8-HpCDD	0.85	0.80	0.82	0.80	0.81	0.87	0.83	3.21
13C-OCDD	0.63	0.64	0.66	0.63	0.68	0.74	0.66	6.38
13C-2,3,7,8-TCDF	1.09	0.99	1.00	1.02	0.97	0.97	1.01	4.48
13C-1,2,3,7,8-PeCDF	0.87	0.93	0.91	0.93	0.94	0.95	0.92	3.07
13C-2,3,4,7,8-PeCDF	0.86	0.92	0.88	0.93	0.92	0.95	0.91	3.65
13C-1,2,3,4,7,8-HxCDF	1.26	1.27	1.26	1.26	1.24	1.26	1.26	0.827
13C-1,2,3,6,7,8-HxCDF	1.51	1.47	1.47	1.48	1.41	1.44	1.46	2.27
13C-2,3,4,6,7,8-HxCDF	1.37	1.34	1.32	1.29	1.30	1.33	1.32	2.38
13C-1,2,3,7,8,9-HxCDF	1.16	1.14	1.13	1.16	1.13	1.20	1.15	2.45
13C-1,2,3,4,6,7,8-HpCDF	0.92	0.90	0.91	0.89	0.90	0.94	0.91	2.02
13C-1,2,3,4,7,8,9-HpCDF	0.76	0.75	0.74	0.74	0.75	0.79	0.76	2.60
13C-OCDF	0.88	0.91	0.91	0.89	0.96	1.06	0.93	6.94
CLEANUP STANDARD								
37Cl-2,3,7,8-TCDD	0.97	0.97	0.93	0.88	0.83	0.84	0.90	6.96

Analyst: [signature] Date: 7/21/16

USEPA - ITD

FORM 3C

PCDD/PCDF INITIAL CALIBRATION ION ABUNDANCE RATIOS

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 7/20/16

Instrument ID: FAL3 GC Column ID: DB5

CS0 Data Filename: 20JUL16M S1 CS3 Data Filename: 20JUL16M S4

CS1 Data Filename: 20JUL16M S2 CS4 Data Filename: 20JUL16M S5

CS2 Data Filename: 20JUL16M S3 CS5 Data Filename: 20JUL16M S6

NATIVE ANALYTES	M/Z'S FORMING RATIO	ION ABUNDANCE RATIOS CS1	CS2	CS3	CS4	CS5	CS6	QC LIMITS
2,3,7,8-TCDD	M/M+2	0.76	0.79	0.82	0.80	0.79	0.78	0.65-0.89
1,2,3,7,8-PeCDD	M+2/M+4	1.52	1.63	1.58	1.55	1.58	1.60	1.32-1.78
1,2,3,4,7,8-HxCDD	M+2/M+4	1.32	1.28	1.25	1.26	1.26	1.26	1.05-1.43
1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.28	1.27	1.26	1.26	1.26	1.05-1.43
1,2,3,7,8,9-HxCDD	M+2/M+4	1.18	1.25	1.32	1.25	1.25	1.26	1.05-1.43
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.00	0.94	1.00	0.95	0.98	1.00	0.88-1.20
OCDD	M+2/M+4	1.02	0.84	0.88	0.82	0.93	0.88	0.76-1.02
2,3,7,8-TCDF	M/M+2	0.75	0.73	0.77	0.75	0.77	0.76	0.65-0.89
1,2,3,7,8-PeCDF	M+2/M+4	1.65	1.60	1.60	1.59	1.61	1.59	1.32-1.78
2,3,4,7,8-PeCDF	M+2/M+4	1.66	1.63	1.61	1.60	1.59	1.57	1.32-1.78
1,2,3,4,7,8-HxCDF	M+2/M+4	1.24	1.24	1.21	1.23	1.25	1.24	1.05-1.43
1,2,3,6,7,8-HxCDF	M+2/M+4	1.28	1.27	1.23	1.25	1.24	1.23	1.05-1.43
2,3,4,6,7,8-HxCDF	M+2/M+4	1.19	1.26	1.23	1.23	1.23	1.24	1.05-1.43
1,2,3,7,8,9-HxCDF	M+2/M+4	1.31	1.26	1.22	1.27	1.24	1.22	1.05-1.43
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	1.04	1.04	1.04	1.02	1.02	0.88-1.20
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.01	0.98	1.01	1.00	1.06	1.01	0.88-1.20
OCDF	M+2/M+4	0.80	0.90	0.91	0.90	0.91	0.90	0.76-1.02

Analyst: [signature] Date: 7/21/16

USEPA - ITD

FORM 3D

PCDD/PCDF INITIAL CALIBRATION ION ABUNDANCE RATIOS

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 7/20/16

Instrument ID: FAL3 GC Column ID: DB5

CS0 Data Filename: 20JUL16M S1 CS3 Data Filename: 20JUL16M S4

CS1 Data Filename: 20JUL16M S2 CS4 Data Filename: 20JUL16M S5

CS2 Data Filename: 20JUL16M S3 CS5 Data Filename: 20JUL16M S6

LABELED COMPOUNDS	M/Z'S FORMING RATIO	ION ABUNDANCE RATIOS CS1	CS2	CS3	CS4	CS5	CS6	QC LIMITS
13C-2,3,7,8-TCDD	M/M+2	0.79	0.79	0.80	0.80	0.80	0.79	0.65-0.89
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.61	1.59	1.57	1.57	1.57	1.57	1.32-1.78
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.28	1.26	1.27	1.28	1.27	1.05-1.43
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.27	1.26	1.27	1.25	1.27	1.05-1.43
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	1.07	1.05	1.07	1.07	1.07	0.88-1.20
13C-OCDD	M+2/M+4	0.89	0.89	0.91	0.90	0.94	0.92	0.76-1.02
13C-2,3,7,8-TCDF	M/M+2	0.80	0.80	0.80	0.80	0.79	0.80	0.65-0.89
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.57	1.59	1.58	1.59	1.59	1.32-1.78
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.58	1.58	1.57	1.57	1.59	1.32-1.78
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.53	0.52	0.52	0.52	0.52	0.43-0.59
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.52	0.52	0.53	0.52	0.52	0.43-0.59
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.52	0.53	0.53	0.53	0.53	0.52	0.43-0.59
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.52	0.53	0.52	0.53	0.52	0.43-0.59
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.49	0.49	0.49	0.48	0.49	0.47	0.37-0.51
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.48	0.49	0.47	0.49	0.49	0.49	0.37-0.51
13C-OCDF	M+2/M+4	0.94	0.93	0.91	0.93	0.91	0.94	0.76-1.02

Analyst: [signature] Date: 7/21/16

USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 7/20/16

Instrument ID: FAL3 GC Column ID: DB5MS

VER Data Filename: 20JUL16M Sam:4 Analysis Date: 20-JUL-16 12:20:54

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	y	10.2	7.80 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	1.55	1.32-1.78	y	48.0	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	47.0	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	45.8	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	y	48.6	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	0.95	0.88-1.20	y	48.7	43.0 - 58.0
OCDD	M+2/M+4	0.82	0.76-1.02	y	98.9	79.0 - 126
2,3,7,8-TCDF	M/M+2	0.75	0.65-0.89	y	9.61	8.40 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	48.6	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	46.9	41.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	46.5	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	47.6	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	47.6	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	y	46.6	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.04	0.88-1.20	y	48.0	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.00	0.88-1.20	y	48.6	43.0 - 58.0
OCDF	M+2/M+4	0.90	0.76-1.02	y	97.4	63.0 - 159

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

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

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

Analyst: _____ Date: 7/21/16

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 7/20/16

Instrument ID: FAL3 GC Column ID: DB5MS

VER Data Filename: 20JUL16M Sam:4 Analysis Date: 20-JUL-16 12:20:54

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	y	96.3	82.0 - 121
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.57	1.32-1.78	y	97.8	62.0 - 160
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	99.2	85.0 - 117
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	100	85.0 - 118
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	y	97.5	72.0 - 138
13C-OCDD	M+2/M+4	0.90	0.76-1.02	y	190	96.0 - 415
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	102	71.0 - 140
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	101	76.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	y	102	77.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	100	76.0 - 131
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	101	70.0 - 143
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	97.0	73.0 - 137
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	y	101	74.0 - 135
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.48	0.37-0.51	y	98.0	78.0 - 129
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.49	0.37-0.51	y	97.8	77.0 - 129
13C-OCDF	M+2/M+4	0.93	0.76-1.02	y	191	96.0 - 415
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					9.75	7.90 - 12.7

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

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

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

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

Analyst: [signature] Date: 7/21/16

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: 7/20/16

RT Window Data Filename: 20JUL16M Sam:4 Analysis Date: 20-JUL-16 Time: 12:20:54

DB-5 IS Data Filename: 20JUL16M Sam:4 Analysis Date: 20-JUL-16 Time: 12:20:54

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

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:25	1,3,6,8-TCDF (F)	23:02
1,2,8,9-TCDD (L)	28:25	1,2,8,9-TCDF (L)	28:41
1,2,4,7,9-PeCDD (F)	30:17	1,3,4,6,8-PeCDF (F)	28:26
1,2,3,8,9-PeCDD (L)	33:54	1,2,3,8,9-PeCDF (L)	34:22
1,2,4,6,7,9-HxCDD (F)	36:09	1,2,3,4,6,8-HxCDF (F)	35:16
1,2,3,7,8,9-HxCDD (L)	39:16	1,2,3,7,8,9-HxCDF (L)	39:54
1,2,3,4,6,7,9-HpCDD (F)	42:49	1,2,3,4,6,7,8-HpCDF (F)	42:18
1,2,3,4,6,7,8-HpCDD (L)	44:13	1,2,3,4,7,8,9-HpCDF (L)	45:11

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

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT BETWEEN COMPARED PEAKS (1)

<25%

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

Analyst: [illegible] Date: 7/21/16

USEPA - ITD

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 7/20/16

Instrument ID: FAL3 GC Column ID: DB5MS

Analysis Date: 20-JUL-16 12:20:54 CS3 or VER Data Filename: 20JUL16M Sam:4

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.025	0.989-1.052
13C-2,3,7,8-TCDD		1.024	0.976-1.043
13C-2,3,7,8-TCDF		0.997	0.923-1.103
13C-1,2,3,7,8-PeCDD		1.242	1.000-1.567
13C-1,2,3,7,8-PeCDF		1.177	1.000-1.425
13C-2,3,4,7,8-PeCDF		1.228	1.011-1.526

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

Analyst: [signature] Date: 7/21/16

USEPA - ITD

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 7/20/16

Instrument ID: FAL3 GC Column ID: DB5MS

Analysis Date: 20-JUL-16 12:20:54 CS3 or VER Data Filename: 20JUL16M Sam:4

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.999-1.003
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.999-1.003
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.001	0.999-1.001
OCDD	13C-OCDD	1.001	0.999-1.001
OCDF	13C-OCDF	1.001	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.985	0.977-1.000
13C-1,2,3,6,7,8-HxCDD		0.989	0.981-1.003
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975
13C-2,3,4,6,7,8-HxCDF		0.978	0.959-1.021
13C-1,2,3,7,8,9-HxCDF		1.015	0.977-1.047
13C-1,2,3,4,6,7,8-HpCDD		1.126	1.086-1.130
13C-1,2,3,4,6,7,8-HpCDF		1.077	1.043-1.085
13C-1,2,3,4,7,8,9-HpCDF		1.150	1.057-1.151
13C-OCDD		1.266	1.032-1.311
13C-OCDF		1.277	1.000-1.311

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

Analyst: _____ Date: 7/21/16

FAL ID: ST072016M3 Filename: 20JUL16M Sam:4 Acquired: 20-JUL-16 12:20:54 ICal: PCDDFAL3-7-20-16
Client ID: 1613 CS3 160711J ConCal: NA EndCal: NA
Results: GC Golumn: DB5MS Amount: 1.000 NATO 1989 Tox: 95.6
Instrument ID: FAL3 WHO 1998 Tox: 119 WHO 2005 Tox: 109

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	5.57e+06	0.80 y	27:29	1.16	10.2		2.50	-	-	*
1,2,3,7,8-PeCDD	2.11e+07	1.55 y	33:20	1.00	48.0		2.50	-	-	*
1,2,3,4,7,8-HxCDD	1.79e+07	1.26 y	38:41	1.08	47.0		2.50	-	-	*
1,2,3,6,7,8-HxCDD	1.91e+07	1.26 y	38:51	1.08	45.8		2.50	-	-	*
1,2,3,7,8,9-HxCDD	2.01e+07	1.25 y	39:16	1.12	48.6		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	1.65e+07	0.95 y	44:13	1.04	48.7		2.50	-	-	*
OCDD	2.67e+07	0.82 y	49:44	1.05	98.9		2.50	-	-	*
2,3,7,8-TCDF	7.61e+06	0.75 y	26:45	1.11	9.61		2.50	-	-	*
1,2,3,7,8-PeCDF	3.03e+07	1.59 y	31:35	0.96	48.6		2.50	-	-	*
2,3,4,7,8-PeCDF	2.91e+07	1.60 y	32:57	0.95	46.9		2.50	-	-	*
1,2,3,4,7,8-HxCDF	2.63e+07	1.23 y	37:16	1.11	46.5		2.50	-	-	*
1,2,3,6,7,8-HxCDF	3.04e+07	1.25 y	37:29	1.07	47.6		2.50	-	-	*
2,3,4,6,7,8-HxCDF	2.57e+07	1.23 y	38:27	1.04	47.6		2.50	-	-	*
1,2,3,7,8,9-HxCDF	2.24e+07	1.27 y	39:54	1.03	46.6		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	2.26e+07	1.04 y	42:18	1.30	48.0		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	1.78e+07	1.00 y	45:11	1.23	48.6		2.50	-	-	*
OCDF	3.13e+07	0.90 y	50:09	0.89	97.4		2.50	-	-	*

						Rec
13C-2,3,7,8-TCDD	4.72e+07	0.80 y	27:28	0.98	96.3	96.3
13C-1,2,3,7,8-PeCDD	4.39e+07	1.57 y	33:18	0.90	97.8	97.8
13C-1,2,3,4,7,8-HxCDD	3.52e+07	1.27 y	38:39	0.88	99.2	99.2
13C-1,2,3,6,7,8-HxCDD	3.89e+07	1.27 y	38:49	0.96	100	100
13C-1,2,3,4,6,7,8-HpCDD	3.25e+07	1.07 y	44:12	0.83	97.5	97.5
13C-OCDD	5.11e+07	0.90 y	49:42	0.66	190	95.2
13C-2,3,7,8-TCDF	7.17e+07	0.80 y	26:43	1.01	102	102
13C-1,2,3,7,8-PeCDF	6.52e+07	1.58 y	31:33	0.92	101	101
13C-2,3,4,7,8-PeCDF	6.51e+07	1.57 y	32:56	0.91	102	102
13C-1,2,3,4,7,8-HxCDF	5.10e+07	0.52 y	37:15	1.26	100	100
13C-1,2,3,6,7,8-HxCDF	5.99e+07	0.53 y	37:27	1.46	101	101
13C-2,3,4,6,7,8-HxCDF	5.20e+07	0.53 y	38:24	1.32	97.0	97.0
13C-1,2,3,7,8,9-HxCDF	4.69e+07	0.52 y	39:52	1.15	101	101
13C-1,2,3,4,6,7,8-HpCDF	3.61e+07	0.48 y	42:17	0.91	98.0	98.0
13C-1,2,3,4,7,8,9-HpCDF	2.99e+07	0.49 y	45:09	0.76	97.8	97.8
13C-OCDF	7.23e+07	0.93 y	50:08	0.93	191	95.7
37Cl-2,3,7,8-TCDD	4.42e+06		27:29	0.90	9.75	97.5
13C-1,2,3,4-TCDD	5.01e+07	0.79 y	26:49	-	93.5	
13C-1,2,3,4-TCDF	7.00e+07	0.80 y	25:34	-	91.3	
13C-1,2,3,7,8,9-HxCDD	4.05e+07	1.25 y	39:15	-	92.4	

						Fac	Noise-1	Noise-2	DL		#Hom
Total Tetra-Dioxins	2.80e+07		24:25	1.16	51.2	2.50	-	-	*		21
Total Penta-Dioxins	6.73e+07		30:17	1.00	153	2.50	-	-	*		17
Total Hexa-Dioxins	8.40e+07		36:09	1.09	208	2.50	-	-	*		23
Total Hepta-Dioxins	3.63e+07		42:49	1.04	107	2.50	-	-	*		23
Total Tetra-Furans	3.45e+07		23:02	1.11	43.5	2.50	-	-	*		21
1st Fn. Tot Penta-Furans	3.89e+07		28:26	0.95	62.6	2.50	-	-	*	PeCDF	2
Total Penta-Furans	8.85e+07		30:13	0.95	142	2.50	-	-	*	205	18
Total Hexa-Furans	1.35e+08		35:16	1.06	242	2.50	-	-	*		18
Total Hepta-Furans	4.13e+07		42:18	1.27	98.8	2.50	-	-	*		17

Analyst: _____ Date: 7/21/16

Frontier Analytical Laboratory - Acquisition Log

Run Name:20JUL16M Instrument: FAL3 GC: DB5 Experiment:PCDD

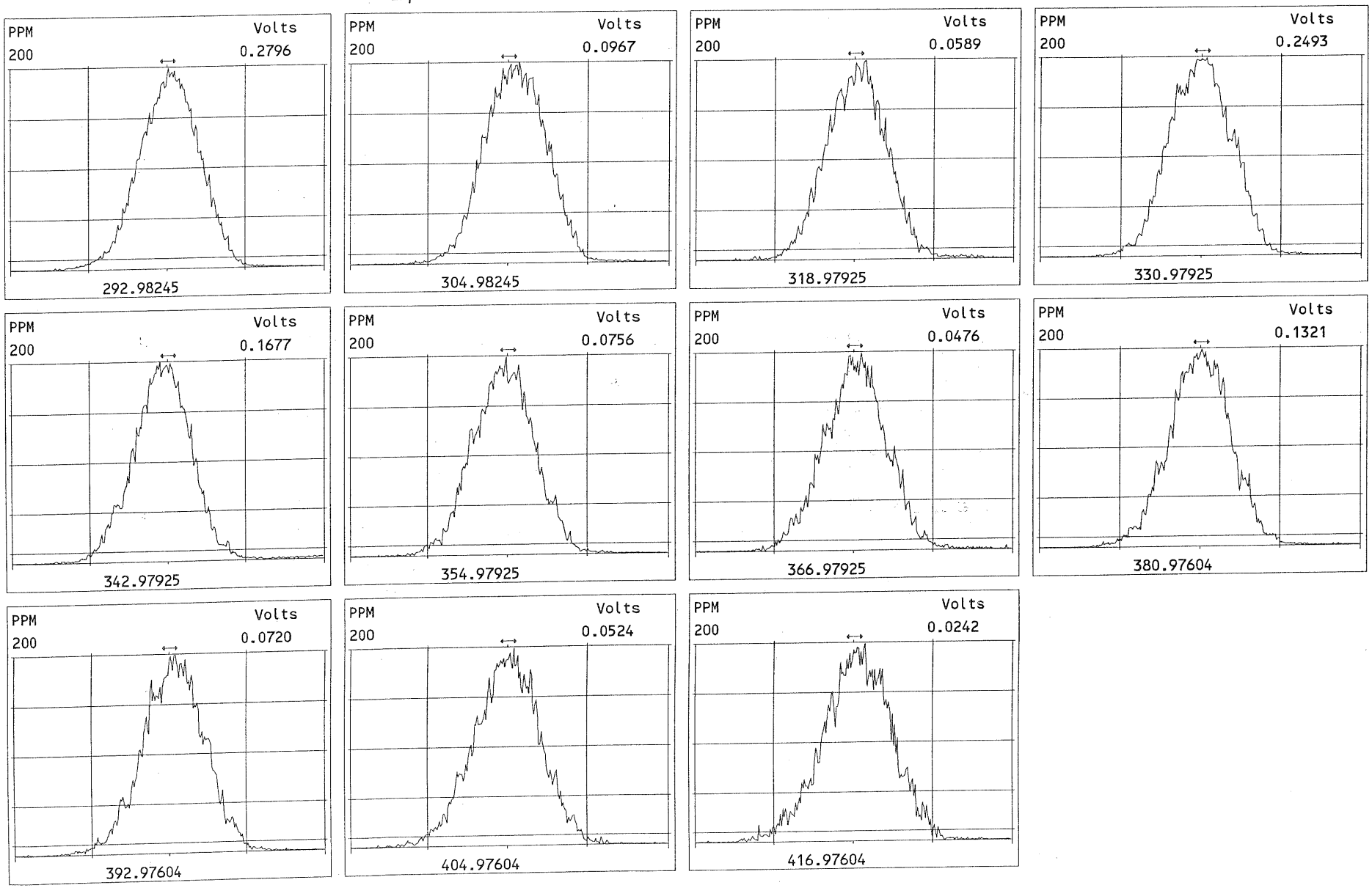
Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
20JUL16M	1	ST072016M0	1613 CS0 160711G	20-JUL-16 09:36:19	NA	NA	TC
20JUL16M	2	ST072016M1	1613 CS1 160711H	20-JUL-16 10:31:12	NA	NA	TC
20JUL16M	3	ST072016M2	1613 CS2 160711I	20-JUL-16 11:26:01	NA	NA	TC
20JUL16M	4	ST072016M3	1613 CS3 160711J	20-JUL-16 12:20:54	NA	NA	TC
20JUL16M	5	ST072016M4	1613 CS4 160711K	20-JUL-16 13:15:47	NA	NA	TC
20JUL16M	6	ST072016M5	1613 CS5 160711L	20-JUL-16 14:10:41	NA	NA	TC
20JUL16M	7	ST072016M6	1613 CS6 160711M	20-JUL-16 15:05:35	NA	NA	TC
20JUL16M	8	SB072016M1	Solvent Blank	20-JUL-16 16:00:28	NA	NA	TC
20JUL16M	9	SB072016M1	Solvent Blank	20-JUL-16 16:55:21	NA	NA	TC
20JUL16M	10	SS072016Y1	2nd Source 160713A	20-JUL-16 17:50:15	NA	NA	TC

7/21/16

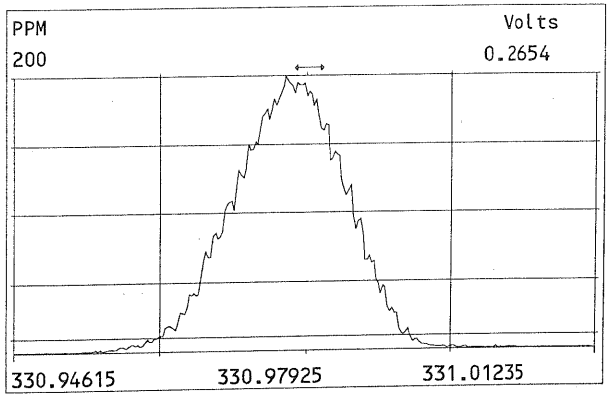
Data Backed Up:_____

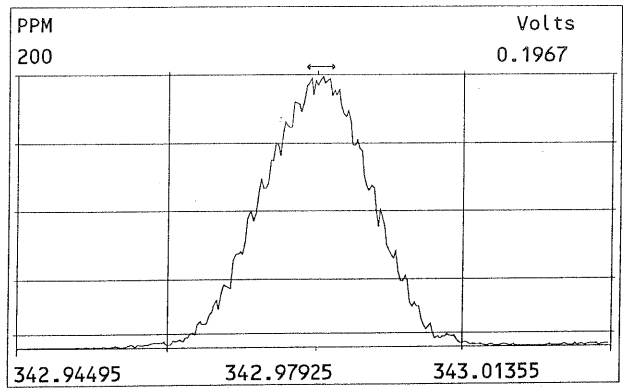
Date:_____

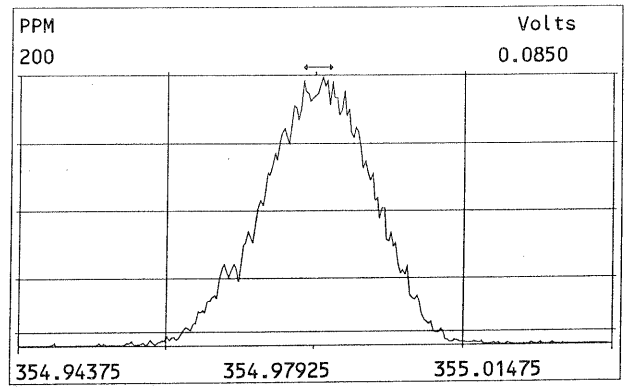
Peak Locate Examination:20-JUL-2016:09:34 File:20JUL16M
Experiment:PCDD Function:1 Reference:PFK

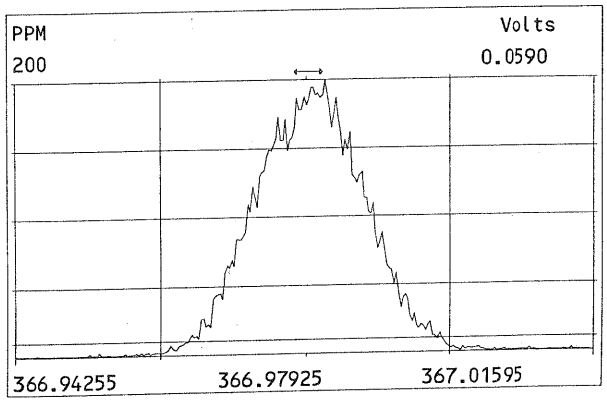


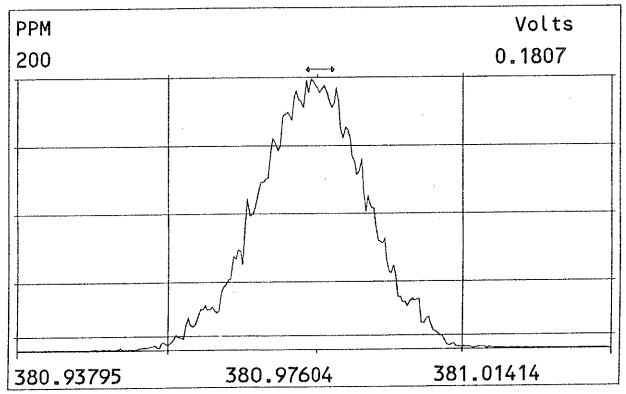
Peak Locate Examination:20-JUL-2016:09:35 File:20JUL16M
Experiment:PCDD Function:2 Reference:PFK

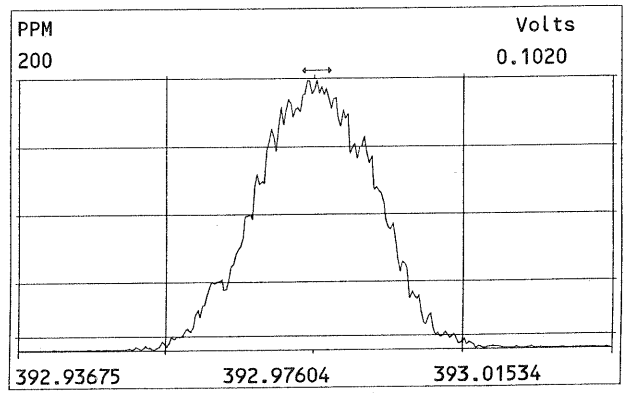


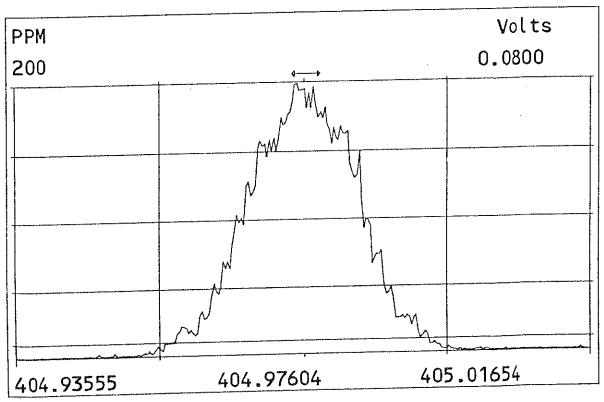


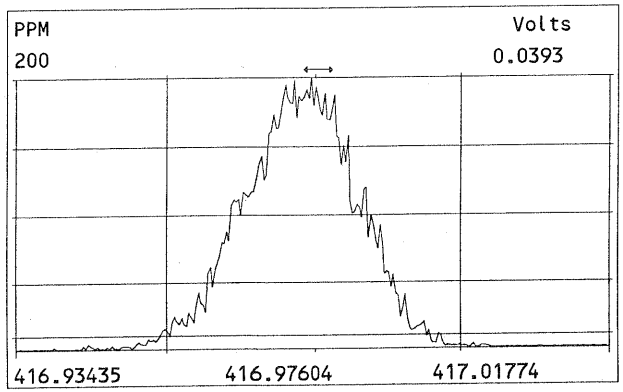




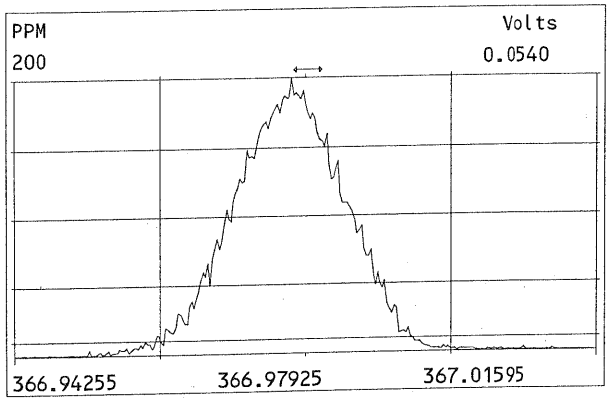


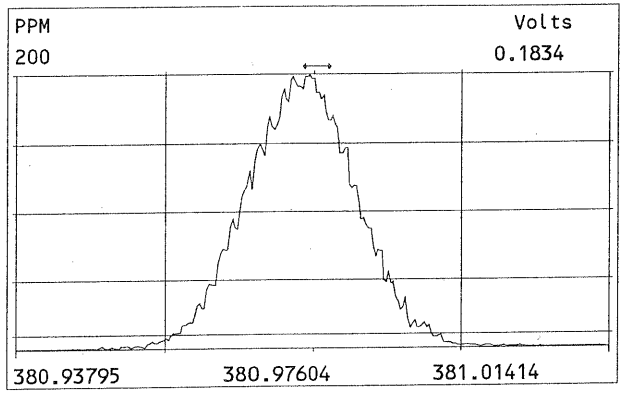


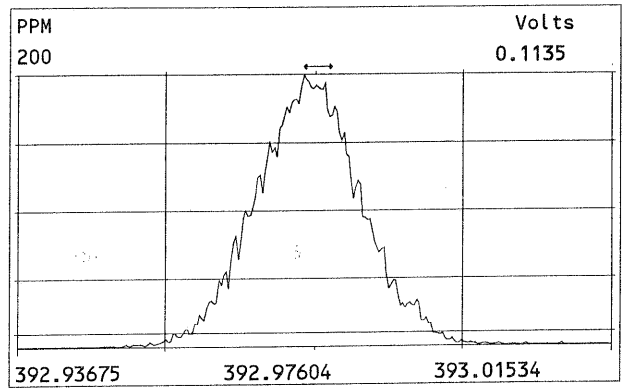


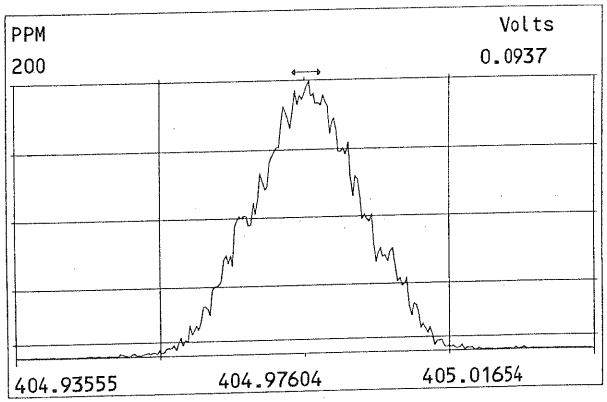


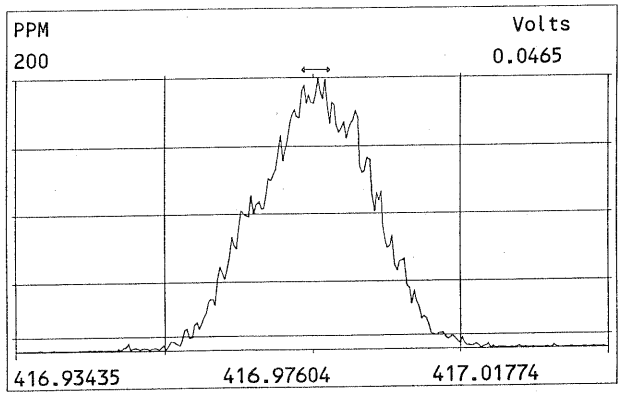
Peak Locate Examination:20-JUL-2016:09:35 File:20JUL16M
Experiment:PCDD Function:3 Reference:PFK

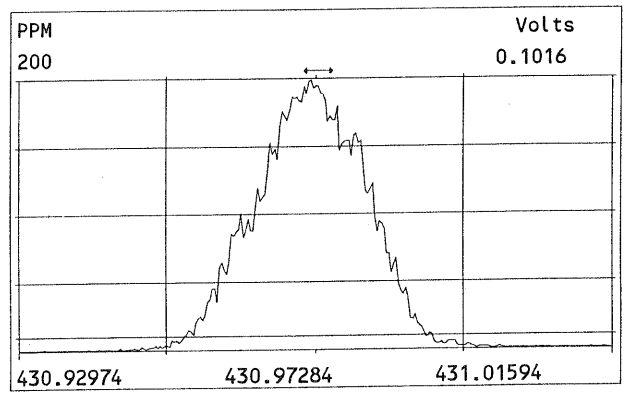


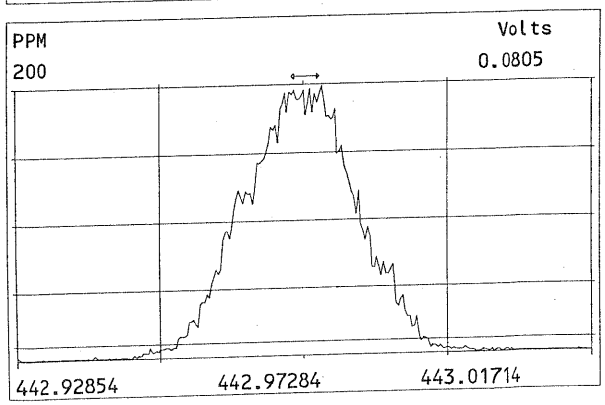


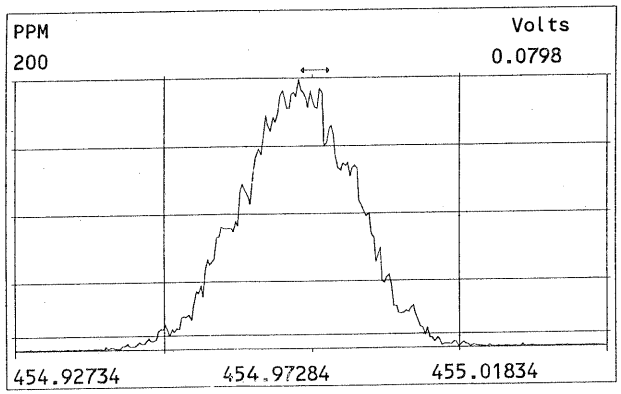




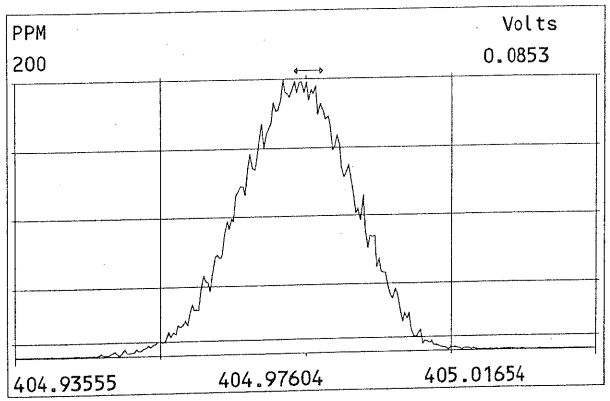


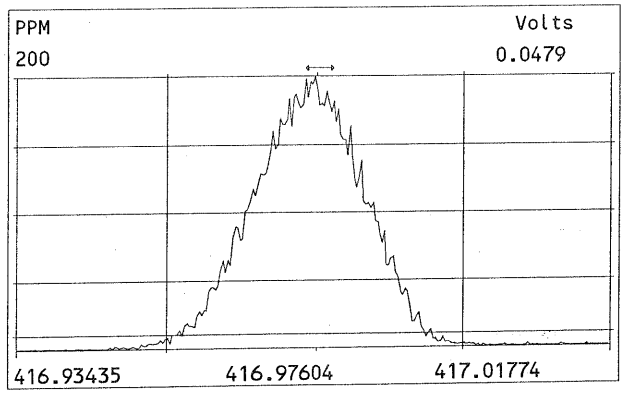


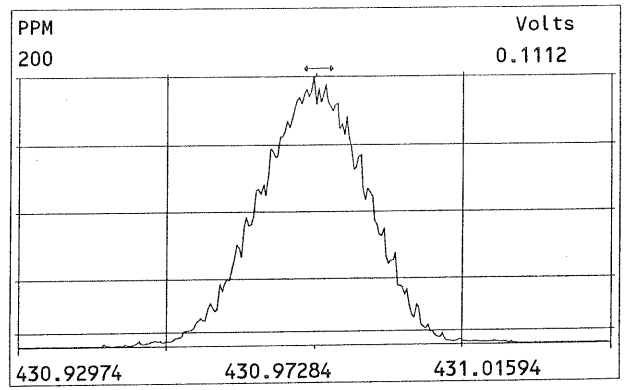


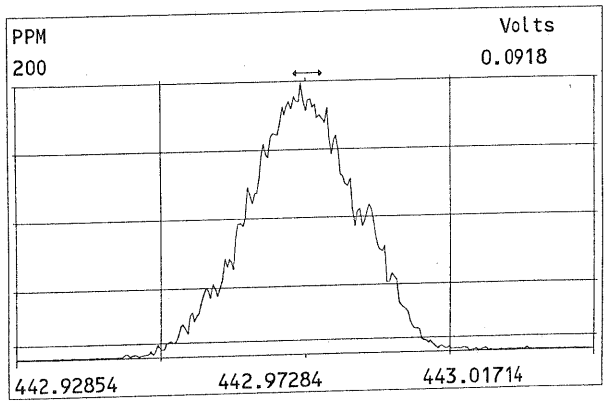


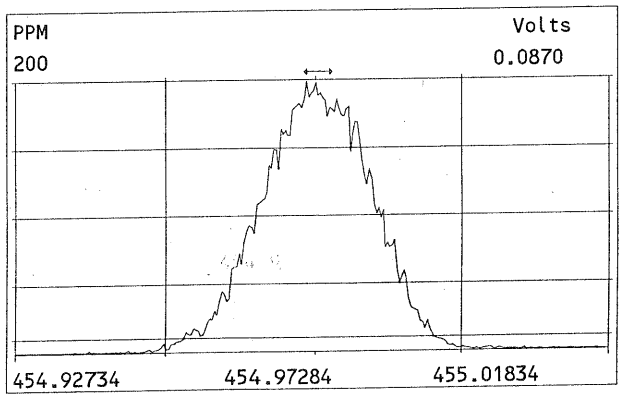
Peak Locate Examination:20-JUL-2016:09:35 File:20JUL16M
Experiment:PCDD Function:4 Reference:PFK

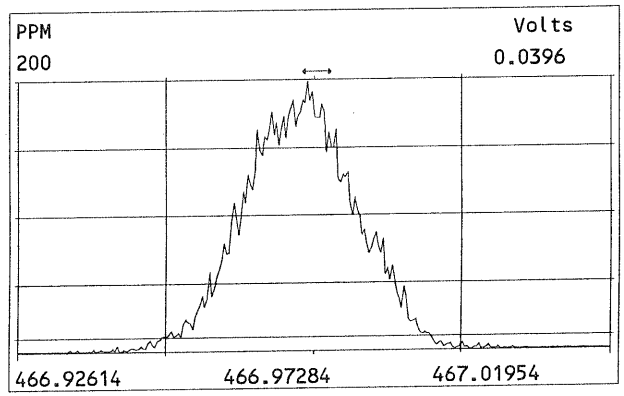


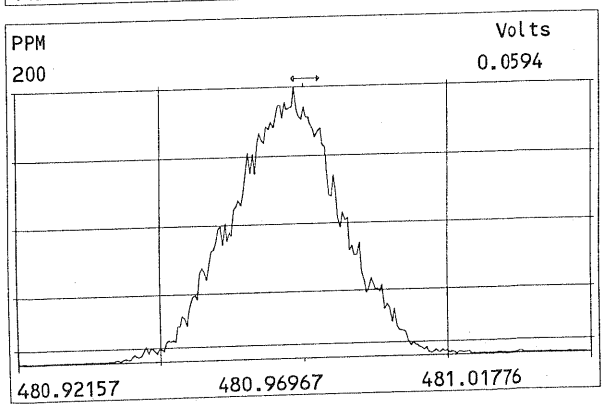




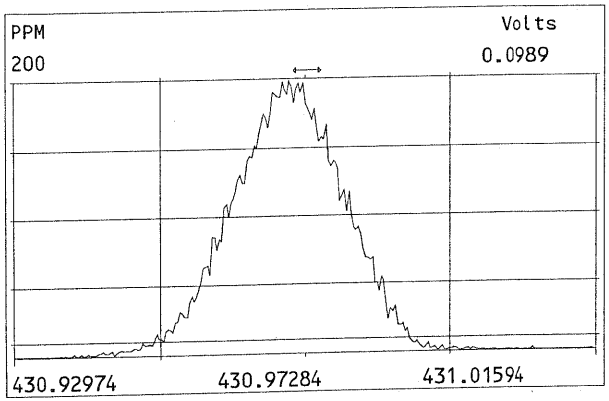


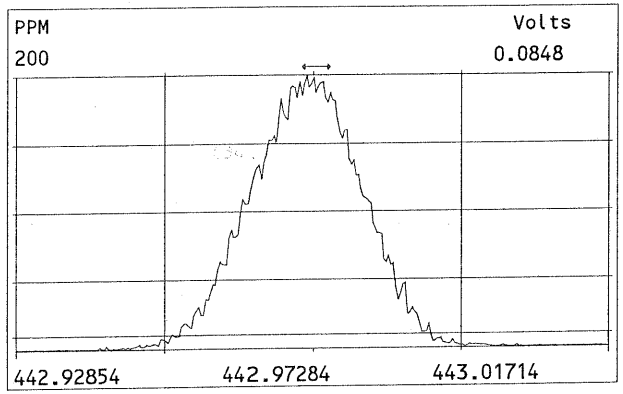


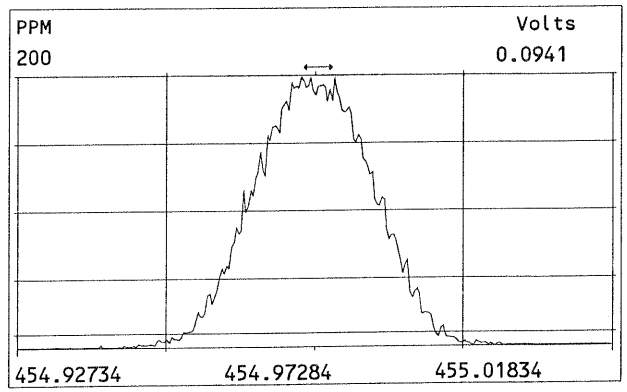


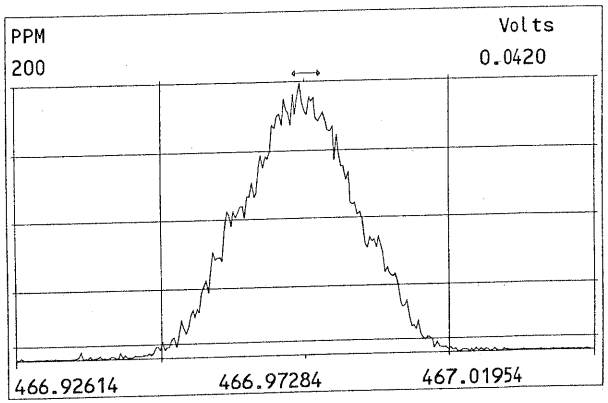


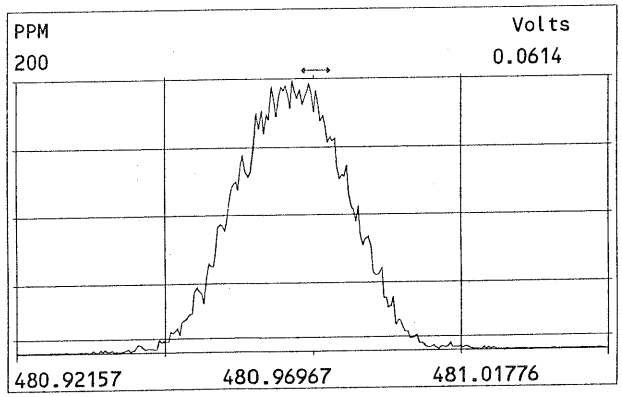
Peak Locate Examination:20-JUL-2016:09:35 File:20JUL16M
Experiment:PCDD Function:5 Reference:PFK

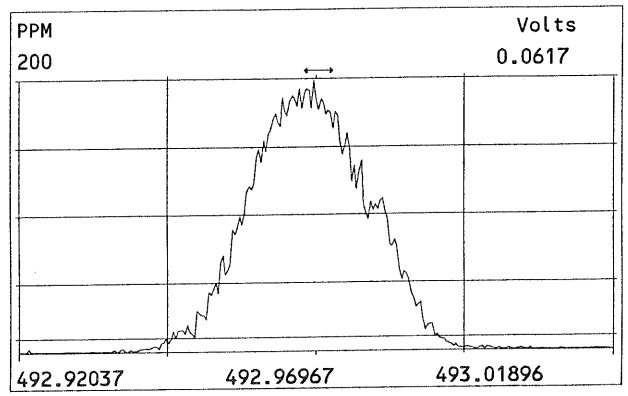


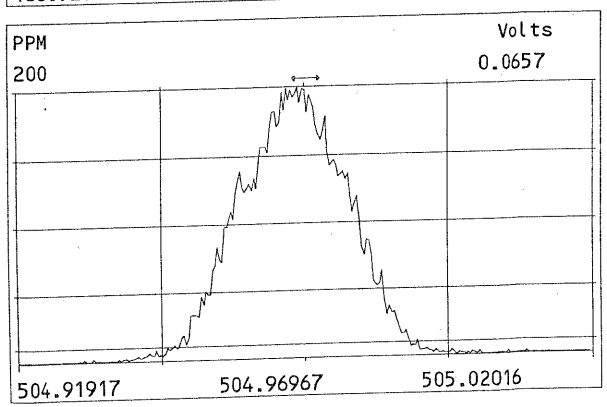


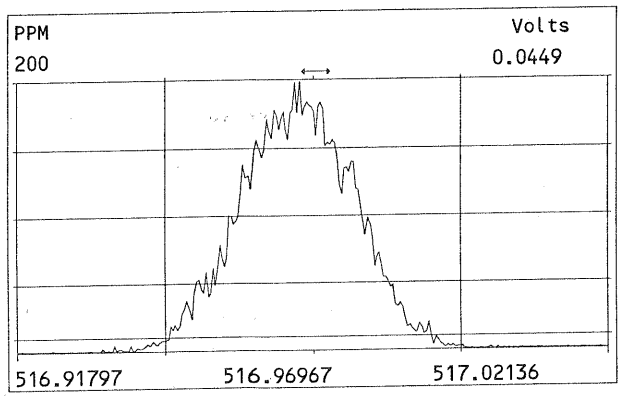




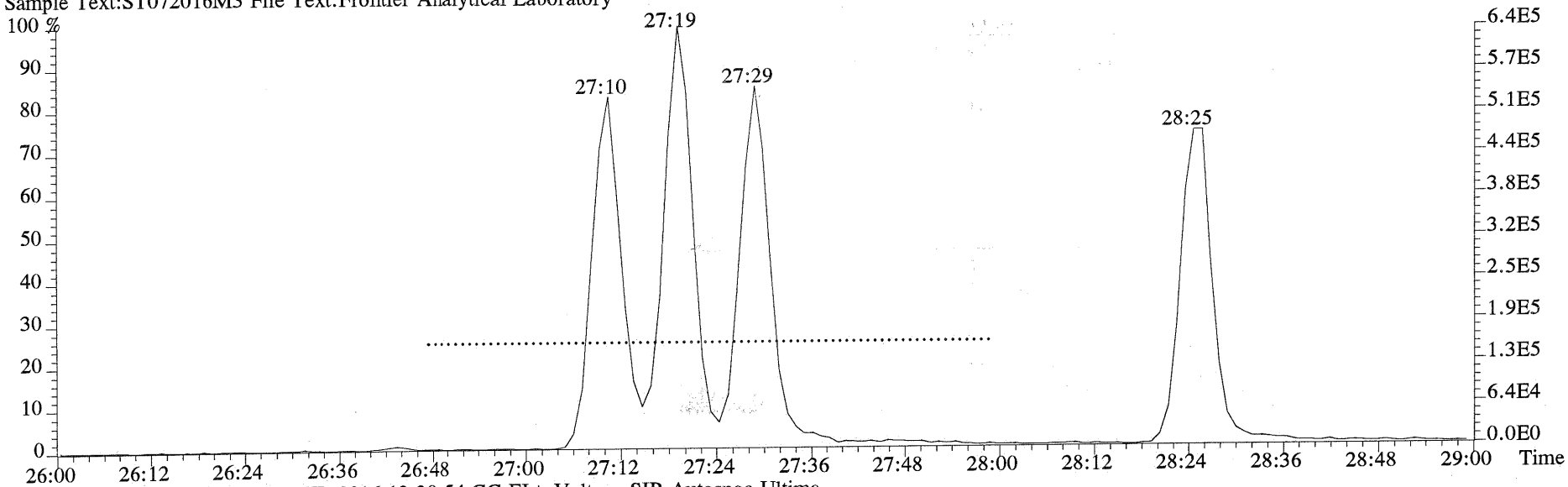




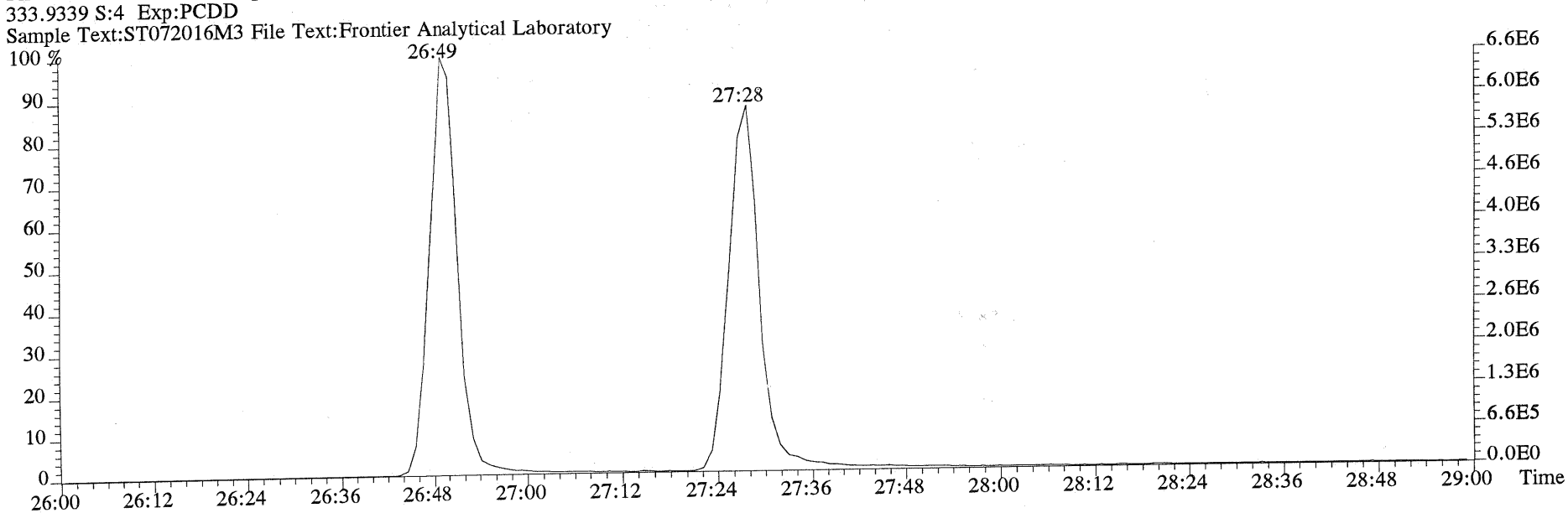




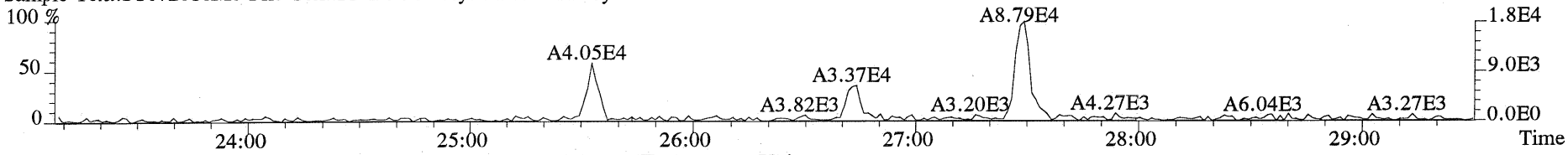
File:20JUL16M #1-399 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:4 Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



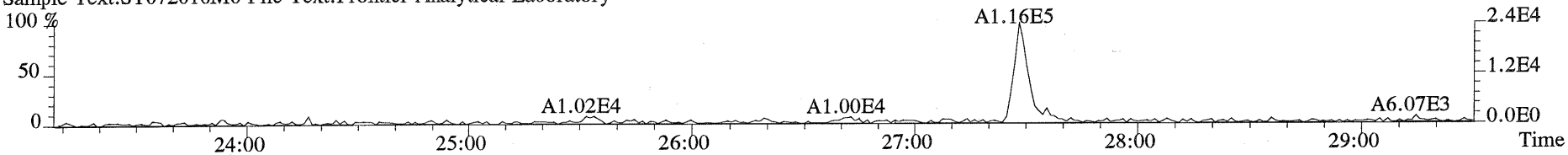
File:20JUL16M #1-399 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:4 Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



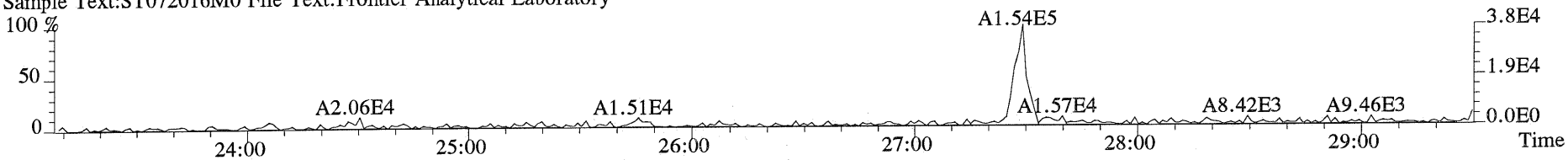
File:20JUL16M #1-400 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



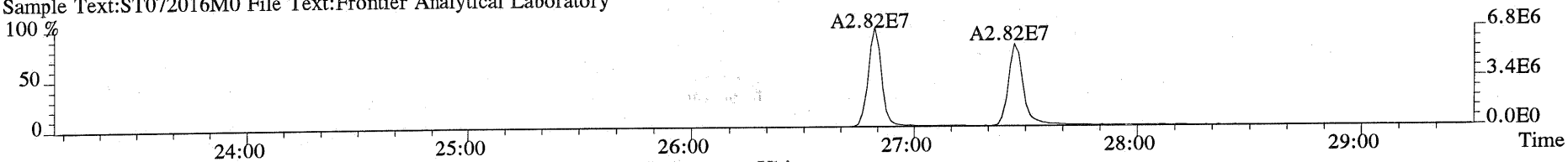
File:20JUL16M #1-400 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



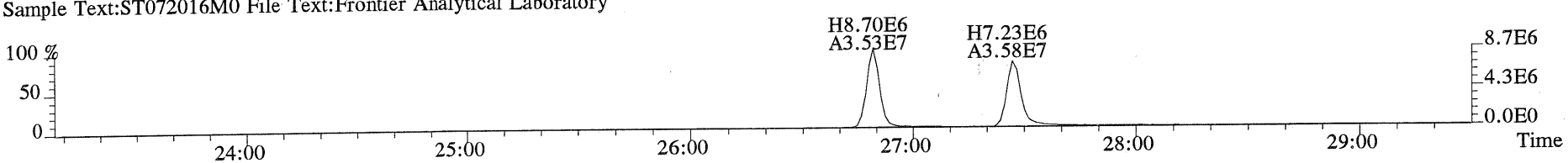
File:20JUL16M #1-400 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



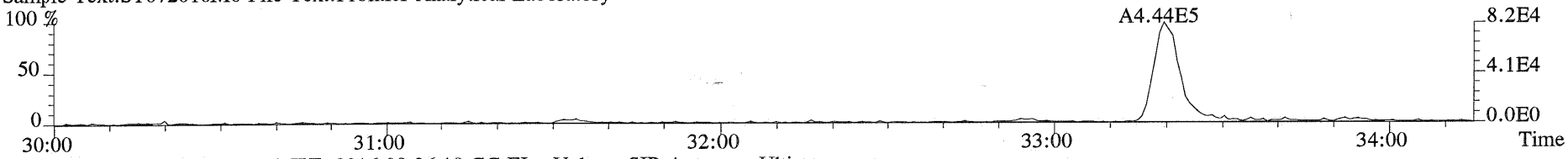
File:20JUL16M #1-400 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



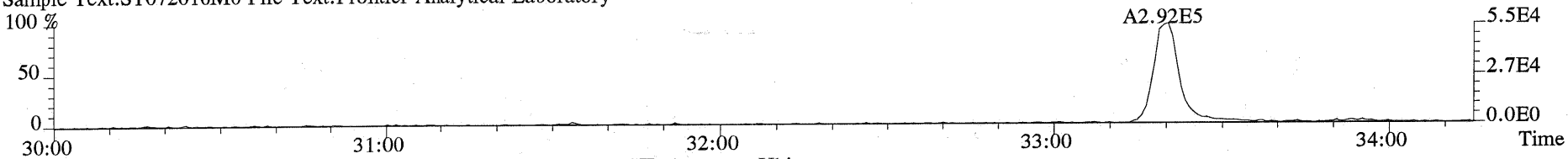
File:20JUL16M #1-400 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



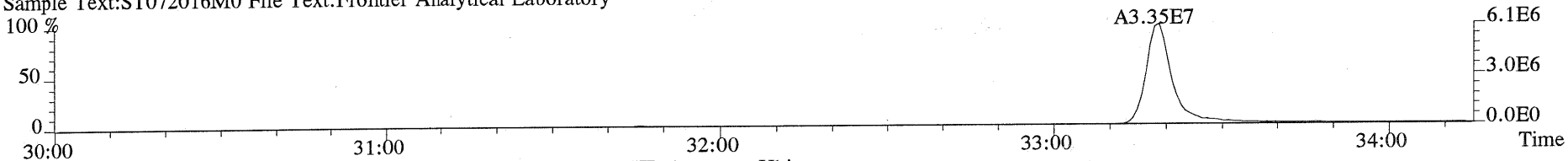
File:20JUL16M #1-410 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



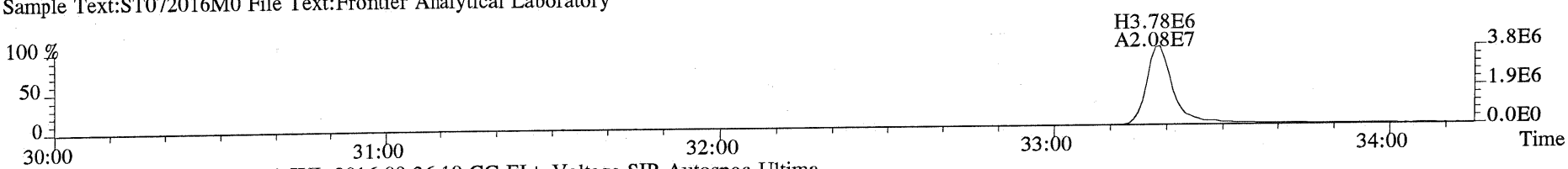
File:20JUL16M #1-410 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
357.8517 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



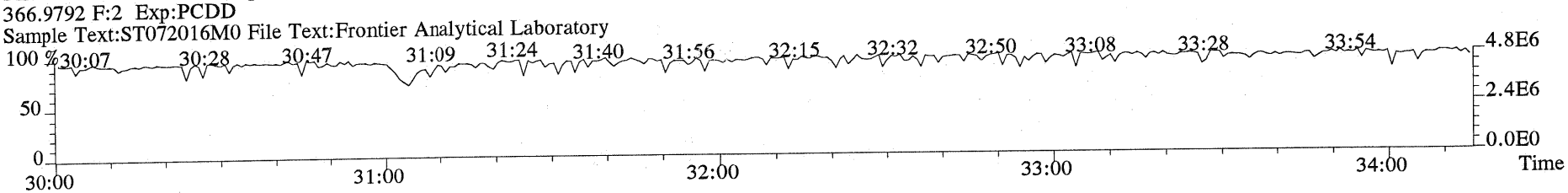
File:20JUL16M #1-410 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



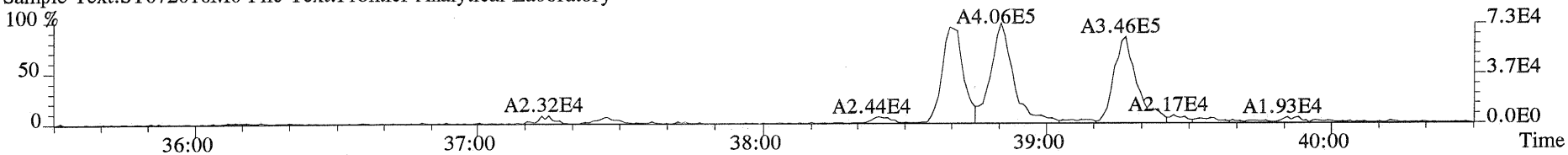
File:20JUL16M #1-410 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
369.8919 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



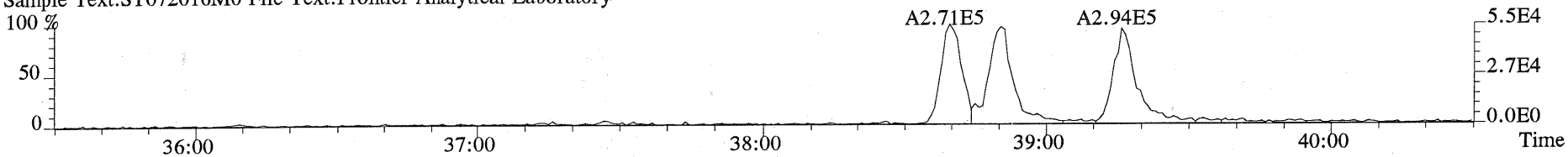
File:20JUL16M #1-410 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
366.9792 F:2 Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



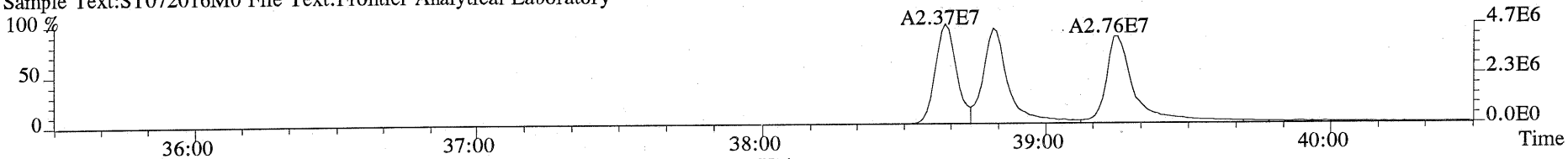
File:20JUL16M #1-494 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



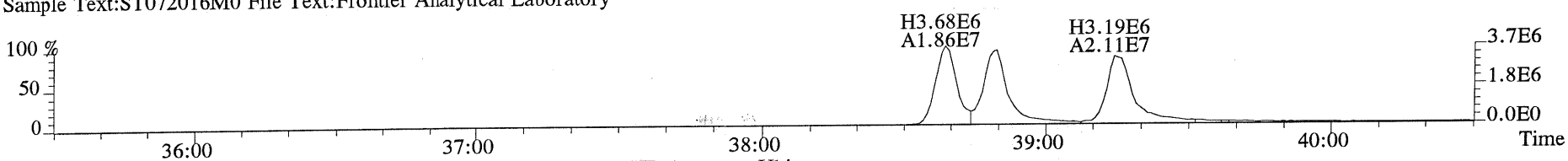
File:20JUL16M #1-494 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



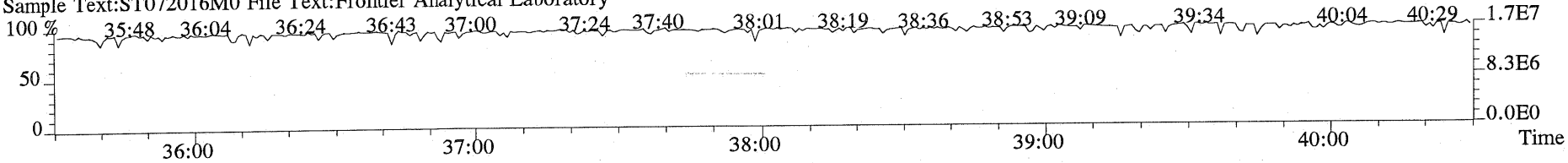
File:20JUL16M #1-494 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



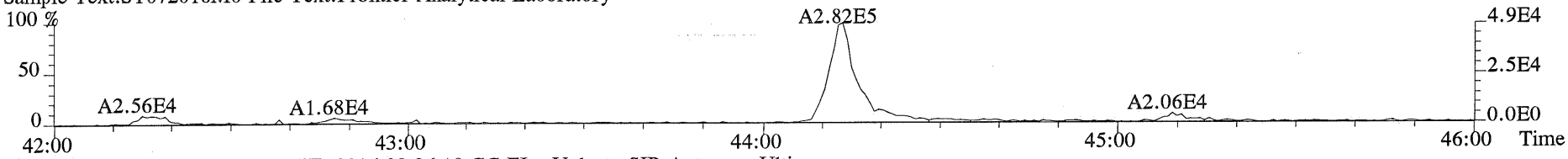
File:20JUL16M #1-494 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



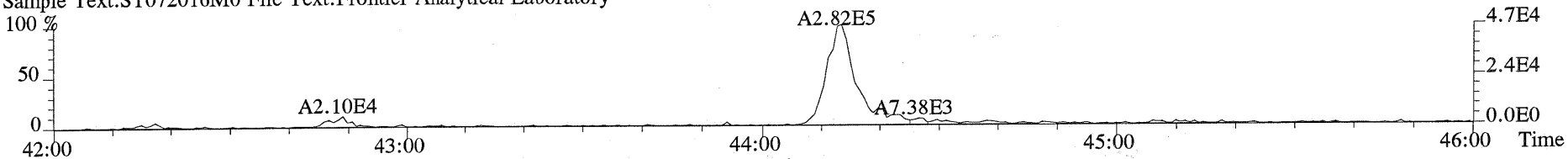
File:20JUL16M #1-494 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
380.9760 F:3 Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



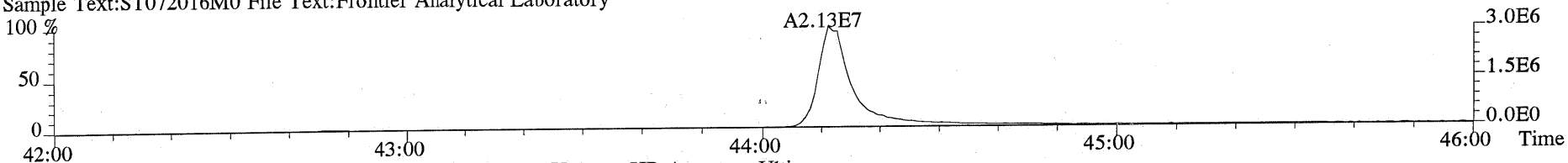
File:20JUL16M #1-520 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



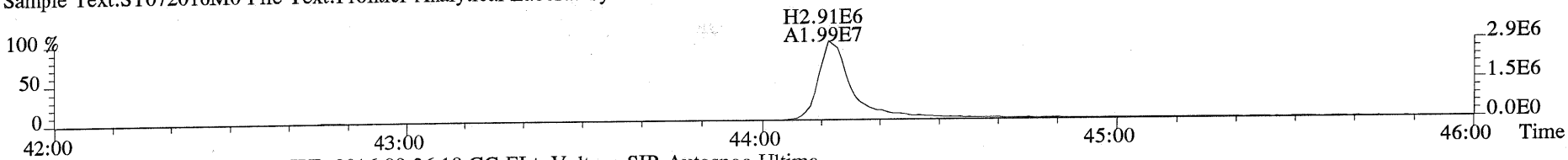
File:20JUL16M #1-520 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



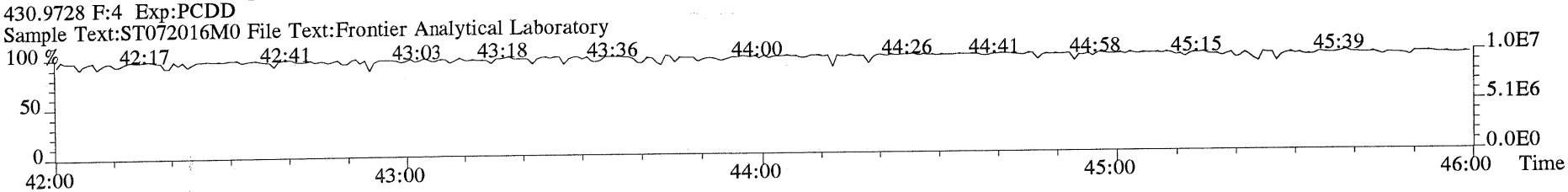
File:20JUL16M #1-520 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



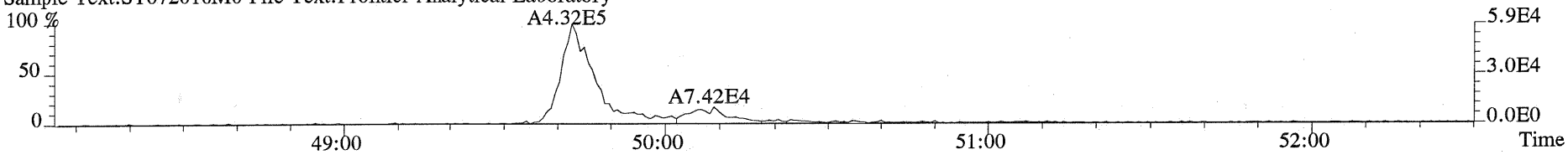
File:20JUL16M #1-520 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



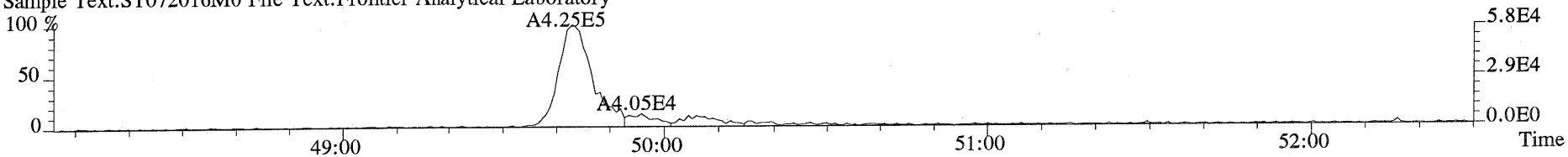
File:20JUL16M #1-520 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
430.9728 F:4 Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



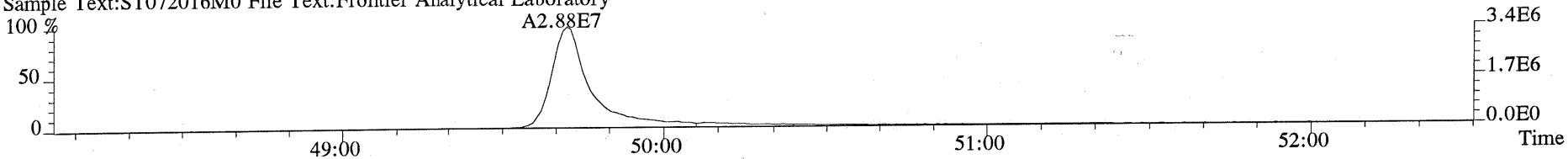
File:20JUL16M #1-361 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



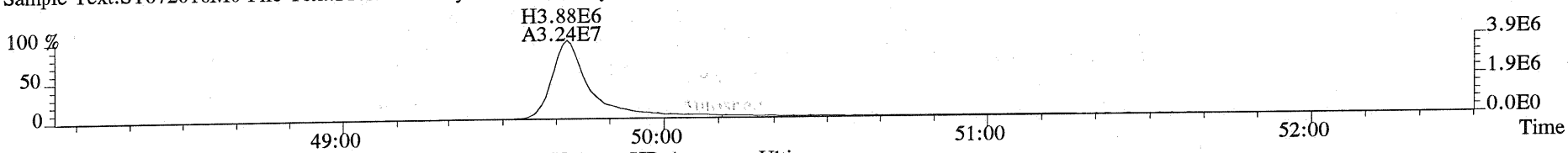
File:20JUL16M #1-361 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



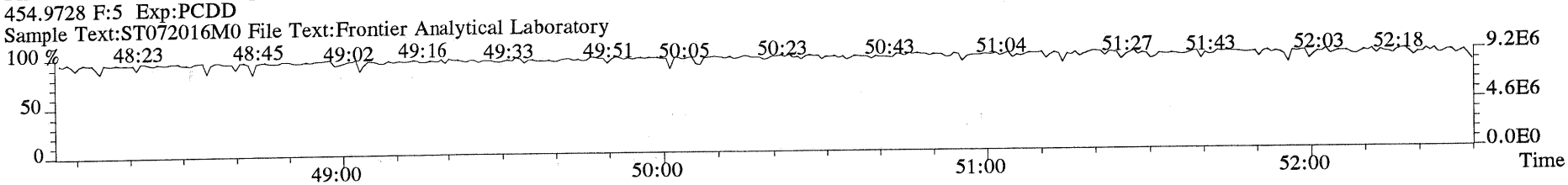
File:20JUL16M #1-361 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



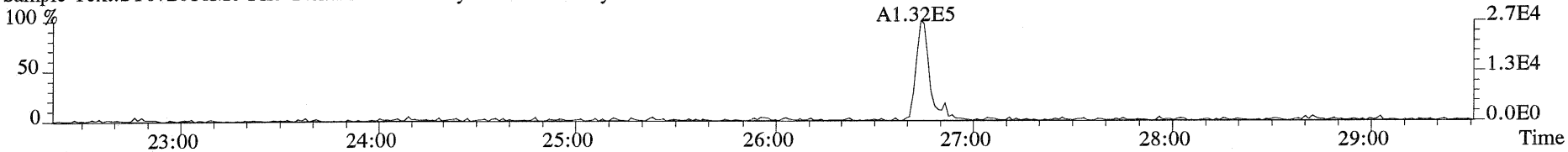
File:20JUL16M #1-361 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



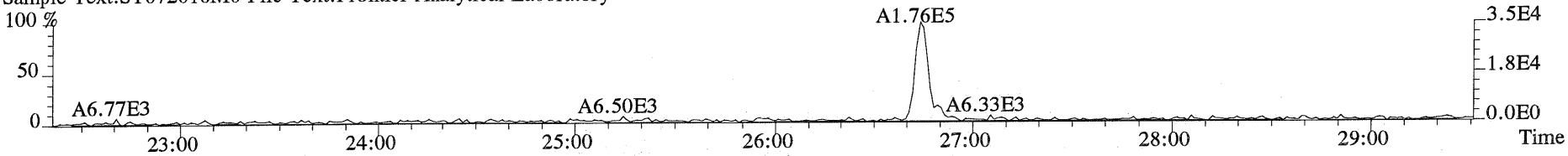
File:20JUL16M #1-361 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
454.9728 F:5 Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



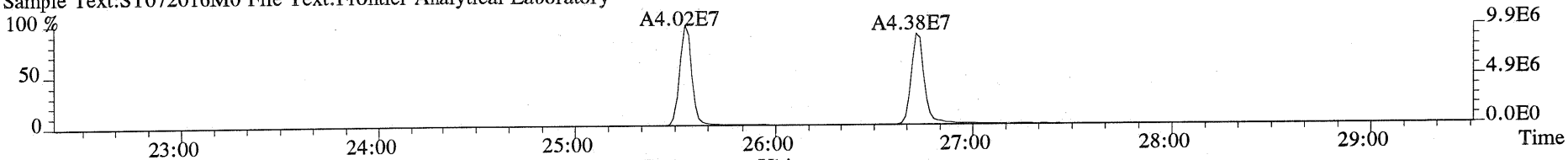
File:20JUL16M #1-400 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



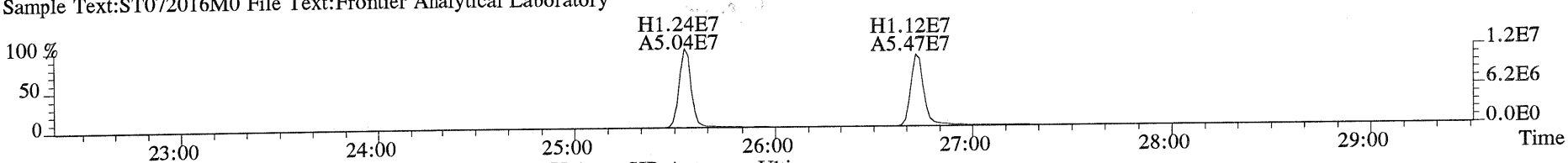
File:20JUL16M #1-400 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



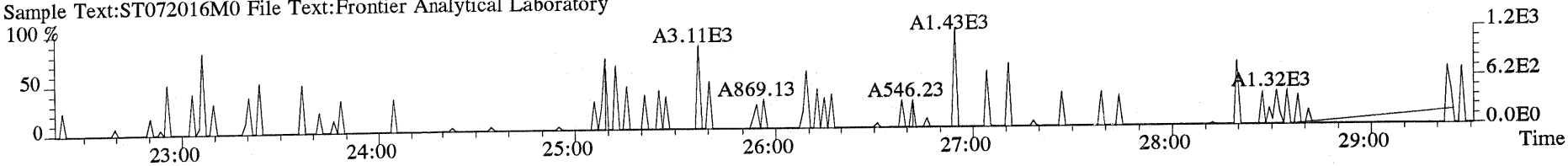
File:20JUL16M #1-400 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



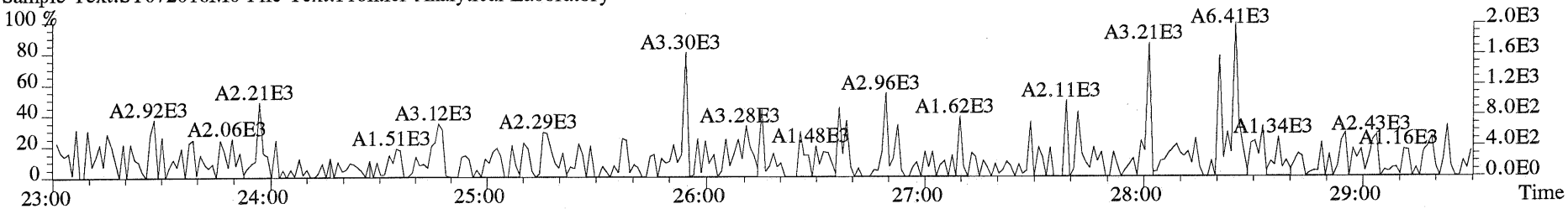
File:20JUL16M #1-400 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



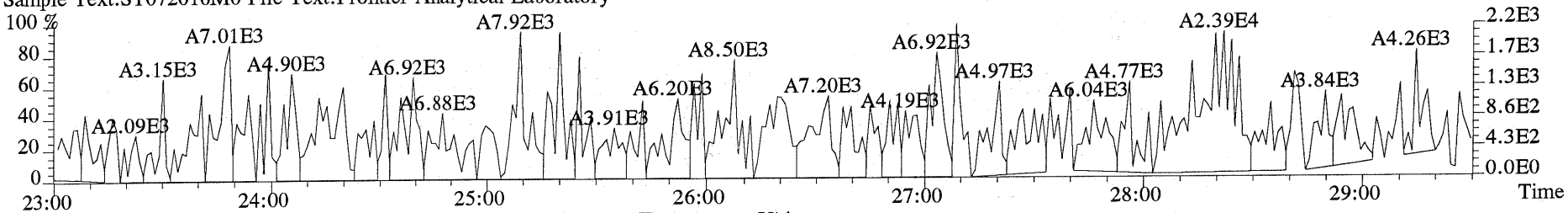
File:20JUL16M #1-400 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



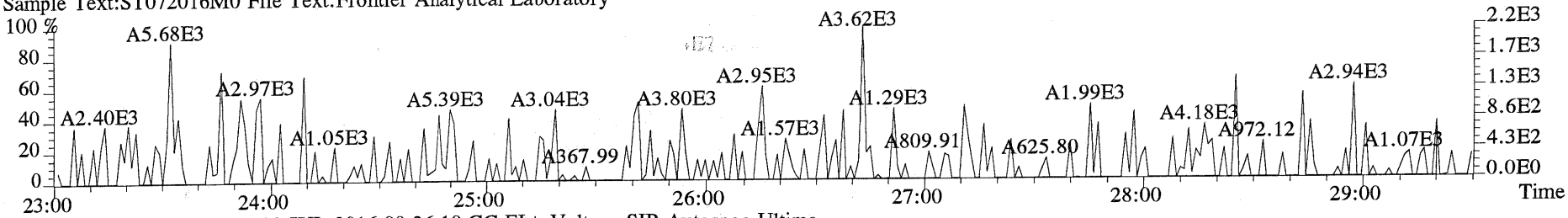
File:20JUL16M #1-400 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



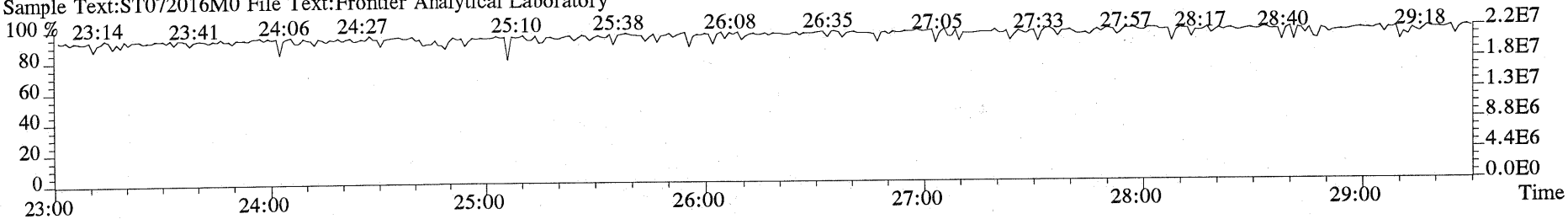
File:20JUL16M #1-400 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
341.8568 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



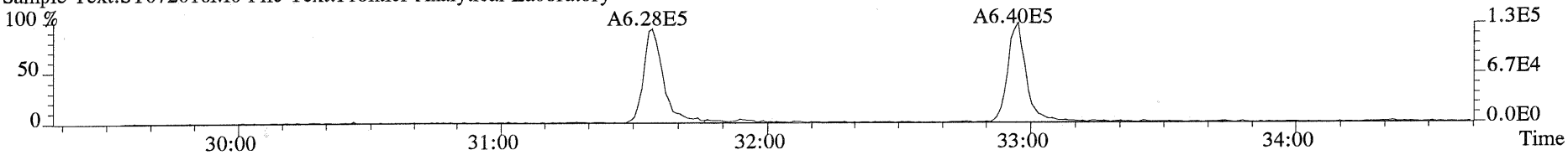
File:20JUL16M #1-400 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



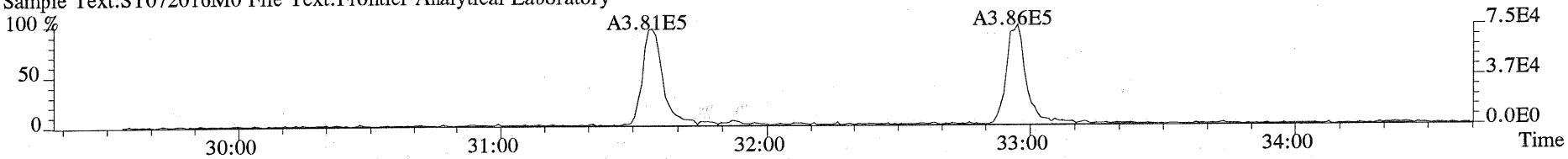
File:20JUL16M #1-400 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
330.9792 Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



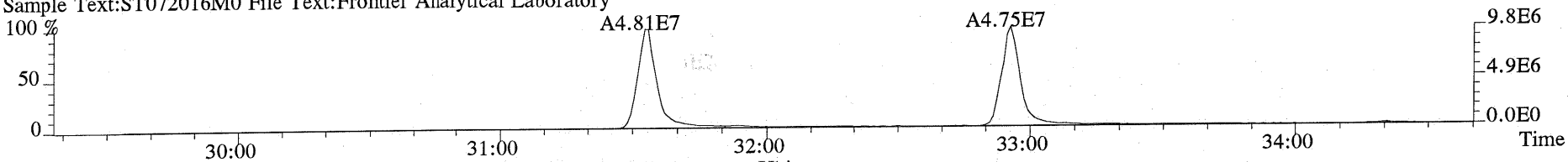
File:20JUL16M #1-410 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



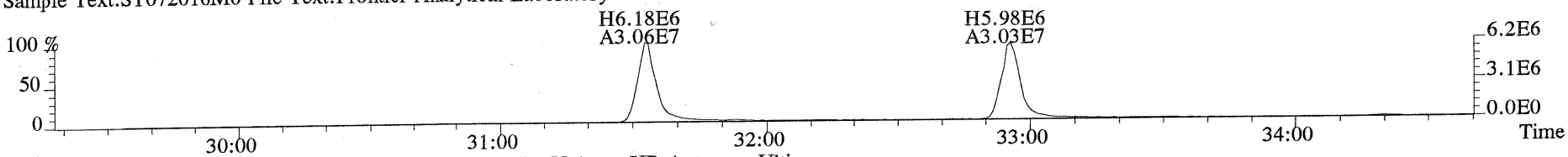
File:20JUL16M #1-410 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



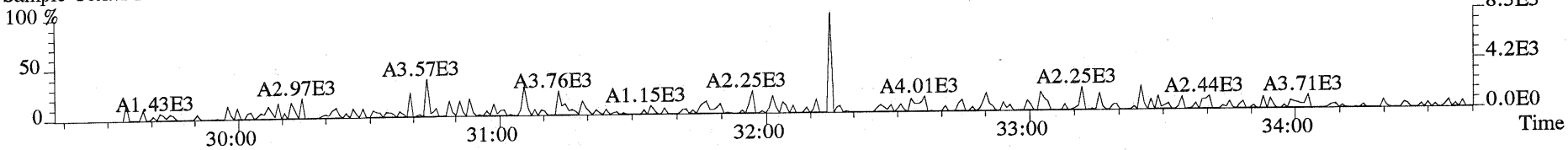
File:20JUL16M #1-410 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



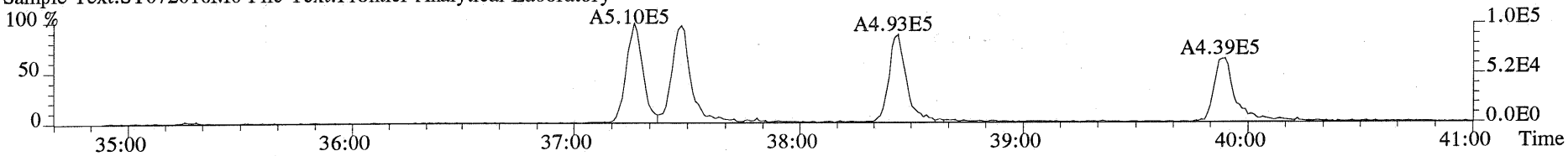
File:20JUL16M #1-410 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
353.8970 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



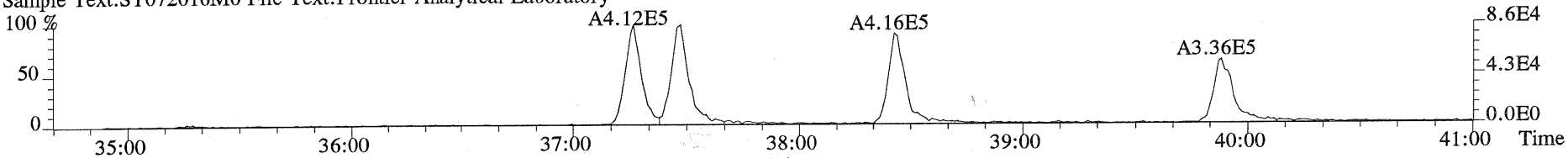
File:20JUL16M #1-410 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



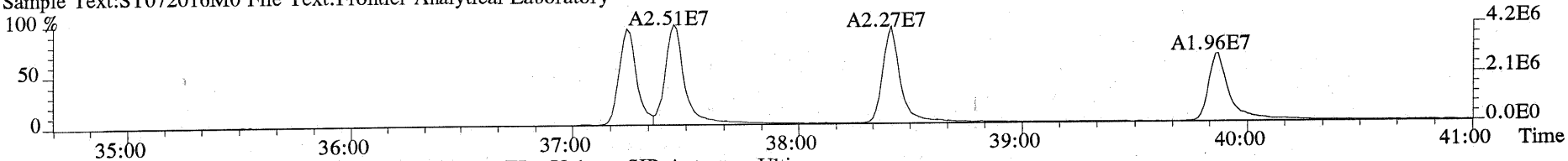
File:20JUL16M #1-494 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



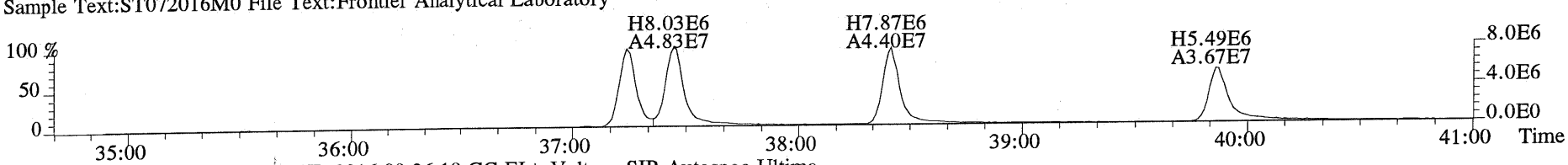
File:20JUL16M #1-494 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



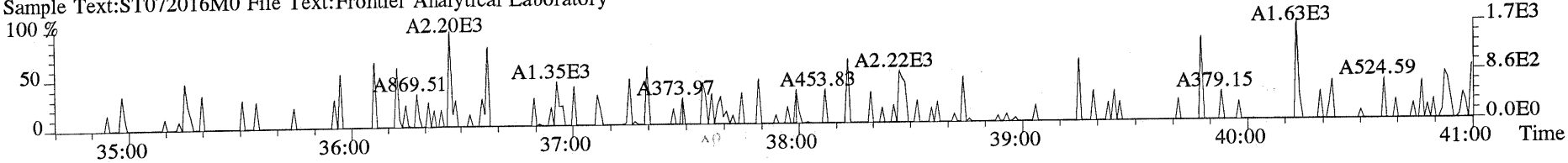
File:20JUL16M #1-494 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



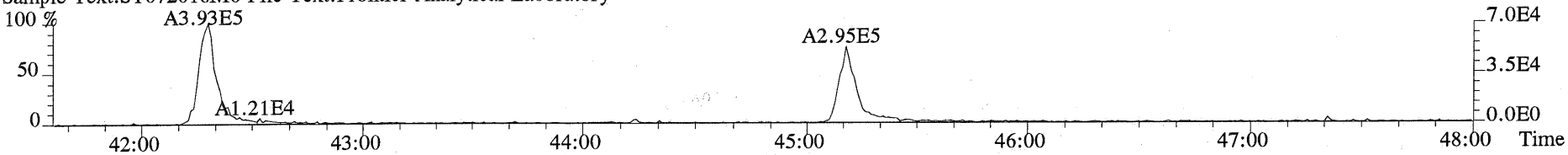
File:20JUL16M #1-494 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



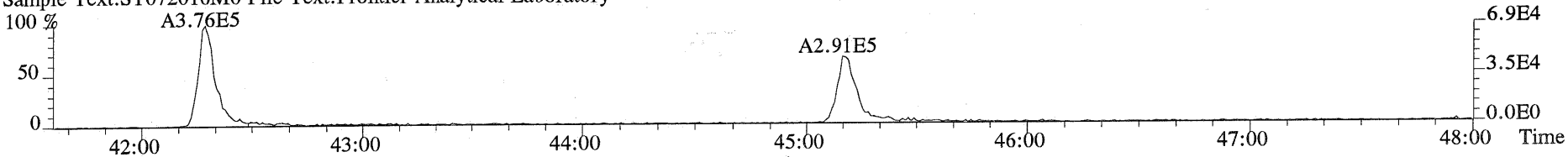
File:20JUL16M #1-494 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



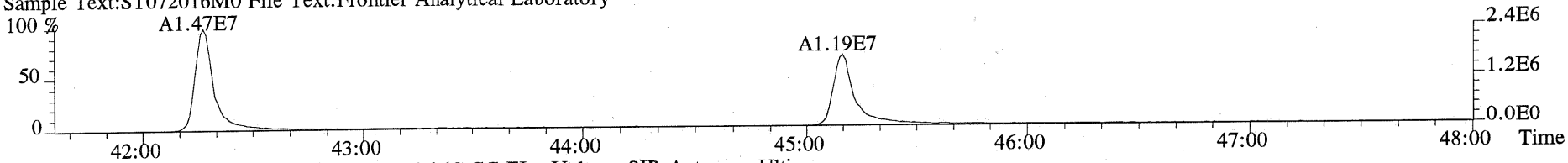
File:20JUL16M #1-520 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



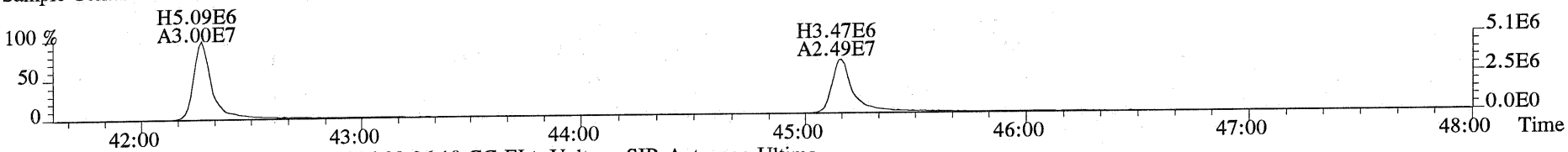
File:20JUL16M #1-520 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



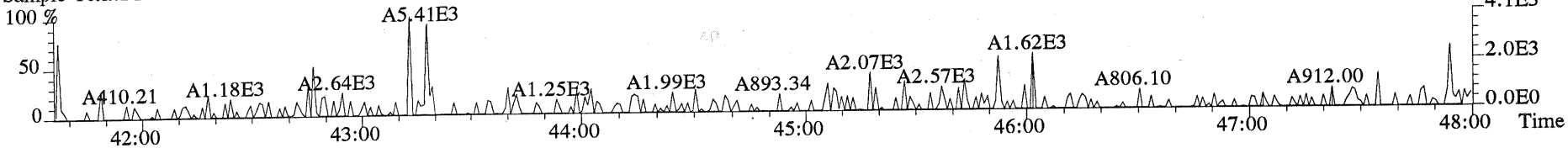
File:20JUL16M #1-520 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



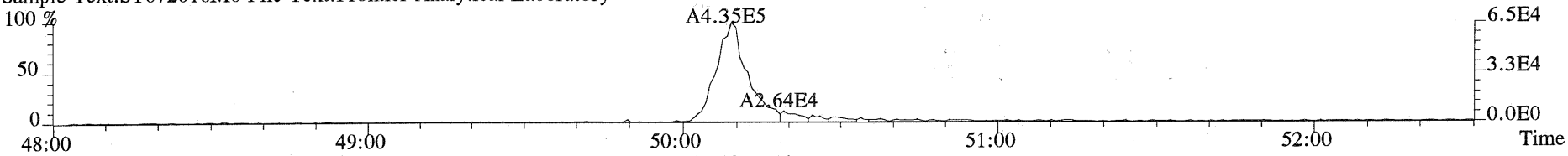
File:20JUL16M #1-520 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



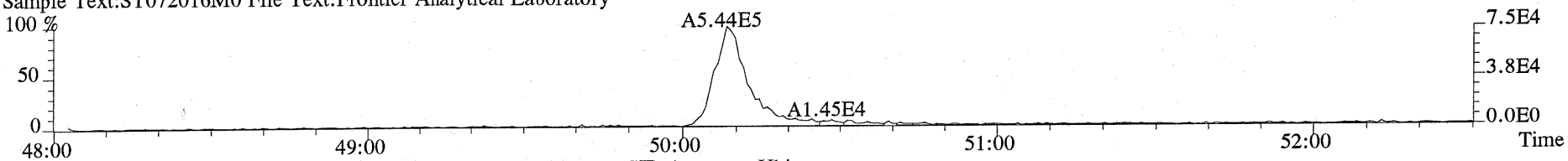
File:20JUL16M #1-520 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



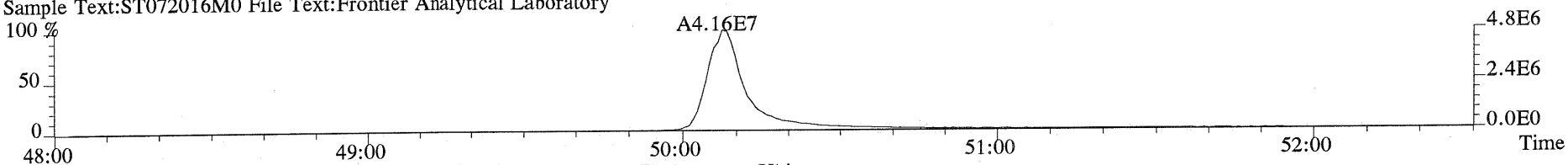
File:20JUL16M #1-361 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



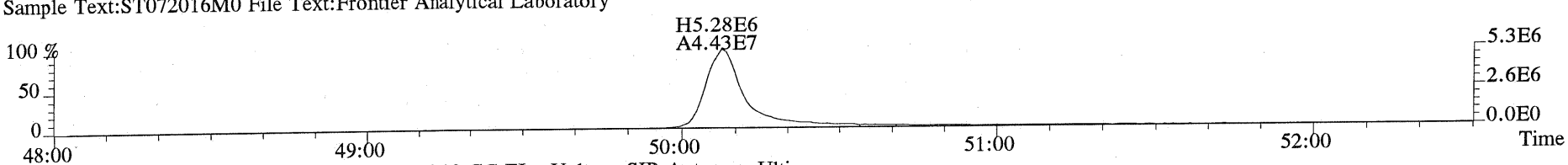
File:20JUL16M #1-361 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



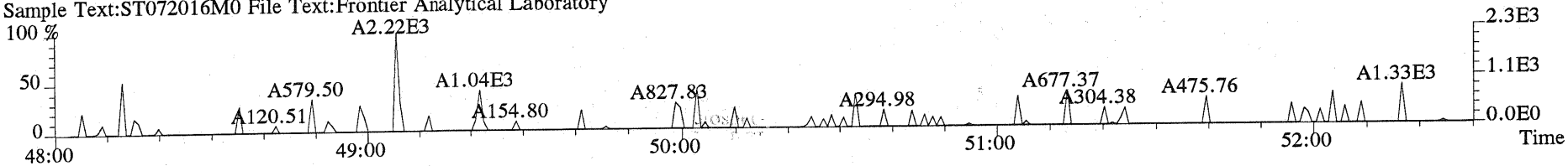
File:20JUL16M #1-361 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



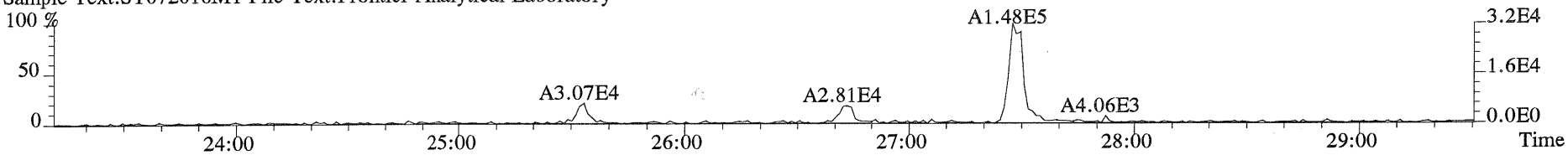
File:20JUL16M #1-361 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



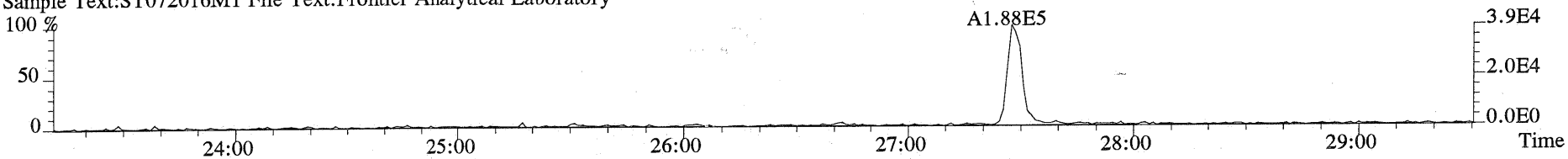
File:20JUL16M #1-361 Acq:20-JUL-2016 09:36:19 GC EI+ Voltage SIR Autospec-Ultima
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M0 File Text:Frontier Analytical Laboratory



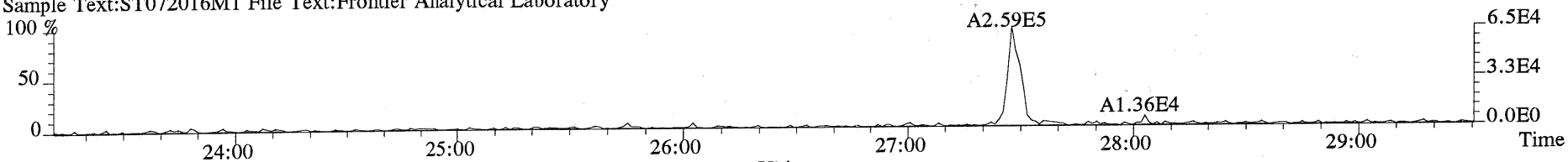
File:20JUL16M #1-399 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



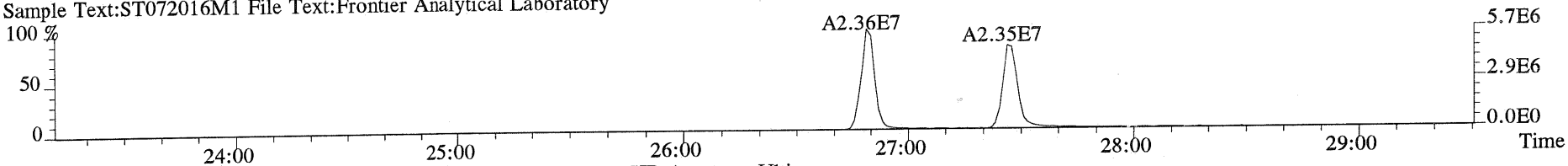
File:20JUL16M #1-399 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



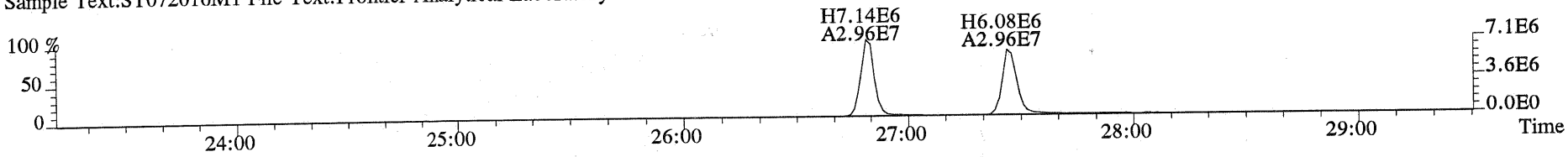
File:20JUL16M #1-399 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



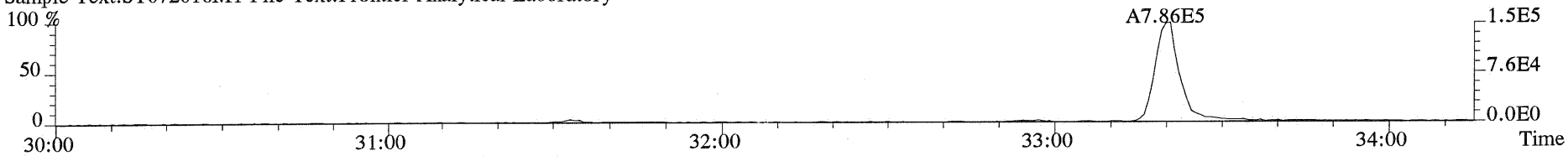
File:20JUL16M #1-399 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



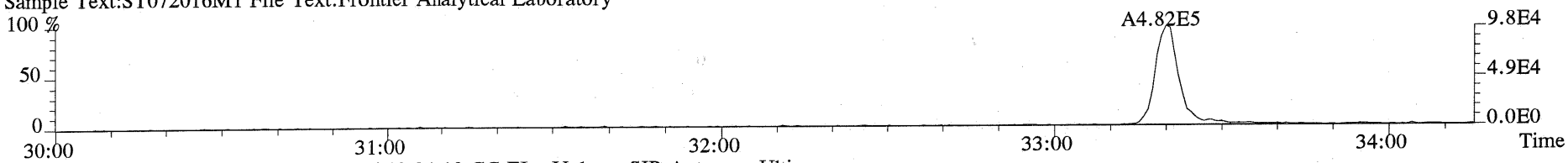
File:20JUL16M #1-399 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



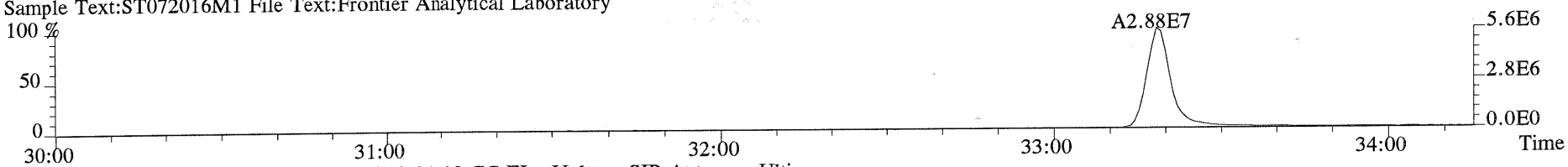
File:20JUL16M #1-411 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



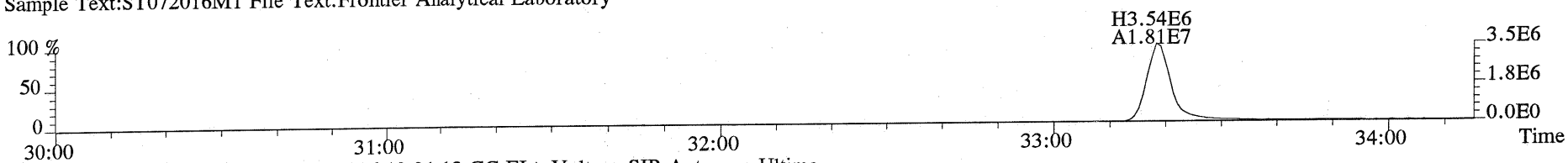
File:20JUL16M #1-411 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



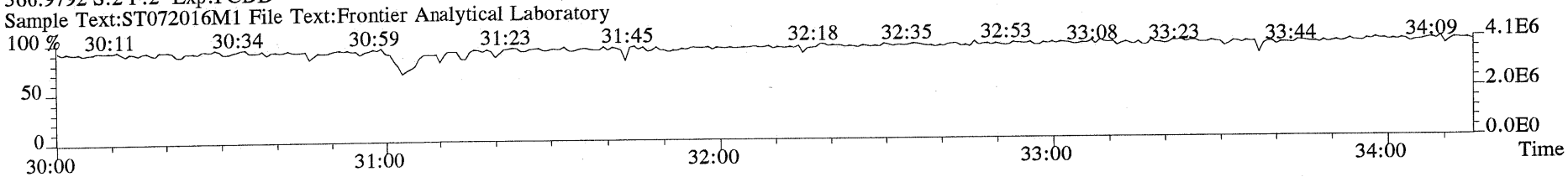
File:20JUL16M #1-411 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



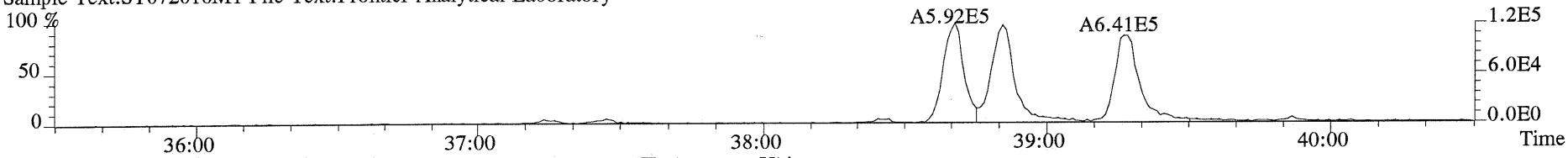
File:20JUL16M #1-411 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



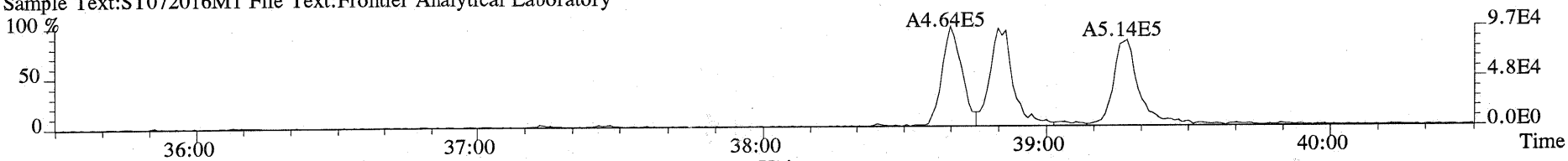
File:20JUL16M #1-411 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:2 F:2 Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



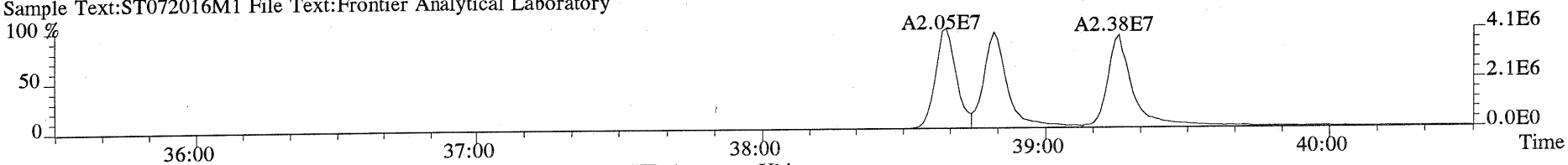
File:20JUL16M #1-495 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



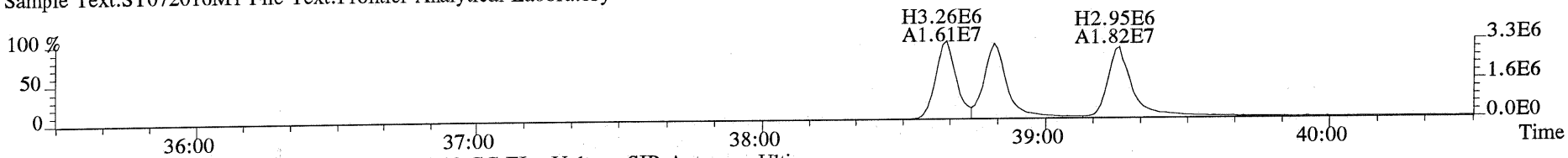
File:20JUL16M #1-495 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



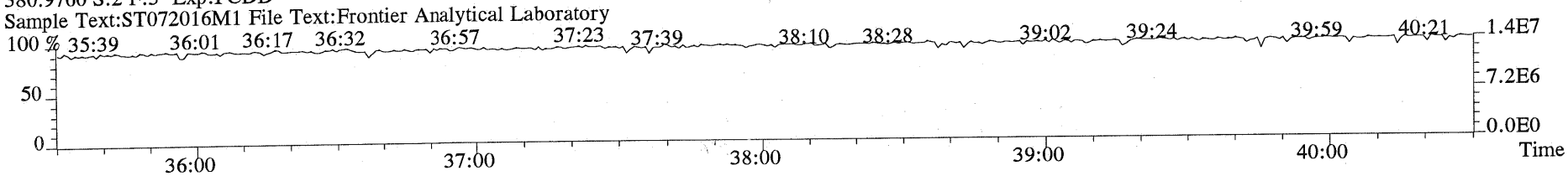
File:20JUL16M #1-495 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



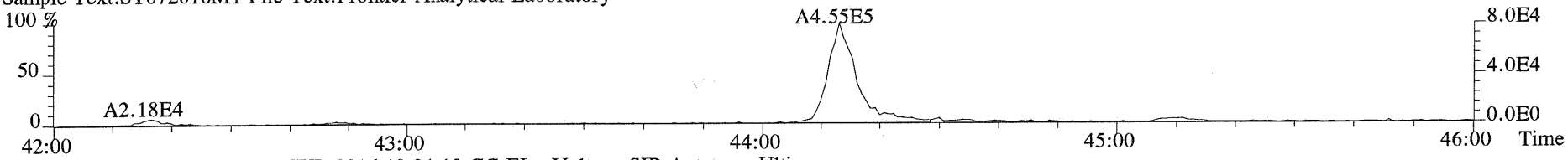
File:20JUL16M #1-495 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



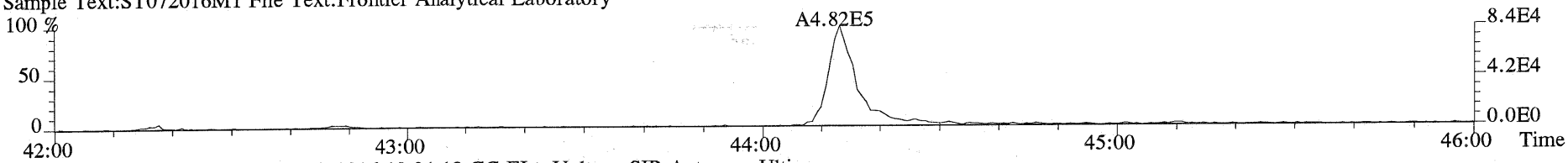
File:20JUL16M #1-495 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:2 F:3 Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



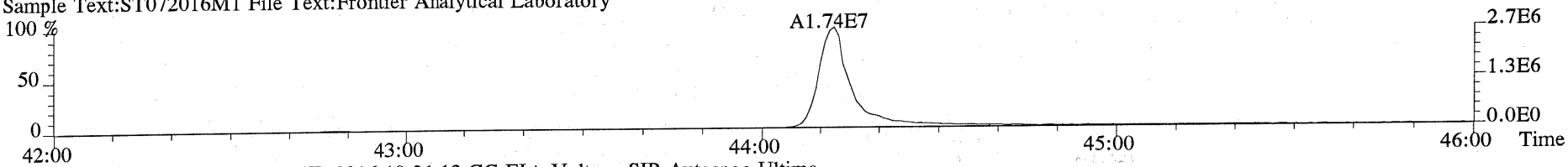
File:20JUL16M #1-521 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



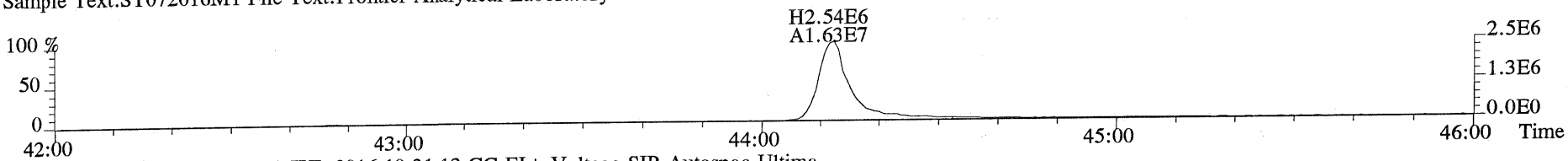
File:20JUL16M #1-521 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



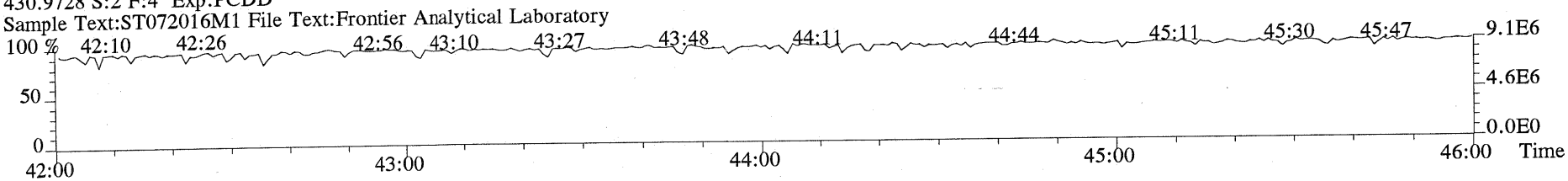
File:20JUL16M #1-521 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



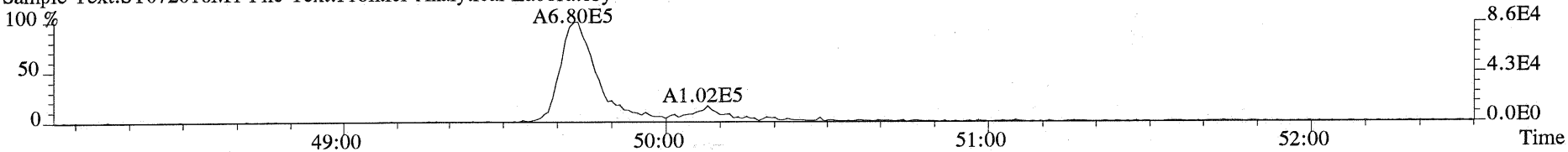
File:20JUL16M #1-521 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



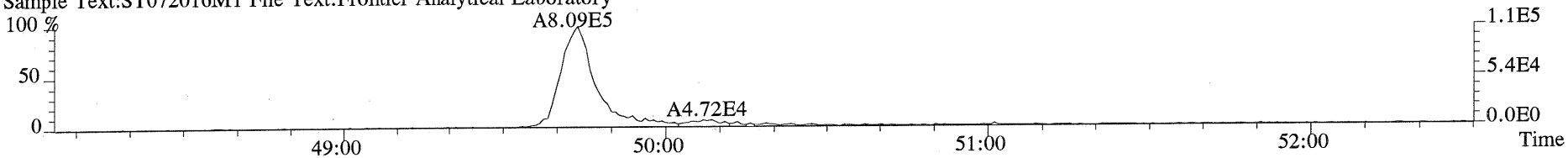
File:20JUL16M #1-521 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:2 F:4 Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



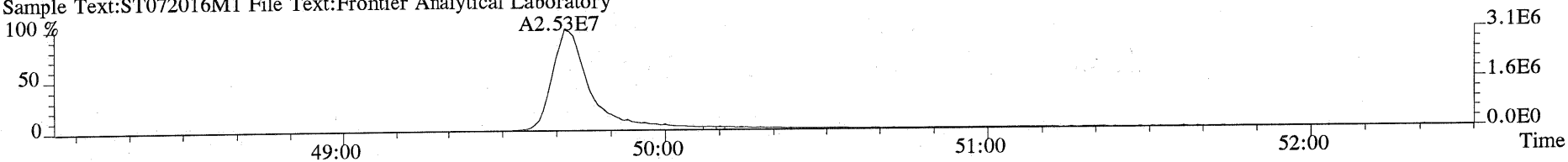
File:20JUL16M #1-360 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



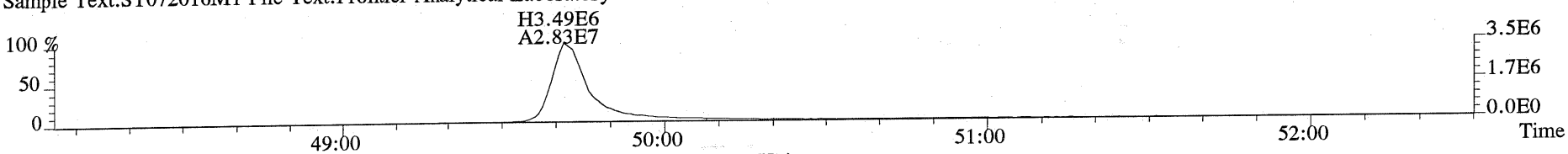
File:20JUL16M #1-360 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



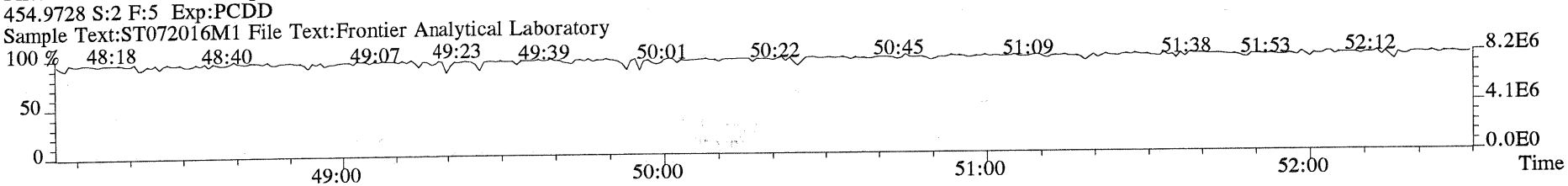
File:20JUL16M #1-360 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



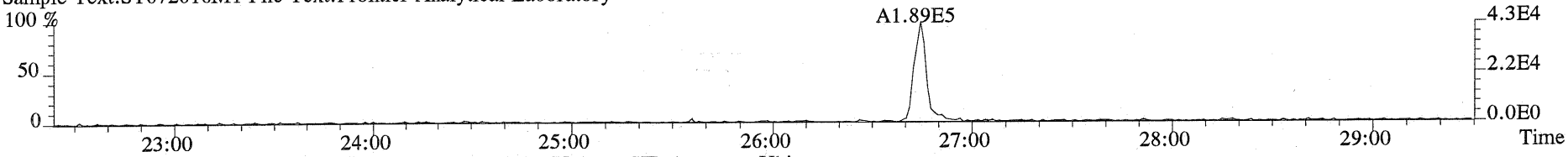
File:20JUL16M #1-360 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



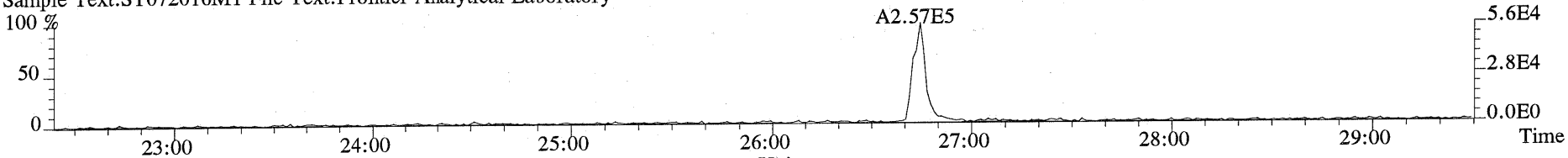
File:20JUL16M #1-360 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:2 F:5 Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



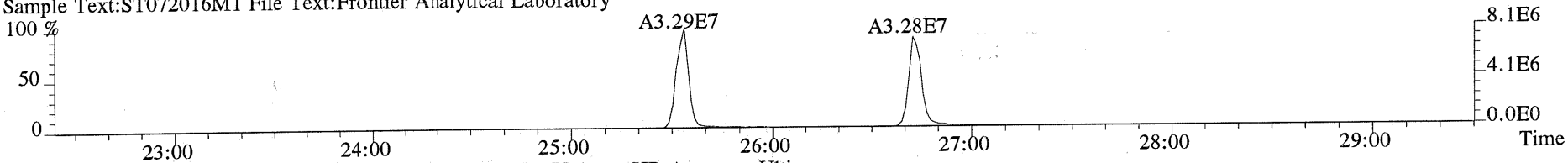
File:20JUL16M #1-399 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



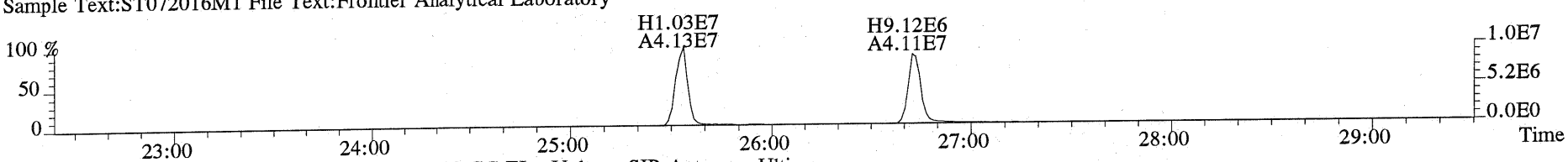
File:20JUL16M #1-399 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



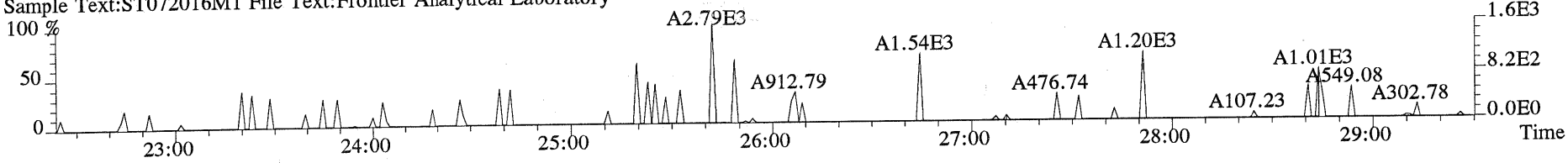
File:20JUL16M #1-399 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



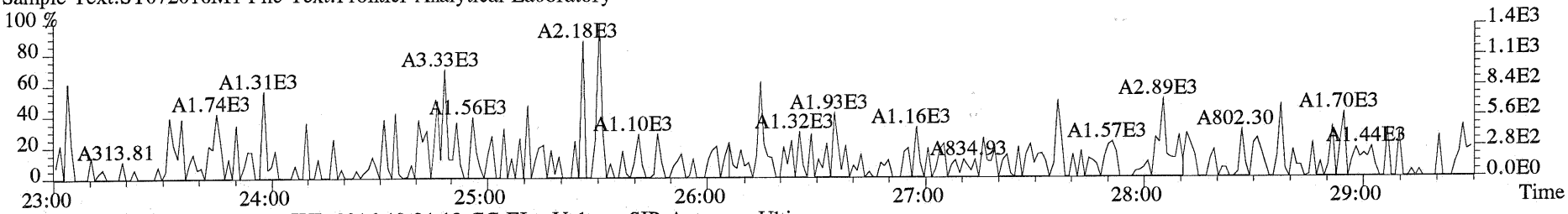
File:20JUL16M #1-399 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



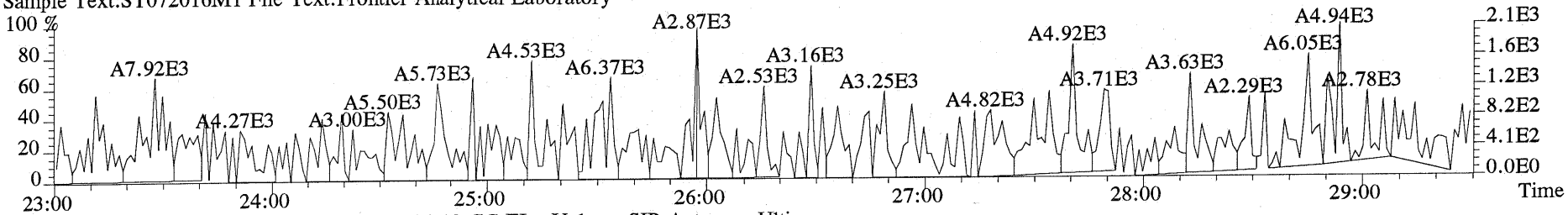
File:20JUL16M #1-399 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



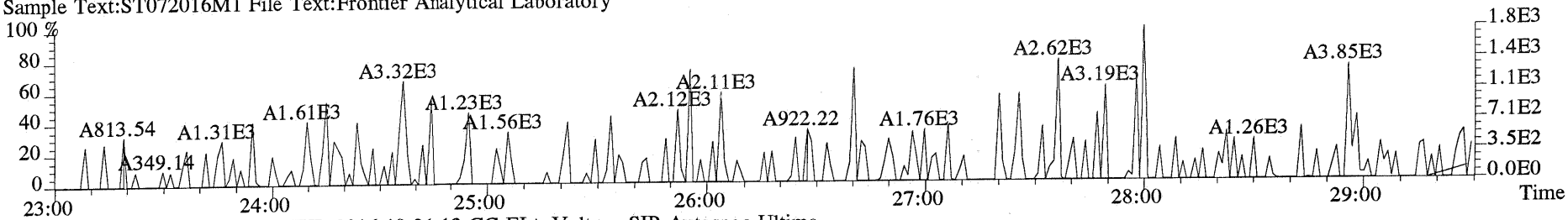
File:20JUL16M #1-399 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



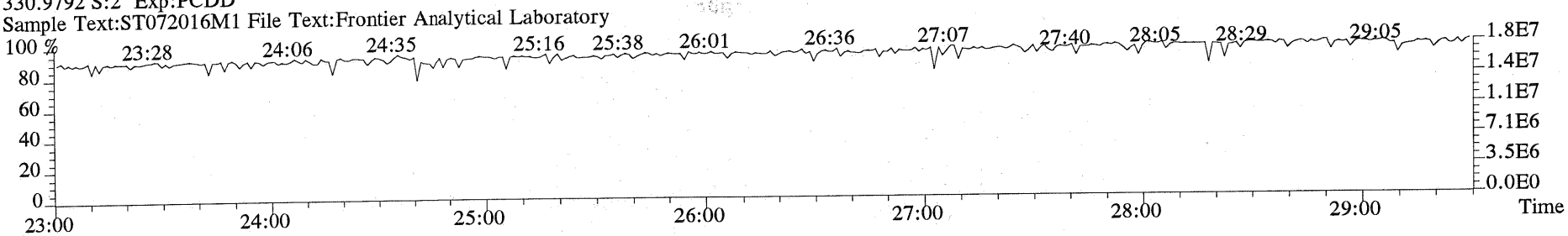
File:20JUL16M #1-399 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



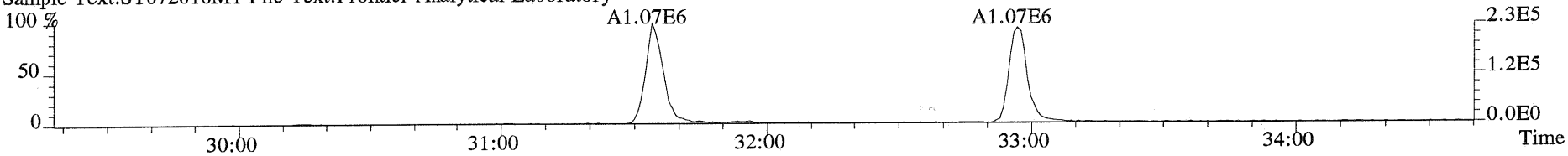
File:20JUL16M #1-399 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



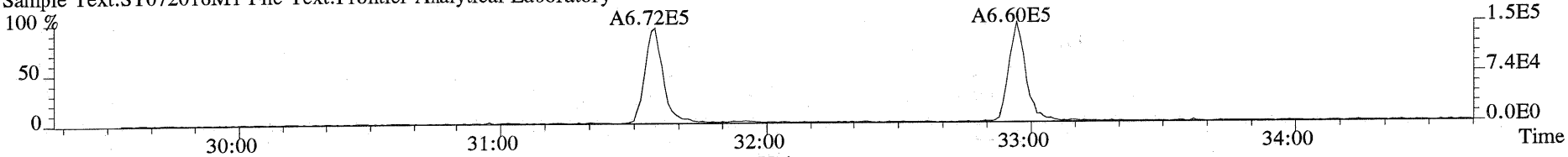
File:20JUL16M #1-399 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:2 Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



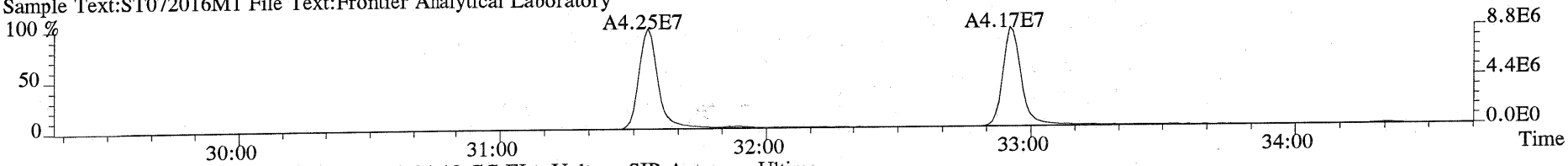
File:20JUL16M #1-411 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



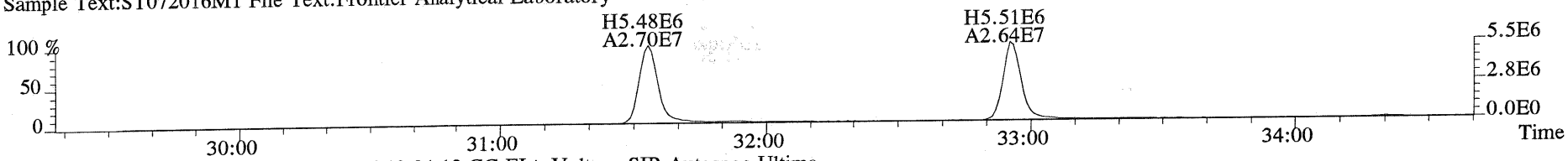
File:20JUL16M #1-411 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



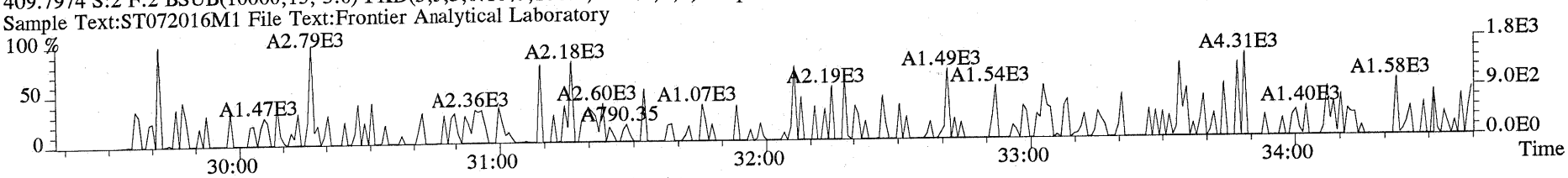
File:20JUL16M #1-411 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



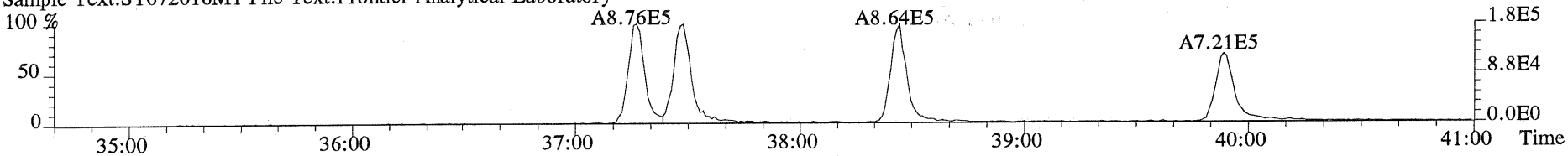
File:20JUL16M #1-411 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



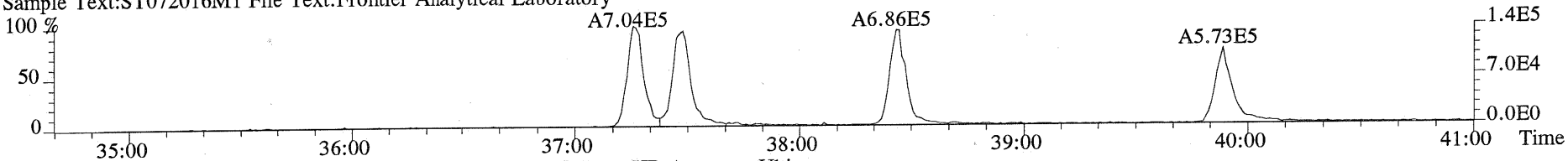
File:20JUL16M #1-411 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



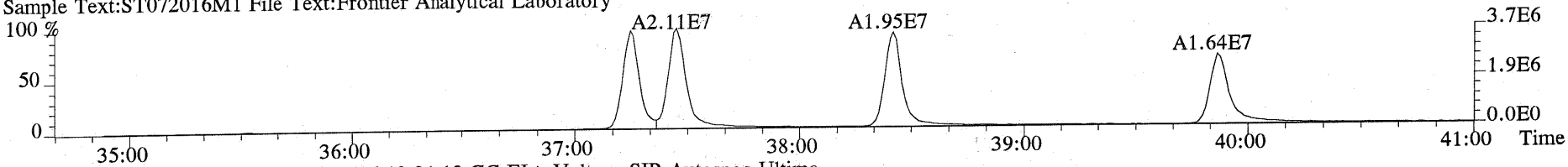
File:20JUL16M #1-495 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



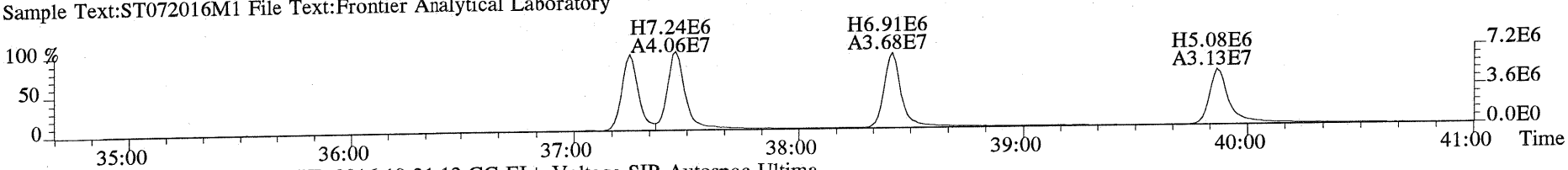
File:20JUL16M #1-495 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



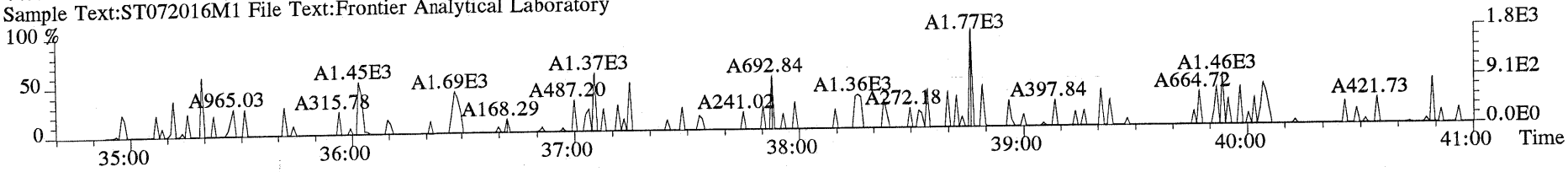
File:20JUL16M #1-495 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



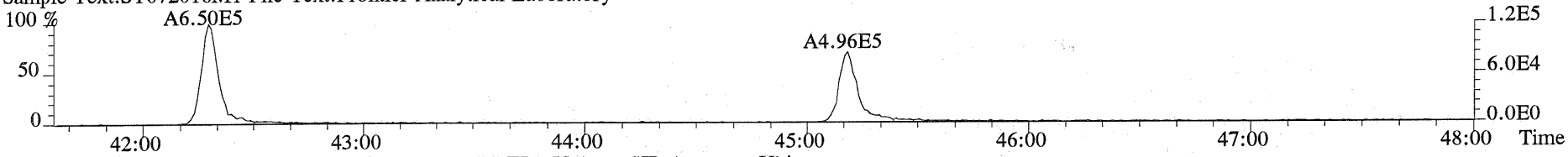
File:20JUL16M #1-495 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



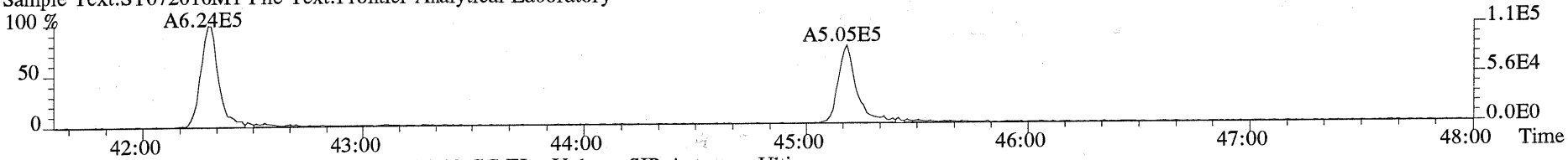
File:20JUL16M #1-495 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



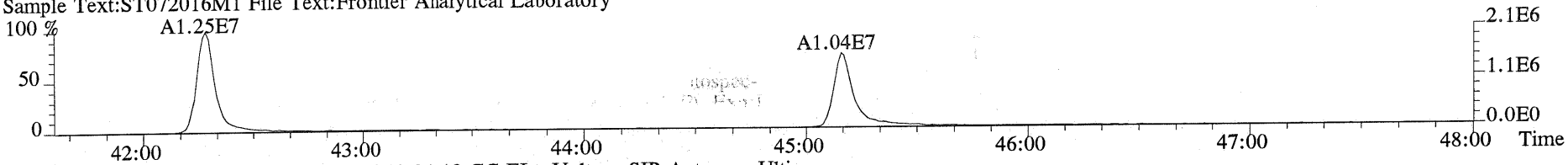
File:20JUL16M #1-521 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



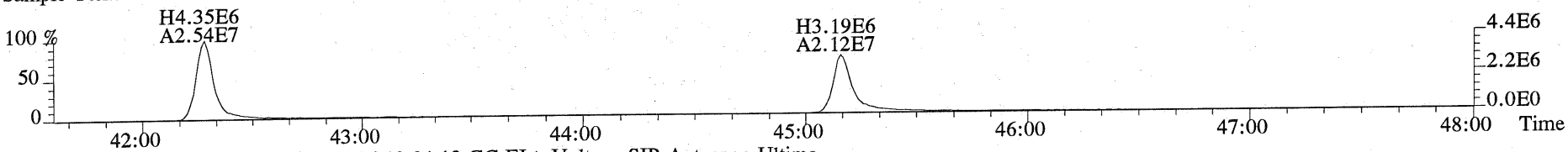
File:20JUL16M #1-521 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



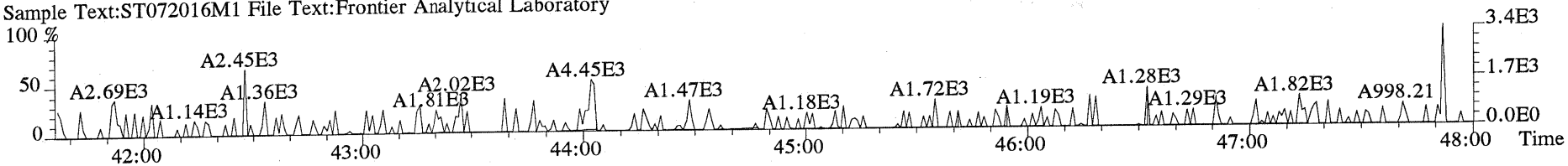
File:20JUL16M #1-521 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



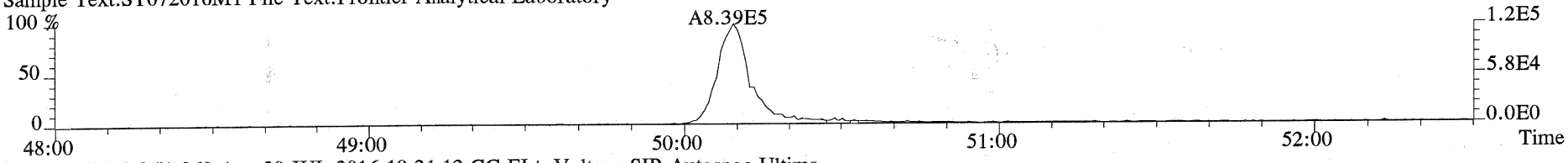
File:20JUL16M #1-521 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



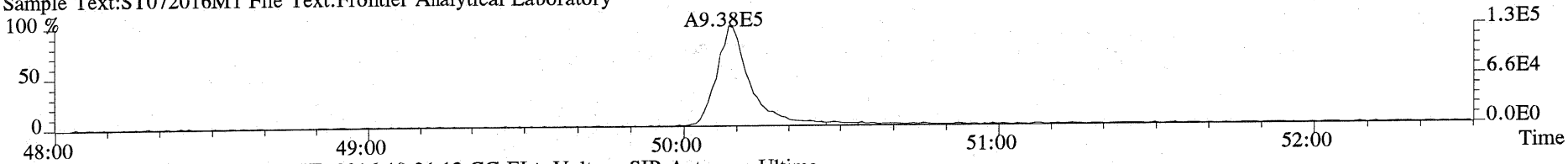
File:20JUL16M #1-521 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



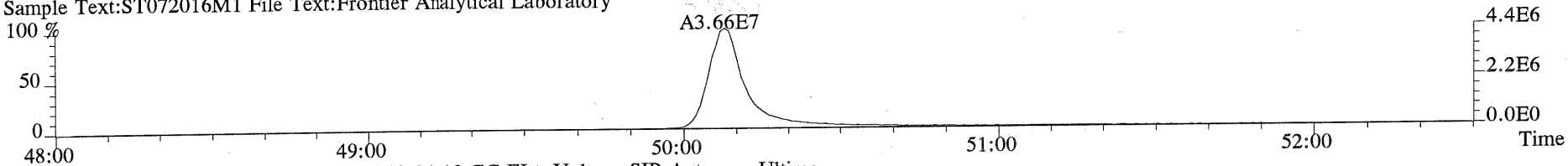
File:20JUL16M #1-360 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



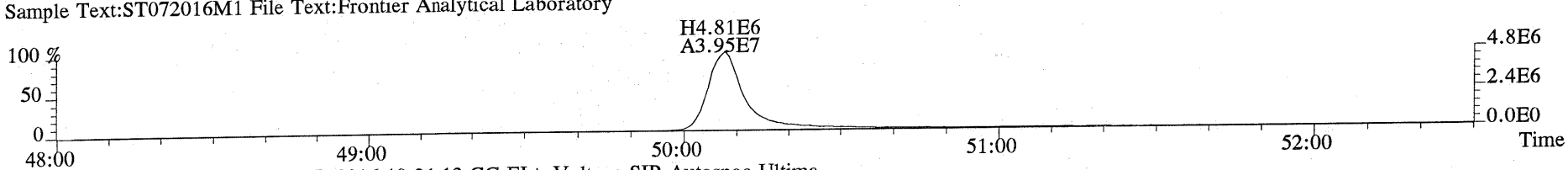
File:20JUL16M #1-360 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



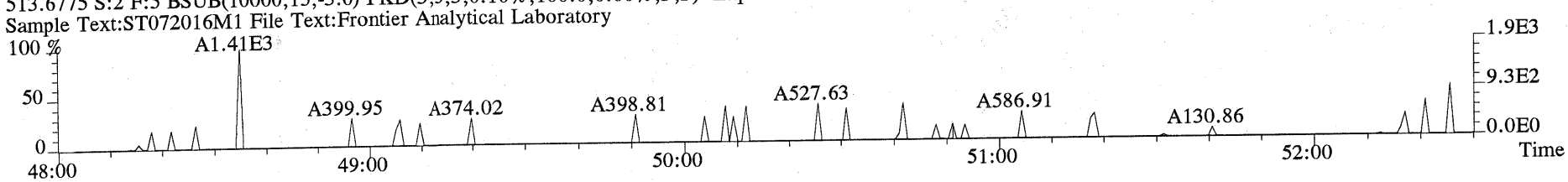
File:20JUL16M #1-360 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



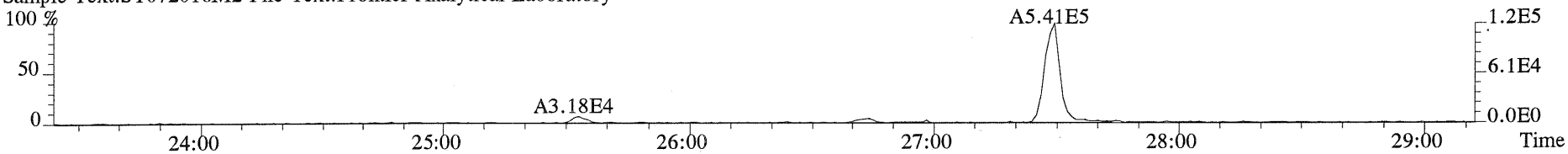
File:20JUL16M #1-360 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



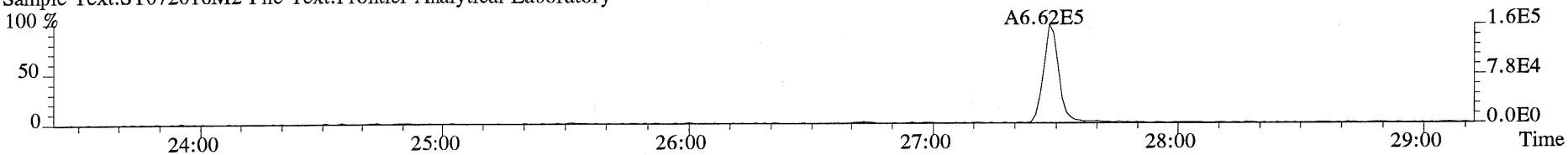
File:20JUL16M #1-360 Acq:20-JUL-2016 10:31:12 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M1 File Text:Frontier Analytical Laboratory



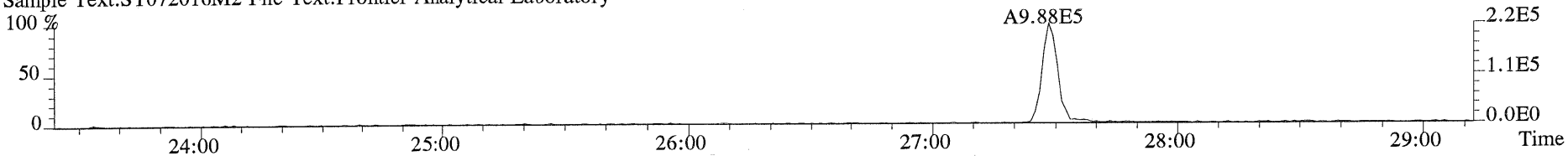
File:20JUL16M #1-400 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



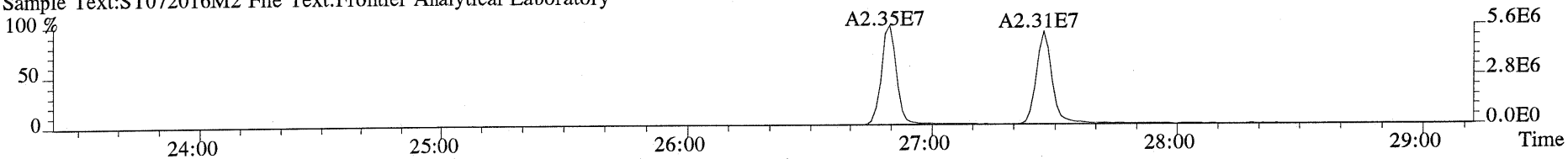
File:20JUL16M #1-400 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



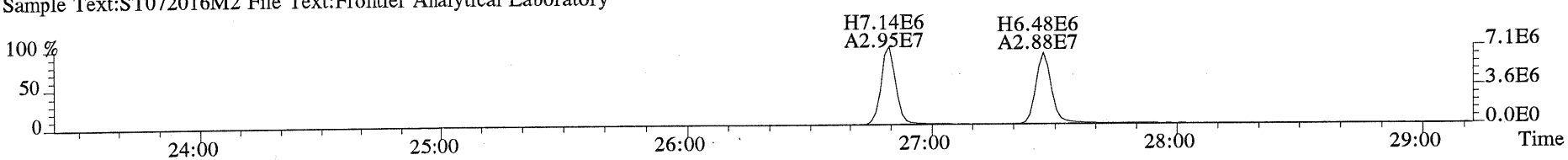
File:20JUL16M #1-400 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



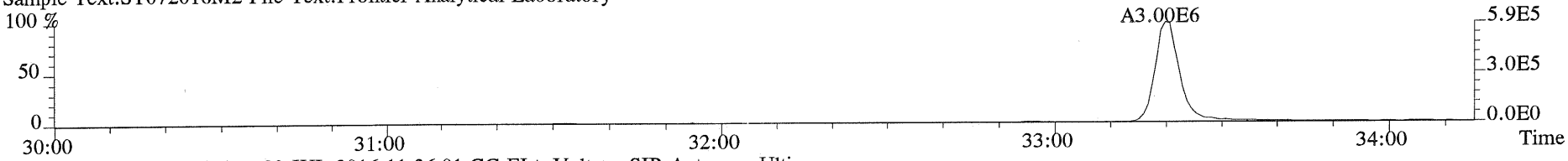
File:20JUL16M #1-400 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



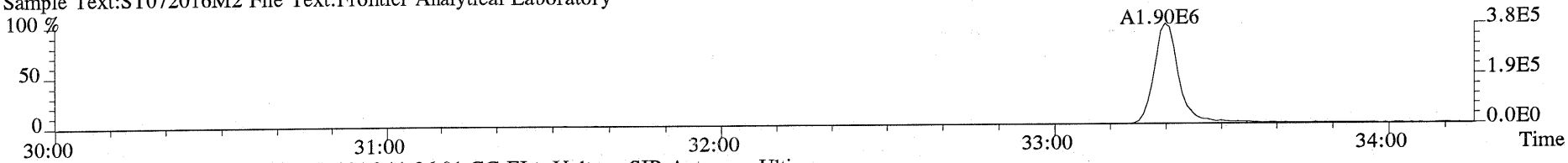
File:20JUL16M #1-400 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



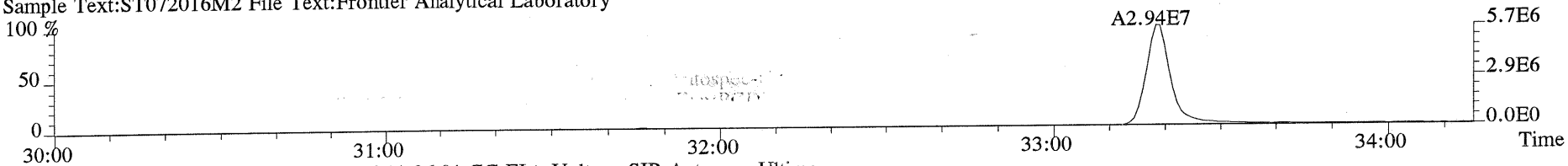
File:20JUL16M #1-410 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



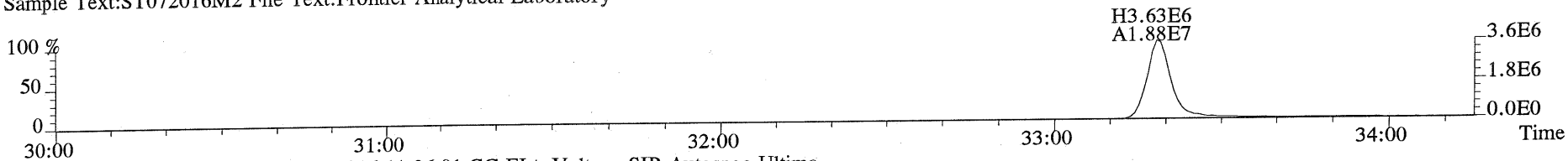
File:20JUL16M #1-410 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



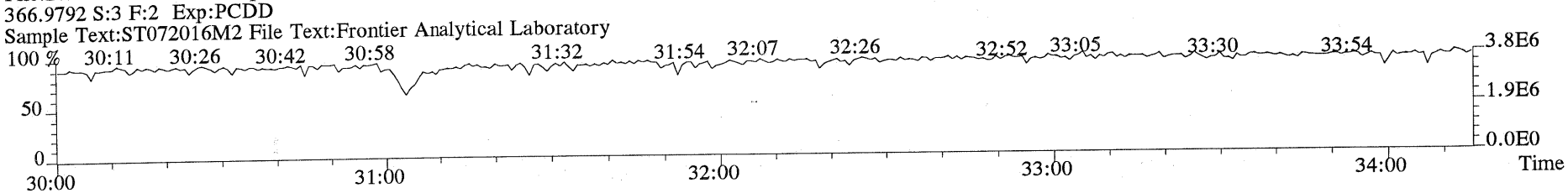
File:20JUL16M #1-410 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



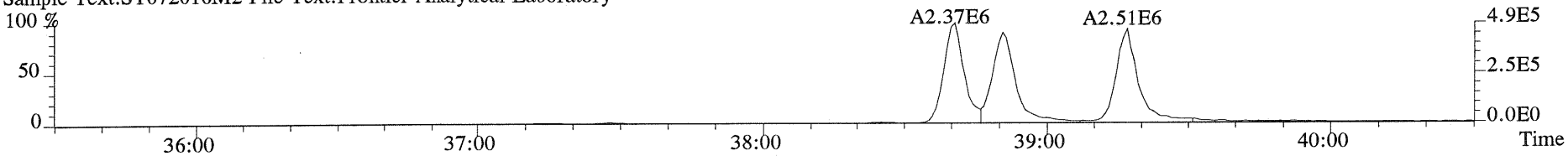
File:20JUL16M #1-410 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



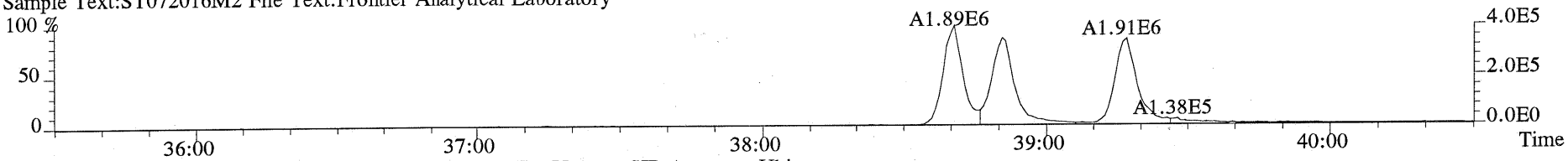
File:20JUL16M #1-410 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:3 F:2 Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



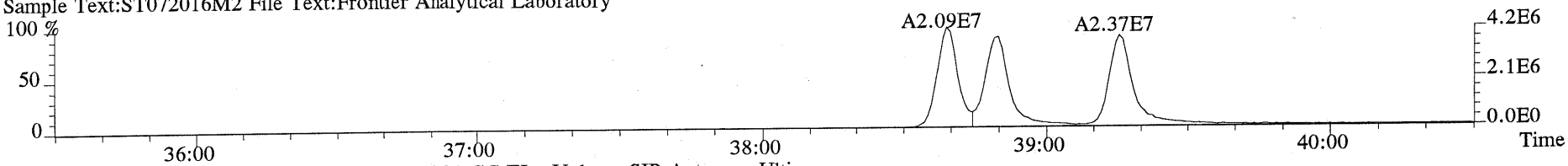
File:20JUL16M #1-495 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



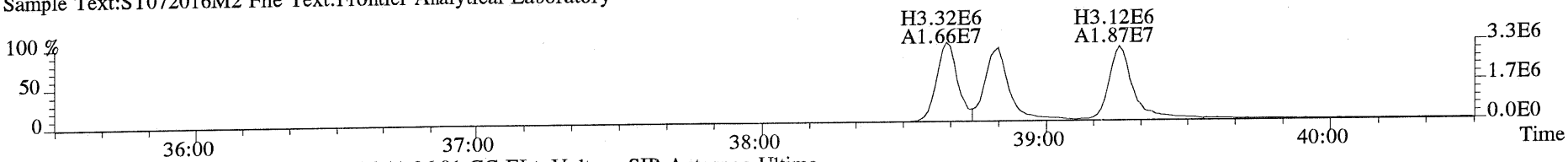
File:20JUL16M #1-495 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



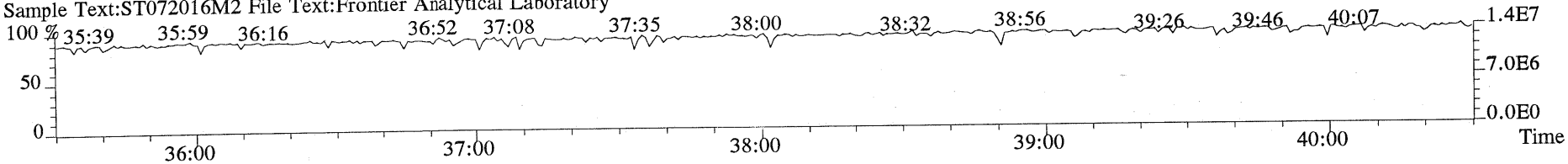
File:20JUL16M #1-495 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



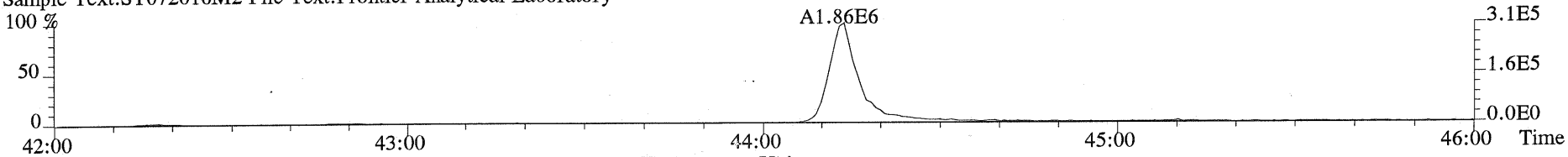
File:20JUL16M #1-495 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



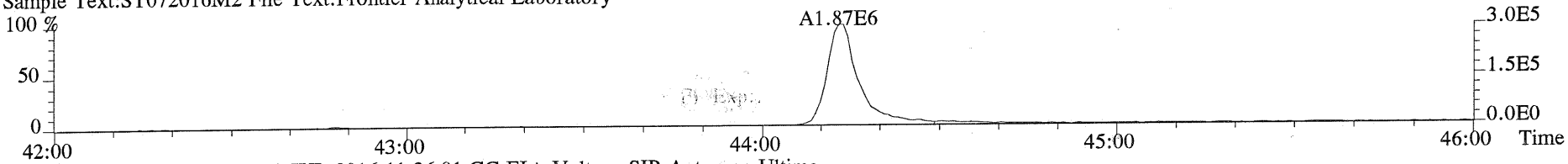
File:20JUL16M #1-495 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:3 F:3 Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



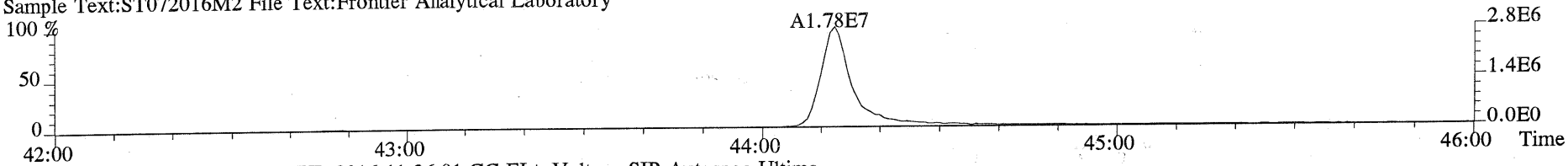
File:20JUL16M #1-521 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



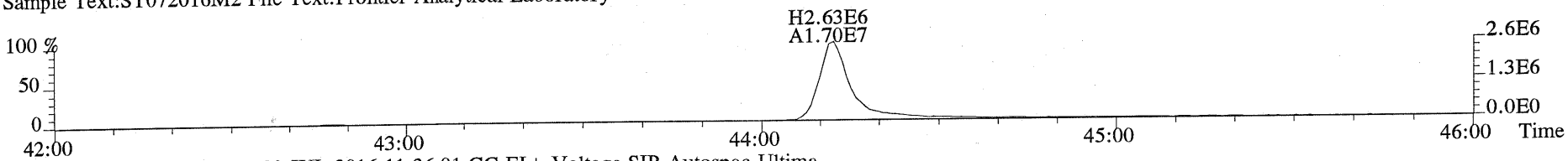
File:20JUL16M #1-521 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



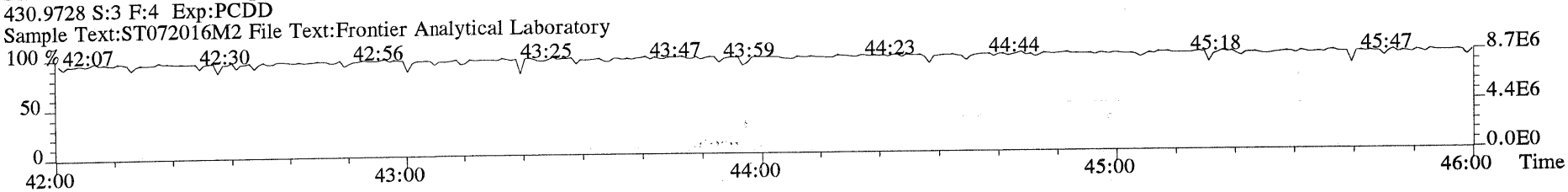
File:20JUL16M #1-521 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



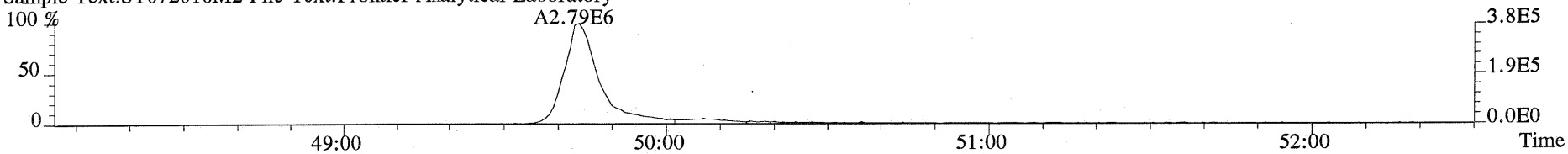
File:20JUL16M #1-521 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



File:20JUL16M #1-521 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:3 F:4 Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory

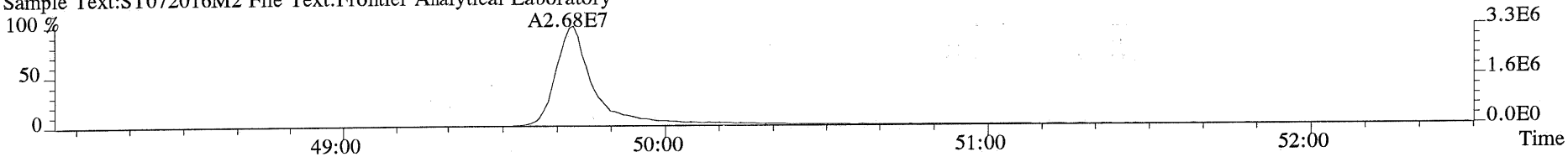


File:20JUL16M #1-360 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory

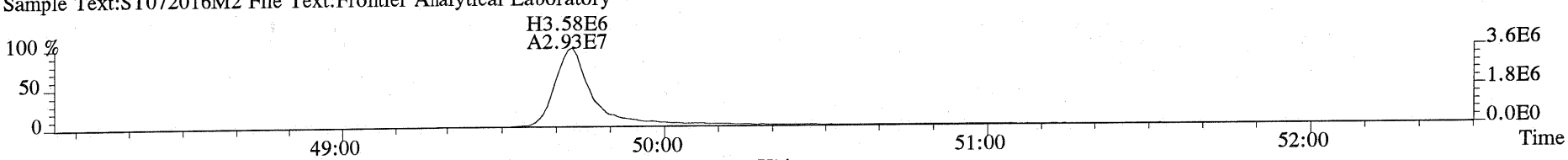


File:20JUL16M #1-360 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory

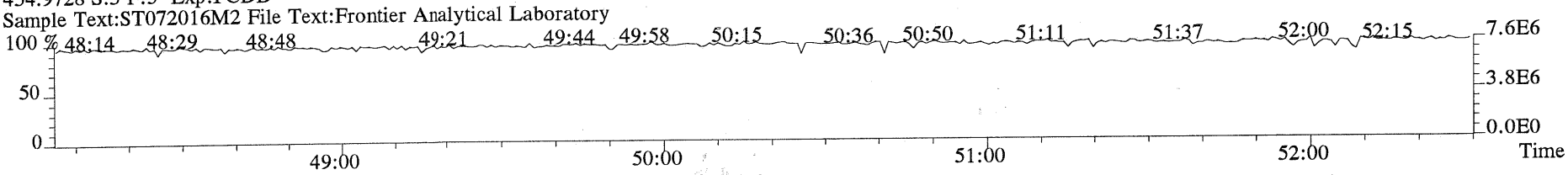
File:20JUL16M #1-360 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



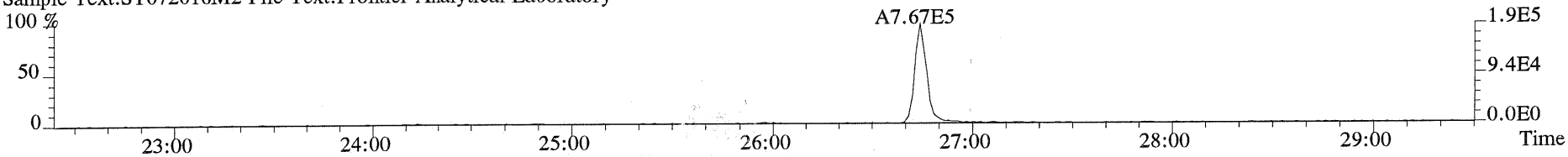
File:20JUL16M #1-360 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



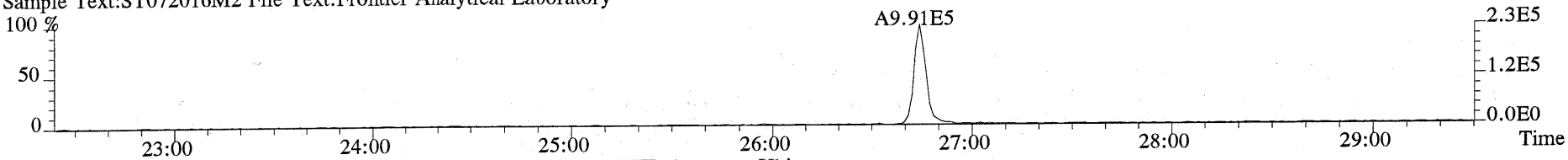
File:20JUL16M #1-360 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:3 F:5 Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



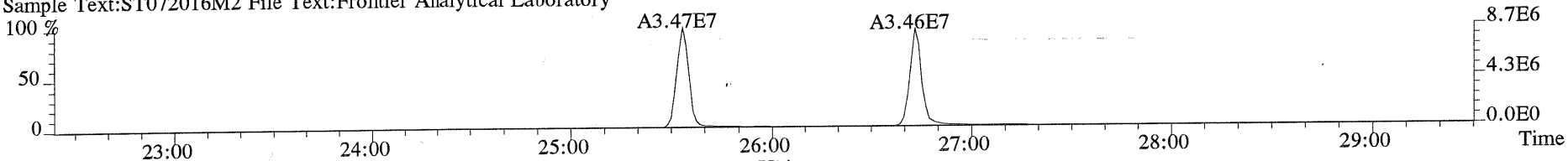
File:20JUL16M #1-400 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



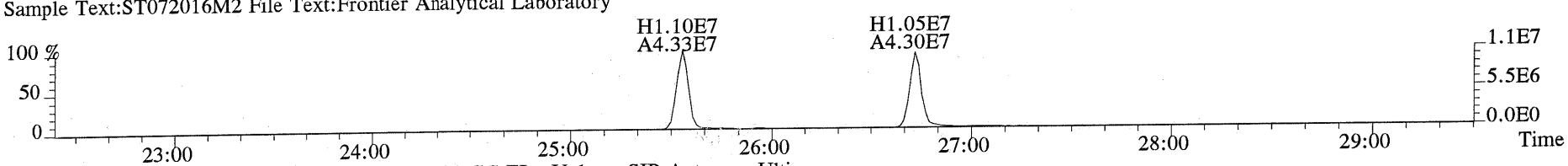
File:20JUL16M #1-400 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



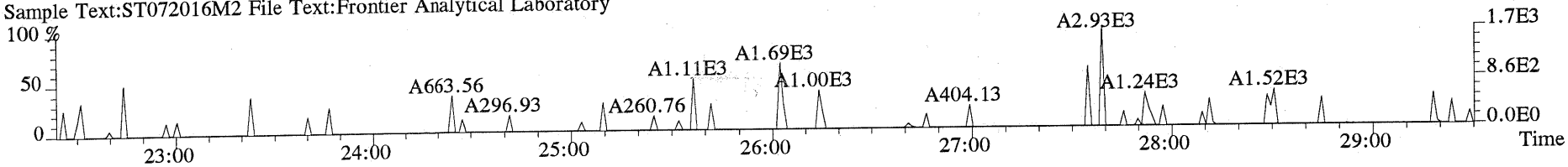
File:20JUL16M #1-400 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



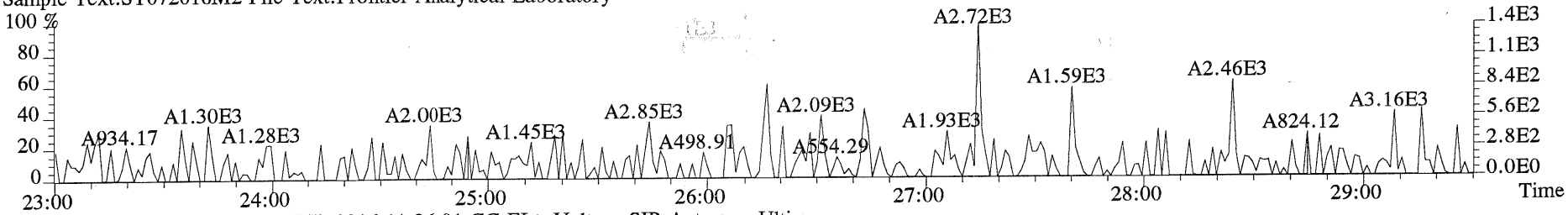
File:20JUL16M #1-400 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



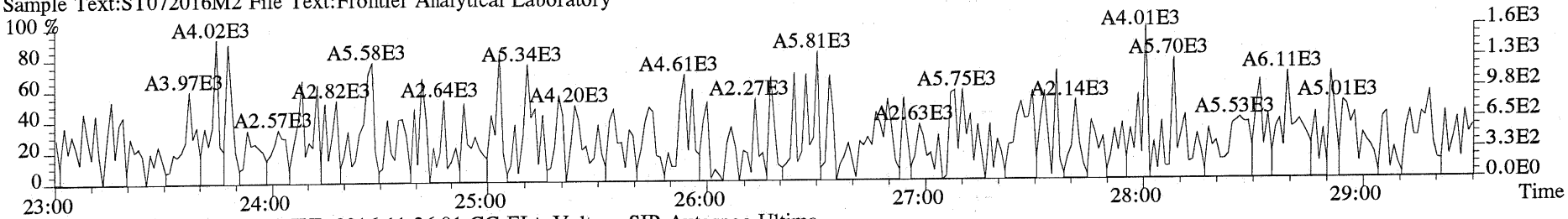
File:20JUL16M #1-400 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



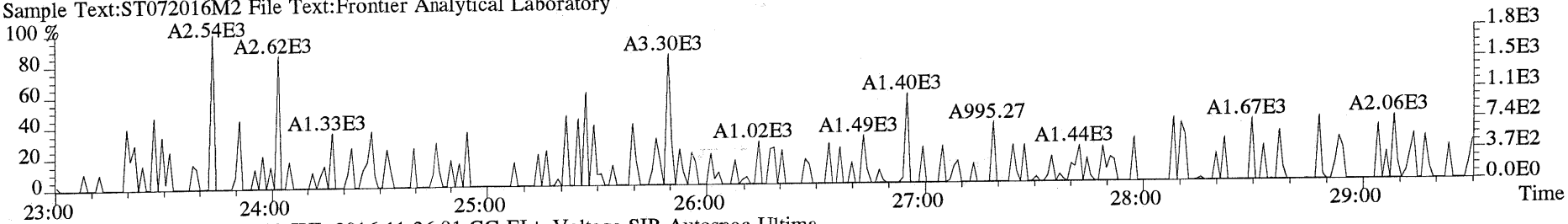
File:20JUL16M #1-400 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



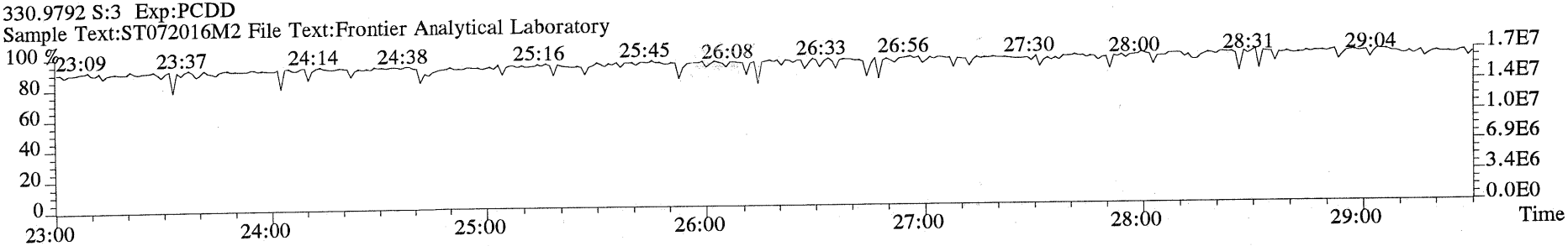
File:20JUL16M #1-400 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



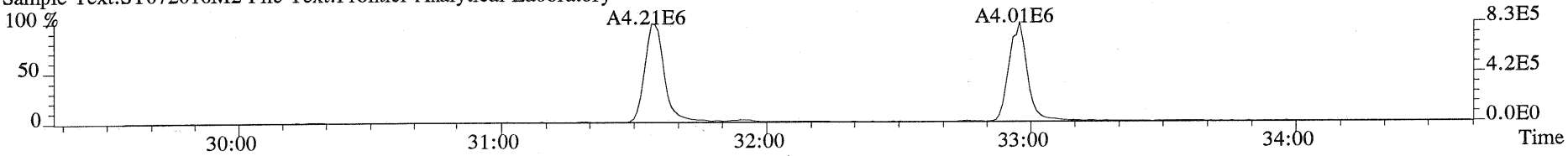
File:20JUL16M #1-400 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



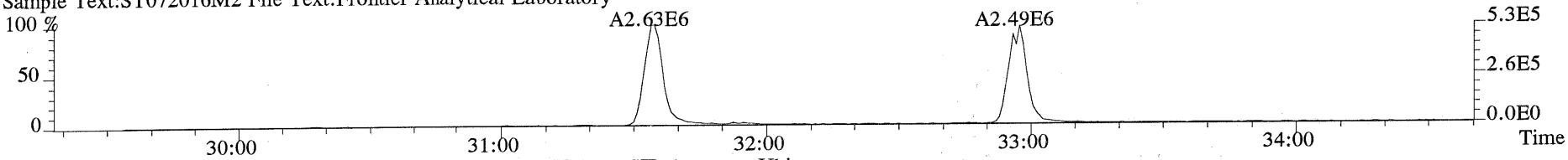
File:20JUL16M #1-400 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:3 Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



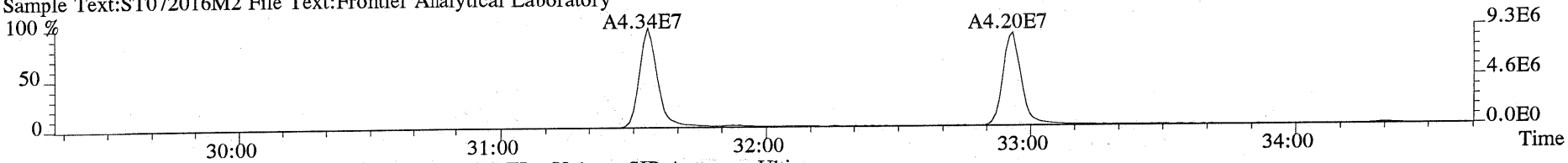
File:20JUL16M #1-410 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



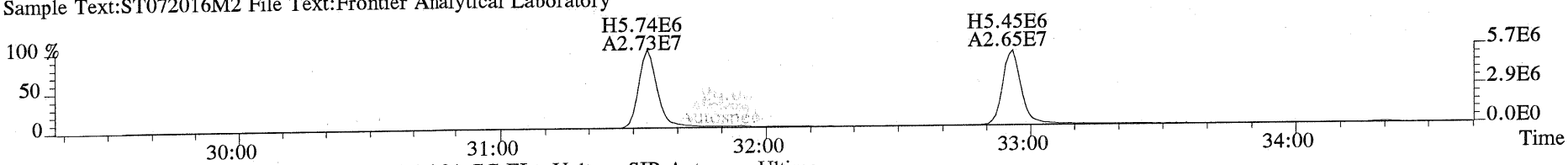
File:20JUL16M #1-410 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



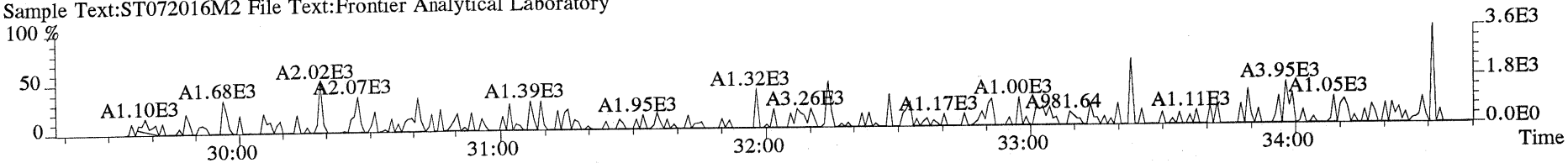
File:20JUL16M #1-410 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



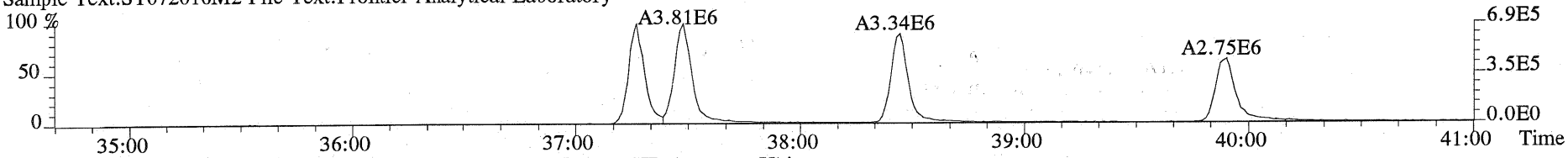
File:20JUL16M #1-410 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



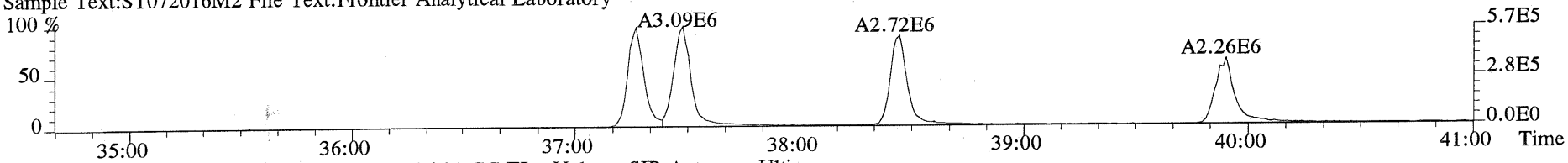
File:20JUL16M #1-410 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



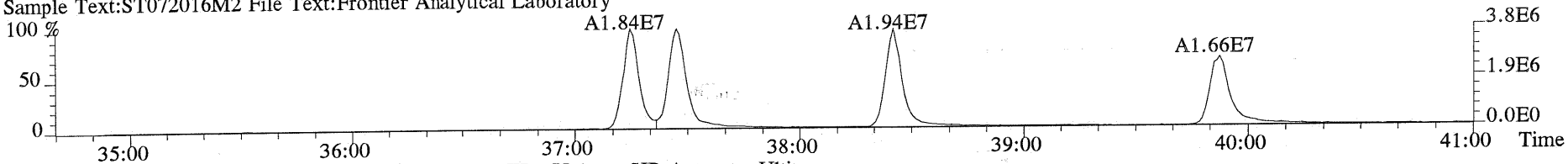
File:20JUL16M #1-495 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



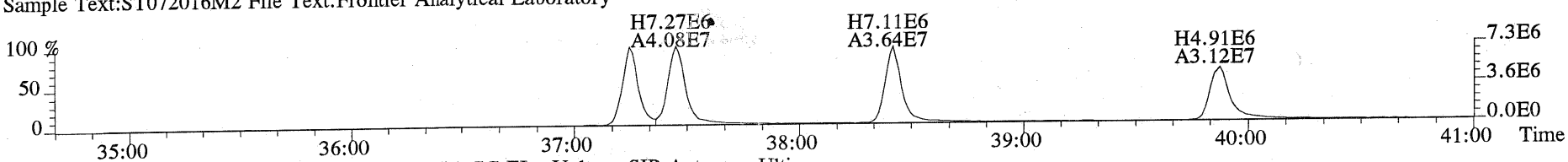
File:20JUL16M #1-495 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



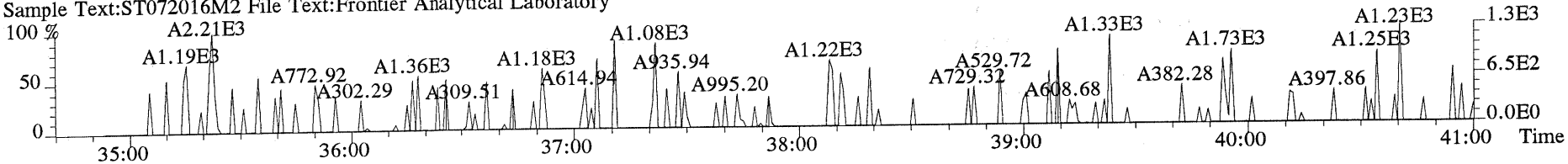
File:20JUL16M #1-495 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



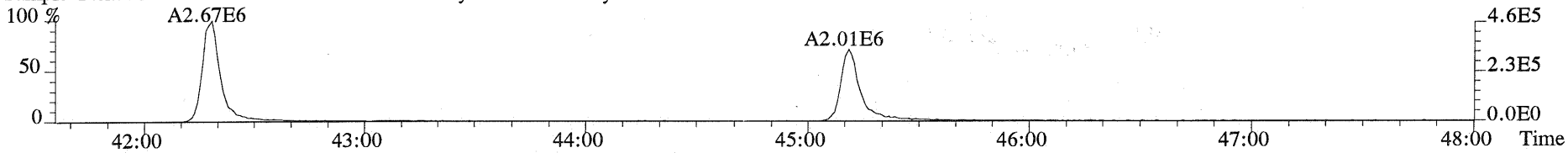
File:20JUL16M #1-495 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



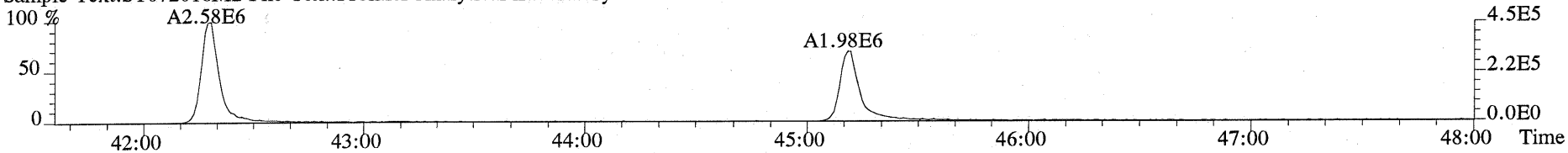
File:20JUL16M #1-495 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



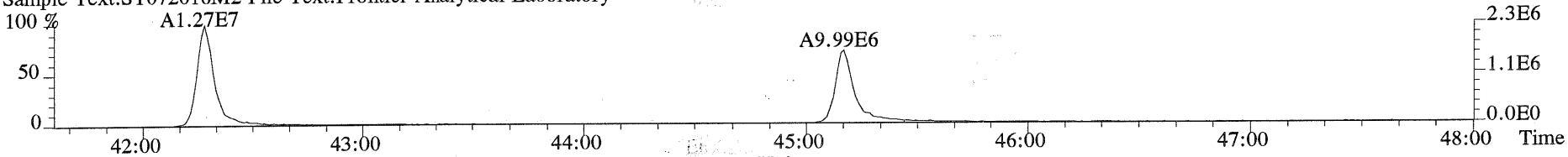
File:20JUL16M #1-521 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



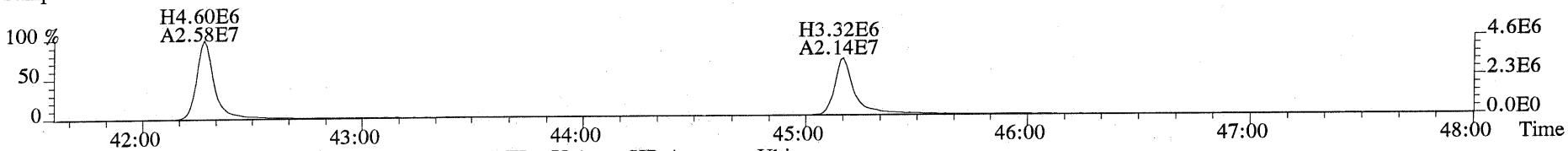
File:20JUL16M #1-521 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



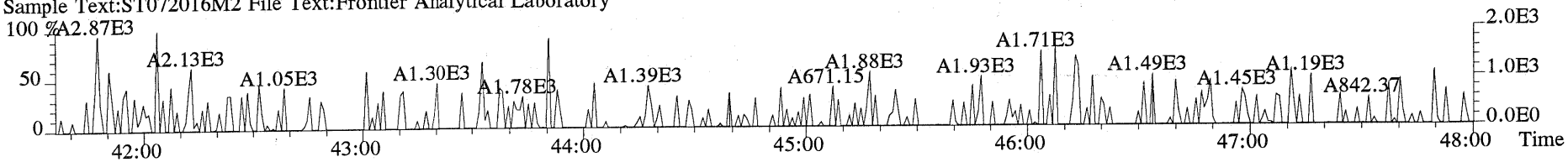
File:20JUL16M #1-521 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



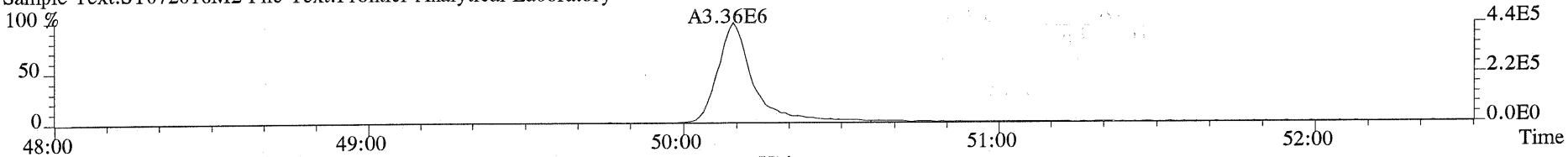
File:20JUL16M #1-521 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



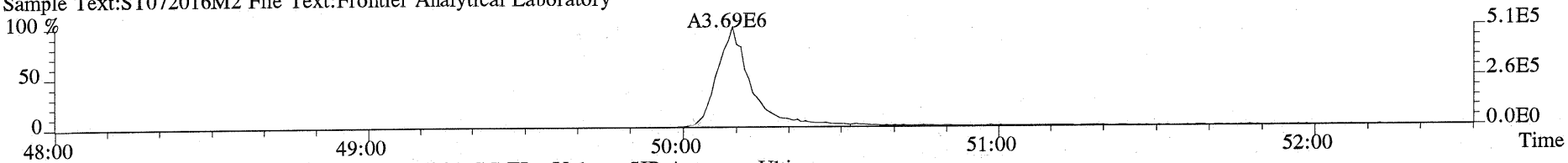
File:20JUL16M #1-521 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



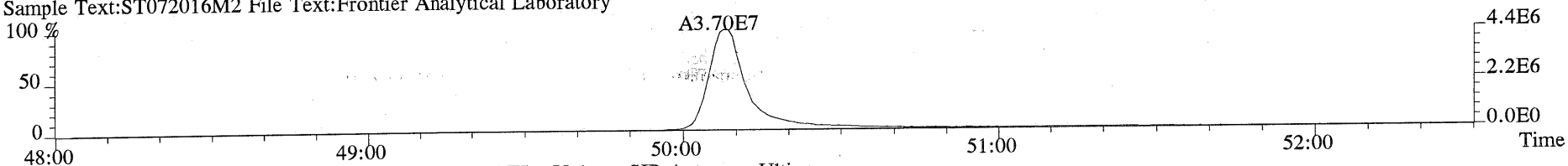
File:20JUL16M #1-360 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



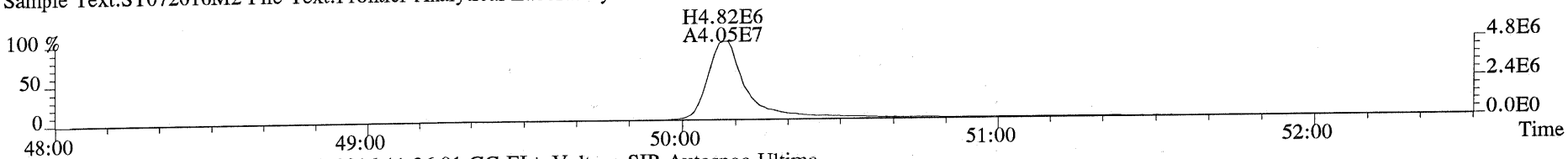
File:20JUL16M #1-360 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



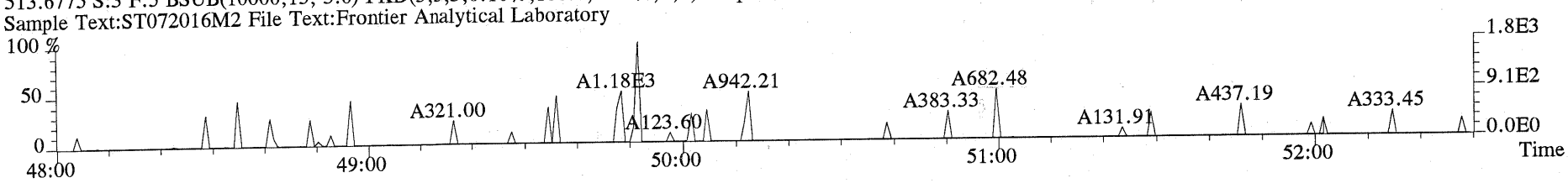
File:20JUL16M #1-360 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



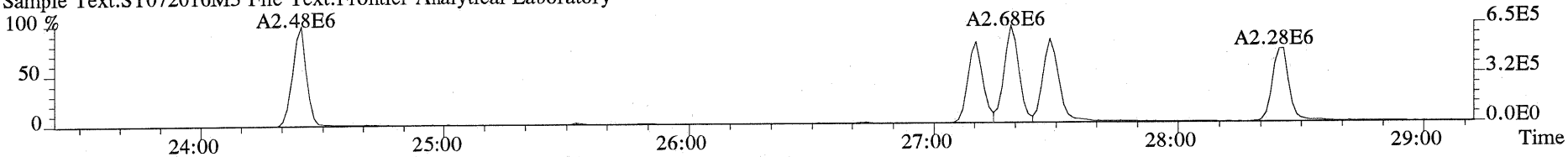
File:20JUL16M #1-360 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



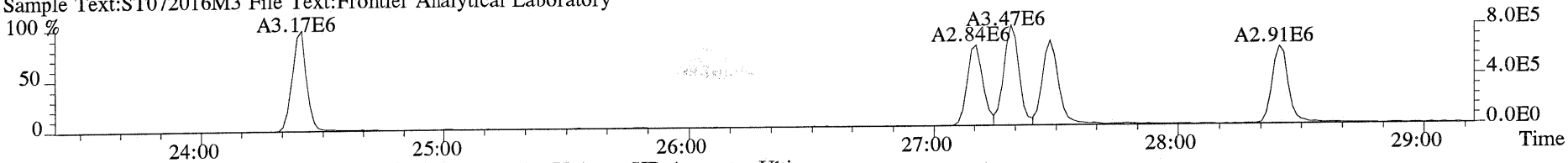
File:20JUL16M #1-360 Acq:20-JUL-2016 11:26:01 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M2 File Text:Frontier Analytical Laboratory



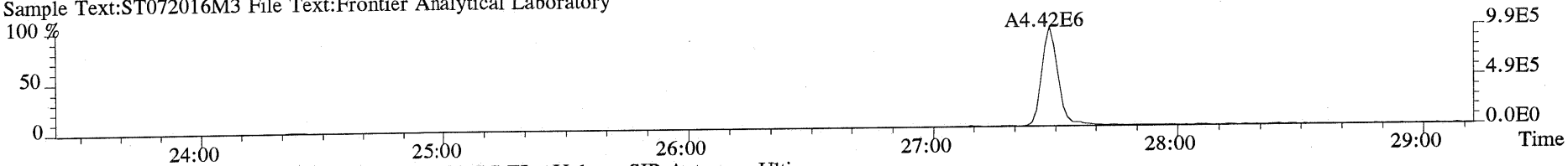
File:20JUL16M #1-399 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



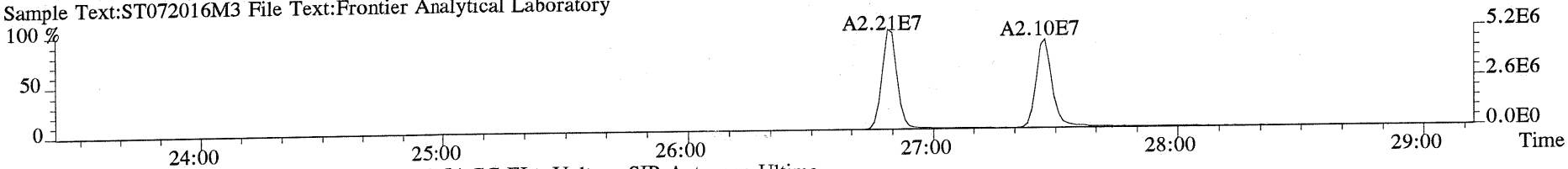
File:20JUL16M #1-399 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



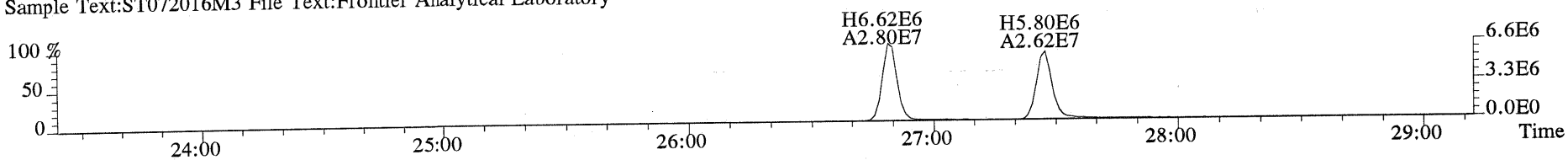
File:20JUL16M #1-399 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



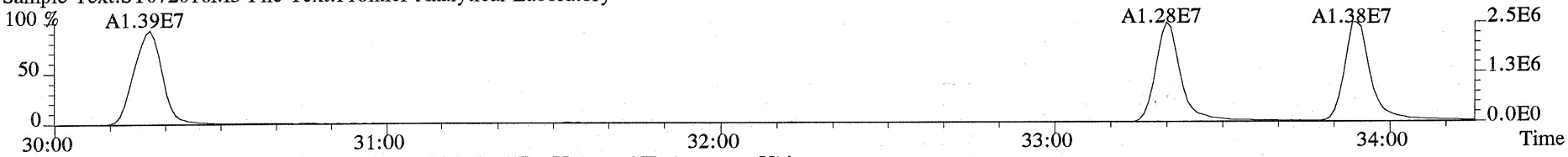
File:20JUL16M #1-399 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



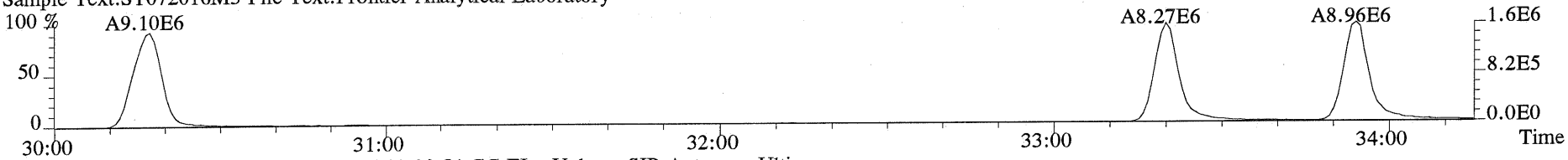
File:20JUL16M #1-399 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



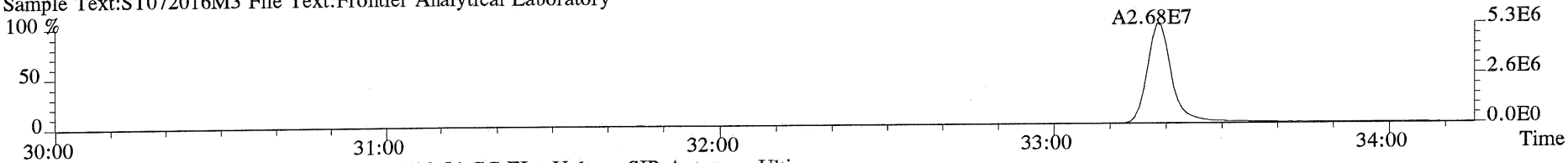
File:20JUL16M #1-411 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



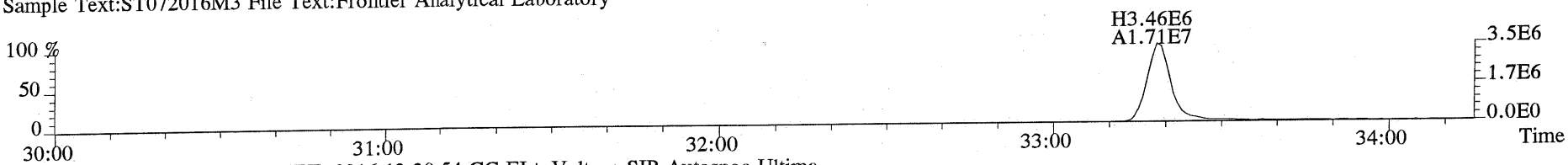
File:20JUL16M #1-411 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



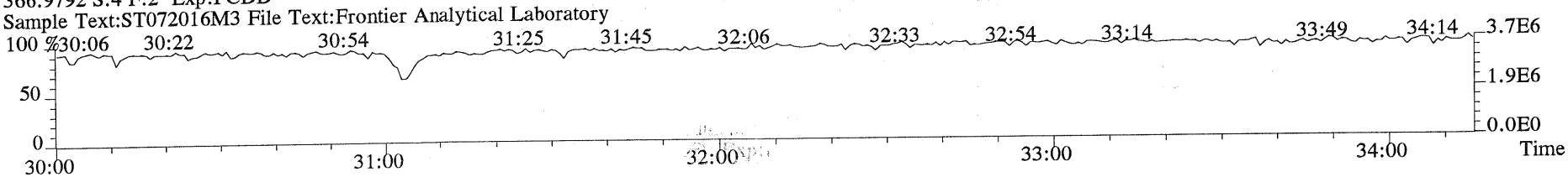
File:20JUL16M #1-411 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



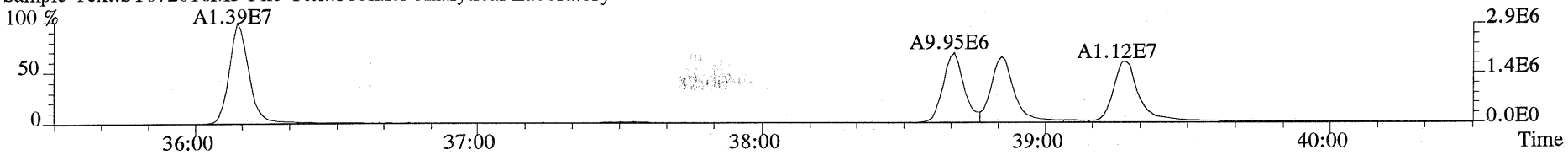
File:20JUL16M #1-411 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



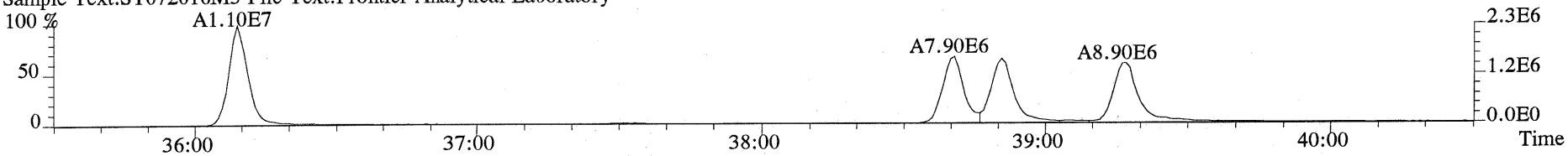
File:20JUL16M #1-411 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:4 F:2 Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



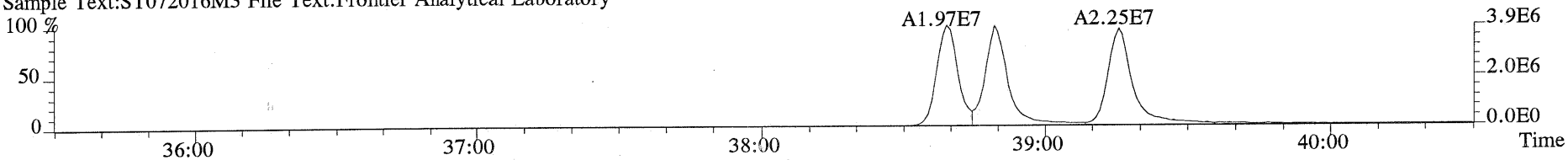
File:20JUL16M #1-495 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



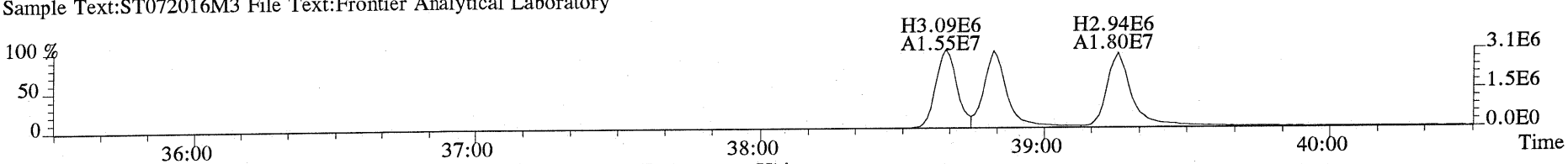
File:20JUL16M #1-495 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



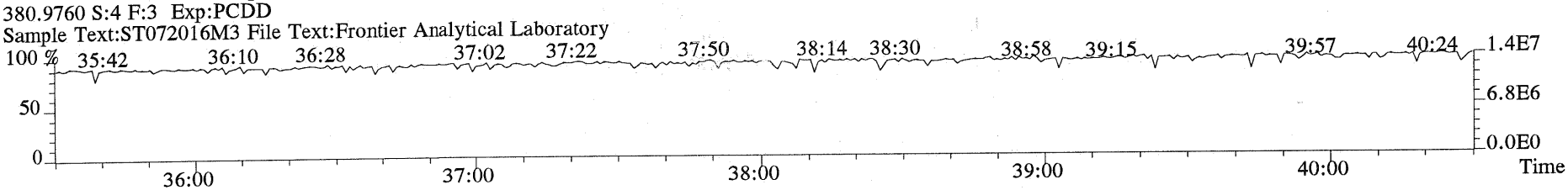
File:20JUL16M #1-495 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



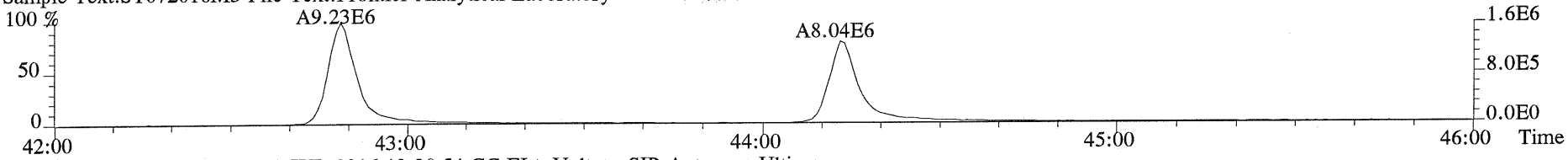
File:20JUL16M #1-495 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



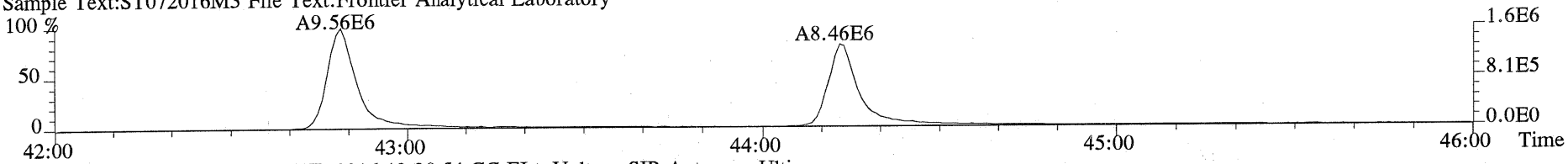
File:20JUL16M #1-495 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:4 F:3 Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



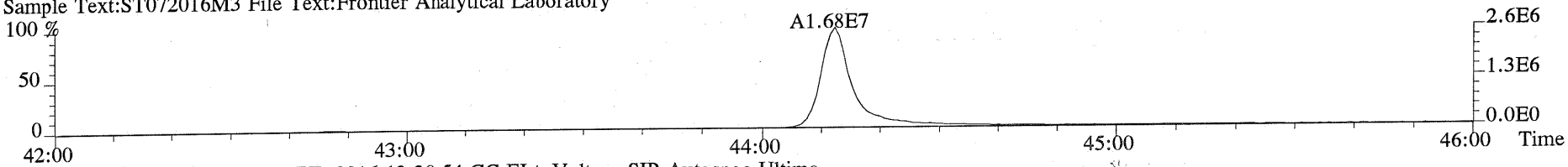
File:20JUL16M #1-521 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



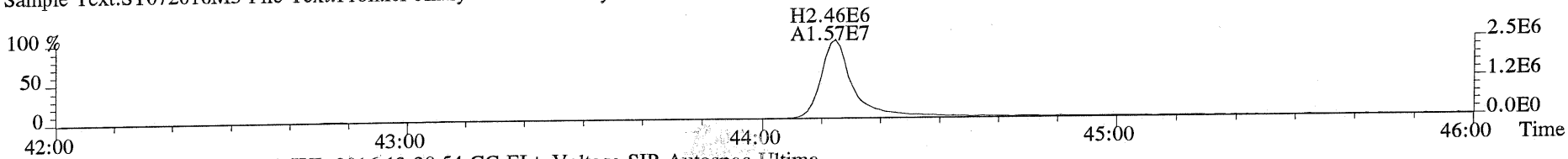
File:20JUL16M #1-521 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



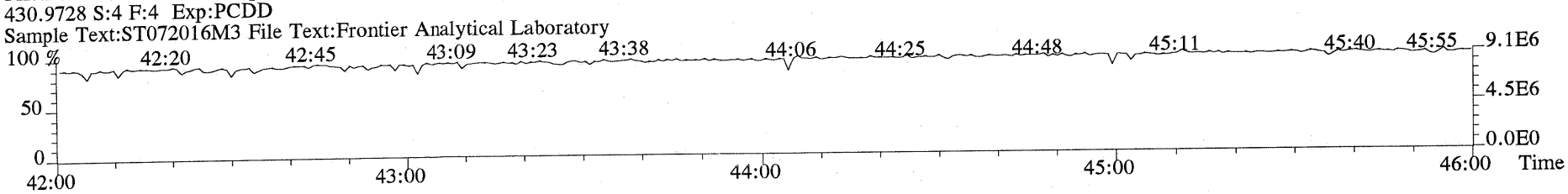
File:20JUL16M #1-521 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



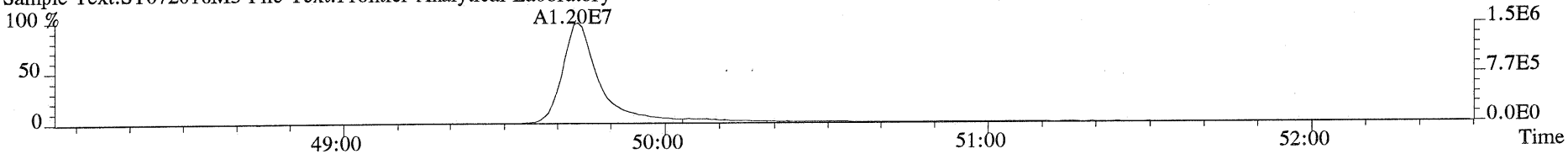
File:20JUL16M #1-521 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



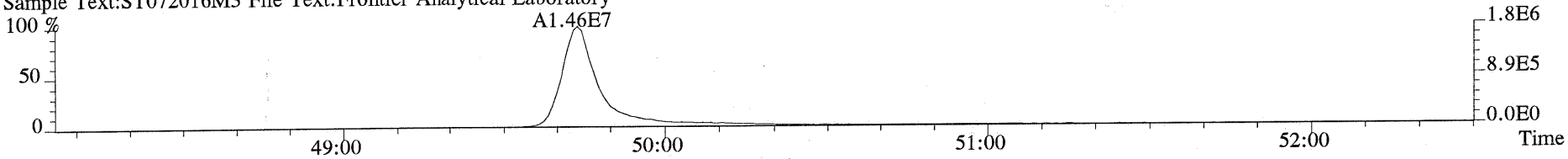
File:20JUL16M #1-521 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:4 F:4 Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



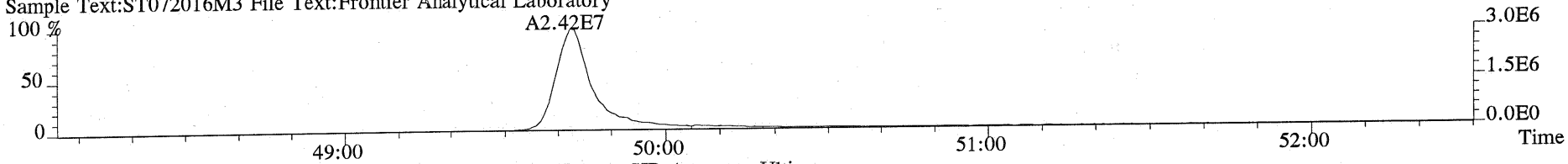
File:20JUL16M #1-360 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



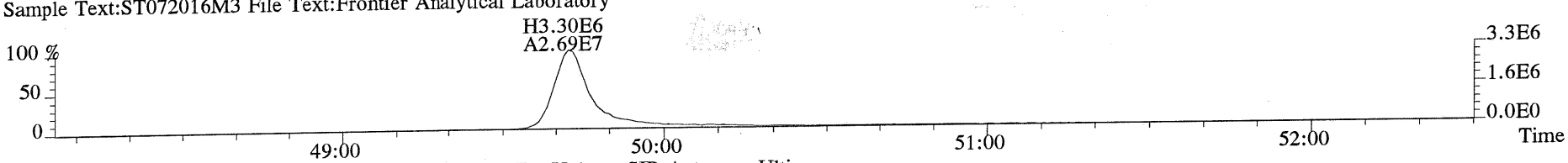
File:20JUL16M #1-360 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



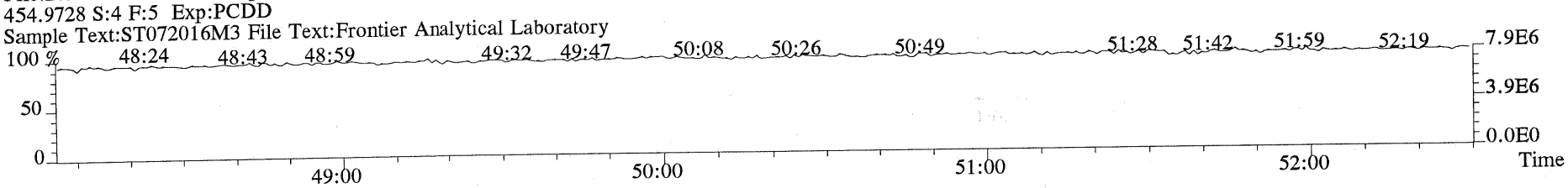
File:20JUL16M #1-360 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



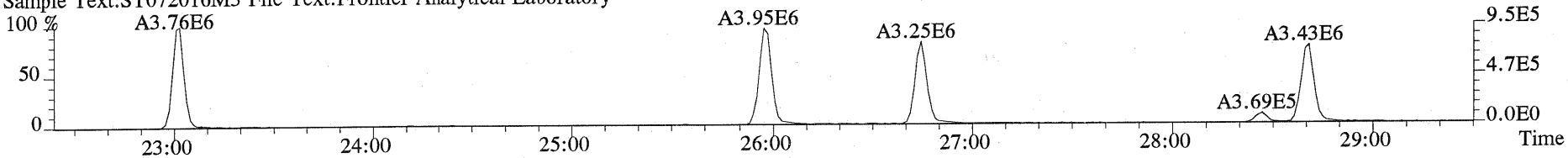
File:20JUL16M #1-360 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



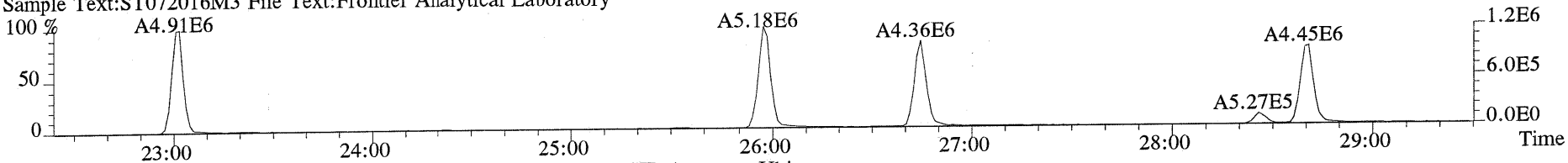
File:20JUL16M #1-360 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:4 F:5 Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



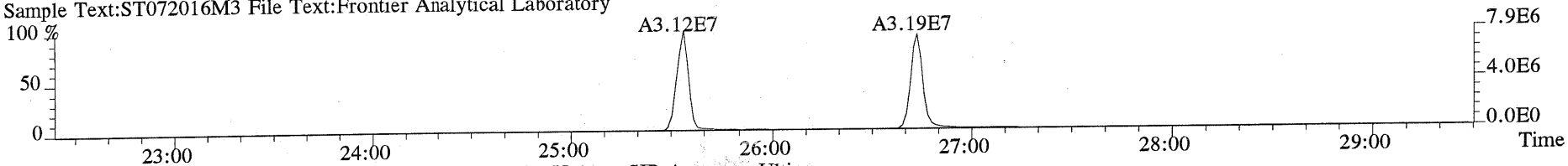
File:20JUL16M #1-399 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



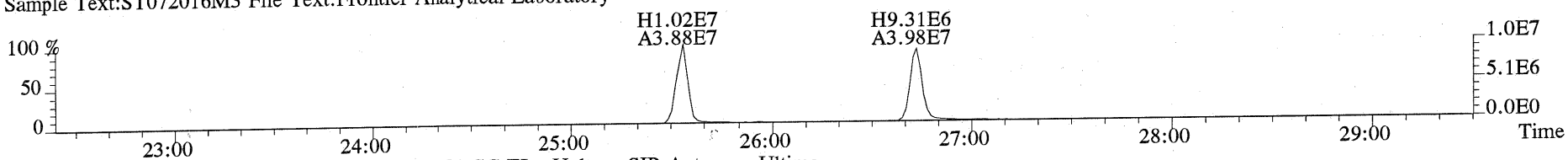
File:20JUL16M #1-399 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



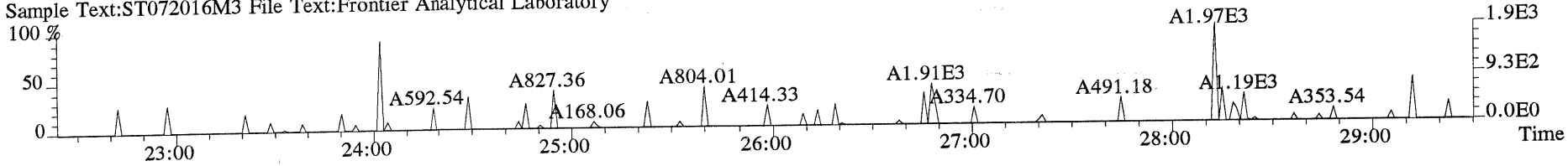
File:20JUL16M #1-399 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



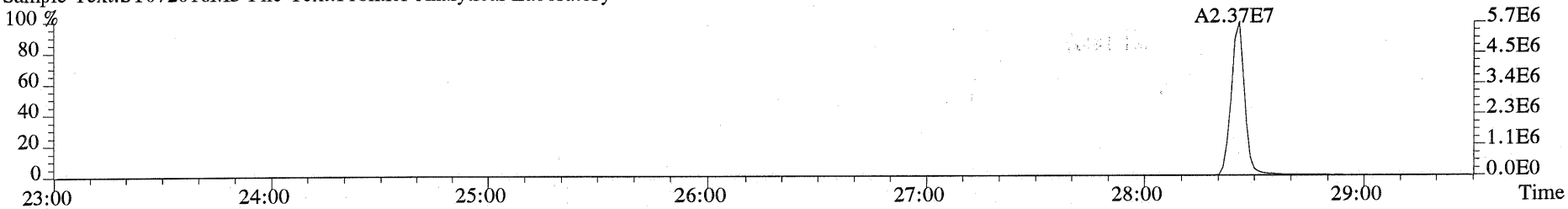
File:20JUL16M #1-399 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



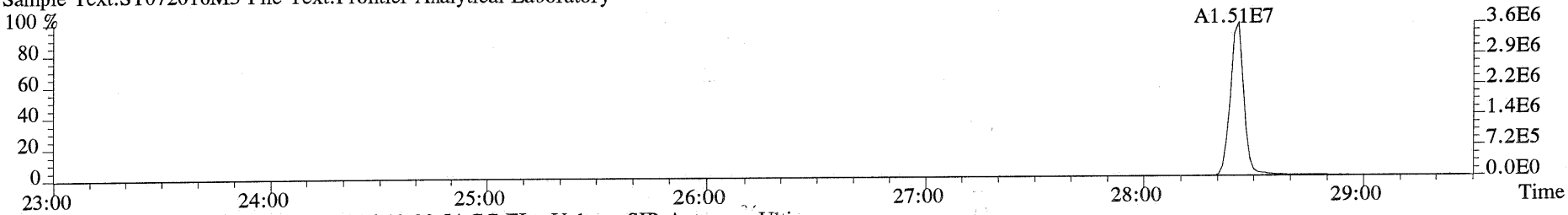
File:20JUL16M #1-399 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



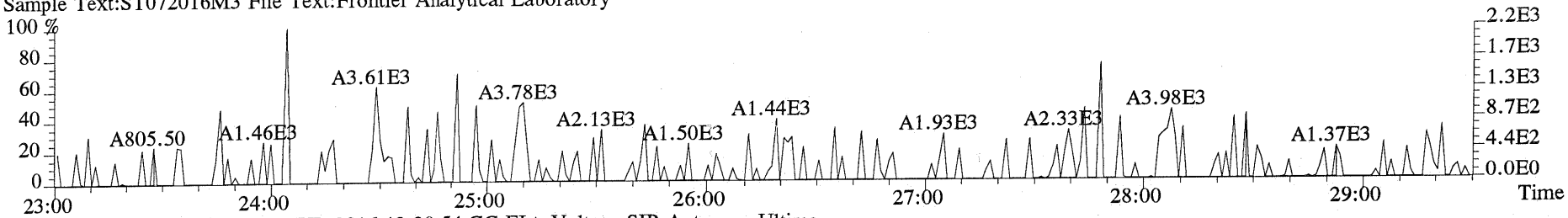
File:20JUL16M #1-399 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



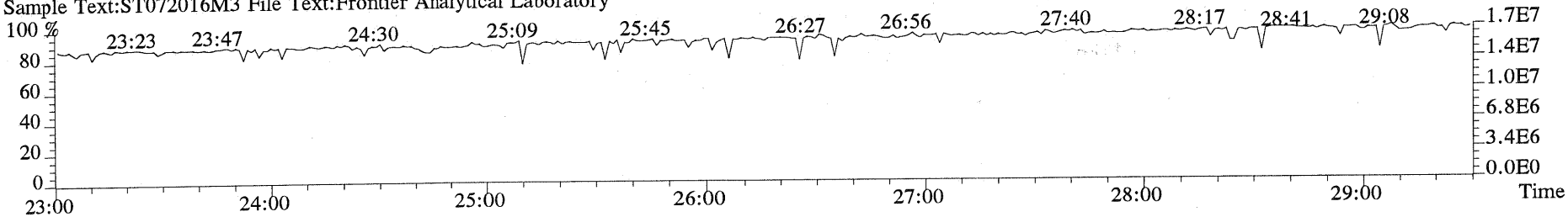
File:20JUL16M #1-399 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



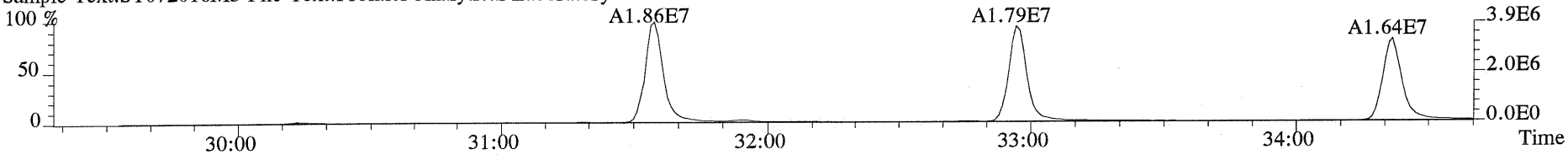
File:20JUL16M #1-399 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



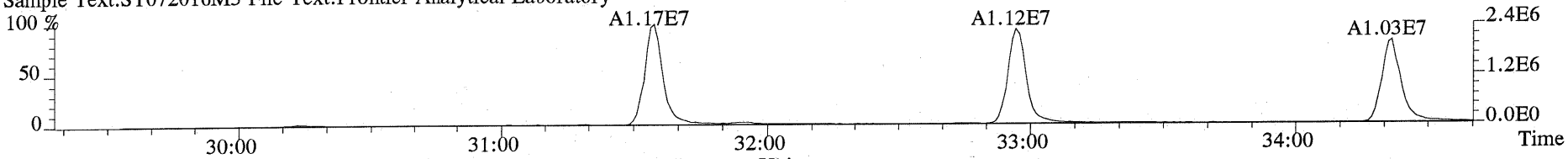
File:20JUL16M #1-399 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:4 Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



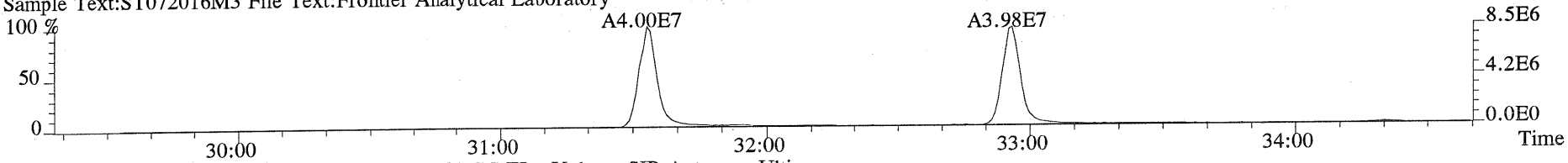
File:20JUL16M #1-411 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



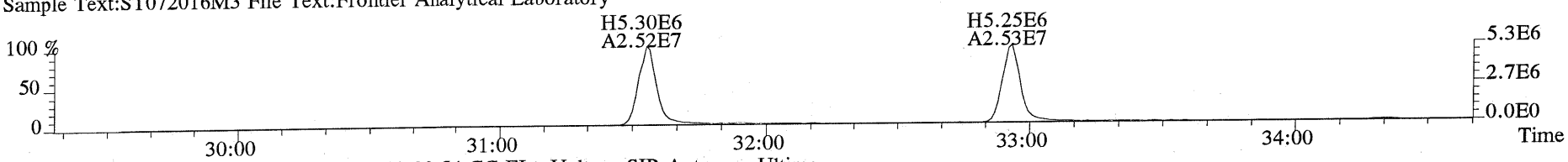
File:20JUL16M #1-411 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



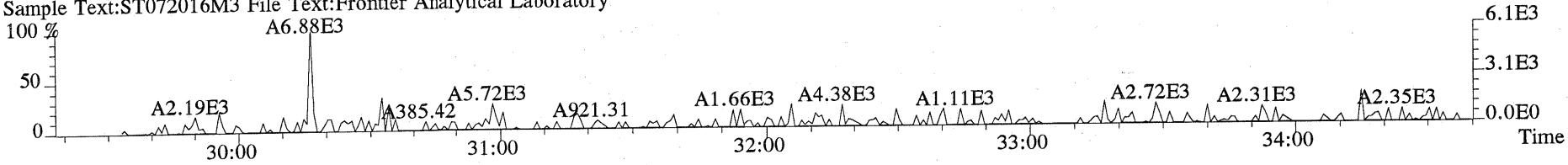
File:20JUL16M #1-411 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



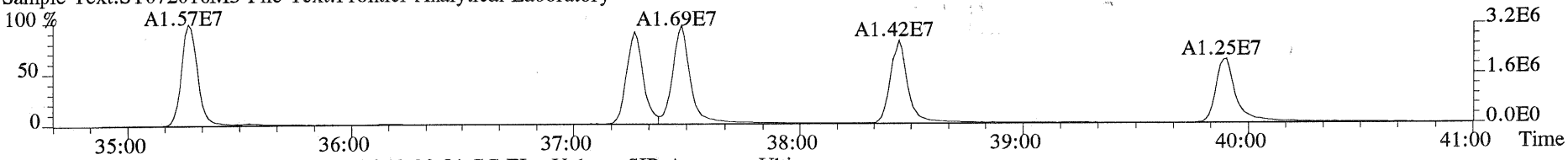
File:20JUL16M #1-411 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



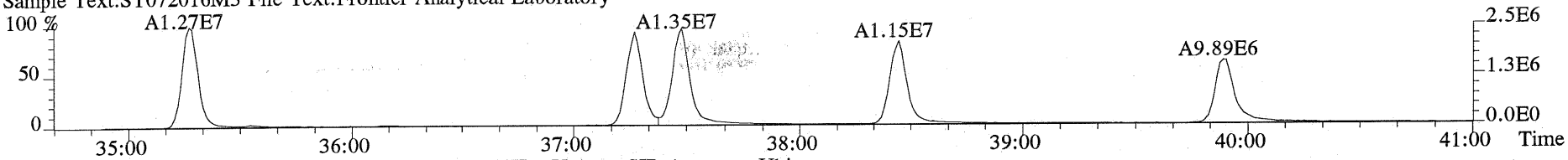
File:20JUL16M #1-411 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



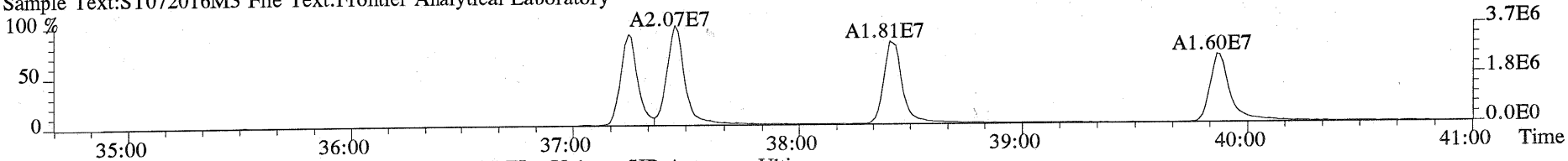
File:20JUL16M #1-495 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



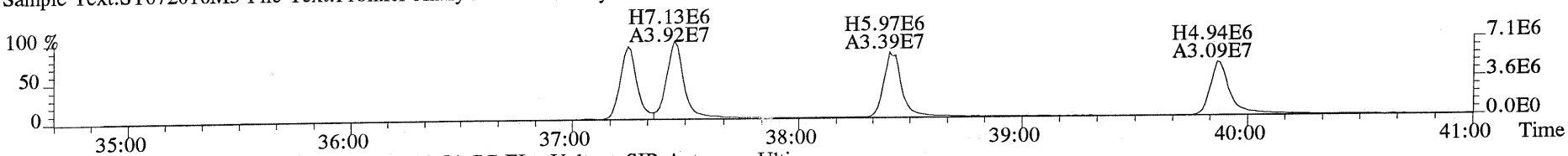
File:20JUL16M #1-495 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



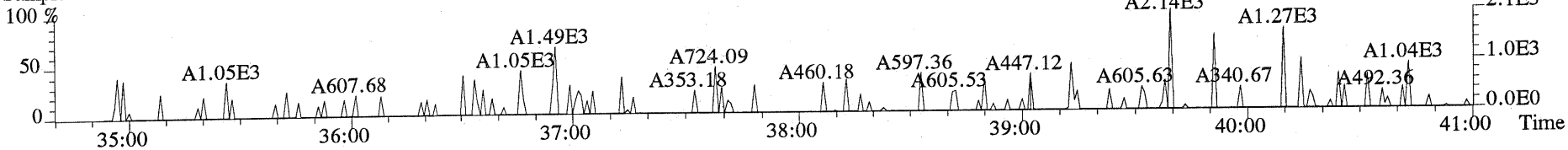
File:20JUL16M #1-495 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



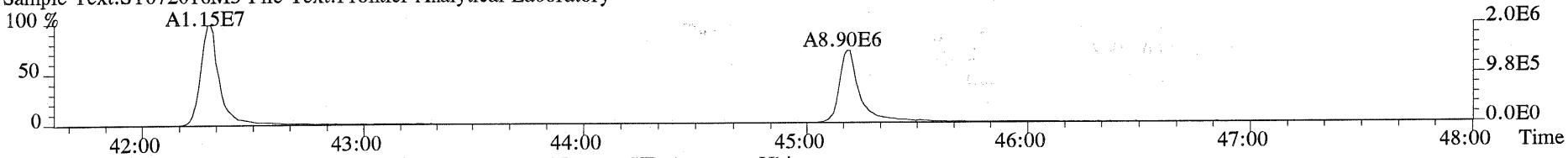
File:20JUL16M #1-495 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



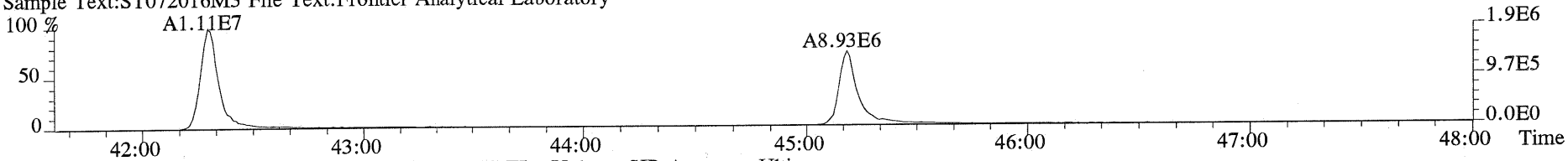
File:20JUL16M #1-495 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



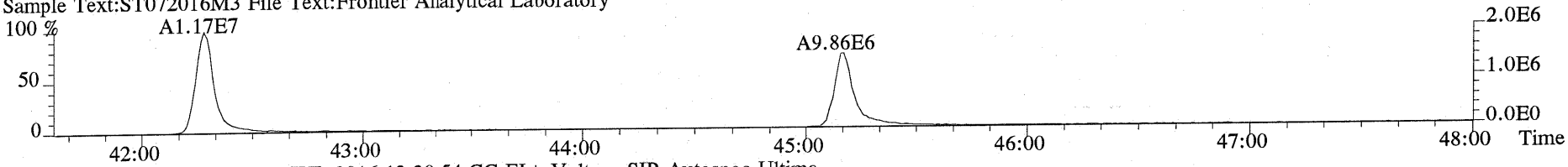
File:20JUL16M #1-521 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



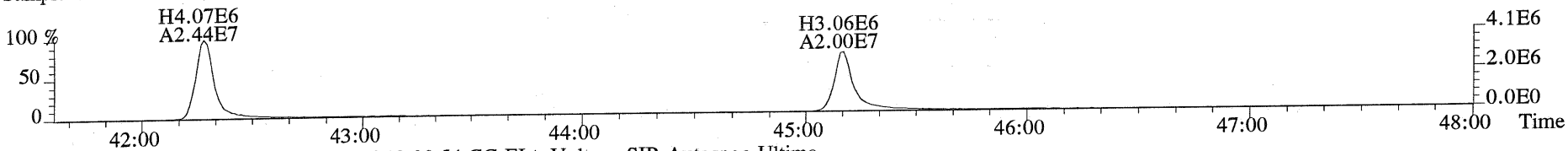
File:20JUL16M #1-521 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



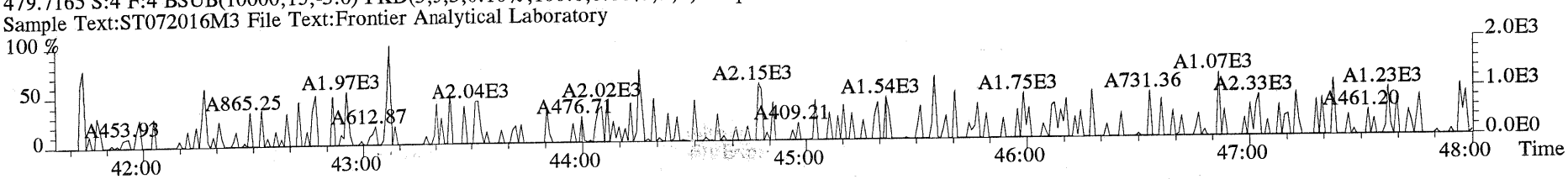
File:20JUL16M #1-521 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



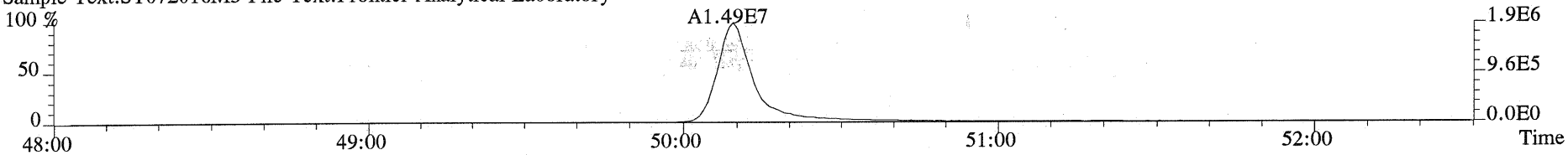
File:20JUL16M #1-521 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



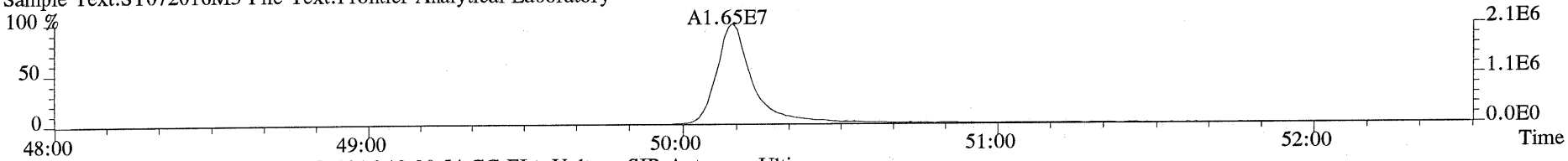
File:20JUL16M #1-521 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



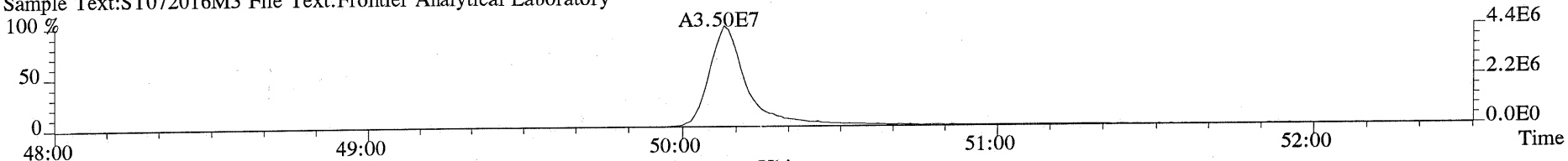
File:20JUL16M #1-360 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



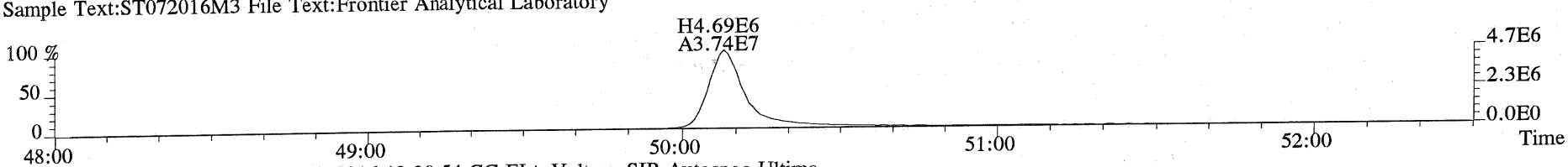
File:20JUL16M #1-360 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



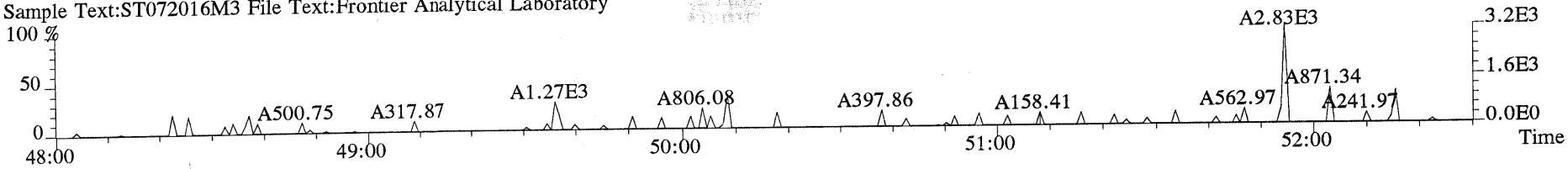
File:20JUL16M #1-360 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



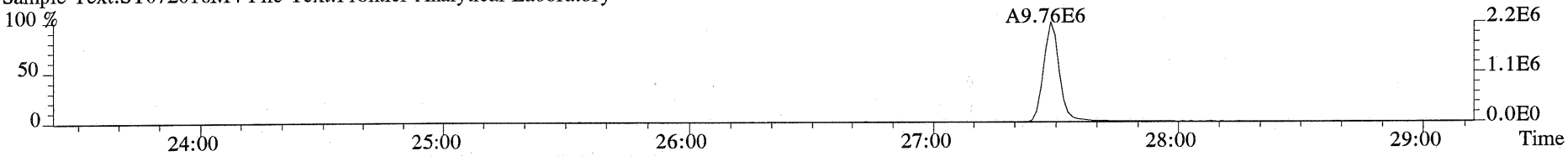
File:20JUL16M #1-360 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



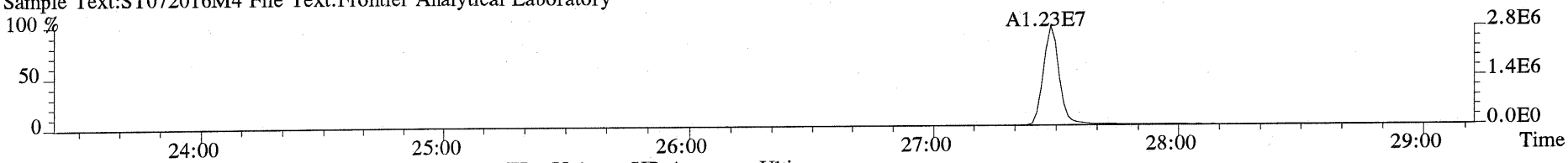
File:20JUL16M #1-360 Acq:20-JUL-2016 12:20:54 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M3 File Text:Frontier Analytical Laboratory



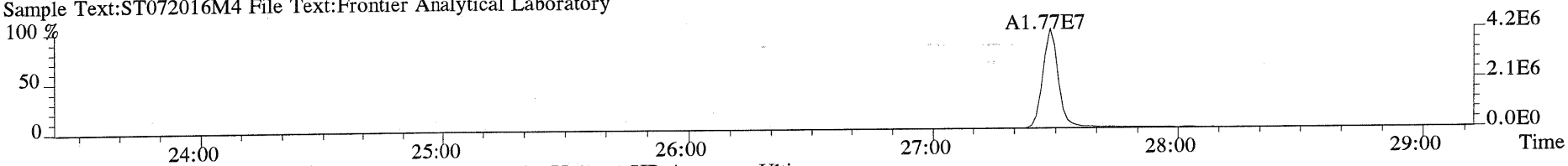
File:20JUL16M #1-399 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



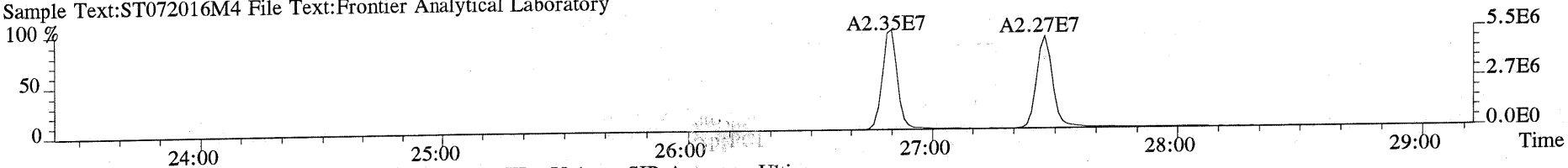
File:20JUL16M #1-399 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



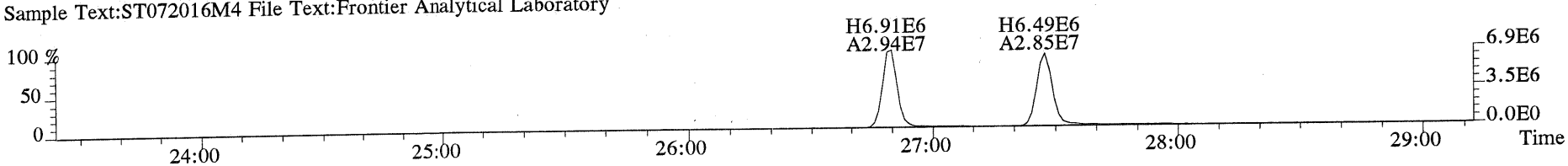
File:20JUL16M #1-399 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



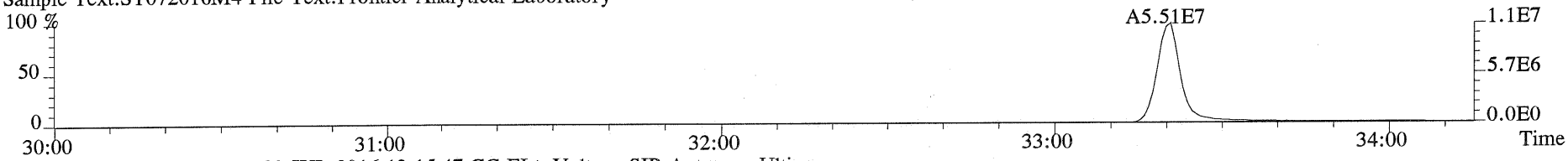
File:20JUL16M #1-399 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



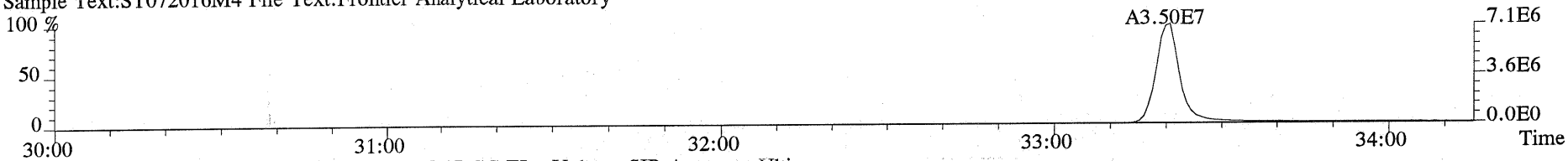
File:20JUL16M #1-399 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



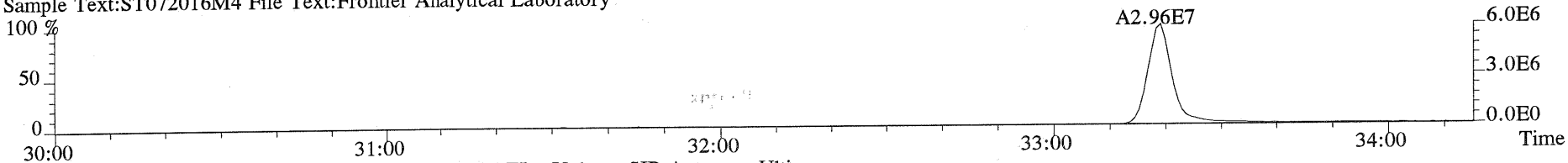
File:20JUL16M #1-411 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



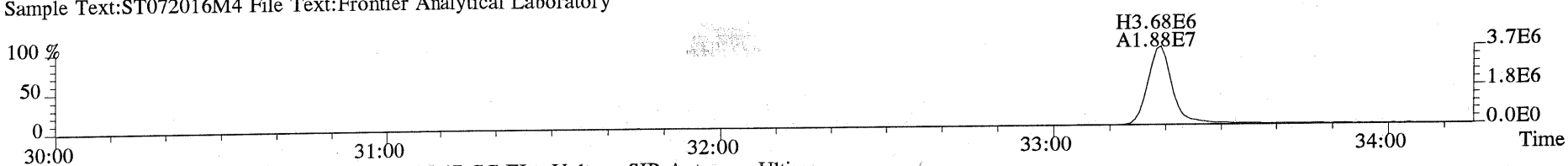
File:20JUL16M #1-411 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



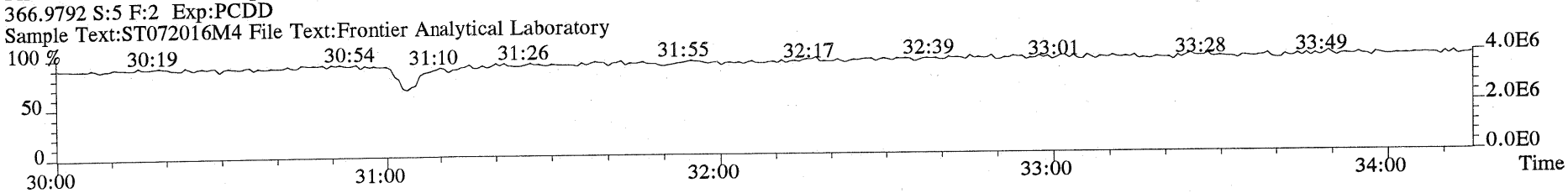
File:20JUL16M #1-411 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



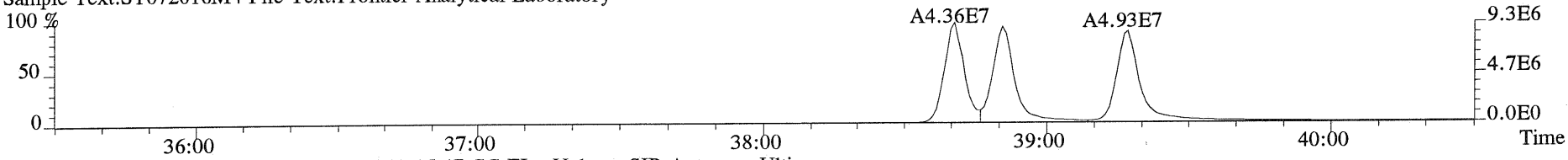
File:20JUL16M #1-411 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



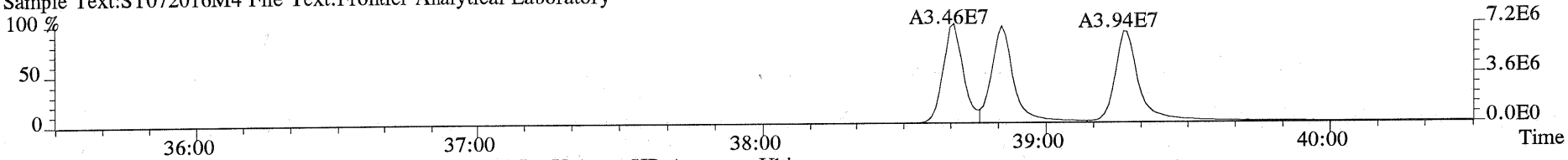
File:20JUL16M #1-411 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:5 F:2 Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



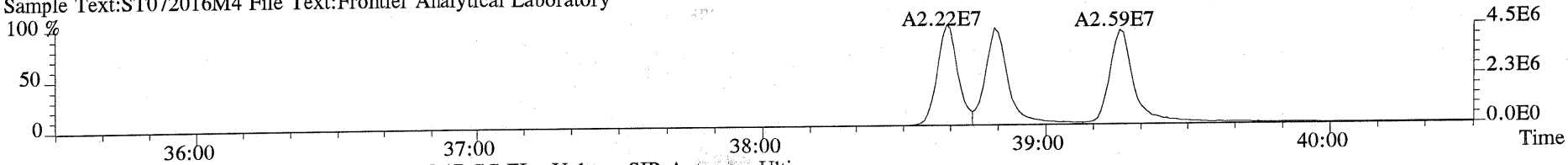
File:20JUL16M #1-495 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



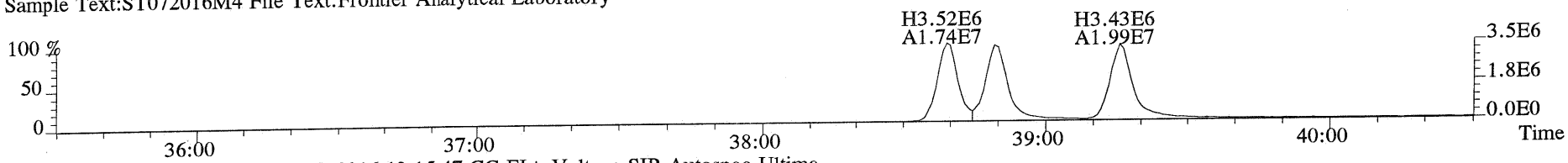
File:20JUL16M #1-495 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



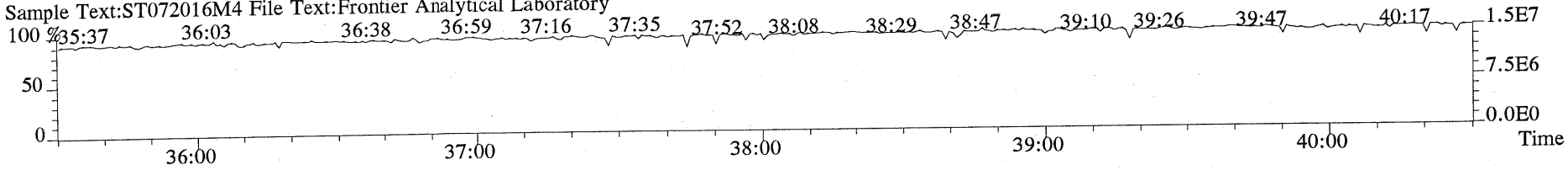
File:20JUL16M #1-495 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



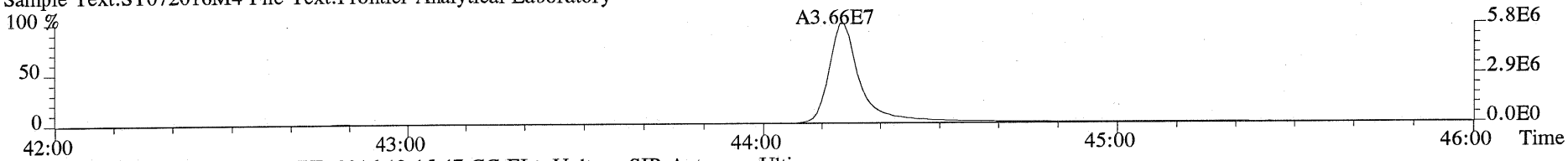
File:20JUL16M #1-495 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



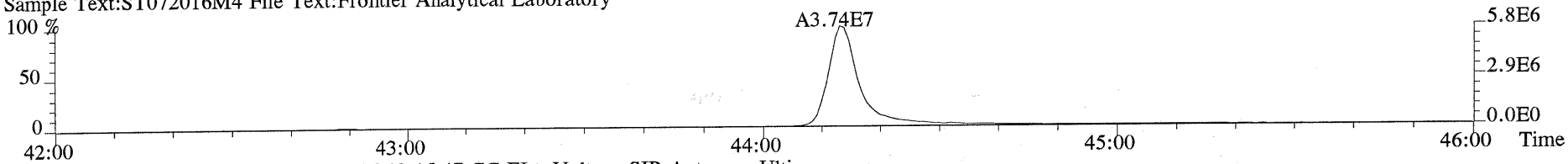
File:20JUL16M #1-495 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:5 F:3 Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



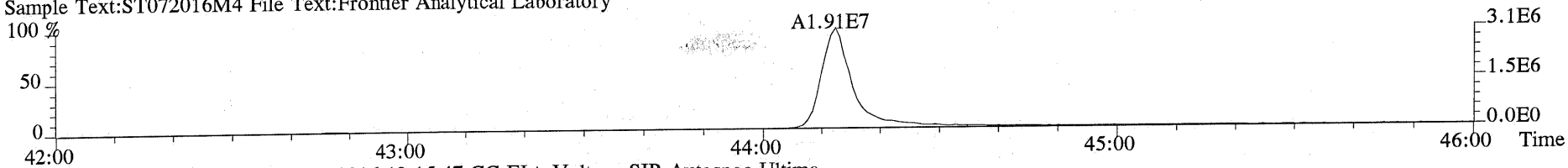
File:20JUL16M #1-521 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



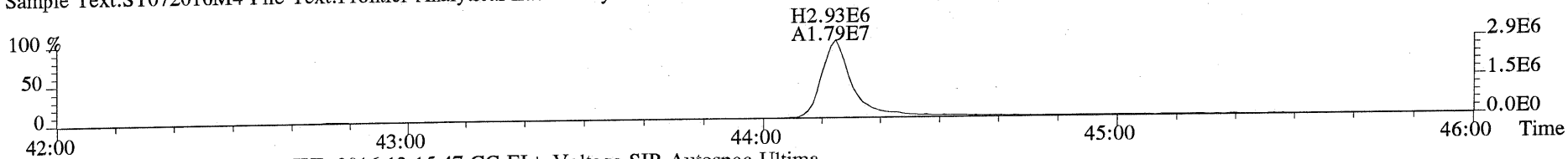
File:20JUL16M #1-521 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



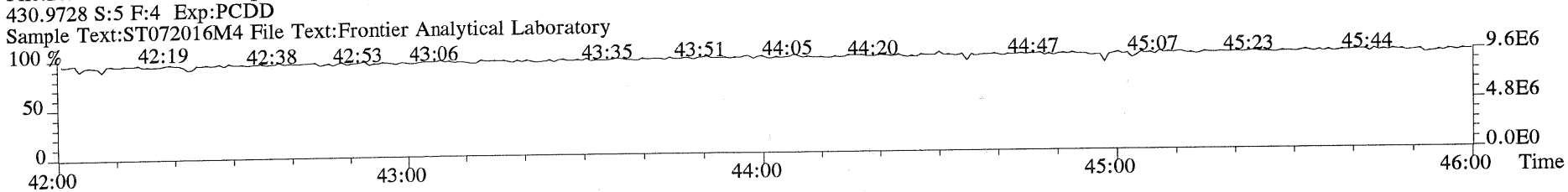
File:20JUL16M #1-521 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



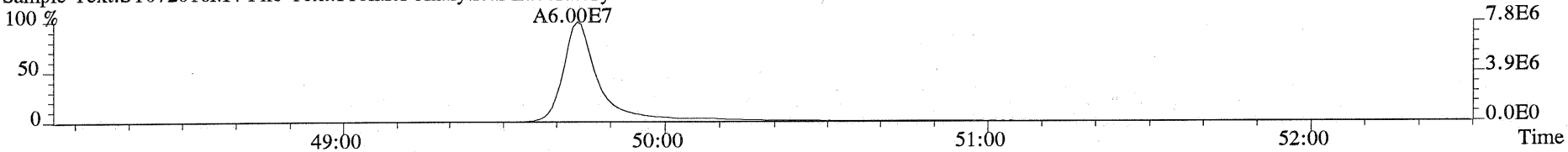
File:20JUL16M #1-521 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



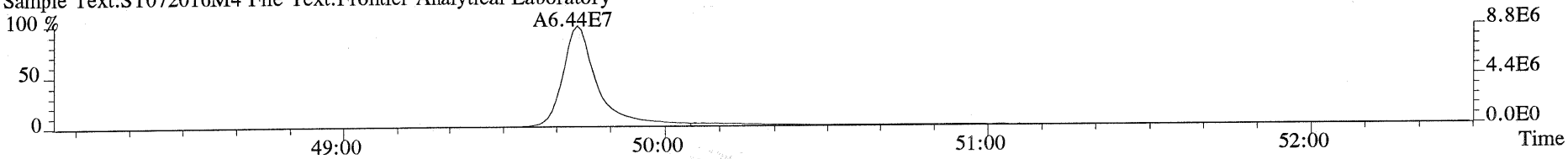
File:20JUL16M #1-521 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:5 F:4 Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



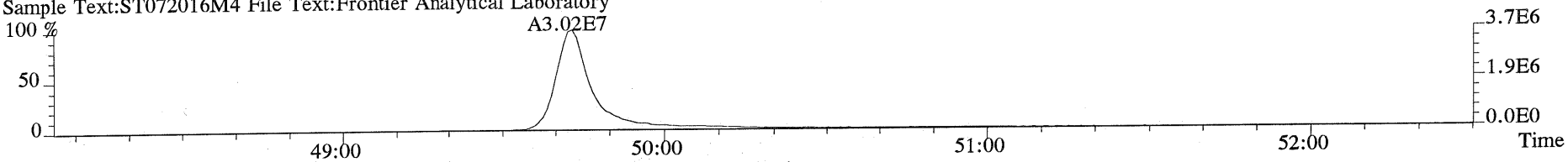
File:20JUL16M #1-360 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



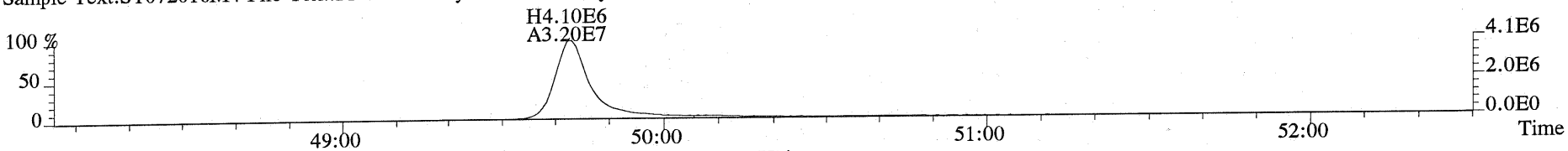
File:20JUL16M #1-360 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



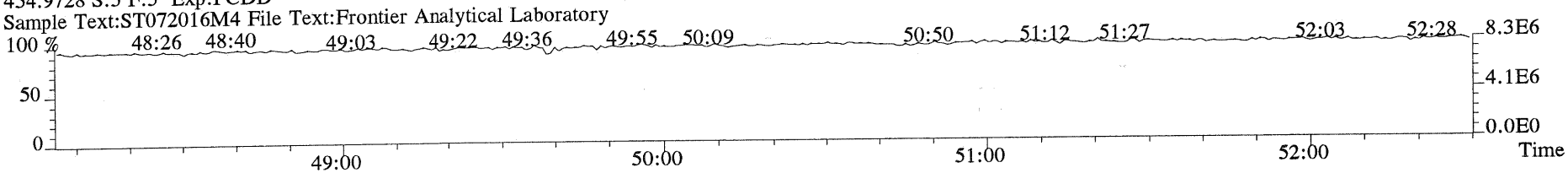
File:20JUL16M #1-360 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



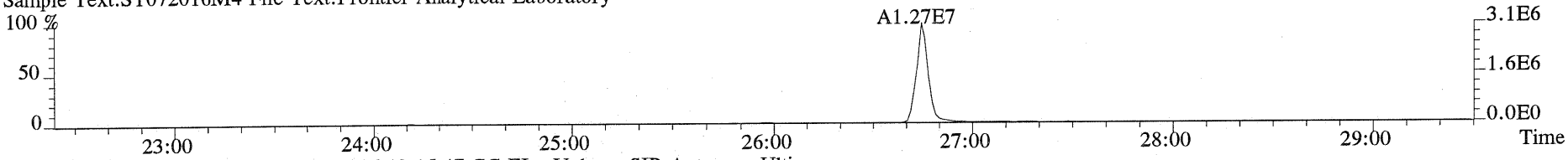
File:20JUL16M #1-360 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



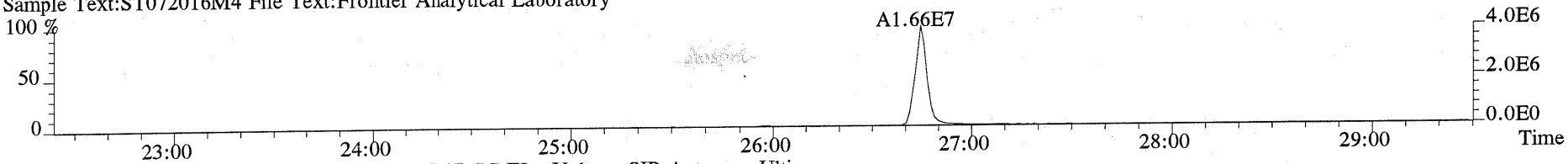
File:20JUL16M #1-360 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:5 F:5 Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



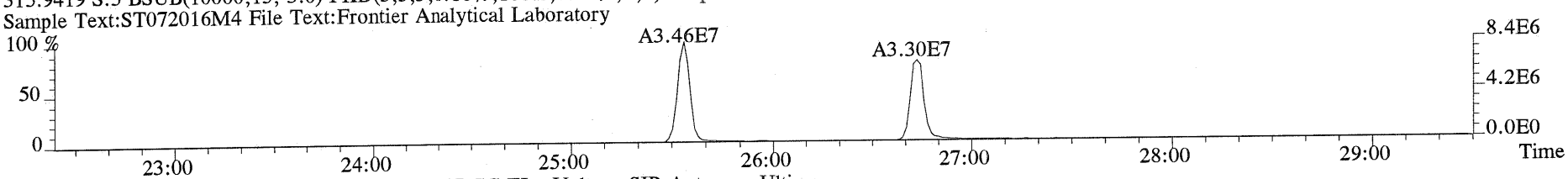
File:20JUL16M #1-399 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



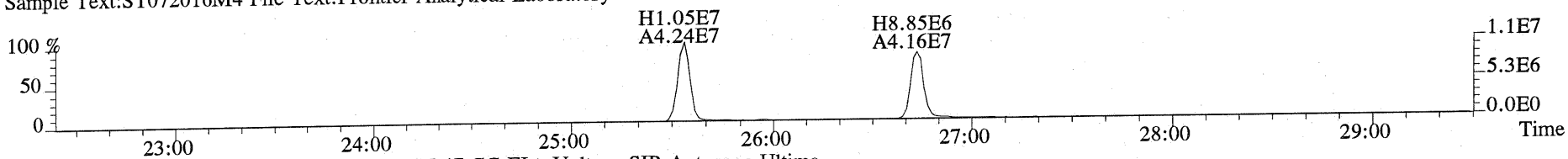
File:20JUL16M #1-399 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



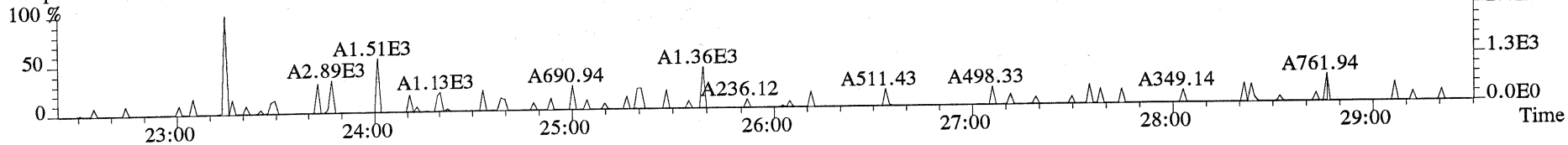
File:20JUL16M #1-399 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



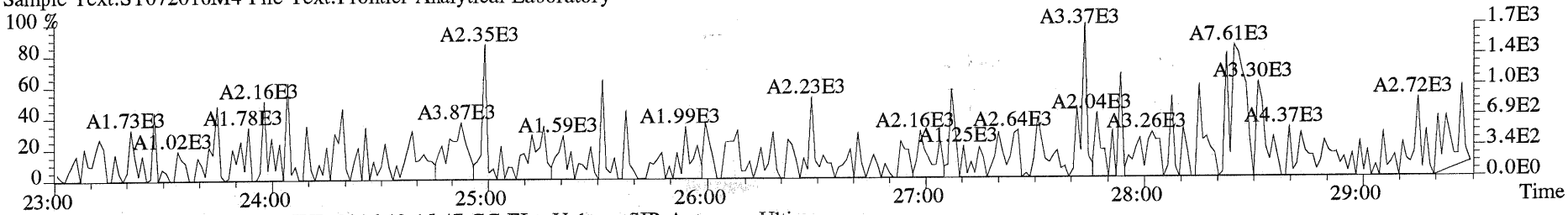
File:20JUL16M #1-399 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



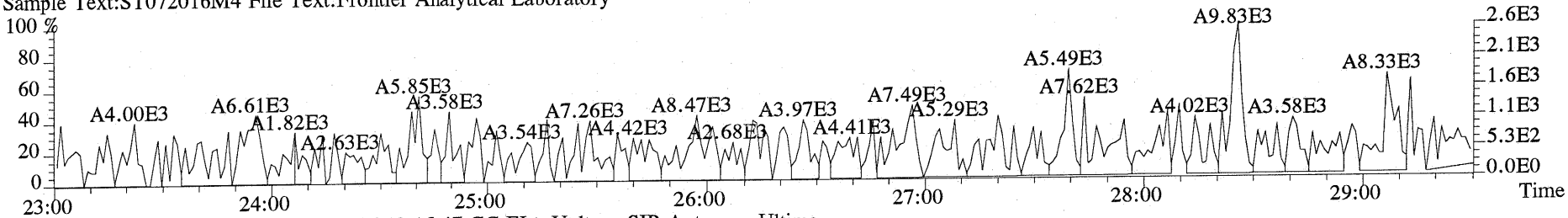
File:20JUL16M #1-399 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



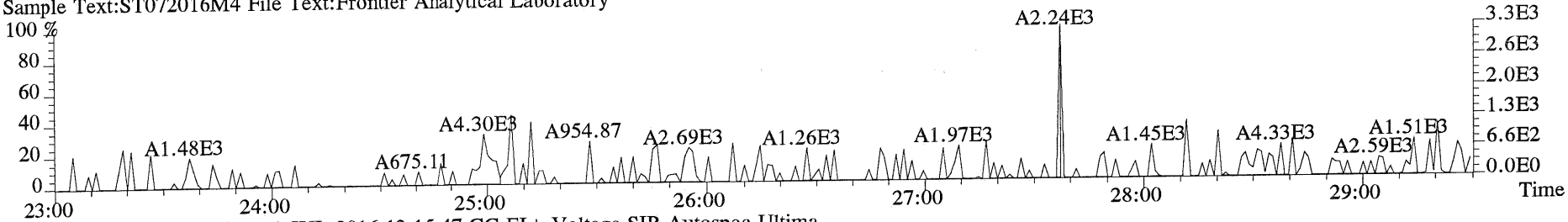
File:20JUL16M #1-399 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



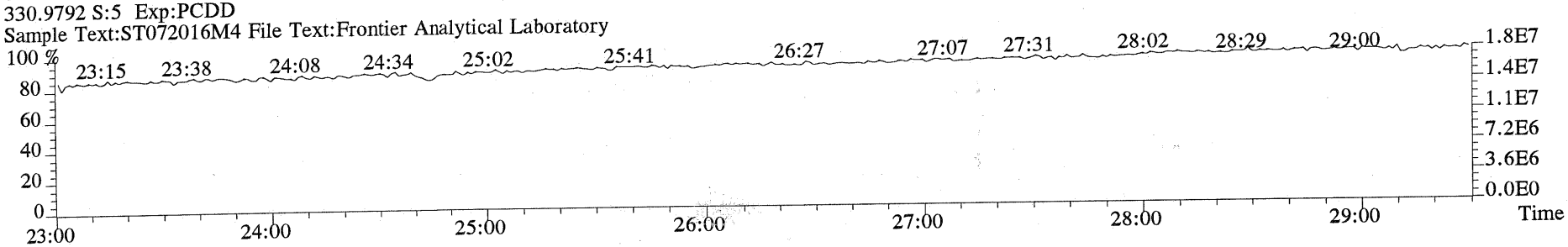
File:20JUL16M #1-399 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



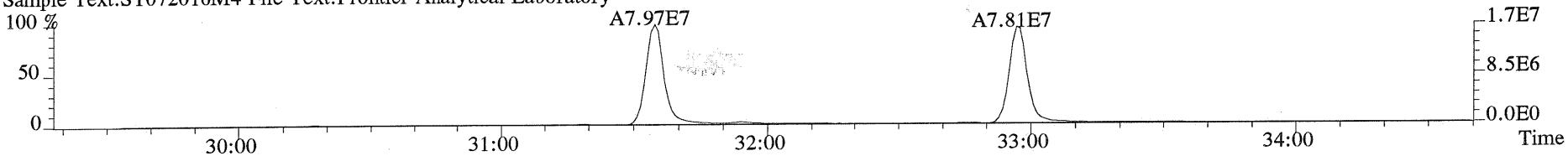
File:20JUL16M #1-399 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



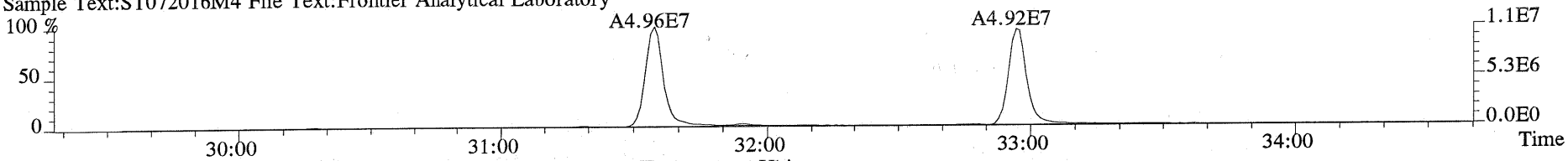
File:20JUL16M #1-399 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:5 Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



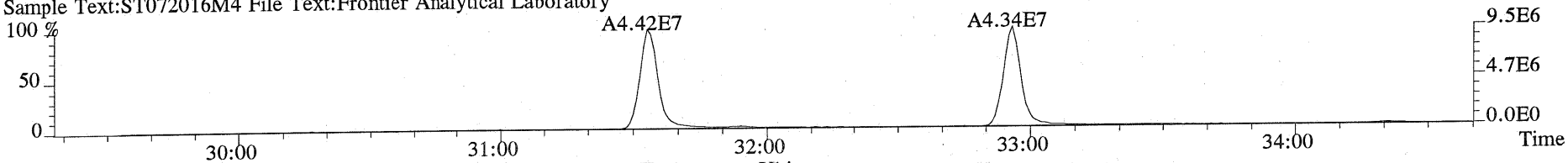
File:20JUL16M #1-411 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



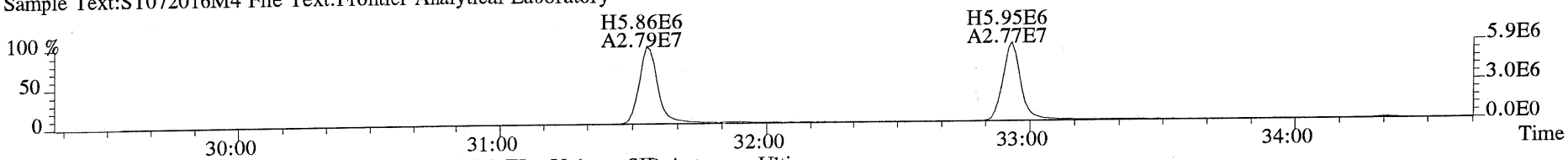
File:20JUL16M #1-411 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



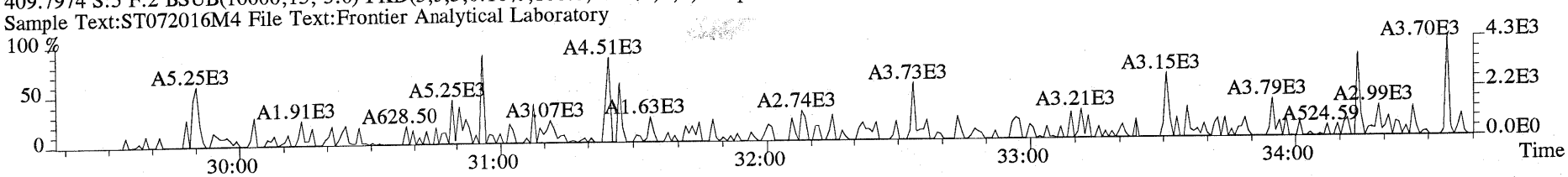
File:20JUL16M #1-411 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



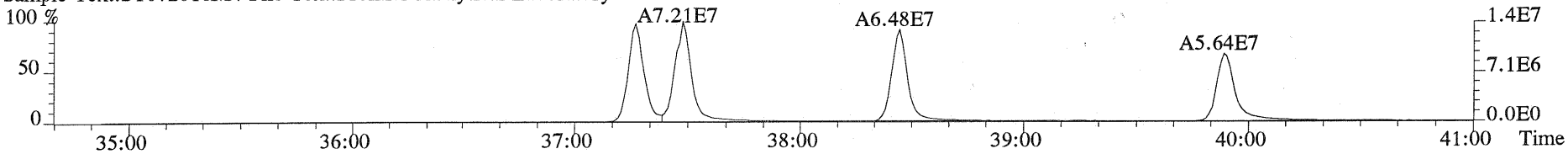
File:20JUL16M #1-411 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



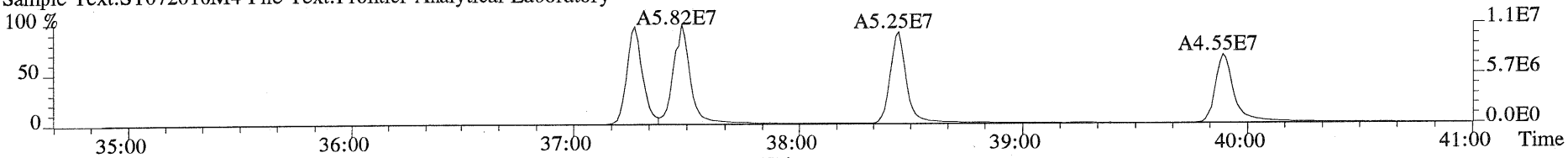
File:20JUL16M #1-411 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



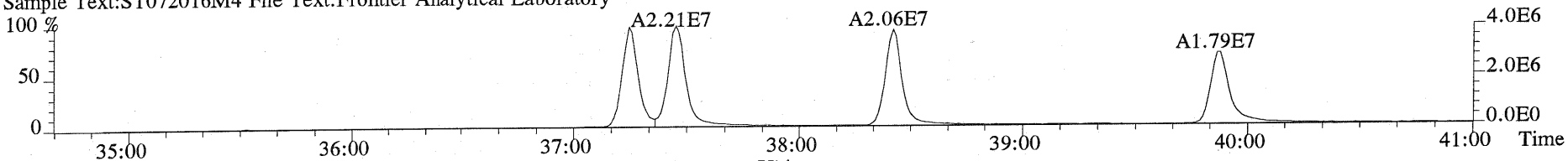
File:20JUL16M #1-495 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



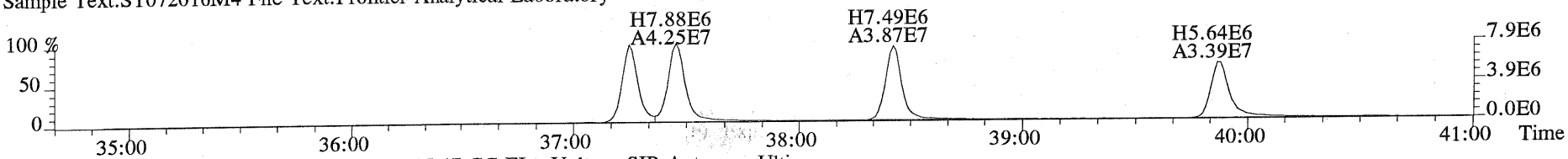
File:20JUL16M #1-495 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



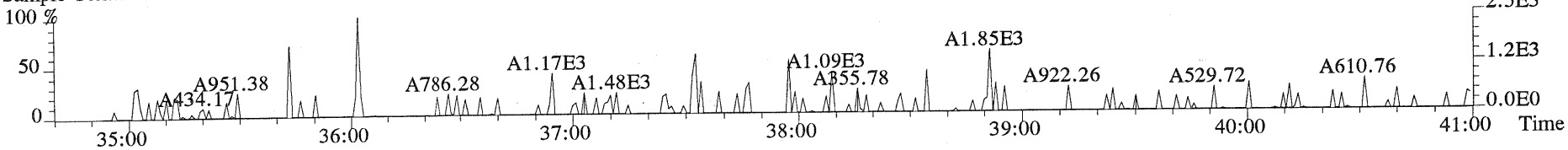
File:20JUL16M #1-495 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



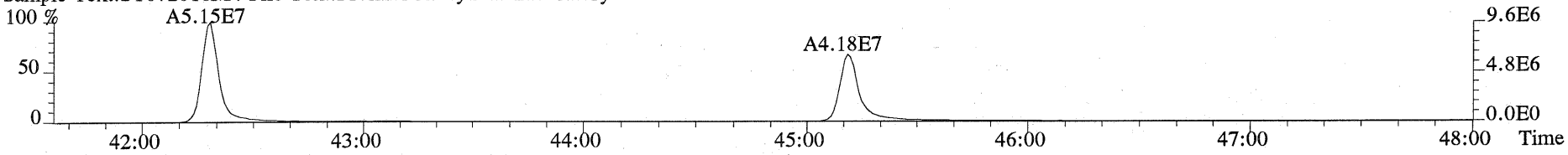
File:20JUL16M #1-495 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



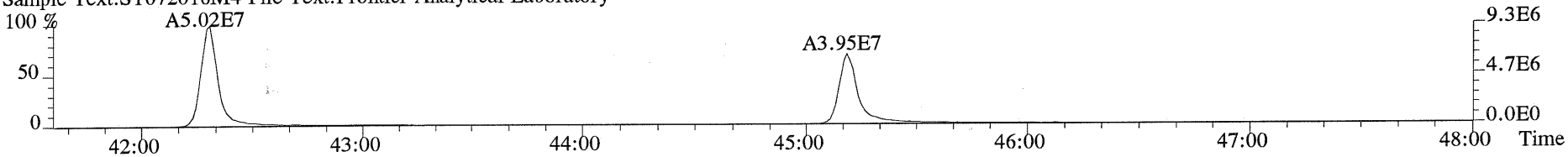
File:20JUL16M #1-495 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



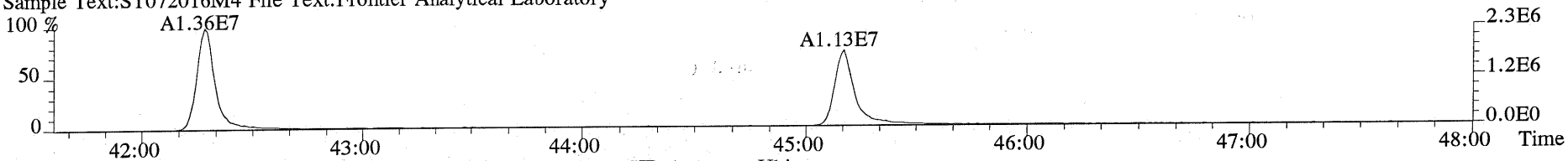
File:20JUL16M #1-521 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



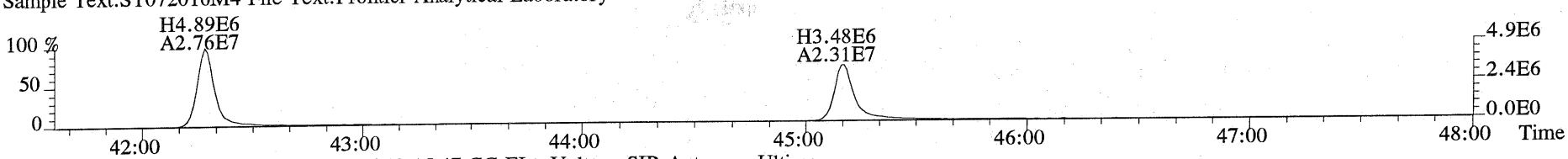
File:20JUL16M #1-521 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



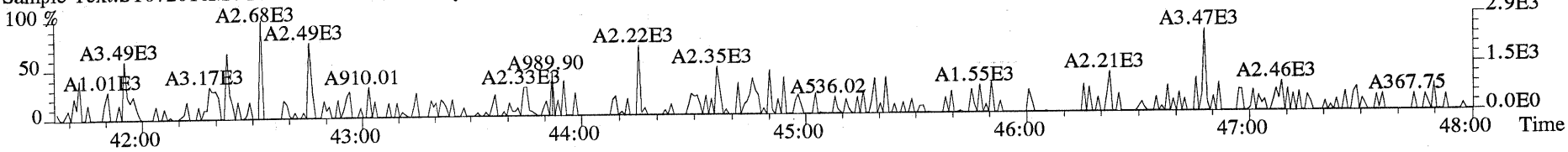
File:20JUL16M #1-521 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



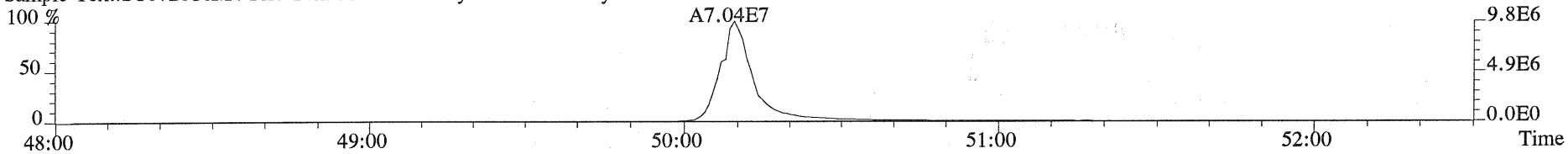
File:20JUL16M #1-521 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



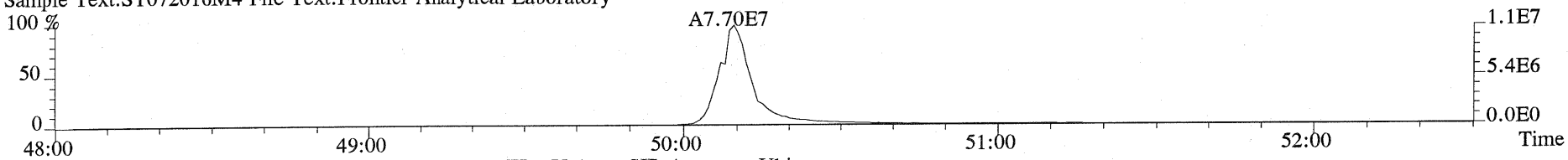
File:20JUL16M #1-521 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



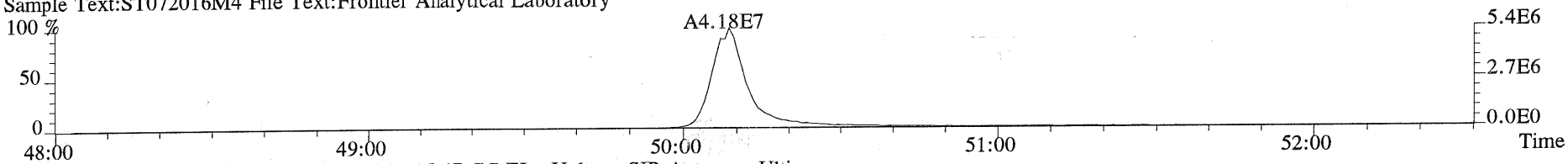
File:20JUL16M #1-360 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



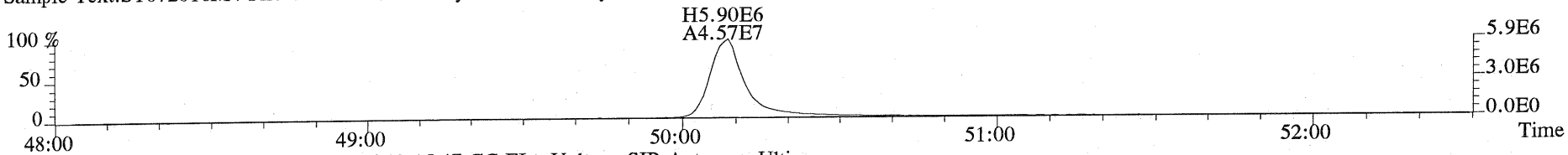
File:20JUL16M #1-360 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



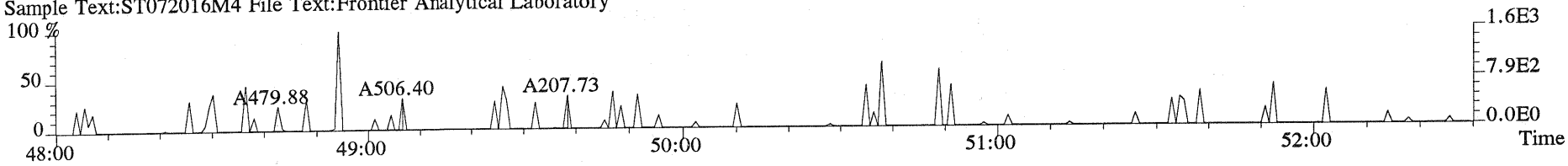
File:20JUL16M #1-360 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



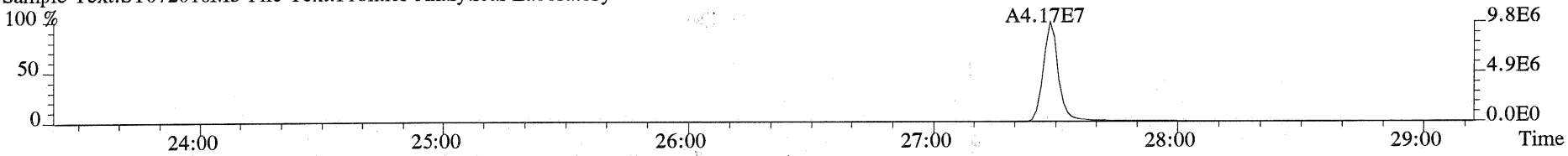
File:20JUL16M #1-360 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



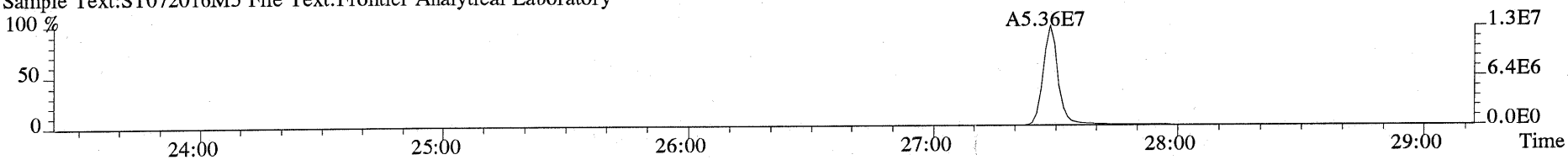
File:20JUL16M #1-360 Acq:20-JUL-2016 13:15:47 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M4 File Text:Frontier Analytical Laboratory



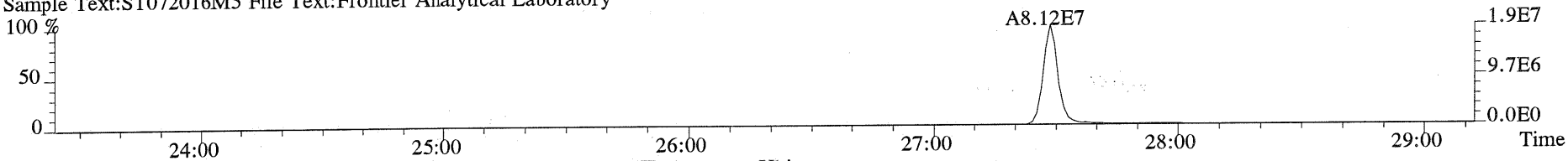
File:20JUL16M #1-399 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



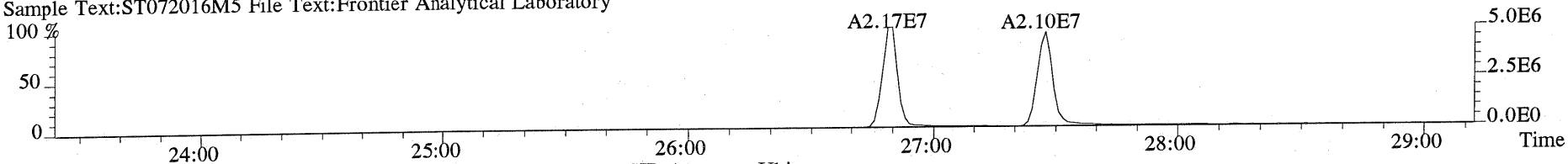
File:20JUL16M #1-399 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



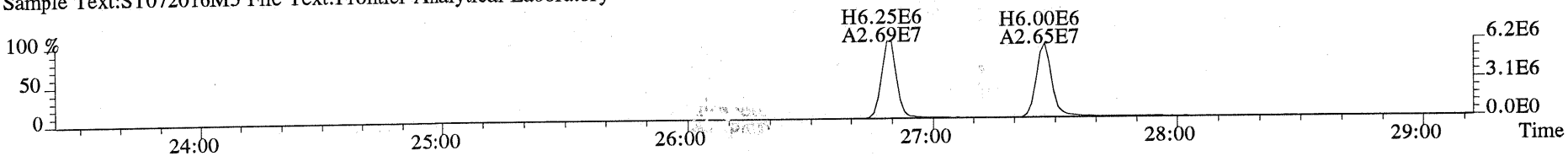
File:20JUL16M #1-399 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



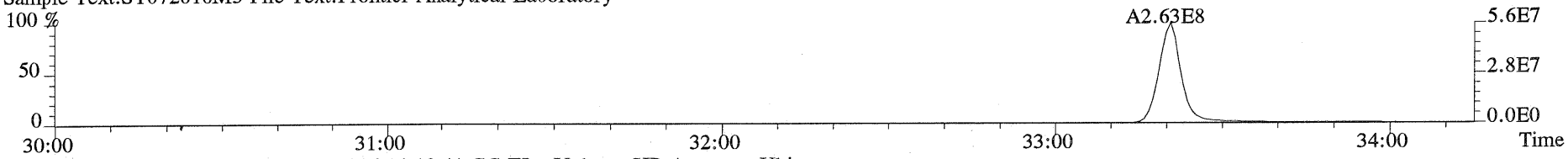
File:20JUL16M #1-399 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



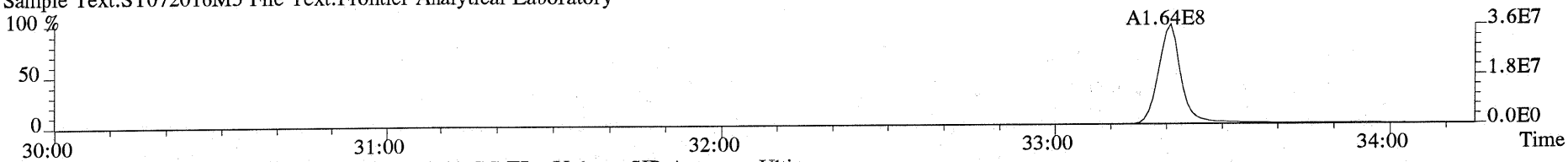
File:20JUL16M #1-399 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



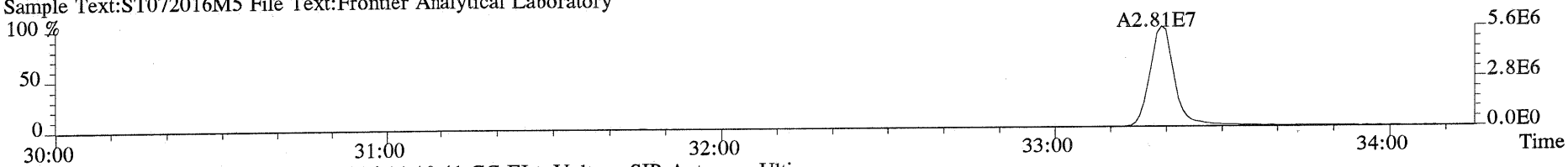
File:20JUL16M #1-411 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



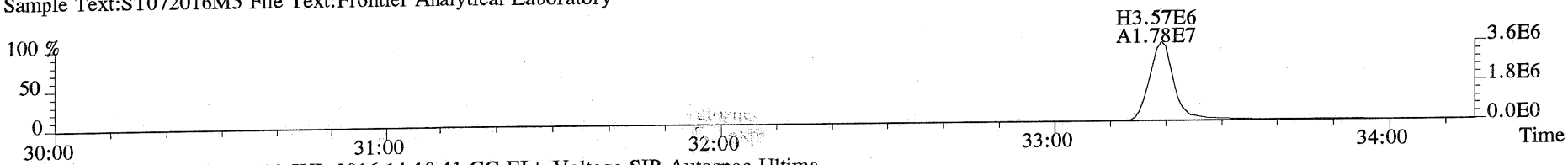
File:20JUL16M #1-411 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



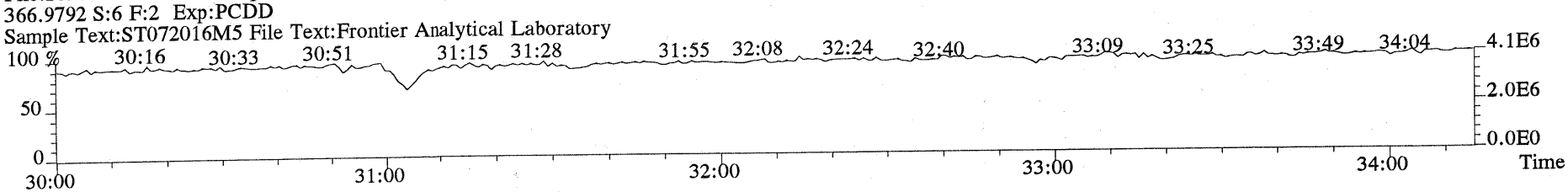
File:20JUL16M #1-411 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



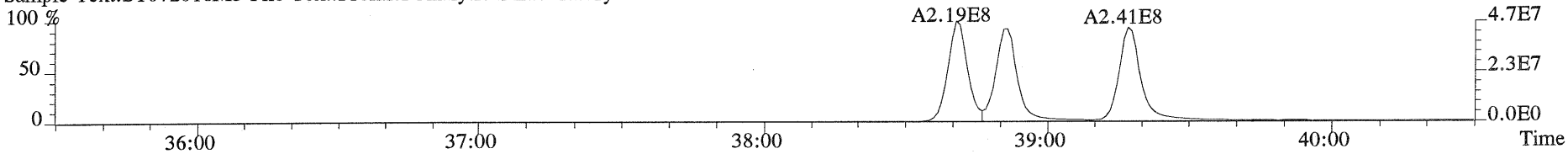
File:20JUL16M #1-411 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



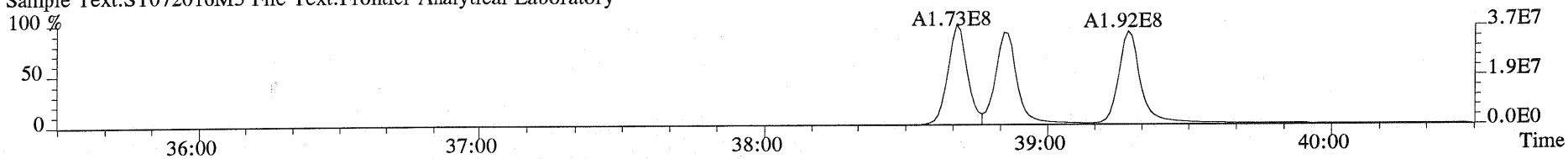
File:20JUL16M #1-411 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:6 F:2 Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



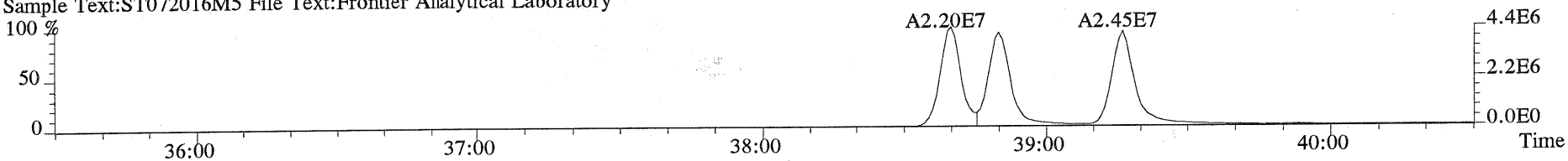
File:20JUL16M #1-495 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



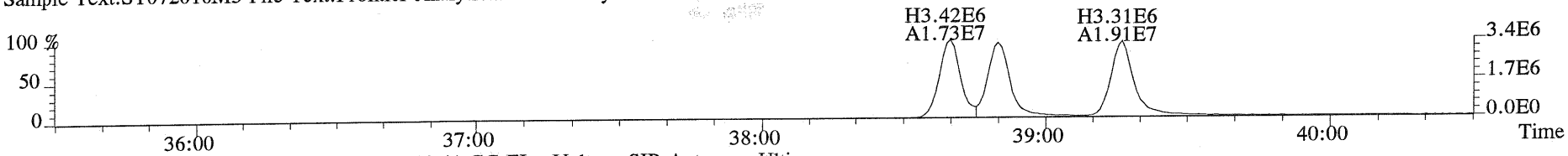
File:20JUL16M #1-495 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



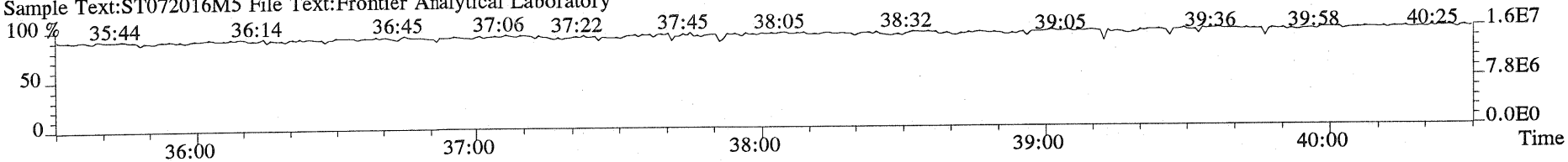
File:20JUL16M #1-495 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



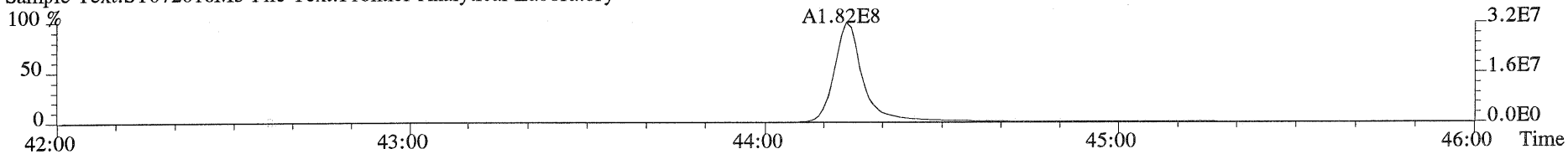
File:20JUL16M #1-495 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



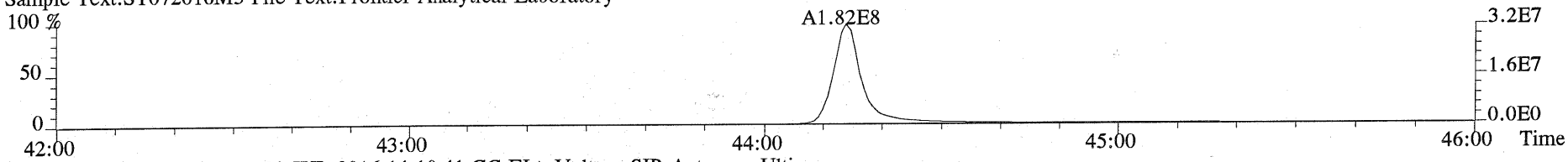
File:20JUL16M #1-495 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:6 F:3 Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



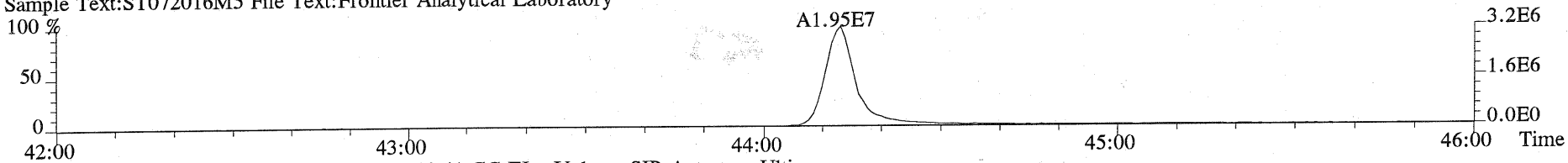
File:20JUL16M #1-521 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



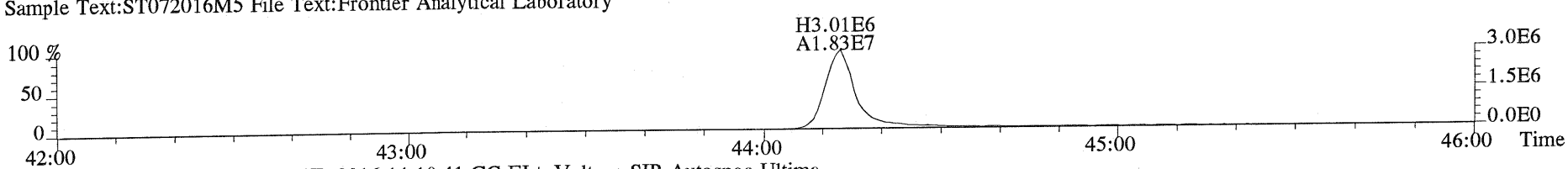
File:20JUL16M #1-521 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



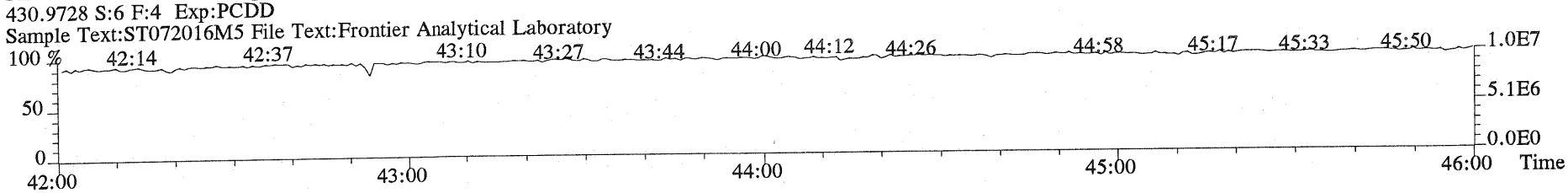
File:20JUL16M #1-521 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



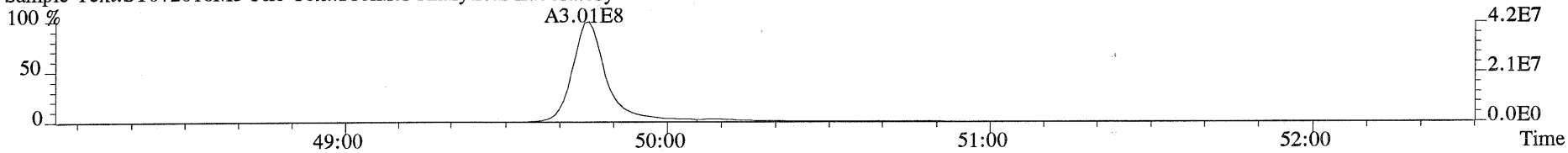
File:20JUL16M #1-521 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



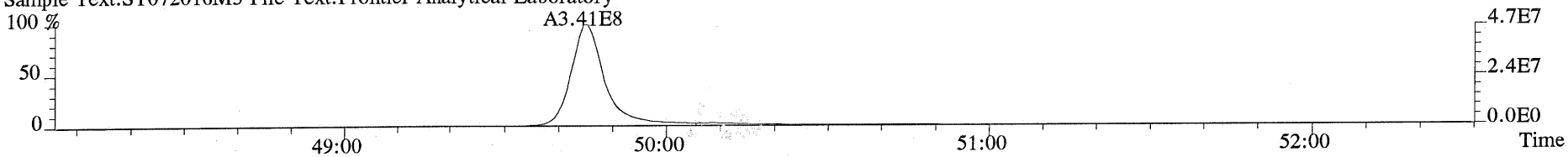
File:20JUL16M #1-521 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:6 F:4 Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



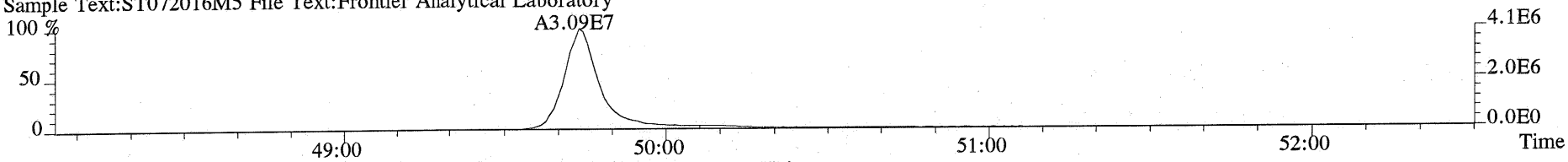
File:20JUL16M #1-360 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



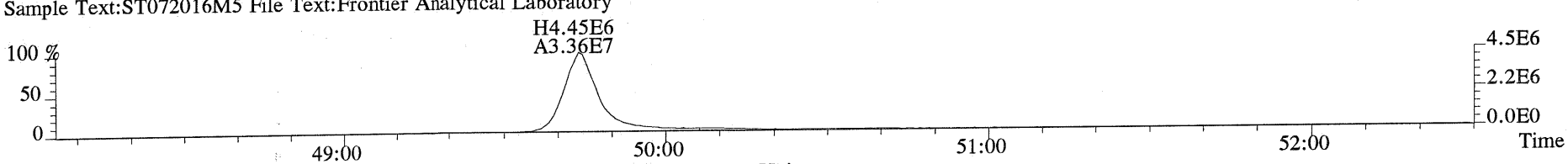
File:20JUL16M #1-360 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



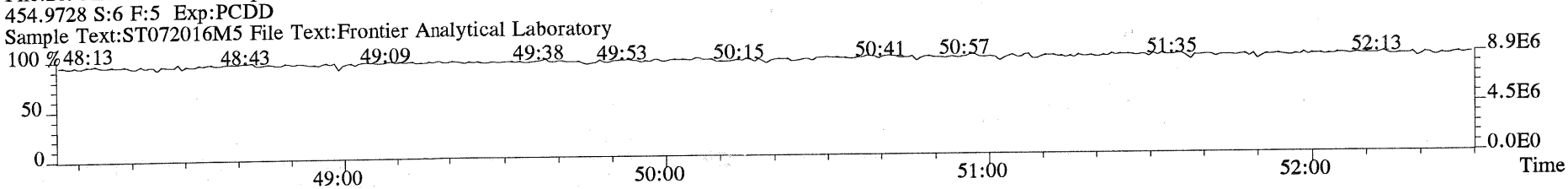
File:20JUL16M #1-360 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



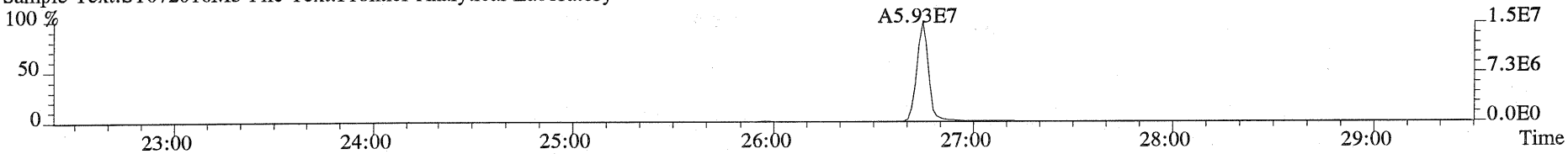
File:20JUL16M #1-360 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
471.7750 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



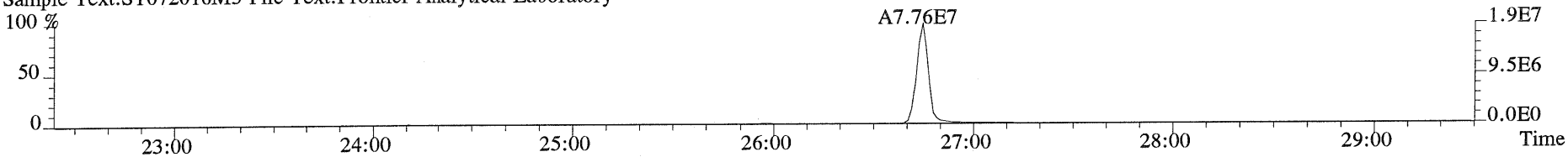
File:20JUL16M #1-360 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:6 F:5 Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



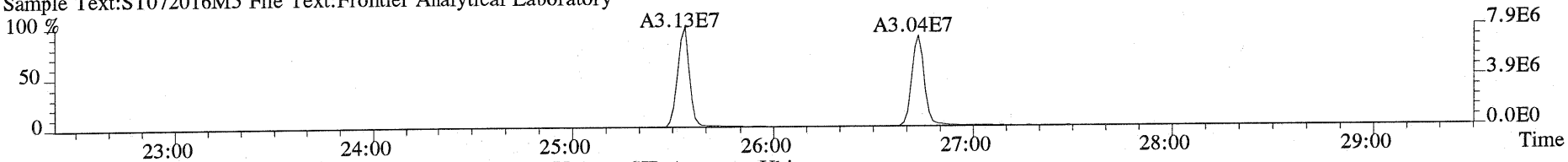
File:20JUL16M #1-399 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



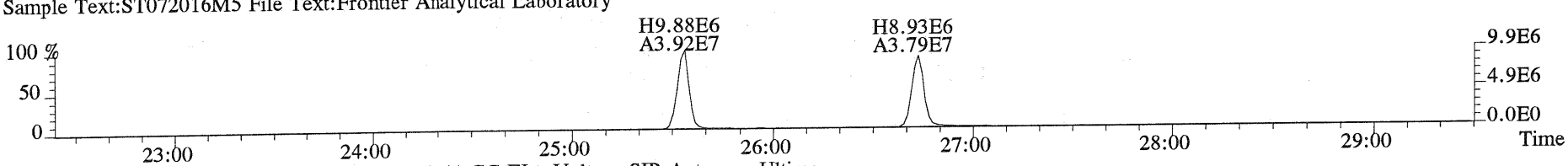
File:20JUL16M #1-399 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



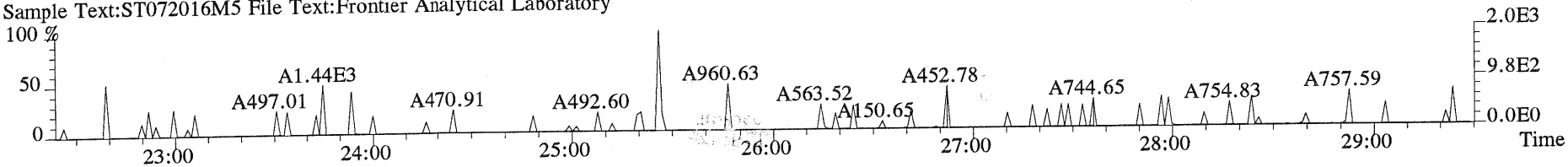
File:20JUL16M #1-399 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



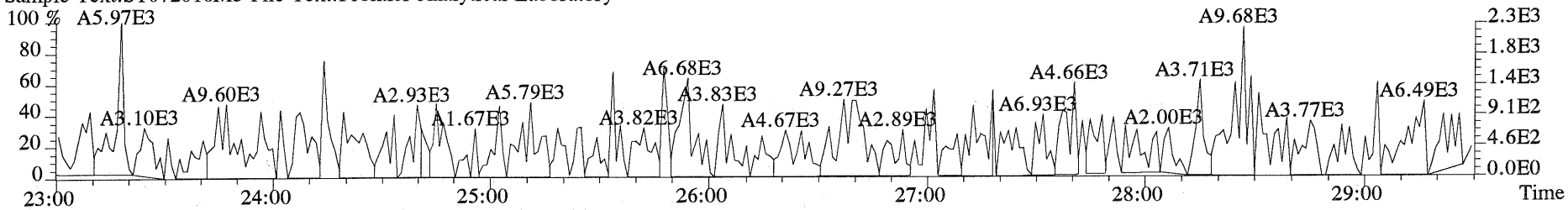
File:20JUL16M #1-399 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



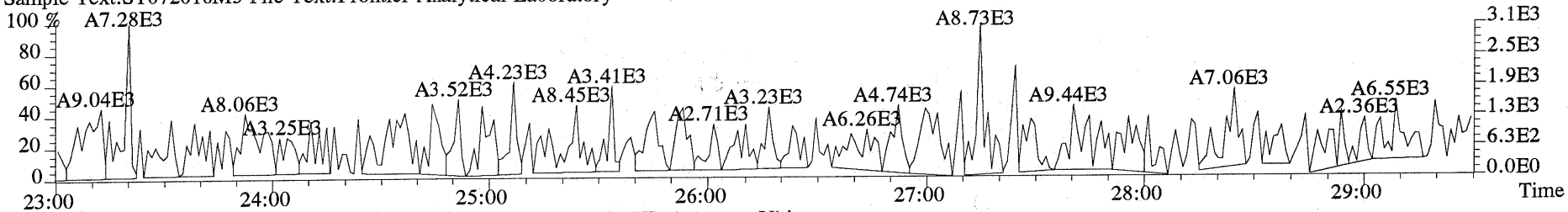
File:20JUL16M #1-399 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



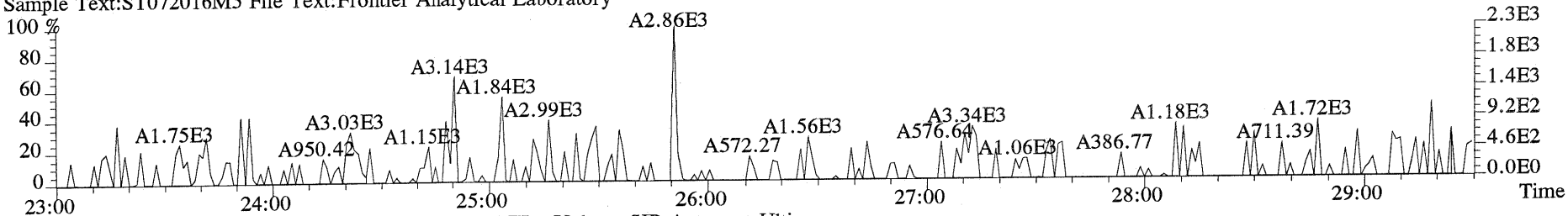
File:20JUL16M #1-399 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



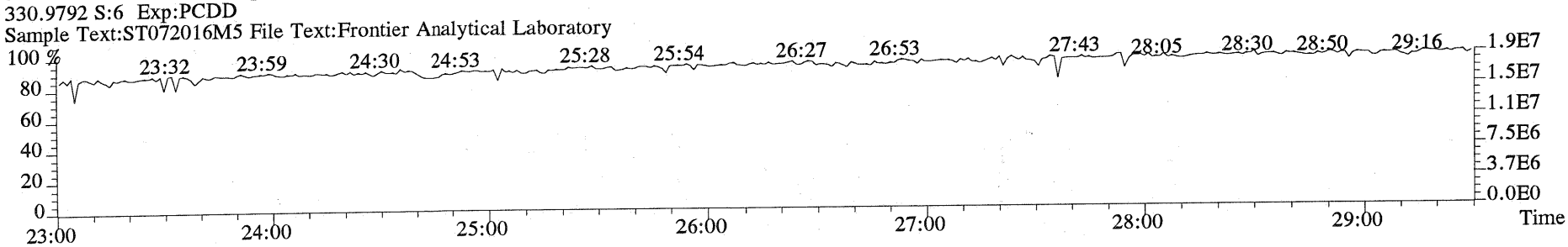
File:20JUL16M #1-399 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



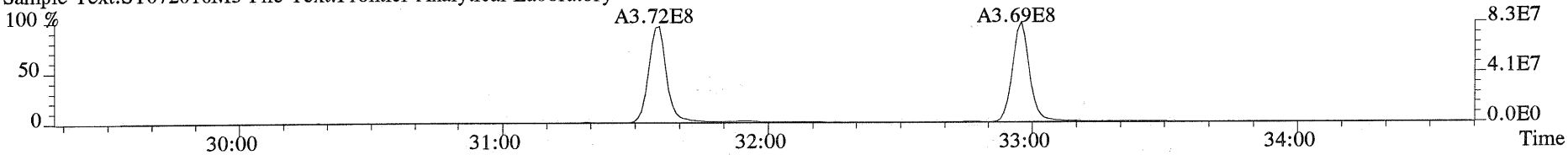
File:20JUL16M #1-399 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



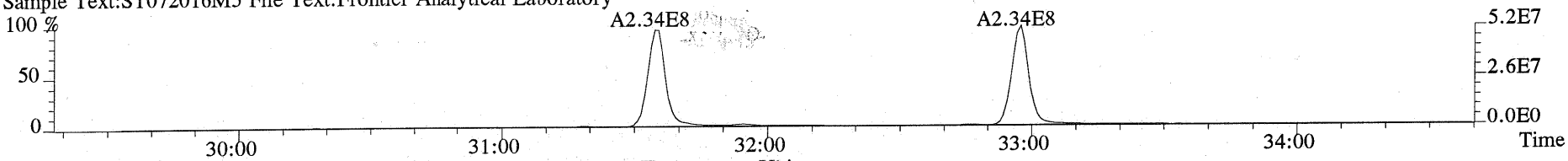
File:20JUL16M #1-399 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:6 Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



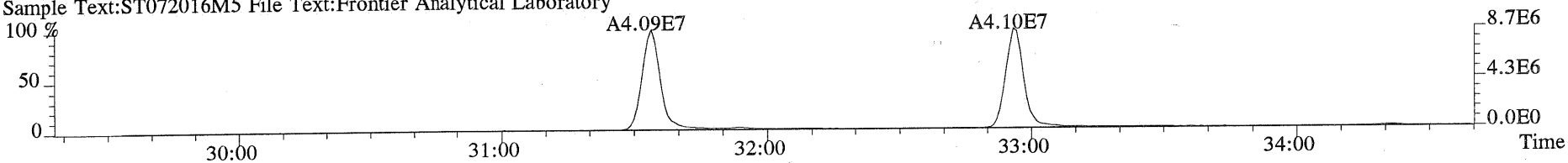
File:20JUL16M #1-411 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



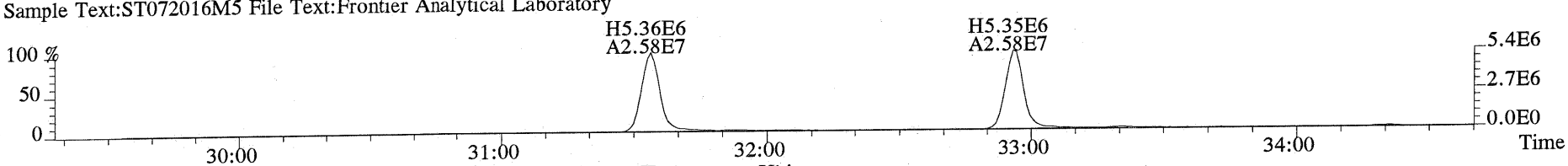
File:20JUL16M #1-411 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



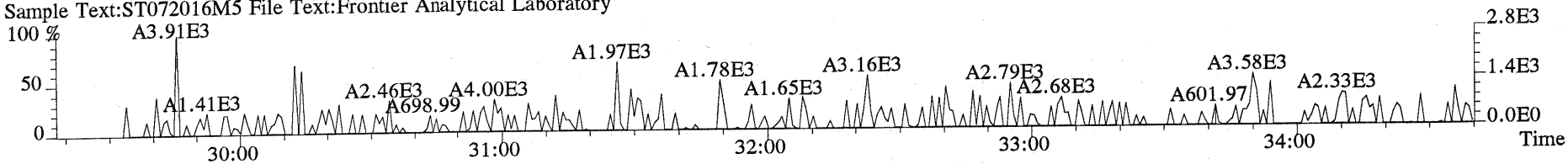
File:20JUL16M #1-411 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



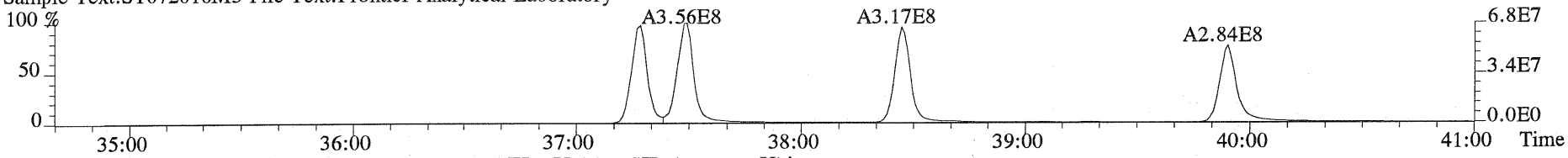
File:20JUL16M #1-411 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



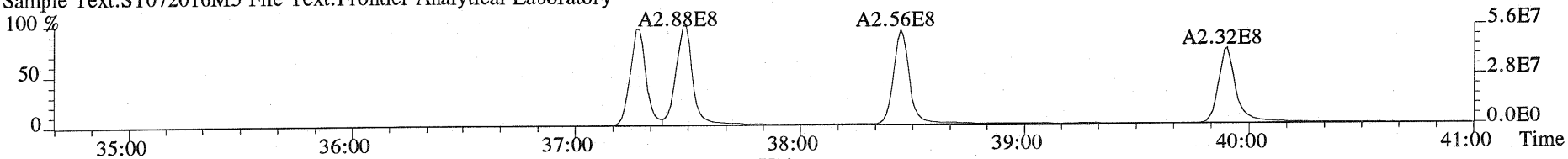
File:20JUL16M #1-411 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



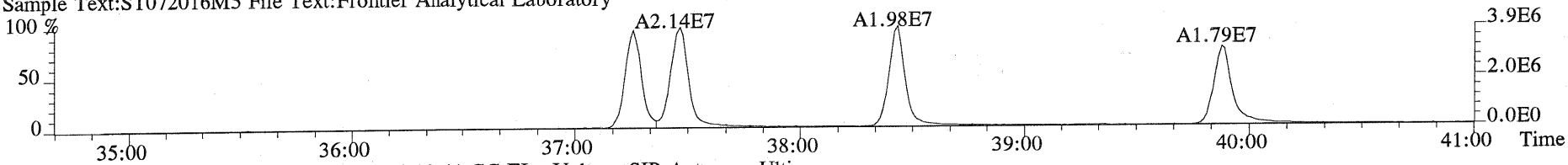
File:20JUL16M #1-495 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



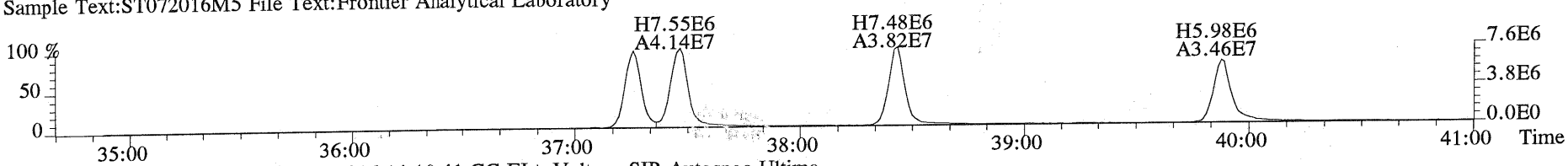
File:20JUL16M #1-495 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



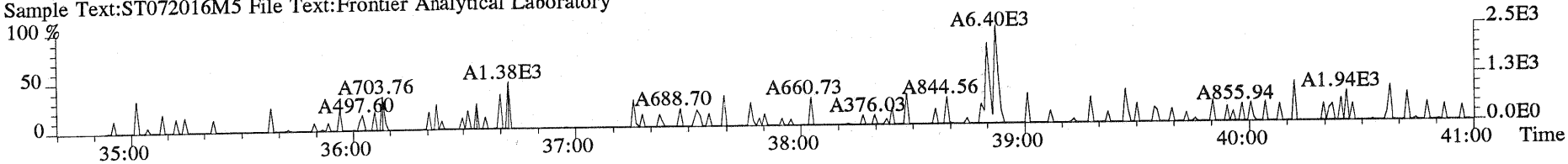
File:20JUL16M #1-495 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



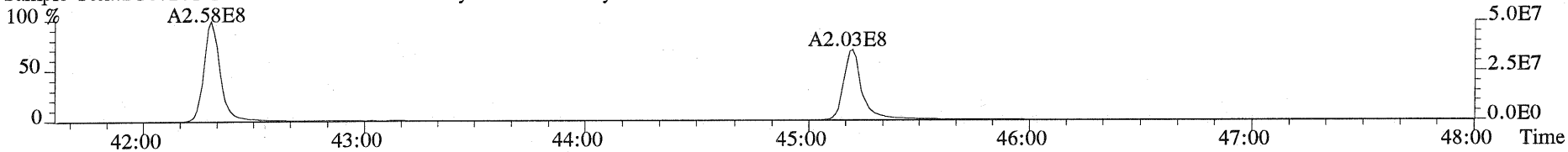
File:20JUL16M #1-495 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



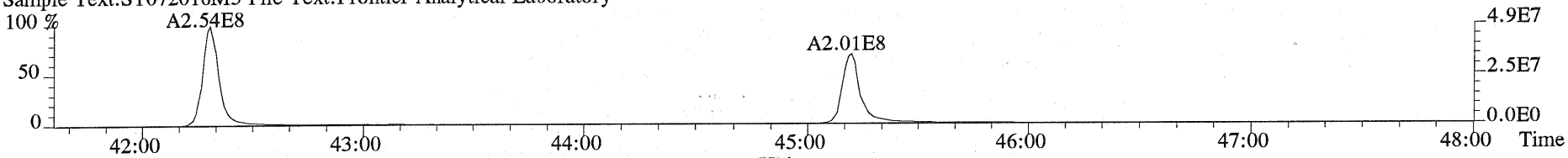
File:20JUL16M #1-495 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



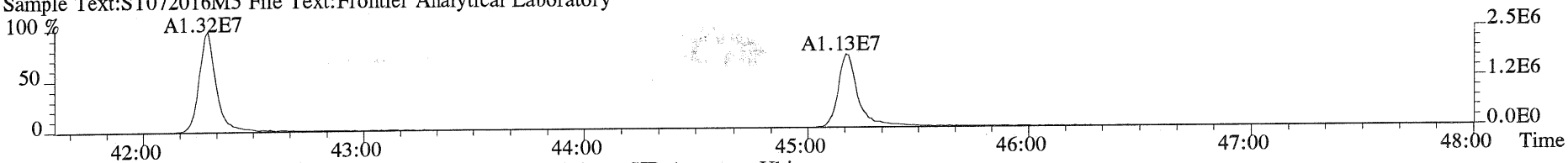
File:20JUL16M #1-521 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



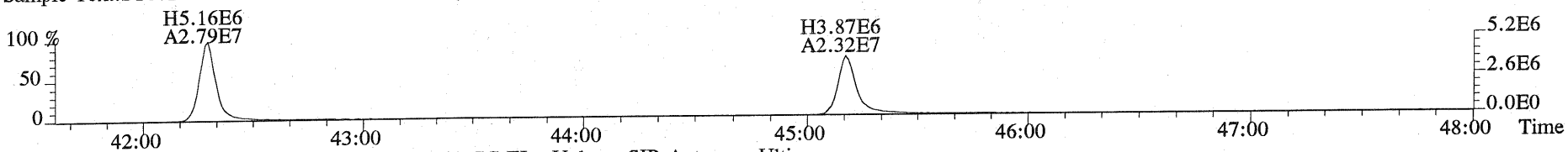
File:20JUL16M #1-521 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



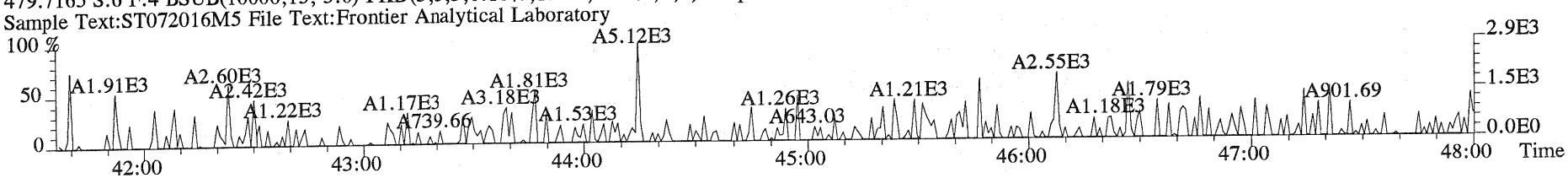
File:20JUL16M #1-521 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



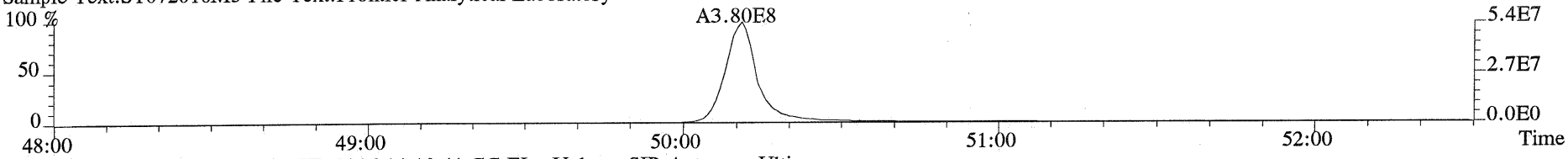
File:20JUL16M #1-521 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



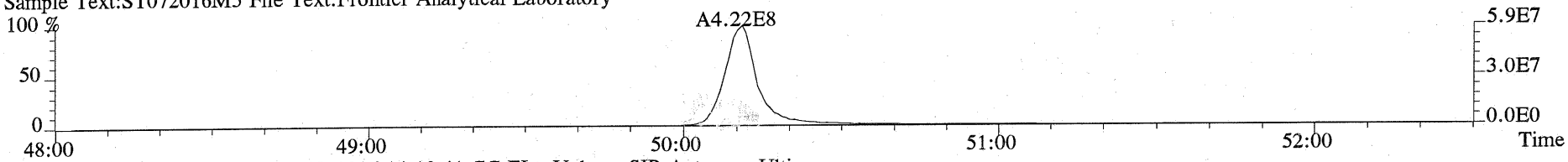
File:20JUL16M #1-521 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



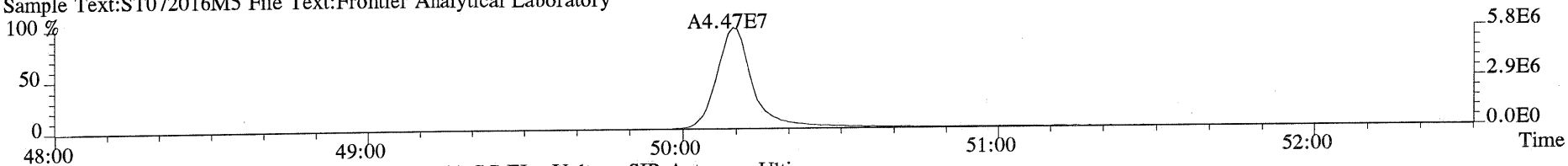
File:20JUL16M #1-360 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



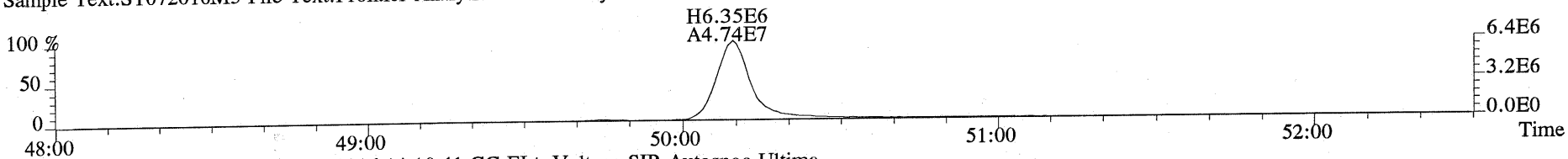
File:20JUL16M #1-360 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



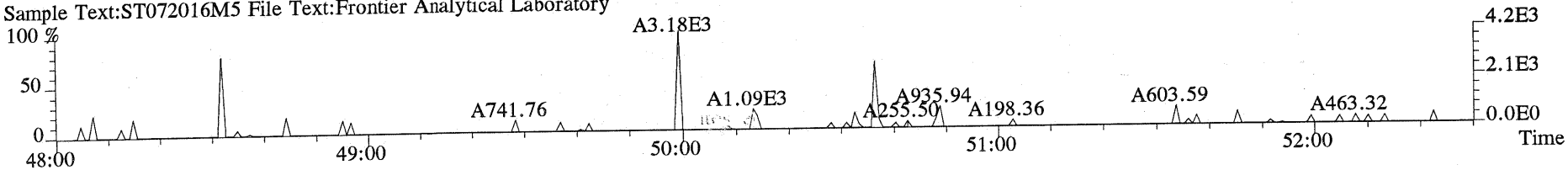
File:20JUL16M #1-360 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory



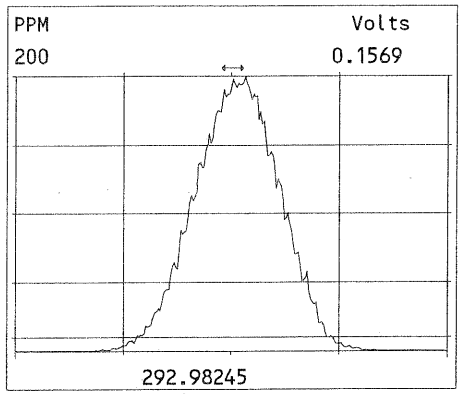
File:20JUL16M #1-360 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory

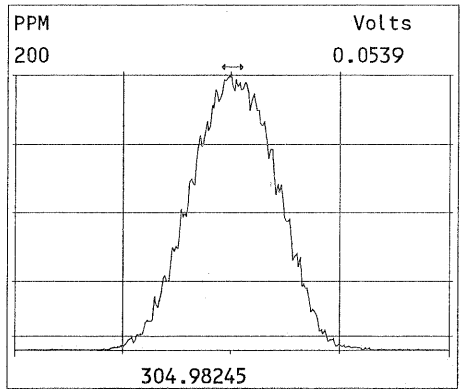


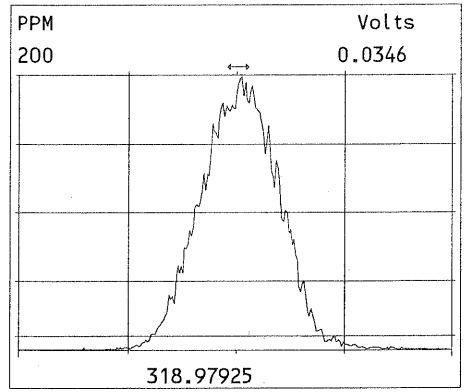
File:20JUL16M #1-360 Acq:20-JUL-2016 14:10:41 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST072016M5 File Text:Frontier Analytical Laboratory

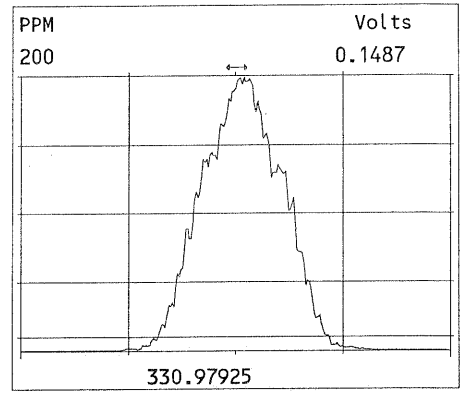


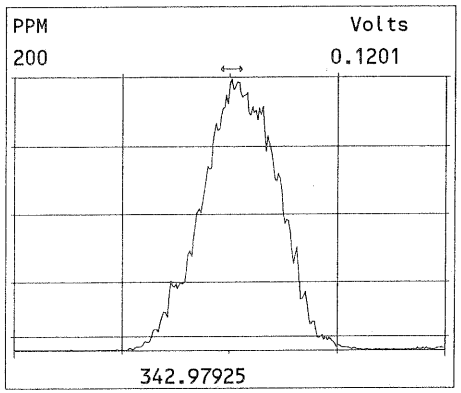
Peak Locate Examination:21-JUL-2016:08:06 File:20JUL16M_RES_CHECK
Experiment:PCDD Function:1 Reference:PFK

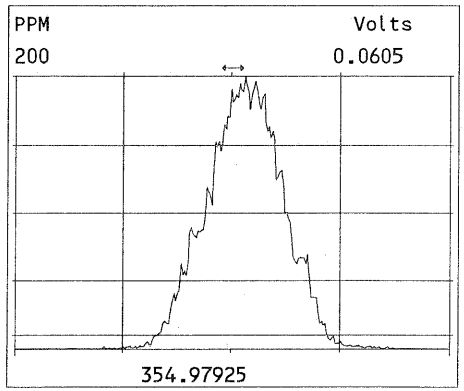


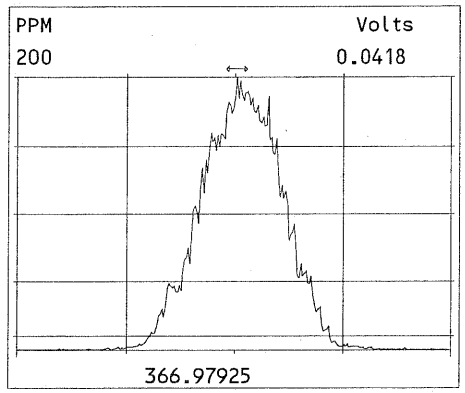


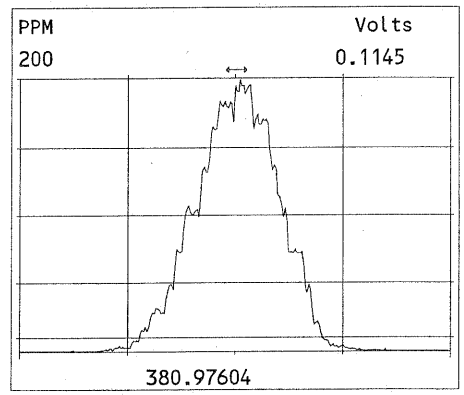


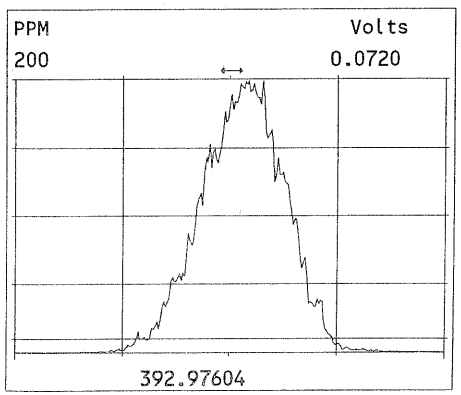


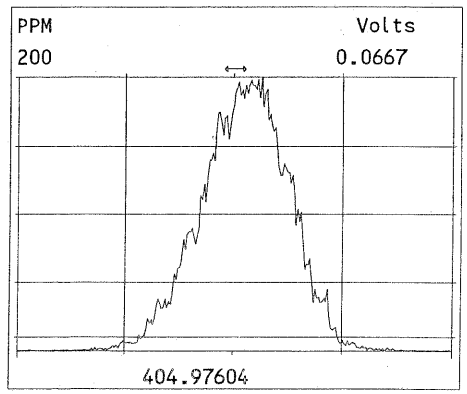


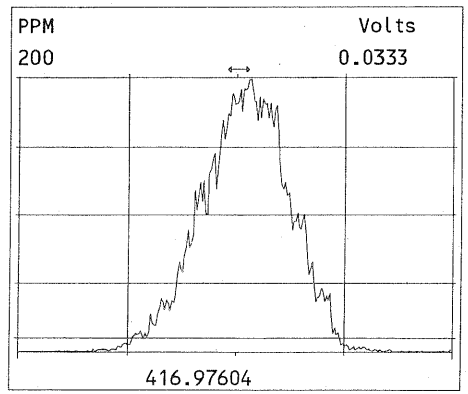




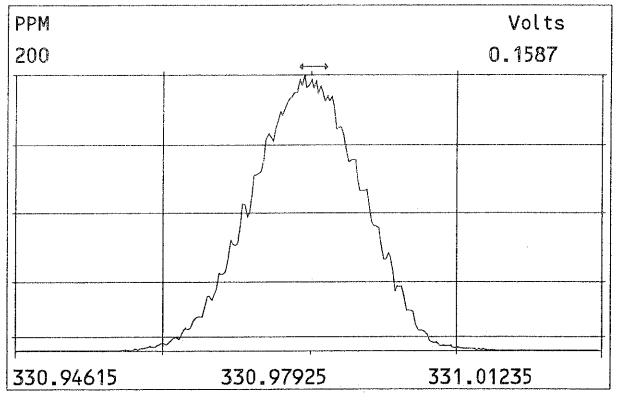


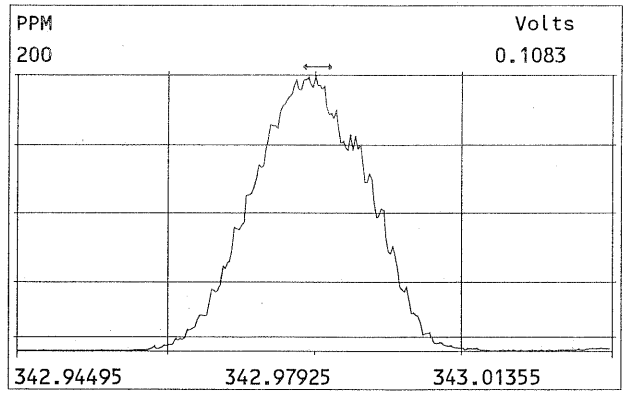


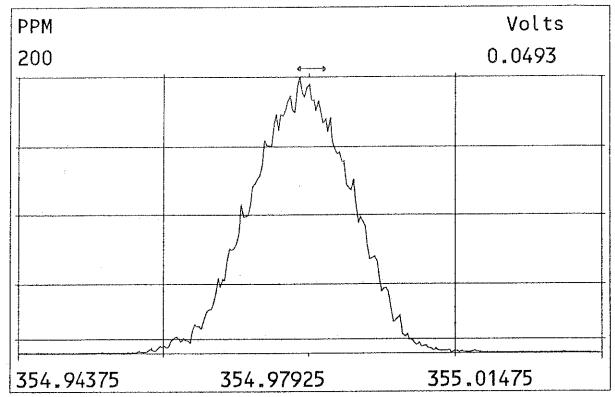


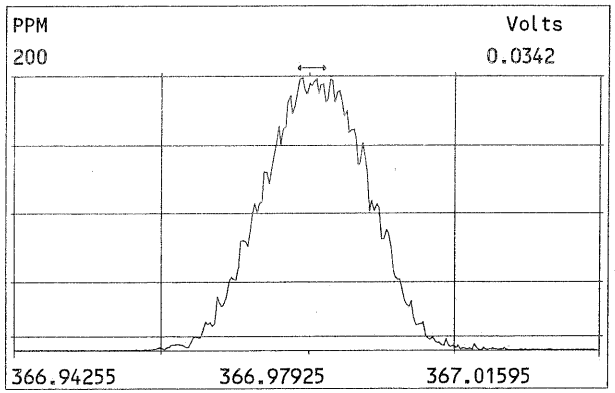


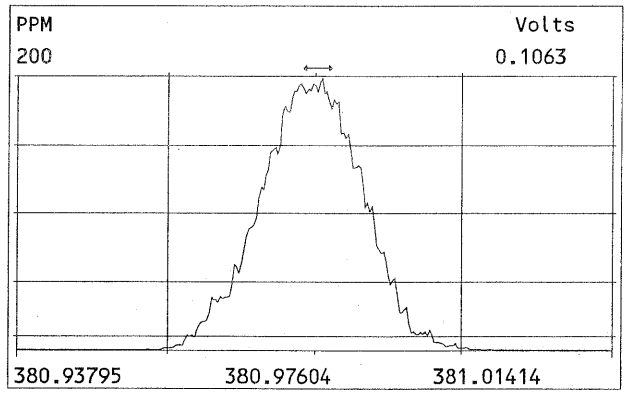
Peak Locate Examination:21-JUL-2016:08:06 File:20JUL16M_RES_CHECK
Experiment:PCDD Function:2 Reference:PFK

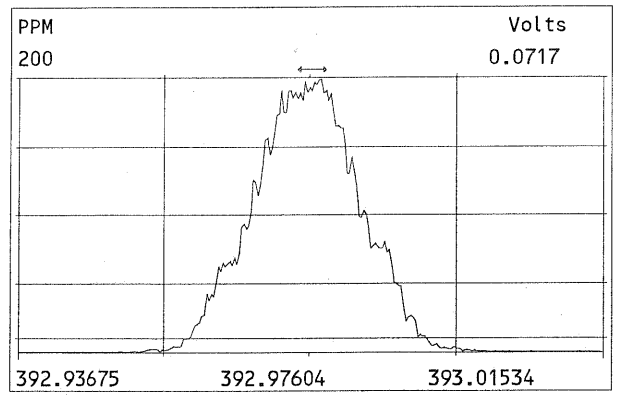


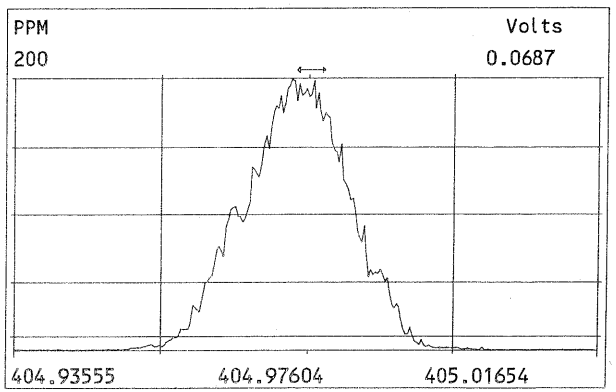


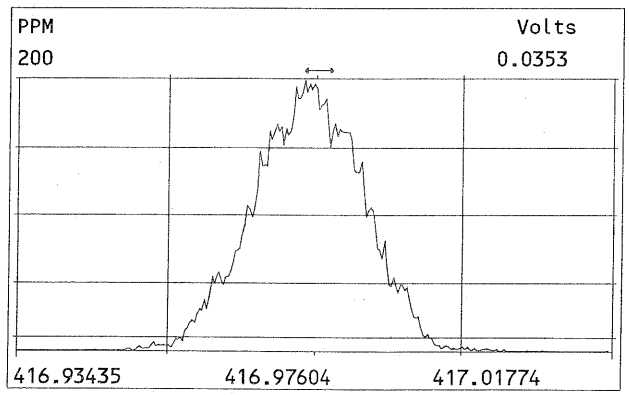




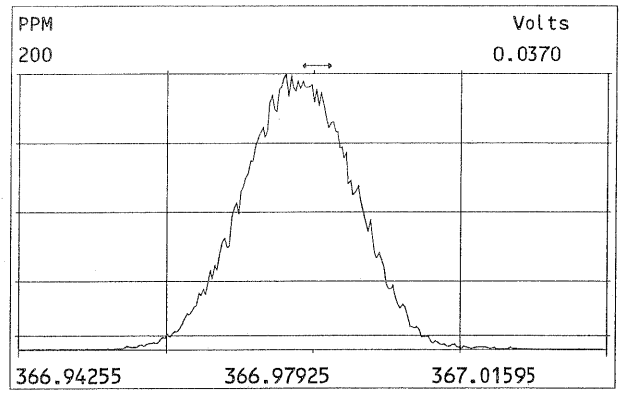


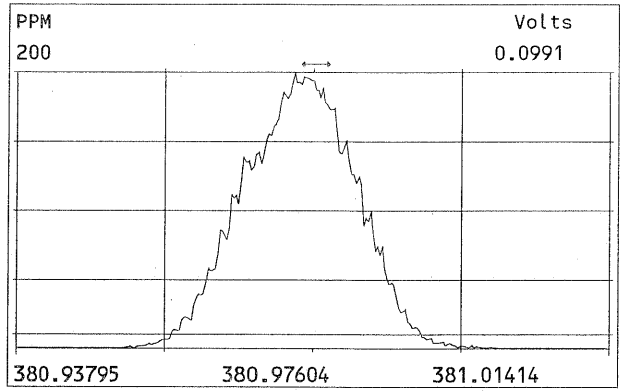


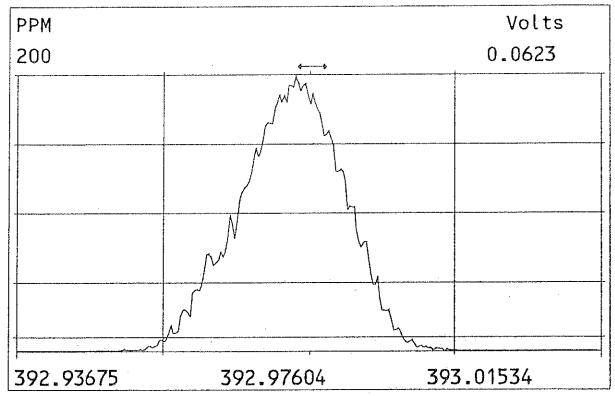


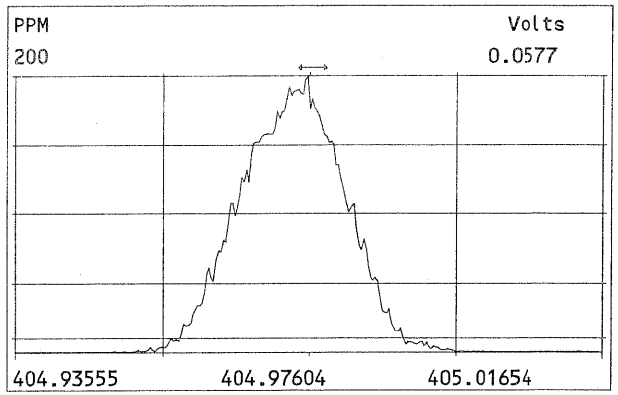


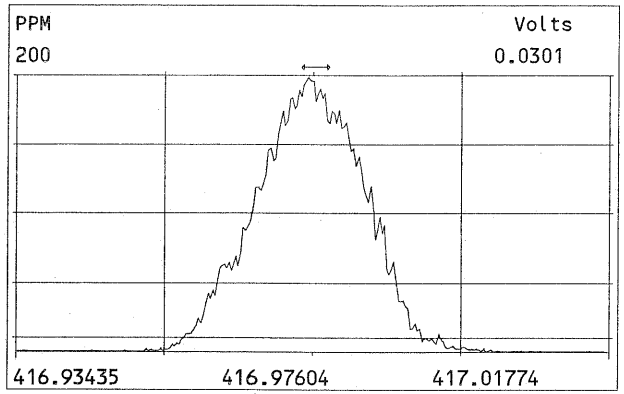
Peak Locate Examination:21-JUL-2016:08:07 File:20JUL16M_RES_CHECK
Experiment:PCDD Function:3 Reference:PFK

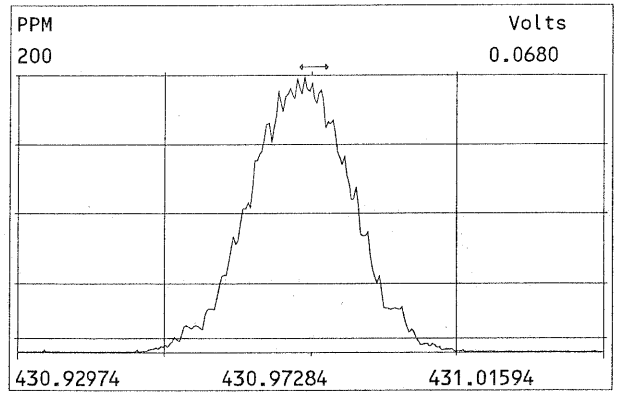


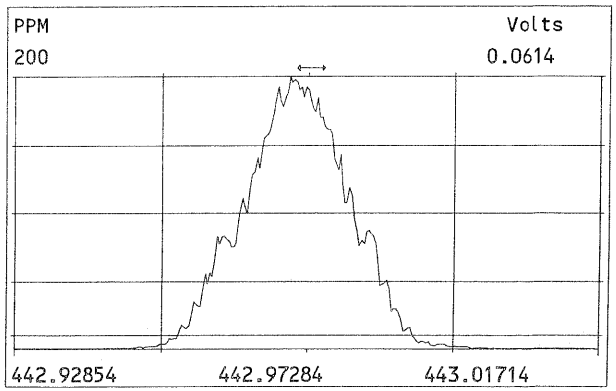


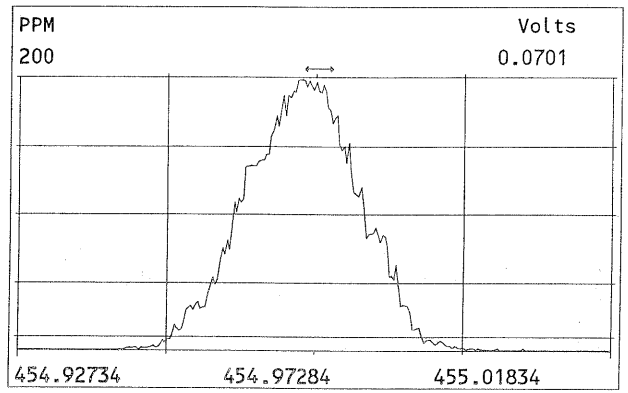




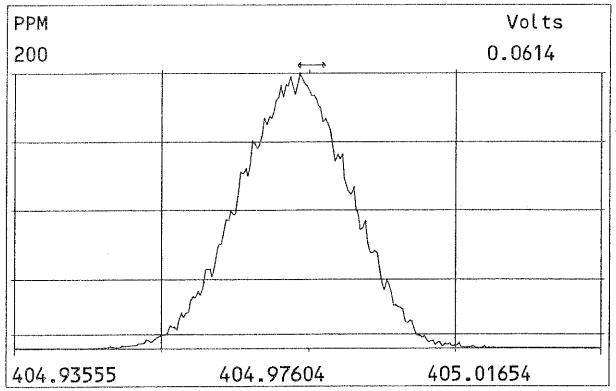


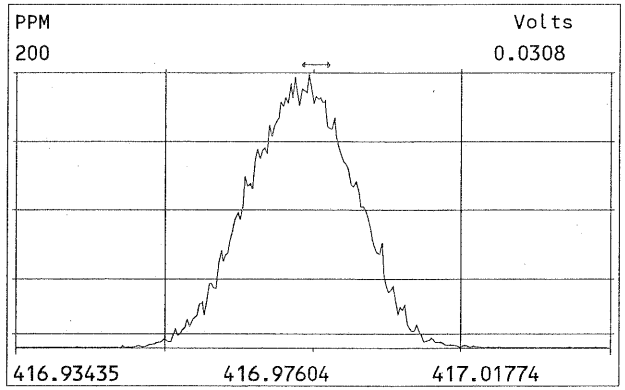


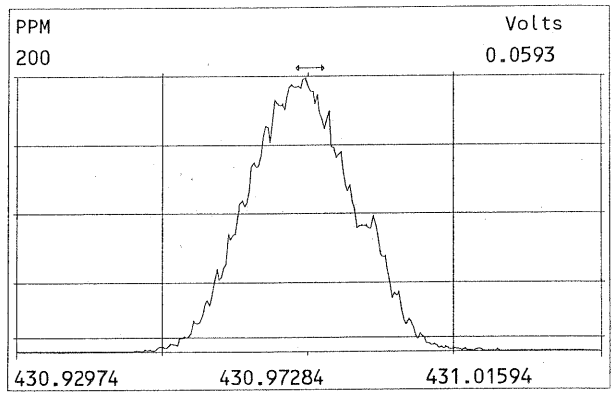


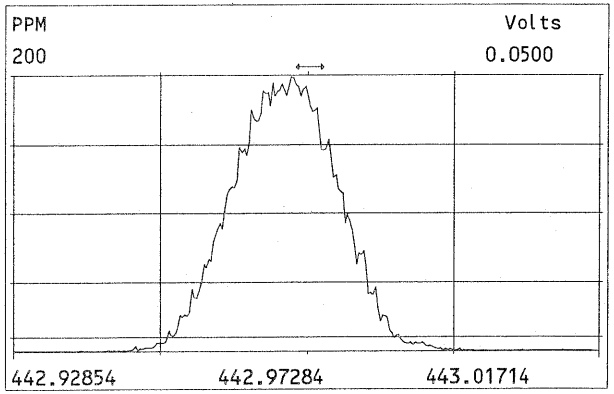


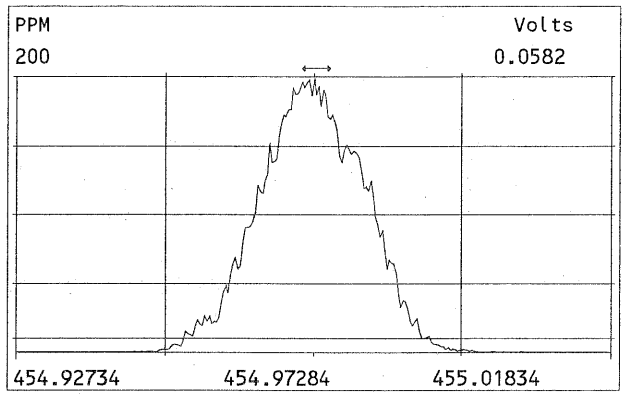
Peak Locate Examination:21-JUL-2016:08:07 File:20JUL16M_RES_CHECK
Experiment:PCDD Function:4 Reference:PFK

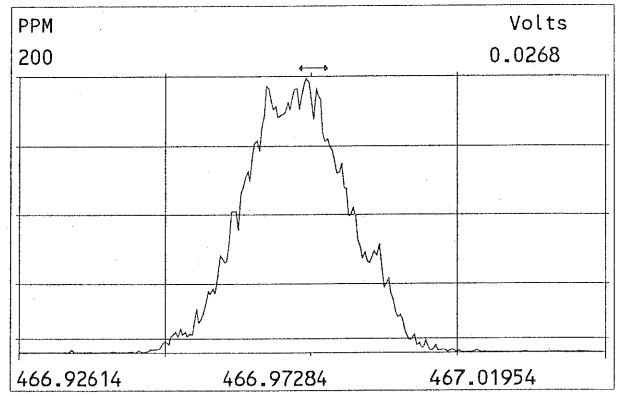


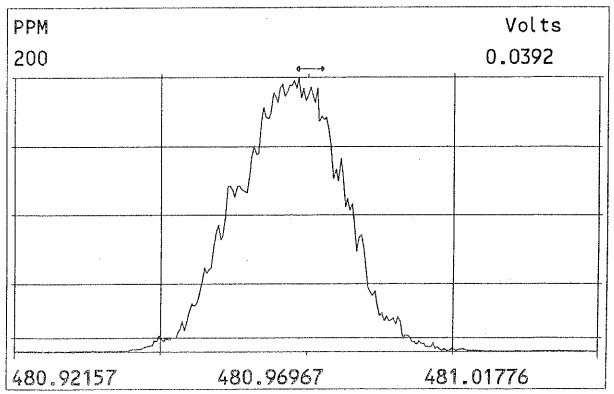




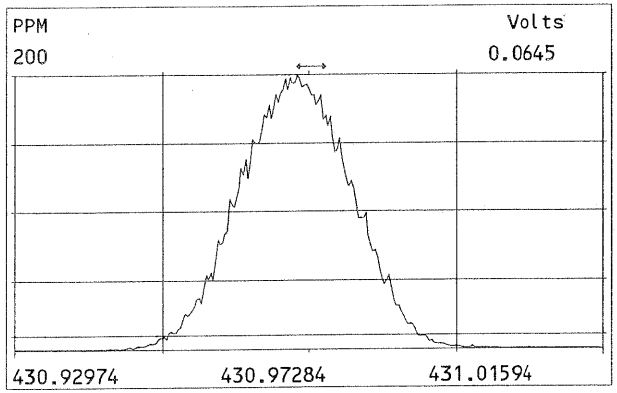


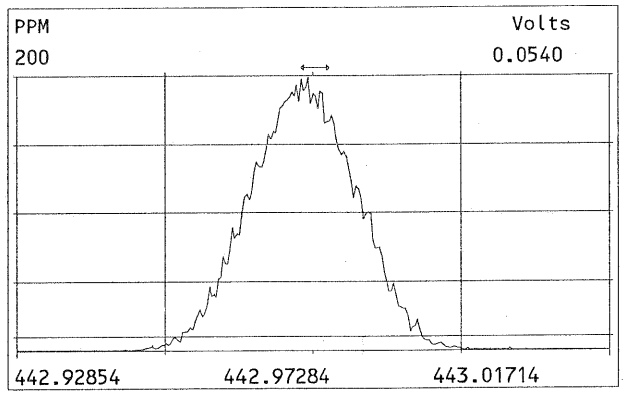


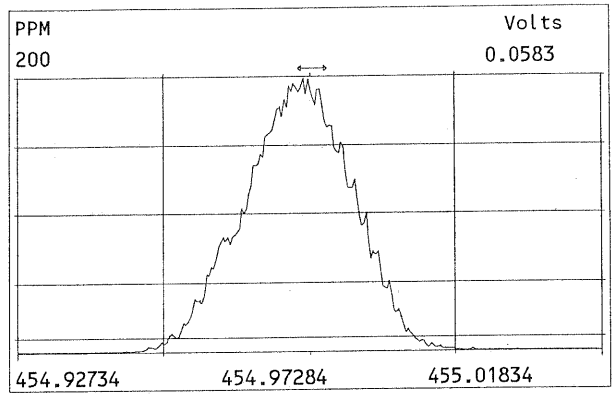


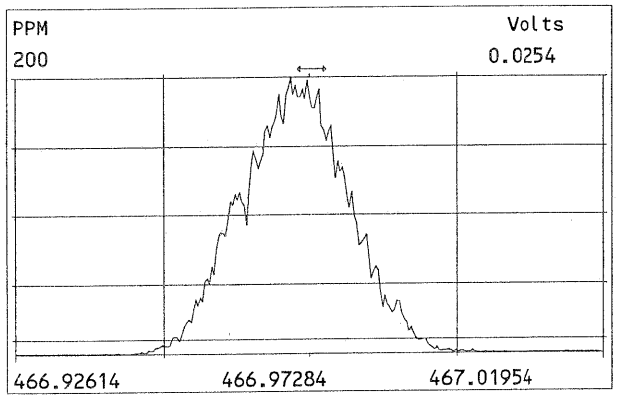


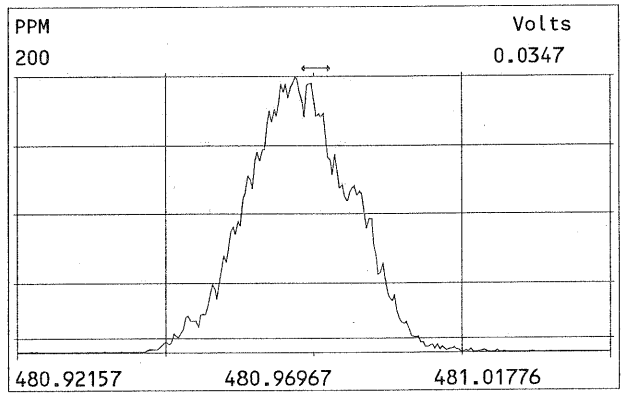
Peak Locate Examination:21-JUL-2016:08:07 File:20JUL16M_RES_CHECK
Experiment:PCDD Function:5 Reference:PFK

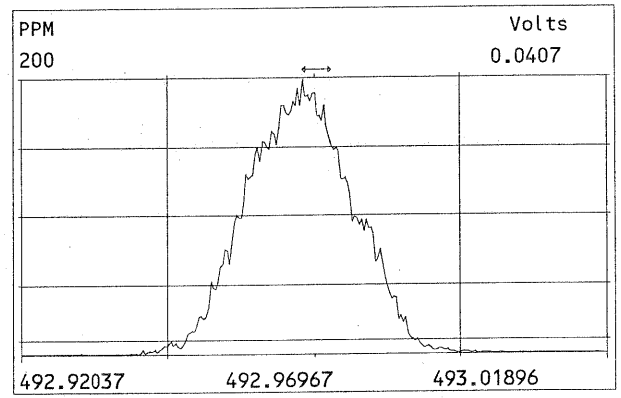


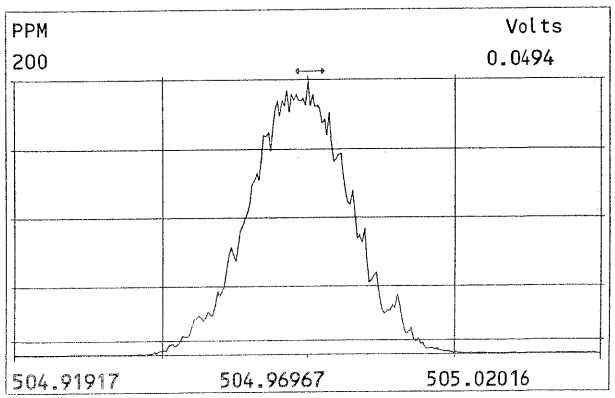


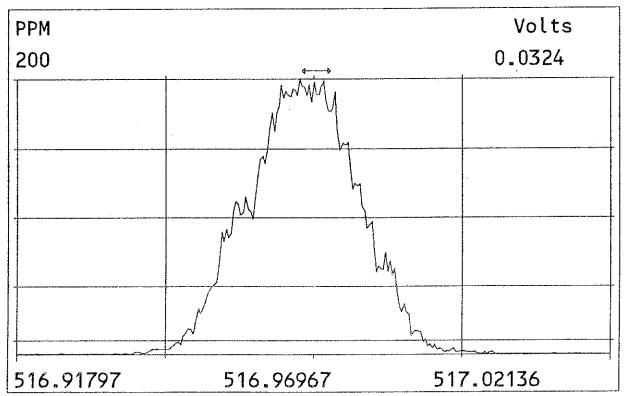












USEPA - ITD

FORM 4A
209 PCB CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 8/11/16

Instrument ID: FAL4 GC Column ID: DB1

VER Data Filename: 18AUG16Z Sam:1 Analysis Date: 18-AUG-16 16:50:51

NATIVE ANALYTES	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	M/M+2	3.21	2.66-3.60	y	48.4	37.5 - 62.5
PCB-3	M/M+2	3.21	2.66-3.60	y	47.8	37.5 - 62.5
PCB-4	M/M+2	1.58	1.33-1.79	y	49.9	37.5 - 62.5
PCB-15	M/M+2	1.55	1.33-1.79	y	48.9	37.5 - 62.5
PCB-19	M/M+2	1.04	0.88-1.20	y	46.3	37.5 - 62.5
PCB-37	M/M+2	1.03	0.88-1.20	y	49.4	37.5 - 62.5
PCB-54	M/M+2	0.77	0.65-0.89	y	49.4	37.5 - 62.5
PCB-77	M/M+2	0.78	0.65-0.89	y	48.8	37.5 - 62.5
PCB-81	M/M+2	0.78	0.65-0.89	y	49.9	37.5 - 62.5
PCB-104	M+2/M+4	1.59	1.32-1.78	y	45.8	37.5 - 62.5
PCB-105	M+2/M+4	1.54	1.32-1.78	y	49.4	37.5 - 62.5
PCB-114	M+2/M+4	1.52	1.32-1.78	y	49.2	37.5 - 62.5
PCB-118	M+2/M+4	1.50	1.32-1.78	y	51.3	37.5 - 62.5
PCB-123	M+2/M+4	1.55	1.32-1.78	y	52.0	37.5 - 62.5
PCB-126	M+2/M+4	1.65	1.32-1.78	y	50.0	37.5 - 62.5
PCB-155	M+2/M+4	1.27	1.05-1.43	y	47.4	37.5 - 62.5
PCB-156	M+2/M+4	1.26	1.05-1.43	y	48.6	37.5 - 62.5
PCB-157	M+2/M+4	1.25	1.05-1.43	y	50.2	37.5 - 62.5
PCB-167	M+2/M+4	1.25	1.05-1.43	y	50.1	37.5 - 62.5
PCB-169	M+2/M+4	1.26	1.05-1.43	y	48.8	37.5 - 62.5
PCB-188	M+2/M+4	1.05	0.89-1.21	y	47.1	37.5 - 62.5
PCB-189	M+2/M+4	1.07	0.89-1.21	y	47.0	37.5 - 62.5
PCB-202	M+2/M+4	0.89	0.76-1.02	y	49.0	37.5 - 62.5
PCB-205	M+2/M+4	0.88	0.76-1.02	y	48.5	37.5 - 62.5
PCB-206	M+4/M+6	1.41	1.13-1.53	y	48.9	37.5 - 62.5
PCB-208	M+4/M+6	1.40	1.13-1.53	y	45.8	37.5 - 62.5
PCB-209	M+4/M+6	1.19	0.99-1.33	y	50.3	37.5 - 62.5

Analyst: [signature] Date: 8/19/16

USEPA - ITD

FORM 4B
209 PCB CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 8/11/16

Instrument ID: FAL4 GC Column ID: DB1

VER Data Filename: 18AUG16Z Sam:1 Analysis Date: 18-AUG-16 16:50:51

	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL)
LABELED COMPOUNDS						
13C-PCB-1	M/M+2	3.06	2.66-3.60	y	103	50.0 - 145
13C-PCB-3	M/M+2	3.15	2.66-3.60	y	97.0	50.0 - 145
13C-PCB-4	M/M+2	1.61	1.33-1.79	y	97.1	50.0 - 145
13C-PCB-15	M/M+2	1.60	1.33-1.79	y	86.2	50.0 - 145
13C-PCB-19	M/M+2	1.08	0.88-1.20	y	103	50.0 - 145
13C-PCB-37	M/M+2	1.09	0.88-1.20	y	87.0	50.0 - 145
13C-PCB-54	M/M+2	0.80	0.65-0.89	y	105	50.0 - 145
13C-PCB-77	M/M+2	0.80	0.65-0.89	y	86.4	50.0 - 145
13C-PCB-81	M/M+2	0.80	0.65-0.89	y	83.5	50.0 - 145
13C-PCB-104	M+2/M+4	1.62	1.32-1.78	y	110	50.0 - 145
13C-PCB-105	M+2/M+4	1.63	1.32-1.78	y	93.2	50.0 - 145
13C-PCB-114	M+2/M+4	1.61	1.32-1.78	y	90.5	50.0 - 145
13C-PCB-118	M+2/M+4	1.61	1.32-1.78	y	90.8	50.0 - 145
13C-PCB-123	M+2/M+4	1.62	1.32-1.78	y	86.4	50.0 - 145
13C-PCB-126	M+2/M+4	1.58	1.32-1.78	y	81.4	50.0 - 145
13C-PCB-155	M+2/M+4	1.27	1.05-1.43	y	108	50.0 - 145
13C-PCB-156	M+2/M+4	1.28	1.05-1.43	y	92.0	50.0 - 145
13C-PCB-157	M+2/M+4	1.27	1.05-1.43	y	93.1	50.0 - 145
13C-PCB-167	M+2/M+4	1.26	1.05-1.43	y	93.0	50.0 - 145
13C-PCB-169	M+2/M+4	1.25	1.05-1.43	y	83.3	50.0 - 145
13C-PCB-188	M+2/M+4	1.08	0.89-1.21	y	115	50.0 - 145
13C-PCB-189	M+2/M+4	1.08	0.89-1.21	y	91.0	50.0 - 145
13C-PCB-202	M+2/M+4	0.92	0.76-1.02	y	114	50.0 - 145
13C-PCB-205	M+2/M+4	0.89	0.76-1.02	y	96.2	50.0 - 145
13C-PCB-206	M+2/M+4	0.78	0.65-0.89	y	105	50.0 - 145
13C-PCB-208	M+2/M+4	0.78	0.65-0.89	y	116	50.0 - 145
13C-PCB-209	M+4/M+6	1.19	0.99-1.33	y	109	50.0 - 145
CLEANUP STANDARDS						
13C-PCB-28	M/M+2	1.05	0.88-1.20	y	93.0	65.0 - 135
13C-PCB-111	M+2/M+4	1.59	1.32-1.78	y	98.3	75.0 - 125
13C-PCB-178	M+2/M+4	1.05	0.89-1.21	y	108	75.0 - 125

Analyst: [illegible] Date: 8/19/16

FAL ID: ST081816Z1 Filename: 18AUG16Z Sam:1 Acquired: 18-AUG-16 16:50:51 ICal: 1668FAL4-8-11-16
Client ID: 1668 CS3 R150603A ConCal: ST081816Z1 EndCal: ST081816Z2
Results: GC Column: DB1 Amount: 1.000

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL	Rec
PCB-1	4.37e+07	3.21 y	14:29	1.05	48.4		2.50	-	-	*	-
13C-PCB-1	8.59e+07	3.06 y	14:28	1.14	103		2.50				103
PCB-3	3.96e+07	3.21 y	16:56	1.05	47.8		2.50	-	-	*	-
13C-PCB-3	7.91e+07	3.15 y	16:55	1.11	97.0		2.50				97.0
PCB-4	2.74e+07	1.58 y	18:09	1.14	49.9		2.50	-	-	*	-
13C-PCB-4	4.83e+07	1.61 y	18:08	0.68	97.1		2.50				97.1
PCB-15	3.46e+07	1.55 y	23:43	1.09	48.9		2.50	-	-	*	-
13C-PCB-15	6.50e+07	1.60 y	23:42	1.02	86.2		2.50				86.2
PCB-19	2.50e+07	1.04 y	22:02	1.16	46.3		2.50	-	-	*	-
13C-PCB-19	4.66e+07	1.08 y	22:01	0.61	103		2.50				103
13C-PCB-9	7.36e+07	1.60 y	19:49	-	53.9		2.50				
PCB-37	2.95e+07	1.03 y	30:22	1.14	49.4		2.50	-	-	*	-
13C-PCB-37	5.23e+07	1.09 y	30:21	1.38	87.0		2.50				87.0
PCB-54	2.98e+07	0.77 y	25:33	1.05	49.4		2.50	-	-	*	-
13C-PCB-54	5.73e+07	0.80 y	25:32	1.25	105		2.50				105
PCB-104	2.30e+07	1.59 y	29:58	1.14	45.8		2.50	-	-	*	-
13C-PCB-104	4.39e+07	1.62 y	29:57	0.91	110		2.50				110
13C-PCB-28	6.03e+07	1.05 y	26:39	1.48	93.0		2.50				93.0
13C-PCB-52	4.37e+07	0.80 y	28:53	-	52.5		2.50				
PCB-81	2.33e+07	0.78 y	36:07	1.14	49.9		2.50	-	-	*	-
13C-PCB-81	4.08e+07	0.80 y	36:06	1.27	83.5		2.50				83.5
PCB-77	2.27e+07	0.78 y	36:41	1.10	48.8		2.50	-	-	*	-
13C-PCB-77	4.22e+07	0.80 y	36:40	1.27	86.4		2.50				86.4
PCB-155	2.38e+07	1.27 y	34:08	1.11	47.4		2.50	-	-	*	-
13C-PCB-155	4.53e+07	1.27 y	34:07	1.09	108		2.50				108
13C-PCB-111	4.74e+07	1.59 y	36:12	1.25	98.3		2.50				98.3
13C-PCB-101	3.85e+07	1.60 y	34:34	-	52.7		2.50				
PCB-123	1.91e+07	1.55 y	38:17	1.05	52.0		2.50	-	-	*	-
13C-PCB-123	3.48e+07	1.62 y	38:15	1.20	86.4		2.50				86.4
PCB-118	2.18e+07	1.50 y	38:27	1.07	51.3		2.50	-	-	*	-
13C-PCB-118	3.99e+07	1.61 y	38:25	1.31	90.8		2.50				90.8
PCB-114	1.99e+07	1.52 y	39:05	1.08	49.2		2.50	-	-	*	-
13C-PCB-114	3.74e+07	1.61 y	39:03	1.23	90.5		2.50				90.5
PCB-105	2.06e+07	1.54 y	39:52	1.08	49.4		2.50	-	-	*	-
13C-PCB-105	3.87e+07	1.63 y	39:52	1.24	93.2		2.50				93.2
PCB-126	1.71e+07	1.65 y	42:03	1.07	50.0		2.50	-	-	*	-
13C-PCB-126	3.20e+07	1.58 y	42:01	1.17	81.4		2.50				81.4
PCB-167	1.89e+07	1.25 y	43:22	0.98	50.1		2.50	-	-	*	-
13C-PCB-167	3.86e+07	1.26 y	43:20	1.24	93.0		2.50				93.0
PCB-156	1.79e+07	1.26 y	44:36	1.01	48.6		2.50	-	-	*	-
13C-PCB-156	3.64e+07	1.28 y	44:34	1.18	92.0		2.50				92.0
PCB-157	1.84e+07	1.25 y	44:50	0.96	50.2		2.50	-	-	*	-
13C-PCB-157	3.82e+07	1.27 y	44:49	1.22	93.1		2.50				93.1
PCB-169	1.51e+07	1.26 y	46:44	1.00	48.8		2.50	-	-	*	-
13C-PCB-169	3.09e+07	1.25 y	46:44	1.11	83.3		2.50				83.3
PCB-188	2.44e+07	1.05 y	39:38	1.09	47.1		2.50	-	-	*	-
13C-PCB-188	4.73e+07	1.08 y	39:36	1.22	115		2.50				115
PCB-189	1.58e+07	1.07 y	48:23	1.14	47.0		2.50	-	-	*	-
13C-PCB-189	2.96e+07	1.08 y	48:23	0.97	91.0		2.50				91.0
PCB-202	1.73e+07	0.89 y	44:44	1.05	49.0		2.50	-	-	*	-
13C-PCB-202	3.34e+07	0.92 y	44:42	0.88	114		2.50				114
13C-PCB-178	2.79e+07	1.05 y	42:16	0.77	108		2.50				108
13C-PCB-138	3.35e+07	1.28 y	41:28	-	48.0		2.50				

FAL ID: ST081816Z1 Filename: 18AUG16Z Sam:1 Acquired: 18-AUG-16 16:50:51 ICal: 1668FAL4-8-11-16
Client ID: 1668 CS3 R150603A ConCal: ST081816Z1 EndCal: ST081816Z2
Results: GC Column: DB1 Amount: 1.000

PCB-205	1.44e+07	0.88 y	50:01	1.02	48.5	2.50	-	-	*	-
13C-PCB-205	2.92e+07	0.89 y	50:01	1.38	96.2	2.50				96.2
PCB-208	1.42e+07	1.40 y	49:06	0.93	45.8	2.50	-	-	*	-
13C-PCB-208	3.34e+07	0.78 y	49:05	1.31	116	2.50				116
PCB-206	1.07e+07	1.41 y	51:13	0.94	48.9	2.50	-	-	*	-
13C-PCB-206	2.33e+07	0.78 y	51:12	1.01	105	2.50				105
PCB-209	1.77e+07	1.19 y	52:24	1.10	50.3	2.50	-	-	*	-
13C-PCB-209	3.19e+07	1.19 y	52:23	1.34	109	2.50				109
13C-PCB-194	2.20e+07	0.91 y	49:46	-	43.6	2.50				

Analyst: _____ Date: 8/19/16

Frontier Analytical Laboratory - Acquisition Log

Run Name:18AUG16Z Instrument: FAL4 GC: DB1 Experiment:1668PCB

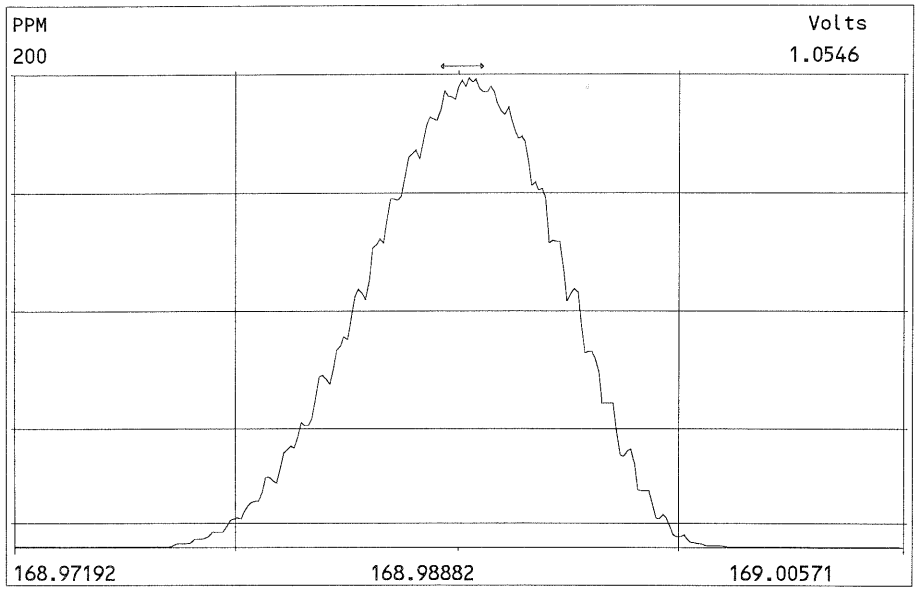
Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
18AUG16Z	1	ST081816Z1	1668 CS3 R150603A	18-AUG-16 16:50:51	ST081816Z1	ST081816Z2	BS
18AUG16Z	2	SS081816Z1	Daily 209 160711B	18-AUG-16 17:50:51	ST081816Z1	ST081816Z2	BS
18AUG16Z	3	03814-001-0001-OPR	OPR	18-AUG-16 18:50:50	ST081816Z1	ST081816Z2	BS
18AUG16Z	4	03814-001-0001-MB	Method Blank	18-AUG-16 19:50:48	ST081816Z1	ST081816Z2	BS
18AUG16Z	5	10051-001-X002-SA	LDW-BA-PC-ENRMATERIAL-GAC	18-AUG-16 20:50:46	ST081816Z1	ST081816Z2	BS
18AUG16Z	6	10095-001-0001-SA	LDW-BA-PC-ENRMAT-SAND	18-AUG-16 21:50:41	ST081816Z1	ST081816Z2	BS
18AUG16Z	7	10095-002-0001-SA	LDW-BA-PC-ENRMAT-GRUSAND	18-AUG-16 22:50:38	ST081816Z1	ST081816Z2	BS
18AUG16Z	8	QC081816Z1	QCA	18-AUG-16 23:50:35	ST081816Z1	ST081816Z2	BS
18AUG16Z	9	03816-001-0001-OPR	OPR	19-AUG-16 00:50:32	ST081816Z1	ST081816Z2	BS
18AUG16Z	10	03816-001-0001-MB	Method Blank	19-AUG-16 01:50:28	ST081816Z1	ST081816Z2	BS
18AUG16Z	11	10051-001-X003-SA	LDW-BA-PC-ENRMATERIAL-GAC	19-AUG-16 02:50:24	ST081816Z1	ST081816Z2	BS
18AUG16Z	12	SB081816Z1	Solvent Blank	19-AUG-16 03:50:20	ST081816Z1	ST081816Z2	BS
18AUG16Z	13	SB081816Z2	Solvent Blank	19-AUG-16 04:50:13	ST081816Z1	ST081816Z2	BS
18AUG16Z	14	ST081816Z2	1668 CS3 R150603A	19-AUG-16 05:50:06	ST081816Z1	ST081816Z2	BS

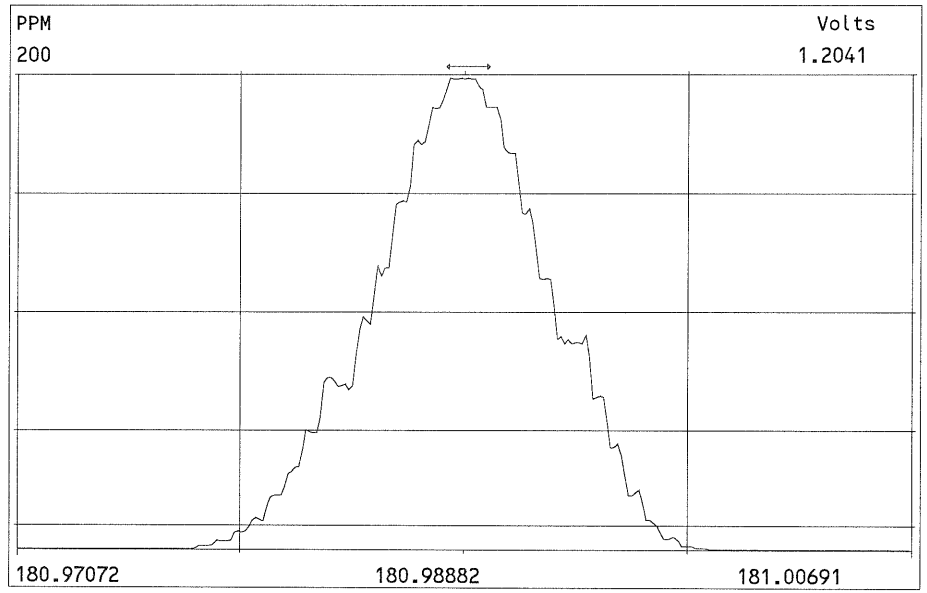
BS 8/19/16

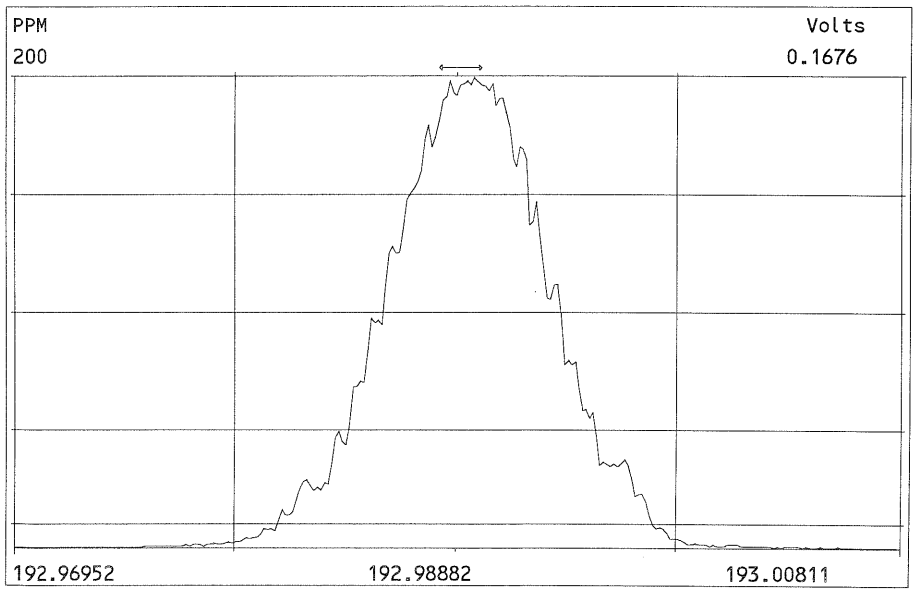
Data Backed Up:_____

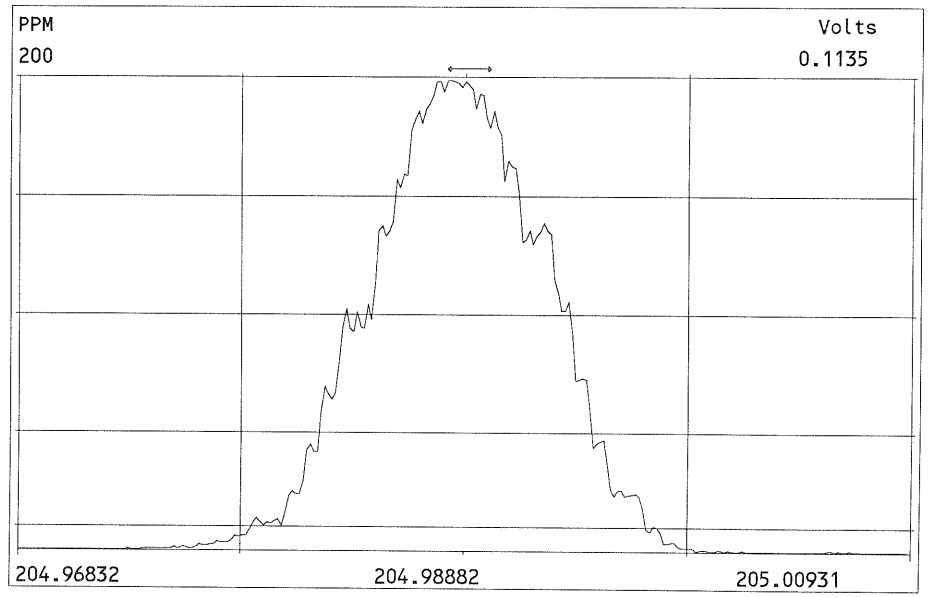
Date:_____

Peak Locate Examination:18-AUG-2016:16:47 File:18AUG16Z
Experiment:1668PCB Function:1 Reference:PFK

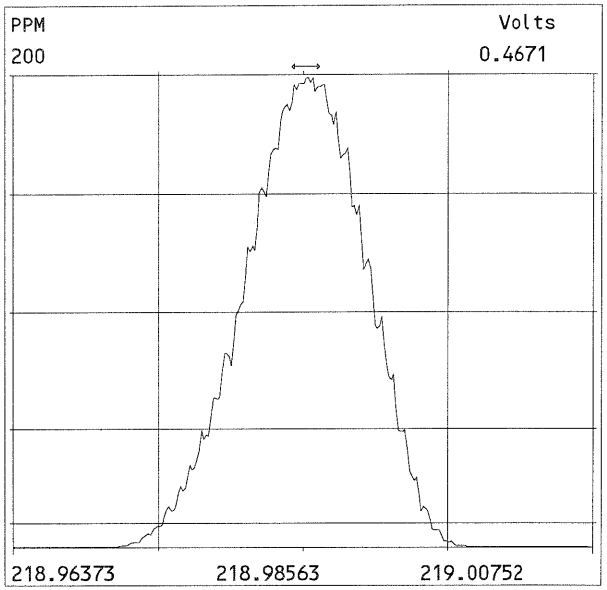


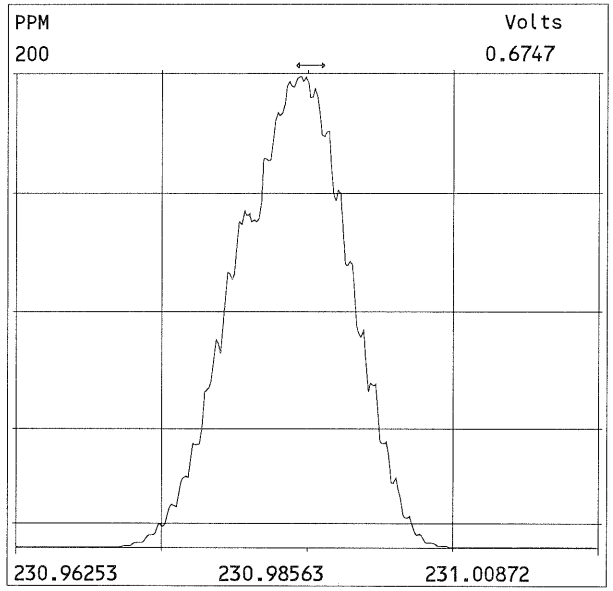


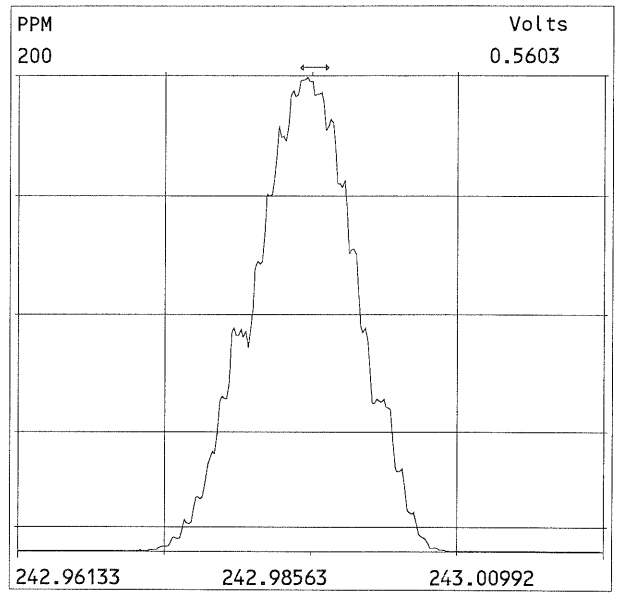


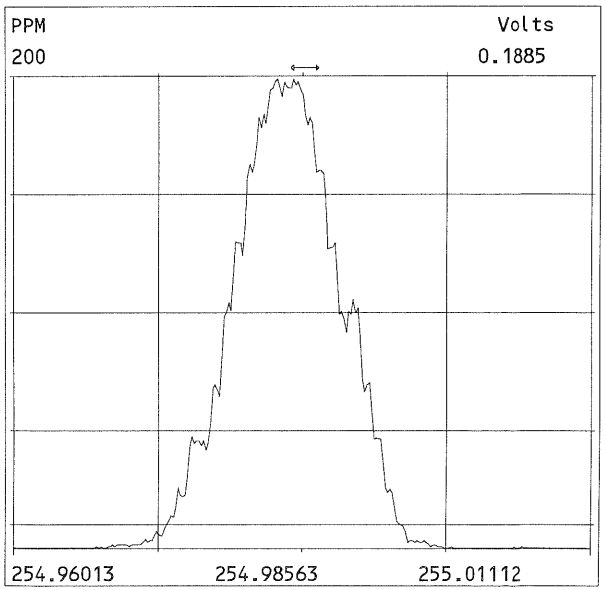


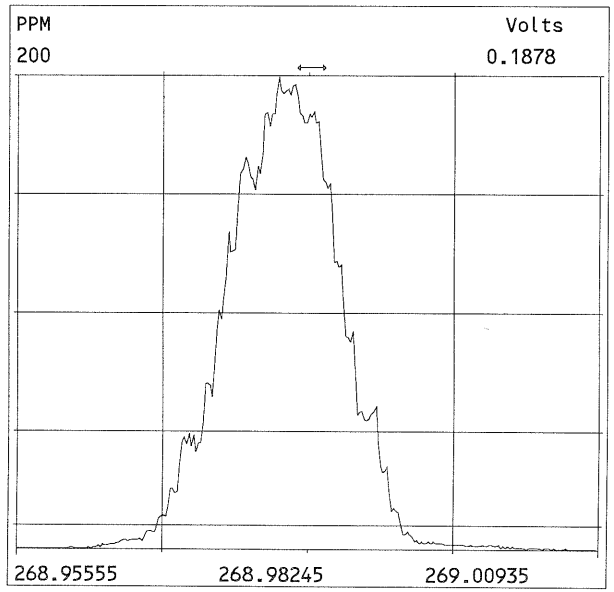
Peak Locate Examination:18-AUG-2016:16:48 File:18AUG16Z
Experiment:1668PCB Function:2 Reference:PFK

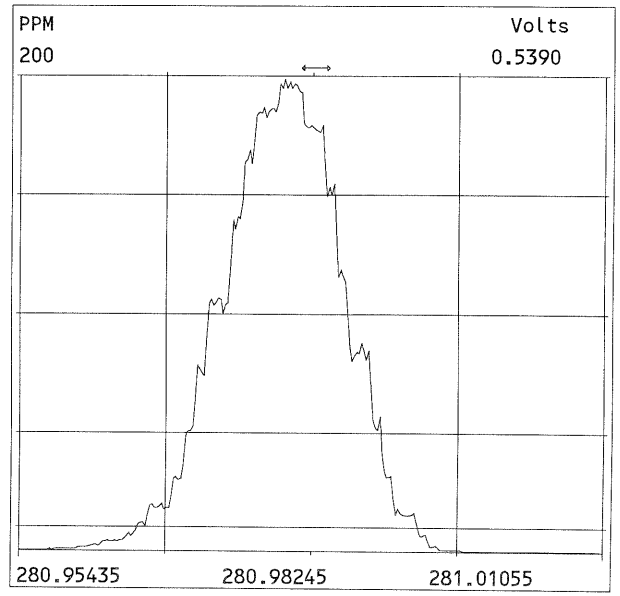




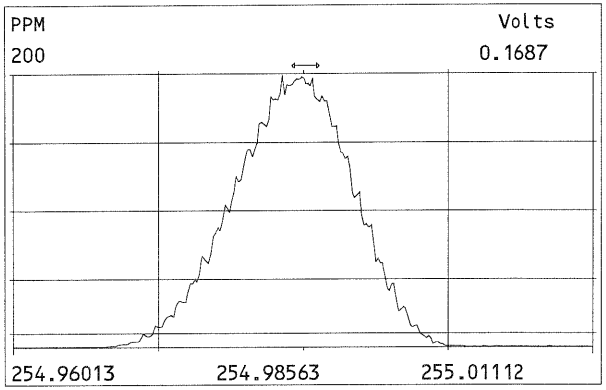


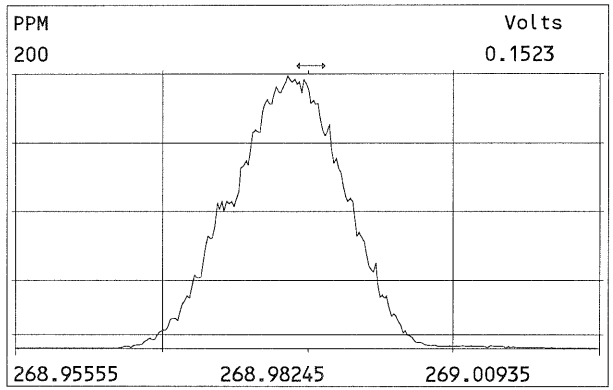


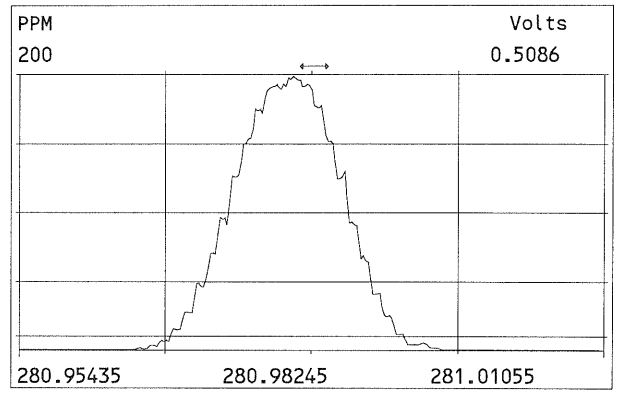


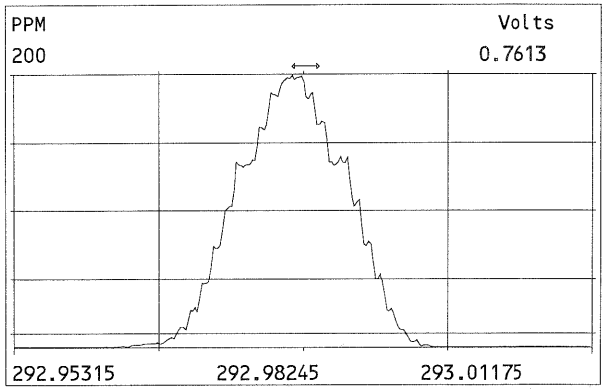


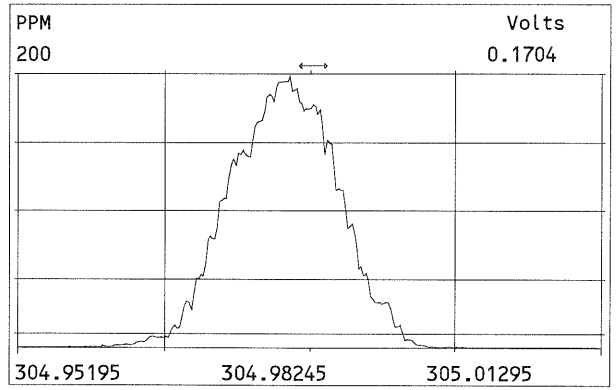
Peak Locate Examination:18-AUG-2016:16:48 File:18AUG16Z
Experiment:1668PCB Function:3 Reference:PFK

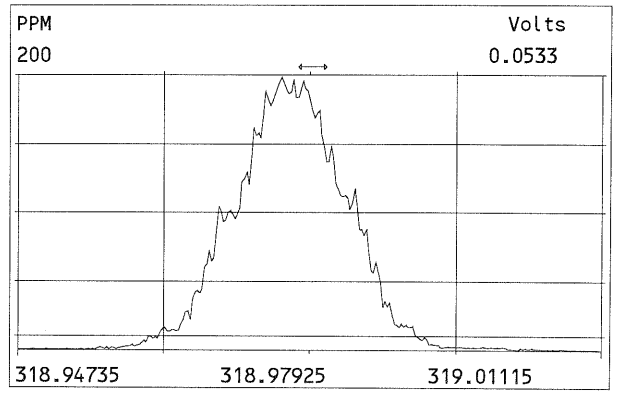


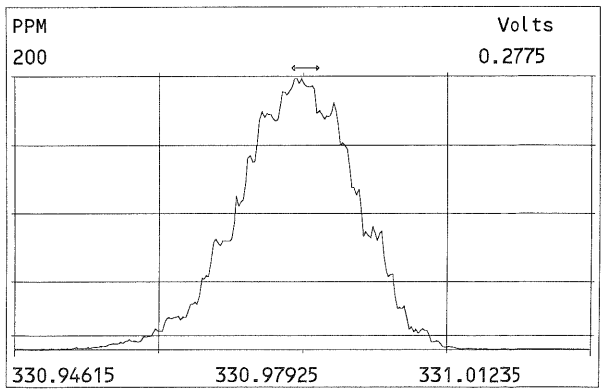


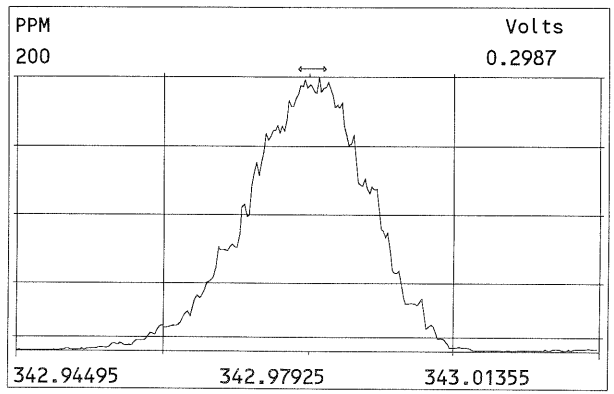




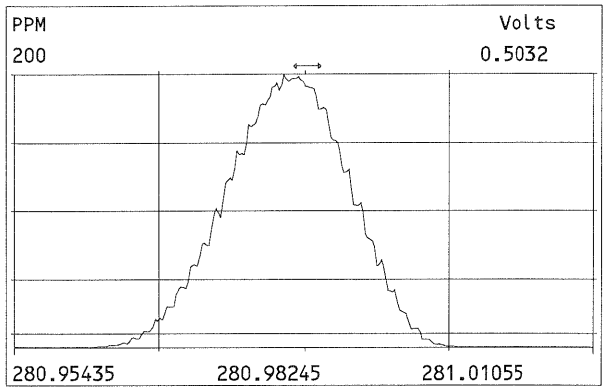


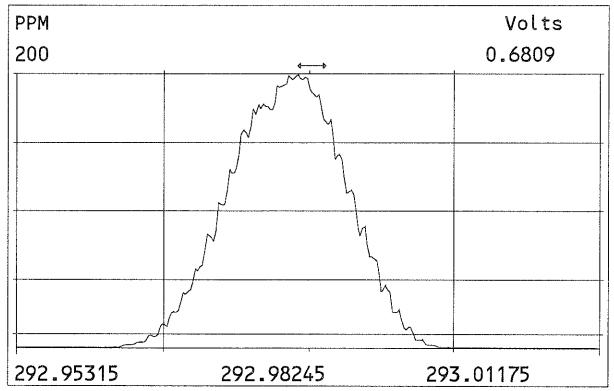


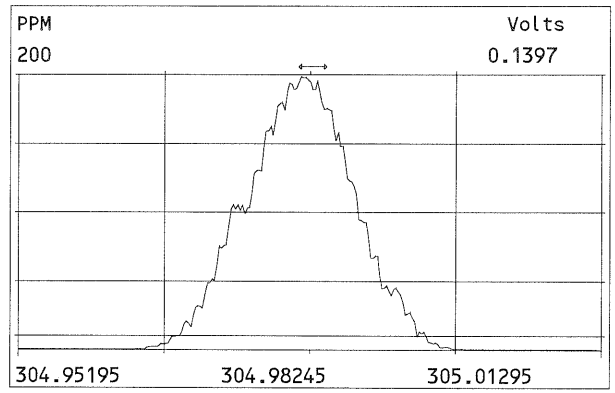


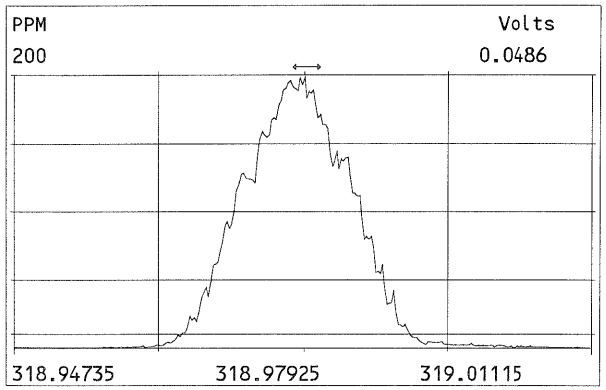


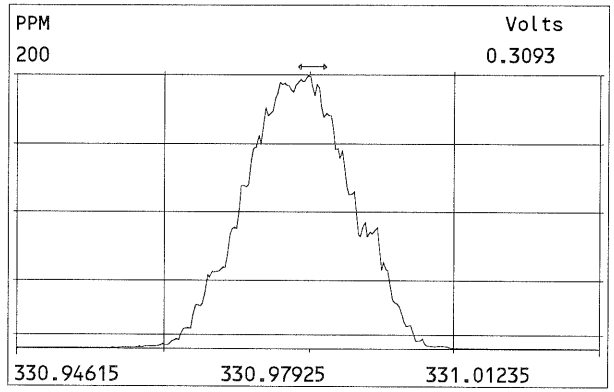
Peak Locate Examination:18-AUG-2016:16:48 File:18AUG16Z
Experiment:1668PCB Function:4 Reference:PFK

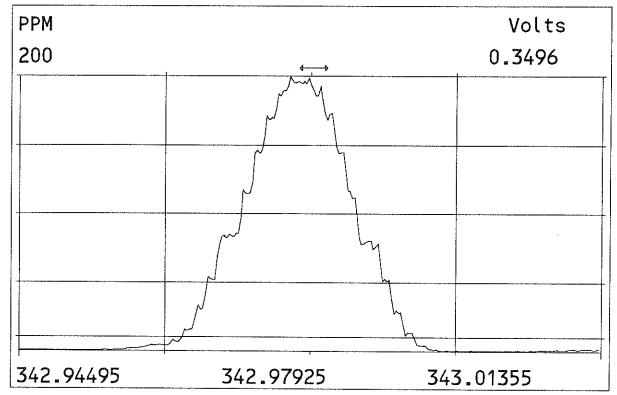


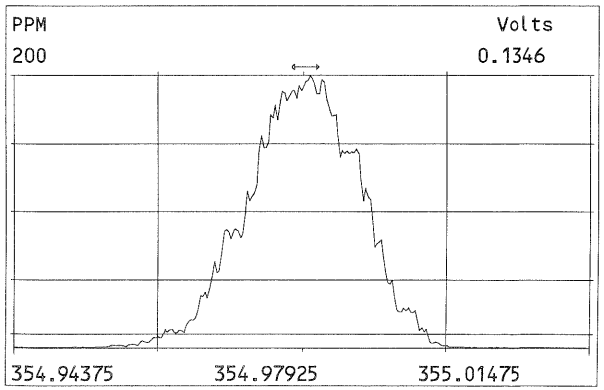


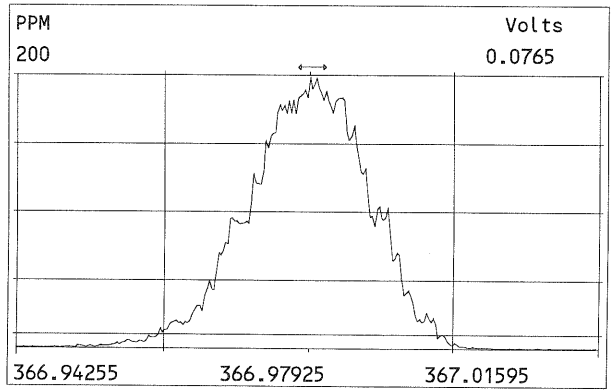


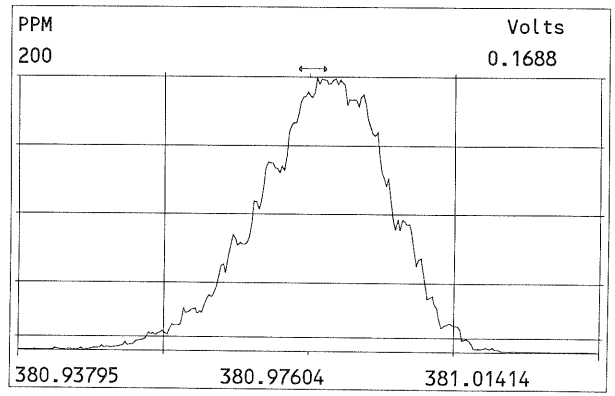




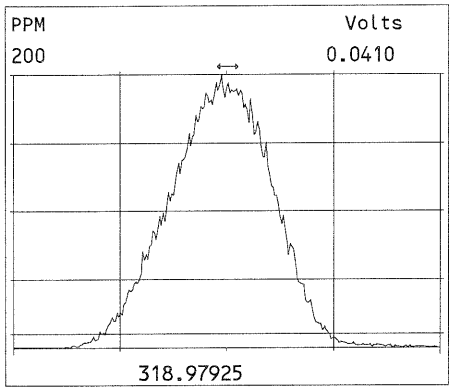


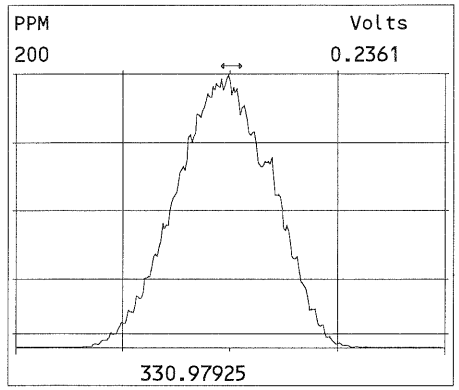


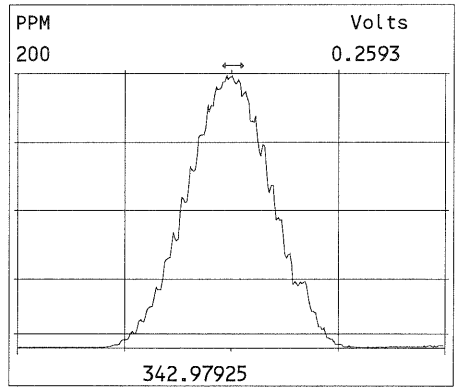


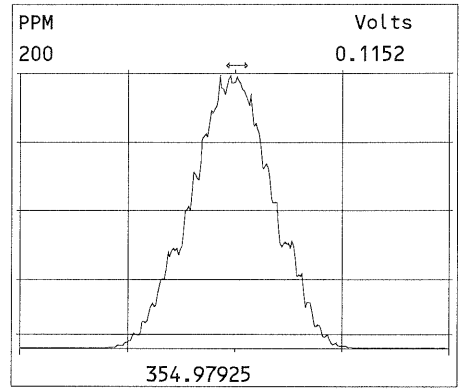


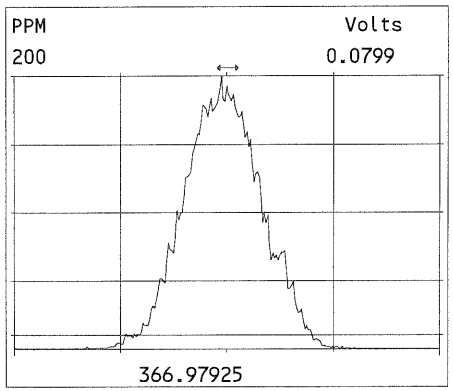
Peak Locate Examination:18-AUG-2016:16:49 File:18AUG16Z
Experiment:1668PCB Function:5 Reference:PFK

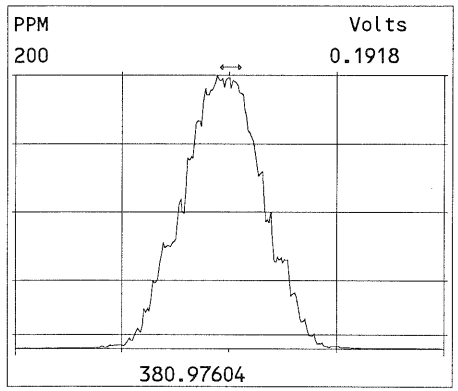


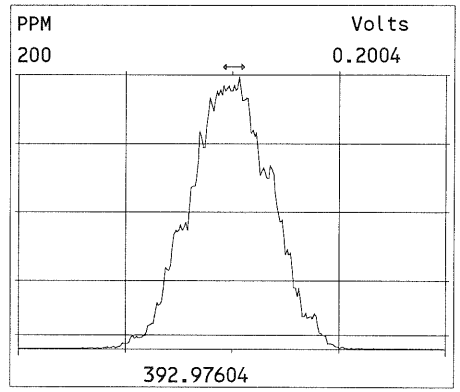


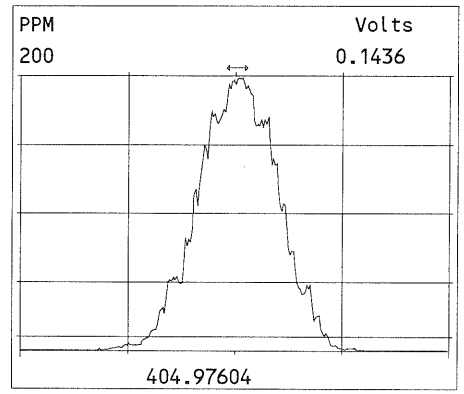


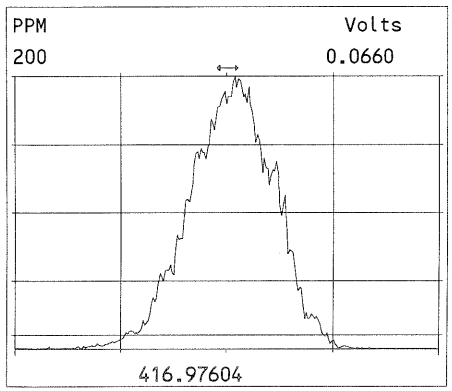


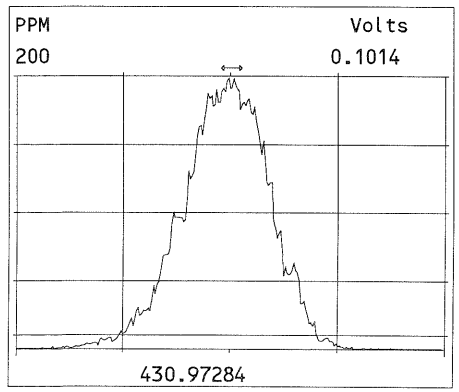


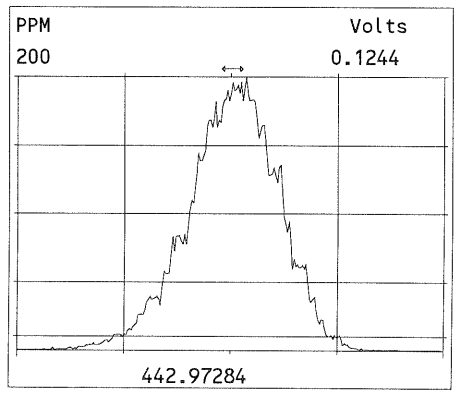




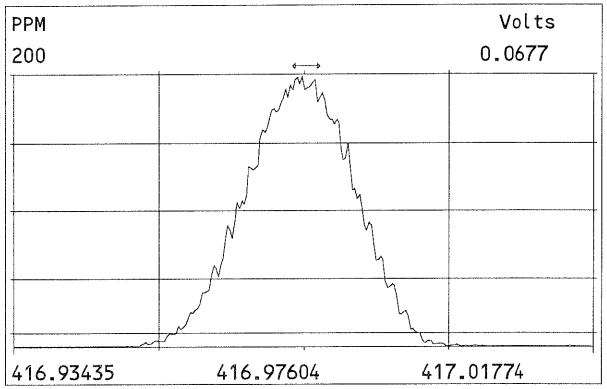


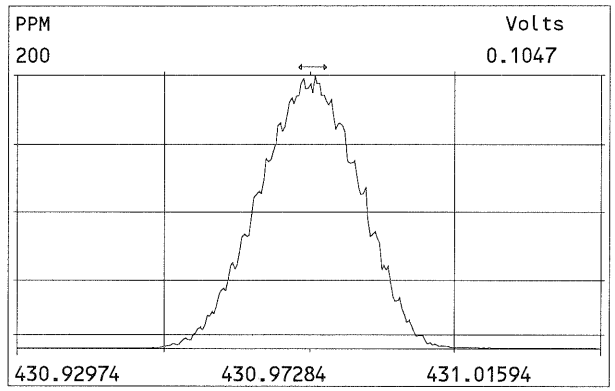


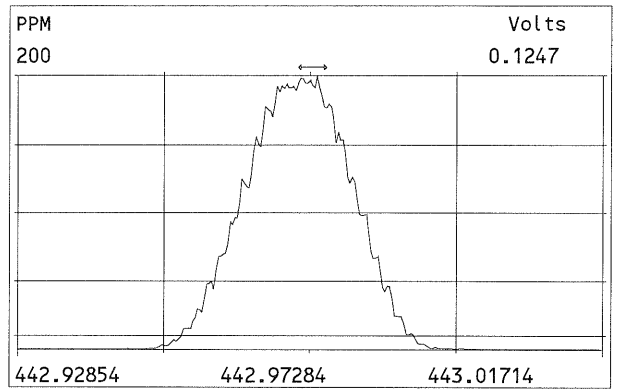


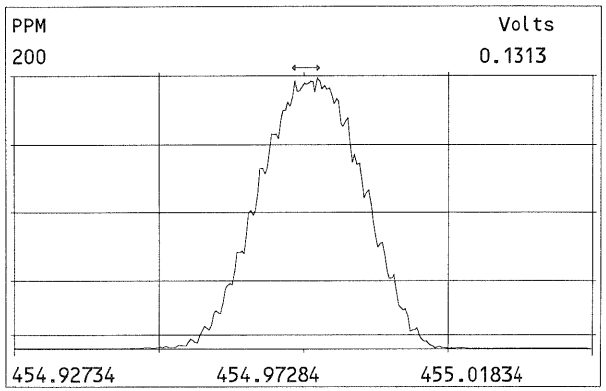


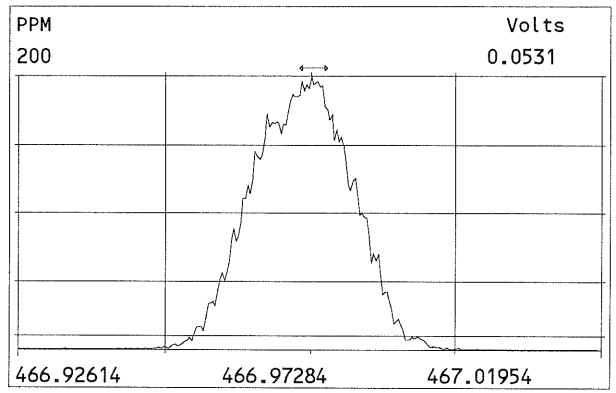
Peak Locate Examination:18-AUG-2016:16:50 File:18AUG16Z
Experiment:1668PCB Function:6 Reference:PFK

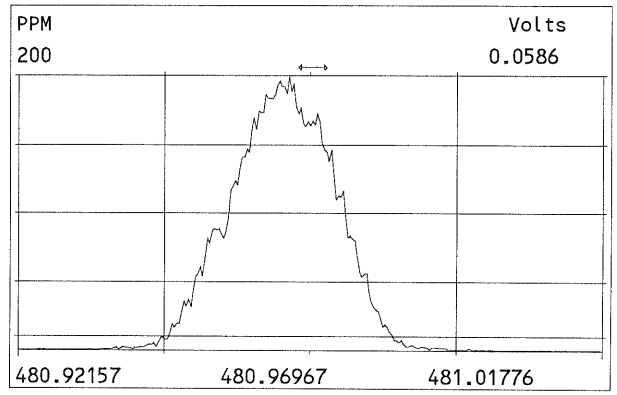


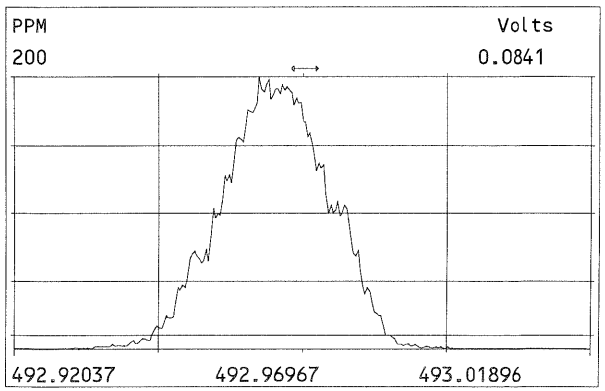


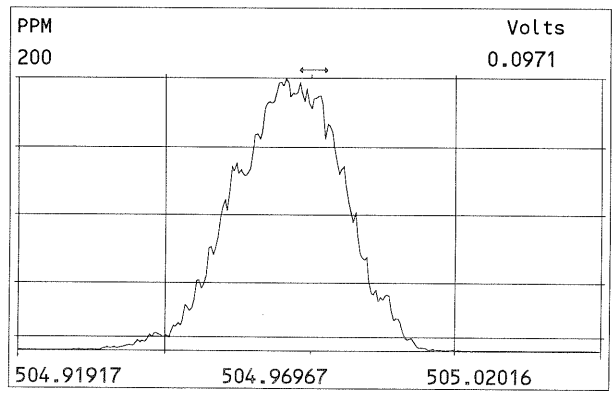


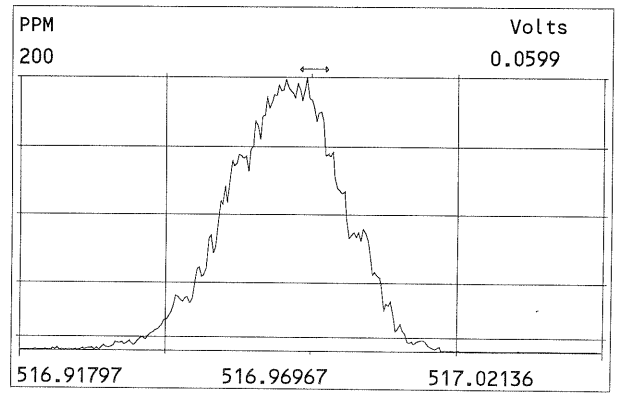




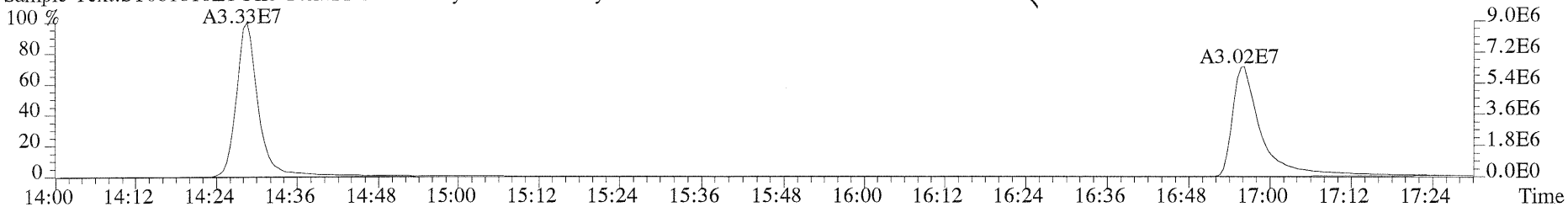




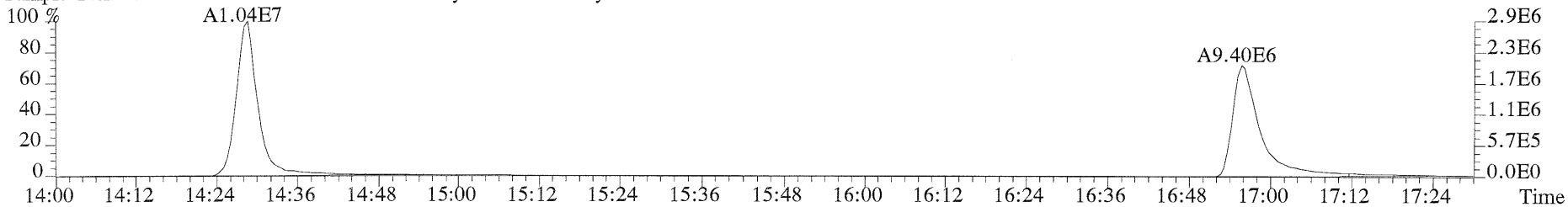




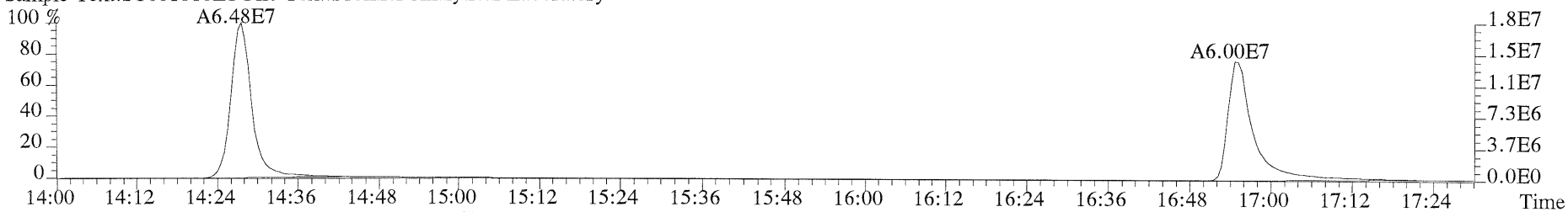
File:18AUG16Z #1-900 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
188.0393 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



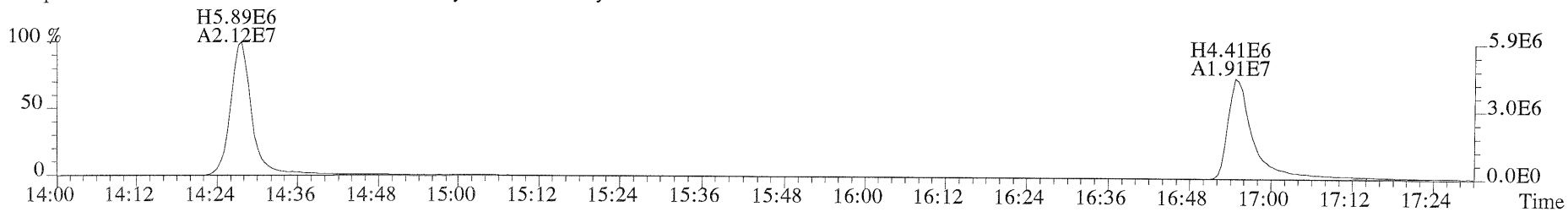
File:18AUG16Z #1-900 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
190.0363 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



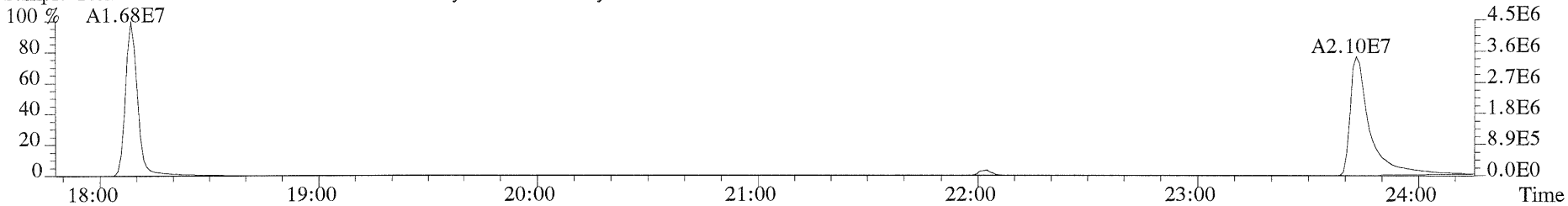
File:18AUG16Z #1-900 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
200.0795 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



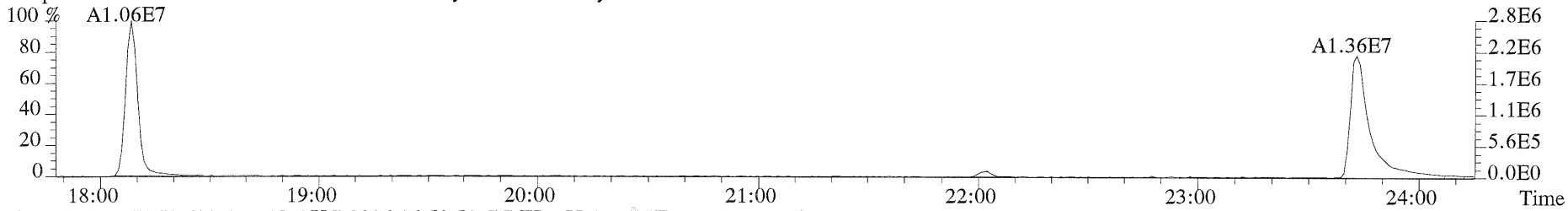
File:18AUG16Z #1-900 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
202.0766 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



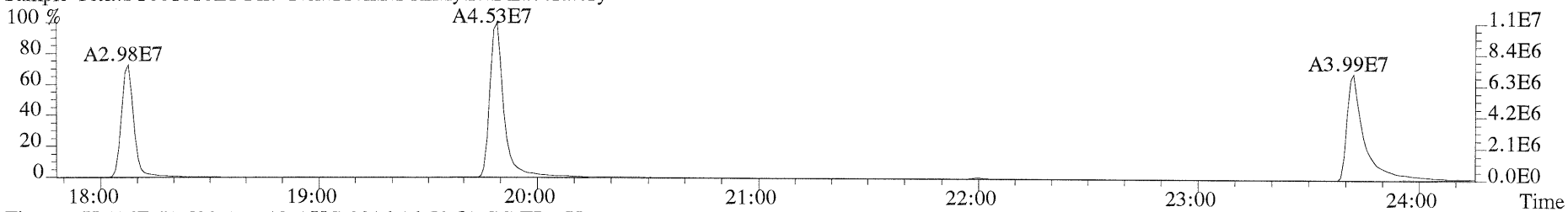
File:18AUG16Z #1-509 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
222.0003 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



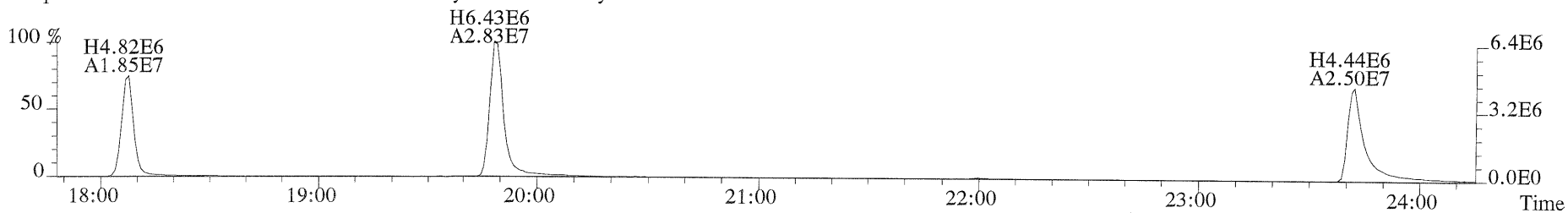
File:18AUG16Z #1-509 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
223.9974 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



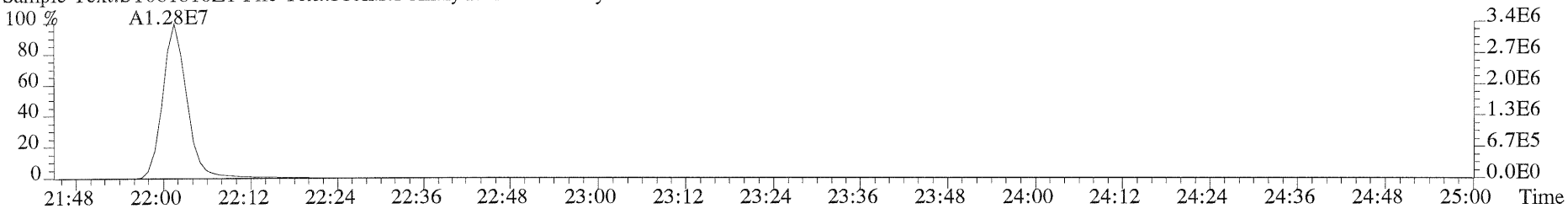
File:18AUG16Z #1-509 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
234.0406 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



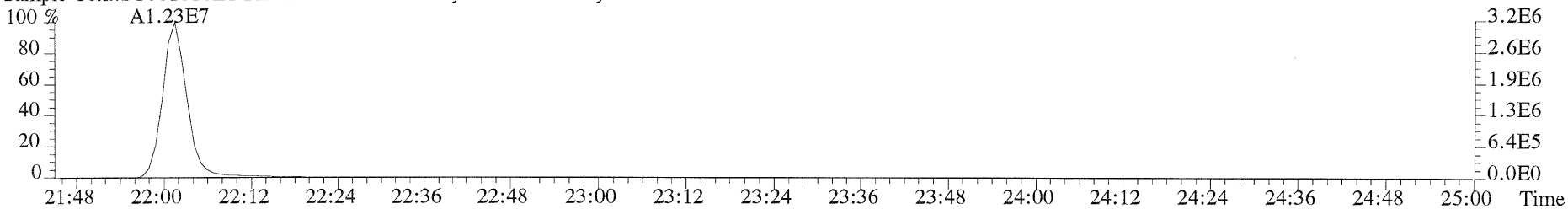
File:18AUG16Z #1-509 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
236.0376 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



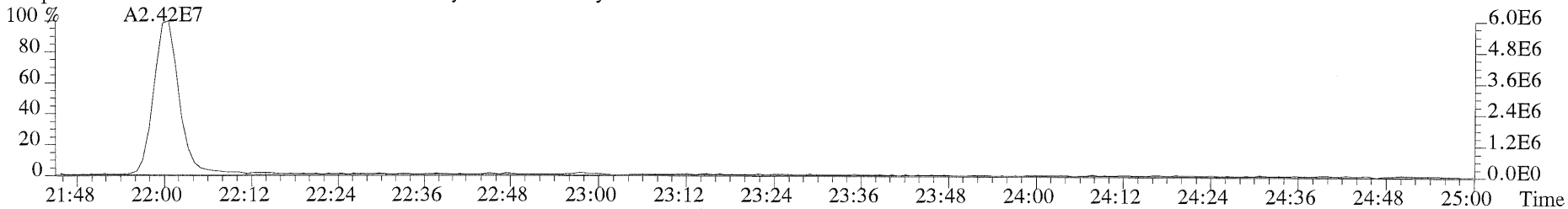
File:18AUG16Z #1-509 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
255.9613 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



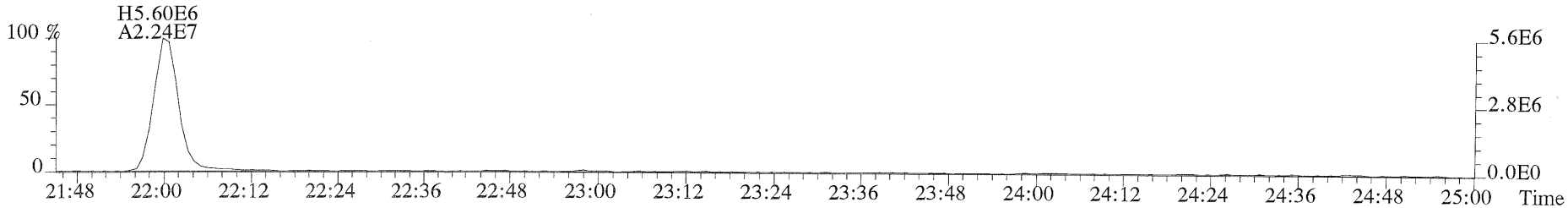
File:18AUG16Z #1-509 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
257.9584 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



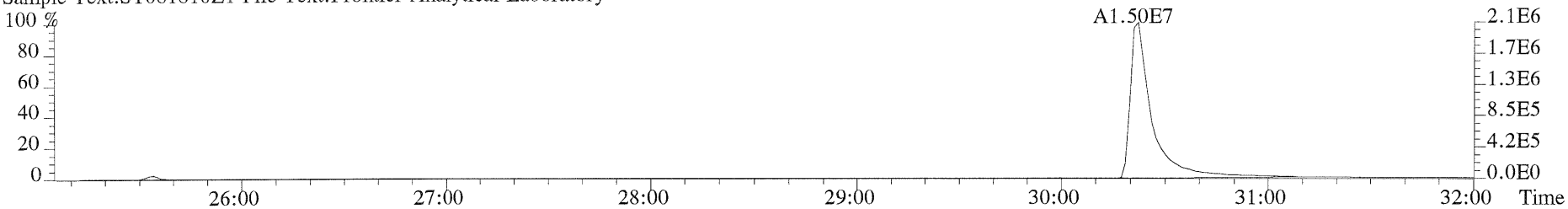
File:18AUG16Z #1-509 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
268.0016 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



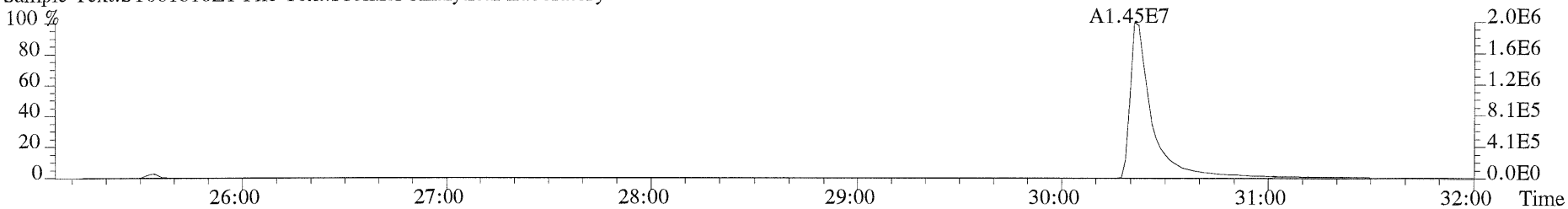
File:18AUG16Z #1-509 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
269.9986 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



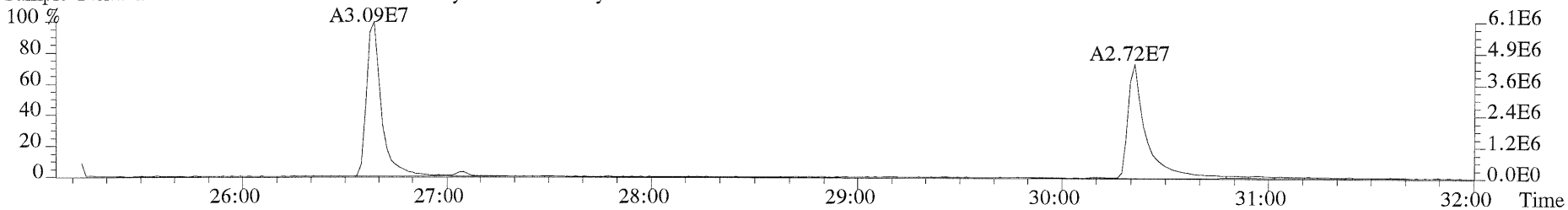
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
255.9613 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



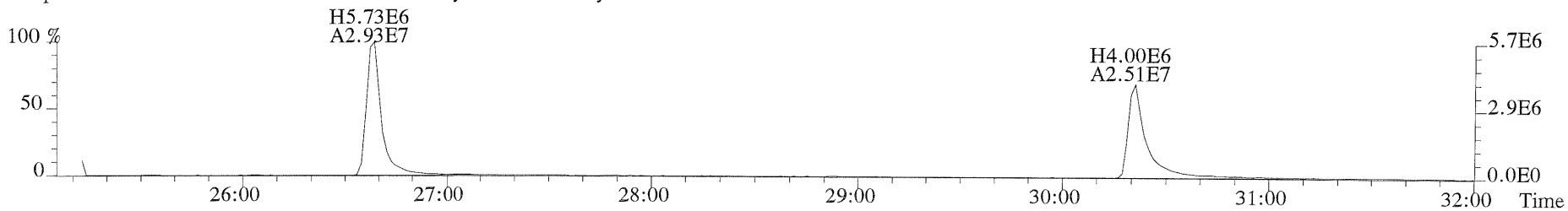
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
257.9584 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



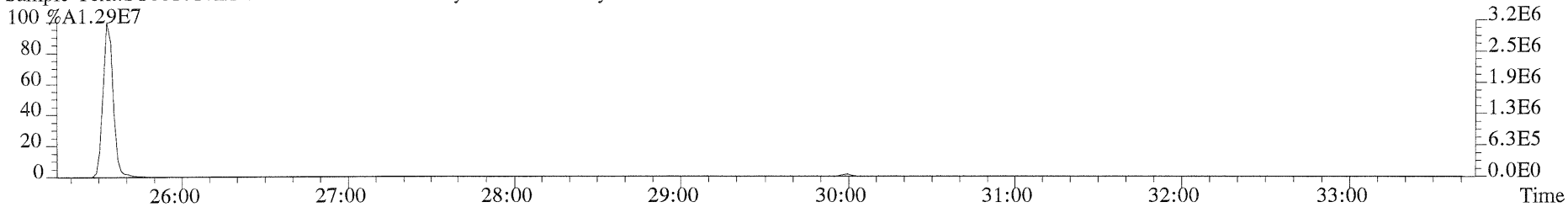
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
268.0016 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



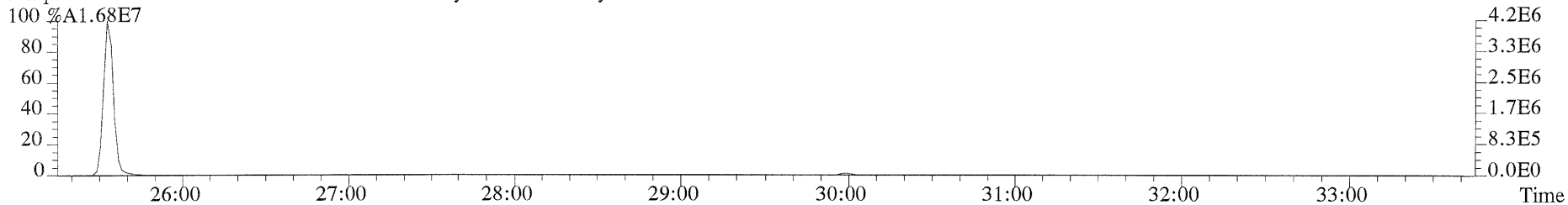
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
269.9986 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



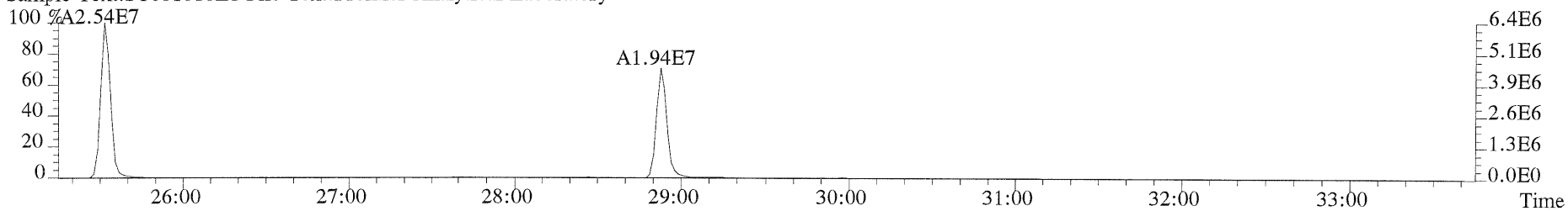
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
289.9224 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



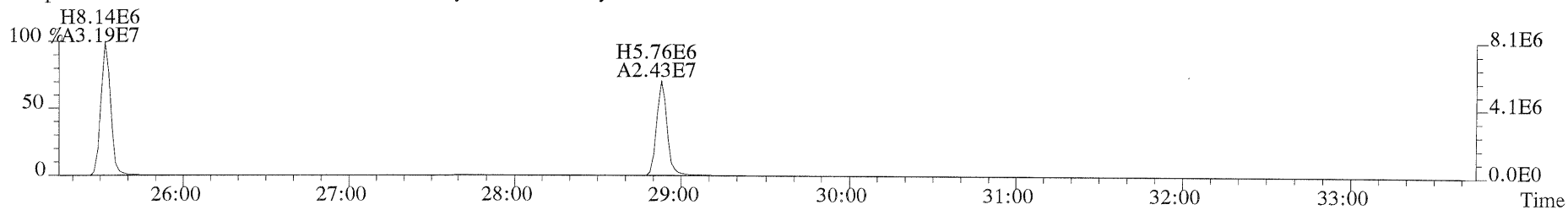
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
291.9194 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



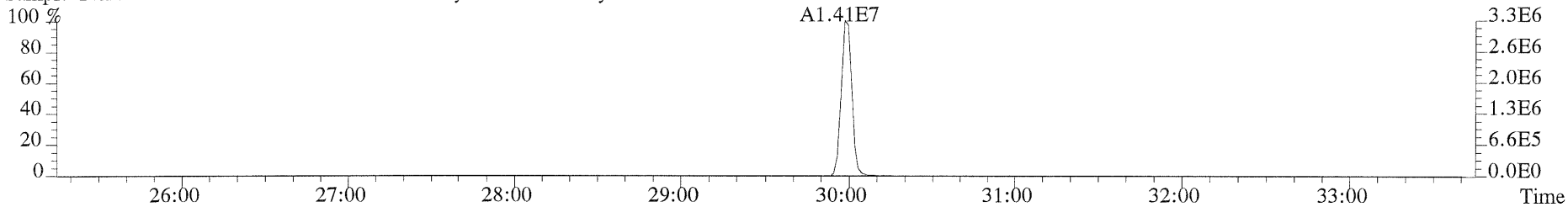
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
301.9626 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



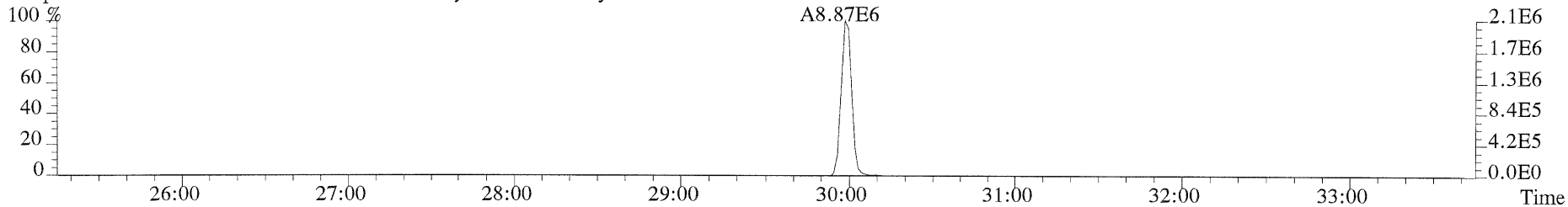
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
303.9597 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



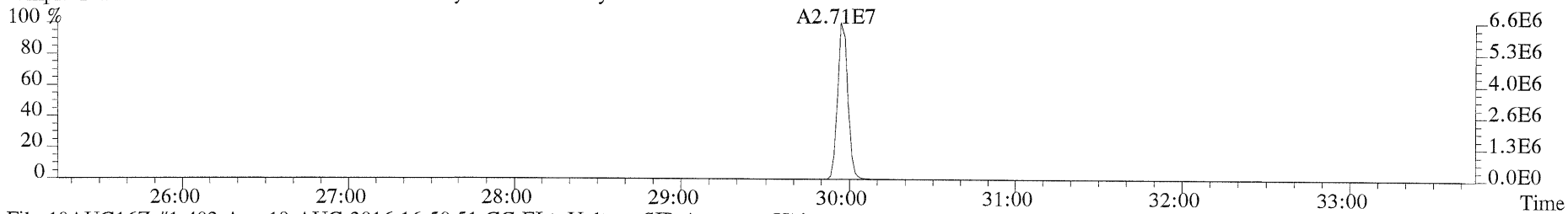
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
325.8804 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



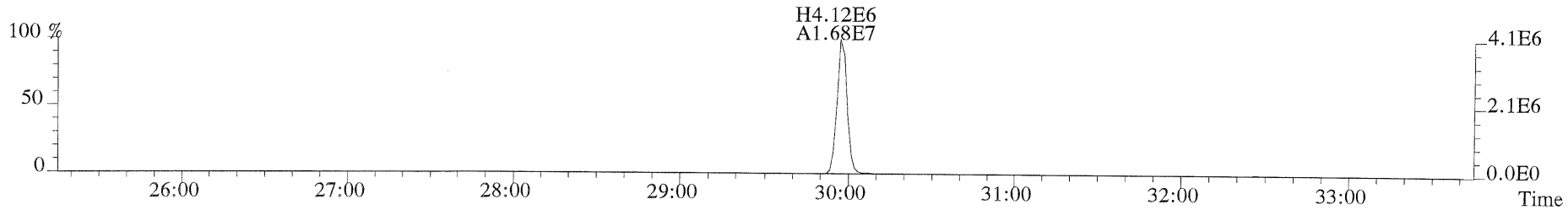
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
327.8775 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



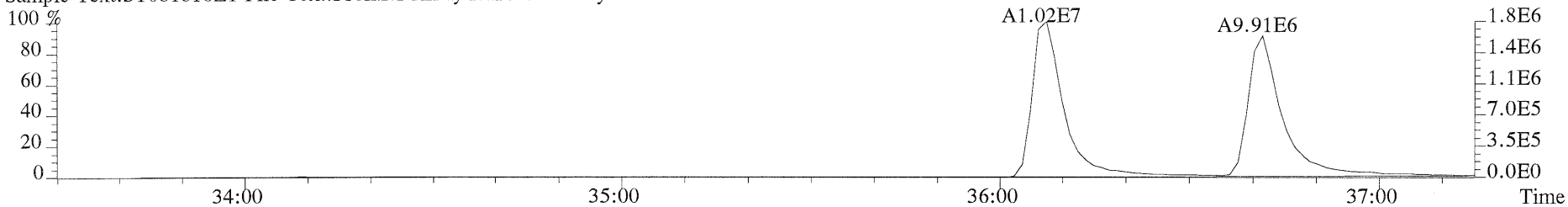
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
337.9207 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



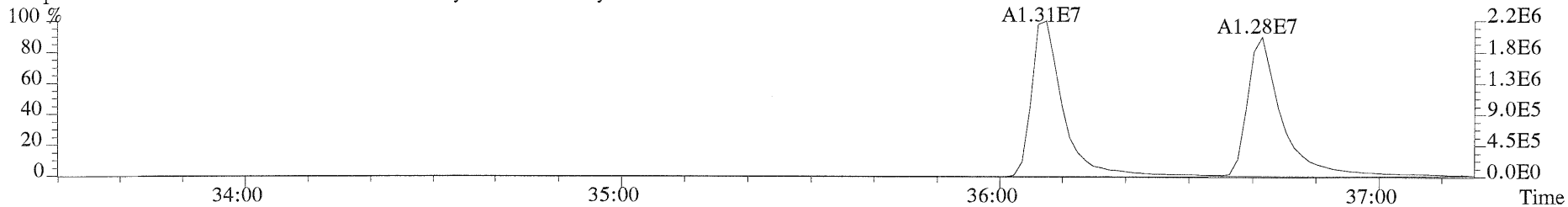
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
339.9178 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



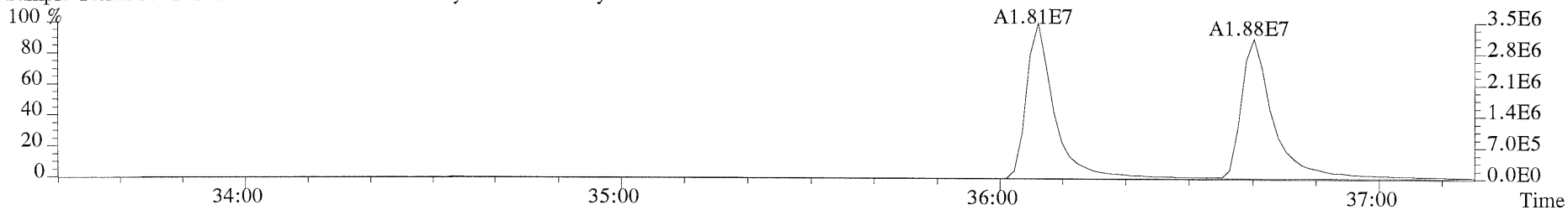
File:18AUG16Z #1-179 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
289.9224 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



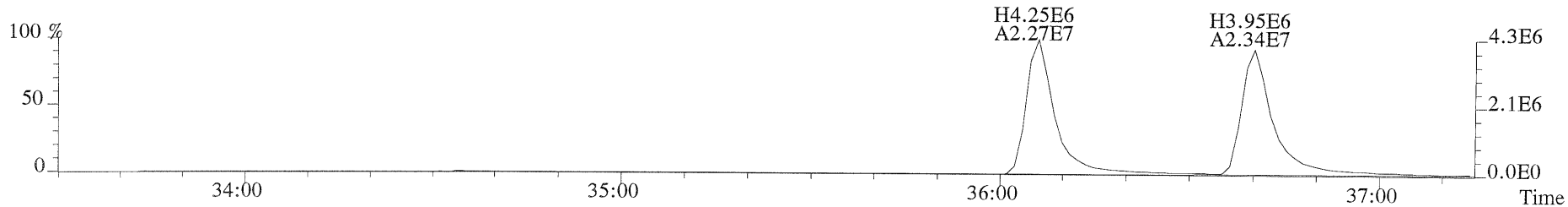
File:18AUG16Z #1-179 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
291.9194 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



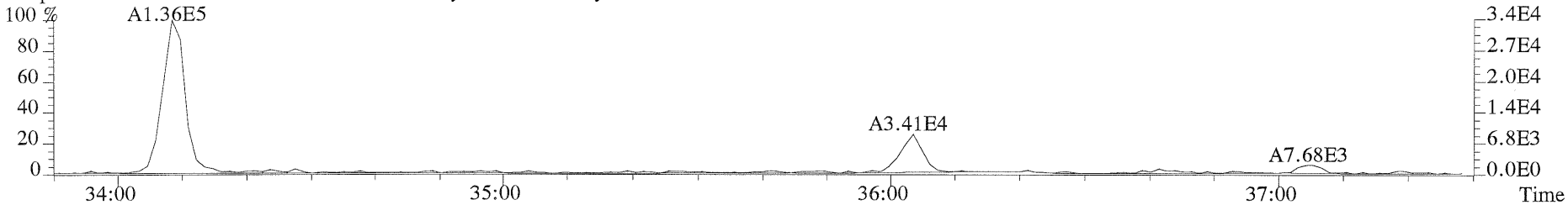
File:18AUG16Z #1-179 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
301.9626 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



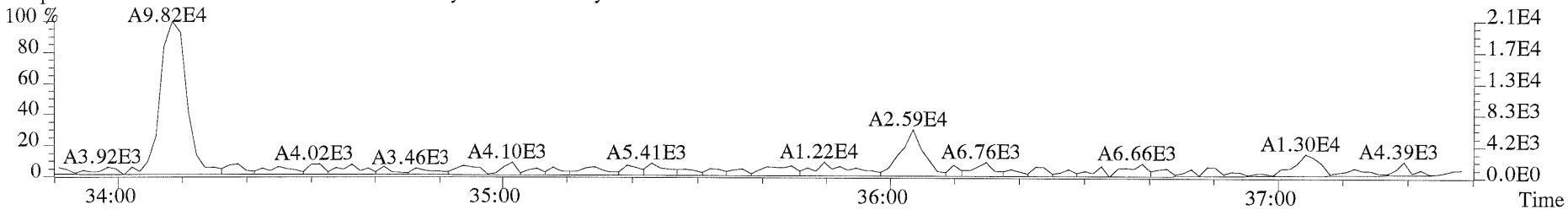
File:18AUG16Z #1-179 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
303.9597 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



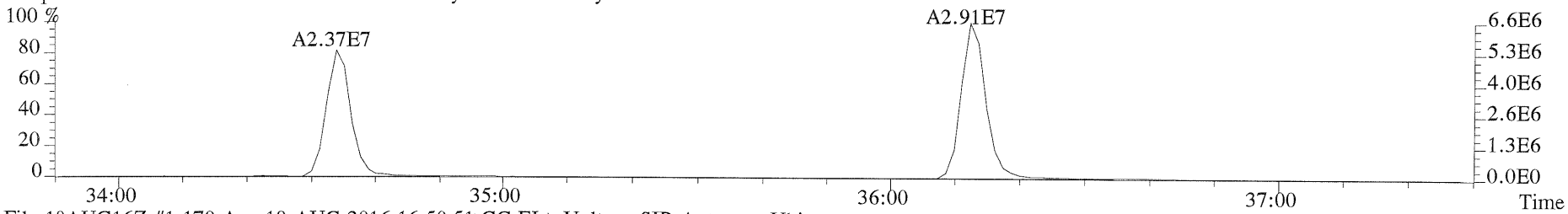
File:18AUG16Z #1-179 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
325.8804 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



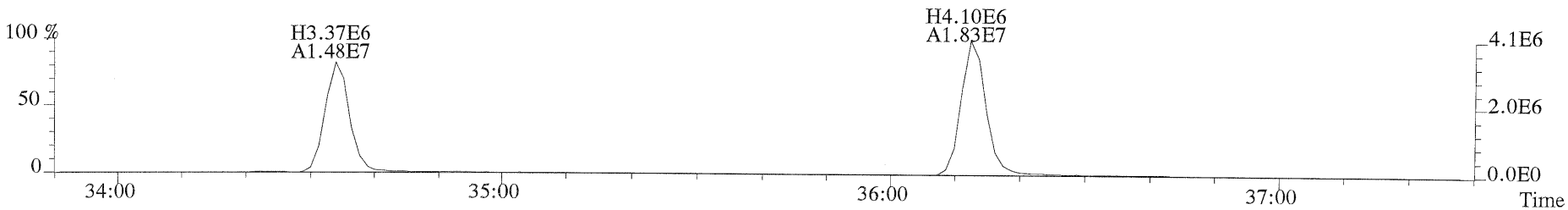
File:18AUG16Z #1-179 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
327.8775 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



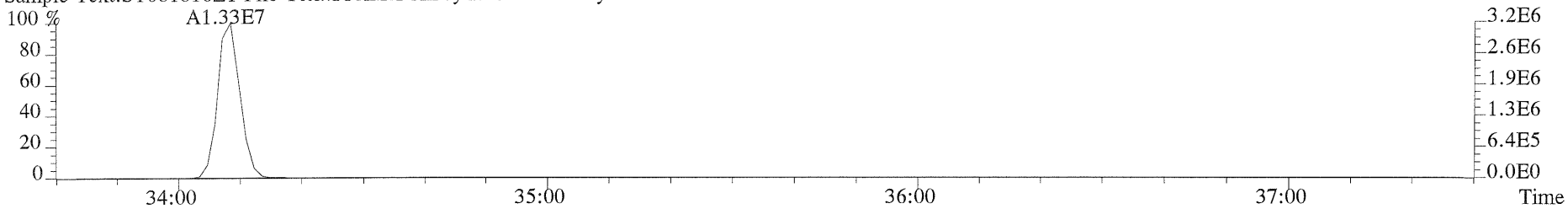
File:18AUG16Z #1-179 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
337.9207 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



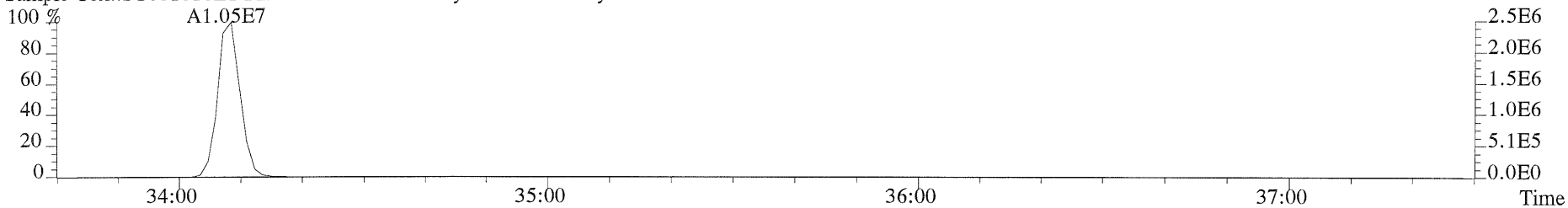
File:18AUG16Z #1-179 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
339.9178 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



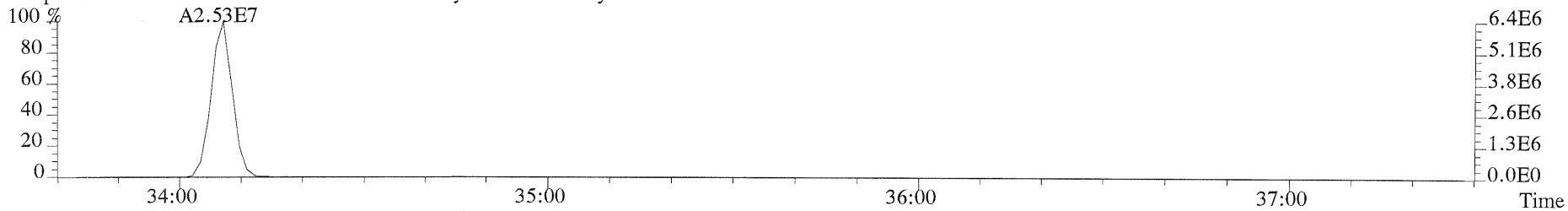
File:18AUG16Z #1-179 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
359.8415 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



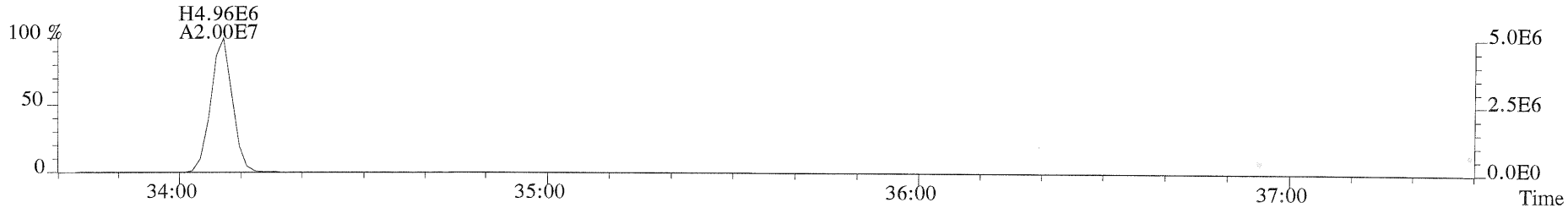
File:18AUG16Z #1-179 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
361.8385 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



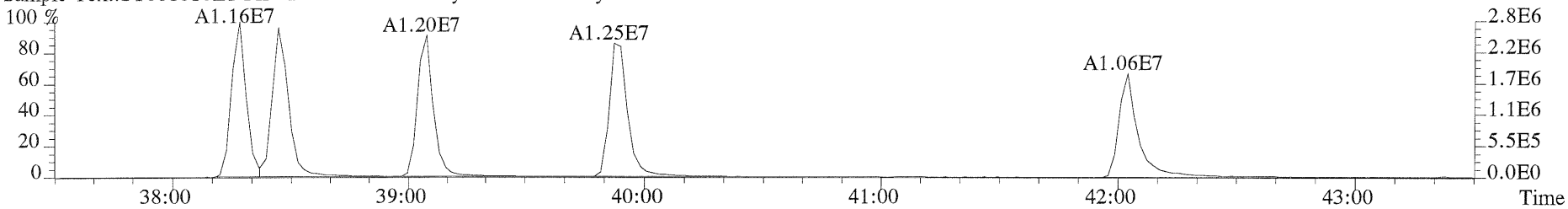
File:18AUG16Z #1-179 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
371.8817 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



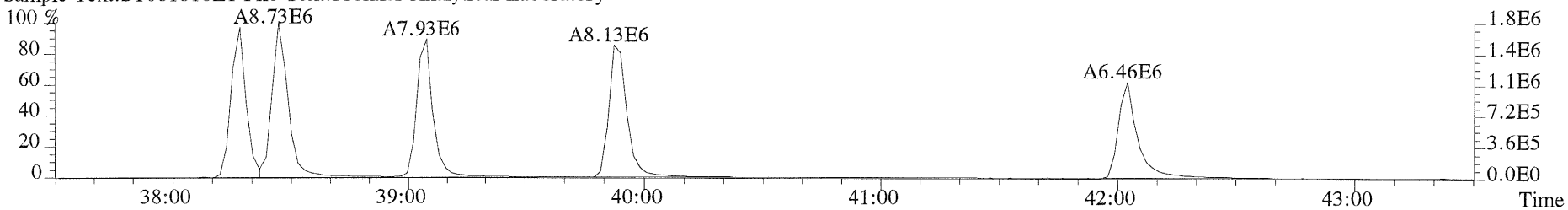
File:18AUG16Z #1-179 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
373.8788 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



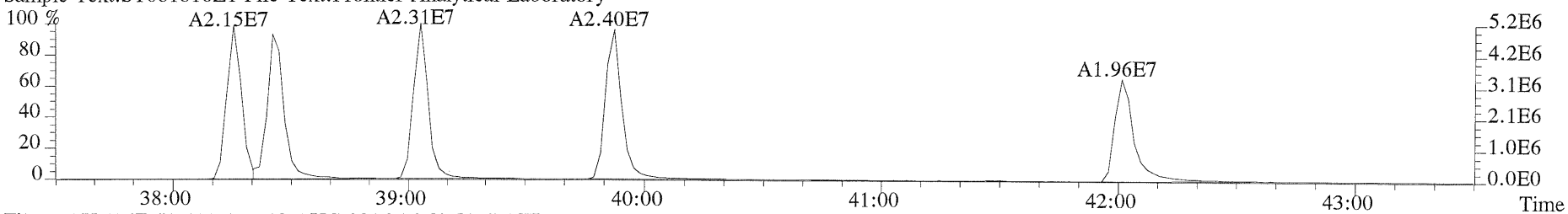
File:18AUG16Z #1-411 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
325.8804 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



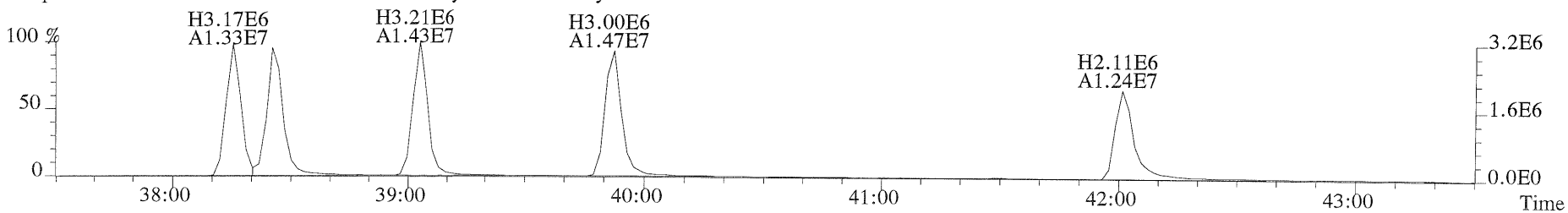
File:18AUG16Z #1-411 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
327.8775 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



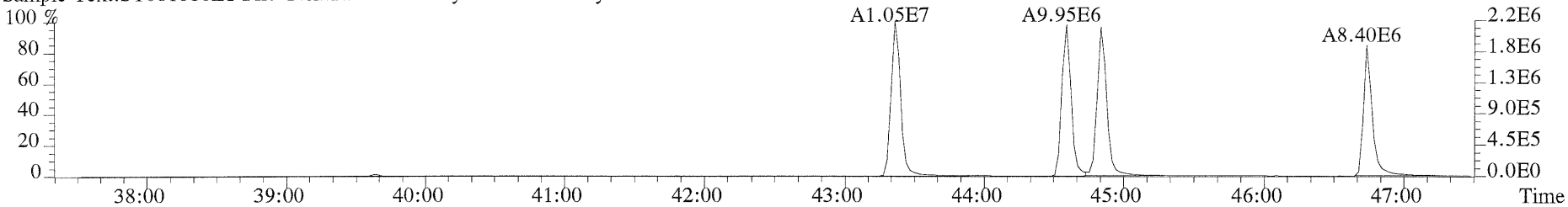
File:18AUG16Z #1-411 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
337.9207 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



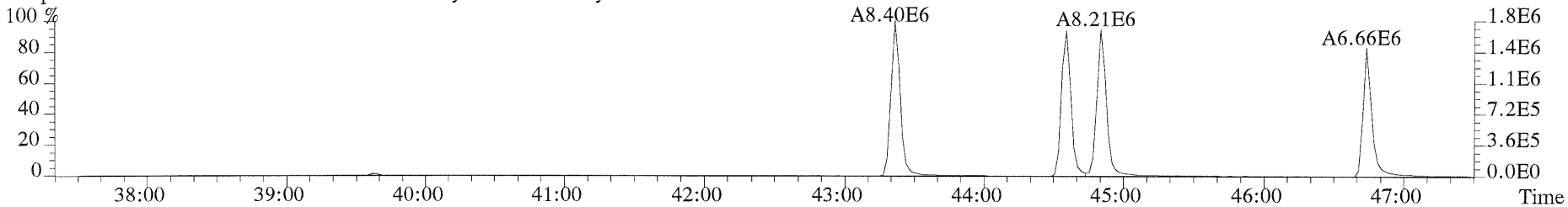
File:18AUG16Z #1-411 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
339.9178 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



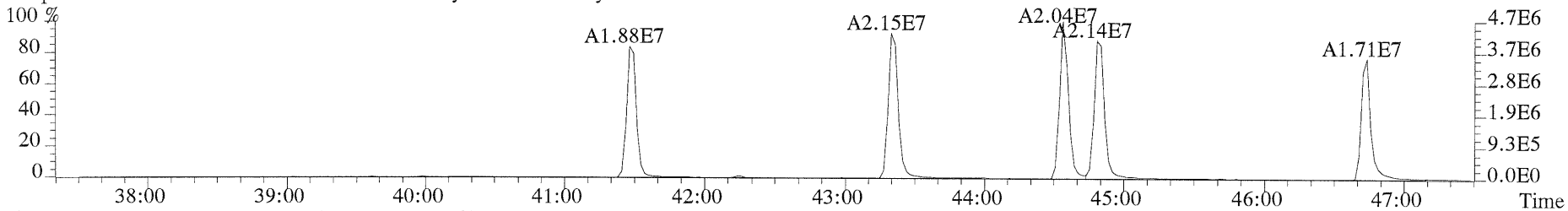
File:18AUG16Z #1-411 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
359.8415 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



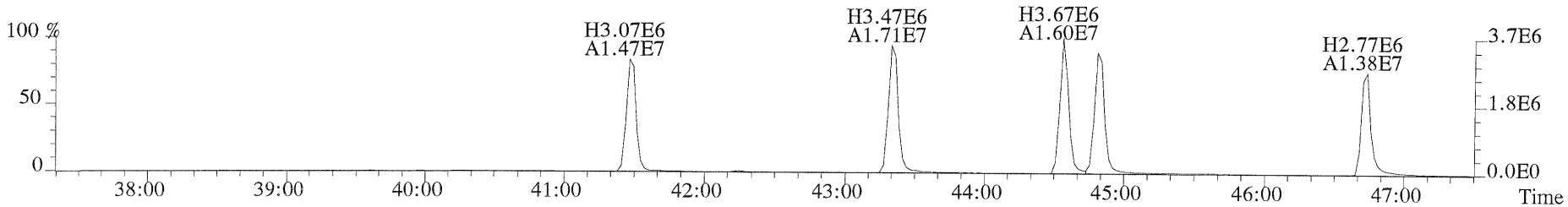
File:18AUG16Z #1-411 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
361.8385 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



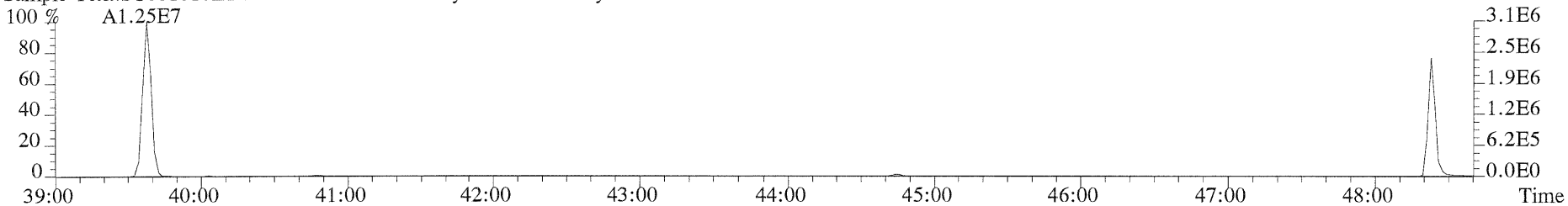
File:18AUG16Z #1-411 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
371.8817 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



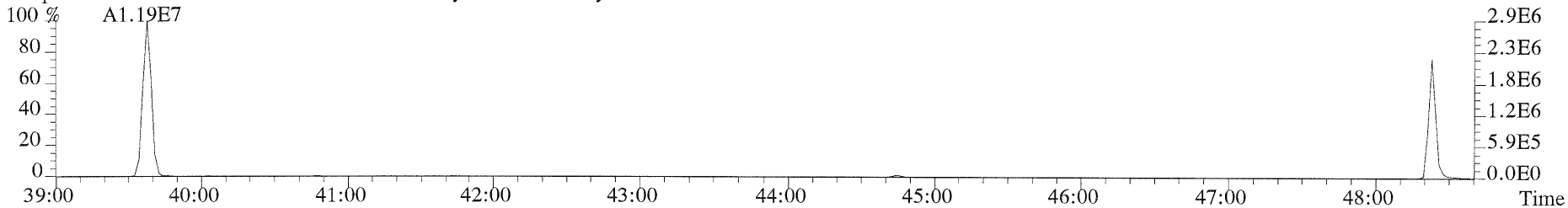
File:18AUG16Z #1-411 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
373.8788 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



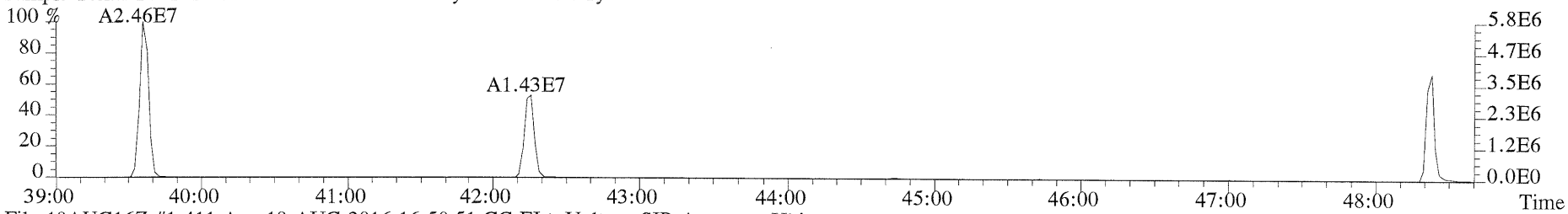
File:18AUG16Z #1-411 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
393.8025 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



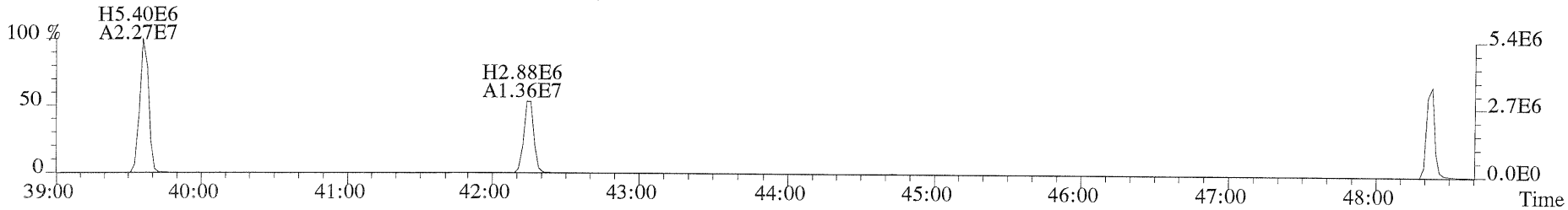
File:18AUG16Z #1-411 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
395.7995 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



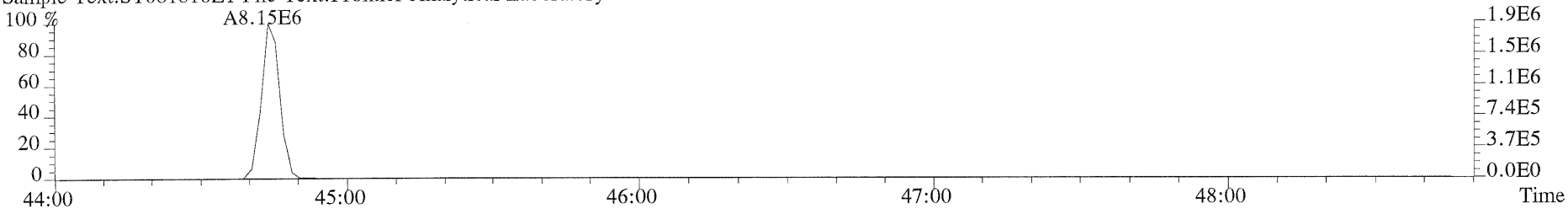
File:18AUG16Z #1-411 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
405.8428 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



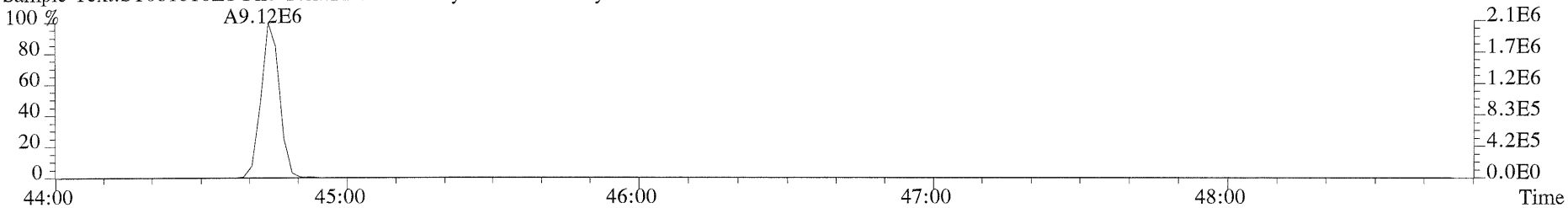
File:18AUG16Z #1-411 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
407.8398 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



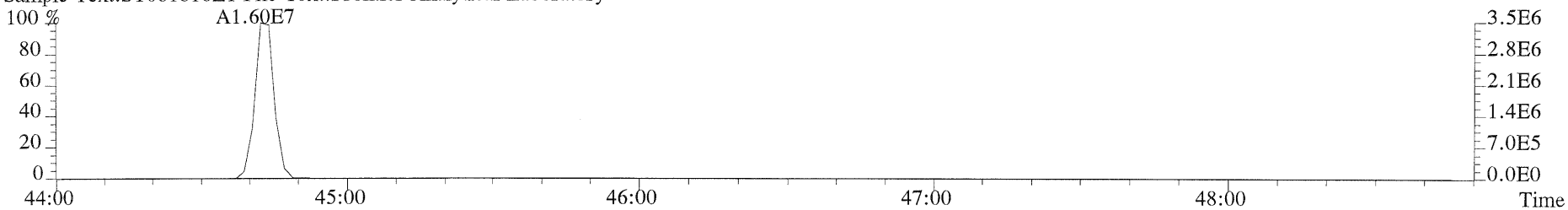
File:18AUG16Z #1-411 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
427.7635 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



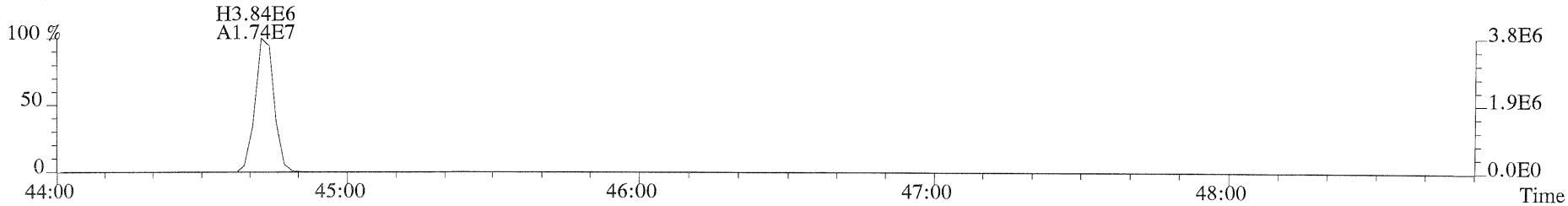
File:18AUG16Z #1-411 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
429.7606 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



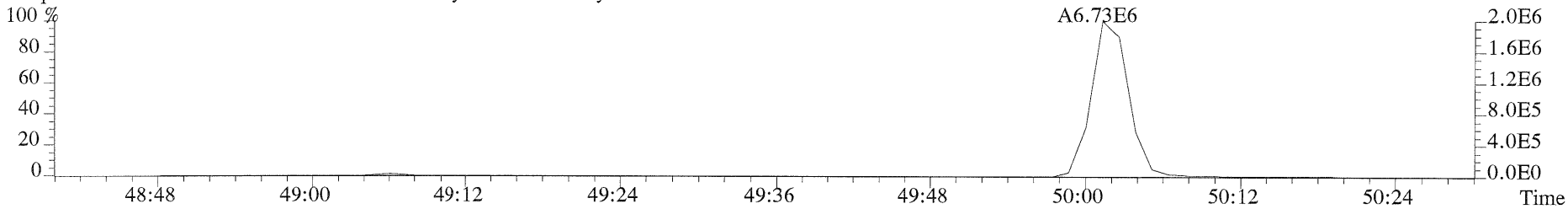
File:18AUG16Z #1-411 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
439.8038 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



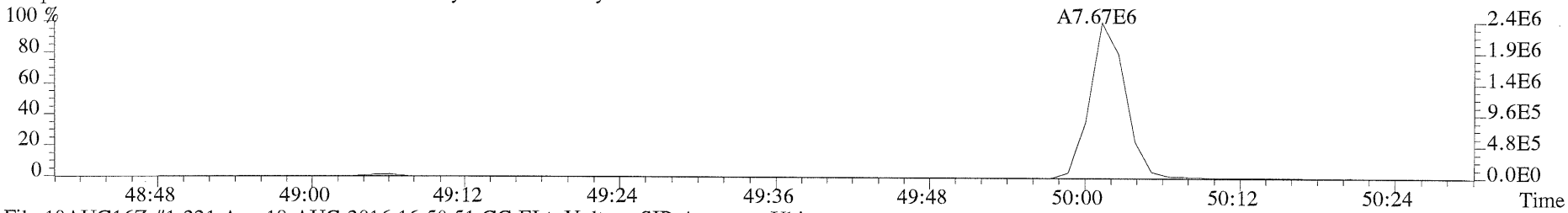
File:18AUG16Z #1-411 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
441.8008 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



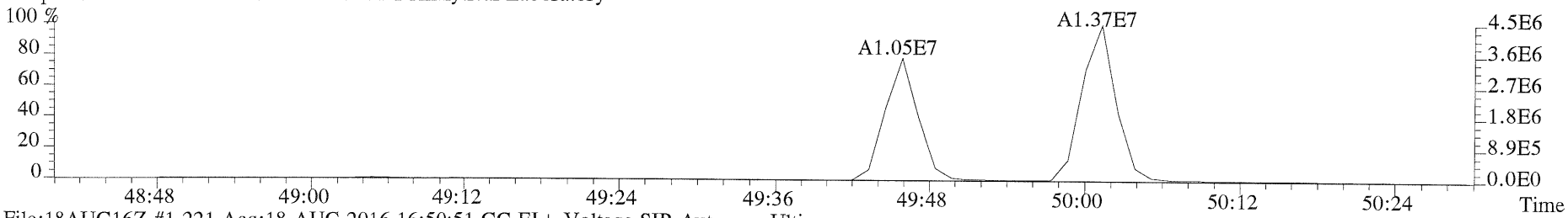
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
427.7635 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



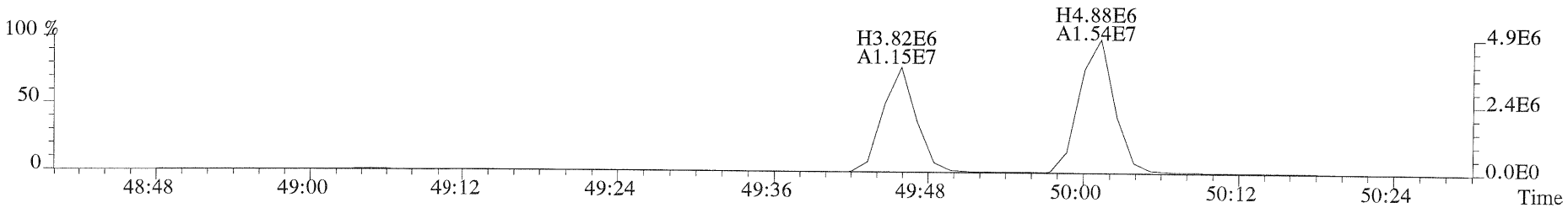
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
429.7606 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



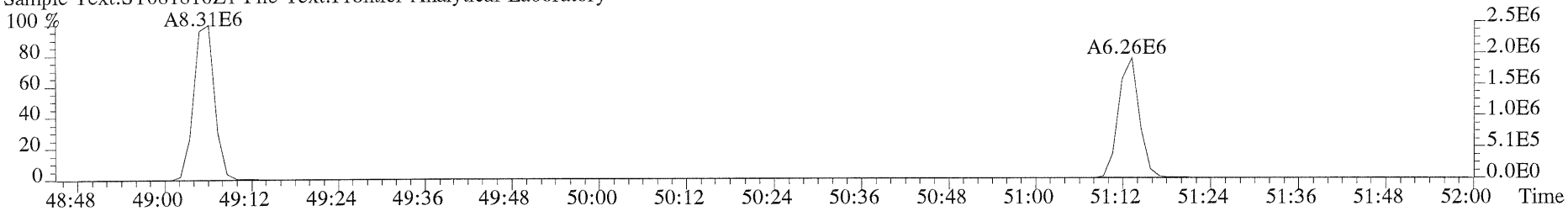
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
439.8038 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



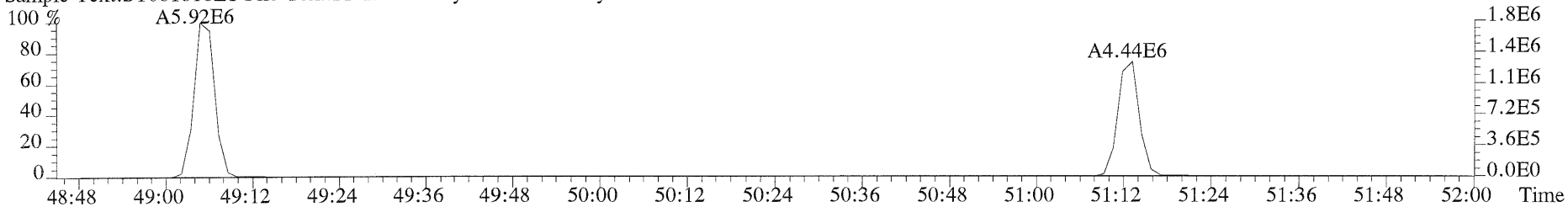
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
441.8008 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



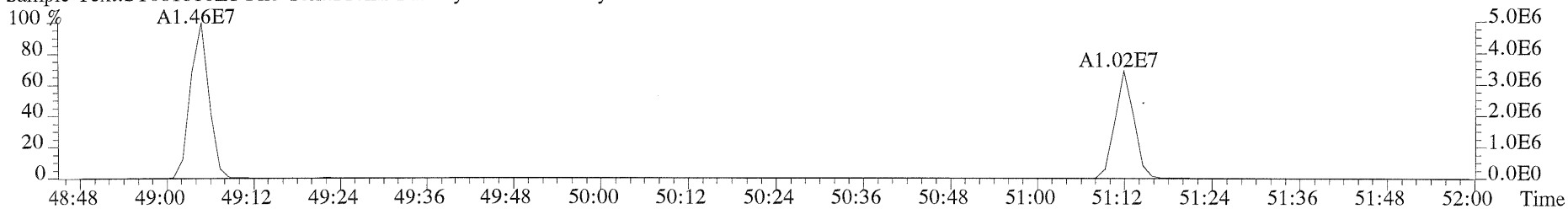
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
463.7216 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



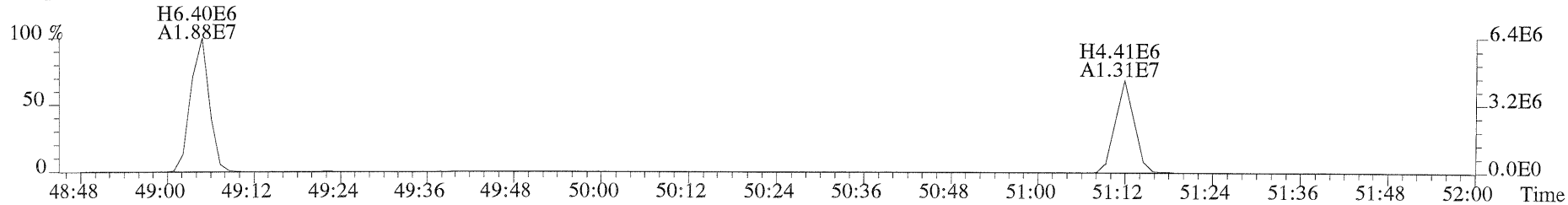
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
465.7187 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



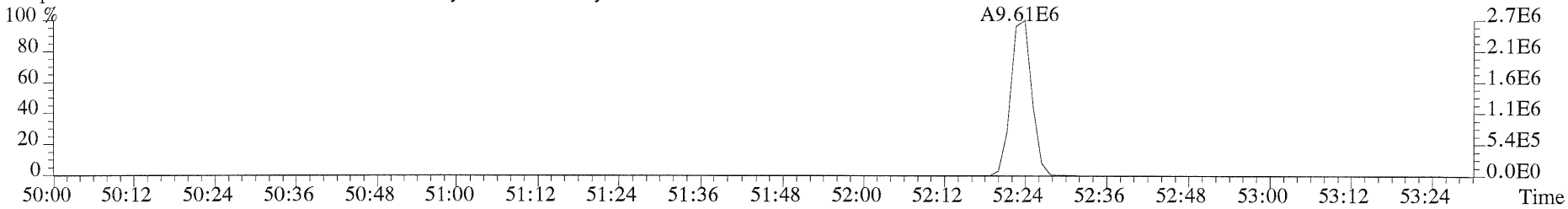
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
473.7648 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



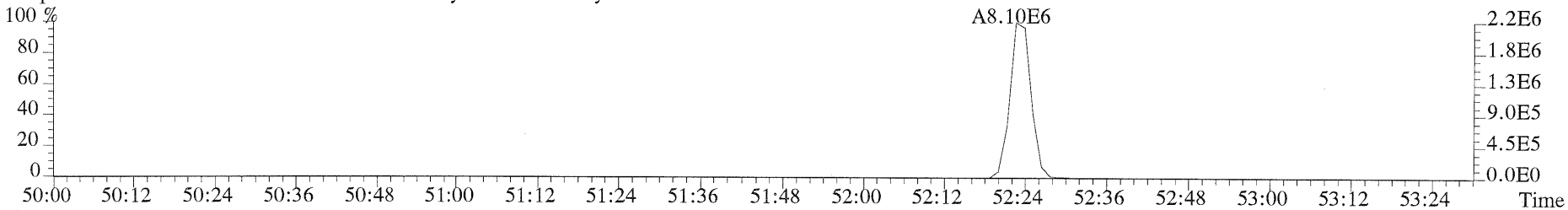
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
475.7619 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



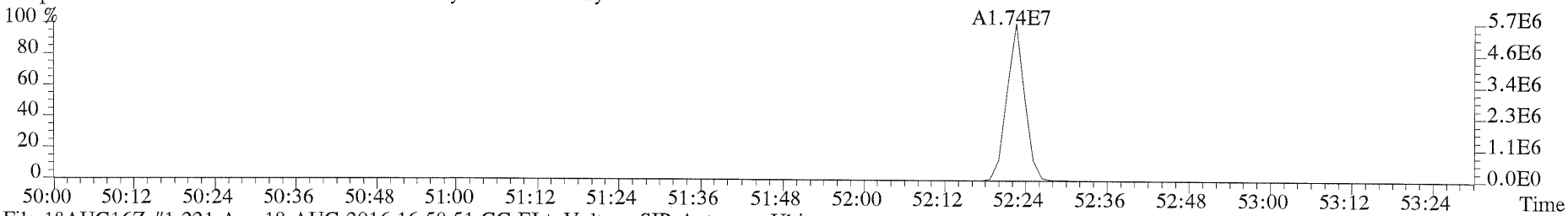
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
497.6826 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



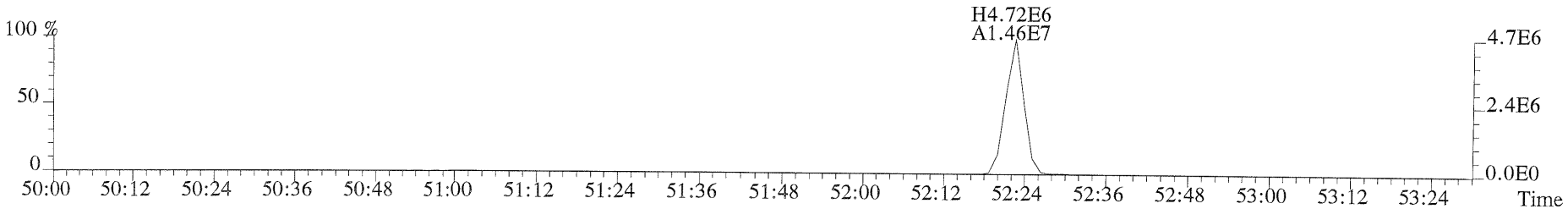
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
499.6797 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory



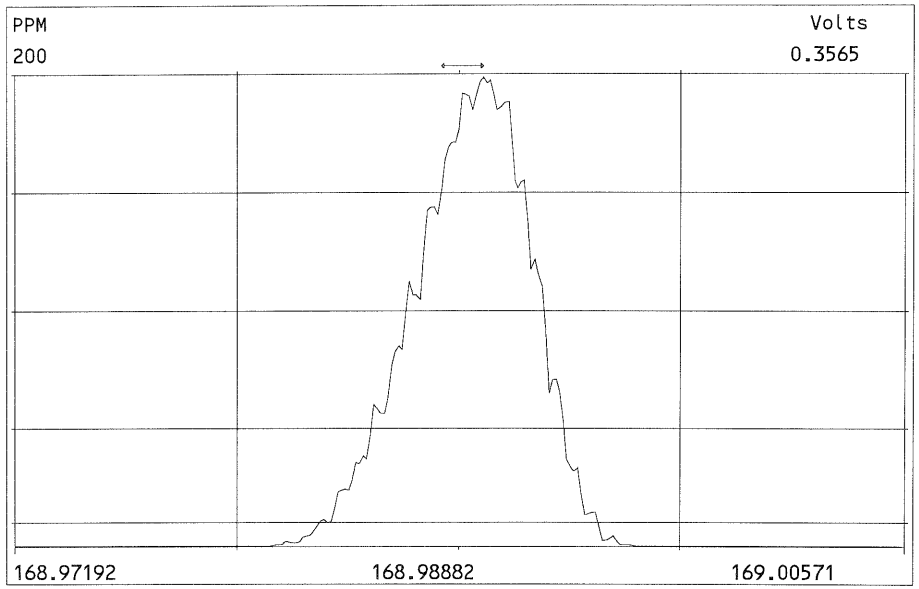
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
509.7229 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory

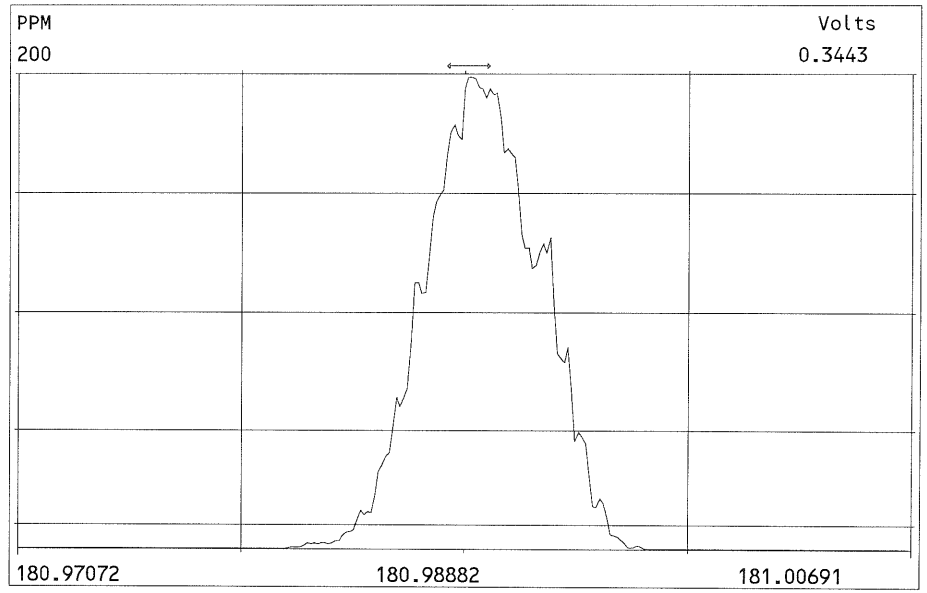


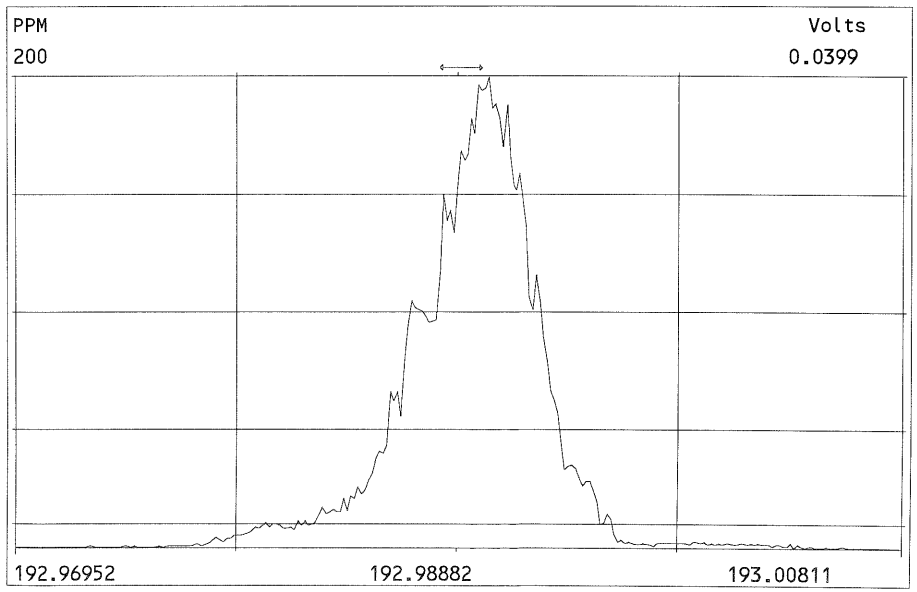
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
511.7199 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z1 File Text:Frontier Analytical Laboratory

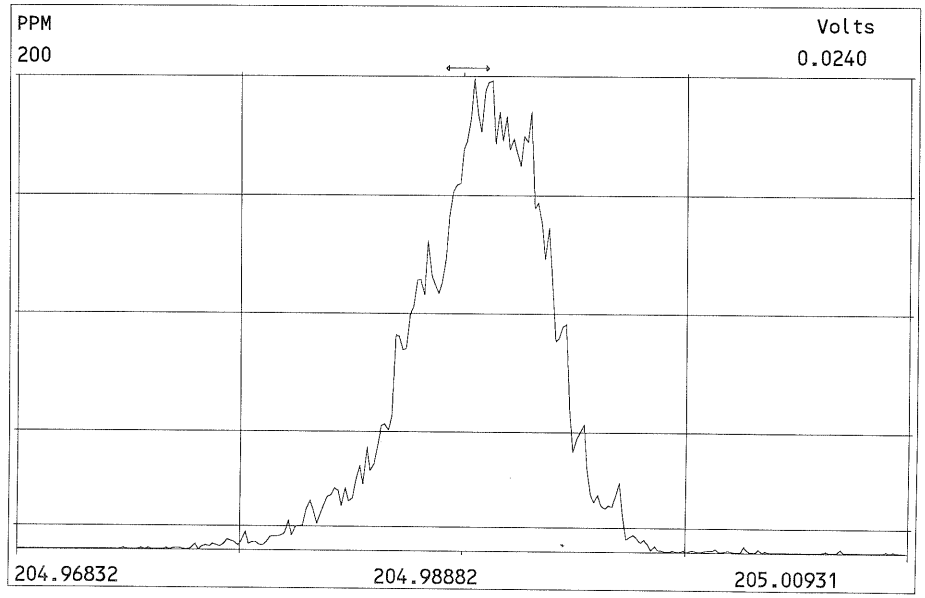


Peak Locate Examination:19-AUG-2016:06:53 File:18AUG16Z_RES_CHECK
Experiment:1668PCB Function:1 Reference:PFK

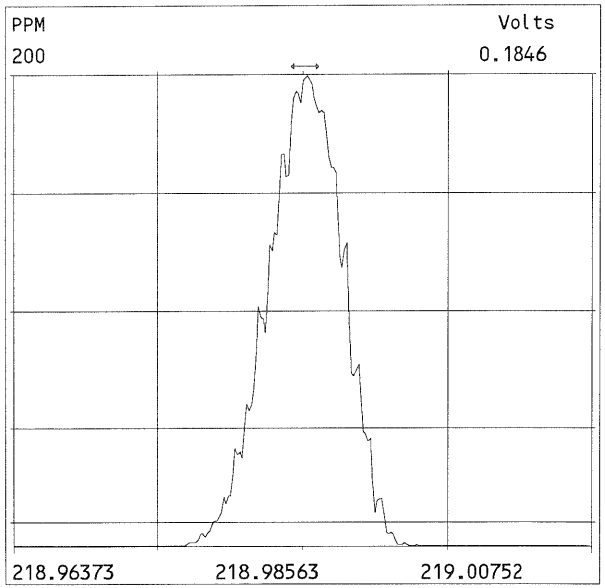


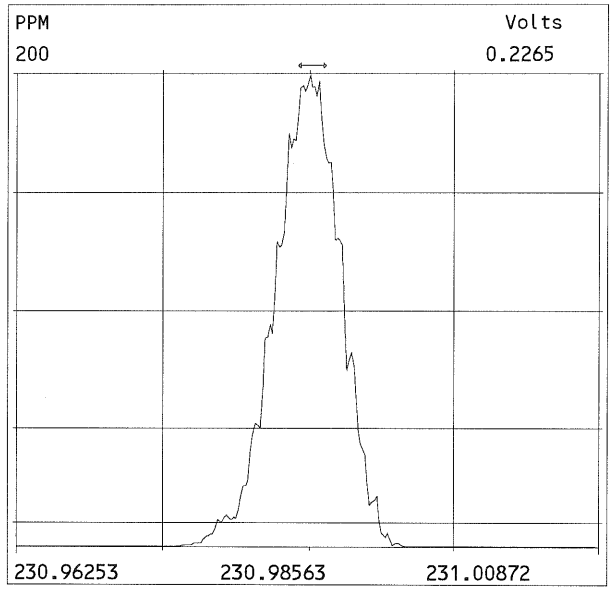


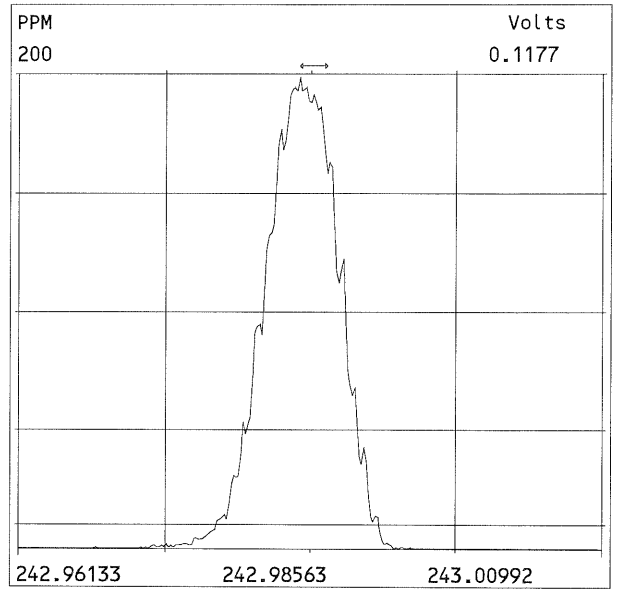


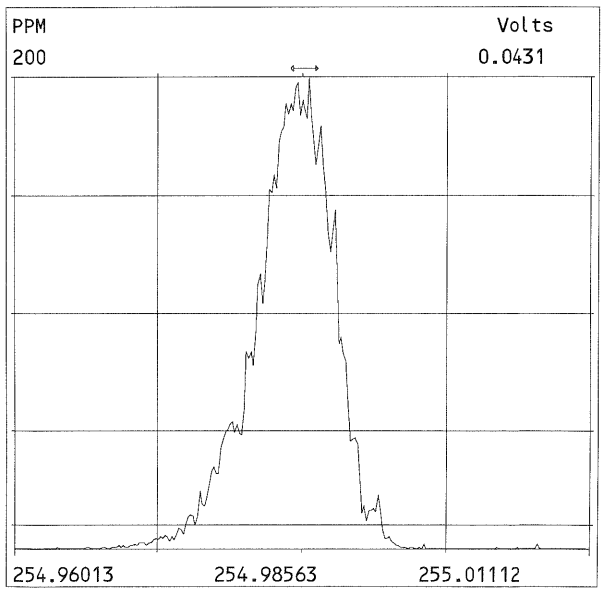


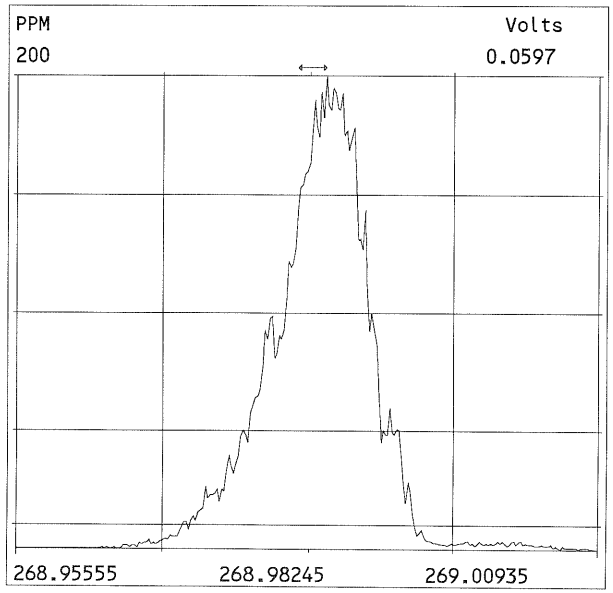
Peak Locate Examination:19-AUG-2016:06:54 File:18AUG16Z_RES_CHECK
Experiment:1668PCB Function:2 Reference:PFK

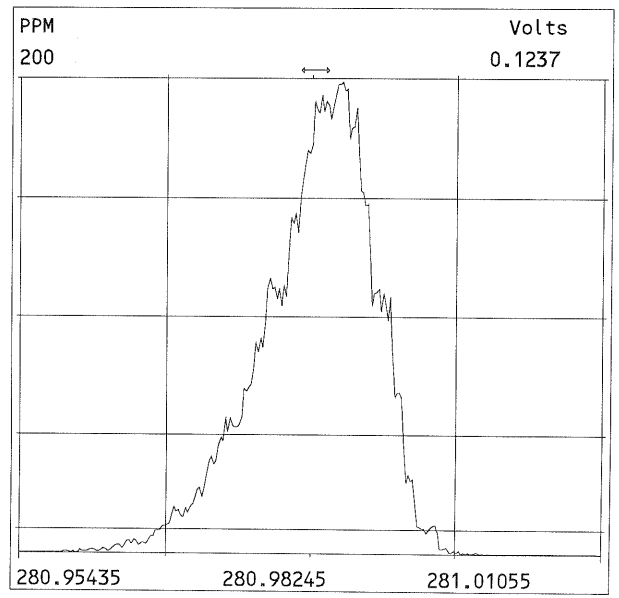




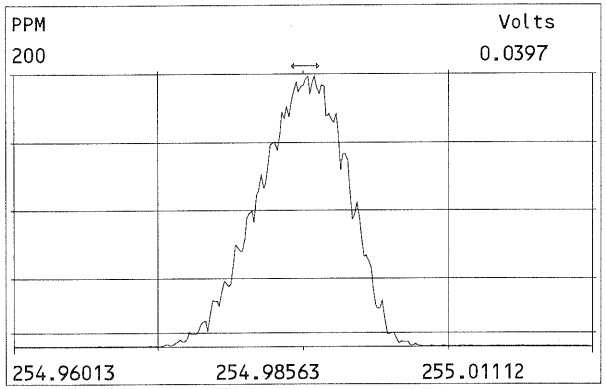


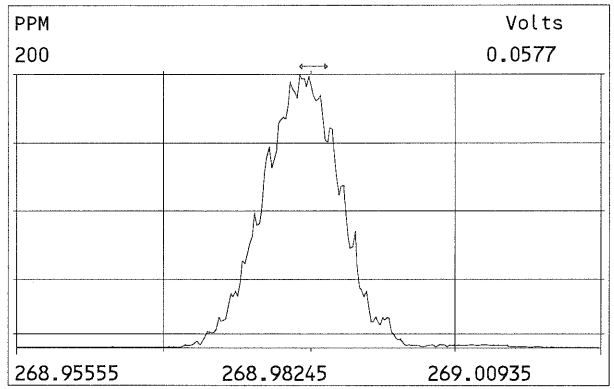


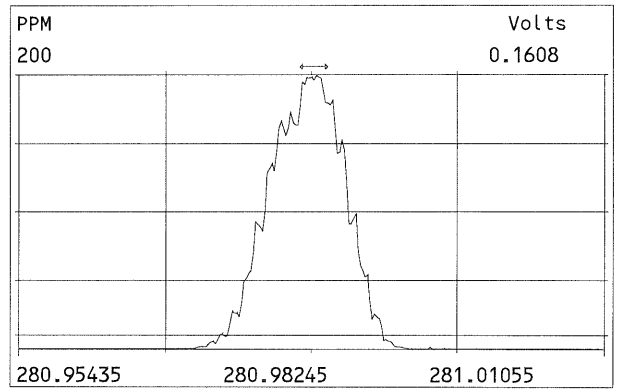


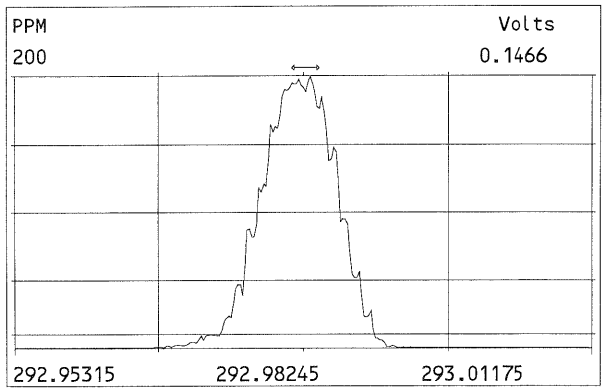


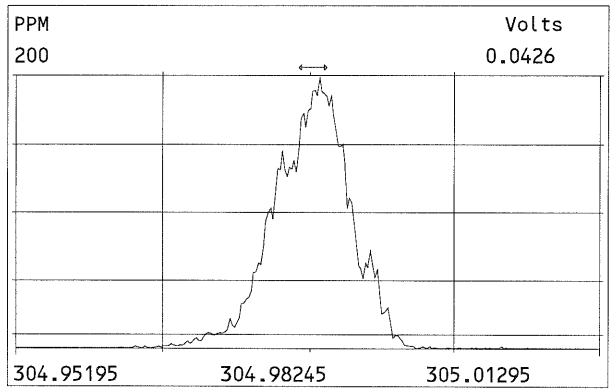
Peak Locate Examination:19-AUG-2016:06:55 File:18AUG16Z_RES_CHECK
Experiment:1668PCB Function:3 Reference:PFK

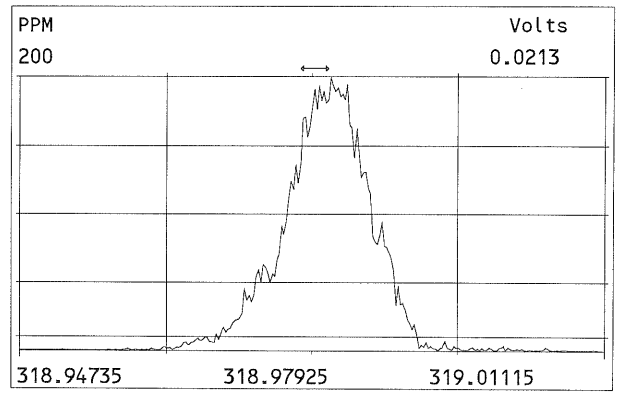


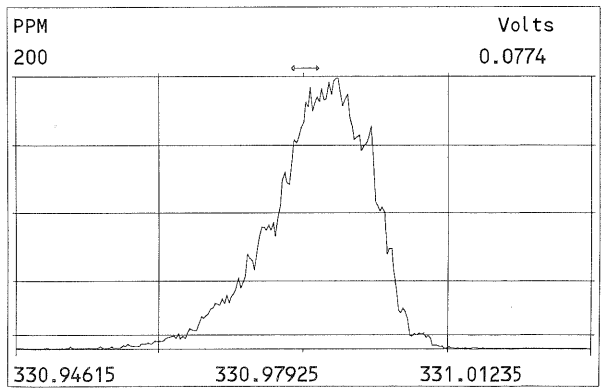


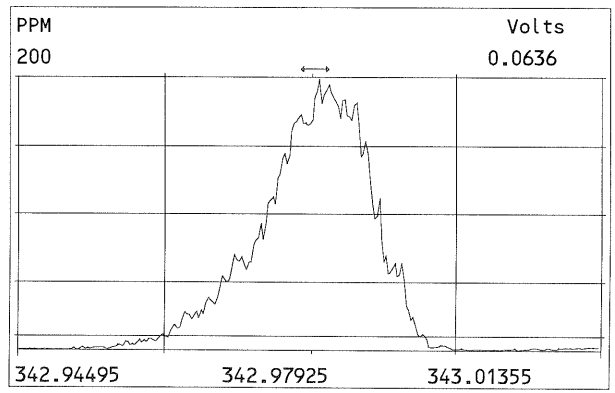




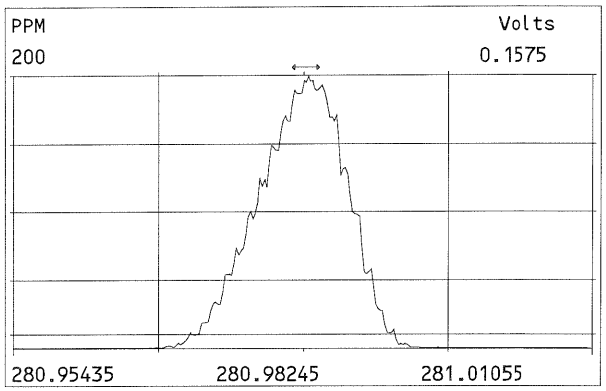


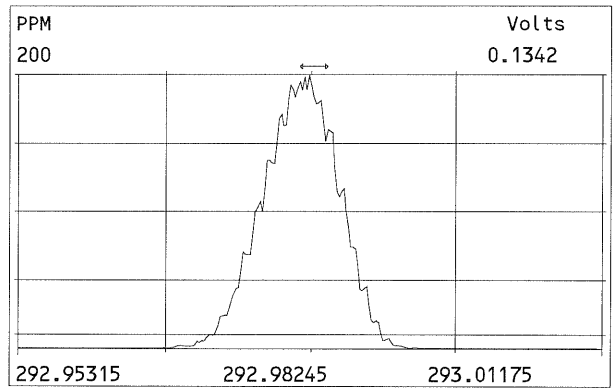


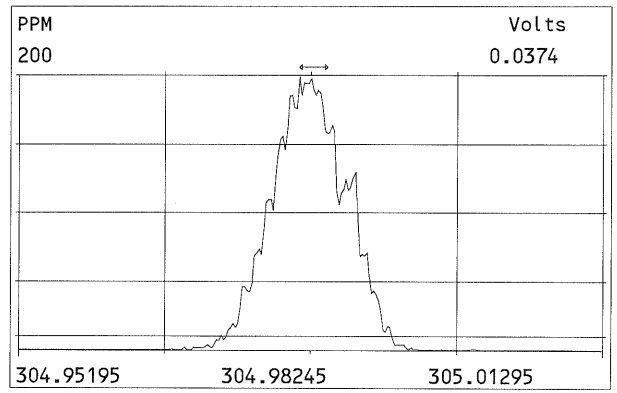


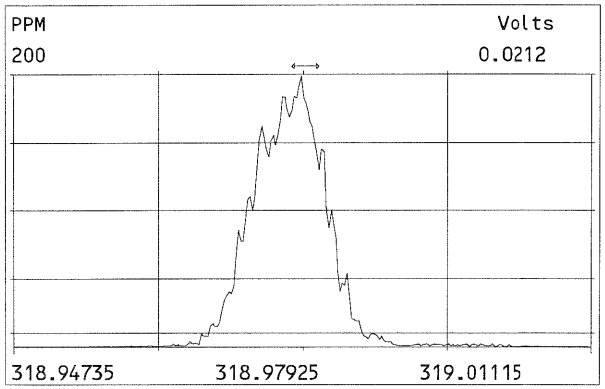


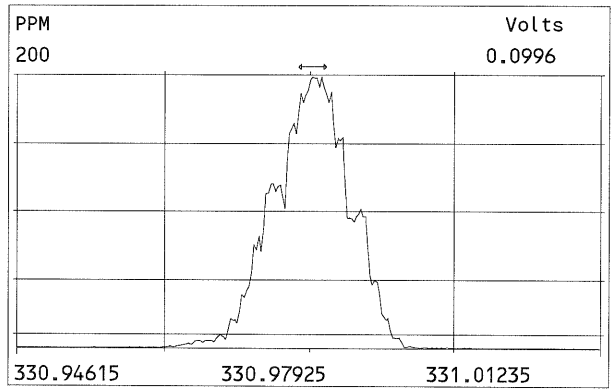
Peak Locate Examination:19-AUG-2016:06:55 File:18AUG16Z_RES_CHECK
Experiment:1668PCB Function:4 Reference:PFK

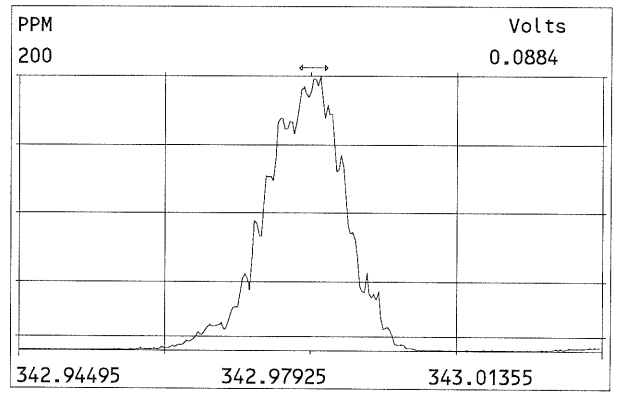


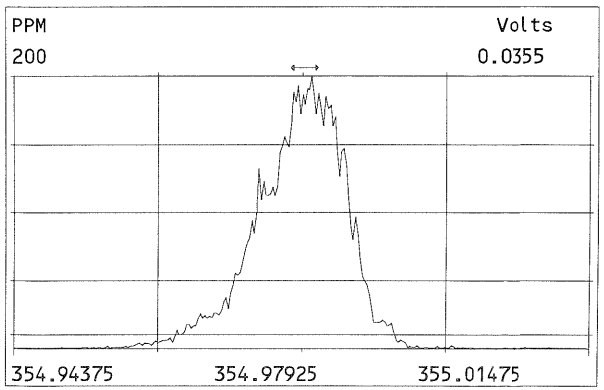


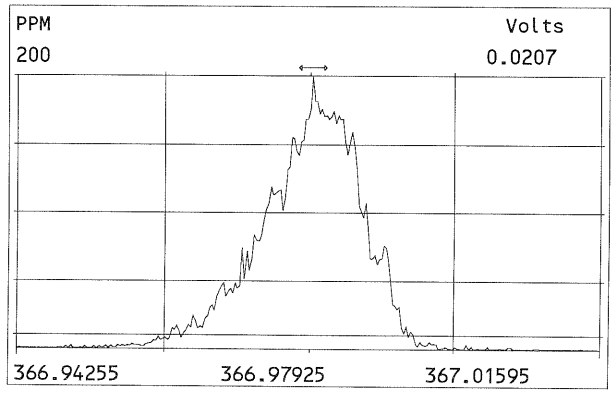


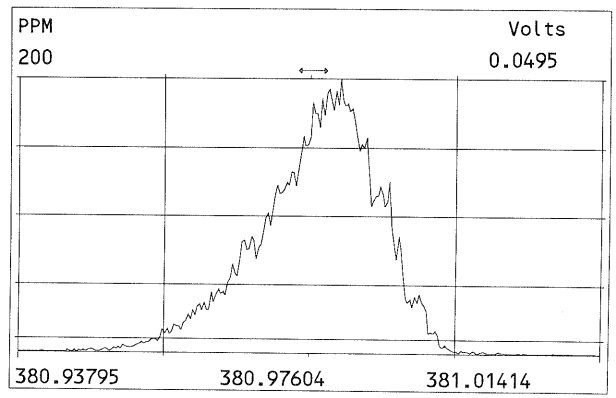




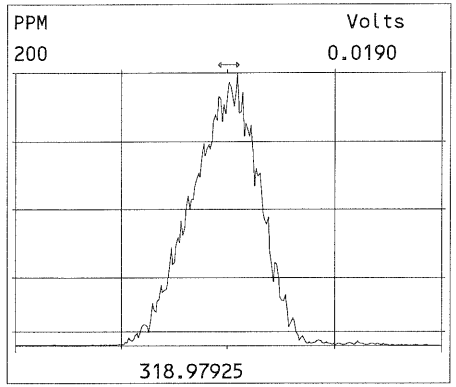


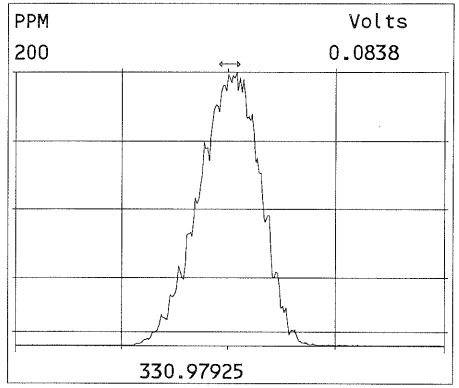


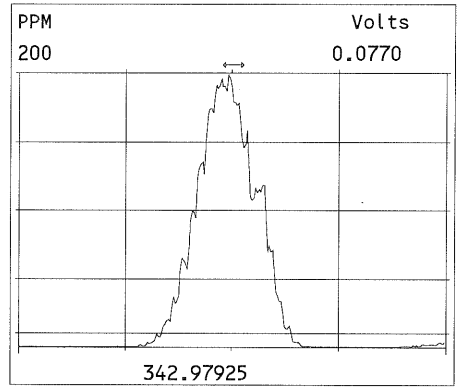


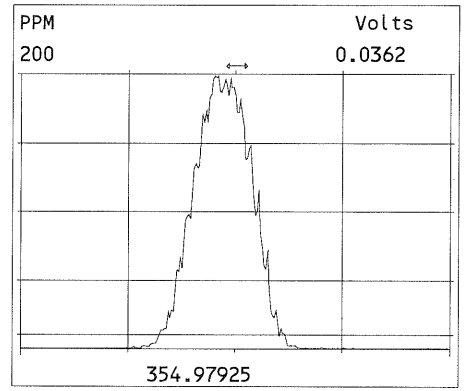


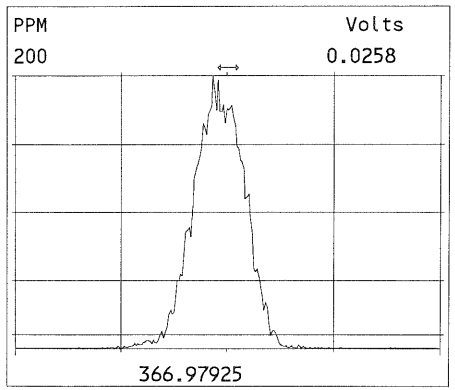
Peak Locate Examination:19-AUG-2016:06:56 File:18AUG16Z_RES_CHECK
Experiment:1668PCB Function:5 Reference:PFK

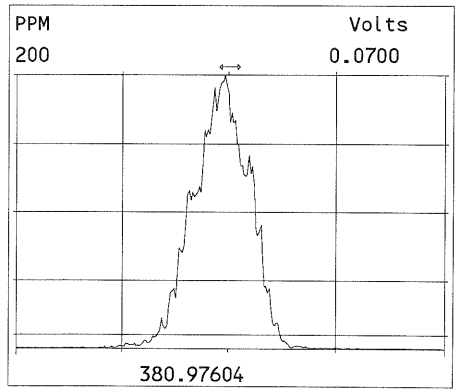


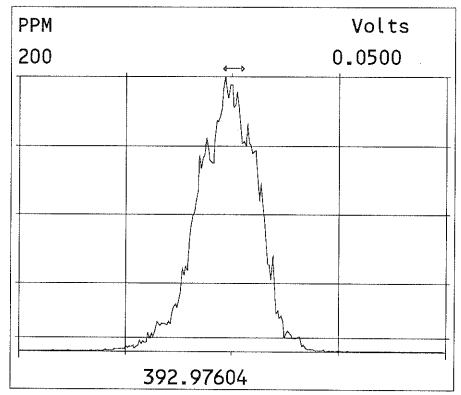


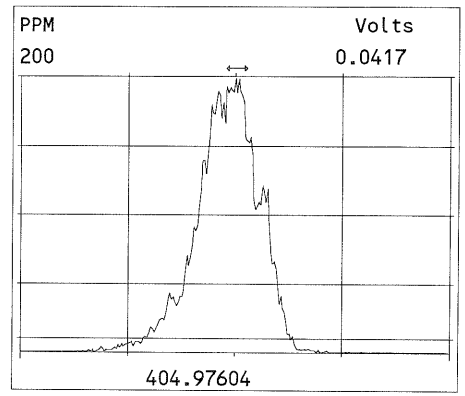


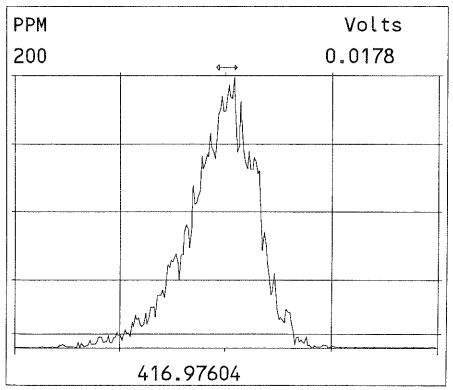


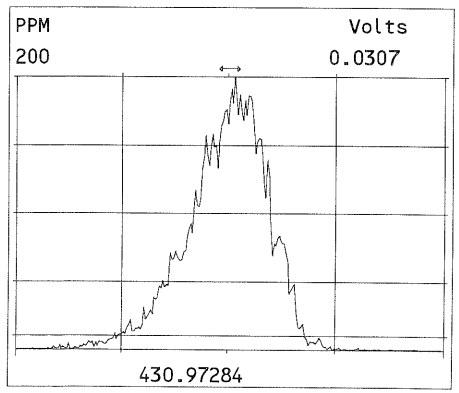


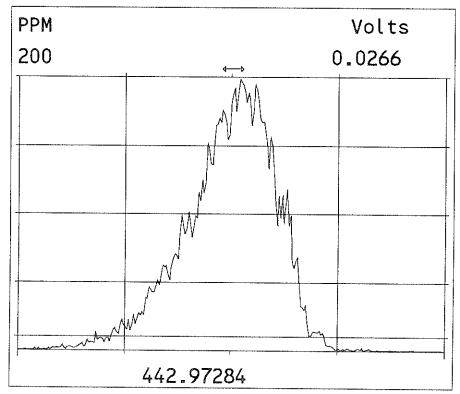




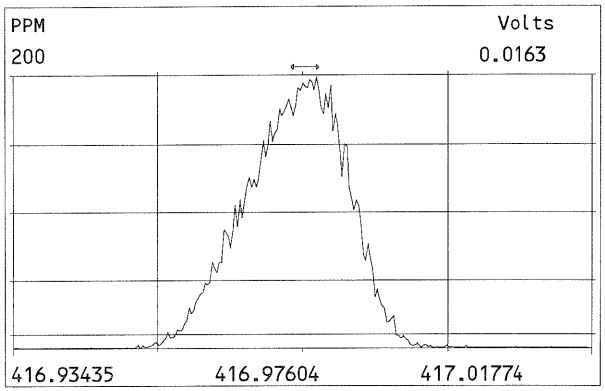


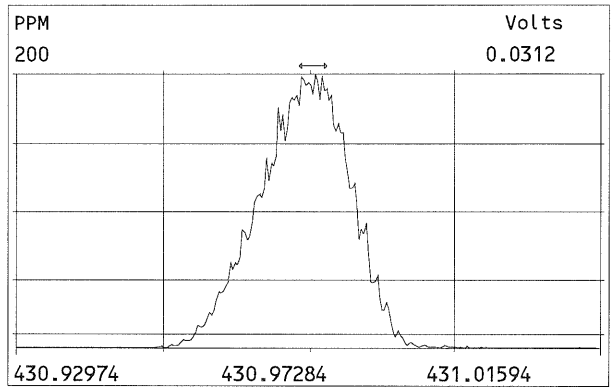


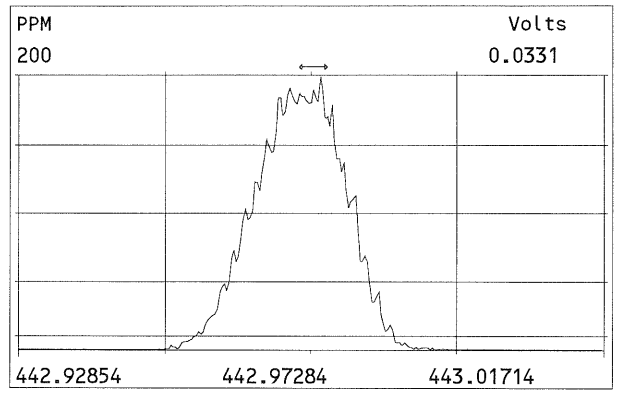


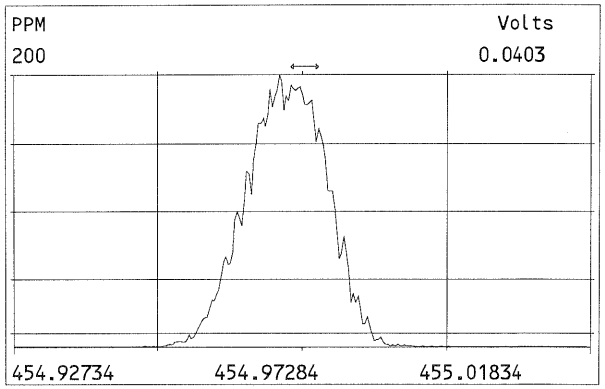


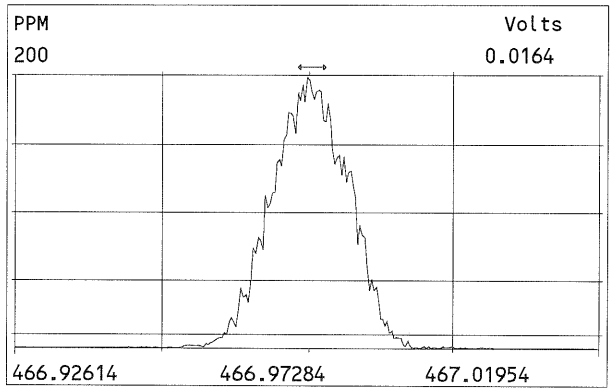
Peak Locate Examination:19-AUG-2016:06:56 File:18AUG16Z_RES_CHECK
Experiment:1668PCB Function:6 Reference:PFK

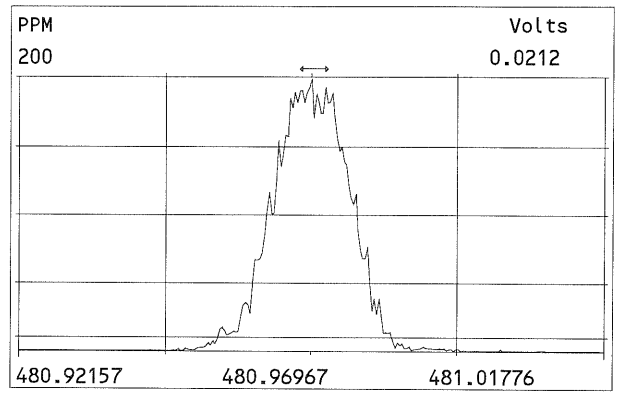


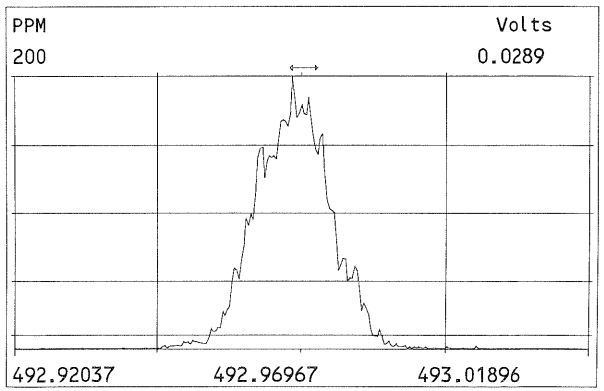


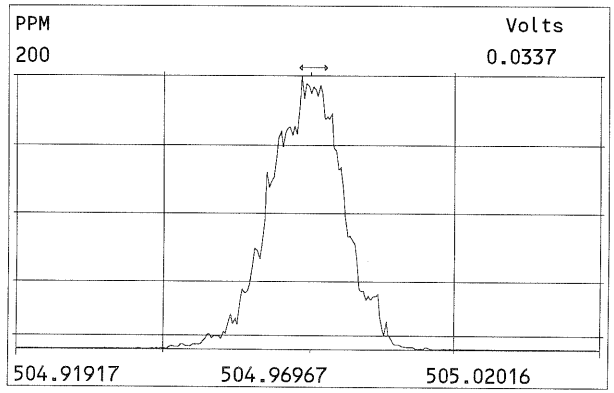


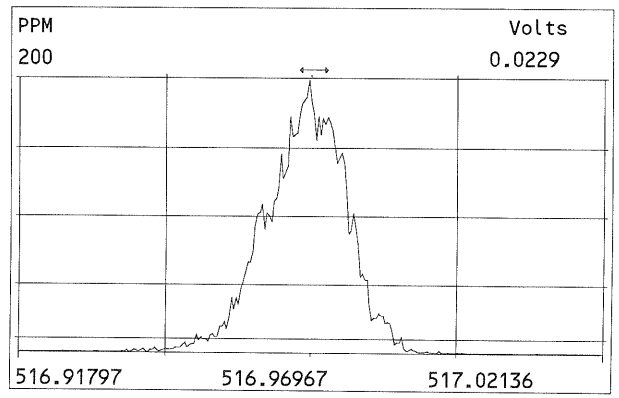












Cal: DAILY209FAL4-8-18-16

Run: 18AUG16Z Analyte: DAILY209FAL4-8-18-16 Results: Version: V3.6 21-MAY-2002 15:28:22

Data Filename:18AUG16Z S2

Name	Mean RRF	S. D.	RRF#1	
PCB-1	1.0356	-	1.04	
13C-PCB-1	1.1116	-	1.11	
PCB-2	0.8972	-	0.90	
PCB-3	1.0692	-	1.07	
13C-PCB-3	1.0283	-	1.03	
PCB-4	1.2184	*	1.22	
PCB-10	1.4199	-	1.42	
13C-PCB-4	0.5754	-	0.58	
PCB-9	1.4152	*	1.42	
PCB-7	1.4617	-	1.46	
PCB-6	1.4872	-	1.49	
PCB-8	1.2631	*	1.26	
PCB-5	1.4987	-	1.50	
PCB-14	1.4125	-	1.41	
PCB-11	1.2060	-	1.21	
PCB-13	1.1253	*	1.13	
PCB-12	1.2753	-	1.28	
PCB-15	1.2590	-	1.26	
13C-PCB-15	0.8841	-	0.88	
PCB-19	1.0694	-	1.07	
PCB-30	1.5090	-	1.51	
PCB-18	1.0009	-	1.00	
PCB-17	1.1253	-	1.13	
PCB-27	1.4132	-	1.41	
PCB-24	1.5374	-	1.54	
PCB-16	1.2688	-	1.27	
PCB-32	1.2481	-	1.25	
13C-PCB-19	0.5903	-	0.59	
13C-PCB-9	-	-	-	
PCB-34	1.0779	-	1.08	
PCB-23	1.3029	-	1.30	
PCB-29	1.2212	-	1.22	
PCB-26	1.1849	-	1.18	
PCB-25	1.5122	-	1.51	
PCB-31	1.1845	-	1.18	
PCB-28	1.4908	-	1.49	
PCB-20	1.2672	-	1.27	Co-elute PCB 21/33
PCB-21	1.2672	-	1.27	Co-elute PCB 20/33
PCB-33	1.2672	-	1.27	Co-elute PCB 20/21
PCB-22	1.2623	-	1.26	
PCB-36	1.1270	-	1.13	
PCB-39	1.1251	-	1.13	
PCB-38	1.1940	-	1.19	
PCB-35	1.0410	-	1.04	
PCB-37	1.2665	-	1.27	
13C-PCB-37	1.2197	-	1.22	

PCB-54	1.0788	-	1.08	
PCB-50	0.7865	-	0.79	
PCB-53	0.7784	-	0.78	
PCB-51	0.7791	-	0.78	
PCB-45	0.6787	-	0.68	
PCB-46	0.6463	-	0.65	
PCB-52	0.9529	-	0.95	Co-elute PCB 69
PCB-69	0.9529	-	0.95	Co-elute PCB 52
PCB-73	0.9378	-	0.94	
PCB-43	0.7338	-	0.73	Co-elute PCB 49
PCB-49	0.7338	-	0.73	Co-elute PCB 43
PCB-47	0.8901	-	0.89	
PCB-48	0.9297	-	0.93	Co-elute PCB 75
PCB-75	0.9297	-	0.93	Co-elute PCB 48
PCB-65	0.9574	-	0.96	
PCB-62	0.8845	-	0.88	
PCB-44	0.6589	-	0.66	
PCB-42	0.8986	-	0.90	Co-elute PCB 59
PCB-59	0.8986	-	0.90	Co-elute PCB 42
PCB-72	0.9646	-	0.96	Co-elute PCB 41/71/64
PCB-41	0.9646	-	0.96	Co-elute PCB 72/71/64
PCB-71	0.9646	-	0.96	Co-elute PCB 72/41/64
PCB-64	0.9646	-	0.96	Co-elute PCB 72/41/71
PCB-68	0.9872	-	0.99	
PCB-40	0.5744	-	0.57	
PCB-57	0.9535	-	0.95	
PCB-67	0.8709	-	0.87	
PCB-58	0.9985	-	1.00	
PCB-63	0.9507	-	0.95	
PCB-74	0.9686	-	0.97	
PCB-61	1.0238	-	1.02	Co-elute PCB 70
PCB-70	1.0238	-	1.02	Co-elute PCB 61
PCB-76	0.9967	-	1.00	Co-elute PCB 66
PCB-66	0.9967	-	1.00	Co-elute PCB 76
PCB-80	1.0798	-	1.08	
PCB-55	0.9811	-	0.98	
13C-PCB-54	1.2445	-	1.24	
PCB-104	1.1384	-	1.14	
PCB-96	1.0127	-	1.01	
PCB-103	0.8837	-	0.88	
PCB-100	0.8422	-	0.84	
PCB-94	0.7044	-	0.70	
PCB-98	0.9201	-	0.92	Co-elute PCB 102
PCB-102	0.9201	-	0.92	Co-elute PCB 98
PCB-95	0.7772	*	0.78	
PCB-93	0.6549	-	0.65	
PCB-88	0.7873	-	0.79	Co-elute PCB 91
PCB-91	0.7873	-	0.79	Co-elute PCB 88
PCB-121	0.9777	-	0.98	
13C-PCB-104	0.8688	-	0.87	
13C-PCB-28	1.4661	-	1.47	
13C-PCB-52	-	-	-	

PCB-56	1.2390	-	1.24	Co-elute PCB 60
PCB-60	1.2390	-	1.24	Co-elute PCB 56
PCB-79	1.1424	-	1.14	
PCB-78	1.0776	-	1.08	
PCB-81	1.1813	-	1.18	
13C-PCB-81	1.0699	-	1.07	
PCB-77	1.0803	-	1.08	
13C-PCB-77	1.0865	-	1.09	
PCB-155	1.0721	-	1.07	
PCB-150	0.9774	-	0.98	
PCB-152	0.9664	-	0.97	
PCB-145	0.9274	-	0.93	
PCB-136	0.9464	-	0.95	
PCB-148	0.6587	-	0.66	
PCB-154	0.7851	-	0.79	
13C-PCB-155	1.0621	-	1.06	
13C-PCB-111	1.1285	-	1.13	
13C-PCB-101	-	-	-	
PCB-84	0.8400	-	0.84	Co-elute PCB 92
PCB-92	0.8400	-	0.84	Co-elute PCB 84
PCB-89	0.8388	-	0.84	
PCB-90	0.9642	-	0.96	Co-elute PCB 101
PCB-101	0.9642	-	0.96	Co-elute PCB 90
PCB-113	1.1532	-	1.15	
PCB-99	0.9578	-	0.96	
PCB-119	1.2229	-	1.22	
PCB-83	0.9863	-	0.99	Co-elute PCB 112
PCB-112	0.9863	-	0.99	Co-elute PCB 83
PCB-109	1.1416	-	1.14	
PCB-97	1.0046	-	1.00	
PCB-86	0.7908	-	0.79	
PCB-125	1.1056	-	1.11	Co-elute PCB 87/117
PCB-87	1.1056	-	1.11	Co-elute PCB 125/117
PCB-117	1.1056	-	1.11	Co-elute PCB 125/87
PCB-111	1.3243	-	1.32	Co-elute PCB 115
PCB-115	1.3243	-	1.32	Co-elute PCB 111
PCB-85	1.0348	-	1.03	Co-elute PCB 116
PCB-116	1.0348	-	1.03	Co-elute PCB 85
PCB-120	1.2440	-	1.24	
PCB-110	1.2745	-	1.27	
PCB-82	0.6982	-	0.70	
PCB-124	1.0957	-	1.10	
PCB-108	1.1718	-	1.17	Co-elute PCB 107
PCB-107	1.1718	-	1.17	Co-elute PCB 108
PCB-123	1.2426	-	1.24	
13C-PCB-123	1.0927	-	1.09	
PCB-118	1.0823	-	1.08	Co-elute PCB 106
PCB-106	1.0823	-	1.08	Co-elute PCB 118
13C-PCB-118	1.1853	-	1.19	
PCB-114	1.0795	-	1.08	
13C-PCB-114	1.1126	-	1.11	
PCB-122	1.1302	-	1.13	
PCB-105	1.1272	-	1.13	
13C-PCB-105	1.1352	-	1.14	
PCB-127	1.0286	-	1.03	
PCB-126	1.1395	-	1.14	
13C-PCB-126	0.9723	-	0.97	

PCB-151	0.8648	-	0.86	
PCB-135	0.9359	-	0.94	
PCB-144	0.9107	-	0.91	
PCB-147	0.9449	-	0.94	
PCB-139	0.9695	-	0.97	Co-elute PCB 149
PCB-149	0.9695	-	0.97	Co-elute PCB 139
PCB-140	0.9173	-	0.92	
PCB-143	0.8718	-	0.87	Co-elute PCB 134
PCB-134	0.8718	-	0.87	Co-elute PCB 143
PCB-131	0.8783	-	0.88	Co-elute PCB 131
PCB-133	0.8783	-	0.88	Co-elute PCB 142
PCB-142	0.7727	-	0.77	
PCB-165	1.0534	-	1.05	Co-elute PCB 146
PCB-146	1.0534	-	1.05	Co-elute PCB 165
PCB-161	0.9886	-	0.99	Co-elute PCB 132
PCB-132	0.9886	-	0.99	Co-elute PCB 161
PCB-153	1.0234	-	1.02	
PCB-168	1.1521	-	1.15	
PCB-141	0.8790	-	0.88	
PCB-137	0.8551	-	0.86	
PCB-130	0.7149	-	0.71	
PCB-138	1.1376	-	1.14	Co-elute PCB 163/164
PCB-163	1.1376	-	1.14	Co-elute PCB 138/164
PCB-164	1.1376	-	1.14	Co-elute PCB 138/163
PCB-158	1.1217	-	1.12	Co-elute PCB 160
PCB-160	1.1217	-	1.12	Co-elute PCB 158
PCB-129	0.6864	-	0.69	
PCB-166	1.0543	-	1.05	
PCB-159	1.1260	-	1.13	
PCB-128	0.9366	-	0.94	Co-elute PCB 162
PCB-162	0.9366	-	0.94	Co-elute PCB 128
PCB-167	0.9643	-	0.96	
13C-PCB-167	1.1438	-	1.14	
PCB-156	1.0351	-	1.04	
13C-PCB-156	1.0715	-	1.07	
PCB-157	0.9598	-	0.96	
13C-PCB-157	1.0855	-	1.09	
PCB-169	0.9226	-	0.92	
13C-PCB-169	0.9236	-	0.92	
PCB-188	1.1237	-	1.12	
13C-PCB-188	1.2460	-	1.25	

PCB-184	1.3549	-	1.35	
PCB-179	1.2947	-	1.29	
PCB-176	1.2198	-	1.22	
PCB-186	1.2340	-	1.23	
PCB-178	0.8637	-	0.86	
PCB-175	0.9134	-	0.91	
PCB-187	0.9859	-	0.99	Co-elute PCB 182
PCB-182	0.9859	-	0.99	Co-elute PCB 187
PCB-183	0.9725	-	0.97	
PCB-185	0.8631	-	0.86	
PCB-174	0.8669	-	0.87	
PCB-181	0.8856	-	0.89	
PCB-177	0.7884	-	0.79	
PCB-171	0.8277	-	0.83	
PCB-173	0.7447	-	0.74	
PCB-172	0.7638	-	0.76	
PCB-192	1.0517	-	1.05	
PCB-180	1.0079	-	1.01	
PCB-193	1.1070	-	1.11	
PCB-191	1.0239	-	1.02	
PCB-170	0.6763	-	0.68	
PCB-190	0.9736	-	0.97	
PCB-189	1.0884	-	1.09	
13C-PCB-189	0.8163	-	0.82	
PCB-202	1.0019	-	1.00	
PCB-201	0.9871	-	0.99	
PCB-204	1.0302	-	1.03	
PCB-197	1.0596	-	1.06	
PCB-200	0.9859	-	0.99	
PCB-198	0.6983	-	0.70	
PCB-199	0.6118	-	0.61	
PCB-203	0.6953	-	0.70	Co-elute PCB 196
PCB-196	0.6953	-	0.70	Co-elute PCB 203
13C-PCB-202	0.8910	-	0.89	
13C-PCB-178	0.8086	-	0.81	
13C-PCB-138	-	-	-	
PCB-195	0.7470	-	0.75	
PCB-194	0.8104	-	0.81	
PCB-205	1.0287	-	1.03	
13C-PCB-205	1.2504	-	1.25	
PCB-208	0.9243	-	0.92	
13C-PCB-208	1.3729	-	1.37	
PCB-207	1.0081	-	1.01	
PCB-206	0.9917	-	0.99	
13C-PCB-206	0.9174	-	0.92	
PCB-209	1.0686	-	1.07	
13C-PCB-209	1.4321	-	1.43	
13C-PCB-194	-	-	-	

Analyst: [illegible] Date: 8/19/12

Run #1 Filename 18AUG16Z S: 2 Acquired: 18-AUG-16 17:50:51 Cal: DAILY209FAL4-8-18-16
Client ID: SS081816Z1 Analyte: FAL ID: Daily 209 160711B

	Typ	Name	Amount	Resp	RA	RT	RF	RRF	
1	Unk	PCB-1	50.00	5.60e+07	3.18 y	14:29	-	1.04	
2	IS/RT	13C-PCB-1	100.00	1.08e+08	3.12 y	14:28	-	1.11	
3	Unk	PCB-2	50.00	4.67e+07	3.18 y	16:43	-	0.897	
4	Unk	PCB-3	50.00	5.34e+07	3.16 y	16:56	-	1.07	
5	IS/RT	13C-PCB-3	100.00	1.00e+08	3.17 y	16:55	-	1.03	
6	Unk	PCB-4	50.00	3.41e+07	1.48 y	18:10	-	1.22	
7	Unk	PCB-10	50.00	5.04e+07	1.61 y	18:12	-	1.42	
8	IS/RT	13C-PCB-4	100.00	5.59e+07	1.60 y	18:08	-	0.575	
9	Unk	PCB-9	50.00	5.02e+07	1.57 y	19:51	-	1.42	
10	Unk	PCB-7	50.00	5.19e+07	1.56 y	19:53	-	1.46	
11	Unk	PCB-6	50.00	5.28e+07	1.56 y	20:28	-	1.49	
12	Unk	PCB-8	50.00	4.48e+07	1.52 y	20:51	-	1.26	
13	Unk	PCB-5	50.00	5.32e+07	1.55 y	20:52	-	1.50	
14	Unk	PCB-14	50.00	5.01e+07	1.59 y	21:55	-	1.41	
15	Unk	PCB-11	50.00	4.28e+07	1.59 y	23:03	-	1.21	
16	Unk	PCB-13	50.00	3.99e+07	1.53 y	23:25	-	1.13	
17	Unk	PCB-12	50.00	4.52e+07	1.63 y	23:26	-	1.28	
18	Unk	PCB-15	50.00	5.41e+07	1.59 y	23:42	-	1.26	
19	IS/RT	13C-PCB-15	100.00	8.60e+07	1.57 y	23:41	-	0.884	
20	Unk	PCB-19	50.00	3.07e+07	1.04 y	22:02	-	1.07	
21	Unk	PCB-30	50.00	4.33e+07	1.04 y	22:53	-	1.51	
22	Unk	PCB-18	50.00	2.87e+07	1.05 y	23:34	-	1.00	
23	Unk	PCB-17	50.00	3.23e+07	1.04 y	23:45	-	1.13	
24	Unk	PCB-27	50.00	4.06e+07	1.06 y	24:17	-	1.41	
25	Unk	PCB-24	50.00	4.41e+07	1.03 y	24:18	-	1.54	
26	Unk	PCB-16	50.00	3.64e+07	1.03 y	24:46	-	1.27	
27	Unk	PCB-32	50.00	3.58e+07	1.05 y	24:47	-	1.25	
28	IS/RT	13C-PCB-19	100.00	5.74e+07	1.08 y	22:01	-	0.590	
29	RS	13C-PCB-9	100.00	9.72e+07	1.61 y	19:48	9.72e+05	-	
30	Unk	PCB-34	50.00	3.67e+07	1.03 y	25:32	-	1.08	
31	Unk	PCB-23	50.00	4.43e+07	1.06 y	25:38	-	1.30	
32	Unk	PCB-29	50.00	4.15e+07	1.02 y	25:52	-	1.22	
33	Unk	PCB-26	50.00	4.03e+07	1.05 y	26:03	-	1.18	
34	Unk	PCB-25	50.00	5.14e+07	1.05 y	26:14	-	1.51	
35	Unk	PCB-31	50.00	4.03e+07	1.03 y	26:34	-	1.18	
36	Unk	PCB-28	50.00	5.07e+07	1.06 y	26:39	-	1.49	
37	Unk	PCB-20	150.00	1.29e+08	1.03 y	27:14	-	1.27	Co-elute PCB 21/33
38	Unk	PCB-21	150.00	1.29e+08	1.03 y	27:14	-	1.27	Co-elute PCB 20/33
39	Unk	PCB-33	150.00	1.29e+08	1.03 y	27:14	-	1.27	Co-elute PCB 20/21
40	Unk	PCB-22	50.00	4.29e+07	1.02 y	27:39	-	1.26	
41	Unk	PCB-36	50.00	3.83e+07	1.05 y	28:15	-	1.13	
42	Unk	PCB-39	50.00	3.83e+07	1.04 y	28:43	-	1.13	
43	Unk	PCB-38	50.00	4.06e+07	1.04 y	29:26	-	1.19	
44	Unk	PCB-35	50.00	3.54e+07	1.05 y	29:56	-	1.04	
45	Unk	PCB-37	50.00	4.31e+07	1.05 y	30:21	-	1.27	
46	IS	13C-PCB-37	100.00	6.80e+07	1.08 y	30:20	-	1.22	

47	Unk	PCB-54	100.00	7.49e+07	0.78	y	25:33	-	1.08	
48	Unk	PCB-50	100.00	5.46e+07	0.78	y	26:40	-	0.787	
49	Unk	PCB-53	100.00	5.40e+07	0.78	y	27:15	-	0.778	
50	Unk	PCB-51	100.00	5.41e+07	0.78	y	27:36	-	0.779	
51	Unk	PCB-45	100.00	4.71e+07	0.78	y	28:01	-	0.679	
52	Unk	PCB-46	100.00	4.49e+07	0.78	y	28:28	-	0.646	
53	Unk	PCB-52	200.00	1.32e+08	0.77	y	28:55	-	0.953	Co-elute PCB 69
54	Unk	PCB-69	200.00	1.32e+08	0.77	y	28:55	-	0.953	Co-elute PCB 52
55	Unk	PCB-73	100.00	6.51e+07	0.80	y	29:02	-	0.938	
56	Unk	PCB-43	200.00	1.02e+08	0.76	y	29:11	-	0.734	Co-elute PCB 49
57	Unk	PCB-49	200.00	1.02e+08	0.76	y	29:11	-	0.734	Co-elute PCB 43
58	Unk	PCB-47	100.00	6.18e+07	0.77	y	29:23	-	0.890	
59	Unk	PCB-48	200.00	1.29e+08	0.78	y	29:29	-	0.930	Co-elute PCB 75
60	Unk	PCB-75	200.00	1.29e+08	0.78	y	29:29	-	0.930	Co-elute PCB 48
61	Unk	PCB-65	100.00	6.64e+07	0.76	y	29:45	-	0.957	
62	Unk	PCB-62	100.00	6.14e+07	0.78	y	29:51	-	0.884	
63	Unk	PCB-44	100.00	4.57e+07	0.78	y	30:07	-	0.659	
64	Unk	PCB-42	200.00	1.25e+08	0.78	y	30:21	-	0.899	Co-elute PCB 59
65	Unk	PCB-59	200.00	1.25e+08	0.78	y	30:21	-	0.899	Co-elute PCB 42
66	Unk	PCB-72	400.00	2.68e+08	0.77	y	30:54	-	0.965	Co-elute PCB 41/71/64
67	Unk	PCB-41	400.00	2.68e+08	0.77	y	30:54	-	0.965	Co-elute PCB 72/71/64
68	Unk	PCB-71	400.00	2.68e+08	0.77	y	30:54	-	0.965	Co-elute PCB 72/41/64
69	Unk	PCB-64	400.00	2.68e+08	0.77	y	30:54	-	0.965	Co-elute PCB 72/41/71
70	Unk	PCB-68	100.00	6.85e+07	0.78	y	31:09	-	0.987	
71	Unk	PCB-40	100.00	3.99e+07	0.76	y	31:21	-	0.574	
72	Unk	PCB-57	100.00	6.62e+07	0.78	y	31:42	-	0.953	
73	Unk	PCB-67	100.00	6.04e+07	0.76	y	32:00	-	0.871	
74	Unk	PCB-58	100.00	6.93e+07	0.79	y	32:06	-	0.999	
75	Unk	PCB-63	100.00	6.60e+07	0.77	y	32:15	-	0.951	
76	Unk	PCB-74	100.00	6.72e+07	0.77	y	32:32	-	0.969	
77	Unk	PCB-61	200.00	1.42e+08	0.77	y	32:43	-	1.02	Co-elute PCB 70
78	Unk	PCB-70	200.00	1.42e+08	0.77	y	32:43	-	1.02	Co-elute PCB 61
79	Unk	PCB-76	200.00	1.38e+08	0.78	y	32:56	-	0.997	Co-elute PCB 66
80	Unk	PCB-66	200.00	1.38e+08	0.78	y	32:56	-	0.997	Co-elute PCB 76
81	Unk	PCB-80	100.00	7.49e+07	0.78	y	33:08	-	1.08	
82	Unk	PCB-55	100.00	6.81e+07	0.77	y	33:26	-	0.981	
83	IS/RT	13C-PCB-54	100.00	6.94e+07	0.79	y	25:32	-	1.24	
84	Unk	PCB-104	100.00	5.52e+07	1.56	y	30:00	-	1.14	
85	Unk	PCB-96	100.00	4.91e+07	1.58	y	31:11	-	1.01	
86	Unk	PCB-103	100.00	4.28e+07	1.58	y	31:41	-	0.884	
87	Unk	PCB-100	100.00	4.08e+07	1.58	y	32:01	-	0.842	
88	Unk	PCB-94	100.00	3.41e+07	1.58	y	32:28	-	0.704	
89	Unk	PCB-98	200.00	8.92e+07	1.54	y	32:54	-	0.920	Co-elute PCB 102
90	Unk	PCB-102	200.00	8.92e+07	1.54	y	32:54	-	0.920	Co-elute PCB 98
91	Unk	PCB-95	100.00	3.77e+07	1.64	y	32:58	-	0.777	
92	Unk	PCB-93	100.00	3.17e+07	1.64	y	33:03	-	0.655	
93	Unk	PCB-88	200.00	7.63e+07	1.60	y	33:22	-	0.787	Co-elute PCB 91
94	Unk	PCB-91	200.00	7.63e+07	1.60	y	33:22	-	0.787	Co-elute PCB 88
95	Unk	PCB-121	100.00	4.74e+07	1.53	y	33:26	-	0.978	
96	IS	13C-PCB-104	100.00	4.85e+07	1.63	y	29:57	-	0.869	
97	C/Up	13C-PCB-28	100.00	8.18e+07	1.08	y	26:38	-	1.47	
98	RS	13C-PCB-52	100.00	5.58e+07	0.78	y	28:53	5.58e+05	-	
99	Unk	PCB-56	200.00	1.32e+08	0.78	y	33:55	-	1.24	Co-elute PCB 60
100	Unk	PCB-60	200.00	1.32e+08	0.78	y	33:55	-	1.24	Co-elute PCB 56

101	Unk	PCB-79	100.00	6.10e+07	0.78 y	34:57		-	1.14	
102	Unk	PCB-78	100.00	5.76e+07	0.77 y	35:36		-	1.08	
103	Unk	PCB-81	100.00	6.26e+07	0.80 y	36:06		-	1.18	
104	IS	13C-PCB-81	100.00	5.30e+07	0.80 y	36:05		-	1.07	
105	Unk	PCB-77	100.00	5.82e+07	0.80 y	36:40		-	1.08	
106	IS/RT	13C-PCB-77	100.00	5.38e+07	0.78 y	36:39		-	1.09	
107	Unk	PCB-155	100.00	5.64e+07	1.27 y	34:09		-	1.07	
108	Unk	PCB-150	100.00	5.14e+07	1.28 y	35:21		-	0.977	
109	Unk	PCB-152	100.00	5.09e+07	1.27 y	35:47		-	0.966	
110	Unk	PCB-145	100.00	4.88e+07	1.26 y	36:13		-	0.927	
111	Unk	PCB-136	100.00	4.98e+07	1.27 y	36:30		-	0.946	
112	Unk	PCB-148	100.00	3.47e+07	1.30 y	36:37		-	0.659	
113	Unk	PCB-154	100.00	4.13e+07	1.26 y	37:04		-	0.785	
114	IS	13C-PCB-155	100.00	5.26e+07	1.27 y	34:07		-	1.06	
115	C/Up	13C-PCB-111	100.00	5.59e+07	1.57 y	36:13		-	1.13	
116	RS	13C-PCB-101	100.00	4.96e+07	1.60 y	34:34	4.96e+05		-	
117	Unk	PCB-84	200.00	7.98e+07	1.59 y	34:14		-	0.840	Co-elute PCB 92
118	Unk	PCB-92	200.00	7.98e+07	1.59 y	34:14		-	0.840	Co-elute PCB 84
119	Unk	PCB-89	100.00	3.99e+07	1.54 y	34:24		-	0.839	
120	Unk	PCB-90	200.00	9.17e+07	1.56 y	34:34		-	0.964	Co-elute PCB 101
121	Unk	PCB-101	200.00	9.17e+07	1.56 y	34:34		-	0.964	Co-elute PCB 90
122	Unk	PCB-113	100.00	5.48e+07	1.55 y	34:48		-	1.15	
123	Unk	PCB-99	100.00	4.55e+07	1.60 y	34:54		-	0.958	
124	Unk	PCB-119	100.00	5.81e+07	1.57 y	35:21		-	1.22	
125	Unk	PCB-83	200.00	9.38e+07	1.58 y	35:30		-	0.986	Co-elute PCB 112
126	Unk	PCB-112	200.00	9.38e+07	1.58 y	35:30		-	0.986	Co-elute PCB 83
127	Unk	PCB-109	100.00	5.43e+07	1.57 y	35:38		-	1.14	
128	Unk	PCB-97	100.00	4.77e+07	1.55 y	35:50		-	1.00	
129	Unk	PCB-86	100.00	3.76e+07	1.53 y	35:59		-	0.791	
130	Unk	PCB-125	300.00	1.58e+08	1.55 y	36:06		-	1.11	Co-elute PCB 87/117
131	Unk	PCB-87	300.00	1.58e+08	1.55 y	36:06		-	1.11	Co-elute PCB 125/117
132	Unk	PCB-117	300.00	1.58e+08	1.55 y	36:06		-	1.11	Co-elute PCB 125/87
133	Unk	PCB-111	200.00	1.26e+08	1.55 y	36:14		-	1.32	Co-elute PCB 115
134	Unk	PCB-115	200.00	1.26e+08	1.55 y	36:14		-	1.32	Co-elute PCB 111
135	Unk	PCB-85	200.00	9.84e+07	1.56 y	36:21		-	1.03	Co-elute PCB 116
136	Unk	PCB-116	200.00	9.84e+07	1.56 y	36:21		-	1.03	Co-elute PCB 85
137	Unk	PCB-120	100.00	5.91e+07	1.55 y	36:35		-	1.24	
138	Unk	PCB-110	100.00	6.06e+07	1.55 y	36:43		-	1.27	
139	Unk	PCB-82	100.00	3.32e+07	1.58 y	37:18		-	0.698	
140	Unk	PCB-124	100.00	5.21e+07	1.56 y	37:58		-	1.10	
141	Unk	PCB-108	200.00	1.11e+08	1.52 y	38:06		-	1.17	Co-elute PCB 107
142	Unk	PCB-107	200.00	1.11e+08	1.52 y	38:06		-	1.17	Co-elute PCB 108
143	Unk	PCB-123	100.00	5.70e+07	1.52 y	38:16		-	1.24	
144	IS	13C-PCB-123	100.00	4.59e+07	1.60 y	38:14		-	1.09	
145	Unk	PCB-118	200.00	1.08e+08	1.56 y	38:27		-	1.08	Co-elute PCB 106
146	Unk	PCB-106	200.00	1.08e+08	1.56 y	38:27		-	1.08	Co-elute PCB 118
147	IS	13C-PCB-118	100.00	4.98e+07	1.60 y	38:26		-	1.19	
148	Unk	PCB-114	100.00	5.05e+07	1.54 y	39:04		-	1.08	
149	IS	13C-PCB-114	100.00	4.67e+07	1.58 y	39:02		-	1.11	
150	Unk	PCB-122	100.00	5.37e+07	1.57 y	39:10		-	1.13	
151	Unk	PCB-105	100.00	5.38e+07	1.53 y	39:53		-	1.13	
152	IS	13C-PCB-105	100.00	4.77e+07	1.62 y	39:51		-	1.14	
153	Unk	PCB-127	100.00	4.89e+07	1.56 y	40:13		-	1.03	
154	Unk	PCB-126	100.00	4.65e+07	1.54 y	42:01		-	1.14	
155	IS	13C-PCB-126	100.00	4.08e+07	1.64 y	41:60		-	0.972	

156	Unk	PCB-151	100.00	3.84e+07	1.27 y	37:41	-	0.865	
157	Unk	PCB-135	100.00	4.15e+07	1.23 y	37:54	-	0.936	
158	Unk	PCB-144	100.00	4.04e+07	1.28 y	38:01	-	0.911	
159	Unk	PCB-147	100.00	4.19e+07	1.25 y	38:08	-	0.945	
160	Unk	PCB-139	200.00	8.60e+07	1.25 y	38:22	-	0.970	Co-elute PCB 149
161	Unk	PCB-149	200.00	8.60e+07	1.25 y	38:22	-	0.970	Co-elute PCB 139
162	Unk	PCB-140	100.00	4.07e+07	1.26 y	38:34	-	0.917	
163	Unk	PCB-143	200.00	7.74e+07	1.24 y	38:57	-	0.872	Co-elute PCB 134
164	Unk	PCB-134	200.00	7.74e+07	1.24 y	38:57	-	0.872	Co-elute PCB 143
165	Unk	PCB-131	200.00	7.79e+07	1.25 y	39:15	-	0.878	Co-elute PCB 133
166	Unk	PCB-133	200.00	7.79e+07	1.25 y	39:15	-	0.878	Co-elute PCB 131
167	Unk	PCB-142	100.00	3.43e+07	1.26 y	39:23	-	0.773	
168	Unk	PCB-165	200.00	9.35e+07	1.26 y	39:37	-	1.05	Co-elute PCB 146
169	Unk	PCB-146	200.00	9.35e+07	1.26 y	39:37	-	1.05	Co-elute PCB 165
170	Unk	PCB-161	200.00	8.77e+07	1.26 y	39:50	-	0.989	Co-elute PCB 132
171	Unk	PCB-132	200.00	8.77e+07	1.26 y	39:50	-	0.989	Co-elute PCB 161
172	Unk	PCB-153	100.00	4.54e+07	1.24 y	39:60	-	1.02	
173	Unk	PCB-168	100.00	5.11e+07	1.27 y	40:11	-	1.15	
174	Unk	PCB-141	100.00	3.90e+07	1.26 y	40:42	-	0.879	
175	Unk	PCB-137	100.00	3.79e+07	1.24 y	41:04	-	0.855	
176	Unk	PCB-130	100.00	3.17e+07	1.26 y	41:09	-	0.715	
177	Unk	PCB-138	300.00	1.51e+08	1.25 y	41:32	-	1.14	Co-elute PCB 163/164
178	Unk	PCB-163	300.00	1.51e+08	1.25 y	41:32	-	1.14	Co-elute PCB 138/164
179	Unk	PCB-164	300.00	1.51e+08	1.25 y	41:32	-	1.14	Co-elute PCB 138/163
180	Unk	PCB-158	200.00	9.95e+07	1.26 y	41:47	-	1.12	Co-elute PCB 160
181	Unk	PCB-160	200.00	9.95e+07	1.26 y	41:47	-	1.12	Co-elute PCB 158
182	Unk	PCB-129	100.00	3.05e+07	1.24 y	41:58	-	0.686	
183	Unk	PCB-166	100.00	4.68e+07	1.24 y	42:24	-	1.05	
184	Unk	PCB-159	100.00	5.00e+07	1.23 y	42:43	-	1.13	
185	Unk	PCB-128	200.00	8.31e+07	1.24 y	42:59	-	0.937	Co-elute PCB 162
186	Unk	PCB-162	200.00	8.31e+07	1.24 y	42:59	-	0.937	Co-elute PCB 128
187	Unk	PCB-167	100.00	4.63e+07	1.23 y	43:22	-	0.964	
188	IS	13C-PCB-167	100.00	4.80e+07	1.27 y	43:20	-	1.14	
189	Unk	PCB-156	100.00	4.66e+07	1.24 y	44:34	-	1.04	
190	IS	13C-PCB-156	100.00	4.50e+07	1.27 y	44:34	-	1.07	
191	Unk	PCB-157	100.00	4.38e+07	1.25 y	44:51	-	0.960	
192	IS	13C-PCB-157	100.00	4.56e+07	1.25 y	44:49	-	1.09	
193	Unk	PCB-169	100.00	3.58e+07	1.24 y	46:45	-	0.923	
194	IS	13C-PCB-169	100.00	3.88e+07	1.30 y	46:43	-	0.924	
195	Unk	PCB-188	100.00	5.88e+07	1.05 y	39:38	-	1.12	
196	IS	13C-PCB-188	100.00	5.23e+07	1.07 y	39:37	-	1.25	

197	Unk	PCB-184	100.00	5.87e+07	1.05	y	40:03	-	1.35	
198	Unk	PCB-179	100.00	5.61e+07	1.06	y	40:47	-	1.29	
199	Unk	PCB-176	100.00	5.28e+07	1.06	y	41:14	-	1.22	
200	Unk	PCB-186	100.00	5.35e+07	1.07	y	41:48	-	1.23	
201	Unk	PCB-178	100.00	3.74e+07	1.05	y	42:16	-	0.864	
202	Unk	PCB-175	100.00	3.96e+07	1.05	y	42:36	-	0.913	
203	Unk	PCB-187	200.00	8.54e+07	1.08	y	42:46	-	0.986	Co-elute PCB 182
204	Unk	PCB-182	200.00	8.54e+07	1.08	y	42:46	-	0.986	Co-elute PCB 187
205	Unk	PCB-183	100.00	4.21e+07	1.05	y	43:04	-	0.973	
206	Unk	PCB-185	100.00	3.74e+07	1.05	y	43:42	-	0.863	
207	Unk	PCB-174	100.00	3.76e+07	1.05	y	44:02	-	0.867	
208	Unk	PCB-181	100.00	3.84e+07	1.06	y	44:08	-	0.886	
209	Unk	PCB-177	100.00	3.41e+07	1.05	y	44:18	-	0.788	
210	Unk	PCB-171	100.00	3.59e+07	1.04	y	44:34	-	0.828	
211	Unk	PCB-173	100.00	3.23e+07	1.05	y	44:59	-	0.745	
212	Unk	PCB-172	100.00	3.31e+07	1.04	y	45:22	-	0.764	
213	Unk	PCB-192	100.00	4.56e+07	1.06	y	45:32	-	1.05	
214	Unk	PCB-180	100.00	4.37e+07	1.06	y	45:44	-	1.01	
215	Unk	PCB-193	100.00	4.79e+07	1.05	y	45:53	-	1.11	
216	Unk	PCB-191	100.00	4.44e+07	1.05	y	46:07	-	1.02	
217	Unk	PCB-170	100.00	2.93e+07	1.06	y	47:01	-	0.676	
218	Unk	PCB-190	100.00	4.22e+07	1.05	y	47:11	-	0.974	
219	Unk	PCB-189	100.00	3.73e+07	1.06	y	48:23	-	1.09	
220	IS	13C-PCB-189	100.00	3.43e+07	1.10	y	48:22	-	0.816	
221	Unk	PCB-202	150.00	5.63e+07	0.89	y	44:44	-	1.00	
222	Unk	PCB-201	150.00	5.54e+07	0.90	y	45:11	-	0.987	
223	Unk	PCB-204	150.00	5.78e+07	0.90	y	45:21	-	1.03	
224	Unk	PCB-197	150.00	5.95e+07	0.89	y	45:35	-	1.06	
225	Unk	PCB-200	150.00	5.54e+07	0.91	y	46:21	-	0.986	
226	Unk	PCB-198	150.00	3.92e+07	0.89	y	47:32	-	0.698	
227	Unk	PCB-199	150.00	3.43e+07	0.91	y	47:37	-	0.612	
228	Unk	PCB-203	300.00	7.81e+07	0.92	y	47:52	-	0.695	Co-elute PCB 196
229	Unk	PCB-196	300.00	7.81e+07	0.92	y	47:52	-	0.695	Co-elute PCB 203
230	IS	13C-PCB-202	100.00	3.74e+07	0.93	y	44:43	-	0.891	
231	C/Up	13C-PCB-178	100.00	3.40e+07	1.08	y	42:15	-	0.809	
232	RS	13C-PCB-138	100.00	4.20e+07	1.29	y	41:28	4.20e+05	-	
233	Unk	PCB-195	150.00	3.89e+07	0.87	y	48:59	-	0.747	
234	Unk	PCB-194	150.00	4.22e+07	0.88	y	49:46	-	0.810	
235	Unk	PCB-205	150.00	5.36e+07	0.87	y	50:02	-	1.03	
236	IS	13C-PCB-205	100.00	3.47e+07	0.92	y	50:01	-	1.25	
237	Unk	PCB-208	150.00	5.29e+07	1.39	y	49:05	-	0.924	
238	IS	13C-PCB-208	100.00	3.81e+07	0.78	y	49:04	-	1.37	
239	Unk	PCB-207	150.00	4.81e+07	1.41	y	49:23	-	1.01	
240	Unk	PCB-206	150.00	3.79e+07	1.40	y	51:12	-	0.992	
241	IS	13C-PCB-206	100.00	2.55e+07	0.80	y	51:12	-	0.917	
242	Unk	PCB-209	150.00	6.37e+07	1.19	y	52:23	-	1.07	
243	IS	13C-PCB-209	100.00	3.98e+07	1.22	y	52:23	-	1.43	
244	RS	13C-PCB-194	100.00	2.78e+07	0.93	y	49:46	2.78e+05	-	

Analyst: _____ Date: 8/19/16

USEPA - ITD

FORM 4A
209 PCB CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 8/18/16

Instrument ID: FAL4 GC Column ID: DB1

VER Data Filename: 18AUG16Z Sam:1 Analysis Date: 18-AUG-16 16:50:51

NATIVE ANALYTES	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	M/M+2	3.21	2.66-3.60	y	49.1	37.5 - 62.5
PCB-3	M/M+2	3.21	2.66-3.60	y	46.8	37.5 - 62.5
PCB-4	M/M+2	1.58	1.33-1.79	y	46.6	37.5 - 62.5
PCB-15	M/M+2	1.55	1.33-1.79	y	42.3	37.5 - 62.5
PCB-19	M/M+2	1.04	0.88-1.20	y	50.2	37.5 - 62.5
PCB-37	M/M+2	1.03	0.88-1.20	y	44.5	37.5 - 62.5
PCB-54	M/M+2	0.77	0.65-0.89	y	48.1	37.5 - 62.5
PCB-77	M/M+2	0.78	0.65-0.89	y	49.7	37.5 - 62.5
PCB-81	M/M+2	0.78	0.65-0.89	y	48.3	37.5 - 62.5
PCB-104	M+2/M+4	1.59	1.32-1.78	y	45.9	37.5 - 62.5
PCB-105	M+2/M+4	1.54	1.32-1.78	y	47.3	37.5 - 62.5
PCB-114	M+2/M+4	1.52	1.32-1.78	y	49.4	37.5 - 62.5
PCB-118	M+2/M+4	1.50	1.32-1.78	y	50.5	37.5 - 62.5
PCB-123	M+2/M+4	1.55	1.32-1.78	y	44.1	37.5 - 62.5
PCB-126	M+2/M+4	1.65	1.32-1.78	y	46.9	37.5 - 62.5
PCB-155	M+2/M+4	1.27	1.05-1.43	y	49.0	37.5 - 62.5
PCB-156	M+2/M+4	1.26	1.05-1.43	y	47.4	37.5 - 62.5
PCB-157	M+2/M+4	1.25	1.05-1.43	y	50.4	37.5 - 62.5
PCB-167	M+2/M+4	1.25	1.05-1.43	y	50.9	37.5 - 62.5
PCB-169	M+2/M+4	1.26	1.05-1.43	y	52.8	37.5 - 62.5
PCB-188	M+2/M+4	1.05	0.89-1.21	y	45.9	37.5 - 62.5
PCB-189	M+2/M+4	1.07	0.89-1.21	y	49.2	37.5 - 62.5
PCB-202	M+2/M+4	0.89	0.76-1.02	y	51.6	37.5 - 62.5
PCB-205	M+2/M+4	0.88	0.76-1.02	y	48.0	37.5 - 62.5
PCB-206	M+4/M+6	1.41	1.13-1.53	y	46.3	37.5 - 62.5
PCB-208	M+4/M+6	1.40	1.13-1.53	y	46.1	37.5 - 62.5
PCB-209	M+4/M+6	1.19	0.99-1.33	y	51.9	37.5 - 62.5

Analyst: [signature] Date: 8/19/16

USEPA - ITD

FORM 4B
209 PCB CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 8/18/16

Instrument ID: FAL4 GC Column ID: DB1

VER Data Filename: 18AUG16Z Sam:1 Analysis Date: 18-AUG-16 16:50:51

	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL)
LABELED COMPOUNDS						
13C-PCB-1	M/M+2	3.06	2.66-3.60	y	105	50.0 - 145
13C-PCB-3	M/M+2	3.15	2.66-3.60	y	104	50.0 - 145
13C-PCB-4	M/M+2	1.61	1.33-1.79	y	114	50.0 - 145
13C-PCB-15	M/M+2	1.60	1.33-1.79	y	99.8	50.0 - 145
13C-PCB-19	M/M+2	1.08	0.88-1.20	y	107	50.0 - 145
13C-PCB-37	M/M+2	1.09	0.88-1.20	y	98.1	50.0 - 145
13C-PCB-54	M/M+2	0.80	0.65-0.89	y	105	50.0 - 145
13C-PCB-77	M/M+2	0.80	0.65-0.89	y	101	50.0 - 145
13C-PCB-81	M/M+2	0.80	0.65-0.89	y	99.2	50.0 - 145
13C-PCB-104	M+2/M+4	1.62	1.32-1.78	y	116	50.0 - 145
13C-PCB-105	M+2/M+4	1.63	1.32-1.78	y	102	50.0 - 145
13C-PCB-114	M+2/M+4	1.61	1.32-1.78	y	100	50.0 - 145
13C-PCB-118	M+2/M+4	1.61	1.32-1.78	y	101	50.0 - 145
13C-PCB-123	M+2/M+4	1.62	1.32-1.78	y	95.1	50.0 - 145
13C-PCB-126	M+2/M+4	1.58	1.32-1.78	y	98.2	50.0 - 145
13C-PCB-155	M+2/M+4	1.27	1.05-1.43	y	111	50.0 - 145
13C-PCB-156	M+2/M+4	1.28	1.05-1.43	y	101	50.0 - 145
13C-PCB-157	M+2/M+4	1.27	1.05-1.43	y	105	50.0 - 145
13C-PCB-167	M+2/M+4	1.26	1.05-1.43	y	101	50.0 - 145
13C-PCB-169	M+2/M+4	1.25	1.05-1.43	y	99.9	50.0 - 145
13C-PCB-188	M+2/M+4	1.08	0.89-1.21	y	113	50.0 - 145
13C-PCB-189	M+2/M+4	1.08	0.89-1.21	y	108	50.0 - 145
13C-PCB-202	M+2/M+4	0.92	0.76-1.02	y	112	50.0 - 145
13C-PCB-205	M+2/M+4	0.89	0.76-1.02	y	106	50.0 - 145
13C-PCB-206	M+2/M+4	0.78	0.65-0.89	y	116	50.0 - 145
13C-PCB-208	M+2/M+4	0.78	0.65-0.89	y	111	50.0 - 145
13C-PCB-209	M+4/M+6	1.19	0.99-1.33	y	102	50.0 - 145
CLEANUP STANDARDS						
13C-PCB-28	M/M+2	1.05	0.88-1.20	y	94.0	65.0 - 135
13C-PCB-111	M+2/M+4	1.59	1.32-1.78	y	109	75.0 - 125
13C-PCB-178	M+2/M+4	1.05	0.89-1.21	y	103	75.0 - 125

Analyst: [signature] Date: 8/19/16

FAL ID: ST081816Z2 Filename: 18AUG16Z Sam:14 Acquired: 19-AUG-16 05:50:06 ICal: DAILY209FAL4-8-18-16
Client ID: 1668 CS3 R150603A ConCal: ST081816Z1 EndCal: ST081816Z2
Results: GC Column: DB1 Amount: 1.000

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL	Rec
PCB-1	1.91e+07	3.28 y	14:31	1.04	52.2		2.50	-	-	*	
13C-PCB-1	3.54e+07	2.98 y	14:30	1.11	95.8		2.50				95.8
PCB-3	1.56e+07	3.51 y	16:60	1.07	51.9		2.50	-	-	*	
13C-PCB-3	2.82e+07	3.07 y	16:58	1.03	82.4		2.50				82.4
PCB-4	1.23e+07	1.51 y	18:10	1.22	44.5		2.50	-	-	*	
13C-PCB-4	2.26e+07	1.58 y	18:10	0.58	118		2.50				118
PCB-15	1.47e+07	1.57 y	23:47	1.26	44.6		2.50	-	-	*	
13C-PCB-15	2.62e+07	1.50 y	23:46	0.88	89.0		2.50				89.0
PCB-19	1.12e+07	1.04 y	22:03	1.07	56.8		2.50	-	-	*	
13C-PCB-19	1.85e+07	1.09 y	22:03	0.59	94.1		2.50				94.1
13C-PCB-9	3.32e+07	1.62 y	19:52	-	34.2		2.50				
PCB-37	1.04e+07	0.99 y	30:25	1.27	46.6		2.50	-	-	*	
13C-PCB-37	1.77e+07	0.98 y	30:24	1.22	73.0		2.50				73.0
PCB-54	1.44e+07	0.78 y	25:36	1.08	50.4		2.50	-	-	*	
13C-PCB-54	2.64e+07	0.78 y	25:34	1.24	107		2.50				107
PCB-104	9.38e+06	1.57 y	30:01	1.14	50.0		2.50	-	-	*	
13C-PCB-104	1.65e+07	1.61 y	29:60	0.87	95.6		2.50				95.6
13C-PCB-28	2.30e+07	1.08 y	26:41	1.47	79.1		2.50				79.1
13C-PCB-52	1.98e+07	0.80 y	28:55	-	35.6		2.50				
PCB-81	9.11e+06	0.78 y	36:10	1.18	47.6		2.50	-	-	*	
13C-PCB-81	1.62e+07	0.80 y	36:09	1.07	90.2		2.50				90.2
PCB-77	8.68e+06	0.75 y	36:44	1.08	48.2		2.50	-	-	*	
13C-PCB-77	1.67e+07	0.81 y	36:43	1.09	91.4		2.50				91.4
PCB-155	9.73e+06	1.26 y	34:10	1.07	52.0		2.50	-	-	*	
13C-PCB-155	1.74e+07	1.29 y	34:09	1.06	97.9		2.50				97.9
13C-PCB-111	1.88e+07	1.57 y	36:15	1.13	99.5		2.50				99.5
13C-PCB-101	1.68e+07	1.59 y	34:36	-	33.8		2.50				
PCB-123	6.43e+06	1.51 y	38:19	1.24	42.9		2.50	-	-	*	
13C-PCB-123	1.21e+07	1.60 y	38:17	1.09	78.6		2.50				78.6
PCB-118	8.31e+06	1.47 y	38:30	1.08	51.3		2.50	-	-	*	
13C-PCB-118	1.50e+07	1.58 y	38:29	1.19	90.0		2.50				90.0
PCB-114	7.21e+06	1.50 y	39:06	1.08	50.1		2.50	-	-	*	
13C-PCB-114	1.33e+07	1.65 y	39:05	1.11	85.3		2.50				85.3
PCB-105	7.39e+06	1.45 y	39:56	1.13	45.2		2.50	-	-	*	
13C-PCB-105	1.45e+07	1.65 y	39:54	1.14	90.9		2.50				90.9
PCB-126	6.54e+06	1.50 y	42:04	1.14	45.3		2.50	-	-	*	
13C-PCB-126	1.27e+07	1.60 y	42:04	0.97	92.7		2.50				92.7
PCB-167	8.15e+06	1.28 y	43:23	0.96	50.2		2.50	-	-	*	
13C-PCB-167	1.68e+07	1.27 y	43:23	1.14	105		2.50				105
PCB-156	7.86e+06	1.25 y	44:37	1.04	47.7		2.50	-	-	*	
13C-PCB-156	1.59e+07	1.28 y	44:37	1.07	106		2.50				106
PCB-157	8.14e+06	1.25 y	44:52	0.96	50.1		2.50	-	-	*	
13C-PCB-157	1.69e+07	1.28 y	44:52	1.09	111		2.50				111
PCB-169	6.37e+06	1.28 y	46:46	0.92	50.8		2.50	-	-	*	
13C-PCB-169	1.36e+07	1.28 y	46:46	0.92	105		2.50				105
PCB-188	9.95e+06	1.05 y	39:39	1.12	47.7		2.50	-	-	*	
13C-PCB-188	1.85e+07	1.10 y	39:38	1.25	106		2.50				106
PCB-189	6.42e+06	1.07 y	48:24	1.09	51.5		2.50	-	-	*	
13C-PCB-189	1.14e+07	1.11 y	48:23	0.82	99.9		2.50				99.9
PCB-202	5.71e+06	0.87 y	44:45	1.00	57.3		2.50	-	-	*	
13C-PCB-202	9.95e+06	0.94 y	44:45	0.89	79.5		2.50				79.5
13C-PCB-178	1.13e+07	1.08 y	42:17	0.81	99.7		2.50				99.7
13C-PCB-138	1.40e+07	1.28 y	41:31	-	33.4		2.50				

FAL ID: ST081816Z2 Filename: 18AUG16Z Sam:14 Acquired: 19-AUG-16 05:50:06 ICal: DAILY209FAL4-8-18-16 2 of 2
Client ID: 1668 CS3 R150603A ConCal: ST081816Z1 EndCal: ST081816Z2
Results: GC Column: DB1 Amount: 1.000

PCB-205	4.93e+06	0.84	y	50:03	1.03	46.1	2.50	-	-	*	
13C-PCB-205	1.04e+07	0.89	y	50:03	1.25	111	2.50				111
PCB-208	5.00e+06	1.49	y	49:07	0.92	44.0	2.50	-	-	*	
13C-PCB-208	1.23e+07	0.77	y	49:06	1.37	120	2.50				120
PCB-206	4.32e+06	1.50	y	51:14	0.99	43.9	2.50	-	-	*	
13C-PCB-206	9.93e+06	0.77	y	51:13	0.92	145	2.50				145
PCB-209	8.04e+06	1.19	y	52:25	1.07	54.4	2.50	-	-	*	
13C-PCB-209	1.38e+07	1.18	y	52:24	1.43	129	2.50				129
13C-PCB-194	7.48e+06	0.93	y	49:47	-	26.9	2.50				

Analyst: _____ Date: 8/19/16

USEPA - ITD

FORM 4A
209 PCB CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 8/18/16

Instrument ID: FAL4 GC Column ID: DB1

VER Data Filename: 18AUG16Z Sam:14 Analysis Date: 19-AUG-16 05:50:06

NATIVE ANALYTES	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	M/M+2	3.28	2.66-3.60	y	52.2	37.5 - 62.5
PCB-3	M/M+2	3.51	2.66-3.60	y	51.9	37.5 - 62.5
PCB-4	M/M+2	1.51	1.33-1.79	y	44.5	37.5 - 62.5
PCB-15	M/M+2	1.57	1.33-1.79	y	44.6	37.5 - 62.5
PCB-19	M/M+2	1.04	0.88-1.20	y	56.8	37.5 - 62.5
PCB-37	M/M+2	0.99	0.88-1.20	y	46.6	37.5 - 62.5
PCB-54	M/M+2	0.78	0.65-0.89	y	50.4	37.5 - 62.5
PCB-77	M/M+2	0.75	0.65-0.89	y	48.2	37.5 - 62.5
PCB-81	M/M+2	0.78	0.65-0.89	y	47.6	37.5 - 62.5
PCB-104	M+2/M+4	1.57	1.32-1.78	y	50.0	37.5 - 62.5
PCB-105	M+2/M+4	1.45	1.32-1.78	y	45.2	37.5 - 62.5
PCB-114	M+2/M+4	1.50	1.32-1.78	y	50.1	37.5 - 62.5
PCB-118	M+2/M+4	1.47	1.32-1.78	y	51.3	37.5 - 62.5
PCB-123	M+2/M+4	1.51	1.32-1.78	y	42.9	37.5 - 62.5
PCB-126	M+2/M+4	1.50	1.32-1.78	y	45.3	37.5 - 62.5
PCB-155	M+2/M+4	1.26	1.05-1.43	y	52.0	37.5 - 62.5
PCB-156	M+2/M+4	1.25	1.05-1.43	y	47.7	37.5 - 62.5
PCB-157	M+2/M+4	1.25	1.05-1.43	y	50.1	37.5 - 62.5
PCB-167	M+2/M+4	1.28	1.05-1.43	y	50.2	37.5 - 62.5
PCB-169	M+2/M+4	1.28	1.05-1.43	y	50.8	37.5 - 62.5
PCB-188	M+2/M+4	1.05	0.89-1.21	y	47.7	37.5 - 62.5
PCB-189	M+2/M+4	1.07	0.89-1.21	y	51.5	37.5 - 62.5
PCB-202	M+2/M+4	0.87	0.76-1.02	y	57.3	37.5 - 62.5
PCB-205	M+2/M+4	0.84	0.76-1.02	y	46.1	37.5 - 62.5
PCB-206	M+4/M+6	1.50	1.13-1.53	y	43.9	37.5 - 62.5
PCB-208	M+4/M+6	1.49	1.13-1.53	y	44.0	37.5 - 62.5
PCB-209	M+4/M+6	1.19	0.99-1.33	y	54.4	37.5 - 62.5

Analyst: [signature] Date: 8/19/16

USEPA - ITD

FORM 4B
209 PCB CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 8/18/16

Instrument ID: FAL4 GC Column ID: DB1

VER Data Filename: 18AUG16Z Sam:14 Analysis Date: 19-AUG-16 05:50:06

	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL)
LABELED COMPOUNDS						
13C-PCB-1	M/M+2	2.98	2.66-3.60	y	95.8	50.0 - 145
13C-PCB-3	M/M+2	3.07	2.66-3.60	y	82.4	50.0 - 145
13C-PCB-4	M/M+2	1.58	1.33-1.79	y	118	50.0 - 145
13C-PCB-15	M/M+2	1.50	1.33-1.79	y	89.0	50.0 - 145
13C-PCB-19	M/M+2	1.09	0.88-1.20	y	94.1	50.0 - 145
13C-PCB-37	M/M+2	0.98	0.88-1.20	y	73.0	50.0 - 145
13C-PCB-54	M/M+2	0.78	0.65-0.89	y	107	50.0 - 145
13C-PCB-77	M/M+2	0.81	0.65-0.89	y	91.4	50.0 - 145
13C-PCB-81	M/M+2	0.80	0.65-0.89	y	90.2	50.0 - 145
13C-PCB-104	M+2/M+4	1.61	1.32-1.78	y	95.6	50.0 - 145
13C-PCB-105	M+2/M+4	1.65	1.32-1.78	y	90.9	50.0 - 145
13C-PCB-114	M+2/M+4	1.65	1.32-1.78	y	85.3	50.0 - 145
13C-PCB-118	M+2/M+4	1.58	1.32-1.78	y	90.0	50.0 - 145
13C-PCB-123	M+2/M+4	1.60	1.32-1.78	y	78.6	50.0 - 145
13C-PCB-126	M+2/M+4	1.60	1.32-1.78	y	92.7	50.0 - 145
13C-PCB-155	M+2/M+4	1.29	1.05-1.43	y	97.9	50.0 - 145
13C-PCB-156	M+2/M+4	1.28	1.05-1.43	y	106	50.0 - 145
13C-PCB-157	M+2/M+4	1.28	1.05-1.43	y	111	50.0 - 145
13C-PCB-167	M+2/M+4	1.27	1.05-1.43	y	105	50.0 - 145
13C-PCB-169	M+2/M+4	1.28	1.05-1.43	y	105	50.0 - 145
13C-PCB-188	M+2/M+4	1.10	0.89-1.21	y	106	50.0 - 145
13C-PCB-189	M+2/M+4	1.11	0.89-1.21	y	99.9	50.0 - 145
13C-PCB-202	M+2/M+4	0.94	0.76-1.02	y	79.5	50.0 - 145
13C-PCB-205	M+2/M+4	0.89	0.76-1.02	y	111	50.0 - 145
13C-PCB-206	M+2/M+4	0.77	0.65-0.89	y	145	50.0 - 145
13C-PCB-208	M+2/M+4	0.77	0.65-0.89	y	120	50.0 - 145
13C-PCB-209	M+4/M+6	1.18	0.99-1.33	y	129	50.0 - 145
CLEANUP STANDARDS						
13C-PCB-28	M/M+2	1.08	0.88-1.20	y	79.1	65.0 - 135
13C-PCB-111	M+2/M+4	1.57	1.32-1.78	y	99.5	75.0 - 125
13C-PCB-178	M+2/M+4	1.08	0.89-1.21	y	99.7	75.0 - 125

Analyst: _____ Date: 8/19/16

FAL ID: ST081816Z1 Filename: 18AUG16Z Sam:1 Acquired: 18-AUG-16 16:50:51 ICal: DAILY209FAL4-8-18-16
Client ID: 1668 CS3 R150603A ConCal: ST081816Z1 EndCal: ST081816Z2
Results: GC Column: DB1 Amount: 1.000

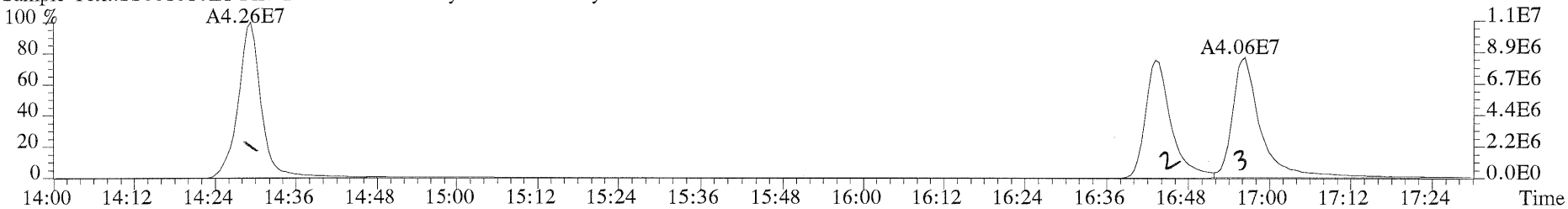
Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL	Rec
PCB-1	4.37e+07	3.21 y	14:29	1.04	49.1		2.50	-	-	*	
13C-PCB-1	8.59e+07	3.06 y	14:28	1.11	105		2.50				105
PCB-3	3.96e+07	3.21 y	16:56	1.07	46.8		2.50	-	-	*	
13C-PCB-3	7.91e+07	3.15 y	16:55	1.03	104		2.50				104
PCB-4	2.74e+07	1.58 y	18:09	1.22	46.6		2.50	-	-	*	
13C-PCB-4	4.83e+07	1.61 y	18:08	0.58	114		2.50				114
PCB-15	3.46e+07	1.55 y	23:43	1.26	42.3		2.50	-	-	*	
13C-PCB-15	6.50e+07	1.60 y	23:42	0.88	99.8		2.50				99.8
PCB-19	2.50e+07	1.04 y	22:02	1.07	50.2		2.50	-	-	*	
13C-PCB-19	4.66e+07	1.08 y	22:01	0.59	107		2.50				107
13C-PCB-9	7.36e+07	1.60 y	19:49	-	75.7		2.50				
PCB-37	2.95e+07	1.03 y	30:22	1.27	44.5		2.50	-	-	*	
13C-PCB-37	5.23e+07	1.09 y	30:21	1.22	98.1		2.50				98.1
PCB-54	2.98e+07	0.77 y	25:33	1.08	48.1		2.50	-	-	*	
13C-PCB-54	5.73e+07	0.80 y	25:32	1.24	105		2.50				105
PCB-104	2.30e+07	1.59 y	29:58	1.14	45.9		2.50	-	-	*	
13C-PCB-104	4.39e+07	1.62 y	29:57	0.87	116		2.50				116
13C-PCB-28	6.03e+07	1.05 y	26:39	1.47	94.0		2.50				94.0
13C-PCB-52	4.37e+07	0.80 y	28:53	-	78.4		2.50				
PCB-81	2.33e+07	0.78 y	36:07	1.18	48.3		2.50	-	-	*	
13C-PCB-81	4.08e+07	0.80 y	36:06	1.07	99.2		2.50				99.2
PCB-77	2.27e+07	0.78 y	36:41	1.08	49.7		2.50	-	-	*	
13C-PCB-77	4.22e+07	0.80 y	36:40	1.09	101		2.50				101
PCB-155	2.38e+07	1.27 y	34:08	1.07	49.0		2.50	-	-	*	
13C-PCB-155	4.53e+07	1.27 y	34:07	1.06	111		2.50				111
13C-PCB-111	4.74e+07	1.59 y	36:12	1.13	109		2.50				109
13C-PCB-101	3.85e+07	1.60 y	34:34	-	77.6		2.50				
PCB-123	1.91e+07	1.55 y	38:17	1.24	44.1		2.50	-	-	*	
13C-PCB-123	3.48e+07	1.62 y	38:15	1.09	95.1		2.50				95.1
PCB-118	2.18e+07	1.50 y	38:27	1.08	50.5		2.50	-	-	*	
13C-PCB-118	3.99e+07	1.61 y	38:25	1.19	101		2.50				101
PCB-114	1.99e+07	1.52 y	39:05	1.08	49.4		2.50	-	-	*	
13C-PCB-114	3.74e+07	1.61 y	39:03	1.11	100		2.50				100
PCB-105	2.06e+07	1.54 y	39:52	1.13	47.3		2.50	-	-	*	
13C-PCB-105	3.87e+07	1.63 y	39:52	1.14	102		2.50				102
PCB-126	1.71e+07	1.65 y	42:03	1.14	46.9		2.50	-	-	*	
13C-PCB-126	3.20e+07	1.58 y	42:01	0.97	98.2		2.50				98.2
PCB-167	1.89e+07	1.25 y	43:22	0.96	50.9		2.50	-	-	*	
13C-PCB-167	3.86e+07	1.26 y	43:20	1.14	101		2.50				101
PCB-156	1.79e+07	1.26 y	44:36	1.04	47.4		2.50	-	-	*	
13C-PCB-156	3.64e+07	1.28 y	44:34	1.07	101		2.50				101
PCB-157	1.84e+07	1.25 y	44:50	0.96	50.4		2.50	-	-	*	
13C-PCB-157	3.82e+07	1.27 y	44:49	1.09	105		2.50				105
PCB-169	1.51e+07	1.26 y	46:44	0.92	52.8		2.50	-	-	*	
13C-PCB-169	3.09e+07	1.25 y	46:44	0.92	99.9		2.50				99.9
PCB-188	2.44e+07	1.05 y	39:38	1.12	45.9		2.50	-	-	*	
13C-PCB-188	4.73e+07	1.08 y	39:36	1.25	113		2.50				113
PCB-189	1.58e+07	1.07 y	48:23	1.09	49.2		2.50	-	-	*	
13C-PCB-189	2.96e+07	1.08 y	48:23	0.82	108		2.50				108
PCB-202	1.73e+07	0.89 y	44:44	1.00	51.6		2.50	-	-	*	
13C-PCB-202	3.34e+07	0.92 y	44:42	0.89	112		2.50				112
13C-PCB-178	2.79e+07	1.05 y	42:16	0.81	103		2.50				103
13C-PCB-138	3.35e+07	1.28 y	41:28	-	79.7		2.50				

FAL ID: ST081816Z1 Filename: 18AUG16Z Sam:1 Acquired: 18-AUG-16 16:50:51 ICal: DAILY209FAL4-8-18-16 2 of 2
Client ID: 1668 CS3 R150603A ConCal: ST081816Z1 EndCal: ST081816Z2
Results: GC Column: DB1 Amount: 1.000

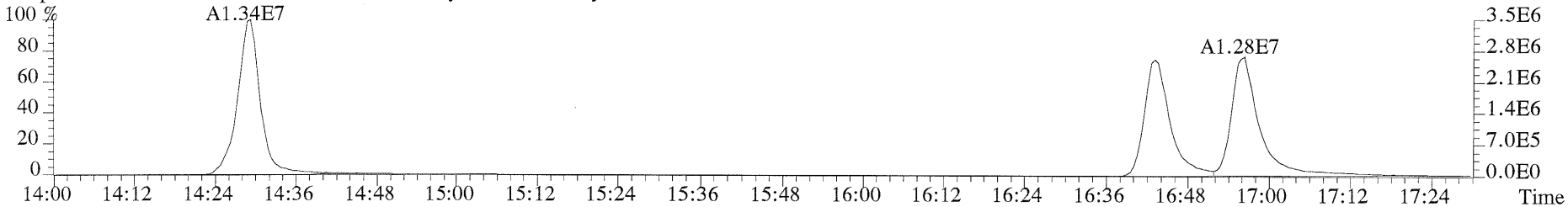
PCB-205	1.44e+07	0.88 y	50:01	1.03	48.0	2.50	-	-	*	
13C-PCB-205	2.92e+07	0.89 y	50:01	1.25	106	2.50				106
PCB-208	1.42e+07	1.40 y	49:06	0.92	46.1	2.50	-	-	*	
13C-PCB-208	3.34e+07	0.78 y	49:05	1.37	111	2.50				111
PCB-206	1.07e+07	1.41 y	51:13	0.99	46.3	2.50	-	-	*	
13C-PCB-206	2.33e+07	0.78 y	51:12	0.92	116	2.50				116
PCB-209	1.77e+07	1.19 y	52:24	1.07	51.9	2.50	-	-	*	
13C-PCB-209	3.19e+07	1.19 y	52:23	1.43	102	2.50				102
13C-PCB-194	2.20e+07	0.91 y	49:46	-	79.1	2.50				

Analyst: _____ Date: 8/19/16

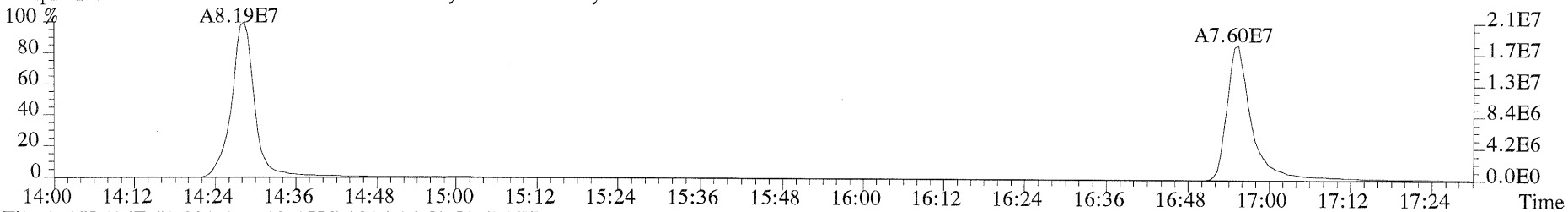
File:18AUG16Z #1-901 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
188.0393 S:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



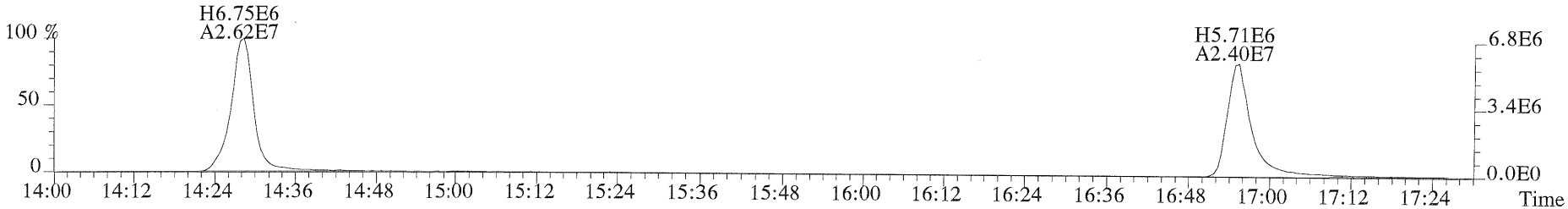
File:18AUG16Z #1-901 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
190.0363 S:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



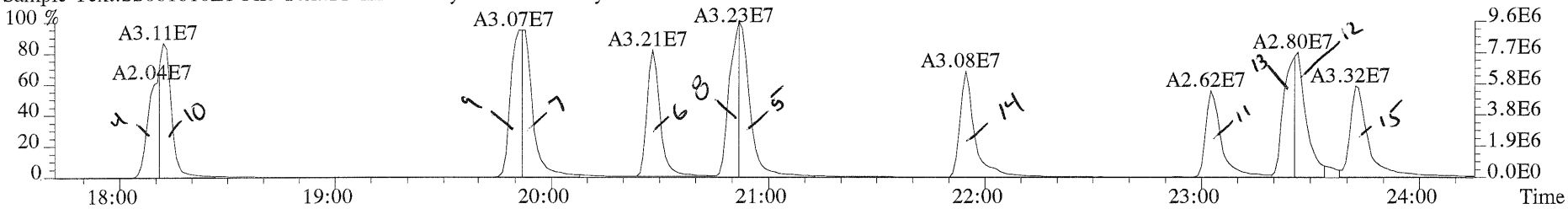
File:18AUG16Z #1-901 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
200.0795 S:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



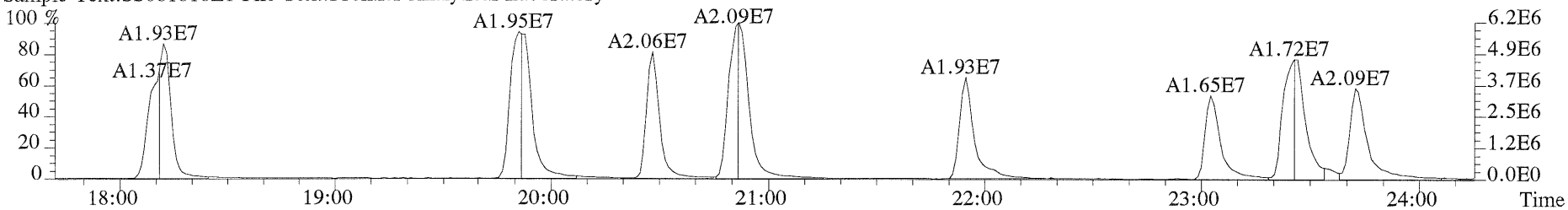
File:18AUG16Z #1-901 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
202.0766 S:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



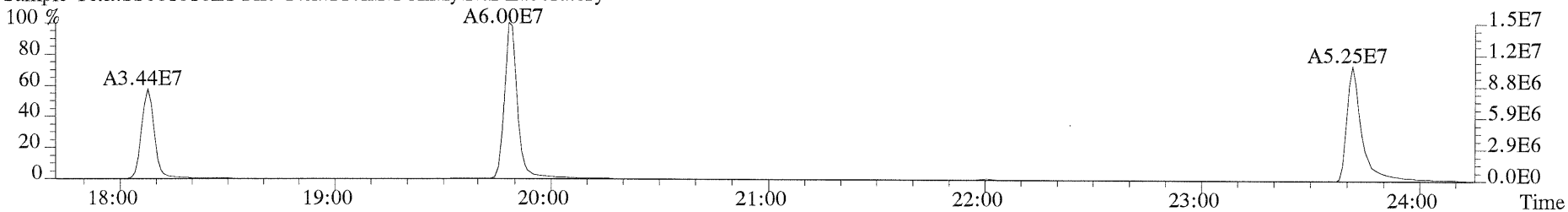
File:18AUG16Z #1-509 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
222.0003 S:2 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



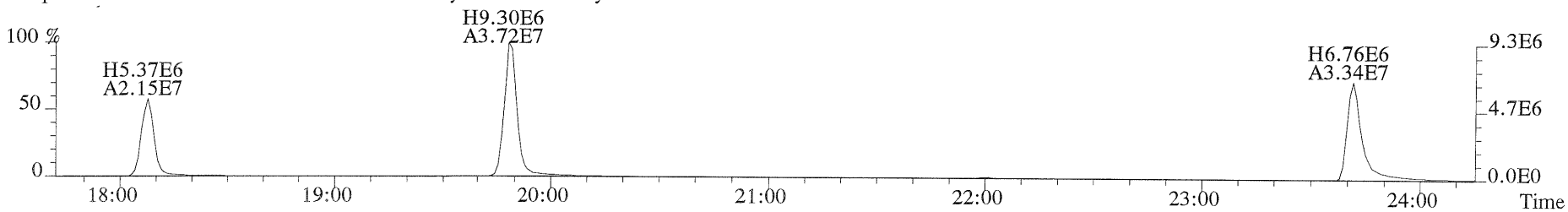
File:18AUG16Z #1-509 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
223.9974 S:2 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



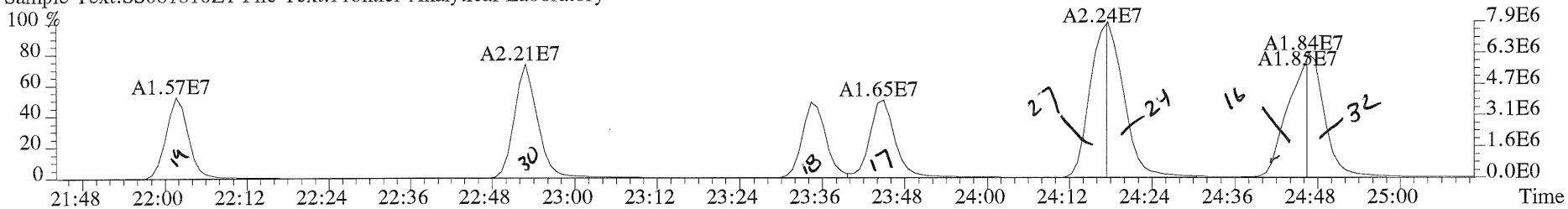
File:18AUG16Z #1-509 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
234.0406 S:2 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



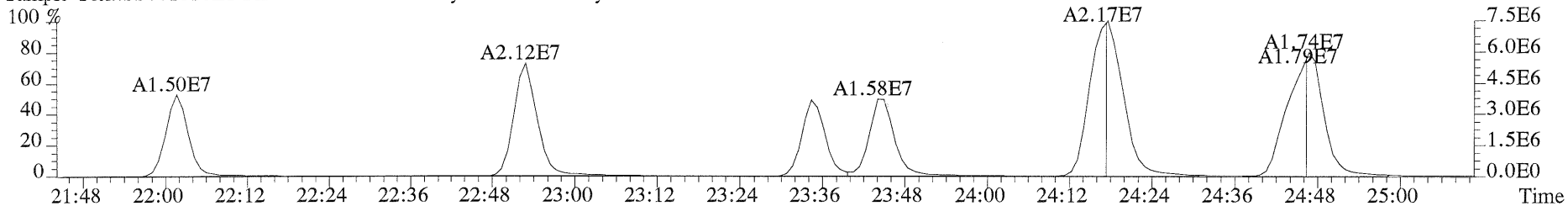
File:18AUG16Z #1-509 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
236.0376 S:2 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



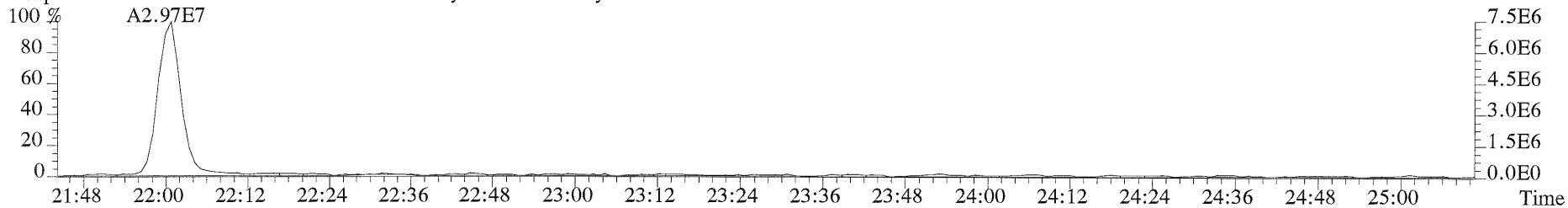
File:18AUG16Z #1-509 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:2 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



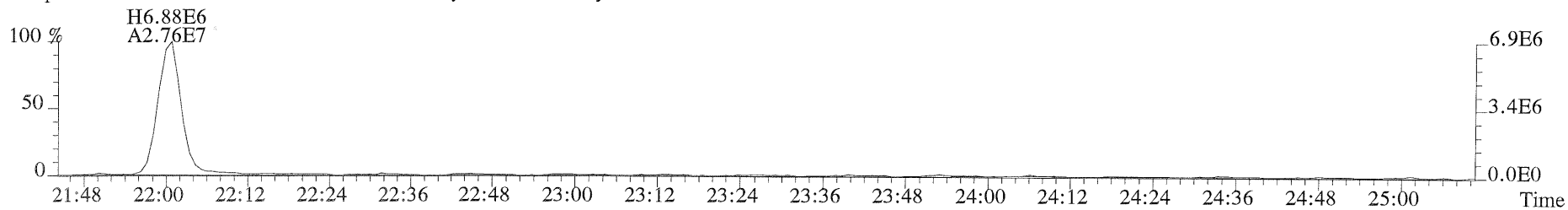
File:18AUG16Z #1-509 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:2 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



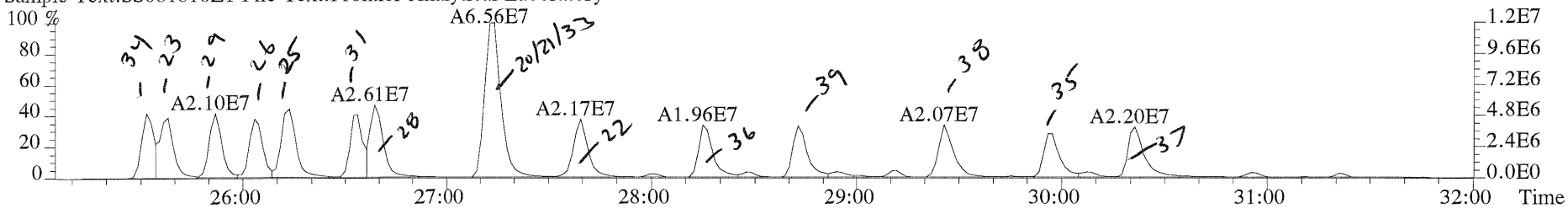
File:18AUG16Z #1-509 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:2 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



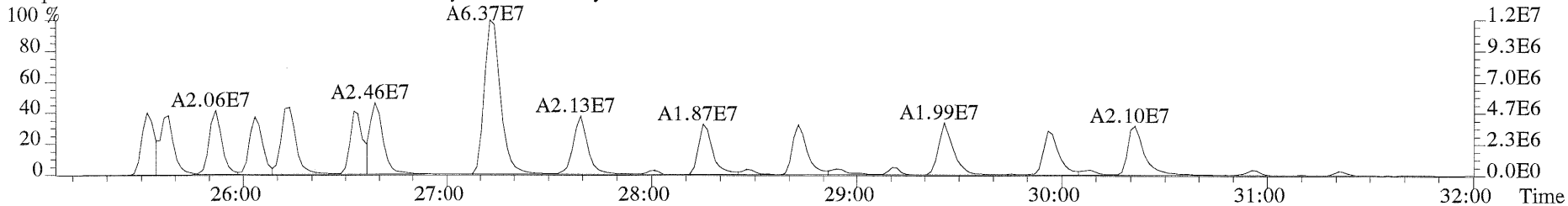
File:18AUG16Z #1-509 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:2 F:2 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



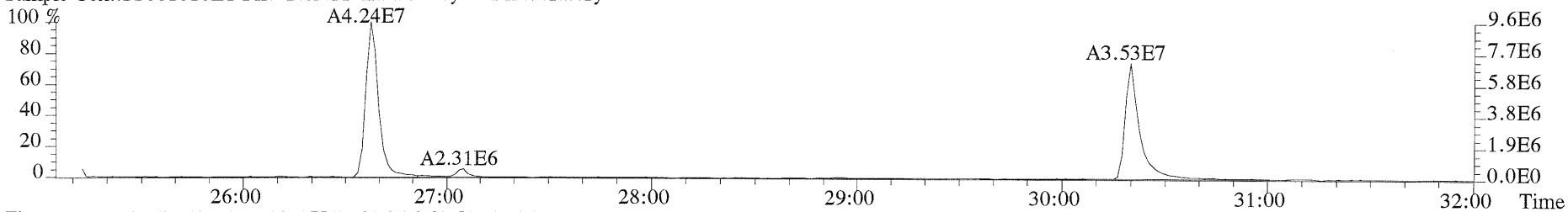
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:2 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



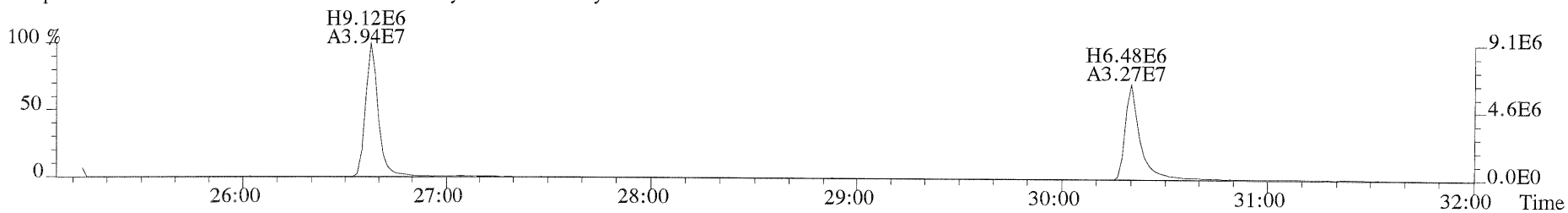
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:2 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



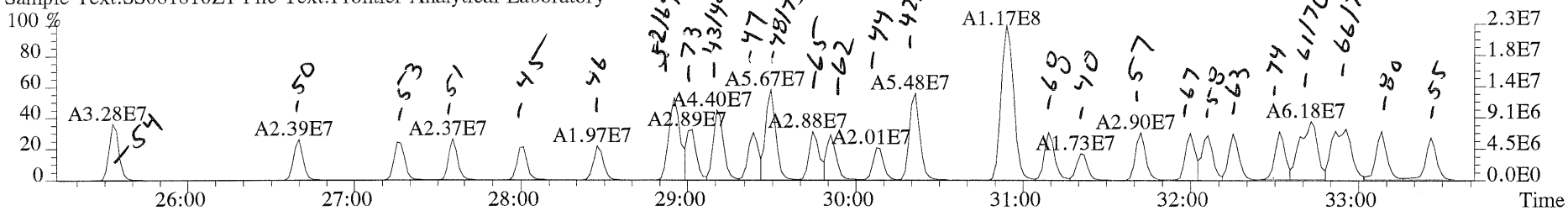
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:2 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



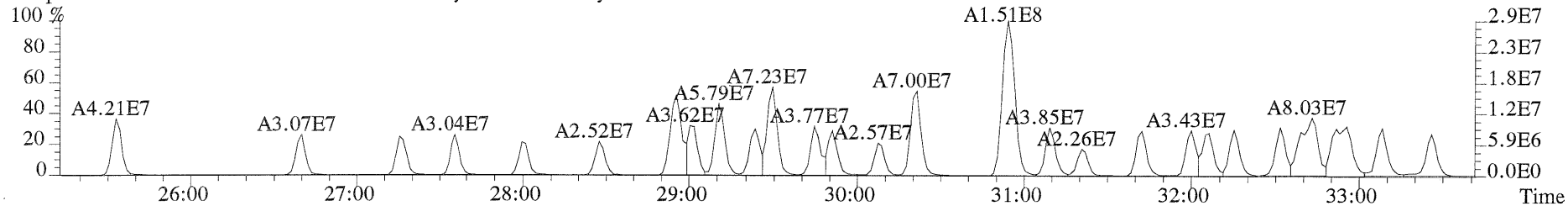
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:2 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



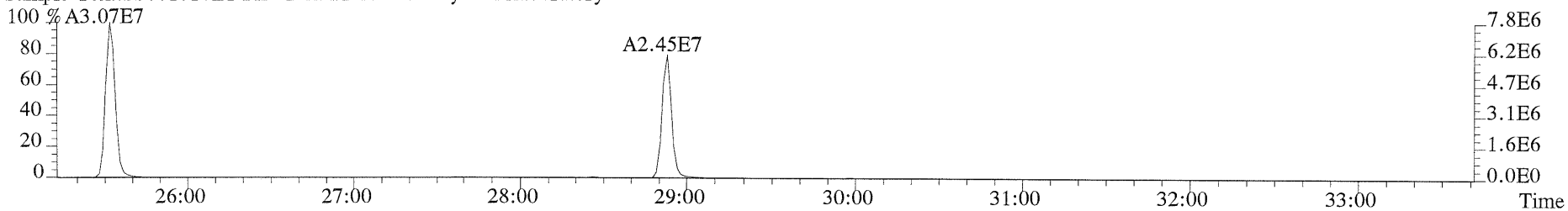
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:2 F:3 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



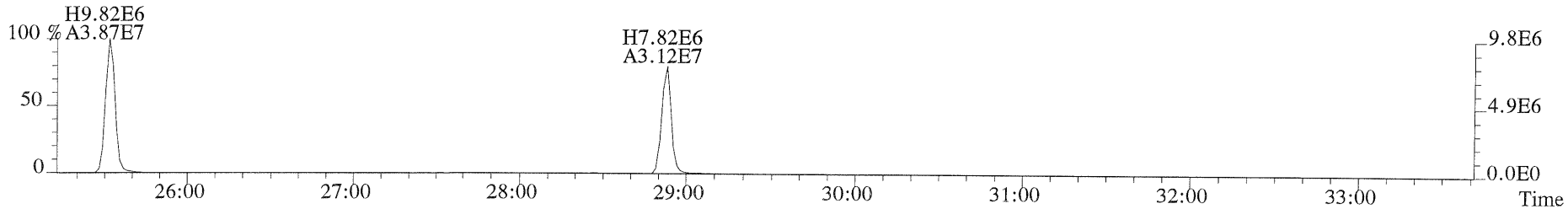
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:2 F:3 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



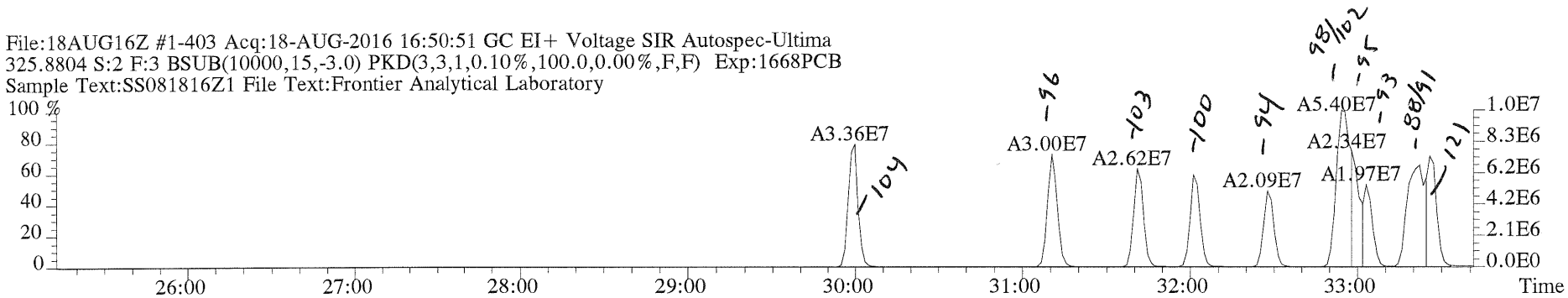
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:2 F:3 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



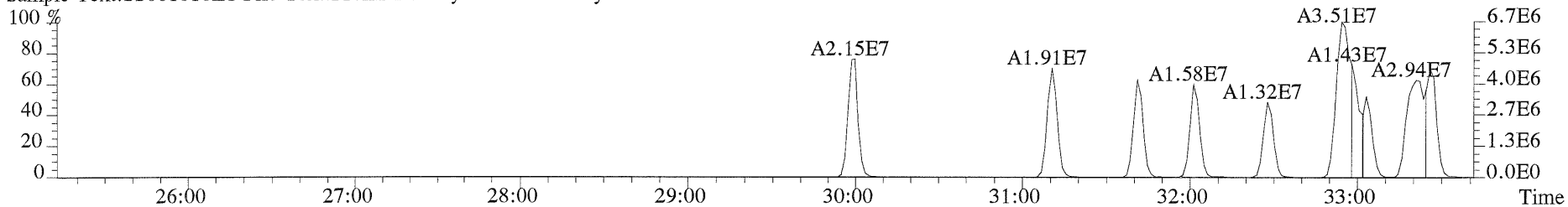
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:2 F:3 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



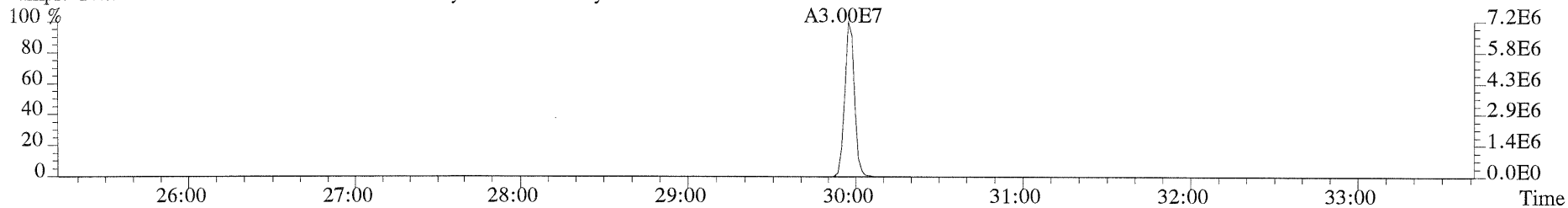
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:2 F:3 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



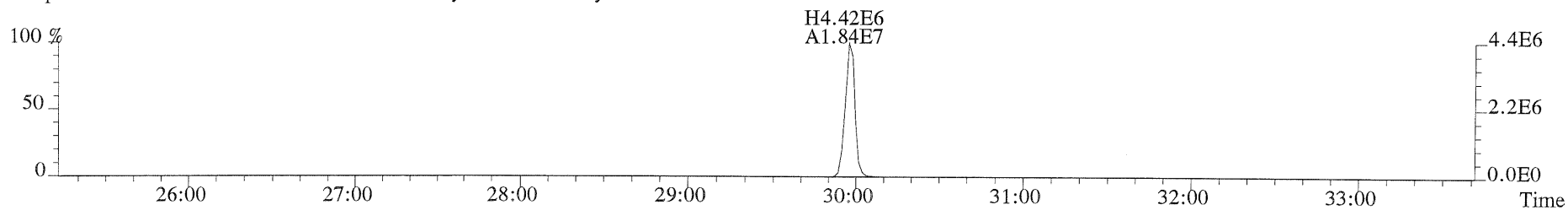
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:2 F:3 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



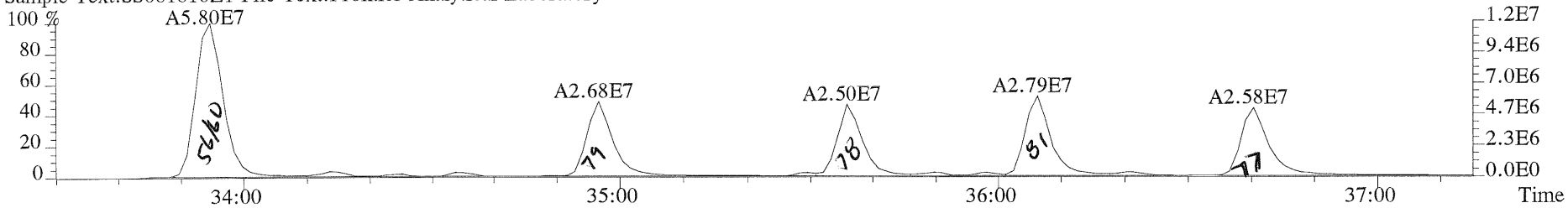
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:2 F:3 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



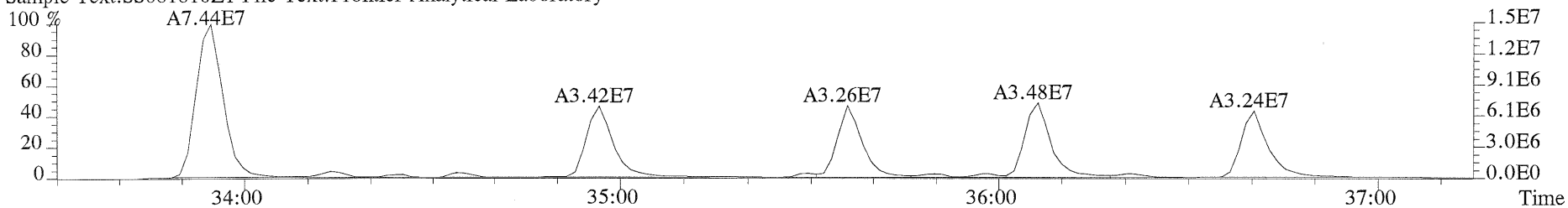
File:18AUG16Z #1-403 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:2 F:3 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



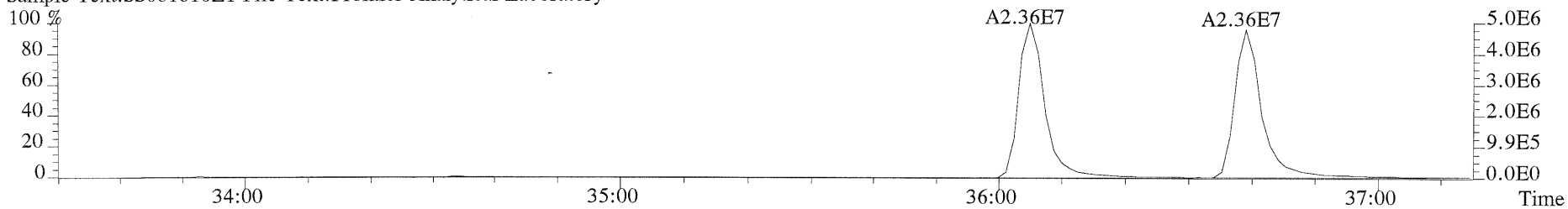
File:18AUG16Z #1-178 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



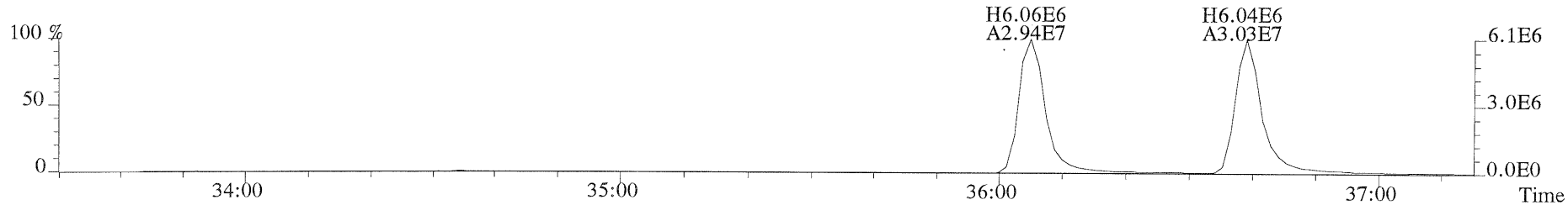
File:18AUG16Z #1-178 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



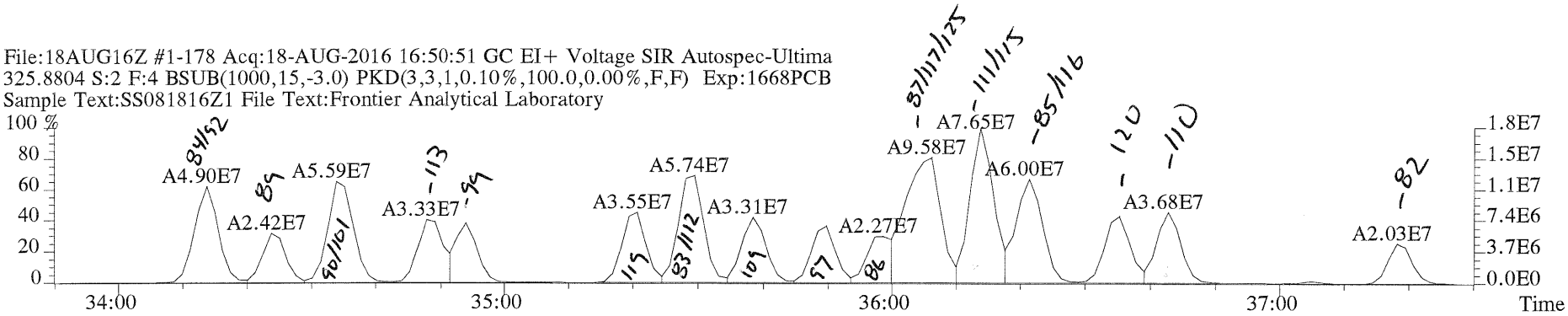
File:18AUG16Z #1-178 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



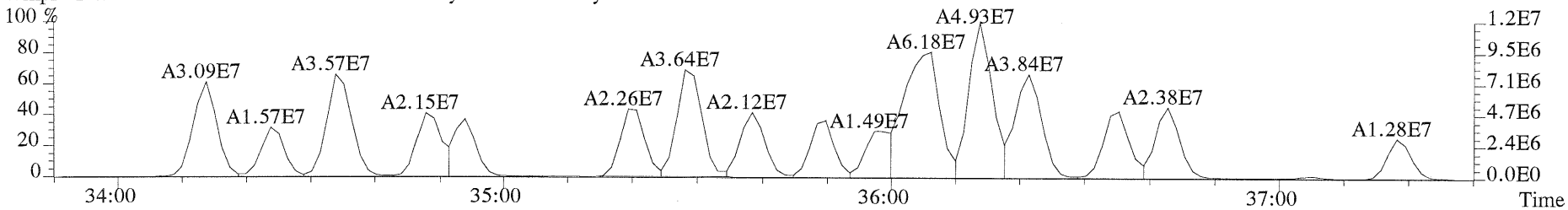
File:18AUG16Z #1-178 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



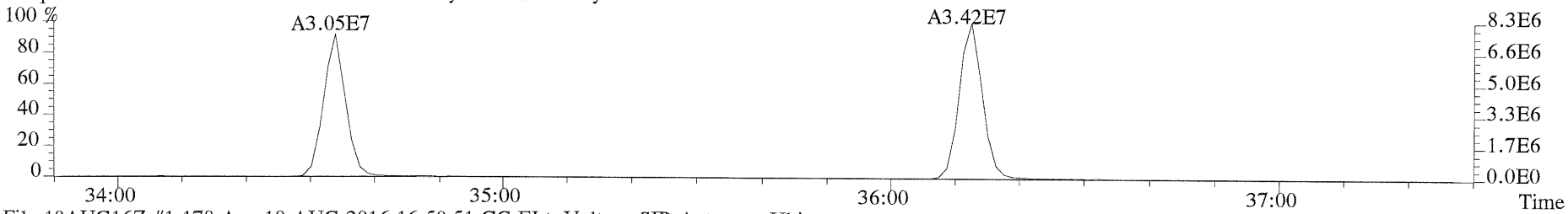
File:18AUG16Z #1-178 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



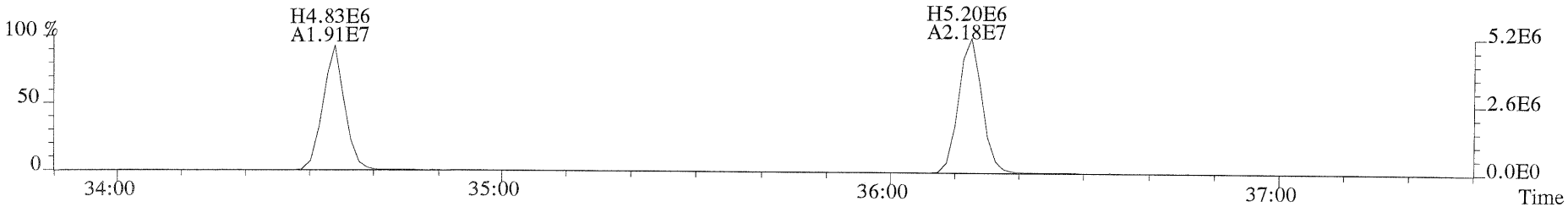
File:18AUG16Z #1-178 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



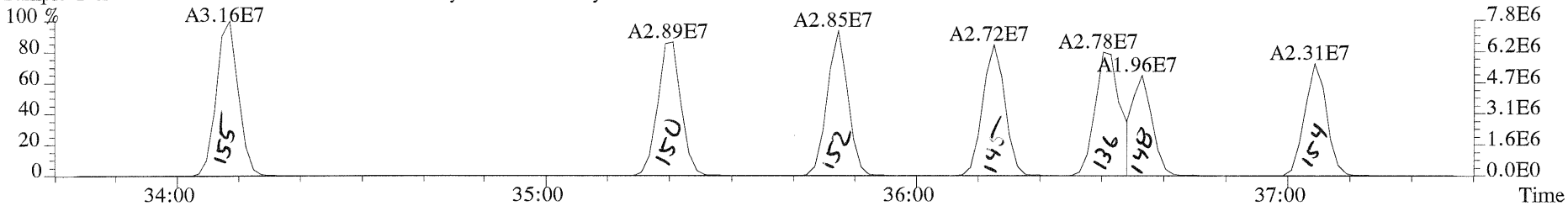
File:18AUG16Z #1-178 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



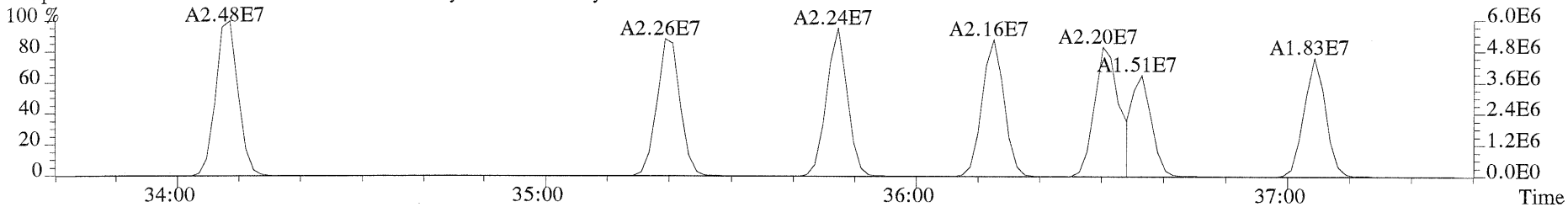
File:18AUG16Z #1-178 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



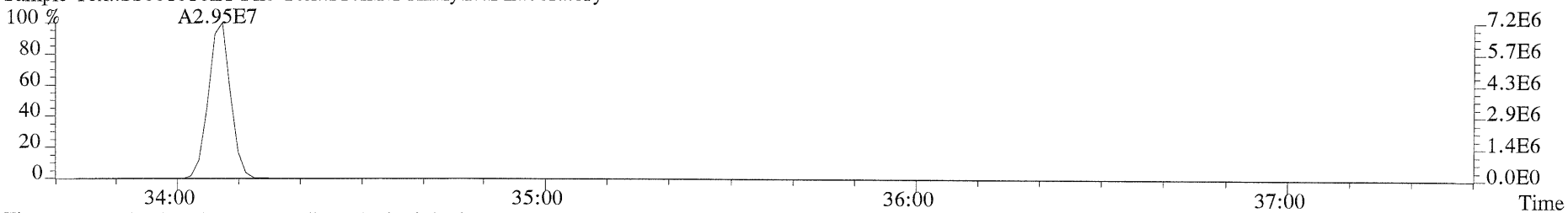
File:18AUG16Z #1-178 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



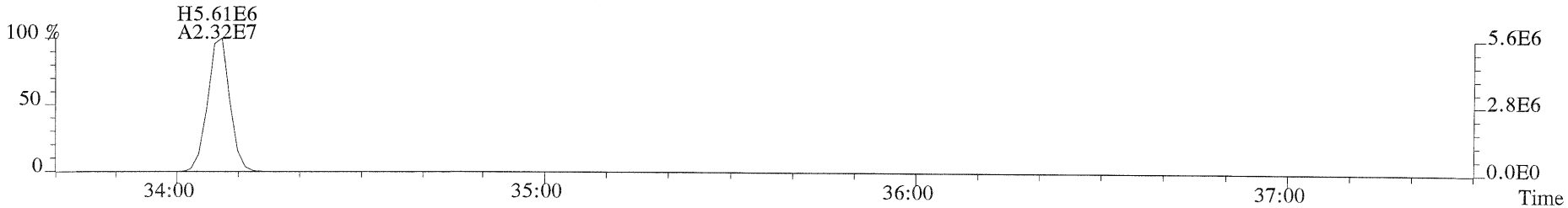
File:18AUG16Z #1-178 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



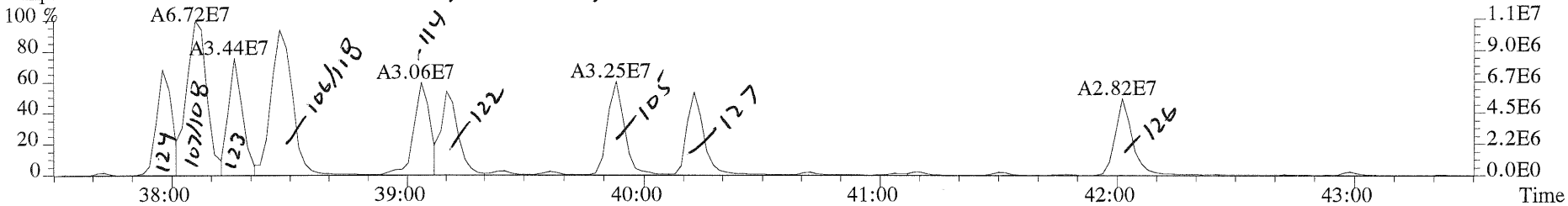
File:18AUG16Z #1-178 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



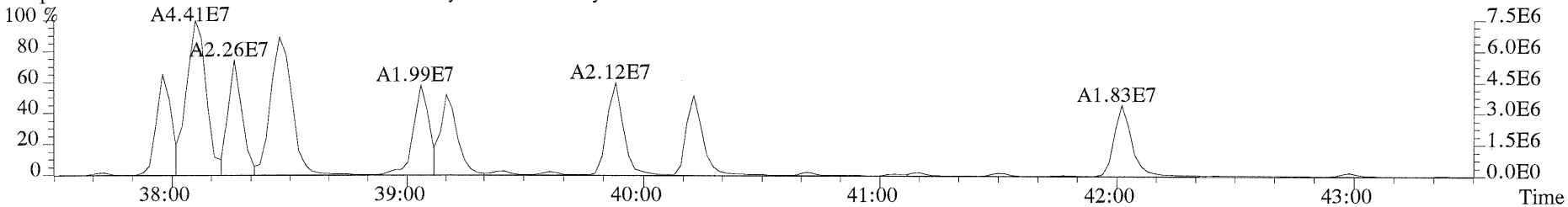
File:18AUG16Z #1-178 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:2 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



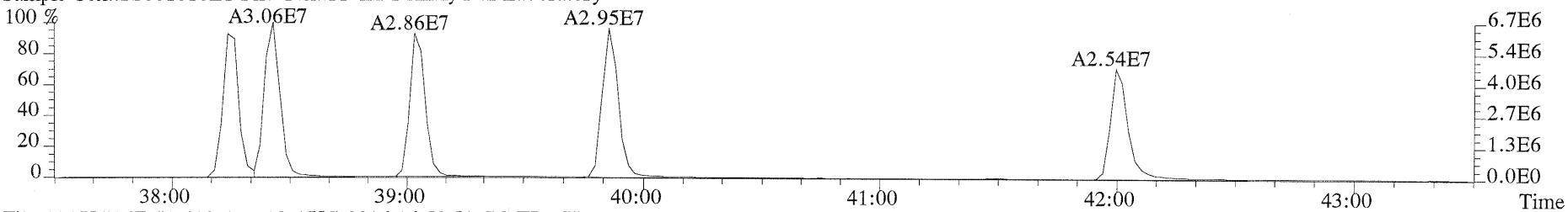
File:18AUG16Z #1-412 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



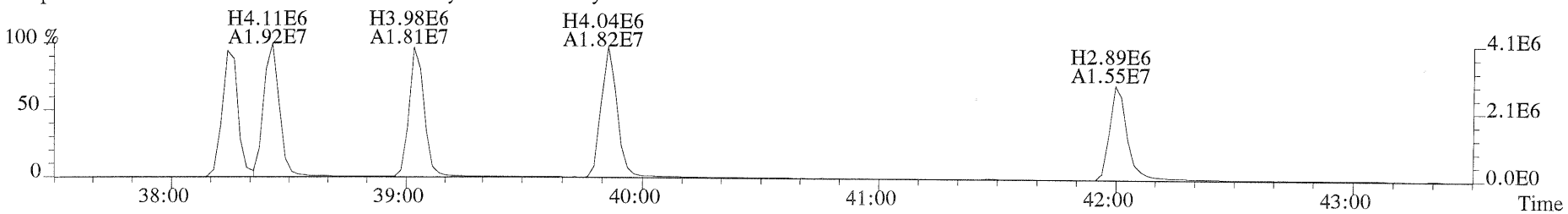
File:18AUG16Z #1-412 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



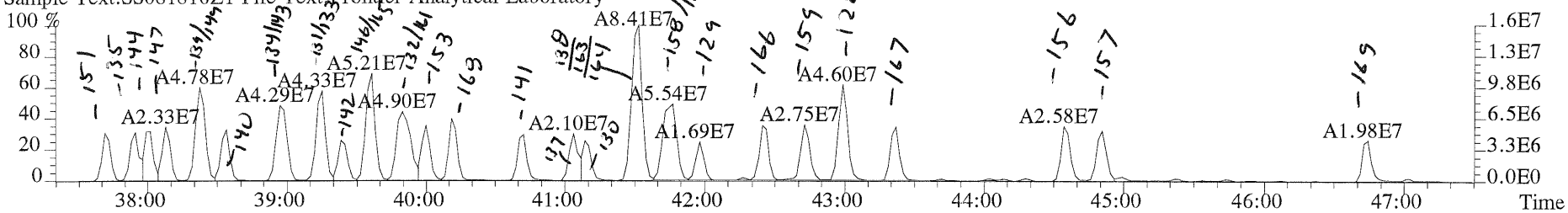
File:18AUG16Z #1-412 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



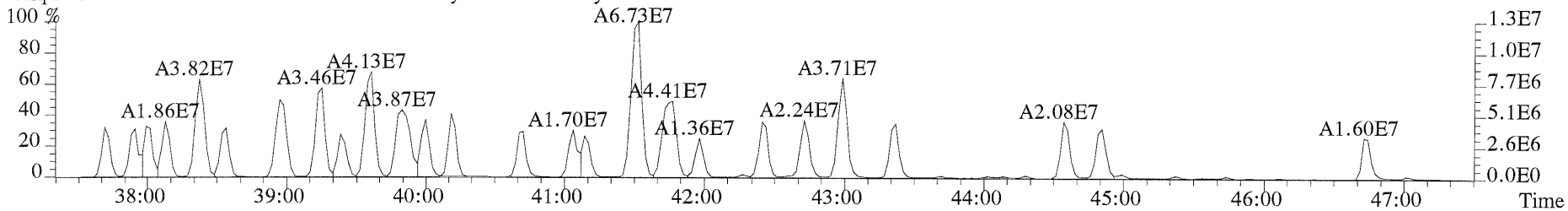
File:18AUG16Z #1-412 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



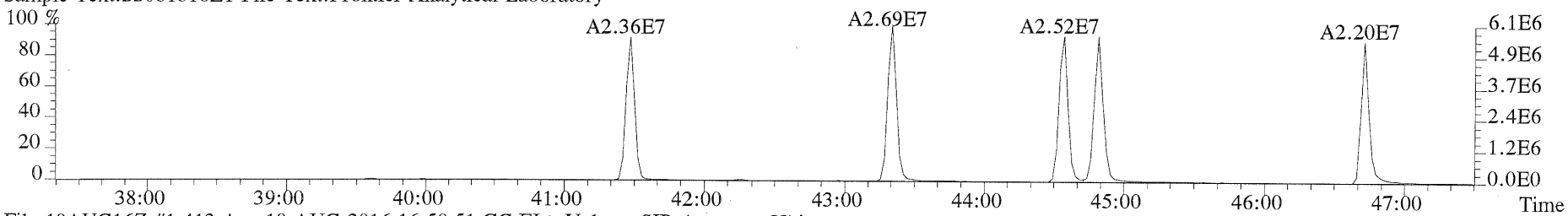
File:18AUG16Z #1-412 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



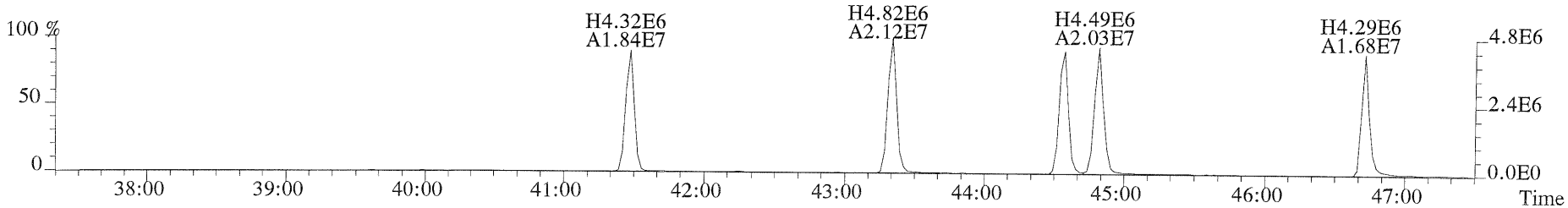
File:18AUG16Z #1-412 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



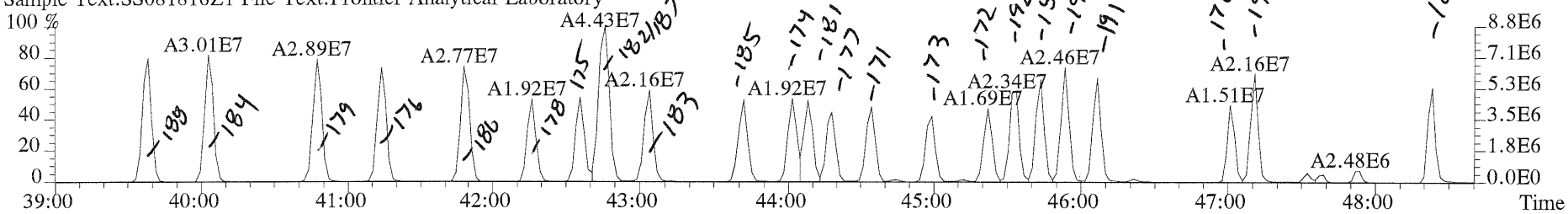
File:18AUG16Z #1-412 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



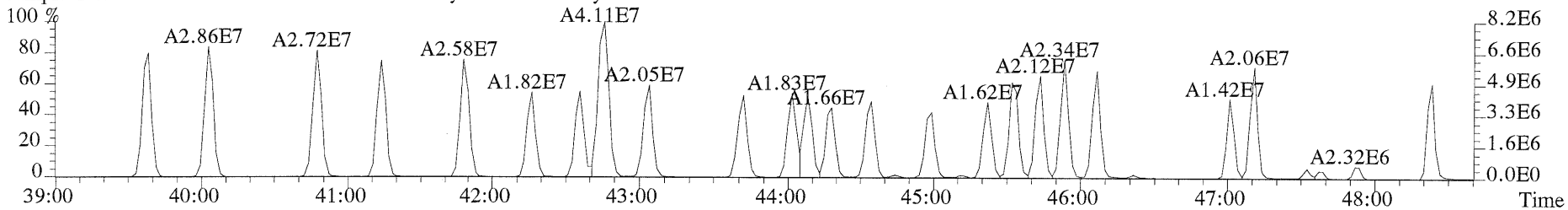
File:18AUG16Z #1-412 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



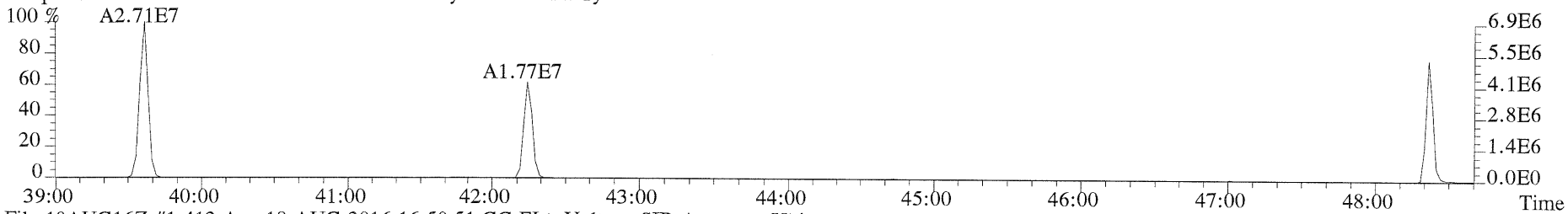
File:18AUG16Z #1-412 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
393.8025 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



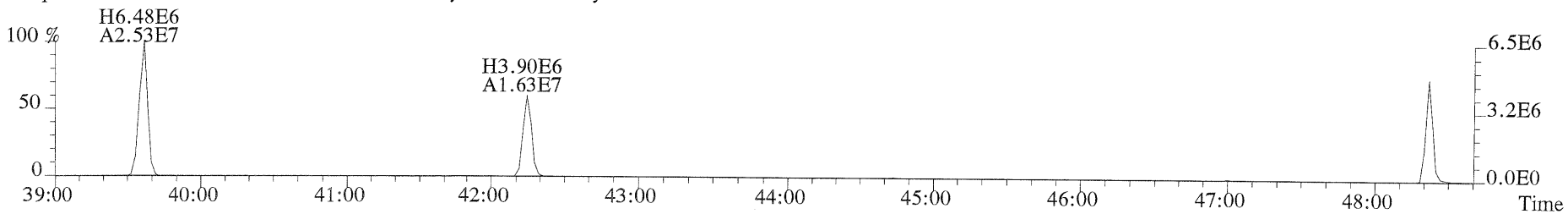
File:18AUG16Z #1-412 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
395.7995 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



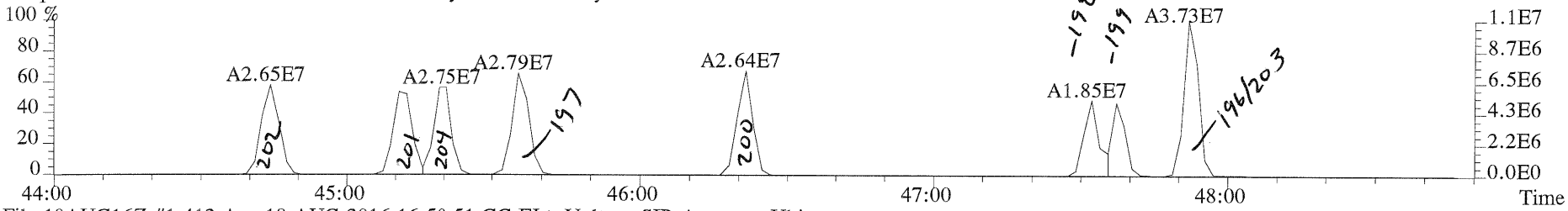
File:18AUG16Z #1-412 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
405.8428 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



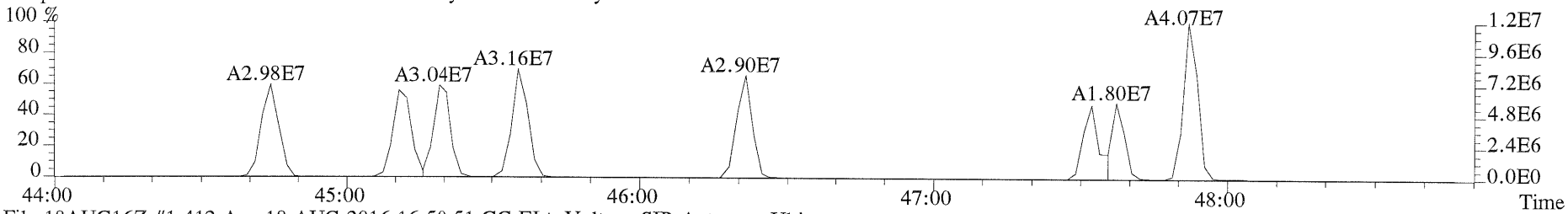
File:18AUG16Z #1-412 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
407.8398 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



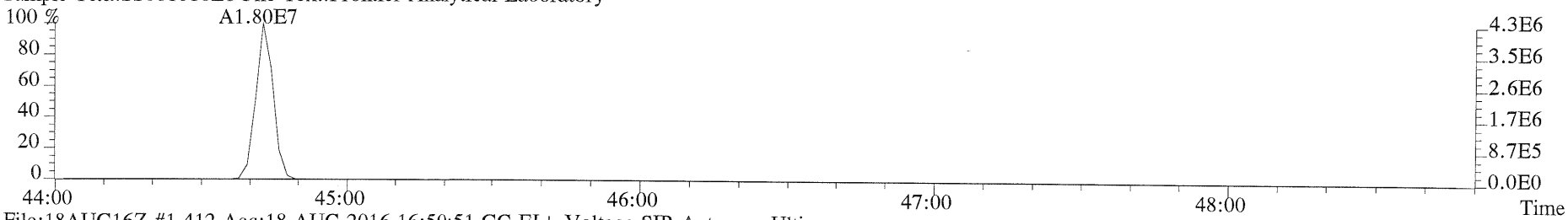
File:18AUG16Z #1-412 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



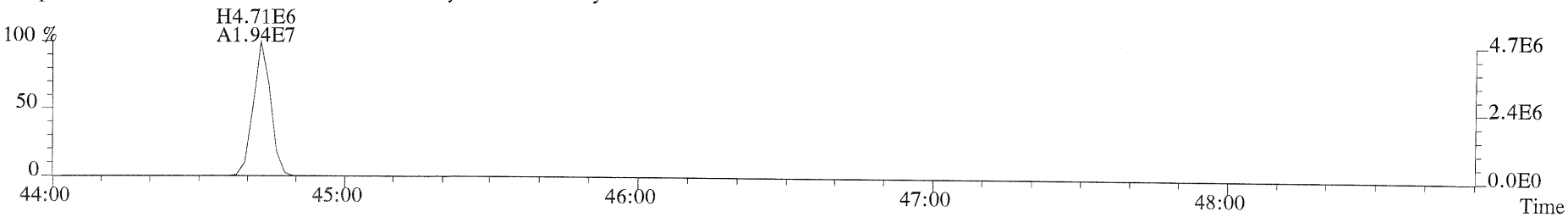
File:18AUG16Z #1-412 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



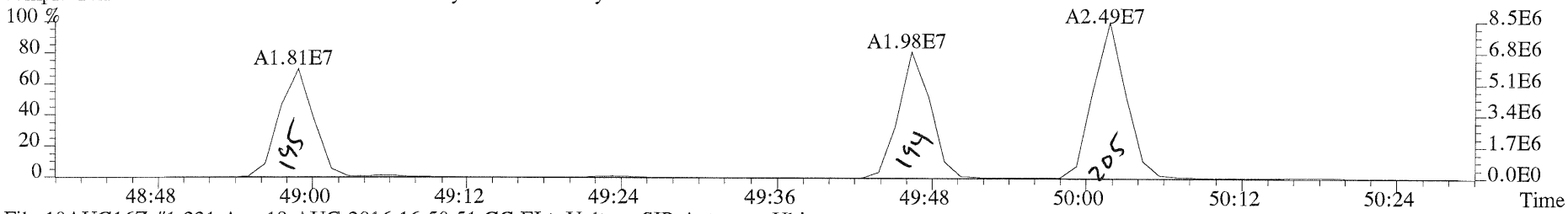
File:18AUG16Z #1-412 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



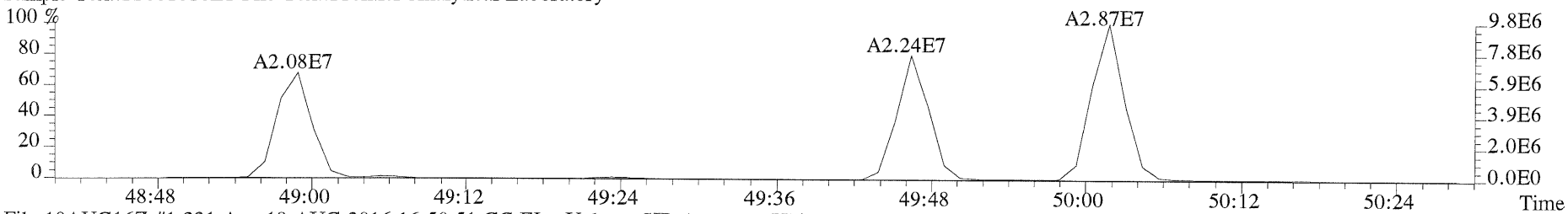
File:18AUG16Z #1-412 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:2 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



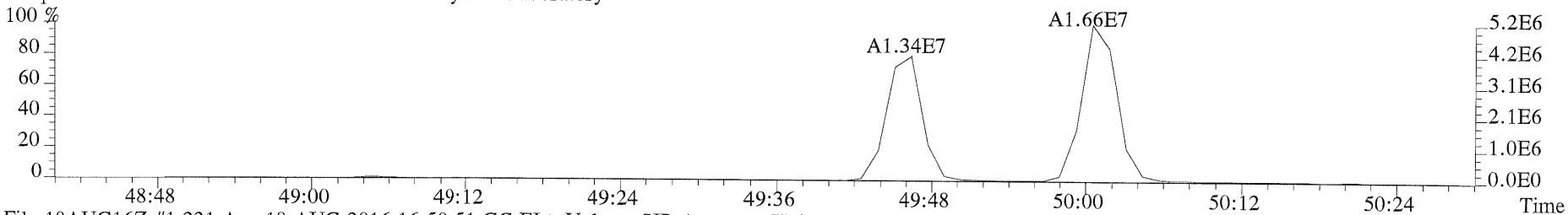
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



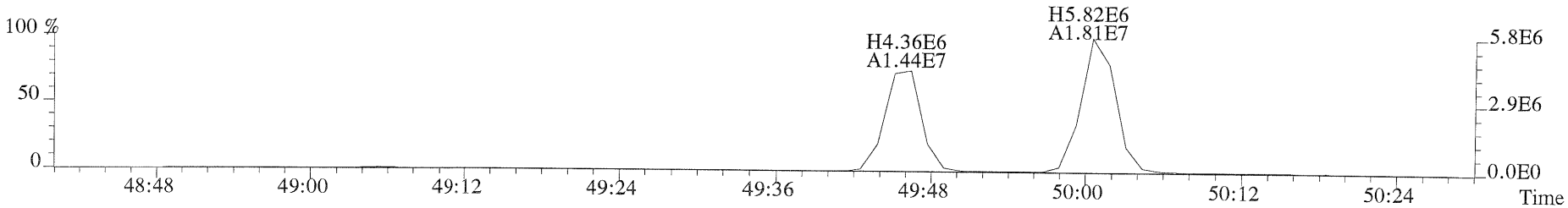
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



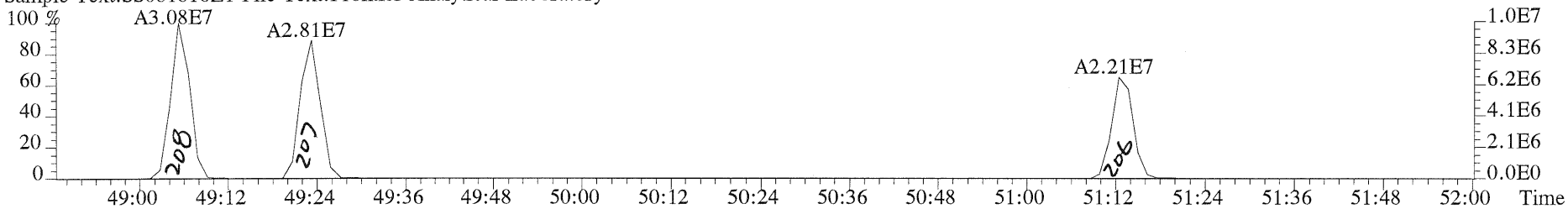
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



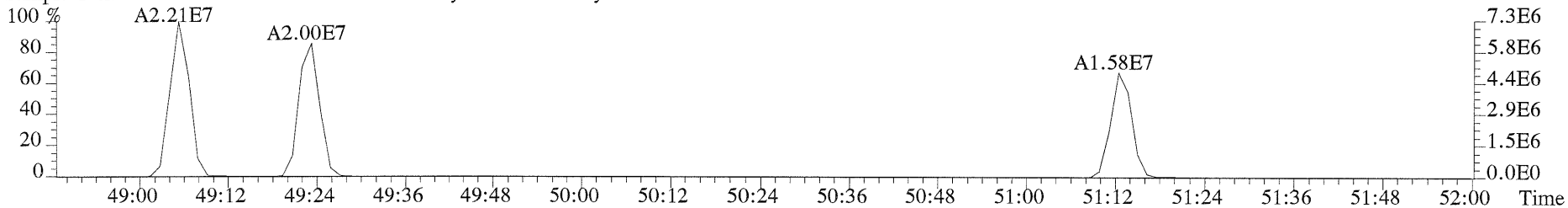
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



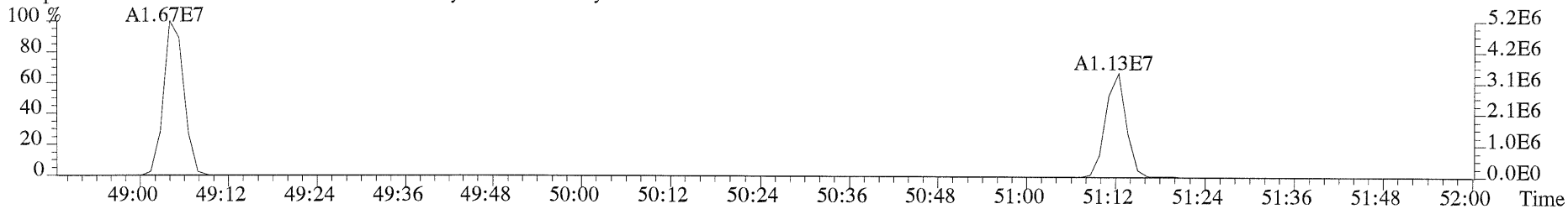
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
463.7216 S:2 F:6 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



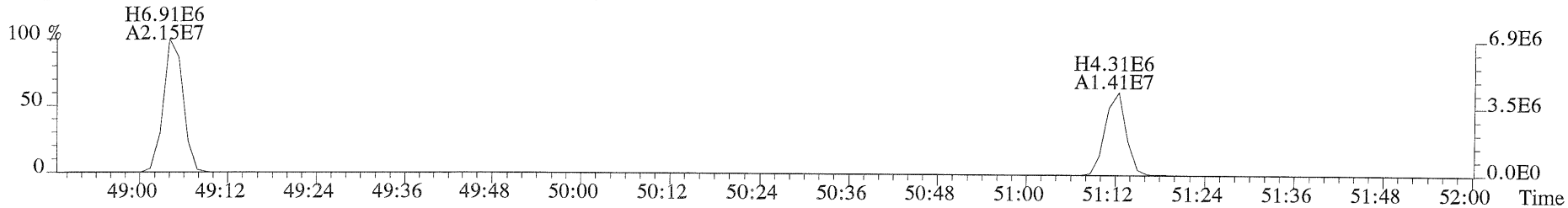
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
465.7187 S:2 F:6 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



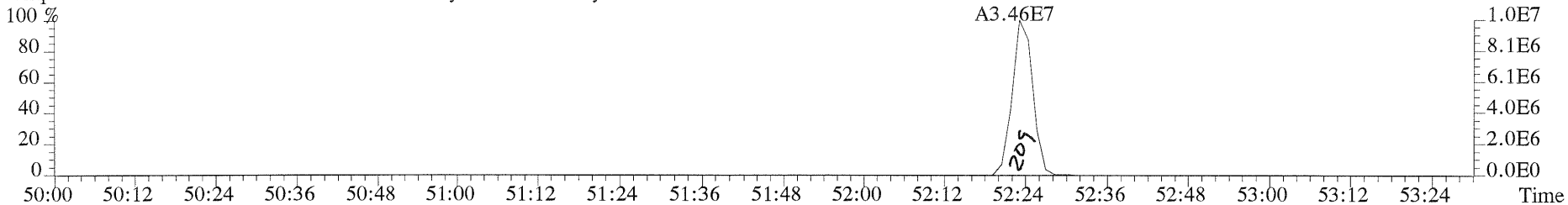
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
473.7648 S:2 F:6 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



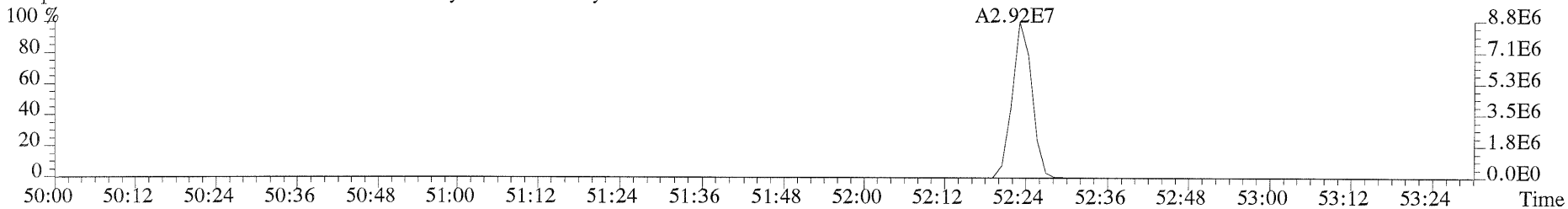
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
475.7619 S:2 F:6 BSUB(10000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



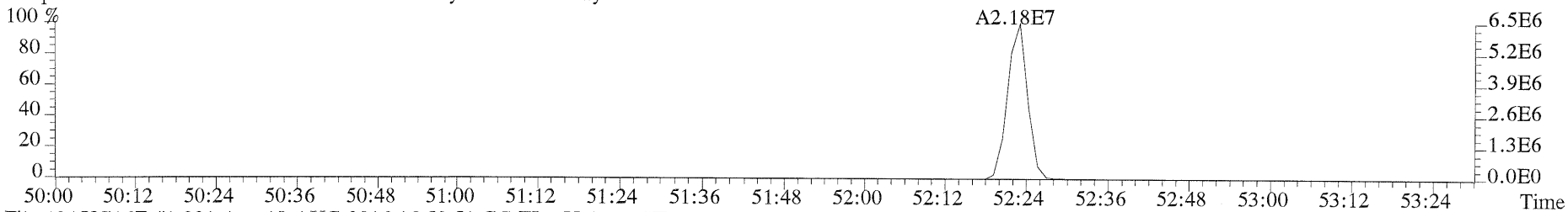
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
497.6826 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



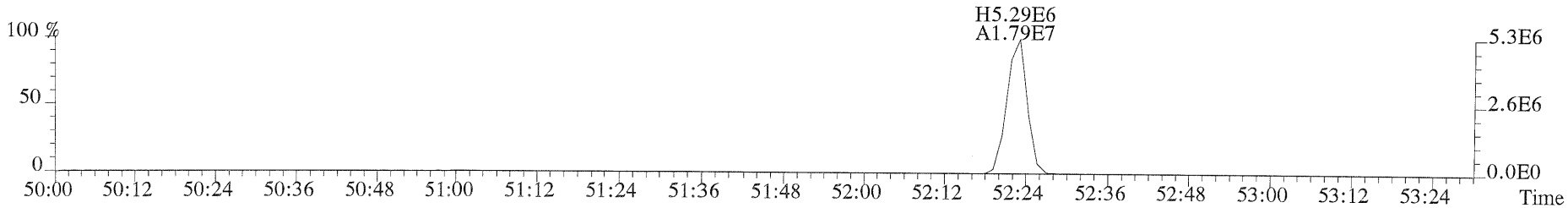
File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
499.6797 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
509.7229 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



File:18AUG16Z #1-221 Acq:18-AUG-2016 16:50:51 GC EI+ Voltage SIR Autospec-Ultima
511.7199 S:2 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:SS081816Z1 File Text:Frontier Analytical Laboratory



USEPA - ITD

FORM 4A
209 PCB CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 8/11/16

Instrument ID: FAL4 GC Column ID: DB1

VER Data Filename: 18AUG16Z Sam:14 Analysis Date: 19-AUG-16 05:50:06

NATIVE ANALYTES	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL)
PCB-1	M/M+2	3.28	2.66-3.60	y	51.4	37.5 - 62.5
PCB-3	M/M+2	3.51	2.66-3.60	y	53.0	37.5 - 62.5
PCB-4	M/M+2	1.51	1.33-1.79	y	47.7	37.5 - 62.5
PCB-15	M/M+2	1.57	1.33-1.79	y	51.5	37.5 - 62.5
PCB-19	M/M+2	1.04	0.88-1.20	y	52.3	37.5 - 62.5
PCB-37	M/M+2	0.99	0.88-1.20	y	51.7	37.5 - 62.5
PCB-54	M/M+2	0.78	0.65-0.89	y	51.7	37.5 - 62.5
PCB-77	M/M+2	0.75	0.65-0.89	y	47.3	37.5 - 62.5
PCB-81	M/M+2	0.78	0.65-0.89	y	49.2	37.5 - 62.5
PCB-104	M+2/M+4	1.57	1.32-1.78	y	49.8	37.5 - 62.5
PCB-105	M+2/M+4	1.45	1.32-1.78	y	47.2	37.5 - 62.5
PCB-114	M+2/M+4	1.50	1.32-1.78	y	49.9	37.5 - 62.5
PCB-118	M+2/M+4	1.47	1.32-1.78	y	52.1	37.5 - 62.5
PCB-123	M+2/M+4	1.51	1.32-1.78	y	50.6	37.5 - 62.5
PCB-126	M+2/M+4	1.50	1.32-1.78	y	48.3	37.5 - 62.5
PCB-155	M+2/M+4	1.26	1.05-1.43	y	50.3	37.5 - 62.5
PCB-156	M+2/M+4	1.25	1.05-1.43	y	48.9	37.5 - 62.5
PCB-157	M+2/M+4	1.25	1.05-1.43	y	50.0	37.5 - 62.5
PCB-167	M+2/M+4	1.28	1.05-1.43	y	49.4	37.5 - 62.5
PCB-169	M+2/M+4	1.28	1.05-1.43	y	47.0	37.5 - 62.5
PCB-188	M+2/M+4	1.05	0.89-1.21	y	49.0	37.5 - 62.5
PCB-189	M+2/M+4	1.07	0.89-1.21	y	49.3	37.5 - 62.5
PCB-202	M+2/M+4	0.87	0.76-1.02	y	54.4	37.5 - 62.5
PCB-205	M+2/M+4	0.84	0.76-1.02	y	46.6	37.5 - 62.5
PCB-206	M+4/M+6	1.50	1.13-1.53	y	46.4	37.5 - 62.5
PCB-208	M+4/M+6	1.49	1.13-1.53	y	43.7	37.5 - 62.5
PCB-209	M+4/M+6	1.19	0.99-1.33	y	52.7	37.5 - 62.5

Analyst: _____ Date: 8/19/16

USEPA - ITD

FORM 4B
209 PCB CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 8/11/16

Instrument ID: FAL4 GC Column ID: DB1

VER Data Filename: 18AUG16Z Sam:14 Analysis Date: 19-AUG-16 05:50:06

	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL)
LABELED COMPOUNDS						
13C-PCB-1	M/M+2	2.98	2.66-3.60	y	93.7	50.0 - 145
13C-PCB-3	M/M+2	3.07	2.66-3.60	y	76.5	50.0 - 145
13C-PCB-4	M/M+2	1.58	1.33-1.79	y	101	50.0 - 145
13C-PCB-15	M/M+2	1.50	1.33-1.79	y	76.9	50.0 - 145
13C-PCB-19	M/M+2	1.09	0.88-1.20	y	90.4	50.0 - 145
13C-PCB-37	M/M+2	0.98	0.88-1.20	y	64.7	50.0 - 145
13C-PCB-54	M/M+2	0.78	0.65-0.89	y	106	50.0 - 145
13C-PCB-77	M/M+2	0.81	0.65-0.89	y	78.2	50.0 - 145
13C-PCB-81	M/M+2	0.80	0.65-0.89	y	75.9	50.0 - 145
13C-PCB-104	M+2/M+4	1.61	1.32-1.78	y	91.3	50.0 - 145
13C-PCB-105	M+2/M+4	1.65	1.32-1.78	y	83.2	50.0 - 145
13C-PCB-114	M+2/M+4	1.65	1.32-1.78	y	76.9	50.0 - 145
13C-PCB-118	M+2/M+4	1.58	1.32-1.78	y	81.3	50.0 - 145
13C-PCB-123	M+2/M+4	1.60	1.32-1.78	y	71.5	50.0 - 145
13C-PCB-126	M+2/M+4	1.60	1.32-1.78	y	76.9	50.0 - 145
13C-PCB-155	M+2/M+4	1.29	1.05-1.43	y	95.6	50.0 - 145
13C-PCB-156	M+2/M+4	1.28	1.05-1.43	y	95.9	50.0 - 145
13C-PCB-157	M+2/M+4	1.28	1.05-1.43	y	98.4	50.0 - 145
13C-PCB-167	M+2/M+4	1.27	1.05-1.43	y	96.7	50.0 - 145
13C-PCB-169	M+2/M+4	1.28	1.05-1.43	y	87.4	50.0 - 145
13C-PCB-188	M+2/M+4	1.10	0.89-1.21	y	108	50.0 - 145
13C-PCB-189	M+2/M+4	1.11	0.89-1.21	y	84.1	50.0 - 145
13C-PCB-202	M+2/M+4	0.94	0.76-1.02	y	80.8	50.0 - 145
13C-PCB-205	M+2/M+4	0.89	0.76-1.02	y	101	50.0 - 145
13C-PCB-206	M+2/M+4	0.77	0.65-0.89	y	131	50.0 - 145
13C-PCB-208	M+2/M+4	0.77	0.65-0.89	y	125	50.0 - 145
13C-PCB-209	M+4/M+6	1.18	0.99-1.33	y	138	50.0 - 145
CLEANUP STANDARDS						
13C-PCB-28	M/M+2	1.08	0.88-1.20	y	78.2	65.0 - 135
13C-PCB-111	M+2/M+4	1.57	1.32-1.78	y	89.5	75.0 - 125
13C-PCB-178	M+2/M+4	1.08	0.89-1.21	y	105	75.0 - 125

Analyst: _____ Date: 8/19/16

FAL ID: ST081816Z2 Filename: 18AUG16Z Sam:14 Acquired: 19-AUG-16 05:50:06 ICal: 1668FAL4-8-11-16
Client ID: 1668 CS3 R150603A ConCal: ST081816Z1 EndCal: ST081816Z2
Results: GC Column: DB1 Amount: 1.000

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL	Rec
PCB-1	1.91e+07	3.28 y	14:31	1.05	51.4		2.50	-	-	*	-
13C-PCB-1	3.54e+07	2.98 y	14:30	1.14	93.7		2.50				93.7
PCB-3	1.56e+07	3.51 y	16:60	1.05	53.0		2.50	-	-	*	-
13C-PCB-3	2.82e+07	3.07 y	16:58	1.11	76.5		2.50				76.5
PCB-4	1.23e+07	1.51 y	18:10	1.14	47.7		2.50	-	-	*	-
13C-PCB-4	2.26e+07	1.58 y	18:10	0.68	101		2.50				101
PCB-15	1.47e+07	1.57 y	23:47	1.09	51.5		2.50	-	-	*	-
13C-PCB-15	2.62e+07	1.50 y	23:46	1.02	76.9		2.50				76.9
PCB-19	1.12e+07	1.04 y	22:03	1.16	52.3		2.50	-	-	*	-
13C-PCB-19	1.85e+07	1.09 y	22:03	0.61	90.4		2.50				90.4
13C-PCB-9	3.32e+07	1.62 y	19:52	-	24.3		2.50				
PCB-37	1.04e+07	0.99 y	30:25	1.14	51.7		2.50	-	-	*	-
13C-PCB-37	1.77e+07	0.98 y	30:24	1.38	64.7		2.50				64.7
PCB-54	1.44e+07	0.78 y	25:36	1.05	51.7		2.50	-	-	*	-
13C-PCB-54	2.64e+07	0.78 y	25:34	1.25	106		2.50				106
PCB-104	9.38e+06	1.57 y	30:01	1.14	49.8		2.50	-	-	*	-
13C-PCB-104	1.65e+07	1.61 y	29:60	0.91	91.3		2.50				91.3
13C-PCB-28	2.30e+07	1.08 y	26:41	1.48	78.2		2.50				78.2
13C-PCB-52	1.98e+07	0.80 y	28:55	-	23.8		2.50				
PCB-81	9.11e+06	0.78 y	36:10	1.14	49.2		2.50	-	-	*	-
13C-PCB-81	1.62e+07	0.80 y	36:09	1.27	75.9		2.50				75.9
PCB-77	8.68e+06	0.75 y	36:44	1.10	47.3		2.50	-	-	*	-
13C-PCB-77	1.67e+07	0.81 y	36:43	1.27	78.2		2.50				78.2
PCB-155	9.73e+06	1.26 y	34:10	1.11	50.3		2.50	-	-	*	-
13C-PCB-155	1.74e+07	1.29 y	34:09	1.09	95.6		2.50				95.6
13C-PCB-111	1.88e+07	1.57 y	36:15	1.25	89.5		2.50				89.5
13C-PCB-101	1.68e+07	1.59 y	34:36	-	23.0		2.50				
PCB-123	6.43e+06	1.51 y	38:19	1.05	50.6		2.50	-	-	*	-
13C-PCB-123	1.21e+07	1.60 y	38:17	1.20	71.5		2.50				71.5
PCB-118	8.31e+06	1.47 y	38:30	1.07	52.1		2.50	-	-	*	-
13C-PCB-118	1.50e+07	1.58 y	38:29	1.31	81.3		2.50				81.3
PCB-114	7.21e+06	1.50 y	39:06	1.08	49.9		2.50	-	-	*	-
13C-PCB-114	1.33e+07	1.65 y	39:05	1.23	76.9		2.50				76.9
PCB-105	7.39e+06	1.45 y	39:56	1.08	47.2		2.50	-	-	*	-
13C-PCB-105	1.45e+07	1.65 y	39:54	1.24	83.2		2.50				83.2
PCB-126	6.54e+06	1.50 y	42:04	1.07	48.3		2.50	-	-	*	-
13C-PCB-126	1.27e+07	1.60 y	42:04	1.17	76.9		2.50				76.9
PCB-167	8.15e+06	1.28 y	43:23	0.98	49.4		2.50	-	-	*	-
13C-PCB-167	1.68e+07	1.27 y	43:23	1.24	96.7		2.50				96.7
PCB-156	7.86e+06	1.25 y	44:37	1.01	48.9		2.50	-	-	*	-
13C-PCB-156	1.59e+07	1.28 y	44:37	1.18	95.9		2.50				95.9
PCB-157	8.14e+06	1.25 y	44:52	0.96	50.0		2.50	-	-	*	-
13C-PCB-157	1.69e+07	1.28 y	44:52	1.22	98.4		2.50				98.4
PCB-169	6.37e+06	1.28 y	46:46	1.00	47.0		2.50	-	-	*	-
13C-PCB-169	1.36e+07	1.28 y	46:46	1.11	87.4		2.50				87.4
PCB-188	9.95e+06	1.05 y	39:39	1.09	49.0		2.50	-	-	*	-
13C-PCB-188	1.85e+07	1.10 y	39:38	1.22	108		2.50				108
PCB-189	6.42e+06	1.07 y	48:24	1.14	49.3		2.50	-	-	*	-
13C-PCB-189	1.14e+07	1.11 y	48:23	0.97	84.1		2.50				84.1
PCB-202	5.71e+06	0.87 y	44:45	1.05	54.4		2.50	-	-	*	-
13C-PCB-202	9.95e+06	0.94 y	44:45	0.88	80.8		2.50				80.8
13C-PCB-178	1.13e+07	1.08 y	42:17	0.77	105		2.50				105
13C-PCB-138	1.40e+07	1.28 y	41:31	-	20.1		2.50				

FAL ID: ST081816Z2 Filename: 18AUG16Z Sam:14 Acquired: 19-AUG-16 05:50:06 ICal: 1668FAL4-8-11-16
Client ID: 1668 CS3 R150603A ConCal: ST081816Z1 EndCal: ST081816Z2
Results: GC Column: DB1 Amount: 1.000

PCB-205	4.93e+06	0.84 y	50:03	1.02	46.6	2.50	-	-	*	-
13C-PCB-205	1.04e+07	0.89 y	50:03	1.38	101	2.50				101
PCB-208	5.00e+06	1.49 y	49:07	0.93	43.7	2.50	-	-	*	-
13C-PCB-208	1.23e+07	0.77 y	49:06	1.31	125	2.50				125
PCB-206	4.32e+06	1.50 y	51:14	0.94	46.4	2.50	-	-	*	-
13C-PCB-206	9.93e+06	0.77 y	51:13	1.01	131	2.50				131
PCB-209	8.04e+06	1.19 y	52:25	1.10	52.7	2.50	-	-	*	-
13C-PCB-209	1.38e+07	1.18 y	52:24	1.34	138	2.50				138
13C-PCB-194	7.48e+06	0.93 y	49:47	-	14.9	2.50				

Analyst: Date: 8/19/16

Frontier Analytical Laboratory - Acquisition Log

Run Name:18AUG16Z Instrument: FAL4 GC: DB1 Experiment:1668PCB

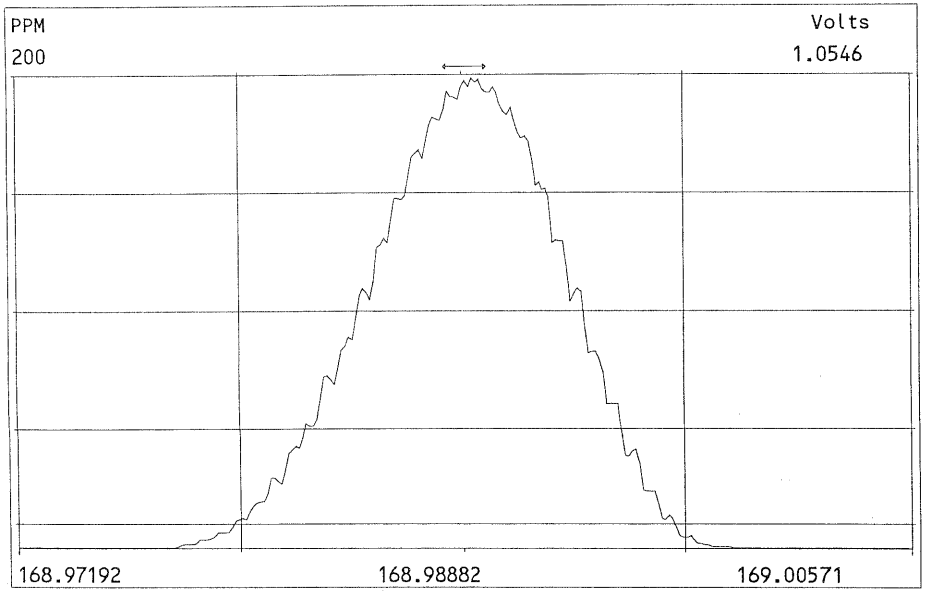
Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
18AUG16Z	1	ST081816Z1	1668 CS3 R150603A	18-AUG-16 16:50:51	ST081816Z1	ST081816Z2	BS
18AUG16Z	2	SS081816Z1	Daily 209 160711B	18-AUG-16 17:50:51	ST081816Z1	ST081816Z2	BS
18AUG16Z	3	03814-001-0001-OPR	OPR	18-AUG-16 18:50:50	ST081816Z1	ST081816Z2	BS
18AUG16Z	4	03814-001-0001-MB	Method Blank	18-AUG-16 19:50:48	ST081816Z1	ST081816Z2	BS
18AUG16Z	5	10051-001-X002-SA	LDW-BA-PC-ENRMATERIAL-GAC	18-AUG-16 20:50:46	ST081816Z1	ST081816Z2	BS
18AUG16Z	6	10095-001-0001-SA	LDW-BA-PC-ENRMAT-SAND	18-AUG-16 21:50:41	ST081816Z1	ST081816Z2	BS
18AUG16Z	7	10095-002-0001-SA	LDW-BA-PC-ENRMAT-GRUSAND	18-AUG-16 22:50:38	ST081816Z1	ST081816Z2	BS
18AUG16Z	8	QC081816Z1	QCA	18-AUG-16 23:50:35	ST081816Z1	ST081816Z2	BS
18AUG16Z	9	03816-001-0001-OPR	OPR	19-AUG-16 00:50:32	ST081816Z1	ST081816Z2	BS
18AUG16Z	10	03816-001-0001-MB	Method Blank	19-AUG-16 01:50:28	ST081816Z1	ST081816Z2	BS
18AUG16Z	11	10051-001-X003-SA	LDW-BA-PC-ENRMATERIAL-GAC	19-AUG-16 02:50:24	ST081816Z1	ST081816Z2	BS
18AUG16Z	12	SB081816Z1	Solvent Blank	19-AUG-16 03:50:20	ST081816Z1	ST081816Z2	BS
18AUG16Z	13	SB081816Z2	Solvent Blank	19-AUG-16 04:50:13	ST081816Z1	ST081816Z2	BS
18AUG16Z	14	ST081816Z2	1668 CS3 R150603A	19-AUG-16 05:50:06	ST081816Z1	ST081816Z2	BS

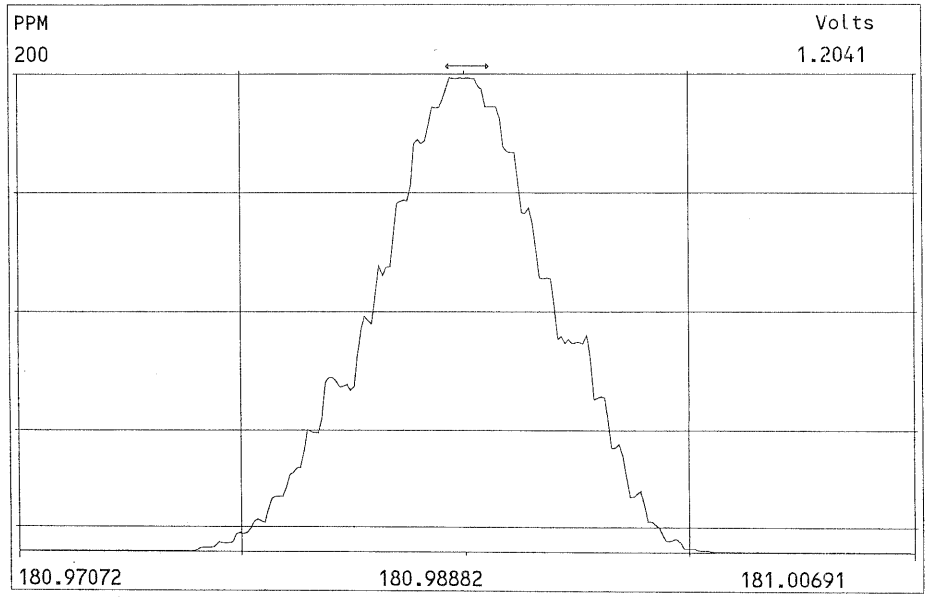
b 8/19/16

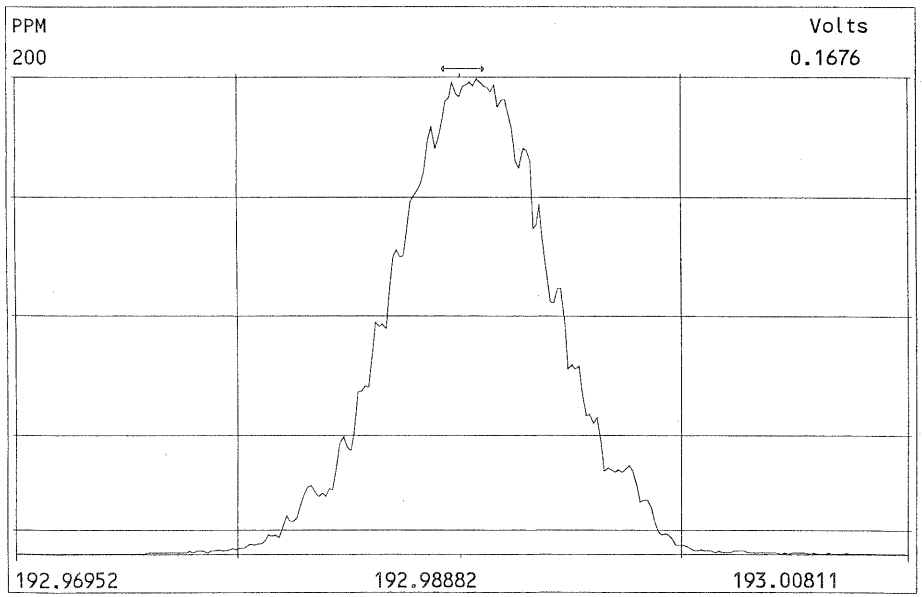
Data Backed Up:_____

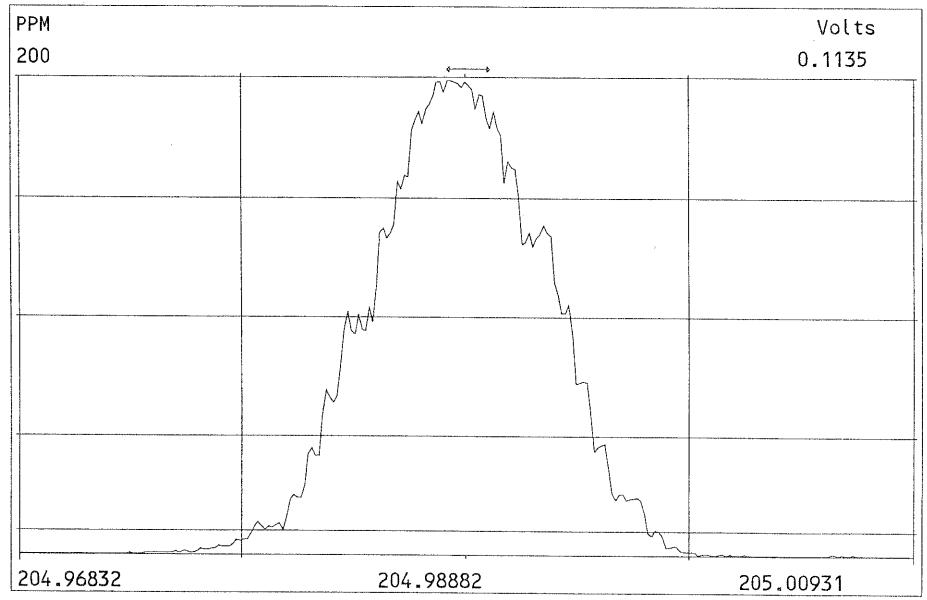
Date:_____

Peak Locate Examination:18-AUG-2016:16:47 File:18AUG16Z
Experiment:1668PCB Function:1 Reference:PFK

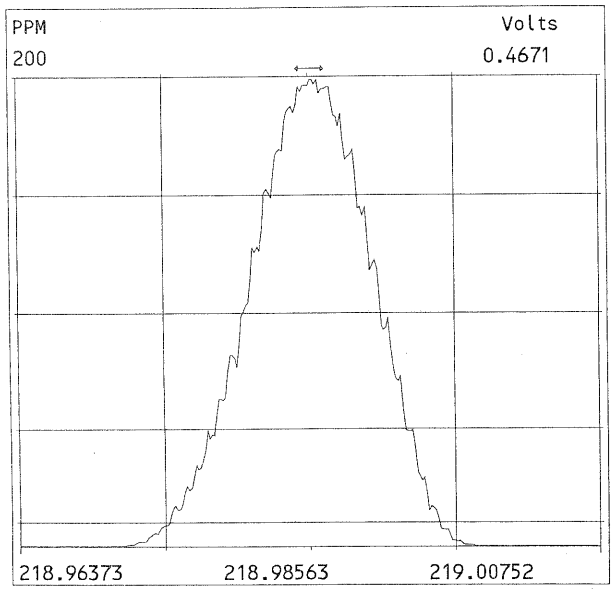


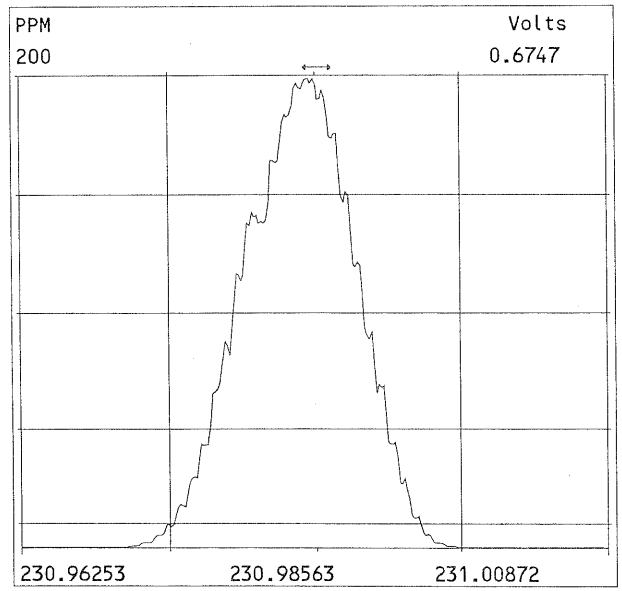


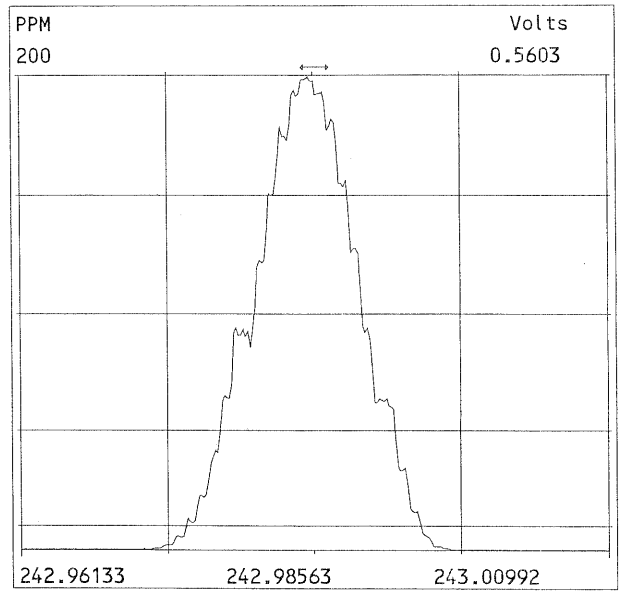


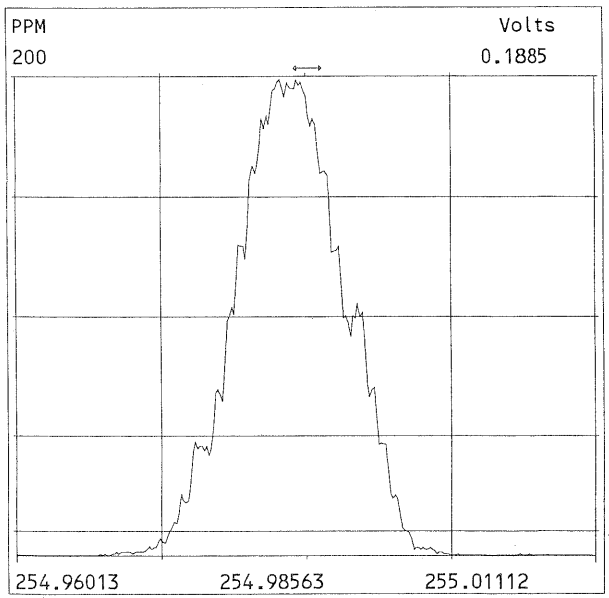


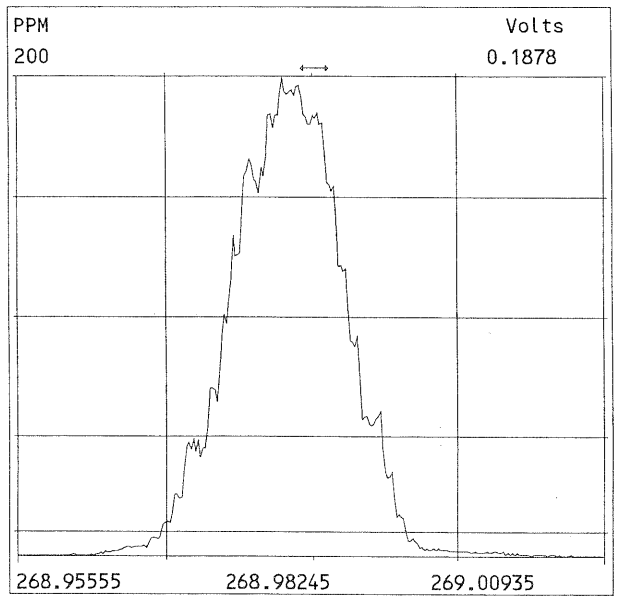
Peak Locate Examination:18-AUG-2016:16:48 File:18AUG16Z
Experiment:1668PCB Function:2 Reference:PFK

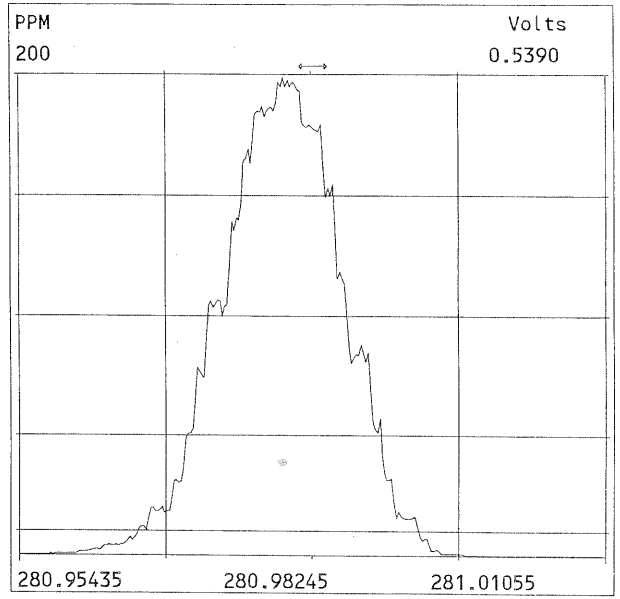




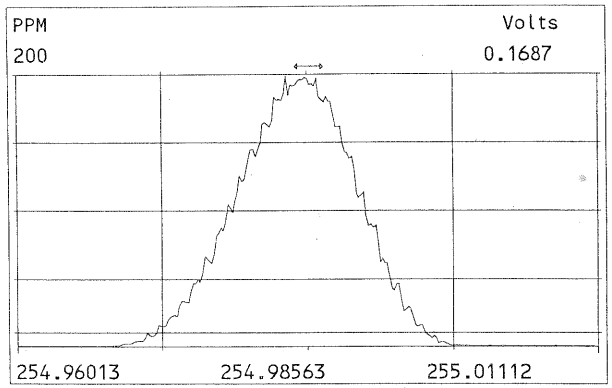


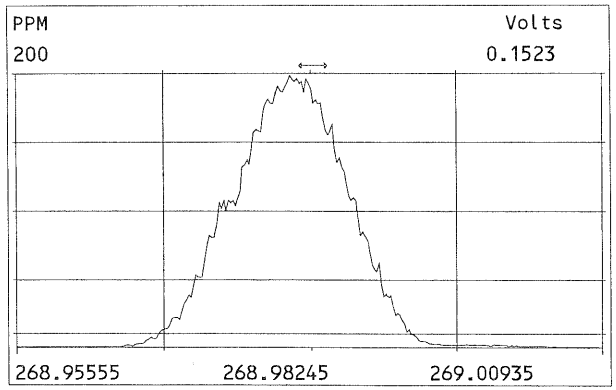


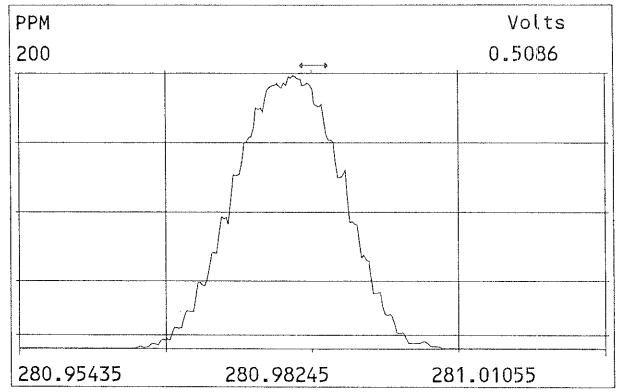


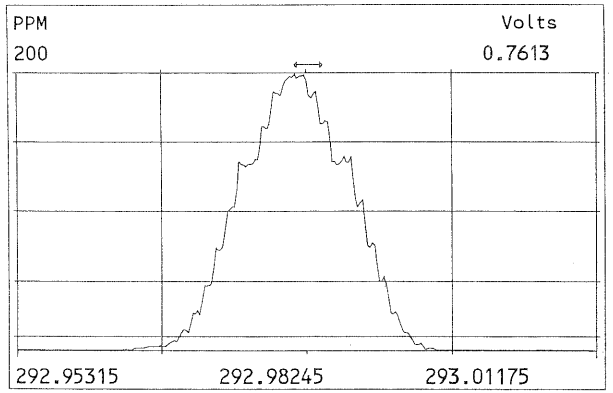


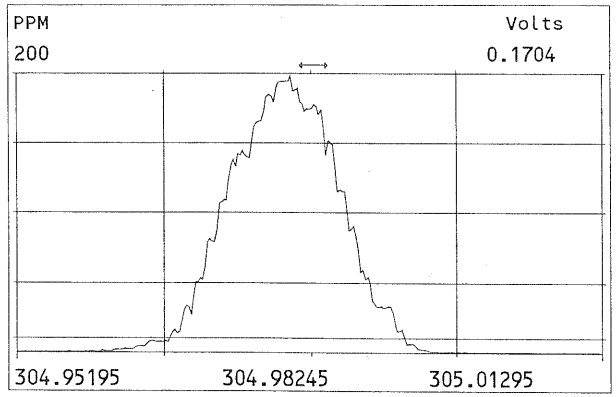
Peak Locate Examination:18-AUG-2016:16:48 File:18AUG16Z
Experiment:1668PCB Function:3 Reference:PFK

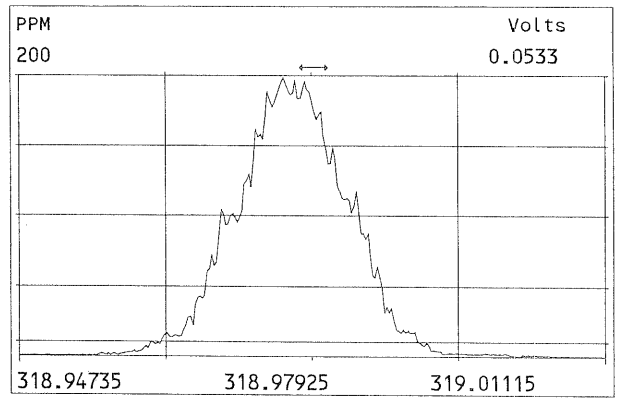


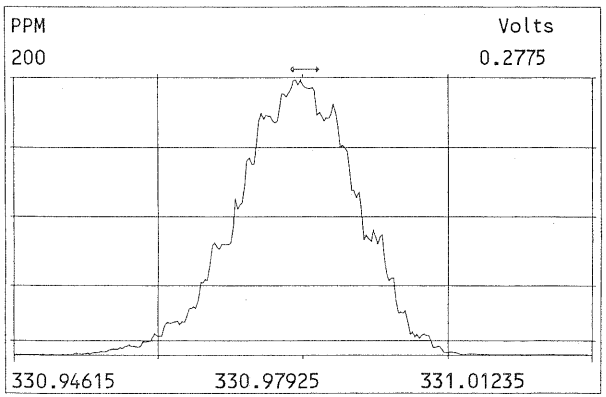


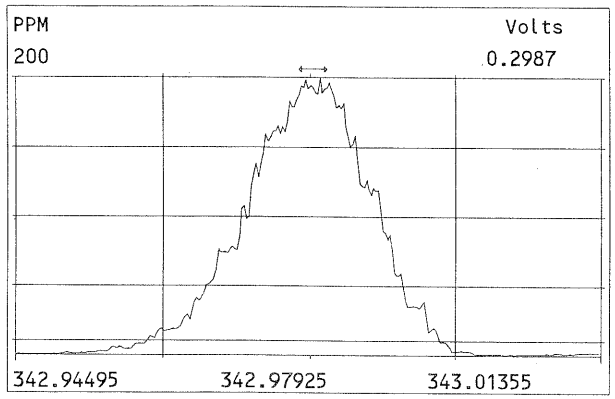




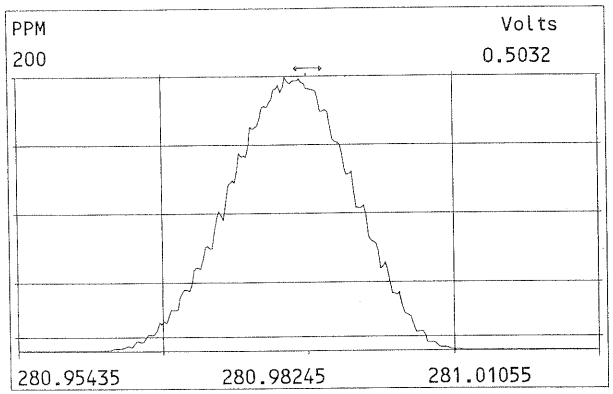


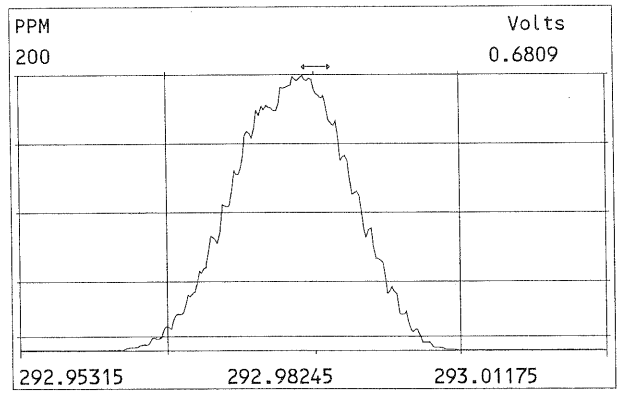


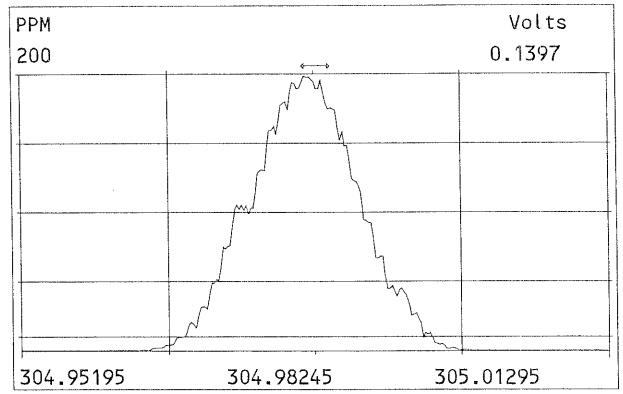


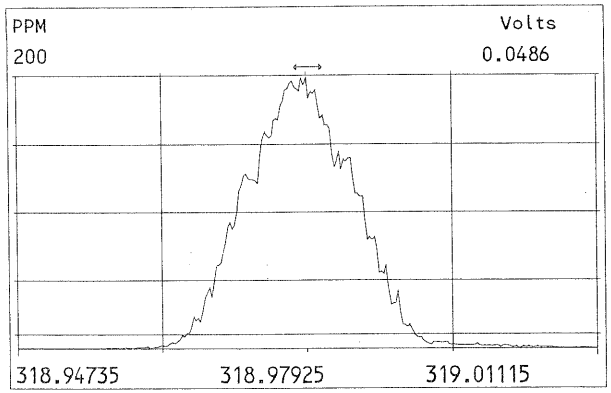


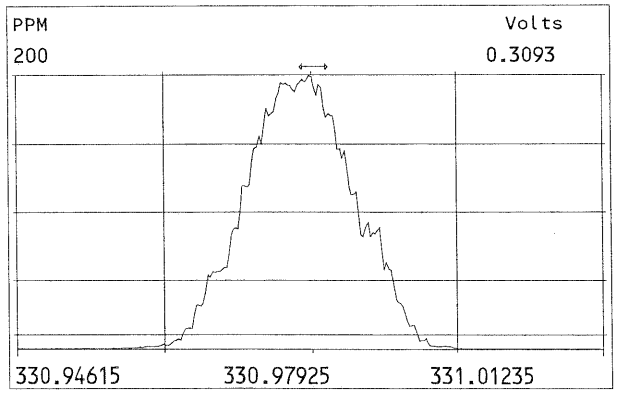
Peak Locate Examination:18-AUG-2016:16:48 File:18AUG16Z
Experiment:1668PCB Function:4 Reference:PFK

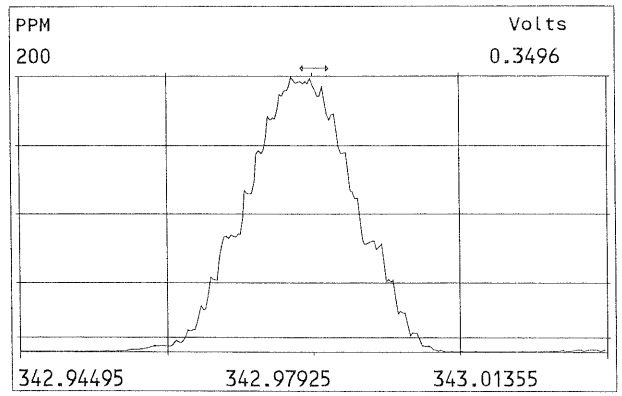


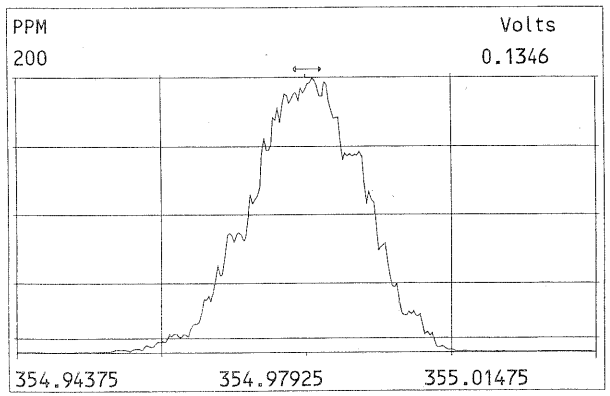


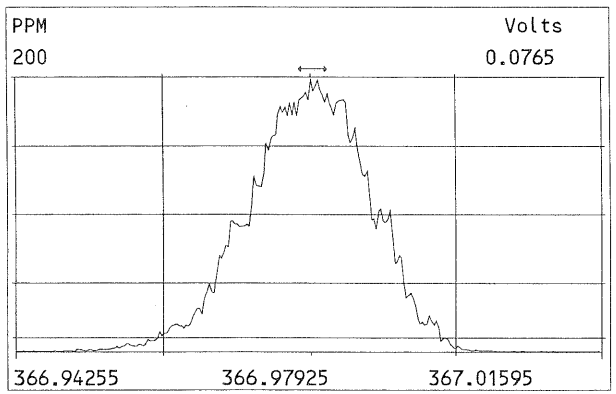


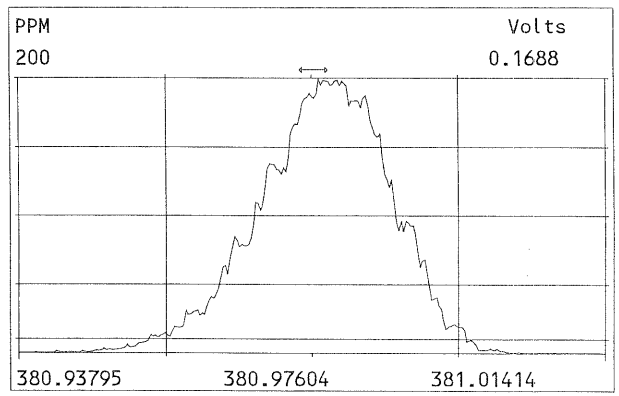




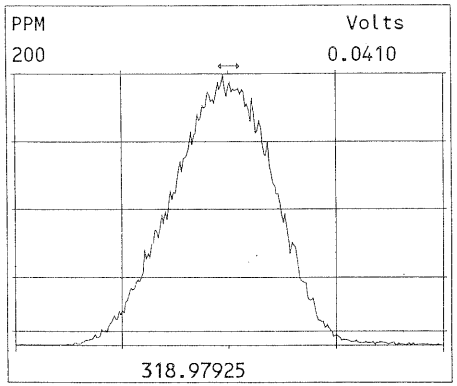


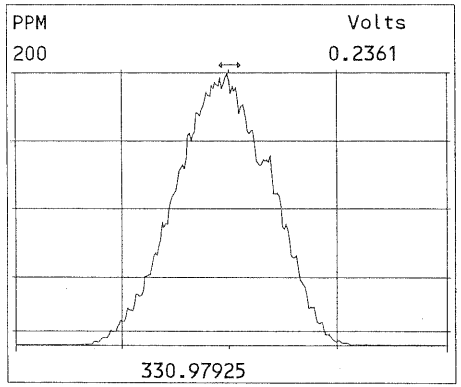


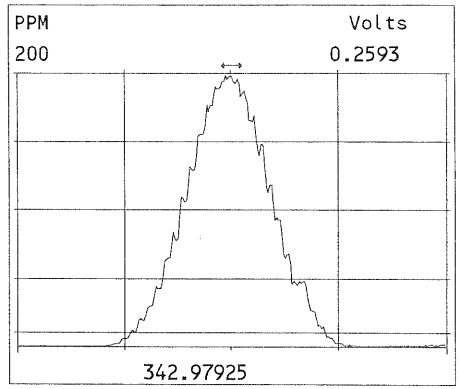


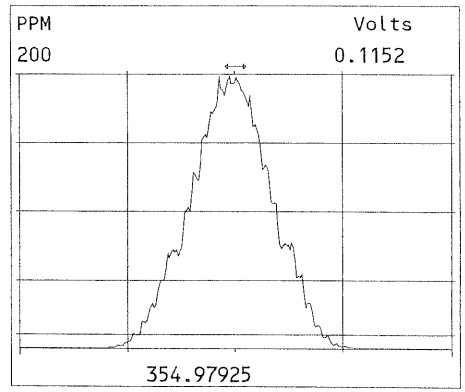


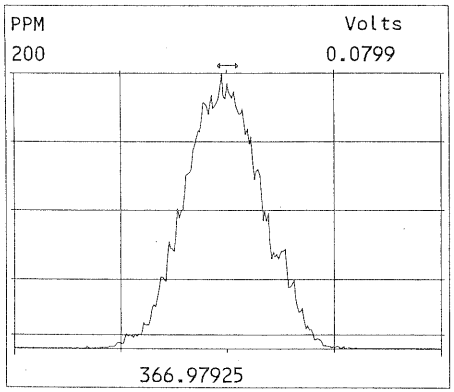
Peak Locate Examination:18-AUG-2016:16:49 File:18AUG16Z
Experiment:1668PCB Function:5 Reference:PFK

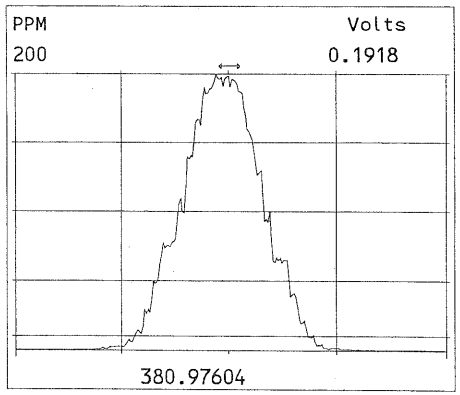


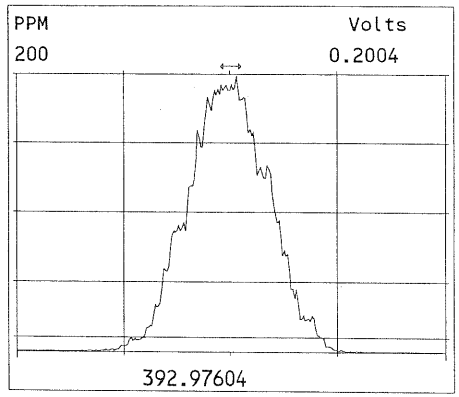


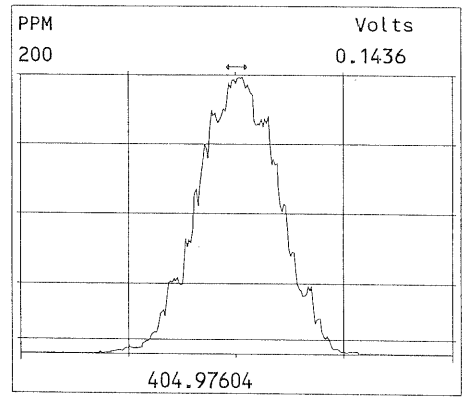


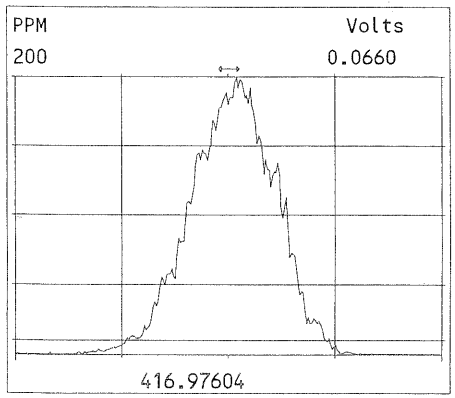


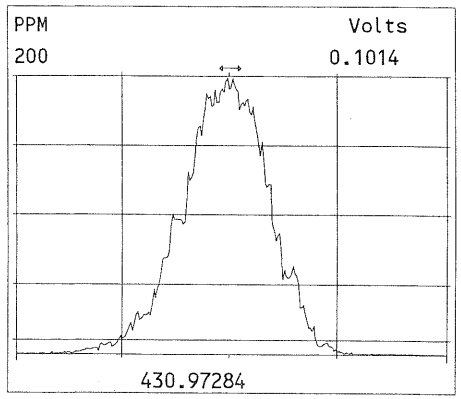


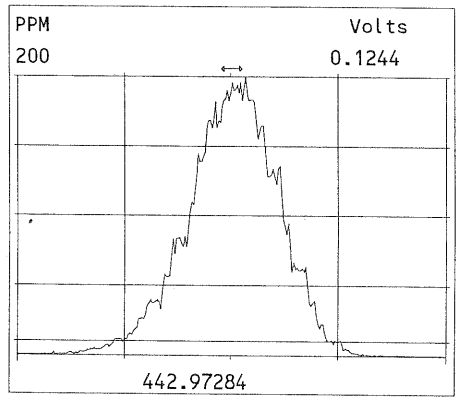




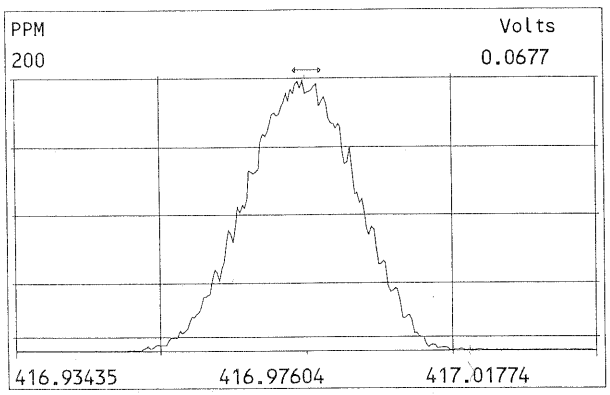


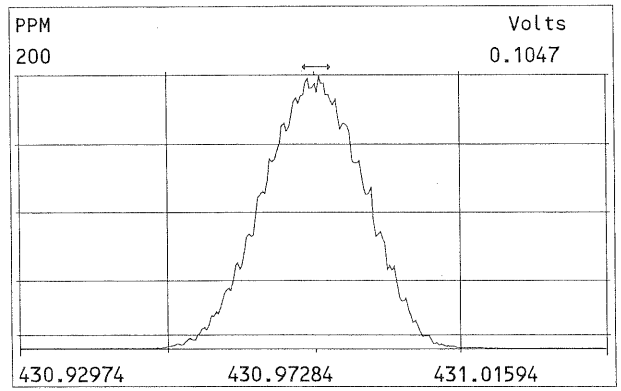


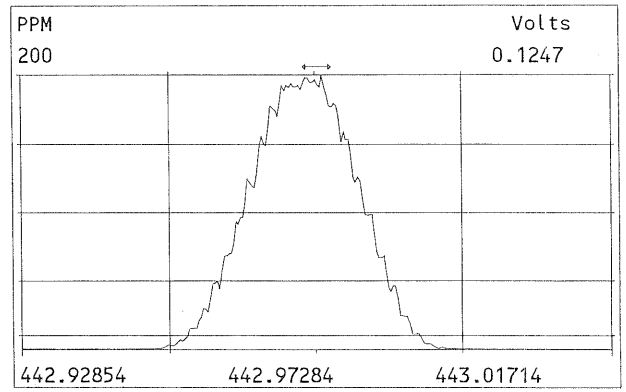


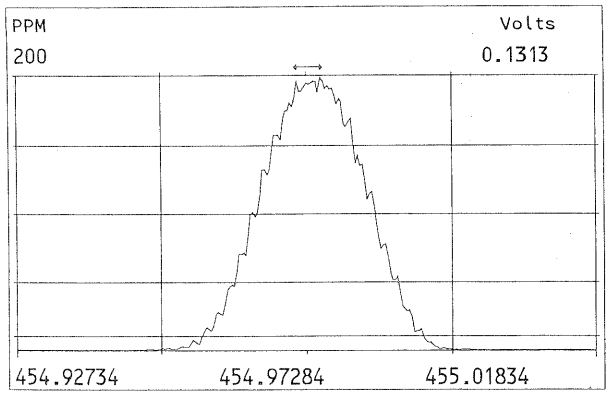


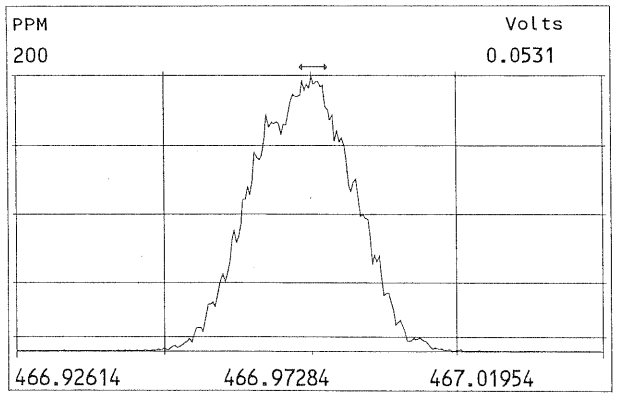
Peak Locate Examination:18-AUG-2016:16:50 File:18AUG16Z
Experiment:1668PCB Function:6 Reference:PFK

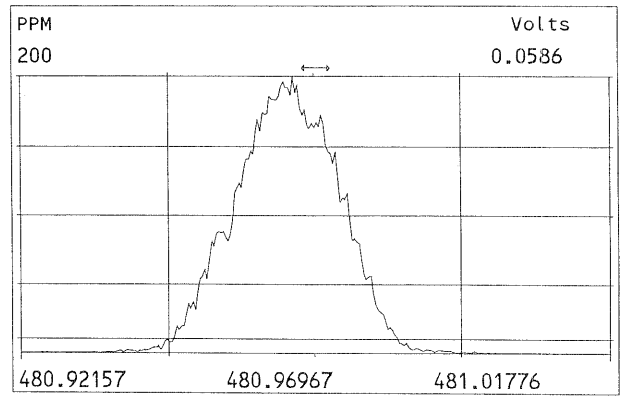


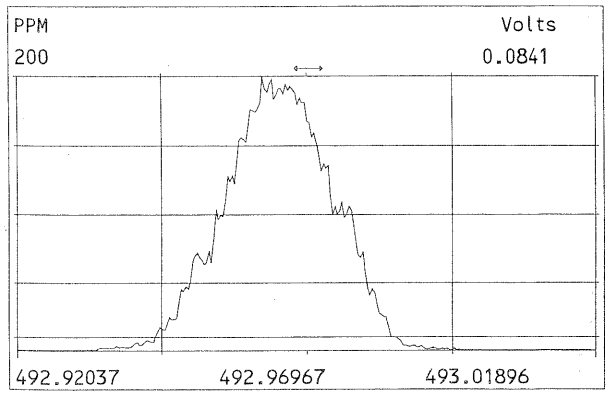


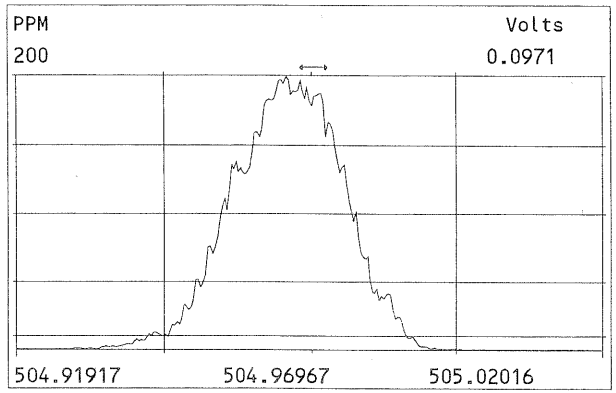


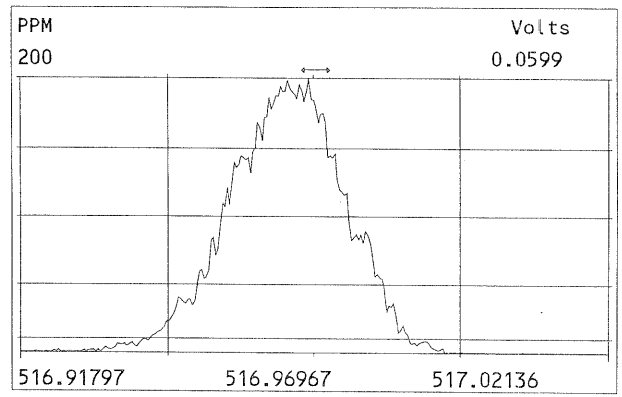




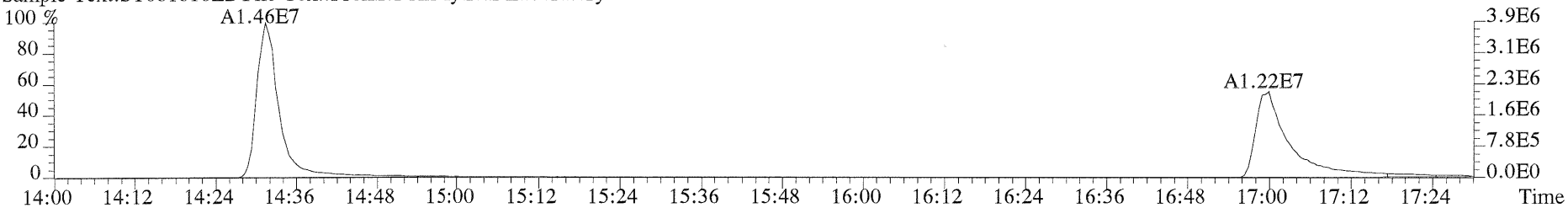




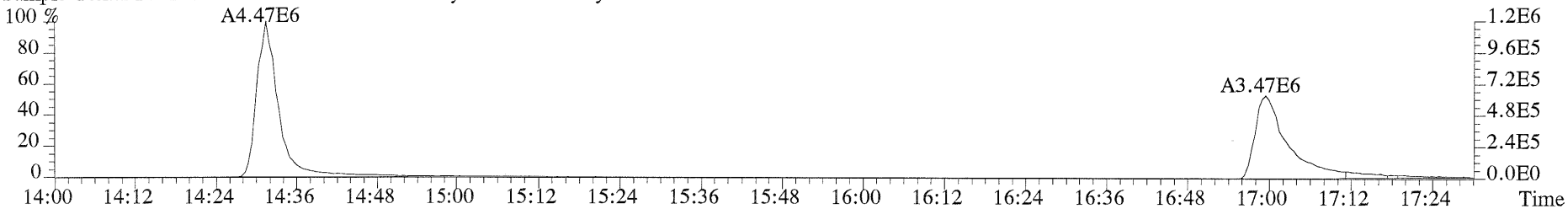




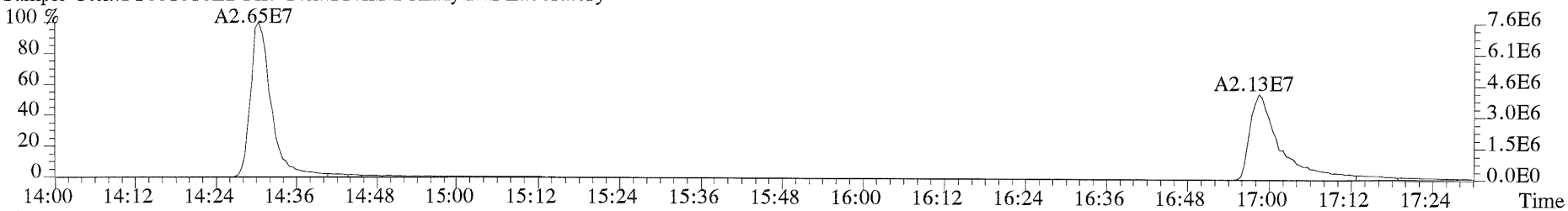
File:18AUG16Z #1-901 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
188.0393 S:14 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



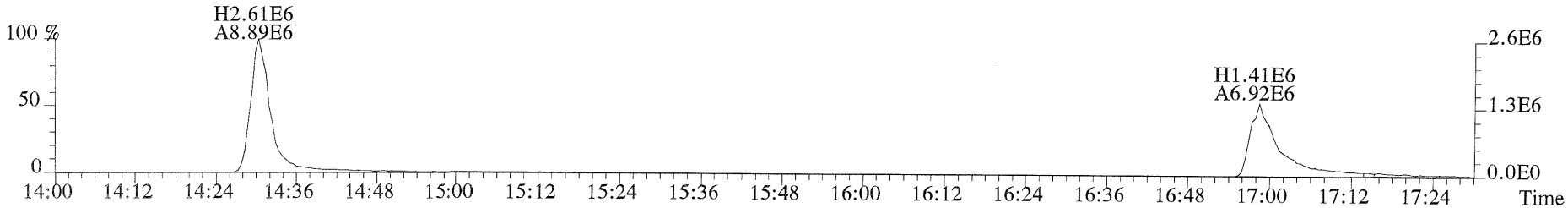
File:18AUG16Z #1-901 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
190.0363 S:14 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



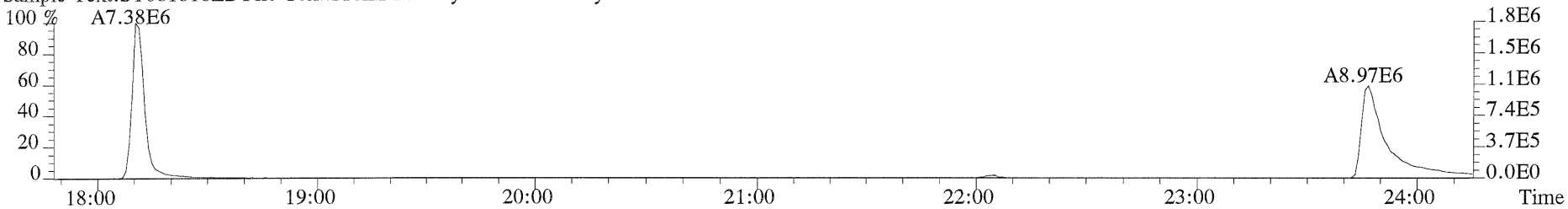
File:18AUG16Z #1-901 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
200.0795 S:14 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



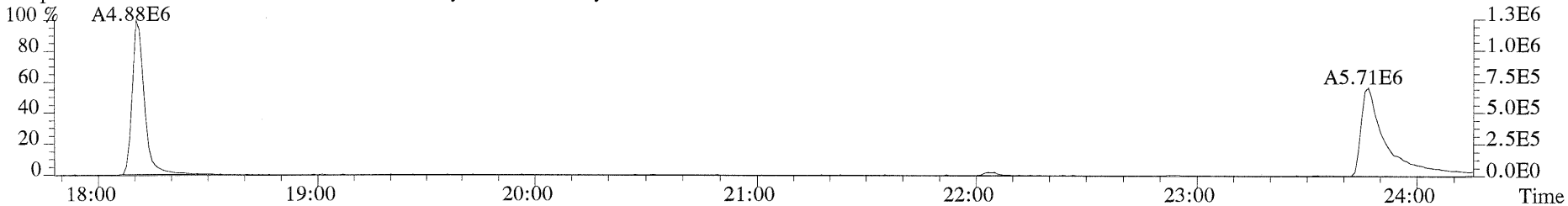
File:18AUG16Z #1-901 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
202.0766 S:14 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



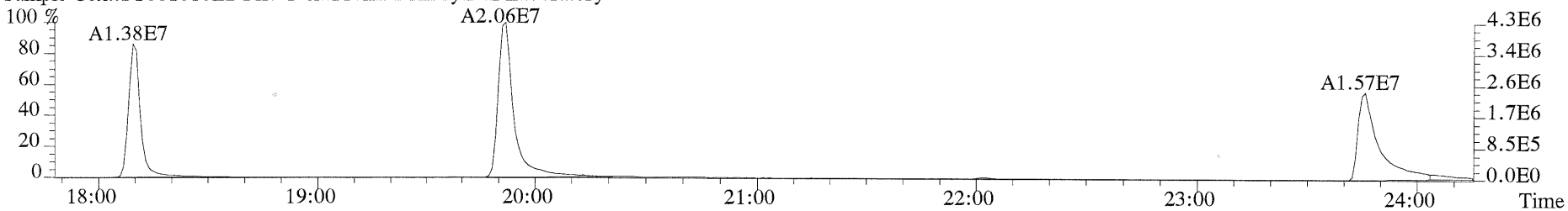
File:18AUG16Z #1-509 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
222.0003 S:14 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



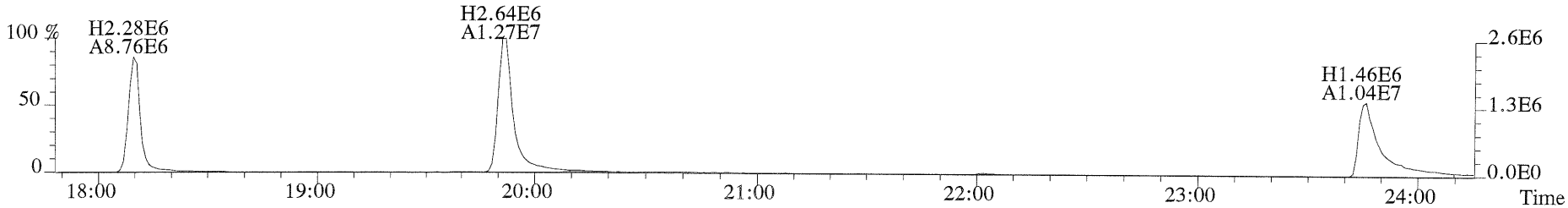
File:18AUG16Z #1-509 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
223.9974 S:14 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



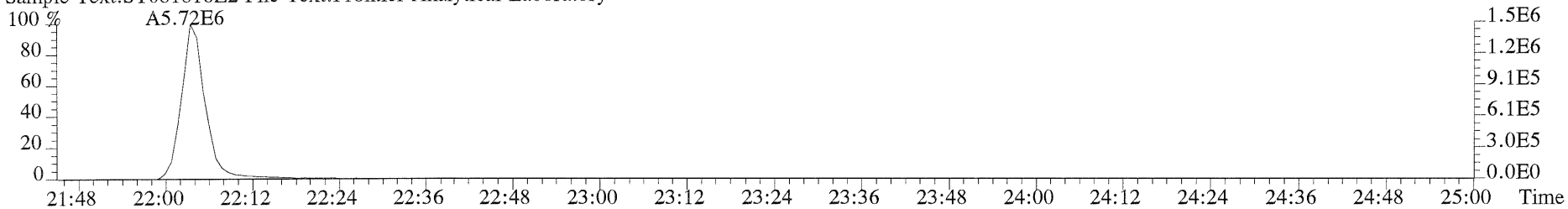
File:18AUG16Z #1-509 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
234.0406 S:14 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



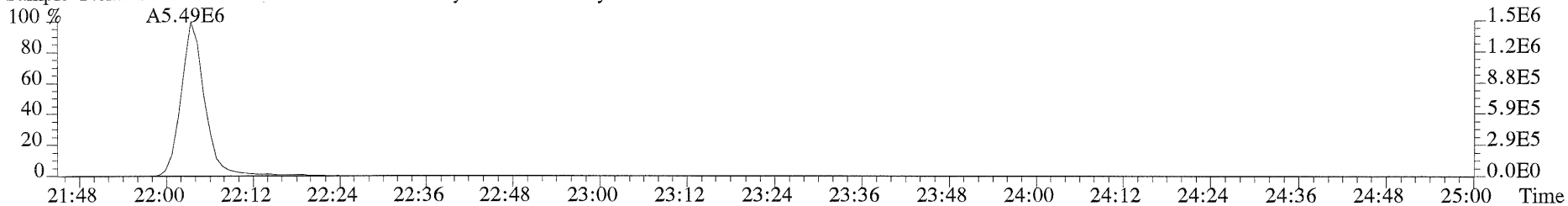
File:18AUG16Z #1-509 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
236.0376 S:14 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



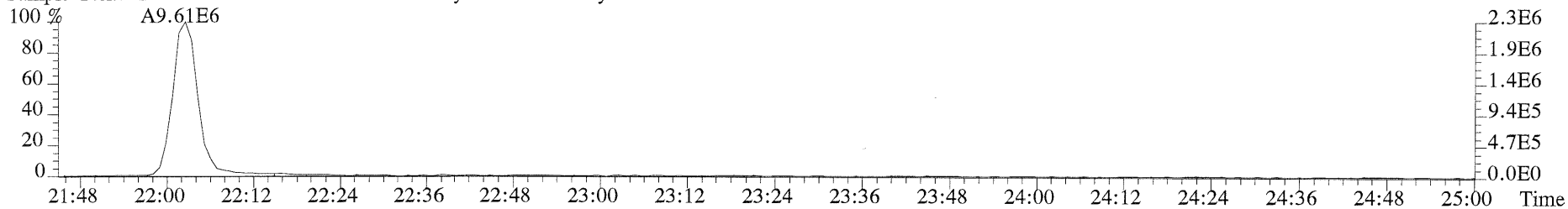
File:18AUG16Z #1-509 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:14 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



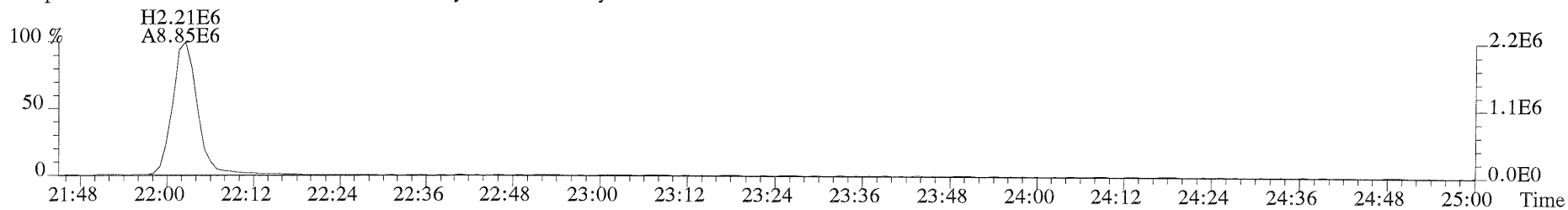
File:18AUG16Z #1-509 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:14 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



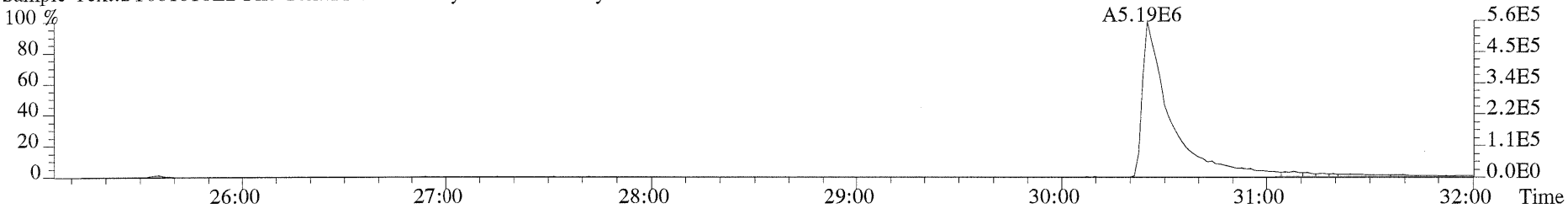
File:18AUG16Z #1-509 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:14 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



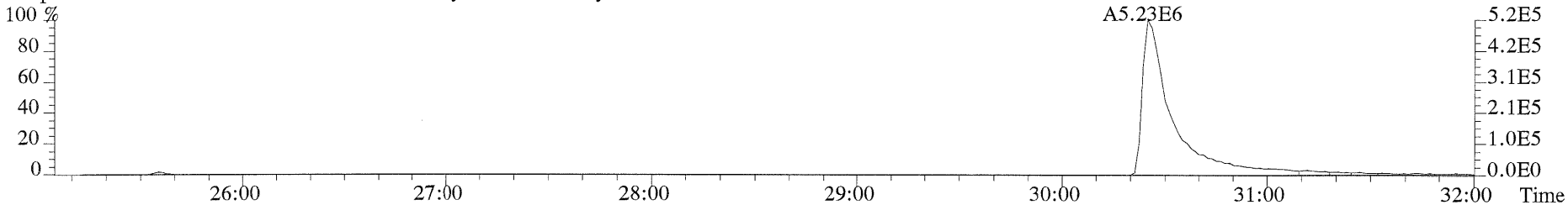
File:18AUG16Z #1-509 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:14 F:2 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



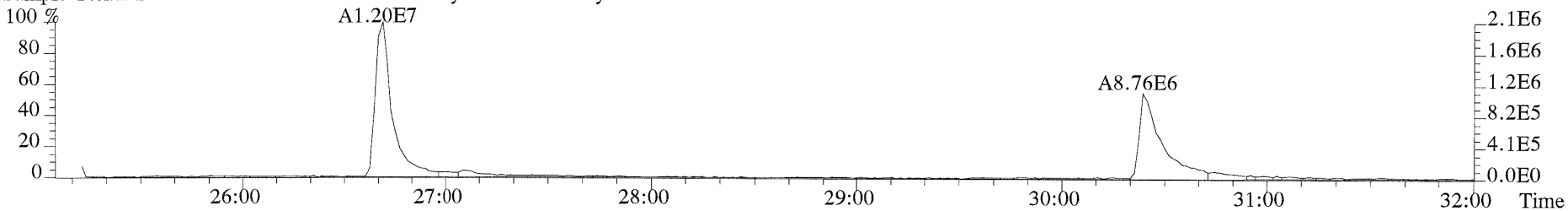
File:18AUG16Z #1-403 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
255.9613 S:14 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



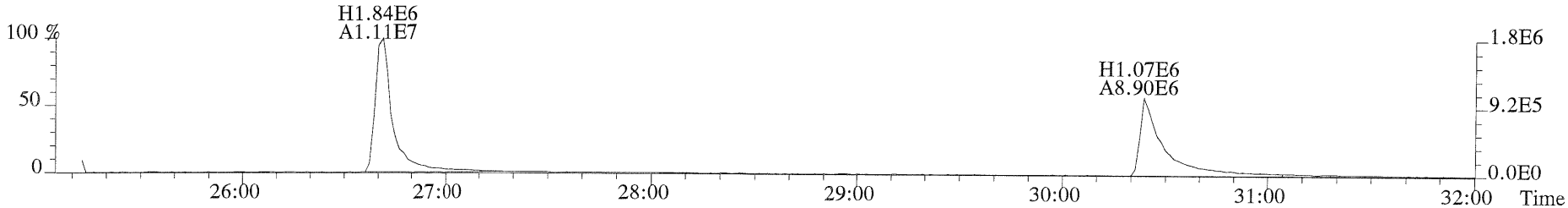
File:18AUG16Z #1-403 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
257.9584 S:14 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



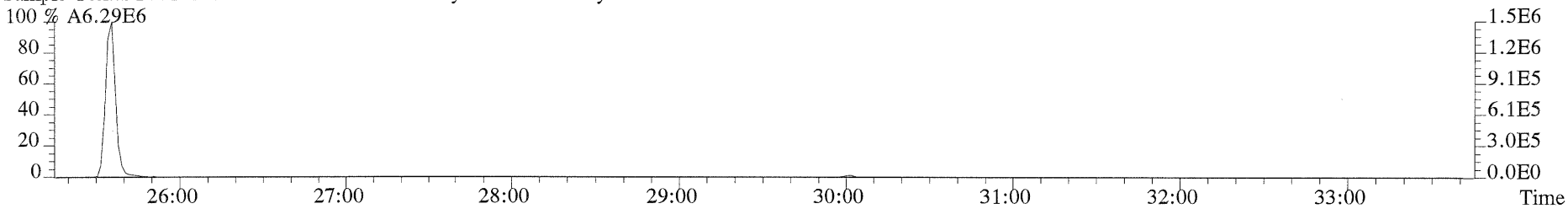
File:18AUG16Z #1-403 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
268.0016 S:14 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



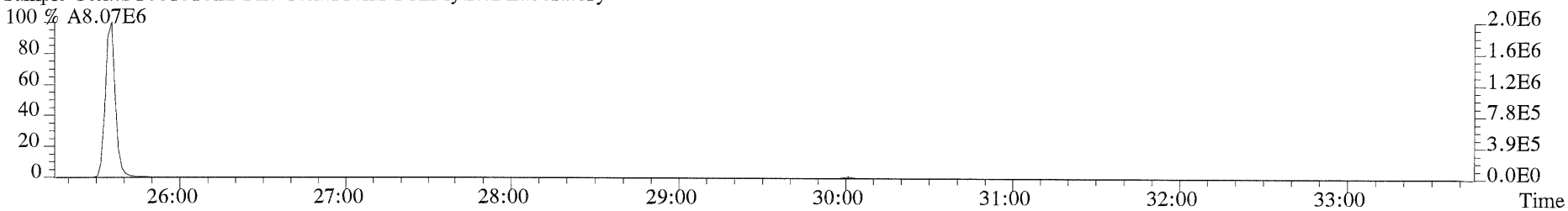
File:18AUG16Z #1-403 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
269.9986 S:14 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



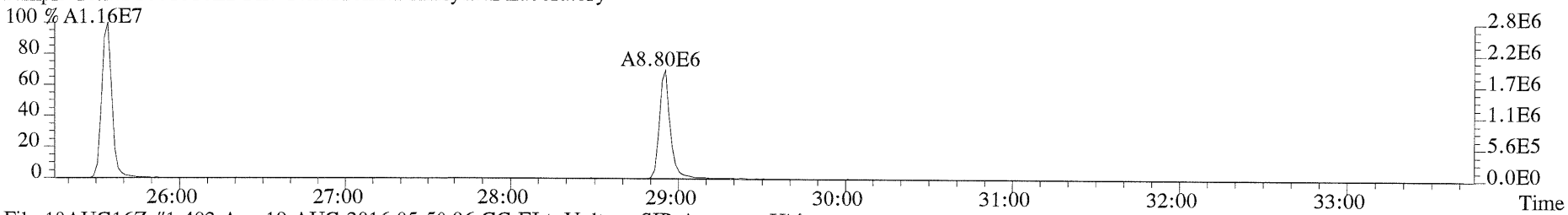
File:18AUG16Z #1-403 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:14 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



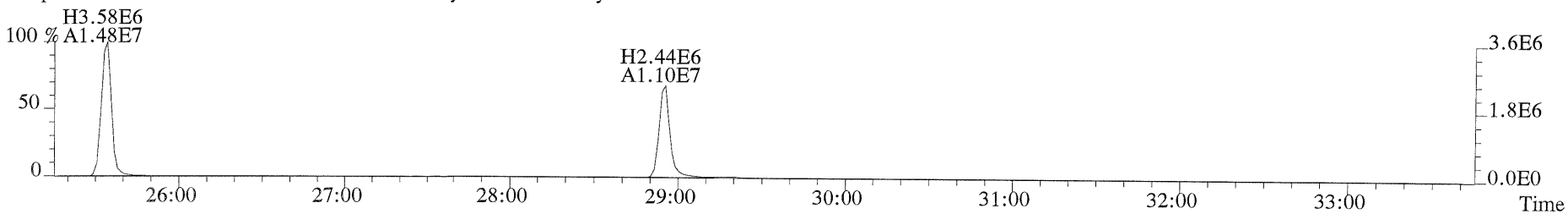
File:18AUG16Z #1-403 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:14 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



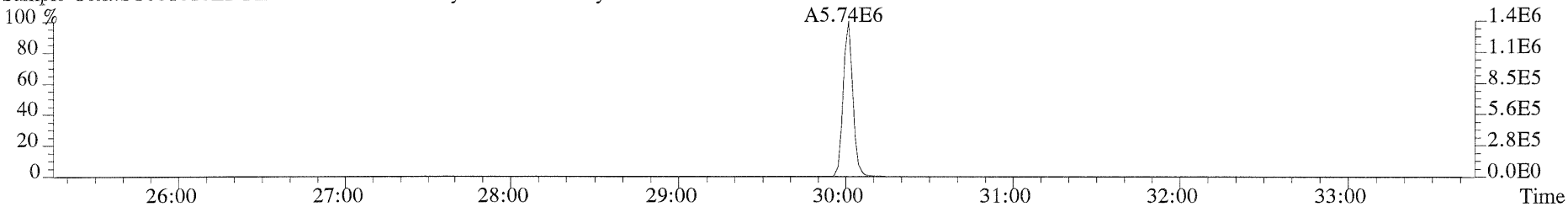
File:18AUG16Z #1-403 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:14 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



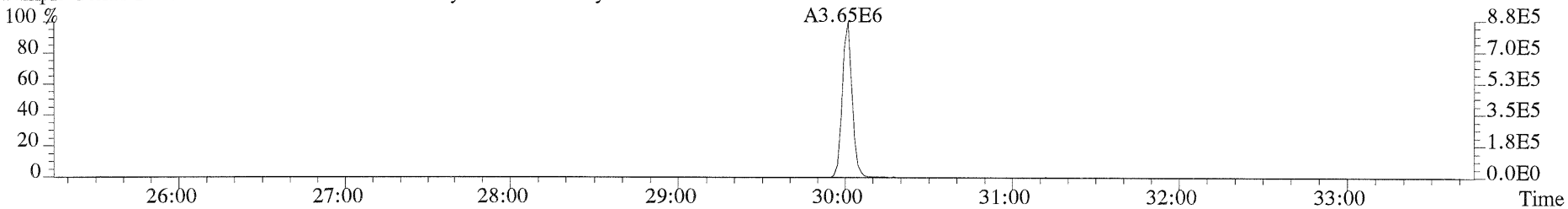
File:18AUG16Z #1-403 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:14 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



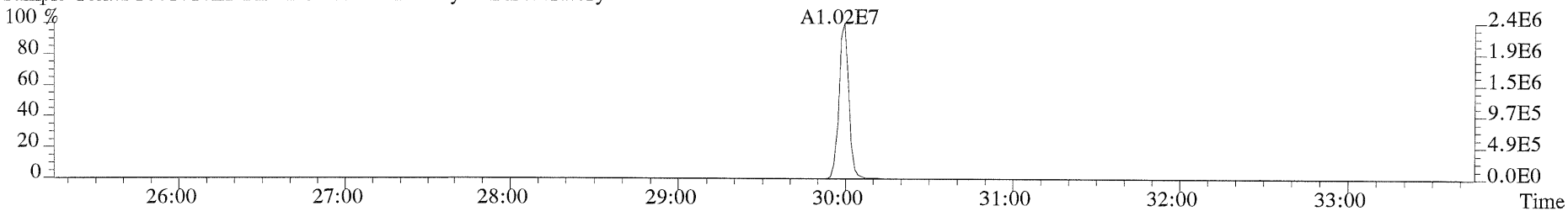
File:18AUG16Z #1-403 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:14 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



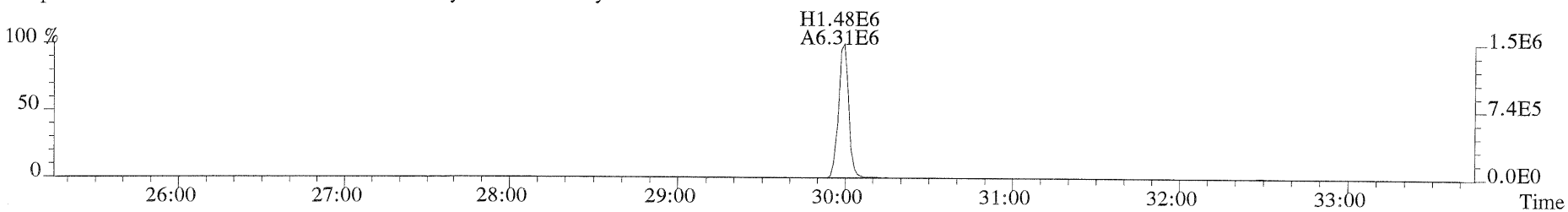
File:18AUG16Z #1-403 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:14 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



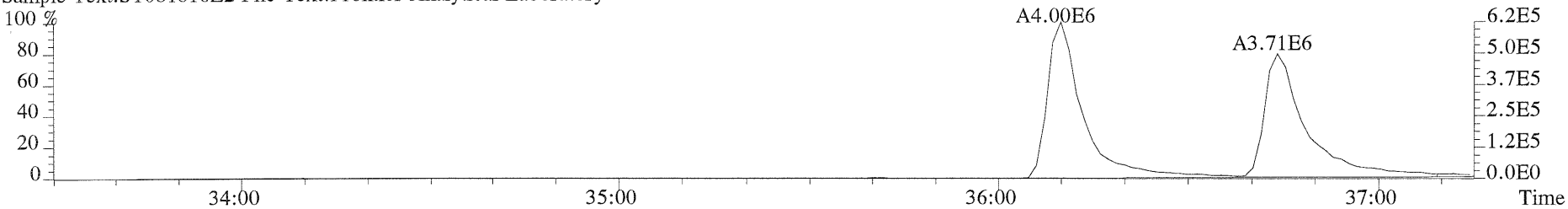
File:18AUG16Z #1-403 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:14 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



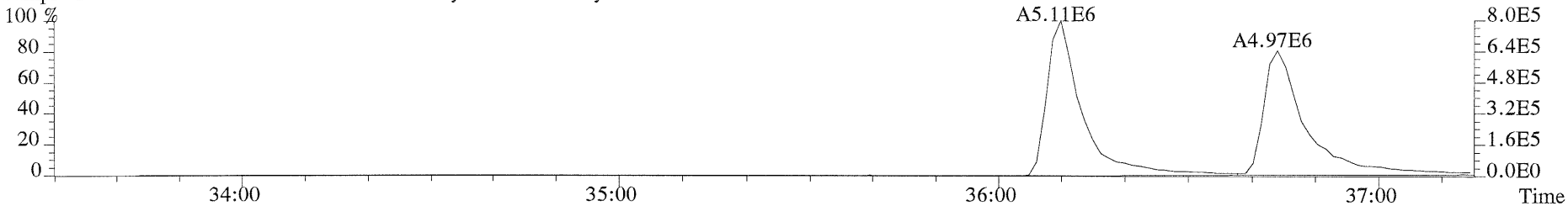
File:18AUG16Z #1-403 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:14 F:3 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



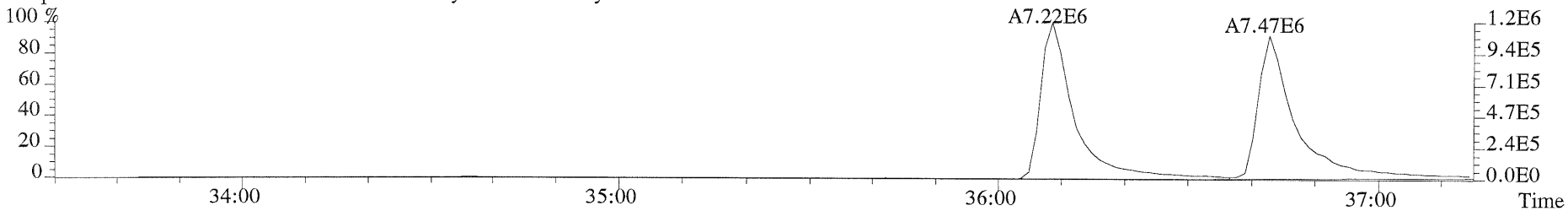
File:18AUG16Z #1-179 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
289.9224 S:14 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



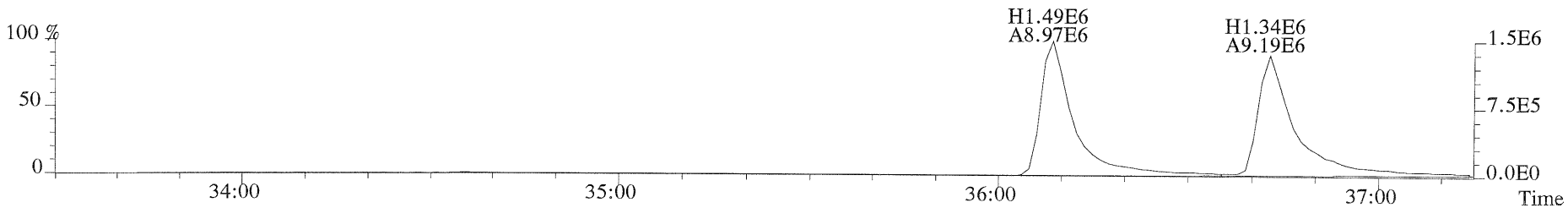
File:18AUG16Z #1-179 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
291.9194 S:14 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



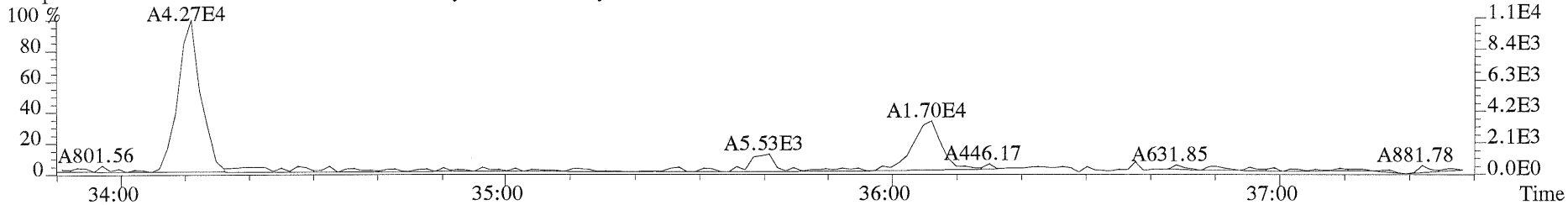
File:18AUG16Z #1-179 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
301.9626 S:14 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



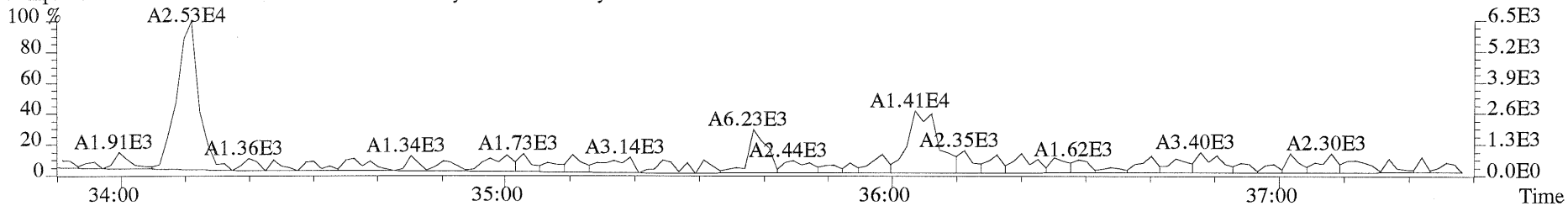
File:18AUG16Z #1-179 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
303.9597 S:14 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



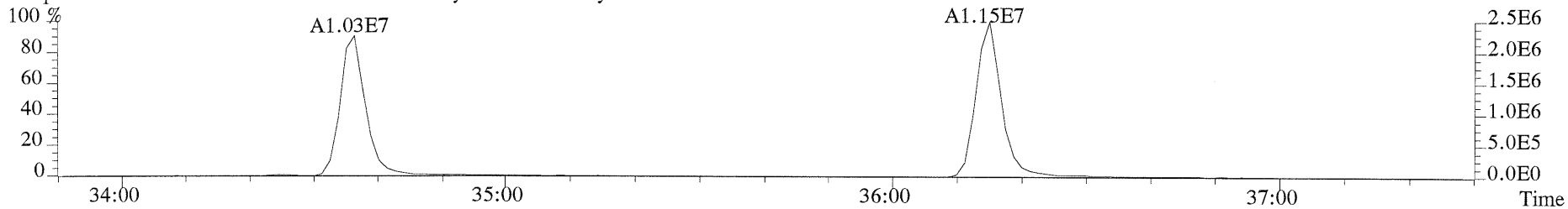
File:18AUG16Z #1-179 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:14 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



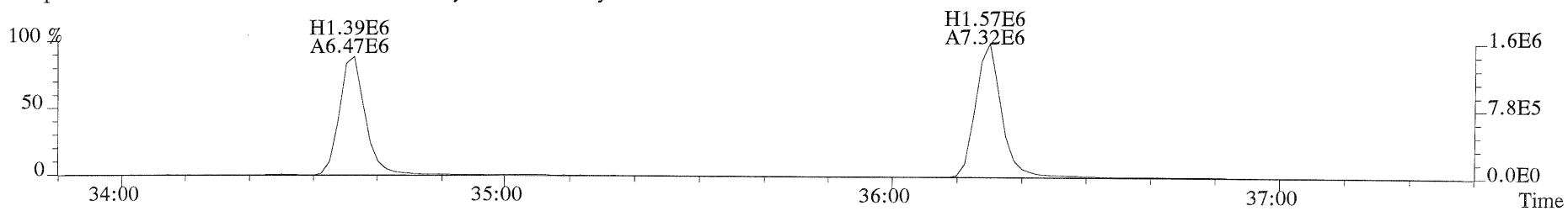
File:18AUG16Z #1-179 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:14 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



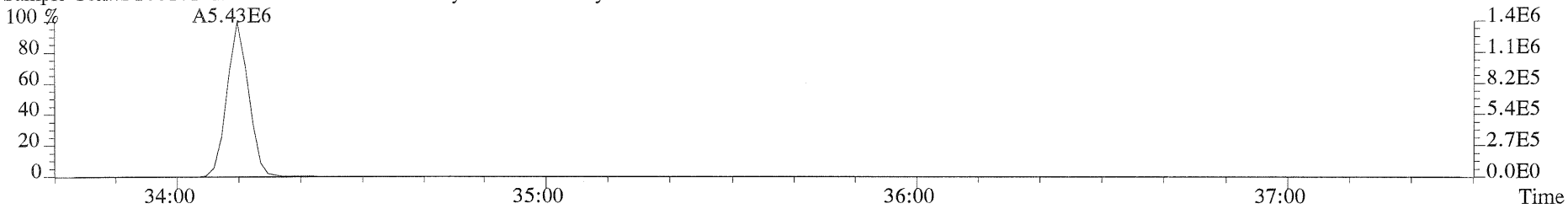
File:18AUG16Z #1-179 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:14 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



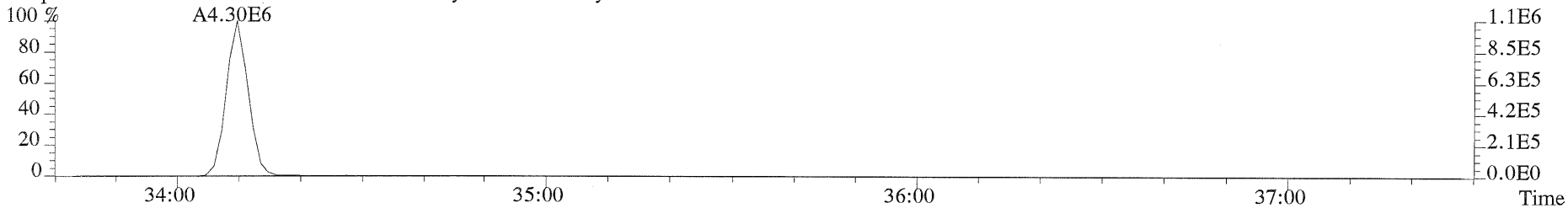
File:18AUG16Z #1-179 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:14 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



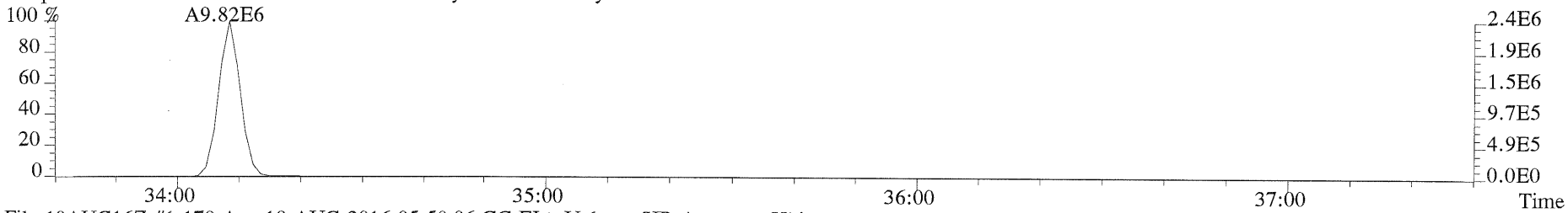
File:18AUG16Z #1-179 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:14 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



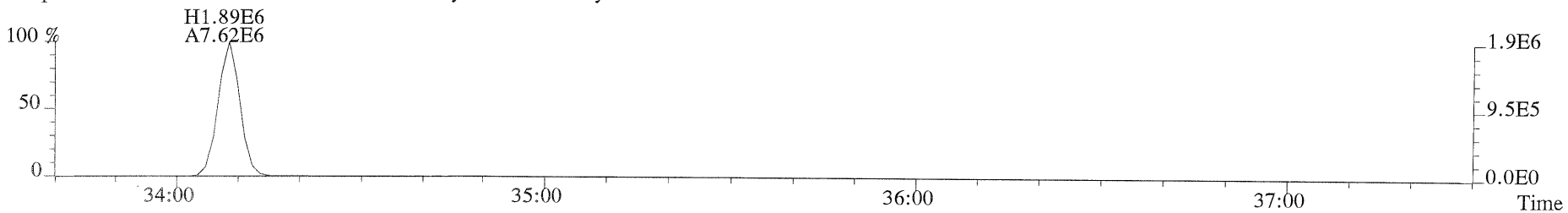
File:18AUG16Z #1-179 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:14 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



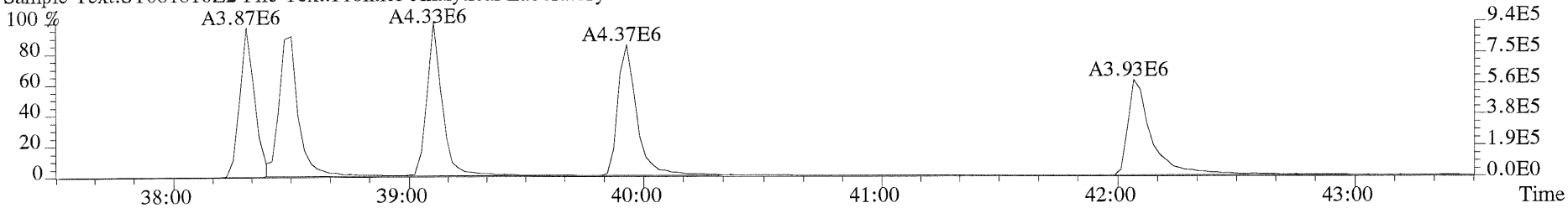
File:18AUG16Z #1-179 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:14 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



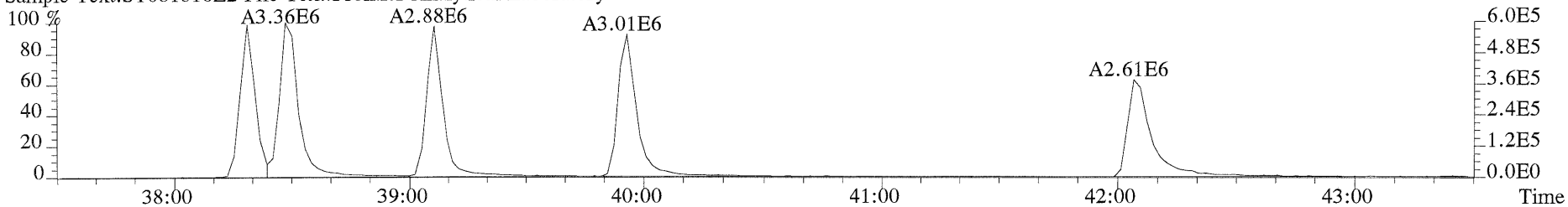
File:18AUG16Z #1-179 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:14 F:4 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



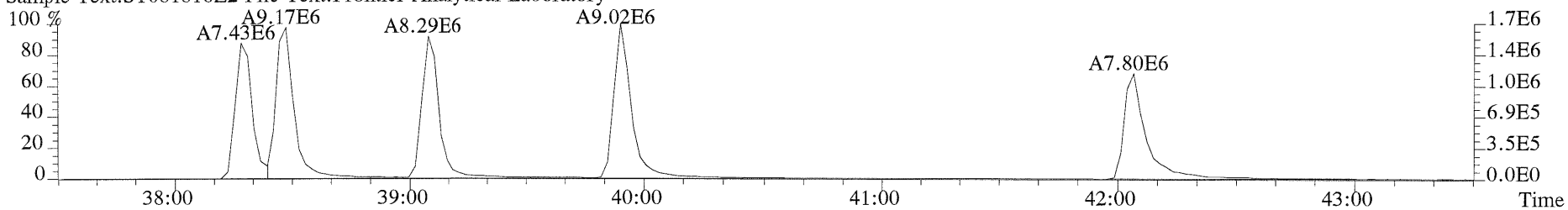
File:18AUG16Z #1-411 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
325.8804 S:14 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



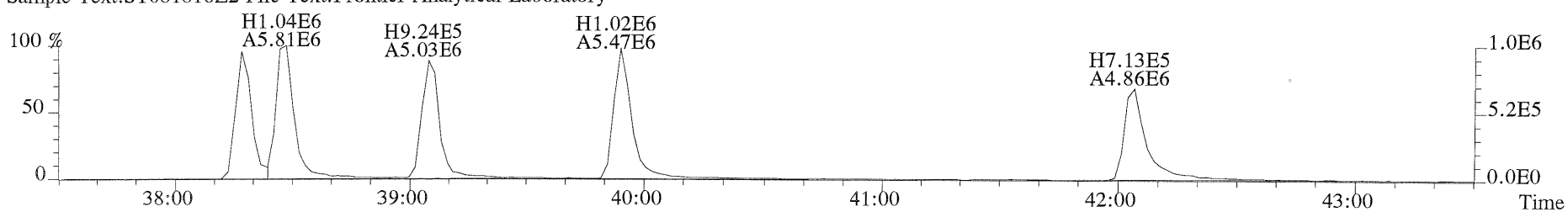
File:18AUG16Z #1-411 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
327.8775 S:14 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



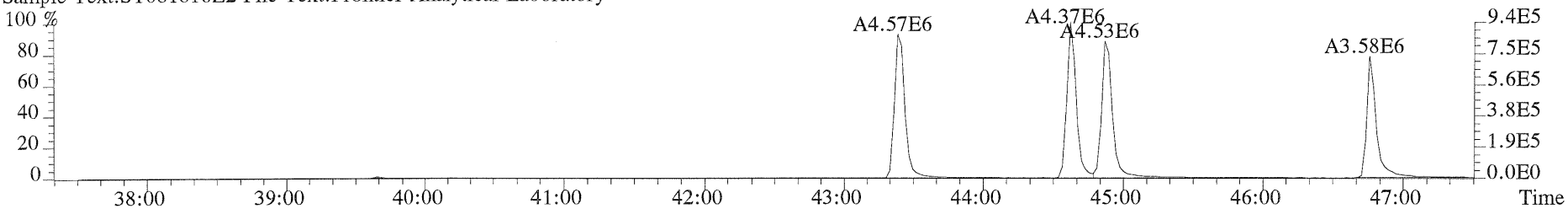
File:18AUG16Z #1-411 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
337.9207 S:14 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



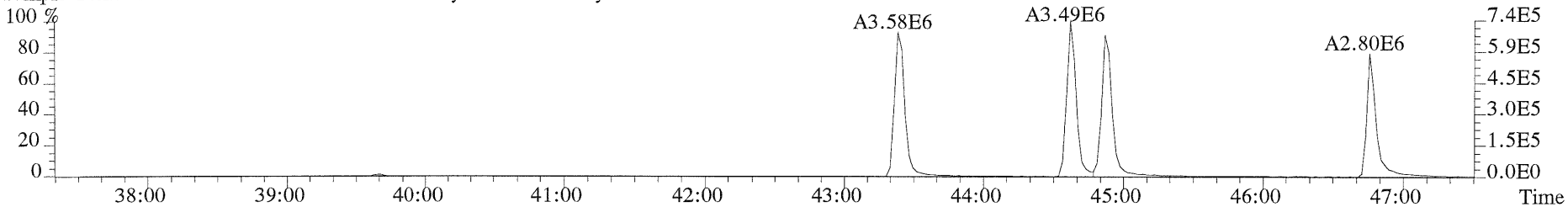
File:18AUG16Z #1-411 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
339.9178 S:14 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



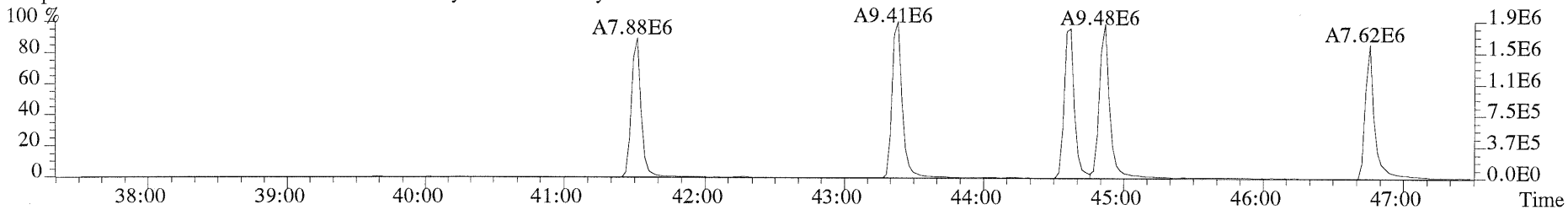
File:18AUG16Z #1-411 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
359.8415 S:14 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



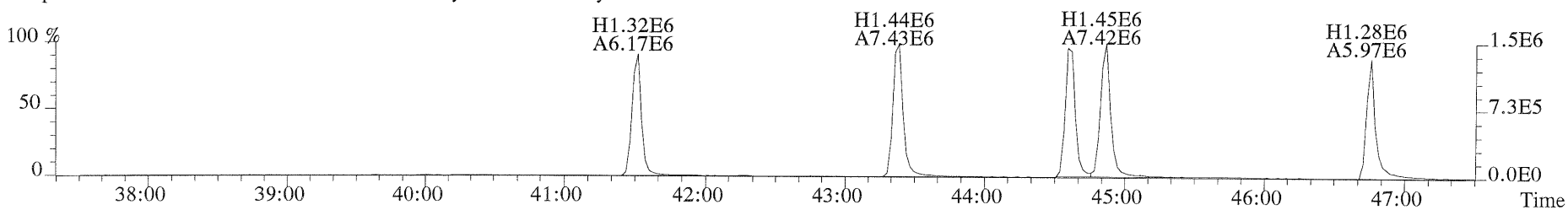
File:18AUG16Z #1-411 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
361.8385 S:14 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



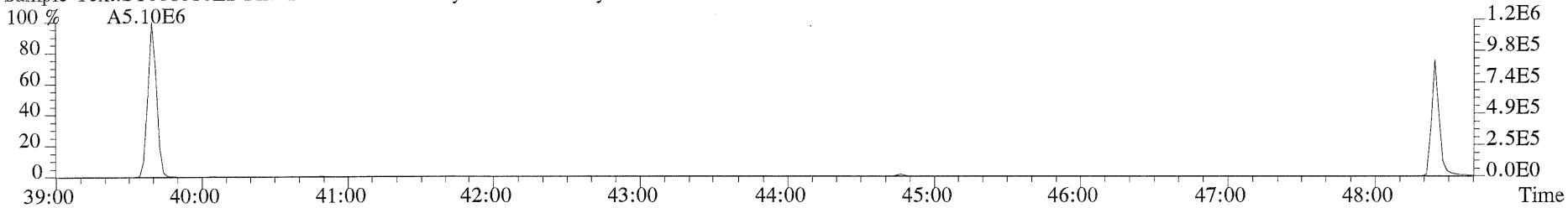
File:18AUG16Z #1-411 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
371.8817 S:14 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



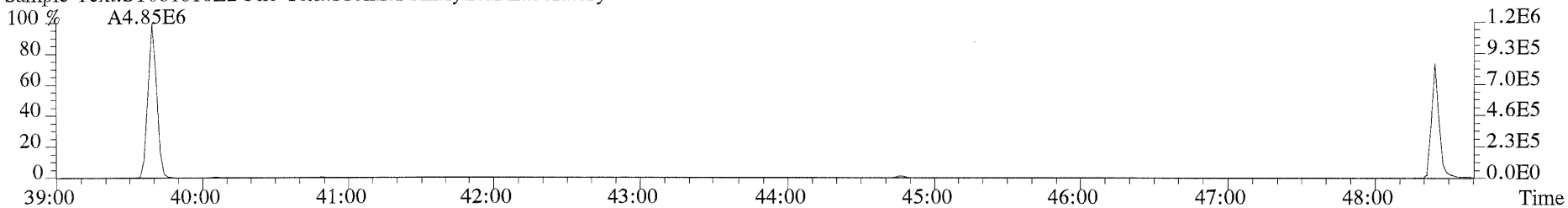
File:18AUG16Z #1-411 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
373.8788 S:14 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



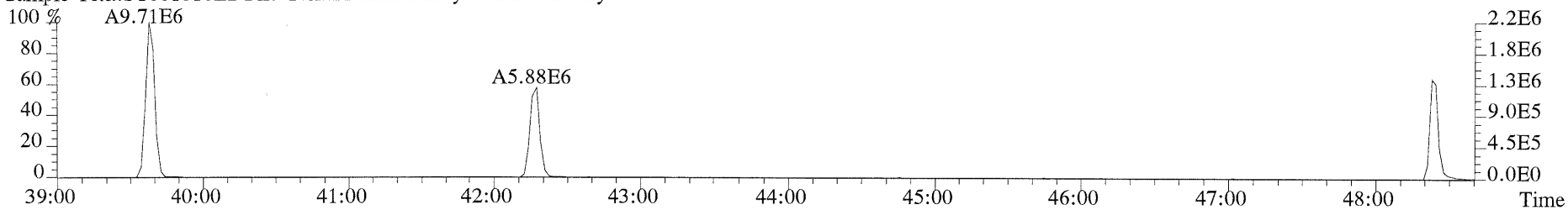
File:18AUG16Z #1-411 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
393.8025 S:14 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



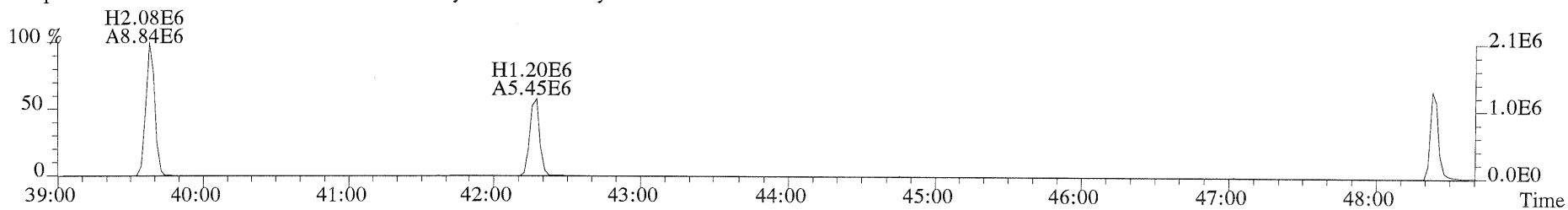
File:18AUG16Z #1-411 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
395.7995 S:14 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



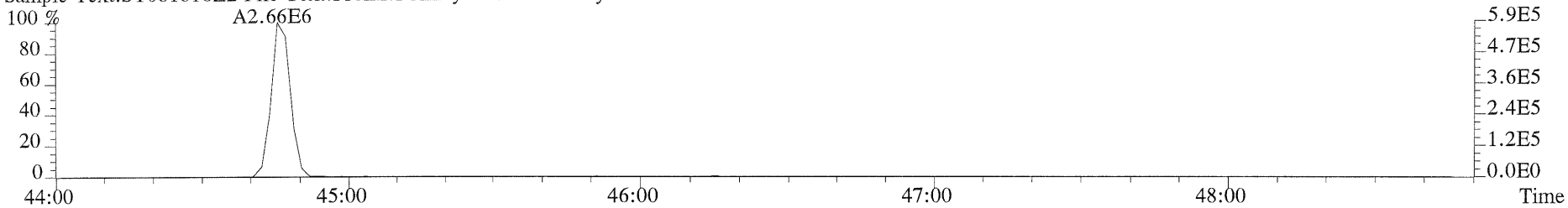
File:18AUG16Z #1-411 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
405.8428 S:14 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



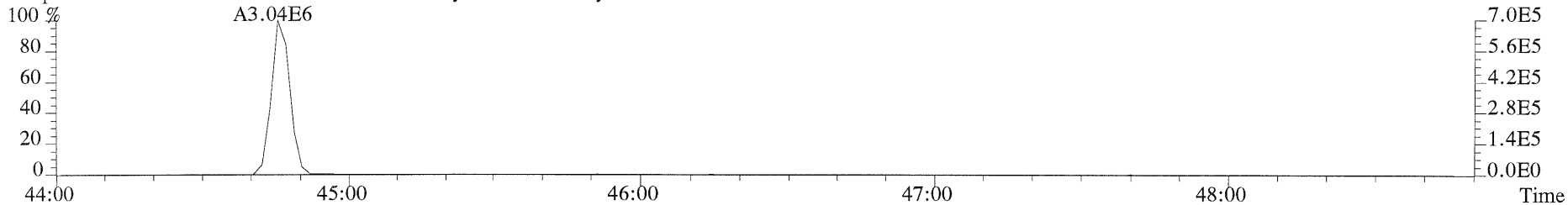
File:18AUG16Z #1-411 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
407.8398 S:14 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



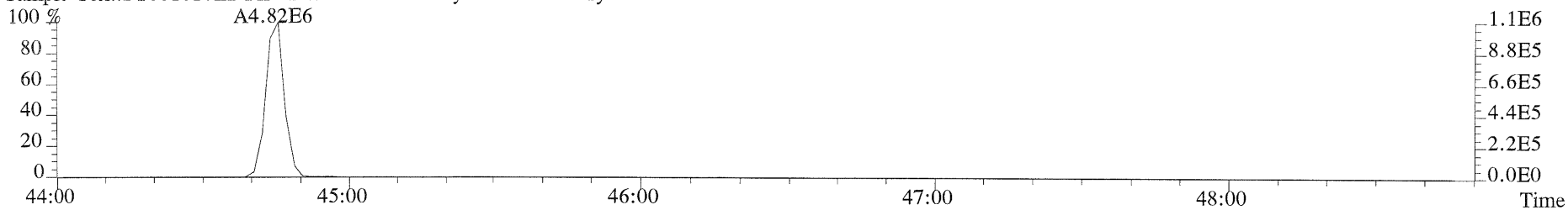
File:18AUG16Z #1-411 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:14 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



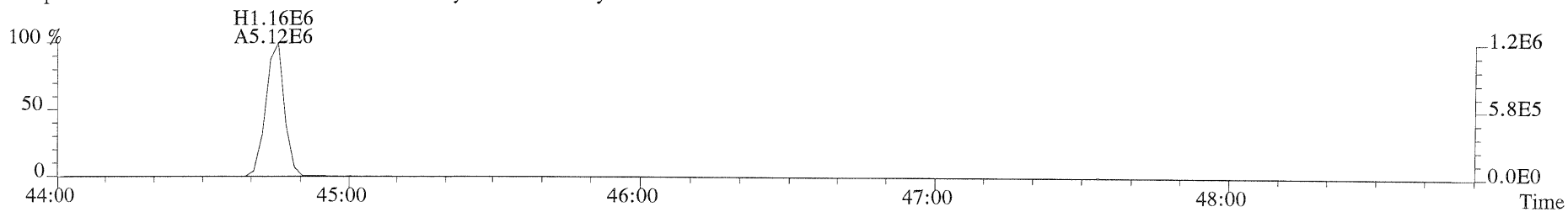
File:18AUG16Z #1-411 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:14 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



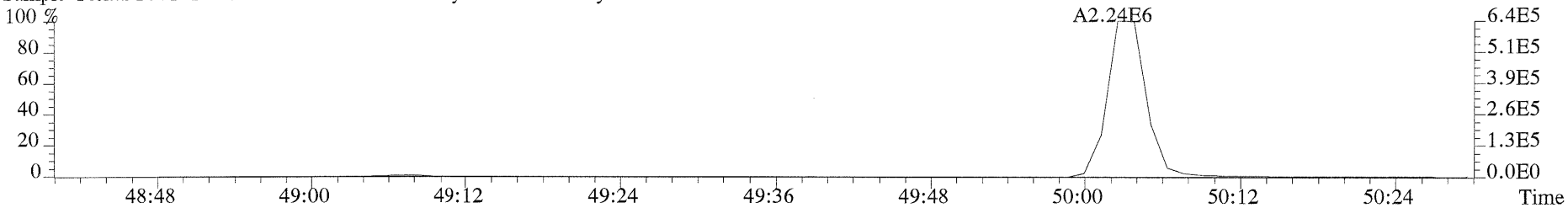
File:18AUG16Z #1-411 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:14 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



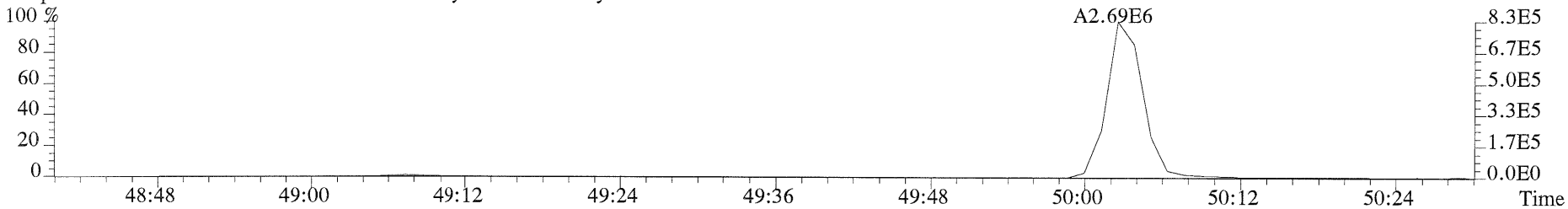
File:18AUG16Z #1-411 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:14 F:5 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



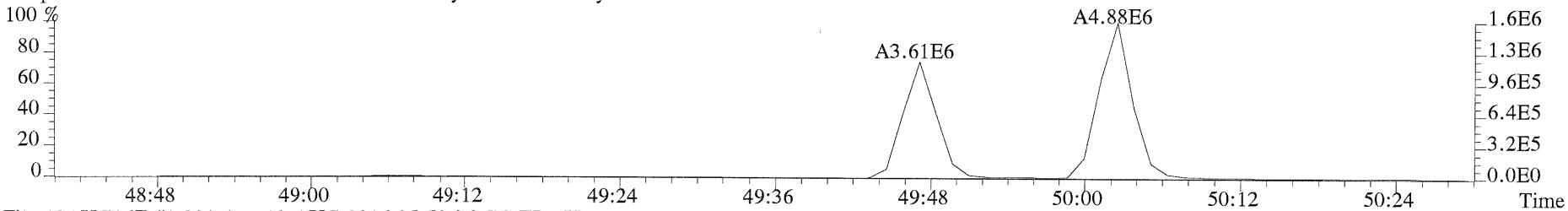
File:18AUG16Z #1-221 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
427.7635 S:14 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



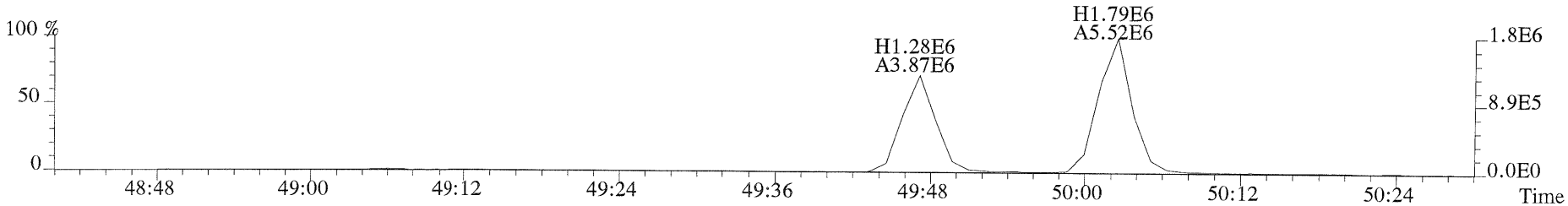
File:18AUG16Z #1-221 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
429.7606 S:14 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



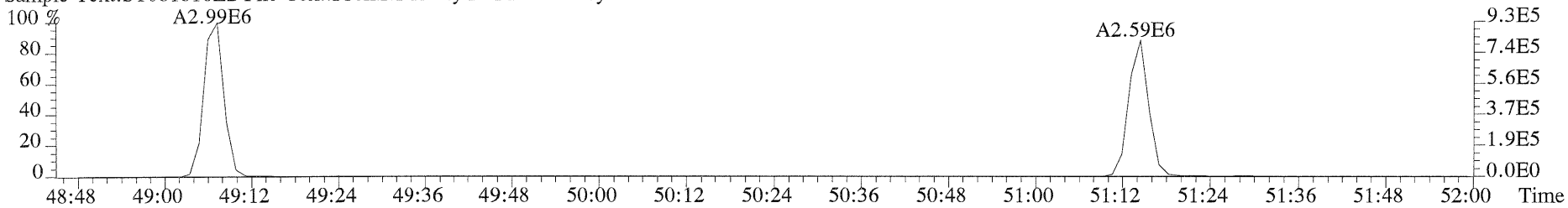
File:18AUG16Z #1-221 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
439.8038 S:14 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



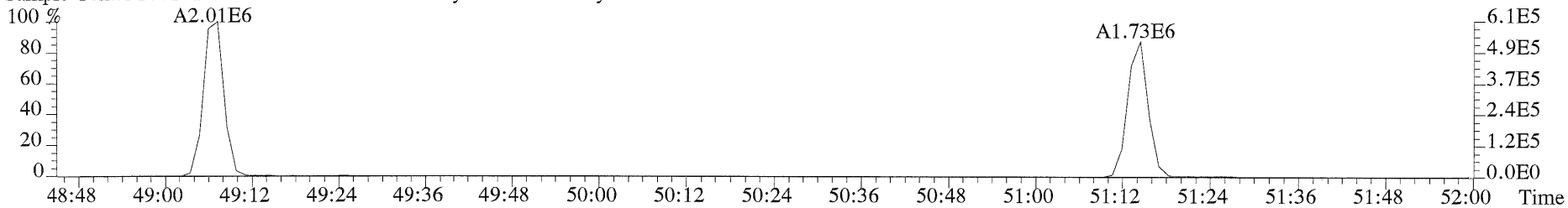
File:18AUG16Z #1-221 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
441.8008 S:14 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



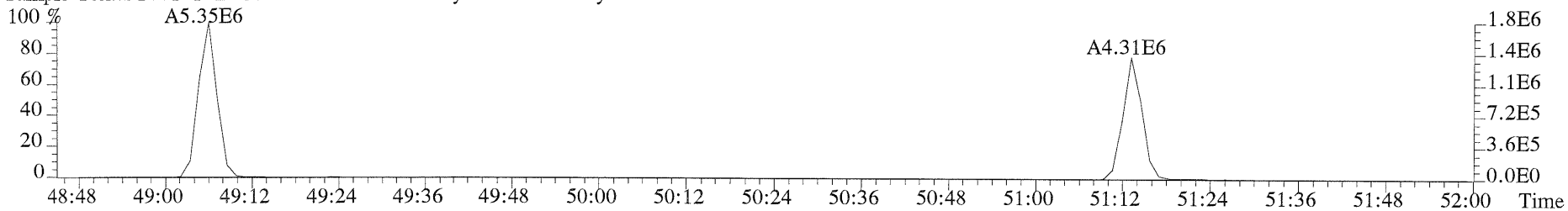
File:18AUG16Z #1-221 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
463.7216 S:14 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



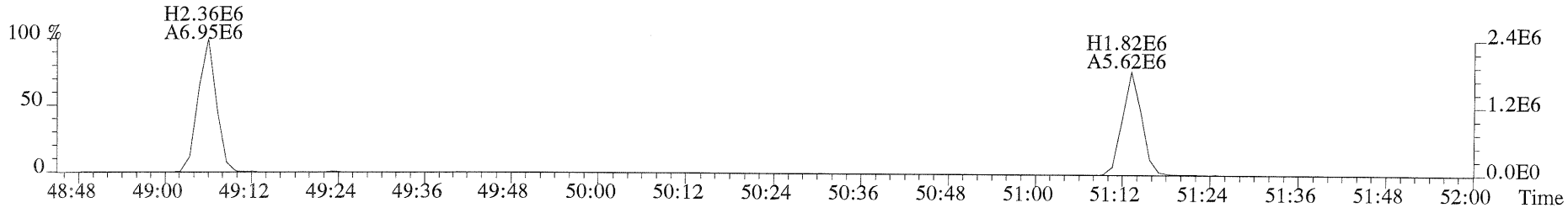
File:18AUG16Z #1-221 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
465.7187 S:14 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



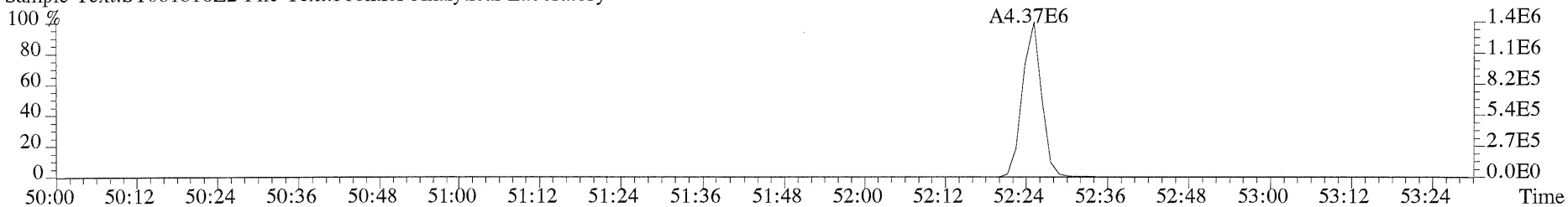
File:18AUG16Z #1-221 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
473.7648 S:14 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



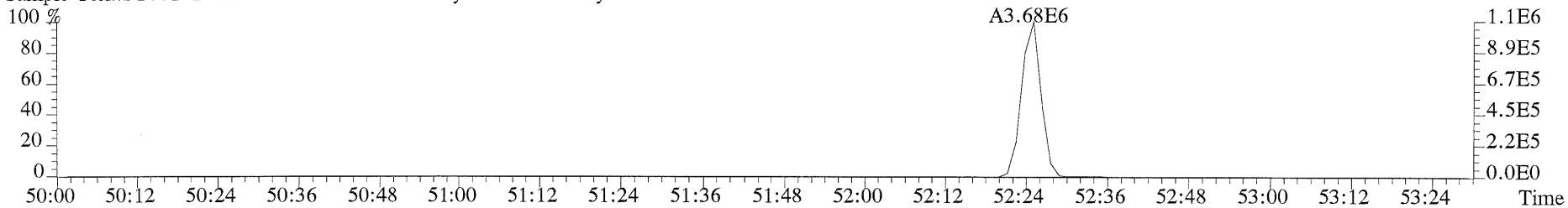
File:18AUG16Z #1-221 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
475.7619 S:14 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



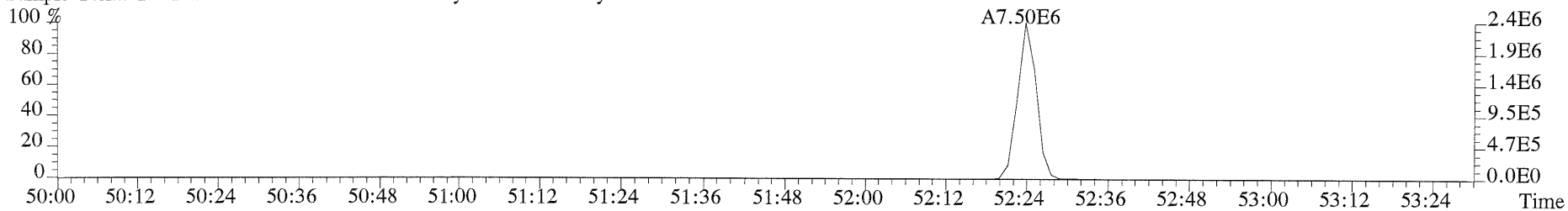
File:18AUG16Z #1-221 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
497.6826 S:14 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



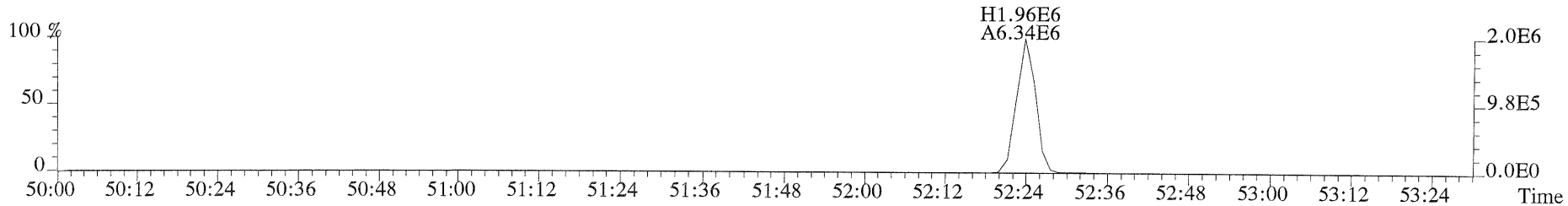
File:18AUG16Z #1-221 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
499.6797 S:14 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory



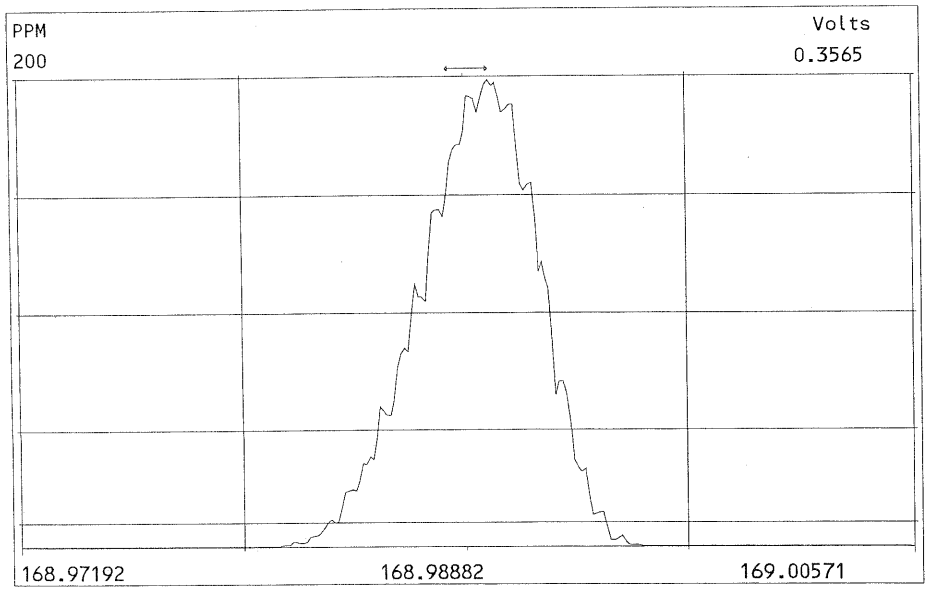
File:18AUG16Z #1-221 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
509.7229 S:14 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory

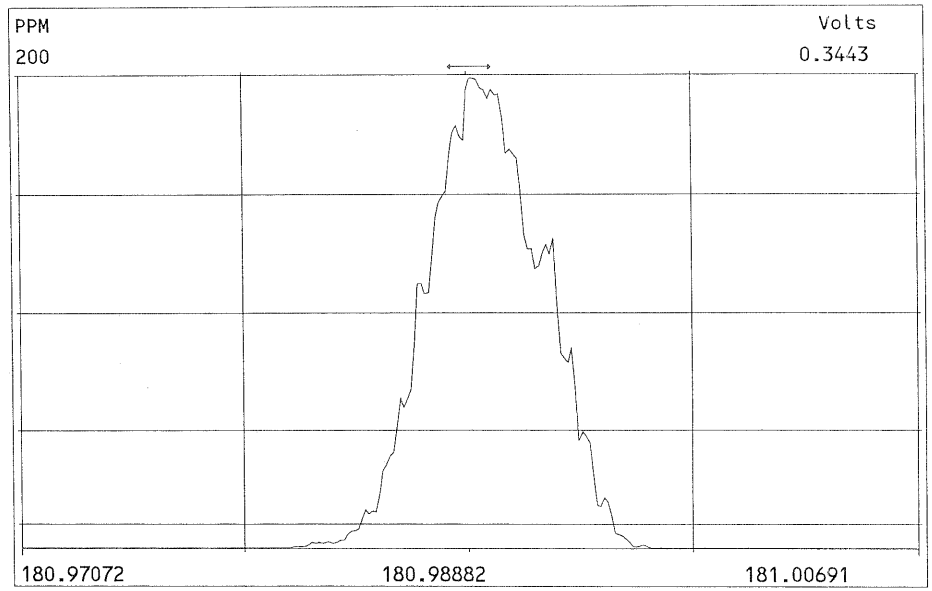


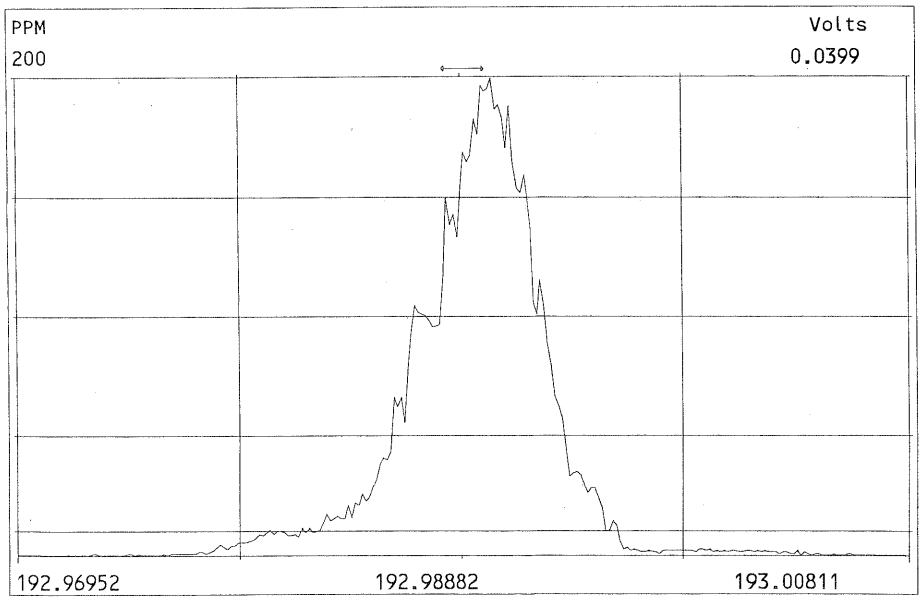
File:18AUG16Z #1-221 Acq:19-AUG-2016 05:50:06 GC EI+ Voltage SIR Autospec-Ultima
511.7199 S:14 F:6 BSUB(1000,15,-3.0) PKD(3,3,1,0.10%,100.0,0.00%,F,F) Exp:1668PCB
Sample Text:ST081816Z2 File Text:Frontier Analytical Laboratory

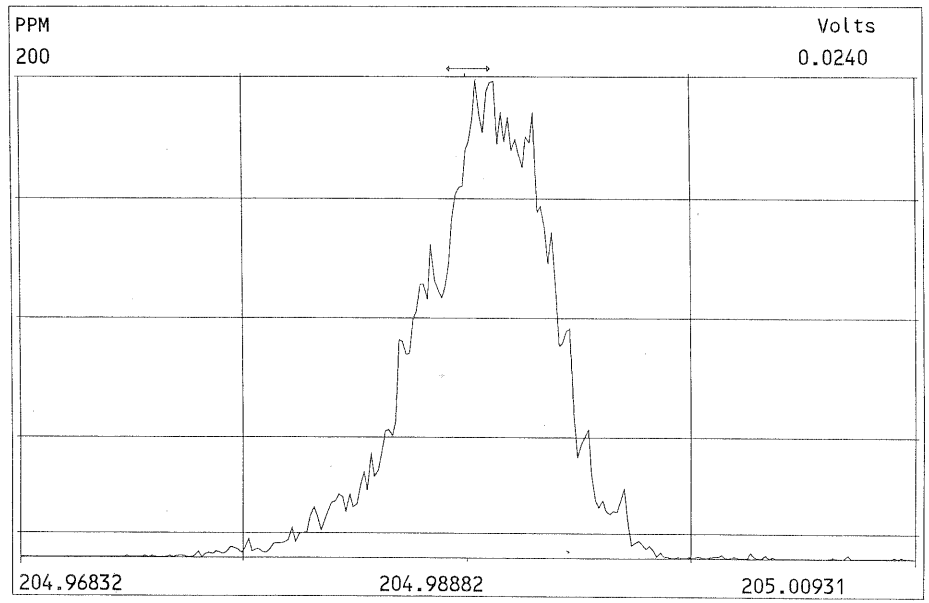


Peak Locate Examination:19-AUG-2016:06:53 File:18AUG16Z_RES_CHECK
Experiment:1668PCB Function:1 Reference:PFK

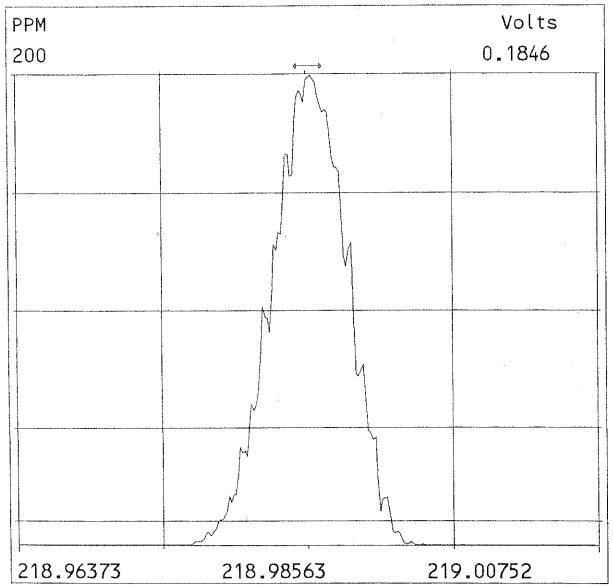


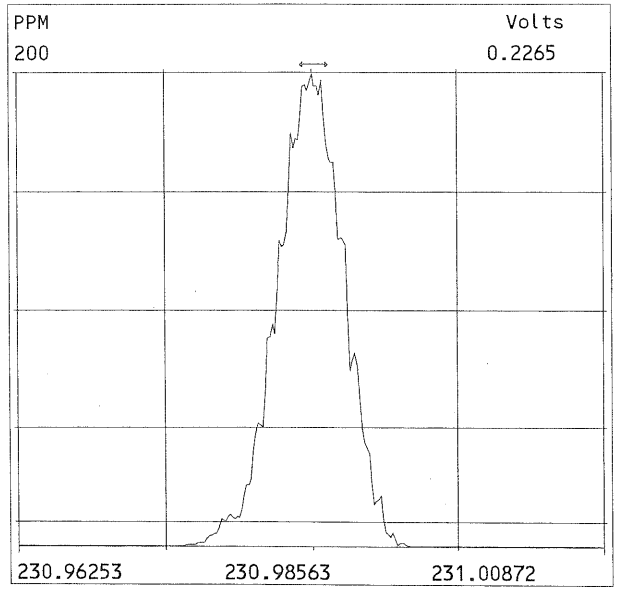


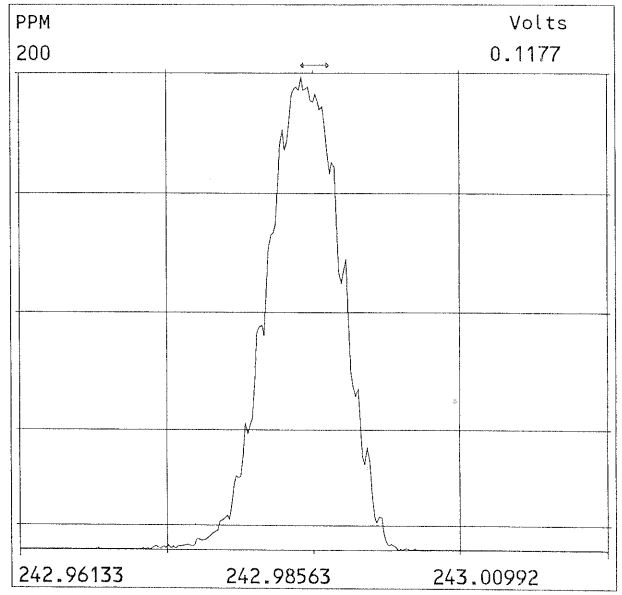


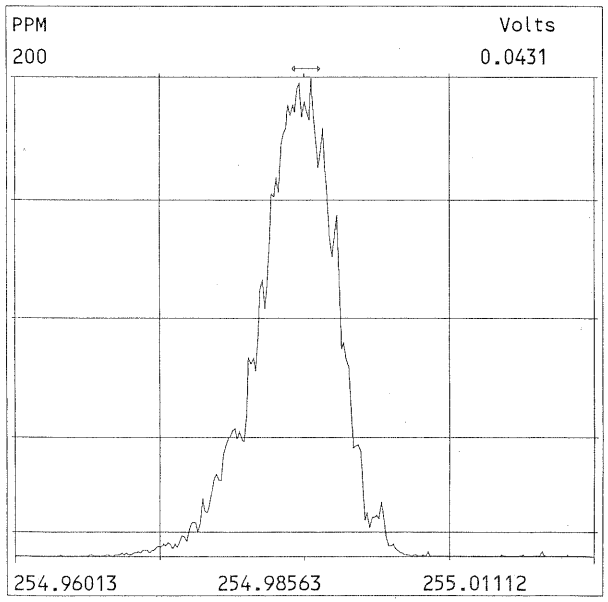


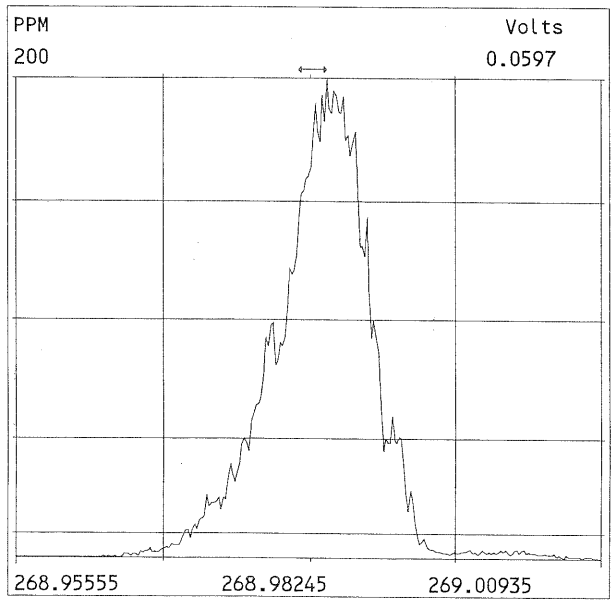
Peak Locate Examination:19-AUG-2016:06:54 File:18AUG16Z_RES_CHECK
Experiment:1668PCB Function:2 Reference:PFK

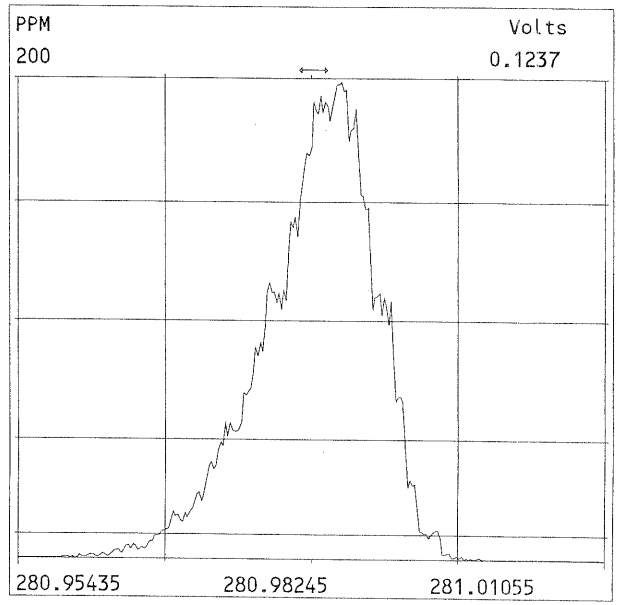




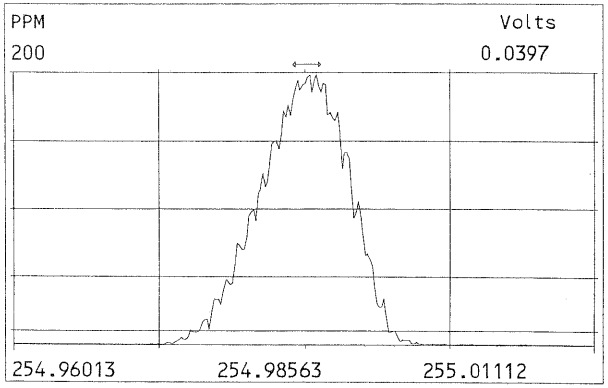


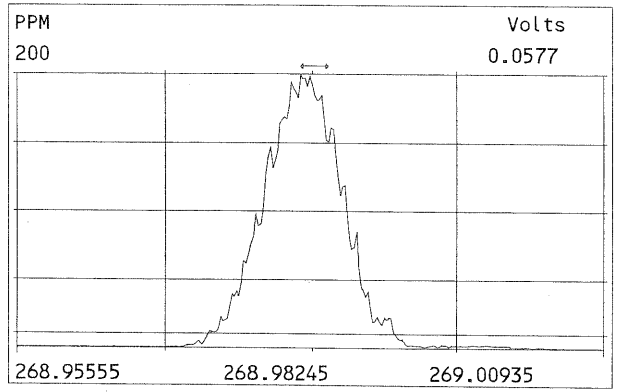


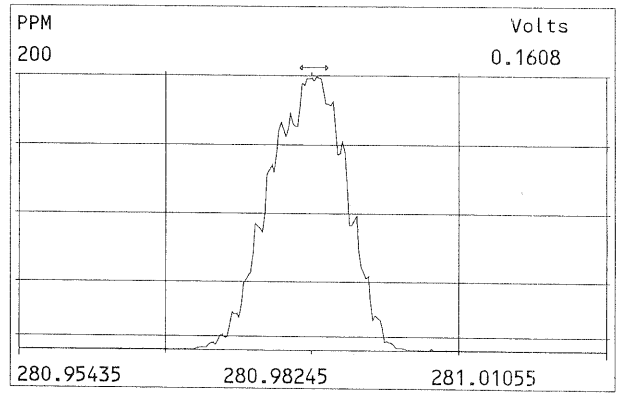


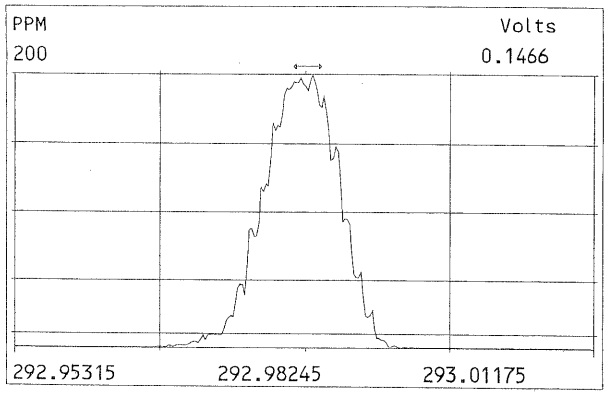


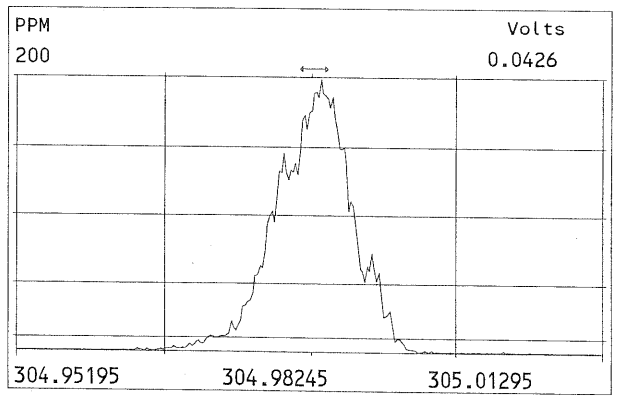
Peak Locate Examination:19-AUG-2016:06:55 File:18AUG16Z_RES_CHECK
Experiment:1668PCB Function:3 Reference:PFK

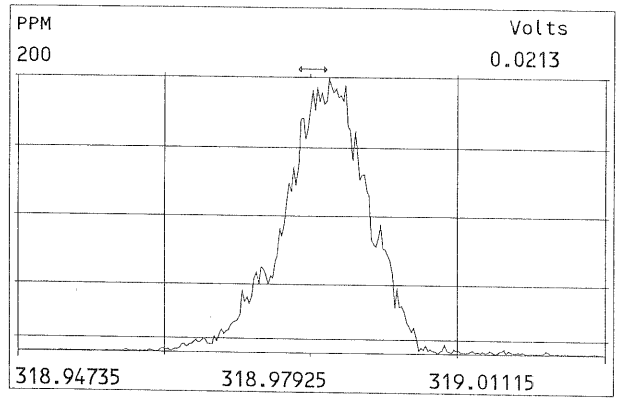


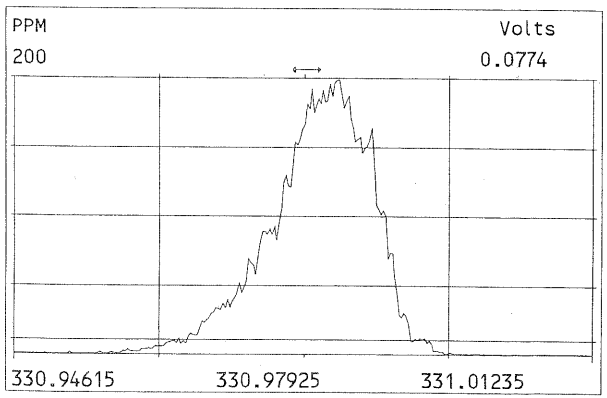


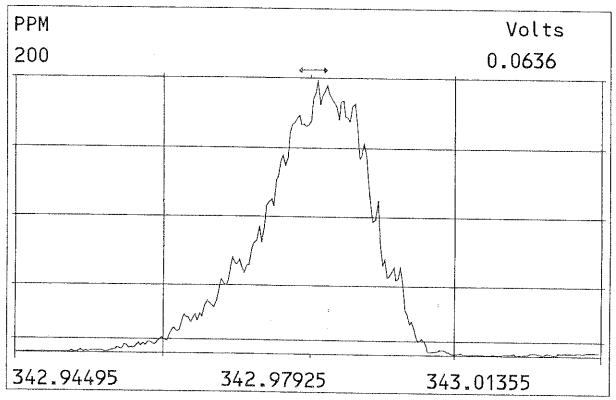




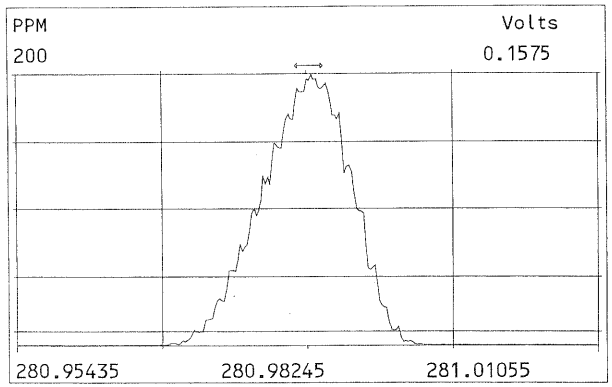


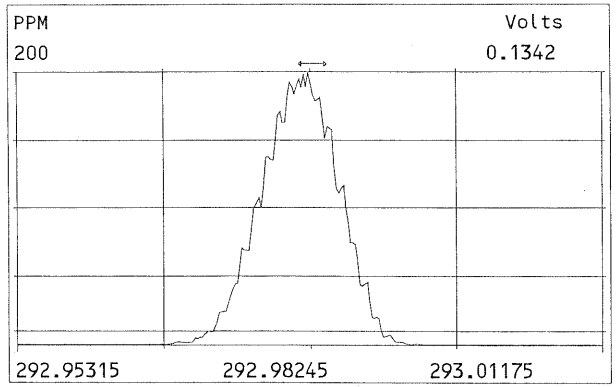


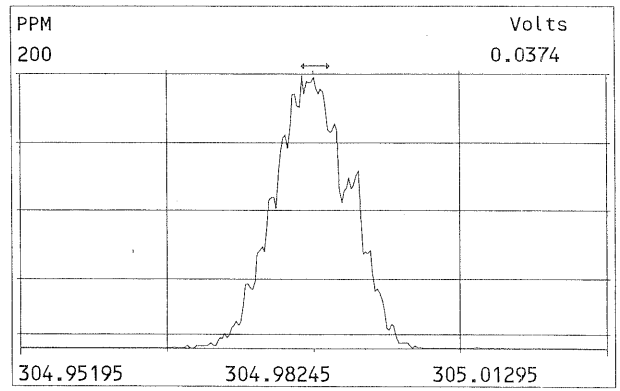


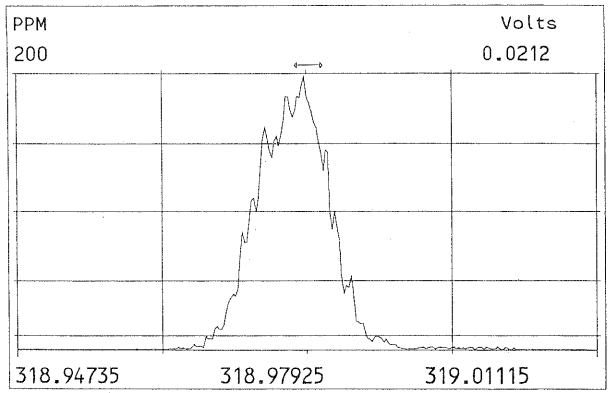


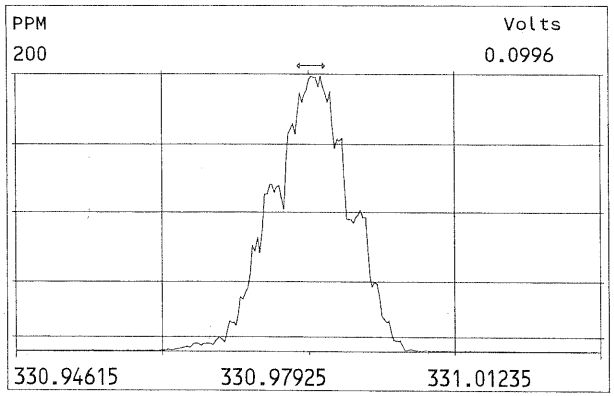
Peak Locate Examination:19-AUG-2016:06:55 File:18AUG16Z_RES_CHECK
Experiment:1668PCB Function:4 Reference:PFK

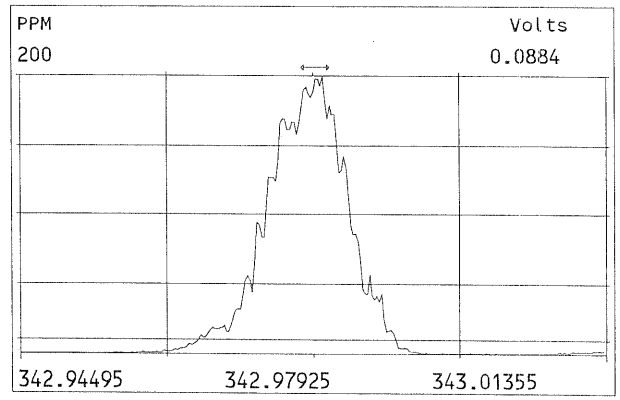


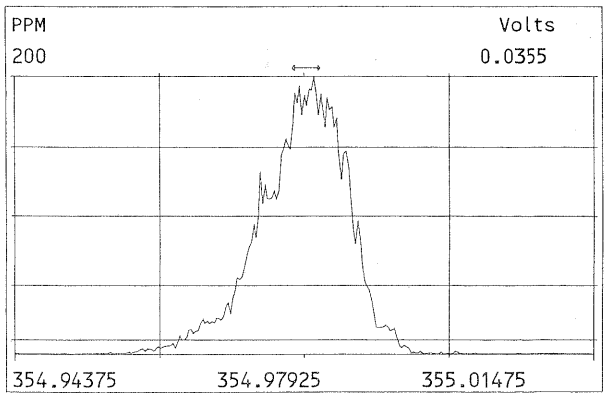


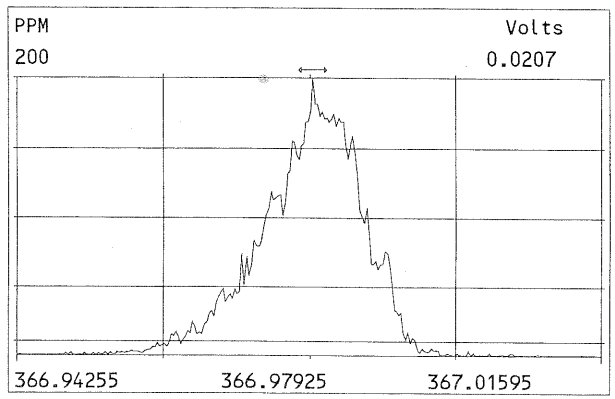


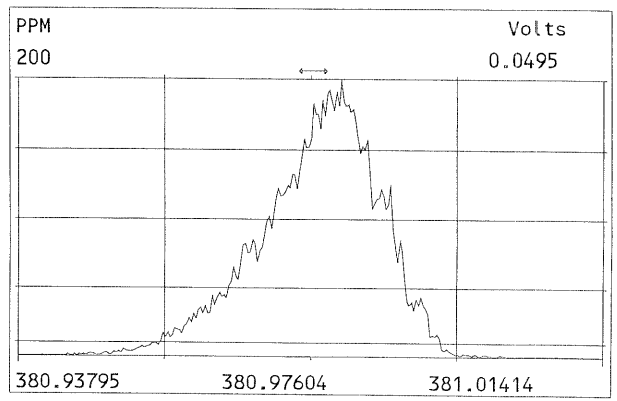




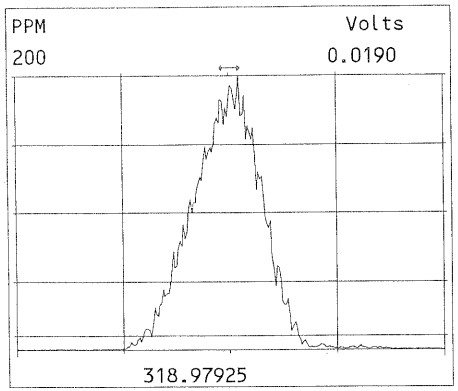


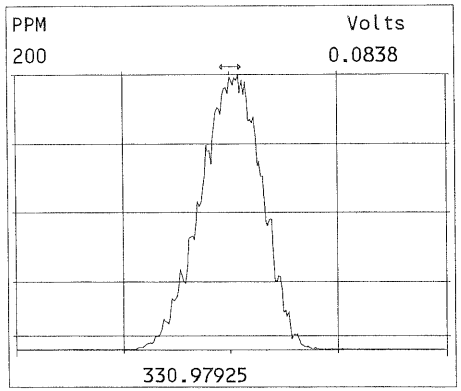


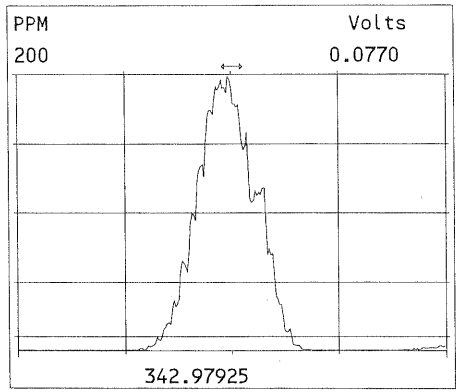


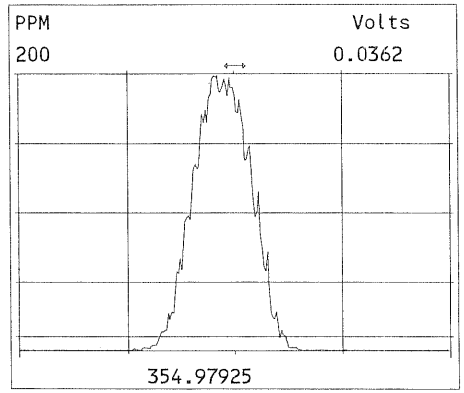


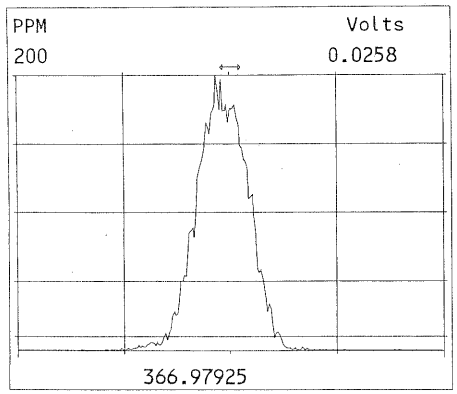
Peak Locate Examination:19-AUG-2016:06:56 File:18AUG16Z_RES_CHECK
Experiment:1668PCB Function:5 Reference:PFK

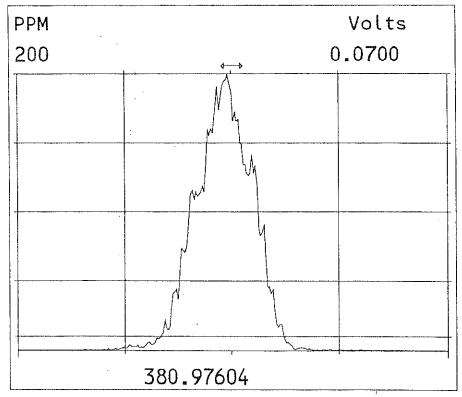


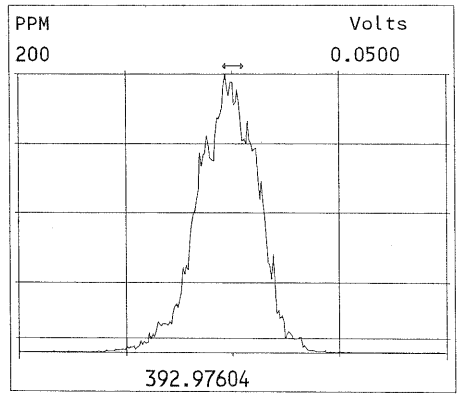


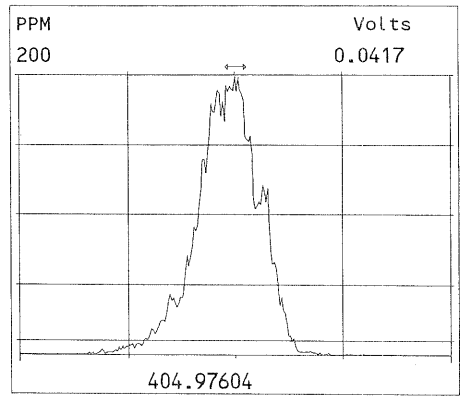


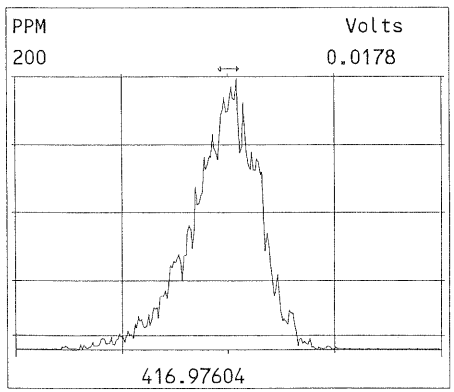


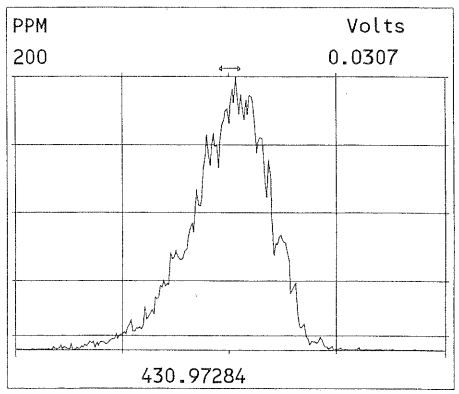


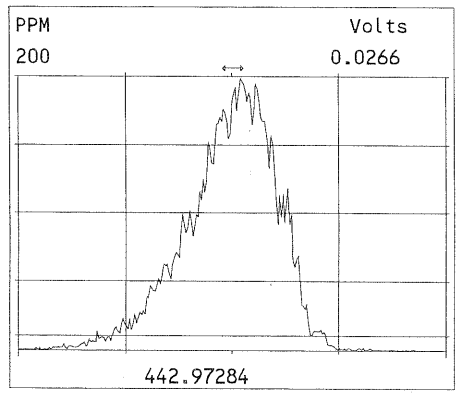




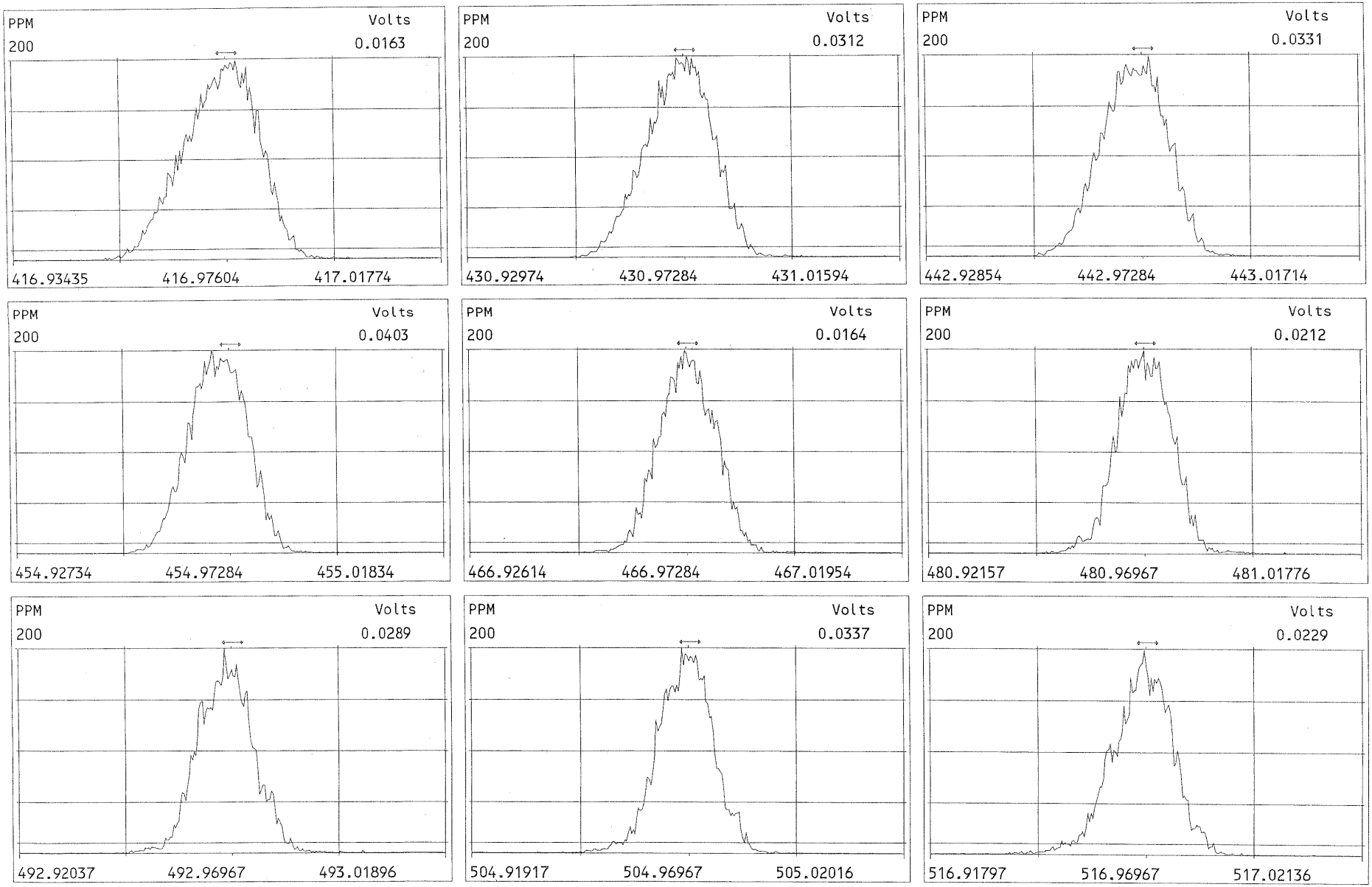








Peak Locate Examination:19-AUG-2016:06:56 File:18AUG16Z_RES_CHECK
Experiment:1668PCB Function:6 Reference:PFK



USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 7/20/16

Instrument ID: FAL3 GC Column ID: DB5MS

VER Data Filename: 18AUG16M Sam:1 Analysis Date: 18-AUG-16 08:40:57

NATIVE ANALYTES	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	y	11.0	7.80 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	1.54	1.32-1.78	y	46.9	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	46.9	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	y	46.6	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.21	1.05-1.43	y	47.7	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	0.99	0.88-1.20	y	47.1	43.0 - 58.0
OCDD	M+2/M+4	0.90	0.76-1.02	y	99.7	79.0 - 126
2,3,7,8-TCDF	M/M+2	0.75	0.65-0.89	y	9.44	8.40 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	y	49.8	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.51	1.32-1.78	y	48.2	41.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	48.9	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	y	47.3	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.19	1.05-1.43	y	48.6	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.23	1.05-1.43	y	48.7	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.04	0.88-1.20	y	48.3	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.04	0.88-1.20	y	47.2	43.0 - 58.0
OCDF	M+2/M+4	0.88	0.76-1.02	y	101	63.0 - 159

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

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

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

Analyst: [signature] Date: 8/19/16

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 7/20/16

Instrument ID: FAL3 GC Column ID: DB5MS

VER Data Filename: 18AUG16M Sam:1 Analysis Date: 18-AUG-16 08:40:57

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.82	0.65-0.89	y	96.6	82.0 - 121
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.60	1.32-1.78	y	83.6	62.0 - 160
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	91.0	85.0 - 117
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	109	85.0 - 118
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.11	0.88-1.20	y	90.6	72.0 - 138
13C-OCDD	M+2/M+4	0.91	0.76-1.02	y	165	96.0 - 415
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	y	94.3	71.0 - 140
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	81.3	76.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	84.7	77.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	96.7	76.0 - 131
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	117	70.0 - 143
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	109	73.0 - 137
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.55	0.43-0.59	y	90.5	74.0 - 135
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.47	0.37-0.51	y	103	78.0 - 129
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	y	92.3	77.0 - 129
13C-OCDF	M+2/M+4	0.91	0.76-1.02	y	165	96.0 - 415
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					9.26	7.90 - 12.7

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

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

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

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

Analyst: _____ Date: 8/19/16

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: 7/20/16

RT Window Data Filename: 18AUG16M Sam:1 Analysis Date: 18-AUG-16 Time: 08:40:57

DB-5 IS Data Filename: 18AUG16M Sam:1 Analysis Date: 18-AUG-16 Time: 08:40:57

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

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:24	1,3,6,8-TCDF (F)	22:60
1,2,8,9-TCDD (L)	28:26	1,2,8,9-TCDF (L)	28:41
1,2,4,7,9-PeCDD (F)	30:19	1,3,4,6,8-PeCDF (F)	28:26
1,2,3,8,9-PeCDD (L)	33:56	1,2,3,8,9-PeCDF (L)	34:24
1,2,4,6,7,9-HxCDD (F)	36:12	1,2,3,4,6,8-HxCDF (F)	35:19
1,2,3,7,8,9-HxCDD (L)	39:19	1,2,3,7,8,9-HxCDF (L)	39:56
1,2,3,4,6,7,9-HpCDD (F)	42:52	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)	45:15

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

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT
BETWEEN
COMPARED PEAKS (1)

<25%

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

Analyst: _____ Date: 8/19/16

USEPA - ITD

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 7/20/16

Instrument ID: FAL3 GC Column ID: DB5MS

Analysis Date: 18-AUG-16 08:40:57 CS3 or VER Data Filename: 18AUG16M Sam:1

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.001	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.025	0.989-1.052
13C-2,3,7,8-TCDD		1.024	0.976-1.043
13C-2,3,7,8-TCDF		0.997	0.923-1.103
13C-1,2,3,7,8-PeCDD		1.243	1.000-1.567
13C-1,2,3,7,8-PeCDF		1.178	1.000-1.425
13C-2,3,4,7,8-PeCDF		1.229	1.011-1.526

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

Analyst: [signature] Date: 8/19/16

USEPA - ITD

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 7/20/16

Instrument ID: FAL3 GC Column ID: DB5MS

Analysis Date: 18-AUG-16 08:40:57 CS3 or VER Data Filename: 18AUG16M Sam:1

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.999-1.003
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.999-1.003
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.985	0.977-1.000
13C-1,2,3,6,7,8-HxCDD		0.989	0.981-1.003
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975
13C-2,3,4,6,7,8-HxCDF		0.979	0.959-1.021
13C-1,2,3,7,8,9-HxCDF		1.016	0.977-1.047
13C-1,2,3,4,6,7,8-HpCDD		1.127	1.086-1.130
13C-1,2,3,4,6,7,8-HpCDF		1.077	1.043-1.085
13C-1,2,3,4,7,8,9-HpCDF		1.151	1.057-1.151
13C-OCDD		1.267	1.032-1.311
13C-OCDF		1.278	1.000-1.311

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

Analyst: [signature] Date: 8/19/16

FAL ID: ST081816M1 Filename: 18AUG16M Sam:1 Acquired: 18-AUG-16 08:40:57 ICal: PCDDFAL3-7-20-16
Client ID: 1613 CS3 160711J ConCal: ST081816M1 EndCal: ST081816M2
Results: GC Golumn: DB5MS Amount: 1.000 NATO 1989 Tox: 97.1
Instrument ID: FAL3 WHO 1998 Tox: 120 WHO 2005 Tox: 110

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	5.58e+06	0.77 y	27:29	1.16	11.0		2.50	-	-	*
1,2,3,7,8-PeCDD	1.62e+07	1.54 y	33:22	1.00	46.9		2.50	-	-	*
1,2,3,4,7,8-HxCDD	1.15e+07	1.24 y	38:43	1.08	46.9		2.50	-	-	*
1,2,3,6,7,8-HxCDD	1.49e+07	1.22 y	38:53	1.08	46.6		2.50	-	-	*
1,2,3,7,8,9-HxCDD	1.39e+07	1.21 y	39:19	1.12	47.7		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	1.04e+07	0.99 y	44:17	1.04	47.1		2.50	-	-	*
OCDD	1.64e+07	0.90 y	49:48	1.05	99.7		2.50	-	-	*
2,3,7,8-TCDF	7.09e+06	0.75 y	26:45	1.11	9.44		2.50	-	-	*
1,2,3,7,8-PeCDF	2.55e+07	1.54 y	31:37	0.96	49.8		2.50	-	-	*
2,3,4,7,8-PeCDF	2.53e+07	1.51 y	32:59	0.95	48.2		2.50	-	-	*
1,2,3,4,7,8-HxCDF	1.87e+07	1.25 y	37:19	1.11	48.9		2.50	-	-	*
1,2,3,6,7,8-HxCDF	2.45e+07	1.20 y	37:31	1.07	47.3		2.50	-	-	*
2,3,4,6,7,8-HxCDF	2.07e+07	1.19 y	38:29	1.04	48.6		2.50	-	-	*
1,2,3,7,8,9-HxCDF	1.48e+07	1.23 y	39:56	1.03	48.7		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	1.68e+07	1.04 y	42:22	1.30	48.3		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	1.15e+07	1.04 y	45:15	1.23	47.2		2.50	-	-	*
OCDF	1.97e+07	0.88 y	50:14	0.89	101		2.50	-	-	*
										Rec
13C-2,3,7,8-TCDD	4.36e+07	0.82 y	27:28	0.98	96.6					96.6
13C-1,2,3,7,8-PeCDD	3.45e+07	1.60 y	33:20	0.90	83.6					83.6
13C-1,2,3,4,7,8-HxCDD	2.27e+07	1.26 y	38:42	0.88	91.0					91.0
13C-1,2,3,6,7,8-HxCDD	2.97e+07	1.25 y	38:51	0.96	109					109
13C-1,2,3,4,6,7,8-HpCDD	2.13e+07	1.11 y	44:16	0.83	90.6					90.6
13C-OCDD	3.11e+07	0.91 y	49:48	0.66	165					82.6
13C-2,3,7,8-TCDF	6.79e+07	0.78 y	26:44	1.01	94.3					94.3
13C-1,2,3,7,8-PeCDF	5.36e+07	1.58 y	31:35	0.92	81.3					81.3
13C-2,3,4,7,8-PeCDF	5.51e+07	1.61 y	32:58	0.91	84.7					84.7
13C-1,2,3,4,7,8-HxCDF	3.46e+07	0.53 y	37:17	1.26	96.7					96.7
13C-1,2,3,6,7,8-HxCDF	4.86e+07	0.53 y	37:30	1.46	117					117
13C-2,3,4,6,7,8-HxCDF	4.10e+07	0.53 y	38:28	1.32	109					109
13C-1,2,3,7,8,9-HxCDF	2.96e+07	0.55 y	39:55	1.15	90.5					90.5
13C-1,2,3,4,6,7,8-HpCDF	2.67e+07	0.47 y	42:20	0.91	103					103
13C-1,2,3,4,7,8,9-HpCDF	1.98e+07	0.45 y	45:14	0.76	92.3					92.3
13C-OCDF	4.39e+07	0.91 y	50:13	0.93	165					82.7
37Cl-2,3,7,8-TCDD	3.86e+06		27:29	0.90	9.26					92.6
13C-1,2,3,4-TCDD	4.61e+07	0.80 y	26:49	-	86.1					
13C-1,2,3,4-TCDF	7.16e+07	0.80 y	25:33	-	93.3					
13C-1,2,3,7,8,9-HxCDD	2.84e+07	1.30 y	39:17	-	64.9					

						Fac	Noise-1	Noise-2	DL		#Hom
Total Tetra-Dioxins	2.75e+07		22:40	1.16	54.4	2.50	-	-	*		27
Total Penta-Dioxins	5.49e+07		30:19	1.00	159	2.50	-	-	*		16
Total Hexa-Dioxins	6.12e+07		36:12	1.09	214	2.50	-	-	*		22
Total Hepta-Dioxins	2.40e+07		42:52	1.04	108	2.50	-	-	*		28
Total Tetra-Furans	3.38e+07		22:60	1.11	45.0	2.50	-	-	*		16
1st Fn. Tot Penta-Furans	3.84e+07		28:26	0.95	74.1	2.50	-	-	*	PeCDF	2
Total Penta-Furans	7.39e+07		30:15	0.95	143	2.50	-	-	*	217	17
Total Hexa-Furans	1.04e+08		35:19	1.06	255	2.50	-	-	*		28
Total Hepta-Furans	2.90e+07		42:22	1.27	98.1	2.50	-	-	*		22

Analyst: [illegible] Date: 8/19/16

Frontier Analytical Laboratory - Acquisition Log

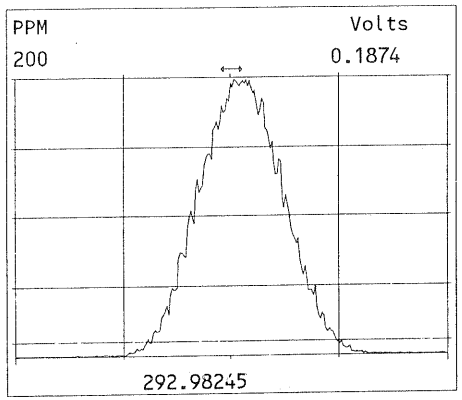
Run Name:18AUG16M Instrument: FAL3 GC: DB5 Experiment:PCDD

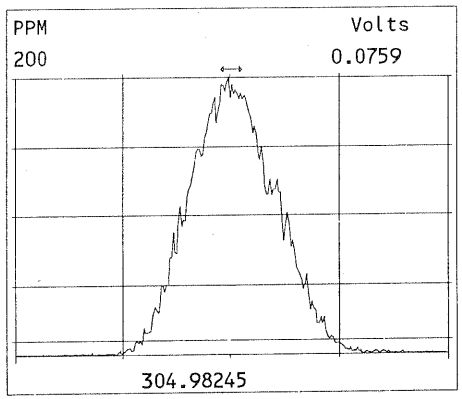
Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
18AUG16M	1	ST081816M1	1613 CS3 160711J	18-AUG-16 08:40:57	ST081816M1	ST081816M2	TC
18AUG16M	2	03815-001-0001-OPR	OPR	18-AUG-16 09:35:46	ST081816M1	ST081816M2	TC
18AUG16M	3	03815-001-0001-MB	Method Blank	18-AUG-16 10:30:39	ST081816M1	ST081816M2	TC
18AUG16M	4	10097-001-0001-SA	P880435	18-AUG-16 11:25:33	ST081816M1	ST081816M2	TC
18AUG16M	5	10087-001-0001-SA	SW-4 36/48	18-AUG-16 12:20:28	ST081816M1	ST081816M2	TC
18AUG16M	6	10087-002-0001-SA	SW-6 36/48	18-AUG-16 13:15:23	ST081816M1	ST081816M2	TC
18AUG16M	7	10087-003-0001-SA	SW-7 36/48	18-AUG-16 14:10:16	ST081816M1	ST081816M2	TC
18AUG16M	8	10087-004-0001-SA	SW-11 36/48	18-AUG-16 15:05:10	ST081816M1	ST081816M2	TC
18AUG16M	9	10095-001-D002-SA	LDW-BA-PC-ENRMAT-SAND	18-AUG-16 16:00:03	ST081816M1	ST081816M2	TC
18AUG16M	10	10095-002-D002-SA	LDW-BA-PC-ENRMAT-GRUSAND	18-AUG-16 16:54:58	ST081816M1	ST081816M2	TC
18AUG16M	11	10096-001-0001-SA	AG-2012-05	18-AUG-16 17:49:52	ST081816M1	ST081816M2	TC
18AUG16M	12	10093-001-0001-SA	16H0530-01 COMP FLY ASH	18-AUG-16 18:44:46	ST081816M1	ST081816M2	TC
18AUG16M	13	10093-002-0001-SA	16H0530-02 COMP BOTTOM ASH	18-AUG-16 19:39:39	ST081816M1	ST081816M2	TC
18AUG16M	14	SB081816M1	Solvent Blank	18-AUG-16 20:34:33	ST081816M1	ST081816M2	TC
18AUG16M	15	ST081816M2	1613 CS3 160711J	18-AUG-16 21:29:26	ST081816M1	ST081816M2	TC

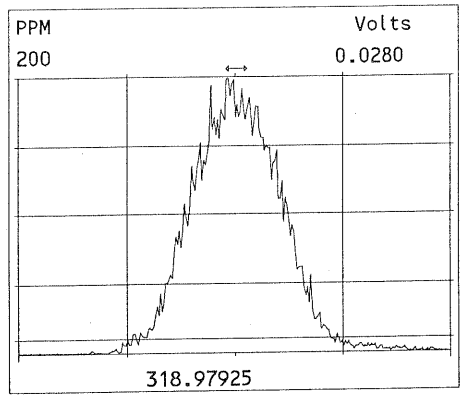
Data Backed Up:_____

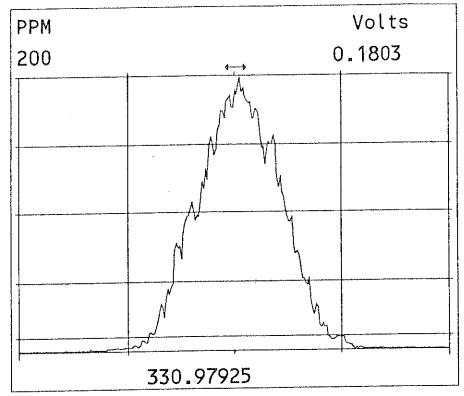
Date:_____

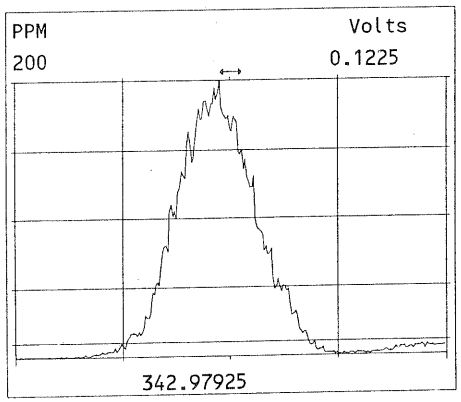
Peak Locate Examination:18-AUG-2016:08:39 File:18AUG16M
Experiment:PCDD Function:1 Reference:PFK

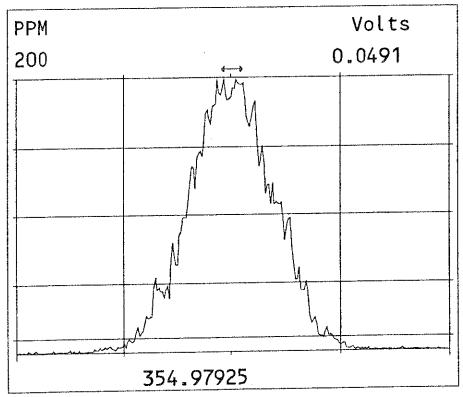


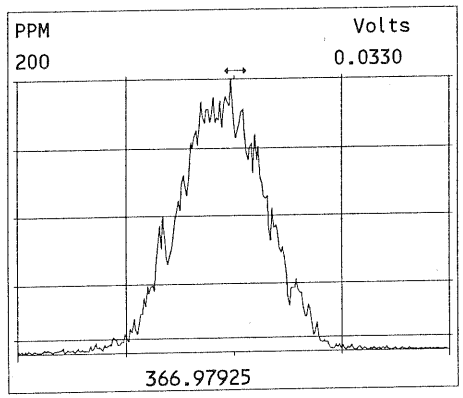


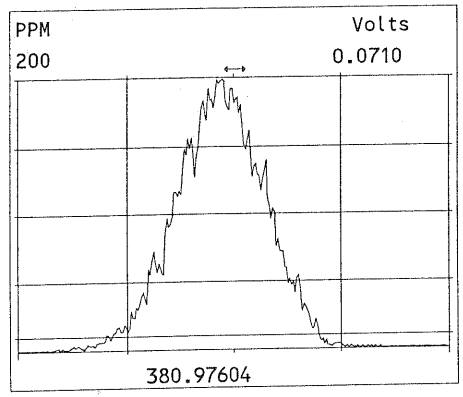


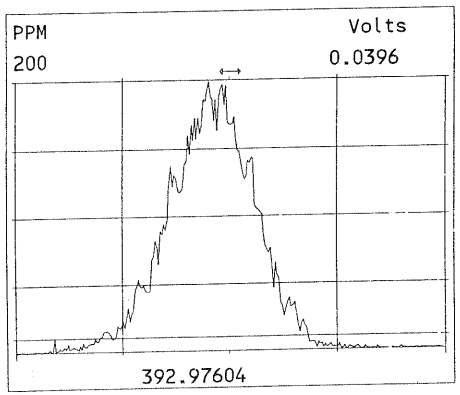


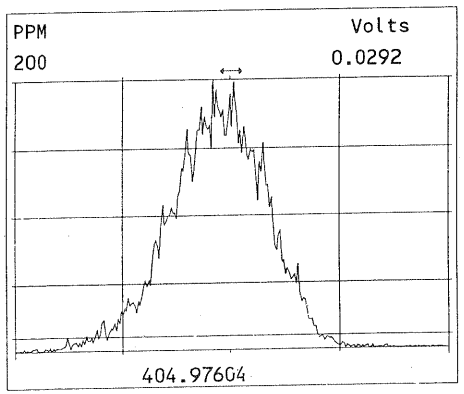


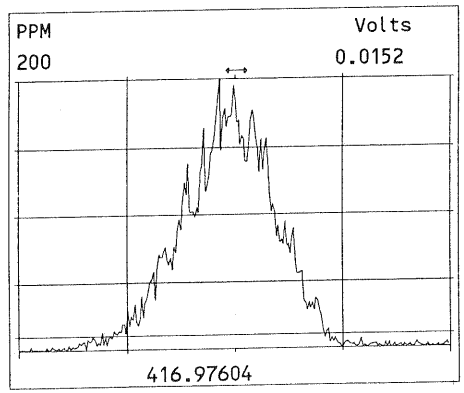




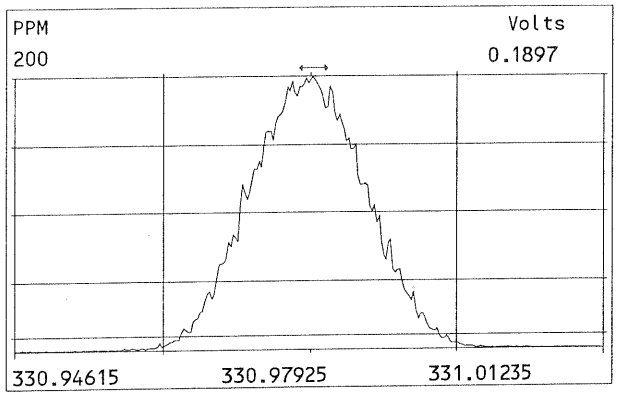


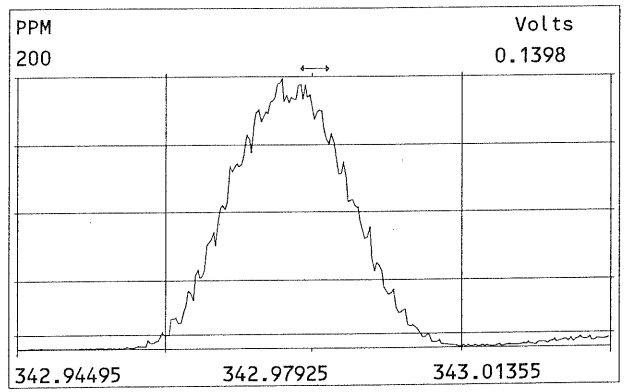


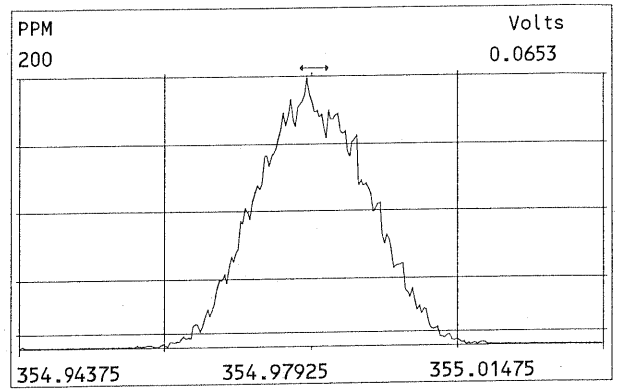


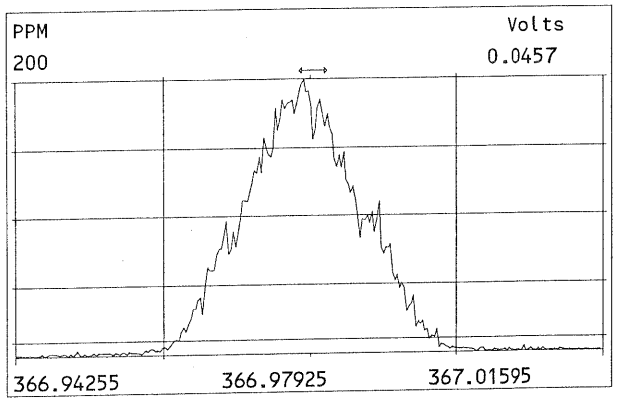


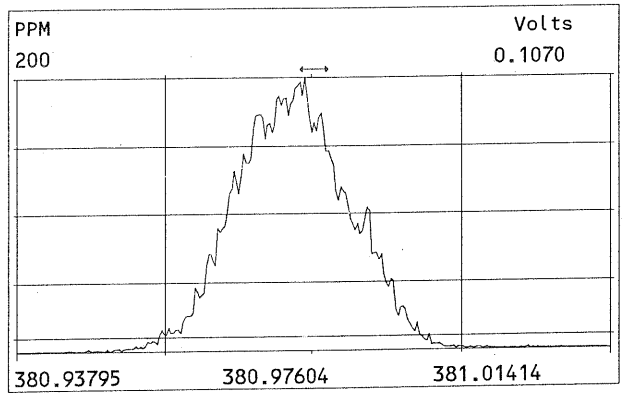
Peak Locate Examination:18-AUG-2016:08:39 File:18AUG16M
Experiment:PCDD Function:2 Reference:PFK

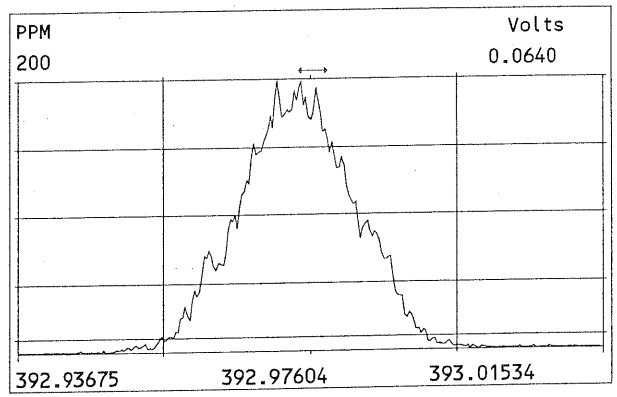


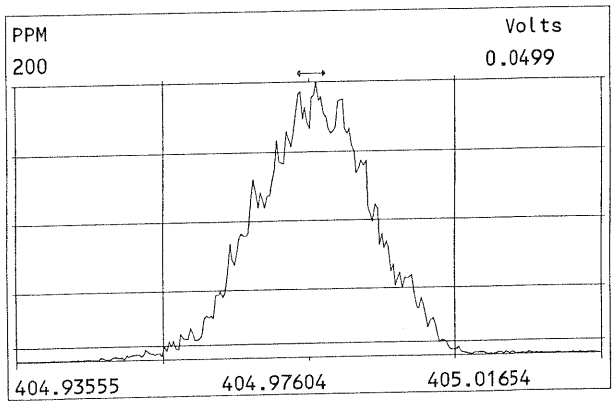


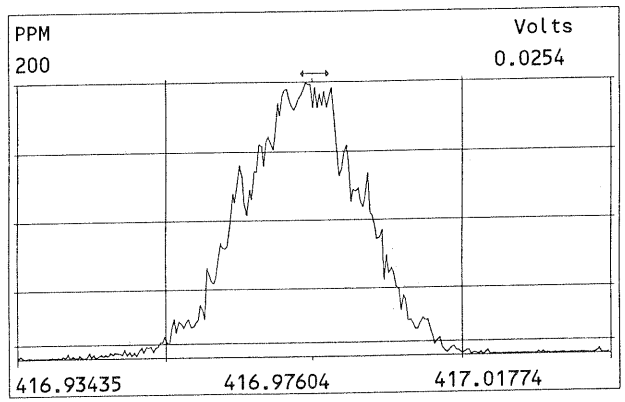




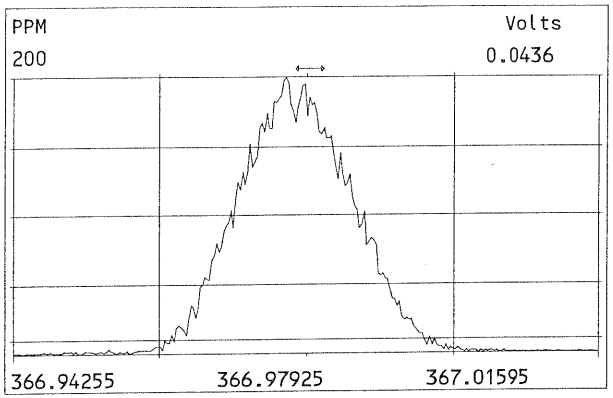


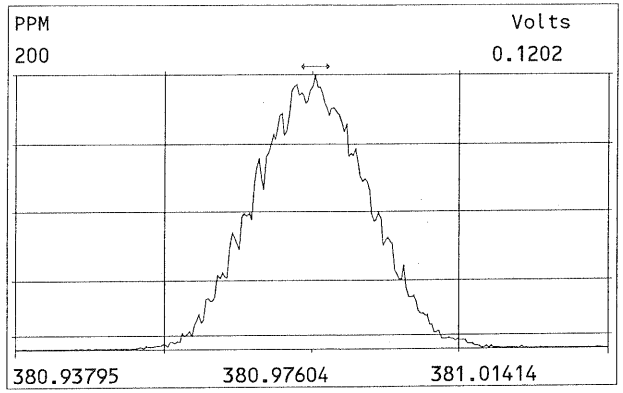


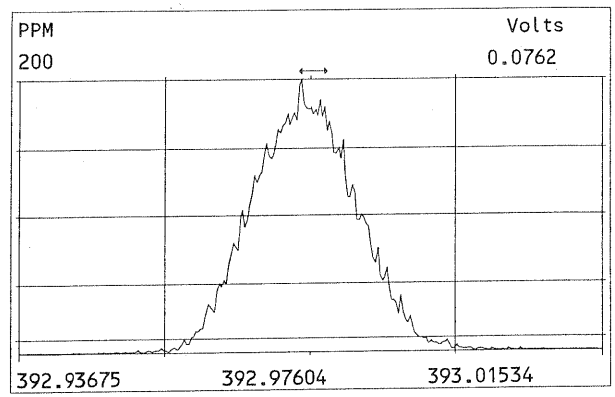


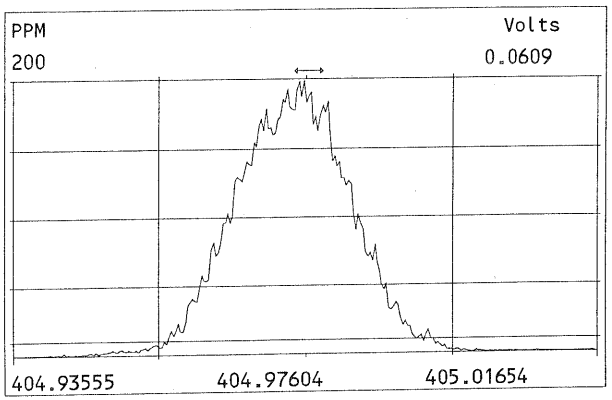


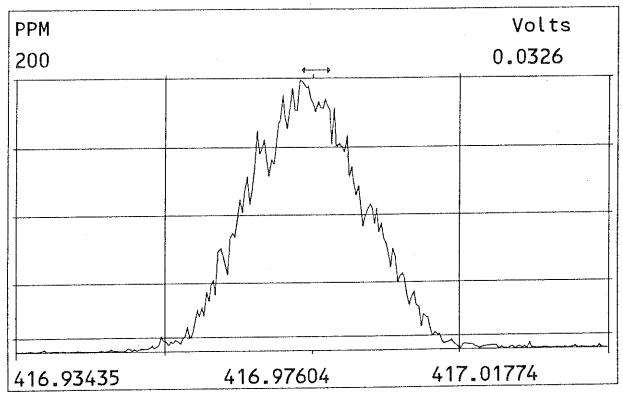
Peak Locate Examination:18-AUG-2016:08:39 File:18AUG16M
Experiment:PCDD Function:3 Reference:PFK

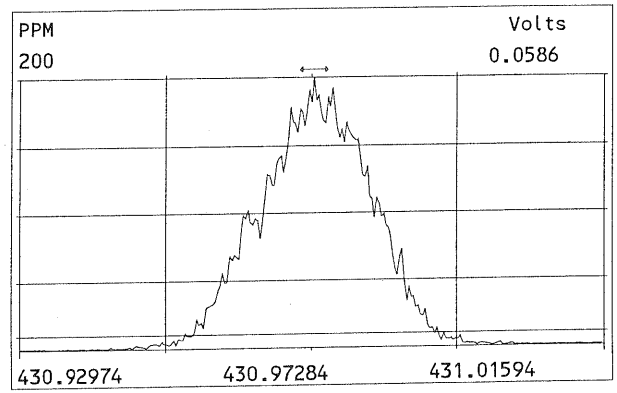


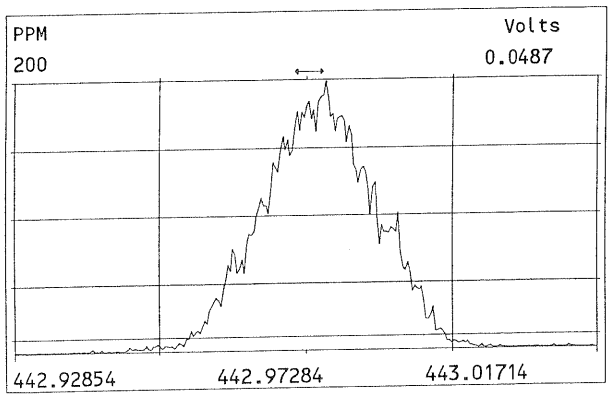


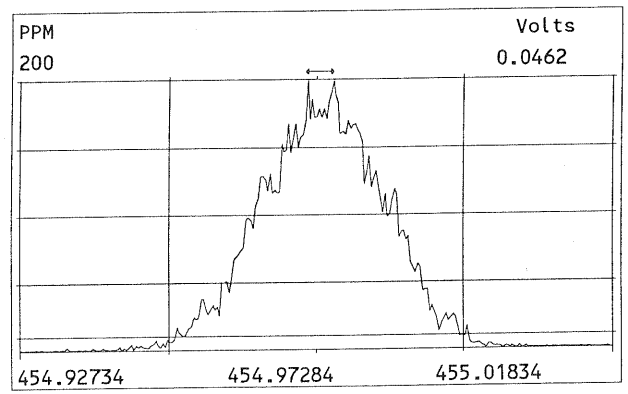




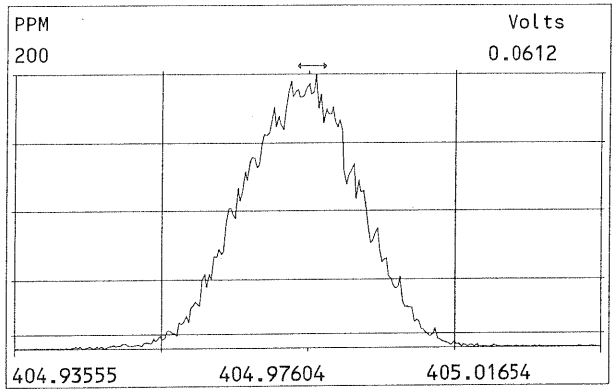


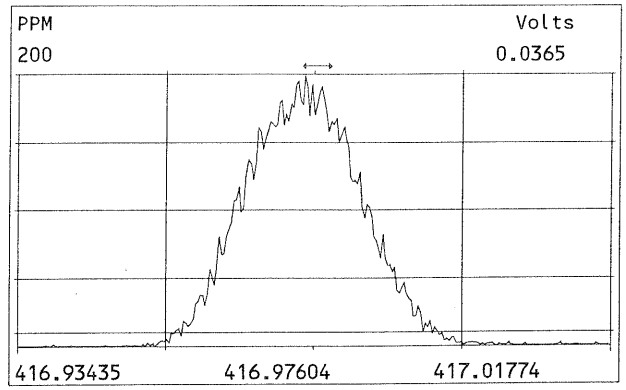


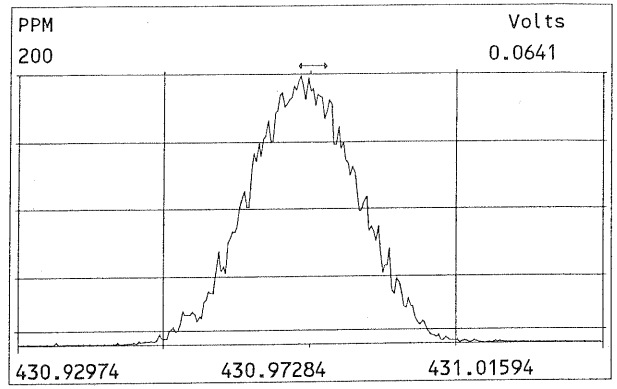


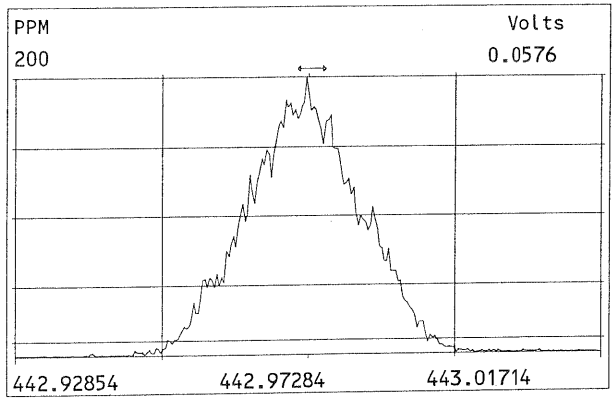


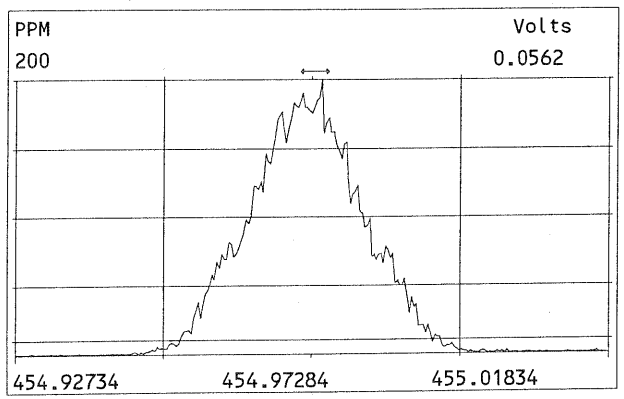
Peak Locate Examination:18-AUG-2016:08:40 File:18AUG16M
Experiment:PCDD Function:4 Reference:PFK

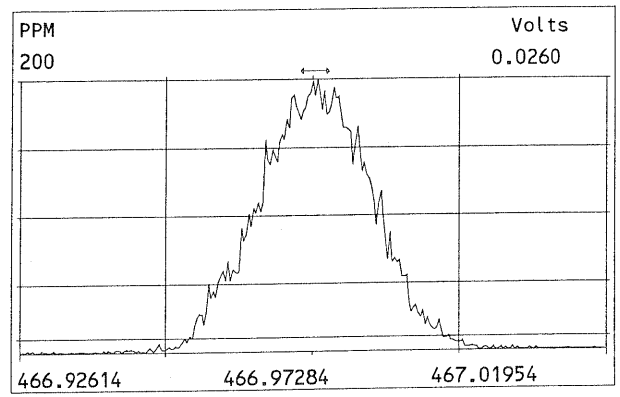


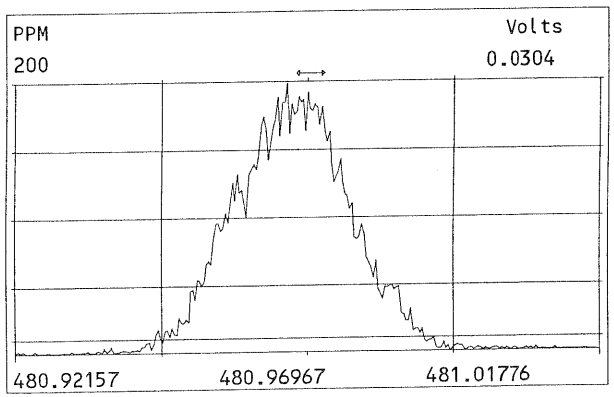




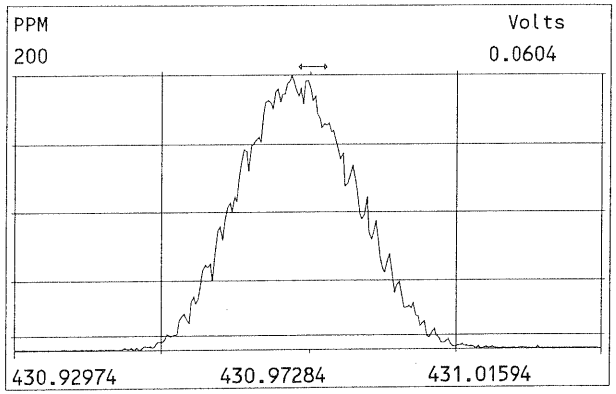


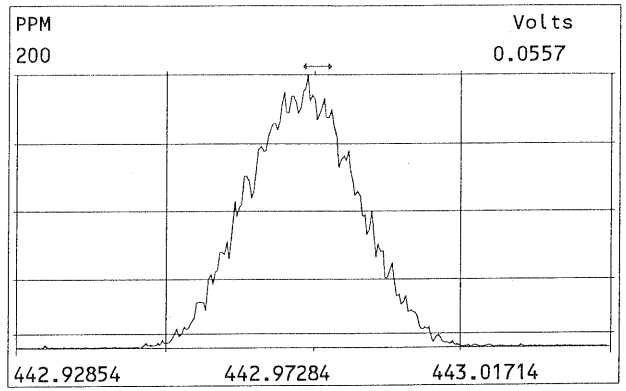


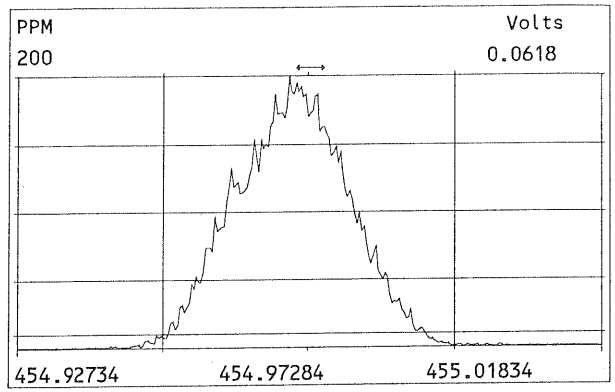


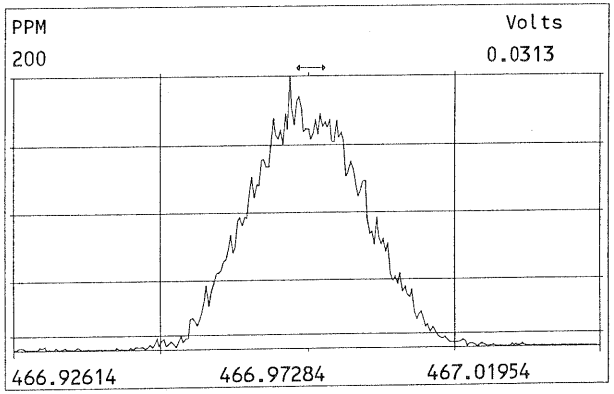


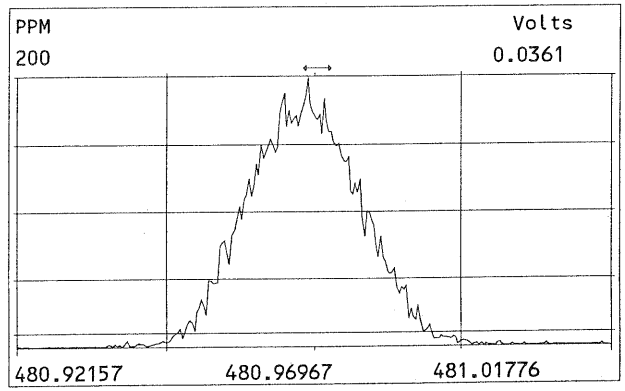
Peak Locate Examination:18-AUG-2016:08:40 File:18AUG16M
Experiment:PCDD Function:5 Reference:PFK

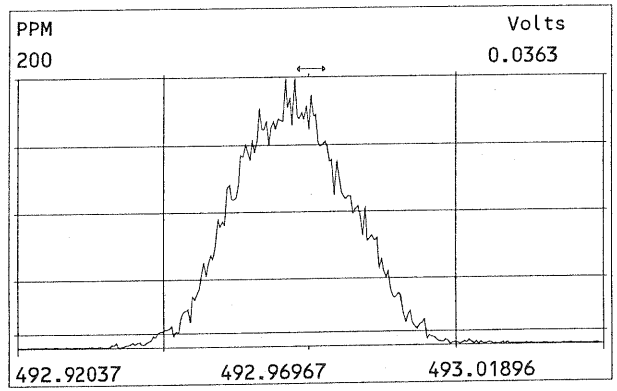


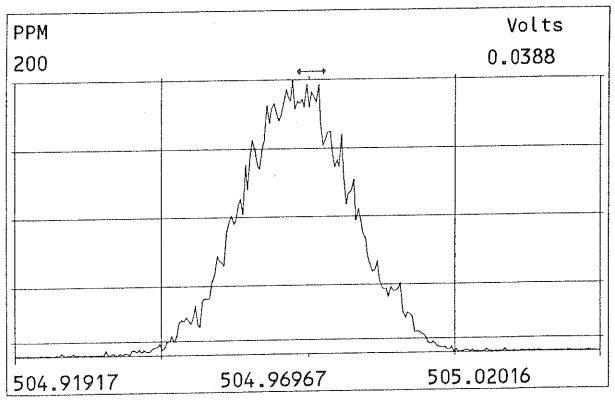


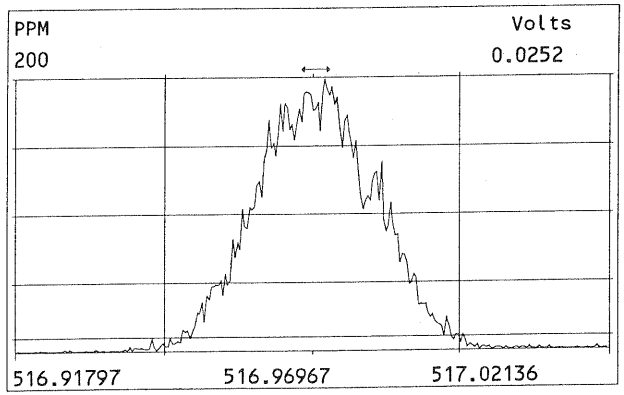




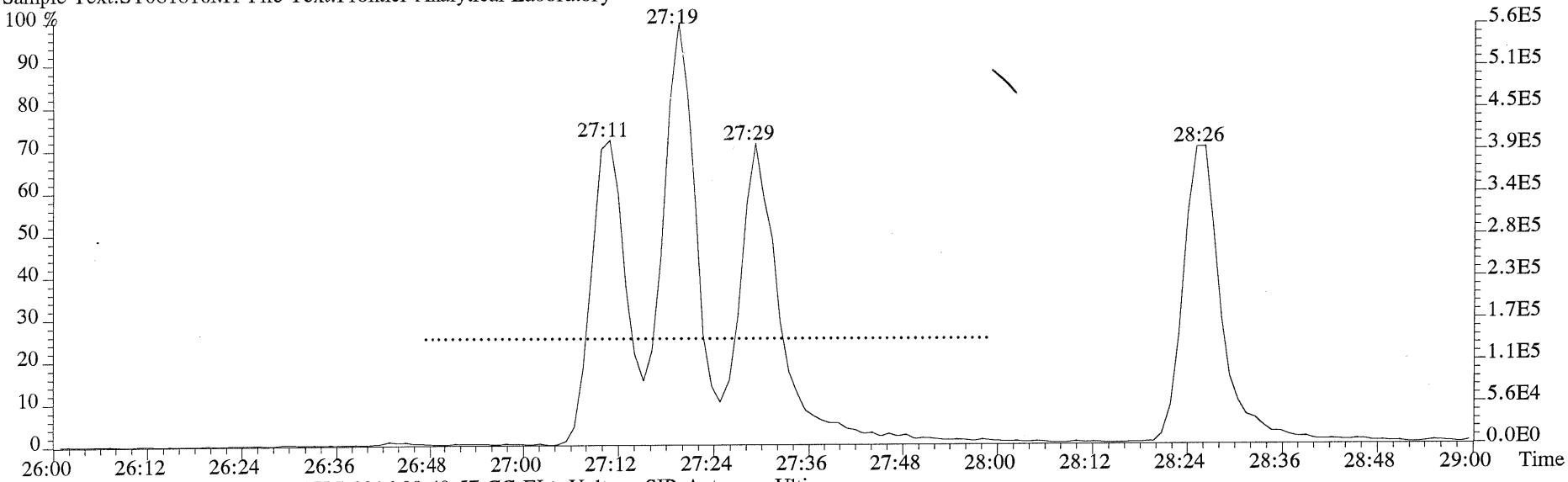




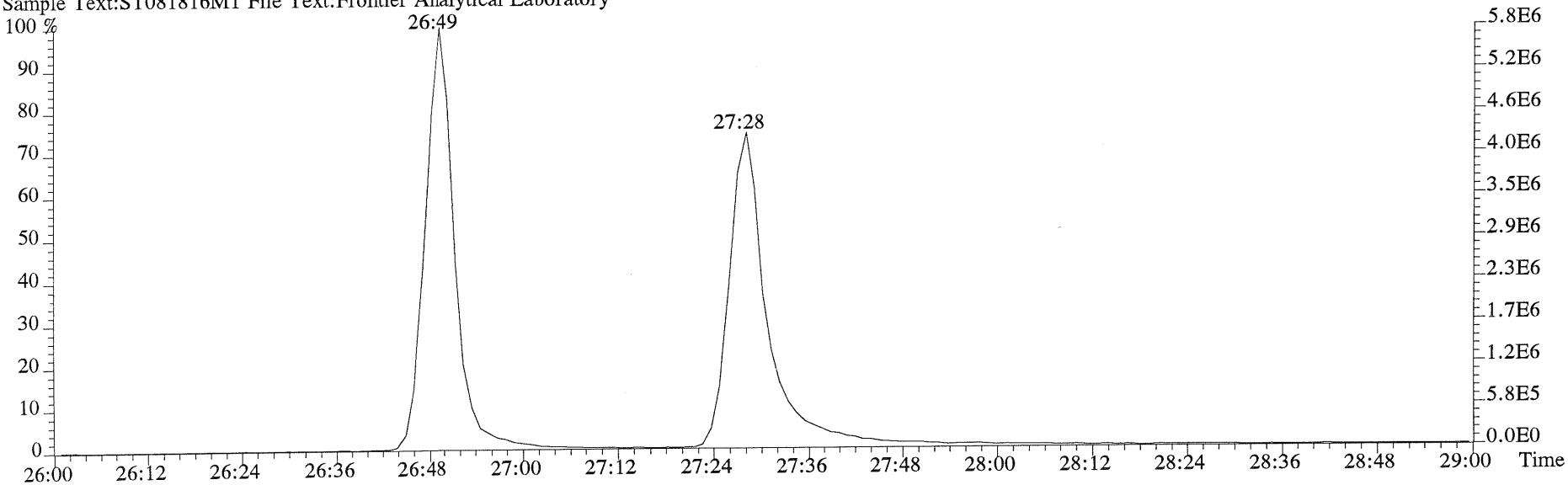




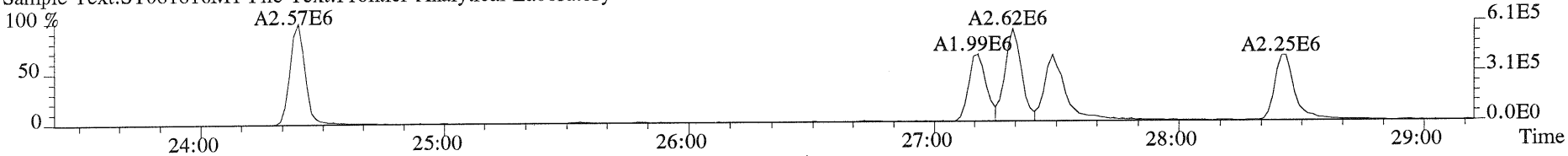
File:18AUG16M #1-400 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
319.8965 Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



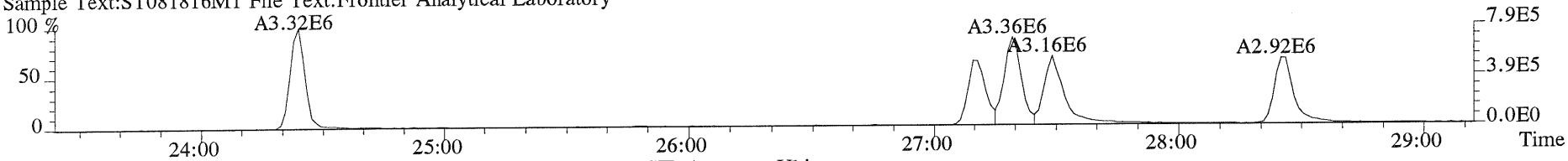
File:18AUG16M #1-400 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
333.9339 Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



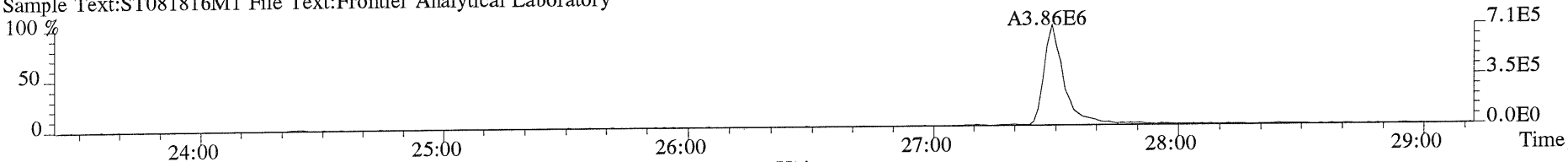
File:18AUG16M #1-400 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



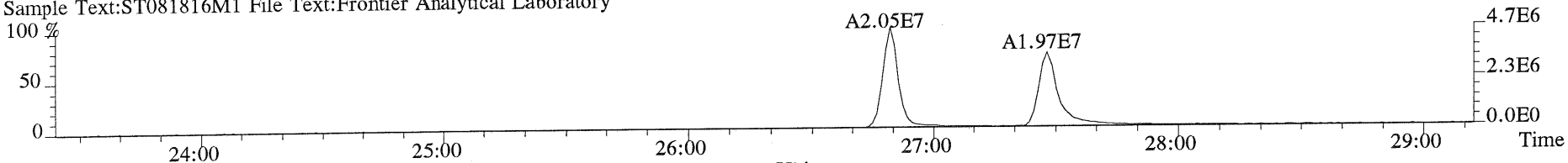
File:18AUG16M #1-400 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



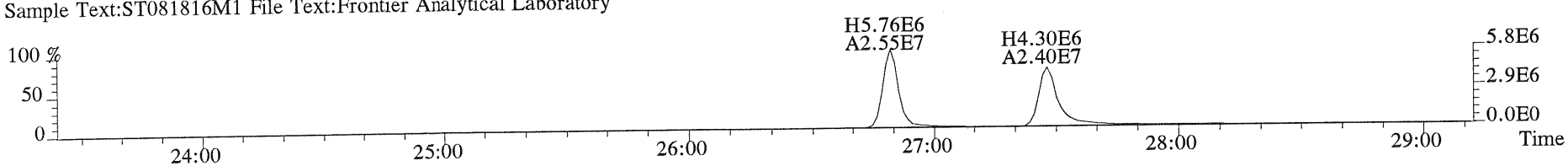
File:18AUG16M #1-400 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



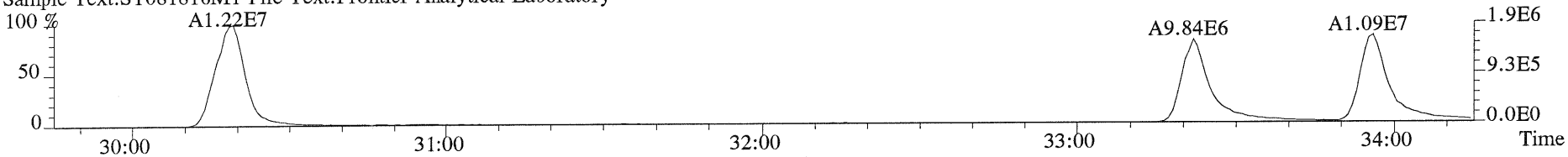
File:18AUG16M #1-400 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



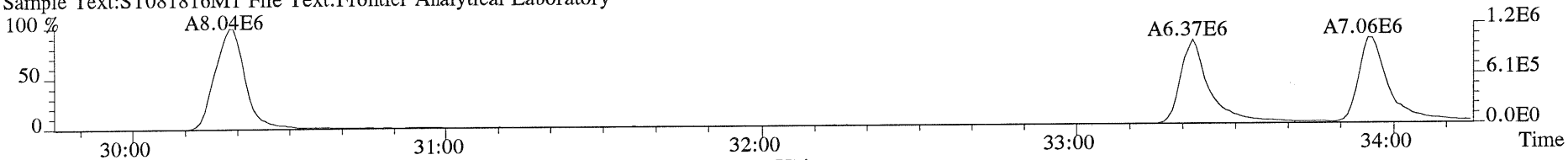
File:18AUG16M #1-400 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



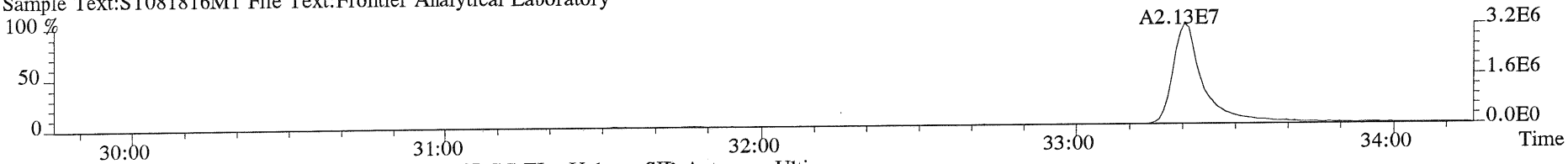
File:18AUG16M #1-410 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



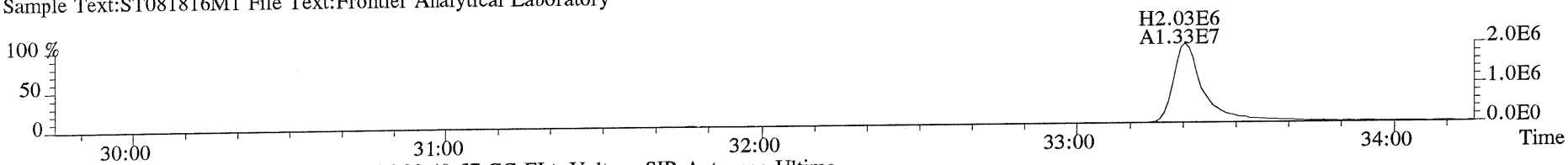
File:18AUG16M #1-410 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
357.8517 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



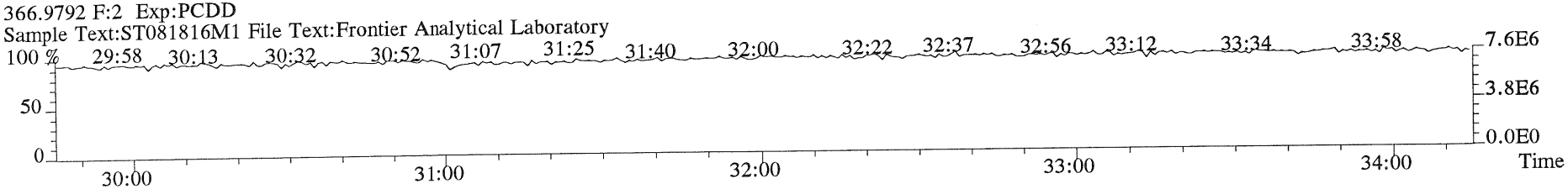
File:18AUG16M #1-410 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



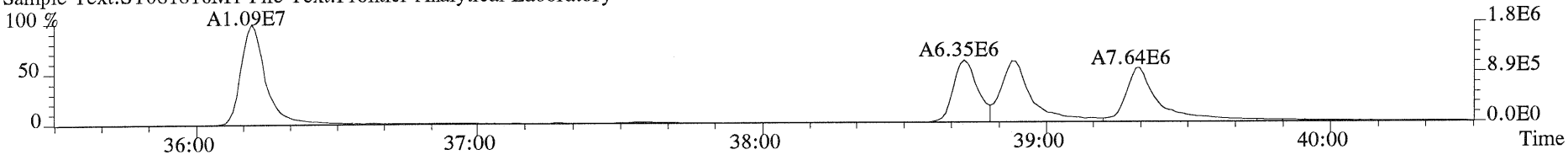
File:18AUG16M #1-410 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
369.8919 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



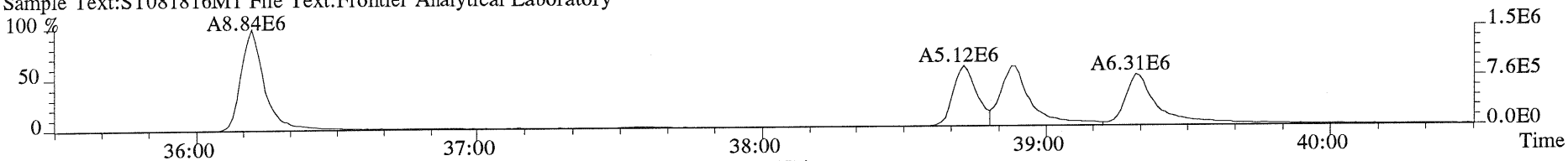
File:18AUG16M #1-410 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
366.9792 F:2 Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



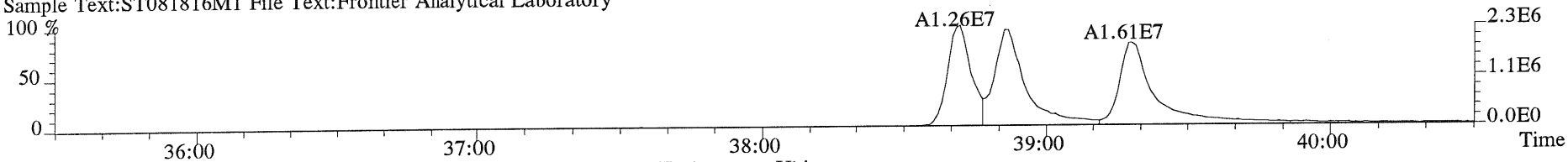
File:18AUG16M #1-494 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



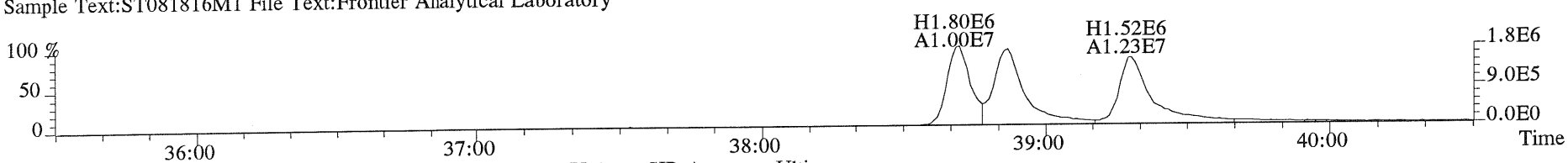
File:18AUG16M #1-494 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



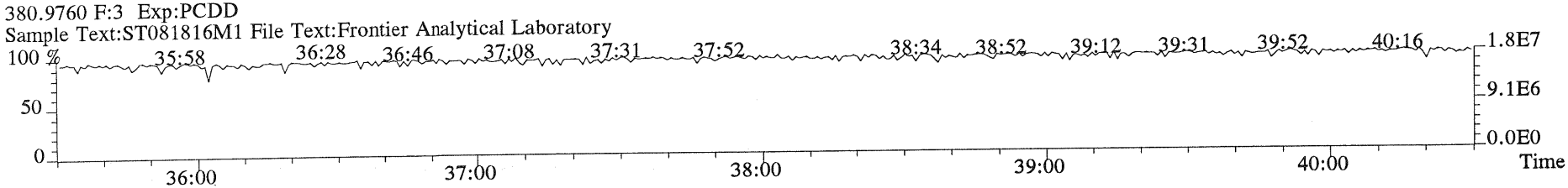
File:18AUG16M #1-494 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



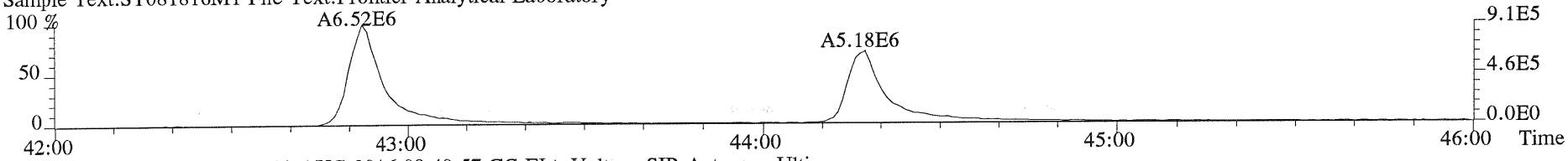
File:18AUG16M #1-494 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



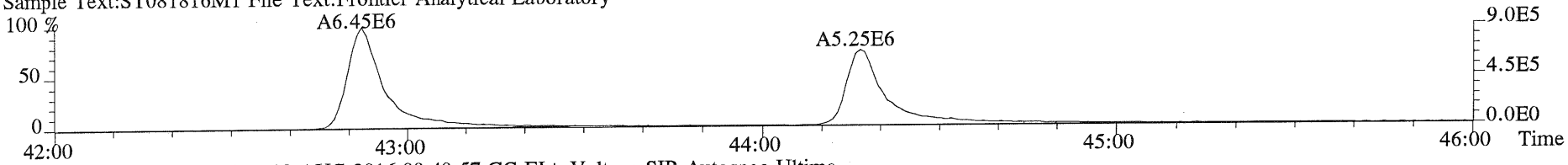
File:18AUG16M #1-494 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
380.9760 F:3 Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



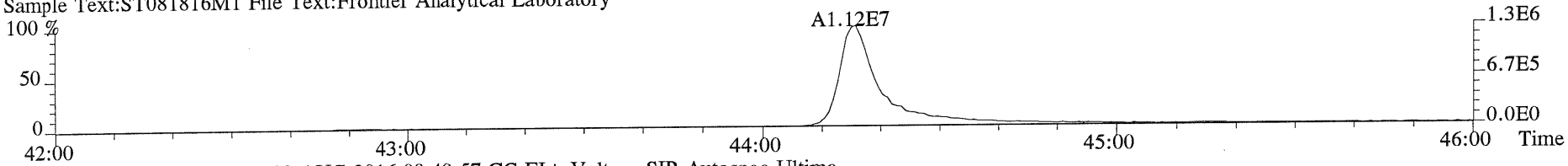
File:18AUG16M #1-520 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



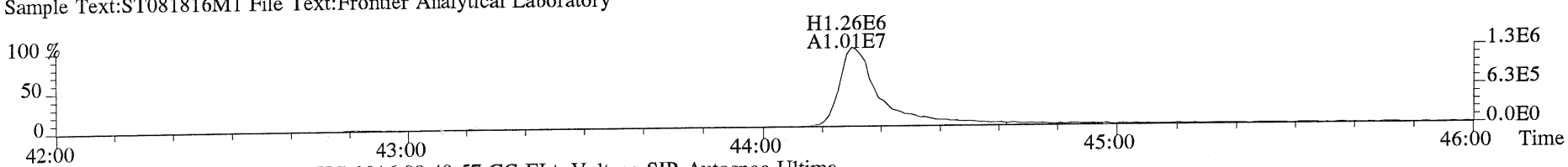
File:18AUG16M #1-520 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



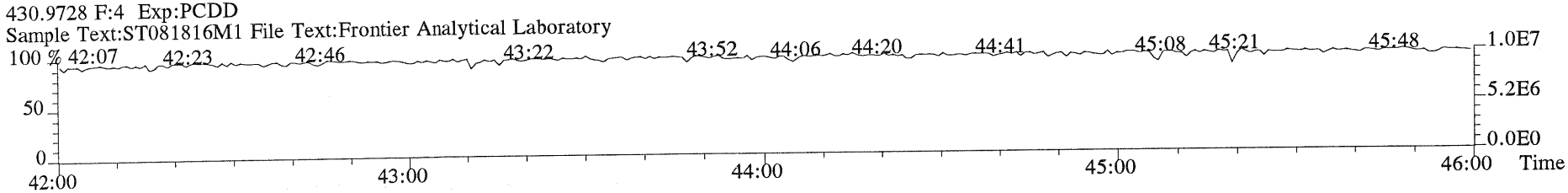
File:18AUG16M #1-520 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



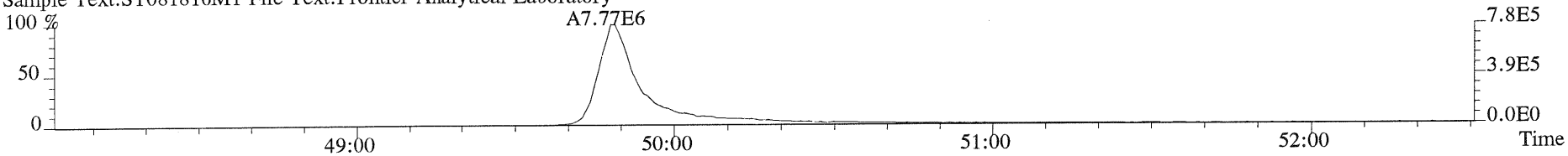
File:18AUG16M #1-520 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



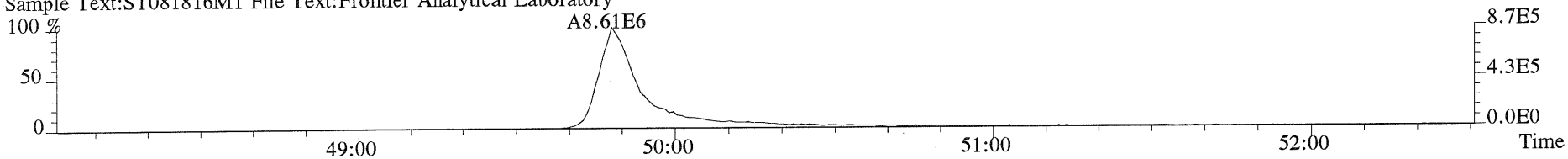
File:18AUG16M #1-520 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
430.9728 F:4 Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



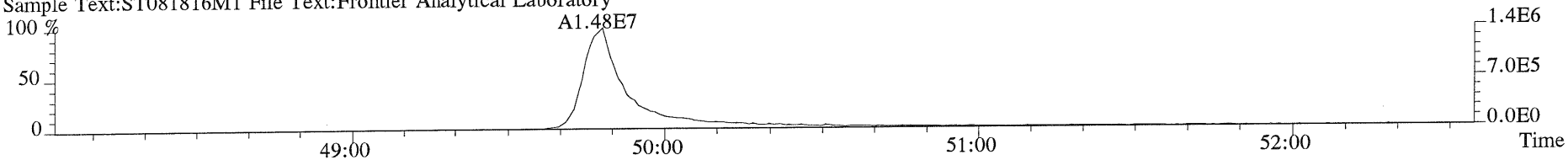
File:18AUG16M #1-347 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



File:18AUG16M #1-347 Acq:18-AUG-2016 08:40:57 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:ST081816M1 File Text:Frontier Analytical Laboratory

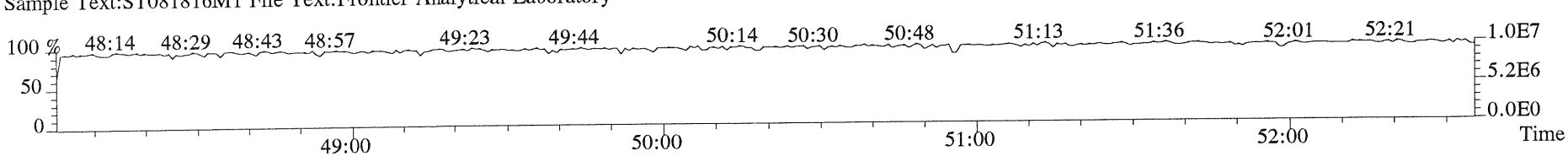


File:18AUG16M #1-352 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory

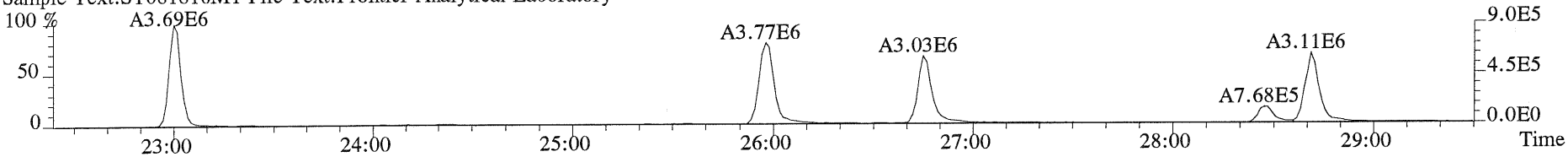


File:18AUG16M #1-352 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory

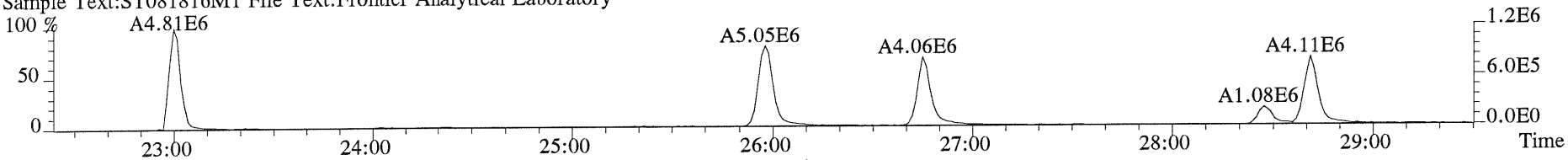
File:18AUG16M #1-353 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
454.9728 F:5 Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



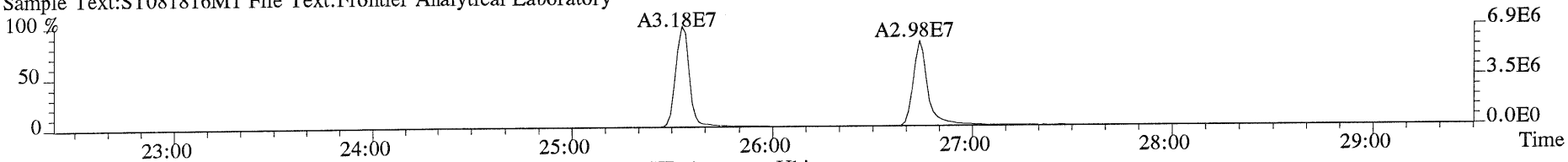
File:18AUG16M #1-400 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



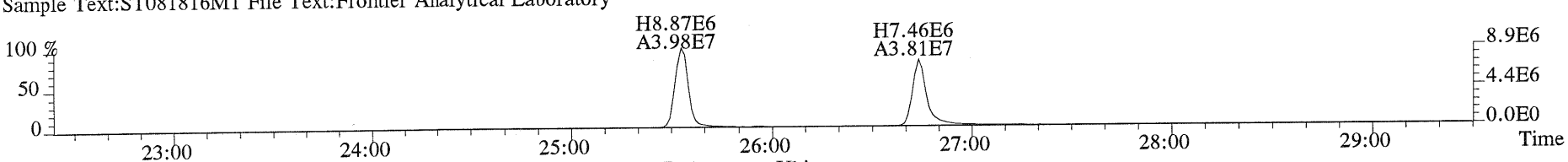
File:18AUG16M #1-400 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



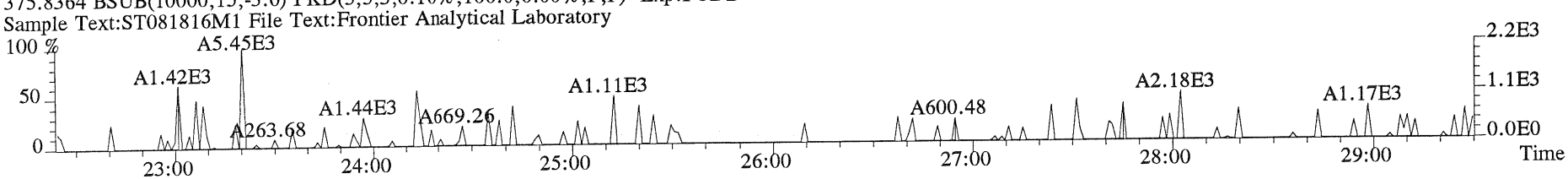
File:18AUG16M #1-400 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



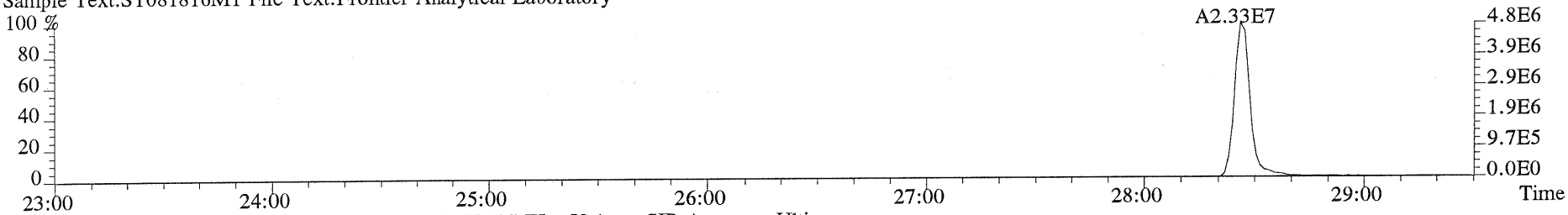
File:18AUG16M #1-400 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



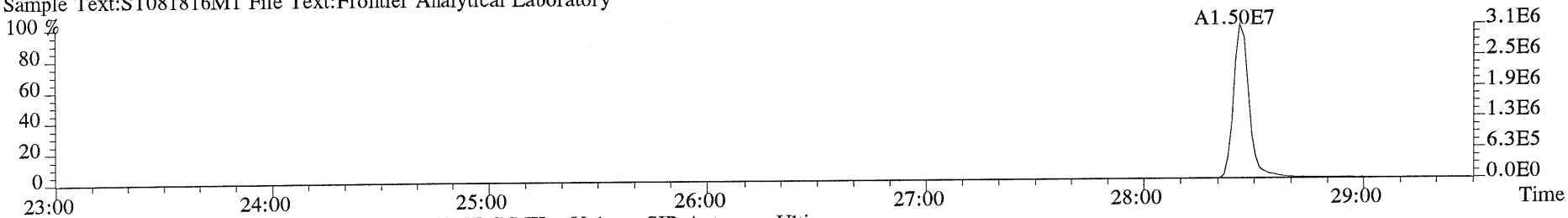
File:18AUG16M #1-400 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



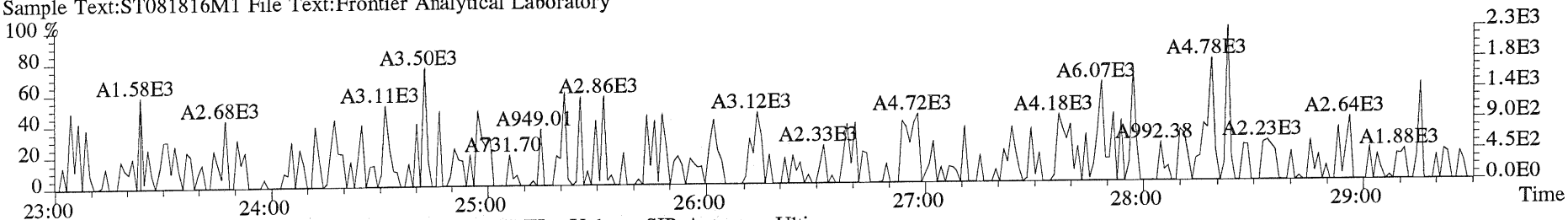
File:18AUG16M #1-400 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



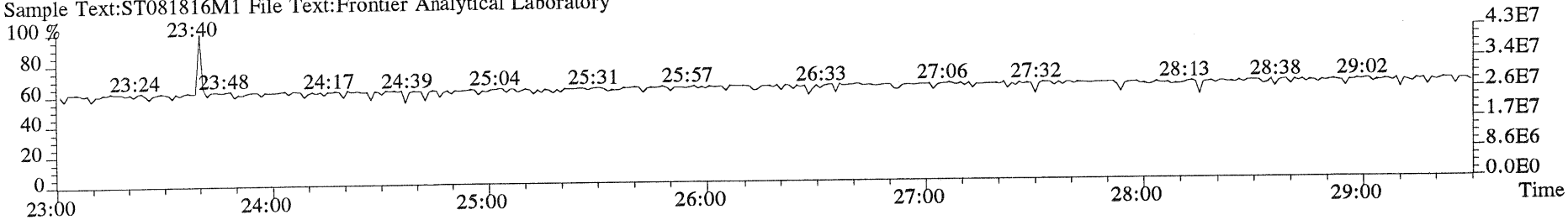
File:18AUG16M #1-400 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
341.8568 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



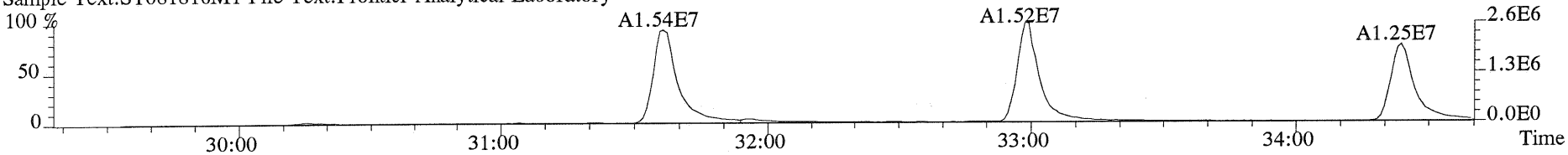
File:18AUG16M #1-400 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



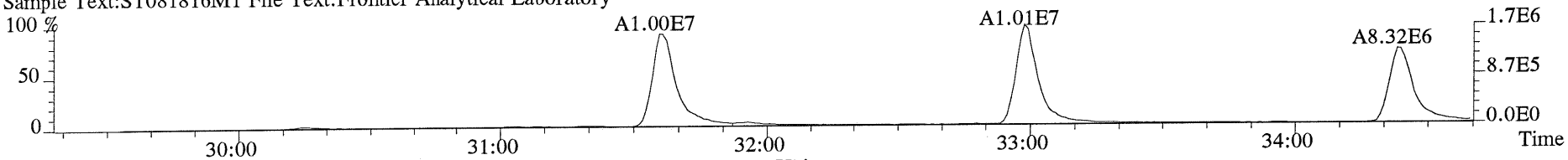
File:18AUG16M #1-400 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
330.9792 Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



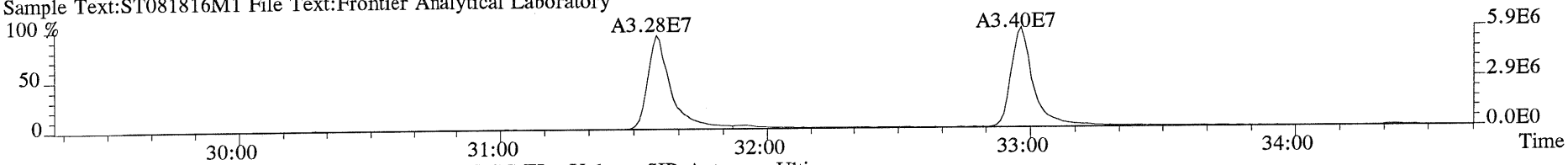
File:18AUG16M #1-410 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



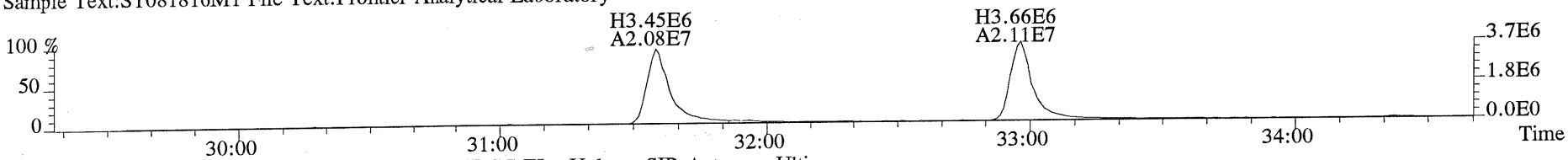
File:18AUG16M #1-410 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



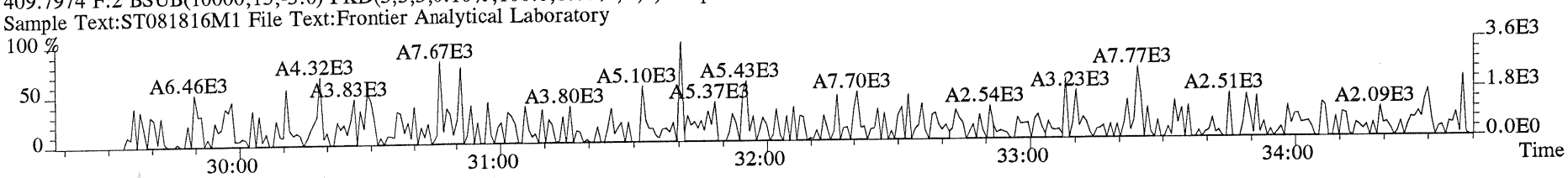
File:18AUG16M #1-410 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



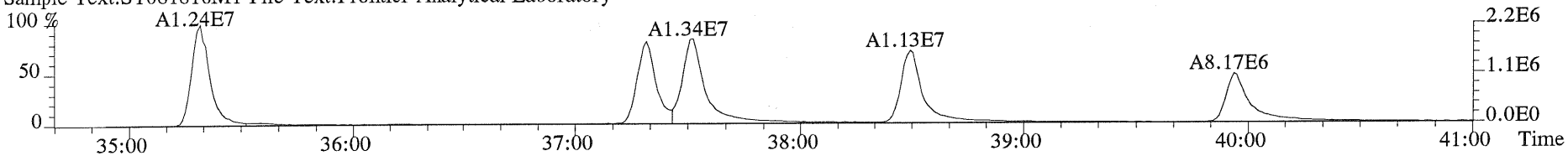
File:18AUG16M #1-410 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
353.8970 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



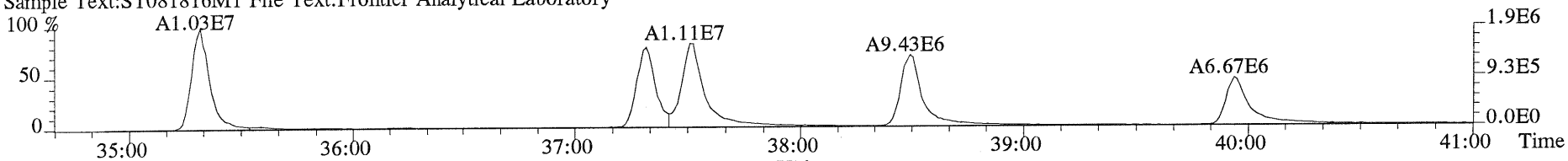
File:18AUG16M #1-410 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



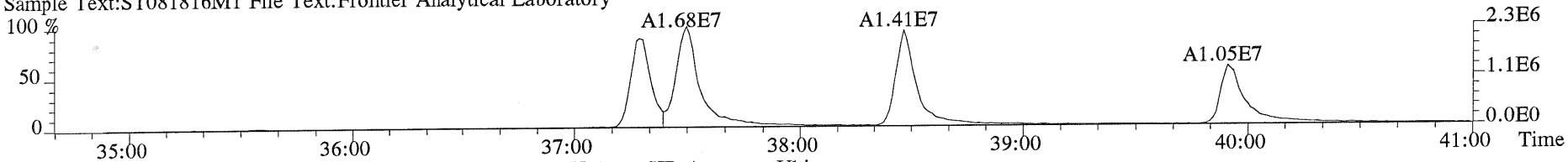
File:18AUG16M #1-494 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



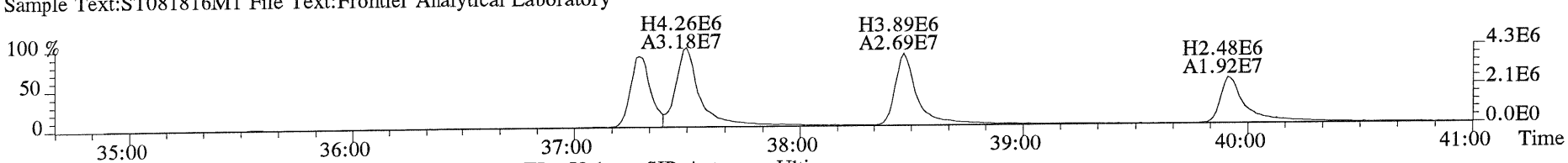
File:18AUG16M #1-494 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



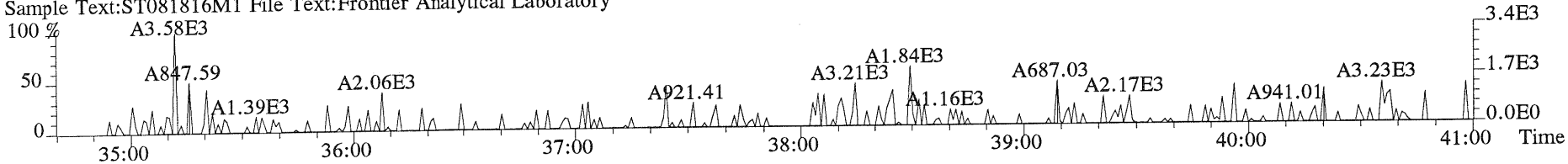
File:18AUG16M #1-494 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



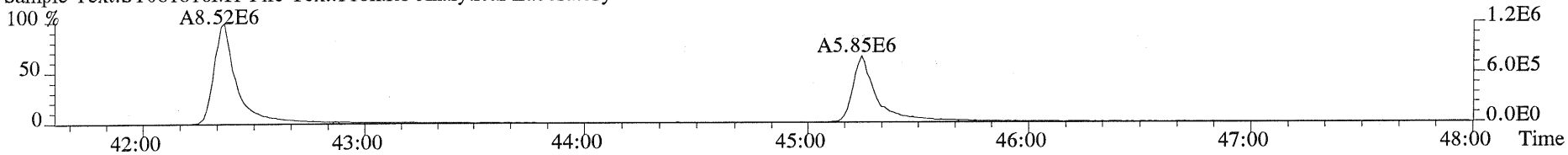
File:18AUG16M #1-494 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



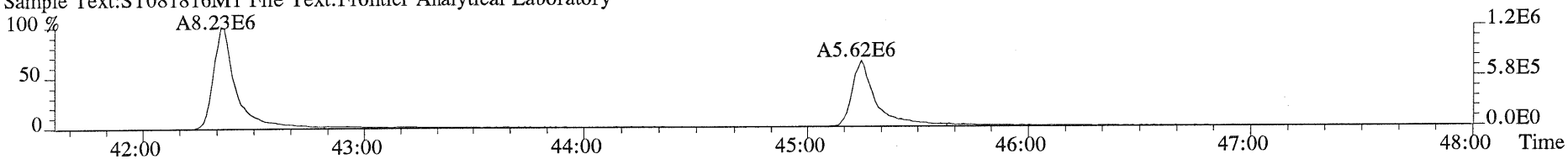
File:18AUG16M #1-494 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



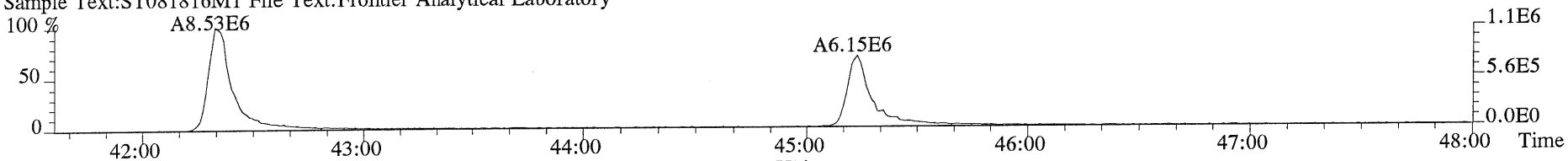
File:18AUG16M #1-520 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



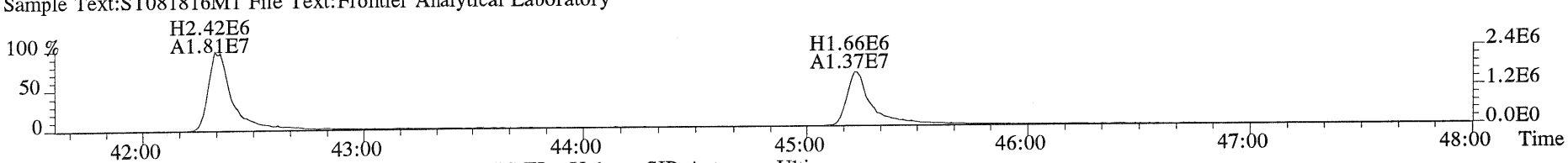
File:18AUG16M #1-520 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



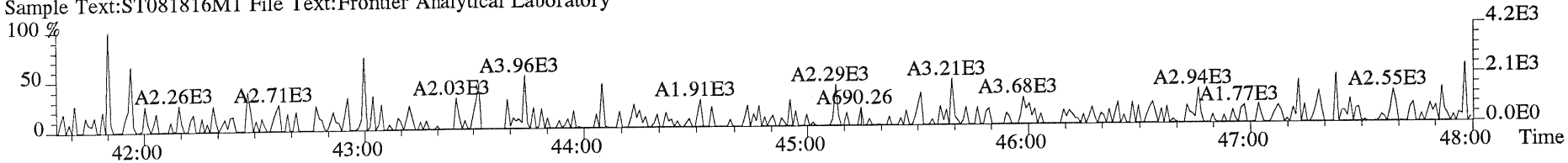
File:18AUG16M #1-520 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



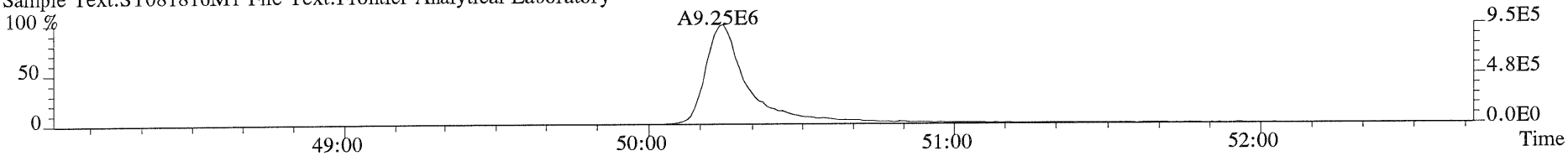
File:18AUG16M #1-520 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



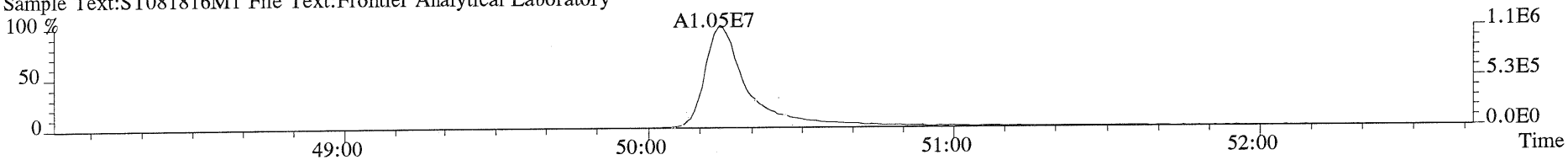
File:18AUG16M #1-520 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



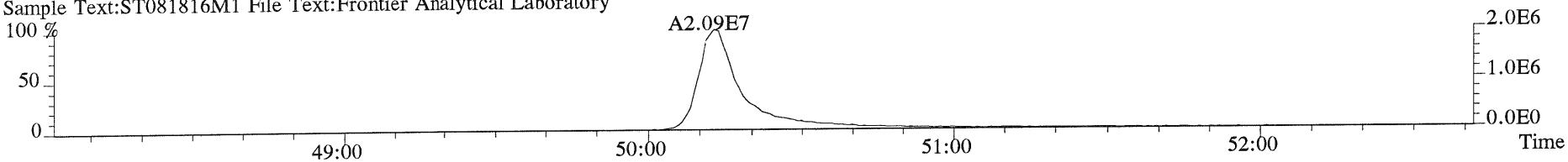
File:18AUG16M #1-361 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



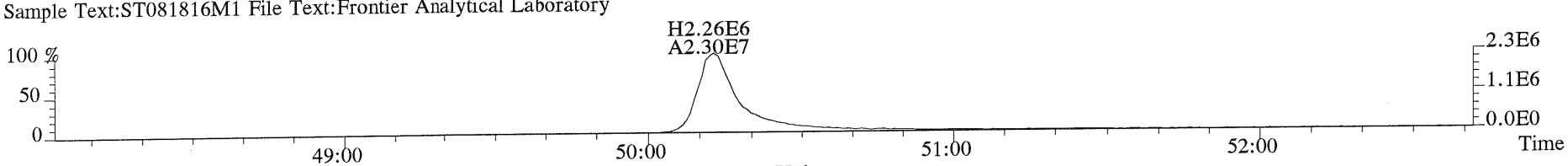
File:18AUG16M #1-361 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



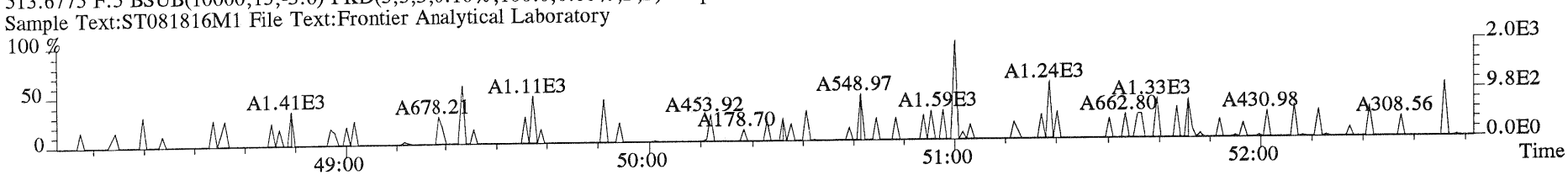
File:18AUG16M #1-361 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



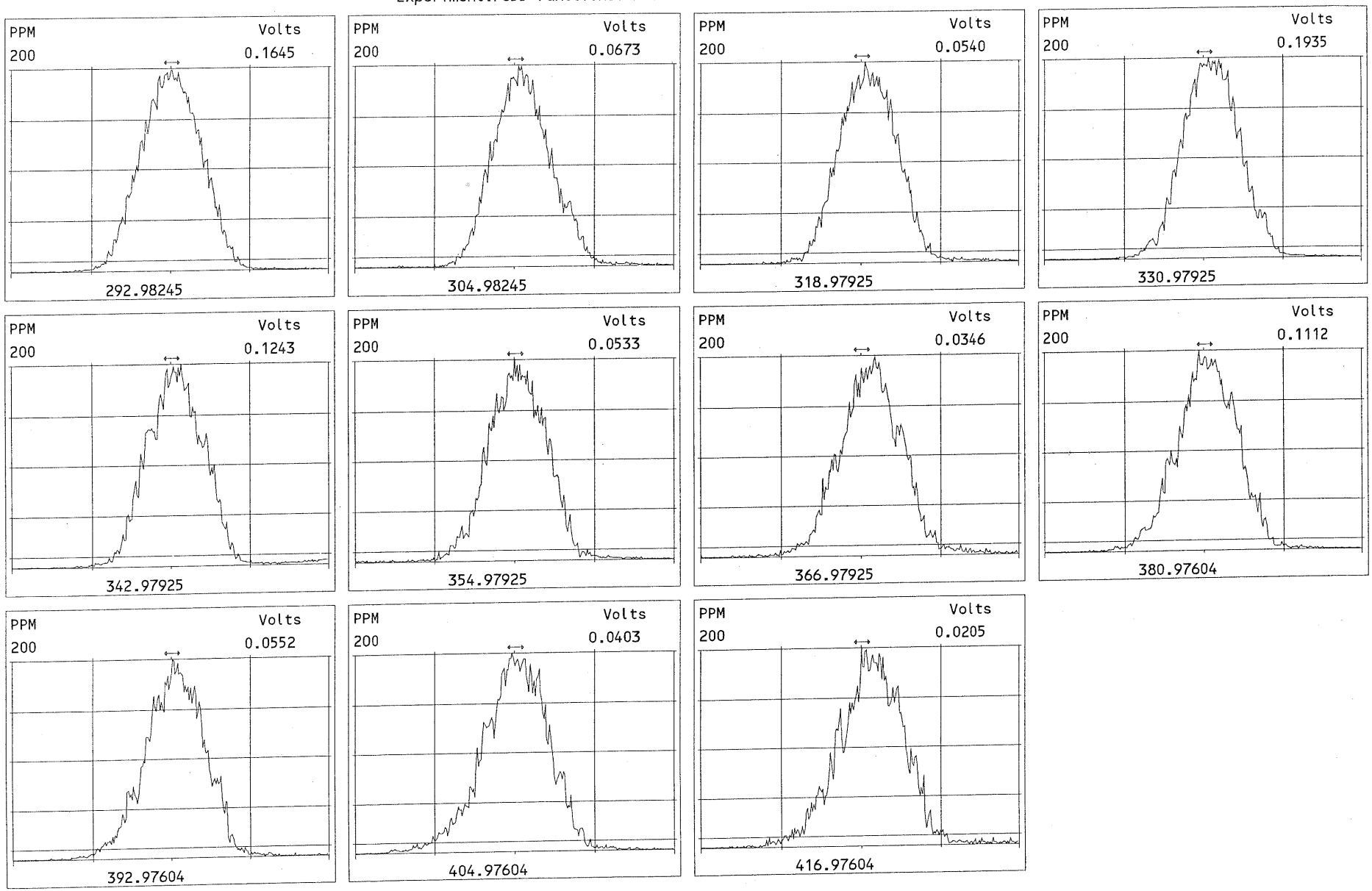
File:18AUG16M #1-361 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory



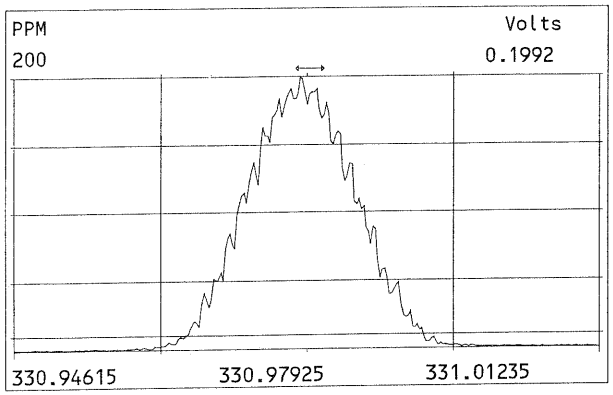
File:18AUG16M #1-361 Acq:18-AUG-2016 08:40:57 GC EI+ Voltage SIR Autospec-Ultima
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M1 File Text:Frontier Analytical Laboratory

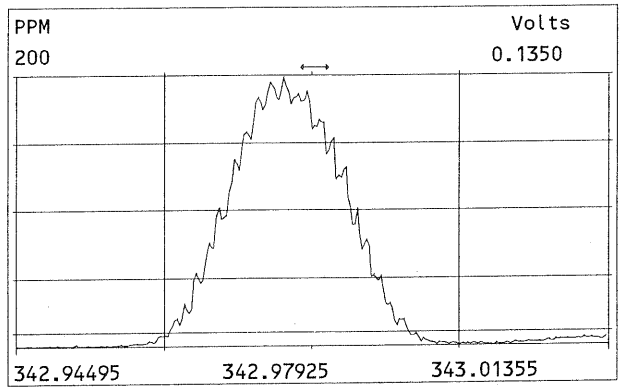


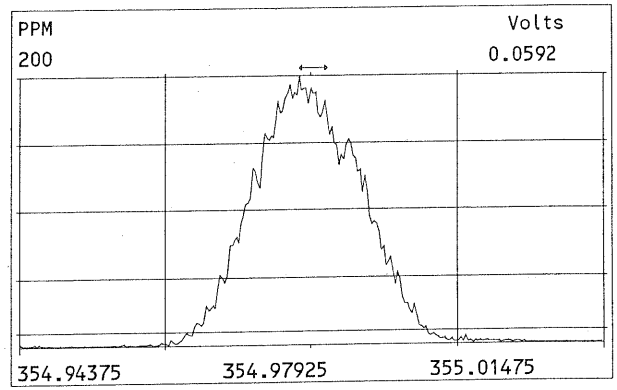
Peak Locate Examination:18-AUG-2016:23:21 File:18AUG16M_RES_CHECK
Experiment:PCDD Function:1 Reference:PFK

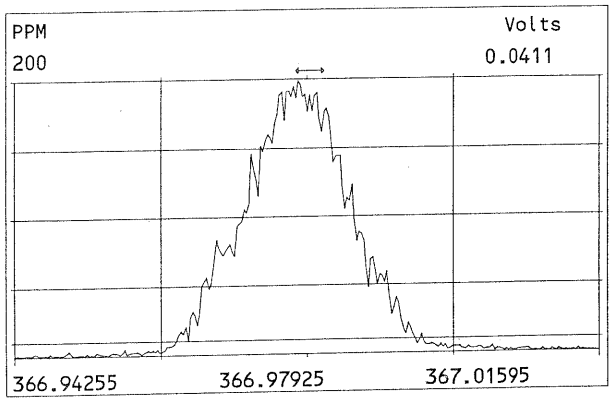


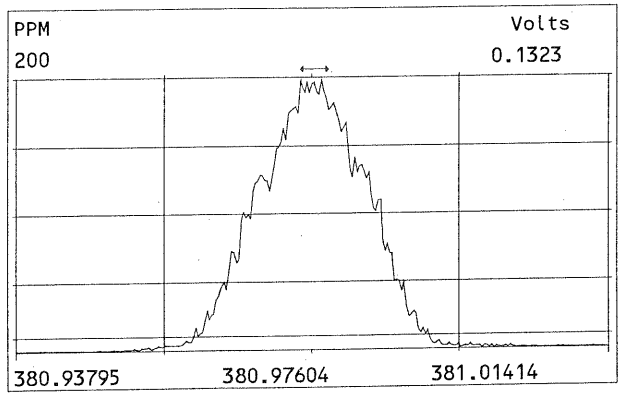
Peak Locate Examination:18-AUG-2016:23:22 File:18AUG16M_RES_CHECK
Experiment:PCDD Function:2 Reference:PFK

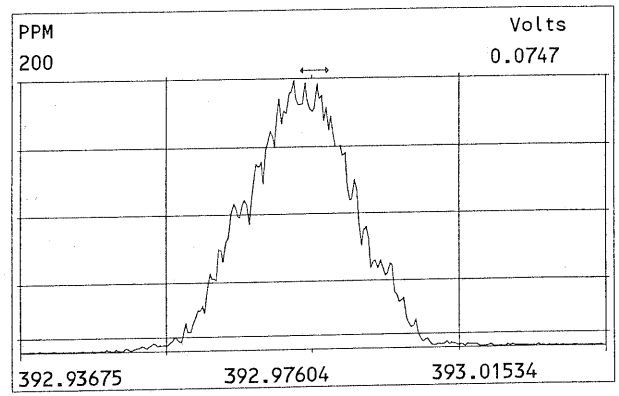


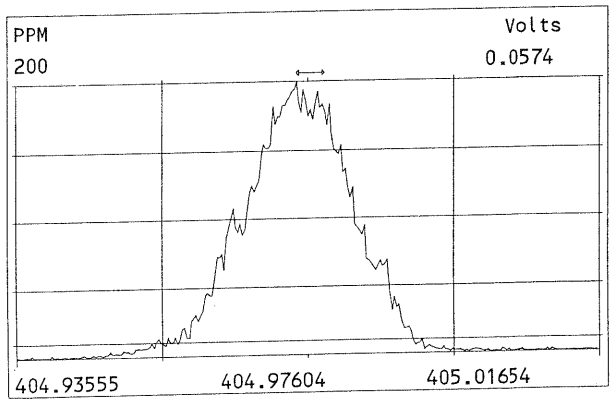


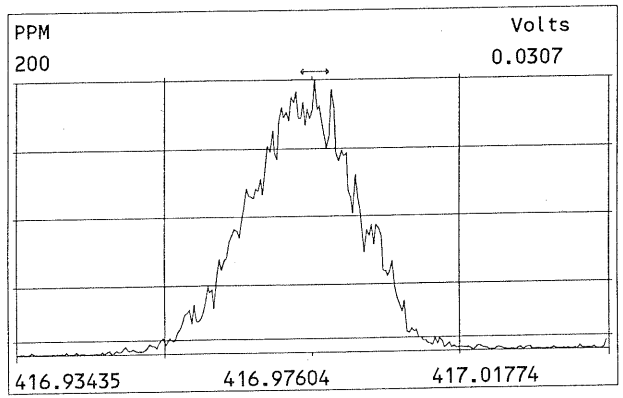




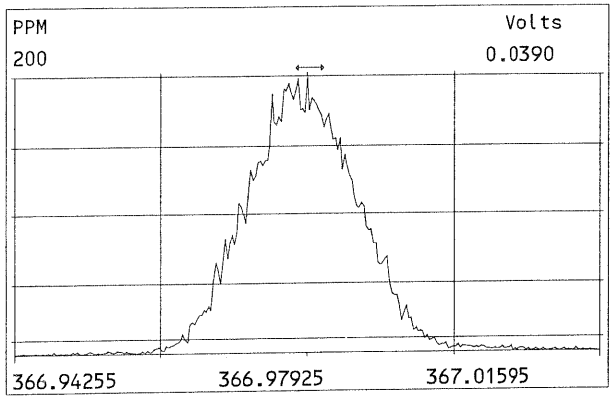


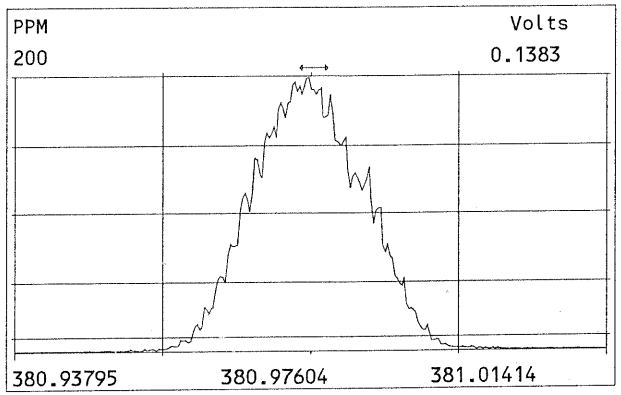


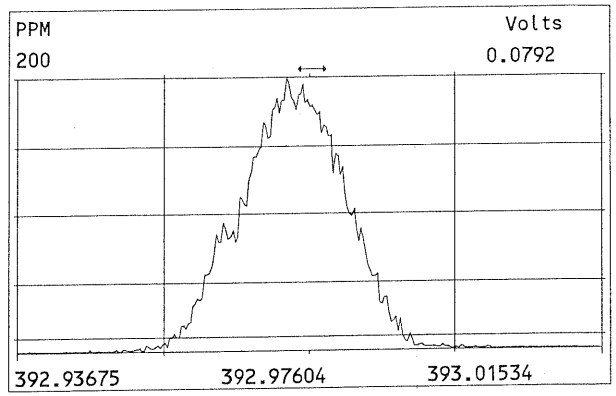


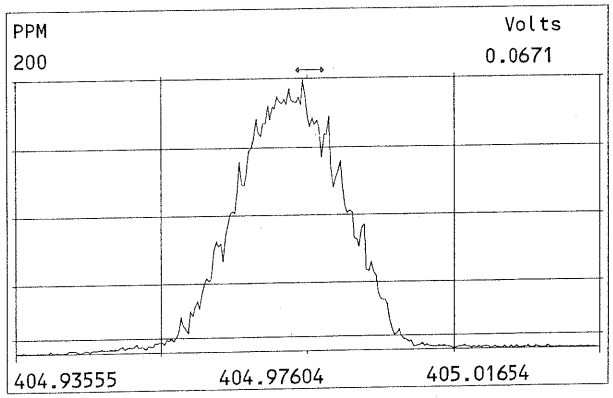


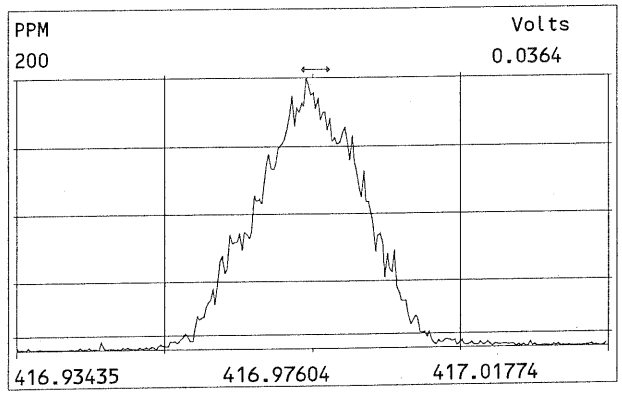
Peak Locate Examination:18-AUG-2016:23:22 File:18AUG16M_RES_CHECK
Experiment:PCDD Function:3 Reference:PFK

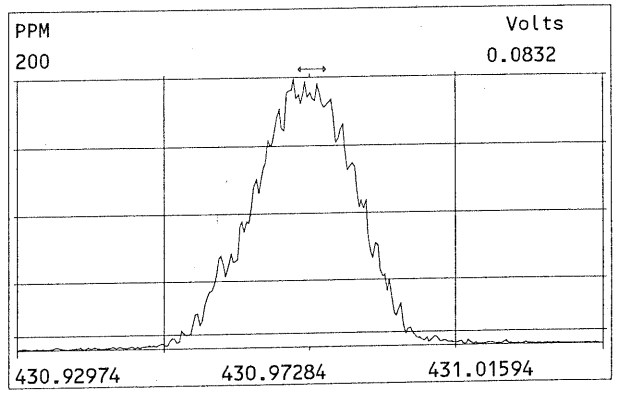


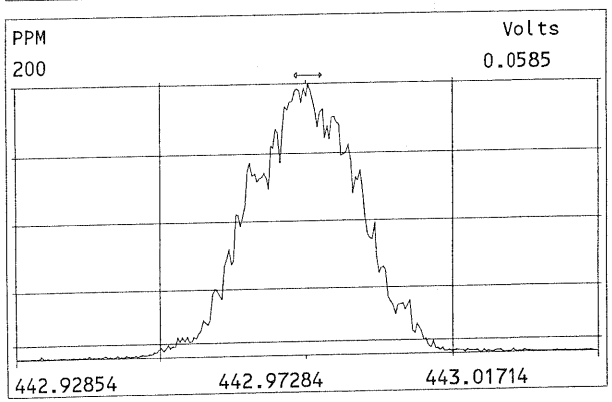


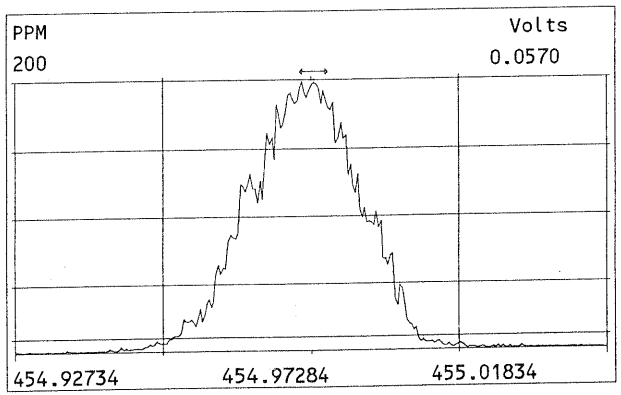




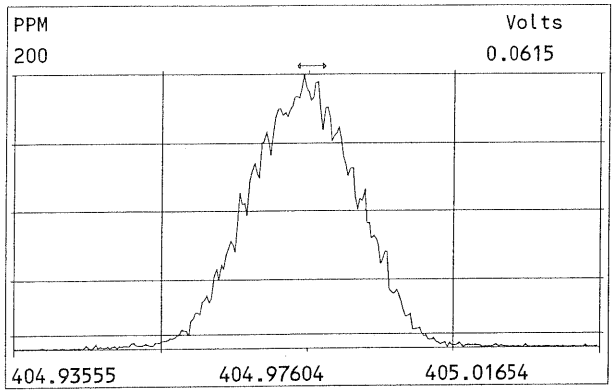


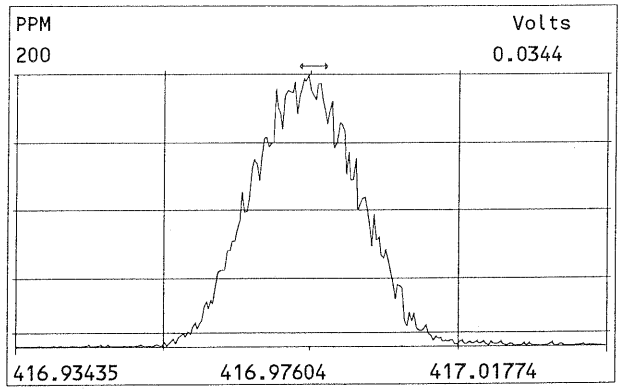


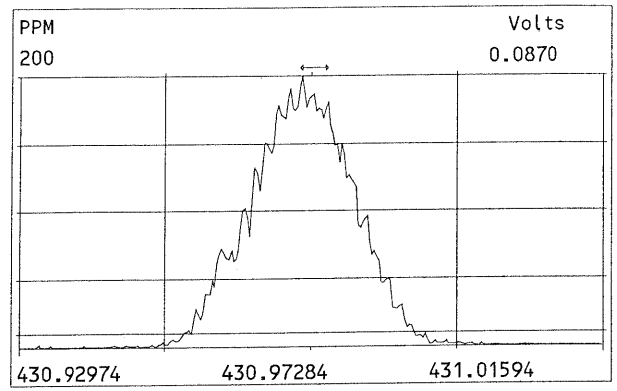


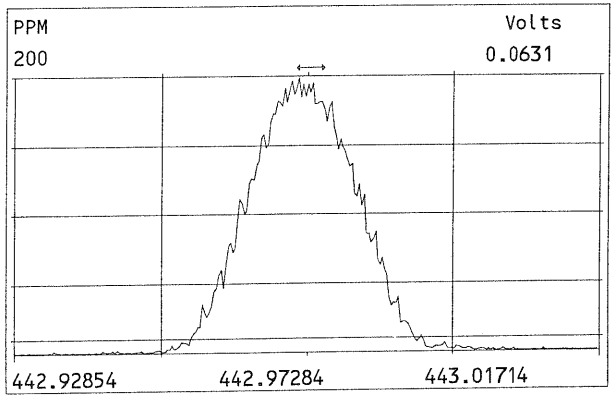


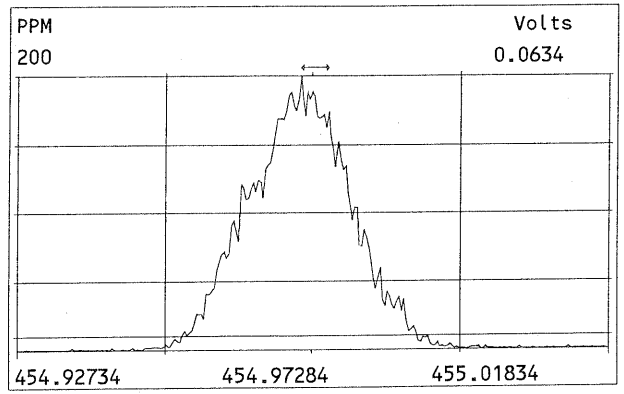
Peak Locate Examination:18-AUG-2016:23:22 File:18AUG16M_RES_CHECK
Experiment:PCDD Function:4 Reference:PFK

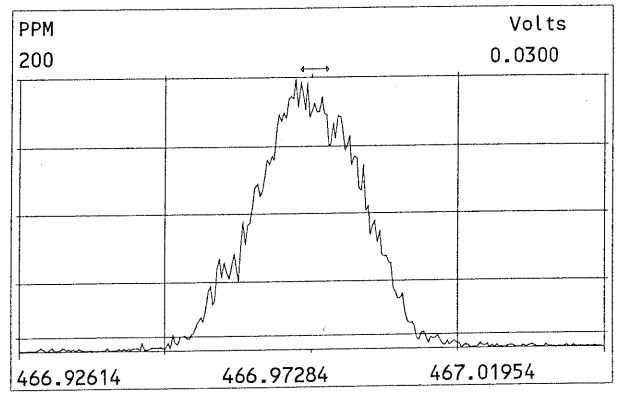


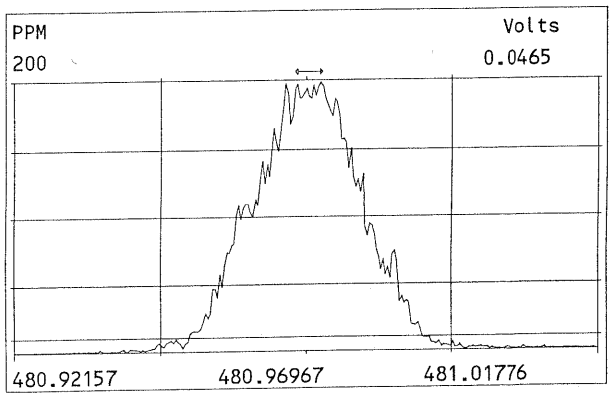




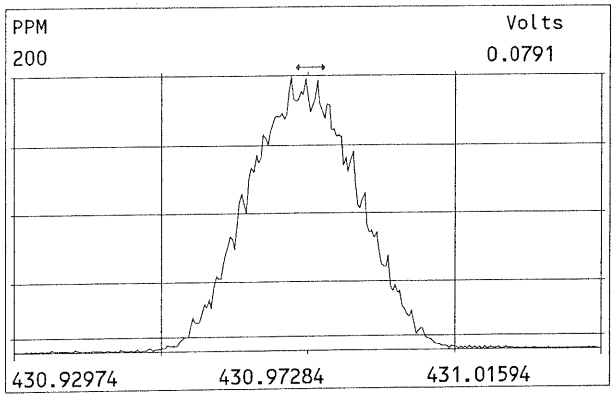


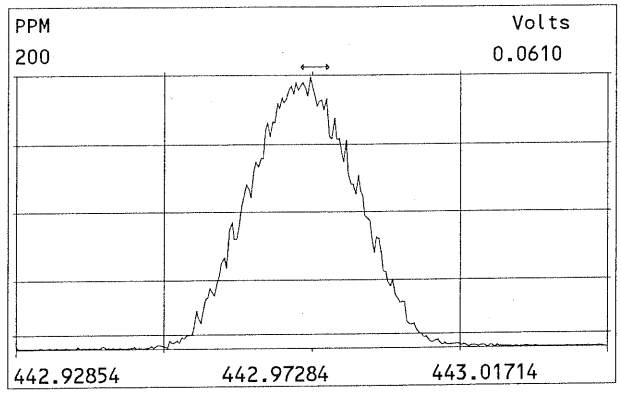


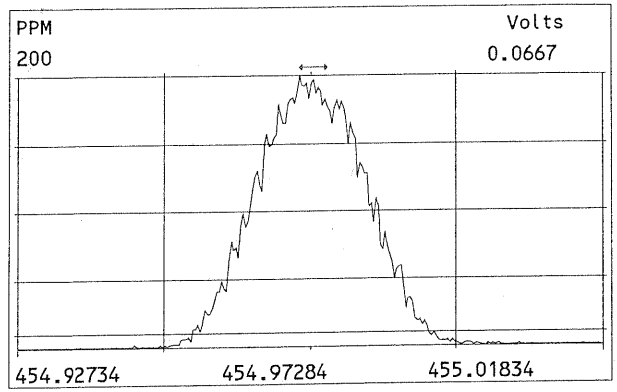


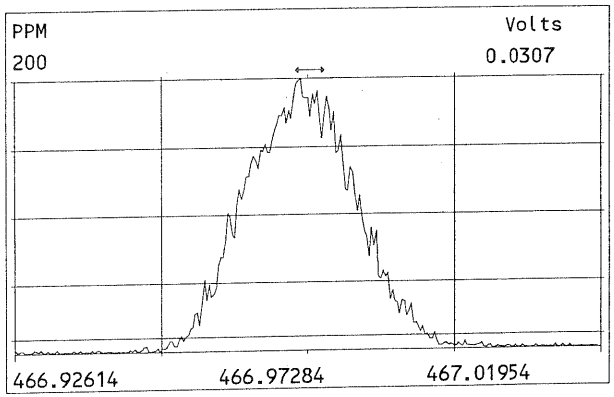


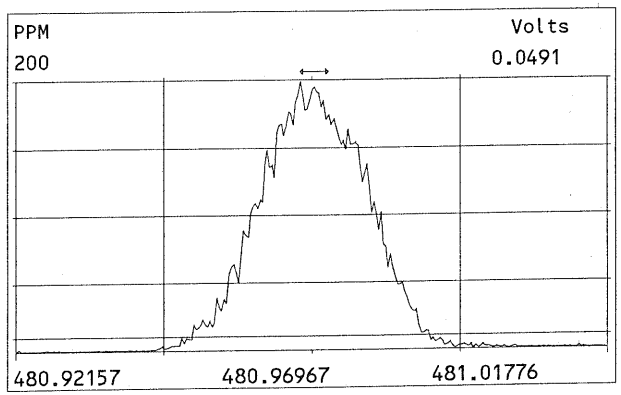
Peak Locate Examination:18-AUG-2016:23:23 File:18AUG16M_RES_CHECK
Experiment:PCDD Function:5 Reference:PFK

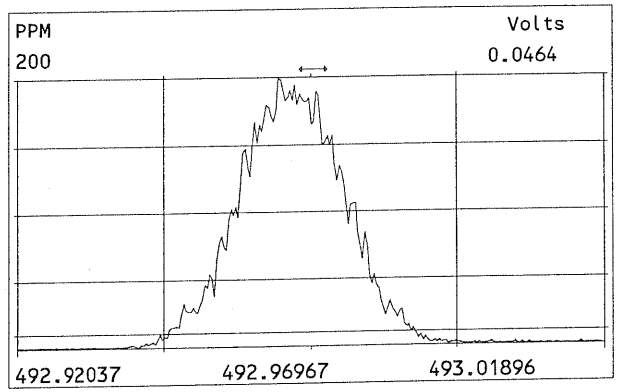


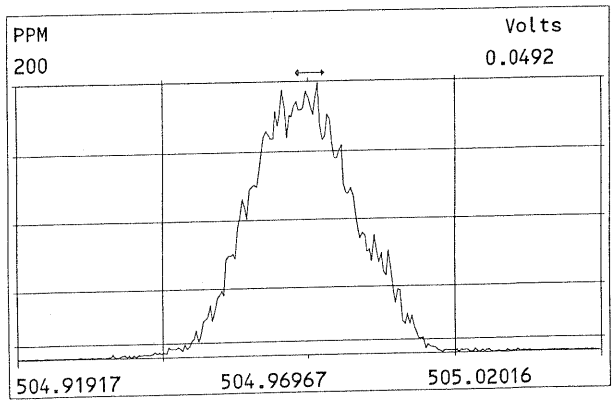


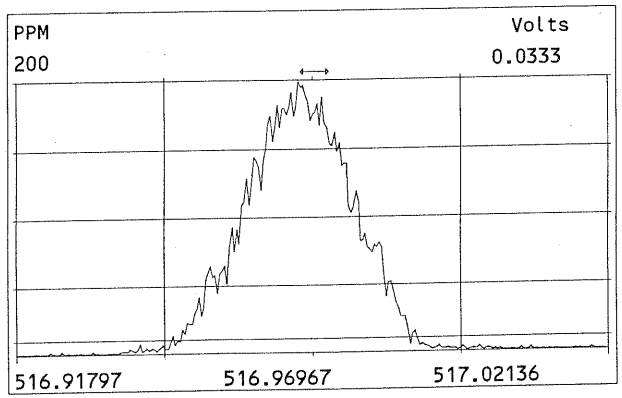












USEPA - ITD

FORM 4A
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 7/20/16

Instrument ID: FAL3 GC Column ID: DB5MS

VER Data Filename: 18AUG16M Sam:15 Analysis Date: 18-AUG-16 21:29:26

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	0.81	0.65-0.89	y	10.4	7.80 - 12.9
1,2,3,7,8-PeCDD	M+2/M+4	1.51	1.32-1.78	y	47.3	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	46.4	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	46.2	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	y	48.0	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	47.7	43.0 - 58.0
OCDD	M+2/M+4	0.85	0.76-1.02	y	103	79.0 - 126
2,3,7,8-TCDF	M/M+2	0.75	0.65-0.89	y	9.59	8.40 - 12.0
1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	y	48.8	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	y	47.7	41.0 - 60.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	47.9	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	y	48.1	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	48.3	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.21	1.05-1.43	y	48.6	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.00	0.88-1.20	y	49.3	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.02	0.88-1.20	y	49.7	43.0 - 58.0
OCDF	M+2/M+4	0.89	0.76-1.02	y	105	63.0 - 159

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

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

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

Analyst: _____ Date: 8/19/16

USEPA - ITD

FORM 4B
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 7/20/16

Instrument ID: FAL3 GC Column ID: DB5MS

VER Data Filename: 18AUG16M Sam:15 Analysis Date: 18-AUG-16 21:29:26

	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	ACCEPT	CONC. FOUND	CONC. RANGE (ng/mL) (3)
LABELED COMPOUNDS						
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	97.4	82.0 - 121
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.57	1.32-1.78	y	87.6	62.0 - 160
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.22	1.05-1.43	y	99.5	85.0 - 117
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	100	85.0 - 118
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.08	0.88-1.20	y	92.8	72.0 - 138
13C-OCDD	M+2/M+4	0.89	0.76-1.02	y	166	96.0 - 415
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	y	94.2	71.0 - 140
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	y	88.9	76.0 - 130
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	84.8	77.0 - 130
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	105	76.0 - 131
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	107	70.0 - 143
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	105	73.0 - 137
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	y	104	74.0 - 135
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.48	0.37-0.51	y	103	78.0 - 129
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.48	0.37-0.51	y	99.1	77.0 - 129
13C-OCDF	M+2/M+4	0.90	0.76-1.02	y	171	96.0 - 415
CLEANUP STANDARD (4)						
37Cl-2,3,7,8-TCDD					9.49	7.90 - 12.7

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

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

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

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

Analyst: [signature] Date: 8/19/16

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: 7/20/16

RT Window Data Filename: 18AUG16M Sam:15 Analysis Date: 18-AUG-16 Time: 21:29:26

DB-5 IS Data Filename: 18AUG16M Sam:15 Analysis Date: 18-AUG-16 Time: 21:29:26

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

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:24	1,3,6,8-TCDF (F)	22:60
1,2,8,9-TCDD (L)	28:25	1,2,8,9-TCDF (L)	28:41
1,2,4,7,9-PeCDD (F)	30:18	1,3,4,6,8-PeCDF (F)	28:26
1,2,3,8,9-PeCDD (L)	33:55	1,2,3,8,9-PeCDF (L)	34:23
1,2,4,6,7,9-HxCDD (F)	36:11	1,2,3,4,6,8-HxCDF (F)	35:18
1,2,3,7,8,9-HxCDD (L)	39:18	1,2,3,7,8,9-HxCDF (L)	39:56
1,2,3,4,6,7,9-HpCDD (F)	42:51	1,2,3,4,6,7,8-HpCDF (F)	42:21
1,2,3,4,6,7,8-HpCDD (L)	44:16	1,2,3,4,7,8,9-HpCDF (L)	45:15

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

==========

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT BETWEEN COMPARED PEAKS (1)

<25%

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

Analyst: [signature] Date: 8/19/16

USEPA - ITD

FORM 6A
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 7/20/16

Instrument ID: FAL3 GC Column ID: DB5MS

Analysis Date: 18-AUG-16 21:29:26 CS3 or VER Data Filename: 18AUG16M Sam:15

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.025	0.989-1.052
13C-2,3,7,8-TCDD		1.023	0.976-1.043
13C-2,3,7,8-TCDF		0.997	0.923-1.103
13C-1,2,3,7,8-PeCDD		1.243	1.000-1.567
13C-1,2,3,7,8-PeCDF		1.178	1.000-1.425
13C-2,3,4,7,8-PeCDF		1.229	1.011-1.526

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

Analyst: _____ Date: 8/19/16

USEPA - ITD

FORM 6B
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Frontier Analytical Laboratory Episode No.:

Contract No.: SAS No.: Init. Cal. Date: 7/20/16

Instrument ID: FAL3 GC Column ID: DB5MS

Analysis Date: 18-AUG-16 21:29:26 CS3 or VER Data Filename: 18AUG16M Sam:15

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.999-1.003
1,2,3,7,8,9-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.012	1.000-1.019
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.999-1.003
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.001	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001
LABELED COMPOUNDS			
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,7,8,9-HxCDD	0.985	0.977-1.000
13C-1,2,3,6,7,8-HxCDD		0.989	0.981-1.003
13C-1,2,3,4,7,8-HxCDF		0.949	0.944-0.970
13C-1,2,3,6,7,8-HxCDF		0.954	0.949-0.975
13C-2,3,4,6,7,8-HxCDF		0.979	0.959-1.021
13C-1,2,3,7,8,9-HxCDF		1.016	0.977-1.047
13C-1,2,3,4,6,7,8-HpCDD		1.126	1.086-1.130
13C-1,2,3,4,6,7,8-HpCDF		1.078	1.043-1.085
13C-1,2,3,4,7,8,9-HpCDF		1.151	1.057-1.151
13C-OCDD		1.267	1.032-1.311
13C-OCDF		1.278	1.000-1.311

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

Analyst: [signature] Date: 8/19/16

FAL ID: ST081816M2 Filename: 18AUG16M Sam:15 Acquired: 18-AUG-16 21:29:26 ICal: PCDDFAL3-7-20-16
Client ID: 1613 CS3 160711J ConCal: ST081816M1 EndCal: ST081816M2
Results: GC Golumn: DB5MS Amount: 1.000 NATO 1989 Tox: 96.3
Instrument ID: FAL3 WHO 1998 Tox: 120 WHO 2005 Tox: 109

Name	Resp	RA	RT	RRF	Conc	Qual	Fac	Noise-1	Noise-2	DL
2,3,7,8-TCDD	5.07e+06	0.81 y	27:28	1.16	10.4		2.50	-	-	*
1,2,3,7,8-PeCDD	1.64e+07	1.51 y	33:21	1.00	47.3		2.50	-	-	*
1,2,3,4,7,8-HxCDD	1.21e+07	1.24 y	38:42	1.08	46.4		2.50	-	-	*
1,2,3,6,7,8-HxCDD	1.32e+07	1.23 y	38:52	1.08	46.2		2.50	-	-	*
1,2,3,7,8,9-HxCDD	1.36e+07	1.26 y	39:18	1.12	48.0		2.50	-	-	*
1,2,3,4,6,7,8-HpCDD	1.05e+07	1.03 y	44:16	1.04	47.7		2.50	-	-	*
OCDD	1.66e+07	0.85 y	49:48	1.05	103		2.50	-	-	*
2,3,7,8-TCDF	7.13e+06	0.75 y	26:44	1.11	9.59		2.50	-	-	*
1,2,3,7,8-PeCDF	2.70e+07	1.57 y	31:35	0.96	48.8		2.50	-	-	*
2,3,4,7,8-PeCDF	2.49e+07	1.54 y	32:58	0.95	47.7		2.50	-	-	*
1,2,3,4,7,8-HxCDF	1.94e+07	1.23 y	37:18	1.11	47.9		2.50	-	-	*
1,2,3,6,7,8-HxCDF	2.23e+07	1.22 y	37:31	1.07	48.1		2.50	-	-	*
2,3,4,6,7,8-HxCDF	1.93e+07	1.23 y	38:29	1.04	48.3		2.50	-	-	*
1,2,3,7,8,9-HxCDF	1.65e+07	1.21 y	39:56	1.03	48.6		2.50	-	-	*
1,2,3,4,6,7,8-HpCDF	1.67e+07	1.00 y	42:21	1.30	49.3		2.50	-	-	*
1,2,3,4,7,8,9-HpCDF	1.26e+07	1.02 y	45:15	1.23	49.7		2.50	-	-	*
OCDF	2.05e+07	0.89 y	50:14	0.89	105		2.50	-	-	*
										Rec
13C-2,3,7,8-TCDD	4.21e+07	0.79 y	27:26	0.98	97.4					97.4
13C-1,2,3,7,8-PeCDD	3.47e+07	1.57 y	33:20	0.90	87.6					87.6
13C-1,2,3,4,7,8-HxCDD	2.41e+07	1.22 y	38:41	0.88	99.5					99.5
13C-1,2,3,6,7,8-HxCDD	2.67e+07	1.28 y	38:51	0.96	100					100
13C-1,2,3,4,6,7,8-HpCDD	2.12e+07	1.08 y	44:15	0.83	92.8					92.8
13C-OCDD	3.05e+07	0.89 y	49:47	0.66	166					83.1
13C-2,3,7,8-TCDF	6.73e+07	0.79 y	26:43	1.01	94.2					94.2
13C-1,2,3,7,8-PeCDF	5.80e+07	1.56 y	31:35	0.92	88.9					88.9
13C-2,3,4,7,8-PeCDF	5.47e+07	1.58 y	32:57	0.91	84.8					84.8
13C-1,2,3,4,7,8-HxCDF	3.66e+07	0.53 y	37:17	1.26	105					105
13C-1,2,3,6,7,8-HxCDF	4.34e+07	0.52 y	37:29	1.46	107					107
13C-2,3,4,6,7,8-HxCDF	3.85e+07	0.51 y	38:27	1.32	105					105
13C-1,2,3,7,8,9-HxCDF	3.31e+07	0.52 y	39:55	1.15	104					104
13C-1,2,3,4,6,7,8-HpCDF	2.60e+07	0.48 y	42:21	0.91	103					103
13C-1,2,3,4,7,8,9-HpCDF	2.07e+07	0.48 y	45:13	0.76	99.1					99.1
13C-OCDF	4.41e+07	0.90 y	50:13	0.93	171					85.3
37Cl-2,3,7,8-TCDD	3.78e+06		27:29	0.90	9.49					94.9
13C-1,2,3,4-TCDD	4.41e+07	0.79 y	26:49	-	82.3					
13C-1,2,3,4-TCDF	7.09e+07	0.80 y	25:32	-	92.5					
13C-1,2,3,7,8,9-HxCDD	2.76e+07	1.20 y	39:18	-	63.1					

						Fac	Noise-1	Noise-2	DL		#Hom
Total Tetra-Dioxins	2.51e+07		24:24	1.16	51.4	2.50	-	-	*		15
Total Penta-Dioxins	5.27e+07		30:18	1.00	152	2.50	-	-	*		14
Total Hexa-Dioxins	5.73e+07		36:11	1.09	207	2.50	-	-	*		23
Total Hepta-Dioxins	2.36e+07		42:51	1.04	107	2.50	-	-	*		18
Total Tetra-Furans	3.30e+07		22:60	1.11	44.4	2.50	-	-	*		17
1st Fn. Tot Penta-Furans	3.51e+07		28:26	0.95	65.2	2.50	-	-	*	PeCDF	5
Total Penta-Furans	7.53e+07		30:14	0.95	140	2.50	-	-	*	205	20
Total Hexa-Furans	1.00e+08		35:18	1.06	249	2.50	-	-	*		21
Total Hepta-Furans	2.98e+07		42:21	1.27	101	2.50	-	-	*		21

Analyst: _____ Date: 8/19/16

Frontier Analytical Laboratory - Acquisition Log

Run Name:18AUG16M Instrument: FAL3 GC: DB5 Experiment:PCDD

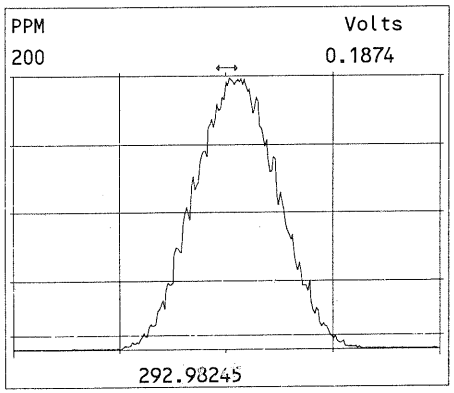
Data File	S	FAL ID	Client ID	Acquired	ConCal	EndCal	Analyst
18AUG16M	1	ST081816M1	1613 CS3 160711J	18-AUG-16 08:40:57	ST081816M1	ST081816M2	TC
18AUG16M	2	03815-001-0001-OPR	OPR	18-AUG-16 09:35:46	ST081816M1	ST081816M2	TC
18AUG16M	3	03815-001-0001-MB	Method Blank	18-AUG-16 10:30:39	ST081816M1	ST081816M2	TC
18AUG16M	4	10097-001-0001-SA	P880435	18-AUG-16 11:25:33	ST081816M1	ST081816M2	TC
18AUG16M	5	10087-001-0001-SA	SW-4 36/48	18-AUG-16 12:20:28	ST081816M1	ST081816M2	TC
18AUG16M	6	10087-002-0001-SA	SW-6 36/48	18-AUG-16 13:15:23	ST081816M1	ST081816M2	TC
18AUG16M	7	10087-003-0001-SA	SW-7 36/48	18-AUG-16 14:10:16	ST081816M1	ST081816M2	TC
18AUG16M	8	10087-004-0001-SA	SW-11 36/48	18-AUG-16 15:05:10	ST081816M1	ST081816M2	TC
18AUG16M	9	10095-001-D002-SA	LDW-BA-PC-ENRMAT-SAND	18-AUG-16 16:00:03	ST081816M1	ST081816M2	TC
18AUG16M	10	10095-002-D002-SA	LDW-BA-PC-ENRMAT-GRUSAND	18-AUG-16 16:54:58	ST081816M1	ST081816M2	TC
18AUG16M	11	10096-001-0001-SA	AG-2012-05	18-AUG-16 17:49:52	ST081816M1	ST081816M2	TC
18AUG16M	12	10093-001-0001-SA	16H0530-01 COMP FLY ASH	18-AUG-16 18:44:46	ST081816M1	ST081816M2	TC
18AUG16M	13	10093-002-0001-SA	16H0530-02 COMP BOTTOM ASH	18-AUG-16 19:39:39	ST081816M1	ST081816M2	TC
18AUG16M	14	SB081816M1	Solvent Blank	18-AUG-16 20:34:33	ST081816M1	ST081816M2	TC
18AUG16M	15	ST081816M2	1613 CS3 160711J	18-AUG-16 21:29:26	ST081816M1	ST081816M2	TC

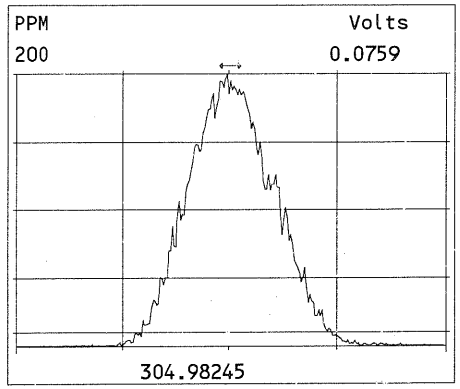
8/19/16

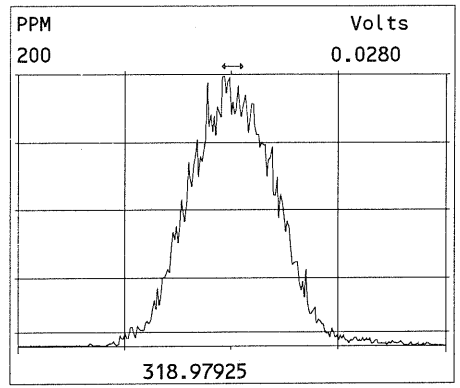
Data Backed Up:_____

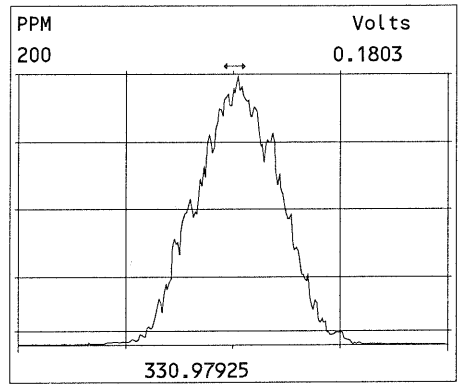
Date:_____

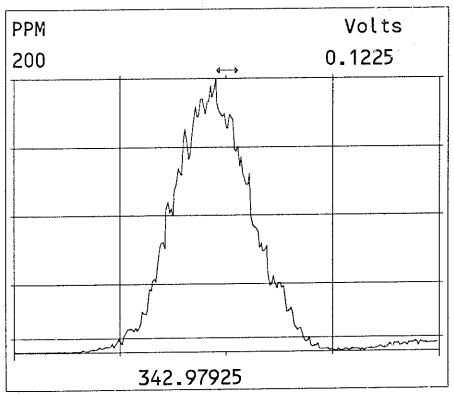
Peak Locate Examination:18-AUG-2016:08:39 File:18AUG16M
Experiment:PCDD Function:1 Reference:PFK

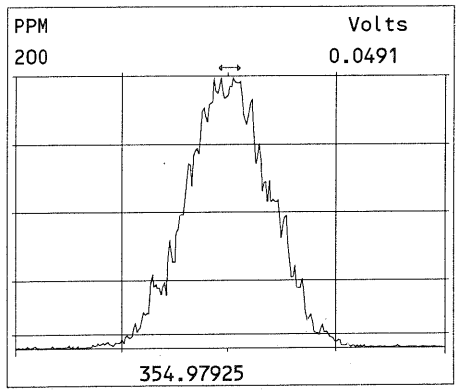


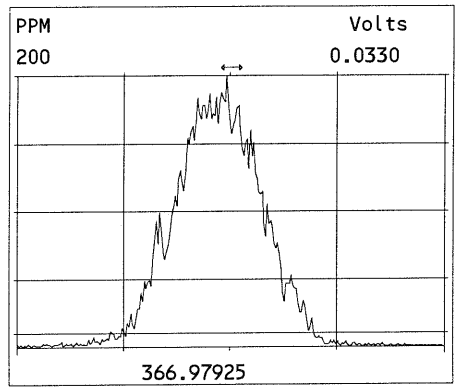


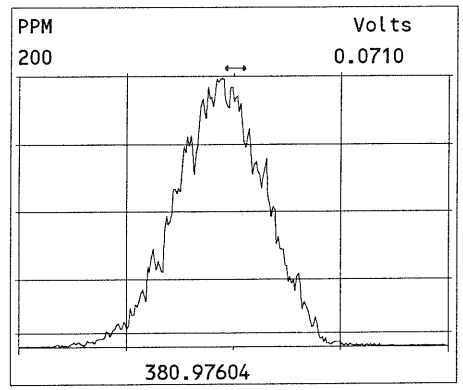


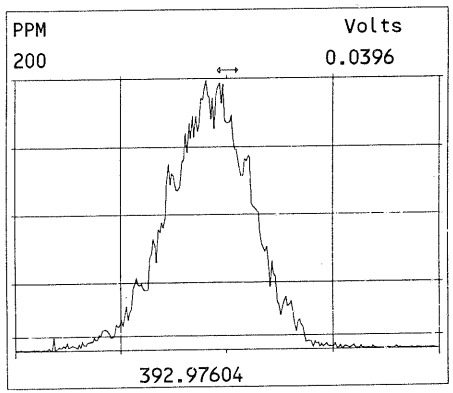


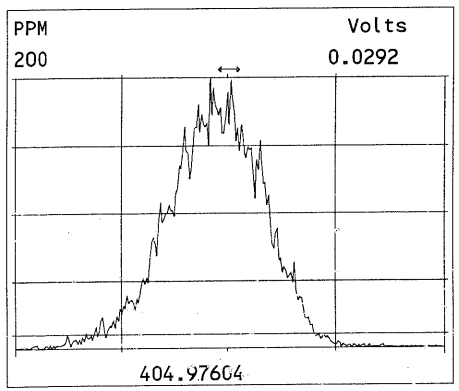


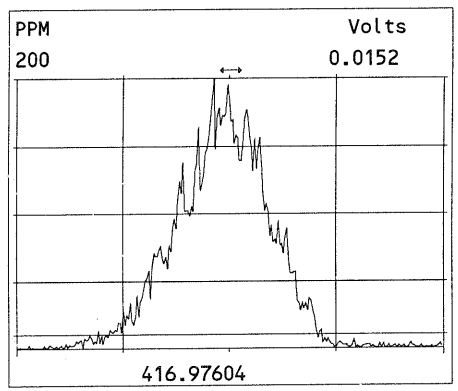




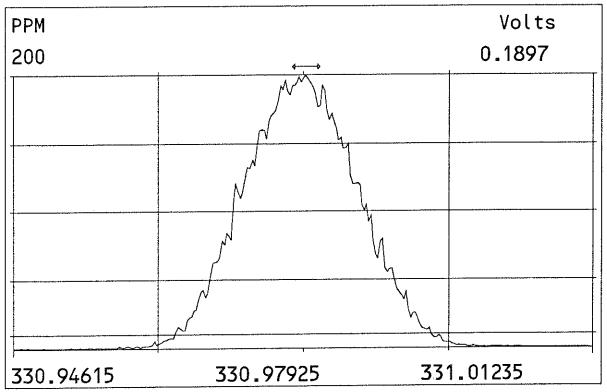


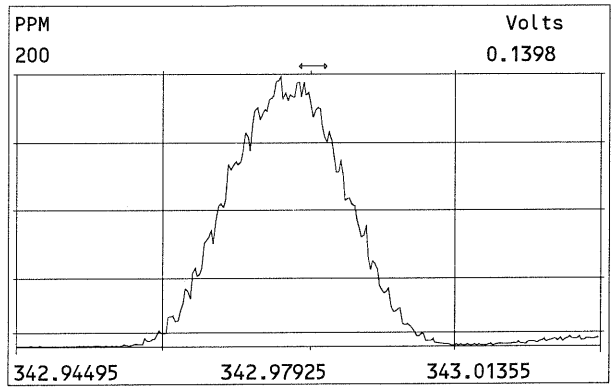


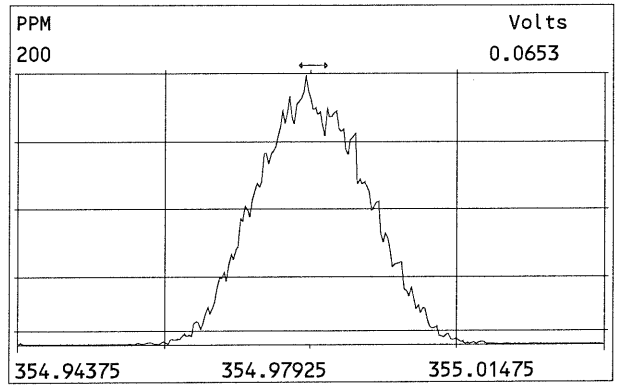


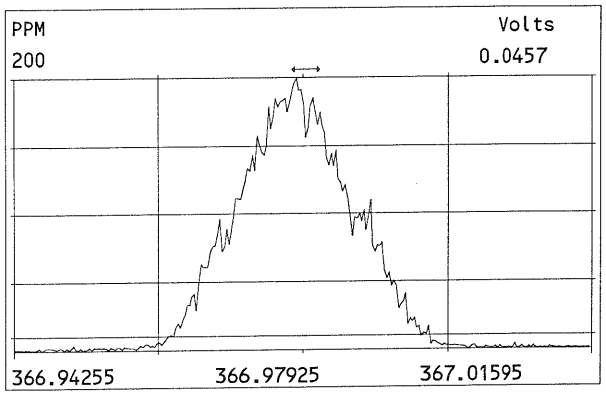


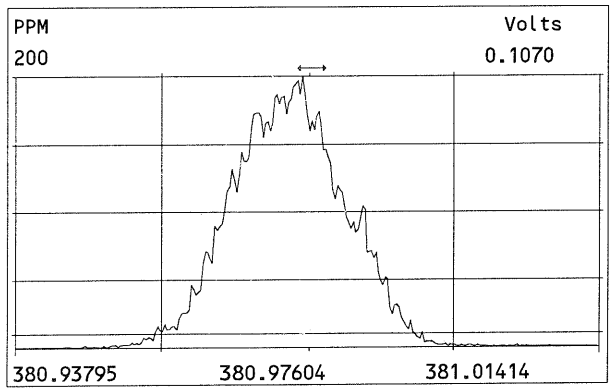
Peak Locate Examination:18-AUG-2016:08:39 File:18AUG16M
Experiment:PCDD Function:2 Reference:PFK

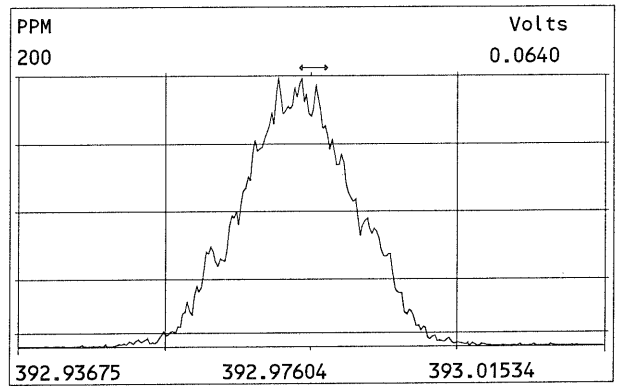


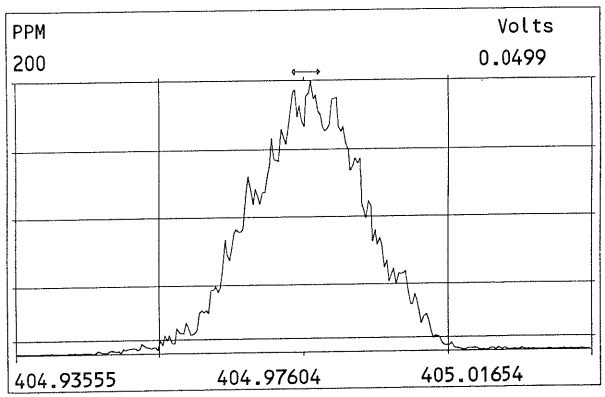


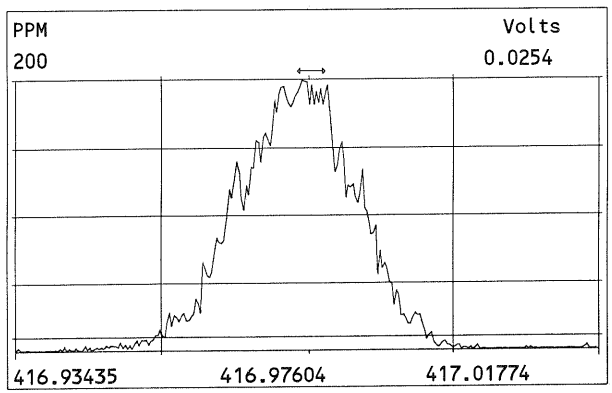




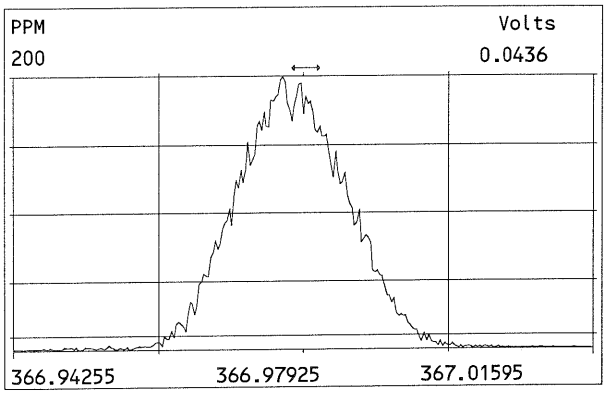


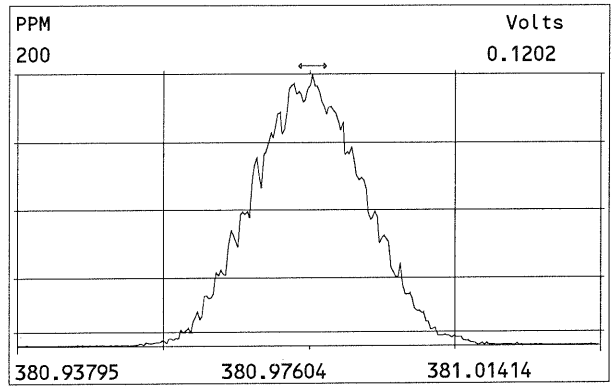


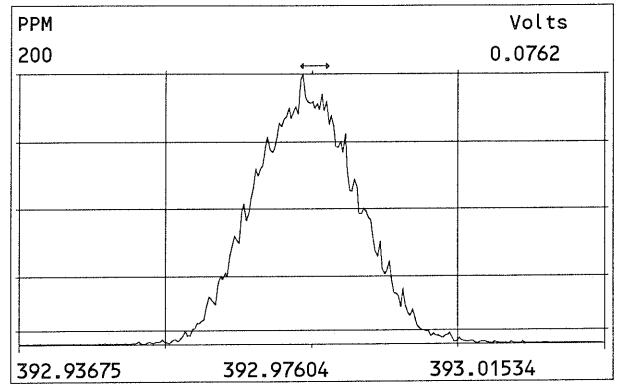


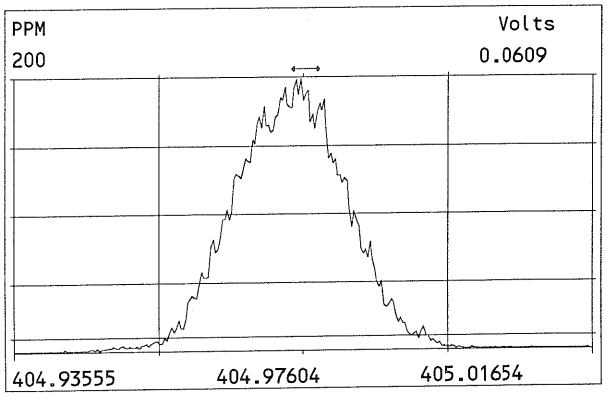


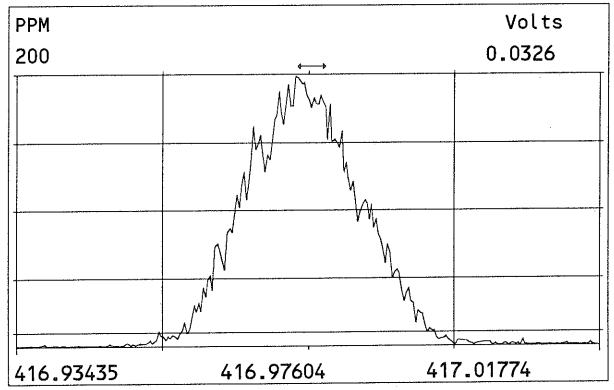
Peak Locate Examination:18-AUG-2016:08:39 File:18AUG16M
Experiment:PCDD Function:3 Reference:PFK

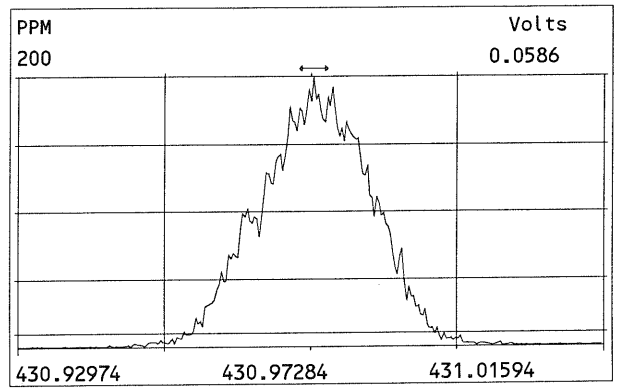


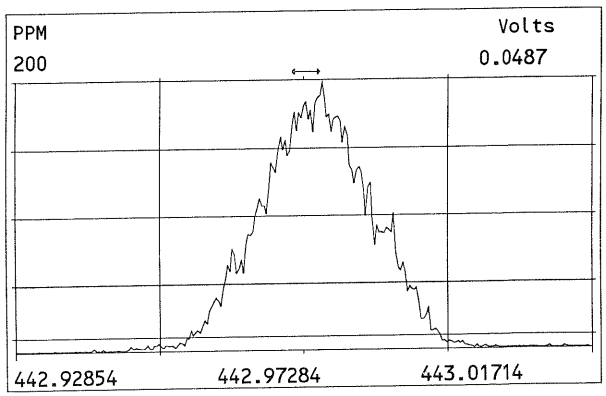


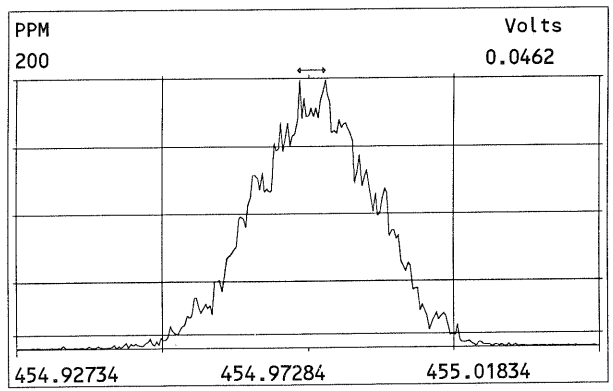




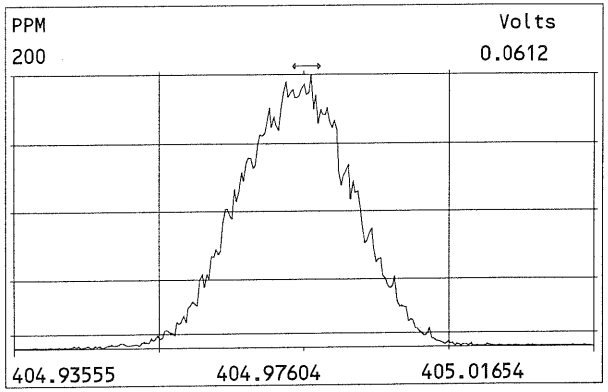


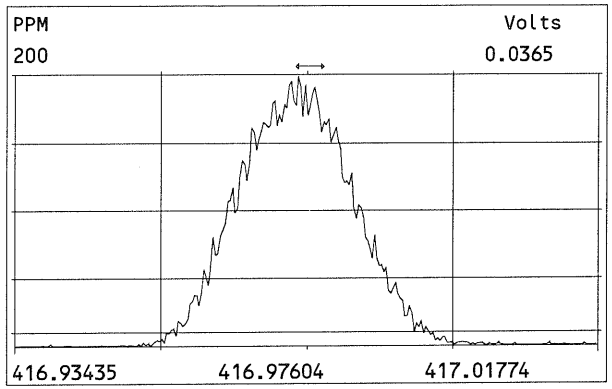


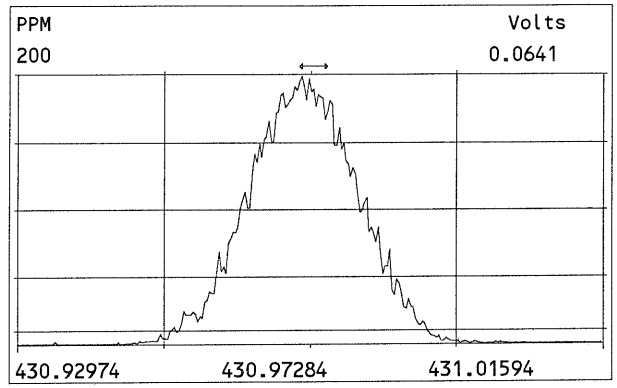


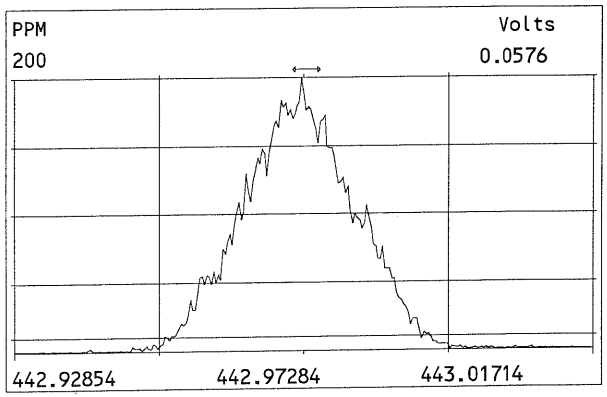


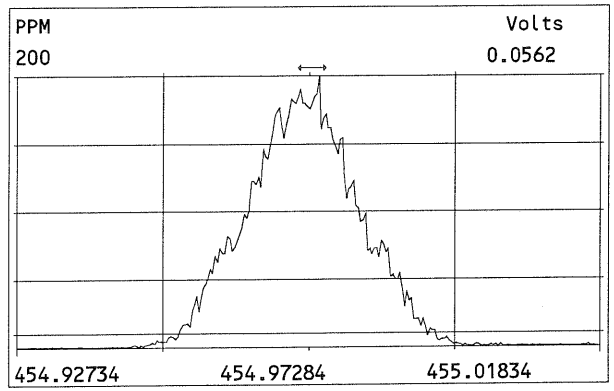
Peak Locate Examination:18-AUG-2016:08:40 File:18AUG16M
Experiment:PCDD Function:4 Reference:PFK

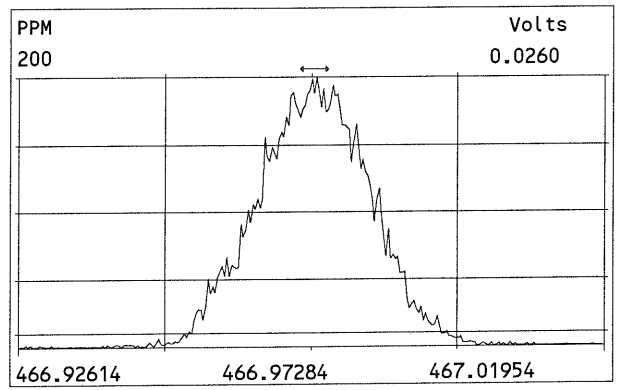


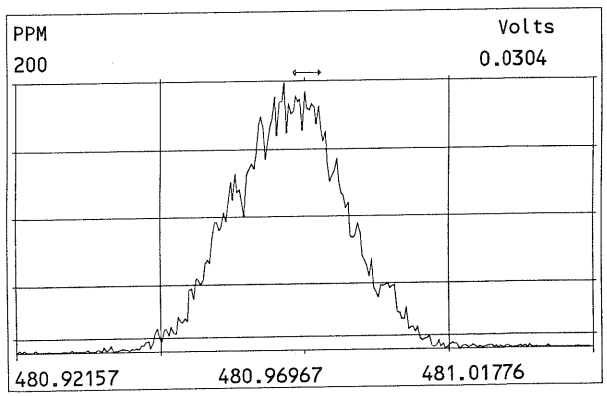




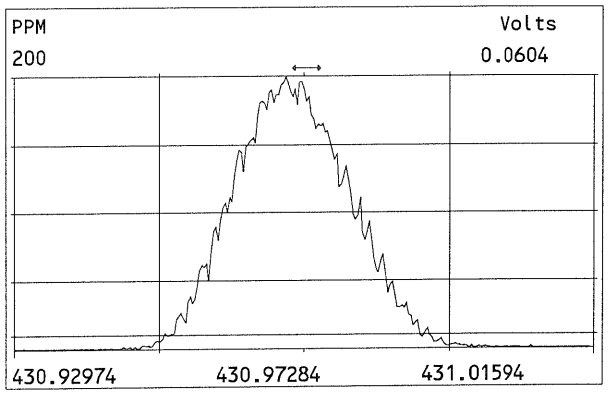


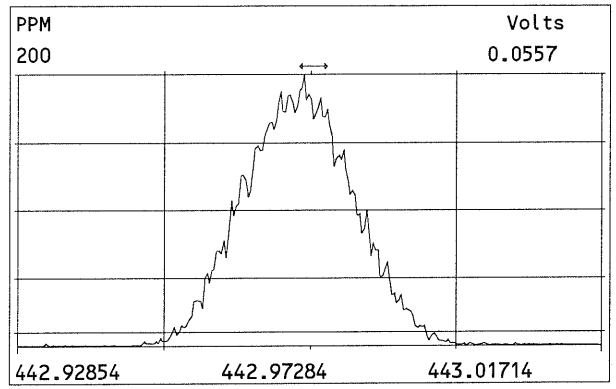


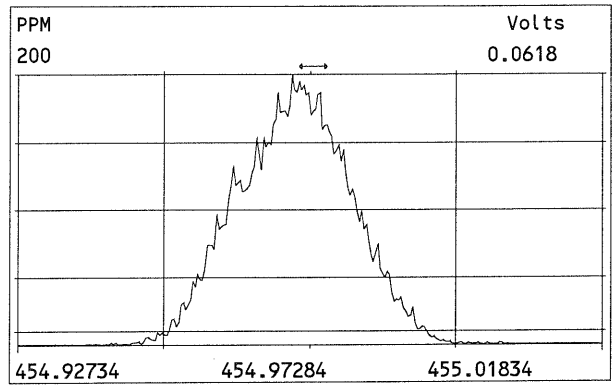


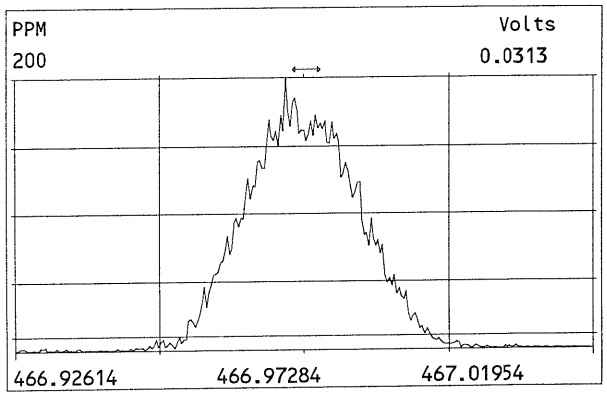


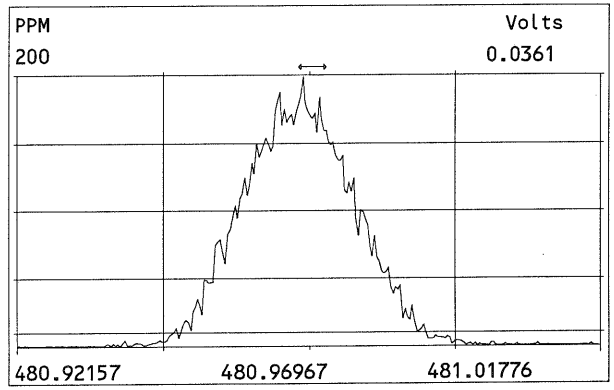
Peak Locate Examination:18-AUG-2016:08:40 File:18AUG16M
Experiment:PCDD Function:5 Reference:PFK

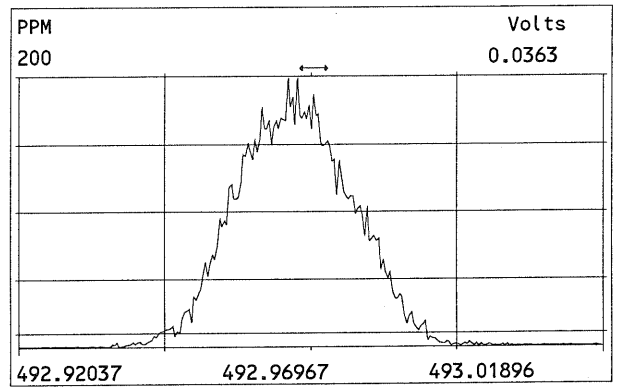


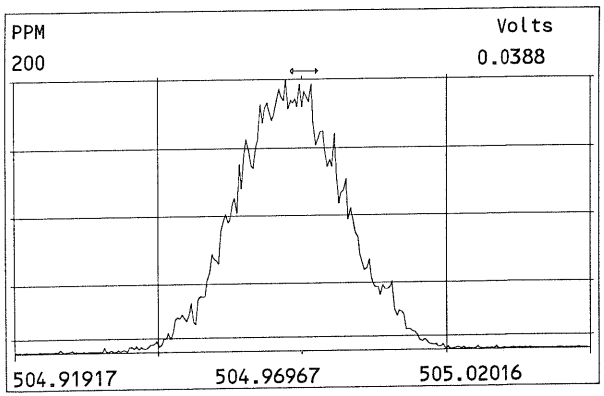


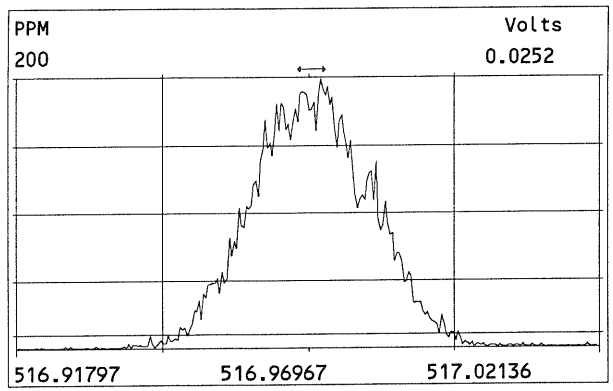




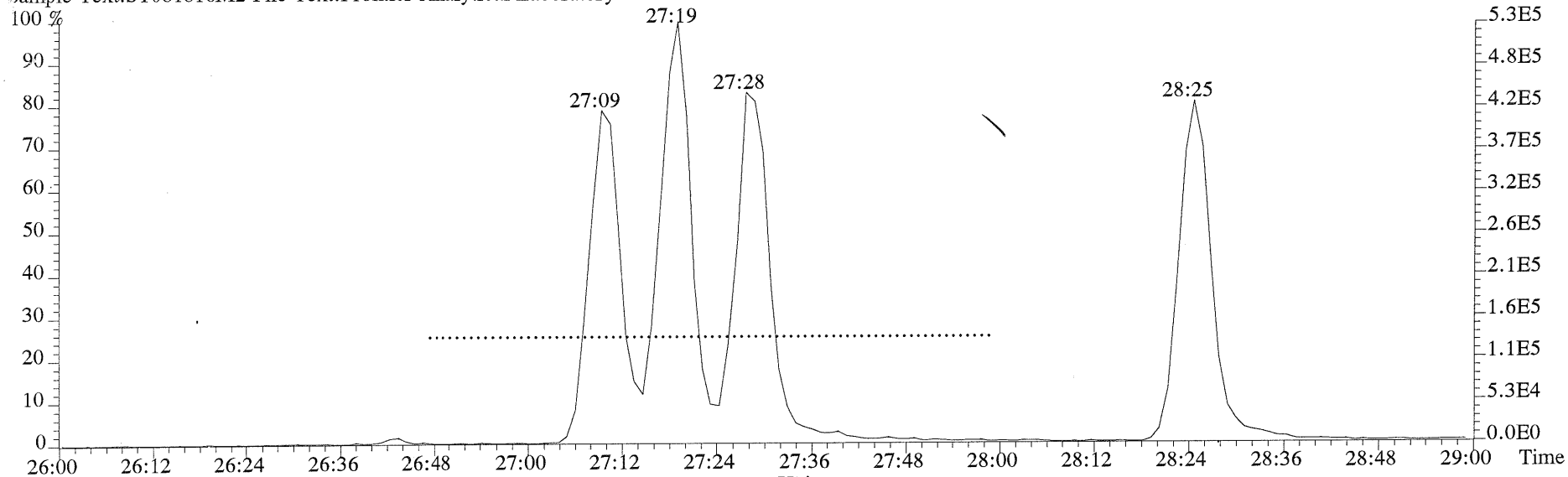




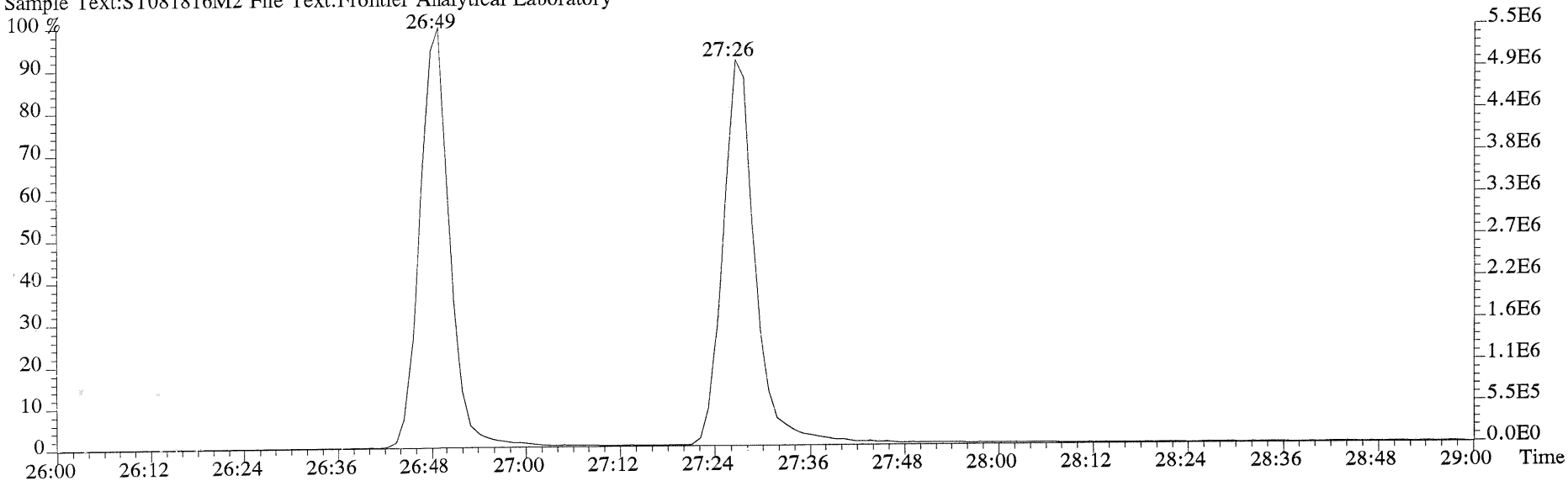




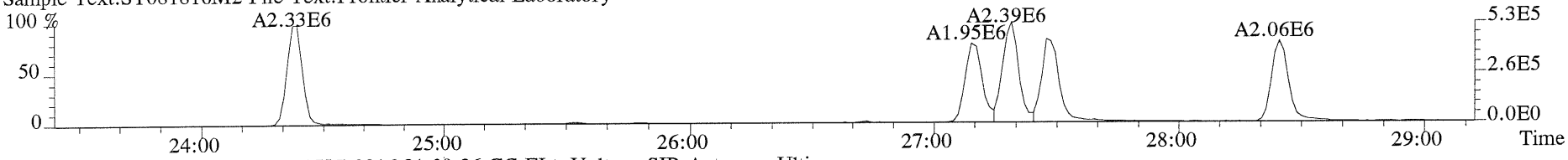
File:18AUG16M #1-399 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:15 Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



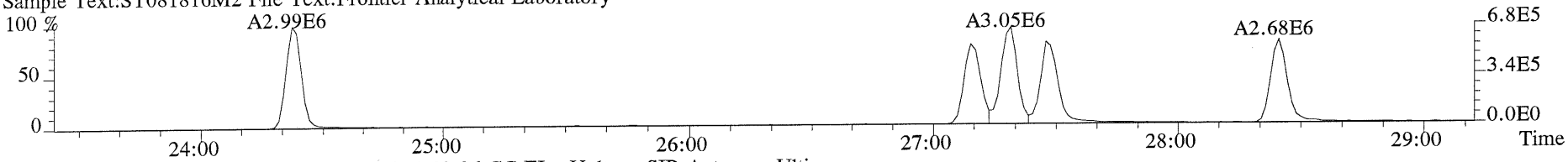
File:18AUG16M #1-399 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:15 Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



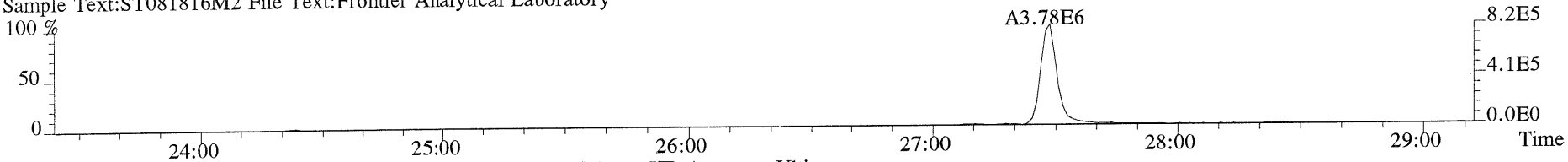
File:18AUG16M #1-399 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
319.8965 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



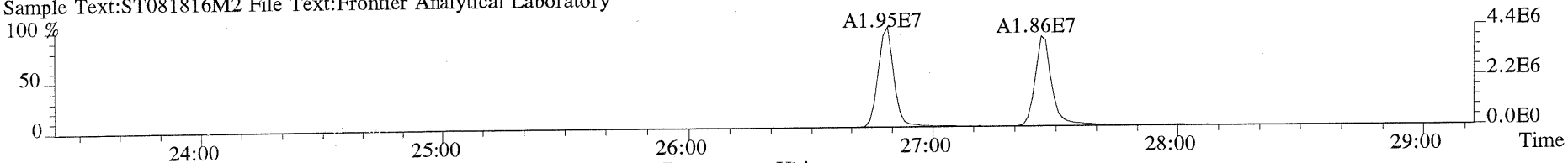
File:18AUG16M #1-399 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
321.8936 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



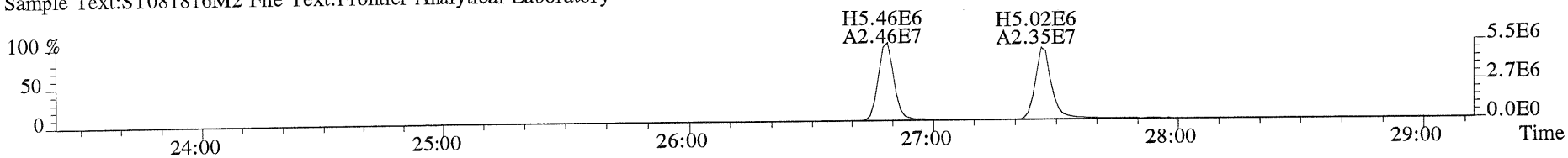
File:18AUG16M #1-399 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
327.8847 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



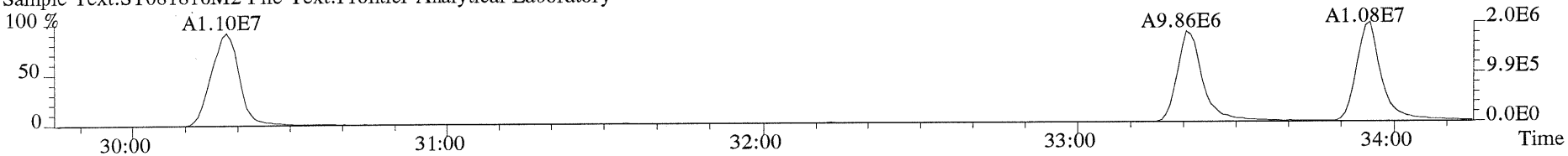
File:18AUG16M #1-399 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
331.9368 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



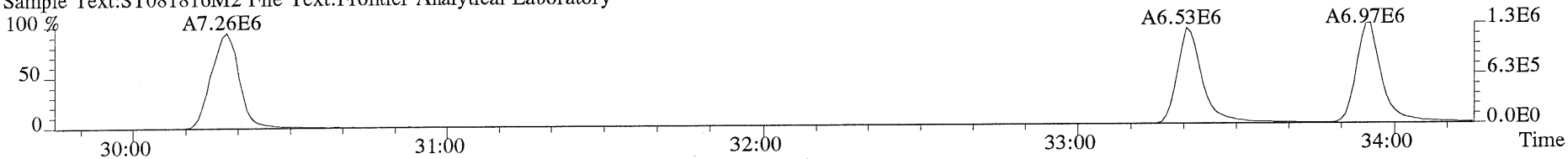
File:18AUG16M #1-399 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
333.9339 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



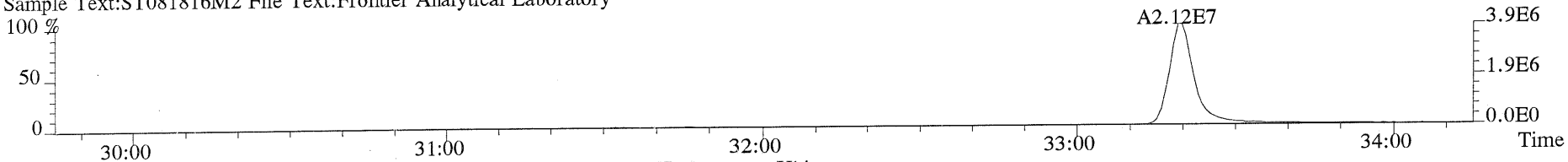
File:18AUG16M #1-411 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
355.8546 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



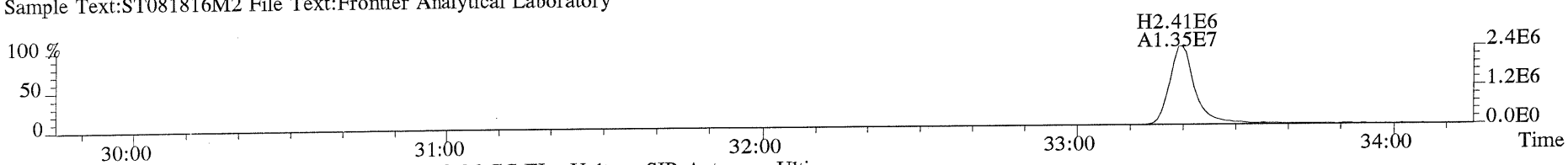
File:18AUG16M #1-411 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
357.8517 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



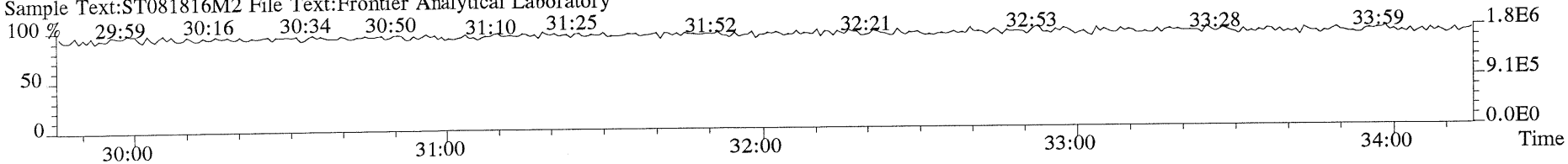
File:18AUG16M #1-411 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
367.8949 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



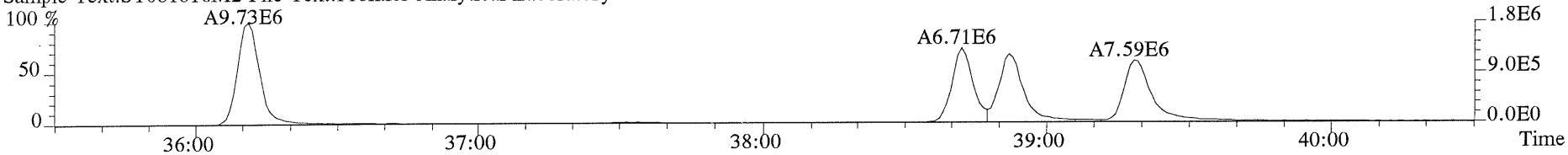
File:18AUG16M #1-411 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
369.8919 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



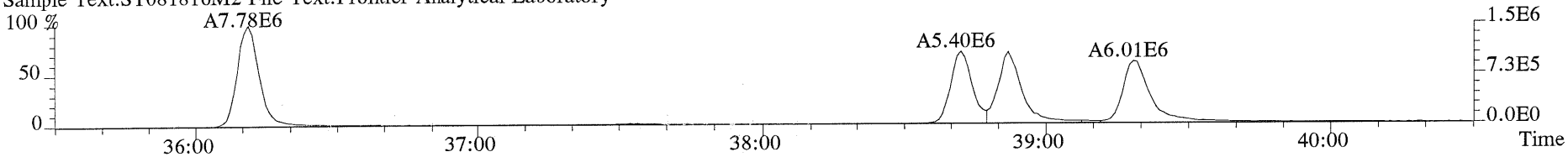
File:18AUG16M #1-411 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
366.9792 S:15 F:2 Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



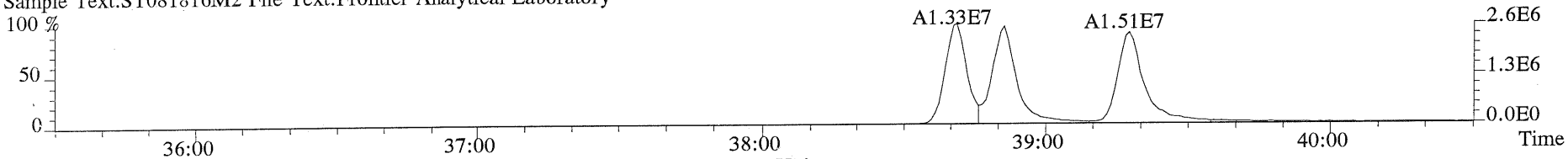
File:18AUG16M #1-495 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
389.8156 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



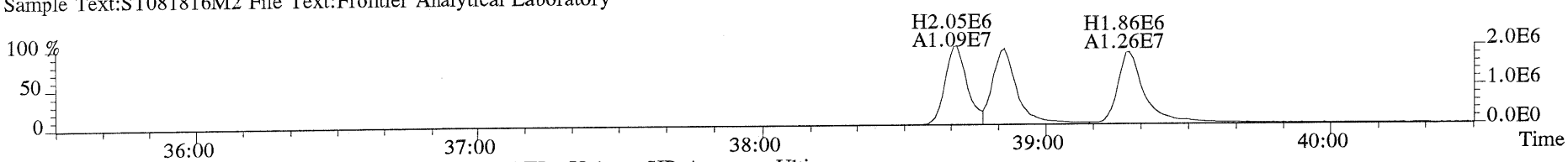
File:18AUG16M #1-495 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
391.8127 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



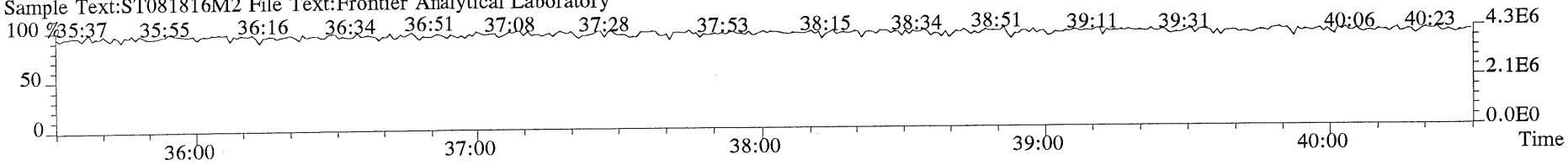
File:18AUG16M #1-495 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
401.8559 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



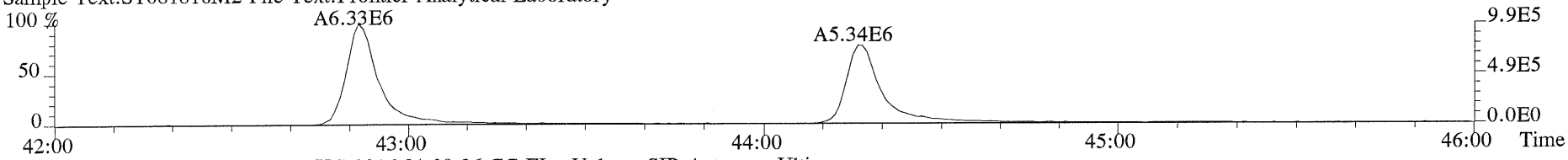
File:18AUG16M #1-495 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
403.8530 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



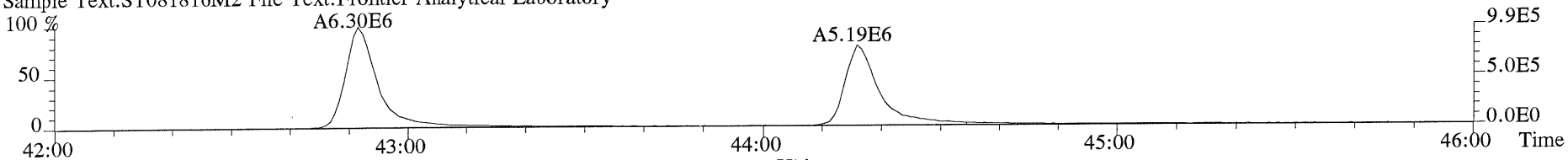
File:18AUG16M #1-495 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
380.9760 S:15 F:3 Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



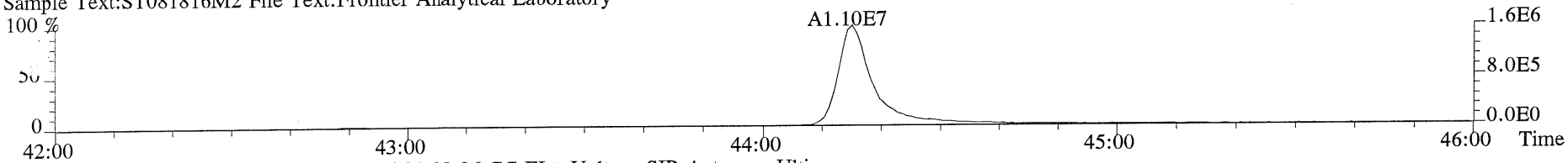
File:18AUG16M #1-521 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
423.7767 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



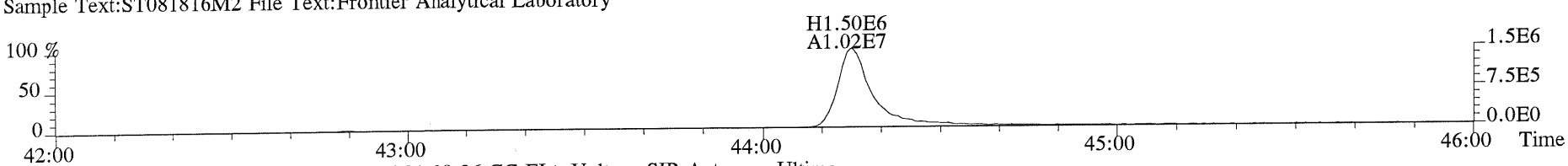
File:18AUG16M #1-521 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
425.7737 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



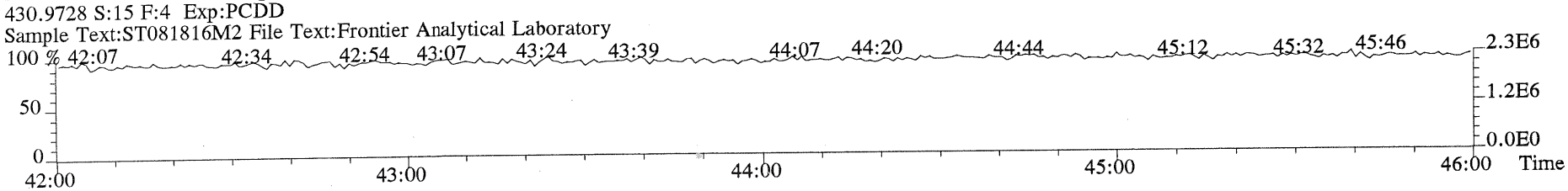
File:18AUG16M #1-521 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
435.8169 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



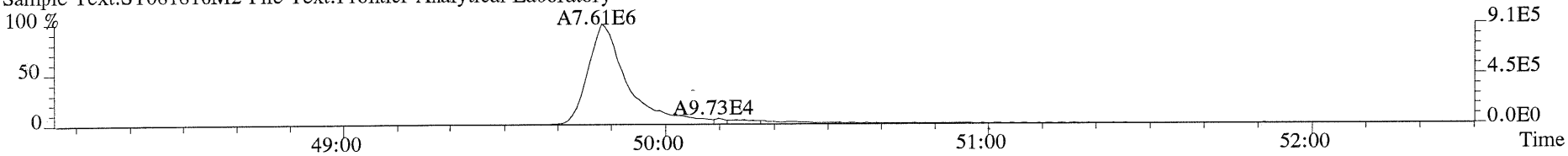
File:18AUG16M #1-521 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
437.8140 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



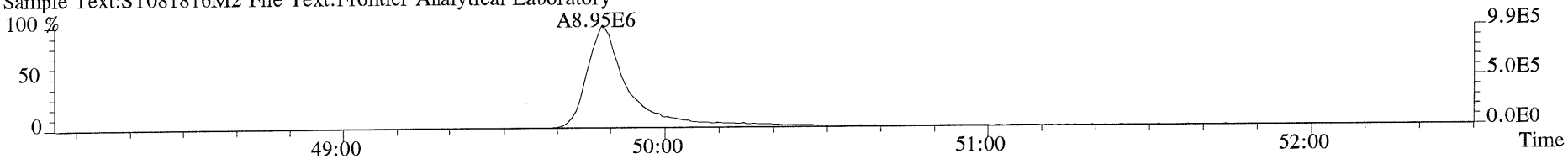
File:18AUG16M #1-521 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
430.9728 S:15 F:4 Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



File:18AUG16M #1-362 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
457.7377 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:ST081816M2 File Text:Frontier Analytical Laboratory



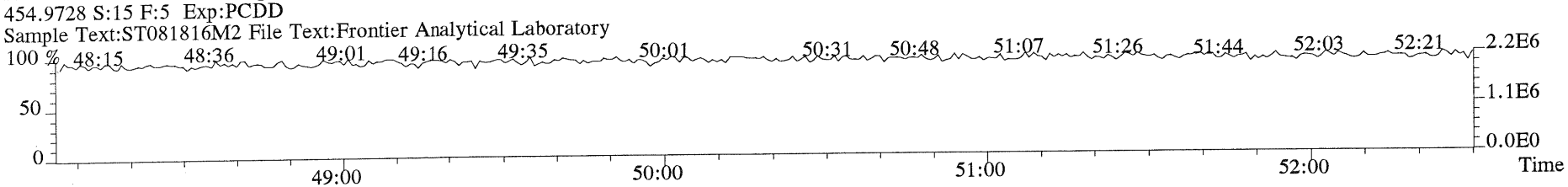
File:18AUG16M #1-362 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
459.7348 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



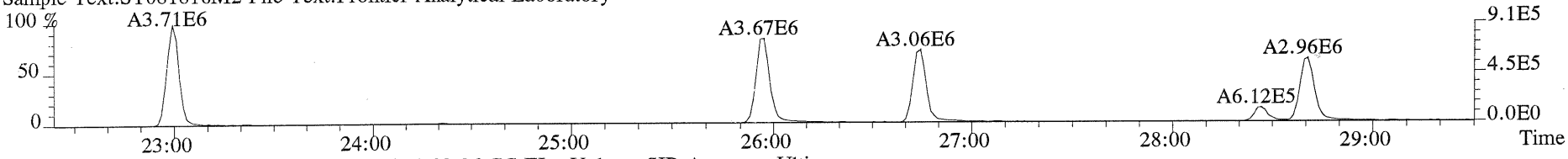
File:18AUG16M #1-362 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
469.7780 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory

File:18AUG16M #1-362 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
471.7750 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:ST081816M2 File Text:Frontier Analytical Laboratory

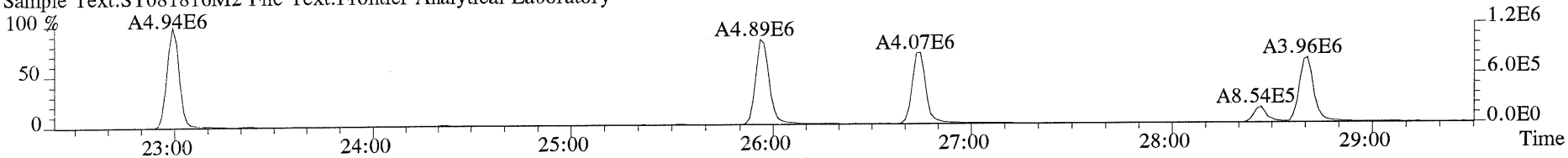
File:18AUG16M #1-362 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
454.9728 S:15 F:5 Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



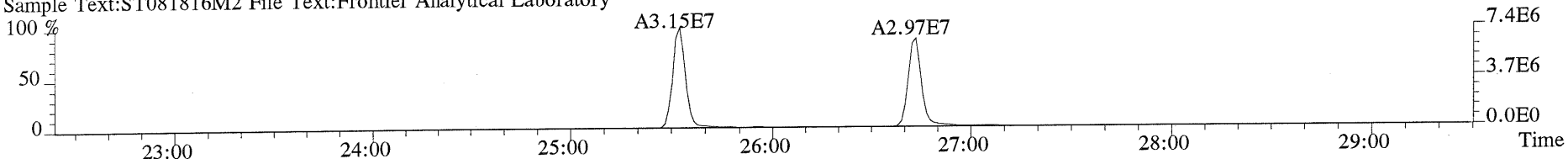
File:18AUG16M #1-399 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
303.9016 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



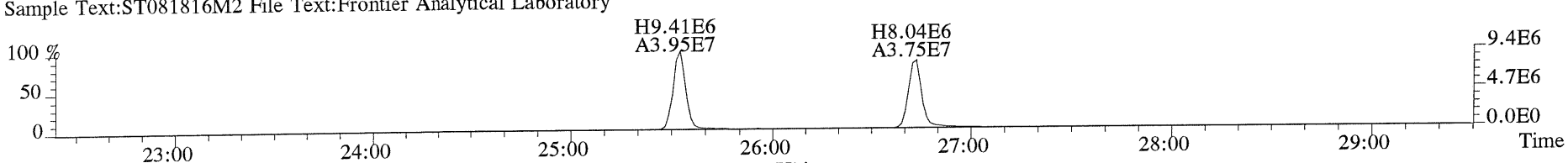
File:18AUG16M #1-399 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
305.8987 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



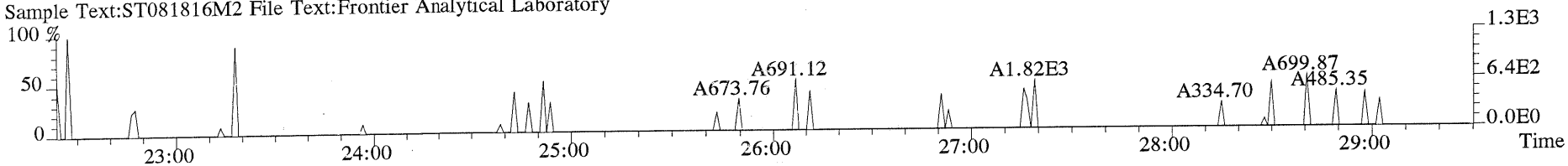
File:18AUG16M #1-399 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
315.9419 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



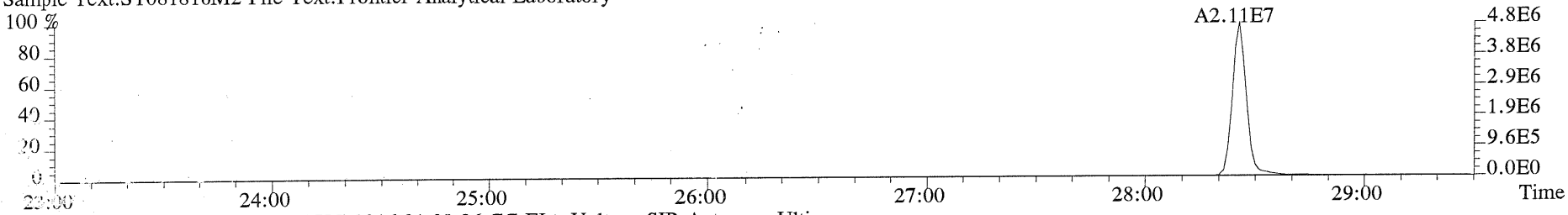
File:18AUG16M #1-399 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
317.9389 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



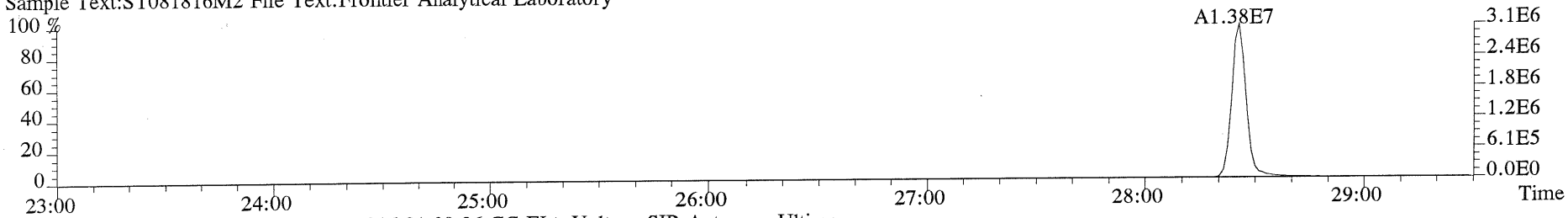
File:18AUG16M #1-399 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
375.8364 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



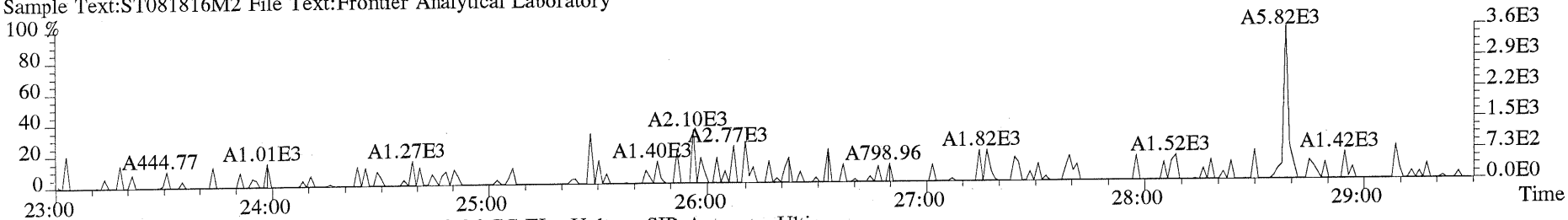
File:18AUG16M #1-399 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



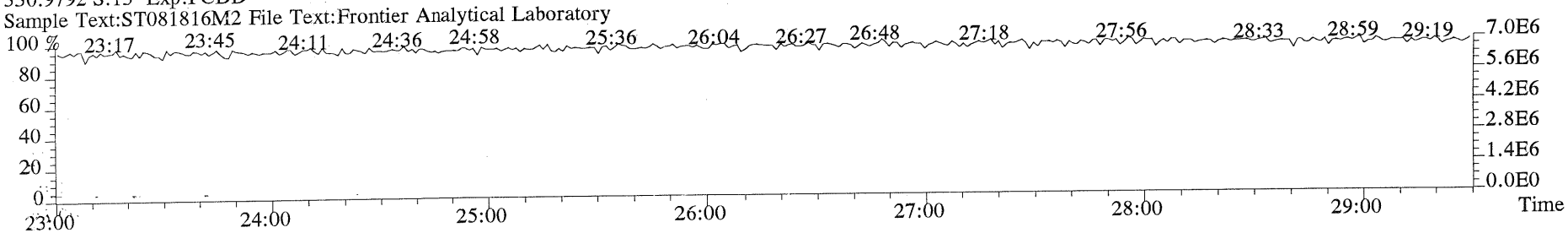
File:18AUG16M #1-399 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



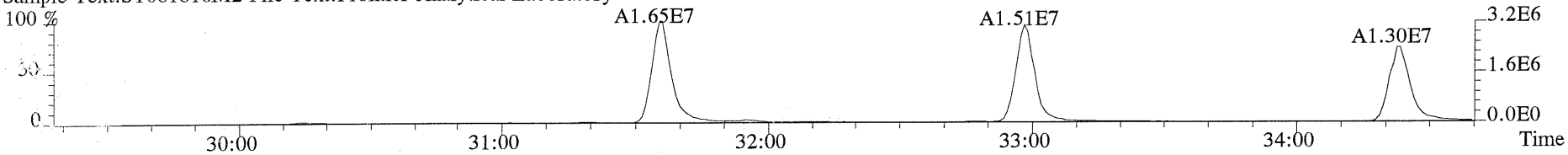
File:18AUG16M #1-399 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:15 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



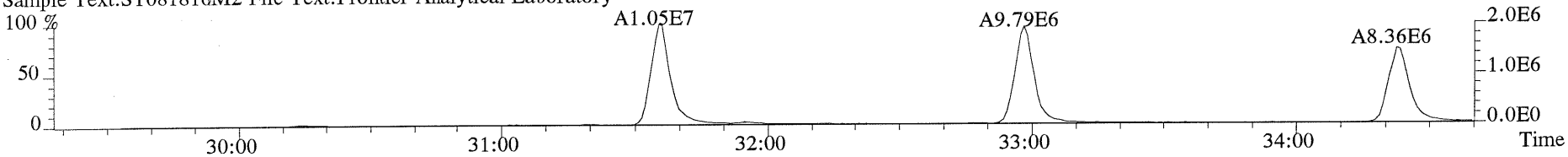
File:18AUG16M #1-399 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
330.9792 S:15 Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



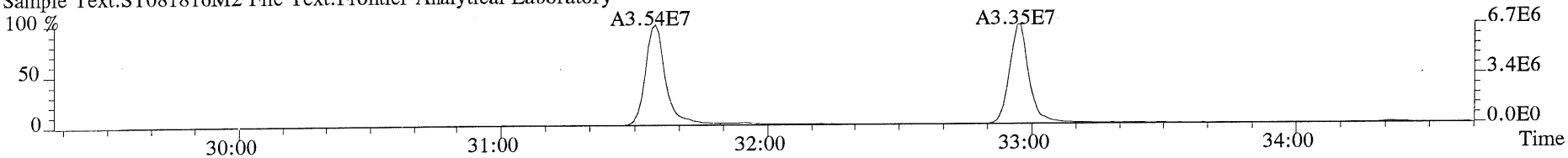
File:18AUG16M #1-411 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
339.8597 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



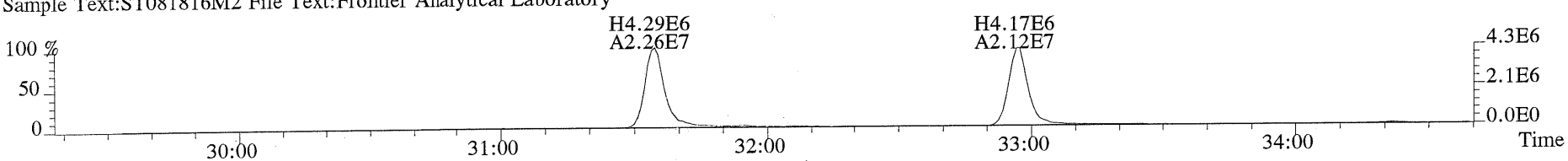
File:18AUG16M #1-411 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
341.8568 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



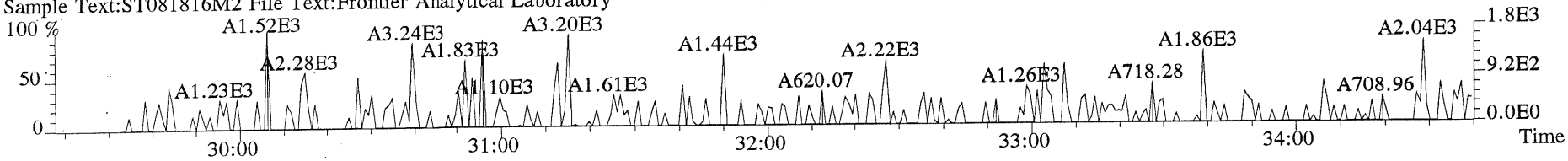
File:18AUG16M #1-411 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
351.9000 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



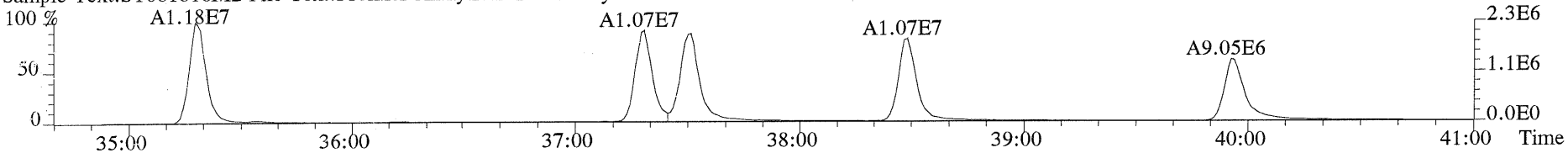
File:18AUG16M #1-411 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
353.8970 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



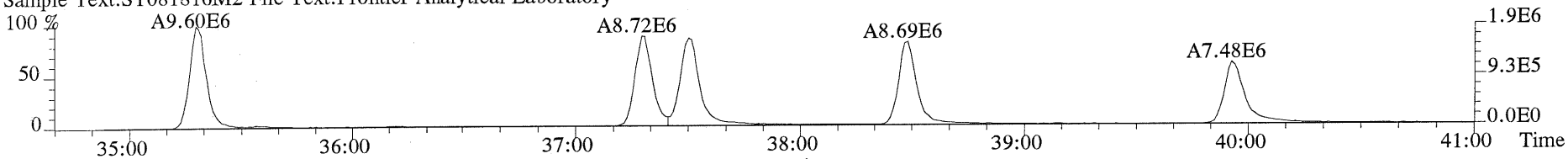
File:18AUG16M #1-411 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
409.7974 S:15 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



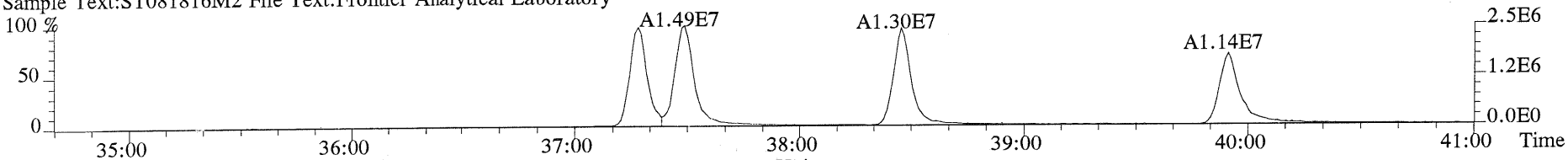
File:18AUG16M #1-495 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
373.8207 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



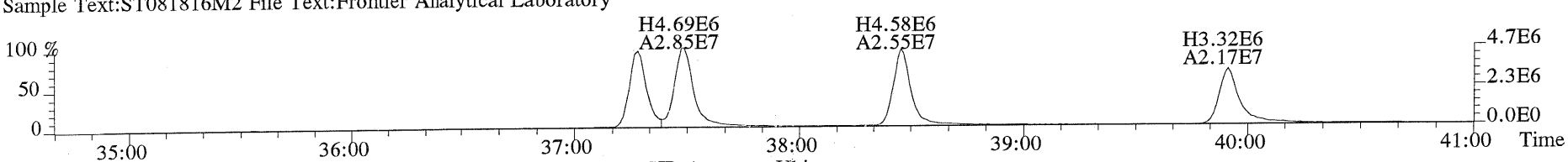
File:18AUG16M #1-495 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
375.8178 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



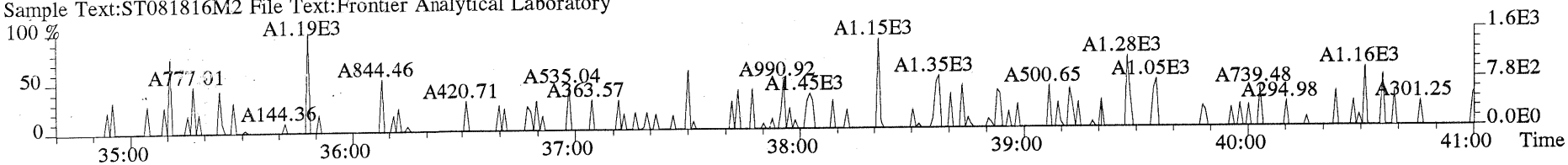
File:18AUG16M #1-495 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
383.8639 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



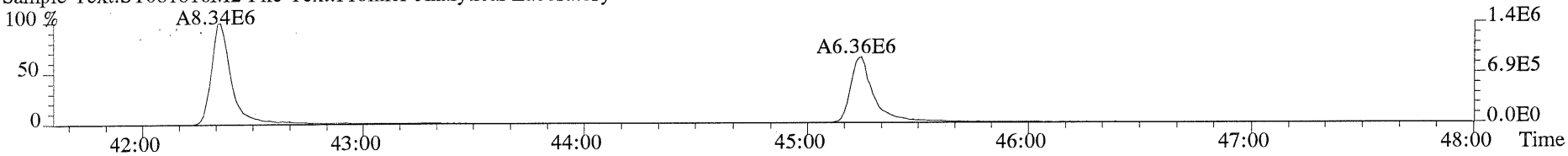
File:18AUG16M #1-495 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
385.8610 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



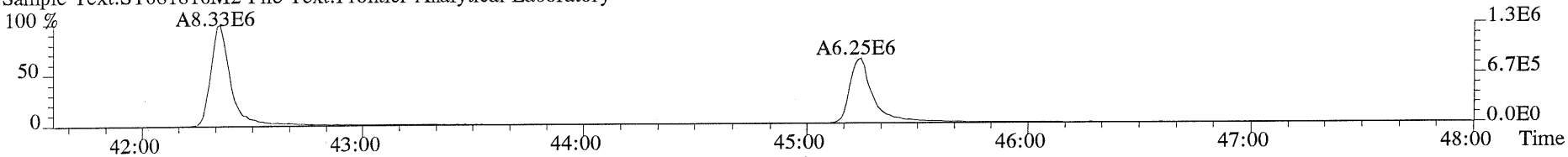
File:18AUG16M #1-495 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
445.7555 S:15 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



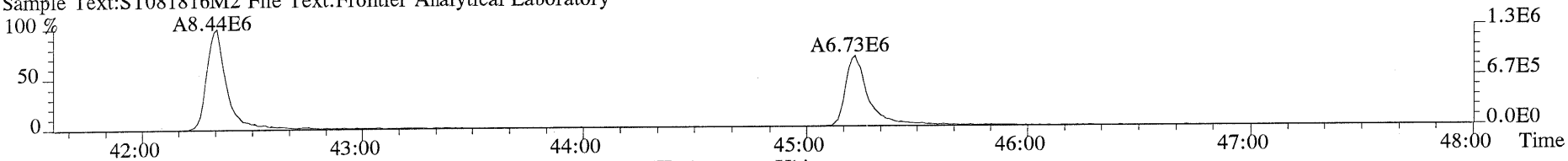
File:18AUG16M #1-521 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
407.7818 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



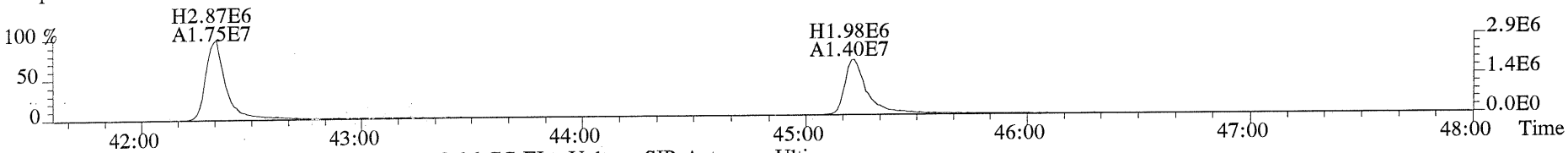
File:18AUG16M #1-521 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
409.7788 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



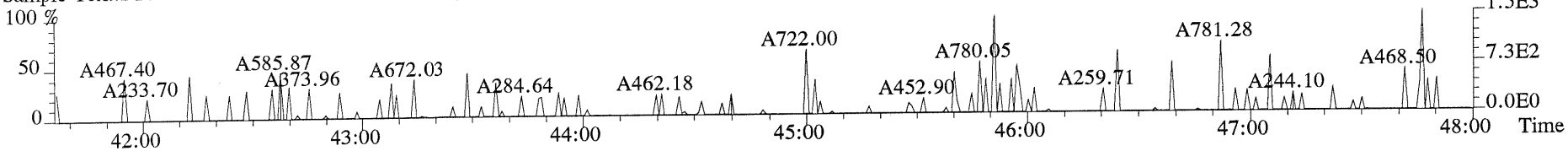
File:18AUG16M #1-521 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
417.8253 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



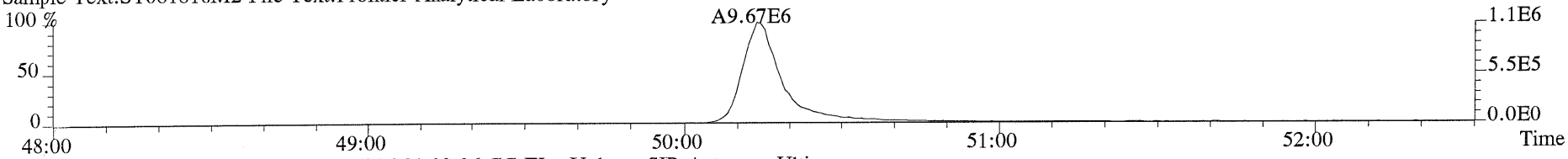
File:18AUG16M #1-521 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
419.8220 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



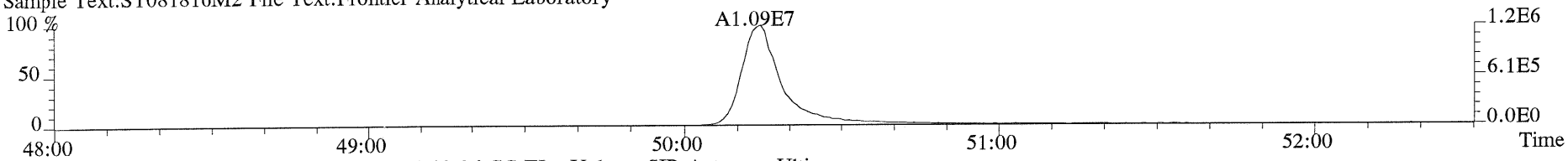
File:18AUG16M #1-521 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
479.7165 S:15 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



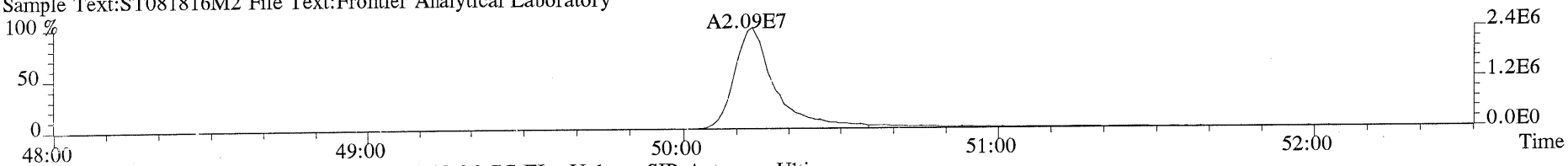
File:18AUG16M #1-362 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
441.7428 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



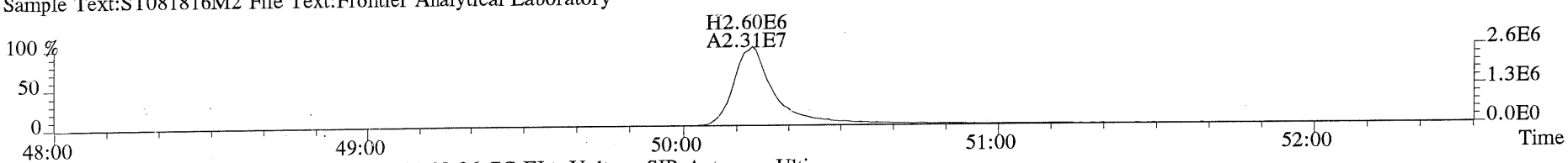
File:18AUG16M #1-362 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
443.7398 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



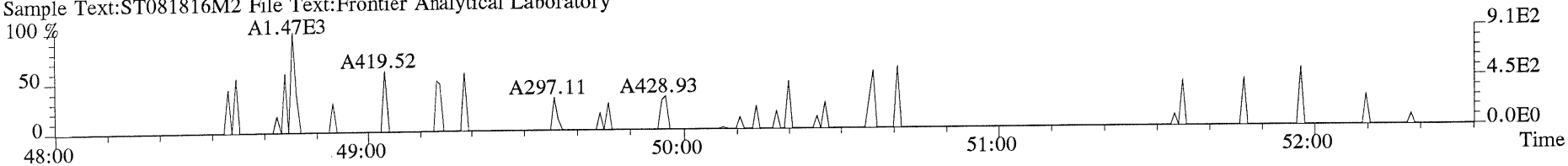
File:18AUG16M #1-362 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
453.7831 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory



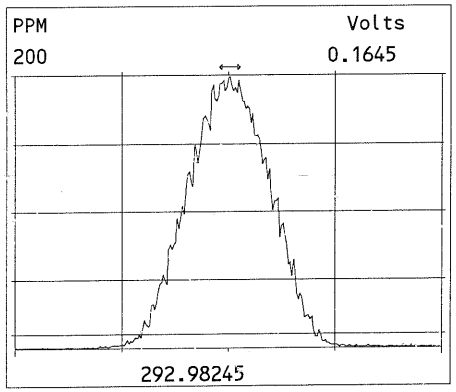
File:18AUG16M #1-362 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
455.7801 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory

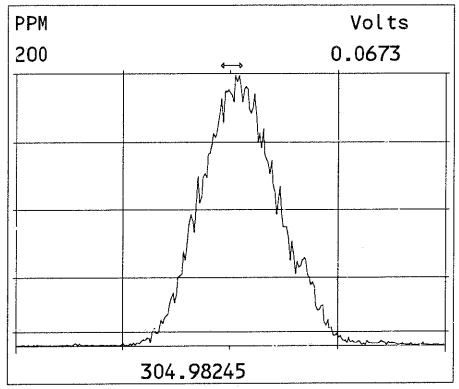


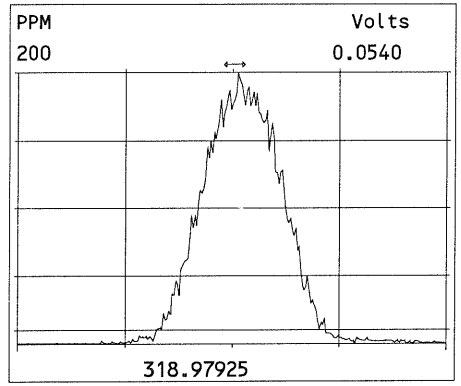
File:18AUG16M #1-362 Acq:18-AUG-2016 21:29:26 GC EI+ Voltage SIR Autospec-Ultima
513.6775 S:15 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F) Exp:PCDD
Sample Text:ST081816M2 File Text:Frontier Analytical Laboratory

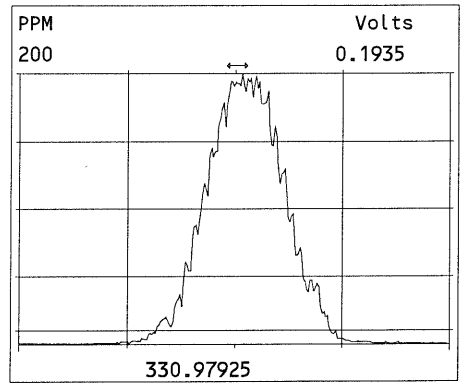


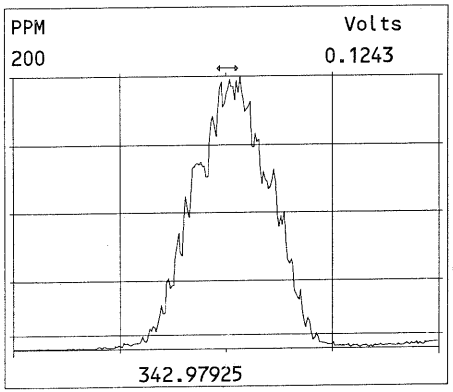
Peak Locate Examination:18-AUG-2016:23:21 File:18AUG16M_RES_CHECK
Experiment:PCDD Function:1 Reference:PFK

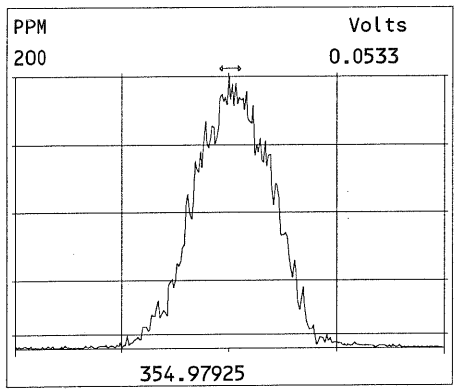


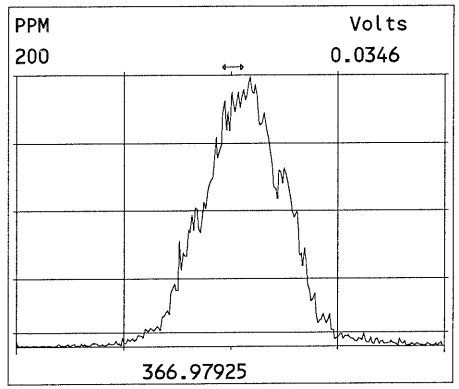


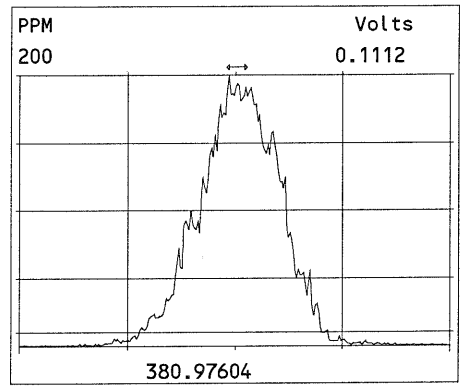


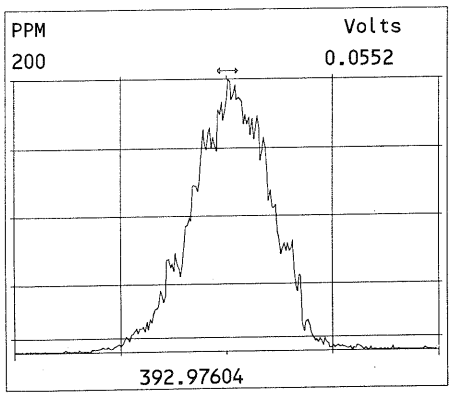


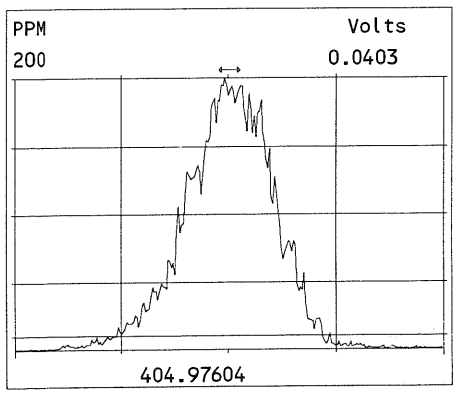


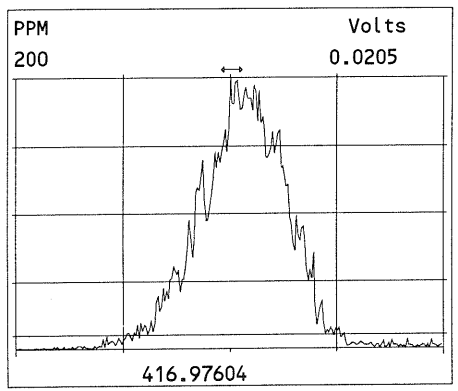




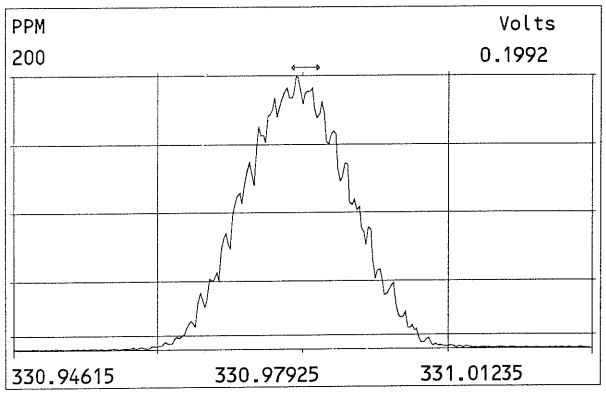


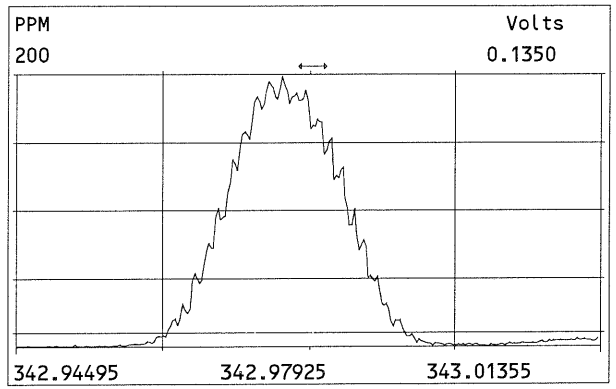


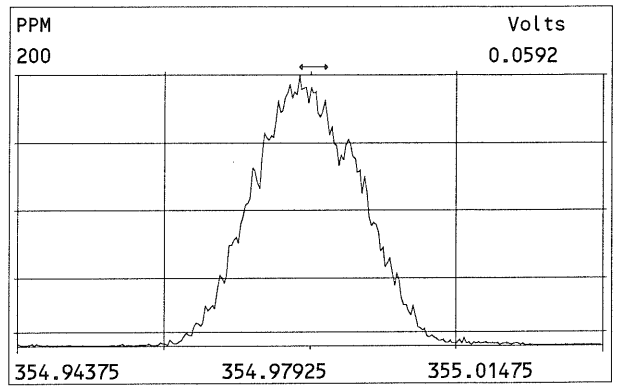


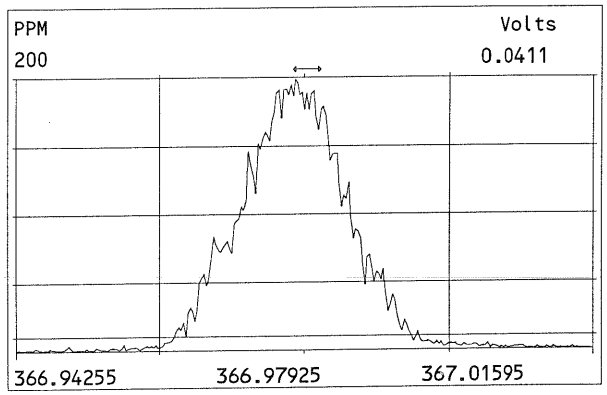


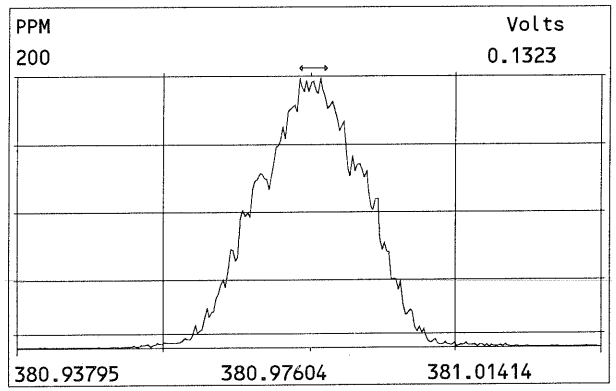
Peak Locate Examination:18-AUG-2016:23:22 File:18AUG16M_RES_CHECK
Experiment:PCDD Function:2 Reference:PFK

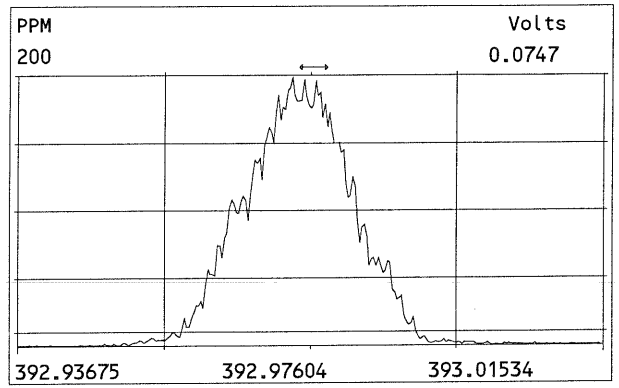


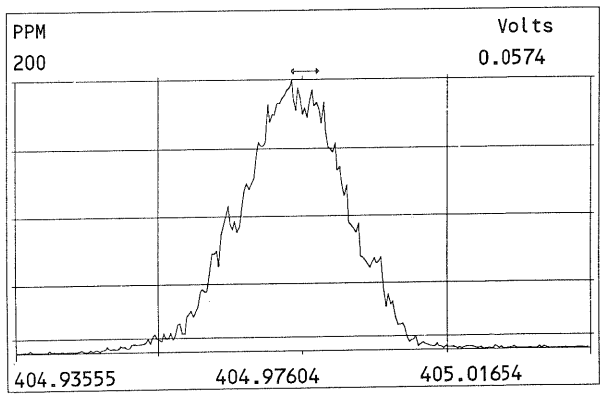


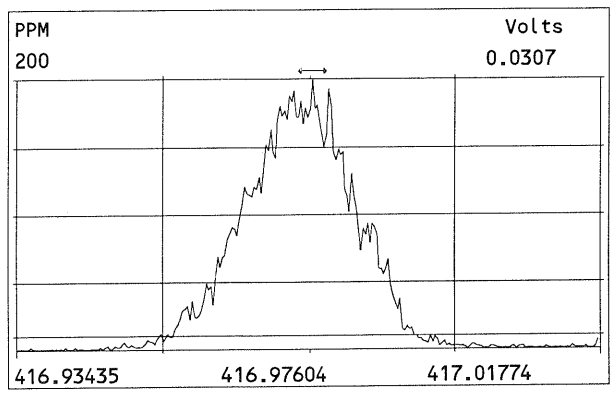




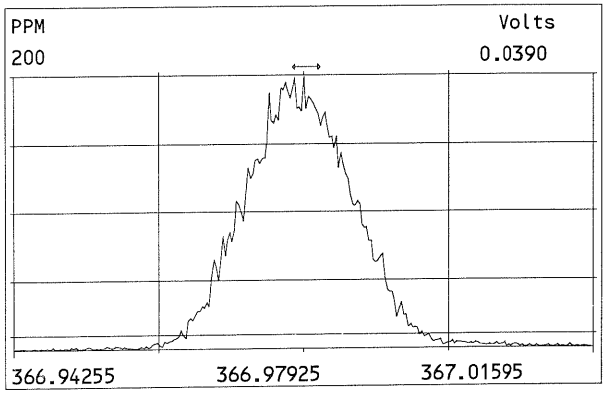


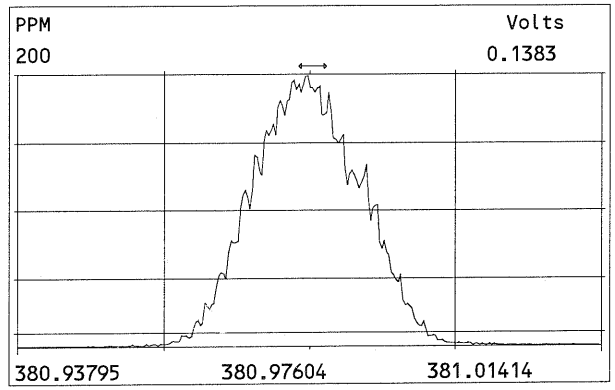


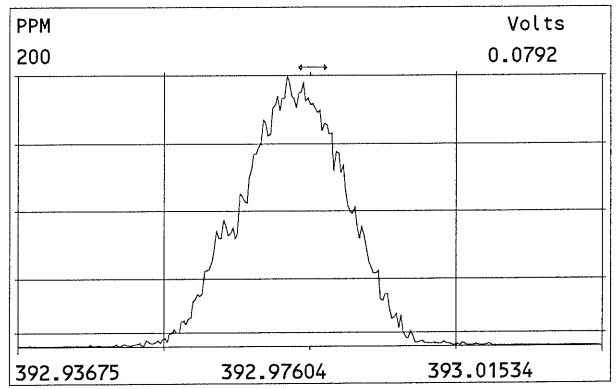


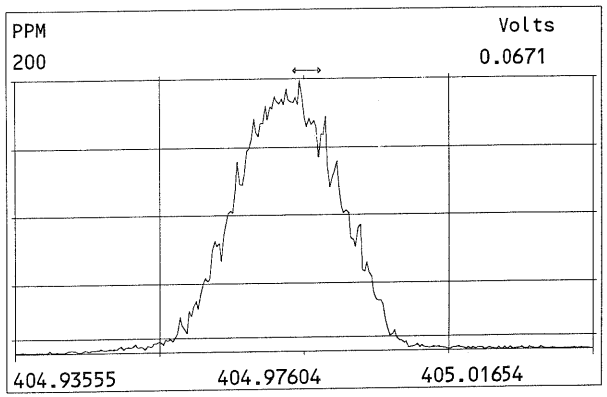


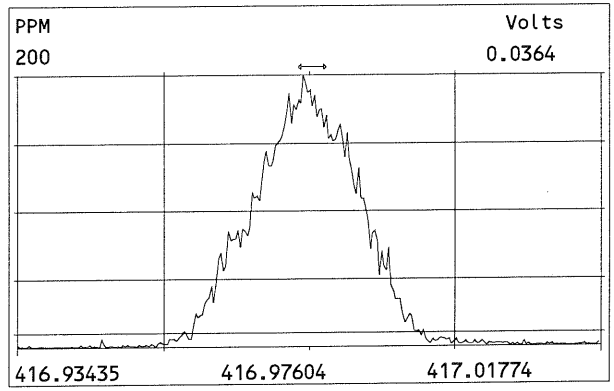
Peak Locate Examination:18-AUG-2016:23:22 File:18AUG16M_RES_CHECK
Experiment:PCDD Function:3 Reference:PFK

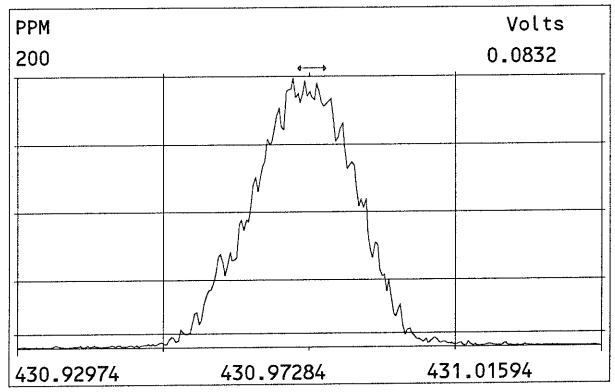


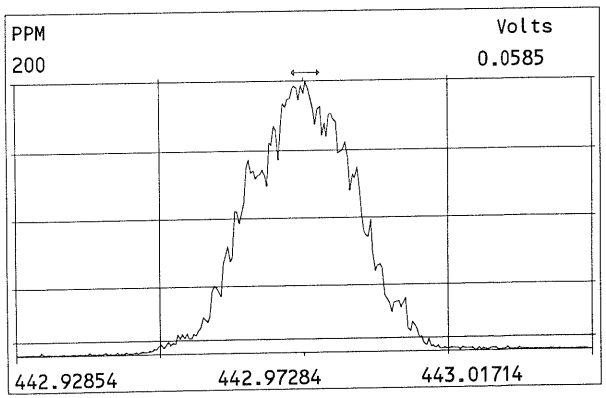


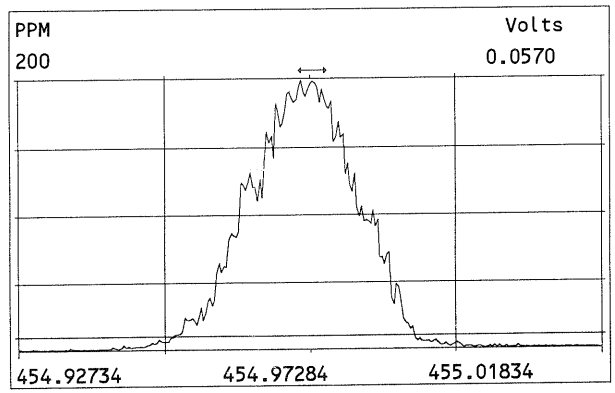




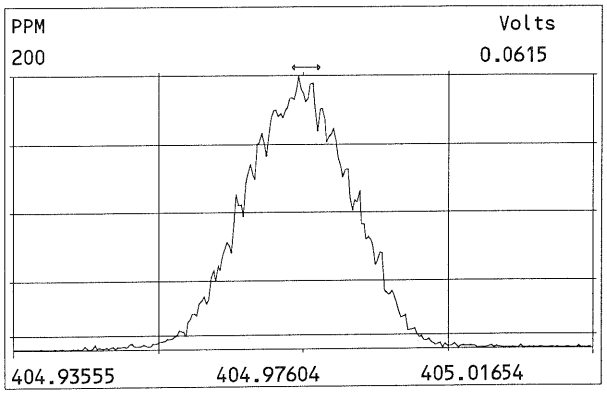


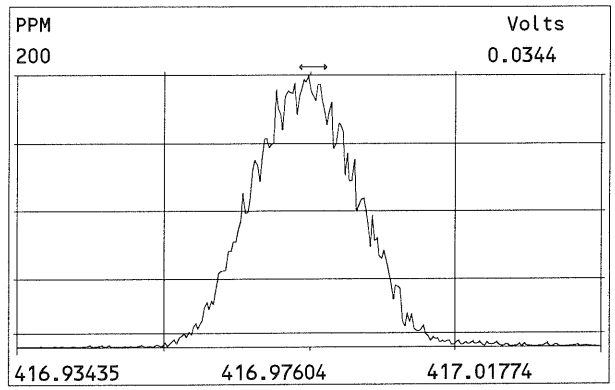


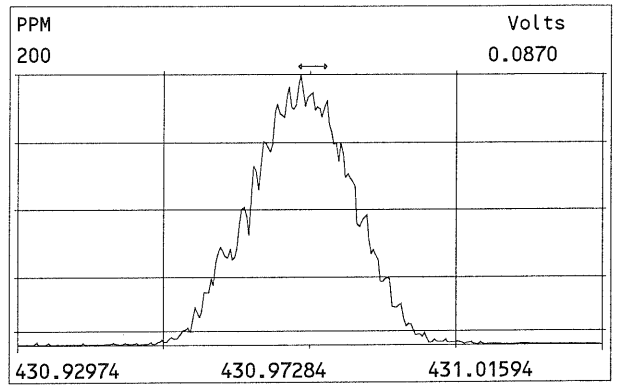


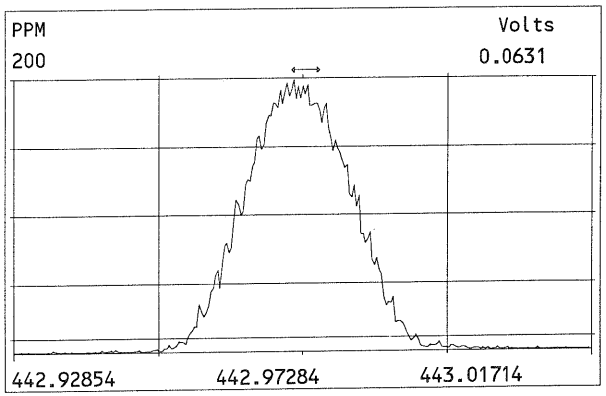


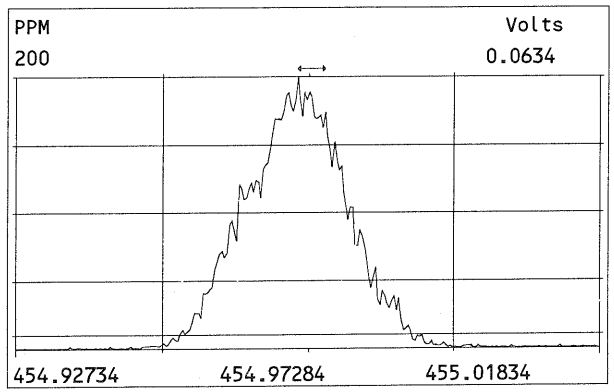
Peak Locate Examination:18-AUG-2016:23:22 File:18AUG16M_RES_CHECK
Experiment:PCDD Function:4 Reference:PFK

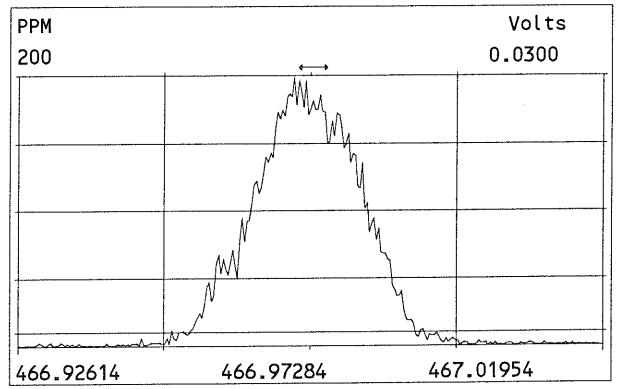


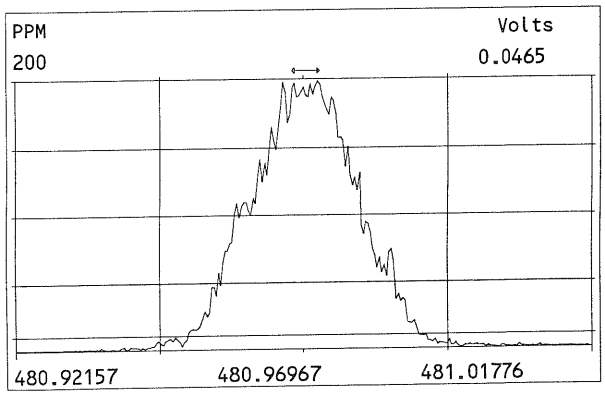
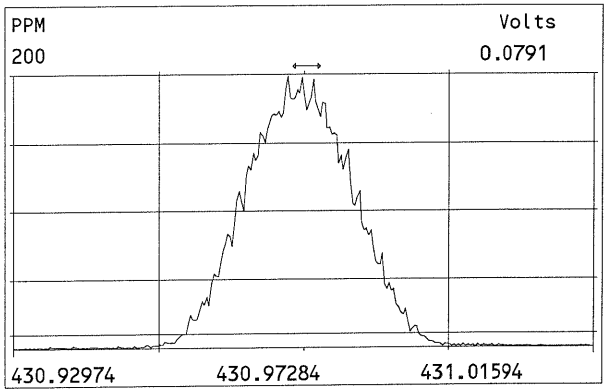
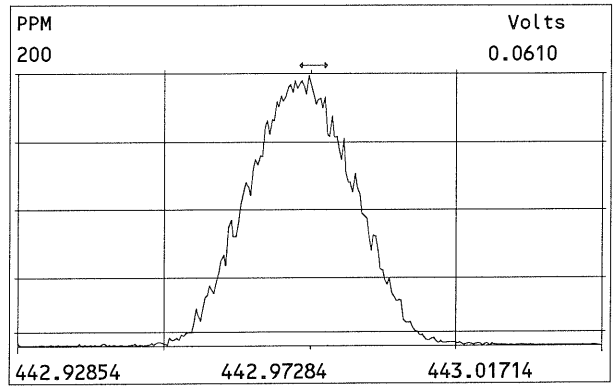
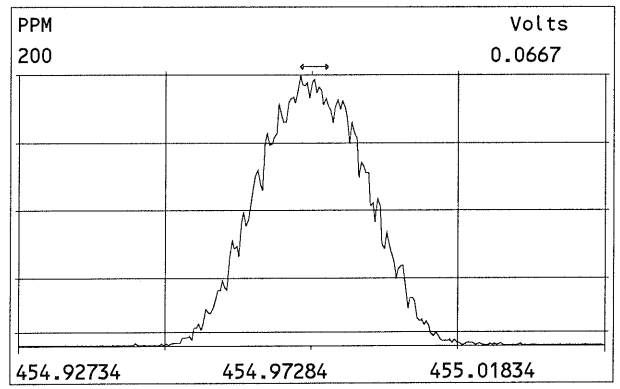
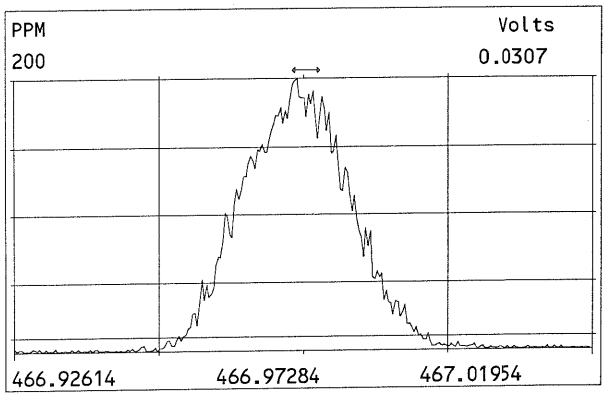
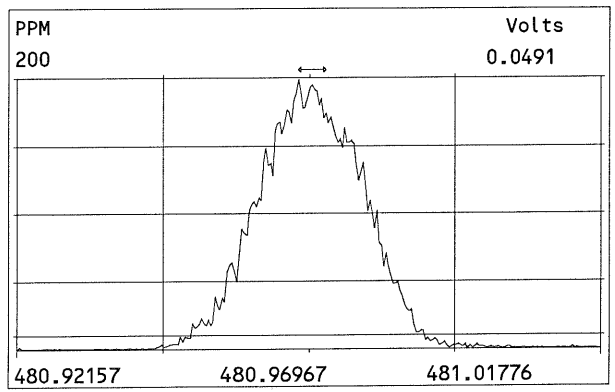
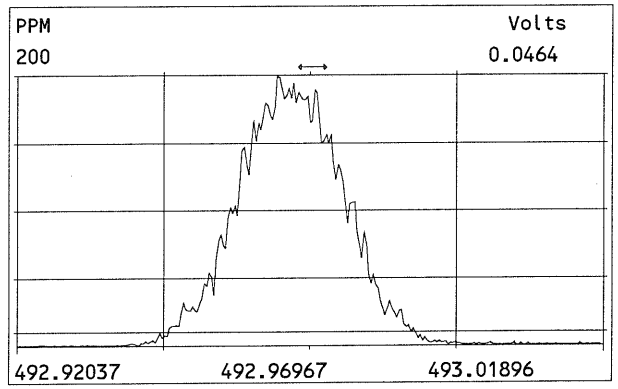
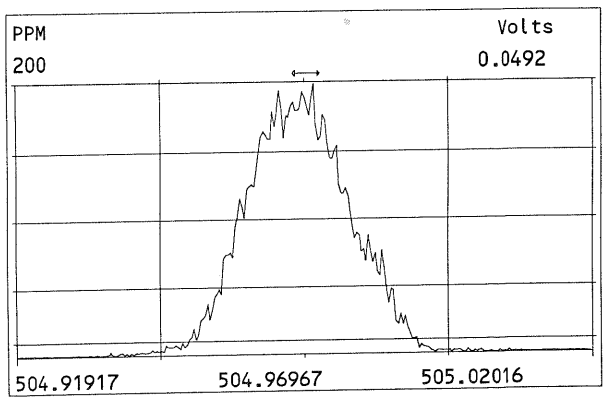
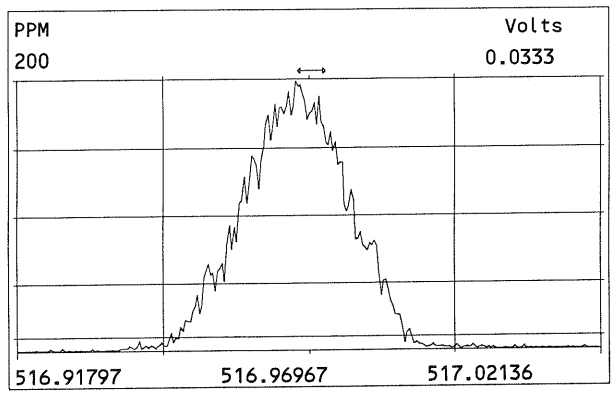












Peak Locate Examination:18-AUG-2016:23:23 File:18AUG16M_RES_CHECK
Experiment:PCDD Function:5 Reference:PFK