



**Clean Air Engineering**

500 W. Wood St. • Palatine, IL 60067 • 847-991-3300

Fax: 847-991-3385  
Internet: [www.cleanair.com](http://www.cleanair.com)

Wheelabrator North Broward, Inc.  
2600 NW 48<sup>th</sup> Street  
Pompano Beach, Florida 33073

**RECEIVED**

**MAY 11 2001**

**BUREAU OF AIR REGULATION**

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**REPORT ON COMPLIANCE TESTING**

Performed for:  
**WHEELABRATOR NORTH BROWARD, INC.**  
**UNITS 1, 2 AND 3 SDA INLET, FF OUTLET AND STACK**

**POMPANO BEACH, FLORIDA**  
**VOLUME II OF II**

Client Reference No:  
CAE Project No: 8890-2  
Revision 0: May 9, 2001

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WHEELABRATOR NORTH BROWARD, INC.  
POMPANO BEACH, FLORIDA

Client Reference No:  
CAE Project No: 8890-2

**APPENDIX TO LABORATORY DATA – METALS**

J



**INORGANIC DATA PACKAGE  
FOR  
CLEAN AIR ENGINEERING**  
*Project # 8890*

**Philip Analytical Services Corporation  
5555 North Service Road  
Burlington, ON L7L 5H7**

***Submission #: 1D0039***

Prepared by : Tara Latoski- CSR  
Approved by : Ada Blythe, Project Manager

Initial : TL  
Initial : AB



00040: \*

please, read  
the note

**1. CASE NARRATIVE**

**PROJECT NARRATIVE****PHILIP Analytical Services Inc (Burlington ON)****Philip Project: AN010356****Philip Submission #:1D0039****Client: Clean Air Engineering****Client Project: 8890****I. SAMPLE RECEIPT/ANALYSIS****a) Sample Listing**

<b>Philip ID</b>	<b>Client Sample ID</b>	<b>Date Sampled</b>	<b>Date Received</b>	<b>Date Prepped</b>	<b>Run Date</b>
<b><i>Mercury 1B via EPA Method 29</i></b>					
014842 00	Method Blank	01/03/29	01/04/02	01/04/10	01/04/10
014843 00	M29HG Reagent Blank	01/03/29	01/04/02	01/04/10	01/04/10
014844 00	M29HG Field Blank	01/03/29	01/04/02	01/04/10	01/04/10
014845 00	M29HG U1 Outlet R1	01/03/26	01/04/02	01/04/10	01/04/10
014846 00	M29HG U1 Outlet R2	01/03/26	01/04/02	01/04/10	01/04/10
014847 00	M29HG U1 Outlet R3	01/03/26	01/04/02	01/04/10	01/04/10
014851 00	M29HG U2 Outlet R1	01/03/27	01/04/02	01/04/10	01/04/10
014852 00	M29HG U2 Outlet R2	01/03/27	01/04/02	01/04/10	01/04/10
014853 00	M29HG U2 Outlet R3	01/03/27	01/04/02	01/04/10	01/04/10
014857 00	M29HG U3 Outlet R1	01/03/27	01/04/02	01/04/10	01/04/10
014858 00	M29HG U3 Outlet R2	01/03/27	01/04/02	01/04/10	01/04/10
014859 00	M29HG U3 Outlet R3	01/03/28	01/04/02	01/04/10	01/04/10
<b><i>Mercury 2B via EPA Method 29</i></b>					
014842 00	Method Blank	01/03/29	01/04/02	01/04/10	01/04/10
014843 00	M29HG Reagent Blank	01/03/29	01/04/02	01/04/10	01/04/10
014844 00	M29HG Field Blank	01/03/29	01/04/02	01/04/10	01/04/10
014845 00	M29HG U1 Outlet R1	01/03/26	01/04/02	01/04/10	01/04/10
014846 00	M29HG U1 Outlet R2	01/03/26	01/04/02	01/04/10	01/04/10
014847 00	M29HG U1 Outlet R3	01/03/26	01/04/02	01/04/10	01/04/10
014851 00	M29HG U2 Outlet R1	01/03/27	01/04/02	01/04/10	01/04/10
014852 00	M29HG U2 Outlet R2	01/03/27	01/04/02	01/04/10	01/04/10
014853 00	M29HG U2 Outlet R3	01/03/27	01/04/02	01/04/10	01/04/10
014857 00	M29HG U3 Outlet R1	01/03/27	01/04/02	01/04/10	01/04/10
014858 00	M29HG U3 Outlet R2	01/03/27	01/04/02	01/04/10	01/04/10
014859 00	M29HG U3 Outlet R3	01/03/28	01/04/02	01/04/10	01/04/10

**Mercury 3A via EPA Method 29**

014842	00	Method Blank	01/03/29	01/04/02	01/04/05	01/04/06
014843	00	M29HG Reagent Blank	01/03/29	01/04/02	01/04/05	01/04/06
014844	00	M29HG Field Blank	01/03/29	01/04/02	01/04/05	01/04/06
014845	00	M29HG U1 Outlet R1	01/03/26	01/04/02	01/04/05	01/04/06
014846	00	M29HG U1 Outlet R2	01/03/26	01/04/02	01/04/05	01/04/06
014847	00	M29HG U1 Outlet R3	01/03/26	01/04/02	01/04/05	01/04/06
014851	00	M29HG U2 Outlet R1	01/03/27	01/04/02	01/04/05	01/04/06
014852	00	M29HG U2 Outlet R2	01/03/27	01/04/02	01/04/05	01/04/06
014853	00	M29HG U2 Outlet R3	01/03/27	01/04/02	01/04/05	01/04/06
014857	00	M29HG U3 Outlet R1	01/03/27	01/04/02	01/04/05	01/04/06
014858	00	M29HG U3 Outlet R2	01/03/27	01/04/02	01/04/05	01/04/06
014859	00	M29HG U3 Outlet R3	01/03/28	01/04/02	01/04/05	01/04/06

**Mercury 3B via EPA Method 29**

014842	00	Method Blank	01/03/29	01/04/02	01/04/05	01/04/05
014843	00	M29HG Reagent Blank	01/03/29	01/04/02	01/04/05	01/04/05
014844	00	M29HG Field Blank	01/03/29	01/04/02	01/04/05	01/04/05
014845	00	M29HG U1 Outlet R1	01/03/26	01/04/02	01/04/05	01/04/05
014846	00	M29HG U1 Outlet R2	01/03/26	01/04/02	01/04/05	01/04/05
014847	00	M29HG U1 Outlet R3	01/03/26	01/04/02	01/04/05	01/04/05
014851	00	M29HG U2 Outlet R1	01/03/27	01/04/02	01/04/05	01/04/05
014852	00	M29HG U2 Outlet R2	01/03/27	01/04/02	01/04/05	01/04/05
014853	00	M29HG U2 Outlet R3	01/03/27	01/04/02	01/04/05	01/04/05
014857	00	M29HG U3 Outlet R1	01/03/27	01/04/02	01/04/05	01/04/05
014858	00	M29HG U3 Outlet R2	01/03/27	01/04/02	01/04/05	01/04/05
014859	00	M29HG U3 Outlet R3	01/03/28	01/04/02	01/04/05	01/04/05

**Mercury 3C via EPA Method 29**

014842	00	Method Blank	01/03/29	01/04/02	01/04/06	01/04/06
014843	00	M29HG Reagent Blank	01/03/29	01/04/02	01/04/06	01/04/06
014844	00	M29HG Field Blank	01/03/29	01/04/02	01/04/06	01/04/06
014845	00	M29HG U1 Outlet R1	01/03/26	01/04/02	01/04/06	01/04/06
014846	00	M29HG U1 Outlet R2	01/03/26	01/04/02	01/04/06	01/04/06
014847	00	M29HG U1 Outlet R3	01/03/26	01/04/02	01/04/06	01/04/06
014851	00	M29HG U2 Outlet R1	01/03/27	01/04/02	01/04/06	01/04/06
014852	00	M29HG U2 Outlet R2	01/03/27	01/04/02	01/04/06	01/04/06
014853	00	M29HG U2 Outlet R3	01/03/27	01/04/02	01/04/06	01/04/06
014857	00	M29HG U3 Outlet R1	01/03/27	01/04/02	01/04/06	01/04/06
014858	00	M29HG U3 Outlet R2	01/03/27	01/04/02	01/04/06	01/04/06
014859	00	M29HG U3 Outlet R3	01/03/28	01/04/02	01/04/06	01/04/06

**Metals via EPA Method 29 - ICPMS**

014842	00	Method Blank	01/03/29	01/04/02	01/04/05	01/04/10
014843	00	M29HG Reagent Blank	01/03/29	01/04/02	01/04/05	01/04/10
014844	00	M29HG Field Blank	01/03/29	01/04/02	01/04/05	01/04/10
014845	00	M29HG U1 Outlet R1	01/03/26	01/04/02	01/04/05	01/04/10
014846	00	M29HG U1 Outlet R2	01/03/26	01/04/02	01/04/05	01/04/10
014847	00	M29HG U1 Outlet R3	01/03/26	01/04/02	01/04/05	01/04/10
014851	00	M29HG U2 Outlet R1	01/03/27	01/04/02	01/04/05	01/04/10
014852	00	M29HG U2 Outlet R2	01/03/27	01/04/02	01/04/05	01/04/10
014853	00	M29HG U2 Outlet R3	01/03/27	01/04/02	01/04/05	01/04/10
014857	00	M29HG U3 Outlet R1	01/03/27	01/04/02	01/04/05	01/04/10
014858	00	M29HG U3 Outlet R2	01/03/27	01/04/02	01/04/05	01/04/10
014859	00	M29HG U3 Outlet R3	01/03/28	01/04/02	01/04/05	01/04/10

Run Date is defined as the date of injection of the last calibration standard (12 hour or less) prior to the samples analyzed within that run sequence. Therefore the time of calibration injection that defines the run date is always within 12 hours of the time of sample injection.

b) Shipping Problems: none encountered

c) Documentation Problems: none encountered

**II. SAMPLE PREP:**

No problems encountered

**III. SAMPLE ANALYSIS:**

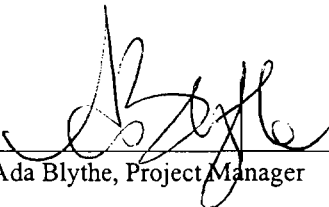
See also comments within the appropriate Certificate of Analysis.

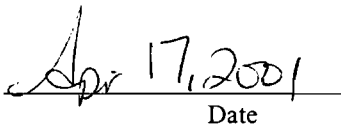
a) Hold Times: all within recommended hold times

b) Instrument Calibration: all within control limits

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above.

In addition, I certify, that to the best of my knowledge and belief, the data as reported are true and accurate. Release of the data contained in this data package has been authorized by the cognizant laboratory official or his/her designee, as verified by this signature.

  
 \_\_\_\_\_  
 Ada Blythe, Project Manager

  
 \_\_\_\_\_  
 Date

00044.

**2. ANALYTICAL DATA REPORT**





## *Certificate of Analysis*

### CLIENT INFORMATION

**Attention:** Scott Brown  
**Client Name:** Clean Air Engineering  
**Project:** 8890  
**Project Desc:** North Broward

**Address:** 500 W. Wood Street  
 Palatine, IL  
 IL 60067

**Fax Number:** 847-991-3385

**Phone Number:** 847-991-3300

### LABORATORY INFORMATION

**Contact:** Ada Blythe, B.Sc., C.Chem.  
**Project:** AN010356  
**Date Received:** 02-Apr-2001  
**Date Reported:** 11-Apr-2001

**Submission No.:** 1D0039  
**Sample No.:** 014842-014859

**NOTES:**            "*-*" = *not analysed*   "*<*" = *less than Method Detection Limit (MDL)*   "*NA*" = *no data available*  
*LOQ can be determined for all analytes by multiplying the appropriate MDL X 3.33*

"Blank correction is only performed on oil and grease, BTEX, total purgeable hydrocarbons

"and VOC analyses when Canadian methods are utilized.

*Solids data is based on dry weight except for biota analyses.*

*Organic analyses are not corrected for extraction recovery standards except for isotope dilution methods, (i.e. CARB 429 PAH, all PCDD/F and DBD/DBF analyses)*

Methods used by PSC Analytical Services are based upon those found in 'Standard Methods for the Examination of Water and Wastewater', Nineteenth Edition. Other methods are based on the principles of MISA or EPA methodologies. New York State: ELAP Identification Number 10756.

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. Any and all use of these test results shall be limited to the actual cost of the pertinent analysis done. There is no other warranty expressed or implied. Your samples will be retained at PSC Analytical Services for a period of three weeks from receipt of data or as per contract.

### COMMENTS:

*Certified by:* \_\_\_\_\_

Page 1

Component	MDL	Units	Method	Blank	% Recovery	Blank Spike	% Recovery	29HG Reagen	M29HG Field	M29HG U1
			Blank	Spike		Duplicate		Blank	Blank	Outlet R1
			014842 01	014842 01	014842 01	014842 01	014842 01	014843 01	014844 01	014845 01
			29-Mar-2001	29-Mar-2001	29-Mar-2001	29-Mar-2001	29-Mar-2001	29-Mar-2001	29-Mar-2001	26-Mar-2001
Filter weight	1.0	mg	-	-	-	-	-	410	410	450
Final volume measured	0	ml	300	-	-	-	-	300	300	300
Sample Volume - Container 5A		"	NA	-	-	-	-	100	100	110
Sample Volume - Container 4		"	NA	-	-	-	-	290	300	770
Mercury - 1B	0.030	ug	<	0.31	100	0.32	110	<	<	2.1
Mercury - 2B	0.010	"	<	0.11	110	0.10	100	<0.29	<0.30	52
Mercury - 3A	0.010	"	<	0.10	100	0.10	100	<	<	0.086
Mercury - 3B	0.050	"	<	0.49	98	0.49	99	<	<	<
Mercury - 3C	0.050	"	<	0.53	110	0.53	110	0.064	<	3.5
Beryllium	0.10	ug	<	140	95	140	95	<	<	<
Cadmium	0.10	"	<	72	97	71	95	<	0.35	6.4
Lead	0.20	"	<	140	95	140	96	0.53	1.9	17

00046

PASC - Certificate of Analysis

Component	MDL	Units	M29HG U1	M29HG U1	M29HG U1	M29HG U1	M29HG U1	M29HG U1	M29HG U1	M29HG U2
			Outlet R1	Outlet R1	Outlet R1	Outlet R1	Outlet R1	Outlet R2	Outlet R3	Outlet R1
<i>Client ID:</i>			014845 01	014845 01	014845 01	014845 01	014845 01	014846 01	014847 01	014851 01
<i>Lab No.:</i>			26-Mar-2001	26-Mar-2001	26-Mar-2001	26-Mar-2001	26-Mar-2001	26-Mar-2001	26-Mar-2001	27-Mar-2001
<i>Date Sampled:</i>			Duplicate	M. Spike	MS % Rec.	MS Dup	MSD % Rec.			
Filter weight	1.0	mg	-	-	-	-	-	440	450	440
Final volume measured	0	ml	-	-	-	-	-	300	300	300
Sample Volume - Container 5A		"	-	-	-	-	-	100	110	110
Sample Volume - Container 4		"	-	-	-	-	-	770	790	750
Mercury - 1B	0.030	ug	2.0	2.4	93	2.4	120	0.53	0.50	<
Mercury - 2B	0.010	"	52	61	110	59	90	35	34	17
Mercury - 3A	0.010	"	0.091	0.20	100	0.20	110	0.037	0.086	<
Mercury - 3B	0.050	"	<	0.54	100	0.53	100	<	<	<
Mercury - 3C	0.050	"	3.6	4.0	86	4.0	85	0.70	0.68	0.45
Beryllium	0.10	ug	<	130	88	140	93	<	<	<
Cadmium	0.10	"	6.3	74	90	77	94	5.2	2.0	0.59
Lead	0.20	"	17	160	97	170	100	32	17	7.8

00047

PASC - Certificate of Analysis

Component	MDL	Units	M29HG U2	M29HG U2	M29HG U3	M29HG U3	M29HG U3	M29HG U3	M29HG U3	M29HG U3
			Outlet R2	Outlet R3	Outlet R1	Outlet R1	Outlet R1	Outlet R1	Outlet R1	Outlet R1
			014852 01	014853 01	014857 01	014857 01	014857 01	014857 01	014857 01	014857 01
			27-Mar-2001	27-Mar-2001	27-Mar-2001	27-Mar-2001	27-Mar-2001	27-Mar-2001	27-Mar-2001	27-Mar-2001
			Duplicate	M. Spike	MS % Rec.	MS Dup	MSD % Rec.			
Filter weight	1.0	mg	440	440	440	-	-	-	-	-
Final volume measured	0	ml	300	300	300	-	-	-	-	-
Sample Volume - Container 5A		"	110	110	100	-	-	-	-	-
Sample Volume - Container 4		"	770	770	670	-	-	-	-	-
Mercury - 1B	0.030	ug	<	0.095	<	<	0.33	100	0.33	100
Mercury - 2B	0.010	"	20	27	17	-	-	-	-	-
Mercury - 3A	0.010	"	0.050	0.038	<	-	-	-	-	-
Mercury - 3B	0.050	"	<	<	<	<	0.50	100	0.50	100
Mercury - 3C	0.050	"	0.85	1.3	0.35	0.35	0.84	98	0.84	98
Beryllium	0.10	ug	<	<	<	-	-	-	-	-
Cadmium	0.10	"	0.72	1.0	0.85	-	-	-	-	-
Lead	0.20	"	8.4	13	12	-	-	-	-	-

00048

	M29HG U3	M29HG U3
<b>Client ID:</b>	Outlet R2	Outlet R3
<b>Lab No.:</b>	014858 01	014859 01
<b>Date Sampled:</b>	27-Mar-2001	28-Mar-2001

Component	MDL	Units		
Filter weight	1.0	mg	450	450
Final volume measured	0	ml	300	300
Sample Volume - Container 5A		"	120	120
Sample Volume - Container 4		"	680	720
Mercury - 1B	0.030	ug	0.033	<
Mercury - 2B	0.010	"	19	17
Mercury - 3A	0.010	"	<	0.012
Mercury - 3B	0.050	"	<	<
Mercury - 3C	0.050	"	0.46	0.31
Beryllium	0.10	ug	<	<
Cadmium	0.10	"	0.94	0.66
Lead	0.20	"	13	9.6

00049

*PASC - Summary of Analysis Pre. Dates*

**Batch Code:** 0403IRW1  
 Filter weight 014843 01  
 014844 01  
 014845 01  
 014846 01  
 014847 01  
 014851 01  
 014852 01  
 014853 01  
 014857 01  
 014858 01  
 014859 01  
 Date Analysed: 01/04/03  
 Date Prepared: 01/04/03

**Batch Code:** 0409MNV1  
 Final volume measured 014842 01  
 014843 01  
 014844 01  
 014845 01  
 014846 01  
 014847 01  
 014851 01  
 014852 01  
 014853 01  
 014857 01  
 014858 01  
 014859 01  
 Date Analysed: 01/04/09  
 Date Prepared: 01/04/09

**Batch Code:** 0403IRV1  
 Sample Volume - Container 5A 014842 01  
 014843 01  
 014844 01  
 014845 01  
 014846 01  
 014847 01  
 014851 01  
 014852 01  
 014853 01  
 014857 01  
 014858 01  
 014859 01  
 Date Analysed: 01/04/03  
 Date Prepared: 01/04/03

**Batch Code:** 0403IRV1  
 Sample Volume - Container 4 014842 01

014843 01  
 014844 01  
 014845 01  
 014846 01  
 014847 01  
 014851 01  
 014852 01  
 014853 01  
 014857 01  
 014858 01  
 014859 01

Date Analysed: 01/04/03  
 Date Prepared: 01/04/03

**Batch Code: 04101M1B 04102M1B**  
 Mercury - 1B

014842 01 014857 01  
 014843 01 014859 01  
 014844 01  
 014845 01  
 014846 01  
 014847 01  
 014851 01  
 014852 01  
 014853 01  
 014858 01

Date Analysed: 01/04/10 01/04/10  
 Date Prepared: 01/04/10 01/04/10

**Batch Code: 04104M2B**  
 Mercury - 2B

014842 01  
 014843 01  
 014844 01  
 014845 01  
 014846 01  
 014847 01  
 014851 01  
 014852 01  
 014853 01  
 014857 01  
 014858 01  
 014859 01

Date Analysed: 01/04/10  
 Date Prepared: 01/04/10

**Batch Code: 04053B3A**  
 Mercury - 3A

014842 01  
 014843 01  
 014844 01  
 014845 01

014846 01  
 014847 01  
 014851 01  
 014852 01  
 014853 01  
 014857 01  
 014858 01  
 014859 01

Date Analysed: 01/04/06  
 Date Prepared: 01/04/05

**Batch Code:** 04051M3B 04052M3B  
 Mercury - 3B  
 014842 01 014857 01  
 014843 01 014859 01  
 014844 01  
 014845 01  
 014846 01  
 014847 01  
 014851 01  
 014852 01  
 014853 01  
 014858 01

Date Analysed: 01/04/05 01/04/05  
 Date Prepared: 01/04/05 01/04/05

**Batch Code:** 04063M3C 04064M3C  
 Mercury - 3C  
 014842 01 014857 01  
 014843 01 014859 01  
 014844 01  
 014845 01  
 014846 01  
 014847 01  
 014851 01  
 014852 01  
 014853 01  
 014858 01

Date Analysed: 01/04/06 01/04/06  
 Date Prepared: 01/04/06 01/04/06

**Batch Code:** 0405MNF1  
 Beryllium  
 014842 01  
 014843 01  
 014844 01  
 014845 01  
 014846 01  
 014847 01  
 014851 01  
 014852 01  
 014853 01



00053

4/11/01

*PASC - Summary of Analysis Pre. Dates*

Page MS-9 of 9

014857 01

014858 01

014859 01

Date Analysed:

01/04/10

Date Prepared:

01/04/05

00054

### 3. RAW DATA



A) CVAA

Zenon Number	Client	Client ID	Parameter	TS	Result	Dup.	Spike	% Rec.	Dup. Spk	% Rec.	Batch Date	Batch Code	Run Date	Run Code	Day Old	Day In	Analyst's Comments
014842	CLEANAIR	MB R456	Mercury -	PV	-0.010	-99999.0	0.107	107.	0.103	103.	01/04/10	4M2B	01/04/10	MG02	12.	8.	
014843	CLEANAIR	M29HG Reagent Blank	Mercury -	PV	-0.290						01/04/10	4M2B	01/04/10	MG02	12.	8.	*DDL*
014844	CLEANAIR	M29HG Field Blank	Mercury -	PV	-0.300						01/04/10	4M2B	01/04/10	MG02	12.	8.	*DDL*
014845	CLEANAIR	M29HG U1 Outlet R1	Mercury -	PV	51.590	52.314	60.630	113.	58.905	90.	01/04/10	4M2B	01/04/10	MG02	15.	8.	
014846	CLEANAIR	M29HG U1 Outlet R2	Mercury -	PV	35.220						01/04/10	4M2B	01/04/10	MG02	15.	8.	
014847	CLEANAIR	M29HG U1 Outlet R3	Mercury -	PV	33.788						01/04/10	4M2B	01/04/10	MG02	15.	8.	
014851	CLEANAIR	M29HG U2 Outlet R1	Mercury -	PV	16.688						01/04/10	4M2B	01/04/10	MG02	14.	8.	
014852	CLEANAIR	M29HG U2 Outlet R2	Mercury -	PV	19.935						01/04/10	4M2B	01/04/10	MG02	14.	8.	
014853	CLEANAIR	M29HG U2 Outlet R3	Mercury -	PV	26.704						01/04/10	4M2B	01/04/10	MG02	14.	8.	
014857	CLEANAIR	M29HG U3 Outlet R1	Mercury -	PV	17.219						01/04/10	4M2B	01/04/10	MG02	14.	8.	
014858	CLEANAIR	M29HG U3 Outlet R2	Mercury -	PV	18.550						01/04/10	4M2B	01/04/10	MG02	14.	8.	
014859	CLEANAIR	M29HG U3 Outlet R3	Mercury -	PV	17.165						01/04/10	4M2B	01/04/10	MG02	13.	8.	
BL0410	INTERNAL		Mercury -	PV	-0.010	-99999.0	0.107	107.	0.103	103.	01/04/10	4M2B	01/04/10	MG02	\$\$\$	\$\$\$	

13 Tests for 29HG-2B with an MDL of 0.010 ug

Validated By cmj

Control Chart Updated N/A

IO Requirements met N/A

00055

Zenon Number	Client	Client ID	Parameter	TS	Result	Dup.	Spike	% Rec.	Dup. % Spk	% Rec.	Batch Date	Batch Code	Run Date	Run Code	Day Old	Day In	Analyst's Comments
014842	CLEANAIR	MB R456	Mercury -	PV	-0.030	-99999.0	0.313	104.	0.318	106.	01/04/10	1M1B	01/04/10	MG02	12.	8.	
014843	CLEANAIR	M29HG Reagent Blank	Mercury -	PV	-0.030						01/04/10	1M1B	01/04/10	MG02	12.	8.	
014844	CLEANAIR	M29HG Field Blank	Mercury -	PV	-0.030						01/04/10	1M1B	01/04/10	MG02	12.	8.	
014845	CLEANAIR	M29HG U1 Outlet R1	Mercury -	PV	2.112	2.031	2.351	93.	2.432	120.	01/04/10	1M1B	01/04/10	MG02	15.	8.	
014846	CLEANAIR	M29HG U1 Outlet R2	Mercury -	PV	0.529						01/04/10	1M1B	01/04/10	MG02	15.	8.	
014847	CLEANAIR	M29HG U1 Outlet R3	Mercury -	PV	0.503						01/04/10	1M1B	01/04/10	MG02	15.	8.	
014851	CLEANAIR	M29HG U2 Outlet R1	Mercury -	PV	-0.030						01/04/10	1M1B	01/04/10	MG02	14.	8.	
014852	CLEANAIR	M29HG U2 Outlet R2	Mercury -	PV	-0.030						01/04/10	1M1B	01/04/10	MG02	14.	8.	
014853	CLEANAIR	M29HG U2 Outlet R3	Mercury -	PV	0.095						01/04/10	1M1B	01/04/10	MG02	14.	8.	
014858	CLEANAIR	M29HG U3 Outlet R2	Mercury -	PV	0.033						01/04/10	1M1B	01/04/10	MG02	14.	8.	
BLO410	INTERNAL		Mercury -	PV	-0.030	-99999.0	0.313	104.	0.318	106.	01/04/10	1M1B	01/04/10	MG02	\$\$\$	\$\$\$	
014857	CLEANAIR	M29HG U3 Outlet R1	Mercury -	PV	-0.030	-0.030	0.332	104.	0.327	102.	01/04/10	2M1B	01/04/10	MG02	14.	8.	
014859	CLEANAIR	M29HG U3 Outlet R3	Mercury -	PV	-0.030						01/04/10	2M1B	01/04/10	MG02	13.	8.	
BLO410	INTERNAL		Mercury -	PV	-0.030	-99999.0	0.304	101.	0.309	103.	01/04/10	2M1B	01/04/10	MG02	\$\$\$	\$\$\$	

14 Tests for 29HG-1B with an MDL of 0.030 ug Validated By CMP Control Chart Updated N/A IO Requirements met N/A

00056

00057

29HG-1B

Sample #	Conc. ug/L	Dilution x	Final Vol ml	Result T ug	Mdl ug	Dil Mdl ug	%	MDL FV
BL0410-1M1B	0.010	1	300	0.003	0.03	0.03		300
BL0410S	1.043	1	300	0.313	0.03	0.03	104	300
BL0410DS	1.061	1	300	0.318	0.03	0.03	106	300
14845	7.040	1	300	2.112	0.03	0.03		300
14845D	6.771	1	300	2.031	0.03	0.03		300
14845S	7.837	1	300	2.351	0.03	0.03	93	300
14845DS	8.105	1	300	2.432	0.03	0.03	120	300
14842	0.008	1	300	0.002	0.03	0.03		300
14843	0.018	1	300	0.005	0.03	0.03		300
14844	0.027	1	300	0.008	0.03	0.03		300
14846	1.764	1	300	0.529	0.03	0.03		300
14847	1.675	1	300	0.503	0.03	0.03		300
14851	0.087	1	300	0.026	0.03	0.03		300
14852	0.073	1	300	0.022	0.03	0.03		300
14853	0.318	1	300	0.095	0.03	0.03		300
14858	0.110	1	300	0.033	0.03	0.03		300

Sample #	Conc. ug/L	Dilution x	Final Vol ml	Result T ug	Mdl ug	Dil Mdl ug	%	MDL FV
BL0410-2M1B	0.015	1	300	0.005	0.03	0.03		300
BL0410S	1.013	1	300	0.304	0.03	0.03	101	300
BL0410DS	1.031	1	300	0.309	0.03	0.03	103	300
14857	0.070	1	300	0.021	0.03	0.03		300
14857D	0.064	1	300	0.019	0.03	0.03		300
14857S	1.107	1	300	0.332	0.03	0.03	104	300
14857DS	1.090	1	300	0.327	0.03	0.03	102	300
14859	0.084	1	300	0.025	0.03	0.03		300

00058

29HG-2B

Sample #	Conc. ug/L	Dilution x	Final Vol ml	Result T ug	Mdl ug	Dil Mdl ug	%	MDL FV
BL0410-4M2B	0.013	1	100	0.001	0.01	0.01		100
BL0410S	1.065	1	100	0.107	0.01	0.01	107	100
BL0410DS	1.033	1	100	0.103	0.01	0.01	103	100
14845	6.700	10	770	51.590	0.01	0.77		100
14845D	6.794	10	770	52.314	0.01	0.77		100
14845S	7.874	10	770	60.630	0.01	0.77	113	100
14845DS	7.650	10	770	58.905	0.01	0.77	90	100
14843	0.022	10	290	0.064	0.01	0.29		100
14844	0.069	10	300	0.207	0.01	0.30		100
14846	4.574	10	770	35.220	0.01	0.77		100
14847	4.277	10	790	33.788	0.01	0.79		100
14851	2.225	10	750	16.688	0.01	0.75		100
14852	2.589	10	770	19.935	0.01	0.77		100
14853	3.468	10	770	26.704	0.01	0.77		100
14857	2.570	10	670	17.219	0.01	0.67		100
14858	2.728	10	680	18.550	0.01	0.68		100
14859	2.384	10	720	17.165	0.01	0.72		100

00059

## Sample Information File C:\FIMS\AAUSER\SAMPINFO\010410F1.SIF

Description : METHOD29  
 Batch ID : MG02  
 Volume Units : L  
 Weight Units : µg  
 Analyst : MGAS  
 Sample Volume : 0.00

AS Sample ID	Sample Sample	User	Remarks
Loc	Weight Units	Dilution	
15	BL0410-1M1B		
16	BL0410S		
17	BL0410DS		
18	14845		
19	14845D		
20	14845S		
21	14845DS		
22	14842		
23	14843		
24	14844		
25	14846		
26	14847		
27	14851		
28	14852		
29	14853		
30	14858		
31	BL0410-2M1B		
32	BL0410S		
33	BL0410DS		
34	14857		
35	14857D		
36	14857S		
37	14857DS		
38	14859		
39	BL0410-4M2B		
40	BL0410S		
41	BL0410DS		
42	14845	10.0000	
43	14845D	10.0000	
44	14845S	10.0000	
45	14845DS	10.0000	
46	14843	10.0000	
47	14844	10.0000	
48	14846	10.0000	
49	14847	10.0000	
50	14851	10.0000	
51	14852	10.0000	
52	14853	10.0000	
53	14857	10.0000	
54	14858	10.0000	
55	14859	10.0000	
56	BL0410-7M3B		
57	BL0410S		
58	BL0410DS		
59	15069		
60	15069D		
61	15069S		
62	15069DS		
63	15067		
64	15068		
65	15070		
66	15071		



00060

67 15072  
8 15073  
15074

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00061

Method Name: EPA 7470  
 Method Description: EPA 7470  
 Element: Hg

Date: 04/10/2001  
 Technique: FI-MHS  
 Calibration Type:  
 Hg, Zero Intercept: Linear  
 Wavelength: 253.7 nm  
 Sample Info Name: 010410F1.SIF

Results Data Set Name: 010410F1

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 04/10/2001  
 Sample ID: Calib Blank

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0001	0.0001	02:38:58	Yes
2			0.0001	0.0001	02:39:31	Yes
3			0.0001	0.0001	02:40:04	Yes
Mean:			0.0001			
SD :			0.0000			
%RSD:			6.6479			

Auto-zero performed.

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 04/10/2001  
 Sample ID: STD1

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0348	0.0350	02:40:53	Yes
2			0.0348	0.0350	02:41:26	Yes
3			0.0349	0.0350	02:41:59	Yes
Mean:			0.0349			
SD :			0.0000			
%RSD:						

[Hg] Standard number 1 applied. [2.500]

Correlation Coefficient: 1.00000

Slope: 0.01394

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 04/10/2001  
 Sample ID: STD2

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.0698	0.0699	02:42:49	Yes
2			0.0694	0.0695	02:43:22	Yes
3			0.0694	0.0695	02:43:55	Yes
Mean:			0.0695			
SD :			0.0003			
%RSD:			0.3649			

[Hg] Standard number 2 applied. [5.000]

Correlation Coefficient: 0.99999

Slope: 0.01392

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 04/10/2001  
 Sample ID: STD3

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.1039	0.1041	02:45:08	Yes
2			0.1041	0.1042	02:45:42	Yes
3			0.1037	0.1038	02:46:15	Yes
Mean:			0.1039			

00062

SD : 0.0002  
 %RSD: 0.1766  
 [Hg] Standard number 3 applied. [7.500]  
 Correlation Coefficient: 0.99998 Slope: 0.01388

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 04/10/2001  
 Sample ID: STD4

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.1367	0.1368	02:47:31	Yes
2			0.1365	0.1366	02:48:04	Yes
3			0.1361	0.1362	02:48:37	Yes
Mean:			0.1364			
SD :			0.0003			
%RSD:			0.2308			

[Hg] Standard number 4 applied. [10.00]  
 Correlation Coefficient: 0.99977 Slope: 0.01375

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 04/10/2001  
 Sample ID: STD5

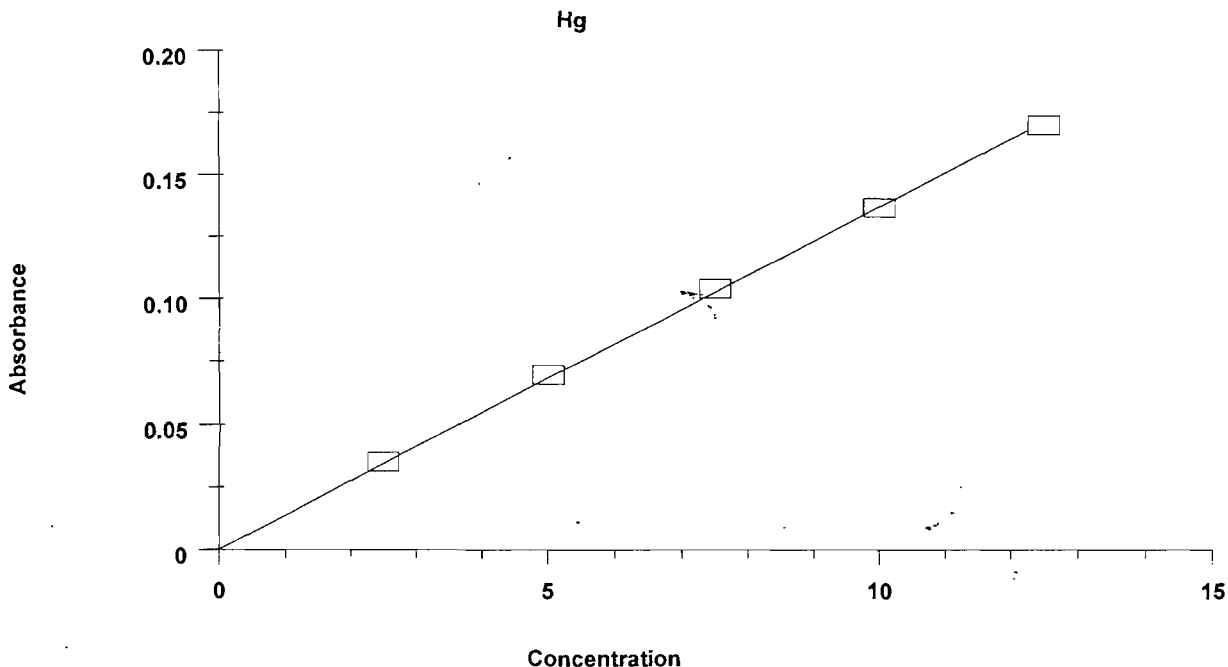
Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.1698	0.1700	02:49:53	Yes
2			0.1696	0.1697	02:50:26	Yes
3			0.1695	0.1697	02:50:59	Yes
Mean:			0.1697			
SD :			0.0002			
%RSD:						

[Hg] Standard number 5 applied. [12.50]  
 Correlation Coefficient: 0.99977 Slope: 0.01367

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0001	---	----	----	----
STD1	0.0349	2.500	2.550	0.0000	----
STD2	0.0695	5.000	5.087	0.0003	0.4
STD3	0.1039	7.500	7.602	0.0002	0.2
STD4	0.1364	10.000	9.977	0.0003	0.2
STD5	0.1697	12.500	12.41	0.0002	----
Correlation Coefficient:		0.99977	Slope: 0.01367	----	

00063



=====  
 Element: Hg      Seq. No.: 7      AS Loc.: 9      Date: 04/10/2001  
 Sample ID: ICV

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	1.515	1.515	0.0207	0.0208	02:52:18	Yes
2	1.517	1.517	0.0207	0.0208	02:52:51	Yes
3	1.510	1.510	0.0206	0.0208	02:53:24	Yes
Mean:	1.514	1.514	0.0207			
SD :	0.0033	0.0033	0.0000			
%RSD:	0.2	0.2	0.2156			

QC value within specified limits.

=====  
 Element: Hg      Seq. No.: 8      AS Loc.: 10      Date: 04/10/2001  
 Sample ID: ICB

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.005	-0.005	-0.0001	0.0000	02:54:13	Yes
2	-0.006	-0.006	-0.0001	0.0000	02:54:46	Yes
3	-0.005	-0.005	-0.0001	0.0000	02:55:19	Yes
Mean:	-0.005	-0.005	-0.0001			
SD :	0.0004	0.0004	0.0000			
%RSD:	8.7	8.7	8.6650			

QC value within specified limits.

=====  
 Element: Hg      Seq. No.: 9      AS Loc.: 11      Date: 04/10/2001  
 Sample ID: NYS 3311

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.803	0.803	0.0110	0.0111	02:56:06	Yes
2	0.795	0.795	0.0109	0.0110	02:56:40	Yes
3	0.796	0.796	0.0109	0.0110	02:57:12	Yes

00064

Mean: 0.798 0.798 0.0109  
 SD : 0.0045 0.0045 0.0001  
 %RSD: 0.6 0.6 0.5618  
 QC value within specified limits.

=====  
 Element: Hg Seq. No.: 10 AS Loc.: 12 Date: 04/10/2001  
 Sample ID: ORG REF  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.321	2.321	0.0317	0.0318	02:58:02	Yes
2	2.334	2.334	0.0319	0.0320	02:58:34	Yes
3	2.336	2.336	0.0319	0.0320	02:59:07	Yes
Mean:	2.330	2.330	0.0319			
SD :	0.0078	0.0078	0.0001			
%RSD:	0.3	0.3	0.3337			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 11 AS Loc.: 13 Date: 04/10/2001  
 Sample ID: LLC  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.252	0.252	0.0034	0.0036	02:59:56	Yes
2	0.251	0.251	0.0034	0.0035	03:00:29	Yes
3	0.251	0.251	0.0034	0.0035	03:01:02	Yes
Mean:	0.251	0.251	0.0034			
SD :	0.0007	0.0007	0.0000			
%RSD:	0.3	0.3	0.2826			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 12 AS Loc.: 14 Date: 04/10/2001  
 Sample ID: DIL. CHECK  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.003	0.003	0.0000	0.0001	03:01:51	Yes
2	0.006	0.006	0.0001	0.0002	03:02:24	Yes
3	0.007	0.007	0.0001	0.0002	03:02:57	Yes
Mean:	0.005	0.005	0.0001			
SD :	0.0019	0.0019	0.0000			
%RSD:	38.1	38.1	38.1345			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 13 AS Loc.: 15 Date: 04/10/2001  
 Sample ID: BL0410-1M1B  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.011	0.011	0.0001	0.0003	03:03:46	Yes
2	0.010	0.010	0.0001	0.0002	03:04:19	Yes
3	0.008	0.008	0.0001	0.0002	03:04:52	Yes
Mean:	0.010	0.010	0.0001			
SD :	0.0012	0.0012	0.0000			
%RSD:	12.9	12.9	12.8981			

=====  
 Element: Hg Seq. No.: 14 AS Loc.: 16 Date: 04/10/2001  
 Sample ID: BL0410S  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
--------	--------------------	------------------	--------------------	----------------	------	----------------

1	1.053	1.053	0.0144	0.0145	03:05:41	Yes
2	1.038	1.038	0.0142	0.0143	03:06:14	Yes
3	1.038	1.038	0.0142	0.0143	03:06:47	Yes
Mean:	1.043	1.043	0.0143			
SD :	0.0086	0.0086	0.0001			
%RSD:	0.8	0.8	0.8236			

Element: Hg Seq. No.: 15 AS Loc.: 17 Date: 04/10/2001  
Sample ID: BL0410DS

Repl #	Sample Conc µg/L	Std Conc µg/L	Blk Corr Signal	Peak Height	Time	Peak Stored
1	1.066	1.066	0.0146	0.0147	03:07:35	Yes
2	1.062	1.062	0.0145	0.0146	03:08:09	Yes
3	1.054	1.054	0.0144	0.0145	03:08:42	Yes
Mean:	1.061	1.061	0.0145			
SD :	0.0063	0.0063	0.0001			
%RSD:	0.6	0.6	0.5985			

Element: Hg Seq. No.: 16 AS Loc.: 18 Date: 04/10/2001  
Sample ID: 14845

Repl #	Sample Conc µg/L	Std Conc µg/L	Blk Corr Signal	Peak Height	Time	Peak Stored
1	7.075	7.075	0.0967	0.0968	03:09:31	Yes
2	7.036	7.036	0.0962	0.0963	03:10:04	Yes
3	7.008	7.008	0.0958	0.0959	03:10:37	Yes
Mean:	7.040	7.040	0.0962			
SD :	0.0336	0.0336	0.0005			
%RSD:	0.5	0.5	0.4778			

Element: Hg Seq. No.: 17 AS Loc.: 19 Date: 04/10/2001  
Sample ID: 14845D

Repl #	Sample Conc µg/L	Std Conc µg/L	Blk Corr Signal	Peak Height	Time	Peak Stored
1	6.789	6.789	0.0928	0.0929	03:11:52	Yes
2	6.775	6.775	0.0926	0.0927	03:12:25	Yes
3	6.749	6.749	0.0923	0.0924	03:12:58	Yes
Mean:	6.771	6.771	0.0926			
SD :	0.0205	0.0205	0.0003			
%RSD:	0.3	0.3	0.3022			

Element: Hg Seq. No.: 18 AS Loc.: 20 Date: 04/10/2001  
Sample ID: 14845S

Repl #	Sample Conc µg/L	Std Conc µg/L	Blk Corr Signal	Peak Height	Time	Peak Stored
1	7.835	7.835	0.1071	0.1072	03:14:13	Yes
2	7.822	7.822	0.1069	0.1070	03:14:46	Yes
3	7.855	7.855	0.1074	0.1075	03:15:19	Yes
Mean:	7.837	7.837	0.1071			
SD :	0.0163	0.0163	0.0002			
%RSD:	0.2	0.2	0.2076			

Element: Hg Seq. No.: 19 AS Loc.: 21 Date: 04/10/2001  
Sample ID: 14845DS

Repl #	Sample Conc µg/L	Std Conc µg/L	Blk Corr Signal	Peak Height	Time	Peak Stored
1	8.144	8.144	0.1113	0.1114	03:16:36	Yes

2	8.090	8.090	0.1106	0.1107	03:17:09	Yes
3	8.080	8.080	0.1105	0.1106	03:17:42	Yes
Mean:	8.105	8.105	0.1108			
SD :	0.0345	0.0345	0.0005			
%RSD:	0.4	0.4	0.4251			

=====  
 Element: Hg Seq. No.: 20 AS Loc.: 22 Date: 04/10/2001  
 Sample ID: 14842  
 -----

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.005	0.005	0.0001	0.0002	03:18:58	Yes
2	0.009	0.009	0.0001	0.0002	03:19:31	Yes
3	0.009	0.009	0.0001	0.0002	03:20:04	Yes
Mean:	0.008	0.008	0.0001			
SD :	0.0024	0.0024	0.0000			
%RSD:	31.7	31.7	31.6585			

=====  
 Element: Hg Seq. No.: 21 AS Loc.: 23 Date: 04/10/2001  
 Sample ID: 14843  
 -----

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.017	0.017	0.0002	0.0003	03:20:54	Yes
2	0.019	0.019	0.0003	0.0004	03:21:27	Yes
3	0.017	0.017	0.0002	0.0003	03:22:00	Yes
Mean:	0.018	0.018	0.0002			
SD :	0.0012	0.0012	0.0000			
%RSD:	6.6	6.6	6.5924			

=====  
 Element: Hg Seq. No.: 22 AS Loc.: 24 Date: 04/10/2001  
 Sample ID: 14844  
 -----

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.027	0.027	0.0004	0.0005	03:22:52	Yes
2	0.026	0.026	0.0004	0.0005	03:23:25	Yes
3	0.027	0.027	0.0004	0.0005	03:23:58	Yes
Mean:	0.027	0.027	0.0004			
SD :	0.0006	0.0006	0.0000			
%RSD:	2.4	2.4	2.3847			

=====  
 Element: Hg Seq. No.: 23 AS Loc.: 7 Date: 04/10/2001  
 Sample ID: CCV  
 -----

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	1.013	1.013	0.0139	0.0140	03:24:50	Yes
2	1.003	1.003	0.0137	0.0138	03:25:24	Yes
3	1.008	1.008	0.0138	0.0139	03:25:57	Yes
Mean:	1.008	1.008	0.0138			
SD :	0.0051	0.0051	0.0001			
%RSD:	0.5	0.5	0.5058			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 24 AS Loc.: 8 Date: 04/10/2001  
 Sample ID: CCB  
 -----

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.005	0.005	0.0001	0.0002	03:26:46	Yes

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2 0.008 0.008 0.0001 0.0002 03:27:19 Yes  
 3 0.006 0.006 0.0001 0.0002 03:27:52 Yes  
 Mean: 0.007 0.007 0.0001  
 SD : 0.0016 0.0016 0.0000  
 %RSD: 24.3 24.3 24.3478  
 QC value within specified limits.

Element: Hg Seq. No.: 25 AS Loc.: 4 Date: 04/10/2001  
 Sample ID: Reslope

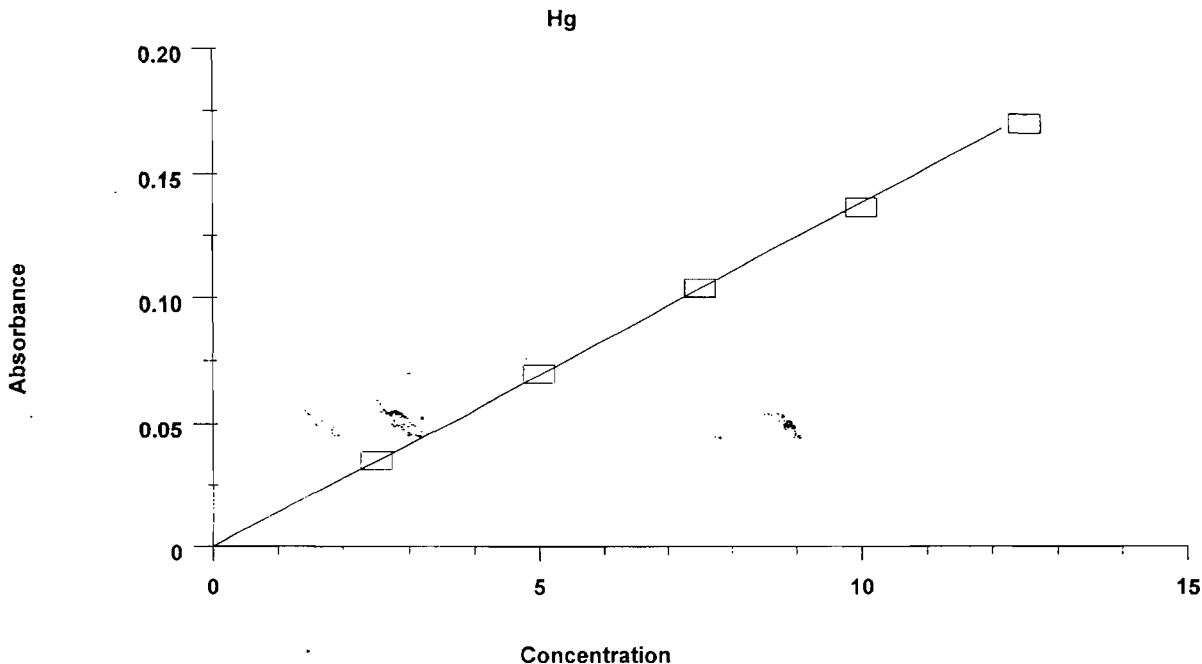
Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.1039	0.1040	03:28:42	Yes
2			0.1034	0.1035	03:29:15	Yes
3			0.1036	0.1037	03:29:48	Yes
Mean:			0.1036			
SD :			0.0002			
%RSD:			0.2353			

[Hg] Reslope standard applied. [7.500]  
 Correlation Coefficient: 0.99977 Slope: 0.01353

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0001	---	0.008	0.0000	6.6
STD1	0.0349	2.500	2.523	0.0000	---
STD2	0.0695	5.000	5.033	0.0003	0.4
STD3	0.1039	7.500	7.522	0.0002	0.2
STD4	0.1364	10.000	9.872	0.0003	0.2
STD5	0.1697	12.500	12.28	0.0002	---
Reslope	0.1036	7.500	7.500	0.0002	0.2

Correlation Coefficient: 0.99977 Slope: 0.01353





00068

Element: Hg Seq. No.: 26 AS Loc.: 25 Date: 04/10/2001  
 Sample ID: 14846

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	1.771	1.771	0.0245	0.0246	03:31:06	Yes
2	1.779	1.779	0.0246	0.0247	03:31:40	Yes
3	1.742	1.742	0.0241	0.0242	03:32:13	Yes
Mean:	1.764	1.764	0.0244			
SD :	0.0194	0.0194	0.0003			
%RSD:	1.1	1.1	1.0985			

Element: Hg Seq. No.: 27 AS Loc.: 26 Date: 04/10/2001  
 Sample ID: 14847

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	1.676	1.676	0.0232	0.0233	03:33:01	Yes
2	1.674	1.674	0.0231	0.0232	03:33:34	Yes
3	1.675	1.675	0.0231	0.0233	03:34:07	Yes
Mean:	1.675	1.675	0.0231			
SD :	0.0010	0.0010	0.0000			
%RSD:						

Element: Hg Seq. No.: 28 AS Loc.: 27 Date: 04/10/2001  
 Sample ID: 14851

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.086	0.086	0.0012	0.0013	03:34:56	Yes
2	0.087	0.087	0.0012	0.0013	03:35:29	Yes
3	0.088	0.088	0.0012	0.0013	03:36:02	Yes
Mean:	0.087	0.087	0.0012			
SD :	0.0011	0.0011	0.0000			
%RSD:	1.2	1.2	1.2162			

Element: Hg Seq. No.: 29 AS Loc.: 28 Date: 04/10/2001  
 Sample ID: 14852

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.073	0.073	0.0010	0.0011	03:36:51	Yes
2	0.072	0.072	0.0010	0.0011	03:37:24	Yes
3	0.073	0.073	0.0010	0.0011	03:37:57	Yes
Mean:	0.073	0.073	0.0010			
SD :	0.0002	0.0002	0.0000			
%RSD:	0.3	0.3	0.3429			

Element: Hg Seq. No.: 30 AS Loc.: 29 Date: 04/10/2001  
 Sample ID: 14853

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.321	0.321	0.0044	0.0045	03:38:46	Yes
2	0.318	0.318	0.0044	0.0045	03:39:19	Yes
3	0.316	0.316	0.0044	0.0045	03:39:52	Yes
Mean:	0.318	0.318	0.0044			
SD :	0.0025	0.0025	0.0000			
%RSD:	0.8	0.8	0.7963			

Element: Hg Seq. No.: 31 AS Loc.: 30 Date: 04/10/2001

00069

Sample ID: 14858

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.111	0.111	0.0015	0.0016	03:40:41	Yes
2	0.108	0.108	0.0015	0.0016	03:41:14	Yes
3	0.111	0.111	0.0015	0.0016	03:41:47	Yes
Mean:	0.110	0.110	0.0015			
SD :	0.0018	0.0018	0.0000			
%RSD:	1.6	1.6	1.5925			

=====  
 Element: Hg Seq. No.: 32 AS Loc.: 3F Date: 04/10/2001  
 Sample ID: BL0410-2M1B

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.016	0.016	0.0002	0.0003	03:42:35	Yes
2	0.016	0.016	0.0002	0.0003	03:43:09	Yes
3	0.014	0.014	0.0002	0.0003	03:43:42	Yes
Mean:	0.015	0.015	0.0002			
SD :	0.0015	0.0015	0.0000			
%RSD:	9.8	9.8	9.7725			

=====  
 Element: Hg Seq. No.: 33 AS Loc.: 32 Date: 04/10/2001  
 Sample ID: BL0410S

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	1.014	1.014	0.0140	0.0141	03:44:31	Yes
2	1.014	1.014	0.0140	0.0141	03:45:04	Yes
3	1.012	1.012	0.0140	0.0141	03:45:37	Yes
Mean:	1.013	1.013	0.0140			
SD :	0.0010	0.0010	0.0000			
%RSD:						

=====  
 Element: Hg Seq. No.: 34 AS Loc.: 33 Date: 04/10/2001  
 Sample ID: BL0410DS

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	1.031	1.031	0.0142	0.0144	03:46:26	Yes
2	1.033	1.033	0.0143	0.0144	03:46:59	Yes
3	1.029	1.029	0.0142	0.0143	03:47:32	Yes
Mean:	1.031	1.031	0.0142			
SD :	0.0023	0.0023	0.0000			
%RSD:	0.2	0.2	0.2261			

=====  
 Element: Hg Seq. No.: 35 AS Loc.: 34 Date: 04/10/2001  
 Sample ID: 14857

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.069	0.069	0.0010	0.0011	03:48:20	Yes
2	0.070	0.070	0.0010	0.0011	03:48:53	Yes
3	0.072	0.072	0.0010	0.0011	03:49:26	Yes
Mean:	0.070	0.070	0.0010			
SD :	0.0012	0.0012	0.0000			
%RSD:	1.7	1.7	1.7022			

=====  
 Element: Hg Seq. No.: 36 AS Loc.: 7 Date: 04/10/2001  
 Sample ID: CCV

00070

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.996	0.996	0.0138	0.0139	03:50:16	Yes
2	0.997	0.997	0.0138	0.0139	03:50:49	Yes
3	0.995	0.995	0.0137	0.0139	03:51:22	Yes
Mean:	0.996	0.996	0.0138			
SD :	0.0009	0.0009	0.0000			

%RSD:

QC value within specified limits.

Element: Hg Seq. No.: 37 AS Loc.: 8 Date: 04/10/2001  
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.004	0.004	0.0001	0.0002	03:52:11	Yes
2	0.006	0.006	0.0001	0.0002	03:52:44	Yes
3	0.005	0.005	0.0001	0.0002	03:53:18	Yes
Mean:	0.005	0.005	0.0001			
SD :	0.0007	0.0007	0.0000			
%RSD:	14.6	14.6	14.6047			

QC value within specified limits.

Element: Hg Seq. No.: 38 AS Loc.: 4 Date: 04/10/2001  
Sample ID: Reslope

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.1040	0.1041	03:54:08	Yes
2			0.1037	0.1038	03:54:41	Yes
3			0.1035	0.1036	03:55:14	Yes
Mean:			0.1037			
SD :			0.0003			
%RSD:			0.2418			

[Hg] Reslope standard applied. [7.500]

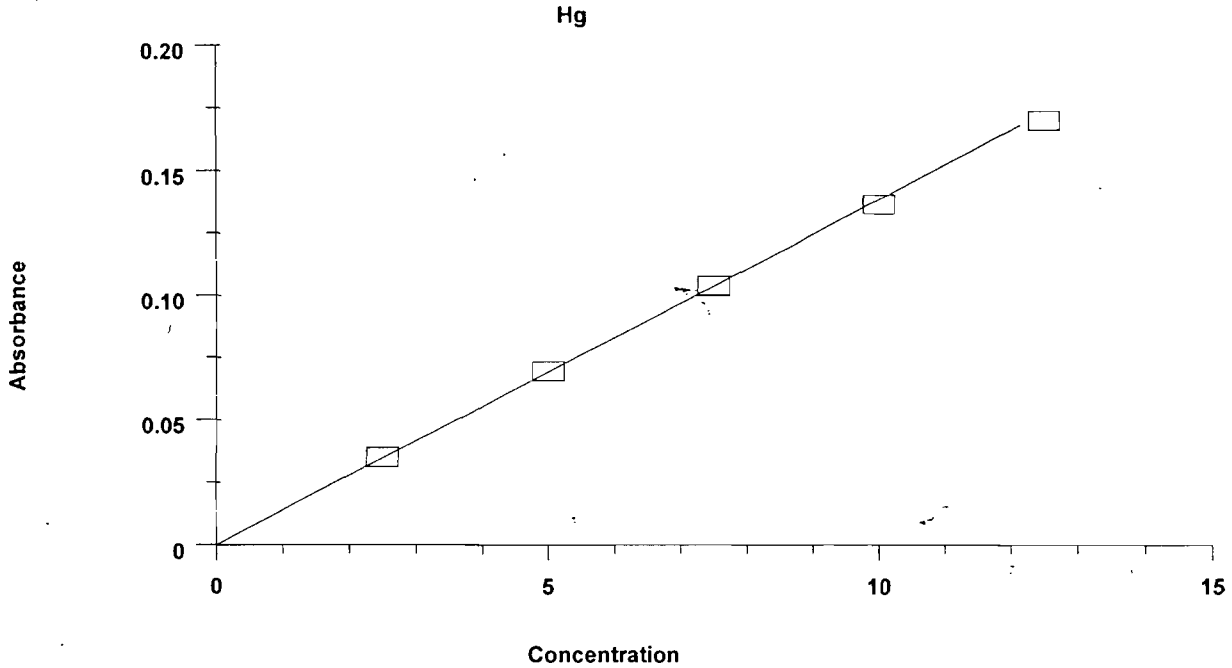
Correlation Coefficient: 0.99977

Slope: 0.01351

## Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0001	---	0.008	0.0000	6.6
STD1	0.0349	2.500	2.520	0.0000	----
STD2	0.0695	5.000	5.028	0.0003	0.4
STD3	0.1039	7.500	7.513	0.0002	0.2
STD4	0.1364	10.000	9.861	0.0003	0.2
STD5	0.1697	12.500	12.27	0.0002	----
Reslope	0.1037	7.500	7.500	0.0003	0.2
Correlation Coefficient: 0.99977		Slope: 0.01351		----	--

00071



=====  
 Element: Hg      Seq. No.: 39      AS Loc.: 35      Date: 04/10/2001  
 Sample ID: 14857D  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.062	0.062	0.0009	0.0010	03:56:35	Yes
2	0.066	0.066	0.0009	0.0010	03:57:08	Yes
3	0.065	0.065	0.0009	0.0010	03:57:41	Yes
Mean:	0.064	0.064	0.0009			
SD :	0.0020	0.0020	0.0000			
%RSD:	3.1	3.1	3.0875			

=====  
 Element: Hg      Seq. No.: 40      AS Loc.: 36      Date: 04/10/2001  
 Sample ID: 14857S  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.109	1.109	0.0153	0.0154	03:58:30	Yes
2	1.107	1.107	0.0153	0.0154	03:59:03	Yes
3	1.106	1.106	0.0153	0.0154	03:59:36	Yes
Mean:	1.107	1.107	0.0153			
SD :	0.0013	0.0013	0.0000			
%RSD:	0.1	0.1	0.1190			

=====  
 Element: Hg      Seq. No.: 41      AS Loc.: 37      Date: 04/10/2001  
 Sample ID: 14857DS  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.093	1.093	0.0151	0.0152	04:00:24	Yes
2	1.093	1.093	0.0151	0.0152	04:00:57	Yes
3	1.086	1.086	0.0150	0.0151	04:01:30	Yes
Mean:	1.090	1.090	0.0151			
SD :	0.0037	0.0037	0.0001			

00072

%RSD: 0.3 0.3 0.3429

=====  
 Element: Hg Seq. No.: 42 AS Loc.: 38 Date: 04/10/2001  
 Sample ID: 14859  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.084	0.084	0.0012	0.0013	04:02:19	Yes
2	0.083	0.083	0.0011	0.0013	04:02:52	Yes
3	0.085	0.085	0.0012	0.0013	04:03:25	Yes
Mean:	0.084	0.084	0.0012			
SD :	0.0012	0.0012	0.0000			
%RSD:	1.4	1.4	1.3677			

=====  
 Element: Hg Seq. No.: 43 AS Loc.: 39 Date: 04/10/2001  
 Sample ID: BL0410-4M2B  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.016	0.016	0.0002	0.0003	04:04:15	Yes
2	0.012	0.012	0.0002	0.0003	04:04:48	Yes
3	0.012	0.012	0.0002	0.0003	04:05:21	Yes
Mean:	0.013	0.013	0.0002			
SD :	0.0018	0.0018	0.0000			
%RSD:	13.3	13.3	13.2604			

=====  
 Element: Hg Seq. No.: 44 AS Loc.: 40 Date: 04/10/2001  
 Sample ID: BL0410S  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.062	1.062	0.0147	0.0148	04:06:13	Yes
2	1.071	1.071	0.0148	0.0149	04:06:46	Yes
3	1.062	1.062	0.0147	0.0148	04:07:19	Yes
Mean:	1.065	1.065	0.0147			
SD :	0.0052	0.0052	0.0001			
%RSD:	0.5	0.5	0.4839			

=====  
 Element: Hg Seq. No.: 45 AS Loc.: 41 Date: 04/10/2001  
 Sample ID: BL0410DS  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.035	1.035	0.0143	0.0144	04:08:08	Yes
2	1.032	1.032	0.0143	0.0144	04:08:41	Yes
3	1.030	1.030	0.0143	0.0144	04:09:14	Yes
Mean:	1.033	1.033	0.0143			
SD :	0.0025	0.0025	0.0000			
%RSD:	0.2	0.2	0.2386			

=====  
 Element: Hg Seq. No.: 46 AS Loc.: 42 Date: 04/10/2001  
 Sample ID: 14845  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	66.97	6.697	0.0926	0.0927	04:10:02	Yes
2	66.97	6.697	0.0926	0.0927	04:10:35	Yes
3	67.05	6.705	0.0927	0.0928	04:11:08	Yes
Mean:	67.00	6.700	0.0927			
SD :	0.0447	0.0045	0.0001			
%RSD:						

00073

Element: Hg Seq. No.: 47 AS Loc.: 43 Date: 04/10/2001  
 Sample ID: 14845D

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	68.45	6.845	0.0947	0.0948	04:12:19	Yes
2	67.78	6.778	0.0937	0.0939	04:12:52	Yes
3	67.59	6.759	0.0935	0.0936	04:13:25	Yes
Mean:	67.94	6.794	0.0940			
SD :	0.4503	0.0450	0.0006			
%RSD:	0.7	0.7	0.6627			

Element: Hg Seq. No.: 48 AS Loc.: 44 Date: 04/10/2001  
 Sample ID: 14845S

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	78.92	7.892	0.1092	0.1093	04:14:37	Yes
2	78.77	7.877	0.1089	0.1091	04:15:10	Yes
3	78.54	7.854	0.1086	0.1087	04:15:43	Yes
Mean:	78.74	7.874	0.1089			
SD :	0.1941	0.0194	0.0003			
%RSD:	0.2	0.2	0.2464			

Element: Hg Seq. No.: 49 AS Loc.: 7 Date: 04/10/2001  
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.997	0.997	0.0138	0.0139	04:16:58	Yes
2	0.979	0.979	0.0135	0.0137	04:17:31	Yes
3	0.993	0.993	0.0137	0.0138	04:18:04	Yes
Mean:	0.990	0.990	0.0137			
SD :	0.0093	0.0093	0.0001			
%RSD:	0.9	0.9	0.9352			

QC value within specified limits.

Element: Hg Seq. No.: 50 AS Loc.: 8 Date: 04/10/2001  
 Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.003	0.003	0.0000	0.0002	04:18:53	Yes
2	0.005	0.005	0.0001	0.0002	04:19:26	Yes
3	0.005	0.005	0.0001	0.0002	04:19:59	Yes
Mean:	0.004	0.004	0.0001			
SD :	0.0008	0.0008	0.0000			
%RSD:	18.4	18.4	18.3801			

QC value within specified limits.

Element: Hg Seq. No.: 51 AS Loc.: 4 Date: 04/10/2001  
 Sample ID: Reslope

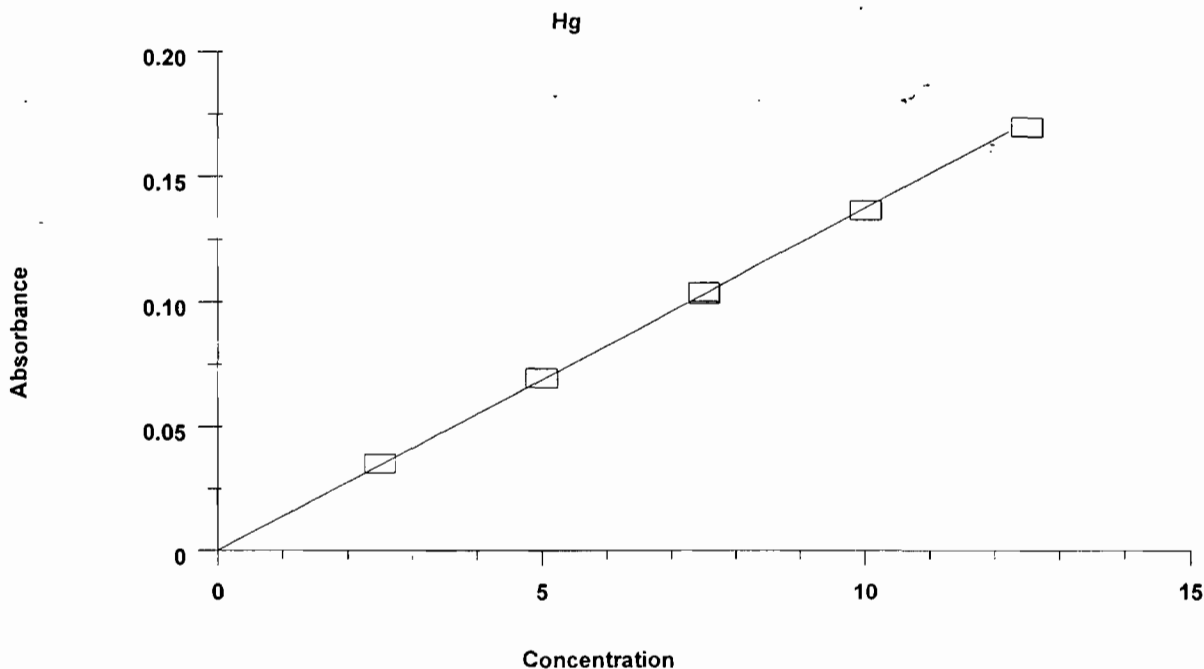
Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.1035	0.1036	04:20:50	Yes
2			0.1035	0.1036	04:21:23	Yes
3			0.1022	0.1023	04:21:56	Yes
Mean:			0.1031			
SD :			0.0007			
%RSD:			0.7255			

[Hg] Reslope standard applied. [7.500]  
 Correlation Coefficient: 0.99977 Slope: 0.01360

00074

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0001	---	0.008	0.0000	6.6
STD1	0.0349	2.500	2.536	0.0000	----
STD2	0.0695	5.000	5.060	0.0003	0.4
STD3	0.1039	7.500	7.562	0.0002	0.2
STD4	0.1364	10.000	9.924	0.0003	0.2
STD5	0.1697	12.500	12.34	0.0002	----
Reslope	0.1031	7.500	7.500	0.0007	0.7
Correlation Coefficient: 0.99977		Slope: 0.01360		----	



Element: Hg Seq. No.: 52 AS Loc.: 45 Date: 04/10/2001  
 Sample ID: 14845DS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	76.73	7.673	0.1054	0.1056	04:23:14	Yes
2	76.62	7.662	0.1053	0.1054	04:23:48	Yes
3	76.17	7.617	0.1047	0.1048	04:24:21	Yes
Mean:	76.50	7.650	0.1051			
SD :	0.2965	0.0297	0.0004			
%RSD:	0.4	0.4	0.3876			

Element: Hg Seq. No.: 53 AS Loc.: 46 Date: 04/10/2001  
 Sample ID: 14843

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.200	0.020	0.0003	0.0004	04:25:34	Yes
2	0.191	0.019	0.0003	0.0004	04:26:07	Yes
3	0.222	0.022	0.0003	0.0004	04:26:40	Yes

00075

Mean: 0.204 0.020 0.0003  
 SD : 0.0162 0.0016 0.0000  
 %RSD: 7.9 7.9 7.9247

=====  
 Element: Hg Seq. No.: 54 AS Loc.: 47 Date: 04/10/2001  
 Sample ID: 14844

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.693	0.069	0.0010	0.0011	04:27:29	Yes
2	0.688	0.069	0.0009	0.0011	04:28:02	Yes
3	0.698	0.070	0.0010	0.0011	04:28:35	Yes
Mean:	0.693	0.069	0.0010			
SD :	0.0051	0.0005	0.0000			
%RSD:	0.7	0.7	0.7312			

=====  
 Element: Hg Seq. No.: 55 AS Loc.: 48 Date: 04/10/2001  
 Sample ID: 14846

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	45.77	4.577	0.0629	0.0630	04:29:24	Yes
2	45.61	4.561	0.0627	0.0628	04:29:57	Yes
3	45.84	4.584	0.0630	0.0631	04:30:30	Yes
Mean:	45.74	4.574	0.0629			
SD :	0.1200	0.0120	0.0002			
%RSD:	0.3	0.3	0.2623			

=====  
 Element: Hg Seq. No.: 56 AS Loc.: 49 Date: 04/10/2001  
 Sample ID: 14847

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	42.93	4.293	0.0590	0.0591	04:31:44	Yes
2	42.67	4.267	0.0586	0.0588	04:32:17	Yes
3	42.71	4.271	0.0587	0.0588	04:32:50	Yes
Mean:	42.77	4.277	0.0588			
SD :	0.1377	0.0138	0.0002			
%RSD:	0.3	0.3	0.3218			

=====  
 Element: Hg Seq. No.: 57 AS Loc.: 50 Date: 04/10/2001  
 Sample ID: 14851

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	22.18	2.218	0.0305	0.0306	04:34:05	Yes
2	22.31	2.231	0.0307	0.0308	04:34:38	Yes
3	22.25	2.225	0.0306	0.0307	04:35:11	Yes
Mean:	22.25	2.225	0.0306			
SD :	0.0646	0.0065	0.0001			
%RSD:	0.3	0.3	0.2903			

=====  
 Element: Hg Seq. No.: 58 AS Loc.: 51 Date: 04/10/2001  
 Sample ID: 14852

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	25.83	2.583	0.0355	0.0356	04:36:00	Yes
2	25.82	2.582	0.0355	0.0356	04:36:34	Yes
3	26.01	2.601	0.0357	0.0359	04:37:07	Yes
Mean:	25.89	2.589	0.0356			



00076

SD : 0.1084 0.0108 0.0001  
 %RSD: 0.4 0.4 0.4187

Element: Hg Seq. No.: 59 AS Loc.: 52 Date: 04/10/2001  
 Sample ID: 14853

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	34.71	3.471	0.0477	0.0478	04:37:56	Yes
2	34.55	3.455	0.0475	0.0476	04:38:29	Yes
3	34.80	3.480	0.0478	0.0479	04:39:02	Yes
Mean:	34.68	3.468	0.0477			
SD :	0.1282	0.0128	0.0002			
%RSD:	0.4	0.4	0.3698			

Element: Hg Seq. No.: 60 AS Loc.: 53 Date: 04/10/2001  
 Sample ID: 14857

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	25.70	2.570	0.0353	0.0354	04:39:51	Yes
2	25.58	2.558	0.0352	0.0353	04:40:24	Yes
3	25.82	2.582	0.0355	0.0356	04:40:57	Yes
Mean:	25.70	2.570	0.0353			
SD :	0.1200	0.0120	0.0002			
%RSD:	0.5	0.5	0.4669			

Element: Hg Seq. No.: 61 AS Loc.: 54 Date: 04/10/2001  
 Sample ID: 14858

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	27.20	2.720	0.0374	0.0375	04:41:45	Yes
2	27.35	2.735	0.0376	0.0377	04:42:18	Yes
3	27.29	2.729	0.0375	0.0376	04:42:51	Yes
Mean:	27.28	2.728	0.0375			
SD :	0.0779	0.0078	0.0001			
%RSD:	0.3	0.3	0.2857			

Element: Hg Seq. No.: 62 AS Loc.: 7 Date: 04/10/2001  
 Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.987	0.987	0.0136	0.0137	04:43:41	Yes
2	0.986	0.986	0.0135	0.0137	04:44:14	Yes
3	0.985	0.985	0.0135	0.0136	04:44:47	Yes
Mean:	0.986	0.986	0.0135			
SD :	0.0008	0.0008	0.0000			
%RSD:						

QC value within specified limits.

Element: Hg Seq. No.: 63 AS Loc.: 8 Date: 04/10/2001  
 Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.007	0.007	0.0001	0.0002	04:45:36	Yes
2	0.009	0.009	0.0001	0.0002	04:46:10	Yes
3	0.006	0.006	0.0001	0.0002	04:46:42	Yes
Mean:	0.007	0.007	0.0001			

00077

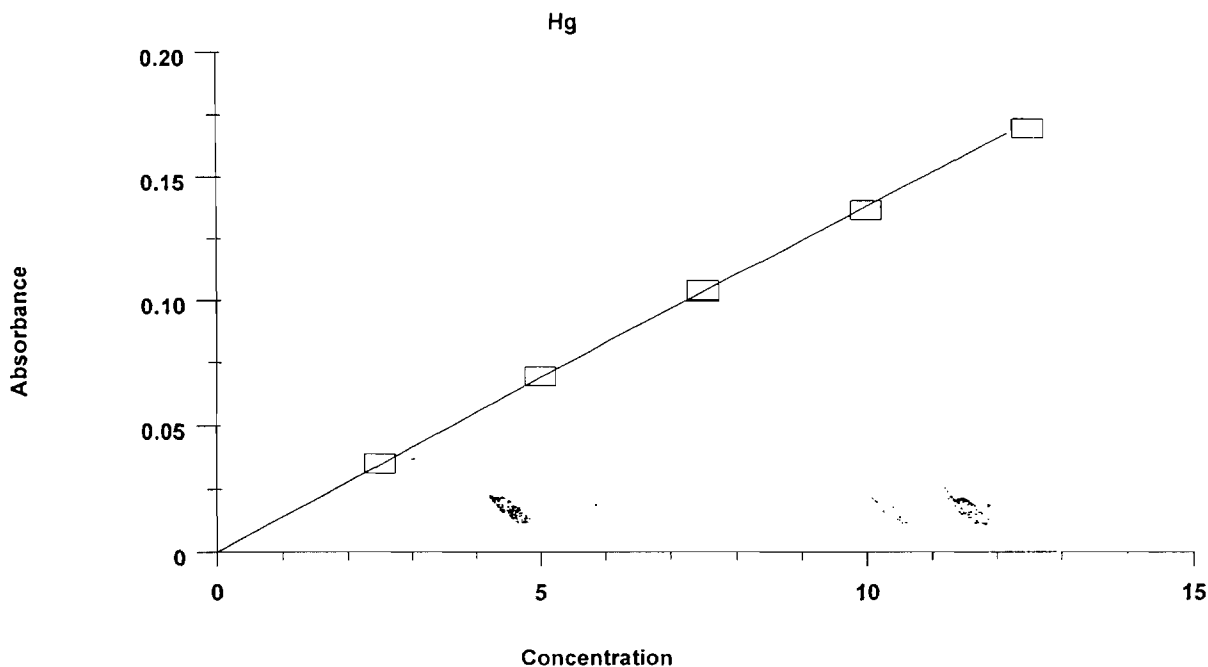
SD : 0.0017 0.0017 0.0000  
 %RSD: 22.7 22.7 22.7207  
 QC value within specified limits.

=====  
 Element: Hg Seq. No.: 64 AS Loc.: 4 Date: 04/10/2001  
 Sample ID: Reslope

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.1029	0.1030	04:47:32	Yes
2			0.1031	0.1032	04:48:06	Yes
3			0.1040	0.1041	04:48:39	Yes
Mean:			0.1033			
SD :			0.0006			
%RSD:			0.5778			
[Hg] Reslope standard applied. [7.500]						
Correlation Coefficient: 0.99977				Slope: 0.01357		

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0001	---	0.008	0.0000	6.6
STD1	0.0349	2.500	2.530	0.0000	---
STD2	0.0695	5.000	5.048	0.0003	0.4
STD3	0.1039	7.500	7.543	0.0002	0.2
STD4	0.1364	10.000	9.900	0.0003	0.2
STD5	0.1697	12.500	12.31	0.0002	---
Reslope	0.1033	7.500	7.500	0.0006	0.6
Correlation Coefficient: 0.99977		Slope: 0.01357		----	



=====  
 Element: Hg Seq. No.: 65 AS Loc.: 55 Date: 04/10/2001  
 Sample ID: 14859

00078

Repl #	SampleConc µg/L	StdndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	23.79	2.379	0.0328	0.0329	04:49:56	Yes
2	24.00	2.400	0.0331	0.0332	04:50:29	Yes
3	23.74	2.374	0.0327	0.0328	04:51:02	Yes
Mean:	23.84	2.384	0.0328			
SD :	0.1404	0.0140	0.0002			
%RSD:	0.6	0.6	0.5887			

=====  
 Element: Hg Seq. No.: 66 AS Loc.: 56 Date: 04/10/2001  
 Sample ID: BL0410-7M3B

Repl #	SampleConc µg/L	StdndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.011	0.011	0.0002	0.0003	04:51:51	Yes
2	0.012	0.012	0.0002	0.0003	04:52:24	Yes
3	0.013	0.013	0.0002	0.0003	04:52:57	Yes
Mean:	0.012	0.012	0.0002			
SD :	0.0011	0.0011	0.0000			
%RSD:	8.8	8.8	8.7537			

=====  
 Element: Hg Seq. No.: 67 AS Loc.: 57 Date: 04/10/2001  
 Sample ID: BL0410S

Repl #	SampleConc µg/L	StdndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.004	1.004	0.0138	0.0139	04:53:46	Yes
2	1.009	1.009	0.0139	0.0140	04:54:19	Yes
3	1.002	1.002	0.0138	0.0139	04:54:52	Yes
Mean:	1.005	1.005	0.0138			
SD :	0.0036	0.0036	0.0000			
%RSD:	0.4	0.4	0.3594			

=====  
 Element: Hg Seq. No.: 68 AS Loc.: 58 Date: 04/10/2001  
 Sample ID: BL0410DS

Repl #	SampleConc µg/L	StdndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.002	1.002	0.0138	0.0139	04:55:40	Yes
2	0.991	0.991	0.0137	0.0138	04:56:13	Yes
3	0.991	0.991	0.0136	0.0138	04:56:47	Yes
Mean:	0.995	0.995	0.0137			
SD :	0.0066	0.0066	0.0001			
%RSD:	0.7	0.7	0.6600			

=====  
 Element: Hg Seq. No.: 69 AS Loc.: 59 Date: 04/10/2001  
 Sample ID: 15069

Repl #	SampleConc µg/L	StdndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.032	0.032	0.0004	0.0005	04:57:35	Yes
2	0.032	0.032	0.0004	0.0006	04:58:09	Yes
3	0.033	0.033	0.0004	0.0006	04:58:42	Yes
Mean:	0.032	0.032	0.0004			
SD :	0.0005	0.0005	0.0000			
%RSD:	1.6	1.6	1.6128			

=====  
 Element: Hg Seq. No.: 70 AS Loc.: 60 Date: 04/10/2001  
 Sample ID: 15069D

Repl #	SampleConc µg/L	StdndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
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00079

#	µg/L	µg/L	Signal	Height	Stored
1	0.032	0.032	0.0004	0.0005	04:59:31 Yes
2	0.033	0.033	0.0005	0.0006	05:00:04 Yes
3	0.033	0.033	0.0005	0.0006	05:00:37 Yes
Mean:	0.033	0.033	0.0004		
SD :	0.0006	0.0006	0.0000		
%RSD:	1.9	1.9	1.9478		

=====  
 Element: Hg Seq. No.: 71 AS Loc.: 61 Date: 04/10/2001  
 Sample ID: 15069S

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	1.062	1.062	0.0146	0.0147	05:01:26	Yes
2	1.054	1.054	0.0145	0.0146	05:01:59	Yes
3	1.037	1.037	0.0143	0.0144	05:02:32	Yes
Mean:	1.051	1.051	0.0145			
SD :	0.0127	0.0127	0.0002			
%RSD:	1.2	1.2	1.2077			

=====  
 Element: Hg Seq. No.: 72 AS Loc.: 62 Date: 04/10/2001  
 Sample ID: 15069DS

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	1.048	1.048	0.0144	0.0146	05:03:21	Yes
2	1.042	1.042	0.0144	0.0145	05:03:54	Yes
3	1.045	1.045	0.0144	0.0145	05:04:27	Yes
Mean:	1.045	1.045	0.0144			
SD :	0.0031	0.0031	0.0000			
%RSD:	0.3	0.3	0.3012			

=====  
 Element: Hg Seq. No.: 73 AS Loc.: 63 Date: 04/10/2001  
 Sample ID: 15067

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.013	0.013	0.0002	0.0003	05:05:16	Yes
2	0.014	0.014	0.0002	0.0003	05:05:49	Yes
3	0.015	0.015	0.0002	0.0003	05:06:22	Yes
Mean:	0.014	0.014	0.0002			
SD :	0.0011	0.0011	0.0000			
%RSD:	7.9	7.9	7.8948			

=====  
 Element: Hg Seq. No.: 74 AS Loc.: 64 Date: 04/10/2001  
 Sample ID: 15068

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1	0.012	0.012	0.0002	0.0003	05:07:10	Yes
2	0.011	0.011	0.0002	0.0003	05:07:43	Yes
3	0.011	0.011	0.0002	0.0003	05:08:17	Yes
Mean:	0.011	0.011	0.0002			
SD :	0.0005	0.0005	0.0000			
%RSD:	4.0	4.0	4.0078			

=====  
 Element: Hg Seq. No.: 75 AS Loc.: 7 Date: 04/10/2001  
 Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
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00080

1	0.988	0.988	0.0136	0.0137	05:09:06	Yes
2	0.996	0.996	0.0137	0.0138	05:09:39	Yes
3	0.990	0.990	0.0136	0.0138	05:10:11	Yes
Mean:	0.991	0.991	0.0137			
SD :	0.0038	0.0038	0.0001			
%RSD:	0.4	0.4	0.3833			

QC value within specified limits.

=====  
 Element: Hg      Seq. No.: 76      AS Loc.: 8      Date: 04/10/2001  
 Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.005	0.005	0.0001	0.0002	05:11:01	Yes
2	0.007	0.007	0.0001	0.0002	05:11:34	Yes
3	0.006	0.006	0.0001	0.0002	05:12:07	Yes
Mean:	0.006	0.006	0.0001			
SD :	0.0010	0.0010	0.0000			
%RSD:	16.7	16.7	16.7476			

QC value within specified limits.

=====  
 Element: Hg      Seq. No.: 77      AS Loc.: 4      Date: 04/10/2001  
 Sample ID: Reslope

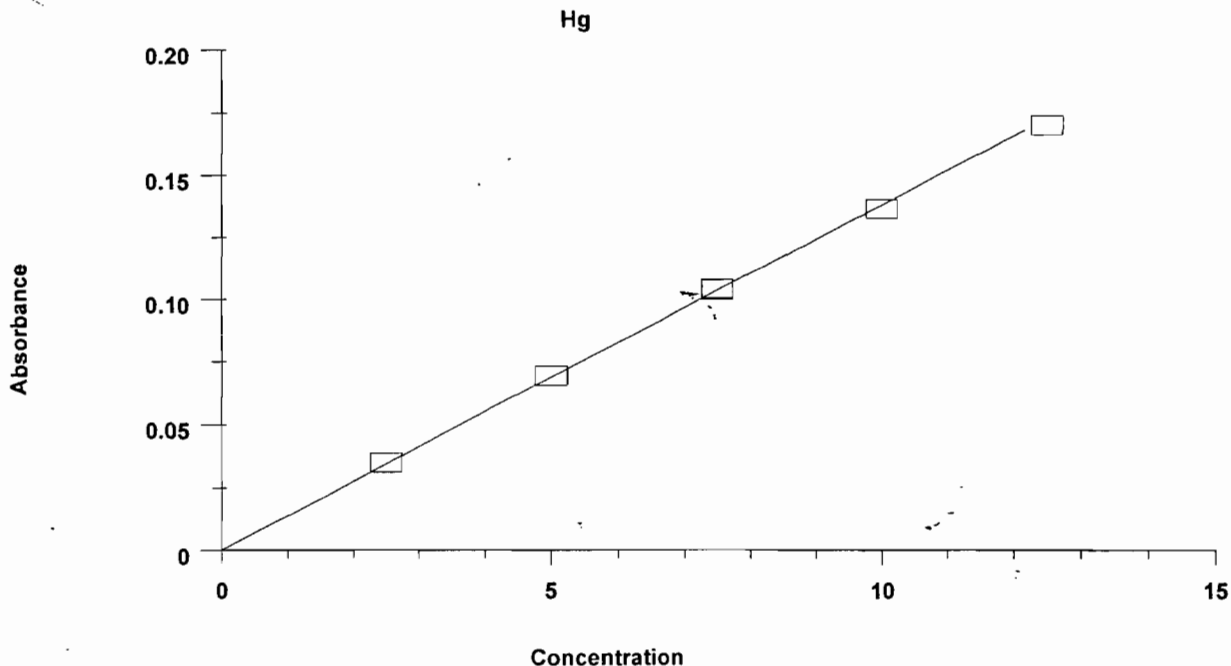
Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1			0.1035	0.1037	05:12:58	Yes
2			0.1032	0.1033	05:13:31	Yes
3			0.1034	0.1035	05:14:04	Yes
Mean:			0.1034			
SD :			0.0002			
%RSD:			0.1479			

[Hg] Reslope standard applied. [7.500]  
 Correlation Coefficient: 0.99977      Slope: 0.01356

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0001	---	0.008	0.0000	6.6
STD1	0.0349	2.500	2.529	0.0000	----
STD2	0.0695	5.000	5.044	0.0003	0.4
STD3	0.1039	7.500	7.538	0.0002	0.2
STD4	0.1364	10.000	9.893	0.0003	0.2
STD5	0.1697	12.500	12.31	0.0002	----
Reslope	0.1034	7.500	7.500	0.0002	0.1
Correlation Coefficient:		0.99977	Slope: 0.01356	----	

00081



=====  
 Element: Hg    Seq. No.: 78    AS Loc.: 65    Date: 04/10/2001  
 Sample ID: 15070

Repl #	SampleConc µg/L	StdConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.013	0.013	0.0002	0.0003	05:15:24	Yes
2	0.013	0.013	0.0002	0.0003	05:15:57	Yes
3	0.013	0.013	0.0002	0.0003	05:16:30	Yes
Mean:	0.013	0.013	0.0002			
SD :	0.0004	0.0004	0.0000			
%RSD:	3.2	3.2	3.1832			

=====  
 Element: Hg    Seq. No.: 79    AS Loc.: 66    Date: 04/10/2001  
 Sample ID: 15071

Repl #	SampleConc µg/L	StdConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.024	0.024	0.0003	0.0004	05:17:19	Yes
2	0.024	0.024	0.0003	0.0004	05:17:52	Yes
3	0.022	0.022	0.0003	0.0004	05:18:25	Yes
Mean:	0.023	0.023	0.0003			
SD :	0.0012	0.0012	0.0000			
%RSD:	5.3	5.3	5.3287			

=====  
 Element: Hg    Seq. No.: 80    AS Loc.: 67    Date: 04/10/2001  
 Sample ID: 15072

Repl #	SampleConc µg/L	StdConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	9.434	9.434	0.1301	0.1302	05:19:14	Yes
2	9.377	9.377	0.1293	0.1294	05:19:47	Yes
3	9.254	9.254	0.1276	0.1277	05:20:20	Yes
Mean:	9.355	9.355	0.1290			
SD :	0.0920	0.0920	0.0013			

00082

Revision 2  
Effective 000926

EPA 7470 WATER PREPARATION LOG - MERCURY

DG7470HG, DGHGLEACH, DG29\*

Calibration Solutions:

#	LD.	**Conc.	Spike	***Conc. Entered
1	Blank/Dummy	0 ppb	None	0.0
2	Standard 1	0 ppb	None	0.0
3	Standard 2	1.67	500 ul of 0.1 ppm working cal standard	2.5
4	Standard 3	3.33	1000 ul of 0.1 ppm working cal standard	6.0
5	Standard 4	6.8	1500 ul of 0.1 ppm working cal standard	7.5
6	Standard 4	6.8	1500 ul of 0.1 ppm working cal standard	7.5
7	Standard 4	6.8	1500 ul of 0.1 ppm working cal standard	7.5
8	Standard 4	6.8	1500 ul of 0.1 ppm working cal standard	7.5
9	Standard 6	6.67	2000 ul of 0.1 ppm working cal standard	10.0
10	Standard 6	8.33	2500 ul of 0.1 ppm working cal standard	12.6

Check List

- Digest Code/labels
- Samples poured out
- Acids added
- Reagents added
- Samples spiked
- Bath at 95 degrees C
- Samples digested
- Hydroxylamine HCl added.
- Samples shaken and bulked
- Rack order checked

#	Sample LD.	B.Code	Init.Vol.	F. Vol.	Dil	Comment
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11	ICV (Int. Calib. Verif.)	147B	20 ml	30 ml	1 X	1.5 ppb = 600 ul of 0.05ppm Working Reference QC Std.
12	LLC (low level check)	"	"	"	"	0.25ppb = 50ul of 0.1 ppm Working Cal Std.
13	BL 0410	"	"	"	"	(Processed Blank)
14	BL 0410 S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
15	BL 0410 DS	"	"	"	"	(Duplicate Blank Spike)
1	16 014845	"	"	"	"	
1	17	D	"	"	"	(Duplicate sample)
1	18	S	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
1	19	DS	"	"	"	(Duplicate Spiked sample)
2	20	42	"	"	"	
3	21	43	"	"	"	
4	22	44	"	"	"	
5	23	46	"	"	"	
6	24	47	"	"	"	
7	25	51	"	"	"	
8	26	52	"	"	"	
9	27	53	"	"	"	
10	28	58	"	"	"	
29	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
30	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
31	BL 0410	241B	20 ml	30 ml	"	(Processed Blank)
32	BL 0410 S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
33	BL 0410 DS	"	"	"	"	(Duplicate Blank Spike)
1	34 014857	"	"	"	"	
1	35	D	"	"	"	(Duplicate sample)
1	36	S	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
1	37	DS	"	"	"	(Duplicate Spiked sample)
2	38	59	"	"	"	
3	39	"	"	"	"	
4	40	"	"	"	"	
5	41	"	"	"	"	
6	42	"	"	"	"	
7	43	"	"	"	"	
8	44	"	"	"	"	
9	45	"	"	"	"	
10	46	"	"	"	"	
47	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
48	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.

Comments: \*\* concentration based on 30 ml final volume, \*\*\* concentration based on 20 ml final volume

Other Applicable Test Codes: DG29HG-1B, DG29HG-2B, DG29HG-3A, DG29HG-3B, DG29HG-3C

DG29HGL, DG29HGF, DG101AA1, DG101AA2

#	Sample ID.	B.Code	Init.Vol.	F. Vol.	Dil	Comment
49	BL 0410	3H2B	-	-	-	(Processed Blank) 014261
50	BL 0410 S	-	-	-	-	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
51	BL 0410 DS	-	-	-	-	(Duplicate Blank Spike)
1	52 014265	-	2.00ul	-	10x	
1	53	D	-	-	-	(Duplicate sample)
1	54	S	-	-	-	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
1	55	DS	-	-	-	(Duplicate Spiked sample)
2	56 62	-	-	-	-	
3	57 63	-	-	-	-	
4	58 64	-	-	-	-	
5	59 66	-	-	-	-	
6	60 67	-	-	-	-	
7	61	-	-	-	-	
8	62	-	-	-	-	
9	63	-	-	-	-	
10	64	-	-	-	-	
	65 CCV (Cond. Calib. Verif.)	-	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
	66 CCV (Cond. Calib. Verif.)	-	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.

## Procedure/Methodology:

- 1 Prepare 25 ppm Intermediate Calibration Standard (if required) by pipetting 625 ul. of 1000 ppm Stock to 25 ml final volume of 2% HNO<sub>3</sub>
- 2 Prepare 0.1 ppm Working calibration standard daily by pipetting 400 ul. of 25 ppm Intermediate to 100 ml final volume of 2% HNO<sub>3</sub>
- 3 Prepare a 0.05 ppm Working Reference QC Standard daily by pipetting 50 ul of Stock Reference Standard to 100 ml final vol of 2% HNO<sub>3</sub>
- 4 Using the LIMS Screen "SCNDIG" enter the required samples into LIMS
- 5 Using the labeling program, "DIGLBL", retrieve the "SCNDIG" list and create labels for the required samples.
- 6 Label the falcon tubes appropriately
- 7 Include one External Reference Material sample per run
- 8 Include one Organic Mercury Control Standard per run
- 9 Transfer a 20 ml. aliquot of well mixed sample into the designated falcon tube
- 10 Spike the tubes as indicated in the comment sector of the digestion sheet
- 11 Add 0.5 ml. of conc. Nitric Acid (HNO<sub>3</sub>), and 1 ml. of conc. Sulphuric acid, (H<sub>2</sub>SO<sub>4</sub>), to each tube
- 12 Add 3 ml. of 6% KMnO<sub>4</sub>, purple colour must remain for the duration of digest.
- 13 Add 1.5 ml. of 5% potassium persulphate, (K<sub>2</sub>S<sub>2</sub>O<sub>8</sub>), to each tube
- 14 Mix samples, cap loosely and place in a water bath @ 85 degrees C for 2 hours
- 15 Remove tubes and allow to cool to room temperature
- 16 Add 1.0 ml. 20% Hydroxylamine Hydrochloride to each tube.
- 17 Recap tubes and shake until KMnO<sub>4</sub> is destroyed and sample becomes colourless  
Dilute the sample to a final volume of 30 ml.

Supplier/Lot Information	Supplier	Lot	Expiry Date
Stock Calibration Standard	Inorganic Ventures	P-H602023	01/04/01
Intermediate Cal Standard	Internal	01/03/23	01/04/23
Stock Reference Standard	High Purity	033536	5AH.02
External Reference Material	SPEX NYS	3311	
Organic Mercury Control Standard	Aldrich	06811HR	01/02/02
6% potassium permanganate	Internal	01/04/06	01/06/06
5% potassium persulphate	Internal	01/04/04	01/06/04
20% hydroxylamine hydrochloride	Internal	01/04/06	01/06/06
HNO <sub>3</sub>	Anachemia	1100083	01/06/06
H <sub>2</sub> SO <sub>4</sub>	Anachemia	3100091	01/06/25
Bath Temp: 1957 C	Time ON: 11:10	Time OFF: 12:10	
Prepared By:	Date: 01/04/10	Checked by: HB	



EPA 7470 WATER PREPARATION LOG - MERCURY

DG7470HG, DGHGLEACH, DG29\*

Calibration Solutions:

#	I.D.	**Conc.	Spike	***Conc. Entered
1	Blank/Dummy	0 ppb	None	0.0
2	Standard 1	0 ppb	None	0.0
3	Standard 2	1.67	500 ul of 0.1 ppm working cal standard	2.5
4	Standard 3	3.33	1000 ul of 0.1 ppm working cal standard	5.0
5	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
6	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
7	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
8	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
9	Standard 5	6.67	2000 ul of 0.1 ppm working cal standard	10.0
10	Standard 6	8.33	2500 ul of 0.1 ppm working cal standard	12.5

Check List

- Digest Code/labels
- Samples poured out
- Acids added
- Reagents added
- Samples spiked
- Bath at 95 degrees C
- Samples digested
- Hydroxylamine HCl added
- Samples shaken and bulked
- Rack order checked

#	Sample I.D.	B.Code	Init.Vol.	F. Vol.	Dil	Comment
11	ICV (Ink. Coll. Verif.)	4K2B	20 ml	30 ml	1 X	1.5 ppb = 600 ul of 0.05ppm Working Reference QC Std.
12	LLC (low level check)	"	"	"	"	0.25ppb = 50ul of 0.1 ppm Working Cal Std.
13	BL0410	"	"	"	"	(Processed Blank) 014842
14	BL0410 S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
15	BL0410 DS	"	"	"	"	(Duplicate Blank Spike)
16	014845	"	1.00ul	"	10x	
17	D	"	"	"	"	(Duplicate sample)
18	S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
19	DS	"	"	"	"	(Duplicate Spiked sample)
20	13	"	"	"	"	
21	44	"	"	"	"	
22	46	"	"	"	"	
23	47	"	"	"	"	
24	51	"	"	"	"	
25	52	"	"	"	"	
26	53	"	"	"	"	
27	57	"	"	"	"	
28	58	"	"	"	"	014584
29	CCV (Cont. Coll. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
30	CCV (Cont. Coll. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
31	BL0410	5K2B	20 ml	30 ml	"	(Processed Blank) 015067
32	BL0410 S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
33	BL0410 DS	"	"	"	"	(Duplicate Blank Spike)
34	015069	"	2.00ul	"	10x	
35	D	"	"	"	"	(Duplicate sample)
36	S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
37	DS	"	"	"	"	(Duplicate Spiked sample)
38	68	"	"	"	"	
39	70	"	"	"	"	
40	71	"	"	"	"	
41	72	"	"	"	"	
42	73	"	"	"	"	
43	74	"	"	"	"	
44	"	"	"	"	"	
45	"	"	"	"	"	
46	"	"	"	"	"	
47	CCV (Cont. Coll. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
48	CCV (Cont. Coll. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.

Comments: \*\* concentration based on 30 ml final volume, \*\*\* concentration based on 20 ml final volume

Other Applicable Test Codes: DG29HG-1B, DG29HG-2B, DG29HG-3A, DG29HG-3B, DG29HG-3C

DG29HGI, DG29HGF, DG101AA1, DG101AA2

#	Sample LD.	B.Code	Init.Vol.	F. Vol.	Dil	Comment
49	BL 04 10	613B	-	-	-	(Processed Blank)
50	BL 04 10 S	-	-	-	-	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
51	BL 04 10 DS	-	-	-	-	(Duplicate Blank Spike)
1 52	014 265	-	-	-	-	
1 53		D	-	-	-	(Duplicate sample)
1 54		S	-	-	-	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
1 65		DS	-	-	-	(Duplicate Spiked sample)
2 66	61	-	-	-	-	
3 67	62	-	-	-	-	
4 68	63	-	-	-	-	
6 69	64	-	-	-	-	
6 60	66	-	-	-	-	
7 61	66 46 67	-	-	-	-	
8 62		-	-	-	-	
9 63		-	-	-	-	
10 64		-	-	-	-	
65	CCV (Cont. Catb. VerK)	-	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
66	CCV (Cont. Catb. VerK)	-	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.

## Procedure/Methodology:

- 1 Prepare 25 ppm Intermediate Calibration Standard (if required) by pipetting 625 ul. of 1000 ppm Stock to 25 ml final volume of 2% HNO<sub>3</sub>
- 2 Prepare 0.1 ppm Working calibration standard daily by pipetting 400 ul. of 25 ppm Intermediate to 100 ml final volume of 2% HNO<sub>3</sub>
- 3 Prepare a 0.05 ppm Working Reference QC Standard daily by pipetting 50 ul of Stock Reference Standard to 100 ml final vol of 2% HNO<sub>3</sub>
- 4 Using the LIMS Screen "SCNDIG" enter the required samples into LIMS
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- 6 Label the falcon tubes appropriately
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- 8 Include one Organic Mercury Control Standard per run
- 9 Transfer a 20 ml. aliquot of well mixed sample into the designated falcon tube
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- 12 Add 3 ml. Of 6% KMnO<sub>4</sub>, purple colour must remain for the duration of digest.
- 13 Add 1.5 ml. of 5% potassium persulphate, (K<sub>2</sub>S<sub>2</sub>O<sub>8</sub>), to each tube
- 14 Mix samples, cap loosely and place in a water bath @ 85 degrees C for 2 hours
- 15 Remove tubes and allow to cool to room temperature
- 16 Add 1.0 ml. 20% Hydroxylamine Hydrochloride to each tube.
- 17 Recap tubes and shake until KMnO<sub>4</sub> is destroyed and sample becomes colourless  
Dilute the sample to a final volume of 30 ml.

Supplier/Lot Information	Supplier	Lot	Expiry Date
Stock Calibration Standard	Inorganic Ventures	P-4602023	01/04/01
Intermediate Cal Standard	Internal	01/03/23	01/04/23
Stock Reference Standard	High Purity	033536	JAN 02
External Reference Material	SPEX/13	3311	
Organic Mercury Control Standard	Aldrich	068114R	01/02/02
6% potassium permanganate	Internal	01/04/06	01/06/06
5% potassium persulphate	Internal	01/04/04	01/06/04
20% hydroxylamine hydrochloride	Internal	01/04/06	01/06/06
HNO <sub>3</sub>	Anachemia	1100083	01/06/06
H <sub>2</sub> SO <sub>4</sub>	Anachemia	3100091	01/05/27
Bath Temps: 195 C	Time ON: 11:10	Time OFF: 1:10	
Prepared By: RB	Date: 01/04/10	Checked by: RB	

Zenon Number	Client	Client ID	Parameter	TS	Result	Dup.	Spike	% Rec.	Dup. Spk	% Rec.	Batch Date	Batch Code	Run Date	Run Code	Day Old	Day In	Analyst's Comments
014842	CLEANAIR	MB R456	Mercury - PV		-0.010	-99999.0	0.100	100.	0.101	101.	01/04/05	3B3A	01/04/06	MG01	7.	3.	
014843	CLEANAIR	M29HG Reagent Blank	Mercury - PV		-0.010						01/04/05	3B3A	01/04/06	MG01	7.	3.	
014844	CLEANAIR	M29HG Field Blank	Mercury - PV		-0.010						01/04/05	3B3A	01/04/06	MG01	7.	3.	
014845	CLEANAIR	M29HG U1 Outlet R1	Mercury - PV		0.086	0.091	0.203	104.	0.204	105.	01/04/05	3B3A	01/04/06	MG01	10.	3.	
014846	CLEANAIR	M29HG U1 Outlet R2	Mercury - PV		0.037						01/04/05	3B3A	01/04/06	MG01	10.	3.	
014847	CLEANAIR	M29HG U1 Outlet R3	Mercury - PV		0.086						01/04/05	3B3A	01/04/06	MG01	10.	3.	
014851	CLEANAIR	M29HG U2 Outlet R1	Mercury - PV		-0.010						01/04/05	3B3A	01/04/06	MG01	9.	3.	
014852	CLEANAIR	M29HG U2 Outlet R2	Mercury - PV		0.050						01/04/05	3B3A	01/04/06	MG01	9.	3.	
014853	CLEANAIR	M29HG U2 Outlet R3	Mercury - PV		0.038						01/04/05	3B3A	01/04/06	MG01	9.	3.	
014857	CLEANAIR	M29HG U3 Outlet R1	Mercury - PV		-0.010						01/04/05	3B3A	01/04/06	MG01	9.	3.	
014858	CLEANAIR	M29HG U3 Outlet R2	Mercury - PV		-0.010						01/04/05	3B3A	01/04/06	MG01	9.	3.	
014859	CLEANAIR	M29HG U3 Outlet R3	Mercury - PV		0.012						01/04/05	3B3A	01/04/06	MG01	8.	3.	
BL0405	INTERNAL		Mercury - PV		-0.010	-99999.0	0.100	100.	0.101	101.	01/04/05	3B3A	01/04/06	MG01	\$\$\$	\$\$\$	

13 Tests for 29HG-3A with an MDL of 0.010 ug

Validated By cmk

Control Chart Updated N/A

IO Requirements met N/A

98000

00087

Sample #	Conc. ug/L	Dilution x	Final Vol ml	Result T ug	Mdl ug	Dil Mdl ug	%	MDL FV
BL0405-3B3A	0.003	1	100	0.000	0.01	0.01		100
BL0405S	0.997	1	100	0.100	0.01	0.01	100	100
BL0405DS	1.007	1	100	0.101	0.01	0.01	101	100
14845	0.785	1	110	0.086	0.01	0.01		100
14845D	0.827	1	110	0.091	0.01	0.01		100
14845S	1.845	1	110	0.203	0.01	0.01	104	100
14845DS	1.859	1	110	0.204	0.01	0.01	105	100
14843	0.008	1	100	0.001	0.01	0.01		100
14844	0.038	1	100	0.004	0.01	0.01		100
14846	0.373	1	100	0.037	0.01	0.01		100
14847	0.818	1	105	0.086	0.01	0.01		100
14851	0.046	1	105	0.005	0.01	0.01		100
14852	0.484	1	110	0.053	0.01	0.01		100
14853	0.341	1	110	0.038	0.01	0.01		100
14857	0.026	1	100	0.003	0.01	0.01		100
14858	0.031	1	120	0.004	0.01	0.01		100
14859	0.101	1	120	0.012	0.01	0.01		100

Sample Information File C:\FIMS\AAUSER\SAMPINFO\010406F1.SIF

Description : METHOD29  
 Batch ID : MG01  
 Volume Units : L  
 Weight Units : µg  
 Analyst : MGAS  
 Sample Volume : 0.00

AS Sample ID Loc	Sample Sample Weight Units	User Dilution	Remarks
15	BL0405-9M1B		
16	BL0405S		
17	BL0405DS		
18	14625		
19	14625D		
20	14625S		
21	14625DS		
22	14623		
23	14624		
24	14626		
25	14627		
26	BL0405-6MA1		
27	BL0405S		
28	BL0405DS		
29	14610		
30	14610D		
31	14610S		
32	14610DS		
33	14608		
34	14609		
35	14611		
36	14612		
37	BL0405-1B3A		
38	BL0405S		
39	BL0405DS		
40	15046		
41	15046D		
42	15046S		
43	15046DS		
44	15047		
45	15048		
46	15049		
47	15050		
48	15051		
49	BL0405-2B3A		
50	BL0405S		
51	BL0405DS		
52	14770 <i>S MA</i>	10.0000	
53	14770 <i>DS MA</i>	10.0000	
54	14770 <i>S MA</i>	10.0000	
55	14770 <i>DS MA</i>	10.0000	
56	14771	2.0000	
57	14772		
58	BL0405-3B3A		
59	BL0405S		
60	BL0405DS		
61	14845		
62	14845D		
63	14845S		
64	14845DS		
65	14843		
66	14844		

7	14846	
8	14847	
69	14851	
70	14852	
1	14853	
2	14857	
73	14858	
74	14859	
5	BL0406-1MDL	
6	BL0406S	
77	BL0406DS	
8	13280	10.0000
9	13280D	10.0000
0	13280S	10.0000
81	13280DS	10.0000
2	13281	10.0000
3	56042-2B 00	10.0000
84	56049-2B 00	10.0000

---

Method Name: EPA 7470  
Method Description: EPA 7470  
Element: Hg

Date: 04/06/2001  
Technique: FI-MHS  
Calibration Type:  
Hg, Zero Intercept: Linear  
Wavelength: 253.7 nm  
Sample Info Name: 010406F1.SIF                      Results Data Set Name: 010406F1

Element: Hg      Seq. No.: 1                      AS Loc.: 1      Date: 04/06/2001  
Sample ID: Calib Blank

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0002	0.0002	09:22:41	Yes
2			0.0002	0.0002	09:23:15	Yes
3			0.0002	0.0002	09:23:48	Yes
Mean:			0.0002			
SD :			0.0000			
%RSD:			6.2266			

Auto-zero performed.

Element: Hg      Seq. No.: 2                      AS Loc.: 2      Date: 04/06/2001  
Sample ID: STD1

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0370	0.0371	09:24:38	Yes
2			0.0368	0.0370	09:25:11	Yes
3			0.0368	0.0369	09:25:44	Yes
Mean:			0.0368			
SD :			0.0001			
%RSD:			0.2699			

[Hg] Standard number 1 applied. [2.500]  
Correlation Coefficient: 1.00000                      Slope: 0.01474

Element: Hg      Seq. No.: 3                      AS Loc.: 3      Date: 04/06/2001  
Sample ID: STD2

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0741	0.0743	09:26:33	Yes
2			0.0742	0.0744	09:27:06	Yes
3			0.0745	0.0747	09:27:39	Yes
Mean:			0.0743			
SD :			0.0002			
%RSD:			0.2952			

[Hg] Standard number 2 applied. [5.000]  
Correlation Coefficient: 0.99995                      Slope: 0.01483

Element: Hg      Seq. No.: 4                      AS Loc.: 4      Date: 04/06/2001  
Sample ID: STD3

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1087	0.1089	09:28:53	Yes
2			0.1081	0.1083	09:29:26	Yes
3			0.1085	0.1087	09:29:59	Yes
Mean:			0.1085			

SD : 0.0003  
 %RSD: 0.2739  
 [Hg] Standard number 3 applied. [7.500]  
 Correlation Coefficient: 0.99948 Slope: 0.01459

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 04/06/2001  
 Sample ID: STD4

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1			0.1461	0.1462	09:31:15	Yes
2			0.1460	0.1462	09:31:48	Yes
3			0.1455	0.1457	09:32:21	Yes
Mean:			0.1459			
SD :			0.0003			
%RSD:			0.2229			
[Hg] Standard number 4 applied. [10.00]						
Correlation Coefficient:			0.99979	Slope: 0.01459		

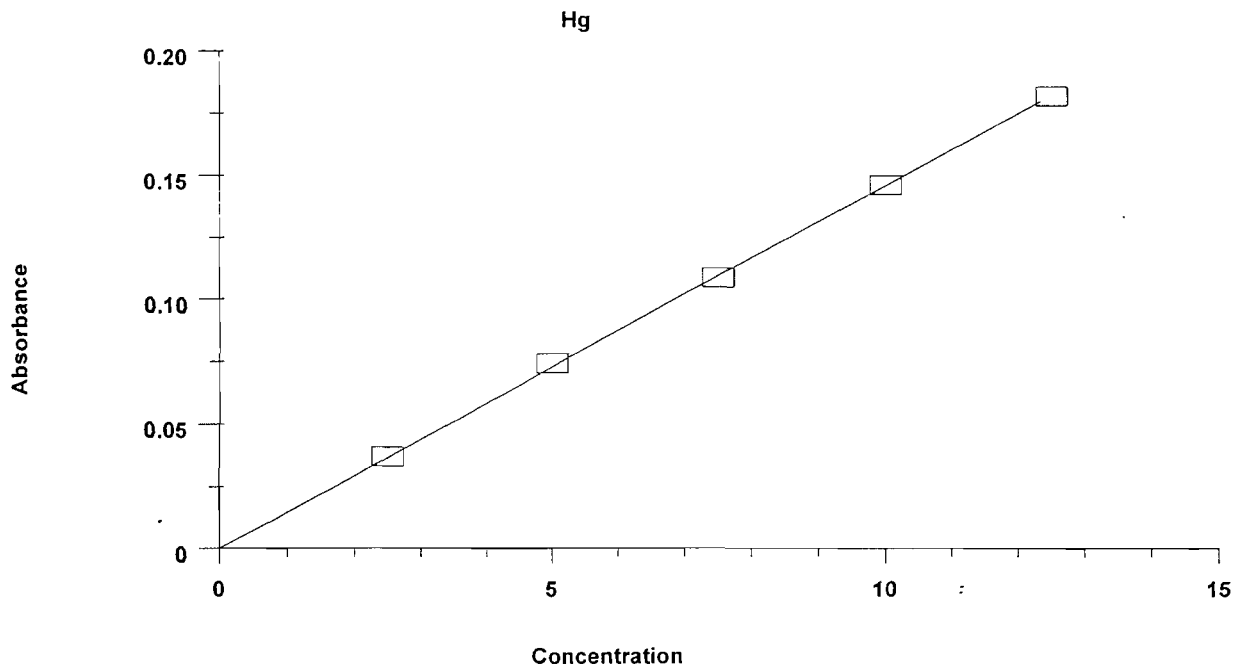
Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 04/06/2001  
 Sample ID: STD5

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1			0.1819	0.1821	09:33:38	Yes
2			0.1803	0.1804	09:34:11	Yes
3			0.1819	0.1820	09:34:43	Yes
Mean:			0.1814			
SD :			0.0009			
%RSD:			0.5208			
[Hg] Standard number 5 applied. [12.50]						
Correlation Coefficient:			0.99987	Slope: 0.01455		

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0002	---	---	---	---
STD1	0.0368	2.500	2.531	0.0001	0.3
STD2	0.0743	5.000	5.103	0.0002	0.3
STD3	0.1085	7.500	7.453	0.0003	0.3
STD4	0.1459	10.000	10.02	0.0003	0.2
STD5	0.1814	12.500	12.46	0.0009	0.5
Correlation Coefficient:		0.99987	Slope:	0.01455	----





=====  
 Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 04/06/2001  
 Sample ID: ICV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.434	1.434	0.0209	0.0210	09:36:03	Yes
2	1.430	1.430	0.0208	0.0210	09:36:36	Yes
3	1.433	1.433	0.0209	0.0210	09:37:09	Yes
Mean:	1.432	1.432	0.0208			
SD :	0.0022	0.0022	0.0000			
%RSD:	0.2	0.2	0.1532			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 04/06/2001  
 Sample ID: ICB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.003	0.003	0.0000	0.0002	09:37:58	Yes
2	-0.003	-0.003	0.0000	0.0001	09:38:31	Yes
3	-0.001	-0.001	0.0000	0.0002	09:39:04	Yes
Mean:	0.000	0.000	0.0000			
SD :	0.0027	0.0027	0.0000			
%RSD:	1076	1076	1076.1029			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 04/06/2001  
 Sample ID: NYS 3311

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.732	0.732	0.0107	0.0108	09:39:52	Yes
2	0.732	0.732	0.0106	0.0108	09:40:25	Yes
3	0.728	0.728	0.0106	0.0108	09:40:58	Yes

Mean: 0.731 0.731 0.0106  
 SD : 0.0021 0.0021 0.0000  
 %RSD: 0.3 0.3 0.2936  
 QC value within specified limits.

=====  
 Element: Hg Seq. No.: 10 AS Loc.: 12 Date: 04/06/2001  
 Sample ID: ORG REF

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.279	2.279	0.0332	0.0333	09:41:47	Yes
2	2.280	2.280	0.0332	0.0333	09:42:21	Yes
3	2.274	2.274	0.0331	0.0333	09:42:53	Yes
Mean:	2.278	2.278	0.0331			
SD :	0.0034	0.0034	0.0000			
%RSD:	0.1	0.1	0.1487			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 11 AS Loc.: 13 Date: 04/06/2001  
 Sample ID: LLC

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.230	0.230	0.0033	0.0035	09:43:42	Yes
2	0.229	0.229	0.0033	0.0035	09:44:15	Yes
3	0.230	0.230	0.0034	0.0035	09:44:48	Yes
Mean:	0.230	0.230	0.0033			
SD :	0.0005	0.0005	0.0000			
%RSD:	0.2	0.2	0.2381			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 12 AS Loc.: 14 Date: 04/06/2001  
 Sample ID: DIL. CHECK

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.001	0.001	0.0000	0.0002	09:45:37	Yes
2	-0.001	-0.001	0.0000	0.0002	09:46:10	Yes
3	0.003	0.003	0.0000	0.0002	09:46:43	Yes
Mean:	0.001	0.001	0.0000			
SD :	0.0018	0.0018	0.0000			
%RSD:	179.3	179.3	179.2705			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 13 AS Loc.: 15 Date: 04/06/2001  
 Sample ID: BL0405-9M1B

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.009	0.009	0.0001	0.0003	09:47:32	Yes
2	0.009	0.009	0.0001	0.0003	09:48:05	Yes
3	0.009	0.009	0.0001	0.0003	09:48:38	Yes
Mean:	0.009	0.009	0.0001			
SD :	0.0003	0.0003	0.0000			
%RSD:	3.2	3.2	3.2065			

=====  
 Element: Hg Seq. No.: 14 AS Loc.: 16 Date: 04/06/2001  
 Sample ID: BL0405S

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
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2	3.630	3.630	0.0528	0.0530	09:59:36	Yes
3	3.683	3.683	0.0536	0.0538	10:00:09	Yes
Mean:	3.660	3.660	0.0533			
SD :	0.0272	0.0272	0.0004			
%RSD:	0.7	0.7	0.7443			

Element: Hg    Seq. No.: 20    AS Loc.: 22    Date: 04/06/2001  
Sample ID: 14623

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.019	0.019	0.0003	0.0004	10:00:57	Yes
2	0.017	0.017	0.0002	0.0004	10:01:30	Yes
3	0.018	0.018	0.0003	0.0004	10:02:03	Yes
Mean:	0.018	0.018	0.0003			
SD :	0.0009	0.0009	0.0000			
%RSD:	5.2	5.2	5.2128			

Element: Hg    Seq. No.: 21    AS Loc.: 23    Date: 04/06/2001  
Sample ID: 14624

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.279	0.279	0.0041	0.0042	10:02:51	Yes
2	0.280	0.280	0.0041	0.0042	10:03:24	Yes
3	0.277	0.277	0.0040	0.0042	10:03:57	Yes
Mean:	0.278	0.278	0.0041			
SD :	0.0017	0.0017	0.0000			
%RSD:	0.6	0.6	0.6096			

Element: Hg    Seq. No.: 22    AS Loc.: 24    Date: 04/06/2001  
Sample ID: 14626

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	2.834	2.834	0.0412	0.0414	10:04:49	Yes
2	2.844	2.844	0.0414	0.0416	10:05:22	Yes
3	2.831	2.831	0.0412	0.0414	10:05:55	Yes
Mean:	2.836	2.836	0.0413			
SD :	0.0071	0.0071	0.0001			
%RSD:	0.3	0.3	0.2513			

Element: Hg    Seq. No.: 23    AS Loc.: 7    Date: 04/06/2001  
Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.940	0.940	0.0137	0.0138	10:06:47	Yes
2	0.938	0.938	0.0137	0.0138	10:07:21	Yes
3	0.945	0.945	0.0138	0.0139	10:07:54	Yes
Mean:	0.941	0.941	0.0137			
SD :	0.0039	0.0039	0.0001			
%RSD:	0.4	0.4	0.4101			

QC value within specified limits.

Element: Hg    Seq. No.: 24    AS Loc.: 8    Date: 04/06/2001  
Sample ID: CCB

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.004	0.004	0.0001	0.0002	10:08:43	Yes

2	0.003	0.003	0.0000	0.0002	10:09:16	Yes
3	0.001	0.001	0.0000	0.0002	10:09:49	Yes
Mean:	0.003	0.003	0.0000			
SD :	0.0015	0.0015	0.0000			
%RSD:	56.1	56.1	56.1177			

QC value within specified limits.

Element: Hg    Seq. No.: 25    AS Loc.: 4    Date: 04/06/2001  
Sample ID: Reslope

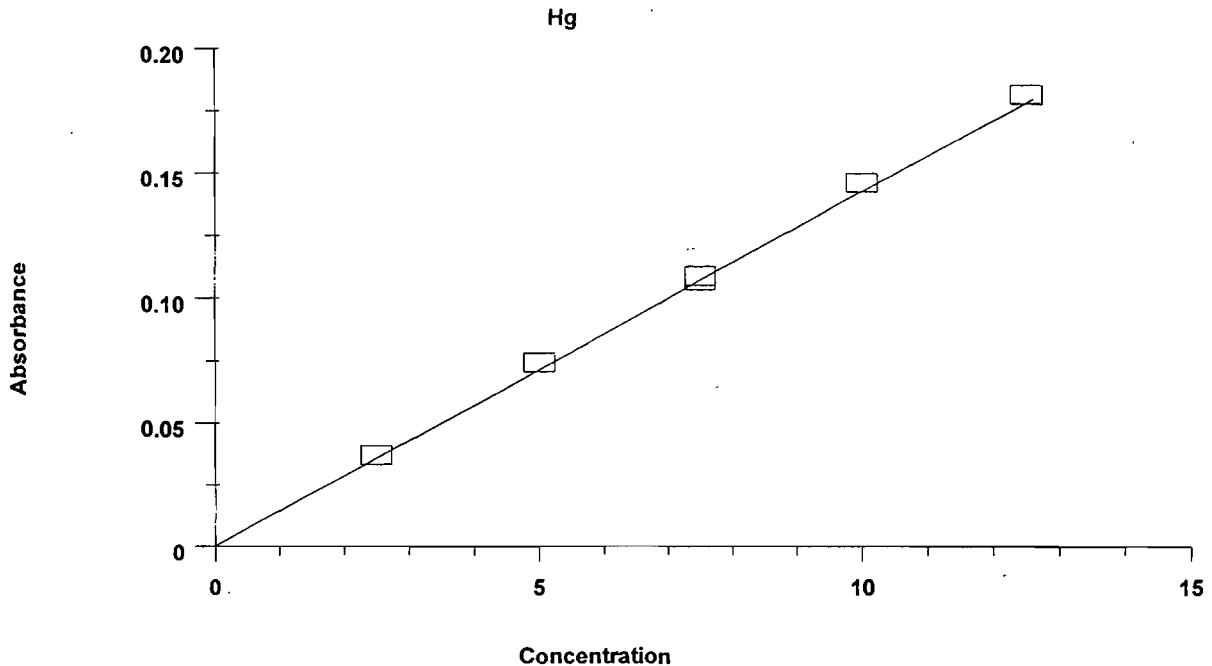
Repl #	Sample Conc µg/L	Std Conc µg/L	Blk Corr Signal	Peak Height	Time	Peak Stored
1			0.1067	0.1068	10:10:39	Yes
2			0.1064	0.1065	10:11:12	Yes
3			0.1072	0.1074	10:11:45	Yes
Mean:			0.1067			
SD :			0.0004			
%RSD:			0.3871			

[Hg] Reslope standard applied. [7.500]  
Correlation Coefficient: 0.99987                      Slope: 0.01488

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0002	---	0.012	0.0000	6.2
STD1	0.0368	2.500	2.589	0.0001	0.3
STD2	0.0743	5.000	5.218	0.0002	0.3
STD3	0.1085	7.500	7.621	0.0003	0.3
STD4	0.1459	10.000	10.25	0.0003	0.2
STD5	0.1814	12.500	12.74	0.0009	0.5
Reslope	0.1067	7.500	7.500	0.0004	0.4

Correlation Coefficient: 0.99987    Slope: 0.01488    ----



00096

=====  
 Element: Hg Seq. No.: 47 AS Loc.: 43 Date: 04/06/2001  
 Sample ID: 15046DS  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	2.550	2.550	0.0363	0.0365	10:53:55	Yes
2	2.528	2.528	0.0360	0.0362	10:54:28	Yes
3	2.549	2.549	0.0363	0.0365	10:55:01	Yes
Mean:	2.542	2.542	0.0362			
SD :	0.0122	0.0122	0.0002			
%RSD:	0.5	0.5	0.4782			

=====  
 Element: Hg Seq. No.: 48 AS Loc.: 44 Date: 04/06/2001  
 Sample ID: 15047  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	1.491	1.491	0.0213	0.0214	10:55:50	Yes
2	1.466	1.466	0.0209	0.0211	10:56:23	Yes
3	1.474	1.474	0.0210	0.0212	10:56:56	Yes
Mean:	1.477	1.477	0.0211			
SD :	0.0129	0.0129	0.0002			
%RSD:	0.9	0.9	0.8745			

=====  
 Element: Hg Seq. No.: 49 AS Loc.: 7 Date: 04/06/2001  
 Sample ID: CCV  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.973	0.973	0.0139	0.0140	10:57:47	Yes
2	0.967	0.967	0.0138	0.0140	10:58:20	Yes
3	0.968	0.968	0.0138	0.0140	10:58:53	Yes
Mean:	0.969	0.969	0.0138			
SD :	0.0030	0.0030	0.0000			
%RSD:	0.3	0.3	0.3105			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 50 AS Loc.: 8 Date: 04/06/2001  
 Sample ID: CCB  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.002	0.002	0.0000	0.0002	10:59:42	Yes
2	0.002	0.002	0.0000	0.0002	11:00:15	Yes
3	0.005	0.005	0.0001	0.0002	11:00:48	Yes
Mean:	0.003	0.003	0.0000			
SD :	0.0016	0.0016	0.0000			
%RSD:	55.8	55.8	55.7537			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 51 AS Loc.: 4 Date: 04/06/2001  
 Sample ID: Reslope  
 -----

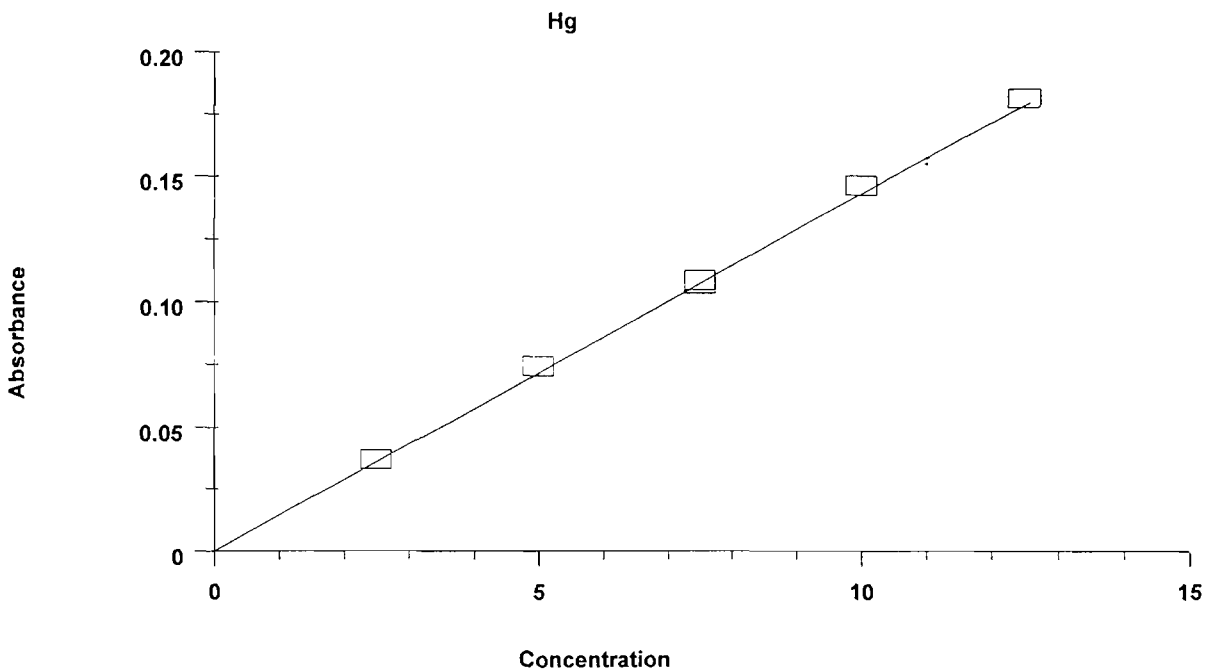
Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1			0.1075	0.1077	11:01:38	Yes
2			0.1067	0.1069	11:02:11	Yes
3			0.1066	0.1068	11:02:44	Yes
Mean:			0.1070			
SD :			0.0005			
%RSD:			0.4305			

[Hg] Reslope standard applied. [7.500]  
 Correlation Coefficient: 0.99987

Slope: 0.01485

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration ( $\mu\text{g/L}$ )	Calculated Concentration ( $\mu\text{g/L}$ )	Standard Deviation	%RSD
Calib Blank	0.0002	---	0.012	0.0000	6.2
STD1	0.0368	2.500	2.583	0.0001	0.3
STD2	0.0743	5.000	5.208	0.0002	0.3
STD3	0.1085	7.500	7.605	0.0003	0.3
STD4	0.1459	10.000	10.23	0.0003	0.2
STD5	0.1814	12.500	12.72	0.0009	0.5
Reslope	0.1070	7.500	7.500	0.0005	0.4
Correlation Coefficient: 0.99987		Slope: 0.01485		----	



Element: Hg    Seq. No.: 52    AS Loc.: 45    Date: 04/06/2001  
Sample ID: 15048

Repl #	SampleConc $\mu\text{g/L}$	StndConc $\mu\text{g/L}$	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.769	1.769	0.0252	0.0254	11:04:04	Yes
2	1.780	1.780	0.0254	0.0255	11:04:36	Yes
3	1.786	1.786	0.0255	0.0256	11:05:09	Yes
Mean:	1.778	1.778	0.0254			
SD :	0.0088	0.0088	0.0001			
%RSD:	0.5	0.5	0.4938			

Element: Hg    Seq. No.: 53    AS Loc.: 46    Date: 04/06/2001  
Sample ID: 15049

Repl #	SampleConc $\mu\text{g/L}$	StndConc $\mu\text{g/L}$	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	6.792	6.792	0.0969	0.0970	11:05:58	Yes
2	6.808	6.808	0.0971	0.0973	11:06:31	Yes
3	6.801	6.801	0.0970	0.0972	11:07:04	Yes

Mean: 6.800 6.800 0.0970  
SD : 0.0082 0.0082 0.0001  
%RSD: 0.1 0.1 0.1205

Element: Hg Seq. No.: 54 AS Loc.: 47 Date: 04/06/2001  
Sample ID: 15050

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	4.524	4.524	0.0645	0.0647	11:08:17	Yes
2	4.519	4.519	0.0644	0.0646	11:08:50	Yes
3	4.509	4.509	0.0643	0.0645	11:09:23	Yes
Mean:	4.517	4.517	0.0644			
SD :	0.0074	0.0074	0.0001			
%RSD:	0.2	0.2	0.1637			

Element: Hg Seq. No.: 55 AS Loc.: 48 Date: 04/06/2001  
Sample ID: 15051

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	3.608	3.608	0.0515	0.0516	11:10:36	Yes
2	3.597	3.597	0.0513	0.0515	11:11:09	Yes
3	3.575	3.575	0.0510	0.0512	11:11:42	Yes
Mean:	3.593	3.593	0.0512			
SD :	0.0170	0.0170	0.0002			
%RSD:	0.5	0.5	0.4721			

Element: Hg Seq. No.: 56 AS Loc.: 49 Date: 04/06/2001  
Sample ID: BL0405-2B3A

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.009	0.009	0.0001	0.0003	11:12:30	Yes
2	0.007	0.007	0.0001	0.0003	11:13:03	Yes
3	0.005	0.005	0.0001	0.0002	11:13:36	Yes
Mean:	0.007	0.007	0.0001			
SD :	0.0017	0.0017	0.0000			
%RSD:	25.2	25.2	25.1559			

Element: Hg Seq. No.: 57 AS Loc.: 50 Date: 04/06/2001  
Sample ID: BL0405S

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.993	0.993	0.0142	0.0143	11:14:25	Yes
2	0.991	0.991	0.0141	0.0143	11:14:58	Yes
3	0.982	0.982	0.0140	0.0142	11:15:32	Yes
Mean:	0.989	0.989	0.0141			
SD :	0.0058	0.0058	0.0001			
%RSD:	0.6	0.6	0.5843			

Element: Hg Seq. No.: 58 AS Loc.: 51 Date: 04/06/2001  
Sample ID: BL0405DS

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	1.003	1.003	0.0143	0.0145	11:16:20	Yes
2	0.995	0.995	0.0142	0.0144	11:16:54	Yes
3	0.999	0.999	0.0142	0.0144	11:17:27	Yes
Mean:	0.999	0.999	0.0142			

SD : 0.0041 0.0041 0.0001  
%RSD: 0.4 0.4 0.4096

Element: Hg Seq. No.: 59 AS Loc.: 52 Date: 04/06/2001  
Sample ID: 14770S

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	20.56	2.056	0.0293	0.0295	11:18:16	Yes
2	20.54	2.054	0.0293	0.0295	11:18:49	Yes
3	20.50	2.050	0.0292	0.0294	11:19:22	Yes
Mean:	20.53	2.053	0.0293			
SD :	0.0269	0.0027	0.0000			
%RSD:	0.1	0.1	0.1309			

Element: Hg Seq. No.: 60 AS Loc.: 53 Date: 04/06/2001  
Sample ID: 14770DS

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	20.41	2.041	0.0291	0.0293	11:20:11	Yes
2	20.38	2.038	0.0291	0.0292	11:20:44	Yes
3	20.20	2.020	0.0288	0.0290	11:21:17	Yes
Mean:	20.33	2.033	0.0290			
SD :	0.1126	0.0113	0.0002			
%RSD:	0.6	0.6	0.5537			

Element: Hg Seq. No.: 61 AS Loc.: 54 Date: 04/06/2001  
Sample ID: 14770fmb

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	10.01	1.001	0.0143	0.0144	11:22:05	Yes
2	9.969	0.997	0.0142	0.0144	11:22:38	Yes
3	10.04	1.004	0.0143	0.0145	11:23:11	Yes
Mean:	10.00	1.000	0.0143			
SD :	0.0349	0.0035	0.0000			
%RSD:	0.3	0.3	0.3485			

Element: Hg Seq. No.: 62 AS Loc.: 7 Date: 04/06/2001  
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.962	0.962	0.0137	0.0139	11:24:01	Yes
2	0.960	0.960	0.0137	0.0139	11:24:34	Yes
3	0.961	0.961	0.0137	0.0139	11:25:07	Yes
Mean:	0.961	0.961	0.0137			
SD :	0.0013	0.0013	0.0000			
%RSD:	0.1	0.1	0.1397			

QC value within specified limits.

Element: Hg Seq. No.: 63 AS Loc.: 8 Date: 04/06/2001  
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.004	0.004	0.0001	0.0002	11:25:56	Yes
2	0.006	0.006	0.0001	0.0003	11:26:30	Yes
3	0.006	0.006	0.0001	0.0003	11:27:03	Yes
Mean:	0.005	0.005	0.0001			



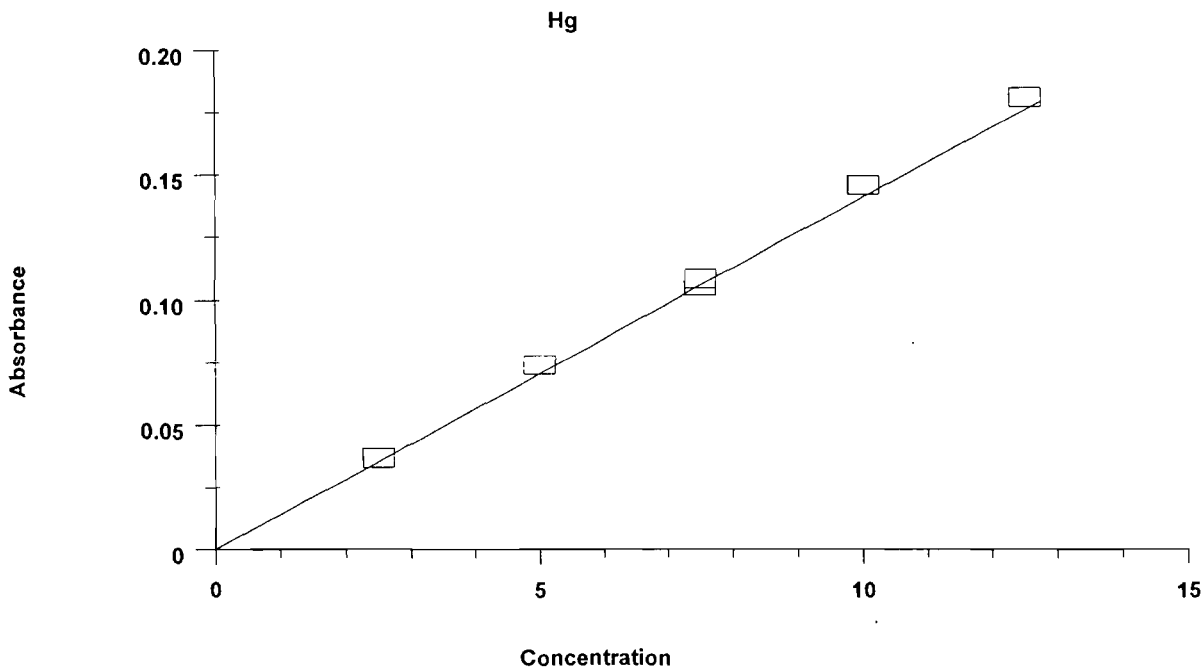
SD : 0.0008 0.0008 0.0000  
 %RSD: 15.2 15.2 15.1795  
 QC value within specified limits.

=====  
 Element: Hg Seq. No.: 64 AS Loc.: 4 Date: 04/06/2001  
 Sample ID: Reslope

Repl #	Sample Conc µg/L	Stnd Conc µg/L	Blk Corr Signal	Peak Height	Time	Peak Stored
1			0.1059	0.1060	11:27:54	Yes
2			0.1058	0.1060	11:28:26	Yes
3			0.1057	0.1059	11:29:00	Yes
Mean:			0.1058			
SD :			0.0001			
%RSD:						
[Hg] Reslope standard applied. [7.500]						
Correlation Coefficient: 0.99987			Slope: 0.01501			

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration: (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0002	---	0.012	0.0000	6.2
STD1	0.0368	2.500	2.611	0.0001	0.3
STD2	0.0743	5.000	5.264	0.0002	0.3
STD3	0.1085	7.500	7.688	0.0003	0.3
STD4	0.1459	10.000	10.34	0.0003	0.2
STD5	0.1814	12.500	12.86	0.0009	0.5
Reslope	0.1058	7.500	7.500	0.0001	----
Correlation Coefficient: 0.99987		Slope: 0.01501		----	



=====  
 Element: Hg Seq. No.: 65 AS Loc.: 55 Date: 04/06/2001  
 Sample ID: 14770D *MA*

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	10.26	1.026	0.0145	0.0146	11:30:17	Yes
2	10.06	1.006	0.0142	0.0144	11:30:50	Yes
3	10.27	1.027	0.0145	0.0147	11:31:23	Yes
Mean:	10.20	1.020	0.0144			
SD :	0.1202	0.0120	0.0002			
%RSD:	1.2	1.2	1.1789			

=====  
Element: Hg      Seq. No.: 66              AS Loc.: 56      Date: 04/06/2001  
Sample ID: 14771

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	15.54	7.769	0.1096	0.1098	11:32:12	Yes
2	15.55	7.775	0.1097	0.1099	11:32:45	Yes
3	15.43	7.716	0.1089	0.1090	11:33:18	Yes
Mean:	15.51	7.753	0.1094			
SD :	0.0645	0.0323	0.0005			
%RSD:	0.4	0.4	0.4160			

=====  
Element: Hg      Seq. No.: 67              AS Loc.: 57      Date: 04/06/2001  
Sample ID: 14772

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	11.83	11.83	0.1669	0.1670	11:34:28	Yes
2	11.84	11.84	0.1670	0.1672	11:35:01	Yes
3	11.67	11.67	0.1646	0.1647	11:35:34	Yes
Mean:	11.78	11.78	0.1661			
SD :	0.0969	0.0969	0.0014			
%RSD:	0.8	0.8	0.8228			

=====  
Element: Hg      Seq. No.: 68              AS Loc.: 58      Date: 04/06/2001  
Sample ID: BL0405-3B3A

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.004	0.004	0.0001	0.0002	11:36:45	Yes
2	0.003	0.003	0.0000	0.0002	11:37:18	Yes
3	0.004	0.004	0.0000	0.0002	11:37:51	Yes
Mean:	0.003	0.003	0.0000			
SD :	0.0003	0.0003	0.0000			
%RSD:	7.7	7.7	7.7289			

=====  
Element: Hg      Seq. No.: 69              AS Loc.: 59      Date: 04/06/2001  
Sample ID: BL0405S

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.993	0.993	0.0140	0.0142	11:38:41	Yes
2	0.998	0.998	0.0141	0.0143	11:39:13	Yes
3	1.000	1.000	0.0141	0.0143	11:39:46	Yes
Mean:	0.997	0.997	0.0141			
SD :	0.0033	0.0033	0.0000			
%RSD:	0.3	0.3	0.3355			

=====  
Element: Hg      Seq. No.: 70              AS Loc.: 60      Date: 04/06/2001  
Sample ID: BL0405DS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
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#	µg/L	µg/L	Signal	Height		Stored
1	1.005	1.005	0.0142	0.0144	11:40:36	Yes
2	1.008	1.008	0.0142	0.0144	11:41:09	Yes
3	1.007	1.007	0.0142	0.0144	11:41:42	Yes
Mean:	1.007	1.007	0.0142			
SD :	0.0014	0.0014	0.0000			
%RSD:	0.1	0.1	0.1387			

=====  
 Element: Hg Seq. No.: 71 AS Loc.: 61 Date: 04/06/2001  
 Sample ID: 14845

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.787	0.787	0.0111	0.0113	11:42:30	Yes
2	0.784	0.784	0.0111	0.0112	11:43:03	Yes
3	0.784	0.784	0.0111	0.0112	11:43:36	Yes
Mean:	0.785	0.785	0.0111			
SD :	0.0017	0.0017	0.0000			
%RSD:	0.2	0.2	0.2145			

=====  
 Element: Hg Seq. No.: 72 AS Loc.: 62 Date: 04/06/2001  
 Sample ID: 14845D

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.825	0.825	0.0116	0.0118	11:44:25	Yes
2	0.828	0.828	0.0117	0.0119	11:44:58	Yes
3	0.829	0.829	0.0117	0.0119	11:45:31	Yes
Mean:	0.827	0.827	0.0117			
SD :	0.0023	0.0023	0.0000			
%RSD:	0.3	0.3	0.2805			

=====  
 Element: Hg Seq. No.: 73 AS Loc.: 63 Date: 04/06/2001  
 Sample ID: 14845S

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	1.856	1.856	0.0262	0.0264	11:46:20	Yes
2	1.844	1.844	0.0260	0.0262	11:46:53	Yes
3	1.836	1.836	0.0259	0.0261	11:47:26	Yes
Mean:	1.845	1.845	0.0260			
SD :	0.0103	0.0103	0.0001			
%RSD:	0.6	0.6	0.5566			

=====  
 Element: Hg Seq. No.: 74 AS Loc.: 64 Date: 04/06/2001  
 Sample ID: 14845DS

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	1.856	1.856	0.0262	0.0264	11:48:15	Yes
2	1.867	1.867	0.0263	0.0265	11:48:48	Yes
3	1.853	1.853	0.0261	0.0263	11:49:21	Yes
Mean:	1.859	1.859	0.0262			
SD :	0.0073	0.0073	0.0001			
%RSD:	0.4	0.4	0.3949			

=====  
 Element: Hg Seq. No.: 75 AS Loc.: 7 Date: 04/06/2001  
 Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
--------	-----------------	---------------	----------------	-------------	------	-------------

1	0.976	0.976	0.0138	0.0139	11:50:11	Yes
2	0.967	0.967	0.0136	0.0138	11:50:43	Yes
3	0.979	0.979	0.0138	0.0140	11:51:16	Yes
Mean:	0.974	0.974	0.0137			
SD :	0.0063	0.0063	0.0001			
%RSD:	0.6	0.6	0.6461			

QC value within specified limits.

=====  
 Element: Hg    Seq. No.: 76    AS Loc.: 8    Date: 04/06/2001  
 Sample ID: CCB

Repl #	Sample Conc µg/L	Stnd Conc µg/L	Blnk Corr Signal	Peak Height	Time	Peak Stored
1	0.004	0.004	0.0001	0.0002	11:52:06	Yes
2	0.004	0.004	0.0001	0.0002	11:52:39	Yes
3	0.004	0.004	0.0001	0.0002	11:53:12	Yes
Mean:	0.004	0.004	0.0001			
SD :	0.0002	0.0002	0.0000			
%RSD:	6.0	6.0	6.0412			

QC value within specified limits.

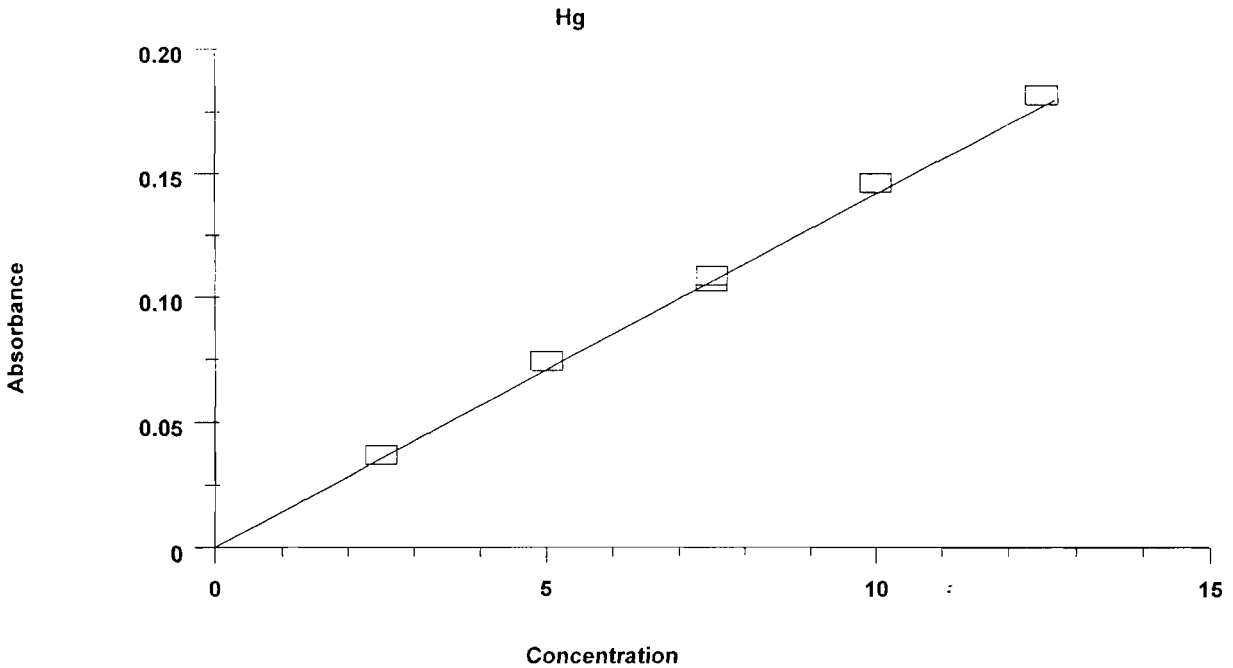
=====  
 Element: Hg    Seq. No.: 77    AS Loc.: 4    Date: 04/06/2001  
 Sample ID: Reslope

Repl #	Sample Conc µg/L	Stnd Conc µg/L	Blnk Corr Signal	Peak Height	Time	Peak Stored
1			0.1057	0.1059	11:54:02	Yes
2			0.1064	0.1066	11:54:35	Yes
3			0.1060	0.1062	11:55:08	Yes
Mean:			0.1060			
SD :			0.0004			
%RSD:			0.3350			

[Hg] Reslope standard applied. [7.500]  
 Correlation Coefficient: 0.99987    Slope: 0.01498

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0002	---	0.012	0.0000	6.2
STD1	0.0368	2.500	2.605	0.0001	0.3
STD2	0.0743	5.000	5.252	0.0002	0.3
STD3	0.1085	7.500	7.670	0.0003	0.3
STD4	0.1459	10.000	10.32	0.0003	0.2
STD5	0.1814	12.500	12.83	0.0009	0.5
Reslope	0.1060	7.500	7.500	0.0004	0.3
Correlation Coefficient: 0.99987		Slope: 0.01498		----	



=====  
Element: Hg    Seq. No.: 78    AS Loc.: 65    Date: 04/06/2001  
Sample ID: 14843  
=====

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.007	0.007	0.0001	0.0003	11:56:28	Yes
2	0.008	0.008	0.0001	0.0003	11:57:01	Yes
3	0.009	0.009	0.0001	0.0003	11:57:34	Yes
Mean:	0.008	0.008	0.0001			
SD :	0.0011	0.0011	0.0000			
%RSD:	13.6	13.6	13.6236			

=====  
Element: Hg    Seq. No.: 79    AS Loc.: 66    Date: 04/06/2001  
Sample ID: 14844  
=====

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.038	0.038	0.0005	0.0007	11:58:23	Yes
2	0.038	0.038	0.0005	0.0007	11:58:56	Yes
3	0.039	0.039	0.0006	0.0007	11:59:29	Yes
Mean:	0.038	0.038	0.0005			
SD :	0.0008	0.0008	0.0000			
%RSD:	2.1	2.1	2.1345			

=====  
Element: Hg    Seq. No.: 80    AS Loc.: 67    Date: 04/06/2001  
Sample ID: 14846  
=====

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.374	0.374	0.0053	0.0055	12:00:18	Yes
2	0.374	0.374	0.0053	0.0055	12:00:51	Yes
3	0.371	0.371	0.0052	0.0054	12:01:24	Yes
Mean:	0.373	0.373	0.0053			
SD :	0.0015	0.0015	0.0000			

%RSD:           0.4           0.4           0.4077

Element: Hg      Seq. No.: 81           AS Loc.: 68      Date: 04/06/2001  
Sample ID: 14847

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.815	0.815	0.0115	0.0117	12:02:13	Yes
2	0.823	0.823	0.0116	0.0118	12:02:47	Yes
3	0.815	0.815	0.0115	0.0117	12:03:20	Yes
Mean:	0.818	0.818	0.0116			
SD :	0.0044	0.0044	0.0001			
%RSD:	0.5	0.5	0.5345			

Element: Hg      Seq. No.: 82           AS Loc.: 69      Date: 04/06/2001  
Sample ID: 14851

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.045	0.045	0.0006	0.0008	12:04:09	Yes
2	0.046	0.046	0.0007	0.0008	12:04:42	Yes
3	0.046	0.046	0.0007	0.0008	12:05:15	Yes
Mean:	0.046	0.046	0.0006			
SD :	0.0005	0.0005	0.0000			
%RSD:	1.1	1.1	1.0622			

Element: Hg      Seq. No.: 83           AS Loc.: 70      Date: 04/06/2001  
Sample ID: 14852

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.488	0.488	0.0069	0.0071	12:06:03	Yes
2	0.483	0.483	0.0068	0.0070	12:06:36	Yes
3	0.482	0.482	0.0068	0.0070	12:07:09	Yes
Mean:	0.484	0.484	0.0068			
SD :	0.0032	0.0032	0.0000			
%RSD:	0.7	0.7	0.6681			

Element: Hg      Seq. No.: 84           AS Loc.: 71      Date: 04/06/2001  
Sample ID: 14853

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.342	0.342	0.0048	0.0050	12:08:01	Yes
2	0.341	0.341	0.0048	0.0050	12:08:34	Yes
3	0.339	0.339	0.0048	0.0050	12:09:07	Yes
Mean:	0.341	0.341	0.0048			
SD :	0.0015	0.0015	0.0000			
%RSD:	0.4	0.4	0.4296			

Element: Hg      Seq. No.: 85           AS Loc.: 72      Date: 04/06/2001  
Sample ID: 14857

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.025	0.025	0.0004	0.0005	12:09:56	Yes
2	0.026	0.026	0.0004	0.0005	12:10:29	Yes
3	0.026	0.026	0.0004	0.0005	12:11:02	Yes
Mean:	0.026	0.026	0.0004			
SD :	0.0005	0.0005	0.0000			
%RSD:	2.1	2.1	2.1302			

00106

Element: Hg Seq. No.: 86 AS Loc.: 73 Date: 04/06/2001  
 Sample ID: 14858

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.031	0.031	0.0004	0.0006	12:11:51	Yes
2	0.031	0.031	0.0004	0.0006	12:12:25	Yes
3	0.033	0.033	0.0005	0.0006	12:12:57	Yes
Mean:	0.031	0.031	0.0004			
SD :	0.0015	0.0015	0.0000			
%RSD:	4.7	4.7	4.7466			

Element: Hg Seq. No.: 87 AS Loc.: 74 Date: 04/06/2001  
 Sample ID: 14859

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.101	0.101	0.0014	0.0016	12:13:47	Yes
2	0.101	0.101	0.0014	0.0016	12:14:20	Yes
3	0.102	0.102	0.0014	0.0016	12:14:53	Yes
Mean:	0.101	0.101	0.0014			
SD :	0.0005	0.0005	0.0000			
%RSD:	0.5	0.5	0.5080			

Element: Hg Seq. No.: 88 AS Loc.: 7 Date: 04/06/2001  
 Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.985	0.985	0.0139	0.0141	12:15:45	Yes
2	0.985	0.985	0.0139	0.0141	12:16:18	Yes
3	0.987	0.987	0.0140	0.0141	12:16:51	Yes
Mean:	0.986	0.986	0.0139			
SD :	0.0014	0.0014	0.0000			
%RSD:	0.1	0.1	0.1465			

QC value within specified limits.

Element: Hg Seq. No.: 89 AS Loc.: 8 Date: 04/06/2001  
 Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.005	0.005	0.0001	0.0002	12:17:40	Yes
2	0.004	0.004	0.0001	0.0002	12:18:13	Yes
3	0.005	0.005	0.0001	0.0002	12:18:46	Yes
Mean:	0.005	0.005	0.0001			
SD :	0.0003	0.0003	0.0000			
%RSD:	5.7	5.7	5.6754			

QC value within specified limits.

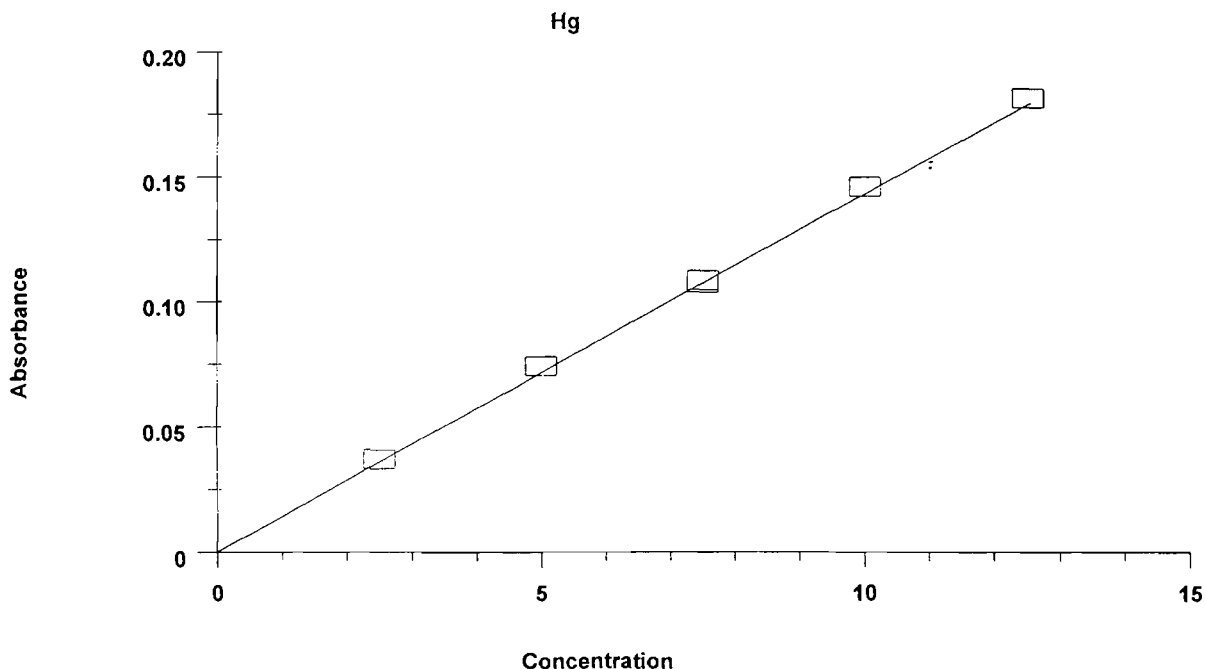
Element: Hg Seq. No.: 90 AS Loc.: 4 Date: 04/06/2001  
 Sample ID: Reslope

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1063	0.1065	12:19:36	Yes
2			0.1076	0.1078	12:20:09	Yes
3			0.1080	0.1081	12:20:42	Yes
Mean:			0.1073			
SD :			0.0009			
%RSD:			0.8343			

[Hg] Reslope standard applied. [7.500]  
 Correlation Coefficient: 0.99987 Slope: 0.01480

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration ( $\mu\text{g/L}$ )	Calculated Concentration ( $\mu\text{g/L}$ )	Standard Deviation	%RSD
Calib Blank	0.0002	---	0.012	0.0000	6.2
STD1	0.0368	2.500	2.575	0.0001	0.3
STD2	0.0743	5.000	5.191	0.0002	0.3
STD3	0.1085	7.500	7.581	0.0003	0.3
STD4	0.1459	10.000	10.20	0.0003	0.2
STD5	0.1814	12.500	12.68	0.0009	0.5
Reslope	0.1073	7.500	7.500	0.0009	0.8
Correlation Coefficient: 0.99987		Slope: 0.01480		----	



Element: Hg Seq. No.: 91 AS Loc.: 75 Date: 04/06/2001  
 Sample ID: BL0406-1MDL

Repl #	SampleConc $\mu\text{g/L}$	StndConc $\mu\text{g/L}$	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.006	0.006	0.0001	0.0003	12:22:00	Yes
2	0.009	0.009	0.0001	0.0003	12:22:33	Yes
3	0.009	0.009	0.0001	0.0003	12:23:06	Yes
Mean:	0.008	0.008	0.0001			
SD :	0.0019	0.0019	0.0000			
%RSD:	23.8	23.8	23.8465			

Element: Hg Seq. No.: 92 AS Loc.: 76 Date: 04/06/2001  
 Sample ID: BL0406S

Repl #	SampleConc $\mu\text{g/L}$	StndConc $\mu\text{g/L}$	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.958	0.958	0.0137	0.0139	12:23:55	Yes
2	0.962	0.962	0.0138	0.0139	12:24:28	Yes
3	0.966	0.966	0.0138	0.0140	12:25:01	Yes



EPA 7470 WATER PREPARATION LOG - MERCURY

DG7470HG, DGHGLEACH, DG29\*

Calibration Solutions:

#	I.D.	**Conc.	Spike	***Conc. Entered
1	Blank/Dummy	0 ppb	None	0.0
2	Standard 1	0 ppb	None	0.0
3	Standard 2	1.67	500 ul of 0.1 ppm working cal standard	2.5
4	Standard 3	3.33	1000 ul of 0.1 ppm working cal standard	5.0
5	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
6	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
7	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
8	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
9	Standard 5	6.67	2000 ul of 0.1 ppm working cal standard	10.0
10	Standard 6	8.33	2500 ul of 0.1 ppm working cal standard	12.5

Check List

- Digest Code/labels
- Samples poured out
- Acids added
- Reagents added
- Samples spiked
- Bath at 95 degrees C
- Samples digested
- Hydroxylamine HCl added.
- Samples shaken and bulked
- Rack order checked

#	Sample I.D.	B.Code	Init.Vol.	F. Vol.	Dil	Comment
11	ICV (Int. Calib. Verif.)	143B	20 ml	30 ml	1 X	1.5 ppb = 600 ul of 0.05ppm Working Reference QC Std.
12	LLC (low level check)	"	"	"	"	0.25ppb = 50ul of 0.1 ppm Working Cal Std.
13	BL0401	"	"	"	"	(Processed Blank)
14	BL0405 S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
15	BL0405 DS	"	"	"	"	(Duplicate Blank Spike)
1	16 014845	"	"	"	"	
1	17 D	"	"	"	"	(Duplicate sample)
1	18 S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
1	19 DS	"	"	"	"	(Duplicate Spiked sample)
2	20 42	"	"	"	"	
3	21 43	"	"	"	"	
4	22 44	"	"	"	"	
5	23 46	"	"	"	"	
6	24 47	"	"	"	"	
7	25 014851	"	"	"	"	
8	26 52	"	"	"	"	
9	27 53	"	"	"	"	
10	28 014858	"	"	"	"	
29	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
30	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
31	BL0405	243B	20 ml	30 ml	"	(Processed Blank)
32	BL0405 S	243B MB	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
33	BL0405 DS	"	"	"	"	(Duplicate Blank Spike)
1	34 014852	"	"	"	"	
1	35 D	"	"	"	"	(Duplicate sample)
1	36 S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
1	37 DS	"	"	"	"	(Duplicate Spiked sample)
2	38 59	"	"	"	"	
3	39	"	"	"	"	
4	40	"	"	"	"	
5	41	"	"	"	"	
6	42	"	"	"	"	
7	43	"	"	"	"	
8	44	"	"	"	"	
9	45	"	"	"	"	
10	46	"	"	"	"	
47	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
48	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.

Comments:\*\* concentration based on 30 ml final volume, \*\*\* concentration based on 20 ml final volume

Other Applicable Test Codes: DG29HG-1B, DG29HG-2B, DG29HG-3A, DG29HG-3B, DG29HG-3C

DG29HGI, DG29HGF, DG101AA1, DG101AA2

#	Sample I.D.	B.Code	Int.Vol.	F. Vol.	Dil	Comment
49	BL0405	3A3B	"	"	"	(Processed Blank)
50	BL0405 S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
51	BL0405 DS	"	"	"	"	(Duplicate Blank Spike)
1 52	015046	"	"	"	"	
1 53	D	"	"	"	"	(Duplicate sample)
1 54	S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
1 55	DS	"	"	"	"	(Duplicate Spiked sample)
2 56	44	"	"	"	"	
3 57	45	"	"	"	"	
4 58	47	"	"	"	"	
5 59	48	"	"	"	"	
6 60	49	"	"	"	"	
7 61	50	"	"	"	"	
8 62	51	"	"	"	"	
9 63		"	"	"	"	
10 64		"	"	"	"	
65	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
66	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.

## Procedure/Methodology:

- 1 Prepare 25 ppm Intermediate Calibration Standard (if required) by pipetting 625 ul., of 1000 ppm Stock to 25 ml final volume of 2% HNO<sub>3</sub>
- 2 Prepare 0.1 ppm Working calibration standard daily by pipetting 400 ul., of 25 ppm Intermediate to 100 ml final volume of 2% HNO<sub>3</sub>
- 3 Prepare a 0.05 ppm Working Reference QC Standard daily by pipetting 50 ul of Stock Reference Standard to 100 ml final vol of 2% HNO<sub>3</sub>
- 4 Using the LIMS Screen "SCNDIG" enter the required samples into LIMS
- 5 Using the labeling program, "DIGLBL", retrieve the "SCNDIG" list and create labels for the required samples.
- 6 Label the falcon tubes appropriately
- 7 Include one External Reference Material sample per run
- 8 Include one Organic Mercury Control Standard per run
- 9 Transfer a 20 ml. aliquot of well mixed sample into the designated falcon tube
- 10 Spike the tubes as indicated in the comment sector of the digestion sheet
- 11 Add 0.5 ml. of conc. Nitric Acid (HNO<sub>3</sub>), and 1 ml. of conc. Sulphuric acid, (H<sub>2</sub>SO<sub>4</sub>), to each tube
- 12 Add 3 ml. Of 6% KMnO<sub>4</sub>, purple colour must remain for the duration of digest.
- 13 Add 1.5 ml. of 5% potassium persulphate, (K<sub>2</sub>S<sub>2</sub>O<sub>8</sub>), to each tube
- 14 Mix samples, cap loosely and place in a water bath @ 95 degrees C for 2 hours
- 15 Remove tubes and allow to cool to room temperature
- 16 Add 1.0 ml. 20% Hydroxylamine Hydrochloride to each tube
- 17 Recap tubes and shake until KMnO<sub>4</sub> is destroyed and sample becomes colourless  
Dilute the sample to a final volume of 30 ml.

Supplier/Lot Information	Supplier	Lot	Expiry Date
Stock Calibration Standard	Inorganic Ventures	P-H602023	01/04/01
Intermediate Cal Standard	Internal	01/03/23	01/05/23
Stock Reference Standard	High Purity	033536	TAN. 02
External Reference Material	SPEX/745	3311	
Organic Mercury Control Standard	Aldrich	068114R	01/02/02
6% potassium permanganate	Internal	0403/22	01/05/22
5% potassium persulphate	Internal	01/04/04	01/06/04
20% hydroxylamine hydrochloride	Internal	01/03/20	01/05/20
HNO <sub>3</sub>	Anachemia	1100081	01/06/03
H <sub>2</sub> SO <sub>4</sub>	Anachemia	3100091	01/05/27
Bath Temps: 195°C	Time ON: 10:40	Time OFF: 12:40	
Prepared By: HB	Date: 01/04/05	Checked by: TRB	

Zenon Number	Client	Client ID	Parameter	TS	Result	Dup.	Spike	% Rec.	Dup. Spk	% Rec.	Batch Date	Batch Code	Run Date	Run Code	Day Old	Day In	Analyst's Comments
014842	CLEANAIR	MB R456	Mercury	- PV	-0.050	-99999.0	0.492	98.	0.493	99.	01/04/05	1M3B	01/04/05	MG01	7.	3.	
014843	CLEANAIR	M29HG Reagent Blank	Mercury	- PV	-0.050						01/04/05	1M3B	01/04/05	MG01	7.	3.	
014844	CLEANAIR	M29HG Field Blank	Mercury	- PV	-0.050						01/04/05	1M3B	01/04/05	MG01	7.	3.	
014845	CLEANAIR	M29HG U1 Outlet R1	Mercury	- PV	-0.050	-0.050	0.537	103.	0.532	102.	01/04/05	1M3B	01/04/05	MG01	10.	3.	
014846	CLEANAIR	M29HG U1 Outlet R2	Mercury	- PV	-0.050						01/04/05	1M3B	01/04/05	MG01	10.	3.	
014847	CLEANAIR	M29HG U1 Outlet R3	Mercury	- PV	-0.050						01/04/05	1M3B	01/04/05	MG01	10.	3.	
014851	CLEANAIR	M29HG U2 Outlet R1	Mercury	- PV	-0.050						01/04/05	1M3B	01/04/05	MG01	9.	3.	
014852	CLEANAIR	M29HG U2 Outlet R2	Mercury	- PV	-0.050						01/04/05	1M3B	01/04/05	MG01	9.	3.	
014853	CLEANAIR	M29HG U2 Outlet R3	Mercury	- PV	-0.050						01/04/05	1M3B	01/04/05	MG01	9.	3.	
014858	CLEANAIR	M29HG U3 Outlet R2	Mercury	- PV	-0.050						01/04/05	1M3B	01/04/05	MG01	9.	3.	
BL0405	INTERNAL		Mercury	- PV	-0.050	-99999.0	0.492	98.	0.493	99.	01/04/05	1M3B	01/04/05	MG01	\$\$\$	\$\$\$	
014857	CLEANAIR	M29HG U3 Outlet R1	Mercury	- PV	-0.050	-0.050	0.501	100.	0.499	100.	01/04/05	2M3B	01/04/05	MG01	9.	3.	
014859	CLEANAIR	M29HG U3 Outlet R3	Mercury	- PV	-0.050						01/04/05	2M3B	01/04/05	MG01	8.	3.	
BL0405	INTERNAL		Mercury	- PV	-0.050	-99999.0	0.495	99.	0.494	99.	01/04/05	2M3B	01/04/05	MG01	\$\$\$	\$\$\$	
			Mercury	- PV	-0.050	-99999.0	0.500	100.	0.497	99.	01/04/05	3M3B	01/04/05	MG01	\$\$\$	\$\$\$	

15 Tests for 29HG-3B with an MDL of 0.050 ug Validated By CMA Control Chart Updated N/A 10 Requirements met N/A

001101

00111

29HG-3B

Sample #	Conc. ug/L	Dilution x	Final Vol ml	Result T ug	Mdl ug	Dil Mdl ug	%	MDL FV
BL0404-1M3B	0.000	1	500	0.000	0.05	0.05		500
BL0404S	0.988	1	500	0.494	0.05	0.05	99	500
BL0404DS	0.995	1	500	0.498	0.05	0.05	100	500
14770	4.746	1	500	2.373	0.05	0.05		500
14770D	4.694	1	500	2.347	0.05	0.05		500
14770S	5.843	1	500	2.922	0.05	0.05	112	500
14770DS	5.675	1	500	2.838	0.05	0.05	95	500
14768	0.000	1	500	0.000	0.05	0.05		500
14769	0.000	1	500	0.000	0.05	0.05		500
14771	3.465	1	500	1.733	0.05	0.05		500
14772	1.790	1	500	0.895	0.05	0.05		500

Sample #	Conc. ug/L	Dilution x	Final Vol ml	Result T ug	Mdl ug	Dil Mdl ug	%	MDL FV
BL0405-1M3B	0.000	1	500	0.000	0.05	0.05		500
BL0405S	0.983	1	500	0.492	0.05	0.05	98	500
BL0405DS	0.986	1	500	0.493	0.05	0.05	99	500
14845	0.041	1	500	0.021	0.05	0.05		500
14845D	0.050	1	500	0.025	0.05	0.05		500
14845S	1.074	1	500	0.537	0.05	0.05	103	500
14845DS	1.064	1	500	0.532	0.05	0.05	102	500
14842	0.000	1	500	0.000	0.05	0.05		500
14843	0.000	1	500	0.000	0.05	0.05		500
14844	0.000	1	500	0.000	0.05	0.05		500
14846	0.074	1	500	0.037	0.05	0.05		500
14847	0.000	1	500	0.000	0.05	0.05		500
14851	0.000	1	500	0.000	0.05	0.05		500
14852	0.000	1	500	0.000	0.05	0.05		500
14853	0.000	1	500	0.000	0.05	0.05		500
14858	0.000	1	500	0.000	0.05	0.05		500

00112

Sample #	Conc. ug/L	Dilution x	Final Vol ml	Result T ug	Mdl ug	Dil Mdl ug	%	MDL FV
BL0405-2M3B	0.000	1	500	0.000	0.05	0.05		500
BL0405S	0.989	1	500	0.495	0.05	0.05	99	500
BL0405DS	0.987	1	500	0.494	0.05	0.05	99	500
14857	0.000	1	500	0.000	0.05	0.05		500
14857D	0.000	1	500	0.000	0.05	0.05		500
14857S	1.001	1	500	0.501	0.05	0.05	100	500
14857DS	0.997	1	500	0.499	0.05	0.05	100	500
14859	0.000	1	500	0.000	0.05	0.05		500

Sample #	Conc. ug/L	Dilution x	Final Vol ml	Result T ug	Mdl ug	Dil Mdl ug	%	MDL FV
BL0405-3M3B	0.000	1	500	0.000	0.05	0.05		500
BL0405S	1.000	1	500	0.500	0.05	0.05	100	500
BL0405DS	0.993	1	500	0.497	0.05	0.05	99	500
15046	0.841	1	500	0.421	0.05	0.05		500
15046D	0.836	1	500	0.418	0.05	0.05		500
15046S	1.871	1	500	0.936	0.05	0.05	103	500
15046DS	1.884	1	500	0.942	0.05	0.05	105	500
15044	0.000	1	500	0.000	0.05	0.05		500
15045	0.000	1	1000	0.000	0.05	0.10		500
15047	0.345	1	500	0.173	0.05	0.05		500
15048	0.625	1	500	0.313	0.05	0.05		500
15049	4.265	1	500	2.133	0.05	0.05		500
15050	3.549	1	500	1.775	0.05	0.05		500
15051	7.065	1	500	3.533	0.05	0.05		500

Sample Information File C:\FIMS\AAUSER\SAMPINFO\010405F1.SIF

Description : METHOD29  
 Batch ID : MG01  
 Volume Units : L  
 Weight Units : µg  
 Analyst : MGAS  
 Sample Volume : 0.00

S	Sample ID	Sample Weight	Sample Units	User	Dilution	Remarks
15	BL0404-1M3B					
16	BL0404S					
17	BL0404DS					
18	14770					
19	14770D					
20	14770S					
21	14770DS					
22	14768					
23	14769					
24	14771					
25	14772					
26	BL0404-2M3C					
27	BL0404S					
28	BL0404DS					
29	13946					
30	13946D					
31	13946S					
32	13946DS					
33	13943					
34	13944					
35	13945					
36	13947					
37	13948				5.0000	
38	13949				2.0000	
39	13950				2.0000	
40	13951					
41	73615-2B 00				10.0000	
42	73619-2B 00				10.0000	
43	BL0405-1M3B					
44	BL0405S					
45	BL0405DS					
46	14845					
47	14845D					
48	14845S					
49	14845DS					
50	14842					
51	14843					
52	14844					
53	14846					
54	14847					
55	14851					
56	14852					
57	14853					
58	14858					
59	BL0405-2M3B					
60	BL0405S					
61	BL0405DS					
62	14857					
63	14857D					
64	14857S					
65	14857DS					
66	14859					

- 67 BL0405-3M3B
  - 68 BL0405S
  - 69 BL0405DS
  - 70 15046
  - 71 15046D
  - 72 15046S
  - 73 15046DS
  - 74 15044
  - 75 15045
  - 76 15047
  - 77 15048
  - 78 15049
  - 79 15050
  - 80 15051
-

Method Name: EPA 7470  
Method Description: EPA 7470  
Element: Hg

Date: 04/05/2001  
Technique: FI-MHS  
Calibration Type:  
Hg, Zero Intercept: Linear  
Wavelength: 253.7 nm  
Sample Info Name: 010405F1.SIF                      Results Data Set Name: 010405F1

=====  
Element: Hg      Seq. No.: 1                      AS Loc.: 1      Date: 04/05/2001  
Sample ID: Calib Blank  
-----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0012	0.0012	09:12:14	Yes
2			0.0004	0.0004	09:12:47	Yes
3			0.0003	0.0003	09:13:21	Yes
Mean:			0.0006			
SD :			0.0005			
%RSD:			79.7896			

Auto-zero performed.

=====  
Element: Hg      Seq. No.: 2                      AS Loc.: 2      Date: 04/05/2001  
Sample ID: STD1  
-----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0359	0.0366	09:14:11	Yes
2			0.0359	0.0365	09:14:43	Yes
3			0.0357	0.0363	09:15:17	Yes
Mean:			0.0358			
SD :			0.0001			
%RSD:			0.3971			

[Hg] Standard number 1 applied. [2.500]  
Correlation Coefficient: 1.00000                      Slope: 0.01433

=====  
Element: Hg      Seq. No.: 3                      AS Loc.: 3      Date: 04/05/2001  
Sample ID: STD2  
-----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.0723	0.0730	09:16:06	Yes
2			0.0719	0.0725	09:16:39	Yes
3			0.0722	0.0728	09:17:12	Yes
Mean:			0.0721			
SD :			0.0002			
%RSD:			0.3311			

[Hg] Standard number 2 applied. [5.000]  
Correlation Coefficient: 0.99997                      Slope: 0.01441

=====  
Element: Hg      Seq. No.: 4                      AS Loc.: 4      Date: 04/05/2001  
Sample ID: STD3  
-----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1084	0.1091	09:18:26	Yes
2			0.1080	0.1087	09:18:59	Yes
3			0.1077	0.1084	09:19:32	Yes
Mean:			0.1081			



SD : 0.0004  
 %RSD: 0.3302  
 [Hg] Standard number 3 applied. [7.500]  
 Correlation Coefficient: 0.99999 Slope: 0.01441

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 04/05/2001  
 Sample ID: STD4

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1			0.1443	0.1450	09:20:48	Yes
2			0.1452	0.1458	09:21:21	Yes
3			0.1445	0.1452	09:21:54	Yes
Mean:			0.1447			
SD :			0.0004			
%RSD:			0.3021			

[Hg] Standard number 4 applied. [10.00]  
 Correlation Coefficient: 0.99998 Slope: 0.01444

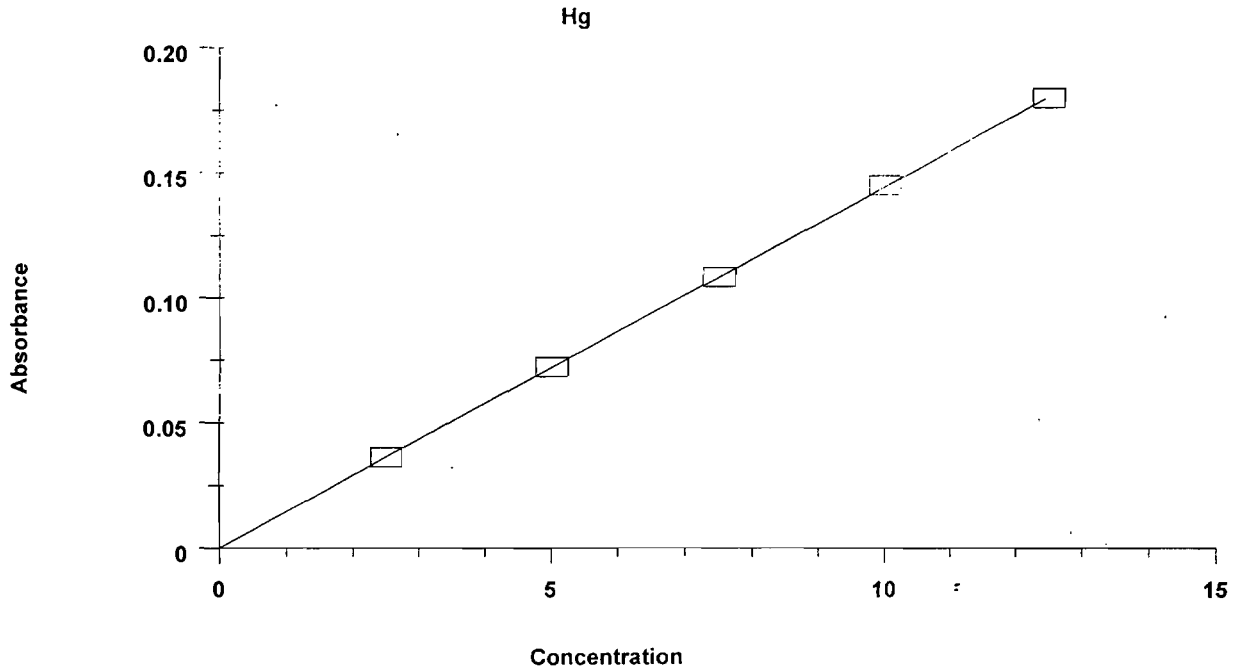
Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 04/05/2001  
 Sample ID: STD5

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1			0.1806	0.1812	09:23:10	Yes
2			0.1786	0.1792	09:23:43	Yes
3			0.1787	0.1794	09:24:16	Yes
Mean:			0.1793			
SD :			0.0011			
%RSD:			0.6219			

[Hg] Standard number 5 applied. [12.50]  
 Correlation Coefficient: 0.99996 Slope: 0.01440

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0006	---	---	---	---
STD1	0.0358	2.500	2.489	0.0001	0.4
STD2	0.0721	5.000	5.011	0.0002	0.3
STD3	0.1081	7.500	7.507	0.0004	0.3
STD4	0.1447	10.000	10.05	0.0004	0.3
STD5	0.1793	12.500	12.45	0.0011	0.6
Correlation Coefficient: 0.99996		Slope:	0.01440	----	



=====  
 Element: Hg    Seq. No.: 7    AS Loc.: 9    Date: 04/05/2001  
 Sample ID: ICV  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.474	1.474	0.0212	0.0219	09:25:35	Yes
2	1.462	1.462	0.0210	0.0217	09:26:08	Yes
3	1.460	1.460	0.0210	0.0216	09:26:41	Yes
Mean:	1.465	1.465	0.0211			
SD :	0.0079	0.0079	0.0001			
%RSD:	0.5	0.5	0.5397			

QC value within specified limits.

=====  
 Element: Hg    Seq. No.: 8    AS Loc.: 10    Date: 04/05/2001  
 Sample ID: ICB  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.015	-0.015	-0.0002	0.0004	09:27:30	Yes
2	-0.038	-0.038	-0.0005	0.0001	09:28:03	Yes
3	-0.038	-0.038	-0.0005	0.0001	09:28:36	Yes
Mean:	-0.030	-0.030	-0.0004			
SD :	0.0132	0.0132	0.0002			
%RSD:	43.4	43.4	43.4041			

QC value within specified limits.

=====  
 Element: Hg    Seq. No.: 9    AS Loc.: 11    Date: 04/05/2001  
 Sample ID: NYS 3311  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.727	0.727	0.0105	0.0111	09:29:25	Yes
2	0.725	0.725	0.0104	0.0111	09:29:58	Yes
3	0.732	0.732	0.0105	0.0112	09:30:31	Yes

Mean: 0.728 0.728 0.0105  
 SD : 0.0035 0.0035 0.0001  
 %RSD: 0.5 0.5 0.4869  
 QC value within specified limits.

Element: Hg Seq. No.: 10 AS Loc.: 12 Date: 04/05/2001  
 Sample ID: ORG REF

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.278	2.278	0.0328	0.0334	09:31:20	Yes
2	2.261	2.261	0.0326	0.0332	09:31:53	Yes
3	2.273	2.273	0.0327	0.0334	09:32:26	Yes
Mean:	2.271	2.271	0.0327			
SD :	0.0086	0.0086	0.0001			
%RSD:	0.4	0.4	0.3785			

QC value within specified limits.

Element: Hg Seq. No.: 11 AS Loc.: 13 Date: 04/05/2001  
 Sample ID: LLC

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.224	0.224	0.0032	0.0039	09:33:15	Yes
2	0.224	0.224	0.0032	0.0039	09:33:48	Yes
3	0.223	0.223	0.0032	0.0038	09:34:21	Yes
Mean:	0.224	0.224	0.0032			
SD :	0.0008	0.0008	0.0000			
%RSD:	0.4	0.4	0.3591			

QC value within specified limits.

Element: Hg Seq. No.: 12 AS Loc.: 14 Date: 04/05/2001  
 Sample ID: DIL. CHECK

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.033	-0.033	-0.0005	0.0002	09:35:09	Yes
2	-0.034	-0.034	-0.0005	0.0001	09:35:42	Yes
3	-0.032	-0.032	-0.0005	0.0002	09:36:16	Yes
Mean:	-0.033	-0.033	-0.0005			
SD :	0.0008	0.0008	0.0000			
%RSD:	2.3	2.3	2.3090			

QC value within specified limits.

Element: Hg Seq. No.: 13 AS Loc.: 15 Date: 04/05/2001  
 Sample ID: BL0404-1M3B

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.014	-0.014	-0.0002	0.0004	09:37:04	Yes
2	-0.014	-0.014	-0.0002	0.0004	09:37:38	Yes
3	-0.010	-0.010	-0.0001	0.0005	09:38:11	Yes
Mean:	-0.013	-0.013	-0.0002			
SD :	0.0022	0.0022	0.0000			
%RSD:	17.7	17.7	17.6599			

Element: Hg Seq. No.: 14 AS Loc.: 16 Date: 04/05/2001  
 Sample ID: BL0404S

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
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2	5.677	5.677	0.0817	0.0824	09:50:27	Yes
3	5.647	5.647	0.0813	0.0819	09:51:00	Yes
Mean:	5.675	5.675	0.0817			
SD :	0.0261	0.0261	0.0004			
%RSD:	0.5	0.5	0.4596			

Element: Hg Seq. No.: 21 AS Loc.: 22 Date: 04/05/2001  
Sample ID: 14768

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.009	-0.009	-0.0001	0.0005	09:52:17	Yes
2	-0.019	-0.019	-0.0003	0.0003	09:52:50	Yes
3	-0.019	-0.019	-0.0003	0.0004	09:53:23	Yes
Mean:	-0.016	-0.016	-0.0002			
SD :	0.0061	0.0061	0.0001			
%RSD:	38.8	38.8	38.7542			

Element: Hg Seq. No.: 21 AS Loc.: 23 Date: 04/05/2001  
Sample ID: 14769

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.016	-0.016	-0.0002	0.0004	09:54:12	Yes
2	-0.015	-0.015	-0.0002	0.0004	09:54:45	Yes
3	-0.015	-0.015	-0.0002	0.0004	09:55:18	Yes
Mean:	-0.015	-0.015	-0.0002			
SD :	0.0004	0.0004	0.0000			
%RSD:	2.8	2.8	2.8198			

Element: Hg Seq. No.: 22 AS Loc.: 24 Date: 04/05/2001  
Sample ID: 14771

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.479	3.479	0.0501	0.0507	09:56:10	Yes
2	3.463	3.463	0.0498	0.0505	09:56:43	Yes
3	3.452	3.452	0.0497	0.0503	09:57:16	Yes
Mean:	3.465	3.465	0.0499			
SD :	0.0134	0.0134	0.0002			
%RSD:	0.4	0.4	0.3879			

Element: Hg Seq. No.: 23 AS Loc.: 7 Date: 04/05/2001  
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.965	0.965	0.0139	0.0145	09:58:08	Yes
2	0.967	0.967	0.0139	0.0145	09:58:41	Yes
3	0.958	0.958	0.0138	0.0144	09:59:14	Yes
Mean:	0.963	0.963	0.0139			
SD :	0.0048	0.0048	0.0001			
%RSD:	0.5	0.5	0.4970			

QC value within specified limits.

Element: Hg Seq. No.: 24 AS Loc.: 8 Date: 04/05/2001  
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.028	-0.028	-0.0004	0.0002	10:00:03	Yes

```

2      -0.023   -0.023   -0.0003   0.0003   10:00:35   Yes
3      -0.024   -0.024   -0.0003   0.0003   10:01:09   Yes
Mean:  -0.025   -0.025   -0.0004
SD :    0.0023   0.0023   0.0000
%RSD:   9.4     9.4     9.4009
QC value within specified limits.
    
```

```

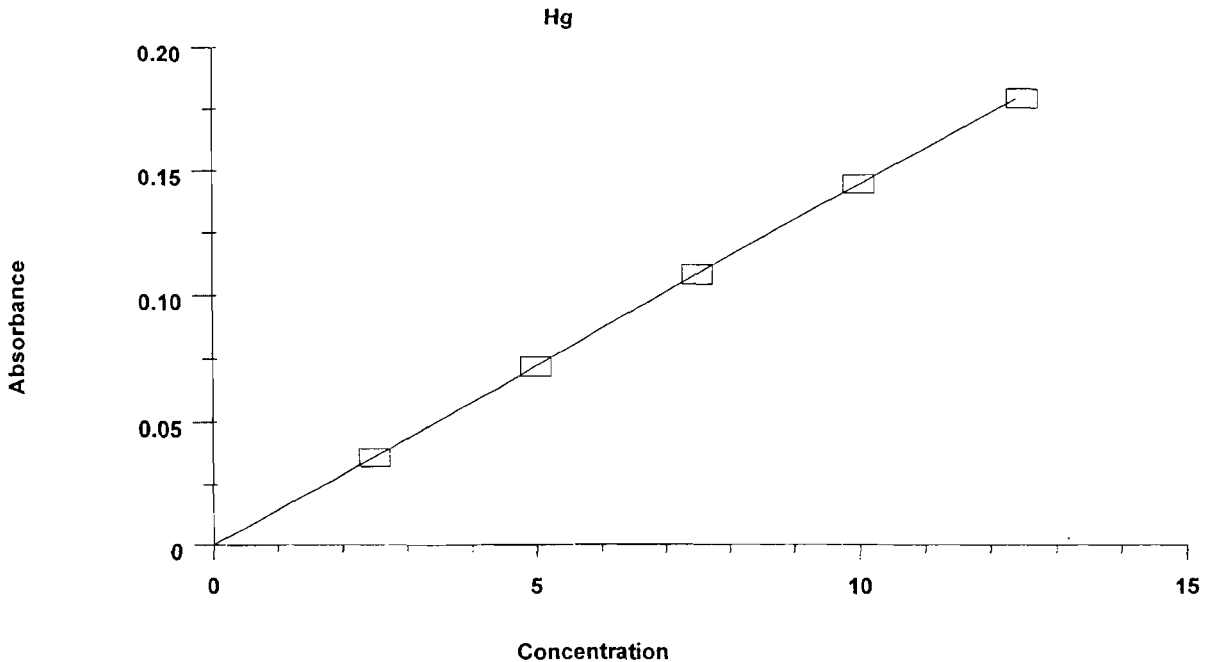
=====
Element: Hg      Seq. No.: 25      AS Loc.: 4      Date: 04/05/2001
Sample ID: Reslope
    
```

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Repl  SampleConc  StndConc  BlnkCorr  Peak      Time      Peak
#      µg/L        µg/L      Signal    Height    Stored
1      0.1084      0.1084   0.1084    0.1090   10:01:59   Yes
2      0.1084      0.1084   0.1084    0.1090   10:02:32   Yes
3      0.1082      0.1082   0.1082    0.1088   10:03:05   Yes
Mean:  0.1083
SD :    0.0001
%RSD:
[Hg] Reslope standard applied. [7.500]
Correlation Coefficient: 0.99996      Slope: 0.01435
    
```

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0006	---	0.044	0.0005	79.8
STD1	0.0358	2.500	2.481	0.0001	0.4
STD2	0.0721	5.000	4.995	0.0002	0.3
STD3	0.1081	7.500	7.483	0.0004	0.3
STD4	0.1447	10.000	10.02	0.0004	0.3
STD5	0.1793	12.500	12.41	0.0011	0.6
Reslope	0.1083	7.500	7.500	0.0001	----
Correlation Coefficient: 0.99996		Slope: 0.01435		----	



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Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.947	0.947	0.0137	0.0143	10:23:34	Yes
2	0.948	0.948	0.0137	0.0143	10:24:07	Yes
3	0.950	0.950	0.0137	0.0143	10:24:40	Yes
Mean:	0.948	0.948	0.0137			
SD :	0.0015	0.0015	0.0000			
%RSD:	0.2	0.2	0.1551			

QC value within specified limits.

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Element: Hg    Seq. No.: 37    AS Loc.: 8    Date: 04/05/2001  
Sample ID: CCB

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Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.029	-0.029	-0.0004	0.0002	10:25:29	Yes
2	-0.032	-0.032	-0.0005	0.0002	10:26:02	Yes
3	-0.028	-0.028	-0.0004	0.0002	10:26:35	Yes
Mean:	-0.030	-0.030	-0.0004			
SD :	0.0019	0.0019	0.0000			
%RSD:	6.5	6.5	6.5161			

QC value within specified limits.

---

Element: Hg    Seq. No.: 38    AS Loc.: 4    Date: 04/05/2001  
Sample ID: Reslope

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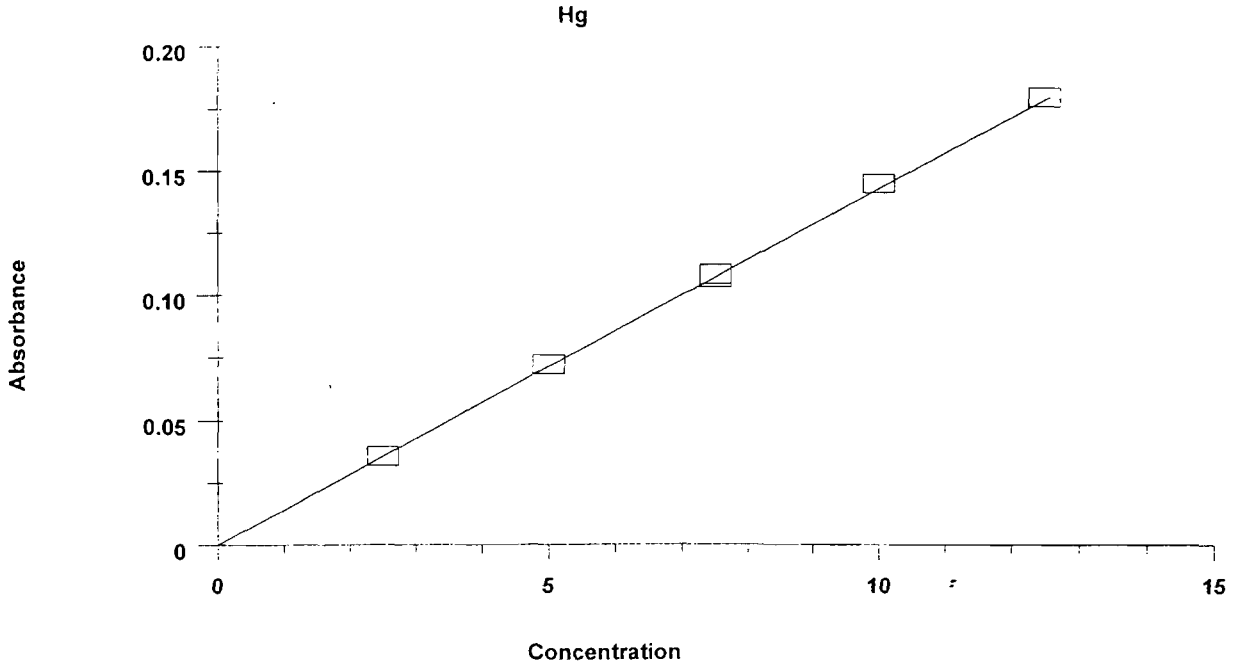
Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1069	0.1075	10:27:25	Yes
2			0.1063	0.1069	10:27:58	Yes
3			0.1073	0.1080	10:28:31	Yes
Mean:			0.1068			
SD :			0.0005			
%RSD:			0.5029			

[Hg] Reslope standard applied. [7.500]  
Correlation Coefficient: 0.99996    Slope: 0.01455

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0006	---	0.044	0.0005	79.8
STD1	0.0358	2.500	2.516	0.0001	0.4
STD2	0.0721	5.000	5.064	0.0002	0.3
STD3	0.1081	7.500	7.586	0.0004	0.3
STD4	0.1447	10.000	10.16	0.0004	0.3
STD5	0.1793	12.500	12.59	0.0011	0.6
Reslope	0.1068	7.500	7.500	0.0005	0.5

Correlation Coefficient: 0.99996    Slope: 0.01455    ----



=====  
 Element: Hg Seq. No.: 39 AS Loc.: 35 Date: 04/05/2001  
 Sample ID: 13945

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.100	0.100	0.0014	0.0021	10:29:51	Yes
2	0.101	0.101	0.0014	0.0021	10:30:24	Yes
3	0.099	0.099	0.0014	0.0020	10:30:57	Yes
Mean:	0.100	0.100	0.0014			
SD :	0.0008	0.0008	0.0000			
%RSD:	0.8	0.8	0.7686			

=====  
 Element: Hg Seq. No.: 40 AS Loc.: 36 Date: 04/05/2001  
 Sample ID: 13947

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.645	0.645	0.0092	0.0098	10:31:46	Yes
2	0.634	0.634	0.0090	0.0097	10:32:19	Yes
3	0.633	0.633	0.0090	0.0097	10:32:52	Yes
Mean:	0.637	0.637	0.0091			
SD :	0.0068	0.0068	0.0001			
%RSD:	1.1	1.1	1.0682			

=====  
 Element: Hg Seq. No.: 41 AS Loc.: 37 Date: 04/05/2001  
 Sample ID: 13948

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	42.76	8.551	0.1218	0.1224	10:33:41	Yes
2	42.62	8.525	0.1214	0.1221	10:34:14	Yes
3	42.81	8.562	0.1220	0.1226	10:34:48	Yes
Mean:	42.73	8.546	0.1217			
SD :	0.0960	0.0192	0.0003			

%RSD:           0.2           0.2           0.2246

Element: Hg      Seq. No.: 42           AS Loc.: 38      Date: 04/05/2001  
Sample ID: 13949

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	14.89	7.446	0.1061	0.1067	10:36:05	Yes
2	14.87	7.434	0.1059	0.1065	10:36:38	Yes
3	14.92	7.458	0.1062	0.1069	10:37:11	Yes
Mean:	14.89	7.446	0.1061			
SD :	0.0243	0.0122	0.0002			
%RSD:	0.2	0.2	0.1634			

Element: Hg      Seq. No.: 43           AS Loc.: 39      Date: 04/05/2001  
Sample ID: 13950

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	15.28	7.639	0.1088	0.1095	10:38:28	Yes
2	15.22	7.609	0.1084	0.1090	10:39:01	Yes
3	15.34	7.669	0.1093	0.1099	10:39:34	Yes
Mean:	15.28	7.639	0.1088			
SD :	0.0606	0.0303	0.0004			
%RSD:	0.4	0.4	0.3964			

Element: Hg      Seq. No.: 44           AS Loc.: 40      Date: 04/05/2001  
Sample ID: 13951

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.736	0.736	0.0105	0.0111	10:40:47	Yes
2	0.738	0.738	0.0105	0.0111	10:41:20	Yes
3	0.735	0.735	0.0105	0.0111	10:41:53	Yes
Mean:	0.736	0.736	0.0105			
SD :	0.0017	0.0017	0.0000			
%RSD:	0.2	0.2	0.2304			

Element: Hg      Seq. No.: 45           AS Loc.: 41      Date: 04/05/2001  
Sample ID: 73615-2B 00

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	45.53	4.553	0.0649	0.0655	10:42:42	Yes
2	45.29	4.529	0.0645	0.0651	10:43:15	Yes
3	45.49	4.549	0.0648	0.0654	10:43:48	Yes
Mean:	45.44	4.544	0.0647			
SD :	0.1287	0.0129	0.0002			
%RSD:	0.3	0.3	0.2833			

Element: Hg      Seq. No.: 46           AS Loc.: 42      Date: 04/05/2001  
Sample ID: 73619-2B 00

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	29.04	2.904	0.0414	0.0420	10:45:00	Yes
2	29.07	2.907	0.0414	0.0420	10:45:33	Yes
3	28.78	2.878	0.0410	0.0416	10:46:06	Yes
Mean:	28.96	2.896	0.0413			
SD :	0.1575	0.0158	0.0002			
%RSD:	0.5	0.5	0.5438			



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Element: Hg Seq. No.: 47 AS Loc.: 43 Date: 04/05/2001  
 Sample ID: BL0405-1M3B

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.023	-0.023	-0.0003	0.0003	10:46:55	Yes
2	-0.016	-0.016	-0.0002	0.0004	10:47:28	Yes
3	-0.024	-0.024	-0.0003	0.0003	10:48:01	Yes
Mean:	-0.021	-0.021	-0.0003			
SD :	0.0044	0.0044	0.0001			
%RSD:	21.0	21.0	20.9781			

Element: Hg Seq. No.: 48 AS Loc.: 44 Date: 04/05/2001  
 Sample ID: BL0405S

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.980	0.980	0.0140	0.0146	10:48:50	Yes
2	0.998	0.998	0.0142	0.0148	10:49:23	Yes
3	0.972	0.972	0.0138	0.0145	10:49:56	Yes
Mean:	0.983	0.983	0.0140			
SD :	0.0135	0.0135	0.0002			
%RSD:	1.4	1.4	1.3703			

Element: Hg Seq. No.: 49 AS Loc.: 7 Date: 04/05/2001  
 Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.960	0.960	0.0137	0.0143	10:50:47	Yes
2	0.961	0.961	0.0137	0.0143	10:51:20	Yes
3	0.959	0.959	0.0137	0.0143	10:51:53	Yes
Mean:	0.960	0.960	0.0137			
SD :	0.0010	0.0010	0.0000			
%RSD:	0.1	0.1	0.1086			

QC value within specified limits.

Element: Hg Seq. No.: 50 AS Loc.: 8 Date: 04/05/2001  
 Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.028	-0.028	-0.0004	0.0002	10:52:42	Yes
2	-0.030	-0.030	-0.0004	0.0002	10:53:15	Yes
3	-0.032	-0.032	-0.0005	0.0002	10:53:49	Yes
Mean:	-0.030	-0.030	-0.0004			
SD :	0.0024	0.0024	0.0000			
%RSD:	7.9	7.9	7.8765			

QC value within specified limits.

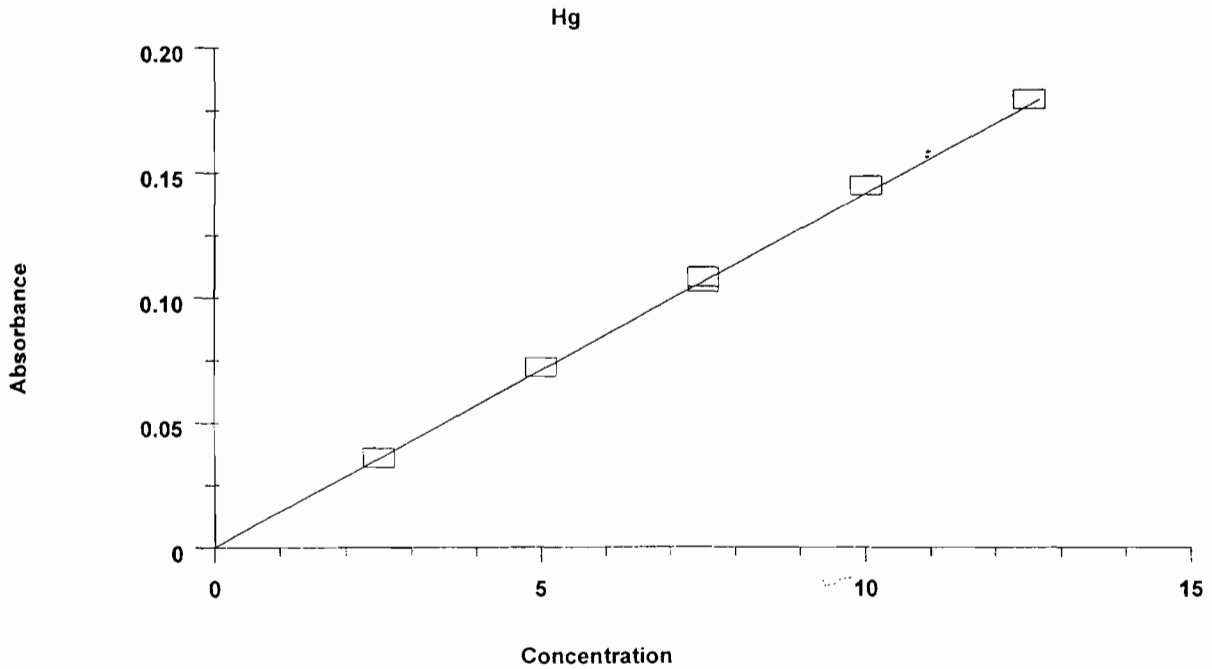
Element: Hg Seq. No.: 51 AS Loc.: 4 Date: 04/05/2001  
 Sample ID: Reslope

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1			0.1062	0.1068	10:54:39	Yes
2			0.1069	0.1075	10:55:12	Yes
3			0.1052	0.1059	10:55:45	Yes
Mean:			0.1061			
SD :			0.0008			
%RSD:			0.7771			

[Hg] Reslope standard applied. [7.500]  
 Correlation Coefficient: 0.99996 Slope: 0.01465

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration ( $\mu\text{g/L}$ )	Calculated Concentration ( $\mu\text{g/L}$ )	Standard Deviation	%RSD
Calib Blank	0.0006	---	0.045	0.0005	79.8
STD1	0.0358	2.500	2.533	0.0001	0.4
STD2	0.0721	5.000	5.100	0.0002	0.3
STD3	0.1081	7.500	7.639	0.0004	0.3
STD4	0.1447	10.000	10.23	0.0004	0.3
STD5	0.1793	12.500	12.67	0.0011	0.6
Reslope	0.1061	7.500	7.500	0.0008	0.8
Correlation Coefficient: 0.99996		Slope: 0.01465		----	



=====  
 Element: Hg    Seq. No.: 52    AS Loc.: 45    Date: 04/05/2001  
 Sample ID: BL0405DS

Repl #	SampleConc $\mu\text{g/L}$	StndConc $\mu\text{g/L}$	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.983	0.983	0.0139	0.0145	10:57:04	Yes
2	0.986	0.986	0.0139	0.0146	10:57:37	Yes
3	0.990	0.990	0.0140	0.0146	10:58:10	Yes
Mean:	0.986	0.986	0.0140			
SD :	0.0034	0.0034	0.0000			
%RSD:	0.3	0.3	0.3456			

=====  
 Element: Hg    Seq. No.: 53    AS Loc.: 46    Date: 04/05/2001  
 Sample ID: 14845

Repl #	SampleConc $\mu\text{g/L}$	StndConc $\mu\text{g/L}$	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.039	0.039	0.0006	0.0012	10:58:59	Yes
2	0.042	0.042	0.0006	0.0012	10:59:32	Yes
3	0.041	0.041	0.0006	0.0012	11:00:05	Yes

Mean: 0.041 0.041 0.0006  
 SD : 0.0013 0.0013 0.0000  
 %RSD: 3.1 3.1 3.0963

Element: Hg Seq. No.: 54 AS Loc.: 47 Date: 04/05/2001  
 Sample ID: 14845D

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.052	0.052	0.0007	0.0014	11:00:54	Yes
2	0.050	0.050	0.0007	0.0013	11:01:27	Yes
3	0.048	0.048	0.0007	0.0013	11:02:00	Yes
Mean:	0.050	0.050	0.0007			
SD :	0.0016	0.0016	0.0000			
%RSD:	3.3	3.3	3.2669			

Element: Hg Seq. No.: 55 AS Loc.: 48 Date: 04/05/2001  
 Sample ID: 14845S

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	1.076	1.076	0.0152	0.0158	11:02:49	Yes
2	1.073	1.073	0.0152	0.0158	11:03:23	Yes
3	1.073	1.073	0.0152	0.0158	11:03:55	Yes
Mean:	1.074	1.074	0.0152			
SD :	0.0017	0.0017	0.0000			
%RSD:	0.2	0.2	0.1572			

Element: Hg Seq. No.: 56 AS Loc.: 49 Date: 04/05/2001  
 Sample ID: 14845DS

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	1.066	1.066	0.0151	0.0157	11:04:44	Yes
2	1.062	1.062	0.0150	0.0157	11:05:17	Yes
3	1.064	1.064	0.0151	0.0157	11:05:50	Yes
Mean:	1.064	1.064	0.0151			
SD :	0.0017	0.0017	0.0000			
%RSD:	0.2	0.2	0.1560			

Element: Hg Seq. No.: 57 AS Loc.: 50 Date: 04/05/2001  
 Sample ID: 14842

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.027	-0.027	-0.0004	0.0002	11:06:39	Yes
2	-0.027	-0.027	-0.0004	0.0003	11:07:12	Yes
3	-0.025	-0.025	-0.0004	0.0003	11:07:45	Yes
Mean:	-0.026	-0.026	-0.0004			
SD :	0.0013	0.0013	0.0000			
%RSD:	5.1	5.1	5.1209			

Element: Hg Seq. No.: 58 AS Loc.: 51 Date: 04/05/2001  
 Sample ID: 14843

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.023	-0.023	-0.0003	0.0003	11:08:34	Yes
2	-0.023	-0.023	-0.0003	0.0003	11:09:07	Yes
3	-0.024	-0.024	-0.0003	0.0003	11:09:40	Yes
Mean:	-0.023	-0.023	-0.0003			

SD : 0.0009 0.0009 0.0000  
%RSD: 3.8 3.8 3.8012

Element: Hg Seq. No.: 59 AS Loc.: 52 Date: 04/05/2001  
Sample ID: 14844

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.019	-0.019	-0.0003	0.0004	11:10:29	Yes
2	-0.020	-0.020	-0.0003	0.0003	11:11:02	Yes
3	-0.022	-0.022	-0.0003	0.0003	11:11:35	Yes
Mean:	-0.021	-0.021	-0.0003			
SD :	0.0015	0.0015	0.0000			
%RSD:	7.1	7.1	7.0767			

Element: Hg Seq. No.: 60 AS Loc.: 53 Date: 04/05/2001  
Sample ID: 14846

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.074	0.074	0.0010	0.0017	11:12:23	Yes
2	0.075	0.075	0.0011	0.0017	11:12:56	Yes
3	0.073	0.073	0.0010	0.0017	11:13:29	Yes
Mean:	0.074	0.074	0.0010			
SD :	0.0010	0.0010	0.0000			
%RSD:	1.3	1.3	1.3015			

Element: Hg Seq. No.: 61 AS Loc.: 54 Date: 04/05/2001  
Sample ID: 14847

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.011	-0.011	-0.0002	0.0005	11:14:18	Yes
2	-0.015	-0.015	-0.0002	0.0004	11:14:52	Yes
3	-0.011	-0.011	-0.0002	0.0005	11:15:25	Yes
Mean:	-0.012	-0.012	-0.0002			
SD :	0.0022	0.0022	0.0000			
%RSD:	18.1	18.1	18.0774			

Element: Hg Seq. No.: 62 AS Loc.: 7 Date: 04/05/2001  
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.962	0.962	0.0136	0.0142	11:16:14	Yes
2	0.960	0.960	0.0136	0.0142	11:16:48	Yes
3	0.957	0.957	0.0135	0.0142	11:17:21	Yes
Mean:	0.960	0.960	0.0136			
SD :	0.0026	0.0026	0.0000			
%RSD:	0.3	0.3	0.2699			

QC value within specified limits.

Element: Hg Seq. No.: 63 AS Loc.: 8 Date: 04/05/2001  
Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.030	-0.030	-0.0004	0.0002	11:18:10	Yes
2	-0.027	-0.027	-0.0004	0.0002	11:18:43	Yes
3	-0.029	-0.029	-0.0004	0.0002	11:19:16	Yes
Mean:	-0.028	-0.028	-0.0004			

SD : 0.0012 0.0012 0.0000  
 %RSD: 4.1 4.1 4.0714  
 QC value within specified limits.

=====  
 Element: Hg Seq. No.: 64 AS Loc.: 4 Date: 04/05/2001  
 Sample ID: Reslope

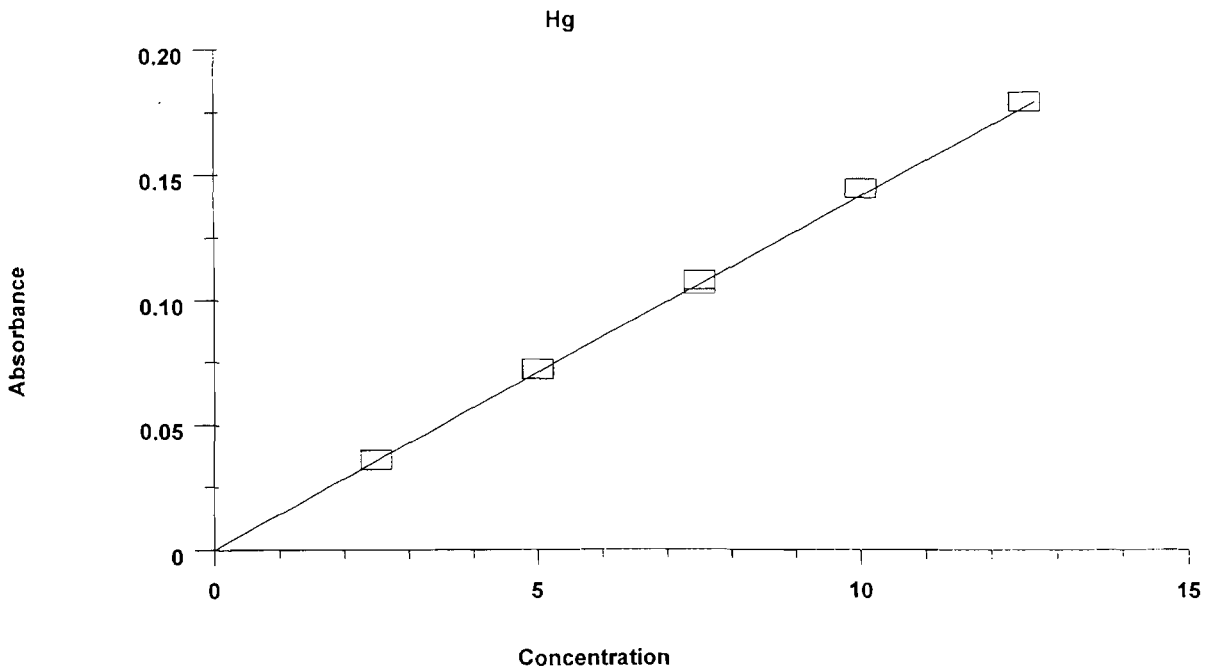
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Repl #	Sample Conc µg/L	Stnd Conc µg/L	Blk Corr Signal	Peak Height	Time	Peak Stored
1			0.1062	0.1068	11:20:06	Yes
2			0.1065	0.1071	11:20:39	Yes
3			0.1060	0.1066	11:21:12	Yes
Mean:			0.1062			
SD :			0.0003			
%RSD:			0.2395			

[Hg] Reslope standard applied. [7.500]  
 Correlation Coefficient: 0.99996 Slope: 0.01464  
 -----

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0006	---	0.044	0.0005	79.8
STD1	0.0358	2.500	2.531	0.0001	0.4
STD2	0.0721	5.000	5.095	0.0002	0.3
STD3	0.1081	7.500	7.632	0.0004	0.3
STD4	0.1447	10.000	10.22	0.0004	0.3
STD5	0.1793	12.500	12.66	0.0011	0.6
Reslope	0.1062	7.500	7.500	0.0003	0.2
Correlation Coefficient: 0.99996 Slope: 0.01464 ----					



=====  
 Element: Hg Seq. No.: 65 AS Loc.: 55 Date: 04/05/2001  
 Sample ID: 14851  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.018	-0.018	-0.0003	0.0004	11:22:29	Yes
2	-0.020	-0.020	-0.0003	0.0004	11:23:02	Yes
3	-0.020	-0.020	-0.0003	0.0004	11:23:35	Yes
Mean:	-0.019	-0.019	-0.0003			
SD :	0.0007	0.0007	0.0000			
%RSD:	3.6	3.6	3.5937			

Element: Hg    Seq. No.: 66    AS Loc.: 56    Date: 04/05/2001  
Sample ID: 14852

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.004	0.004	0.0001	0.0007	11:24:24	Yes
2	0.004	0.004	0.0001	0.0007	11:24:57	Yes
3	0.004	0.004	0.0001	0.0007	11:25:30	Yes
Mean:	0.004	0.004	0.0001			
SD :	0.0002	0.0002	0.0000			
%RSD:	5.1	5.1	5.0821			

Element: Hg    Seq. No.: 67    AS Loc.: 57    Date: 04/05/2001  
Sample ID: 14853

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.004	-0.004	-0.0001	0.0006	11:26:19	Yes
2	-0.005	-0.005	-0.0001	0.0006	11:26:52	Yes
3	-0.005	-0.005	-0.0001	0.0006	11:27:24	Yes
Mean:	-0.005	-0.005	-0.0001			
SD :	0.0008	0.0008	0.0000			
%RSD:	17.6	17.6	17.6227			

Element: Hg    Seq. No.: 68    AS Loc.: 58    Date: 04/05/2001  
Sample ID: 14858

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.001	0.001	0.0000	0.0006	11:28:13	Yes
2	0.002	0.002	0.0000	0.0007	11:28:46	Yes
3	0.001	0.001	0.0000	0.0006	11:29:19	Yes
Mean:	0.001	0.001	0.0000			
SD :	0.0004	0.0004	0.0000			
%RSD:	25.8	25.8	25.8213			

Element: Hg    Seq. No.: 69    AS Loc.: 59    Date: 04/05/2001  
Sample ID: BL0405-2M3B

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.020	-0.020	-0.0003	0.0003	11:30:08	Yes
2	-0.019	-0.019	-0.0003	0.0004	11:30:41	Yes
3	-0.022	-0.022	-0.0003	0.0003	11:31:14	Yes
Mean:	-0.021	-0.021	-0.0003			
SD :	0.0014	0.0014	0.0000			
%RSD:	6.7	6.7	6.7097			

Element: Hg    Seq. No.: 70    AS Loc.: 60    Date: 04/05/2001  
Sample ID: BL0405S

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
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#	µg/L	µg/L	Signal	Height		Stored
1	0.991	0.991	0.0140	0.0147	11:32:03	Yes
2	0.985	0.985	0.0139	0.0146	11:32:36	Yes
3	0.990	0.990	0.0140	0.0147	11:33:09	Yes
Mean:	0.989	0.989	0.0140			
SD :	0.0036	0.0036	0.0001			
%RSD:	0.4	0.4	0.3652			

Element: Hg Seq. No.: 71 AS Loc.: 61 Date: 04/05/2001  
Sample ID: BL0405DS

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.995	0.995	0.0141	0.0147	11:33:58	Yes
2	0.981	0.981	0.0139	0.0145	11:34:31	Yes
3	0.985	0.985	0.0139	0.0146	11:35:04	Yes
Mean:	0.987	0.987	0.0140			
SD :	0.0074	0.0074	0.0001			
%RSD:	0.7	0.7	0.7475			

Element: Hg Seq. No.: 72 AS Loc.: 62 Date: 04/05/2001  
Sample ID: 14857

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.016	-0.016	-0.0002	0.0004	11:35:52	Yes
2	-0.017	-0.017	-0.0002	0.0004	11:36:25	Yes
3	-0.017	-0.017	-0.0002	0.0004	11:36:58	Yes
Mean:	-0.017	-0.017	-0.0002			
SD :	0.0007	0.0007	0.0000			
%RSD:	4.0	4.0	4.0127			

Element: Hg Seq. No.: 73 AS Loc.: 63 Date: 04/05/2001  
Sample ID: 14857D

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.022	-0.022	-0.0003	0.0003	11:37:47	Yes
2	-0.017	-0.017	-0.0002	0.0004	11:38:20	Yes
3	-0.016	-0.016	-0.0002	0.0004	11:38:53	Yes
Mean:	-0.018	-0.018	-0.0003			
SD :	0.0029	0.0029	0.0000			
%RSD:	16.0	16.0	16.0299			

Element: Hg Seq. No.: 74 AS Loc.: 64 Date: 04/05/2001  
Sample ID: 14857S

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	1.003	1.003	0.0142	0.0148	11:39:42	Yes
2	1.002	1.002	0.0142	0.0148	11:40:15	Yes
3	1.000	1.000	0.0142	0.0148	11:40:48	Yes
Mean:	1.001	1.001	0.0142			
SD :	0.0018	0.0018	0.0000			
%RSD:	0.2	0.2	0.1768			

Element: Hg Seq. No.: 75 AS Loc.: 7 Date: 04/05/2001  
Sample ID: CCV

Repl #	SampleConc µg/L	StdConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
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1	0.949	0.949	0.0134	0.0141	11:41:38	Yes
2	0.953	0.953	0.0135	0.0141	11:42:11	Yes
3	0.955	0.955	0.0135	0.0142	11:42:44	Yes
Mean:	0.952	0.952	0.0135			
SD :	0.0030	0.0030	0.0000			
%RSD:	0.3	0.3	0.3143			

QC value within specified limits.

=====  
Element: Hg    Seq. No.: 76    AS Loc.: 8    Date: 04/05/2001  
Sample ID: CCB  
-----

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.030	-0.030	-0.0004	0.0002	11:43:33	Yes
2	-0.031	-0.031	-0.0004	0.0002	11:44:06	Yes
3	-0.029	-0.029	-0.0004	0.0002	11:44:39	Yes
Mean:	-0.030	-0.030	-0.0004			
SD :	0.0012	0.0012	0.0000			
%RSD:	4.0	4.0	3.9733			

QC value within specified limits.

=====  
Element: Hg    Seq. No.: 77    AS Loc.: 4    Date: 04/05/2001  
Sample ID: Reslope  
-----

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1			0.1066	0.1072	11:45:30	Yes
2			0.1060	0.1066	11:46:03	Yes
3			0.1059	0.1065	11:46:36	Yes
Mean:			0.1061			
SD :			0.0004			
%RSD:			0.3388			

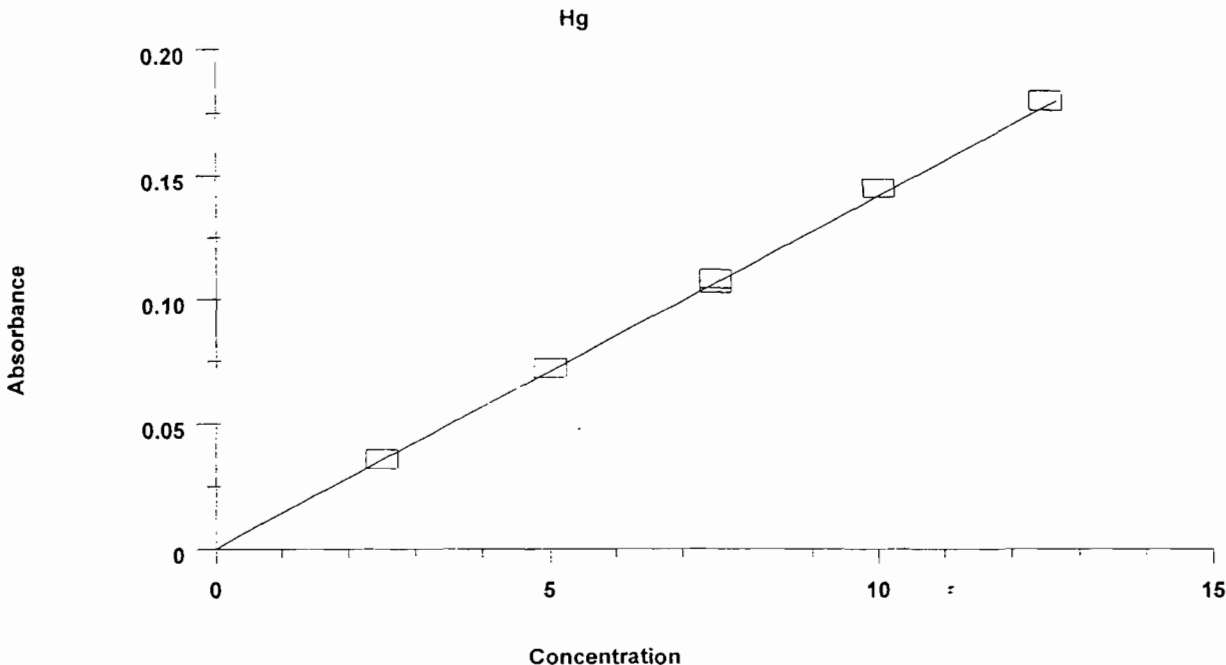
[Hg] Reslope standard applied. [7.500]  
Correlation Coefficient: 0.99996    Slope: 0.01464  
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Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0006	---	0.045	0.0005	79.8
STD1	0.0358	2.500	2.532	0.0001	0.4
STD2	0.0721	5.000	5.098	0.0002	0.3
STD3	0.1081	7.500	7.636	0.0004	0.3
STD4	0.1447	10.000	10.22	0.0004	0.3
STD5	0.1793	12.500	12.67	0.0011	0.6
Reslope	0.1061	7.500	7.500	0.0004	0.3
Correlation Coefficient:	0.99996	Slope:	0.01464	----	

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 Element: Hg Seq. No.: 78 AS Loc.: 65 Date: 04/05/2001  
 Sample ID: 14857DS  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.999	0.999	0.0141	0.0148	11:47:56	Yes
2	1.000	1.000	0.0142	0.0148	11:48:29	Yes
3	0.991	0.991	0.0140	0.0147	11:49:02	Yes
Mean:	0.997	0.997	0.0141			
SD :	0.0050	0.0050	0.0001			
%RSD:	0.5	0.5	0.4971			

=====  
 Element: Hg Seq. No.: 79 AS Loc.: 66 Date: 04/05/2001  
 Sample ID: 14859  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.020	-0.020	-0.0003	0.0003	11:49:52	Yes
2	-0.019	-0.019	-0.0003	0.0004	11:50:25	Yes
3	-0.020	-0.020	-0.0003	0.0004	11:50:58	Yes
Mean:	-0.020	-0.020	-0.0003			
SD :	0.0005	0.0005	0.0000			
%RSD:	2.5	2.5	2.4676			

=====  
 Element: Hg Seq. No.: 80 AS Loc.: 67 Date: 04/05/2001  
 Sample ID: BL0405-3M3B  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.024	-0.024	-0.0003	0.0003	11:51:47	Yes
2	-0.024	-0.024	-0.0003	0.0003	11:52:20	Yes
3	-0.024	-0.024	-0.0003	0.0003	11:52:53	Yes
Mean:	-0.024	-0.024	-0.0003			
SD :	0.0001	0.0001	0.0000			

00133

Element: Hg Seq. No.: 86 AS Loc.: 73 Date: 04/05/2001  
 Sample ID: 15046DS

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	1.887	1.887	0.0267	0.0273	12:03:19	Yes
2	1.888	1.888	0.0267	0.0274	12:03:52	Yes
3	1.878	1.878	0.0266	0.0272	12:04:25	Yes
Mean:	1.884	1.884	0.0267			
SD :	0.0056	0.0056	0.0001			
%RSD:	0.3	0.3	0.2984			

Element: Hg Seq. No.: 87 AS Loc.: 74 Date: 04/05/2001  
 Sample ID: 15044

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.027	-0.027	-0.0004	0.0003	12:05:14	Yes

Element: Hg Seq. No.: 88 AS Loc.: 7 Date: 04/05/2001  
 Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.956	0.956	0.0135	0.0142	12:07:05	Yes
2	0.961	0.961	0.0136	0.0142	12:07:38	Yes
3	0.960	0.960	0.0136	0.0142	12:08:11	Yes
Mean:	0.959	0.959	0.0136			
SD :	0.0024	0.0024	0.0000			
%RSD:	0.3	0.3	0.2541			

QC value within specified limits.

Element: Hg Seq. No.: 89 AS Loc.: 8 Date: 04/05/2001  
 Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.029	-0.029	-0.0004	0.0002	12:09:00	Yes
2	-0.028	-0.028	-0.0004	0.0002	12:09:33	Yes
3	-0.027	-0.027	-0.0004	0.0003	12:10:06	Yes
Mean:	-0.028	-0.028	-0.0004			
SD :	0.0011	0.0011	0.0000			
%RSD:	4.1	4.1	4.0543			

QC value within specified limits.

Element: Hg Seq. No.: 90 AS Loc.: 74 Date: 04/05/2001  
 Sample ID: 15044

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.026	-0.026	-0.0004	0.0003	12:10:58	Yes
2	-0.025	-0.025	-0.0004	0.0003	12:11:31	Yes
3	-0.041	-0.041	-0.0006	0.0000	12:12:04	Yes
Mean:	-0.031	-0.031	-0.0004			
SD :	0.0091	0.0091	0.0001			
%RSD:	29.8	29.8	29.8249			

Element: Hg Seq. No.: 91 AS Loc.: 4 Date: 04/05/2001  
 Sample ID: Reslope

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
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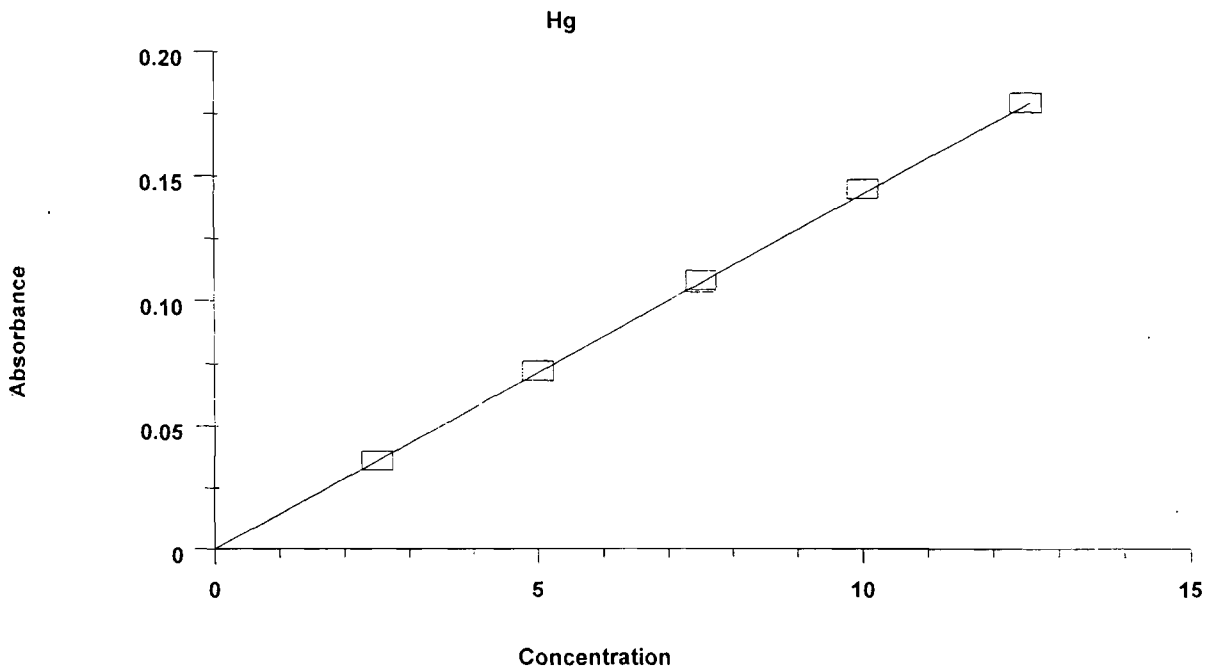
1 0.1071 0.1078 12:12:55 Yes  
 2 0.1070 0.1076 12:13:28 Yes  
 3 0.1067 0.1073 12:14:01 Yes  
 Mean: 0.1069  
 SD : 0.0002  
 %RSD: 0.2111

[Hg] Reslope standard applied. [7.500]  
 Correlation Coefficient: 0.99996

Slope: 0.01454

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0006	---	0.044	0.0005	79.8
STD1	0.0358	2.500	2.514	0.0001	0.4
STD2	0.0721	5.000	5.060	0.0002	0.3
STD3	0.1081	7.500	7.580	0.0004	0.3
STD4	0.1447	10.000	10.15	0.0004	0.3
STD5	0.1793	12.500	12.58	0.0011	0.6
Reslope	0.1069	7.500	7.500	0.0002	0.2
Correlation Coefficient: 0.99996		Slope: 0.01454		----	



Element: Hg Seq. No.: 92 AS Loc.: 75 Date: 04/05/2001  
 Sample ID: 15045

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	-0.024	-0.024	-0.0003	0.0003	12:15:19	Yes
2	-0.027	-0.027	-0.0004	0.0002	12:15:52	Yes
3	-0.027	-0.027	-0.0004	0.0002	12:16:25	Yes
Mean:	-0.026	-0.026	-0.0004			
SD :	0.0022	0.0022	0.0000			
%RSD:	8.3	8.3	8.3211			

EPA 7470 WATER PREPARATION LOG - MERCURY

DG7470HG, DGHGLEACH, DG29\*

Calibration Solutions:

#	I.D.	**Conc.	Spike	***Conc. Entered
1	Blank/Dummy	0 ppb	None	0.0
2	Standard 1	0 ppb	None	0.0
3	Standard 2	1.67	500 ul of 0.1 ppm working cal standard	2.5
4	Standard 3	3.33	1000 ul of 0.1 ppm working cal standard	5.0
5	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
6	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
7	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
8	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
9	Standard 5	6.67	2000 ul of 0.1 ppm working cal standard	10.0
10	Standard 6	8.33	2500 ul of 0.1 ppm working cal standard	12.5

Check List

- Digest Code/labels
- Samples poured out
- Acids added
- Reagents added
- Samples spiked
- Bath at 95 degrees C
- Samples digested
- Hydroxylamine HCl added,
- Samples shaken and bulked
- Rack order checked

#	Sample I.D.	B.Code	Init. Vol.	F. Vol.	Dil	Comment
11	ICV (Int. Coll. Verif.)	1B3A	20 ml	30 ml	1X	1.5 ppb = 600 ul of 0.05ppm Working Reference QC Std.
12	LLC (low level check)	"	"	"	"	0.25ppb = 50ul of 0.1 ppm Working Cal Std.
13	BL 0405	"	"	"	"	(Processed Blank) 015045
14	BL 0405 S	"	"	"	"	1 ppb = 200 ul of 0.1 ppm Working Cal Std.
15	BL 0405 DS	"	"	"	"	(Duplicate Blank Spike)
1	16 015046	"	"	"	"	
1	17 D	"	"	"	"	(Duplicate sample)
1	18 S	"	"	"	"	1 ppb = 200 ul of 0.1 ppm Working Cal Std.
1	19 DS	"	"	"	"	(Duplicate Spiked sample)
2	20 45 HB	"	"	"	"	
3	21 47	"	"	"	"	
4	22 48	"	"	"	"	
5	23 49	"	"	"	"	
6	24 50	"	"	"	"	
7	25 51	"	"	"	"	
8	26	"	"	"	"	
9	27	"	"	"	"	
10	28	"	"	"	"	
29	CCV (Cont. Coll. Verif.)	"	20 ml	30 ml	1X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
30	CCV (Cont. Coll. Verif.)	"	20 ml	30 ml	1X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
31	BL 0405	2B8A	20 ml	30 ml	"	(Processed Blank) 014768
32	BL 0405 S	"	"	"	"	1 ppb = 200 ul of 0.1 ppm Working Cal Std.
33	BL 0405 DS	"	"	"	"	(Duplicate Blank Spike)
1	34 014770	"	20ml	"	10X	
1	35 D	"	"	"	"	(Duplicate sample)
1	36 S	"	"	"	"	1 ppb = 200 ul of 0.1 ppm Working Cal Std.
1	37 DS	"	"	"	"	(Duplicate Spiked sample)
2	38 71	"	20.00ml	"	1X	
3	39 72	"	"	"	"	
4	40	"	"	"	"	
5	41	"	"	"	"	
6	42	"	"	"	"	
7	43	"	"	"	"	
8	44	"	"	"	"	
9	45	"	"	"	"	
10	46	"	"	"	"	
47	CCV (Cont. Coll. Verif.)	"	20 ml	30 ml	1X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
48	CCV (Cont. Coll. Verif.)	"	20 ml	30 ml	1X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.

Comments: \*\* concentration based on 30 ml final volume, \*\*\* concentration based on 20 ml final volume

Other Applicable Test Codes: DG29HG-1B, DG29HG-2B, DG29HG-3A, DG29HG-3B, DG29HG-3C

DG29HGI, DG29HGF, DG101AA1, DG101AA2

#	Sample I.D.	B.Code	Int.Vol.	F. Vol.	Dil	Comment
49	BL 0405	3B3A	"	"	"	(Processed Blank) 014842
50	BL 0405 S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
51	BL 0405 DS	"	"	"	"	(Duplicate Blank Spike)
1	52 014845	"	"	"	"	
1	53	D	"	"	"	(Duplicate sample)
1	54	S	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
1	55	DS	"	"	"	(Duplicate Spiked sample)
2	56 43	"	"	"	"	
3	57 44	"	"	"	"	
4	58 46	"	"	"	"	
6	59 47	"	"	"	"	
6	60 51	"	"	"	"	
7	61 52	"	"	"	"	
8	62 53	"	"	"	"	
9	63 57	"	"	"	"	
10	64 58	"	"	"	"	014859
65	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
66	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.

Procedure/Methodology:

- 1 Prepare 25 ppm Intermediate Calibration Standard (if required) by pipetting 625 ul. of 1000 ppm Stock to 25 ml final volume of 2% HNO<sub>3</sub>
- 2 Prepare 0.1 ppm Working calibration standard daily by pipetting 400 ul. of 25 ppm Intermediate to 100 ml final volume of 2% HNO<sub>3</sub>
- 3 Prepare a 0.05 ppm Working Reference QC Standard daily by pipetting 50 ul of Stock Reference Standard to 100 ml final vol of 2% HNO<sub>3</sub>
- 4 Using the LIMS Screen "SCNDIG" enter the required samples into LIMS
- 5 Using the labeling program, "DIGLBL", retrieve the "SCNDIG" list and create labels for the required samples.
- 6 Label the falcon tubes appropriately
- 7 Include one External Reference Material sample per run
- 8 Include one Organic Mercury Control Standard per run
- 9 Transfer a 20 ml. aliquot of well mixed sample into the designated falcon tube
- 10 Spike the tubes as indicated in the comment sector of the digestion sheet
- 11 Add 0.5 ml. of conc. Nitric Acid (HNO<sub>3</sub>), and 1 ml. of conc. Sulphuric acid, (H<sub>2</sub>SO<sub>4</sub>), to each tube
- 12 Add 3 ml. Of 6% KMnO<sub>4</sub>, purple colour must remain for the duration of digest.
- 13 Add 1.5 ml. of 5% potassium persulphate, (K<sub>2</sub>S<sub>2</sub>O<sub>8</sub>), to each tube
- 14 Mix samples, cap loosely and place in a water bath @ 95 degrees C for 2 hours
- 15 Remove tubes and allow to cool to room temperature
- 16 Add 1.0 ml. 20% Hydroxylamine Hydrochloride to each tube
- 17 Recap tubes and shake until KMnO<sub>4</sub> is destroyed and sample becomes colourless  
Dilute the sample to a final volume of 30 ml.

Supplier/Lot Information	Supplier	Lot	Expiry Date
Stock Calibration Standard	Inorganic Ventures	P4602023	01/04/01
Intermediate Cal Standard	Internal	01/03/23	01/05/23
Stock Reference Standard	High Purity	033536	7AN.02
External Reference Material	SPEX NYS	3311	
Organic Mercury Control Standard	Aldrich	06811HR	01/02/07
6% potassium permanganate	Internal	01/03/22	01/05/22
5% potassium persulphate	Internal	01/04/04	01/06/04
20% hydroxylamine hydrochloride	Internal	01/03/20	01/05/20
HNO <sub>3</sub>	Anachemia	1100081	01/06/03
H <sub>2</sub> SO <sub>4</sub>	Anachemia	3100091	01/05/27
Bath Temps: 95 C	Time ON: 12:15	Time OFF: 2:15	
Prepared By: MB	Date: 01/04/05	Checked by: MB	

Zenon Number	Client	Client ID	Parameter	TS	Result	Dup.	Spike	% Rec.	Dup. Spk	% Rec.	Batch Date	Batch Code	Run Date	Run Code	Day Old	Day In	Analyst's Comments
014842	CLEANAIR	MB R456	Mercury -	PV	-0.050	-99999.0	0.530	106.	0.525	105.	01/04/06	3M3C	01/04/06	MG03	8.	4.	
014843	CLEANAIR	M29HG Reagent Blank	Mercury -	PV	0.064						01/04/06	3M3C	01/04/06	MG03	8.	4.	
014844	CLEANAIR	M29HG Field Blank	Mercury -	PV	-0.050						01/04/06	3M3C	01/04/06	MG03	8.	4.	
014845	CLEANAIR	M29HG U1 Outlet R1	Mercury -	PV	3.516	3.611	3.994	86.	3.989	85.	01/04/06	3M3C	01/04/06	MG03	11.	4.	
014846	CLEANAIR	M29HG U1 Outlet R2	Mercury -	PV	0.696						01/04/06	3M3C	01/04/06	MG03	11.	4.	
014847	CLEANAIR	M29HG U1 Outlet R3	Mercury -	PV	0.678						01/04/06	3M3C	01/04/06	MG03	11.	4.	
014851	CLEANAIR	M29HG U2 Outlet R1	Mercury -	PV	0.450						01/04/06	3M3C	01/04/06	MG03	10.	4.	
014852	CLEANAIR	M29HG U2 Outlet R2	Mercury -	PV	0.849						01/04/06	3M3C	01/04/06	MG03	10.	4.	
014853	CLEANAIR	M29HG U2 Outlet R3	Mercury -	PV	1.332						01/04/06	3M3C	01/04/06	MG03	10.	4.	
014858	CLEANAIR	M29HG U3 Outlet R2	Mercury -	PV	0.455						01/04/06	3M3C	01/04/06	MG03	10.	4.	
BL0406	INTERNAL		Mercury -	PV	-0.050	-99999.0	0.530	106.	0.525	105.	01/04/06	3M3C	01/04/06	MG03	\$\$\$	\$\$\$	

11 Tests for 29HG-3C with an MDL of 0.050 ug

Validated By CMB

Control Chart Updated N/A

IO Requirements met N/A

00137

Zenon Number	Client	Client ID	Parameter	TS	Result	Dup.	Spike	% Rec.	Dup. Spk	% Rec.	Batch Date	Batch Code	Run Date	Run Code	Day Old	Day In	Analyst's Comments
014857	CLEANAIR	M29HG U3 Outlet R1	Mercury -	PV	0.346	0.346	0.838	98.	0.837	98.	01/04/06	4M3C	01/04/06	MG03	10.	4.	
014859	CLEANAIR	M29HG U3 Outlet R3	Mercury -	PV	0.311						01/04/06	4M3C	01/04/06	MG03	9.	4.	
BL0406	INTERNAL		Mercury -	PV	-0.050	-99999.0	0.532	106.	0.536	107.	01/04/06	4M3C	01/04/06	MG03	\$\$\$	\$\$\$	

3 Tests for 29HG-3C with an MDL of 0.050 ug

Validated By emp

Control Chart Updated N/A

IO Requirements met N/A

00138

00139

29HG-3C

Sample #	Conc. ug/L	Dilution x	Final Vol ml	Result T ug	Mdl ug	Dil Mdl ug	%	MDL FV
BL0406-2M3C	0.010	1	500	0.005	0.05	0.05		500
BL0406S	1.052	1	500	0.526	0.05	0.05	105	500
BL0406DS	1.069	1	500	0.535	0.05	0.05	107	500
14770	1.716	1	500	0.858	0.05	0.05		500
14770D	1.711	1	500	0.856	0.05	0.05		500
14770S	2.685	1	500	1.343	0.05	0.05	97	500
14770DS	2.634	1	500	1.317	0.05	0.05	92	500
14768	0.023	1	500	0.012	0.05	0.05		500
14769	0.068	1	500	0.034	0.05	0.05		500
14771	3.057	1	500	1.529	0.05	0.05		500
14772	3.938	1	500	1.969	0.05	0.05		500

Sample #	Conc. ug/L	Dilution x	Final Vol ml	Result T ug	Mdl ug	Dil Mdl ug	%	MDL FV
BL0406-3M3C	0.023	1	500	0.012	0.05	0.05		500
BL0406S	1.060	1	500	0.530	0.05	0.05	106	500
BL0406DS	1.049	1	500	0.525	0.05	0.05	105	500
14845	7.032	1	500	3.516	0.05	0.05		500
14845D	7.221	1	500	3.611	0.05	0.05		500
14845S	7.987	1	500	3.994	0.05	0.05	86	500
14845DS	7.977	1	500	3.989	0.05	0.05	85	500
14842	0.009	1	500	0.005	0.05	0.05		500
14843	0.127	1	500	0.064	0.05	0.05		500
14844	0.092	1	500	0.046	0.05	0.05		500
14846	1.392	1	500	0.696	0.05	0.05		500
14847	1.355	1	500	0.678	0.05	0.05		500
14851	0.899	1	500	0.450	0.05	0.05		500
14852	1.698	1	500	0.849	0.05	0.05		500
14853	2.664	1	500	1.332	0.05	0.05		500
14858	0.910	1	500	0.455	0.05	0.05		500

Sample #	Conc. ug/L	Dilution x	Final Vol ml	Result T ug	Mdl ug	Dil Mdl ug	%	MDL FV
BL0406-4M3C	0.017	1	500	0.009	0.05	0.05		500
BL0406S	1.063	1	500	0.532	0.05	0.05	106	500
BL0406DS	1.071	1	500	0.536	0.05	0.05	107	500
14857	0.692	1	500	0.346	0.05	0.05		500
14857D	0.691	1	500	0.346	0.05	0.05		500
14757S	1.675	1	500	0.838	0.05	0.05	98	500
14757DS	1.673	1	500	0.837	0.05	0.05	98	500
14759	0.622	1	500	0.311	0.05	0.05		500



Sample Information File C:\FIMS\AAUSER\SAMPINFO\010406F2.SIF

Description : METHOD29  
Batch ID : MG03  
Volume Units : L  
Weight Units : µg  
Analyst : MGAS  
Sample Volume : 0.00

AS Sample ID Loc	Sample Sample Weight Units	User Dilution	Remarks
15	BL0406-2M3C		
16	BL0406S		
17	BL0406DS		
18	14770		
19	14770D		
20	14770S		
21	14770DS		
22	14768		
23	14769		
24	14771		
25	14772		
26	BL0406-3M3C		
27	BL0406S		
28	BL0406DS		
29	14845		
30	14845D		
31	14845S		
32	14845DS		
33	14842		
34	14843		
35	14844		
36	14846		
37	14847		
38	14851		
39	14852		
40	14853		
41	14858		
42	BL0406-4M3C		
43	BL0406S		
44	BL0406DS		
45	14857		
46	14857D		
47	14857S		
48	14857DS		
49	14859		
50	HG-SPK	CHECH	

Method Name: EPA 7470  
 Method Description: EPA 7470  
 Element: Hg

Date: 04/06/2001  
 Technique: FI-MHS  
 Calibration Type:  
 Hg, Zero Intercept: Linear  
 Wavelength: 253.7 nm  
 Sample Info Name: 010406F2.SIF

Results Data Set Name: 010406F2

Element: Hg Seq. No.: 1 AS Loc.: 1 Date: 04/06/2001  
 Sample ID: Calib Blank

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1			0.0001	0.0001	03:58:00	Yes
2			0.0001	0.0001	03:58:33	Yes
3			0.0001	0.0001	03:59:07	Yes
Mean:			0.0001			
SD :			0.0000			
%RSD:			1.6538			

Auto-zero performed.

Element: Hg Seq. No.: 2 AS Loc.: 2 Date: 04/06/2001  
 Sample ID: STD1

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1			0.0356	0.0357	03:59:56	Yes
2			0.0357	0.0358	04:00:29	Yes
3			0.0357	0.0359	04:01:02	Yes
Mean:			0.0357			
SD :			0.0001			
%RSD:			0.1963			

[Hg] Standard number 1 applied. [2.500]  
 Correlation Coefficient: 1.00000 Slope: 0.01426

Element: Hg Seq. No.: 3 AS Loc.: 3 Date: 04/06/2001  
 Sample ID: STD2

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1			0.0719	0.0720	04:01:51	Yes
2			0.0715	0.0716	04:02:24	Yes
3			0.0719	0.0721	04:02:57	Yes
Mean:			0.0718			
SD :			0.0003			
%RSD:			0.3500			

[Hg] Standard number 2 applied. [5.000]  
 Correlation Coefficient: 0.99997 Slope: 0.01433

Element: Hg Seq. No.: 4 AS Loc.: 4 Date: 04/06/2001  
 Sample ID: STD3

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1			0.1065	0.1066	04:04:11	Yes
2			0.1062	0.1064	04:04:44	Yes
3			0.1071	0.1072	04:05:17	Yes
Mean:			0.1066			

SD : 0.0004  
 %RSD: 0.4076  
 [Hg] Standard number 3 applied. [7.500]  
 Correlation Coefficient: 0.99994 Slope: 0.01426

Element: Hg Seq. No.: 5 AS Loc.: 5 Date: 04/06/2001  
 Sample ID: STD4

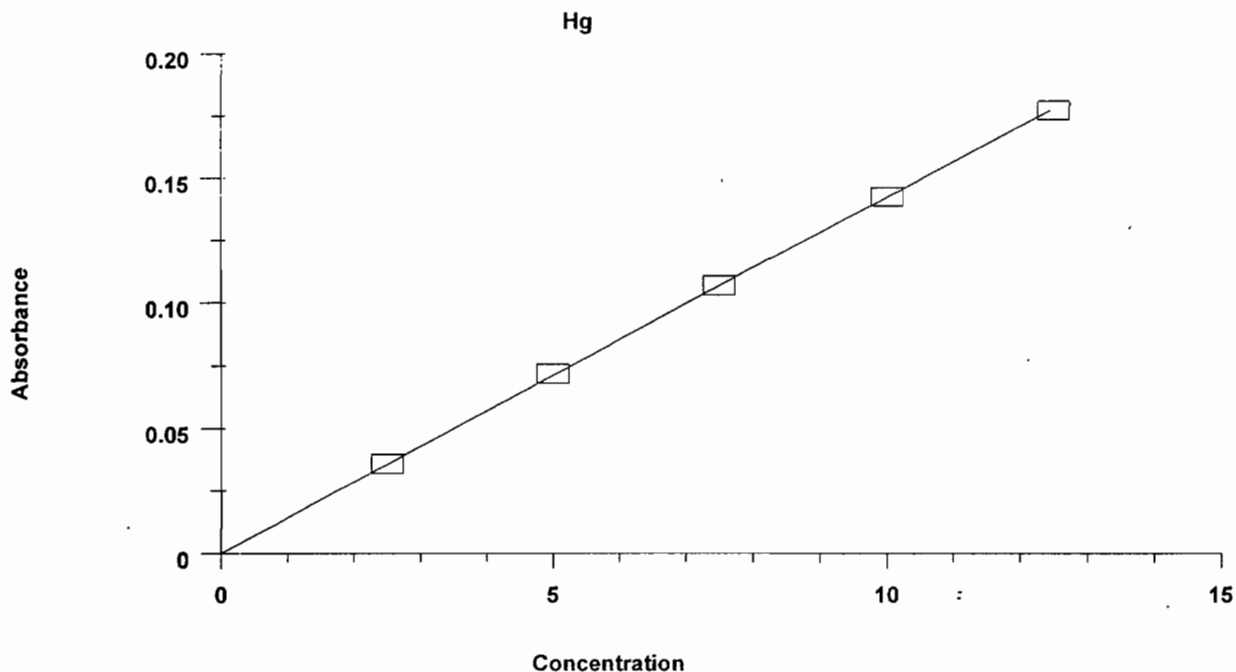
Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.1425	0.1426	04:06:33	Yes
2			0.1415	0.1417	04:07:06	Yes
3			0.1426	0.1427	04:07:39	Yes
Mean:			0.1422			
SD :			0.0006			
%RSD:			0.4054			
[Hg] Standard number 4 applied. [10.00]						
Correlation Coefficient:			0.99997	Slope: 0.01424		

Element: Hg Seq. No.: 6 AS Loc.: 6 Date: 04/06/2001  
 Sample ID: STD5

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Height	Time	Peak Stored
1			0.1771	0.1772	04:08:55	Yes
2			0.1764	0.1765	04:09:28	Yes
3			0.1772	0.1773	04:10:01	Yes
Mean:			0.1769			
SD :			0.0004			
%RSD:			0.2432			
[Hg] Standard number 5 applied. [12.50]						
Correlation Coefficient:			0.99996	Slope: 0.01420		

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0001	---	---	---	---
STD1	0.0357	2.500	2.512	0.0001	0.2
STD2	0.0718	5.000	5.054	0.0003	0.3
STD3	0.1066	7.500	7.508	0.0004	0.4
STD4	0.1422	10.000	10.01	0.0006	0.4
STD5	0.1769	12.500	12.46	0.0004	0.2
Correlation Coefficient:		0.99996	Slope: 0.01420	----	



-----  
 Element: Hg Seq. No.: 7 AS Loc.: 9 Date: 04/06/2001  
 Sample ID: ICV  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.499	1.499	0.0213	0.0214	04:11:21	Yes
2	1.494	1.494	0.0212	0.0213	04:11:54	Yes
3	1.502	1.502	0.0213	0.0215	04:12:27	Yes
Mean:	1.498	1.498	0.0213			
SD :	0.0043	0.0043	0.0001			
%RSD:	0.3	0.3	0.2843			

QC value within specified limits.

-----  
 Element: Hg Seq. No.: 8 AS Loc.: 10 Date: 04/06/2001  
 Sample ID: ICB  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	-0.002	-0.002	0.0000	0.0001	04:13:15	Yes
2	-0.004	-0.004	-0.0001	0.0001	04:13:48	Yes
3	-0.004	-0.004	-0.0001	0.0001	04:14:21	Yes
Mean:	-0.003	-0.003	0.0000			
SD :	0.0010	0.0010	0.0000			
%RSD:	29.1	29.1	29.1472			

QC value within specified limits.

-----  
 Element: Hg Seq. No.: 9 AS Loc.: 11 Date: 04/06/2001  
 Sample ID: NYS 3311  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.776	0.776	0.0110	0.0112	04:15:10	Yes
2	0.766	0.766	0.0109	0.0110	04:15:43	Yes
3	0.774	0.774	0.0110	0.0111	04:16:16	Yes

Mean: 0.772 0.772 0.0110  
 SD : 0.0052 0.0052 0.0001  
 %RSD: 0.7 0.7 0.6736  
 QC value within specified limits.

=====  
 Element: Hg Seq. No.: 10 AS Loc.: 12 Date: 04/06/2001  
 Sample ID: ORG REF

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.322	2.322	0.0330	0.0331	04:17:05	Yes
2	2.319	2.319	0.0329	0.0331	04:17:38	Yes
3	2.293	2.293	0.0326	0.0327	04:18:11	Yes
Mean:	2.311	2.311	0.0328			
SD :	0.0160	0.0160	0.0002			
%RSD:	0.7	0.7	0.6921			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 11 AS Loc.: 13 Date: 04/06/2001  
 Sample ID: LLC

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.247	0.247	0.0035	0.0037	04:19:00	Yes
2	0.243	0.243	0.0035	0.0036	04:19:33	Yes
3	0.249	0.249	0.0035	0.0037	04:20:06	Yes
Mean:	0.246	0.246	0.0035			
SD :	0.0028	0.0028	0.0000			
%RSD:	1.2	1.2	1.1556			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 12 AS Loc.: 14 Date: 04/06/2001  
 Sample ID: DIL. CHECK

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.002	0.002	0.0000	0.0002	04:20:56	Yes
2	0.002	0.002	0.0000	0.0002	04:21:28	Yes
3	0.002	0.002	0.0000	0.0002	04:22:01	Yes
Mean:	0.002	0.002	0.0000			
SD :	0.0003	0.0003	0.0000			
%RSD:	13.9	13.9	13.8877			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 13 AS Loc.: 15 Date: 04/06/2001  
 Sample ID: BL0406-2M3C

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.009	0.009	0.0001	0.0003	04:22:50	Yes
2	0.011	0.011	0.0002	0.0003	04:23:23	Yes
3	0.009	0.009	0.0001	0.0003	04:23:56	Yes
Mean:	0.010	0.010	0.0001			
SD :	0.0010	0.0010	0.0000			
%RSD:	10.0	10.0	9.9733			

=====  
 Element: Hg Seq. No.: 14 AS Loc.: 16 Date: 04/06/2001  
 Sample ID: BL0406S

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
--------	-----------------	---------------	-----------------	-------------	------	-------------

2	2.627	2.627	0.0373	0.0374	04:34:53	Yes
3	2.633	2.633	0.0374	0.0375	04:35:26	Yes
Mean:	2.634	2.634	0.0374			
SD :	0.0075	0.0075	0.0001			
%RSD:	0.3	0.3	0.2852			

=====  
 Element: Hg Seq. No.: 20 AS Loc.: 22 Date: 04/06/2001  
 Sample ID: 14768

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.022	0.022	0.0003	0.0004	04:36:15	Yes
2	0.022	0.022	0.0003	0.0005	04:36:48	Yes
3	0.026	0.026	0.0004	0.0005	04:37:21	Yes
Mean:	0.023	0.023	0.0003			
SD :	0.0027	0.0027	0.0000			
%RSD:	11.4	11.4	11.4066			

=====  
 Element: Hg Seq. No.: 21 AS Loc.: 23 Date: 04/06/2001  
 Sample ID: 14769

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.068	0.068	0.0010	0.0011	04:38:10	Yes
2	0.069	0.069	0.0010	0.0011	04:38:43	Yes
3	0.066	0.066	0.0009	0.0011	04:39:16	Yes
Mean:	0.068	0.068	0.0010			
SD :	0.0014	0.0014	0.0000			
%RSD:	2.1	2.1	2.1251			

=====  
 Element: Hg Seq. No.: 22 AS Loc.: 24 Date: 04/06/2001  
 Sample ID: 14771

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	3.058	3.058	0.0434	0.0436	04:40:08	Yes
2	3.055	3.055	0.0434	0.0435	04:40:41	Yes
3	3.058	3.058	0.0434	0.0436	04:41:14	Yes
Mean:	3.057	3.057	0.0434			
SD :	0.0020	0.0020	0.0000			
%RSD:						

=====  
 Element: Hg Seq. No.: 23 AS Loc.: 7 Date: 04/06/2001  
 Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.993	0.993	0.0141	0.0142	04:42:06	Yes
2	0.992	0.992	0.0141	0.0142	04:42:39	Yes
3	0.991	0.991	0.0141	0.0142	04:43:12	Yes
Mean:	0.992	0.992	0.0141			
SD :	0.0009	0.0009	0.0000			
%RSD:						

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 24 AS Loc.: 8 Date: 04/06/2001  
 Sample ID: CCB

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.001	0.001	0.0000	0.0001	04:44:01	Yes

2        0.001        0.001        0.0000        0.0002        04:44:34 Yes  
 3        0.002        0.002        0.0000        0.0002        04:45:08 Yes  
 Mean:    0.001        0.001        0.0000  
 SD :     0.0005        0.0005        0.0000  
 %RSD:    52.5        52.5        52.5409  
 QC value within specified limits.

=====  
 Element: Hg    Seq. No.: 25        AS Loc.: 4    Date: 04/06/2001  
 Sample ID: Reslope  
 -----

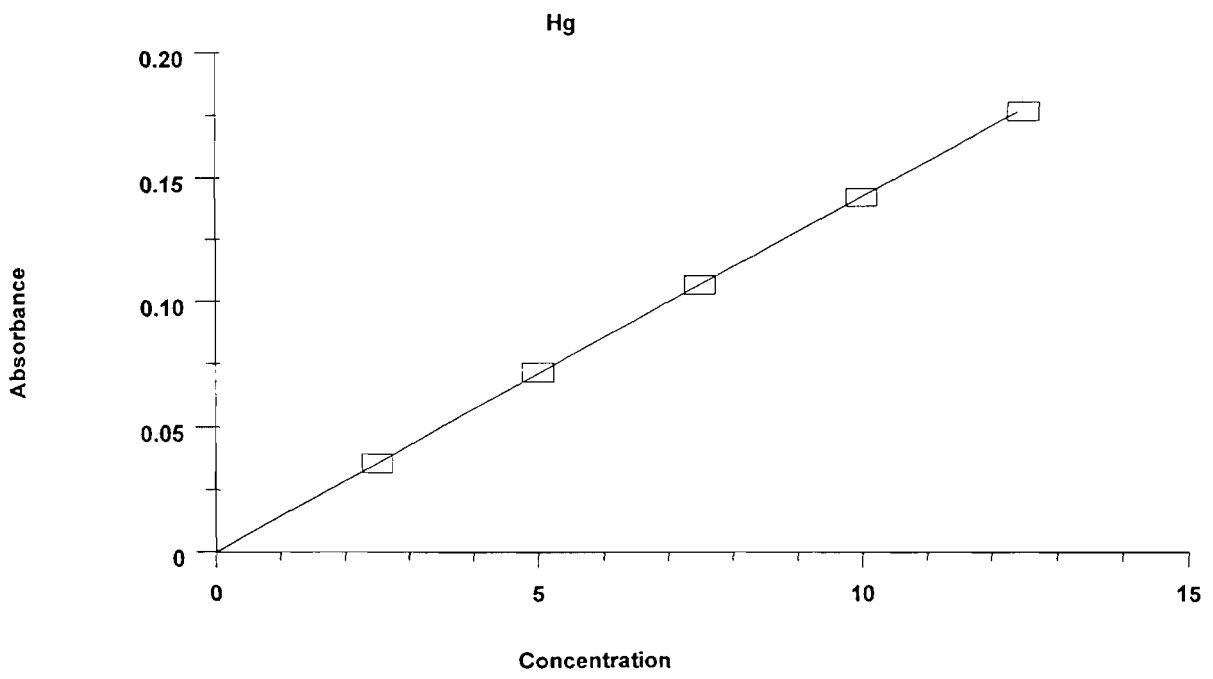
Repl #	Sample Conc µg/L	Stnd Conc µg/L	Blk Corr Signal	Peak Height	Time	Peak Stored
1			0.1070	0.1071	04:45:58	Yes
2			0.1064	0.1066	04:46:31	Yes
3			0.1069	0.1070	04:47:04	Yes
Mean:			0.1068			
SD :			0.0003			
%RSD:			0.2691			

[Hg] Reslope standard applied. [7.500]  
 Correlation Coefficient: 0.99996                      Slope: 0.01416  
 -----

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0001	---	0.010	0.0000	1.7
STD1	0.0357	2.500	2.505	0.0001	0.2
STD2	0.0718	5.000	5.040	0.0003	0.3
STD3	0.1066	7.500	7.488	0.0004	0.4
STD4	0.1422	10.000	9.988	0.0006	0.4
STD5	0.1769	12.500	12.43	0.0004	0.2
Reslope	0.1068	7.500	7.500	0.0003	0.3

Correlation Coefficient: 0.99996    Slope: 0.01416    ----  
 -----



Element: Hg Seq. No.: 26 AS Loc.: 25 Date: 04/06/2001  
 Sample ID: 14772

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	3.949	3.949	0.0562	0.0564	04:48:22	Yes
2	3.923	3.923	0.0558	0.0560	04:48:55	Yes
3	3.943	3.943	0.0561	0.0563	04:49:28	Yes
Mean:	3.938	3.938	0.0561			
SD :	0.0137	0.0137	0.0002			
%RSD:	0.3	0.3	0.3477			

Element: Hg Seq. No.: 27 AS Loc.: 26 Date: 04/06/2001  
 Sample ID: BL0406-3M3C

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.024	0.024	0.0003	0.0005	04:50:17	Yes
2	0.021	0.021	0.0003	0.0004	04:50:50	Yes
3	0.025	0.025	0.0004	0.0005	04:51:23	Yes
Mean:	0.023	0.023	0.0003			
SD :	0.0021	0.0021	0.0000			
%RSD:	9.1	9.1	9.0737			

Element: Hg Seq. No.: 28 AS Loc.: 27 Date: 04/06/2001  
 Sample ID: BL0406S

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.061	1.061	0.0151	0.0152	04:52:11	Yes
2	1.060	1.060	0.0151	0.0152	04:52:44	Yes
3	1.058	1.058	0.0151	0.0152	04:53:17	Yes
Mean:	1.060	1.060	0.0151			
SD :	0.0017	0.0017	0.0000			
%RSD:	0.2	0.2	0.1600			

Element: Hg Seq. No.: 29 AS Loc.: 28 Date: 04/06/2001  
 Sample ID: BL0406DS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.049	1.049	0.0149	0.0151	04:54:06	Yes
2	1.047	1.047	0.0149	0.0151	04:54:39	Yes
3	1.050	1.050	0.0150	0.0151	04:55:12	Yes
Mean:	1.049	1.049	0.0149			
SD :	0.0015	0.0015	0.0000			
%RSD:	0.1	0.1	0.1406			

Element: Hg Seq. No.: 30 AS Loc.: 29 Date: 04/06/2001  
 Sample ID: 14845

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	7.019	7.019	0.0999	0.1001	04:56:01	Yes
2	7.025	7.025	0.1000	0.1001	04:56:34	Yes
3	7.054	7.054	0.1004	0.1006	04:57:08	Yes
Mean:	7.032	7.032	0.1001			
SD :	0.0189	0.0189	0.0003			
%RSD:	0.3	0.3	0.2691			

Element: Hg Seq. No.: 31 AS Loc.: 30 Date: 04/06/2001



Sample ID: 14845D

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	7.198	7.198	0.1025	0.1026	04:58:21	Yes
2	7.222	7.222	0.1028	0.1029	04:58:55	Yes
3	7.243	7.243	0.1031	0.1033	04:59:28	Yes
Mean:	7.221	7.221	0.1028			
SD :	0.0226	0.0226	0.0003			
%RSD:	0.3	0.3	0.3124			

=====  
 Element: Hg Seq. No.: 32 AS Loc.: 31 Date: 04/06/2001  
 Sample ID: 14845S

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	8.019	8.019	0.1142	0.1143	05:00:41	Yes
2	7.950	7.950	0.1132	0.1133	05:01:14	Yes
3	7.991	7.991	0.1138	0.1139	05:01:47	Yes
Mean:	7.987	7.987	0.1137			
SD :	0.0345	0.0345	0.0005			
%RSD:	0.4	0.4	0.4322			

=====  
 Element: Hg Seq. No.: 33 AS Loc.: 32 Date: 04/06/2001  
 Sample ID: 14845DS

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	7.975	7.975	0.1135	0.1137	05:03:01	Yes
2	7.992	7.992	0.1138	0.1139	05:03:34	Yes
3	7.964	7.964	0.1134	0.1135	05:04:07	Yes
Mean:	7.977	7.977	0.1136			
SD :	0.0138	0.0138	0.0002			
%RSD:	0.2	0.2	0.1732			

=====  
 Element: Hg Seq. No.: 34 AS Loc.: 33 Date: 04/06/2001  
 Sample ID: 14842

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.009	0.009	0.0001	0.0003	05:05:22	Yes
2	0.009	0.009	0.0001	0.0003	05:05:56	Yes
3	0.010	0.010	0.0001	0.0003	05:06:28	Yes
Mean:	0.009	0.009	0.0001			
SD :	0.0005	0.0005	0.0000			
%RSD:	5.3	5.3	5.3297			

=====  
 Element: Hg Seq. No.: 35 AS Loc.: 34 Date: 04/06/2001  
 Sample ID: 14843

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.129	0.129	0.0018	0.0020	05:07:17	Yes
2	0.127	0.127	0.0018	0.0019	05:07:50	Yes
3	0.125	0.125	0.0018	0.0019	05:08:23	Yes
Mean:	0.127	0.127	0.0018			
SD :	0.0017	0.0017	0.0000			
%RSD:	1.4	1.4	1.3734			

=====  
 Element: Hg Seq. No.: 36 AS Loc.: 7 Date: 04/06/2001  
 Sample ID: CCV

---

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.992	0.992	0.0141	0.0143	05:09:12	Yes
2	0.992	0.992	0.0141	0.0143	05:09:45	Yes
3	0.991	0.991	0.0141	0.0142	05:10:18	Yes
Mean:	0.992	0.992	0.0141			
SD :	0.0005	0.0005	0.0000			
%RSD:						

QC value within specified limits.

---

Element: Hg    Seq. No.: 37    AS Loc.: 8    Date: 04/06/2001  
Sample ID: CCB

---

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.000	0.000	0.0000	0.0001	05:11:07	Yes
2	-0.001	-0.001	0.0000	0.0001	05:11:40	Yes
3	0.002	0.002	0.0000	0.0002	05:12:13	Yes
Mean:	0.000	0.000	0.0000			
SD :	0.0016	0.0016	0.0000			
%RSD:	537.8	537.8	537.8134			

QC value within specified limits.

---

Element: Hg    Seq. No.: 38    AS Loc.: 4    Date: 04/06/2001  
Sample ID: Reslope

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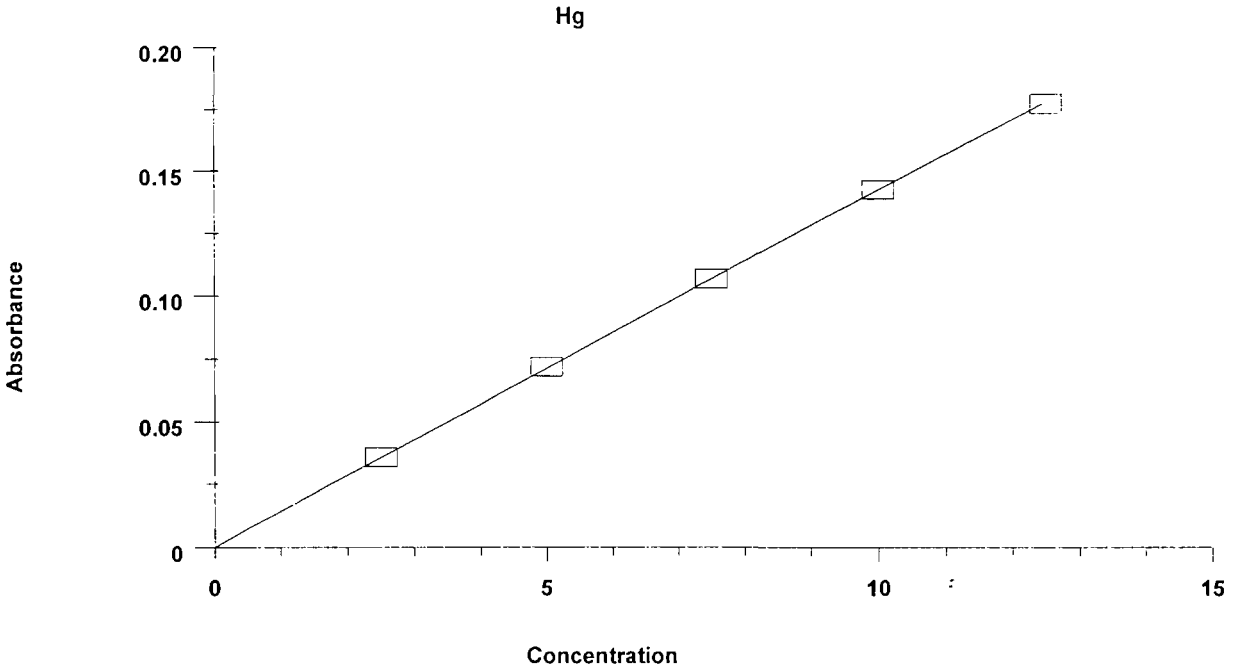
Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1			0.1062	0.1064	05:13:03	Yes
2			0.1067	0.1068	05:13:36	Yes
3			0.1068	0.1069	05:14:09	Yes
Mean:			0.1066			
SD :			0.0003			
%RSD:			0.2741			

[Hg] Reslope standard applied. [7.500]  
Correlation Coefficient: 0.99996    Slope: 0.01419

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration (µg/L)	Calculated Concentration (µg/L)	Standard Deviation	%RSD
Calib Blank	0.0001	---	0.010	0.0000	1.7
STD1	0.0357	2.500	2.510	0.0001	0.2
STD2	0.0718	5.000	5.050	0.0003	0.3
STD3	0.1066	7.500	7.503	0.0004	0.4
STD4	0.1422	10.000	10.01	0.0006	0.4
STD5	0.1769	12.500	12.45	0.0004	0.2
Reslope	0.1066	7.500	7.500	0.0003	0.3
Correlation Coefficient:		0.99996	Slope:	0.01419	----

---



=====  
 Element: Hg    Seq. No.: 39    AS Loc.: 35    Date: 04/06/2001  
 Sample ID: 14844  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.093	0.093	0.0013	0.0015	05:15:29	Yes
2	0.091	0.091	0.0013	0.0014	05:16:02	Yes
3	0.091	0.091	0.0013	0.0014	05:16:35	Yes
Mean:	0.092	0.092	0.0013			
SD :	0.0013	0.0013	0.0000			
%RSD:	1.4	1.4	1.4303			

=====  
 Element: Hg    Seq. No.: 40    AS Loc.: 36    Date: 04/06/2001  
 Sample ID: 14846  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.399	1.399	0.0199	0.0200	05:17:24	Yes
2	1.390	1.390	0.0198	0.0199	05:17:57	Yes
3	1.388	1.388	0.0197	0.0199	05:18:30	Yes
Mean:	1.392	1.392	0.0198			
SD :	0.0056	0.0056	0.0001			
%RSD:	0.4	0.4	0.4008			

=====  
 Element: Hg    Seq. No.: 41    AS Loc.: 37    Date: 04/06/2001  
 Sample ID: 14847  
 =====

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.361	1.361	0.0193	0.0195	05:19:20	Yes
2	1.353	1.353	0.0192	0.0194	05:19:53	Yes
3	1.353	1.353	0.0192	0.0194	05:20:26	Yes
Mean:	1.355	1.355	0.0193			
SD :	0.0045	0.0045	0.0001			

%RSD:           0.3           0.3           0.3296

Element: Hg      Seq. No.: 42           AS Loc.: 38      Date: 04/06/2001  
Sample ID: 14851

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.897	0.897	0.0128	0.0129	05:21:15	Yes
2	0.901	0.901	0.0128	0.0129	05:21:48	Yes
3	0.900	0.900	0.0128	0.0129	05:22:21	Yes
Mean:	0.899	0.899	0.0128			
SD :	0.0018	0.0018	0.0000			
%RSD:	0.2	0.2	0.1996			

Element: Hg      Seq. No.: 43           AS Loc.: 39      Date: 04/06/2001  
Sample ID: 14852

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.696	1.696	0.0241	0.0242	05:23:09	Yes
2	1.703	1.703	0.0242	0.0243	05:23:42	Yes
3	1.694	1.694	0.0241	0.0242	05:24:15	Yes
Mean:	1.698	1.698	0.0241			
SD :	0.0053	0.0053	0.0001			
%RSD:	0.3	0.3	0.3098			

Element: Hg      Seq. No.: 44           AS Loc.: 40      Date: 04/06/2001  
Sample ID: 14853

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	2.655	2.655	0.0377	0.0379	05:25:07	Yes
2	2.667	2.667	0.0379	0.0380	05:25:40	Yes
3	2.671	2.671	0.0380	0.0381	05:26:13	Yes
Mean:	2.664	2.664	0.0379			
SD :	0.0085	0.0085	0.0001			
%RSD:	0.3	0.3	0.3199			

Element: Hg      Seq. No.: 45           AS Loc.: 41      Date: 04/06/2001  
Sample ID: 14858

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.913	0.913	0.0130	0.0131	05:27:02	Yes
2	0.907	0.907	0.0129	0.0130	05:27:35	Yes
3	0.910	0.910	0.0129	0.0131	05:28:08	Yes
Mean:	0.910	0.910	0.0129			
SD :	0.0026	0.0026	0.0000			
%RSD:	0.3	0.3	0.2854			

Element: Hg      Seq. No.: 46           AS Loc.: 42      Date: 04/06/2001  
Sample ID: BL0406-4M3C

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.015	0.015	0.0002	0.0003	05:28:57	Yes
2	0.019	0.019	0.0003	0.0004	05:29:30	Yes
3	0.017	0.017	0.0002	0.0004	05:30:02	Yes
Mean:	0.017	0.017	0.0002			
SD :	0.0022	0.0022	0.0000			
%RSD:	13.1	13.1	13.0600			

00152

=====  
 Element: Hg Seq. No.: 47 AS Loc.: 43 Date: 04/06/2001  
 Sample ID: BL0406S  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.059	1.059	0.0150	0.0152	05:30:51	Yes
2	1.071	1.071	0.0152	0.0154	05:31:24	Yes
3	1.058	1.058	0.0150	0.0152	05:31:57	Yes
Mean:	1.063	1.063	0.0151			
SD :	0.0074	0.0074	0.0001			
%RSD:	0.7	0.7	0.6971			

=====  
 Element: Hg Seq. No.: 48 AS Loc.: 44 Date: 04/06/2001  
 Sample ID: BL0406DS  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	1.067	1.067	0.0152	0.0153	05:32:45	Yes
2	1.072	1.072	0.0152	0.0154	05:33:18	Yes
3	1.072	1.072	0.0152	0.0154	05:33:51	Yes
Mean:	1.071	1.071	0.0152			
SD :	0.0029	0.0029	0.0000			
%RSD:	0.3	0.3	0.2708			

=====  
 Element: Hg Seq. No.: 49 AS Loc.: 7 Date: 04/06/2001  
 Sample ID: CCV  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.997	0.997	0.0142	0.0143	05:34:42	Yes
2	0.996	0.996	0.0142	0.0143	05:35:15	Yes
3	0.998	0.998	0.0142	0.0143	05:35:48	Yes
Mean:	0.997	0.997	0.0142			
SD :	0.0011	0.0011	0.0000			
%RSD:	0.1	0.1	0.1091			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 50 AS Loc.: 8 Date: 04/06/2001  
 Sample ID: CCB  
 -----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.005	0.005	0.0001	0.0002	05:36:37	Yes
2	0.006	0.006	0.0001	0.0002	05:37:10	Yes
3	0.004	0.004	0.0001	0.0002	05:37:43	Yes
Mean:	0.005	0.005	0.0001			
SD :	0.0007	0.0007	0.0000			
%RSD:	15.0	15.0	15.0416			

QC value within specified limits.

=====  
 Element: Hg Seq. No.: 51 AS Loc.: 4 Date: 04/06/2001  
 Sample ID: Reslope  
 -----

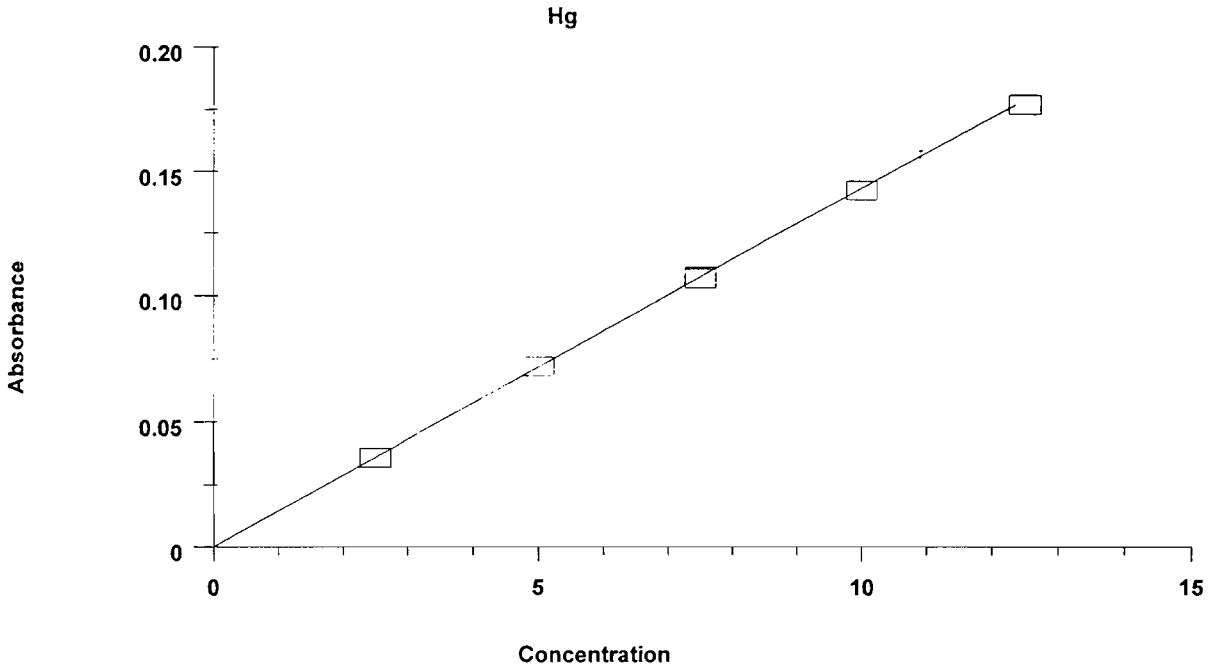
Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1			0.1074	0.1075	05:38:34	Yes
2			0.1069	0.1071	05:39:07	Yes
3			0.1077	0.1078	05:39:40	Yes
Mean:			0.1073			
SD :			0.0004			
%RSD:			0.3560			

[Hg] Reslope standard applied. [7.500]  
 Correlation Coefficient: 0.99996

Slope: 0.01409

Calibration data for Hg

Standard ID	Mean Signal (Pk Height)	Entered Concentration ( $\mu\text{g/L}$ )	Calculated Concentration ( $\mu\text{g/L}$ )	Standard Deviation	%RSD
Calib Blank	0.0001	---	0.010	0.0000	1.7
STD1	0.0357	2.500	2.492	0.0001	0.2
STD2	0.0718	5.000	5.015	0.0003	0.3
STD3	0.1066	7.500	7.450	0.0004	0.4
STD4	0.1422	10.000	9.938	0.0006	0.4
STD5	0.1769	12.500	12.36	0.0004	0.2
Reslope	0.1073	7.500	7.500	0.0004	0.4
Correlation Coefficient: 0.99996		Slope: 0.01409		----	



Element: Hg    Seq. No.: 52    AS Loc.: 45    Date: 04/06/2001  
Sample ID: 14857

Repl #	SampleConc $\mu\text{g/L}$	StndConc $\mu\text{g/L}$	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.694	0.694	0.0099	0.0101	05:41:00	Yes
2	0.690	0.690	0.0099	0.0100	05:41:33	Yes
3	0.692	0.692	0.0099	0.0100	05:42:06	Yes
Mean:	0.692	0.692	0.0099			
SD :	0.0020	0.0020	0.0000			
%RSD:	0.3	0.3	0.2893			

Element: Hg    Seq. No.: 53    AS Loc.: 46    Date: 04/06/2001  
Sample ID: 14857D

Repl #	SampleConc $\mu\text{g/L}$	StndConc $\mu\text{g/L}$	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.693	0.693	0.0099	0.0101	05:42:55	Yes
2	0.686	0.686	0.0098	0.0100	05:43:28	Yes
3	0.695	0.695	0.0099	0.0101	05:44:01	Yes

Mean: 0.691 0.691 0.0099.  
SD : 0.0048 0.0048 0.0001  
%RSD: 0.7 0.7 0.6927

Element: Hg Seq. No.: 54 AS Loc.: 47 Date: 04/06/2001  
Sample ID: 14857S

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	1.669	1.669	0.0239	0.0240	05:44:50	Yes
2	1.677	1.677	0.0240	0.0241	05:45:23	Yes
3	1.679	1.679	0.0240	0.0242	05:45:56	Yes
Mean:	1.675	1.675	0.0240			
SD :	0.0052	0.0052	0.0001			
%RSD:	0.3	0.3	0.3114			

Element: Hg Seq. No.: 55 AS Loc.: 48 Date: 04/06/2001  
Sample ID: 14857DS

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	1.680	1.680	0.0240	0.0242	05:46:45	Yes
2	1.661	1.661	0.0238	0.0239	05:47:18	Yes
3	1.677	1.677	0.0240	0.0241	05:47:51	Yes
Mean:	1.673	1.673	0.0239			
SD :	0.0105	0.0105	0.0001			
%RSD:	0.6	0.6	0.6261			

Element: Hg Seq. No.: 56 AS Loc.: 49 Date: 04/06/2001  
Sample ID: 14859

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	0.622	0.622	0.0089	0.0090	05:48:38	Yes
2	0.625	0.625	0.0089	0.0091	05:49:11	Yes
3	0.618	0.618	0.0088	0.0090	05:49:45	Yes
Mean:	0.622	0.622	0.0089			
SD :	0.0036	0.0036	0.0001			
%RSD:	0.6	0.6	0.5847			

Element: Hg Seq. No.: 57 AS Loc.: 50 Date: 04/06/2001  
Sample ID: HG-SPK CHECH

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	1.492	1.492	0.0214	0.0215	05:50:33	Yes
2	1.498	1.498	0.0214	0.0216	05:51:07	Yes
3	1.493	1.493	0.0214	0.0215	05:51:40	Yes
Mean:	1.494	1.494	0.0214			
SD :	0.0031	0.0031	0.0000			
%RSD:	0.2	0.2	0.2050			

Element: Hg Seq. No.: 58 AS Loc.: 7 Date: 04/06/2001  
Sample ID: CCV

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Height	Time	Peak Stored
1	1.001	1.001	0.0143	0.0145	05:52:30	Yes
2	0.992	0.992	0.0142	0.0143	05:53:03	Yes
3	0.995	0.995	0.0142	0.0144	05:53:36	Yes
Mean:	0.996	0.996	0.0143			

SD : 0.0045 0.0045 0.0001  
%RSD: 0.5 0.5 0.4561  
QC value within specified limits.

=====  
Element: Hg Seq. No.: 59 AS Loc.: 8 Date: 04/06/2001  
Sample ID: CCB  
-----

Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Height	Time	Peak Stored
1	0.008	0.008	0.0001	0.0003	05:54:26	Yes
2	0.003	0.003	0.0000	0.0002	05:54:59	Yes
3	0.003	0.003	0.0000	0.0002	05:55:32	Yes
Mean:	0.005	0.005	0.0001			
SD :	0.0027	0.0027	0.0000			
%RSD:	56.5	56.5	56.5293			

QC value within specified limits.



EPA 7470 WATER PREPARATION LOG - MERCURY

DG7470HG, DGHGLEACH, DG29\*

Calibration Solutions:

#	I.D.	**Conc.	Spike	***Conc. Entered
1	Blank/Dummy	0 ppb	None	0.0
2	Standard 1	0 ppb	None	0.0
3	Standard 2	1.67	500 ul of 0.1 ppm working cal standard	2.5
4	Standard 3	3.33	1000 ul of 0.1 ppm working cal standard	5.0
5	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
6	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
7	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
8	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
9	Standard 5	6.67	2000 ul of 0.1 ppm working cal standard	10.0
10	Standard 6	8.33	2500 ul of 0.1 ppm working cal standard	12.5

Check List

- Digest Code/labels
- Samples poured out
- Acids added
- Reagents added
- Samples spiked
- Bath at 95 degrees C
- Samples digested
- Hydroxylamine HCl added,
- Samples shaken and bulked
- Rack order checked

#	Sample I.D.	B.Code	Init.Vol.	F. Vol.	Dil	Comment
11	ICV (Int. Calib. Verif.)	IKDL	20 ml	30 ml	1 X	1.5 ppb = 600 ul of 0.05ppm Working Reference QC Std.
12	LLC (low level check)	"	"	"	"	0.25ppb = 60ul of 0.1 ppm Working Cal Std.
13	BL 0406	"	"	"	"	(Processed Blank)
14	BL 0406 S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
15	BL 0406 DS	"	"	"	"	(Duplicate Blank Spike)
1	16 013280	"	"	"	"	
1	17 D	"	"	"	"	(Duplicate sample)
1	18 S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
1	19 DS	"	"	"	"	(Duplicate Spiked sample)
2	20 01	"	"	"	"	
3	21	"	"	"	"	
4	22	"	"	"	"	
5	23	"	"	"	"	
6	24	"	"	"	"	
7	25	"	"	"	"	
8	26	"	"	"	"	
9	27	"	"	"	"	
10	28	"	"	"	"	
29	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
30	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
31	BL 0406	2H3C	20 ml	30 ml	"	(Processed Blank)
32	BL 0406 S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
33	BL 0406 DS	"	"	"	"	(Duplicate Blank Spike)
1	34 014770	"	"	"	"	
1	35 D	"	"	"	"	(Duplicate sample)
1	36 S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
1	37 DS	"	"	"	"	(Duplicate Spiked sample)
2	38 08	"	"	"	"	
3	39 09	"	"	"	"	
4	40 71	"	"	"	"	
5	41 72	"	"	"	"	
6	42	"	"	"	"	
7	43	"	"	"	"	
8	44	"	"	"	"	
9	45	"	"	"	"	
10	46	"	"	"	"	
47	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
48	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.

Comments: \*\* concentration based on 30 ml final volume, \*\*\* concentration based on 20 ml final volume

Other Applicable Test Codes: DG29HG-1B, DG29HG-2B, DG29HG-3A, DG29HG-3B, DG29HG-3C

DG29HGI, DG29HGF, DG101AA1, DG101AA2

#	Sample I.D.	B.Code	Init.Vol.	F. Vol.	Dil	Comment
49	BL 0406	3M3C	"	"	"	(Processed Blank)
50	BL 0406	S	"	"	"	1 ppb = 200 ul of 0.1 ppm Working Cal Std.
51	BL 0406	DS	"	"	"	(Duplicate Blank Spike)
1	52 014845	"	"	"	"	
1	53	D	"	"	"	(Duplicate sample)
1	54	S	"	"	"	1 ppb = 200 ul of 0.1 ppm Working Cal Std.
1	55	DS	"	"	"	(Duplicate Spiked sample)
2	56 42	"	"	"	"	
3	57 43	"	"	"	"	
4	58 44	"	"	"	"	
5	59 46	"	"	"	"	
6	60 47	"	"	"	"	
7	61 51	"	"	"	"	
8	62 52	"	"	"	"	
9	63 53	"	"	"	"	
10	64 58	"	"	"	"	
65	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
66	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.

## Procedure/Methodology:

- 1 Prepare 25 ppm Intermediate Calibration Standard (if required) by pipetting 625 ul., of 1000 ppm Stock to 25 ml final volume of 2% HNO<sub>3</sub>
- 2 Prepare 0.1 ppm Working calibration standard daily by pipetting 400 ul., of 25 ppm Intermediate to 100 ml final volume of 2% HNO<sub>3</sub>
- 3 Prepare a 0.05 ppm Working Reference QC Standard daily by pipetting 50 ul of Stock Reference Standard to 100 ml final vol of 2% HNO<sub>3</sub>
- 4 Using the LIMS Screen "SCNDIG" enter the required samples into LIMS
- 5 Using the labeling program, "DIGLBL", retrieve the "SCNDIG" list and create labels for the required samples.
- 6 Label the falcon tubes appropriately
- 7 Include one External Reference Material sample per run
- 8 Include one Organic Mercury Control Standard per run
- 9 Transfer a 20 ml. aliquot of well mixed sample into the designated falcon tube
- 10 Spike the tubes as indicated in the comment sector of the digestion sheet
- 11 Add 0.5 ml. of conc. Nitric Acid (HNO<sub>3</sub>), and 1 ml. of conc. Sulphuric acid, (H<sub>2</sub>SO<sub>4</sub>), to each tube
- 12 Add 3 ml. Of 6% KMnO<sub>4</sub>, purple colour must remain for the duration of digest.
- 13 Add 1.5 ml. of 5% potassium persulphate, (K<sub>2</sub>S<sub>2</sub>O<sub>8</sub>), to each tube
- 14 Mix samples, cap loosely and place in a water bath @ 95 degrees C for 2 hours
- 15 Remove tubes and allow to cool to room temperature
- 16 Add 1.0 ml. 20% Hydroxylamine Hydrochloride to each tube
- 17 Recap tubes and shake until KMnO<sub>4</sub> is destroyed and sample becomes colourless  
Dilute the sample to a final volume of 30 ml.

Supplier/Lot Information	Supplier	Lot	Expiry Date
Stock Calibration Standard	Inorganic Ventures	P-4C02023	01/09/01
Intermediate Cal Standard	Internal	01103/23	01/04/23
Stock Reference Standard	High Purity	033536	JAN-02
External Reference Material	SPEX NYS	3311	
Organic Mercury Control Standard	Aldrich	06811HR	01/01/02
6% potassium permanganate	Internal	01103/22	01/03/22
5% potassium persulphate	Internal	01104/04	01/06/04
20% hydroxylamine hydrochloride	Internal	01103/20	01/05/20
HNO <sub>3</sub>	Anachemia	1100083	01/06/06
H <sub>2</sub> SO <sub>4</sub>	Anachemia	3100091	01/05/27
Bath Temps: 105 C	Time ON: 10:00	Time OFF: 12:00	
Prepared By: MB	Date: 01/04/06	Checked by: MB	

00158

Revision 2  
Effective 000926

EPA 7470 WATER PREPARATION LOG - MERCURY

DG7470HG, DGHGLEACH, DG29\*

Calibration Solutions:

#	I.D.	**Conc.	Spike	***Conc. Entered
1	Blank/Dummy	0 ppb	None	0.0
2	Standard 1	0 ppb	None	0.0
3	Standard 2	1.67	500 ul of 0.1 ppm working cal standard	2.5
4	Standard 3	3.33	1000 ul of 0.1 ppm working cal standard	5.0
5	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
6	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
7	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
8	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
9	Standard 5	6.67	2000 ul of 0.1 ppm working cal standard	10.0
10	Standard 6	8.33	2500 ul of 0.1 ppm working cal standard	12.5

Check List

- Digest Code/labels
- Samples poured out
- Acids added
- Reagents added
- Samples spiked
- Bath at 95 degrees C
- Samples digested
- Hydroxylamine HCl added
- Samples shaken and bulked
- Rack order checked

#	Sample I.D.	B.Code	Init.Vol.	F. Vol.	Dil	Comment
11	ICV (Int. Calib. Verif.)	4M30	20 ml	30 ml	1 X	1.5 ppb = 600 ul of 0.05ppm Working Reference QC Std.
12	LLC (low level check)	"	"	"	"	0.25ppb = 50ul of 0.1 ppm Working Cal Std.
13	BL 0406	"	"	"	"	(Processed Blank)
14	BL 0406 S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
15	BL 0406 DS	"	"	"	"	(Duplicate Blank Spike)
1	16 014857	"	"	"	"	
1	17	D	"	"	"	(Duplicate sample)
1	18	S	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
1	19	DS	"	"	"	(Duplicate Spiked sample)
2	20 59	"	"	"	"	
3	21	"	"	"	"	
4	22	"	"	"	"	
5	23	"	"	"	"	
6	24	"	"	"	"	
7	25	"	"	"	"	
8	26	"	"	"	"	
9	27	"	"	"	"	
10	28	"	"	"	"	
29	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
30	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
31	BL	"	20 ml	30 ml	"	(Processed Blank)
32	BL S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
33	BL DS	"	"	"	"	(Duplicate Blank Spike)
1	34	"	"	"	"	
1	35	D	"	"	"	(Duplicate sample)
1	36	S	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
1	37	DS	"	"	"	(Duplicate Spiked sample)
2	38	"	"	"	"	
3	39	"	"	"	"	
4	40	"	"	"	"	
5	41	"	"	"	"	
6	42	"	"	"	"	
7	43	"	"	"	"	
8	44	"	"	"	"	
9	45	"	"	"	"	
10	46	"	"	"	"	
47	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
48	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.

Comments:\*\* concentration based on 30 ml final volume, \*\*\* concentration based on 20 ml final volume

Other Applicable Test Codes: DG29HG-1B, DG29HG-2B, DG29HG-3A, DG29HG-3B, DG29HG-3C

DG29HGI, DG29HGF, DG101AA1, DG101AA2

#	Sample I.D.	B.Code	Init.Vol.	F. Vol.	Dil	Comment
49	BL		"	"	"	(Processed Blank)
50	BL	S	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
51	BL	DS	"	"	"	(Duplicate Blank Spike)
1	52		"	"	"	
1	53	D	"	"	"	(Duplicate sample)
1	54	S	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
1	55	DS	"	"	"	(Duplicate Spiked sample)
2	56		"	"	"	
3	57		"	"	"	
4	58		"	"	"	
5	59		"	"	"	
6	60		"	"	"	
7	61		"	"	"	
8	62		"	"	"	
9	63		"	"	"	
10	64		"	"	"	
65	CCV (Cont. Calib. Verif.)	-	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
66	CCV (Cont. Calib. Verif.)	-	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.

## Procedure/Methodology:

- 1 Prepare 25 ppm Intermediate Calibration Standard (if required) by pipetting 625 ul. of 1000 ppm Stock to 25 ml final volume of 2% HNO<sub>3</sub>
- 2 Prepare 0.1 ppm Working calibration standard daily by pipetting 400 ul. of 25 ppm Intermediate to 100 ml final volume of 2% HNO<sub>3</sub>
- 3 Prepare a 0.05 ppm Working Reference QC Standard daily by pipetting 50 ul of Stock Reference Standard to 100 ml final vol of 2% HNO<sub>3</sub>
- 4 Using the LIMS Screen "SCNDIG" enter the required samples into LIMS
- 5 Using the labeling program, "DIGLBL", retrieve the "SCNDIG" list and create labels for the required samples.
- 6 Label the falcon tubes appropriately
- 7 Include one External Reference Material sample per run
- 8 Include one Organic Mercury Control Standard per run
- 9 Transfer a 20 ml. aliquot of well mixed sample into the designated falcon tube
- 10 Spike the tubes as indicated in the comment sector of the digestion sheet
- 11 Add 0.5 ml. of conc. Nitric Acid (HNO<sub>3</sub>), and 1 ml. of conc. Sulphuric acid, (H<sub>2</sub>SO<sub>4</sub>), to each tube
- 12 Add 3 ml. Of 6% KMnO<sub>4</sub>, purple colour must remain for the duration of digest.
- 13 Add 1.5 ml. of 5% potassium persulphate, (K<sub>2</sub>S<sub>2</sub>O<sub>8</sub>), to each tube
- 14 Mix samples, cap loosely and place in a water bath @ 95 degrees C for 2 hours
- 15 Remove tubes and allow to cool to room temperature
- 16 Add 1.0 ml. 20% Hydroxylamine Hydrochloride to each tube
- 17 Recap tubes and shake until KMnO<sub>4</sub> is destroyed and sample becomes colourless  
Dilute the sample to a final volume of 30 ml.

Supplier/Lot Information	Supplier	Lot	Expiry Date
Stock Calibration Standard	Inorganic Ventures	P-HG02023	01/04/01
Intermediate Cal Standard	Internal	01103/25	01/04/25
Stock Reference Standard	High Purity	038536	JAN-02
External Reference Material	SPEX HYS	3311	
Organic Mercury Control Standard	Aldrich	0681172	01/02/02
6% potassium permanganate	Internal	01103/22	01/05/22
5% potassium persulphate	Internal	01104/04	01/06/04
20% hydroxylamine hydrochloride	Internal	01103/20	01/05/20
HNO <sub>3</sub>	Anachemia	1100083	01/06/06
H <sub>2</sub> SO <sub>4</sub>	Anachemia	3100091	01/05/27
Bath Temps: 1951 C	Time ON: 10:00	Time OFF: 12:00	
Prepared By: HLB	Date: 01/04/06	Checked by: HLB	

001601

Revision 2  
Effective 000926

EPA 7470 WATER PREPARATION LOG - MERCURY

DG7470HG, DGHGLEACH, DG29\*

Calibration Solutions:

#	I.D.	**Conc.	Spike	***Conc. Entered
1	Blank/Dummy	0 ppb	None	0.0
2	Standard 1	0 ppb	None	0.0
3	Standard 2	1.67	500 ul of 0.1 ppm working cal standard	2.5
4	Standard 3	3.33	1000 ul of 0.1 ppm working cal standard	5.0
5	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
6	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
7	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
8	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
9	Standard 5	6.67	2000 ul of 0.1 ppm working cal standard	10.0
10	Standard 6	8.33	2500 ul of 0.1 ppm working cal standard	12.6

Check List

- Digest Code/labels
- Samples poured out
- Acids added
- Reagents added
- Samples spiked
- Bath at 95 degrees C
- Samples digested
- Hydroxylamine HCl added,
- Samples shaken and bulked
- Rack order checked

#	Sample I.D.	B.Code	Int.Vol.	F. Vol.	Dil	Comment
11	ICV (Int. Calib. Verif.)	1HDL	20 ml	30 ml	1 X	1.5 ppb = 600 ul of 0.05ppm Working Reference QC Std.
12	LLC (low level check)	"	"	"	"	0.25ppb = 50ul of 0.1 ppm Working Cal Std.
13	BL 0406	"	"	"	"	(Processed Blank)
14	BL 0406 S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
15	BL 0406 DS	"	"	"	"	(Duplicate Blank Spike)
1	16 013280	"	"	"	"	
1	17	D	"	"	"	(Duplicate sample)
1	18	S	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
1	19	DS	"	"	"	(Duplicate Spiked sample)
2	20	"	"	"	"	
3	21	"	"	"	"	
4	22	"	"	"	"	
5	23	"	"	"	"	
6	24	"	"	"	"	
7	25	"	"	"	"	
8	26	"	"	"	"	
9	27	"	"	"	"	
10	28	"	"	"	"	
29	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
30	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.

31	BL 0406	2H3C	20 ml	30 ml	"	(Processed Blank)
32	BL 0406 S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
33	BL 0406 DS	"	"	"	"	(Duplicate Blank Spike)
1	34 014770	"	"	"	"	
1	35	D	"	"	"	(Duplicate sample)
1	36	S	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
1	37	DS	"	"	"	(Duplicate Spiked sample)
2	38	"	"	"	"	
3	39	"	"	"	"	
4	40	"	"	"	"	
5	41	"	"	"	"	
6	42	"	"	"	"	
7	43	"	"	"	"	
8	44	"	"	"	"	
9	45	"	"	"	"	
10	46	"	"	"	"	
47	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
48	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.

Comments:\*\* concentration based on 30 ml final volume, \*\*\* concentration based on 20 ml final volume

Other Applicable Test Codes: DG29HG-1B, DG29HG-2B, DG29HG-3A, DG29HG-3B, DG29HG-3C

DG29HGI, DG29HGF, DG101AA1, DG101AA2

#	Sample ID.	B.Code	Int.Vol.	F. Vol.	Dil	Comment
49	BL 0406	3N3C	"	"	"	(Processed Blank)
50	BL 0406 S	"	"	"	"	1 ppb = 200 ul of 0.1 ppm Working Cal Std.
51	BL 0406 DS	"	"	"	"	(Duplicate Blank Spike)
1 52	014895	"	"	"	"	
1 53		D	"	"	"	(Duplicate sample)
1 54		S	"	"	"	1 ppb = 200 ul of 0.1 ppm Working Cal Std.
1 55		DS	"	"	"	(Duplicate Spiked sample)
2 56	42	"	"	"	"	
3 57	43	"	"	"	"	
4 58	44	"	"	"	"	
5 59	46	"	"	"	"	
6 60	47	"	"	"	"	
7 61	51	"	"	"	"	
8 62	52	"	"	"	"	
9 63	53	"	"	"	"	
10 64	58	"	"	"	"	
65	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
66	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.

## Procedure/Methodology:

- 1 Prepare 25 ppm Intermediate Calibration Standard (if required) by pipetting 625 ul. of 1000 ppm Stock to 25 ml final volume of 2% HNO<sub>3</sub>
- 2 Prepare 0.1 ppm Working calibration standard daily by pipetting 400 ul. of 25 ppm Intermediate to 100 ml final volume of 2% HNO<sub>3</sub>
- 3 Prepare a 0.05 ppm Working Reference QC Standard daily by pipetting 50 ul of Stock Reference Standard to 100 ml final vol of 2% HNO<sub>3</sub>
- 4 Using the LIMS Screen "SCNDIG" enter the required samples into LIMS
- 5 Using the labeling program, "DIGLBL", retrieve the "SCNDIG" list and create labels for the required samples.
- 6 Label the falcon tubes appropriately
- 7 Include one External Reference Material sample per run
- 8 Include one Organic Mercury Control Standard per run
- 9 Transfer a 20 ml. aliquot of well mixed sample into the designated falcon tube
- 10 Spike the tubes as indicated in the comment sector of the digestion sheet
- 11 Add 0.5 ml. of conc. Nitric Acid (HNO<sub>3</sub>), and 1 ml. of conc. Sulphuric acid, (H<sub>2</sub>SO<sub>4</sub>), to each tube
- 12 Add 3 ml. Of 6% KMnO<sub>4</sub>, purple colour must remain for the duration of digest.
- 13 Add 1.5 ml. of 5% potassium persulphate, (K<sub>2</sub>S<sub>2</sub>O<sub>8</sub>), to each tube
- 14 Mix samples, cap loosely and place in a water bath @ 95 degrees C for 2 hours
- 15 Remove tubes and allow to cool to room temperature
- 16 Add 1.0 ml. 20% Hydroxylamine Hydrochloride to each tube
- 17 Recap tubes and shake until KMnO<sub>4</sub> is destroyed and sample becomes colourless  
Dilute the sample to a final volume of 30 ml.

Supplier/Lot Information	Supplier	Lot	Expiry Date
Stock Calibration Standard	Inorganic Ventures	P-HC02023	01/04/01
Intermediate Cal Standard	Internal	01104123	01/04/23
Stock Reference Standard	High Purity	033536	54N-02
External Reference Material	SPEX NYS	3311	
Organic Mercury Control Standard	Aldrich	06811HR	01/02/02
6% potassium permanganate	Internal	01103122	01/03/22
5% potassium persulphate	Internal	01104104	01/06/04
20% hydroxylamine hydrochloride	Internal	01103120	01/05/20
HNO <sub>3</sub>	Anachemia	1100083	01/06/06
H <sub>2</sub> SO <sub>4</sub>	Anachemia	3100091	01/05/27
Bath Temps: 109.5 C	Time ON: 10:00	Time OFF: 12:00	
Prepared By: MB	Date: 01/04/06	Checked by: MB	

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Revision 2  
Effective 000926

EPA 7470 WATER PREPARATION LOG - MERCURY

DG7470HG, DGHGLEACH, DG29\*

Calibration Solutions:

#	I.D.	**Conc.	Spike	***Conc. Entered
1	Blank/Dummy	0 ppb	None	0.0
2	Standard 1	0 ppb	None	0.0
3	Standard 2	1.67	500 ul of 0.1 ppm working cal standard	2.5
4	Standard 3	3.33	1000 ul of 0.1 ppm working cal standard	5.0
5	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
6	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
7	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
8	Standard 4	5.0	1500 ul of 0.1 ppm working cal standard	7.5
9	Standard 5	6.67	2000 ul of 0.1 ppm working cal standard	10.0
10	Standard 6	8.33	2500 ul of 0.1 ppm working cal standard	12.5

- Check List
- Digest Code/labels
  - Samples poured out
  - Acids added
  - Reagents added
  - Samples spiked
  - Bath at 95 degrees C
  - Samples digested
  - Hydroxylamine HCl added.
  - Samples shaken and bulked
  - Rack order checked

#	Sample I.D.	B.Code	Init.Vol.	F. Vol.	Dil	Comment
11	ICV (Int. Calib. Verif.)	4M3C	20 ml	30 ml	1 X	1.5 ppb = 600 ul of 0.05ppm Working Reference QC Std.
12	LLC (low level check)	"	"	"	"	0.25ppb = 50ul of 0.1 ppm Working Cal Std.
13	BL 0406	"	"	"	"	(Processed Blank)
14	BL 0406 S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
15	BL 0406 DS	"	"	"	"	(Duplicate Blank Spike)
1 16	014R57	"	"	"	"	
1 17	D	"	"	"	"	(Duplicate sample)
1 18	S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
1 19	DS	"	"	"	"	(Duplicate Spiked sample)
2 20	59	"	"	"	"	
3 21		"	"	"	"	
4 22		"	"	"	"	
5 23		"	"	"	"	
6 24		"	"	"	"	
7 25		"	"	"	"	
8 26		"	"	"	"	
9 27		"	"	"	"	
10 28		"	"	"	"	
29	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
30	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
31	BL	"	20 ml	30 ml	"	(Processed Blank)
32	BL S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
33	BL DS	"	"	"	"	(Duplicate Blank Spike)
1 34		"	"	"	"	
1 35	D	"	"	"	"	(Duplicate sample)
1 36	S	"	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
1 37	DS	"	"	"	"	(Duplicate Spiked sample)
2 38		"	"	"	"	
3 39		"	"	"	"	
4 40		"	"	"	"	
5 41		"	"	"	"	
6 42		"	"	"	"	
7 43		"	"	"	"	
8 44		"	"	"	"	
9 45		"	"	"	"	
10 46		"	"	"	"	
47	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
48	CCV (Cont. Calib. Verif.)	"	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.

Comments:\*\* concentration based on 30 ml final volume, \*\*\* concentration based on 20 ml final volume

Other Applicable Test Codes: DG29HG-1B, DG29HG-2B, DG29HG-3A, DG29HG-3B, DG29HG-3C

DG29HGI, DG29HGF, DG101AA1, DG101AA2

#	Sample I.D.	B.Code	Int.Vol.	F. Vol.	Dil	Comment
49	BL		"	"	"	(Processed Blank)
50	BL	S	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
51	BL	DS	"	"	"	(Duplicate Blank Spike)
1	52		"	"	"	
1	53	D	"	"	"	(Duplicate sample)
1	54	S	"	"	"	1 ppb = 200 ul. of 0.1 ppm Working Cal Std.
1	55	DS	"	"	"	(Duplicate Spiked sample)
2	56		"	"	"	
3	57		"	"	"	
4	58		"	"	"	
5	59		"	"	"	
6	60		"	"	"	
7	61		"	"	"	
8	62		"	"	"	
9	63		"	"	"	
10	64		"	"	"	
	65	CCV (Cont. Calib. Verif.)	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.
	66	CCV (Cont. Calib. Verif.)	20 ml	30 ml	1 X	1.0 ppb = 400 ul of 0.05ppm Working Reference QC Std.

## Procedure/Methodology:

- 1 Prepare 25 ppm Intermediate Calibration Standard (if required) by pipetting 625 ul. of 1000 ppm Stock to 25 ml final volume of 2% HNO<sub>3</sub>
- 2 Prepare 0.1 ppm Working calibration standard daily by pipetting 400 ul. of 25 ppm Intermediate to 100 ml final volume of 2% HNO<sub>3</sub>
- 3 Prepare a 0.05 ppm Working Reference QC Standard daily by pipetting 50 ul of Stock Reference Standard to 100 ml final vol of 2% HNO<sub>3</sub>
- 4 Using the LIMS Screen "SCNDIG" enter the required samples into LIMS
- 5 Using the labeling program, "DIGLBL", retrieve the "SCNDIG" list and create labels for the required samples.
- 6 Label the falcon tubes appropriately
- 7 Include one External Reference Material sample per run
- 8 Include one Organic Mercury Control Standard per run
- 9 Transfer a 20 ml. aliquot of well mixed sample into the designated falcon tube
- 10 Spike the tubes as indicated in the comment sector of the digestion sheet
- 11 Add 0.5 ml. of conc. Nitric Acid (HNO<sub>3</sub>), and 1 ml. of conc. Sulphuric acid, (H<sub>2</sub>SO<sub>4</sub>), to each tube
- 12 Add 3 ml. Of 6% KMnO<sub>4</sub>, purple colour must remain for the duration of digest.
- 13 Add 1.5 ml. of 5% potassium persulphate, (K<sub>2</sub>S<sub>2</sub>O<sub>8</sub>), to each tube
- 14 Mix samples, cap loosely and place in a water bath @ 95 degrees C for 2 hours
- 15 Remove tubes and allow to cool to room temperature
- 16 Add 1.0 ml. 20% Hydroxylamine Hydrochloride to each tube
- 17 Recap tubes and shake until KMnO<sub>4</sub> is destroyed and sample becomes colourless  
Dilute the sample to a final volume of 30 ml.

Supplier/Lot Information	Supplier	Lot	Expiry Date
Stock Calibration Standard	Inorganic Ventures	P-17G 02023	01/04/01
Intermediate Cal Standard	Internal	01103/23	01/04/23
Stock Reference Standard	High Purity	033536	JAN-02
External Reference Material	SPEX HFS	3311	
Organic Mercury Control Standard	Aldrich	068117R	01/02/02
6% potassium permanganate	Internal	01103/22	01/05/22
5% potassium persulphate	Internal	01104/04	01/06/04
20% hydroxylamine hydrochloride	Internal	01103/20	01/05/20
HNO <sub>3</sub>	Anachemia	1100083	01/06/06
H <sub>2</sub> SO <sub>4</sub>	Anachemia	3100091	01/05/27
Bath Temp: 195.1 C	Time ON: 10:00	Time OFF: 12:00	
Prepared By: MB	Date: 01/04/06	Checked by: MB	



00164.

**B) ICP-MS**

Zenon Number	Client	Client ID	Parameter	TS	Result	Dup.	Spike	% Rec.	Dup. Spk	% Rec.	Batch Date	Batch Code	Run Date	Run Code	Day Old	Day In	Analyst's Comments	
014842	CLEANAIR	MB R456	Beryllium	PV	0.00	0.00	143.17	95.	142.42	95.	01/04/05	MNF1	01/04/10	BT03	7.	3.		
			Cadmium		0.00	0.00	72.43	97.	71.21	95.								
			Lead		0.03	0.03	142.69	95.	144.40	96.								
014843	CLEANAIR	M29HG Reagent Blank	Beryllium	PV	0.00						01/04/05	MNF1	01/04/10	BT03	7.	3.		
			Cadmium		0.02													
			Lead		0.53													
014844	CLEANAIR	M29HG Field Blank	Beryllium	PV	0.00						01/04/05	MNF1	01/04/10	BT03	7.	3.		
			Cadmium		0.35													
			Lead		1.94													
014845	CLEANAIR	M29HG U1 Outlet R1	Beryllium	PV	0.01	0.00	132.58	88.	139.52	93.	01/04/05	MNF1	01/04/10	BT03	10.	3.		
			Cadmium		6.35	6.28	73.85	90.	76.60	94.								
			Lead		17.35	17.24	162.87	97.	171.77	103.								
014846	CLEANAIR	M29HG U1 Outlet R2	Beryllium	PV	0.00						01/04/05	MNF1	01/04/10	BT03	10.	3.		
			Cadmium		5.19													
			Lead		31.52													
014847	CLEANAIR	M29HG U1 Outlet R3	Beryllium	PV	0.02						01/04/05	MNF1	01/04/10	BT03	10.	3.		
			Cadmium		1.98													
			Lead		17.26													
014851	CLEANAIR	M29HG U2 Outlet R1	Beryllium	PV	0.00						01/04/05	MNF1	01/04/10	BT03	9.	3.		
			Cadmium		0.59													
			Lead		7.80													
014852	CLEANAIR	M29HG U2 Outlet R2	Beryllium	PV	0.00						01/04/05	MNF1	01/04/10	BT03	9.	3.		
			Cadmium		0.72													
			Lead		8.38													
014853	CLEANAIR	M29HG U2 Outlet R3	Beryllium	PV	0.00						01/04/05	MNF1	01/04/10	BT03	9.	3.		
			Cadmium		1.00													
			Lead		13.02													
014857	CLEANAIR	M29HG U3 Outlet R1	Beryllium	PV	0.00						01/04/05	MNF1	01/04/10	BT03	9.	3.		
			Cadmium		0.85													
			Lead		11.66													
014858	CLEANAIR	M29HG U3 Outlet R2	Beryllium	PV	0.00						01/04/05	MNF1	01/04/10	BT03	9.	3.		
			Cadmium		0.94													
			Lead		13.46													
014859	CLEANAIR	M29HG U3 Outlet R3	Beryllium	PV	0.00						01/04/05	MNF1	01/04/10	BT03	8.	3.	*CD BIAS LOW DUE TO IN	
			Cadmium		0.66													
			Lead		9.59													
BLO405	INTERNAL		Beryllium	PV	0.00	0.00	143.17	95.	142.42	95.	01/04/05	MNF1	01/04/10	BT03	\$\$\$	\$\$\$		
			Cadmium		0.00	0.00	72.43	97.	71.21	95.								
			Lead		0.03	0.03	142.69	95.	144.40	96.								

00165

13 Tests for 8890-FM with an MDL of 0.10 ug

Validated By [Signature]

Control Chart Updated \_\_\_\_\_

IO Requirements met \_\_\_\_\_

## EPA METHOD 29 Metals by ICP-MS

### Level 3 Data Package

**Calibration:** 0 ug/L, 10 ug/L, 50 ug/L, 100 ug/L for Be and Pb  
0 ug/L, 5 ug/L, 25 ug/L, 50 ug/L for Cd

**Reporting Isotope (s):** <sup>9</sup>Be, <sup>114</sup>Cd, and <sup>208</sup>Pb

**Internal Standard(s):** <sup>6</sup>Li, <sup>45</sup>Sc, <sup>72</sup>Ge, <sup>103</sup>Rh, and <sup>159</sup>Tb

**Method Detection Limit(s):** as listed on the certificate of analysis and/or the validation record(s)

**Testcode(s):** 8890-FM,

**Matrix:** Filter

**Calculation:** Final Result (ug) = Conc. (ug/L) x Final Volume (0.3 L and 3L) x Dilution Factor (10)

#### Procedural Legend

ICB - Initial Calibration Blank

ICV - Initial Calibration Verification

Conc. - 50 ug/L for all metals

Conc. - 25 ug/L for Cd

BL - Process Blank

P - Process Spike

Conc. - 50 ug/L for all other metals

Conc. - 25 ug/L for Cd

D - Duplicate Sample

DP - Duplicate Process Spike

Conc. - 50 ug/L for all other metals

Conc. - 25 ug/L for Cd

CCB - Continuing Calibration Blank

CCV - Continuing Calibration Verification

Conc. - 50 ug/L for all other metals

Conc. - 25 ug/L for Cd

00167

EPA METHOD 29 PREPARATION LOG (COMBINED FRONT AND BACK HALF) **DG29F**

Check List

- \*  Particulates done on Acetone wash
- \*  Particulates done on Filter
- Acetone Wash redissolved
- 0.1 N HNO3 Probe wash reduced
- Filter and washes combined in bomb
- HNO3 and HF added
- Bombs sealed, weighed and digested
- Bombs cooled and weighed
- Sample transferred to 500 ml PET
- Bulked to 150 ml in PET bottle
- 10% Mercury cut taken 25%
- Add Back half Impinger 1,2,3 digests
- Samples bulked to 300 ml.
- Samples post spiked in falcon tubes
- Dilution for ICP-MS done if required
- MARK "HF" ON LIDS IN RED

Bomb #	Sample I.D.	B.Code	Final Vol.	First Pre Wt	First Post Wt	Dilution	Comment
6	BL 0405	MNFI	300	294.028	298.349	300x	
H	BL 0405	SS	300	295.191	294.989		Blank Spk. Sol'n #1
4	BL 0405	DS	300	290.543	290.563		Blank Spk. Sol'n #1
7	BL	L	"				Blank Spk. Sol'n #2
8	BL	DL	"				Blank Spk. Sol'n #2
4	BL 0405	M	300	290.692	290.628	300x	Blank Spk. Sol'n #3
6	BL 0405	DM	300	293.685	293.851		Blank Spk. Sol'n #3
1	7	13274	180	299.169	293.628		
1	8	13275	1	300.740	301.501		
1	9	14843	150	298.329	298.695		Post Spk. Sol'n #4
1	10	44		302.416	302.522		Post Spk. Sol'n #5
1	11	45		287.483	288.019		Post Spk. Sol'n #3
1	12	46		282.583	282.526		Post Spk. Sol'n #4
1	13	47		290.895	291.502		Post Spk. Sol'n #5
1	14	14851		293.578	293.546		Post Spk. Sol'n #3
2	15	52		281.492	281.485		
3	16	53		295.014	295.054		
4	17	14857		288.578	288.586		
5	2	58		281.040	281.028		
6	3	59		303.401	303.429		
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

Notes:

- Blank Spk. Sol'n #1: (ICPAES Spike) 600 ul. of "QCA" + 600 ul. of "QCBR" (pre-digestion spike)
- Blank Spk. Sol'n #2: (GFAAS Spike) 600 ul. of High Purity MES-ZENO 30/2, Int. Std.
- Post Blank/Sample Spike Sol'n #3: (ICP-MS Spike) 250 ul of High Purity MES-1297-02/QC
- Post Digestion Spike Sol'n #3: (ICPAES Spike) 50 ul. of "QCA" + 50 ul. of "QCBR" to a 25 ml aliquot of sample
- Post Digestion Spike Sol'n #4: (GFAAS Spike) 50 ul. of High Purity MES-ZENO 30/2, Int. Std. to a 25 ml aliquot of sample
- All spikes may not be required, check test codes to determine which analysis are required

HNO3 Lot No. 1100083      HF Lot No. 519070

Prepared By: *M. Shaperst*      Date: 010405      Checked by: *M. Shaperst*

## Sample/Batch Report

User Name: AWhitmell

Computer Name: AWHITMEL

Sample File: C:\elandata\Sample\0410BT03.sam

Report Date/Time: Tuesday, April 10, 2001 15:04:25

A/S Loc.	Batch ID	Sample ID	Description	Method
9	0410BT03	ICB		c:\elandata\Method\6020scan5.mth
10	0410BT03	ICV		c:\elandata\Method\6020scan5.mth
3	0410BT03	CAL 2 Check		c:\elandata\Method\6020scan5.mth
11	0410BT03	SPEX		c:\elandata\Method\6020scan5.mth
12	0410BT03	EPL-1		c:\elandata\Method\6020scan5.mth
13	0410BT03	ICS-A		c:\elandata\Method\6020scan5.mth
14	0410BT03	ICS-AB		c:\elandata\Method\6020scan5.mth
15	0410BT03	CCB		c:\elandata\Method\6020scan5.mth
16	0410BT03	CCB		c:\elandata\Method\6020scan5.mth
17	0410BT03	CCB		c:\elandata\Method\6020scan5.mth
18	0410BT03	CCV		c:\elandata\Method\6020scan5.mth
19	0410BT03	CCB		c:\elandata\Method\6020scan5.mth
20	0410BT03	BL0409 STB1 X10	W X10	c:\elandata\Method\6020scan5.mth
21	0410BT03	BL0409M X10	W X10	c:\elandata\Method\6020scan5.mth
22	0410BT03	014432 X10	W X10	c:\elandata\Method\6020scan5.mth
23	0410BT03	014432D X10	W X10	c:\elandata\Method\6020scan5.mth
24	0410BT03	014432M X10	W X10	c:\elandata\Method\6020scan5.mth
25	0410BT03	014433 X10	W X10	c:\elandata\Method\6020scan5.mth
26	0410BT03	014434 X10	W X10	c:\elandata\Method\6020scan5.mth
27	0410BT03	014435 X10	W X10	c:\elandata\Method\6020scan5.mth
28	0410BT03	014436 X10	W X10	c:\elandata\Method\6020scan5.mth
29	0410BT03	014437 X10	W X10	c:\elandata\Method\6020scan5.mth
30	0410BT03	014438 X10	W X10	c:\elandata\Method\6020scan5.mth
31	0410BT03	014439 X10	W X10	c:\elandata\Method\6020scan5.mth
32	0410BT03	014440 X10	W X10	c:\elandata\Method\6020scan5.mth
33	0410BT03	014441 X10	W X10	c:\elandata\Method\6020scan5.mth
34	0410BT03	CCB		c:\elandata\Method\6020scan5.mth
35	0410BT03	CCV		c:\elandata\Method\6020scan5.mth
36	0410BT03	CCB		c:\elandata\Method\6020scan5.mth
37	0410BT03	BL0409 STB2 X10	W X10	c:\elandata\Method\6020scan5.mth
38	0410BT03	BL0409M X10	W X10	c:\elandata\Method\6020scan5.mth
39	0410BT03	015194 X10	W X10	c:\elandata\Method\6020scan5.mth
40	0410BT03	015194D X10	W X10	c:\elandata\Method\6020scan5.mth
41	0410BT03	015194M X10	W X10	c:\elandata\Method\6020scan5.mth
42	0410BT03	014442 X10	W X10	c:\elandata\Method\6020scan5.mth
43	0410BT03	CCB		c:\elandata\Method\6020scan5.mth
44	0410BT03	CCV		c:\elandata\Method\6020scan5.mth
45	0410BT03	CCB		c:\elandata\Method\6020scan5.mth
46	0410BT03	TRAIN RINSE	T X300	c:\elandata\Method\6020scan5.mth
47	0410BT03	BL0405 MNF1 X10	T X300	c:\elandata\Method\6020scan5.mth
48	0410BT03	BL0405D X10	T X300	c:\elandata\Method\6020scan5.mth
49	0410BT03	BL0405M X10	T X300	c:\elandata\Method\6020scan5.mth
50	0410BT03	BL0405DM X10	T X300	c:\elandata\Method\6020scan5.mth
51	0410BT03	014843 X10	T X300	c:\elandata\Method\6020scan5.mth
52	0410BT03	014844 X10	T X300	c:\elandata\Method\6020scan5.mth
53	0410BT03	014845 X10	T X300	c:\elandata\Method\6020scan5.mth
54	0410BT03	014845D X10	T X300	c:\elandata\Method\6020scan5.mth
55	0410BT03	014845P X10	T X300	c:\elandata\Method\6020scan5.mth
56	0410BT03	014845DP X10	T X300	c:\elandata\Method\6020scan5.mth

57	0410BT03	014846 X10	T X300	c:\elandata\Method\6020scan5.mth
58	0410BT03	014847 X10	T X300	c:\elandata\Method\6020scan5.mth
59	0410BT03	CCB		c:\elandata\Method\6020scan5.mth
60	0410BT03	CCV		c:\elandata\Method\6020scan5.mth
61	0410BT03	CCB		c:\elandata\Method\6020scan5.mth
62	0410BT03	014851 X10	T X300	c:\elandata\Method\6020scan5.mth
63	0410BT03	014852 X10	T X300	c:\elandata\Method\6020scan5.mth
64	0410BT03	014853 X10	T X300	c:\elandata\Method\6020scan5.mth
65	0410BT03	014857 X10	T X300	c:\elandata\Method\6020scan5.mth
66	0410BT03	014858 X10	T X300	c:\elandata\Method\6020scan5.mth
67	0410BT03	014859 X10	T X300	c:\elandata\Method\6020scan5.mth
68	0410BT03	014859 X50	T X300	c:\elandata\Method\6020scan5.mth
69	0410BT03	CCB		c:\elandata\Method\6020scan5.mth
70	0410BT03	CCV		c:\elandata\Method\6020scan5.mth
71	0410BT03	CCB		c:\elandata\Method\6020scan5.mth
72	0410BT03	BL0409 IRI1 X10	T X150	c:\elandata\Method\6020scan5.mth
73	0410BT03	BL0409D X10	T X150	c:\elandata\Method\6020scan5.mth
74	0410BT03	BL0409M X10	T X150	c:\elandata\Method\6020scan5.mth
75	0410BT03	BL0409DM X10	T X150	c:\elandata\Method\6020scan5.mth
76	0410BT03	014262 X10	T X150	c:\elandata\Method\6020scan5.mth
77	0410BT03	014263 X10	T X150	c:\elandata\Method\6020scan5.mth
78	0410BT03	014263D X10	T X150	c:\elandata\Method\6020scan5.mth
79	0410BT03	014263P X10	T X150	c:\elandata\Method\6020scan5.mth
80	0410BT03	014263DP X10	T X150	c:\elandata\Method\6020scan5.mth
81	0410BT03	014264 X10	T X150	c:\elandata\Method\6020scan5.mth
82	0410BT03	014265 X10	T X150	c:\elandata\Method\6020scan5.mth
83	0410BT03	014266 X10	T X150	c:\elandata\Method\6020scan5.mth
84	0410BT03	014267 X10	T X150	c:\elandata\Method\6020scan5.mth
85	0410BT03	014267 X50	T X150	c:\elandata\Method\6020scan5.mth
86	0410BT03	CCB		c:\elandata\Method\6020scan5.mth
87	0410BT03	CCV		c:\elandata\Method\6020scan5.mth
88	0410BT03	CCB		c:\elandata\Method\6020scan5.mth
11	0410BT03	SPEX		c:\elandata\Method\6020scan5.mth
12	0410BT03	EPL-1		c:\elandata\Method\6020scan5.mth

00170

## Sample ID: Blank

Sample Date/Time: Tuesday, April 10, 2001 15:46:29

Method File: c:\elandata\Method\6020scan5.mth

## Sample Description:

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44		ug/L	23642				
Mg	26		ug/L	277				
Cl	35		mg/L	59824				
Na	23		ug/L	17961				
K	39		ug/L	1279174				
Sc	45		ug/L	165238				
Li	6		ug/L	22735				
Li	7		ug/L	1620				
Be	9		ug/L	8				
B	10		ug/L	35				
B	11		ug/L	139				
Al	27		ug/L	2186				
Ti	49		ug/L	157				
V	51		ug/L	1717				
Cr	53		ug/L	331				
Cr	52		ug/L	4542				
Fe	56		ug/L	1255734				
Fe	57		ug/L	9722				
Fe	54		ug/L	81064				
Mn	55		ug/L	2510				
Co	59		ug/L	184				
Ni	62		ug/L	64				
Ni	60		ug/L	78				
Cu	63		ug/L	316				
Cu	65		ug/L	124				
Sc	45		ug/L	165238				
Zn	67		ug/L	124				
Zn	68		ug/L	644				
Zn	66		ug/L	514				
As	75		ug/L	618				
Se	77		ug/L	98				
Se	78		ug/L	9414				
Se	82		ug/L	315				
Br	79		mg/L	8581				
Ge	72		mg/L	82830				
Rh	103		ug/L	319040				
Sr	88		ug/L	273				
Mo	97		ug/L	82				
Mo	98		ug/L	176				
Ag	107		ug/L	70				
Ag	109		ug/L	58				
Cd	111		ug/L	339				
Cd	114		ug/L	32				
Sn	118		ug/L	691				
Sn	120		ug/L	986				
Sb	121		ug/L	299				
Sb	123		ug/L	252				
Ba	135		ug/L	49				
Ba	137		ug/L	65				
Tl	203		ug/L	99				
Tl	205		ug/L	245				
Pb	208		ug/L	500				
Bi	209		ug/L	2334				
U	238		ug/L	167				
Tb	159		ug/L	335249				
Kr	83		mg/L	280				
Y	89		ug/L	364355				
In	115		ug/L	381187				
Ho	165		ug/L	397496				
Tm	169		ug/L	447702				
Ar2	76		mg/L	72603				

00171

## Sample ID: Standard 1

Sample Date/Time: Tuesday, April 10, 2001 15:50:59

Method File: c:\elandata\Method\6020scan5.mth

## Sample Description:

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44		ug/L	75595	23642			1.584
Mg	26		ug/L	19894	277			2.688
Cl	35		mg/L	59878	59824			428.471
Na	23		ug/L	856161	17961			2.288
K	39		ug/L	2680020	1279174			1.047
Sc	45		ug/L	164901	165238			0.366
Li	6		ug/L	22599	22735			4.803
Li	7		ug/L	1658	1620			79.742
Be	9		ug/L	1891	8			2.762
B	10		ug/L	344	35			11.061
B	11		ug/L	1842	139			5.024
Al	27		ug/L	71692	2186			3.720
Ti	49		ug/L	4097	157			2.289
V	51		ug/L	65284	1717			3.155
Cr	53		ug/L	6902	331			3.231
Cr	52		ug/L	59209	4542			3.719
Fe	56		ug/L	1674389	1255734			11.683
Fe	57		ug/L	19649	9722			4.361
Fe	54		ug/L	103137	81064			4.177
Mn	55		ug/L	94908	2510			1.903
Co	59		ug/L	69641	184			2.225
Ni	62		ug/L	2333	64			3.354
Ni	60		ug/L	14895	78			0.934
Cu	63		ug/L	34974	316			2.093
Cu	65		ug/L	16968	124			0.575
Sc	45		ug/L	164901	165238			0.366
Zn	67		ug/L	3331	124			3.463
Zn	68		ug/L	14775	644			2.410
Zn	66		ug/L	20422	514			0.320
As	75		ug/L	12758	618			1.836
Se	77		ug/L	922	98			2.477
Se	78		ug/L	12021	9414			2.694
Se	82		ug/L	1435	315			2.458
Br	79		mg/L	9726	8581			55.778
Ge	72		mg/L	82439	82830			0.468
Rh	103		ug/L	320671	319040			2.516
Sr	88		ug/L	174072	273			3.061
Mo	97		ug/L	7521	82			5.033
Mo	98		ug/L	18682	176			5.328
Ag	107		ug/L	33100	70			3.088
Ag	109		ug/L	31498	58			3.156
Cd	111		ug/L	8021	339			4.665
Cd	114		ug/L	17933	32			3.871
Sn	118		ug/L	24690	691			3.860
Sn	120		ug/L	34253	986			2.510
Sb	121		ug/L	10389	299			4.354
Sb	123		ug/L	7877	252			3.393
Ba	135		ug/L	14570	49			4.034
Ba	137		ug/L	25184	65			4.340
Tl	203		ug/L	58921	99			1.926
Tl	205		ug/L	140400	245			2.987
Pb	208		ug/L	209489	500			1.899
Bi	209		ug/L	150677	2334			6.534
U	238		ug/L	199206	167			3.137
Tb	159		ug/L	345008	335249			1.814
Kr	83		mg/L	307	280			24.066
Y	89		ug/L	367912	364355			213.945
In	115		ug/L	384773	381187			174.854
Ho	165		ug/L	408153	397496			106.136
Tm	169		ug/L	454101	447702			177.677
Ar2	76		mg/L	73484	72603			122.402



00172

## Sample ID: Standard 2

Sample Date/Time: Tuesday, April 10, 2001 15:57:22

Method File: c:\elandata\Method\6020scan5.mth

## Sample Description:

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44		ug/L	267383	23642			1.361
Mg	26		ug/L	95136	277			1.879
Cl	35		mg/L	59097	59824			419.723
Na	23		ug/L	3894247	17961			0.896
K	39		ug/L	8216301	1279174			0.548
Sc	45		ug/L	162285	165238			0.775
Li	6		ug/L	22248	22735			5.205
Li	7		ug/L	1536	1620			69.154
Be	9	51.310	ug/L	9511	8	2.587	5.041	5.041
B	10	52.554	ug/L	1634	35	2.673	5.087	5.087
B	11	48.316	ug/L	8234	139	2.406	4.980	4.980
Al	27	97.301	ug/L	334974	2186	0.861	0.885	0.885
Ti	49	50.724	ug/L	19822	157	0.836	1.648	1.648
V	51	50.456	ug/L	317339	1717	0.339	0.672	0.672
Cr	53	48.539	ug/L	31719	331	0.947	1.951	1.951
Cr	52	49.050	ug/L	268392	4542	0.178	0.364	0.364
Fe	56	250.327	ug/L	3308330	1255734	8.807	3.518	3.518
Fe	57	226.629	ug/L	53922	9722	6.698	2.955	2.955
Fe	54	241.677	ug/L	185397	81064	4.999	2.069	2.069
Mn	55	47.792	ug/L	437067	2510	0.659	1.379	1.379
Co	59	48.670	ug/L	332906	184	1.507	3.096	3.096
Ni	62	48.694	ug/L	10939	64	2.048	4.206	4.206
Ni	60	48.782	ug/L	71223	78	1.830	3.752	3.752
Cu	63	49.487	ug/L	169130	316	2.024	4.089	4.089
Cu	65	49.257	ug/L	81796	124	2.492	5.058	5.058
Sc	45		ug/L	162285	165238			0.775
Zn	67	98.205	ug/L	15463	124	1.248	1.271	1.271
Zn	68	98.657	ug/L	68528	644	1.886	1.912	1.912
Zn	66	99.059	ug/L	96551	514	3.044	3.073	3.073
As	75	51.166	ug/L	61105	618	0.883	1.726	1.726
Se	77	50.465	ug/L	4147	98	1.031	2.043	2.043
Se	78	51.108	ug/L	22323	9414	1.204	2.356	2.356
Se	82	52.678	ug/L	6062	315	0.765	1.453	1.453
Br	79		mg/L	9118	8581			40.672
Ge	72		mg/L	80306	82830			2.472
Rh	103		ug/L	310119	319040			1.755
Sr	88	50.433	ug/L	848491	273	0.669	1.327	1.327
Mo	97	25.378	ug/L	36635	82	0.526	2.073	2.073
Mo	98	26.030	ug/L	93436	176	0.342	1.315	1.315
Ag	107	24.839	ug/L	158865	70	0.567	2.282	2.282
Ag	109	24.913	ug/L	151655	58	0.653	2.620	2.620
Cd	111	25.724	ug/L	38556	339	0.604	2.346	2.346
Cd	114	25.441	ug/L	88178	32	0.427	1.679	1.679
Sn	118	24.496	ug/L	114430	691	0.287	1.170	1.170
Sn	120	24.318	ug/L	157469	986	0.327	1.344	1.344
Sb	121	11.072	ug/L	54230	299	0.561	5.067	5.067
Sb	123	11.187	ug/L	41434	252	0.661	5.909	5.909
Ba	135	50.239	ug/L	70664	49	1.117	2.224	2.224
Ba	137	50.504	ug/L	122877	65	1.401	2.775	2.775
Tl	203	51.647	ug/L	288752	99	0.512	0.991	0.991
Tl	205	51.252	ug/L	682905	245	0.401	0.782	0.782
Pb	208	48.449	ug/L	961813	500	1.566	3.232	3.232
Bi	209	54.102	ug/L	763733	2334	2.678	4.950	4.950
U	238	52.136	ug/L	985669	167	1.470	2.819	2.819
Tb	159		ug/L	327864	335249			5.284
Kr	83		mg/L	315	280			31.514
Y	89		ug/L	357094	364355			134.291
In	115		ug/L	384707	381187			81.837
Ho	165		ug/L	393676	397496			666.327
Tm	169		ug/L	441846	447702			415.436
Ar2	76		mg/L	75435	72603			20.484

00173

## Sample ID: Standard 3

Sample Date/Time: Tuesday, April 10, 2001 16:05:45

Method File: c:\elandata\Method\6020scan5.mth

## Sample Description:

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	2453.510	ug/L	528793	23642	42.634	1.738	1.738
Mg	26	482.706	ug/L	192983	277	14.293	2.961	2.961
Cl	35		mg/L	56649	59824			36.183
Na	23	2472.883	ug/L	8087533	17961	63.343	2.561	2.561
K	39	2412.087	ug/L	15459459	1279174	29.375	1.218	1.218
Sc	45		ug/L	170866	165238			4.371
Li	6		ug/L	23130	22735			6.068
Li	7		ug/L	1630	1620			124.158
Be	9	99.772	ug/L	19709	8	3.391	3.398	3.398
B	10	103.052	ug/L	3460	35	3.298	3.200	3.200
B	11	101.941	ug/L	17332	139	4.138	4.060	4.060
Al	27	192.794	ug/L	678620	2186	0.514	0.267	0.267
Ti	49	96.816	ug/L	40225	157	1.648	1.702	1.702
V	51	97.451	ug/L	648792	1717	2.857	2.931	2.931
Cr	53	96.889	ug/L	64406	331	3.361	3.469	3.469
Cr	52	97.359	ug/L	545821	4542	2.301	2.364	2.364
Fe	56	449.212	ug/L	5220241	1255734	13.622	3.032	3.032
Fe	57	496.443	ug/L	103109	9722	13.637	2.747	2.747
Fe	54	484.574	ug/L	299827	81064	11.370	2.346	2.346
Mn	55	97.208	ug/L	892849	2510	3.542	3.643	3.643
Co	59	97.478	ug/L	683385	184	1.934	1.984	1.984
Ni	62	96.478	ug/L	22168	64	1.991	2.064	2.064
Ni	60	95.110	ug/L	142600	78	2.064	2.170	2.170
Cu	63	95.030	ug/L	338230	316	0.535	0.563	0.563
Cu	65	97.644	ug/L	168146	124	0.798	0.817	0.817
Sc	45		ug/L	170866	165238			4.371
Zn	67	198.119	ug/L	31322	124	5.427	2.739	2.739
Zn	68	197.777	ug/L	138452	644	1.998	1.010	1.010
Zn	66	199.470	ug/L	197112	514	5.425	2.720	2.720
As	75	99.621	ug/L	124147	618	1.619	1.625	1.625
Se	77	99.437	ug/L	8361	98	1.868	1.879	1.879
Se	78	100.965	ug/L	36665	9414	2.059	2.039	2.039
Se	82	98.433	ug/L	11912	315	1.843	1.873	1.873
Br	79		mg/L	11912	8581			7.868
Ge	72		mg/L	82333	82830			1.877
Rh	103		ug/L	317214	319040			1.884
Sr	88	97.736	ug/L	1695432	273	0.588	0.602	0.602
Mo	97	49.271	ug/L	73705	82	0.500	1.014	1.014
Mo	98	50.137	ug/L	191176	176	0.052	0.104	0.104
Ag	107	49.769	ug/L	323410	70	0.820	1.647	1.647
Ag	109	49.757	ug/L	308677	58	0.362	0.727	0.727
Cd	111	50.186	ug/L	78736	339	0.230	0.458	0.458
Cd	114	50.921	ug/L	183528	32	0.724	1.421	1.421
Sn	118	51.142	ug/L	238867	691	0.957	1.871	1.871
Sn	120	50.617	ug/L	325402	986	1.071	2.117	2.117
Sb	121	20.735	ug/L	114266	299	1.130	5.452	5.452
Sb	123	20.599	ug/L	86683	252	1.231	5.978	5.978
Ba	135	100.536	ug/L	145219	49	0.403	0.401	0.401
Ba	137	99.462	ug/L	249776	65	0.641	0.645	0.645
Tl	203	97.734	ug/L	585528	99	0.976	0.999	0.999
Tl	205	97.826	ug/L	1386554	245	1.366	1.397	1.397
Pb	208	95.122	ug/L	1904858	500	2.174	2.285	2.285
Bi	209	98.596	ug/L	1560336	2334	2.693	2.731	2.731
U	238	99.152	ug/L	2029641	167	3.757	3.790	3.790
Tb	159		ug/L	340496	335249			2.364
Kr	83		mg/L	364	280			36.621
Y	89		ug/L	364171	364355			5797.254
In	115		ug/L	391589	381187			101.129
Ho	165		ug/L	405979	397496			176.136
Tm	169		ug/L	458636	447702			102.651
Ar2	76		mg/L	82016	72603			6.817

00174

## Sample ID: Standard 4

Sample Date/Time: Tuesday, April 10, 2001 16:11:09

Method File: c:\elandata\Method\6020scan5.mth

## Sample Description:

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	9539.614	ug/L	1837524	23642	207.928	2.180	2.180
Mg	26	10273.125	ug/L	3743734	277	315.540	3.072	3.072
Cl	35		mg/L	56958	59824			146.557
Na	23	10231.626	ug/L	31100120	17961	165.635	1.619	1.619
K	39	10142.476	ug/L	55463551	1279174	341.702	3.369	3.369
Sc	45		ug/L	160410	165238			4.316
Li	6		ug/L	20724	22735			7.223
Li	7		ug/L	1481	1620			775.128
Be	9	0.124	ug/L	30	8	0.171	137.954	137.954
B	10	1.847	ug/L	89	35	0.719	38.913	38.913
B	11	1.906	ug/L	426	139	0.900	47.231	47.231
Al	27	2004.528	ug/L	6412296	2186	32.831	1.638	1.638
Ti	49	0.137	ug/L	205	157	0.124	90.172	90.172
V	51	0.109	ug/L	2354	1717	0.135	123.017	123.017
Cr	53	0.324	ug/L	519	331	0.124	38.178	38.178
Cr	52	0.265	ug/L	5780	4542	0.115	43.511	43.511
Fe	56	4720.535	ug/L	36796769	1255734	171.451	3.632	3.632
Fe	57	4974.582	ug/L	879934	9722	187.405	3.767	3.767
Fe	54	4994.150	ug/L	2117334	81064	196.718	3.939	3.939
Mn	55	0.581	ug/L	7337	2510	0.085	14.595	14.595
Co	59	0.099	ug/L	825	184	0.059	59.807	59.807
Ni	62	0.347	ug/L	135	64	0.095	27.426	27.426
Ni	60	0.530	ug/L	796	78	0.079	14.847	14.847
Cu	63	0.441	ug/L	1726	316	0.071	16.215	16.215
Cu	65	0.423	ug/L	793	124	0.048	11.294	11.294
Sc	45		ug/L	160410	165238			4.316
Zn	67	1853.962	ug/L	285303	124	39.256	2.117	2.117
Zn	68	1954.842	ug/L	1329583	644	33.389	1.708	1.708
Zn	66	1942.411	ug/L	1880707	514	25.551	1.315	1.315
As	75	0.124	ug/L	758	618	0.065	52.138	52.138
Se	77	0.081	ug/L	102	98	0.122	151.047	151.047
Se	78	0.546	ug/L	9353	9414	1.100	201.572	201.572
Se	82	0.346	ug/L	348	315	0.069	20.109	20.109
Br	79		mg/L	10844	8581			20.430
Ge	72		mg/L	81091	82830			4.766
Rh	103		ug/L	304878	319040			2.633
Sr	88	0.337	ug/L	5783	273	0.045	13.264	13.264
Mo	97	0.184	ug/L	340	82	0.080	43.551	43.551
Mo	98	0.173	ug/L	806	176	0.066	37.858	37.858
Ag	107	0.026	ug/L	232	70	0.023	89.496	89.496
Ag	109	0.023	ug/L	196	58	0.021	89.240	89.240
Cd	111	0.002	ug/L	326	339	0.017	1096.489	1096.489
Cd	114	0.031	ug/L	141	32	0.021	66.048	66.048
Sn	118	0.604	ug/L	3415	691	0.083	13.710	13.710
Sn	120	0.588	ug/L	4602	986	0.087	14.814	14.814
Sb	121	0.358	ug/L	2237	299	0.101	28.234	28.234
Sb	123	0.343	ug/L	1661	252	0.106	30.993	30.993
Ba	135	0.068	ug/L	142	49	0.030	44.529	44.529
Ba	137	0.073	ug/L	238	65	0.021	29.150	29.150
Tl	203	0.042	ug/L	328	99	0.034	82.024	82.024
Tl	205	0.038	ug/L	739	245	0.031	81.413	81.413
Pb	208	0.255	ug/L	5109	500	0.047	18.510	18.510
Bi	209	0.234	ug/L	5680	2334	0.144	61.678	61.678
U	238	0.076	ug/L	1629	167	0.091	119.109	119.109
Tb	159		ug/L	320280	335249			1.391
Kr	83		mg/L	315	280			62.226
Y	89		ug/L	346236	364355			52.971
In	115		ug/L	372873	381187			27.290
Ho	165		ug/L	383300	397496			44.323
Tm	169		ug/L	435931	447702			65.256
Ar2	76		mg/L	71159	72603			133.045

00175

## Sample ID: Standard 5

Sample Date/Time: Tuesday, April 10, 2001 16:16:34

Method File: c:\elandata\Method\6020scan5.mth

## Sample Description:

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	46.757	ug/L	33618	23642	1.277	2.730	2.730
Mg	26	3.139	ug/L	1542	277	0.645	20.557	20.557
Cl	35		mg/L	203977	59824			4.834
Na	23	2898.759	ug/L	9630978	17961	78.289	2.701	2.701
K	39	10680.326	ug/L	63175246	1279174	131.259	1.229	1.229
Sc	45		ug/L	171398	165238			1.485
Li	6		ug/L	22739	22735			2.340
Li	7		ug/L	1611	1620			543.964
Be	9	0.010	ug/L	10	8	0.023	231.277	231.277
B	10	0.649	ug/L	57	35	0.341	52.486	52.486
B	11	0.765	ug/L	269	139	0.121	15.793	15.793
Al	27	0.602	ug/L	4327	2186	0.146	24.260	24.260
Ti	49	0.070	ug/L	190	157	0.198	284.189	284.189
V	51	-0.014	ug/L	1688	1717	0.007	48.245	48.245
Cr	53	0.241	ug/L	499	331	0.022	9.130	9.130
Cr	52	-0.022	ug/L	4590	4542	0.001	6.277	6.277
Fe	56	-4.850	ug/L	1265307	1255734	5.275	108.779	108.779
Fe	57	-1.026	ug/L	9892	9722	0.954	92.992	92.992
Fe	54	-1.148	ug/L	83580	81064	4.250	370.348	370.348
Mn	55	-0.011	ug/L	2500	2510	0.010	86.688	86.688
Co	59	-0.004	ug/L	163	184	0.002	54.565	54.565
Ni	62	0.055	ug/L	79	64	0.028	50.490	50.490
Ni	60	0.027	ug/L	120	78	0.006	22.978	22.978
Cu	63	0.229	ug/L	1114	316	0.005	2.342	2.342
Cu	65	0.192	ug/L	452	124	0.025	13.205	13.205
Sc	45		ug/L	171398	165238			1.485
Zn	67	1.078	ug/L	279	124	0.155	14.383	14.383
Zn	68	1.012	ug/L	1324	644	0.191	18.896	18.896
Zn	66	1.095	ug/L	1558	514	0.120	10.958	10.958
As	75	13.940	ug/L	17861	618	0.213	1.527	1.527
Se	77	0.292	ug/L	121	98	0.130	44.627	44.627
Se	78	0.080	ug/L	9383	9414	1.250	1559.892	1559.892
Se	82	58.214	ug/L	7092	315	1.098	1.886	1.886
Br	79		mg/L	2599829	8581			4.134
Ge	72		mg/L	82420	82830			2.536
Rh	103		ug/L	332503	319040			0.951
Sr	88	0.433	ug/L	8013	273	0.012	2.829	2.829
Mo	97	0.172	ug/L	352	82	0.001	0.722	0.722
Mo	98	0.031	ug/L	308	176	0.008	26.305	26.305
Ag	107	0.012	ug/L	157	70	0.002	12.799	12.799
Ag	109	0.014	ug/L	152	58	0.003	23.890	23.890
Cd	111	-0.006	ug/L	343	339	0.013	208.647	208.647
Cd	114	-0.000	ug/L	32	32	0.002	696.703	696.703
Sn	118	0.144	ug/L	1436	691	0.010	7.258	7.258
Sn	120	0.142	ug/L	1990	986	0.018	12.744	12.744
Sb	121	0.093	ug/L	862	299	0.005	5.493	5.493
Sb	123	0.090	ug/L	670	252	0.013	14.662	14.662
Ba	135	0.576	ug/L	925	49	0.040	6.902	6.902
Ba	137	0.588	ug/L	1609	65	0.024	4.097	4.097
Tl	203	0.050	ug/L	397	99	0.001	2.948	2.948
Tl	205	0.047	ug/L	904	245	0.005	10.165	10.165
Pb	208	0.030	ug/L	1101	500	0.001	3.661	3.661
Bi	209	-0.057	ug/L	1484	2334	0.008	14.210	14.210
U	238	-0.001	ug/L	159	167	0.001	195.577	195.577
Tb	159		ug/L	342981	335249			2.330
Kr	83		mg/L	331	280			43.419
Y	89		ug/L	378915	364355			9.353
In	115		ug/L	400056	381187			28.073
Ho	165		ug/L	412413	397496			40.746
Tm	169		ug/L	462054	447702			34.186
Ar2	76		mg/L	72791	72603			355.246

00176

## Sample ID: ICB

Sample Date/Time: Tuesday, April 10, 2001 16:21:57

Method File: c:\elandata\Method\6020scan5.mth

## Sample Description:

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	4.223	ug/L	23053	23642	2.754	65.225	65.225
Mg	26	0.208	ug/L	339	277	0.311	149.586	149.586
Cl	35	-0.020	mg/L	56176	59824	0.066	329.324	329.324
Na	23	1.108	ug/L	20317	17961	0.673	60.745	60.745
K	39	5.053	ug/L	1233053	1279174	5.585	110.532	110.532
Sc	45		ug/L	155916	165238			3.003
Li	6		ug/L	20208	22735			5.440
Li	7		ug/L	1453	1620			260.493
Be	9	-0.018	ug/L	4	8	0.014	76.326	76.326
B	10	0.352	ug/L	42	35	0.111	31.649	31.649
B	11	0.430	ug/L	187	139	0.194	45.055	45.055
Al	27	0.302	ug/L	3003	2186	0.046	15.106	15.106
Ti	49	-0.008	ug/L	145	157	0.010	117.618	117.618
V	51	-0.014	ug/L	1536	1717	0.010	68.739	68.739
Cr	53	0.081	ug/L	360	331	0.046	56.762	56.762
Cr	52	-0.028	ug/L	4144	4542	0.017	59.116	59.116
Fe	56	-1.253	ug/L	1175741	1255734	3.738	298.411	298.411
Fe	57	-1.156	ug/L	8971	9722	1.994	172.489	172.489
Fe	54	-9.153	ug/L	72829	81064	3.982	43.505	43.505
Mn	55	-0.067	ug/L	1820	2510	0.004	6.383	6.383
Co	59	-0.008	ug/L	123	184	0.003	38.013	38.013
Ni	62	-0.020	ug/L	56	64	0.070	344.929	344.929
Ni	60	-0.015	ug/L	54	78	0.006	42.267	42.267
Cu	63	-0.010	ug/L	266	316	0.004	43.015	43.015
Cu	65	-0.004	ug/L	111	124	0.002	58.040	58.040
Sc	45		ug/L	155916	165238			3.003
Zn	67	0.173	ug/L	136	124	0.163	94.198	94.198
Zn	68	0.070	ug/L	634	644	0.103	147.035	147.035
Zn	66	0.031	ug/L	498	514	0.073	235.434	235.434
As	75	0.089	ug/L	669	618	0.049	54.907	54.907
Se	77	0.031	ug/L	92	98	0.056	178.287	178.287
Se	78	1.526	ug/L	9019	9414	0.148	9.704	9.704
Se	82	0.374	ug/L	329	315	0.213	56.964	56.964
Br	79	0.044	mg/L	18412	8581	0.011	25.096	25.096
Ge	72		mg/L	75985	82830			2.230
Rh	103		ug/L	306016	319040			0.703
Sr	88	-0.007	ug/L	144	273	0.001	18.492	18.492
Mo	97	-0.003	ug/L	74	82	0.006	197.783	197.783
Mo	98	-0.003	ug/L	159	176	0.001	48.859	48.859
Ag	107	-0.005	ug/L	37	70	0.001	20.221	20.221
Ag	109	-0.004	ug/L	30	58	0.001	12.870	12.870
Cd	111	-0.015	ug/L	302	339	0.011	72.735	72.735
Cd	114	-0.003	ug/L	19	32	0.003	77.661	77.661
Sn	118	-0.041	ug/L	473	691	0.007	17.785	17.785
Sn	120	-0.042	ug/L	683	986	0.011	25.794	25.794
Sb	121	-0.001	ug/L	280	299	0.003	230.636	230.636
Sb	123	0.002	ug/L	252	252	0.014	632.574	632.574
Ba	135	-0.016	ug/L	24	49	0.002	12.930	12.930
Ba	137	-0.011	ug/L	35	65	0.001	6.345	6.345
Tl	203	0.014	ug/L	170	99	0.002	17.427	17.427
Tl	205	0.011	ug/L	371	245	0.005	45.640	45.640
Pb	208	-0.007	ug/L	355	500	0.002	24.121	24.121
Bi	209	-0.116	ug/L	526	2334	0.001	0.515	0.515
U	238	-0.005	ug/L	63	167	0.001	19.734	19.734
Tb	159		ug/L	318006	335249			1.357
Kr	83		mg/L	296	280			54.606
Y	89		ug/L	341783	364355			14.245
In	115		ug/L	367561	381187			49.288
Ho	165		ug/L	377285	397496			53.832
Tm	169		ug/L	424863	447702			36.434
Ar2	76		mg/L	69516	72603			36.179

00177

## Sample ID: ICV

Sample Date/Time: Tuesday, April 10, 2001 16:27:18

Method File: c:\elandata\Method\6020scan5.mth

## Sample Description:

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	1293.780	ug/L	266565	23642	18.269	1.412	1.412
Mg	26	239.857	ug/L	92920	277	7.964	3.320	3.320
Cl	35	-0.363	mg/L	54886	59824	0.084	23.214	23.214
Na	23	1230.385	ug/L	3958707	17961	46.577	3.786	3.786
K	39	1266.900	ug/L	8359536	1279174	29.197	2.305	2.305
Sc	45		ug/L	165403	165238			3.830
Li	6		ug/L	21767	22735			8.483
Li	7		ug/L	1622	1620			133.144
Be	9	50.291	ug/L	9331	8	1.588	3.157	3.157
B	10	52.082	ug/L	1700	35	1.752	3.364	3.364
B	11	50.896	ug/L	8335	139	1.381	2.712	2.712
Al	27	100.156	ug/L	333426	2186	3.613	3.608	3.608
Ti	49	49.548	ug/L	19497	157	1.397	2.819	2.819
V	51	49.586	ug/L	313882	1717	2.272	4.582	4.582
Cr	53	50.546	ug/L	31907	331	1.795	3.551	3.551
Cr	52	49.912	ug/L	267491	4542	2.073	4.154	4.154
Fe	56	278.158	ng/L	3298568	1255734	18.677	6.714	6.714
Fe	57	248.060	ug/L	54272	9722	12.462	5.024	5.024
Fe	54	251.770	ug/L	186972	81064	18.922	7.516	7.516
Mn	55	50.031	ug/L	436296	2510	2.714	5.425	5.425
Co	59	49.275	ug/L	327905	184	2.088	4.237	4.237
Ni	62	49.743	ug/L	10784	64	2.858	5.746	5.746
Ni	60	50.532	ug/L	70527	78	2.614	5.172	5.172
Cu	63	50.943	ug/L	168691	316	2.076	4.075	4.075
Cu	65	50.301	ug/L	82336	124	0.848	1.686	1.686
Sc	45		ug/L	165403	165238			3.830
Zn	67	107.771	ug/L	15347	124	3.844	3.567	3.567
Zn	68	102.403	ug/L	68014	644	1.759	1.717	1.717
Zn	66	103.011	ug/L	96398	514	1.944	1.887	1.887
As	75	50.134	ug/L	60995	618	0.827	1.650	1.650
Se	77	50.506	ug/L	4168	98	0.748	1.480	1.480
Se	78	49.718	ug/L	22329	9414	0.846	1.701	1.701
Se	82	50.429	ug/L	6028	315	1.195	2.370	2.370
Br	79	0.049	mg/L	20804	8581	0.003	5.840	5.840
Ge	72		mg/L	80265	82830			3.999
Rh	103		ug/L	320082	319040			2.609
Sr	88	48.704	ug/L	837442	273	0.491	1.007	1.007
Mo	97	24.569	ug/L	36706	82	0.190	0.773	0.773
Mo	98	24.219	ug/L	93500	176	0.307	1.268	1.268
Ag	107	23.635	ug/L	154485	70	0.464	1.963	1.963
Ag	109	23.892	ug/L	149051	58	0.545	2.281	2.281
Cd	111	24.363	ug/L	38871	339	0.572	2.346	2.346
Cd	114	24.220	ug/L	89428	32	0.591	2.438	2.438
Sn	118	24.735	ug/L	119081	691	0.478	1.931	1.931
Su	120	25.048	ug/L	164619	986	0.163	0.650	0.650
Sb	121	9.292	ug/L	53308	299	0.643	6.922	6.922
Sb	123	9.310	ug/L	40583	252	0.658	7.065	7.065
Ba	135	49.429	ug/L	72413	49	1.469	2.971	2.971
Ba	137	49.752	ug/L	125608	65	0.880	1.768	1.768
Tl	203	49.239	ug/L	283176	99	0.374	0.760	0.760
Tl	205	49.774	ug/L	677829	245	0.430	0.863	0.863
Pb	208	49.244	ug/L	926011	500	0.934	1.897	1.897
Bi	209	48.925	ug/L	748577	2334	1.651	3.374	3.374
U	238	48.818	ug/L	969554	167	0.724	1.483	1.483
Tb	159		ug/L	332855	335249			5.173
Kr	83		mg/L	317	280			24.550
Y	89		ug/L	355615	364355			88.934
In	115		ug/L	387833	381187			169.289
Ho	165		ug/L	393509	397496			454.021
Tm	169		ug/L	439155	447702			163.499
Ar2	76		mg/L	75630	72603			30.416

00178.

## Sample ID: CCV

Sample Date/Time: Tuesday, April 10, 2001 18:56:58

Method File: c:\elandata\Method\6020scan5.mth

## Sample Description:

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	1255.210	ug/L	248521	23642	12.186	0.971	0.971
Mg	26	234.179	ug/L	86918	277	4.617	1.972	1.972
Cl	35	0.059	mg/L	58104	59824	0.201	339.508	339.508
Na	23	1178.265	ug/L	3629350	17961	29.326	2.489	2.489
K	39	1193.270	ug/L	7616145	1279174	14.421	1.209	1.209
Sc	45		ug/L	158485	165238			3.328
Li	6		ug/L	20128	22735			6.822
Li	7		ug/L	1402	1620			75.835
Be	9	49.396	ug/L	8477	8	1.972	3.992	3.992
B	10	46.837	ug/L	1418	35	2.193	4.682	4.682
B	11	48.503	ug/L	7346	139	2.992	6.168	6.168
Al	27	97.650	ug/L	311328	2186	1.635	1.674	1.674
Ti	49	48.649	ug/L	18365	157	1.068	2.196	2.196
V	51	48.389	ug/L	293837	1717	0.090	0.185	0.185
Cr	53	48.579	ug/L	29404	331	0.149	0.307	0.307
Cr	52	48.775	ug/L	250652	4542	0.472	0.969	0.969
Fe	56	266.918	ug/L	3083453	1255734	5.272	1.975	1.975
Fe	57	237.857	ug/L	50271	9722	3.665	1.541	1.541
Fe	54	227.913	ug/L	169635	81064	5.708	2.504	2.504
Mn	55	47.917	ug/L	400829	2510	0.409	0.854	0.854
Co	59	48.034	ug/L	306249	184	0.801	1.667	1.667
Ni	62	49.341	ug/L	10261	64	0.943	1.911	1.911
Ni	60	49.361	ug/L	66066	78	0.402	0.815	0.815
Cu	63	50.179	ug/L	159255	316	0.252	0.502	0.502
Cu	65	49.075	ug/L	76942	124	0.750	1.528	1.528
Sc	45		ug/L	158485	165238			3.328
Zn	67	103.384	ug/L	14354	124	1.581	1.530	1.530
Zn	68	98.035	ug/L	63466	644	0.357	0.364	0.364
Zn	66	98.378	ug/L	89725	514	1.034	1.051	1.051
As	75	48.066	ug/L	56998	618	0.912	1.897	1.897
Se	77	46.659	ug/L	3758	98	0.238	0.511	0.511
Se	78	45.632	ug/L	20693	9414	1.463	3.207	3.207
Se	82	48.123	ug/L	5614	315	0.944	1.961	1.961
Br	79	0.013	mg/L	11274	8581	0.001	9.254	9.254
Ge	72		mg/L	78191	82830			1.816
Rh	103		ug/L	314980	319040			2.896
Sr	88	46.702	ug/L	790323	273	0.691	1.481	1.481
Mo	97	23.744	ug/L	34889	82	0.795	3.350	3.350
Mo	98	23.370	ug/L	88725	176	0.669	2.861	2.861
Ag	107	23.040	ug/L	148161	70	0.094	0.408	0.408
Ag	109	23.264	ug/L	142770	58	0.252	1.084	1.084
Cd	111	23.648	ug/L	37122	339	0.084	0.357	0.357
Cd	114	23.649	ug/L	85870	32	0.435	1.840	1.840
Sn	118	24.382	ug/L	115471	691	0.309	1.266	1.266
Sn	120	24.760	ug/L	160063	986	0.571	2.305	2.305
Sb	121	9.256	ug/L	52207	299	1.039	11.228	11.228
Sb	123	9.379	ug/L	40194	252	1.060	11.305	11.305
Ba	135	49.786	ug/L	71719	49	0.704	1.414	1.414
Ba	137	49.638	ug/L	123272	65	0.776	1.564	1.564
Tl	203	47.522	ug/L	278188	99	0.776	1.634	1.634
Tl	205	48.014	ug/L	665420	245	0.867	1.806	1.806
Pb	208	47.192	ug/L	903698	500	0.830	1.759	1.759
Bi	209	47.126	ug/L	734375	2334	0.692	1.468	1.468
U	238	45.948	ug/L	929047	167	0.950	2.067	2.067
Tb	159		ug/L	338658	335249			2.301
Kr	83		mg/L	308	280			53.611
Y	89		ug/L	352213	364355			138.809
In	115		ug/L	384143	381187			237.380
Ho	165		ug/L	406339	397496			117.150
Tm	169		ug/L	460070	447702			101.635
Ar2	76		mg/L	72638	72603			2562.572

00179

## Sample ID: CCB

Sample Date/Time: Tuesday, April 10, 2001 19:05:20

Method File: c:\elandata\Method\6020scan5.mth

## Sample Description:

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	-2.752	ug/L	23905	23642	2.617	95.088	95.088
Mg	26	-0.140	ug/L	231	277	0.057	40.988	40.988
Cl	35	-0.248	mg/L	58285	59824	0.220	88.940	88.940
Na	23	0.272	ug/L	19454	17961	0.305	111.985	111.985
K	39	-12.291	ug/L	1251022	1279174	5.279	42.949	42.949
Sc	45		ug/L	170855	165238			3.465
Li	6		ug/L	21489	22735			4.410
Li	7		ug/L	1577	1620			123.308
Be	9	-0.007	ug/L	6	8	0.006	95.535	95.535
B	10	0.395	ug/L	46	35	0.138	35.004	35.004
B	11	0.515	ug/L	213	139	0.189	36.651	36.651
Al	27	0.356	ug/L	3478	2186	0.063	17.851	17.851
Ti	49	0.017	ug/L	169	157	0.015	89.578	89.578
V	51	-0.030	ug/L	1583	1717	0.004	13.491	13.491
Cr	53	0.070	ug/L	388	331	0.031	43.740	43.740
Cr	52	-0.089	ug/L	4213	4542	0.027	30.165	30.165
Fe	56	-13.990	ug/L	1191154	1255734	6.348	45.375	45.375
Fe	57	-5.160	ug/L	9089	9722	1.584	30.697	30.697
Fe	54	-23.815	ug/L	73420	81064	6.666	27.993	27.993
Mn	55	-0.085	ug/L	1829	2510	0.008	9.732	9.732
Co	59	-0.010	ug/L	121	184	0.001	9.039	9.039
Ni	62	0.035	ug/L	74	64	0.058	167.222	167.222
Ni	60	-0.019	ug/L	53	78	0.003	14.575	14.575
Cu	63	-0.032	ug/L	218	316	0.004	11.712	11.712
Cu	65	-0.033	ug/L	72	124	0.006	18.973	18.973
Sc	45		ug/L	170855	165238			3.465
Zn	67	-0.029	ug/L	119	124	0.031	104.816	104.816
Zn	68	-0.212	ug/L	497	644	0.027	12.864	12.864
Zn	66	-0.147	ug/L	370	514	0.016	10.853	10.853
As	75	-0.041	ug/L	563	618	0.075	181.739	181.739
Se	77	-0.005	ug/L	97	98	0.246	4787.356	4787.356
Se	78	-1.746	ug/L	8876	9414	0.569	32.566	32.566
Se	82	-0.016	ug/L	311	315	0.217	1392.222	1392.222
Br	79	0.002	mg/L	9108	8581	0.002	80.137	80.137
Ge	72		mg/L	82295	82830			1.313
Rh	103		ug/L	336466	319040			2.228
Sr	88	-0.007	ug/L	167	273	0.000	4.204	4.204
Mo	97	0.000	ug/L	87	82	0.010	2879.617	2879.617
Mo	98	0.012	ug/L	234	176	0.004	34.139	34.139
Ag	107	-0.005	ug/L	40	70	0.001	12.873	12.873
Ag	109	-0.004	ug/L	35	58	0.001	22.581	22.581
Cd	111	0.010	ug/L	374	339	0.008	75.146	75.146
Cd	114	-0.005	ug/L	13	32	0.001	25.308	25.308
Sn	118	-0.037	ug/L	545	691	0.018	50.196	50.196
Sn	120	-0.045	ug/L	731	986	0.017	38.409	38.409
Sb	121	0.033	ug/L	513	299	0.006	18.513	18.513
Sb	123	0.025	ug/L	378	252	0.007	26.969	26.969
Ba	135	-0.012	ug/L	33	49	0.002	14.399	14.399
Ba	137	-0.012	ug/L	37	65	0.001	7.720	7.720
Tl	203	-0.002	ug/L	91	99	0.002	104.127	104.127
Tl	205	-0.002	ug/L	229	245	0.002	97.711	97.711
Pb	208	0.016	ug/L	852	500	0.001	6.509	6.509
Bi	209	-0.108	ug/L	704	2334	0.001	1.137	1.137
U	238	-0.005	ug/L	76	167	0.000	10.356	10.356
Tb	159		ug/L	354781	335249			0.385
Kr	83		mg/L	305	280			65.033
Y	89		ug/L	374173	364355			38.356
In	115		ug/L	404729	381187			37.358
Ho	165		ug/L	423286	397496			18.293
Tm	169		ug/L	479062	447702			7.609
Ar2	76		mg/L	70801	72603			30.728



00180

## Sample ID: TRAIN RINSE

Sample Date/Time: Tuesday, April 10, 2001 19:10:42

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	13.823	ug/L	27621	23642	5.022	36.329	36.329
Mg	26	0.886	ug/L	651	277	0.165	18.622	18.622
Cl	35	-0.204	mg/L	60019	59824	0.061	30.008	30.008
Na	23	9.092	ug/L	49489	17961	0.522	5.744	5.744
K	39	-12.821	ug/L	1270836	1279174	4.345	33.889	33.889
Sc	45		ug/L	173919	165238			1.318
Li	6		ug/L	22955	22735			2.307
Li	7		ug/L	1629	1620			2230.798
Be	9	-0.016	ug/L	5	8	0.002	15.722	15.722
B	10	1.911	ug/L	100	35	0.223	11.648	11.648
B	11	1.992	ug/L	479	139	0.250	12.570	12.570
Al	27	5.819	ug/L	22526	2186	0.517	8.877	8.877
Ti	49	0.575	ug/L	401	157	0.057	9.876	9.876
V	51	-0.020	ug/L	1671	1717	0.013	63.670	63.670
Cr	53	0.377	ug/L	596	331	0.020	5.429	5.429
Cr	52	0.214	ug/L	5964	4542	0.016	7.705	7.705
Fe	56	-14.007	ug/L	1213273	1255734	4.646	33.171	33.171
Fe	57	-2.453	ug/L	9769	9722	0.568	23.155	23.155
Fe	54	-8.296	ug/L	81641	81064	3.118	37.585	37.585
Mn	55	-0.004	ug/L	2600	2510	0.015	345.806	345.806
Co	59	0.012	ug/L	276	184	0.001	8.795	8.795
Ni	62	0.157	ug/L	103	64	0.050	32.086	32.086
Ni	60	0.064	ug/L	176	78	0.014	22.566	22.566
Cu	63	0.026	ug/L	424	316	0.006	22.633	22.633
Cu	65	0.052	ug/L	219	124	0.016	31.397	31.397
Sc	45		ug/L	173919	165238			1.318
Zn	67	0.790	ug/L	238	124	0.173	21.865	21.865
Zn	68	0.696	ug/L	1111	644	0.029	4.105	4.105
Zn	66	0.653	ug/L	1136	514	0.026	3.941	3.941
As	75	0.024	ug/L	644	618	0.091	378.193	378.193
Se	77	-0.055	ug/L	93	98	0.135	243.322	243.322
Se	78	-1.329	ug/L	9008	9414	0.370	27.818	27.818
Se	82	0.093	ug/L	324	315	0.313	335.019	335.019
Br	79	0.028	mg/L	15757	8581	0.003	9.927	9.927
Ge	72		mg/L	82451	82830			0.566
Rh	103		ug/L	333539	319040			1.822
Sr	88	0.009	ug/L	455	273	0.001	12.408	12.408
Mo	97	0.028	ug/L	129	82	0.004	14.156	14.156
Mo	98	0.032	ug/L	311	176	0.014	44.340	44.340
Ag	107	0.026	ug/L	251	70	0.003	10.489	10.489
Ag	109	0.023	ug/L	207	58	0.003	14.546	14.546
Cd	111	0.020	ug/L	387	339	0.026	131.634	131.634
Cd	114	-0.004	ug/L	18	32	0.003	72.717	72.717
Sn	118	0.666	ug/L	4054	691	0.264	39.605	39.605
Sn	120	0.685	ug/L	5707	986	0.273	39.915	39.915
Sb	121	0.618	ug/L	4001	299	0.217	35.193	35.193
Sb	123	0.605	ug/L	3005	252	0.213	35.171	35.171
Ba	135	0.344	ug/L	574	49	0.111	32.285	32.285
Ba	137	0.344	ug/L	971	65	0.100	28.920	28.920
Tl	203	0.005	ug/L	134	99	0.003	60.653	60.653
Tl	205	0.003	ug/L	297	245	0.001	33.371	33.371
Pb	208	0.014	ug/L	806	500	0.001	10.220	10.220
Bi	209	0.035	ug/L	3010	2334	0.053	149.531	149.531
U	238	-0.001	ug/L	146	167	0.003	242.932	242.932
Tb	159		ug/L	350339	335249			1.316
Kr	83		mg/L	311	280			79.409
Y	89		ug/L	375174	364355			79.162
In	115		ug/L	395786	381187			32.822
Ho	165		ug/L	418401	397496			34.482
Tm	169		ug/L	473111	447702			37.695
Ar2	76		mg/L	70898	72603			47.681

00181

## Sample ID: BL0405 MNF1 X10

Sample Date/Time: Tuesday, April 10, 2001 19:16:04

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens.	Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens.	RSD
Ca	44	17.490	ug/L	28876		23642	5.911	33.799	33.799	
Mg	26	0.965	ug/L	697		277	0.152	15.722	15.722	
Cl	35	-0.275	mg/L	60153		59824	0.100	36.227	36.227	
Na	23	8.281	ug/L	47661		17961	0.685	8.269	8.269	
K	39	-15.432	ug/L	1280089		1279174	5.431	35.193	35.193	
Sc	45		ug/L	177370		165238			2.857	
Li	6		ug/L	22976		22735			2.409	
Li	7		ug/L	1695		1620			173.297	
Be	9	-0.009	ug/L	6		8	0.010	116.591	116.591	
B	10	1.755	ug/L	95		35	0.538	30.662	30.662	
B	11	1.904	ug/L	465		139	0.080	4.202	4.202	
Al	27	4.526	ug/L	18386		2186	0.149	3.283	3.283	
Ti	49	0.408	ug/L	339		157	0.027	6.681	6.681	
V	51	-0.015	ug/L	1736		1717	0.024	155.110	155.110	
Cr	53	0.407	ug/L	627		331	0.082	20.232	20.232	
Cr	52	0.197	ug/L	5988		4542	0.031	15.866	15.866	
Fe	56	-14.219	ug/L	1234808		1255734	7.296	51.309	51.309	
Fe	57	0.697	ug/L	10566		9722	1.265	181.547	181.547	
Fe	54	-8.674	ug/L	83038		81064	7.977	91.965	91.965	
Mn	55	-0.018	ug/L	2525		2510	0.007	36.102	36.102	
Co	59	0.005	ug/L	233		184	0.003	60.727	60.727	
Ni	62	0.102	ug/L	92		64	0.025	24.906	24.906	
Ni	60	0.037	ug/L	138		78	0.019	51.858	51.858	
Cu	63	0.018	ug/L	404		316	0.004	23.504	23.504	
Cu	65	0.041	ug/L	205		124	0.011	27.033	27.033	
Sc	45		ug/L	177370		165238			2.857	
Zn	67	0.323	ug/L	170		124	0.092	28.519	28.519	
Zn	68	0.139	ug/L	732		644	0.076	55.128	55.128	
Zn	66	0.169	ug/L	672		514	0.049	28.845	28.845	
As	75	0.032	ug/L	653		618	0.065	201.033	201.033	
Se	77	0.014	ug/L	98		98	0.125	900.170	900.170	
Se	78	-1.057	ug/L	9062		9414	1.129	106.844	106.844	
Se	82	-0.006	ug/L	312		315	0.182	3288.379	3288.379	
Br	79	0.022	mg/L	14202		8581	0.004	20.481	20.481	
Ge	72		mg/L	82331		82830			3.513	
Rh	103		ug/L	338698		319040			1.462	
Sr	88	0.005	ug/L	378		273	0.002	42.054	42.054	
Mo	97	0.003	ug/L	92		82	0.006	173.463	173.463	
Mo	98	0.007	ug/L	216		176	0.006	88.901	88.901	
Ag	107	0.020	ug/L	212		70	0.004	20.719	20.719	
Ag	109	0.022	ug/L	210		58	0.002	9.422	9.422	
Cd	111	0.007	ug/L	372		339	0.011	144.919	144.919	
Cd	114	-0.003	ug/L	21		32	0.002	71.269	71.269	
Sn	118	0.329	ug/L	2400		691	0.038	11.402	11.402	
Sn	120	0.339	ug/L	3387		986	0.029	8.551	8.551	
Sb	121	0.317	ug/L	2231		299	0.010	3.228	3.228	
Sb	123	0.309	ug/L	1687		252	0.029	9.304	9.304	
Ba	135	0.440	ug/L	732		49	0.031	7.042	7.042	
Ba	137	0.458	ug/L	1292		65	0.015	3.309	3.309	
Tl	203	0.001	ug/L	111		99	0.000	30.856	30.856	
Tl	205	-0.001	ug/L	243		245	0.001	108.060	108.060	
Pb	208	0.010	ug/L	739		500	0.002	15.345	15.345	
Bi	209	-0.070	ug/L	1330		2334	0.010	14.023	14.023	
U	238	-0.005	ug/L	72		167	0.000	6.009	6.009	
Tb	159		ug/L	354893		335249			0.246	
Kr	83		mg/L	292		280			84.262	
Y	89		ug/L	375872		364355			37.557	
In	115		ug/L	403391		381187			34.703	
Ho	165		ug/L	426898		397496			7.285	
Tm	169		ug/L	477979		447702			18.563	
Ar2	76		mg/L	70895		72603			110.075	

00182

## Sample ID: BL0405D X10

Sample Date/Time: Tuesday, April 10, 2001 19:21:28

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	23.064	ug/L	29718	23642	1.648	7.144	7.144
Mg	26	0.594	ug/L	539	277	0.096	16.166	16.166
Cl	35	-0.256	mg/L	59851	59824	0.028	11.047	11.047
Na	23	11.062	ug/L	56691	17961	0.451	4.077	4.077
K	39	-11.355	ug/L	1291982	1279174	0.763	6.721	6.721
Sc	45		ug/L	175598	165238			1.489
Li	6		ug/L	23554	22735			2.791
Li	7		ug/L	1660	1620			168.280
Be	9	-0.011	ug/L	6	8	0.008	72.217	72.217
B	10	1.527	ug/L	89	35	0.300	19.664	19.664
B	11	1.832	ug/L	464	139	0.079	4.304	4.304
Al	27	4.403	ug/L	17778	2186	0.083	1.894	1.894
Ti	49	0.322	ug/L	300	157	0.020	6.303	6.303
V	51	-0.007	ug/L	1779	1717	0.026	387.071	387.071
Cr	53	0.366	ug/L	594	331	0.075	20.582	20.582
Cr	52	0.230	ug/L	6112	4542	0.026	11.271	11.271
Fe	56	-14.297	ug/L	1222659	1255734	4.377	30.612	30.612
Fe	57	-3.183	ug/L	9723	9722	0.836	26.268	26.268
Fe	54	-8.469	ug/L	82354	81064	2.608	30.791	30.791
Mn	55	-0.008	ug/L	2591	2510	0.001	14.774	14.774
Co	59	0.002	ug/L	209	184	0.003	141.093	141.093
Ni	62	0.098	ug/L	90	64	0.063	64.423	64.423
Ni	60	0.043	ug/L	147	78	0.015	35.900	35.900
Cu	63	0.017	ug/L	395	316	0.011	64.594	64.594
Cu	65	0.039	ug/L	199	124	0.005	13.545	13.545
Sc	45		ug/L	175598	165238			1.489
Zn	67	0.338	ug/L	176	124	0.142	41.911	41.911
Zn	68	0.217	ug/L	802	644	0.008	3.641	3.641
Zn	66	0.187	ug/L	703	514	0.022	11.533	11.533
As	75	0.022	ug/L	653	618	0.025	114.258	114.258
Se	77	-0.052	ug/L	95	98	0.118	224.716	224.716
Se	78	-1.690	ug/L	9071	9414	1.388	82.098	82.098
Se	82	-0.026	ug/L	316	315	0.203	778.914	778.914
Br	79	0.013	mg/L	12262	8581	0.002	13.903	13.903
Ge	72		mg/L	83980	82830			1.956
Rh	103		ug/L	337688	319040			1.208
Sr	88	0.006	ug/L	399	273	0.000	4.816	4.816
Mo	97	-0.013	ug/L	66	82	0.003	22.179	22.179
Mo	98	-0.007	ug/L	157	176	0.002	28.193	28.193
Ag	107	0.020	ug/L	215	70	0.003	14.098	14.098
Ag	109	0.021	ug/L	201	58	0.001	5.739	5.739
Cd	111	0.009	ug/L	374	339	0.017	189.053	189.053
Cd	114	-0.006	ug/L	12	32	0.003	53.751	53.751
Sn	118	0.279	ug/L	2137	691	0.033	11.985	11.985
Sn	120	0.289	ug/L	3033	986	0.022	7.519	7.519
Sb	121	0.293	ug/L	2083	299	0.024	8.166	8.166
Sb	123	0.280	ug/L	1550	252	0.012	4.138	4.138
Ba	135	0.473	ug/L	781	49	0.015	3.095	3.095
Ba	137	0.470	ug/L	1321	65	0.025	5.389	5.389
Tl	203	-0.003	ug/L	90	99	0.001	34.786	34.786
Tl	205	-0.004	ug/L	199	245	0.001	29.962	29.962
Pb	208	0.009	ug/L	716	500	0.001	14.050	14.050
Bi	209	-0.104	ug/L	790	2334	0.004	4.265	4.265
U	238	-0.006	ug/L	52	167	0.000	2.605	2.605
Tb	159		ug/L	358966	335249			1.057
Kr	83		mg/L	304	280			72.240
Y	89		ug/L	377476	364355			53.806
In	115		ug/L	397598	381187			24.107
Ho	165		ug/L	424866	397496			18.648
Tm	169		ug/L	476762	447702			8.284
Ar2	76		mg/L	71752	72603			59.758

00183

## Sample ID: BL0405M X10

Sample Date/Time: Tuesday, April 10, 2001 19:26:51

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	1286.462	ug/L	280087	23642	21.570	1.677	1.677
Mg	26	232.404	ug/L	95132	277	1.904	0.819	0.819
Cl	35	-0.265	mg/L	59415	59824	0.084	31.541	31.541
Na	23	1159.899	ug/L	3940647	17961	16.247	1.401	1.401
K	39	1184.844	ug/L	8346587	1279174	5.829	0.492	0.492
Sc	45		ug/L	174722	165238			1.478
Li	6		ug/L	23587	22735			1.783
Li	7		ug/L	1703	1620			160.440
Be	9	47.722	ug/L	9611	8	0.899	1.884	1.884
B	10	50.322	ug/L	1785	35	1.619	3.217	3.217
B	11	50.822	ug/L	9032	139	0.362	0.713	0.713
Al	27	101.424	ug/L	356546	2186	0.382	0.377	0.377
Ti	49	47.890	ug/L	19924	157	1.107	2.312	2.312
V	51	48.701	ug/L	326024	1717	0.110	0.227	0.227
Cr	53	48.898	ug/L	32625	331	0.462	0.945	0.945
Cr	52	48.686	ug/L	275903	4542	0.364	0.748	0.748
Fe	56	256.188	ug/L	3316249	1255734	2.216	0.865	0.865
Fe	57	239.748	ug/L	55767	9722	8.418	3.511	3.511
Fe	54	232.165	ug/L	188894	81064	1.481	0.638	0.638
Mn	55	48.898	ug/L	450932	2510	0.492	1.006	1.006
Co	59	48.104	ug/L	338184	184	0.839	1.744	1.744
Ni	62	48.633	ug/L	11148	64	0.523	1.075	1.075
Ni	60	48.317	ug/L	71276	78	0.725	1.501	1.501
Cu	63	49.429	ug/L	172939	316	0.796	1.610	1.610
Cu	65	48.748	ug/L	84275	124	0.918	1.883	1.883
Sc	45		ug/L	174722	165238			1.478
Zn	67	104.434	ug/L	15514	124	3.445	3.299	3.299
Zn	68	99.666	ug/L	69039	644	2.943	2.953	2.953
Zn	66	101.338	ug/L	98912	514	2.015	1.989	1.989
As	75	48.255	ug/L	61278	618	0.782	1.621	1.621
Se	77	47.858	ug/L	4123	98	0.640	1.338	1.338
Se	78	46.048	ug/L	22268	9414	1.135	2.464	2.464
Se	82	49.191	ug/L	6138	315	0.751	1.527	1.527
Br	79	0.006	mg/L	10273	8581	0.001	19.597	19.597
Ge	72		mg/L	83702	82830			1.866
Rh	103		ug/L	330922	319040			2.447
Sr	88	47.788	ug/L	849475	273	0.256	0.536	0.536
Mo	97	24.527	ug/L	37877	82	0.186	0.756	0.756
Mo	98	24.151	ug/L	96350	176	0.540	2.234	2.234
Ag	107	23.654	ug/L	159819	70	0.080	0.337	0.337
Ag	109	23.914	ug/L	154129	58	0.671	2.805	2.805
Cd	111	23.826	ug/L	39281	339	0.734	3.081	3.081
Cd	114	24.144	ug/L	92091	32	0.693	2.870	2.870
Sn	118	25.697	ug/L	127778	691	0.909	3.538	3.538
Sn	120	26.197	ug/L	177869	986	0.733	2.799	2.799
Sb	121	10.453	ug/L	62011	299	0.247	2.360	2.360
Sb	123	10.453	ug/L	47106	252	0.414	3.963	3.963
Ba	135	49.068	ug/L	74242	49	1.551	3.160	3.160
Ba	137	49.789	ug/L	129836	65	1.967	3.950	3.950
Tl	203	47.660	ug/L	290922	99	0.695	1.457	1.457
Tl	205	47.583	ug/L	687438	245	1.183	2.487	2.487
Pb	208	47.563	ug/L	949599	500	0.727	1.528	1.528
Bi	209	47.552	ug/L	772889	2334	0.690	1.451	1.451
U	238	47.032	ug/L	991610	167	0.474	1.007	1.007
Tb	159		ug/L	353217	335249			1.573
Kr	83		mg/L	306	280			136.776
Y	89		ug/L	376808	364355			43.073
In	115		ug/L	405867	381187			34.374
Ho	165		ug/L	417455	397496			50.305
Tm	169		ug/L	468442	447702			17.753
Ar2	76		mg/L	76496	72603			47.105

00184

## Sample ID: BL0405DM X10

Sample Date/Time: Tuesday, April 10, 2001 19:35:15

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	1260.630	ug/L	271741	23642	7.949	0.631	0.631
Mg	26	235.666	ug/L	95320	277	2.894	1.228	1.228
Cl	35	-0.314	mg/L	58014	59824	0.028	9.058	9.058
Na	23	1193.380	ug/L	4006168	17961	39.472	3.308	3.308
K	39	1169.153	ug/L	8156021	1279174	12.405	1.061	1.061
Sc	45		ug/L	172651	165238			0.698
Li	6		ug/L	23058	22735			1.846
Li	7		ug/L	1642	1620			7045.333
Be	9	47.474	ug/L	9346	8	1.044	2.198	2.198
B	10	49.426	ug/L	1714	35	1.507	3.049	3.049
B	11	50.771	ug/L	8821	139	1.017	2.004	2.004
Al	27	99.519	ug/L	345721	2186	1.887	1.896	1.896
Ti	49	47.228	ug/L	19418	157	0.432	0.915	0.915
V	51	47.047	ug/L	311277	1717	0.616	1.309	1.309
Cr	53	47.716	ug/L	31468	331	0.303	0.636	0.636
Cr	52	47.212	ug/L	264512	4542	0.424	0.898	0.898
Fe	56	259.552	ug/L	3302992	1255734	11.889	4.581	4.581
Fe	57	247.242	ug/L	56530	9722	8.077	3.267	3.267
Fe	54	230.576	ug/L	185958	81064	2.435	1.056	1.056
Mn	55	48.217	ug/L	439430	2510	1.415	2.936	2.936
Co	59	47.257	ug/L	328363	184	1.468	3.107	3.107
Ni	62	47.274	ug/L	10709	64	1.037	2.193	2.193
Ni	60	47.378	ug/L	69076	78	0.924	1.951	1.951
Cu	63	48.306	ug/L	167042	316	0.149	0.308	0.308
Cu	65	47.678	ug/L	81464	124	0.080	0.167	0.167
Sc	45		ug/L	172651	165238			0.698
Zn	67	102.263	ug/L	15097	124	1.224	1.197	1.197
Zn	68	99.549	ug/L	68506	644	3.045	3.059	3.059
Zn	66	98.850	ug/L	95872	514	2.446	2.474	2.474
As	75	48.102	ug/L	60661	618	0.813	1.691	1.691
Se	77	48.383	ug/L	4140	98	0.993	2.052	2.052
Se	78	46.278	ug/L	22187	9414	0.882	1.905	1.905
Se	82	48.565	ug/L	6023	315	0.279	0.574	0.574
Br	79	0.008	mg/L	10727	8581	0.001	10.520	10.520
Ge	72		mg/L	83150	82830			1.622
Rh	103		ug/L	326506	319040			1.658
Sr	88	47.040	ug/L	824913	273	0.249	0.529	0.529
Mo	97	23.995	ug/L	36563	82	0.165	0.686	0.686
Mo	98	23.876	ug/L	94007	176	0.051	0.212	0.212
Ag	107	23.244	ug/L	154926	70	0.386	1.661	1.661
Ag	109	23.430	ug/L	149020	58	0.582	2.486	2.486
Cd	111	23.449	ug/L	38158	339	0.313	1.335	1.335
Cd	114	23.735	ug/L	89349	32	0.292	1.232	1.232
Sn	118	24.647	ug/L	121000	691	0.425	1.724	1.724
Sn	120	24.826	ug/L	166403	986	0.287	1.156	1.156
Sb	121	10.436	ug/L	61099	299	0.181	1.734	1.734
Sb	123	10.496	ug/L	46695	252	0.071	0.680	0.680
Ba	135	48.806	ug/L	72888	49	0.801	1.641	1.641
Ba	137	49.023	ug/L	126192	65	0.875	1.784	1.784
Tl	203	48.230	ug/L	284287	99	0.194	0.401	0.401
Tl	205	48.152	ug/L	671921	245	0.402	0.836	0.836
Pb	208	48.134	ug/L	928029	500	0.062	0.128	0.128
Bi	209	48.731	ug/L	764825	2334	0.334	0.686	0.686
U	238	47.217	ug/L	960968	167	1.048	2.219	2.219
Tb	159		ug/L	341053	335249			1.547
Kr	83		mg/L	340	280			35.443
Y	89		ug/L	372506	364355			46.567
In	115		ug/L	396452	381187			21.845
Ho	165		ug/L	411946	397496			39.256
Tm	169		ug/L	461605	447702			66.090
Ar2	76		mg/L	75739	72603			16.430

00185

Sample ID: 014843 X10

Sample Date/Time: Tuesday, April 10, 2001 19:43:40

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	295.288	ug/L	168093	23642	8.828	2.990	2.990
Mg	26	2.882	ug/L	2948	277	0.251	8.716	8.716
Cl	35	-2.383	mg/L	57833	59824	0.055	2.292	2.292
Na	23	21.406	ug/L	183409	17961	1.586	7.409	7.409
K	39	-112.351	ug/L	1385261	1279174	3.167	2.818	2.818
Sc	45		ug/L	351287	165238			4.235
Li	6		ug/L	28389	22735			2.282
Li	7		ug/L	1998	1620			422.969
Be	9	-0.006	ug/L	8	8	0.014	221.475	221.475
B	10	0.578	ug/L	68	35	0.431	74.635	74.635
B	11	0.733	ug/L	328	139	0.146	19.855	19.855
Al	27	16.830	ug/L	122768	2186	0.273	1.624	1.624
Ti	49	0.100	ug/L	416	157	0.054	53.770	53.770
V	51	-0.140	ug/L	1772	1717	0.018	12.720	12.720
Cr	53	0.081	ug/L	811	331	0.019	23.014	23.014
Cr	52	-0.222	ug/L	7166	4542	0.024	10.703	10.703
Fe	56	-88.424	ug/L	1288554	1255734	2.828	3.198	3.198
Fe	57	-22.499	ug/L	12069	9722	1.305	5.800	5.800
Fe	54	-90.176	ug/L	91681	81064	3.382	3.750	3.750
Mn	55	0.145	ug/L	7988	2510	0.022	15.310	15.310
Co	59	-0.006	ug/L	311	184	0.001	17.964	17.964
Ni	62	0.091	ug/L	177	64	0.063	69.514	69.514
Ni	60	0.197	ug/L	749	78	0.013	6.561	6.561
Cu	63	0.184	ug/L	1964	316	0.011	5.868	5.868
Cu	65	0.193	ug/L	933	124	0.015	7.862	7.862
Sc	45		ug/L	351287	165238			4.235
Zn	67	2.304	ug/L	485	124	0.192	8.312	8.312
Zn	68	2.622	ug/L	2555	644	0.135	5.162	5.162
Zn	66	2.102	ug/L	2672	514	0.042	2.003	2.003
As	75	0.206	ug/L	923	618	0.104	50.388	50.388
Se	77	-0.042	ug/L	99	98	0.066	155.788	155.788
Se	78	-3.433	ug/L	8932	9414	0.724	21.082	21.082
Se	82	0.746	ug/L	425	315	0.313	41.915	41.915
Br	79	0.004	mg/L	10230	8581	0.002	46.771	46.771
Ge	72		mg/L	87354	82830			2.369
Rb	103		ug/L	338190	319040			1.499
Sr	88	0.164	ug/L	3260	273	0.008	4.805	4.805
Mo	97	2.164	ug/L	3493	82	0.073	3.356	3.356
Mo	98	2.132	ug/L	8862	176	0.025	1.167	1.167
Ag	107	0.024	ug/L	242	70	0.005	19.365	19.365
Ag	109	0.023	ug/L	213	58	0.002	7.755	7.755
Cd	111	0.034	ug/L	415	339	0.020	58.516	58.516
Cd	114	0.005	ug/L	54	32	0.013	259.191	259.191
Sn	118	8.116	ug/L	41766	691	0.041	0.505	0.505
Sn	120	8.234	ug/L	57855	986	0.249	3.029	3.029
Sb	121	0.007	ug/L	357	299	0.002	29.213	29.213
Sb	123	-0.003	ug/L	256	252	0.008	298.774	298.774
Ba	135	0.888	ug/L	1424	49	0.028	3.146	3.146
Ba	137	0.898	ug/L	2463	65	0.021	2.297	2.297
Tl	203	0.006	ug/L	140	99	0.005	87.179	87.179
Tl	205	0.004	ug/L	323	245	0.005	126.505	126.505
Pb	208	0.178	ug/L	4110	500	0.009	4.772	4.772
Bi	209	0.003	ug/L	2528	2334	0.040	1337.870	1337.870
U	238	0.048	ug/L	1200	167	0.005	10.437	10.437
Tb	159		ug/L	355330	335249			3.334
Kr	83		mg/L	843	280			25.395
Y	89		ug/L	387660	364355			26.083
In	115		ug/L	396725	381187			22.252
Ho	165		ug/L	427322	397496			37.305
Tm	169		ug/L	481472	447702			20.012
Ar2	76		mg/L	72272	72603			116.738

00186

## Sample ID: 014844 X10

Sample Date/Time: Tuesday, April 10, 2001 19:49:05

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	309.505	ug/L	168577	23642	14.639	4.730	4.730
Mg	26	7.180	ug/L	6286	277	0.128	1.781	1.781
Cl	35	-2.296	mg/L	58537	59824	0.094	4.074	4.074
Na	23	44.362	ug/L	329566	17961	0.893	2.013	2.013
K	39	-106.290	ug/L	1414249	1279174	1.893	1.781	1.781
Sc	45		ug/L	340834	165238			2.758
Li	6		ug/L	29195	22735			1.755
Li	7		ug/L	2022	1620			145.463
Be	9	-0.014	ug/L	6	8	0.009	62.683	62.683
B	10	1.125	ug/L	93	35	0.047	4.156	4.156
B	11	1.364	ug/L	474	139	0.210	15.405	15.405
Al	27	19.879	ug/L	139847	2186	0.830	4.173	4.173
Ti	49	0.266	ug/L	537	157	0.035	13.049	13.049
V	51	-0.137	ug/L	1754	1717	0.011	7.876	7.876
Cr	53	0.050	ug/L	746	331	0.019	38.104	38.104
Cr	52	-0.218	ug/L	6997	4542	0.021	9.785	9.785
Fe	56	-87.059	ug/L	1272137	1255734	1.143	1.312	1.312
Fe	57	-22.456	ug/L	11735	9722	0.666	2.964	2.964
Fe	54	-88.033	ug/L	90913	81064	1.576	1.791	1.791
Mn	55	0.402	ug/L	12358	2510	0.005	1.340	1.340
Co	59	0.005	ug/L	446	184	0.001	20.258	20.258
Ni	62	0.158	ug/L	202	64	0.034	21.855	21.855
Ni	60	0.245	ug/L	864	78	0.006	2.614	2.614
Cu	63	0.340	ug/L	2964	316	0.021	6.057	6.057
Cu	65	0.362	ug/L	1474	124	0.018	4.914	4.914
Sc	45		ug/L	340834	165238			2.758
Zn	67	7.212	ug/L	1224	124	0.400	5.544	5.544
Zn	68	7.555	ug/L	6015	644	0.235	3.116	3.116
Zn	66	6.967	ug/L	7508	514	0.291	4.182	4.182
As	75	0.354	ug/L	1102	618	0.106	30.014	30.014
Se	77	-0.009	ug/L	101	98	0.085	976.008	976.008
Se	78	-3.521	ug/L	8800	9414	0.624	17.734	17.734
Se	82	1.097	ug/L	462	315	0.362	33.017	33.017
Br	79	0.042	mg/L	20277	8581	0.017	41.693	41.693
Ge	72		mg/L	86282	82830			1.338
Rh	103		ug/L	329208	319040			1.877
Sr	88	0.263	ug/L	4926	273	0.007	2.624	2.624
Mo	97	2.214	ug/L	3479	82	0.045	2.028	2.028
Mo	98	2.175	ug/L	8798	176	0.053	2.434	2.434
Ag	107	0.023	ug/L	229	70	0.002	6.598	6.598
Ag	109	0.018	ug/L	178	58	0.001	5.843	5.843
Cd	111	0.101	ug/L	514	339	0.011	10.368	10.368
Cd	114	0.115	ug/L	470	32	0.016	13.702	13.702
Sn	118	3.393	ug/L	17402	691	0.196	5.778	5.778
Sn	120	3.478	ug/L	24373	986	0.184	5.298	5.298
Sb	121	0.060	ug/L	663	299	0.003	5.719	5.719
Sb	123	0.058	ug/L	521	252	0.003	4.329	4.329
Ba	135	0.953	ug/L	1485	49	0.041	4.271	4.271
Ba	137	0.958	ug/L	2554	65	0.028	2.906	2.906
Tl	203	0.028	ug/L	276	99	0.006	20.025	20.025
Tl	205	0.026	ug/L	628	245	0.004	16.384	16.384
Pb	208	0.646	ug/L	13387	500	0.013	2.040	2.040
Bi	209	-0.083	ug/L	1113	2334	0.008	10.090	10.090
U	238	0.042	ug/L	1068	167	0.004	9.335	9.335
Tb	159		ug/L	352263	335249			2.674
Kr	83		mg/L	893	280			10.130
Y	89		ug/L	382280	364355			8.331
In	115		ug/L	389793	381187			68.028
Ho	165		ug/L	424820	397496			27.072
Tm	169		ug/L	475739	447702			42.836
Ar2	76		mg/L	71932	72603			115.346

00187

## Sample ID: 014845 X10

Sample Date/Time: Tuesday, April 10, 2001 19:54:30

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	754.868	ug/L	350110	23642	16.748	2.219	2.219
Mg	26	73.540	ug/L	60694	277	2.457	3.341	3.341
Cl	35	-1.181	mg/L	92512	59824	0.039	3.300	3.300
Na	23	714.453	ug/L	4876117	17961	26.719	3.740	3.740
K	39	-64.877	ug/L	1942180	1279174	5.490	8.462	8.462
Sc	45		ug/L	350152	165238			2.631
Li	6		ug/L	30699	22735			3.648
Li	7		ug/L	2147	1620			265.291
Be	9	0.002	ug/L	11	8	0.007	303.510	303.510
B	10	136.528	ug/L	6219	35	5.903	4.323	4.323
B	11	136.876	ug/L	31309	139	6.315	4.614	4.614
Al	27	156.477	ug/L	1099556	2186	2.305	1.473	1.473
Ti	49	10.156	ug/L	8727	157	0.264	2.602	2.602
V	51	-0.068	ug/L	2724	1717	0.029	42.992	42.992
Cr	53	0.925	ug/L	1924	331	0.060	6.472	6.472
Cr	52	0.571	ug/L	15989	4542	0.054	9.447	9.447
Fe	56	-7.743	ug/L	2539481	1255734	4.177	53.946	53.946
Fe	57	-46.573	ug/L	38296	9722	2.923	6.276	6.276
Fe	54	-25.179	ug/L	149362	81064	1.434	5.694	5.694
Mn	55	1.043	ug/L	24476	2510	0.018	1.718	1.718
Co	59	0.054	ug/L	1156	184	0.002	3.245	3.245
Ni	62	1.126	ug/L	649	64	0.150	13.314	13.314
Ni	60	1.048	ug/L	3258	78	0.057	5.447	5.447
Cu	63	1.266	ug/L	9530	316	0.039	3.074	3.074
Cu	65	1.572	ug/L	5697	124	0.077	4.907	4.907
Sc	45		ug/L	350152	165238			2.631
Zn	67	51.140	ug/L	7976	124	0.403	0.789	0.789
Zn	68	51.334	ug/L	37355	644	0.356	0.694	0.694
Zn	66	50.535	ug/L	51626	514	1.084	2.144	2.144
As	75	1.237	ug/L	2269	618	0.020	1.581	1.581
Se	77	0.076	ug/L	109	98	0.178	233.477	233.477
Se	78	-3.860	ug/L	8788	9414	0.253	6.549	6.549
Se	82	1.351	ug/L	498	315	0.044	3.288	3.288
Br	79	0.036	mg/L	19020	8581	0.004	11.113	11.113
Ge	72		mg/L	87126	82830			0.725
Rh	103		ug/L	329817	319040			1.975
Sr	88	1.170	ug/L	21006	273	0.020	1.733	1.733
Mo	97	2.949	ug/L	4613	82	0.064	2.168	2.168
Mo	98	2.862	ug/L	11543	176	0.038	1.341	1.341
Ag	107	0.227	ug/L	1605	70	0.023	9.916	9.916
Ag	109	0.210	ug/L	1410	58	0.021	10.208	10.208
Cd	111	2.158	ug/L	3864	339	0.093	4.329	4.329
Cd	114	2.118	ug/L	8084	32	0.017	0.791	0.791
Sn	118	9.391	ug/L	47025	691	0.113	1.207	1.207
Su	120	9.480	ug/L	64812	986	0.203	2.136	2.136
Sb	121	5.920	ug/L	35145	299	0.107	1.801	1.801
Sb	123	5.935	ug/L	26780	252	0.164	2.771	2.771
Ba	135	23.844	ug/L	35994	49	0.354	1.486	1.486
Ba	137	23.910	ug/L	62201	65	0.498	2.083	2.083
Tl	203	0.008	ug/L	154	99	0.003	40.099	40.099
Tl	205	0.007	ug/L	353	245	0.001	19.345	19.345
Pb	208	5.783	ug/L	115856	500	0.081	1.395	1.395
Bi	209	-0.055	ug/L	1572	2334	0.002	3.850	3.850
U	238	0.048	ug/L	1192	167	0.002	3.756	3.756
Tb	159		ug/L	353028	335249			1.246
Kr	83		mg/L	1174	280			8.548
Y	89		ug/L	371054	364355			125.860
In	115		ug/L	390894	381187			46.711
Ho	165		ug/L	425860	397496			23.246
Tm	169		ug/L	482631	447702			21.982
Ar2	76		mg/L	70776	72603			55.485



00188

## Sample ID: 014845D X10

Sample Date/Time: Tuesday, April 10, 2001 19:59:56

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	772.370	ug/L	345456	23642	22.608	2.927	2.927
Mg	26	75.627	ug/L	60400	277	0.892	1.179	1.179
Cl	35	-1.100	mg/L	91782	59824	0.011	0.999	0.999
Na	23	738.427	ug/L	4877670	17961	23.351	3.162	3.162
K	39	-60.247	ug/L	1932844	1279174	0.379	0.628	0.628
Sc	45		ug/L	338742	165238			0.817
Li	6		ug/L	29676	22735			1.409
Li	7		ug/L	2149	1620			87.705
Be	9	-0.017	ug/L	6	8	0.013	74.376	74.376
B	10	144.784	ug/L	6374	35	3.482	2.405	2.405
B	11	140.863	ug/L	31168	139	5.867	4.165	4.165
Al	27	163.551	ug/L	1111821	2186	2.134	1.305	1.305
Ti	49	10.372	ug/L	8619	157	0.215	2.076	2.076
V	51	-0.076	ug/L	2536	1717	0.038	49.396	49.396
Cr	53	0.895	ug/L	1823	331	0.066	7.345	7.345
Cr	52	0.623	ug/L	16042	4542	0.037	5.914	5.914
Fe	56	2.835	ug/L	2616783	1255734	2.766	97.561	97.561
Fe	57	54.701	ug/L	40054	9722	2.146	3.923	3.923
Fe	54	-17.225	ug/L	151347	81064	1.033	5.995	5.995
Mn	55	1.142	ug/L	25438	2510	0.013	1.122	1.122
Co	59	0.047	ug/L	1023	184	0.003	5.717	5.717
Ni	62	1.367	ug/L	735	64	0.101	7.353	7.353
Ni	60	1.322	ug/L	3937	78	0.043	3.241	3.241
Cu	63	1.546	ug/L	11120	316	0.024	1.520	1.520
Cu	65	1.875	ug/L	6527	124	0.071	3.775	3.775
Sc	45		ug/L	338742	165238			0.817
Zn	67	52.248	ug/L	8280	124	0.496	0.950	0.950
Zn	68	52.171	ug/L	38574	644	0.376	0.722	0.722
Zn	66	51.964	ug/L	53941	514	0.116	0.224	0.224
As	75	1.221	ug/L	2282	618	0.143	11.701	11.701
Se	77	0.066	ug/L	110	98	0.164	249.212	249.212
Se	78	-4.781	ug/L	8662	9414	0.454	9.490	9.490
Se	82	1.306	ug/L	500	315	0.542	41.487	41.487
Br	79	0.030	mg/L	17654	8581	0.001	4.773	4.773
Ge	72		mg/L	88559	82830			1.269
Rh	103		ug/L	330347	319040			1.325
Sr	88	1.199	ug/L	21540	273	0.022	1.829	1.829
Mo	97	2.933	ug/L	4596	82	0.039	1.314	1.314
Mo	98	2.878	ug/L	11621	176	0.078	2.724	2.724
Ag	107	0.197	ug/L	1401	70	0.011	5.676	5.676
Ag	109	0.187	ug/L	1266	58	0.005	2.786	2.786
Cd	111	2.183	ug/L	3912	339	0.048	2.211	2.211
Cd	114	2.092	ug/L	8000	32	0.016	0.775	0.775
Sn	118	9.889	ug/L	49552	691	0.145	1.467	1.467
Sn	120	10.085	ug/L	69013	986	0.199	1.972	1.972
Sb	121	5.866	ug/L	34892	299	0.070	1.188	1.188
Sb	123	5.790	ug/L	26183	252	0.004	0.077	0.077
Ba	135	23.240	ug/L	35147	49	0.487	2.097	2.097
Ba	137	23.692	ug/L	61740	65	0.696	2.940	2.940
Tl	203	0.008	ug/L	155	99	0.002	22.511	22.511
Tl	205	0.005	ug/L	334	245	0.002	48.042	48.042
Pb	208	5.748	ug/L	117079	500	0.084	1.462	1.462
Bi	209	-0.059	ug/L	1523	2334	0.006	9.776	9.776
U	238	0.049	ug/L	1231	167	0.002	4.795	4.795
Tb	159		ug/L	358908	335249			1.675
Kr	83		mg/L	1228	280			9.197
Y	89		ug/L	380047	364355			17.347
In	115		ug/L	389611	381187			26.449
Ho	165		ug/L	432198	397496			8.829
Tm	169		ug/L	492407	447702			18.306
Ar2	76		mg/L	70784	72603			53.549

00189

## Sample ID: 014845P X10

Sample Date/Time: Tuesday, April 10, 2001 20:05:19

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	1441.780	ug/L	582011	23642	34.001	2.358	2.358
Mg	26	200.527	ug/L	153724	277	4.860	2.424	2.424
Cl	35	-1.040	mg/L	90248	59824	0.040	3.891	3.891
Na	23	1374.378	ug/L	8733378	17961	33.879	2.465	2.465
K	39	593.081	ug/L	9086877	1279174	2.795	0.471	0.471
Sc	45		ug/L	327129	165238			1.996
Li	6		ug/L	28192	22735			1.683
Li	7		ug/L	2137	1620			74.691
Be	9	44.194	ug/L	10639	8	1.232	2.787	2.787
B	10	191.204	ug/L	7982	35	6.915	3.616	3.616
B	11	181.819	ug/L	38163	139	6.268	3.447	3.447
Al	27	212.000	ug/L	1390496	2186	1.035	0.488	0.488
Ti	49	34.320	ug/L	26820	157	0.476	1.386	1.386
V	51	25.863	ug/L	325728	1717	0.198	0.765	0.765
Cr	53	27.017	ug/L	34040	331	0.229	0.848	0.848
Cr	52	26.639	ug/L	286691	4542	0.223	0.839	0.839
Fe	56	129.678	ug/L	4369375	1255734	5.693	4.390	4.390
Fe	57	186.086	ug/L	85332	9722	9.288	4.991	4.991
Fe	54	114.769	ug/L	256010	81064	2.646	2.305	2.305
Mn	55	27.616	ug/L	478933	2510	0.414	1.499	1.499
Co	59	26.405	ug/L	347574	184	1.245	4.715	4.715
Ni	62	27.253	ug/L	11748	64	0.827	3.033	3.033
Ni	60	27.233	ug/L	75244	78	1.437	5.277	5.277
Cu	63	27.706	ug/L	181768	316	0.367	1.324	1.324
Cu	65	27.577	ug/L	89353	124	0.653	2.369	2.369
Sc	45		ug/L	327129	165238			1.996
Zn	67	151.389	ug/L	23277	124	1.018	0.672	0.672
Zn	68	150.085	ug/L	107537	644	0.440	0.293	0.293
Zn	66	148.313	ug/L	149939	514	2.499	1.685	1.685
As	75	47.528	ug/L	62604	618	0.257	0.540	0.540
Se	77	47.405	ug/L	4237	98	1.569	3.310	3.310
Se	78	42.371	ug/L	22044	9414	0.910	2.148	2.148
Se	82	47.087	ug/L	6107	315	1.642	3.486	3.486
Br	79	0.029	mg/L	16903	8581	0.001	2.342	2.342
Ge	72		mg/L	86824	82830			0.569
Rh	103		ug/L	326720	319040			1.583
Sr	88	47.650	ug/L	836060	273	0.752	1.579	1.579
Mo	97	25.978	ug/L	39600	82	0.390	1.503	1.503
Mo	98	25.815	ug/L	101688	176	0.141	0.546	0.546
Ag	107	22.440	ug/L	149676	70	0.377	1.678	1.678
Ag	109	22.148	ug/L	140977	58	0.372	1.678	1.678
Cd	111	24.336	ug/L	39610	339	0.470	1.933	1.933
Cd	114	24.616	ug/L	92726	32	0.346	1.404	1.404
Sn	118	32.410	ug/L	158997	691	0.373	1.150	1.150
Sn	120	32.334	ug/L	216570	986	0.400	1.238	1.238
Sb	121	15.532	ug/L	90847	299	0.129	0.828	0.828
Sb	123	15.566	ug/L	69168	252	0.187	1.204	1.204
Ba	135	68.153	ug/L	101837	49	0.636	0.933	0.933
Ba	137	69.548	ug/L	179159	65	0.481	0.692	0.692
Tl	203	49.169	ug/L	293421	99	1.745	3.550	3.550
Tl	205	48.972	ug/L	691906	245	1.465	2.991	2.991
Pb	208	54.289	ug/L	1059857	500	1.401	2.581	2.581
Bi	209	50.223	ug/L	798032	2334	1.687	3.359	3.359
U	238	50.721	ug/L	1045574	167	1.126	2.221	2.221
Tb	159		ug/L	345484	335249			2.211
Kr	83		mg/L	1103	280			10.418
Y	89		ug/L	367083	364355			235.895
In	115		ug/L	376951	381187			149.566
Ho	165		ug/L	411255	397496			44.672
Tm	169		ug/L	468102	447702			40.024
Ar2	76		mg/L	74405	72603			32.762

00190

## Sample ID: 014845DP X10

Sample Date/Time: Tuesday, April 10, 2001 20:13:38

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	1463.190	ug/L	553561	23642	27.549	1.883	1.883
Mg	26	208.903	ug/L	150091	277	9.068	4.341	4.341
Cl	35	-0.985	mg/L	86007	59824	0.121	12.251	12.251
Na	23	1422.534	ug/L	8478268	17961	31.566	2.219	2.219
K	39	605.374	ug/L	8646031	1279174	26.551	4.386	4.386
Sc	45		ug/L	306987	165238			5.032
Li	6		ug/L	26225	22735			4.753
Li	7		ug/L	1945	1620			48.383
Be	9	46.508	ug/L	10409	8	1.290	2.773	2.773
B	10	188.888	ug/L	7334	35	3.440	1.821	1.821
B	11	189.074	ug/L	36895	139	4.818	2.548	2.548
Al	27	217.351	ug/L	1337137	2186	3.220	1.481	1.481
Ti	49	35.965	ug/L	26336	157	1.194	3.319	3.319
V	51	26.625	ug/L	314391	1717	0.720	2.704	2.704
Cr	53	28.097	ug/L	33175	331	0.644	2.292	2.292
Cr	52	27.611	ug/L	278455	4542	0.339	1.227	1.227
Fe	56	137.519	ug/L	4204645	1255734	8.076	5.873	5.873
Fe	57	192.477	ug/L	82199	9722	5.868	3.049	3.049
Fe	54	125.411	ug/L	248309	81064	8.708	6.944	6.944
Mn	55	28.741	ug/L	467136	2510	0.841	2.924	2.924
Co	59	27.217	ug/L	336302	184	0.219	0.804	0.804
Ni	62	28.716	ug/L	11607	64	0.548	1.909	1.909
Ni	60	28.332	ug/L	73468	78	0.446	1.576	1.576
Cu	63	28.960	ug/L	178186	316	0.549	1.896	1.896
Cu	65	28.735	ug/L	87362	124	0.281	0.979	0.979
Sc	45		ug/L	306987	165238			5.032
Zn	67	152.568	ug/L	22133	124	1.740	1.140	1.140
Zn	68	150.909	ug/L	102002	644	2.535	1.680	1.680
Zn	66	149.807	ug/L	142840	514	3.140	2.096	2.096
As	75	47.910	ug/L	59525	618	0.285	0.594	0.594
Se	77	48.012	ug/L	4048	98	1.414	2.945	2.945
Se	78	45.725	ug/L	21700	9414	1.302	2.848	2.848
Se	82	48.547	ug/L	5932	315	0.947	1.951	1.951
Br	79	0.031	mg/L	16525	8581	0.001	4.786	4.786
Ge	72		mg/L	81907	82830			2.714
Rh	103		ug/L	311450	319040			3.692
Sr	88	48.497	ug/L	811154	273	0.318	0.656	0.656
Mo	97	26.754	ug/L	38862	82	0.569	2.128	2.128
Mo	98	26.726	ug/L	100322	176	0.387	1.449	1.449
Ag	107	23.215	ug/L	147585	70	0.279	1.200	1.200
Ag	109	23.366	ug/L	141744	58	0.372	1.593	1.593
Cd	111	25.466	ug/L	39496	339	0.273	1.074	1.074
Cd	114	25.532	ug/L	91679	32	0.194	0.760	0.760
Sn	118	33.311	ug/L	155723	691	0.504	1.514	1.514
Sn	120	33.613	ug/L	214513	986	0.666	1.980	1.980
Sb	121	16.063	ug/L	89508	299	0.416	2.591	2.591
Sb	123	16.041	ug/L	67902	252	0.442	2.753	2.753
Ba	135	70.913	ug/L	100969	49	1.441	2.033	2.033
Ba	137	70.720	ug/L	173614	65	0.602	0.851	0.851
Tl	203	51.444	ug/L	293045	99	1.165	2.265	2.265
Tl	205	51.244	ug/L	691001	245	0.813	1.586	1.586
Pb	208	57.256	ug/L	1066805	500	0.628	1.097	1.097
Bi	209	51.977	ug/L	788282	2334	1.047	2.015	2.015
U	238	51.745	ug/L	1018017	167	0.917	1.773	1.773
Tb	159		ug/L	329599	335249			0.710
Kr	83		mg/L	745	280			57.927
Y	89		ug/L	356158	364355			68.193
In	115		ug/L	366379	381187			72.328
Ho	165		ug/L	393483	397496			140.135
Tm	169		ug/L	451649	447702			121.855
Ar2	76		mg/L	72431	72603			603.948

00191

## Sample ID: 014846 X10

Sample Date/Time: Tuesday, April 10, 2001 20:21:58

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	713.596	ug/L	305354	23642	1.378	0.193	0.193
Mg	26	80.043	ug/L	60441	277	0.755	0.943	0.943
Cl	35	-0.203	mg/L	110616	59824	0.085	41.719	41.719
Na	23	538.613	ug/L	3375105	17961	8.783	1.631	1.631
K	39	-59.980	ug/L	1831176	1279174	0.895	1.493	1.493
Sc	45		ug/L	320403	165238			1.774
Li	6		ug/L	27105	22735			5.865
Li	7		ug/L	1931	1620			2886.906
Be	9	-0.015	ug/L	6	8	0.006	43.318	43.318
B	10	145.959	ug/L	5868	35	1.596	1.093	1.093
B	11	148.373	ug/L	29968	139	2.321	1.564	1.564
Al	27	149.580	ug/L	962278	2186	1.084	0.725	0.725
Ti	49	6.619	ug/L	5313	157	0.108	1.631	1.631
V	51	-0.086	ug/L	2284	1717	0.007	7.815	7.815
Cr	53	0.598	ug/L	1365	331	0.041	6.817	6.817
Cr	52	0.306	ug/L	11933	4542	0.033	10.685	10.685
Fe	56	-26.833	ug/L	2054918	1255734	11.374	42.388	42.388
Fe	57	33.698	ug/L	30580	9722	0.299	0.888	0.888
Fe	54	-32.940	ug/L	130341	81064	0.211	0.642	0.642
Mn	55	2.073	ug/L	39718	2510	0.025	1.206	1.206
Co	59	0.194	ug/L	2852	184	0.005	2.747	2.747
Ni	62	6.836	ug/L	2980	64	0.326	4.771	4.771
Ni	60	7.198	ug/L	19599	78	0.176	2.448	2.448
Cu	63	1.742	ug/L	11774	316	0.034	1.960	1.960
Cu	65	1.987	ug/L	6532	124	0.091	4.582	4.582
Sc	45		ug/L	320403	165238			1.774
Zn	67	41.937	ug/L	6291	124	0.558	1.330	1.330
Zn	68	41.742	ug/L	29230	644	0.240	0.574	0.574
Zn	66	40.984	ug/L	40219	514	0.973	2.374	2.374
As	75	0.821	ug/L	1652	618	0.061	7.432	7.432
Se	77	0.047	ug/L	102	98	0.108	227.889	227.889
Se	78	-4.514	ug/L	8241	9414	0.196	4.347	4.347
Se	82	1.013	ug/L	437	315	0.169	16.718	16.718
Br	79	0.048	mg/L	21248	8581	0.004	7.321	7.321
Ge	72		mg/L	83494	82830			1.712
Rh	103		ug/L	314686	319040			2.673
Sr	88	1.039	ug/L	17826	273	0.024	2.277	2.277
Mo	97	2.811	ug/L	4201	82	0.064	2.267	2.267
Mo	98	2.774	ug/L	10682	176	0.008	0.293	0.293
Ag	107	0.079	ug/L	574	70	0.004	5.412	5.412
Ag	109	0.069	ug/L	484	58	0.007	9.565	9.565
Cd	111	1.745	ug/L	3047	339	0.039	2.209	2.209
Cd	114	1.729	ug/L	6306	32	0.033	1.903	1.903
Sn	118	6.576	ug/L	31613	691	0.099	1.510	1.510
Sn	120	6.816	ug/L	44751	986	0.071	1.040	1.040
Sb	121	3.975	ug/L	22617	299	0.027	0.679	0.679
Sb	123	3.967	ug/L	17165	252	0.037	0.923	0.923
Ba	135	21.947	ug/L	31615	49	0.242	1.101	1.101
Ba	137	22.221	ug/L	55162	65	0.239	1.077	1.077
Tl	203	0.019	ug/L	211	99	0.004	20.531	20.531
Tl	205	0.021	ug/L	529	245	0.002	11.463	11.463
Pb	208	10.506	ug/L	200125	500	0.173	1.646	1.646
Bi	209	0.108	ug/L	4010	2334	0.032	30.156	30.156
U	238	0.056	ug/L	1299	167	0.007	13.021	13.021
Tb	159		ug/L	336332	335249			2.842
Kr	83		mg/L	953	280			24.421
Y	89		ug/L	360562	364355			268.437
In	115		ug/L	368688	381187			53.895
Ho	165		ug/L	404777	397496			34.860
Tm	169		ug/L	460960	447702			19.118
Ar2	76		mg/L	68217	72603			22.618

00192

## Sample ID: 014847 X10

Sample Date/Time: Tuesday, April 10, 2001 20:27:18

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	625.739	ug/L	249766	23642	4.994	0.798	0.798
Mg	26	73.558	ug/L	50766	277	1.746	2.374	2.374
Cl	35	-0.968	mg/L	82407	59824	0.104	10.738	10.738
Na	23	548.695	ug/L	3137688	17961	19.578	3.568	3.568
K	39	-49.776	ug/L	1771477	1279174	6.474	13.006	13.006
Sc	45		ug/L	292784	165238			6.701
Li	6		ug/L	25216	22735			6.033
Li	7		ug/L	1845	1620			43.521
Be	9	0.005	ug/L	10	8	0.010	193.223	193.223
B	10	145.677	ug/L	5454	35	2.571	1.765	1.765
B	11	147.881	ug/L	27840	139	5.147	3.480	3.480
Al	27	139.790	ug/L	821237	2186	2.940	2.103	2.103
Ti	49	4.105	ug/L	3117	157	0.030	0.740	0.740
V	51	-0.088	ug/L	2065	1717	0.013	15.162	15.162
Cr	53	0.535	ug/L	1174	331	0.083	15.603	15.603
Cr	52	0.326	ug/L	11082	4542	0.047	14.403	14.403
Fe	56	13.144	ug/L	2393027	1255734	5.593	42.556	42.556
Fe	57	61.396	ug/L	36685	9722	4.814	7.841	7.841
Fe	54	-0.498	ug/L	143066	81064	7.367	1478.115	1478.115
Mn	55	1.011	ug/L	19949	2510	0.053	5.236	5.236
Co	59	0.042	ug/L	824	184	0.004	10.094	10.094
Ni	62	0.554	ug/L	326	64	0.046	8.226	8.226
Ni	60	0.648	ug/L	1733	78	0.050	7.791	7.791
Cu	63	0.900	ug/L	5823	316	0.026	2.908	2.908
Cu	65	1.152	ug/L	3547	124	0.051	4.456	4.456
Sc	45		ug/L	292784	165238			6.701
Zn	67	33.606	ug/L	4844	124	0.443	1.317	1.317
Zn	68	32.814	ug/L	22104	644	0.229	0.699	0.699
Zn	66	32.683	ug/L	30754	514	0.790	2.417	2.417
As	75	0.401	ug/L	1077	618	0.058	14.426	14.426
Se	77	-0.013	ug/L	93	98	0.103	806.917	806.917
Se	78	-2.653	ug/L	8366	9414	1.301	49.056	49.056
Se	82	0.559	ug/L	367	315	0.311	55.711	55.711
Br	79	0.030	mg/L	15804	8581	0.001	2.585	2.585
Ge	72		mg/L	79845	82830			3.788
Rh	103		ug/L	308823	319040			2.723
Sr	88	0.778	ug/L	13169	273	0.015	1.916	1.916
Mo	97	2.706	ug/L	3971	82	0.014	0.512	0.512
Mo	98	2.660	ug/L	10058	176	0.012	0.469	0.469
Ag	107	0.068	ug/L	496	70	0.007	10.213	10.213
Ag	109	0.054	ug/L	379	58	0.003	5.757	5.757
Cd	111	0.726	ug/L	1435	339	0.031	4.254	4.254
Cd	114	0.660	ug/L	2380	32	0.013	1.895	1.895
Sn	118	6.026	ug/L	28499	691	0.117	1.937	1.937
Sn	120	6.086	ug/L	39313	986	0.145	2.387	2.387
Sb	121	3.816	ug/L	21315	299	0.023	0.604	0.604
Sb	123	3.803	ug/L	16163	252	0.061	1.595	1.595
Ba	135	20.736	ug/L	29333	49	0.455	2.192	2.192
Ba	137	20.731	ug/L	50536	65	0.431	2.077	2.077
Tl	203	0.010	ug/L	151	99	0.003	34.940	34.940
Tl	205	0.006	ug/L	319	245	0.003	56.755	56.755
Pb	208	5.752	ug/L	105957	500	0.059	1.026	1.026
Bi	209	-0.046	ug/L	1576	2334	0.003	7.469	7.469
U	238	0.046	ug/L	1062	167	0.000	0.927	0.927
Tb	159		ug/L	324557	335249			4.626
Kr	83		mg/L	594	280			68.166
Y	89		ug/L	352487	364355			83.993
In	115		ug/L	361998	381187			60.954
Ho	165		ug/L	391274	397496			348.193
Tm	169		ug/L	447742	447702			61803.775
Ar2	76		mg/L	65834	72603			17.675

00193

## Sample ID: CCB

Sample Date/Time: Tuesday, April 10, 2001 20:32:38

Method File: c:\elandata\Method\6020scan5.mth

## Sample Description:

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	46.498	ug/L	35005	23642	7.292	15.682	15.682
Mg	26	-0.005	ug/L	298	277	0.031	628.144	628.144
Cl	35	-0.939	mg/L	50821	59824	0.041	4.368	4.368
Na	23	-1.243	ug/L	15123	17961	0.452	36.337	36.337
K	39	-45.524	ug/L	1108982	1279174	1.538	3.379	3.379
Sc	45		ug/L	178775	165238			0.973
Li	6		ug/L	25627	22735			1.006
Li	7		ug/L	1835	1620			312.188
Be	9	-0.012	ug/L	6	8	0.012	98.276	98.276
B	10	1.856	ug/L	110	35	0.624	33.646	33.646
B	11	1.970	ug/L	532	139	0.500	25.392	25.392
Al	27	0.364	ug/L	3661	2186	0.132	36.360	36.360
Ti	49	-0.179	ug/L	94	157	0.037	20.925	20.925
V	51	-0.057	ug/L	1471	1717	0.003	5.883	5.883
Cr	53	-0.038	ug/L	332	331	0.021	55.032	55.032
Cr	52	-0.164	ug/L	3977	4542	0.013	7.734	7.734
Fe	56	-29.706	ug/L	1122600	1255734	2.048	6.895	6.895
Fe	57	-6.449	ug/L	9266	9722	0.681	10.565	10.565
Fe	54	-29.140	ug/L	74447	81064	3.298	11.318	11.318
Mn	55	-0.057	ug/L	2182	2510	0.002	4.280	4.280
Co	59	-0.004	ug/L	167	184	0.005	103.002	103.002
Ni	62	-0.054	ug/L	57	64	0.018	34.189	34.189
Ni	60	-0.020	ug/L	54	78	0.003	14.875	14.875
Cu	63	-0.037	ug/L	209	316	0.003	9.375	9.375
Cu	65	-0.014	ug/L	110	124	0.011	83.599	83.599
Sc	45		ug/L	178775	165238			0.973
Zn	67	0.024	ug/L	129	124	0.074	309.772	309.772
Zn	68	-0.118	ug/L	573	644	0.028	23.385	23.385
Zn	66	-0.067	ug/L	457	514	0.033	49.545	49.545
As	75	-0.100	ug/L	501	618	0.011	10.769	10.769
Se	77	0.014	ug/L	100	98	0.262	1863.064	1863.064
Se	78	-3.695	ug/L	8538	9414	0.759	20.549	20.549
Se	82	-0.287	ug/L	286	315	0.131	45.749	45.749
Br	79	0.000	mg/L	8798	8581	0.002	786.618	786.618
Ge	72		mg/L	84207	82830			1.132
Rh	103		ug/L	332720	319040			0.597
Sr	88	-0.007	ug/L	168	273	0.001	14.760	14.760
Mo	97	-0.036	ug/L	29	82	0.010	26.552	26.552
Mo	98	-0.032	ug/L	56	176	0.011	34.182	34.182
Ag	107	-0.004	ug/L	48	70	0.001	39.480	39.480
Ag	109	-0.004	ug/L	38	58	0.002	43.181	43.181
Cd	111	-0.040	ug/L	287	339	0.010	25.158	25.158
Cd	114	-0.001	ug/L	31	32	0.001	132.912	132.912
Sn	118	-0.099	ug/L	231	691	0.013	13.406	13.406
Sn	120	-0.099	ug/L	359	986	0.024	24.048	24.048
Sb	121	-0.042	ug/L	62	299	0.008	19.869	19.869
Sb	123	-0.046	ug/L	53	252	0.004	8.371	8.371
Ba	135	0.026	ug/L	91	49	0.030	116.357	116.357
Ba	137	0.033	ug/L	156	65	0.033	99.174	99.174
Tl	203	-0.006	ug/L	65	99	0.003	41.394	41.394
Tl	205	-0.007	ug/L	149	245	0.001	18.710	18.710
Pb	208	-0.001	ug/L	497	500	0.006	415.489	415.489
Bi	209	-0.141	ug/L	168	2334	0.002	1.270	1.270
U	238	-0.007	ug/L	37	167	0.000	2.823	2.823
Tb	159		ug/L	350454	335249			1.884
Kr	83		mg/L	306	280			88.327
Y	89		ug/L	376184	364355			31.258
In	115		ug/L	393417	381187			17.408
Ho	165		ug/L	422919	397496			28.187
Tm	169		ug/L	475563	447702			42.148
Ar2	76		mg/L	69355	72603			14.885

00194

## Sample ID: CCV

Sample Date/Time: Tuesday, April 10, 2001 20:37:59

Method File: c:\elandata\Method\6020scan5.mth

## Sample Description:

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	1236.632	ug/L	280583	23642	26.118	2.112	2.112
Mg	26	220.701	ug/L	93797	277	5.060	2.293	2.293
Cl	35	-0.877	mg/L	52489	59824	0.064	7.292	7.292
Na	23	1099.589	ug/L	3880042	17961	33.028	3.004	3.004
K	39	1093.637	ug/L	8107053	1279174	16.534	1.512	1.512
Sc	45		ug/L	181396	165238			0.688
Li	6		ug/L	24541	22735			2.321
Li	7		ug/L	1747	1620			2887.582
Be	9	46.917	ug/L	9834	8	0.392	0.836	0.836
B	10	48.831	ug/L	1802	35	3.571	7.313	7.313
B	11	48.954	ug/L	9055	139	1.589	3.245	3.245
Al	27	90.977	ug/L	332278	2186	1.801	1.980	1.980
Ti	49	45.134	ug/L	19507	157	0.665	1.474	1.474
V	51	45.429	ug/L	315871	1717	0.169	0.373	0.373
Cr	53	46.159	ug/L	31993	331	0.844	1.829	1.829
Cr	52	45.582	ug/L	268476	4542	0.656	1.439	1.439
Fe	56	227.963	ug/L	3215229	1255734	6.005	2.634	2.634
Fe	57	225.345	ug/L	55070	9722	4.380	1.944	1.944
Fe	54	206.729	ug/L	184375	81064	6.819	3.298	3.298
Mn	55	46.524	ug/L	445516	2510	0.307	0.659	0.659
Co	59	46.027	ug/L	335989	184	0.615	1.337	1.337
Ni	62	45.149	ug/L	10749	64	0.699	1.549	1.549
Ni	60	46.851	ug/L	71765	78	0.259	0.553	0.553
Cu	63	46.720	ug/L	169749	316	0.247	0.529	0.529
Cu	65	45.809	ug/L	82237	124	0.435	0.950	0.950
Sc	45		ug/L	181396	165238			0.688
Zn	67	100.047	ug/L	14956	124	0.892	0.891	0.891
Zn	68	97.169	ug/L	67727	644	1.447	1.490	1.490
Zn	66	96.691	ug/L	94956	514	0.472	0.488	0.488
As	75	47.486	ug/L	60641	618	0.306	0.644	0.644
Se	77	46.796	ug/L	4057	98	0.871	1.862	1.862
Se	78	42.764	ug/L	21482	9414	1.690	3.951	3.951
Se	82	47.657	ug/L	5989	315	0.184	0.386	0.386
Br	79	0.008	mg/L	10930	8581	0.001	16.715	16.715
Ge	72		mg/L	84176	82830			0.706
Rh	103		ug/L	328687	319040			0.552
Sr	88	46.686	ug/L	824188	273	0.826	1.770	1.770
Mo	97	23.445	ug/L	35968	82	0.174	0.744	0.744
Mo	98	23.292	ug/L	92324	176	0.159	0.685	0.685
Ag	107	22.645	ug/L	151969	70	0.366	1.616	1.616
Ag	109	22.811	ug/L	146093	58	0.306	1.340	1.340
Cd	111	22.848	ug/L	37442	339	0.410	1.793	1.793
Cd	114	22.863	ug/L	86657	32	0.217	0.951	0.951
Sn	118	22.937	ug/L	113424	691	0.118	0.513	0.513
Sn	120	23.005	ug/L	155327	986	0.105	0.455	0.455
Sb	121	8.685	ug/L	51234	299	0.627	7.215	7.215
Sb	123	8.701	ug/L	39002	252	0.712	8.183	8.183
Ba	135	45.831	ug/L	68916	49	0.196	0.428	0.428
Ba	137	46.314	ug/L	120036	65	0.438	0.946	0.946
Tl	203	48.005	ug/L	287165	99	0.539	1.122	1.122
Tl	205	47.944	ug/L	678830	245	1.254	2.615	2.615
Pb	208	47.540	ug/L	930091	500	1.321	2.778	2.778
Bi	209	47.260	ug/L	752666	2334	1.787	3.781	3.781
U	238	47.596	ug/L	983270	167	0.801	1.682	1.682
Tb	159		ug/L	346151	335249			1.150
Kr	83		mg/L	345	280			0.000
Y	89		ug/L	376268	364355			73.756
In	115		ug/L	398834	381187			7.634
Ho	165		ug/L	415452	397496			0.748
Tm	169		ug/L	475616	447702			62.924
Ar2	76		mg/L	74329	72603			26.200

00195

## Sample ID: CCB

Sample Date/Time: Tuesday, April 10, 2001 20:46:21

Method File: c:\elandata\Method\6020scan5.mth

## Sample Description:

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	27.614	ug/L	31237	23642	4.708	17.049	17.049
Mg	26	-0.210	ug/L	213	277	0.008	3.683	3.683
Cl	35	-0.837	mg/L	52432	59824	0.039	4.658	4.658
Na	23	-2.206	ug/L	11821	17961	0.189	8.553	8.553
K	39	-39.659	ug/L	1146480	1279174	2.886	7.278	7.278
Sc	45		ug/L	179101	165238			0.951
Li	6		ug/L	24124	22735			2.875
Li	7		ug/L	1796	1620			54.642
Be	9	-0.006	ug/L	7	8	0.015	264.573	264.573
B	10	0.764	ug/L	64	35	0.564	73.797	73.797
B	11	0.986	ug/L	324	139	0.063	6.412	6.412
Al	27	0.292	ug/L	3413	2186	0.009	3.086	3.086
Ti	49	-0.146	ug/L	108	157	0.031	21.447	21.447
V	51	-0.041	ug/L	1584	1717	0.007	17.168	17.168
Cr	53	-0.030	ug/L	338	331	0.026	88.733	88.733
Cr	52	-0.152	ug/L	4056	4542	0.012	7.924	7.924
Fe	56	-27.125	ug/L	1145107	1255734	4.253	15.678	15.678
Fe	57	-7.741	ug/L	9031	9722	1.142	14.757	14.757
Fe	54	-32.221	ug/L	73177	81064	3.393	10.530	10.530
Mn	55	-0.071	ug/L	2055	2510	0.001	2.037	2.037
Co	59	-0.005	ug/L	165	184	0.004	82.918	82.918
Ni	62	0.004	ug/L	70	64	0.056	1263.203	1263.203
Ni	60	-0.018	ug/L	58	78	0.006	33.540	33.540
Cu	63	-0.032	ug/L	227	316	0.010	31.804	31.804
Cu	65	-0.020	ug/L	99	124	0.002	10.986	10.986
Sc	45		ug/L	179101	165238			0.951
Zn	67	-0.006	ug/L	125	124	0.088	1562.500	1562.500
Zn	68	-0.169	ug/L	538	644	0.053	31.083	31.083
Zn	66	-0.111	ug/L	414	514	0.022	19.378	19.378
As	75	-0.002	ug/L	626	618	0.058	2885.811	2885.811
Se	77	-0.080	ug/L	93	98	0.072	89.457	89.457
Se	78	-3.777	ug/L	8529	9414	0.127	3.351	3.351
Se	82	-0.122	ug/L	306	315	0.255	209.269	209.269
Br	79	-0.000	mg/L	8635	8581	0.004	911.209	911.209
Ge	72		mg/L	84330	82830			1.478
Rh	103		ug/L	333694	319040			3.110
Sr	88	-0.004	ug/L	213	273	0.002	59.856	59.856
Mo	97	-0.019	ug/L	56	82	0.005	28.097	28.097
Mo	98	-0.011	ug/L	140	176	0.003	28.623	28.623
Ag	107	-0.001	ug/L	67	70	0.002	214.710	214.710
Ag	109	-0.000	ug/L	59	58	0.002	413.050	413.050
Cd	111	-0.023	ug/L	317	339	0.010	45.377	45.377
Cd	114	0.000	ug/L	35	32	0.001	403.608	403.608
Sn	118	-0.057	ug/L	441	691	0.012	21.705	21.705
Sn	120	-0.056	ug/L	651	986	0.020	35.756	35.756
Sb	121	0.013	ug/L	392	299	0.006	45.117	45.117
Sb	123	0.001	ug/L	267	252	0.005	771.826	771.826
Ba	135	-0.005	ug/L	44	49	0.006	129.241	129.241
Ba	137	-0.001	ug/L	65	65	0.005	429.840	429.840
Tl	203	-0.000	ug/L	104	99	0.007	23383.539	23383.539
Tl	205	-0.002	ug/L	229	245	0.005	242.752	242.752
Pb	208	0.025	ug/L	1020	500	0.003	13.300	13.300
Bi	209	-0.111	ug/L	652	2334	0.002	1.852	1.852
U	238	-0.000	ug/L	168	167	0.004	1122.579	1122.579
Tb	159		ug/L	352186	335249			2.430
Kr	83		mg/L	318	280			18.074
Y	89		ug/L	382902	364355			42.115
In	115		ug/L	400526	381187			30.624
Ho	165		ug/L	420890	397496			33.298
Tm	169		ug/L	473880	447702			51.144
Ar2	76		mg/L	70458	72603			35.397



00196

## Sample ID: 014851 X10

Sample Date/Time: Tuesday, April 10, 2001 20:51:43

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	503.769	ug/L	223589	23642	14.772	2.932	2.932
Mg	26	64.248	ug/L	47452	277	0.925	1.440	1.440
Cl	35	-2.305	mg/L	53518	59824	0.056	2.412	2.412
Na	23	467.351	ug/L	2862380	17961	2.998	0.642	0.642
K	39	-70.610	ug/L	1675021	1279174	2.100	2.975	2.975
Sc	45		ug/L	312734	165238			0.622
Li	6		ug/L	25224	22735			4.463
Li	7		ug/L	1883	1620			92.057
Be	9	-0.005	ug/L	7	8	0.007	138.191	138.191
B	10	147.108	ug/L	5496	35	8.469	5.757	5.757
B	11	151.600	ug/L	28497	139	4.813	3.175	3.175
Al	27	122.045	ug/L	767102	2186	1.734	1.421	1.421
Ti	49	1.237	ug/L	1210	157	0.043	3.511	3.511
V	51	-0.121	ug/L	1802	1717	0.005	4.076	4.076
Cr	53	0.116	ug/L	762	331	0.001	1.043	1.043
Cr	52	-0.104	ug/L	7564	4542	0.013	12.165	12.165
Fe	56	-58.158	ug/L	1568713	1255734	1.765	3.036	3.036
Fe	57	6.620	ug/L	20648	9722	0.806	12.179	12.179
Fe	54	-56.803	ug/L	108237	81064	1.516	2.668	2.668
Mn	55	0.872	ug/L	19059	2510	0.009	0.979	0.979
Co	59	0.001	ug/L	364	184	0.003	229.437	229.437
Ni	62	0.345	ug/L	262	64	0.055	15.872	15.872
Ni	60	0.325	ug/L	1005	78	0.009	2.756	2.756
Cu	63	0.419	ug/L	3216	316	0.010	2.407	2.407
Cu	65	0.515	ug/L	1824	124	0.006	1.076	1.076
Sc	45		ug/L	312734	165238			0.622
Zn	67	15.671	ug/L	2491	124	0.660	4.214	4.214
Zn	68	16.213	ug/L	12053	644	0.195	1.203	1.203
Zn	66	15.396	ug/L	15831	514	0.260	1.689	1.689
As	75	0.324	ug/L	1055	618	0.055	16.857	16.857
Se	77	-0.119	ug/L	91	98	0.216	181.242	181.242
Se	78	-4.773	ug/L	8380	9414	0.058	1.207	1.207
Se	82	0.934	ug/L	439	315	0.143	15.331	15.331
Br	79	0.008	mg/L	10914	8581	0.002	33.039	33.039
Ge	72		mg/L	85646	82830			0.713
Rh	103		ug/L	320931	319040			2.733
Sr	88	0.469	ug/L	8353	273	0.012	2.460	2.460
Mo	97	2.549	ug/L	3891	82	0.058	2.289	2.289
Mo	98	2.544	ug/L	9999	176	0.091	3.582	3.582
Ag	107	0.047	ug/L	377	70	0.005	11.568	11.568
Ag	109	0.032	ug/L	258	58	0.005	17.074	17.074
Cd	111	0.245	ug/L	729	339	0.025	10.215	10.215
Cd	114	0.197	ug/L	762	32	0.015	7.544	7.544
Sn	118	4.928	ug/L	24349	691	0.113	2.297	2.297
Sn	120	5.019	ug/L	33862	986	0.044	0.883	0.883
Sb	121	1.323	ug/L	7881	299	0.064	4.822	4.822
Sb	123	1.317	ug/L	5987	252	0.071	5.363	5.363
Ba	135	20.904	ug/L	30713	49	0.392	1.873	1.873
Ba	137	20.947	ug/L	53049	65	0.069	0.329	0.329
Tl	203	-0.001	ug/L	97	99	0.001	81.229	81.229
Tl	205	-0.004	ug/L	194	245	0.001	13.400	13.400
Pb	208	2.601	ug/L	52048	500	0.048	1.846	1.846
Bi	209	-0.022	ug/L	2086	2334	0.020	89.471	89.471
U	238	0.044	ug/L	1099	167	0.001	1.789	1.789
Tb	159		ug/L	350682	335249			1.578
Kr	83		mg/L	900	280			17.949
Y	89		ug/L	368903	364355			223.183
In	115		ug/L	383425	381187			91.021
Ho	165		ug/L	421229	397496			42.866
Tm	169		ug/L	476357	447702			16.482
Ar2	76		mg/L	68437	72603			18.193

00197

Sample ID: 014852 X10

Sample Date/Time: Tuesday, April 10, 2001 20:57:06

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	538.889	ug/L	239481	23642	7.799	1.447	1.447
Mg	26	66.462	ug/L	49775	277	0.964	1.450	1.450
Cl	35	0.384	mg/L	124972	59824	0.035	9.204	9.204
Na	23	475.919	ug/L	2956634	17961	3.883	0.816	0.816
K	39	-70.879	ug/L	1695969	1279174	1.767	2.493	2.493
Sc	45		ug/L	317246	165238			2.179
Li	6		ug/L	26553	22735			1.409
Li	7		ug/L	1960	1620			101.985
Be	9	-0.003	ug/L	8	8	0.014	510.598	510.598
B	10	153.670	ug/L	6051	35	3.468	2.257	2.257
B	11	149.713	ug/L	29643	139	5.040	3.367	3.367
Al	27	124.566	ug/L	794123	2186	1.823	1.464	1.464
Ti	49	1.759	ug/L	1620	157	0.114	6.490	6.490
V	51	-0.110	ug/L	1962	1717	0.002	2.115	2.115
Cr	53	0.293	ug/L	984	331	0.092	31.303	31.303
Cr	52	-0.048	ug/L	8237	4542	0.011	23.696	23.696
Fe	56	-75.974	ug/L	1339841	1255734	2.783	3.663	3.663
Fe	57	-9.034	ug/L	15549	9722	1.111	12.301	12.301
Fe	54	-72.662	ug/L	96965	81064	3.146	4.329	4.329
Mn	55	0.532	ug/L	13671	2510	0.016	3.072	3.072
Co	59	0.023	ug/L	643	184	0.003	13.734	13.734
Ni	62	0.297	ug/L	246	64	0.013	4.461	4.461
Ni	60	0.300	ug/L	953	78	0.014	4.737	4.737
Cu	63	0.856	ug/L	6035	316	0.013	1.499	1.499
Cu	65	0.972	ug/L	3285	124	0.044	4.550	4.550
Sc	45		ug/L	317246	165238			2.179
Zn	67	17.634	ug/L	2757	124	0.347	1.969	1.969
Zn	68	17.571	ug/L	12863	644	0.282	1.606	1.606
Zn	66	16.963	ug/L	17196	514	0.263	1.550	1.550
As	75	0.416	ug/L	1161	618	0.049	11.763	11.763
Se	77	-0.037	ug/L	97	98	0.246	657.627	657.627
Se	78	-5.091	ug/L	8199	9414	0.379	7.451	7.451
Se	82	1.238	ug/L	470	315	0.145	11.732	11.732
Br	79	0.029	mg/L	16579	8581	0.001	2.370	2.370
Ge	72		mg/L	84701	82830			0.159
Rh	103		ug/L	321997	319040			2.221
Sr	88	0.588	ug/L	10436	273	0.014	2.406	2.406
Mo	97	2.522	ug/L	3864	82	0.049	1.946	1.946
Mo	98	2.494	ug/L	9846	176	0.022	0.883	0.883
Ag	107	0.153	ug/L	1078	70	0.001	0.948	0.948
Ag	109	0.133	ug/L	891	58	0.007	5.498	5.498
Cd	111	0.286	ug/L	796	339	0.044	15.237	15.237
Cd	114	0.240	ug/L	924	32	0.010	4.004	4.004
Sn	118	4.199	ug/L	20912	691	0.052	1.244	1.244
Sn	120	4.244	ug/L	28874	986	0.117	2.754	2.754
Sb	121	1.206	ug/L	7233	299	0.006	0.523	0.523
Sb	123	1.194	ug/L	5462	252	0.028	2.334	2.334
Ba	135	20.526	ug/L	30252	49	0.532	2.592	2.592
Ba	137	20.679	ug/L	52531	65	0.521	2.521	2.521
Tl	203	0.009	ug/L	154	99	0.002	28.492	28.492
Tl	205	0.009	ug/L	380	245	0.001	12.015	12.015
Pb	208	2.793	ug/L	55325	500	0.073	2.615	2.615
Bi	209	-0.078	ug/L	1175	2334	0.005	6.751	6.751
U	238	0.043	ug/L	1054	167	0.002	5.498	5.498
Tb	159		ug/L	347364	335249			2.414
Kr	83		mg/L	981	280			8.519
Y	89		ug/L	369328	364355			174.728
In	115		ug/L	380823	381187			627.275
Ho	165		ug/L	416316	397496			69.330
Tm	169		ug/L	473171	447702			27.002
Ar2	76		mg/L	67779	72603			19.094

00198

Sample ID: 014853 X10

Sample Date/Time: Tuesday, April 10, 2001 21:02:29

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	668.840	ug/L	290529	23642	33.301	4.979	4.979
Mg	26	70.525	ug/L	53583	277	2.011	2.852	2.852
Cl	35	-1.484	mg/L	77027	59824	0.021	1.442	1.442
Na	23	493.656	ug/L	3111531	17961	14.886	3.016	3.016
K	39	-63.386	ug/L	1803390	1279174	2.183	3.444	3.444
Sc	45		ug/L	322059	165238			0.694
Li	6		ug/L	26092	22735			4.157
Li	7		ug/L	1934	1620			30.553
Be	9	-0.007	ug/L	7	8	0.009	129.060	129.060
B	10	157.219	ug/L	6073	35	9.888	6.289	6.289
B	11	159.750	ug/L	31015	139	9.261	5.797	5.797
Al	27	131.427	ug/L	850269	2186	2.675	2.035	2.035
Ti	49	2.748	ug/L	2395	157	0.112	4.065	4.065
V	51	-0.105	ug/L	2057	1717	0.018	17.484	17.484
Cr	53	0.908	ug/L	1749	331	0.080	8.776	8.776
Cr	52	0.611	ug/L	15127	4542	0.008	1.251	1.251
Fe	56	-4.011	ug/L	2390186	1255734	2.784	69.416	69.416
Fe	57	46.698	ug/L	35287	9722	3.285	7.034	7.034
Fe	54	-20.585	ug/L	141125	81064	3.391	16.471	16.471
Mn	55	1.240	ug/L	25850	2510	0.004	0.335	0.335
Co	59	0.049	ug/L	997	184	0.001	1.961	1.961
Ni	62	0.356	ug/L	274	64	0.040	11.107	11.107
Ni	60	0.347	ug/L	1094	78	0.016	4.550	4.550
Cu	63	0.694	ug/L	5084	316	0.025	3.582	3.582
Cu	65	0.807	ug/L	2808	124	0.024	3.008	3.008
Sc	45		ug/L	322059	165238			0.694
Zn	67	25.768	ug/L	3920	124	0.228	0.885	0.885
Zn	68	26.182	ug/L	18610	644	0.592	2.260	2.260
Zn	66	25.210	ug/L	24986	514	0.313	1.241	1.241
As	75	0.469	ug/L	1213	618	0.052	11.159	11.159
Se	77	-0.210	ug/L	81	98	0.020	9.589	9.589
Se	78	-5.015	ug/L	8117	9414	0.167	3.324	3.324
Se	82	1.158	ug/L	455	315	0.224	19.306	19.306
Br	79	0.025	mg/L	15126	8581	0.002	9.079	9.079
Ge	72		mg/L	83642	82830			0.862
Rh	103		ug/L	322554	319040			0.802
Sr	88	0.855	ug/L	15091	273	0.008	0.902	0.902
Mo	97	2.835	ug/L	4341	82	0.063	2.210	2.210
Mo	98	2.804	ug/L	11064	176	0.088	3.150	3.150
Ag	107	0.059	ug/L	457	70	0.003	5.271	5.271
Ag	109	0.045	ug/L	339	58	0.001	2.141	2.141
Cd	111	0.385	ug/L	955	339	0.013	3.318	3.318
Cd	114	0.334	ug/L	1274	32	0.013	3.935	3.935
Sn	118	5.200	ug/L	25770	691	0.186	3.585	3.585
Sn	120	5.192	ug/L	35170	986	0.097	1.860	1.860
Sb	121	1.470	ug/L	8761	299	0.052	3.562	3.562
Sb	123	1.480	ug/L	6726	252	0.027	1.814	1.814
Ba	135	21.429	ug/L	31646	49	0.230	1.074	1.074
Ba	137	21.582	ug/L	54929	65	0.081	0.376	0.376
Tl	203	-0.001	ug/L	98	99	0.001	153.039	153.039
Tl	205	-0.002	ug/L	227	245	0.001	62.235	62.235
Pb	208	4.341	ug/L	85513	500	0.080	1.845	1.845
Bi	209	-0.086	ug/L	1046	2334	0.001	0.854	0.854
U	238	0.043	ug/L	1068	167	0.002	5.630	5.630
Tb	159		ug/L	346531	335249			0.469
Kr	83		mg/L	907	280			8.559
Y	89		ug/L	358982	364355			88.958
In	115		ug/L	383585	381187			283.264
Ho	165		ug/L	420044	397496			30.034
Tm	169		ug/L	479917	447702			19.774
Ar2	76		mg/L	67178	72603			17.311

00199

## Sample ID: 014857 X10

Sample Date/Time: Tuesday, April 10, 2001 21:07:52

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	525.337	ug/L	227252	23642	3.146	0.599	0.599
Mg	26	72.119	ug/L	52252	277	1.656	2.296	2.296
Cl	35	0.062	mg/L	112713	59824	0.191	306.880	306.880
Na	23	521.728	ug/L	3133269	17961	18.433	3.533	3.533
K	39	-65.808	ug/L	1694253	1279174	5.622	8.543	8.543
Sc	45		ug/L	307395	165238			5.145
Li	6		ug/L	25678	22735			4.648
Li	7		ug/L	1915	1620			92.699
Be	9	-0.010	ug/L	6	8	0.011	102.319	102.319
B	10	151.983	ug/L	5787	35	5.709	3.756	3.756
B	11	155.408	ug/L	29714	139	5.637	3.628	3.628
Al	27	133.500	ug/L	823564	2186	4.147	3.106	3.106
Ti	49	1.188	ug/L	1154	157	0.066	5.521	5.521
V	51	-0.128	ug/L	1692	1717	0.010	8.073	8.073
Cr	53	0.166	ug/L	808	331	0.016	9.723	9.723
Cr	52	-0.116	ug/L	7304	4542	0.033	28.440	28.440
Fe	56	-79.633	ug/L	1248054	1255734	1.535	1.928	1.928
Fe	57	-13.864	ug/L	13441	9722	1.642	11.844	11.844
Fe	54	-76.231	ug/L	91062	81064	5.128	6.727	6.727
Mn	55	0.804	ug/L	17625	2510	0.039	4.875	4.875
Co	59	0.000	ug/L	344	184	0.001	776.602	776.602
Ni	62	0.372	ug/L	268	64	0.041	11.114	11.114
Ni	60	0.336	ug/L	1014	78	0.025	7.306	7.306
Cu	63	0.534	ug/L	3865	316	0.034	6.441	6.441
Cu	65	0.584	ug/L	2003	124	0.020	3.395	3.395
Sc	45		ug/L	307395	165238			5.145
Zn	67	22.884	ug/L	3404	124	0.109	0.476	0.476
Zn	68	22.753	ug/L	15829	644	0.085	0.373	0.373
Zn	66	21.973	ug/L	21268	514	0.654	2.974	2.974
As	75	0.336	ug/L	1019	618	0.050	14.801	14.801
Se	77	-0.081	ug/L	89	98	0.232	286.148	286.148
Se	78	-4.588	ug/L	8018	9414	0.719	15.663	15.663
Se	82	0.974	ug/L	422	315	0.185	19.032	19.032
Br	79	0.024	mg/L	14565	8581	0.001	6.102	6.102
Ge	72		mg/L	81446	82830			1.438
Rh	103		ug/L	314926	319040			2.373
Sr	88	0.527	ug/L	9188	273	0.003	0.538	0.538
Mo	97	2.677	ug/L	4007	82	0.053	1.966	1.966
Mo	98	2.673	ug/L	10308	176	0.053	1.990	1.990
Ag	107	0.054	ug/L	414	70	0.003	6.492	6.492
Ag	109	0.037	ug/L	286	58	0.002	4.874	4.874
Cd	111	0.290	ug/L	786	339	0.035	12.070	12.070
Cd	114	0.283	ug/L	1060	32	0.003	1.062	1.062
Sn	118	4.511	ug/L	21926	691	0.031	0.697	0.697
Sn	120	4.567	ug/L	30317	986	0.091	1.997	1.997
Sb	121	0.687	ug/L	4156	299	0.022	3.142	3.142
Sb	123	0.679	ug/L	3145	252	0.026	3.865	3.865
Ba	135	21.887	ug/L	31543	49	0.645	2.946	2.946
Ba	137	22.292	ug/L	55380	65	0.299	1.342	1.342
Tl	203	0.002	ug/L	112	99	0.002	89.667	89.667
Tl	205	0.001	ug/L	266	245	0.000	6.636	6.636
Pb	208	3.887	ug/L	75742	500	0.045	1.148	1.148
Bi	209	-0.101	ug/L	796	2334	0.002	1.908	1.908
U	238	0.045	ug/L	1085	167	0.001	3.052	3.052
Tb	159		ug/L	342535	335249			0.525
Kr	83		mg/L	806	280			34.793
Y	89		ug/L	361698	364355			251.489
In	115		ug/L	374469	381187			94.348
Ho	165		ug/L	411831	397496			20.612
Tm	169		ug/L	466040	447702			56.395
Ar2	76		mg/L	66431	72603			7.028

66200

Sample ID: 014858 X10

Sample Date/Time: Tuesday, April 10, 2001 21:13:16

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	574.061	ug/L	237352	23642	15.243	2.655	2.655
Mg	26	73.241	ug/L	51591	277	1.138	1.554	1.554
Cl	35	-0.053	mg/L	106788	59824	0.129	244.659	244.659
Na	23	534.102	ug/L	3120185	17961	11.003	2.060	2.060
K	39	-63.859	ug/L	1667414	1279174	4.335	6.789	6.789
Sc	45		ug/L	298724	165238			2.633
Li	6		ug/L	25244	22735			3.262
Li	7		ug/L	1834	1620			135.001
Be	9	-0.018	ug/L	5	8	0.003	18.688	18.688
B	10	155.945	ug/L	5838	35	2.015	1.292	1.292
B	11	158.806	ug/L	29872	139	4.493	2.829	2.829
Al	27	129.836	ug/L	779112	2186	2.311	1.780	1.780
Ti	49	1.484	ug/L	1330	157	0.004	0.290	0.290
V	51	-0.118	ug/L	1758	1717	0.005	4.414	4.414
Cr	53	0.261	ug/L	893	331	0.015	5.930	5.930
Cr	52	-0.054	ug/L	7699	4542	0.014	25.718	25.718
Fe	56	-70.132	ug/L	1339205	1255734	2.607	3.717	3.717
Fe	57	-5.561	ug/L	15765	9722	1.291	23.219	23.219
Fe	54	-64.454	ug/L	97537	81064	3.595	5.578	5.578
Mn	55	1.150	ug/L	22548	2510	0.028	2.428	2.428
Co	59	0.006	ug/L	409	184	0.002	24.897	24.897
Ni	62	0.396	ug/L	270	64	0.062	15.594	15.594
Ni	60	0.297	ug/L	888	78	0.013	4.492	4.492
Cu	63	0.678	ug/L	4622	316	0.017	2.575	2.575
Cu	65	0.735	ug/L	2393	124	0.028	3.811	3.811
Sc	45		ug/L	298724	165238			2.633
Zn	67	27.060	ug/L	4009	124	0.734	2.713	2.713
Zn	68	26.691	ug/L	18489	644	0.564	2.113	2.113
Zn	66	26.077	ug/L	25186	514	0.568	2.179	2.179
As	75	0.339	ug/L	1024	618	0.062	18.219	18.219
Se	77	0.039	ug/L	99	98	0.068	174.976	174.976
Se	78	-4.635	ug/L	8019	9414	0.244	5.262	5.262
Se	82	0.770	ug/L	399	315	0.032	4.183	4.183
Br	79	0.025	mg/L	14956	8581	0.000	1.712	1.712
Ge	72		mg/L	81569	82830			0.431
Rh	103		ug/L	316503	319040			1.705
Sr	88	0.584	ug/L	10199	273	0.008	1.424	1.424
Mo	97	2.588	ug/L	3894	82	0.074	2.863	2.863
Mo	98	2.548	ug/L	9879	176	0.054	2.127	2.127
Ag	107	0.046	ug/L	364	70	0.003	6.216	6.216
Ag	109	0.031	ug/L	251	58	0.003	10.253	10.253
Cd	111	0.342	ug/L	871	339	0.016	4.711	4.711
Cd	114	0.313	ug/L	1172	32	0.017	5.343	5.343
Sn	118	5.404	ug/L	26253	691	0.248	4.595	4.595
Sn	120	5.565	ug/L	36915	986	0.300	5.386	5.386
Sb	121	0.747	ug/L	4516	299	0.028	3.791	3.791
Sb	123	0.753	ug/L	3478	252	0.012	1.535	1.535
Ba	135	21.043	ug/L	30492	49	0.257	1.222	1.222
Ba	137	21.065	ug/L	52596	65	0.502	2.382	2.382
Tl	203	0.000	ug/L	103	99	0.002	628.271	628.271
Tl	205	0.000	ug/L	258	245	0.000	59.918	59.918
Pb	208	4.485	ug/L	87704	500	0.072	1.613	1.613
Bi	209	-0.109	ug/L	676	2334	0.001	1.209	1.209
U	238	0.040	ug/L	991	167	0.001	3.303	3.303
Tb	159		ug/L	344085	335249			1.249
Kr	83		mg/L	740	280			29.127
Y	89		ug/L	362635	364355			130.848
In	115		ug/L	377787	381187			203.814
Ho	165		ug/L	412538	397496			32.824
Tm	169		ug/L	466410	447702			34.814
Ar2	76		mg/L	65651	72603			3.604

00201

## Sample ID: 014859 X10

Sample Date/Time: Tuesday, April 10, 2001 21:18:40

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	514.704	ug/L	224637	23642	13.919	2.704	2.704
Mg	26	68.078	ug/L	49609	277	0.854	1.254	1.254
Cl	35	-2.381	mg/L	50871	59824	0.047	1.985	1.985
Na	23	519.693	ug/L	3137143	17961	16.256	3.128	3.128
K	39	-67.388	ug/L	1686960	1279174	2.800	4.154	4.154
Sc	45		ug/L	308821	165238			3.569
Li	6		ug/L	25683	22735			4.216
Li	7		ug/L	1852	1620			387.315
Be	9	-0.012	ug/L	6	8	0.018	148.537	148.537
B	10	118.730	ug/L	4525	35	6.022	5.072	5.072
B	11	120.120	ug/L	22998	139	6.201	5.162	5.162
Al	27	132.185	ug/L	819940	2186	1.231	0.931	0.931
Ti	49	1.048	ug/L	1056	157	0.043	4.150	4.150
V	51	-0.124	ug/L	1751	1717	0.008	6.726	6.726
Cr	53	0.187	ug/L	836	331	0.034	18.345	18.345
Cr	52	-0.066	ug/L	7837	4542	0.021	31.209	31.209
Fe	56	-78.310	ug/L	1272153	1255734	1.624	2.074	2.074
Fe	57	-13.287	ug/L	13707	9722	0.710	5.341	5.341
Fe	54	-79.641	ug/L	88898	81064	2.442	3.066	3.066
Mn	55	0.671	ug/L	15565	2510	0.001	0.142	0.142
Co	59	0.018	ug/L	564	184	0.006	32.593	32.593
Ni	62	0.364	ug/L	266	64	0.040	10.863	10.863
Ni	60	0.343	ug/L	1039	78	0.015	4.246	4.246
Cu	63	0.705	ug/L	4935	316	0.039	5.504	5.504
Cu	65	0.723	ug/L	2437	124	0.015	2.058	2.058
Sc	45		ug/L	308821	165238			3.569
Zn	67	21.151	ug/L	3181	124	0.484	2.289	2.289
Zn	68	21.744	ug/L	15282	644	0.220	1.014	1.014
Zn	66	21.135	ug/L	20641	514	0.708	3.351	3.351
As	75	0.323	ug/L	1010	618	0.140	43.335	43.335
Se	77	-0.087	ug/L	90	98	0.010	11.695	11.695
Se	78	-5.027	ug/L	7965	9414	0.711	14.153	14.153
Se	82	0.872	ug/L	413	315	0.542	62.217	62.217
Br	79	0.005	mg/L	9772	8581	0.003	51.832	51.832
Ge	72		mg/L	82131	82830			1.820
Rh	103		ug/L	316490	319040			0.076
Sr	88	0.520	ug/L	9109	273	0.013	2.516	2.516
Mo	97	2.649	ug/L	3986	82	0.073	2.767	2.767
Mo	98	2.567	ug/L	9954	176	0.032	1.257	1.257
Ag	107	0.045	ug/L	360	70	0.001	1.273	1.273
Ag	109	0.032	ug/L	255	58	0.002	4.918	4.918
Cd	111	0.257	ug/L	738	339	0.043	16.846	16.846
Cd	114	0.220	ug/L	835	32	0.014	6.170	6.170
Sn	118	3.941	ug/L	19331	691	0.082	2.093	2.093
Sn	120	4.011	ug/L	26884	986	0.079	1.966	1.966
Sb	121	1.092	ug/L	6462	299	0.060	5.515	5.515
Sb	123	1.065	ug/L	4819	252	0.006	0.609	0.609
Ba	135	24.389	ug/L	35336	49	0.229	0.940	0.940
Ba	137	24.535	ug/L	61261	65	0.103	0.421	0.421
Tl	203	-0.004	ug/L	75	99	0.003	65.021	65.021
Tl	205	-0.008	ug/L	131	245	0.001	17.730	17.730
Pb	208	3.198	ug/L	61876	500	0.084	2.621	2.621
Bi	209	-0.113	ug/L	601	2334	0.002	2.146	2.146
U	238	0.044	ug/L	1061	167	0.003	7.714	7.714
Tb	159		ug/L	339681	335249			0.965
Kr	83		mg/L	888	280			7.365
Y	89		ug/L	362097	364355			64.604
In	115		ug/L	374535	381187			61.815
Ho	165		ug/L	416145	397496			33.968
Tm	169		ug/L	464524	447702			62.419
Ar2	76		mg/L	65486	72603			12.116

00202

## Sample ID: 014859 X50

Sample Date/Time: Tuesday, April 10, 2001 21:24:05

Method File: c:\elandata\Method\6020scan5.mth

Sample Description: T X300

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	192.872	ug/L	74135	23642	10.207	5.292	5.292
Mg	26	21.028	ug/L	10399	277	0.301	1.430	1.430
Cl	35	-1.541	mg/L	47993	59824	0.058	3.795	3.795
Na	23	161.572	ug/L	662498	17961	3.626	2.244	2.244
K	39	-60.604	ug/L	1165919	1279174	1.919	3.166	3.166
Sc	45		ug/L	204762	165238			0.783
Li	6		ug/L	24128	22735			4.161
Li	7		ug/L	1794	1620			68.966
Be	9	-0.008	ug/L	6	8	0.011	131.409	131.409
B	10	26.923	ug/L	993	35	0.777	2.886	2.886
B	11	27.107	ug/L	4997	139	0.341	1.260	1.260
Al	27	40.333	ug/L	167794	2186	0.307	0.762	0.762
Ti	49	0.120	ug/L	252	157	0.034	28.461	28.461
V	51	-0.089	ug/L	1436	1717	0.009	10.127	10.127
Cr	53	-0.006	ug/L	405	331	0.023	399.073	399.073
Cr	52	-0.162	ug/L	4575	4542	0.022	13.506	13.506
Fe	56	-40.069	ug/L	1191564	1255734	1.486	3.708	3.708
Fe	57	-3.520	ug/L	11264	9722	0.430	12.201	12.201
Fe	54	-39.954	ug/L	79646	81064	2.885	7.220	7.220
Mn	55	0.203	ug/L	5293	2510	0.008	3.832	3.832
Co	59	0.001	ug/L	237	184	0.001	119.183	119.183
Ni	62	0.081	ug/L	101	64	0.039	48.591	48.591
Ni	60	0.092	ug/L	255	78	0.005	5.496	5.496
Cu	63	0.231	ug/L	1339	316	0.006	2.608	2.608
Cu	65	0.224	ug/L	606	124	0.012	5.248	5.248
Sc	45		ug/L	204762	165238			0.783
Zn	67	4.349	ug/L	767	124	0.127	2.922	2.922
Zn	68	4.353	ug/L	3643	644	0.036	0.833	0.833
Zn	66	4.175	ug/L	4579	514	0.153	3.653	3.653
As	75	0.072	ug/L	716	618	0.049	67.230	67.230
Se	77	-0.156	ug/L	86	98	0.175	111.826	111.826
Se	78	-5.111	ug/L	8107	9414	0.301	5.895	5.895
Se	82	0.168	ug/L	339	315	0.092	54.631	54.631
Br	79	-0.002	mg/L	8261	8581	0.001	93.444	93.444
Ge	72		ug/L	83818	82830			1.098
Rh	103		ug/L	318293	319040			2.429
Sr	88	0.098	ug/L	1944	273	0.003	3.196	3.196
Mo	97	0.507	ug/L	833	82	0.004	0.790	0.790
Mo	98	0.504	ug/L	2105	176	0.012	2.380	2.380
Ag	107	0.004	ug/L	97	70	0.001	30.973	30.973
Ag	109	0.004	ug/L	83	58	0.002	46.026	46.026
Cd	111	-0.012	ug/L	320	339	0.018	157.188	157.188
Cd	114	0.041	ug/L	181	32	0.008	18.562	18.562
Sn	118	0.793	ug/L	4468	691	0.095	12.024	12.024
Sn	120	0.740	ug/L	5787	986	0.030	4.090	4.090
Sb	121	0.198	ug/L	1421	299	0.018	9.261	9.261
Sb	123	0.187	ug/L	1058	252	0.015	7.967	7.967
Ba	135	4.964	ug/L	7269	49	0.099	1.995	1.995
Ba	137	5.036	ug/L	12698	65	0.041	0.824	0.824
Tl	203	-0.008	ug/L	54	99	0.001	14.347	14.347
Tl	205	-0.010	ug/L	108	245	0.001	7.193	7.193
Pb	208	0.655	ug/L	13099	500	0.020	3.110	3.110
Bi	209	-0.141	ug/L	173	2334	0.001	0.426	0.426
U	238	0.003	ug/L	228	167	0.001	35.287	35.287
Tb	159		ug/L	340443	335249			0.837
Kr	83		mg/L	439	280			25.436
Y	89		ug/L	354972	364355			86.466
In	115		ug/L	378436	381187			303.352
Ho	165		ug/L	411789	397496			15.231
Tm	169		ug/L	469190	447702			41.938
Ar2	76		mg/L	66561	72603			5.248

00203

## Sample ID: CCB

Sample Date/Time: Tuesday, April 10, 2001 21:29:31

Method File: c:\elandata\Method\6020scan5.mth

## Sample Description:

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	46.723	ug/L	34298	23642	7.179	15.364	15.364
Mg	26	0.019	ug/L	301	277	0.102	532.960	532.960
Cl	35	-1.028	mg/L	48435	59824	0.037	3.645	3.645
Na	23	-2.526	ug/L	10459	17961	0.105	4.171	4.171
K	39	-52.960	ug/L	1041093	1279174	0.422	0.798	0.798
Sc	45		ug/L	174909	165238			0.764
Li	6		ug/L	23316	22735			2.782
Li	7		ug/L	1697	1620			147.604
Be	9	-0.016	ug/L	5	8	0.013	81.616	81.616
B	10	1.413	ug/L	84	35	0.227	16.089	16.089
B	11	1.191	ug/L	349	139	0.200	16.764	16.764
Al	27	3.148	ug/L	13320	2186	0.175	5.559	5.559
Ti	49	-0.190	ug/L	87	157	0.033	17.584	17.584
V	51	-0.062	ug/L	1407	1717	0.011	18.545	18.545
Cr	53	-0.072	ug/L	303	331	0.018	24.712	24.712
Cr	52	-0.200	ug/L	3695	4542	0.026	13.264	13.264
Fe	56	-38.452	ug/L	1030411	1255734	3.816	9.925	9.925
Fe	57	-11.438	ug/L	8117	9722	0.739	6.463	6.463
Fe	54	-36.438	ug/L	69593	81064	3.151	8.647	8.647
Mn	55	-0.061	ug/L	2098	2510	0.004	7.369	7.369
Co	59	-0.010	ug/L	125	184	0.002	20.540	20.540
Ni	62	-0.024	ug/L	62	64	0.026	109.379	109.379
Ni	60	-0.026	ug/L	44	78	0.005	18.286	18.286
Cu	63	-0.010	ug/L	299	316	0.005	51.704	51.704
Cu	65	0.002	ug/L	135	124	0.013	567.217	567.217
Sc	45		ug/L	174909	165238			0.764
Zn	67	1.857	ug/L	385	124	0.164	8.844	8.844
Zn	68	1.991	ug/L	1951	644	0.071	3.542	3.542
Zn	66	2.022	ug/L	2401	514	0.079	3.923	3.923
As	75	-0.021	ug/L	579	618	0.033	156.739	156.739
Se	77	-0.276	ug/L	73	98	0.114	41.495	41.495
Se	78	-3.959	ug/L	8138	9414	0.454	11.480	11.480
Se	82	-0.070	ug/L	300	315	0.135	192.948	192.948
Br	79	-0.003	mg/L	7557	8581	0.001	43.802	43.802
Ge	72		mg/L	80954	82830			1.703
Rh	103		ug/L	323100	319040			1.814
Sr	88	-0.009	ug/L	125	273	0.001	10.325	10.325
Mo	97	-0.040	ug/L	23	82	0.002	6.273	6.273
Mo	98	-0.036	ug/L	37	176	0.001	2.678	2.678
Ag	107	-0.006	ug/L	31	70	0.000	3.763	3.763
Ag	109	-0.005	ug/L	28	58	0.001	19.237	19.237
Cd	111	-0.060	ug/L	248	339	0.005	8.458	8.458
Cd	114	0.000	ug/L	33	32	0.002	853.994	853.994
Sn	118	-0.102	ug/L	209	691	0.010	10.294	10.294
Sn	120	-0.109	ug/L	277	986	0.008	7.751	7.751
Sb	121	-0.047	ug/L	34	299	0.001	1.646	1.646
Sb	123	-0.048	ug/L	44	252	0.010	21.702	21.702
Ba	135	0.009	ug/L	62	49	0.002	19.006	19.006
Ba	137	0.018	ug/L	112	65	0.004	21.081	21.081
Tl	203	-0.010	ug/L	44	99	0.001	6.461	6.461
Tl	205	-0.012	ug/L	84	245	0.001	7.568	7.568
Pb	208	-0.010	ug/L	325	500	0.001	13.752	13.752
Bi	209	-0.147	ug/L	81	2334	0.001	0.361	0.361
U	238	-0.007	ug/L	30	167	0.000	2.859	2.859
Tb	159		ug/L	341011	335249			1.164
Kr	83		mg/L	271	280			200.918
Y	89		ug/L	370599	364355			13.130
In	115		ug/L	386318	381187			69.827
Ho	165		ug/L	410241	397496			36.069
Tm	169		ug/L	466455	447702			42.060
Ar2	76		mg/L	66060	72603			10.245



00204

## Sample ID: CCV

Sample Date/Time: Tuesday, April 10, 2001 21:34:57

Method File: c:\elandata\Method\6020scan5.mth

## Sample Description:

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	1209.109	ug/L	271377	23642	41.629	3.443	3.443
Mg	26	223.323	ug/L	93717	277	3.606	1.615	1.615
Cl	35	-1.100	mg/L	48529	59824	0.051	4.653	4.653
Na	23	1119.938	ug/L	3900147	17961	42.886	3.829	3.829
K	39	1074.145	ug/L	7885733	1279174	26.851	2.500	2.500
Sc	45		ug/L	179136	165238			1.769
Li	6		ug/L	22893	22735			1.539
Li	7		ug/L	1696	1620			61.905
Be	9	48.144	ug/L	9412	8	0.165	0.343	0.343
B	10	50.464	ug/L	1737	35	2.279	4.515	4.515
B	11	50.995	ug/L	8797	139	2.000	3.922	3.922
Al	27	91.463	ug/L	329820	2186	1.290	1.410	1.410
Ti	49	45.017	ug/L	19212	157	0.318	0.707	0.707
V	51	44.412	ug/L	304929	1717	0.836	1.883	1.883
Cr	53	46.046	ug/L	31517	331	0.374	0.813	0.813
Cr	52	44.816	ug/L	260730	4542	0.582	1.299	1.299
Fe	56	212.507	ug/L	3052219	1255734	2.743	1.291	1.291
Fe	57	214.673	ug/L	52314	9722	1.141	0.531	0.531
Fe	54	201.957	ug/L	179906	81064	7.065	3.498	3.498
Mn	55	45.461	ug/L	429961	2510	0.318	0.699	0.699
Co	59	45.368	ug/L	327027	184	0.548	1.207	1.207
Ni	62	45.539	ug/L	10703	64	1.519	3.336	3.336
Ni	60	45.755	ug/L	69203	78	0.800	1.749	1.749
Cu	63	45.621	ug/L	163638	316	1.515	3.321	3.321
Cu	65	44.840	ug/L	79487	124	0.745	1.662	1.662
Sc	45		ug/L	179136	165238			1.769
Zn	67	100.229	ug/L	14548	124	0.775	0.773	0.773
Zn	68	96.892	ug/L	65571	644	1.422	1.468	1.468
Zn	66	96.634	ug/L	92138	514	1.208	1.250	1.250
As	75	46.834	ug/L	58087	618	0.397	0.847	0.847
Se	77	45.864	ug/L	3863	98	0.310	0.675	0.675
Se	78	42.694	ug/L	20839	9414	0.712	1.667	1.667
Se	82	46.699	ug/L	5704	315	1.055	2.259	2.259
Br	79	0.004	mg/L	9382	8581	0.000	11.576	11.576
Ge	72		mg/L	81739	82830			1.863
Rh	103		ug/L	329315	319040			0.588
Sr	88	45.160	ug/L	798815	273	0.476	1.055	1.055
Mo	97	23.091	ug/L	35495	82	0.462	2.000	2.000
Mo	98	22.688	ug/L	90109	176	0.225	0.993	0.993
Ag	107	21.995	ug/L	147892	70	0.043	0.195	0.195
Ag	109	22.063	ug/L	141565	58	0.372	1.688	1.688
Cd	111	22.107	ug/L	36305	339	0.514	2.326	2.326
Cd	114	22.358	ug/L	84902	32	0.391	1.751	1.751
Sn	118	22.786	ug/L	112897	691	0.361	1.586	1.586
Sn	120	23.215	ug/L	157032	986	0.432	1.859	1.859
Sb	121	8.668	ug/L	51231	299	0.683	7.882	7.882
Sb	123	8.704	ug/L	39093	252	0.616	7.074	7.074
Ba	135	45.760	ug/L	68944	49	0.611	1.335	1.335
Ba	137	46.706	ug/L	121293	65	0.735	1.574	1.574
Tl	203	46.398	ug/L	280231	99	0.940	2.025	2.025
Tl	205	46.799	ug/L	669150	245	0.731	1.562	1.562
Pb	208	46.249	ug/L	913894	500	0.303	0.655	0.655
Bi	209	46.248	ug/L	743748	2334	1.660	3.590	3.590
U	238	46.059	ug/L	960884	167	0.476	1.034	1.034
Tb	159		ug/L	349552	335249			1.741
Kr	83		mg/L	339	280			11.798
Y	89		ug/L	366420	364355			53.400
In	115		ug/L	394169	381187			52.346
Ho	165		ug/L	412673	397496			32.471
Tm	169		ug/L	465179	447702			31.074
Ar2	76		mg/L	71371	72603			151.321

00205

## Sample ID: CCB

Sample Date/Time: Tuesday, April 10, 2001 21:43:19

Method File: c:\elandata\Method\6020scan5.mth

## Sample Description:

Analyte	Mass	Conc. Mean	Sample Unit	Meas. Intens. Mean	Blank Intensity	Conc. SD	Conc. RSD	Net Intens. RSD
Ca	44	52.631	ug/L	33478	23642	5.591	10.623	10.623
Mg	26	4.557	ug/L	2035	277	0.060	1.317	1.317
Cl	35	-0.898	mg/L	47487	59824	0.087	9.695	9.695
Na	23	-2.273	ug/L	10682	17961	0.093	4.107	4.107
K	39	-40.855	ug/L	1050123	1279174	5.083	12.442	12.442
Sc	45		ug/L	165215	165238			4.394
Li	6		ug/L	21068	22735			3.296
Li	7		ug/L	1507	1620			777.969
Be	9	-0.010	ug/L	5	8	0.013	134.826	134.826
B	10	0.699	ug/L	54	35	0.296	42.388	42.388
B	11	0.774	ug/L	250	139	0.098	12.650	12.650
Al	27	0.330	ug/L	3273	2186	0.045	13.607	13.607
Ti	49	-0.145	ug/L	100	157	0.034	23.621	23.621
V	51	-0.057	ug/L	1359	1717	0.020	35.621	35.621
Cr	53	-0.084	ug/L	278	331	0.032	37.736	37.736
Cr	52	-0.158	ug/L	3711	4542	0.013	8.431	8.431
Fe	56	-29.668	ug/L	1037158	1255734	3.202	10.794	10.794
Fe	57	-8.195	ug/L	8249	9722	0.188	2.289	2.289
Fe	54	-29.560	ug/L	68562	81064	5.566	18.829	18.829
Mn	55	-0.008	ug/L	2442	2510	0.006	74.452	74.452
Co	59	-0.009	ug/L	124	184	0.001	15.427	15.427
Ni	62	0.015	ug/L	67	64	0.049	336.591	336.591
Ni	60	0.032	ug/L	122	78	0.007	22.487	22.487
Cu	63	0.468	ug/L	1860	316	0.033	7.093	7.093
Cu	65	0.492	ug/L	926	124	0.031	6.332	6.332
Sc	45		ug/L	165215	165238			4.394
Zn	67	0.041	ug/L	122	124	0.063	154.565	154.565
Zn	68	-0.075	ug/L	556	644	0.028	37.625	37.625
Zn	66	-0.017	ug/L	466	514	0.009	54.156	54.156
As	75	0.022	ug/L	605	618	0.054	247.658	247.658
Se	77	-0.180	ug/L	77	98	0.179	99.216	99.216
Se	78	-2.420	ug/L	8199	9414	0.646	26.705	26.705
Se	82	0.097	ug/L	306	315	0.255	262.328	262.328
Br	79	-0.001	mg/L	7814	8581	0.001	150.997	150.997
Ge	72		ug/L	77640	82830			2.964
Rh	103		ug/L	311766	319040			2.193
Sr	88	-0.004	ug/L	207	273	0.001	27.423	27.423
Mo	97	-0.012	ug/L	62	82	0.011	85.025	85.025
Mo	98	-0.016	ug/L	112	176	0.004	23.796	23.796
Ag	107	-0.003	ug/L	48	70	0.002	46.066	46.066
Ag	109	-0.002	ug/L	43	58	0.003	120.624	120.624
Cd	111	-0.054	ug/L	248	339	0.016	30.149	30.149
Cd	114	-0.002	ug/L	26	32	0.001	37.606	37.606
Sn	118	-0.053	ug/L	428	691	0.016	29.314	29.314
Sn	120	-0.054	ug/L	621	986	0.013	23.471	23.471
Sb	121	0.013	ug/L	367	299	0.008	59.780	59.780
Sb	123	0.008	ug/L	280	252	0.010	129.294	129.294
Ba	135	-0.003	ug/L	43	49	0.001	37.769	37.769
Ba	137	0.000	ug/L	65	65	0.004	1004.249	1004.249
Tl	203	-0.007	ug/L	58	99	0.001	19.115	19.115
Tl	205	-0.008	ug/L	129	245	0.002	21.348	21.348
Pb	208	0.048	ug/L	1401	500	0.002	4.395	4.395
Bi	209	-0.114	ug/L	575	2334	0.000	0.271	0.271
U	238	-0.005	ug/L	74	167	0.001	21.827	21.827
Tb	159		ug/L	333411	335249			1.776
Kr	83		mg/L	293	280			101.476
Y	89		ug/L	346269	364355			36.479
In	115		ug/L	376703	381187			195.428
Ho	165		ug/L	395283	397496			283.453
Tm	169		ug/L	444252	447702			301.532
Ar2	76		mg/L	65236	72603			14.072

#### 4. SHIPPING/RECEIVING DOCUMENTS

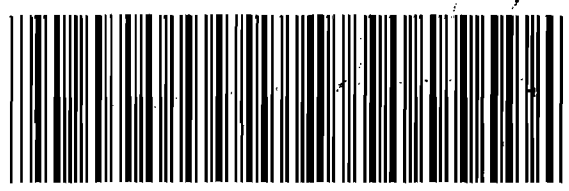
Airbills

Chain-of-Custody Records

Sample Login Sheet

Miscellaneous Shipping/Receiving Records (describe or list)

Method 29 Submission Status  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



802126646521

Sender's FedEx Account Number  
 3-29-01

Sender's Name: Huy NGUYEN  
 Phone: (412) 787-9130

Sender's Address: CLEAR AIR ENGINEERING @ WHEELABRATOR North Beach

Sender's Address: 2600 NW 48th STREET  
 Pompano Beach, FL 33073

Internal Billing Reference Information

Recipient's Name: ADA Blyth  
 Phone: (905) 332-8788

Recipient's Address: PSC 3 ANALYTICAL

Recipient's Address: 99 Clayuga Road (W of FedEx Depot)  
 Dept./Floor/Suite/Room

Recipient's Address: CHEEKTAWAGA, NY 14225

Check here for Saturday Delivery check here

Express Package Service Packages under 150 lbs.  
 FedEx Priority Overnight (Next business morning)  
 FedEx Standard Overnight (Next business day)  
 FedEx 2Day (Second business day)  
 FedEx Express Saver (Third business day)

Express Freight Service Packages over 150 lbs.  
 FedEx Overnight Freight (Next business day)  
 FedEx 2Day Freight (Second business day)  
 FedEx Express Saver Freight (Up to 3 business days)

5 Packaging  
 Other Packaging  
 Dangerous Goods cannot be shipped in FedEx packaging.

6 Special Handling  
 Dangerous Goods as per attached Shipper's Declaration  
 Cargo Aircraft Only

7 Payment  
 Bill to:  Sender (Account no. required)  Recipient  Third Party  Credit Card  Cash/Check

Total Packages	Weight	Total Declared Value*	Total Charges
2	7.10	NDV .00	

\*When declared value higher than \$100 per shipment, you pay an additional charge. See SERVICE - Credit Card Auth. CONDITION - DECLARED VALUE, AND LIMIT OF LIABILITY section for further information.

Signature Release Unavailable

PART #150652 - Rev. Date 3/97  
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FedEx Tracking Number: 802126646521  
 Form I.D. No.: 0204

Two completed and signed copies of this Declaration must be handed to the operator.

**TRANSPORT DETAILS**

Shipment is within the aircraft prescribed for:  AIRCRAFT ONLY

Port of Destination:  AIRCRAFT ONLY

Shipment type: (delete non-applicable)  
 NON-RADIOACTIVE

**WARNING**  
 Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties. This Declaration must not, in any circumstances, be completed and/or signed by a consolidator, a forwarder or an IATA cargo agent.

DANGEROUS GOODS IDENTIFICATION					Quantity and Type of Packaging	Packing Inst.	Authorization
Proper Shipping Name	Class or Division	UN or I.D. No.	Packing Group	Subsidiary Risk			
Corrosive Liquids, Acidizing, 10% Nitric Acid, 10% Hydrogen Peroxide	8	UN 3093	II	5.1	2 Fiberboard Box (containing 6.5 Liters in Each)	813	

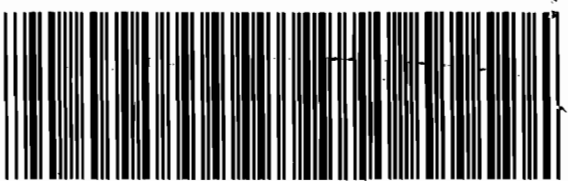
Additional Handling Information: IATA

Shipper declares that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked, and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Signature: Huy NGUYEN / Project Leader  
 F. Lauretelle, FL 3-29-01

Emergency Telephone Number (Required for US Origin or Destination Shipments): 1-800-255-3924

Airbill



802126646473

From 3029-01 Sender's FedEx Account Number [Redacted]  
 To Huy Nguyen Phone (412) 787-9130

Questions? Call 1-800-Go-FedEx (800)463-3339

City CLEAN AIR ENGINEERING @ WASHINGTON NORTH BLDG  
 Street 2600 NW 48th STREET  
 City BONAPARTE BEACH State FL ZIP 33073

**5 Packaging**  
 Other Packaging  
 Dangerous Goods cannot be shipped in FedEx packaging.

Your Internal Billing Reference Information  
 To ADA Blythe Phone 905, 332-8788

**6 Special Handling**  
 Dangerous Goods as per attached Shipper's Declaration  
 Cargo Aircraft Only

City PSC ANALYTICAL  
 Street 299 Cayuga Road (FedEx Depot)  
 City CHEEKTAWUGH State NY ZIP 14225

**7 Payment**  
 Bill to:  Sender (Account no. in Section 1 will be billed)  
 Recipient  
 Third Party  
 Credit Card  
 Cash/Check

For HOLD at FedEx Location check here  
 Hold Weekday  
 Hold Saturday (Not available at all locations)  
 For Saturday Delivery check here  
 Extra charge. Not available to all locations.

Total Packages 3 Total Weight 90 Total Declared Value \$ NDV Total Charges \$

**Express Package Service Packages under 150 lbs.**  
 FedEx Priority Overnight (Next business morning)  
 FedEx Standard Overnight (Next business afternoon)  
 FedEx 2Day (Second business day)  
 FedEx Express Saver (Third business day)

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**Express Freight Service Packages over 150 lbs.**  
 FedEx Overnight Freight (Next business day)  
 FedEx 2Day Freight (Second business day)  
 FedEx Express Saver Freight (Up to 3 business days)

FedEx Tracking Number 802126646473 Form I.D. No. 0204

Page 1 of 1 Pages

Two completed and signed copies of this Declaration must be handed to the operator.

**TRANSPORT DETAILS**  
 Airport of Departure: FT. LAUDERDALE  
 Airport of Destination: BUF

**WARNING**  
 Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties. This Declaration must not, in any circumstances, be completed and/or signed by a consolidator, a forwarder or an IATA cargo agent.

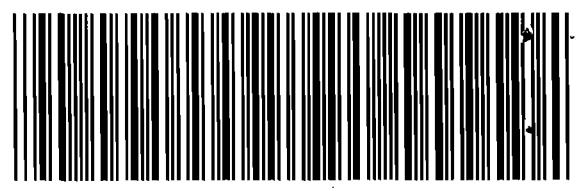
Shipment type (delete non-applicable)  
 NON-RADIOACTIVE

NATURE AND QUANTITY OF DANGEROUS GOODS					Quantity and Type of Packaging	Packing Inst.	Authorization
Dangerous Goods Identification							
Proper Shipping Name	Class or Division	UN or I.D. No.	Packing Group	Subsidiary Risk			
Kidizing Liquid, corrosive, N.O.S. (10% Potassium Permanganate 0% Sulphuric Acid)	5.1	UN 3090	II	0	3 Fiberboard Box Containing 3 liters in Each.	506	

Special Handling Information IATA

Shipper hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked, and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.  
 Agency Telephone Number (Required for US Origin or Destination Shipments) 1-800-255-3924

Name/Title of Signatory HUY NGUYEN / Project leader  
 Place and Date FT. LAUDERDALE, FL 3-29-01  
 Signature Huy Nguyen



802126646430

From: 3-29-01 Sender's FedEx Account Number [Redacted]

To: Huy NGUYEN Phone: (412) 787-9130

Address: CLEAN AIR ENGINEERING @ Wheelabrator North Broward

2600 NW 48th STREET  
 PAMPANO BEACH FL 33073

Internal Billing Reference Information

To: ADA Blythe Phone: (905) 332-8788

PSC Analytical

299 Cayuga Road (Fed Ex Dept)  
 CHEEKTAWAGA NY 14225

OLD at FedEx Location check here  
 Hold Weekday Hold Saturday (Not available at all locations)  
 For Saturday Delivery check here (Extra charge applies for FedEx Express Saver)

Questions? Call 1-800-Go-FedEx (800)463-3339

**5 Packaging**  
 Other Packaging  
 Dangerous Goods cannot be shipped in FedEx packaging.

**6 Special Handling**  
 Dangerous Goods as per attached Shipper's Declaration  Cargo Aircraft Only

**7 Payment**  
 Bill to:  Sender (Account no. in section 1 will be billed)  Recipient (Enter FedEx account no. or Credit Card no. below)  Third Party  Credit Card  Cash/Check

Total Packages: 2 Total Weight: 50 Total Declared Value: \$ .00 Total Charges: \$

\* When declaring a value higher than \$100 per shipment, you pay an additional charge. See SERVICE Credit Card Auth. CONDITIONS, DECLARED VALUE, AND LIMIT OF LIABILITY section for further information.

Signature Release Unavailable

PART #150652 - Rev. Data 3/97  
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**Express Package Service Packages under 150 lbs.**  
 FedEx Priority Overnight (Next business morning)  FedEx Standard Overnight (Next business afternoon)  
 FedEx 2Day (Second business day)  FedEx Express Saver (Third business day)

**Express Freight Service Packages over 150 lbs.**  
 FedEx Overnight Freight (Next business day)  FedEx 2Day Freight (Second business day)  FedEx Express Saver Freight (Up to 3 business days)

FedEx Tracking Number: 802126646430 Form I.D. No. 0204

Page 1 of 1 Pages

Two completed and signed copies of this Declaration must be handed to the operator.

**TRANSPORT DETAILS**  
 Shipment is within the limits prescribed for:  CARGO AIRCRAFT ONLY  
 Airport of Departure: FTI LAUDERDALE  
 Airport of Destination: BUF

**WARNING**  
 Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties. This Declaration must not, in any circumstances, be completed and/or signed by a consolidator, a forwarder or an IATA cargo agent.

Shipment type: (delete non-applicable)  
 NON-RADIOACTIVE  RADIOACTIVE

NATURE AND QUANTITY OF DANGEROUS GOODS					Quantity and Type of Packaging	Packing Inst.	Authorization
Dangerous Goods Identification							
Proper Shipping Name	Class or Division	UN or I.D. No.	Packing Group	Subsidiary Risk			
Hydrochloric Acid Solution	8	UN 1789	III		Two Fiberboard Box (Containing 4.5 Liters.)	821	

Additional Handling Information: IATA


I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked, and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.  
 Telephone Number (Required for US Origin or Destination Shipments): 1-800-255-3924  
 Name/Title of Signatory: Huy NGUYEN / Project Leader  
 Place and Date: Ft. Lauderdale, FL 3-29-01  
 Signature: Huy Nguyen

**CHAIN OF CUSTODY FORM**

CLIENT <u>WHEELABRATOR</u>	PROJECT NO. <u>8890</u>	NO. OF CONTAINERS	ORIGINAL VOLUME	ANALYSIS REQUESTED				PAGE <u>    </u> OF <u>    </u>
PLANT <u>NORTH Broward</u>	DEPT. <u>66</u>			Metals *				REVISION NO. <u>    </u>
PROJECT MANAGER <u>S. BROWN</u>	RECOVERY PERSON: <u>C. JOHNSON</u>							ADDITIONAL INFORMATION
JOB LEADER <u>Huy Nguyen</u>								

CAE LAB NO.	RUN NO.	TEST LOCATION	DATE	SAMPLE MATRIX	NO. OF CONTAINERS	ORIGINAL VOLUME						
		Field Blank	3-29-01	Filter	1	-	X				X Hg, Pb, Be, Cd.	
	14844	↓		F1/2 .1N HNO <sub>3</sub>	1	52	X					
					Imp 1,2,3	1	406	X				
					Imp 4	1	102	X				
					Imp 5,6	1	306	X				
					8 N HCl	1	229	X				
	14843	Reagent Blank	3-29-01	Filter	1	-	X					
				.1N HNO <sub>3</sub>	1	202	X					
				5% / 10%	1	305	X					
				4% / 10%	1	302	X					
				8 N HCl / DI H <sub>2</sub> O	1	225	X					
				DI H <sub>2</sub> O	1	200	X					

Relinquished by:(Signature) <u>Nguyen</u>	Date/Time 3-29-01 1400	Received by:(Signature) <u>M. Kient</u>	Date/Time 04/02 1200	Relinquished by:(Signature)	Date/Time
Courier:	Date/Time	Relinquished by:(Signature)	Date/Time	Rec'd for Analysis by:	Date/Time


Special Handling Instructions	This form was completed by: <u>Nguyen</u> Signature <u>Nguyen</u> Date <u>3-29-01</u>	 <b>Clean Air Engineering</b> <small>DS COC Palatine EXCL.R0-6/7/96</small>
Forwarding Lab: <u>PSC Analytical</u>	500 West Wood Street Palatine, IL 60067 (847) 991-3300 phone (847) 991-3385 fax	
PQ Number: <u>20038-8890-66</u>		

**CHAIN OF CUSTODY FORM**

CLIENT <u>Wheelabrator</u>	PROJECT NO. <u>8890</u>	NO. OF CONTAINERS	ORIGINAL VOLUME	ANALYSIS REQUESTED				ADDITIONAL INFORMATION	
PLANT <u>North Broward</u>	DEPT. <u>6600</u>			metals					
PROJECT MANAGER <u>Scott Brown</u>									
EPA METHOD 29									

CAE LAB NO.	RUN NO.	TEST LOCATION	DATE	SAMPLE MATRIX	NO. OF CONTAINERS	ORIGINAL VOLUME	metals					ADDITIONAL INFORMATION
<u>14245</u>	<u>1</u>	<u>Unit 1 Outlet</u>	<u>3-26-01</u>	<u>FILTER</u>	<u>1</u>	<u>-</u>	<u>X</u>					<u>Metals = Hg, Pb, Be, Cd</u>
	<u>1</u>		<u>↓</u>	<u>FRONT 1/2 .1 N HNO3</u>	<u>1</u>	<u>104</u>	<u>X</u>					
	<u>1</u>		<u>↓</u>	<u>IMP 1,2,3 .1 N HNO3 RINSE</u>	<u>1</u>	<u>771</u>	<u>X</u>					
	<u>1</u>		<u>↓</u>	<u>IMP 4 - .1N HNO3 RINSE</u>	<u>1</u>	<u>106</u>	<u>X</u>					
	<u>1</u>		<u>↓</u>	<u>IMP 5,6 KMnO4/H2O RINSE</u>	<u>1</u>	<u>407</u>	<u>X</u>					
	<u>1</u>		<u>↓</u>	<u>IMP 5,6 HCL RINSE</u>	<u>1</u>	<u>229</u>	<u>X</u>					
<u>14846</u>	<u>2</u>	<u>Unit 1 Outlet</u>	<u>3-26-01</u>	<u>FILTER</u>	<u>1</u>	<u>-</u>	<u>x</u>					
	<u>2</u>		<u>↓</u>	<u>FRONT 1/2 .1 N HNO3</u>	<u>1</u>	<u>108</u>	<u>x</u>					
	<u>2</u>		<u>↓</u>	<u>IMP 1,2,3 .1 N HNO3 RINSE</u>	<u>1</u>	<u>778</u>	<u>x</u>					
	<u>2</u>		<u>↓</u>	<u>IMP 4 - .1N HNO3 RINSE</u>	<u>1</u>	<u>101</u>	<u>x</u>					
	<u>2</u>		<u>↓</u>	<u>IMP 5,6 KMnO4/H2O RINSE</u>	<u>1</u>	<u>419</u>	<u>x</u>					
	<u>2</u>		<u>↓</u>	<u>IMP 5,6 HCL RINSE</u>	<u>1</u>	<u>222</u>	<u>x</u>					

Relinquished by:(Signature) <u>[Signature]</u>	Date/Time <u>3-29-01 1400</u>	Received by:(Signature) <u>[Signature]</u>	Date/Time <u>04/02 12:00</u>	Relinquished by:(Signature)	Date/Time
Courier:	Date/Time	Relinquished by:(Signature)	Date/Time	Rec'd for Analysis by:	Date/Time

Special Handling Instructions	This form was completed by: <u>Joe Heffernan EIT</u>	 601 Parkway View Drive Pittsburgh, PA 15205 412) 787-9130 ph 412) 787-9138 fax "Clean Air" DS COC Pittsburgh EXCL.R0-8/3/95
Forwarding Lab: <u>Philip Analytical Services</u>	Signature <u>[Signature]</u> Date <u>2-28-01</u>	
<u>299 Cayuga Road</u> <u>Cheektawaga, NY 14225</u>		
PO Number: <u>20038-8890-66</u>		

00211



## CHAIN OF CUSTODY FORM

CLIENT <u>Wheelerator</u>	PROJECT NO. <u>8890</u>	NO. OF CONTAINERS	ORIGINAL VOLUME	ANALYSIS REQUESTED				ADDITIONAL INFORMATION
PLANT <u>N. Broward North</u>	DEPT. <u>66</u>							
PROJECT MANAGER <u>Scott Brown</u>								
EPA METHOD 29								

CAE LAB NO.	RUN NO.	TEST LOCATION	DATE	SAMPLE MATRIX						
14847	3	Unit 1 outlet	3/26/01	FILTER	1	-	X			Metals = Hg, Pb, Cd, Be
	3			FRONT 1/2 .1 N HNO3	1	158	X			
	3			IMP 1,2,3 .1 N HNO3 RINSE	1	794	X			
	3			IMP 4 - .1N HNO3 RINSE	1	104	X			
	3			IMP 5,6 KMnO4/H2O RINSE	1	504	X			
	3			IMP 5,6 HCL RINSE	1	187	X			
14848	4	Unit 1 outlet	3/27/01							
	4			FILTER	1	-	X			
	4			FRONT 1/2 .1 N HNO3	1	59	X			
	4			IMP 1,2,3 .1 N HNO3 RINSE	1	746	X			
	4			IMP 4 - .1N HNO3 RINSE	1	107	X			
	4			IMP 5,6 KMnO4/H2O RINSE	1	408	X			
	4			IMP 5,6 HCL RINSE	1	210	X			

Relinquished by: (Signature) <u>[Signature]</u>	Date/Time 3-29-01 1400	Received by: (Signature) <u>[Signature]</u>	Date/Time 04/02/2000	Relinquished by: (Signature)	Date/Time
Courier <u>[Signature]</u>	Date/Time	Relinquished by: (Signature)	Date/Time	Rec'd for Analysis by:	Date/Time

Special Handling Instructions	This form was completed by: <u>Joe Hefferman III</u>	 <b>Clean Air Engineering</b> 601 Parkway View Drive Pittsburgh, PA 15205 (412) 787-9130 ph (412) 787-9138 fax <small>DS COC Pittsburgh EXCL.RC-8/3/95</small>
Forwarding Lab: <u>Philip Analytical Services</u> <u>299 Cayuga Road</u> <u>Cheektawaga, NY 14225</u>	Signature <u>[Signature]</u> Date <u>2-28-01</u>	
PO Number: <u>20038-8890-66</u>		

00212

**CHAIN OF CUSTODY FORM**

CLIENT Wheela bratar PROJECT NO. 8890  
 PLANT North Brownard DEPT. 66  
 PROJECT MANAGER Scott Brown  
 EPA METHOD 29

NO. OF CONTAINERS  
 ORIGINAL VOLUME  
 ANALYSIS REQUESTED  
 metals ARCHIVE  
 ADDITIONAL INFORMATION

CAE LAB NO.	RUN NO.	TEST LOCATION	DATE	SAMPLE MATRIX	NO. OF CONTAINERS	ORIGINAL VOLUME	ANALYSIS REQUESTED	ADDITIONAL INFORMATION
14849	5	Unit 1 outlet	3-27-01	FILTER	1	-	X	Metals = Hg, Pb, Cd, Bc
	5	↓	↓	FRONT 1/2 .1 N HNO3	1	16	X	
	5	↓	↓	IMP 1,2,3 .1 N HNO3 RINSE	1	735	X	
	5	↓	↓	IMP 4 - .1N HNO3 RINSE	1	105	X	
	5	↓	↓	IMP 5,6 KMnO4/H2O RINSE	1	419	X	
	5	↓	↓	IMP 5,6 HCL RINSE	1	198	X	
14850	6	Unit 1 outlet	3-27-01	FILTER	1	-	x	
	6	↓	↓	FRONT 1/2 .1 N HNO3	1	44	x	
	6	↓	↓	IMP 1,2,3 .1 N HNO3 RINSE	1	710	x	
	6	↓	↓	IMP 4 - .1N HNO3 RINSE	1	101	x	
	6	↓	↓	IMP 5,6 KMnO4/H2O RINSE	1	429	x	
	6	↓	↓	IMP 5,6 HCL RINSE	1	231	x	

Relinquished by:(Signature) <i>[Signature]</i>	Date/Time 3-29-01	Received by:(Signature) <i>[Signature]</i>	Date/Time 04/02/2000	Relinquished by:(Signature)	Date/Time
Courier <i>[Signature]</i>	Date/Time	Relinquished by:(Signature)	Date/Time	Rec'd for Analysis by:	Date/Time

Special Handling Instructions

Forwarding Lab: Philip Analytical Services  
299 Cayuga Road  
Cheektawaga, NY 14225  
 PO Number: 20078-8890-66

This form was completed by:  
Joe Heffernan III  
 Signature [Signature] Date 3-28-01

**CAE** 601 Parkway View Drive  
 Pittsburgh, PA 15205  
 (412) 787-9130 ph  
 (412) 787-9138 fax  
 Clean Air Engineering  
 DS COC Pittsburgh  
 EXCL.FO-8/3/95


00213

# CHAIN OF CUSTODY FORM

CLIENT <u>wheelabrator</u>	PROJECT NO. <u>8890</u>	NO. OF CONTAINERS	ORIGINAL VOLUME	ANALYSIS REQUESTED				ADDITIONAL INFORMATION
PLANT <u>North Broward</u>	DEPT. <u>66</u>			metals				
PROJECT MANAGER <u>Scott Brown</u>								
EPA METHOD 29								

CAE LAB NO.	RUN NO.	TEST LOCATION	DATE	SAMPLE MATRIX	NO. OF CONTAINERS	ORIGINAL VOLUME					
<u>14851</u>	<u>1</u>	<u>unit 2 outlet</u>	<u>3/27/01</u>	<u>FILTER</u>	<u>1</u>	<u>-</u>	<u>X</u>				<u>Metals = Hg, Pb, Be, Cd</u>
	<u>1</u>		↓	<u>FRONT 1/2 .1 N HNO3</u>	<u>1</u>	<u>74</u>	<u>X</u>				
	<u>1</u>		↓	<u>IMP 1,2,3 .1 N HNO3 RINSE</u>	<u>1</u>	<u>753</u>	<u>X</u>				
	<u>1</u>		↓	<u>IMP 4 - .1N HNO3 RINSE</u>	<u>1</u>	<u>103</u>	<u>X</u>				
	<u>1</u>		↓	<u>IMP 5,6 KMnO4/H2O RINSE</u>	<u>1</u>	<u>425</u>	<u>X</u>				
	<u>1</u>		↓	<u>IMP 5,6 HCL RINSE</u>	<u>1</u>	<u>216</u>	<u>X</u>				
<u>14852</u>	<u>2</u>	<u>unit 2 outlet</u>	<u>3-27-01</u>	<u>FILTER</u>	<u>1</u>	<u>-</u>	<u>x</u>				
	<u>2</u>		↓	<u>FRONT 1/2 .1 N HNO3</u>	<u>1</u>	<u>106</u>	<u>x</u>				
	<u>2</u>		↓	<u>IMP 1,2,3 .1 N HNO3 RINSE</u>	<u>1</u>	<u>766</u>	<u>x</u>				
	<u>2</u>		↓	<u>IMP 4 - .1N HNO3 RINSE</u>	<u>1</u>	<u>10.7</u>	<u>x</u>				
	<u>2</u>		↓	<u>IMP 5,6 KMnO4/H2O RINSE</u>	<u>1</u>	<u>436</u>	<u>x</u>				
	<u>2</u>		↓	<u>IMP 5,6 HCL RINSE</u>	<u>1</u>	<u>217</u>	<u>x</u>				

Relinquished by:(Signature)	Date/Time	Received by:(Signature)	Date/Time	Relinquished by:(Signature)	Date/Time
		<u>[Signature]</u>	<u>04/02/12 00</u>		
Courier:	Date/Time	Relinquished by:(Signature)	Date/Time	Rec'd for Analysis by:	Date/Time

Special Handling Instructions	This form was completed by:	 601 Parkway View Drive Pittsburgh, PA 15205 (412) 787-9130 ph (412) 787-9138 fax Clean Air Engineering <small>DS COC Pittsburgh EXCL.R0-8/3/95</small>
Forwarding Lab:	Philip Analytical Services	Signature
	299 Cayuga Road	<u>[Signature]</u>
	Cheektawaga, NY 14225	Date
		<u>3-28-01</u>
PO Number:	<u>20038-8890-66</u>	

00214

**CHAIN OF CUSTODY FORM**

CLIENT <u>Wheelabrator</u>	PROJECT NO. <u>8890</u>	NO. OF CONTAINERS	ORIGINAL VOLUME	ANALYSIS REQUESTED				ADDITIONAL INFORMATION
PLANT <u>North Broward</u>	DEPT. <u>66</u>							
PROJECT MANAGER <u>SCOTT BROWN</u>								
EPA METHOD 29								

CAE LAB NO.	RUN NO.	TEST LOCATION	DATE	SAMPLE MATRIX						
14853	3	Unit 2 outlet ↓	3-27-01 ↓	FILTER	1	-	X			Metals = Hg, Pb, Be, Cd
	3			FRONT 1/2 .1 N HNO3	1	76	X			
	3			IMP 1,2,3 .1 N HNO3 RINSE	1	764	X			
	3			IMP 4 - .1N HNO3 RINSE	1	104	X			
	3			IMP 5,6 KMnO4/H2O RINSE	1	410	X			
	3			IMP 5,6 HCL RINSE	1	198	X			
14854	4	Unit 2 outlet ↓	3-27-01 ↓	FILTER	1	-	X			
	4			FRONT 1/2 .1 N HNO3	1	106	X			
	4			IMP 1,2,3 .1 N HNO3 RINSE	1	720	X			
	4			IMP 4 - .1N HNO3 RINSE	1	101	X			
	4			IMP 5,6 KMnO4/H2O RINSE	1	460	X			
	4			IMP 5,6 HCL RINSE	1	200	X			

Relinquished by:(Signature) <u>[Signature]</u>	Date/Time 3-29-01 1400	Received by:(Signature) <u>[Signature]</u>	Date/Time 04/02 12:00	Relinquished by:(Signature)	Date/Time
Courier:	Date/Time	Relinquished by:(Signature)	Date/Time	Rec'd for Analysis by:	Date/Time

Special Handling Instructions	This form was completed by: <u>Joe Hefferman III</u>	 601 Parkway View Drive Pittsburgh, PA 15205 (412) 787-9130 ph (412) 787-9138 fax Clean Air Engineering <small>DS COC Pittsburgh EXCL.R0-8/3/95</small>
Forwarding Lab: <u>Philip Analytical Services</u>	Signature <u>[Signature]</u> Date <u>3-28-01</u>	
<u>299 Cayuga Road</u> <u>Cheektawaga, NY 14225</u>		
PO Number: <u>20038-8890-66</u>		

00215

### CHAIN OF CUSTODY FORM

CLIENT <u>wheelabrator</u>	PROJECT NO. <u>8890</u>	NO. OF CONTAINERS	ORIGINAL VOLUME	ANALYSIS REQUESTED				ADDITIONAL INFORMATION	
PLANT <u>North Broward</u>	DEPT. <u>666</u>			metals	ARCHIVE				
PROJECT MANAGER <u>SCOTT BROWN</u>									
EPA METHOD 29									

CAE LAB NO.	RUN NO.	TEST LOCATION	DATE	SAMPLE MATRIX	NO. OF CONTAINERS	ORIGINAL VOLUME	metals	ARCHIVE	ADDITIONAL INFORMATION	
14855	5	Unit 2 outlet	3-29-01	FILTER	1	-	X		Metals = Hg, Pb, Be, Cd	
	5	↓	↓	FRONT 1/2 .1 N HNO3	1	91.5	X			
	5			IMP 1,2,3 .1 N HNO3 RINSE	1	735.8	X			
	5			IMP 4 - .1N HNO3 RINSE	1	106.3	X			
	5			IMP 5,6 KMnO4/H2O RINSE	1	46.1	X			
	5			IMP 5,6 HCL RINSE	1	227.9	X			
14856	6	Unit 2 Outlet	3-29-01	FILTER	1	-	x			
	6	↓	↓	FRONT 1/2 .1 N HNO3	1	109	x			
	6			IMP 1,2,3 .1 N HNO3 RINSE	1	687	x			
	6			IMP 4 - .1N HNO3 RINSE	1	100	x			
	6			IMP 5,6 KMnO4/H2O RINSE	1	429	x			
	6			IMP 5,6 HCL RINSE	1	227	x			

Relinquished by:(Signature) <u>[Signature]</u>	Date/Time 3-29-01 1401	Received by:(Signature) <u>[Signature]</u>	Date/Time 04/02/200	Relinquished by:(Signature)	Date/Time
Courier: <u>[Signature]</u>	Date/Time	Relinquished by:(Signature)	Date/Time	Rec'd for Analysis by:	Date/Time

Special Handling Instructions	This form was completed by: <u>Joe Heffernan</u>	<b>Clean Air Engineering</b> 601 Parkway View Drive Pittsburgh, PA 15205 412) 787-9130 ph 412) 787-9138 fax <small>DS COC Pittsburgh EXCL.R0-B/3/95</small>
Forwarding Lab: <u>Philip Analytical Services</u> <u>299 Cayuga Road</u> <u>Cheektawaga, NY 14225</u>	Signature <u>[Signature]</u> Date <u>3-29-01</u>	
PO Number: <u>20038-8890-66</u>		

00216


**CHAIN OF CUSTODY FORM**

CLIENT Wheelaerator PROJECT NO. 8890  
 PLANT North Broward DEPT. 66  
 PROJECT MANAGER Scott Brown  
 EPA METHOD 29

NO. OF CONTAINERS	ORIGINAL VOLUME	ANALYSIS REQUESTED				ADDITIONAL INFORMATION
		metals				

CAE LAB NO.	RUN NO.	TEST LOCATION	DATE	SAMPLE MATRIX	NO. OF CONTAINERS	ORIGINAL VOLUME	metals				
14857	1	Unit 3 outlet	3-27-01	FILTER	1	-	X				Metals = Hg, Pb, Cd, Be
	1	↓	↓	FRONT 1/2 .1 N HNO3	1	67	X				
	1			IMP 1,2,3 .1 N HNO3 RINSE	1	673	X				
	1			IMP 4 - .1N HNO3 RINSE	1	100	X				
	1			IMP 5,6 KMnO4/H2O RINSE	1	403	X				
	1			IMP 5,6 HCL RINSE	1	203	X				
14858	1			Unit 3 outlet	3-27-01	FILTER	1	-	X		
	2	↓	↓	FRONT 1/2 .1 N HNO3	1	103	X				
	2			IMP 1,2,3 .1 N HNO3 RINSE	1	680	X				
	2			IMP 4 - .1N HNO3 RINSE	1	116	X				
	2			IMP 5,6 KMnO4/H2O RINSE	1	412	X				
	2			IMP 5,6 HCL RINSE	1	248	X				

Relinquished by:(Signature) <i>[Signature]</i>	Date/Time 3-29-01 1400	Received by:(Signature) <i>[Signature]</i>	Date/Time 04/02/2001	Relinquished by:(Signature)	Date/Time
Courier	Date/Time	Relinquished by:(Signature)	Date/Time	Rec'd for Analysis by:	Date/Time

Special Handling Instructions	This form was completed by: <i>Joe Hefferman</i>	 <b>Clean Air Engineering</b> 601 Parkway View Drive Pittsburgh, PA 15205 412) 787-9130 ph 412) 787-9138 fax DS COC Pittsburgh EXCL.R0-8/3/95
Forwarding Lab: Philip Analytical Services 299 Cayuga Road Cheektawaga, NY 14225	Signature <i>[Signature]</i> Date 3-28-01	

PO Number: 70078-8890-66


00217

# CHAIN OF CUSTODY FORM

CLIENT <u>Wheelabrator</u>	PROJECT NO. <u>8890</u>	NO. OF CONTAINERS	ORIGINAL VOLUME	ANALYSIS REQUESTED				ADDITIONAL INFORMATION
PLANT <u>North Broward</u>	DEPT. <u>66</u>							
PROJECT MANAGER <u>Scott Brown</u>								
EPA METHOD 29								

CAE LAB NO.	RUN NO.	TEST LOCATION	DATE	SAMPLE MATRIX						
14859	3	Outlet Unit 3	3-28-01	FILTER	1	-	X			
	3	↓	↓	FRONT 1/2 .1 N HNO3	1	121	X			
	3			IMP 1,2,3 .1 N HNO3 RINSE	1	725	X			
	3			IMP 4 - .1N HNO3 RINSE	1	116	X			
	3			IMP 5,6 KMnO4/H2O RINSE	1	480	X			
	3			IMP 5,6 HCL RINSE	1	202	X			
	3									
14860	4	Outlet unit 3	3-28-01	FILTER	1	-	X			
	4	↓	↓	FRONT 1/2 .1 N HNO3	1	165	X			
	4			IMP 1,2,3 .1 N HNO3 RINSE	1	640	X			
	4			IMP 4 - .1N HNO3 RINSE	1	93	X			
	4			IMP 5,6 KMnO4/H2O RINSE	1	428	X			
	4			IMP 5,6 HCL RINSE	1	229	X			
	4									

Relinquished by: (Signature) <i>[Signature]</i>	Date/Time 3-29-01 1400	Received by: (Signature) <i>[Signature]</i>	Date/Time 04/02/2000	Relinquished by: (Signature)	Date/Time
Courier <i>[Signature]</i>	Date/Time	Relinquished by: (Signature)	Date/Time	Rec'd for Analysis by:	Date/Time

Special Handling Instructions	This form was completed by: <u>Jol Keffernau III</u>	 601 Parkway View Drive Pittsburgh, PA 15205 (412) 787-9130 ph (412) 787-9138 fax DS COC Pittsburgh EXCL R0-B/3/95
Forwarding Lab: <u>Philip Analytical Services</u> <u>299 Cayuga Road</u> <u>Cheektawaga, NY 14225</u>	Signature <u>[Signature]</u> Date <u>3-28-01</u>	
PO Number: <u>2003B-8890-66</u>		

00218

**CHAIN OF CUSTODY FORM**

CLIENT Wheelabrator PROJECT NO. 8890  
 PLANT Marsh Broward DEPT. 66  
 PROJECT MANAGER Scott Brown  
 EPA METHOD 29

NO. OF CONTAINERS	ORIGINAL VOLUME	ANALYSIS REQUESTED			ADDITIONAL INFORMATION
		metals	ARCHIVE		

CAE LAB NO.	RUN NO.	TEST LOCATION	DATE	SAMPLE MATRIX	NO. OF CONTAINERS	ORIGINAL VOLUME	ANALYSIS REQUESTED	ADDITIONAL INFORMATION
148601	5	Unit 3 outlet	3-28-01	FILTER	1	-	X	Metals = Hg, Pb, Be, Cd
	5	↓	↓	FRONT 1/2 .1 N HNO3	1	133	X	
	5			IMP 1,2,3 .1 N HNO3 RINSE	1	770	X	
	5			IMP 4 - .1N HNO3 RINSE	1	101	X	
	5			IMP 5,6 KMnO4/H2O RINSE	1	429	X	
	5			IMP 5,6 HCL RINSE	1	202	X	
148602	6	Unit 3 outlet	3-29-01	FILTER	1	-	x	
	6	↓	↓	FRONT 1/2 .1 N HNO3	1	63.7	x	
	6			IMP 1,2,3 .1 N HNO3 RINSE	1	747.8	x	
	6			IMP 4 - .1N HNO3 RINSE	1	107.2	x	
	6			IMP 5,6 KMnO4/H2O RINSE	1	367.7	x	
	6			IMP 5,6 HCL RINSE	1	170.9	x	

Relinquished by:(Signature) <i>[Signature]</i>	Date/Time 3-29-01 1400	Received by:(Signature) <i>[Signature]</i>	Date/Time 04/02/2000	Relinquished by:(Signature)	Date/Time
Courier: <i>[Signature]</i>	Date/Time	Relinquished by:(Signature)	Date/Time	Rec'd for Analysis by:	Date/Time

Special Handling Instructions

Forwarding Lab: Philip Analytical Services  
299 Cayuga Road  
Cheektawaga, NY 14225  
 PO Number: 20078-8890-66

This form was completed by:  
Joe Wetkeman III  
 Signature [Signature] Date 3-29-01

**Clean Air Engineering** 601 Parkway View Drive  
 Pittsburgh, PA 15205  
 (412) 787-9130 ph  
 (412) 787-9138 fax  
 DS COC Pittsburgh  
 EXCL R0-8/3/95

00219



US SAMPLE LOG IN SHEET

CLEAN AIR

Lab Name: Philip Analytical Services Corporation, Burlington Laboratory

Received By (Print Name): M Ficht

P.B. FL

Received By (Signature): *M Ficht*

Client Project ID:

REMARKS:

Condition of Samples/Sample Shipment:

Custody Seal(s) Present \_\_\_ Absent

All intact

Chain of Custody Records Present  Absent \_\_\_

Airbill Present  Absent \_\_\_

Airbill No. 802126646430

8261 4544 9664

7 BOXES

802126646521

8261 4544 9610

802126646473

8261 4544 9561

8261 4544 9572

Does Information on Custody Records and Samples Agree? Yes  No \_\_\_

Date Received at Lab 4-2-01

Time Received 12:00

Temperature of Coolers

Cooler ID: Temperature

Relinquished By: *[Signature]*

Logbook No: \_\_\_\_\_

Date: 4-2-01

Logbook Page No. \_\_\_\_\_

METHOD 20 SUBMISSION STATUS

Client ID: Clean Air

PASC Sample #

47 14845  
~~43 14846~~  
~~48 14848~~

M29 Container #	Receipt Confirmation (P/A)	Volume Mark (P/A)	Volume as Marked*** (Y/N)	Comments	M29 Container #	Receipt Confirmation (P/A)	Volume Mark (P/A)	Volume as Marked*** (Y/N)	Comments
<b>Reagent Blank</b>					<b>Run # 1 Ul Outlet</b>				
Portions for all Metals					Portions for all Metals				
12	P/A			250P	1	P/A			250P
7	P/A	P/A	Y/N		2	P/A	P/A	Y/N	
8A	P/A	P/A	Y/N	250P	3	P/A	P/A	Y/N	250P
9	P/A	P/A	Y/N	1LP	4	P/A	P/A	Y/N	1LP
Portions for Mercury only					Portions for Mercury only				
10	P/A	P/A	Y/N	1LP	5A	P/A	P/A	Y/N	250P
8B	P/A	P/A	Y/N	250P	5B	P/A	P/A	Y/N	1LP
11	P/A	P/A	Y/N	250P	5C	P/A	P/A	Y/N	250P
<b>Run # Field Blank</b>					<b>Run # 2 Ul Outlet</b>				
Portions for all Metals					Portions for all Metals				
1	P/A			250P	1	P/A			250P
2	P/A	P/A	Y/N		2	P/A	P/A	Y/N	
3	P/A	P/A	Y/N	250P	3	P/A	P/A	Y/N	250P
4	P/A	P/A	Y/N	1LP	4	P/A	P/A	Y/N	1LP
Portions for Mercury only					Portions for Mercury only				
5A	P/A	P/A	Y/N	250P	5A	P/A	P/A	Y/N	250P
5B	P/A	P/A	Y/N	1LP	5B	P/A	P/A	Y/N	1LP
5C	P/A	P/A	Y/N	250P	5C	P/A	P/A	Y/N	250P

\* 6 filters requested; 2 for laboratory method blanks, 2 for ICAP blank spikes & 2 for low level (ICP-MS/GFAA) blank spikes

\*\* 200 ml required if Hg is not requested: 100 ml for FH rinse, 100 ml for peroxide rinses and 100 ml for Imp 4 rinses.

\*\*\* Estimated to be within 5% of the marked volume.

P = Present, A = Absent, Y = Yes, N = No.

Inspected By: \_\_\_\_\_

METHOD 29 SUBMISSION STATUS

Client ID: CleanAir

PASC Sample #: 14849 ~~14850~~

17248  
14849  
~~14850~~  
~~14850~~

M29 Container #	Receipt Confirmation (P/A)	Volume Mark (P/A)	Volume as Marked*** (Y/N)	Comments	M29 Container #	Receipt Confirmation (P/A)	Volume Mark (P/A)	Volume as Marked*** (Y/N)	Comments
<b>Reagent Blank</b> Portions for all Metals 12 Filters (3 min.): # of filters = _____ P/A 7 Acetone (Req. 100 ml) P/A P/A Y/N 8A 0.1 N Nitric Acid (Req. 300 ml) P/A P/A Y/N 9 Nitric/Peroxide (Req. 200 ml) P/A P/A Y/N Portions for Mercury only 10 KMnO4/H2SO4 (Req. 100 ml) P/A P/A Y/N 8B Water (Req. 100 ml) P/A P/A Y/N 11 HCl (Req. 200 ml water + 25 ml 8N HCl) P/A P/A Y/N					<b>Run # 4 U10 at let</b> Portions for all Metals 1 Filter P/A 250P 2 Acetone Rinse P/A P/A Y/N 3 Nitric Probe Rinse P/A P/A Y/N 250P 4 Nitric/Peroxide and Rinses P/A P/A Y/N 1LP Portions for Mercury only 5A Impinger 4 and Rinses P/A P/A Y/N 250P 5B Permanganate and Rinses P/A P/A Y/N 1LP 5C HCl Rinse P/A P/A Y/N 250P				
<b>Run # 3 U10 at let</b> Portions for all Metals 1 Filter P/A 250P 2 Acetone Rinse P/A P/A Y/N 3 Nitric Probe Rinse P/A P/A Y/N 250P 4 Nitric/Peroxide and Rinses P/A P/A Y/N 1LP Portions for Mercury only 5A Impinger 4 and Rinses P/A P/A Y/N 250P 5B Permanganate and Rinses P/A P/A Y/N 1LP 5C HCl Rinse P/A P/A Y/N 250P					<b>Run # 5 U10 at let</b> Portions for all Metals 1 Filter P/A 250P 2 Acetone Rinse P/A P/A Y/N 3 Nitric Probe Rinse P/A P/A Y/N 250P 4 Nitric/Peroxide and Rinses P/A P/A Y/N 1LP Portions for Mercury only 5A Impinger 4 and Rinses P/A P/A Y/N 250P 5B Permanganate and Rinses P/A P/A Y/N 1LP 5C HCl Rinse P/A P/A Y/N 250P				

\* 6 filters requested; 2 for laboratory method blanks, 2 for ICAP blank spikes & 2 for low level (ICP-MS/GFAA) blank spikes  
 \*\* 200 ml required if Hg is not requested: 100 ml for FH rinse, 100 ml for peroxide rinses and 100 ml for Imp 4 rinses.  
 \*\*\* Estimated to be within 5% of the marked volume.  
 P = Present, A = Absent, Y = Yes, N = No.

Inspected By: \_\_\_\_\_

METHOD 20 SUBMISSION STATUS

14850

Client ID: \_\_\_\_\_

PASC Sample #: 14852

M29 Container #	Receipt Confirmation (P/A)	Volume Mark (P/A)	Volume as Marked*** (Y/N)	Comments	M29 Container #	Receipt Confirmation (P/A)	Volume Mark (P/A)	Volume as Marked*** (Y/N)	Comments
<b>Reagent Blank</b>					<b>Run # _____</b>				
Portions for all Metals					Portions for all Metals				
12	Filters (3 min.): # of filters =	P/A			1	Filter	P/A		
7	Acetone (Req. 100 ml)	P/A	P/A	Y/N	2	Acetone Rinse	P/A	P/A	Y/N
8A	0.1 N Nitric Acid (Req. 300 ml)**	P/A	P/A	Y/N	3	Nitric Probe Rinse	P/A	P/A	Y/N
9	Nitric/Peroxide (Req. 200 ml)	P/A	P/A	Y/N	4	Nitric/Peroxide and Rinses	P/A	P/A	Y/N
Portions for Mercury only					Portions for Mercury only				
10	KMnO4/H2SO4 (Req. 100 ml)	P/A	P/A	Y/N	5A	Impinger 4 and Rinses	P/A	P/A	Y/N
8B	Water (Req. 100 ml)	P/A	P/A	Y/N	5B	Permanganate and Rinses	P/A	P/A	Y/N
11	HCl (Req. 200 ml water + 25 ml 8N HCl)	P/A	P/A	Y/N	5C	HCl Rinse	P/A	P/A	Y/N
<b>Run # <u>6 U1 Outlet</u></b>					<b>Run # _____</b>				
Portions for all Metals					Portions for all Metals				
1	Filter	P/A		250P	1	Filter	P/A		
2	Acetone Rinse	P/A	P/A	Y/N	2	Acetone Rinse	P/A	P/A	Y/N
3	Nitric Probe Rinse	P/A	P/A	Y/N	3	Nitric Probe Rinse	P/A	P/A	Y/N
4	Nitric/Peroxide and Rinses	P/A	P/A	Y/N	4	Nitric/Peroxide and Rinses	P/A	P/A	Y/N
Portions for Mercury only					Portions for Mercury only				
5A	Impinger 4 and Rinses	P/A	P/A	Y/N	5A	Impinger 4 and Rinses	P/A	P/A	Y/N
5B	Permanganate and Rinses	P/A	P/A	Y/N	5B	Permanganate and Rinses	P/A	P/A	Y/N
5C	HCl Rinse	P/A	P/A	Y/N	5C	HCl Rinse	P/A	P/A	Y/N

00223

\* 6 filters requested; 2 for laboratory method blanks, 2 for ICAP blank spikes & 2 for low level (ICP-MS/GFAA) blank spikes

\*\* 200 ml required if Hg is not requested: 100 ml for FH rinse, 100 ml for peroxide rinses and 100 ml for Imp 4 rinses.

\*\*\* Estimated to be within 5% of the marked volume.

P = Present, A = Absent, Y = Yes, N = No.

Inspected By: \_\_\_\_\_

METHOD 20 SUBMISSION STATUS

Client ID: Cleanair

PASC Sample #: 14852 14852 14852

14852  
14852  
14852

M29 Container #	Receipt Confirmation (P/A)	Volume Mark (P/A)	Volume as Marked*** (Y/N)	Comments	M29 Container #	Receipt Confirmation (P/A)	Volume Mark (P/A)	Volume as Marked*** (Y/N)	Comments
<b>Reagent Blank</b> Portions for all Metals 12 Filters (3 min.*): # of filters = _____ P/A 7 Acetone (Req. 100 ml) P/A P/A Y/N 8A 0.1 N Nitric Acid (Req. 300 ml**) P/A P/A Y/N 9 Nitric/Peroxide (Req. 200 ml) P/A P/A Y/N Portions for Mercury only 10 KMnO4/H2SO4 (Req. 100 ml) P/A P/A Y/N 8B Water (Req. 100 ml) P/A P/A Y/N 11 HCl (Req. 200 ml water + 25 ml 8N HCl) P/A P/A Y/N					<b>Run # 2 UZ Outlet</b> Portions for all Metals 1 Filter P/A 250P 2 Acetone Rinse P/A P/A Y/N 250P 3 Nitric Probe Rinse P/A P/A Y/N 250P 4 Nitric/Peroxide and Rinses P/A P/A Y/N 1LP Portions for Mercury only 5A Impinger 4 and Rinses P/A P/A Y/N 250P 5B Permanganate and Rinses P/A P/A Y/N 1LP 5C HCl Rinse P/A P/A Y/N 250P				
<b>Run # 1 UZ Outlet</b> Portions for all Metals 1 Filter P/A 250P 2 Acetone Rinse P/A P/A Y/N 3 Nitric Probe Rinse P/A P/A Y/N 250P 4 Nitric/Peroxide and Rinses P/A P/A Y/N 1LP Portions for Mercury only 5A Impinger 4 and Rinses P/A P/A Y/N 250P 5B Permanganate and Rinses P/A P/A Y/N 1LP 5C HCl Rinse P/A P/A Y/N 250P					<b>Run # 3 UZ Outlet</b> Portions for all Metals 1 Filter P/A 2 Acetone Rinse P/A P/A Y/N 3 Nitric Probe Rinse P/A P/A Y/N 250P 4 Nitric/Peroxide and Rinses P/A P/A Y/N 1LP Portions for Mercury only 5A Impinger 4 and Rinses P/A P/A Y/N 250P 5B Permanganate and Rinses P/A P/A Y/N 1LP 5C HCl Rinse P/A P/A Y/N 250P				

\* 6 filters requested; 2 for laboratory method blanks, 2 for ICAP blank spikes & 2 for low level (ICP-MS/GFAA) blank spikes  
 \*\* 200 ml required if Hg is not requested: 100 ml for FH rinse, 100 ml for peroxide rinses and 100 ml for Imp 4 rinses.  
 \*\*\* Estimated to be within 5% of the marked volume.  
 P = Present, A = Absent, Y = Yes, N = No.

Inspected By: \_\_\_\_\_

METHOD 29 SUBMISSION STATUS

14857  
14857  
14857  
14857

Client ID: \_\_\_\_\_

PASC Sample #: ~~14856~~ 14858

M29 Container #	Receipt Confirmation (P/A)	Volume Mark (P/A)	Volume as Marked*** (Y/N)	Comments	M29 Container #	Receipt Confirmation (P/A)	Volume Mark (P/A)	Volume as Marked*** (Y/N)	Comments
<b>Reagent Blank</b> Portions for all Metals 12 Filters (3 min.) # of filters = _____ P/A 7 Acetone (Req. 100 ml) P/A P/A Y/N 8A 0.1 N Nitric Acid (Req. 300 ml**) P/A P/A Y/N 9 Nitric/Peroxide (Req. 200 ml) P/A P/A Y/N Portions for Mercury only 10 KMnO4/H2SO4 (Req. 100 ml) P/A P/A Y/N 8B Water (Req. 100 ml) P/A P/A Y/N 11 HCl (Req. 200 ml water + 25 ml 8N HCl) P/A P/A Y/N					<b>Run # 5 U2 Outlet</b> Portions for all Metals 1 Filter (P/A) 250P 2 Acetone Rinse (P/A) P/A Y/N 3 Nitric Probe Rinse (P/A) (P/A) (Y/N) 250P 4 Nitric/Peroxide and Rinses (P/A) (P/A) (Y/N) 1LP Portions for Mercury only 5A Impinger 4 and Rinses (P/A) (P/A) (Y/N) 250P 5B Permanganate and Rinses (P/A) (P/A) (Y/N) 1LP 5C HCl Rinse (P/A) (P/A) (Y/N) 250P				
<b>Run # 4 U2 Outlet</b> Portions for all Metals 1 Filter (P/A) 250P 2 Acetone Rinse (P/A) P/A Y/N 3 Nitric Probe Rinse (P/A) (P/A) (Y/N) 250P 4 Nitric/Peroxide and Rinses (P/A) (P/A) (Y/N) 1LP Portions for Mercury only 5A Impinger 4 and Rinses (P/A) (P/A) (Y/N) 250P 5B Permanganate and Rinses (P/A) (P/A) (Y/N) 1LP 5C HCl Rinse (P/A) (P/A) (Y/N) 250P					<b>Run # 6 U2 Outlet</b> Portions for all Metals 1 Filter (P/A) 250P 2 Acetone Rinse (P/A) P/A Y/N 3 Nitric Probe Rinse (P/A) (P/A) (Y/N) 250P 4 Nitric/Peroxide and Rinses (P/A) (P/A) (Y/N) 1LP Portions for Mercury only 5A Impinger 4 and Rinses (P/A) (P/A) (Y/N) 250P 5B Permanganate and Rinses (P/A) (P/A) (Y/N) 1LP 5C HCl Rinse (P/A) (P/A) (Y/N) 250P				

\* 6 filters requested; 2 for laboratory method blanks, 2 for ICAP blank spikes & 2 for low level (ICP-MS/GFAA) blank spikes  
 \*\* 200 ml required if Hg is not requested: 100 ml for FH rinse, 100 ml for peroxide rinses and 100 ml for Imp 4 rinses.  
 \*\*\* Estimated to be within 5% of the marked volume.  
 P = Present, A = Absent, Y = Yes, N = No.

Inspected By: \_\_\_\_\_

METHOD 29 SUBMISSION STATUS

Client ID: \_\_\_\_\_

PASC Sample #: ~~14857~~ ~~14859~~ ~~14860~~

14857 14859  
14859  
14860

MZ9 Container #	Receipt Confirmation (P/A)	Volume Mark (P/A)	Volume as Marked*** (Y/N)	Comments	MZ9 Container #	Receipt Confirmation (P/A)	Volume Mark (P/A)	Volume as Marked*** (Y/N)	Comments		
<b>Reagent Blank</b>					<b>Run # 2 U3 Outlet</b>						
<b>Portions for all Metals</b>					<b>Portions for all Metals</b>						
12	Filters (3 min.*): # of filters = _____	P/A			1	Filter	P/A		250P		
7	Acetone (Req. 100 ml)	P/A	P/A	Y/N	2	Acetone Rinse	P/A	P/A	Y/N		
8A	0.1 N Nitric Acid (Req. 300 ml**)	P/A	P/A	Y/N	3	Nitric Probe Rinse	P/A	P/A	Y/N	250P	
9	Nitric/Peroxide (Req. 200 ml)	P/A	P/A	Y/N	4	Nitric/Peroxide and Rinses	P/A	P/A	Y/N	LLP	
<b>Portions for Mercury only</b>					<b>Portions for Mercury only</b>						
10	KMnO4/H2SO4 (Req. 100 ml)	P/A	P/A	Y/N	5A	Impinger 4 and Rinses	P/A	P/A	Y/N	250P	
8B	Water (Req. 100 ml)	P/A	P/A	Y/N	5B	Permanganate and Rinses	P/A	P/A	Y/N	LLP	
11	HCl (Req. 200 ml water + 25 ml 8N HCl)	P/A	P/A	Y/N	5C	HCl Rinse	P/A	P/A	Y/N	250P	
<b>Run # 1 U3 Outlet</b>					<b>Run # 3 U3 Outlet</b>						
<b>Portions for all Metals</b>					<b>Portions for all Metals</b>						
1	Filter	P/A		250P	1	Filter	P/A		250P		
2	Acetone Rinse	P/A	P/A	Y/N	2	Acetone Rinse	P/A	P/A	Y/N		
3	Nitric Probe Rinse	P/A	P/A	Y/N	3	Nitric Probe Rinse	P/A	P/A	Y/N	250P	
4	Nitric/Peroxide and Rinses	P/A	P/A	Y/N	4	Nitric/Peroxide and Rinses	P/A	P/A	Y/N	LLP	
<b>Portions for Mercury only</b>					<b>Portions for Mercury only</b>						
5A	Impinger 4 and Rinses	P/A	P/A	Y/N	250P	5A	Impinger 4 and Rinses	P/A	P/A	Y/N	250P
5B	Permanganate and Rinses	P/A	P/A	Y/N	LLP	5B	Permanganate and Rinses	P/A	P/A	Y/N	LLP
5C	HCl Rinse	P/A	P/A	Y/N	250P	5C	HCl Rinse	P/A	P/A	Y/N	250P

\* 6 filters requested; 2 for laboratory method blanks, 2 for ICAP blank spikes & 2 for low level (ICP-MS/GFAA) blank spikes

\*\* 200 ml required if Hg is not requested: 100 ml for FH rinse, 100 ml for peroxide rinses and 100 ml for Imp 4 rinses.

\*\*\* Estimated to be within 5% of the marked volume.

P = Present, A = Absent, Y = Yes, N = No.

Inspected By: \_\_\_\_\_

METHOD 29 SUBMISSION STATUS

14860 14862  
14861

Client ID: \_\_\_\_\_

PASC Sample #: 14860 14862

M29 Container #	Receipt Confirmation (P/A)	Volume Mark (P/A)	Volume as Marked*** (Y/N)	Comments	M29 Container #	Receipt Confirmation (P/A)	Volume Mark (P/A)	Volume as Marked*** (Y/N)	Comments
<b>Reagent Blank</b>					<b>Run # 5 U3 Outlet</b>				
<b>Portions for all Metals</b>					<b>Portions for all Metals</b>				
12	Filters (3 min.): # of filters =	P/A			1	Filter	P/A		250P
7	Acetone (Req. 100 ml)	P/A	P/A	Y/N	2	Acetone Rinse	P/A	P/A	Y/N
8A	0.1 N Nitric Acid (Req. 300 ml**)	P/A	P/A	Y/N	3	Nitric Probe Rinse	P/A	P/A	Y/N
9	Nitric/Peroxide (Req. 200 ml)	P/A	P/A	Y/N	4	Nitric/Peroxide and Rinses	P/A	P/A	Y/N
<b>Portions for Mercury only</b>					<b>Portions for Mercury only</b>				
10	KMnO4/H2SO4 (Req. 100 ml)	P/A	P/A	Y/N	5A	Impinger 4 and Rinses	P/A	P/A	Y/N
8B	Water (Req. 100 ml)	P/A	P/A	Y/N	5B	Permanganate and Rinses	P/A	P/A	Y/N
11	HCl (Req. 200 ml water + 25 ml 8N HCl)	P/A	P/A	Y/N	5C	HCl Rinse	P/A	P/A	Y/N
<b>Run # 4 U3 Outlet</b>					<b>Run # 6 U3 Outlet</b>				
<b>Portions for all Metals</b>					<b>Portions for all Metals</b>				
1	Filter	P/A		250P	1	Filter	P/A		250P
2	Acetone Rinse	P/A	P/A	Y/N	2	Acetone Rinse	P/A	P/A	Y/N
3	Nitric Probe Rinse	P/A	P/A	Y/N	3	Nitric Probe Rinse	P/A	P/A	Y/N
4	Nitric/Peroxide and Rinses	P/A	P/A	Y/N	4	Nitric/Peroxide and Rinses	P/A	P/A	Y/N
<b>Portions for Mercury only</b>					<b>Portions for Mercury only</b>				
5A	Impinger 4 and Rinses	P/A	P/A	Y/N	5A	Impinger 4 and Rinses	P/A	P/A	Y/N
5B	Permanganate and Rinses	P/A	P/A	Y/N	5B	Permanganate and Rinses	P/A	P/A	Y/N
5C	HCl Rinse	P/A	P/A	Y/N	5C	HCl Rinse	P/A	P/A	Y/N

\* 6 filters requested; 2 for laboratory method blanks, 2 for ICAP blank spikes & 2 for low level (ICP-MS/GFAA) blank spikes  
 \*\* 200 ml required if Hg is not requested: 100 ml for FH rinse, 100 ml for peroxide rinses and 100 ml for Imp 4 rinses.  
 \*\*\* Estimated to be within 5% of the marked volume.  
 P = Present, A = Absent, Y = Yes, N = No.

Inspected By: \_\_\_\_\_



**APPENDIX TO LABORATORY DATA - PCDDS/PCDFS**

K

18 APRIL 2001

Scott Brown  
Clean Air Engineering  
500 West Wood Street  
Palatine, IL 60067

Ph.: 847-991-3300  
Fax: 847-991-3385

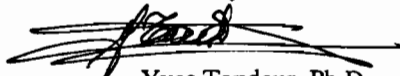
Dear Scott;

Attached to this narrative are the analytical results you requested on samples submitted for the determination of polychlorinated dibenzo-*p*-dioxins and dibenzofurans. The insert below summarizes the relevant information pertaining to your project. In particular, the QC annotations bring to your attention specific analytical observations and assessments made during the sample handling and data interpretation phases. A brief description of the report's components is provided on the next page.

<b>Your Project No.:</b>	<b>8890</b>
<b>AAP Project No.:</b>	<b>P1454</b>
<b>Analytical Protocol:</b>	<b>Method 23</b>
<b>No. of Samples Submitted:</b>	<b>12</b>
<b>No. of Samples Analyzed:</b>	<b>10</b>
<b>No. of Lab Method Blanks (MB):</b>	<b>2</b>
<b>No. of OPRs:</b>	<b>2</b>
<b>Audit Sample:</b>	<b>1</b>
<b>QC Annotations:</b>	
1.	Data meet QA/QC requirements.
2.	Sample "M23-0090-01" was received on April 5 <sup>th</sup> , 2001 and extracted under batch 324 with its own lab method blank and OPR.
3.	An "A" data qualifier is used for analytes with a concentration falling below the calibration curve.

Alta Analytical Perspectives remains committed to serving you in the most effective manner. Should you have any questions or need additional information and technical support, please, do not hesitate to contact us at the telephone numbers shown below. We wanted to thank you for choosing Alta Analytical Perspectives as part of your analytical support team.

Sincerely,



Yves Tondeur, Ph.D.

P1454

## REPORTING PLATFORMS

### LEVEL I:

- ① PART 1
- ② SUMMARY TOPSHEETS
- ③ COC

### LEVEL II:

- ① PARTS 1, 2, 3, 4
- ② WITH ICAL SUMMARY

### LEVEL III:

- ① PARTS 1, 2, 3, 4
- ② WITH COMPLETE RAW DATA FOR ICAL

### PLATINUM:

- ① PARTS 1, 2, 3, 4
- ② WITH COMPLETE RAW DATA FOR ICAL
- ③ ON-GOING PRECISION & ACCURACY DATA

ALTA ANALYTICAL PERSPECTIVES

## Part 1 Narrative

- Letter
- QC Annotations
- Project Information

ALTA ANALYTICAL PERSPECTIVES

## Part 3 Results

- Summary Topsheets
- Raw Data
- SICPs
- Areas
- Retention Times
- S/N
- Ion Abundance Ratios

ALTA ANALYTICAL PERSPECTIVES

## Part 2 Path

- Overview
- Protocol
- Extraction
- Analysis
- Spike Profile
- SOPs
- QC
- Reporting
- Special Requirements

ALTA ANALYTICAL PERSPECTIVES

## Part 4 Performance

- System Checks
- Mass Spectrometry
- Gas Chromatography
- Initial Calibration
- Continuing Calibration
- OPR

Extraction  
Tracking Sheets

Fractionation  
Tracking Sheets

Injection  
Tracking Sheets

Part 4  
GC, MS,  
ConCal

Part 4D  
ICAL

Part 4E  
OPR

# Sample Summary



# Method 23

Analyte	0_319_MB001	Unit 1 Run 1 Out	Unit 1 Run 2 Out	Unit 2 Run 1 Out	Unit 2 Run 2 Out	Unit 2 Run 3 Out
	pg	pg	pg	pg	pg	pg
2,3,7,8-TCDD	(1.58)	3.82	[3.72]	[4.79]	(1.08)	3.6
1,2,3,7,8-PeCDD	(2.22)	14.1	11.9	18.9	12.2	14.6
1,2,3,4,7,8-HxCDD	(6.65)	16.4	16.9	25.9	16.3	19.1
1,2,3,6,7,8-HxCDD	(7.41)	46	43.5	71.5	51.6	52.1
1,2,3,7,8,9-HxCDD	(6.63)	28.8	23.7	35.6	23.4	29.1
1,2,3,4,6,7,8-HpCDD	(4.2)	292	274	315	249	261
OCDD	19.7	621	618	462	353	442
2,3,7,8-TCDF	(2.43)	22.7	21.9	25.7	18.9	20.8
1,2,3,7,8-PeCDF	(2.29)	28.2	26.3	36.3	25	25.7
2,3,4,7,8-PeCDF	(2.26)	43	39.6	58	36.4	38.3
1,2,3,4,7,8-HxCDF	(1.74)	41.5	38.9	41.7	32.6	34.1
1,2,3,6,7,8-HxCDF	(1.59)	42.9	38.5	48.8	36	37
2,3,4,6,7,8-HxCDF	(1.69)	49.2	45.2	56.5	37.6	41.1
1,2,3,7,8,9-HxCDF	(1.93)	9.59	9.74	12	8.64	8.62
1,2,3,4,6,7,8-HpCDF	(2.3)	176	158	148	106	126
1,2,3,4,7,8,9-HpCDF	(2.73)	14	10.8	12.6	8.13	12.1
OCDF	(8.96)	51.4	44.6	45.1	25.6	51.4
<b>Totals &amp; TEQs</b>						
TCDDs	ND	229	196	457	332	318
PeCDDs	ND	409	362	806	534	549
HxCDDs	ND	724	686	1300	963	1010
HpCDDs	ND	568	537	623	487	520
TCDFs	ND	822	773	1010	734	769
PeCDFs	ND	570	515	710	466	483
HxCDFs	ND	412	365	463	318	332
HpCDFs	ND	242	216	210	150	160
<b>Total PCDD/Fs</b>	<b>19.7</b>	<b>4650</b>	<b>4310</b>	<b>6090</b>	<b>4360</b>	<b>4640</b>
<b>TEQ (ND=0)</b>	<b>0.0197</b>	<b>65.0</b>	<b>56.0</b>	<b>77.3</b>	<b>52.1</b>	<b>60.0</b>
<b>TEQ (ND=DL/2)</b>	<b>3.54</b>	<b>65.0</b>	<b>56.0</b>	<b>77.3</b>	<b>52.6</b>	<b>60.0</b>

() = DL  
 [] = EMPC

Reviewer Cl  
 Date 18 Apr 01

# Sample Summary



# Method 23

Analyte	Unit 3 Run 1 Out	Unit 3 Run 2 Out	Unit 3 Run 3 Out	Field Blank
	pg	pg	pg	pg
2,3,7,8-TCDD	9.45	6.74	7.2	(1.35)
1,2,3,7,8-PeCDD	53.3	44	37.7	(1.44)
1,2,3,4,7,8-HxCDD	81.4	71	59.1	(5.71)
1,2,3,6,7,8-HxCDD	268	236	205	(6.36)
1,2,3,7,8,9-HxCDD	127	113	98.2	(5.69)
1,2,3,4,6,7,8-HpCDD	1520	1390	1190	8.6
OCDD	3040	3110	2510	36.3
2,3,7,8-TCDF	60.8	50.2	40.6	(2.99)
1,2,3,7,8-PeCDF	99.7	83.6	66.4	(2.9)
2,3,4,7,8-PeCDF	206	171	137	(2.85)
1,2,3,4,7,8-HxCDF	172	152	119	(1.12)
1,2,3,6,7,8-HxCDF	177	157	127	(1.02)
2,3,4,6,7,8-HxCDF	217	209	163	(1.09)
1,2,3,7,8,9-HxCDF	47.5	45.6	32.6	(1.24)
1,2,3,4,6,7,8-HpCDF	844	882	679	5.92
1,2,3,4,7,8,9-HpCDF	43.1	50.2	36.5	(1.8)
OCDF	170	218	166	(9.63)
<b>Totals &amp; TEQs</b>				
TCDDs	822	689	565	5.45
PeCDDs	2120	1830	1610	ND
HxCDDs	4150	3660	3240	7.89
HpCDDs	3010	2800	2350	18.2
TCDFs	2480	1890	1590	ND
PeCDFs	2290	1880	1520	ND
HxCDFs	1870	1660	1330	4.24
HpCDFs	1100	1180	900	5.92
<b>Total PCDD/Fs</b>	<b>21100</b>	<b>18900</b>	<b>15800</b>	<b>78.0</b>
<b>TEQ (ND=0)</b>	<b>286</b>	<b>248</b>	<b>204</b>	<b>0.182</b>
<b>TEQ (ND=DL/2)</b>	<b>286</b>	<b>248</b>	<b>204</b>	<b>3.28</b>

( ) = DL

EMP

Reviewer

Ce  
18 Apr 01

# Sample Summary \*



# Method 23

Analyte	0_319_MB001	Unit 1 Run 1 Out	Unit 1 Run 2 Out	Unit 2 Run 1 Out	Unit 2 Run 2 Out	Unit 2 Run 3 Out
	pg	pg	pg	pg	pg	pg
2,3,7,8-TCDD	(1.58)	3.82	[3.72]	[4.79]	(1.08)	3.6
1,2,3,7,8-PeCDD	(2.22)	14.1	11.9	18.9	12.2	14.6
1,2,3,4,7,8-HxCDD	(6.65)	16.4	16.9	25.9	16.3	19.1
1,2,3,6,7,8-HxCDD	(7.41)	46	43.5	71.5	51.6	52.1
1,2,3,7,8,9-HxCDD	(6.63)	28.8	23.7	35.6	23.4	29.1
1,2,3,4,6,7,8-HpCDD	(4.2)	292	274	315	249	261
OCDD	19.7	621	618	462	353	442
2,3,7,8-TCDF	(2.43)	22.7	21.9	25.7	18.9	20.8
1,2,3,7,8-PeCDF	(2.29)	28.2	26.3	36.3	25	25.7
2,3,4,7,8-PeCDF	(2.26)	43	39.6	58	36.4	38.3
1,2,3,4,7,8-HxCDF	(1.74)	41.5	38.9	41.7	32.6	34.1
1,2,3,6,7,8-HxCDF	(1.59)	42.9	38.5	48.8	36	37
2,3,4,6,7,8-HxCDF	(1.69)	49.2	45.2	56.5	37.6	41.1
1,2,3,7,8,9-HxCDF	(1.93)	9.59	9.74	12	8.64	8.62
1,2,3,4,6,7,8-HpCDF	(2.3)	176	158	148	106	126
1,2,3,4,7,8,9-HpCDF	(2.73)	14	10.8	12.6	8.13	12.1
OCDF	(8.96)	51.4	44.6	45.1	25.6	51.4
<b>Totals &amp; TEQs</b>						
TCDDs	ND	229	196	457	332	318
PeCDDs	ND	409	362	806	534	549
HxCDDs	ND	724	686	1300	963	1010
HpCDDs	ND	568	537	623	487	520
TCDFs	ND	822	773	1010	734	769
PeCDFs	ND	570	515	710	466	483
HxCDFs	ND	412	365	463	318	332
HpCDFs	ND	242	216	210	150	160
<b>Total PCDD/Fs</b>	<b>19.7</b>	<b>4650</b>	<b>4310</b>	<b>6090</b>	<b>4360</b>	<b>4640</b>
<b>TEQ (ND=0)</b>	<b>0.0197</b>	<b>65.0</b>	<b>56.0</b>	<b>77.3</b>	<b>52.1</b>	<b>60.0</b>
<b>TEQ (ND=DL/2)</b>	<b>3.54</b>	<b>65.0</b>	<b>56.0</b>	<b>77.3</b>	<b>52.6</b>	<b>60.0</b>

\* DB-225 Confirmation results Incorporated

() = DL  
 [] = EMPC

Reviewer CA  
 Date 21 Apr 01

# Sample Summary \* Method 23

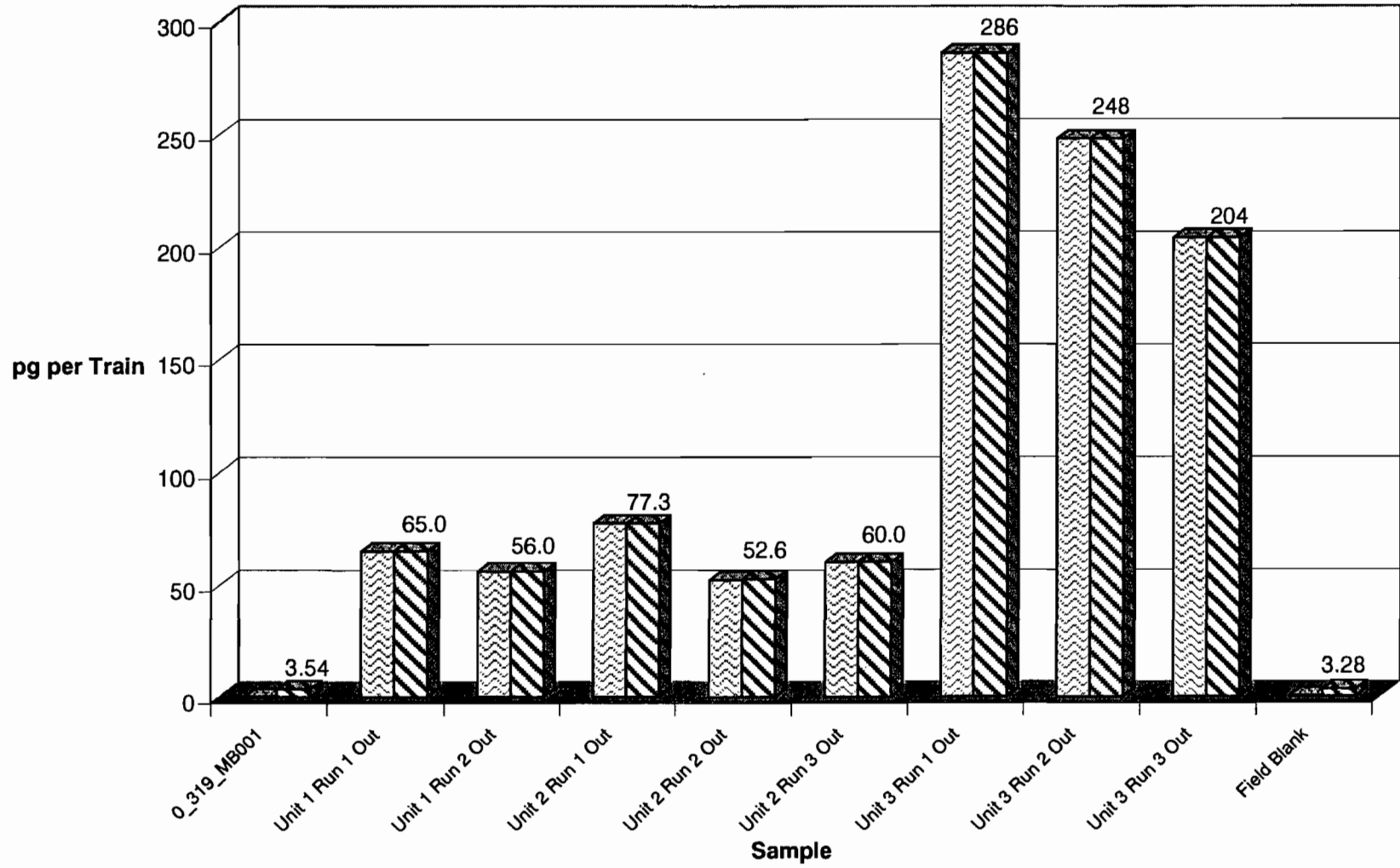
Analyte	Unit 3 Run 1 Out	Unit 3 Run 2 Out	Unit 3 Run 3 Out	Field Blank
	pg	pg	pg	pg
2,3,7,8-TCDD	9.45	6.74	7.2	(1.35)
1,2,3,7,8-PeCDD	53.3	44	37.7	(1.44)
1,2,3,4,7,8-HxCDD	81.4	71	59.1	(5.71)
1,2,3,6,7,8-HxCDD	268	236	205	(6.36)
1,2,3,7,8,9-HxCDD	127	113	98.2	(5.69)
1,2,3,4,6,7,8-HpCDD	1520	1390	1190	8.6
OCDD	3040	3110	2510	36.3
2,3,7,8-TCDF	62.6	48.1	40.6	(2.99)
1,2,3,7,8-PeCDF	99.7	83.6	66.4	(2.9)
2,3,4,7,8-PeCDF	206	171	137	(2.85)
1,2,3,4,7,8-HxCDF	172	152	119	(1.12)
1,2,3,6,7,8-HxCDF	177	157	127	(1.02)
2,3,4,6,7,8-HxCDF	217	209	163	(1.09)
1,2,3,7,8,9-HxCDF	47.5	45.6	32.6	(1.24)
1,2,3,4,6,7,8-HpCDF	844	882	679	5.92
1,2,3,4,7,8,9-HpCDF	43.1	50.2	36.5	(1.8)
OCDF	170	218	166	(9.63)
<b>Totals &amp; TEQs</b>				
TCDDs	822	689	565	5.45
PeCDDs	2120	1830	1610	ND
HxCDDs	4150	3660	3240	7.89
HpCDDs	3010	2800	2350	18.2
TCDFs	2480	1890	1590	ND
PeCDFs	2290	1880	1520	ND
HxCDFs	1870	1660	1330	4.24
HpCDFs	1100	1180	900	5.92
<b>Total PCDD/Fs</b>	<b>21100</b>	<b>18900</b>	<b>15800</b>	<b>78.0</b>
<b>TEQ (ND=0)</b>	<b>287</b>	<b>248</b>	<b>204</b>	<b>0.182</b>
<b>TEQ (ND=DL/2)</b>	<b>287</b>	<b>248</b>	<b>204</b>	<b>3.28</b>

\* DB-225 Confirmation results incorporated

( ) = DL  
 [ ] = EMPG

Reviewer Ce  
U.A. DL

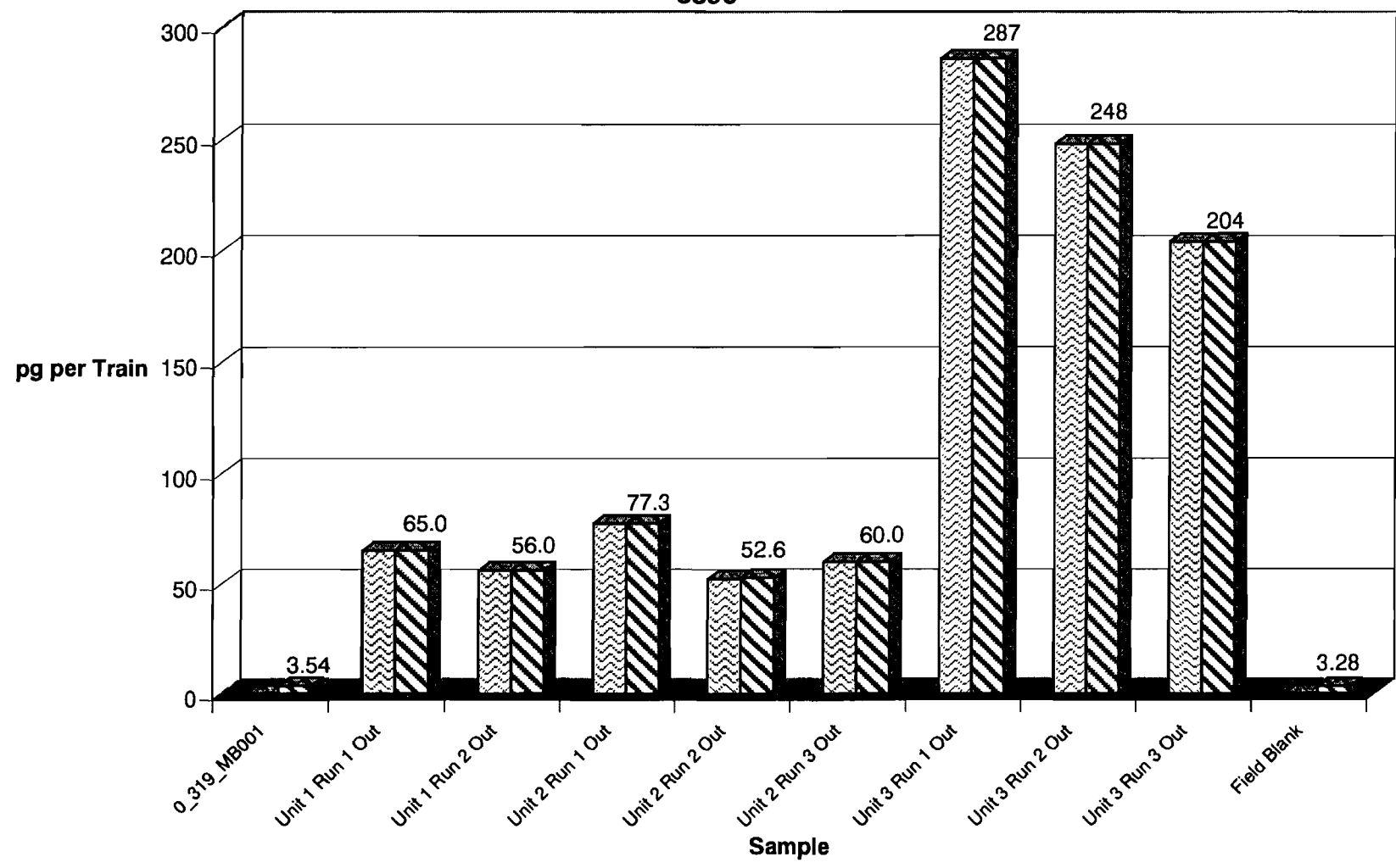
TEQ  
P1454  
8890



TEQ (ND=0)      TEQ (ND=DL/2)

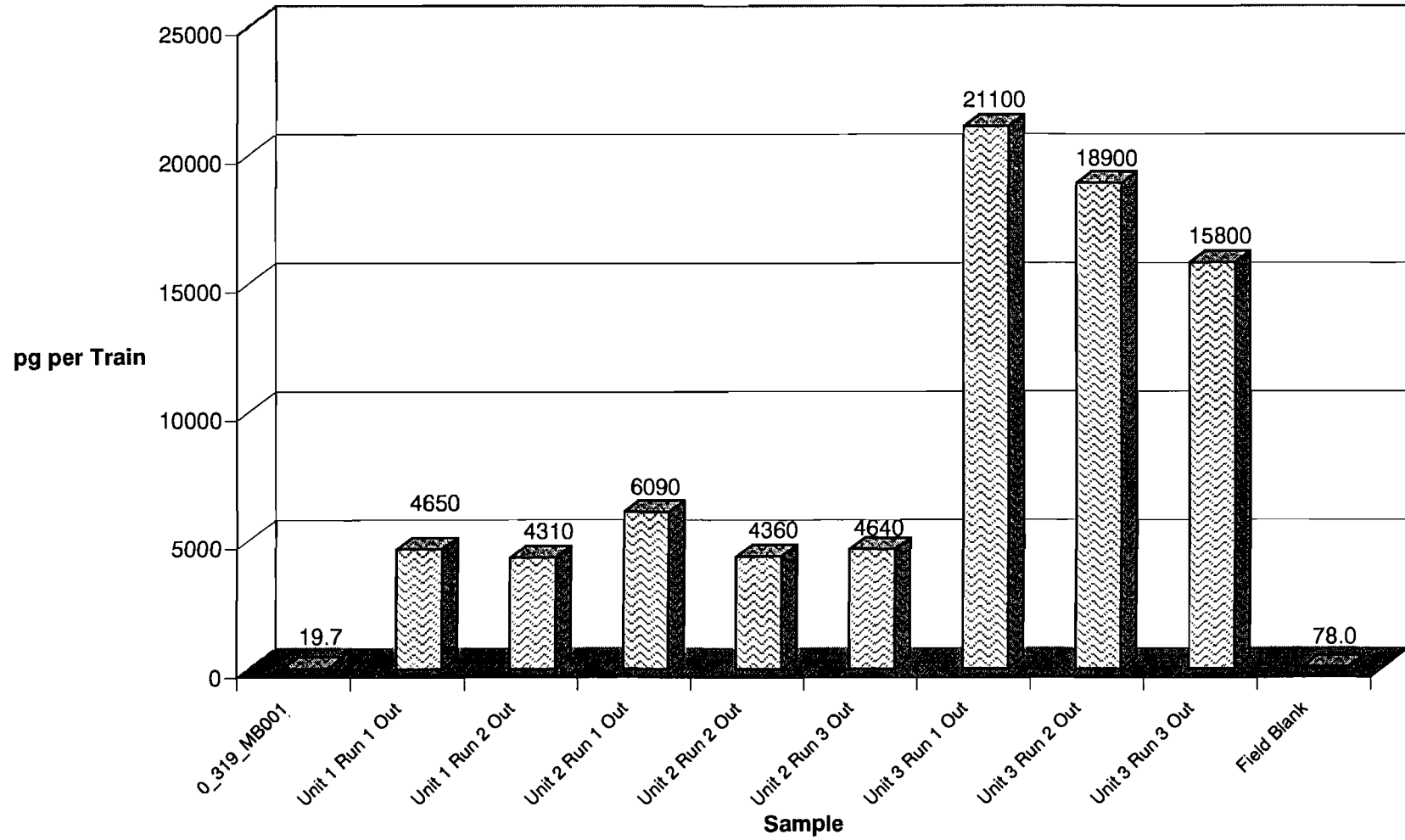


TEQ  
P1454 confirmation incorporated  
8890

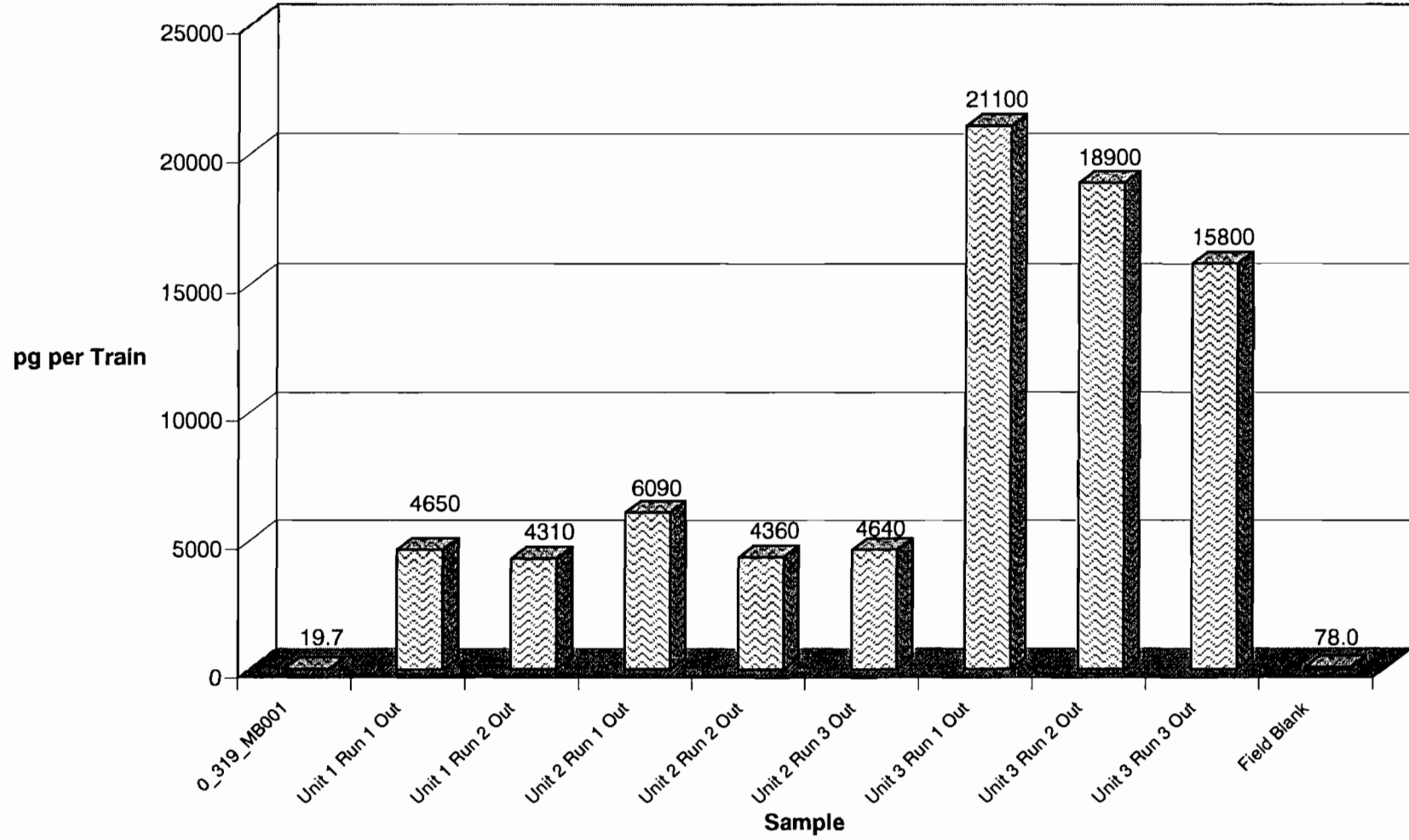


TEQ (ND=0)      TEQ (ND=DL/2)

Total PCDD/Fs  
P1454  
8890



**Total PCDD/Fs**  
**P1454 confirmation incorporated**  
**8890**




**Sample ID: 0\_319\_MB001**

**Method 23**

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	n/a
Project ID:	8890	Weight/Volume:	1	Sample ID:	0_319_MB001	Date Extracted:	2 Apr 01
Date Collected:	n/a			QC Batch No.:	319	Date Analyzed:	4-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	ND	1.58			98.7	100	110
1,2,3,7,8-PeCDD	ND	2.22			105	95.4	110
1,2,3,4,7,8-HxCDD	ND	6.65			104	93	110
1,2,3,6,7,8-HxCDD	ND	7.41			104	93	110
1,2,3,7,8,9-HxCDD	ND	6.63			104	93	110
1,2,3,4,6,7,8-HpCDD	ND	4.2			104	92.5	110
OCDD	19.7			A	91.8	92.5	110
2,3,7,8-TCDF	ND	2.43			98.4	100	110
1,2,3,7,8-PeCDF	ND	2.29			98.2	95.4	110
2,3,4,7,8-PeCDF	ND	2.26			98.2	95.4	110
1,2,3,4,7,8-HxCDF	ND	1.74			112	96.5	110
1,2,3,6,7,8-HxCDF	ND	1.59			112	96.5	110
2,3,4,6,7,8-HxCDF	ND	1.69			112	96.5	110
1,2,3,7,8,9-HxCDF	ND	1.93			112	96.5	110
1,2,3,4,6,7,8-HpCDF	ND	2.3			114	92.5	110
1,2,3,4,7,8,9-HpCDF	ND	2.73			114	92.5	110
OCDF	ND	8.96			99.4	92.5	110

Totals & TEQs				ALTA ANALYTICAL PERSPECTIVES			
TCDDs	ND	1.58		 <p>2714 Exchange Drive Wilmington North Carolina 28405 USA</p> <p>Tel: 910 794-1613 Fax: 910 794-3919 e-mail: ytondeur@cs.com web: www.ultratrace.com</p>			
PeCDDs	ND	2.22					
HxCDDs	ND	6.88					
HpCDDs	ND		4.2				
TCDFs	ND	2.43					
PeCDFs	ND	2.27					
HxCDFs	ND	1.73					
HpCDFs	ND	2.5					
<b>Total PCDD/Fs</b>	<b>19.7</b>		<b>23.9</b>				
<b>TEQ (ND=0)</b>	<b>0.0197</b>		<b>0.0197</b>				
<b>TEQ (ND=DL/2)</b>	<b>3.54</b>		<b>3.54</b>	ITEF	ITEF		

Reviewer ca  
Date 18 Apr 01

# Sample ID: Unit 1 Run 1 Out

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_001	Date Extracted:	2 Apr 01
Date Collected:	27 Mar 01			QC Batch No.:	319	Date Analyzed:	4-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	3.82			A	90.8	102	101
1,2,3,7,8-PeCDD	14.1			A	95.3	97.4	101
1,2,3,4,7,8-HxCDD	16.4			A	96.7	89.8	101
1,2,3,6,7,8-HxCDD	46			A	96.7	89.8	101
1,2,3,7,8,9-HxCDD	28.8			A	96.7	89.8	101
1,2,3,4,6,7,8-HpCDD	292				99.1	96.6	101
OCDD	621			B	77.2	96.6	101
2,3,7,8-TCDF	22.7				89.8	102	101
1,2,3,7,8-PeCDF	28.2			A	90.5	97.4	101
2,3,4,7,8-PeCDF	43			A	90.5	97.4	101
1,2,3,4,7,8-HxCDF	41.5			A	106	94.1	101
1,2,3,6,7,8-HxCDF	42.9			A	106	94.1	101
2,3,4,6,7,8-HxCDF	49.2			A	106	94.1	101
1,2,3,7,8,9-HxCDF	9.59			A	106	94.1	101
1,2,3,4,6,7,8-HpCDF	176				104	96.6	101
1,2,3,4,7,8,9-HpCDF	14			A	104	96.6	101
OCDF	51.4			A	87.4	96.6	101

Totals & TEQs			
TCDDs	229		
PeCDDs	409		
HxCDDs	724		
HpCDDs	568		
TCDFs	822		
PeCDFs	570		
HxCDFs	412	418	
HpCDFs	242		
<b>Total PCDD/Fs</b>	<b>4650</b>	<b>4660</b>	
<b>TEQ (ND=0)</b>	<b>65.0</b>	<b>65.0</b>	<b>ITEF</b>
<b>TEQ (ND=DL/2)</b>	<b>65.0</b>	<b>65.0</b>	<b>ITEF</b>



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Reviewer Ce  
18 APR 01

# Sample ID: Unit 1 Run 2 Out

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_002	Date Extracted:	2 Apr 01
Date Collected:	28 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	EMPC		3.72	A	85.1	97.5	93.3
1,2,3,7,8-PeCDD	11.9			A	90	91.9	93.3
1,2,3,4,7,8-HxCDD	16.9			A	90	86.6	93.3
1,2,3,6,7,8-HxCDD	43.5			A	90	86.6	93.3
1,2,3,7,8,9-HxCDD	23.7			A	90	86.6	93.3
1,2,3,4,6,7,8-HpCDD	274				87.8	88.4	93.3
OCDD	618			B	72.7	88.4	93.3
2,3,7,8-TCDF	21.9				83.3	97.5	93.3
1,2,3,7,8-PeCDF	26.3			A	85.5	91.9	93.3
2,3,4,7,8-PeCDF	39.6			A	85.5	91.9	93.3
1,2,3,4,7,8-HxCDF	38.9			A	100	89.4	93.3
1,2,3,6,7,8-HxCDF	38.5			A	100	89.4	93.3
2,3,4,6,7,8-HxCDF	45.2			A	100	89.4	93.3
1,2,3,7,8,9-HxCDF	9.74			A	100	89.4	93.3
1,2,3,4,6,7,8-HpCDF	158				96.7	88.4	93.3
1,2,3,4,7,8,9-HpCDF	10.8			A	96.7	88.4	93.3
OCDF	44.6			A	82.2	88.4	93.3

Totals & TEQs			
TCDDs	196		210
PeCDDs	362		
HxCDDs	686		
HpCDDs	537		
TCDFs	773		
PeCDFs	515		
HxCDFs	365		379
HpCDFs	216		
<b>Total PCDD/Fs</b>	<b>4310</b>		<b>4340</b>
<b>TEQ (ND=0)</b>	<b>56.0</b>		<b>59.7</b>
<b>TEQ (ND=DL/2)</b>	<b>56.0</b>		<b>59.7</b>



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Reviewer: *cl*  
Date: *18 Apr 01*

# Sample ID: Unit 2 Run 1 Out

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_004	Date Extracted:	2 Apr 01
Date Collected:	26 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	EMPC		4.79	A	84.3	102	89.7
1,2,3,7,8-PeCDD	18.9			A	88.9	97.8	89.7
1,2,3,4,7,8-HxCDD	25.9			A	90.2	88.3	89.7
1,2,3,6,7,8-HxCDD	71.5				90.2	88.3	89.7
1,2,3,7,8,9-HxCDD	35.6			A	90.2	88.3	89.7
1,2,3,4,6,7,8-HpCDD	315				84.9	92.8	89.7
OCDD	462			B	66.4	92.8	89.7
2,3,7,8-TCDF	25.7				81.5	102	89.7
1,2,3,7,8-PeCDF	36.3			A	83.5	97.8	89.7
2,3,4,7,8-PeCDF	58				83.5	97.8	89.7
1,2,3,4,7,8-HxCDF	41.7			A	98.8	92.1	89.7
1,2,3,6,7,8-HxCDF	48.8			A	98.8	92.1	89.7
2,3,4,6,7,8-HxCDF	56.5				98.8	92.1	89.7
1,2,3,7,8,9-HxCDF	12			A	98.8	92.1	89.7
1,2,3,4,6,7,8-HpCDF	148				93.5	92.8	89.7
1,2,3,4,7,8,9-HpCDF	12.6			A	93.5	92.8	89.7
OCDF	45.1			A	74.9	92.8	89.7

Totals & TEQs			
TCDDs	457		485
PeCDDs	806		
HxCDDs	1300		
HpCDDs	623		
TCDFs	1010		1030
PeCDFs	710		715
HxCDFs	463		
HpCDFs	210		
<b>Total PCDD/Fs</b>	<b>6090</b>		<b>6130</b>
<b>TEQ (ND=0)</b>	<b>77.3</b>		<b>82.1</b>
<b>TEQ (ND=DL/2)</b>	<b>77.3</b>		<b>82.1</b>



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Reviewer *ce*

*BA*

# Sample ID: Unit 2 Run 2 Out

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_005	Date Extracted:	2 Apr 01
Date Collected:	26 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01
Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	ND	1.08			89.5	102	95.5
1,2,3,7,8-PeCDD	12.2			A	94.7	96.8	95.5
1,2,3,4,7,8-HxCDD	16.3			A	97.4	89.3	95.5
1,2,3,6,7,8-HxCDD	51.6				97.4	89.3	95.5
1,2,3,7,8,9-HxCDD	23.4			A	97.4	89.3	95.5
1,2,3,4,6,7,8-HpCDD	249				90.3	94.2	95.5
OCDD	353			B	71.2	94.2	95.5
2,3,7,8-TCDF	18.9				89.5	102	95.5
1,2,3,7,8-PeCDF	25			A	90.3	96.8	95.5
2,3,4,7,8-PeCDF	36.4			A	90.3	96.8	95.5
1,2,3,4,7,8-HxCDF	32.6			A	109	92.3	95.5
1,2,3,6,7,8-HxCDF	36			A	109	92.3	95.5
2,3,4,6,7,8-HxCDF	37.6			A	109	92.3	95.5
1,2,3,7,8,9-HxCDF	8.64			A	109	92.3	95.5
1,2,3,4,6,7,8-HpCDF	106				101	94.2	95.5
1,2,3,4,7,8,9-HpCDF	8.13			A	101	94.2	95.5
OCDF	25.6			A	84.3	94.2	95.5
Totals & TEQs							
TCDDs	332						
PeCDDs	534						
HxCDDs	963						
HpCDDs	487						
TCDFs	734						
PeCDFs	466		477				
HxCDFs	318		324				
HpCDFs	150						
<b>Total PCDD/Fs</b>	<b>4360</b>		<b>4380</b>				
<b>TEQ (ND=0)</b>	<b>52.1</b>		<b>52.1</b>	<b>ITEF</b>			
<b>TEQ (ND=DL/2)</b>	<b>52.6</b>		<b>52.6</b>	<b>ITEF</b>			



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Reviewer: Ce  
Date: 18 Apr 01



# Sample ID: Unit 2 Run 3 Out

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_006	Date Extracted:	2 Apr 01
Date Collected:	28 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01
Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	3.6			A	88.8	104	101
1,2,3,7,8-PeCDD	14.6			A	94.9	101	101
1,2,3,4,7,8-HxCDD	19.1			A	95.8	91.7	101
1,2,3,6,7,8-HxCDD	52.1				95.8	91.7	101
1,2,3,7,8,9-HxCDD	29.1			A	95.8	91.7	101
1,2,3,4,6,7,8-HpCDD	261				89.3	95.8	101
OCDD	442			B	71.3	95.8	101
2,3,7,8-TCDF	20.8				86.1	104	101
1,2,3,7,8-PeCDF	25.7			A	87.3	101	101
2,3,4,7,8-PeCDF	38.3			A	87.3	101	101
1,2,3,4,7,8-HxCDF	34.1			A	109	92.5	101
1,2,3,6,7,8-HxCDF	37			A	109	92.5	101
2,3,4,6,7,8-HxCDF	41.1			A	109	92.5	101
1,2,3,7,8,9-HxCDF	8.62			A	109	92.5	101
1,2,3,4,6,7,8-HpCDF	126				99.7	95.8	101
1,2,3,4,7,8,9-HpCDF	12.1			A	99.7	95.8	101
OCDF	51.4			A	82.4	95.8	101
<b>Totals &amp; TEQs</b>							
TCDDs	318		351				
PeCDDs	549		575				
HxCDDs	1010						
HpCDDs	520						
TCDFs	769		773				
PeCDFs	483		488				
HxCDFs	332		341				
HpCDFs	160		178				
<b>Total PCDD/Fs</b>	<b>4640</b>		<b>4730</b>				
<b>TEQ (ND=0)</b>	<b>60.0</b>		<b>60.0</b>	<b>ITEF</b>			
<b>TEQ (ND=DL/2)</b>	<b>60.0</b>		<b>60.0</b>	<b>ITEF</b>			



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Reviewer

*ca*  
18 APR 01

# Sample ID: Unit 3 Run 1 Out

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_007	Date Extracted:	2 Apr 01
Date Collected:	26 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	9.45			A	91.7	103	109
1,2,3,7,8-PeCDD	53.3				99.1	99.6	109
1,2,3,4,7,8-HxCDD	81.4				102	87.9	109
1,2,3,6,7,8-HxCDD	268				102	87.9	109
1,2,3,7,8,9-HxCDD	127				102	87.9	109
1,2,3,4,6,7,8-HpCDD	1520				92.4	94.3	109
OCDD	3040			B	67.6	94.3	109
2,3,7,8-TCDF	60.8				88.1	103	109
1,2,3,7,8-PeCDF	99.7				91.2	99.6	109
2,3,4,7,8-PeCDF	206				91.2	99.6	109
1,2,3,4,7,8-HxCDF	172				118	91.8	109
1,2,3,6,7,8-HxCDF	177				118	91.8	109
2,3,4,6,7,8-HxCDF	217				118	91.8	109
1,2,3,7,8,9-HxCDF	47.5			A	118	91.8	109
1,2,3,4,6,7,8-HpCDF	844				105	94.3	109
1,2,3,4,7,8,9-HpCDF	43.1			A	105	94.3	109
OCDF	170				83.8	94.3	109

Totals & TEQs			
TCDDs	822		
PeCDDs	2120		
HxCDDs	4150		
HpCDDs	3010		
TCDFs	2480		
PeCDFs	2290		
HxCDFs	1870		
HpCDFs	1100		
<b>Total PCDD/Fs</b>	<b>21100</b>		<b>21100</b>
<b>TEQ (ND=0)</b>	<b>286</b>		<b>286</b>
<b>TEQ (ND=DL/2)</b>	<b>286</b>		<b>286</b>



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# Sample ID: Unit 3 Run 1 Out - confirmation results incorporated

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_007	Date Extracted:	2 Apr 01
Date Collected:	26 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	9.45			A	91.7	103	109
1,2,3,7,8-PeCDD	53.3				99.1	99.6	109
1,2,3,4,7,8-HxCDD	81.4				102	87.9	109
1,2,3,6,7,8-HxCDD	268				102	87.9	109
1,2,3,7,8,9-HxCDD	127				102	87.9	109
1,2,3,4,6,7,8-HpCDD	1520				92.4	94.3	109
OCDD	3040			B	67.6	94.3	109
2,3,7,8-TCDF	62.6				88.1	103	109
1,2,3,7,8-PeCDF	99.7				91.2	99.6	109
2,3,4,7,8-PeCDF	206				91.2	99.6	109
1,2,3,4,7,8-HxCDF	172				118	91.8	109
1,2,3,6,7,8-HxCDF	177				118	91.8	109
2,3,4,6,7,8-HxCDF	217				118	91.8	109
1,2,3,7,8,9-HxCDF	47.5			A	118	91.8	109
1,2,3,4,6,7,8-HpCDF	844				105	94.3	109
1,2,3,4,7,8,9-HpCDF	43.1			A	105	94.3	109
OCDF	170				83.8	94.3	109

Totals & TEQs			
TCDDs	822		
PeCDDs	2120		
HxCDDs	4150		
HpCDDs	3010		
TCDFs	2480		
PeCDFs	2290		
HxCDFs	1870		
HpCDFs	1100		
<b>Total PCDD/Fs</b>	<b>21100</b>		<b>21100</b>
<b>TEQ (ND=0)</b>	<b>287</b>		<b>287</b>
<b>TEQ (ND=DL/2)</b>	<b>287</b>		<b>287</b>



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# Sample ID: Unit 3 Run 2 Out

# Method 23

<u>Client Data</u>		<u>Sample Data</u>		<u>Laboratory Data</u>			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_008	Date Extracted:	2 Apr 01
Date Collected:	26 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01
Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	6.74			A	94.8	105	108
1,2,3,7,8-PeCDD	44			A	101	100	108
1,2,3,4,7,8-HxCDD	71				109	84.8	108
1,2,3,6,7,8-HxCDD	236				109	84.8	108
1,2,3,7,8,9-HxCDD	113				109	84.8	108
1,2,3,4,6,7,8-HpCDD	1390				97.9	92.2	108
OCDD	3110			B	73.8	92.2	108
2,3,7,8-TCDF	50.2				92.9	105	108
1,2,3,7,8-PeCDF	83.6				93.6	100	108
2,3,4,7,8-PeCDF	171				93.6	100	108
1,2,3,4,7,8-HxCDF	152				122	90.5	108
1,2,3,6,7,8-HxCDF	157				122	90.5	108
2,3,4,6,7,8-HxCDF	209				122	90.5	108
1,2,3,7,8,9-HxCDF	45.6			A	122	90.5	108
1,2,3,4,6,7,8-HpCDF	882				111	92.2	108
1,2,3,4,7,8,9-HpCDF	50.2				111	92.2	108
OCDF	218				88.5	92.2	108
<b>Totals &amp; TEQs</b>							
TCDDs	689		692				
PeCDDs	1830						
HxCDDs	3660						
HpCDDs	2800						
TCDFs	1890		1910				
PeCDFs	1880						
HxCDFs	1660						
HpCDFs	1180						
<b>Total PCDD/Fs</b>	<b>18900</b>		<b>18900</b>				
<b>TEQ (ND=0)</b>	<b>248</b>		<b>248</b>	<b>ITEF</b>			
<b>TEQ (ND=DL/2)</b>	<b>248</b>		<b>248</b>	<b>ITEF</b>			



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Date 18 Apr 01

# Sample ID: Unit 3 Run 2 Out - confirmation results incorporated

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_008	Date Extracted:	2 Apr 01
Date Collected:	26 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	6.74			A	94.8	105	108
1,2,3,7,8-PeCDD	44			A	101	100	108
1,2,3,4,7,8-HxCDD	71				109	84.8	108
1,2,3,6,7,8-HxCDD	236				109	84.8	108
1,2,3,7,8,9-HxCDD	113				109	84.8	108
1,2,3,4,6,7,8-HpCDD	1390				97.9	92.2	108
OCDD	3110			B	73.8	92.2	108
2,3,7,8-TCDF	48.1				92.9	105	108
1,2,3,7,8-PeCDF	83.6				93.6	100	108
2,3,4,7,8-PeCDF	171				93.6	100	108
1,2,3,4,7,8-HxCDF	152				122	90.5	108
1,2,3,6,7,8-HxCDF	157				122	90.5	108
2,3,4,6,7,8-HxCDF	209				122	90.5	108
1,2,3,7,8,9-HxCDF	45.6			A	122	90.5	108
1,2,3,4,6,7,8-HpCDF	882				111	92.2	108
1,2,3,4,7,8,9-HpCDF	50.2				111	92.2	108
OCDF	218				88.5	92.2	108

Totals & TEQs			
TCDDs	689		692
PeCDDs	1830		
HxCDDs	3660		
HpCDDs	2800		
TCDFs	1890		1910
PeCDFs	1880		
HxCDFs	1660		
HpCDFs	1180		
<b>Total PCDD/Fs</b>	<b>18900</b>		<b>18900</b>
<b>TEQ (ND=0)</b>	<b>248</b>		<b>248</b>
<b>TEQ (ND=DL/2)</b>	<b>248</b>		<b>248</b>



**ALTA ANALYTICAL PERSPECTIVES**

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web: www.ultratrace.com

Reviewer *cu*  
Date *5/4/01*

# Sample ID: Unit 3 Run 3 Out

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_009	Date Extracted:	2 Apr 01
Date Collected:	27 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	7.2			A	89.9	102	104
1,2,3,7,8-PeCDD	37.7			A	96.1	97.9	104
1,2,3,4,7,8-HxCDD	59.1				98.3	85.2	104
1,2,3,6,7,8-HxCDD	205				98.3	85.2	104
1,2,3,7,8,9-HxCDD	98.2				98.3	85.2	104
1,2,3,4,6,7,8-HpCDD	1190				91.1	90.7	104
OCDD	2510			B	70.1	90.7	104
2,3,7,8-TCDF	40.6				87.2	102	104
1,2,3,7,8-PeCDF	66.4				90.6	97.9	104
2,3,4,7,8-PeCDF	137				90.6	97.9	104
1,2,3,4,7,8-HxCDF	119				114	89.5	104
1,2,3,6,7,8-HxCDF	127				114	89.5	104
2,3,4,6,7,8-HxCDF	163				114	89.5	104
1,2,3,7,8,9-HxCDF	32.6			A	114	89.5	104
1,2,3,4,6,7,8-HpCDF	679				103	90.7	104
1,2,3,4,7,8,9-HpCDF	36.5			A	103	90.7	104
OCDF	166				83.1	90.7	104

Totals & TEQs			
TCDDs	565		582
PeCDDs	1610		
HxCDDs	3240		
HpCDDs	2350		
TCDFs	1590		
PeCDFs	1520		
HxCDFs	1330		
HpCDFs	900		
<b>Total PCDD/Fs</b>	<b>15800</b>		<b>15800</b>
<b>TEQ (ND=0)</b>	<b>204</b>		<b>204</b>
<b>TEQ (ND=DL/2)</b>	<b>204</b>		<b>204</b>



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web: www.ultratrace.com

Reviewer: CP  
Date: 18 Apr 01

# Sample ID: Field Blank

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_010	Date Extracted:	2 Apr 01
Date Collected:	29 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	ND	1.35			89.4	104	105
1,2,3,7,8-PeCDD	ND	1.44			97.4	101	105
1,2,3,4,7,8-HxCDD	ND	5.71			101	86.4	105
1,2,3,6,7,8-HxCDD	ND	6.36			101	86.4	105
1,2,3,7,8,9-HxCDD	ND	5.69			101	86.4	105
1,2,3,4,6,7,8-HpCDD	8.6			A	90.4	93.8	105
OCDD	36.3			A B	67.8	93.8	105
2,3,7,8-TCDF	ND	2.99			87.6	104	105
1,2,3,7,8-PeCDF	ND	2.9			90.6	101	105
2,3,4,7,8-PeCDF	ND	2.85			90.6	101	105
1,2,3,4,7,8-HxCDF	ND	1.12			114	91	105
1,2,3,6,7,8-HxCDF	ND	1.02			114	91	105
2,3,4,6,7,8-HxCDF	ND	1.09			114	91	105
1,2,3,7,8,9-HxCDF	ND	1.24			114	91	105
1,2,3,4,6,7,8-HpCDF	5.92			A	104	93.8	105
1,2,3,4,7,8,9-HpCDF	ND	1.8			104	93.8	105
OCDF	ND	9.63			80.6	93.8	105

Totals & TEQs				
TCDDs	5.45			
PeCDDs	ND		7.91	
HxCDDs	7.89		14.5	
HpCDDs	18.2			
TCDFs	ND	2.99		
PeCDFs	ND	2.88		
HxCDFs	4.24			
HpCDFs	5.92			
<b>Total PCDD/Fs</b>	<b>78.0</b>		<b>92.5</b>	
<b>TEQ (ND=0)</b>	<b>0.182</b>		<b>0.182</b>	<b>ITEF</b>
<b>TEQ (ND=DL/2)</b>	<b>3.28</b>		<b>3.28</b>	<b>ITEF</b>




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Reviewer *ce*  
Date *3/1/01*

**Sample ID: 0\_324\_MB001**

**Method 23**

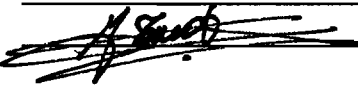
<u>Client Data</u>		<u>Sample Data</u>		<u>Laboratory Data</u>			
Name:	CAE	Matrix:	Air	Project No.:	P1463	Date Received:	n/a
Project ID:	8890/8891	Weight/Volume:	1	Sample ID:	0_324_MB001	Date Extracted:	9 Apr 01
Date Collected:	n/a			QC Batch No.:	324	Date Analyzed:	18-APR-01
Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	ND	2.19			88.1		91.1
1,2,3,7,8-PeCDD	EMPC		7.57	A	83.5		91.1
1,2,3,4,7,8-HxCDD	12.5			A	87.5		91.1
1,2,3,6,7,8-HxCDD	14.4			A	87.5		91.1
1,2,3,7,8,9-HxCDD	10.2			A	87.5		91.1
1,2,3,4,6,7,8-HpCDD	9.64			A	82.6		91.1
OCDD	ND	17.7			66.9		91.1
2,3,7,8-TCDF	ND	3.24			87.2		91.1
1,2,3,7,8-PeCDF	6.73			A	81.5		91.1
2,3,4,7,8-PeCDF	6.17			A	81.5		91.1
1,2,3,4,7,8-HxCDF	13.5			A	90.3		91.1
1,2,3,6,7,8-HxCDF	13.6			A	90.3		91.1
2,3,4,6,7,8-HxCDF	EMPC		12	A	90.3		91.1
1,2,3,7,8,9-HxCDF	EMPC		6.13	A	90.3		91.1
1,2,3,4,6,7,8-HpCDF	11.9			A	86.1		91.1
1,2,3,4,7,8,9-HpCDF	ND	6.9			86.1		91.1
OCDF	ND	7.15			70.7		91.1
Totals & TEQs					 <p><b>ALTA ANALYTICAL PERSPECTIVES</b></p> <p>2714 Exchange Drive Wilmington North Carolina 28405 USA</p> <p>Tel: 910 794-1613 Fax: 910 794-3919 e-mail: ytondeur@cs.com web: www.ultratrace.com</p>		
TCDDs	ND	2.19					
PeCDDs	ND		7.57				
HxCDDs	37.1						
HpCDDs	9.64						
TCDFs	ND	3.24					
PeCDFs	12.9						
HxCDFs	27.1		45.3				
HpCDFs	11.9						
<b>Total PCDD/Fs</b>	<b>98.6</b>		<b>124</b>				
<b>TEQ (ND=0)</b>	<b>10.1</b>		<b>15.7</b>	<b>ITEF</b>			
<b>TEQ (ND=DL/2)</b>	<b>11.4</b>		<b>17.0</b>	<b>ITEF</b>			

Reviewer  
Date

*Ce*  
20 Apr 01



## USEPA Stationary Source Compliance Audit Program Dioxin/Furan Audit Form

**Auditor:** \_\_\_\_\_  
**Agency:** \_\_\_\_\_  
**Agency Address:** \_\_\_\_\_  
**Agency Phone #:** \_\_\_\_\_  
**Date Analyzed:** 18 APRIL 2001  
**Auditee Company:** ALTA ANALYTICAL PERSPECTIVES  
**Auditee Address:** 2714 EXCHANGE DRIVE WILMINGTON, NC 28405  
**Date Audit Sam Rec'd:** 06 APRIL 2001  
**Audit Sample #:** M23-0090-01  
**Confirmation Analysis Used:** Yes \_\_\_\_\_ No  **SEE NOTE BELOW**  
**Auditee's Name:** DR. YVES TONDEUR  
**Signature:** 

Compound	Auditee Result (ng/sample)	Compound	Auditee Result (ng/sample)
2378-TCDD	0.912	2378-TCDF	1.260
Other TCDD	1.458	Other TCDF	2.710
12378-PeCDD	1.080	12378-PCDF	1.180
Other PeCDD	2.950	23478-PCDF	1.170
123478-HxCDD	0.997	Other PCDF	2.680
123678-HxCDD	1.320	123478-HxCDF	1.240
123789-HxCDD	1.190	123678-HxCDF	1.360
Other HxCDD	2.503	123789-HxCDF	2.500 ***
1234678-HpCDD	2.170	234678-HxCDF	1.150
Other HpCDD	1.250	Other HxCDF	1.540 ***
OCDD	2.710	1234678-HpCDF	2.400
		1234789-HpCDF	2.160
		Other HpCDF	∅
		OCDF	2.310

Note regarding the confirmation analysis:

Alta Analytical Perspectives uses GC conditions that allow the isomer-specific determination of 2,3,7,8-TCDF on a different GC column than the DB-225. Whenever a DB-225 "confirmation" analysis is performed, our original result is typically found to be the lowest of the two analyses.

The lowest result is the one the laboratory always reports. Thus, while a "confirmation" analysis may have been conducted, its result may not be used here.

\*\*\* This particular isomer co-elutes with the last HxCDF isomer. Based on the examination of the GC peak shape, it is estimated that the 1,2,3,7,8,9-HxCDF is overestimated by a factor of two, and the "Other HxCDFs" is therefore underestimated by 1.250 ng/sample.

P1454



ALTA ANALYTICAL PERSPECTIVES

# PART 2

# SAMPLE PATH

DOCUMENTATION FOR THE ANALYSIS  
OF  
POLYCHLORINATED DIBENZO-*p*-DIOXINS & DIBENZOFURANS



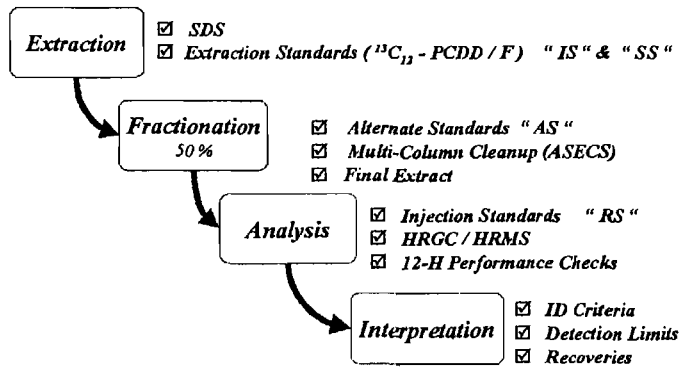
ALTA ANALYTICAL PERSPECTIVES

# SAMPLE PATH

AAP PROJECT No.: P1454

PROTOCOL: 23

## SAMPLE PROCESSING



## SPIKE PROFILE

NS: ✓ 100 PG (10 µL; 0.01 NG/µL) FOR OPR ONLY  
 IS: ✓ 4 NG (25 µL; 0.16 NG/µL)  
 AS & SS: ✓ 4 NG (25 µL; 0.16 NG/µL)  
 RS: ✓ 2 NG (10 µL; 0.2 NG/µL)

## SOPS

EXTRACTION: AP-SP-E  
 FRACTIONATION: AP-SP-CU  
 ANALYSIS: AP-SP-A  
 CONCENTRATION: AP-SP-N  
 FORTIFICATION: AP-SP-F  
 DATA VALIDATION: AP-SP-R

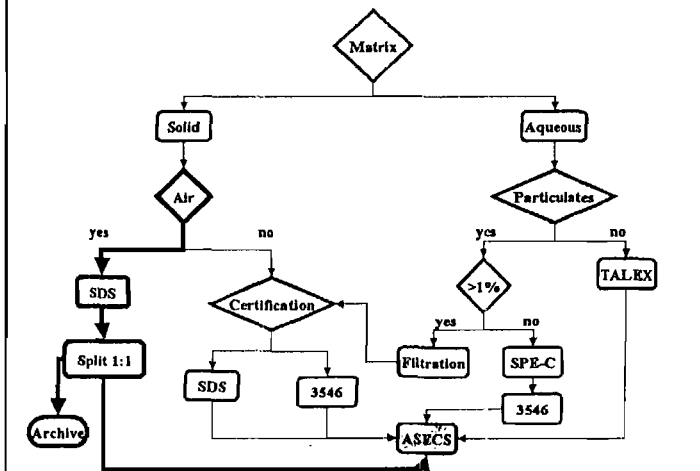
## QC PROFILE

LMB: ALWAYS REQUIRED  
 OPR: ALWAYS REQUIRED

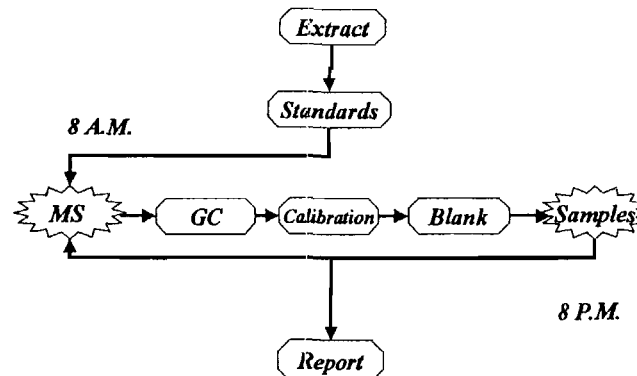
## REPORTING PLATFORM

LEVEL: I II III PLATINUM

## SAMPLE EXTRACTION



## SAMPLE ANALYSIS



## SPECIAL REQUIREMENTS

### SUPPLIES IDS

SAND 10302000  
 TOLUENE 005999  
 ACID SILICA 03152001AEC  
 BASE SILICA 03122018  
 SILICA 03122001  
 FLORISIL SP02061  
 HEXANE 003603  
 CH<sub>2</sub>CL<sub>2</sub> 003597  
 TETRADECANE 1380781

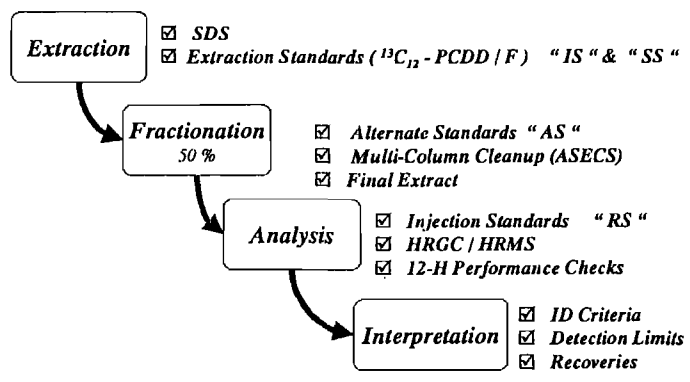


ALTA ANALYTICAL PERSPECTIVES

# SAMPLE PATH

**AAP PROJECT No.: P1463**  
**PROTOCOL: 23**

## SAMPLE PROCESSING



## SPIKE PROFILE

NS: ✓ 100 PG (10 µL; 0.01 NG/µL) FOR OPR ONLY  
 IS: ✓ 4 NG (25 µL; 0.16 NG/µL)  
 AS & SS: ✓ 4 NG (25 µL; 0.16 NG/µL)  
 RS: ✓ 2 NG (10 µL; 0.2 NG/µL)

## SOPS

EXTRACTION: AP-SP-E  
 FRACTIONATION: AP-SP-CU  
 ANALYSIS: AP-SP-A  
 CONCENTRATION: AP-SP-N  
 FORTIFICATION: AP-SP-F  
 DATA VALIDATION: AP-SP-R

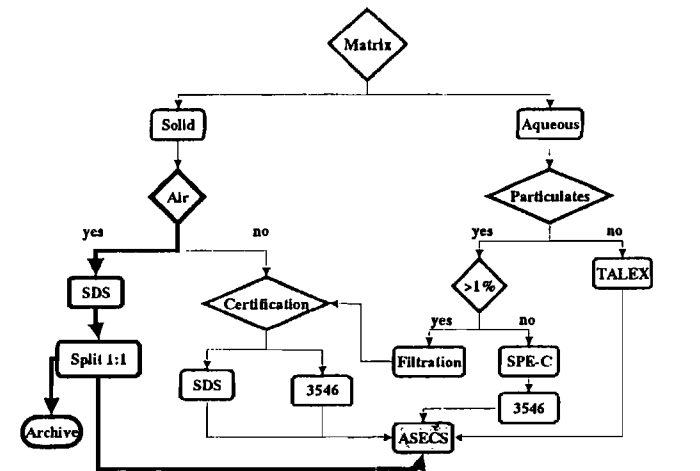
## QC PROFILE

LMB: ALWAYS REQUIRED  
 OPR: ALWAYS REQUIRED

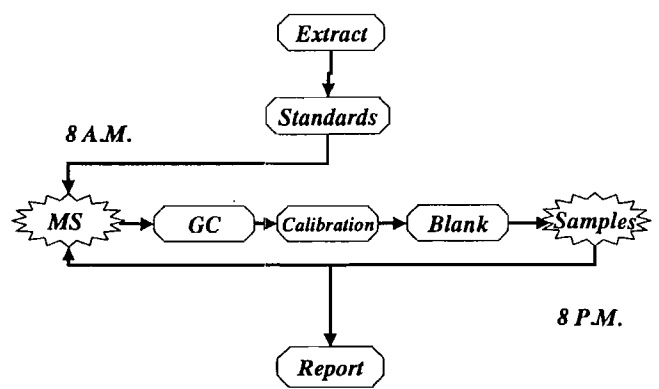
## REPORTING PLATFORM

LEVEL: I II III PLATINUM

## SAMPLE EXTRACTION



## SAMPLE ANALYSIS



## SPECIAL REQUIREMENTS

SUPPLIES IDs

SAND	10302000
TOLUENE	005999
ACID SILICA	03152001ABC
BASE SILICA	03122001B
SILICA	03122100
FLORISIL	5P02061
HEXANE	003603
CH <sub>2</sub> CL <sub>2</sub>	003597
TETRADECANE	138076

Project: P1454

Extraction Set: 319

Chemist: TM 04/02/01

Method(s): EPA Method 23

Vial Box ID: \_\_\_\_\_

7  
6  
5  
4  
3  
2  
1  
6  
5  
4  
3

ALTA Sample ID	Client Sample ID	PUF/Trap Prep Date	XAD Lot#	IS/NS CHEM/ WIT DATE / Opnd	Impinger Extraction Date	AS CHEM/WIT DATE	SiGEL/MSF CHEM/Date (Circle One)	ASECS CC CHEM/Date (Tcd)	RS CHEM/WIT DATE
0_319_MB001	---	---	---	TM 04/02/01	NA	CM 04/03/01	---	CM 04/03/01	TM 04/04/01
0_319_OPR001	---	---	---	---	---	---	---	---	---
P1454_319_001	Unit 1 Run 1 Out	---	---	---	---	---	---	---	---
P1454_319_002	Unit 1 Run 2 Out	---	---	---	---	---	---	---	---
P1454_319_004	Unit 2 Run 1 Out	---	---	---	---	---	---	---	---
P1454_319_005	Unit 2 Run 2 Out	---	---	---	---	---	---	---	---
P1454_319_006	Unit 2 Run 3 Out	---	---	---	---	---	---	---	---
P1454_319_007	Unit 3 Run 1 Out	---	---	---	---	---	---	---	---
P1454_319_008	Unit 3 Run 2 Out	---	---	---	---	---	---	---	---
P1454_319_009	Unit 3 Run 3 Out	---	---	---	---	---	---	---	---
P1454_319_010	Field Blank	---	---	---	---	---	---	---	---
P1454_319_011	Reagent Blk <u>Hold</u>	---	---	---	---	---	---	---	---

001, 002, 004: 1 filter: slightly moist, no coloration KAD; appears clean sticky  
glul: wet, white

005: 1 filter: light peach polka dots KAD; appears clean, sticky  
glul: wet, white

006: see 001

007: P1414 see 001

008: see 001

009: see 001

P1415  
CAE  
PREP.: 22 MAR 2001  
EXPIRATION: 05 APR 2001  
4 NG SAMPLING STANDARDS PCDD/Fs  
INITIALS: CMR

04/02/01 010<sup>th</sup> filter: clean XAD; freeflowing, appears clean glul: dry white

IS ID #1:	NS ID #1:	AS ID #1:	RS ID #1:	Cycle #1:	#2:	Split	Check Out:
000919R 428-IS wtp 09/19/02	000919D 428-NS wtp 09/19/02 orange	000919B 428-AS (V6) wtp 09/19/02	000919E 428-RS wtp 09/19/02 yellow	04/02/01 Start 3:00pm	---	04/03/01	Chemist: TM 04/02/01
IS ID #2: ---	NS ID #2: ---	AS ID #2: ---	RS ID #2: ---	---	---	1:4	Check-In: ---
IS ID #3: ---	NS ID #3: ---	AS ID #3: ---	RS ID #3: ---	04/03/01 Stop 9:30pm	---	(1:2) TM CMR	Chemist: ---
IS ID #4: ---	NS ID #4: ---	AS ID #4: ---	RS ID #4: ---	---	---	---	Chemist: ---

ALTA ANALYTICAL PERSPECTIVES

Project: P1463

Extraction Set: 324

Chemist: JM 040901

Method(s): EPA Method 23

Vial Box ID: \_\_\_\_\_

ALTA Sample ID	Client Sample ID	PUF/Trap Prep Date	XAD Lot#	IS/NS CHEM/ WIT DATE	Impinger Extraction Date	AS CHEM/WIT DATE	SiGEL/MSF CHEM/Date (Circle)	ASECS CHEM/Date (Td)	RS CHEM/WIT DATE
0_324_MB001	---	---	---	25 ml 04/09/01 DATE 10 ml	NA	25 ml 04/10/01 DATE	---	---	---
0_324_OPR001	---	---	---	0 ml 04/09/01 DATE * 0 ml	---	0 ml 04/10/01 DATE	---	---	---
P1463_324_001	M23-0090-01 AUDIT	---	---	0 ml	---	0 ml	---	---	---

001 XAD: appears clean, free flowing

**P1463-001**

M23-0090-01 AUDIT

XAD#1: XAD

SLoc: F-3

IS ID #1: 000919C (3) 428-IS exp 04/19/02	NS ID #1: 000919D 428-NS exp 04/19/02	AS ID #1: 000919B (V6) 428-AS exp. 09/19/02	RS ID #1: 000919E 428-RS exp 04/19/02 yellow	Cycle #1: 04/09/01 Start 2:30pm	#2: ---	Split: //	Check Out: JM 04/09/01
IS ID #2: ---	NS ID #2: ---	AS ID #2: ---	RS ID #2: ---	Cycle #1: 04/10/01 Stop 9:00 AM	#2: ---	Split: 1.2	Check-In: ---
IS ID #3: ---	NS ID #3: ---	AS ID #3: ---	RS ID #3: ---	JM 04/10/01			
IS ID #4: ---	NS ID #4: ---	AS ID #4: ---	RS ID #4: ---				

*re-cleanup*  
**Extraction Set: 324**

Project: P1463

Chemist: *AM* 04/19/01

Method(s): EPA Method 23

Vial Box ID: \_\_\_\_\_

ALTA Sample ID	Client Sample ID	PUF/Tran Pren Date	XAD Lot#	IS/NS CHEM/ WIT DATE	Impinger Extraction Date	AS CHEM/WIT DATE	SiGEL/MSF CHEM/Date (Circle One)	ASECS CHEM/Date (Td)	RS CHEM/WIT DATE
0_324_MB001	—	—	—	/	—	/	—	—	—
0_324_OPR001	—	—	—	/	—	/	—	—	—
P1463_324_001	M23-0090-01 AUDIT	—	—	/	—	/	—	—	—

*Archive cleanup:*  
 Silica: 03122001  
 Base Silica: 03212001 <sup>12 gtm</sup>  
 Acid Silica: 03212001  
 Florisil: SP02001  
 CH<sub>2</sub>Cl<sub>2</sub>: 003597  
 Hexane: 003603  
 Tetradecane: 13807B1

IS ID #1:	NS ID #1:	AS ID #1:	RS ID #1:	Cycle #1:	#2:	Split	Check Out:
NA	NA	NR	000919E 428-RS exp. 09/19/02 Yellow	—	—	4	Chemist: <i>AM</i>
—	—	—	—	—	—	1:4	Check-In: _____
—	—	—	—	—	—	—	Chemist: _____
IS ID #4:	NS ID #4:	AS ID #4:	RS ID #4:	Stop:	—	—	—



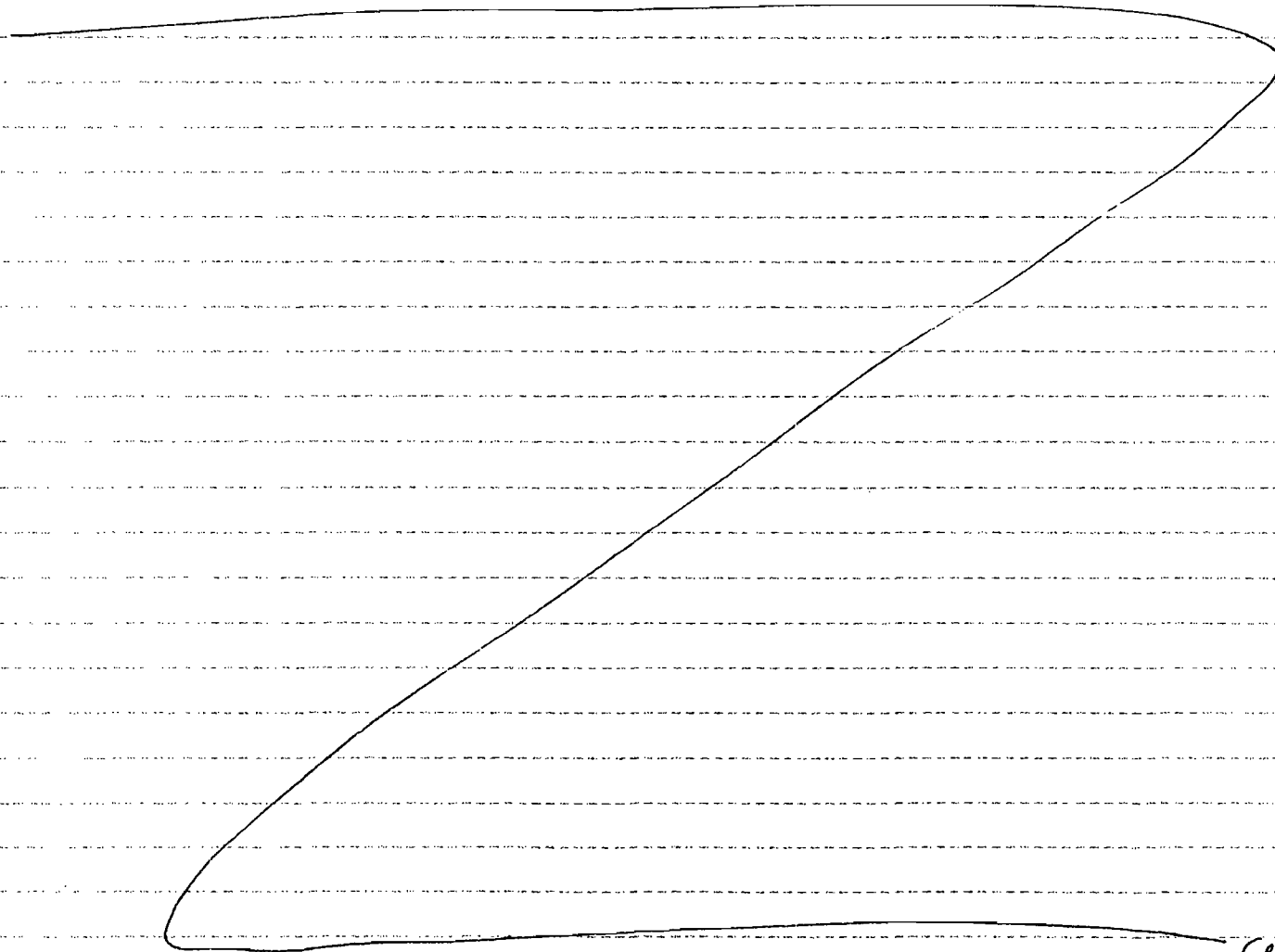
ALTA ANALYTICAL PERSPECTIVES

# SAMPLE PATH

AAP PROJECT NO.: P1454

PROTOCOL: 23

## COMMUNICATIONS



ca 18 Apr 01





ALTA ANALYTICAL PERSPECTIVES

# SAMPLE PATH

AAP PROJECT NO.: P1463

PROTOCOL: 23

## COMMUNICATIONS

method blank indicates OP2 contamination - analyze archive extracts Ce 18 Apr 01  
Archived extracts had GI in Function 2 & slight interference in Fn 3 - suspect silicone  
introduced during clean up of archived extracts Ce 19 Apr 01

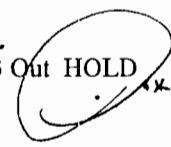
Ce 18 Apr 01

**Sample Inventory Report: MM5 Sampling Train**

Project No.: P1454

Project Name: General Analytical HRMS

Date Rec.: 30-Mar-01 ✓

Lab. Sample ID	Collection Date	Client Sample ID	Component ID
001	27-Mar-01	Unit 1 Run 1 Out ✓	Ace/Me
	27-Mar-01 ✓		Filter
	27-Mar-01 ✓		Imp. Hold ✓
	27-Mar-01		Toluene
	27-Mar-01		XAD
002	28-Mar-01	Unit 1 Run 2 Out ✓	Ace/Me
	28-Mar-01 ✓		Filter
	28-Mar-01 ✓		Imp. Hold ✓
	28-Mar-01		Toluene
	28-Mar-01		XAD
003	29-Mar-01	Unit 1 Run 3 Out HOLD 	Ace/Me Hold ✓
	29-Mar-01 ✓		Filter Hold ✓
	29-Mar-01 ✓		Imp. Hold ✓
	29-Mar-01		Toluene ✓
	29-Mar-01		XAD Hold ✓
004	26-Mar-01	Unit 2 Run 1 Out ✓	Ace/Me
	26-Mar-01 ✓		Filter
	26-Mar-01		Imp. Hold ✓
	26-Mar-01		Toluene
	26-Mar-01		XAD
005	26-Mar-01	Unit 2 Run 2 Out ✓	Ace/Me
	26-Mar-01 ✓		Filter
	26-Mar-01		Imp. Hold ✓
	26-Mar-01		Toluene
	26-Mar-01		XAD
006	28-Mar-01	Unit 2 Run 3 Out ✓	Ace/Me
	28-Mar-01		Filter
	28-Mar-01 ✓		Imp. Hold ✓
	28-Mar-01		Toluene
	28-Mar-01		XAD

CC 18 APR 01

Sample Inventory Report: MM5 Sampling Train

Project No.: P1454

Project Name: General Analytical HRMS

Date Rec.: 30-Mar-01

Lab. Sample ID	Collection Date	Client Sample ID	Component ID
006	28-Mar-01	Unit 2 Run 3 Out	XAD
007	26-Mar-01	Unit 3 Run 1 Out	Ace/Me
	26-Mar-01 ✓		Filter
	26-Mar-01		Imp. Hold ✓
	26-Mar-01		Toluene
	26-Mar-01		XAD
008	26-Mar-01	Unit 3 Run 2 Out	Ace/Me
	26-Mar-01 ✓		Filter
	26-Mar-01		Imp. Hold ✓
	26-Mar-01		Toluene
	26-Mar-01		XAD
009	27-Mar-01	Unit 3 Run 3 Out	Ace/Me
	27-Mar-01 ✓		Filter
	27-Mar-01		Imp. Hold ✓
	27-Mar-01		Toluene
010	29-Mar-01	Field Blank	XAD
	29-Mar-01 ✓		Ace/Me
	29-Mar-01		Filter
	29-Mar-01		Imp. Hold ✓
	29-Mar-01		Toluene
011	29-Mar-01	Reagent Blk	XAD
	29-Mar-01		Acetone
	29-Mar-01 ✓		Filter
	29-Mar-01		Me/Chl
	29-Mar-01		Toluene

*Hold  
as per  
Scott  
02 APR 01  
Y.T.*

XAD → not identified; use unused trap.  
Y.T.  
02 APR 01

*Sample Inventory Report: MM5 Sampling Train*

Project No.: P1463

Project Name: General Analytical HRMS

Date Rec.: 6-Apr-01

Lab. Sample ID	Collection Date	Client Sample ID	Component ID
001	5-Apr-01	M23-0090-01 AUDIT ✓	XAD

*cc 18 Apr 01*

*OK*

*✓*

*06 APR 01*

# PROCESS SHEET

**Project No.-AR:** P1454-1 of 1  
**Client:** Clean Air Engineering (CLAIL01A)  
**Client Manager:** Yves Tondeur

**Project Due:** 4/20/01  
**TAT:** 21  
**Extraction Due:** 4/25/01

**Method:** EPA Method 23  
**Extraction Type:** EPA Method 23

**Matrix:** MM5  
**Split Type:** 1:2

**Component:** PCDD/F (Tetra - Octa)

LabID	Client-ID	Component Type	Client Component ID	Date Received	SLoc
001	Unit 1 Run 1 Out	Solvent#1	Ace/Me	3/31/01	F-1
		Solvent#2	Toluene	3/31/01	F-1
		XAD#1	XAD	3/31/01	F-1
		Filter#1	Filter	3/31/01	F-1
		Impinger#1	Imp. Hold	3/31/01	F-1
002	Unit 1 Run 2 Out	Filter#1	Filter	3/31/01	F-1
		Impinger#1	Imp. Hold	3/31/01	F-1
		Solvent#1	Ace/Me	3/31/01	F-1
		Solvent#2	Toluene	3/31/01	F-1
		XAD#1	XAD	3/31/01	F-1
004	Unit 2 Run 1 Out	Filter#1	Filter	3/31/01	F-1
		Impinger#1	Imp. Hold	3/31/01	F-1
		Solvent#1	Ace/Me	3/31/01	F-1
		Solvent#2	Toluene	3/31/01	F-1
		XAD#1	XAD	3/31/01	F-1
005	Unit 2 Run 2 Out	Filter#1	Filter	3/31/01	F-1
		Impinger#1	Imp. Hold	3/31/01	F-1
		Solvent#1	Ace/Me	3/31/01	F-1
		Solvent#2	Toluene	3/31/01	F-1
		XAD#1	XAD	3/31/01	F-1

## Instructions:

## Report Options

Report Level: 1

EDD Type:

Vial Box ID: \_\_\_\_\_

Date Requested: 4/13/01  
HRMSAirAR

# PROCESS SHEET

**Project No.-AR:** P1454-1 of 1  
**Client:** Clean Air Engineering (CLAIL01A)  
**Client Manager:** Yves Tondeur

**Project Due:** 4/20/01  
**TAT:** 21  
**Extraction Due:** 4/25/01

**Method:** EPA Method 23  
**Extraction Type:** EPA Method 23

**Matrix:** MM5  
**Split Type:** 1:2

**Component:** PCDD/F (Tetra - Octa)

LabID	Client-ID	Component Type	Client Component ID	Date Received	SLoc
006	Unit 2 Run 3 Out	Filter#1	Filter	3/31/01	F-1
		Impinger#1	Imp. Hold	3/31/01	F-1
		Solvent#1	Ace/Me	3/31/01	F-1
		Solvent#2	Toluene	3/31/01	F-1
		XAD#1	XAD	3/31/01	F-1
007	Unit 3 Run 1 Out	Filter#1	Filter	3/31/01	F-1
		Impinger#1	Imp. Hold	3/31/01	F-1
		Solvent#1	Ace/Me	3/31/01	F-1
		Solvent#2	Toluene	3/31/01	F-1
		XAD#1	XAD	3/31/01	F-1
008	Unit 3 Run 2 Out	Filter#1	Filter	3/31/01	F-1
		Impinger#1	Imp. Hold	3/31/01	F-1
		Solvent#1	Ace/Me	3/31/01	F-1
		Solvent#2	Toluene	3/31/01	F-1
		XAD#1	XAD	3/31/01	F-1
009	Unit 3 Run 3 Out	Filter#1	Filter	3/31/01	F-1
		Impinger#1	Imp. Hold	3/31/01	F-1
		Solvent#1	Ace/Me	3/31/01	F-1
		Solvent#2	Toluene	3/31/01	F-1
		XAD#1	XAD	3/31/01	F-1

**Instructions:**

P1414  
 CLEAN AIR ENG.  
 PREP.: 16 MAR 2001  
 EXPIRATION: 30 MAR 2001  
 4 NG SAMPLING STANDARDS PCDD/FS  
 INITIALS: CMR



007  
 CMR  
 4/14/02/01

**Report Options**

Report Level: 1

EDD Type:

Vial Box ID: \_\_\_\_\_

Date Requested: 4/13/01  
 HRMSAirAR.rpt

# PROCESS SHEET

**Project No.-AR:** P1454-1 of 1  
**Client:** Clean Air Engineering (CLAIL01A)  
**Client Manager:** Yves Tondeur

**Project Due:** 4/20/01  
**TAT:** 21  
**Extraction Due:** 4/25/01

**Method:** EPA Method 23  
**Extraction Type:** EPA Method 23

**Matrix:** MM5  
**Split Type:** 1:2

**Component:** PCDD/F (Tetra - Octa)

LabID	Client-ID	Component Type	Client Component ID	Date Received	SLoc
010	Field Blank	Filter#1	Filter	3/31/01	F-1
		Impinger#1	Imp. Hold	3/31/01	F-1
		Solvent#1	Ace/Me	3/31/01	F-1
		Solvent#2	Toluene	3/31/01	F-1
		XAD#1	XAD	3/31/01	F-1
011	Reagent Blk	Filter#1	Filter	3/31/01	F-1
		Solvent#1	Me/Chl	3/31/01	F-1
		Solvent#2	Toluene	3/31/01	F-1
		Solvent#3	Acetone	3/31/01	F-1
		XAD#1	XAD	3/31/01	F-1

## Instructions:

## Report Options

Report Level: 1

EDD Type:

Vial Box ID: \_\_\_\_\_

Date Requested: 4/13/01  
HRMSAirAFbot

# PROCESS SHEET

**Project No.-AR:** P1463-1 of 1  
**Client:** Clean Air Engineering (CLAIL01A)  
**Client Manager:** Yves Tondeur

**Project Due:** 4/27/01  
**TAT:** 21  
**Extraction Due:** 5/5/01

**Method:** EPA Method 23  
**Extraction Type:** EPA Method 23

**Matrix:** MM5  
**Split Type:** 1:2

**Component:** PCDD/F (Tetra - Octa)

<u>LabID</u>	<u>Client-ID</u>	<u>Component Type</u>	<u>Client Component ID</u>	<u>Date Received</u>	<u>SLoc</u>
001	M23-0090-01 AUDIT	XAD#1	XAD	4/6/01	F-3

**Instructions:**

## Report Options

Report Level: 1

EDD Type:

Vial Box ID: \_\_\_\_\_

Date Requested: 4/20/01  
HRMSairAR.rpt



# CHAIN OF CUSTODY FORM


P1454

CLIENT <u>WHEELABRISTOL</u>	PROJECT NO. <u>8890</u>	NO. OF CONTAINERS	ORIGINAL VOLUME	ANALYSIS REQUESTED				ADDITIONAL INFORMATION
PLANT <u>NORTH BROWNS</u>	DEPT. <u>66</u>			EPA 23	ARCHIVE			
PROJECT MANAGER <u>Scott Brown</u>								

p 1/6

CAE LAB NO.	RUN NO.	TEST LOCATION	DATE	SAMPLE MATRIX	NO. OF CONTAINERS	ORIGINAL VOLUME	EPA 23	ARCHIVE	ANALYSIS REQUESTED	ANALYSIS REQUESTED	ANALYSIS REQUESTED	ANALYSIS REQUESTED	ADDITIONAL INFORMATION	
	1	Unit 1 Outlet	3-27-01	FILTER	1	-	X							
	1	↓	↓	ACETONE + MeCl <sub>2</sub> RINSE	1	212	X							
	1			TOLUENE RINSE	1	102	X							missing OK BT Rev 4.2.01
	1			HPLC H <sub>2</sub> O BACK HALF	2	1010	X		X					
	1			<del>ACETONE + MeCl<sub>2</sub> B1/2</del>	<del>1</del>	<del>-</del>	<del>X</del>							
	1			Trap #	1	-	X							
	2	Unit 1 - Outlet	3-28-01	FILTER	1	-	X							
	2	↓	↓	ACETONE + MeCl <sub>2</sub> RINSE	1	249	X							
	2			TOLUENE RINSE	1	136	X							missing OK BT Rev 4.2.01
	2			HPLC H <sub>2</sub> O BACK HALF	1	920	X		X					missing OK BT Rev 4.2.01
	2			<del>ACETONE + MeCl<sub>2</sub> B1/2</del>	<del>1</del>	<del>-</del>	<del>X</del>							
	2			Trap #	1	-	X							

Relinquished by: (Signature) <i>[Signature]</i>	Date/Time 3-29-01 1300	Received by: (Signature) <i>[Signature]</i>	Date/Time 3-31-01 10:30	Relinquished by: (Signature)	Date/Time
Courier <i>[Signature]</i>	Date/Time	Relinquished by: (Signature)	Date/Time	Rec'd for Analysis by:	Date/Time


Special Handling Instructions  <u>Altal</u>	This form was completed by: <u>Joe Heffernan III</u>	 <b>Clean Air Engineering</b>	1601 Parkway View Drive Pittsburgh, PA 15205  (412) 787-9130 ph (412) 787-9138 fax
Forwarding Lab: <u>Phillip [Signature]</u>	Signature: <u>[Signature]</u> Date: <u>3-31-01</u>		847- 991- 6200 2044

### CHAIN OF CUSTODY FORM

CLIENT <u>WHELABRATOR</u>	PROJECT NO. <u>8890</u>	NO. OF CONTAINERS	ORIGINAL VOLUME	ANALYSIS REQUESTED			PAGE <u>2</u> OF <u>6</u>					
PLANT <u>NORTH Broward</u>	DEPT. <u>66</u>			ARCHIVE	PCDD/PCDF			REVISION NO. _____				
PROJECT MANAGER <u>S. Brown</u>	RECOVERY PERSON: _____							ADDITIONAL INFORMATION				
JOB LEADER <u>Huy NGUYEN</u>	_____											

CAE LAB NO.	RUN NO.	TEST LOCATION	DATE	SAMPLE MATRIX	NO. OF CONTAINERS	ORIGINAL VOLUME	ARCHIVE	PCDD/PCDF	ANALYSIS REQUESTED	ANALYSIS REQUESTED	ANALYSIS REQUESTED	ANALYSIS REQUESTED	
	3	Unit 1 Outlet	3-29-01	Filter	1	—	X						
	3	↓	↓	1/2 Acetone / MeCl <sub>2</sub>	1	280	X						
	3			1/2 Toluene	1	124	X						
	3			1/2 H <sub>2</sub> O	1	799	X						
	3			Trap	1	—	X						
		REAGENTS Blank	3-29-01	Filter	1	—	X						
		↓	↓	MeCl <sub>2</sub>	1	200	X						
				Toluene	1	200	X						
				Acetone	1	200	X						
				Trap	1	—	X						

Relinquished by:(Signature) <u>Nguyen</u>	Date/Time 3-29-01 1200	Received by:(Signature) <u>Bruce Padon</u>	Date/Time 10:30 7-31-01	Relinquished by:(Signature)	Date/Time
Courier	Date/Time	Relinquished by:(Signature)	Date/Time	Rec'd for Analysis by:	Date/Time

Special Handling Instructions	This form was completed by: <u>Nguyen</u>	 <p>500 West Wood Street Palatine, IL 60067 (847) 991-3300 phone (847) 991-3385 fax</p> <p>DS COC Palatine EXCL.R0-67/96</p>
Forwarding Lab: <u>Alta</u>	Signature <u>Nguyen</u> Date <u>3-29-01</u>	

# CHAIN OF CUSTODY FORM


P1454

CLIENT <u>Wheelabrator</u>	PROJECT NO. <u>8810</u>	NO. OF CONTAINERS	ORIGINAL VOLUME	ANALYSIS REQUESTED				ADDITIONAL INFORMATION	
PLANT <u>North Broward</u>	DEPT. <u>66</u>			EPA 23	Archive				
PROJECT MANAGER <u>Scott Brown</u>									
EPA METHOD 23									

p 3/6

CAE LAB NO.	RUN NO.	TEST LOCATION	DATE	SAMPLE MATRIX	NO. OF CONTAINERS	ORIGINAL VOLUME	EPA 23	Archive	ANALYSIS REQUESTED	ADDITIONAL INFORMATION	
	1	Outlet unit 2	3-26-01	FILTER	1	-	X				
	1	↓	↓	ACETONE +MeCl2 RINSE	1	210	X				
	1			TOLUENE RINSE	1	127	X				Missing OK BS REC 4-2-01
	1			HPLC H2O BACK HALF	1	999	X		X		Missing OK BS REC 4-2-01
	1			ACETONE +MeCl2-B1/2	1	-	X				
	1			Trap #	1	-	X				
	2	Outlet Unit 2	3-26-01	FILTER	1	-	X				
	2	↓	↓	ACETONE +MeCl2 RINSE	1	289	X				
	2			TOLUENE RINSE	1	146	X				Missing OK BS REC 4-2-01
	2			HPLC H2O BACK HALF	1	983	X		X		Missing OK BS REC 4-2-01
	2			ACETONE +MeCl2-B1/2	1	-	X				
	2			Trap #	1	-	X				

Relinquished by:(Signature) <u>Nguyen</u>	Date/Time 3-29-01 1300	Received by:(Signature) <u>Joe Hefernan</u>	Date/Time 3-31-01 10:30	Relinquished by:(Signature)	Date/Time
Courier: <u>U</u>	Date/Time	Relinquished by:(Signature)	Date/Time	Rec'd for Analysis by:	Date/Time

Special Handling Instructions  Forwarding Lab: <u>Alta</u>	This form was completed by: <u>Joe Hefernan</u>	 <b>Clean Air Engineering</b> 1601 Parkway View Drive Pittsburgh, PA 15205 (412) 787-9130 ph (412) 787-9138 fax
Signature: <u>[Signature]</u> Date: <u>3-29-01</u>	PO Number: <u>21055-0000-1-10</u> EXCERPTS 3/95	


# CHAIN OF CUSTODY FORM

P1454

CLIENT <u>wheelabrator</u>	PROJECT NO. <u>8890</u>	NO. OF CONTAINERS	ORIGINAL VOLUME	ANALYSIS REQUESTED				ADDITIONAL INFORMATION	
PLANT <u>North Broward</u>	DEPT. <u>66</u>			EPA 23	Archive				P416
PROJECT MANAGER <u>Scott Brown</u>									3-31-01 ee BT
EPA METHOD 23									

CAE LAB NO.	RUN NO.	TEST LOCATION	DATE	SAMPLE MATRIX	NO. OF CONTAINERS	ORIGINAL VOLUME	EPA 23	Archive	ANALYSIS REQUESTED	ADDITIONAL INFORMATION
	3	Unit 2 Outlet	3-28-01	FILTER	1	-	X			Arrived in broken container for Filter does not appear compressed
	3			ACETONE + MeCl2 RINSE	1	283.1	X			
	3			TOLUENE RINSE	1	154	X			Missing OK BT Rec 4-2-01
	3			HPLC H2O BACK HALF	1	951.5	X	X		
				ACETONE + MeCl2 B1/2	1	-	X			
	3			Trap #	1	-	X			
				FILTER	1	-	X			
				ACETONE + MeCl2 RINSE	1		X			
				TOLUENE RINSE	1		X			
				HPLC H2O BACK HALF	1		X	X		
				ACETONE + MeCl2 B1/2	1	-	X			
				Trap #	1	-	X			

Relinquished by:(Signature) <u>[Signature]</u>	Date/Time 3-29-01 1300	Received by:(Signature) <u>[Signature]</u>	Date/Time 3-31-01 10:30	Relinquished by:(Signature)	Date/Time
Courier	Date/Time	Relinquished by:(Signature)	Date/Time	Rec'd for Analysis by:	Date/Time

Special Handling Instructions  Forwarding Lab: <u>Alta</u> <del>XXXXXXXXXXXXXXXXXXXX</del> <del>XXXXXXXXXXXXXXXXXXXX</del> <del>XXXXXXXXXXXXXXXXXXXX</del>	This form was completed by: <u>Joe Heffernan</u> Signature: <u>[Signature]</u> Date: <u>3-29-01</u>	 <b>Clean Air Engineering</b> 601 Parkway View Drive Pittsburgh, PA 15205 (412) 787-9130 ph (412) 787-9138 fax <small>DS CQC Pittsburgh EXCL R0-8/3/95</small>
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# CHAIN OF CUSTODY FORM

P1454

CLIENT <u>Wheeler Laboratory</u>	PROJECT NO. <u>8890</u>	NO. OF CONTAINERS	ORIGINAL VOLUME	ANALYSIS REQUESTED				ADDITIONAL INFORMATION	
PLANT <u>North Broward</u>	DEPT. <u>CG</u>			EPA 23	PDD/PDDF	ARCHIVE			
PROJECT MANAGER <u>Scott Brown</u>									P 5/6

CAE LAB NO.	RUN NO.	TEST LOCATION	DATE	SAMPLE MATRIX	NO. OF CONTAINERS	ORIGINAL VOLUME	EPA 23	PDD/PDDF	ARCHIVE	ADDITIONAL INFORMATION
	1	Unit 3 Outlet ↓	3-26-01	FILTER	1	-	X			
	1		ACETONE + MeCl2 RINSE		1	304	X			
	1		TOLUENE RINSE		1	123	X			
	1		HPLC H2O BACK HALF		2	1080	X	X		Missing OK BT 4-2-01
	1		ACETONE + MeCl2 B1/2		1	-	X			
	1		Trap #		1	-	X			
	2	Unit 3 outlet ↓		FILTER	1	-	X			
	2		ACETONE + MeCl2 RINSE		1	198	X			
	2		TOLUENE RINSE		1	126	X			Missing OK BT 4-2-01
	2		HPLC H2O BACK HALF		1	991	X	X		Missing OK BT 4-2-01
	2		ACETONE + MeCl2 B1/2		1	-	X			
	2		Trap #		1	-	X			

Relinquished by: (Signature) <i>Nguyen</i>	Date/Time 3-29-01 1300	Received by: (Signature) <i>Scott Brown</i>	Date/Time 3-31-01 10:30	Relinquished by: (Signature)	Date/Time
Courier:	Date/Time	Relinquished by: (Signature)	Date/Time	Rec'd for Analysis by:	Date/Time

Special Handling Instructions  Forwarding Lab: <u>Alta</u> <u>Environmental Services</u> <u>1000 University Blvd</u> <u>Channahon, IL 61018</u>	This form was completed by: <u>Joe Hette</u> Signature: <u>[Signature]</u> Date: <u>3-29-01</u>	 <b>Clean Air Engineering</b> 1601 Parkway View Drive Pittsburgh, PA 15205 (412) 787-9130 ph (412) 787-9138 fax
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# CHAIN OF CUSTODY FORM

P1454

CLIENT <u>WHEELABATOR</u>	PROJECT NO. <u>8890</u>	NO. OF CONTAINERS	ORIGINAL VOLUME	ANALYSIS REQUESTED				ADDITIONAL INFORMATION	
PLANT <u>NORTH BROWNS</u>	DEPT. <u>66</u>								P6/B
PROJECT MANAGER <u>Scott Brown</u>				EPA 23	PCDD/PCDF	ARCHIVE			
EPA METHOD 23									

CAE LAB NO.	RUN NO.	TEST LOCATION	DATE	SAMPLE MATRIX	NO. OF CONTAINERS	ORIGINAL VOLUME						
	3	Unit 3 ↓	3-27-01	FILTER	1	-	X					
	3		ACETONE + MeCl2 RINSE			1	234	X				
	3		TOLUENE RINSE			1	117	X				
	3		HPLC H2O BACK HALF			2	92/114	X	X	1035	Missing OK BT Rec 4-2-01	
			ACETONE + MeCl2 B1/2			1		X				
	3		Trap #			1		X				
		Field Blank ↓	3-29-01	FILTER	1	-	X				Missing OK BT Rec 4-2-01	
			ACETONE + MeCl2 RINSE			1	312	X				Missing OK BT Rec 4-2-01
			TOLUENE RINSE			1	131	X				Missing OK BT Rec 4-2-01
			HPLC H2O BACK HALF			1	225	X	X	225	Missing OK BT Rec 4-2-01	
			ACETONE + MeCl2 B1/2			1		X				
			Trap #			1	-	X				

Relinquished by: (Signature) <i>[Signature]</i>	Date/Time 3-29-01 11:45	Received by: (Signature) <i>[Signature]</i>	Date/Time 3-31-01 10:30	Relinquished by: (Signature)	Date/Time
Courier:	Date/Time	Relinquished by: (Signature)	Date/Time	Rec'd for Analysis by:	Date/Time


Special Handling Instructions  <u>Alta</u>	This form was completed by:  <u>NGUYEN</u>	 <b>Clean Air Engineering</b>	1601 Parkway View Drive Pittsburgh, PA 15205  (412) 787-9130 ph (412) 787-9138 fax
Forwarding Lab: <u>Philip Anderson Services</u>	Signature: <i>[Signature]</i> Date: <u>3-29-01</u>	DS COC Pittsburgh EXCL.R0-8/3/95	
PO Number: <u>7M2E-0001-1.1</u>			

CHAIN OF CUSTODY FORM

CLIENT Wheelabrator PROJECT NO. 8890/8891 PAGE 1 OF 1  
 PLANT North + South Broward DEPT. 66  
 PROJECT MANAGER Scott Brown RECOVERY PERSON: H. Nguyen  
 JOB LEADER Scott Brown/H. Nguyen

CAE LAB NO.	RUN NO.	TEST LOCATION	DATE	SAMPLE MATRIX	NO. OF CONTAINERS	ORIGINAL VOLUME	ANALYSIS REQUESTED				ADDITIONAL INFORMATION	
		<u>EPA Audit Sample</u> <u>(23-0090-01)</u>	<u>4/5/01</u>	<u>received from</u> <u>EPA week of 3/26/01</u>	<u>1</u>	<u>NA</u>	<u>X</u>					

Relinquished by:(Signature) <u>Scott Brown</u>	Date/Time <u>4/5/01</u>	Received by:(Signature) <u>Brian Parker</u>	Date/Time <u>4-6-01 10:30</u>	Relinquished by:(Signature)	Date/Time
Courier:	Date/Time	Relinquished by:(Signature)	Date/Time	Rec'd for Analysis by:	Date/Time

Special Handling Instructions	This form was completed by: <u>S. Brown</u>	 <b>Clean Air Engineering</b> 500 West Wood Street Palatine, IL 60067 (847) 991-3300 phone (847) 991-3385 fax
Forwarding Lab:	Signature <u>Scott Brown</u> Date <u>4/5/01</u>	

3 31-01

D1454 A





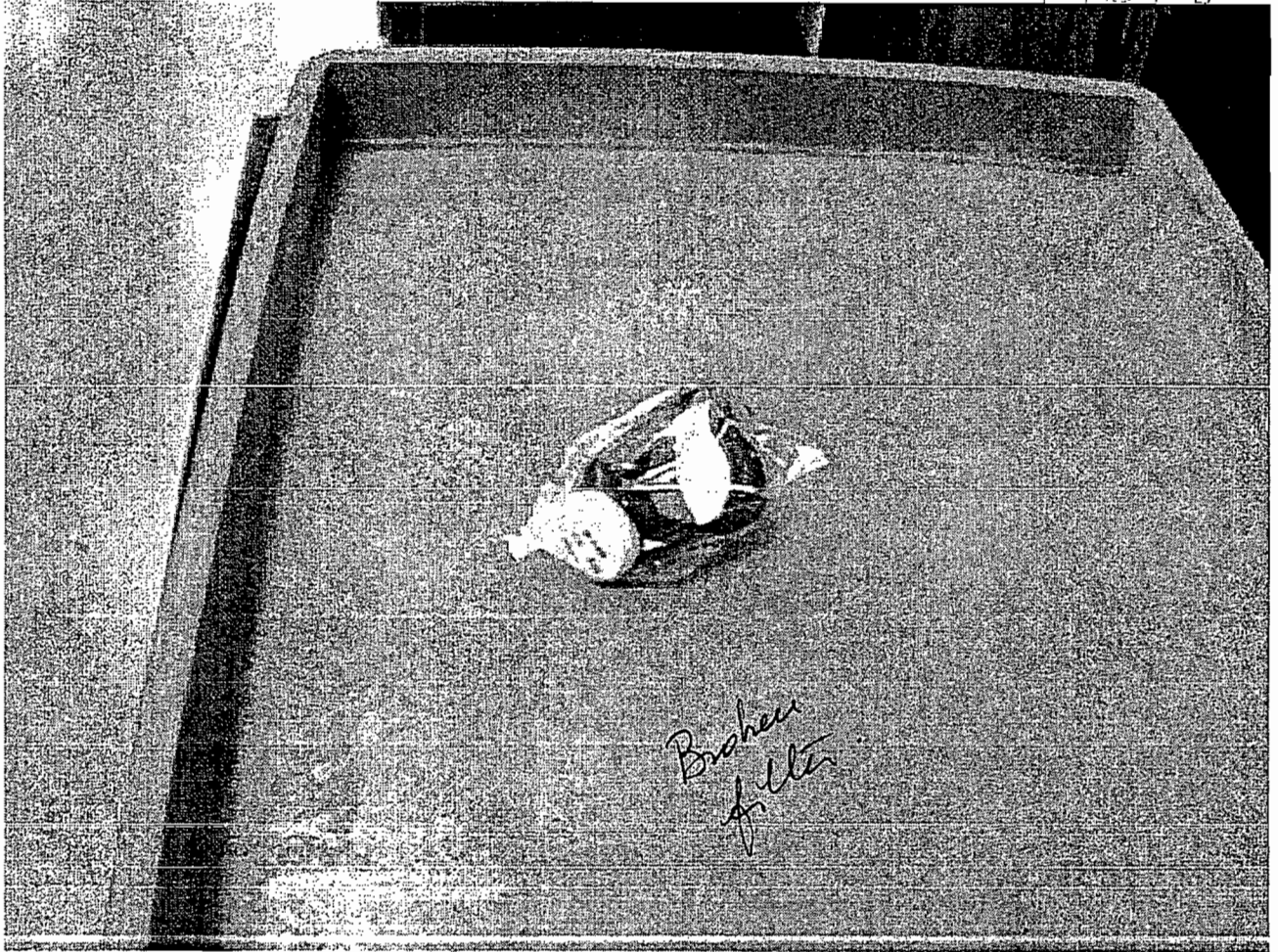
3-30-01

P1454



3-31-01

P 1454 B



4-2-01

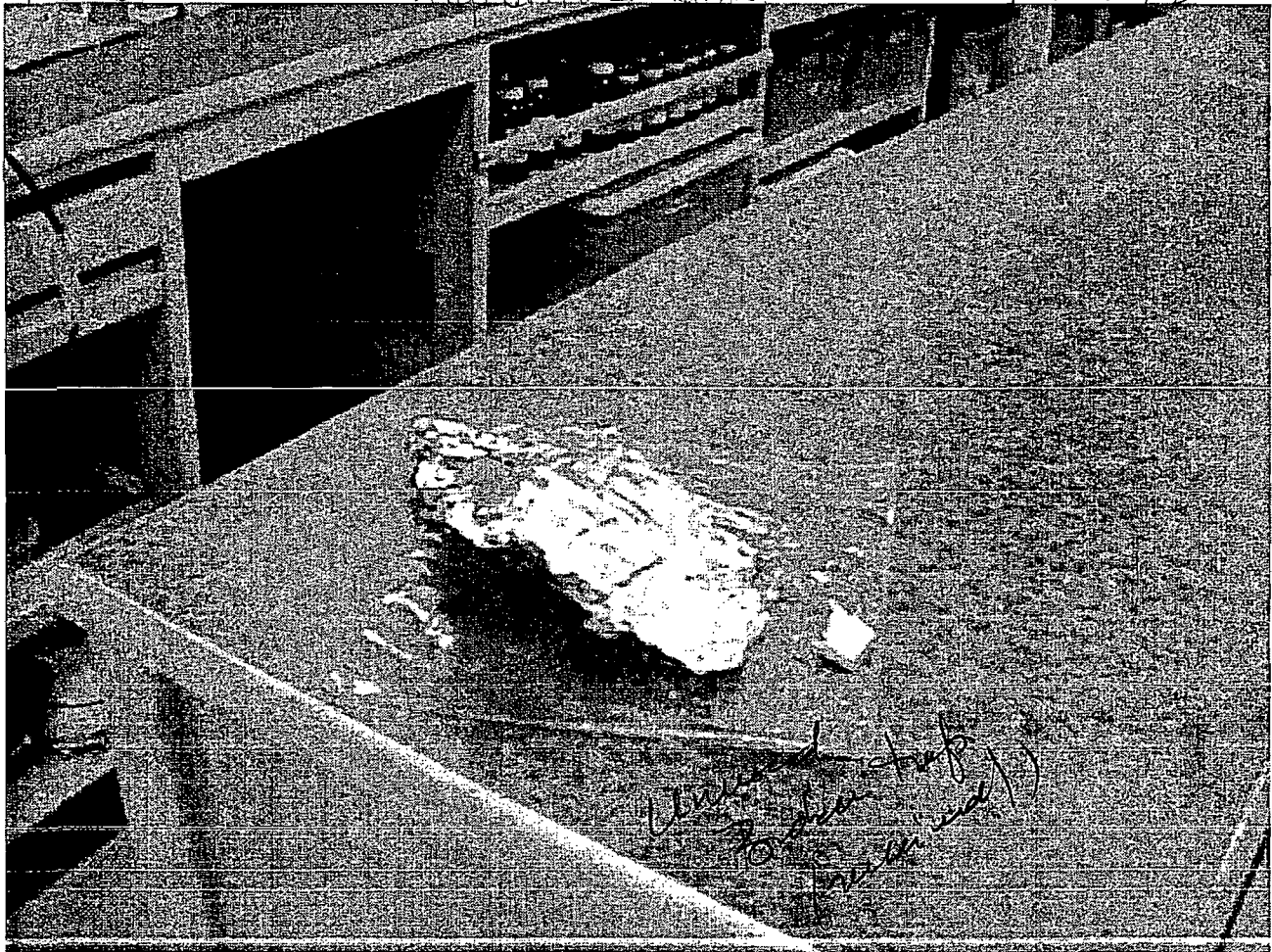
D1454C



4-2-01

Trapped bird broken

P 1454 D



STANDARD OPERATING PROCEDURE



Attachment 2

CHAIN OF CUSTODY ANOMALY FORM

Client CLAILOIA Project No. P1454 Date Received

Upon receipt of your samples, we found the following items omitted from the chain-of-custody (COC).

Sampler:

Relinquished by:

Date: Time: 3-31-01 10:30

Sample ID: Unit 1 Run 3 & Unit 3 Run 3 Field Blank  
Reagent Blank  
Sample Date: 3-29-01

Sample Description:

Analysis(es) Requested: m-23

Turnaround Time Requested: 21

Containers Qty:

Type:

Matrix Type:

Preservative\*:

\*Drinking Water Requirement

Other Comments: Reagent Blank Filter, Ace/me, Toluene, & Impinger, + trap  
listed on cofc but did not arrive  
Field Blank - Filter, Ace/me, Toluene, + Impinger  
listed on cofc but did not arrive.  
*Please note these omissions for future reference.*

**ALTA ANALYTICAL PERSPECTIVES**  
2714 Exchange Drive  
Wilmington, NC 28405  
Ph.: 910-794-1613  
Fax: 910-794-3919

*All reviewed  
later...  
However, no trap  
identified for  
ZB.*

Thank you.  
ALTA ANALYTICAL PERSPECTIVES

STANDARD OPERATING PROCEDURE



Attachment 2

**CHAIN OF CUSTODY ANOMALY FORM**

Client CLALLOIA Project No. P1454 Date Received

Upon receipt of your samples, we found the following items omitted from the chain-of-custody (COC).

- Sampler:
- Relinquished by:
- Date: Time: 3-31-01 10:30
- Sample ID: Unit 2 Run 3-out
- Sample Date: 3-28-01
- Sample Description: Filter
- Analysis(es) Requested: M-23
- Turnaround Time Requested: 21
- Containers Qty: 1
- Type: Amber bottle
- Matrix Type:
- Preservative\*:   
\*Drinking Water Requirement

Other Comments: Amber bottle containing filter arrived broken, however; the filter does not appear to be compromised. RK  
*Please note these omissions for future reference.*

**ALTA ANALYTICAL PERSPECTIVES**  
2714 Exchange Drive  
Wilmington, NC 28405  
Ph.: 910-794-1613  
Fax: 910-794-3919

Thank you.  
ALTA ANALYTICAL PERSPECTIVES

STANDARD OPERATING PROCEDURE



Attachment 1

ALTA ANALYTICAL PERSPECTIVES Project No.: p 1454

Sample Log-In Checklist	Yes	No
1. Date Samples Arrived: <u>3-30-01</u> Initials: <u>BT</u>		
2. Time / Date logged in: <u>3-30-01 10:00</u> Location <u>F-1</u> Initials: <u>BT</u>		
3. Samples Arrived By: (circle one) Airborne Express <u>Federal Express</u> UPS Emery Freezer Truck Company Courier DHL Other		
4. Shipping Preservation: (circle) Ice <u>Blue Ice</u> Dry Ice / None Temp °C <u>22°, 20°, 22°, 14°</u> <u>WARM</u> (received) <u>4-2-01</u>		
5. Shipping Documentation Present? (circle one) Shipping Label <u>Airbill</u> Tracking Number <u>820148212147 &amp; 802126646418</u> Rec <u>4-2-01</u>	✓	
6. Shipping Container(s) Intact? If no, describe condition below.	✓	
7. Container Custody Seals Present and Intact? If not intact, describe condition below.		✓
8. Sample Custody Seals Present and Intact? If not intact, describe condition below. No. of Seals _____ or Seal No. _____		✓
9. Sample Container Intact? If no, indicate sample condition below.	✓	
10. Chain of Custody (COC) or other Sample Documentation Present?	✓	
11. COC/Documentation Acceptable? If no, complete COC Anomaly Form.	✓	
12. Shipping Container: (circle) <u>ALTA ANALYTICAL PERSPECTIVES</u> Return or <u>Retain</u> or Dispose Client Return or Retain or Dispose		
13. Container and/or Bottles Requested?		✓
14. Sample Control Check In/Out Log Completed?	✓	<u>ee BT</u>
15. Drinking Water Sample? If yes, Acceptable Preservation? (circle) Y or N		✓
16. Imported Soil? If yes, apply appropriate label.		✓

Name: Bruce Pender

Date Samples Reconciled: \_\_\_\_\_

Comments:

OK Telerec records.

STANDARD OPERATING PROCEDURE



Attachment 1

ALTA ANALYTICAL PERSPECTIVES Project No.: 1454

Sample Log-In Checklist	Yes	No
1. Date Samples Arrived: <u>3-31-01</u> Initials: <u>BT</u>		
2. Time / Date logged in: <u>10:30 3-31-01</u> Location <u>F-1</u> Initials: <u>BT</u>		
3. Samples Arrived By: (circle one) Airborne Express <u>Federal Express</u> UPS Emery Freezer Truck Company Courier DHL Other		
4. Shipping Preservation: (circle) Ice / Blue Ice / Dry Ice / None Temp °C <u>22°</u>		
5. Shipping Documentation Present? (circle one) Shipping Label <u>Airbill</u> Tracking Number <u>802126646429</u>		
6. Shipping Container(s) Intact? If no, describe condition below.	✓	
7. Container Custody Seals Present and Intact? If not intact, describe condition below.		✓
8. Sample Custody Seals Present and Intact? If not intact, describe condition below. No. of Seals _____ or Seal No.		✓
9. Sample Container Intact? If no, indicate sample condition below. <u>Amber Bottle broke containing filter for Unit 2-Out Run 3</u>		✓
10. Chain of Custody (COC) or other Sample Documentation Present?	✓	
11. COC/Documentation Acceptable? If no, complete COC Anomaly Form.	✓	
12. Shipping Container: (circle) ALTA ANALYTICAL PERSPECTIVES Return or Retain or Dispose <u>Client</u> Return or Retain or <u>Dispose</u>		
13. Container and/or Bottles Requested?		✓
14. Sample Control Check In/Out Log Completed?	✓	
15. Drinking Water Sample? If yes, Acceptable Preservation? (circle) Y or N		✓
16. Imported Soil? If yes, apply appropriate label.		✓

Name: Bruce Pendur

Date Samples Reconciled: \_\_\_\_\_

Comments:



STANDARD OPERATING PROCEDURE



Attachment 1

ALTA ANALYTICAL PERSPECTIVES Project No.: P1463

Sample Log-In Checklist	Yes	No
1. Date Samples Arrived: <u>4-6-01</u> Initials: <u>JS</u>		
2. Time / Date logged in: <u>10:30 4-6-01</u> Location _____ Initials: <u>JS</u>		
3. Samples Arrived By: (circle one) Airborne Express <u>Federal Express</u> UPS Emery Freezer Truck Company Courier DHL Other		
4. Shipping Preservation: (circle) Ice / Blue Ice / Dry Ice <u>None</u> Temp °C <u>20°</u>		
5. Shipping Documentation Present? (circle one) <u>Shipping Label</u> Airbill Tracking Number <u>668890</u>	✓	
6. Shipping Container(s) Intact? If no, describe condition below.	✓	
7. Container Custody Seals Present and Intact? If not intact, describe condition below.		✓
8. Sample Custody Seals Present and Intact? If not intact, describe condition below. No. of Seals _____ or Seal No. _____		✓
9. Sample Container Intact? If no, indicate sample condition below.	✓	
10. Chain of Custody (COC) or other Sample Documentation Present?	✓	
11. COC/Documentation Acceptable? If no, complete COC Anomaly Form.	✓	
12. Shipping Container: (circle) ALTA ANALYTICAL PERSPECTIVES Return or Retain or Dispose <u>Client</u> Return or Retain or <u>Dispose</u>		
13. Container and/or Bottles Requested?		✓
14. Sample Control Check In/Out Log Completed?	✓	
15. Drinking Water Sample? If yes, Acceptable Preservation? (circle) Y or N		✓
16. Imported Soil? If yes, apply appropriate label.		✓

Name: [Signature]

Date Samples Reconciled: \_\_\_\_\_

Comments:

Alta Analytical Perspectives - Injection Log

Run file: 010418P2

GC Column ID: db-5

Data file	S#	Vial#	Lab ID	Sample ID (Chrom. Text)	Analyst	Acq date	Acq time	
010404P4	1	2	CS3RCX	DB5 CPSM / M23 CS3	GAG	4-APR-01	20:48:12	✓ *
010404P4	2	20	0_319_OPR001	0_319_OPR001	GAG	4-APR-01	21:40:01	
010404P4	3	21	0_319_MB001	0_319_MB001	GAG	4-APR-01	22:31:56	
010404P4	4	22	P1454_319_001	P1454_319_001 Unit 1 Run 1 Out Air Train	GAG	4-APR-01	23:23:51	
010404P4	5	23	P1454_319_002	P1454_319_002 Unit 1 Run 2 Out Air Train	GAG	5-APR-01	00:15:41	
010404P4	6	24	P1454_319_004	P1454_319_004 Unit 2 Run 1 Out Air Train	GAG	5-APR-01	01:07:31	
010404P4	7	25	P1454_319_005	P1454_319_005 Unit 2 Run 2 Out Air Train	GAG	5-APR-01	01:59:26	
010404P4	8	26	P1454_319_006	P1454_319_006 Unit 2 Run 3 Out Air Train	GAG	5-APR-01	02:51:16	
010404P4	9	2	CS3RCX	DB5 CPSM / M23 CS3	GAG	5-APR-01	03:43:10	✓ *
010405P1	1	15	SB	SOLVENT BLANK	GAG	5-APR-01	04:48:56	
010405P1	2	27	P1454_319_007	P1454_319_007 Unit 3 Run 1 Out Air Train	GAG	5-APR-01	05:40:51	
010405P1	3	28	P1454_319_008	P1454_319_008 Unit 3 Run 2 Out Air Train	GAG	5-APR-01	06:32:45	
010405P1	4	29	P1454_319_009	P1454_319_009 Unit 3 Run 3 Out Air Train	GAG	5-APR-01	07:24:36	
010405P1	5	30	P1454_319_010	P1454_319_010 Field Blank Air Train	GAG	5-APR-01	08:16:25	
010405P1	6	2	CS3RCX	DB5 CPSM / M23 CS3	GAG	5-APR-01	09:08:19	✓ *
010418P2	1	3	010418P2S3	DB5 CPSM / M23 CS3X	GAG	18-APR-01	11:13:46	✓ *
010418P2	2	69	0_324_OPR001	0_324_OPR001	GAG	18-APR-01	12:05:41	
010418P2	3	70	0_324_MB001	0_324_MB001	GAG	18-APR-01	12:57:42	
010418P2	4	71	P1463_324_001	P1463_324_001 M23-0090-01 AUDIT Air Train	GAG	18-APR-01	13:49:38	
010418P2	5	3	010418P2S7	DB5 CPSM / M23 CS3X	GAG	18-APR-01	14:41:31	✓ *

mass resolution plot acquired ~ 1 hr prior to CS3RCX 4-Apr-01 20:48 - internal GC  
 Sample injected prior to CS3RCX. Cf 18 Apr 01

Alta Analytical Perspectives - Injection Log

Run file: 010419P3

GC Column ID: db-5

Data file	S#	Vial#	Lab ID	Sample ID (Chrom. Text)	Analyst	Acq date	Acq time	
010419P2	7	3	010419P2S7	DB5 CPSM / M23 CS3X	GAG	19-APR-01	18:19:46	✓*
010419P3	1	15	SB	SOLVENT BLANK	GAG	19-APR-01	19:18:29	—
010419P3	2	27	0_324_OPR001	0_324_OPR001	GAG	19-APR-01	20:10:18	—
010419P3	3	28	0_324_MB001	0_324_MB001	GAG	19-APR-01	21:02:07	—
010419P3	4	29	P1463_324_001	P1463_324_001 M23-0090-01 AUDIT Air Train	GAG	19-APR-01	21:54:03	—
010419P3	5	15	SB	SOLVENT BLANK	GAG	19-APR-01	22:45:55	—
010419P3	6	3	CS3RCX	DB5 CPSM / M23 CS3X	GAG	19-APR-01	23:37:44	✓*

Archived extract →

Alta Analytical Perspectives - Injection Log Run file: 010420r1

GC Column ID: db-225

Data file	S#	Vial#	Lab ID	Sample ID (Chrom. Text)	Analyst	Acq date	Acq time	
010420R1	1	13	CP	CP DB225 CPSM	JRH	20-APR-01	08:30:49	✓*
010420R1	2	14	SB	SB SOLVENT BLANK	JRH	20-APR-01	09:07:31	
010420R1	3	74	M23 CS3	M23 CS3 000919I	JRH	20-APR-01	09:44:13	✓*
010420R1	4	85	P1454_319_007	P1454_319_007 Unit 3 Run 1 Out Air Train	JRH	20-APR-01	10:20:56	
010420R1	5	86	P1454_319_008	P1454_319_008 Unit 3 Run 2 Out Air Train	JRH	20-APR-01	10:57:39	
010420R3	1	74	M23 CS3	M23 CS3 000919I	JRH	20-APR-01	16:16:40	✓*

*DB-225  
TCDF confirmations*

P1454



**ALTA ANALYTICAL PERSPECTIVES**

# **PART 3**

# **ANALYTICAL RESULTS**

DOCUMENTATION FOR THE ANALYSIS  
OF  
POLYCHLORINATED DIBENZO-*p*-DIOXINS & DIBENZOFURANS

**Sample ID: 0\_319\_MB001**

**Method 23**

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	n/a
Project ID:	8890	Weight/Volume:	1	Sample ID:	0_319_MB001	Date Extracted:	2 Apr 01
Date Collected:	n/a			QC Batch No.:	319	Date Analyzed:	4-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	ND	1.58			98.7	100	110
1,2,3,7,8-PeCDD	ND	2.22			105	95.4	110
1,2,3,4,7,8-HxCDD	ND	6.65			104	93	110
1,2,3,6,7,8-HxCDD	ND	7.41			104	93	110
1,2,3,7,8,9-HxCDD	ND	6.63			104	93	110
1,2,3,4,6,7,8-HpCDD	ND	4.2			104	92.5	110
OCDD	19.7			A	91.8	92.5	110
2,3,7,8-TCDF	ND	2.43			98.4	100	110
1,2,3,7,8-PeCDF	ND	2.29			98.2	95.4	110
2,3,4,7,8-PeCDF	ND	2.26			98.2	95.4	110
1,2,3,4,7,8-HxCDF	ND	1.74			112	96.5	110
1,2,3,6,7,8-HxCDF	ND	1.59			112	96.5	110
2,3,4,6,7,8-HxCDF	ND	1.69			112	96.5	110
1,2,3,7,8,9-HxCDF	ND	1.93			112	96.5	110
1,2,3,4,6,7,8-HpCDF	ND	2.3			114	92.5	110
1,2,3,4,7,8,9-HpCDF	ND	2.73			114	92.5	110
OCDF	ND	8.96			99.4	92.5	110

Totals & TEQs			
TCDDs	ND	1.58	
PeCDDs	ND	2.22	
HxCDDs	ND	6.88	
HpCDDs	ND		4.2
TCDFs	ND	2.43	
PeCDFs	ND	2.27	
HxCDFs	ND	1.73	
HpCDFs	ND	2.5	
<b>Total PCDD/Fs</b>	<b>19.7</b>		<b>23.9</b>
<b>TEQ (ND=0)</b>	<b>0.0197</b>		<b>0.0197</b>
<b>TEQ (ND=DL/2)</b>	<b>3.54</b>		<b>3.54</b>



2714 Exchange Drive  
Wilmington  
North Carolina 28405  
USA

Tel: 910 794-1613  
Fax: 910 794-3919  
e-mail: ytondeur@cs.com  
web: www.ultratrace.com

Reviewer .....  
Date 18 Apr 01

Client ID: 0\_319\_MB001  
Lab ID: 0\_319\_MB001

Filename: 010404P4  
GC Column ID: db-5

S: 3 Acq: 4-APR-01 22:31:56  
Ical: MM1\_M23\_0» wt/vol: 1.000

ConCal: 010404P4-  
EndCal: 010404P4-

Name	Resp	RA	RRF	RT	Conc	Qualif.	CDE	noise	Fac	DL
2,3,7,8-TCDD	*	* n	1.26	NotF»	*			1255	2.5	1.58
1,2,3,7,8-PeCDD	*	* n	1.01	NotF»	*			904	2.5	2.22
1,2,3,4,7,8-HxCDD	*	* n	1.14	NotF»	*			2571	2.5	6.65
1,2,3,6,7,8-HxCDD	*	* n	1.02	NotF»	*			2571	2.5	7.41
1,2,3,7,8,9-HxCDD	*	* n	1.14	NotF»	*			2571	2.5	6.63
1,2,3,4,6,7,8-HpCDD	*	* n	1.13	NotF»	*			1175	2.5	4.20
OCDD	1.17e+05	0.89 y	1.03	47:34	19.7			1240	2.5	7.45
2,3,7,8-TCDF	*	* n	1.05	NotF»	*			2196	2.5	2.43
1,2,3,7,8-PeCDF	*	* n	1.04	NotF»	*			1445	2.5	2.29
2,3,4,7,8-PeCDF	*	* n	1.05	NotF»	*			1445	2.5	2.26
1,2,3,4,7,8-HxCDF	*	* n	1.13	NotF»	*			1493	2.5	1.74
1,2,3,6,7,8-HxCDF	*	* n	1.24	NotF»	*			1493	2.5	1.59
2,3,4,6,7,8-HxCDF	*	* n	1.16	NotF»	*			1493	2.5	1.69
1,2,3,7,8,9-HxCDF	*	* n	1.02	NotF»	*			1493	2.5	1.93
1,2,3,4,6,7,8-HpCDF	*	* n	1.54	NotF»	*			1563	2.5	2.30
1,2,3,4,7,8,9-HpCDF	*	* n	1.30	NotF»	*			1563	2.5	2.73
OCDF	*	* n	1.15	NotF»	*			2043	2.5	8.96
Total Tetra-Dioxins	*	* n	1.26	NotF»	*			1255	2.5	1.58
Total Penta-Dioxins	*	* n	1.01	NotF»	*			904	2.5	2.22
Total Hexa-Dioxins	*	* n	1.10	NotF»	*			2571	2.5	6.88
Total Hepta-Dioxins	*	* n	1.13	NotF»	*			1175	2.5	4.20
Total Tetra-Furans	*	* n	1.05	NotF»	*			2196	2.5	2.43
1st Fnc. Penta-Furans	*	* n	1.05	NotF»	*			2485	2.5	3.91
Total Penta-Furans	*	* n	1.05	NotF»	*			1445	2.5	2.27
PeCDF Totals:					0.00					0.00
Total Hexa-Furans	*	* n	1.14	NotF»	*			1493	2.5	1.73
Total Hepta-Furans	*	* n	1.42	NotF»	*			1563	2.5	2.50
IS 13C-2,3,7,8-TCDD	4.42e+07	0.80 y	1.13	28:20	3950					98.7
IS 13C-1,2,3,7,8-PeCDD	3.83e+07	1.58 y	0.93	33:40	4190					105
IS 13C-1,2,3,6,7,8-HxCDD	3.32e+07	1.26 y	0.93	37:41	4140					104
IS 13C-1,2,3,4,6,7,8-HpCDD	3.24e+07	1.05 y	0.91	42:07	4170					104
IS 13C-OCDD	2.31e+07	0.90 y	0.73	47:34	3670					91.8
IS 13C-2,3,7,8-TCDF	6.53e+07	0.79 y	1.06	27:29	3940					98.4
IS 13C-1,2,3,7,8-PeCDF	5.89e+07	1.58 y	0.96	32:13	3930					98.2
IS 13C-1,2,3,6,7,8-HxCDF	4.92e+07	0.53 y	1.28	36:42	4470					112
IS 13C-1,2,3,4,6,7,8-HpCDF	3.54e+07	0.45 y	0.90	40:26	4560					114
IS 13C-OCDF	2.77e+07	0.89 y	0.81	47:52	3980					99.4
RS/RT 13C-1,2,3,4-TCDD	3.95e+07	0.81 y	1.00	27:42	4000					-
RS 13C-1,2,3,4-TCDF	6.25e+07	0.79 y	1.00	26:10	4000					-
RS/RT 13C-1,2,3,7,8,9-HxCDD	3.44e+07	1.27 y	1.00	38:00	4000					-
PS 37C1-2,3,7,8-TCDD	2.28e+07		0.51	28:22	4010					100
PS 13C-2,3,4,7,8-PeCDF	5.47e+07	1.60 y	0.97	33:19	3820					95.4
PS 13C-1,2,3,4,7,8-HxCDD	2.85e+07	1.27 y	0.92	37:33	3720					93.0
PS 13C-1,2,3,4,7,8-HxCDF	4.32e+07	0.53 y	0.91	36:33	3860					96.5
PS 13C-1,2,3,4,7,8,9-HpCDF	2.80e+07	0.45 y	0.85	42:59	3700					92.5
AS 13C-1,2,3,7,8,9-HxCDF	4.06e+07	0.55 y	1.07	38:25	4420					110

Reviewer: CL

Date: 18 Apr 01

EMPC

Rec

Analyst: GAB

Date: 17 Apr 01

56

Totals class: TCDD EMPC Function: 1 Run #: 10  
File Name: 010404P4 Sample #: 3 Sample text: 0\_319\_MB001 ✓

Acquired: 4-APR-01 22:31:56 ✓ Processed: 5-APR-01 09:01:09

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF» ✓	*	n	*	n	* n	*	*	*	n	*

Totals class: PeCDD EMPC Function: 2 Run #: 10  
File Name: 010404P4 Sample #: 3 Sample text: 0\_319\_MB001

Acquired: 4-APR-01 22:31:56 Processed: 5-APR-01 09:01:09

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF» ✓	*	n	*	n	* n	*	*	*	n	*

Totals class: HxCDD EMPC Function: 3 Run #: 10  
File Name: 010404P4 Sample #: 3 Sample text: 0\_319\_MB001

Acquired: 4-APR-01 22:31:56 Processed: 5-APR-01 09:01:09

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF» ✓	*	n	*	n	* n	*	*	*	n	*

Totals class: HpCDD EMPC Function: 4 Run #: 10  
File Name: 010404P4 Sample #: 3 Sample text: 0\_319\_MB001

Acquired: 4-APR-01 22:31:56 Processed: 5-APR-01 09:01:09

Total Conc.: 4.2031 Unnamed Conc.: 4.203

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
40:54 ✓	1.960e+04	y	2.272e+04	n	0.86 (n)	4.232e+04	3.845e+04	4.83e+00	y	4.20

Totals class: TCDF EMPC Function: 1 Run #: 10  
File Name: 010404P4 Sample #: 3 Sample text: 0\_319\_MB001



Acquired: 4-APR-01 22:31:56 Processed: 5-APR-01 09:01:09

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF*	/	* n	* n	* n	*	*	*	*	n	*

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Totals class: 1st Fnc.PeCDF EMPC Function: 1 Run #: 10  
 File Name: 010404P4 Sample #: 3 Sample text: 0\_319\_MB001

Acquired: 4-APR-01 22:31:56 Processed: 5-APR-01 09:01:09

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF*	/	* n	* n	* n	*	*	*	*	n	*

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Totals class: PeCDF EMPC Function: 2 Run #: 10  
 File Name: 010404P4 Sample #: 3 Sample text: 0\_319\_MB001

Acquired: 4-APR-01 22:31:56 Processed: 5-APR-01 09:01:09

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF*	/	* n	* n	* n	*	*	*	*	n	*

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Totals class: HxCDF EMPC Function: 3 Run #: 10  
 File Name: 010404P4 Sample #: 3 Sample text: 0\_319\_MB001

Acquired: 4-APR-01 22:31:56 Processed: 5-APR-01 09:01:09

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF*	/	* n	* n	* n	*	*	*	*	n	*

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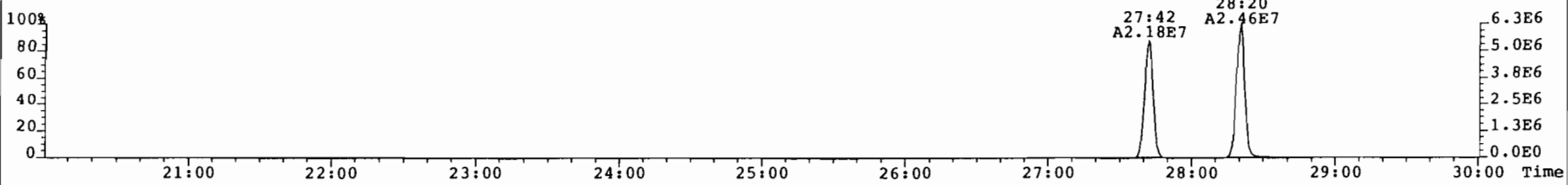
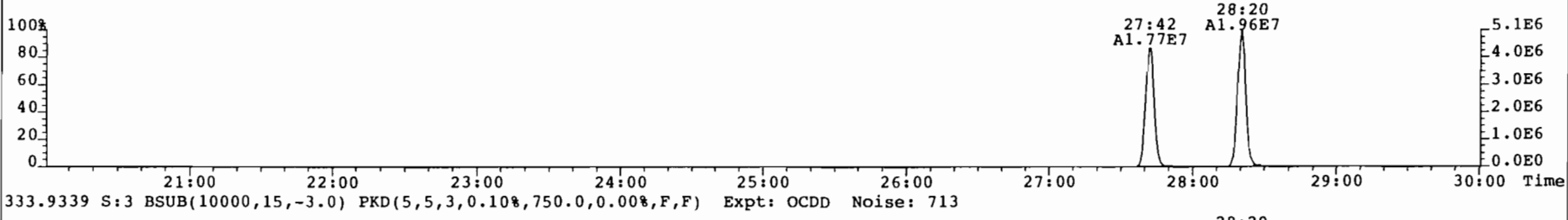
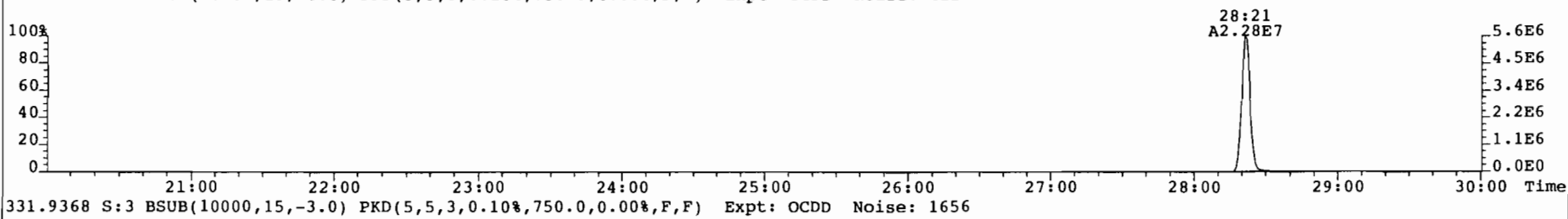
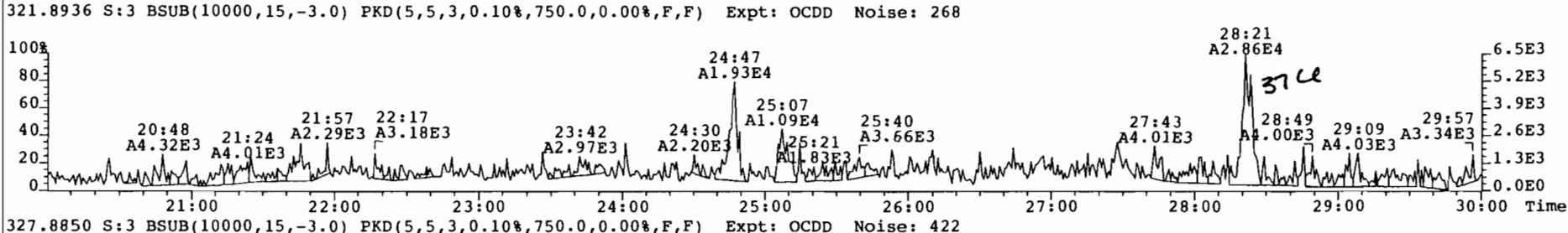
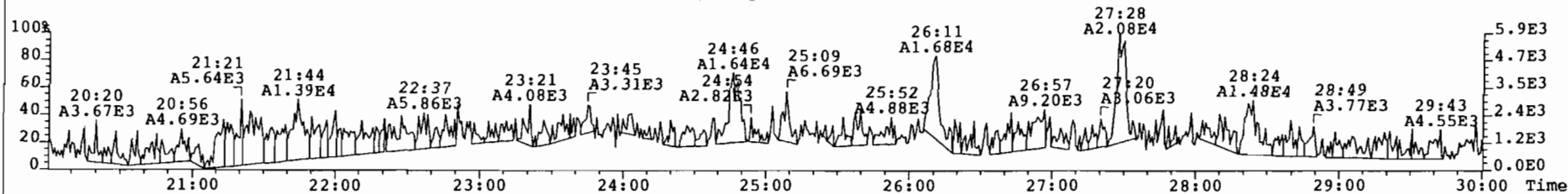
Totals class: HpCDF EMPC Function: 4 Run #: 10  
 File Name: 010404P4 Sample #: 3 Sample text: 0\_319\_MB001

Acquired: 4-APR-01 22:31:56 Processed: 5-APR-01 09:01:09

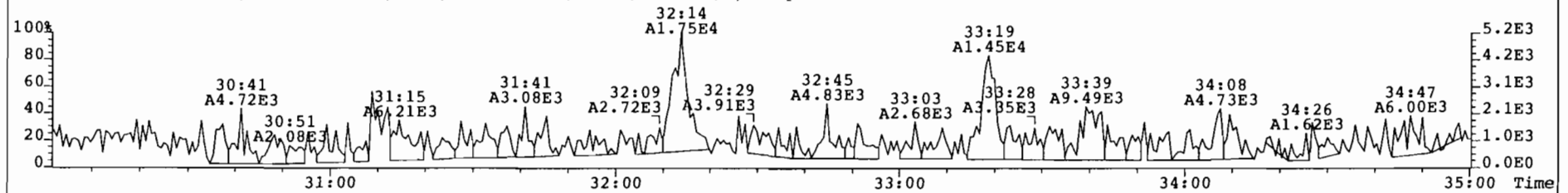
Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF	/	*	n	*	n	*	n	*	*	*	n	*

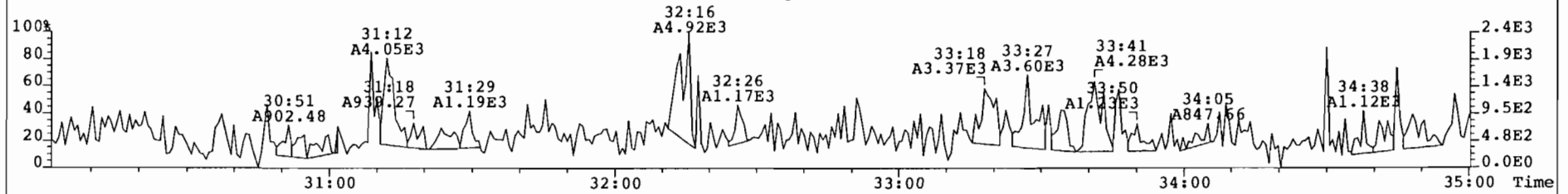
File: 010404P4 Acq: 4-APR-2001 22:31:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0 319 MB001 Vial# 21 File Text: AAP DB5  
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 482



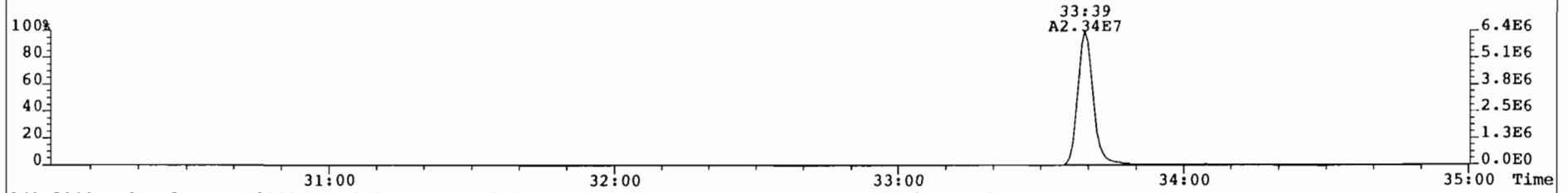
File: 010404P4 Acq: 4-APR-2001 22:31:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0 319 MB001 Vial# 21 File Text: AAP DB5  
355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 312



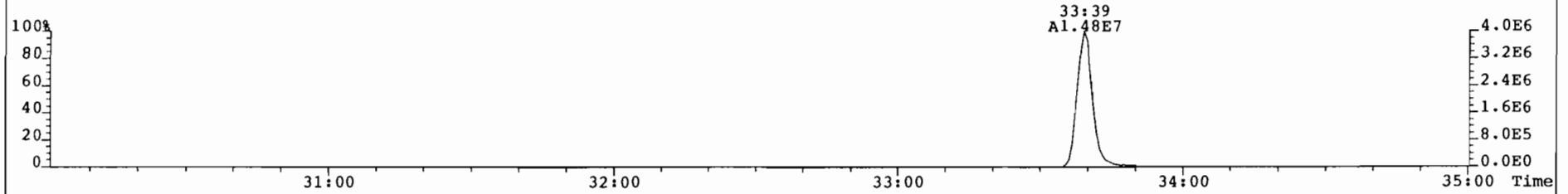
357.8517 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 177



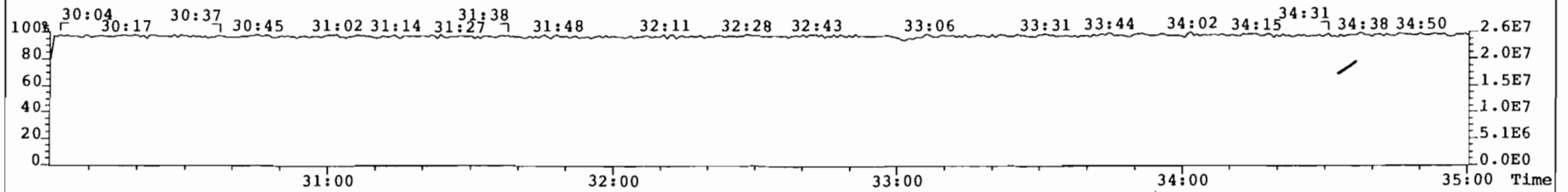
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1315



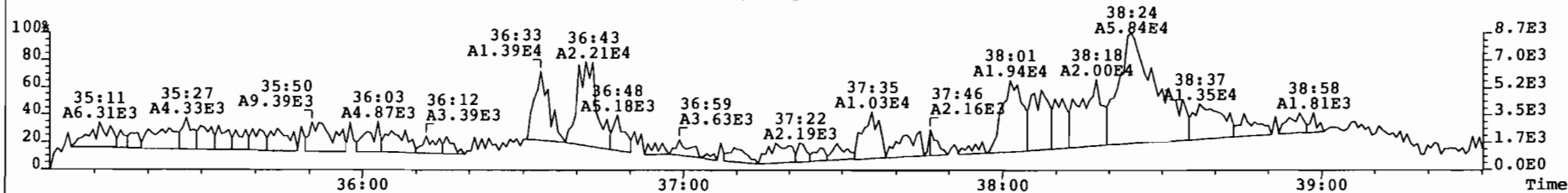
369.8919 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 598



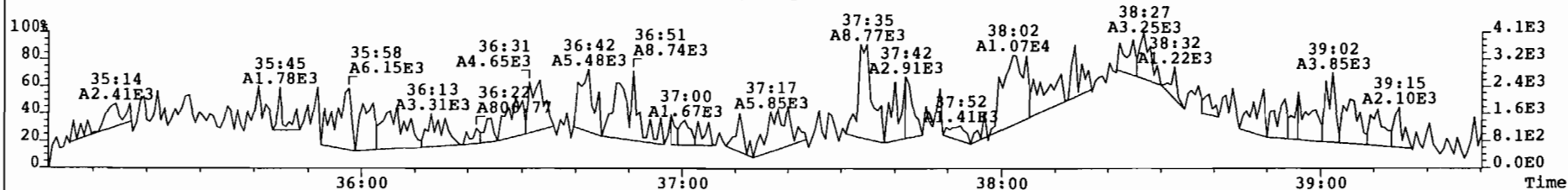
366.9792 S:3 F:2 Expt: OCDD



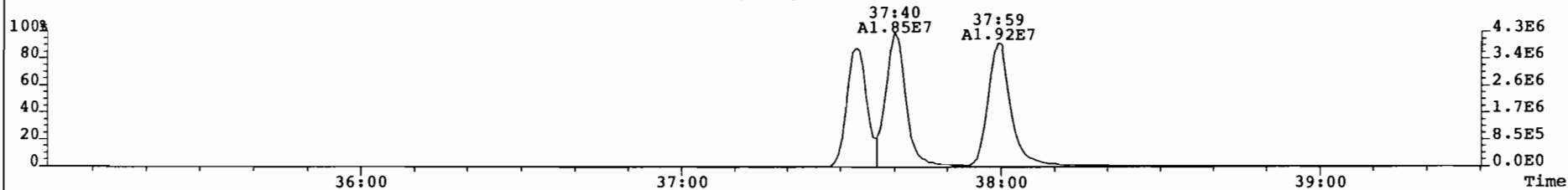
File: 010404P4 Acq: 4-APR-2001 22:31:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0\_319\_MB001 Vial# 21 File Text: AAP DB5  
389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 648



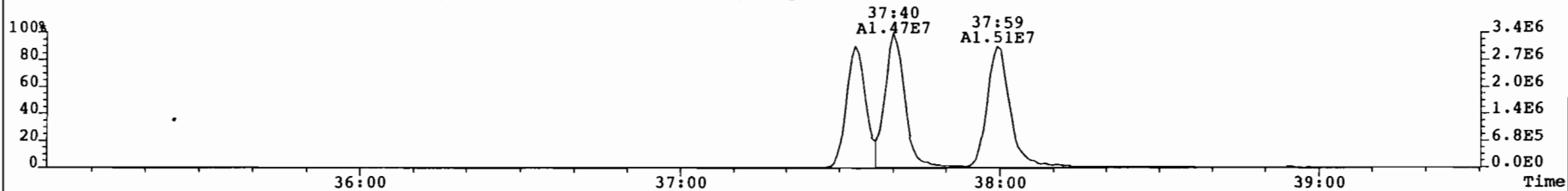
391.8127 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 458



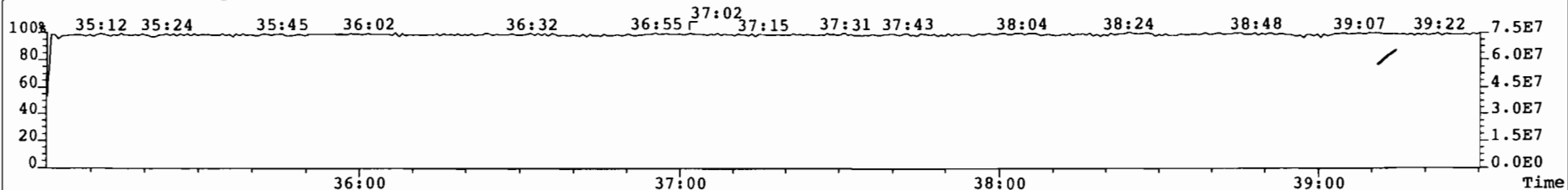
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 456



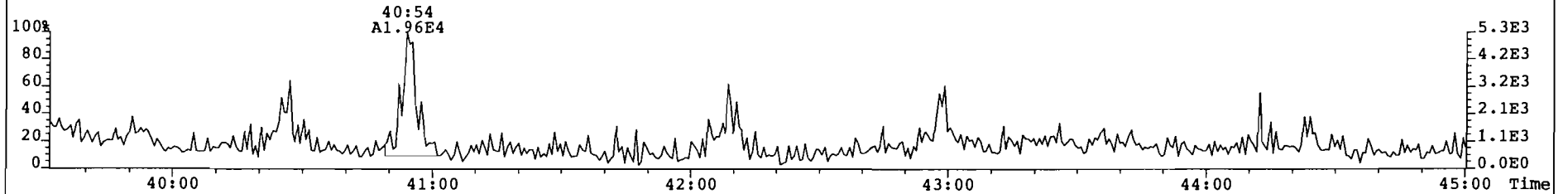
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 393



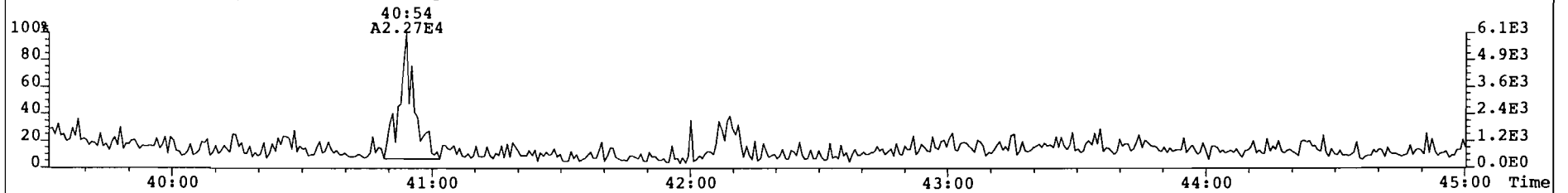
380.9760 S:3 F:3 Expt: OCDD



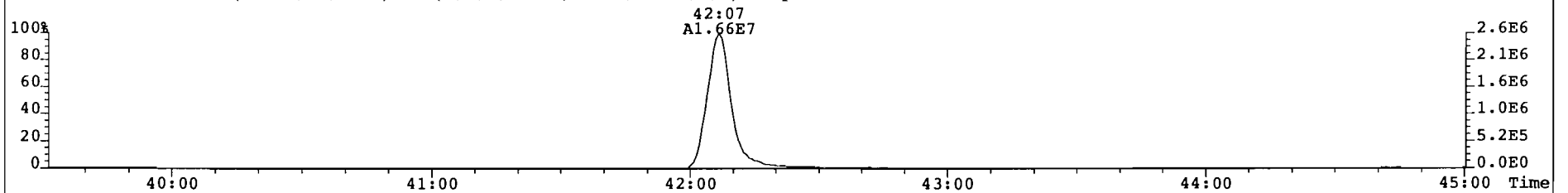
File: 010404P4 Acq: 4-APR-2001 22:31:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0 319 MB001 Vial# 21 File Text: AAP DB5  
423.7767 S:3 F:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 254



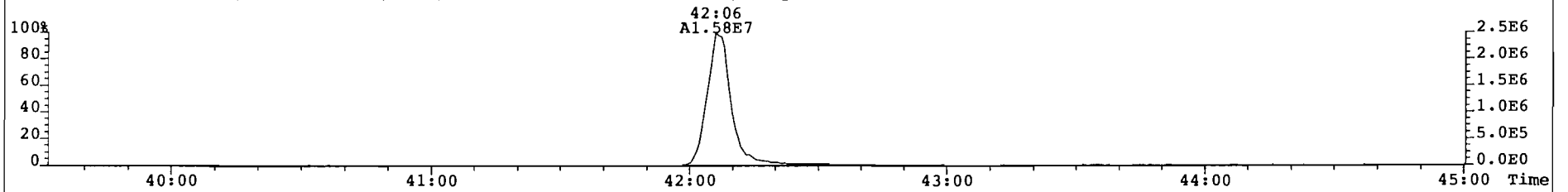
425.7737 S:3 F:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 253



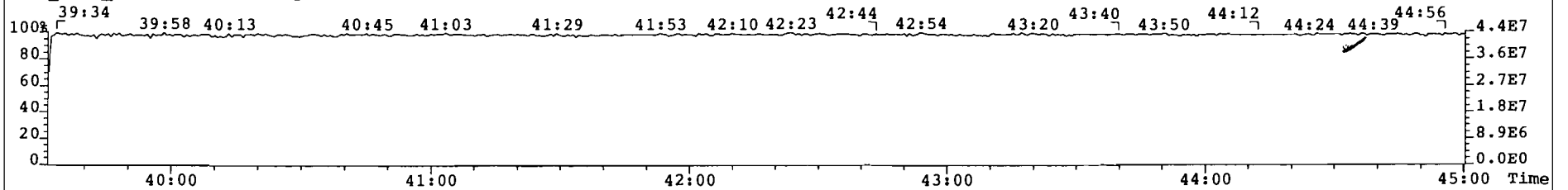
435.8169 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,F,F) Expt: OCDD Noise: 2576



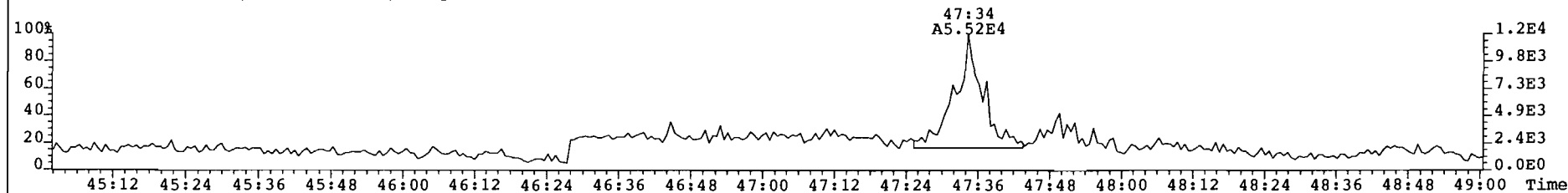
437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,F,F) Expt: OCDD Noise: 1227



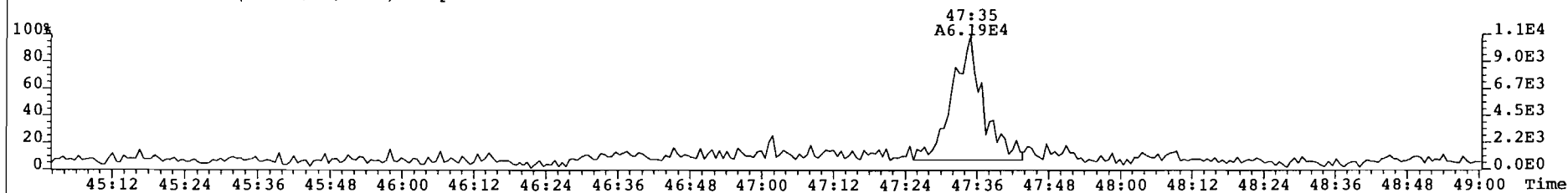
LOCK MASS CHECK S:3 F:4 Expt: OCDD



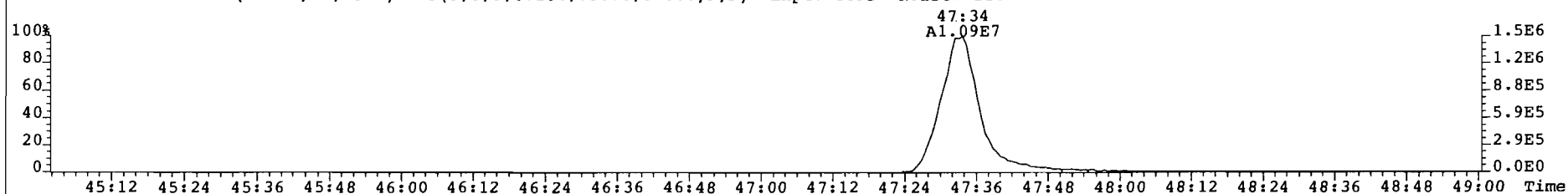
File: 010404P4 Acq: 4-APR-2001 22:31:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0 319 MB001 Vial# 21 File Text: AAP DB5  
457.7377 S:3 F:5 BSUB(10000,15,-3.0) Expt: OCDD Noise: 686



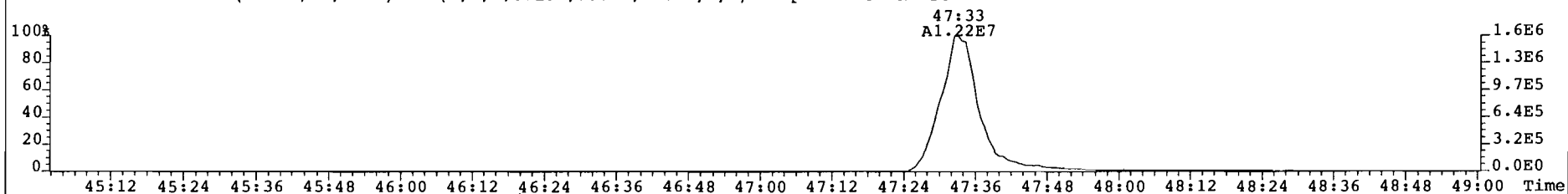
459.7348 S:3 F:5 BSUB(10000,15,-3.0) Expt: OCDD Noise: 287



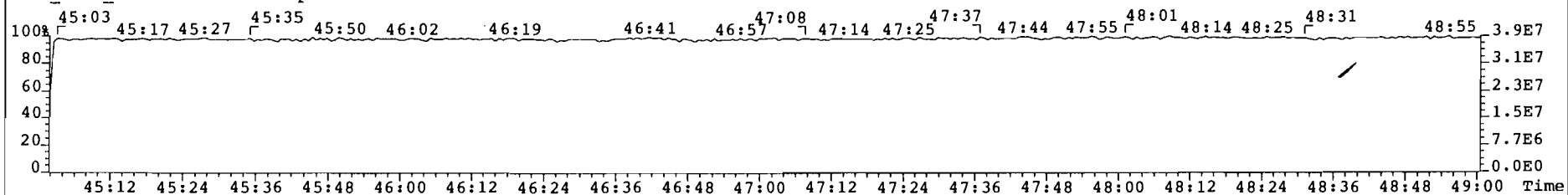
469.7780 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 214



471.7750 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 249



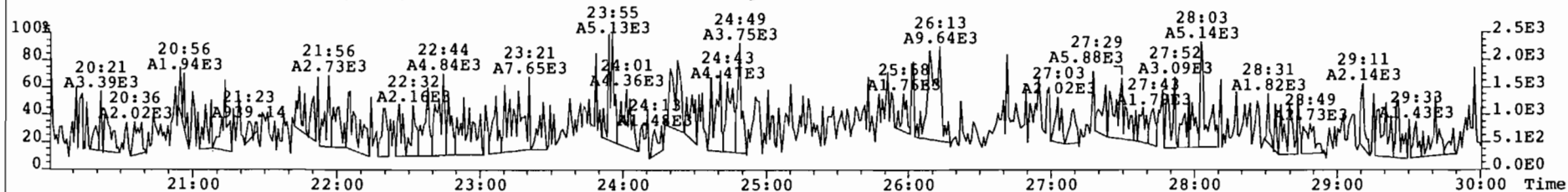
LOCK\_MASS\_CHECK S:3 F:5 Expt: OCDD



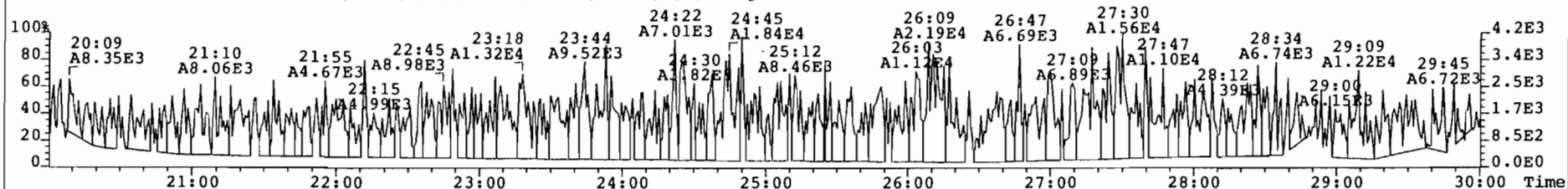
File: 010404P4 Acq: 4-APR-2001 22:31:56 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 3 Text: 0 319 MB001 Vial# 21 File Text: AAP DB5

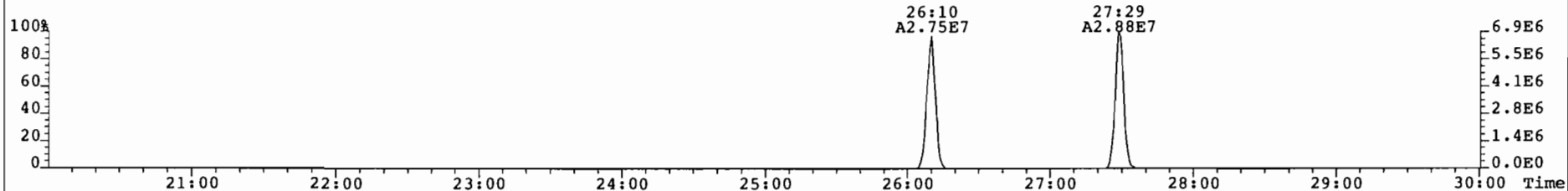
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 245



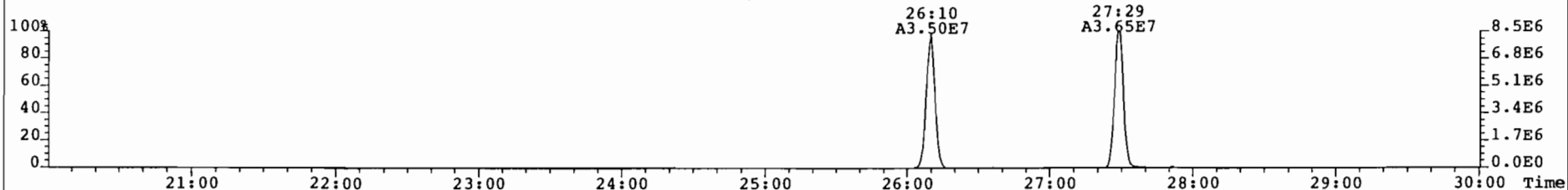
305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 502



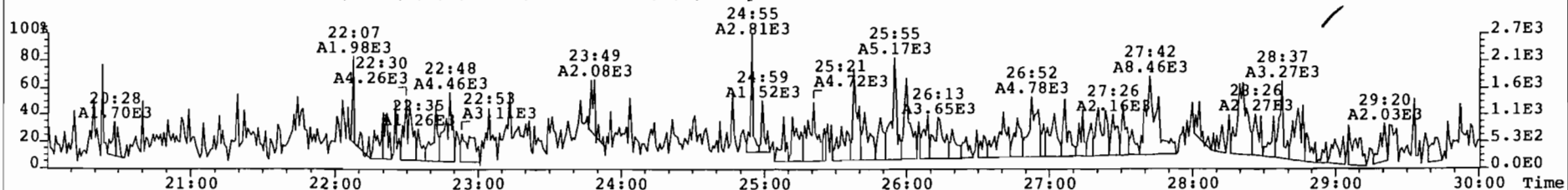
315.9419 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 437



317.9389 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1650

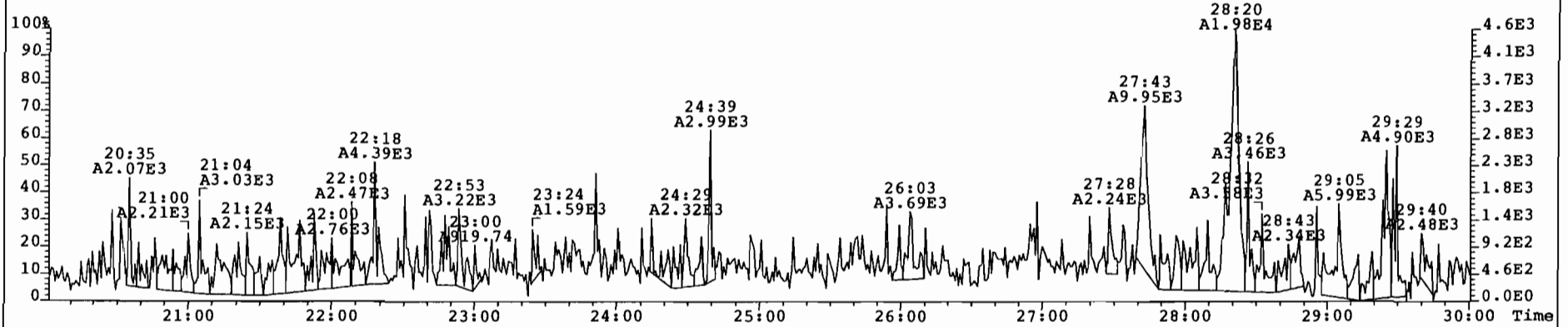


375.8364 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 185

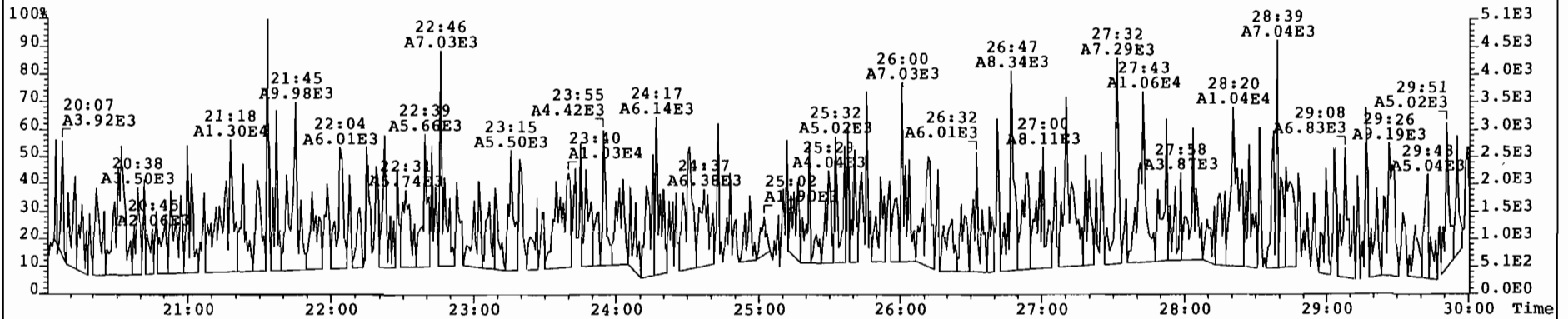




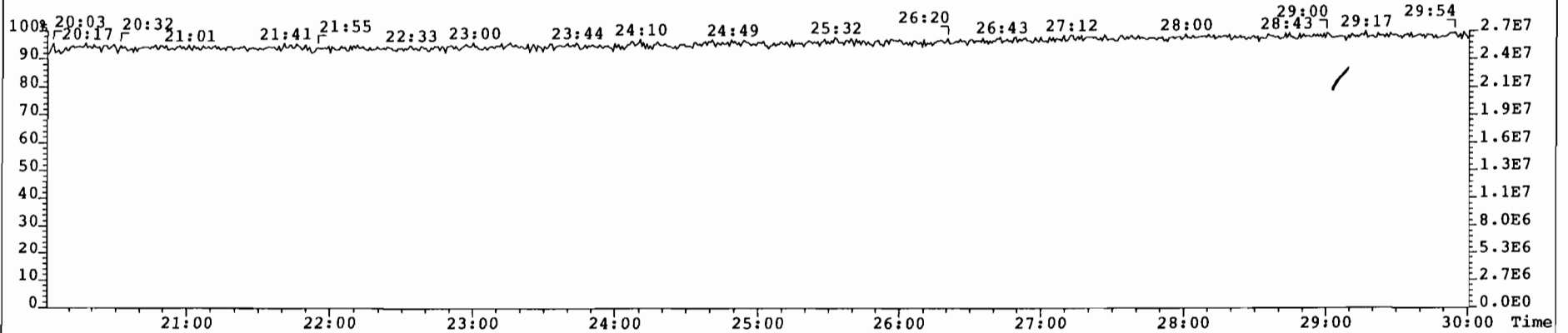
File: 010404P4 Acq: 4-APR-2001 22:31:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0\_319\_MB001 Vial# 21 File Text: AAP DB5  
339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 181



341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 361



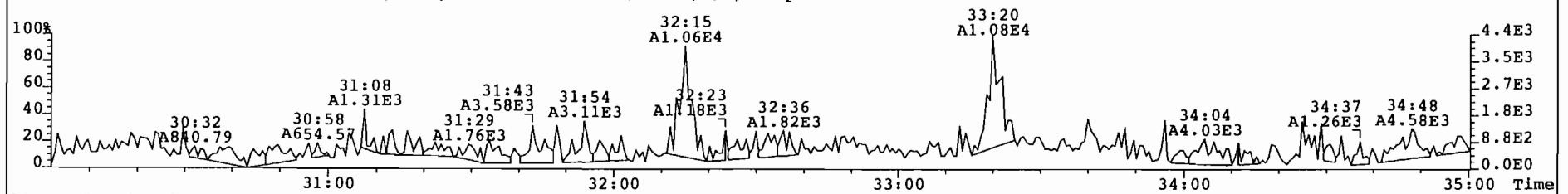
316.9824 S:3 Expt: OCDD



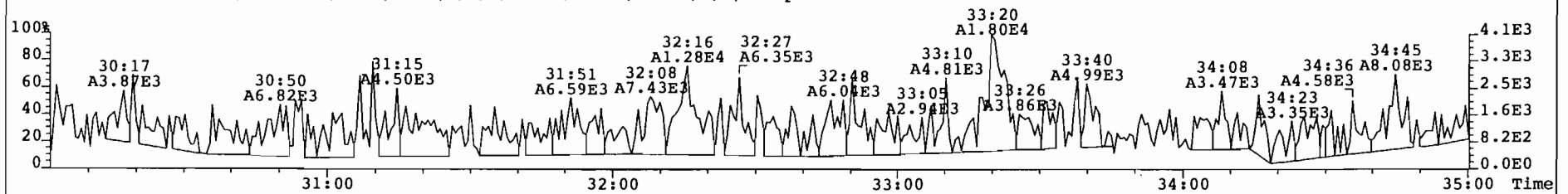
File: 010404P4 Acq: 4-APR-2001 22:31:56 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 3 Text: 0\_319\_MB001 Vial# 21 File Text: AAP DB5

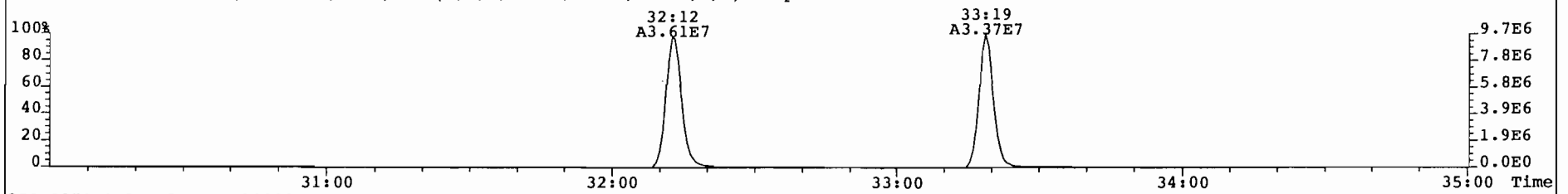
339.8597 S:3 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 200



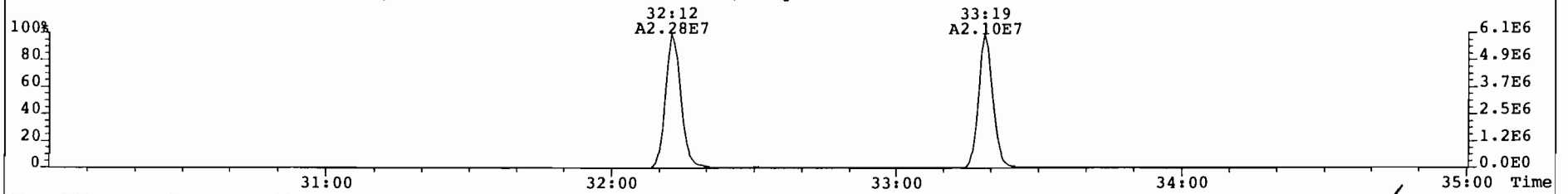
341.8568 S:3 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 397



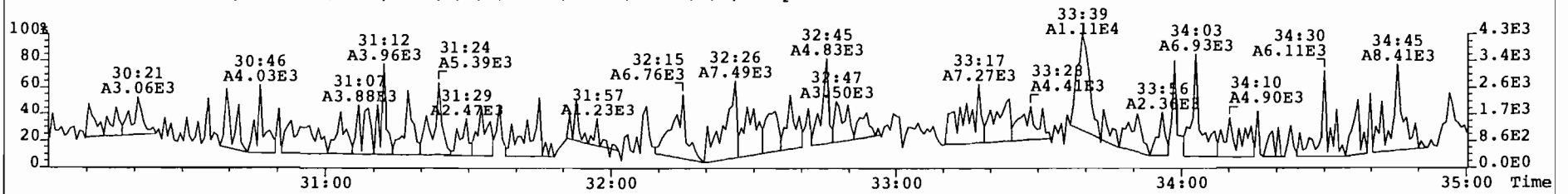
351.9000 S:3 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 919



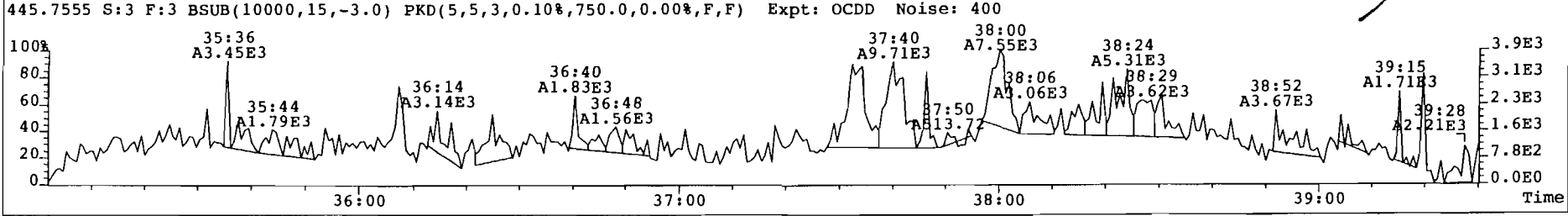
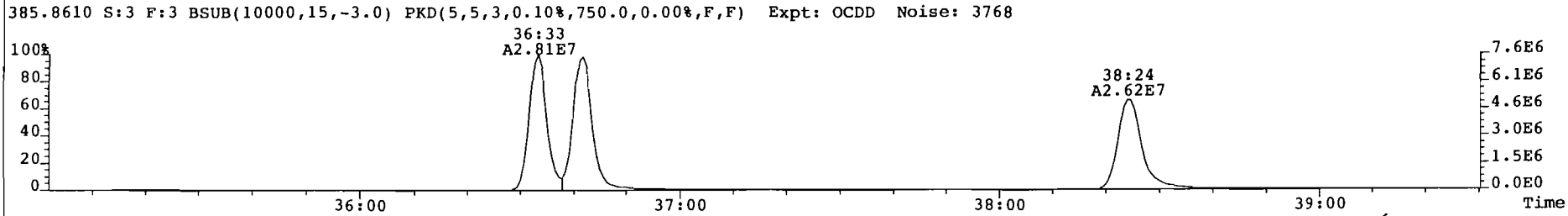
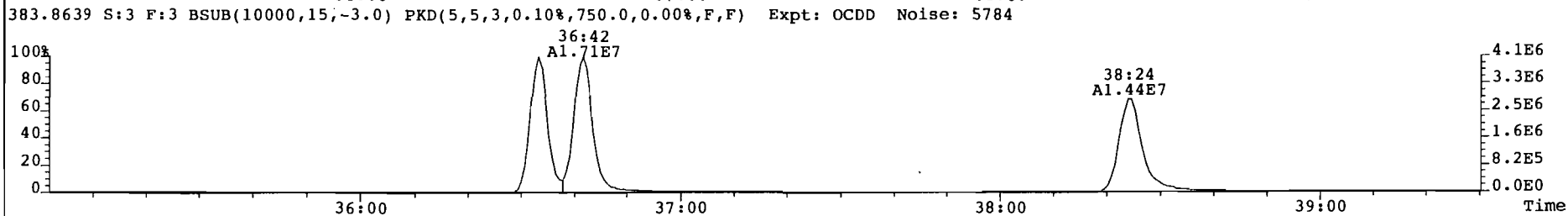
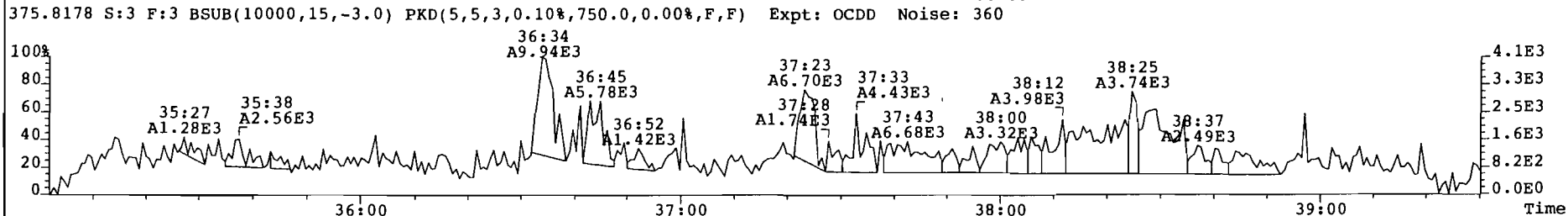
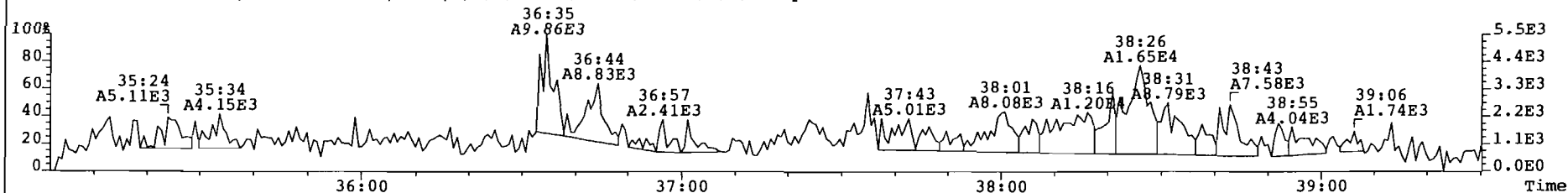
353.8970 S:3 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 649



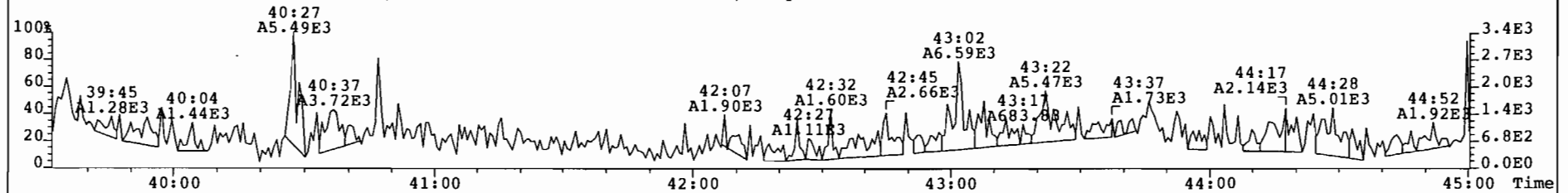
409.7974 S:3 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 364



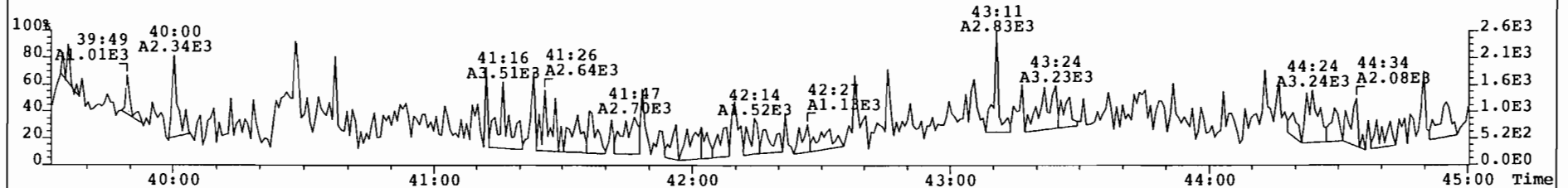
File: 010404P4 Acq: 4-APR-2001 22:31:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0 319 MB001 Vial# 21 File Text: AAP DB5  
373.8207 S:3 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 438



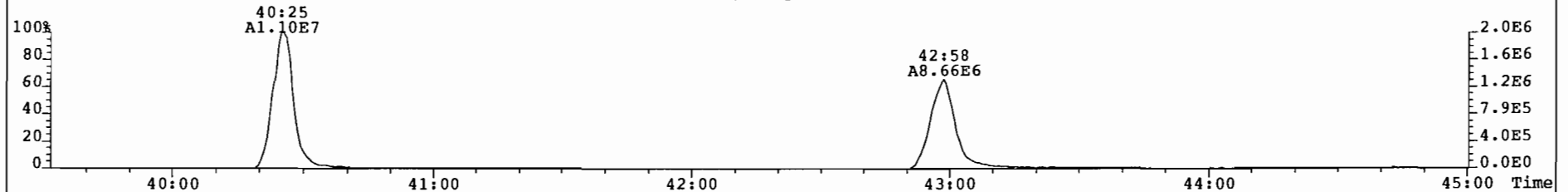
File: 010404P4 Acq: 4-APR-2001 22:31:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0\_319\_MB001 Vial# 21 File Text: AAP DB5  
407.7818 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 251



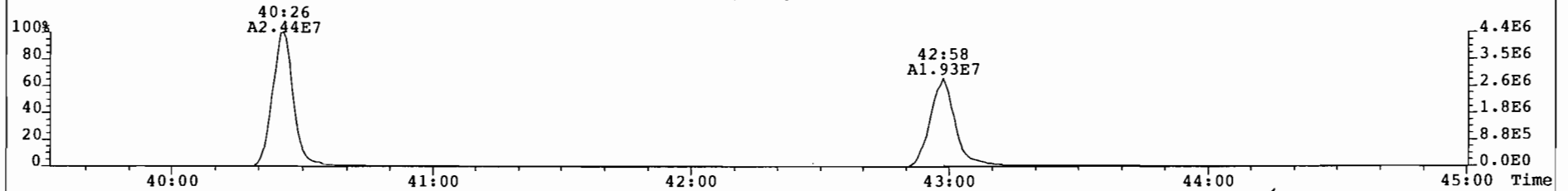
409.7788 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 263



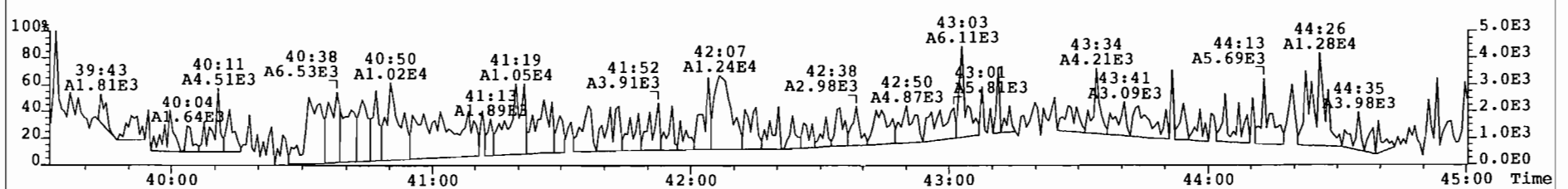
417.8253 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 777



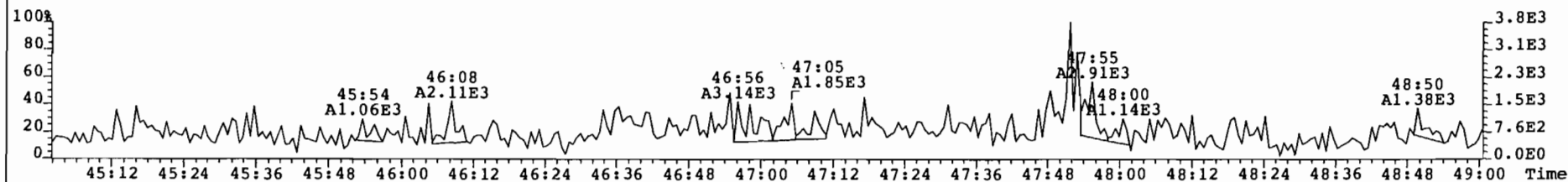
419.8220 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1199



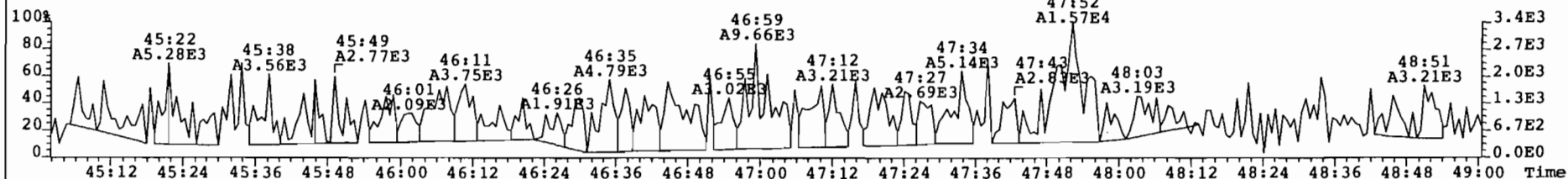
479.7165 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 481



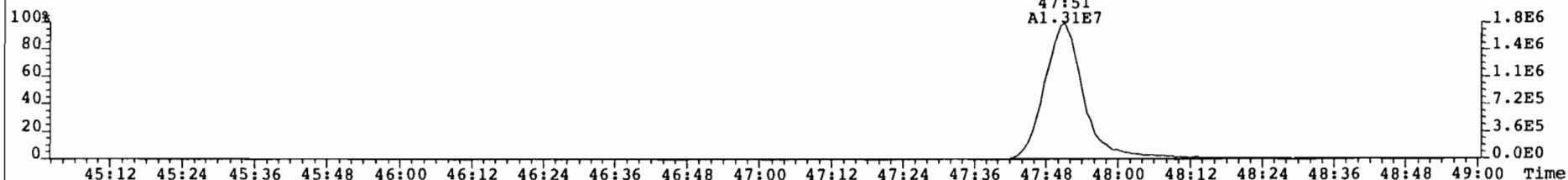
File: 010404P4 Acq: 4-APR-2001 22:31:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0.319\_MB001 Vial# 21 File Text: AAP DB5  
441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 228



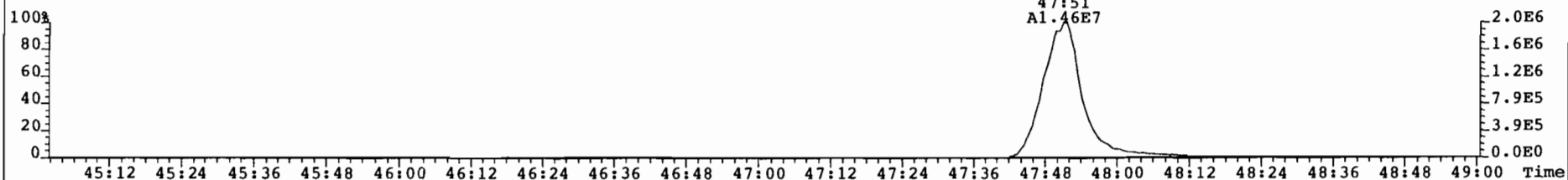
443.7398 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 317



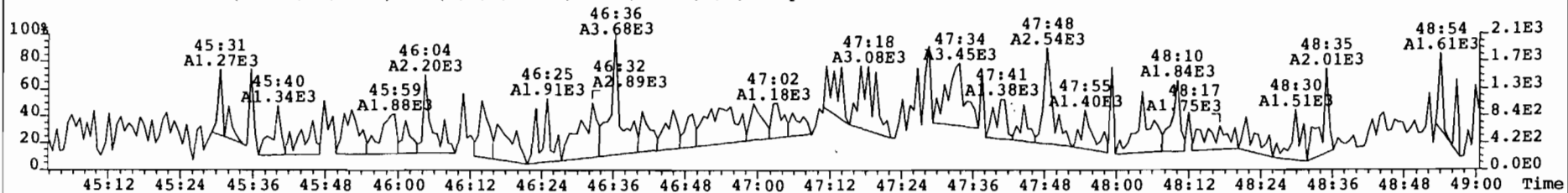
453.7830 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 209



455.7801 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 2656



513.6775 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 199




# Sample ID: Unit 1 Run 1 Out

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_001	Date Extracted:	2 Apr 01
Date Collected:	27 Mar 01			QC Batch No.:	319	Date Analyzed:	4-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	3.82			A	90.8	102	101
1,2,3,7,8-PeCDD	14.1			A	95.3	97.4	101
1,2,3,4,7,8-HxCDD	16.4			A	96.7	89.8	101
1,2,3,6,7,8-HxCDD	46			A	96.7	89.8	101
1,2,3,7,8,9-HxCDD	28.8			A	96.7	89.8	101
1,2,3,4,6,7,8-HpCDD	292				99.1	96.6	101
OCDD	621			B	77.2	96.6	101
2,3,7,8-TCDF	22.7				89.8	102	101
1,2,3,7,8-PeCDF	28.2			A	90.5	97.4	101
2,3,4,7,8-PeCDF	43			A	90.5	97.4	101
1,2,3,4,7,8-HxCDF	41.5			A	106	94.1	101
1,2,3,6,7,8-HxCDF	42.9			A	106	94.1	101
2,3,4,6,7,8-HxCDF	49.2			A	106	94.1	101
1,2,3,7,8,9-HxCDF	9.59			A	106	94.1	101
1,2,3,4,6,7,8-HpCDF	176				104	96.6	101
1,2,3,4,7,8,9-HpCDF	14			A	104	96.6	101
OCDF	51.4			A	87.4	96.6	101

Totals & TEQs				
TCDDs	229			
PeCDDs	409			
HxCDDs	724			
HpCDDs	568			
TCDFs	822			
PeCDFs	570			
HxCDFs	412		418	
HpCDFs	242			
<b>Total PCDD/Fs</b>	<b>4650</b>		<b>4660</b>	
<b>TEQ (ND=0)</b>	<b>65.0</b>		<b>65.0</b>	<b>ITEF</b>
<b>TEQ (ND=DL/2)</b>	<b>65.0</b>		<b>65.0</b>	<b>ITEF</b>

 **ALTA ANALYTICAL PERSPECTIVES**

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Reviewer Ce  
Date 18 Apr 01

Client ID: Unit 1 Run 1 Out  
Lab ID: P1454\_319\_001

Filename: 010404P4  
GC Column ID: db-5

S: 4 Acq: 4-APR-01 23:23:51  
Ical: MM1\_M23\_0 wt/vol: 1.000

ConCal: 010404P4-  
EndCal: 010404P4-

Name	Resp	RA	RRF	RT	Conc	Qualif.	CDE	noise	Fac	DL
2,3,7,8-TCDD	5.32e+04	0.57	1.26	28:21	4.03			1098	2.5	1.47
1,2,3,7,8-PeCDD	1.27e+05	1.49	1.01	33:40	14.1			791	2.5	2.07
1,2,3,4,7,8-HxCDD	1.44e+05	1.25	1.14	37:34	16.4			2314	2.5	6.73
1,2,3,6,7,8-HxCDD	3.65e+05	1.23	1.02	37:41	46.0			2314	2.5	7.49
1,2,3,7,8,9-HxCDD	2.55e+05	1.22	1.14	38:01	28.8			2314	2.5	6.70
1,2,3,4,6,7,8-HpCDD	2.53e+06	1.01	1.13	42:08	292			2928	2.5	11.2
OCDD	3.09e+06	0.91	1.03	47:35	621			958	2.5	6.68
2,3,7,8-TCDF	3.66e+05	0.71	1.05	27:30	22.7			2233	2.5	2.60
1,2,3,7,8-PeCDF	4.10e+05	1.64	1.04	32:14	28.2			1908	2.5	3.09
2,3,4,7,8-PeCDF	6.35e+05	1.52	1.05	33:20	43.0			1908	2.5	3.04
1,2,3,4,7,8-HxCDF	5.45e+05	1.20	1.13	36:34	41.5			1406	2.5	1.69
1,2,3,6,7,8-HxCDF	6.16e+05	1.26	1.24	36:42	42.9			1406	2.5	1.54
2,3,4,6,7,8-HxCDF	6.65e+05	1.34	1.16	37:22	49.2			1406	2.5	1.64
1,2,3,7,8,9-HxCDF	1.13e+05	1.33	1.02	38:27	9.59			1406	2.5	1.87
1,2,3,4,6,7,8-HpCDF	2.19e+06	1.06	1.54	40:26	176			1530	2.5	2.48
1,2,3,4,7,8,9-HpCDF	1.46e+05	1.18	1.30	43:00	14.0			1530	2.5	2.94
OCDF	3.58e+05	0.87	1.15	47:52	51.4			1611	2.5	8.06
Total Tetra-Dioxins	2.97e+06	0.80	1.26	24:46	225			1098	2.5	1.47
Total Penta-Dioxins	3.70e+06	1.52	1.01	31:11	409			791	2.5	2.07
Total Hexa-Dioxins	6.16e+06	1.32	1.10	35:50	724			2314	2.5	6.95
Total Hepta-Dioxins	4.93e+06	1.03	1.13	40:54	568			2928	2.5	11.2
Total Tetra-Furans	1.32e+07	0.76	1.05	22:43	822			2233	2.5	2.60
1st Fnc. Penta-Furans	9.47e+05	1.63	1.05	29:26	64.6			2811	2.5	4.51
Total Penta-Furans	7.41e+06	1.58	1.05	30:58	506			1908	2.5	3.06
PeCDF Totals:					570					570
Total Hexa-Furans	5.49e+06	1.27	1.14	35:11	412			1406	2.5	1.68
Total Hepta-Furans	2.93e+06	1.06	1.42	40:26	242			1530	2.5	2.69
IS 13C-2,3,7,8-TCDD	4.18e+07	0.79	1.13	28:20	3630					90.8
IS 13C-1,2,3,7,8-PeCDD	3.58e+07	1.57	0.93	33:40	3810					95.3
IS 13C-1,2,3,6,7,8-HxCDD	3.09e+07	1.26	0.93	37:40	3870					96.7
IS 13C-1,2,3,4,6,7,8-HpCDD	3.08e+07	1.06	0.91	42:07	3960					99.1
IS 13C-OCDD	1.94e+07	0.91	0.73	47:34	3090					77.2
IS 13C-2,3,7,8-TCDF	6.16e+07	0.78	1.06	27:28	3590					89.8
IS 13C-1,2,3,7,8-PeCDF	5.60e+07	1.59	0.96	32:13	3620					90.5
IS 13C-1,2,3,6,7,8-HxCDF	4.64e+07	0.53	1.28	36:42	4220					106
IS 13C-1,2,3,4,6,7,8-HpCDF	3.22e+07	0.44	0.90	40:25	4160					104
IS 13C-OCDF	2.43e+07	0.90	0.81	47:51	3500					87.4
RS/RT 13C-1,2,3,4-TCDD	4.06e+07	0.81	1.00	27:42	4000					-
RS 13C-1,2,3,4-TCDF	6.46e+07	0.78	1.00	26:10	4000					-
RS/RT 13C-1,2,3,7,8,9-HxCDD	3.43e+07	1.26	1.00	38:00	4000					-
PS 37Cl-2,3,7,8-TCDD	2.20e+07		0.51	28:21	4090					102
PS 13C-2,3,4,7,8-PeCDF	5.31e+07	1.58	0.97	33:19	3890					97.4
PS 13C-1,2,3,4,7,8-HxCDD	2.57e+07	1.27	0.92	37:33	3590					89.8
PS 13C-1,2,3,4,7,8-HxCDF	3.97e+07	0.53	0.91	36:33	3760					94.1
PS 13C-1,2,3,4,7,8,9-HpCDF	2.66e+07	0.44	0.85	42:58	3860					96.6
AS 13C-1,2,3,7,8,9-HxCDF	3.70e+07	0.53	1.07	38:25	4030					101

Reviewer: ce

Date: 18 Apr 01

EMPC  
230  
409  
724  
568  
822  
64.6  
570  
418  
242

Rec  
90.8  
95.3  
96.7  
99.1  
77.2  
89.8  
90.5  
106  
104  
87.4

Analyst: GAG

Date: 17 Apr 01

Totals class: TCDD EMPC Function: 1 Run #: 11  
 File Name: 010404P4 Sample #: 4 Sample text: P1454\_319\_001 Unit 1 Run 1 Out Air Train ✓

Acquired: 4-APR-01 23:23:51 ✓ Processed: 5-APR-01 09:01:10

Total Conc.: 229.52 Unnamed Conc.: 225.487

RT	m1	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
24:46	✓	7.012e+05	n	8.813e+05	n	0.80	y	✓	1.582e+06	1.582e+06	1.67e+02	y	120
25:07	✓	1.553e+05	n	1.795e+05	n	0.87	y	✓	3.348e+05	3.348e+05	3.65e+01	y	25.4
25:32	✓	3.839e+04	y	5.231e+04	n	0.73	y	✓	9.070e+04	9.070e+04	1.12e+01	y	6.88
26:32	✓	8.501e+04	n	1.026e+05	n	0.83	y	✓	1.876e+05	1.876e+05	2.04e+01	y	14.2
26:43	✓	7.011e+04	y	8.213e+04	n	0.85	y	✓	1.522e+05	1.522e+05	2.17e+01	y	11.5
26:55	✓	3.232e+04	y	4.509e+04	n	0.72	y	✓	7.741e+04	7.741e+04	1.19e+01	y	5.87
27:20	✓	3.121e+04	y	4.498e+04	n	0.69	y	✓	7.620e+04	7.620e+04	1.01e+01	y	5.78
27:43	✓	8.722e+04	n	1.054e+05	n	0.83	y	✓	1.927e+05	1.927e+05	2.33e+01	y	14.6
28:05	✓	9.528e+04	y	1.307e+05	y	0.73	y	✓	2.260e+05	2.260e+05	2.33e+01	y	17.1
28:21	✓	2.313e+04	y	4.040e+04	y	0.57	Ⓣ	✓	6.353e+04	5.317e+04	9.60e+00	y	4.03 2,3,7,8-TCDD
28:40	✓	2.366e+04	y	2.950e+04	y	0.80	y	✓	5.316e+04	5.316e+04	8.43e+00	y	4.03

Totals class: PeCDD EMPC Function: 2 Run #: 11  
 File Name: 010404P4 Sample #: 4 Sample text: P1454\_319\_001 Unit 1 Run 1 Out Air Train

Acquired: 4-APR-01 23:23:51 Processed: 5-APR-01 09:01:10

Total Conc.: 408.89 Unnamed Conc.: 394.829

RT	m1	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
31:11	✓	8.254e+05	n	5.425e+05	n	1.52	y	✓	1.368e+06	1.368e+06	1.45e+02	y	151
31:43	✓	4.421e+04	y	2.614e+04	y	1.69	y	✓	7.035e+04	7.035e+04	9.79e+00	y	7.77
32:16	✓	6.673e+05	n	4.028e+05	n	1.66	y	✓	1.070e+06	1.070e+06	1.43e+02	y	118
32:26	✓	6.695e+04	y	4.028e+04	y	1.66	y	✓	1.072e+05	1.072e+05	1.77e+01	y	11.8
32:33	✓	2.498e+05	n	1.764e+05	n	1.42	y	✓	4.262e+05	4.262e+05	6.46e+01	y	47.0
32:48	✓	1.089e+05	n	7.190e+04	n	1.52	y	✓	1.808e+05	1.808e+05	2.15e+01	y	20.0
33:10	✓	1.406e+05	y	9.586e+04	n	1.47	y	✓	2.365e+05	2.365e+05	2.99e+01	y	26.1
33:40	✓	7.629e+04	y	5.108e+04	y	1.49	y	✓	1.274e+05	1.274e+05	1.75e+01	y	14.1 1,2,3,7,8-PeCDD
33:46	✓	3.371e+04	y	2.444e+04	y	1.38	y	✓	5.815e+04	5.815e+04	9.20e+00	y	6.42
34:07	✓	3.644e+04	y	2.282e+04	y	1.60	y	✓	5.926e+04	5.926e+04	9.93e+00	y	6.54

Totals class: HxCDD EMPC Function: 3 Run #: 11  
 File Name: 010404P4 Sample #: 4 Sample text: P1454\_319\_001 Unit 1 Run 1 Out Air Train

Acquired: 4-APR-01 23:23:51 Processed: 5-APR-01 09:01:10

Total Conc.: 724.32 Unnamed Conc.: 633.110

RT	m1	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
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35:50	2.970e+05	n	2.242e+05	n	1.32	y	5.212e+05	5.212e+05	2.60e+01	y	61.1
36:29	1.916e+06	n	1.540e+06	n	1.24	y	3.455e+06	3.455e+06	1.73e+02	y	405
36:47	6.432e+05	n	5.111e+05	n	1.26	y	1.154e+06	1.154e+06	4.72e+01	y	135
36:55	6.698e+04	n	6.106e+04	n	1.10	y	1.280e+05	1.280e+05	6.68e+00	y	15.0
37:34	8.017e+04	n	6.413e+04	n	1.25	y	1.443e+05	1.443e+05	7.97e+00	y	16.4 1,2,3,4,7,8-HxCDD
37:41	2.008e+05	n	1.637e+05	n	1.23	y	3.646e+05	3.646e+05	1.68e+01	y	46.0 1,2,3,6,7,8-HxCDD
37:53	8.172e+04	n	5.798e+04	n	1.41	y	1.397e+05	1.397e+05	5.61e+00	y	16.4
38:01	1.402e+05	n	1.146e+05	n	1.22	y	2.547e+05	2.547e+05	1.02e+01	y	28.8 1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC Function: 4 Run #: 11  
 File Name: 010404P4 Sample #: 4 Sample text: P1454\_319\_001 Unit 1 Run 1 Out Air Train

Acquired: 4-APR-01 23:23:51 Processed: 5-APR-01 09:01:10

Total Conc.: 568.49 Unnamed Conc.: 276.535

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
40:54	1.220e+06	n	1.180e+06	n	1.03	y	2.400e+06	2.400e+06	7.18e+01	y	277
42:08	1.276e+06	n	1.258e+06	n	1.01	y	2.534e+06	2.534e+06	7.32e+01	y	292 1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC Function: 1 Run #: 11  
 File Name: 010404P4 Sample #: 4 Sample text: P1454\_319\_001 Unit 1 Run 1 Out Air Train

Acquired: 4-APR-01 23:23:51 Processed: 5-APR-01 09:01:10

Total Conc.: 822.05 Unnamed Conc.: 799.340

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
22:43	3.275e+05	n	4.304e+05	n	0.76	y	7.580e+05	7.580e+05	3.50e+01	y	47.1
23:17	2.016e+05	n	2.723e+05	n	0.74	y	4.740e+05	4.740e+05	2.61e+01	y	29.4
23:53	1.695e+05	n	2.219e+05	n	0.76	y	3.913e+05	3.913e+05	2.06e+01	y	24.3
24:22	9.817e+05	y	1.252e+06	n	0.78	y	2.234e+06	2.234e+06	7.74e+01	y	139
24:39	1.711e+05	y	2.219e+05	y	0.77	y	3.930e+05	3.930e+05	2.14e+01	y	24.4
24:46	4.105e+05	y	5.177e+05	y	0.79	y	9.282e+05	9.282e+05	3.71e+01	y	57.6
25:09	2.083e+05	y	2.663e+05	y	0.78	y	4.747e+05	4.747e+05	2.50e+01	y	29.5
25:17	1.375e+05	y	1.678e+05	y	0.82	y	3.053e+05	3.053e+05	1.72e+01	y	19.0
25:27	2.386e+05	y	3.001e+05	y	0.80	y	5.387e+05	5.387e+05	2.89e+01	y	33.4
25:49	1.849e+05	y	2.215e+05	y	0.84	y	4.064e+05	4.064e+05	2.14e+01	y	25.2
25:56	2.668e+05	y	3.246e+05	y	0.82	y	5.914e+05	5.914e+05	3.40e+01	y	36.7
26:04	2.383e+05	y	3.058e+05	n	0.78	y	5.441e+05	5.441e+05	3.40e+01	y	33.8
26:11	6.612e+05	n	8.309e+05	n	0.80	y	1.492e+06	1.492e+06	7.02e+01	y	92.6
26:37	2.425e+05	n	3.143e+05	y	0.77	y	5.568e+05	5.568e+05	3.11e+01	y	34.6
26:45	3.450e+04	y	5.242e+04	y	0.66	y	8.692e+04	8.692e+04	6.05e+00	y	5.40
26:54	1.378e+05	y	1.784e+05	y	0.77	y	3.161e+05	3.161e+05	1.96e+01	y	19.6
27:05	1.870e+05	n	2.535e+05	y	0.74	y	4.405e+05	4.405e+05	2.49e+01	y	27.3
27:17	2.084e+05	y	2.866e+05	y	0.73	y	4.950e+05	4.950e+05	3.08e+01	y	30.7
27:23	1.483e+05	y	1.797e+05	y	0.83	y	3.280e+05	3.280e+05	1.98e+01	y	20.4
27:30	1.515e+05	y	2.142e+05	y	0.71	y	3.657e+05	3.657e+05	2.14e+01	y	22.7 2,3,7,8-TCDF
27:51	3.711e+05	n	4.775e+05	n	0.78	y	8.487e+05	8.487e+05	4.85e+01	y	52.7

TD+  
822.21

28:06	2.999e+04	y	4.241e+04	y	0.71	y	7.240e+04	7.240e+04	4.87e+00	y	4.50
28:22	3.193e+04	y	4.449e+04	n	0.72	y	7.642e+04	7.642e+04	4.58e+00	y	4.74
29:28	5.598e+04	n	6.601e+04	y	0.85	y	1.220e+05	1.220e+05	4.69e+00	y	7.57

Totals class: 1st Fnc.PeCDF EMPC                      Function: 1 Run #: 11  
 File Name: 010404P4 Sample #: 4                      Sample text: P1454\_319\_001 Unit 1 Run 1 Out Air Train

Acquired: 4-APR-01 23:23:51      Processed: 5-APR-01 09:01:10

Total Conc.: 64.638                      Unnamed Conc.: 64.638

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
29:26	5.871e+05	n	3.600e+05	n	1.63	y	9.471e+05	9.471e+05	3.22e+01	y	64.6

Totals class: PeCDF EMPC                                      Function: 2 Run #: 11  
 File Name: 010404P4 Sample #: 4                              Sample text: P1454\_319\_001 Unit 1 Run 1 Out Air Train

Acquired: 4-APR-01 23:23:51      Processed: 5-APR-01 09:01:10

Total Conc.: 505.76                      Unnamed Conc.: 434.581

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
30:58	7.185e+05	y	4.536e+05	y	1.58	y	1.172e+06	1.172e+06	4.63e+01	y	80.0
31:07	9.109e+05	n	5.769e+05	n	1.58	y	1.488e+06	1.488e+06	5.62e+01	y	102
31:13	2.112e+05	y	1.422e+05	y	1.49	y	3.533e+05	3.533e+05	2.27e+01	y	24.1
31:19	7.979e+04	y	5.037e+04	y	1.58	y	1.302e+05	1.302e+05	7.76e+00	y	8.88
31:33	1.040e+05	n	7.240e+04	n	1.44	y	1.764e+05	1.764e+05	7.63e+00	y	12.0
31:46	6.376e+05	y	4.133e+05	y	1.54	y	1.051e+06	1.051e+06	4.40e+01	y	71.7
31:52	1.482e+05	y	8.548e+04	y	1.73	y	2.337e+05	2.337e+05	1.55e+01	y	16.0
32:01	1.344e+05	y	8.655e+04	n	1.55	y	2.210e+05	2.210e+05	1.32e+01	y	15.1
32:14	2.547e+05	y	1.549e+05	y	1.64	y	4.097e+05	4.097e+05	2.10e+01	y	28.2 1,2,3,7,8-PeCDF
32:30	3.855e+05	n	2.172e+05	n	1.77	y	6.027e+05	6.027e+05	2.20e+01	y	41.1
32:40	3.427e+04	y	2.466e+04	y	1.39	y	5.893e+04	5.893e+04	3.41e+00	y	4.02
33:04	4.704e+04	y	3.110e+04	y	1.51	y	7.814e+04	7.814e+04	4.64e+00	y	5.33
33:12	4.111e+05	y	2.618e+05	y	1.57	y	6.728e+05	6.728e+05	4.11e+01	y	45.9
33:20	3.835e+05	y	2.515e+05	y	1.52	y	6.350e+05	6.350e+05	3.09e+01	y	43.0 2,3,4,7,8-PeCDF
33:39	4.137e+04	y	3.050e+04	y	1.36	y	7.187e+04	7.187e+04	4.77e+00	y	4.91
34:23	3.292e+04	y	2.444e+04	y	1.35	y	5.736e+04	5.736e+04	3.72e+00	y	3.92

*2.67% PeCDF  
0.37% totals*

*DPE*

Totals class: HxCDF EMPC                                      Function: 3 Run #: 11  
 File Name: 010404P4 Sample #: 4                              Sample text: P1454\_319\_001 Unit 1 Run 1 Out Air Train

Acquired: 4-APR-01 23:23:51      Processed: 5-APR-01 09:01:10

Total Conc.: 418.48                      Unnamed Conc.: 275.295

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
----	----	-----------	----	-----------	----	------	----------	-----	-------	------

35:11	3.508e+05	n	2.763e+05	n	1.27	y	6.270e+05	6.270e+05	5.46e+01	y	47.5	
35:23	9.660e+05	n	7.713e+05	n	1.25	y	1.737e+06	1.737e+06	1.60e+02	y	132	
35:37	7.131e+04	y	5.743e+04	y	1.24	y	1.287e+05	1.287e+05	1.16e+01	y	9.75	
35:48	1.063e+05	n	8.193e+04	n	1.30	y	1.882e+05	1.882e+05	1.44e+01	y	14.3	
36:01	5.039e+04	y	3.850e+04	n	1.31	y	8.890e+04	8.890e+04	7.50e+00	y	6.73	
36:27	3.369e+05	y	2.671e+05	y	1.26	y	6.040e+05	6.040e+05	5.37e+01	y	45.7	
36:34	2.973e+05	y	2.480e+05	y	1.20	y	5.453e+05	5.453e+05	4.75e+01	y	41.5	1,2,3,4,7,8-HxCDF
36:42	3.429e+05	y	2.727e+05	n	1.26	y	6.155e+05	6.155e+05	5.07e+01	y	42.9	1,2,3,6,7,8-HxCDF
36:52	4.059e+04	y	3.437e+04	y	1.18	y	7.496e+04	7.496e+04	6.38e+00	y	5.68	
37:01	5.337e+04	y	3.619e+04	y	1.47	n	8.956e+04	8.107e+04	7.26e+00	y	6.14	
37:09	5.677e+04	y	4.806e+04	y	1.18	y	1.048e+05	1.048e+05	9.09e+00	y	7.94	
37:22	3.812e+05	n	2.836e+05	n	1.34	y	6.648e+05	6.648e+05	4.85e+01	y	49.2	2,3,4,6,7,8-HxCDF
38:27	6.468e+04	n	4.858e+04	y	1.33	y	1.133e+05	1.133e+05	6.92e+00	y	9.59	1,2,3,7,8,9-HxCDF

Totals class: HpCDF EMPC

Function: 4 Run #: 11

File Name: 010404P4 Sample #: 4

Sample text: P1454\_319\_001 Unit 1 Run 1 Out Air Train

Acquired: 4-APR-01 23:23:51

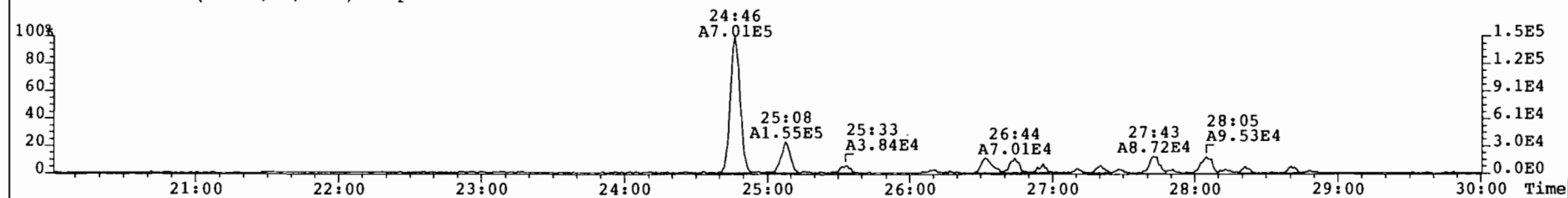
Processed: 5-APR-01 09:01:10

Total Conc.: 242.12

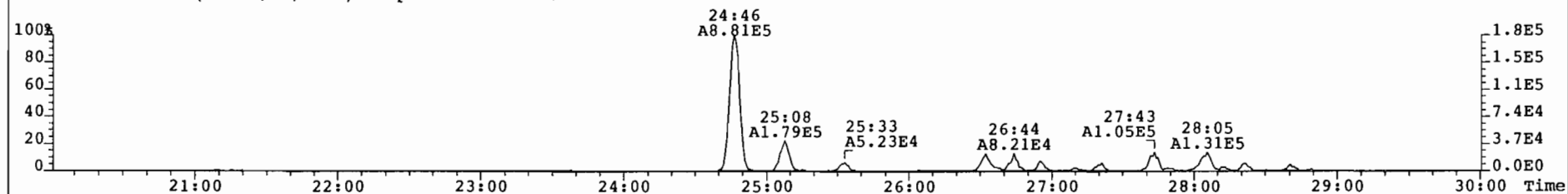
Unnamed Conc.: 51.937

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
40:26	1.125e+06	n	1.062e+06	y	1.06	y	2.188e+06	2.188e+06	1.29e+02	y	176	1,2,3,4,6,7,8-HpCDF
40:53	1.611e+05	n	1.498e+05	y	1.08	y	3.109e+05	3.109e+05	1.88e+01	y	27.2	
41:08	1.534e+05	y	1.298e+05	y	1.18	y	2.832e+05	2.832e+05	1.50e+01	y	24.8	
43:00	7.926e+04	y	6.720e+04	y	1.18	y	1.465e+05	1.465e+05	5.91e+00	y	14.0	1,2,3,4,7,8,9-HpCDF

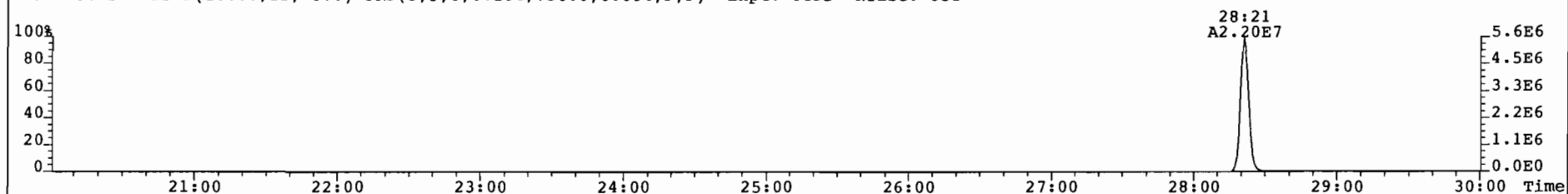
File: 010404P4 Acq: 4-APR-2001 23:23:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454\_319\_001 Unit 1 Run 1 Out Air Train Vial# 22 File Text: AAP DB5  
319.8965 S:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 467



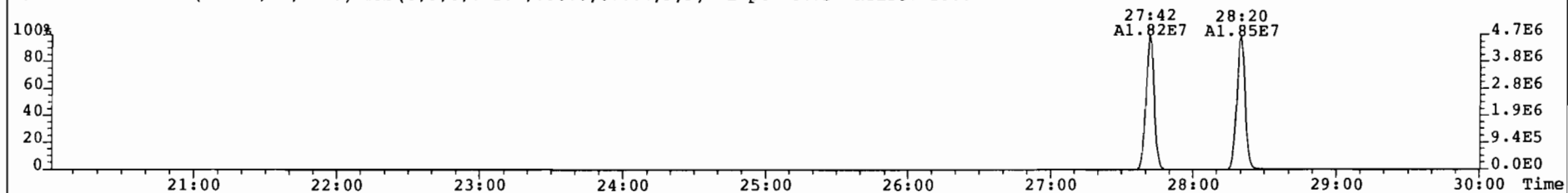
321.8936 S:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 244



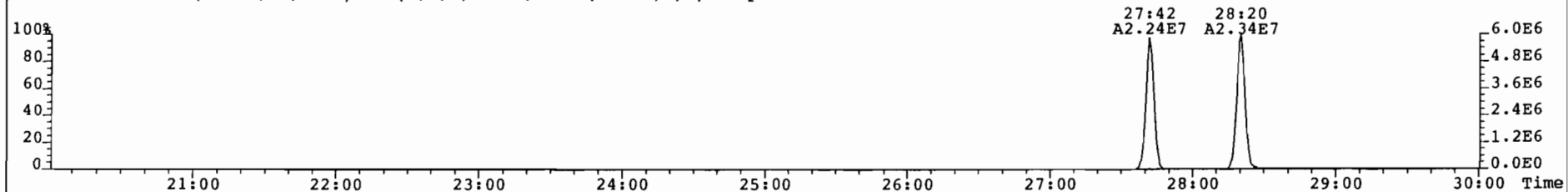
327.8850 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 351



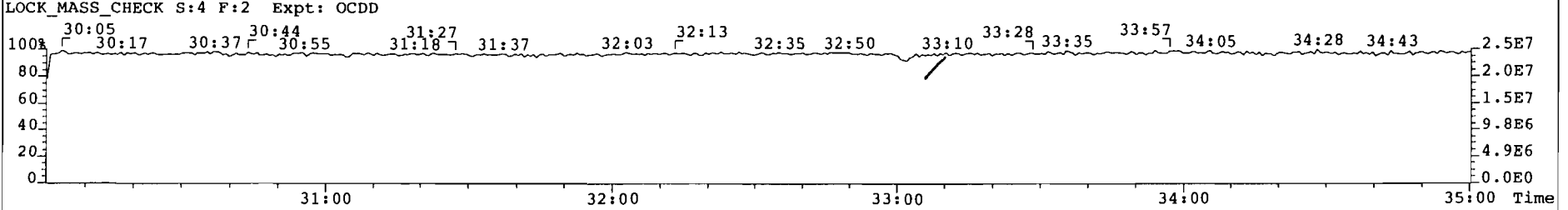
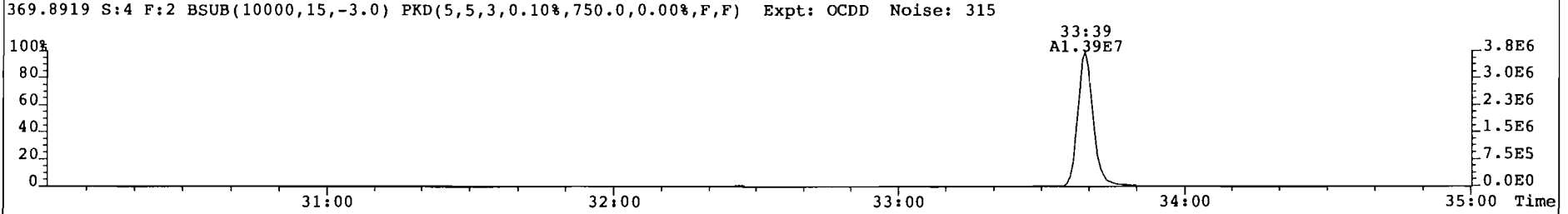
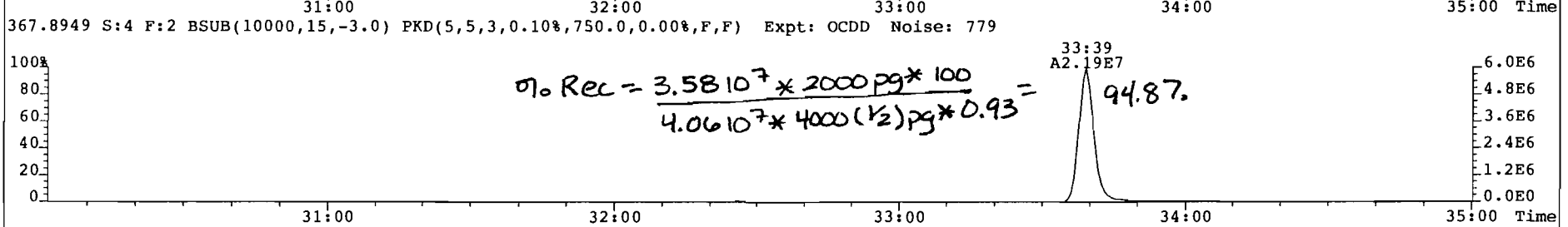
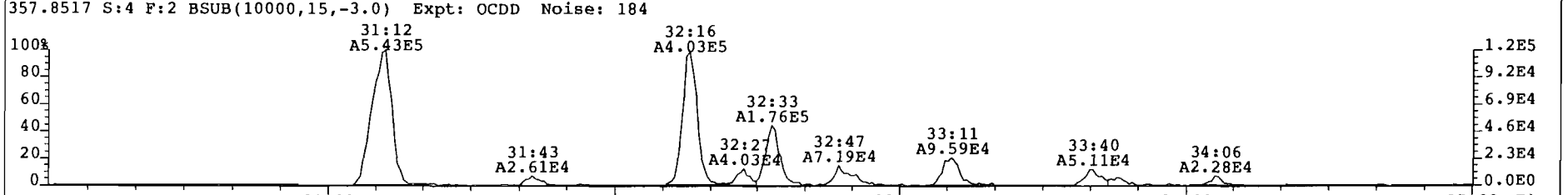
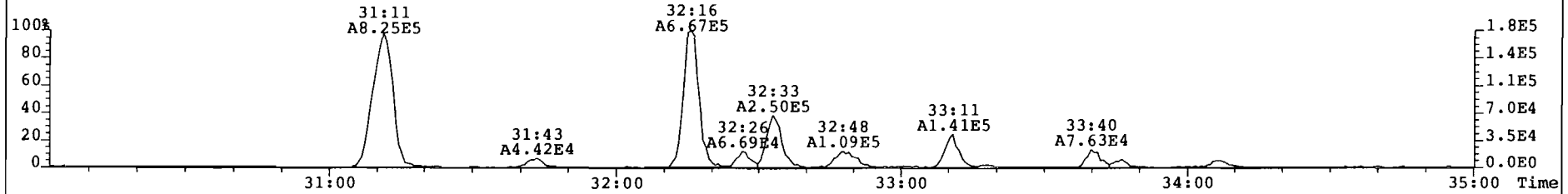
331.9368 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1566



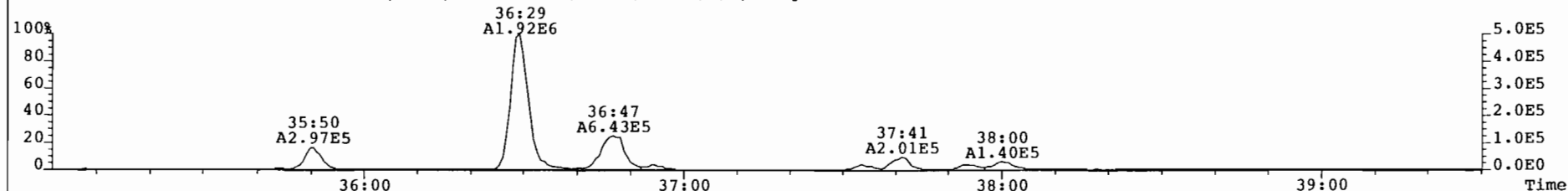
333.9339 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 750



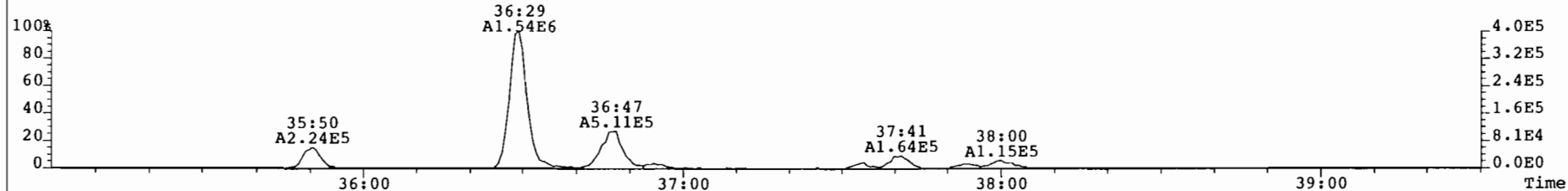
File: 010404P4 Acq: 4-APR-2001 23:23:51 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample# 4 Text: P1454\_319\_001 Unit 1 Run 1 Out Air Train Vial# 22 File Text: AAP DB5  
 355.8546 S:4 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 291



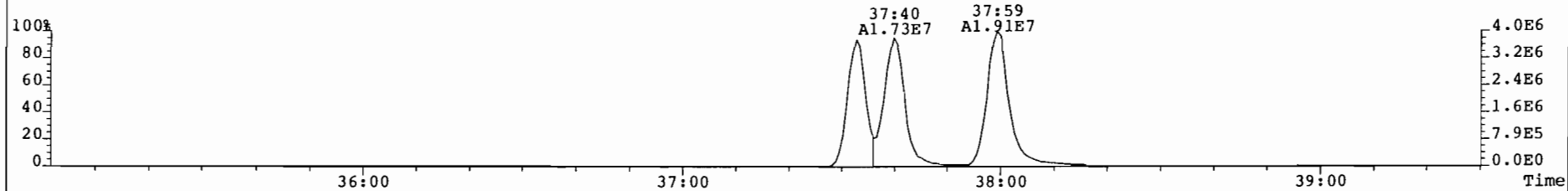
File: 010404P4 Acq: 4-APR-2001 23:23:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454 319 001 Unit 1 Run 1 Out Air Train Vial# 22 File Text: AAP DB5  
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 895



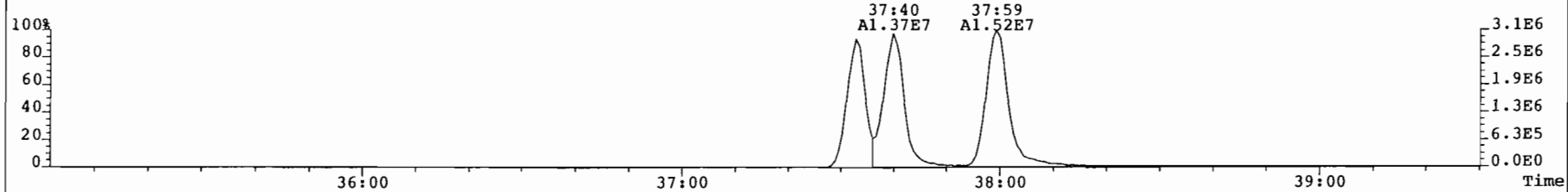
391.8127 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 507



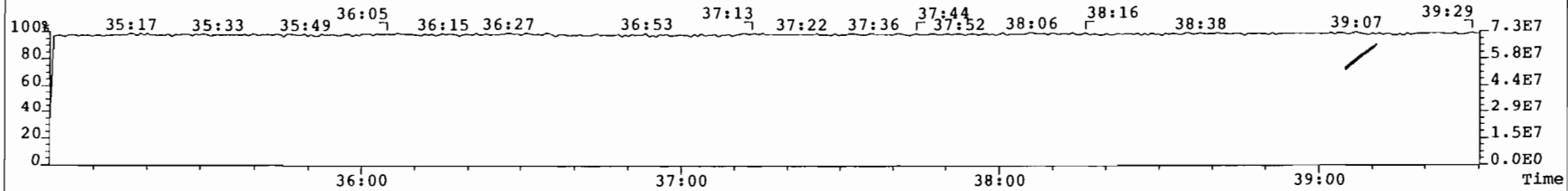
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1124



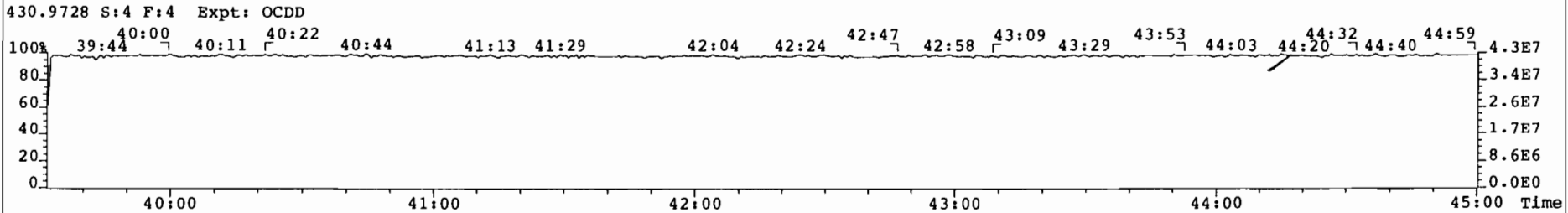
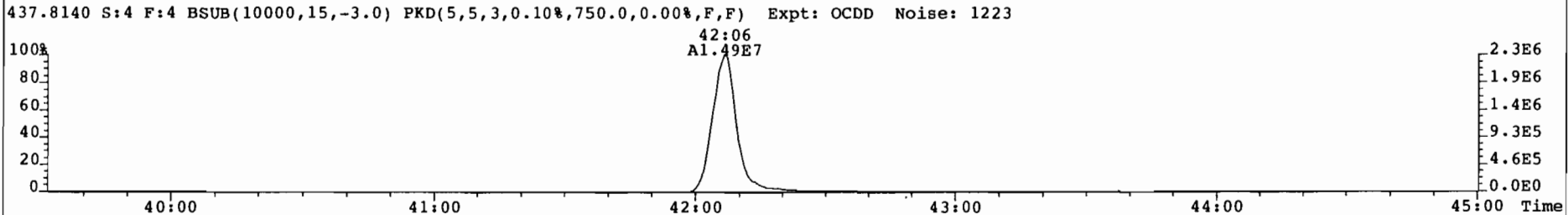
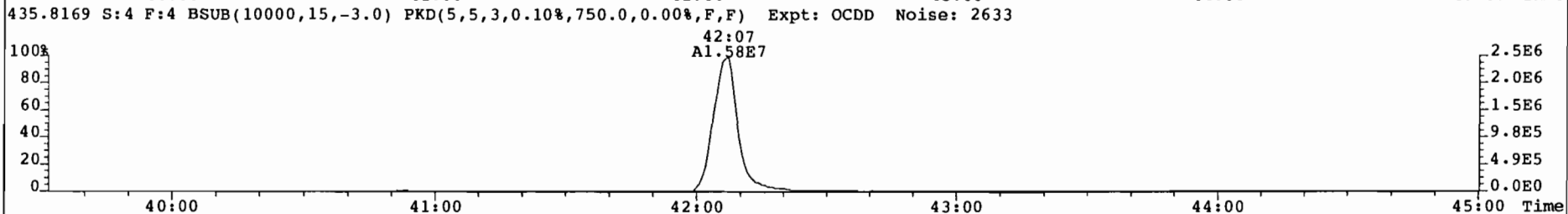
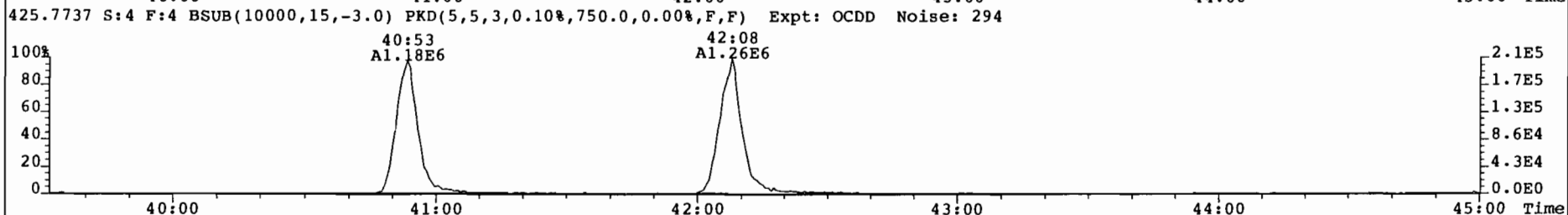
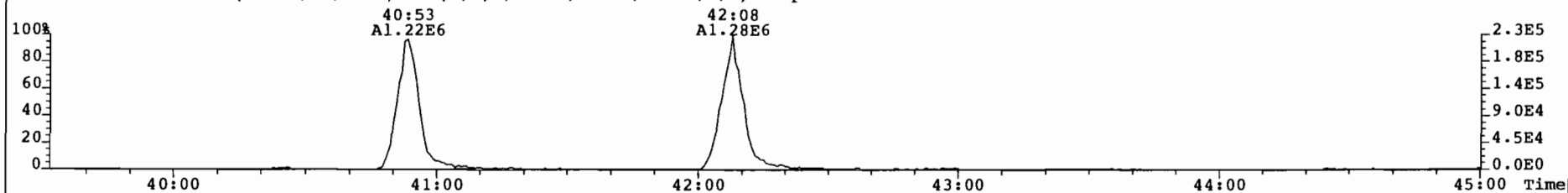
403.8530 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 861



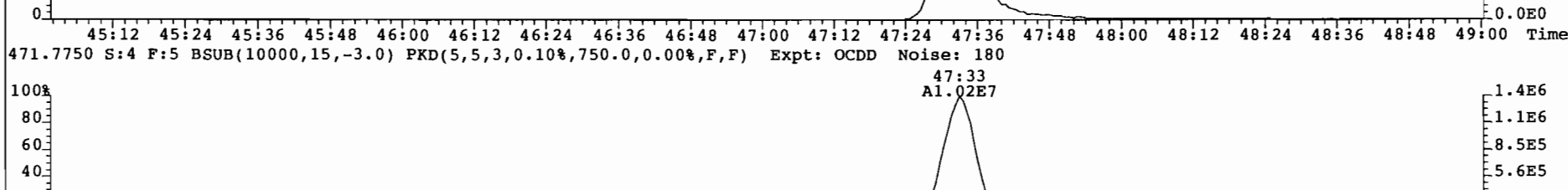
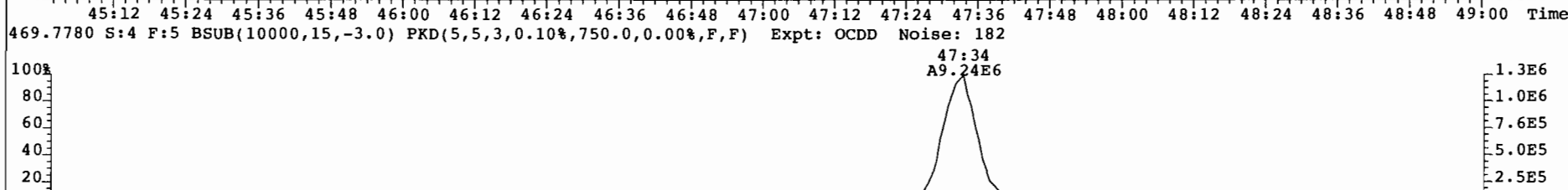
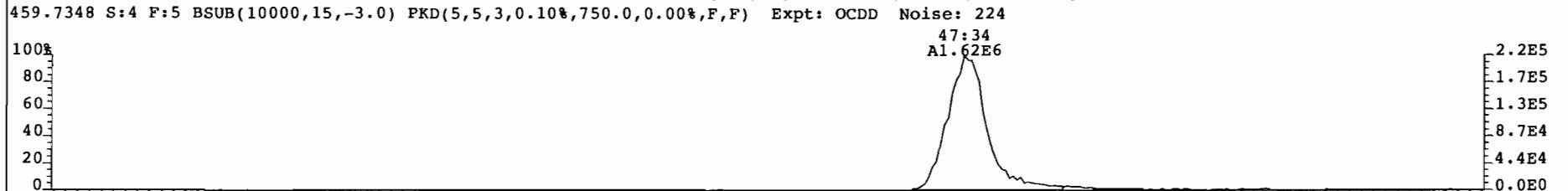
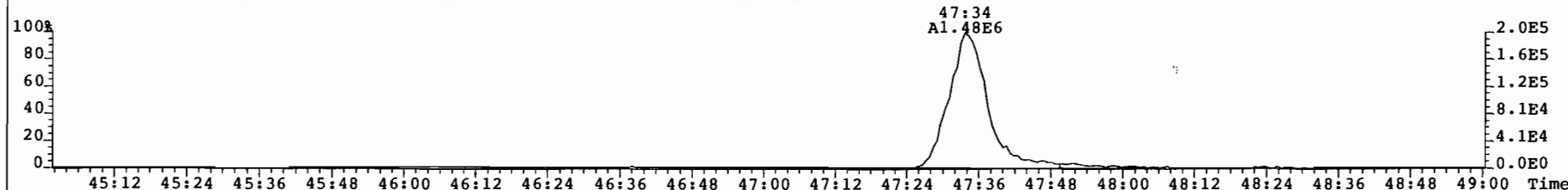
380.9760 S:4 F:3 Expt: OCDD



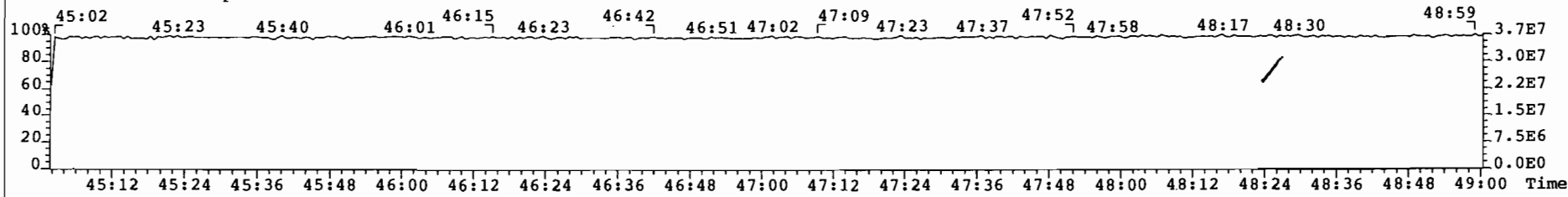
File: 010404P4 Acq: 4-APR-2001 23:23:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454 319 001 Unit 1 Run 1 Out Air Train Vial# 22 File Text: AAP DB5  
423.7767 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 348



File: 010404P4 Acq: 4-APR-2001 23:23:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454 319 001 Unit 1 Run 1 Out Air Train Vial# 22 File Text: AAP DB5  
457.7377 S:4 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 553

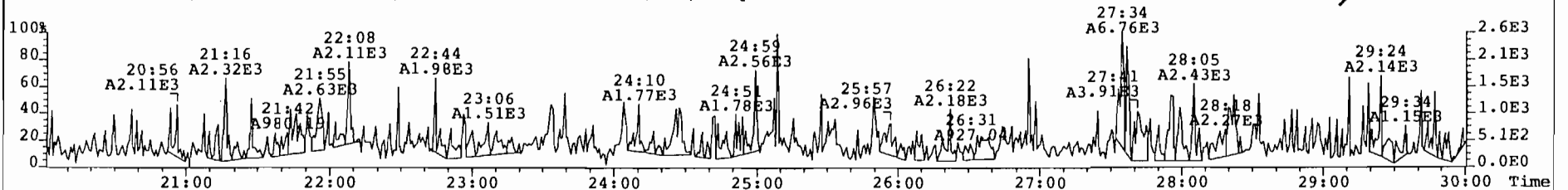
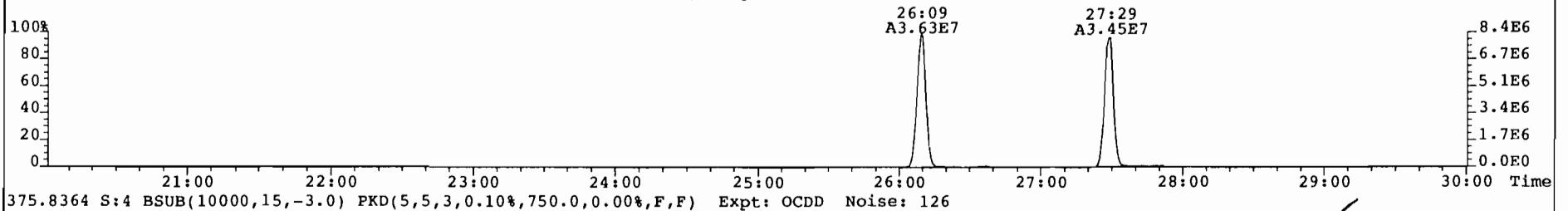
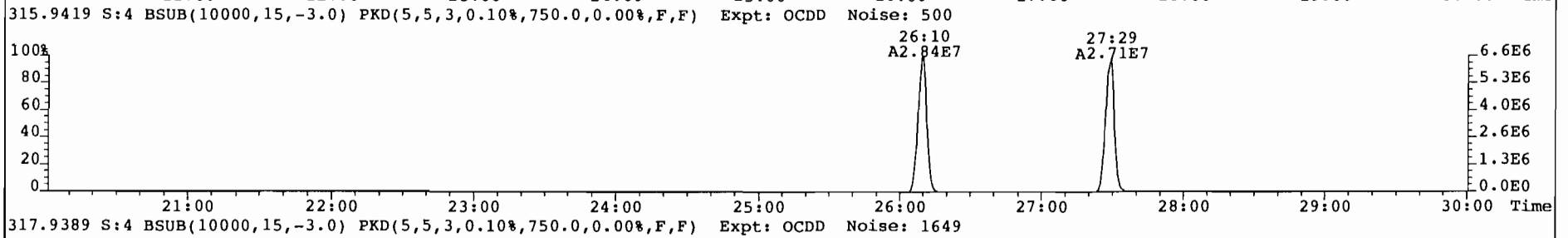
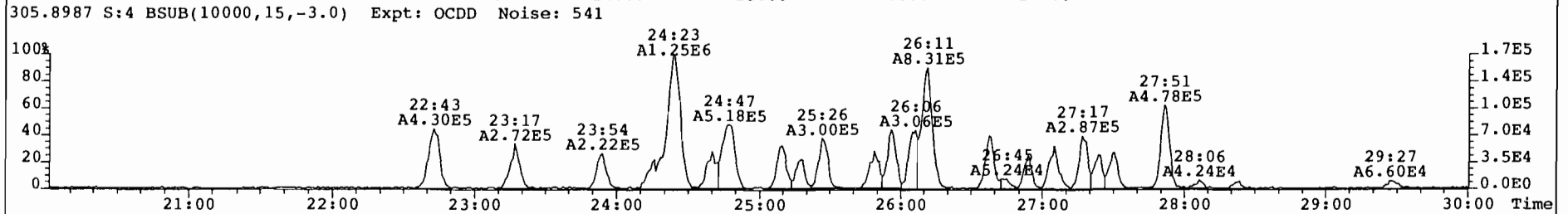
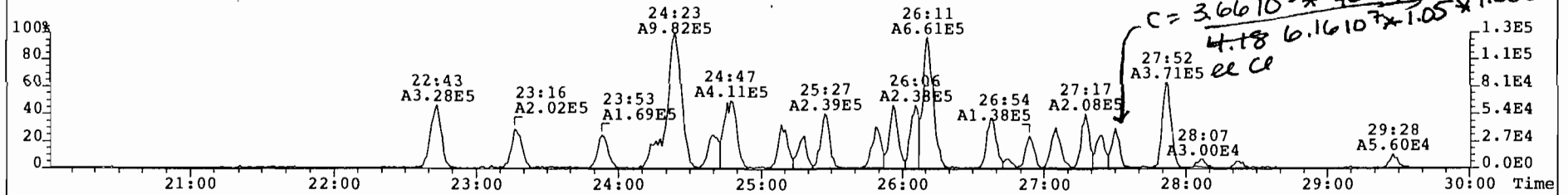


454.9728 S:4 F:5 Expt: OCDD

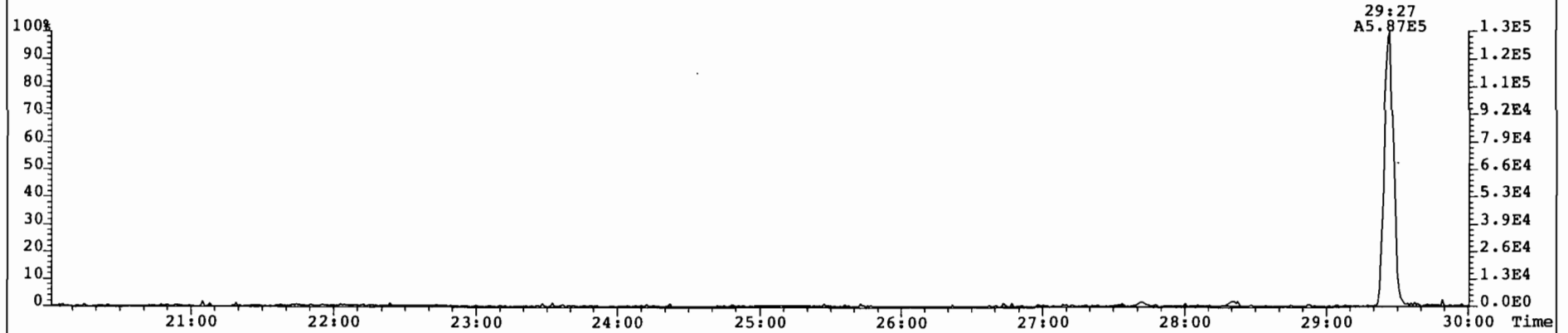




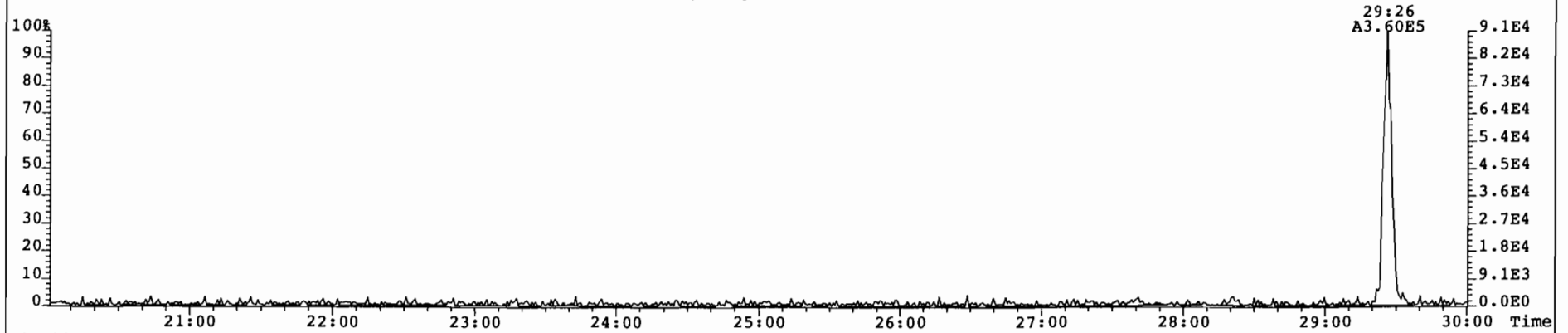
File: 010404P4 Acq: 4-APR-2001 23:23:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454 319 001 Unit 1 Out Air Train Vial# 22 File Text: AAP DB5  
303.9016 S:4 BSub(10000,15,-3.0) Expt: OCDD Noise: 245



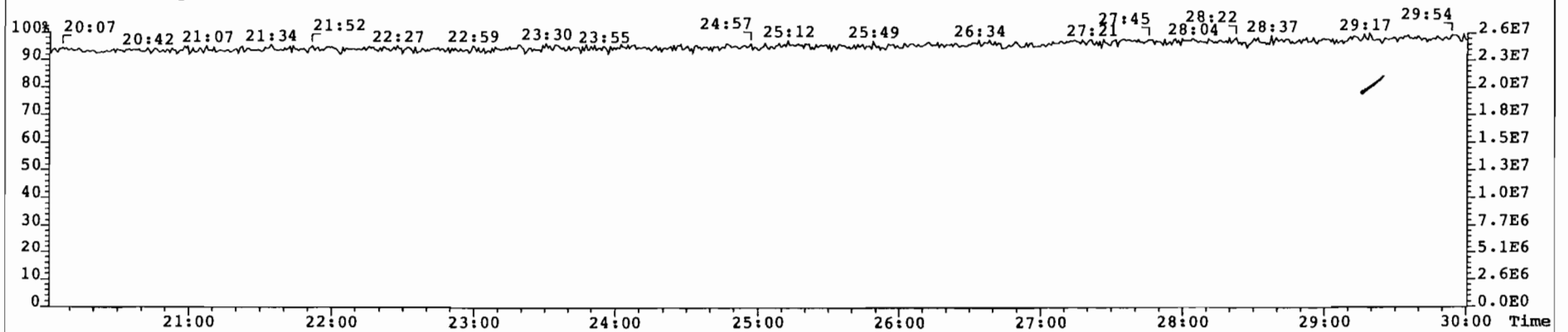
File: 010404P4 Acq: 4-APR-2001 23:23:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454\_319\_001 Unit 1 Run 1 Out Air Train Vial# 22 File Text: AAP DB5  
339.8597 S:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 143



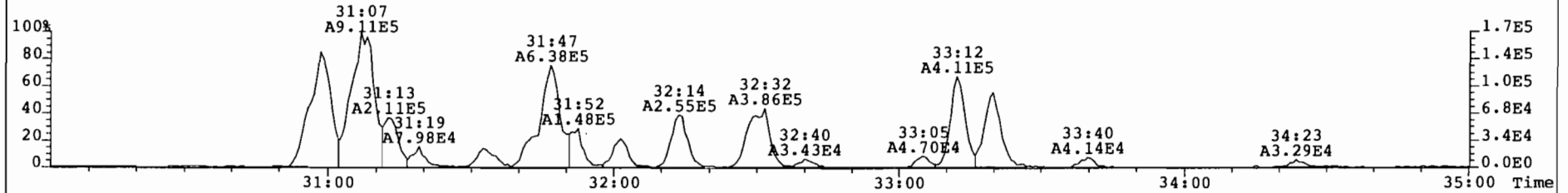
341.8568 S:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 272



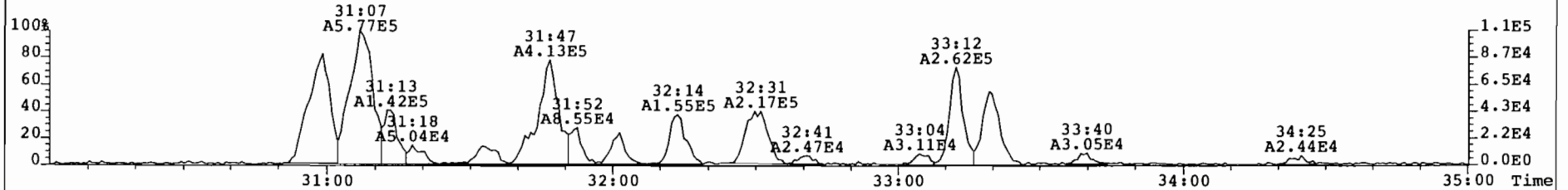
316.9824 S:4 Expt: OCDD



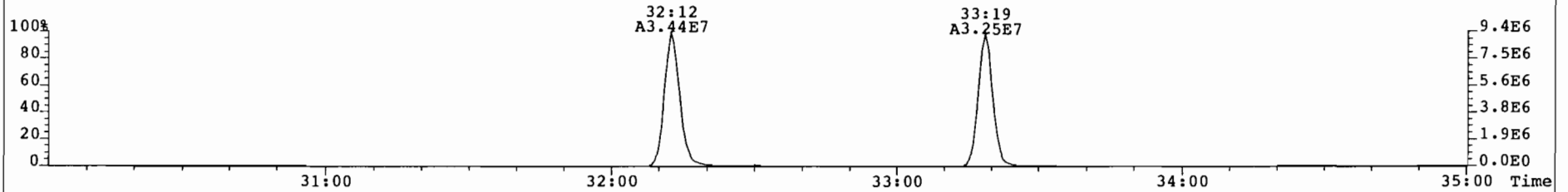
File: 010404P4 Acq: 4-APR-2001 23:23:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454 319 001 Unit 1 Run 1 Out Air Train Vial# 22 File Text: AAP DB5  
339.8597 S:4 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 347



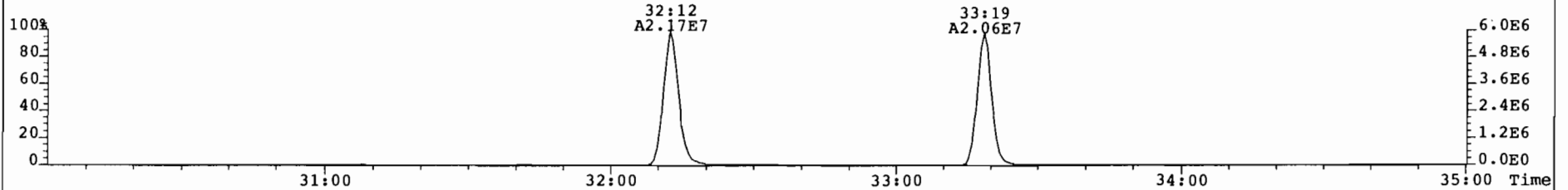
341.8568 S:4 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 370



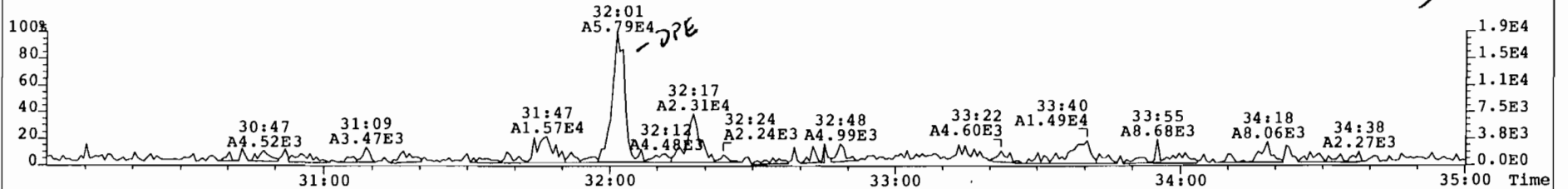
351.9000 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1022



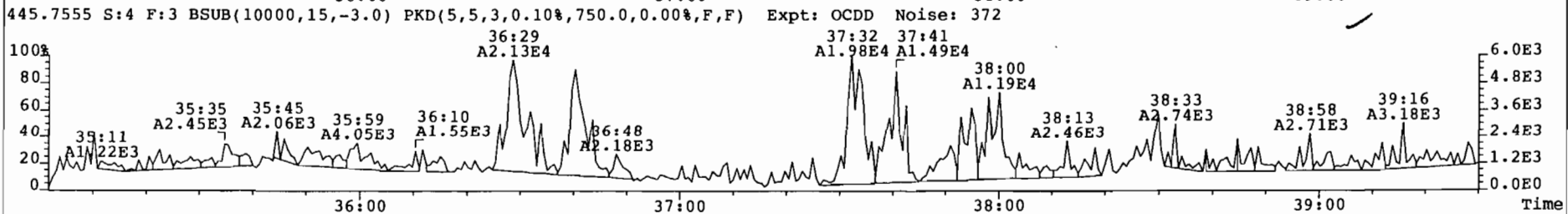
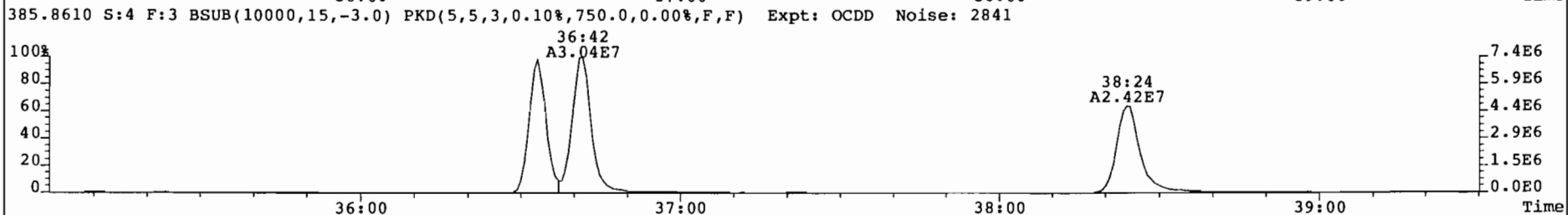
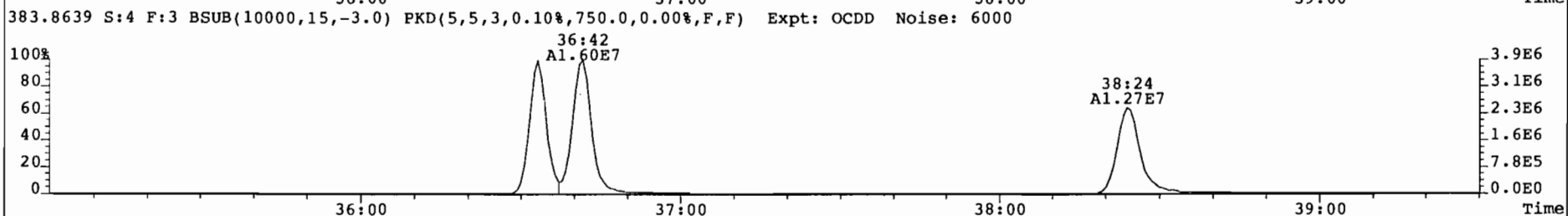
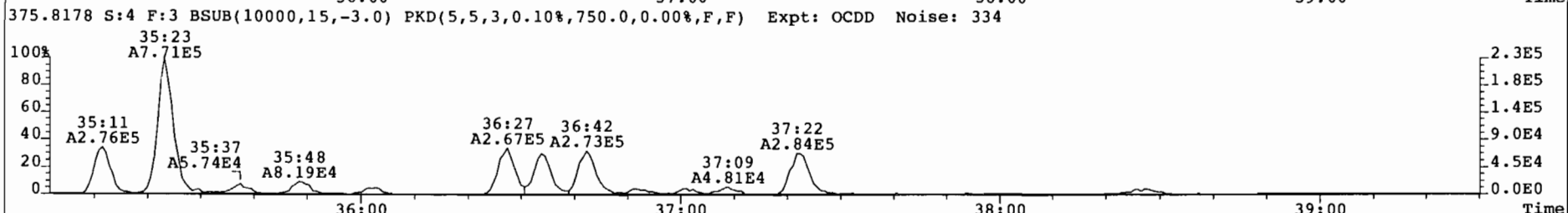
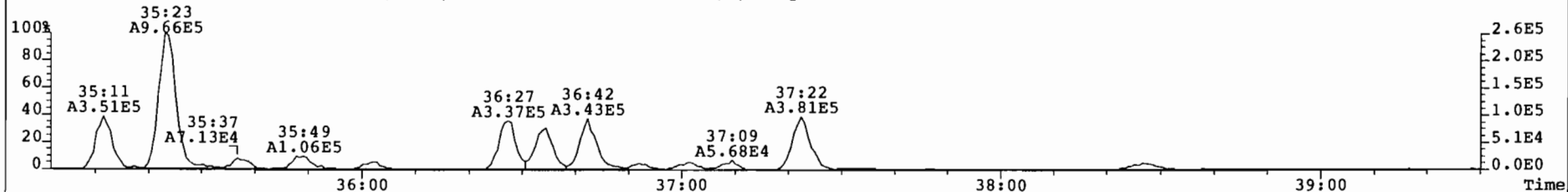
353.8970 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 645



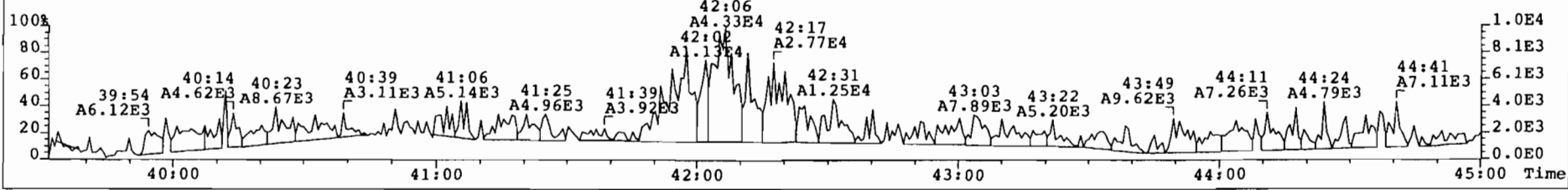
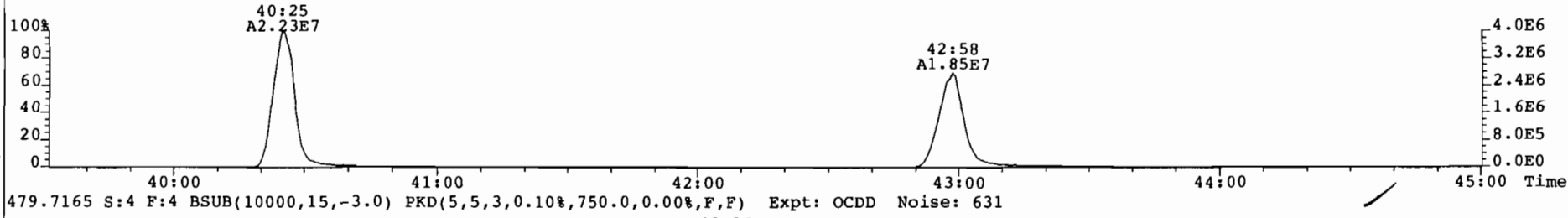
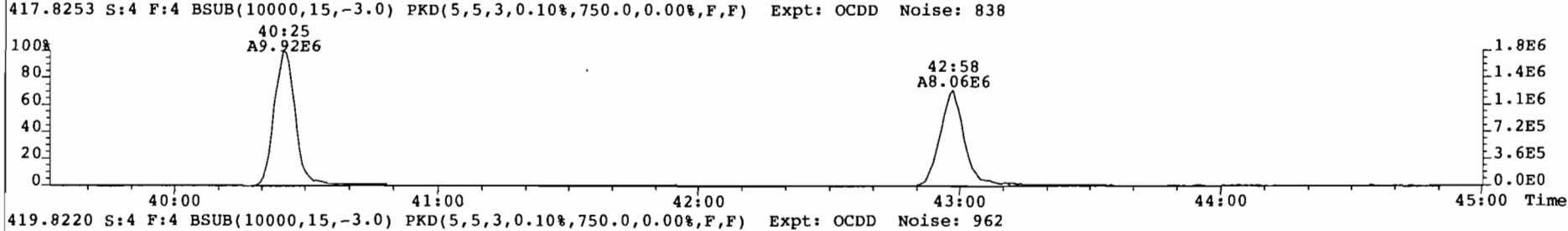
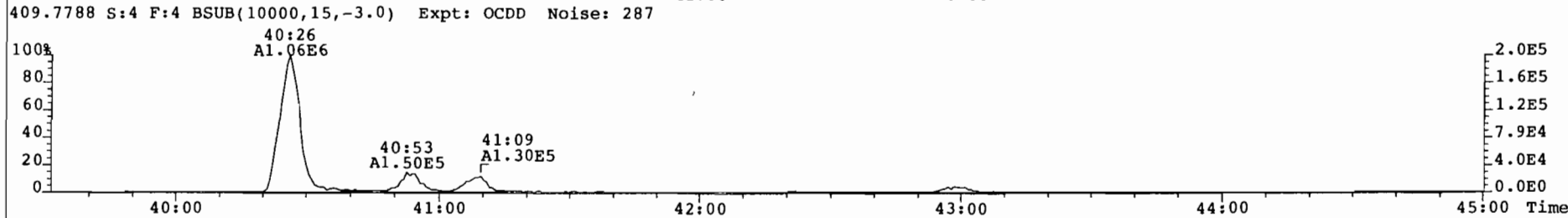
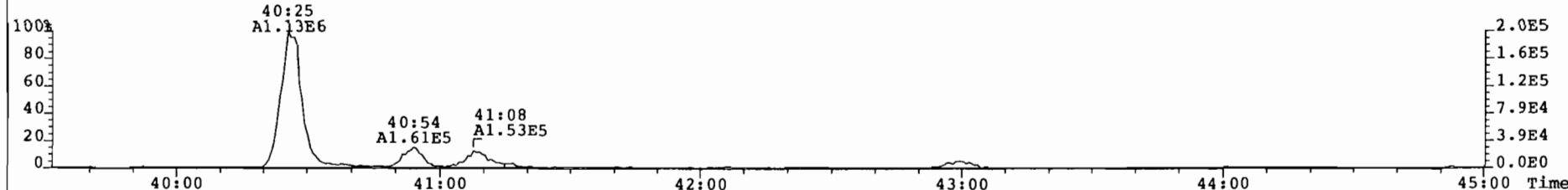
409.7974 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 299



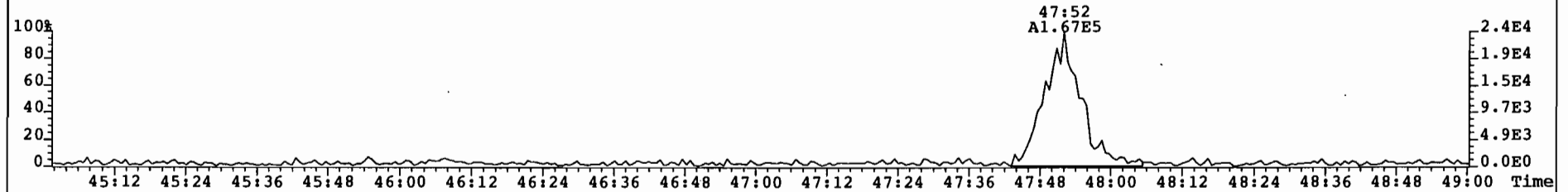
File: 010404P4 Acq: 4-APR-2001 23:23:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454\_319\_001 Unit 1 Run 1 Out Air Train Vial# 22 File Text: AAP DB5  
373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 391



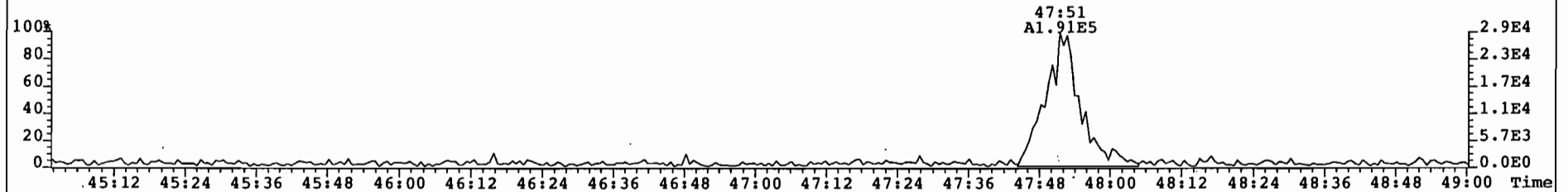
File: 010404P4 Acq: 4-APR-2001 23:23:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454 319.001 Unit 1 Run 1 Out Air Train Vial# 22 File Text: AAP DB5  
407.7818 S:4 F:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 369



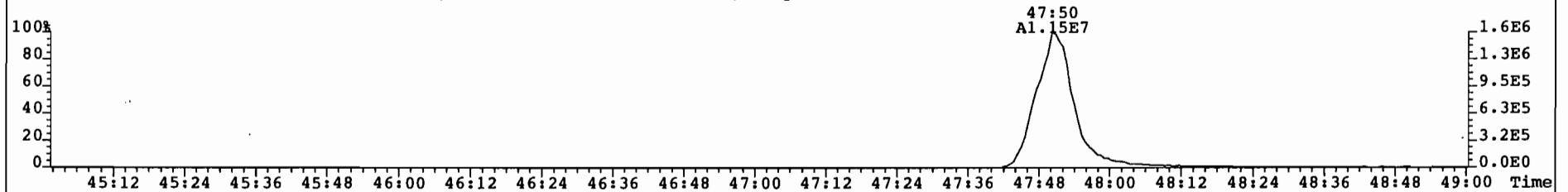
File: 010404P4 Acq: 4-APR-2001 23:23:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454 319 001 Unit 1 Run 1 Out Air Train Vial# 22 File Text: AAP DB5  
441.7428 S:4 F:5 BSUB(10000,15,-3.0) Expt: OCDD Noise: 216



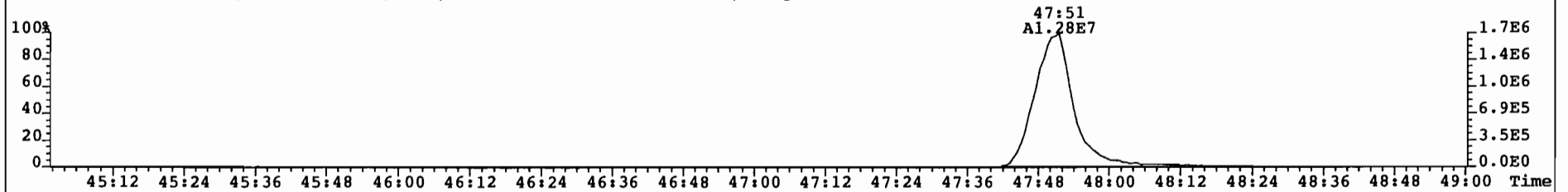
443.7398 S:4 F:5 BSUB(10000,15,-3.0) Expt: OCDD Noise: 338



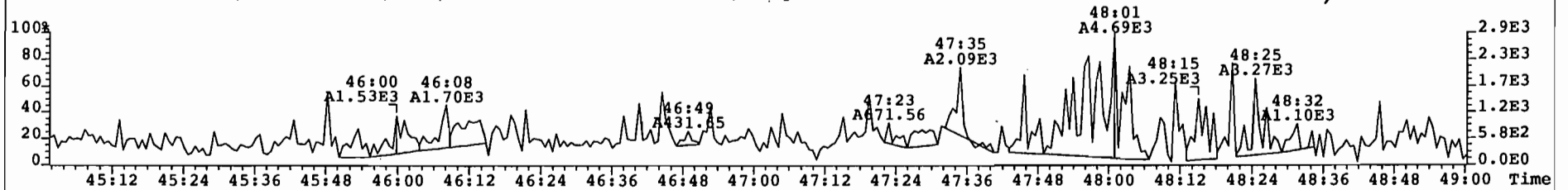
453.7830 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 174



455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 2432



513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 169



# Sample ID: Unit 1 Run 2 Out

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_002	Date Extracted:	2 Apr 01
Date Collected:	28 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	EMPC		3.72	A	85.1	97.5	93.3
1,2,3,7,8-PeCDD	11.9			A	90	91.9	93.3
1,2,3,4,7,8-HxCDD	16.9			A	90	86.6	93.3
1,2,3,6,7,8-HxCDD	43.5			A	90	86.6	93.3
1,2,3,7,8,9-HxCDD	23.7			A	90	86.6	93.3
1,2,3,4,6,7,8-HpCDD	274				87.8	88.4	93.3
OCDD	618			B	72.7	88.4	93.3
2,3,7,8-TCDF	21.9				83.3	97.5	93.3
1,2,3,7,8-PeCDF	26.3			A	85.5	91.9	93.3
2,3,4,7,8-PeCDF	39.6			A	85.5	91.9	93.3
1,2,3,4,7,8-HxCDF	38.9			A	100	89.4	93.3
1,2,3,6,7,8-HxCDF	38.5			A	100	89.4	93.3
2,3,4,6,7,8-HxCDF	45.2			A	100	89.4	93.3
1,2,3,7,8,9-HxCDF	9.74			A	100	89.4	93.3
1,2,3,4,6,7,8-HpCDF	158				96.7	88.4	93.3
1,2,3,4,7,8,9-HpCDF	10.8			A	96.7	88.4	93.3
OCDF	44.6			A	82.2	88.4	93.3

Totals & TEQs			
TCDDs	196		210
PeCDDs	362		
HxCDDs	686		
HpCDDs	537		
TCDFs	773		
PeCDFs	515		
HxCDFs	365		379
HpCDFs	216		
<b>Total PCDD/Fs</b>	<b>4310</b>		<b>4340</b>
<b>TEQ (ND=0)</b>	<b>56.0</b>		<b>59.7</b>
<b>TEQ (ND=DL/2)</b>	<b>56.0</b>		<b>59.7</b>



**ALTA ANALYTICAL PERSPECTIVES**

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Reviewer: *Cl*  
Date: 18 Apr 01

Client ID: Unit 1 Run 2 Out ✓  
Lab ID: P1454\_319\_002 ✓

Filename: 010404P4  
GC Column ID: db-5

S: 5 Acq: 5-APR-01 00:15:41  
ICal: MM1\_M23\_0 wt/vol: 1.000 ✓

ConCal: 010404P4-  
EndCal: 010404P4-

Name	Resp	RA	RRF	RT	Conc	Qualif.	CDE	noise	Fac	DL
2,3,7,8-TCDD	4.53e+04	0.60 n	1.26	28:21	3.72			2216	2.5	3.22
1,2,3,7,8-PeCDD	1.01e+05	1.76 y	1.01	33:40	11.9			800	2.5	2.33
1,2,3,4,7,8-HxCDD	1.39e+05	1.22 y	1.14	37:33	16.9			1718	2.5	5.15
1,2,3,6,7,8-HxCDD	3.23e+05	1.22 y	1.02	37:41	43.5			1718	2.5	5.73
1,2,3,7,8,9-HxCDD	1.97e+05	1.36 y	1.14	38:00	23.7			1718	2.5	5.13
1,2,3,4,6,7,8-HpCDD	2.13e+06	1.11 y	1.13	42:08	274			2258	2.5	9.14
OCDD	2.93e+06	0.93 y	1.03	47:35	618			1573	2.5	11.0
2,3,7,8-TCDF	3.28e+05	0.84 y	1.05	27:30	21.9			2478	2.5	3.06
1,2,3,7,8-PeCDF	3.62e+05	1.51 y	1.04	32:14	26.3			1260	2.5	2.15
2,3,4,7,8-PeCDF	5.55e+05	1.47 y	1.05	33:20	39.6			1260	2.5	2.12
1,2,3,4,7,8-HxCDF	4.90e+05	1.26 y	1.13	36:34	38.9			2022	2.5	2.65
1,2,3,6,7,8-HxCDF	5.30e+05	1.28 y	1.24	36:42	38.5			2022	2.5	2.42
2,3,4,6,7,8-HxCDF	5.85e+05	1.20 y	1.16	37:22	45.2			2022	2.5	2.57
1,2,3,7,8,9-HxCDF	1.10e+05	1.41 y	1.02	38:27	9.74			2022	2.5	2.94
1,2,3,4,6,7,8-HpCDF	1.84e+06	1.04 y	1.54	40:26	158			1649	2.5	2.76
1,2,3,4,7,8,9-HpCDF	1.06e+05	1.04 y	1.30	42:58	10.8			1649	2.5	3.28
OCDF	2.95e+05	0.90 y	1.15	47:52	44.6			1857	2.5	9.08
Total Tetra-Dioxins	2.39e+06	0.79 y	1.26	24:46	196			2216	2.5	3.22
Total Penta-Dioxins	3.05e+06	1.61 y	1.01	31:11	362			800	2.5	2.33
Total Hexa-Dioxins	5.48e+06	1.32 y	1.10	35:50	686			1718	2.5	5.32
Total Hepta-Dioxins	4.17e+06	1.03 y	1.13	40:53	537			2258	2.5	9.14
Total Tetra-Furans	1.16e+07	0.77 y	1.05	22:43	773			2478	2.5	3.06
1st Fnc. Penta-Furans	8.11e+05	1.54 y	1.05	29:26	58.4			3608	2.5	6.11
Total Penta-Furans	6.34e+06	1.53 y	1.05	30:58	456			1260	2.5	2.14
PeCDF Totals:					515					515
Total Hexa-Furans	4.65e+06	1.33 y	1.14	35:12	365			2022	2.5	2.63
Total Hepta-Furans	2.45e+06	1.04 y	1.42	40:26	216			1649	2.5	3.00
IS 13C-2,3,7,8-TCDD	3.86e+07	0.79 y	1.13	28:20	3400					85.1
IS 13C-1,2,3,7,8-PeCDD	3.33e+07	1.58 y	0.93	33:39	3600					90.0
IS 13C-1,2,3,6,7,8-HxCDD	2.91e+07	1.27 y	0.93	37:40	3600					90.0
IS 13C-1,2,3,4,6,7,8-HpCDD	2.75e+07	1.03 y	0.91	42:07	3510					87.8
IS 13C-OCDD	1.85e+07	0.91 y	0.73	47:34	2910					72.7
IS 13C-2,3,7,8-TCDF	5.73e+07	0.79 y	1.06	27:29	3330					83.3
IS 13C-1,2,3,7,8-PeCDF	5.31e+07	1.56 y	0.96	32:13	3420					85.5
IS 13C-1,2,3,6,7,8-HxCDF	4.45e+07	0.54 y	1.28	36:42	4010					100
IS 13C-1,2,3,4,6,7,8-HpCDF	3.02e+07	0.45 y	0.90	40:25	3870					96.7
IS 13C-OCDF	2.31e+07	0.90 y	0.81	47:52	3290					82.2
RS/RT 13C-1,2,3,4-TCDD	4.00e+07	0.82 y	1.00	27:42	4000					-
RS 13C-1,2,3,4-TCDF	6.48e+07	0.79 y	1.00	26:10	4000					-
RS/RT 13C-1,2,3,7,8,9-HxCDD	3.46e+07	1.27 y	1.00	38:00	4000					-
PS 37Cl-2,3,7,8-TCDD	1.94e+07		0.51	28:22	3900					97.5
PS 13C-2,3,4,7,8-PeCDF	4.75e+07	1.59 y	0.97	33:19	3680					91.9
PS 13C-1,2,3,4,7,8-HxCDD	2.32e+07	1.26 y	0.92	37:33	3460					86.6
PS 13C-1,2,3,4,7,8-HxCDF	3.61e+07	0.54 y	0.91	36:33	3570					89.4
PS 13C-1,2,3,4,7,8,9-HpCDF	2.28e+07	0.45 y	0.85	42:58	3540					88.4
AS 13C-1,2,3,7,8,9-HxCDF	3.45e+07	0.54 y	1.07	38:25	3730					93.3

Reviewer: CP

Date: 18 April

EMPC  
210  
362  
686  
537  
773  
58.4  
515  
379  
216

Rec  
85.1  
90.0  
90.0  
87.8  
72.7  
83.3  
85.5  
100  
96.7  
82.2

Analyst: GAG

Date: 17 April



Totals class: TCDD EMPC Function: 1 Run #: 12  
 File Name: 010404P4 Sample #: 5 Sample text: P1454\_319\_002 Unit 1 Run 2 Out Air Train ✓

Acquired: 5-APR-01 00:15:41 ✓ Processed: 5-APR-01 09:01:11

Total Conc.: 209.80 Unnamed Conc.: 206.078

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
24:46	5.924e+05	n	7.470e+05	n	0.79 y	1.339e+06	1.339e+06	7.15e+01	y	110
25:08	1.331e+05	n	1.655e+05	n	0.80 y	2.987e+05	2.987e+05	1.51e+01	y	24.5
25:33	2.646e+04	y	3.860e+04	y	0.69 y	6.506e+04	6.506e+04	4.22e+00	y	5.34
26:32	7.836e+04	y	9.338e+04	y	0.84 y	1.717e+05	1.717e+05	7.57e+00	y	14.1
26:43	6.757e+04	y	8.450e+04	y	0.80 y	1.521e+05	1.521e+05	9.12e+00	y	12.5
26:55	2.993e+04	y	3.211e+04	y	0.93 n	6.205e+04	5.684e+04	3.80e+00	y	4.67
27:20	3.051e+04	y	3.387e+04	y	0.90 n	6.438e+04	5.995e+04	5.06e+00	y	4.92
27:43	7.537e+04	n	9.005e+04	n	0.84 y	1.654e+05	1.654e+05	1.01e+01	y	13.6
28:04	6.550e+04	y	7.813e+04	y	0.84 y	1.436e+05	1.436e+05	6.31e+00	y	11.8
28:21	1.970e+04	y	3.282e+04	y	0.60 n	5.252e+04	4.528e+04	3.54e+00	y	3.72 2,3,7,8-TCDD
28:40	2.664e+04	y	3.062e+04	y	0.87 y	5.726e+04	5.726e+04	4.09e+00	y	4.70

Totals class: PeCDD EMPC Function: 2 Run #: 12  
 File Name: 010404P4 Sample #: 5 Sample text: P1454\_319\_002 Unit 1 Run 2 Out Air Train

Acquired: 5-APR-01 00:15:41 Processed: 5-APR-01 09:01:11

Total Conc.: 361.98 Unnamed Conc.: 350.069

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
31:11	6.577e+05	n	4.093e+05	n	1.61 y	1.067e+06	1.067e+06	1.05e+02	y	126
31:43	4.198e+04	y	2.885e+04	n	1.46 y	7.083e+04	7.083e+04	9.99e+00	y	8.40
32:16	5.525e+05	n	3.224e+05	n	1.71 y	8.749e+05	8.749e+05	1.11e+02	y	104
32:27	6.502e+04	y	3.856e+04	y	1.69 y	1.036e+05	1.036e+05	1.37e+01	y	12.3
32:33	2.256e+05	y	1.313e+05	y	1.72 y	3.570e+05	3.570e+05	4.43e+01	y	42.3
32:48	1.015e+05	n	6.188e+04	n	1.64 y	1.634e+05	1.634e+05	1.54e+01	y	19.4
33:10	1.248e+05	n	8.179e+04	n	1.53 y	2.066e+05	2.066e+05	2.88e+01	y	24.5
33:40	6.406e+04	y	3.644e+04	y	1.76 y	1.005e+05	1.005e+05	1.36e+01	y	11.9 1,2,3,7,8-PeCDD
33:46	3.147e+04	y	2.198e+04	y	1.43 y	5.345e+04	5.345e+04	8.38e+00	y	6.34
34:07	3.543e+04	y	2.115e+04	y	1.68 y	5.658e+04	5.658e+04	8.97e+00	y	6.71

Totals class: HxCDD EMPC Function: 3 Run #: 12  
 File Name: 010404P4 Sample #: 5 Sample text: P1454\_319\_002 Unit 1 Run 2 Out Air Train

Acquired: 5-APR-01 00:15:41 Processed: 5-APR-01 09:01:11

Total Conc.: 686.45 Unnamed Conc.: 602.395

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
----	----	-----------	----	-----------	----	------	----------	-----	-------	------

35:50	2.568e+05	y	1.944e+05	y	1.32	y	4.512e+05	4.512e+05	2.96e+01	y	56.4
36:29	1.718e+06	y	1.351e+06	n	1.27	y	3.069e+06	3.069e+06	2.09e+02	y	383
36:46	5.743e+05	y	4.462e+05	y	1.29	y	1.021e+06	1.021e+06	5.12e+01	y	127
36:54	7.787e+04	y	6.731e+04	y	1.16	y	1.452e+05	1.452e+05	7.70e+00	y	18.1
37:33	7.661e+04	y	6.284e+04	y	1.22	y	1.394e+05	1.394e+05	9.02e+00	y	16.9 1,2,3,4,7,8-HxCDD
37:41	1.778e+05	y	1.456e+05	y	1.22	y	3.233e+05	3.233e+05	1.87e+01	y	43.5 1,2,3,6,7,8-HxCDD
37:53	7.114e+04	y	6.447e+04	y	1.10	y	1.356e+05	1.356e+05	9.14e+00	y	16.9
38:00	1.133e+05	y	8.353e+04	y	1.36	y	1.968e+05	1.968e+05	9.95e+00	y	23.7 1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC                      Function: 4 Run #: 12  
 File Name: 010404P4 Sample #: 5              Sample text: P1454\_319\_002 Unit 1 Run 2 Out Air Train

Acquired: 5-APR-01 00:15:41      Processed: 5-APR-01 09:01:11

Total Conc.: 537.32                      Unnamed Conc.: 263.492

RT	m1 Resp mod.	m2 Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
40:53	1.036e+06	n	1.009e+06	n	1.03	y	2.045e+06	2.045e+06 7.87e+01 y 263
42:08	1.116e+06	n	1.009e+06	n	1.11	y	2.125e+06	2.125e+06 7.63e+01 y 274 1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC                      Function: 1 Run #: 12  
 File Name: 010404P4 Sample #: 5              Sample text: P1454\_319\_002 Unit 1 Run 2 Out Air Train

Acquired: 5-APR-01 00:15:41      Processed: 5-APR-01 09:01:11

Total Conc.: 772.89                      Unnamed Conc.: 751.000

RT	m1 Resp mod.	m2 Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
22:43	2.950e+05	n	3.821e+05	n	0.77	y	6.771e+05	6.771e+05 2.73e+01 y 45.2
23:17	1.809e+05	n	2.588e+05	n	0.70	y	4.397e+05	4.397e+05 2.09e+01 y 29.4
23:53	1.484e+05	n	1.978e+05	n	0.75	y	3.462e+05	3.462e+05 1.62e+01 y 23.1
24:23	8.594e+05	n	1.140e+06	y	0.75	y	2.000e+06	2.000e+06 6.29e+01 y 134
24:39	1.372e+05	y	1.778e+05	y	0.77	y	3.150e+05	3.150e+05 1.83e+01 y 21.0
24:46	3.797e+05	y	4.843e+05	y	0.78	y	8.640e+05	8.640e+05 3.12e+01 y 57.7
25:09	1.872e+05	y	2.272e+05	y	0.82	y	4.143e+05	4.143e+05 2.12e+01 y 27.7
25:18	1.269e+05	y	1.662e+05	y	0.76	y	2.931e+05	2.931e+05 1.66e+01 y 19.6
25:27	2.106e+05	y	2.886e+05	y	0.73	y	4.991e+05	4.991e+05 2.50e+01 y 33.3
25:49	1.570e+05	y	1.997e+05	y	0.79	y	3.568e+05	3.568e+05 1.57e+01 y 23.8
25:56	2.334e+05	y	2.850e+05	y	0.82	y	5.184e+05	5.184e+05 2.60e+01 y 34.6
26:05	2.324e+05	y	2.675e+05	y	0.87	y	4.999e+05	4.999e+05 2.78e+01 y 33.4
26:12	5.302e+05	n	7.238e+05	n	0.73	y	1.254e+06	1.254e+06 5.63e+01 y 83.7
26:38	2.482e+05	y	3.373e+05	y	0.74	y	5.856e+05	5.856e+05 2.55e+01 y 39.1
26:54	1.315e+05	y	1.669e+05	y	0.79	y	2.984e+05	2.984e+05 1.71e+01 y 19.9
27:05	1.688e+05	n	2.191e+05	y	0.77	y	3.879e+05	3.879e+05 1.62e+01 y 25.9
27:17	1.957e+05	y	2.415e+05	y	0.81	y	4.372e+05	4.372e+05 2.58e+01 y 29.2
27:23	1.321e+05	y	1.820e+05	y	0.73	y	3.141e+05	3.141e+05 1.87e+01 y 21.0
27:30	1.500e+05	y	1.778e+05	y	0.84	y	3.278e+05	3.278e+05 1.74e+01 y 21.9 2,3,7,8-TCDF
27:52	3.247e+05	n	4.197e+05	n	0.77	y	7.444e+05	7.444e+05 4.26e+01 y 49.7

Totals class: 1st Fnc.PeCDF EMPC Function: 1 Run #: 12  
 File Name: 010404P4 Sample #: 5 Sample text: P1454\_319\_002 Unit 1 Run 2 Out Air Train

Acquired: 5-APR-01 00:15:41 Processed: 5-APR-01 09:01:11

Total Conc.: 58.433 Unnamed Conc.: 58.433

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
29:26	4.923e+05	n	3.190e+05	n	1.54 y	8.113e+05	8.113e+05	2.06e+01	y	58.4

Page 14 of 18

Totals class: PeCDF EMPC Function: 2 Run #: 12  
 File Name: 010404P4 Sample #: 5 Sample text: P1454\_319\_002 Unit 1 Run 2 Out Air Train

Acquired: 5-APR-01 00:15:41 Processed: 5-APR-01 09:01:11

Total Conc.: 456.17 Unnamed Conc.: 390.277

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
30:58	6.144e+05	y	4.016e+05	y	1.53 y	1.016e+06	1.016e+06	6.40e+01	y	73.2
31:06	7.794e+05	y	4.991e+05	y	1.56 y	1.279e+06	1.279e+06	7.81e+01	y	92.1
31:13	2.090e+05	y	1.328e+05	y	1.57 y	3.418e+05	3.418e+05	3.11e+01	y	24.6
31:18	5.851e+04	y	4.071e+04	y	1.44 y	9.923e+04	9.923e+04	8.82e+00	y	7.15
31:33	8.692e+04	y	6.433e+04	n	1.35 y	1.512e+05	1.512e+05	1.03e+01	y	10.9
31:45	4.770e+05	y	3.148e+05	y	1.52 y	7.918e+05	7.918e+05	4.97e+01	y	57.0
31:52	1.358e+05	y	9.372e+04	y	1.45 y	2.296e+05	2.296e+05	2.34e+01	y	16.5
32:01	1.218e+05	n	8.275e+04	y	1.47 y	2.045e+05	2.045e+05	1.78e+01	y	14.7
32:14	2.177e+05	n	1.441e+05	y	1.51 y	3.618e+05	3.618e+05	2.94e+01	y	26.3
32:30	3.454e+05	n	2.281e+05	y	1.51 y	5.735e+05	5.735e+05	3.53e+01	y	41.3
33:05	4.423e+04	y	3.104e+04	y	1.42 y	7.527e+04	7.527e+04	7.04e+00	y	5.42
33:12	3.553e+05	n	2.294e+05	y	1.55 y	5.847e+05	5.847e+05	4.89e+01	y	42.1
33:20	3.299e+05	y	2.246e+05	y	1.47 y	5.545e+05	5.545e+05	3.84e+01	y	39.6
33:39	4.203e+04	n	3.090e+04	y	1.36 y	7.293e+04	7.293e+04	6.93e+00	y	5.25

*2.8% PeCDF  
0.3% total*

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Totals class: HxCDF EMPC Function: 3 Run #: 12  
 File Name: 010404P4 Sample #: 5 Sample text: P1454\_319\_002 Unit 1 Run 2 Out Air Train

Acquired: 5-APR-01 00:15:41 Processed: 5-APR-01 09:01:11

Total Conc.: 378.66 Unnamed Conc.: 246.218

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
35:12	2.742e+05	n	2.066e+05	n	1.33 y	4.809e+05	4.809e+05	2.92e+01	y	38.0
35:23	8.455e+05	y	6.584e+05	n	1.28 y	1.504e+06	1.504e+06	8.95e+01	y	119
35:37	6.857e+04	y	4.289e+04	y	1.60 n	1.115e+05	9.607e+04	5.44e+00	y	7.60
35:49	8.439e+04	n	6.451e+04	n	1.31 y	1.489e+05	1.489e+05	7.75e+00	y	11.8
36:02	4.463e+04	y	3.876e+04	y	1.15 y	8.339e+04	8.339e+04	5.60e+00	y	6.59
36:27	3.070e+05	y	2.314e+05	y	1.33 y	5.384e+05	5.384e+05	2.99e+01	y	42.6

36:34	2.732e+05	y	2.163e+05	y	1.26	y	4.895e+05	4.895e+05	2.90e+01	y	38.9	1,2,3,4,7,8-HxCDF
36:42	2.973e+05	y	2.327e+05	y	1.28	y	5.301e+05	5.301e+05	2.92e+01	y	38.5	1,2,3,6,7,8-HxCDF
36:52	5.264e+04	y	3.467e+04	y	1.52	n	8.731e+04	7.766e+04	5.16e+00	y	6.14	
37:00	4.806e+04	y	4.203e+04	y	1.14	y	9.010e+04	9.010e+04	5.41e+00	y	7.13	
37:08	5.095e+04	y	4.321e+04	y	1.18	y	9.417e+04	9.417e+04	6.05e+00	y	7.45	
37:22	3.194e+05	y	2.658e+05	n	1.20	y	5.852e+05	5.852e+05	3.19e+01	y	45.2	2,3,4,6,7,8-HxCDF
38:27	6.455e+04	y	4.564e+04	y	1.41	y	1.102e+05	1.102e+05	4.82e+00	y	9.74	1,2,3,7,8,9-HxCDF

Totals class: HpCDF EMPC

Function: 4 Run #: 12

File Name: 010404P4 Sample #: 5

Sample text: P1454\_319\_002 Unit 1 Run 2 Out Air Train

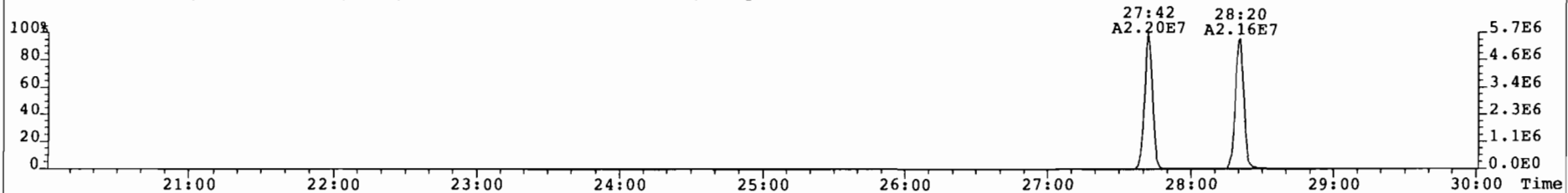
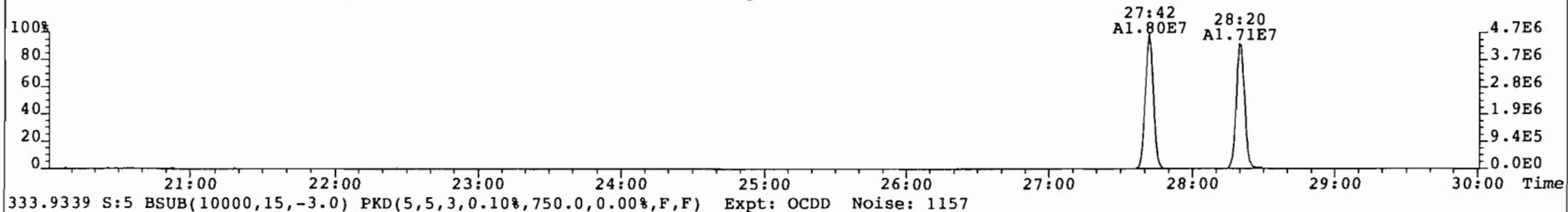
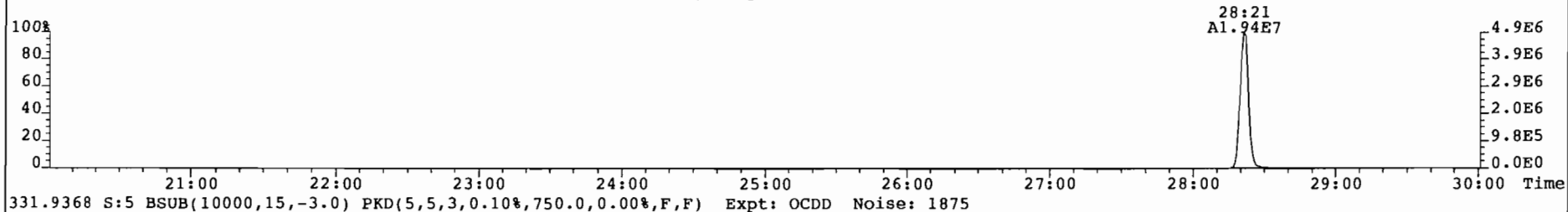
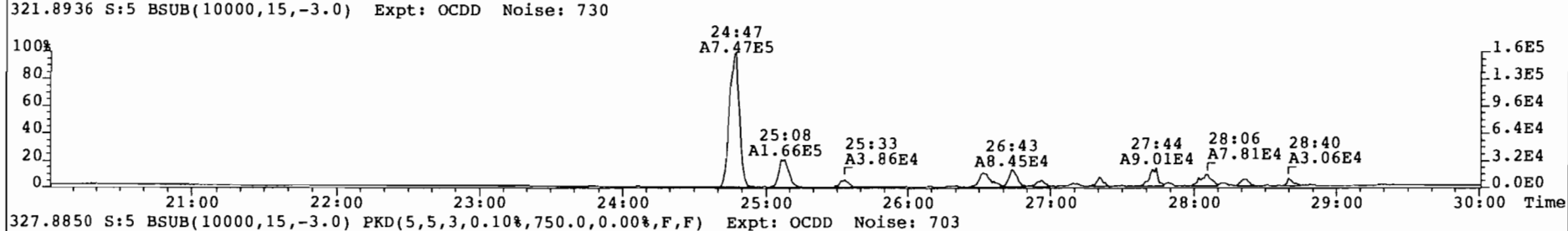
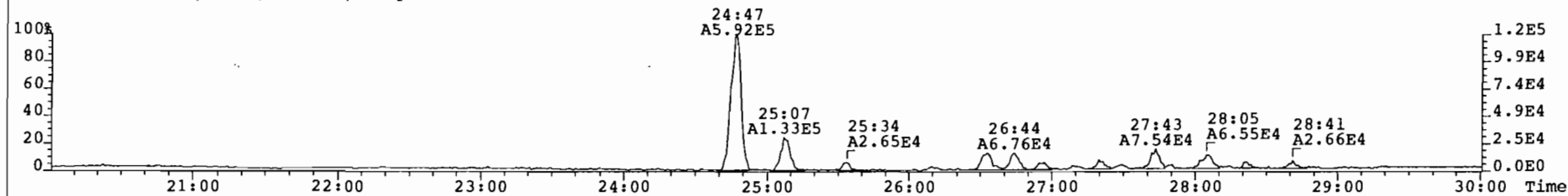
Acquired: 5-APR-01 00:15:41 Processed: 5-APR-01 09:01:11

Total Conc.: 215.82

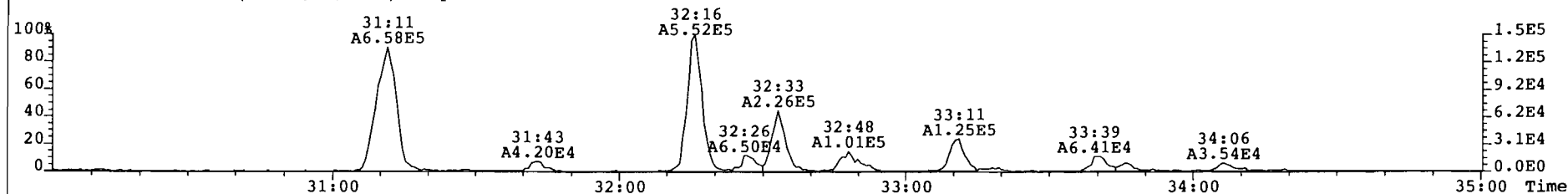
Unnamed Conc.: 47.094

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
40:26	9.363e+05	n	9.016e+05	n	1.04	y	1.838e+06	1.838e+06	1.04e+02	y	158	1,2,3,4,6,7,8-HpCDF
40:53	1.294e+05	y	1.307e+05	y	0.99	y	2.601e+05	2.601e+05	1.78e+01	y	24.3	
41:08	1.323e+05	y	1.125e+05	y	1.18	y	2.448e+05	2.448e+05	1.20e+01	y	22.8	
42:58	5.392e+04	y	5.181e+04	y	1.04	y	1.057e+05	1.057e+05	5.59e+00	y	10.8	1,2,3,4,7,8,9-HpCDF

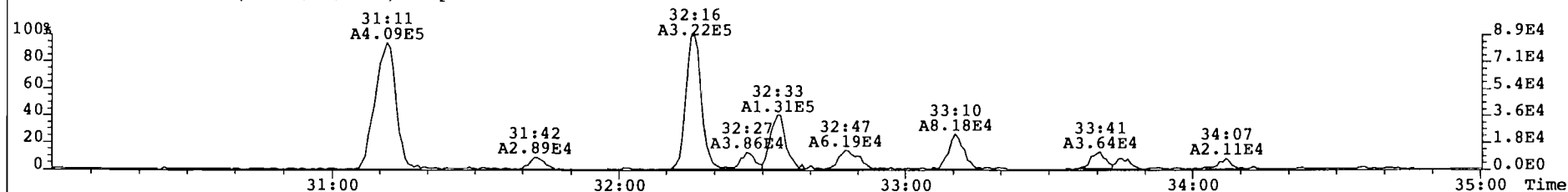
File: 010404P4 Acq: 5-APR-2001 00:15:41 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454 319 002 Unit 1 Run 2 Out Air Train Vial# 23 File Text: AAP DB5  
319.8965 S:5 BSUB(10000,15,-3.0) Expt: OCDD Noise: 966



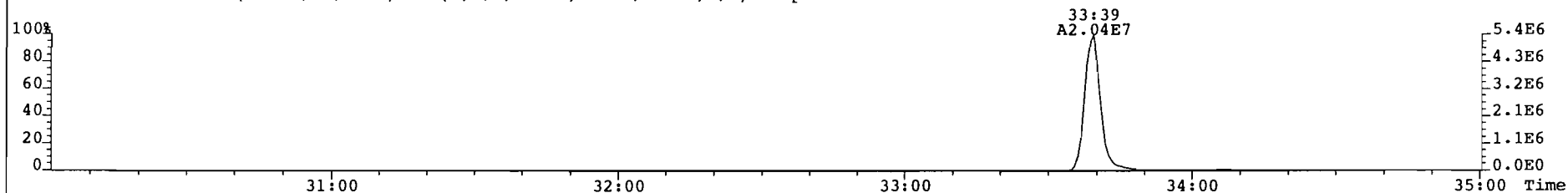
File: 010404P4 Acq: 5-APR-2001 00:15:41 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454 319 002 Unit 1 Run 2 Out Air Train Vial# 23 File Text: AAP DB5  
355.8546 S:5 F:2 BSub(10000,15,-3.0) Expt: OCDD Noise: 307



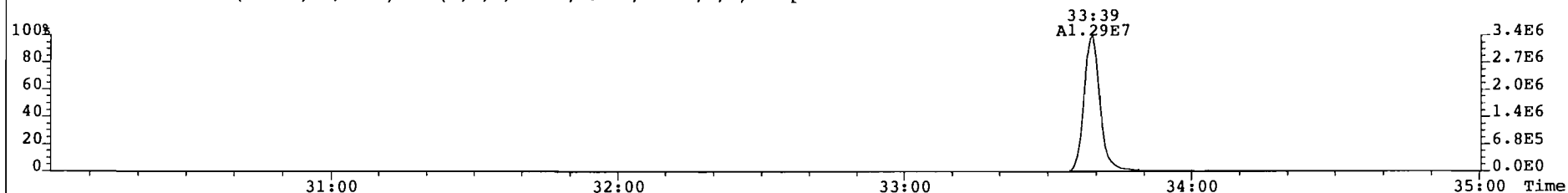
357.8517 S:5 F:2 BSub(10000,15,-3.0) Expt: OCDD Noise: 212



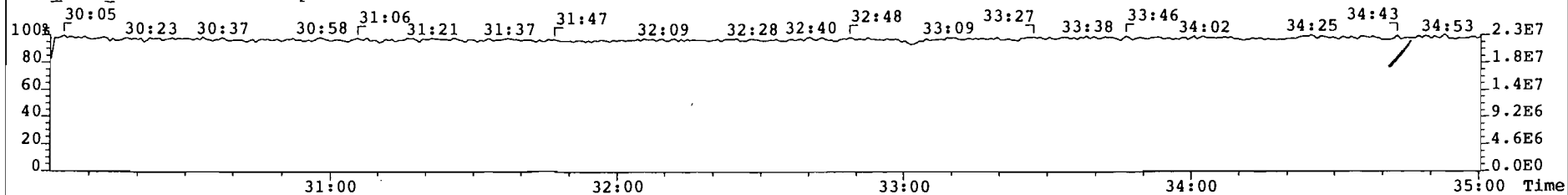
367.8949 S:5 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1421



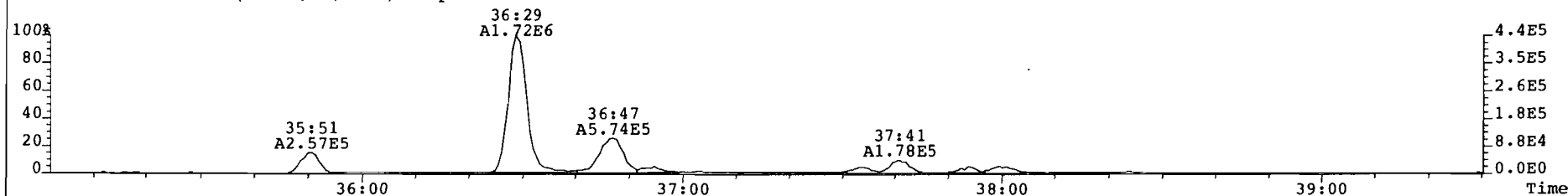
369.8919 S:5 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 633



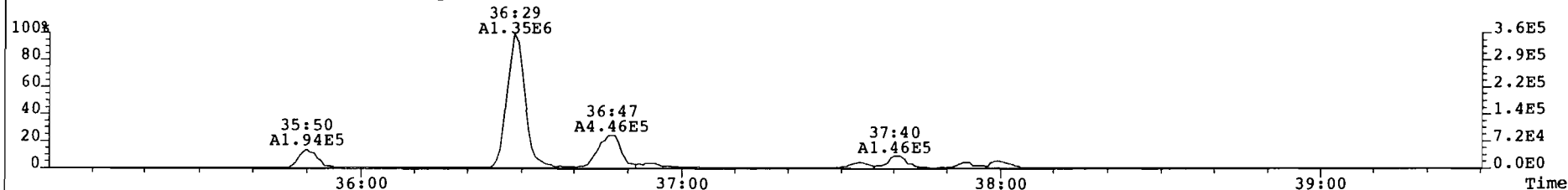
LOCK MASS CHECK S:5 F:2 Expt: OCDD



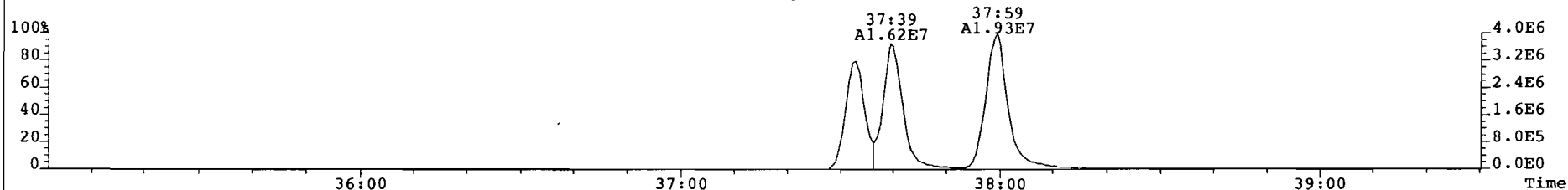
File: 010404P4 Acq: 5-APR-2001 00:15:41 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454\_319\_002 Unit 1 Run 2 Out Air Train Vial# 23 File Text: AAP DB5  
389.8156 S:5 F:3 BSUB(10000,15,-3.0) Expt: OCDD Noise: 1110



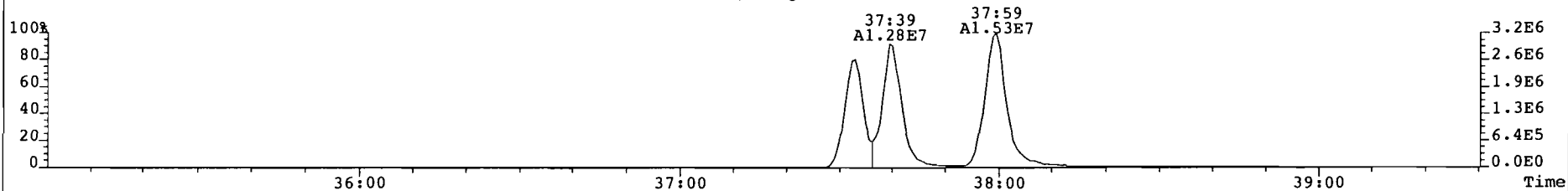
391.8127 S:5 F:3 BSUB(10000,15,-3.0) Expt: OCDD Noise: 556



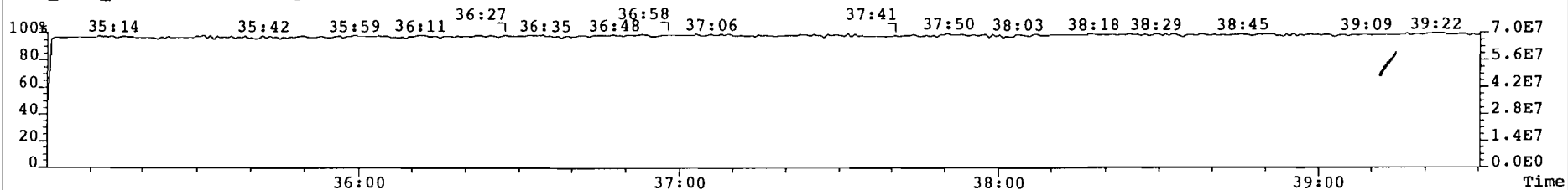
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 977



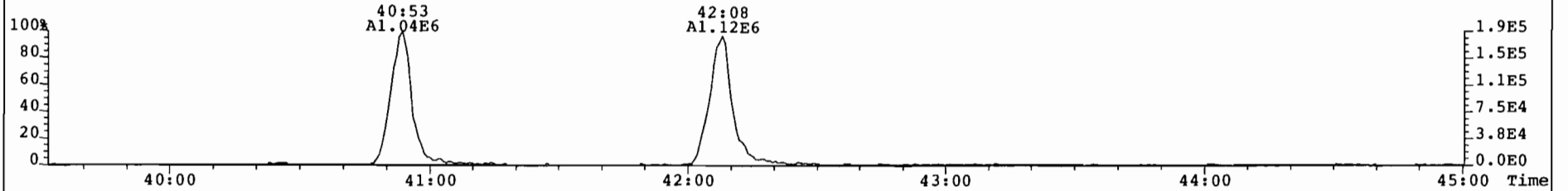
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 393



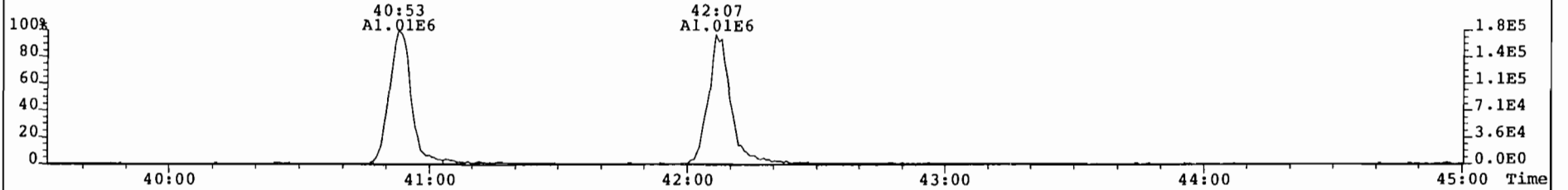
LOCK\_MASS\_CHECK S:5 F:3 Expt: OCDD



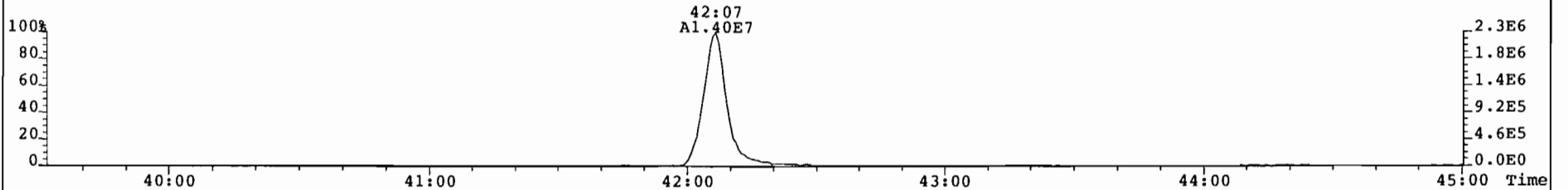
File: 010404P4 Acq: 5-APR-2001 00:15:41 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454 319 002 Unit 1 Run 2 Out Air Train Vial# 23 File Text: AAP DB5  
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 340



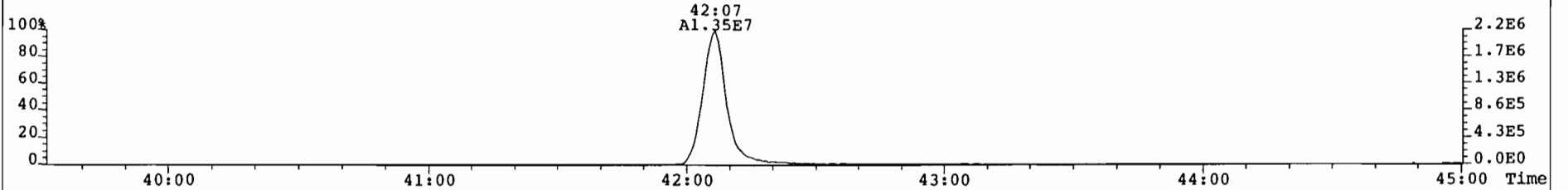
425.7737 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 321



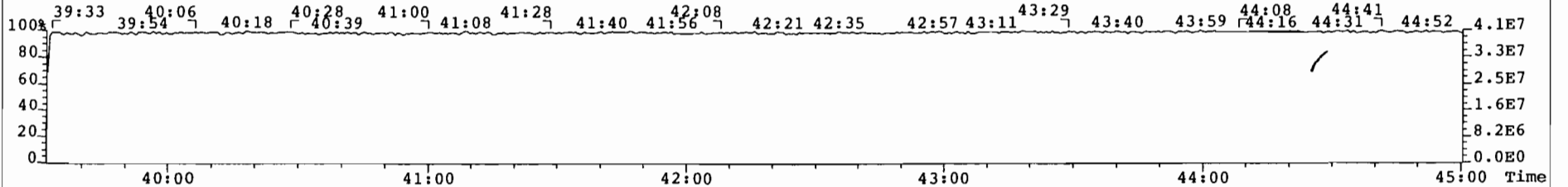
435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 2027



437.8140 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1199

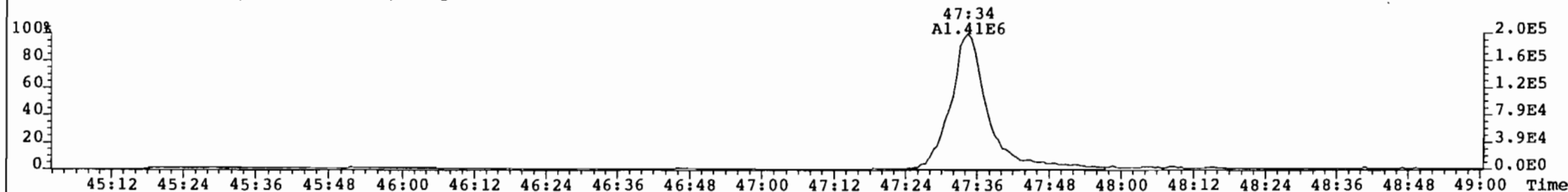


430.9728 S:5 F:4 Expt: OCDD

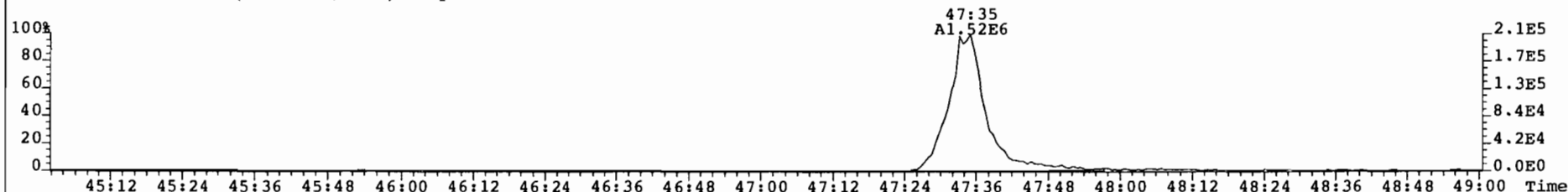




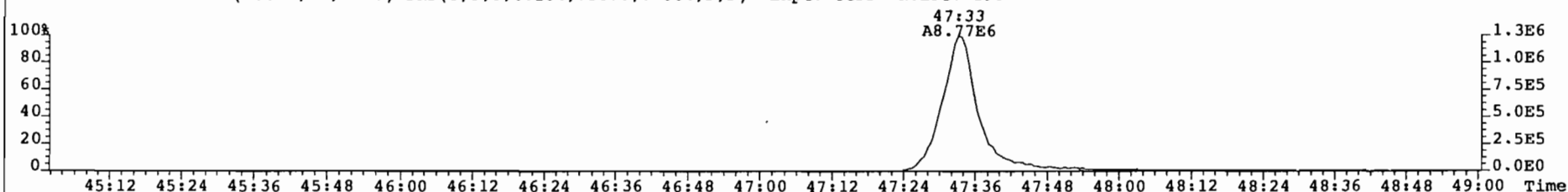
File: 010404P4 Acq: 5-APR-2001 00:15:41 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454\_319\_002 Unit 1 Run 2 Out Air Train Vial# 23 File Text: AAP DB5  
457.7377 S:5 F:5 BSUB(10000,15,-3.0) Expt: OCDD Noise: 616



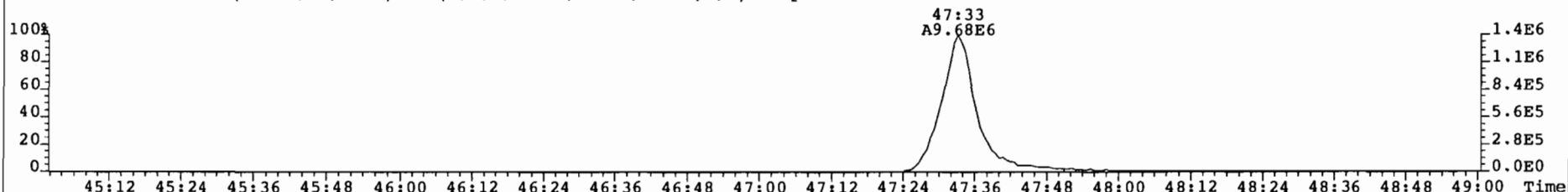
459.7348 S:5 F:5 BSUB(10000,15,-3.0) Expt: OCDD Noise: 359



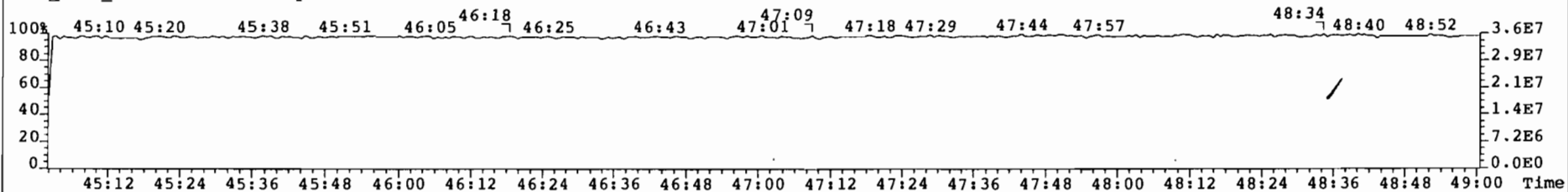
469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 193



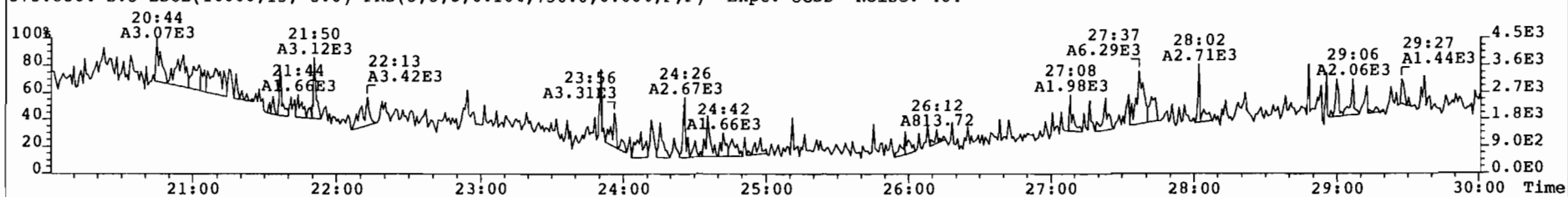
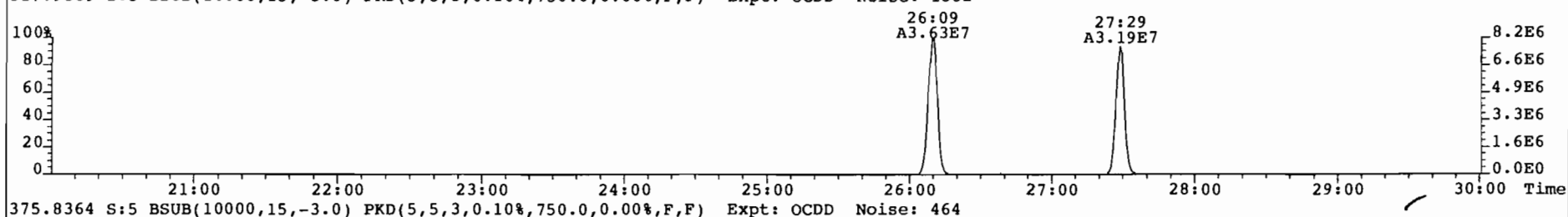
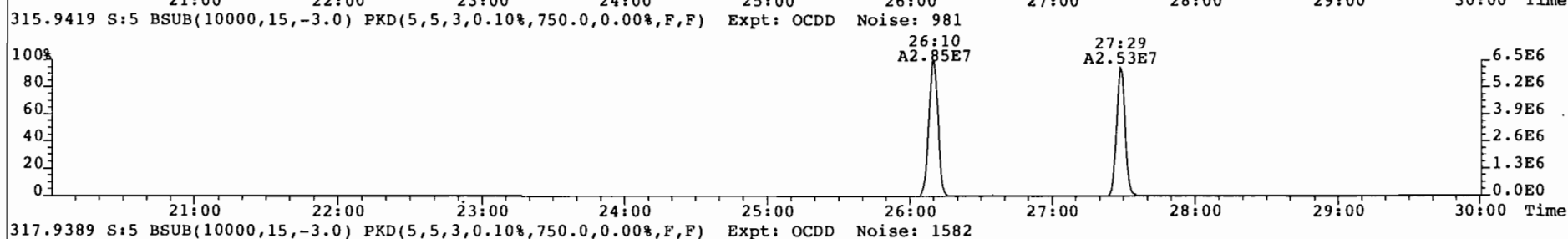
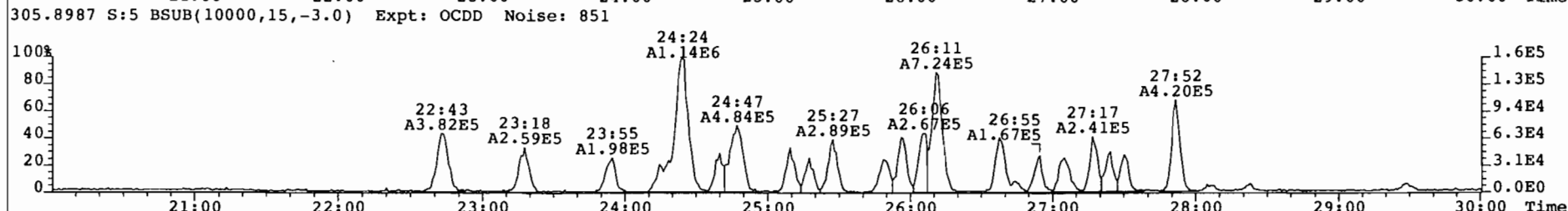
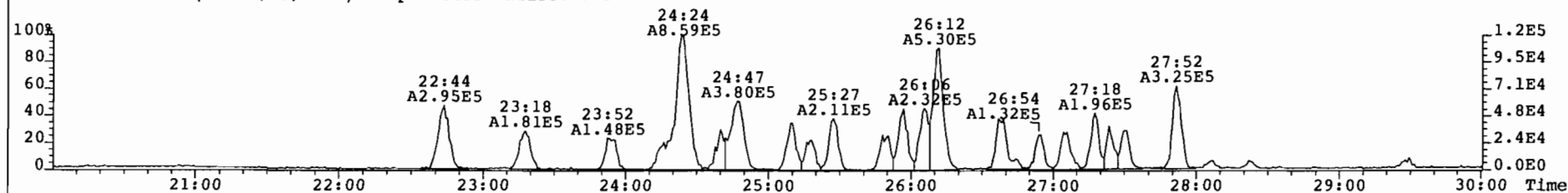
471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 260



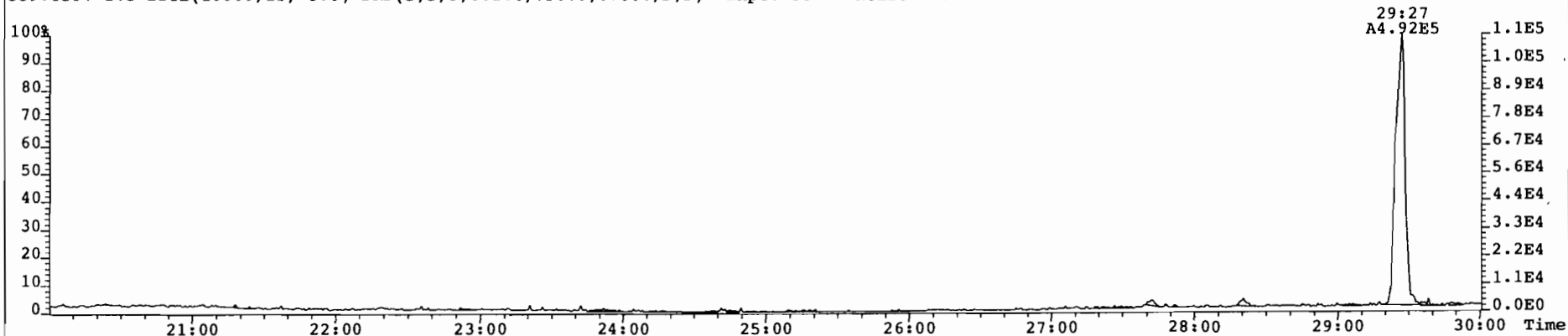
LOCK\_MASS\_CHECK S:5 F:5 Expt: OCDD



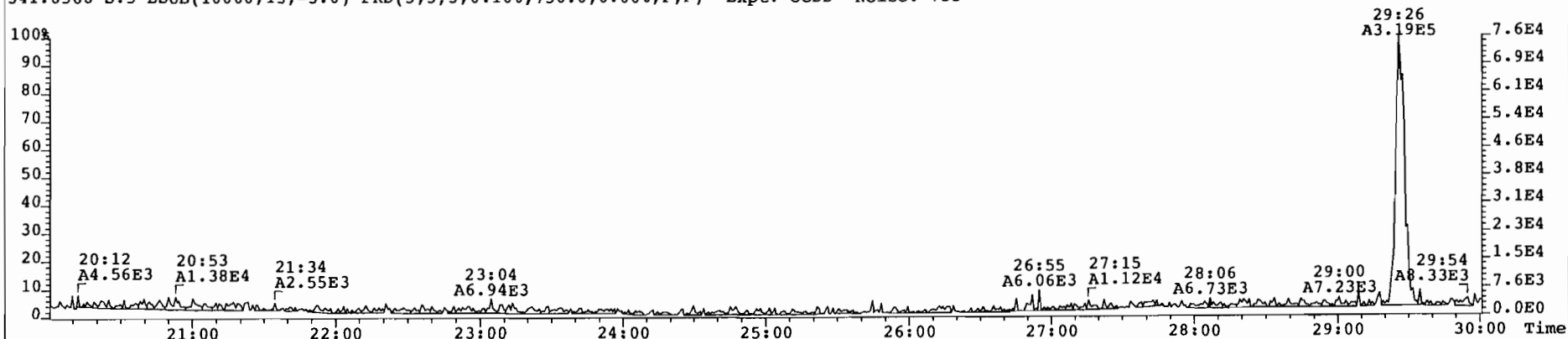
File: 010404P4 Acq: 5-APR-2001 00:15:41 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454\_319\_002 Unit 1 Run 2 Out Air Train Vial# 23 File Text: AAP DB5  
303.9016 S:5 BSUB(10000,15,-3.0) Expt: OCDD Noise: 714



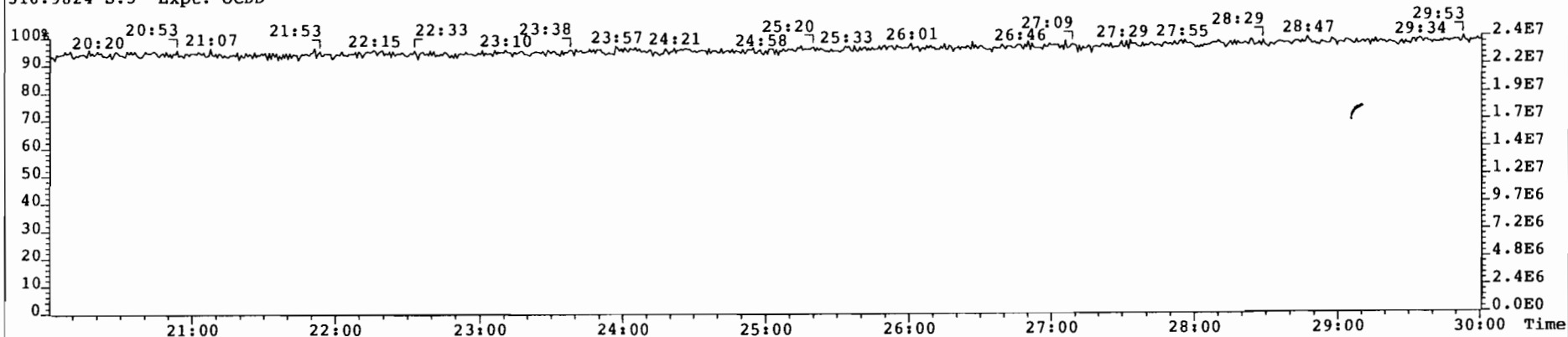
File: 010404P4 Acq: 5-APR-2001 00:15:41 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454 319\_002 Unit 1 Run 2 Out Air Train Vial# 23 File Text: AAP DB5  
339.8597 S:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 500



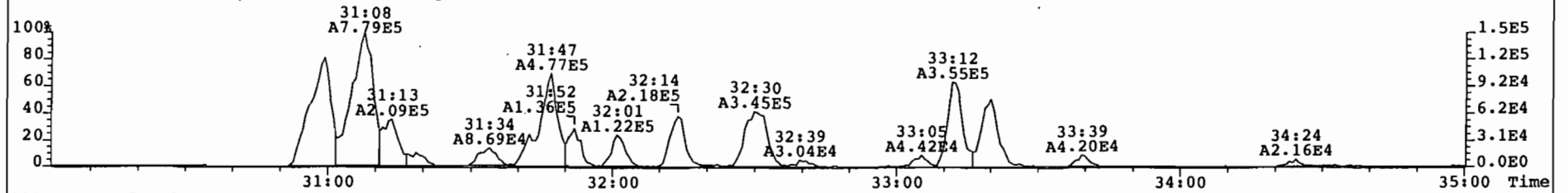
341.8568 S:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 755



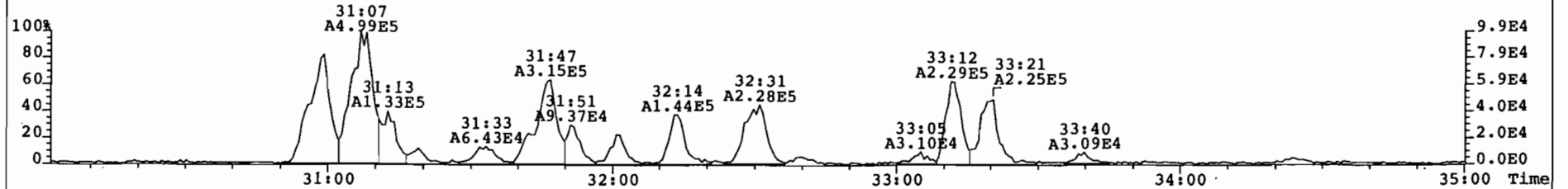
316.9824 S:5 Expt: OCDD



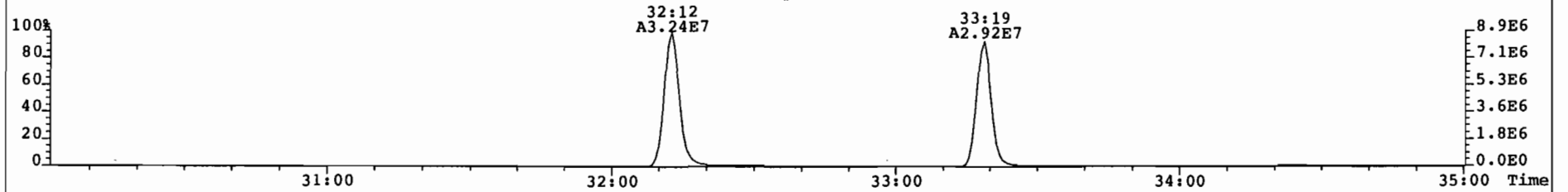
File: 010404P4 Acq: 5-APR-2001 00:15:41 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454 319 002 Unit 1 Run 2 Out Air Train Vial# 23 File Text: AAP DB5  
339.8597 S:5 F:2 BSub(10000,15,-3.0) Expt: OCDD Noise: 334



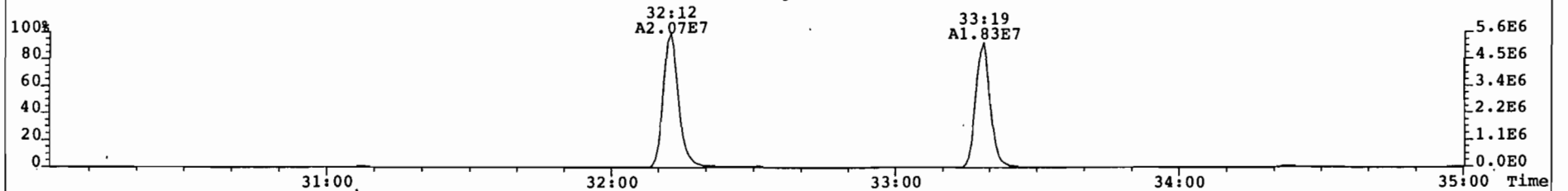
341.8568 S:5 F:2 BSub(10000,15,-3.0) Expt: OCDD Noise: 426



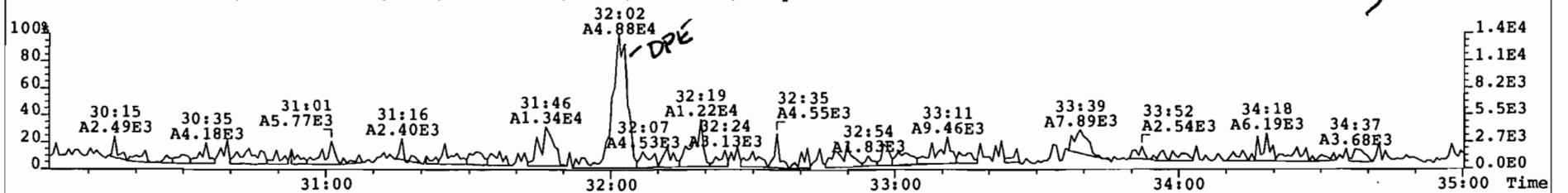
351.9000 S:5 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 787



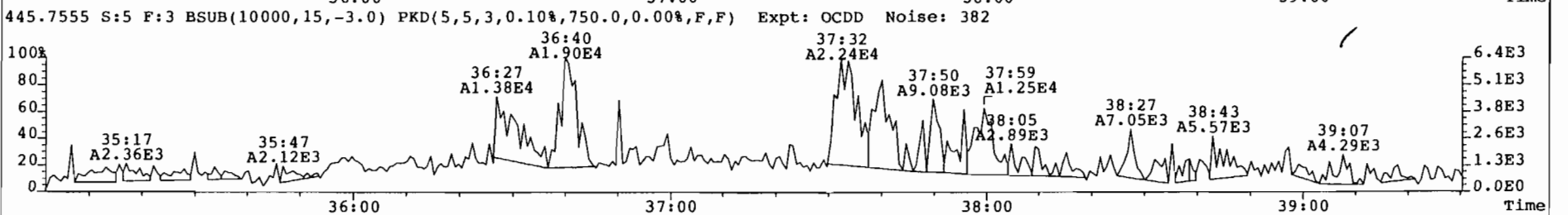
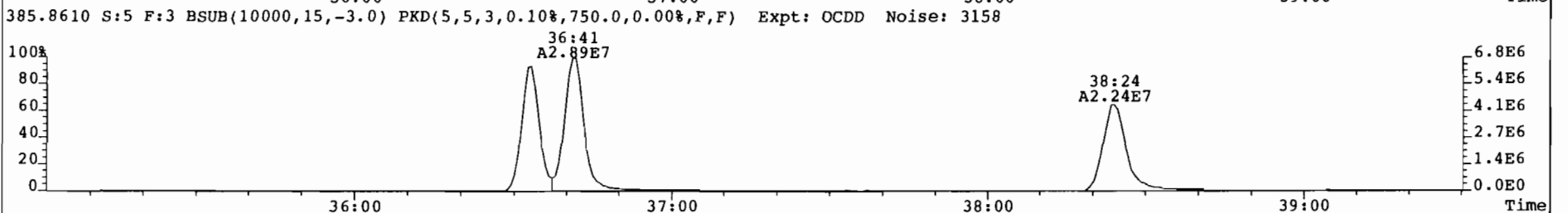
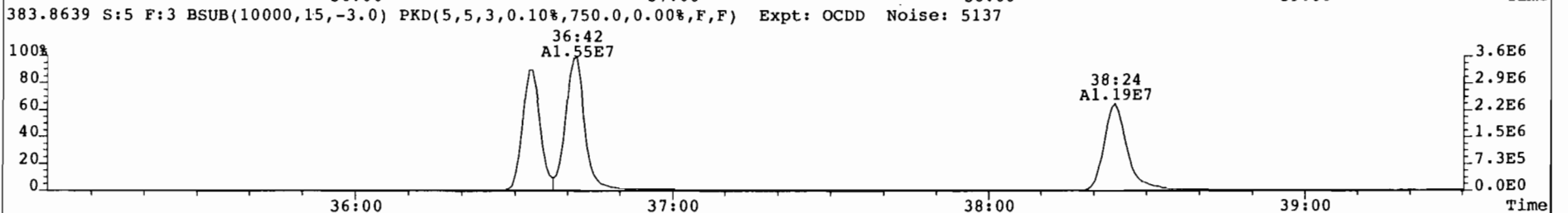
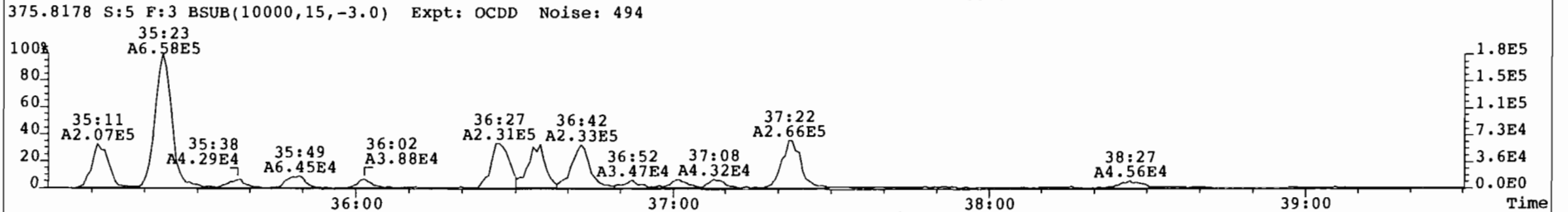
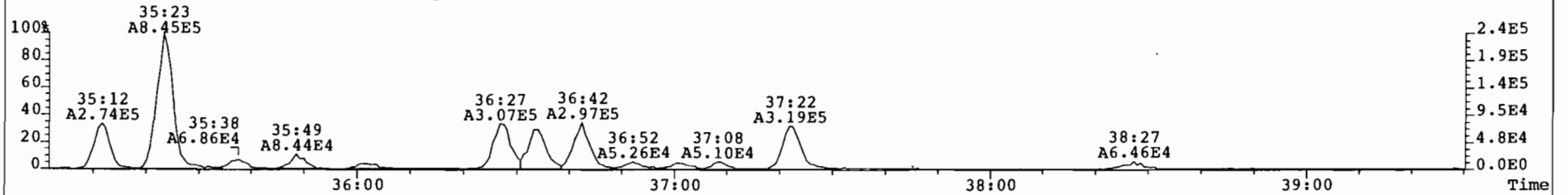
353.8970 S:5 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 656



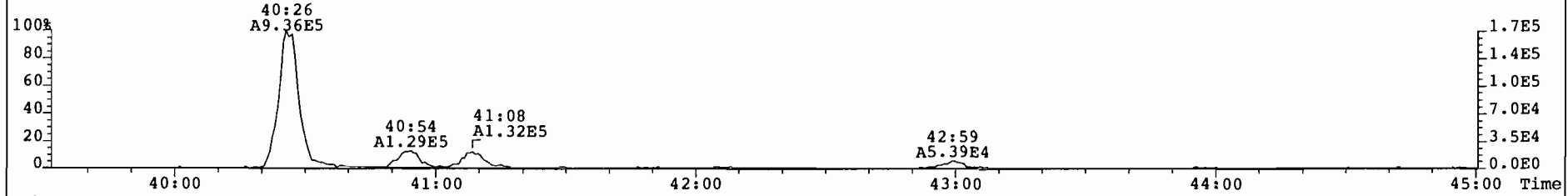
409.7974 S:5 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 380



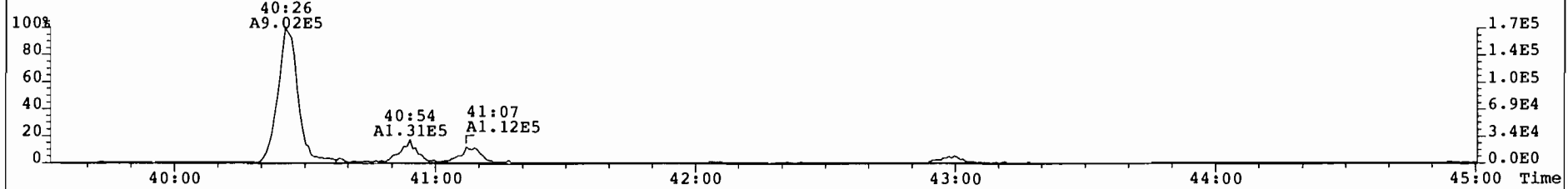
File: 010404P4 Acq: 5-APR-2001 00:15:41 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454 319 002 Unit 1 Run 2 Out Air Train Vial# 23 File Text: AAP DB5  
373.8207 S:5 F:3 BSUB(10000,15,-3.0) Expt: OCDD Noise: 457



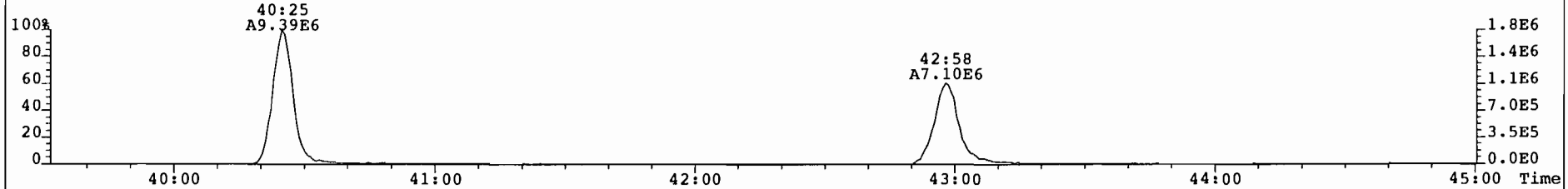
File: 010404P4 Acq: 5-APR-2001 00:15:41 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454\_319\_002 Unit 1 Run 2 Out Air Train Vial# 23 File Text: AAP DB5  
407.7818 S:5 F:4 BSub(10000,15,-3.0) Expt: OCDD Noise: 304



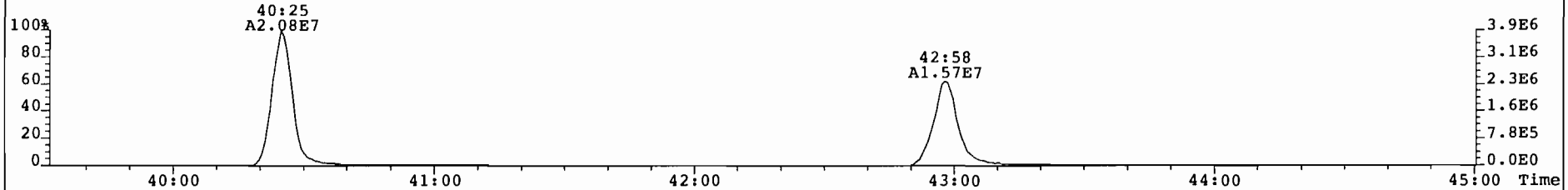
409.7788 S:5 F:4 BSub(10000,15,-3.0) Expt: OCDD Noise: 254



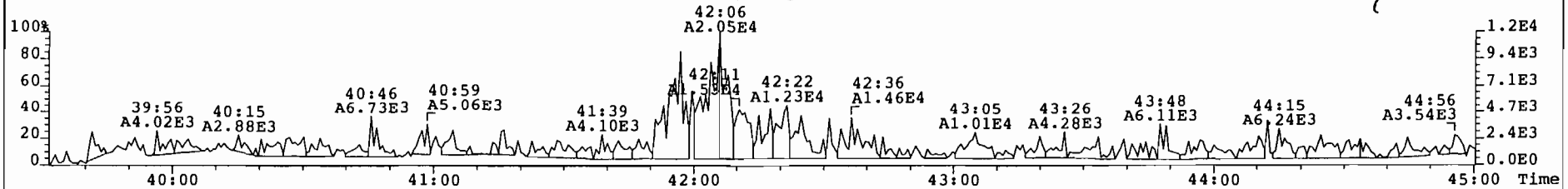
417.8253 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 682



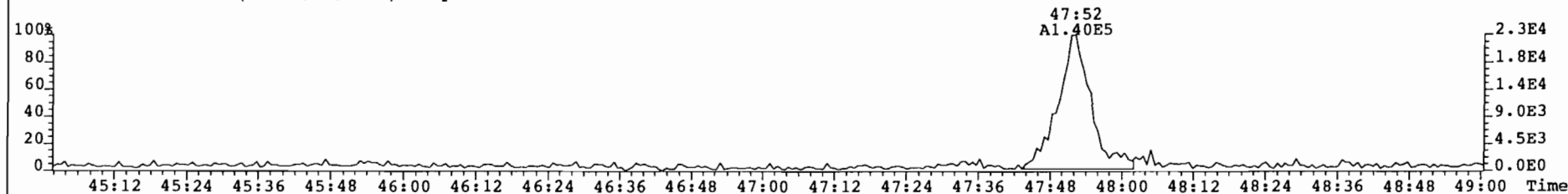
419.8220 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 997



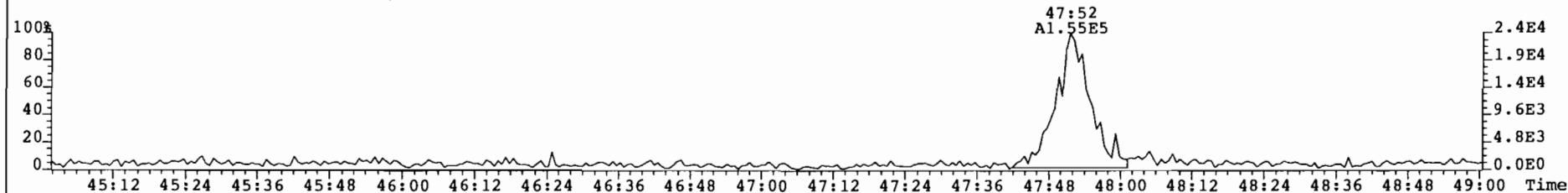
479.7165 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 457



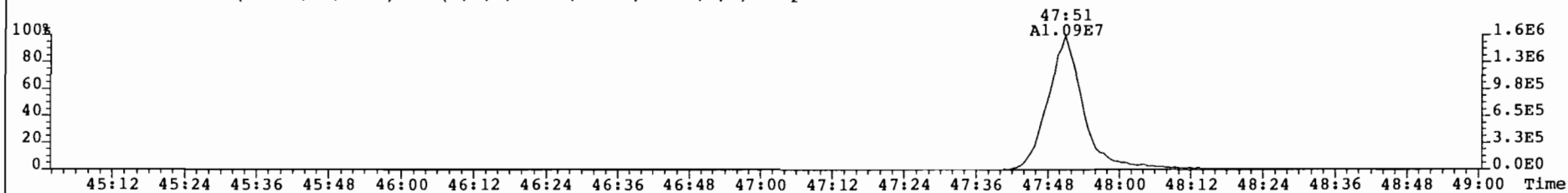
File: 010404P4 Acq: 5-APR-2001 00:15:41 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454\_319\_002 Unit 1 Run 2 Out Air Train Vial# 23 File Text: AAP DB5  
441.7428 S:5 F:5 BSub(10000,15,-3.0) Expt: OCDD Noise: 275



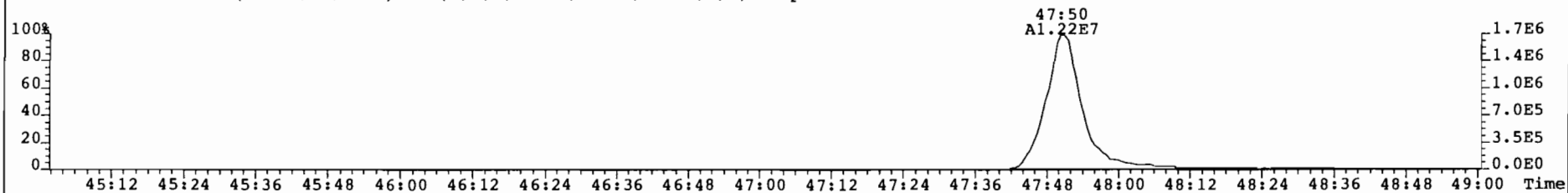
443.7398 S:5 F:5 BSub(10000,15,-3.0) Expt: OCDD Noise: 338



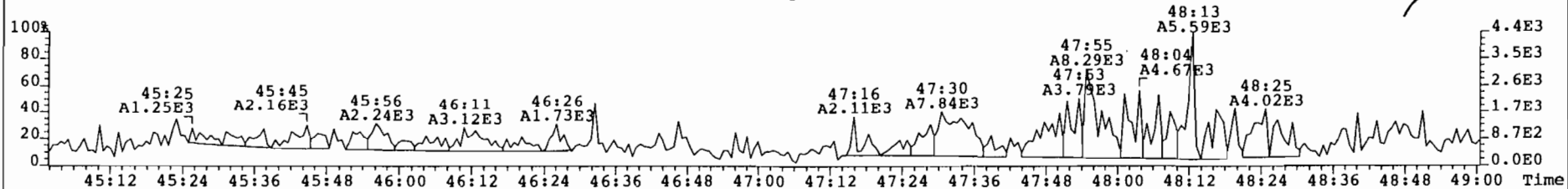
453.7830 S:5 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 234



455.7801 S:5 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 2288




513.6775 S:5 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 247



# Sample ID: Unit 2 Run 1 Out

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_004	Date Extracted:	2 Apr 01
Date Collected:	26 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01
Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	EMPC		4.79	A	84.3	102	89.7
1,2,3,7,8-PeCDD	18.9			A	88.9	97.8	89.7
1,2,3,4,7,8-HxCDD	25.9			A	90.2	88.3	89.7
1,2,3,6,7,8-HxCDD	71.5				90.2	88.3	89.7
1,2,3,7,8,9-HxCDD	35.6			A	90.2	88.3	89.7
1,2,3,4,6,7,8-HpCDD	315				84.9	92.8	89.7
OCDD	462			B	66.4	92.8	89.7
2,3,7,8-TCDF	25.7				81.5	102	89.7
1,2,3,7,8-PeCDF	36.3			A	83.5	97.8	89.7
2,3,4,7,8-PeCDF	58				83.5	97.8	89.7
1,2,3,4,7,8-HxCDF	41.7			A	98.8	92.1	89.7
1,2,3,6,7,8-HxCDF	48.8			A	98.8	92.1	89.7
2,3,4,6,7,8-HxCDF	56.5				98.8	92.1	89.7
1,2,3,7,8,9-HxCDF	12			A	98.8	92.1	89.7
1,2,3,4,6,7,8-HpCDF	148				93.5	92.8	89.7
1,2,3,4,7,8,9-HpCDF	12.6			A	93.5	92.8	89.7
OCDF	45.1			A	74.9	92.8	89.7
Totals & TEQs					 <b>ALTA ANALYTICAL PERSPECTIVES</b> 2714 Exchange Drive Wilmington North Carolina 28405 USA Tel: 910 794-1613 Fax: 910 794-3919 e-mail: ytondeur@cs.com web: www.ultratrace.com		
TCDDs	457		485				
PeCDDs	806						
HxCDDs	1300						
HpCDDs	623						
TCDFs	1010		1030				
PeCDFs	710		715				
HxCDFs	463						
HpCDFs	210						
<b>Total PCDD/Fs</b>	<b>6090</b>		<b>6130</b>				
<b>TEQ (ND=0)</b>	<b>77.3</b>		<b>82.1</b>	<b>ITEF</b>			
<b>TEQ (ND=DL/2)</b>	<b>77.3</b>		<b>82.1</b>	<b>ITEF</b>			

Reviewer CE  
 Date 18 Apr 01

56



Client ID: Unit 2 Run 1 Out  
Lab ID: P1454\_319\_004

Filename: 010404P4  
GC Column ID: db-5

S: 6 Acq: 5-APR-01 01:07:31  
ICal: MM1\_M23\_0 wt/vol: 1.000

ConCal: 010404P4-  
EndCal: 010404P4-

Name	Resp	RA	RRF	RT	Conc	Qualif.	CDE	noise	Fac	DL
2,3,7,8-TCDD	5.68e+04	0.62 n	1.26	28:21	4.79			794	2.5	1.23
1,2,3,7,8-PeCDD	1.55e+05	1.42 y	1.01	33:40	18.9			1011	2.5	2.96
1,2,3,4,7,8-HxCDD	2.13e+05	1.31 y	1.14	37:33	25.9			2219	2.5	6.75
1,2,3,6,7,8-HxCDD	5.29e+05	1.29 y	1.02	37:41	71.5			2219	2.5	7.51
1,2,3,7,8,9-HxCDD	2.94e+05	1.33 y	1.14	38:00	35.6			2219	2.5	6.72
1,2,3,4,6,7,8-HpCDD	2.35e+06	1.02 y	1.13	42:08	315			1931	2.5	8.60
OCDD	1.99e+06	0.91 y	1.03	47:34	462			1554	2.5	12.0
2,3,7,8-TCDF	3.75e+05	0.71 y	1.05	27:30	25.7			2143	2.5	2.73
1,2,3,7,8-PeCDF	4.85e+05	1.58 y	1.04	32:14	36.3			1838	2.5	3.29
2,3,4,7,8-PeCDF	7.87e+05	1.37 y	1.05	33:20	58.0			1838	2.5	3.23
1,2,3,4,7,8-HxCDF	5.13e+05	1.21 y	1.13	36:34	41.7			1593	2.5	2.01
1,2,3,6,7,8-HxCDF	6.57e+05	1.26 y	1.24	36:42	48.8			1593	2.5	1.84
2,3,4,6,7,8-HxCDF	7.16e+05	1.31 y	1.16	37:23	56.5			1593	2.5	1.96
1,2,3,7,8,9-HxCDF	1.32e+05	1.38 y	1.02	38:28	12.0			1593	2.5	2.24
1,2,3,4,6,7,8-HpCDF	1.66e+06	1.04 y	1.54	40:26	148			1973	2.5	3.41
1,2,3,4,7,8,9-HpCDF	1.19e+05	1.11 y	1.30	42:59	12.6			1973	2.5	4.05
OCDF	2.70e+05	0.86 y	1.15	47:51	45.1			2298	2.5	12.1
Total Tetra-Dioxins	5.41e+06	0.79 y	1.26	24:46	457			794	2.5	1.23
Total Penta-Dioxins	6.60e+06	1.58 y	1.01	31:11	806			1011	2.5	2.96
Total Hexa-Dioxins	1.03e+07	1.28 y	1.10	35:51	1300			2219	2.5	6.98
Total Hepta-Dioxins	4.64e+06	0.99 y	1.13	40:53	623			1931	2.5	8.60
Total Tetra-Furans	1.48e+07	0.80 y	1.05	22:43	1010			2143	2.5	2.73
1st Fnc. Penta-Furans	9.61e+05	1.52 y	1.05	29:27	71.3			2889	2.5	5.12
Total Penta-Furans	8.61e+06	1.47 y	1.05	30:58	639			1838	2.5	3.26
PeCDF Totals:					710					715
Total Hexa-Furans	5.78e+06	1.27 y	1.14	35:12	463			1593	2.5	2.00
Total Hepta-Furans	2.28e+06	1.04 y	1.42	40:26	210			1973	2.5	3.70
IS 13C-2,3,7,8-TCDD	3.76e+07	0.79 y	1.13	28:20	3370					84.3
IS 13C-1,2,3,7,8-PeCDD	3.23e+07	1.59 y	0.93	33:39	3560					88.9
IS 13C-1,2,3,6,7,8-HxCDD	2.89e+07	1.28 y	0.93	37:40	3610					90.2
IS 13C-1,2,3,4,6,7,8-HpCDD	2.64e+07	1.08 y	0.91	42:07	3400					84.9
IS 13C-OCDD	1.67e+07	0.90 y	0.73	47:34	2660					66.4
IS 13C-2,3,7,8-TCDF	5.57e+07	0.79 y	1.06	27:29	3260					81.5
IS 13C-1,2,3,7,8-PeCDF	5.15e+07	1.58 y	0.96	32:13	3340					83.5
IS 13C-1,2,3,6,7,8-HxCDF	4.35e+07	0.53 y	1.28	36:42	3950					98.8
IS 13C-1,2,3,4,6,7,8-HpCDF	2.90e+07	0.45 y	0.90	40:25	3740					93.5
IS 13C-OCDF	2.09e+07	0.87 y	0.81	47:51	3000					74.9
RS/RT 13C-1,2,3,4-TCDD	3.93e+07	0.80 y	1.00	27:42	4000					-
RS 13C-1,2,3,4-TCDF	6.44e+07	0.79 y	1.00	26:10	4000					-
RS/RT 13C-1,2,3,7,8,9-HxCDD	3.44e+07	1.28 y	1.00	38:00	4000					-
PS 37Cl-2,3,7,8-TCDD	1.97e+07		0.51	28:22	4070					102
PS 13C-2,3,4,7,8-PeCDF	4.90e+07	1.59 y	0.97	33:19	3910					97.8
PS 13C-1,2,3,4,7,8-HxCDD	2.36e+07	1.25 y	0.92	37:33	3530					88.3
PS 13C-1,2,3,4,7,8-HxCDF	3.65e+07	0.55 y	0.91	36:33	3690					92.1
PS 13C-1,2,3,4,7,8,9-HpCDF	2.30e+07	0.44 y	0.85	42:59	3710					92.8
AS 13C-1,2,3,7,8,9-HxCDF	3.30e+07	0.53 y	1.07	38:25	3590					89.7

Reviewer: ce

Date: 18 Apr 01

EMPC

485  
806  
1300  
623  
1030 ✓  
71.3  
715  
463  
210

Rec

84.3  
88.9  
90.2  
84.9  
66.4  
81.5  
83.5  
98.8  
93.5  
74.9

Analyst: GAG

102  
97.8  
88.3  
92.1  
92.8  
89.7

Date: 18 Apr 01

Totals class: TCDD EMPC Function: 1 Run #: 13  
 File Name: 010404P4 Sample #: 6 Sample text: P1454\_319\_004 Unit 2 Run 1 Out Air Train

Acquired: 5-APR-01 01:07:31 Processed: 5-APR-01 09:01:12

Total Conc.: 484.90 Unnamed Conc.: 480.103

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
24:46	1.509e+06	n	1.919e+06	n	0.79	y	3.428e+06	3.428e+06	5.30e+02	y	289	
25:08	2.452e+05	n	3.178e+05	n	0.77	y	5.630e+05	5.630e+05	8.04e+01	y	47.5	
25:33	4.901e+04	n	6.388e+04	n	0.77	y	1.129e+05	1.129e+05	1.93e+01	y	9.53	
26:33	1.500e+05	n	1.734e+05	n	0.86	y	3.234e+05	3.234e+05	4.56e+01	y	27.3	
26:44	1.096e+05	y	1.194e+05	y	0.92	n	2.290e+05	2.113e+05	3.55e+01	y	17.8	
26:56	4.353e+04	n	5.040e+04	n	0.86	y	9.393e+04	9.393e+04	1.65e+01	y	7.93	
27:20	5.463e+04	y	6.830e+04	y	0.80	y	1.229e+05	1.229e+05	2.09e+01	y	10.4	
27:43	1.845e+05	n	2.242e+05	n	0.82	y	4.086e+05	4.086e+05	6.95e+01	y	34.5	
27:49	1.802e+04	y	2.396e+04	n	0.75	y	4.198e+04	4.198e+04	9.28e+00	y	3.55	
28:05	1.258e+05	y	1.464e+05	y	0.86	y	2.721e+05	2.721e+05	3.45e+01	y	23.0	
28:13	2.149e+04	y	2.584e+04	y	0.83	y	4.733e+04	4.733e+04	9.69e+00	y	4.00	
28:21	2.469e+04	y	4.000e+04	y	0.62	n	6.468e+04	5.675e+04	1.48e+01	y	4.79	2,3,7,8-TCDD
28:41	3.027e+04	y	3.380e+04	y	0.90	n	6.407e+04	5.983e+04	1.15e+01	y	5.05	

Totals class: PeCDD EMPC Function: 2 Run #: 13  
 File Name: 010404P4 Sample #: 6 Sample text: P1454\_319\_004 Unit 2 Run 1 Out Air Train

Acquired: 5-APR-01 01:07:31 Processed: 5-APR-01 09:01:12

Total Conc.: 806.45 Unnamed Conc.: 787.528

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
31:11	1.486e+06	n	9.413e+05	n	1.58	y	2.427e+06	2.427e+06	1.99e+02	y	297	
31:43	7.431e+04	n	4.550e+04	n	1.63	y	1.198e+05	1.198e+05	1.45e+01	y	14.6	
32:16	1.201e+06	n	7.514e+05	n	1.60	y	1.953e+06	1.953e+06	2.20e+02	y	239	
32:27	1.037e+05	n	7.603e+04	n	1.36	y	1.797e+05	1.797e+05	2.22e+01	y	22.0	
32:33	4.637e+05	n	2.894e+05	n	1.60	y	7.532e+05	7.532e+05	7.95e+01	y	92.1	
32:48	1.631e+05	n	1.113e+05	n	1.47	y	2.744e+05	2.744e+05	2.16e+01	y	33.5	
33:11	3.501e+05	n	2.178e+05	n	1.61	y	5.679e+05	5.679e+05	5.83e+01	y	69.4	
33:40	9.068e+04	n	6.406e+04	n	1.42	y	1.547e+05	1.547e+05	1.95e+01	y	18.9	1,2,3,7,8-PeCDD
33:46	5.726e+04	n	3.516e+04	n	1.63	y	9.242e+04	9.242e+04	1.05e+01	y	11.3	
34:07	4.528e+04	n	2.940e+04	n	1.54	y	7.468e+04	7.468e+04	9.40e+00	y	9.13	

Totals class: HxCDD EMPC Function: 3 Run #: 13  
 File Name: 010404P4 Sample #: 6 Sample text: P1454\_319\_004 Unit 2 Run 1 Out Air Train

Acquired: 5-APR-01 01:07:31 Processed: 5-APR-01 09:01:12

Total Conc.: 1295.5 Unnamed Conc.: 1162.491

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
35:51	4.435e+05	n	3.455e+05	n	1.28	y	7.890e+05	7.890e+05	3.87e+01	y	99.1
36:29	3.670e+06	n	2.852e+06	n	1.29	y	6.522e+06	6.522e+06	3.51e+02	y	819
36:46	9.214e+05	n	6.829e+05	n	1.35	y	1.604e+06	1.604e+06	6.40e+01	y	201
36:55	1.061e+05	n	7.989e+04	n	1.33	y	1.860e+05	1.860e+05	7.03e+00	y	23.4
37:33	1.211e+05	n	9.228e+04	n	1.31	y	2.134e+05	2.134e+05	1.03e+01	y	25.9
37:41	2.979e+05	n	2.312e+05	n	1.29	y	5.291e+05	5.291e+05	2.39e+01	y	71.5
37:53	8.687e+04	n	7.139e+04	n	1.22	y	1.583e+05	1.583e+05	7.72e+00	y	19.9
38:00	1.678e+05	n	1.263e+05	n	1.33	y	2.942e+05	2.942e+05	1.23e+01	y	35.6

Totals class: HpCDD EMPC                      Function: 4   Run #: 13  
 File Name: 010404P4   Sample #: 6            Sample text: P1454\_319\_004 Unit 2 Run 1 Out Air Train

Acquired: 5-APR-01 01:07:31    Processed: 5-APR-01 09:01:12

Total Conc.: 623.05                      Unnamed Conc.: 307.672

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
40:53	1.143e+06	n	1.150e+06	n	0.99	y	2.294e+06	2.294e+06	1.11e+02	y	308
42:08	1.187e+06	y	1.164e+06	n	1.02	y	2.351e+06	2.351e+06	9.73e+01	y	315

Totals class: TCDF EMPC                      Function: 1   Run #: 13  
 File Name: 010404P4   Sample #: 6            Sample text: P1454\_319\_004 Unit 2 Run 1 Out Air Train

Acquired: 5-APR-01 01:07:31    Processed: 5-APR-01 09:01:12

Total Conc.: 1025.7                      Unnamed Conc.: 999.983

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
22:43	3.273e+05	n	4.098e+05	n	0.80	y	7.371e+05	7.371e+05	3.47e+01	y	50.6
23:17	1.895e+05	n	2.446e+05	n	0.77	y	4.341e+05	4.341e+05	2.18e+01	y	29.8
23:54	2.197e+05	n	2.692e+05	n	0.82	y	4.888e+05	4.888e+05	2.27e+01	y	33.6
24:23	1.009e+06	n	1.288e+06	n	0.78	y	2.297e+06	2.297e+06	8.85e+01	y	158
24:39	1.576e+05	y	1.873e+05	y	0.84	y	3.449e+05	3.449e+05	2.11e+01	y	23.7
24:46	4.345e+05	y	5.618e+05	y	0.77	y	9.964e+05	9.964e+05	4.11e+01	y	68.4
25:09	2.081e+05	y	2.620e+05	y	0.79	y	4.701e+05	4.701e+05	2.45e+01	y	32.3
25:17	1.338e+05	y	1.826e+05	y	0.73	y	3.164e+05	3.164e+05	1.86e+01	y	21.7
25:27	2.299e+05	y	2.978e+05	y	0.77	y	5.277e+05	5.277e+05	3.06e+01	y	36.2
25:49	1.997e+05	y	2.422e+05	y	0.82	y	4.420e+05	4.420e+05	2.23e+01	y	30.3
25:56	3.144e+05	y	4.377e+05	y	0.72	y	7.522e+05	7.522e+05	4.70e+01	y	51.6
26:05	2.537e+05	y	3.296e+05	y	0.77	y	5.834e+05	5.834e+05	4.19e+01	y	40.1
26:12	9.994e+05	n	1.241e+06	n	0.81	y	2.240e+06	2.240e+06	1.12e+02	y	154
26:37	2.486e+05	y	3.329e+05	y	0.75	y	5.815e+05	5.815e+05	4.01e+01	y	39.9
26:44	5.700e+04	y	8.200e+04	n	0.70	y	1.390e+05	1.390e+05	8.00e+00	y	9.54
26:54	1.527e+05	y	1.963e+05	y	0.78	y	3.490e+05	3.490e+05	2.34e+01	y	24.0
27:05	2.582e+05	n	3.347e+05	n	0.77	y	5.929e+05	5.929e+05	3.38e+01	y	40.7
27:17	2.633e+05	y	3.543e+05	y	0.74	y	6.176e+05	6.176e+05	3.92e+01	y	42.4
27:23	1.767e+05	y	2.208e+05	y	0.80	y	3.975e+05	3.975e+05	2.73e+01	y	27.3

27:30	1.554e+05	y	2.194e+05	y	0.71	y	3.748e+05	3.748e+05	2.71e+01	y	25.7	2,3,7,8-TCDF
27:51	4.289e+05	n	5.615e+05	n	0.76	y	9.904e+05	9.904e+05	6.03e+01	y	68.0	
28:06	3.449e+04	y	5.629e+04	y	0.61	n	9.078e+04	7.929e+04	5.77e+00	y	5.44	
28:23	4.368e+04	n	5.647e+04	n	0.77	y	1.001e+05	1.001e+05	5.70e+00	y	6.88	
29:28	4.882e+04	y	4.817e+04	y	1.01	n	9.699e+04	8.527e+04	4.48e+00	y	5.86	

Totals class: 1st Fnc.PeCDF EMPC                      Function: 1 Run #: 13  
 File Name: 010404P4    Sample #: 6                      Sample text: P1454\_319\_004 Unit 2 Run 1 Out Air Train

Acquired: 5-APR-01 01:07:31    Processed: 5-APR-01 09:01:12

Total Conc.: 71.274                      Unnamed Conc.: 71.274

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name		
29:27	5.798e+05	n	3.809e+05	n	1.52	y	9.607e+05	9.607e+05	2.85e+01	y	71.3	

Totals class: PeCDF EMPC                              Function: 2 Run #: 13  
 File Name: 010404P4    Sample #: 6                      Sample text: P1454\_319\_004 Unit 2 Run 1 Out Air Train

Acquired: 5-APR-01 01:07:31    Processed: 5-APR-01 09:01:12

Total Conc.: 644.09                      Unnamed Conc.: 549.842

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name		
30:58	8.043e+05	y	5.477e+05	y	1.47	y	1.352e+06	1.352e+06	5.65e+01	y	100	
31:07	9.738e+05	y	6.343e+05	n	1.54	y	1.608e+06	1.608e+06	6.36e+01	y	119	
31:13	2.266e+05	y	1.448e+05	y	1.56	y	3.714e+05	3.714e+05	2.63e+01	y	27.6	
31:18	9.034e+04	y	6.251e+04	n	1.45	y	1.529e+05	1.529e+05	9.55e+00	y	11.3	
31:33	1.314e+05	n	9.039e+04	y	1.45	y	2.218e+05	2.218e+05	1.05e+01	y	16.5	
31:45	7.385e+05	y	4.771e+05	y	1.55	y	1.216e+06	1.216e+06	5.31e+01	y	90.2	
31:52	1.901e+05	y	1.206e+05	y	1.58	y	3.107e+05	3.107e+05	1.83e+01	y	23.1	
32:01	1.687e+05	n	1.091e+05	n	1.55	y	2.778e+05	2.778e+05	1.54e+01	y	20.6	
32:14	2.971e+05	n	1.881e+05	n	1.58	y	4.852e+05	4.852e+05	2.80e+01	y	36.3	1,2,3,7,8-PeCDF
32:30	4.619e+05	y	3.037e+05	n	1.52	y	7.656e+05	7.656e+05	3.29e+01	y	56.8	
32:39	4.271e+04	y	3.310e+04	y	1.29	n	7.581e+04	7.027e+04	4.93e+00	y	5.21	
33:04	6.409e+04	y	4.378e+04	y	1.46	y	1.079e+05	1.079e+05	6.64e+00	y	8.00	
33:12	5.186e+05	y	3.222e+05	y	1.61	y	8.408e+05	8.408e+05	4.80e+01	y	62.4	
33:20	4.556e+05	y	3.319e+05	y	1.37	y	7.874e+05	7.874e+05	3.94e+01	y	58.0	2,3,4,7,8-PeCDF
33:39	6.752e+04	y	4.868e+04	y	1.39	y	1.162e+05	1.162e+05	9.16e+00	y	8.62	

Totals class: HxCDF EMPC                              Function: 3 Run #: 13  
 File Name: 010404P4    Sample #: 6                      Sample text: P1454\_319\_004 Unit 2 Run 1 Out Air Train

Acquired: 5-APR-01 01:07:31    Processed: 5-APR-01 09:01:12

Total Conc.: 462.87                      Unnamed Conc.: 303.982

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
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DPE

2.97 PeCDF  
0.37

35:12	3.690e+05	n	2.903e+05	n	1.27	y	6.593e+05	6.593e+05	4.95e+01	y	53.2	
35:24	9.517e+05	n	7.443e+05	n	1.28	y	1.696e+06	1.696e+06	1.31e+02	y	137	
35:38	8.138e+04	n	7.029e+04	n	1.16	y	1.517e+05	1.517e+05	1.01e+01	y	12.2	
35:49	1.072e+05	n	9.299e+04	n	1.15	y	2.002e+05	2.002e+05	1.57e+01	y	16.2	
36:02	6.238e+04	n	4.791e+04	n	1.30	y	1.103e+05	1.103e+05	8.19e+00	y	8.90	
36:27	3.486e+05	n	2.621e+05	n	1.33	y	6.107e+05	6.107e+05	4.30e+01	y	49.3	
36:34	2.809e+05	n	2.321e+05	n	1.21	y	5.130e+05	5.130e+05	3.68e+01	y	41.7	1,2,3,4,7,8-HxCDF
36:42	3.669e+05	n	2.900e+05	n	1.26	y	6.569e+05	6.569e+05	4.87e+01	y	48.8	1,2,3,6,7,8-HxCDF
36:52	6.368e+04	n	4.927e+04	n	1.29	y	1.130e+05	1.130e+05	7.46e+00	y	9.12	
37:01	5.477e+04	n	4.356e+04	n	1.26	y	9.833e+04	9.833e+04	7.57e+00	y	7.94	
37:09	6.765e+04	n	5.801e+04	n	1.17	y	1.257e+05	1.257e+05	8.57e+00	y	10.1	
37:23	4.060e+05	n	3.104e+05	n	1.31	y	7.164e+05	7.164e+05	4.49e+01	y	56.5	2,3,4,6,7,8-HxCDF
38:28	7.694e+04	n	5.555e+04	n	1.38	y	1.325e+05	1.325e+05	7.12e+00	y	12.0	1,2,3,7,8,9-HxCDF

Page 18 of 18

Totals class: HpCDF EMPC

Function: 4 Run #: 13

File Name: 010404P4 Sample #: 6

Sample text: P1454\_319\_004 Unit 2 Run 1 Out Air Train

Acquired: 5-APR-01 01:07:31

Processed: 5-APR-01 09:01:12

Total Conc.: 209.94

Unnamed Conc.: 48.932

RT	m1	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
40:26	8.456e+05	n	8.125e+05	n	1.04	y	1.658e+06	1.658e+06	7.90e+01	y	148	1,2,3,4,6,7,8-HpCDF
40:53	1.276e+05	n	1.234e+05	n	1.03	y	2.510e+05	2.510e+05	1.18e+01	y	24.4	
41:09	1.353e+05	y	1.175e+05	n	1.15	y	2.528e+05	2.528e+05	1.22e+01	y	24.6	
42:59	6.261e+04	y	5.647e+04	y	1.11	y	1.191e+05	1.191e+05	4.67e+00	y	12.6	1,2,3,4,7,8,9-HpCDF

Client ID: Unit 2 Run 1 Out  
Lab ID: P1454\_319\_004

Filename: 010404P4  
GC Column ID: db-5

S: 6 Acq: 5-APR-01 01:07:31  
ICal: MM1\_M23\_0 wt/vol: 1.000

ConCal: 010404P4-  
EndCal: 010404P4-

Name	Resp	RA	RRF	RT	Conc	Qualif.	CDE	noise	Fac	DL
2,3,7,8-TCDD	5.68e+04	0.62 n	1.26	28:21	4.79			794	2.5	1.23
1,2,3,7,8-PeCDD	1.55e+05	1.42 y	1.01	33:40	18.9			1011	2.5	2.96
1,2,3,4,7,8-HxCDD	2.13e+05	1.31 y	1.14	37:33	25.9			2219	2.5	6.75
1,2,3,6,7,8-HxCDD	5.29e+05	1.29 y	1.02	37:41	71.5			2219	2.5	7.51
1,2,3,7,8,9-HxCDD	2.94e+05	1.33 y	1.14	38:00	35.6			2219	2.5	6.72
1,2,3,4,6,7,8-HpCDD	2.35e+06	1.02 y	1.13	42:08	315			1931	2.5	8.60
OCDD	1.99e+06	0.91 y	1.03	47:34	462			1554	2.5	12.0
2,3,7,8-TCDF	3.75e+05	0.71 y	1.05	27:30	25.7			2143	2.5	2.73
1,2,3,7,8-PeCDF	4.85e+05	1.58 y	1.04	32:14	36.3			1838	2.5	3.29
2,3,4,7,8-PeCDF	7.87e+05	1.37 y	1.05	33:20	58.0			1838	2.5	3.23
1,2,3,4,7,8-HxCDF	5.13e+05	1.21 y	1.13	36:34	41.7			1593	2.5	2.01
1,2,3,6,7,8-HxCDF	6.57e+05	1.26 y	1.24	36:42	48.8			1593	2.5	1.84
2,3,4,6,7,8-HxCDF	7.16e+05	1.31 y	1.16	37:23	56.5			1593	2.5	1.96
1,2,3,7,8,9-HxCDF	1.32e+05	1.38 y	1.02	38:28	12.0			1593	2.5	2.24
1,2,3,4,6,7,8-HpCDF	1.66e+06	1.04 y	1.54	40:26	148			1973	2.5	3.41
1,2,3,4,7,8,9-HpCDF	1.19e+05	1.11 y	1.30	42:59	12.6			1973	2.5	4.05
OCDF	2.70e+05	0.86 y	1.15	47:51	45.1			2298	2.5	12.1
Total Tetra-Dioxins	5.41e+06	0.79 y	1.26	24:46	457			794	2.5	1.23
Total Penta-Dioxins	6.60e+06	1.58 y	1.01	31:11	806			1011	2.5	2.96
Total Hexa-Dioxins	1.03e+07	1.28 y	1.10	35:51	1300			2219	2.5	6.98
Total Hepta-Dioxins	4.64e+06	0.99 y	1.13	40:53	623			1931	2.5	8.60
Total Tetra-Furans	1.48e+07	0.80 y	1.05	22:43	1010	SN+		2143	2.5	2.73
1st Fnc. Penta-Furans	9.61e+05	1.52 y	1.05	29:27	71.3			2889	2.5	5.12
Total Penta-Furans	8.61e+06	1.47 y	1.05	30:58	639			1838	2.5	3.26
PeCDF Totals:					710					715
Total Hexa-Furans	5.78e+06	1.27 y	1.14	35:12	463			1593	2.5	2.00
Total Hepta-Furans	2.28e+06	1.04 y	1.42	40:26	210			1973	2.5	3.70
IS 13C-2,3,7,8-TCDD	3.76e+07	0.79 y	1.13	28:20	3370					Rec 84.3
IS 13C-1,2,3,7,8-PeCDD	3.23e+07	1.59 y	0.93	33:39	3560					88.9
IS 13C-1,2,3,6,7,8-HxCDD	2.89e+07	1.28 y	0.93	37:40	3610					90.2
IS 13C-1,2,3,4,6,7,8-HpCDD	2.64e+07	1.08 y	0.91	42:07	3400					84.9
IS 13C-OCDD	1.67e+07	0.90 y	0.73	47:34	2660					66.4
IS 13C-2,3,7,8-TCDF	5.57e+07	0.79 y	1.06	27:29	3260					81.5
IS 13C-1,2,3,7,8-PeCDF	5.15e+07	1.58 y	0.96	32:13	3340					83.5
IS 13C-1,2,3,6,7,8-HxCDF	4.35e+07	0.53 y	1.28	36:42	3950					98.8
IS 13C-1,2,3,4,6,7,8-HpCDF	2.90e+07	0.45 y	0.90	40:25	3740					93.5
IS 13C-OCDF	2.09e+07	0.87 y	0.81	47:51	3000					74.9
RS/RT 13C-1,2,3,4-TCDD	3.93e+07	0.80 y	1.00	27:42	4000					-
RS 13C-1,2,3,4-TCDF	6.44e+07	0.79 y	1.00	26:10	4000					-
RS/RT 13C-1,2,3,7,8,9-HxCDD	3.44e+07	1.28 y	1.00	38:00	4000					-
PS 37Cl-2,3,7,8-TCDD	1.97e+07		0.51	28:22	4070					102
PS 13C-2,3,4,7,8-PeCDF	4.90e+07	1.59 y	0.97	33:19	3910					97.8
PS 13C-1,2,3,4,7,8-HxCDD	2.36e+07	1.25 y	0.92	37:33	3530					88.3
PS 13C-1,2,3,4,7,8-HxCDF	3.65e+07	0.55 y	0.91	36:33	3690					92.1
PS 13C-1,2,3,4,7,8,9-HpCDF	2.30e+07	0.44 y	0.85	42:59	3710					92.8
AS 13C-1,2,3,7,8,9-HxCDF	3.30e+07	0.53 y	1.07	38:25	3590					89.7

Reviewer: CE

Date: 18 Apr 01

EMPC  
485  
806  
1300  
623  
1020  
71.3  
715  
463  
210

Rec  
84.3  
88.9  
90.2  
84.9  
66.4  
81.5  
83.5  
98.8  
93.5  
74.9

Analyst: GAG

Date: 17 Apr 01

Totals class: TCDD EMPC Function: 1 Run #: 13  
 File Name: 010404P4 Sample #: 6 Sample text: P1454\_319\_004 Unit 2 Run 1 Out Air Train

Acquired: 5-APR-01 01:07:31 Processed: 5-APR-01 09:01:12

Total Conc.: 484.90 Unnamed Conc.: 480.103

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
24:46	1.509e+06	n		1.919e+06	n		0.79	y	3.428e+06	3.428e+06	5.30e+02	y	289
25:08	2.452e+05	n		3.178e+05	n		0.77	y	5.630e+05	5.630e+05	8.04e+01	y	47.5
25:33	4.901e+04	n		6.388e+04	n		0.77	y	1.129e+05	1.129e+05	1.93e+01	y	9.53
26:33	1.500e+05	n		1.734e+05	n		0.86	y	3.234e+05	3.234e+05	4.56e+01	y	27.3
26:44	1.096e+05	y		1.194e+05	y		0.92	n	2.290e+05	2.113e+05	3.55e+01	y	17.8
26:56	4.353e+04	n		5.040e+04	n		0.86	y	9.393e+04	9.393e+04	1.65e+01	y	7.93
27:20	5.463e+04	y		6.830e+04	y		0.80	y	1.229e+05	1.229e+05	2.09e+01	y	10.4
27:43	1.845e+05	n		2.242e+05	n		0.82	y	4.086e+05	4.086e+05	6.95e+01	y	34.5
27:49	1.802e+04	y		2.396e+04	n		0.75	y	4.198e+04	4.198e+04	9.28e+00	y	3.55
28:05	1.258e+05	y		1.464e+05	y		0.86	y	2.721e+05	2.721e+05	3.45e+01	y	23.0
28:13	2.149e+04	y		2.584e+04	y		0.83	y	4.733e+04	4.733e+04	9.69e+00	y	4.00
28:21	2.469e+04	y		4.000e+04	y		0.62	n	6.468e+04	5.675e+04	1.48e+01	y	4.79
28:41	3.027e+04	y		3.380e+04	y		0.90	n	6.407e+04	5.983e+04	1.15e+01	y	5.05

Totals class: PeCDD EMPC Function: 2 Run #: 13  
 File Name: 010404P4 Sample #: 6 Sample text: P1454\_319\_004 Unit 2 Run 1 Out Air Train

Acquired: 5-APR-01 01:07:31 Processed: 5-APR-01 09:01:12

Total Conc.: 806.45 Unnamed Conc.: 787.528

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
31:11	1.486e+06	n		9.413e+05	n		1.58	y	2.427e+06	2.427e+06	1.99e+02	y	297
31:43	7.431e+04	n		4.550e+04	n		1.63	y	1.198e+05	1.198e+05	1.45e+01	y	14.6
32:16	1.201e+06	n		7.514e+05	n		1.60	y	1.953e+06	1.953e+06	2.20e+02	y	239
32:27	1.037e+05	n		7.603e+04	n		1.36	y	1.797e+05	1.797e+05	2.22e+01	y	22.0
32:33	4.637e+05	n		2.894e+05	n		1.60	y	7.532e+05	7.532e+05	7.95e+01	y	92.1
32:48	1.631e+05	n		1.113e+05	n		1.47	y	2.744e+05	2.744e+05	2.16e+01	y	33.5
33:11	3.501e+05	n		2.178e+05	n		1.61	y	5.679e+05	5.679e+05	5.83e+01	y	69.4
33:40	9.068e+04	n		6.406e+04	n		1.42	y	1.547e+05	1.547e+05	1.95e+01	y	18.9
33:46	5.726e+04	n		3.516e+04	n		1.63	y	9.242e+04	9.242e+04	1.05e+01	y	11.3
34:07	4.528e+04	n		2.940e+04	n		1.54	y	7.468e+04	7.468e+04	9.40e+00	y	9.13

Totals class: HxCDD EMPC Function: 3 Run #: 13  
 File Name: 010404P4 Sample #: 6 Sample text: P1454\_319\_004 Unit 2 Run 1 Out Air Train

Acquired: 5-APR-01 01:07:31 Processed: 5-APR-01 09:01:12

Total Conc.: 1295.5 Unnamed Conc.: 1162.491

RT	m1 Resp mod.	m2 Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
35:51	4.435e+05 n	3.455e+05 n	1.28 y	7.890e+05	7.890e+05	3.87e+01 y	99.1	
36:29	3.670e+06 n	2.852e+06 n	1.29 y	6.522e+06	6.522e+06	3.51e+02 y	819	
36:46	9.214e+05 n	6.829e+05 n	1.35 y	1.604e+06	1.604e+06	6.40e+01 y	201	
36:55	1.061e+05 n	7.989e+04 n	1.33 y	1.860e+05	1.860e+05	7.03e+00 y	23.4	
37:33	1.211e+05 n	9.228e+04 n	1.31 y	2.134e+05	2.134e+05	1.03e+01 y	25.9	1,2,3,4,7,8-HxCDD
37:41	2.979e+05 n	2.312e+05 n	1.29 y	5.291e+05	5.291e+05	2.39e+01 y	71.5	1,2,3,6,7,8-HxCDD
37:53	8.687e+04 n	7.139e+04 n	1.22 y	1.583e+05	1.583e+05	7.72e+00 y	19.9	
38:00	1.678e+05 n	1.263e+05 n	1.33 y	2.942e+05	2.942e+05	1.23e+01 y	35.6	1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC Function: 4 Run #: 13  
 File Name: 010404P4 Sample #: 6 Sample text: P1454\_319\_004 Unit 2 Run 1 Out Air Train

Acquired: 5-APR-01 01:07:31 Processed: 5-APR-01 09:01:12

Total Conc.: 623.05 Unnamed Conc.: 307.672

RT	m1 Resp mod.	m2 Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
40:53	1.143e+06 n	1.150e+06 n	0.99 y	2.294e+06	2.294e+06	1.11e+02 y	308	
42:08	1.187e+06 y	1.164e+06 n	1.02 y	2.351e+06	2.351e+06	9.73e+01 y	315	1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC Function: 1 Run #: 13  
 File Name: 010404P4 Sample #: 6 Sample text: P1454\_319\_004 Unit 2 Run 1 Out Air Train

Acquired: 5-APR-01 01:07:31 Processed: 5-APR-01 09:01:12

Total Conc.: 1019.9 Unnamed Conc.: 994.130

RT	m1 Resp mod.	m2 Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
22:43	3.273e+05 n	4.098e+05 n	0.80 y	7.371e+05	7.371e+05	3.47e+01 y	50.6	
23:17	1.895e+05 n	2.446e+05 n	0.77 y	4.341e+05	4.341e+05	2.18e+01 y	29.8	
23:54	2.197e+05 n	2.692e+05 n	0.82 y	4.888e+05	4.888e+05	2.27e+01 y	33.6	
24:23	1.009e+06 n	1.288e+06 n	0.78 y	2.297e+06	2.297e+06	8.85e+01 y	158	
24:39	1.576e+05 y	1.873e+05 y	0.84 y	3.449e+05	3.449e+05	2.11e+01 y	23.7	
24:46	4.345e+05 y	5.618e+05 y	0.77 y	9.964e+05	9.964e+05	4.11e+01 y	68.4	
25:09	2.081e+05 y	2.620e+05 y	0.79 y	4.701e+05	4.701e+05	2.45e+01 y	32.3	
25:17	1.338e+05 y	1.826e+05 y	0.73 y	3.164e+05	3.164e+05	1.86e+01 y	21.7	
25:27	2.299e+05 y	2.978e+05 y	0.77 y	5.277e+05	5.277e+05	3.06e+01 y	36.2	
25:49	1.997e+05 y	2.422e+05 y	0.82 y	4.420e+05	4.420e+05	2.23e+01 y	30.3	
25:56	3.144e+05 y	4.377e+05 y	0.72 y	7.522e+05	7.522e+05	4.70e+01 y	51.6	
26:05	2.537e+05 y	3.296e+05 y	0.77 y	5.834e+05	5.834e+05	4.19e+01 y	40.1	
26:12	9.994e+05 n	1.241e+06 n	0.81 y	2.240e+06	2.240e+06	1.12e+02 y	154	
26:37	2.486e+05 y	3.329e+05 y	0.75 y	5.815e+05	5.815e+05	4.01e+01 y	39.9	
26:44	5.702e+04 y	8.200e+04 n	0.70 y	1.390e+05	1.390e+05	8.00e+00 y	9.55	
26:54	1.527e+05 y	1.963e+05 y	0.78 y	3.490e+05	3.490e+05	2.34e+01 y	24.0	
27:05	2.582e+05 n	3.347e+05 n	0.77 y	5.929e+05	5.929e+05	3.38e+01 y	40.7	
27:17	2.633e+05 y	3.543e+05 y	0.74 y	6.176e+05	6.176e+05	3.92e+01 y	42.4	
27:23	1.767e+05 y	2.208e+05 y	0.80 y	3.975e+05	3.975e+05	2.73e+01 y	27.3	



27:30 ✓ 1.554e+05 y 2.194e+05 y 0.71 y ✓ 3.748e+05 3.748e+05 2.71e+01 y 25.7 2,3,7,8-TCDF  
 27:51 ✓ 4.289e+05 n 5.615e+05 n 0.76 y ✓ 9.904e+05 9.904e+05 6.03e+01 y 68.0  
 28:06 ✓ 3.450e+04 y 5.629e+04 y 0.61 y ✓ 9.079e+04 7.930e+04 5.77e+00 y 5.45  
 28:23 ✓ 4.368e+04 n 5.647e+04 n 0.77 y ✓ 1.001e+05 1.001e+05 5.70e+00 y 6.88

Totals class: 1st Fnc.PeCDF EMPC Function: 1 Run #: 13  
 File Name: 010404P4 Sample #: 6 Sample text: P1454\_319\_004 Unit 2 Run 1 Out Air Train

Acquired: 5-APR-01 01:07:31 Processed: 5-APR-01 09:01:12

Total Conc.: 71.274 Unnamed Conc.: 71.274

RT	m1 Resp mod.	m2 Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
29:27 ✓	5.798e+05 n	3.809e+05 n	1.52 y ✓	9.607e+05	9.607e+05	2.85e+01 y	71.3	

Totals class: PeCDF EMPC Function: 2 Run #: 13  
 File Name: 010404P4 Sample #: 6 Sample text: P1454\_319\_004 Unit 2 Run 1 Out Air Train

Acquired: 5-APR-01 01:07:31 Processed: 5-APR-01 09:01:12

Total Conc.: 644.09 Unnamed Conc.: 549.842

RT	m1 Resp mod.	m2 Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
30:58 ✓	8.043e+05 y	5.477e+05 y	1.47 y ✓	1.352e+06	1.352e+06	5.65e+01 y	100	
31:07 ✓	9.738e+05 y	6.343e+05 n	1.54 y ✓	1.608e+06	1.608e+06	6.36e+01 y	119	
31:13 ✓	2.266e+05 y	1.448e+05 y	1.56 y ✓	3.714e+05	3.714e+05	2.63e+01 y	27.6	
31:18 ✓	9.034e+04 y	6.251e+04 n	1.45 y ✓	1.529e+05	1.529e+05	9.55e+00 y	11.3	
31:33 ✓	1.314e+05 n	9.039e+04 y	1.45 y ✓	2.218e+05	2.218e+05	1.05e+01 y	16.5	
31:45 ✓	7.385e+05 y	4.771e+05 y	1.55 y ✓	1.216e+06	1.216e+06	5.31e+01 y	90.2	
31:52 ✓	1.901e+05 y	1.206e+05 y	1.58 y ✓	3.107e+05	3.107e+05	1.83e+01 y	23.1	
32:01 ✓	1.687e+05 n	1.091e+05 n	1.55 y ✓	2.778e+05	2.778e+05	1.54e+01 y	20.6	
32:14 ✓	2.971e+05 n	1.881e+05 n	1.58 y ✓	4.852e+05	4.852e+05	2.80e+01 y	36.3	1,2,3,7,8-PeCDF
32:30 ✓	4.619e+05 y	3.037e+05 n	1.52 y ✓	7.656e+05	7.656e+05	3.29e+01 y	56.8	
32:39 ✓	4.271e+04 y	3.310e+04 y	1.29 y ✓	7.581e+04	7.027e+04	4.93e+00 y	5.21	
33:04 ✓	6.409e+04 y	4.378e+04 y	1.46 y ✓	1.079e+05	1.079e+05	6.64e+00 y	8.00	
33:12 ✓	5.186e+05 y	3.222e+05 y	1.61 y ✓	8.408e+05	8.408e+05	4.80e+01 y	62.4	
33:20 ✓	4.556e+05 y	3.319e+05 y	1.37 y ✓	7.874e+05	7.874e+05	3.94e+01 y	58.0	2,3,4,7,8-PeCDF
33:39 ✓	6.752e+04 y	4.868e+04 y	1.39 y ✓	1.162e+05	1.162e+05	9.16e+00 y	8.62	

Totals class: HxCDF EMPC Function: 3 Run #: 13  
 File Name: 010404P4 Sample #: 6 Sample text: P1454\_319\_004 Unit 2 Run 1 Out Air Train

Acquired: 5-APR-01 01:07:31 Processed: 5-APR-01 09:01:12

Total Conc.: 462.87 Unnamed Conc.: 303.982

RT	m1 Resp mod.	m2 Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
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*2.97% PeCDF*

35:12	3.690e+05	n	2.903e+05	n	1.27	y	6.593e+05	6.593e+05	4.95e+01	y	53.2	
35:24	9.517e+05	n	7.443e+05	n	1.28	y	1.696e+06	1.696e+06	1.31e+02	y	137	
35:38	8.138e+04	n	7.029e+04	n	1.16	y	1.517e+05	1.517e+05	1.01e+01	y	12.2	
35:49	1.072e+05	n	9.299e+04	n	1.15	y	2.002e+05	2.002e+05	1.57e+01	y	16.2	
36:02	6.238e+04	n	4.791e+04	n	1.30	y	1.103e+05	1.103e+05	8.19e+00	y	8.90	
36:27	3.486e+05	n	2.621e+05	n	1.33	y	6.107e+05	6.107e+05	4.30e+01	y	49.3	
36:34	2.809e+05	n	2.321e+05	n	1.21	y	5.130e+05	5.130e+05	3.68e+01	y	41.7	1,2,3,4,7,8-HxCDF
36:42	3.669e+05	n	2.900e+05	n	1.26	y	6.569e+05	6.569e+05	4.87e+01	y	48.8	1,2,3,6,7,8-HxCDF
36:52	6.368e+04	n	4.927e+04	n	1.29	y	1.130e+05	1.130e+05	7.46e+00	y	9.12	
37:01	5.477e+04	n	4.356e+04	n	1.26	y	9.833e+04	9.833e+04	7.57e+00	y	7.94	
37:09	6.765e+04	n	5.801e+04	n	1.17	y	1.257e+05	1.257e+05	8.57e+00	y	10.1	
37:23	4.060e+05	n	3.104e+05	n	1.31	y	7.164e+05	7.164e+05	4.49e+01	y	56.5	2,3,4,6,7,8-HxCDF
38:28	7.694e+04	n	5.555e+04	n	1.38	y	1.325e+05	1.325e+05	7.12e+00	y	12.0	1,2,3,7,8,9-HxCDF

Totals class: HpCDF EMPC

Function: 4 Run #: 13

File Name: 010404P4 Sample #: 6

Sample text: P1454\_319\_004 Unit 2 Run 1 Out Air Train

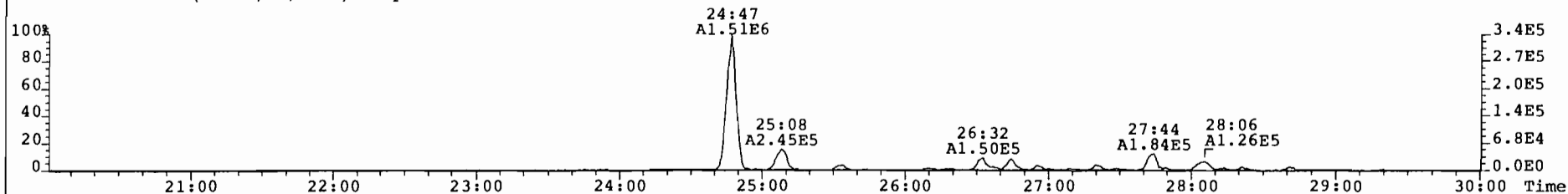
Acquired: 5-APR-01 01:07:31 Processed: 5-APR-01 09:01:12

Total Conc.: 209.94

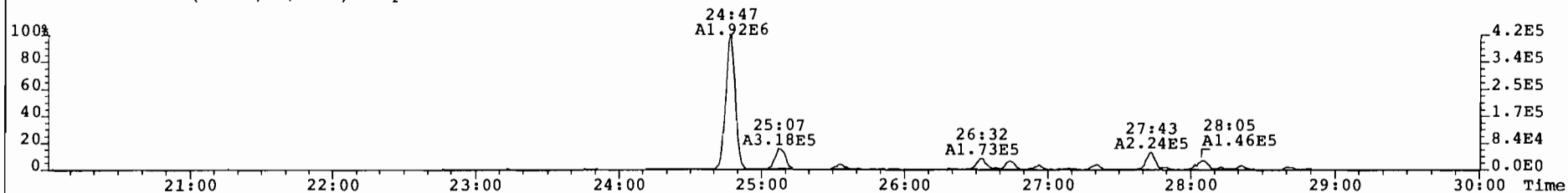
Unnamed Conc.: 48.932

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
40:26	8.456e+05	n	8.125e+05	n	1.04	y	1.658e+06	1.658e+06	7.90e+01	y	148	1,2,3,4,6,7,8-HpCDF
40:53	1.276e+05	n	1.234e+05	n	1.03	y	2.510e+05	2.510e+05	1.18e+01	y	24.4	
41:09	1.353e+05	y	1.175e+05	n	1.15	y	2.528e+05	2.528e+05	1.22e+01	y	24.6	
42:59	6.261e+04	y	5.647e+04	y	1.11	y	1.191e+05	1.191e+05	4.67e+00	y	12.6	1,2,3,4,7,8,9-HpCDF

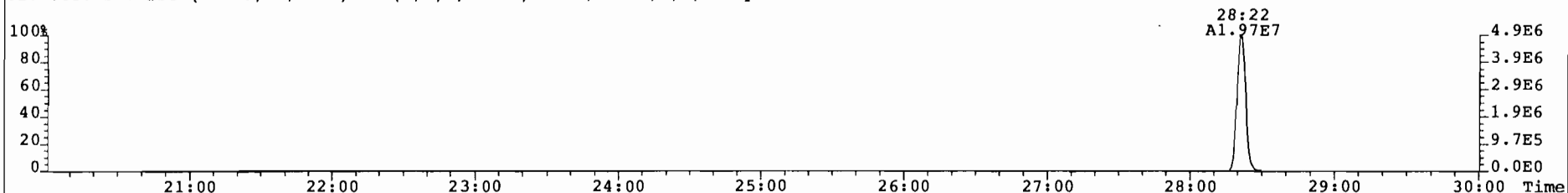
File: 010404P4 Acq: 5-APR-2001 01:07:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: P1454 319\_004 Unit 2 Run 1 Out Air Train Vial# 24 File Text: AAP DB5  
319.8965 S:6 BSub(10000,15,-3.0) Expt: OCDD Noise: 366



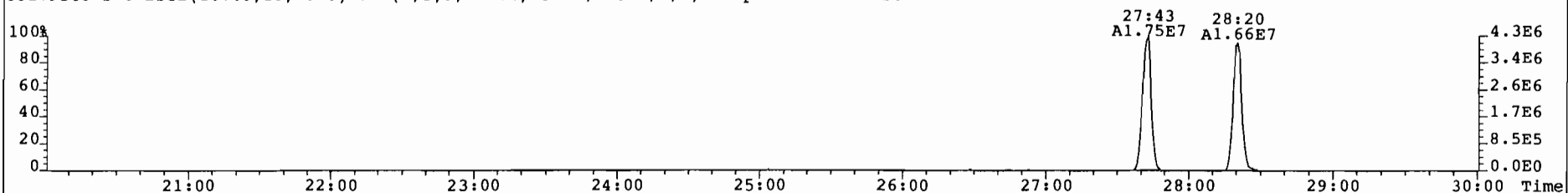
321.8936 S:6 BSub(10000,15,-3.0) Expt: OCDD Noise: 258



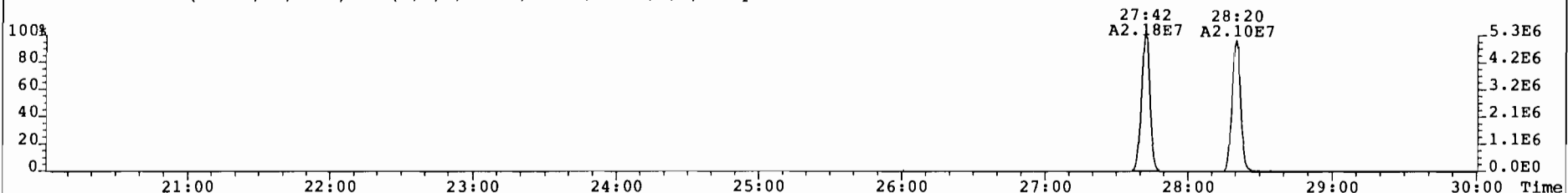
327.8850 S:6 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 322



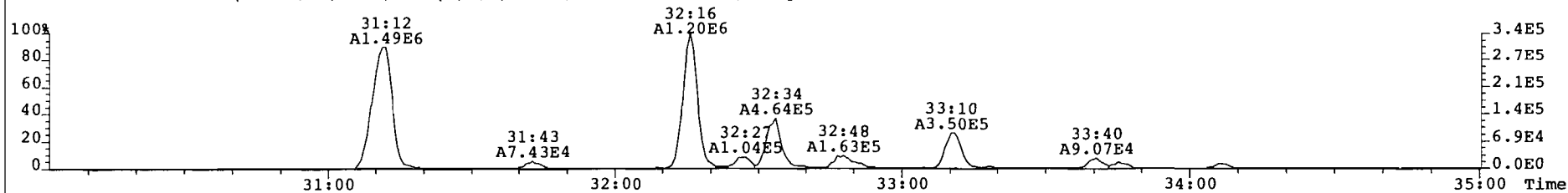
331.9368 S:6 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1544



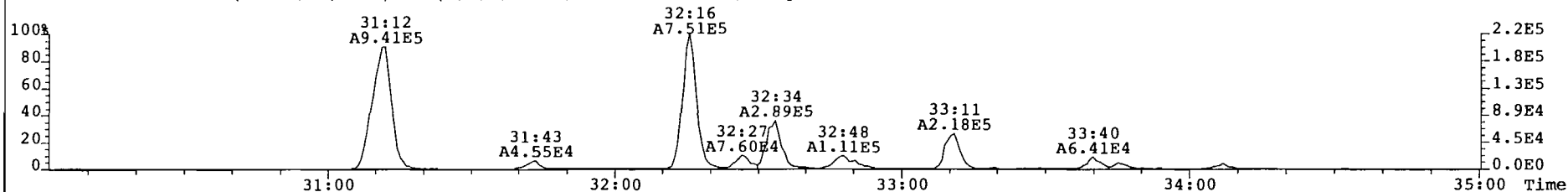
333.9339 S:6 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 744



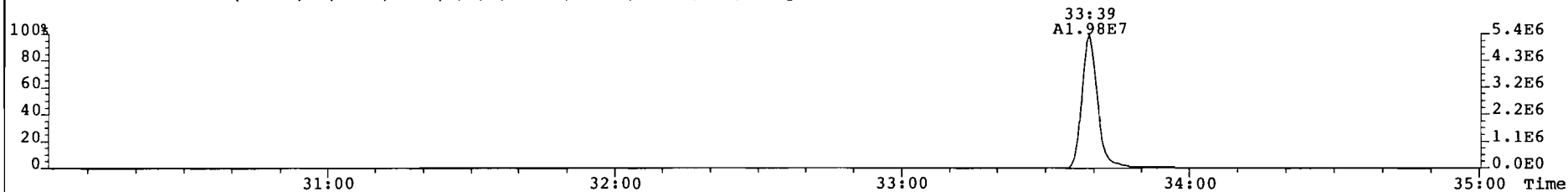
File: 010404P4 Acq: 5-APR-2001 01:07:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: P1454 319 004 Unit 2 Run 1 Out Air Train Vial# 24 File Text: AAP DB5  
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 387



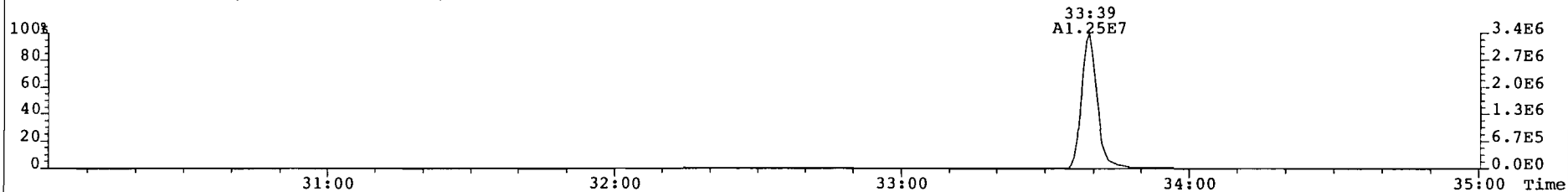
357.8517 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 224



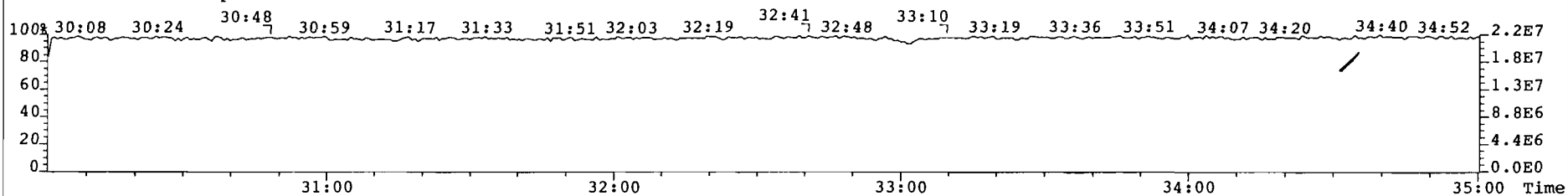
367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1378



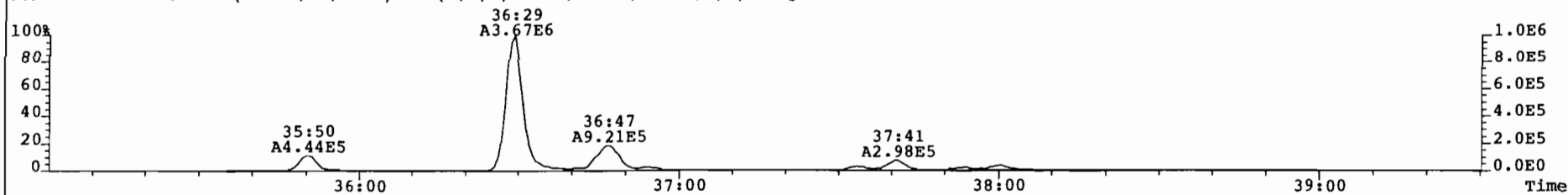
369.8919 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 607



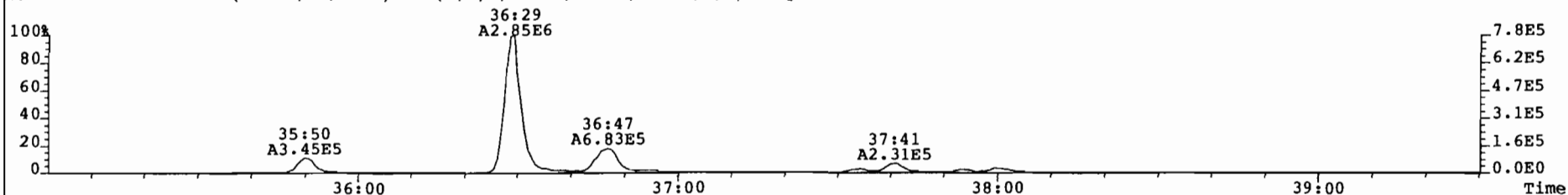
366.9792 S:6 F:2 Expt: OCDD



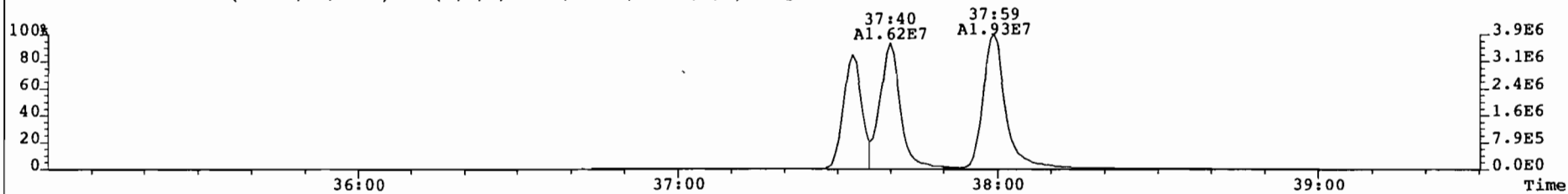
File: 010404P4 Acq: 5-APR-2001 01:07:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: P1454 319\_004 Unit 2 Run 1 Out Air Train Vial# 24 File Text: AAP DB5  
389.8156 S:6 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 997



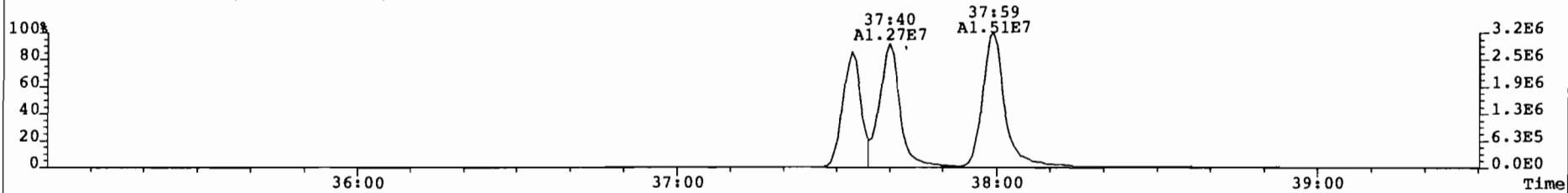
391.8127 S:6 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 568



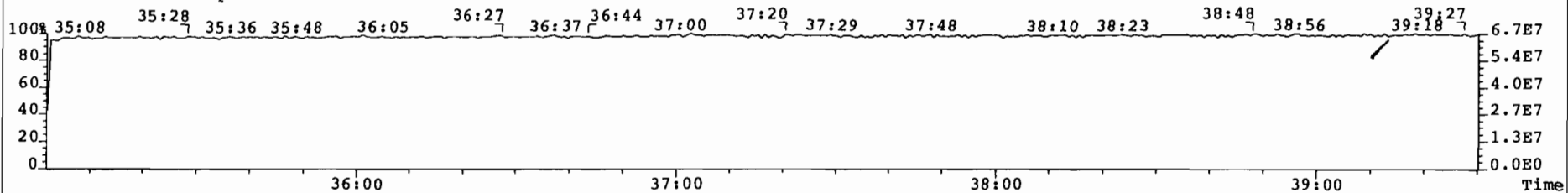
401.8559 S:6 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 537



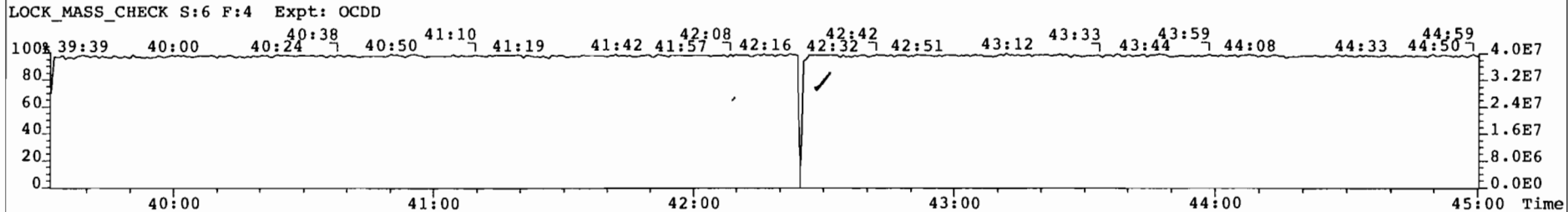
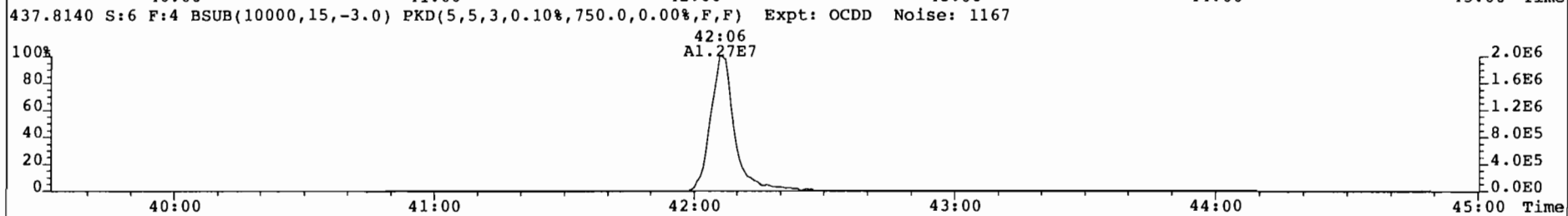
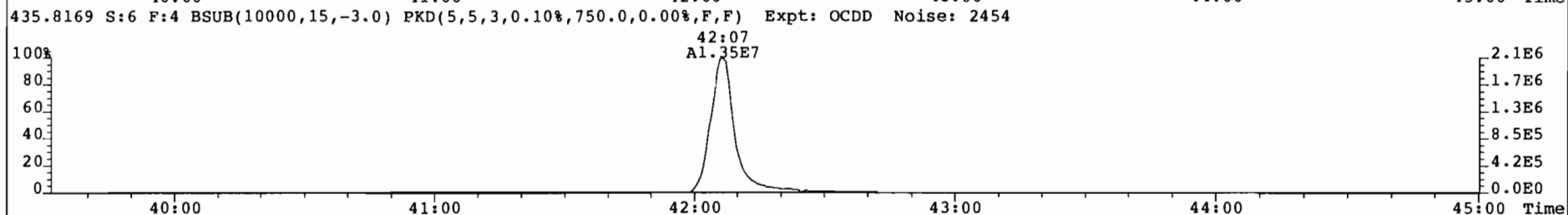
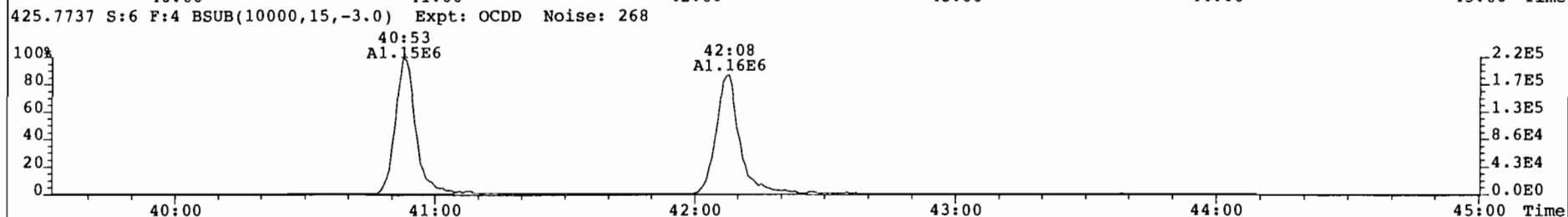
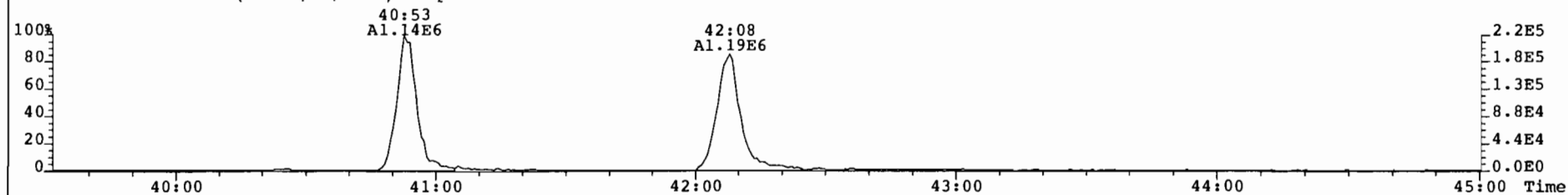
403.8530 S:6 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 656



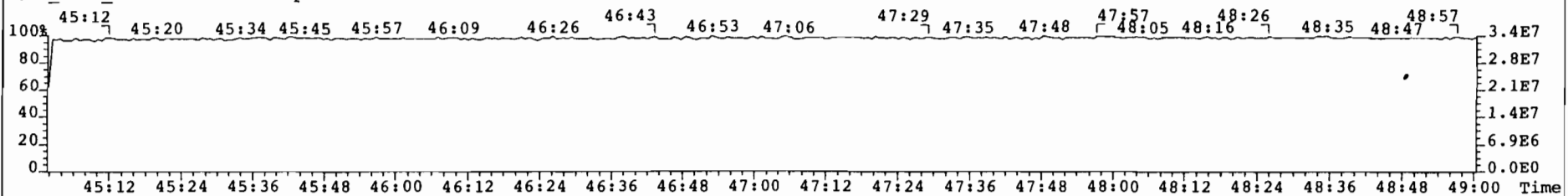
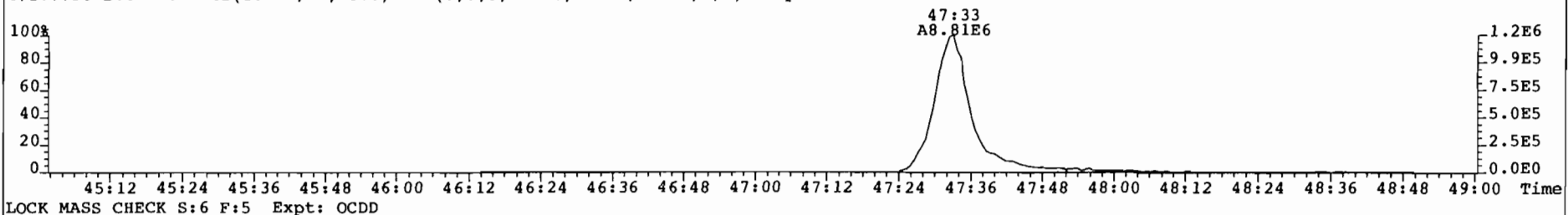
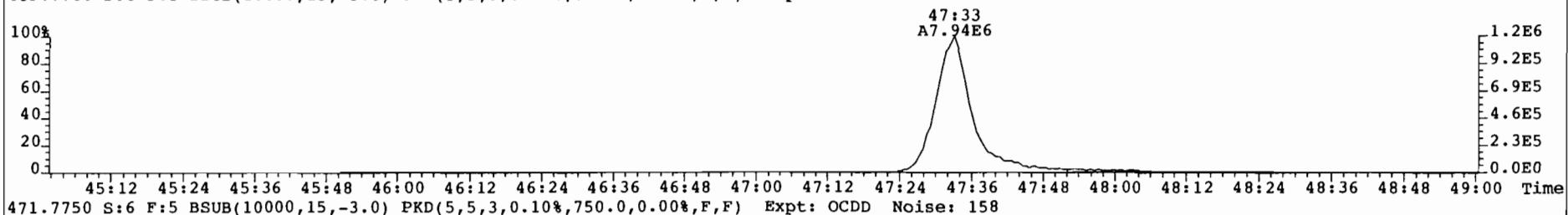
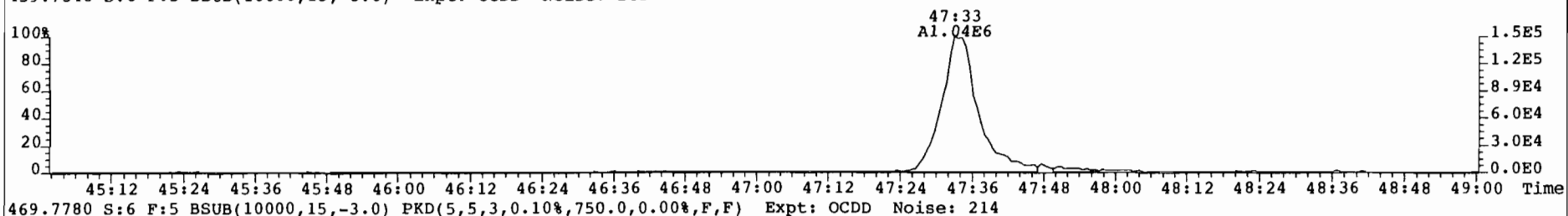
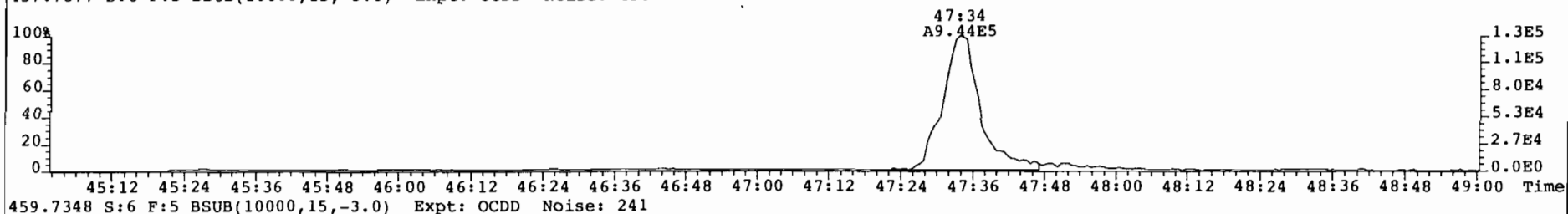
380.9760 S:6 F:3 Expt: OCDD



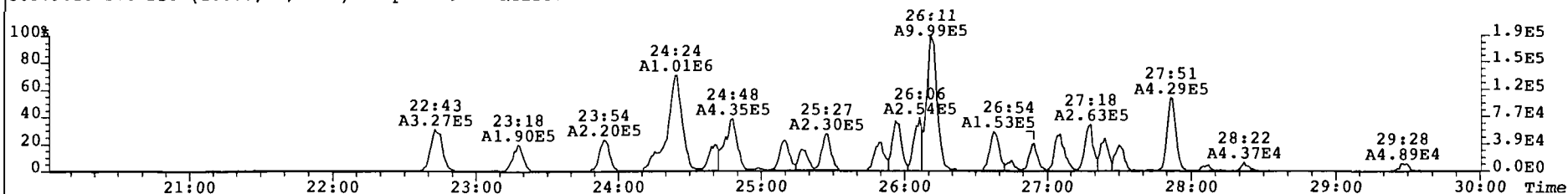
File: 010404P4 Acq: 5-APR-2001 01:07:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: P1454 319 004 Unit 2 Run 1 Out Air Train Vial# 24 File Text: AAP DB5  
423.7767 S:6 F:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 317



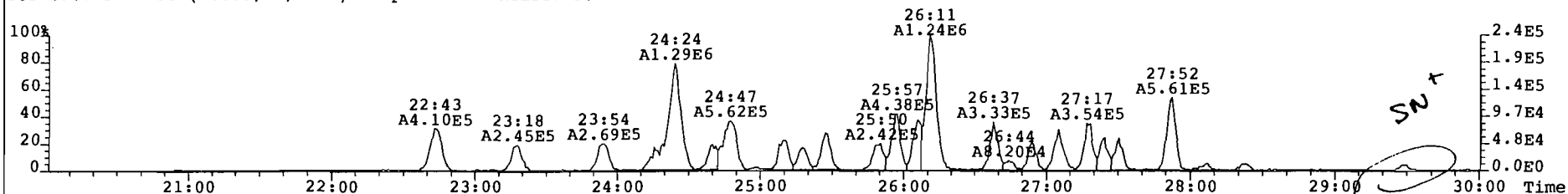
File: 010404P4 Acq: 5-APR-2001 01:07:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: P1454 319 004 Unit 2 Run 1 Out Air Train Vial# 24 File Text: AAP DB5  
457.7377 S:6 F:5 BSub(10000,15,-3.0) Expt: OCDD Noise: 456



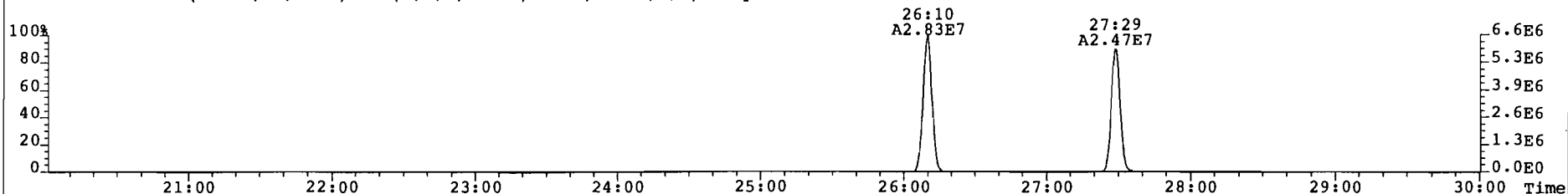
File: 010404P4 Acq: 5-APR-2001 01:07:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: P1454 319 004 Unit 2 Run 1 Out Air Train Vial# 24 File Text: AAP DB5  
303.9016 S:6 BSUB(10000,15,-3.0) Expt: OCDD Noise: 244



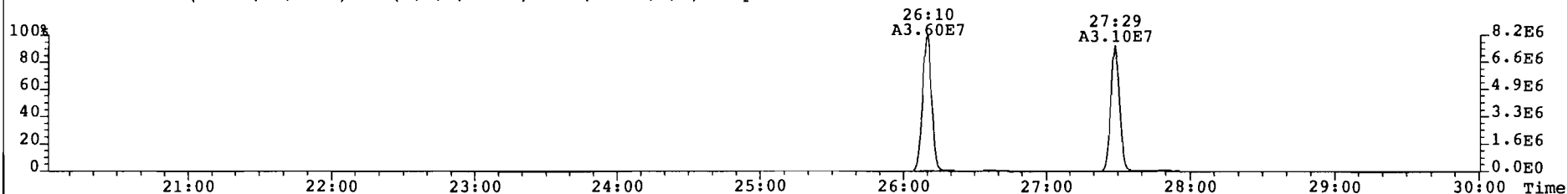
305.8987 S:6 BSUB(10000,15,-3.0) Expt: OCDD Noise: 561



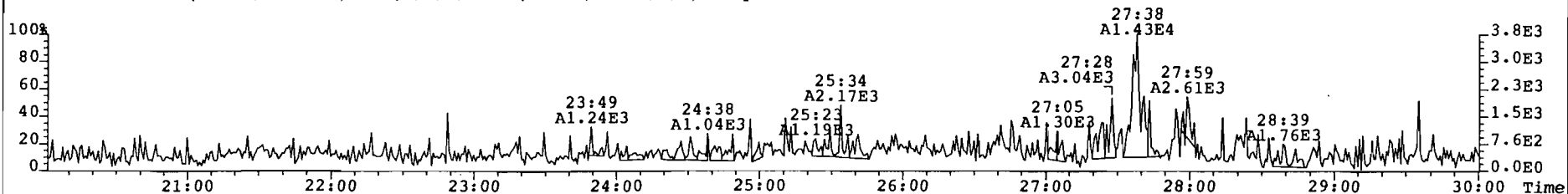
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 357



317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1352

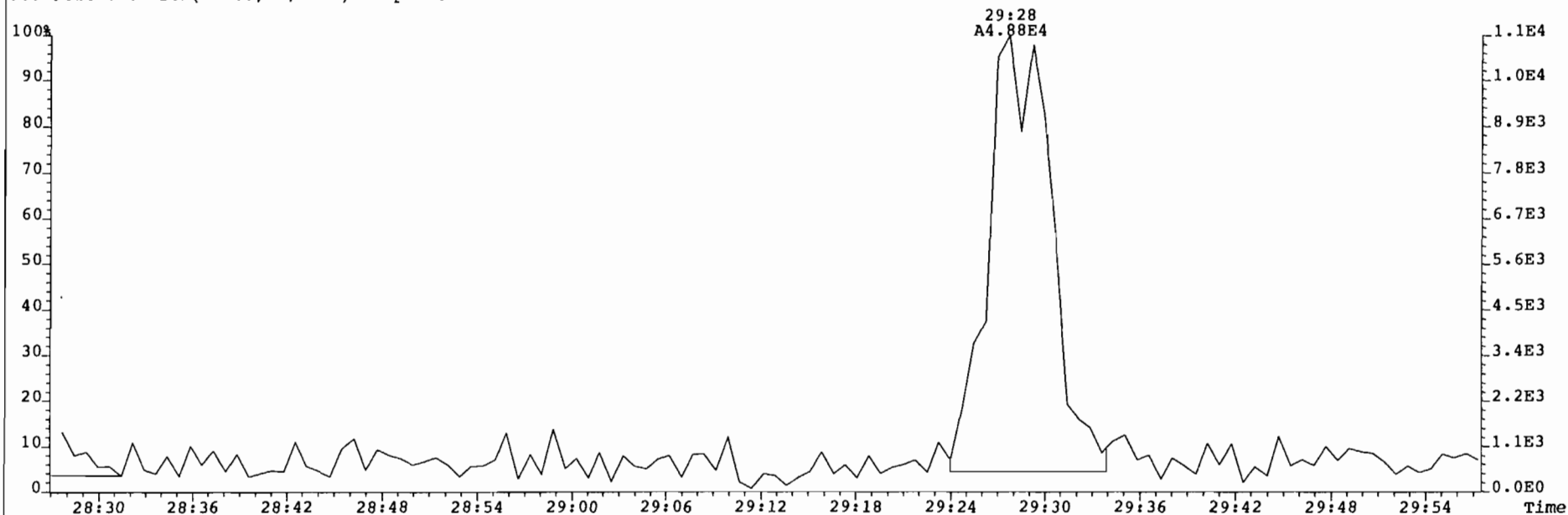


375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 150

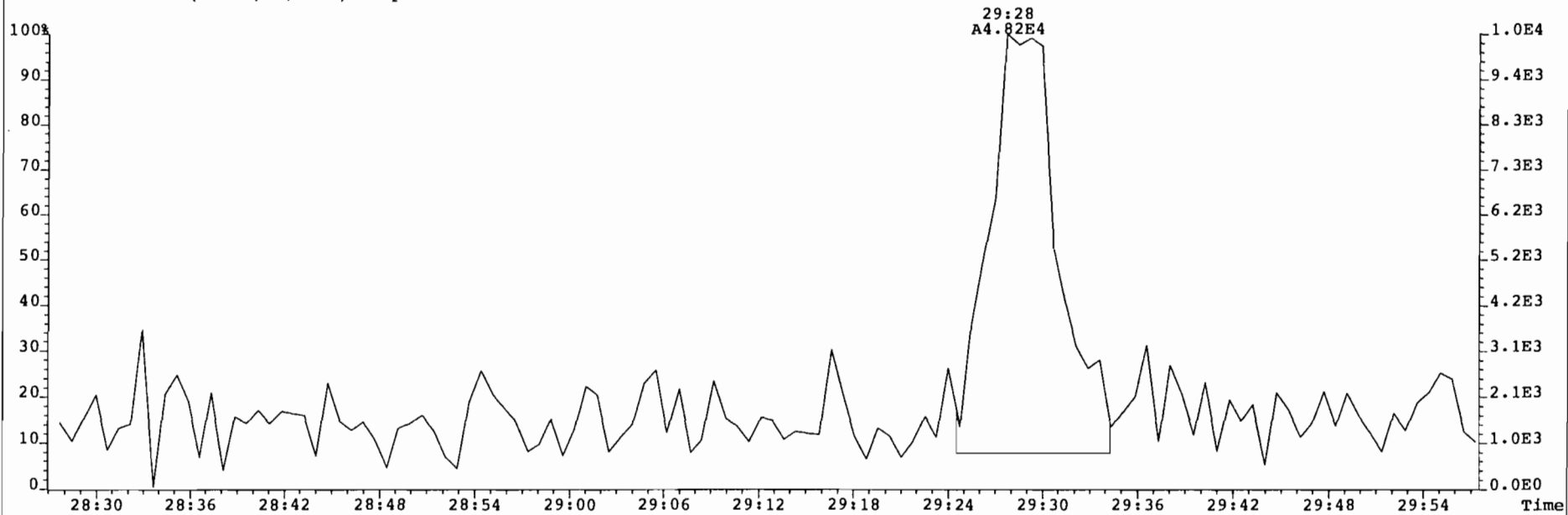




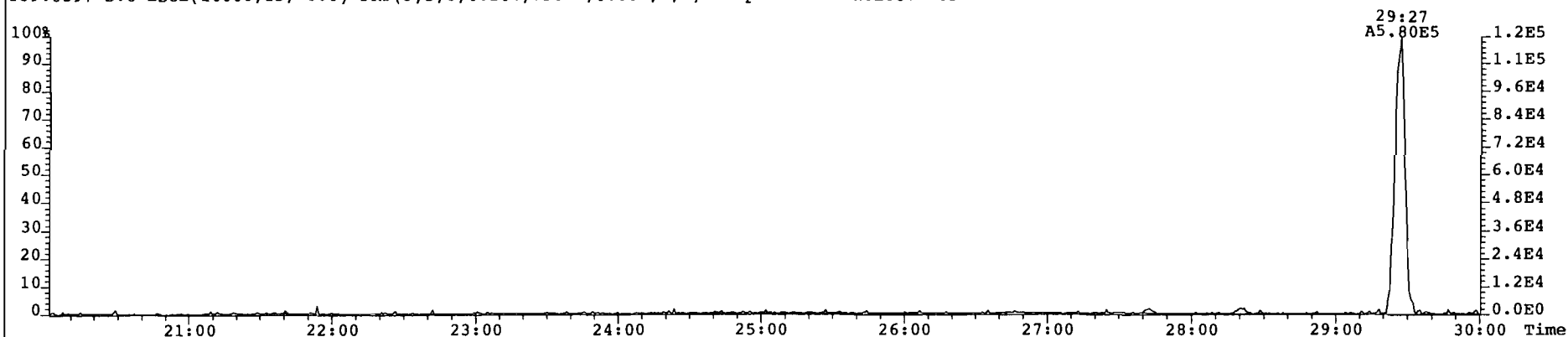
File: 010404F4 Acq: 5-APR-2001 01:07:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: P1454\_319\_004 Unit 2 Run 1 Out Air Train Vial# 24 File Text: AAP DB5  
303.9016 S:6 BSUB(10000,15,-3.0) Expt: OCDD Noise: 244



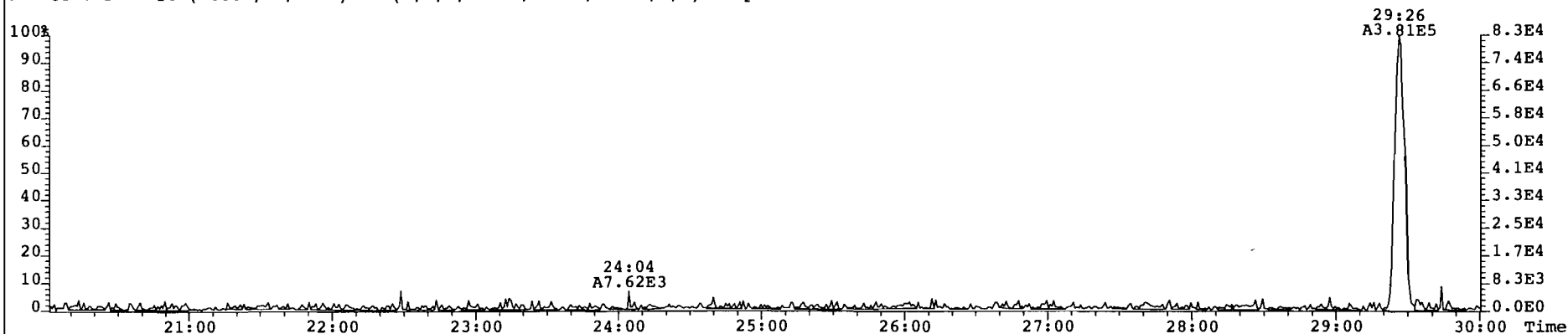
305.8987 S:6 BSUB(10000,15,-3.0) Expt: OCDD Noise: 561



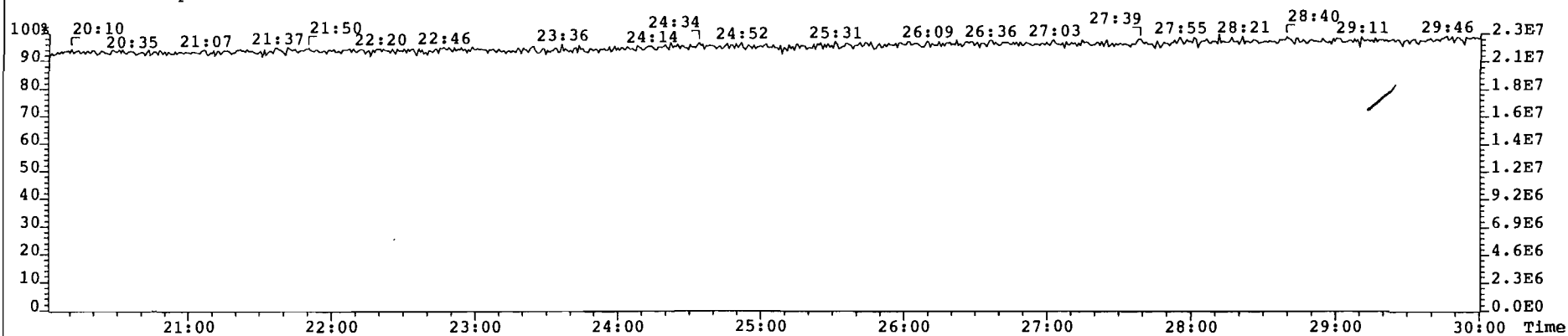
File: 010404P4 Acq: 5-APR-2001 01:07:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: P1454 319\_004 Unit 2 Run 1 Out Air Train Vial# 24 File Text: AAP DB5  
339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 165



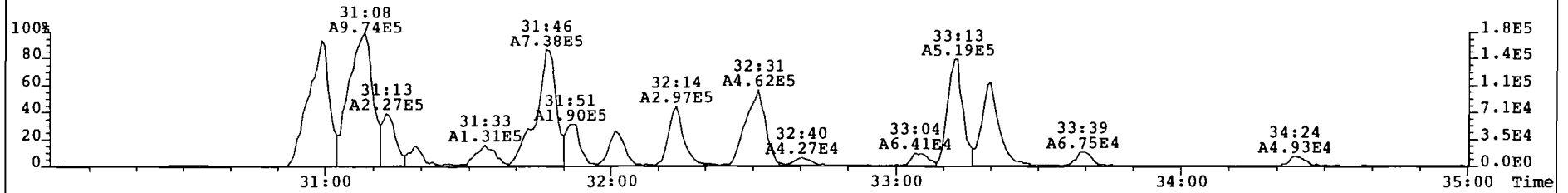
341.8568 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 304



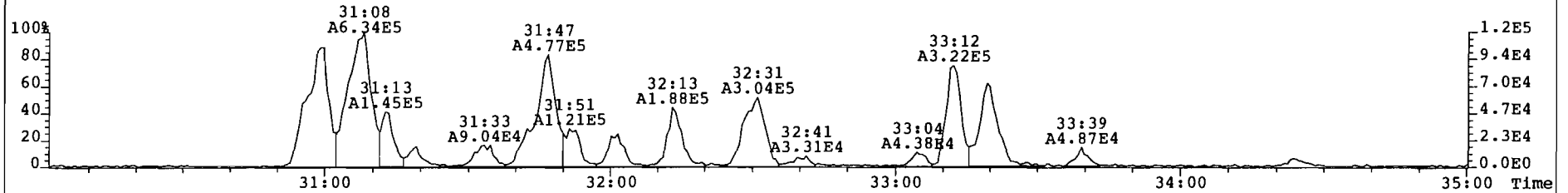
316.9824 S:6 Expt: OCDD



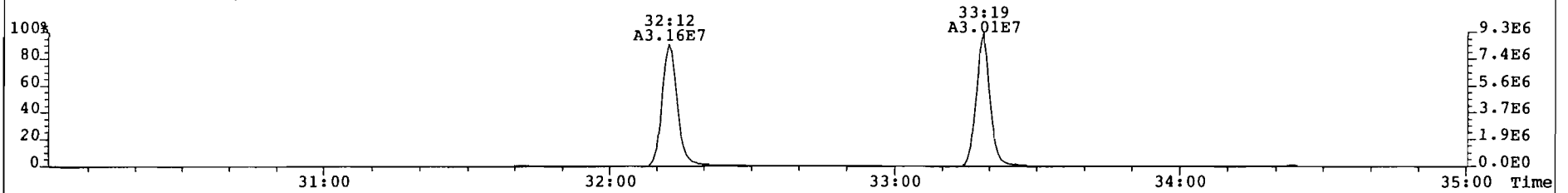
File: 010404P4 Acq: 5-APR-2001 01:07:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: P1454 319 004 Unit 2 Run 1 Out Air Train Vial# 24 File Text: AAP DB5  
339.8597 S:6 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 298



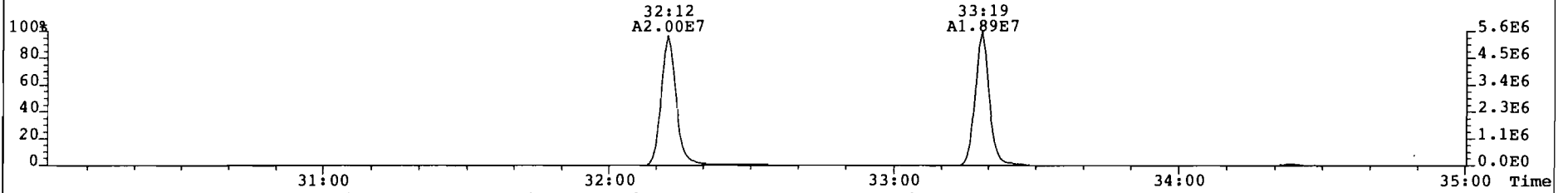
341.8568 S:6 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 460



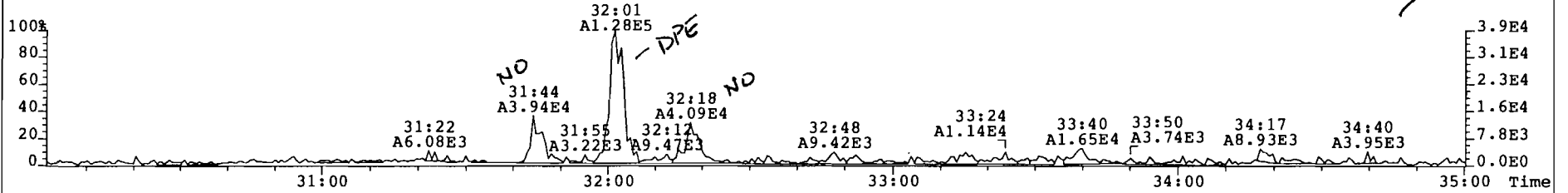
351.9000 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 510



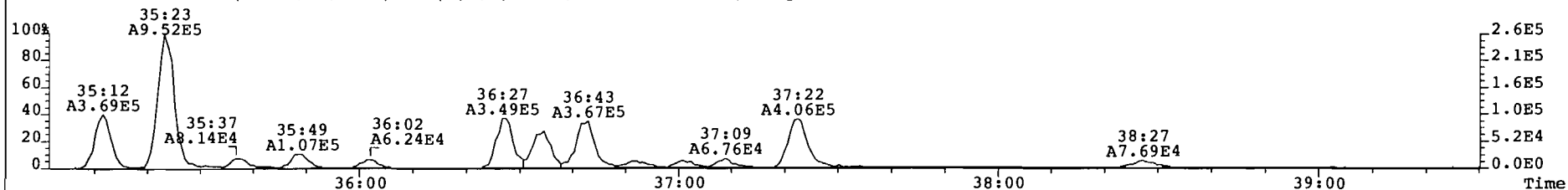
353.8970 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 740



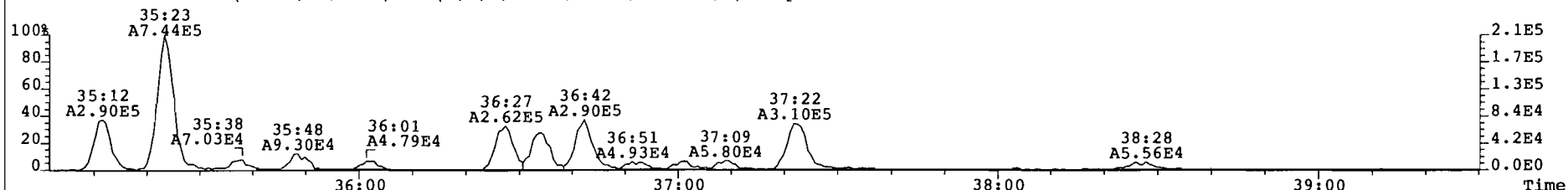
409.7974 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 396



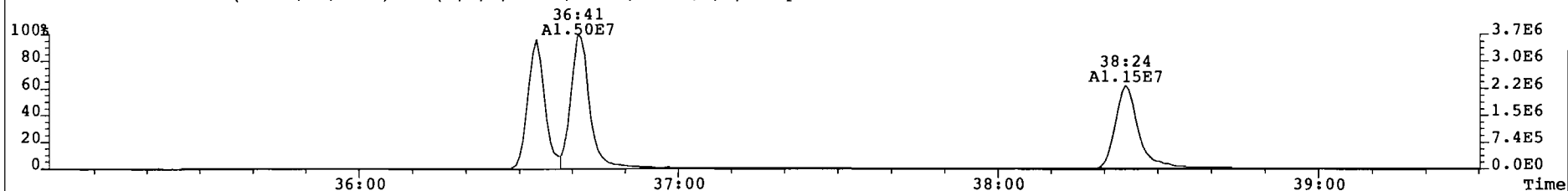
File: 010404P4 Acq: 5-APR-2001 01:07:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: P1454 319 004 Unit 2 Run 1 Out Air Train Vial# 24 File Text: AAP DB5  
373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 465



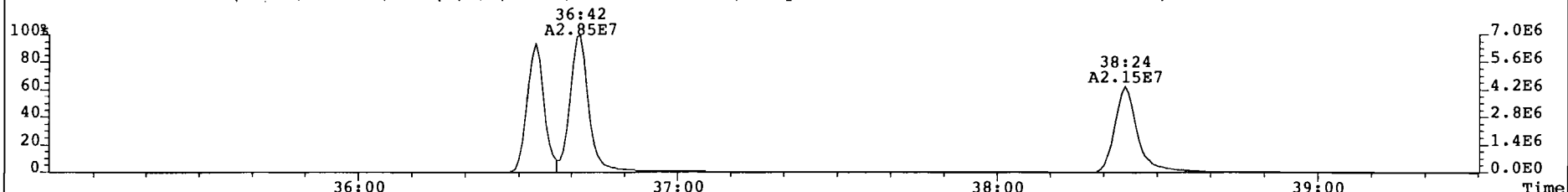
375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 404



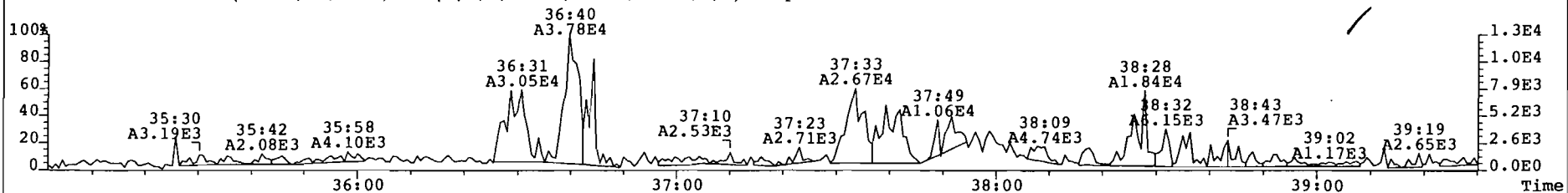
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 5012



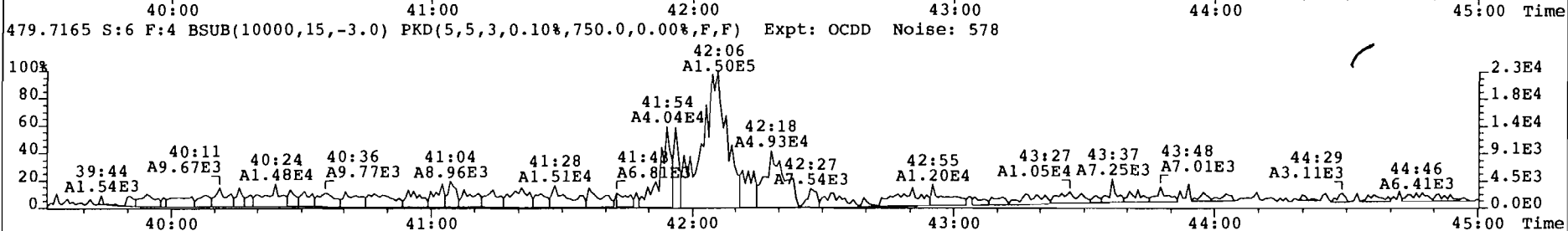
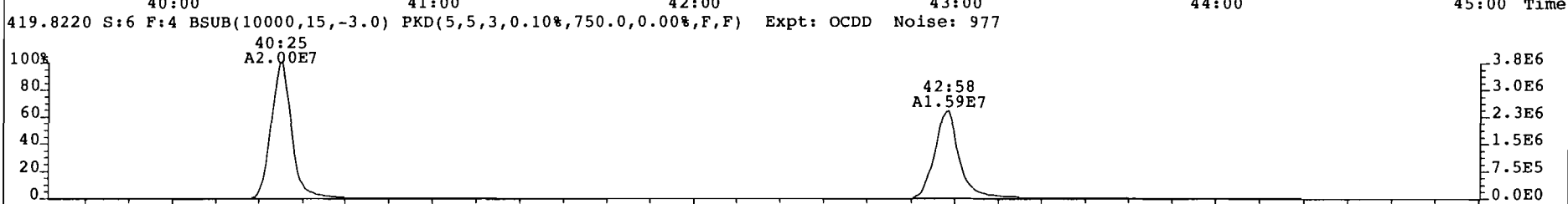
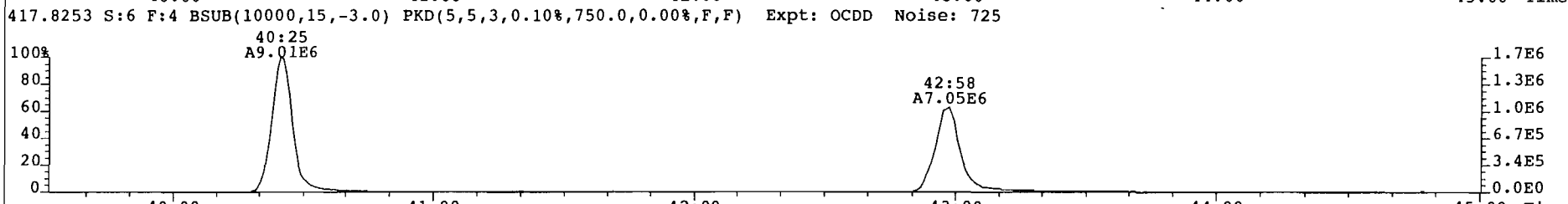
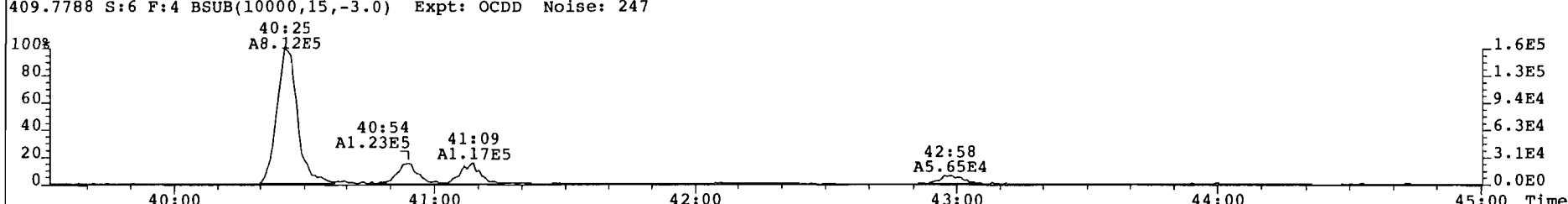
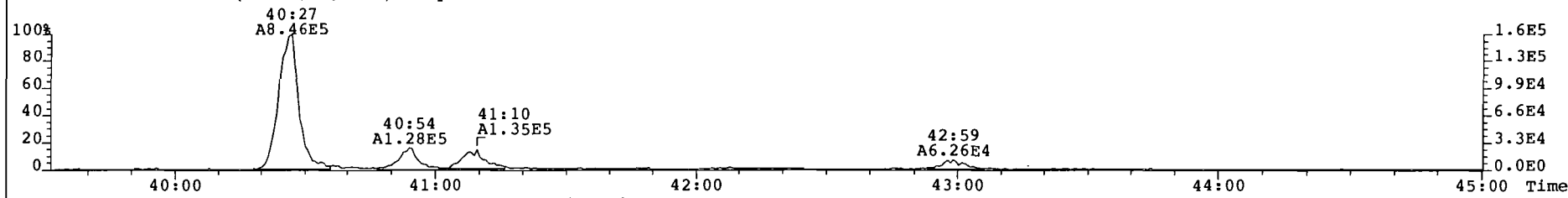
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 2382



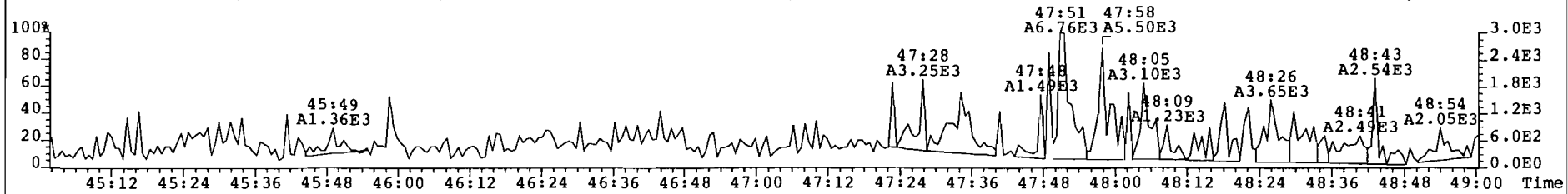
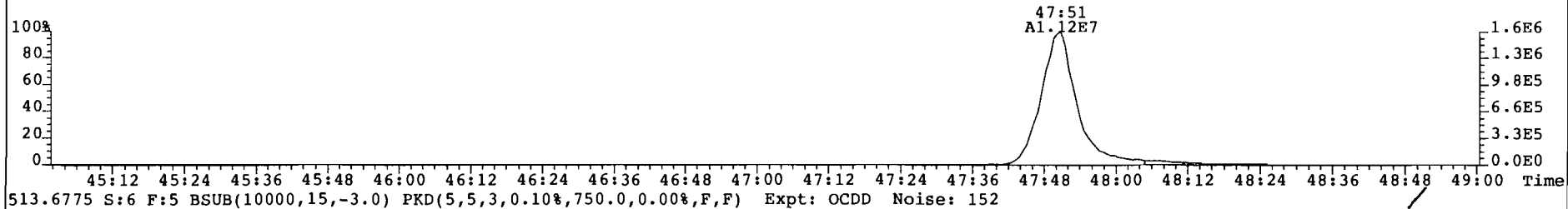
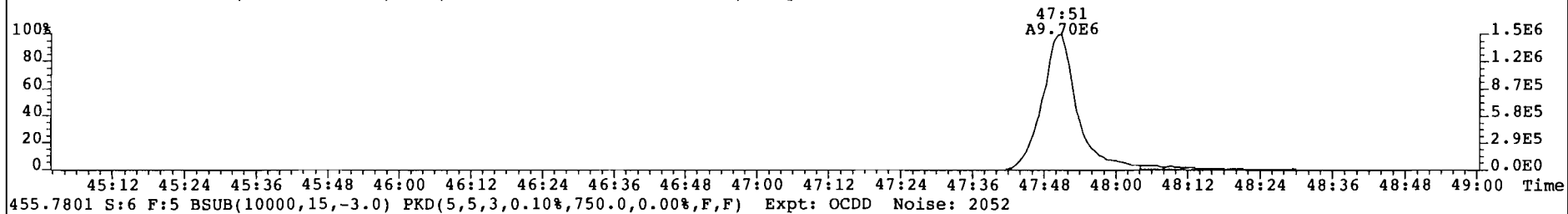
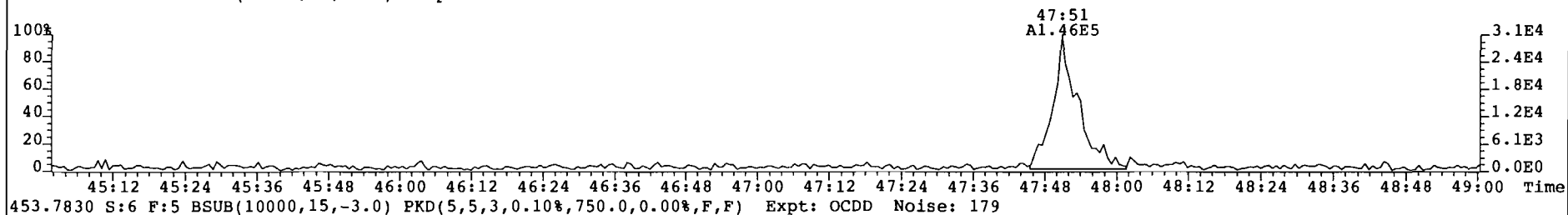
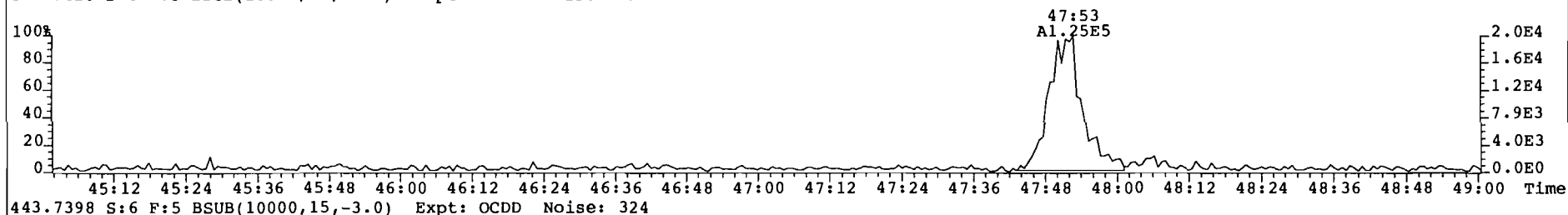
445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 280



File: 010404P4 Acq: 5-APR-2001 01:07:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: P1454 319 004 Unit 2 Run 1 Out Air Train Vial# 24 File Text: AAP DB5  
407.7818 S:6 F:4 BSub(10000,15,-3.0) Expt: OCDD Noise: 357



File: 010404P4 Acq: 5-APR-2001 01:07:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: P1454 319 004 Unit 2 Run 1 Out Air Train Vial# 24 File Text: AAP DB5  
441.7428 S:6 F:5 BSUB(10000,15,-3.0) Expt: OCDD Noise: 195




# Sample ID: Unit 2 Run 2 Out

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_005	Date Extracted:	2 Apr 01
Date Collected:	26 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	ND	1.08			89.5	102	95.5
1,2,3,7,8-PeCDD	12.2			A	94.7	96.8	95.5
1,2,3,4,7,8-HxCDD	16.3			A	97.4	89.3	95.5
1,2,3,6,7,8-HxCDD	51.6				97.4	89.3	95.5
1,2,3,7,8,9-HxCDD	23.4			A	97.4	89.3	95.5
1,2,3,4,6,7,8-HpCDD	249				90.3	94.2	95.5
OCDD	353			B	71.2	94.2	95.5
2,3,7,8-TCDF	18.9				89.5	102	95.5
1,2,3,7,8-PeCDF	25			A	90.3	96.8	95.5
2,3,4,7,8-PeCDF	36.4			A	90.3	96.8	95.5
1,2,3,4,7,8-HxCDF	32.6			A	109	92.3	95.5
1,2,3,6,7,8-HxCDF	36			A	109	92.3	95.5
2,3,4,6,7,8-HxCDF	37.6			A	109	92.3	95.5
1,2,3,7,8,9-HxCDF	8.64			A	109	92.3	95.5
1,2,3,4,6,7,8-HpCDF	106				101	94.2	95.5
1,2,3,4,7,8,9-HpCDF	8.13			A	101	94.2	95.5
OCDF	25.6			A	84.3	94.2	95.5

Totals & TEQs					ALTA ANALYTICAL PERSPECTIVES		
TCDDs	332				 <p>2714 Exchange Drive Wilmington North Carolina 28405 USA</p> <p>Tel: 910 794-1613 Fax: 910 794-3919 e-mail: ytondeur@cs.com web: www.ultratrace.com</p>		
PeCDDs	534						
HxCDDs	963						
HpCDDs	487						
TCDFs	734						
PeCDFs	466		477				
HxCDFs	318		324				
HpCDFs	150						
<b>Total PCDD/Fs</b>	<b>4360</b>		<b>4380</b>				
<b>TEQ (ND=0)</b>	<b>52.1</b>		<b>52.1</b>	<b>ITEF</b>			
<b>TEQ (ND=DL/2)</b>	<b>52.6</b>		<b>52.6</b>	<b>ITEF</b>			

Reviewer  
Date

Ce  
18 Apr 01

52

Client ID: Unit 2 Run 2 Out  
Lab ID: P1454\_319\_005

Filename: 010404P4  
GC Column ID: db-5

S: 7 Acq: 5-APR-01 01:59:26  
Ical: MM1\_M23\_0\* wt/vol: 1.000

ConCal: 010404P4-  
EndCal: 010404P4-

Name	Resp	RA	RRF	RT	Conc	Qualif.	CDE	noise	Fac	DL
2,3,7,8-TCDD	*	* n	1.26	NotF*	*			662 2.5	1.08	
1,2,3,7,8-PeCDD	9.64e+04	1.57 y	1.01	33:40	12.2			941 2.5	2.99	
1,2,3,4,7,8-HxCDD	1.24e+05	1.29 y	1.14	37:33	16.3			1821 2.5	6.31	
1,2,3,6,7,8-HxCDD	3.55e+05	1.21 y	1.02	37:40	51.6			1821 2.5	7.03	
1,2,3,7,8,9-HxCDD	1.79e+05	1.19 y	1.14	38:01	23.4			1821 2.5	6.29	
1,2,3,4,6,7,8-HpCDD	1.70e+06	1.05 y	1.13	42:08	249			1567 2.5	7.97	
OCDD	1.40e+06	0.91 y	1.03	47:34	353			958 2.5	8.82	
2,3,7,8-TCDF	2.72e+05	0.86 y	1.05	27:29	18.9			1645 2.5	2.20	
1,2,3,7,8-PeCDF	3.25e+05	1.50 y	1.04	32:13	25.0			1949 2.5	3.64	
2,3,4,7,8-PeCDF	4.81e+05	1.57 y	1.05	33:19	36.4			1949 2.5	3.59	
1,2,3,4,7,8-HxCDF	3.82e+05	1.34 y	1.13	36:33	32.6			1332 2.5	1.80	
1,2,3,6,7,8-HxCDF	4.62e+05	1.20 y	1.24	36:42	36.0			1332 2.5	1.64	
2,3,4,6,7,8-HxCDF	4.53e+05	1.22 y	1.16	37:22	37.6			1332 2.5	1.75	
1,2,3,7,8,9-HxCDF	9.11e+04	1.40 y	1.02	38:26	8.64			1332 2.5	2.00	
1,2,3,4,6,7,8-HpCDF	1.10e+06	1.05 y	1.54	40:26	106			1275 2.5	2.41	
1,2,3,4,7,8,9-HpCDF	7.11e+04	1.17 y	1.30	42:59	8.13			1275 2.5	2.87	
OCDF	1.48e+05	0.76 y	1.15	47:51	25.6			1915 2.5	11.4	
Total Tetra-Dioxins	3.78e+06	0.78 y	1.26	24:46	332			662 2.5	1.08	
Total Penta-Dioxins	4.21e+06	1.60 y	1.01	31:11	534			941 2.5	2.99	
Total Hexa-Dioxins	7.11e+06	1.34 y	1.10	35:50	963			1821 2.5	6.53	
Total Hepta-Dioxins	3.32e+06	1.07 y	1.13	40:53	487			1567 2.5	7.97	
Total Tetra-Furans	1.06e+07	0.77 y	1.05	22:42	734			1645 2.5	2.20	
1st Fnc. Penta-Furans	6.40e+05	1.42 y	1.05	29:26	48.8			2041 2.5	3.79	
Total Penta-Furans	5.48e+06	1.59 y	1.05	30:57	418			1949 2.5	3.62	
PeCDF Totals:					466					477
Total Hexa-Furans	3.79e+06	1.29 y	1.14	35:11	318			1332 2.5	1.79	324
Total Hepta-Furans	1.51e+06	1.05 y	1.42	40:26	150			1275 2.5	2.62	150
IS 13C-2,3,7,8-TCDD	3.61e+07	0.79 y	1.13	28:19	3580					Rec 89.5
IS 13C-1,2,3,7,8-PeCDD	3.11e+07	1.59 y	0.93	33:39	3790					94.7
IS 13C-1,2,3,6,7,8-HxCDD	2.69e+07	1.27 y	0.93	37:40	3890					97.4
IS 13C-1,2,3,4,6,7,8-HpCDD	2.42e+07	1.05 y	0.91	42:07	3610					90.3
IS 13C-OCDD	1.54e+07	0.93 y	0.73	47:33	2850					71.2
IS 13C-2,3,7,8-TCDF	5.51e+07	0.79 y	1.06	27:28	3580					89.5
IS 13C-1,2,3,7,8-PeCDF	5.02e+07	1.58 y	0.96	32:12	3610					90.3
IS 13C-1,2,3,6,7,8-HxCDF	4.14e+07	0.53 y	1.28	36:41	4370					109
IS 13C-1,2,3,4,6,7,8-HpCDF	2.69e+07	0.45 y	0.90	40:25	4030					101
IS 13C-OCDF	2.02e+07	0.85 y	0.81	47:51	3370					84.3
RS/RT 13C-1,2,3,4-TCDD	3.55e+07	0.81 y	1.00	27:42	4000					-
RS 13C-1,2,3,4-TCDF	5.80e+07	0.79 y	1.00	26:09	4000					-
RS/RT 13C-1,2,3,7,8,9-HxCDD	2.96e+07	1.26 y	1.00	38:00	4000					-
PS 37Cl-2,3,7,8-TCDD	1.89e+07		0.51	28:21	4070					102
PS 13C-2,3,4,7,8-PeCDF	4.73e+07	1.58 y	0.97	33:18	3870					96.8
PS 13C-1,2,3,4,7,8-HxCDD	2.22e+07	1.28 y	0.92	37:32	3570					89.3
PS 13C-1,2,3,4,7,8-HxCDF	3.48e+07	0.53 y	0.91	36:33	3690					92.3
PS 13C-1,2,3,4,7,8,9-HpCDF	2.17e+07	0.45 y	0.85	42:58	3770					94.2
AS 13C-1,2,3,7,8,9-HxCDF	3.02e+07	0.52 y	1.07	38:24	3820					95.5

Reviewer: CE

Date: 18 Apr 01

EMPC  
332  
534  
963  
487  
734  
48.8  
418  
466  
318  
150

Rec  
89.5  
94.7  
97.4  
90.3  
71.2  
89.5  
90.3  
109  
101  
84.3

Analyst: GAG

102  
96.8  
89.3  
92.3  
94.2  
95.5  
Date: 17 Apr 01



Totals class: TCDD EMPC Function: 1 Run #: 14  
 File Name: 010404P4 Sample #: 7 Sample text: P1454\_319\_005 Unit 2 Run 2 Out Air Train ✓

Acquired: 5-APR-01 01:59:26 ✓ Processed: 5-APR-01 09:01:12

Total Conc.: 332.05 Unnamed Conc.: 332.051

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
24:46	✓	1.005e+06	n	1.285e+06	n	0.78	✓	2.290e+06	2.290e+06	4.46e+02	y	201
25:07	✓	2.015e+05	n	2.313e+05	n	0.87	✓	4.328e+05	4.328e+05	7.48e+01	y	38.1
25:32	✓	3.631e+04	y	4.494e+04	n	0.81	✓	8.125e+04	8.125e+04	1.45e+01	y	7.15
26:32	✓	9.183e+04	y	1.147e+05	y	0.80	✓	2.065e+05	2.065e+05	3.83e+01	y	18.2
26:43	✓	6.517e+04	y	7.881e+04	y	0.83	✓	1.440e+05	1.440e+05	3.03e+01	y	12.7
26:55	✓	2.594e+04	y	3.589e+04	n	0.72	✓	6.183e+04	6.183e+04	1.43e+01	y	5.44
27:19	✓	3.470e+04	y	4.433e+04	n	0.78	✓	7.902e+04	7.902e+04	1.46e+01	y	6.95
27:42	✓	1.223e+05	y	1.583e+05	y	0.77	✓	2.805e+05	2.805e+05	5.35e+01	y	24.7
28:04	✓	9.309e+04	y	1.063e+05	y	0.88	✓	1.994e+05	1.994e+05	2.95e+01	y	17.5

Totals class: PeCDD EMPC Function: 2 Run #: 14  
 File Name: 010404P4 Sample #: 7 Sample text: P1454\_319\_005 Unit 2 Run 2 Out Air Train

Acquired: 5-APR-01 01:59:26 Processed: 5-APR-01 09:01:12

Total Conc.: 534.02 Unnamed Conc.: 521.781

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
31:11	✓	9.318e+05	n	5.839e+05	n	1.60	✓	1.516e+06	1.516e+06	1.32e+02	y	192
31:42	✓	4.513e+04	y	2.591e+04	n	1.74	✓	7.104e+04	7.104e+04	1.03e+01	y	9.02
32:15	✓	7.671e+05	n	4.944e+05	n	1.55	✓	1.262e+06	1.262e+06	1.41e+02	y	160
32:26	✓	6.608e+04	y	4.239e+04	y	1.56	✓	1.085e+05	1.085e+05	1.17e+01	y	13.8
32:33	✓	2.984e+05	y	1.825e+05	n	1.64	✓	4.809e+05	4.809e+05	4.85e+01	y	61.0
32:48	✓	1.047e+05	y	6.914e+04	n	1.51	✓	1.738e+05	1.738e+05	1.42e+01	y	22.1
33:10	✓	2.428e+05	n	1.503e+05	n	1.61	✓	3.931e+05	3.931e+05	4.16e+01	y	49.9
33:40	✓	5.887e+04	y	3.755e+04	y	1.57	✓	9.642e+04	9.642e+04	1.15e+01	y	12.2
33:45	✓	3.308e+04	y	2.403e+04	y	1.38	✓	5.711e+04	5.711e+04	7.15e+00	y	7.25
34:06	✓	3.124e+04	y	1.830e+04	y	1.71	✓	4.954e+04	4.954e+04	6.38e+00	y	6.29

Totals class: HxCDD EMPC Function: 3 Run #: 14  
 File Name: 010404P4 Sample #: 7 Sample text: P1454\_319\_005 Unit 2 Run 2 Out Air Train

Acquired: 5-APR-01 01:59:26 Processed: 5-APR-01 09:01:12

Total Conc.: 962.78 Unnamed Conc.: 871.591

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
35:50	✓	2.858e+05	n	2.135e+05	n	1.34	✓	4.993e+05	4.993e+05	3.61e+01	y	67.4

36:29	✓	2.613e+06	n	2.051e+06	n	1.27	✓	4.664e+06	4.664e+06	2.90e+02	y	630
36:46	✓	5.994e+05	n	4.544e+05	y	1.32	y	1.054e+06	1.054e+06	5.06e+01	y	142
36:54	✓	6.855e+04	y	5.261e+04	y	1.30	✓	1.212e+05	1.212e+05	6.71e+00	y	16.4
37:33	✓	7.003e+04	y	5.438e+04	y	1.29	y	1.244e+05	1.244e+05	7.19e+00	y	16.3 1,2,3,4,7,8-HxCDD
37:40	✓	1.939e+05	y	1.606e+05	y	1.21	✓	3.545e+05	3.545e+05	1.86e+01	y	51.6 1,2,3,6,7,8-HxCDD
37:53	✓	6.486e+04	y	4.921e+04	y	1.32	✓	1.141e+05	1.141e+05	8.45e+00	y	15.4
38:01	✓	9.765e+04	y	8.180e+04	y	1.19	✓	1.795e+05	1.795e+05	8.34e+00	y	23.4 1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC Function: 4 Run #: 14  
 File Name: 010404P4 Sample #: 7 Sample text: P1454\_319\_005 Unit 2 Run 2 Out Air Train

Acquired: 5-APR-01 01:59:26 Processed: 5-APR-01 09:01:12

Total Conc.: 486.79 Unnamed Conc.: 237.398

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
40:53	✓	8.373e+05	y	7.822e+05	n	1.07	y	1.619e+06	1.619e+06	8.42e+01	y	237
42:08	✓	8.720e+05	n	8.294e+05	y	1.05	y	1.701e+06	1.701e+06	7.86e+01	y	249 1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC Function: 1 Run #: 14  
 File Name: 010404P4 Sample #: 7 Sample text: P1454\_319\_005 Unit 2 Run 2 Out Air Train

Acquired: 5-APR-01 01:59:26 Processed: 5-APR-01 09:01:12

Total Conc.: 733.75 Unnamed Conc.: 714.886

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
22:42	✓	2.332e+05	n	3.036e+05	n	0.77	✓	5.368e+05	5.368e+05	3.28e+01	y	37.3
23:16	✓	1.392e+05	n	1.971e+05	n	0.71	y	3.363e+05	3.363e+05	2.14e+01	y	23.3
23:53	✓	1.457e+05	n	1.863e+05	n	0.78	✓	3.320e+05	3.320e+05	2.42e+01	y	23.0
24:22	✓	7.319e+05	n	9.006e+05	n	0.81	y	1.633e+06	1.633e+06	7.50e+01	y	113
24:39	✓	1.289e+05	n	1.594e+05	n	0.81	✓	2.883e+05	2.883e+05	2.26e+01	y	20.0
24:46	✓	3.056e+05	n	3.715e+05	y	0.82	y	6.771e+05	6.771e+05	3.90e+01	y	47.0
25:09	✓	1.573e+05	y	1.975e+05	y	0.80	✓	3.547e+05	3.547e+05	2.46e+01	y	24.6
25:17	✓	1.121e+05	y	1.425e+05	y	0.79	y	2.547e+05	2.547e+05	2.12e+01	y	17.7
25:26	✓	1.702e+05	n	2.092e+05	n	0.81	✓	3.793e+05	3.793e+05	2.86e+01	y	26.3
25:48	✓	1.363e+05	y	1.940e+05	y	0.70	y	3.302e+05	3.302e+05	2.55e+01	y	22.9
25:56	✓	2.186e+05	y	2.807e+05	y	0.78	✓	4.993e+05	4.993e+05	3.70e+01	y	34.7
26:04	✓	2.005e+05	y	2.685e+05	y	0.75	y	4.690e+05	4.690e+05	4.06e+01	y	32.6
26:11	✓	6.326e+05	y	8.258e+05	y	0.77	✓	1.458e+06	1.458e+06	1.03e+02	y	101
26:37	✓	1.876e+05	y	2.389e+05	y	0.79	y	4.265e+05	4.265e+05	3.04e+01	y	29.6
26:44	✓	3.117e+04	y	4.020e+04	y	0.78	✓	7.137e+04	7.137e+04	7.51e+00	y	4.95
26:53	✓	1.131e+05	y	1.485e+05	y	0.76	y	2.617e+05	2.617e+05	2.05e+01	y	18.2
27:05	✓	1.770e+05	n	2.279e+05	y	0.78	✓	4.049e+05	4.049e+05	3.09e+01	y	28.1
27:17	✓	1.852e+05	y	2.229e+05	y	0.83	y	4.082e+05	4.082e+05	3.82e+01	y	28.3
27:23	✓	1.161e+05	y	1.640e+05	y	0.71	✓	2.801e+05	2.801e+05	2.75e+01	y	19.4
27:29	✓	1.255e+05	y	1.463e+05	y	0.86	✓	2.718e+05	2.718e+05	2.16e+01	y	18.9 2,3,7,8-TCDF
27:51	✓	3.156e+05	y	3.851e+05	y	0.82	✓	7.007e+05	7.007e+05	5.27e+01	y	48.6
28:06	✓	2.746e+04	n	3.920e+04	y	0.70	✓	6.667e+04	6.667e+04	5.52e+00	y	4.63
28:22	✓	2.804e+04	y	3.901e+04	y	0.72	✓	6.705e+04	6.705e+04	5.41e+00	y	4.65

29:28 / 2.964e+04 n 3.431e+04 y 0.86 y / 6.395e+04 6.395e+04 5.09e+00 y 4.44

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Totals class: 1st Fnc.PeCDF EMPC Function: 1 Run #: 14  
File Name: 010404P4 Sample #: 7 Sample text: P1454\_319\_005 Unit 2 Run 2 Out Air Train

Acquired: 5-APR-01 01:59:26 Processed: 5-APR-01 09:01:12

Total Conc.: 48.776 Unnamed Conc.: 48.776

RT	ml	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
29:26	3.761e+05	n	2.644e+05	n	1.42 y	6.405e+05	6.405e+05	2.78e+01	y	48.8

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Totals class: PeCDF EMPC Function: 2 Run #: 14  
File Name: 010404P4 Sample #: 7 Sample text: P1454\_319\_005 Unit 2 Run 2 Out Air Train

Acquired: 5-APR-01 01:59:26 Processed: 5-APR-01 09:01:12

Total Conc.: 428.20 Unnamed Conc.: 366.861

RT	ml	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
30:57	5.343e+05	y	3.361e+05	y	1.59 y	8.704e+05	8.704e+05	3.40e+01	y	66.3
31:06	6.536e+05	y	4.143e+05	y	1.58 y	1.068e+06	1.068e+06	4.20e+01	y	81.3
31:13	1.515e+05	y	1.095e+05	y	1.38 y	2.610e+05	2.610e+05	1.68e+01	y	19.9
31:18	5.758e+04	y	3.465e+04	y	1.66 y	9.223e+04	9.223e+04	5.78e+00	y	7.02
31:32	8.449e+04	y	6.699e+04	y	1.26 y	1.515e+05	1.390e+05	7.86e+00	y	10.6
31:45	4.650e+05	y	2.972e+05	y	1.56 y	7.622e+05	7.622e+05	3.12e+01	y	58.0
31:51	1.424e+05	y	8.795e+04	y	1.62 y	2.304e+05	2.304e+05	1.25e+01	y	17.5
32:01	1.046e+05	y	7.012e+04	n	1.49 y	1.747e+05	1.747e+05	9.38e+00	y	13.3
32:13	1.951e+05	n	1.301e+05	n	1.50 y	3.252e+05	3.252e+05	1.62e+01	y	25.0 1,2,3,7,8-PeCDF
32:30	3.071e+05	n	2.121e+05	n	1.45 y	5.192e+05	5.192e+05	2.05e+01	y	39.5
33:04	3.799e+04	n	2.642e+04	y	1.44 y	6.442e+04	6.442e+04	4.09e+00	y	4.91
33:11	3.361e+05	y	2.169e+05	y	1.55 y	5.530e+05	5.530e+05	3.00e+01	y	42.1
33:19	2.938e+05	y	1.876e+05	y	1.57 y	4.814e+05	4.814e+05	2.09e+01	y	36.4 2,3,4,7,8-PeCDF
33:39	4.989e+04	n	3.297e+04	y	1.51 y	8.286e+04	8.286e+04	4.27e+00	y	6.31

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Totals class: HxCDF EMPC Function: 3 Run #: 14  
File Name: 010404P4 Sample #: 7 Sample text: P1454\_319\_005 Unit 2 Run 2 Out Air Train

Acquired: 5-APR-01 01:59:26 Processed: 5-APR-01 09:01:12

Total Conc.: 323.70 Unnamed Conc.: 208.912

RT	ml	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
35:11	2.431e+05	n	1.891e+05	n	1.29 y	4.323e+05	4.323e+05	3.92e+01	y	36.7
35:23	6.144e+05	n	4.859e+05	y	1.26 y	1.100e+06	1.100e+06	1.00e+02	y	93.3
35:37	4.826e+04	y	4.209e+04	y	1.15 y	9.035e+04	9.035e+04	8.22e+00	y	7.67
35:48	8.643e+04	n	6.240e+04	n	1.39 y	1.488e+05	1.488e+05	1.25e+01	y	12.6

DPE

2.89 PeCDF  
0.37 totals

36:01	4.857e+04	n	3.736e+04	n	1.30	y	8.593e+04	8.593e+04	8.19e+00	y	7.29
36:27	2.241e+05	y	1.688e+05	y	1.33	y	3.929e+05	3.929e+05	3.72e+01	y	33.3
36:33	2.187e+05	y	1.629e+05	y	1.34	y	3.815e+05	3.815e+05	3.17e+01	y	32.6 1,2,3,4,7,8-HxCDF
36:42	2.518e+05	y	2.098e+05	y	1.20	y	4.616e+05	4.616e+05	3.66e+01	y	36.0 1,2,3,6,7,8-HxCDF
36:52	3.999e+04	y	2.756e+04	y	1.45	n	6.755e+04	6.173e+04	6.12e+00	y	5.24
37:00	3.681e+04	y	3.255e+04	y	1.13	y	6.936e+04	6.936e+04	6.63e+00	y	5.88
37:07	4.640e+04	y	3.452e+04	y	1.34	y	8.091e+04	8.091e+04	6.43e+00	y	6.86
37:22	2.491e+05	n	2.043e+05	n	1.22	y	4.534e+05	4.534e+05	3.87e+01	y	37.6 2,3,4,6,7,8-HxCDF
38:26	5.315e+04	y	3.797e+04	y	1.40	y	9.112e+04	9.112e+04	7.13e+00	y	8.64 1,2,3,7,8,9-HxCDF

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Totals class: HpCDF EMPC

Function: 4 Run #: 14

File Name: 010404P4 Sample #: 7

Sample text: P1454\_319\_005 Unit 2 Run 2 Out Air Train

Acquired: 5-APR-01 01:59:26

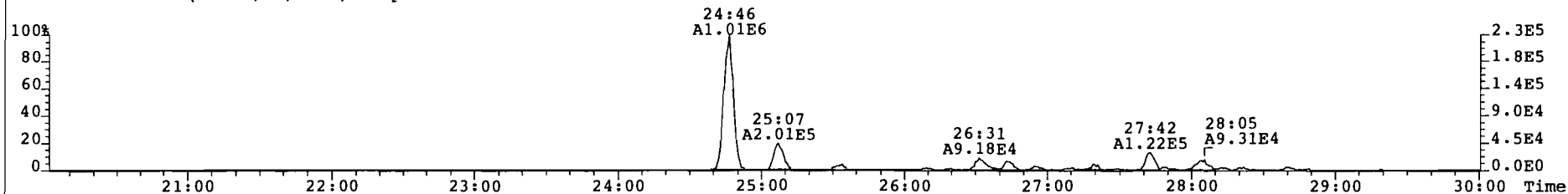
Processed: 5-APR-01 09:01:12

Total Conc.: 149.78

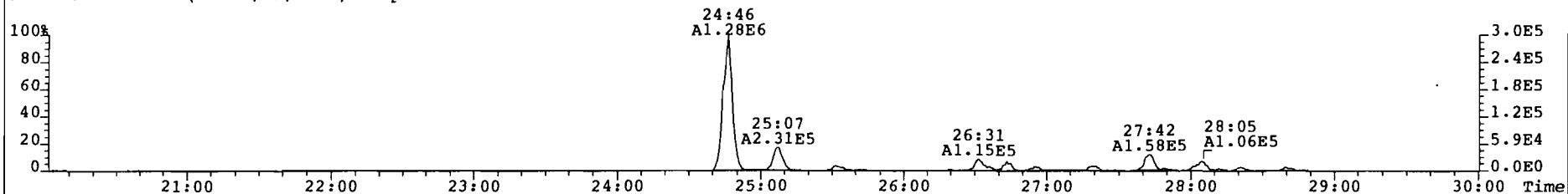
Unnamed Conc.: 35.714

RT	m1	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
40:26	5.619e+05	n	5.371e+05	n	1.05	y	1.099e+06	1.099e+06	7.78e+01	y	106	1,2,3,4,6,7,8-HpCDF
40:53	8.703e+04	n	8.029e+04	n	1.08	y	1.673e+05	1.673e+05	1.15e+01	y	17.5	
41:08	9.196e+04	n	8.204e+04	n	1.12	y	1.740e+05	1.740e+05	1.10e+01	y	18.2	
42:59	3.834e+04	y	3.274e+04	y	1.17	y	7.108e+04	7.108e+04	5.03e+00	y	8.13	1,2,3,4,7,8,9-HpCDF

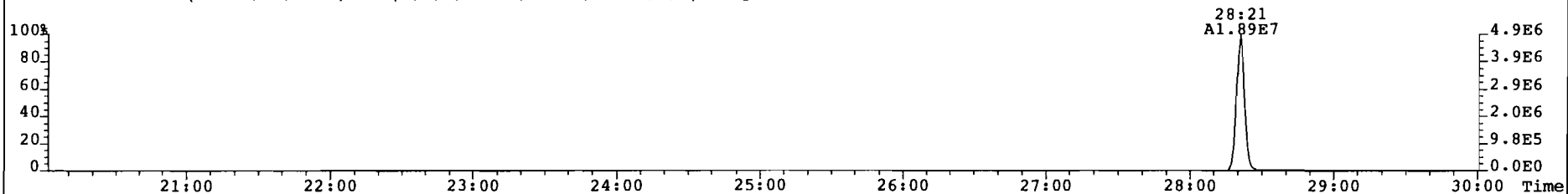
File: 010404P4 Acq: 5-APR-2001 01:59:26 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 7 Text: P1454 319.005 Unit 2 Run 2 Out Air Train Vial# 25 File Text: AAP DB5  
319.8965 S:7 BSUB(10000,15,-3.0) Expt: OCDD Noise: 352



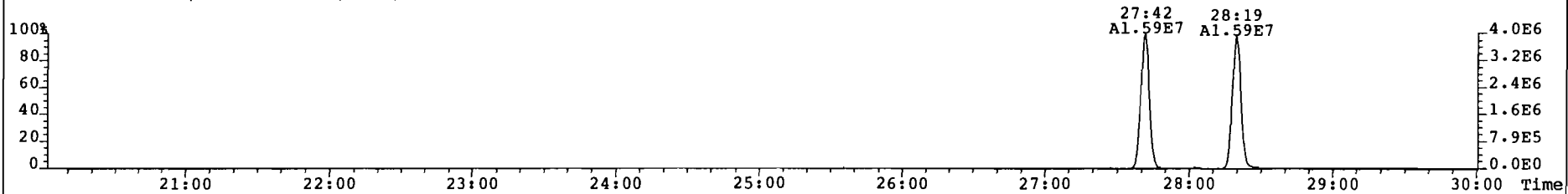
321.8936 S:7 BSUB(10000,15,-3.0) Expt: OCDD Noise: 188



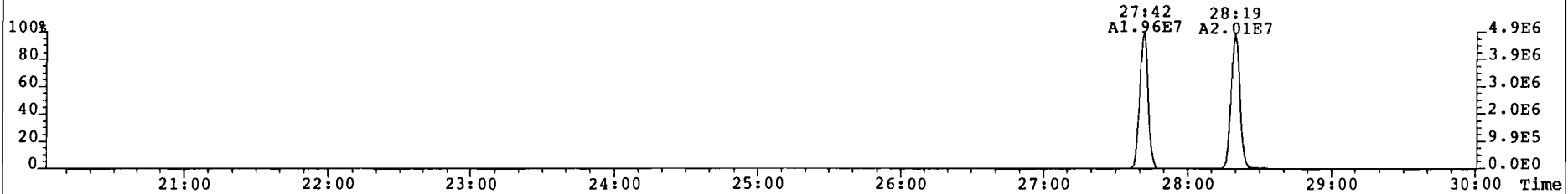
327.8850 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 285



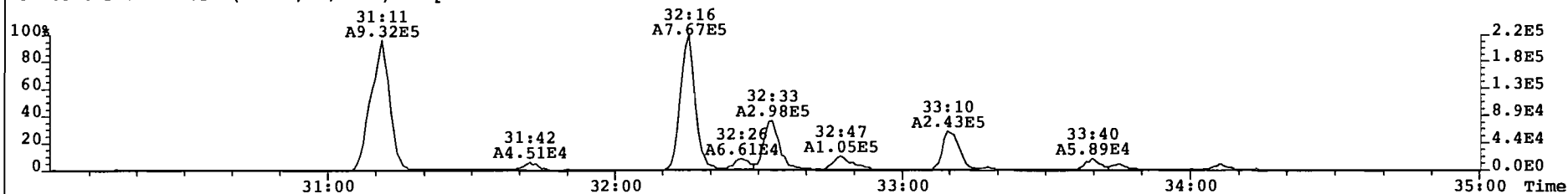
331.9368 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1642



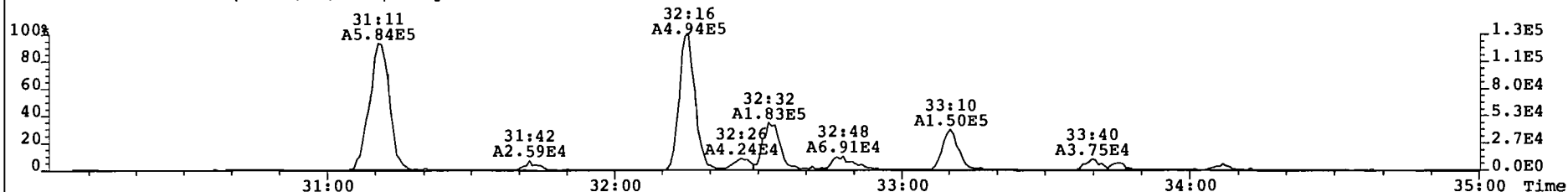
333.9339 S:7 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 758



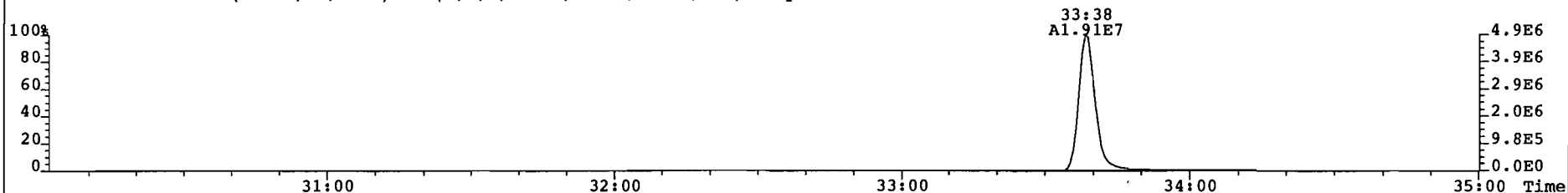
File: 010404P4 Acq: 5-APR-2001 01:59:26 GC EI+ Voltage SIR Autospec-ULTimaE  
Sample# 7 Text: P1454 319 005 Unit 2 Run 2 Out Air Train Vial# 25 File Text: AAP DB5  
355.8546 S:7 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 283



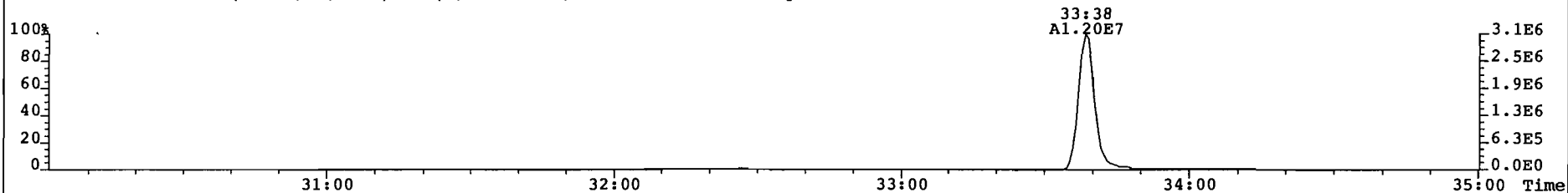
357.8517 S:7 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 118



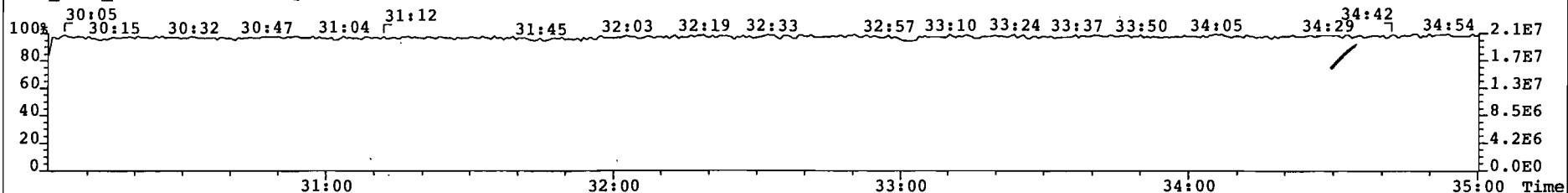
367.8949 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 919



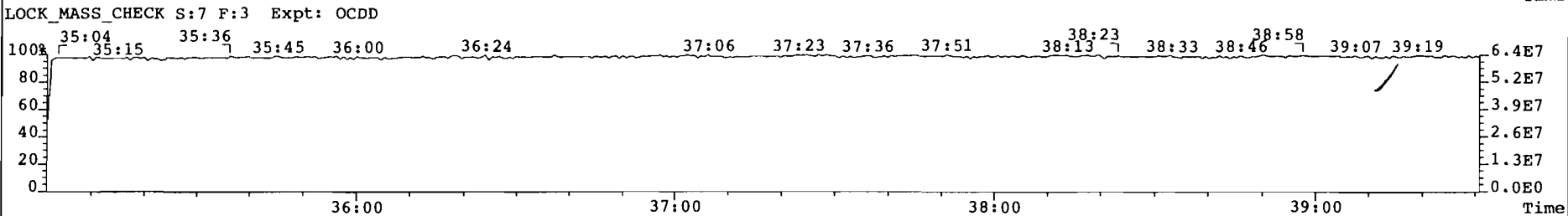
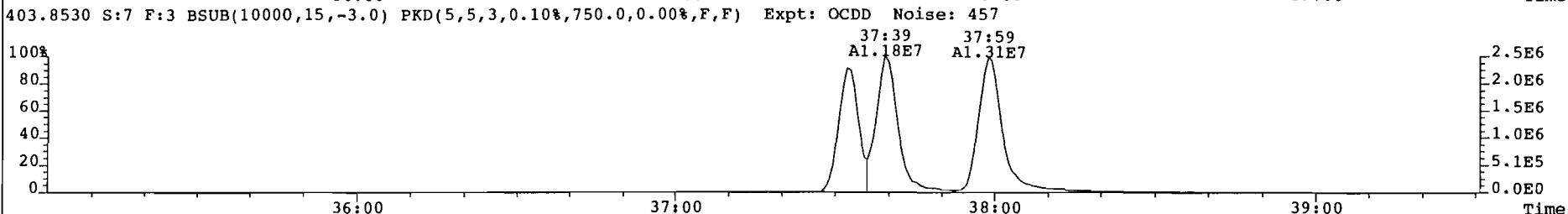
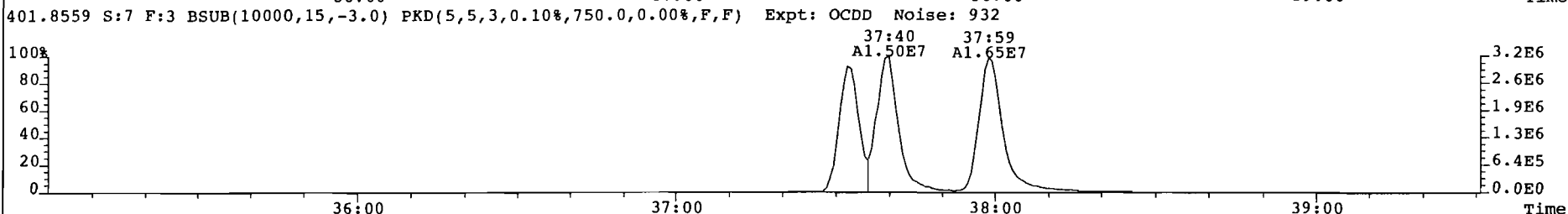
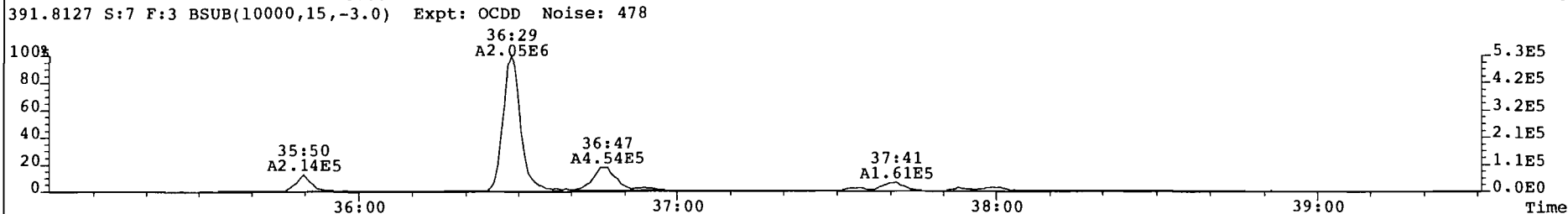
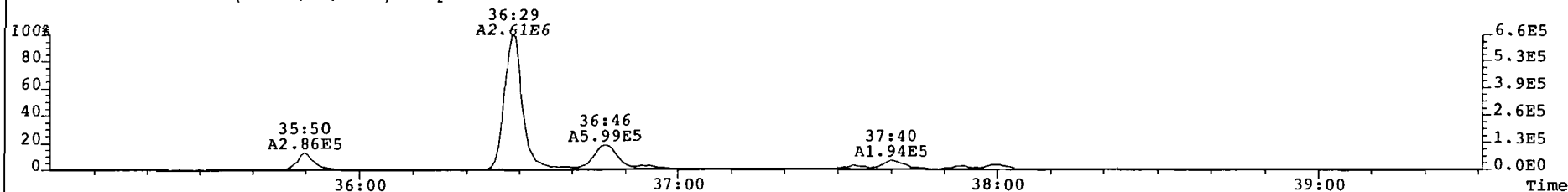
369.8919 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 350



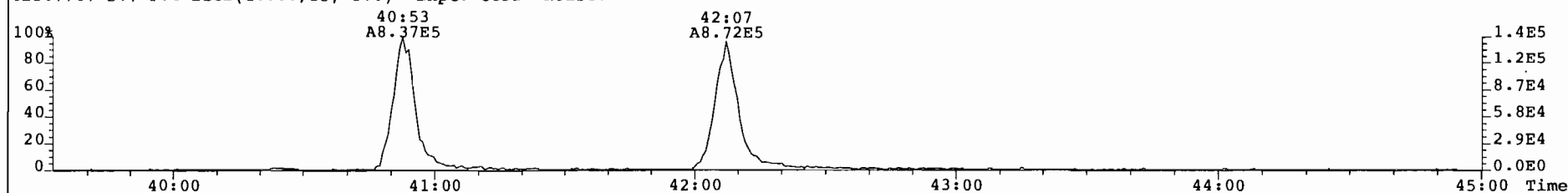
LOCK MASS CHECK S:7 F:2 Expt: OCDD



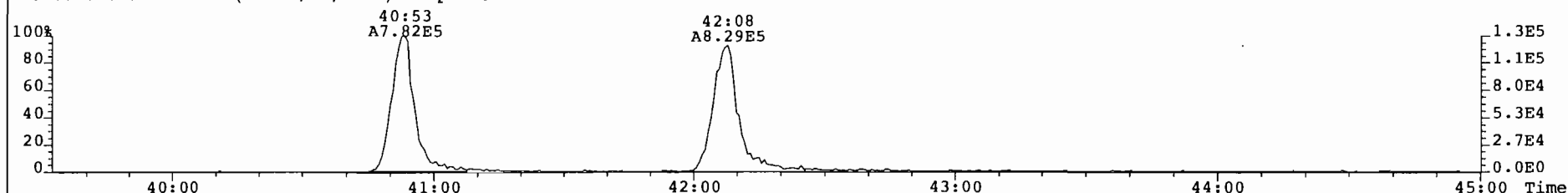
File: 010404P4 Acq: 5-APR-2001 01:59:26 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 7 Text: P1454 319\_005 Unit 2 Run 2 Out Air Train Vial# 25 File Text: AAP DB5  
389.8156 S:7 F:3 BSUB(10000,15,-3.0) Expt: OCDD Noise: 868



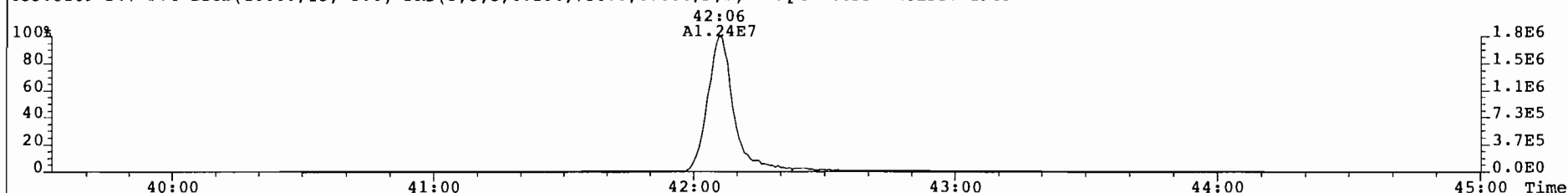
File: 010404P4 Acq: 5-APR-2001 01:59:26 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 7 Text: P1454\_319\_005 Unit 2 Run 2 Out Air Train Vial# 25 File Text: AAP DB5  
423.7767 S:7 F:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 244



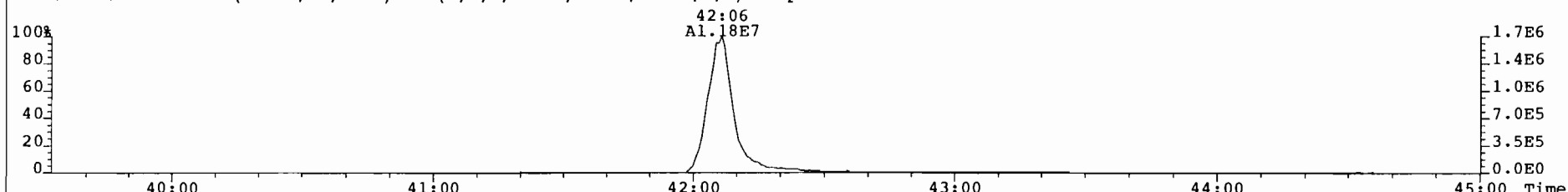
425.7737 S:7 F:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 208



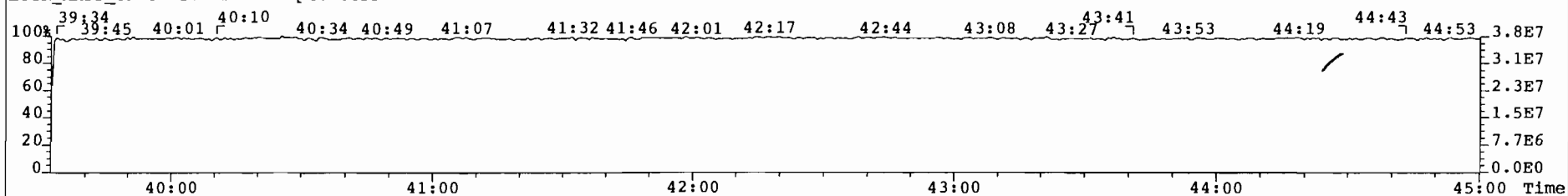
435.8169 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1945



437.8140 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 989

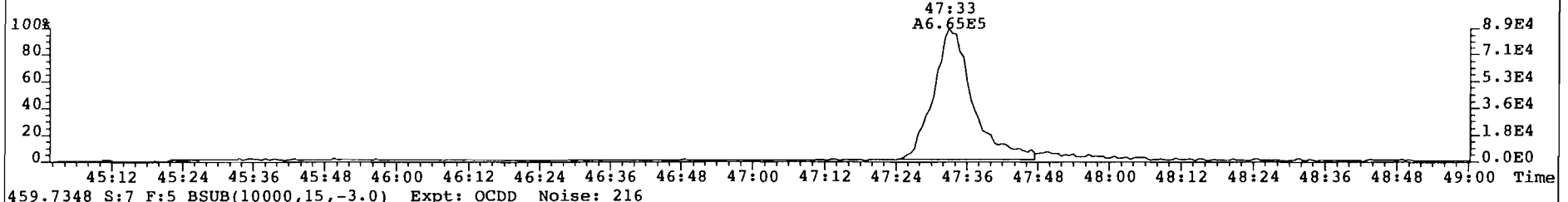


LOCK MASS CHECK S:7 F:4 Expt: OCDD

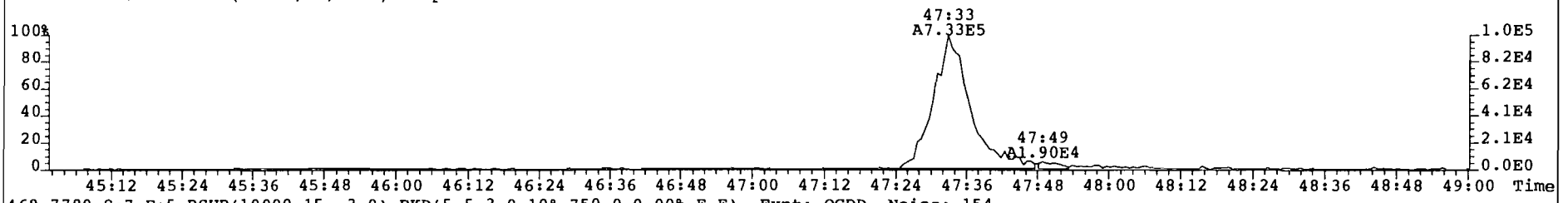




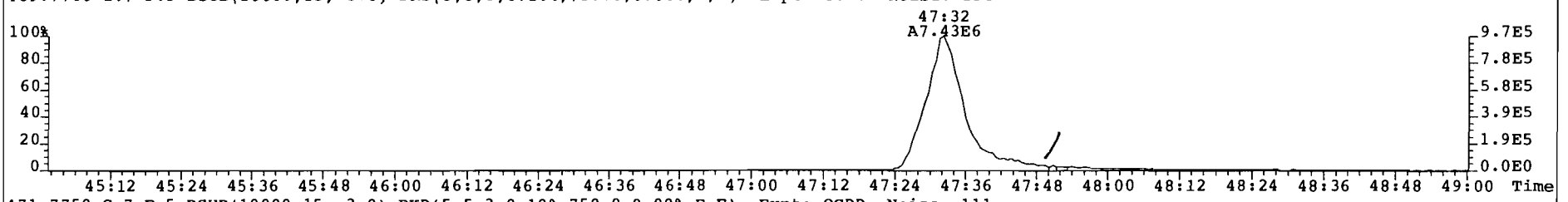
File: 010404P4 Acq: 5-APR-2001 01:59:26 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 7 Text: P1454 319 005 Unit 2 Run 2 Out Air Train Vial# 25 File Text: AAP DB5  
457.7377 S:7 F:5 BSub(10000,15,-3.0) Expt: OCDD Noise: 353



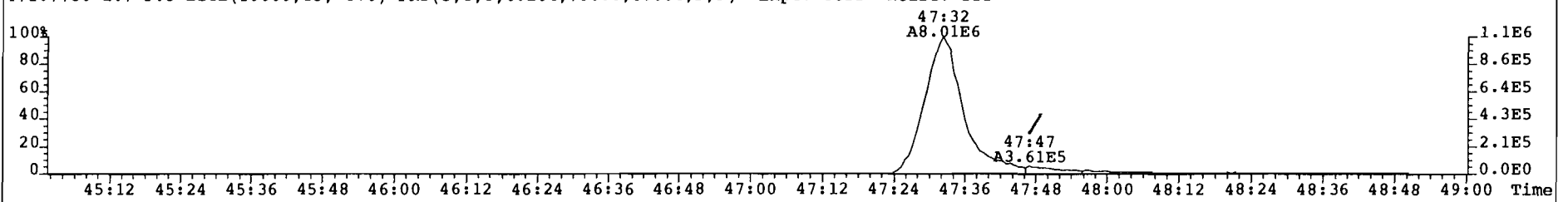
459.7348 S:7 F:5 BSub(10000,15,-3.0) Expt: OCDD Noise: 216



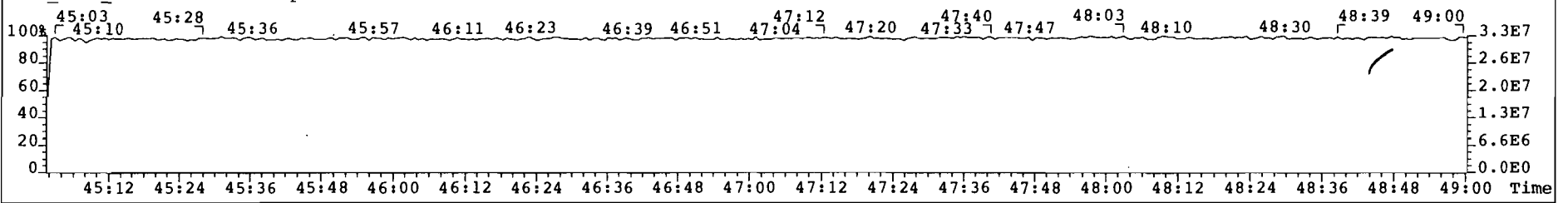
469.7780 S:7 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 154



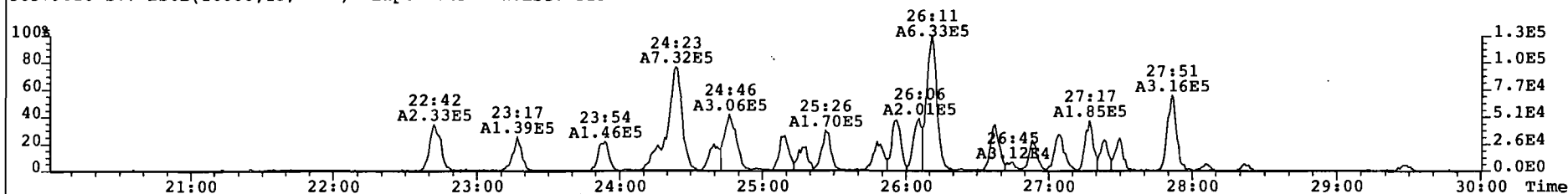
471.7750 S:7 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 111



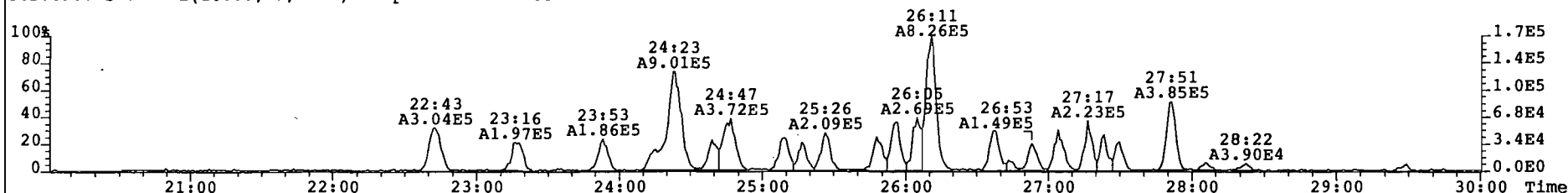
LOCK MASS CHECK S:7 F:5 Expt: OCDD



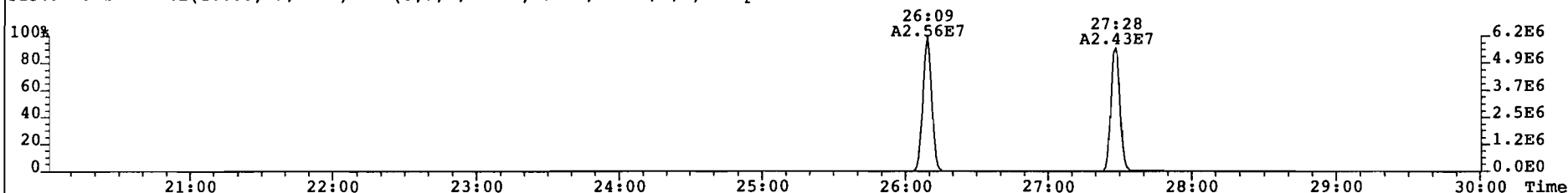
File: 010404P4 Acq: 5-APR-2001 01:59:26 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 7 Text: P1454\_319\_005 Unit 2 Run 2 Out Air Train Vial# 25 File Text: AAP DB5  
303.9016 S:7 BSub(10000,15,-3.0) Expt: OCDD Noise: 215



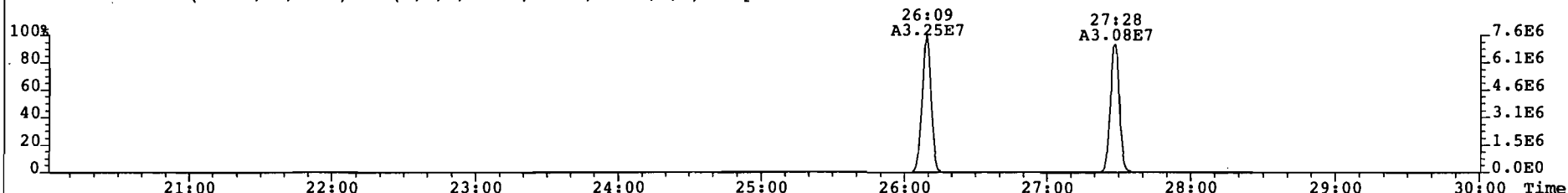
305.8987 S:7 BSub(10000,15,-3.0) Expt: OCDD Noise: 533



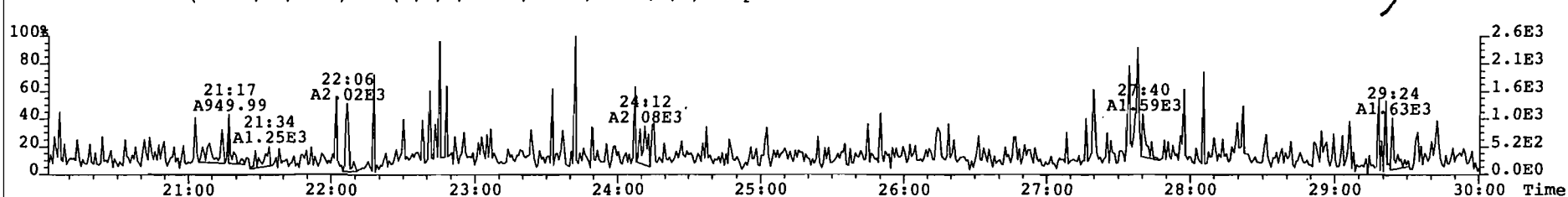
315.9419 S:7 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 345



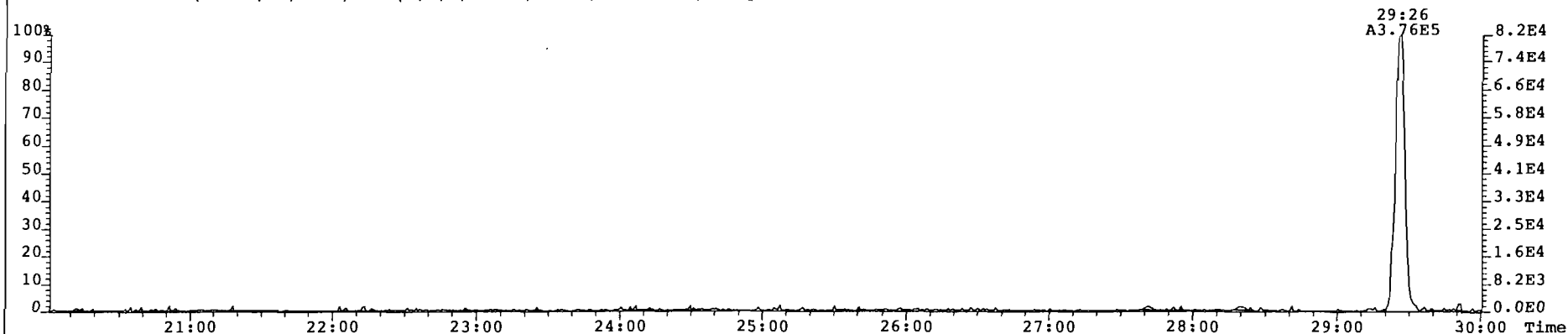
317.9389 S:7 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1123



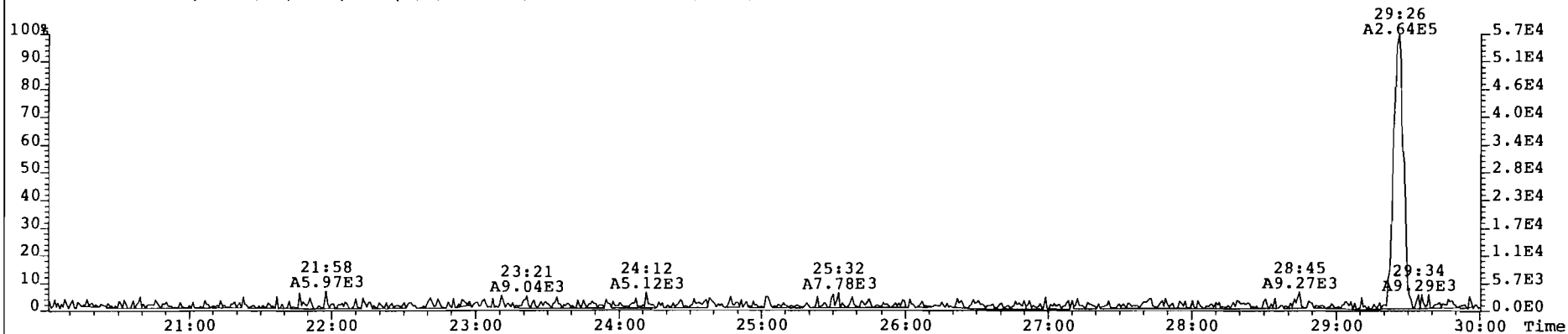
375.8364 S:7 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 92



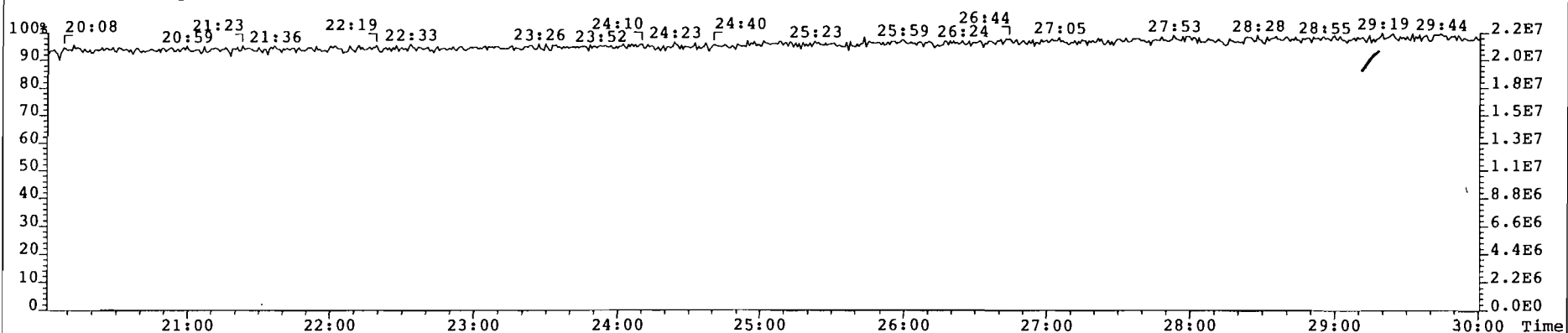
File: 010404P4 Acq: 5-APR-2001 01:59:26 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 7 Text: P1454\_319\_005 Unit 2 Run 2 Out Air Train Vial# 25 File Text: AAP DB5  
339.8597 S:7 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 99



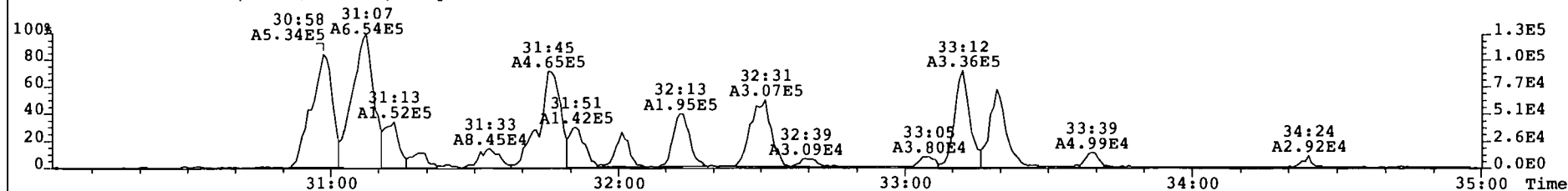
341.8568 S:7 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 262



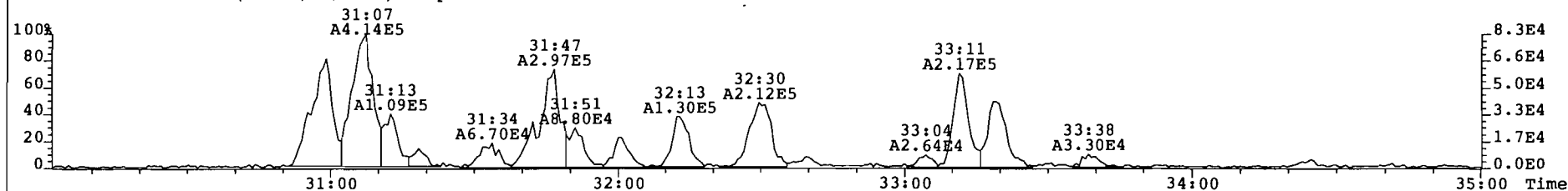
316.9824 S:7 Expt: OCDD



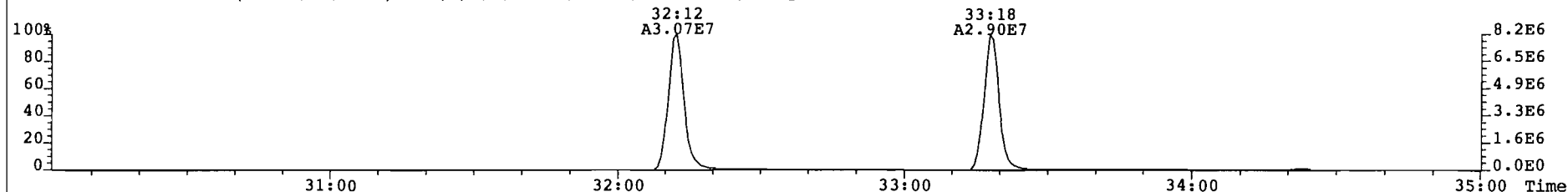
File: 010404P4 Acq: 5-APR-2001 01:59:26 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 7 Text: P1454 319\_005 Unit 2 Run 2 Out Air Train Vial# 25 File Text: AAP DB5  
339.8597 S:7 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 288



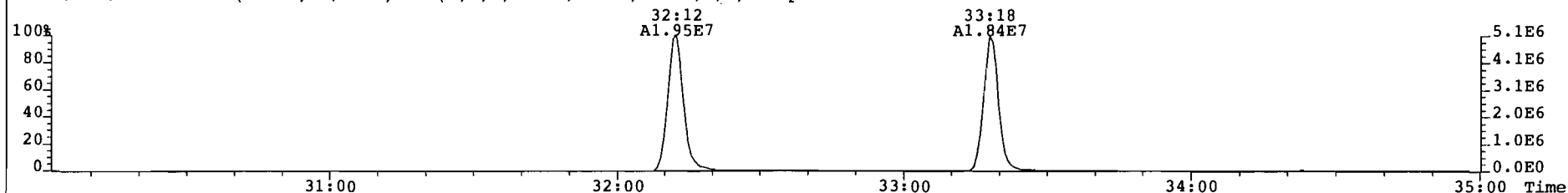
341.8568 S:7 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 408



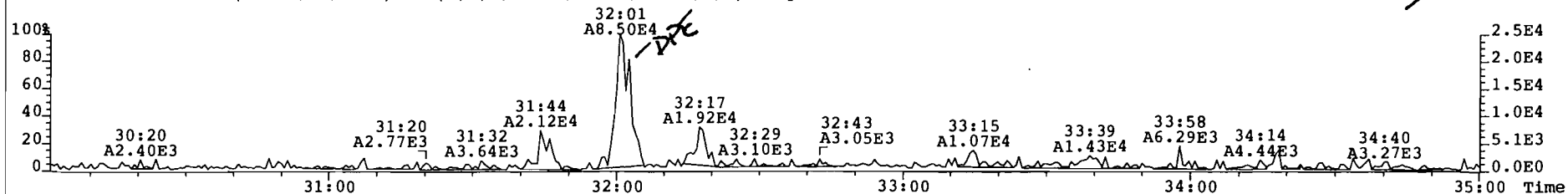
351.9000 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 479



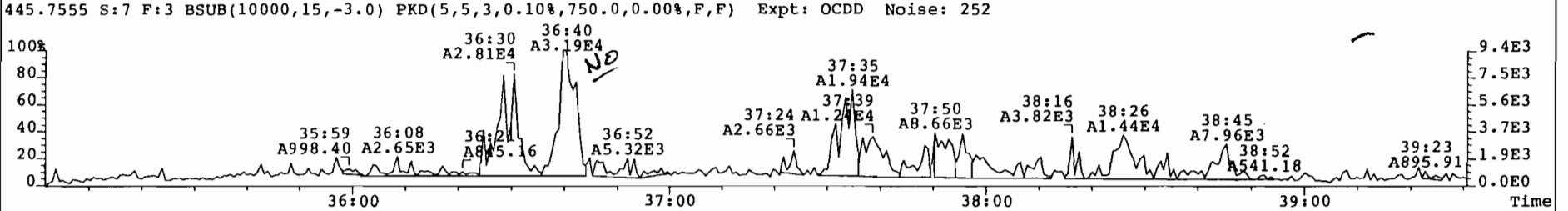
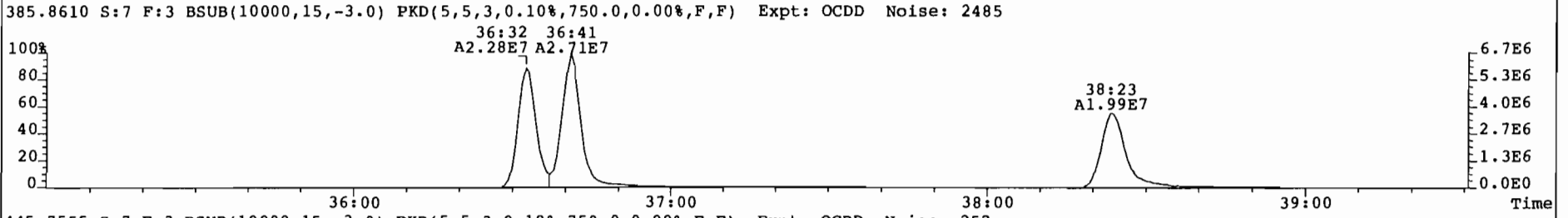
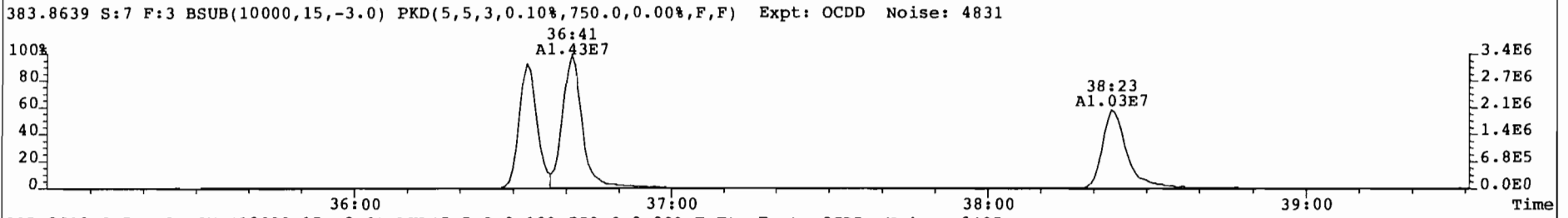
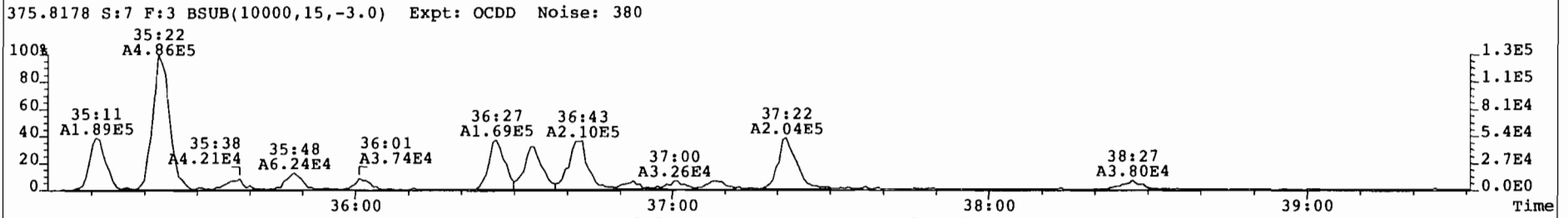
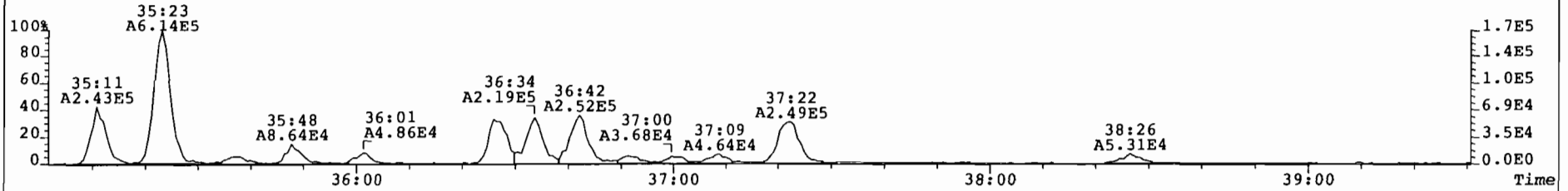
353.8970 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 342



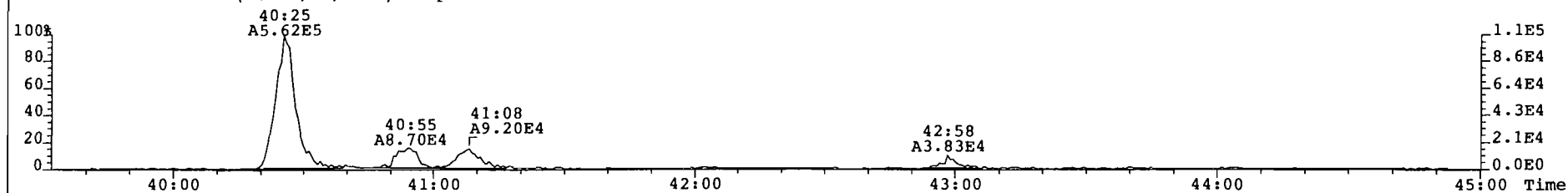
409.7974 S:7 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 266



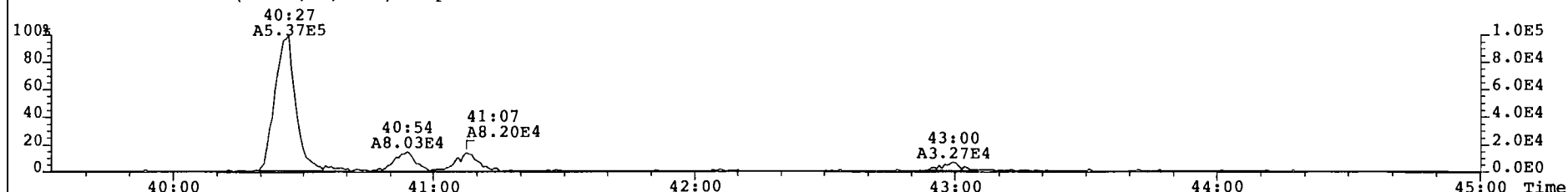
File: 010404P4 Acq: 5-APR-2001 01:59:26 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 7 Text: P1454 319\_005 Unit 2 Run 2 Out Air Train Vial# 25 File Text: AAP DB5  
373.8207 S:7 F:3 BSUB(10000,15,-3.0) Expt: OCDD Noise: 423



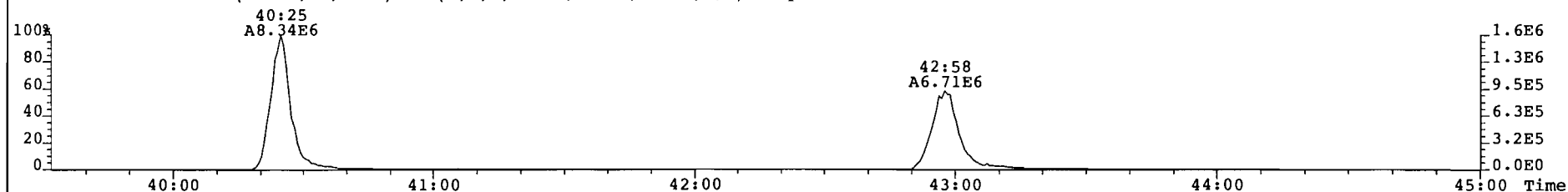
File: 010404P4 Acq: 5-APR-2001 01:59:26 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 7 Text: P1454\_319\_005 Unit 2 Run 2 Out Air Train Vial# 25 File Text: AAP DB5  
407.7818 S:7 F:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 224



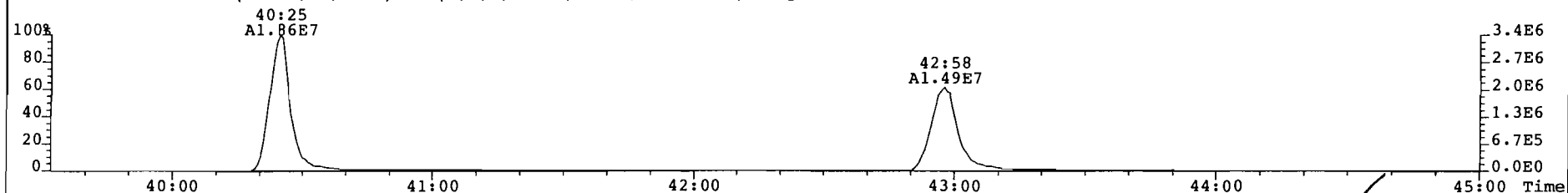
409.7788 S:7 F:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 168



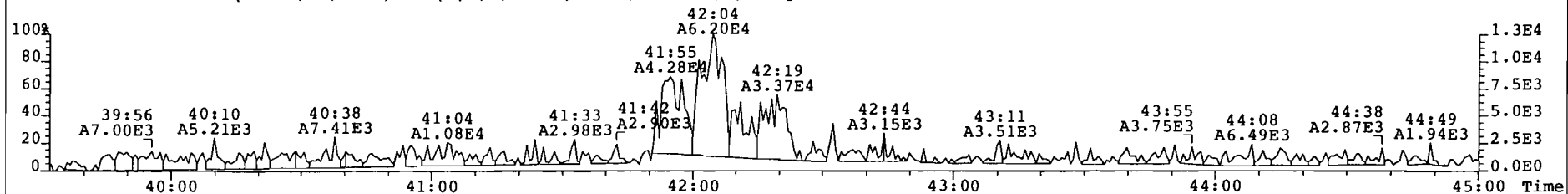
417.8253 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 450



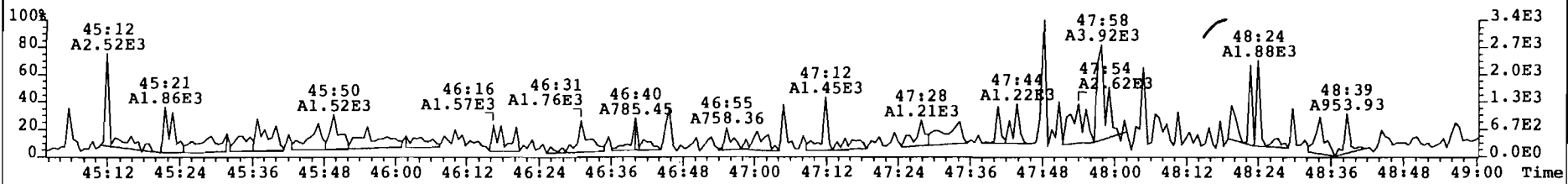
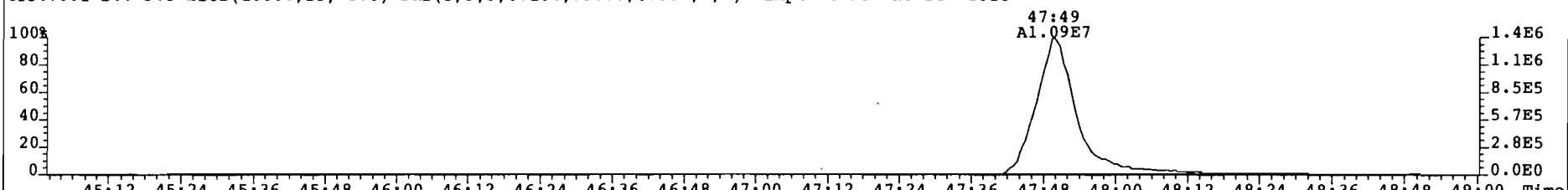
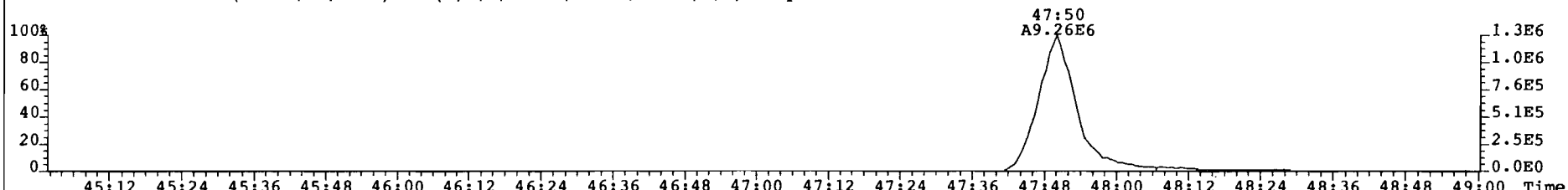
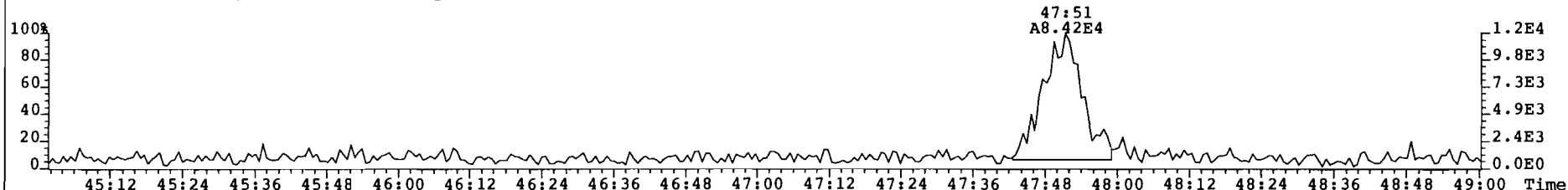
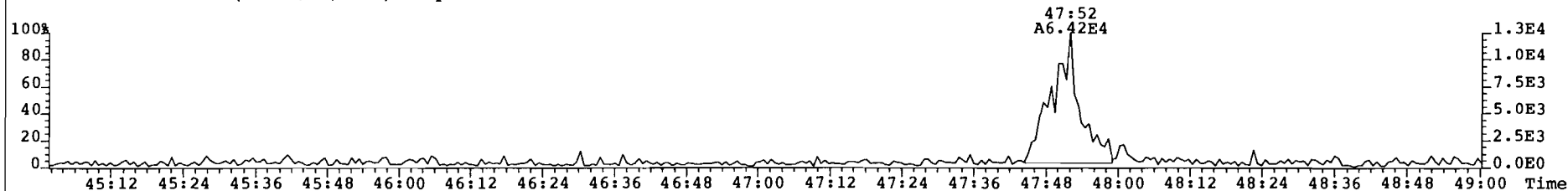
419.8220 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1086



479.7165 S:7 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 370



File: 010404P4 Acq: 5-APR-2001 01:59:26 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 7 Text: P1454 319 005 Unit 2 Run 2 Out Air Train Vial# 25 File Text: AAP DB5  
441.7428 S:7 F:5 BSUB(10000,15,-3.0) Expt: OCDD Noise: 132




# Sample ID: Unit 2 Run 3 Out

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_006	Date Extracted:	2 Apr 01
Date Collected:	28 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	3.6			A	88.8	104	101
1,2,3,7,8-PeCDD	14.6			A	94.9	101	101
1,2,3,4,7,8-HxCDD	19.1			A	95.8	91.7	101
1,2,3,6,7,8-HxCDD	52.1				95.8	91.7	101
1,2,3,7,8,9-HxCDD	29.1			A	95.8	91.7	101
1,2,3,4,6,7,8-HpCDD	261				89.3	95.8	101
OCDD	442			B	71.3	95.8	101
2,3,7,8-TCDF	20.8				86.1	104	101
1,2,3,7,8-PeCDF	25.7			A	87.3	101	101
2,3,4,7,8-PeCDF	38.3			A	87.3	101	101
1,2,3,4,7,8-HxCDF	34.1			A	109	92.5	101
1,2,3,6,7,8-HxCDF	37			A	109	92.5	101
2,3,4,6,7,8-HxCDF	41.1			A	109	92.5	101
1,2,3,7,8,9-HxCDF	8.62			A	109	92.5	101
1,2,3,4,6,7,8-HpCDF	126				99.7	95.8	101
1,2,3,4,7,8,9-HpCDF	12.1			A	99.7	95.8	101
OCDF	51.4			A	82.4	95.8	101

Totals & TEQs				 <b>ALTA ANALYTICAL PERSPECTIVES</b> 2714 Exchange Drive Wilmington North Carolina 28405 USA  Tel: 910 794-1613 Fax: 910 794-3919 e-mail: ytondeur@cs.com web: www.ultratrace.com			
TCDDs	318		351				
PeCDDs	549		575				
HxCDDs	1010						
HpCDDs	520						
TCDFs	769		773				
PeCDFs	483		488				
HxCDFs	332		341				
HpCDFs	160		178				
<b>Total PCDD/Fs</b>	<b>4640</b>		<b>4730</b>				
<b>TEQ (ND=0)</b>	<b>60.0</b>		<b>60.0</b>	ITEF			
<b>TEQ (ND=DL/2)</b>	<b>60.0</b>		<b>60.0</b>	ITEF			

Reviewer CU  
 Date 18 April 01

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Client ID: Unit 2 Run 3 Out  
Lab ID: P1454\_319\_006

Filename: 010404P4  
GC Column ID: db-5

S: 8 Acq: 5-APR-01 02:51:16  
Ical: MM1\_M23\_0» wt/vol: 1.000

ConCal: 010404P4-  
EndCal: 010404P4-

Name	Resp	RA	RRF	RT	Conc	Qualif.	CDE	noise	Fac	DL	
2,3,7,8-TCDD	4.22e+04	0.54 n	1.26	28:21	3.74			905	2.5	1.45	
1,2,3,7,8-PeCDD	1.15e+05	1.60 y	1.01	33:39	14.6			2339	2.5	7.24	
1,2,3,4,7,8-HxCDD	1.45e+05	1.15 y	1.14	37:33	19.1			2005	2.5	6.96	
1,2,3,6,7,8-HxCDD	3.56e+05	1.27 y	1.02	37:41	52.1			2005	2.5	7.75	
1,2,3,7,8,9-HxCDD	2.22e+05	1.17 y	1.14	38:01	29.1			2005	2.5	6.94	
1,2,3,4,6,7,8-HpCDD	1.78e+06	1.07 y	1.13	42:08	261			2203	2.5	11.4	
OCDD	1.77e+06	0.90 y	1.03	47:34	442			1424	2.5	13.0	
2,3,7,8-TCDF	2.91e+05	0.75 y	1.05	27:29	20.8			2579	2.5	3.53	
1,2,3,7,8-PeCDF	3.27e+05	1.62 y	1.04	32:13	25.7			1931	2.5	3.78	
2,3,4,7,8-PeCDF	4.95e+05	1.55 y	1.05	33:19	38.3			1931	2.5	3.72	
1,2,3,4,7,8-HxCDF	4.02e+05	1.38 y	1.13	36:33	34.1			1618	2.5	2.31	
1,2,3,6,7,8-HxCDF	4.77e+05	1.21 y	1.24	36:42	37.0			1618	2.5	2.11	
2,3,4,6,7,8-HxCDF	4.99e+05	1.20 y	1.16	37:22	41.1			1618	2.5	2.25	
1,2,3,7,8,9-HxCDF	9.15e+04	1.42 y	1.02	38:27	8.62			1618	2.5	2.57	
1,2,3,4,6,7,8-HpCDF	1.30e+06	1.06 y	1.54	40:26	126			1409	2.5	2.73	
1,2,3,4,7,8,9-HpCDF	1.06e+05	1.16 y	1.30	42:58	12.1			1409	2.5	3.24	
OCDF	2.95e+05	1.01 y	1.15	47:51	51.4			1718	2.5	10.3	
EMPC											
Total Tetra-Dioxins	3.54e+06	0.78 y	1.26	24:46	314			905	2.5	1.45	351
Total Penta-Dioxins	4.33e+06	1.60 y	1.01	31:11	549			2339	2.5	7.24	575
Total Hexa-Dioxins	7.42e+06	1.35 y	1.10	35:50	1010			2005	2.5	7.20	1010
Total Hepta-Dioxins	3.55e+06	1.05 y	1.13	40:53	520			2203	2.5	11.4	520
Total Tetra-Furans	1.08e+07	0.74 y	1.05	22:42	769			2579	2.5	3.53	773
1st Fnc. Penta-Furans	6.58e+05	1.49 y	1.05	29:26	51.3			2869	2.5	5.57	51.3
Total Penta-Furans	5.54e+06	1.61 y	1.05	30:57	432			1931	2.5	3.75	
PeCDF Totals:					483						488
Total Hexa-Furans	3.97e+06	1.21 y	1.14	35:11	332			1618	2.5	2.30	341
Total Hepta-Furans	1.63e+06	1.06 y	1.42	40:26	160			1409	2.5	2.96	178
Rec											
IS 13C-2,3,7,8-TCDD	3.57e+07	0.80 y	1.13	28:20	3550			88.8			-
IS 13C-1,2,3,7,8-PeCDD	3.12e+07	1.59 y	0.93	33:39	3800			94.9			-
IS 13C-1,2,3,6,7,8-HxCDD	2.67e+07	1.27 y	0.93	37:40	3830			95.8			-
IS 13C-1,2,3,4,6,7,8-HpCDD	2.42e+07	1.07 y	0.91	42:07	3570			89.3			-
IS 13C-OCDD	1.56e+07	0.91 y	0.73	47:34	2850			71.3			-
IS 13C-2,3,7,8-TCDF	5.36e+07	0.81 y	1.06	27:28	3450			86.1			-
IS 13C-1,2,3,7,8-PeCDF	4.91e+07	1.58 y	0.96	32:12	3490			87.3			-
IS 13C-1,2,3,6,7,8-HxCDF	4.17e+07	0.53 y	1.28	36:41	4350			109			-
IS 13C-1,2,3,4,6,7,8-HpCDF	2.69e+07	0.45 y	0.90	40:25	3990			99.7			-
IS 13C-OCDF	2.00e+07	0.90 y	0.81	47:51	3300			82.4			-
RS/RT 13C-1,2,3,4-TCDD	3.55e+07	0.81 y	1.00	27:42	4000			-			-
RS 13C-1,2,3,4-TCDF	5.86e+07	0.77 y	1.00	26:09	4000			-			-
RS/RT 13C-1,2,3,7,8,9-HxCDD	2.99e+07	1.26 y	1.00	38:00	4000			-			-
PS 37Cl-2,3,7,8-TCDD	1.91e+07		0.51	28:21	4160			104			-
PS 13C-2,3,4,7,8-PeCDF	4.81e+07	1.60 y	0.97	33:19	4030			101			-
PS 13C-1,2,3,4,7,8-HxCDD	2.26e+07	1.27 y	0.92	37:32	3670			91.7			-
PS 13C-1,2,3,4,7,8-HxCDF	3.51e+07	0.52 y	0.91	36:33	3700			92.5			-
PS 13C-1,2,3,4,7,8,9-HpCDF	2.20e+07	0.44 y	0.85	42:59	3830			95.8			-
AS 13C-1,2,3,7,8,9-HxCDF	3.22e+07	0.52 y	1.07	38:25	4030			101			-

Reviewer: ce

Date: 18 Apr 01

EMPC

Rec

Analyst: GAG

Date: 18 Apr 01

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Totals class: TCDD EMPC Function: 1 Run #: 15  
 File Name: 010404P4 Sample #: 8 Sample text: P1454\_319\_006 Unit 2 Run 3 Out Air Train

Acquired: 5-APR-01 02:51:16 Processed: 5-APR-01 09:01:14

Total Conc.: 351.16 Unnamed Conc.: 347.417

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
24:46	1.040e+06	n	1.327e+06	n	0.78	2.367e+06	2.367e+06	3.23e+02	y	210
25:07	1.727e+05	n	2.146e+05	n	0.80	3.873e+05	3.873e+05	5.09e+01	y	34.4
25:32	3.878e+04	y	4.295e+04	y	0.90	8.173e+04	7.602e+04	1.41e+01	y	6.74
26:32	1.034e+05	y	1.282e+05	y	0.81	2.317e+05	2.317e+05	3.06e+01	y	20.6
26:43	7.537e+04	y	8.790e+04	y	0.86	1.633e+05	1.633e+05	2.17e+01	y	14.5
26:55	3.874e+04	y	2.937e+04	y	1.32	6.811e+04	5.199e+04	8.73e+00	y	4.61
27:20	3.714e+04	y	4.198e+04	n	0.88	7.911e+04	7.911e+04	1.32e+01	y	7.02
27:43	1.407e+05	y	1.717e+05	y	0.82	3.125e+05	3.125e+05	4.09e+01	y	27.7
28:04	1.038e+05	y	1.147e+05	y	0.91	2.186e+05	2.031e+05	2.34e+01	y	18.0
28:21	1.835e+04	y	3.374e+04	y	0.54	5.209e+04	4.219e+04	1.14e+01	y	3.74
28:40	2.246e+04	y	2.479e+04	y	0.91	4.725e+04	4.389e+04	6.60e+00	y	3.89

Totals class: PeCDD EMPC Function: 2 Run #: 15  
 File Name: 010404P4 Sample #: 8 Sample text: P1454\_319\_006 Unit 2 Run 3 Out Air Train

Acquired: 5-APR-01 02:51:16 Processed: 5-APR-01 09:01:14

Total Conc.: 575.30 Unnamed Conc.: 560.685

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
31:11	1.060e+06	n	6.611e+05	n	1.60	1.721e+06	1.721e+06	5.95e+01	y	218
31:42	4.236e+04	y	2.521e+04	n	1.68	6.757e+04	6.757e+04	3.87e+00	y	8.57
32:15	8.155e+05	n	5.155e+05	n	1.58	1.331e+06	1.331e+06	6.58e+01	y	169
32:26	7.179e+04	y	4.406e+04	y	1.63	1.158e+05	1.158e+05	6.01e+00	y	14.7
32:33	3.226e+05	y	2.200e+05	y	1.47	5.426e+05	5.426e+05	2.31e+01	y	68.8
32:48	1.151e+05	y	6.151e+04	n	1.87	1.766e+05	1.569e+05	4.95e+00	y	19.9
33:10	2.295e+05	n	1.487e+05	n	1.54	3.782e+05	3.782e+05	1.60e+01	y	48.0
33:39	7.089e+04	y	4.439e+04	y	1.60	1.153e+05	1.153e+05	5.13e+00	y	14.6
33:46	3.359e+04	y	2.335e+04	y	1.54	5.931e+04	5.931e+04	2.92e+00	y	7.52
34:07	4.015e+04	n	1.896e+04	y	2.12	5.910e+04	4.834e+04	1.91e+00	n	6.13

Totals class: HxCDD EMPC Function: 3 Run #: 15  
 File Name: 010404P4 Sample #: 8 Sample text: P1454\_319\_006 Unit 2 Run 3 Out Air Train

Acquired: 5-APR-01 02:51:16 Processed: 5-APR-01 09:01:14

Total Conc.: 1010.1 Unnamed Conc.: 909.786

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
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35:50	3.003e+05	n	2.226e+05	y	1.35	y	5.229e+05	5.229e+05	2.98e+01	y	71.1	
36:29	2.686e+06	n	2.060e+06	n	1.30	y	4.747e+06	4.747e+06	2.60e+02	y	645	
36:46	6.486e+05	y	5.129e+05	n	1.26	y	1.162e+06	1.162e+06	4.88e+01	y	158	
36:54	7.807e+04	y	6.288e+04	y	1.24	y	1.410e+05	1.410e+05	6.99e+00	y	19.2	
37:33	7.775e+04	y	6.759e+04	y	1.15	y	1.453e+05	1.453e+05	8.48e+00	y	19.1	1,2,3,4,7,8-HxCDD
37:41	1.992e+05	y	1.567e+05	y	1.27	y	3.560e+05	3.560e+05	1.63e+01	y	52.1	1,2,3,6,7,8-HxCDD
37:53	7.126e+04	y	5.055e+04	y	1.41	y	1.218e+05	1.218e+05	5.40e+00	y	16.6	
38:01	1.198e+05	y	1.026e+05	y	1.17	y	2.224e+05	2.224e+05	9.83e+00	y	29.1	1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC                      Function: 4 Run #: 15  
 File Name: 010404P4    Sample #: 8              Sample text: P1454\_319\_006 Unit 2 Run 3 Out Air Train

Acquired: 5-APR-01 02:51:16    Processed: 5-APR-01 09:01:14

Total Conc.: 520.44                      Unnamed Conc.: 259.818

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
40:53	9.082e+05	y	8.635e+05	n	1.05	y	1.772e+06	1.772e+06	6.69e+01	y	260	
42:08	9.194e+05	n	8.579e+05	n	1.07	y	2.777e+06	1.777e+06	5.88e+01	y	261	1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC                      Function: 1 Run #: 15  
 File Name: 010404P4    Sample #: 8              Sample text: P1454\_319\_006 Unit 2 Run 3 Out Air Train

Acquired: 5-APR-01 02:51:16    Processed: 5-APR-01 09:01:14

Total Conc.: 773.28                      Unnamed Conc.: 752.491

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
22:42	2.569e+05	n	3.464e+05	n	0.74	y	6.033e+05	6.033e+05	2.32e+01	y	43.0	
23:17	1.517e+05	n	2.014e+05	n	0.75	y	3.530e+05	3.530e+05	1.48e+01	y	25.2	
23:53	1.323e+05	n	1.999e+05	y	0.66	y	3.322e+05	3.322e+05	1.69e+01	y	23.7	
24:22	7.459e+05	n	9.710e+05	n	0.77	y	1.717e+06	1.717e+06	5.50e+01	y	122	
24:39	1.321e+05	y	1.511e+05	y	0.87	y	2.833e+05	2.833e+05	1.44e+01	y	20.2	
24:46	3.182e+05	y	4.372e+05	y	0.73	y	7.554e+05	7.554e+05	2.49e+01	y	53.9	
25:09	1.520e+05	y	2.121e+05	y	0.72	y	3.641e+05	3.641e+05	1.62e+01	y	26.0	
25:17	1.007e+05	y	1.275e+05	y	0.79	y	2.282e+05	2.282e+05	1.25e+01	y	16.3	
25:26	1.718e+05	n	2.426e+05	n	0.71	y	4.144e+05	4.144e+05	2.05e+01	y	29.6	
25:48	1.449e+05	y	2.011e+05	n	0.72	y	3.460e+05	3.460e+05	1.45e+01	y	24.7	
25:56	2.049e+05	y	2.630e+05	y	0.78	y	4.679e+05	4.679e+05	2.63e+01	y	33.4	
26:05	2.521e+05	y	3.062e+05	y	0.82	y	5.583e+05	5.583e+05	2.38e+01	y	39.8	
26:11	6.002e+05	y	7.726e+05	y	0.78	y	1.373e+06	1.373e+06	6.57e+01	y	98.0	
26:37	1.860e+05	y	2.627e+05	y	0.71	y	4.486e+05	4.486e+05	2.16e+01	y	32.0	
26:43	3.322e+04	y	3.848e+04	y	0.86	y	7.169e+04	7.169e+04	4.95e+00	y	5.12	
26:53	1.151e+05	n	1.380e+05	y	0.83	y	2.532e+05	2.532e+05	1.34e+01	y	18.1	
27:04	1.585e+05	y	2.316e+05	y	0.68	y	3.901e+05	3.901e+05	1.64e+01	y	27.8	
27:17	1.711e+05	y	2.272e+05	y	0.75	y	3.983e+05	3.983e+05	1.88e+01	y	28.4	
27:23	1.236e+05	y	1.518e+05	y	0.81	y	2.754e+05	2.754e+05	1.54e+01	y	19.7	
27:29	1.251e+05	y	1.663e+05	y	0.75	y	2.914e+05	2.914e+05	1.60e+01	y	20.8	2,3,7,8-TCDF
27:51	3.041e+05	n	3.779e+05	n	0.80	y	6.820e+05	6.820e+05	3.33e+01	y	48.7	

28:06	2.441e+04	n	4.576e+04	y	0.53	7.017e+04	5.612e+04	3.67e+00	y	4.00
28:22	3.069e+04	y	4.123e+04	y	0.74	7.191e+04	7.191e+04	3.77e+00	y	5.13
29:27	4.780e+04	n	5.521e+04	n	0.87	1.030e+05	1.030e+05	4.43e+00	y	7.35

Totals class: 1st Fnc.PeCDF EMPC                      Function: 1 Run #: 15  
 File Name: 010404P4 Sample #: 8                      Sample text: P1454\_319\_006 Unit 2 Run 3 Out Air Train

Acquired: 5-APR-01 02:51:16      Processed: 5-APR-01 09:01:14

Total Conc.: 51.320                      Unnamed Conc.: 51.320

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
29:26	3.942e+05	n	2.642e+05	n	1.49	6.584e+05	6.584e+05	2.38e+01	y	51.3

Totals class: PeCDF EMPC                                  Function: 2 Run #: 15  
 File Name: 010404P4 Sample #: 8                      Sample text: P1454\_319\_006 Unit 2 Run 3 Out Air Train

Acquired: 5-APR-01 02:51:16      Processed: 5-APR-01 09:01:14

Total Conc.: 436.60                      Unnamed Conc.: 372.660

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
30:57	5.417e+05	y	3.359e+05	y	1.61	8.776e+05	8.776e+05	3.35e+01	y	68.4
31:06	6.844e+05	y	4.498e+05	y	1.52	1.134e+06	1.134e+06	4.22e+01	y	88.4
31:13	1.621e+05	y	1.134e+05	y	1.43	2.755e+05	2.755e+05	1.77e+01	y	21.5
31:18	5.255e+04	y	3.493e+04	n	1.50	8.748e+04	8.748e+04	7.56e+00	y	6.82
31:33	8.302e+04	y	5.575e+04	y	1.49	1.388e+05	1.388e+05	6.48e+00	y	10.8
31:45	4.832e+05	y	2.971e+05	y	1.63	7.803e+05	7.803e+05	3.20e+01	y	60.8
31:51	1.271e+05	y	8.903e+04	y	1.43	2.162e+05	2.162e+05	1.31e+01	y	16.9
32:01	1.007e+05	y	7.263e+04	y	1.39	1.734e+05	1.734e+05	1.01e+01	y	13.5
32:13	2.020e+05	n	1.248e+05	n	1.62	3.268e+05	3.268e+05	1.78e+01	y	25.7
32:30	3.136e+05	y	1.903e+05	n	1.65	5.038e+05	5.038e+05	1.88e+01	y	39.3
33:12	3.182e+05	y	2.133e+05	y	1.49	5.316e+05	5.316e+05	3.14e+01	y	41.4
33:19	3.003e+05	y	1.943e+05	y	1.55	4.946e+05	4.946e+05	2.61e+01	y	38.3
33:39	3.770e+04	y	3.249e+04	y	1.16	7.020e+04	6.202e+04	5.28e+00	y	4.83

*2.87 PeCDF  
0.373 total*

Totals class: HxCDF EMPC                                  Function: 3 Run #: 15  
 File Name: 010404P4 Sample #: 8                      Sample text: P1454\_319\_006 Unit 2 Run 3 Out Air Train

Acquired: 5-APR-01 02:51:16      Processed: 5-APR-01 09:01:14

Total Conc.: 340.66                      Unnamed Conc.: 219.906

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
35:11	2.289e+05	n	1.885e+05	n	1.21	4.174e+05	4.174e+05	3.21e+01	y	35.2
35:23	6.746e+05	n	5.533e+05	y	1.22	1.228e+06	1.228e+06	9.23e+01	y	104
35:37	6.707e+04	y	4.678e+04	y	1.43	1.138e+05	1.048e+05	6.39e+00	y	8.83

35:48	8.041e+04	n	6.353e+04	y	1.27	y	1.439e+05	1.439e+05	9.72e+00	y	12.1	
36:01	3.777e+04	n	2.958e+04	n	1.28	y	6.735e+04	6.735e+04	5.60e+00	y	5.68	
36:27	2.206e+05	y	1.884e+05	y	1.17	y	4.089e+05	4.089e+05	2.87e+01	y	34.5	
36:33	2.331e+05	y	1.689e+05	y	1.38	y	4.020e+05	4.020e+05	2.82e+01	y	34.1	1,2,3,4,7,8-HxCDF
36:42	2.613e+05	y	2.158e+05	y	1.21	y	4.771e+05	4.771e+05	3.13e+01	y	37.0	1,2,3,6,7,8-HxCDF
36:51	4.645e+04	y	3.665e+04	y	1.27	y	8.310e+04	8.310e+04	5.11e+00	y	7.01	
37:00	3.704e+04	y	3.009e+04	y	1.23	y	6.713e+04	6.713e+04	5.61e+00	y	5.66	
37:08	4.939e+04	y	3.859e+04	y	1.28	y	8.798e+04	8.798e+04	5.48e+00	y	7.42	
37:22	2.723e+05	n	2.263e+05	n	1.20	y	4.986e+05	4.986e+05	3.31e+01	y	41.1	2,3,4,6,7,8-HxCDF
38:27	5.373e+04	y	3.776e+04	n	1.42	y	9.148e+04	9.148e+04	4.29e+00	y	8.62	1,2,3,7,8,9-HxCDF

Totals class: HpCDF EMPC

Function: 4 Run #: 15

File Name: 010404P4 Sample #: 8

Sample text: P1454\_319\_006 Unit 2 Run 3 Out Air Train

Acquired: 5-APR-01 02:51:16

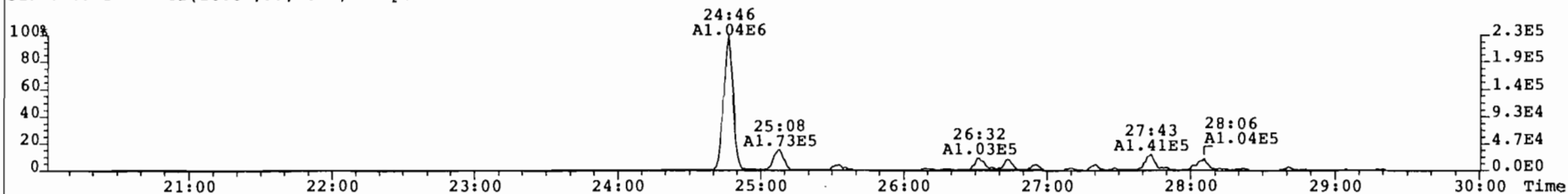
Processed: 5-APR-01 09:01:14

Total Conc.: 177.93

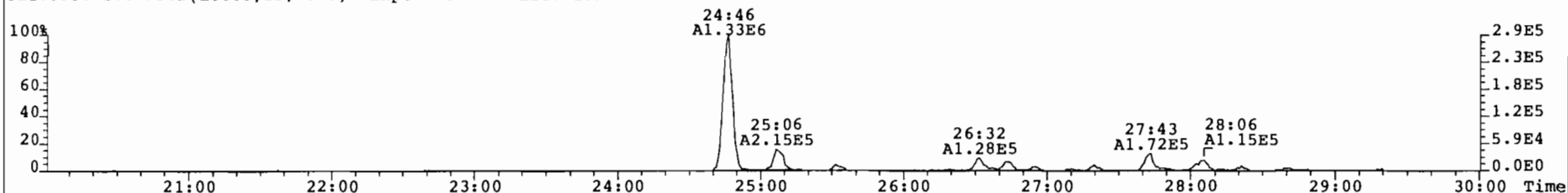
Unnamed Conc.: 40.128

RT	m1	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
40:26	6.715e+05	n	6.321e+05	n	1.06	y	1.304e+06	1.304e+06	8.52e+01	y	126	1,2,3,4,6,7,8-HpCDF
40:53	1.175e+05	y	9.859e+04	y	1.19	y	2.161e+05	2.161e+05	1.23e+01	y	22.6	
41:08	1.046e+05	y	8.199e+04	y	1.28	n	1.866e+05	1.673e+05	1.19e+01	y	17.5	
42:58	5.669e+04	y	4.893e+04	y	1.16	y	1.056e+05	1.056e+05	6.23e+00	y	12.1	1,2,3,4,7,8,9-HpCDF

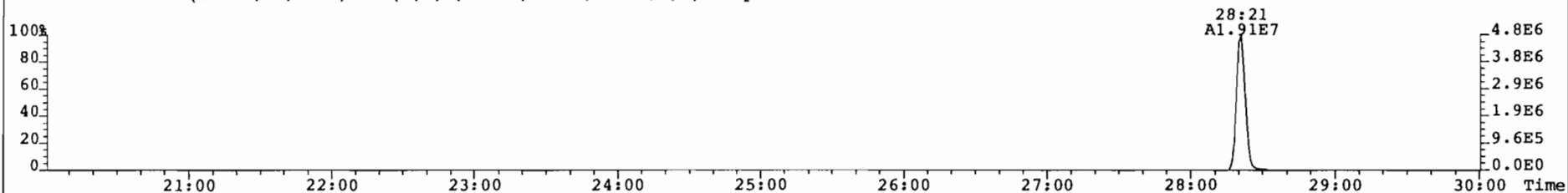
File: 010404P4 Acq: 5-APR-2001 02:51:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 8 Text: P1454\_319\_006 Unit 2 Run 3 Out Air Train Vial# 26 File Text: AAP DB5  
319.8965 S:8 BSub(10000,15,-3.0) Expt: OCDD Noise: 245



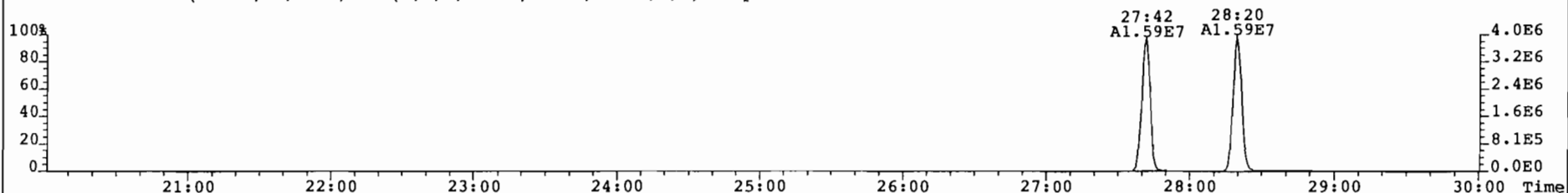
321.8936 S:8 BSub(10000,15,-3.0) Expt: OCDD Noise: 159



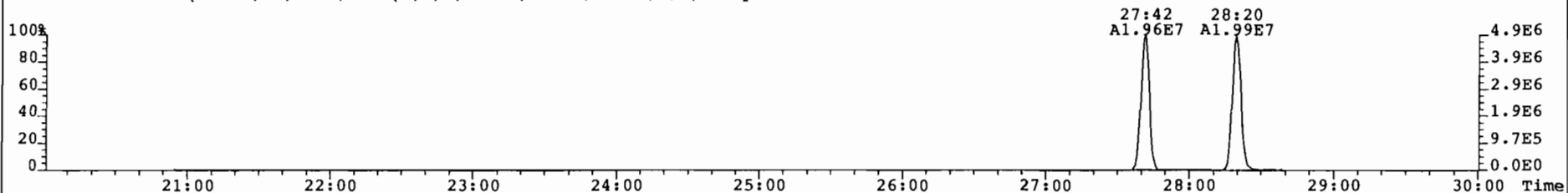
327.8850 S:8 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 296



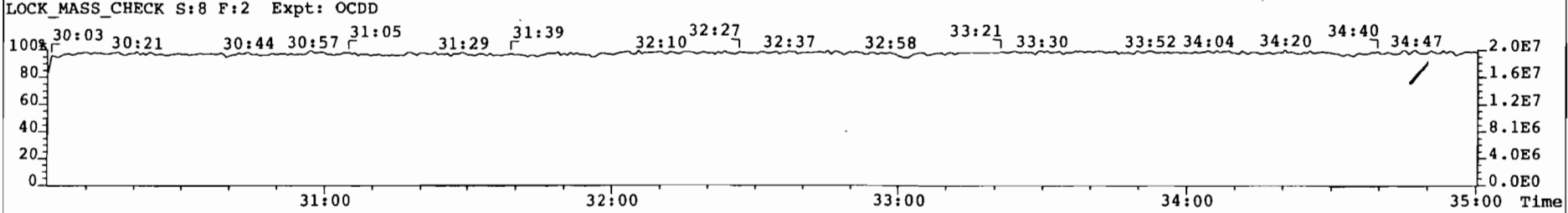
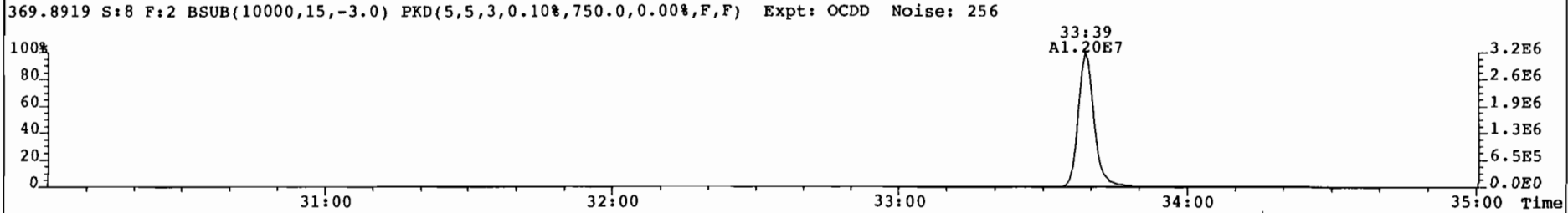
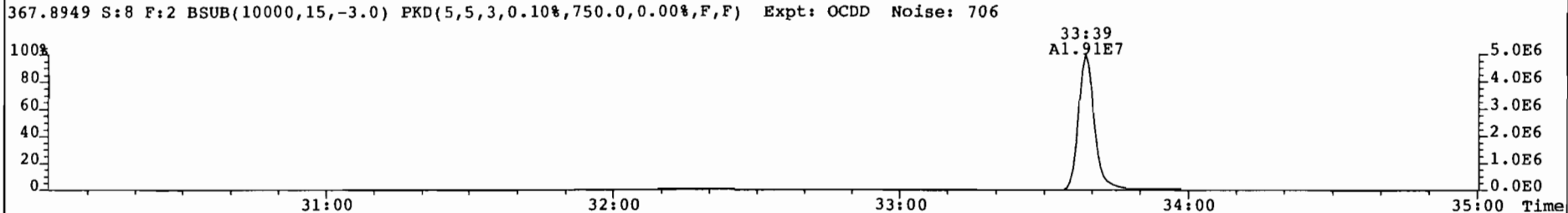
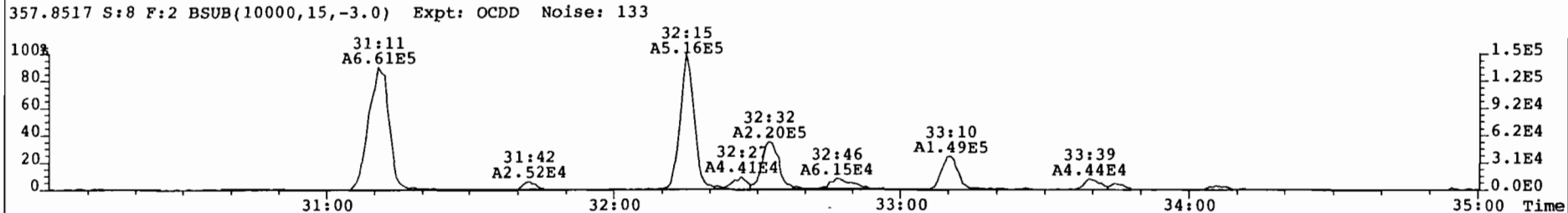
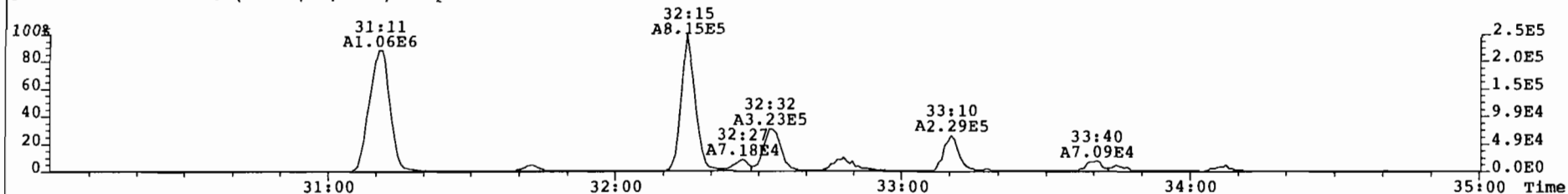
331.9368 S:8 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1389



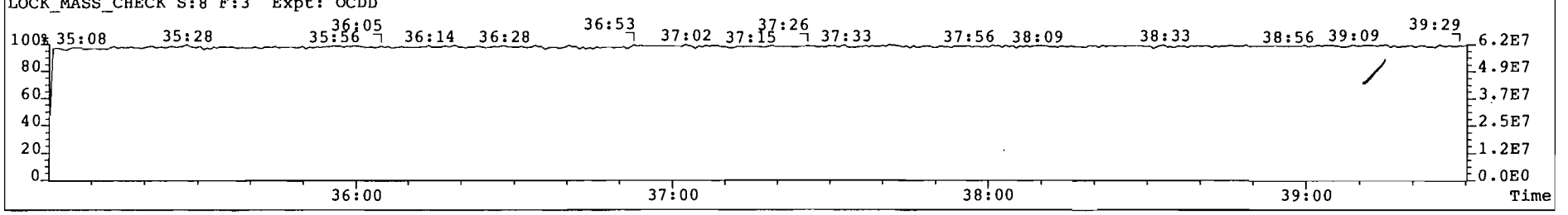
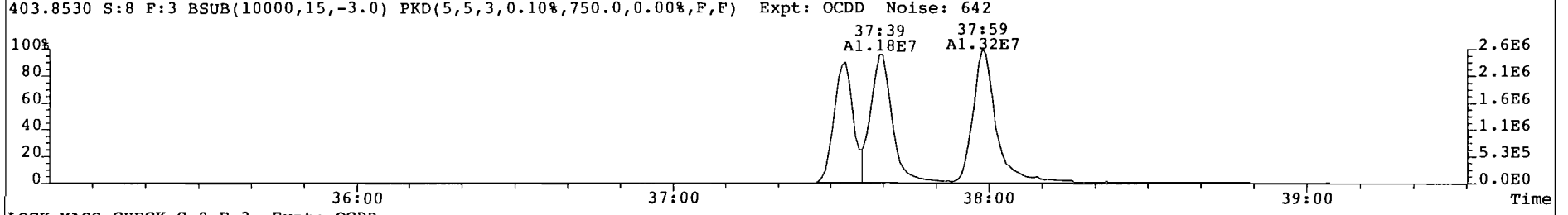
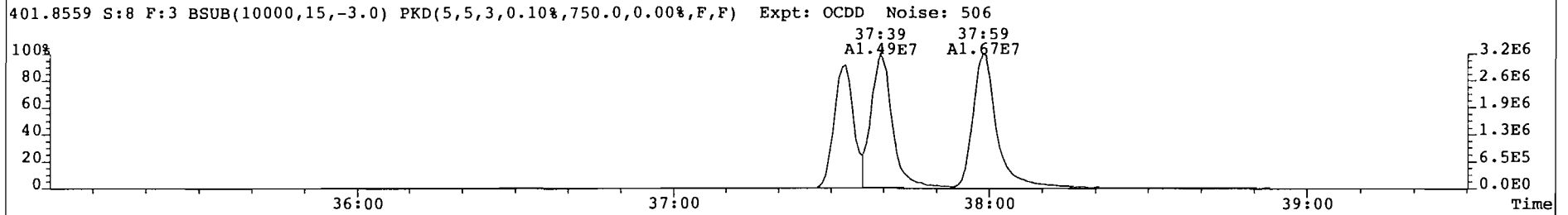
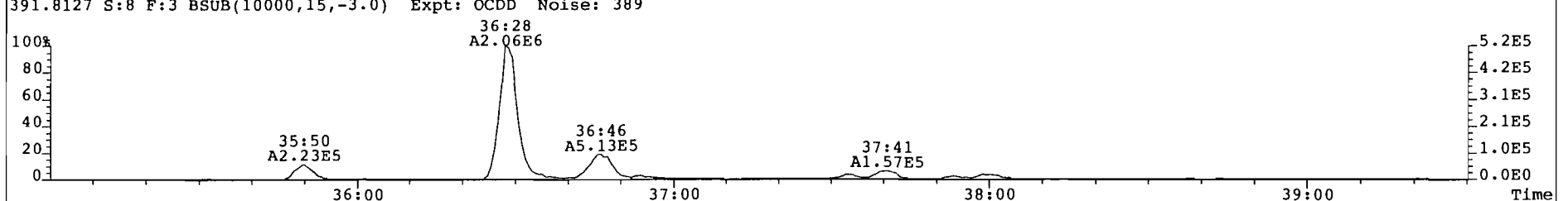
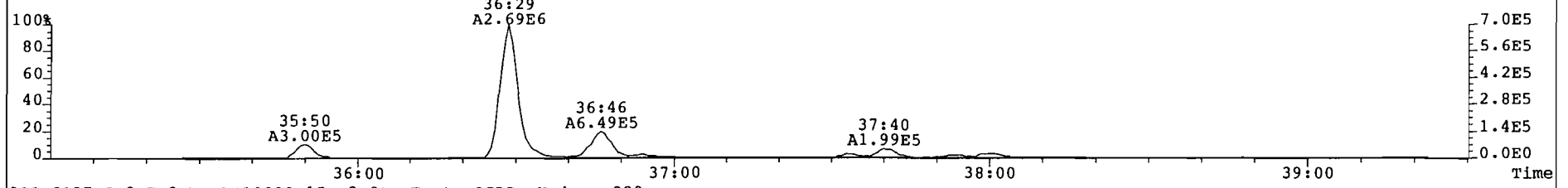
333.9339 S:8 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 717



File: 010404P4 Acq: 5-APR-2001 02:51:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 8 Text: P1454\_319\_006 Unit 2 Run 3 Out Air Train Vial# 26 File Text: AAP DB5  
355.8546 S:8 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 270

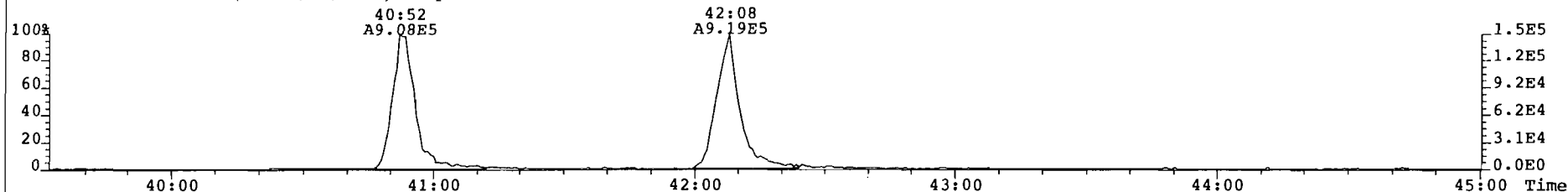


File: 010404P4 Acq: 5-APR-2001 02:51:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 8 Text: P1454\_319\_006 Unit 2 Run 3 Out Air Train Vial# 26 File Text: AAP DB5  
389.8156 S:8 F:3 BSUB(10000,15,-3.0) Expt: OCDD Noise: 696

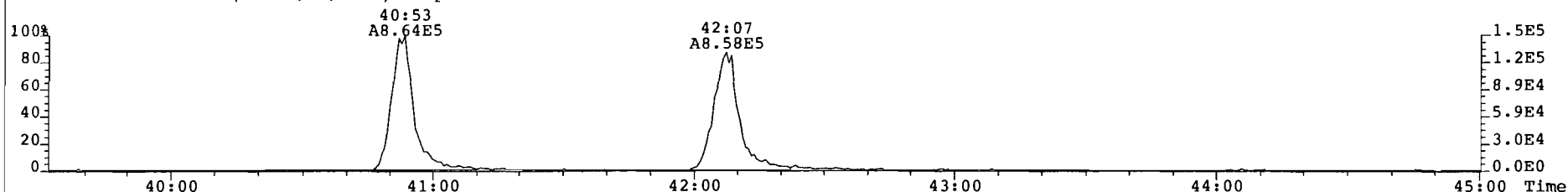




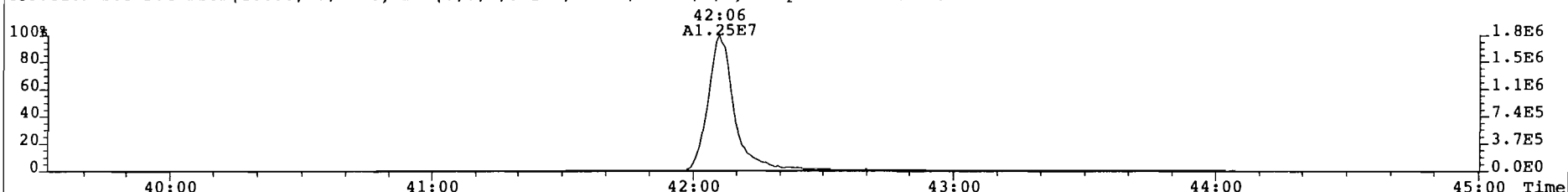
File: 010404F4 Acq: 5-APR-2001 02:51:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 8 Text: P1454 319 006 Unit 2 Run 3 Out Air Train Vial# 26 File Text: AAP DB5  
423.7767 S:8 F:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 301



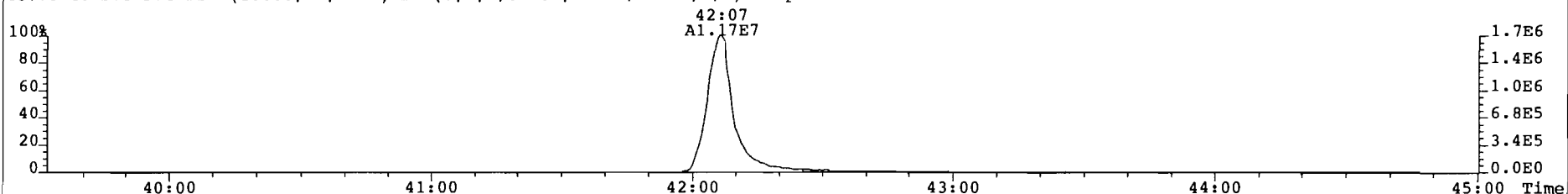
425.7737 S:8 F:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 231



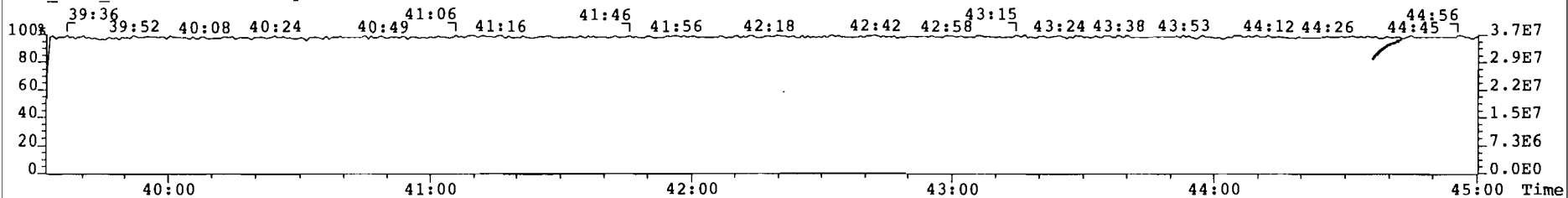
435.8169 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1823



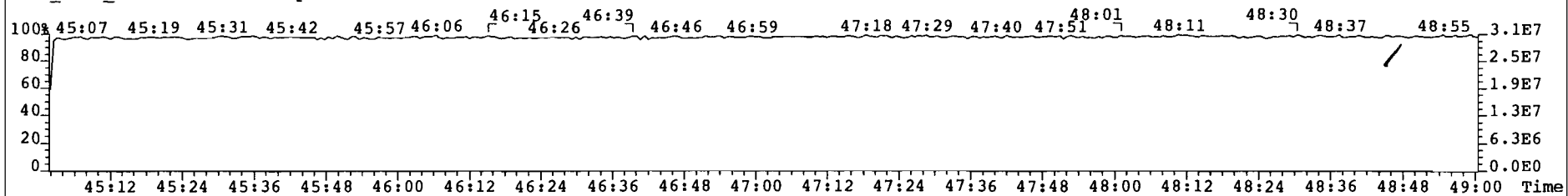
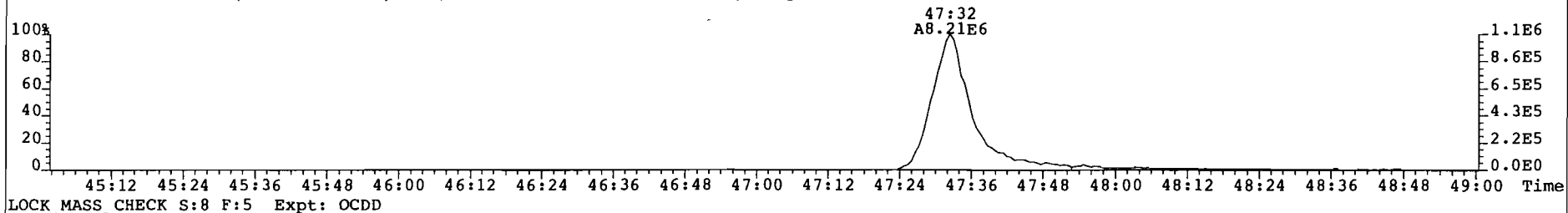
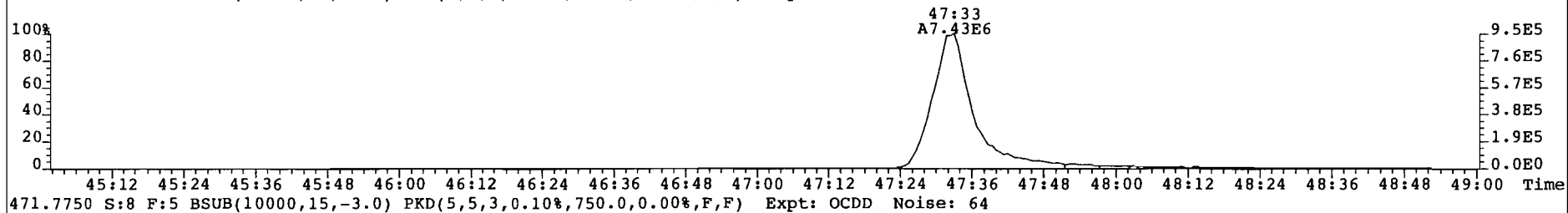
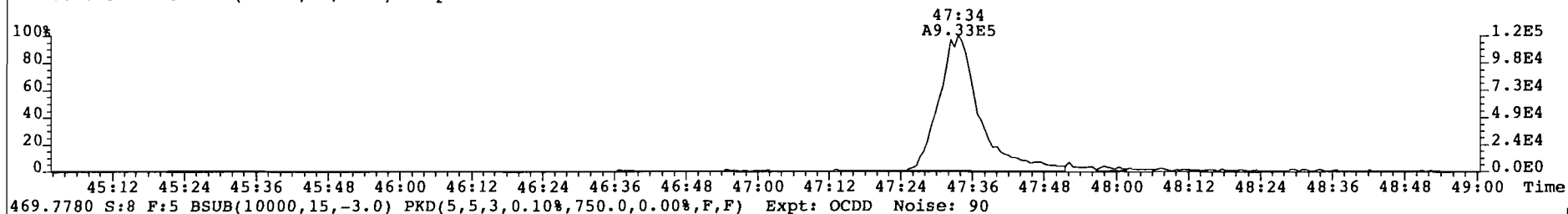
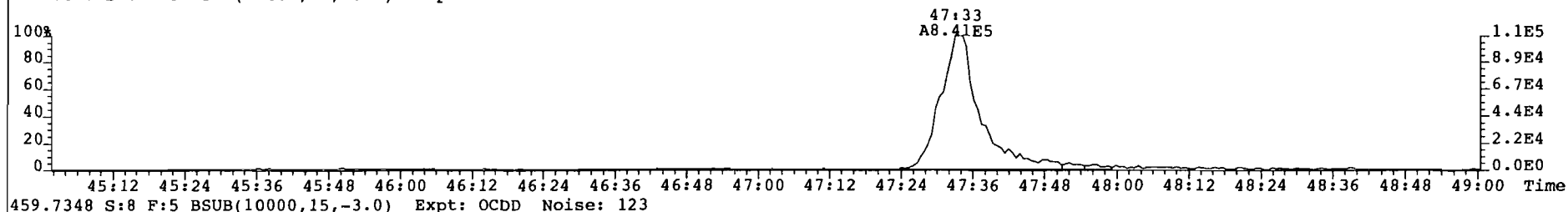
437.8140 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 779



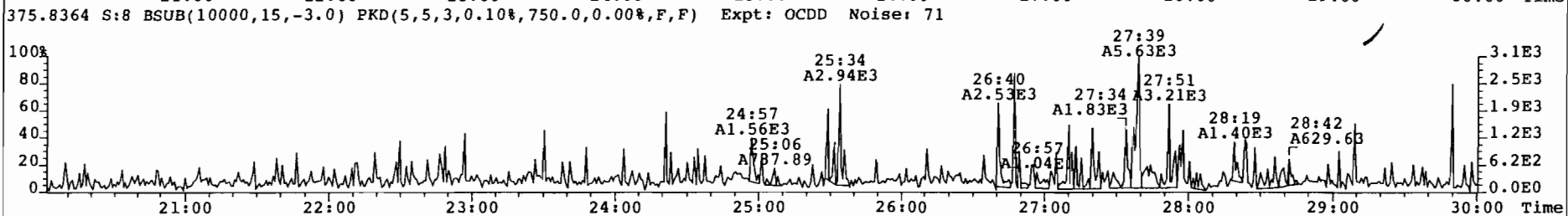
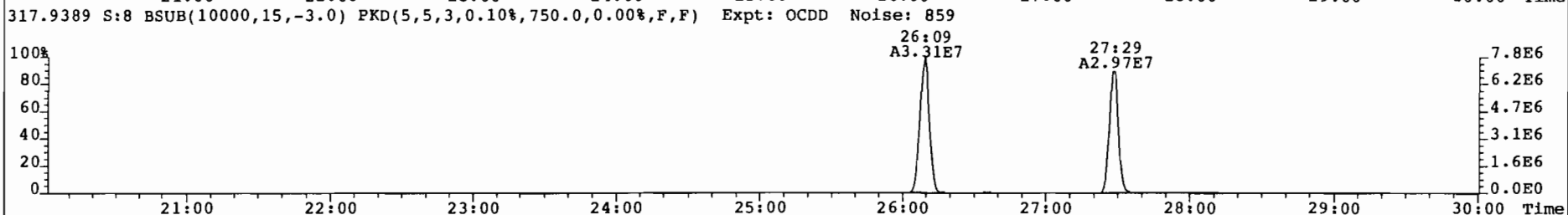
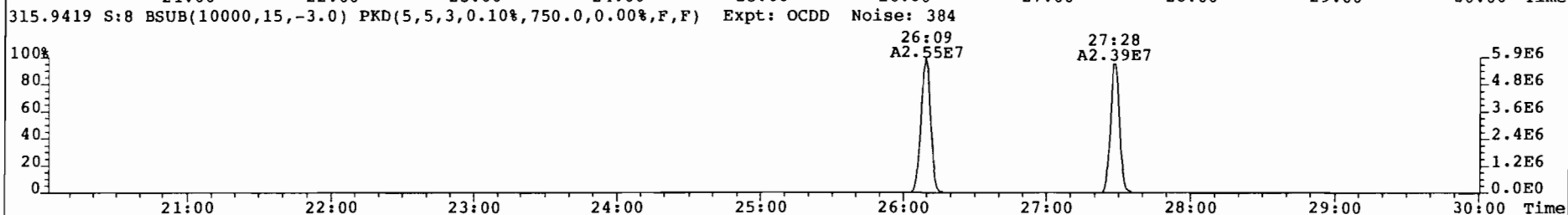
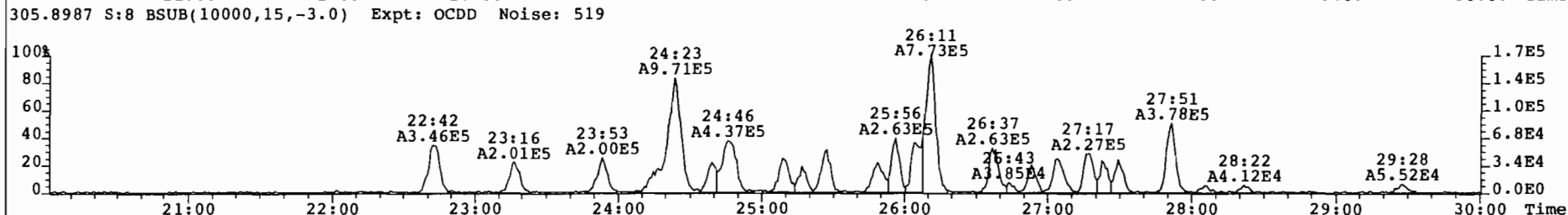
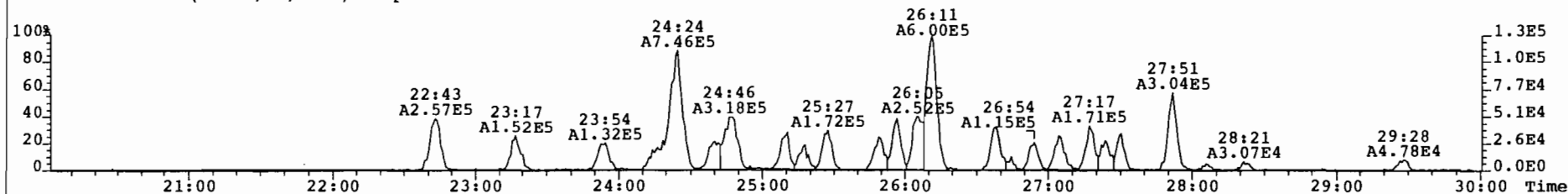
LOCK MASS CHECK S:8 F:4 Expt: OCDD



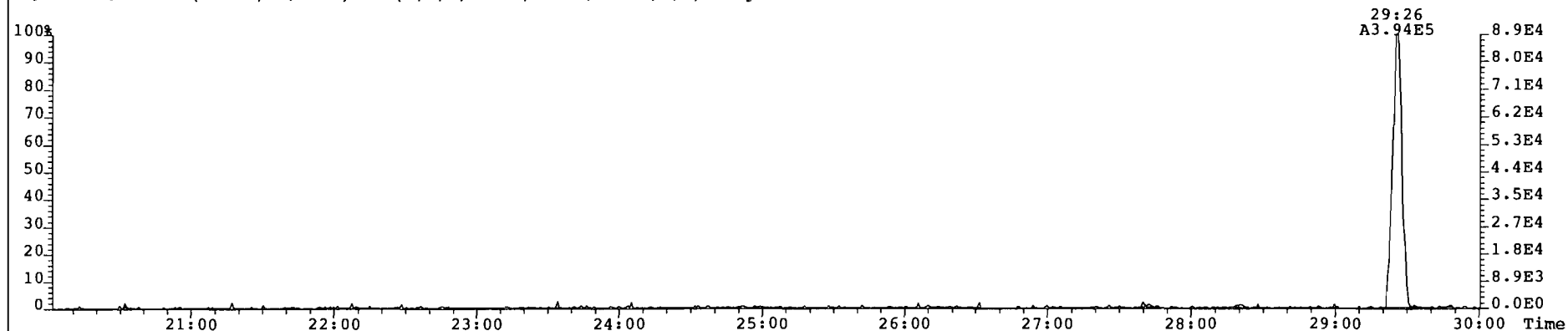
File: 010404P4 Acq: 5-APR-2001 02:51:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 8 Text: P1454\_319\_006 Unit 2 Run 3 Out Air Train Vial# 26 File Text: AAP DB5  
457.7377 S:8 F:5 BSUB(10000,15,-3.0) Expt: OCDD Noise: 235



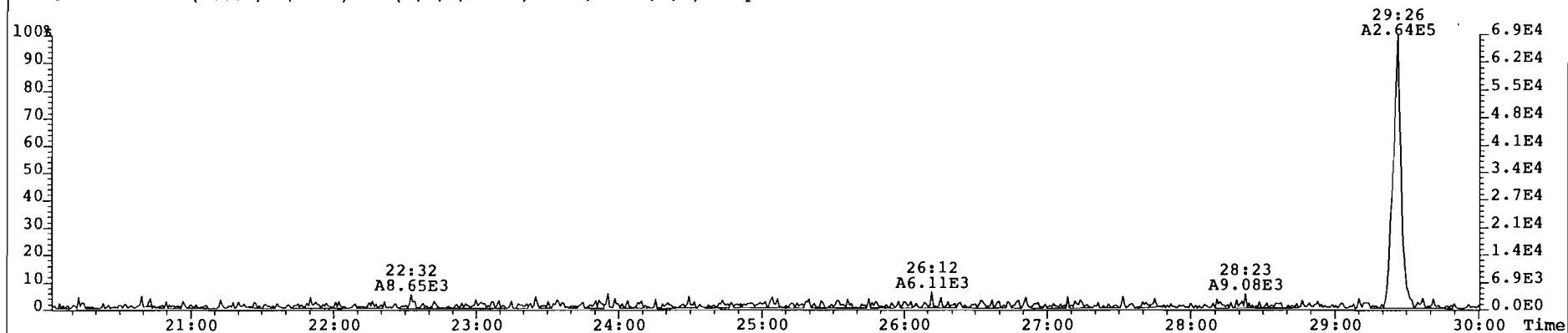
File: 010404P4 Acq: 5-APR-2001 02:51:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 8 Text: P1454\_319\_006 Unit 2 Run 3 Out Air Train Vial# 26 File Text: AAP DB5  
303.9016 S:8 BSUB(10000,15,-3.0) Expt: OCDD Noise: 215



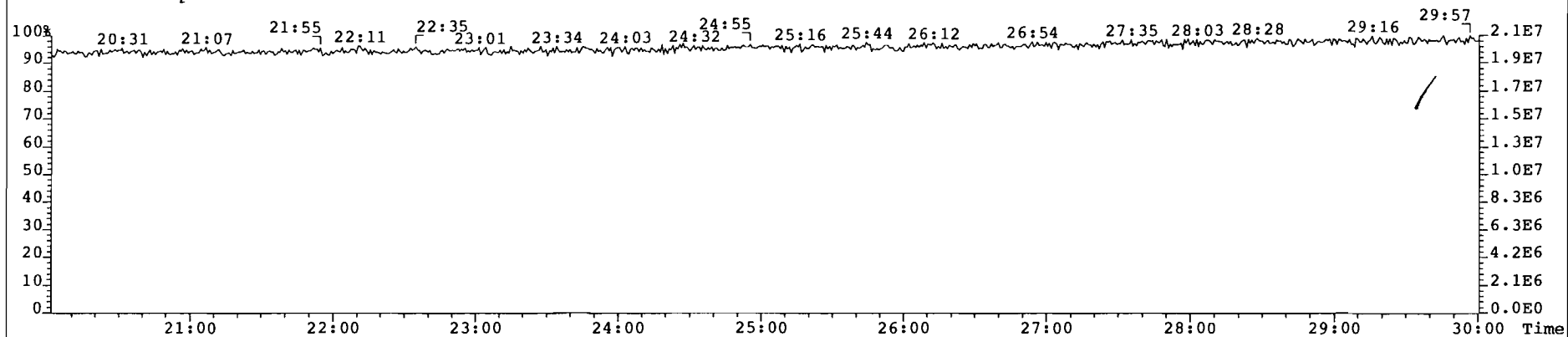
File: 010404P4 Acq: 5-APR-2001 02:51:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 8 Text: Pl454\_319\_006 Unit 2 Run 3 Out Air Train Vial# 26 File Text: AAP DB5  
339.8597 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 71



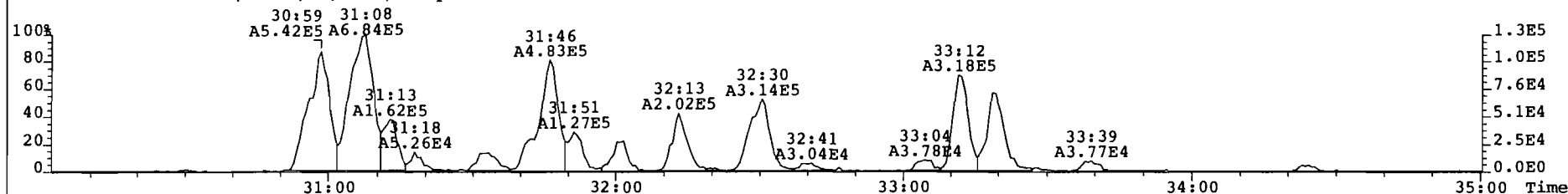
341.8568 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 263



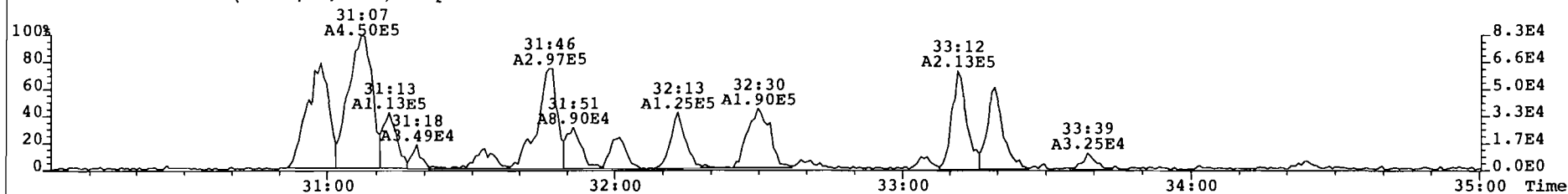
316.9824 S:8 Expt: OCDD



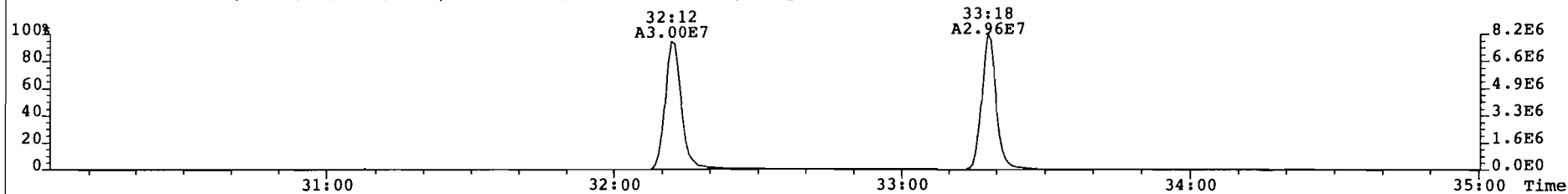
File: 010404P4 Acq: 5-APR-2001 02:51:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 8 Text: P1454 319 006 Unit 2 Run 3 Out Air Train Vial# 26 File Text: AAP DB5  
339.8597 S:8 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 196



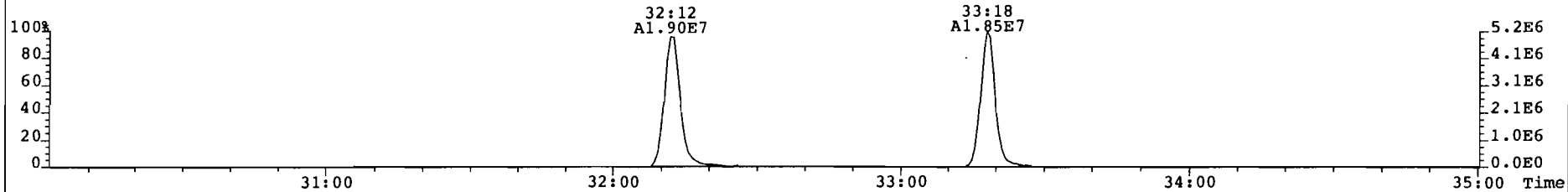
341.8568 S:8 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 422



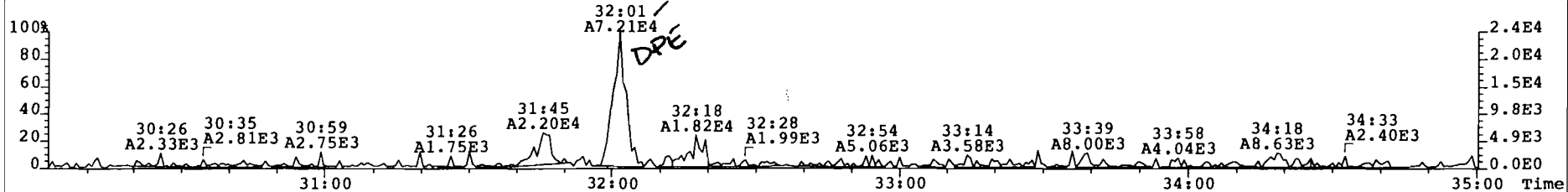
351.9000 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 448



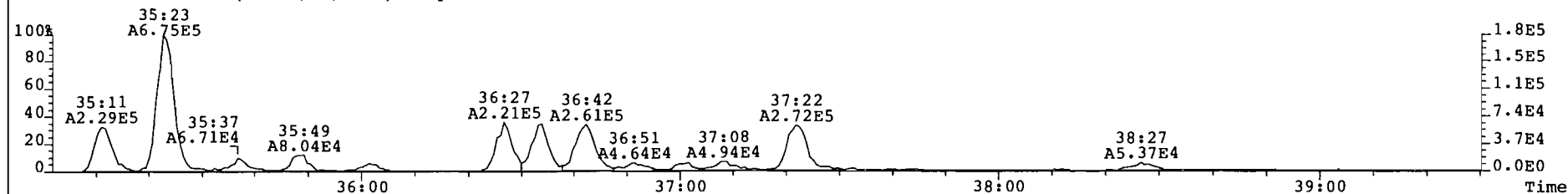
353.8970 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 529



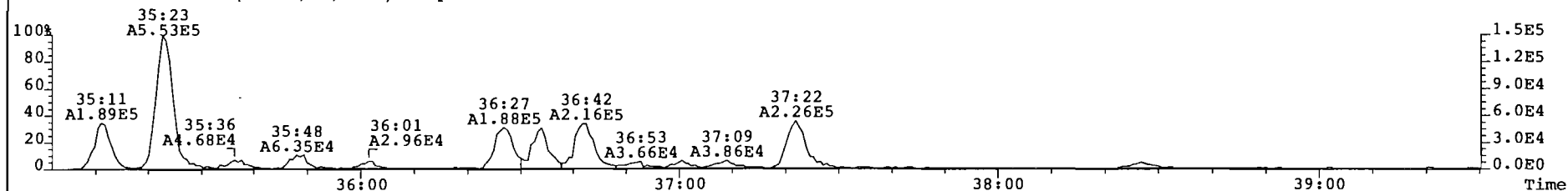
409.7974 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 143



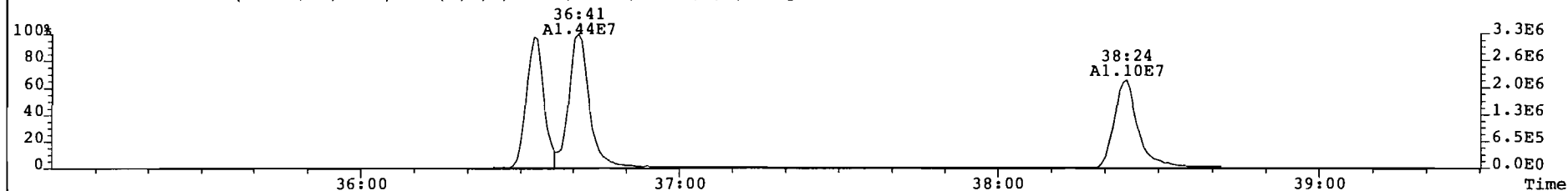
File: 010404P4 Acq: 5-APR-2001 02:51:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 8 Text: P1454\_319.006 Unit 2 Run 3 Out Air Train Vial# 26 File Text: AAP DB5  
373.8207 S:8 F:3 BSUB(10000,15,-3.0) Expt: OCDD Noise: 386



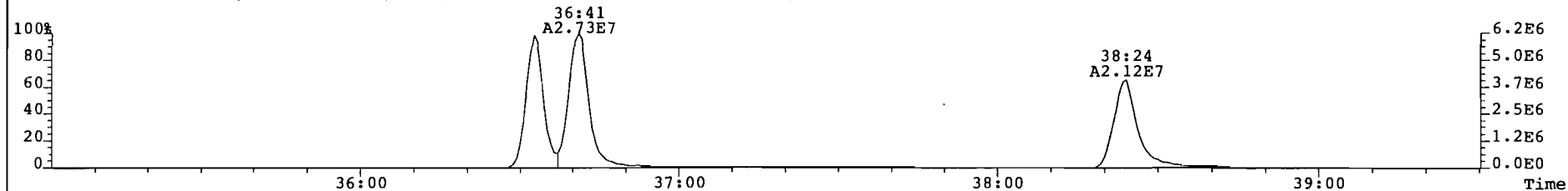
375.8178 S:8 F:3 BSUB(10000,15,-3.0) Expt: OCDD Noise: 311



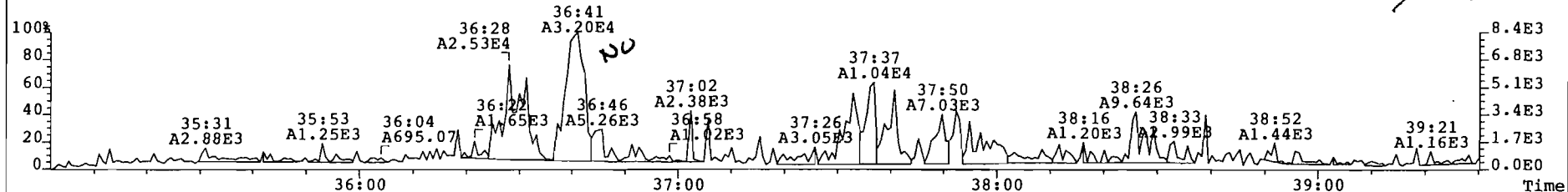
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 3919



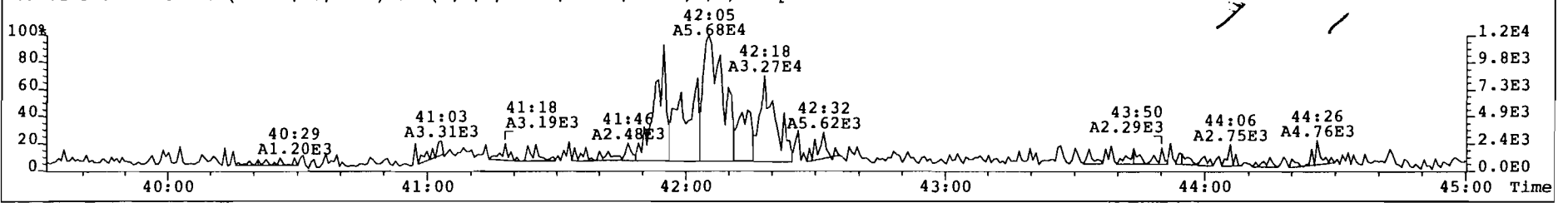
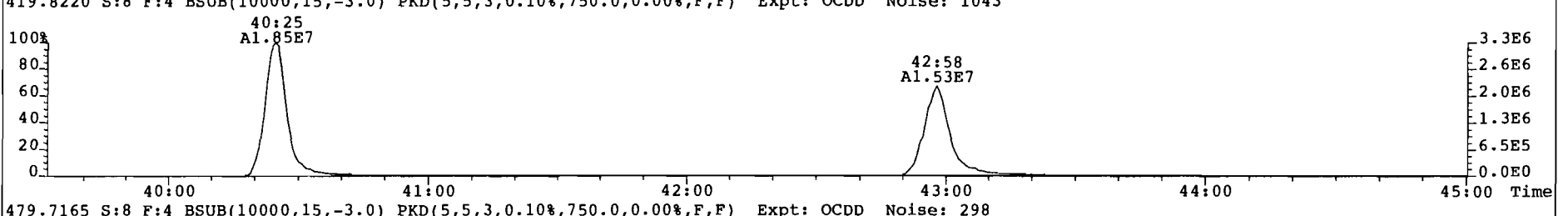
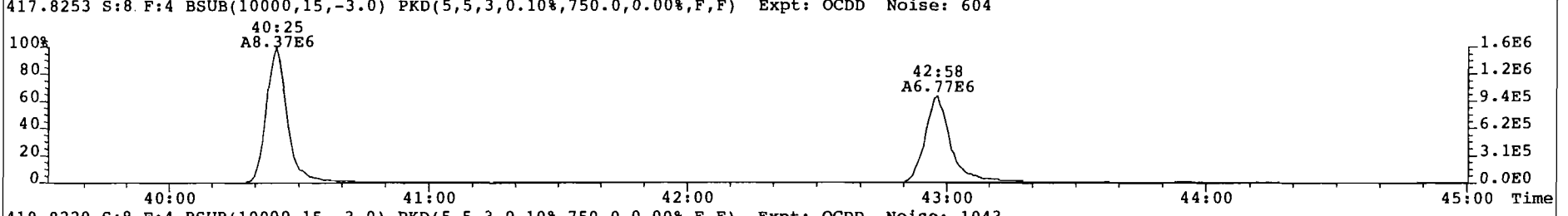
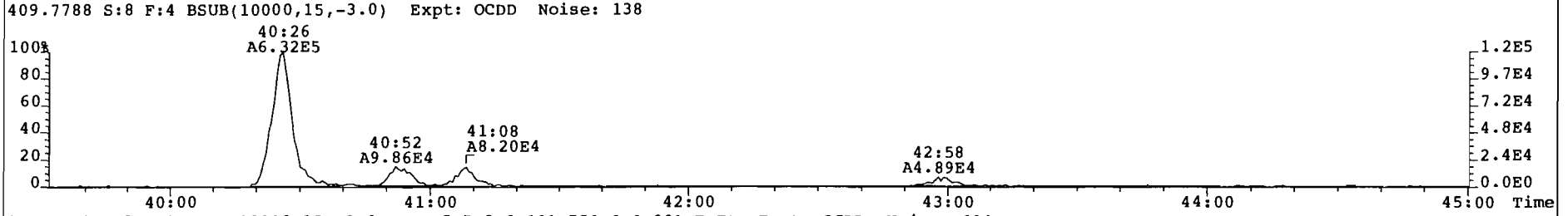
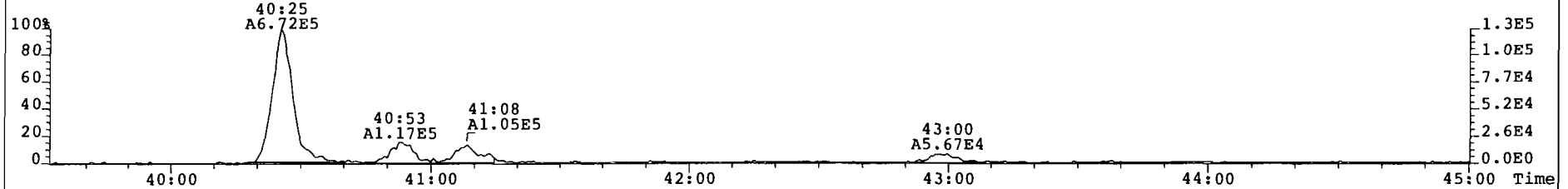
385.8610 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 2040



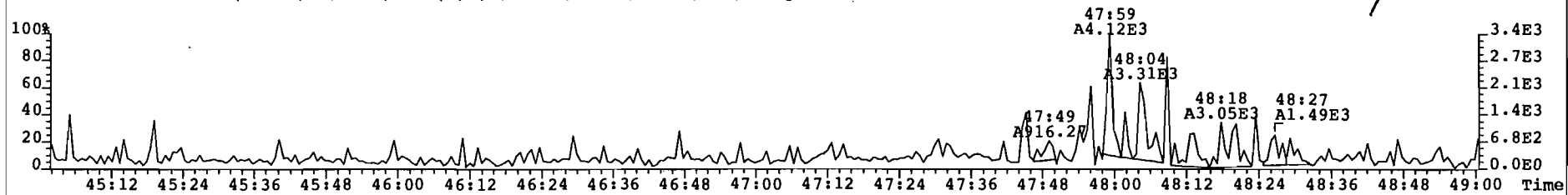
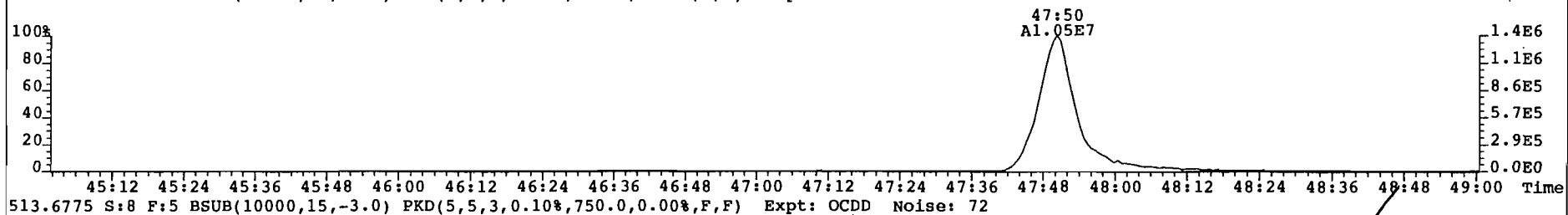
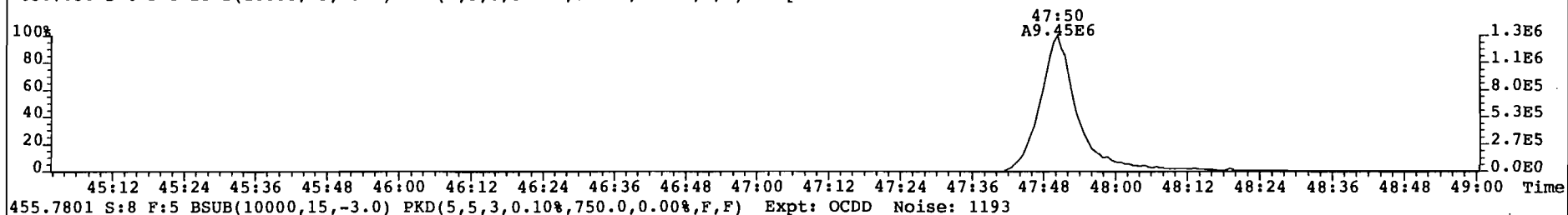
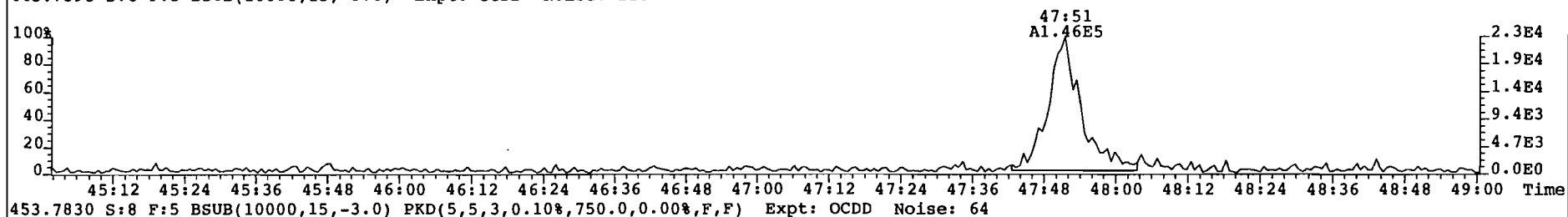
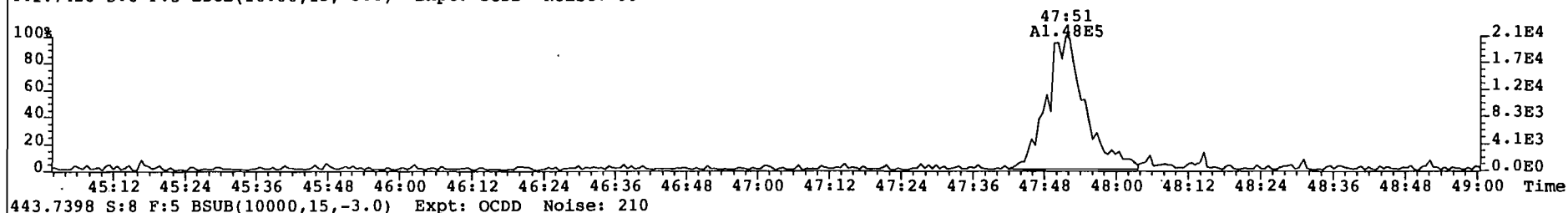
445.7555 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 193



File: 010404P4 Acq: 5-APR-2001 02:51:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 8 Text: P1454 319\_006 Unit 2 Run 3 Out Air Train Vial# 26 File Text: AAP DB5  
407.7818 S:8 F:4 BSub(10000,15,-3.0) Expt: OCDD Noise: 290



File: 010404P4 Acq: 5-APR-2001 02:51:16 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 8 Text: P1454 319 006 Unit 2 Run 3 Out Air Train Vial# 26 File Text: AAP DB5  
441.7428 S:8 F:5 BSUB(10000,15,-3.0) Expt: OCDD Noise: 99






# Sample ID: Unit 3 Run 1 Out

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_007	Date Extracted:	2 Apr 01
Date Collected:	26 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	9.45			A	91.7	103	109
1,2,3,7,8-PeCDD	53.3				99.1	99.6	109
1,2,3,4,7,8-HxCDD	81.4				102	87.9	109
1,2,3,6,7,8-HxCDD	268				102	87.9	109
1,2,3,7,8,9-HxCDD	127				102	87.9	109
1,2,3,4,6,7,8-HpCDD	1520				92.4	94.3	109
OCDD	3040			B	67.6	94.3	109
2,3,7,8-TCDF	60.8				88.1	103	109
1,2,3,7,8-PeCDF	99.7				91.2	99.6	109
2,3,4,7,8-PeCDF	206				91.2	99.6	109
1,2,3,4,7,8-HxCDF	172				118	91.8	109
1,2,3,6,7,8-HxCDF	177				118	91.8	109
2,3,4,6,7,8-HxCDF	217				118	91.8	109
1,2,3,7,8,9-HxCDF	47.5			A	118	91.8	109
1,2,3,4,6,7,8-HpCDF	844				105	94.3	109
1,2,3,4,7,8,9-HpCDF	43.1			A	105	94.3	109
OCDF	170				83.8	94.3	109

Totals & TEQs		ALTA ANALYTICAL PERSPECTIVES					
TCDDs	822	 <p>2714 Exchange Drive Wilmington North Carolina 28405 USA</p> <p>Tel: 910 794-1613 Fax: 910 794-3919 e-mail: ytondeur@cs.com web: www.ultratrace.com</p>					
PeCDDs	2120						
HxCDDs	4150						
HpCDDs	3010						
TCDFs	2480						
PeCDFs	2290						
HxCDFs	1870						
HpCDFs	1100						
<b>Total PCDD/Fs</b>	<b>21100</b>						
<b>TEQ (ND=0)</b>	<b>286</b>						
<b>TEQ (ND=DL/2)</b>	<b>286</b>	<b>21100</b>	<b>286</b>	<b>286</b>	<b>ITEF</b>	<b>ITEF</b>	

Reviewer: *Cl*  
Date: *18 Apr 01*


*52*

# Sample ID: Unit 3 Run 1 Out - confirmation results incorporated

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_007	Date Extracted:	2 Apr 01
Date Collected:	26 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	9.45			A	91.7	103	109
1,2,3,7,8-PeCDD	53.3				99.1	99.6	109
1,2,3,4,7,8-HxCDD	81.4				102	87.9	109
1,2,3,6,7,8-HxCDD	268				102	87.9	109
1,2,3,7,8,9-HxCDD	127				102	87.9	109
1,2,3,4,6,7,8-HpCDD	1520				92.4	94.3	109
OCDD	3040			B	67.6	94.3	109
2,3,7,8-TCDF	62.6				88.1	103	109
1,2,3,7,8-PeCDF	99.7				91.2	99.6	109
2,3,4,7,8-PeCDF	206				91.2	99.6	109
1,2,3,4,7,8-HxCDF	172				118	91.8	109
1,2,3,6,7,8-HxCDF	177				118	91.8	109
2,3,4,6,7,8-HxCDF	217				118	91.8	109
1,2,3,7,8,9-HxCDF	47.5			A	118	91.8	109
1,2,3,4,6,7,8-HpCDF	844				105	94.3	109
1,2,3,4,7,8,9-HpCDF	43.1			A	105	94.3	109
OCDF	170				83.8	94.3	109

Totals & TEQs		 <b>ALTA ANALYTICAL PERSPECTIVES</b> 2714 Exchange Drive Wilmington North Carolina 28405 USA  Tel: 910 794-1613 Fax: 910 794-3919 e-mail: ytondeur@cs.com web: www.ultratrace.com					
TCDDs	822						
PeCDDs	2120						
HxCDDs	4150						
HpCDDs	3010						
TCDFs	2480						
PeCDFs	2290						
HxCDFs	1870						
HpCDFs	1100						
<b>Total PCDD/Fs</b>	<b>21100</b>		<b>21100</b>				
<b>TEQ (ND=0)</b>	<b>287</b>		<b>287</b>	ITEF			
<b>TEQ (ND=DL/2)</b>	<b>287</b>		<b>287</b>	ITEF			

Reviewer CL  
 Date 20 Apr 01 SC

Client ID: Unit 3 Run 1 Out  
Lab ID: P1454\_319\_007

Filename: 010405P1  
GC Column ID: db-5

S: 2 Acq: 5-APR-01 05:40:51  
ICal: MM1\_M23\_0 wt/vol: 1.000

ConCal: 010405P1-  
EndCal: 010405P1-

Name	Resp	RA	RRF	RT	Conc	Qualif.	CDE	noise	Fac	DL
2,3,7,8-TCDD	1.08e+05	0.62 <sup>n</sup>	1.26	28:20	9.21			911	2.5	1.38
1,2,3,7,8-PeCDD	4.43e+05	1.54 <sup>y</sup>	1.01	33:40	53.3			1691	2.5	5.26
1,2,3,4,7,8-HxCDD	6.50e+05	1.29 <sup>y</sup>	1.14	37:33	81.4			3334	2.5	11.6
1,2,3,6,7,8-HxCDD	1.93e+06	1.25 <sup>y</sup>	1.02	37:41	268			3334	2.5	12.9
1,2,3,7,8,9-HxCDD	1.02e+06	1.18 <sup>y</sup>	1.14	38:01	127			3334	2.5	11.6
1,2,3,4,6,7,8-HpCDD	1.06e+07	1.07 <sup>y</sup>	1.13	42:09	1520			4034	2.5	21.7
OCDD	1.14e+07	0.92 <sup>y</sup>	1.03	47:35	3040			1088	2.5	10.5
2,3,7,8-TCDF	8.95e+05	0.80 <sup>y</sup>	1.05	27:29	60.8 <sup>OK</sup>			2392	2.5	3.07
1,2,3,7,8-PeCDF	1.36e+06	1.54 <sup>y</sup>	1.04	32:13	99.7			2194	2.5	3.94
2,3,4,7,8-PeCDF	2.85e+06	1.55 <sup>y</sup>	1.05	33:19	206			2194	2.5	3.88
1,2,3,4,7,8-HxCDF	2.18e+06	1.24 <sup>y</sup>	1.13	36:33	172			2578	2.5	3.40
1,2,3,6,7,8-HxCDF	2.45e+06	1.26 <sup>y</sup>	1.24	36:42	177			2578	2.5	3.11
2,3,4,6,7,8-HxCDF	2.82e+06	1.23 <sup>y</sup>	1.16	37:22	217			2578	2.5	3.30
1,2,3,7,8,9-HxCDF	5.39e+05	1.23 <sup>y</sup>	1.02	38:27	47.5			2578	2.5	3.78
1,2,3,4,6,7,8-HpCDF	9.09e+06	1.02 <sup>y</sup>	1.54	40:26	844			1243	2.5	2.48
1,2,3,4,7,8,9-HpCDF	3.92e+05	0.95 <sup>y</sup>	1.30	42:59	43.1			1243	2.5	2.95
OCDF	9.82e+05	0.86 <sup>y</sup>	1.15	47:52	170			1438	2.5	9.08
Total Tetra-Dioxins	9.53e+06	0.79 <sup>y</sup>	1.26	24:46	812			911	2.5	1.38
Total Penta-Dioxins	1.76e+07	1.59 <sup>y</sup>	1.01	31:11	2120			1691	2.5	5.26
Total Hexa-Dioxins	3.20e+07	1.26 <sup>y</sup>	1.10	35:50	4150			3334	2.5	12.0
Total Hepta-Dioxins	2.10e+07	1.05 <sup>y</sup>	1.13	40:54	3010			4034	2.5	21.7
Total Tetra-Furans	3.64e+07	0.78 <sup>y</sup>	1.05	22:42	2480			2392	2.5	3.07
1st Fnc. Penta-Furans	2.94e+06	1.60 <sup>y</sup>	1.05	29:26	214			3332	2.5	5.94
Total Penta-Furans	2.86e+07	1.58 <sup>y</sup>	1.05	30:57	2080			2194	2.5	3.91
PeCDF Totals:					2290					2290
Total Hexa-Furans	2.39e+07	1.25 <sup>y</sup>	1.14	35:11	1870			2578	2.5	3.38
Total Hepta-Furans	1.16e+07	1.02 <sup>y</sup>	1.42	40:26	1100			1243	2.5	2.69
IS 13C-2,3,7,8-TCDD	3.72e+07	0.79 <sup>y</sup>	1.13	28:20	3670			91.7		
IS 13C-1,2,3,7,8-PeCDD	3.28e+07	1.59 <sup>y</sup>	0.93	33:39	3970			99.1		
IS 13C-1,2,3,6,7,8-HxCDD	2.81e+07	1.28 <sup>y</sup>	0.93	37:40	4070			102		
IS 13C-1,2,3,4,6,7,8-HpCDD	2.47e+07	1.09 <sup>y</sup>	0.91	42:07	3700			92.4		
IS 13C-OCDD	1.47e+07	0.87 <sup>y</sup>	0.73	47:34	2700			67.6		
IS 13C-2,3,7,8-TCDF	5.63e+07	0.81 <sup>y</sup>	1.06	27:28	3530			88.1		
IS 13C-1,2,3,7,8-PeCDF	5.26e+07	1.59 <sup>y</sup>	0.96	32:12	3650			91.2		
IS 13C-1,2,3,6,7,8-HxCDF	4.46e+07	0.53 <sup>y</sup>	1.28	36:42	4710			118		
IS 13C-1,2,3,4,6,7,8-HpCDF	2.79e+07	0.44 <sup>y</sup>	0.90	40:25	4190			105		
IS 13C-OCDF	2.01e+07	0.89 <sup>y</sup>	0.81	47:52	3350			83.8		
RS/RT 13C-1,2,3,4-TCDD	3.58e+07	0.81 <sup>y</sup>	1.00	27:41	4000			-		
RS 13C-1,2,3,4-TCDF	6.02e+07	0.79 <sup>y</sup>	1.00	26:09	4000			-		
RS/RT 13C-1,2,3,7,8,9-HxCDD	2.96e+07	1.29 <sup>y</sup>	1.00	38:00	4000			-		
PS 37C1-2,3,7,8-TCDD	1.98e+07		0.51	28:21	4130			103		
PS 13C-2,3,4,7,8-PeCDF	5.10e+07	1.59 <sup>y</sup>	0.97	33:18	3980			99.6		
PS 13C-1,2,3,4,7,8-HxCDD	2.27e+07	1.28 <sup>y</sup>	0.92	37:32	3510			87.9		
PS 13C-1,2,3,4,7,8-HxCDF	3.73e+07	0.53 <sup>y</sup>	0.91	36:33	3670			91.8		
PS 13C-1,2,3,4,7,8,9-HpCDF	2.25e+07	0.44 <sup>y</sup>	0.85	42:59	3770			94.3		
AS 13C-1,2,3,7,8,9-HxCDF	3.44e+07	0.53 <sup>y</sup>	1.07	38:25	4350			109		

Reviewer: CE

Date: 18 Apr 01

EMPC  
822  
2120  
4150  
3010  
2480  
214  
2290  
1870  
1100

Rec  
91.7  
99.1  
102  
92.4  
67.6  
88.1  
91.2  
118  
105  
83.8

Analyst: GAG

Date: 18 Apr 01

Totals class: TCDD EMPC Function: 1 Run #: 17  
 File Name: 010405P1 Sample #: 2 Sample text: P1454\_319\_007 Unit 3 Run 1 Out Air Train ✓

Acquired: 5-APR-01 05:40:51 ✓ Processed: 5-APR-01 09:19:38

Total Conc.: 821.61 Unnamed Conc.: 812.398

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
24:46	✓	2.012e+06	n	2.537e+06	n	0.79	y	4.549e+06	4.549e+06	6.06e+02	y	388
25:07	✓	4.977e+05	n	5.827e+05	n	0.85	y	1.080e+06	1.080e+06	1.35e+02	y	92.1
25:32	✓	1.696e+05	n	1.968e+05	n	0.86	y	3.664e+05	3.664e+05	5.00e+01	y	31.2
26:17	✓	1.573e+04	n	2.390e+04	y	0.66	y	3.964e+04	3.964e+04	5.97e+00	y	3.38
26:31	✓	3.010e+05	n	3.599e+05	n	0.84	y	6.609e+05	6.609e+05	8.49e+01	y	56.3
26:43	✓	2.297e+05	y	2.756e+05	y	0.83	y	5.053e+05	5.053e+05	7.27e+01	y	43.1
26:54	✓	1.352e+05	y	1.533e+05	y	0.88	y	2.885e+05	2.885e+05	3.88e+01	y	24.6
27:09	✓	3.754e+04	y	4.350e+04	y	0.86	y	8.104e+04	8.104e+04	1.15e+01	y	6.91
27:20	✓	1.236e+05	y	1.568e+05	y	0.79	y	2.804e+05	2.804e+05	4.23e+01	y	23.9
27:42	✓	2.840e+05	n	3.535e+05	n	0.80	y	6.375e+05	6.375e+05	9.05e+01	y	54.3
27:48	✓	5.350e+04	y	6.518e+04	y	0.82	y	1.187e+05	1.187e+05	1.75e+01	y	10.1
28:04	✓	2.473e+05	y	3.416e+05	y	0.72	y	5.889e+05	5.889e+05	6.59e+01	y	50.2
28:12	✓	4.445e+04	y	5.657e+04	y	0.79	y	1.010e+05	1.010e+05	1.45e+01	y	8.61
28:20	✓	4.703e+04	y	7.571e+04	y	0.62	n	1.227e+05	1.081e+05	1.93e+01	y	9.21
28:40	✓	6.105e+04	y	7.383e+04	y	0.83	y	1.349e+05	1.349e+05	1.92e+01	y	11.5
28:48	✓	2.327e+04	y	2.899e+04	y	0.80	y	5.225e+04	5.225e+04	7.00e+00	y	4.45
29:19	✓	2.123e+04	y	2.835e+04	n	0.75	y	4.957e+04	4.957e+04	8.04e+00	y	4.22

tot  
822.08

Totals class: PeCDD EMPC Function: 2 Run #: 17  
 File Name: 010405P1 Sample #: 2 Sample text: P1454\_319\_007 Unit 3 Run 1 Out Air Train

Acquired: 5-APR-01 05:40:51 Processed: 5-APR-01 09:19:38

Total Conc.: 2117.2 Unnamed Conc.: 2063.869

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
31:11	✓	3.860e+06	n	2.422e+06	n	1.59	y	6.282e+06	6.282e+06	3.05e+02	y	756
31:42	✓	2.664e+05	n	1.596e+05	n	1.67	y	4.260e+05	4.260e+05	2.68e+01	y	51.2
32:15	✓	2.995e+06	n	1.901e+06	n	1.58	y	4.896e+06	4.896e+06	3.32e+02	y	589
32:26	✓	2.994e+05	n	1.747e+05	n	1.71	y	4.741e+05	4.741e+05	2.90e+01	y	57.0
32:33	✓	1.283e+06	n	8.000e+05	n	1.60	y	2.083e+06	2.083e+06	1.22e+02	y	251
32:48	✓	6.119e+05	n	3.907e+05	n	1.57	y	1.003e+06	1.003e+06	4.85e+01	y	121
33:11	✓	8.539e+05	n	5.238e+05	n	1.63	y	1.378e+06	1.378e+06	7.86e+01	y	166
33:40	✓	2.684e+05	n	1.748e+05	n	1.54	y	4.432e+05	4.432e+05	2.91e+01	y	53.3
33:46	✓	1.950e+05	n	1.381e+05	n	1.41	y	3.331e+05	3.331e+05	2.09e+01	y	40.1
34:06	✓	1.800e+05	n	1.013e+05	n	1.78	y	2.813e+05	2.813e+05	1.53e+01	y	33.8

Totals class: HxCDD EMPC Function: 3 Run #: 17  
 File Name: 010405P1 Sample #: 2 Sample text: P1454\_319\_007 Unit 3 Run 1 Out Air Train

Acquired: 5-APR-01 05:40:51 Processed: 5-APR-01 09:19:38

Total Conc.: 4151.1 Unnamed Conc.: 3673.905

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
35:50	1.545e+06	n	1.230e+06	n	1.26	y	2.775e+06	2.775e+06	9.88e+01	y	359	
36:29	9.905e+06	n	7.794e+06	n	1.27	y	1.770e+07	1.770e+07	5.83e+02	y	2290	
36:46	3.346e+06	n	2.692e+06	n	1.24	y	6.037e+06	6.037e+06	1.61e+02	y	781	
36:55	6.246e+05	n	4.867e+05	n	1.28	y	1.111e+06	1.111e+06	3.15e+01	y	144	
37:33	3.665e+05	n	2.839e+05	n	1.29	y	6.504e+05	6.504e+05	2.43e+01	y	81.4	1,2,3,4,7,8-HxCDD
37:41	1.071e+06	n	8.553e+05	n	1.25	y	1.927e+06	1.927e+06	5.56e+01	y	268	1,2,3,6,7,8-HxCDD
37:53	4.454e+05	n	3.292e+05	n	1.35	y	7.746e+05	7.746e+05	2.20e+01	y	100	
38:01	5.520e+05	n	4.694e+05	n	1.18	y	1.021e+06	1.021e+06	2.56e+01	y	127	1,2,3,7,8,9-HxCDD

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Totals class: HpCDD EMPC Function: 4 Run #: 17  
 File Name: 010405P1 Sample #: 2 Sample text: P1454\_319\_007 Unit 3 Run 1 Out Air Train

Acquired: 5-APR-01 05:40:51 Processed: 5-APR-01 09:19:38

Total Conc.: 3012.8 Unnamed Conc.: 1497.090

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
40:54	5.344e+06	n	5.107e+06	n	1.05	y	1.045e+07	1.045e+07	2.09e+02	y	1500	
42:09	5.467e+06	n	5.114e+06	n	1.07	y	1.058e+07	1.058e+07	1.80e+02	y	1520	1,2,3,4,6,7,8-HpCDD

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Totals class: TCDF EMPC Function: 1 Run #: 17  
 File Name: 010405P1 Sample #: 2 Sample text: P1454\_319\_007 Unit 3 Run 1 Out Air Train

Acquired: 5-APR-01 05:40:51 Processed: 5-APR-01 09:19:38

Total Conc.: 2475.1 Unnamed Conc.: 2414.348

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
22:42	5.808e+05	n	7.463e+05	n	0.78	y	1.327e+06	1.327e+06	5.64e+01	y	90.1	
23:16	4.156e+05	n	5.466e+05	n	0.76	y	9.622e+05	9.622e+05	4.43e+01	y	65.3	
23:52	5.535e+05	n	7.622e+05	n	0.73	y	1.316e+06	1.316e+06	6.18e+01	y	89.3	
24:21	1.957e+06	n	2.537e+06	n	0.77	y	4.494e+06	4.494e+06	1.25e+02	y	305	
24:38	3.330e+05	y	3.861e+05	y	0.86	y	7.190e+05	7.190e+05	3.82e+01	y	48.8	
24:46	8.783e+05	y	1.201e+06	y	0.73	y	2.079e+06	2.079e+06	8.04e+01	y	141	
25:09	5.361e+05	y	6.695e+05	y	0.80	y	1.206e+06	1.206e+06	6.46e+01	y	81.9	
25:17	3.387e+05	y	4.559e+05	y	0.74	y	7.946e+05	7.946e+05	3.96e+01	y	54.0	
25:26	4.248e+05	y	5.268e+05	y	0.81	y	9.515e+05	9.515e+05	4.85e+01	y	64.6	
25:48	4.946e+05	y	5.984e+05	y	0.83	y	1.093e+06	1.093e+06	5.18e+01	y	74.2	
25:55	9.195e+05	y	1.217e+06	y	0.76	y	2.136e+06	2.136e+06	1.09e+02	y	145	
26:04	8.222e+05	y	1.081e+06	y	0.76	y	1.903e+06	1.903e+06	1.10e+02	y	129	
26:10	2.463e+06	n	3.168e+06	y	0.78	y	5.630e+06	5.630e+06	2.72e+02	y	382	
26:37	5.839e+05	n	7.514e+05	n	0.78	y	1.335e+06	1.335e+06	6.95e+01	y	90.7	
26:43	1.435e+05	y	1.765e+05	n	0.81	y	3.200e+05	3.200e+05	1.89e+01	y	21.7	

26:53	4.231e+05	y	5.463e+05	y	0.77	y	9.694e+05	9.694e+05	5.55e+01	y	65.8
27:04	7.154e+05	n	9.486e+05	y	0.75	y	1.664e+06	1.664e+06	7.68e+01	y	113
27:17	8.074e+05	y	1.064e+06	y	0.76	y	1.871e+06	1.871e+06	1.07e+02	y	127
27:23	6.299e+05	y	7.907e+05	y	0.80	y	1.421e+06	1.421e+06	8.34e+01	y	96.5
27:29	3.973e+05	y	4.976e+05	y	0.80	y	8.949e+05	8.949e+05	5.66e+01	y	60.8
27:51	1.060e+06	n	1.385e+06	n	0.77	y	2.445e+06	2.445e+06	1.35e+02	y	166
28:05	1.261e+05	y	1.528e+05	y	0.83	y	2.789e+05	2.789e+05	1.57e+01	y	18.9
28:22	1.445e+05	n	1.736e+05	n	0.83	y	3.181e+05	3.181e+05	2.05e+01	y	21.6
29:28	1.403e+05	n	1.778e+05	n	0.79	y	3.181e+05	3.181e+05	1.49e+01	y	21.6

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Totals class: 1st Fnc.PeCDF EMPC                      Function: 1 Run #: 17  
 File Name: 010405P1 Sample #: 2                      Sample text: P1454\_319\_007 Unit 3 Run 1 Out Air Train

Acquired: 5-APR-01 05:40:51      Processed: 5-APR-01 09:19:38

Total Conc.: 213.87                      Unnamed Conc.: 213.870

RT	m1 Resp mod.	m2 Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
29:26	1.810e+06	n	1.132e+06	n	1.60	y	2.943e+06	2.943e+06 7.42e+01 y 214

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Totals class: PeCDF EMPC                                  Function: 2 Run #: 17  
 File Name: 010405P1 Sample #: 2                      Sample text: P1454\_319\_007 Unit 3 Run 1 Out Air Train

Acquired: 5-APR-01 05:40:51      Processed: 5-APR-01 09:19:38

Total Conc.: 2078.9                      Unnamed Conc.: 1773.357

RT	m1 Resp mod.	m2 Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
30:57	2.355e+06	y	1.492e+06	y	1.58	y	3.847e+06	3.847e+06 1.46e+02 y 280
31:06	2.838e+06	n	1.803e+06	n	1.57	y	4.640e+06	4.640e+06 1.43e+02 y 337
31:13	7.300e+05	y	4.481e+05	y	1.63	y	1.178e+06	1.178e+06 5.94e+01 y 85.6
31:18	2.602e+05	y	1.571e+05	y	1.66	y	4.173e+05	4.173e+05 2.13e+01 y 30.3
31:32	3.960e+05	y	2.562e+05	y	1.55	y	6.522e+05	6.522e+05 2.38e+01 y 47.4
31:45	2.797e+06	y	1.731e+06	y	1.62	y	4.528e+06	4.528e+06 1.65e+02 y 329
31:51	7.714e+05	y	4.696e+05	y	1.64	y	1.241e+06	1.241e+06 5.89e+01 y 90.2
32:00	6.838e+05	y	4.252e+05	y	1.61	y	1.109e+06	1.109e+06 5.39e+01 y 80.6
32:13	8.241e+05	n	5.367e+05	y	1.54	y	1.361e+06	1.361e+06 6.38e+01 y 99.7
32:30	1.612e+06	n	1.002e+06	n	1.61	y	2.614e+06	2.614e+06 9.03e+01 y 190
32:40	1.567e+05	y	1.006e+05	n	1.56	y	2.573e+05	2.573e+05 1.07e+01 y 18.7
33:04	2.202e+05	y	1.334e+05	y	1.65	y	3.535e+05	3.535e+05 1.89e+01 y 25.7
33:11	1.714e+06	n	1.099e+06	y	1.56	y	2.813e+06	2.813e+06 1.45e+02 y 204
33:19	1.735e+06	n	1.119e+06	n	1.55	y	2.854e+06	2.854e+06 1.14e+02 y 206
33:39	2.647e+05	y	1.874e+05	y	1.41	y	4.522e+05	4.522e+05 2.24e+01 y 32.9
34:23	1.805e+05	y	1.167e+05	n	1.55	y	2.971e+05	2.971e+05 1.39e+01 y 21.6

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Totals class: HxCDF EMPC                                  Function: 3 Run #: 17  
 File Name: 010405P1 Sample #: 2                      Sample text: P1454\_319\_007 Unit 3 Run 1 Out Air Train

Acquired: 5-APR-01 05:40:51      Processed: 5-APR-01 09:19:38

*3.57e PeCDF  
0.47. totals*

*DPE*

Total Conc.: 1869.4

Unnamed Conc.: 1255.197

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
35:11	1.757e+06	n	1.401e+06	n	1.25	y	3.158e+06	3.158e+06	1.56e+02	y	249
35:23	3.915e+06	n	3.067e+06	n	1.28	y	6.983e+06	6.983e+06	3.11e+02	y	550
35:37	2.848e+05	y	2.210e+05	y	1.29	y	5.058e+05	5.058e+05	2.05e+01	y	39.8
35:48	4.880e+05	y	3.542e+05	y	1.38	y	8.422e+05	8.422e+05	3.90e+01	y	66.3
36:01	2.957e+05	n	2.260e+05	n	1.31	y	5.217e+05	5.217e+05	2.19e+01	y	41.1
36:27	1.536e+06	n	1.153e+06	y	1.33	y	2.689e+06	2.689e+06	1.35e+02	y	212
36:33	1.205e+06	y	9.711e+05	y	1.24	y	2.176e+06	2.176e+06	9.56e+01	y	172
36:42	1.365e+06	y	1.085e+06	y	1.26	y	2.450e+06	2.450e+06	1.02e+02	y	177
36:52	2.230e+05	y	1.867e+05	y	1.19	y	4.097e+05	4.097e+05	1.63e+01	y	32.3
37:00	2.270e+05	y	1.647e+05	y	1.38	y	3.917e+05	3.917e+05	1.67e+01	y	30.8
37:08	2.542e+05	y	1.883e+05	y	1.35	y	4.424e+05	4.424e+05	1.51e+01	y	34.8
37:22	1.558e+06	n	1.262e+06	n	1.23	y	2.821e+06	2.821e+06	1.11e+02	y	217
38:27	2.977e+05	y	2.417e+05	n	1.23	y	5.394e+05	5.394e+05	1.74e+01	y	47.5

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Totals class: HpCDF EMPC

Function: 4 Run #: 17

File Name: 010405P1 Sample #: 2

Sample text: P1454\_319\_007 Unit 3 Run 1 Out Air Train

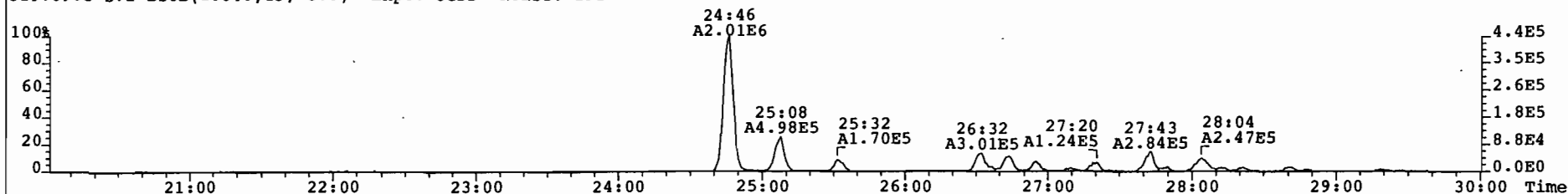
Acquired: 5-APR-01 05:40:51 Processed: 5-APR-01 09:19:38

Total Conc.: 1105.0

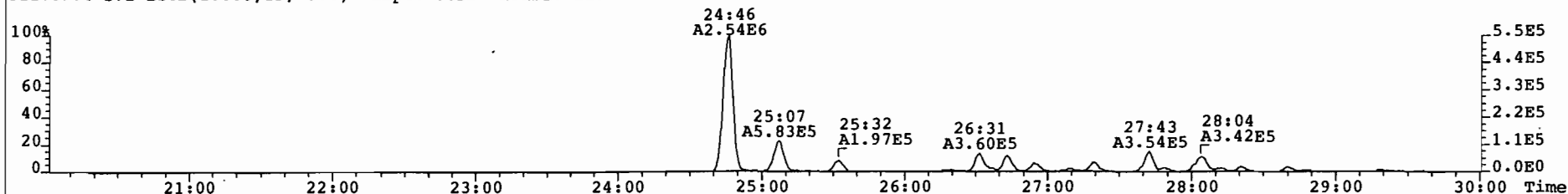
Unnamed Conc.: 218.034

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
40:26	4.600e+06	n	4.489e+06	n	1.02	y	9.089e+06	9.089e+06	6.22e+02	y	844
40:53	4.996e+05	n	4.810e+05	n	1.04	y	9.806e+05	9.806e+05	6.66e+01	y	98.8
41:08	6.121e+05	n	5.708e+05	n	1.07	y	1.183e+06	1.183e+06	6.68e+01	y	119
42:59	1.912e+05	n	2.003e+05	n	0.95	y	3.915e+05	3.915e+05	2.01e+01	y	43.1

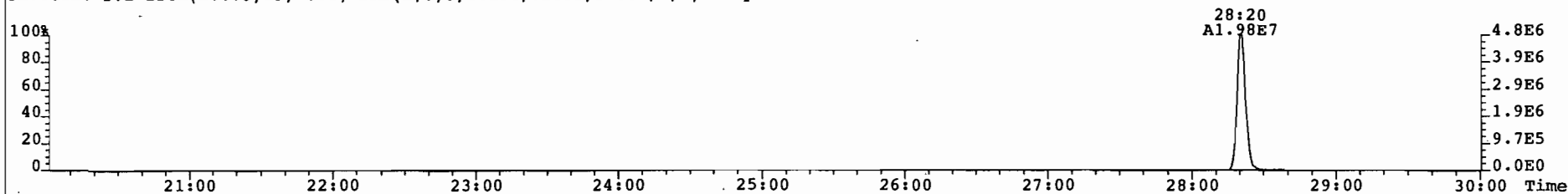
File: 010405PI Acq: 5-APR-2001 05:40:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 2 Text: P1454\_319\_007 Unit 3 Run 1 Out Air Train Vial# 27 File Text: AAP DB5  
319.8965 S:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 191



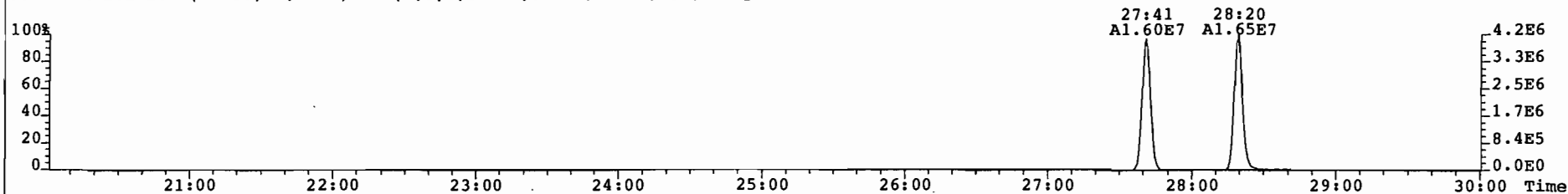
321.8936 S:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 113



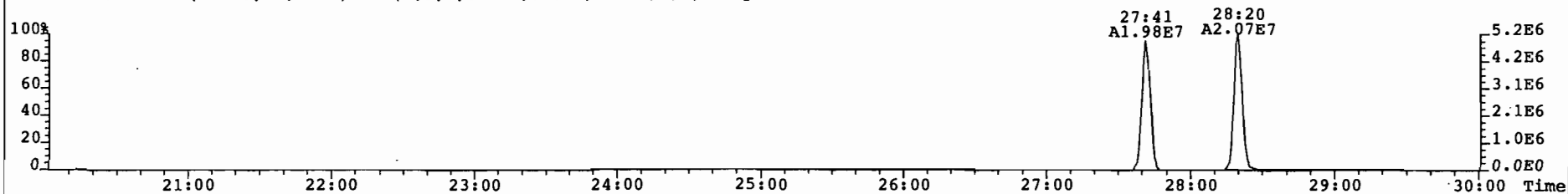
327.8850 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 76



331.9368 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1337

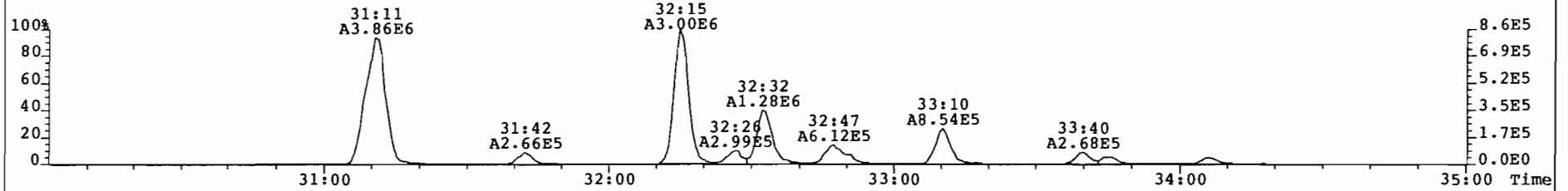


333.9339 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 406

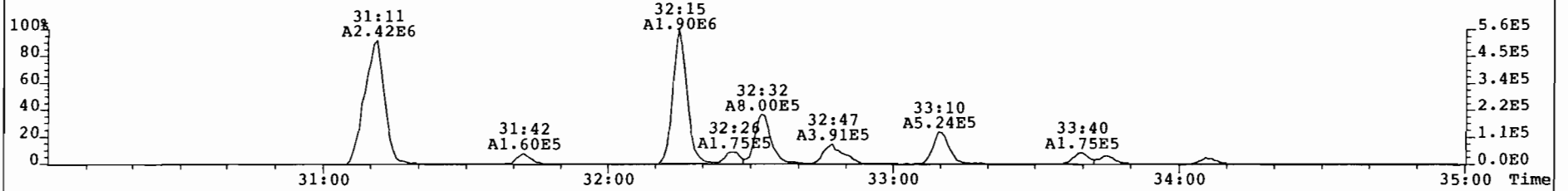




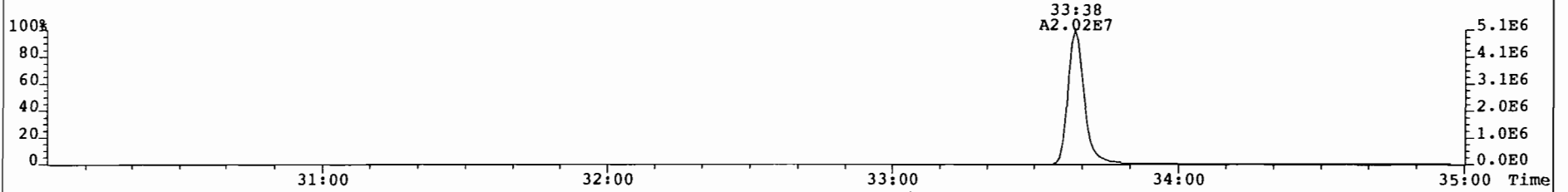
File: 010405P1 Acq: 5-APR-2001 05:40:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 2 Text: PI454\_319\_007 Unit 3 Run 1 Out Air Train Vial# 27 File Text: AAP DB5  
355.8546 S:2 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 366



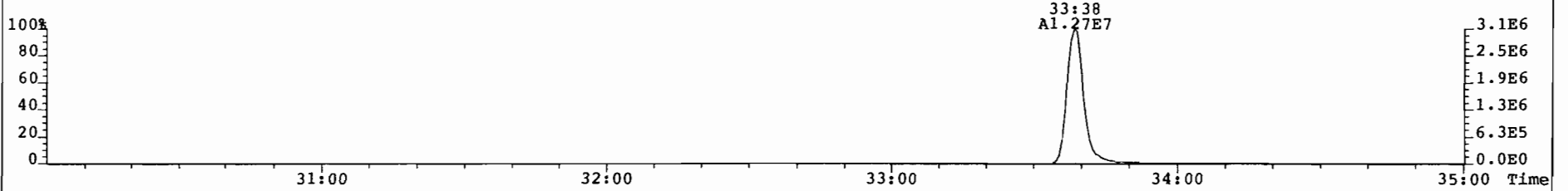
357.8517 S:2 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 201



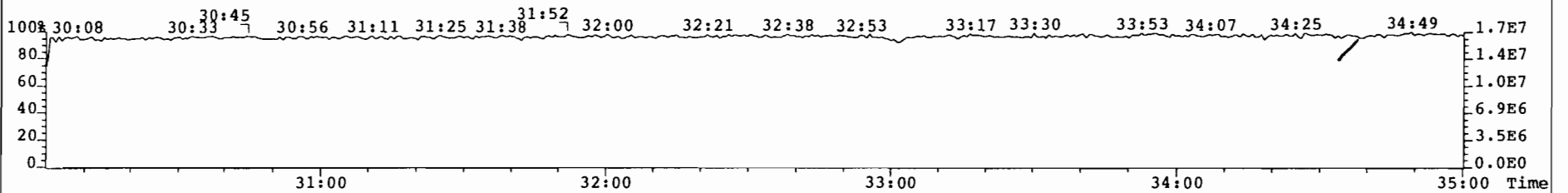
367.8949 S:2 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 423



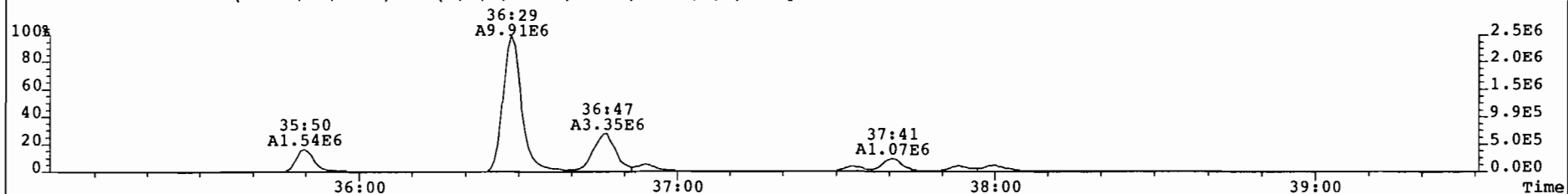
369.8919 S:2 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 156



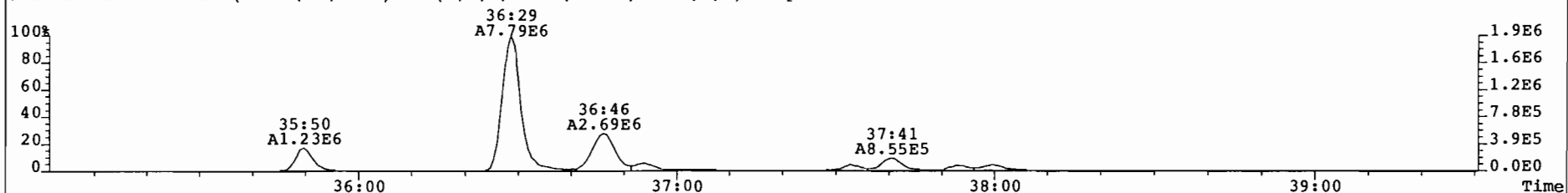
366.9792 S:2 F:2 Expt: OCDD



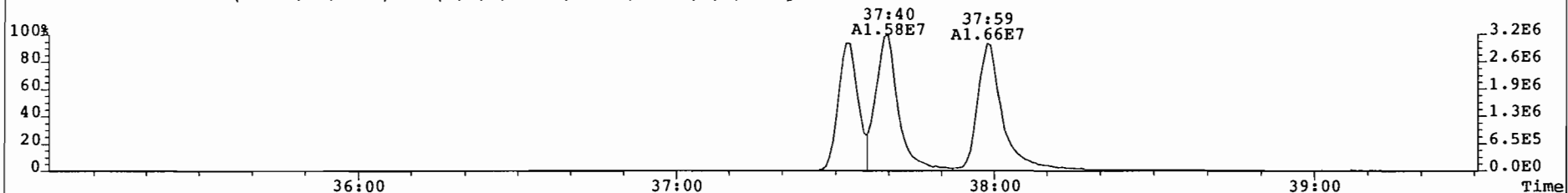
File: 010405P1 Acq: 5-APR-2001 05:40:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 2 Text: P1454 319.007 Unit 3 Run 1 Out Air Train Vial# 27 File Text: AAP DB5  
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 580



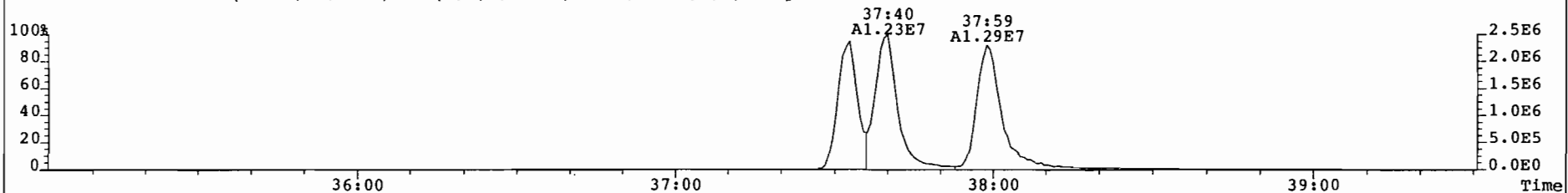
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 532



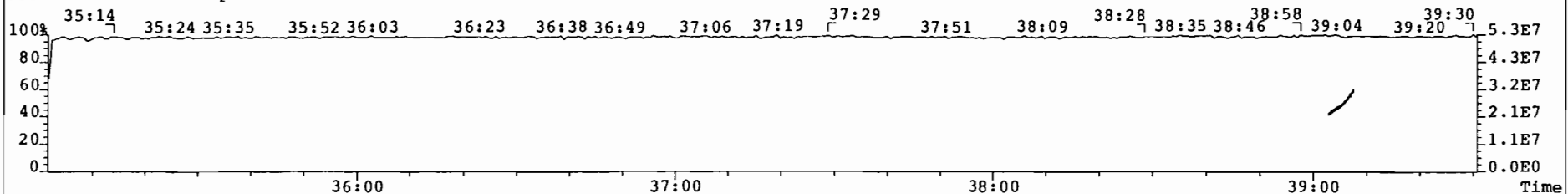
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 406



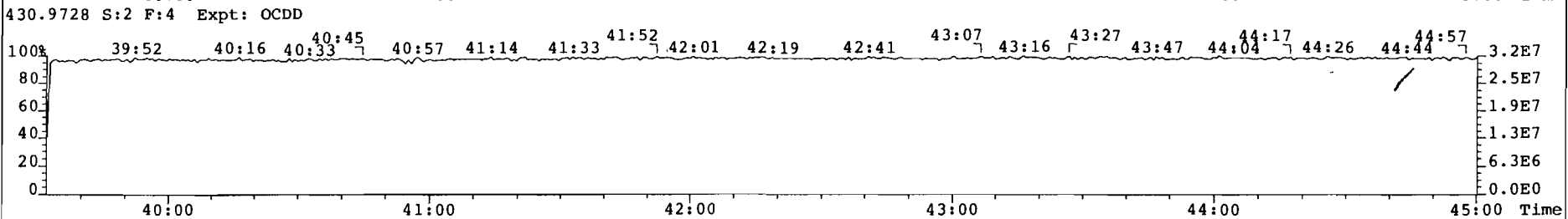
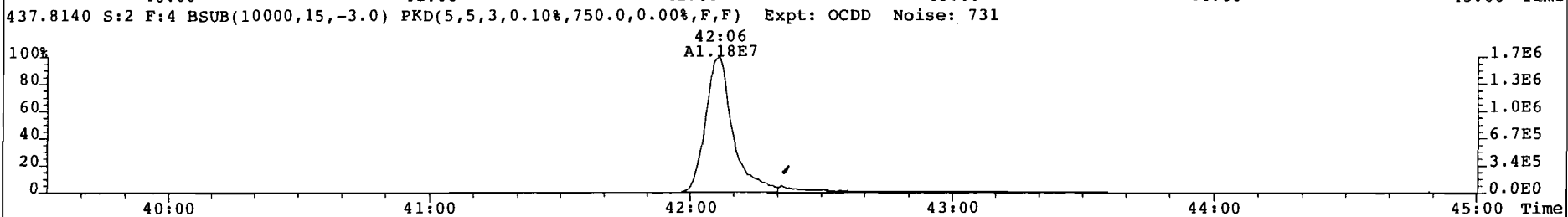
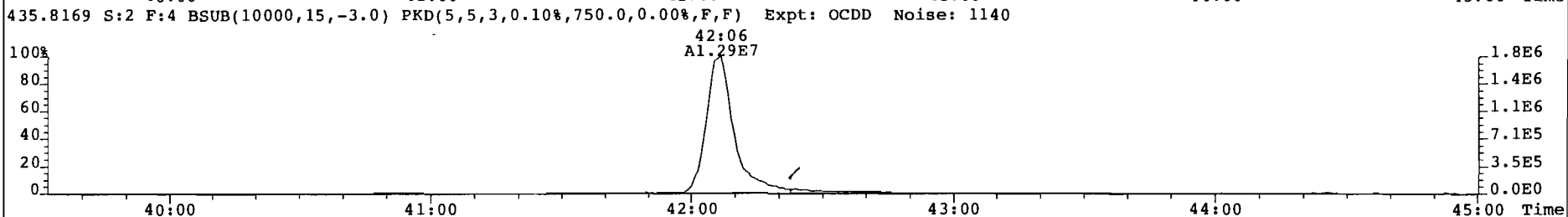
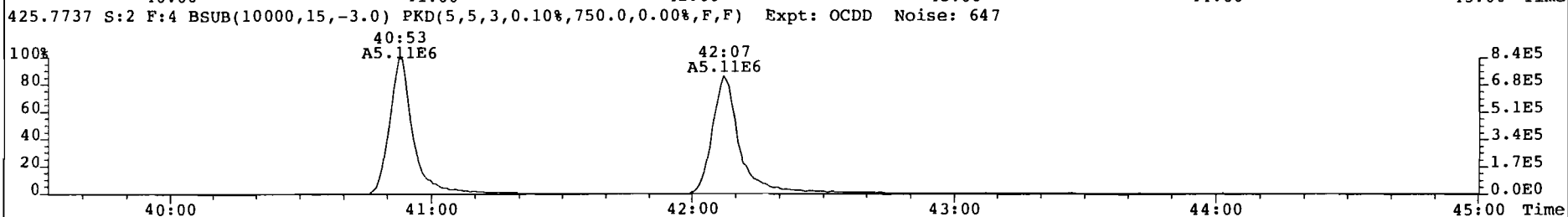
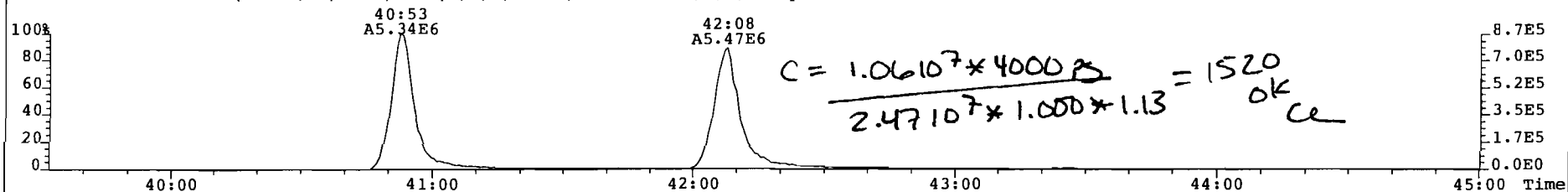
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 223



380.9760 S:2 F:3 Expt: OCDD



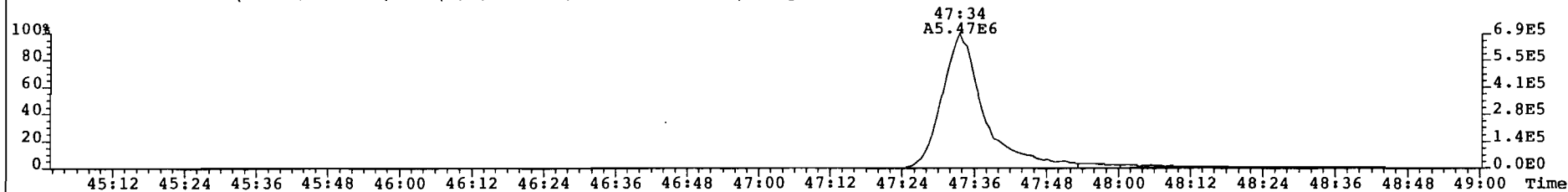
File: 010405P1 Acq: 5-APR-2001 05:40:51 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample# 2 Text: P1454 319\_007 Unit 3 Run 1 Out Air Train Vial# 27 File Text: AAP DB5  
 423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 560



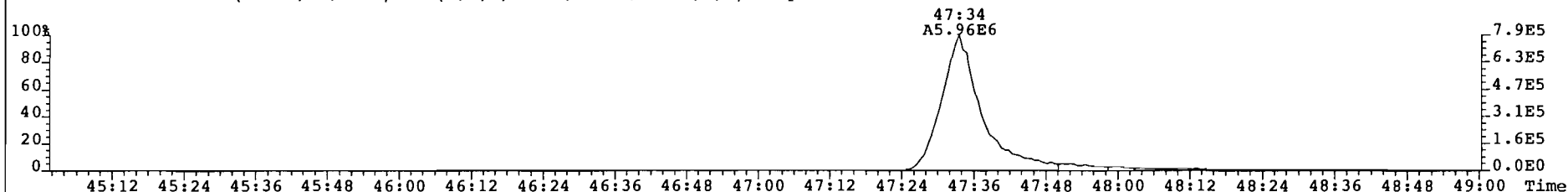
File: 010405P1 Acq: 5-APR-2001 05:40:51 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 2 Text: P1454\_319\_007 Unit 3 Run 1 Out Air Train Vial# 27 File Text: AAP DB5

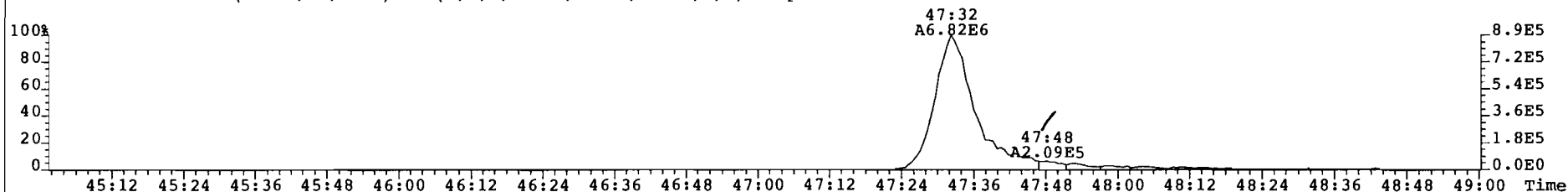
457.7377 S:2 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 138



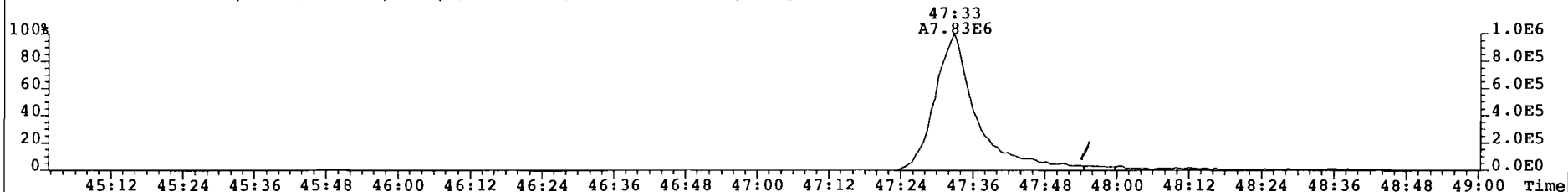
459.7348 S:2 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 76



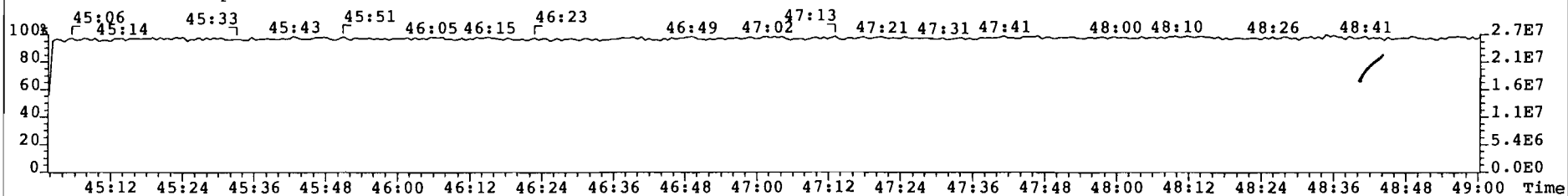
469.7780 S:2 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 48



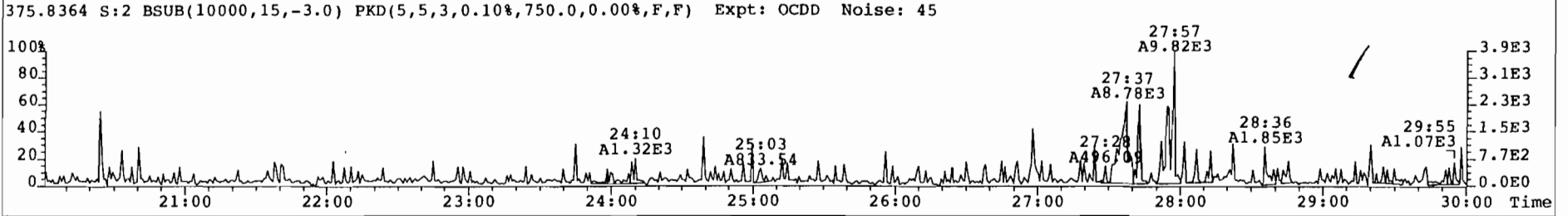
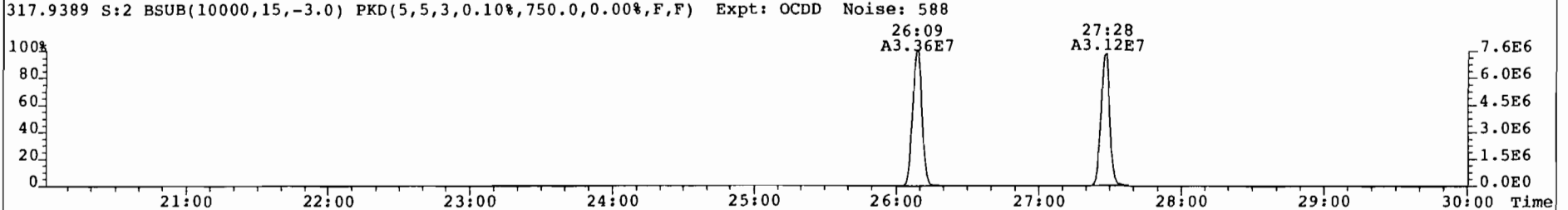
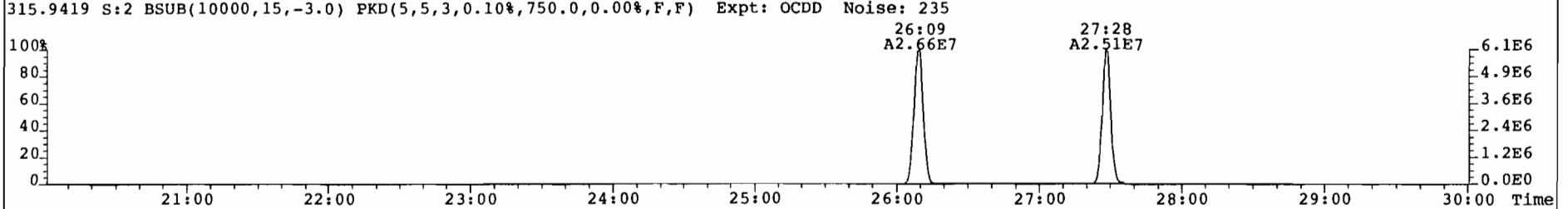
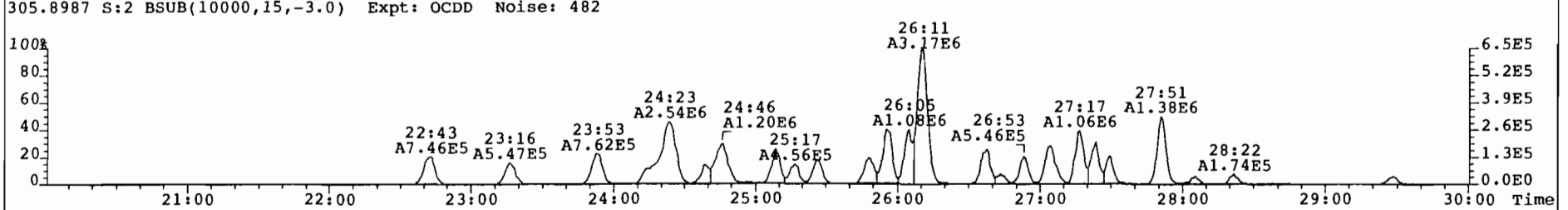
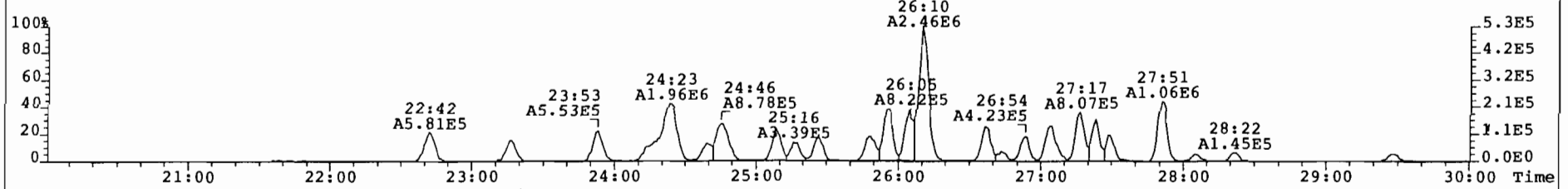
471.7750 S:2 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 37



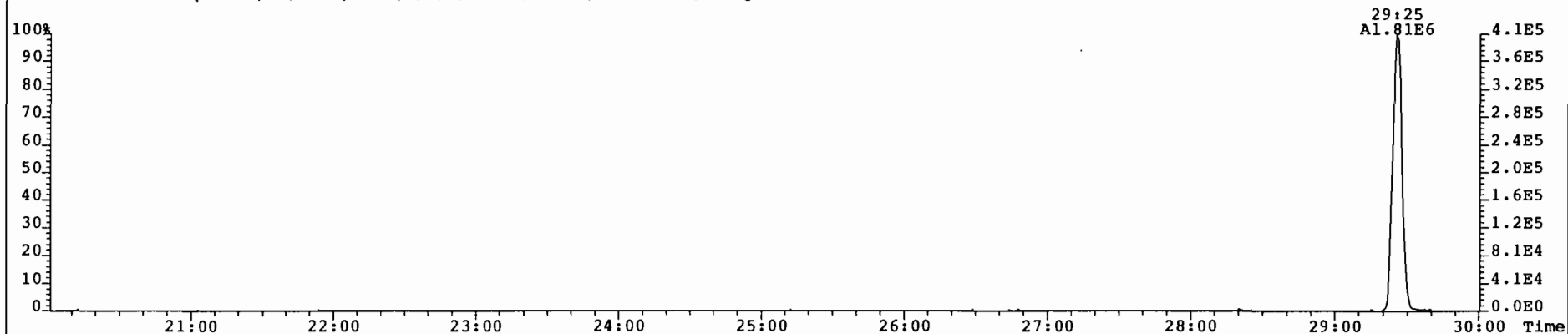
454.9728 S:2 F:5 Expt: OCDD



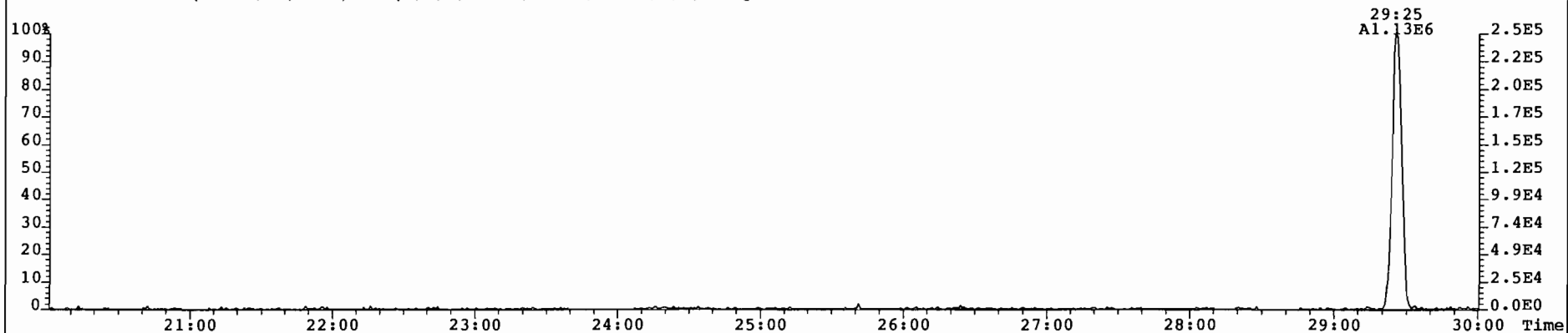
File: 010405P1 Acq: 5-APR-2001 05:40:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 2 Text: P1454 319\_007 Unit 3 Run 1 Out Air Train Vial# 27 File Text: AAP DB5  
303.9016 S:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 239



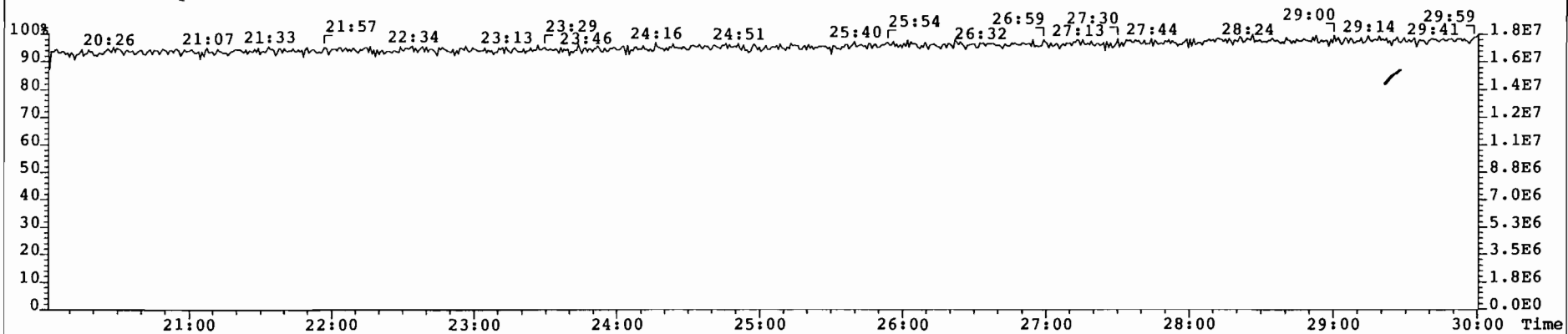
File: 010405P1 Acq: 5-APR-2001 05:40:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 2 Text: P1454\_319\_007 Unit 3 Run 1 Out Air Train Vial# 27 File Text: AAP DB5  
339.8597 S:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 45



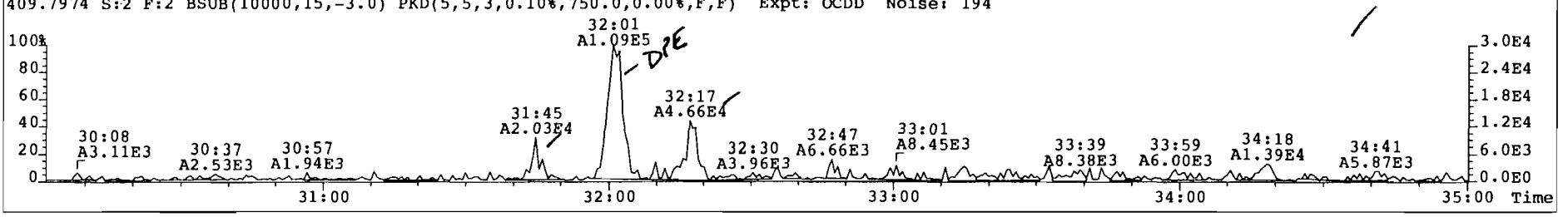
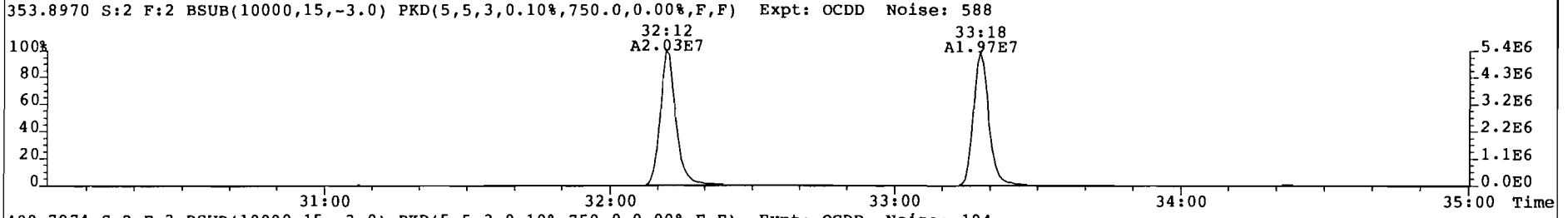
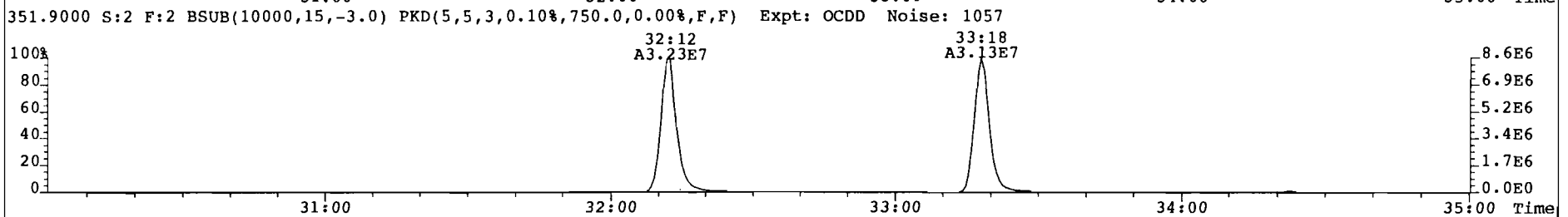
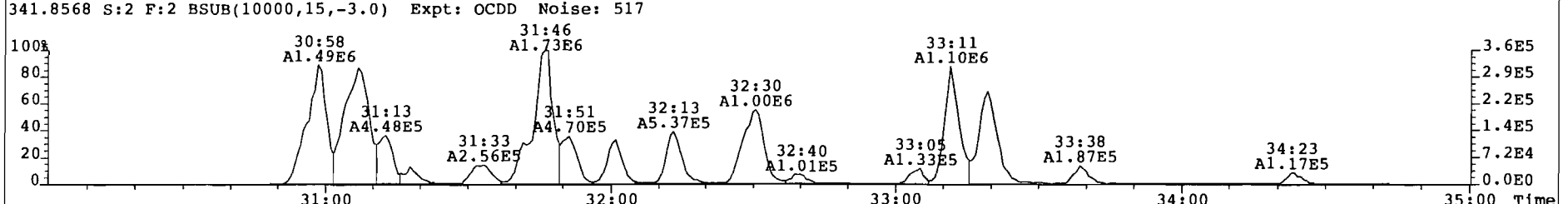
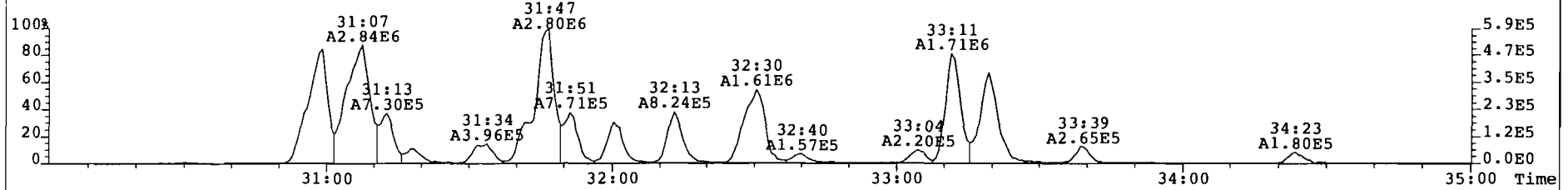
341.8568 S:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 136



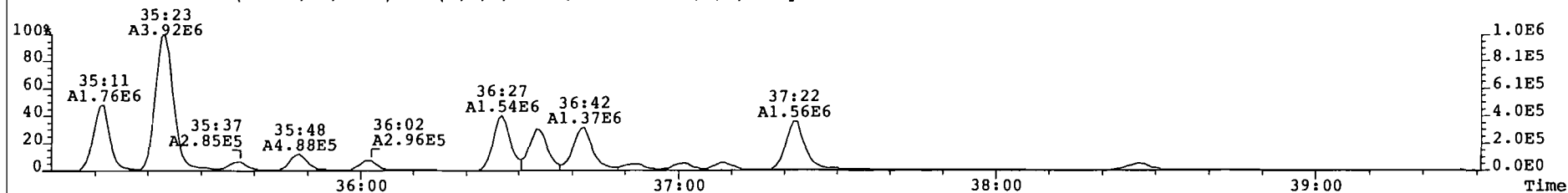
316.9824 S:2 Expt: OCDD



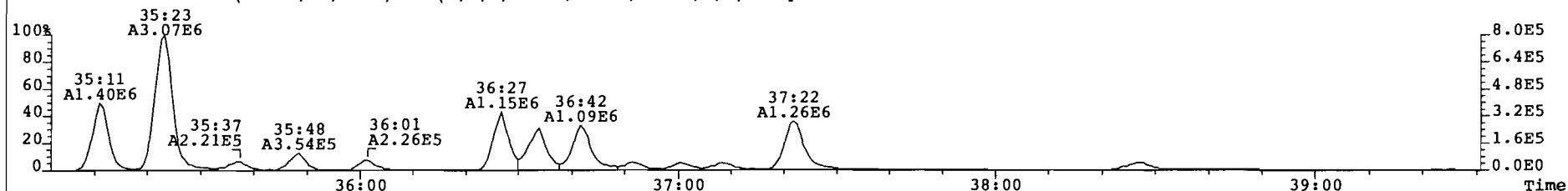
File: 010405P1 Acq: 5-APR-2001 05:40:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 2 Text: P1454 319 007 Unit 3 Run 1 Out Air Train Vial# 27 File Text: AAP DB5  
339.8597 S:2 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 433



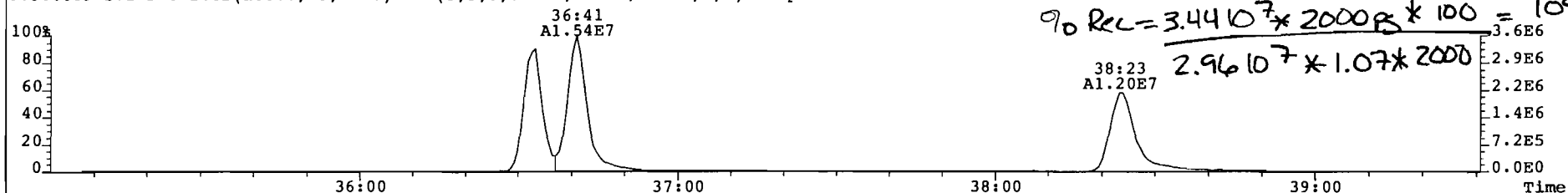
File: 010405F1 Acq: 5-APR-2001 05:40:51 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample# 2 Text: P1454\_319\_007 Unit 3 Run 1 Out Air Train Vial# 27 File Text: AAP DB5  
 373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 638



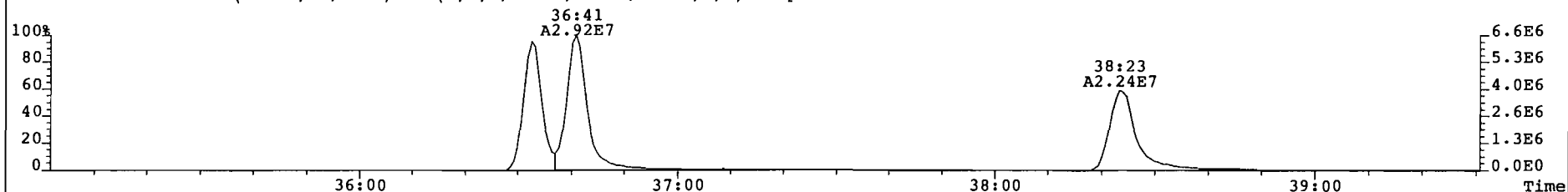
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 613



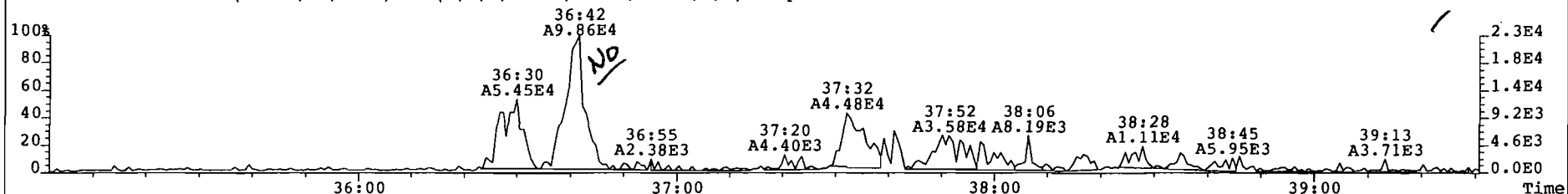
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 3338



385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 2404

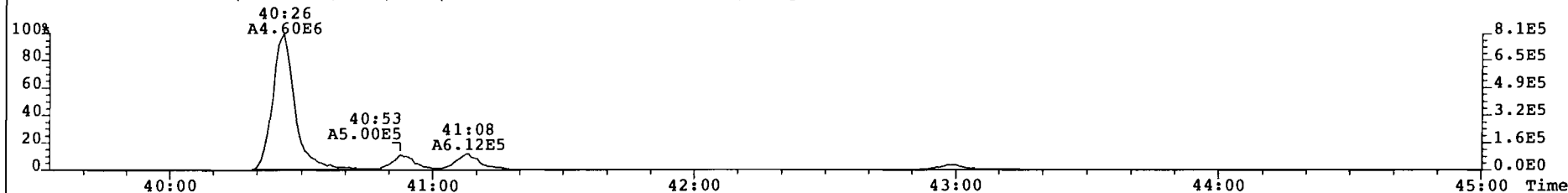


445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 158

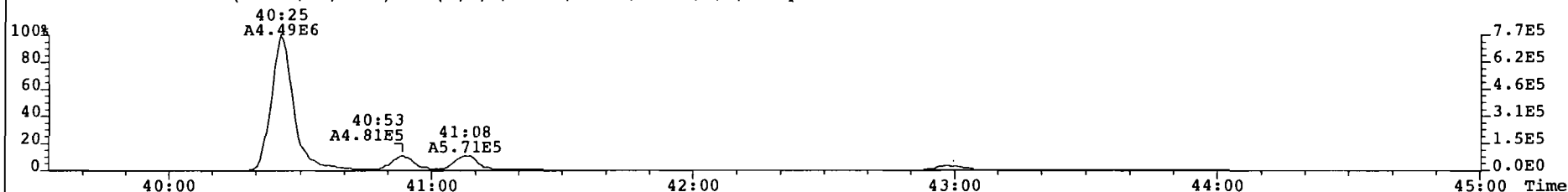




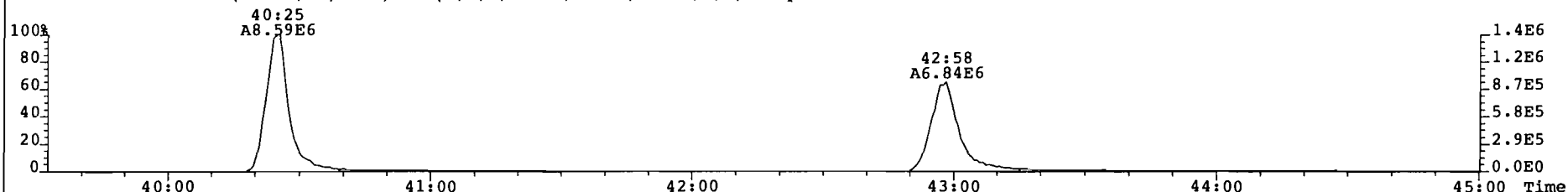
File: 010405F1 Acq: 5-APR-2001 05:40:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 2 Text: P1454 319 007 Unit 3 Run 1 Out Air Train Vial# 27 File Text: AAP DB5  
407.7818 S:2 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 243



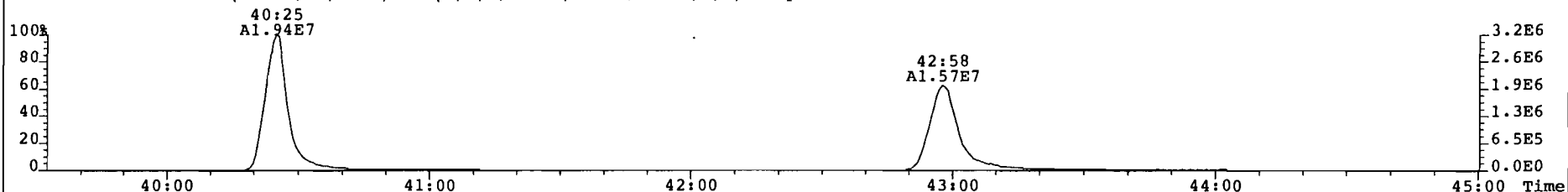
409.7788 S:2 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 195



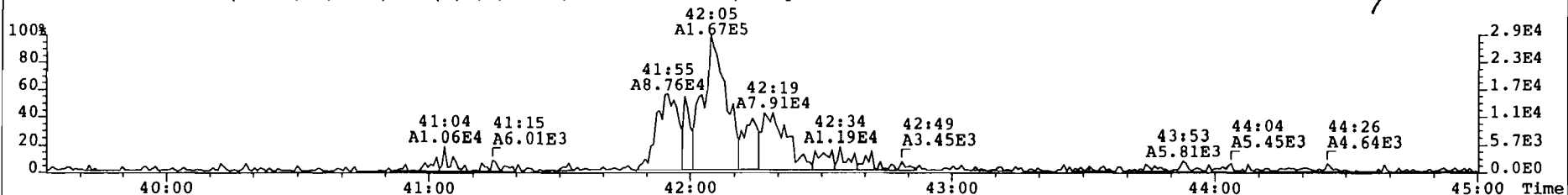
417.8253 S:2 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 792



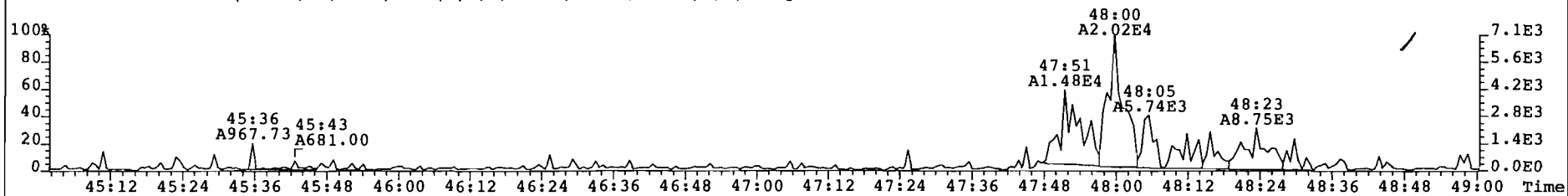
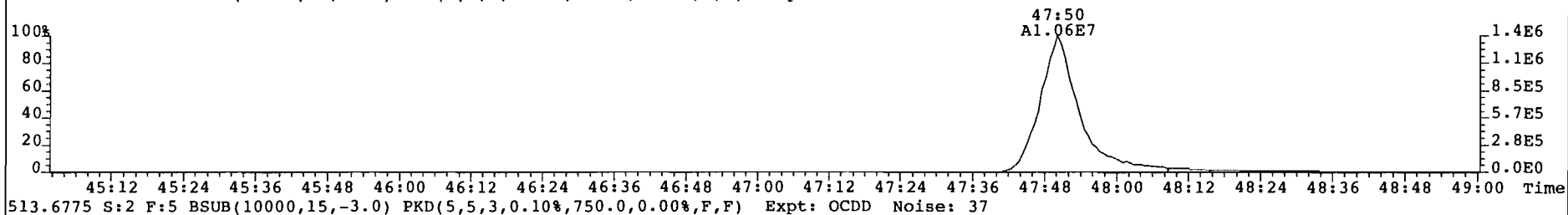
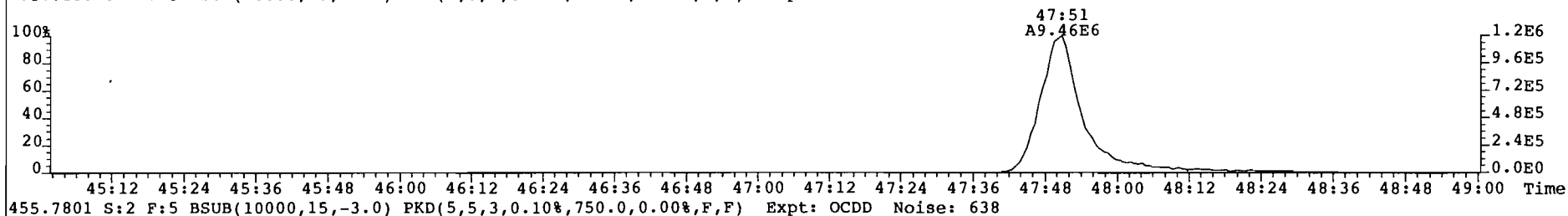
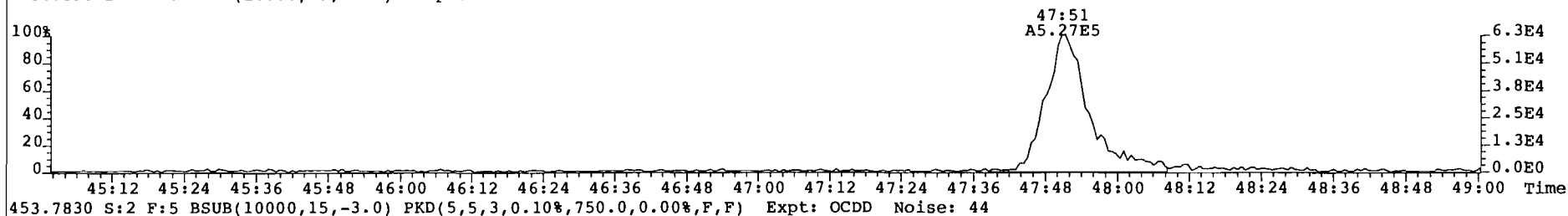
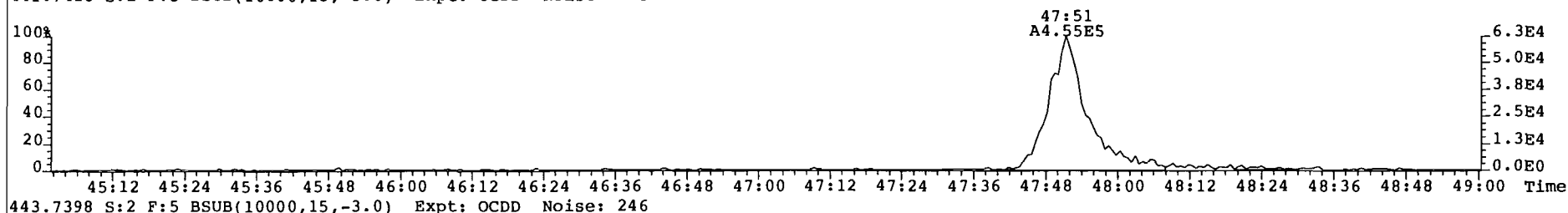
419.8220 S:2 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 913



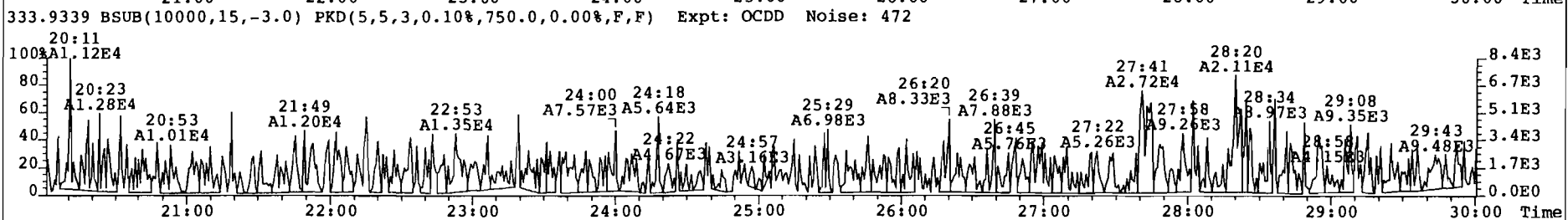
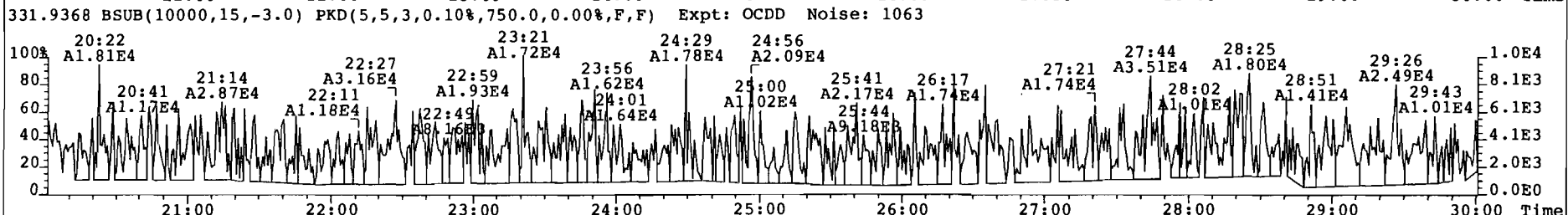
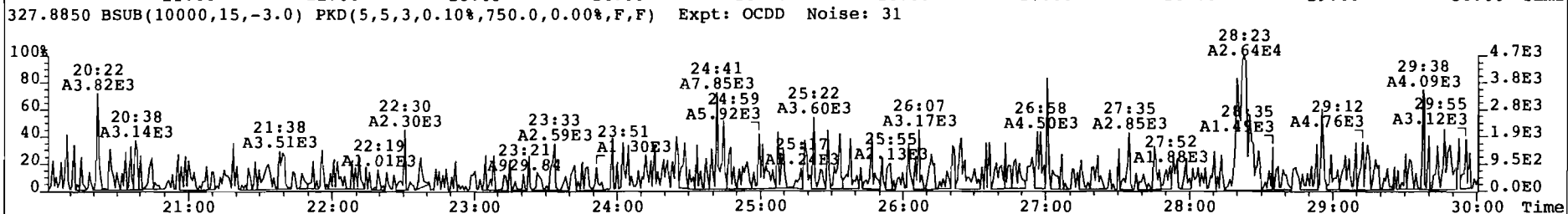
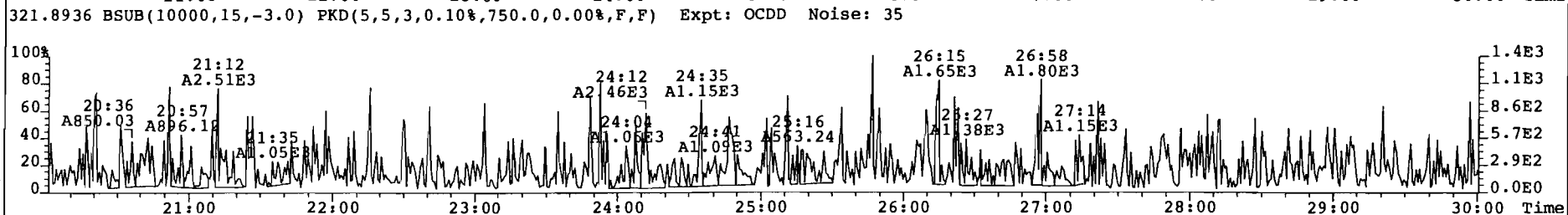
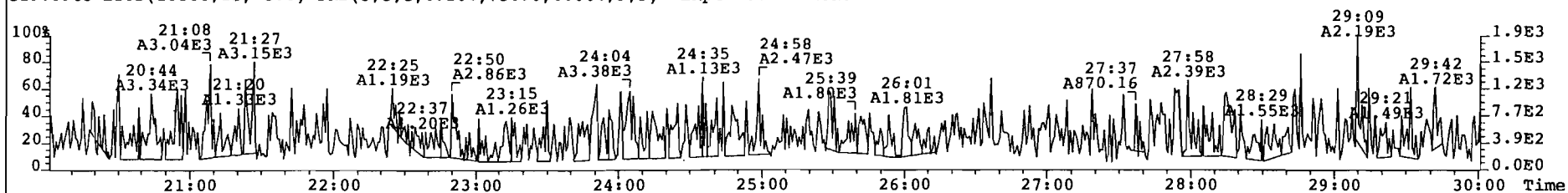
479.7165 S:2 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 148



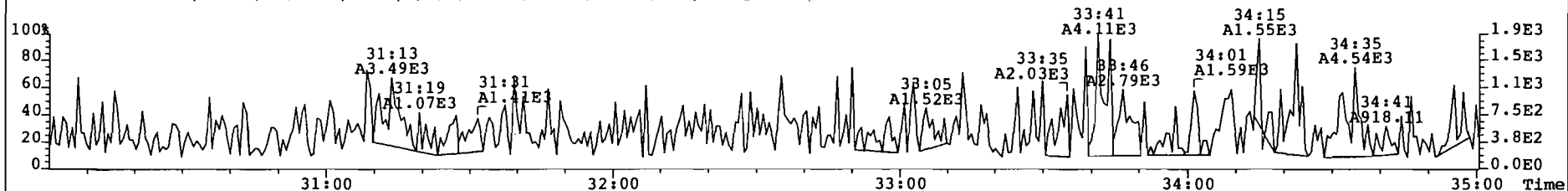
File: 010405P1 Acq: 5-APR-2001 05:40:51 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 2 Text: P1454\_319\_007 Unit 3 Run 1 Out Air Train Vial# 27 File Text: AAP DB5  
441.7428 S:2 F:5 BSub(10000,15,-3.0) Expt: OCDD Noise: 113



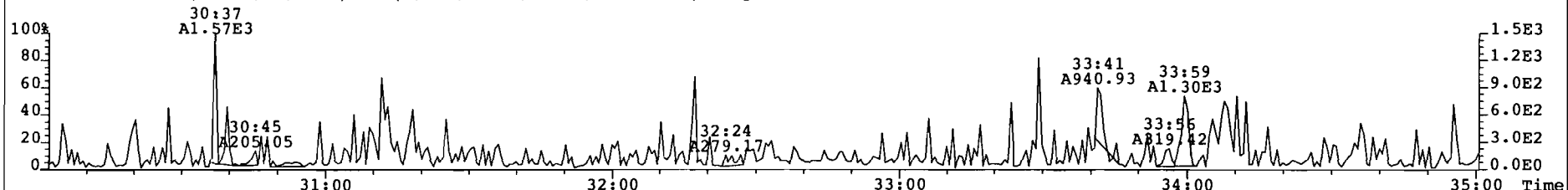
File: 010405F1 Acq: 5-APR-2001 04:48:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: SOLVENT BLANK Vial# 15 File Text: AAP DB5  
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 121



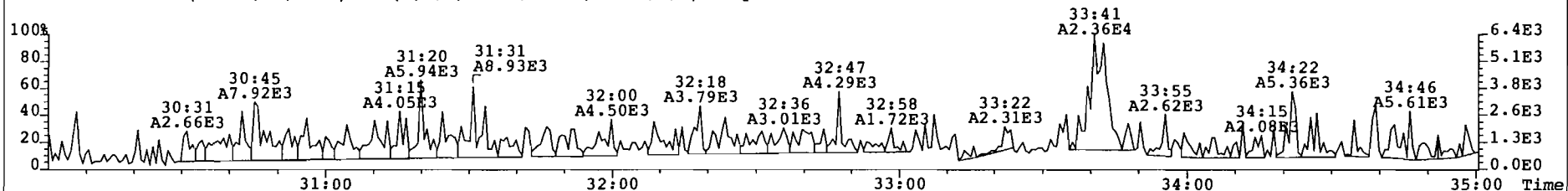
File: 010405F1 Acq: 5-APR-2001 04:48:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: SOLVENT BLANK Vial# 15 File Text: AAP DB5  
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 136



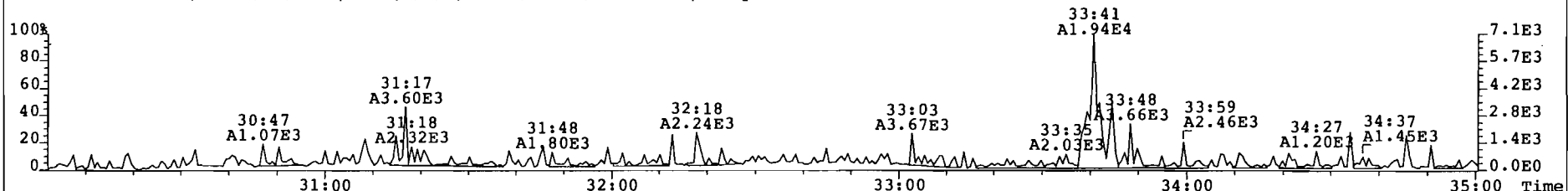
357.8517 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 21



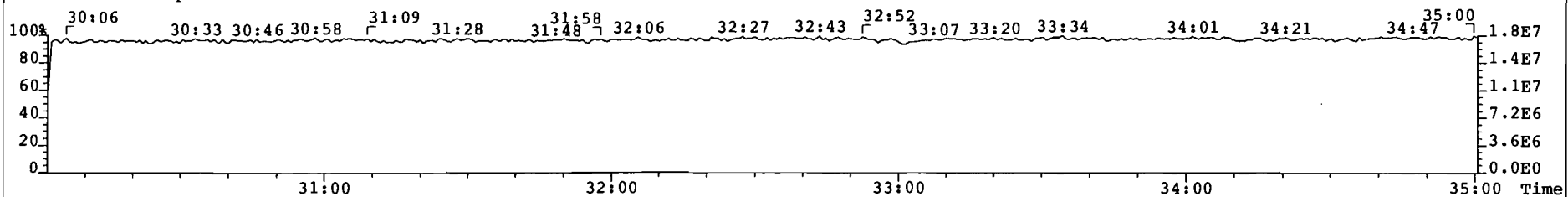
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 355



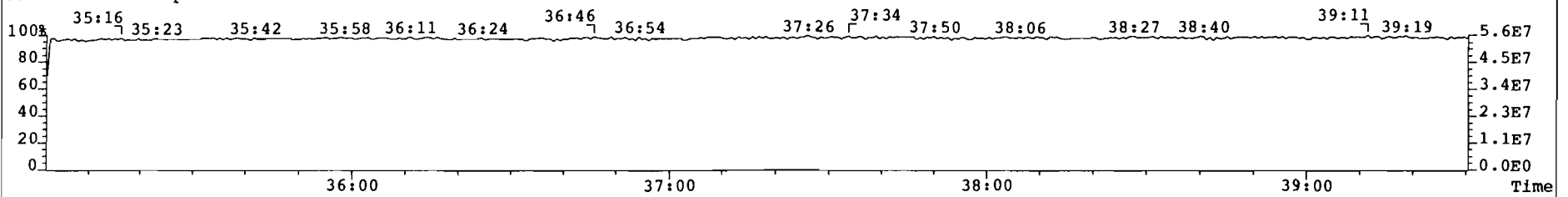
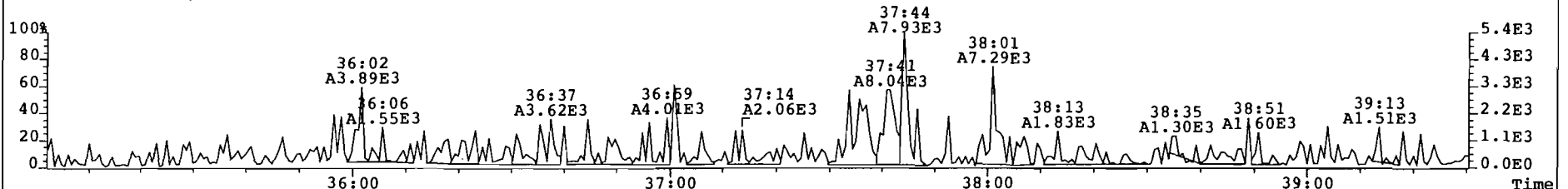
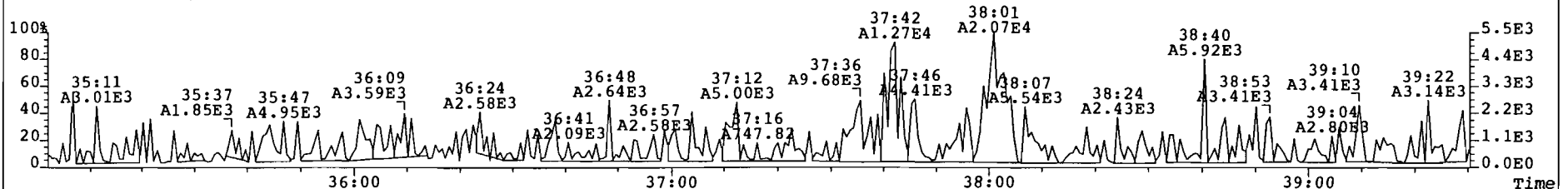
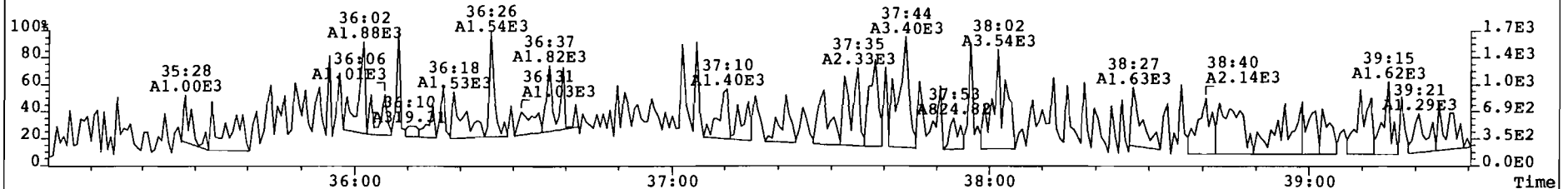
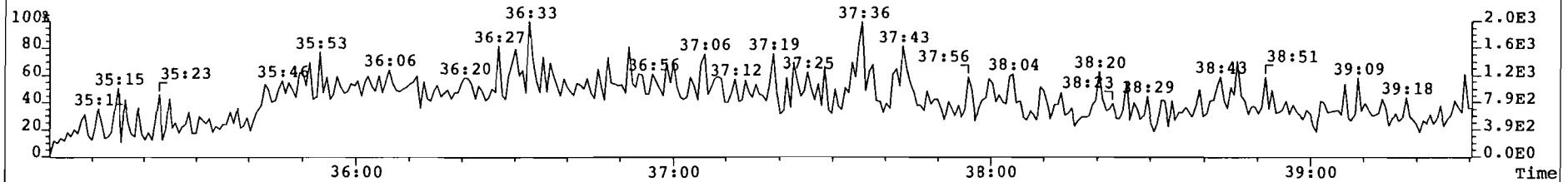
369.8919 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 96



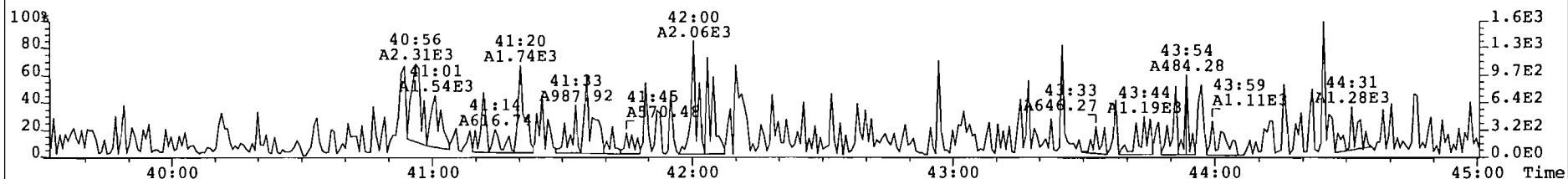
366.9792 F:2 Expt: OCDD



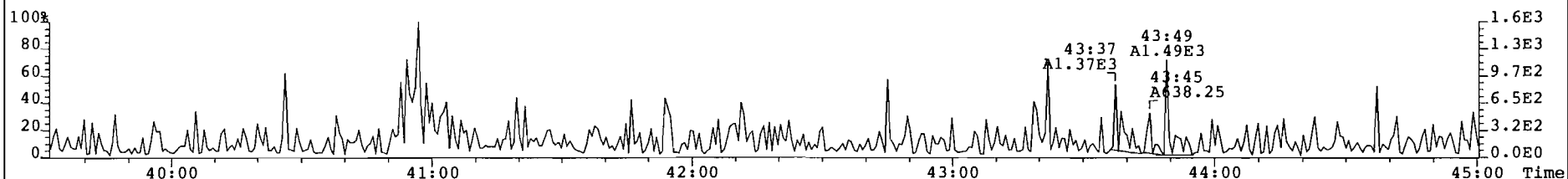
File: 010405PI Acq: 5-APR-2001 04:48:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: SOLVENT BLANK Vial# 15 File Text: AAP DB5  
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 267



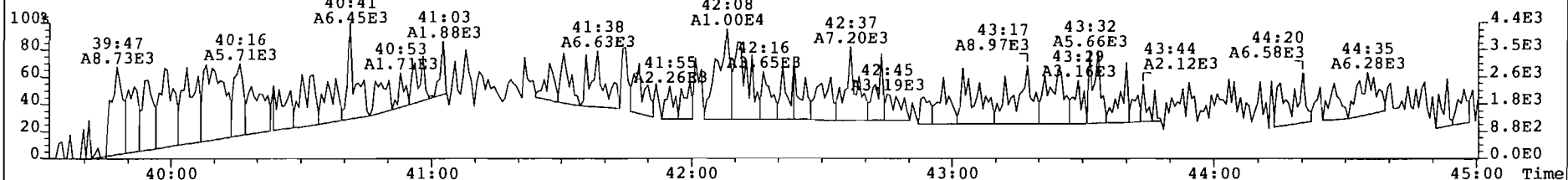
File: 010405F1 Acq: 5-APR-2001 04:48:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: SOLVENT BLANK Vial# 15 File Text: AAP DB5  
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 25



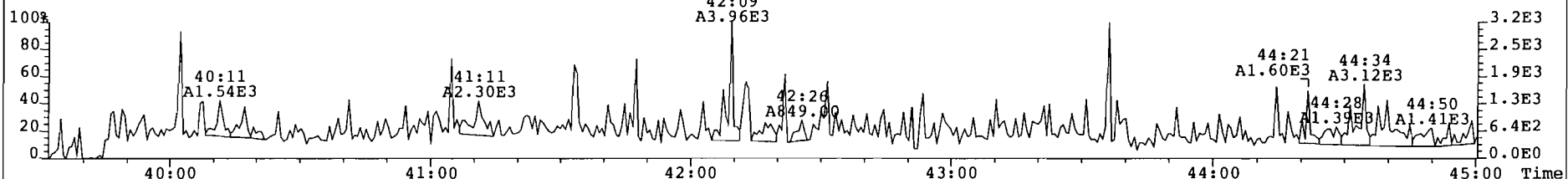
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 27



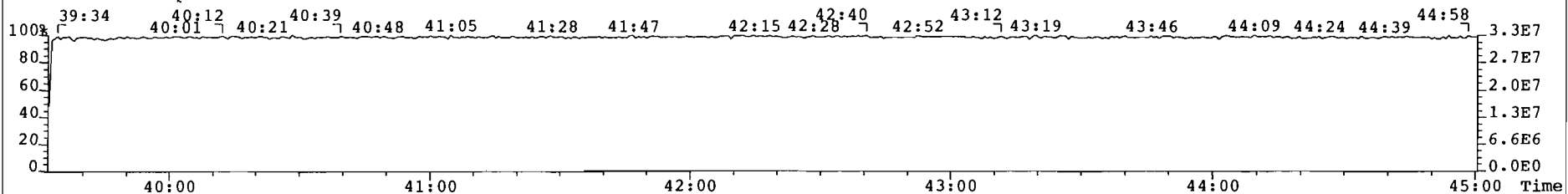
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 682



437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 196



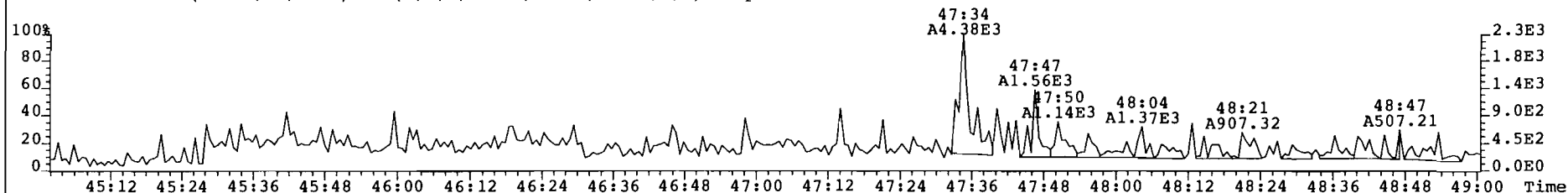
430.9728 F:4 Expt: OCDD



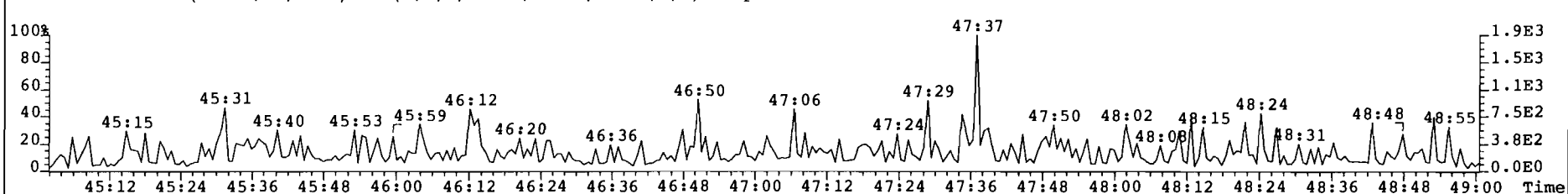
File: 010405F1 Acq: 5-APR-2001 04:48:56 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 1 Text: SOLVENT BLANK Vial# 15 File Text: AAP DB5

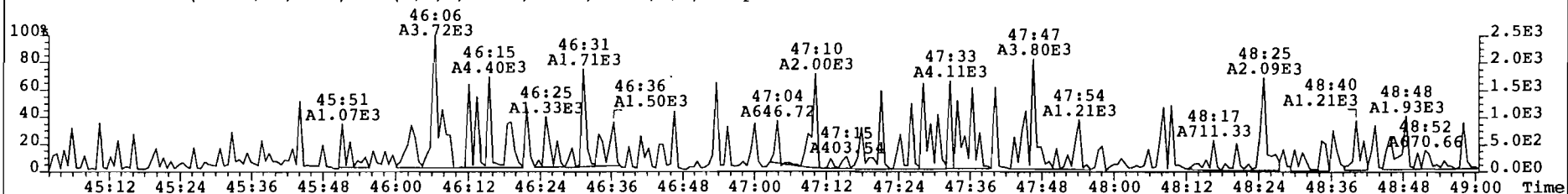
457.7377 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 117



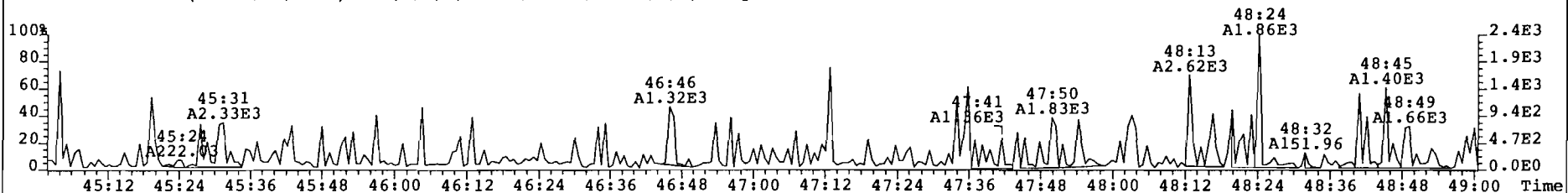
459.7348 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 54



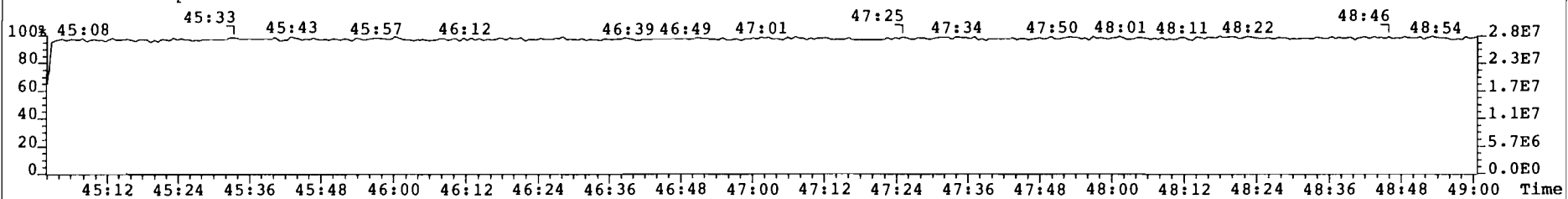
469.7780 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 30



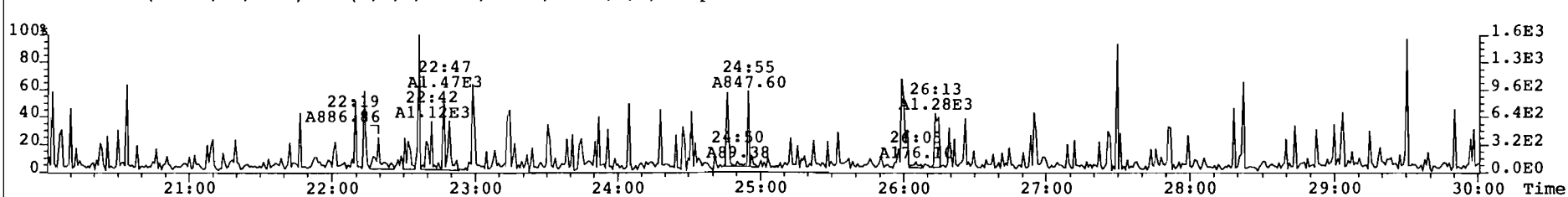
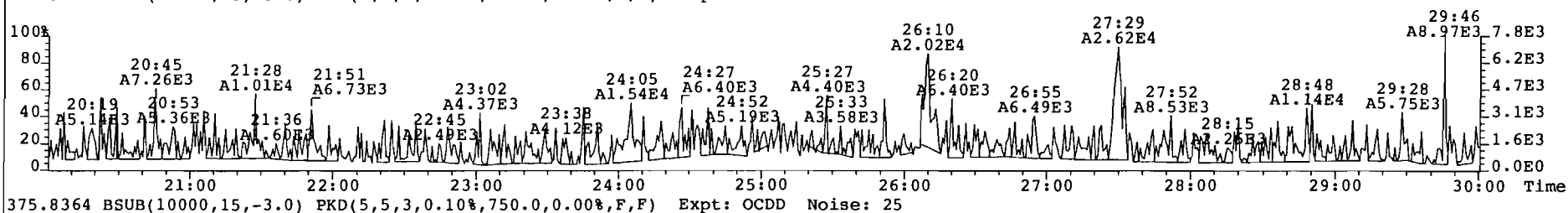
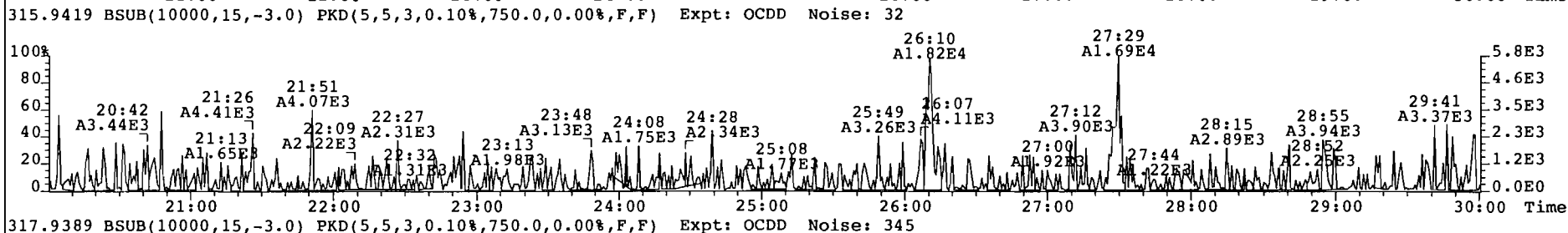
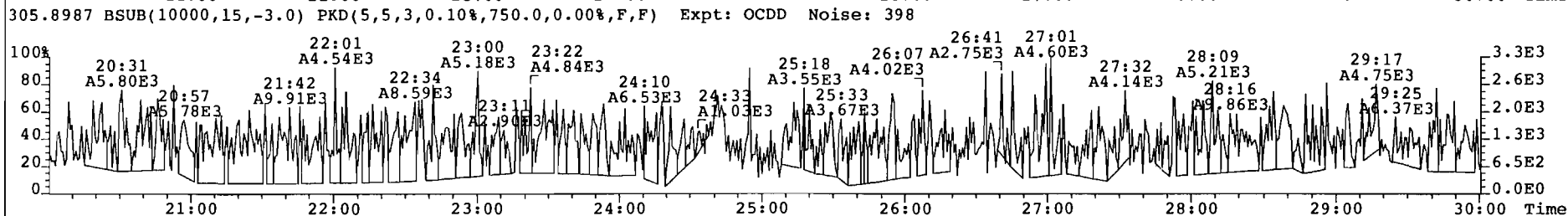
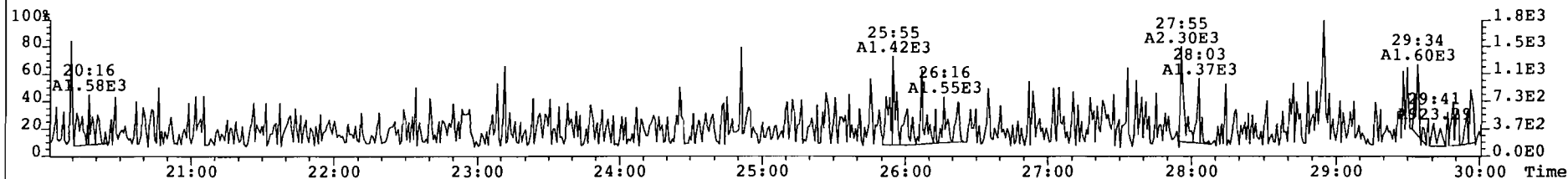
471.7750 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 33



454.9728 F:5 Expt: OCDD

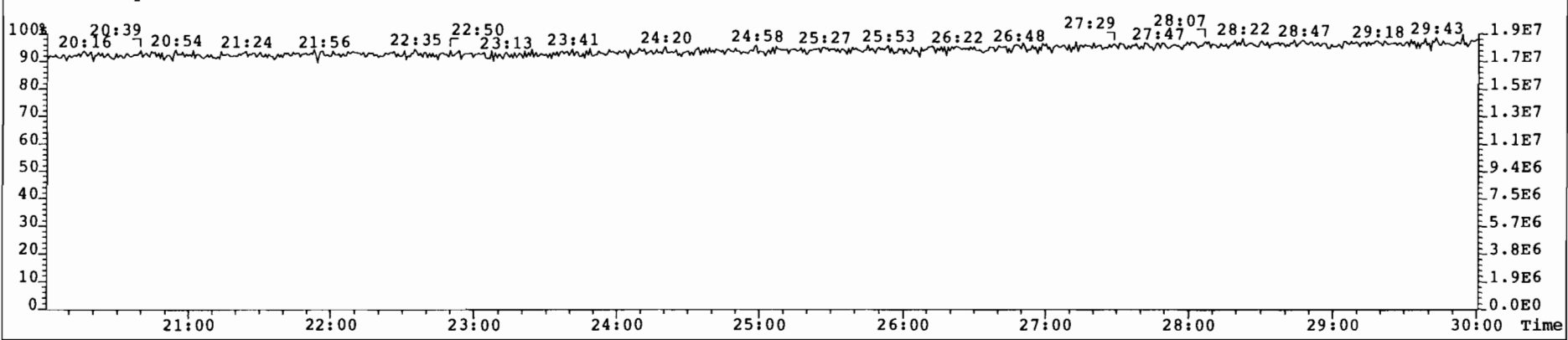
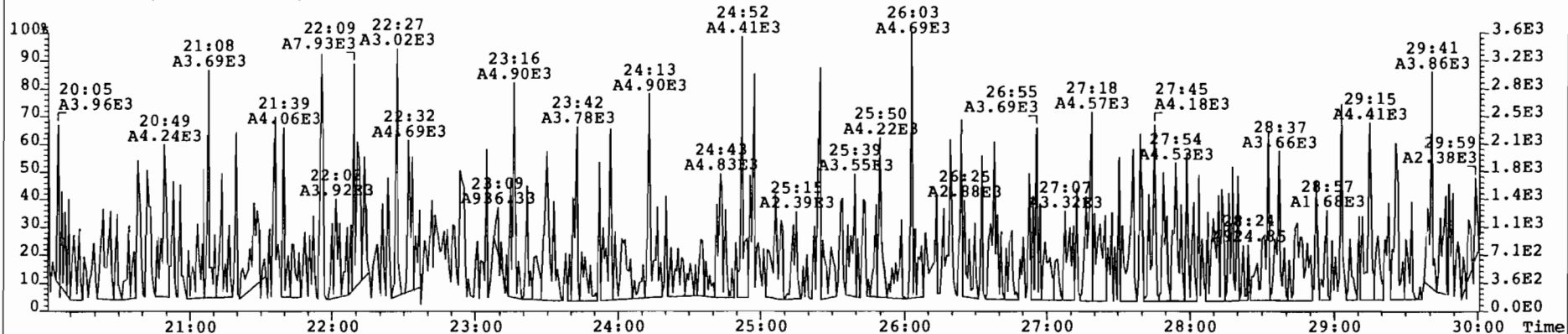
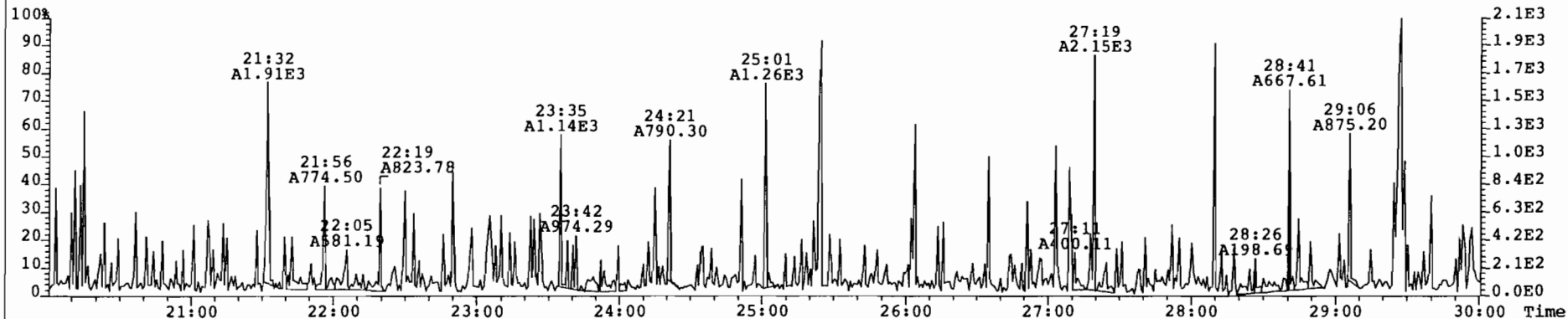


File: 010405P1 Acq: 5-APR-2001 04:48:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: SOLVENT BLANK Vial# 15 File Text: AAP DB5  
303.9016 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 90

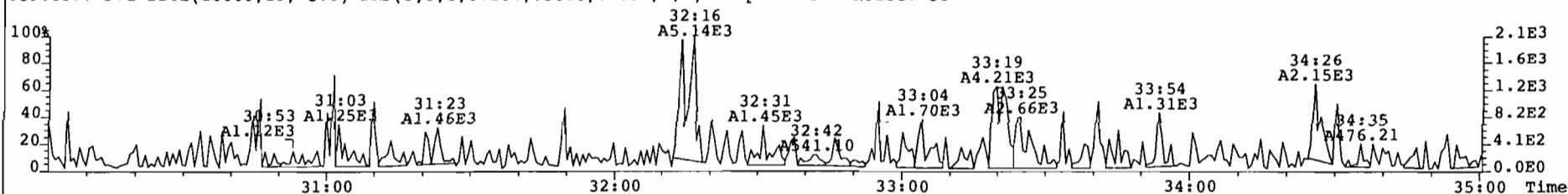




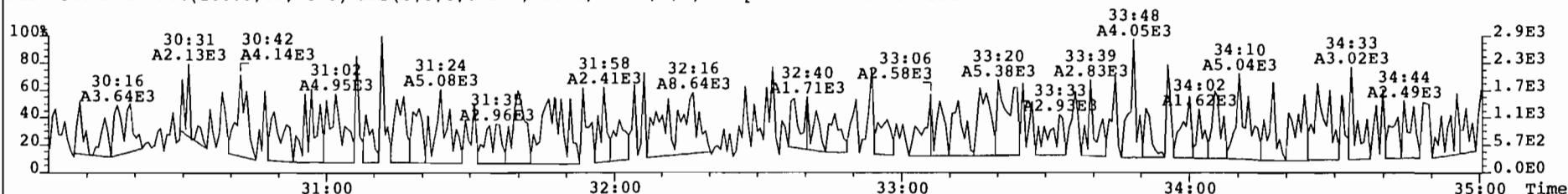
File: 010405P1 Acq: 5-APR-2001 04:48:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: SOLVENT BLANK Vial# 15 File Text: AAP DB5  
339.8597 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 26



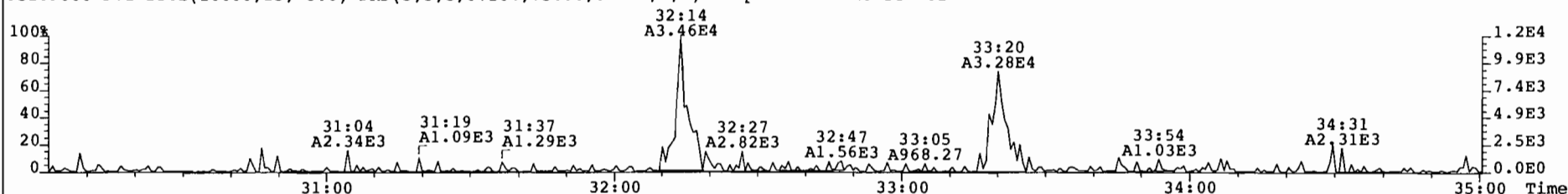
File: 010405F1 Acq: 5-APR-2001 04:48:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: SOLVENT BLANK Vial# 15 File Text: AAP DB5  
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 38



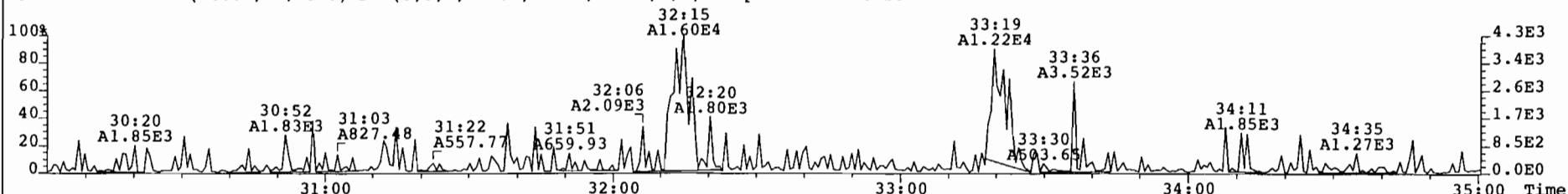
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 282



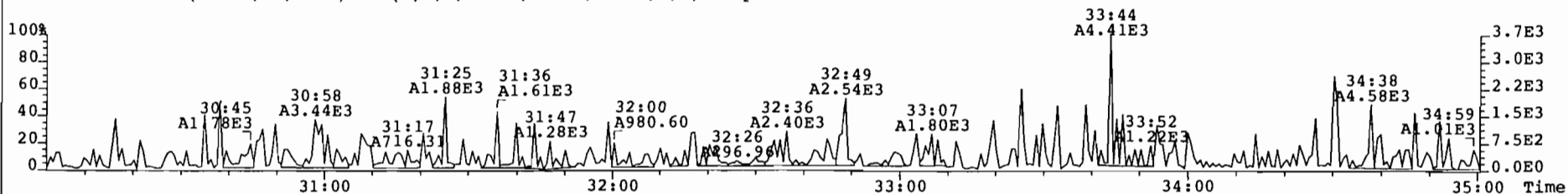
351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 32



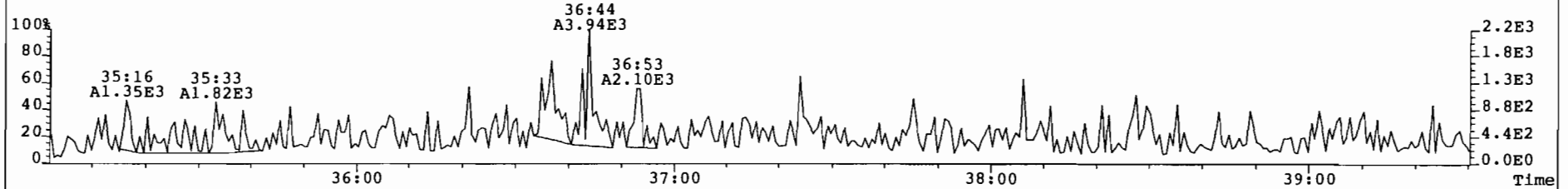
353.8970 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 28



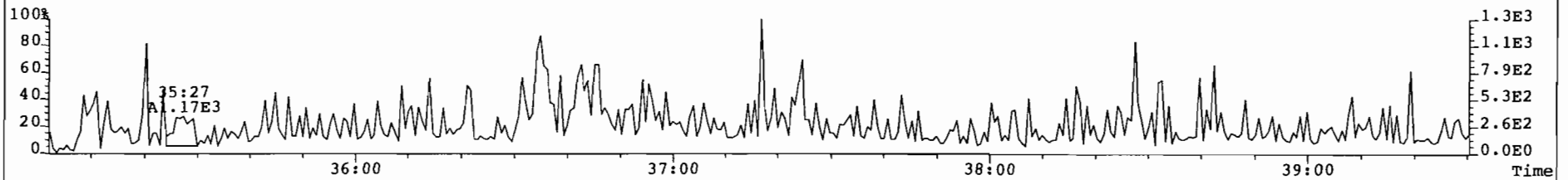
409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 52



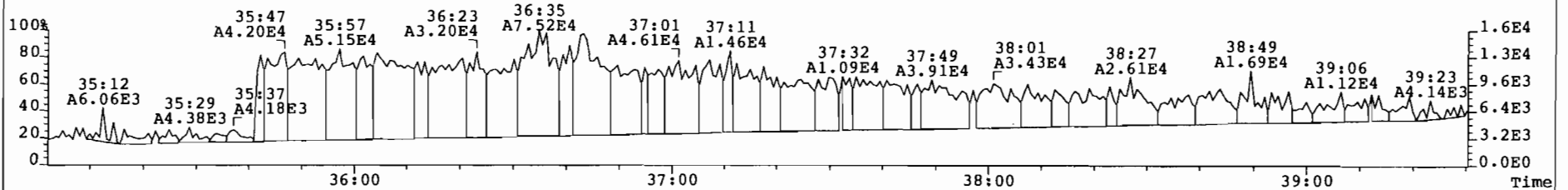
File: 010405P1 Acq: 5-APR-2001 04:48:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: SOLVENT BLANK Vial# 15 File Text: AAP DB5  
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 112



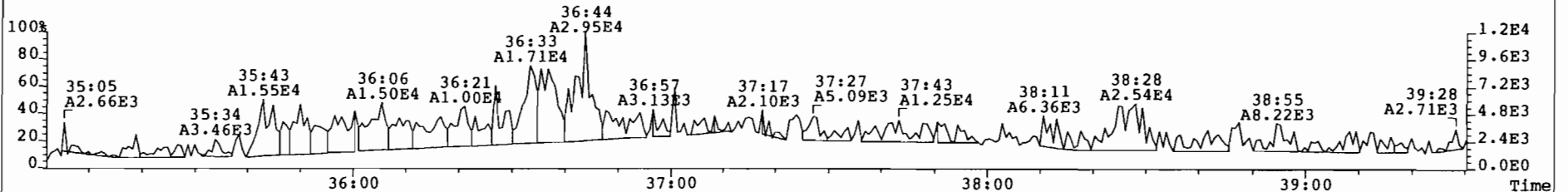
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 57



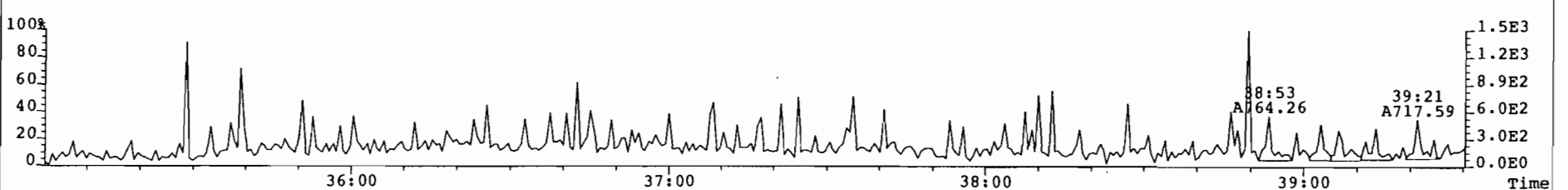
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 2887



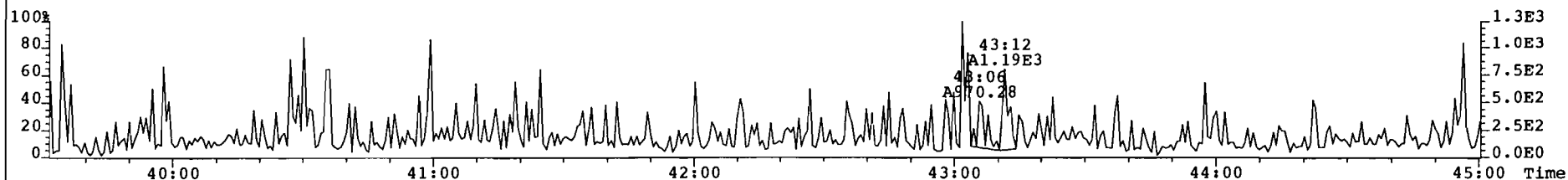
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 949



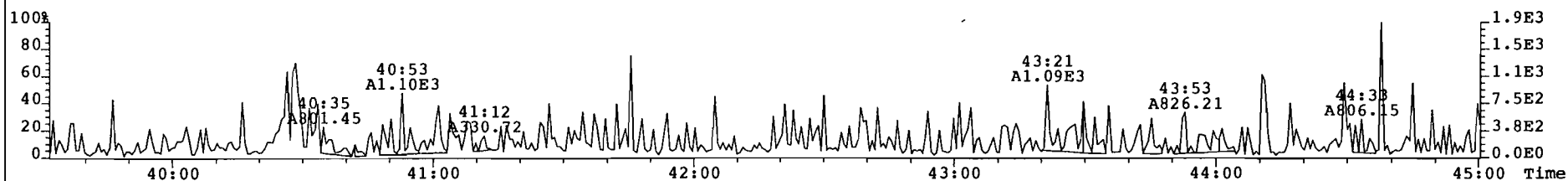
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 56



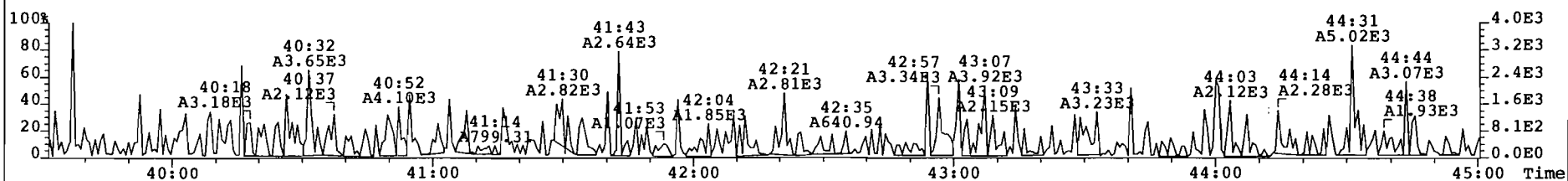
File: 010405F1 Acq: 5-APR-2001 04:48:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: SOLVENT BLANK Vial# 15 File Text: AAP DB5  
407.7818 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 41



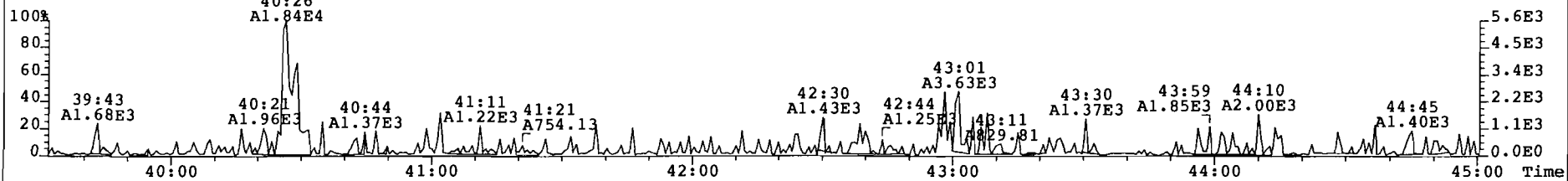
409.7788 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 34



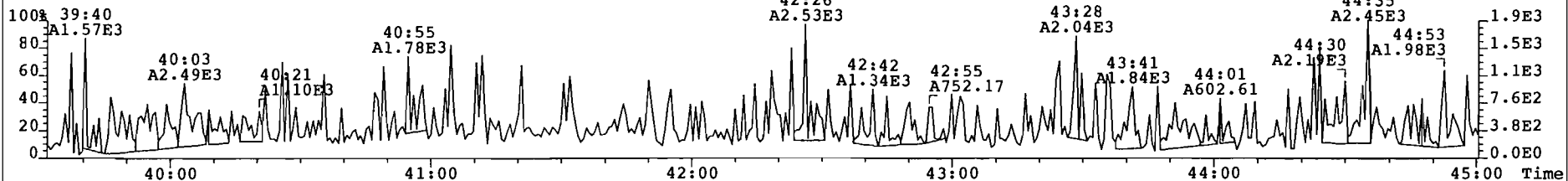
417.8253 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 36



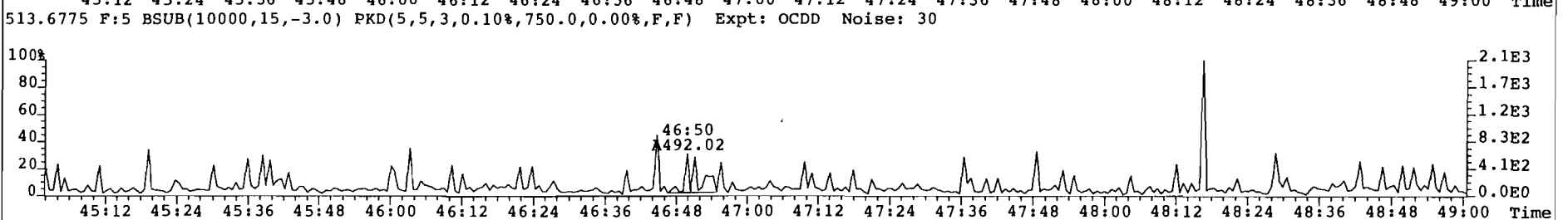
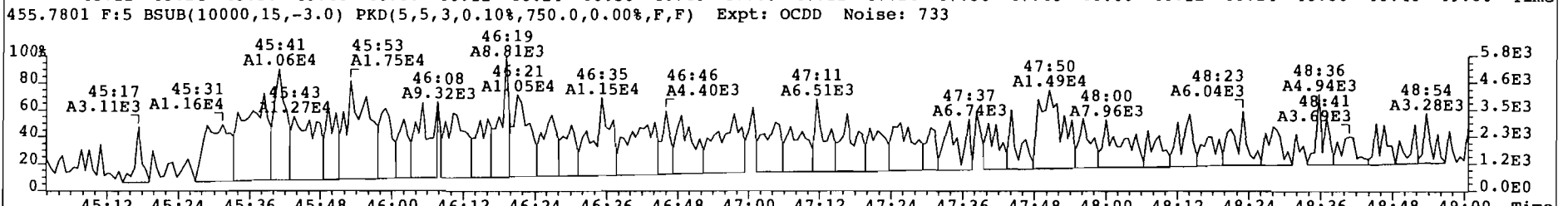
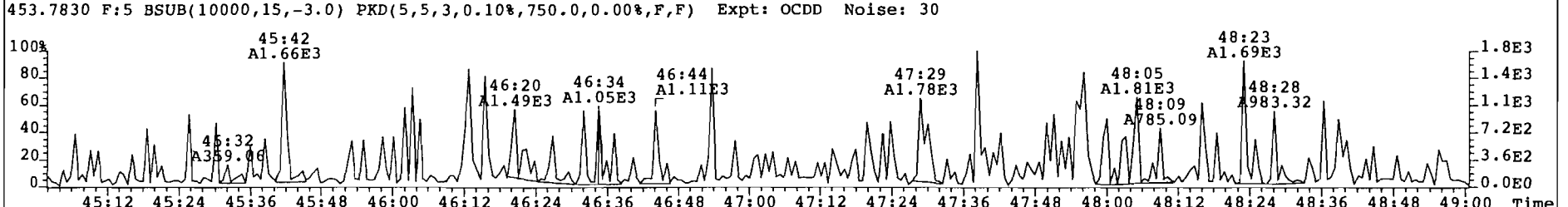
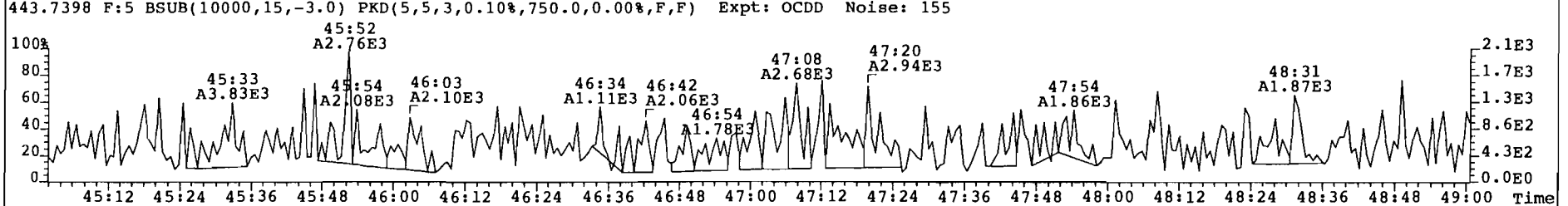
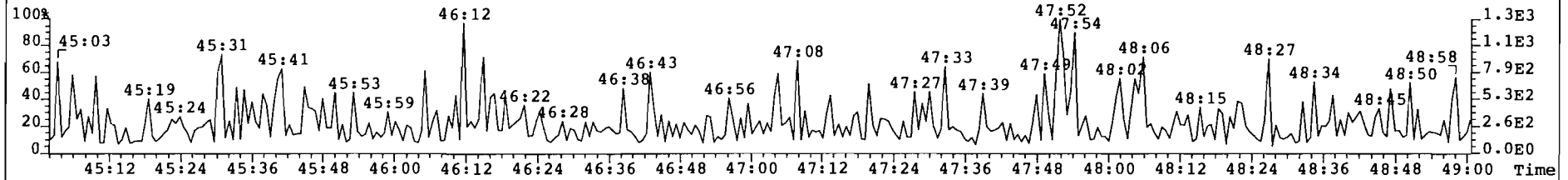
419.8220 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 31



479.7165 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 106



File: 010405F1 Acq: 5-APR-2001 04:48:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: SOLVENT BLANK Vial# 15 File Text: AAP DB5  
441.7428 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 65



Client ID: Unit 3 Run 1 Out ✓

Filename: 010420R1 S: 4

Acq: 20-APR-01 10:20:56

Page 2 of 4

Lab ID: P1454\_319\_007 ✓

GC Column ID: db-225 ICal: mm3\_db225\_000919

Wt/Vol: 1.000

Sample text: P1454\_319\_007 Unit 3 Run 1 Out Air Train ✓

Vial: 85

	Name	Resp	RA	RRF	RT	Conc	Qual	noise Fac	DL	Rec
RS	13C-1,2,3,4-TCDF	2.41e+08	0.79 y ✓	-	15:54	103		21784 5.0	-	-
IS/RT	13C-2,3,7,8-TCDF	2.44e+08	0.79 y ✓	1.06	19:21	3830		21784 5.0	17.1	95.8 ✓
Unk	2,3,7,8-TCDF	4.14e+06	0.77 y ✓	1.08	19:23	62.6 ✓		7300 5.0	5.66	-

Reviewer: CP

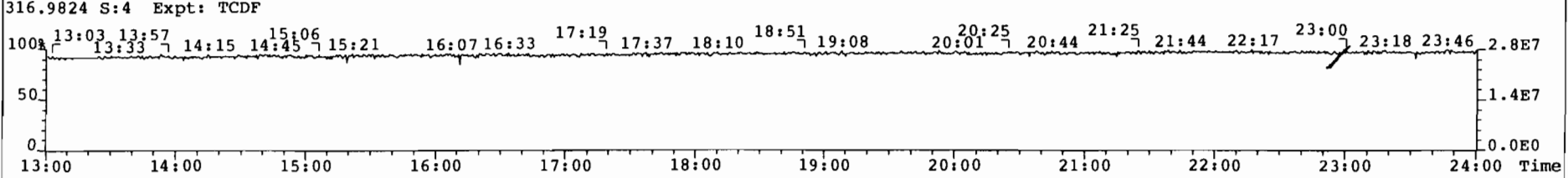
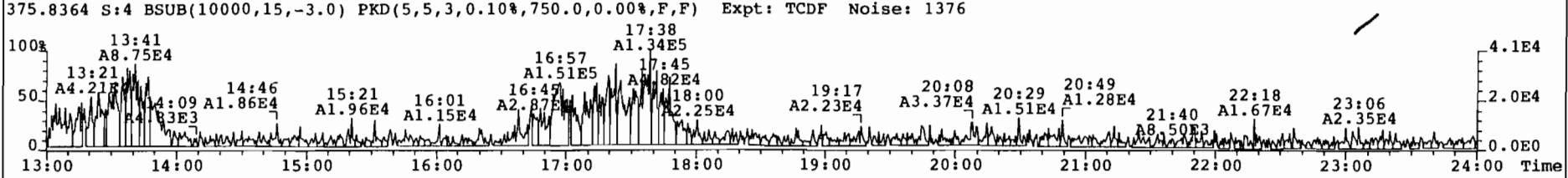
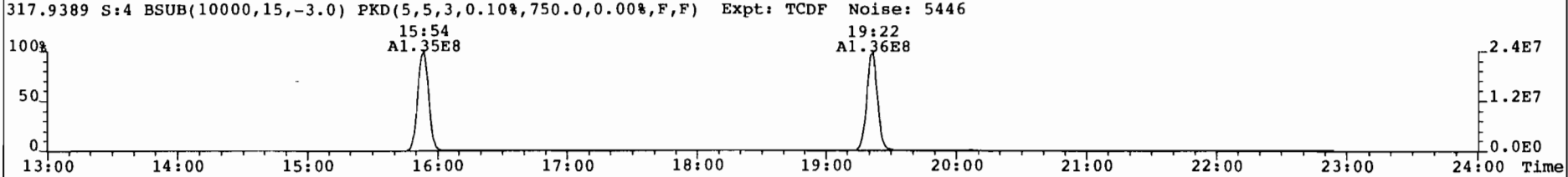
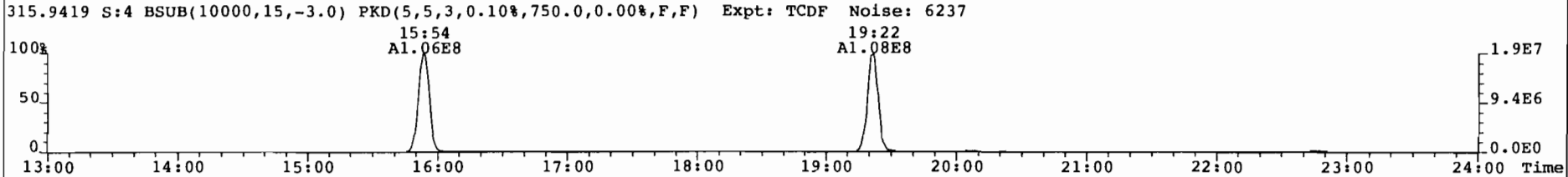
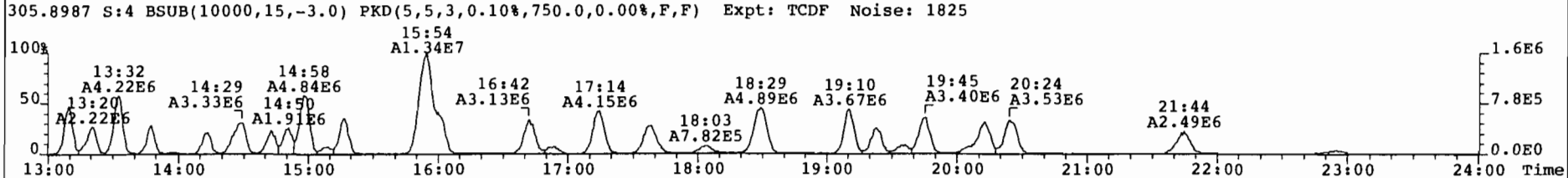
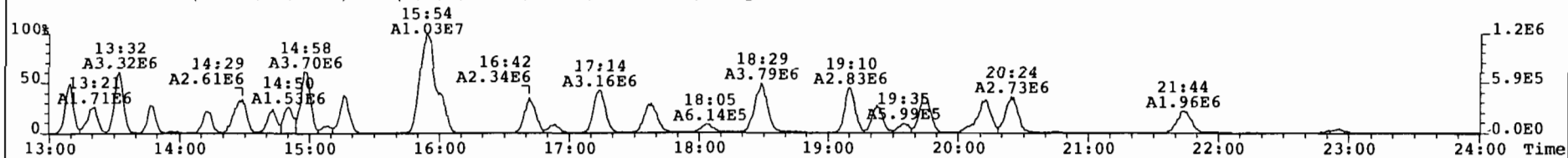
Date: 20 Apr 01

Analyst: JAH

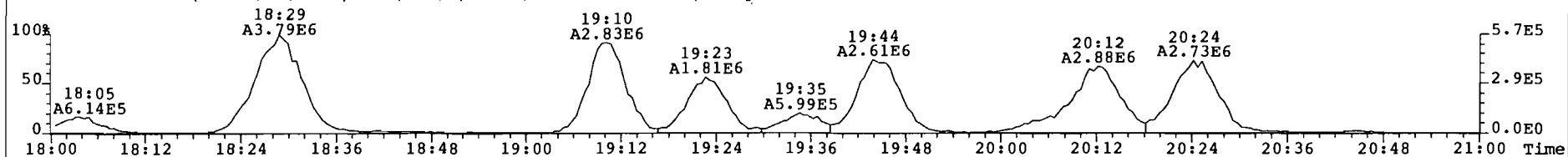
Date: 25 Apr 01

SC

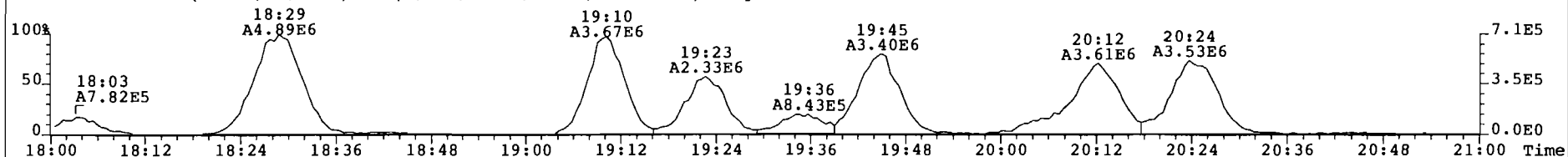
File: 010420R1 Acq: 20-APR-2001 10:20:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454 319\_007 Unit 3 Run 1 Out Air Train File Text: AAP DB225  
303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: TCDF Noise: 1507



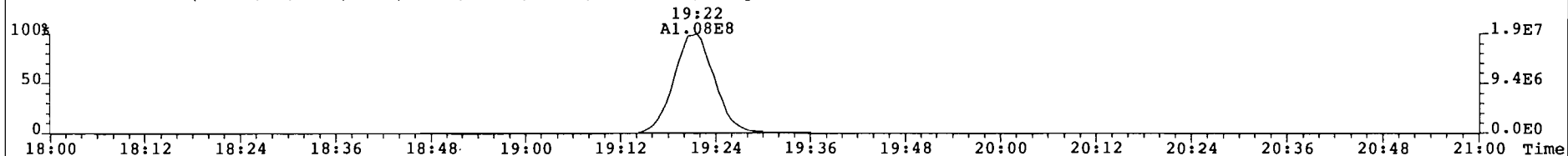
File: 010420R1 Acq: 20-APR-2001 10:20:56 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454 319\_007 Unit 3 Run 1 Out Air Train File Text: AAP DB225  
303.9016 S:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: TCDF Noise: 1507



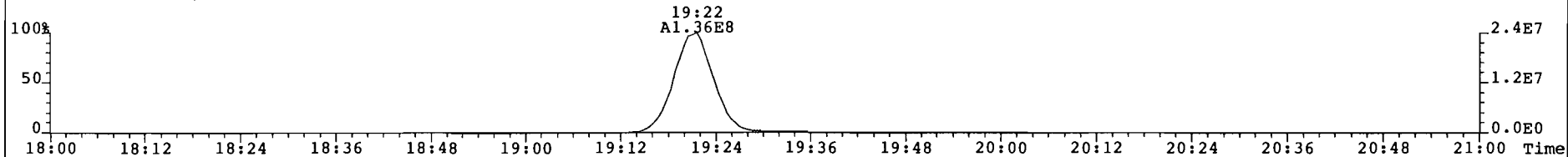
305.8987 S:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: TCDF Noise: 1825



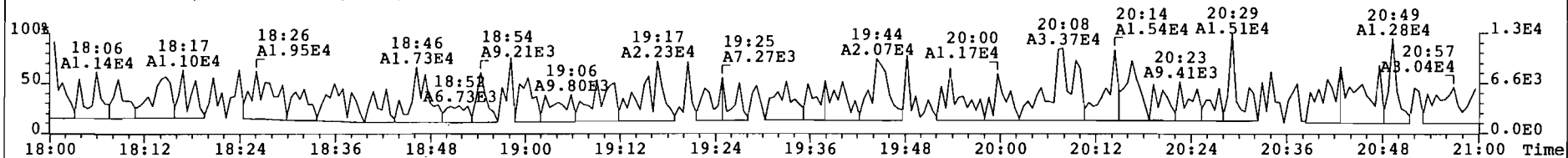
315.9419 S:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: TCDF Noise: 6237



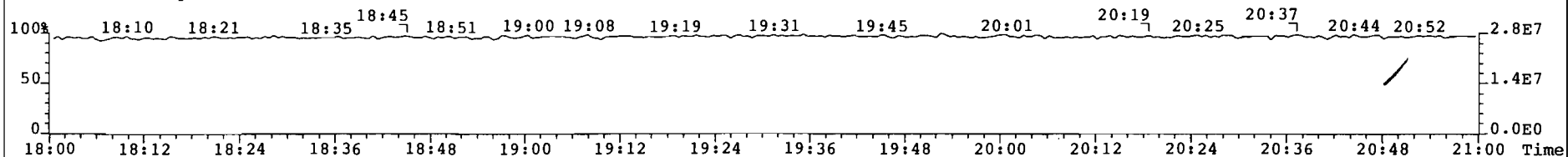
317.9389 S:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: TCDF Noise: 5446



375.8364 S:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: TCDF Noise: 1376



316.9824 S:4 Expt: TCDF





# Sample ID: Unit 3 Run 2 Out

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_008	Date Extracted:	2 Apr 01
Date Collected:	26 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	6.74			A	94.8	105	108
1,2,3,7,8-PeCDD	44			A	101	100	108
1,2,3,4,7,8-HxCDD	71				109	84.8	108
1,2,3,6,7,8-HxCDD	236				109	84.8	108
1,2,3,7,8,9-HxCDD	113				109	84.8	108
1,2,3,4,6,7,8-HpCDD	1390				97.9	92.2	108
OCDD	3110			B	73.8	92.2	108
2,3,7,8-TCDF	50.2				92.9	105	108
1,2,3,7,8-PeCDF	83.6				93.6	100	108
2,3,4,7,8-PeCDF	171				93.6	100	108
1,2,3,4,7,8-HxCDF	152				122	90.5	108
1,2,3,6,7,8-HxCDF	157				122	90.5	108
2,3,4,6,7,8-HxCDF	209				122	90.5	108
1,2,3,7,8,9-HxCDF	45.6			A	122	90.5	108
1,2,3,4,6,7,8-HpCDF	882				111	92.2	108
1,2,3,4,7,8,9-HpCDF	50.2				111	92.2	108
OCDF	218				88.5	92.2	108

Totals & TEQs			
TCDDs	689		692
PeCDDs	1830		
HxCDDs	3660		
HpCDDs	2800		
TCDFs	1890		1910
PeCDFs	1880		
HxCDFs	1660		
HpCDFs	1180		
<b>Total PCDD/Fs</b>	<b>18900</b>		<b>18900</b>
<b>TEQ (ND=0)</b>	<b>248</b>		<b>248</b>
<b>TEQ (ND=DL/2)</b>	<b>248</b>		<b>248</b>

**ALTA ANALYTICAL PERSPECTIVES**

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web: www.ultratrace.com

Reviewer CE  
Date 18 Apr 01


54

# Sample ID: Unit 3 Run 2 Out - confirmation results incorporated

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_008	Date Extracted:	2 Apr 01
Date Collected:	26 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	6.74			A	94.8	105	108
1,2,3,7,8-PeCDD	44			A	101	100	108
1,2,3,4,7,8-HxCDD	71				109	84.8	108
1,2,3,6,7,8-HxCDD	236				109	84.8	108
1,2,3,7,8,9-HxCDD	113				109	84.8	108
1,2,3,4,6,7,8-HpCDD	1390				97.9	92.2	108
OCDD	3110			B	73.8	92.2	108
2,3,7,8-TCDF	48.1				92.9	105	108
1,2,3,7,8-PeCDF	83.6				93.6	100	108
2,3,4,7,8-PeCDF	171				93.6	100	108
1,2,3,4,7,8-HxCDF	152				122	90.5	108
1,2,3,6,7,8-HxCDF	157				122	90.5	108
2,3,4,6,7,8-HxCDF	209				122	90.5	108
1,2,3,7,8,9-HxCDF	45.6			A	122	90.5	108
1,2,3,4,6,7,8-HpCDF	882				111	92.2	108
1,2,3,4,7,8,9-HpCDF	50.2				111	92.2	108
OCDF	218				88.5	92.2	108

Totals & TEQs				
TCDDs	689		692	 <b>ALTA ANALYTICAL PERSPECTIVES</b> 2714 Exchange Drive Wilmington North Carolina 28405 USA Tel: 910 794-1613 Fax: 910 794-3919 e-mail: ytondeur@cs.com web: www.ultratrace.com
PeCDDs	1830			
HxCDDs	3660			
HpCDDs	2800			
TCDFs	1890		1910	
PeCDFs	1880			
HxCDFs	1660			
HpCDFs	1180			
<b>Total PCDD/Fs</b>	<b>18900</b>		<b>18900</b>	
<b>TEQ (ND=0)</b>	<b>248</b>		<b>248</b>	
<b>TEQ (ND=DL/2)</b>	<b>248</b>		<b>248</b>	
			ITEF	
			ITEF	

Reviewer CL  
 Date 21 Apr 01

4

Client ID: Unit 3 Run 2 Out  
Lab ID: P1454\_319\_008

Filename: 010405P1  
GC Column ID: db-5

S: 3 Acq: 5-APR-01 06:32:45  
ICal: MM1\_M23\_0 wt/vol: 1.000

ConCal: 010405P1-  
EndCal: 010405P1-

Name	Resp	RA	RRF	RT	Conc	Qualif.	CDE	noise	Fac	DL
2,3,7,8-TCDD	8.67e+04	0.62 <i>h</i>	1.26	28:20	6.82			964	2.5	1.36
1,2,3,7,8-PeCDD	3.88e+05	1.77 <i>y</i>	1.01	33:39	44.0			1194	2.5	3.41
1,2,3,4,7,8-HxCDD	6.42e+05	1.34 <i>y</i>	1.14	37:33	71.0			3821	2.5	12.0
1,2,3,6,7,8-HxCDD	1.92e+06	1.30 <i>y</i>	1.02	37:41	236			3821	2.5	13.4
1,2,3,7,8,9-HxCDD	1.02e+06	1.34 <i>y</i>	1.14	38:01	113			3821	2.5	12.0
1,2,3,4,6,7,8-HpCDD	1.09e+07	1.07 <i>y</i>	1.13	42:08	1390			4002	2.5	19.0
OCDD	1.34e+07	0.89 <i>y</i>	1.03	47:35	3110			807	2.5	7.17
2,3,7,8-TCDF	8.06e+05	0.75 <i>y</i>	1.05	27:29	50.2 <i>ok</i>			1653	2.5	1.89
1,2,3,7,8-PeCDF	1.21e+06	1.58 <i>y</i>	1.04	32:13	83.6			3183	2.5	5.29
2,3,4,7,8-PeCDF	2.52e+06	1.56 <i>y</i>	1.05	33:19	171			3183	2.5	5.21
1,2,3,4,7,8-HxCDF	2.08e+06	1.30 <i>y</i>	1.13	36:33	152			4679	2.5	6.02
1,2,3,6,7,8-HxCDF	2.36e+06	1.26 <i>y</i>	1.24	36:42	157			4679	2.5	5.51
2,3,4,6,7,8-HxCDF	2.96e+06	1.29 <i>y</i>	1.16	37:22	209			4679	2.5	5.85
1,2,3,7,8,9-HxCDF	5.63e+05	1.18 <i>y</i>	1.02	38:27	45.6			4679	2.5	6.69
1,2,3,4,6,7,8-HpCDF	1.06e+07	1.04 <i>y</i>	1.54	40:26	882			1860	2.5	3.12
1,2,3,4,7,8,9-HpCDF	5.08e+05	1.13 <i>y</i>	1.30	43:00	50.2			1860	2.5	3.71
OCDF	1.39e+06	0.93 <i>y</i>	1.15	47:52	218			1440	2.5	8.51
Total Tetra-Dioxins	8.66e+06	0.81 <i>y</i>	1.26	24:46	682			964	2.5	1.36
Total Penta-Dioxins	1.62e+07	1.60 <i>y</i>	1.01	31:10	1830			1194	2.5	3.41
Total Hexa-Dioxins	3.20e+07	1.26 <i>y</i>	1.10	35:50	3660			3821	2.5	12.4
Total Hepta-Dioxins	2.18e+07	1.04 <i>y</i>	1.13	40:53	2800 ✓			4002	2.5	19.0
Total Tetra-Furans	3.04e+07	0.77 <i>y</i>	1.05	22:42	1890			1653	2.5	1.89
1st Fnc. Penta-Furans	2.45e+06	1.61 <i>y</i>	1.05	29:26	167			1299	2.5	2.14
Total Penta-Furans	2.50e+07	1.54 <i>y</i>	1.05	30:57	1710			3183	2.5	5.25
PeCDF Totals:					1880					1880
Total Hexa-Furans	2.31e+07	1.27 <i>y</i>	1.14	35:11	1660			4679	2.5	5.99
Total Hepta-Furans	1.39e+07	1.04 <i>y</i>	1.42	40:26	1180			1860	2.5	3.39
IS 13C-2,3,7,8-TCDD	4.03e+07	0.79 <i>y</i>	1.13	28:19	3790					
IS 13C-1,2,3,7,8-PeCDD	3.49e+07	1.61 <i>y</i>	0.93	33:39	4020					
IS 13C-1,2,3,6,7,8-HxCDD	3.17e+07	1.29 <i>y</i>	0.93	37:40	4370					
IS 13C-1,2,3,4,6,7,8-HpCDD	2.76e+07	1.09 <i>y</i>	0.91	42:07	3920					
IS 13C-OCDD	1.68e+07	0.96 <i>y</i>	0.73	47:34	2950					
IS 13C-2,3,7,8-TCDF	6.14e+07	0.80 <i>y</i>	1.06	27:28	3720					
IS 13C-1,2,3,7,8-PeCDF	5.60e+07	1.59 <i>y</i>	0.96	32:12	3750					
IS 13C-1,2,3,6,7,8-HxCDF	4.85e+07	0.53 <i>y</i>	1.28	36:42	4860					
IS 13C-1,2,3,4,6,7,8-HpCDF	3.12e+07	0.44 <i>y</i>	0.90	40:25	4440					
IS 13C-OCDF	2.23e+07	0.89 <i>y</i>	0.81	47:51	3540					
RS/RT 13C-1,2,3,4-TCDD	3.75e+07	0.82 <i>y</i>	1.00	27:41	4000					
RS 13C-1,2,3,4-TCDF	6.23e+07	0.78 <i>y</i>	1.00	26:09	4000					
RS/RT 13C-1,2,3,7,8,9-HxCDD	3.11e+07	1.27 <i>y</i>	1.00	38:00	4000					
PS 37C1-2,3,7,8-TCDD	2.18e+07		0.51	28:20	4200					
PS 13C-2,3,4,7,8-PeCDF	5.46e+07	1.59 <i>y</i>	0.97	33:18	4010					
PS 13C-1,2,3,4,7,8-HxCDD	2.49e+07	1.28 <i>y</i>	0.92	37:32	3390					
PS 13C-1,2,3,4,7,8-HxCDF	3.99e+07	0.54 <i>y</i>	0.91	36:33	3620					
PS 13C-1,2,3,4,7,8,9-HpCDF	2.45e+07	0.44 <i>y</i>	0.85	42:58	3690					
AS 13C-1,2,3,7,8,9-HxCDF	3.58e+07	0.54 <i>y</i>	1.07	38:25	4300					

Reviewer: ce

Date: 18 April

EMPC

692
1830
3660
2800 ✓
1910
167
1880
1660
1180

Rec

94.8 -
101 -
109 -
97.9 -
73.8 -
92.9 -
93.6 -
122 -
111 -
88.5 -

Analyst: OAG

105 -
100 -
84.8 -
90.5 -
92.2 -
108 -

Date: 18 April

Totals class: TCDD EMPC Function: 1 Run #: 18  
 File Name: 010405P1 Sample #: 3 Sample text: P1454\_319\_008 Unit 3 Run 2 Out Air Train

Acquired: 5-APR-01 06:32:45 Processed: 5-APR-01 09:19:40

Total Conc.: 691.74 Unnamed Conc.: 684.913

RT	m1	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
24:46	1.887e+06	n	2.330e+06	n	0.81	y	4.217e+06	4.217e+06	5.27e+02	y	332	
25:06	4.605e+05	n	5.748e+05	n	0.80	y	1.035e+06	1.035e+06	1.33e+02	y	81.5	
25:32	1.484e+05	n	1.811e+05	n	0.82	y	3.295e+05	3.295e+05	3.97e+01	y	25.9	
26:18	1.986e+04	y	2.208e+04	y	0.90	n	4.194e+04	3.908e+04	6.46e+00	y	3.08	
26:32	2.704e+05	n	3.387e+05	n	0.80	y	6.091e+05	6.091e+05	6.90e+01	y	48.0	
26:43	1.975e+05	y	2.478e+05	n	0.80	y	4.453e+05	4.453e+05	5.78e+01	y	35.1	
26:55	1.075e+05	y	1.368e+05	n	0.79	y	2.443e+05	2.443e+05	3.29e+01	y	19.2	
27:09	2.823e+04	n	3.238e+04	n	0.87	y	6.061e+04	6.061e+04	7.87e+00	y	4.77	
27:19	1.154e+05	n	1.426e+05	n	0.81	y	2.580e+05	2.580e+05	3.44e+01	y	20.3	
27:42	2.587e+05	n	3.340e+05	y	0.77	y	5.927e+05	5.927e+05	7.79e+01	y	46.7	
27:49	3.423e+04	y	5.077e+04	y	0.67	y	8.500e+04	8.500e+04	1.59e+01	y	6.69	
28:03	2.229e+05	y	2.788e+05	y	0.80	y	5.017e+05	5.017e+05	5.22e+01	y	39.5	
28:12	3.822e+04	y	5.476e+04	y	0.70	y	9.298e+04	9.298e+04	1.66e+01	y	7.32	
28:20	3.770e+04	y	6.094e+04	y	0.62	n	9.863e+04	8.665e+04	1.58e+01	y	6.82	2,3,7,8-TCDD
28:40	4.902e+04	y	6.217e+04	y	0.79	y	1.112e+05	1.112e+05	1.61e+01	y	8.75	
28:48	1.618e+04	y	2.018e+04	y	0.80	y	3.636e+04	3.636e+04	4.87e+00	y	2.86	
29:18	1.883e+04	y	2.225e+04	y	0.85	y	4.108e+04	4.108e+04	7.70e+00	y	3.23	

Totals class: PeCDD EMPC Function: 2 Run #: 18  
 File Name: 010405P1 Sample #: 3 Sample text: P1454\_319\_008 Unit 3 Run 2 Out Air Train

Acquired: 5-APR-01 06:32:45 Processed: 5-APR-01 09:19:40

Total Conc.: 1832.9 Unnamed Conc.: 1788.835

RT	m1	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
31:10	3.554e+06	n	2.217e+06	n	1.60	y	5.771e+06	5.771e+06	3.92e+02	y	654	
31:42	2.383e+05	y	1.484e+05	n	1.61	y	3.867e+05	3.867e+05	3.36e+01	y	43.8	
32:15	2.875e+06	n	1.784e+06	n	1.61	y	4.658e+06	4.658e+06	4.08e+02	y	528	
32:25	2.586e+05	y	1.594e+05	y	1.62	y	4.180e+05	4.180e+05	3.74e+01	y	47.4	
32:32	1.136e+06	y	7.118e+05	y	1.60	y	1.848e+06	1.848e+06	1.66e+02	y	209	
32:47	5.736e+05	n	3.560e+05	n	1.61	y	9.296e+05	9.296e+05	5.66e+01	y	105	
33:10	7.968e+05	n	4.650e+05	n	1.71	y	1.262e+06	1.262e+06	1.12e+02	y	143	
33:39	2.480e+05	y	1.403e+05	y	1.77	y	3.884e+05	3.884e+05	3.43e+01	y	44.0	1,2,3,7,8-PeCDD
33:45	1.642e+05	y	1.137e+05	y	1.44	y	2.779e+05	2.779e+05	2.45e+01	y	31.5	
34:06	1.420e+05	y	8.696e+04	y	1.63	y	2.290e+05	2.290e+05	2.08e+01	y	26.0	

Totals class: HxCDD EMPC Function: 3 Run #: 18  
 File Name: 010405P1 Sample #: 3 Sample text: P1454\_319\_008 Unit 3 Run 2 Out Air Train

Acquired: 5-APR-01 06:32:45 Processed: 5-APR-01 09:19:40

Total Conc.: 3664.5 Unnamed Conc.: 3245.178

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
35:50	1.475e+06	n	1.175e+06	n	1.26	y	2.649e+06	2.649e+06	8.14e+01	y	303	
36:29	1.005e+07	n	7.927e+06	n	1.27	y	1.797e+07	1.797e+07	5.21e+02	y	2050	
36:46	3.300e+06	n	2.639e+06	n	1.25	y	5.939e+06	5.939e+06	1.35e+02	y	679	
36:54	6.090e+05	n	4.835e+05	n	1.26	y	1.092e+06	1.092e+06	2.98e+01	y	125	
37:33	3.673e+05	n	2.749e+05	n	1.34	y	6.422e+05	6.422e+05	1.83e+01	y	71.0	1,2,3,4,7,8-HxCDD
37:41	1.082e+06	n	8.335e+05	n	1.30	y	1.916e+06	1.916e+06	4.76e+01	y	236	1,2,3,6,7,8-HxCDD
37:53	4.203e+05	n	3.137e+05	n	1.34	y	7.340e+05	7.340e+05	1.86e+01	y	83.9	
38:01	5.848e+05	n	4.365e+05	n	1.34	y	1.021e+06	1.021e+06	2.03e+01	y	113	1,2,3,7,8,9-HxCDD

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Totals class: HpCDD EMPC Function: 4 Run #: 18  
 File Name: 010405P1 Sample #: 3 Sample text: P1454\_319\_008 Unit 3 Run 2 Out Air Train

Acquired: 5-APR-01 06:32:45 Processed: 5-APR-01 09:19:40

Total Conc.: 2795.4 Unnamed Conc.: 1400.714

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
40:53	5.561e+06	n	5.342e+06	n	1.04	y	1.090e+07	1.090e+07	2.18e+02	y	1400	
42:08	5.608e+06	n	5.248e+06	n	1.07	y	1.086e+07	1.086e+07	1.98e+02	y	1390	1,2,3,4,6,7,8-HpCDD

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Totals class: TCDF EMPC Function: 1 Run #: 18  
 File Name: 010405P1 Sample #: 3 Sample text: P1454\_319\_008 Unit 3 Run 2 Out Air Train

Acquired: 5-APR-01 06:32:45 Processed: 5-APR-01 09:19:40

Total Conc.: 1907.5 Unnamed Conc.: 1857.266

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
22:42	4.569e+05	n	5.898e+05	n	0.77	y	1.047e+06	1.047e+06	6.73e+01	y	65.1	
23:16	3.162e+05	n	3.957e+05	n	0.80	y	7.119e+05	7.119e+05	4.54e+01	y	44.3	
23:52	4.511e+05	n	5.788e+05	n	0.78	y	1.030e+06	1.030e+06	7.39e+01	y	64.1	
24:21	1.623e+06	n	2.068e+06	n	0.78	y	3.691e+06	3.691e+06	1.54e+02	y	230	
24:38	2.451e+05	y	3.317e+05	y	0.74	y	5.768e+05	5.768e+05	4.23e+01	y	35.9	
24:46	7.021e+05	y	9.051e+05	y	0.78	y	1.607e+06	1.607e+06	8.82e+01	y	100	
25:08	4.307e+05	y	5.700e+05	y	0.76	y	1.001e+06	1.001e+06	8.13e+01	y	62.3	
25:16	2.588e+05	y	3.092e+05	y	0.84	y	5.680e+05	5.680e+05	4.00e+01	y	35.3	
25:26	3.251e+05	y	3.974e+05	y	0.82	y	7.224e+05	7.224e+05	5.11e+01	y	45.0	
25:48	3.952e+05	y	5.160e+05	y	0.77	y	9.111e+05	9.111e+05	6.26e+01	y	56.7	
25:55	8.334e+05	y	1.061e+06	y	0.79	y	1.895e+06	1.895e+06	1.45e+02	y	118	
26:03	6.362e+05	n	8.419e+05	y	0.76	y	1.478e+06	1.478e+06	1.26e+02	y	92.0	
26:10	2.227e+06	n	2.867e+06	y	0.78	y	5.093e+06	5.093e+06	3.52e+02	y	317	
26:37	5.096e+05	n	6.402e+05	n	0.80	y	1.150e+06	1.150e+06	8.34e+01	y	71.6	
26:43	1.171e+05	n	1.554e+05	y	0.75	y	2.725e+05	2.725e+05	2.55e+01	y	17.0	

26:53	3.396e+05	y	4.315e+05	y	0.79	y	7.711e+05	7.711e+05	5.86e+01	y	48.0
27:04	6.250e+05	y	8.450e+05	n	0.74	y	1.470e+06	1.470e+06	1.09e+02	y	91.5
27:16	7.029e+05	y	9.201e+05	y	0.76	y	1.623e+06	1.623e+06	1.41e+02	y	101
27:23	5.540e+05	y	7.279e+05	y	0.76	y	1.282e+06	1.282e+06	1.05e+02	y	79.8
27:29	3.450e+05	y	4.614e+05	y	0.75	y	8.065e+05	8.065e+05	7.13e+01	y	50.2
27:51	9.587e+05	n	1.225e+06	n	0.78	y	2.184e+06	2.184e+06	1.68e+02	y	136
28:06	9.543e+04	y	1.266e+05	y	0.75	y	2.221e+05	2.221e+05	1.63e+01	y	13.8
28:21	1.338e+05	y	1.871e+05	y	0.71	y	3.209e+05	3.209e+05	2.61e+01	y	20.0
29:28	1.140e+05	y	1.218e+05	y	0.94	n	2.358e+05	2.156e+05	1.63e+01	y	13.4

Totals class: 1st Fnc.PeCDF EMPC                      Function: 1 Run #: 18  
 File Name: 010405P1 Sample #: 3                      Sample text: P1454\_319\_008 Unit 3 Run 2 Out Air Train

Acquired: 5-APR-01 06:32:45      Processed: 5-APR-01 09:19:40

Total Conc.: 167.20                      Unnamed Conc.: 167.201

RT	ml	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
29:26	1.509e+06	n	9.376e+05	n	1.61	y	2.446e+06	2.446e+06	1.68e+02	y	167

Totals class: PeCDF EMPC                                  Function: 2 Run #: 18  
 File Name: 010405P1 Sample #: 3                      Sample text: P1454\_319\_008 Unit 3 Run 2 Out Air Train

Acquired: 5-APR-01 06:32:45      Processed: 5-APR-01 09:19:40

Total Conc.: 1710.2                      Unnamed Conc.: 1455.615

RT	ml	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
30:57	1.956e+06	n	1.271e+06	n	1.54	y	3.227e+06	3.227e+06	7.80e+01	y	221
31:06	2.453e+06	n	1.481e+06	n	1.66	y	3.934e+06	3.934e+06	8.18e+01	y	269
31:13	5.763e+05	n	3.716e+05	n	1.55	y	9.480e+05	9.480e+05	3.79e+01	y	64.8
31:19	1.594e+05	n	1.134e+05	n	1.41	y	2.729e+05	2.729e+05	1.08e+01	y	18.7
31:33	3.356e+05	n	2.302e+05	n	1.46	y	5.658e+05	5.658e+05	1.44e+01	y	38.7
31:45	2.522e+06	n	1.605e+06	n	1.57	y	4.128e+06	4.128e+06	1.01e+02	y	282
31:51	6.273e+05	n	4.026e+05	n	1.56	y	1.030e+06	1.030e+06	4.04e+01	y	70.4
32:00	6.069e+05	n	3.877e+05	n	1.57	y	9.945e+05	9.945e+05	3.44e+01	y	68.0
32:13	7.427e+05	n	4.704e+05	n	1.58	y	1.213e+06	1.213e+06	3.76e+01	y	83.6
32:30	1.386e+06	n	9.014e+05	n	1.54	y	2.288e+06	2.288e+06	5.38e+01	y	156
32:40	1.408e+05	n	1.069e+05	n	1.32	y	2.477e+05	2.477e+05	8.40e+00	y	16.9
33:04	1.847e+05	n	1.255e+05	n	1.47	y	3.102e+05	3.102e+05	1.17e+01	y	21.2
33:12	1.614e+06	n	1.040e+06	n	1.55	y	2.654e+06	2.654e+06	9.20e+01	y	181
33:19	1.534e+06	n	9.865e+05	n	1.56	y	2.521e+06	2.521e+06	6.95e+01	y	171
33:39	2.442e+05	n	1.624e+05	n	1.50	y	4.066e+05	4.066e+05	1.23e+01	y	27.8
34:23	2.812e+05	n	1.097e+05	n	1.65	y	2.909e+05	2.909e+05	8.91e+00	y	19.9

Totals class: HxCDF EMPC                                  Function: 3 Run #: 18  
 File Name: 010405P1 Sample #: 3                      Sample text: P1454\_319\_008 Unit 3 Run 2 Out Air Train

Acquired: 5-APR-01 06:32:45      Processed: 5-APR-01 09:19:40

DPE

*3.67 PeCDF  
 0.47 (0.36) to tats*

Total Conc.: 1662.3

Unnamed Conc.: 1098.547

RT	m1	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
35:11	1.620e+06	n	1.276e+06	n	1.27	y	2.897e+06	2.897e+06	7.59e+01	y	210	
35:23	3.549e+06	n	2.860e+06	n	1.24	y	6.410e+06	6.410e+06	1.69e+02	y	464	
35:37	2.592e+05	n	2.017e+05	n	1.29	y	4.609e+05	4.609e+05	1.07e+01	y	33.4	
35:48	4.919e+05	n	3.896e+05	n	1.26	y	8.815e+05	8.815e+05	2.22e+01	y	63.9	
36:01	3.181e+05	n	2.430e+05	n	1.31	y	5.610e+05	5.610e+05	1.37e+01	y	40.7	
36:27	1.465e+06	n	1.196e+06	n	1.22	y	2.661e+06	2.661e+06	6.61e+01	y	193	
36:33	1.176e+06	n	9.075e+05	n	1.30	y	2.084e+06	2.084e+06	4.92e+01	y	152	1,2,3,4,7,8-HxCDF
36:42	1.313e+06	n	1.044e+06	n	1.26	y	2.357e+06	2.357e+06	5.06e+01	y	157	1,2,3,6,7,8-HxCDF
36:52	2.166e+05	n	1.768e+05	n	1.22	y	3.933e+05	3.933e+05	8.60e+00	y	28.5	
37:00	2.426e+05	n	2.016e+05	n	1.20	y	4.442e+05	4.442e+05	1.06e+01	y	32.2	
37:08	2.596e+05	n	1.926e+05	n	1.35	y	4.522e+05	4.522e+05	9.26e+00	y	32.8	
37:22	1.665e+06	n	1.291e+06	n	1.29	y	2.956e+06	2.956e+06	6.31e+01	y	209	2,3,4,6,7,8-HxCDF
38:27	3.050e+05	n	2.576e+05	n	1.18	y	5.626e+05	5.626e+05	8.96e+00	y	45.6	1,2,3,7,8,9-HxCDF

Page 18 of 18

Totals class: HpCDF EMPC

Function: 4 Run #: 18

File Name: 010405P1 Sample #: 3

Sample text: P1454\_319\_008 Unit 3 Run 2 Out Air Train

Acquired: 5-APR-01 06:32:45

Processed: 5-APR-01 09:19:40

Total Conc.: 1181.0

Unnamed Conc.: 248.429

RT	m1	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
40:26	5.395e+06	n	5.201e+06	n	1.04	y	1.060e+07	1.060e+07	4.90e+02	y	882	1,2,3,4,6,7,8-HpCDF
40:53	6.358e+05	n	6.570e+05	n	0.97	y	1.293e+06	1.293e+06	5.97e+01	y	117	
41:08	7.459e+05	n	7.092e+05	n	1.05	y	1.455e+06	1.455e+06	6.24e+01	y	132	
43:00	2.688e+05	n	2.389e+05	n	1.13	y	5.076e+05	5.076e+05	2.16e+01	y	50.2	1,2,3,4,7,8,9-HpCDF

Client ID: Unit 3 Run 2 Out / Filename: 010405P1 S: 3 Acq: 5-APR-01 06:32:45 ConCal: 010405P1- Page 11 of 11  
Lab ID: P1454\_319\_008 / GC Column ID: db-5 ICal: MM1\_M23\_0\* wt/vol: 1.000 EndCal: 010405P1-

Name	Resp	RA	RRF	RT	Conc	Qualif.	CDE	noise	Fac	DL
2,3,7,8-TCDD	8.67e+04	0.62 <sup>n</sup>	1.26	28:20	6.82			964	2.5	1.36
1,2,3,7,8-PeCDD	3.88e+05	1.77 <sup>y</sup>	1.01	33:39	44.0			1194	2.5	3.41
1,2,3,4,7,8-HxCDD	6.42e+05	1.34 <sup>y</sup>	1.14	37:33	71.0			3821	2.5	12.0
1,2,3,6,7,8-HxCDD	1.92e+06	1.30 <sup>y</sup>	1.02	37:41	236			3821	2.5	13.4
1,2,3,7,8,9-HxCDD	1.02e+06	1.34 <sup>y</sup>	1.14	38:01	113			3821	2.5	12.0
1,2,3,4,6,7,8-HpCDD	1.09e+07	1.07 <sup>y</sup>	1.13	42:08	1390			4002	2.5	19.0
OCDD	1.34e+07	0.89 <sup>y</sup>	1.03	47:35	3110			807	2.5	7.17

Reviewer: CC

Date: 18 Apr 01

2,3,7,8-TCDF	8.06e+05	0.75 <sup>y</sup>	1.05	27:29	50.2 <sup>OK</sup>			1653	2.5	1.89
1,2,3,7,8-PeCDF	1.21e+06	1.58 <sup>y</sup>	1.04	32:13	83.6			3183	2.5	5.29
2,3,4,7,8-PeCDF	2.52e+06	1.56 <sup>y</sup>	1.05	33:19	171			3183	2.5	5.21
1,2,3,4,7,8-HxCDF	2.08e+06	1.30 <sup>y</sup>	1.13	36:33	152			4679	2.5	6.02
1,2,3,6,7,8-HxCDF	2.36e+06	1.26 <sup>y</sup>	1.24	36:42	157			4679	2.5	5.51
2,3,4,6,7,8-HxCDF	2.96e+06	1.29 <sup>y</sup>	1.16	37:22	209			4679	2.5	5.85
1,2,3,7,8,9-HxCDF	5.63e+05	1.18 <sup>y</sup>	1.02	38:27	45.6			4679	2.5	6.69
1,2,3,4,6,7,8-HpCDF	1.06e+07	1.04 <sup>y</sup>	1.54	40:26	882			1860	2.5	3.12
1,2,3,4,7,8,9-HpCDF	5.08e+05	1.13 <sup>y</sup>	1.30	43:00	50.2			1860	2.5	3.71
OCDF	1.39e+06	0.93 <sup>y</sup>	1.15	47:52	218			1440	2.5	8.51

EMPC

Total Tetra-Dioxins	8.66e+06	0.81 <sup>y</sup>	1.26	24:46	682			964	2.5	1.36	692
Total Penta-Dioxins	1.62e+07	1.60 <sup>y</sup>	1.01	31:10	1830			1194	2.5	3.41	1830
Total Hexa-Dioxins	3.20e+07	1.26 <sup>y</sup>	1.10	35:50	3660			3821	2.5	12.4	3660
Total Hepta-Dioxins	2.18e+07	1.04 <sup>y</sup>	1.13	40:53	2800			4002	2.5	19.0	2820
Total Tetra-Furans	3.04e+07	0.77 <sup>y</sup>	1.05	22:42	1890			1653	2.5	1.89	1910
1st Fnc. Penta-Furans	2.45e+06	1.61 <sup>y</sup>	1.05	29:26	167			1299	2.5	2.14	167
Total Penta-Furans	2.50e+07	1.54 <sup>y</sup>	1.05	30:57	1710			3183	2.5	5.25	
PeCDF Totals:					1880						1880
Total Hexa-Furans	2.31e+07	1.27 <sup>y</sup>	1.14	35:11	1660			4679	2.5	5.99	1660
Total Hepta-Furans	1.39e+07	1.04 <sup>y</sup>	1.42	40:26	1180			1860	2.5	3.39	1180

- RW

IS	13C-2,3,7,8-TCDD	4.03e+07	0.79 <sup>y</sup>	1.13	28:19	3790					94.8
IS	13C-1,2,3,7,8-PeCDD	3.49e+07	1.61 <sup>y</sup>	0.93	33:39	4020					101
IS	13C-1,2,3,6,7,8-HxCDD	3.17e+07	1.29 <sup>y</sup>	0.93	37:40	4370					109
IS	13C-1,2,3,4,6,7,8-HpCDD	2.76e+07	1.09 <sup>y</sup>	0.91	42:07	3920					97.9
IS	13C-OCDD	1.68e+07	0.96 <sup>y</sup>	0.73	47:34	2950					73.8
IS	13C-2,3,7,8-TCDF	6.14e+07	0.80 <sup>y</sup>	1.06	27:28	3720					92.9
IS	13C-1,2,3,7,8-PeCDF	5.60e+07	1.59 <sup>y</sup>	0.96	32:12	3750					93.6
IS	13C-1,2,3,6,7,8-HxCDF	4.85e+07	0.53 <sup>y</sup>	1.28	36:42	4860					122
IS	13C-1,2,3,4,6,7,8-HpCDF	3.12e+07	0.44 <sup>y</sup>	0.90	40:25	4440					111
IS	13C-OCDF	2.23e+07	0.89 <sup>y</sup>	0.81	47:51	3540					88.5

Rec

94.8  
101  
109  
97.9  
73.8  
92.9  
93.6  
122  
111  
88.5

RS/RT	13C-1,2,3,4-TCDD	3.75e+07	0.82 <sup>y</sup>	1.00	27:41	4000					-
RS	13C-1,2,3,4-TCDF	6.23e+07	0.78 <sup>y</sup>	1.00	26:09	4000					-
RS/RT	13C-1,2,3,7,8,9-HxCDD	3.11e+07	1.27 <sup>y</sup>	1.00	38:00	4000					-

Analyst: GAG

PS	37C1-2,3,7,8-TCDD	2.18e+07		0.51	28:20	4200					105
PS	13C-2,3,4,7,8-PeCDF	5.46e+07	1.59 <sup>y</sup>	0.97	33:18	4010					100
PS	13C-1,2,3,4,7,8-HxCDD	2.49e+07	1.28 <sup>y</sup>	0.92	37:32	3390					84.8
PS	13C-1,2,3,4,7,8-HxCDF	3.99e+07	0.54 <sup>y</sup>	0.91	36:33	3620					90.5
PS	13C-1,2,3,4,7,8,9-HpCDF	2.45e+07	0.44 <sup>y</sup>	0.85	42:58	3690					92.2
AS	13C-1,2,3,7,8,9-HxCDF	3.58e+07	0.54 <sup>y</sup>	1.07	38:25	4300					108

Date: 18 Apr 01



Totals class: TCDD EMPC Function: 1 Run #: 18  
 File Name: 010405P1 Sample #: 3 Sample text: P1454\_319\_008 Unit 3 Run 2 Out Air Train

Acquired: 5-APR-01 06:32:45 Processed: 5-APR-01 09:19:40

Total Conc.: 691.74 Unnamed Conc.: 684.913

RT	m1	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
24:46	✓	1.887e+06	n	2.330e+06	n	0.81	y	4.217e+06	4.217e+06	5.27e+02	y	332	
25:06	✓	4.605e+05	n	5.748e+05	n	0.80	y	1.035e+06	1.035e+06	1.33e+02	y	81.5	
25:32	✓	1.484e+05	n	1.811e+05	n	0.82	y	3.295e+05	3.295e+05	3.97e+01	y	25.9	
26:18	✓	1.986e+04	y	2.208e+04	y	0.90	n	4.194e+04	3.908e+04	6.46e+00	y	3.08	
26:32	✓	2.704e+05	n	3.387e+05	n	0.80	y	6.091e+05	6.091e+05	6.90e+01	y	48.0	
26:43	✓	1.975e+05	y	2.478e+05	n	0.80	y	4.453e+05	4.453e+05	5.78e+01	y	35.1	
26:55	✓	1.075e+05	y	1.368e+05	n	0.79	y	2.443e+05	2.443e+05	3.29e+01	y	19.2	
27:09	✓	2.823e+04	n	3.238e+04	n	0.87	y	6.061e+04	6.061e+04	7.87e+00	y	4.77	
27:19	✓	1.154e+05	n	1.426e+05	n	0.81	y	2.580e+05	2.580e+05	3.44e+01	y	20.3	
27:42	✓	2.587e+05	n	3.340e+05	y	0.77	y	5.927e+05	5.927e+05	7.79e+01	y	46.7	
27:49	✓	3.423e+04	y	5.077e+04	y	0.67	y	8.500e+04	8.500e+04	1.59e+01	y	6.69	
28:03	✓	2.229e+05	y	2.788e+05	y	0.80	y	5.017e+05	5.017e+05	5.22e+01	y	39.5	
28:12	✓	3.822e+04	y	5.476e+04	y	0.70	y	9.298e+04	9.298e+04	1.66e+01	y	7.32	
28:20	✓	3.770e+04	y	6.094e+04	y	0.62	n	9.863e+04	8.665e+04	1.58e+01	y	6.82	2,3,7,8-TCDD
28:40	✓	4.902e+04	y	6.217e+04	y	0.79	y	1.112e+05	1.112e+05	1.61e+01	y	8.75	
28:48	✓	1.618e+04	y	2.018e+04	y	0.80	y	3.636e+04	3.636e+04	4.87e+00	y	2.86	
29:18	✓	1.883e+04	y	2.225e+04	y	0.85	y	4.108e+04	4.108e+04	7.70e+00	y	3.23	

Totals class: PeCDD EMPC Function: 2 Run #: 18  
 File Name: 010405P1 Sample #: 3 Sample text: P1454\_319\_008 Unit 3 Run 2 Out Air Train

Acquired: 5-APR-01 06:32:45 Processed: 5-APR-01 09:19:40

Total Conc.: 1832.9 Unnamed Conc.: 1788.835

RT	m1	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
31:10	✓	3.554e+06	n	2.217e+06	n	1.60	y	5.771e+06	5.771e+06	3.92e+02	y	654	
31:42	✓	2.383e+05	y	1.484e+05	n	1.61	y	3.867e+05	3.867e+05	3.36e+01	y	43.8	
32:15	✓	2.875e+06	n	1.784e+06	n	1.61	y	4.658e+06	4.658e+06	4.08e+02	y	528	
32:25	✓	2.586e+05	y	1.594e+05	y	1.62	y	4.180e+05	4.180e+05	3.74e+01	y	47.4	
32:32	✓	1.136e+06	y	7.118e+05	y	1.60	y	1.848e+06	1.848e+06	1.66e+02	y	209	
32:47	✓	5.736e+05	n	3.560e+05	n	1.61	y	9.296e+05	9.296e+05	5.66e+01	y	105	
33:10	✓	7.968e+05	n	4.650e+05	n	1.71	y	1.262e+06	1.262e+06	1.12e+02	y	143	
33:39	✓	2.480e+05	y	1.403e+05	y	1.77	y	3.884e+05	3.884e+05	3.43e+01	y	44.0	1,2,3,7,8-PeCDD
33:45	✓	1.642e+05	y	1.137e+05	y	1.44	y	2.779e+05	2.779e+05	2.45e+01	y	31.5	
34:06	✓	1.420e+05	y	8.696e+04	y	1.63	y	2.290e+05	2.290e+05	2.08e+01	y	26.0	

Totals class: HxCDD EMPC Function: 3 Run #: 18  
 File Name: 010405P1 Sample #: 3 Sample text: P1454\_319\_008 Unit 3 Run 2 Out Air Train

Acquired: 5-APR-01 06:32:45 Processed: 5-APR-01 09:19:40

Total Conc.: 3664.5 Unnamed Conc.: 3245.178

RT	ml	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
35:50	1.475e+06	n	1.175e+06	n	1.26	2.649e+06	2.649e+06	8.14e+01	y	303
36:29	1.005e+07	n	7.927e+06	n	1.27	1.797e+07	1.797e+07	5.21e+02	y	2050
36:46	3.300e+06	n	2.639e+06	n	1.25	5.939e+06	5.939e+06	1.35e+02	y	679
36:54	6.090e+05	n	4.835e+05	n	1.26	1.092e+06	1.092e+06	2.98e+01	y	125
37:33	3.673e+05	n	2.749e+05	n	1.34	6.422e+05	6.422e+05	1.83e+01	y	71.0 1,2,3,4,7,8-HxCDD
37:41	1.082e+06	n	8.335e+05	n	1.30	1.916e+06	1.916e+06	4.76e+01	y	236 1,2,3,6,7,8-HxCDD
37:53	4.203e+05	n	3.137e+05	n	1.34	7.340e+05	7.340e+05	1.86e+01	y	83.9
38:01	5.848e+05	n	4.365e+05	n	1.34	1.021e+06	1.021e+06	2.03e+01	y	113 1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC Function: 4 Run #: 18  
 File Name: 010405P1 Sample #: 3 Sample text: P1454\_319\_008 Unit 3 Run 2 Out Air Train

Acquired: 5-APR-01 06:32:45 Processed: 5-APR-01 09:19:40

Total Conc.: 2820.2 Unnamed Conc.: 1425.431

RT	ml	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
40:53	5.561e+06	n	5.342e+06	n	1.04	1.090e+07	1.090e+07	2.18e+02	y	1400
42:08	5.608e+06	n	5.248e+06	n	1.07	1.086e+07	1.086e+07	1.98e+02	y	1390 1,2,3,4,6,7,8-HpCDD
42:27	6.338e+04	n	1.065e+05	n	0.59	1.699e+05	1.243e+05	6.49e+00	y	16.0
42:34	9.721e+04	n	3.337e+04	n	2.91	1.306e+05	6.808e+04	2.91e+00	y	8.75

Totals class: TCDF EMPC Function: 1 Run #: 18  
 File Name: 010405P1 Sample #: 3 Sample text: P1454\_319\_008 Unit 3 Run 2 Out Air Train

Acquired: 5-APR-01 06:32:45 Processed: 5-APR-01 09:19:40

Total Conc.: 1907.5 Unnamed Conc.: 1857.266

RT	ml	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
22:42	4.569e+05	n	5.898e+05	n	0.77	1.047e+06	1.047e+06	6.73e+01	y	65.1
23:16	3.162e+05	n	3.957e+05	n	0.80	7.119e+05	7.119e+05	4.54e+01	y	44.3
23:52	4.511e+05	n	5.788e+05	n	0.78	1.030e+06	1.030e+06	7.39e+01	y	64.1
24:21	1.623e+06	n	2.068e+06	n	0.78	3.691e+06	3.691e+06	1.54e+02	y	230
24:38	2.451e+05	y	3.317e+05	y	0.74	5.768e+05	5.768e+05	4.23e+01	y	35.9
24:46	7.021e+05	y	9.051e+05	y	0.78	1.607e+06	1.607e+06	8.82e+01	y	100
25:08	4.307e+05	y	5.700e+05	y	0.76	1.001e+06	1.001e+06	8.13e+01	y	62.3
25:16	2.588e+05	y	3.092e+05	y	0.84	5.680e+05	5.680e+05	4.00e+01	y	35.3
25:26	3.251e+05	y	3.974e+05	y	0.82	7.224e+05	7.224e+05	5.11e+01	y	45.0
25:48	3.952e+05	y	5.160e+05	y	0.77	9.111e+05	9.111e+05	6.26e+01	y	56.7
25:55	8.334e+05	y	1.061e+06	y	0.79	1.895e+06	1.895e+06	1.45e+02	y	118
26:03	6.362e+05	n	8.419e+05	y	0.76	1.478e+06	1.478e+06	1.26e+02	y	92.0
26:10	2.227e+06	n	2.867e+06	y	0.78	5.093e+06	5.093e+06	3.52e+02	y	317

26:37	5.096e+05	n	6.402e+05	n	0.80	y	1.150e+06	1.150e+06	8.34e+01	y	71.6
26:43	1.171e+05	n	1.554e+05	y	0.75	y	2.725e+05	2.725e+05	2.55e+01	y	17.0
26:53	3.396e+05	y	4.315e+05	y	0.79	y	7.711e+05	7.711e+05	5.86e+01	y	48.0
27:04	6.250e+05	y	8.450e+05	n	0.74	y	1.470e+06	1.470e+06	1.09e+02	y	91.5
27:16	7.029e+05	y	9.201e+05	y	0.76	y	1.623e+06	1.623e+06	1.41e+02	y	101
27:23	5.540e+05	y	7.279e+05	y	0.76	y	1.282e+06	1.282e+06	1.05e+02	y	79.8
27:29	3.450e+05	y	4.614e+05	y	0.75	y	8.065e+05	8.065e+05	7.13e+01	y	50.2
27:51	9.587e+05	n	1.225e+06	n	0.78	y	2.184e+06	2.184e+06	1.68e+02	y	136
28:06	9.543e+04	y	1.266e+05	y	0.75	y	2.221e+05	2.221e+05	1.63e+01	y	13.8
28:21	1.338e+05	y	1.871e+05	y	0.71	y	3.209e+05	3.209e+05	2.61e+01	y	20.0
29:28	1.140e+05	y	1.218e+05	y	0.94	n	2.358e+05	2.156e+05	1.63e+01	y	13.4

Totals class: 1st Fnc.PeCDF EMPC Function: 1 Run #: 18  
 File Name: 010405P1 Sample #: 3 Sample text: P1454\_319\_008 Unit 3 Run 2 Out Air Train

Acquired: 5-APR-01 06:32:45 Processed: 5-APR-01 09:19:40

Total Conc.: 167.20 Unnamed Conc.: 167.201

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
29:26	1.509e+06	n	9.376e+05	n	1.61	y	2.446e+06	2.446e+06	1.68e+02	y	167

Totals class: PeCDF EMPC Function: 2 Run #: 18  
 File Name: 010405P1 Sample #: 3 Sample text: P1454\_319\_008 Unit 3 Run 2 Out Air Train

Acquired: 5-APR-01 06:32:45 Processed: 5-APR-01 09:19:40

Total Conc.: 1710.2 Unnamed Conc.: 1455.615

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
30:57	1.956e+06	n	1.271e+06	n	1.54	y	3.227e+06	3.227e+06	7.80e+01	y	221
31:06	2.453e+06	n	1.481e+06	n	1.66	y	3.934e+06	3.934e+06	8.18e+01	y	269
31:13	5.763e+05	n	3.716e+05	n	1.55	y	9.480e+05	9.480e+05	3.79e+01	y	64.8
31:19	1.594e+05	n	1.134e+05	n	1.41	y	2.729e+05	2.729e+05	1.08e+01	y	18.7
31:33	3.356e+05	n	2.302e+05	n	1.46	y	5.658e+05	5.658e+05	1.44e+01	y	38.7
31:45	2.522e+06	n	1.605e+06	n	1.57	y	4.128e+06	4.128e+06	1.01e+02	y	282
31:51	6.273e+05	n	4.026e+05	n	1.56	y	1.030e+06	1.030e+06	4.04e+01	y	70.4
32:00	6.069e+05	n	3.877e+05	n	1.57	y	9.945e+05	9.945e+05	3.44e+01	y	68.0
32:13	7.427e+05	n	4.704e+05	n	1.58	y	1.213e+06	1.213e+06	3.76e+01	y	83.6
32:30	1.386e+06	n	9.014e+05	n	1.54	y	2.288e+06	2.288e+06	5.38e+01	y	156
32:40	1.408e+05	n	1.069e+05	n	1.32	y	2.477e+05	2.477e+05	8.40e+00	y	16.9
33:04	1.847e+05	n	1.255e+05	n	1.47	y	3.102e+05	3.102e+05	1.17e+01	y	21.2
33:12	1.614e+06	n	1.040e+06	n	1.55	y	2.654e+06	2.654e+06	9.20e+01	y	181
33:19	1.534e+06	n	9.865e+05	n	1.56	y	2.521e+06	2.521e+06	6.95e+01	y	171
33:39	2.442e+05	n	1.624e+05	n	1.50	y	4.066e+05	4.066e+05	1.23e+01	y	27.8
34:23	1.812e+05	n	1.097e+05	n	1.65	y	2.909e+05	2.909e+05	8.91e+00	y	19.9

Totals class: HxCDF EMPC Function: 3 Run #: 18  
 File Name: 010405P1 Sample #: 3 Sample text: P1454\_319\_008 Unit 3 Run 2 Out Air Train

*DPE*

*3.67 PeCDF*

Acquired: 5-APR-01 06:32:45 Processed: 5-APR-01 09:19:40

Total Conc.: 1662.3

Unnamed Conc.: 1098.547

RT	m1	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
35:11	1.620e+06	n	1.276e+06	n	1.27	y	2.897e+06	2.897e+06	7.59e+01	y	210	
35:23	3.549e+06	n	2.860e+06	n	1.24	y	6.410e+06	6.410e+06	1.69e+02	y	464	
35:37	2.592e+05	n	2.017e+05	n	1.29	y	4.609e+05	4.609e+05	1.07e+01	y	33.4	
35:48	4.919e+05	n	3.896e+05	n	1.26	y	8.815e+05	8.815e+05	2.22e+01	y	63.9	
36:01	3.181e+05	n	2.430e+05	n	1.31	y	5.610e+05	5.610e+05	1.37e+01	y	40.7	
36:27	1.465e+06	n	1.196e+06	n	1.22	y	2.661e+06	2.661e+06	6.61e+01	y	193	
36:33	1.176e+06	n	9.075e+05	n	1.30	y	2.084e+06	2.084e+06	4.92e+01	y	152	1,2,3,4,7,8-HxCDF
36:42	1.313e+06	n	1.044e+06	n	1.26	y	2.357e+06	2.357e+06	5.06e+01	y	157	1,2,3,6,7,8-HxCDF
36:52	2.166e+05	n	1.768e+05	n	1.22	y	3.933e+05	3.933e+05	8.60e+00	y	28.5	
37:00	2.426e+05	n	2.016e+05	n	1.20	y	4.442e+05	4.442e+05	1.06e+01	y	32.2	
37:08	2.596e+05	n	1.926e+05	n	1.35	y	4.522e+05	4.522e+05	9.26e+00	y	32.8	
37:22	1.665e+06	n	1.291e+06	n	1.29	y	2.956e+06	2.956e+06	6.31e+01	y	209	2,3,4,6,7,8-HxCDF
38:27	3.050e+05	n	2.576e+05	n	1.18	y	5.626e+05	5.626e+05	8.96e+00	y	45.6	1,2,3,7,8,9-HxCDF

Page 18 of 18

Totals class: HpCDF EMPC

Function: 4 Run #: 18

File Name: 010405P1 Sample #: 3

Sample text: P1454\_319\_008 Unit 3 Run 2 Out Air Train

Acquired: 5-APR-01 06:32:45

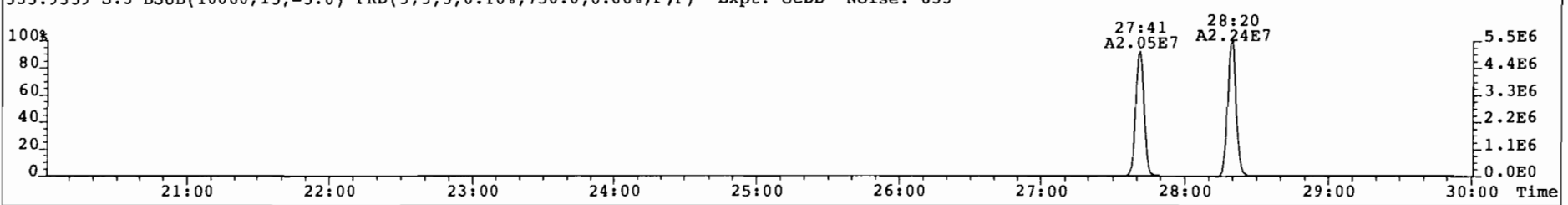
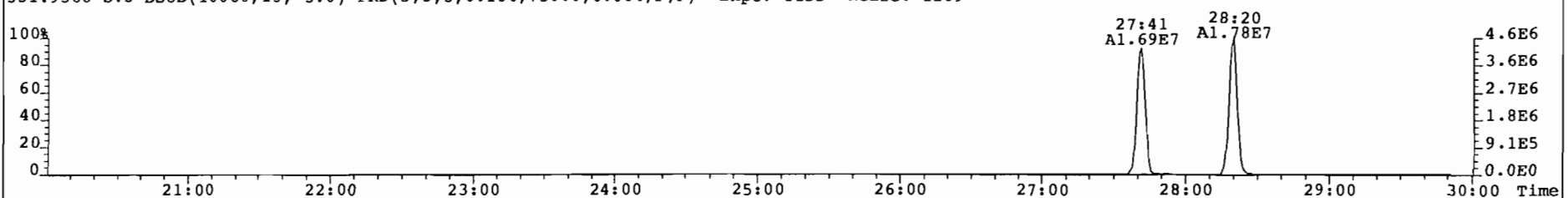
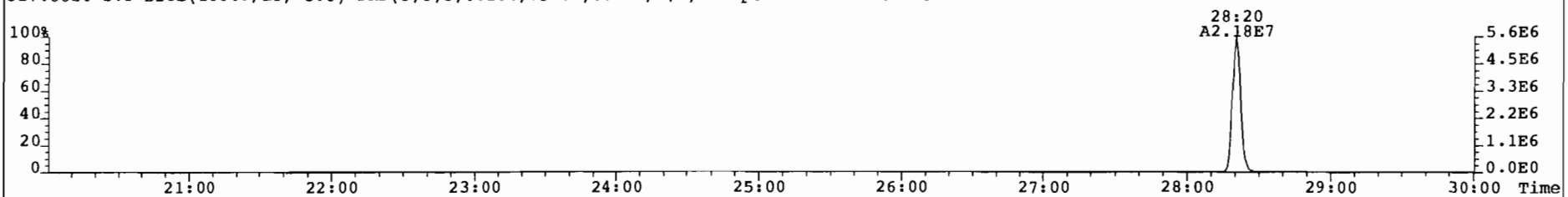
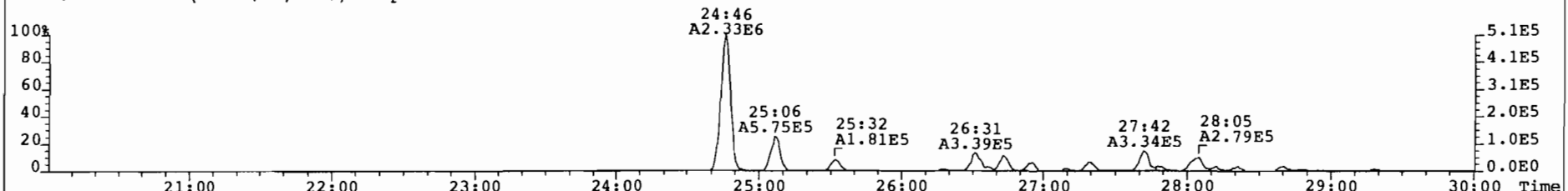
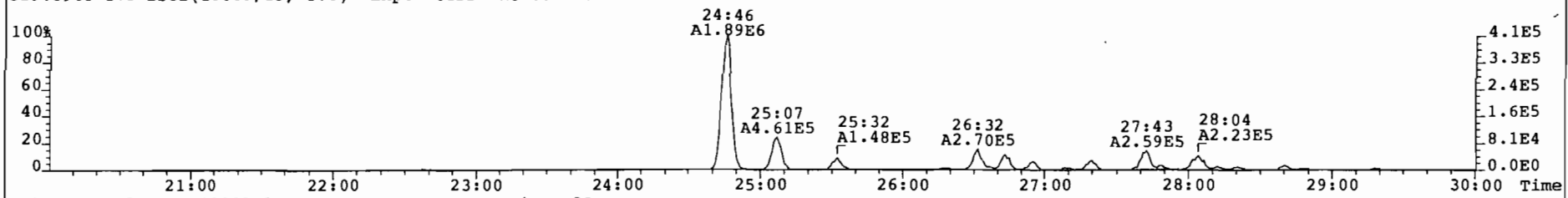
Processed: 5-APR-01 09:19:40

Total Conc.: 1181.0

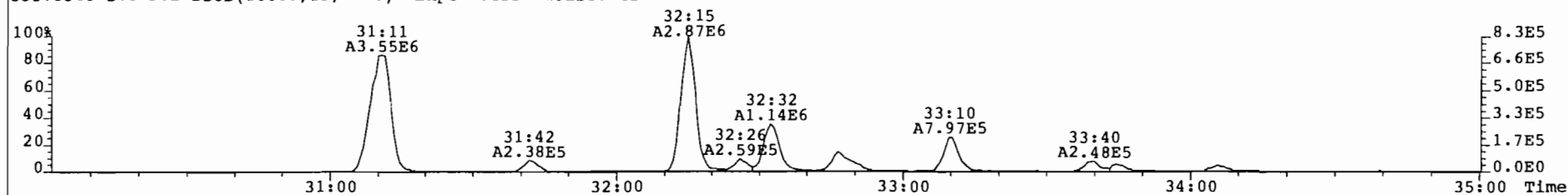
Unnamed Conc.: 248.429

RT	m1	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
40:26	5.395e+06	n	5.201e+06	n	1.04	y	1.060e+07	1.060e+07	4.90e+02	y	882	1,2,3,4,6,7,8-HpCDF
40:53	6.358e+05	n	6.570e+05	n	0.97	y	1.293e+06	1.293e+06	5.97e+01	y	117	
41:08	7.459e+05	n	7.092e+05	n	1.05	y	1.455e+06	1.455e+06	6.24e+01	y	132	
43:00	2.688e+05	n	2.389e+05	n	1.13	y	5.076e+05	5.076e+05	2.16e+01	y	50.2	1,2,3,4,7,8,9-HpCDF

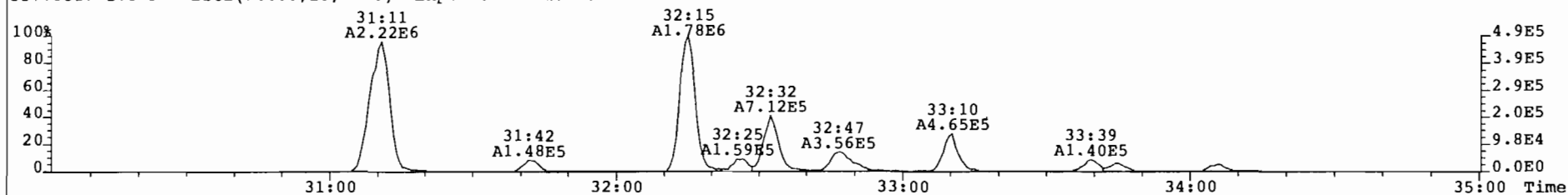
File: 010405F1 Acq: 5-APR-2001 06:32:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: P1454 319\_008 Unit 3 Run 2 Out Air Train Vial# 28 File Text: AAP DB5  
319.8965 S:3 BSUB(10000,15,-3.0) Expt: OCDD Noise: 176



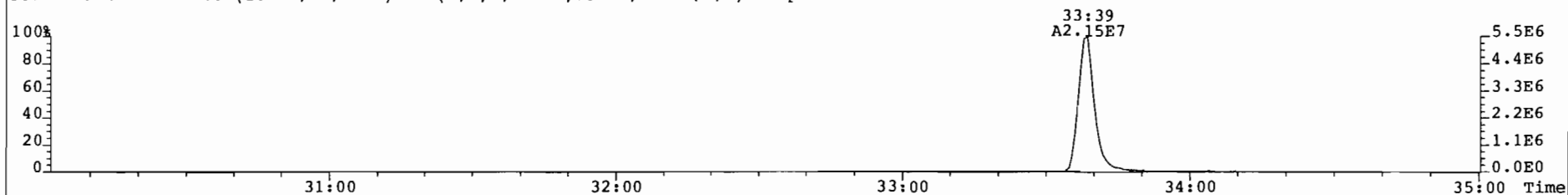
File: 010405F1 Acq: 5-APR-2001 06:32:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: P1454\_319\_008 Unit 3 Run 2 Out Air Train Vial# 28 File Text: AAP DB5  
355.8546 S:3 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 420



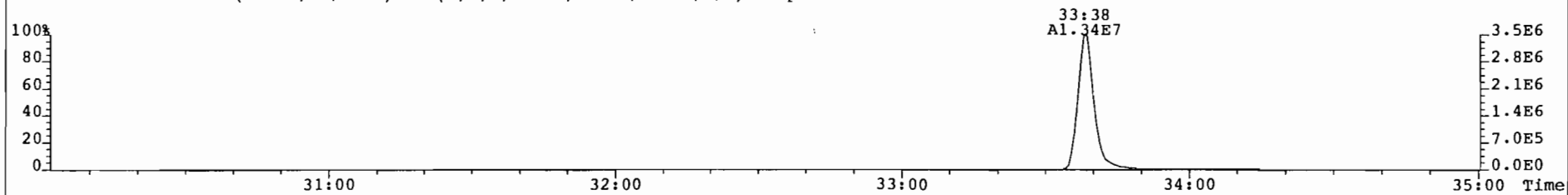
357.8517 S:3 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 213



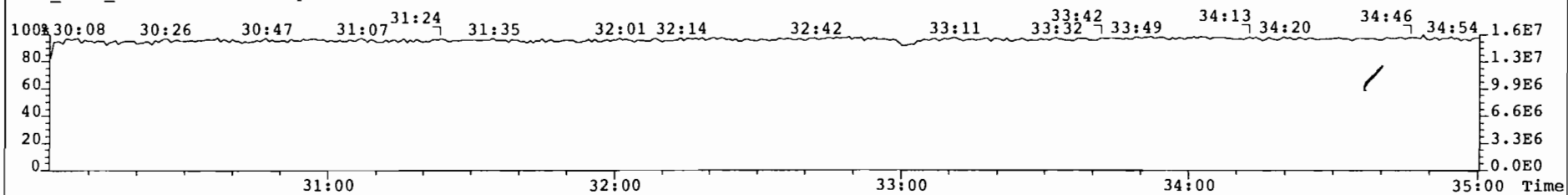
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 262



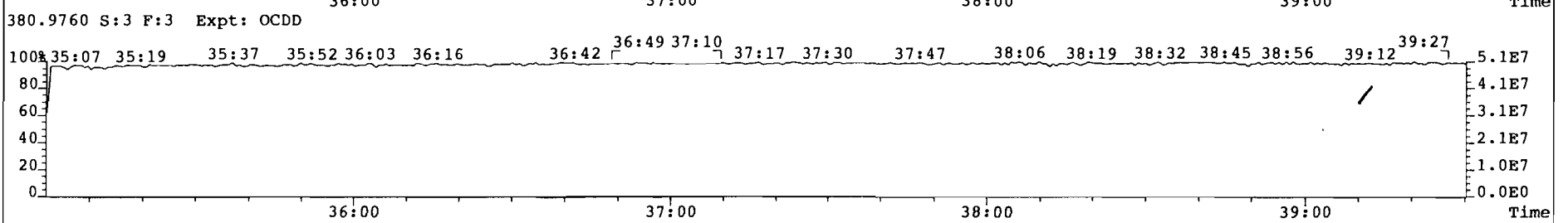
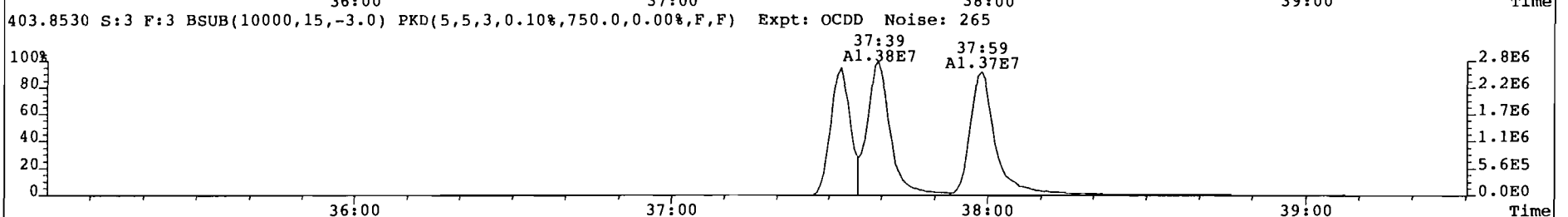
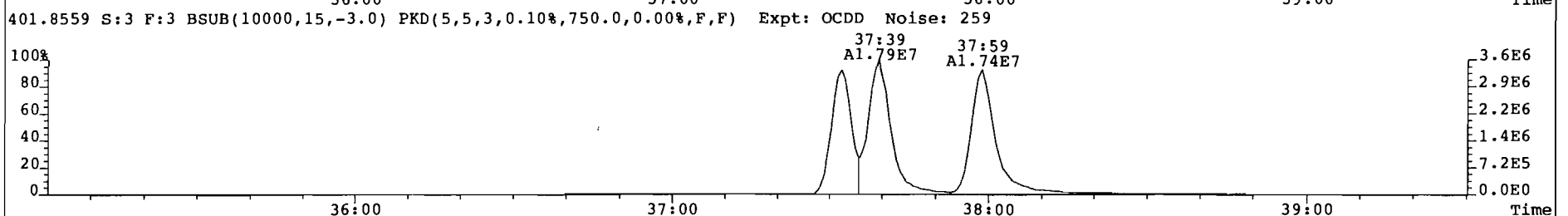
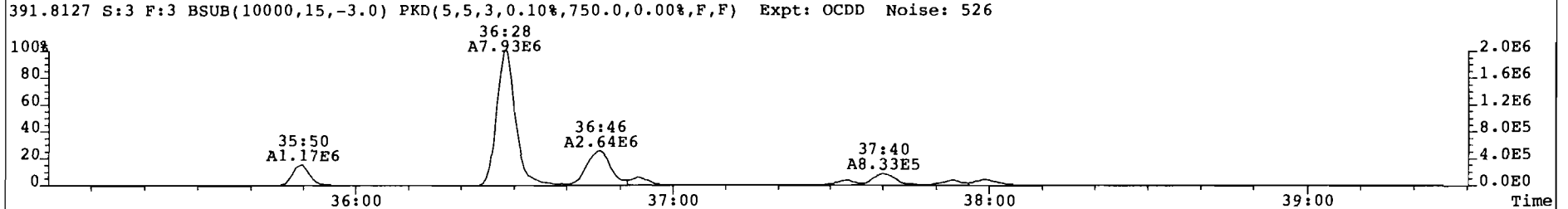
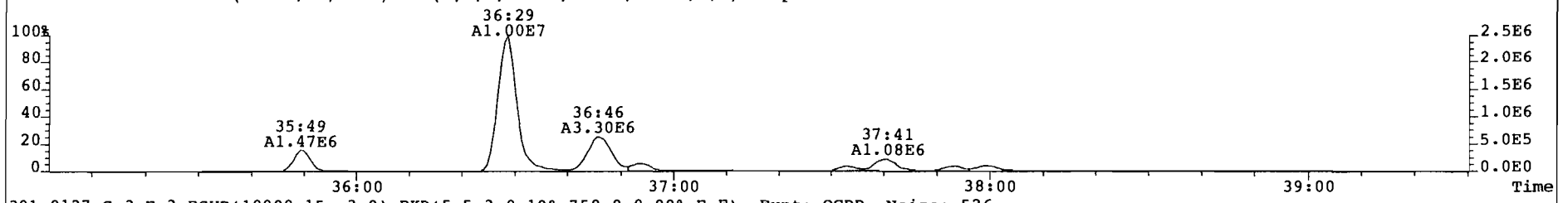
369.8919 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 57



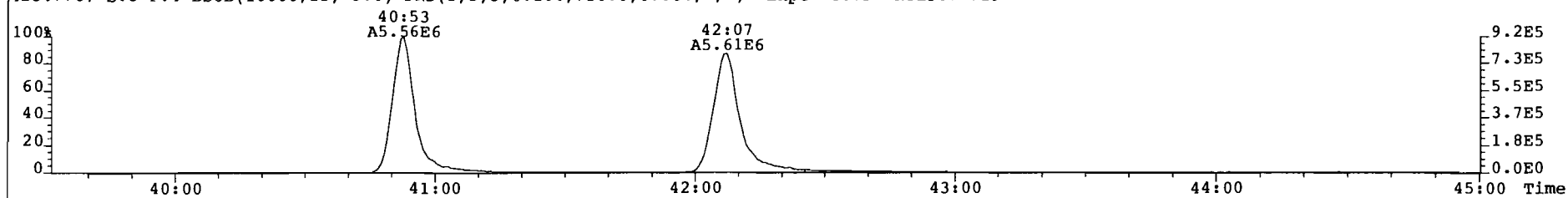
LOCK\_MASS\_CHECK S:3 F:2 Expt: OCDD



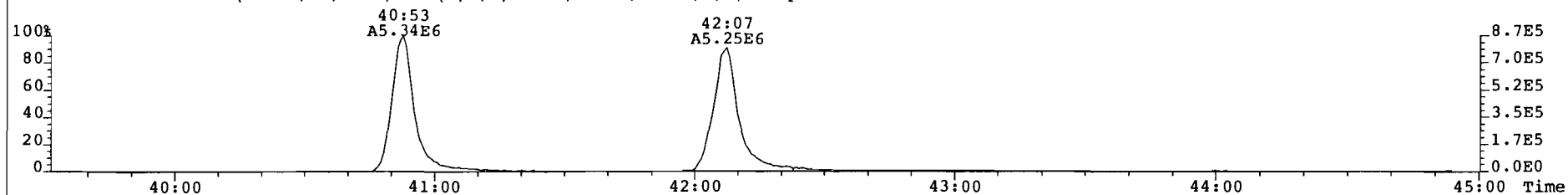
File: 010405F1 Acq: 5-APR-2001 06:32:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: P1454 319.008 Unit 3 Run 2 Out Air Train Vial# 28 File Text: AAP DB5  
389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 663



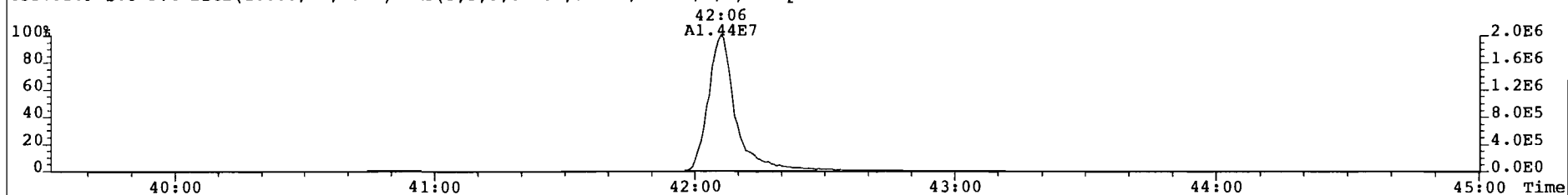
File: 010405P1 Acq: 5-APR-2001 06:32:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: P1454 319 008 Unit 3 Run 2 Out Air Train Vial# 28 File Text: AAP DB5  
423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 719



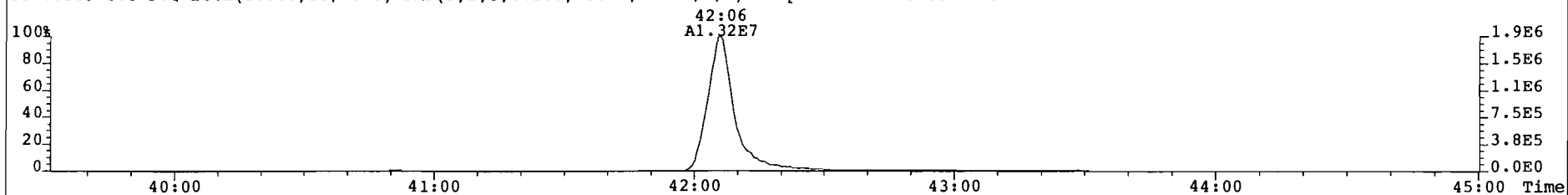
425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 643



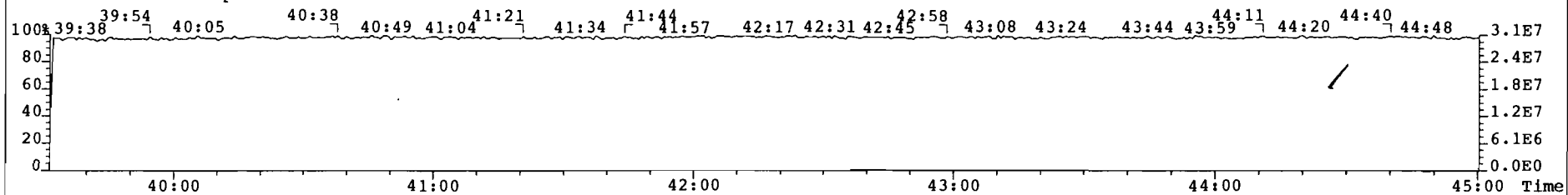
435.8169 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1041



437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 469



430.9728 S:3 F:4 Expt: OCDD

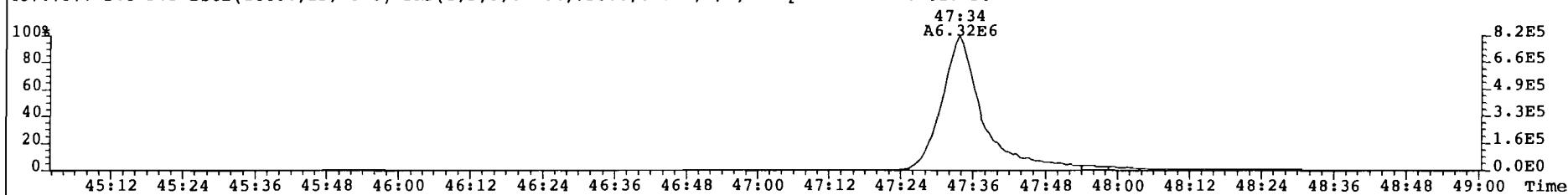




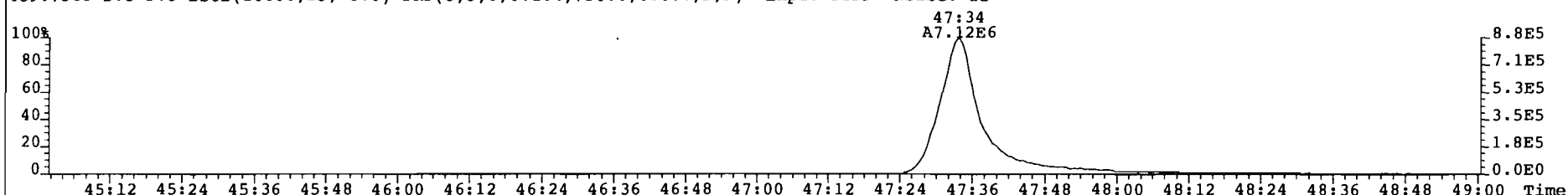
File: 010405P1 Acq: 5-APR-2001 06:32:45 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 3 Text: P1454\_319\_008 Unit 3 Run 2 Out Air Train Vial# 28 File Text: AAP DB5

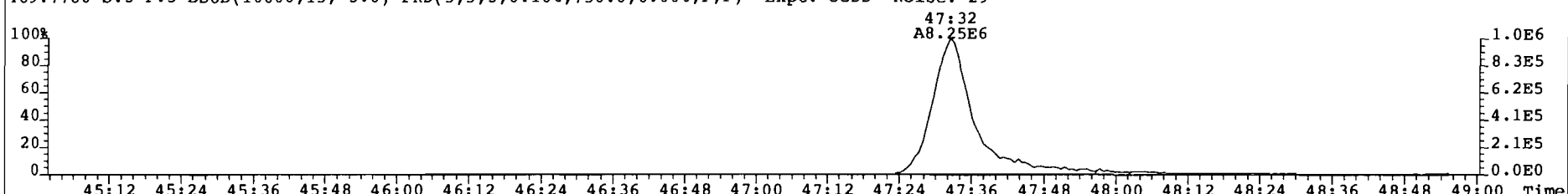
457.7377 S:3 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 50



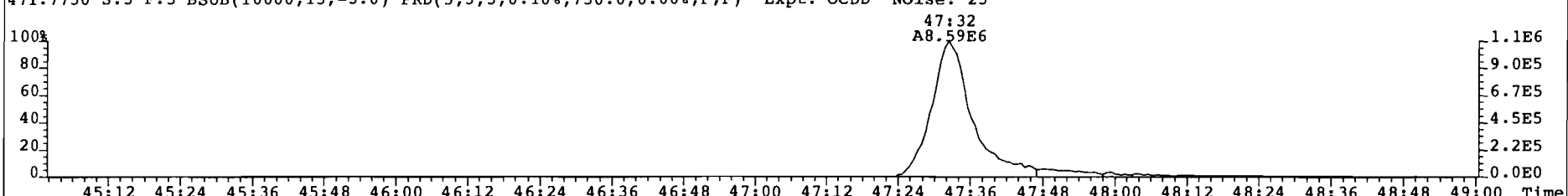
459.7348 S:3 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 22



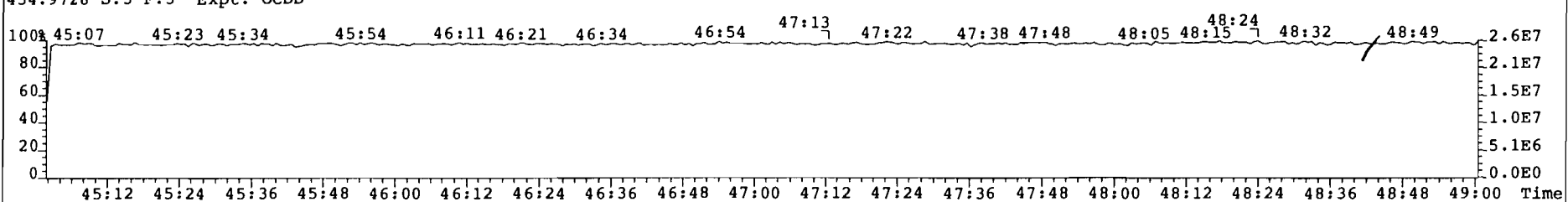
469.7780 S:3 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 29



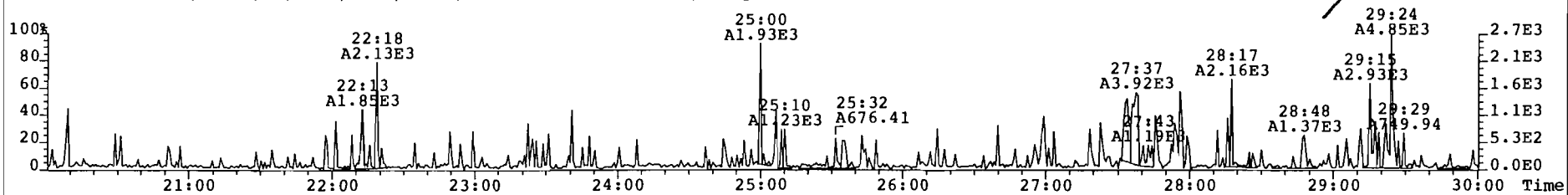
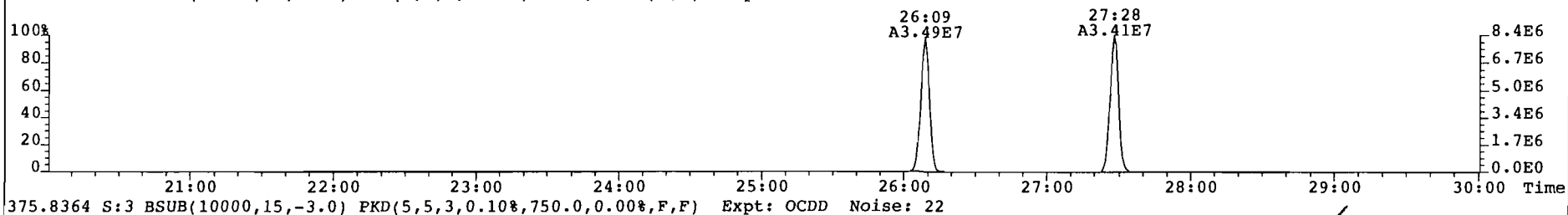
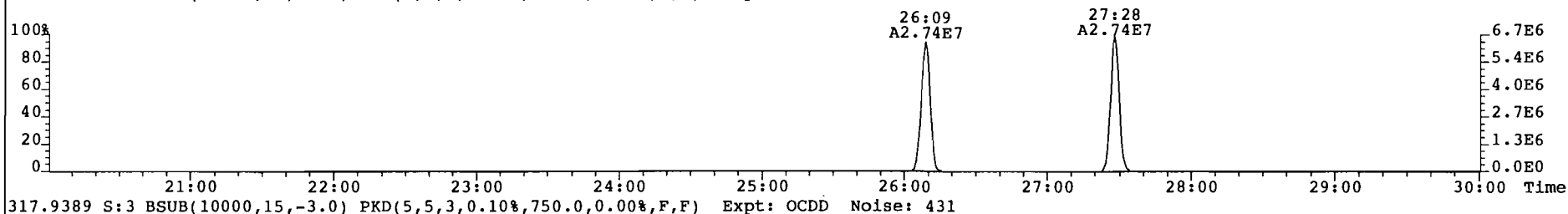
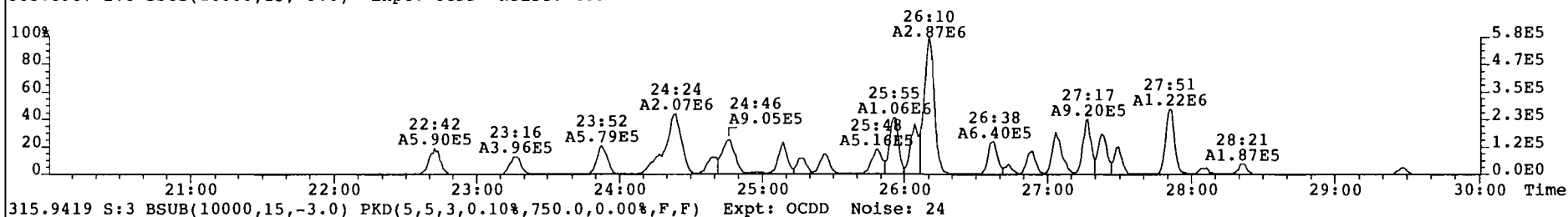
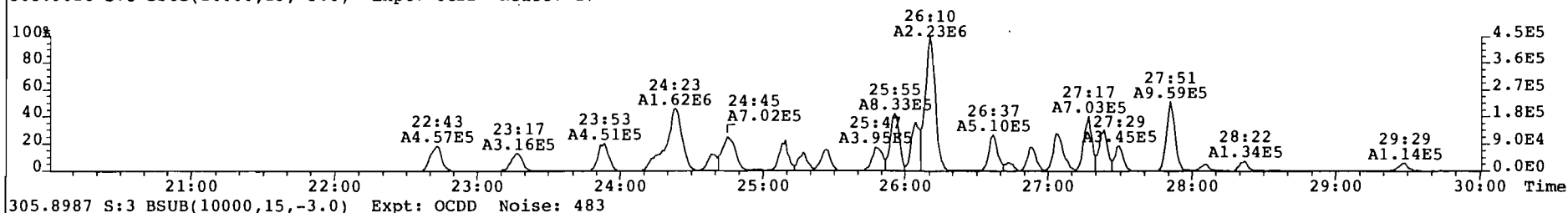
471.7750 S:3 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 23



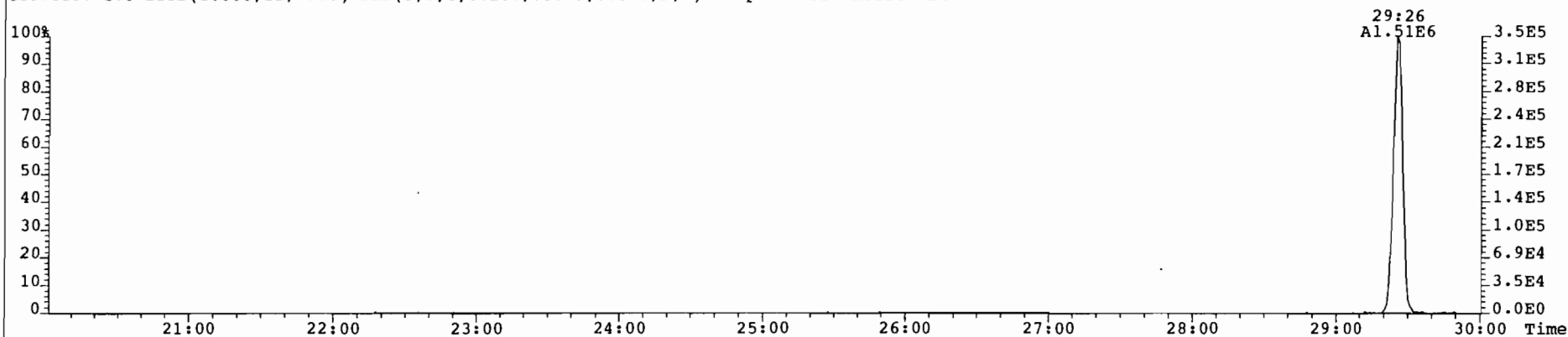
454.9728 S:3 F:5 Expt: OCDD



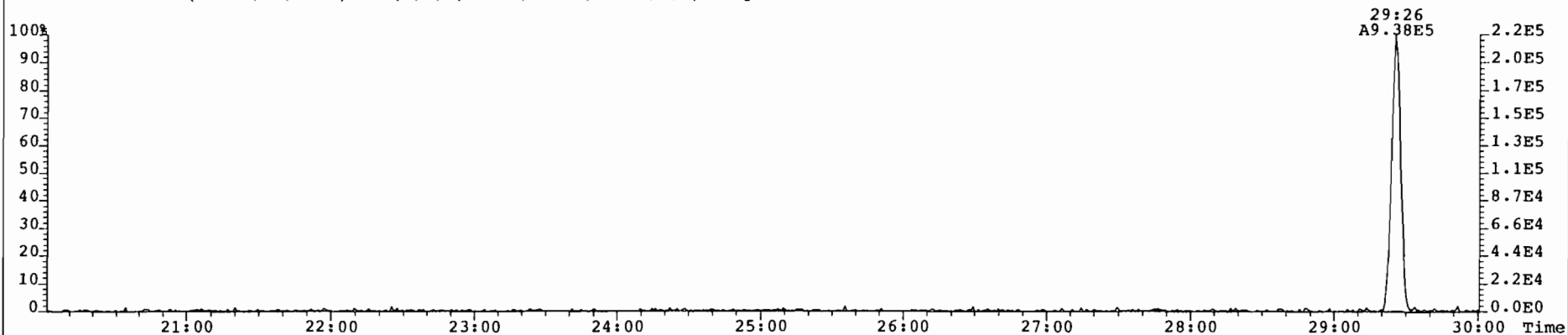
File: 010405F1 Acq: 5-APR-2001 06:32:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: P1454\_319\_008 Unit 3 Run 2 Out Air Train Vial# 28 File Text: AAP DB5  
303.9016 S:3 BSUB(10000,15,-3.0) Expt: OCDD Noise: 172



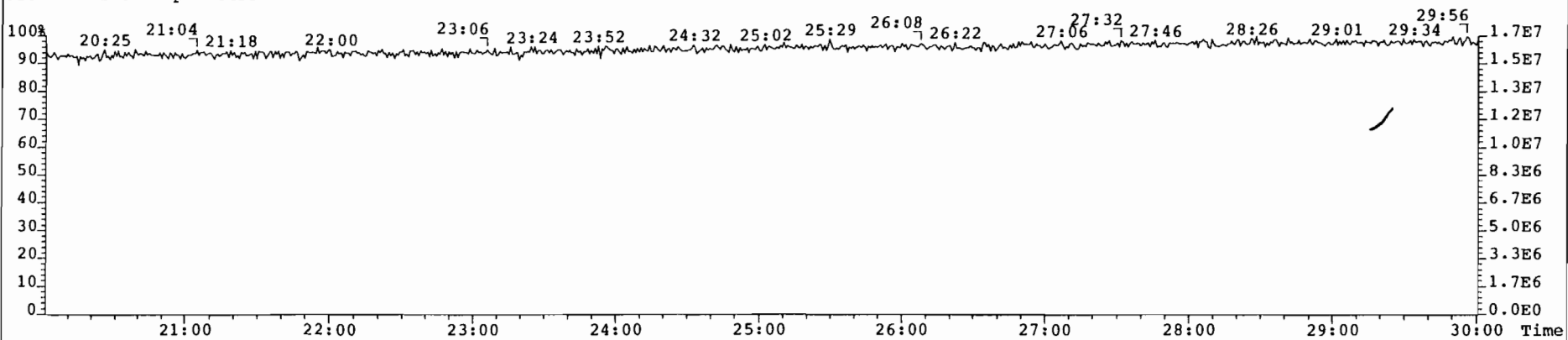
File: 010405P1 Acq: 5-APR-2001 06:32:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: P1454\_319\_008 Unit 3 Run 2 Out Air Train Vial# 28 File Text: AAP DB5  
339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 24



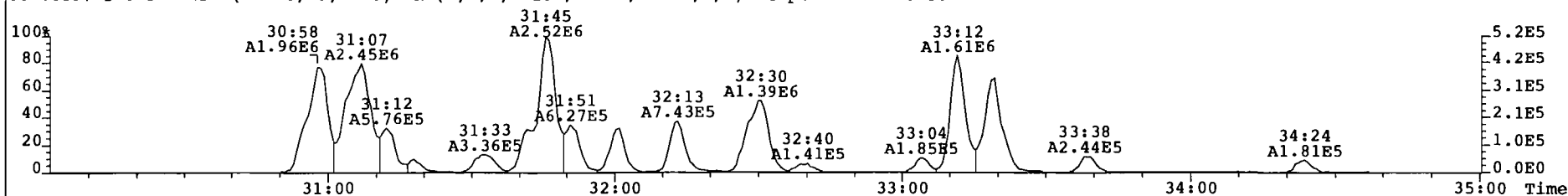
341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 30



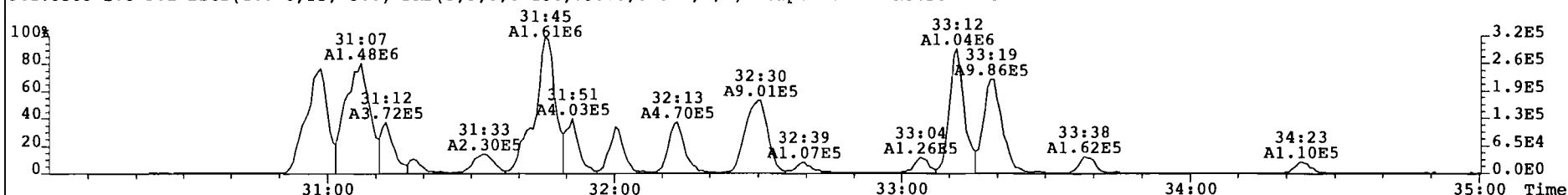
316.9824 S:3 Expt: OCDD



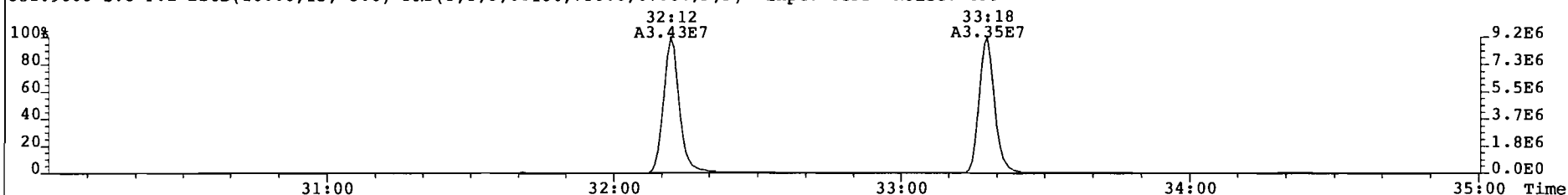
File: 010405F1 Acq: 5-APR-2001 06:32:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: P1454 319 008 Unit 3 Run 2 Out Air Train Vial# 28 File Text: AAP DB5  
339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 357



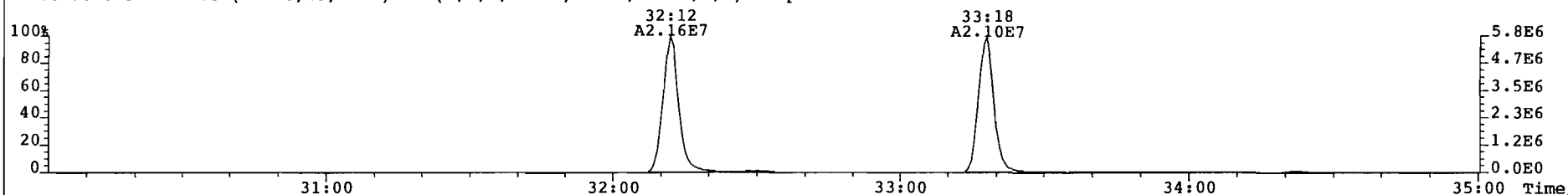
341.8568 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 403



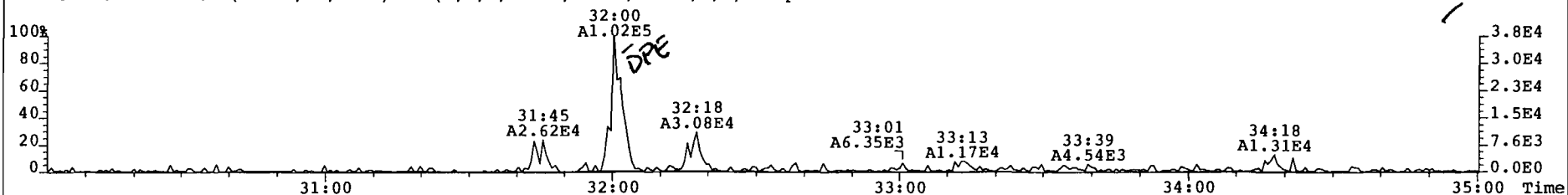
351.9000 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 699



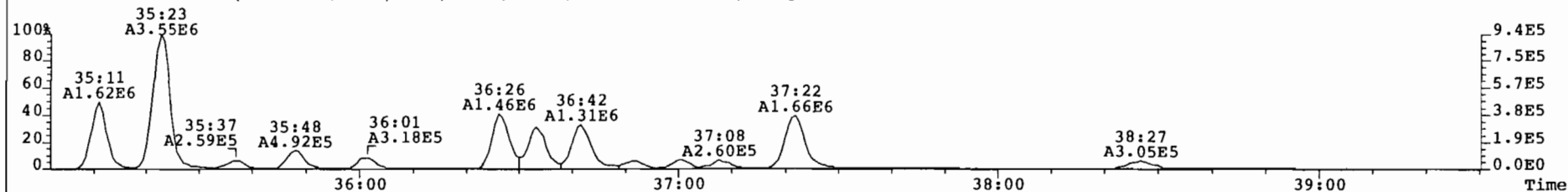
353.8970 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 195



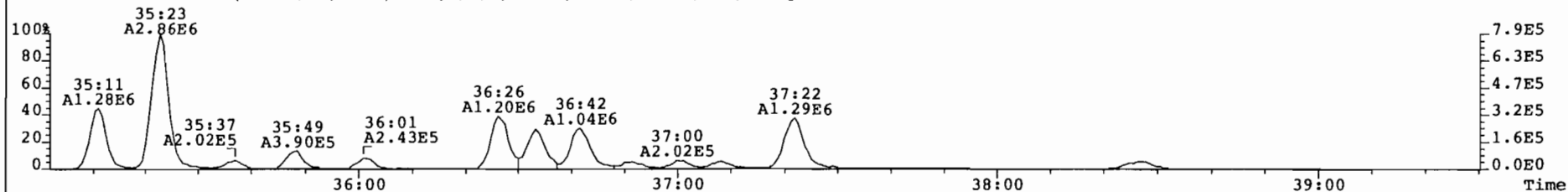
409.7974 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 43



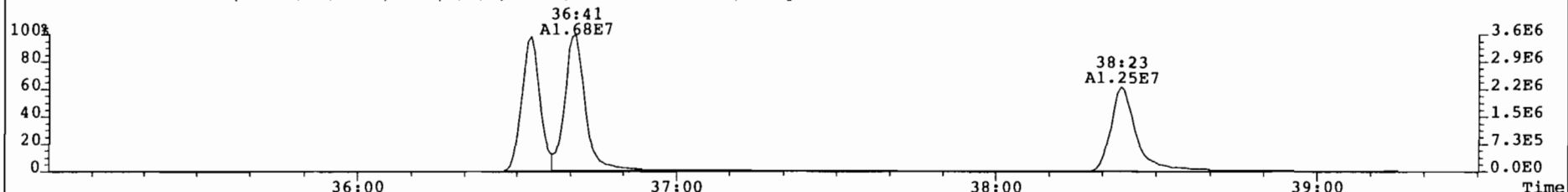
File: 010405P1 Acq: 5-APR-2001 06:32:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: P1454 319 008 Unit 3 Run 2 Out Air Train Vial# 28 File Text: AAP DB5  
373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 759



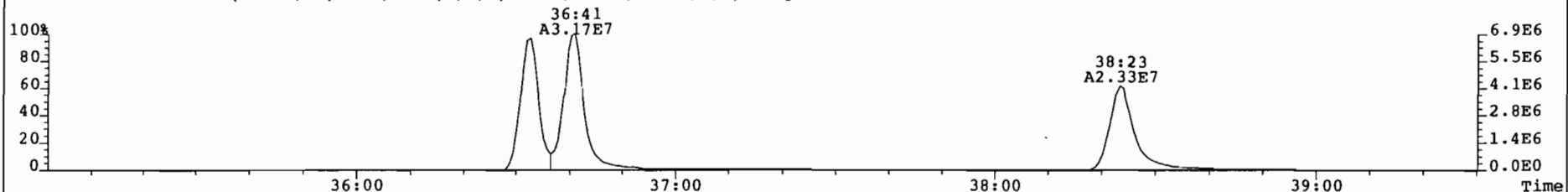
375.8178 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 427



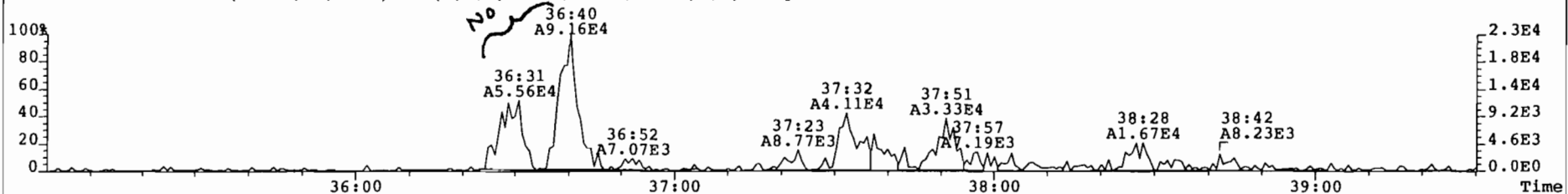
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 2778



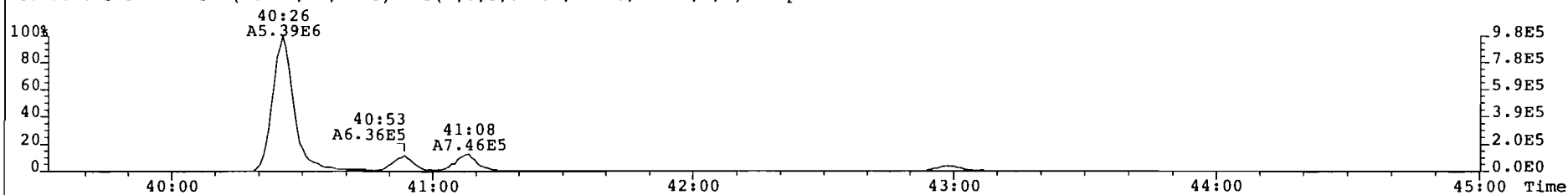
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1598



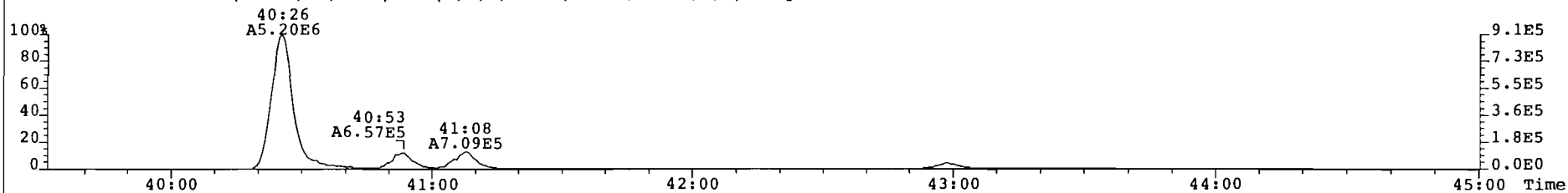
445.7555 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 45



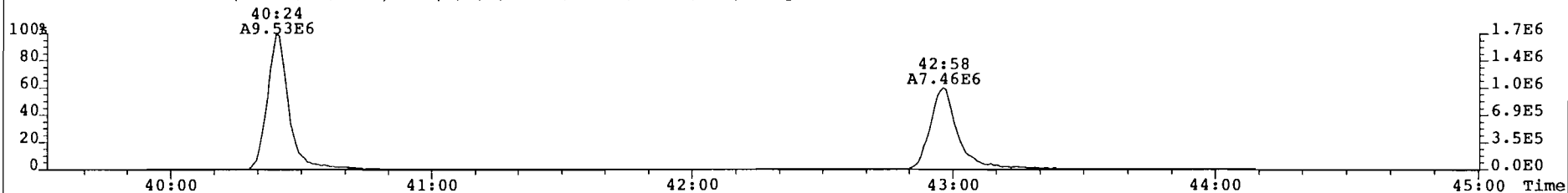
File: 010405PI Acq: 5-APR-2001 06:32:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: P1454 319 008 Unit 3 Run 2 Out Air Train Vial# 28 File Text: AAP DB5  
407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 242



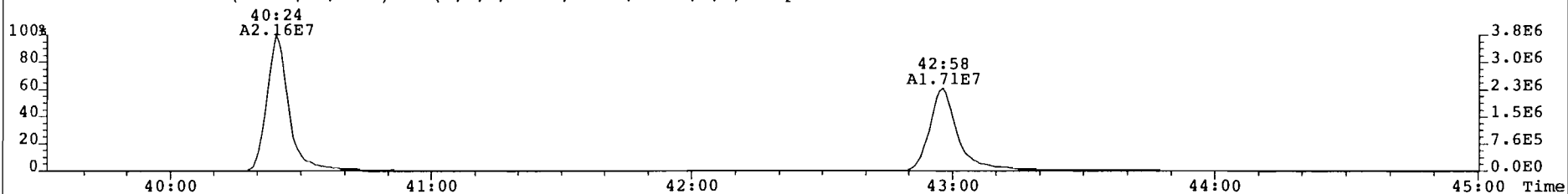
409.7788 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 236



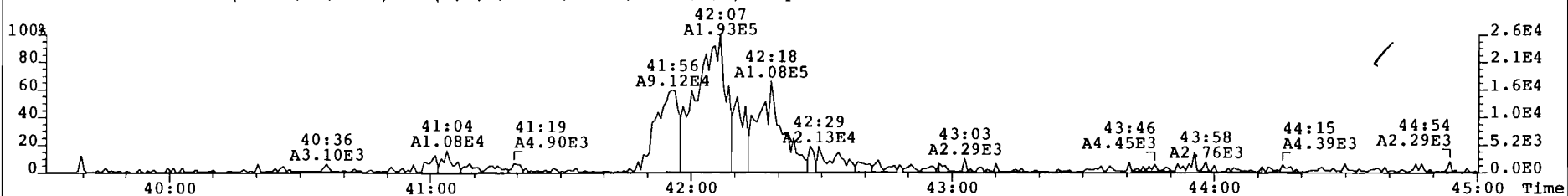
417.8253 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 622



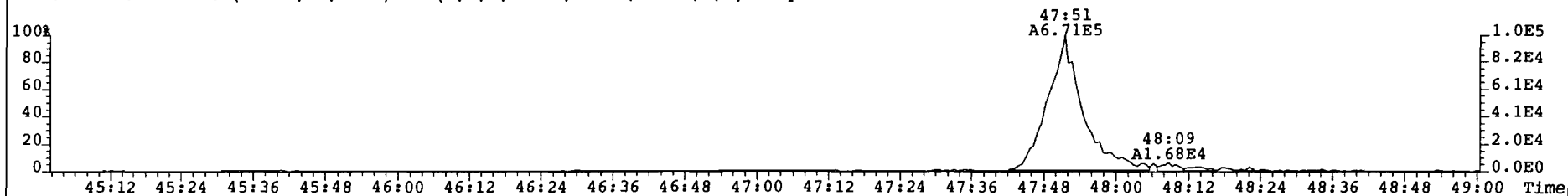
419.8220 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1250



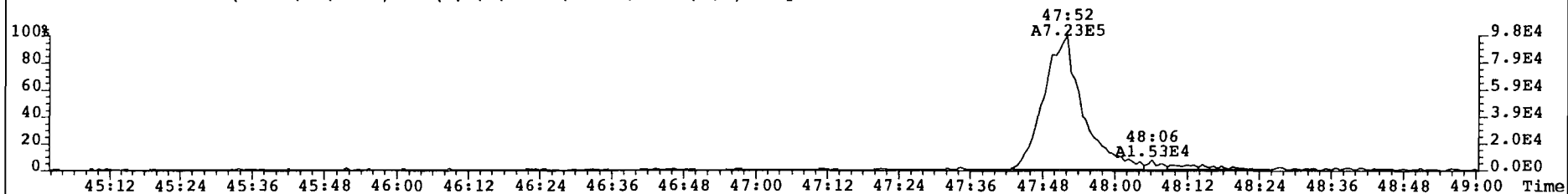
479.7165 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 75



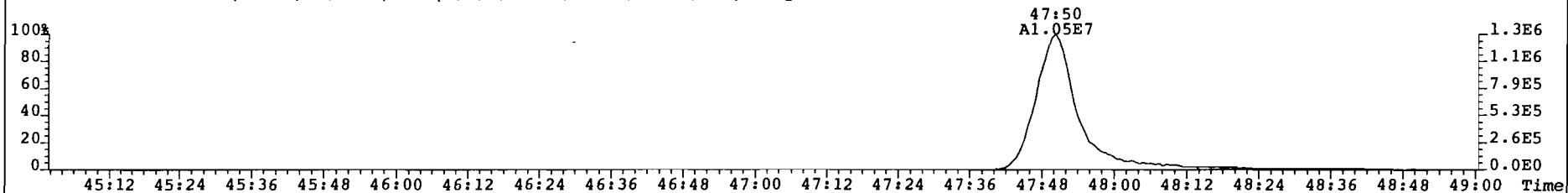
File: 010405P1 Acq: 5-APR-2001 06:32:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: P1454 319 008 Unit 3 Run 2 Out Air Train Vial# 28 File Text: AAP DB5  
441.7428 S:3 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 123



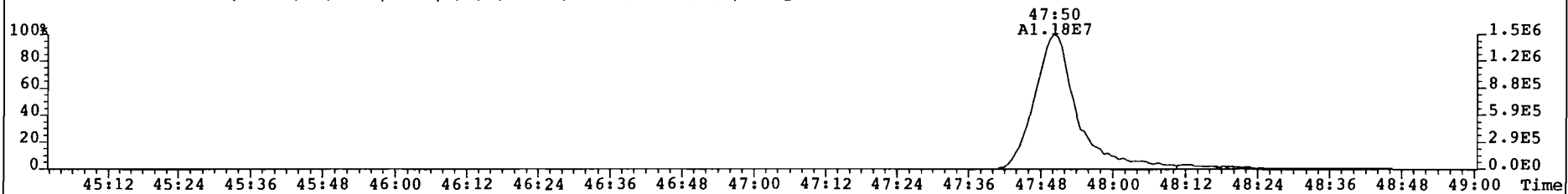
443.7398 S:3 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 243



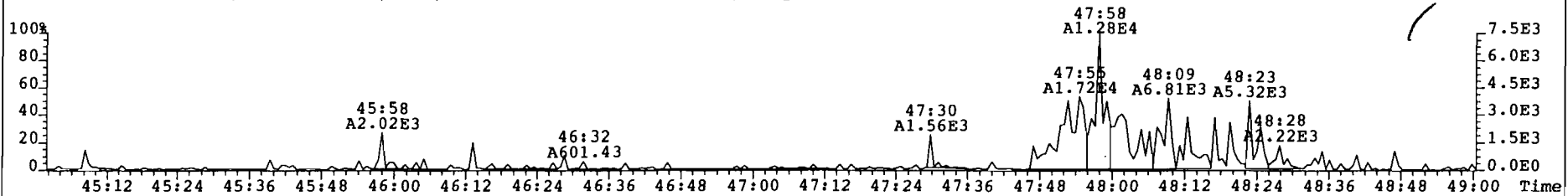
453.7830 S:3 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 24



455.7801 S:3 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 534



513.6775 S:3 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 26



Client ID: Unit 3 Run 2 Out /      Filename: 010420R1 S: 5      Acq: 20-APR-01 10:57:39      Page 3 of 4  
 Lab ID: P1454\_319\_008 /      GC Column ID: db-225 ICal: mm3\_db225\_000919      Wt/Vol: 1.000 /  
 Sample text: P1454\_319\_008 Unit 3 Run 2 Out Air Train /      Vial: 86

	Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Rec
RS	13C-1,2,3,4-TCDF	2.75e+08	0.78 y	-	15:53	117		26672	5.0	-	-
IS/RT	13C-2,3,7,8-TCDF	2.86e+08	0.79 y	1.06	19:21	3930		26672	5.0	17.9	98.2 /
Unk	2,3,7,8-TCDF	3.72e+06	0.80 y	1.08	19:22	48.1 /		7588	5.0	5.00	-

Reviewer:   Ce  

Date:   20 Apr 01  

Analyst:   JKK  

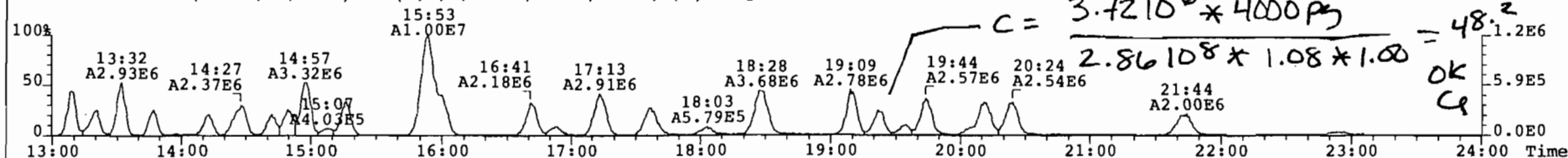
Date:   20 Apr 01  

52

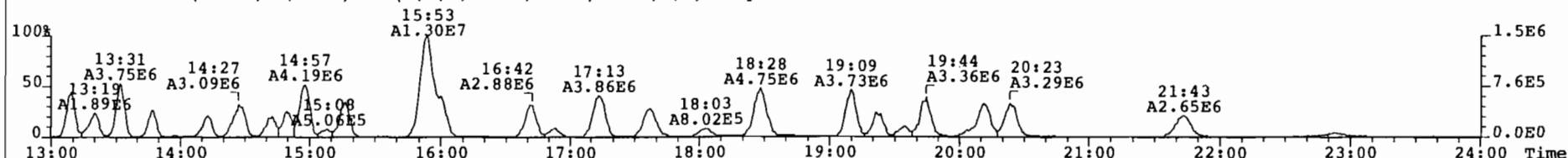


File: 010420R1 Acq: 20-APR-2001 10:57:39 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454\_319\_008 Unit 3 Run 2 Out Air Train File Text: AAP DB225

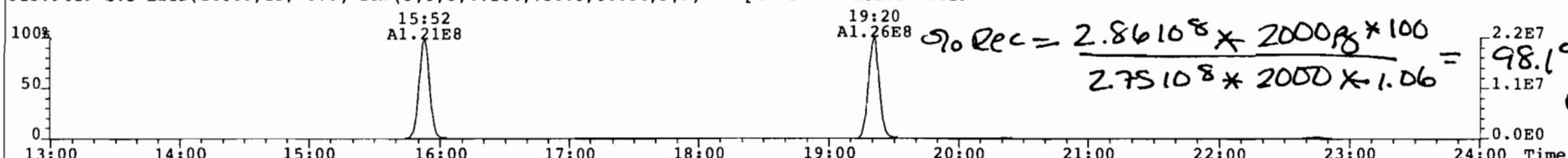
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: TCDF Noise: 1537



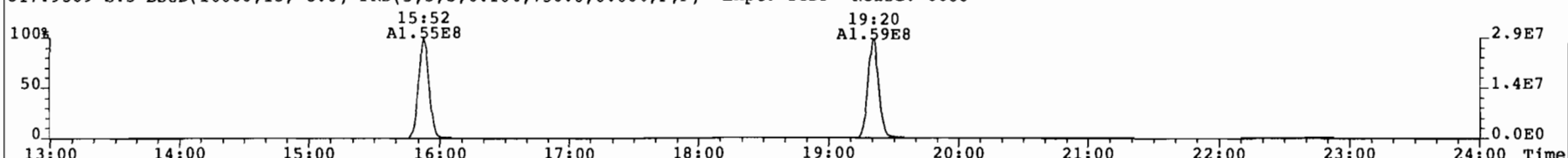
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: TCDF Noise: 1897



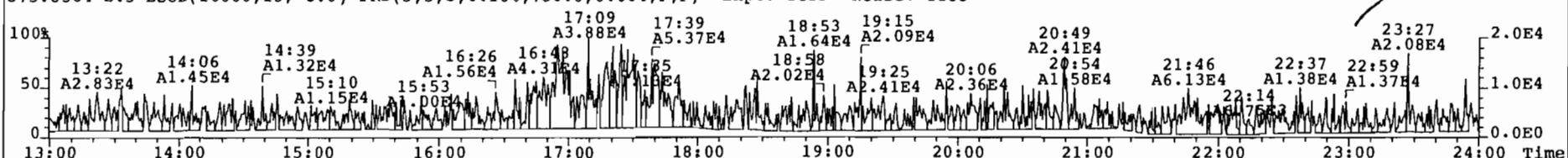
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: TCDF Noise: 6529



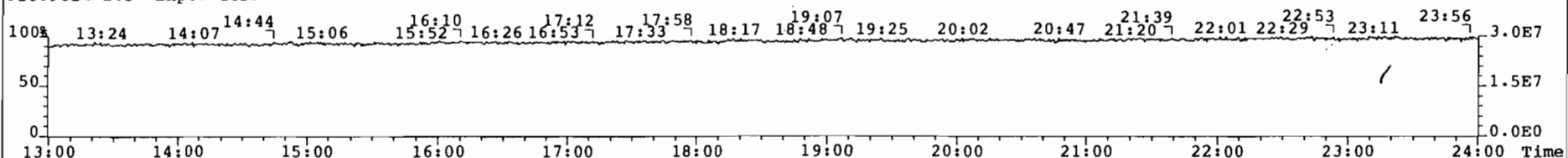
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: TCDF Noise: 6668



375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: TCDF Noise: 1183



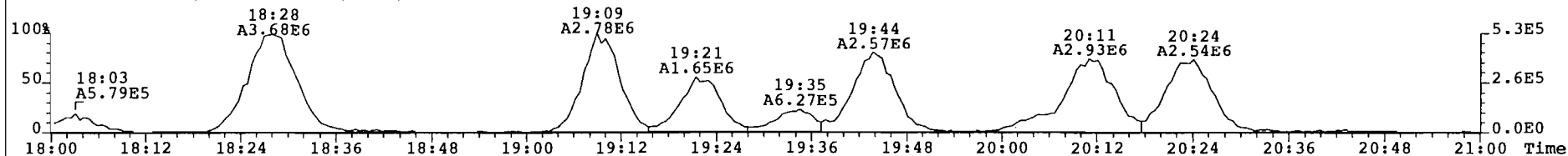
316.9824 S:5 Expt: TCDF



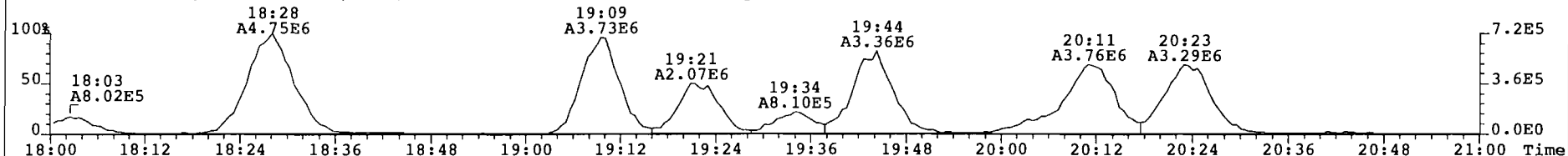
File: 010420R1 Acq: 20-APR-2001 10:57:39 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 5 Text: P1454\_319\_008 Unit 3 Run 2 Out Air Train File Text: AAP DB225

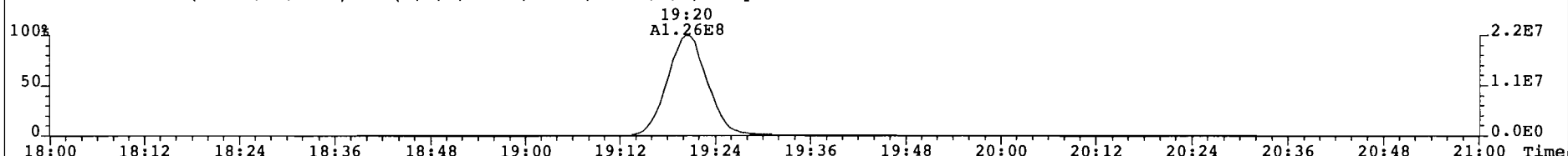
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: TCDF Noise: 1537



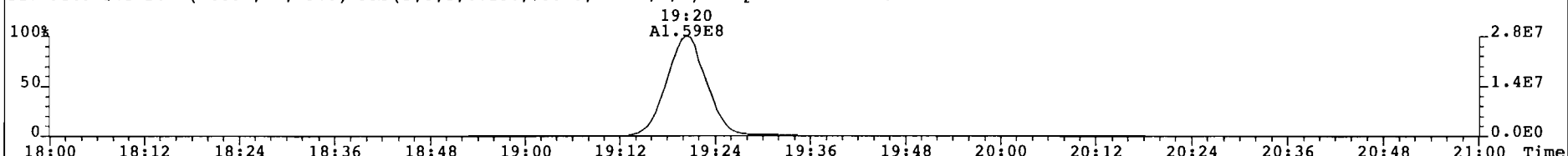
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: TCDF Noise: 1897



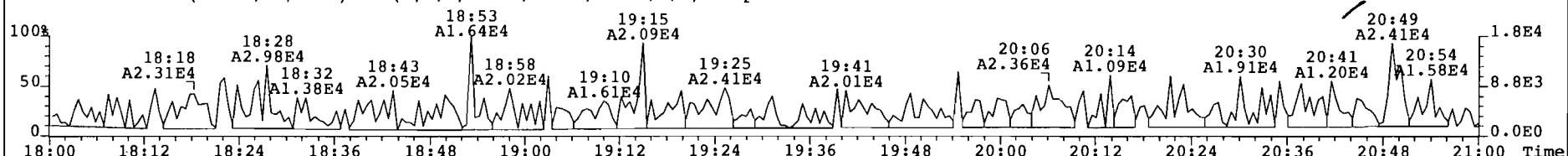
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: TCDF Noise: 6529



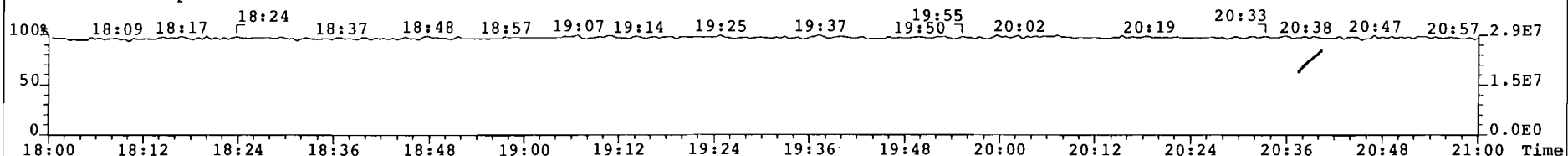
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: TCDF Noise: 6668



375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: TCDF Noise: 1183



316.9824 S:5 Expt: TCDF




# Sample ID: Unit 3 Run 3 Out

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_009	Date Extracted:	2 Apr 01
Date Collected:	27 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	7.2			A	89.9	102	104
1,2,3,7,8-PeCDD	37.7			A	96.1	97.9	104
1,2,3,4,7,8-HxCDD	59.1				98.3	85.2	104
1,2,3,6,7,8-HxCDD	205				98.3	85.2	104
1,2,3,7,8,9-HxCDD	98.2				98.3	85.2	104
1,2,3,4,6,7,8-HpCDD	1190				91.1	90.7	104
OCDD	2510			B	70.1	90.7	104
2,3,7,8-TCDF	40.6				87.2	102	104
1,2,3,7,8-PeCDF	66.4				90.6	97.9	104
2,3,4,7,8-PeCDF	137				90.6	97.9	104
1,2,3,4,7,8-HxCDF	119				114	89.5	104
1,2,3,6,7,8-HxCDF	127				114	89.5	104
2,3,4,6,7,8-HxCDF	163				114	89.5	104
1,2,3,7,8,9-HxCDF	32.6			A	114	89.5	104
1,2,3,4,6,7,8-HpCDF	679				103	90.7	104
1,2,3,4,7,8,9-HpCDF	36.5			A	103	90.7	104
OCDF	166				83.1	90.7	104

Totals & TEQs					 <b>ALTA ANALYTICAL PERSPECTIVES</b> 2714 Exchange Drive Wilmington North Carolina 28405 USA  Tel: 910 794-1613 Fax: 910 794-3919 e-mail: ytondeur@cs.com web: www.ultratrace.com
TCDDs	565		582		
PeCDDs	1610				
HxCDDs	3240				
HpCDDs	2350				
TCDFs	1590				
PeCDFs	1520				
HxCDFs	1330				
HpCDFs	900				
<b>Total PCDD/Fs</b>	<b>15800</b>		<b>15800</b>		
<b>TEQ (ND=0)</b>	<b>204</b>		<b>204</b>	<b>ITEF</b>	
<b>TEQ (ND=DL/2)</b>	<b>204</b>		<b>204</b>	<b>ITEF</b>	

Reviewer: *ce*  
 Date: *18 Apr 01*

Client ID: Unit 3 Run 3 Out  
Lab ID: P1454\_319\_009

Filename: 010405P1  
GC Column ID: db-5

S: 4 Acq: 5-APR-01 07:24:36  
Ical: MM1\_M23\_0 wt/vol: 1.000

ConCal: 010405P1-  
EndCal: 010405P1- Page 12 of 12

Name	Resp	RA	RRF	RT	Conc	Qualif.	CDE	noise	Fac	DL
2,3,7,8-TCDD	8.19e+04	0.85 y	1.26	28:20	7.20			743	2.5	1.17
1,2,3,7,8-PeCDD	3.01e+05	1.52 y	1.01	33:39	37.7			1408	2.5	4.39
1,2,3,4,7,8-HxCDD	4.62e+05	1.41 y	1.14	37:33	59.1			2744	2.5	9.36
1,2,3,6,7,8-HxCDD	1.44e+06	1.29 y	1.02	37:40	205			2744	2.5	10.4
1,2,3,7,8,9-HxCDD	7.70e+05	1.32 y	1.14	38:00	98.2			2744	2.5	9.33
1,2,3,4,6,7,8-HpCDD	8.29e+06	1.03 y	1.13	42:08	1190			4273	2.5	22.2
OCDD	9.91e+06	0.91 y	1.03	47:35	2510			556	2.5	5.43

Reviewer: ce

Date: 18 Apr 01

2,3,7,8-TCDF	5.84e+05	0.80 y	1.05	27:29	40.6			1497	2.5	1.85
1,2,3,7,8-PeCDF	8.91e+05	1.59 y	1.04	32:12	66.4			2304	2.5	4.15
2,3,4,7,8-PeCDF	1.87e+06	1.71 y	1.05	33:19	137			2304	2.5	4.09
1,2,3,4,7,8-HxCDF	1.48e+06	1.27 y	1.13	36:33	119			2553	2.5	3.46
1,2,3,6,7,8-HxCDF	1.72e+06	1.27 y	1.24	36:42	127			2553	2.5	3.16
2,3,4,6,7,8-HxCDF	2.07e+06	1.29 y	1.16	37:22	163			2553	2.5	3.36
1,2,3,7,8,9-HxCDF	3.63e+05	1.29 y	1.02	38:26	32.6			2553	2.5	3.85
1,2,3,4,6,7,8-HpCDF	7.26e+06	1.06 y	1.54	40:25	679			1937	2.5	3.73
1,2,3,4,7,8,9-HpCDF	3.29e+05	0.95 y	1.30	42:58	36.5			1937	2.5	4.43
OCDF	9.58e+05	0.86 y	1.15	47:52	166			1198	2.5	7.45

Total Tetra-Dioxins	6.44e+06	0.79 y	1.26	24:45	565			743	2.5	1.17
Total Penta-Dioxins	1.28e+07	1.60 y	1.01	31:10	1610			1408	2.5	4.39
Total Hexa-Dioxins	2.45e+07	1.27 y	1.10	35:50	3240			2744	2.5	9.68
Total Hepta-Dioxins	1.64e+07	1.03 y	1.13	40:53	2350			4273	2.5	22.2
Total Tetra-Furans	2.29e+07	0.71 y	1.05	22:41	1590			1497	2.5	1.85
1st Fnc. Penta-Furans	1.81e+06	1.57 y	1.05	29:25	134			1610	2.5	2.88
Total Penta-Furans	1.87e+07	1.63 y	1.05	30:57	1380			2304	2.5	4.12
PeCDF Totals:					1520					1520
Total Hexa-Furans	1.68e+07	1.29 y	1.14	35:11	1330			2553	2.5	3.44
Total Hepta-Furans	9.41e+06	1.06 y	1.42	40:25	900			1937	2.5	4.05

EMPC  
582  
1610  
3240  
2350  
1590  
134  
1380  
1520  
1330  
900

IS 13C-2,3,7,8-TCDD	3.61e+07	0.80 y	1.13	28:19	3600					89.9
IS 13C-1,2,3,7,8-PeCDD	3.15e+07	1.60 y	0.93	33:38	3850					96.1
IS 13C-1,2,3,6,7,8-HxCDD	2.74e+07	1.29 y	0.93	37:40	3930					98.3
IS 13C-1,2,3,4,6,7,8-HpCDD	2.47e+07	1.09 y	0.91	42:07	3640					91.1
IS 13C-OCDD	1.54e+07	0.89 y	0.73	47:33	2800					70.1
IS 13C-2,3,7,8-TCDF	5.51e+07	0.79 y	1.06	27:28	3490					87.2
IS 13C-1,2,3,7,8-PeCDF	5.17e+07	1.59 y	0.96	32:12	3620					90.6
IS 13C-1,2,3,6,7,8-HxCDF	4.38e+07	0.53 y	1.28	36:41	4570					114
IS 13C-1,2,3,4,6,7,8-HpCDF	2.78e+07	0.45 y	0.90	40:25	4110					103
IS 13C-OCDF	2.01e+07	0.87 y	0.81	47:51	3320					83.1

Rec  
89.9  
96.1  
98.3  
91.1  
70.1  
87.2  
90.6  
114  
103  
83.1

RS/RT 13C-1,2,3,4-TCDD	3.54e+07	0.81 y	1.00	27:41	4000					-
RS 13C-1,2,3,4-TCDF	5.95e+07	0.79 y	1.00	26:08	4000					-
RS/RT 13C-1,2,3,7,8,9-HxCDD	2.99e+07	1.27 y	1.00	38:00	4000					-

Analyst: GAG

PS 37C1-2,3,7,8-TCDD	1.90e+07		0.51	28:20	4090					102
PS 13C-2,3,4,7,8-PeCDF	4.92e+07	1.59 y	0.97	33:18	3920					97.9
PS 13C-1,2,3,4,7,8-HxCDD	2.16e+07	1.29 y	0.92	37:32	3410					85.2
PS 13C-1,2,3,4,7,8-HxCDF	3.57e+07	0.53 y	0.91	36:32	3580					89.5
PS 13C-1,2,3,4,7,8,9-HpCDF	2.15e+07	0.44 y	0.85	42:58	3630					90.7
AS 13C-1,2,3,7,8,9-HxCDF	3.34e+07	0.54 y	1.07	38:25	4170					104

102  
97.9  
85.2  
89.5  
90.7  
104

Date: 18 Apr 01

Totals class: TCDD EMPC Function: 1 Run #: 19  
 File Name: 010405P1 Sample #: 4 Sample text: P1454\_319\_009 Unit 3 Run 3 Out Air Train

Acquired: 5-APR-01 07:24:36 Processed: 5-APR-01 09:19:41

Total Conc.: 581.63 Unnamed Conc.: 574.435

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
24:45	1.453e+06	n	1.851e+06	n	0.79	y	3.304e+06	3.304e+06	5.20e+02	y	290	
25:06	3.447e+05	n	4.251e+05	n	0.81	y	7.698e+05	7.698e+05	1.25e+02	y	67.6	
25:31	1.084e+05	n	1.305e+05	n	0.83	y	2.389e+05	2.389e+05	4.18e+01	y	21.0	
26:31	2.014e+05	y	2.581e+05	y	0.78	y	4.596e+05	4.596e+05	6.55e+01	y	40.4	
26:43	1.513e+05	y	1.812e+05	y	0.83	y	3.325e+05	3.325e+05	5.90e+01	y	29.2	
26:54	7.882e+04	y	1.080e+05	n	0.73	y	1.868e+05	1.868e+05	3.56e+01	y	16.4	
27:08	2.268e+04	y	2.251e+04	y	1.01	n	4.518e+04	3.984e+04	8.05e+00	y	3.50	
27:19	7.772e+04	y	1.056e+05	y	0.74	y	1.833e+05	1.833e+05	4.32e+01	y	16.1	
27:42	1.974e+05	y	2.440e+05	y	0.81	y	4.414e+05	4.414e+05	7.61e+01	y	38.8	
27:48	3.458e+04	y	4.606e+04	y	0.75	y	8.065e+04	8.065e+04	1.22e+01	y	7.08	
28:03	1.572e+05	y	2.026e+05	y	0.78	y	3.598e+05	3.598e+05	4.60e+01	y	31.6	
28:11	3.334e+04	y	3.687e+04	y	0.90	n	7.021e+04	6.525e+04	1.24e+01	y	5.73	
28:20	3.754e+04	y	4.440e+04	n	0.85	y	8.194e+04	8.194e+04	1.66e+01	y	7.20	2,3,7,8-TCDD
28:39	4.613e+04	y	4.537e+04	y	1.02	n	8.150e+04	8.031e+04	1.56e+01	y	7.05	

Totals class: PeCDD EMPC Function: 2 Run #: 19  
 File Name: 010405P1 Sample #: 4 Sample text: P1454\_319\_009 Unit 3 Run 3 Out Air Train

Acquired: 5-APR-01 07:24:36 Processed: 5-APR-01 09:19:41

Total Conc.: 1610.9 Unnamed Conc.: 1573.230

RT	ml	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
31:10	2.838e+06	n	1.777e+06	n	1.60	y	4.615e+06	4.615e+06	2.72e+02	y	579	
31:42	1.733e+05	n	1.199e+05	n	1.44	y	2.932e+05	2.932e+05	2.51e+01	y	36.8	
32:15	2.296e+06	n	1.444e+06	n	1.59	y	3.739e+06	3.739e+06	2.89e+02	y	469	
32:26	2.015e+05	n	1.398e+05	n	1.44	y	3.414e+05	3.414e+05	2.69e+01	y	42.8	
32:32	9.126e+05	n	5.632e+05	n	1.62	y	1.476e+06	1.476e+06	1.09e+02	y	185	
32:47	4.327e+05	n	2.722e+05	n	1.59	y	7.049e+05	7.049e+05	4.07e+01	y	88.4	
33:10	5.965e+05	n	3.715e+05	n	1.61	y	9.681e+05	9.681e+05	7.11e+01	y	121	
33:39	1.815e+05	n	1.190e+05	n	1.52	y	3.006e+05	3.006e+05	2.29e+01	y	37.7	1,2,3,7,8-PeCDD
33:45	1.300e+05	n	8.748e+04	n	1.49	y	2.175e+05	2.175e+05	1.47e+01	y	27.3	
34:06	1.099e+05	n	7.981e+04	n	1.38	y	1.897e+05	1.897e+05	1.41e+01	y	23.8	

Totals class: HxCDD EMPC Function: 3 Run #: 19  
 File Name: 010405P1 Sample #: 4 Sample text: P1454\_319\_009 Unit 3 Run 3 Out Air Train

Acquired: 5-APR-01 07:24:36 Processed: 5-APR-01 09:19:41

Total Conc.: 3244.1 Unnamed Conc.: 2881.382

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
35:50	1.149e+06	n	9.075e+05	n	1.27	y	2.056e+06	2.056e+06	8.42e+01	y	272
36:29	7.697e+06	n	6.116e+06	n	1.26	y	1.381e+07	1.381e+07	5.53e+02	y	1830
36:46	2.605e+06	n	2.005e+06	n	1.30	y	4.610e+06	4.610e+06	1.46e+02	y	610
36:54	4.471e+05	n	3.676e+05	n	1.22	y	8.148e+05	8.148e+05	2.71e+01	y	108
37:33	2.705e+05	n	1.917e+05	n	1.41	y	4.622e+05	4.622e+05	1.77e+01	y	59.1 1,2,3,4,7,8-HxCDD
37:40	8.124e+05	n	6.298e+05	n	1.29	y	1.442e+06	1.442e+06	5.38e+01	y	205 1,2,3,6,7,8-HxCDD
37:52	2.755e+05	n	2.217e+05	n	1.24	y	4.973e+05	4.973e+05	1.78e+01	y	65.8
38:00	4.381e+05	n	3.323e+05	n	1.32	y	7.704e+05	7.704e+05	2.13e+01	y	98.2 1,2,3,7,8,9-HxCDD

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Totals class: HpCDD EMPC                      Function: 4 Run #: 19  
 File Name: 010405P1 Sample #: 4              Sample text: P1454\_319\_009 Unit 3 Run 3 Out Air Train  
 Acquired: 5-APR-01 07:24:36              Processed: 5-APR-01 09:19:41  
 Total Conc.: 2353.5                      Unnamed Conc.: 1163.199

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
40:53	4.110e+06	n	3.989e+06	n	1.03	y	8.098e+06	8.098e+06	1.50e+02	y	1160
42:08	4.209e+06	n	4.078e+06	n	1.03	y	8.287e+06	8.287e+06	1.42e+02	y	1190 1,2,3,4,6,7,8-HpCDD

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Totals class: TCDF EMPC                      Function: 1 Run #: 19  
 File Name: 010405P1 Sample #: 4              Sample text: P1454\_319\_009 Unit 3 Run 3 Out Air Train  
 Acquired: 5-APR-01 07:24:36              Processed: 5-APR-01 09:19:41  
 Total Conc.: 1592.0                      Unnamed Conc.: 1551.423

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
22:41	3.469e+05	n	4.884e+05	n	0.71	y	8.353e+05	8.353e+05	5.60e+01	y	58.0
23:15	2.511e+05	n	3.102e+05	n	0.81	y	5.613e+05	5.613e+05	3.86e+01	y	39.0
23:52	3.525e+05	n	4.720e+05	n	0.75	y	8.245e+05	8.245e+05	6.14e+01	y	57.3
24:21	1.203e+06	n	1.588e+06	n	0.76	y	2.792e+06	2.792e+06	1.34e+02	y	194
24:37	1.742e+05	y	2.209e+05	y	0.79	y	3.952e+05	3.952e+05	3.89e+01	y	27.4
24:45	5.745e+05	y	7.378e+05	y	0.78	y	1.312e+06	1.312e+06	8.02e+01	y	91.1
25:08	3.382e+05	y	4.190e+05	y	0.81	y	7.572e+05	7.572e+05	6.23e+01	y	52.6
25:16	1.945e+05	y	2.549e+05	y	0.76	y	4.494e+05	4.494e+05	3.92e+01	y	31.2
25:26	2.402e+05	n	3.465e+05	n	0.69	y	5.867e+05	5.867e+05	5.27e+01	y	40.8
25:48	2.875e+05	y	4.008e+05	y	0.72	y	6.883e+05	6.883e+05	5.91e+01	y	47.8
25:55	5.751e+05	y	7.586e+05	y	0.76	y	1.334e+06	1.334e+06	1.20e+02	y	92.6
26:03	4.948e+05	y	6.416e+05	y	0.77	y	1.136e+06	1.136e+06	1.06e+02	y	78.9
26:10	1.611e+06	y	2.150e+06	y	0.75	y	3.761e+06	3.761e+06	3.03e+02	y	261
26:37	3.570e+05	y	4.984e+05	y	0.72	y	8.554e+05	8.554e+05	7.41e+01	y	59.4
26:43	8.113e+04	y	1.059e+05	y	0.77	y	1.870e+05	1.870e+05	1.91e+01	y	13.0
26:52	2.432e+05	n	3.198e+05	n	0.76	y	5.630e+05	5.630e+05	5.46e+01	y	39.1
27:04	4.560e+05	n	6.025e+05	n	0.76	y	1.058e+06	1.058e+06	7.74e+01	y	73.5
27:16	5.077e+05	y	6.677e+05	y	0.76	y	1.175e+06	1.175e+06	1.03e+02	y	81.6

27:23	3.834e+05	y	4.871e+05	y	0.79	y	8.705e+05	8.705e+05	7.47e+01	y	60.5
27:29	2.602e+05	y	3.242e+05	y	0.80	y	5.844e+05	5.844e+05	5.23e+01	y	40.6 2,3,7,8-TCDF
27:51	7.086e+05	n	9.091e+05	n	0.78	y	1.618e+06	1.618e+06	1.39e+02	y	112
28:05	6.752e+04	y	9.217e+04	n	0.73	y	1.597e+05	1.597e+05	1.32e+01	y	11.1
28:21	9.193e+04	n	1.263e+05	n	0.73	y	2.183e+05	2.183e+05	2.03e+01	y	15.2
29:28	8.991e+04	y	1.083e+05	y	0.83	y	1.982e+05	1.982e+05	1.43e+01	y	13.8

Totals class: 1st Fnc.PeCDF EMPC                      Function: 1 Run #: 19  
 File Name: 010405P1 Sample #: 4                      Sample text: P1454\_319\_009 Unit 3 Run 3 Out Air Train

Acquired: 5-APR-01 07:24:36      Processed: 5-APR-01 09:19:41

Total Conc.: 133.97                      Unnamed Conc.: 133.967

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
29:25	1.105e+06	n	7.051e+05	n	1.57	y	1.810e+06	1.810e+06	1.04e+02	y 134

Totals class: PeCDF EMPC                                  Function: 2 Run #: 19  
 File Name: 010405P1 Sample #: 4                      Sample text: P1454\_319\_009 Unit 3 Run 3 Out Air Train

Acquired: 5-APR-01 07:24:36      Processed: 5-APR-01 09:19:41

Total Conc.: 1381.5                      Unnamed Conc.: 1177.828

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
30:57	1.490e+06	n	9.136e+05	n	1.63	y	2.403e+06	2.403e+06	8.47e+01	y 178
31:05	1.814e+06	y	1.115e+06	y	1.63	y	2.929e+06	2.929e+06	8.08e+01	y 217
31:12	4.964e+05	y	2.962e+05	y	1.68	y	7.926e+05	7.926e+05	3.45e+01	y 58.7
31:18	1.496e+05	y	8.870e+04	y	1.69	y	2.383e+05	2.383e+05	1.11e+01	y 17.6
31:32	2.540e+05	n	1.670e+05	n	1.52	y	4.210e+05	4.210e+05	1.67e+01	y 31.2
31:45	1.879e+06	y	1.158e+06	y	1.62	y	3.037e+06	3.037e+06	1.08e+02	y 225
31:51	4.901e+05	y	3.308e+05	y	1.48	y	8.210e+05	8.210e+05	3.86e+01	y 60.8
32:00	4.654e+05	y	2.922e+05	n	1.59	y	7.576e+05	7.576e+05	3.72e+01	y 56.1
32:12	5.472e+05	n	3.433e+05	n	1.59	y	8.905e+05	8.905e+05	4.22e+01	y 66.4 1,2,3,7,8-PeCDF
32:29	1.031e+06	y	6.701e+05	y	1.54	y	1.701e+06	1.701e+06	5.73e+01	y 126
32:39	1.038e+05	y	6.328e+04	y	1.64	y	1.671e+05	1.671e+05	6.55e+00	y 12.4
33:04	1.353e+05	y	9.193e+04	y	1.47	y	2.273e+05	2.273e+05	1.06e+01	y 16.8
33:11	1.165e+06	y	7.681e+05	y	1.52	y	1.933e+06	1.933e+06	9.14e+01	y 143
33:19	1.178e+06	y	6.906e+05	n	1.71	y	1.868e+06	1.868e+06	7.05e+01	y 137 2,3,4,7,8-PeCDF
33:38	1.784e+05	y	1.054e+05	n	1.69	y	2.838e+05	2.838e+05	1.45e+01	y 21.0
34:23	1.239e+05	y	7.653e+04	y	1.62	y	2.005e+05	2.005e+05	8.54e+00	y 14.8

*3.77 PeCDF  
0.567 total*

Totals class: HxCDF EMPC                                  Function: 3 Run #: 19  
 File Name: 010405P1 Sample #: 4                      Sample text: P1454\_319\_009 Unit 3 Run 3 Out Air Train

Acquired: 5-APR-01 07:24:36      Processed: 5-APR-01 09:19:41

Total Conc.: 1334.5                      Unnamed Conc.: 893.219

RT	m1	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
35:11	1.180e+06	n	9.134e+05	n	1.29	y	2.094e+06	2.094e+06	9.81e+01	y	168	
35:22	2.683e+06	n	2.129e+06	n	1.26	y	4.812e+06	4.812e+06	2.31e+02	y	386	
35:36	2.033e+05	y	1.465e+05	n	1.39	y	3.498e+05	3.498e+05	1.49e+01	y	28.0	
35:48	3.637e+05	n	2.879e+05	n	1.26	y	6.516e+05	6.516e+05	2.98e+01	y	52.2	
36:01	2.195e+05	y	1.783e+05	n	1.23	y	3.979e+05	3.979e+05	1.92e+01	y	31.9	
36:26	1.067e+06	y	8.776e+05	y	1.22	y	1.944e+06	1.944e+06	9.20e+01	y	156	
36:33	8.267e+05	y	6.513e+05	y	1.27	y	1.478e+06	1.478e+06	6.68e+01	y	119	1,2,3,4,7,8-HxCDF
36:42	9.626e+05	y	7.607e+05	y	1.27	y	1.723e+06	1.723e+06	7.41e+01	y	127	1,2,3,6,7,8-HxCDF
36:51	1.503e+05	y	1.249e+05	y	1.20	y	2.752e+05	2.752e+05	1.15e+01	y	22.1	
37:00	1.616e+05	y	1.358e+05	y	1.19	y	2.974e+05	2.974e+05	1.33e+01	y	23.8	
37:08	1.766e+05	y	1.421e+05	y	1.24	y	3.187e+05	3.187e+05	1.24e+01	y	25.6	
37:22	1.169e+06	n	9.050e+05	n	1.29	y	2.074e+06	2.074e+06	8.05e+01	y	163	2,3,4,6,7,8-HxCDF
38:26	2.048e+05	n	1.585e+05	n	1.29	y	3.633e+05	3.633e+05	1.11e+01	y	32.6	1,2,3,7,8,9-HxCDF

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Totals class: HpCDF EMPC

Function: 4 Run #: 19

File Name: 010405P1 Sample #: 4

Sample text: P1454\_319\_009 Unit 3 Run 3 Out Air Train

Acquired: 5-APR-01 07:24:36

Processed: 5-APR-01 09:19:41

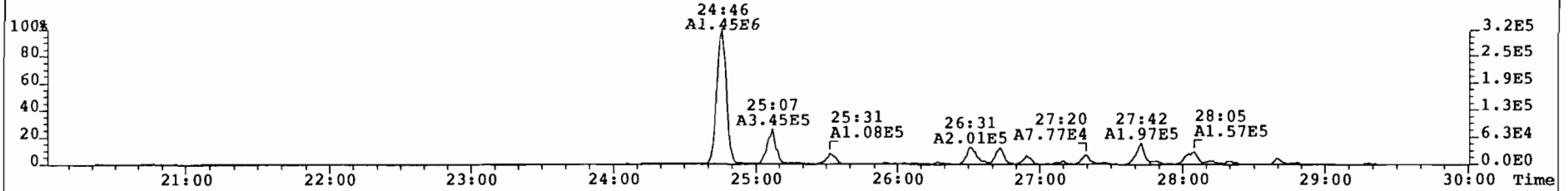
Total Conc.: 900.13

Unnamed Conc.: 185.032

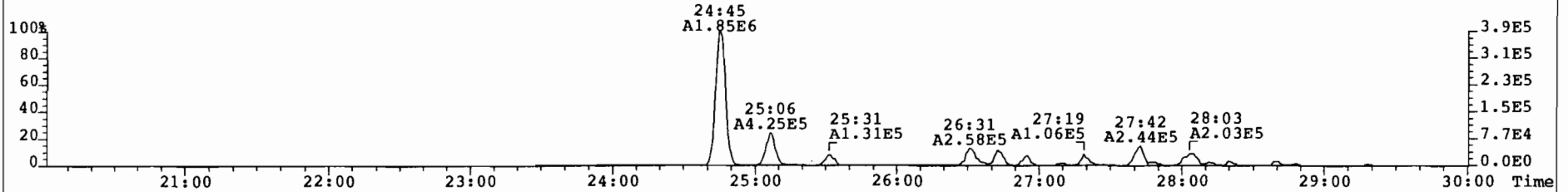
RT	m1	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
40:25	3.729e+06	n	3.532e+06	n	1.06	y	7.261e+06	7.261e+06	3.27e+02	y	679	1,2,3,4,6,7,8-HpCDF
40:52	4.620e+05	n	4.282e+05	n	1.08	y	8.902e+05	8.902e+05	3.59e+01	y	90.3	
41:07	4.896e+05	y	4.439e+05	n	1.10	y	9.335e+05	9.335e+05	3.65e+01	y	94.7	
42:58	1.603e+05	y	1.685e+05	n	0.95	y	3.288e+05	3.288e+05	1.42e+01	y	36.5	1,2,3,4,7,8,9-HpCDF



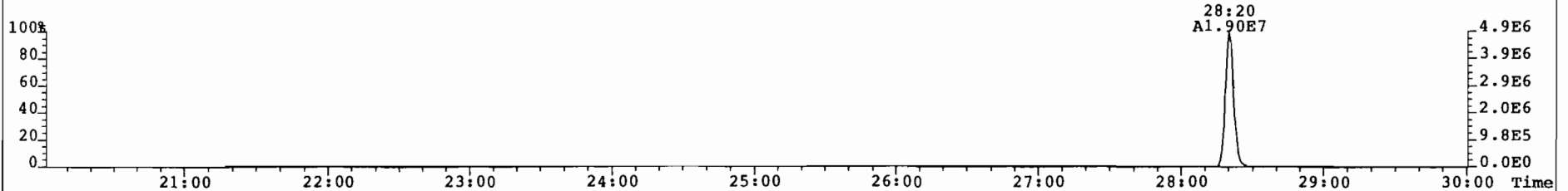
File: 010405P1 Acq: 5-APR-2001 07:24:36 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454 319\_009 Unit 3 Run 3 Out Air Train Vial# 29 File Text: AAP DB5  
319.8965 S:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 177



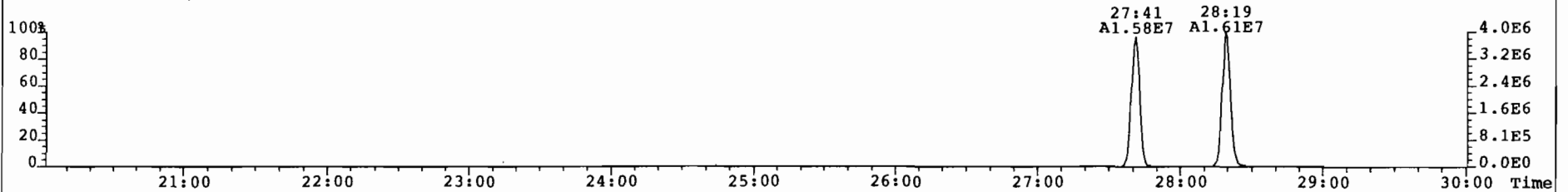
321.8936 S:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 104



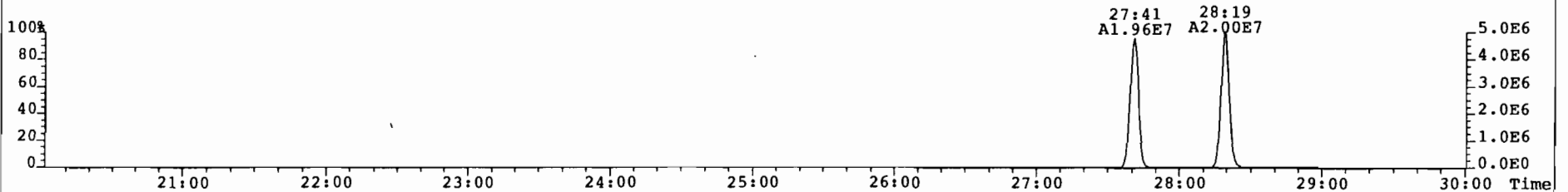
327.8850 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 23



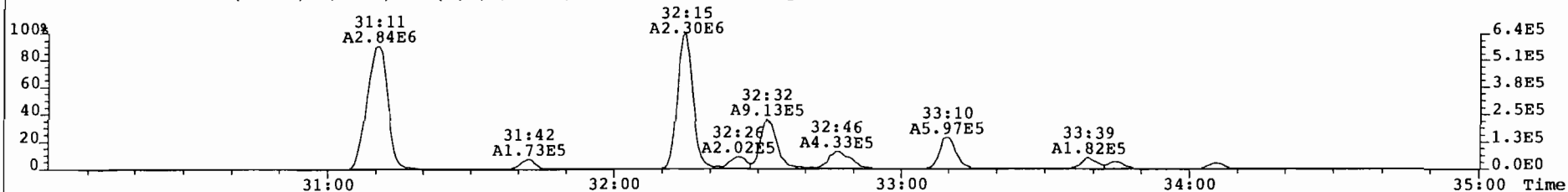
331.9368 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1323



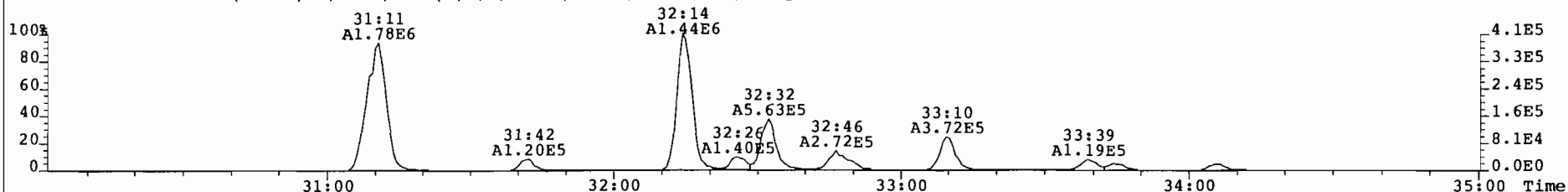
333.9339 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 653



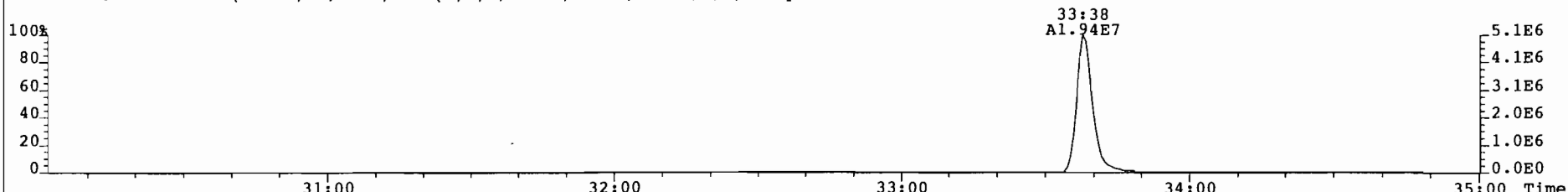
File: 010405P1 Acq: 5-APR-2001 07:24:36 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454\_319\_009 Unit 3 Run 3 Out Air Train Vial# 29 File Text: AAP DB5  
355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 256



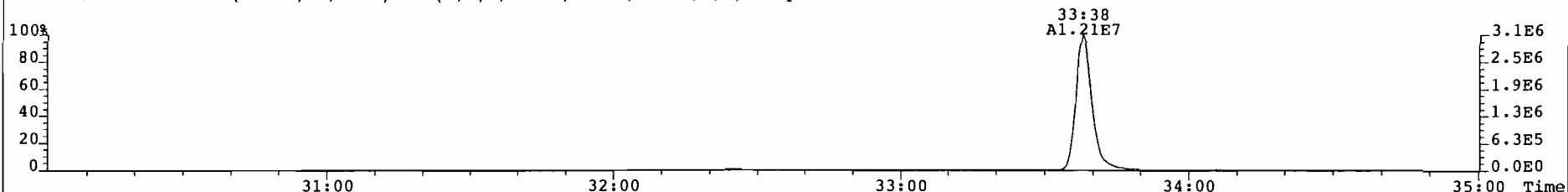
357.8517 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 169



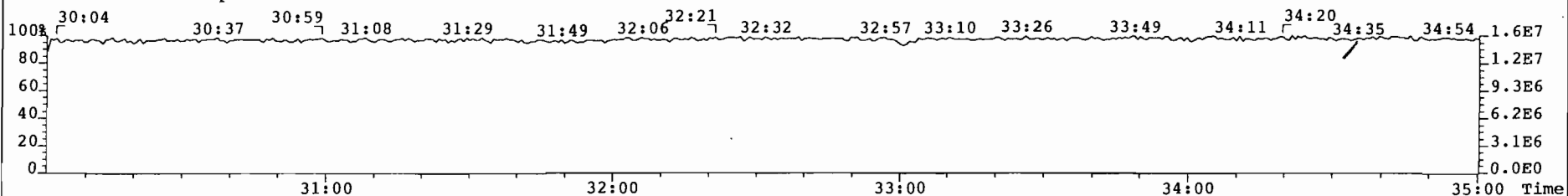
367.8949 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 279



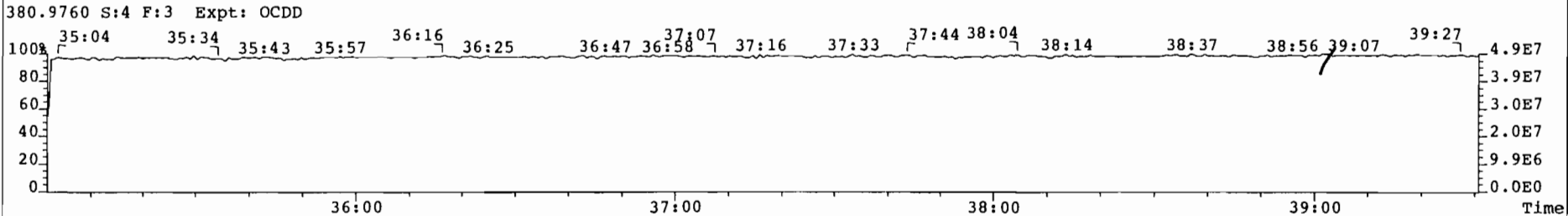
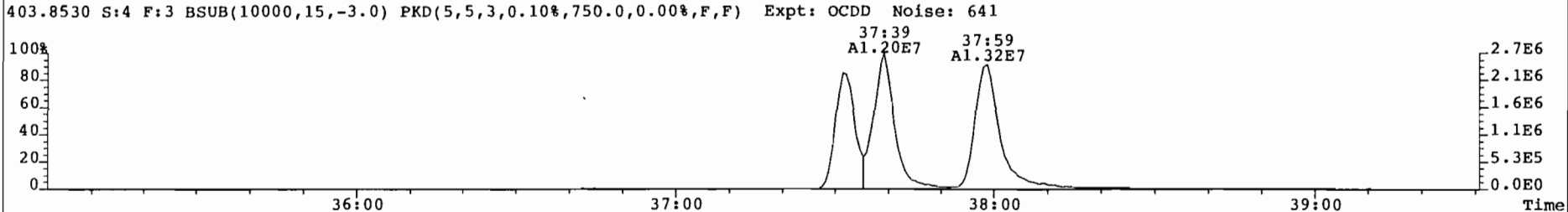
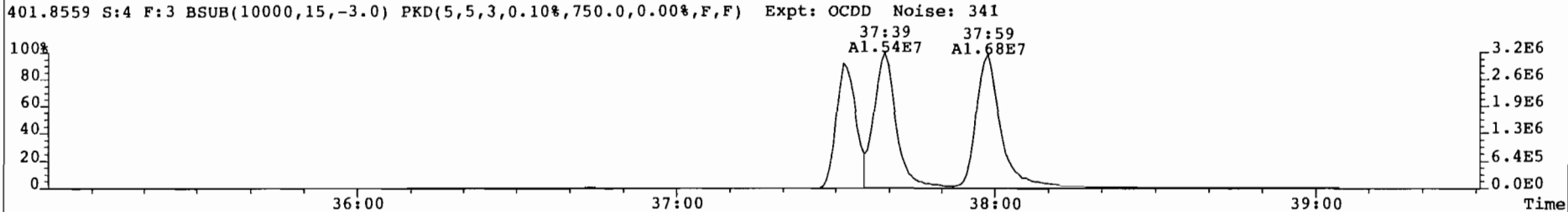
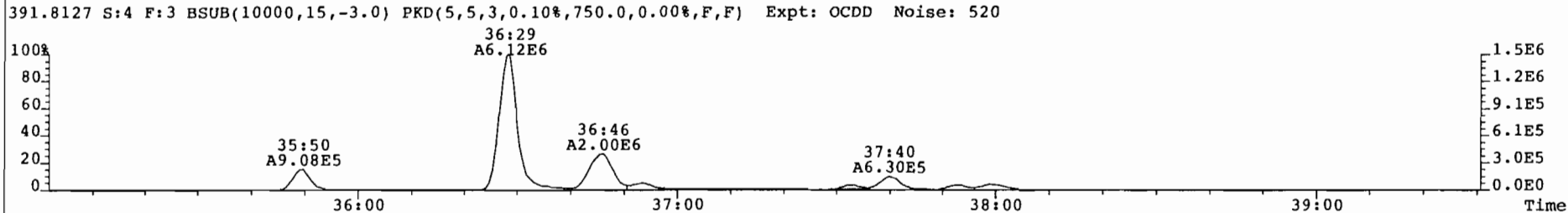
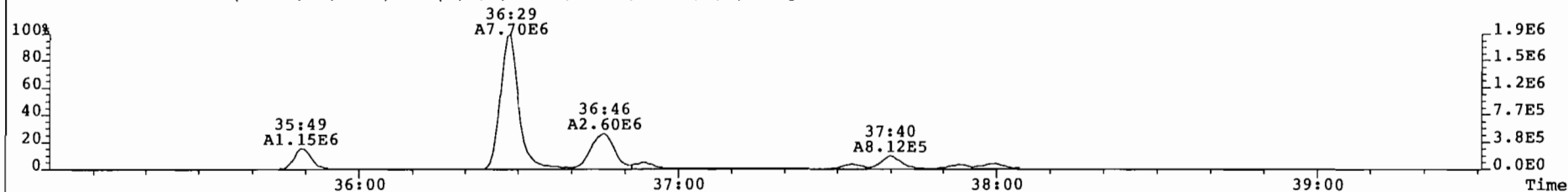
369.8919 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 67



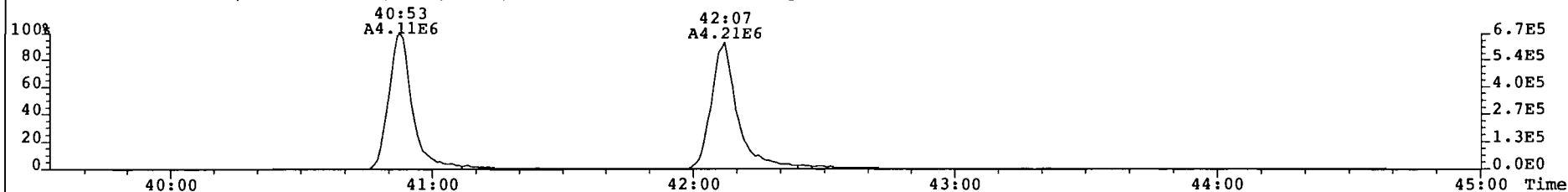
366.9792 S:4 F:2 Expt: OCDD



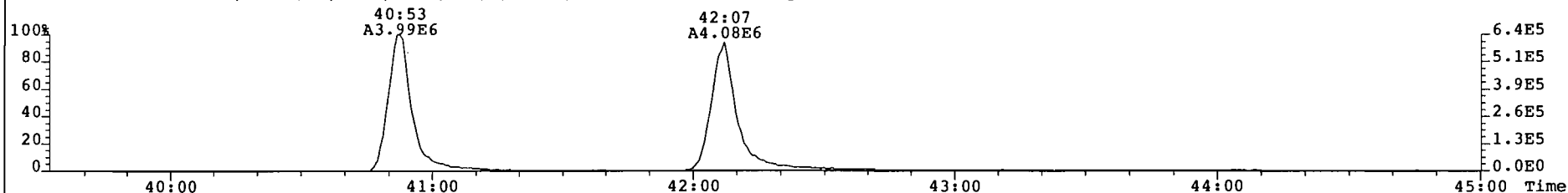
File: 010405P1 Acq: 5-APR-2001 07:24:36 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454 319\_009 Unit 3 Run 3 Out Air Train Vial# 29 File Text: AAP DB5  
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 510



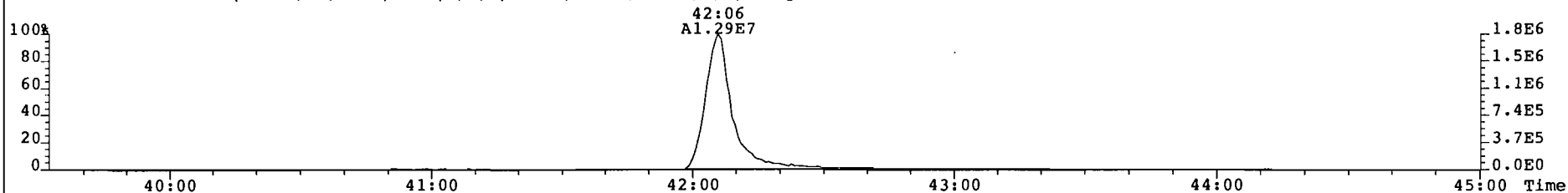
File: 010405P1 Acq: 5-APR-2001 07:24:36 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454 319 009 Unit 3 Run 3 Out Air Train Vial# 29 File Text: AAP DB5  
423.7767 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 430



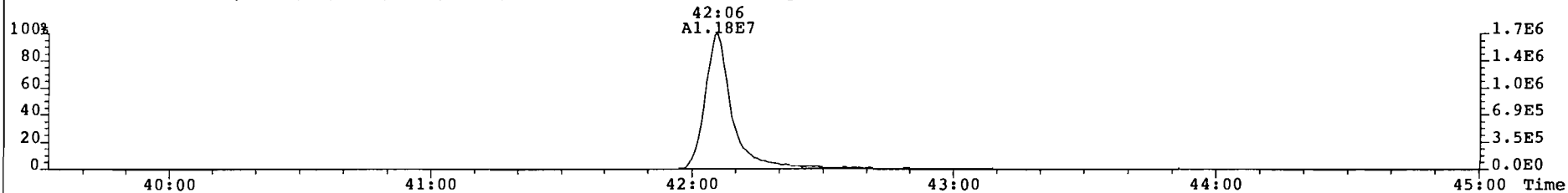
425.7737 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 577



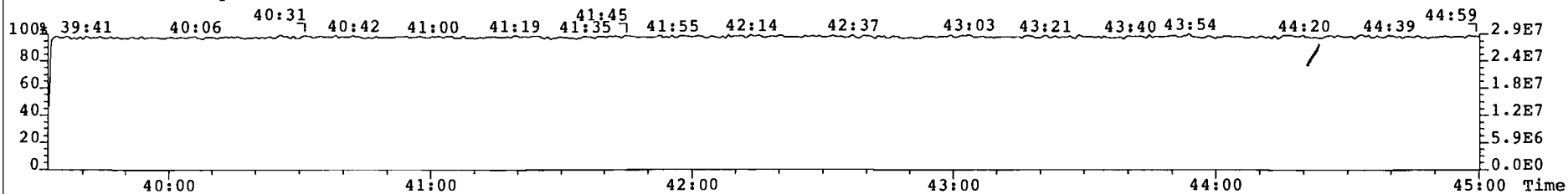
435.8169 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1008



437.8140 S:4 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 320



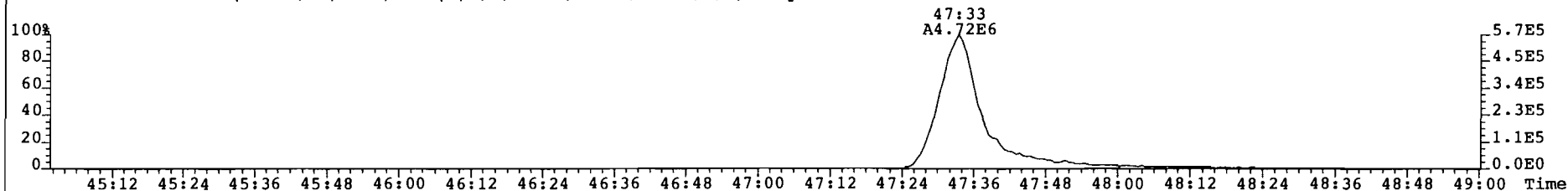
430.9728 S:4 F:4 Expt: OCDD



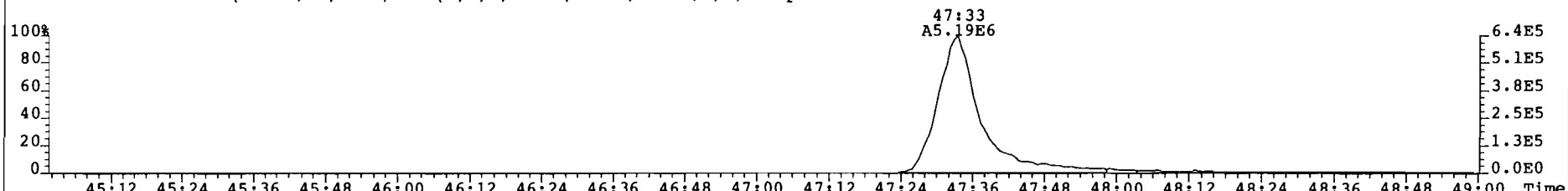
File: 010405F1 Acq: 5-APR-2001 07:24:36 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 4 Text: P1454 319\_009 Unit 3 Run 3 Out Air Train Vial# 29 File Text: AAP DB5

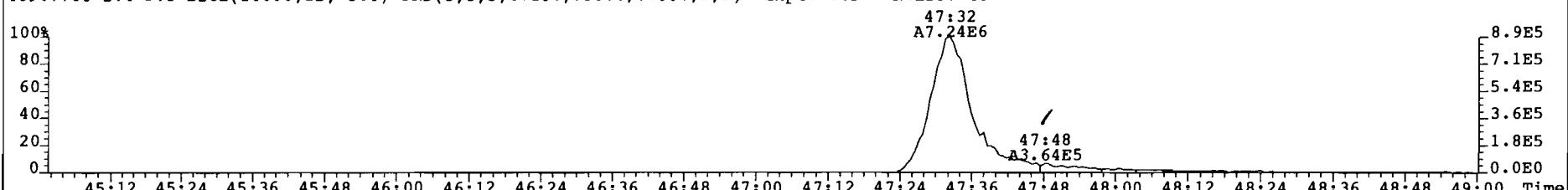
457.7377 S:4 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 71



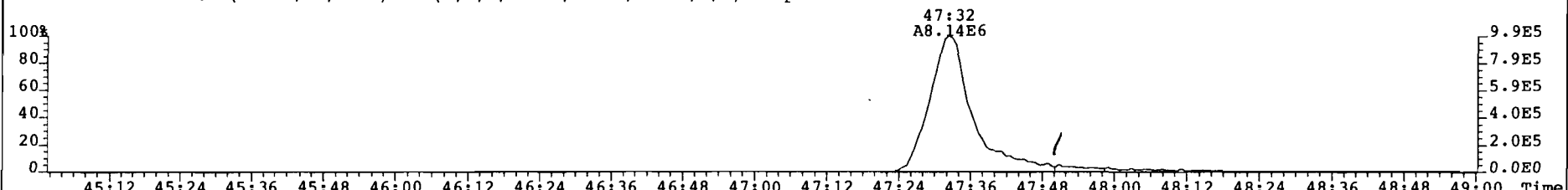
459.7348 S:4 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 35



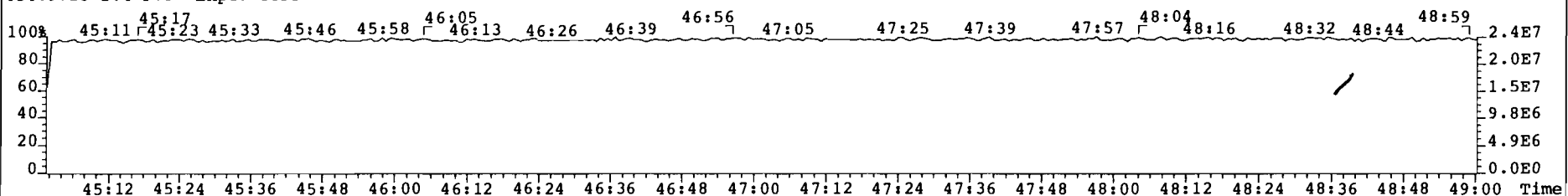
469.7780 S:4 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 43



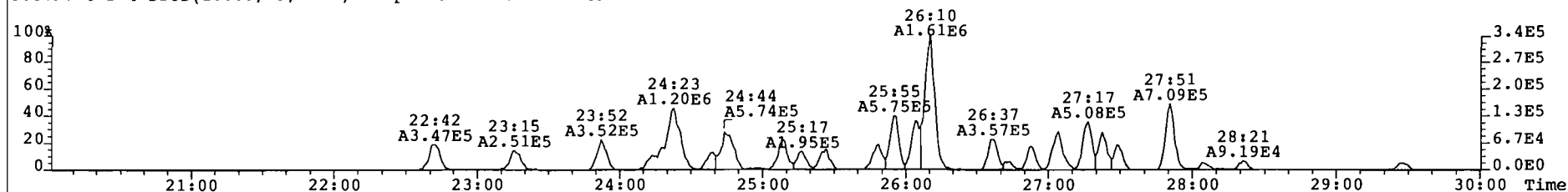
471.7750 S:4 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 35



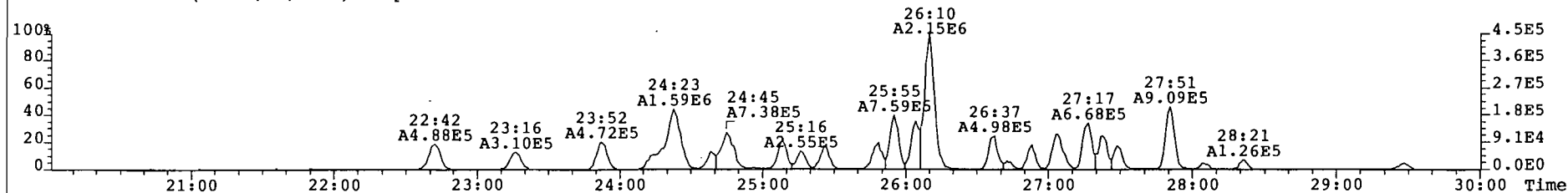
454.9728 S:4 F:5 Expt: OCDD



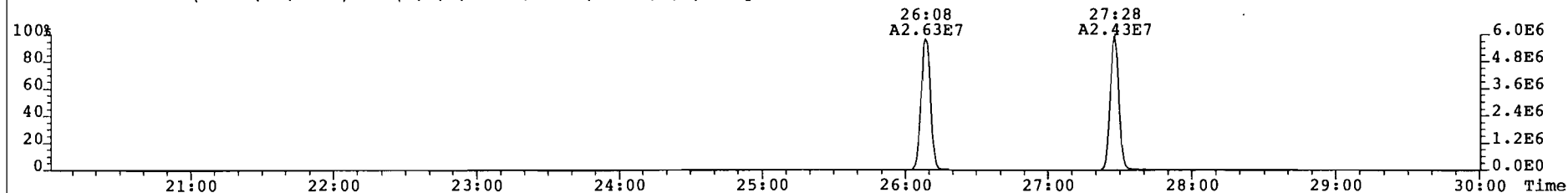
File: 010405P1 Acq: 5-APR-2001 07:24:36 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454\_319\_009 Unit 3 Run 3 Out Air Train Vial# 29 File Text: AAP DB5  
303.9016 S:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 169



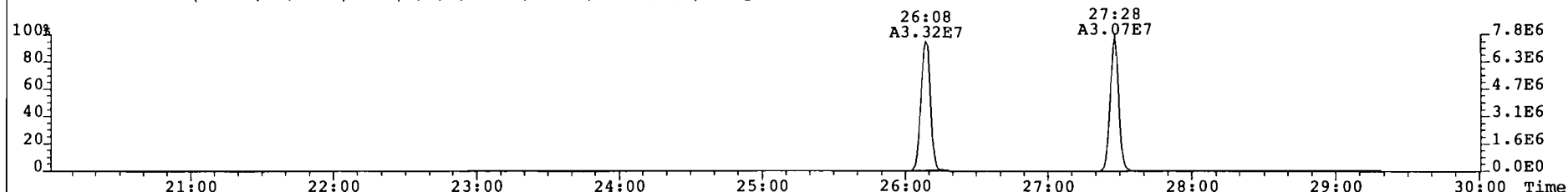
305.8987 S:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 471



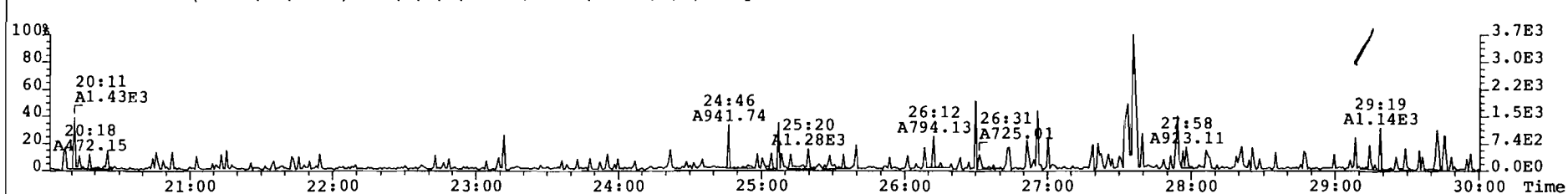
315.9419 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 403



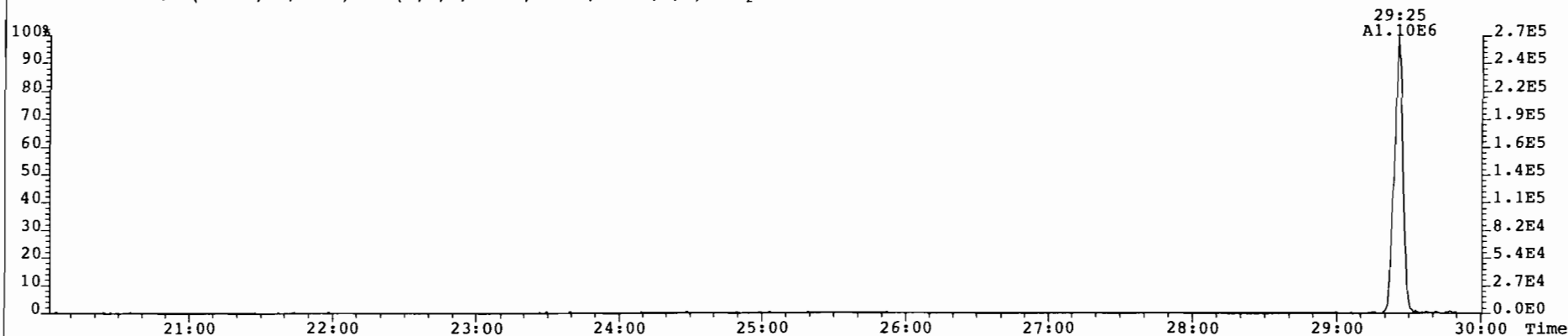
317.9389 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 530



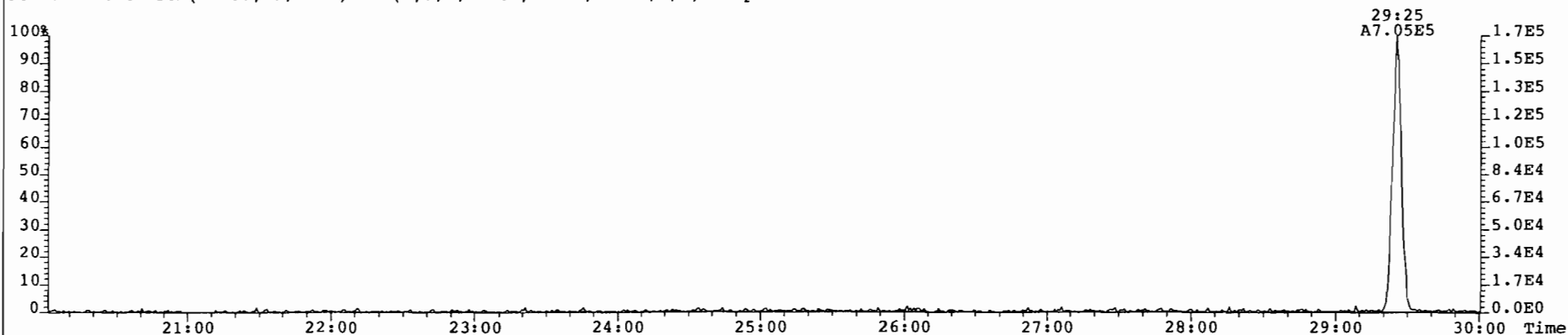
375.8364 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 22



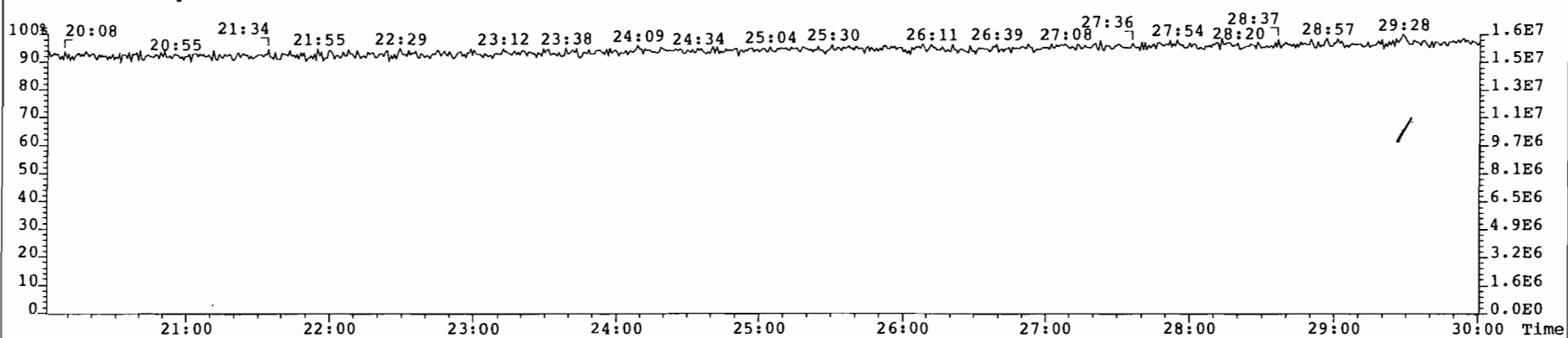
File: 010405P1 Acq: 5-APR-2001 07:24:36 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454 319\_009 Unit 3 Run 3 Out Air Train Vial# 29 File Text: AAP DB5  
339.8597 S:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 23



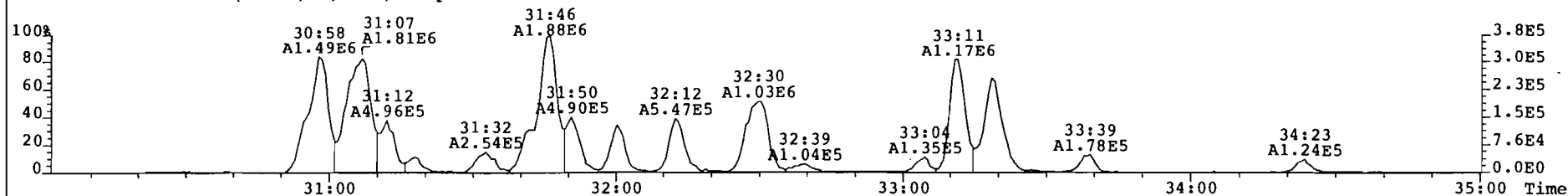
341.8568 S:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 166



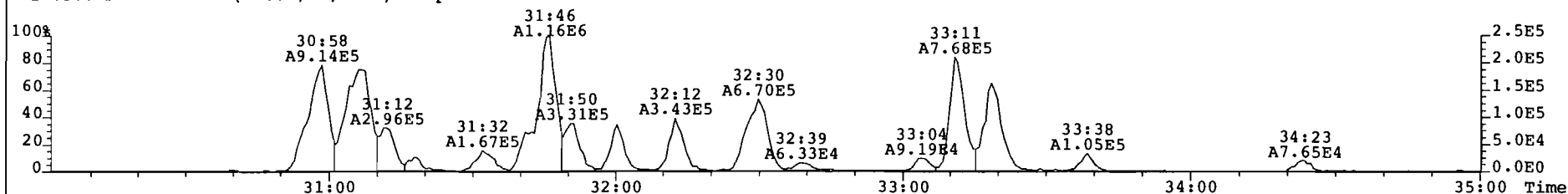
316.9824 S:4 Expt: OCDD



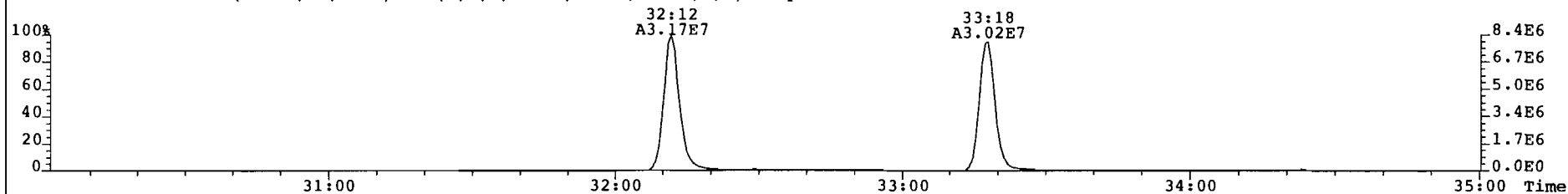
File: 010405PI Acq: 5-APR-2001 07:24:36 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454 319 009 Unit 3 Run 3 Out Air Train Vial# 29 File Text: AAP DB5  
339.8597 S:4 F:2 BSub(10000,15,-3.0) Expt: OCDD Noise: 295



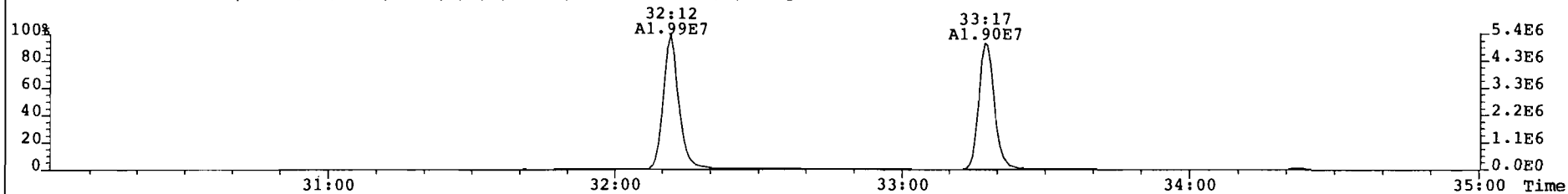
341.8568 S:4 F:2 BSub(10000,15,-3.0) Expt: OCDD Noise: 358



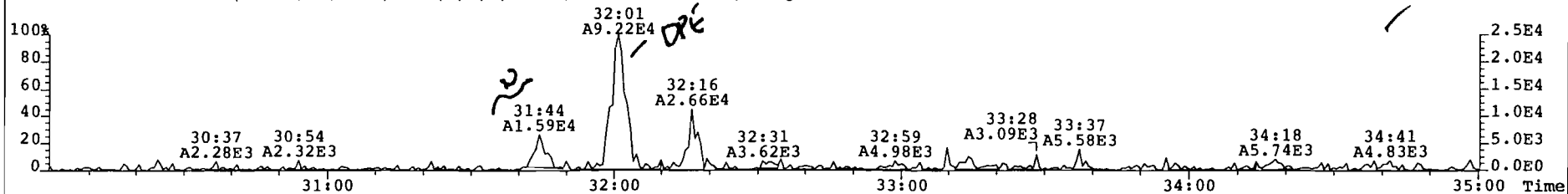
351.9000 S:4 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 420



353.8970 S:4 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 511

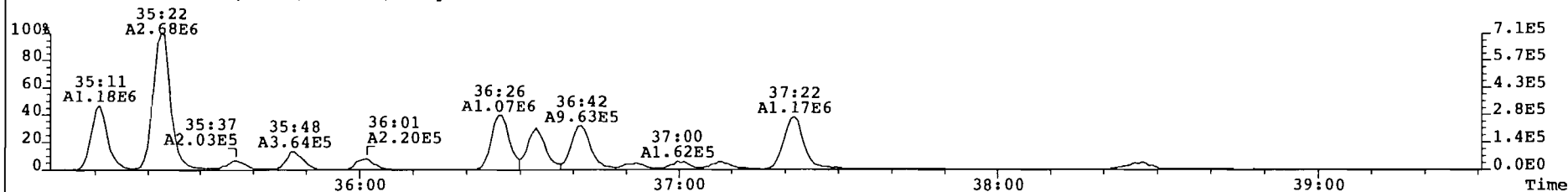


409.7974 S:4 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 31

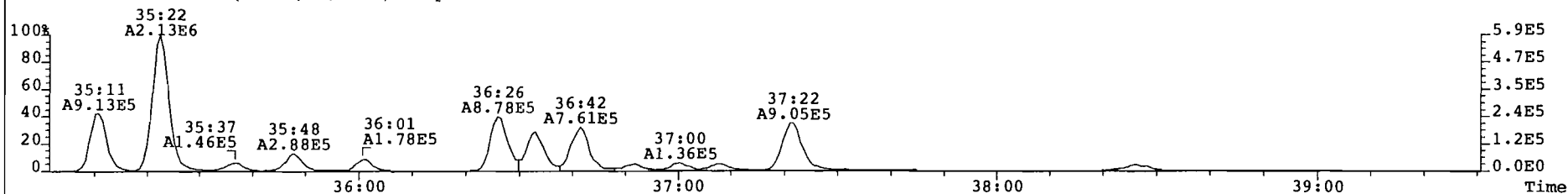




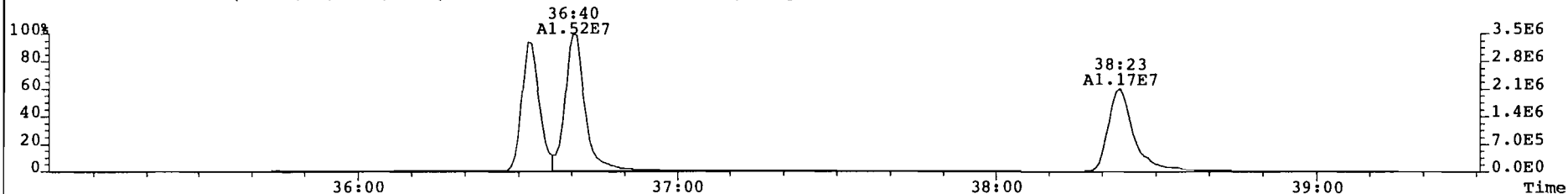
File: 010405P1 Acq: 5-APR-2001 07:24:36 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454 319 009 Unit 3 Run 3 Out Air Train Vial# 29 File Text: AAP DB5  
373.8207 S:4 F:3 BSUB(10000,15,-3.0) Expt: OCDD Noise: 619



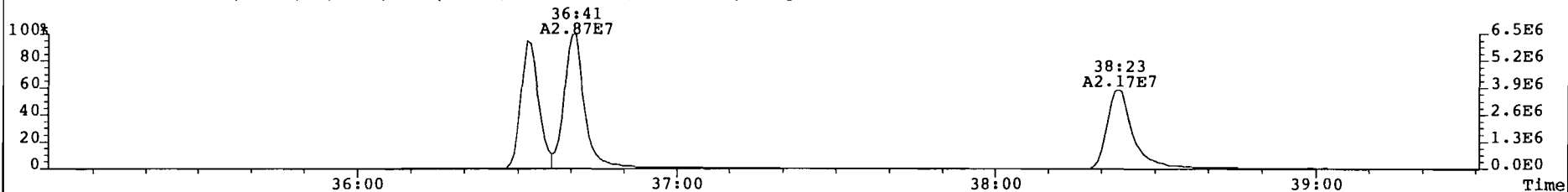
375.8178 S:4 F:3 BSUB(10000,15,-3.0) Expt: OCDD Noise: 446



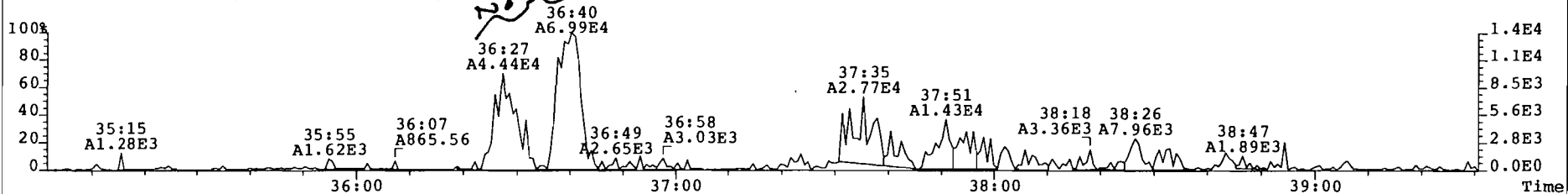
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 2567



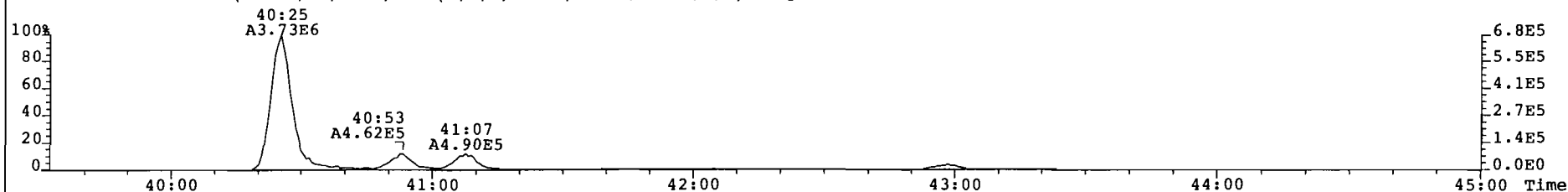
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1763



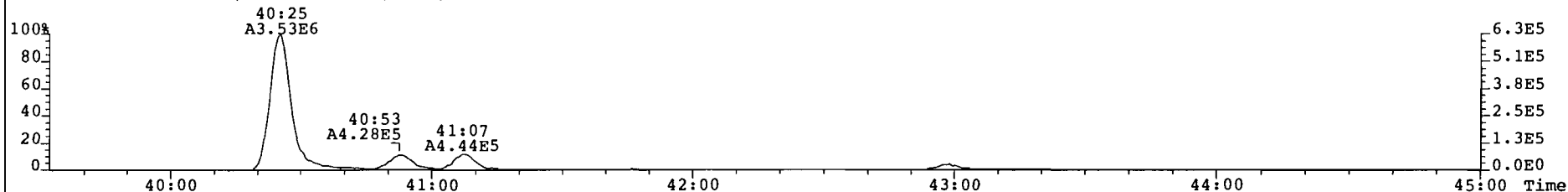
445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 39



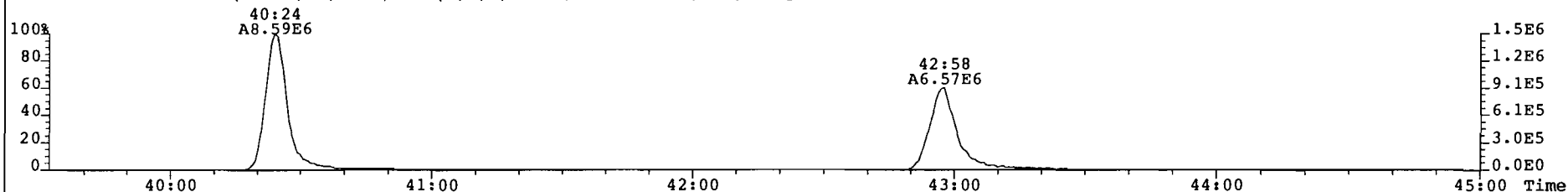
File: 010405F1 Acq: 5-APR-2001 07:24:36 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454 319 009 Unit 3 Run 3 Out Air Train Vial# 29 File Text: AAP DB5  
407.7818 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 189



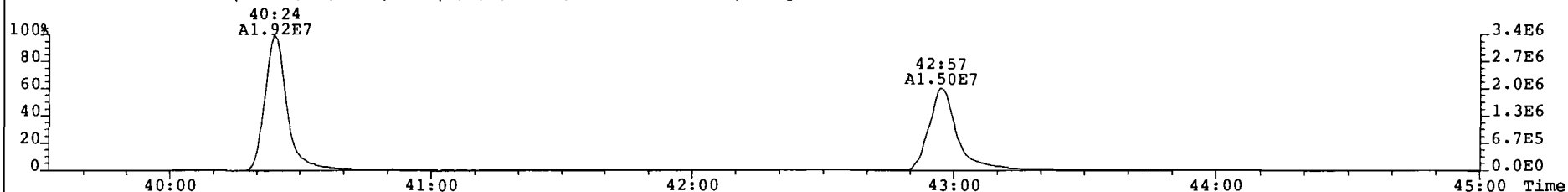
409.7788 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 188



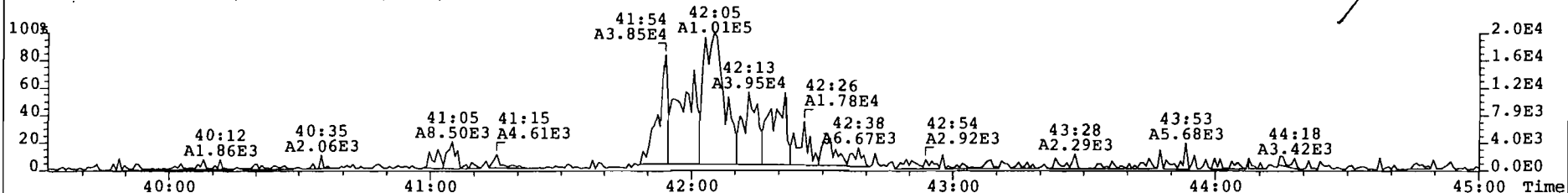
417.8253 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 794



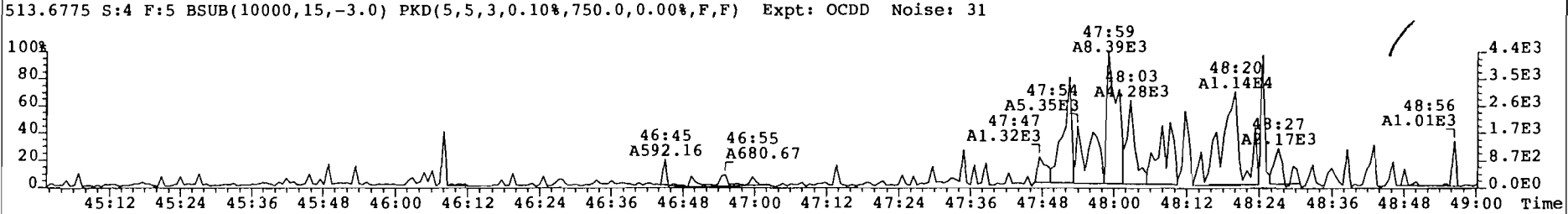
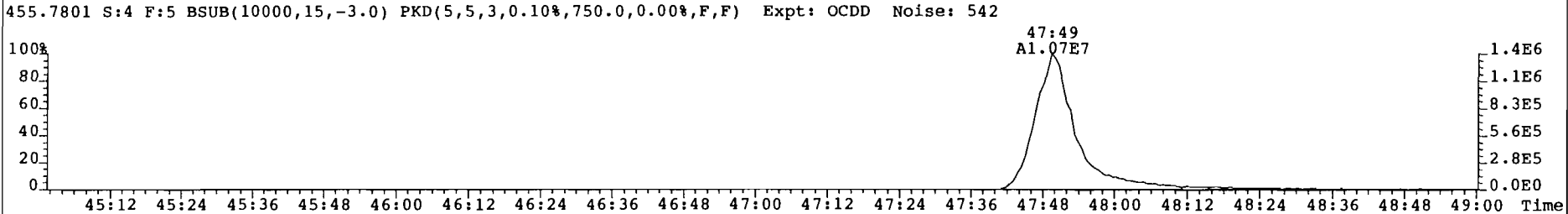
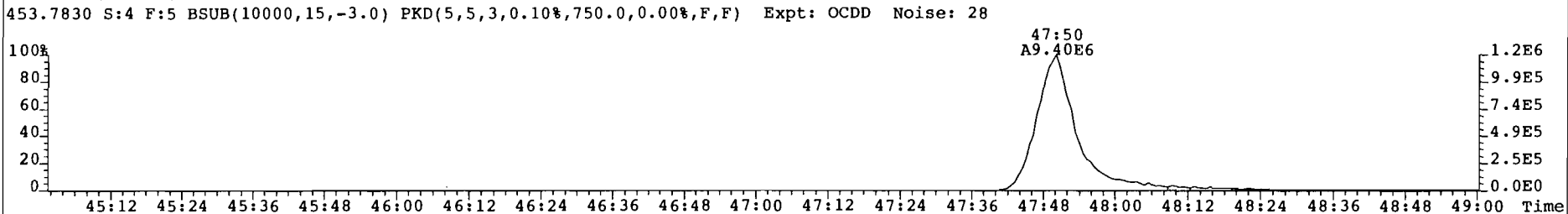
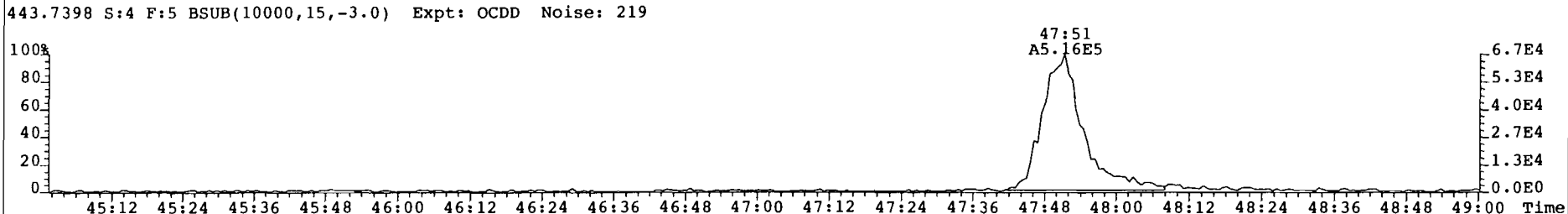
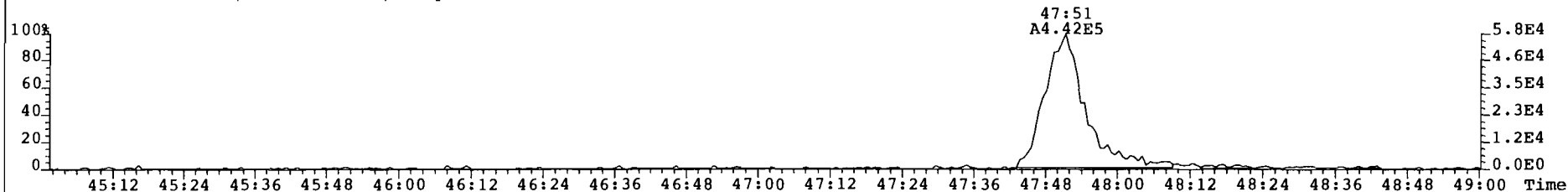
419.8220 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 871



479.7165 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 116



File: 010405P1 Acq: 5-APR-2001 07:24:36 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 4 Text: P1454 319 009 Unit 3 Run 3 Out Air Train Vial# 29 File Text: AAP DB5  
441.7428 S:4 F:5 BSub(10000,15,-3.0) Expt: OCDD Noise: 64




# Sample ID: Field Blank

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1454	Date Received:	30 Mar 01
Project ID:	8890	Weight/Volume:	1	Sample ID:	P1454_319_010	Date Extracted:	2 Apr 01
Date Collected:	29 Mar 01			QC Batch No.:	319	Date Analyzed:	5-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	ND	1.35			89.4	104	105
1,2,3,7,8-PeCDD	ND	1.44			97.4	101	105
1,2,3,4,7,8-HxCDD	ND	5.71			101	86.4	105
1,2,3,6,7,8-HxCDD	ND	6.36			101	86.4	105
1,2,3,7,8,9-HxCDD	ND	5.69			101	86.4	105
1,2,3,4,6,7,8-HpCDD	8.6			A	90.4	93.8	105
OCDD	36.3			AB	67.8	93.8	105
2,3,7,8-TCDF	ND	2.99			87.6	104	105
1,2,3,7,8-PeCDF	ND	2.9			90.6	101	105
2,3,4,7,8-PeCDF	ND	2.85			90.6	101	105
1,2,3,4,7,8-HxCDF	ND	1.12			114	91	105
1,2,3,6,7,8-HxCDF	ND	1.02			114	91	105
2,3,4,6,7,8-HxCDF	ND	1.09			114	91	105
1,2,3,7,8,9-HxCDF	ND	1.24			114	91	105
1,2,3,4,6,7,8-HpCDF	5.92			A	104	93.8	105
1,2,3,4,7,8,9-HpCDF	ND	1.8			104	93.8	105
OCDF	ND	9.63			80.6	93.8	105

Totals & TEQs				ALTA ANALYTICAL PERSPECTIVES			
TCDDs	5.45			 <p>2714 Exchange Drive Wilmington North Carolina 28405 USA</p> <p>Tel: 910 794-1613 Fax: 910 794-3919 e-mail: ytondeur@cs.com web: www.ultratrace.com</p>			
PeCDDs	ND		7.91				
HxCDDs	7.89		14.5				
HpCDDs	18.2						
TCDFs	ND	2.99					
PeCDFs	ND	2.88					
HxCDFs	4.24						
HpCDFs	5.92						
<b>Total PCDD/Fs</b>	<b>78.0</b>		<b>92.5</b>				
<b>TEQ (ND=0)</b>	<b>0.182</b>		<b>0.182</b>				
<b>TEQ (ND=DL/2)</b>	<b>3.28</b>		<b>3.28</b>	<b>ITEF</b>			

Reviewer: *cl*  
Date: *18 Apr 01*

*sc*

Client ID: Field Blank  
Lab ID: P1454\_319\_010

Filename: 010405P1  
GC Column ID: db-5

S: 5 Acq: 5-APR-01 08:16:25  
ICal: MMI\_M23\_0 wt/vol: 1.000

ConCal: 010405P1-  
EndCal: 010405P1-

Name	Resp	RA	RRF	RT	Conc	Qualif.	CDE	noise	Fac	DL
2,3,7,8-TCDD	*	* n	1.26	NotF		*		805	2.5	1.35
1,2,3,7,8-PeCDD	*	* n	1.01	NotF		*		453	2.5	1.44
1,2,3,4,7,8-HxCDD	*	* n	1.14	NotF		*		1568	2.5	5.71
1,2,3,6,7,8-HxCDD	*	* n	1.02	NotF		*		1568	2.5	6.36
1,2,3,7,8,9-HxCDD	*	* n	1.14	NotF		*		1568	2.5	5.69
1,2,3,4,6,7,8-HpCDD	5.81e+04	1.09 y	1.13	42:06	8.60			703	2.5	3.78
OCDD	1.36e+05	0.93 y	1.03	47:35	36.3			598	2.5	6.04
2,3,7,8-TCDF	*	* n	1.05	NotF		*		2292	2.5	2.99
1,2,3,7,8-PeCDF	*	* n	1.04	NotF		*		1517	2.5	2.90
2,3,4,7,8-PeCDF	*	* n	1.05	NotF		*		1517	2.5	2.85
1,2,3,4,7,8-HxCDF	*	* n	1.13	NotF		*		832	2.5	1.12
1,2,3,6,7,8-HxCDF	*	* n	1.24	NotF		*		832	2.5	1.02
2,3,4,6,7,8-HxCDF	*	* n	1.16	NotF		*		832	2.5	1.09
1,2,3,7,8,9-HxCDF	*	* n	1.02	NotF		*		832	2.5	1.24
1,2,3,4,6,7,8-HpCDF	6.28e+04	1.08 y	1.54	40:25	5.92			763	2.5	1.51
1,2,3,4,7,8,9-HpCDF	*	* n	1.30	NotF		*		763	2.5	1.80
OCDF	*	* n	1.15	NotF		*		1409	2.5	9.63
Total Tetra-Dioxins	6.06e+04	0.86 y	1.26	24:46	5.45			805	2.5	1.35
Total Penta-Dioxins	*	* n	1.01	NotF	*			453	2.5	1.44
Total Hexa-Dioxins	6.02e+04	1.35 y	1.10	36:29	7.89			1568	2.5	5.90
Total Hepta-Dioxins	1.23e+05	1.10 y	1.13	40:53	18.2			703	2.5	3.78
Total Tetra-Furans	*	* n	1.05	NotF	*			2292	2.5	2.99
1st Fnc. Penta-Furans	*	* n	1.05	NotF	*			1659	2.5	3.15
Total Penta-Furans	*	* n	1.05	NotF	*			1517	2.5	2.88
PeCDF Totals:					0.00					0.00
Total Hexa-Furans	5.17e+04	1.13 y	1.14	35:23	4.24			832	2.5	1.11
Total Hepta-Furans	6.28e+04	1.08 y	1.42	40:25	5.92			763	2.5	1.64
IS 13C-2,3,7,8-TCDD	3.53e+07	0.80 y	1.13	28:19	3580					89.4
IS 13C-1,2,3,7,8-PeCDD	3.13e+07	1.59 y	0.93	33:39	3890					97.4
IS 13C-1,2,3,6,7,8-HxCDD	2.77e+07	1.28 y	0.93	37:40	4060					101
IS 13C-1,2,3,4,6,7,8-HpCDD	2.39e+07	1.02 y	0.91	42:06	3610					90.4
IS 13C-OCDD	1.45e+07	0.94 y	0.73	47:34	2710					67.8
IS 13C-2,3,7,8-TCDF	5.41e+07	0.80 y	1.06	27:28	3500					87.6
IS 13C-1,2,3,7,8-PeCDF	5.05e+07	1.58 y	0.96	32:12	3620					90.6
IS 13C-1,2,3,6,7,8-HxCDF	4.29e+07	0.53 y	1.28	36:41	4580					114
IS 13C-1,2,3,4,6,7,8-HpCDF	2.75e+07	0.45 y	0.90	40:25	4170					104
IS 13C-OCDF	1.91e+07	0.90 y	0.81	47:51	3220					80.6
RS/RT 13C-1,2,3,4-TCDD	3.48e+07	0.82 y	1.00	27:41	4000					-
RS 13C-1,2,3,4-TCDF	5.82e+07	0.79 y	1.00	26:09	4000					-
RS/RT 13C-1,2,3,7,8,9-HxCDD	2.93e+07	1.27 y	1.00	38:00	4000					-
PS 37C1-2,3,7,8-TCDD	1.89e+07		0.51	28:20	4180					104
PS 13C-2,3,4,7,8-PeCDF	4.95e+07	1.61 y	0.97	33:18	4030					101
PS 13C-1,2,3,4,7,8-HxCDD	2.21e+07	1.26 y	0.92	37:32	3460					86.4
PS 13C-1,2,3,4,7,8-HxCDF	3.55e+07	0.52 y	0.91	36:32	3640					91.0
PS 13C-1,2,3,4,7,8,9-HpCDF	2.21e+07	0.44 y	0.85	42:58	3750					93.8
AS 13C-1,2,3,7,8,9-HxCDF	3.27e+07	0.53 y	1.07	38:25	4180					105

Reviewer: cc

Date: 18 April

EMPC

5.45  
7.91  
14.5  
18.2  
\*  
\*  
0.00  
4.24  
5.92

Rec

89.4  
97.4  
101  
90.4  
67.8  
87.6  
90.6  
114  
104  
80.6

Analyst: GAG

104  
101  
86.4  
91.0  
93.8  
105

Date: 18 April

Totals class: TCDD EMPC Function: 1 Run #: 20  
 File Name: 010405P1 Sample #: 5 Sample text: P1454\_319\_010 Field Blank Air Train /

Acquired: 5-APR-01 08:16:25 Processed: 5-APR-01 09:19:43

Total Conc.: 5.4459 Unnamed Conc.: 5.446

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name				
24:46	✓	2.808e+04	y	3.248e+04	y	0.86	y	✓	6.057e+04	6.057e+04	9.01e+00	y	5.45	

Totals class: PeCDD EMPC Function: 2 Run #: 20  
 File Name: 010405P1 Sample #: 5 Sample text: P1454\_319\_010 Field Blank Air Train

Acquired: 5-APR-01 08:16:25 Processed: 5-APR-01 09:19:43

Total Conc.: 7.9132 Unnamed Conc.: 7.913

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name			
31:09	✓	2.817e+04	y	1.328e+04	y	2.12	n	4.145e+04	3.386e+04	5.61e+00	y	4.27	
32:15		1.756e+04	y	1.468e+04	y	1.20	n	3.224e+04	2.888e+04	8.48e+00	y	3.64	

Totals class: HxCDD EMPC Function: 3 Run #: 20  
 File Name: 010405P1 Sample #: 5 Sample text: P1454\_319\_010 Field Blank Air Train

Acquired: 5-APR-01 08:16:25 Processed: 5-APR-01 09:19:43

Total Conc.: 14.471 Unnamed Conc.: 14.471

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name			
35:49	✓	1.059e+04	n	1.097e+04	y	0.97	n	2.156e+04	1.913e+04	2.51e+00	y	2.51	
36:29		3.458e+04	y	2.564e+04	y	1.35	y	6.022e+04	6.022e+04	4.73e+00	y	7.89	
36:45	✓	2.149e+04	y	1.386e+04	y	1.55	n	3.534e+04	3.104e+04	2.19e+00	n	4.07	

Totals class: HpCDD EMPC Function: 4 Run #: 20  
 File Name: 010405P1 Sample #: 5 Sample text: P1454\_319\_010 Field Blank Air Train

Acquired: 5-APR-01 08:16:25 Processed: 5-APR-01 09:19:43

Total Conc.: 18.168 Unnamed Conc.: 9.564

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name			
40:53	✓	3.381e+04	y	3.083e+04	y	1.10	y	6.464e+04	6.464e+04	8.14e+00	y	9.56	
42:06	✓	3.037e+04	y	2.777e+04	y	1.09	y	6.815e+04	5.815e+04	8.04e+00	y	8.60	1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC Function: 1 Run #: 20  
File Name: 010405P1 Sample #: 5 Sample text: P1454\_319\_010 Field Blank Air Train

Acquired: 5-APR-01 08:16:25 Processed: 5-APR-01 09:19:43

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF	/	* n	* n	* n	*	*	*	y	*	

Totals class: 1st Fnc.PeCDF EMPC Function: 1 Run #: 20  
File Name: 010405P1 Sample #: 5 Sample text: P1454\_319\_010 Field Blank Air Train

Acquired: 5-APR-01 08:16:25 Processed: 5-APR-01 09:19:43

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF	/	* n	* n	* n	*	*	*	n	*	

Totals class: PeCDF EMPC Function: 2 Run #: 20  
File Name: 010405P1 Sample #: 5 Sample text: P1454\_319\_010 Field Blank Air Train

Acquired: 5-APR-01 08:16:25 Processed: 5-APR-01 09:19:43

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF	/	* n	* n	* n	*	*	*	n	*	

Totals class: HxCDF EMPC Function: 3 Run #: 20  
File Name: 010405P1 Sample #: 5 Sample text: P1454\_319\_010 Field Blank Air Train

Acquired: 5-APR-01 08:16:25 Processed: 5-APR-01 09:19:43

Total Conc.: 4.2372 Unnamed Conc.: 4.237

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name			
35:23	/	2.742e+04	y	2.433e+04	y	1.13	y	5.174e+04	5.174e+04	8.60e+00	y	4.24	

Totals class: HpCDF EMPC Function: 4 Run #: 20  
File Name: 010405P1 Sample #: 5 Sample text: P1454\_319\_010 Field Blank Air Train

Acquired: 5-APR-01 08:16:25 Processed: 5-APR-01 09:19:43

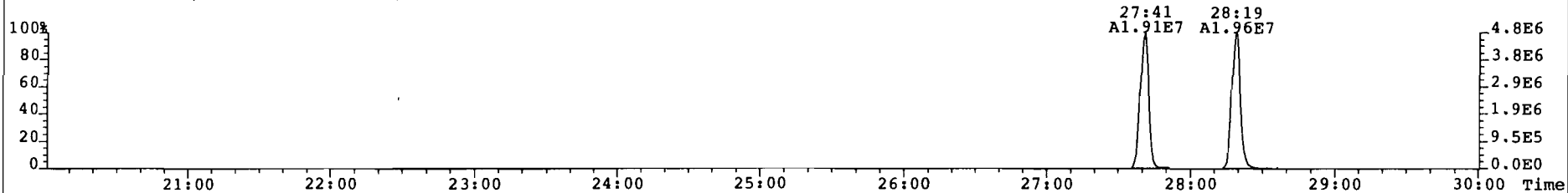
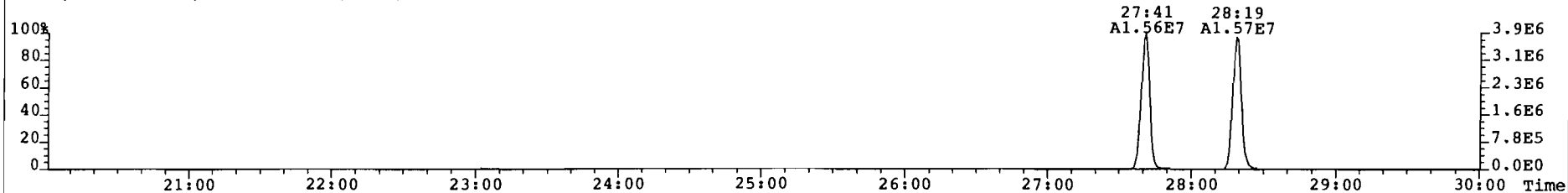
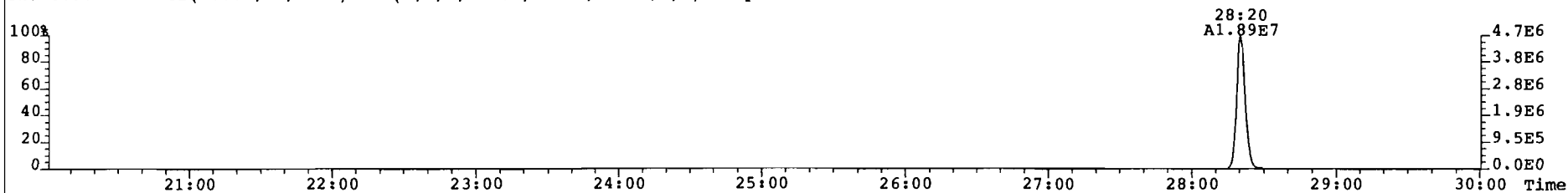
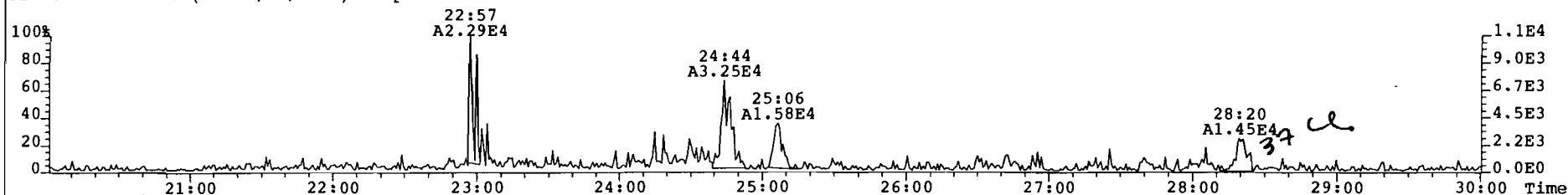
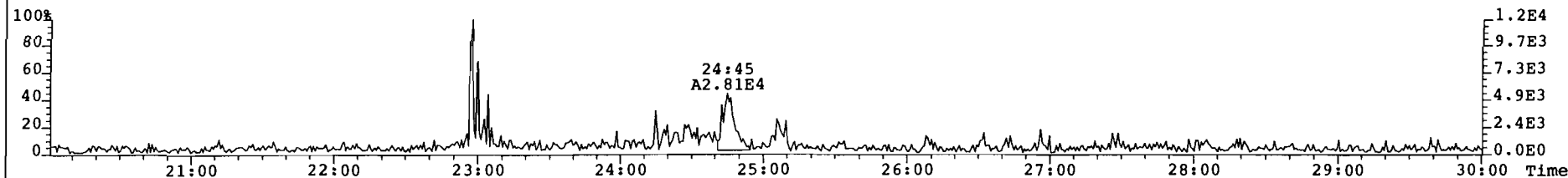
Total Conc.: 5.9179

Unnamed Conc.: \*

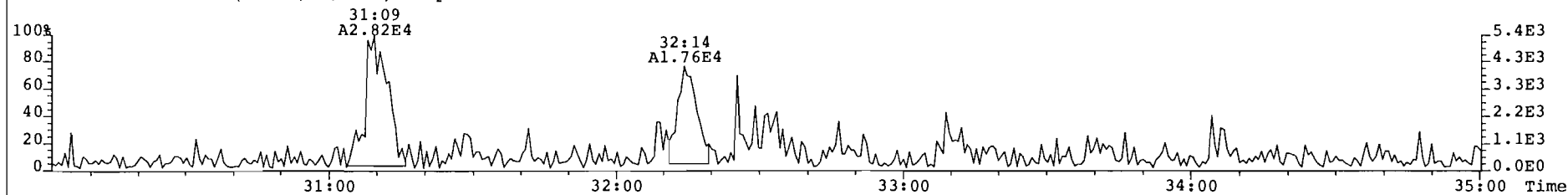
RT	m1	Resp	mod.	m2	Resp	mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
40:25	/	3.269e+04	y	3.015e+04	y	1.08	y	6.284e+04	6.284e+04	7.91e+00	y	5.92	1,2,3,4,6,7,8-HpCDF



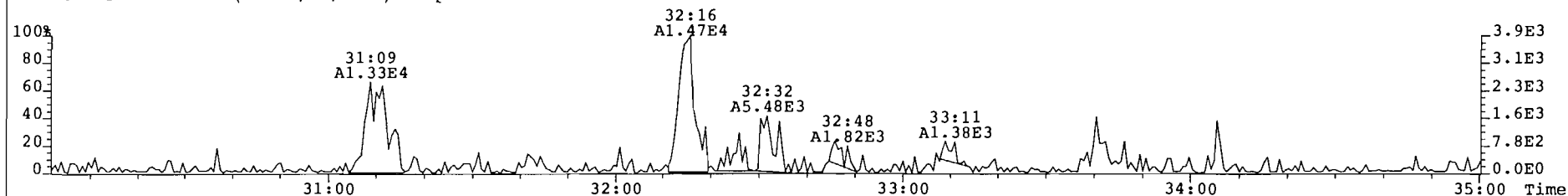
File: 010405P1 Acq: 5-APR-2001 08:16:25 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454\_319\_010 Field Blank Air Train Vial# 30 File Text: AAP DB5  
319.8965 S:5 BSUB(10000,15,-3.0) Expt: OCDD Noise: 150



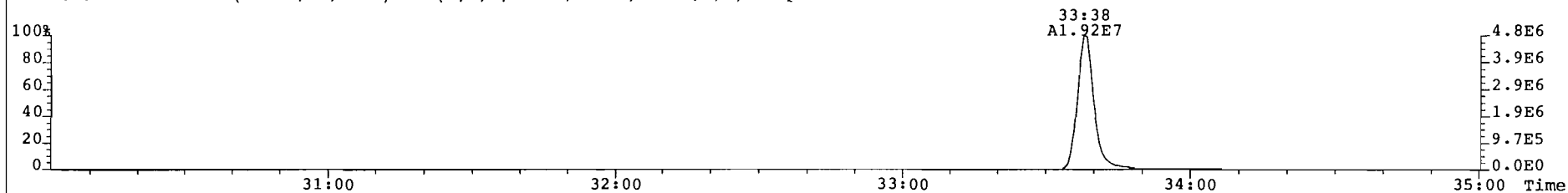
File: 010405P1 Acq: 5-APR-2001 08:16:25 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454\_319\_010 Field Blank Air Train Vial# 30 File Text: AAP DB5  
355.8546 S:5 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 139



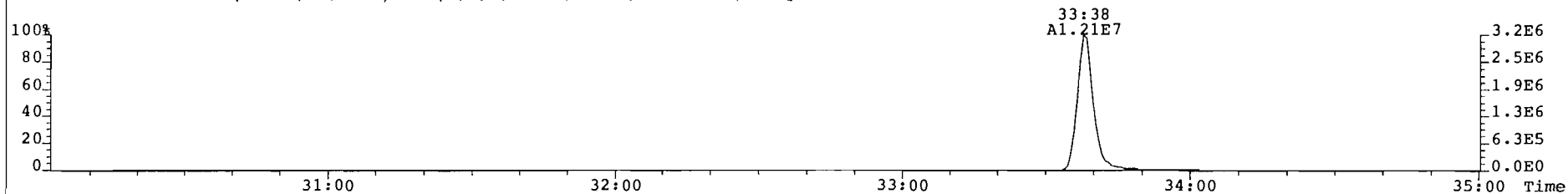
357.8517 S:5 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 18



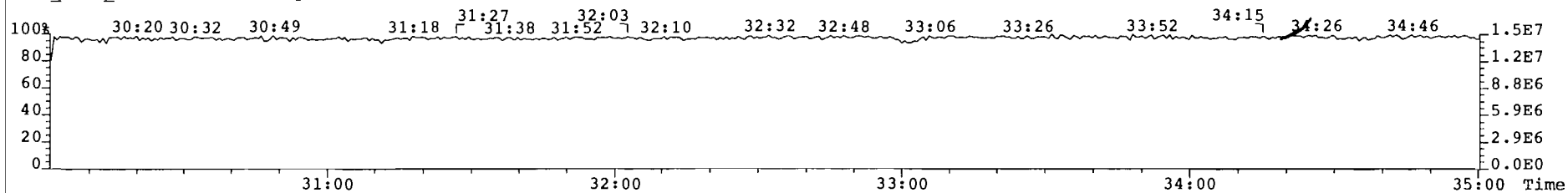
367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 46



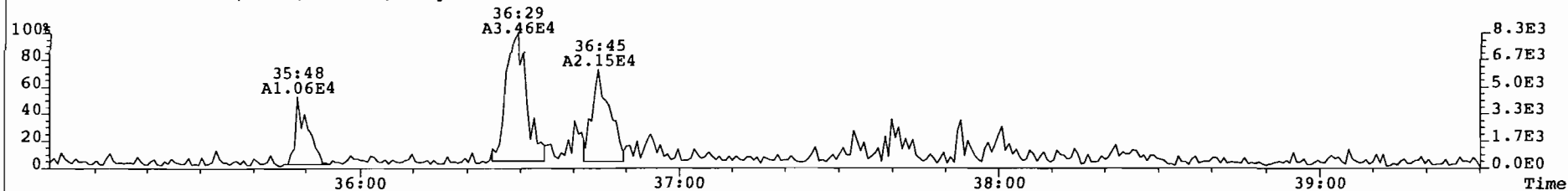
369.8919 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 35



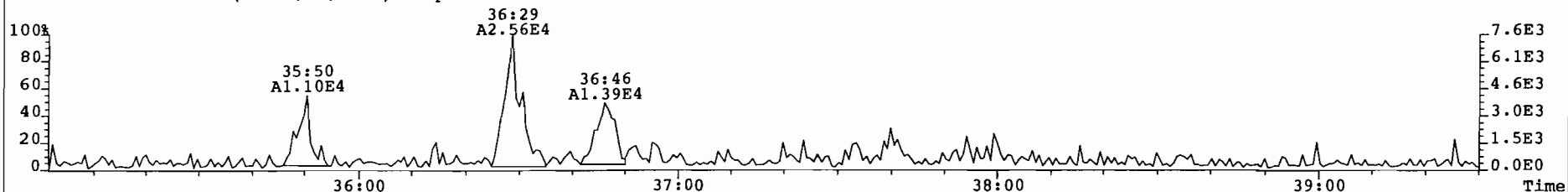
LOCK\_MASS\_CHECK S:5 F:2 Expt: OCDD



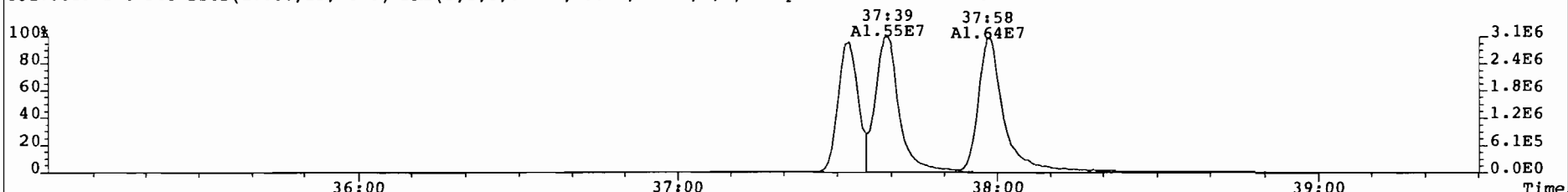
File: 010405P1 Acq: 5-APR-2001 08:16:25 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454 319 010 Field Blank Air Train Vial# 30 File Text: AAP DB5  
389.8156 S:5 F:3 BSUB(10000,15,-3.0) Expt: OCDD Noise: 125



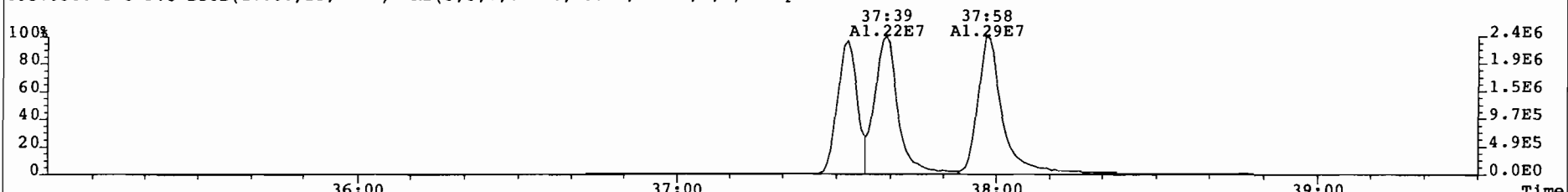
391.8127 S:5 F:3 BSUB(10000,15,-3.0) Expt: OCDD Noise: 107



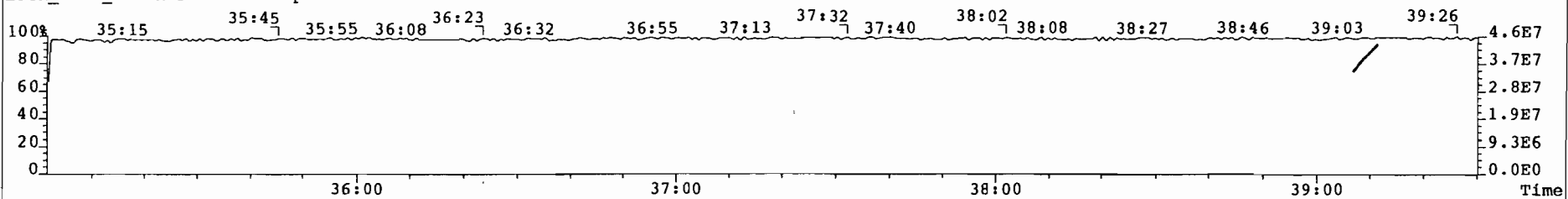
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 251



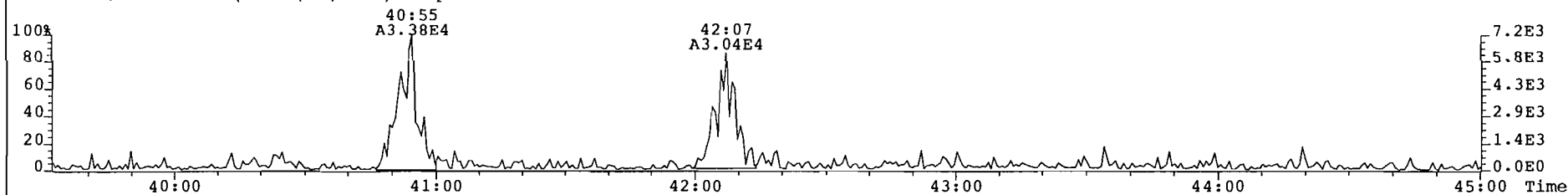
403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 175



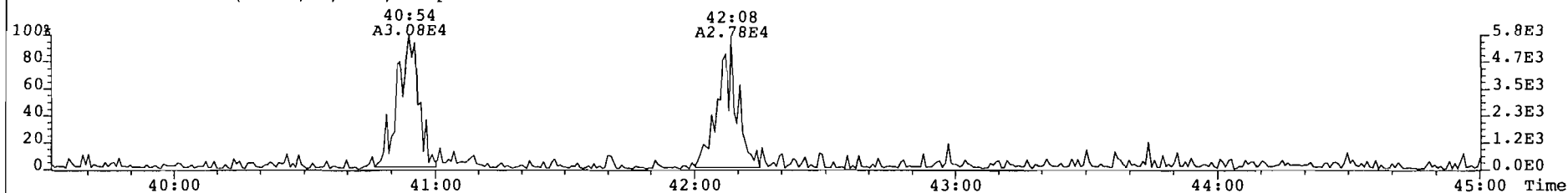
LOCK\_MASS\_CHECK S:5 F:3 Expt: OCDD



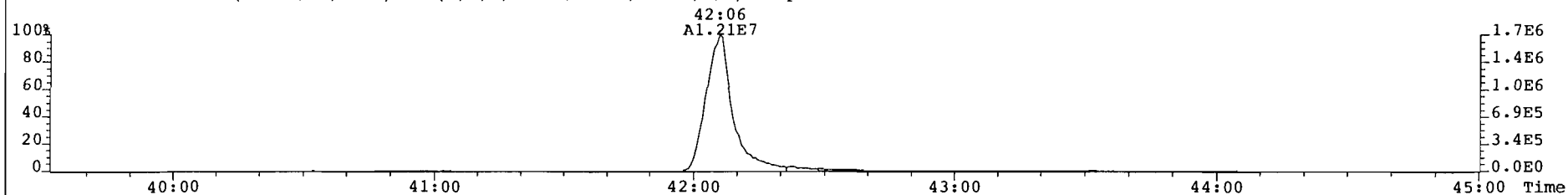
File: 010405PI Acq: 5-APR-2001 08:16:25 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454\_319\_010 Field Blank Air Train Vial# 30 File Text: AAP DB5  
423.7767 S:5 F:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 56



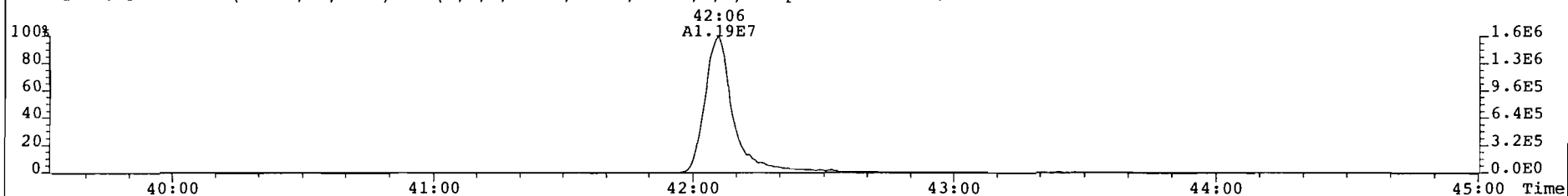
425.7737 S:5 F:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 40



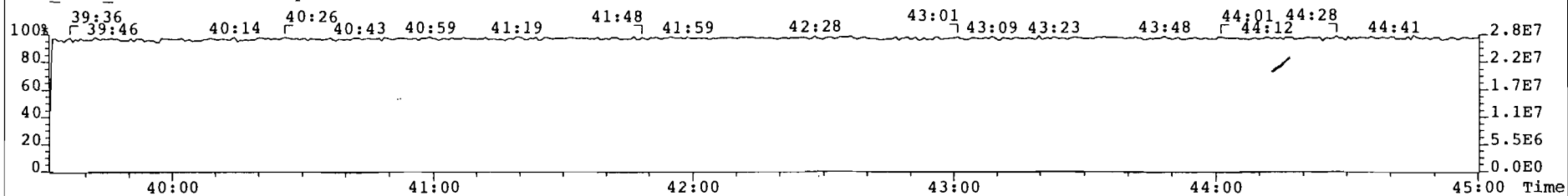
435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 958



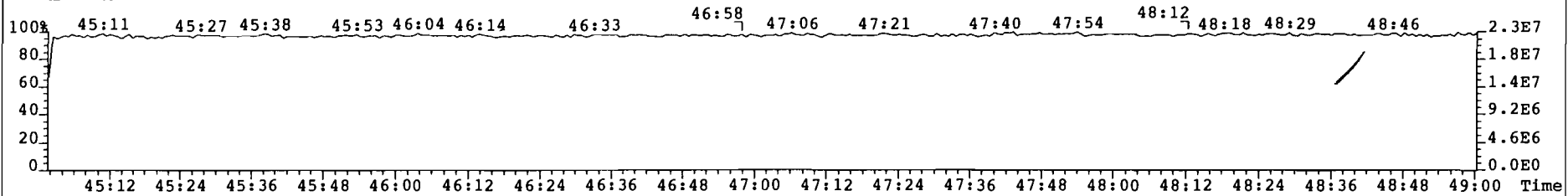
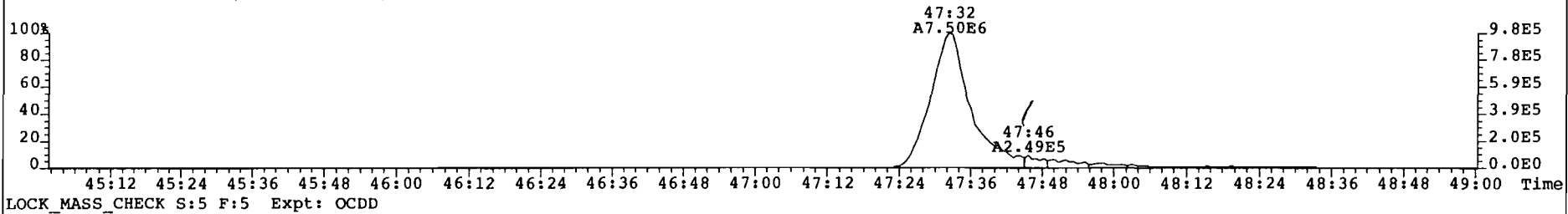
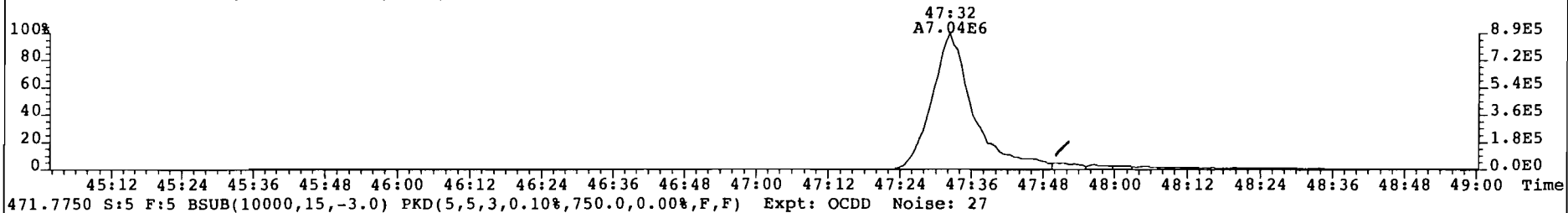
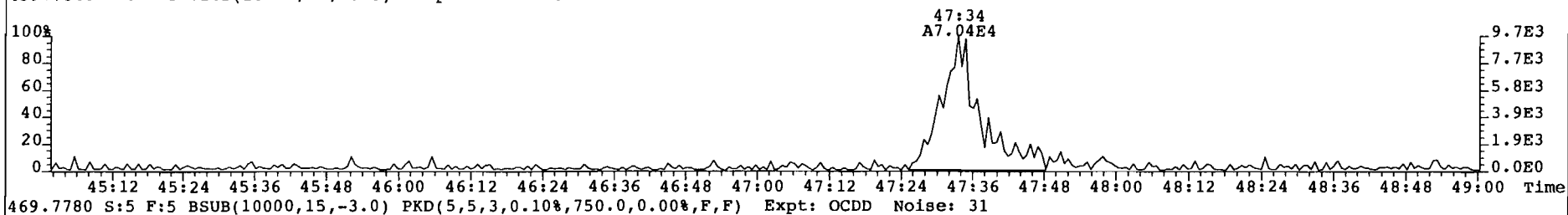
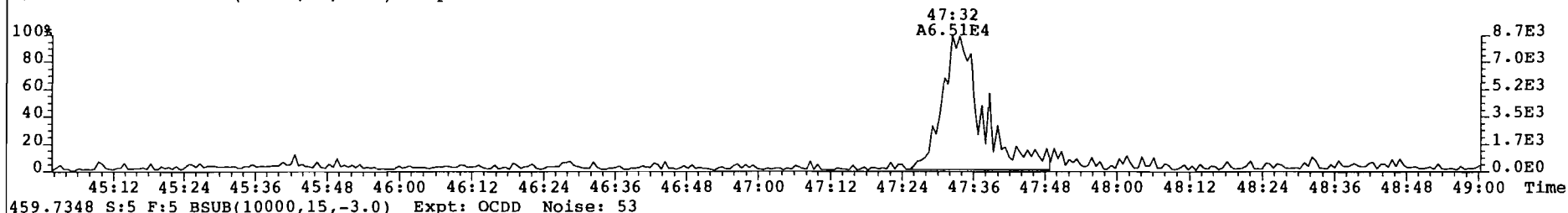
437.8140 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 402



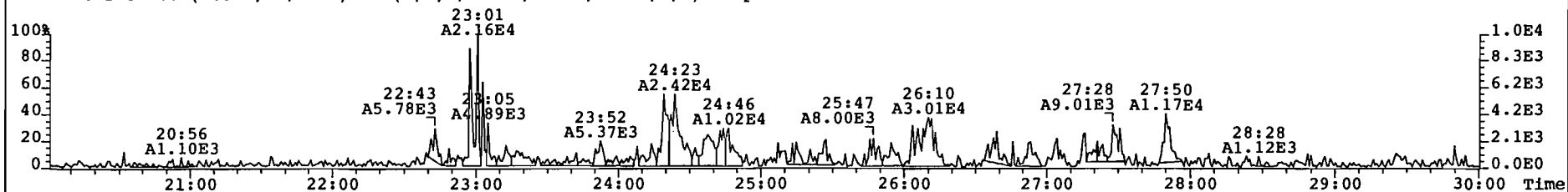
LOCK MASS CHECK S:5 F:4 Expt: OCDD



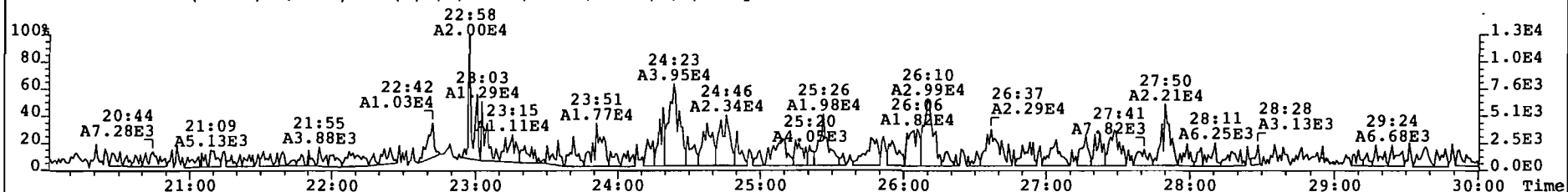
File: 010405F1 Acq: 5-APR-2001 08:16:25 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454\_319\_010 Field Blank Air Train Vial# 30 File Text: AAP DB5  
457.7377 S:5 F:5 BSUB(10000,15,-3.0) Expt: OCDD Noise: 65



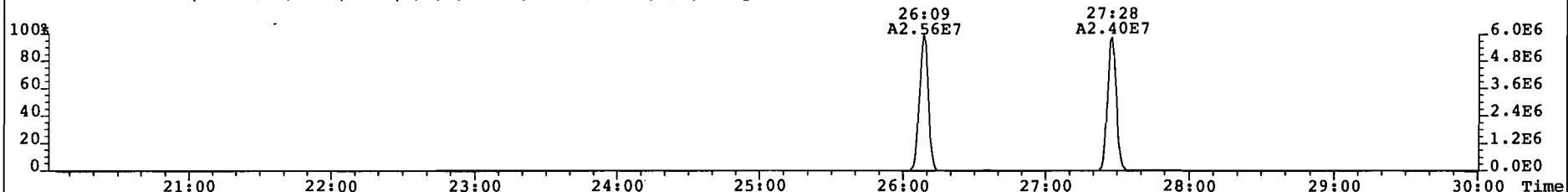
File: 010405P1 Acq: 5-APR-2001 08:16:25 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454 319 010 Field Blank Air Train Vial# 30 File Text: AAP DB5  
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 100



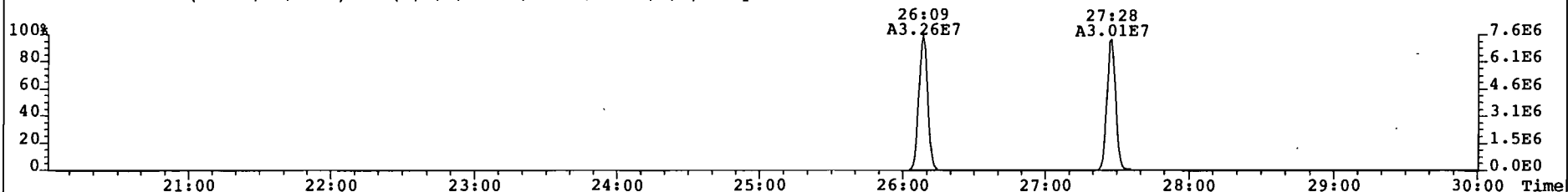
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 408



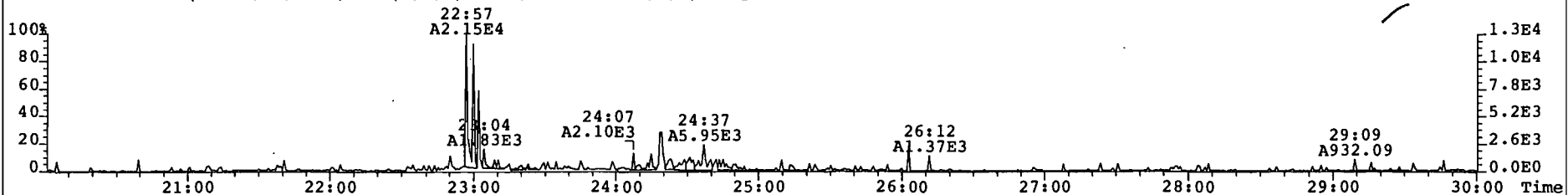
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 360



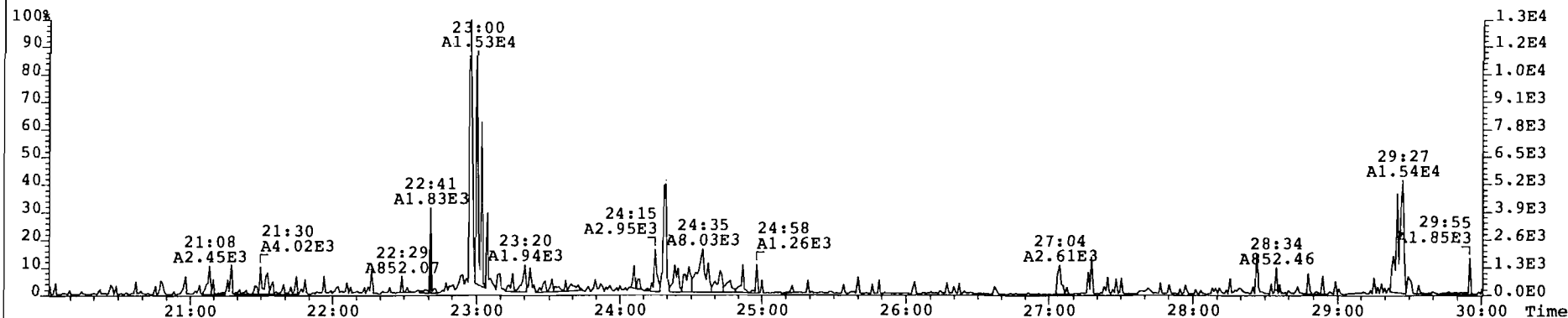
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 571



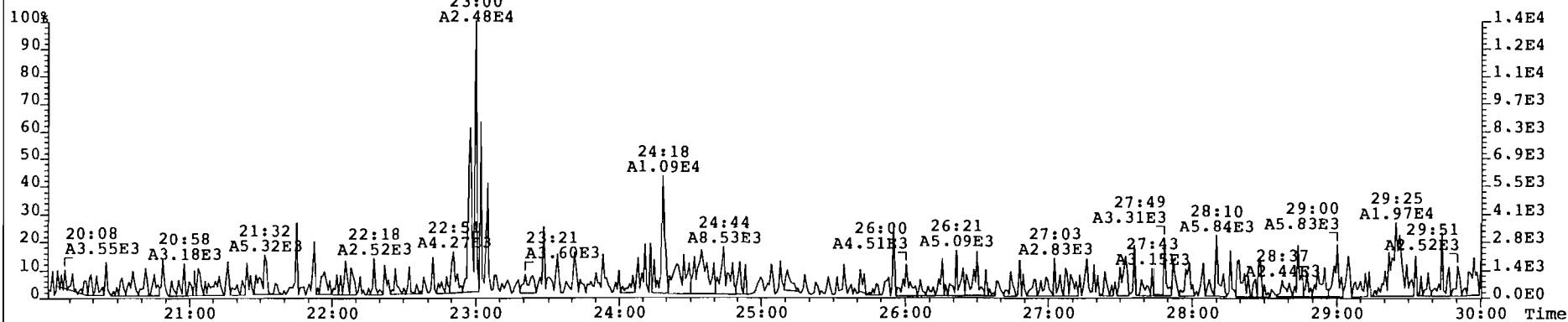
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 26



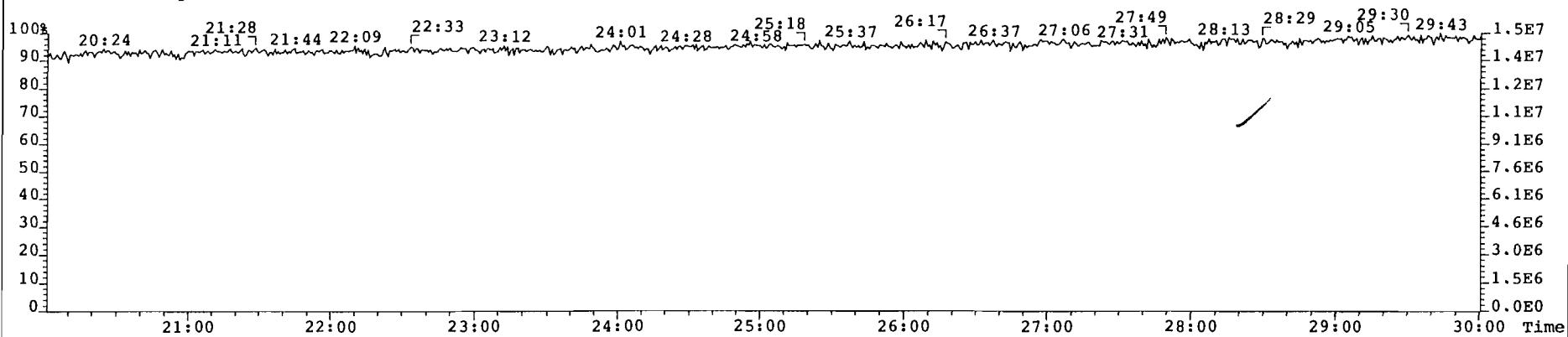
File: 010405P1 Acq: 5-APR-2001 08:16:25 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454 319\_010 Field Blank Air Train Vial# 30 File Text: AAP DB5  
339.8597 S:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 27



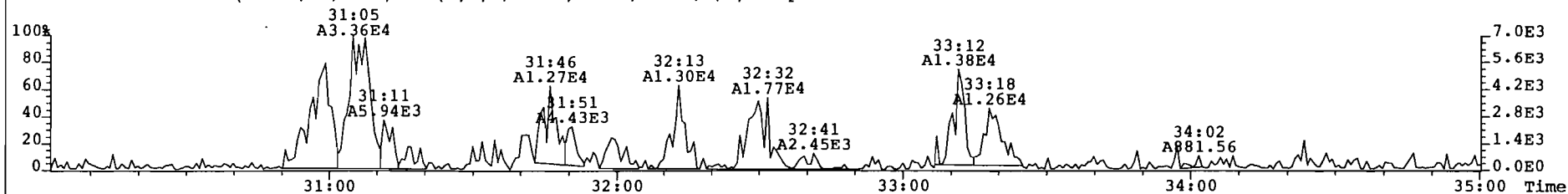
341.8568 S:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 130



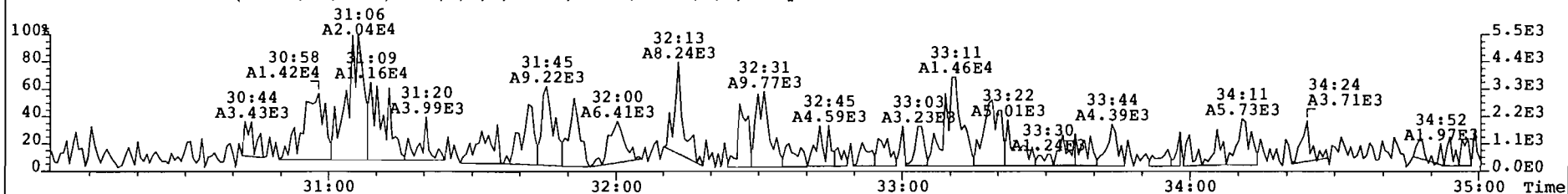
316.9824 S:5 Expt: OCDD



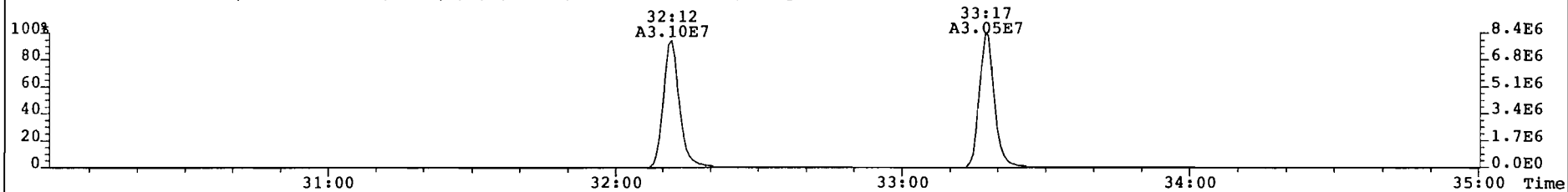
File: 010405P1 Acq: 5-APR-2001 08:16:25 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454 319 010 Field Blank Air Train Vial# 30 File Text: AAP DB5  
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 45



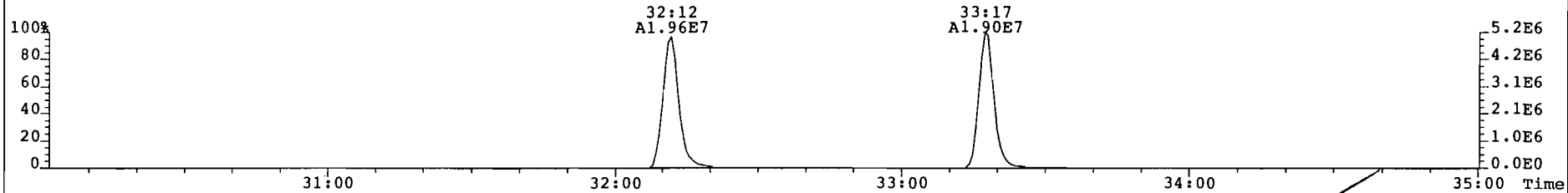
341.8568 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 297



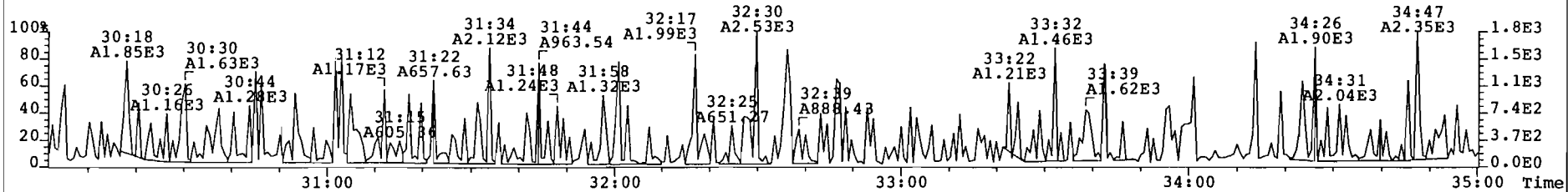
351.9000 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 534



353.8970 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 607

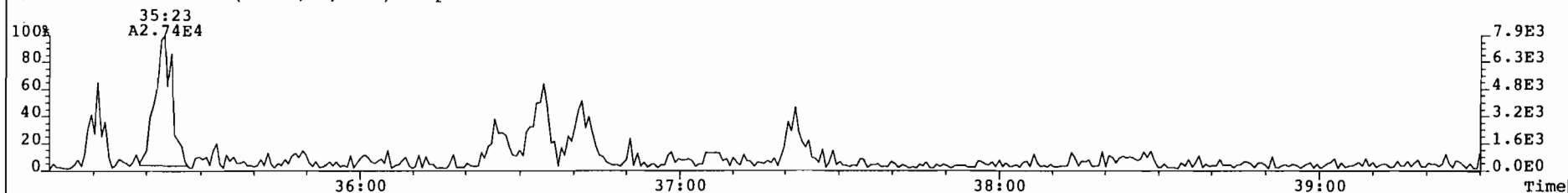


409.7974 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 40

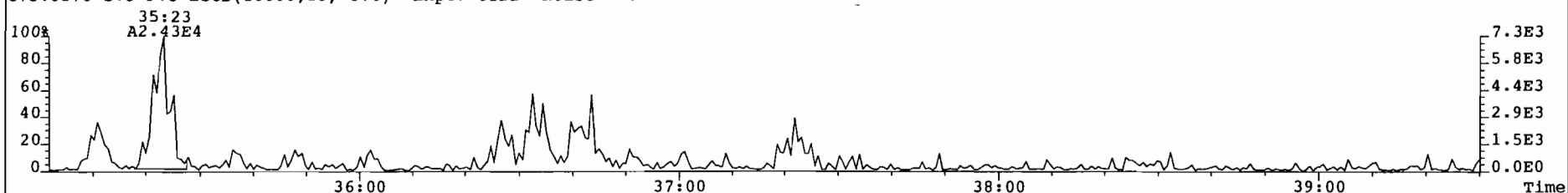




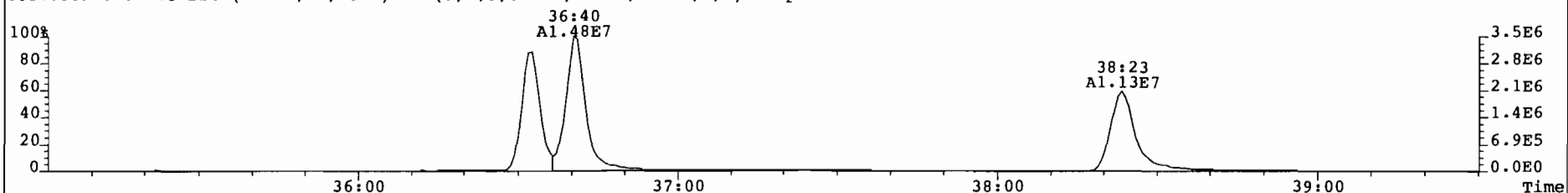
File: 010405P1 Acq: 5-APR-2001 08:16:25 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454 319 010 Field Blank Air Train Vial# 30 File Text: AAP DB5  
373.8207 S:5 F:3 BSUB(10000,15,-3.0) Expt: OCDD Noise: 86



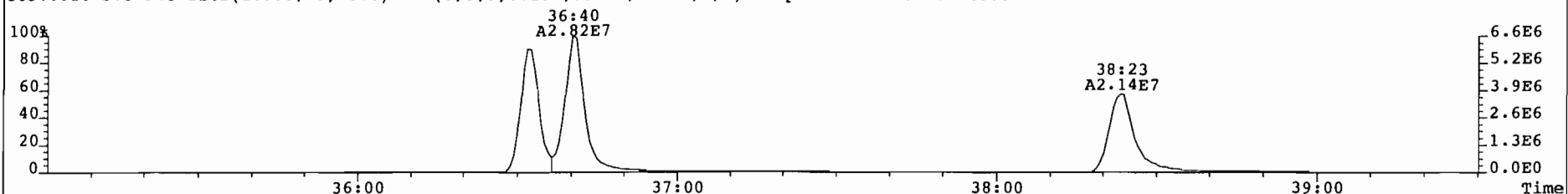
375.8178 S:5 F:3 BSUB(10000,15,-3.0) Expt: OCDD Noise: 38



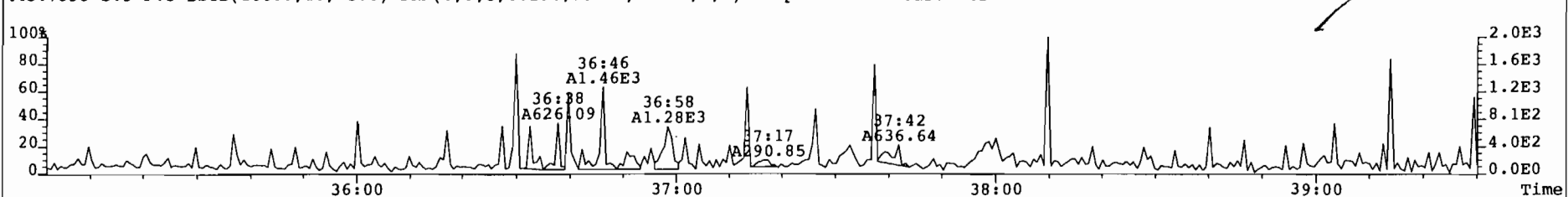
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 2022



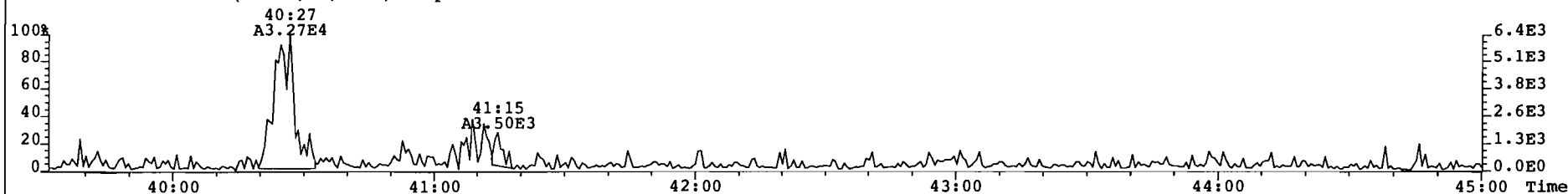
385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 2083



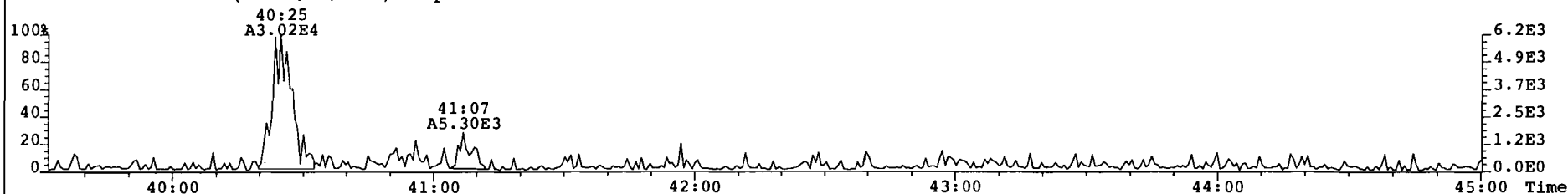
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 41



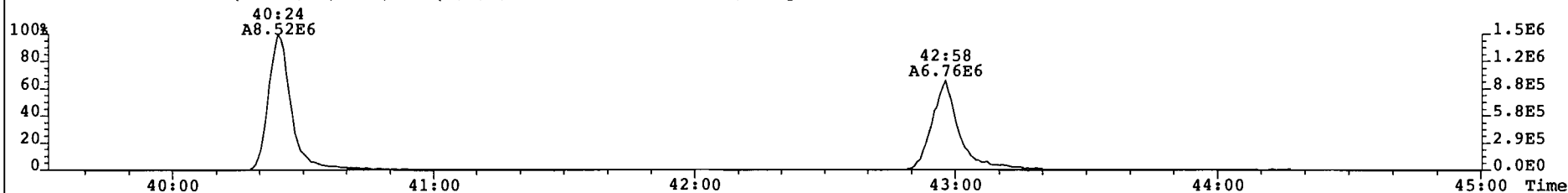
File: 010405P1 Acq: 5-APR-2001 08:16:25 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454 319 010 Field Blank Air Train Vial# 30 File Text: AAP DB5  
407.7818 S:5 F:4 BSub(10000,15,-3.0) Expt: OCDD Noise: 66



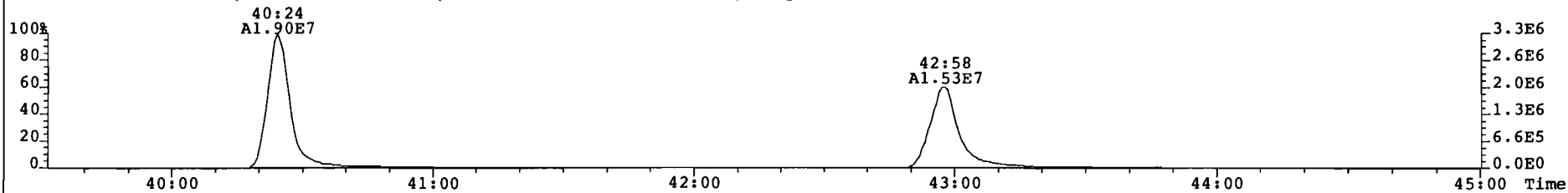
409.7788 S:5 F:4 BSub(10000,15,-3.0) Expt: OCDD Noise: 56



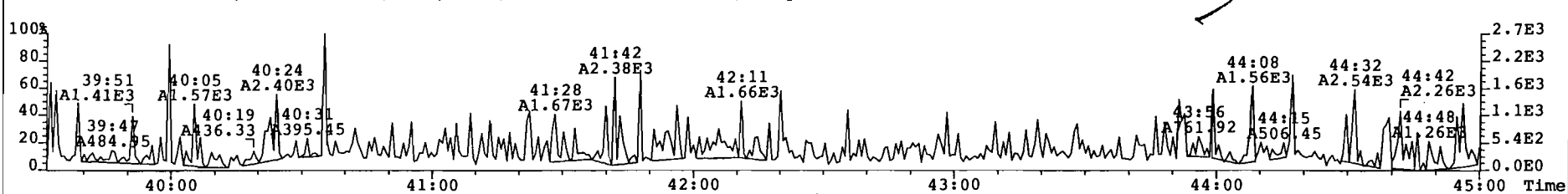
417.8253 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 577



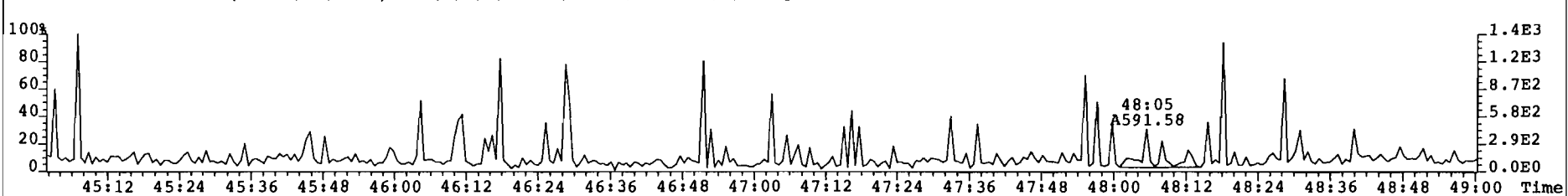
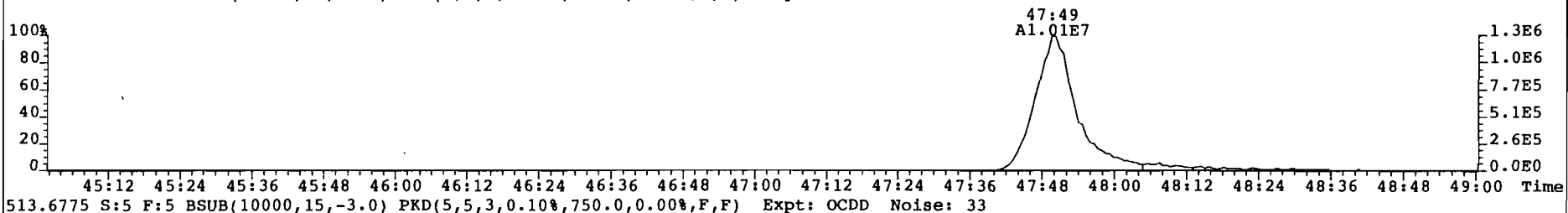
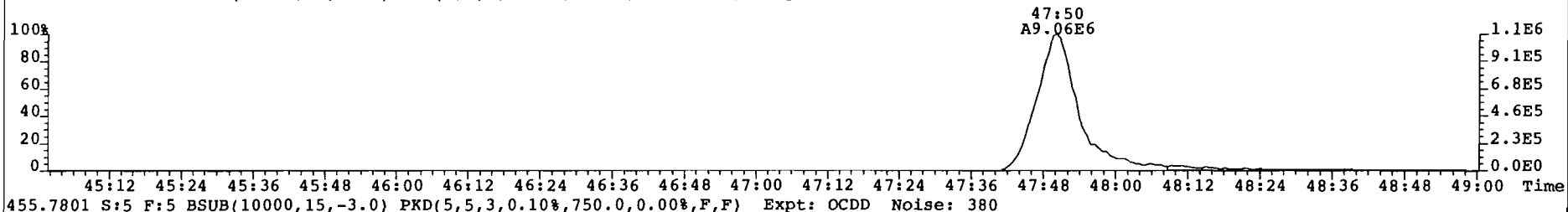
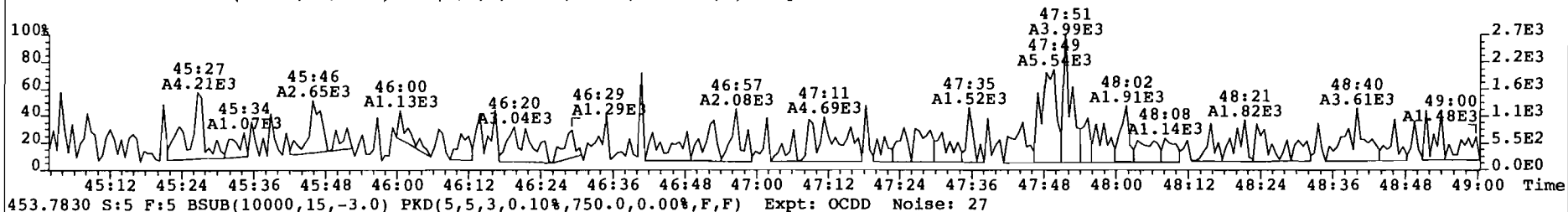
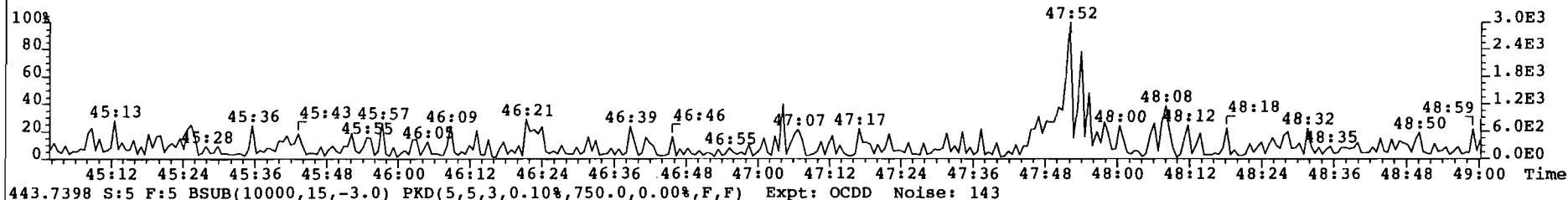
419.8220 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 899



479.7165 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 86



File: 010405P1 Acq: 5-APR-2001 08:16:25 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: P1454 319 010 Field Blank Air Train Vial# 30 File Text: AAP DB5  
441.7428 S:5 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 35



# Sample ID: 0\_324\_MB001 -Archive

# Method 23

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1463	Date Received:	n/a
Project ID:	8890/8891	Weight/Volume:	1	Sample ID:	0_324Archive_MB001	Date Extracted:	9 Apr 01
Date Collected:	n/a			QC Batch No.:	324	Date Analyzed:	19-APR-01
Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	ND	1.55			93.7		96.5
1,2,3,7,8-PeCDD	ND	3.1			86		96.5
1,2,3,4,7,8-HxCDD	ND	5.63			91.5		96.5
1,2,3,6,7,8-HxCDD	ND	6.27			91.5		96.5
1,2,3,7,8,9-HxCDD	ND	5.61			91.5		96.5
1,2,3,4,6,7,8-HpCDD	ND	8.98			81.9		96.5
OCDD	ND	16.6			64.2		96.5
2,3,7,8-TCDF	ND	3.44			88		96.5
1,2,3,7,8-PeCDF	ND	2.7			79.3		96.5
2,3,4,7,8-PeCDF	ND	2.66			79.3		96.5
1,2,3,4,7,8-HxCDF	ND	3.43			95.4		96.5
1,2,3,6,7,8-HxCDF	ND	3.14			95.4		96.5
2,3,4,6,7,8-HxCDF	ND	3.33			95.4		96.5
1,2,3,7,8,9-HxCDF	ND	3.81			95.4		96.5
1,2,3,4,6,7,8-HpCDF	ND	2.29			92.4		96.5
1,2,3,4,7,8,9-HpCDF	ND	2.72			92.4		96.5
OCDF	ND	8.24			71		96.5
<b>Totals &amp; TEQs</b>							
TCDDs	ND	1.55					
PeCDDs	ND	3.1					
HxCDDs	ND	5.82					
HpCDDs	ND	8.98					
TCDFs	ND	3.44					
PeCDFs	ND	2.68					
HxCDFs	ND	3.41					
HpCDFs	ND	2.49					
<b>Total PCDD/Fs</b>	<b>0.00</b>		<b>0.00</b>				
<b>TEQ (ND=0)</b>	<b>0.00</b>		<b>0.00</b>	<b>ITEF</b>			
<b>TEQ (ND=DL/2)</b>	<b>4.10</b>		<b>4.10</b>	<b>ITEF</b>			



**ALTA ANALYTICAL PERSPECTIVES**

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Fax: 910 794-3919  
e-mail: ytondeur@cs.com  
web: www.ultratrace.com

Reviewer: G  
Date: 26 Apr 01

Name	Resp	RA	RRF	RT	Conc	Qualif.	CDE	noise	Fac	DL
2,3,7,8-TCDD	*	* n	1.26	NotF#	*			934	2.5	1.55
1,2,3,7,8-PeCDD	*	* n	1.01	NotF#	*			864	2.5	3.10
1,2,3,4,7,8-HxCDD	*	* n	1.14	NotF#	*			1461	2.5	5.63
1,2,3,6,7,8-HxCDD	*	* n	1.02	NotF#	*			1461	2.5	6.27
1,2,3,7,8,9-HxCDD	*	* n	1.14	NotF#	*			1461	2.5	5.61
1,2,3,4,6,7,8-HpCDD	*	* n	1.13	NotF#	*			1551	2.5	8.98
OCDD	*	* n	1.03	NotF#	*			1506	2.5	16.6
2,3,7,8-TCDF	*	* n	1.05	NotF#	*			2299	2.5	3.44
1,2,3,7,8-PeCDF	*	* n	1.04	NotF#	*			1158	2.5	2.70
2,3,4,7,8-PeCDF	*	* n	1.05	NotF#	*			1158	2.5	2.66
1,2,3,4,7,8-HxCDF	*	* n	1.13	NotF#	*			1984	2.5	3.43
1,2,3,6,7,8-HxCDF	*	* n	1.24	NotF#	*			1984	2.5	3.14
2,3,4,6,7,8-HxCDF	*	* n	1.16	NotF#	*			1984	2.5	3.33
1,2,3,7,8,9-HxCDF	*	* n	1.02	NotF#	*			1984	2.5	3.81
1,2,3,4,6,7,8-HpCDF	*	* n	1.54	NotF#	*			1042	2.5	2.29
1,2,3,4,7,8,9-HpCDF	*	* n	1.30	NotF#	*			1042	2.5	2.72
OCDF	*	* n	1.15	NotF#	*			1074	2.5	8.24
Total Tetra-Dioxins	*	* n	1.26	NotF#	*			934	2.5	1.55
Total Penta-Dioxins	*	* n	1.01	NotF#	*			864	2.5	3.10
Total Hexa-Dioxins	*	* n	1.10	NotF#	*			1461	2.5	5.82
Total Hepta-Dioxins	*	* n	1.13	NotF#	*			1551	2.5	8.98
Total Tetra-Furans	*	* n	1.05	NotF#	*			2299	2.5	3.44
1st Fnc. Penta-Furans	*	* n	1.05	NotF#	*			2191	2.5	5.07
Total Penta-Furans	*	* n	1.05	NotF#	*			1158	2.5	2.68
PeCDF Totals:					0.00					0.00
Total Hexa-Furans	*	* n	1.14	NotF#	*			1984	2.5	3.41
Total Hepta-Furans	*	* n	1.42	NotF#	*			1042	2.5	2.49

Reviewer: ce  
Date: 20 Apr 01

EMPC

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Rec

93.7
86.0
91.5
81.9
64.2
88.0
79.3
95.4
92.4
71.0

GC Deflections  
in Pe-Fn 2 & beginning  
of Fn 3.  
ce 20 Apr 01

IS	13C-2,3,7,8-TCDD	3.42e+07	0.78 y	1.13	28:17	3750
IS	13C-1,2,3,7,8-PeCDD	2.56e+07	1.58 y	0.93	33:38	3440
IS	13C-1,2,3,6,7,8-HxCDD	2.05e+07	1.27 y	0.93	37:38	3660
IS	13C-1,2,3,4,6,7,8-HpCDD	1.78e+07	1.07 y	0.91	42:03	3280
IS	13C-OCDD	1.13e+07	0.92 y	0.73	47:30	2570
IS	13C-2,3,7,8-TCDF	4.76e+07	0.81 y	1.06	27:26	3520
IS	13C-1,2,3,7,8-PeCDF	3.88e+07	1.58 y	0.96	32:11	3170
IS	13C-1,2,3,6,7,8-HxCDF	2.94e+07	0.53 y	1.28	36:40	3810
IS	13C-1,2,3,4,6,7,8-HpCDF	2.01e+07	0.45 y	0.90	40:23	3700
IS	13C-OCDF	1.38e+07	0.88 y	0.81	47:47	2840
RS/RT	13C-1,2,3,4-TCDD	3.22e+07	0.80 y	1.00	27:39	4000
RS	13C-1,2,3,4-TCDF	5.10e+07	0.78 y	1.00	26:06	4000
RS/RT	13C-1,2,3,7,8,9-HxCDD	2.41e+07	1.25 y	1.00	37:58	4000
PS	37Cl-2,3,7,8-TCDD	*		0.51	NotF#	*
PS	13C-2,3,4,7,8-PeCDF	*	* n	0.97	NotF#	*
PS	13C-1,2,3,4,7,8-HxCDD	*	* n	0.92	NotF#	*
PS	13C-1,2,3,4,7,8-HxCDF	9.06e+04	0.69 n	0.91	36:31	13.6
PS	13C-1,2,3,4,7,8,9-HpCDF	6.71e+04	0.31 n	0.85	42:55	15.7
AS	13C-1,2,3,7,8,9-HxCDF	2.48e+07	0.53 y	1.07	38:22	3860

Analyst: GAG

Date: 20 Apr 01

0.339
0.392
96.5

Totals class: TCDD EMPC Function: 1 Run #: 9  
File Name: 010419P3 Sample #: 3 Sample text: 0\_324\_MB001

Acquired: 19-APR-01 21:02:07 Processed: 20-APR-01 11:51:23

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF	/	*	n	*	n	*	*	*	n	*

Totals class: PeCDD EMPC Function: 2 Run #: 9  
File Name: 010419P3 Sample #: 3 Sample text: 0\_324\_MB001

Acquired: 19-APR-01 21:02:07 Processed: 20-APR-01 11:51:23

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF	/	*	n	*	n	*	*	*	n	*

Totals class: HxCDD EMPC Function: 3 Run #: 9  
File Name: 010419P3 Sample #: 3 Sample text: 0\_324\_MB001

Acquired: 19-APR-01 21:02:07 Processed: 20-APR-01 11:51:23

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF	/	*	n	*	n	*	*	*	n	*

Totals class: HpCDD EMPC Function: 4 Run #: 9  
File Name: 010419P3 Sample #: 3 Sample text: 0\_324\_MB001

Acquired: 19-APR-01 21:02:07 Processed: 20-APR-01 11:51:23

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF	/	*	n	*	n	*	*	*	n	*

Totals class: TCDF EMPC Function: 1 Run #: 9  
File Name: 010419P3 Sample #: 3 Sample text: 0\_324\_MB001

Acquired: 19-APR-01 21:02:07 Processed: 20-APR-01 11:51:23

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF*	/	* n	* n	* n	*	*	*	*	n	*

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Totals class: 1st Fnc.PeCDF EMPC Function: 1 Run #: 9  
File Name: 010419P3 Sample #: 3 Sample text: 0\_324\_MB001

Acquired: 19-APR-01 21:02:07 Processed: 20-APR-01 11:51:23

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF*	/	* n	* n	* n	*	*	*	*	n	*

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Totals class: PeCDF EMPC Function: 2 Run #: 9  
File Name: 010419P3 Sample #: 3 Sample text: 0\_324\_MB001

Acquired: 19-APR-01 21:02:07 Processed: 20-APR-01 11:51:23

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF*	/	* n	* n	* n	*	*	*	*	n	*

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Totals class: HxCDF EMPC Function: 3 Run #: 9  
File Name: 010419P3 Sample #: 3 Sample text: 0\_324\_MB001

Acquired: 19-APR-01 21:02:07 Processed: 20-APR-01 11:51:23

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF*	/	* n	* n	* n	*	*	*	*	n	*

Page 18 of 18

Totals class: HpCDF EMPC Function: 4 Run #: 9  
File Name: 010419P3 Sample #: 3 Sample text: 0\_324\_MB001

Acquired: 19-APR-01 21:02:07 Processed: 20-APR-01 11:51:23

Total Conc.: \* Unnamed Conc.: \*

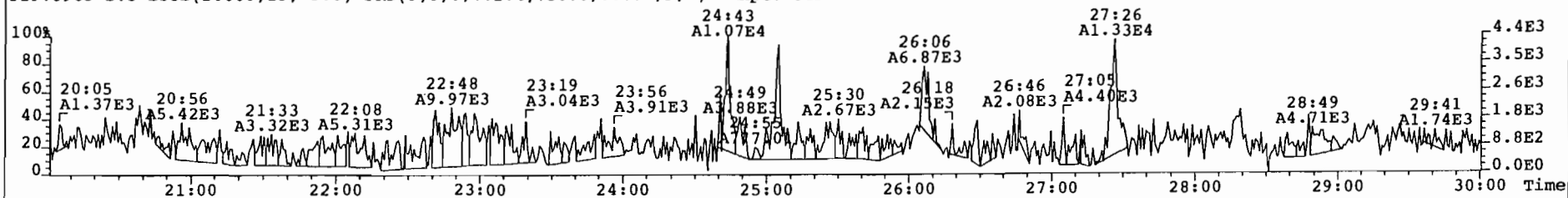
RT	m1 Resp mod.	m2 Resp mod.	RA	Resp	Adj_Resp	S/N	Conc. Name
NotF*	* n	* n	* n	*	* *	n	*



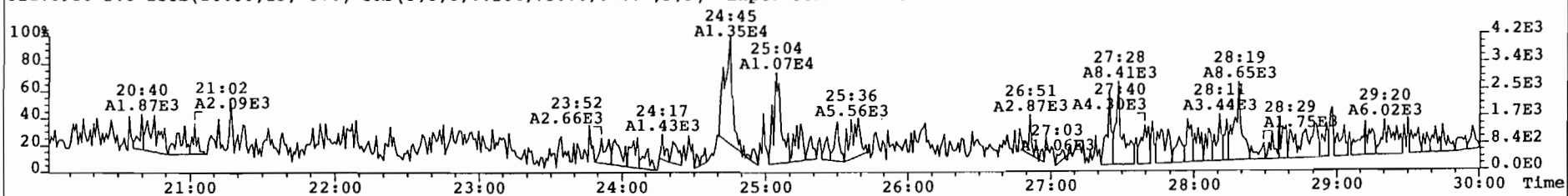
File: 010419F3 Acq: 19-APR-2001 21:02:07 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 3 Text: 0\_324 MB001 Vial# 28 File Text: AAP DB5

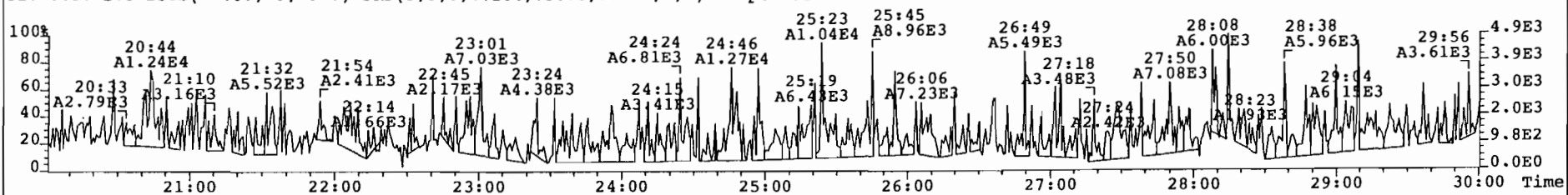
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 308



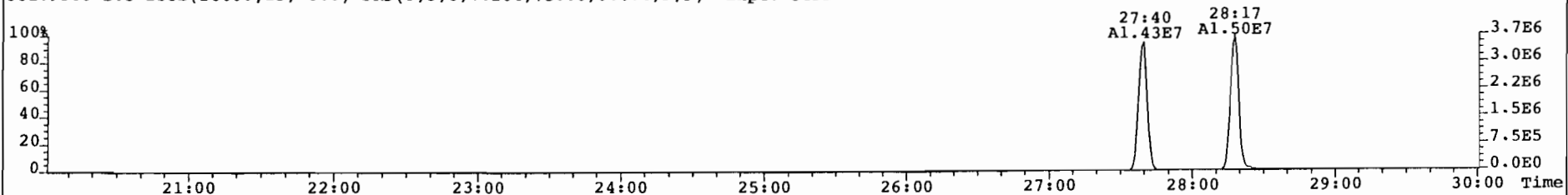
321.8936 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 279



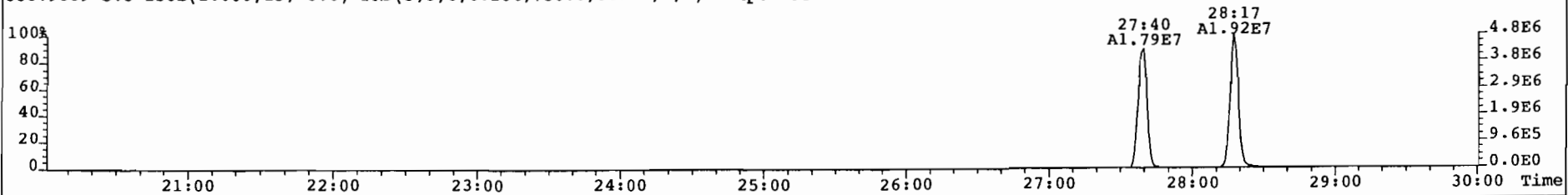
327.8850 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 366



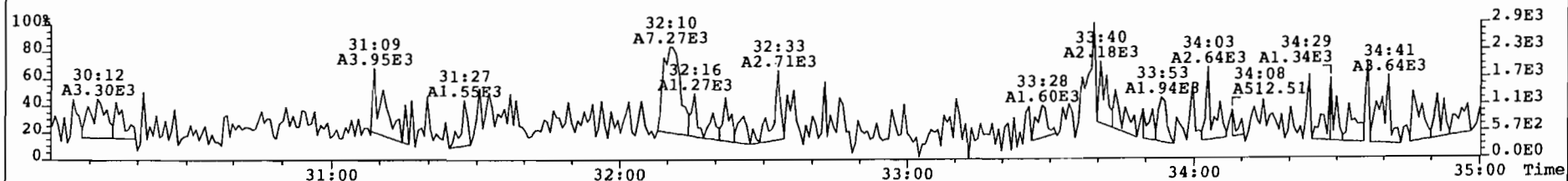
331.9368 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1284



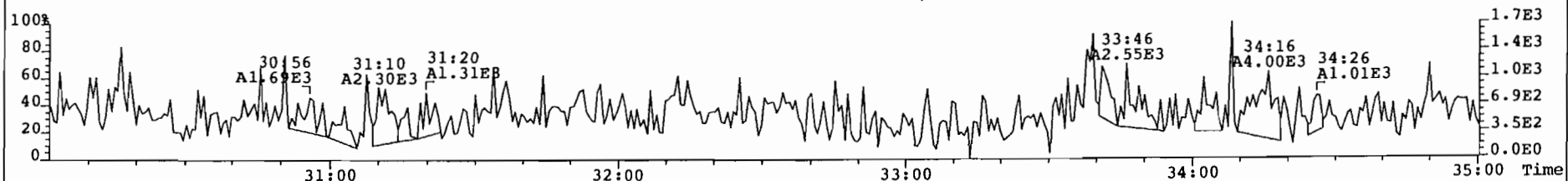
333.9339 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 693



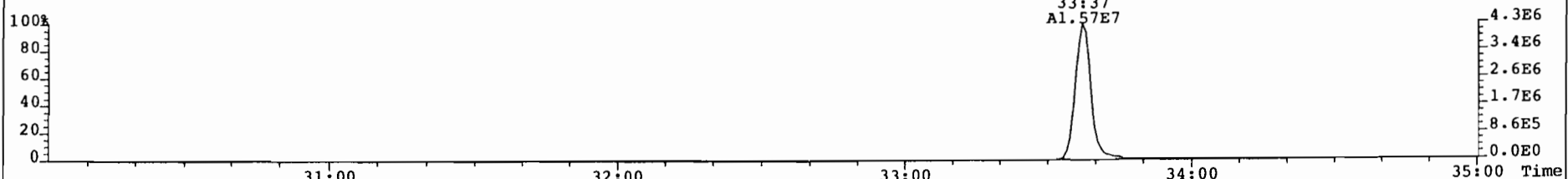
File: 010419P3 Acq: 19-APR-2001 21:02:07 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0\_324\_MB001 Vial# 28 File Text: AAP DB5  
355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 229



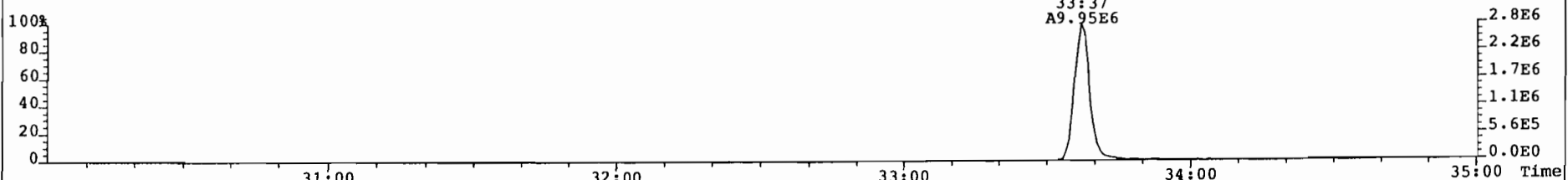
357.8517 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 189



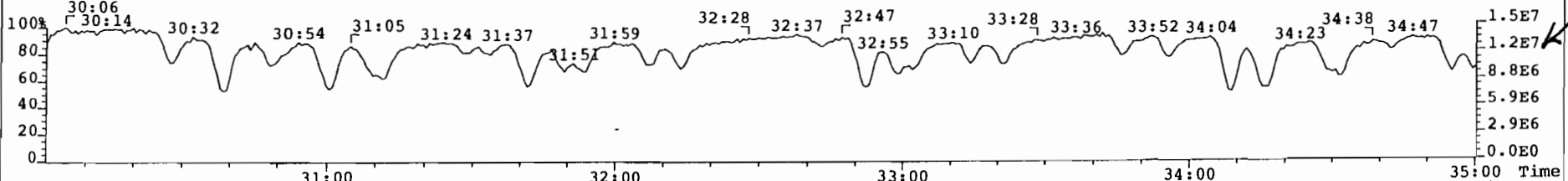
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1052



369.8919 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 516



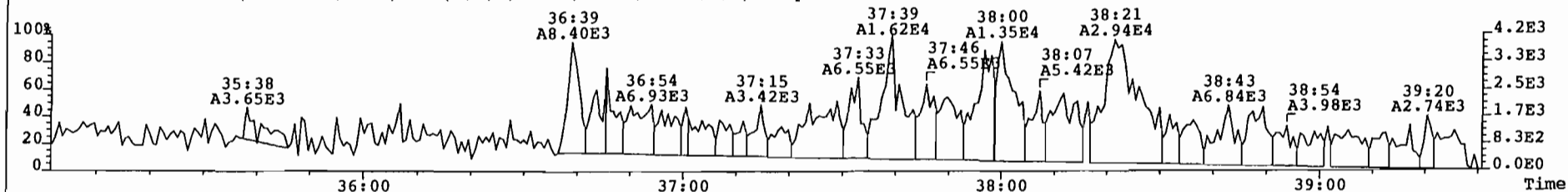
366.9792 S:3 F:2 Expt: OCDD



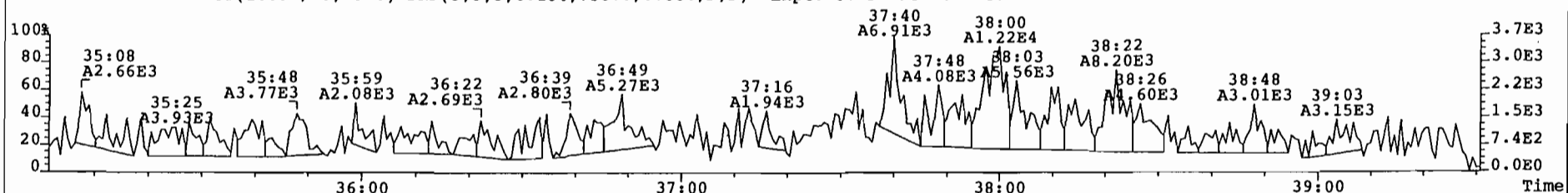
File: 010419P3 Acq: 19-APR-2001 21:02:07 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 3 Text: 0 324 MB001 Vial# 28 File Text: AAP DB5

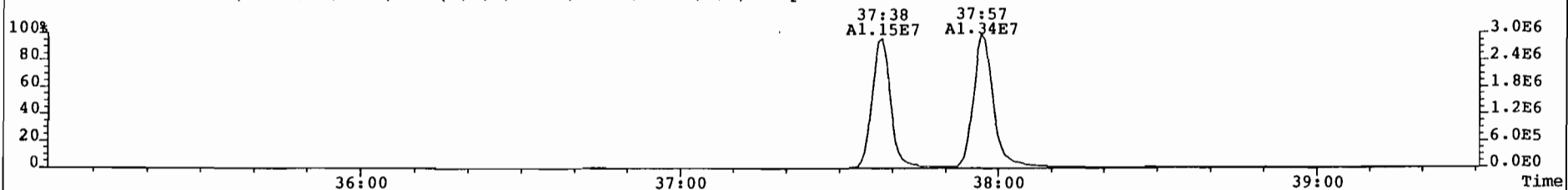
389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 406



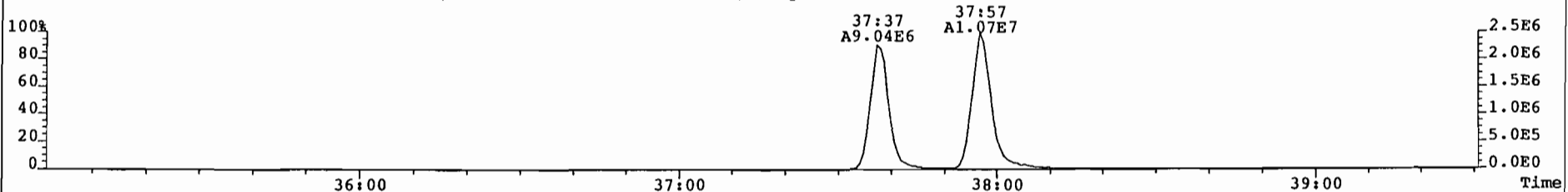
391.8127 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 333



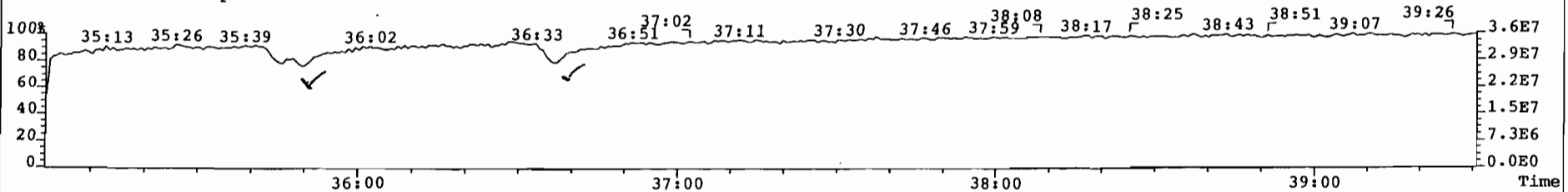
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 730



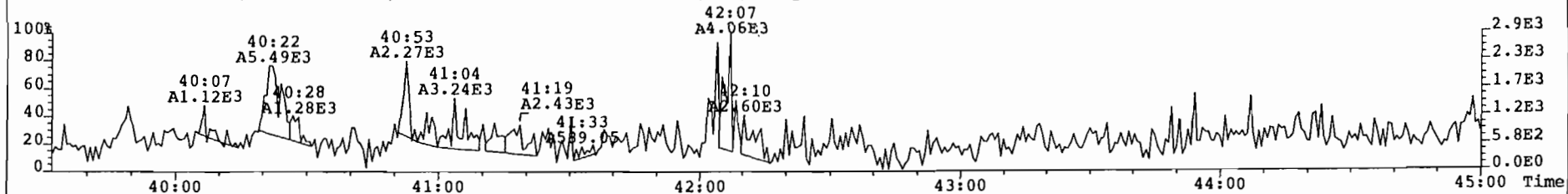
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 693



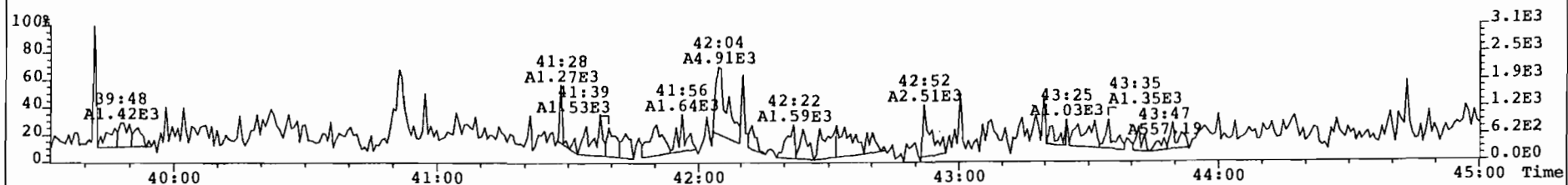
380.9760 S:3 F:3 Expt: OCDD



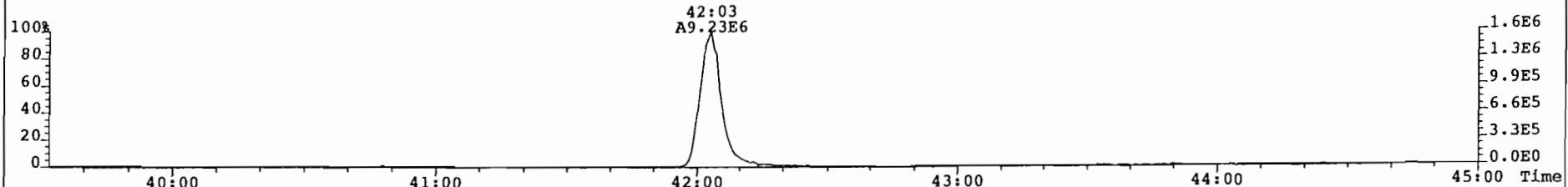
File: 010419F3 Acq: 19-APR-2001 21:02:07 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0 324 MB001 Vial# 28 File Text: AAP DB5  
423.7767 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 206



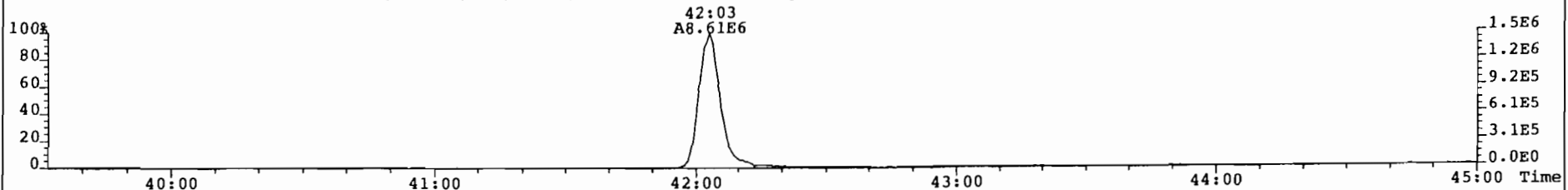
425.7737 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 190



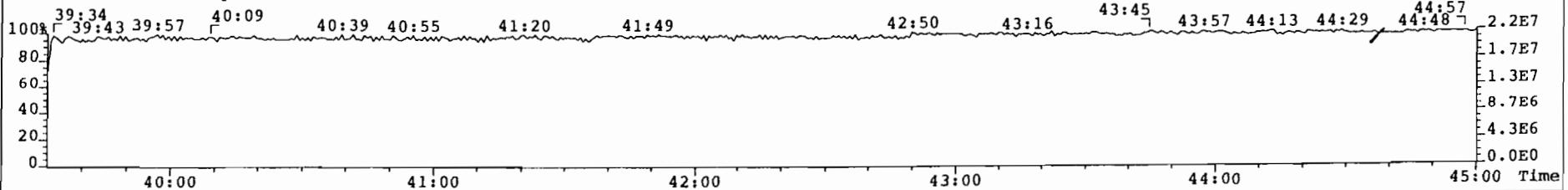
435.8169 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1164



437.8140 S:3 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 997



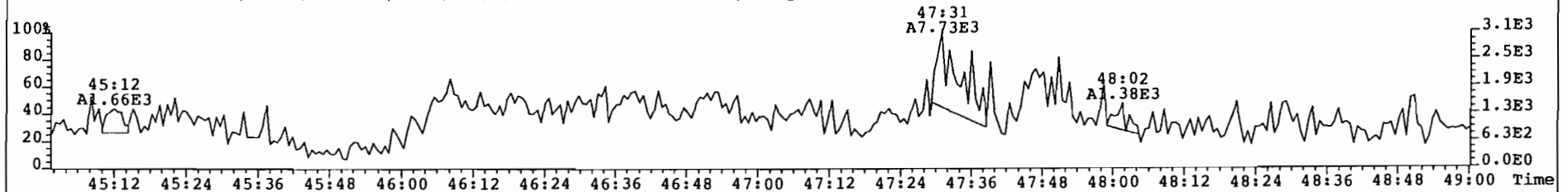
430.9728 S:3 F:4 Expt: OCDD



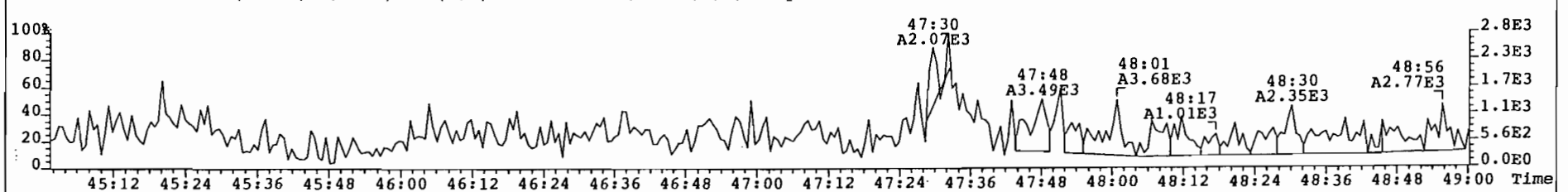
File: 010419P3 Acq: 19-APR-2001 21:02:07 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 3 Text: 0.324 MB001 Vial# 28 File Text: AAP DB5

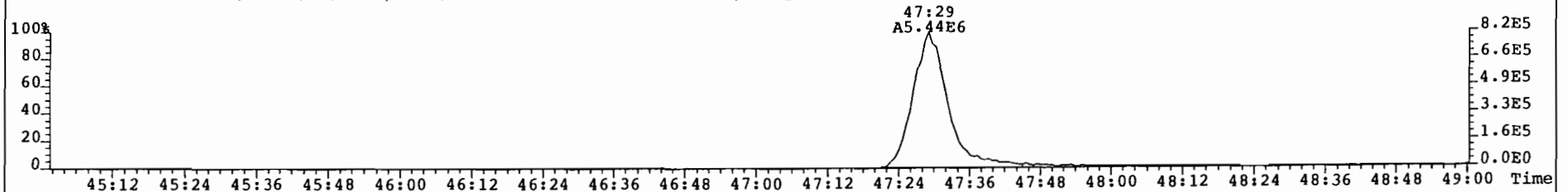
457.7377 S:3 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 377



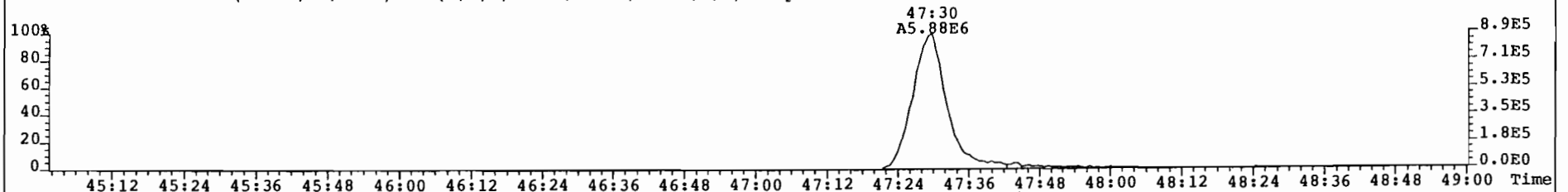
459.7348 S:3 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 221



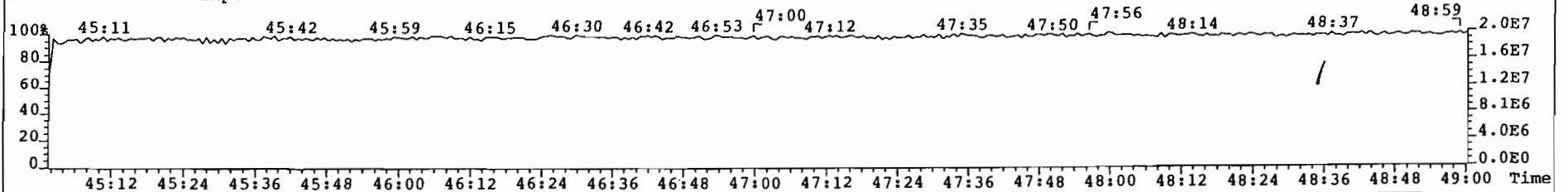
469.7780 S:3 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 423



471.7750 S:3 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 242



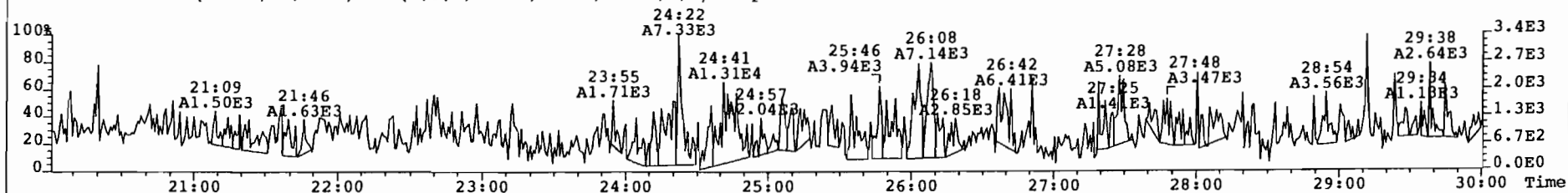
454.9728 S:3 F:5 Expt: OCDD



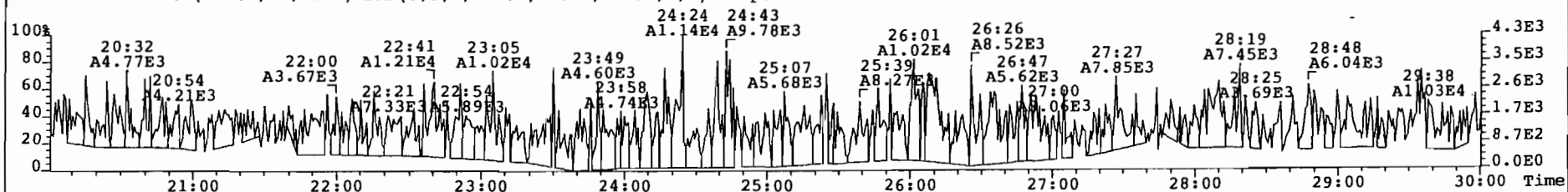
File: 010419F3 Acq: 19-APR-2001 21:02:07 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 3 Text: 0 324 MB001 Vial# 28 File Text: AAP DB5

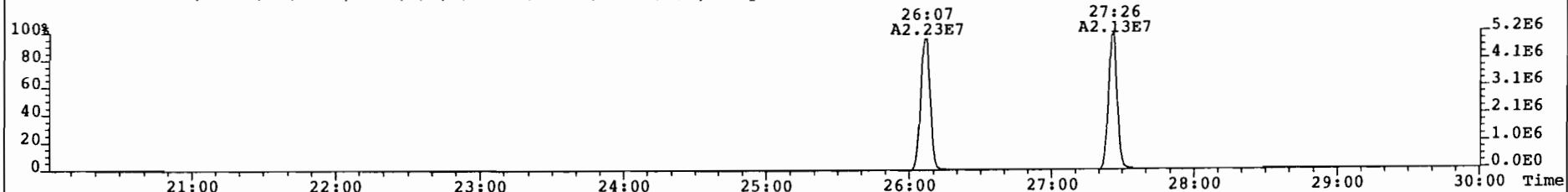
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 302



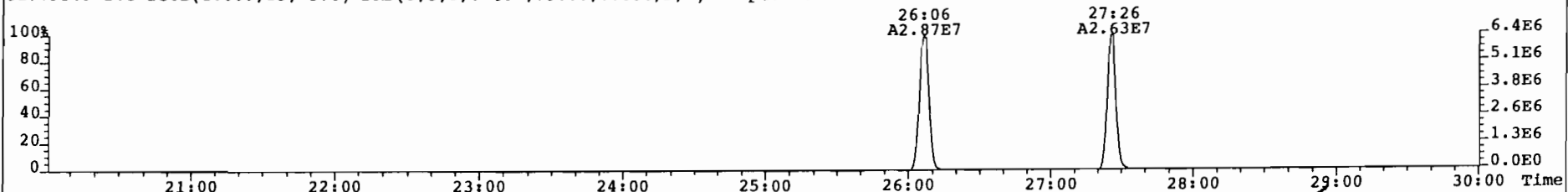
305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 457



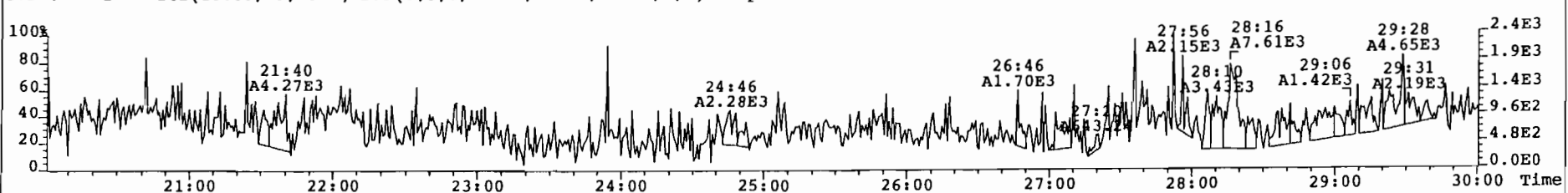
315.9419 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 491



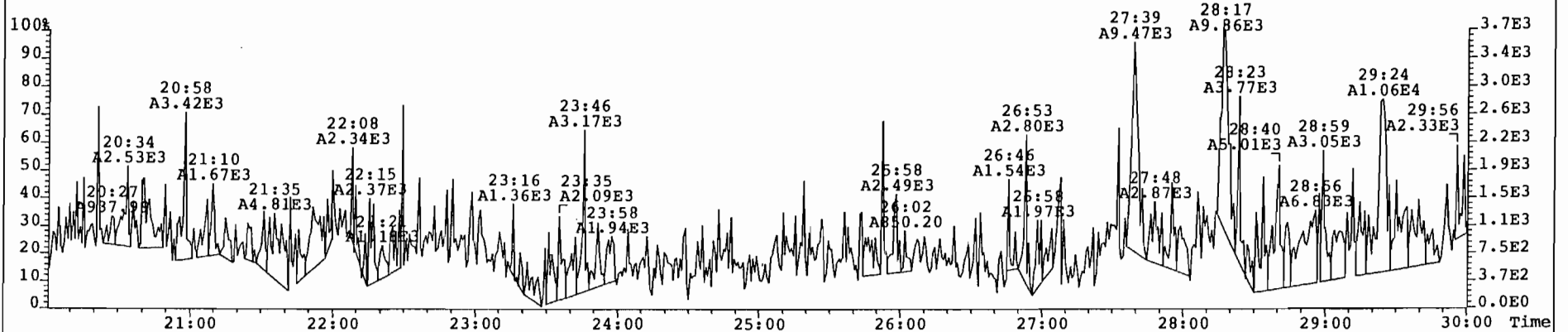
317.9389 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1056



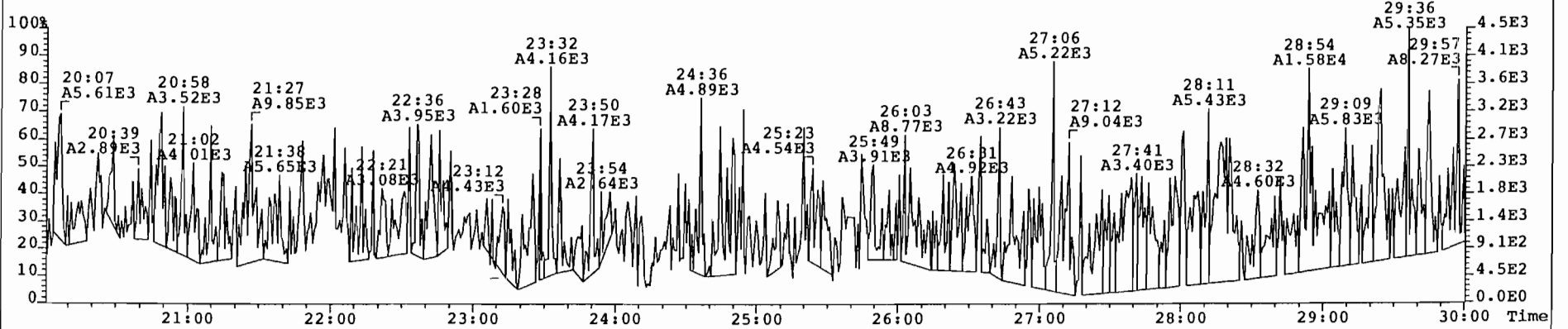
375.8364 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 250



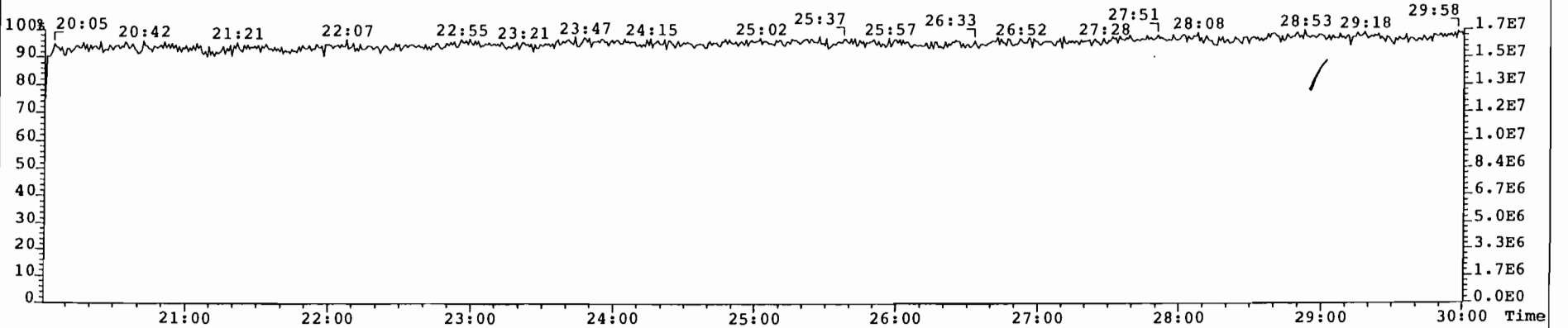
File: 010419P3 Acq: 19-APR-2001 21:02:07 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0\_324\_MB001 Vial# 28 File Text: AAP DB5  
339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 266



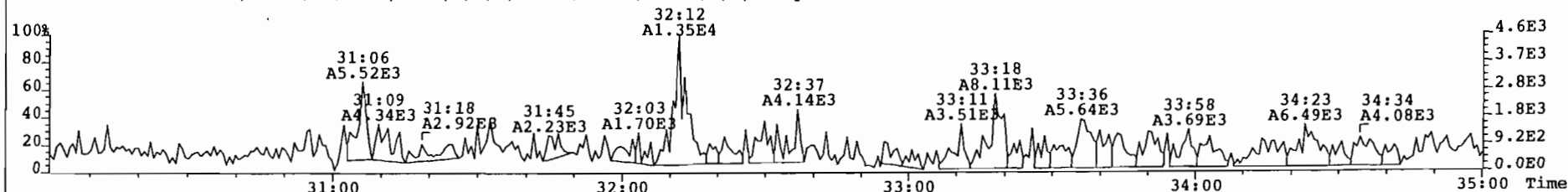
341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 395



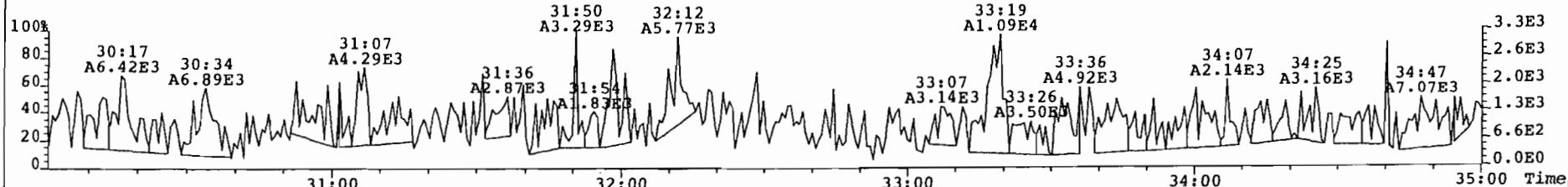
316.9824 S:3 Expt: OCDD



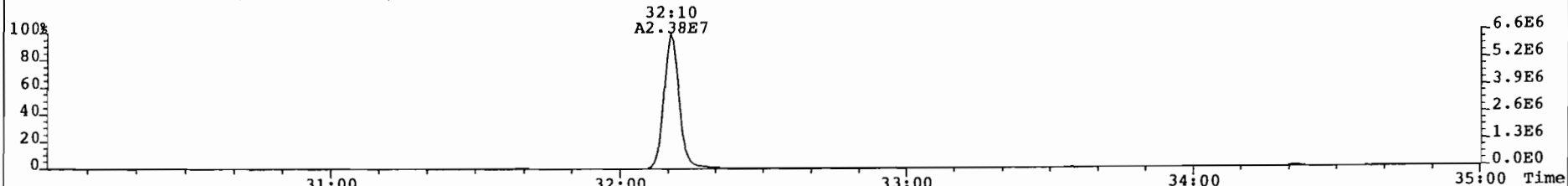
File: 010419P3 Acq: 19-APR-2001 21:02:07 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0 324 MB001 Vial# 28 File Text: AAP DB5  
339.8597 S:3 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 230



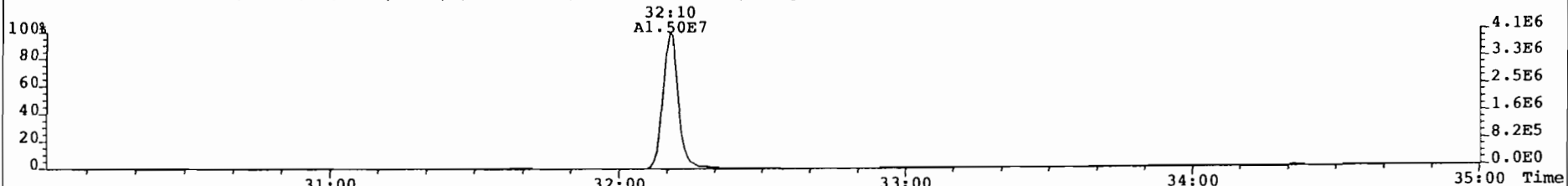
341.8568 S:3 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 326



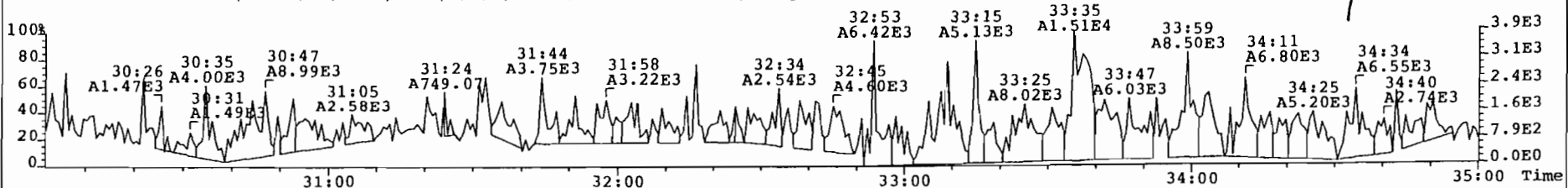
351.9000 S:3 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 522



353.8970 S:3 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 271

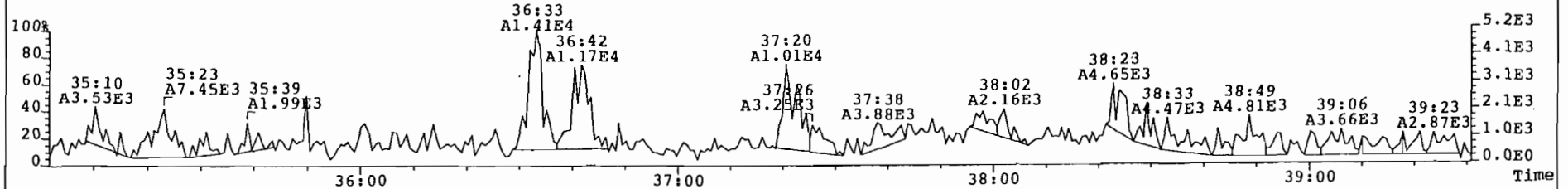


409.7974 S:3 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 362

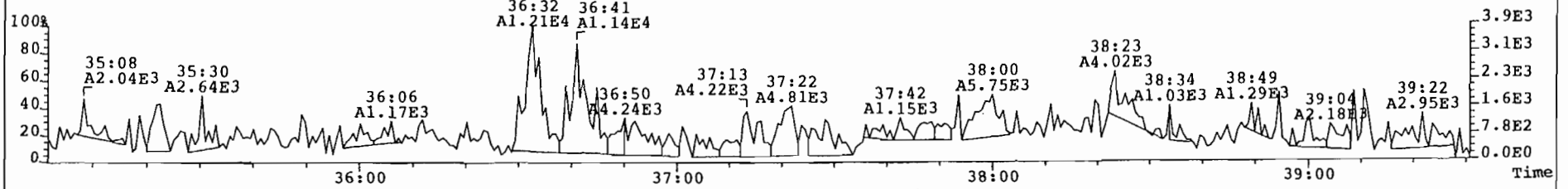




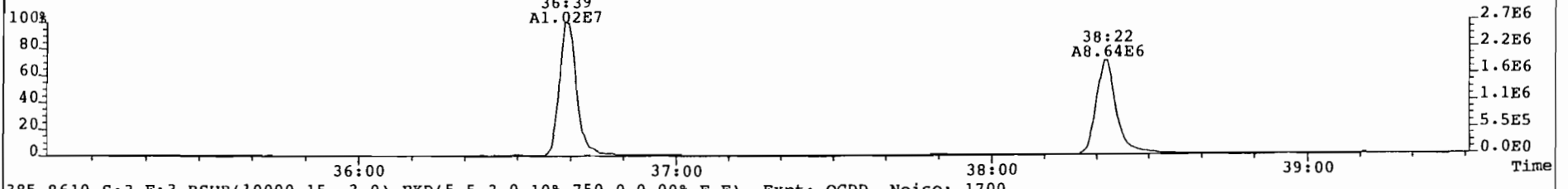
File: 010419P3 Acq: 19-APR-2001 21:02:07 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0.324 MB001 Vial# 28 File Text: AAP DB5  
373.8207 S:3 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 272



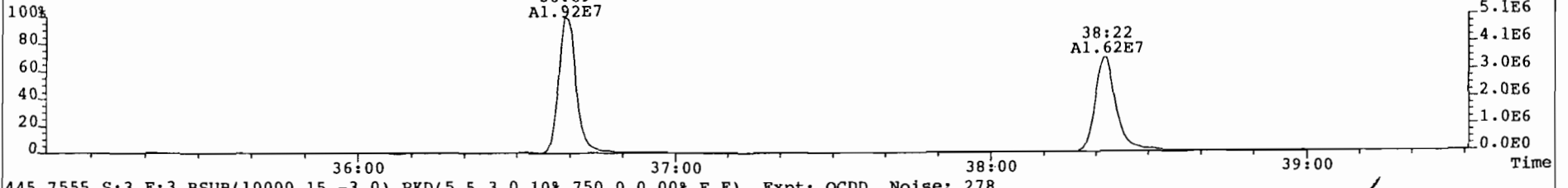
375.8178 S:3 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 247



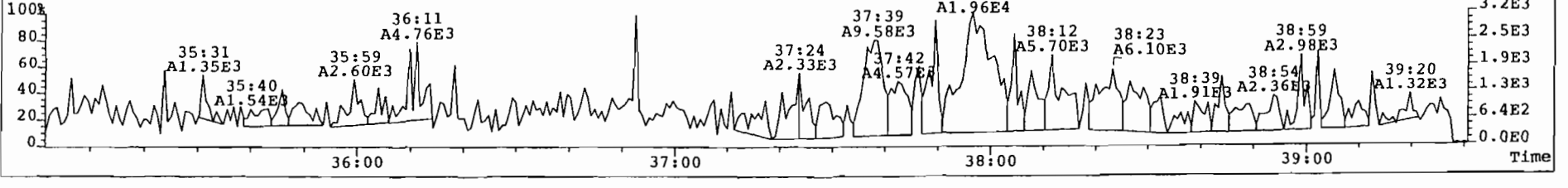
383.8639 S:3 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 2187



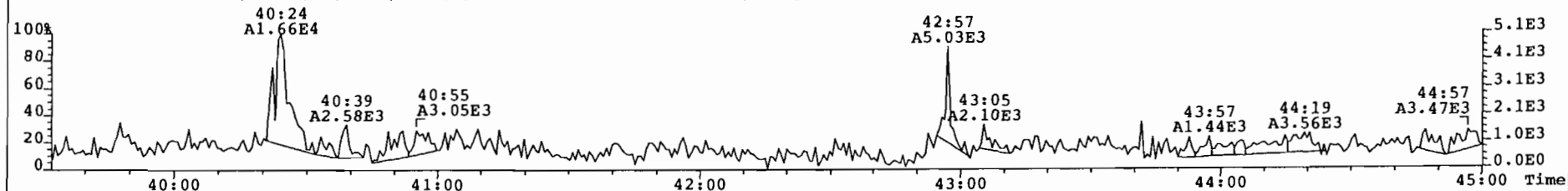
385.8610 S:3 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1700



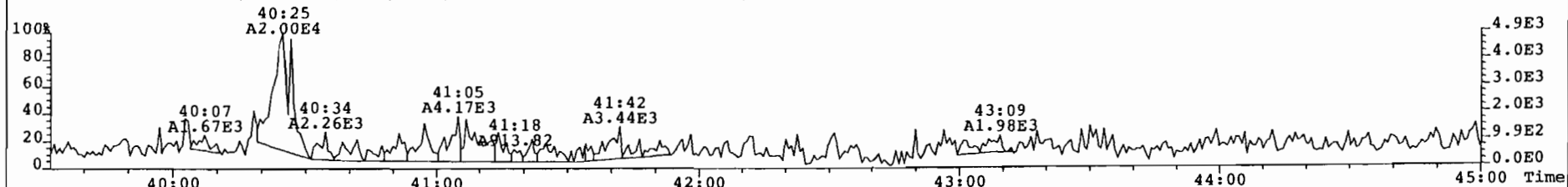
445.7555 S:3 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 278



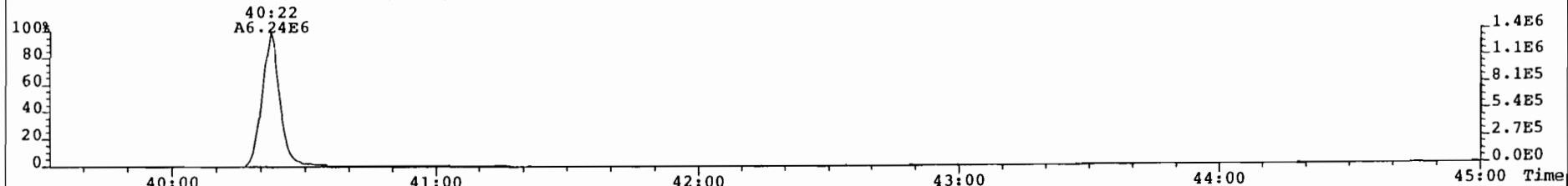
File: 010419P3 Acq: 19-APR-2001 21:02:07 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0 324 MB001 Vial# 28 File Text: AAP DB5  
407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 259



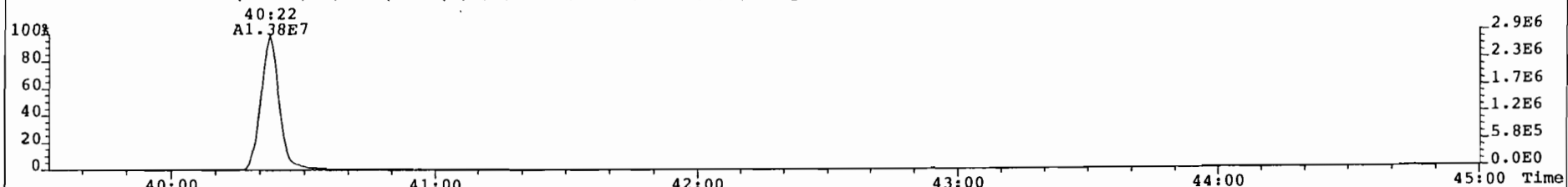
409.7788 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 241



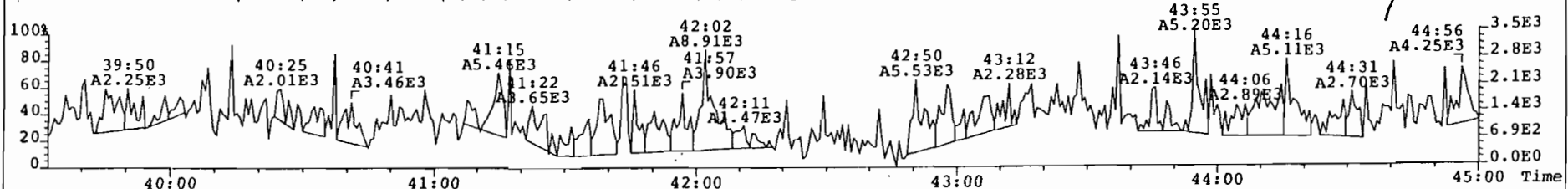
417.8253 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 570



419.8220 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 972



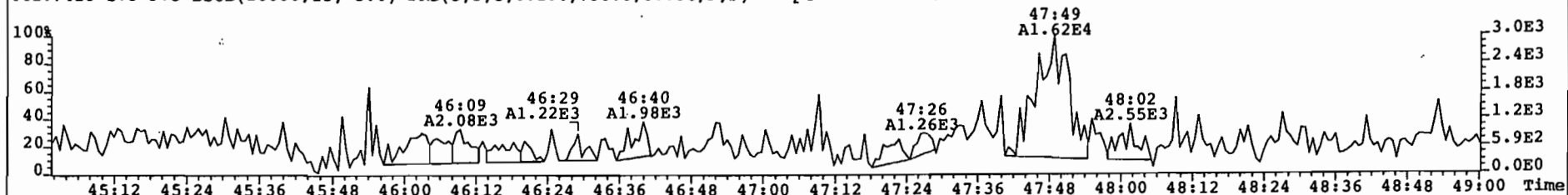
479.7165 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 416



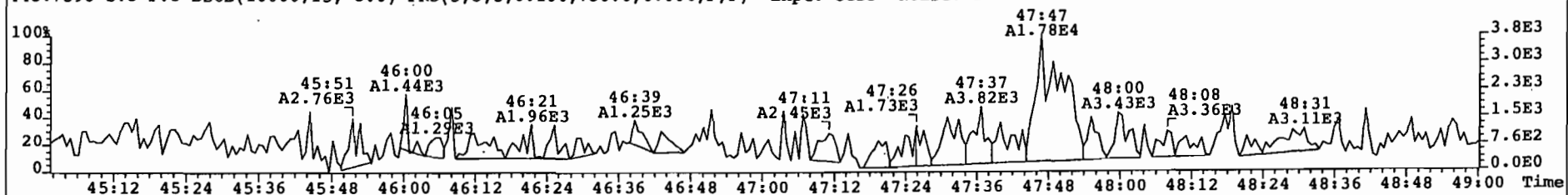
File: 010419P3 Acq: 19-APR-2001 21:02:07 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 3 Text: 0\_324 MB001 Vial# 28 File Text: AAP DB5

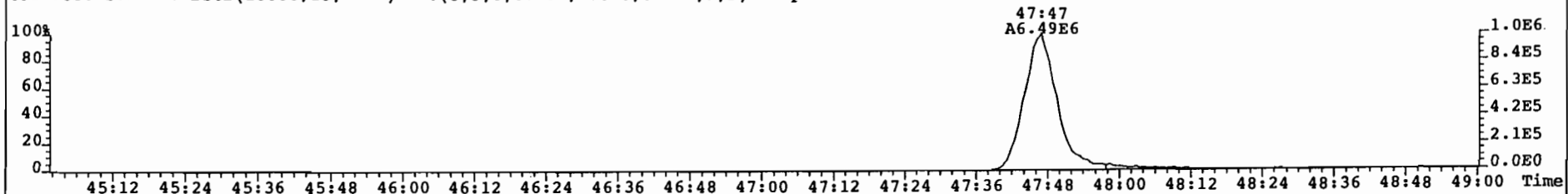
441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 210



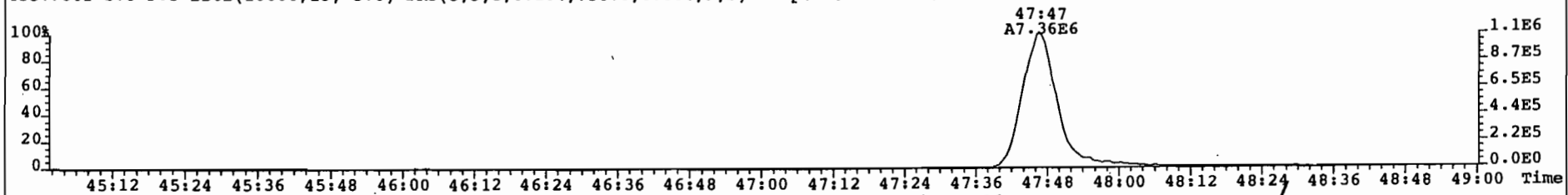
443.7398 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 256



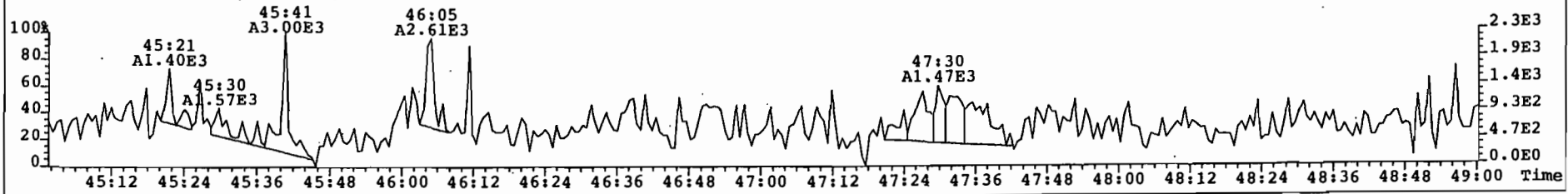
453.7830 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 239



455.7801 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1281



513.6775 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 226



**Sample ID: 0\_324\_MB001**

**Method 23**

Client Data		Sample Data		Laboratory Data			
Name:	CAE	Matrix:	Air	Project No.:	P1463	Date Received:	n/a
Project ID:	8890/8891	Weight/Volume:	1	Sample ID:	0_324_MB001	Date Extracted:	9 Apr 01
Date Collected:	n/a			QC Batch No.:	324	Date Analyzed:	18-APR-01

Analyte	Conc. pg	DL pg	EMPC pg	Qualifier	Recoveries		
					IS	SS	AS
2,3,7,8-TCDD	ND	2.19			88.1		91.1
1,2,3,7,8-PeCDD	EMPC		7.57	A	83.5		91.1
1,2,3,4,7,8-HxCDD	12.5			A	87.5		91.1
1,2,3,6,7,8-HxCDD	14.4			A	87.5		91.1
1,2,3,7,8,9-HxCDD	10.2			A	87.5		91.1
1,2,3,4,6,7,8-HpCDD	9.64			A	82.6		91.1
OCDD	ND	17.7			66.9		91.1
2,3,7,8-TCDF	ND	3.24			87.2		91.1
1,2,3,7,8-PeCDF	6.73			A	81.5		91.1
2,3,4,7,8-PeCDF	6.17			A	81.5		91.1
1,2,3,4,7,8-HxCDF	13.5			A	90.3		91.1
1,2,3,6,7,8-HxCDF	13.6			A	90.3		91.1
2,3,4,6,7,8-HxCDF	EMPC		12	A	90.3		91.1
1,2,3,7,8,9-HxCDF	EMPC		6.13	A	90.3		91.1
1,2,3,4,6,7,8-HpCDF	11.9			A	86.1		91.1
1,2,3,4,7,8,9-HpCDF	ND	6.9			86.1		91.1
OCDF	ND	7.15			70.7		91.1

Totals & TEQs				
TCDDs	ND	2.19		
PeCDDs	ND		7.57	
HxCDDs	37.1			
HpCDDs	9.64			
TCDFs	ND	3.24		
PeCDFs	12.9			
HxCDFs	27.1		45.3	
HpCDFs	11.9			
<b>Total PCDD/Fs</b>	<b>98.6</b>		<b>124</b>	
<b>TEQ (ND=0)</b>	<b>10.1</b>		<b>15.7</b>	ITEF
<b>TEQ (ND=DL/2)</b>	<b>11.4</b>		<b>17.0</b>	ITEF



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Client ID: 0\_324\_MB001 /  
Lab ID: 0\_324\_MB001 /

Filename: 010418P2 S: 3 Acq: 18-APR-01 12:57:42  
GC Column ID: db-5 ICal: mml\_m23\_0 wt/vol: 1.000

ConCal: 010418P2-  
EndCal: 010418P2-

Name	Resp	RA	RRF	RT	Conc	Qualif.	CDE	noise	Fac	DL
2,3,7,8-TCDD	*	* n	1.26	NotF*		*		1303	2.5	2.19
1,2,3,7,8-PeCDD	5.05e+04	1.80 $\text{\textcircled{h}}$	1.01	33:39	7.57			567	2.5	2.04
1,2,3,4,7,8-HxCDD	6.77e+04	1.31 y	1.14	37:32	12.5			1158	2.5	4.88
1,2,3,6,7,8-HxCDD	7.05e+04	1.06 y	1.02	37:39	14.4			1158	2.5	5.44
1,2,3,7,8,9-HxCDD	5.57e+04	1.28 y	1.14	37:58	10.2			1158	2.5	4.86
1,2,3,4,6,7,8-HpCDD	4.76e+04	1.15 y	1.13	42:06	9.64			1177	2.5	7.20
OCDD	*	* n	1.03	NotF*		*		1593	2.5	17.7
2,3,7,8-TCDF	*	* n	1.05	NotF*		*		2068	2.5	3.24
1,2,3,7,8-PeCDF	6.66e+04	1.40 y	1.04	32:11	6.73			1296	2.5	3.21
2,3,4,7,8-PeCDF	6.20e+04	1.75 y	1.05	33:18	6.17			1296	2.5	3.16
1,2,3,4,7,8-HxCDF	1.03e+05	1.24 y	1.13	36:33	13.5			1066	2.5	1.96
1,2,3,6,7,8-HxCDF	1.14e+05	1.33 y	1.24	36:41	13.6			1066	2.5	1.80
2,3,4,6,7,8-HxCDF	9.47e+04	1.47 $\text{\textcircled{h}}$	1.16	37:21	12.0			1066	2.5	1.91
1,2,3,7,8,9-HxCDF	4.22e+04	1.52 $\text{\textcircled{h}}$	1.02	38:24	6.13			1066	2.5	2.18
1,2,3,4,6,7,8-HpCDF	8.31e+04	1.19 y	1.54	40:24	11.9			2453	2.5	5.81
1,2,3,4,7,8,9-HpCDF	*	* n	1.30	NotF*		*		2453	2.5	6.90
OCDF	*	* n	1.15	NotF*		*		895	2.5	7.15
Total Tetra-Dioxins	*	* n	1.26	NotF*		*		1303	2.5	2.19
Total Penta-Dioxins	*	* n	1.01	NotF*		*		567	2.5	2.04
Total Hexa-Dioxins	1.94e+05	1.31 y	1.10	37:32	37.1			1158	2.5	5.05
Total Hepta-Dioxins	4.76e+04	1.15 y	1.13	42:06	9.64			1177	2.5	7.20
Total Tetra-Furans	*	* n	1.05	NotF*		*		2068	2.5	3.24
1st Fnc. Penta-Furans	*	* n	1.05	NotF*		*		3266	2.5	8.03
Total Penta-Furans	1.29e+05	1.40 y	1.05	32:11	12.9			1296	2.5	3.19
PeCDF Totals:					12.9					12.9
Total Hexa-Furans	2.18e+05	1.24 y	1.14	36:33	27.1			1066	2.5	1.95
Total Hepta-Furans	8.31e+04	1.19 y	1.42	40:24	11.9			2453	2.5	6.31
IS 13C-2,3,7,8-TCDD	3.41e+07	0.79 y	1.13	28:17	3520					88.1
IS 13C-1,2,3,7,8-PeCDD	2.63e+07	1.58 y	0.93	33:37	3340					83.5
IS 13C-1,2,3,6,7,8-HxCDD	1.91e+07	1.26 y	0.93	37:38	3500					87.5
IS 13C-1,2,3,4,6,7,8-HpCDD	1.75e+07	1.04 y	0.91	42:04	3300					82.6
IS 13C-OCDD	1.15e+07	0.90 y	0.73	47:30	2670					66.9
IS 13C-2,3,7,8-TCDF	4.52e+07	0.79 y	1.06	27:26	3490					87.2
IS 13C-1,2,3,7,8-PeCDF	3.81e+07	1.57 y	0.96	32:11	3260					81.5
IS 13C-1,2,3,6,7,8-HxCDF	2.71e+07	0.52 y	1.28	36:39	3610					90.3
IS 13C-1,2,3,4,6,7,8-HpCDF	1.82e+07	0.44 y	0.90	40:22	3440					86.1
IS 13C-OCDF	1.34e+07	0.87 y	0.81	47:47	2830					70.7
RS/RT 13C-1,2,3,4-TCDD	3.41e+07	0.79 y	1.00	27:39	4000					-
RS 13C-1,2,3,4-TCDF	4.88e+07	0.77 y	1.00	26:06	4000					-
RS/RT 13C-1,2,3,7,8,9-HxCDD	2.34e+07	1.25 y	1.00	37:58	4000					-
PS 37C1-2,3,7,8-TCDD	1.78e+04		0.51	28:19	4.06					0.102
PS 13C-2,3,4,7,8-PeCDF	*	* n	0.97	NotF*	*					*
PS 13C-1,2,3,4,7,8-HxCDD	*	* n	0.92	NotF*	*					*
PS 13C-1,2,3,4,7,8-HxCDF	*	* n	0.91	NotF*	*					*
PS 13C-1,2,3,4,7,8,9-HpCDF	4.74e+04	0.26 n	0.85	42:54	12.2					0.305
AS 13C-1,2,3,7,8,9-HxCDF	2.28e+07	0.52 y	1.07	38:22	3640					91.1

Reviewer: ca  
Date: 18 APR 01

EMPC  
\*  
7.57  
37.1  
9.64  
\*  
\*  
12.9  
45.3  
11.9

*OPR Contamination  
analyze archived  
extract*

Analyst: GAG  
Date: 18 APR 01  
0.102  
\*  
\*  
0.305  
91.1

Totals class: TCDD EMPC Function: 1 Run #: 9  
File Name: 010418P2 Sample #: 3 Sample text: 0\_324\_MB001

Acquired: 18-APR-01 12:57:42 Processed: 18-APR-01 13:48:06

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF*	✓	* n	* n	* n	*	*	*	n	*	

Totals class: PeCDD EMPC Function: 2 Run #: 9  
File Name: 010418P2 Sample #: 3 Sample text: 0\_324\_MB001

Acquired: 18-APR-01 12:57:42 Processed: 18-APR-01 13:48:06

Total Conc.: 7.5664 Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
33:39	✓	3.554e+04	y	1.979e+04	y	1.80	5.533e+04	5.045e+04	1.24e+01	y	7.57 1,2,3,7,8-PeCDD

Totals class: HxCDD EMPC Function: 3 Run #: 9  
File Name: 010418P2 Sample #: 3 Sample text: 0\_324\_MB001

Acquired: 18-APR-01 12:57:42 Processed: 18-APR-01 13:48:06

Total Conc.: 37.086 Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
37:32	✓	3.837e+04	y	2.938e+04	y	1.31	6.774e+04	6.774e+04	7.03e+00	y	12.5 1,2,3,4,7,8-HxCDD
37:39	✓	3.627e+04	y	3.426e+04	y	1.06	7.053e+04	7.053e+04	7.12e+00	y	14.4 1,2,3,6,7,8-HxCDD
37:58	✓	3.126e+04	y	2.442e+04	y	1.28	5.567e+04	5.567e+04	6.26e+00	y	10.2 1,2,3,7,8,9-HxCDD

Totals class: HpCDD EMPC Function: 4 Run #: 9  
File Name: 010418P2 Sample #: 3 Sample text: 0\_324\_MB001

Acquired: 18-APR-01 12:57:42 Processed: 18-APR-01 13:48:06

Total Conc.: 9.6445 Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name	
42:06	✓	2.551e+04	y	2.210e+04	y	1.15	4.761e+04	4.761e+04	3.81e+00	y	9.64 1,2,3,4,6,7,8-HpCDD

Totals class: TCDF EMPC Function: 1 Run #: 9  
 File Name: 010418P2 Sample #: 3 Sample text: 0\_324\_MB001

Acquired: 18-APR-01 12:57:42 Processed: 18-APR-01 13:48:06

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF	/	* n	* n	* n	*	*	*	*	n	*

Totals class: 1st Fnc.PeCDF EMPC Function: 1 Run #: 9  
 File Name: 010418P2 Sample #: 3 Sample text: 0\_324\_MB001

Acquired: 18-APR-01 12:57:42 Processed: 18-APR-01 13:48:06

Total Conc.: \* Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
NotF	/	* n	* n	* n	*	*	*	*	n	*

Totals class: PeCDF EMPC Function: 2 Run #: 9  
 File Name: 010418P2 Sample #: 3 Sample text: 0\_324\_MB001

Acquired: 18-APR-01 12:57:42 Processed: 18-APR-01 13:48:06

Total Conc.: 12.903 Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
32:11	/	3.889e+04 y	2.774e+04 y	1.40 y	6.663e+04	6.663e+04	5.68e+00	y	6.73	1,2,3,7,8-PeCDF
33:18	/	3.948e+04 y	2.256e+04 y	1.75 y	6.204e+04	6.204e+04	4.51e+00	y	6.17	2,3,4,7,8-PeCDF

Totals class: HxCDF EMPC Function: 3 Run #: 9  
 File Name: 010418P2 Sample #: 3 Sample text: 0\_324\_MB001

Acquired: 18-APR-01 12:57:42 Processed: 18-APR-01 13:48:06

Total Conc.: 45.252 Unnamed Conc.: \*

RT	m1	Resp mod.	m2	Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name
36:33	/	5.722e+04 n	4.609e+04 n	1.24 y	1.033e+05	1.033e+05	1.39e+01	y	13.5	1,2,3,4,7,8-HxCDF
36:41	/	6.526e+04 n	4.899e+04 n	1.33 y	1.142e+05	1.142e+05	1.36e+01	y	13.6	1,2,3,6,7,8-HxCDF
37:21	/	6.217e+04 n	4.226e+04 n	1.47 n	1.044e+05	9.466e+04	9.93e+00	y	12.0	2,3,4,6,7,8-HxCDF
38:24	/	2.872e+04 n	1.886e+04 n	1.52 n	4.758e+04	4.225e+04	5.67e+00	y	6.13	1,2,3,7,8,9-HxCDF

Totals class: HpCDF EMPC                      Function: 4 Run #: 9  
 File Name: 010418P2 Sample #: 3              Sample text: 0\_324\_MB001

Acquired: 18-APR-01 12:57:42      Processed: 18-APR-01 13:48:06

Total Conc.: 11.865                      Unnamed Conc.: \*

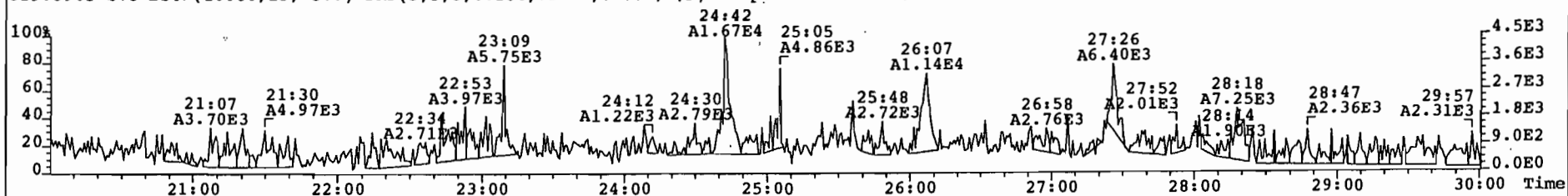
RT	m1 Resp mod.	m2 Resp mod.	RA	Resp	Adj_Resp	S/N	Conc.	Name				
40:24	4.513e+04	y	3.795e+04	y	1.19	y	8.309e+04	8.309e+04	3.33e+00	y	11.9	1,2,3,4,6,7,8-HpCDF



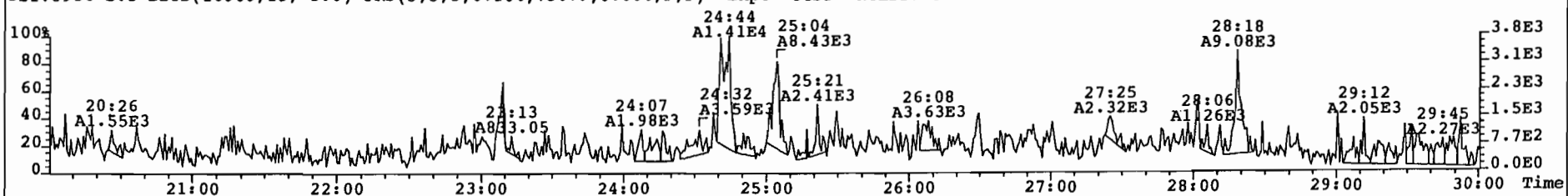
File: 010418E2 Acq: 18-APR-2001 12:57:42 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 3 Text: 0\_324\_MB001 Vial# 70 File Text: AAP DB5

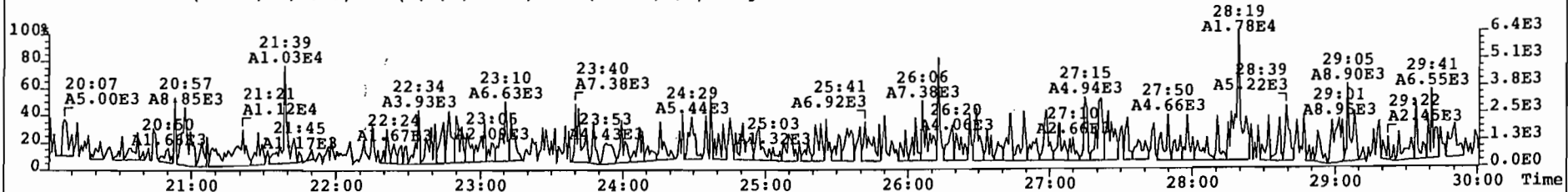
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 260



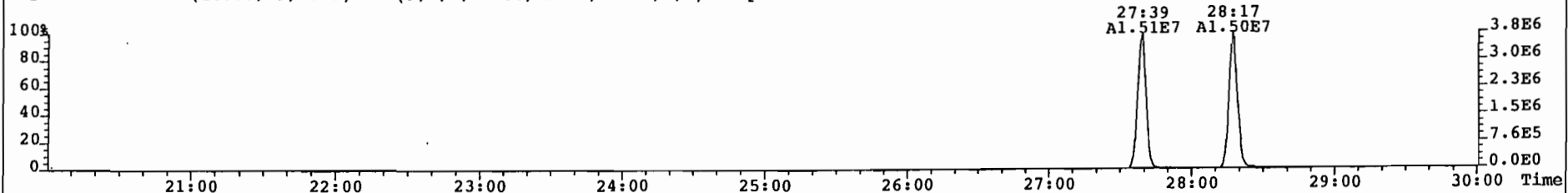
321.8936 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 218



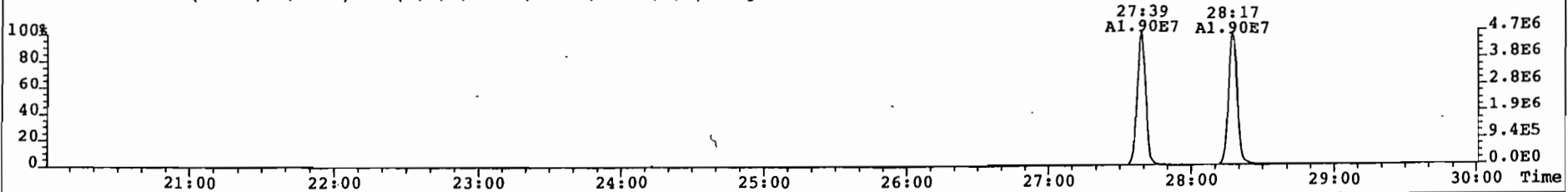
327.8850 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 271



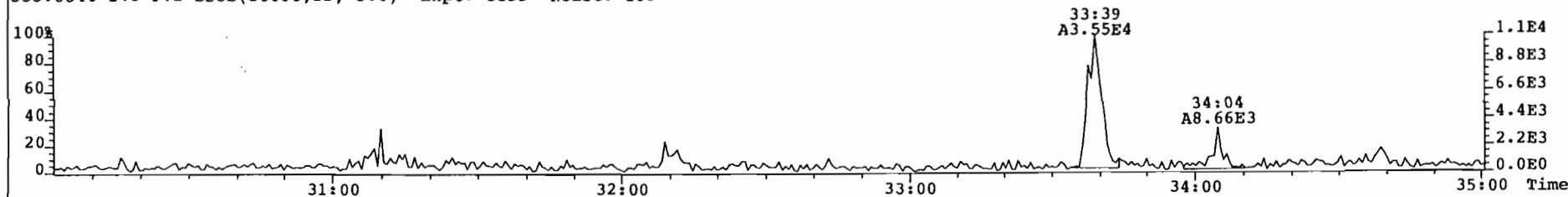
331.9368 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 902



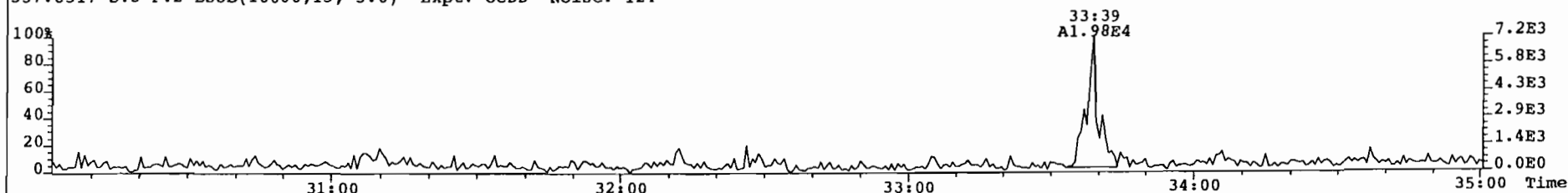
333.9339 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 597



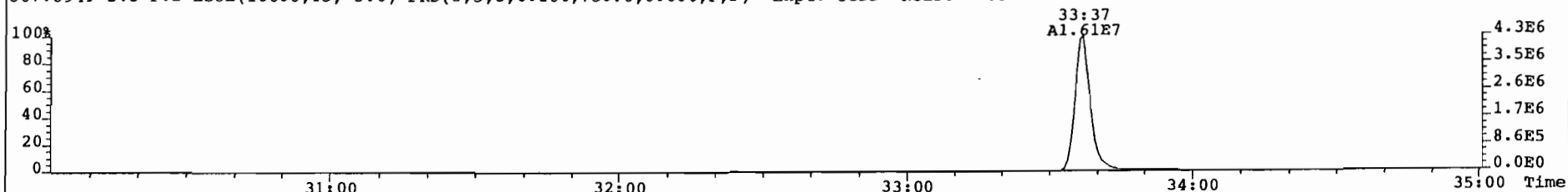
File: 010418P2 Acq: 18-APR-2001 12:57:42 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0 324 MB001 Vial# 70 File Text: AAP DB5  
355.8546 S:3 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 183



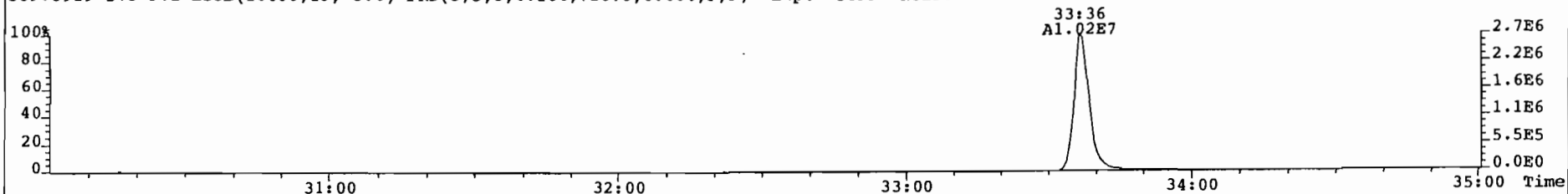
357.8517 S:3 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 124



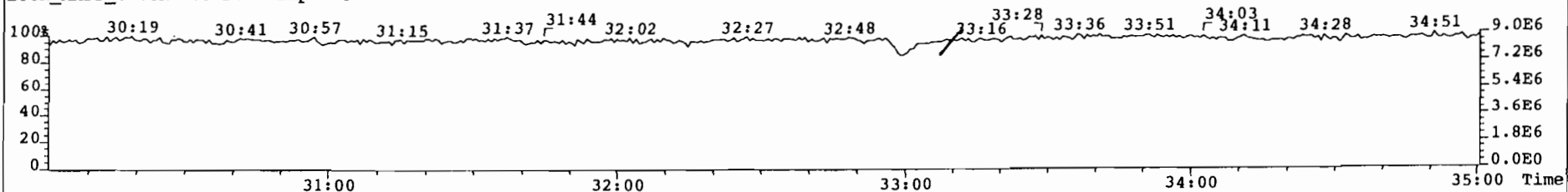
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 206



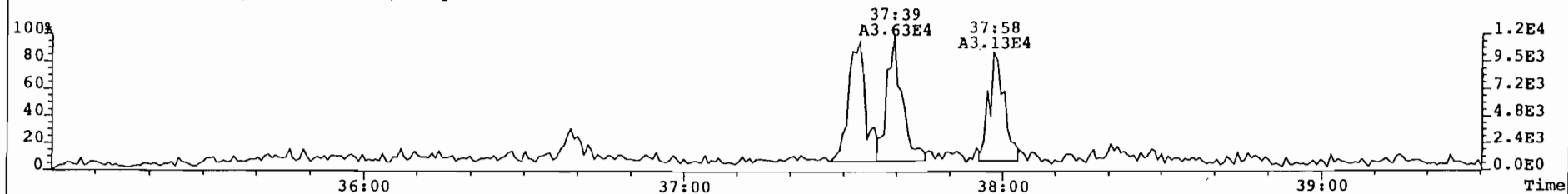
369.8919 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 172



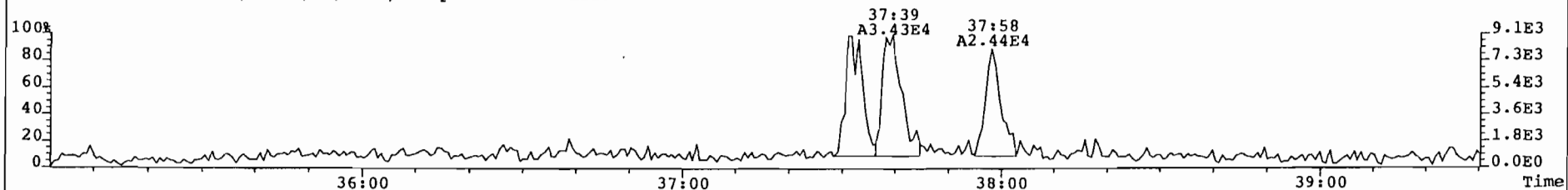
LOCK\_MASS\_CHECK S:3 F:2 Expt: OCDD



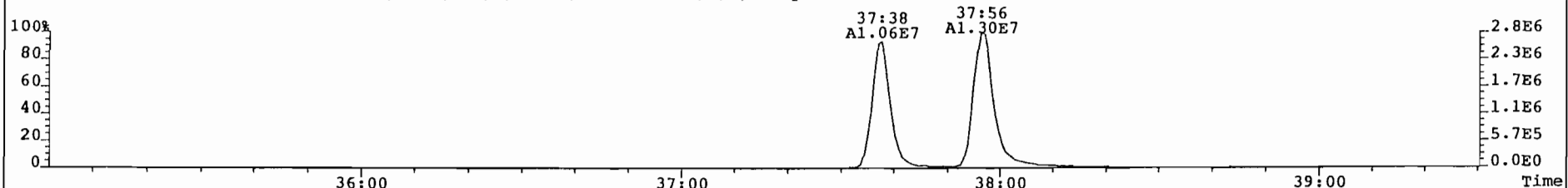
File: 010418P2 Acq: 18-APR-2001 12:57:42 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0 324 MB001 Vial# 70 File Text: AAP DB5  
389.8156 S:3 F:3 BSUB(10000,15,-3.0) Expt: OCDD Noise: 302



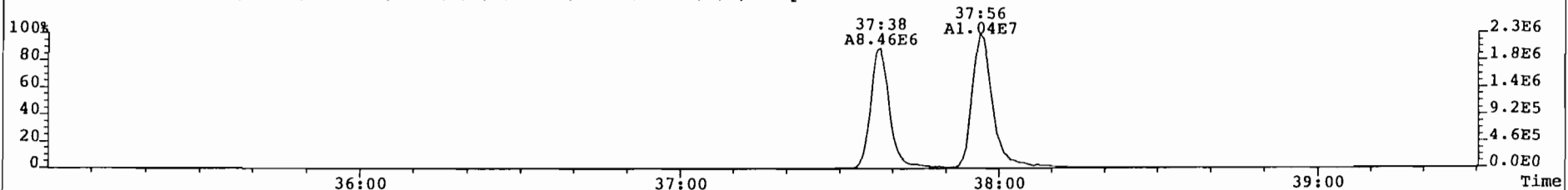
391.8127 S:3 F:3 BSUB(10000,15,-3.0) Expt: OCDD Noise: 266



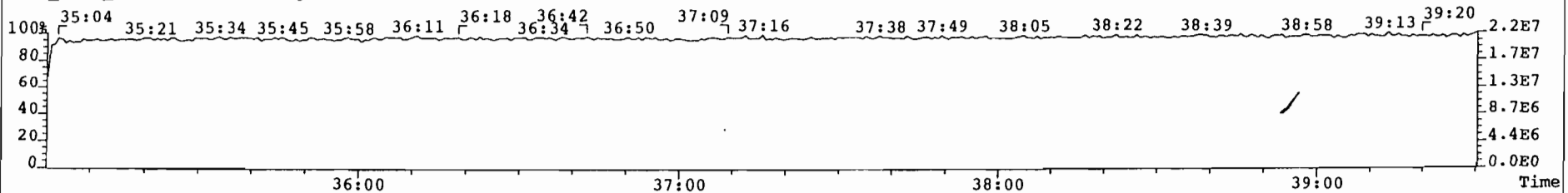
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 706



403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 284

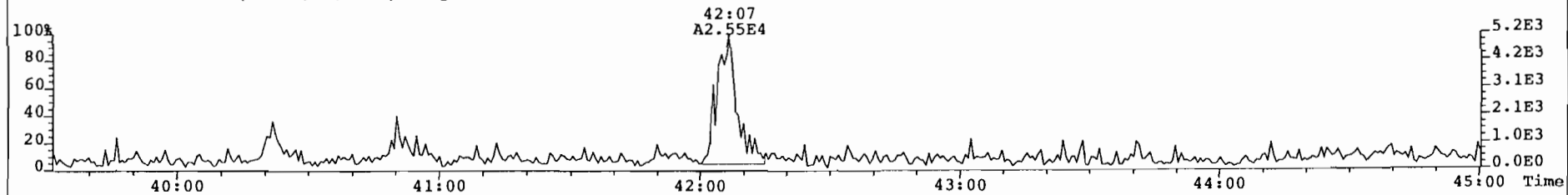


LOCK\_MASS\_CHECK S:3 F:3 Expt: OCDD

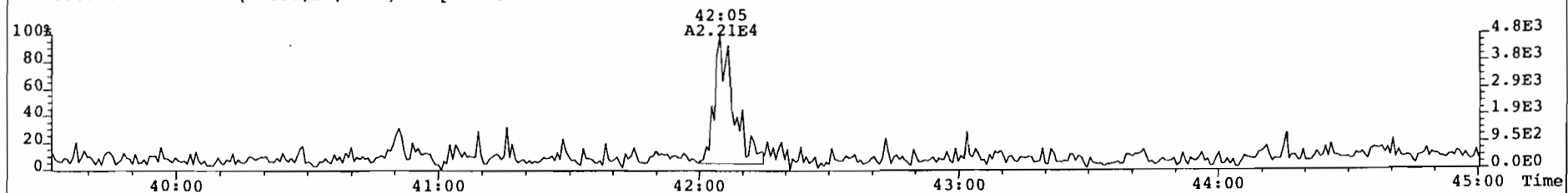


File: 010418P2 Acq: 18-APR-2001 12:57:42 GC EI+ Voltage SIR Autospec-UltimaE

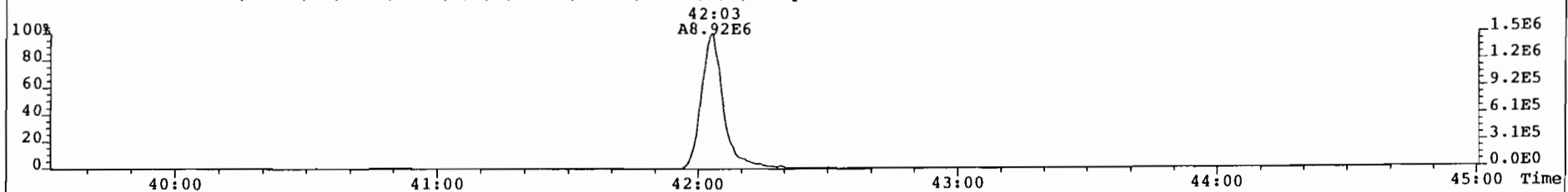
Sample# 3 Text: 0 324 MB001 Vial# 70 File Text: AAP DB5  
423.7767 S:3 F:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 140



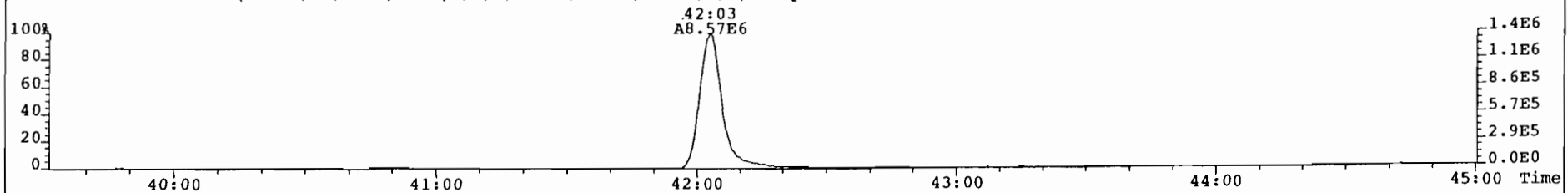
425.7737 S:3 F:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 129



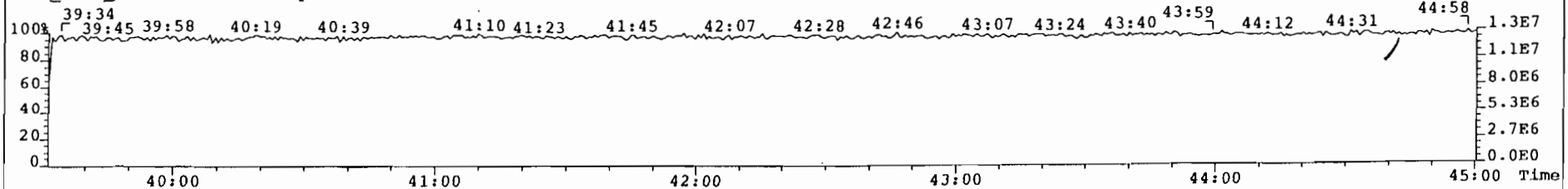
435.8169 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 610



437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 451



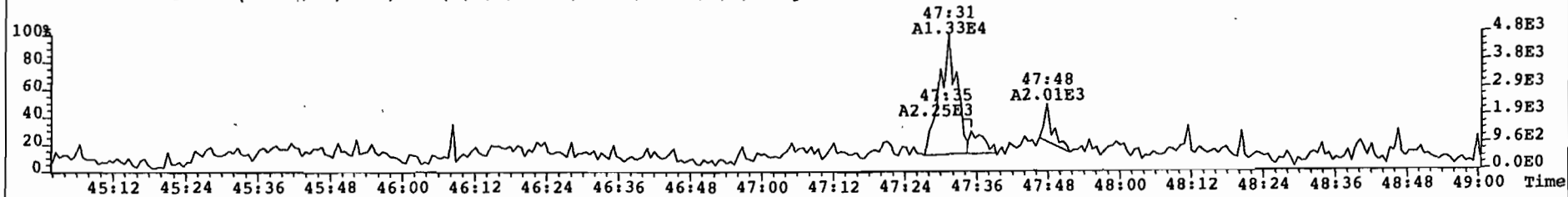
LOCK\_MASS\_CHECK S:3 F:4 Expt: OCDD



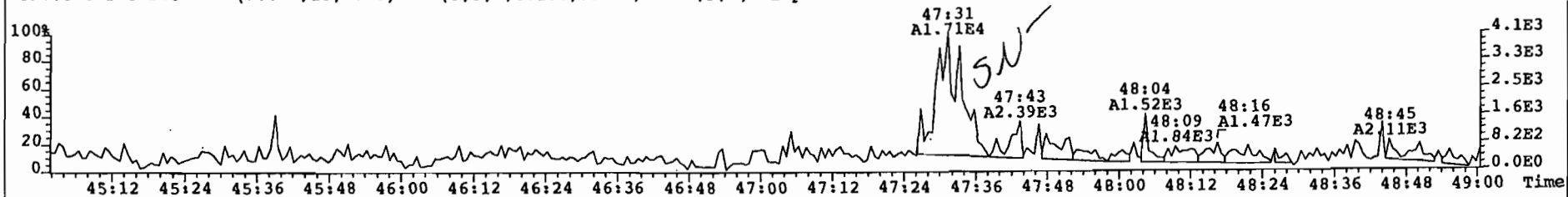
File: 010418P2 Acq: 18-APR-2001 12:57:42 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 3 Text: 0.324 MB001 Vial# 70 File Text: AAP DB5

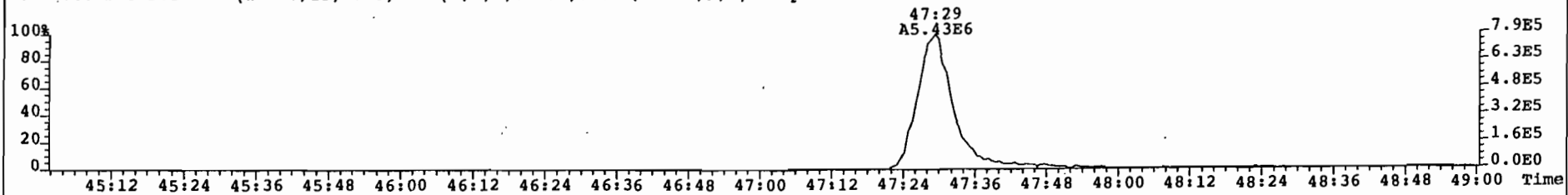
457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 193



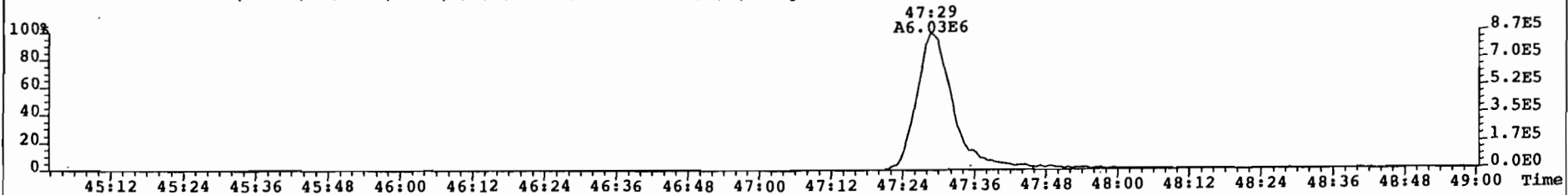
459.7348 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 145



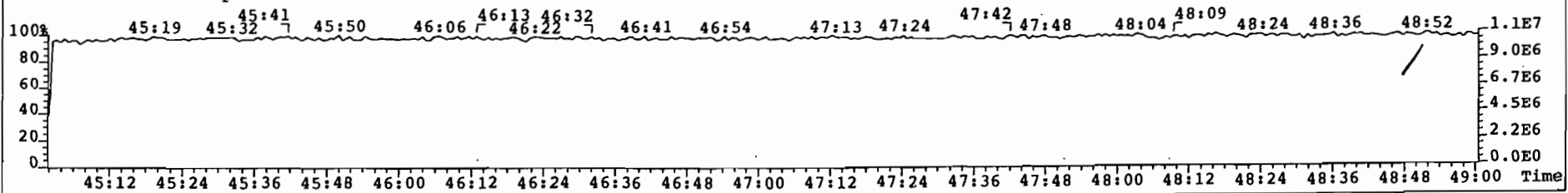
469.7780 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 237



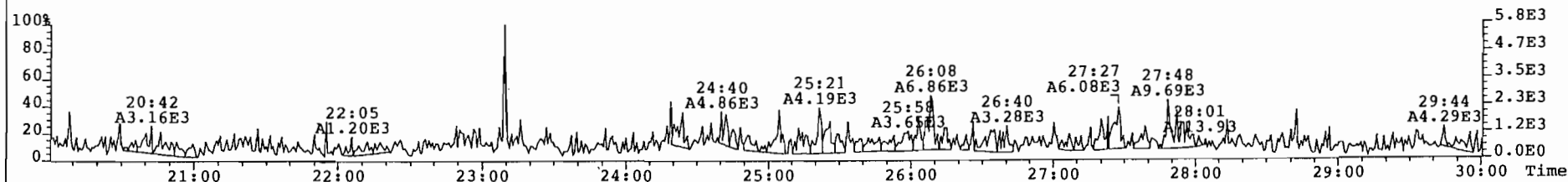
471.7750 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 166



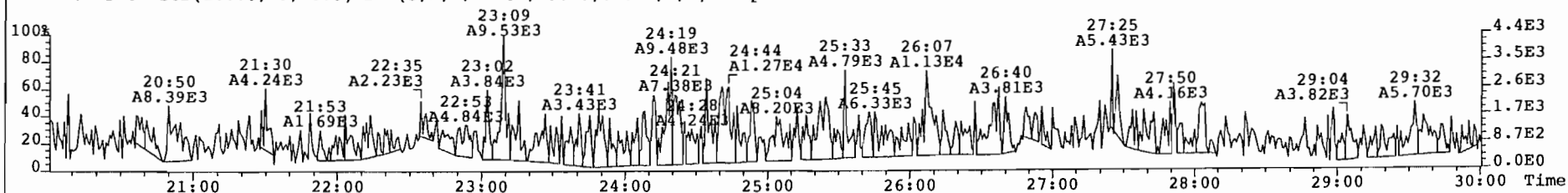
454.9728 S:3 F:5 Expt: OCDD



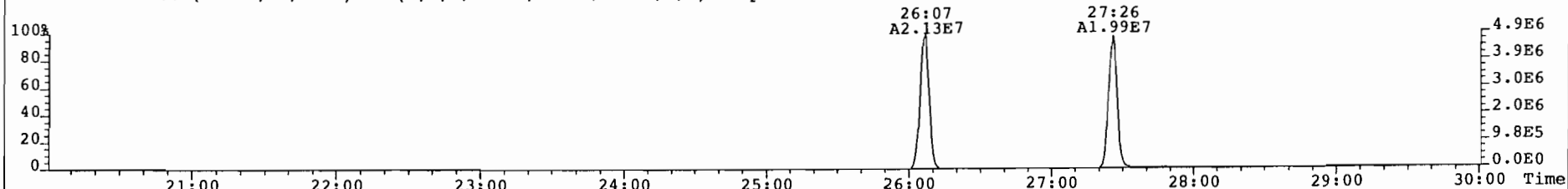
File: 010418P2 Acq: 18-APR-2001 12:57:42 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0 324 MB001 Vial# 70 File Text: AAP DB5  
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 216



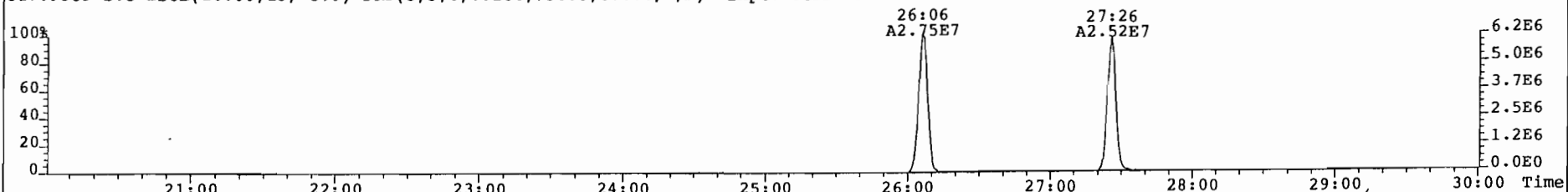
305.8987 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 318



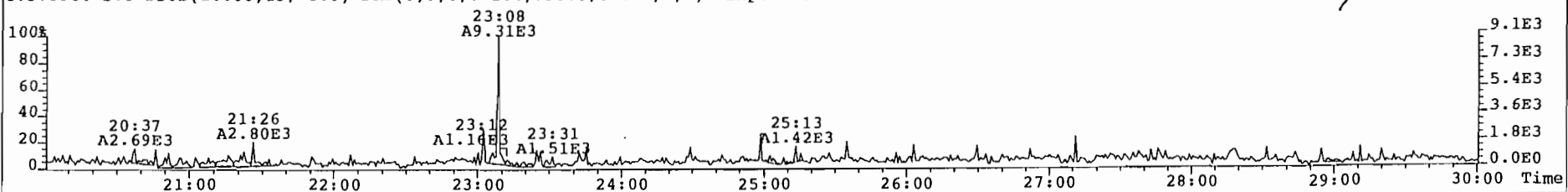
315.9419 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 379



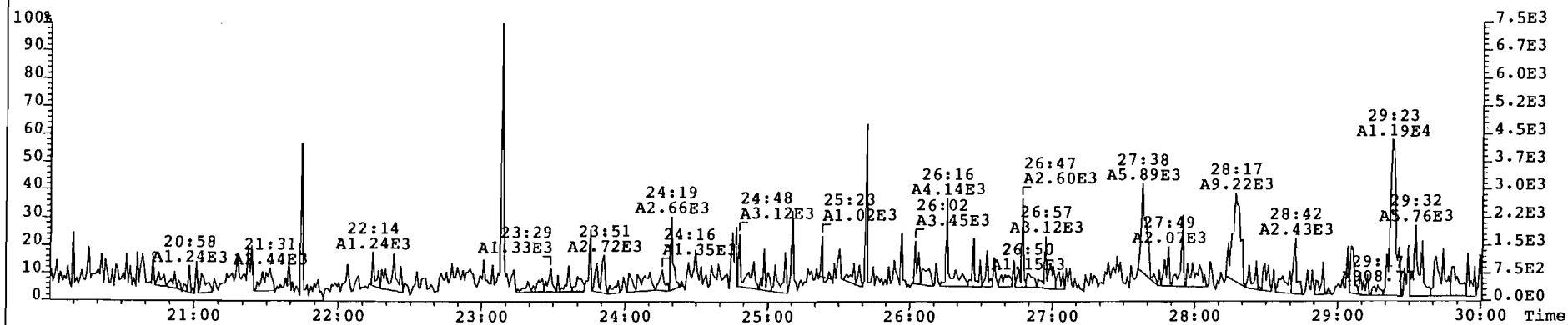
317.9389 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 622



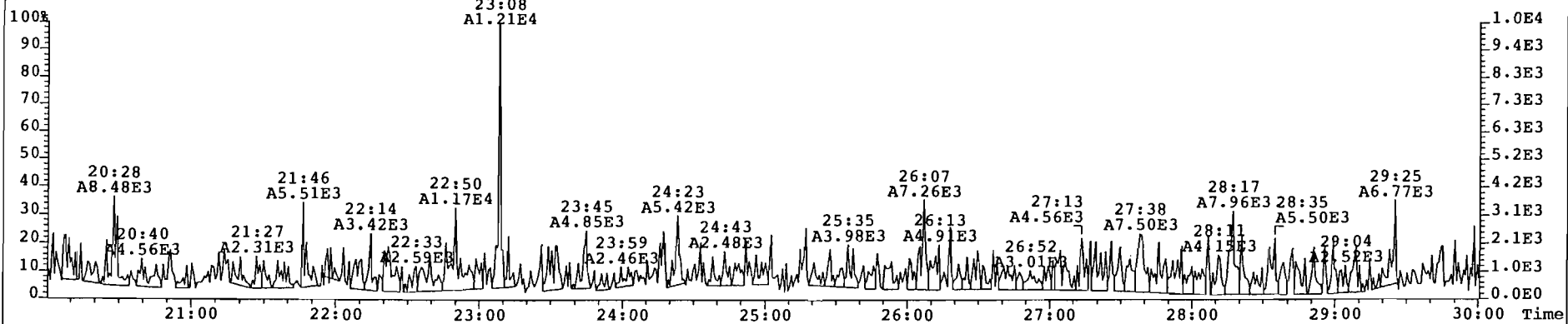
375.8364 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 154



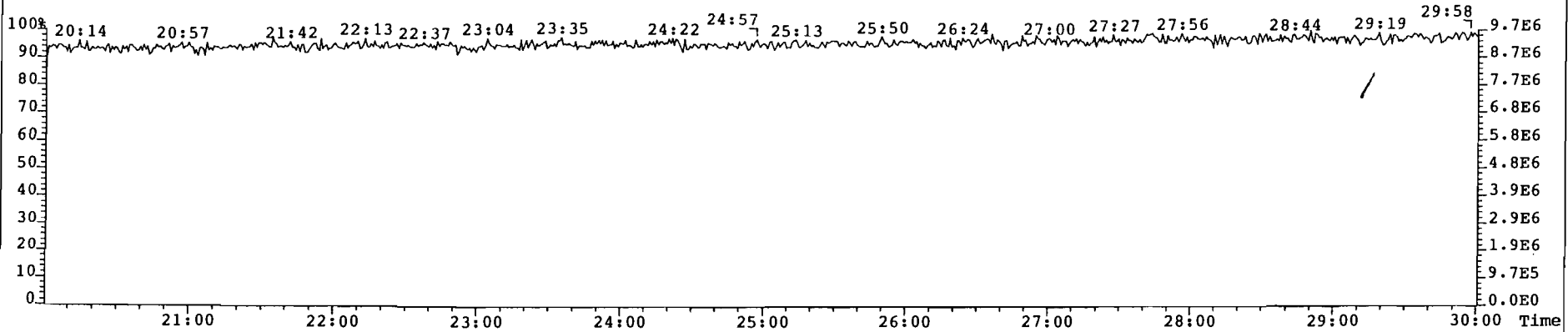
File: 010418P2 Acq: 18-APR-2001 12:57:42 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0\_324\_MB001 Vial# 70 File Text: AAP DB5  
339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 172



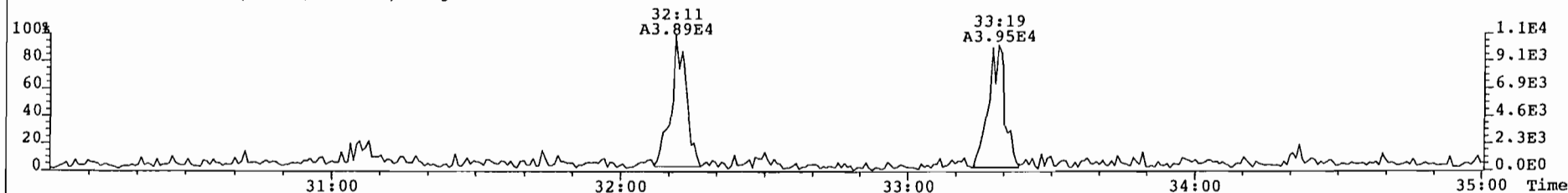
341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 278



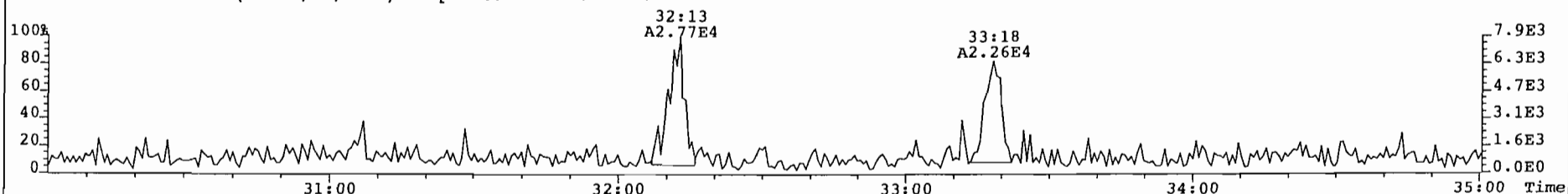
316.9824 S:3 Expt: OCDD



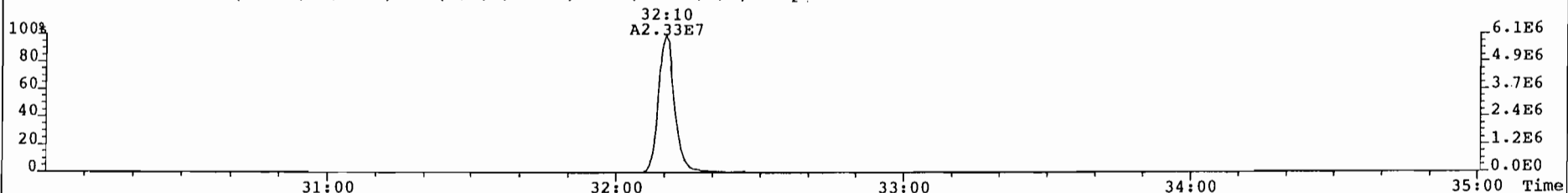
File: 010418P2 Acq: 18-APR-2001 12:57:42 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0\_324\_MB001 Vial# 70 File Text: AAP DB5  
339.8597 S:3 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 183



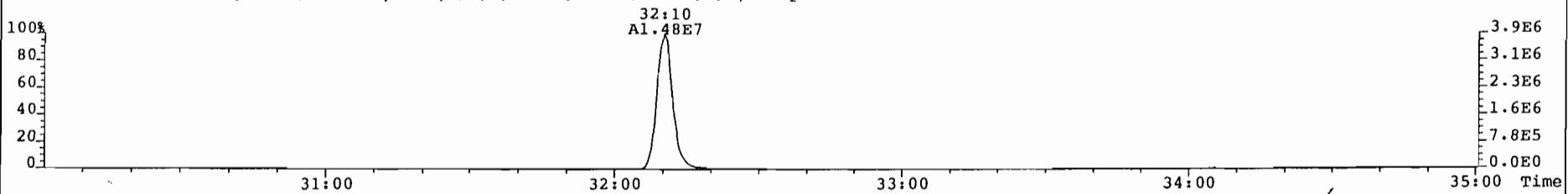
341.8568 S:3 F:2 BSUB(10000,15,-3.0) Expt: OCDD Noise: 259



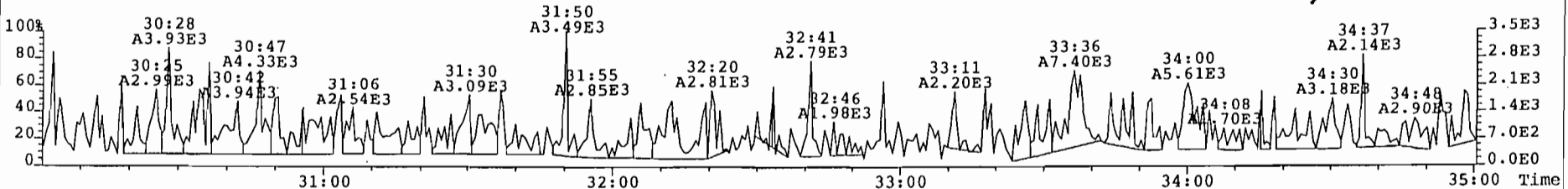
351.9000 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 202



353.8970 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 248

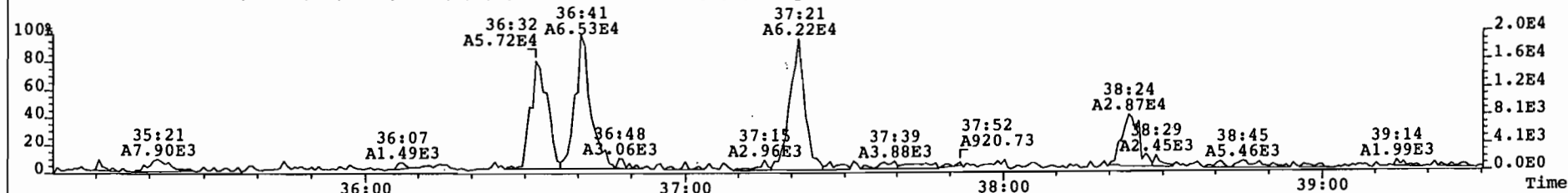


409.7974 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 228

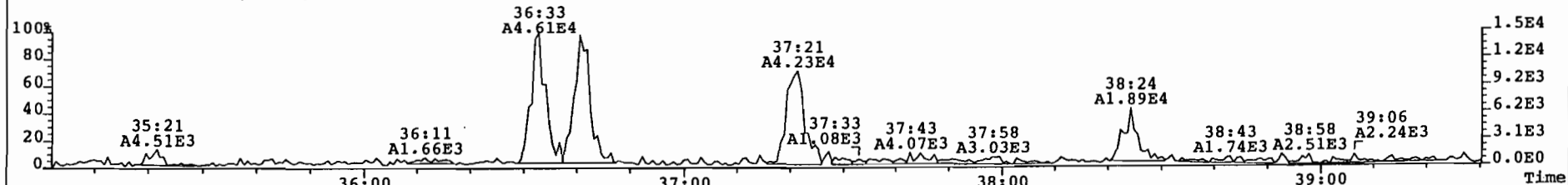




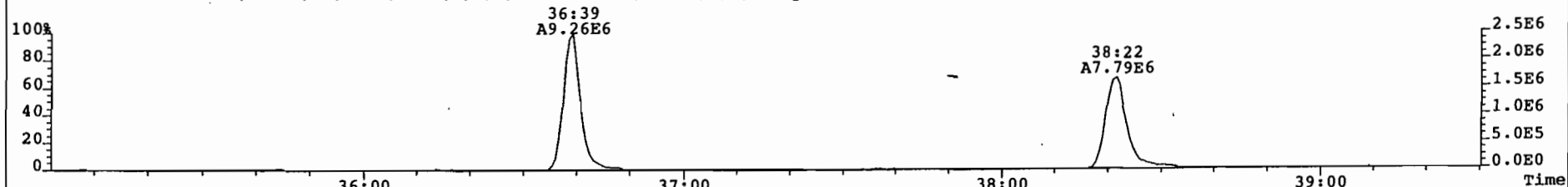
File: 010418P2 Acq: 18-APR-2001 12:57:42 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0\_324 MB001 Vial# 70 File Text: AAP DB5  
373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 233



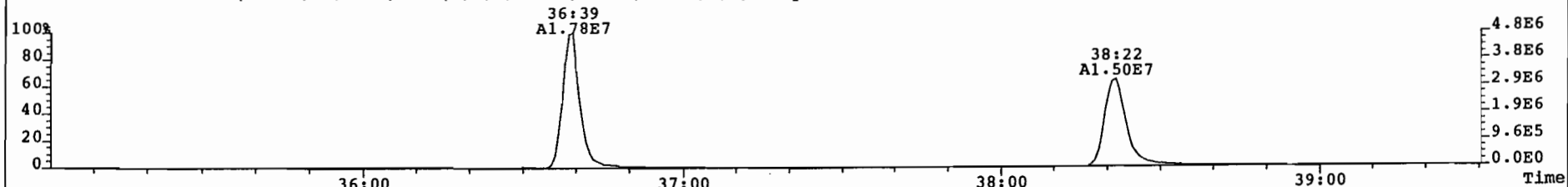
375.8178 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 203



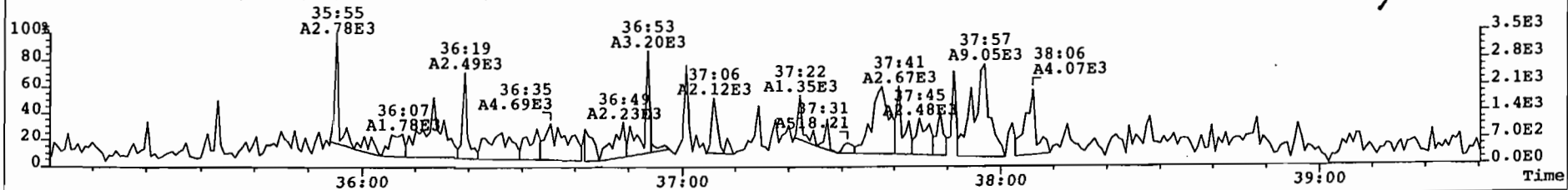
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1409



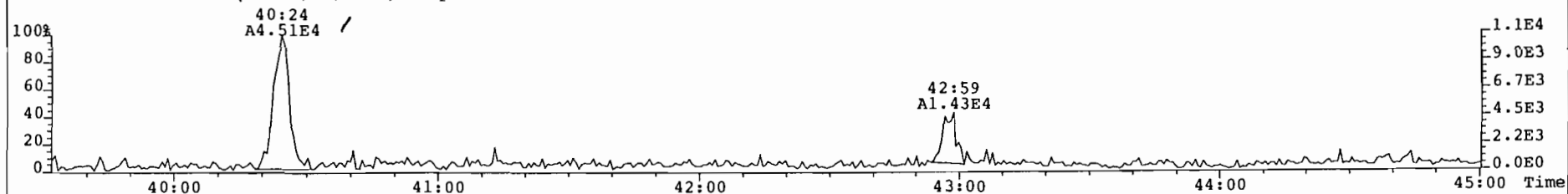
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1226



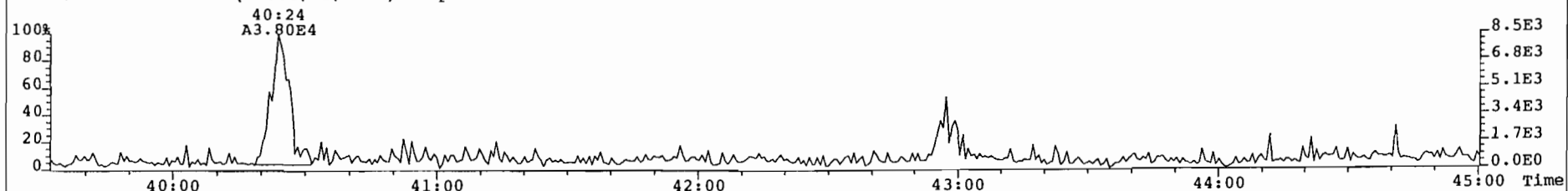
445.7555 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 189



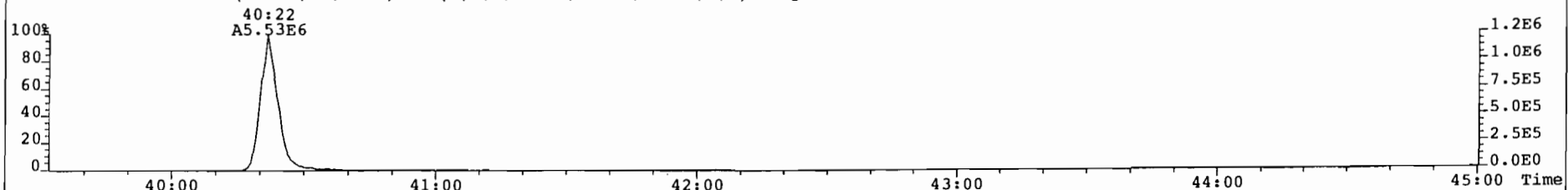
File: 010418P2 Acq: 18-APR-2001 12:57:42 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0.324 MB001 Vial# 70 File Text: AAP DB5  
407.7818 S:3 F:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 179



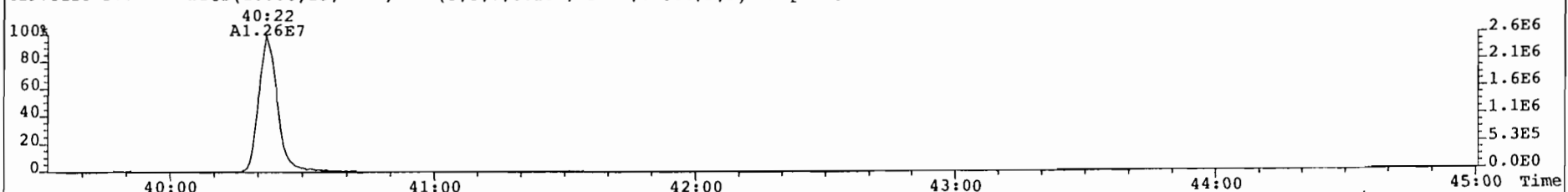
409.7788 S:3 F:4 BSUB(10000,15,-3.0) Expt: OCDD Noise: 195



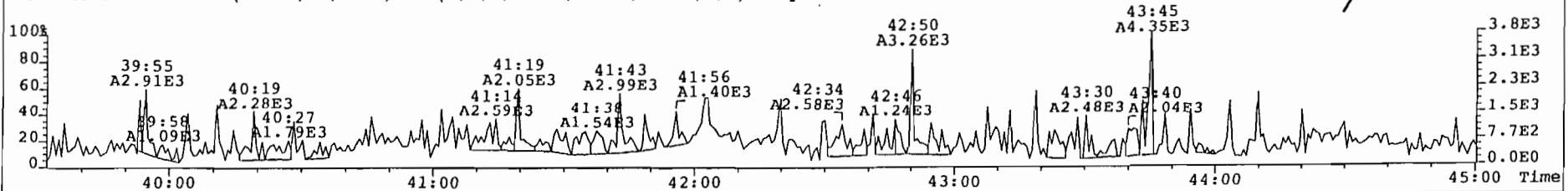
417.8253 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 263



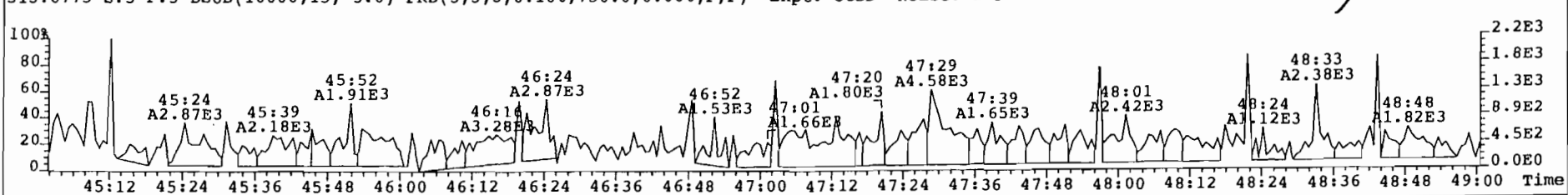
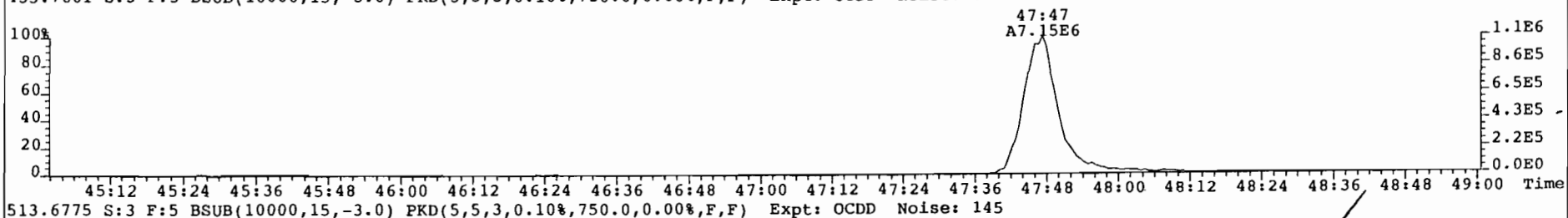
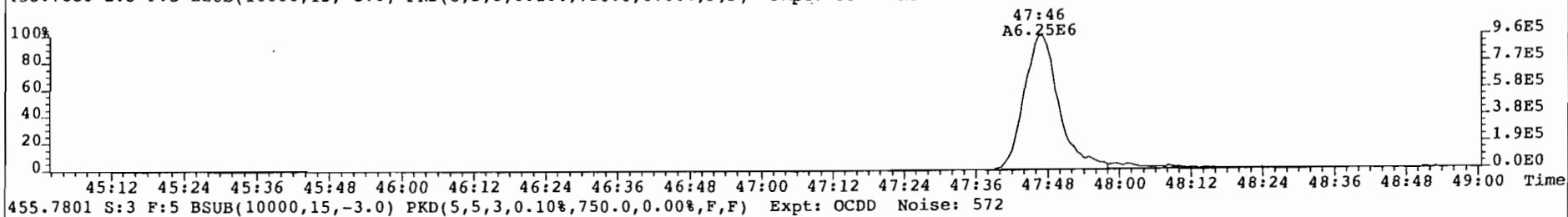
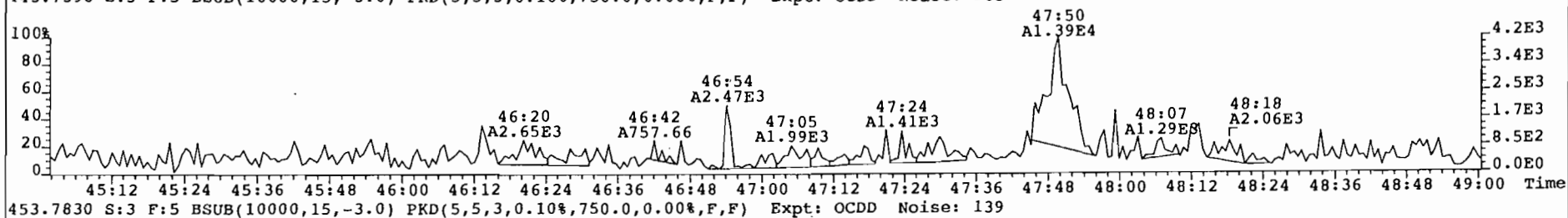
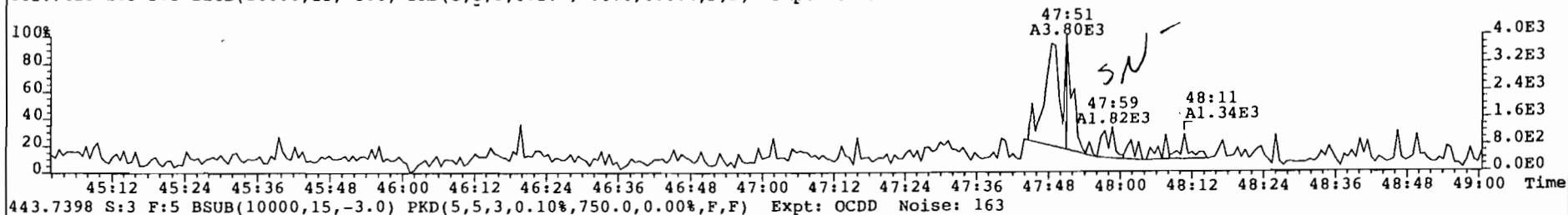
419.8220 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 604



479.7165 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 206



File: 010418E2 Acq: 18-APR-2001 12:57:42 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 3 Text: 0 324 MB001 Vial# 70 File Text: AAP DB5  
441.7428 S:3 F:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 137





ALTA ANALYTICAL PERSPECTIVES

## PART 4

# SYSTEM PERFORMANCE

MS & GC  
CONCAL

DOCUMENTATION FOR THE ANALYSIS  
OF  
POLYCHLORINATED DIBENZO-*p*-DIOXINS & DIBENZOFURANS

PCDD/PCDF CALIBRATION VERIFICATION

Alta Analytical Perspectives

Initial Calibration Date: 10/05/00 ✓

Instrument ID: MM-1 ✓ GC Column ID: DB-5

VER Data Filename: 010404P4 S#1 Analysis Date: 4-APR-01 Time: 20:48:12

Reviewer: CE

Date: 18 Apr 01

NATIVE ANALYTES	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	5.80 ✓	3.75 - 6.25
1,2,3,7,8-PeCDD	M+2/M+4	1.56	1.32-1.78	y	29.13 ✓	18.75-31.25
1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	28.14 ✓	18.75-31.25
1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	29.13 ✓	18.75-31.25
1,2,3,7,8,9-HxCDD	M+2/M+4	1.27	1.05-1.43	y	28.38 ✓	18.75-31.25
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	y	27.30 ✓	18.75-31.25
OCDD	M+2/M+4	0.88	0.76-1.02	y	55.57 ✓	37 - 65
2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	y	5.38 ✓	3.75 - 6.25
1,2,3,7,8-PeCDF	M+2/M+4	1.62	1.32-1.78	y	27.79 ✓	18.75-31.25
2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	y	27.83 ✓	18.75-31.25
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	28.41 ✓	18.75-31.25
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	27.79 ✓	18.75-31.25
2,3,4,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	28.84 ✓	18.75-31.25
1,2,3,7,8,9-HxCDF	M+2/M+4	1.24	1.05-1.43	y	28.13 ✓	18.75-31.25
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.03	0.88-1.20	y	27.61 ✓	18.75-31.25
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.04	0.88-1.20	y	26.17 ✓	18.75-31.25
OCDF	M+2/M+4	0.91	0.76-1.02	y	53.79 ✓	35 - 65

Analyst: GAG

Date: 17 APR 01

PCDD/PCDF CALIBRATION VERIFICATION

Alta Analytical Perspectives

Initial Calibration Date: 10/05/00 ✓

Instrument ID: MM-1 ✓ GC Column ID: DB-5

VER Data Filename: 010404P4 S#1 Analysis Date: 4-APR-01 Time: 20:48:12

Reviewer: ce

Date: 18 April

LABELED COMPOUNDS	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	91.6 ✓	70.0 - 130.0
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.58	1.32-1.78	y	95.6 ✓	70.0 - 130.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	95.5 ✓	70.0 - 130.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	y	101.3 ✓	70.0 - 130.0
13C-OCDD	M+2/M+4	0.91	0.76-1.02	y	93.2 ✓	70.0 - 130.0
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	91.9 ✓	70.0 - 130.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	90.1 ✓	70.0 - 130.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	96.8 ✓	70.0 - 130.0
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	y	106.7 ✓	70.0 - 130.0
13C-OCDF	M+2/M+4	0.88	0.76-1.02	y	99.7 ✓	70.0 - 130.0
37Cl-2,3,7,8-TCDD					105.3 ✓	75.0 - 125.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	y	103.1 ✓	75.0 - 125.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.28	1.05-1.43	y	101.9 ✓	75.0 - 125.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	106.9 ✓	75.0 - 125.0
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.45	0.37-0.51	y	99.7 ✓	75.0 - 125.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	y	102.2 ✓	75.0 - 125.0

Analyst: GAG

Date: 17 April

Client ID: DB5 CPSM / M23 CS3  
 Lab ID: CS3RCX

Filename: 010404P4  
 GC Column ID: db-5

S: 1 Acq: 4-APR-01 20:48:12  
 ICal: MM1\_M23\_0 wt/vol: 1.000

ConCal: 010404P4-  
 EndCal: 010404P4-

Name	Resp	RA	RRF	RT	Conc	Qualif.	CDE	noise	Fac	DL
2,3,7,8-TCDD	2.62e+06	0.79	1.26	28:21	5.80			1347	2.5	0.0549
1,2,3,7,8-PeCDD	9.00e+06	1.56	1.01	33:40	29.1			2195	2.5	0.166
1,2,3,4,7,8-HxCDD	8.30e+06	1.28	1.14	37:33	28.1			3033	2.5	0.241
1,2,3,6,7,8-HxCDD	7.72e+06	1.26	1.02	37:40	29.1			3033	2.5	0.268
1,2,3,7,8,9-HxCDD	8.40e+06	1.27	1.14	38:00	28.4			3033	2.5	0.240
1,2,3,4,6,7,8-HpCDD	8.21e+06	1.05	1.13	42:08	27.3			3344	2.5	0.339
OCDD	1.13e+07	0.88	1.03	47:34	55.6			1343	2.5	0.206
2,3,7,8-TCDF	2.84e+06	0.77	1.05	27:30	5.38			1773	2.5	0.0631
1,2,3,7,8-PeCDF	1.29e+07	1.62	1.04	32:13	27.8			3038	2.5	0.142
2,3,4,7,8-PeCDF	1.31e+07	1.57	1.05	33:19	27.8			3038	2.5	0.140
1,2,3,4,7,8-HxCDF	1.16e+07	1.25	1.13	36:34	28.4			3973	2.5	0.134
1,2,3,6,7,8-HxCDF	1.24e+07	1.25	1.24	36:42	27.8			3973	2.5	0.123
2,3,4,6,7,8-HxCDF	1.21e+07	1.25	1.16	37:22	28.8			3973	2.5	0.130
1,2,3,7,8,9-HxCDF	1.03e+07	1.24	1.02	38:25	28.1			3973	2.5	0.149
1,2,3,4,6,7,8-HpCDF	1.19e+07	1.03	1.54	40:26	27.6			3344	2.5	0.142
1,2,3,4,7,8,9-HpCDF	9.51e+06	1.04	1.30	42:59	26.2			3344	2.5	0.169
OCDF	1.45e+07	0.91	1.15	47:52	53.8			1826	2.5	0.204
Total Tetra-Dioxins	1.06e+07	0.81	1.26	24:46	23.5			1347	2.5	0.0549
Total Penta-Dioxins	2.37e+07	1.55	1.01	31:10	76.6			2195	2.5	0.166
Total Hexa-Dioxins	2.53e+07	1.26	1.10	35:50	88.6			3033	2.5	0.249
Total Hepta-Dioxins	1.53e+07	1.05	1.13	40:53	50.9			3344	2.5	0.339
Total Tetra-Furans	9.62e+06	0.78	1.05	22:42	18.2			1773	2.5	0.0631
1st Fnc. Penta-Furans	9.98e+06	1.57	1.05	29:25	21.3			2181	2.5	0.101
Total Penta-Furans	3.63e+07	1.62	1.05	32:13	77.6			3038	2.5	0.141
PeCDF Totals:					98.9					99.1
Total Hexa-Furans	4.78e+07	1.22	1.14	35:11	117			3973	2.5	0.133
Total Hepta-Furans	2.14e+07	1.03	1.42	40:26	53.8			3344	2.5	0.154
IS 13C-2,3,7,8-TCDD	3.58e+07	0.79	1.13	28:19	91.6					91.6
IS 13C-1,2,3,7,8-PeCDD	3.05e+07	1.58	0.93	33:39	95.6					95.6
IS 13C-1,2,3,6,7,8-HxCDD	2.59e+07	1.29	0.93	37:40	95.5					95.5
IS 13C-1,2,3,4,6,7,8-HpCDD	2.67e+07	1.07	0.91	42:06	101					101
IS 13C-OCDD	1.99e+07	0.91	0.73	47:33	93.2					93.2
IS 13C-2,3,7,8-TCDF	5.05e+07	0.80	1.06	27:28	91.9					91.9
IS 13C-1,2,3,7,8-PeCDF	4.47e+07	1.59	0.96	32:12	90.1					90.1
IS 13C-1,2,3,6,7,8-HxCDF	3.61e+07	0.53	1.28	36:41	96.8					96.8
IS 13C-1,2,3,4,6,7,8-HpCDF	2.80e+07	0.45	0.90	40:25	107					107
IS 13C-OCDF	2.35e+07	0.88	0.81	47:51	99.7					99.7
RS/RT 13C-1,2,3,4-TCDD	3.45e+07	0.79	1.00	27:41	100					-
RS 13C-1,2,3,4-TCDF	5.18e+07	0.78	1.00	26:09	100					-
RS/RT 13C-1,2,3,7,8,9-HxCDD	2.91e+07	1.27	1.00	37:59	100					-
PS 37Cl-2,3,7,8-TCDD	1.94e+07		0.51	28:21	105					105
PS 13C-2,3,4,7,8-PeCDF	4.49e+07	1.57	0.97	33:18	103					103
PS 13C-1,2,3,4,7,8-HxCDD	2.43e+07	1.28	0.92	37:32	102					102
PS 13C-1,2,3,4,7,8-HxCDF	3.51e+07	0.53	0.91	36:32	107					107
PS 13C-1,2,3,4,7,8,9-HpCDF	2.38e+07	0.45	0.85	42:58	99.7					99.7
AS 13C-1,2,3,7,8,9-HxCDF	3.18e+07	0.52	1.07	38:24	102					102

Reviewer: CE

Date: 18 Apr 01

EMPC  
 23.5  
 76.6  
 88.6  
 50.9  
 18.2  
 21.3  
 99.1  
 117  
 53.8

Rec  
 91.6  
 95.6  
 95.5  
 101  
 93.2  
 91.9  
 90.1  
 96.8  
 107  
 99.7

Analyst: GAG

105  
 103  
 102  
 107  
 99.7  
 102  
 Date: 17 Apr 01

FORM 5  
PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Alta Analytical Perspectives Episode No.:

Contract No.:

SAS No.:

Reviewer: ce

Instrument ID: MM-1 ✓

Initial Calibration Date: 10/05/00 ✓

Date: 18 Apr 01

RT Window Data Filename: 010404P4 S#1 Analysis Date: 4-APR-01 Time: 20:48:12

DB-5 IS Data Filename: 010404P4 S#1 Analysis Date: 4-APR-01 Time: 20:48:12

DB\_225 IS Data Filename: Analysis Date: Time:

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:46 ✓	1,3,6,8-TCDF (F)	22:42 ✓
1,2,8,9-TCDD (L)	29:19 ✓	1,2,8,9-TCDF (L)	29:29 ✓
1,2,4,7,9-PeCDD (F)	31:10 ✓	1,3,4,6,8-PeCDF (F)	29:25 ✓
1,2,3,8,9-PeCDD (L)	34:06 ✓	1,2,3,8,9-PeCDF (L)	34:24 ✓
1,2,4,6,7,9-HxCDD (F)	35:50 ✓	1,2,3,4,6,8-HxCDF (F)	35:11 ✓
1,2,3,7,8,9-HxCDD (L)	38:00 ✓	1,2,3,7,8,9-HxCDF (L)	38:25 ✓
1,2,3,4,6,7,9-HpCDD (F)	40:53 ✓	1,2,3,4,6,7,8-HpCDF (F)	40:26 ✓
1,2,3,4,6,7,8-HpCDD (L)	42:08 ✓	1,2,3,4,7,8,9-HpCDF (L)	42:59 ✓

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

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

% VALLEY HEIGHT  
BETWEEN  
COMPARED PEAKS (1)

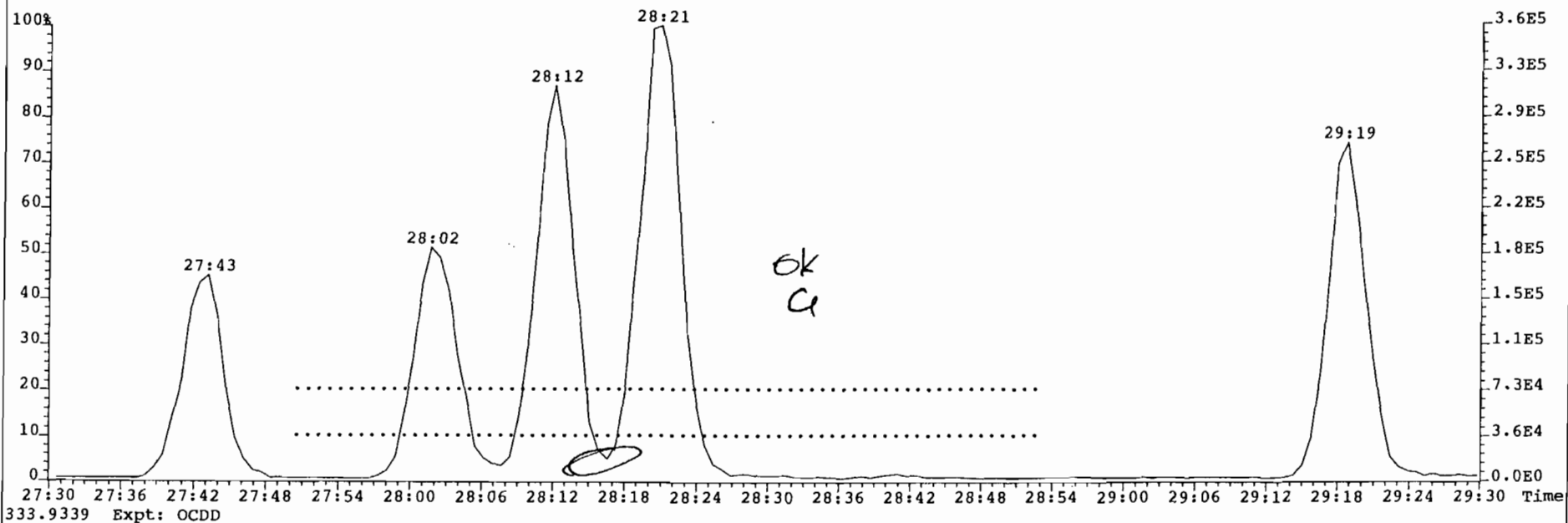
<25%

Analyst: GAG

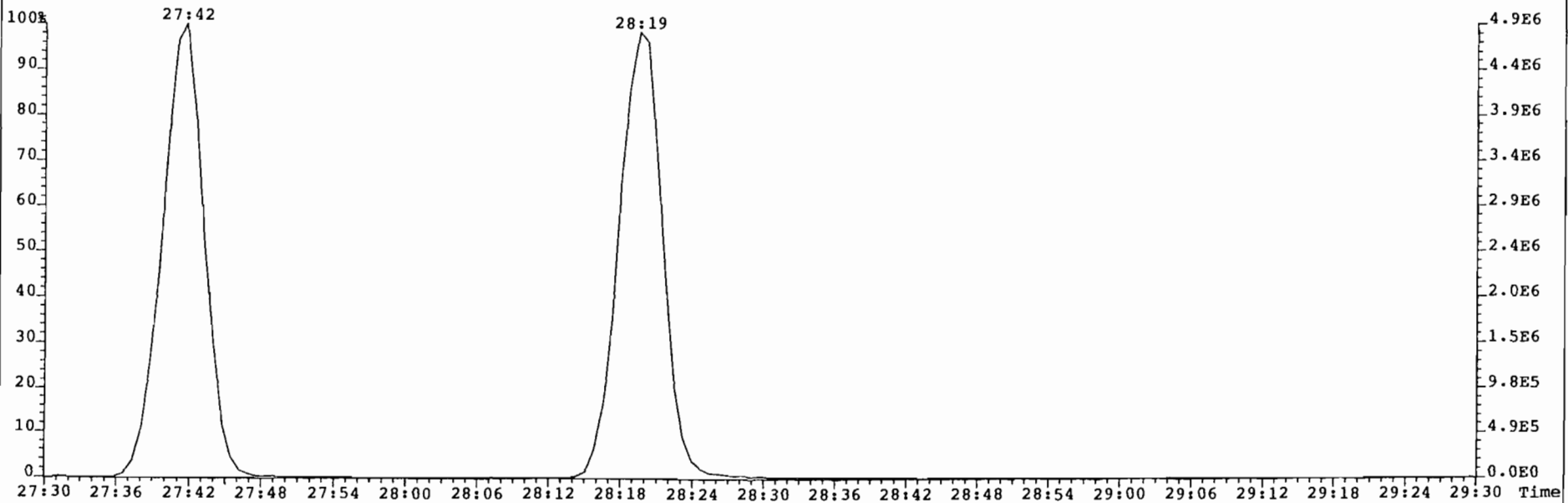
Date: 17 Apr 01



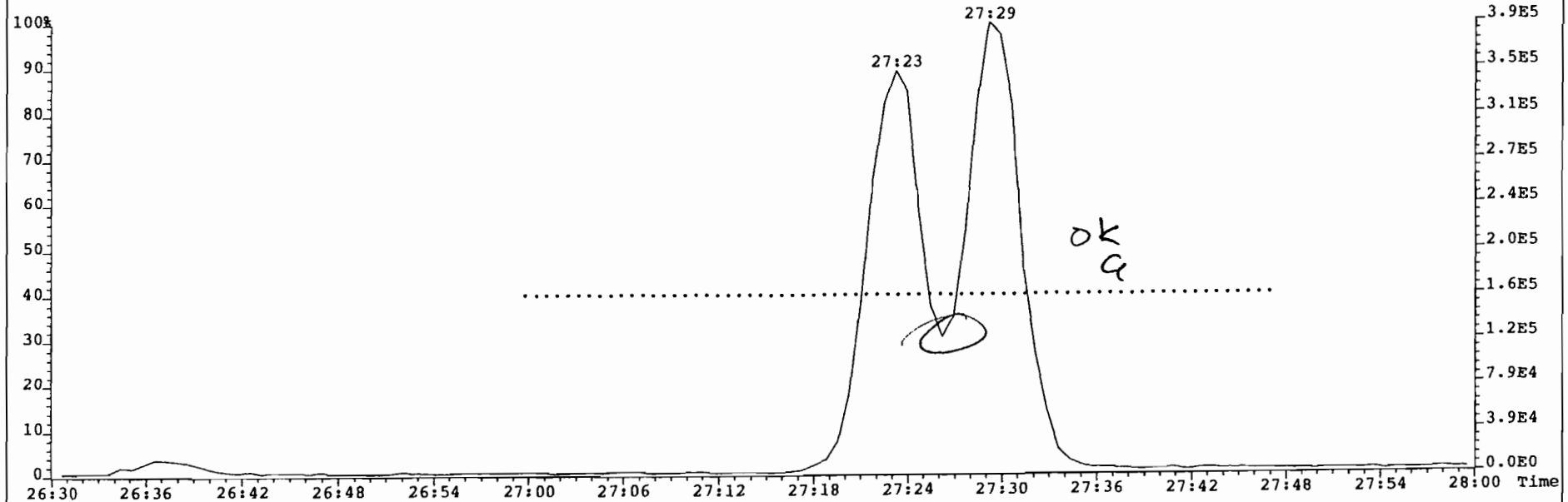
File: 010404P4 Acq: 4-APR-2001 20:48:12 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
321.8936 Expt: OCDD



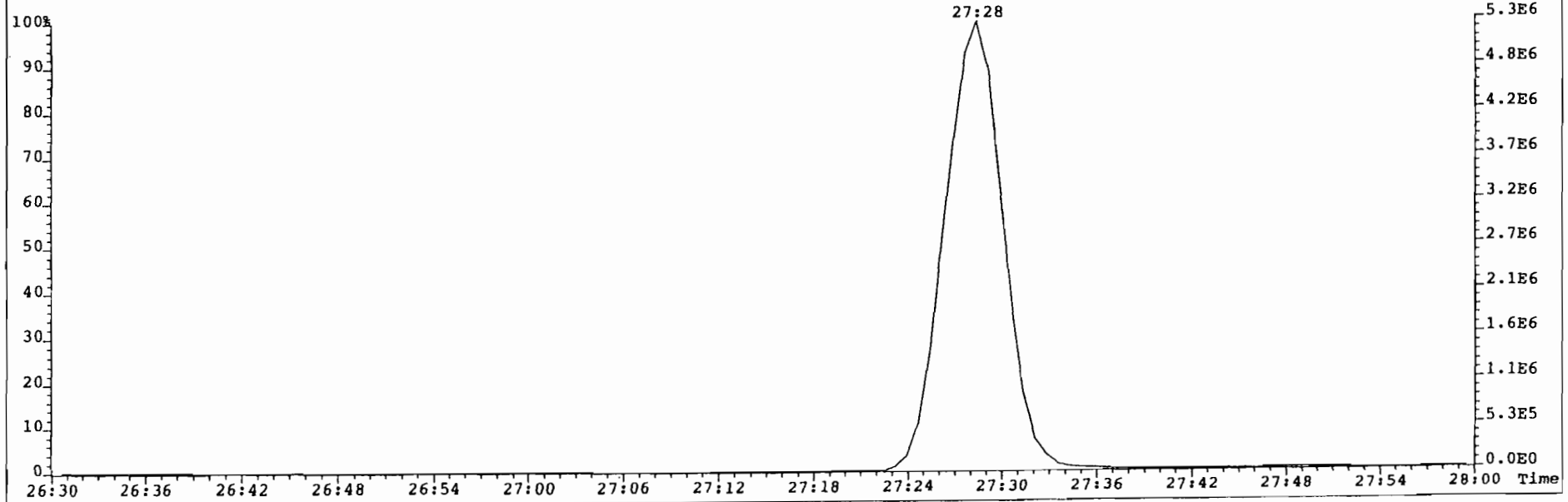
333.9339 Expt: OCDD



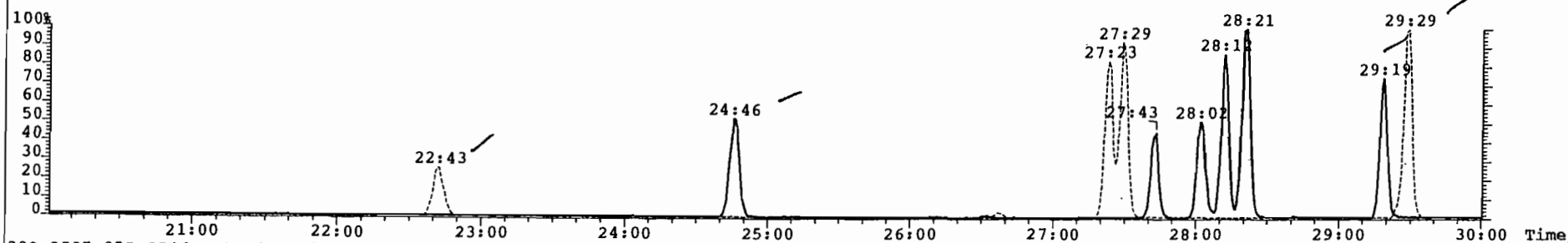
File: 010404P4 Acq: 4-APR-2001 20:48:12 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
305.8987 Expt: OCDD



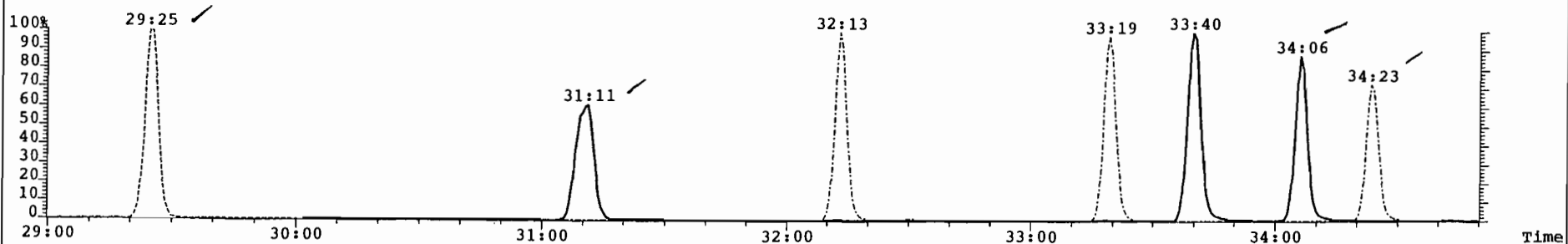
315.9419 Expt: OCDD



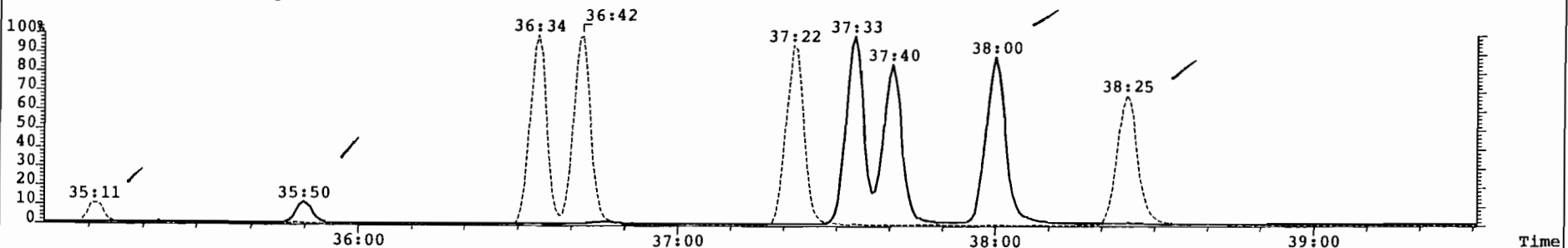
File: 010404P4 Acq: 4-APR-2001 20:48:12 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
305.8987,321.8936 Expt: OCDD



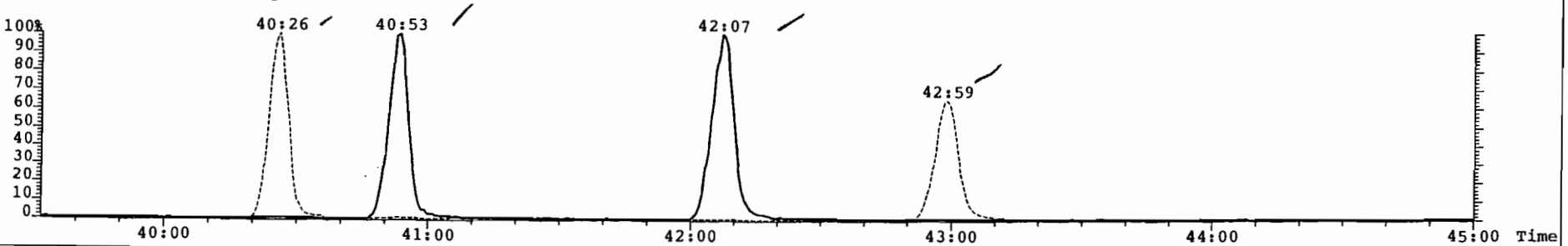
339.8597,355.8546 F:2,339.8597 F:2 Expt: OCDD



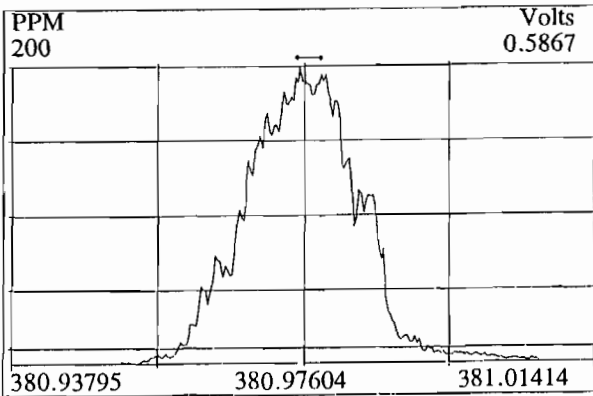
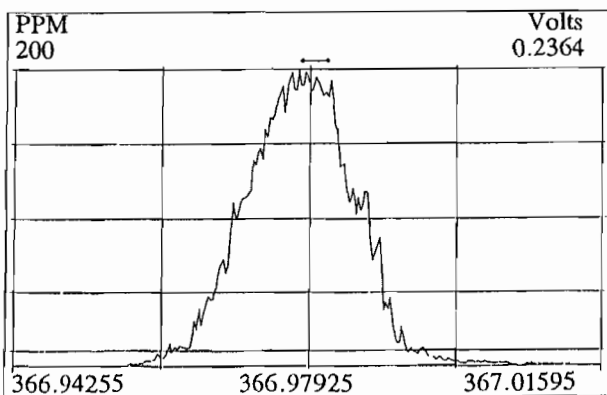
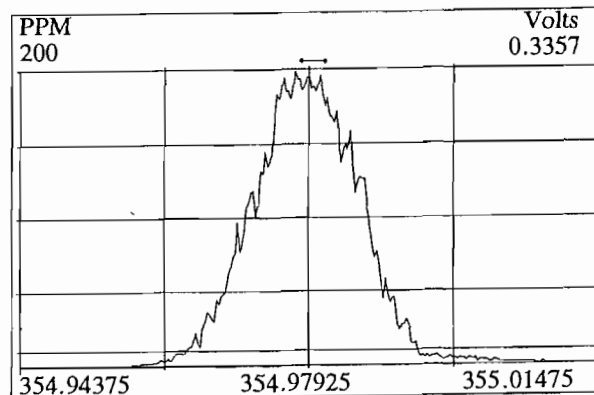
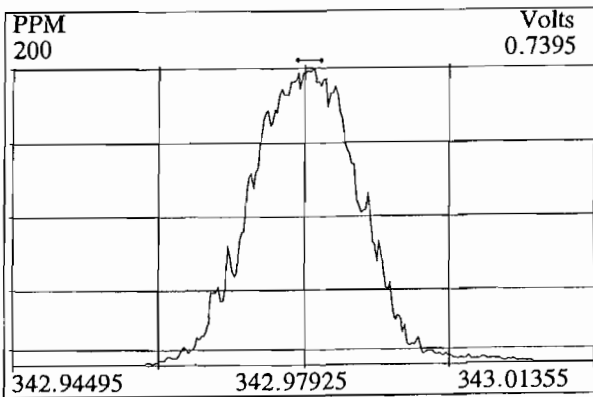
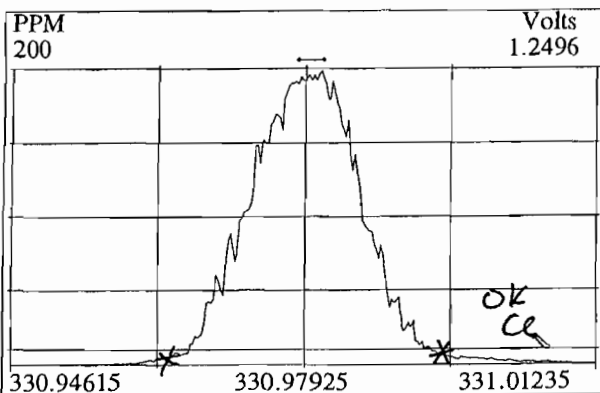
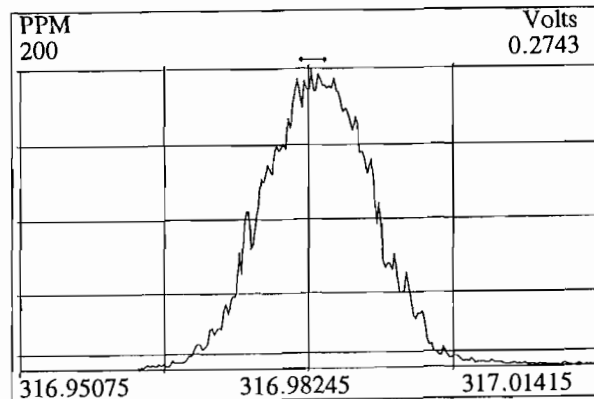
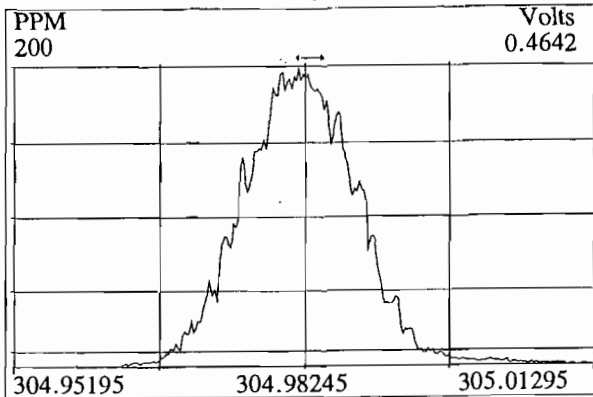
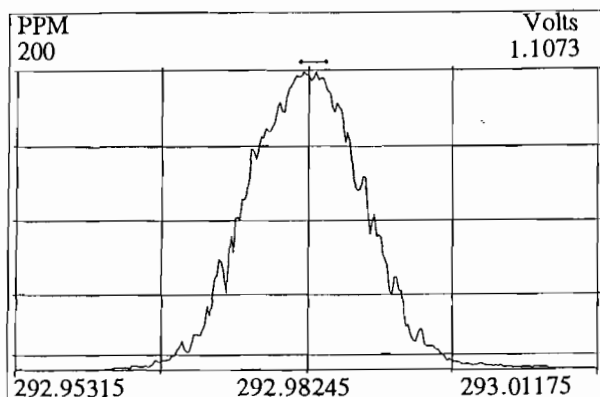
F:3 373.8207,389.8156 Expt: OCDD



F:4 407.7818,423.7767 Expt: OCDD

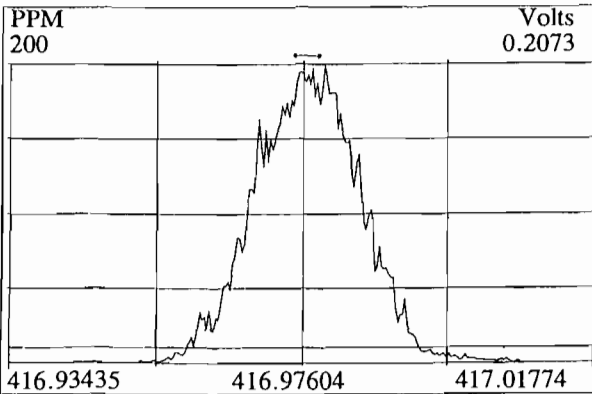
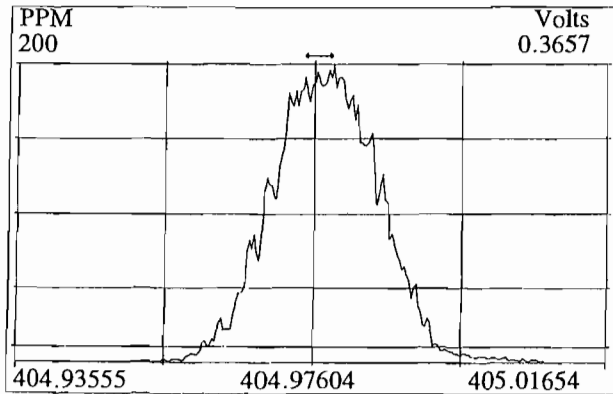
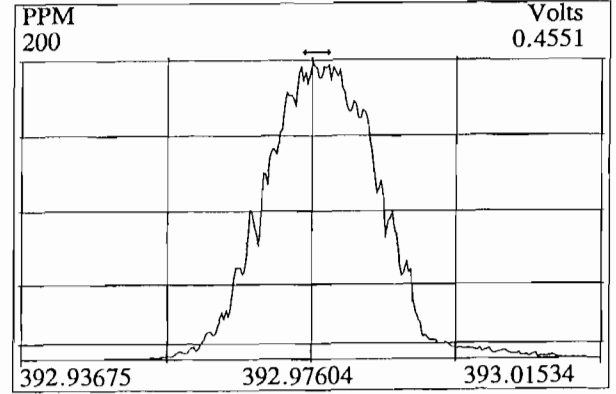
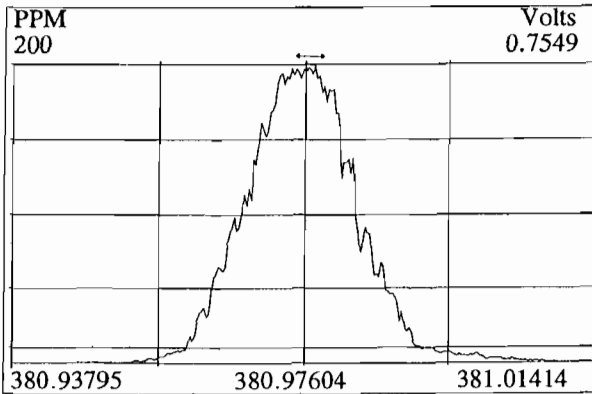
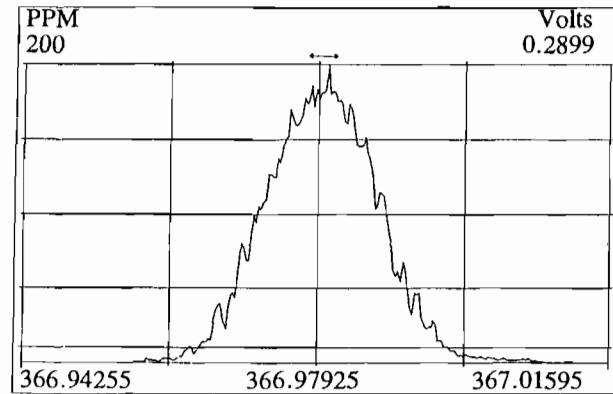
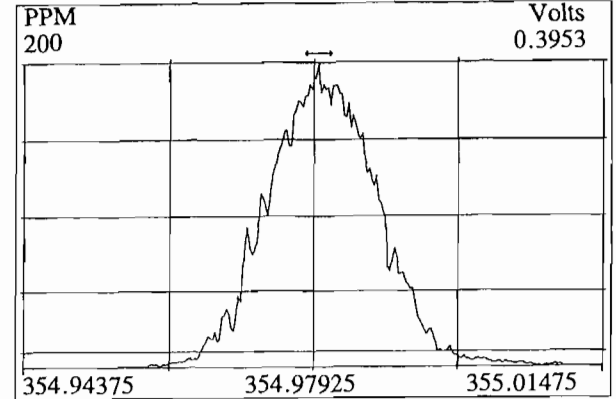
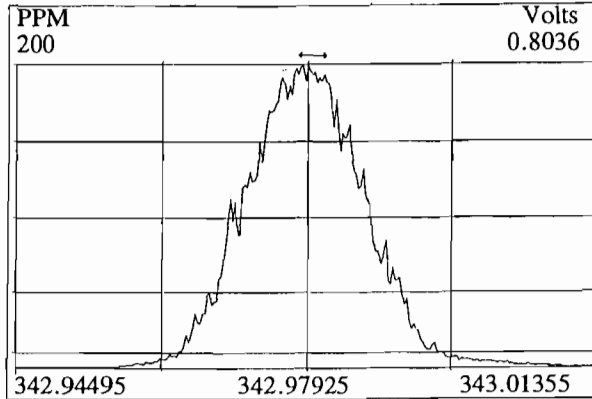
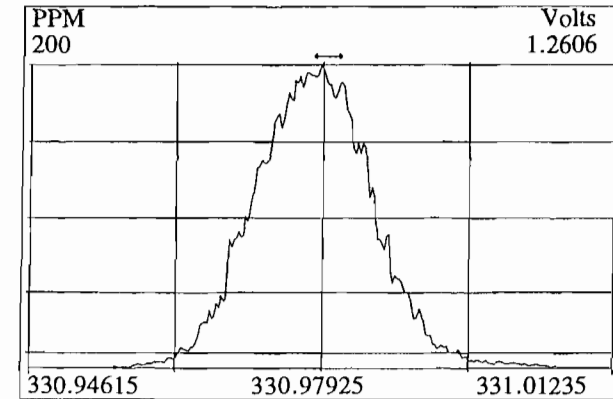


Peak Locate Examination: 4-APR-2001:19:40 File:010404P3  
Experiment:OCDD Function:1 Reference:PFK2

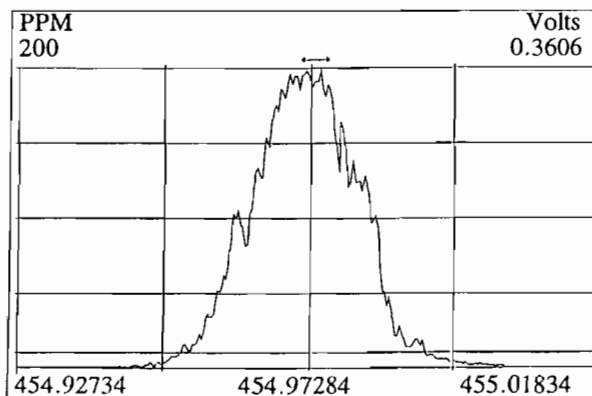
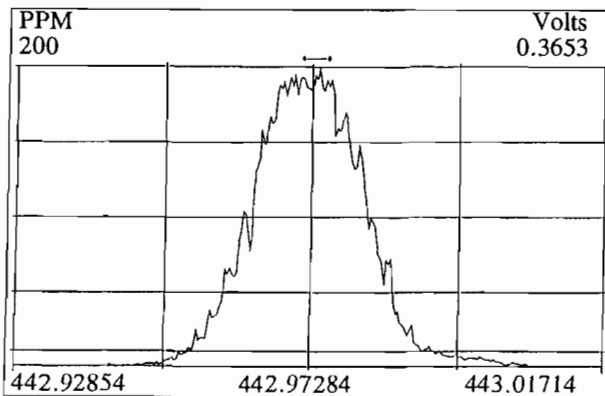
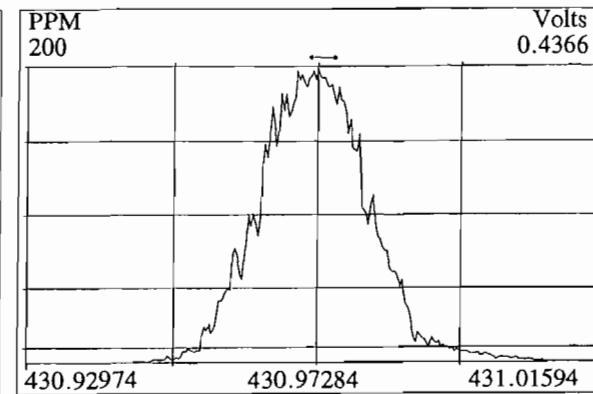
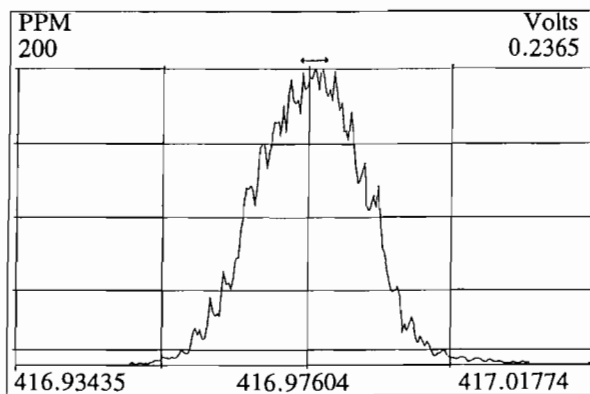
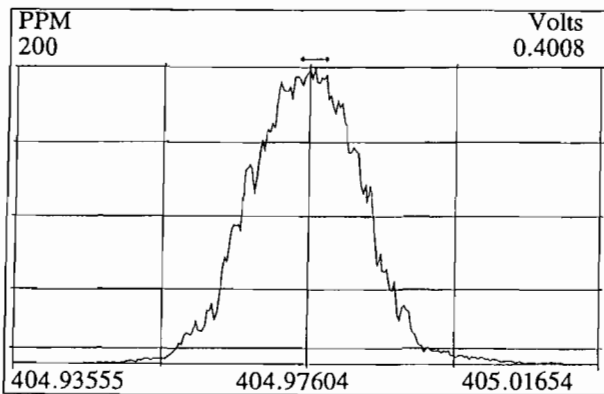
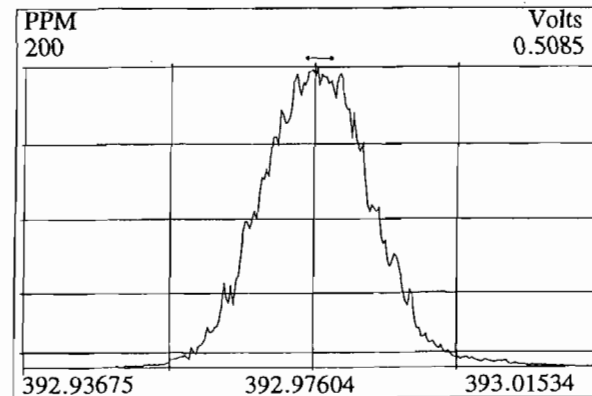
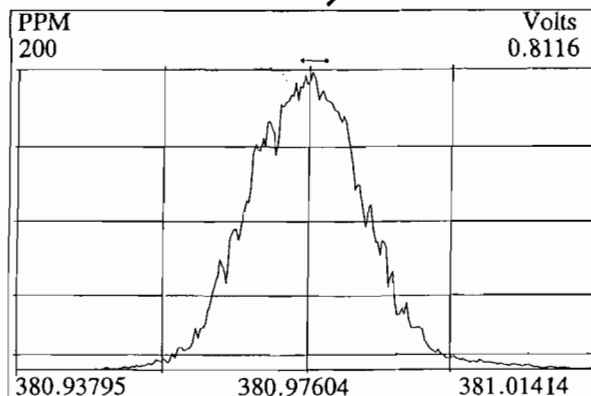
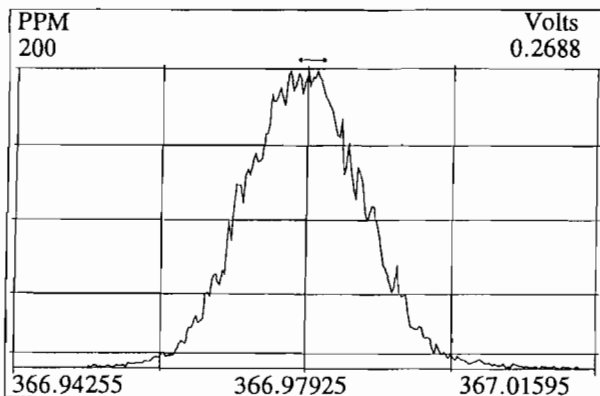


res plot acquired  
~1hr prior to CS<sub>3</sub>  
Ce 18 Apr 01

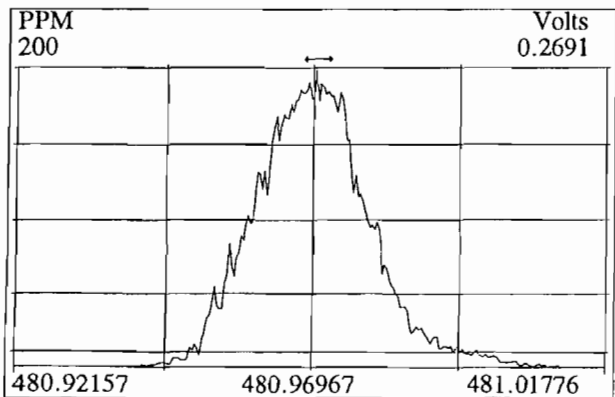
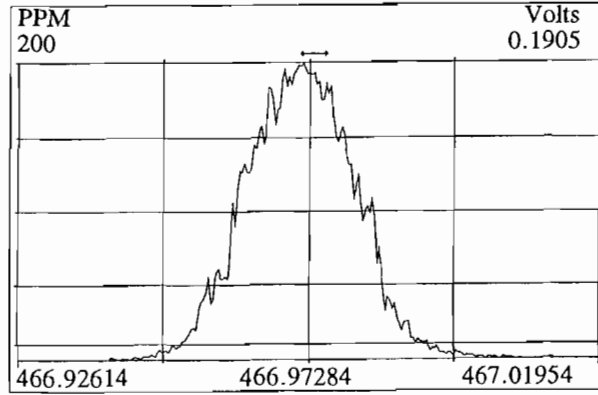
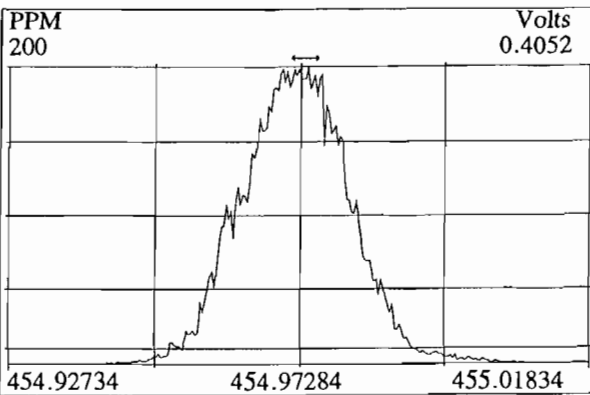
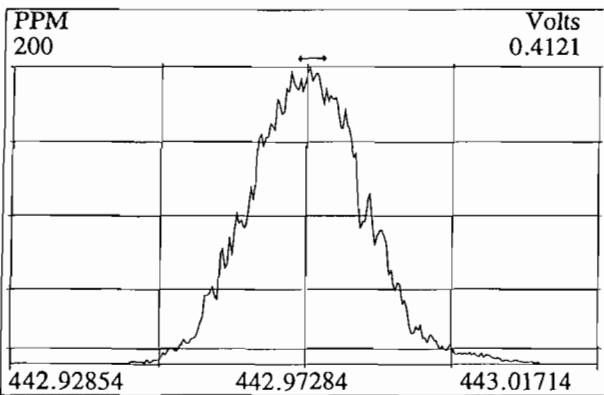
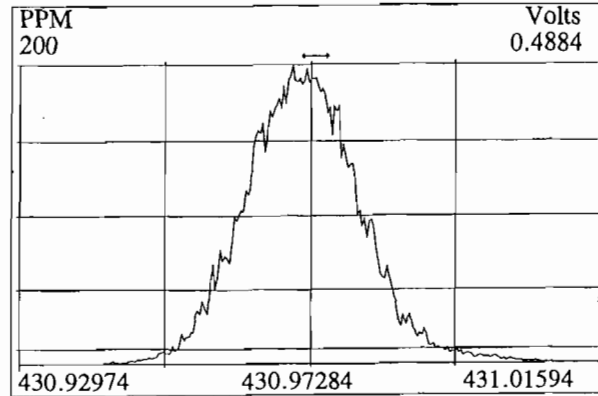
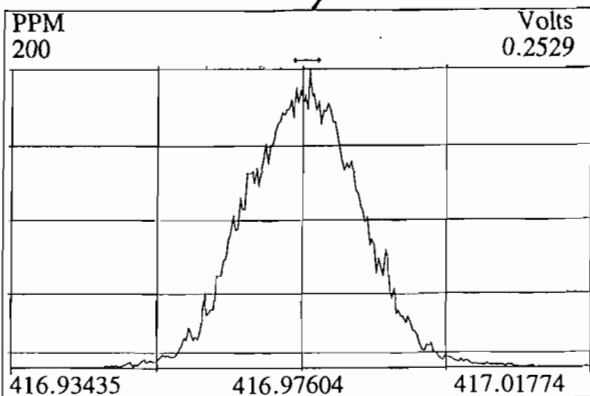
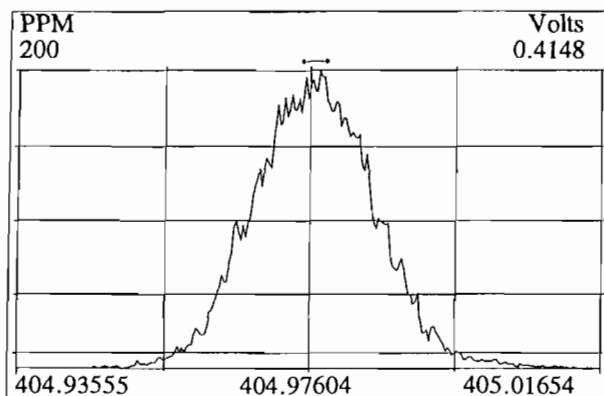
Peak Locate Examination: 4-APR-2001:19:40 File:010404P3  
Experiment:OCDD Function:2 Reference:PFK2



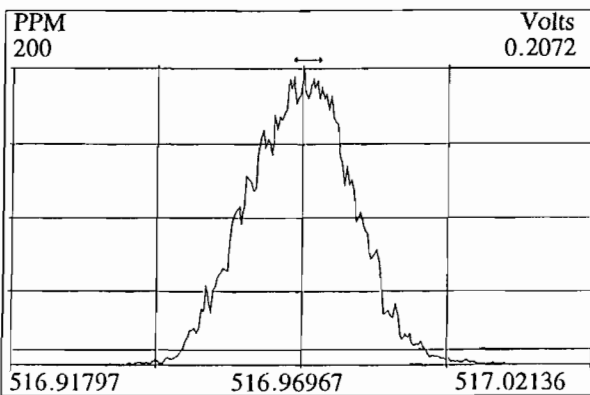
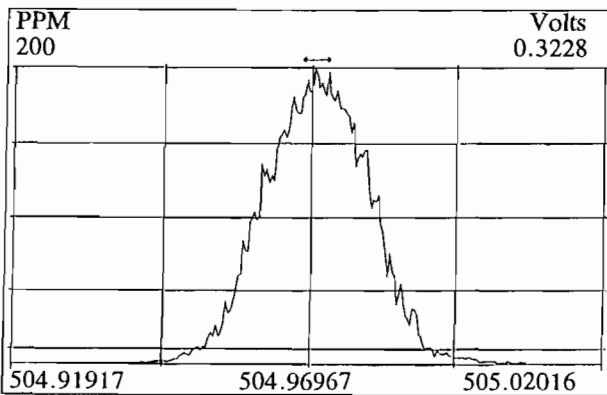
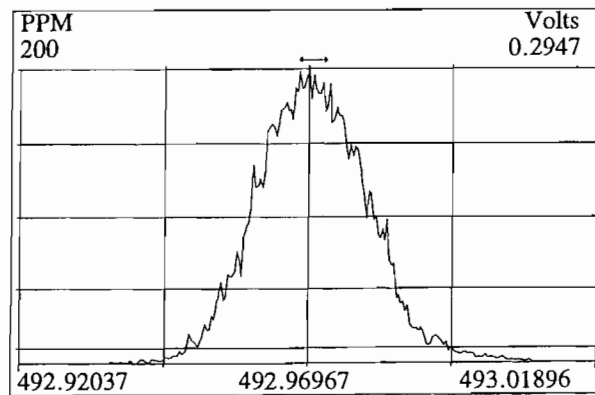
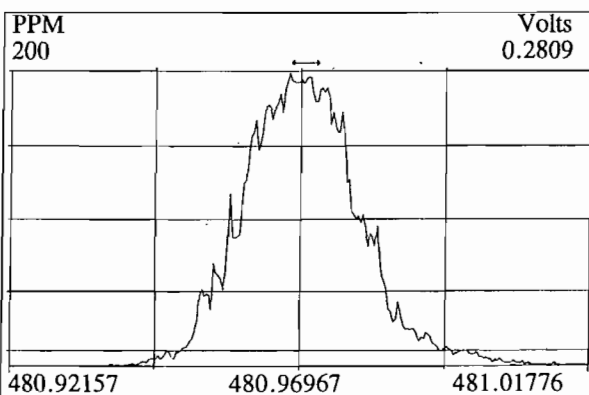
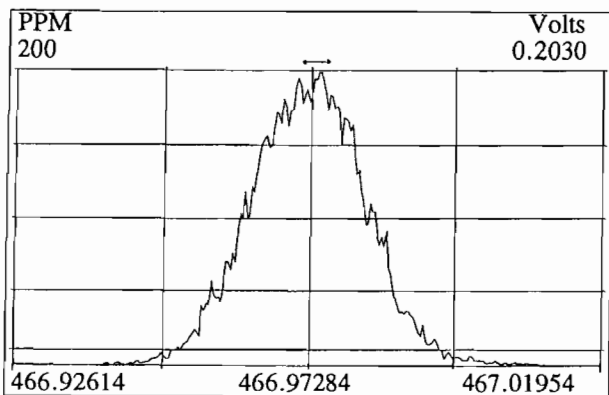
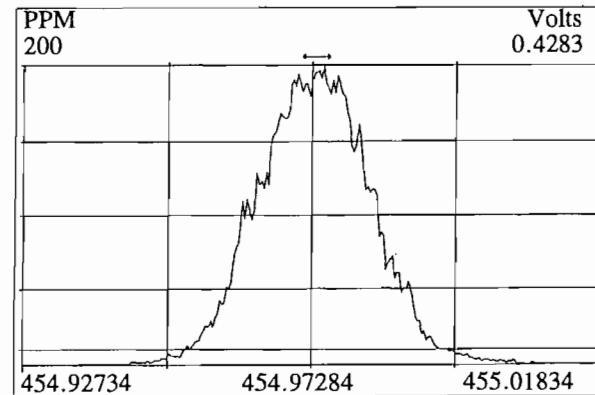
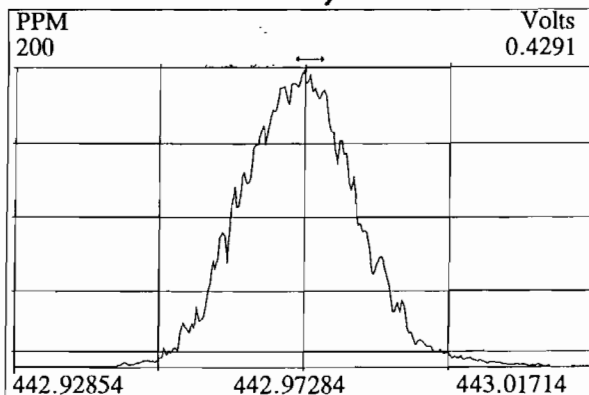
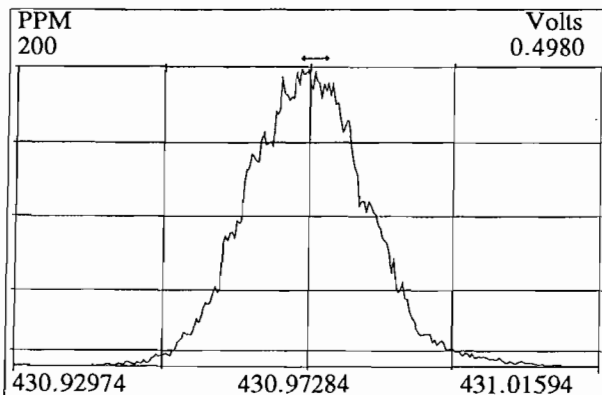
Peak Locate Examination: 4-APR-2001:19:41 File:010404P3  
Experiment:OCDD Function:3 Reference:PFK2



Peak Locate Examination: 4-APR-2001:19:41 File:010404P3  
Experiment:OCDD Function:4 Reference:PFK2

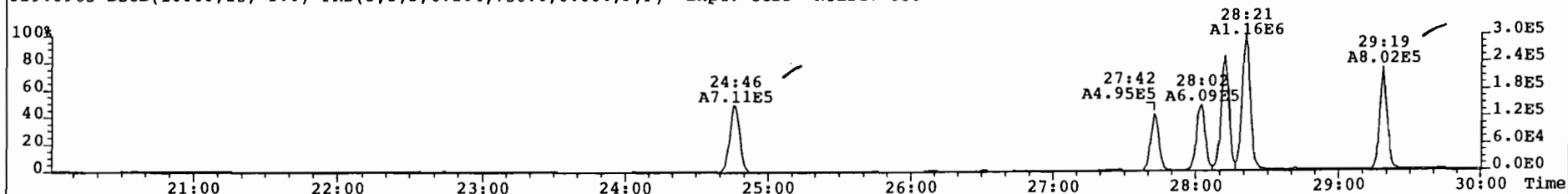


Peak Locate Examination: 4-APR-2001:19:41 File:010404P3  
Experiment:OCDD Function:5 Reference:PFK2

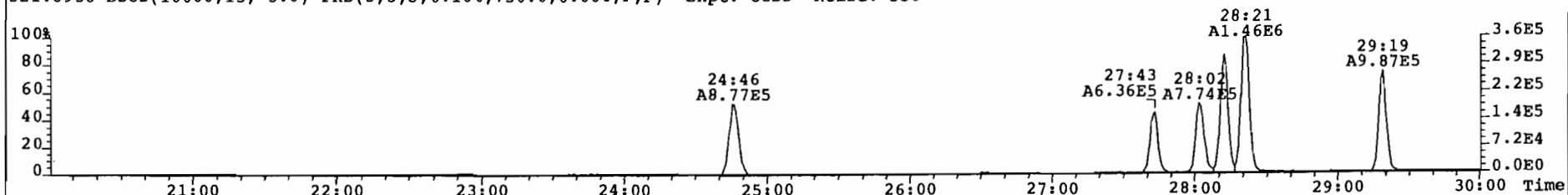




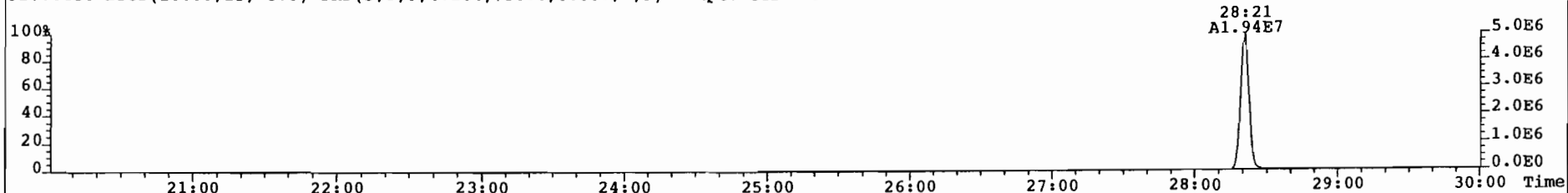
File: 010404P4 Acq: 4-APR-2001 20:48:12 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 686



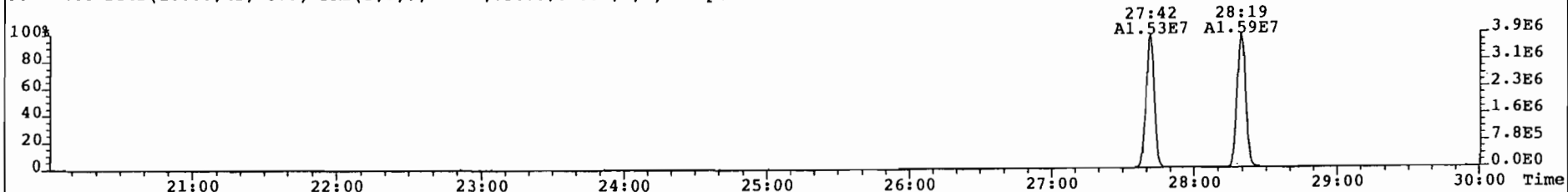
321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 556



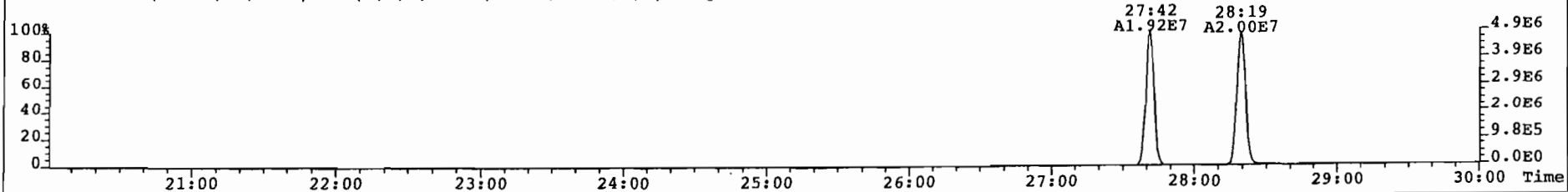
327.8850 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 427



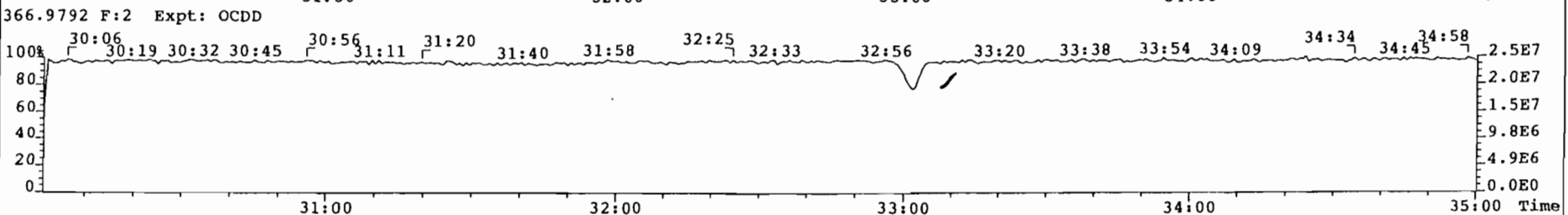
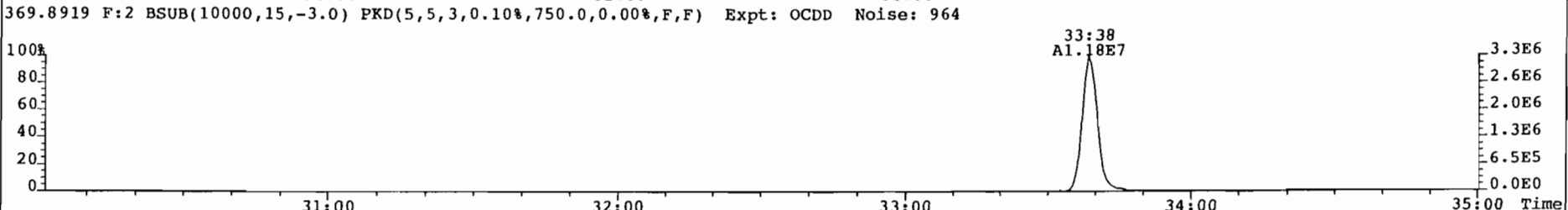
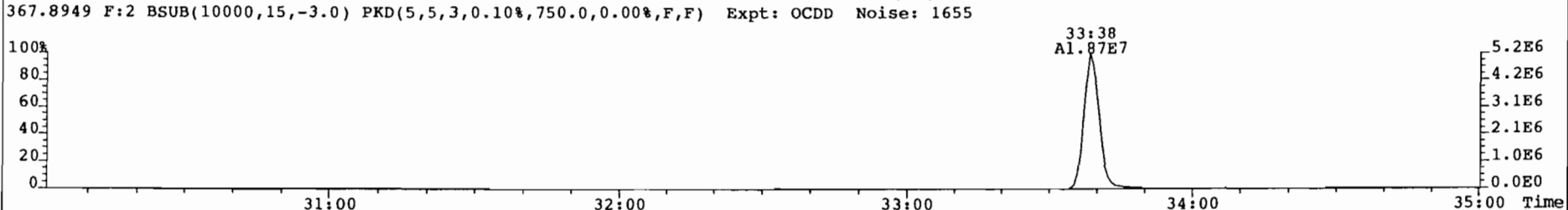
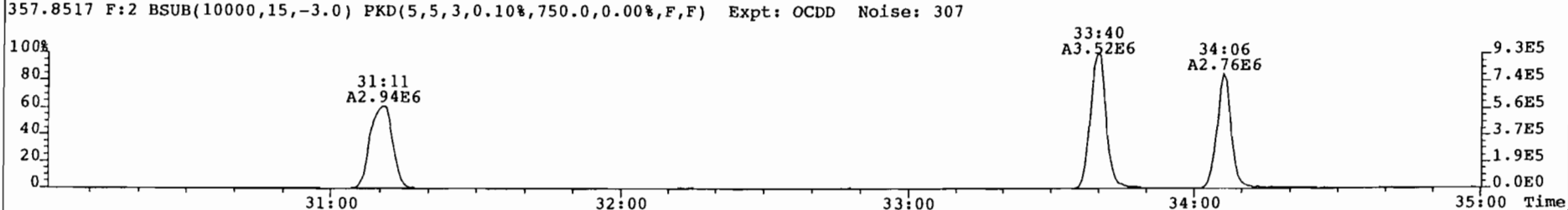
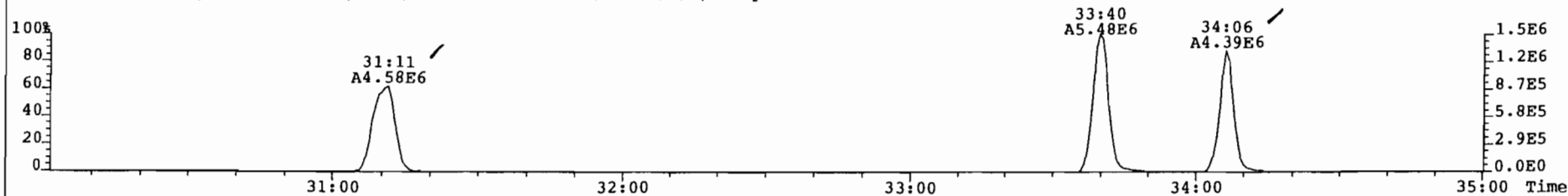
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1800



333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 985



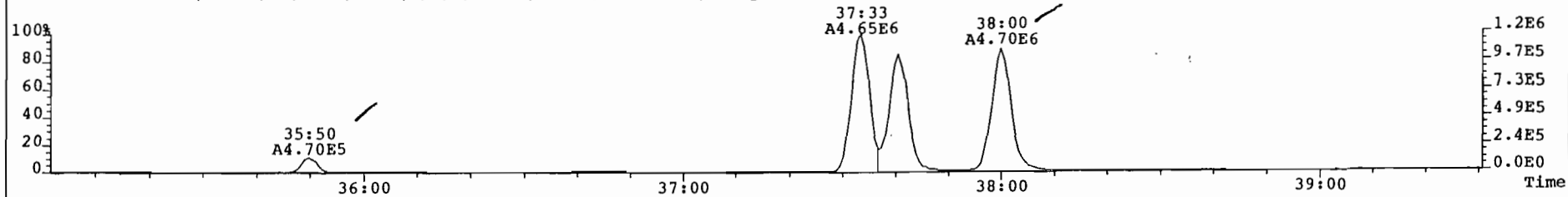
File: 010404P4 Acq: 4-APR-2001 20:48:12 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 488



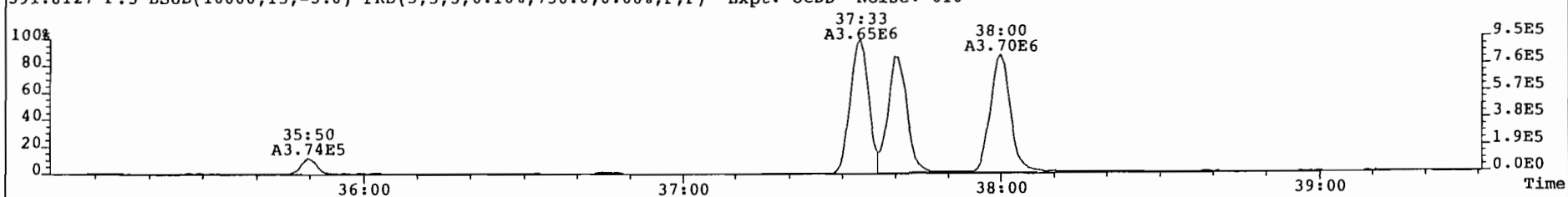
File: 010404P4 Acq: 4-APR-2001 20:48:12 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 1 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5

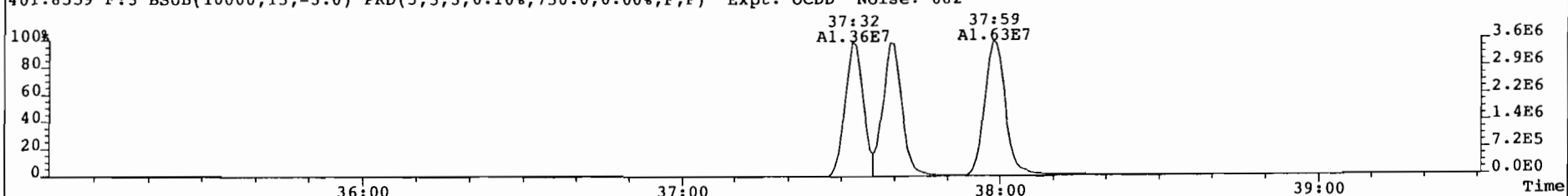
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 940



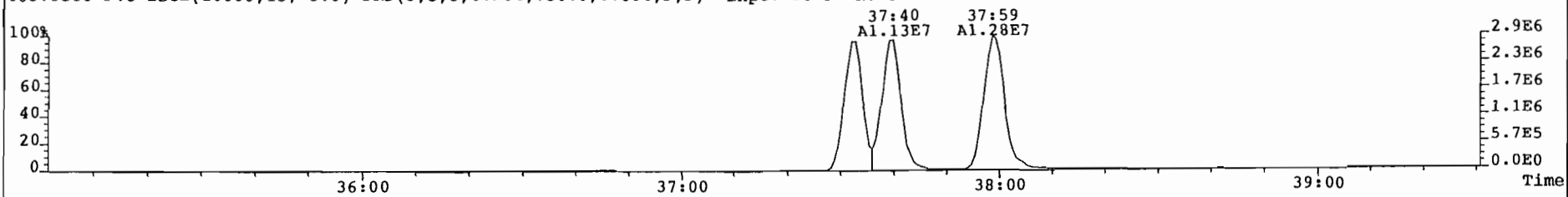
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 610



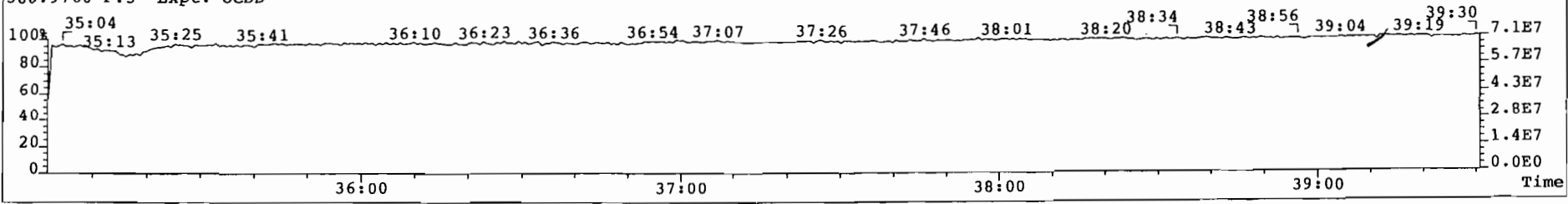
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 682



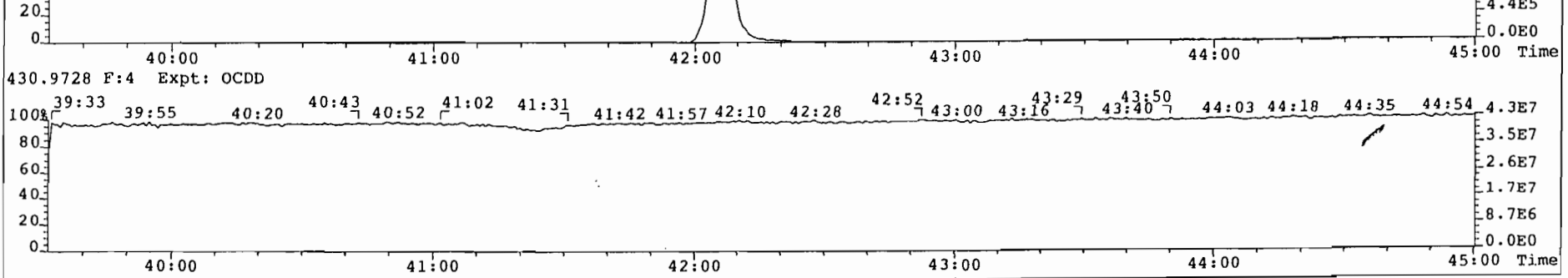
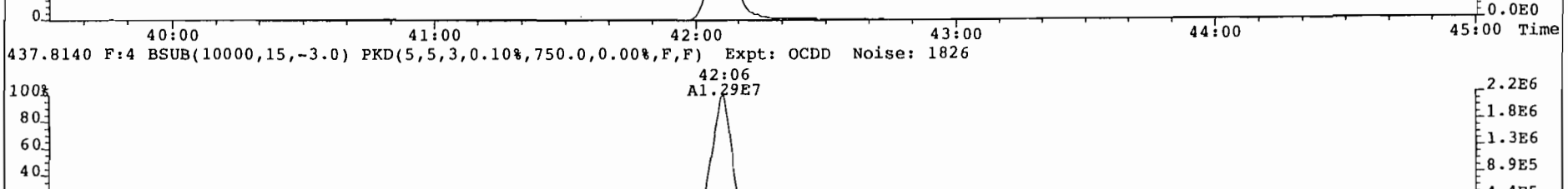
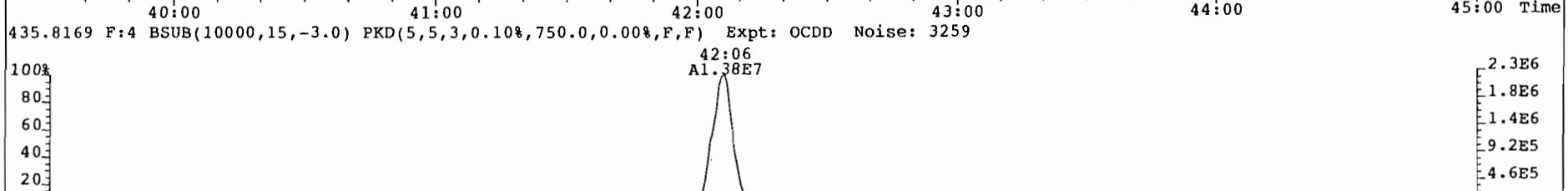
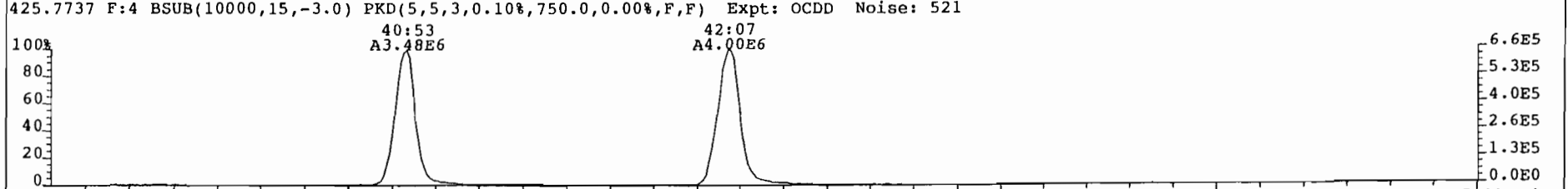
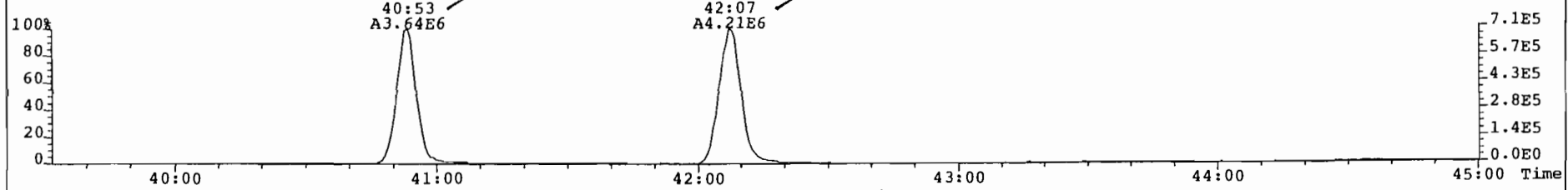
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 606



380.9760 F:3 Expt: OCDD



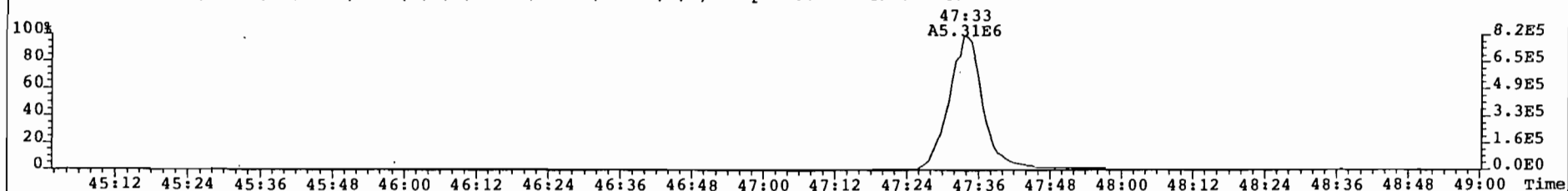
File: 010404P4 Acq: 4-APR-2001 20:48:12 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 604



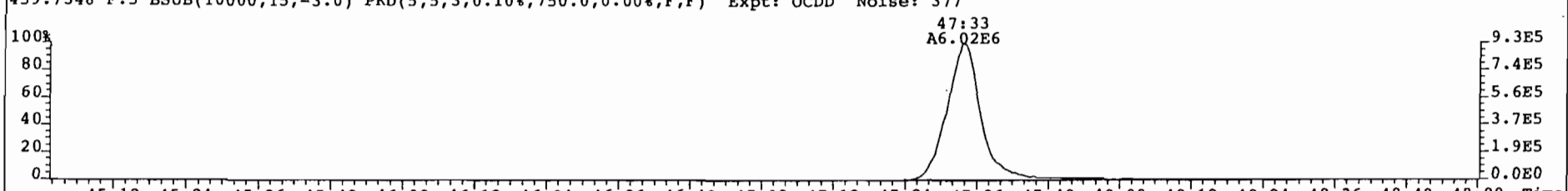
File: 010404P4 Acq: 4-APR-2001 20:48:12 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 1 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5

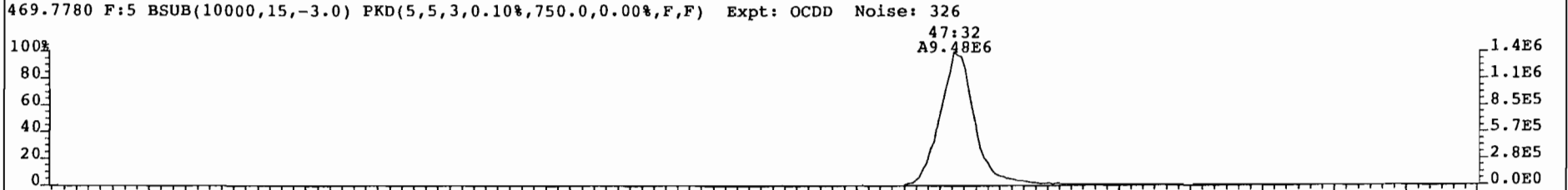
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 867



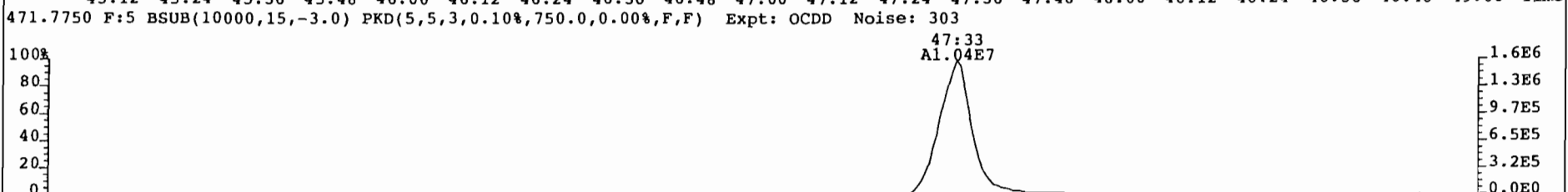
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 377



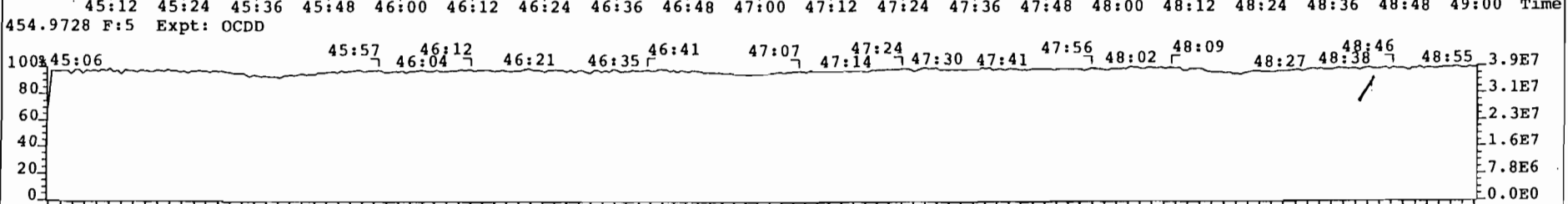
469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 326



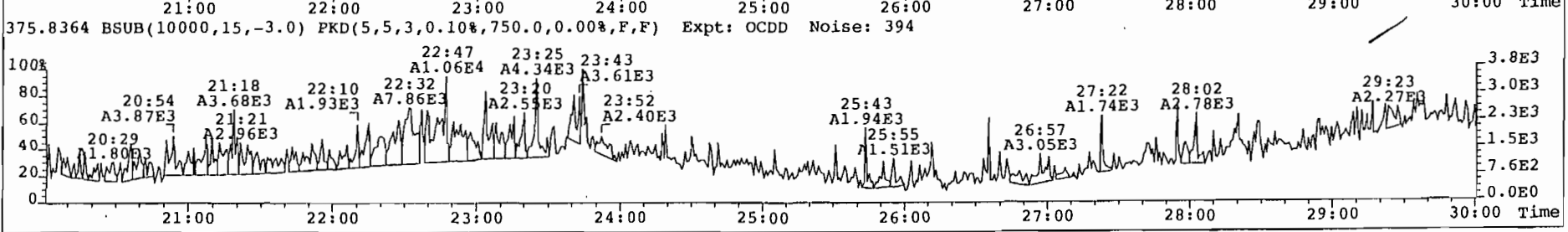
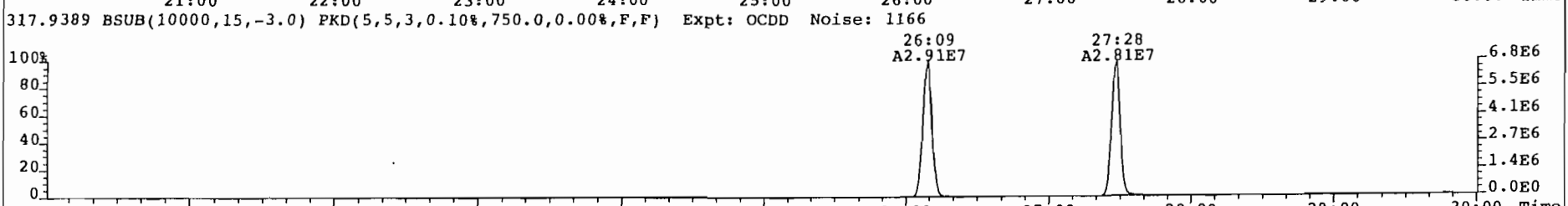
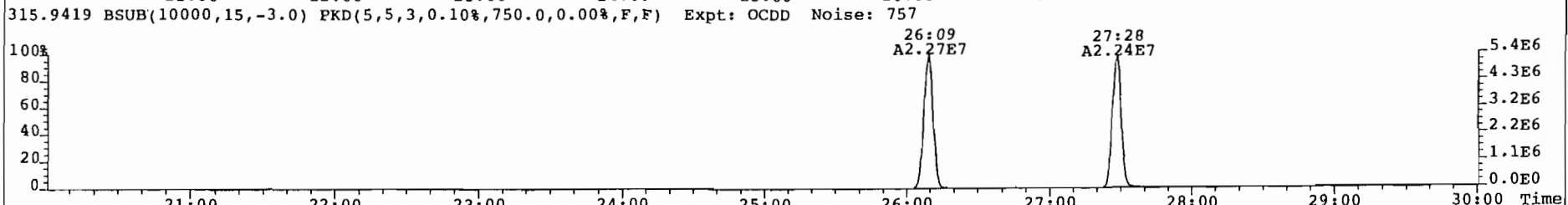
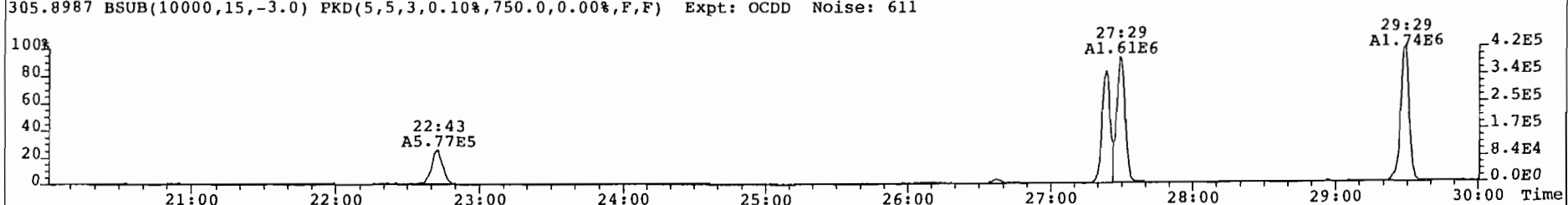
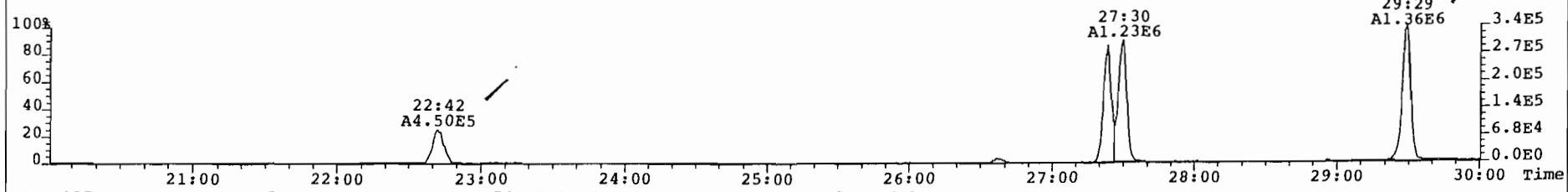
471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 303



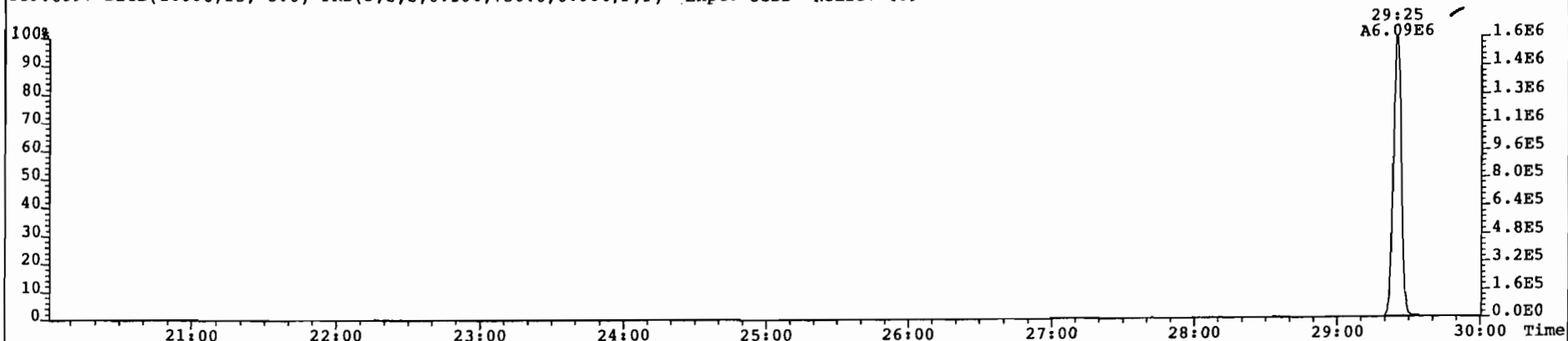
454.9728 F:5 Expt: OCDD



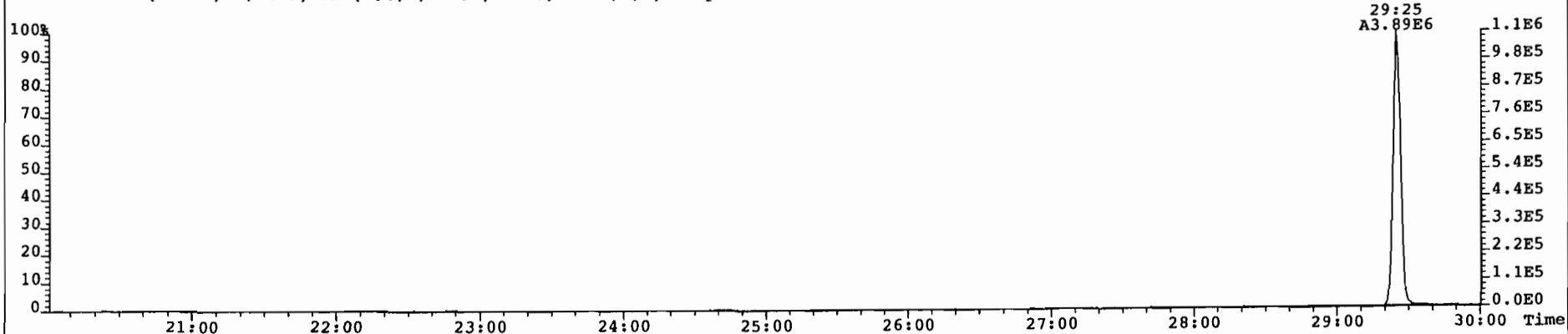
File: 010404P4 Acq: 4-APR-2001 20:48:12 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 464



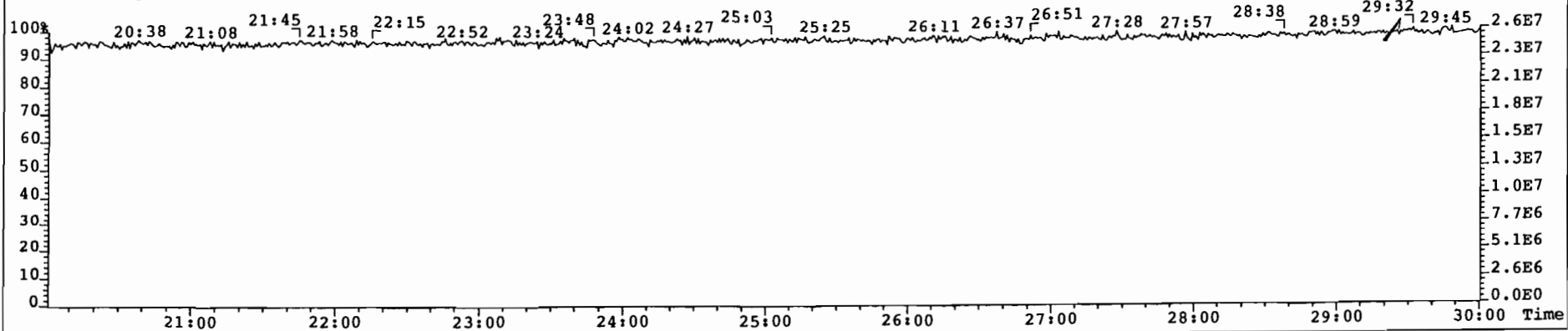
File: 010404P4 Acq: 4-APR-2001 20:48:12 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
339.8597 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 409



341.8568 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 526



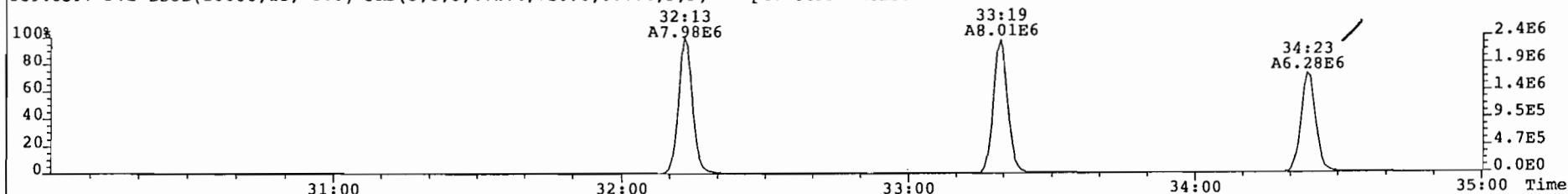
316.9824 Expt: OCDD



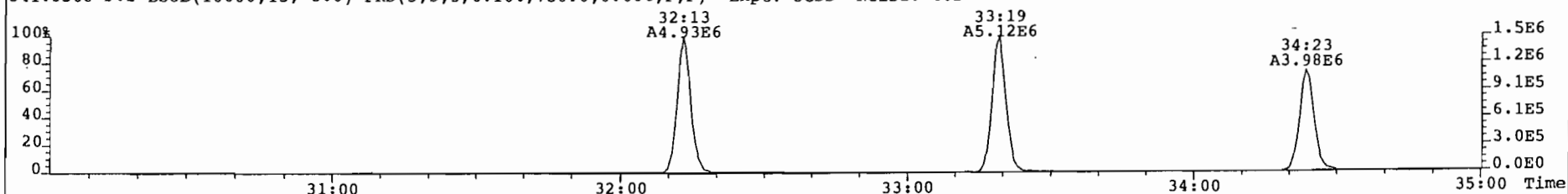
File: 010404P4 Acq: 4-APR-2001 20:48:12 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 1 Text: DB5 CPSM / M23 CS3 vial# 2 File Text: AAP DB5

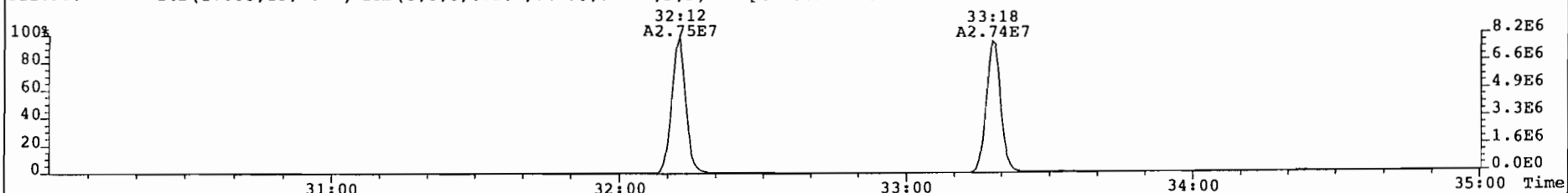
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 452



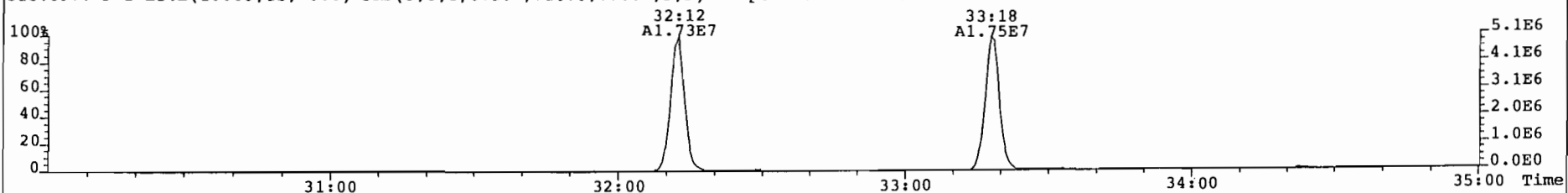
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 462



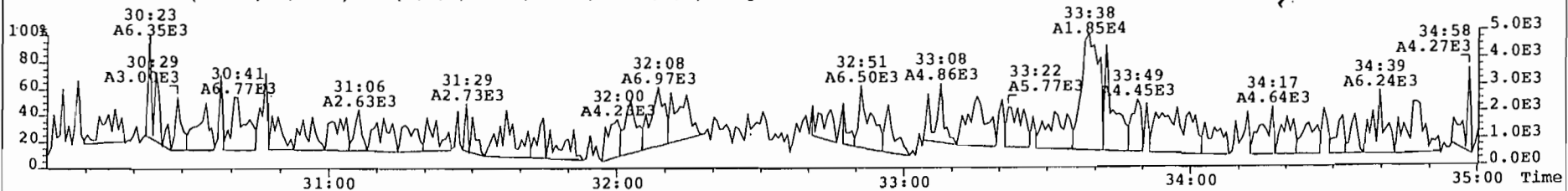
351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 666



353.8970 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 633

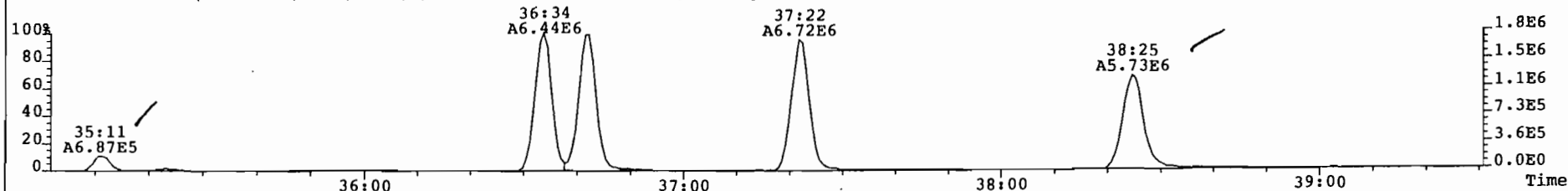


409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 454

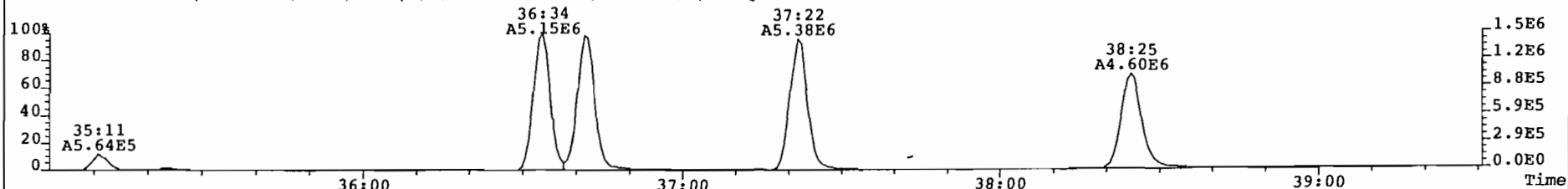




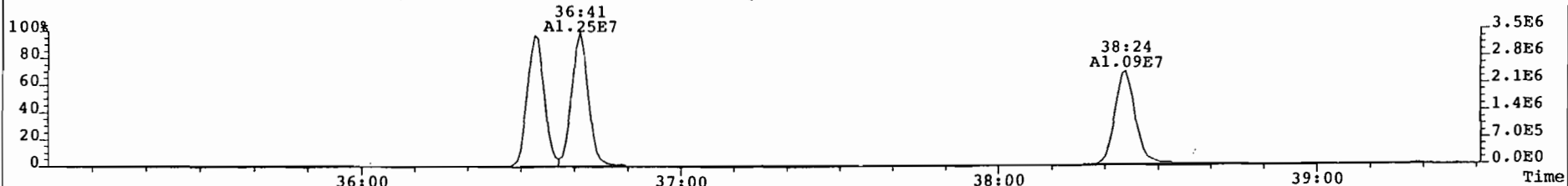
File: 010404P4 Acq: 4-APR-2001 20:48:12 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 937



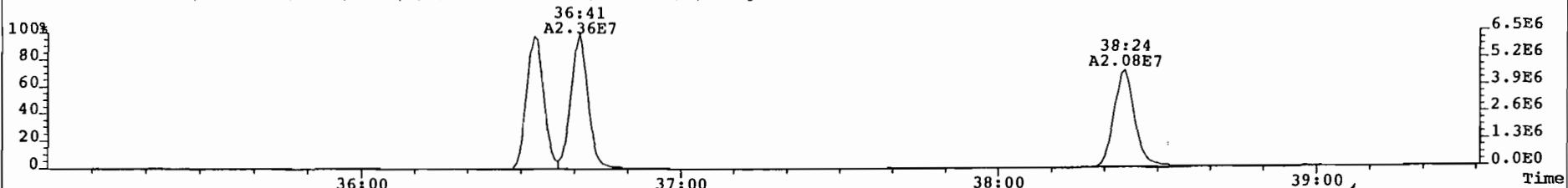
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 568



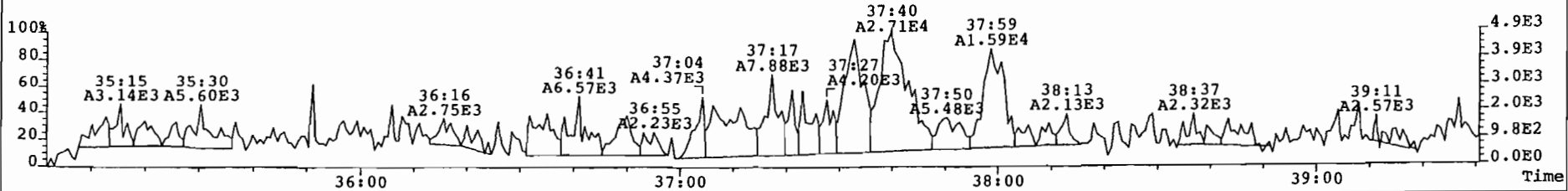
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 3511



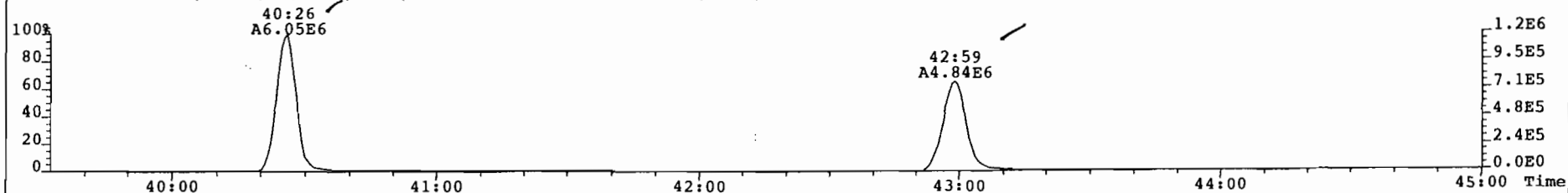
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 2119



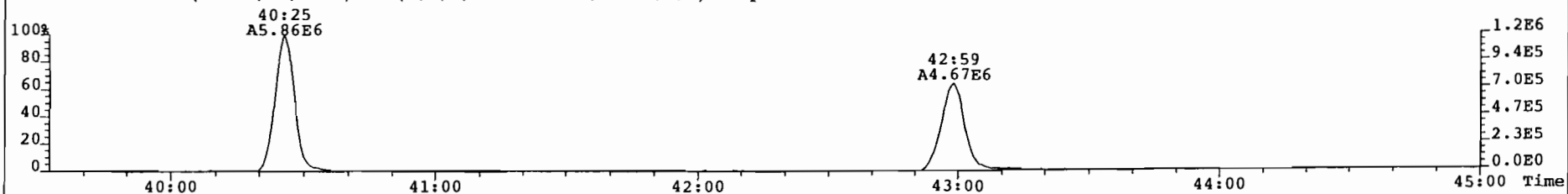
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 383



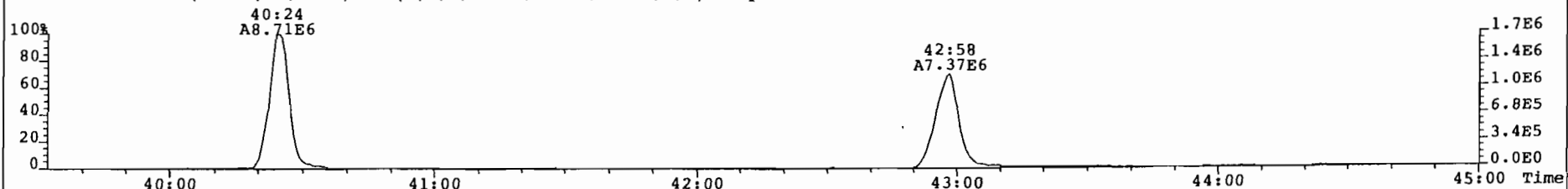
File: 010404P4 Acq: 4-APR-2001 20:48:12 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 730



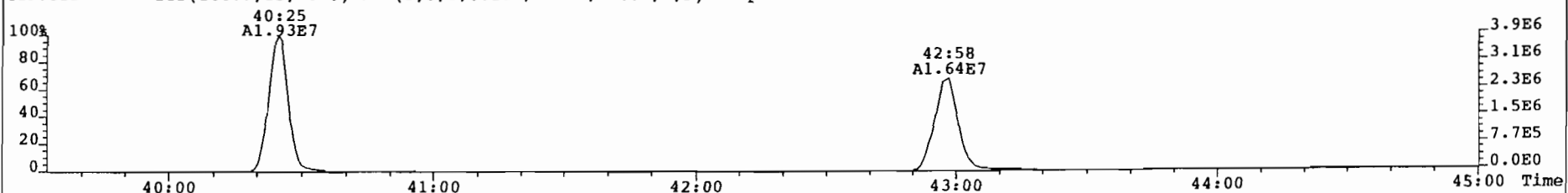
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 652



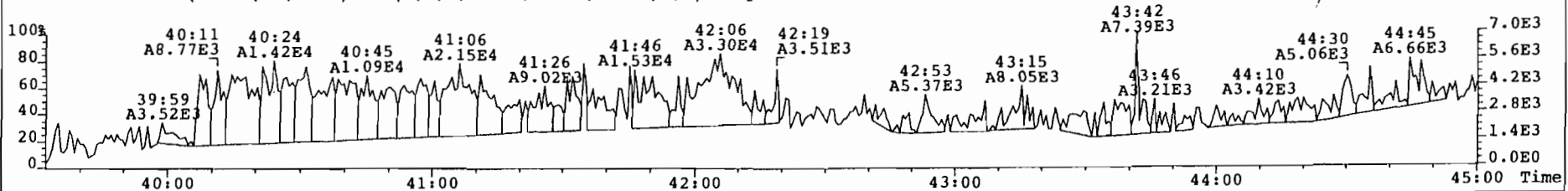
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 846



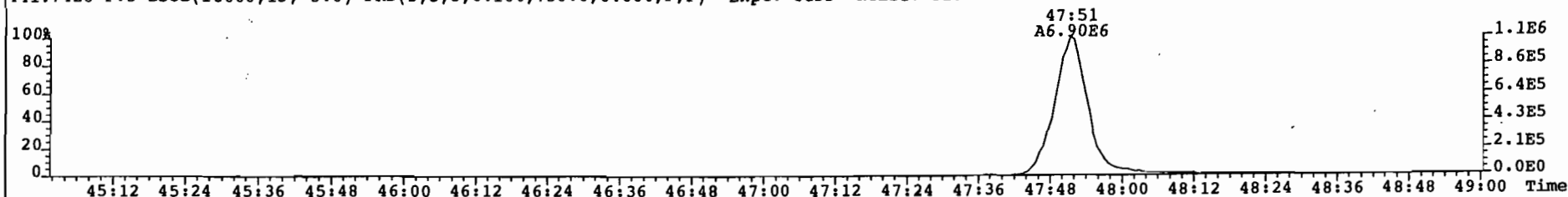
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1033



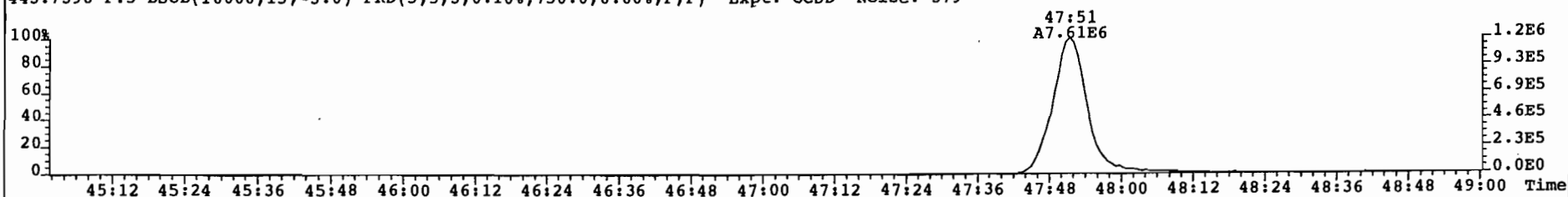
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1067



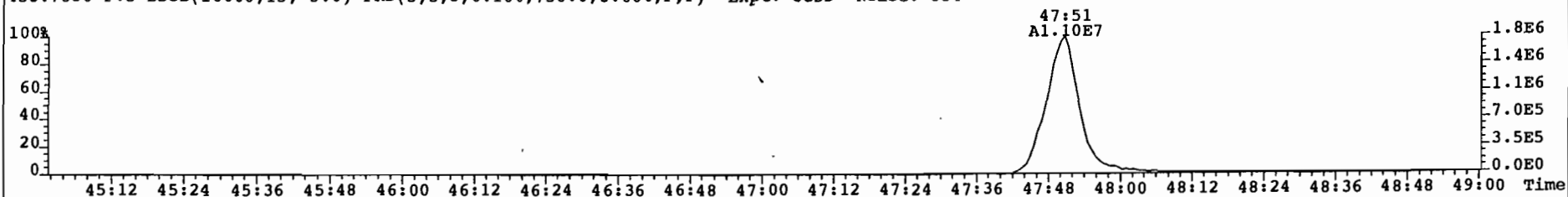
File: 010404P4 Acq: 4-APR-2001 20:48:12 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 326



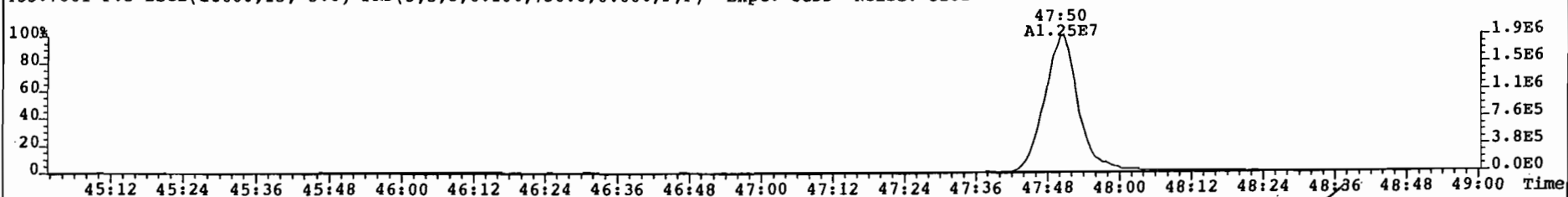
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 379



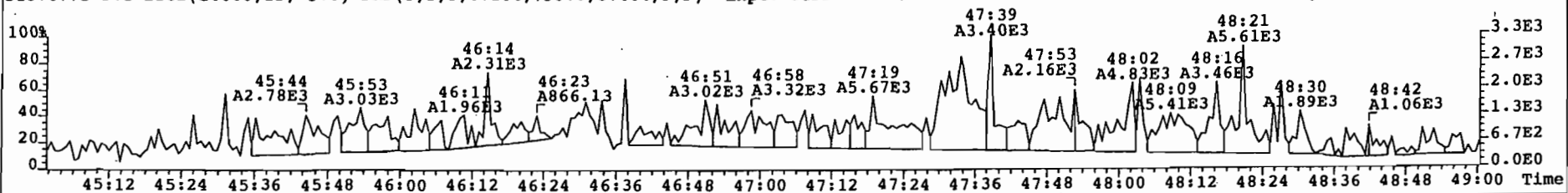
453.7830 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 334



455.7801 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 3202



513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 291



PCDD/PCDF CALIBRATION VERIFICATION

Alta Analytical Perspectives

Initial Calibration Date: 10/05/00

Reviewer: ce

Instrument ID: MM-1 GC Column ID: DB-5

Date: 18 April 01

VER Data Filename: 010404P4 S#9 Analysis Date: 5-APR-01 Time: 03:43:10

NATIVE ANALYTES	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	5.74 ✓	3.75 - 6.25
1,2,3,7,8-PeCDD	M+2/M+4	1.59	1.32-1.78	y	29.14 ✓	18.75-31.25
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	26.68 ✓	18.75-31.25
1,2,3,6,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	29.43 ✓	18.75-31.25
1,2,3,7,8,9-HxCDD	M+2/M+4	1.31	1.05-1.43	y	27.16 ✓	18.75-31.25
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	y	27.48 ✓	18.75-31.25
OCDD	M+2/M+4	0.91	0.76-1.02	y	55.13 ✓	37 - 65
2,3,7,8-TCDF	M/M+2	0.74	0.65-0.89	y	5.23 ✓	3.75 - 6.25
1,2,3,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	y	27.72 ✓	18.75-31.25
2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	27.64 ✓	18.75-31.25
1,2,3,4,7,8-HxCDF	M+2/M+4	1.27	1.05-1.43	y	25.79 ✓	18.75-31.25
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	27.37 ✓	18.75-31.25
2,3,4,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	y	25.60 ✓	18.75-31.25
1,2,3,7,8,9-HxCDF	M+2/M+4	1.25	1.05-1.43	y	24.92 ✓	18.75-31.25
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.07	0.88-1.20	y	26.94 ✓	18.75-31.25
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.06	0.88-1.20	y	25.04 ✓	18.75-31.25
OCDF	M+2/M+4	0.90	0.76-1.02	y	54.07 ✓	35 - 65

Analyst: GAB

Date: 17 April 01

66

PCDD/PCDF CALIBRATION VERIFICATION

Alta Analytical Perspectives

Initial Calibration Date: 10/05/00 ✓

Instrument ID: MM-1 ✓ GC Column ID: DB-5

VER Data Filename: 010404P4 S#9 Analysis Date: 5-APR-01 Time: 03:43:10

Reviewer: CC

Date: 18 Apr 01

LABELLED COMPOUNDS	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	y	94.7 ✓	70.0 - 130.0
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.58	1.32-1.78	y	99.6 ✓	70.0 - 130.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	99.3 ✓	70.0 - 130.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	91.8 ✓	70.0 - 130.0
13C-OCDD	M+2/M+4	0.90	0.76-1.02	y	81.0 ✓	70.0 - 130.0
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	92.1 ✓	70.0 - 130.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	y	96.7 ✓	70.0 - 130.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.54	0.43-0.59	y	113.6 ✓	70.0 - 130.0
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	y	106.8 ✓	70.0 - 130.0
13C-OCDF	M+2/M+4	0.86	0.76-1.02	y	92.1 ✓	70.0 - 130.0
37Cl-2,3,7,8-TCDD					106.6 ✓	75.0 - 125.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	103.1 ✓	75.0 - 125.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.33	1.05-1.43	y	94.2 ✓	75.0 - 125.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	99.8 ✓	75.0 - 125.0
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	y	95.8 ✓	75.0 - 125.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	y	108.2 ✓	75.0 - 125.0

Analyst: GAG

Date: 17 Apr 01

Client ID: DB5 CPSM / M23 CS3  
Lab ID: CS3RCX

Filename: 010404P4  
GC Column ID: db-5

S: 9 Acq: 5-APR-01 03:43:10  
ICal: MM1\_M23\_0 wt/vol: 1.000

ConCal: 010404P4-  
EndCal: 010404P4-

Name	Resp	RA	RRF	RT	Conc	Qualif.	CDE	noise	Fac	DL
2,3,7,8-TCDD	2.33e+06	0.79 y	1.26	28:21	5.74			862	2.5	0.0376
1,2,3,7,8-PeCDD	8.17e+06	1.59 y	1.01	33:41	29.1			1341	2.5	0.124
1,2,3,4,7,8-HxCDD	7.16e+06	1.26 y	1.14	37:33	26.7			1780	2.5	0.170
1,2,3,6,7,8-HxCDD	7.09e+06	1.29 y	1.02	37:41	29.4			1780	2.5	0.190
1,2,3,7,8,9-HxCDD	7.31e+06	1.31 y	1.14	38:01	27.2			1780	2.5	0.170
1,2,3,4,6,7,8-HpCDD	6.55e+06	1.05 y	1.13	42:08	27.5			2731	2.5	0.376
OCDD	8.54e+06	0.91 y	1.03	47:35	55.1			1858	2.5	0.434
2,3,7,8-TCDF	2.57e+06	0.74 y	1.05	27:30	5.23			1602	2.5	0.0613
1,2,3,7,8-PeCDF	1.28e+07	1.55 y	1.04	32:14	27.7			4812	2.5	0.249
2,3,4,7,8-PeCDF	1.30e+07	1.61 y	1.05	33:20	27.6			4812	2.5	0.245
1,2,3,4,7,8-HxCDF	1.08e+07	1.27 y	1.13	36:34	25.8			3254	2.5	0.124
1,2,3,6,7,8-HxCDF	1.25e+07	1.25 y	1.24	36:43	27.4			3254	2.5	0.113
2,3,4,6,7,8-HxCDF	1.10e+07	1.26 y	1.16	37:23	25.6			3254	2.5	0.121
1,2,3,7,8,9-HxCDF	9.39e+06	1.25 y	1.02	38:26	24.9			3254	2.5	0.138
1,2,3,4,6,7,8-HpCDF	1.02e+07	1.07 y	1.54	40:27	26.9			3818	2.5	0.207
1,2,3,4,7,8,9-HpCDF	7.97e+06	1.06 y	1.30	43:00	25.0			3818	2.5	0.246
OCDF	1.18e+07	0.90 y	1.15	47:53	54.1			1546	2.5	0.250
Total Tetra-Dioxins	9.31e+06	0.76 y	1.26	24:46	22.9			862	2.5	0.0376
Total Penta-Dioxins	2.16e+07	1.59 y	1.01	31:11	77.2			1341	2.5	0.124
Total Hexa-Dioxins	2.24e+07	1.29 y	1.10	35:50	86.4			1780	2.5	0.176
Total Hepta-Dioxins	1.23e+07	1.06 y	1.13	40:54	51.8			2731	2.5	0.376
Total Tetra-Furans	8.85e+06	0.75 y	1.05	22:43	18.0			1602	2.5	0.0613
1st Fnc. Penta-Furans	8.45e+06	1.59 y	1.05	29:25	18.2			2278	2.5	0.117
Total Penta-Furans	3.60e+07	1.55 y	1.05	32:14	77.4			4812	2.5	0.247
PeCDF Totals:					95.6					95.6
Total Hexa-Furans	4.50e+07	1.30 y	1.14	35:12	107			3254	2.5	0.123
Total Hepta-Furans	1.83e+07	1.07 y	1.42	40:27	52.4			3818	2.5	0.225
IS 13C-2,3,7,8-TCDD	3.22e+07	0.80 y	1.13	28:20	94.7					94.7
IS 13C-1,2,3,7,8-PeCDD	2.77e+07	1.58 y	0.93	33:40	99.6					99.6
IS 13C-1,2,3,6,7,8-HxCDD	2.35e+07	1.21 y	0.93	37:40	99.3					99.3
IS 13C-1,2,3,4,6,7,8-HpCDD	2.11e+07	1.04 y	0.91	42:07	91.8					91.8
IS 13C-OCDD	1.51e+07	0.90 y	0.73	47:34	81.0					81.0
IS 13C-2,3,7,8-TCDF	4.69e+07	0.80 y	1.06	27:28	92.1					92.1
IS 13C-1,2,3,7,8-PeCDF	4.45e+07	1.57 y	0.96	32:13	96.7					96.7
IS 13C-1,2,3,6,7,8-HxCDF	3.70e+07	0.54 y	1.28	36:42	114					114
IS 13C-1,2,3,4,6,7,8-HpCDF	2.45e+07	0.44 y	0.90	40:25	107					107
IS 13C-OCDF	1.90e+07	0.86 y	0.81	47:51	92.1					92.1
RS/RT 13C-1,2,3,4-TCDD	3.00e+07	0.81 y	1.00	27:42	100					-
RS 13C-1,2,3,4-TCDF	4.80e+07	0.79 y	1.00	26:09	100					-
RS/RT 13C-1,2,3,7,8,9-HxCDD	2.54e+07	1.28 y	1.00	38:00	100					-
PS 37Cl-2,3,7,8-TCDD	1.77e+07		0.51	28:21	107					107
PS 13C-2,3,4,7,8-PeCDF	4.47e+07	1.59 y	0.97	33:18	103					103
PS 13C-1,2,3,4,7,8-HxCDD	2.05e+07	1.33 y	0.92	37:33	94.2					94.2
PS 13C-1,2,3,4,7,8-HxCDF	3.36e+07	0.53 y	0.91	36:33	99.8					99.8
PS 13C-1,2,3,4,7,8,9-HpCDF	2.00e+07	0.44 y	0.85	42:59	95.8					95.8
AS 13C-1,2,3,7,8,9-HxCDF	2.94e+07	0.53 y	1.07	38:25	108					108

Reviewer: ce

Date: 18 April

EMPC

22.9

77.2

87.1

51.8

18.2

18.2

95.6

107

52.7

Rec

94.7

99.6

99.3

91.8

81.0

92.1

96.7

114

107

92.1

Analyst: GAB

107

103

94.2

99.8

95.8

108

Date: 17 April

FORM 5  
PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Alta Analytical Perspectives Episode No.:

Contract No.:

SAS No.:

Reviewer: CE

Instrument ID: MM-1 /

Initial Calibration Date: 10/05/00 /

RT Window Data Filename: 010404P4 S#9 Analysis Date: 5-APR-01 Time: 03:43:10

Date: 18 Apr 01

DB-5 IS Data Filename: 010404P4 S#9 Analysis Date: 5-APR-01 Time: 03:43:10

DB\_225 IS Data Filename: Analysis Date: Time:

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:46 ✓	1,3,6,8-TCDF (F)	22:43 ✓
1,2,8,9-TCDD (L)	29:19 ✓	1,2,8,9-TCDF (L)	29:29 ✓
1,2,4,7,9-PeCDD (F)	31:11 ✓	1,3,4,6,8-PeCDF (F)	29:25 ✓
1,2,3,8,9-PeCDD (L)	34:07 ✓	1,2,3,8,9-PeCDF (L)	34:24 ✓
1,2,4,6,7,9-HxCDD (F)	35:50 ✓	1,2,3,4,6,8-HxCDF (F)	35:12 ✓
1,2,3,7,8,9-HxCDD (L)	38:01 ✓	1,2,3,7,8,9-HxCDF (L)	38:26 ✓
1,2,3,4,6,7,9-HpCDD (F)	40:54 ✓	1,2,3,4,6,7,8-HpCDF (F)	40:27 ✓
1,2,3,4,6,7,8-HpCDD (L)	42:08 ✓	1,2,3,4,7,8,9-HpCDF (L)	43:00 ✓

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

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

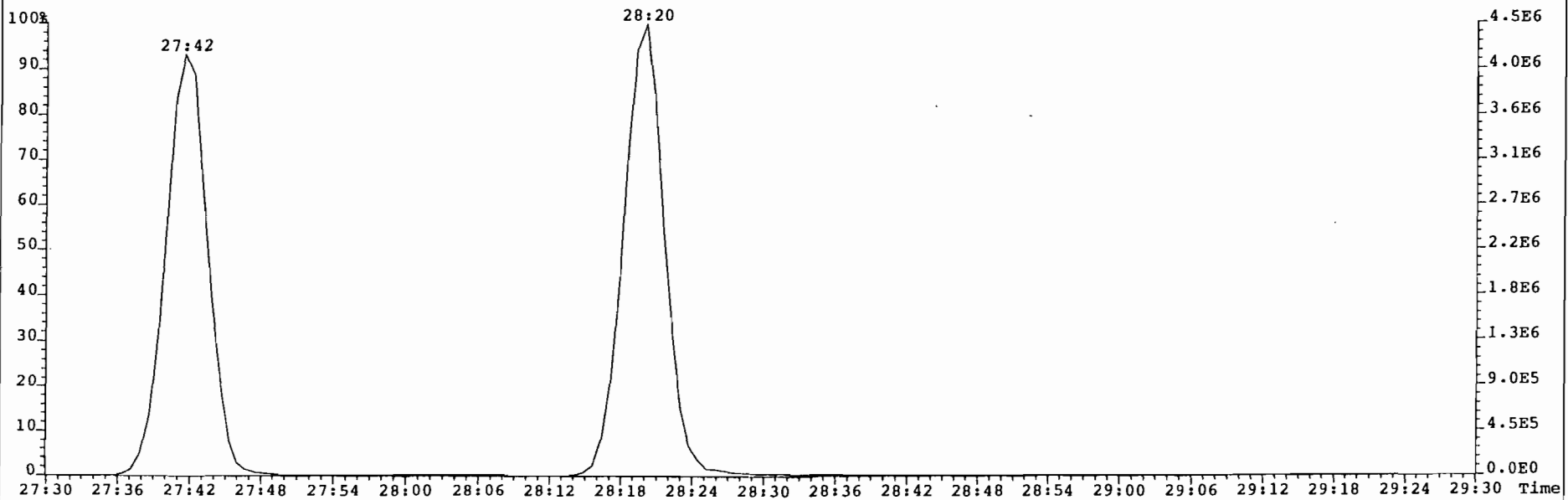
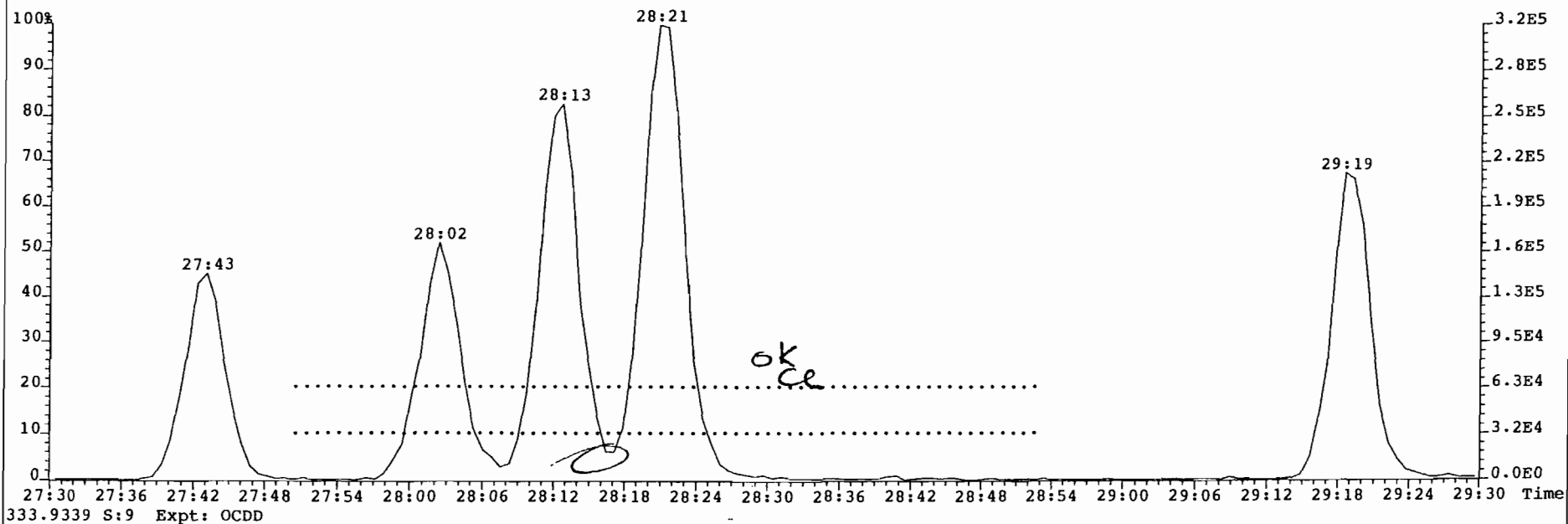
% VALLEY HEIGHT  
BETWEEN  
COMPARED PEAKS (1)

<25%

Analyst: GAB

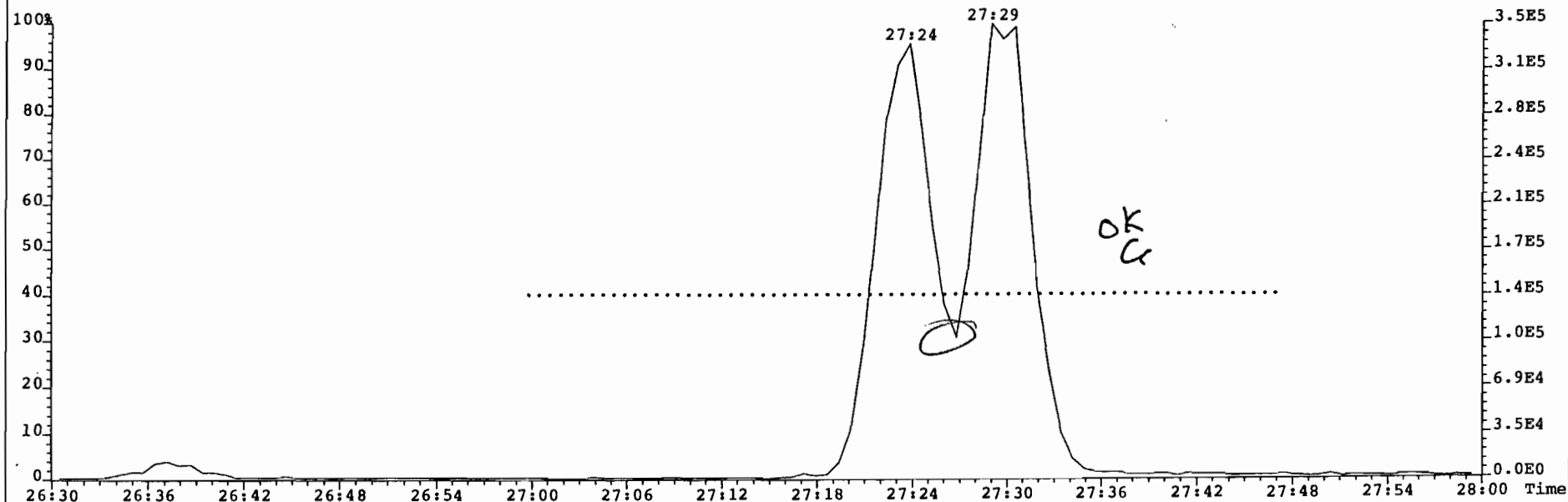
Date: 17 Apr 01

File: 010404P4 Acq: 5-APR-2001 03:43:10 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 9 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
321.8936 S:9 Expt: OCDD

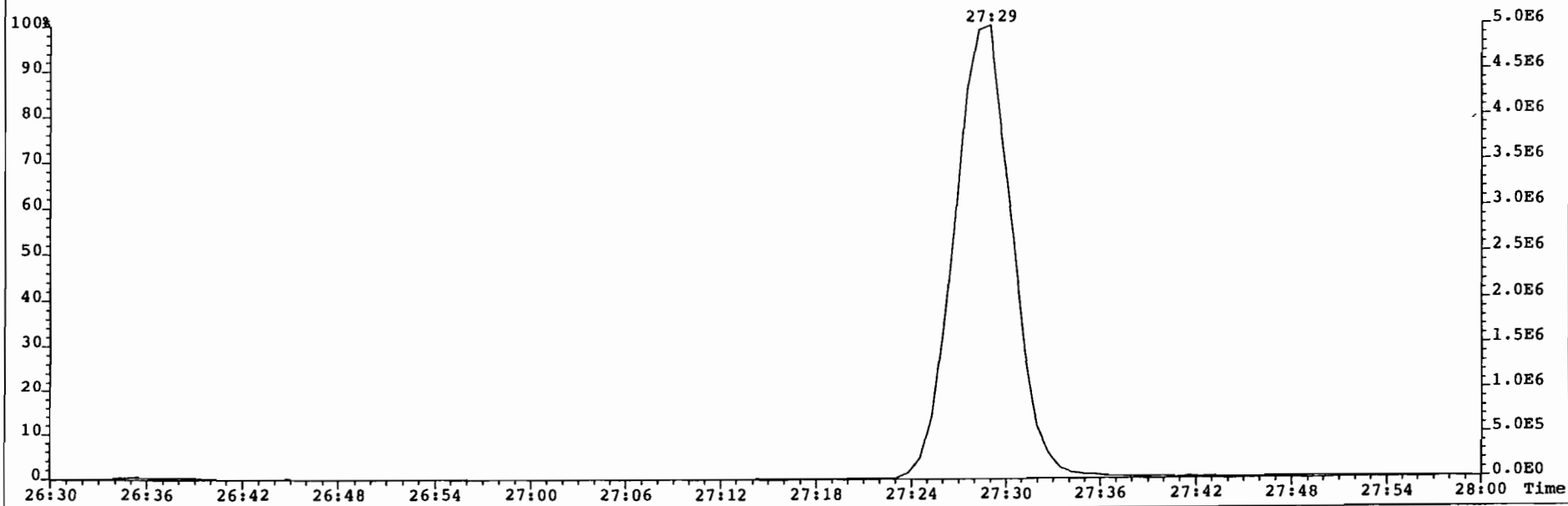




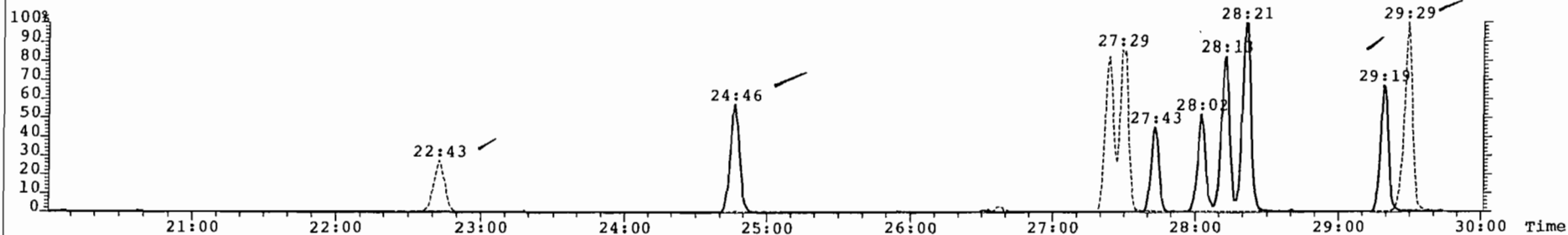
File: 010404P4 Acq: 5-APR-2001 03:43:10 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 9 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
305.8987 S:9 Expt: OCDD



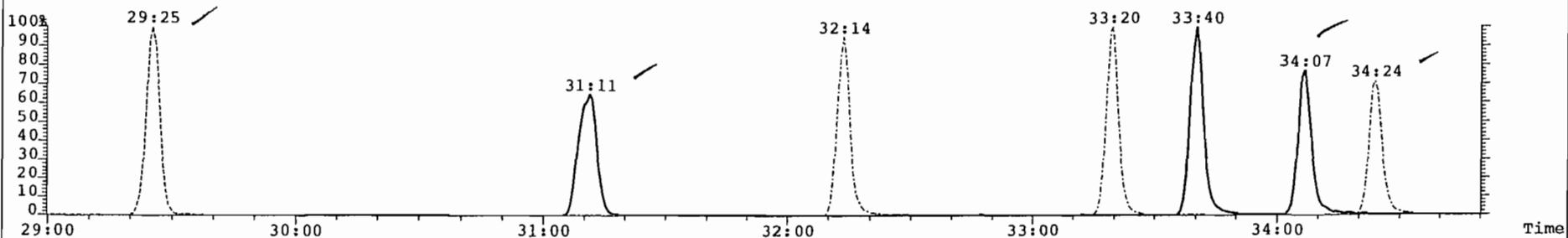
315.9419 S:9 Expt: OCDD



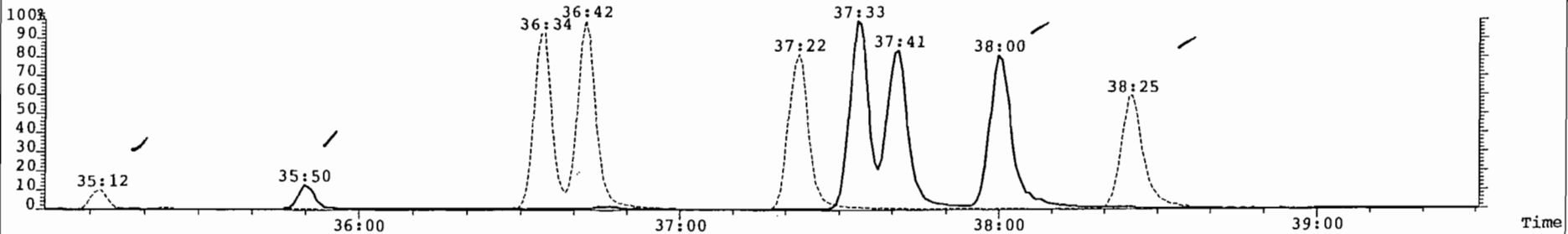
File: 010404P4 Acq: 5-APR-2001 03:43:10 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 9 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
S:9 305.8987,321.8936 Expt: OCDD



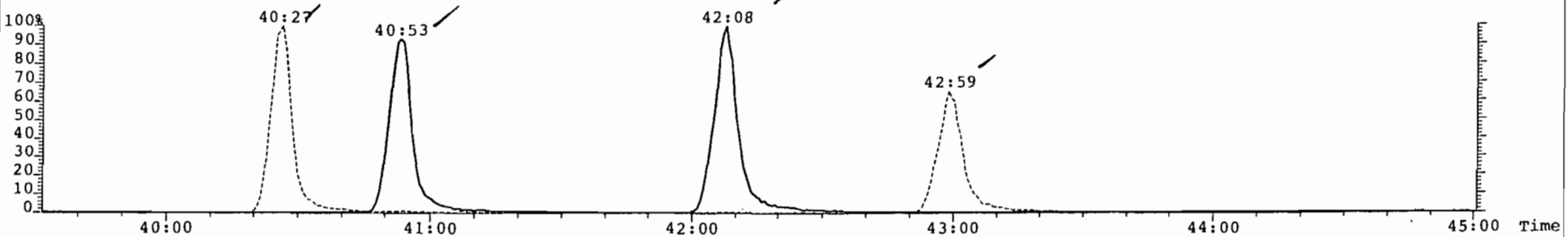
S:9 339.8597,355.8546 F:2,339.8597 F:2 Expt: OCDD



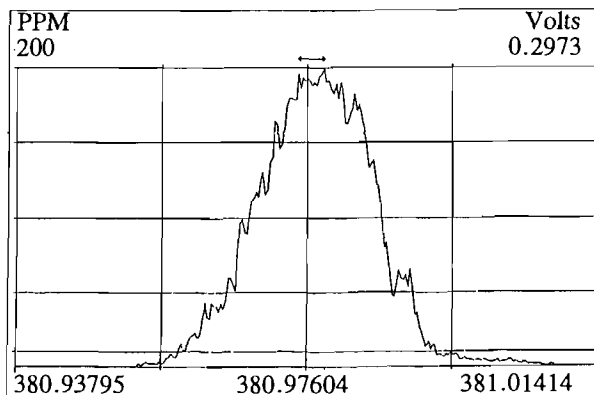
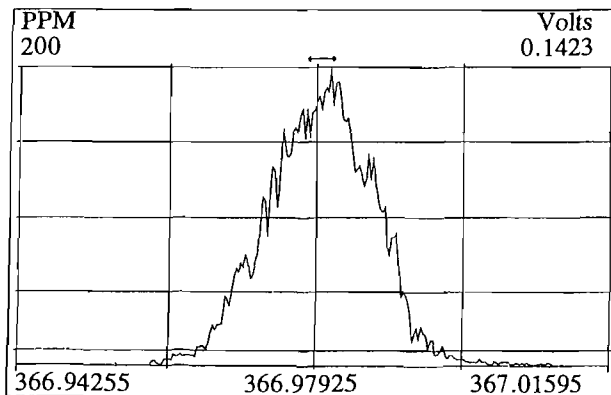
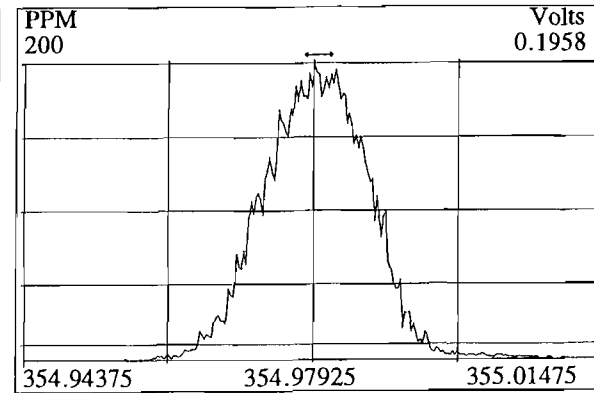
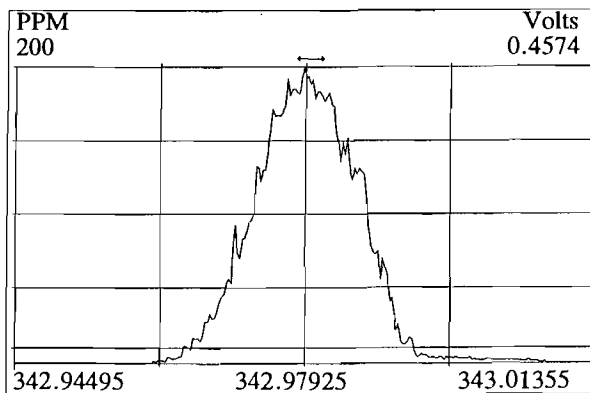
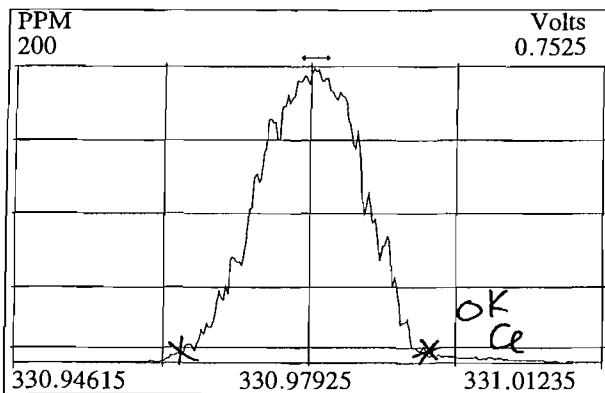
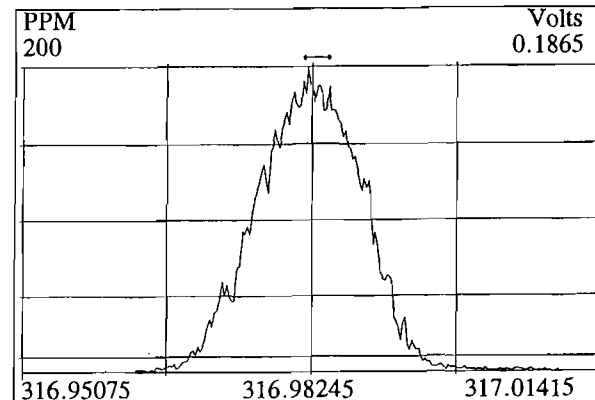
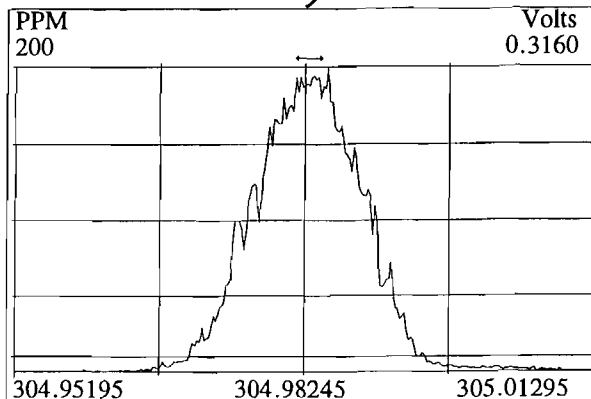
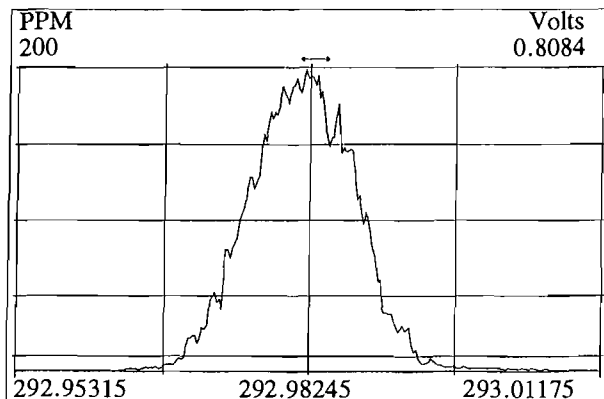
S:9 F:3 373.8207,389.8156 Expt: OCDD



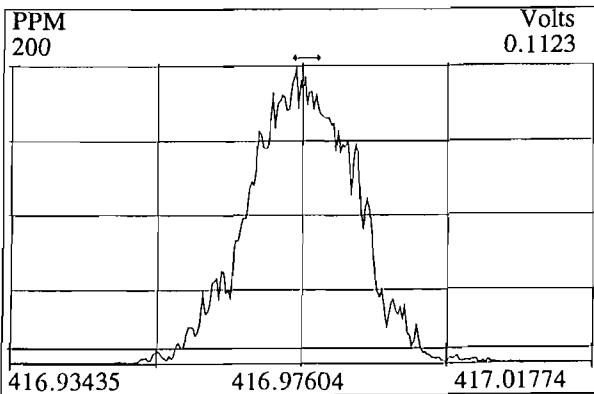
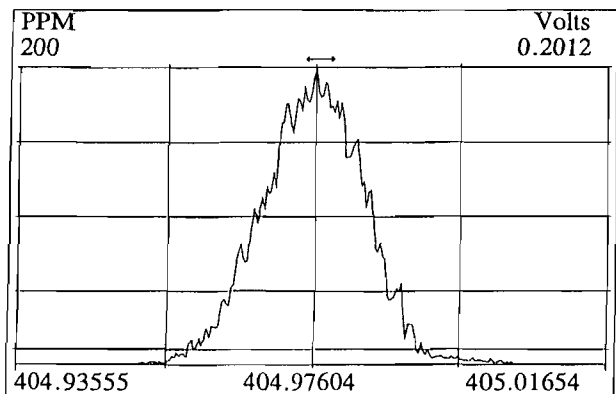
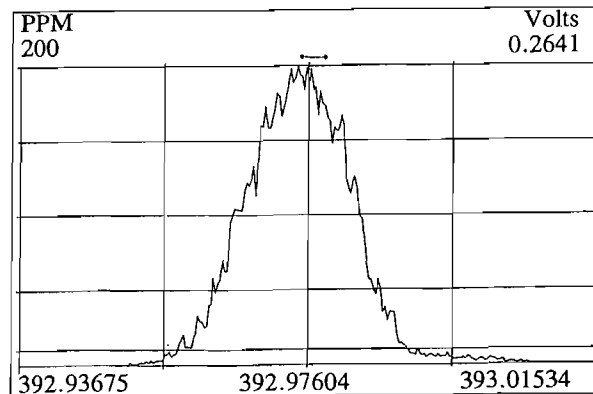
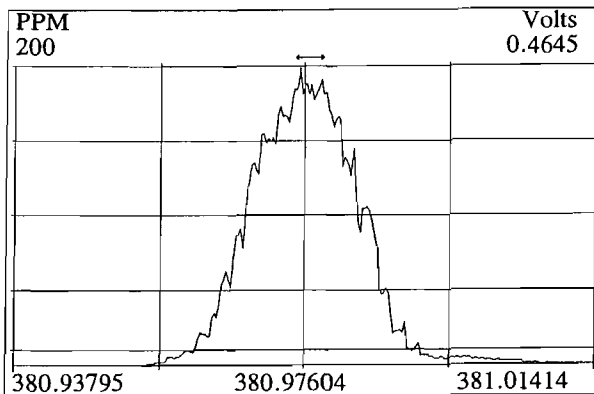
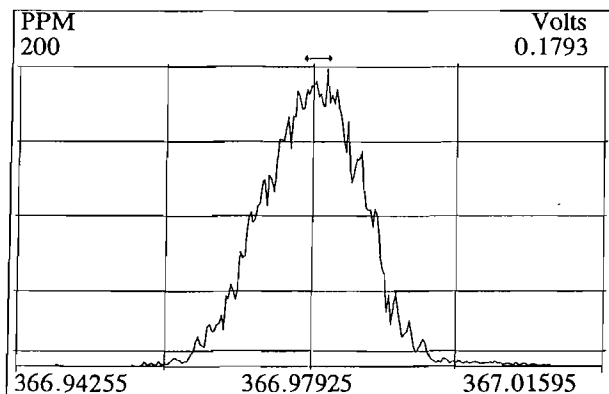
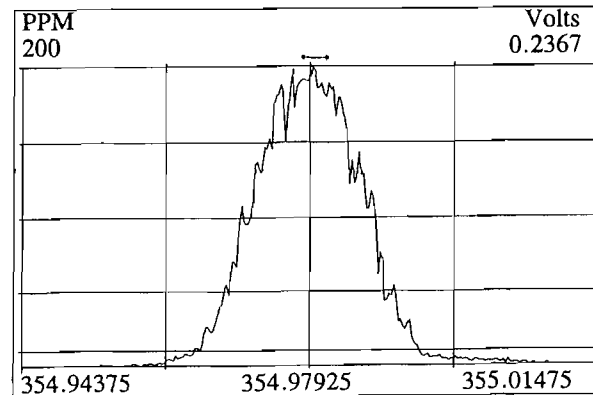
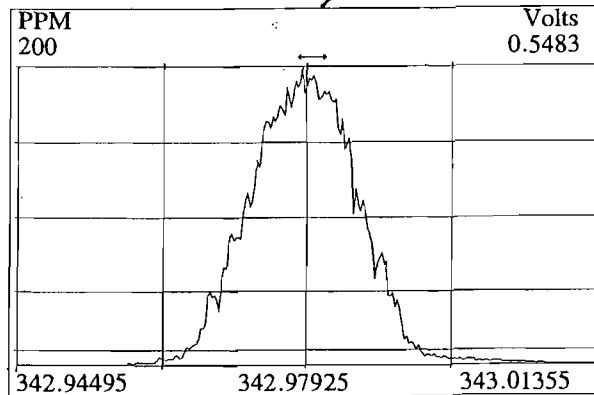
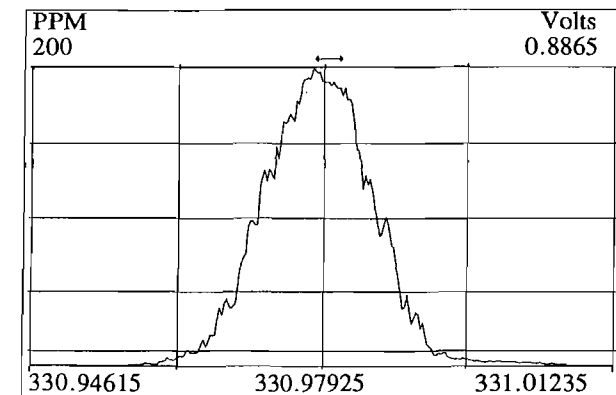
S:9 F:4 407.7818,423.7767 Expt: OCDD



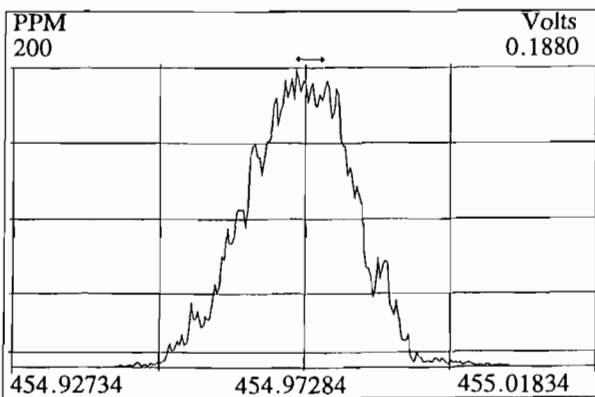
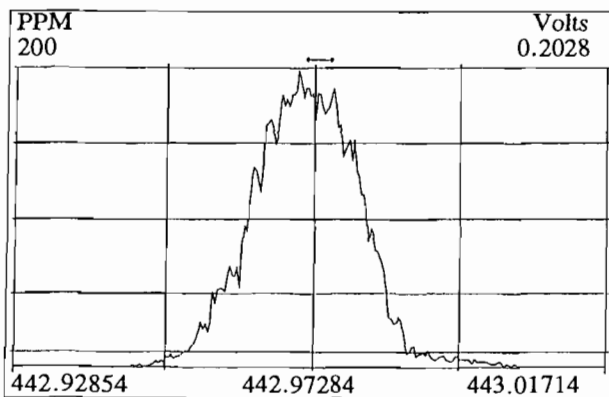
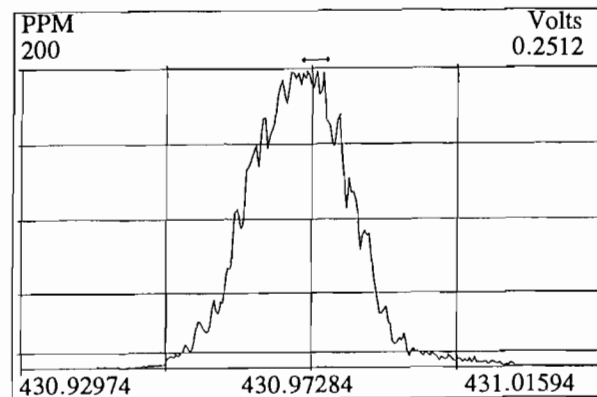
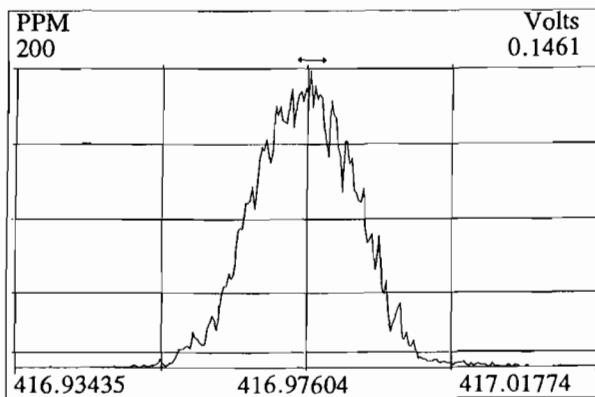
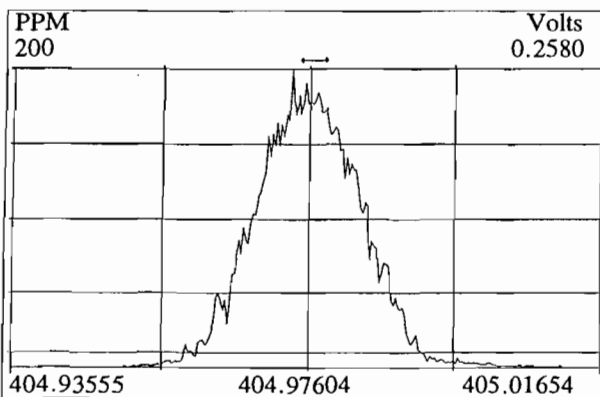
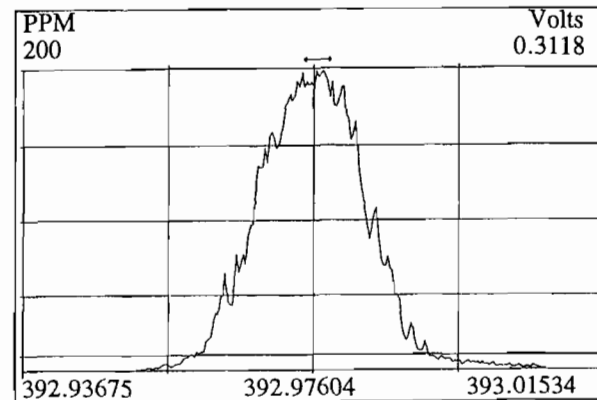
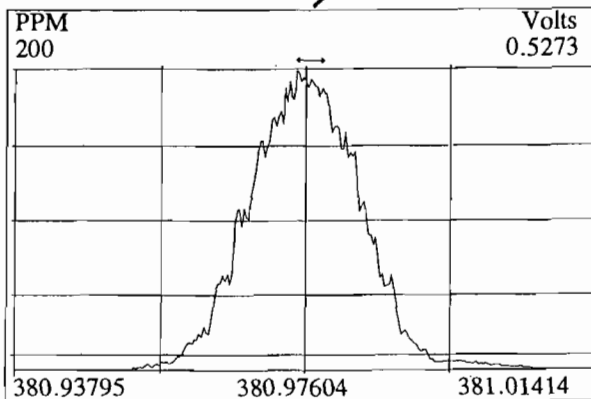
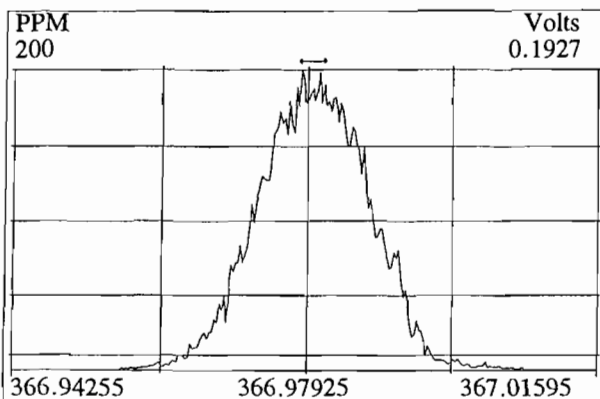
Peak Locate Examination: 5-APR-2001:04:44 File:RES\_CHECK  
Experiment:OCDD Function:1 Reference:PFK2



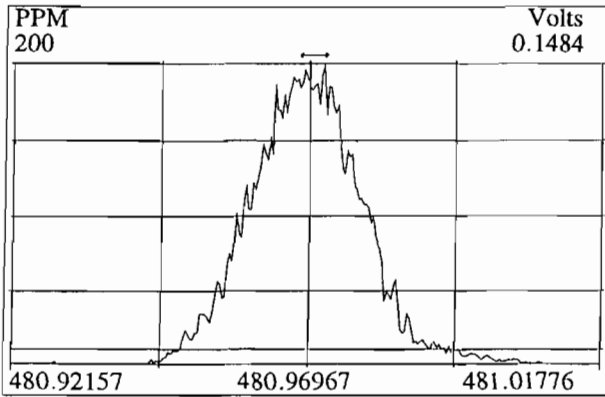
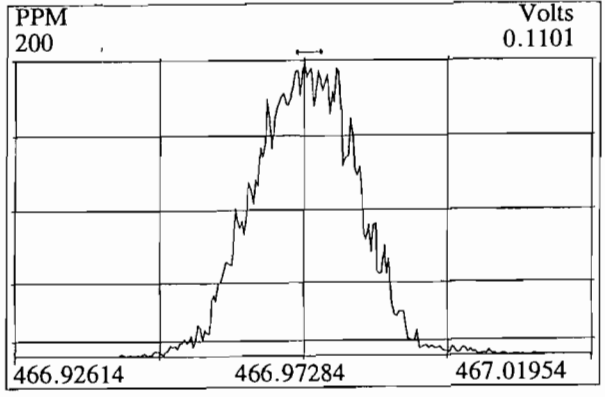
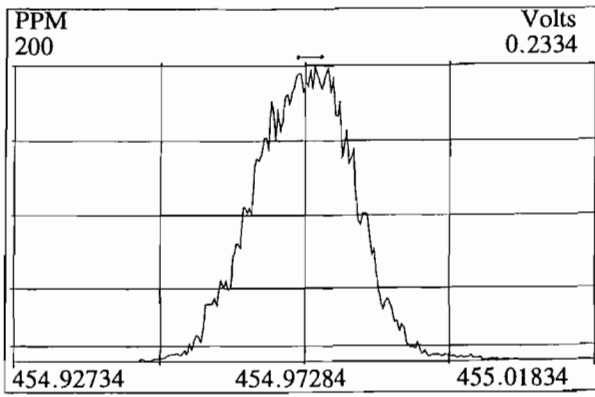
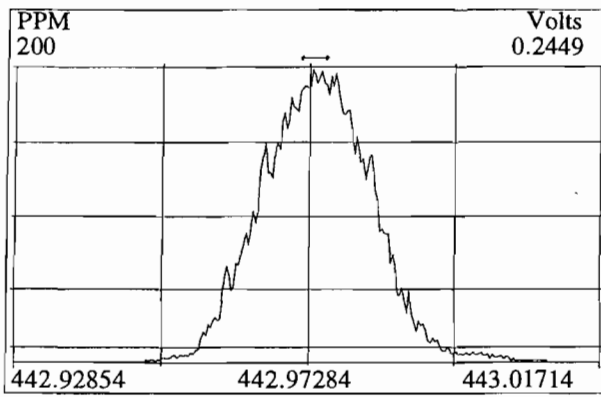
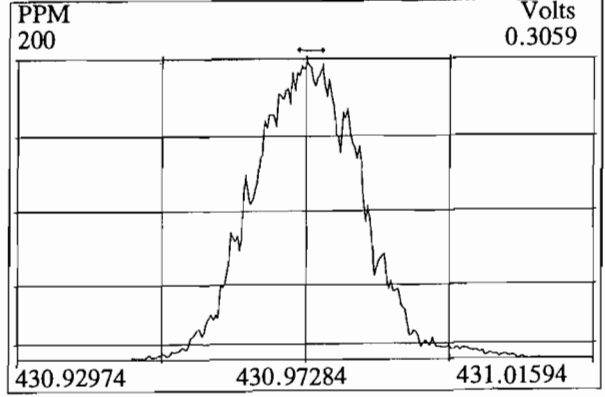
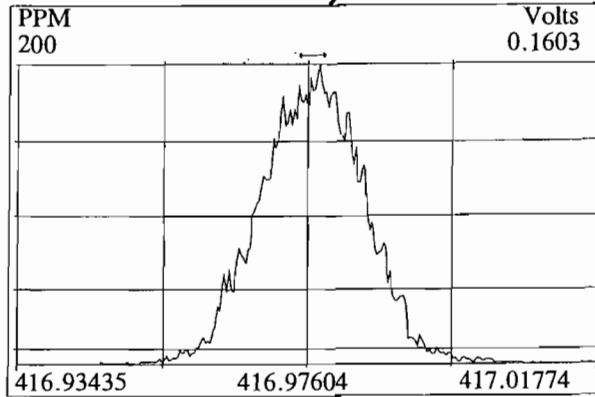
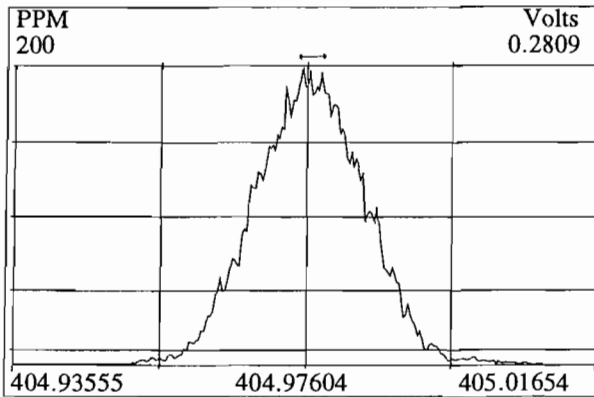
Peak Locate Examination: 5-APR-2001:04:45 File:RES CHECK  
Experiment:OCDD Function:2 Reference:PFK2



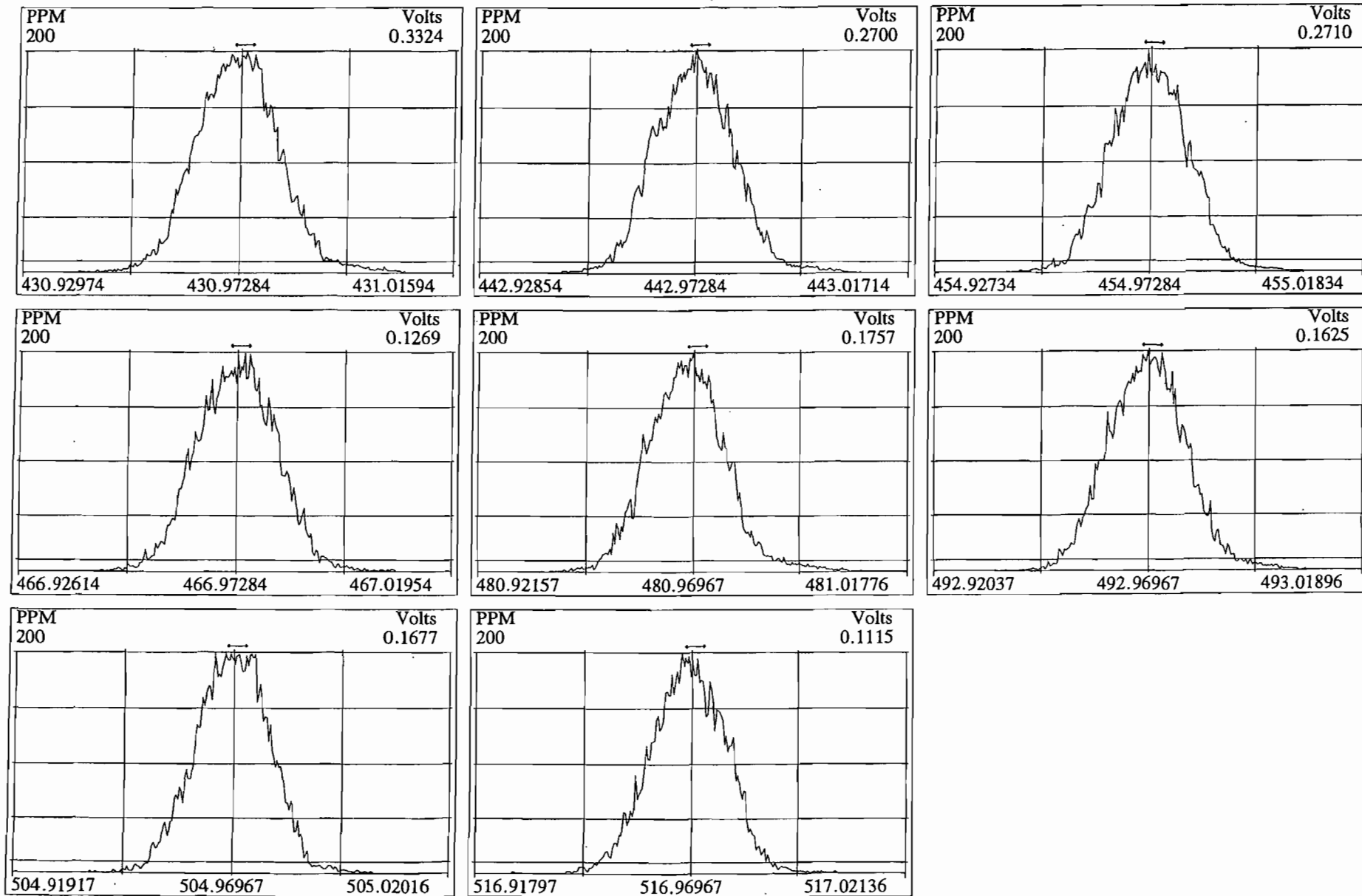
Peak Locate Examination: 5-APR-2001:04:46 File:RES\_CHECK  
Experiment:OCDD Function:3 Reference:PFK2



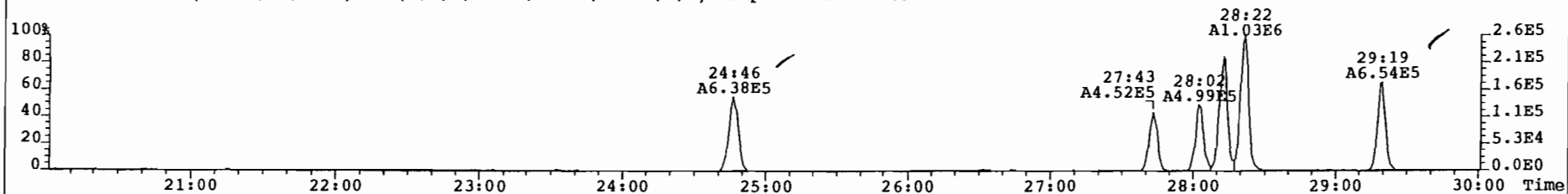
Peak Locate Examination: 5-APR-2001:04:47 File:RES CHECK  
Experiment:OCDD Function:4 Reference:PFK2



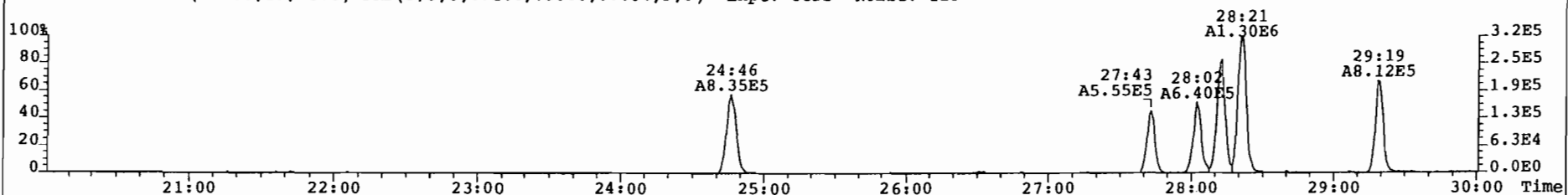
Peak Locate Examination: 5-APR-2001:04:48 File:RES CHECK  
Experiment:OCDD Function:5 Reference:PFK2



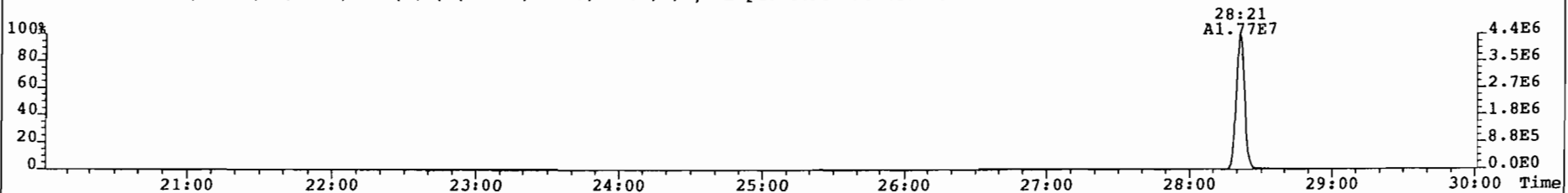
File: 010404P4 Acq: 5-APR-2001 03:43:10 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 9 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
319.8965 S:9 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 214



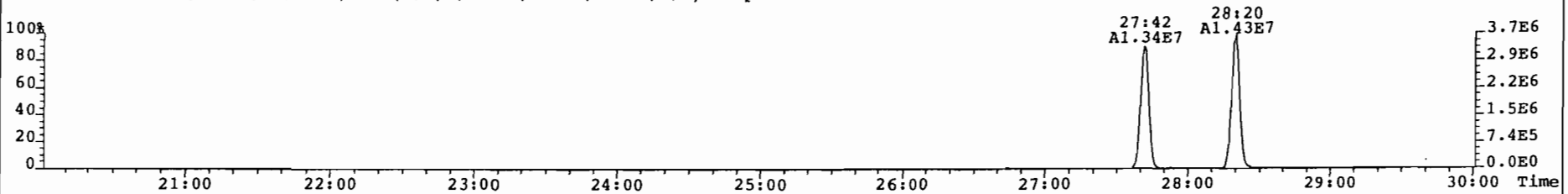
321.8936 S:9 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 125



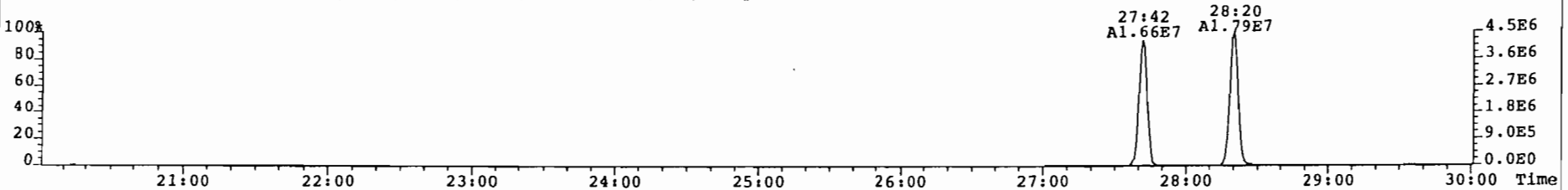
327.8850 S:9 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 264



331.9368 S:9 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1301

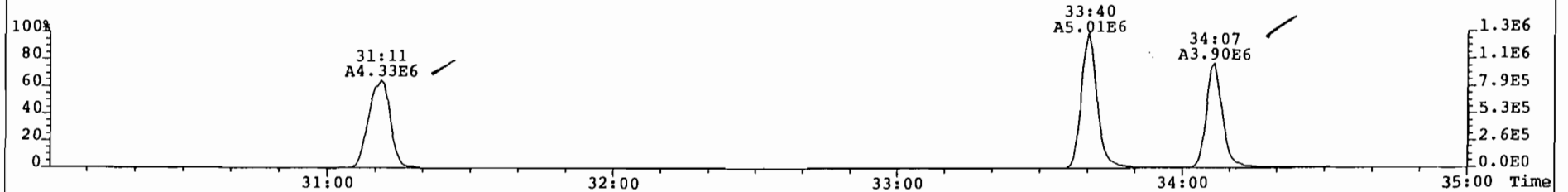


333.9339 S:9 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 651

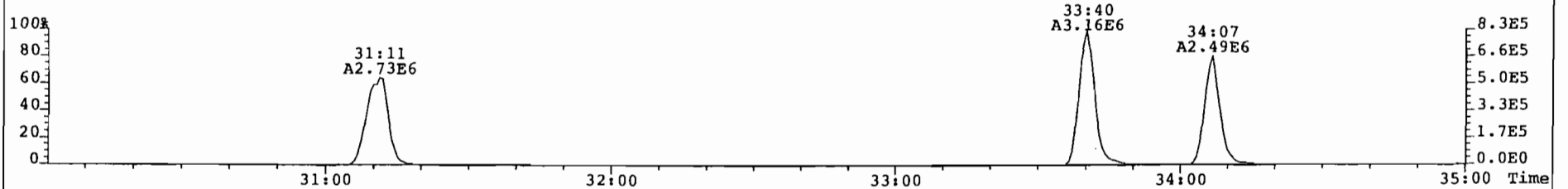




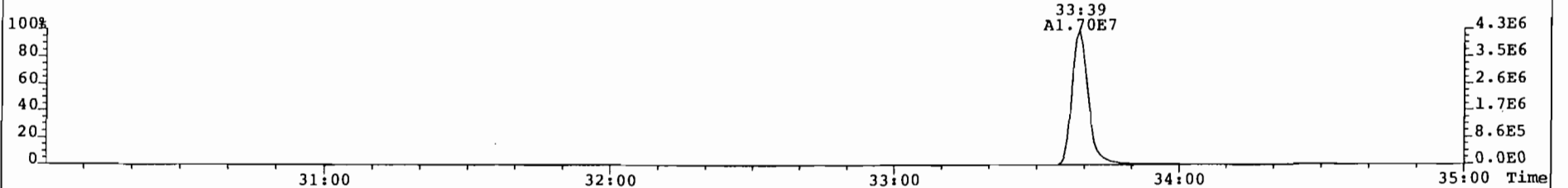
File: 010404P4 Acq: 5-APR-2001 03:43:10 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 9 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
355.8546 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 272



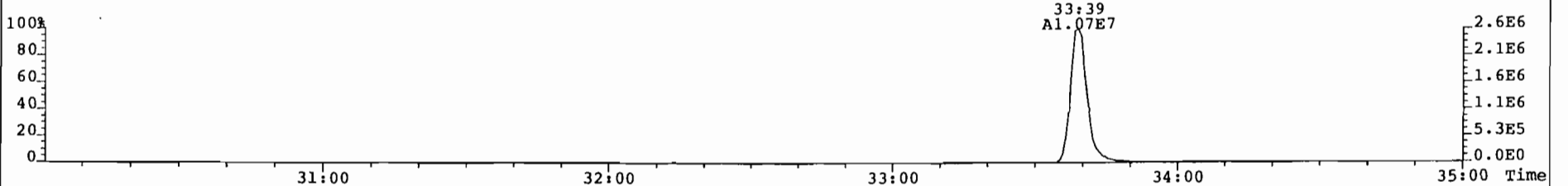
357.8517 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 129



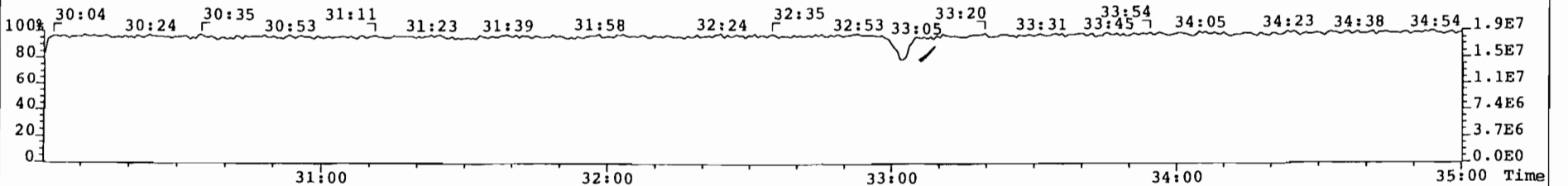
367.8949 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 527



369.8919 S:9 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 156



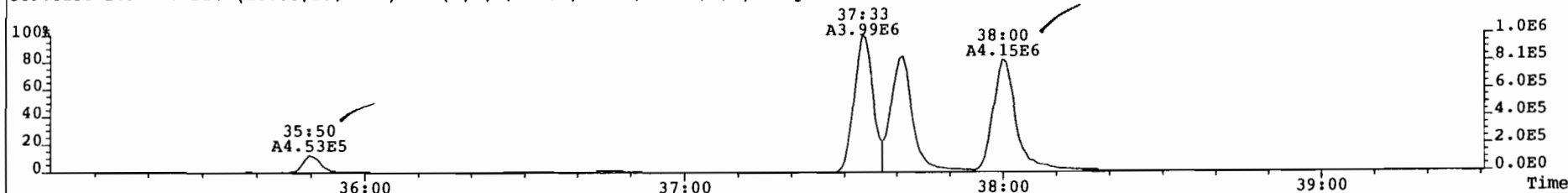
366.9792 S:9 F:2 Expt: OCDD



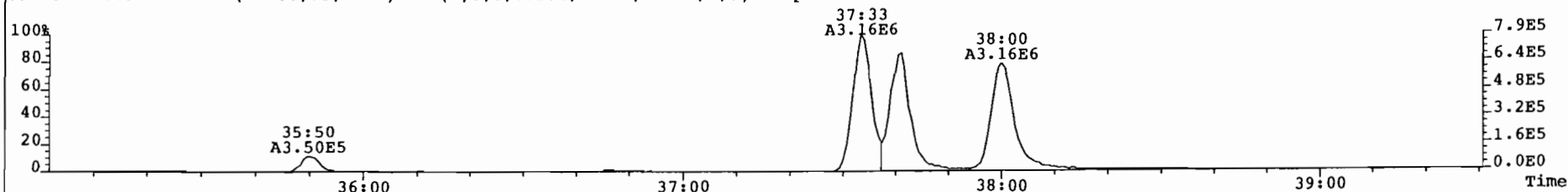
File: 010404P4 Acq: 5-APR-2001 03:43:10 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 9 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5

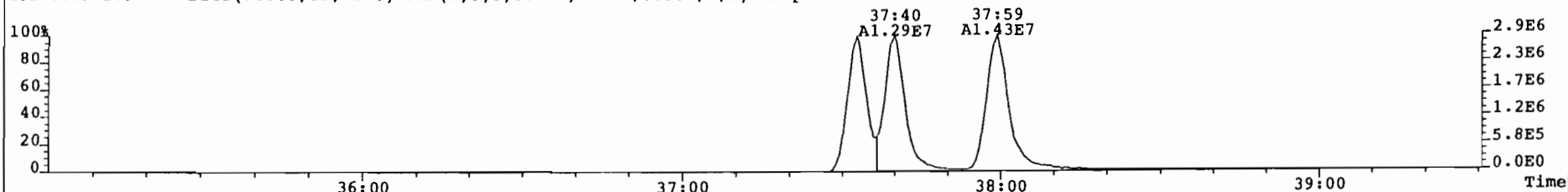
389.8156 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 443



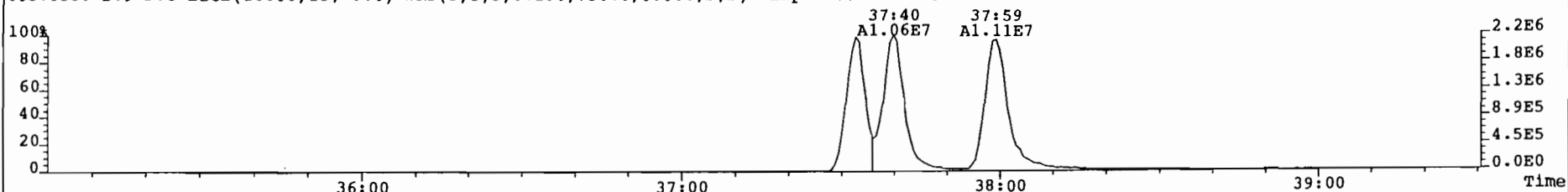
391.8127 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 333



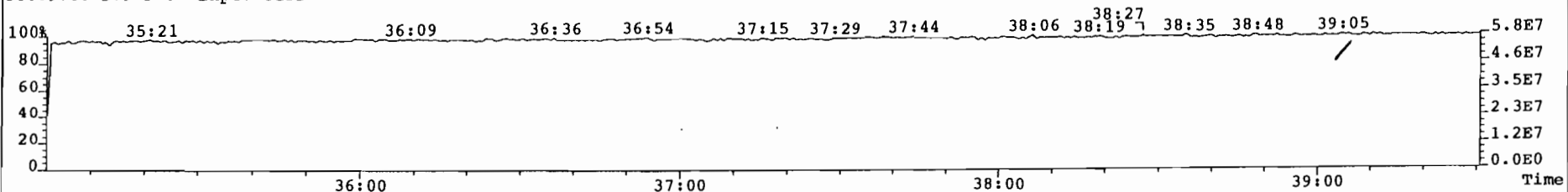
401.8559 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 544

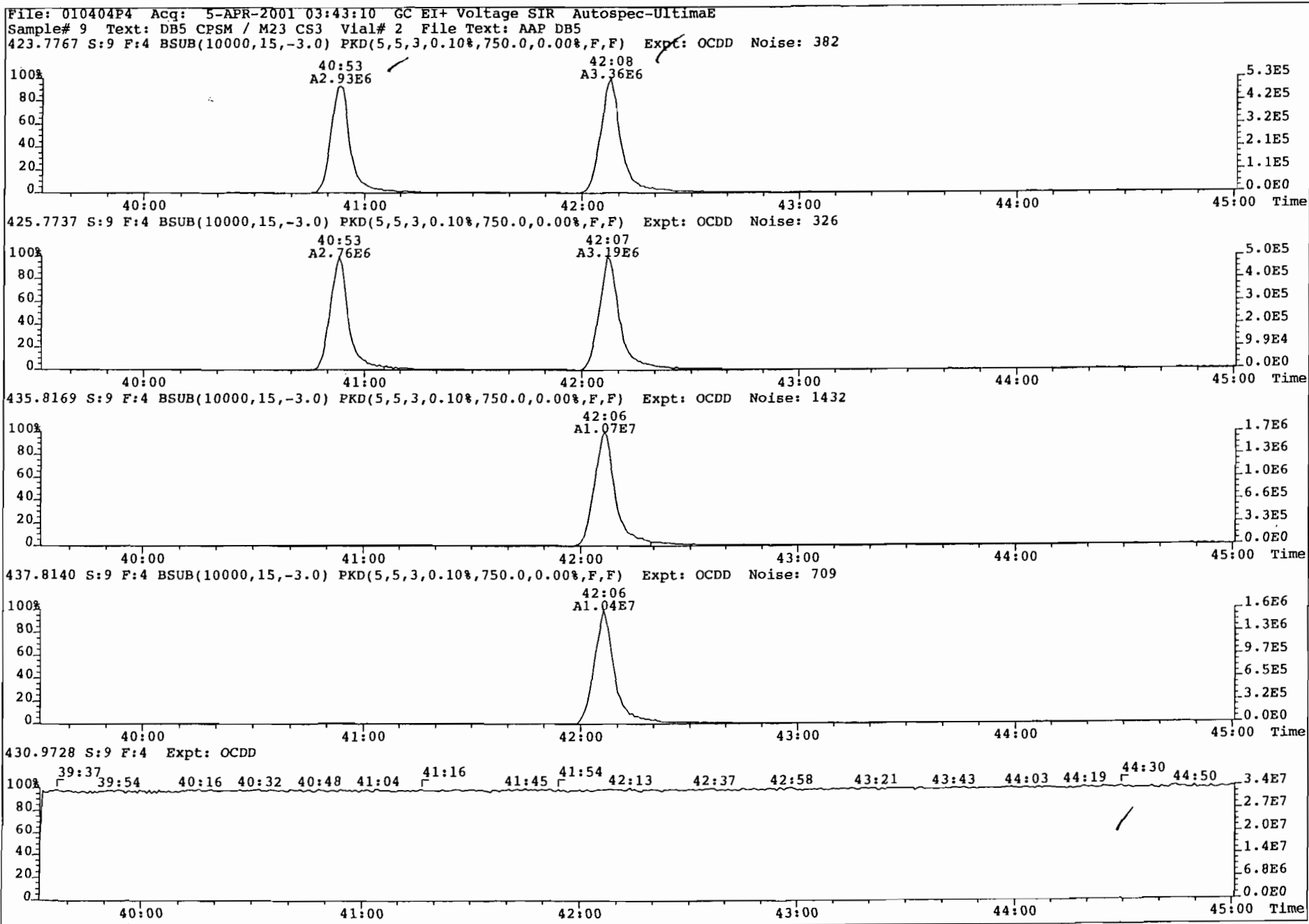


403.8530 S:9 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 381



380.9760 S:9 F:3 Expt: OCDD

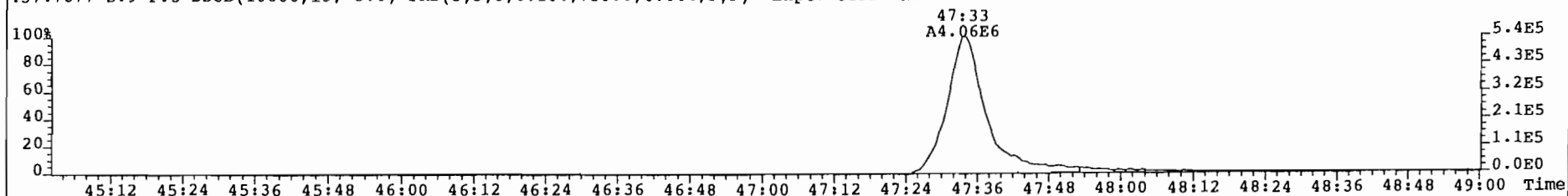




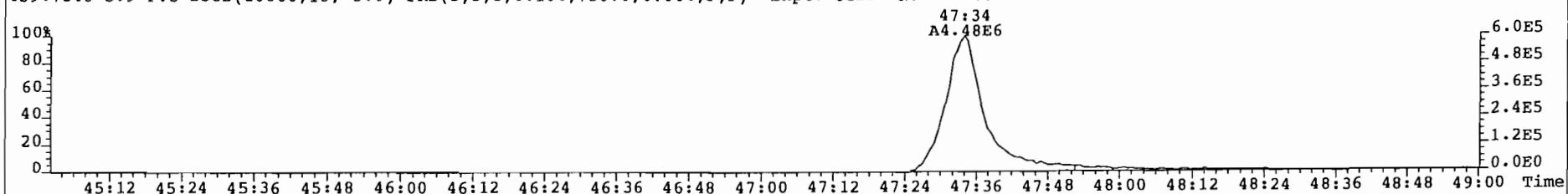
File: 010404P4 Acq: 5-APR-2001 03:43:10 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 9 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5

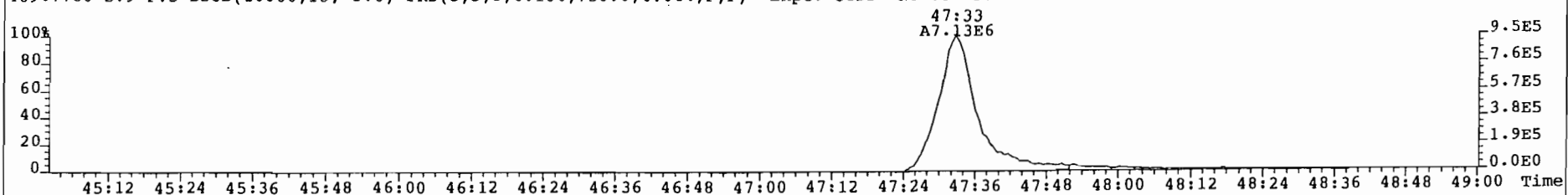
457.7377 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 159



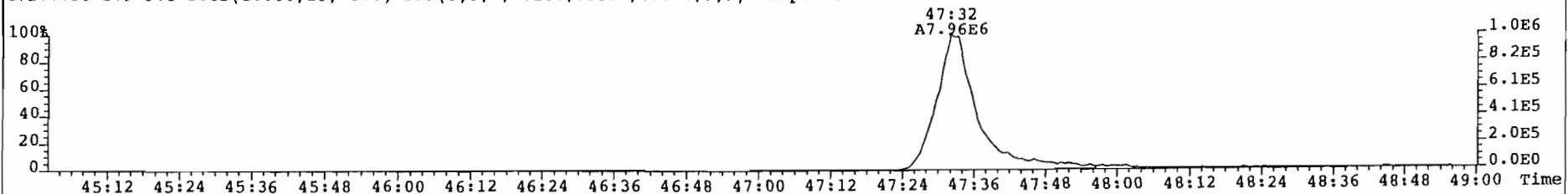
459.7348 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 83



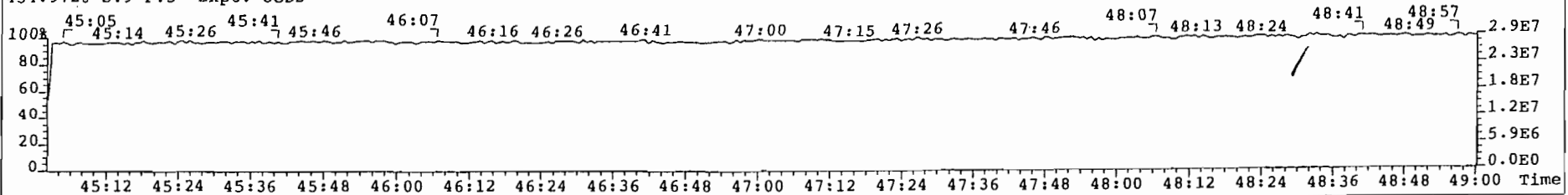
469.7780 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 58



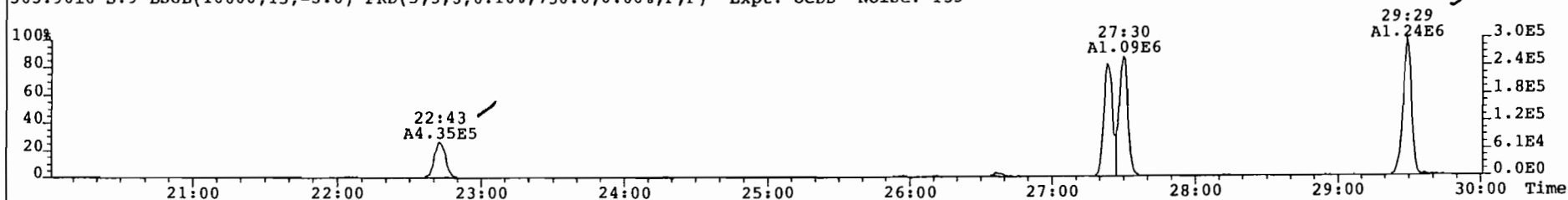
471.7750 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 50



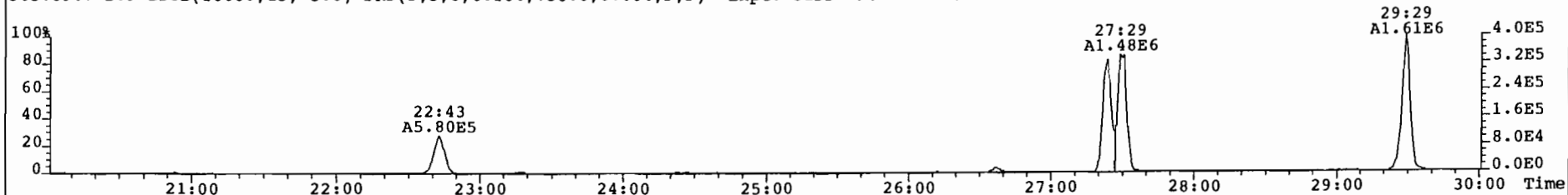
454.9728 S:9 F:5 Expt: OCDD



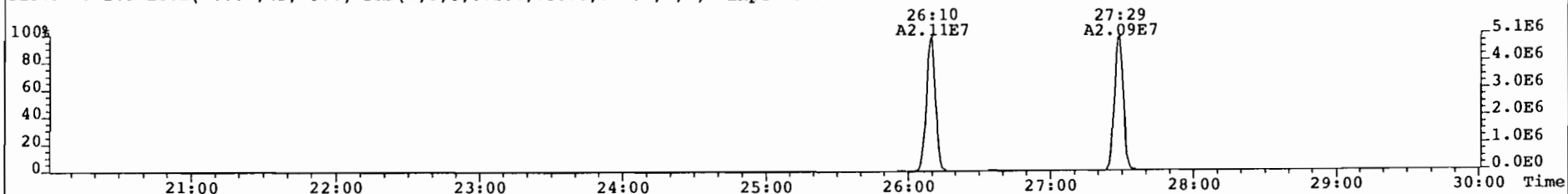
File: 010404P4 Acq: 5-APR-2001 03:43:10 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 9 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
303.9016 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 135



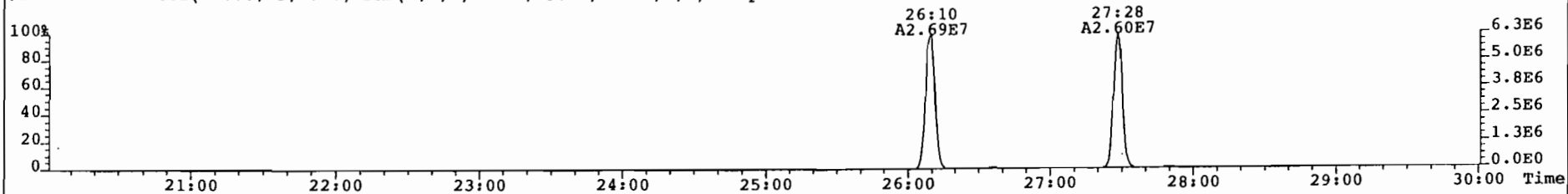
305.8987 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 440



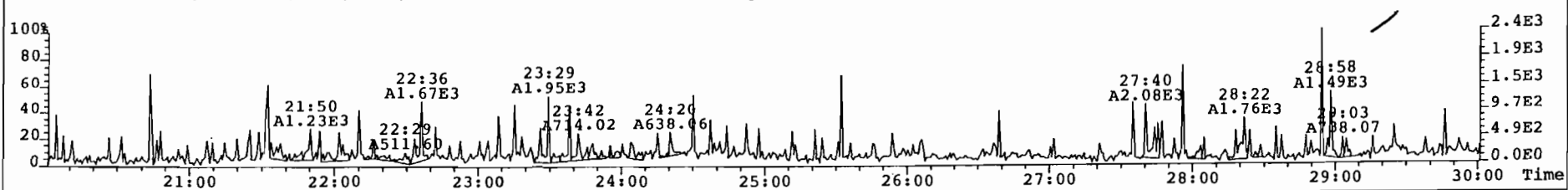
315.9419 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 75



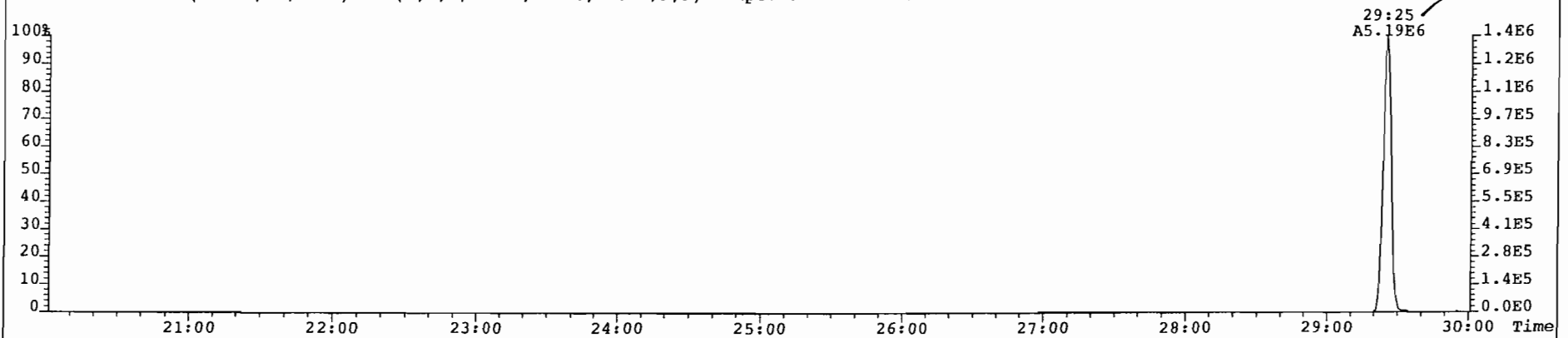
317.9389 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 714



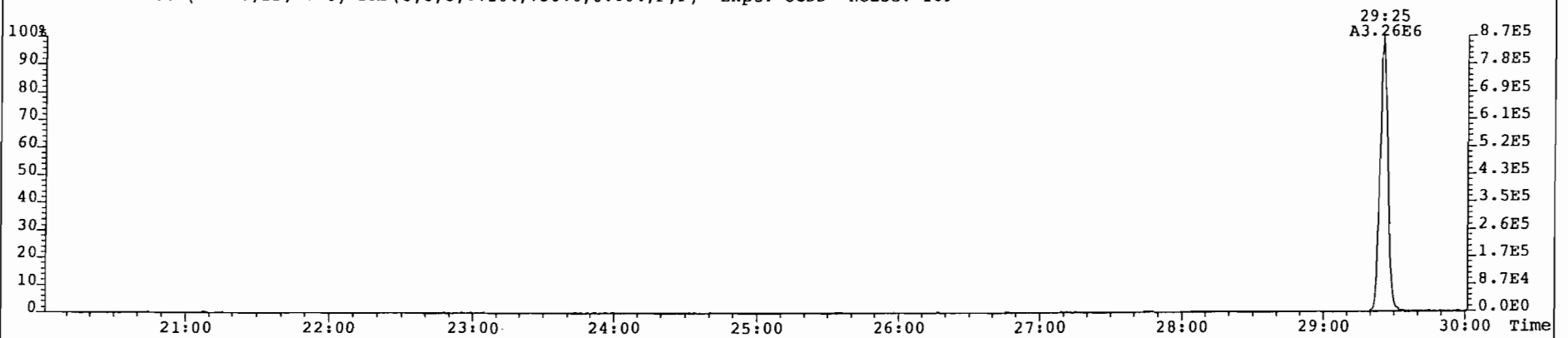
375.8364 S:9 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 51



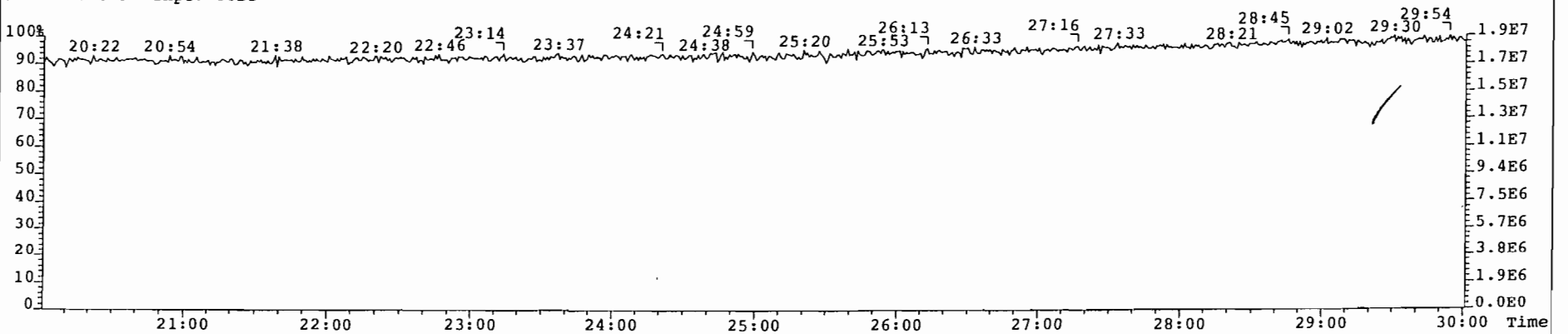
File: 010404P4 Acq: 5-APR-2001 03:43:10 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 9 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
339.8597 S:9 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 52



341.8568 S:9 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 169



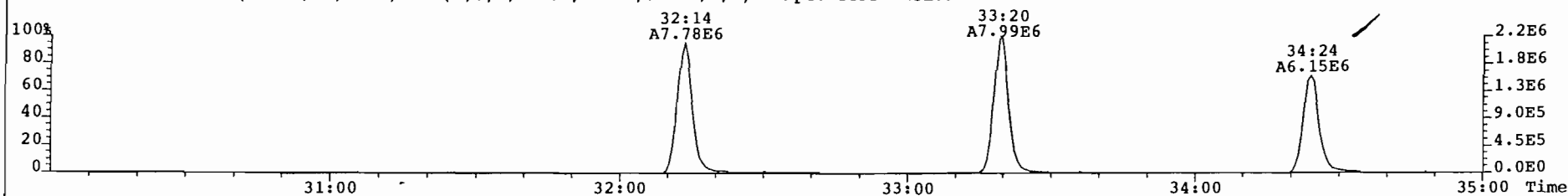
316.9824 S:9 Expt: OCDD



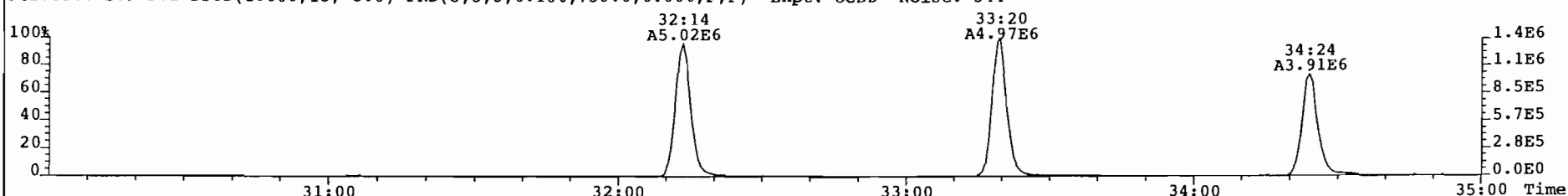
File: 010404P4 Acq: 5-APR-2001 03:43:10 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 9 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5

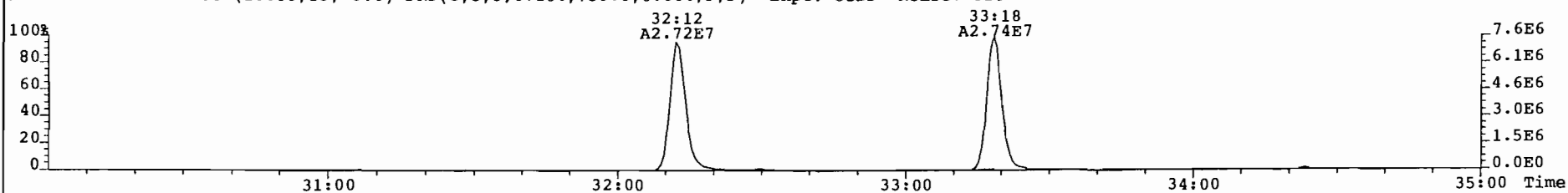
339.8597 S:9 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 385



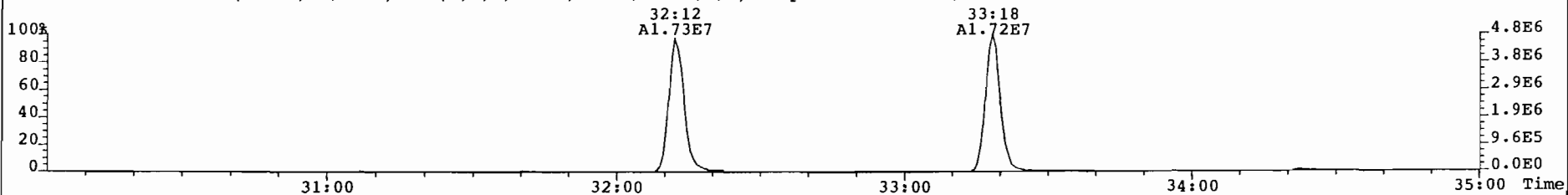
341.8568 S:9 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 544



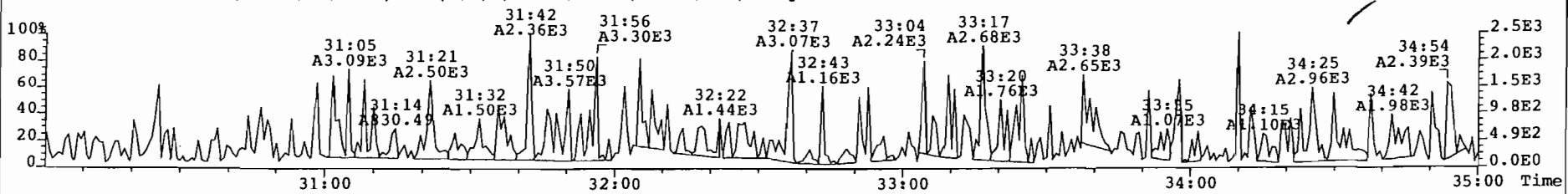
351.9000 S:9 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 815



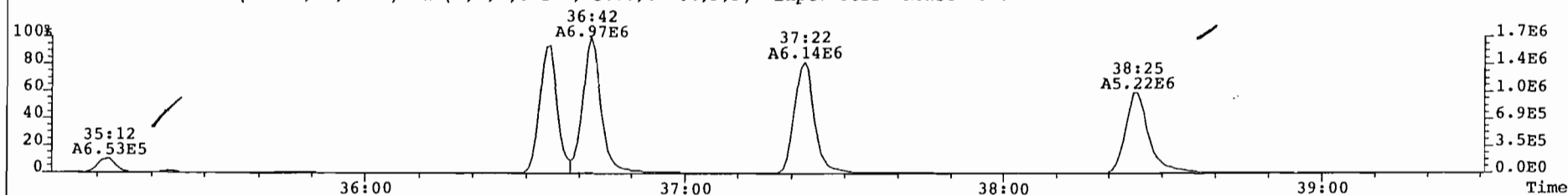
353.8970 S:9 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 450



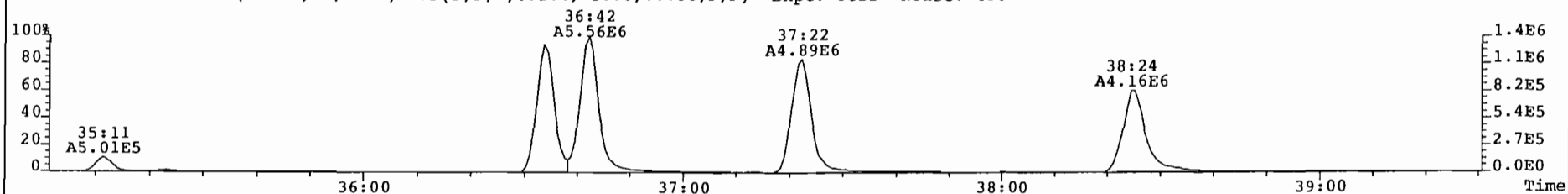
409.7974 S:9 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 84



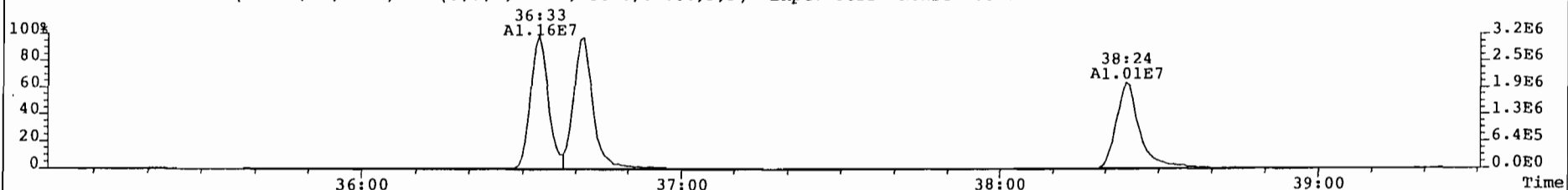
File: 010404P4 Acq: 5-APR-2001 03:43:10 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 9 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
373.8207 S:9 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 518



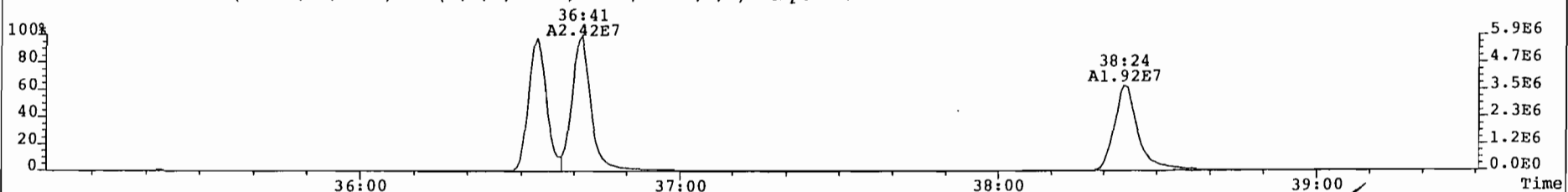
375.8178 S:9 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 438



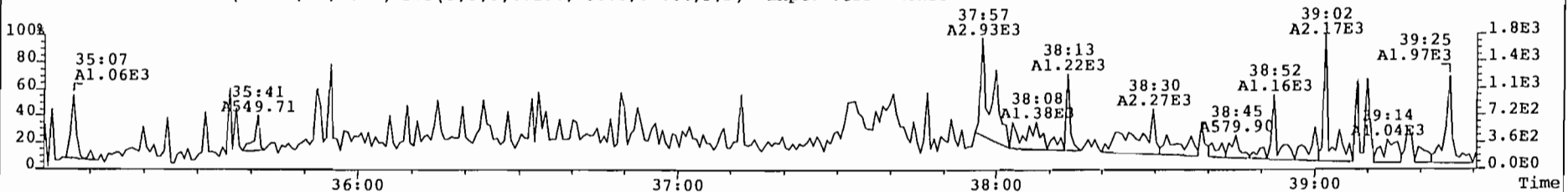
383.8639 S:9 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 3846



385.8610 S:9 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1631



445.7555 S:9 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 112

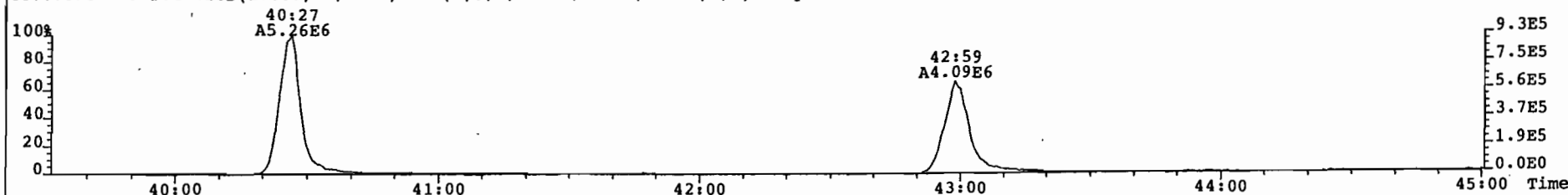




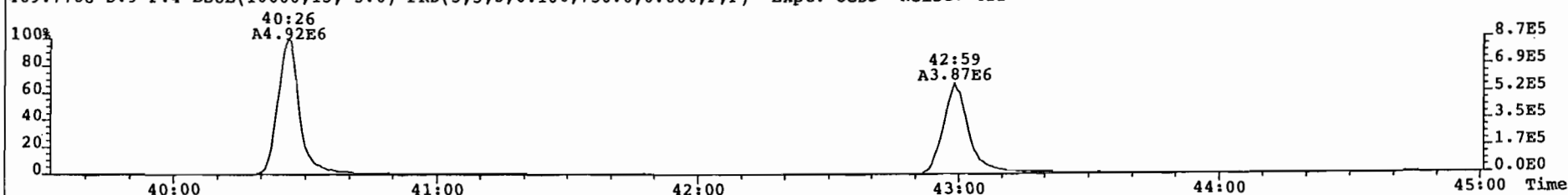
File: 010404P4 Acq: 5-APR-2001 03:43:10 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 9 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5

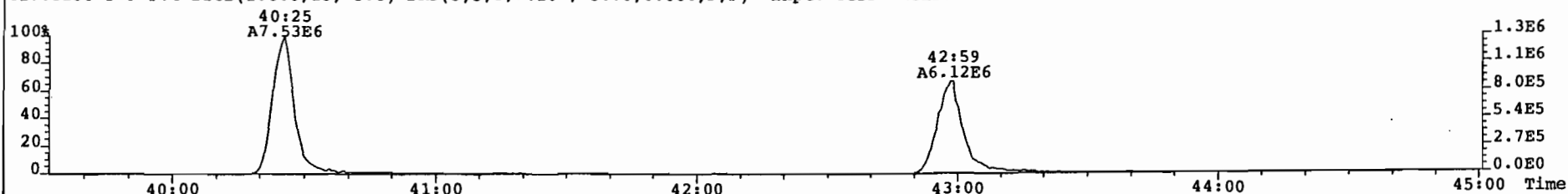
407.7818 S:9 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 388



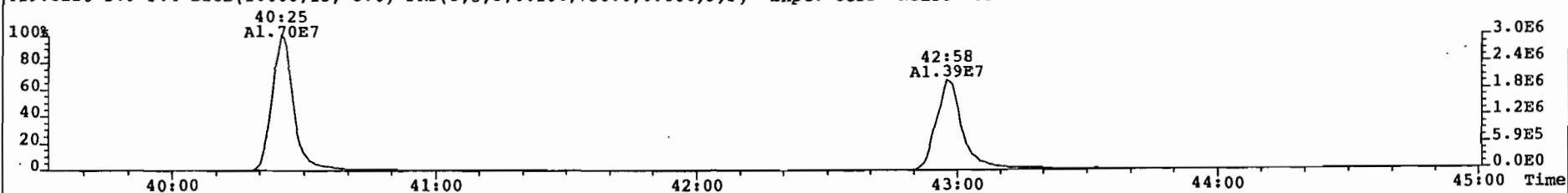
409.7788 S:9 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 411



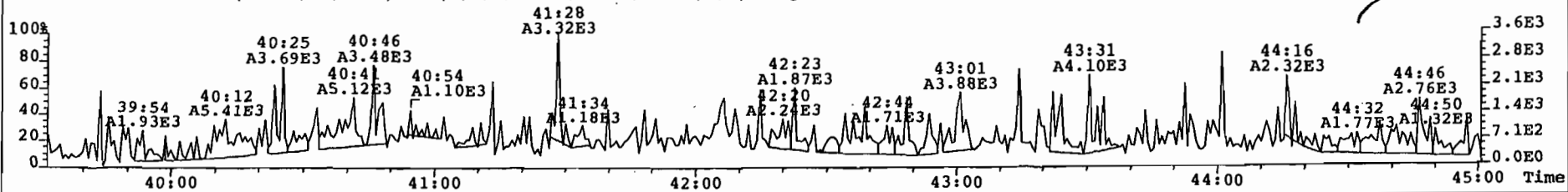
417.8253 S:9 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 585



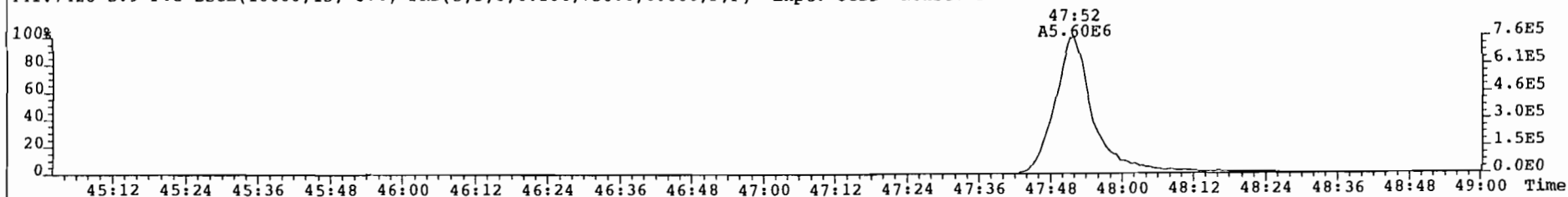
419.8220 S:9 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 852



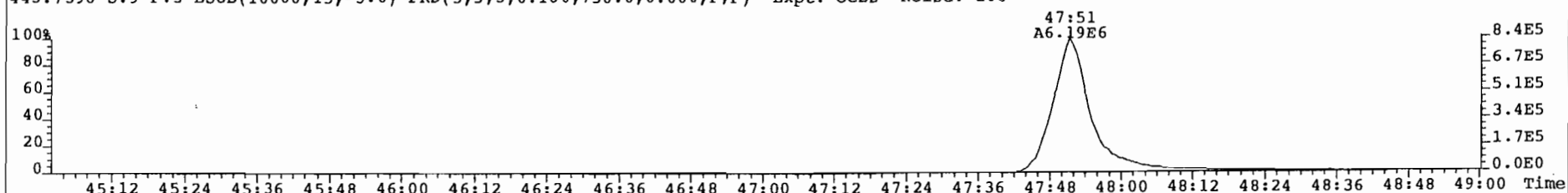
479.7165 S:9 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 218



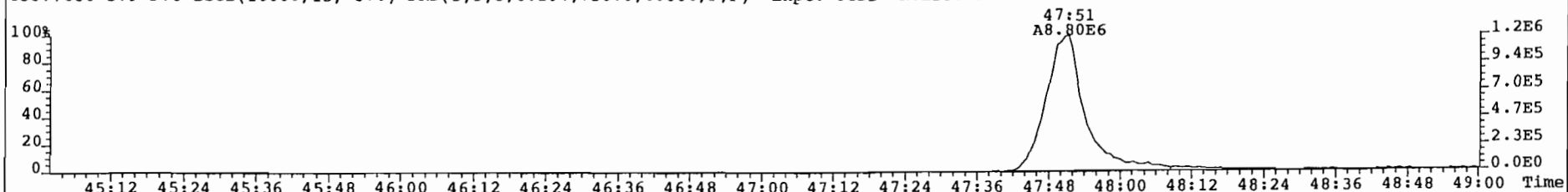
File: 010404P4 Acq: 5-APR-2001 03:43:10 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 9 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
441.7428 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 54



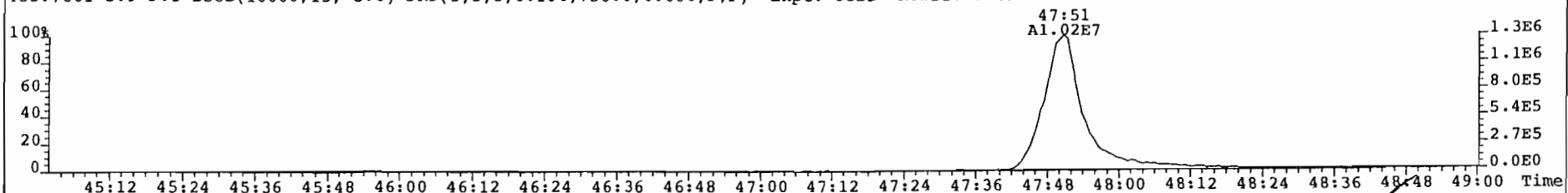
443.7398 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 206



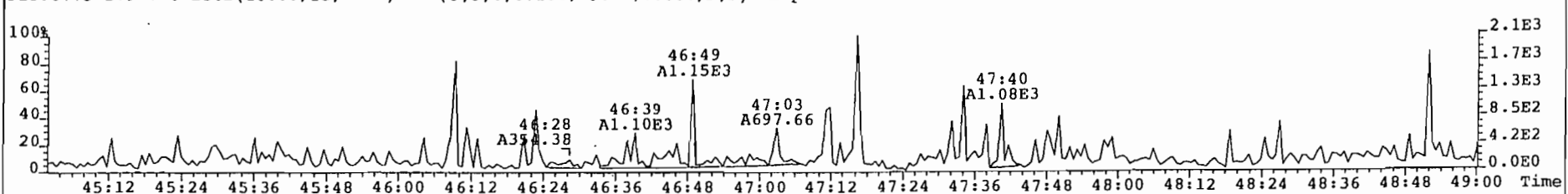
453.7830 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 51



455.7801 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1067



513.6775 S:9 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 49



PCDD/PCDF CALIBRATION VERIFICATION

Alta Analytical Perspectives

Initial Calibration Date: 10/05/00 ✓

Instrument ID: MM-1 ✓ GC Column ID: DB-5

VER Data Filename: 010405P1 S#6 Analysis Date: 5-APR-01 Time: 09:08:19

Reviewer: CL

Date: 18 Apr 01

NATIVE ANALYTES	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	y	5.67 ✓	3.75 - 6.25
1,2,3,7,8-PeCDD	M+2/M+4	1.60	1.32-1.78	y	29.83 ✓	18.75-31.25
1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	25.61 ✓	18.75-31.25
1,2,3,6,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	28.29 ✓	18.75-31.25
1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	y	26.21 ✓	18.75-31.25
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.07	0.88-1.20	y	26.67 ✓	18.75-31.25
OCDD	M+2/M+4	0.91	0.76-1.02	y	55.57 ✓	37 - 65
2,3,7,8-TCDF	M/M+2	0.72	0.65-0.89	y	5.48 ✓	3.75 - 6.25
1,2,3,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	28.08 ✓	18.75-31.25
2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	28.44 ✓	18.75-31.25
1,2,3,4,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	25.20 ✓	18.75-31.25
1,2,3,6,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	26.64 ✓	18.75-31.25
2,3,4,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	25.39 ✓	18.75-31.25
1,2,3,7,8,9-HxCDF	M+2/M+4	1.27	1.05-1.43	y	23.92 ✓	18.75-31.25
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.06	0.88-1.20	y	27.07 ✓	18.75-31.25
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.06	0.88-1.20	y	24.99 ✓	18.75-31.25
OCDF	M+2/M+4	0.91	0.76-1.02	y	54.58 ✓	35 - 65

Analyst: BAG

Date: 17 Apr 01

## PCDD/PCDF CALIBRATION VERIFICATION

## Alta Analytical Perspectives

Initial Calibration Date: 10/05/00 ✓

Instrument ID: MM-1 ✓ GC Column ID: DB-5

VER Data Filename: 010405P1 S#6 Analysis Date: 5-APR-01 Time: 09:08:19

Reviewer: ceDate: 18 Apr 01

LABELED COMPOUNDS	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.81	0.65-0.89	y	94.8 ✓	70.0 - 130.0
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.61	1.32-1.78	y	100.4 ✓	70.0 - 130.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	102.7 ✓	70.0 - 130.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	y	93.3 ✓	70.0 - 130.0
13C-OCDD	M+2/M+4	0.90	0.76-1.02	y	81.3 ✓	70.0 - 130.0
13C-2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	y	90.6 ✓	70.0 - 130.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	94.7 ✓	70.0 - 130.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	117.9 ✓	70.0 - 130.0
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.44	0.37-0.51	y	108.0 ✓	70.0 - 130.0
13C-OCDF	M+2/M+4	0.89	0.76-1.02	y	90.5 ✓	70.0 - 130.0
37Cl-2,3,7,8-TCDD					107.7 ✓	75.0 - 125.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	104.4 ✓	75.0 - 125.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	89.0 ✓	75.0 - 125.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	94.5 ✓	75.0 - 125.0
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.44	0.37-0.51	y	96.0 ✓	75.0 - 125.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	y	110.1 ✓	75.0 - 125.0

Analyst: GAGDate: 17 Apr 01

Client ID: DB5 CPSM / M23 CS3  
Lab ID: CS3RCX

Filename: 010405P1  
GC Column ID: db-5

S: 6 Acq: 5-APR-01 09:08:19  
ICal: MMI\_M23\_0 wt/vol: 1.000

ConCal: 010405P1-  
EndCal: 010405P1-

Name	Resp	RA	RRF	RT	Conc	Qualif.	CDE	noise	Fac	DL
2,3,7,8-TCDD	2.24e+06	0.78 y	1.26	28:21	5.67			851	2.5	0.0386
1,2,3,7,8-PeCDD	8.16e+06	1.60 y	1.01	33:41	29.8			1814	2.5	0.168
1,2,3,4,7,8-HxCDD	6.88e+06	1.29 y	1.14	37:33	25.6			3839	2.5	0.398
1,2,3,6,7,8-HxCDD	6.83e+06	1.29 y	1.02	37:41	28.3			3839	2.5	0.444
1,2,3,7,8,9-HxCDD	7.07e+06	1.26 y	1.14	38:01	26.2			3839	2.5	0.397
1,2,3,4,6,7,8-HpCDD	6.26e+06	1.07 y	1.13	42:09	26.7			3407	2.5	0.513
OCDD	8.37e+06	0.91 y	1.03	47:36	55.6			721	2.5	0.182
2,3,7,8-TCDF	2.68e+06	0.72 y	1.05	27:30	5.48			1525	2.5	0.0557
1,2,3,7,8-PeCDF	1.29e+07	1.58 y	1.04	32:13	28.1			3369	2.5	0.179
2,3,4,7,8-PeCDF	1.33e+07	1.59 y	1.05	33:20	28.4			3369	2.5	0.176
1,2,3,4,7,8-HxCDF	1.06e+07	1.24 y	1.13	36:34	25.2			2967	2.5	0.115
1,2,3,6,7,8-HxCDF	1.23e+07	1.25 y	1.24	36:43	26.6			2967	2.5	0.106
2,3,4,6,7,8-HxCDF	1.10e+07	1.24 y	1.16	37:22	25.4			2967	2.5	0.112
1,2,3,7,8,9-HxCDF	9.06e+06	1.27 y	1.02	38:26	23.9			2967	2.5	0.128
1,2,3,4,6,7,8-HpCDF	1.00e+07	1.06 y	1.54	40:27	27.1			3607	2.5	0.198
1,2,3,4,7,8,9-HpCDF	7.79e+06	1.06 y	1.30	43:00	25.0			3607	2.5	0.235
OCDF	1.13e+07	0.91 y	1.15	47:53	54.6			1280	2.5	0.218
Total Tetra-Dioxins	8.98e+06	0.78 y	1.26	24:46	22.8			851	2.5	0.0386
Total Penta-Dioxins	2.17e+07	1.60 y	1.01	31:10	79.2			1814	2.5	0.168
Total Hexa-Dioxins	2.17e+07	1.31 y	1.10	35:50	83.7			3839	2.5	0.412
Total Hepta-Dioxins	1.20e+07	1.06 y	1.13	40:54	51.0			3407	2.5	0.513
Total Tetra-Furans	9.00e+06	0.79 y	1.05	22:42	18.4			1525	2.5	0.0557
1st Fnc. Penta-Furans	8.06e+06	1.64 y	1.05	29:25	17.4			1900	2.5	0.0999
Total Penta-Furans	3.65e+07	1.58 y	1.05	32:13	78.8			3369	2.5	0.177
PeCDF Totals:					96.3					96.3
Total Hexa-Furans	4.41e+07	1.27 y	1.14	35:11	104			2967	2.5	0.115
Total Hepta-Furans	1.78e+07	1.06 y	1.42	40:27	52.1			3607	2.5	0.215
IS 13C-2,3,7,8-TCDD	3.13e+07	0.81 y	1.13	28:20	94.8					94.8
IS 13C-1,2,3,7,8-PeCDD	2.70e+07	1.61 y	0.93	33:39	100					100
IS 13C-1,2,3,6,7,8-HxCDD	2.36e+07	1.29 y	0.93	37:40	103					103
IS 13C-1,2,3,4,6,7,8-HpCDD	2.08e+07	1.05 y	0.91	42:07	93.3					93.3
IS 13C-OCDD	1.47e+07	0.90 y	0.73	47:35	81.3					81.3
IS 13C-2,3,7,8-TCDF	4.68e+07	0.79 y	1.06	27:28	90.6					90.6
IS 13C-1,2,3,7,8-PeCDF	4.42e+07	1.59 y	0.96	32:13	94.7					94.7
IS 13C-1,2,3,6,7,8-HxCDF	3.72e+07	0.53 y	1.28	36:42	118					118
IS 13C-1,2,3,4,6,7,8-HpCDF	2.40e+07	0.44 y	0.90	40:25	108					108
IS 13C-OCDF	1.81e+07	0.89 y	0.81	47:51	90.5					90.5
RS/RT 13C-1,2,3,4-TCDD	2.91e+07	0.81 y	1.00	27:42	100					-
RS 13C-1,2,3,4-TCDF	4.87e+07	0.78 y	1.00	26:09	100					-
RS/RT 13C-1,2,3,7,8,9-HxCDD	2.46e+07	1.24 y	1.00	38:00	100					-
PS 37Cl-2,3,7,8-TCDD	1.73e+07		0.51	28:21	108					108
PS 13C-2,3,4,7,8-PeCDF	4.49e+07	1.60 y	0.97	33:18	104					104
PS 13C-1,2,3,4,7,8-HxCDD	1.94e+07	1.29 y	0.92	37:33	89.0					89.0
PS 13C-1,2,3,4,7,8-HxCDF	3.20e+07	0.53 y	0.91	36:33	94.5					94.5
PS 13C-1,2,3,4,7,8,9-HpCDF	1.97e+07	0.44 y	0.85	42:59	96.0					96.0
AS 13C-1,2,3,7,8,9-HxCDF	2.90e+07	0.52 y	1.07	38:25	110					110

Reviewer: ce

Date: 18 Apr 01

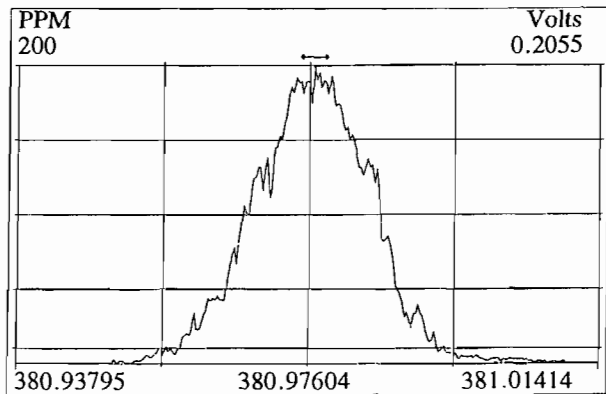
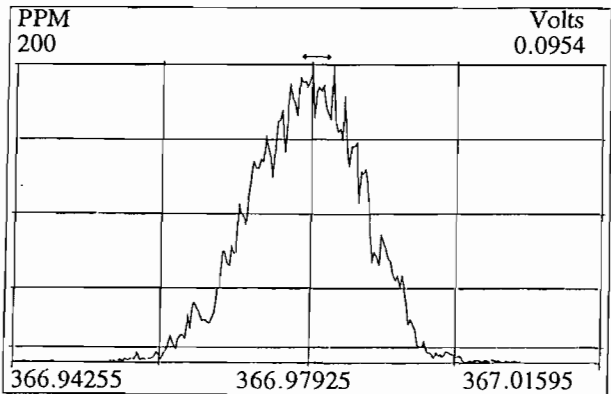
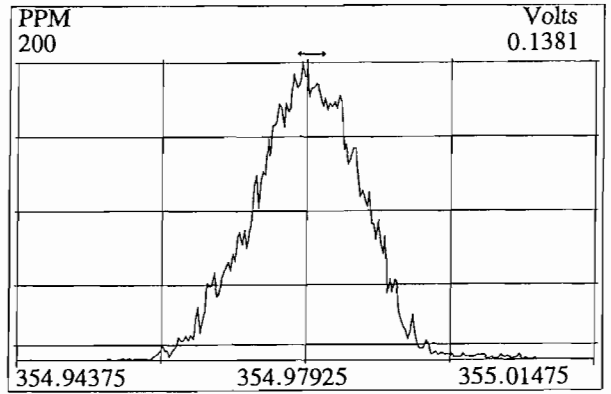
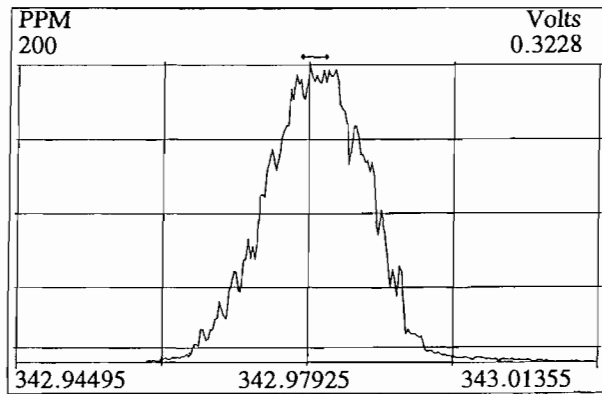
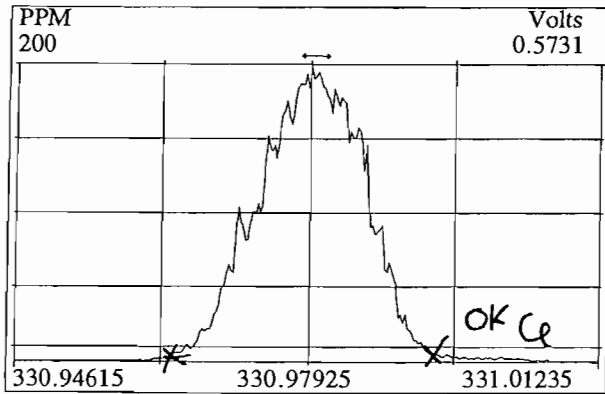
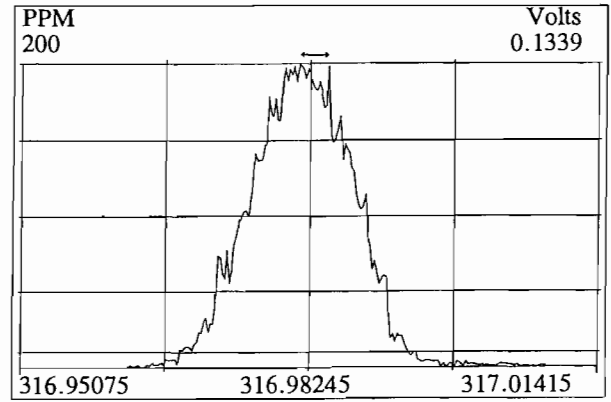
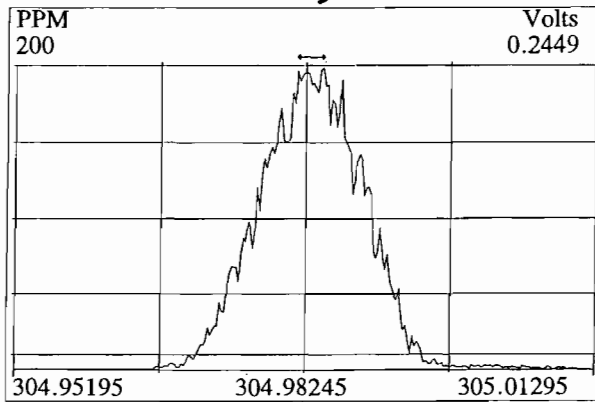
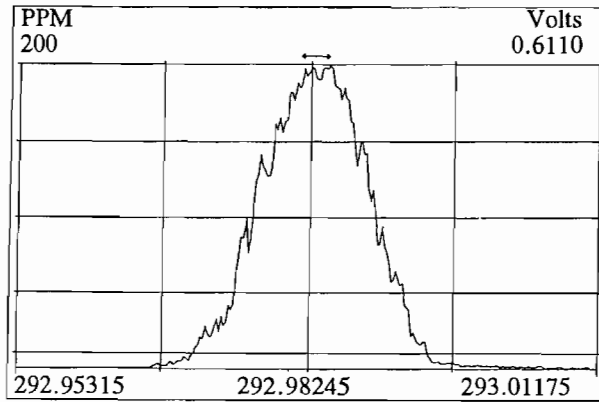
EMPC  
22.8  
79.3  
84.4  
51.5  
18.4  
17.4  
96.3  
104  
52.3

Rec  
94.8  
100  
103  
93.3  
81.3  
90.6  
94.7  
118  
108  
90.5

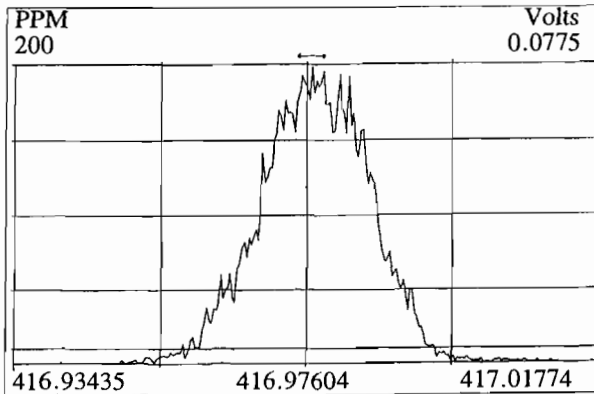
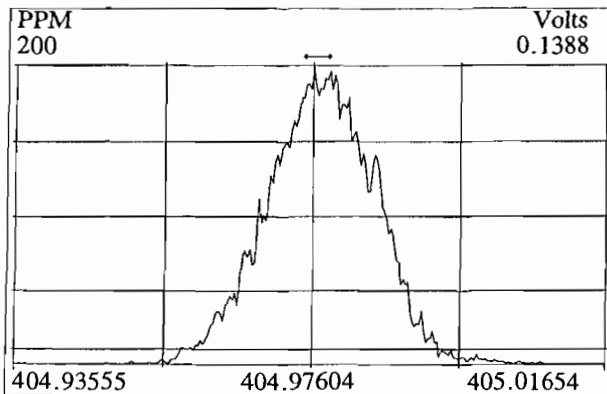
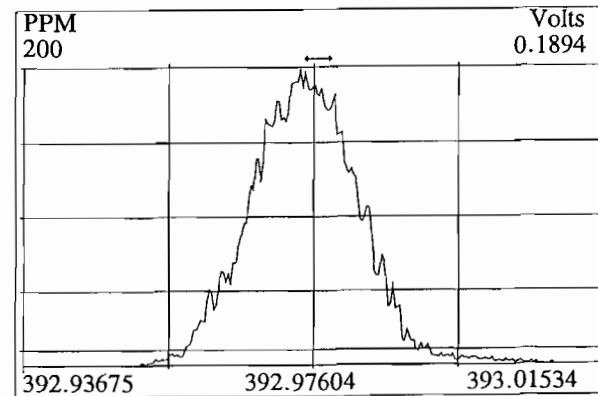
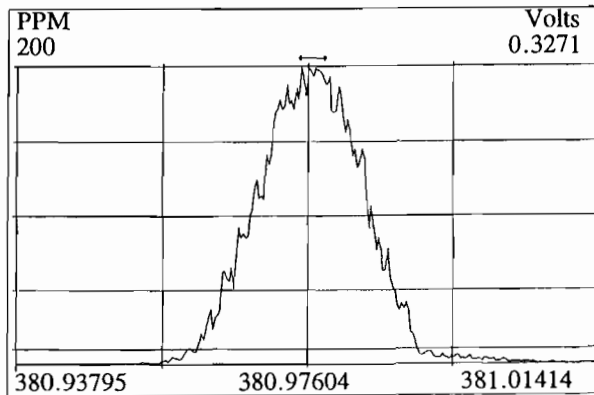
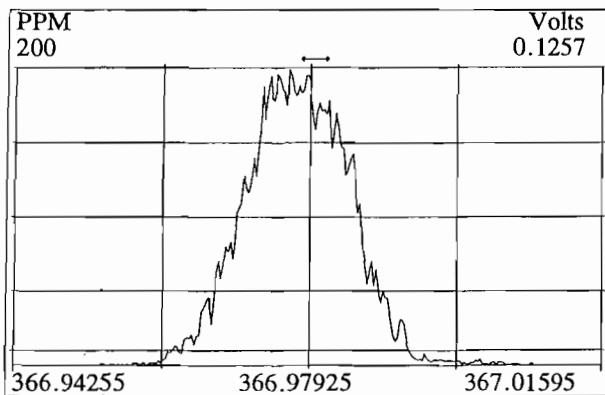
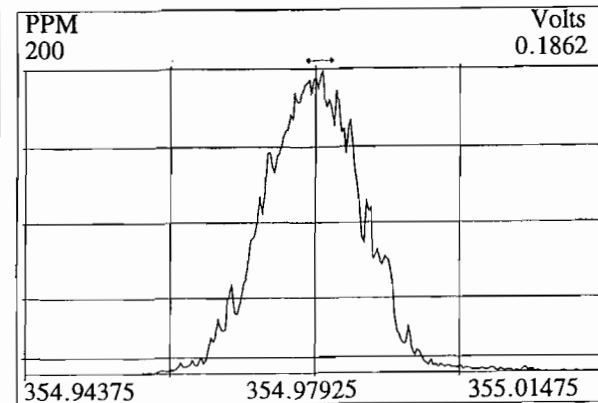
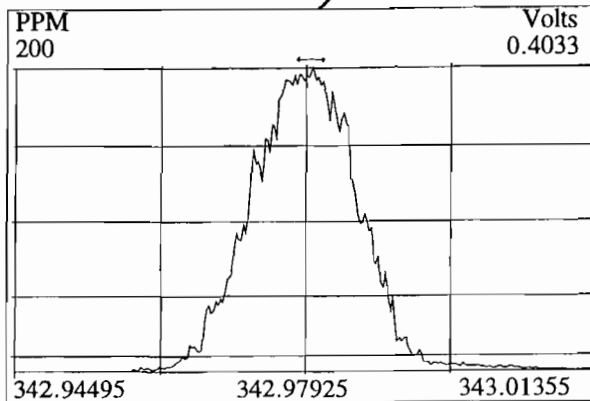
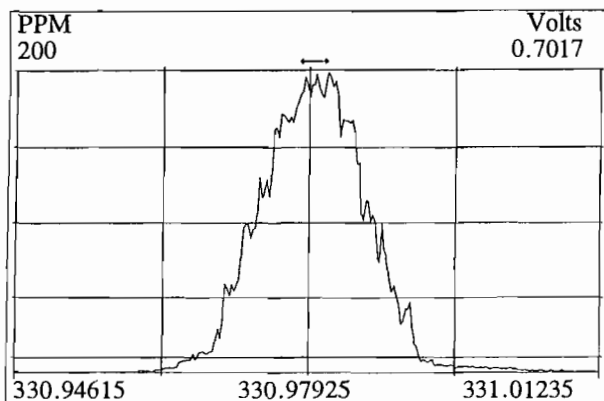
Analyst: GAG

108  
104  
89.0  
94.5  
96.0  
110  
Date: 17 Apr 01

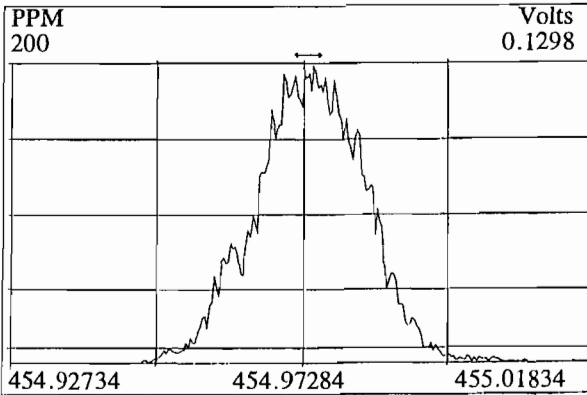
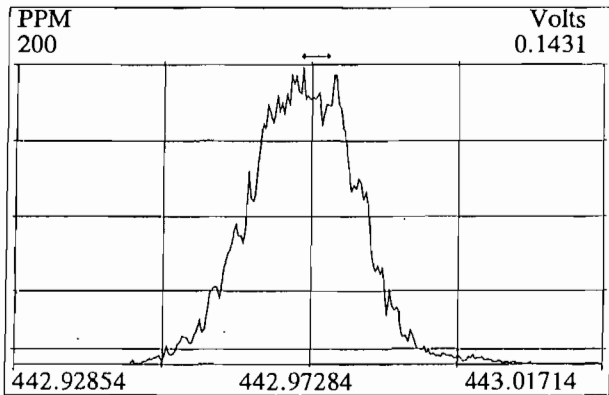
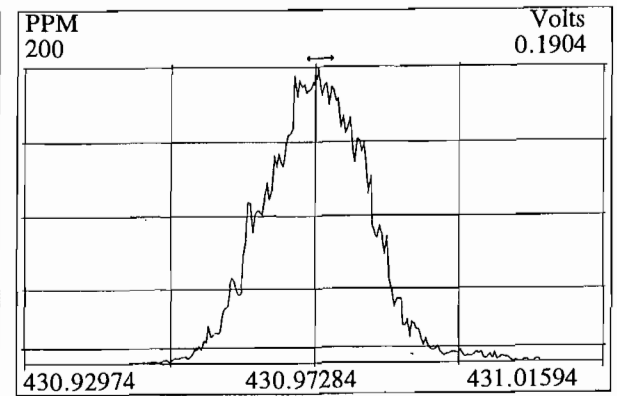
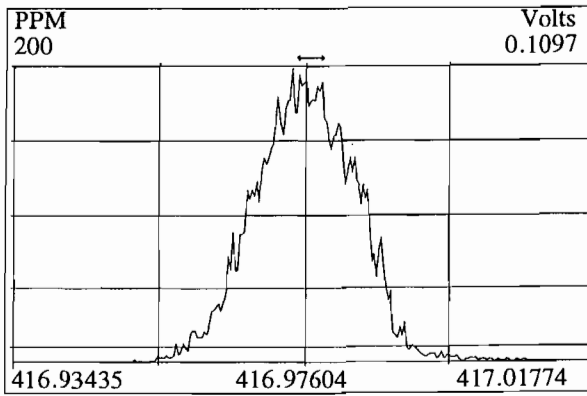
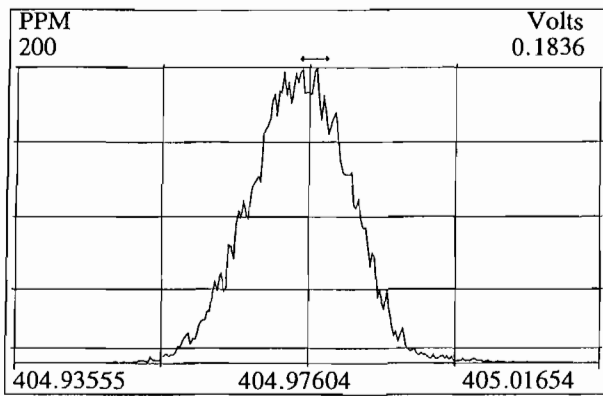
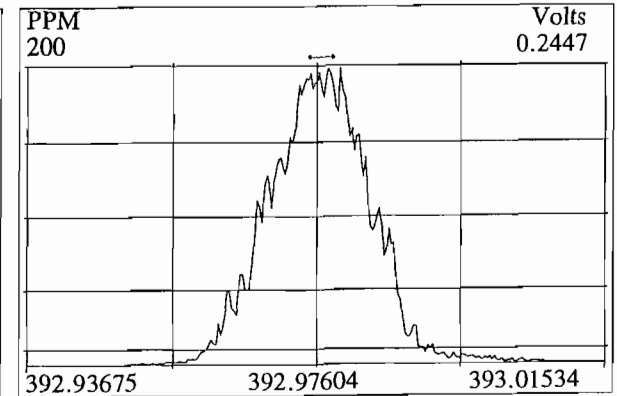
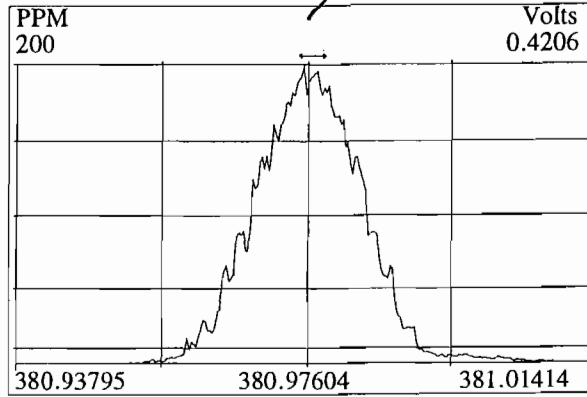
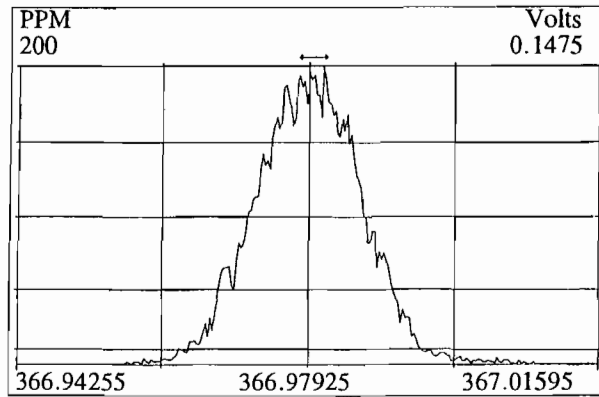
Peak Locate Examination: 5-APR-2001:10:09 File:RES CHECK  
Experiment:OCDD Function:1 Reference:PFK2



Peak Locate Examination: 5-APR-2001:10:10 File:RES\_CHECK  
Experiment:OCDD Function:2 Reference:PFK2

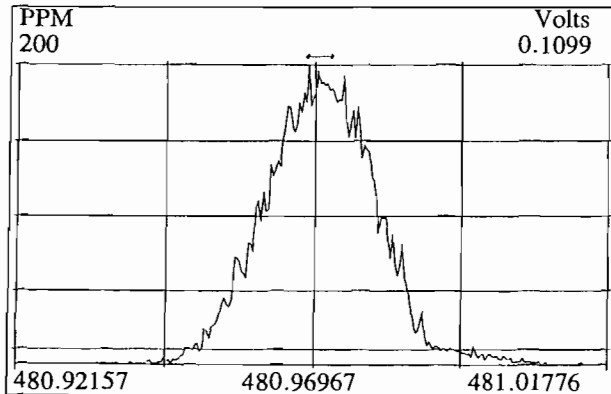
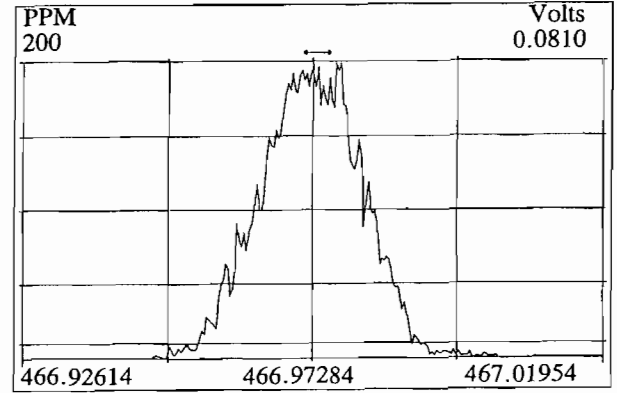
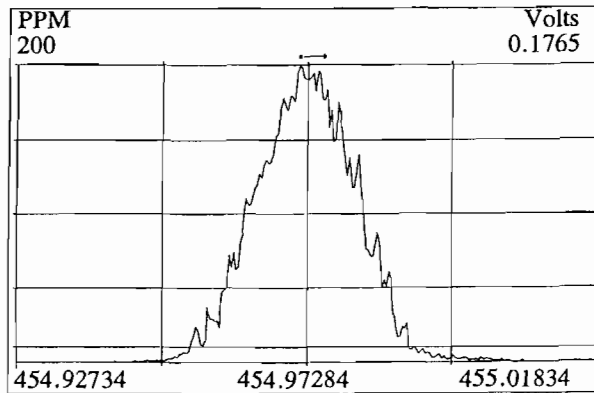
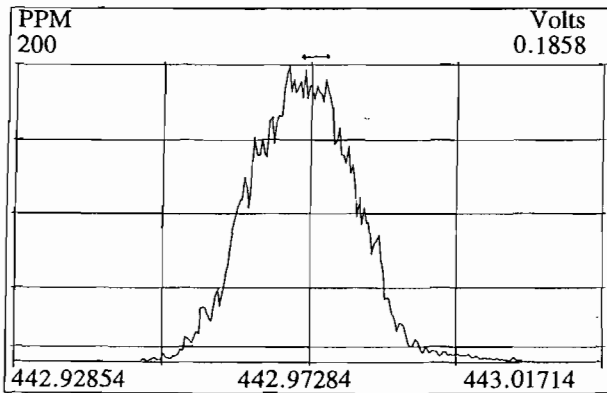
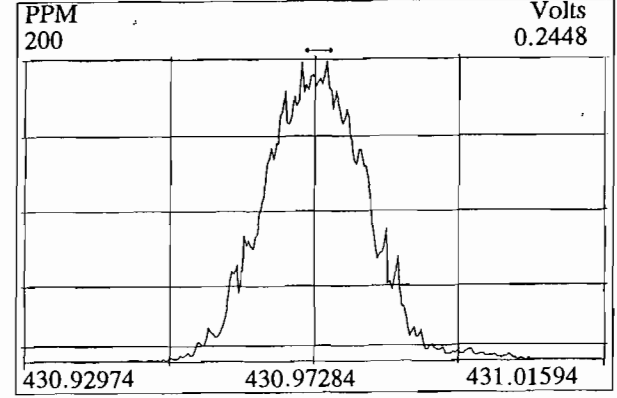
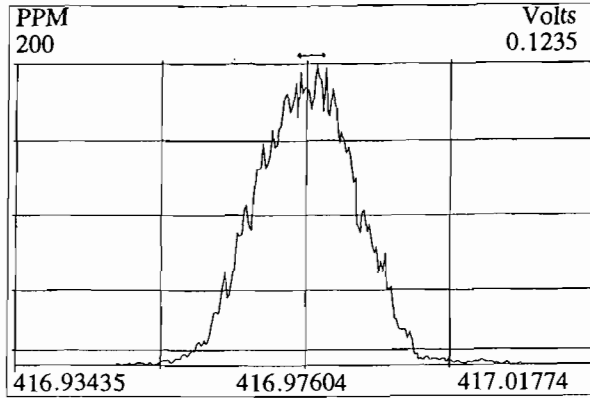
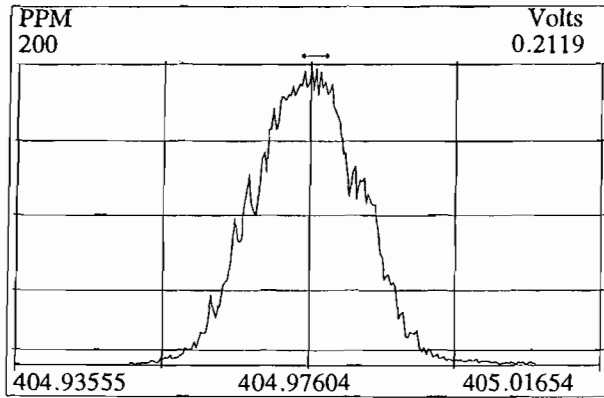


Peak Locate Examination: 5-APR-2001:10:11 File:RES CHECK  
Experiment:OCDD Function:3 Reference:PFK2

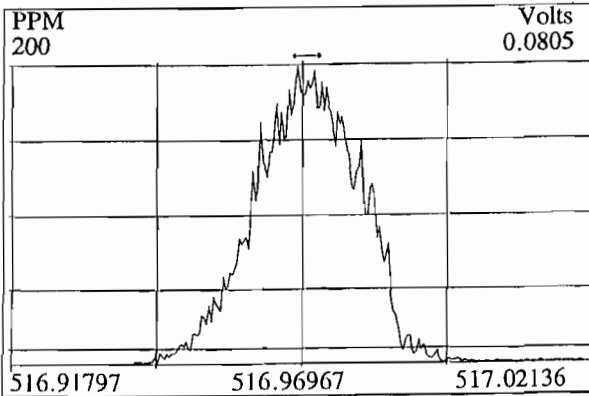
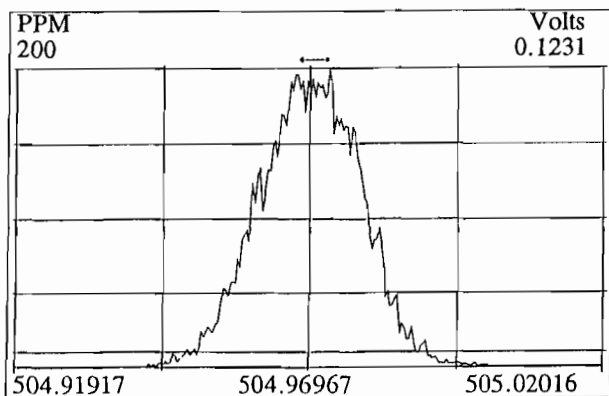
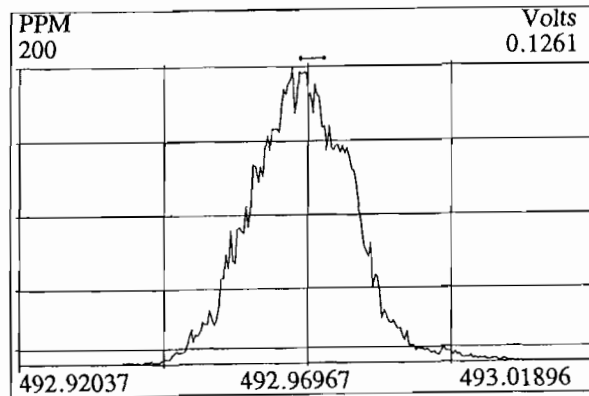
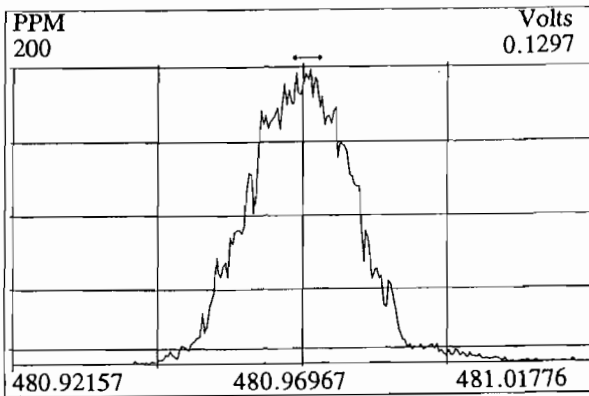
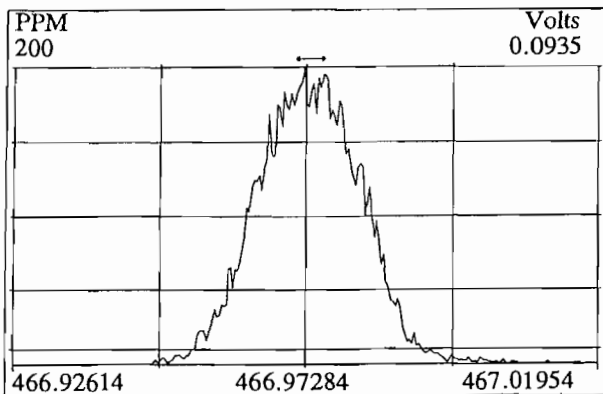
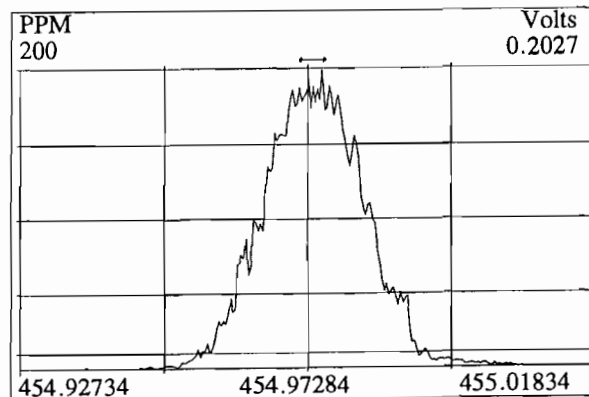
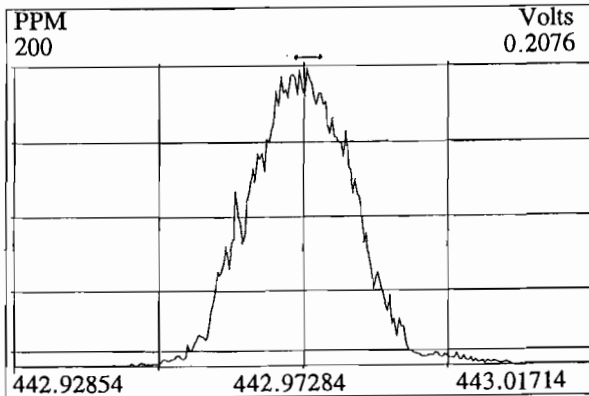
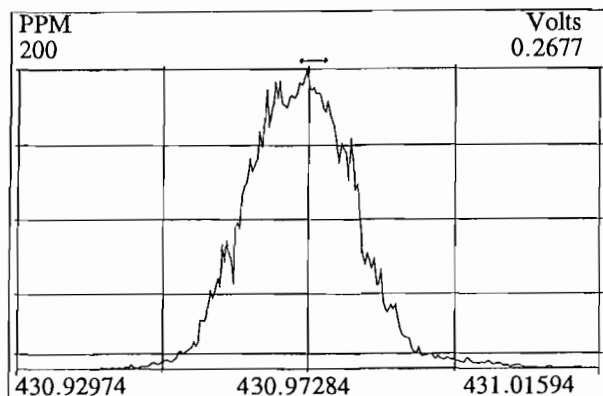




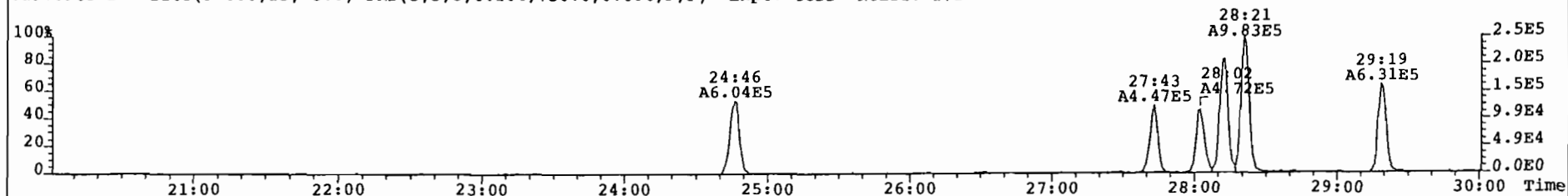
Peak Locate Examination: 5-APR-2001:10:12 File:RES\_CHECK  
Experiment:OCDD Function:4 Reference:PFK2



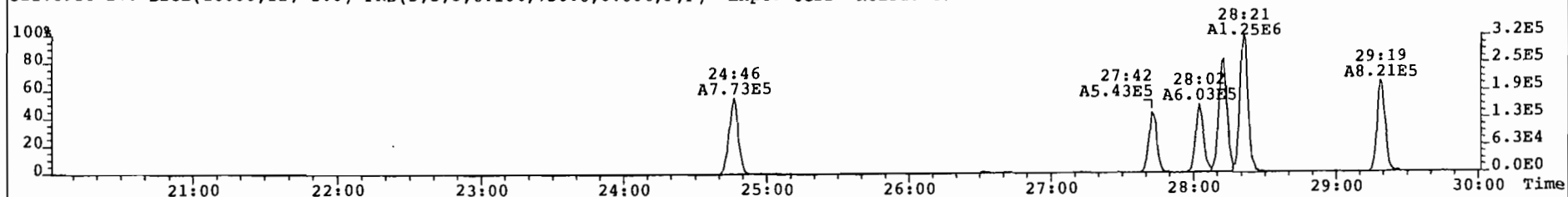
Peak Locate Examination: 5-APR-2001:10:13 File:RES CHECK  
Experiment:OCDD Function:5 Reference:PFK2



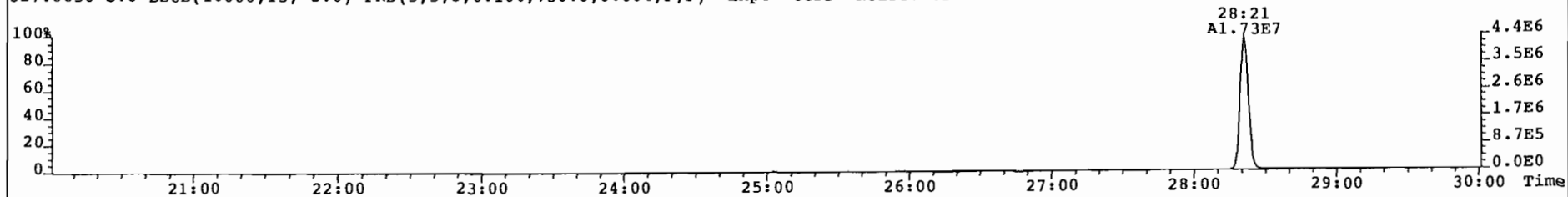
File: 010405F1 Acq: 5-APR-2001 09:08:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 171



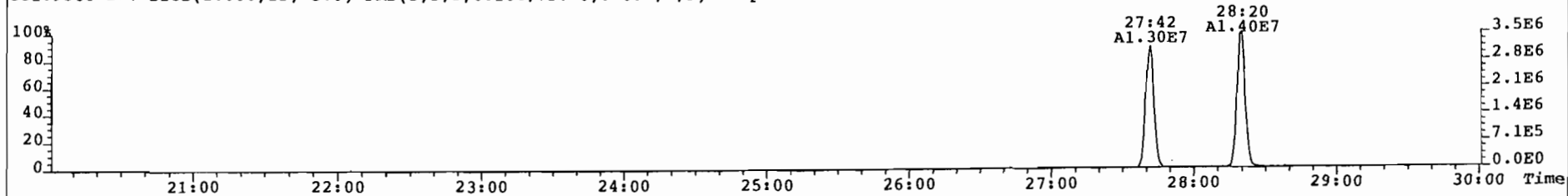
321.8936 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 47



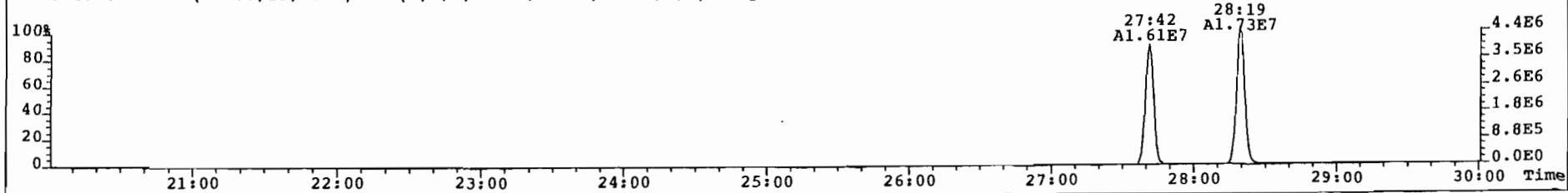
327.8850 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 43



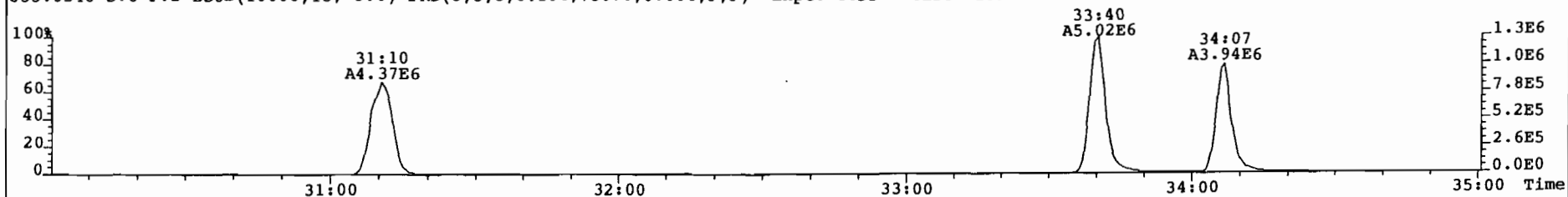
331.9368 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1125



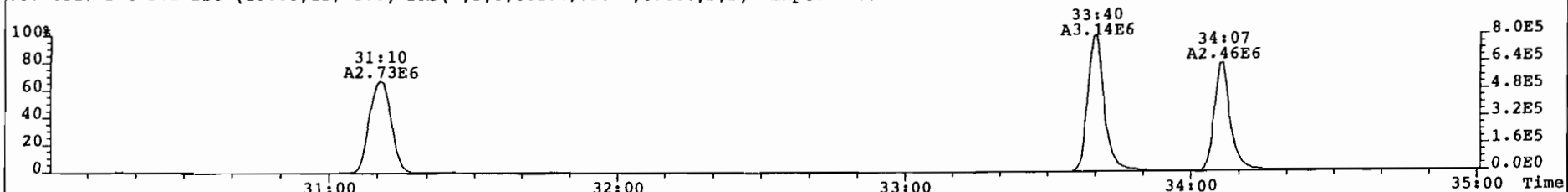
333.9339 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 546



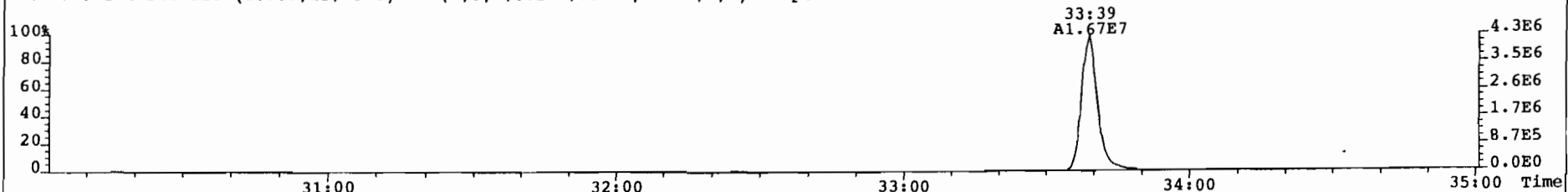
File: 010405P1 Acq: 5-APR-2001 09:08:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 239



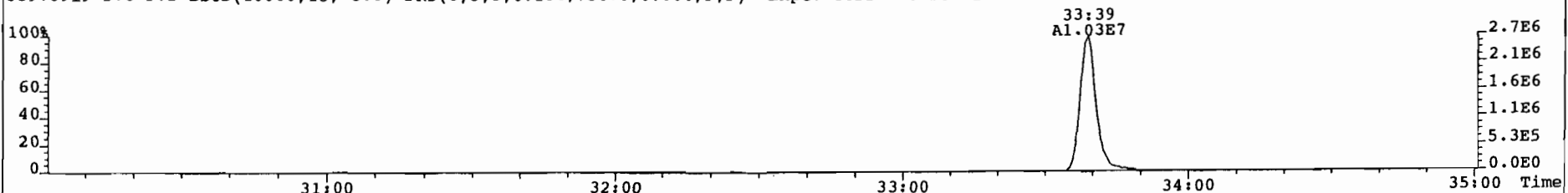
357.8517 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 106



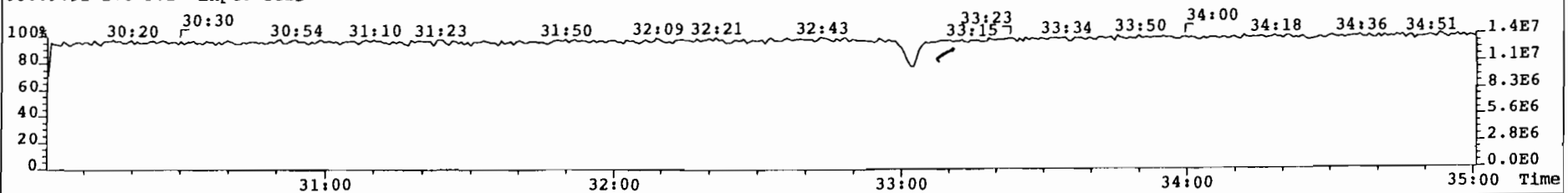
367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 314



369.8919 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 110



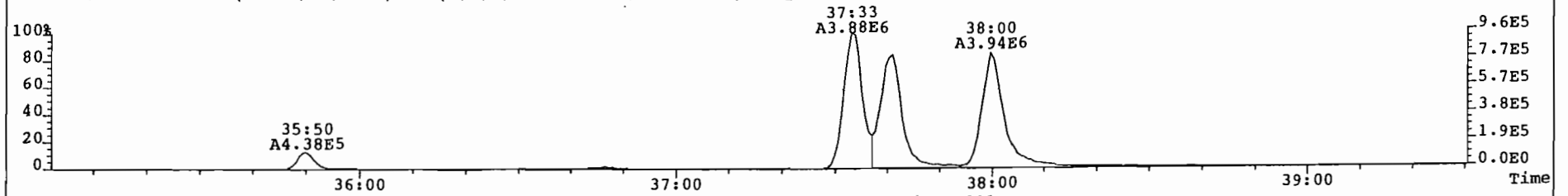
366.9792 S:6 F:2 Expt: OCDD



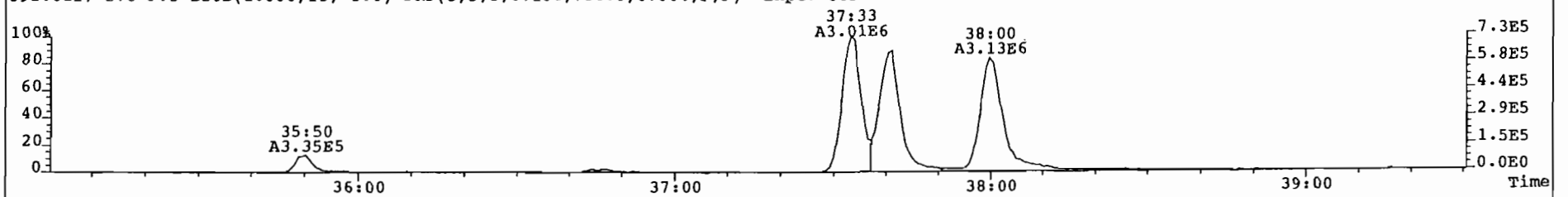
File: 010405P1 Acq: 5-APR-2001 09:08:19 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 6 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5

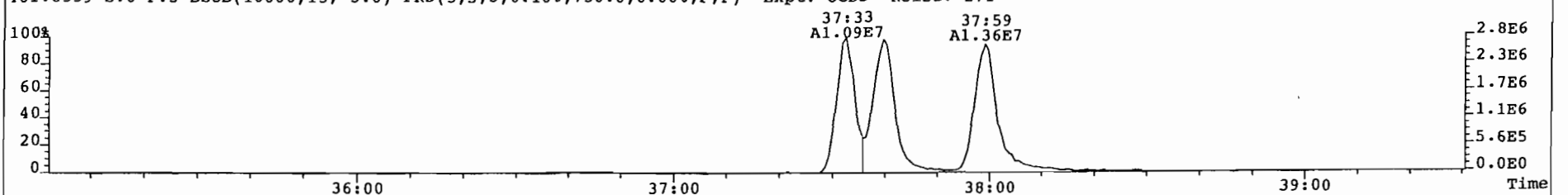
389.8156 S:6 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 278



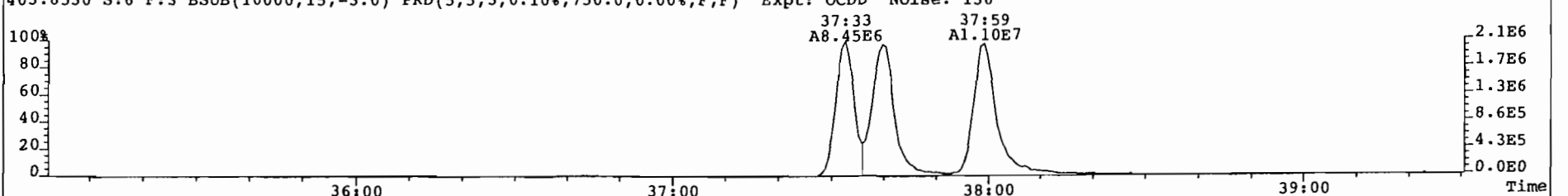
391.8127 S:6 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 281



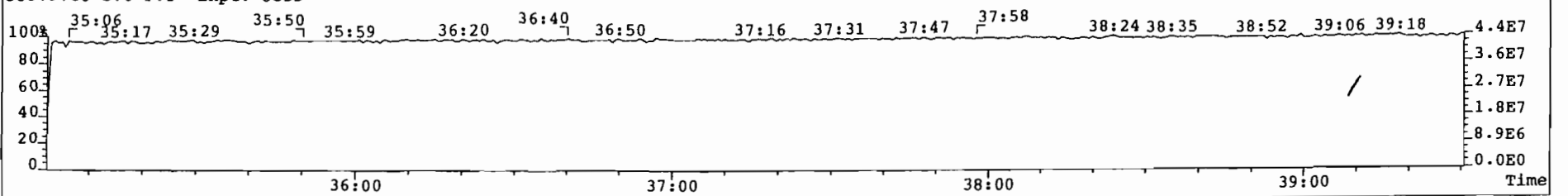
401.8559 S:6 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 271



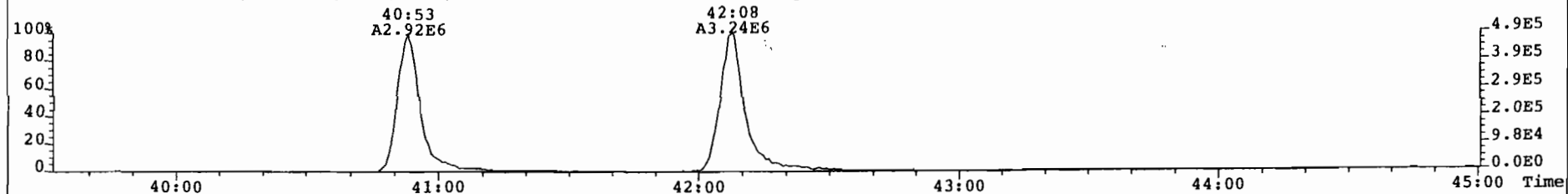
403.8530 S:6 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 136



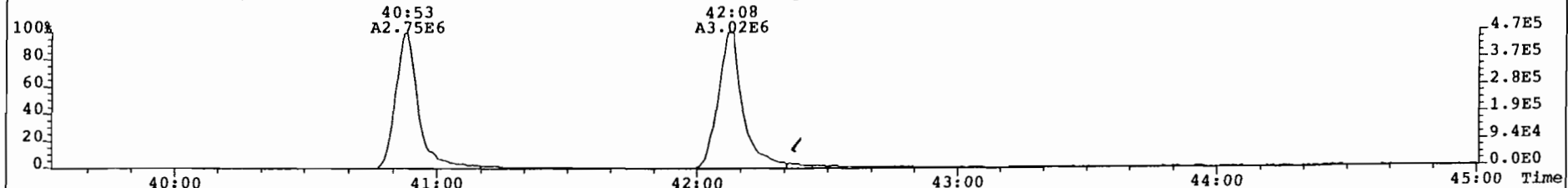
380.9760 S:6 F:3 Expt: OCDD



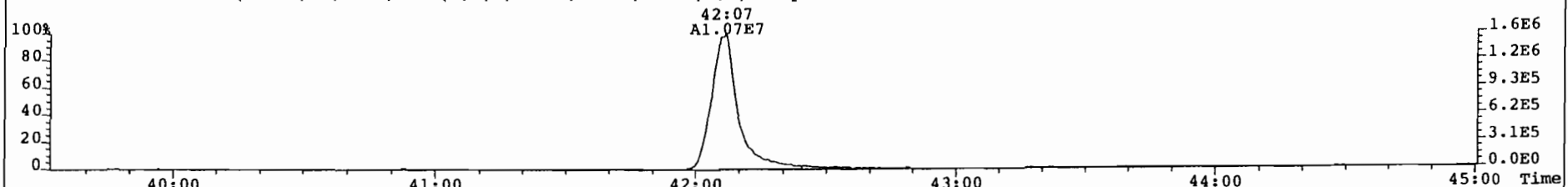
File: 010405P1 Acq: 5-APR-2001 09:08:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
423.7767 S:6 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 300



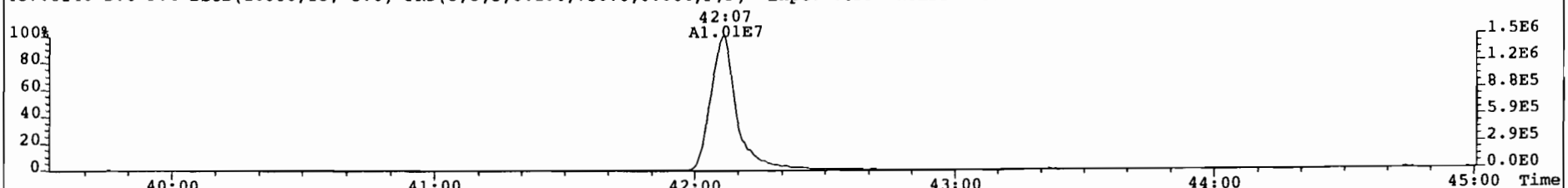
425.7737 S:6 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 289



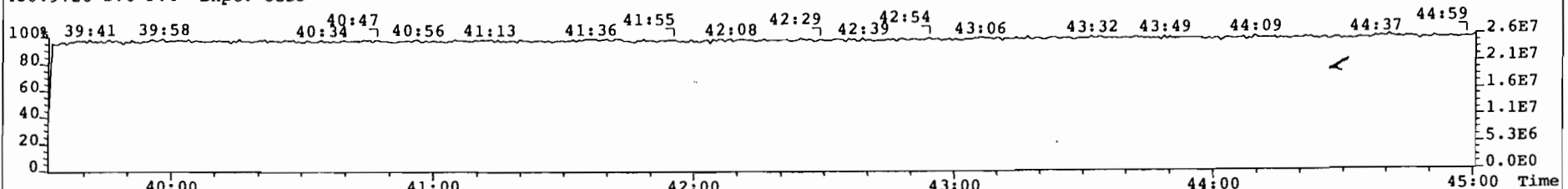
435.8169 S:6 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 818



437.8140 S:6 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 337



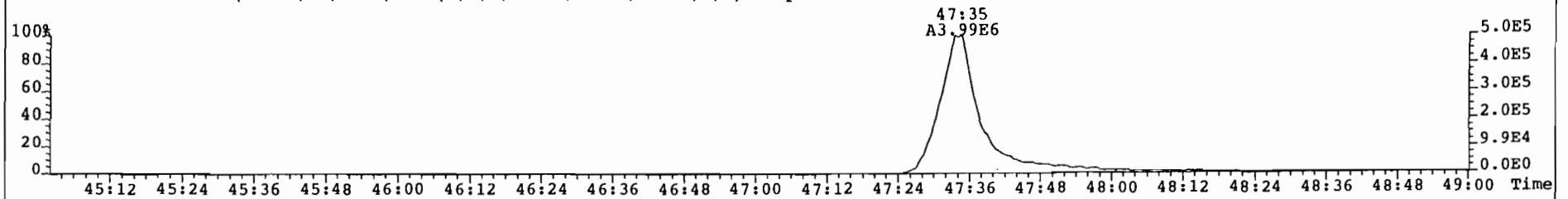
430.9728 S:6 F:4 Expt: OCDD



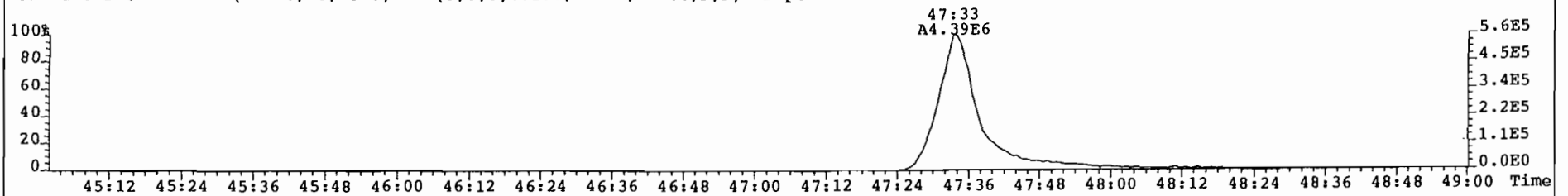
File: 010405F1 Acq: 5-APR-2001 09:08:19 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 6 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5

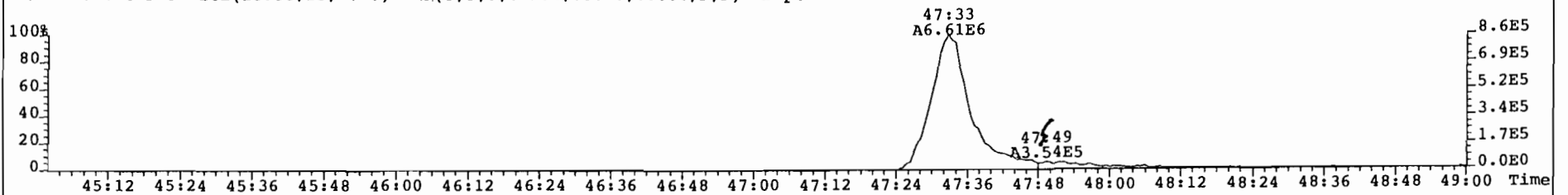
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 76



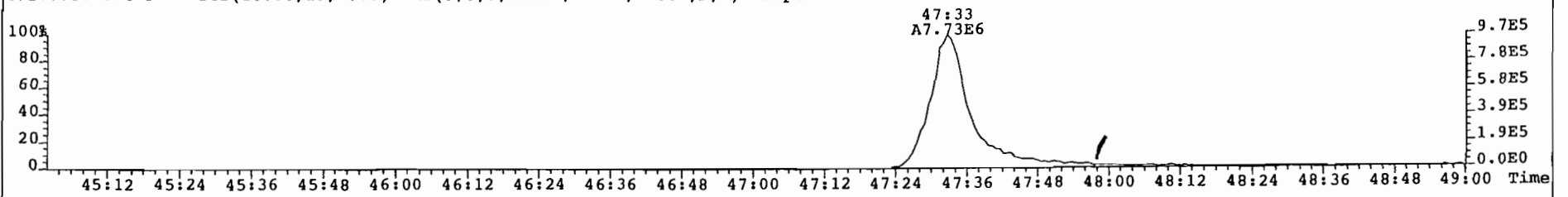
459.7348 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 34



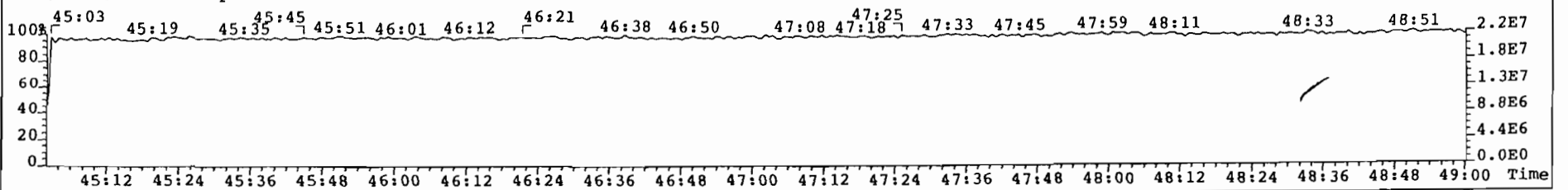
469.7780 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 27



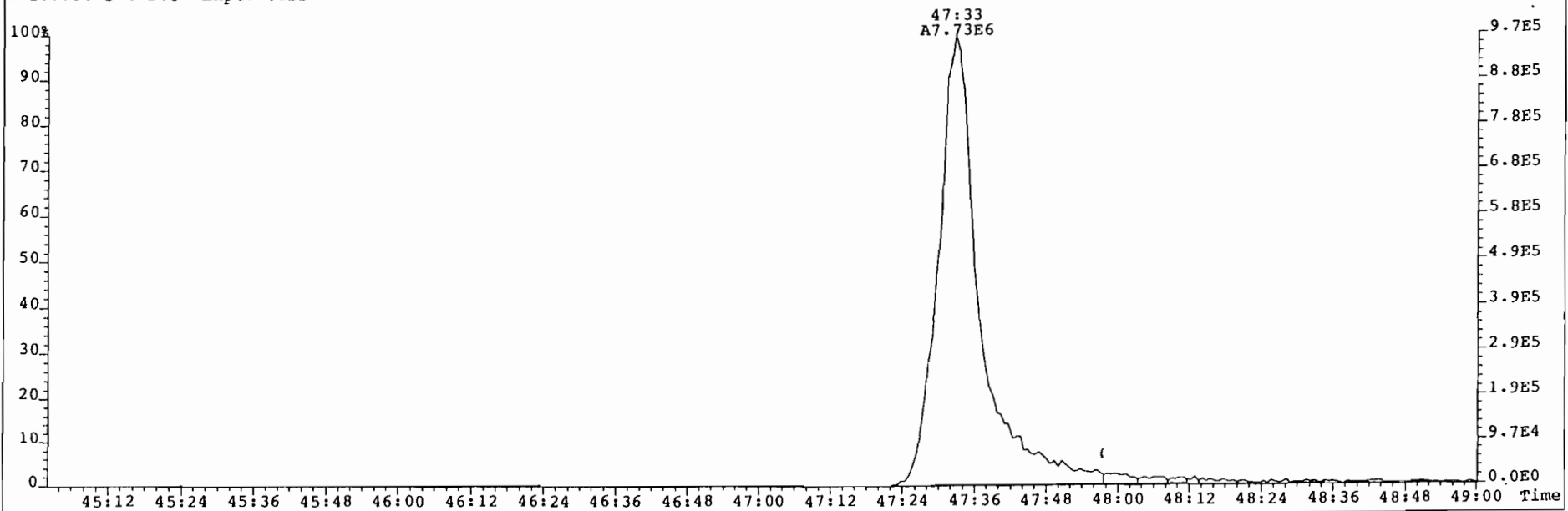
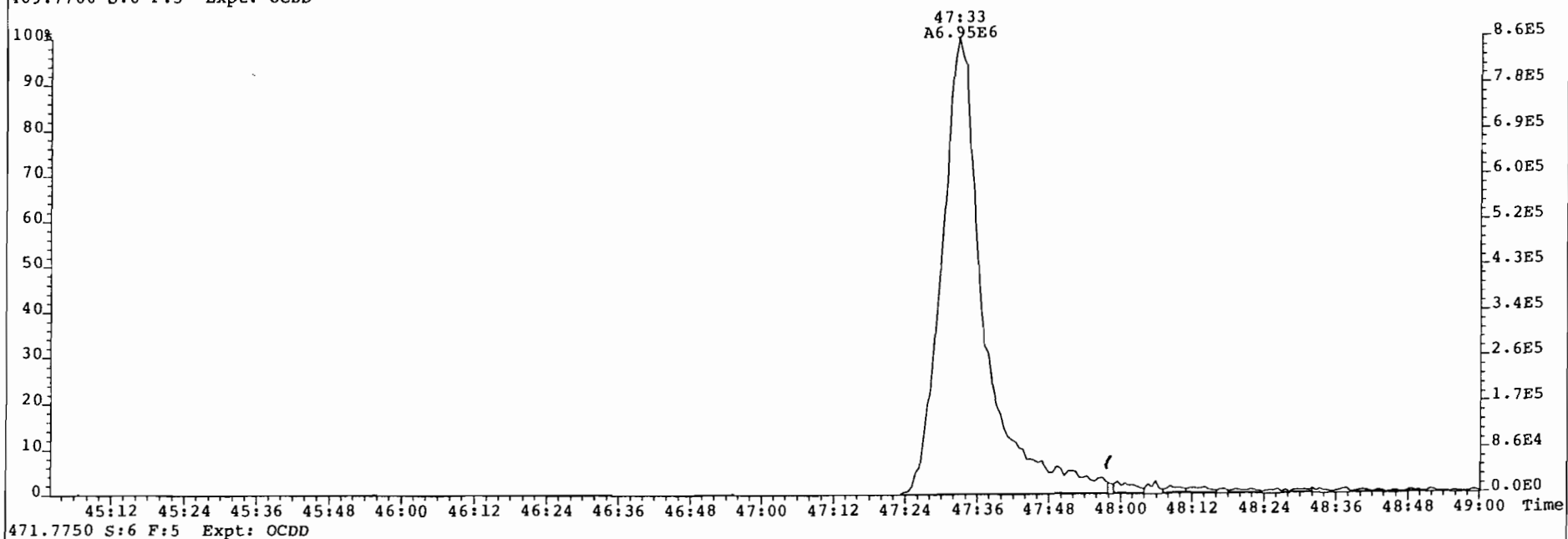
471.7750 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 24



454.9728 S:6 F:5 Expt: OCDD

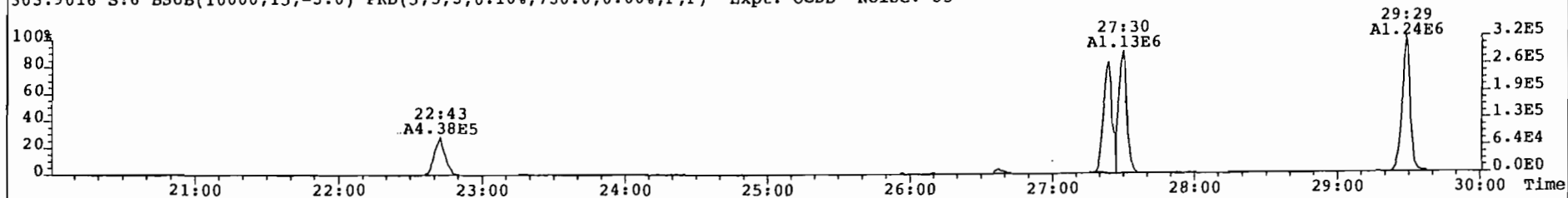


File: 010405P1 Acq: 5-APR-2001 09:08:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
469.7780 S:6 F:5 Expt: OCDD

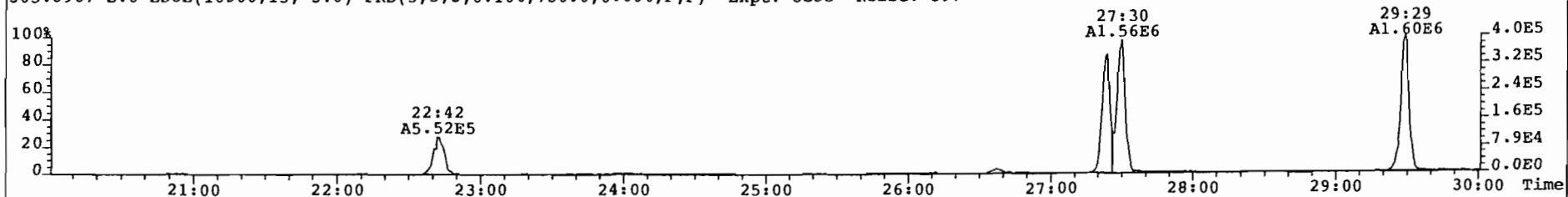




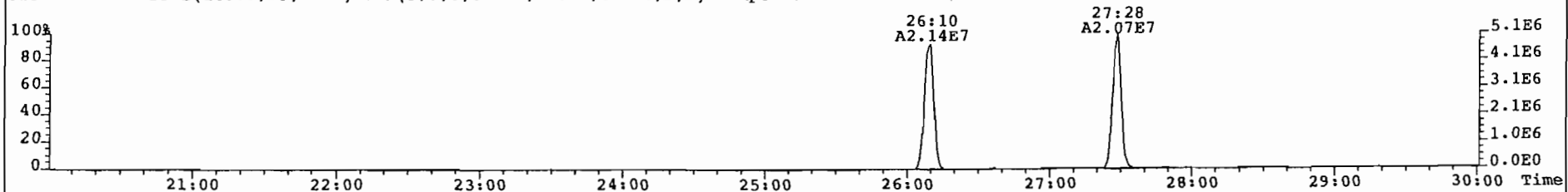
File: 010405P1 Acq: 5-APR-2001 09:08:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 55



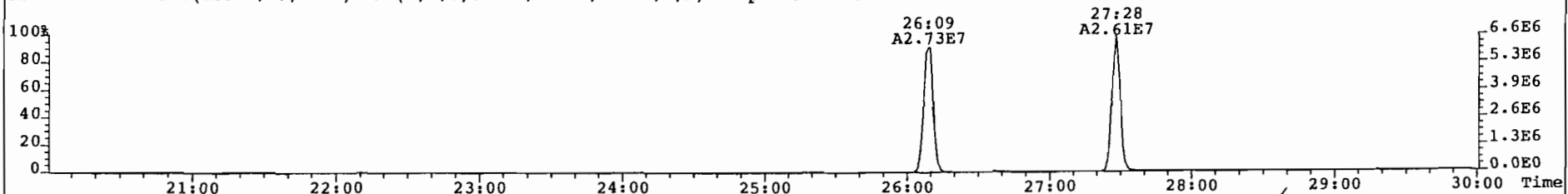
305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 397



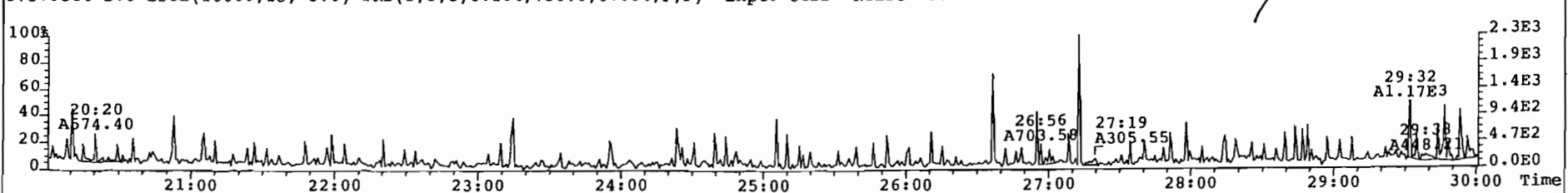
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 151



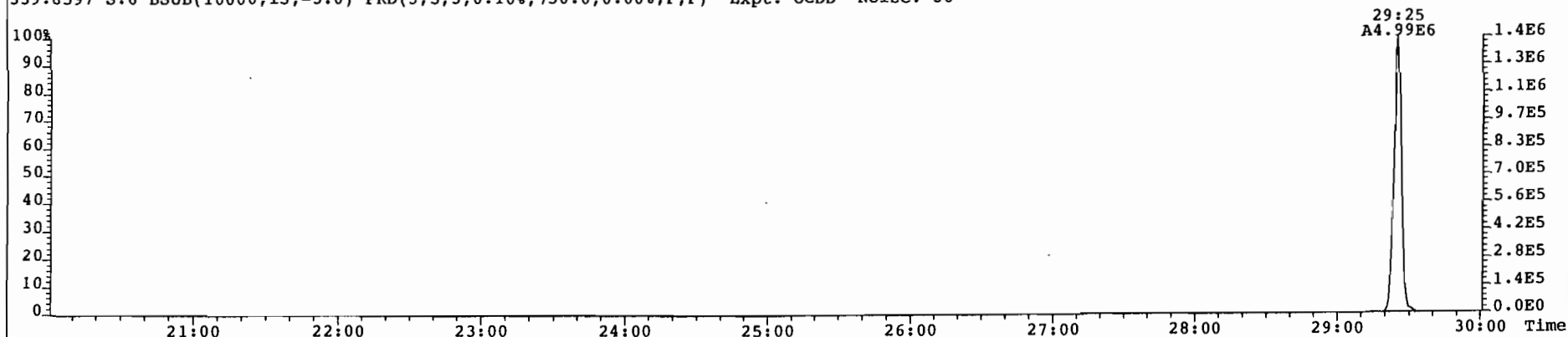
317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 350



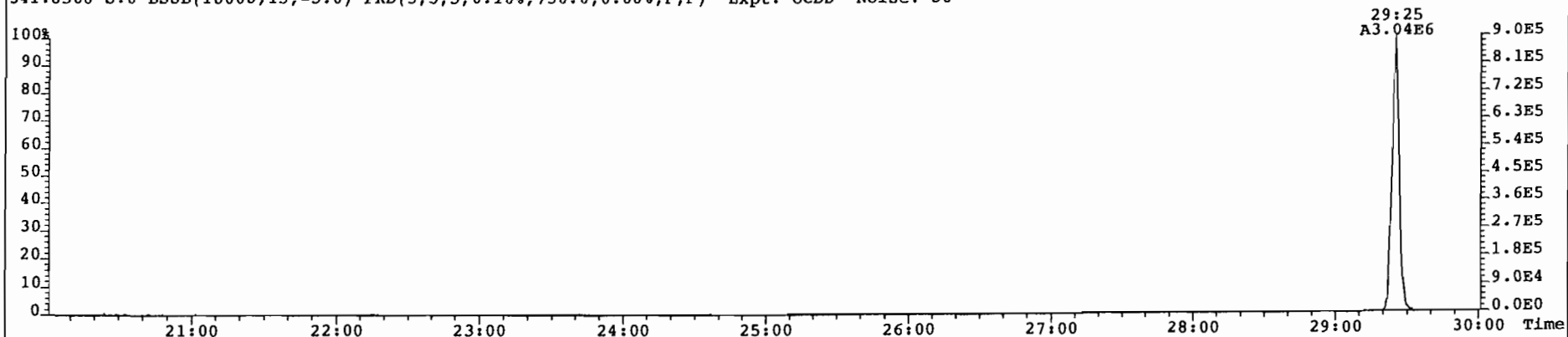
375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 37



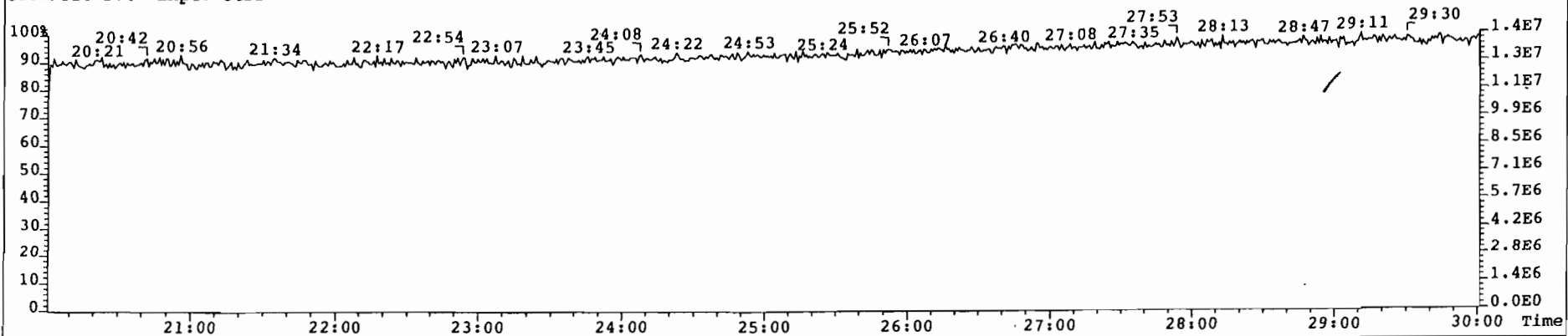
File: 010405P1 Acq: 5-APR-2001 09:08:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 36



341.8568 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 36



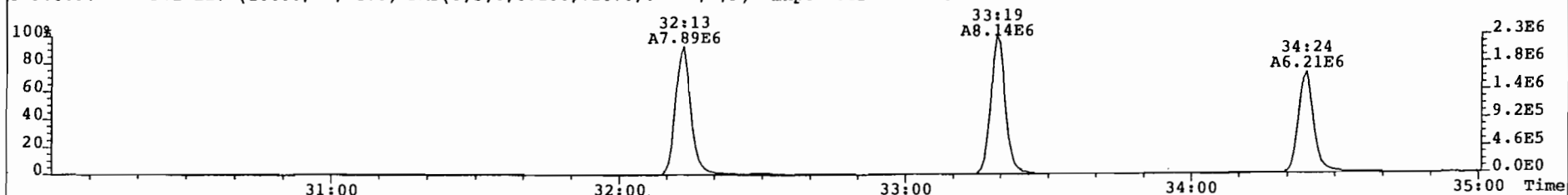
316.9824 S:6 Expt: OCDD



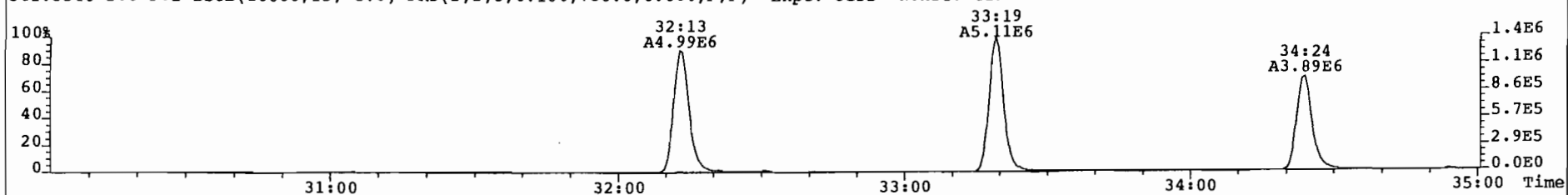
File: 010405P1 Acq: 5-APR-2001 09:08:19 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 6 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5

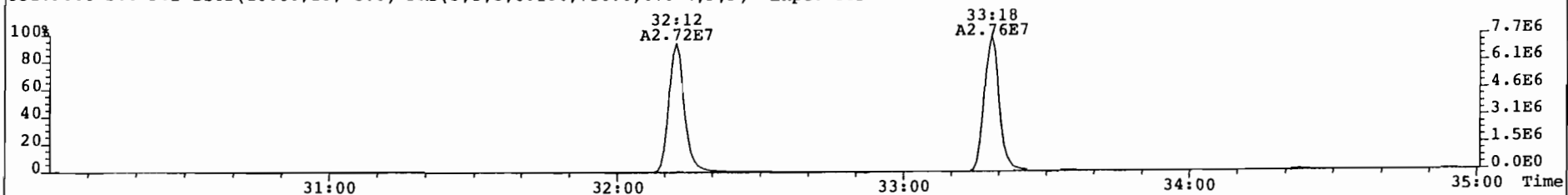
339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 358



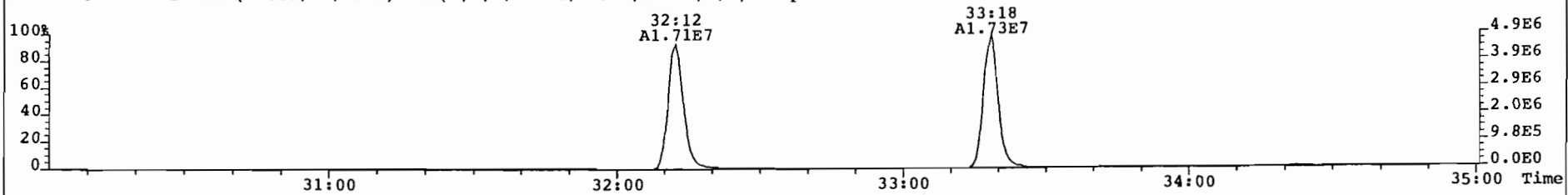
341.8568 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 419



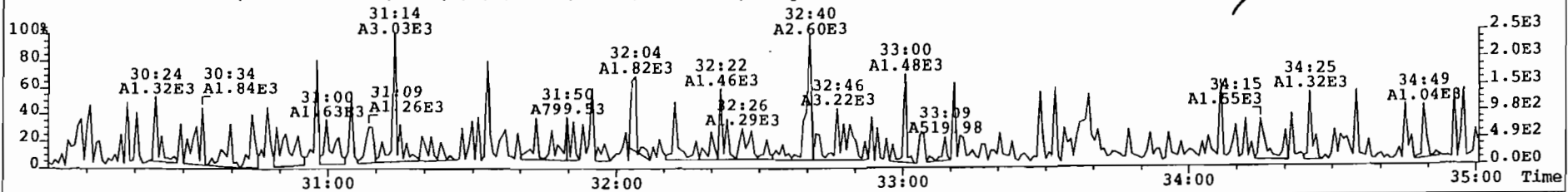
351.9000 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 682



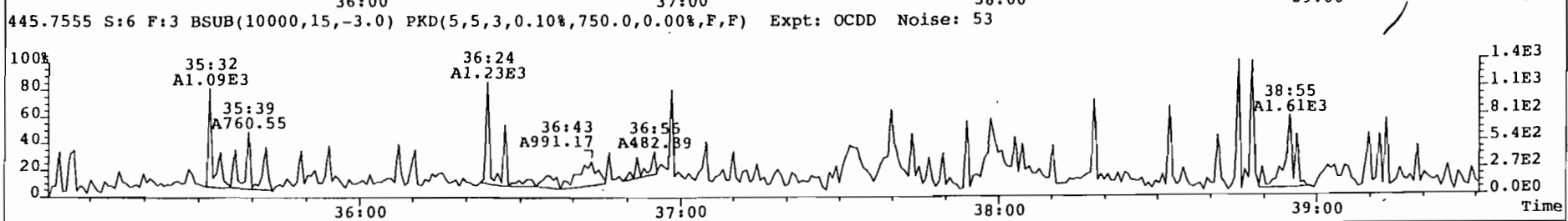
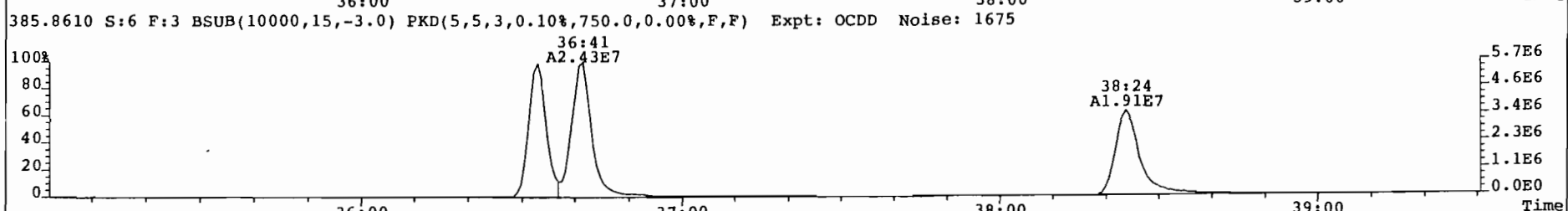
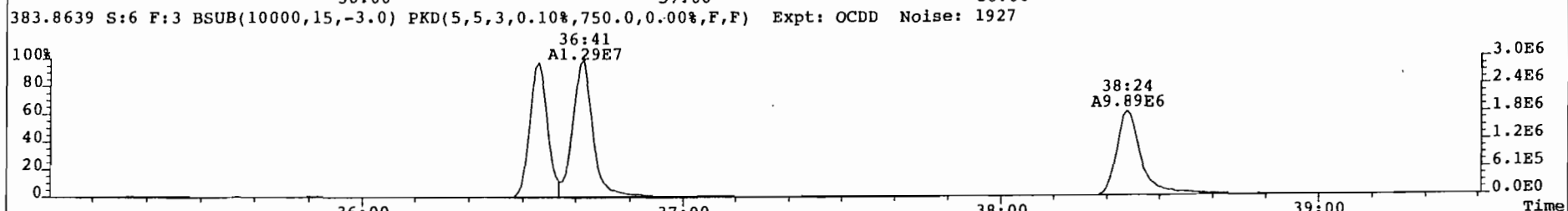
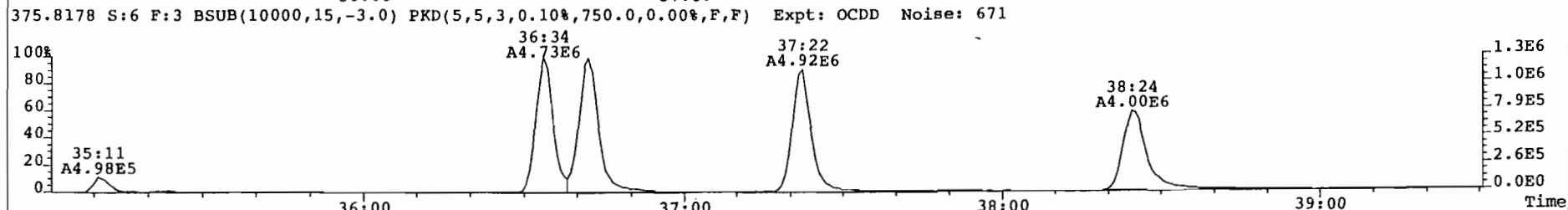
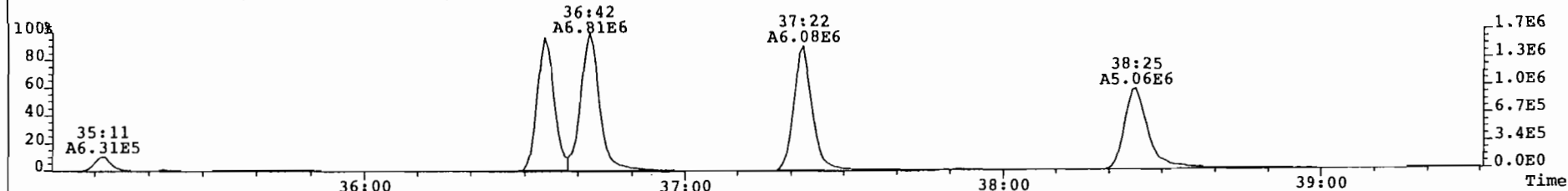
353.8970 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 442



409.7974 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 66



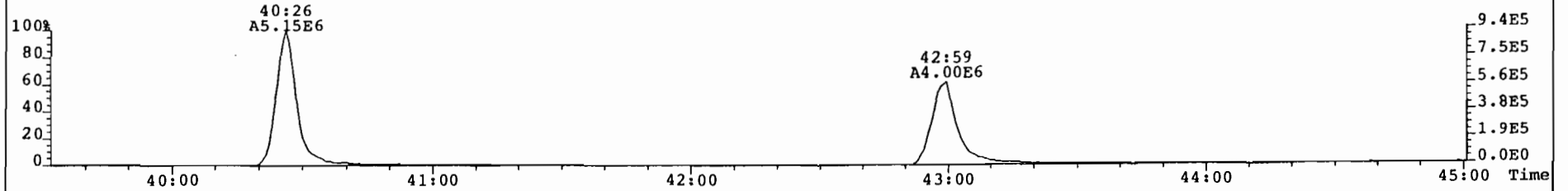
File: 010405P1 Acq: 5-APR-2001 09:08:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 621



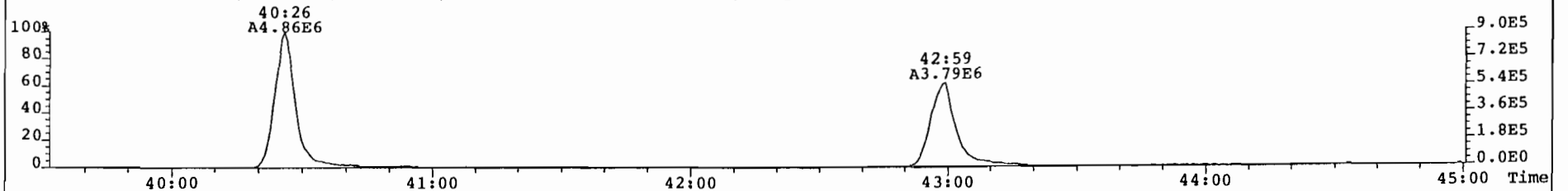
File: 010405P1 Acq: 5-APR-2001 09:08:19 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 6 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5

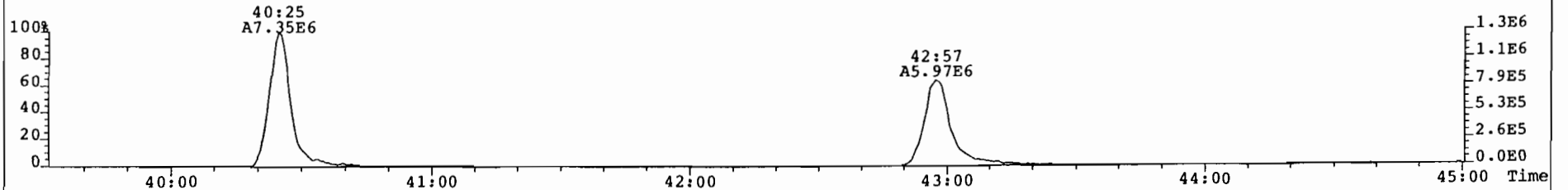
407.7818 S:6 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 379



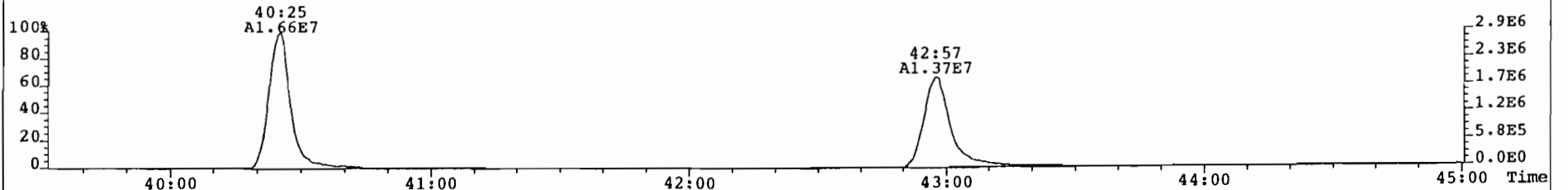
409.7788 S:6 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 331



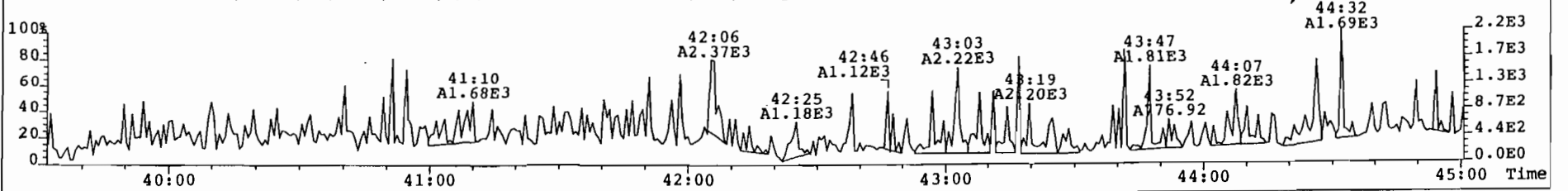
417.8253 S:6 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 529



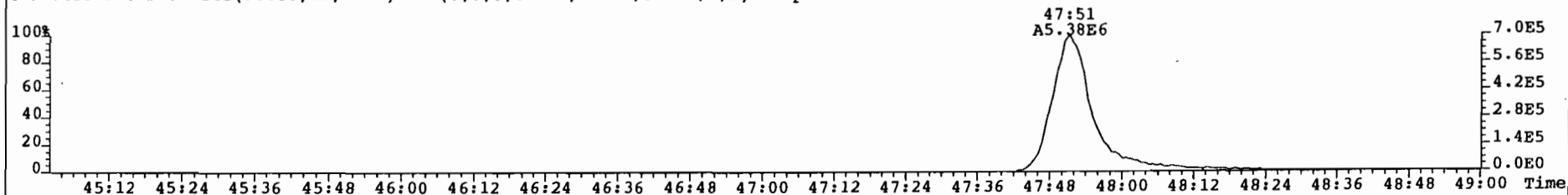
419.8220 S:6 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 955



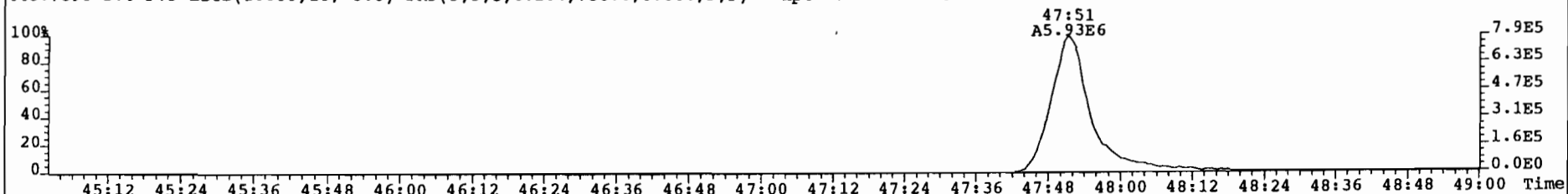
479.7165 S:6 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 134



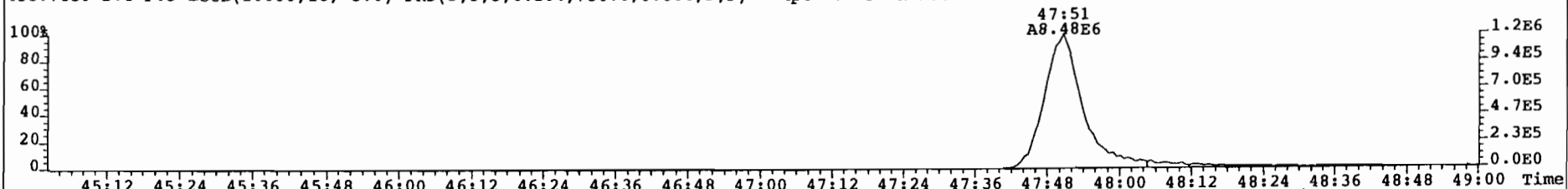
File: 010405P1 Acq: 5-APR-2001 09:08:19 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 6 Text: DB5 CPSM / M23 CS3 Vial# 2 File Text: AAP DB5  
441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 22



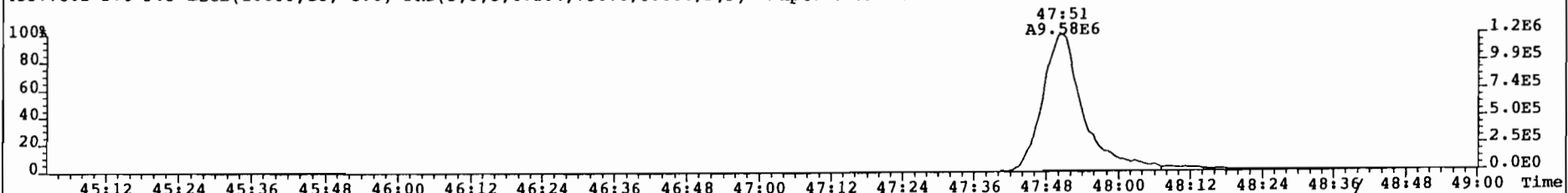
443.7398 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 145



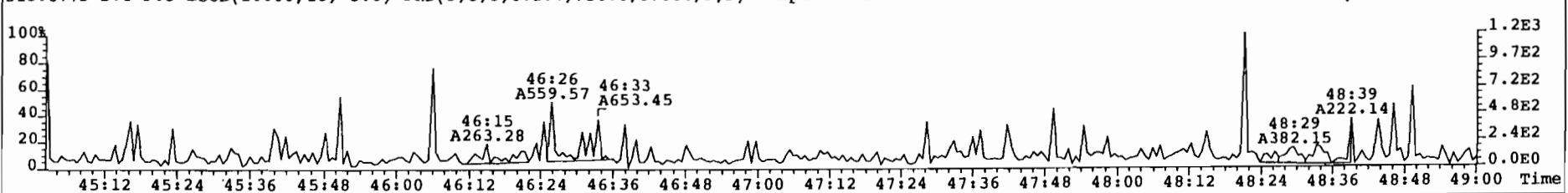
453.7830 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 27



455.7801 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 410



513.6775 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 29



## PCDD/PCDF CALIBRATION VERIFICATION

## Alta Analytical Perspectives

Initial Calibration Date: 10/05/00 ✓

Instrument ID: MM-1 / GC Column ID: DB-5

VER Data Filename: 010418P2 S#1 Analysis Date: 18-APR-01 Time: 11:13:46

Reviewer: ceDate: 18 April 01

NATIVE ANALYTES	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
2,3,7,8-TCDD	M/M+2	0.81	0.65-0.89	y	5.25 ✓	3.75 - 6.25
1,2,3,7,8-PeCDD	M+2/M+4	1.62	1.32-1.78	y	27.44 ✓	18.75-31.25
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	24.84 ✓	18.75-31.25
1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	26.95 ✓	18.75-31.25
1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	y	25.29 ✓	18.75-31.25
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	y	26.49 ✓	18.75-31.25
OCDD	M+2/M+4	0.87	0.76-1.02	y	53.31 ✓	37 - 65
2,3,7,8-TCDF	M/M+2	0.76	0.65-0.89	y	5.56 ✓	3.75 - 6.25
1,2,3,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	y	26.63 ✓	18.75-31.25
2,3,4,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	y	26.46 ✓	18.75-31.25
1,2,3,4,7,8-HxCDF	M+2/M+4	1.25	1.05-1.43	y	25.06 ✓	18.75-31.25
1,2,3,6,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	y	26.36 ✓	18.75-31.25
2,3,4,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	25.30 ✓	18.75-31.25
1,2,3,7,8,9-HxCDF	M+2/M+4	1.26	1.05-1.43	y	23.73 ✓	18.75-31.25
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.04	0.88-1.20	y	26.34 ✓	18.75-31.25
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.06	0.88-1.20	y	25.00 ✓	18.75-31.25
OCDF	M+2/M+4	0.88	0.76-1.02	y	52.52 ✓	35 - 65

Analyst: GAGDate: 18 April 01

PCDD/PCDF CALIBRATION VERIFICATION

Alta Analytical Perspectives

Initial Calibration Date: 10/05/00 ✓

Instrument ID: MM-1 ✓ GC Column ID: DB-5

VER Data Filename: 010418P2 S#1 Analysis Date: 18-APR-01 Time: 11:13:46

Reviewer: ce

Date: 18 April

LABELED COMPOUNDS	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.79	0.65-0.89	y	93.1 ✓	70.0 - 130.0
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.58	1.32-1.78	y	86.5 ✓	70.0 - 130.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	99.5 ✓	70.0 - 130.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	y	93.3 ✓	70.0 - 130.0
13C-OCDD	M+2/M+4	0.89	0.76-1.02	y	75.8 ✓	70.0 - 130.0
13C-2,3,7,8-TCDF	M/M+2	0.80	0.65-0.89	y	89.0 ✓	70.0 - 130.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	y	83.7 ✓	70.0 - 130.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	102.4 ✓	70.0 - 130.0
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	y	91.9 ✓	70.0 - 130.0
13C-OCDF	M+2/M+4	0.87	0.76-1.02	y	79.1 ✓	70.0 - 130.0
37Cl-2,3,7,8-TCDD					101.8 ✓	75.0 - 125.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	103.7 ✓	75.0 - 125.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.21	1.05-1.43	y	93.4 ✓	75.0 - 125.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	96.3 ✓	75.0 - 125.0
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.43	0.37-0.51	y	96.0 ✓	75.0 - 125.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.53	0.43-0.59	y	96.4 ✓	75.0 - 125.0

Analyst: GAG

Date: 18 April



Client ID: DB5 CPSM / M23 CS3X  
Lab ID: CS3RCX

Filename: 010418P2  
GC Column ID: db-5

S: 1 Acq: 18-APR-01 11:13:46  
ICal: MM1\_M23\_0 wt/vol: 1.000

ConCal: 010418P2-  
EndCal: 010418P2-

Name	Resp	RA	RRF	RT	Conc	Qualif.	CDE	noise	Fac	DL
2,3,7,8-TCDD	2.03e+06	0.81 y	1.26	28:19	5.25			1285	2.5	0.0637
1,2,3,7,8-PeCDD	6.45e+06	1.62 y	1.01	33:39	27.4			1745	2.5	0.187
1,2,3,4,7,8-HxCDD	5.23e+06	1.27 y	1.14	37:31	24.8			3904	2.5	0.465
1,2,3,6,7,8-HxCDD	5.09e+06	1.27 y	1.02	37:39	27.0			3904	2.5	0.518
1,2,3,7,8,9-HxCDD	5.34e+06	1.26 y	1.14	37:58	25.3			3904	2.5	0.463
1,2,3,4,6,7,8-HpCDD	5.02e+06	1.02 y	1.13	42:06	26.5			2759	2.5	0.479
OCDD	6.05e+06	0.87 y	1.03	47:31	53.3			1245	2.5	0.357
2,3,7,8-TCDF	2.28e+06	0.76 y	1.05	29:27	5.56			1615	2.5	0.0751
1,2,3,7,8-PeCDF	9.22e+06	1.55 y	1.04	32:12	26.6			2270	2.5	0.166
2,3,4,7,8-PeCDF	9.30e+06	1.55 y	1.05	33:18	26.5			2270	2.5	0.163
1,2,3,4,7,8-HxCDF	7.41e+06	1.25 y	1.13	36:32	25.1			4640	2.5	0.241
1,2,3,6,7,8-HxCDF	8.52e+06	1.26 y	1.24	36:41	26.4			4640	2.5	0.220
2,3,4,6,7,8-HxCDF	7.69e+06	1.23 y	1.16	37:21	25.3			4640	2.5	0.234
1,2,3,7,8,9-HxCDF	6.31e+06	1.26 y	1.02	38:24	23.7			4640	2.5	0.268
1,2,3,4,6,7,8-HpCDF	6.70e+06	1.04 y	1.54	40:24	26.3			3184	2.5	0.241
1,2,3,4,7,8,9-HpCDF	5.36e+06	1.06 y	1.30	42:57	25.0			3184	2.5	0.286
OCDF	7.69e+06	0.88 y	1.15	47:49	52.5			943	2.5	0.216
Total Tetra-Dioxins	8.18e+06	0.79 y	1.26	24:43	21.1			1285	2.5	0.0637
Total Penta-Dioxins	1.74e+07	1.57 y	1.01	31:09	73.9			1745	2.5	0.187
Total Hexa-Dioxins	1.63e+07	1.29 y	1.10	35:48	80.2			3904	2.5	0.481
Total Hepta-Dioxins	9.26e+06	1.04 y	1.13	40:51	48.8			2759	2.5	0.479
Total Tetra-Furans	7.48e+06	0.69 y	1.05	21:55	18.2			1615	2.5	0.0751
1st Fnc. Penta-Furans	8.62e+06	1.55 y	1.05	29:23	24.7			2288	2.5	0.166
Total Penta-Furans	2.57e+07	1.55 y	1.05	32:12	73.7			2270	2.5	0.164
PeCDF Totals:					98.4					99.6
Total Hexa-Furans	3.09e+07	1.25 y	1.14	35:09	104			4640	2.5	0.240
Total Hepta-Furans	1.21e+07	1.04 y	1.42	40:24	51.4			3184	2.5	0.262
IS 13C-2,3,7,8-TCDD	3.06e+07	0.79 y	1.13	28:17	93.1					93.1
IS 13C-1,2,3,7,8-PeCDD	2.32e+07	1.58 y	0.93	33:38	86.5					86.5
IS 13C-1,2,3,6,7,8-HxCDD	1.85e+07	1.27 y	0.93	37:38	99.5					99.5
IS 13C-1,2,3,4,6,7,8-HpCDD	1.68e+07	1.05 y	0.91	42:04	93.3					93.3
IS 13C-OCDD	1.11e+07	0.89 y	0.73	47:30	75.8					75.8
IS 13C-2,3,7,8-TCDF	3.92e+07	0.80 y	1.06	27:26	89.0					89.0
IS 13C-1,2,3,7,8-PeCDF	3.34e+07	1.56 y	0.96	32:11	83.7					83.7
IS 13C-1,2,3,6,7,8-HxCDF	2.61e+07	0.52 y	1.28	36:39	102					102
IS 13C-1,2,3,4,6,7,8-HpCDF	1.65e+07	0.45 y	0.90	40:23	91.9					91.9
IS 13C-OCDF	1.28e+07	0.87 y	0.81	47:48	79.1					79.1
RS/RT 13C-1,2,3,4-TCDD	2.90e+07	0.80 y	1.00	27:39	100					-
RS 13C-1,2,3,4-TCDF	4.16e+07	0.78 y	1.00	26:06	100					-
RS/RT 13C-1,2,3,7,8,9-HxCDD	1.99e+07	1.26 y	1.00	37:58	100					-
PS 37Cl-2,3,7,8-TCDD	1.61e+07		0.51	28:19	102					102
PS 13C-2,3,4,7,8-PeCDF	3.37e+07	1.58 y	0.97	33:17	104					104
PS 13C-1,2,3,4,7,8-HxCDD	1.59e+07	1.21 y	0.92	37:31	93.4					93.4
PS 13C-1,2,3,4,7,8-HxCDF	2.29e+07	0.52 y	0.91	36:31	96.3					96.3
PS 13C-1,2,3,4,7,8,9-HpCDF	1.35e+07	0.43 y	0.85	42:55	96.0					96.0
AS 13C-1,2,3,7,8,9-HxCDF	2.05e+07	0.53 y	1.07	38:22	96.4					96.4

Reviewer: ca

Date: 18 Apr 01

EMPC  
21.3  
75.7  
82.1  
50.4  
18.8  
24.9  
99.6  
105  
52.7

Rec  
93.1  
86.5  
99.5  
93.3  
75.8  
89.0  
83.7  
102  
91.9  
79.1

Analyst: GAG

102  
104  
93.4  
96.3  
96.0  
96.4  
Date: 18 Apr 01

FORM 5  
PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Alta Analytical Perspectives Episode No.:

Contract No.:

SAS No.:

Reviewer: ca

Instrument ID: MM-1 ✓

Initial Calibration Date: 10/05/00 ✓

Date: 18 April

RT Window Data Filename: 010418P2 S#1 Analysis Date: 18-APR-01 Time: 11:13:46

DB-5 IS Data Filename: 010418P2 S#1 Analysis Date: 18-APR-01 Time: 11:13:46

DB\_225 IS Data Filename: Analysis Date: Time:

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:43 ✓	1,3,6,8-TCDF (F)	22:38 ✓
1,2,8,9-TCDD (L)	29:17 ✓	1,2,8,9-TCDF (L)	29:27 ✓
1,2,4,7,9-PeCDD (F)	31:09 ✓	1,3,4,6,8-PeCDF (F)	29:23 ✓
1,2,3,8,9-PeCDD (L)	34:05 ✓	1,2,3,8,9-PeCDF (L)	34:22 ✓
1,2,4,6,7,9-HxCDD (F)	35:48 ✓	1,2,3,4,6,8-HxCDF (F)	35:09 ✓
1,2,3,7,8,9-HxCDD (L)	37:58 ✓	1,2,3,7,8,9-HxCDF (L)	38:24 ✓
1,2,3,4,6,7,9-HpCDD (F)	40:51 ✓	1,2,3,4,6,7,8-HpCDF (F)	40:24 ✓
1,2,3,4,6,7,8-HpCDD (L)	42:06 ✓	1,2,3,4,7,8,9-HpCDF (L)	42:57 ✓

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

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

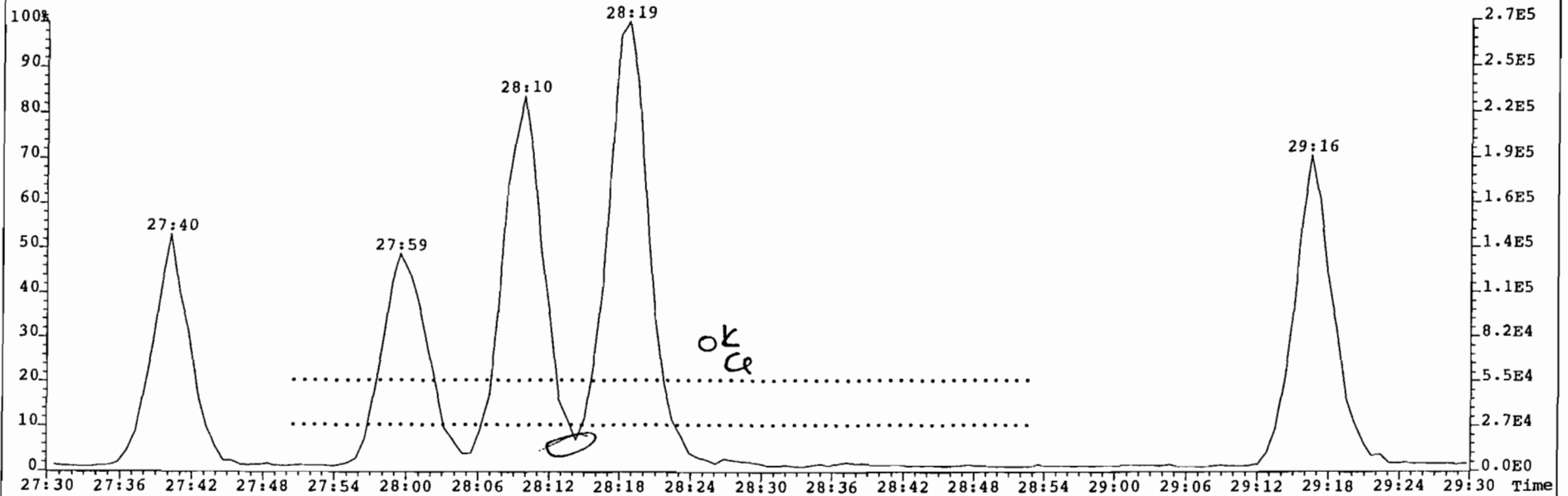
% VALLEY HEIGHT  
BETWEEN  
COMPARED PEAKS (1)

<25%

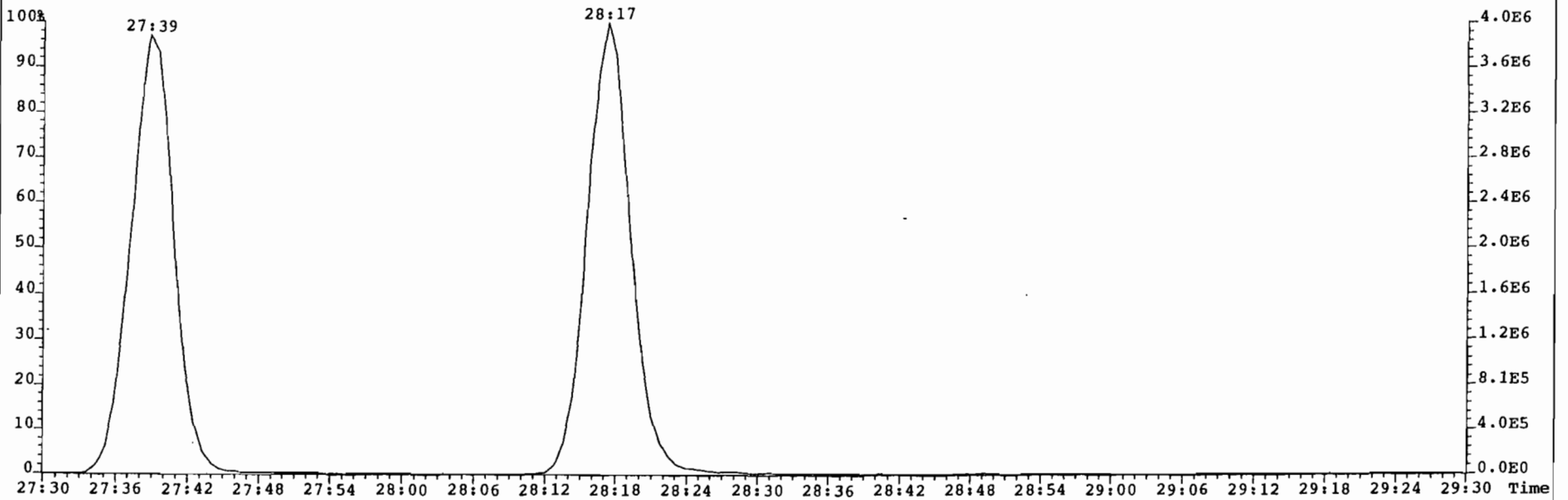
Analyst: GAB

Date: 18 April

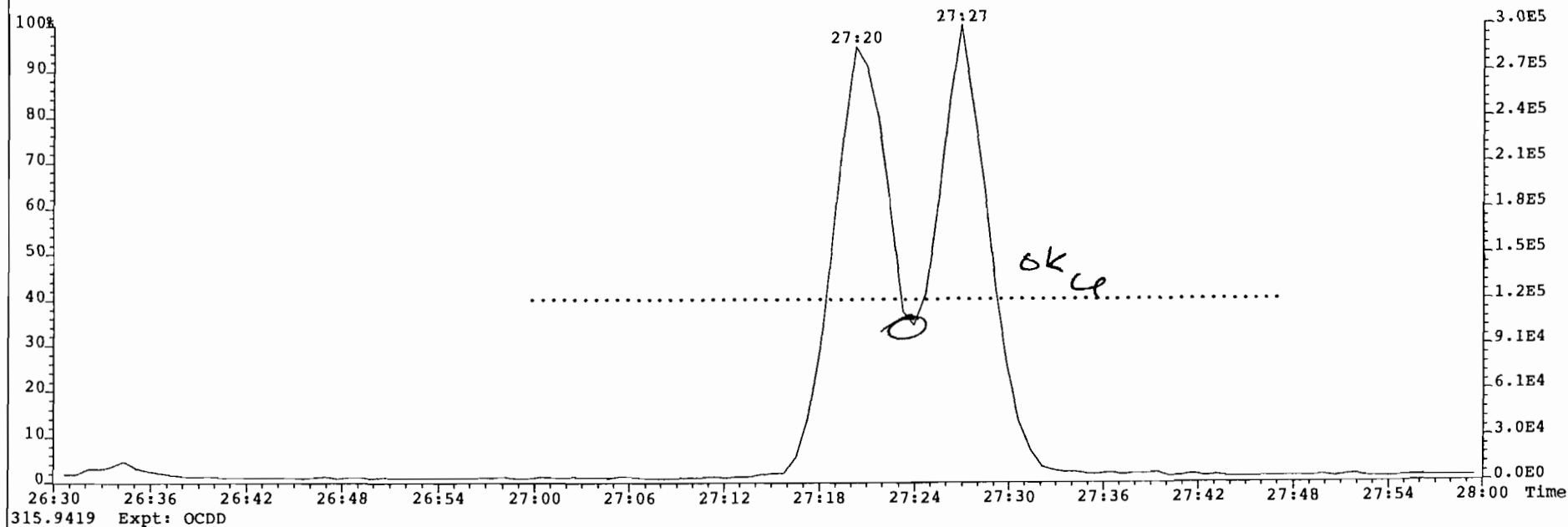
File: 010418P2 Acq: 18-APR-2001 11:13:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5  
321.8936 Expt: OCDD



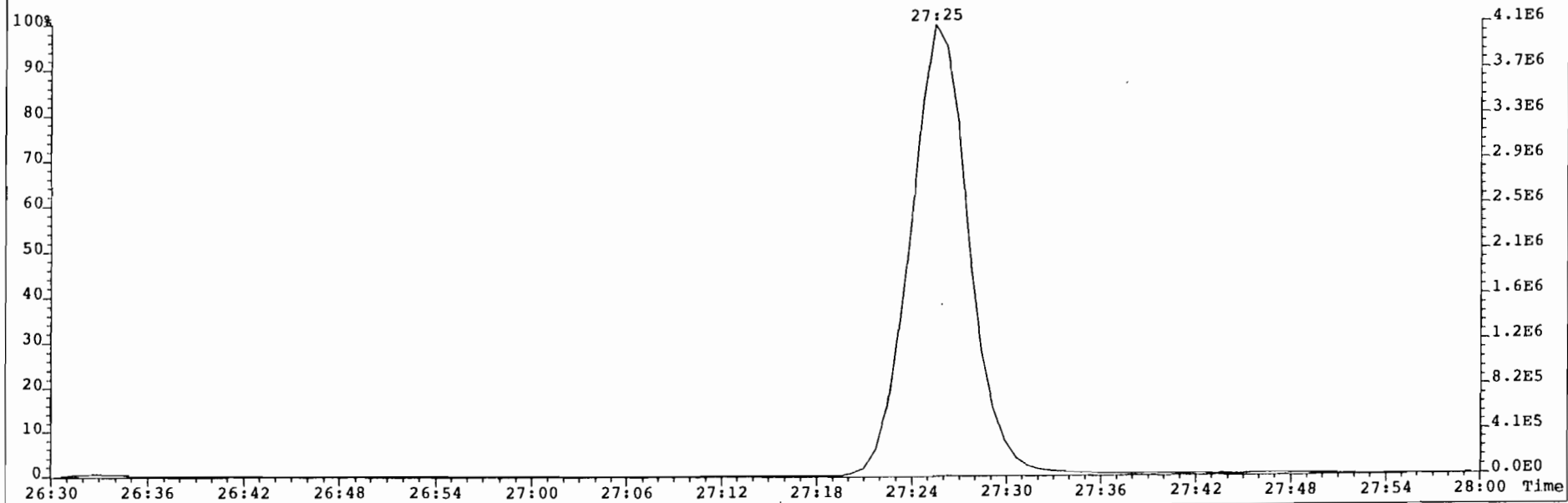
333.9339 Expt: OCDD



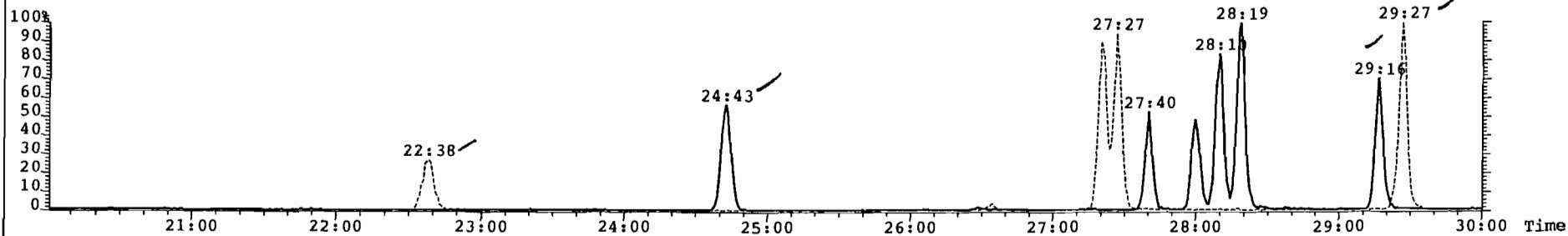
File: 010418P2 Acq: 18-APR-2001 11:13:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5  
305.8987 Expt: OCDD



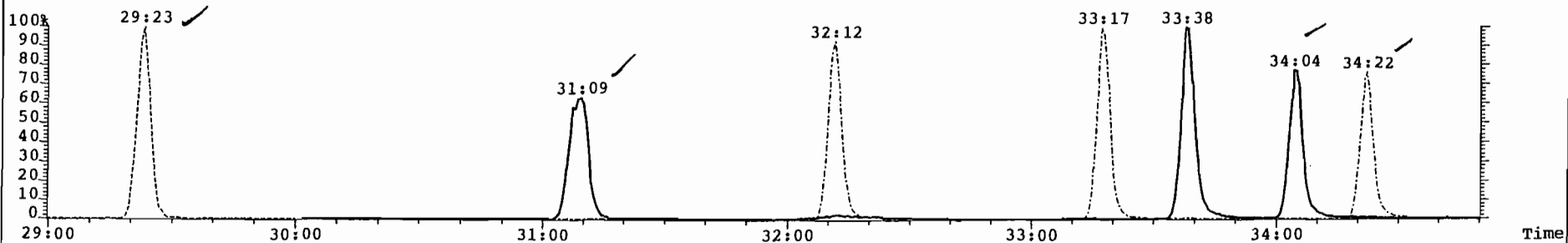
315.9419 Expt: OCDD



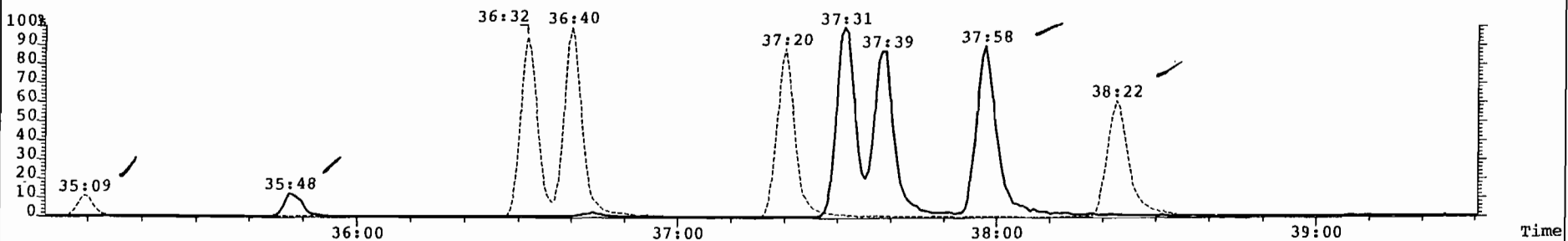
File: 010418P2 Acq: 18-APR-2001 11:13:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5  
305.8987,321.8936 Expt: OCDD



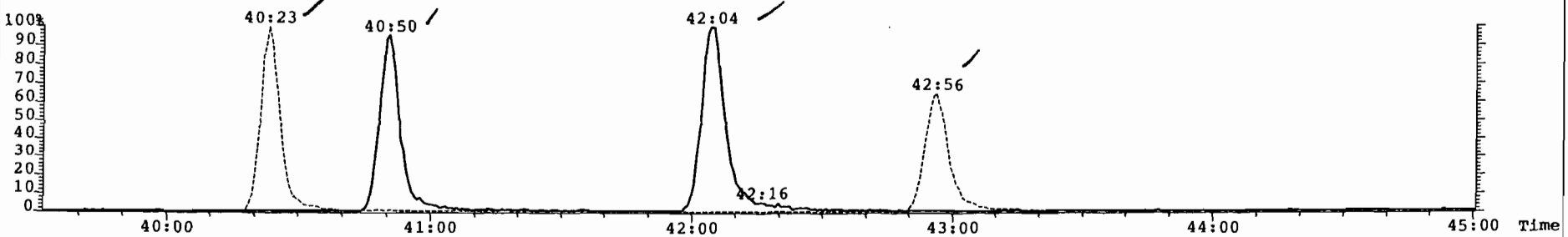
339.8597,355.8546 F:2,339.8597 F:2 Expt: OCDD



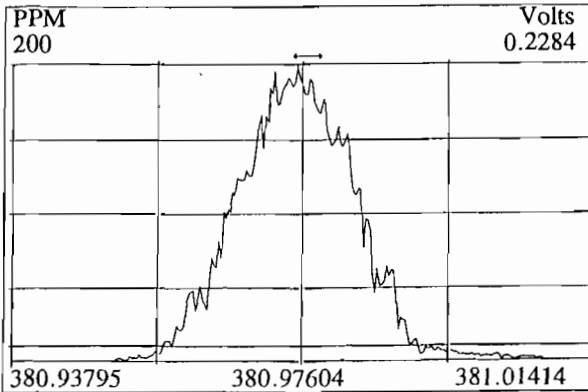
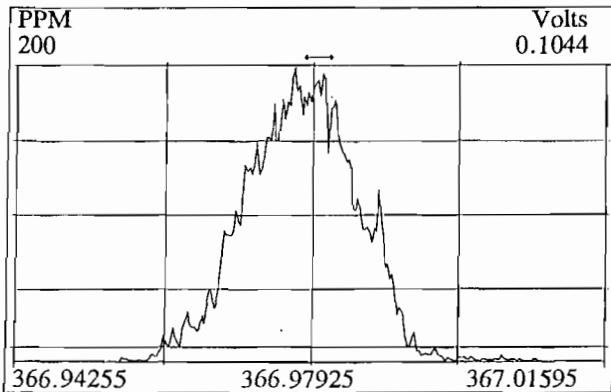
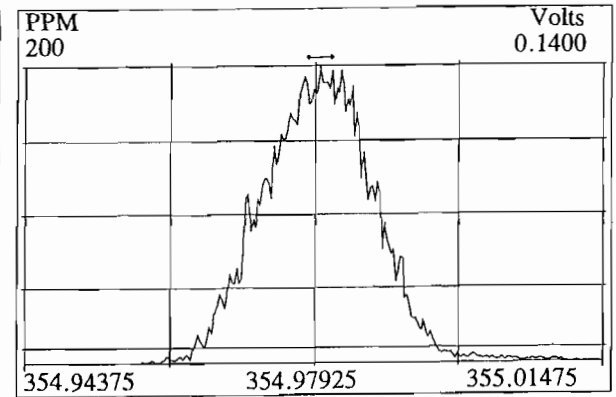
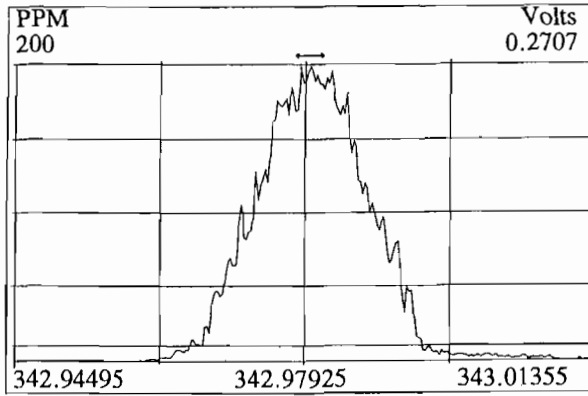
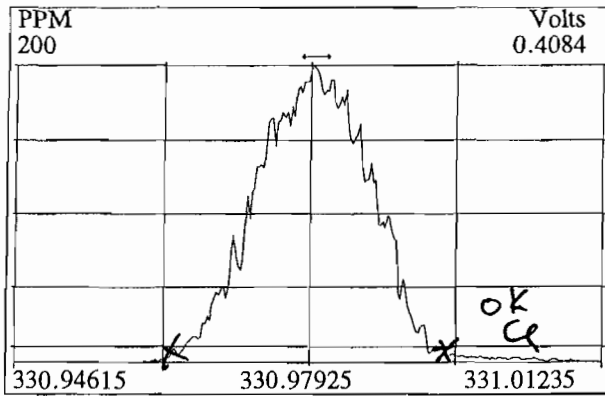
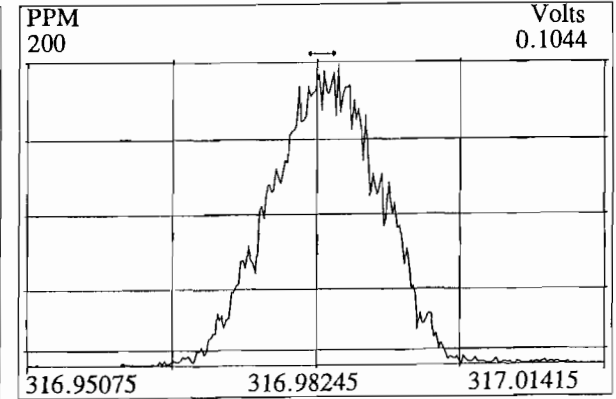
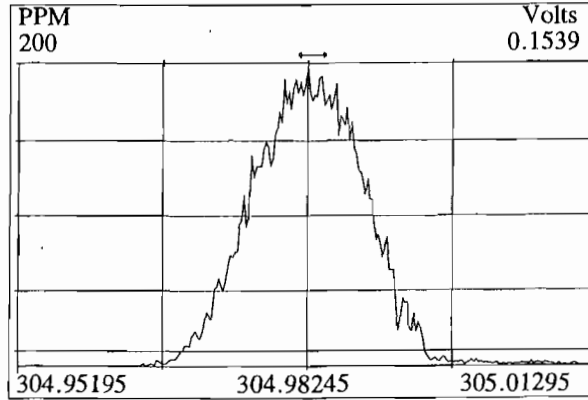
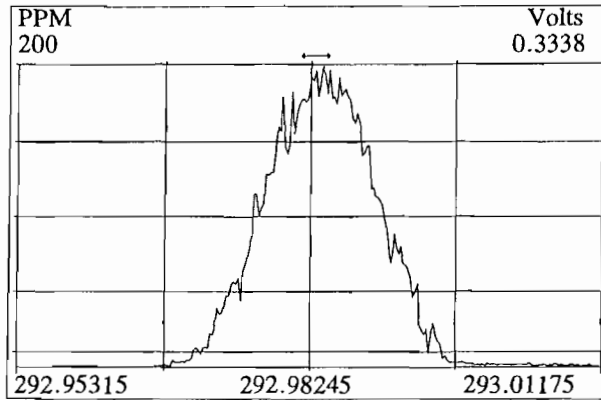
F:3 373.8207,389.8156 Expt: OCDD



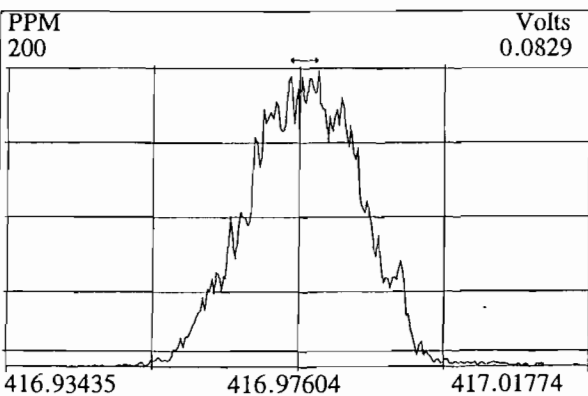
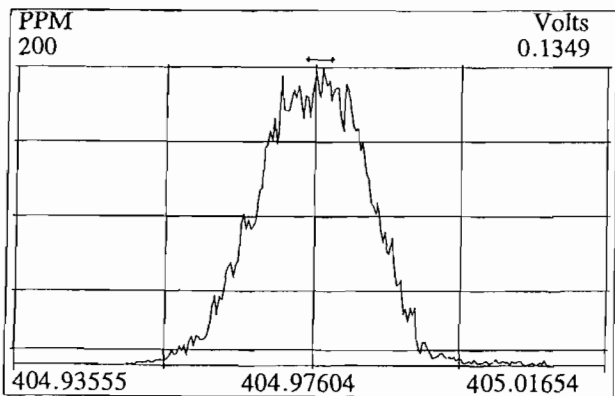
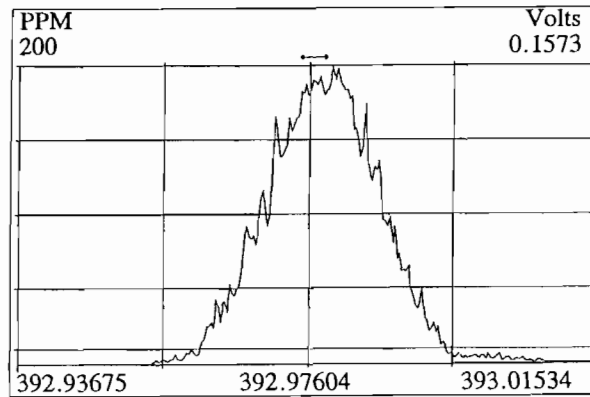
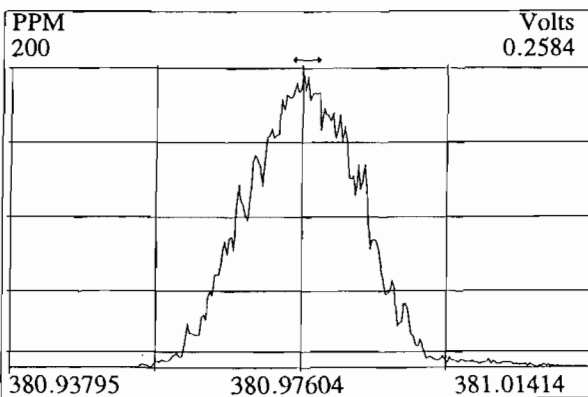
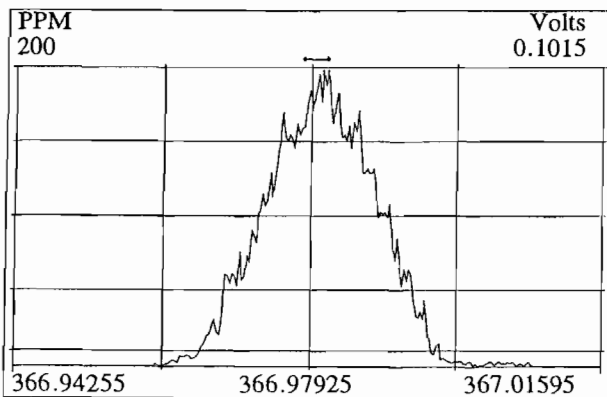
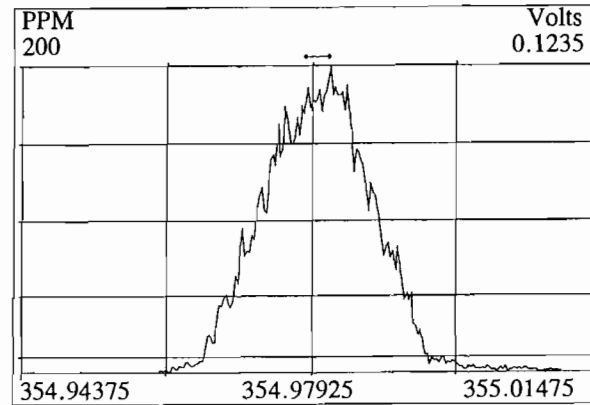
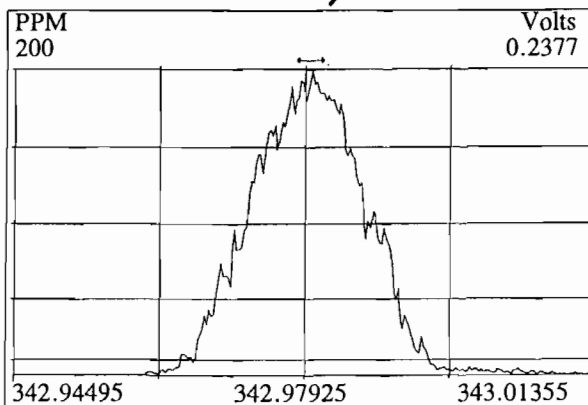
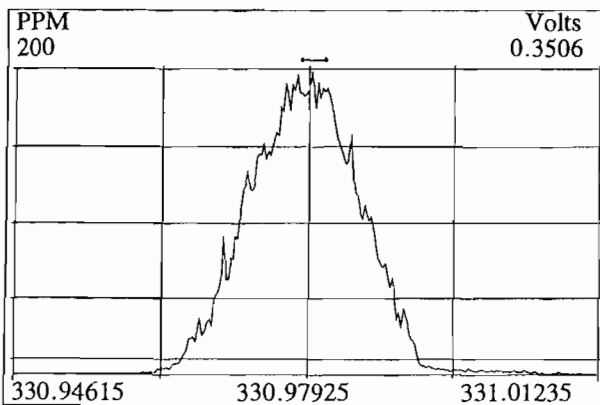
F:4 407.7818,423.7767 Expt: OCDD



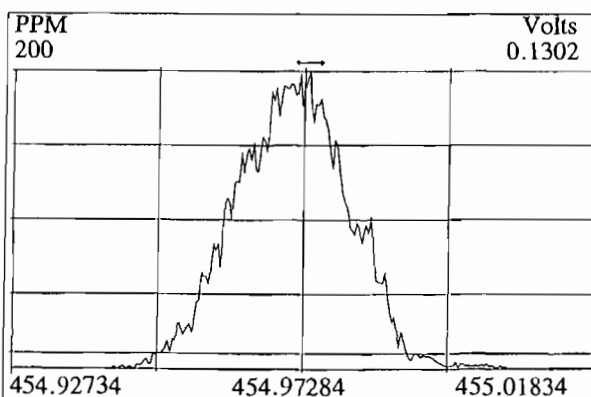
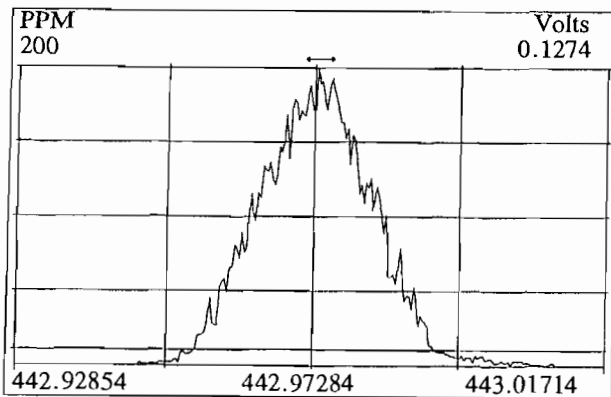
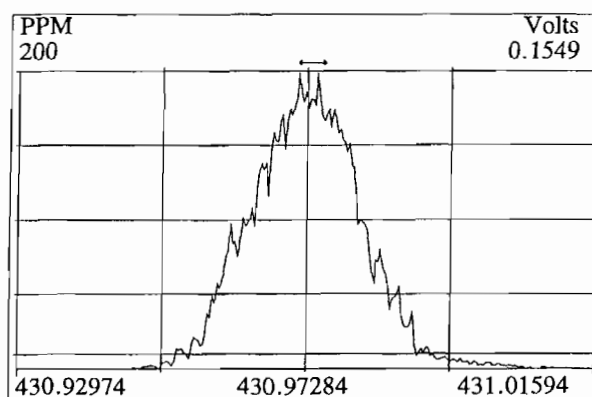
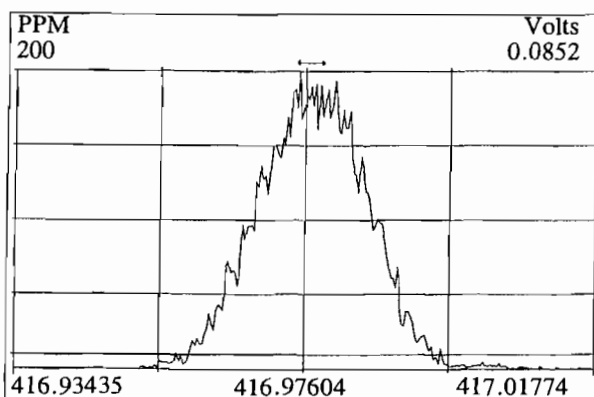
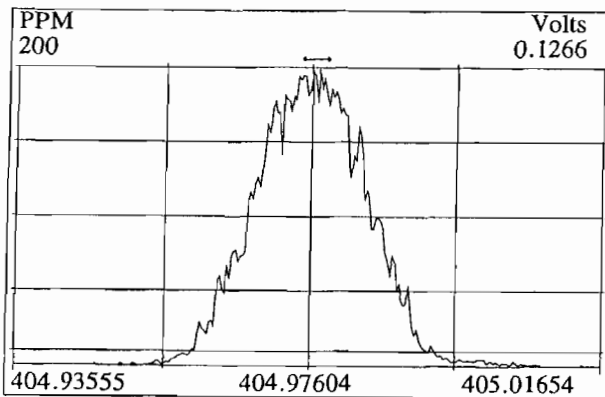
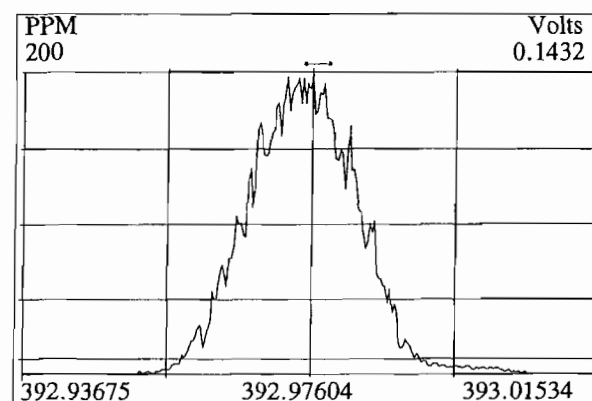
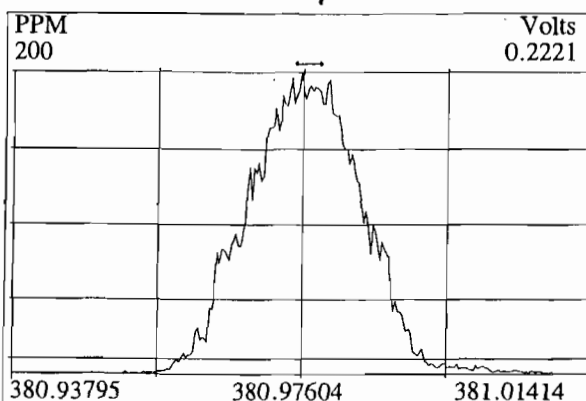
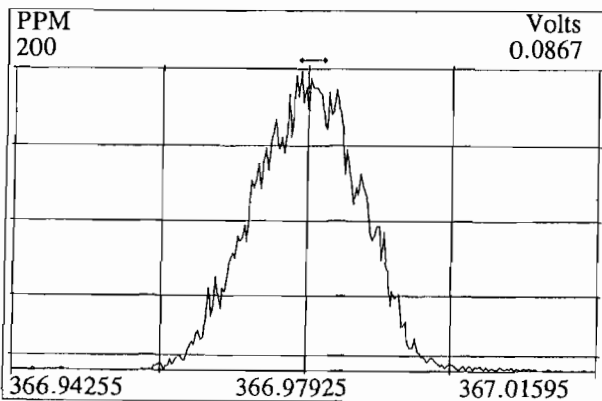
Peak Locate Examination: 18-APR-2001: 11:12 File: 010418P2  
Experiment: OCDD Function: 1 Reference: PFK2



Peak Locate Examination: 18-APR-2001:11:12 File:010418P2  
Experiment: OCDD Function: 2 Reference: PFK2

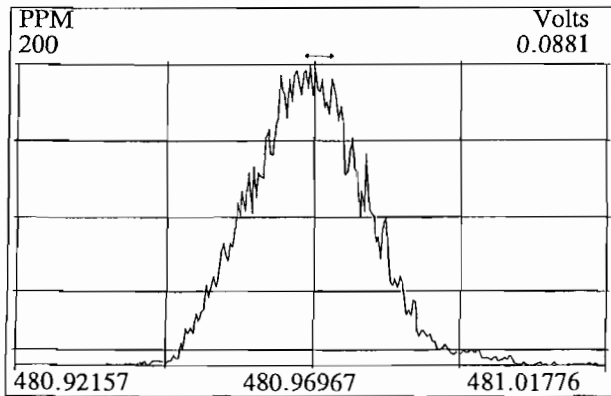
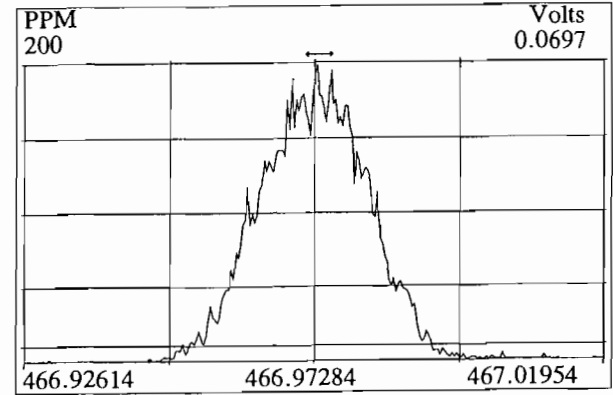
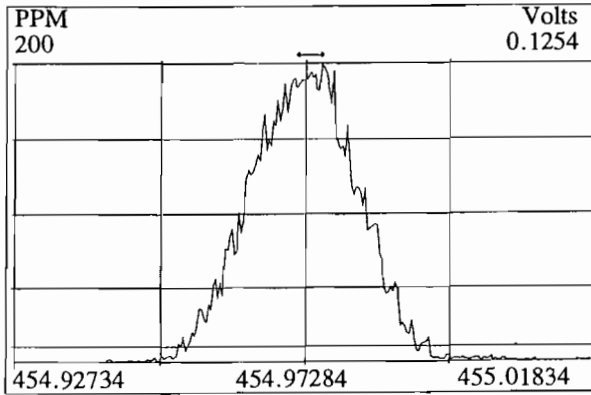
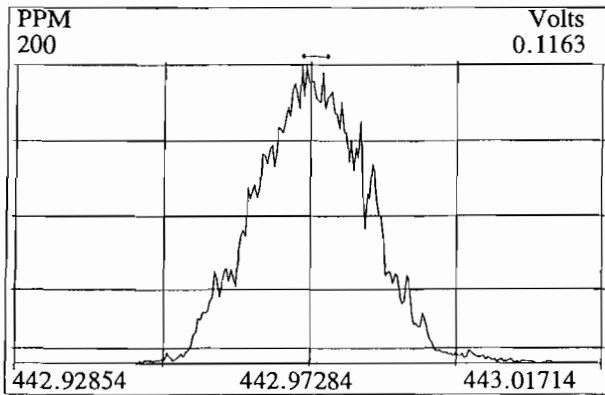
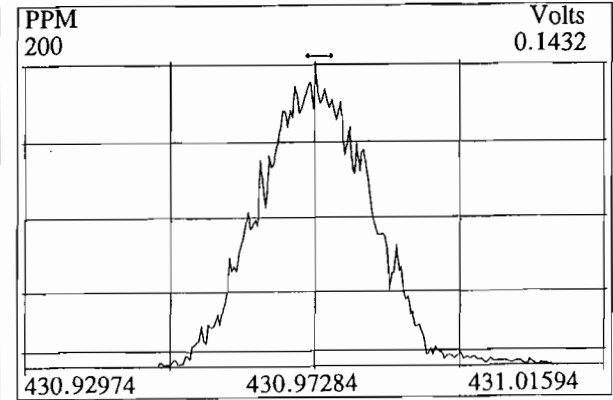
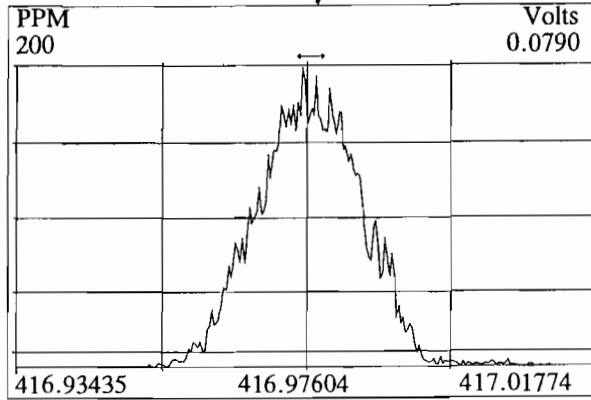
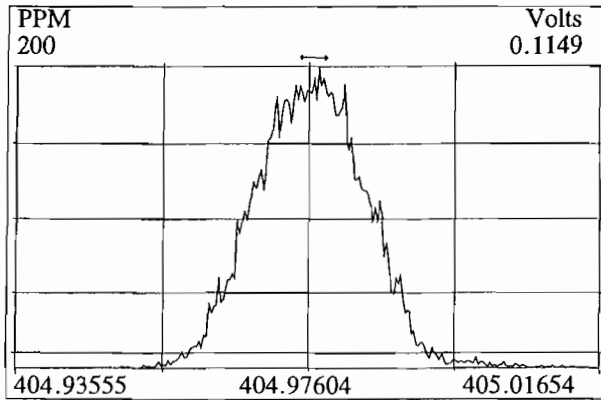


Peak Locate Examination: 18-APR-2001: 11:12 File: 010418P2  
Experiment: OCDD Function: 3 Reference: PFK2

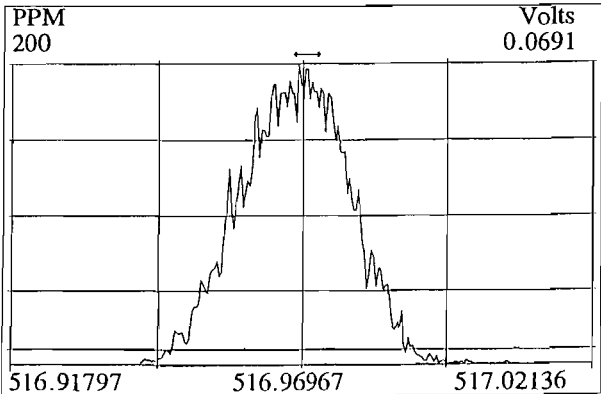
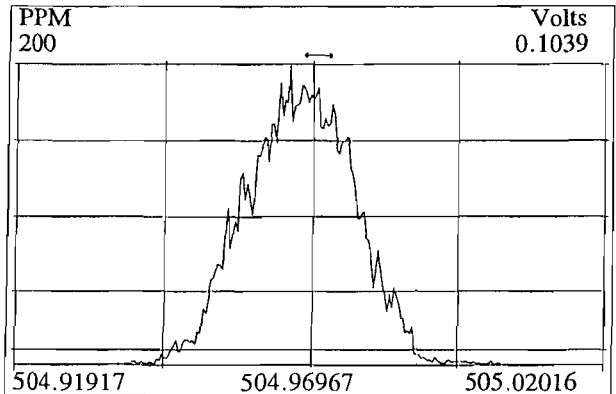
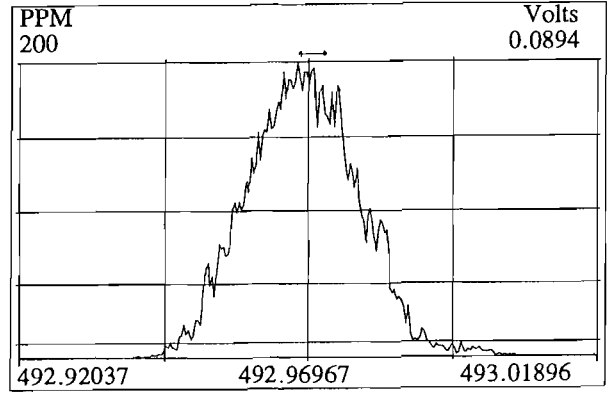
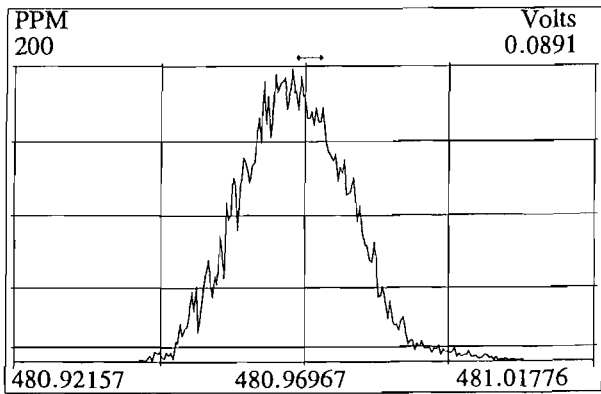
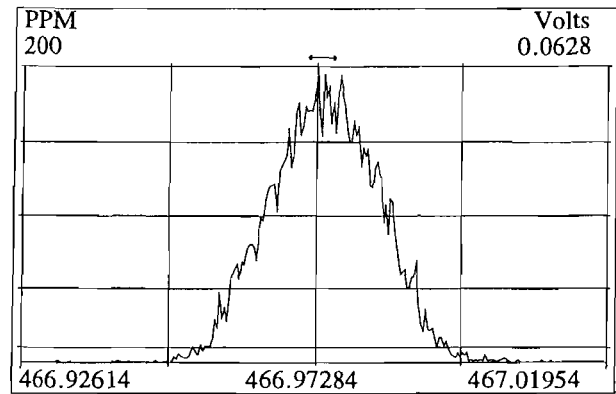
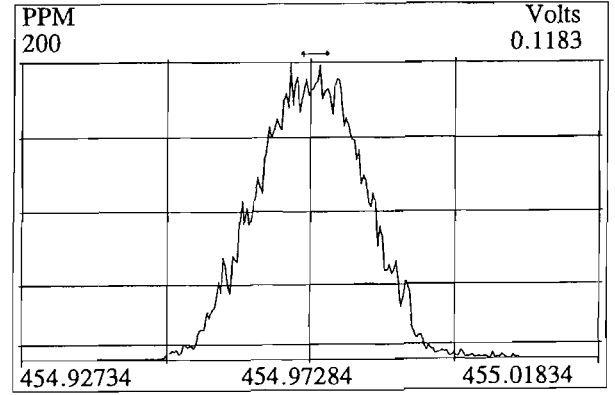
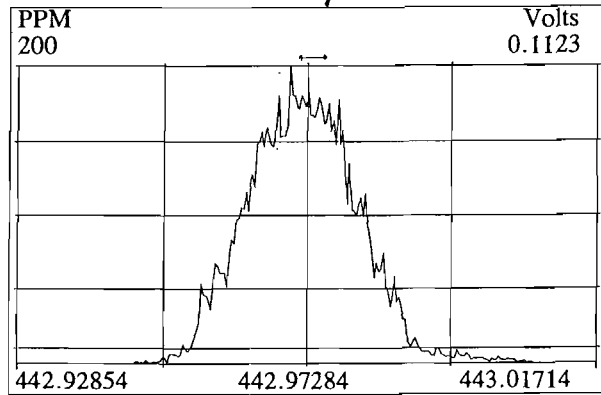
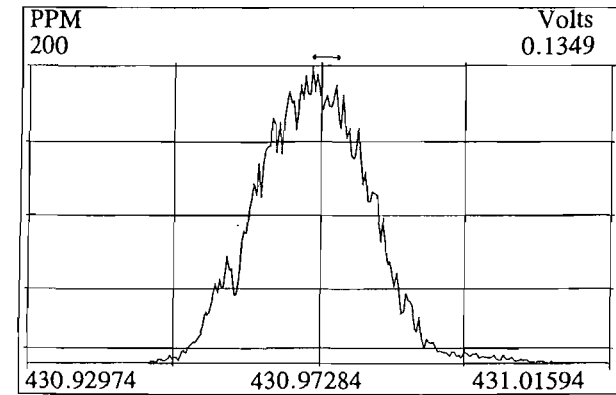




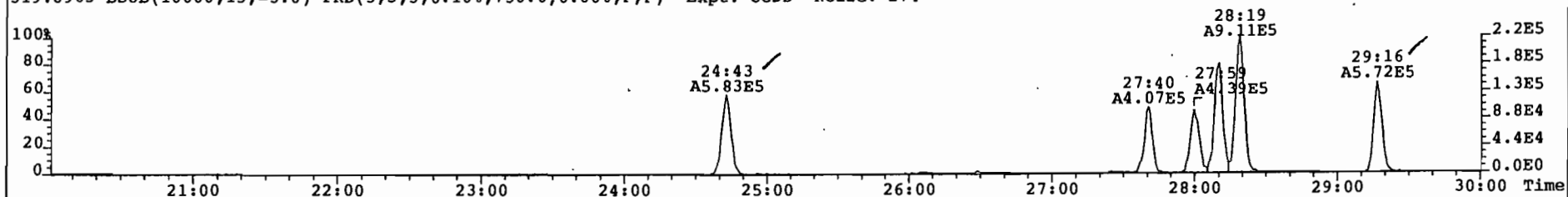
Peak Locate Examination: 18-APR-2001:11:13 File:010418P2  
Experiment:OCDD Function:4 Reference:PFK2



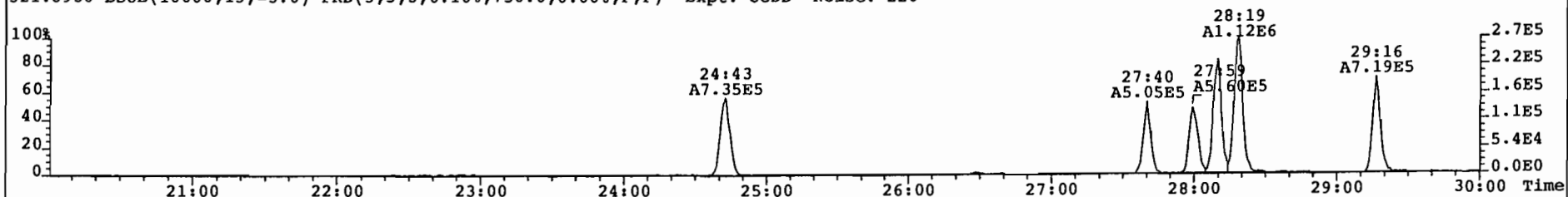
Peak Locate Examination: 18-APR-2001: 11:13 File: 010418P2  
Experiment: OCDD Function: 5 Reference: PFK2



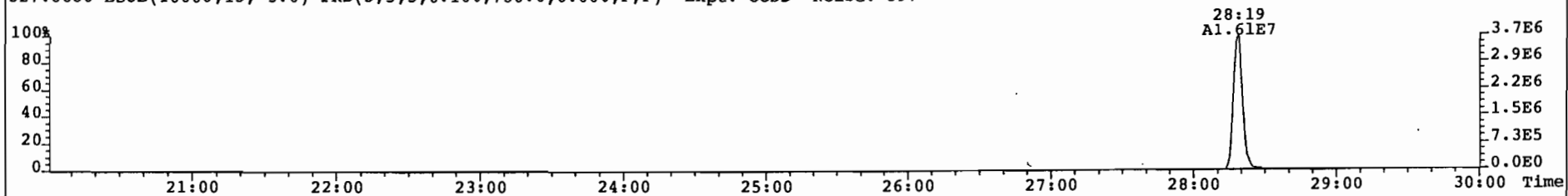
File: 010418P2 Acq: 18-APR-2001 11:13:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5  
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 274



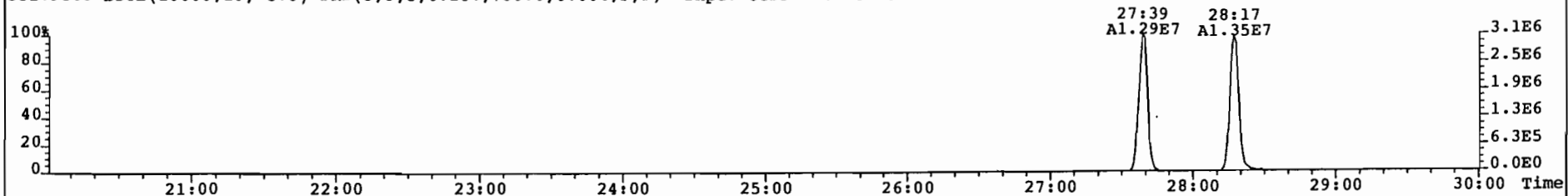
321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 220



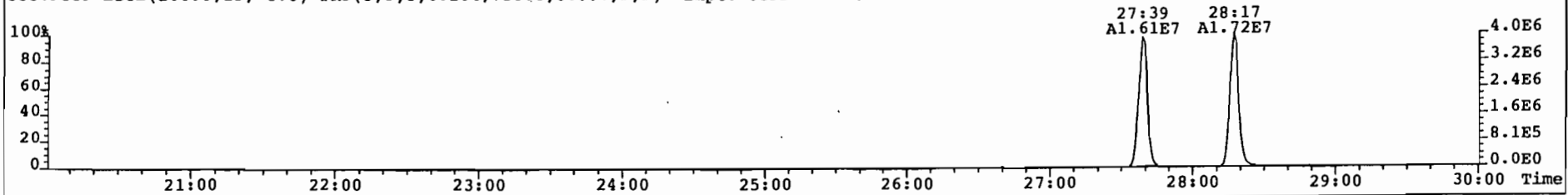
327.8850 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 397



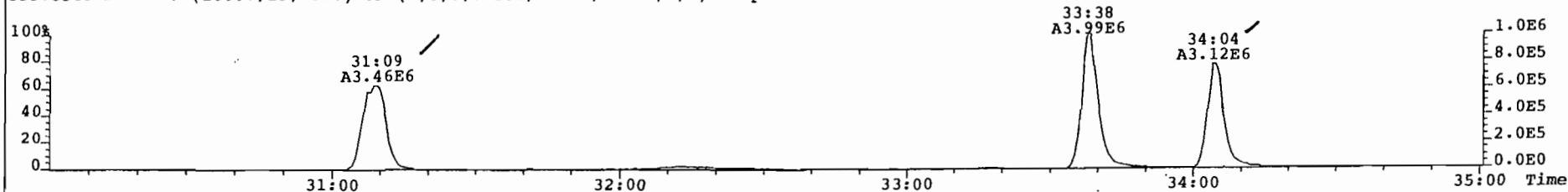
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 801



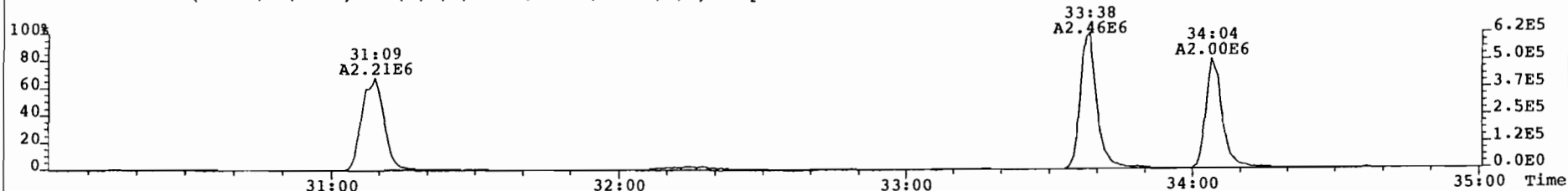
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 504



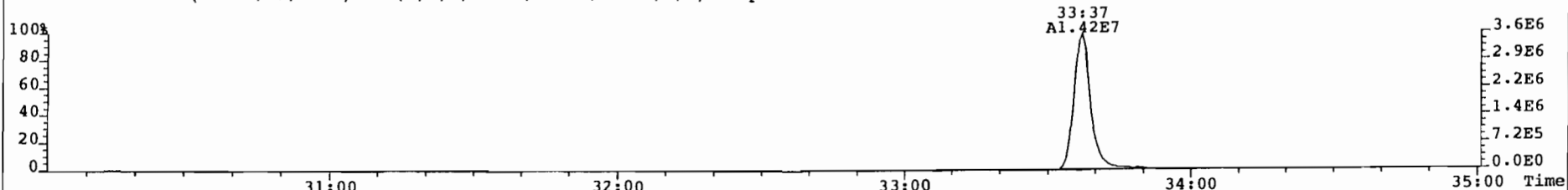
File: 010418P2 Acq: 18-APR-2001 11:13:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5  
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 495



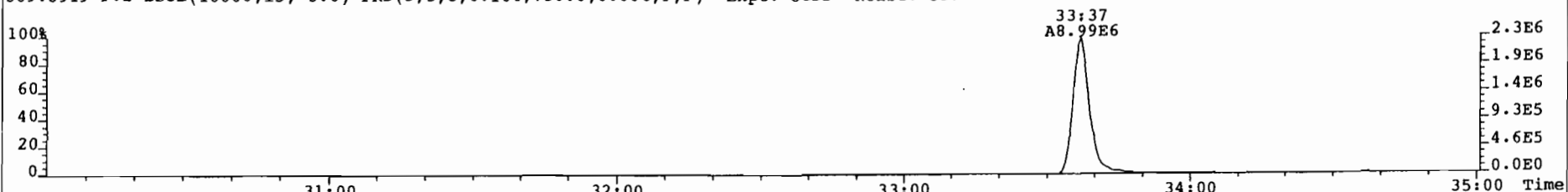
357.8517 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 371



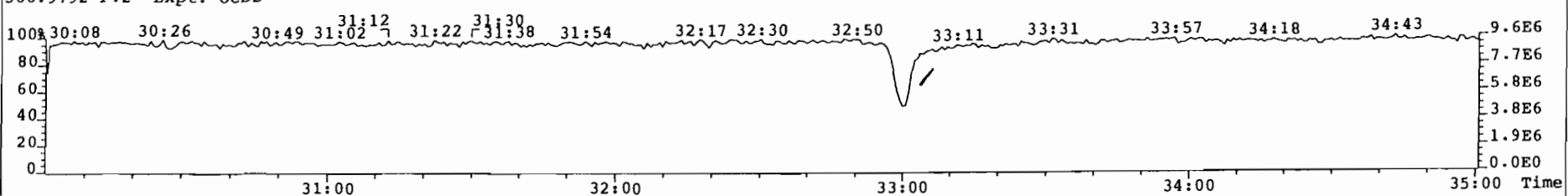
367.8949 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 653



369.8919 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 357



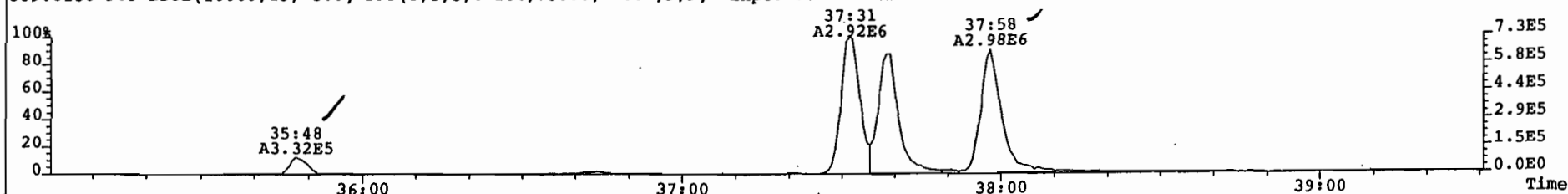
366.9792 F:2 Expt: OCDD



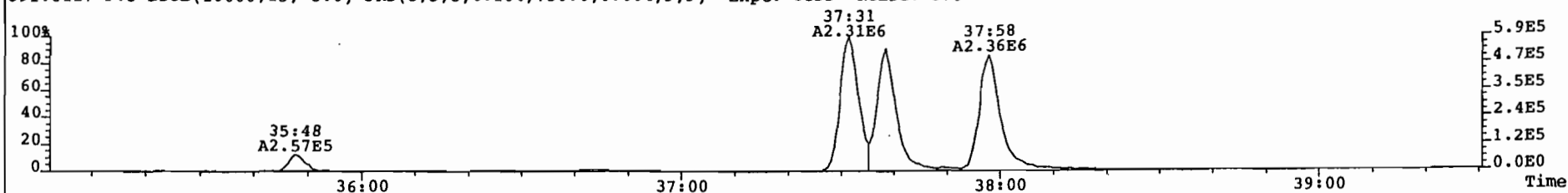
File: 010418P2 Acq: 18-APR-2001 11:13:46 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 1 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5

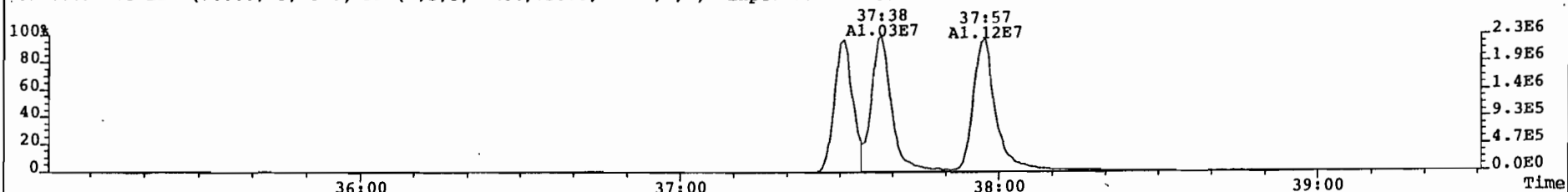
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 380



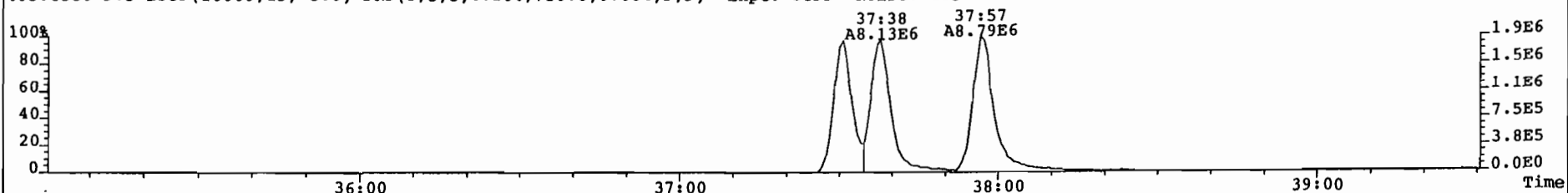
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 370



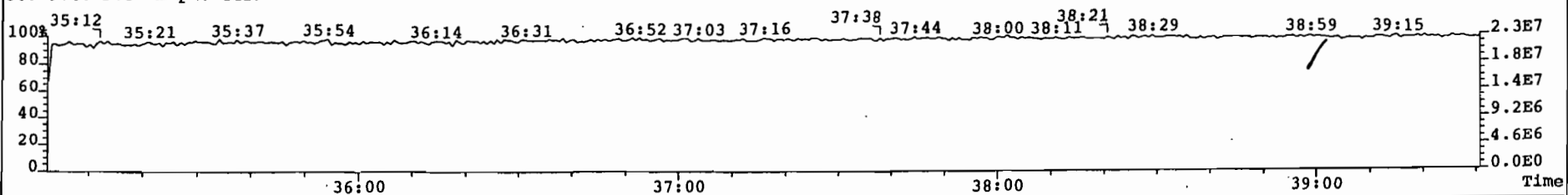
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 890



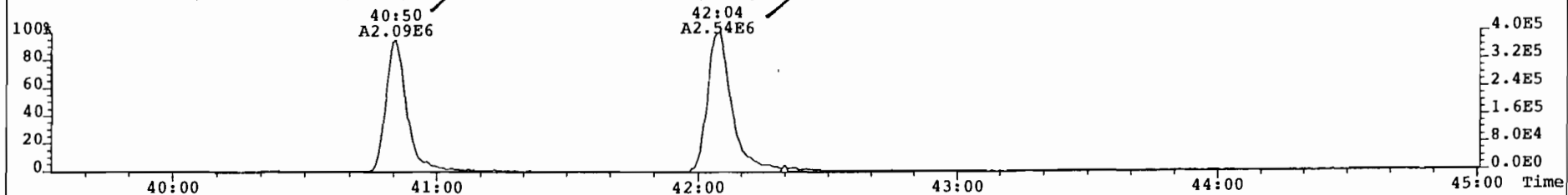
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 403



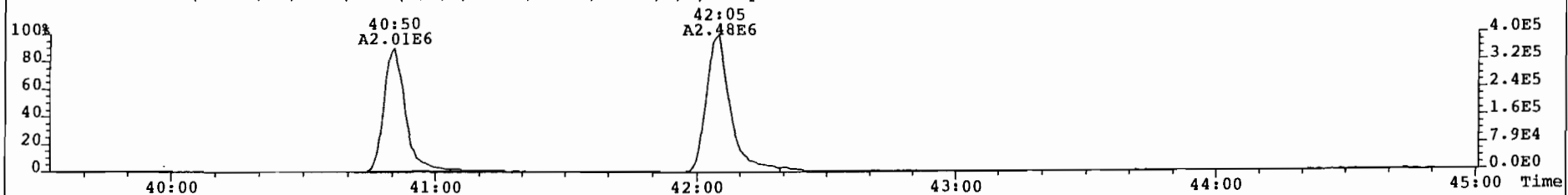
380.9760 F:3 Expt: OCDD



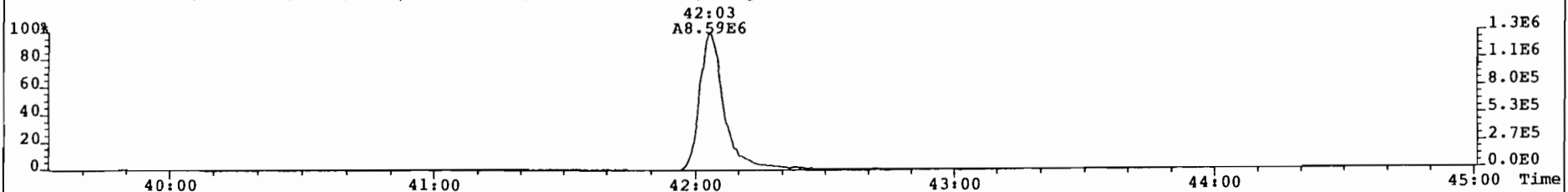
File: 010418P2 Acq: 18-APR-2001 11:13:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5  
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 429



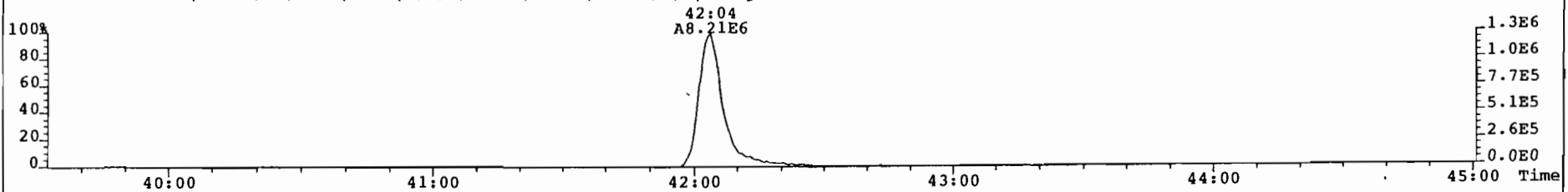
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 388



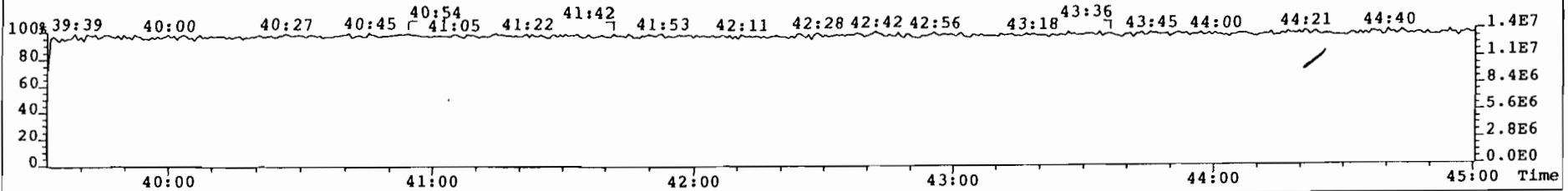
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 926



437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 596



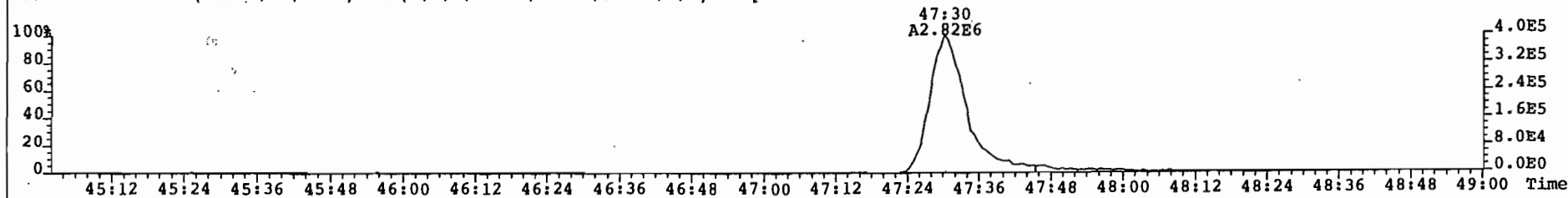
430.9728 F:4 Expt: OCDD



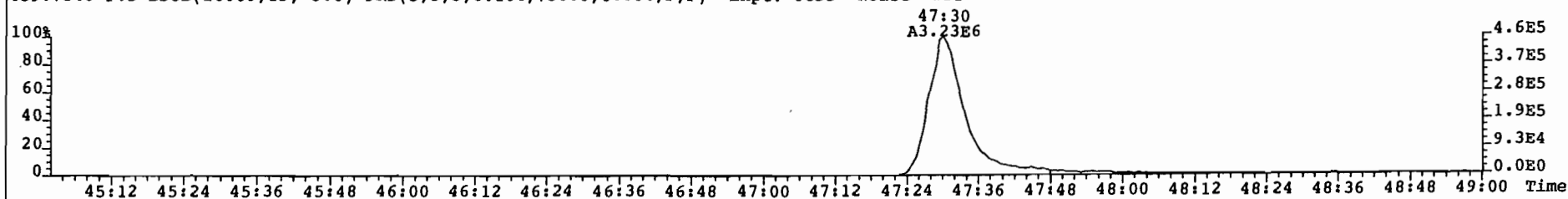
File: 010418P2 Acq: 18-APR-2001 11:13:46 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 1 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5

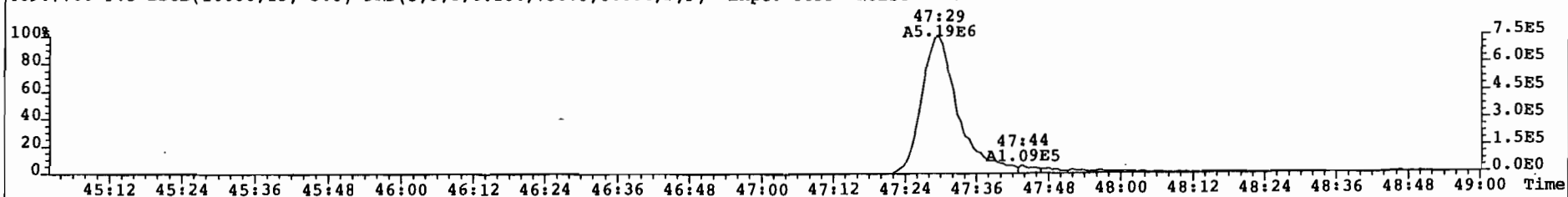
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 287



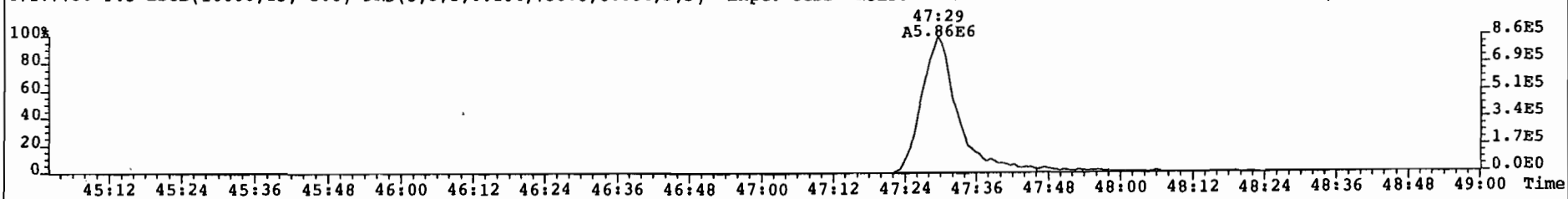
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 221



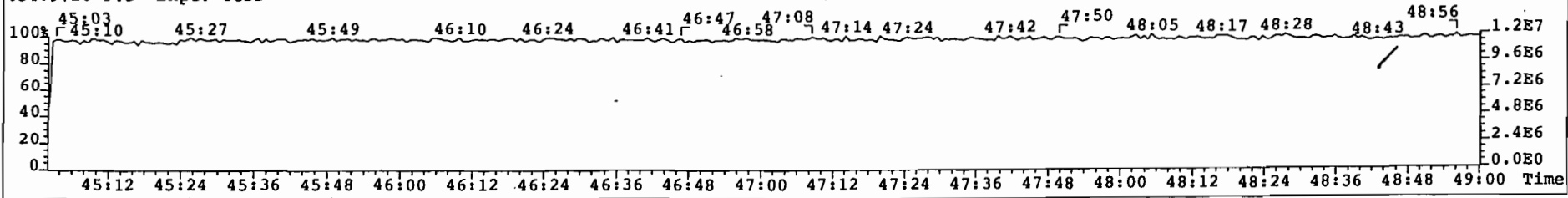
469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 297



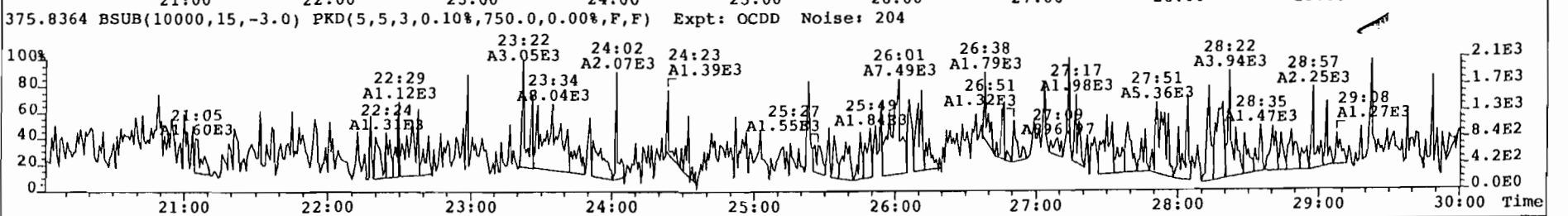
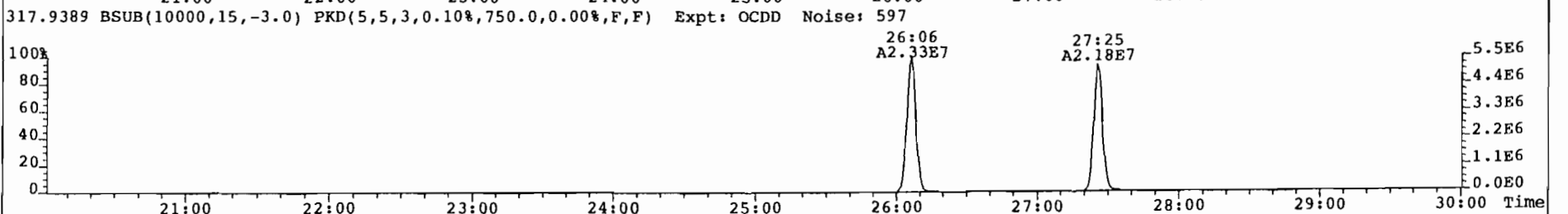
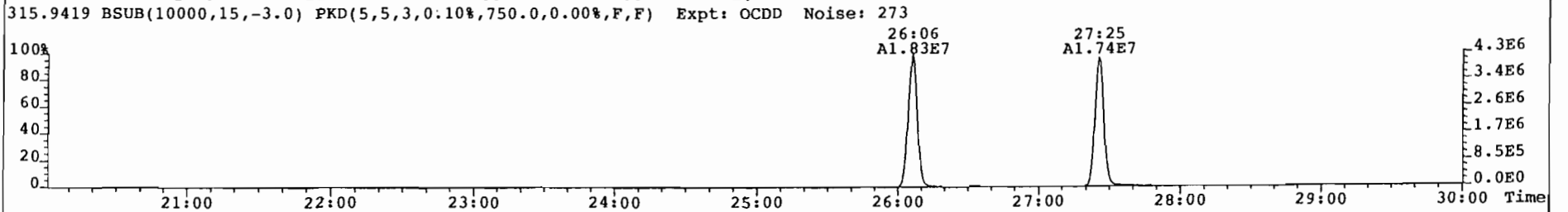
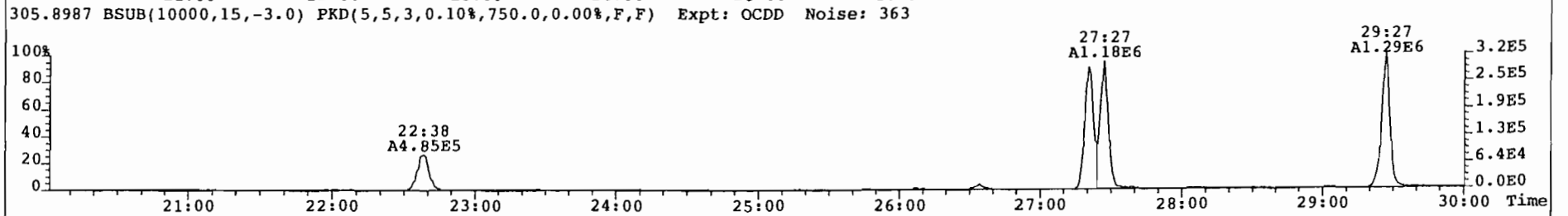
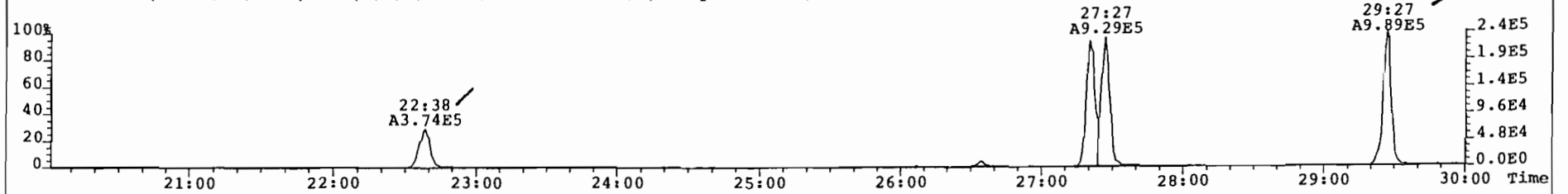
471.7750 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 267



454.9728 F:5 Expt: OCDD

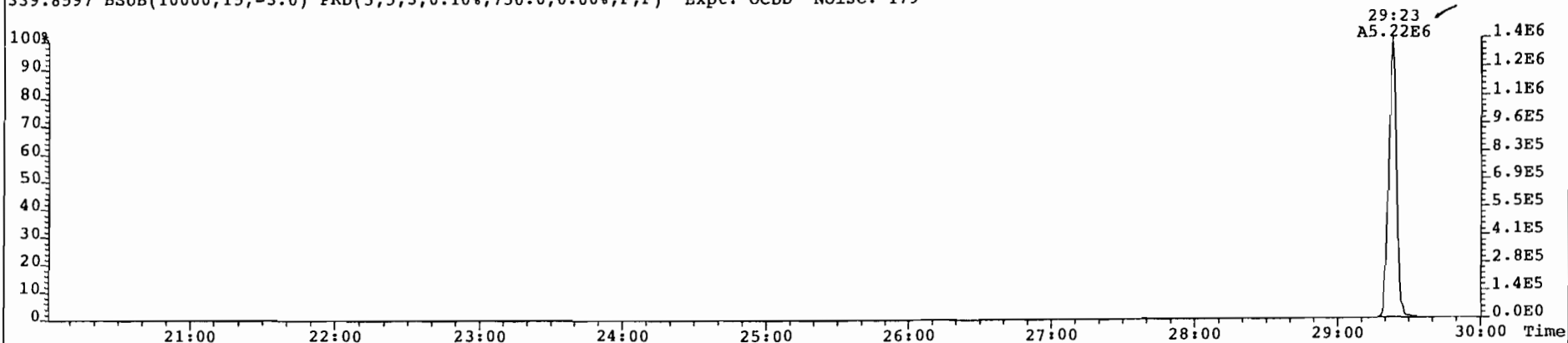


File: 010418P2 Acq: 18-APR-2001 11:13:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5  
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 259

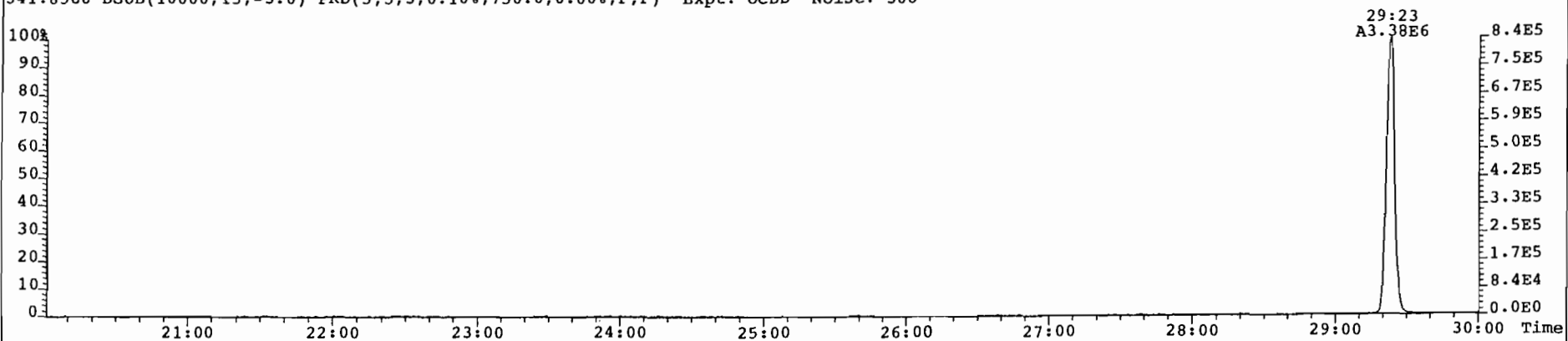




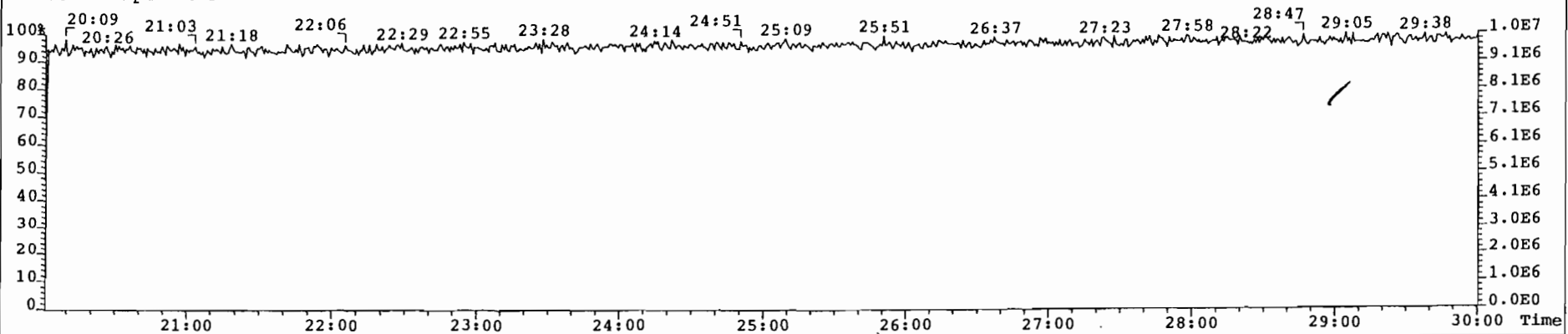
File: 010418P2 Acq: 18-APR-2001 11:13:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5  
339.8597 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 179



341.8568 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 308



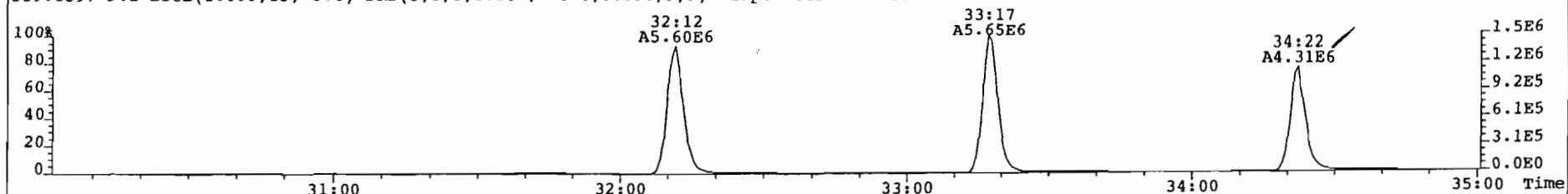
316.9824 Expt: OCDD



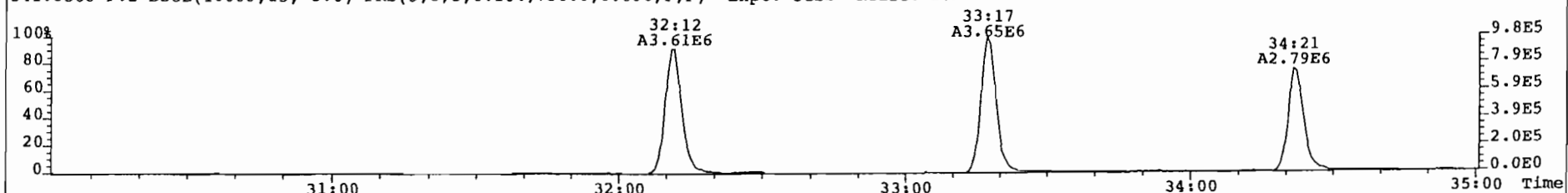
File: 010418P2 Acq: 18-APR-2001 11:13:46 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 1 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5

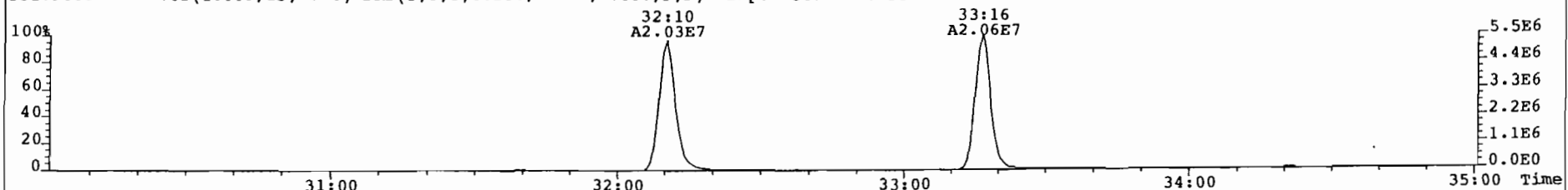
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 455



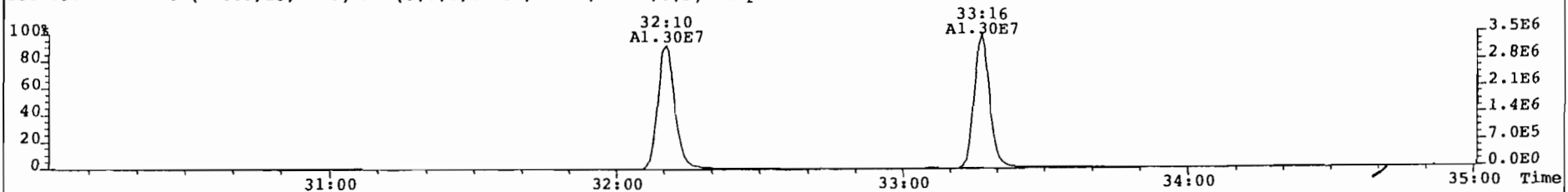
341.8568 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 575



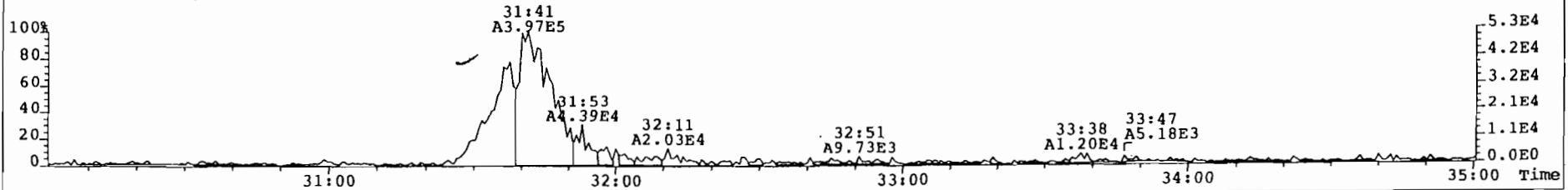
351.9000 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 376

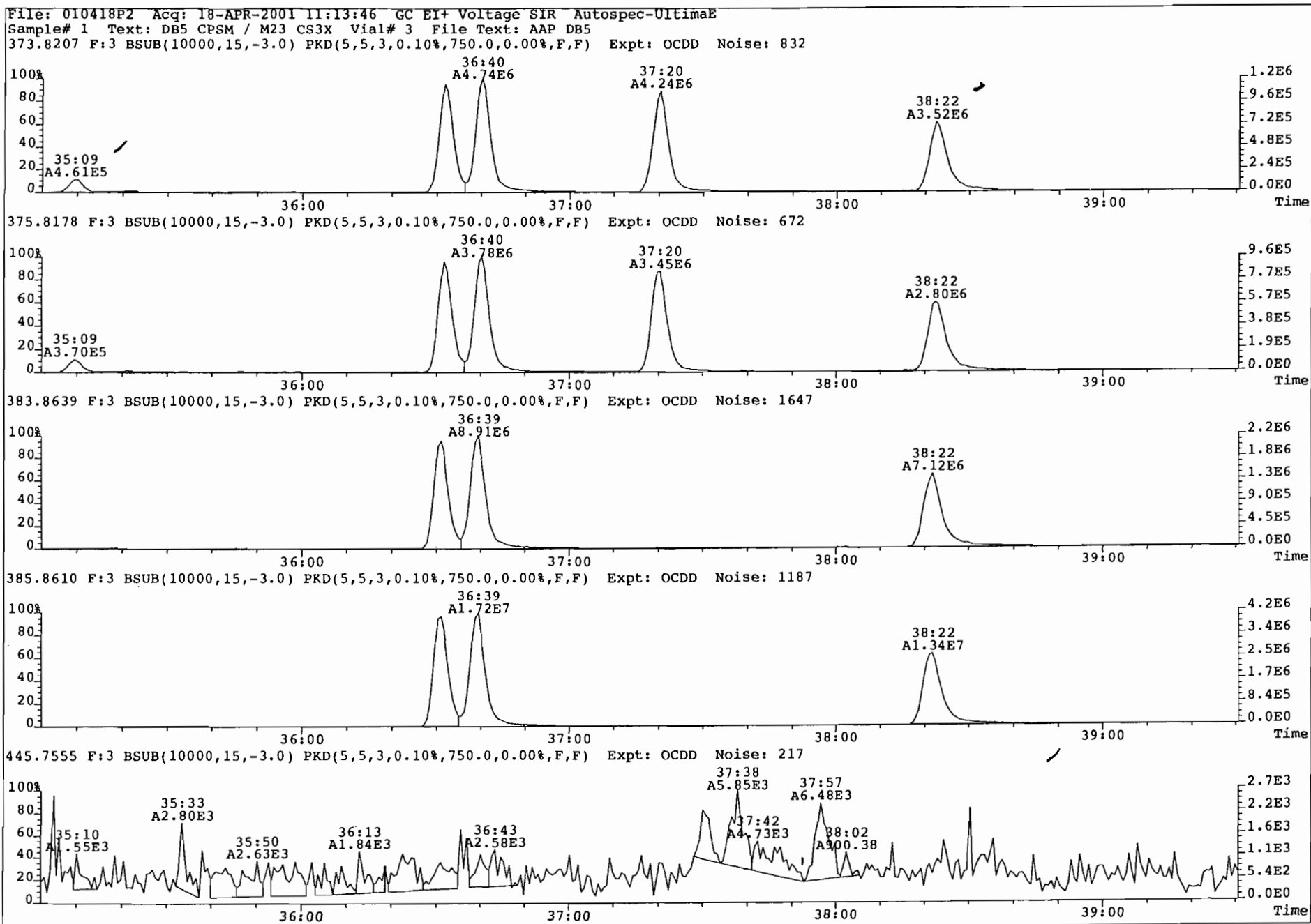


353.8970 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 558

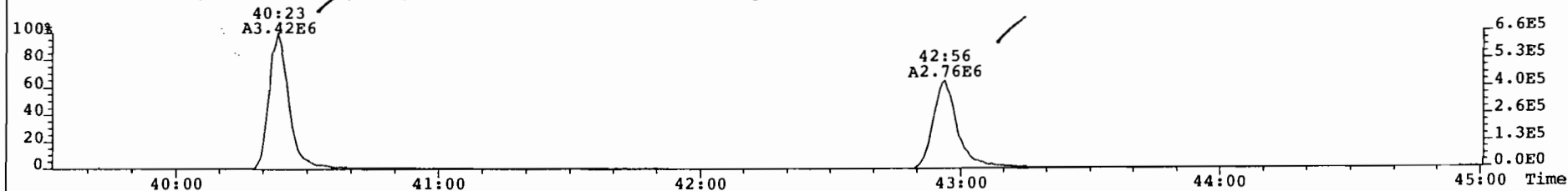


409.7974 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 286

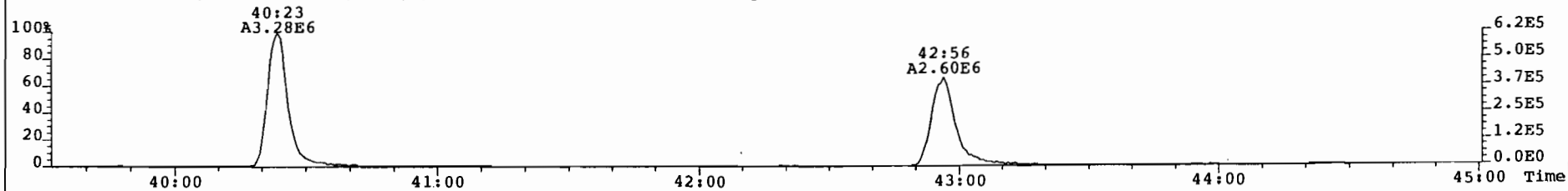




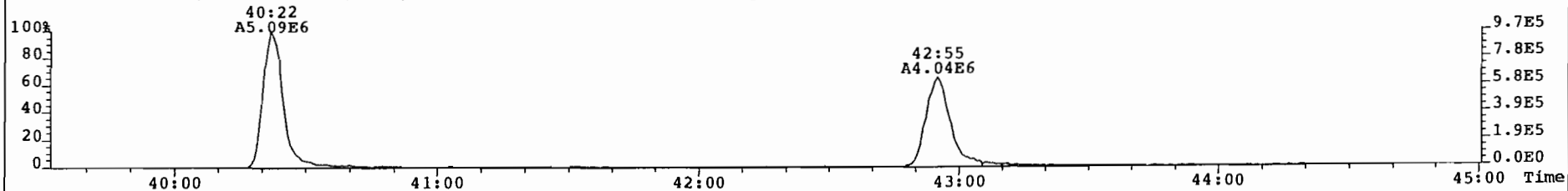
File: 010418F2 Acq: 18-APR-2001 11:13:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5  
407.7818 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 409



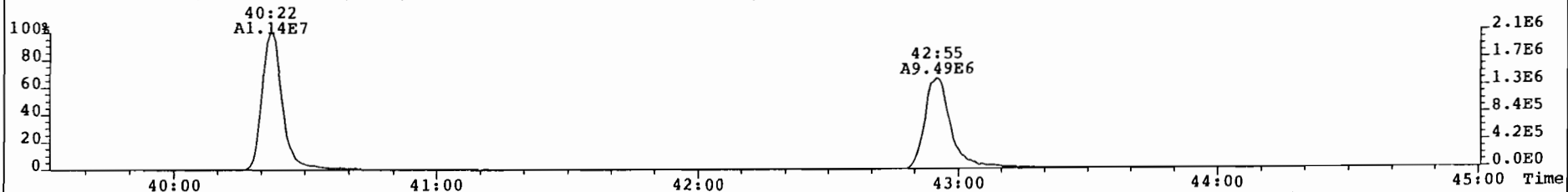
409.7788 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 430



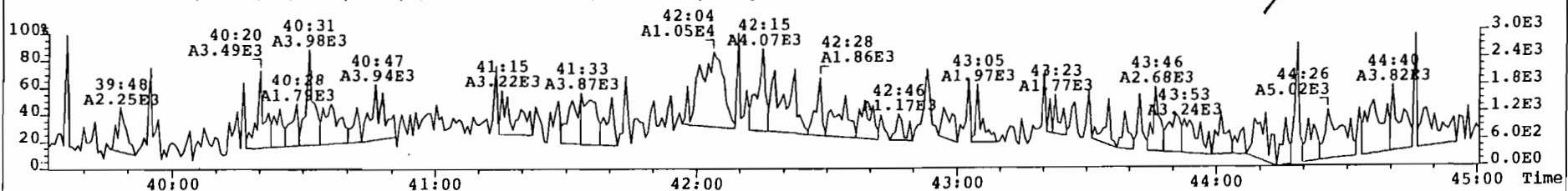
417.8253 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 594



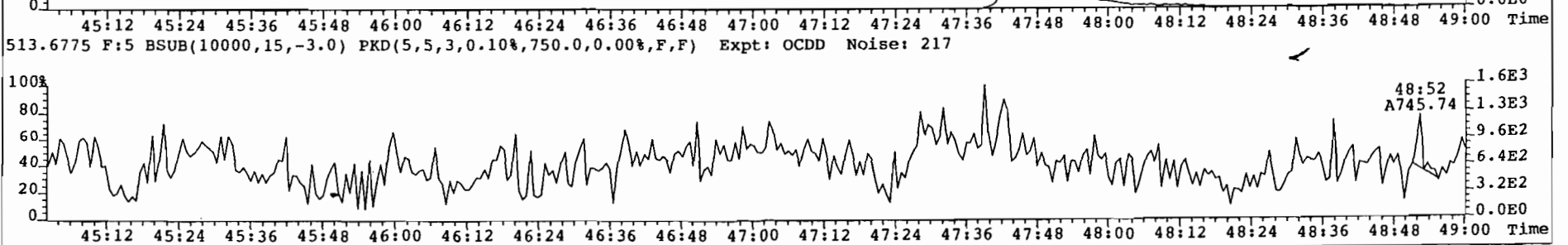
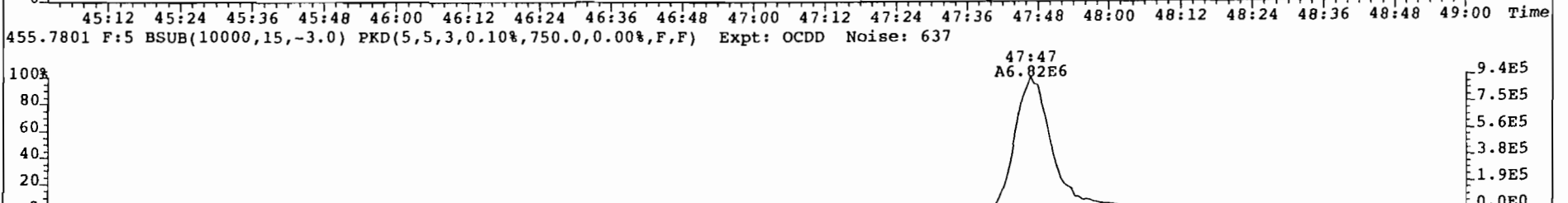
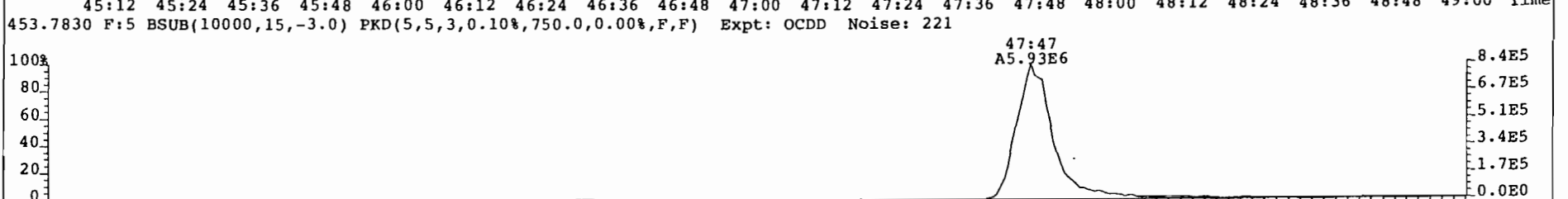
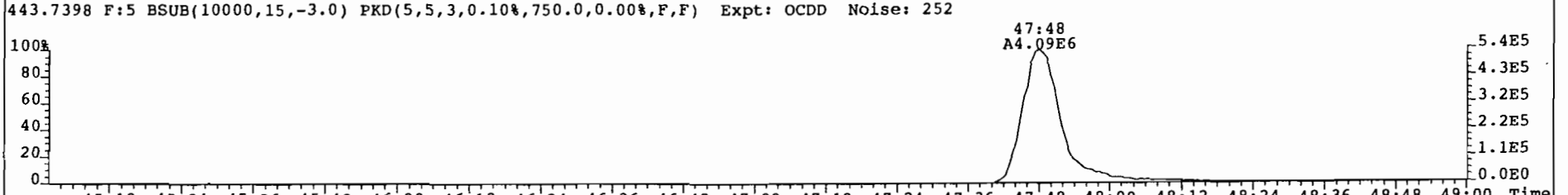
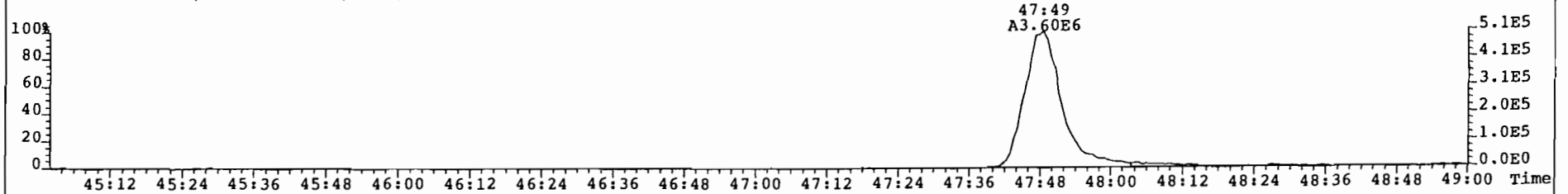
419.8220 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 795



479.7165 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 305



File: 010418P2 Acq: 18-APR-2001 11:13:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 1 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5  
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 220



## PCDD/PCDF CALIBRATION VERIFICATION

## Alta Analytical Perspectives

Initial Calibration Date: 10/05/00 ✓

Instrument ID: MM-1 ✓ GC Column ID: DB-5

VER Data Filename: 010418P2 S#5 Analysis Date: 18-APR-01 Time: 14:41:31Reviewer: clDate: 18 Apr 01

NATIVE ANALYTES	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	y	5.29 ✓	3.75 - 6.25
1,2,3,7,8-PeCDD	M+2/M+4	1.62	1.32-1.78	y	27.10 ✓	18.75-31.25
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	25.59 ✓	18.75-31.25
1,2,3,6,7,8-HxCDD	M+2/M+4	1.24	1.05-1.43	y	27.00 ✓	18.75-31.25
1,2,3,7,8,9-HxCDD	M+2/M+4	1.28	1.05-1.43	y	25.76 ✓	18.75-31.25
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	y	26.60 ✓	18.75-31.25
OCDD	M+2/M+4	0.89	0.76-1.02	y	53.37 ✓	37 - 65
2,3,7,8-TCDF	M/M+2	0.77	0.65-0.89	y	5.46 ✓	3.75 - 6.25
1,2,3,7,8-PeCDF	M+2/M+4	1.56	1.32-1.78	y	26.99 ✓	18.75-31.25
2,3,4,7,8-PeCDF	M+2/M+4	1.53	1.32-1.78	y	26.60 ✓	18.75-31.25
1,2,3,4,7,8-HxCDF	M+2/M+4	1.26	1.05-1.43	y	25.42 ✓	18.75-31.25
1,2,3,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	26.44 ✓	18.75-31.25
2,3,4,6,7,8-HxCDF	M+2/M+4	1.24	1.05-1.43	y	25.66 ✓	18.75-31.25
1,2,3,7,8,9-HxCDF	M+2/M+4	1.26	1.05-1.43	y	24.53 ✓	18.75-31.25
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.01	0.88-1.20	y	26.47 ✓	18.75-31.25
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.07	0.88-1.20	y	24.90 ✓	18.75-31.25
OCDF	M+2/M+4	0.89	0.76-1.02	y	52.80 ✓	35 - 65

Analyst: GAGDate: 18 Apr 01

GL

PCDD/PCDF CALIBRATION VERIFICATION

Alta Analytical Perspectives

Initial Calibration Date: 10/05/00 ✓

Instrument ID: MM-1 ✓ GC Column ID: DB-5

VER Data Filename: 010418P2 S#5 Analysis Date: 18-APR-01 Time: 14:41:31

Reviewer: CE

Date: 18 Apr 01

LABELLED COMPOUNDS	M/Z'S FORMING RATIO	ION ABUND. RATIO	QC LIMITS	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.78	0.65-0.89	y	93.4 ✓	70.0 - 130.0
13C-1,2,3,7,8-PeCDD	M+2/M+4	1.56	1.32-1.78	y	88.0 ✓	70.0 - 130.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	100.0 ✓	70.0 - 130.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.03	0.88-1.20	y	86.4 ✓	70.0 - 130.0
13C-OCDD	M+2/M+4	0.92	0.76-1.02	y	77.9 ✓	70.0 - 130.0
13C-2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	y	90.2 ✓	70.0 - 130.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.57	1.32-1.78	y	86.1 ✓	70.0 - 130.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	103.8 ✓	70.0 - 130.0
13C-1,2,3,4,6,7,8-HpCDF	M/M+2	0.45	0.37-0.51	y	92.9 ✓	70.0 - 130.0
13C-OCDF	M+2/M+4	0.87	0.76-1.02	y	80.9 ✓	70.0 - 130.0
37Cl-2,3,7,8-TCDD					102.2 ✓	75.0 - 125.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.58	1.32-1.78	y	103.3 ✓	75.0 - 125.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	94.0 ✓	75.0 - 125.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.53	0.43-0.59	y	99.8 ✓	75.0 - 125.0
13C-1,2,3,4,7,8,9-HpCDF	M/M+2	0.42	0.37-0.51	y	97.3 ✓	75.0 - 125.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	y	98.1 ✓	75.0 - 125.0

Analyst: GAG

Date: 18 Apr 01

Client ID: DB5 CPSM / M23 CS3X  
Lab ID: CS3RCX

Filename: 010418P2  
GC Column ID: db-5

S: 5 Acq: 18-APR-01 14:41:31  
ICal: MM1\_M23\_0 wt/vol: 1.000

ConCal: 010418P2-  
EndCal: 010418P2-

Name	Resp	RA	RRF	RT	Conc	Qualif.	CDE	noise	Fac	DL
2,3,7,8-TCDD	2.13e+06	0.80 y	1.26	28:20	5.29			890	2.5	0.0399
1,2,3,7,8-PeCDD	6.73e+06	1.62 y	1.01	33:39	27.1			1419	2.5	0.141
1,2,3,4,7,8-HxCDD	5.63e+06	1.27 y	1.14	37:32	25.6			2411	2.5	0.258
1,2,3,6,7,8-HxCDD	5.33e+06	1.24 y	1.02	37:40	27.0			2411	2.5	0.287
1,2,3,7,8,9-HxCDD	5.69e+06	1.28 y	1.14	37:59	25.8			2411	2.5	0.257
1,2,3,4,6,7,8-HpCDD	4.86e+06	1.02 y	1.13	42:05	26.6			2673	2.5	0.447
OCDD	6.48e+06	0.89 y	1.03	47:32	53.4			907	2.5	0.252
2,3,7,8-TCDF	2.38e+06	0.77 y	1.05	29:28	5.46			1622	2.5	0.0705
1,2,3,7,8-PeCDF	1.00e+07	1.56 y	1.04	32:13	27.0			3260	2.5	0.212
2,3,4,7,8-PeCDF	1.01e+07	1.53 y	1.05	33:18	26.6			3260	2.5	0.209
1,2,3,4,7,8-HxCDF	7.92e+06	1.26 y	1.13	36:33	25.4			3869	2.5	0.182
1,2,3,6,7,8-HxCDF	9.01e+06	1.23 y	1.24	36:41	26.4			3869	2.5	0.167
2,3,4,6,7,8-HxCDF	8.22e+06	1.24 y	1.16	37:21	25.7			3869	2.5	0.177
1,2,3,7,8,9-HxCDF	6.88e+06	1.26 y	1.02	38:24	24.5			3869	2.5	0.203
1,2,3,4,6,7,8-HpCDF	7.09e+06	1.01 y	1.54	40:24	26.5			3134	2.5	0.214
1,2,3,4,7,8,9-HpCDF	5.61e+06	1.07 y	1.30	42:57	24.9			3134	2.5	0.254
OCDF	8.23e+06	0.89 y	1.15	47:49	52.8			1314	2.5	0.274
Total Tetra-Dioxins	8.45e+06	0.69 y	1.26	21:05	21.0			890	2.5	0.0399
Total Penta-Dioxins	1.82e+07	1.60 y	1.01	31:10	73.4			1419	2.5	0.141
Total Hexa-Dioxins	1.74e+07	1.29 y	1.10	35:49	81.7			2411	2.5	0.266
Total Hepta-Dioxins	9.12e+06	1.06 y	1.13	40:51	49.9			2673	2.5	0.447
Total Tetra-Furans	7.82e+06	0.74 y	1.05	22:39	18.0			1622	2.5	0.0705
1st Fnc. Penta-Furans	8.90e+06	1.56 y	1.05	29:24	23.7			3292	2.5	0.213
Total Penta-Furans	2.79e+07	1.53 y	1.05	31:06	74.3			3260	2.5	0.211
PeCDF Totals:					98.0					98.9
Total Hexa-Furans	3.31e+07	1.25 y	1.14	35:10	106			3869	2.5	0.181
Total Hepta-Furans	1.28e+07	1.01 y	1.42	40:24	51.6			3134	2.5	0.232
IS 13C-2,3,7,8-TCDD	3.19e+07	0.78 y	1.13	28:18	93.4					93.4
IS 13C-1,2,3,7,8-PeCDD	2.45e+07	1.56 y	0.93	33:38	88.0					88.0
IS 13C-1,2,3,6,7,8-HxCDD	1.93e+07	1.25 y	0.93	37:38	100.0					100.0
IS 13C-1,2,3,4,6,7,8-HpCDD	1.62e+07	1.03 y	0.91	42:04	86.4					86.4
IS 13C-OCDD	1.18e+07	0.92 y	0.73	47:31	77.9					77.9
IS 13C-2,3,7,8-TCDF	4.16e+07	0.78 y	1.06	27:27	90.2					90.2
IS 13C-1,2,3,7,8-PeCDF	3.59e+07	1.57 y	0.96	32:11	86.1					86.1
IS 13C-1,2,3,6,7,8-HxCDF	2.75e+07	0.53 y	1.28	36:40	104					104
IS 13C-1,2,3,4,6,7,8-HpCDF	1.74e+07	0.45 y	0.90	40:23	92.9					92.9
IS 13C-OCDF	1.36e+07	0.87 y	0.81	47:48	80.9					80.9
RS/RT 13C-1,2,3,4-TCDD	3.01e+07	0.79 y	1.00	27:40	100					-
RS 13C-1,2,3,4-TCDF	4.35e+07	0.79 y	1.00	26:07	100					-
RS/RT 13C-1,2,3,7,8,9-HxCDD	2.07e+07	1.27 y	1.00	37:58	100					-
PS 37Cl-2,3,7,8-TCDD	1.68e+07		0.51	28:20	102					102
PS 13C-2,3,4,7,8-PeCDF	3.61e+07	1.58 y	0.97	33:17	103					103
PS 13C-1,2,3,4,7,8-HxCDD	1.67e+07	1.27 y	0.92	37:31	94.0					94.0
PS 13C-1,2,3,4,7,8-HxCDF	2.50e+07	0.53 y	0.91	36:32	99.8					99.8
PS 13C-1,2,3,4,7,8,9-HpCDF	1.44e+07	0.42 y	0.85	42:56	97.3					97.3
AS 13C-1,2,3,7,8,9-HxCDF	2.17e+07	0.52 y	1.07	38:23	98.1					98.1

Reviewer: ce

Date: 18 Apr 01

EMPC  
21.2  
74.0  
82.8  
51.0  
18.3  
23.8  
98.9  
106  
52.9

Rec  
93.4  
88.0  
100.0  
86.4  
77.9  
90.2  
86.1  
104  
92.9  
80.9

Analyst: OAG

Date: 18 Apr 01



FORM 5  
PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Alta Analytical Perspectives Episode No.:

Contract No.:

SAS No.:

Reviewer: CE

Instrument ID: MM-1 ✓

Initial Calibration Date: 10/05/00 ✓

Date: 18 Apr 01

RT Window Data Filename: 010418P2 S#5 Analysis Date: 18-APR-01 Time: 14:41:31

DB-5 IS Data Filename: 010418P2 S#5 Analysis Date: 18-APR-01 Time: 14:41:31

DB\_225 IS Data Filename: Analysis Date: Time:

DB-5 RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	24:44 ✓	1,3,6,8-TCDF (F)	22:39 ✓
1,2,8,9-TCDD (L)	29:18 ✓	1,2,8,9-TCDF (L)	29:28 ✓
1,2,4,7,9-PeCDD (F)	31:10 ✓	1,3,4,6,8-PeCDF (F)	29:24 ✓
1,2,3,8,9-PeCDD (L)	34:06 ✓	1,2,3,8,9-PeCDF (L)	34:23 ✓
1,2,4,6,7,9-HxCDD (F)	35:49 ✓	1,2,3,4,6,8-HxCDF (F)	35:10 ✓
1,2,3,7,8,9-HxCDD (L)	37:59 ✓	1,2,3,7,8,9-HxCDF (L)	38:24 ✓
1,2,3,4,6,7,9-HpCDD (F)	40:51 ✓	1,2,3,4,6,7,8-HpCDF (F)	40:24 ✓
1,2,3,4,6,7,8-HpCDD (L)	42:05 ✓	1,2,3,4,7,8,9-HpCDF (L)	42:57 ✓

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

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

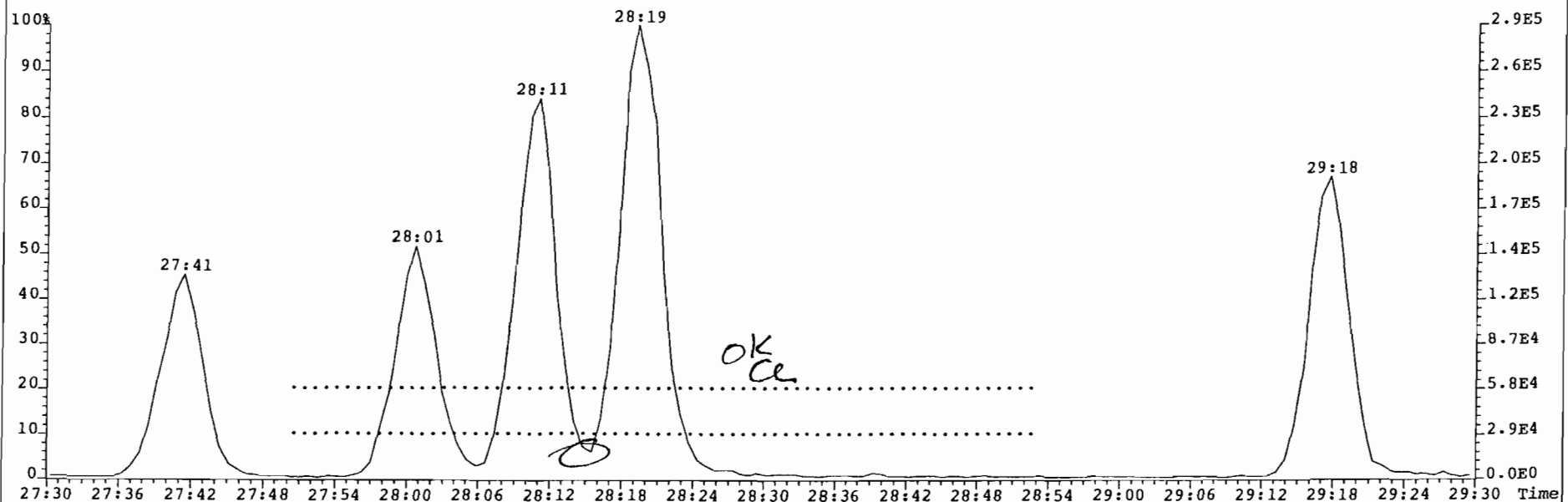
8 VALLEY HEIGHT  
BETWEEN  
COMPARED PEAKS (1)

<25%

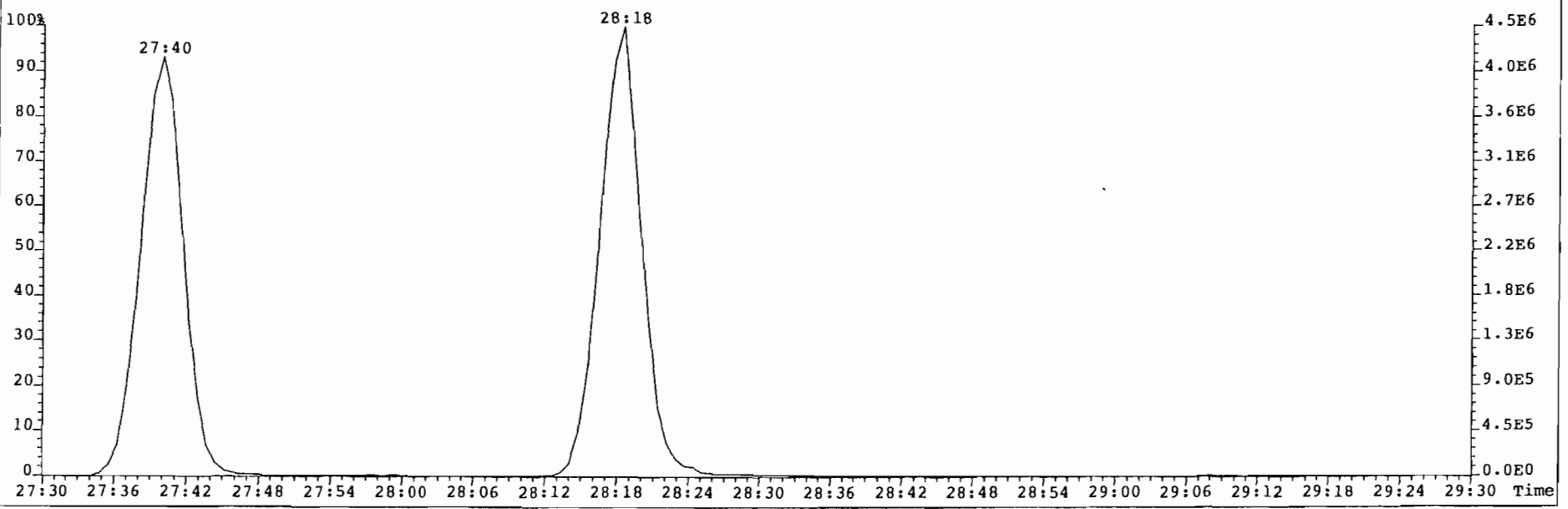
Analyst: GAG

Date: 18 Apr 01

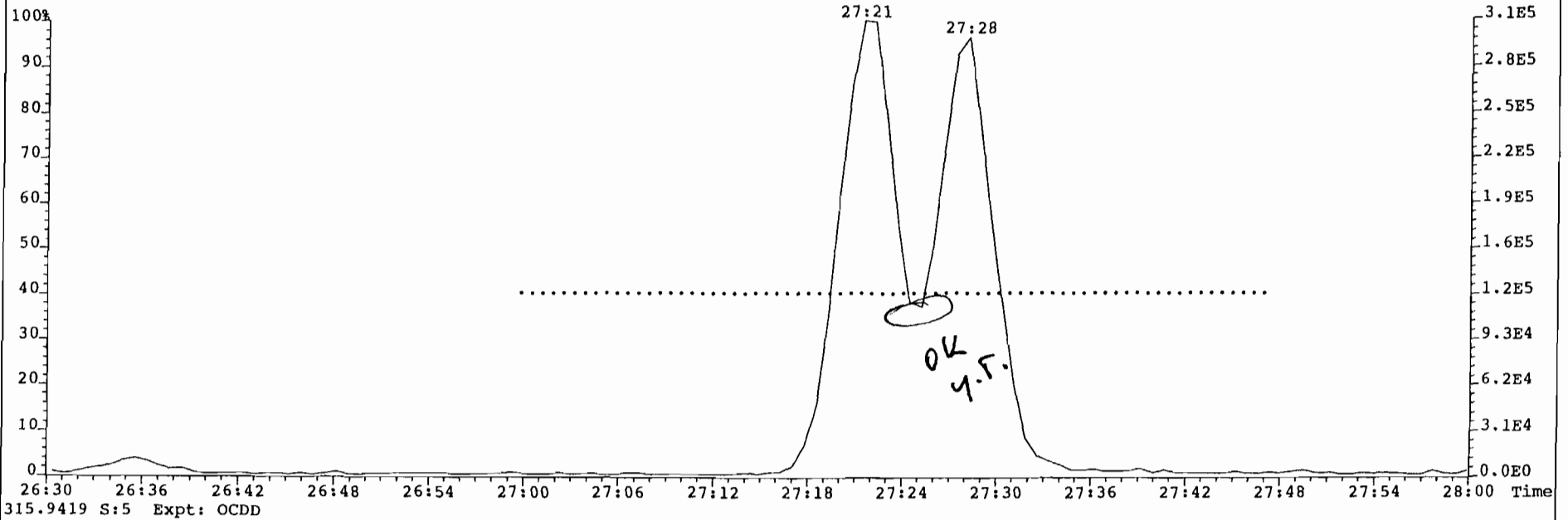
File: 010418P2 Acq: 18-APR-2001 14:41:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5  
321.8936 S:5 Expt: OCDD



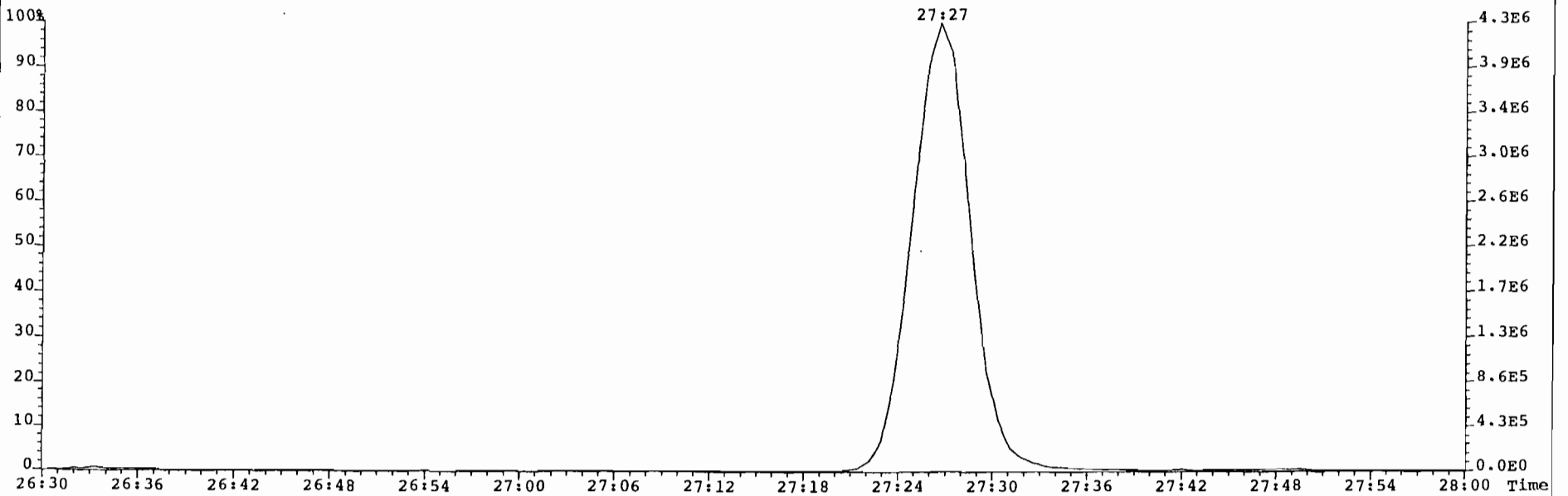
333.9339 S:5 Expt: OCDD



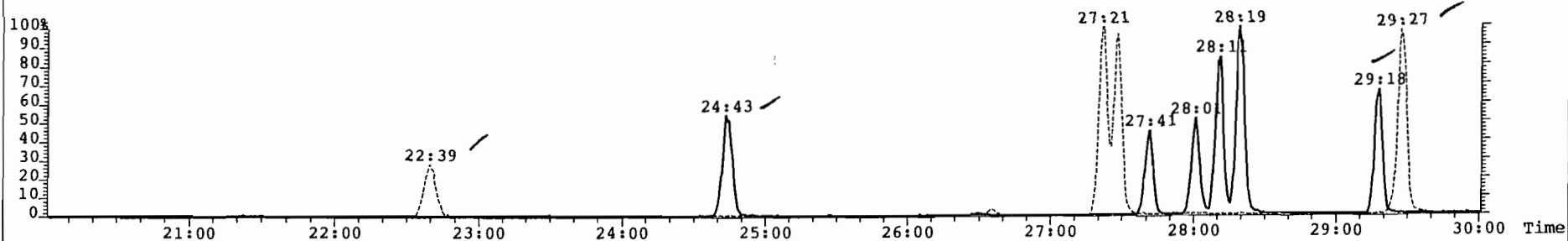
File: 010418P2 Acq: 18-APR-2001 14:41:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5  
305.8987 S:5 Expt: OCDD



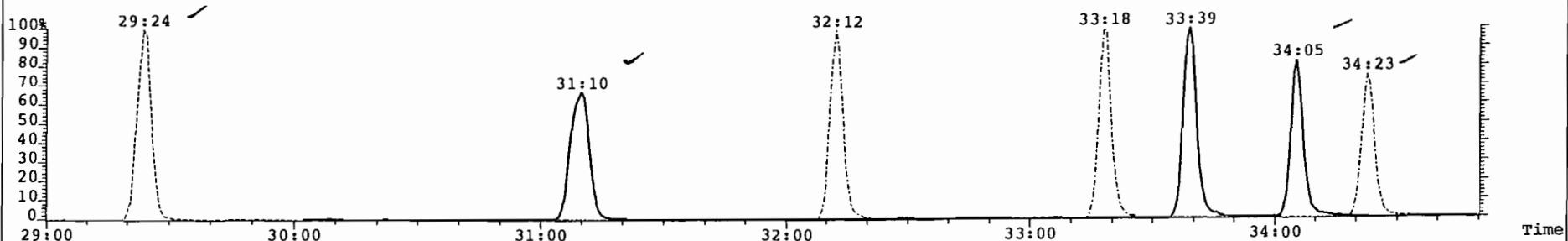
315.9419 S:5 Expt: OCDD



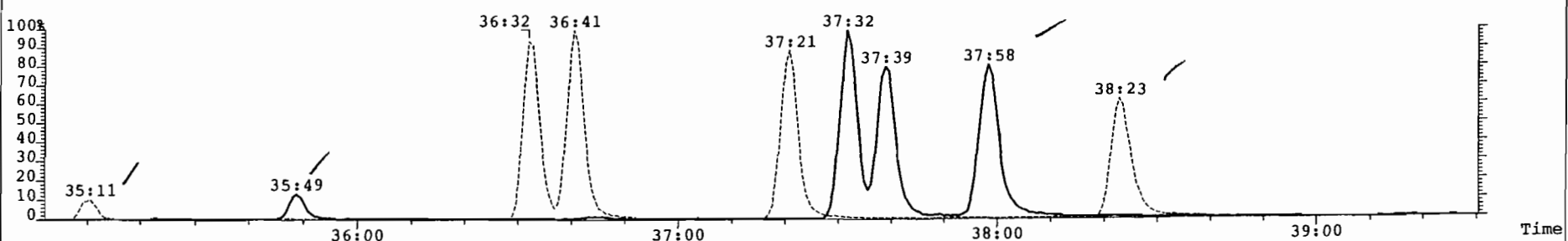
File: 010418P2 Acq: 18-APR-2001 14:41:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5  
S:5 305.8987,321.8936 Expt: OCDD



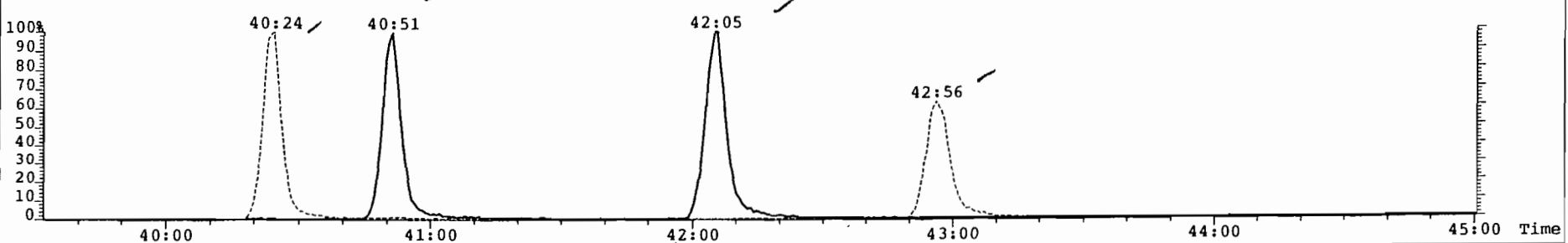
S:5 339.8597,355.8546 F:2,339.8597 F:2 Expt: OCDD



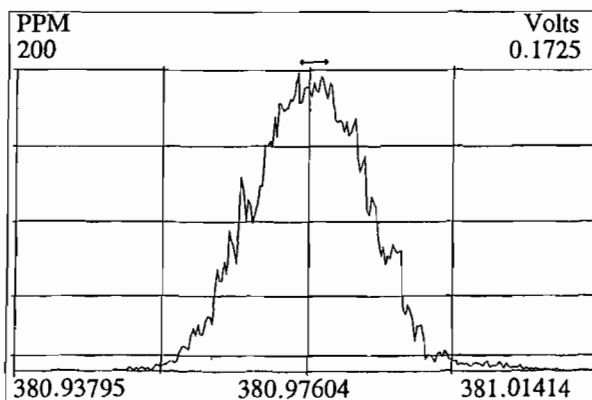
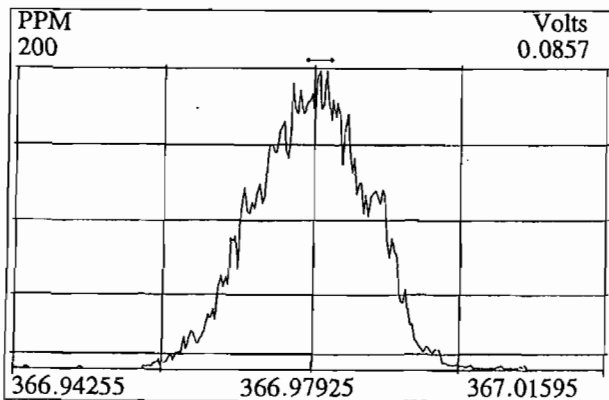
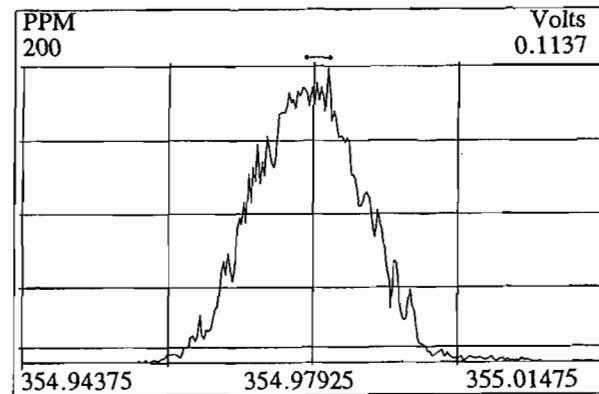
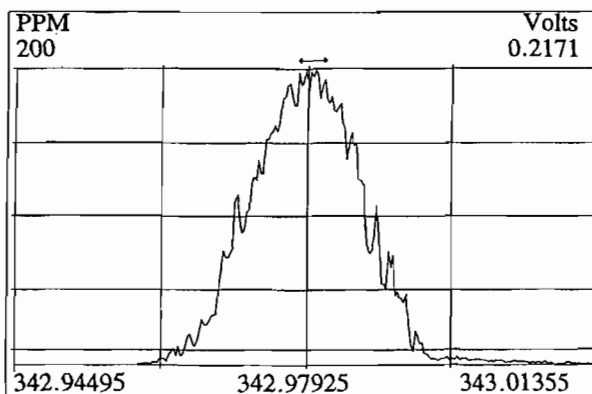
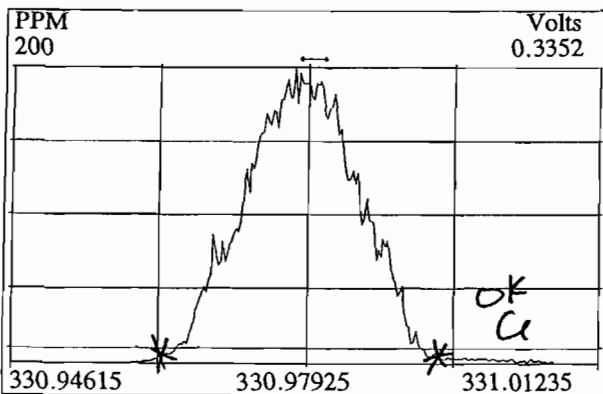
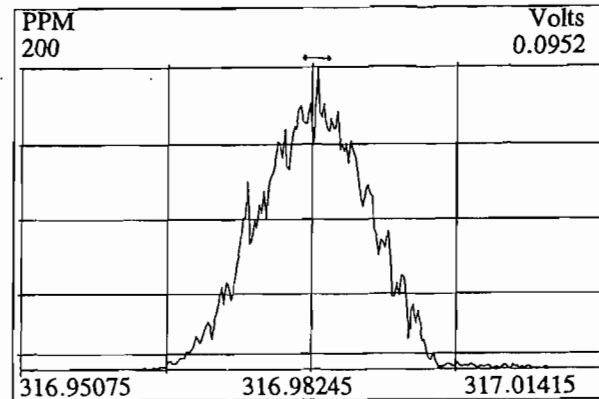
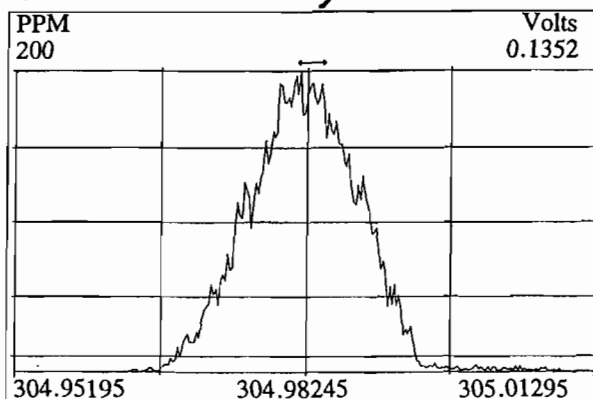
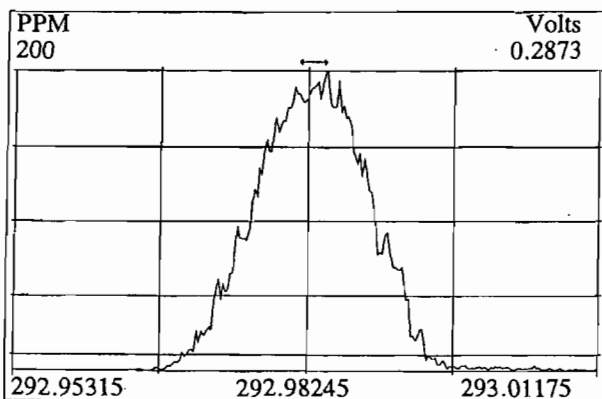
S:5 F:3 373.8207,389.8156 Expt: OCDD



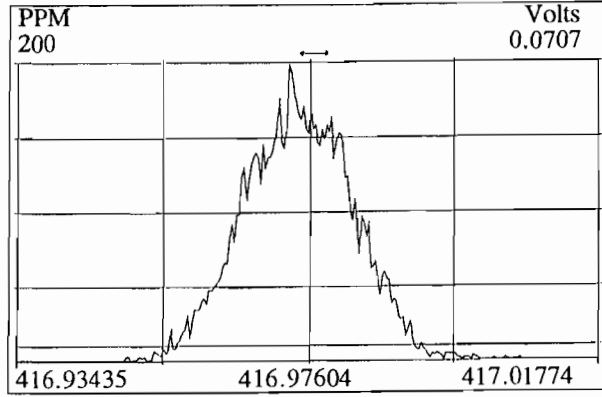
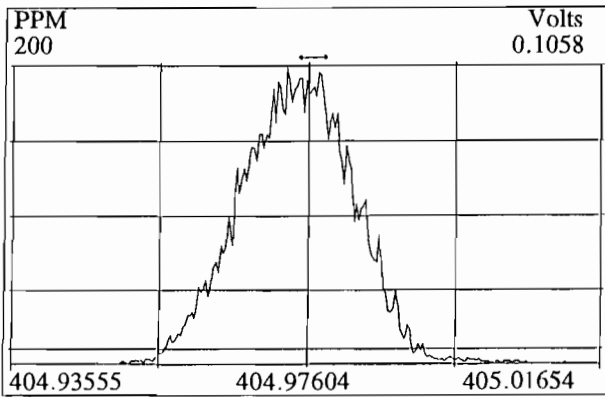
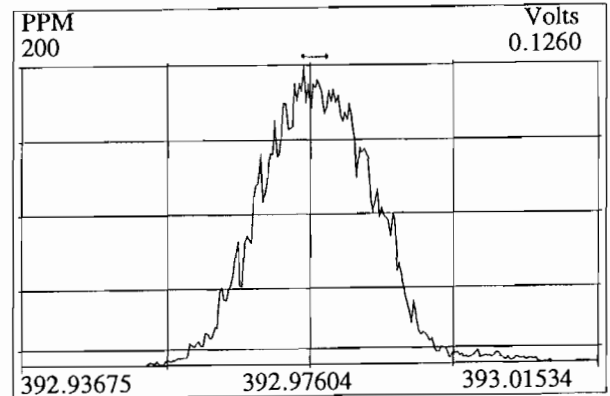
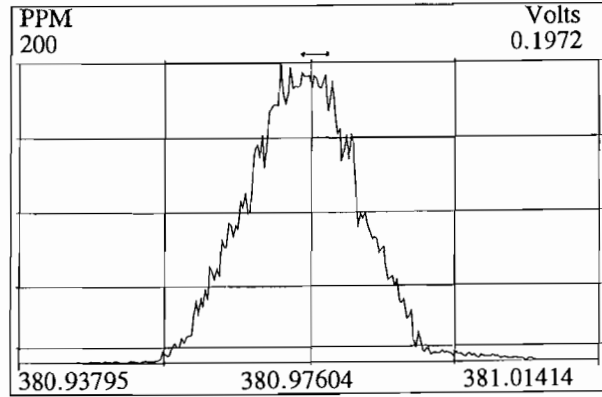
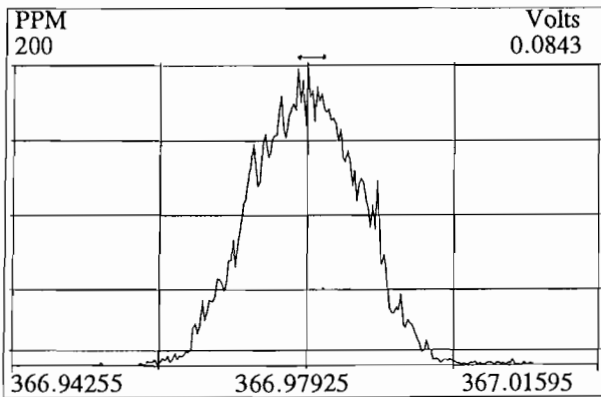
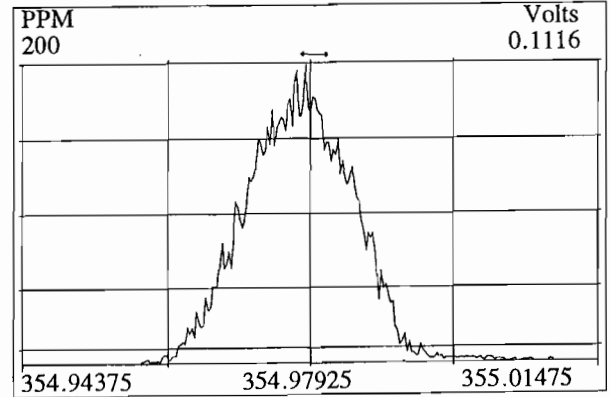
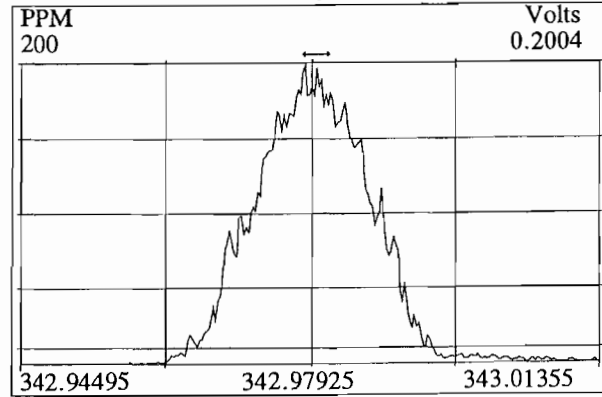
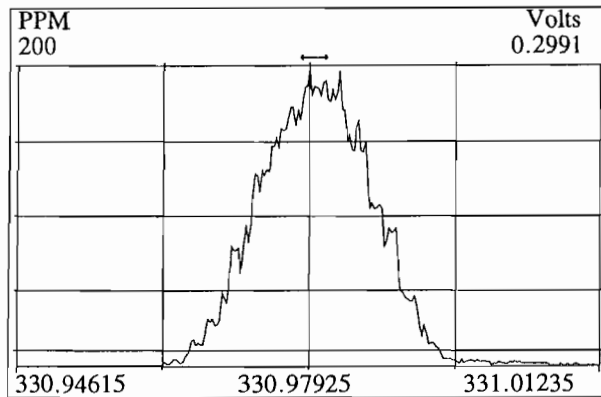
S:5 F:4 407.7818,423.7767 Expt: OCDD



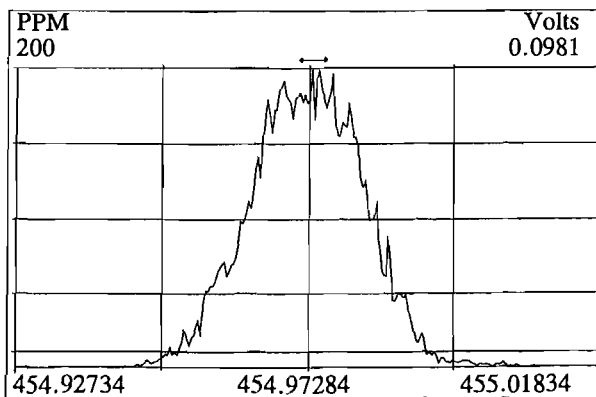
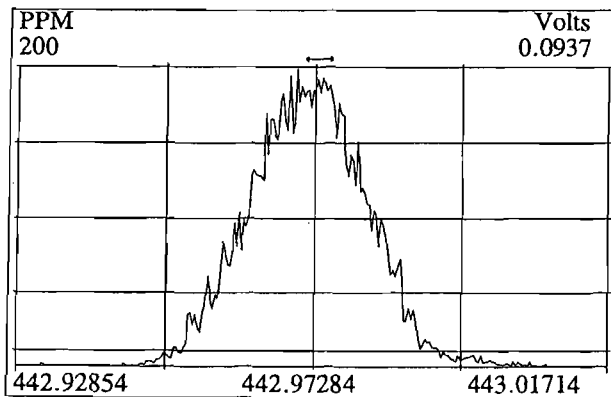
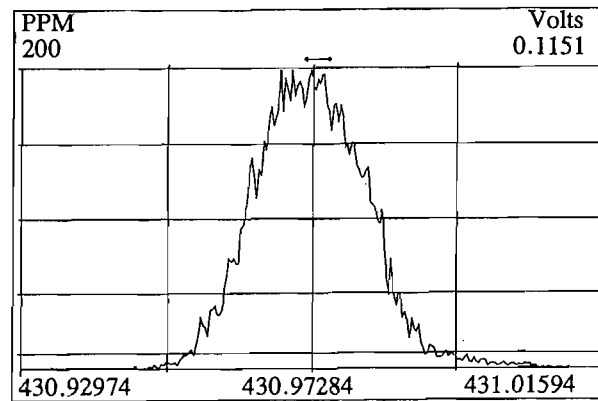
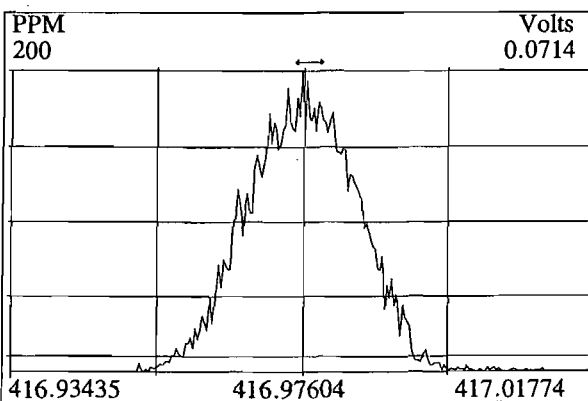
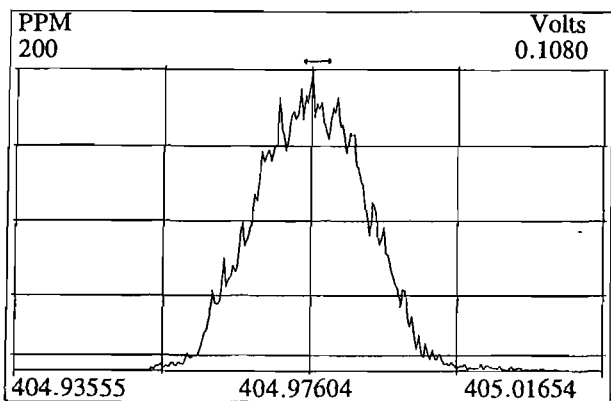
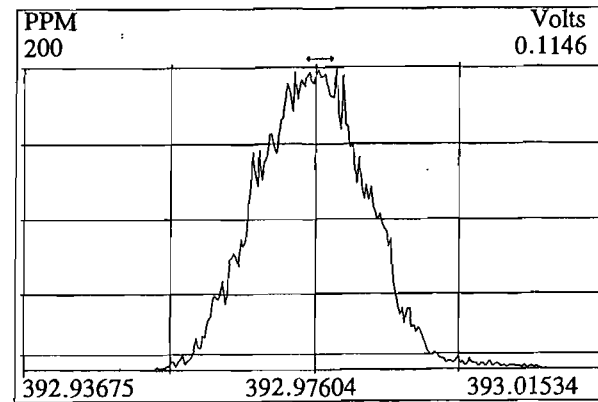
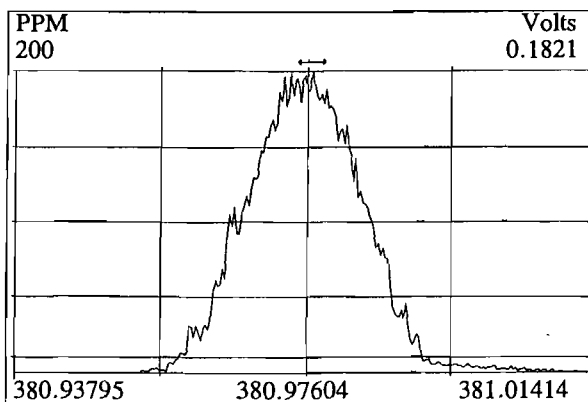
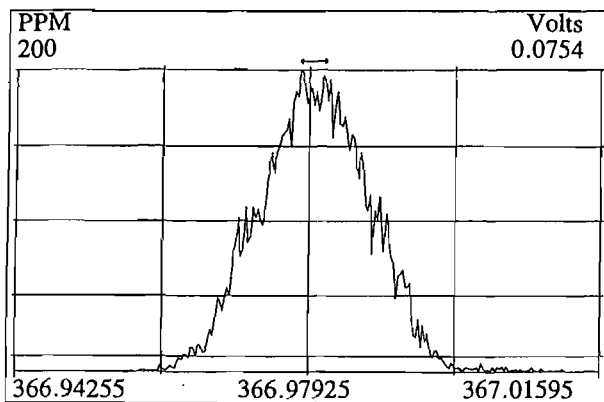
Peak Locate Examination: 18-APR-2001: 15:42 File: RES CHECK  
Experiment: OCDD Function: 1 Reference: PFK2



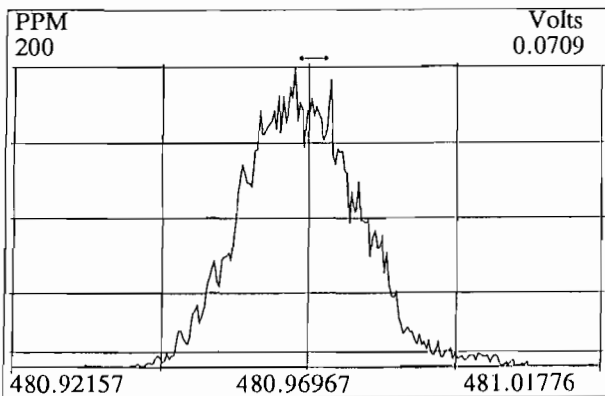
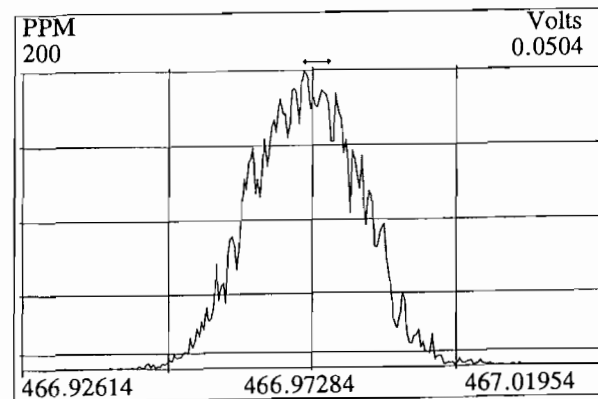
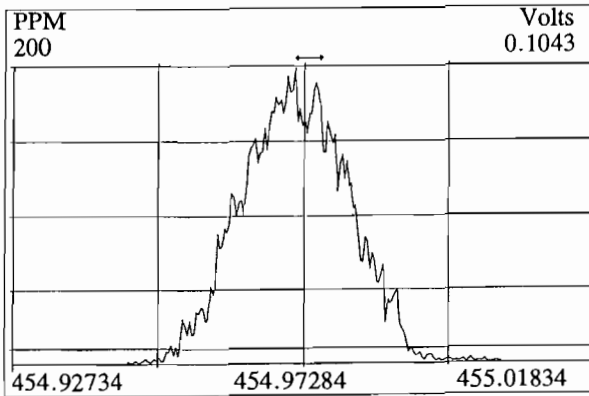
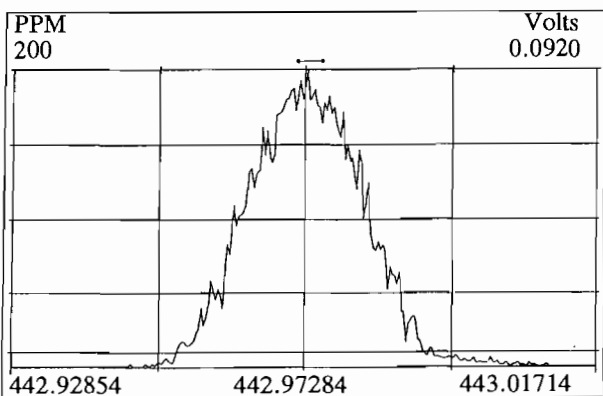
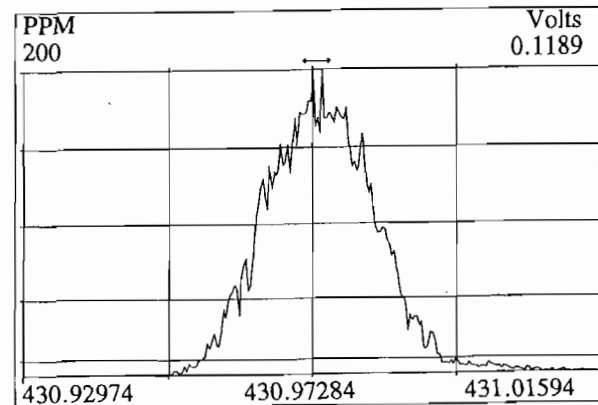
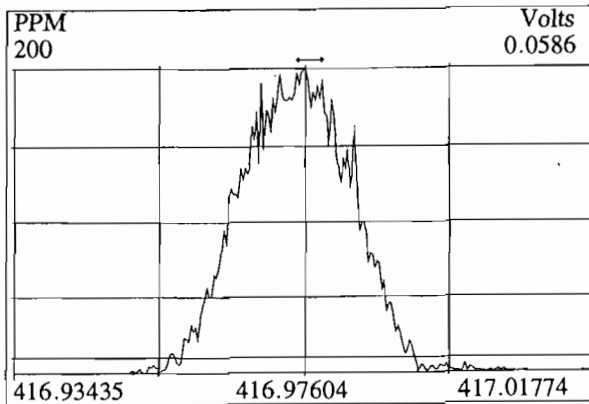
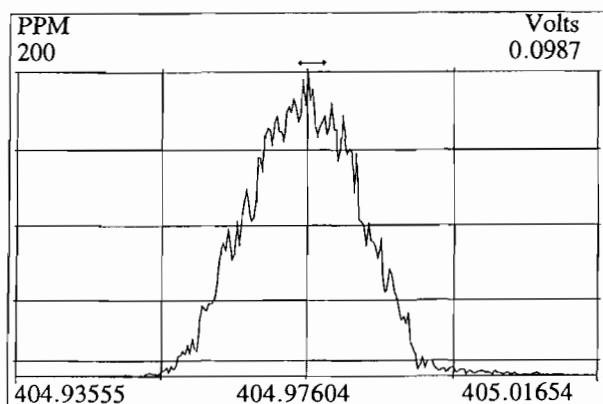
Peak Locate Examination:18-APR-2001:15:43 File:RES CHECK  
Experiment:OCDD Function:2 Reference:PFK2



Peak Locate Examination: 18-APR-2001: 15:44 File: RES CHECK  
Experiment: OCDD Function: 3 Reference: PFK2

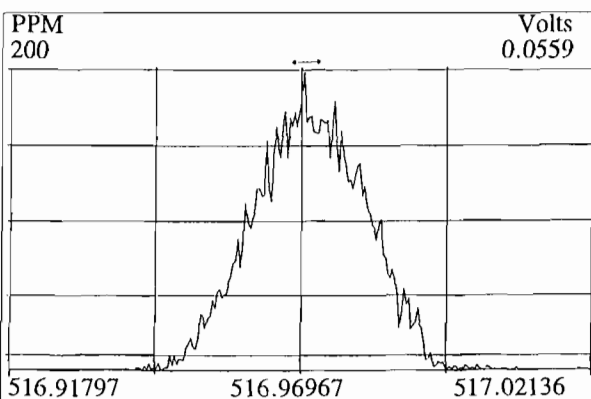
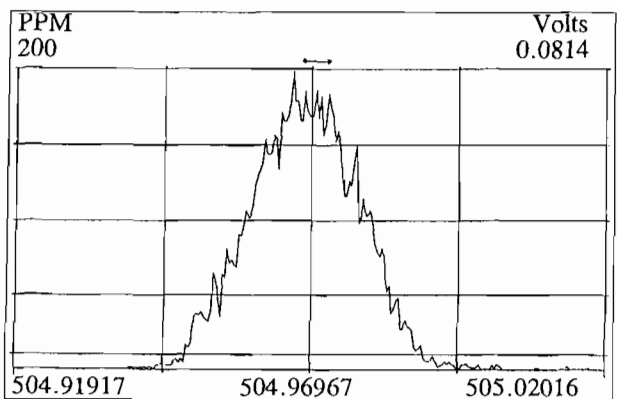
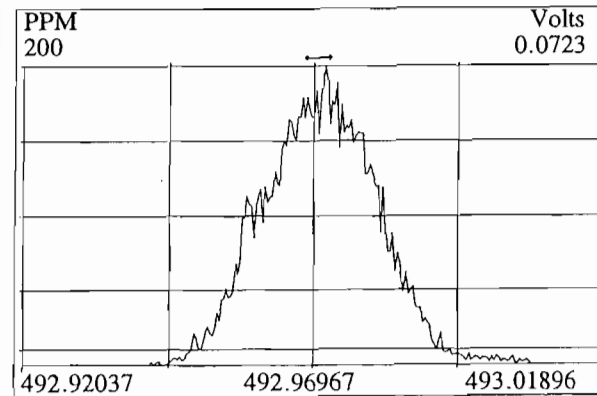
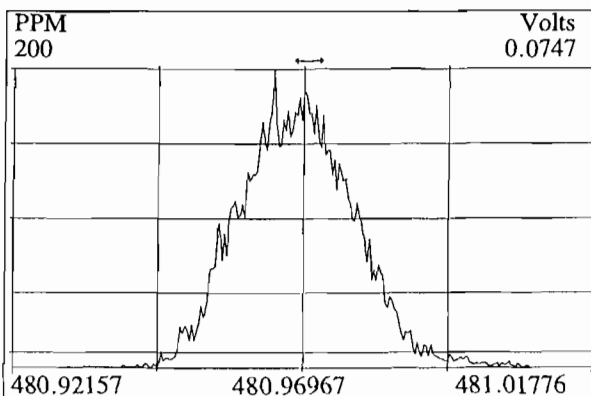
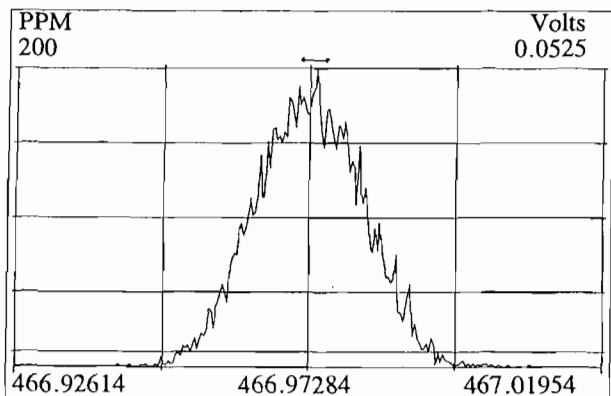
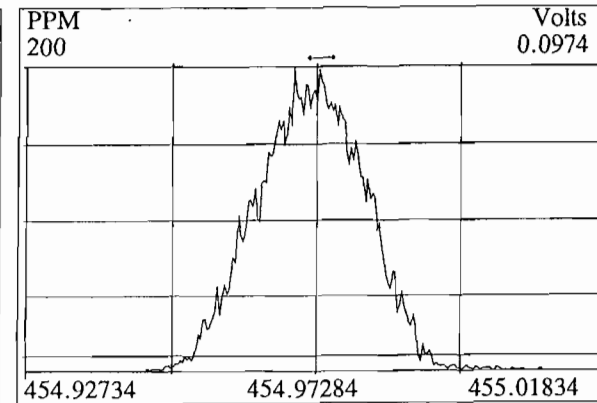
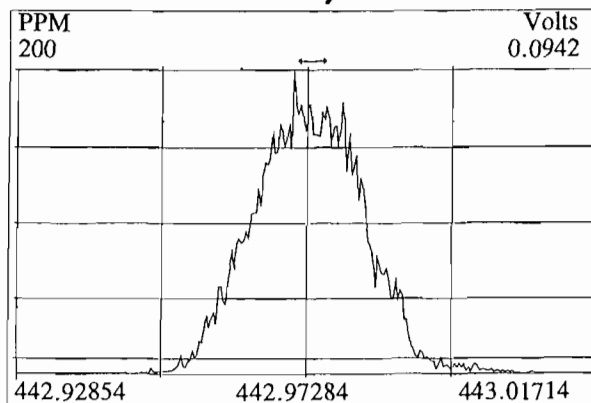
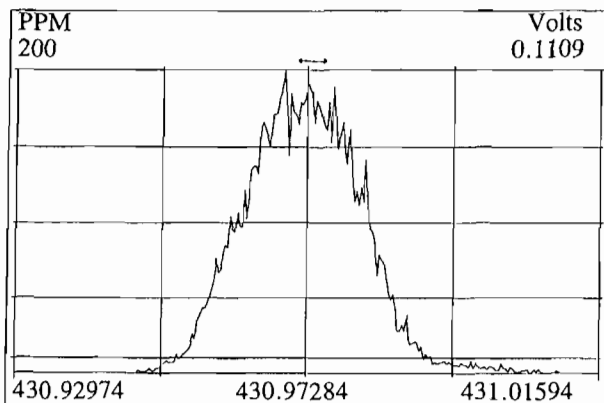


Peak Locate Examination:18-APR-2001:15:45 File:RES CHECK  
Experiment:OCDD Function:4 Reference:PFK2

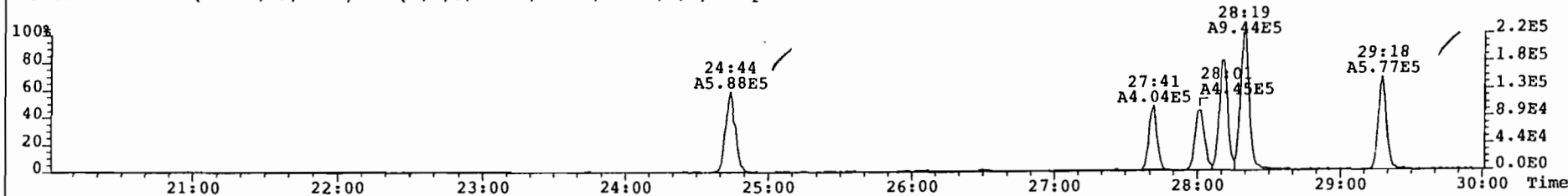




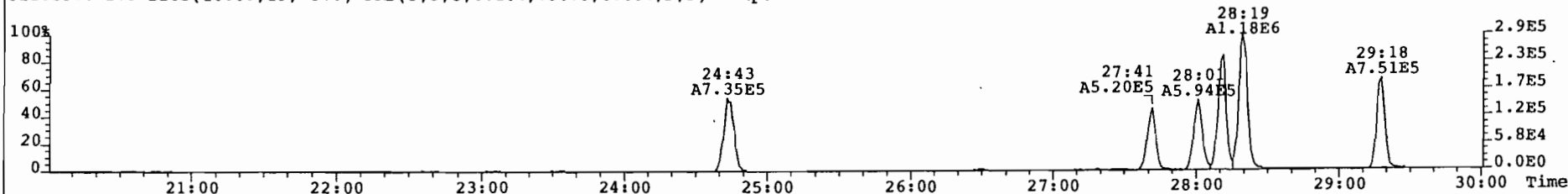
Peak Locate Examination: 18-APR-2001: 15:46 File: RES\_CHECK  
Experiment: OCDD Function: 5 Reference: PFK2



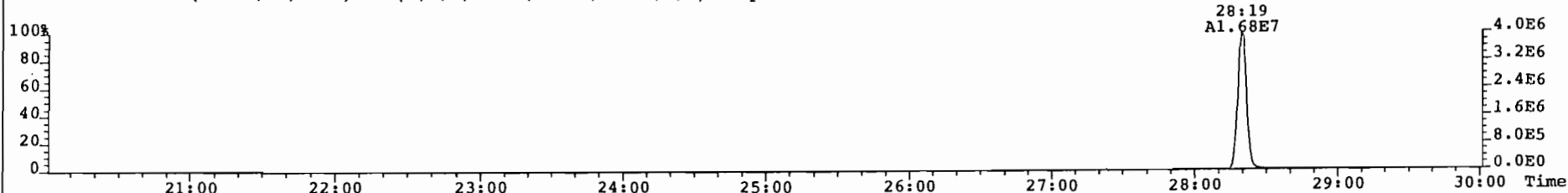
File: 010418P2 Acq: 18-APR-2001 14:41:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5  
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 208



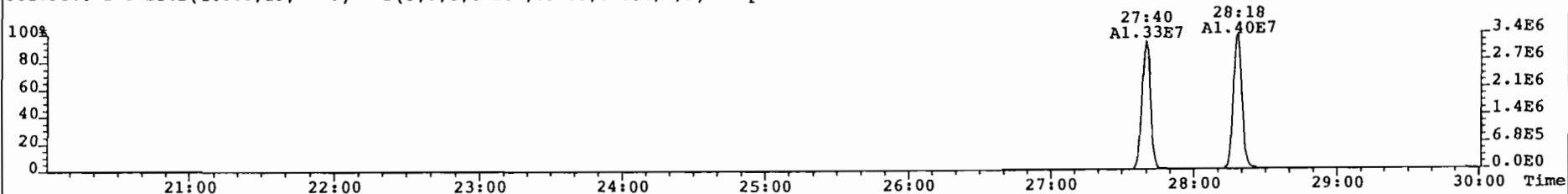
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 182



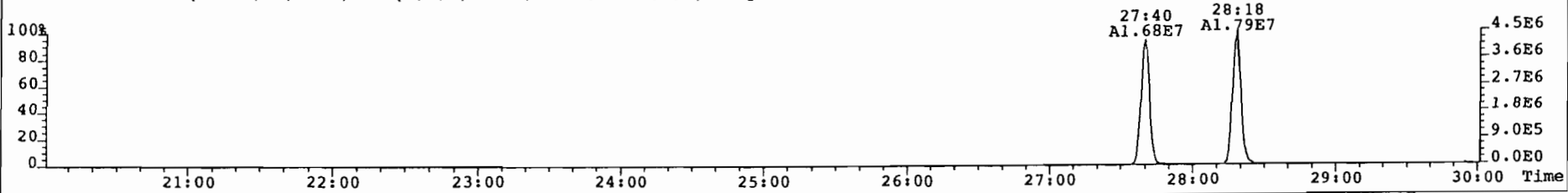
327.8850 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 304



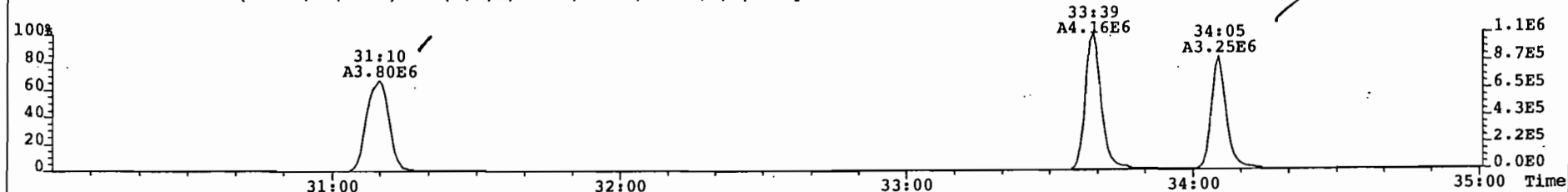
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 945



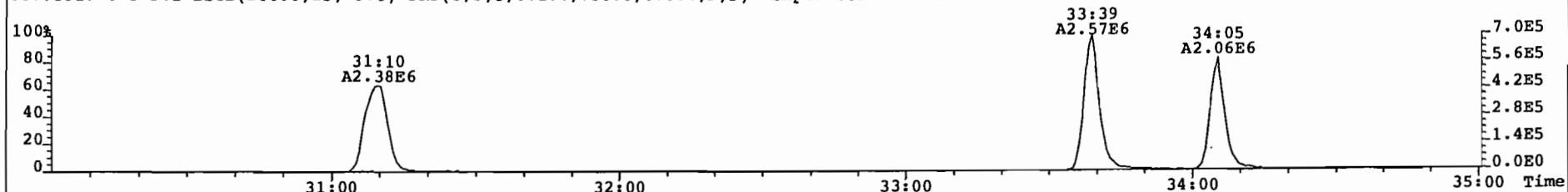
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 510



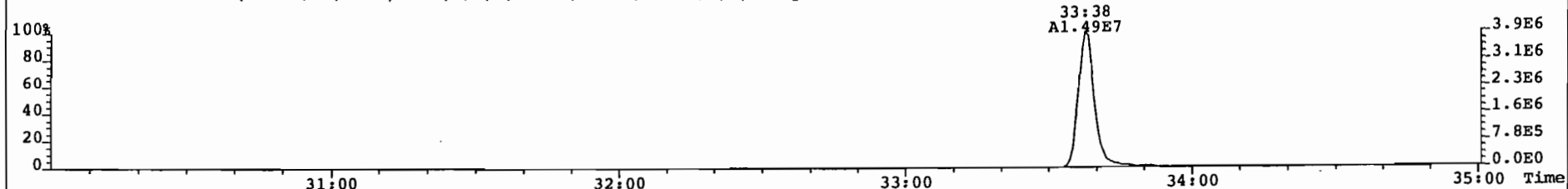
File: 010418P2 Acq: 18-APR-2001 14:41:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5  
355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 266



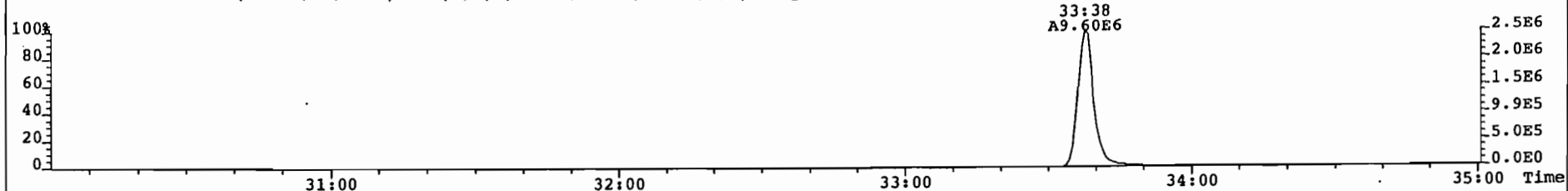
357.8517 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 149



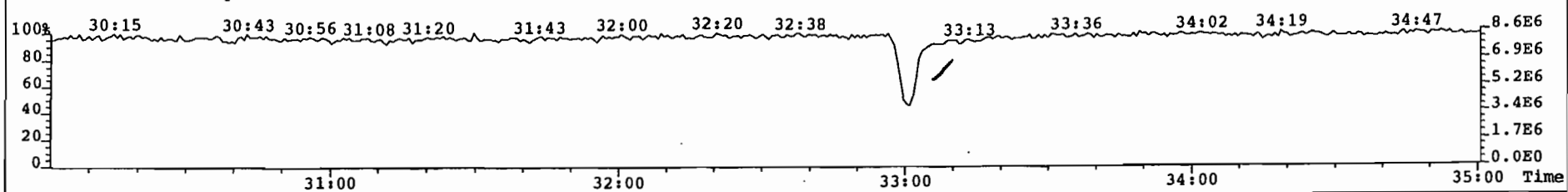
367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 565



369.8919 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 252



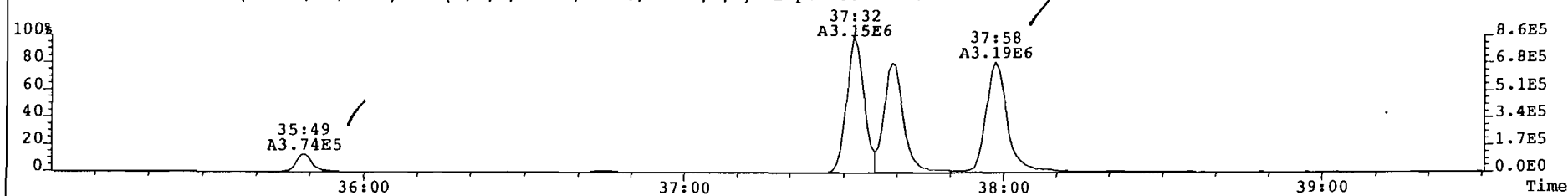
366.9792 S:5 F:2 Expt: OCDD



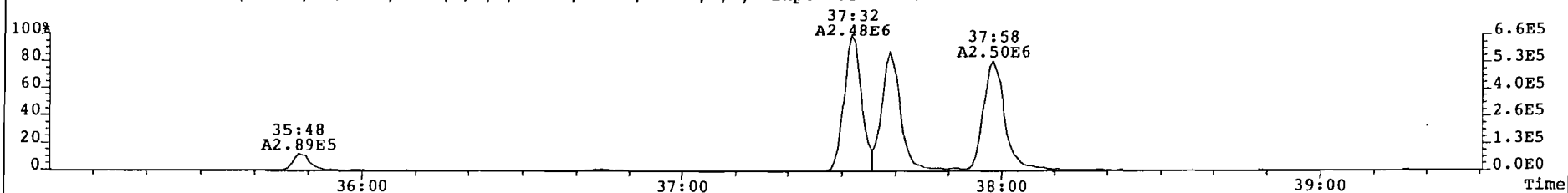
File: 010418P2 Acq: 18-APR-2001 14:41:31 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 5 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5

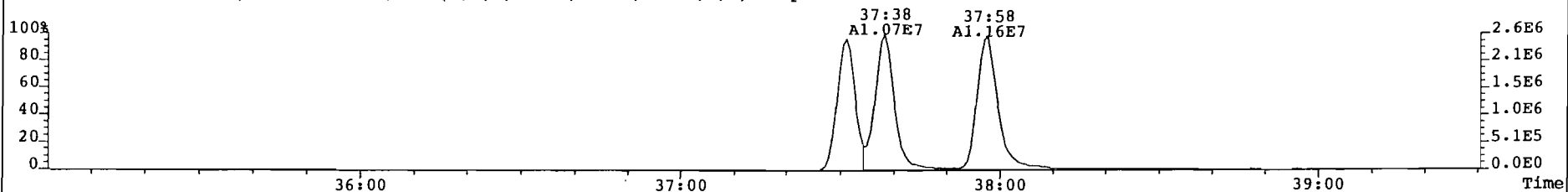
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 337



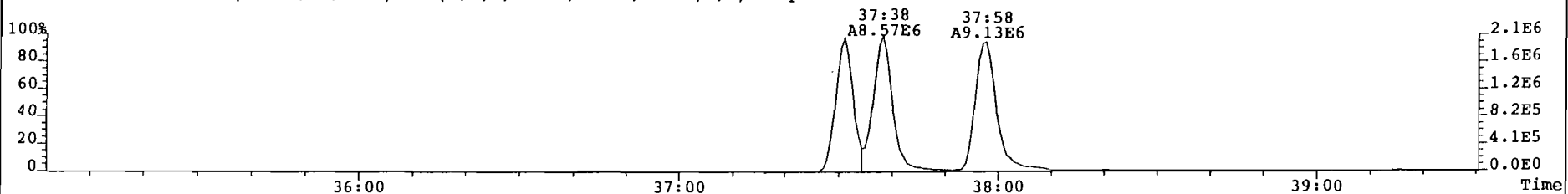
391.8127 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 292



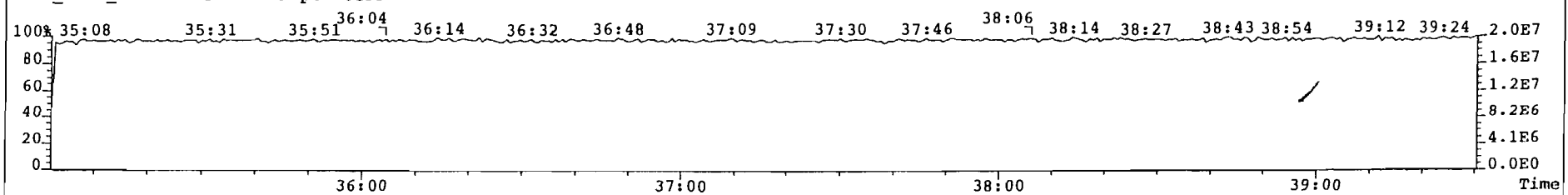
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 330



403.8530 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 240



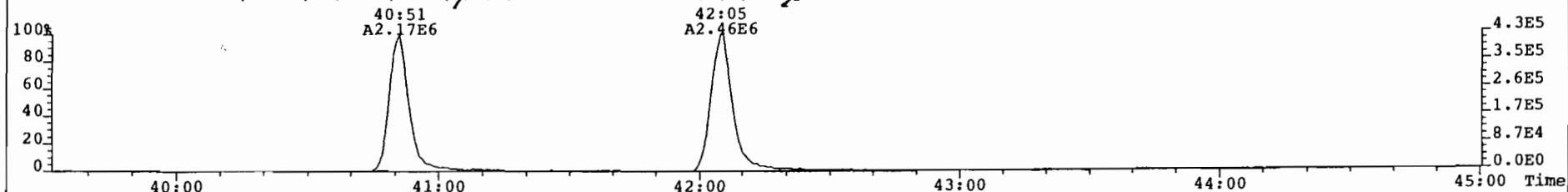
LOCK\_MASS\_CHECK S:5 F:3 Expt: OCDD



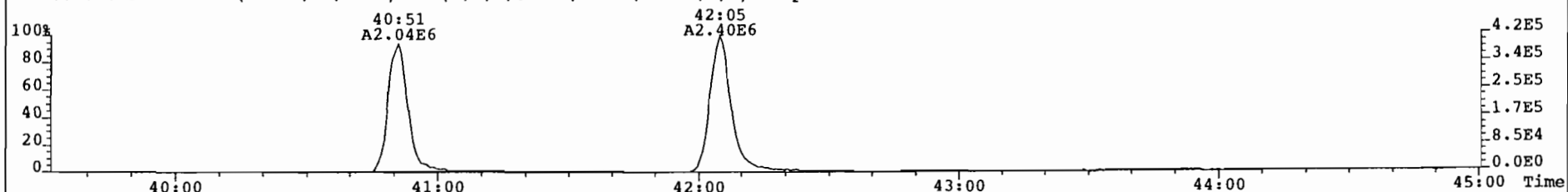
File: 010418P2 Acq: 18-APR-2001 14:41:31 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 5 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5

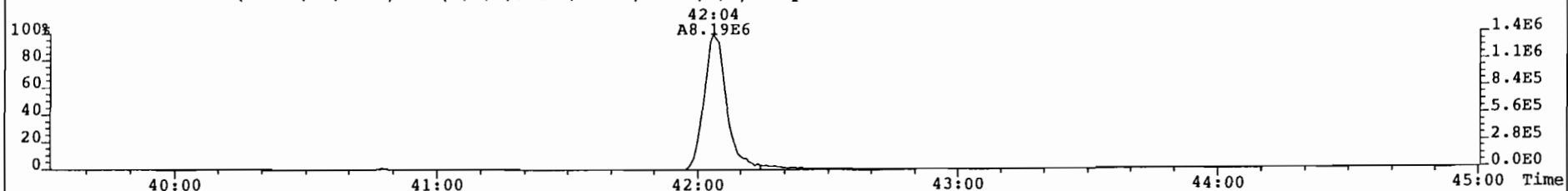
423.7767 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 355



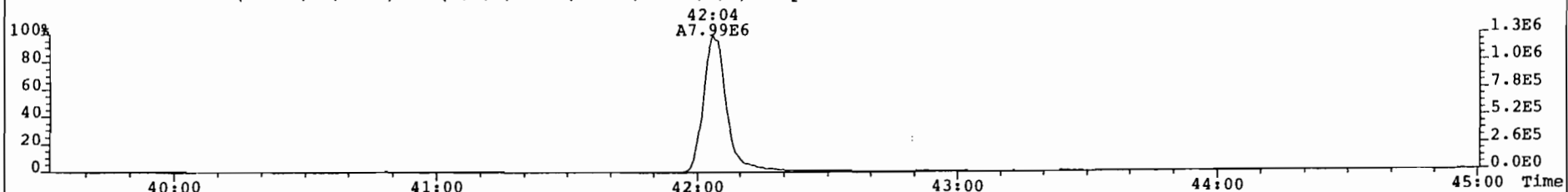
425.7737 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 288



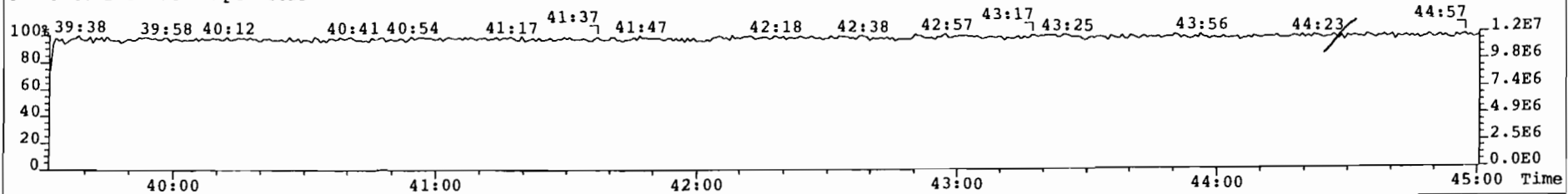
435.8169 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 623



437.8140 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 362



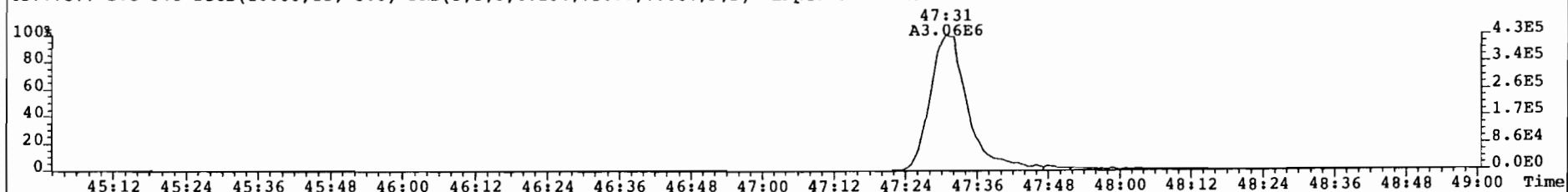
430.9728 S:5 F:4 Expt: OCDD



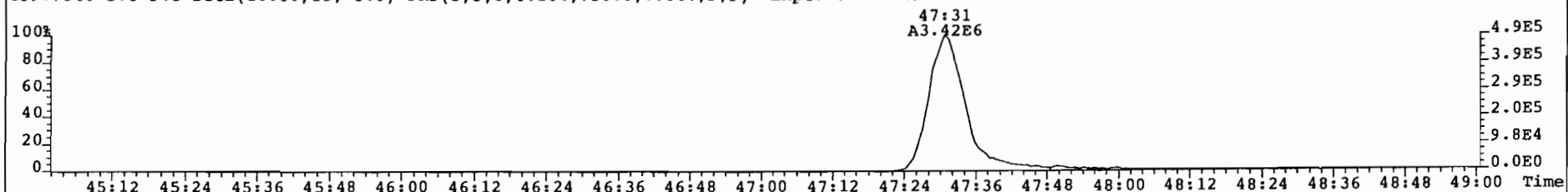
File: 010418P2 Acq: 18-APR-2001 14:41:31 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 5 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5

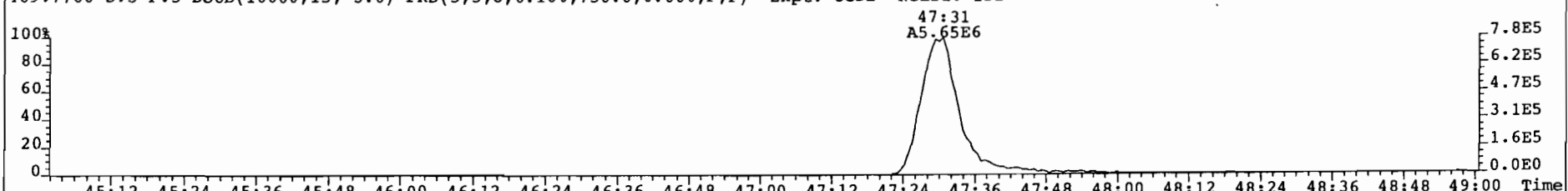
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 155



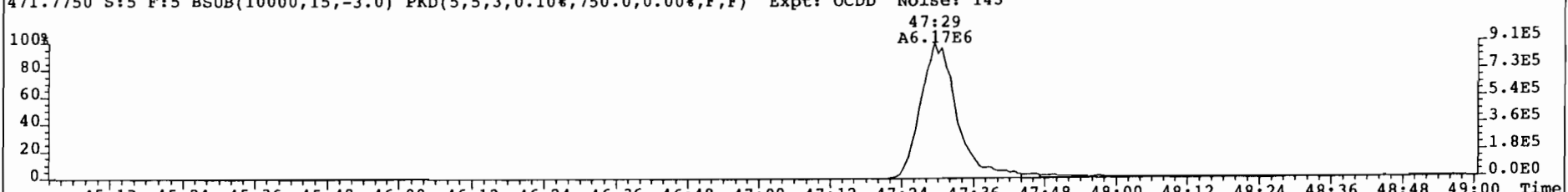
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 137



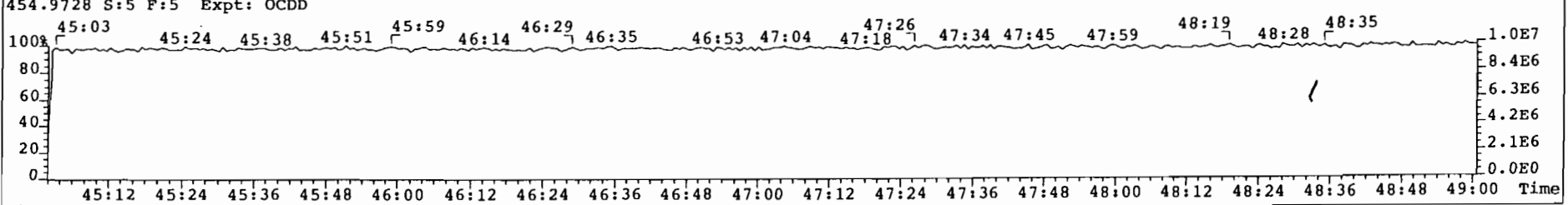
469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 152



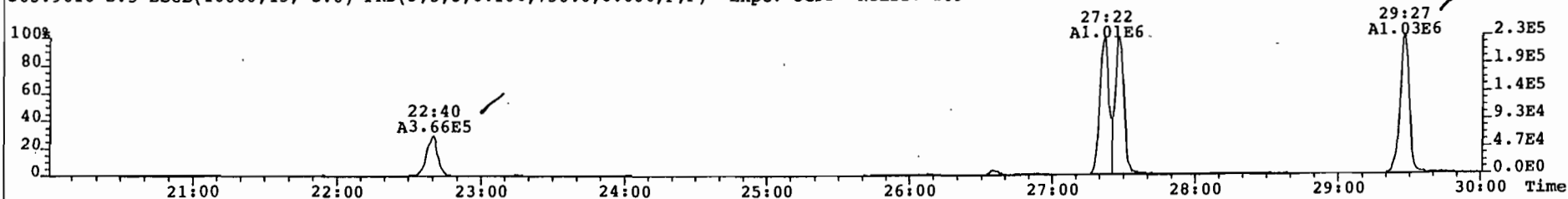
471.7750 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 143



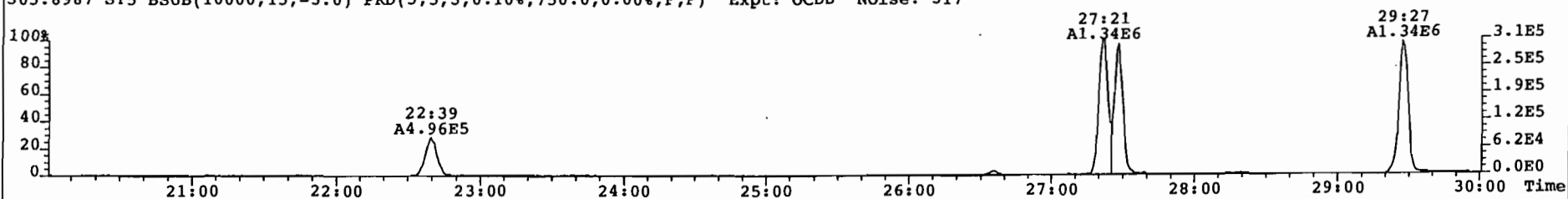
454.9728 S:5 F:5 Expt: OCDD



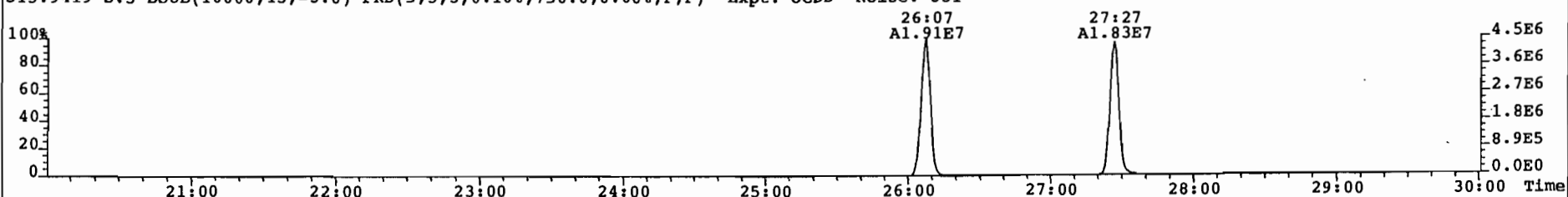
File: 010418P2 Acq: 18-APR-2001 14:41:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5  
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 189



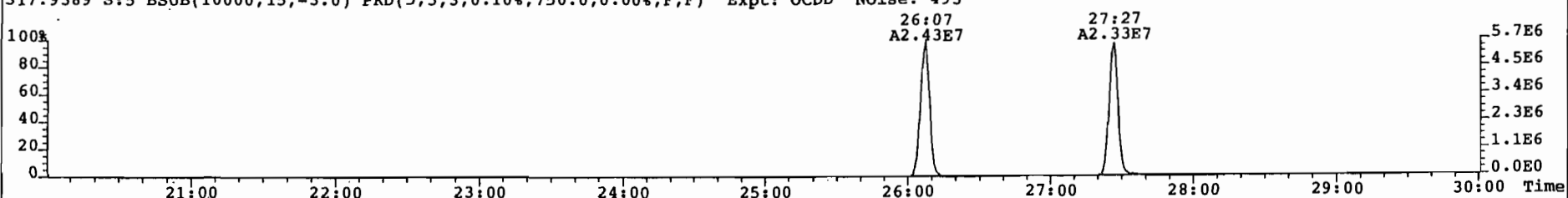
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 317



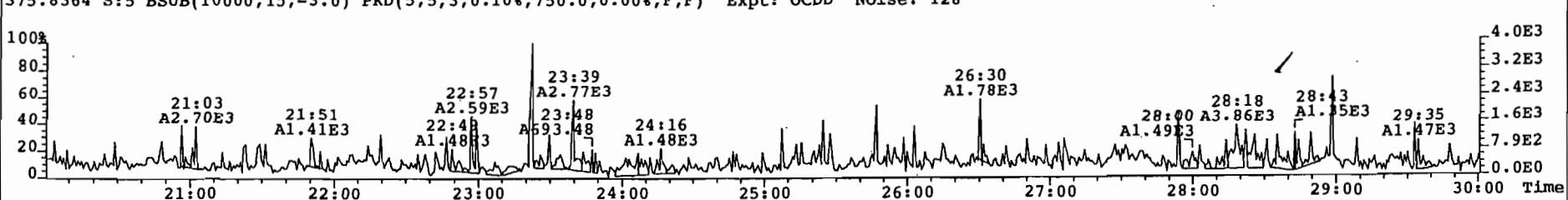
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 331



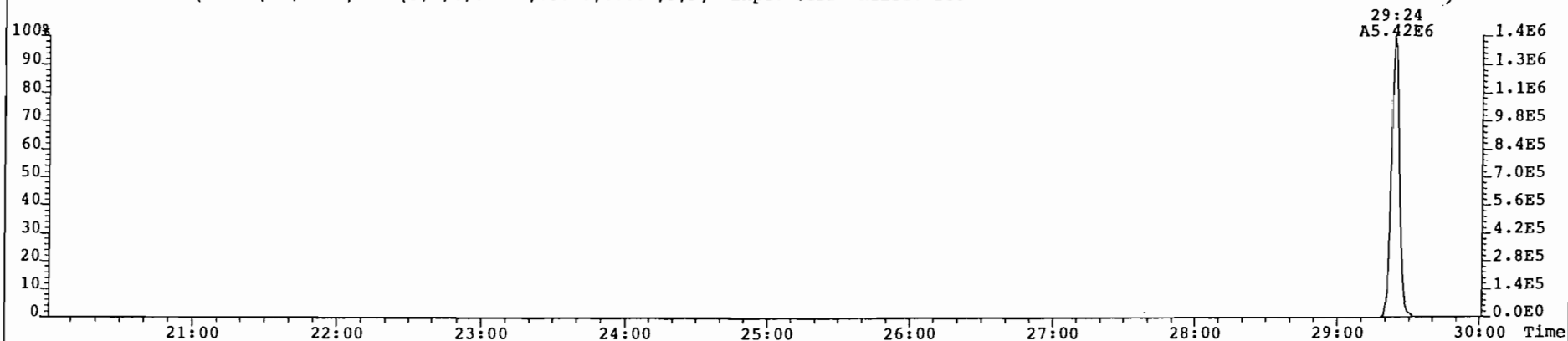
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 493



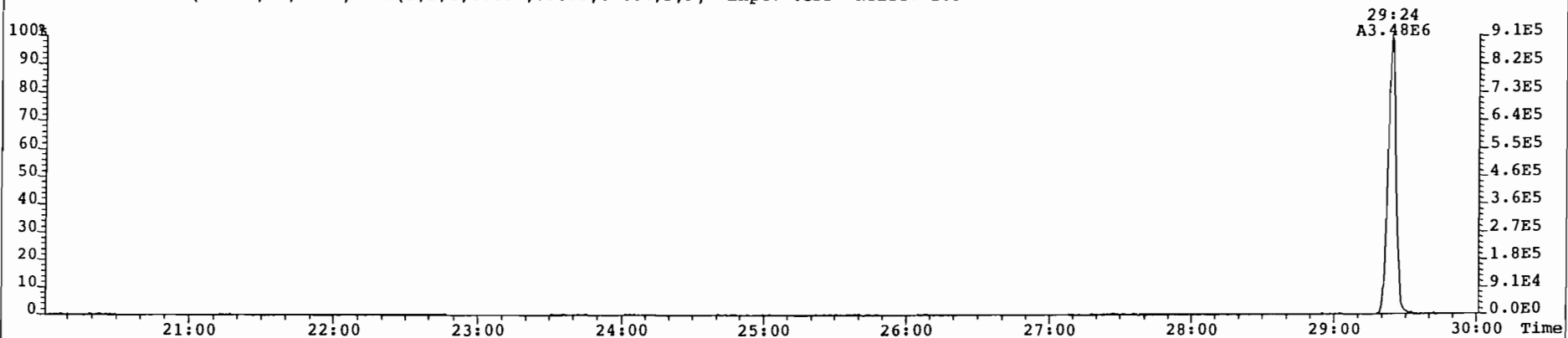
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 128



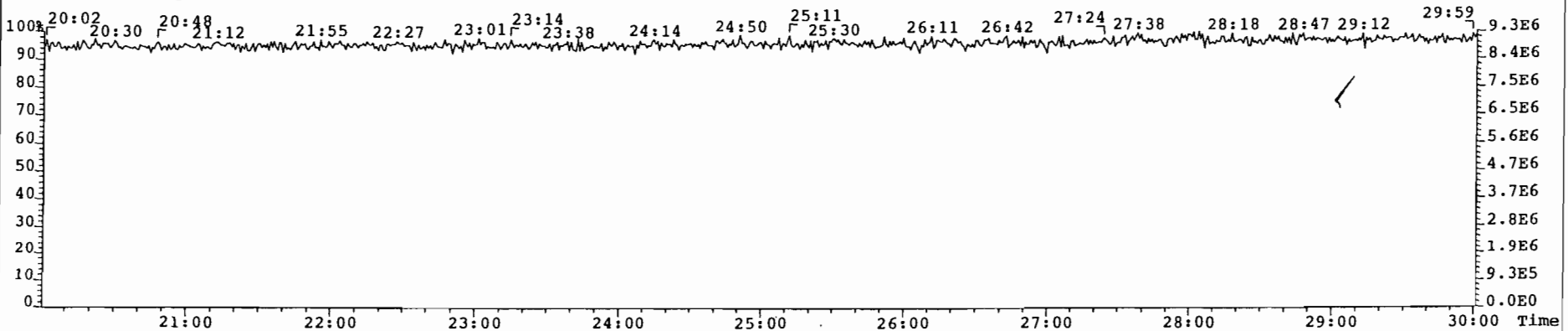
File: 010418P2 Acq: 18-APR-2001 14:41:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5  
339.8597 S:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 130



341.8568 S:5 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 205



316.9824 S:5 Expt: OCDD

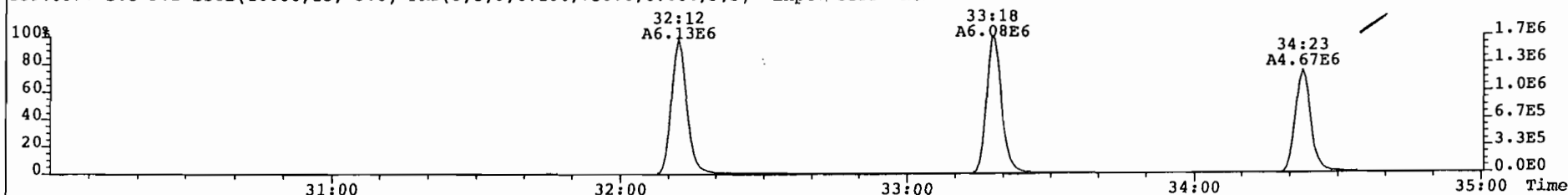




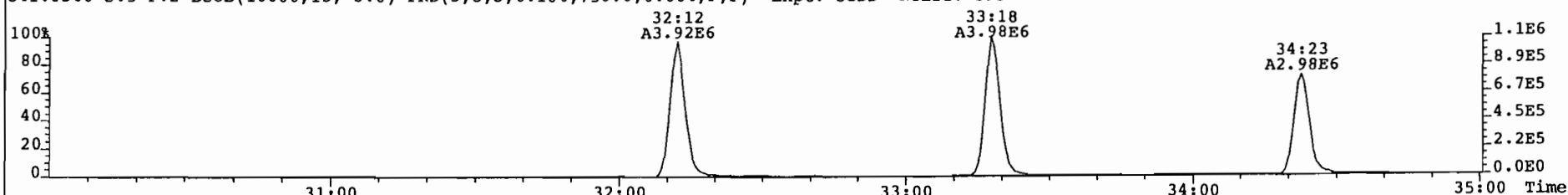
File: 010418P2 Acq: 18-APR-2001 14:41:31 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 5 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5

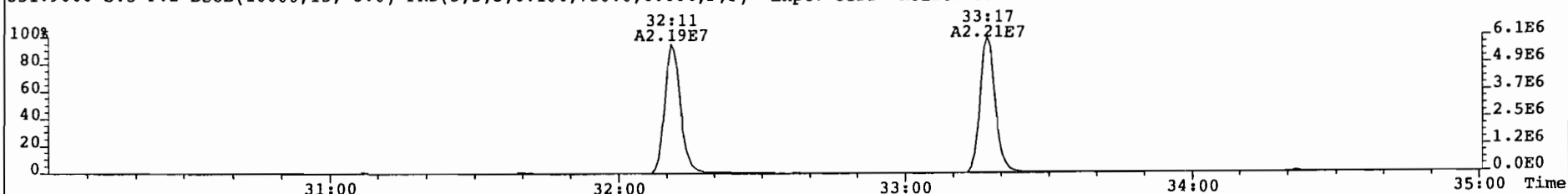
339.8597 S:5 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 459



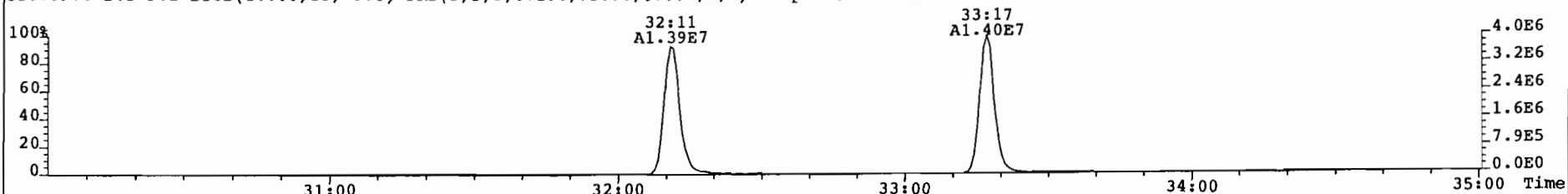
341.8568 S:5 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 395



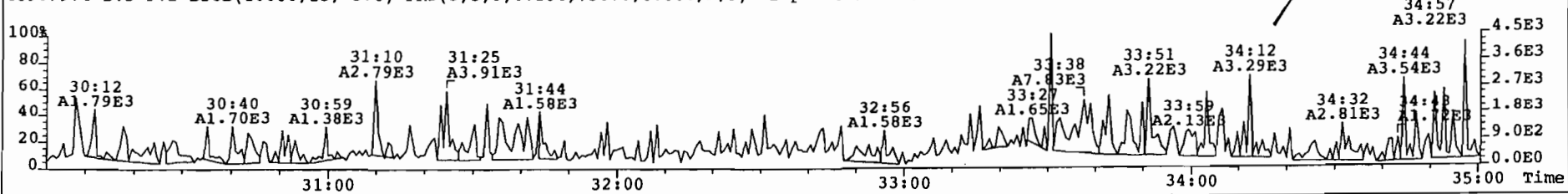
351.9000 S:5 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 597



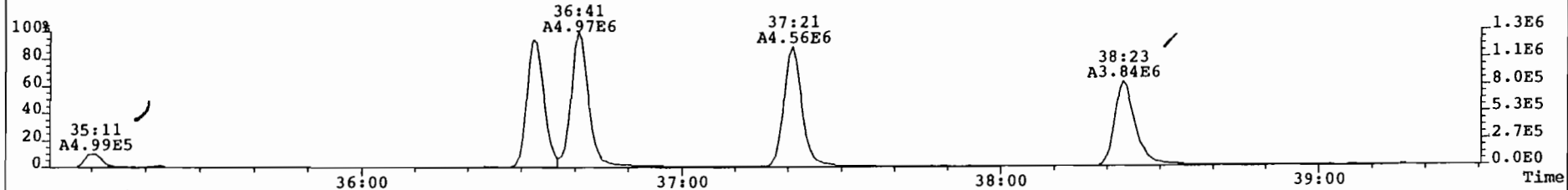
353.8970 S:5 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 534



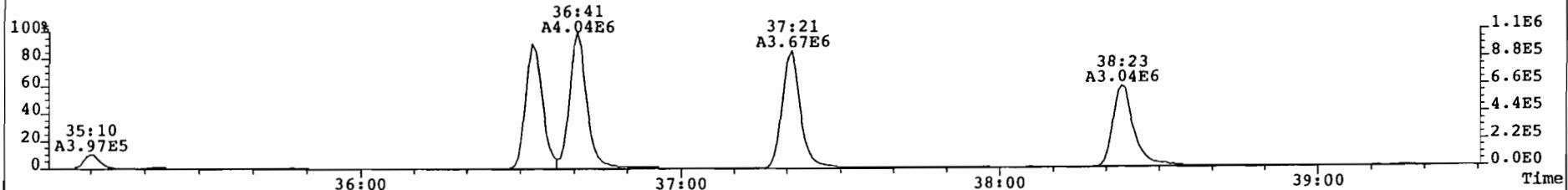
409.7974 S:5 F:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 162



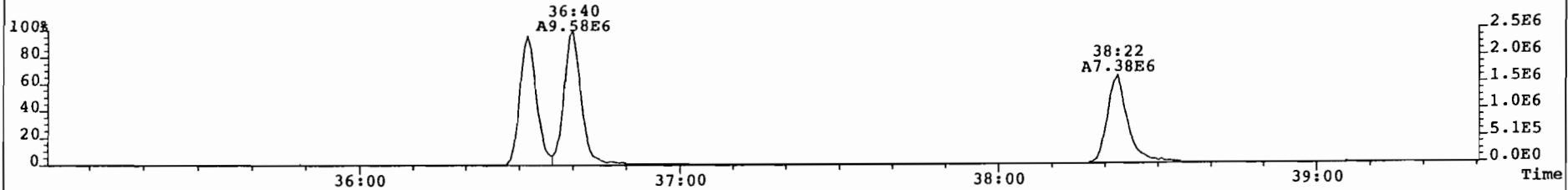
File: 010418F2 Acq: 18-APR-2001 14:41:31 GC EI+ Voltage SIR Autospec-UltimaE  
Sample# 5 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5  
373.8207 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 710



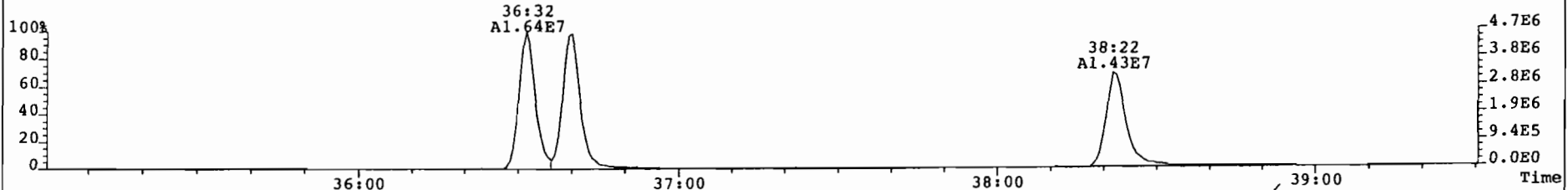
375.8178 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 597



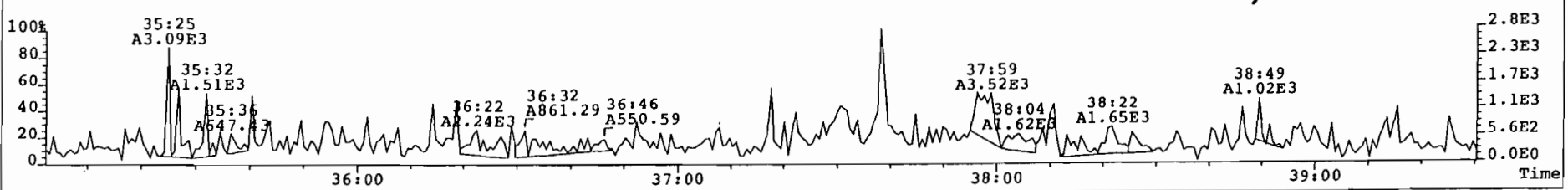
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1214



385.8610 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 1161



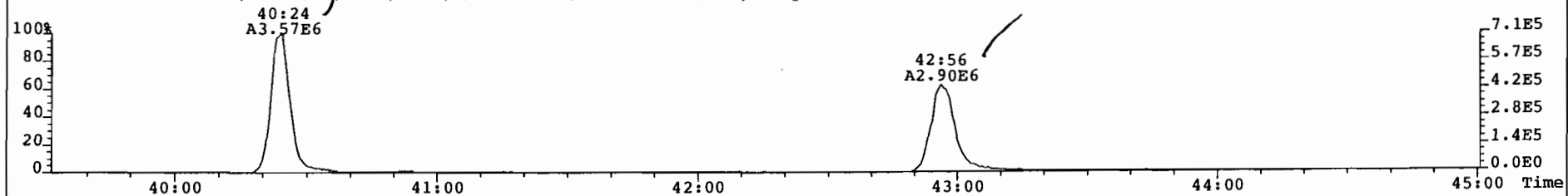
445.7555 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 128



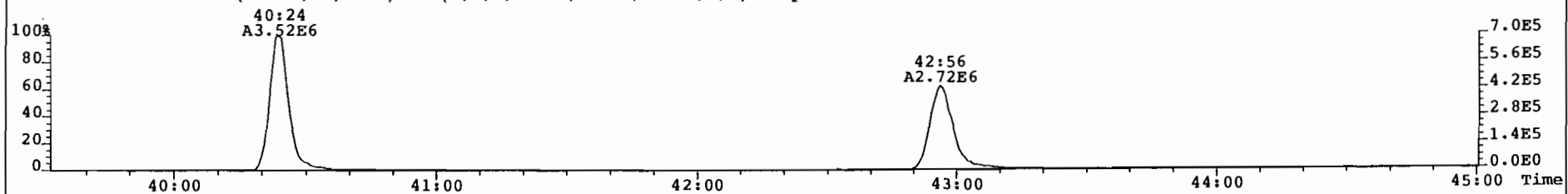
File: 010418P2 Acq: 18-APR-2001 14:41:31 GC EI+ Voltage SIR Autospec-UltimaE

Sample# 5 Text: DB5 CPSM / M23 CS3X Vial# 3 File Text: AAP DB5

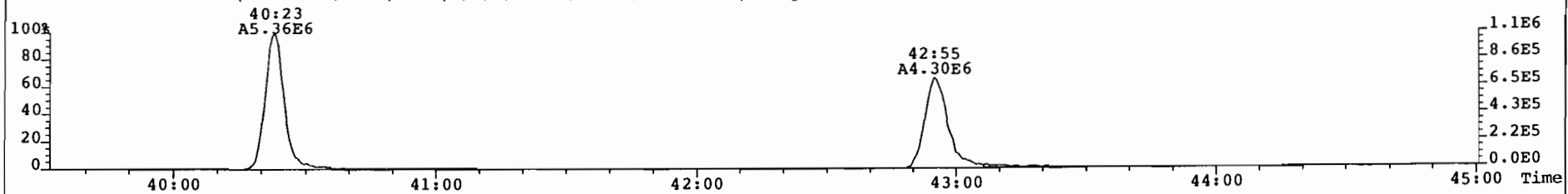
407.7818 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 318



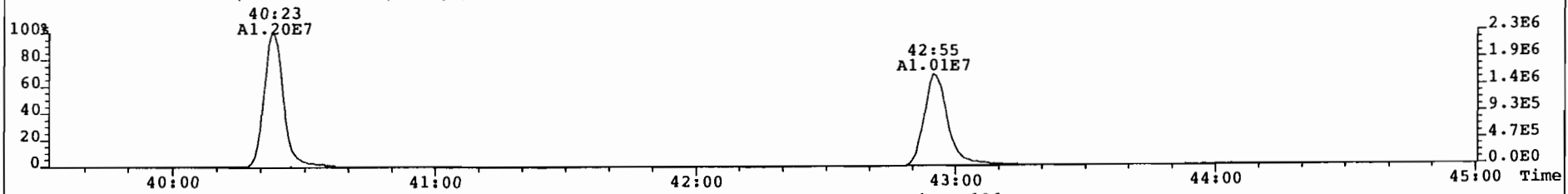
409.7788 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 291



417.8253 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 313



419.8220 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 432



479.7165 S:5 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,750.0,0.00%,F,F) Expt: OCDD Noise: 186

