PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

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HSWA LANL G|M|00

PL I.D. **008096**

September 25, 2000

NMED HWB
2044 A Galisteo Street
Santa Fe, NM 87505

Project Name/Number: LANL PAJARITO 2-MILE HWB 8.24.00 CGF

Attention: John Young

On **08/25/00**, Pinnacle Laboratories Inc., (ADHS License No. AZ0592 pending), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

This report is being issued in part. Results for Appendix IX and Radiological chemistry analyses will be sent, at a later date, upon completion of analyses. We apologize for any inconvenience this may cause.

Radiological chemistry analyses are being performed by Envirotest, Casper, WY.

Appendix IX analyses are being performed by ATEL, Melmore and Marion, OH.

EPA method 8270 SIMS analyses were performed by Environmental Services Laboratory, Inc., Portland, OR.

EPA method 8330 High Explosives, analyses were performed by Barringer Laboratories, Inc., Golden, CO.

Perchlorate analyses were performed by ATEL, Tucson, AZ.

All other analyses were performed by ATEL, Marion, OH.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

H. Mitchell Rubenstein, Ph.D.
General Manager

5625

TL

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: NMED HWB	DATE RECEIVED	: 08/25/00
PROJECT #	: HWB 8.24.00 CG		
PROJECT NAME	: LANL PAJARITO 2-MILE	REPORT DATE	: 09/25/00

PL ID: 008096

	PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	008096-01	PARAJITO @ TWO MILE	AQUEOUS	08/24/00

---TOTALS---

MATRIX	#SAMPLES
AQUEOUS	1

Environmental Services Laboratory, Inc. E S L

17400 SW Upper Boones Ferry Road • Suite 270 • Portland, OR 97224 • (503) 670-8520

September 06, 2000

Jacinta A. Tenorio
Pinnacle Laboratories
2709-D Pan American Fwy NE
Albuquerque, NM 87107
TEL: 505-344-3777
FAX (505) 344-4413

RE: 008096/NMHWB

Order No.: 0008156

Dear Jacinta A. Tenorio,

Environmental Services Laboratory received 1 sample on 8/29/00 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
PAH BY SIM, Aqueous (8270-SIM)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety, without the written approval from the Laboratory.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

Nichole Karl

Nichole Karl
Project Manager

Keith Hunter
Technical Review

Environmental Services Laboratory

Date: *06-Sep-00*

CLIENT:	Pinnacle Laboratories	**Client Sample ID:**	008096-01 Pajarito @ Two Mile
Lab Order:	0008156	**Tag Number:**	
Project:	008096/NMHWB	**Collection Date:**	8/24/00
Lab ID:	0008156-01A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PAH BY SIM, AQUEOUS		**8270-SIM**				Analyst: **ams**
Acenaphthene	ND	0.400		µg/L	1	9/1/00
Acenaphthylene	ND	0.400		µg/L	1	9/1/00
Anthracene	ND	0.400		µg/L	1	9/1/00
Benz(a)anthracene	ND	0.400		µg/L	1	9/1/00
Benzo(a)pyrene	ND	0.400		µg/L	1	9/1/00
Benzo(b)fluoranthene	ND	0.400		µg/L	1	9/1/00
Benzo(g,h,i)perylene	ND	0.400		µg/L	1	9/1/00
Benzo(k)fluoranthene	ND	0.400		µg/L	1	9/1/00
Chrysene	ND	0.400		µg/L	1	9/1/00
Dibenz(a,h)anthracene	ND	0.400		µg/L	1	9/1/00
Fluoranthene	ND	0.400		µg/L	1	9/1/00
Fluorene	ND	0.400		µg/L	1	9/1/00
Indeno(1,2,3-cd)pyrene	ND	0.400		µg/L	1	9/1/00
Naphthalene	ND	0.400		µg/L	1	9/1/00
Phenanthrene	ND	0.400		µg/L	1	9/1/00
Pyrene	ND	0.400		µg/L	1	9/1/00
Surr: 2-Fluorobiphenyl	56.0	43-116		%REC	1	9/1/00
Surr: 4-Terphenyl-d14	75.0	33-141		%REC	1	9/1/00
Surr: Nitrobenzene-d5	52.0	35-114		%REC	1	9/1/00

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Environmental Services Laboratory

Date: *06-Sep-00*

CLIENT: Pinnacle Laboratories
Work Order: 0008156
Project: 008096/NMHWB

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-1824** Batch ID: **1824** Test Code: **8270-SIM** Units: **µg/L** Analysis Date **9/1/00** Prep Date: **9/1/00**

Client ID: **0008156** Run ID: **HEISENBURG_000901B** SeqNo: **51045**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	ND	0.1									
Acenaphthylene	ND	0.1									
Anthracene	ND	0.1									
Benz(a)anthracene	ND	0.1									
Benzo(a)pyrene	ND	0.1									
Benzo(b)fluoranthene	ND	0.1									
Benzo(g,h,i)perylene	ND	0.1									
Benzo(k)fluoranthene	ND	0.1									
Chrysene	ND	0.1									
Dibenz(a,h)anthracene	ND	0.1									
Fluoranthene	ND	0.1									
Fluorene	ND	0.1									
Indeno(1,2,3-cd)pyrene	ND	0.1									
Naphthalene	ND	0.1									
Phenanthrene	ND	0.1									
Pyrene	ND	0.1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Environmental Services Laboratory

Date: *06-Sep-00*

CLIENT: Pinnacle Laboratories
Work Order: 0008156
Project: 008096/NMHWB

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-1824** Batch ID: **1824** Test Code: **8270-SIM** Units: **µg/L** Analysis Date **9/1/00** Prep Date: **9/1/00**

Client ID: **0008156** Run ID: **HEISENBURG_000901B** SeqNo: **51046**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	.62	0.1	1	0	62.0%	47	145	0			
Acenaphthylene	.61	0.1	1	0	61.0%	33	145	0			
Anthracene	.86	0.1	1	0	86.0%	27	133	0			
Benz(a)anthracene	.76	0.1	1	0	76.0%	33	143	0			
Benzo(a)pyrene	.71	0.1	1	0	71.0%	17	163	0			
Benzo(b)fluoranthene	.6	0.1	1	0	60.0%	24	159	0			
Benzo(g,h,i)perylene	.72	0.1	1	0	72.0%	1	219	0			
Benzo(k)fluoranthene	.68	0.1	1	0	68.0%	11	162	0			
Chrysene	.69	0.1	1	0	69.0%	17	168	0			
Dibenz(a,h)anthracene	.65	0.1	1	0	65.0%	1	227	0			
Fluoranthene	.72	0.1	1	0	72.0%	26	137	0			
Fluorene	.63	0.1	1	0	63.0%	59	121	0			
Indeno(1,2,3-cd)pyrene	.71	0.1	1	0	71.0%	1	171	0			
Naphthalene	.6	0.1	1	0	60.0%	21	133	0			
Phenanthrene	.61	0.1	1	0	61.0%	54	120	0			
Pyrene	.69	0.1	1	0	69.0%	52	115	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: Pinnacle Laboratories
Work Order: 0008156
Project: 008096/NMHWB

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: **LCSD-1824** Batch ID: **1824** Test Code: **8270-SIM** Units: **µg/L** Analysis Date **9/1/00** Prep Date: **9/1/00**

Client ID: **0008156** Run ID: **HEISENBURG_000901B** SeqNo: **51047**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	.6	0.1	1	0	60.0%	47	145	0.62	3.3%	30	
Acenaphthylene	.59	0.1	1	0	59.0%	33	145	0.61	3.3%	30	
Anthracene	.82	0.1	1	0	82.0%	27	133	0.86	4.8%	30	
Benz(a)anthracene	.78	0.1	1	0	78.0%	33	143	0.76	2.6%	30	
Benzo(a)pyrene	.69	0.1	1	0	69.0%	17	163	0.71	2.9%	30	
Benzo(b)fluoranthene	.63	0.1	1	0	63.0%	24	159	0.6	4.9%	30	
Benzo(g,h,i)perylene	.73	0.1	1	0	73.0%	1	219	0.72	1.4%	30	
Benzo(k)fluoranthene	.68	0.1	1	0	68.0%	11	162	0.68	0.0%	30	
Chrysene	.71	0.1	1	0	71.0%	17	168	0.69	2.9%	30	
Dibenz(a,h)anthracene	.66	0.1	1	0	66.0%	1	227	0.65	1.5%	30	
Fluoranthene	.71	0.1	1	0	71.0%	26	137	0.72	1.4%	30	
Fluorene	.63	0.1	1	0	63.0%	59	121	0.63	0.0%	30	
Indeno(1,2,3-cd)pyrene	.74	0.1	1	0	74.0%	1	171	0.71	4.1%	30	
Naphthalene	.56	0.1	1	0	56.0%	21	133	0.6	6.9%	30	
Phenanthrene	.6	0.1	1	0	60.0%	54	120	0.61	1.7%	30	
Pyrene	.71	0.1	1	0	71.0%	52	115	0.69	2.9%	30	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Environmental Services Laboratory

Date: *06-Sep-00*

CLIENT: Pinnacle Laboratories
Work Order: 0008156
Project: 008096/NMHWB

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: **CCV** Batch ID: **1824** Test Code: **8270-SIM** Units: **µg/L** Analysis Date **9/1/00** Prep Date:

Client ID: **0008156** Run ID: **HEISENBURG_000901B** SeqNo: **51044**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	.89	0.1	1	0	89.0%	80	120	0			
Acenaphthylene	.88	0.1	1	0	88.0%	80	120	0			
Anthracene	.91	0.1	1	0	91.0%	80	120	0			
Benz(a)anthracene	.88	0.1	1	0	88.0%	80	120	0			
Benzo(a)pyrene	.86	0.1	1	0	86.0%	80	120	0			
Benzo(b)fluoranthene	.82	0.1	1	0	82.0%	80	120	0			
Benzo(g,h,i)perylene	.85	0.1	1	0	85.0%	80	120	0			
Benzo(k)fluoranthene	.83	0.1	1	0	83.0%	80	120	0			
Chrysene	.87	0.1	1	0	87.0%	80	120	0			
Dibenz(a,h)anthracene	.8	0.1	1	0	80.0%	80	120	0			
Fluoranthene	.89	0.1	1	0	89.0%	80	120	0			
Fluorene	.9	0.1	1	0	90.0%	80	120	0			
Indeno(1,2,3-cd)pyrene	.85	0.1	1	0	85.0%	80	120	0			
Naphthalene	.9	0.1	1	0	90.0%	80	120	0			
Phenanthrene	.83	0.1	1	0	83.0%	80	120	0			
Pyrene	.88	0.1	1	0	88.0%	80	120	0			
2-Fluorobiphenyl	.96	0.1	1	0	96.0%	43	116	0			
4-Terphenyl-d14	1.03	0.1	1	0	103.0%	33	141	0			
Nitrobenzene-d5	.98	0.1	1	0	98.0%	35	114	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Pinnacle Laboratories, Inc. — **Interlab Chain of Custody** — Date: 8/28 Page: 1 of

Network Project Manager: Jacinta A. Tenorio

Pinnacle Laboratories, Inc.
2709-D Pan American Freeway, NE
Albuquerque, New Mexico 87107
(505) 344-3777 Fax (505) 344-4413

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals (8) RCRA	RCRA TCLP METALS	Metals-13 PP List	Metals-TAL (23 METALS)		TOX	TOC	Gen Chemistry	8270 SIMS	Oil and Grease	Volatile Organics GC/MS (8260)	BOD	COD	PESTICIDES/PCB (608/8082)	Herbicides (615/8151)	PNA (8310)	8240 (TCLP 1311) ZHE		Base/Neutral Acid Compounds GC/MS (625/8270)	URANIUM (ICP-MS)	RADIUM 226+228	Gross Alpha/Beta	TO-14	NUMBER OF CONTAINERS
008096-01	8/24	0955	AQ	01									X															

PROJECT INFORMATION	
PROJECT #:	008096
PROJ. NAME:	NMHWB
QC LEVEL:	STD., IV
QC REQUIRED:	MS MSD BLANK
TAT:	STANDARD RUSH!!
DUE DATE:	9/12
RUSH SURCHARGE:	—
CLIENT DISCOUNT:	—
SPECIAL CERTIFICATION REQUIRED:	YES NO

SAMPLE RECEIPT	
Total Number of Containers	
Chain of Custody Seals	
Received Intact?	
Received Good Cond./Cold	
LAB NUMBER:	008096

COMMENTS:

SAMPLES SENT TO:	
PENSACOLA - STL-FL	
ESL - OR	X
STL - CT	
ATEL - AZ	
ATEL - MARION	
ATEL - MELMORE	
BARRINGER	
WCAS	
WOHL	

RELINQUISED BY: 1.	RELINQUISED BY: 2.
Signature: Francine Torivio — Time: 1730	Signature: — Time:
Printed Name: Francine Torivio — Date: 8/28/00	Printed Name: — Date:
Pinnacle Laboratories, Inc.	Company
RECEIVED BY: 1.	**RECEIVED BY: 2**
Signature: Nichole Karl — Time: 9:30	Signature: — Time:
Printed Name: Nichole Karl — Date: 8/29	Printed Name: — Date:
Company	Company

Barringer Laboratories, Inc.

15000 W 6th Avenue Suite 300 Golden, Colorado 80401-5047 (800) 654-0506 (303) 277-1687 Fax (303) 277-1689

Date: 11-Sep-00

Jacinta Tenorio
Pinnacle Laboratories
2709-D Pan American Freeway NE
Albuquerque, NM 87107

Phone: 1-505-344-3777
Fax: 1-505-344-4413

Work Order: 0008329
Project: LANL Pajarito 2-mile

Dear Jacinta Tenorio,

Barringer Laboratories received 1 sample on 08/29/00 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these test results, please feel free to call.

Bob George 9/12/00

Bob George
Organic Laboratory Manager

C E Lott Jr

Clarence Lott 9/12/2000
Project Manager

Date: 11-Sep-00

Barringer Laboratories, Inc.

15000 W 6th Avenue Suite 300 Golden, Colorado 80401-5047 (800) 654-0506 (303) 277-1687 Fax (303) 277-1689

Sample Receipt Checklist

Client Name	**Pinnacle Laboratories**	Date and Time Received	**29-Aug-00**
Work Order	**0008329**	Received By	**NSW**
Carrier	**UPS Next Day**	Checklist Created By	**NSW**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☑	No ☐	Not Present ☐
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Coolers and samples screened for radioactivity?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated tests?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	Temp: 2°C
VOA vials have less than pea-sized headspace?	Yes ☐	No ☐	No VOA vials ☑
Was pH acceptable upon receipt?	Yes ☑	No ☐	
Was pH left unadjusted?	Yes ☑	No ☐	Preservative: Lot#:

Comments:

Date: 11-Sep-00

Barringer Laboratories, Inc.

15000 W 6th Avenue Suite 300 Golden, Colorado 80401-5047 (800) 654-0506 (303) 277-1687 Fax (303) 277-1689

Client: Pinnacle Laboratories
Project: LANL Pajarito 2-mile
Work Order: 0008329
Date Received: 8/29/00
Temp Received: 2°C

SAMPLE SUMMARY

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Matrix	Bottle and Preservation
0008329-01A	008096-01	Pajarito @ Two Mile	8/24/00 9:55:00 AM	Aqueous	1L amber glass, unpreserved

Barringer Laboratories, Inc.

15000 W 6th Avenue Suite 300 Golden, Colorado 80401-5047 (800) 654-0506 (303) 277-1687 Fax (303) 277-1689

Date: 11-Sep-00

Client: Pinnacle Laboratories
Project: LANL Pajarito 2-mile
Work Order: 0008329

CASE NARRATIVE

All reported values in this report have been rounded to the correct number of significant figures. All calculations have been performed before applying significant figures, therefore, not all calculations may be reproducible with the results printed in this report.

Date: 11-Sep-00

Barringer Laboratories, Inc.

CLIENT SAMPLE REPORT

15000 W 6th Avenue Suite 300 Golden, Colorado 80401-5047 (800) 654-0506 (303) 277-1687 Fax (303) 277-1689

Client: **Pinnacle Laboratories**
Work Order: **0008329**
Project: **LANL Pajarito 2-mile**

Client Sample ID: **008096-01** Pajarito @ Two Mile
Tag Number:

Lab Sample ID: **0008329-01A**
Date Collected: **08/24/2000**
Matrix: **Aqueous**

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
1,3,5-Trinitrobenzene	99-35-4	SW846 8330	ND	0.1		µg/L	1	08/30/2000	09/07/2000	JMP	P6628
1,3-Dinitrobenzene	99-65-0	SW846 8330	ND	0.2		µg/L	1	08/30/2000	09/07/2000	JMP	P6628
2,4,6-Trinitrotoluene	118-96-7	SW846 8330	ND	0.6		µg/L	1	08/30/2000	09/07/2000	JMP	P6628
2,4-Dinitrotoluene	121-14-2	SW846 8330	ND	0.4		µg/L	1	08/30/2000	09/07/2000	JMP	P6628
2,6-Dinitrotoluene	606-20-2	SW846 8330	ND	0.4		µg/L	1	08/30/2000	09/07/2000	JMP	P6628
2-Amino-4,6-dinitrotoluene	35572-78-2	SW846 8330	ND	0.4		µg/L	1	08/30/2000	09/07/2000	JMP	P6628
2-Nitrotoluene	88-72-2	SW846 8330	ND	0.2		µg/L	1	08/30/2000	09/07/2000	JMP	P6628
3-Nitrotoluene	99-08-1	SW846 8330	ND	0.2		µg/L	1	08/30/2000	09/07/2000	JMP	P6628
4-Amino-2,6-dinitrotoluene	1946-51-0	SW846 8330	ND	0.9		µg/L	1	08/30/2000	09/07/2000	JMP	P6628
4-Nitrotoluene	99-99-0	SW846 8330	ND	0.3		µg/L	1	08/30/2000	09/07/2000	JMP	P6628
HMX	2691-41-0	SW846 8330	ND	0.2		µg/L	1	08/30/2000	09/07/2000	JMP	P6628
Nitrobenzene	98-95-3	SW846 8330	ND	0.4		µg/L	1	08/30/2000	09/07/2000	JMP	P6628
RDX	121-82-4	SW846 8330	ND	0.2		µg/L	1	08/30/2000	09/07/2000	JMP	P6628
Tetryl	479-45-8	SW846 8330	ND	0.6		µg/L	1	08/30/2000	09/07/2000	JMP	P6628
surr: 3,4-Dinitrotoluene	610-39-9	SW846 8330	86	56-120		%	1	08/30/2000	09/07/2000	JMP	P6628

Qualifiers:
ND - Not detected at the reporting limit
B - Analyte detected in method blank
Z - Sample > 10 times blank result
J - Analyte detected below reporting limit
L - Contract/Client reporting limit exceeded
M - Maximum contaminant level exceeded
E - Value above quantitation range
R - RPD outside accepted recovery limits
X - Duplicate sample(s) < 5 times limit
S - Spike outside accepted recovery limits
Y - Unspiked sample > 4 times amount spiked

Barringer Laboratories, Inc.
15000 W 6th Avenue Suite 300 Golden, Colorado 80401-5047 (800) 654-0506 (303) 277-1687 Fax (303) 277-1689

Date: 11-Sep-00

BATCH QC SUMMARY REPORT

Client: **Pinnacle Laboratories**
Work Order: **0008329**
Project: **LANL Pajarito 2-mile**

Batch ID: **P6628**

Laboratory Control Spike

Sample ID: **LCS-6628**
Seq No: **187198**
Run ID: **ENTERPRISE_000907A**

Method: **SW846 8330**
Unit: **µg/L**
Matrix: **Aqueous**

Prepped: **8/30/00**
Analyzed: **9/7/00**
Analyst: **JMP**

Analyte	Result ± 2 sigma	Limit	SpikeVal	SpikeRefVal	%REC	LowLimit	HighLimit	DupRefVal	± 2 sigma	RPD/RER	RPDLimit	Qual
1,3,5-Trinitrobenzene	1.2	0.1	1.3		89	70	136					
1,3-Dinitrobenzene	1.2	0.2	1.3		89	59	127					
2,4,6-Trinitrotoluene	1.2	0.6	1.3		90	73	136					
2,4-Dinitrotoluene	1.2	0.4	1.3		93	65	144					
2,6-Dinitrotoluene	1.0	0.4	1.3		81	67	152					
2-Amino-4,6-dinitrotoluene	1.2	0.4	1.3		93	63	135					
2-Nitrotoluene	1.1	0.2	1.3		86	61	130					
3-Nitrotoluene	1.3	0.2	1.3		98	53	149					
4-Amino-2,6-dinitrotoluene	1.3	0.9	1.3		103	50	134					
4-Nitrotoluene	1.2	0.3	1.3		92	54	138					
HMX	1.1	0.2	1.3		88	47	155					
Nitrobenzene	1.2	0.4	1.3		93	49	125					
PETN	6.5	6	6.5		101	72	137					
RDX	1.1	0.2	1.3		83	53	139					
Tetryl	1.3	0.6	1.3		103	48	191					
surr: 3,4-Dinitrotoluene	93	56-120										

Client: **Pinnacle Laboratories**
Work Order: **0008329**
Project: **LANL Pajarito 2-mile**

Batch ID: **P6628**

Laboratory Control Spike Duplicate

Sample ID: **LCSD-6628**
Seq No: **187199**
Run ID: **ENTERPRISE_000907A**

Method: **SW846 8330**
Unit: **µg/L**
Matrix: **Aqueous**

Prepped: **8/30/00**
Analyzed: **9/7/00**
Analyst: **JMP**

Analyte	Result ± 2 sigma	Limit	SpikeVal	SpikeRefVal	%REC	LowLimit	HighLimit	DupRefVal	± 2 sigma	RPD/RER	RPDLimit	Qual
1,3,5-Trinitrobenzene	1.1	0.1	1.3		86	70	136	1.2		4	20	
1,3-Dinitrobenzene	1.1	0.2	1.3		86	59	127	1.2		4	20	
2,4,6-Trinitrotoluene	1.2	0.6	1.3		93	73	136	1.2		3	20	
2,4-Dinitrotoluene	1.2	0.4	1.3		90	65	144	1.2		3	20	
2,6-Dinitrotoluene	1.1	0.4	1.3		85	67	152	1.0		6	20	
2-Amino-4,6-dinitrotoluene	1.2	0.4	1.3		96	63	135	1.2		3	20	
2-Nitrotoluene	1.1	0.2	1.3		88	61	130	1.1		2	20	
3-Nitrotoluene	1.2	0.2	1.3		92	53	149	1.3		7	20	
4-Amino-2,6-dinitrotoluene	1.3	0.9	1.3		103	50	134	1.3		0	20	
4-Nitrotoluene	1.2	0.3	1.3		93	54	138	1.2		2	20	
HMX	1.1	0.2	1.3		84	47	155	1.1		4	20	

Qualifiers:
ND - Not detected at the reporting limit
J - Analyte detected below quantitation limit
E - Value above quantitation range
R - RPD outside accepted recovery limits
X - Duplicate sample(s) < 5 times limit
S - Spike recovery outside accepted recovery limits
Y - Unspiked sample > 4 times amount spiked
B - Analyte detected in the associated method blank
Z - Sample > 10 times blank result

Barringer Laboratories, Inc.

15000 W 6th Avenue Suite 300 Golden, Colorado 80401-5047 (800) 654-0506 (303) 277-1687 Fax (303) 277-1689

BATCH QC SUMMARY REPORT

Nitrobenzene	1.1	0.4	1.3	83	49	125	1.2	11	20
PETN	6.0	6	6.5	93	72	137	6.5	8	20
RDX	1.3	0.2	1.3	98	53	139	1.1	16	20
Tetryl	1.3	0.6	1.3	102	48	191	1.3	1	20
surr: 3,4-Dinitrotoluene	97	56-120							

Client: **Pinnacle Laboratories**
Work Order: **0008329**
Project: **LANL Pajarito 2-mile**

Batch ID: **P6628**

Method Blank

Sample ID: **MBLK-6628** Method: **SW846 8330** Prepped: **8/30/00**
Seq No: **187197** Unit: **µg/L** Analyzed: **9/7/00**
Run ID: **ENTERPRISE_000907A** Matrix: **Aqueous** Analyst: **JMP**

Analyte	Result ± 2 sigma	Limit	SpikeVal	SpikeRefVal	%REC	LowLimit	HighLimit	DupRefVal	± 2 sigma	RPD/RER	RPDLimit	Qual
1,3,5-Trinitrobenzene	ND	0.1										
1,3-Dinitrobenzene	ND	0.2										
2,4,6-Trinitrotoluene	ND	0.6										
2,4-Dinitrotoluene	ND	0.4										
2,6-Dinitrotoluene	ND	0.4										
2-Amino-4,6-dinitrotoluene	ND	0.4										
2-Nitrotoluene	ND	0.2										
3-Nitrotoluene	ND	0.2										
4-Amino-2,6-dinitrotoluene	ND	0.9										
4-Nitrotoluene	ND	0.3										
HMX	ND	0.2										
Nitrobenzene	ND	0.4										
PETN	ND	6										
RDX	ND	0.2										
Tetryl	ND	0.6										
surr: 3,4-Dinitrotoluene	98	56-120										

Qualifiers:
ND - Not detected at the reporting limit
J - Analyte detected below quantitation limit
E - Value above quantitation range
R - RPD outside accepted recovery limits
X - Duplicate sample(s) < 5 times limit
S - Spike recovery outside accepted recovery limits
Y - Unspiked sample > 4 times amount spiked
B - Analyte detected in the associated method blank
Z - Sample > 10 times blank result

Pinnacle Laboratories, Inc. **Interlab Chain of Custody** 0008329 Date: 8/28 Page: 1 of

Network Project Manager: Jacinta A. Tenorio

Pinnacle Laboratories, Inc.
2709-D Pan American Freeway, NE
Albuquerque, New Mexico 87107
(505) 344-3777 Fax (505) 344-4413

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals (8) RCRA	RCRA TCLP METALS	Metals-13 PP List	Metals-TAL (23 METALS)		TOX	TOC	Gen Chemistry	8330 HE	Oil and Grease	Volatile Organics GC/MS (8260)	BOD	COD	PESTICIDES/PCB (608/8082)	Herbicides (615/8151)	PNA (8310)	8240 (TCLP 1311) ZHE		Base/Neutral Acid Compounds GC/MS (625/8270)	URANIUM (ICP-MS)	RADIUM 226+228	Gross Alpha/Beta	TO-14	NUMBER OF CONTAINERS
008096-01	8/24	0955	AQ										X															

PROJECT INFORMATION		SAMPLE RECEIPT		SAMPLES SENT TO:	
PROJECT #: 008096		Total Number of Containers		PENSACOLA - STL-FL	
PROJ. NAME: NMHWB		Chain of Custody Seals		ESL - OR	
QC LEVEL: STD IV		Received Intact?		STL - CT	
QC REQUIRED: MS MSD BLANK		Received Good Cond./Cold		ATEL - AZ	
TAT: STANDARD RUSH!!		LAB NUMBER:		ATEL - MARION	
				ATEL - MELMORE	
DUE DATE: 9/18	COMMENTS:			BARRINGER	X
RUSH SURCHARGE: —				WCAS	
CLIENT DISCOUNT: —				WOHL	
SPECIAL CERTIFICATION REQUIRED: YES NO					

RELINQUISED BY: 1.	RELINQUISED BY: 2.
Signatue: Francine Torino Time: 1730	Signatue: Time:
Printed Name: Francine Torino Date: 8/28/00	Printed Name: Date:
Pinnacle Laboratories, Inc.	Company
RECEIVED BY: 1.	**RECEIVED BY: 2**
Signatue: Nicole White Time: 1045	Signatue: Time:
Printed Name: N. WHITE Date: 8/29/00	Printed Name: Date:
Company BLI	Company

ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: T0608

Pinnacle Laboratories, Inc.
2709-D Pan American Freeway, NE
Albuquerque, NM 87107-

Attn: Mitch Rubenstein

Report Date: *14-Sep-00*

Phone: (505) 344-3777 **Ext:**
FAX: (505) 344-4413

Our Lab #: 082900033
Date Logged-In: 8/29/00
Matrix: Water
Project #: NMHWB

Your Sample ID: 008096-01 Pajarito @ Two Mile
Sample Source: SDWA/WTP's
Client Project #:
PO#: 008096
Date Submitted to Lab: 8/29/2000

- COLLECTION INFORMATION -

Date/Time/By: 8/24/00 9:55 AM

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
PER	314.0	Perchlorate, aq	< 5.00	ug/L	9/11/00	JMN	2582

End of Report

Report Approved By: R Mosher

Arizona Lab License No. AZ0009

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Aqua Tech Environmental Laboratories, Inc.

- QUALITY CONTROL REPORT -

Printed: 9/13/2000

WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
2582	082900033M	PER	M	25.8	ug/L	25	103 %R: *	3 %RPD	0	
2582	082900033S	PER	S	25.1	ug/L	25	100 %R:		80	120
2582	Blank	PER	B	0.00	ug/L	0				
2582	Calib Check	PER	K	111	ug/L	100	111 %R:		85	115
2582	Calib Check	PER	K	21.1	ug/L	20	106 %R:		85	115
2582	Calib Check	PER	K	4.90	ug/L	5	98 %R:		75	125
2582	Control	PER	C	25.2	ug/L	25	101 %R:		85	115
2582	LCS	PER	C	25.1	ug/L	25	100 %R:		80	120

QC Code Legend

B	Blanks	K	Calibration Checks	S	Spikes
C	Control Samples	M	Matrix Spike Duplicates		
D	Duplicates	R	Surrogates		

PLI # 008096

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Pinnacle Laboratories, Inc.

Interlab Chain of Custody

Date: 8/28 Page: 1 of

Work Project Manager: Jacinta A. Tenorio

Pinnacle Laboratories, Inc.
2709-D Pan American Freeway, NE
Albuquerque, New Mexico 87107
(505) 344-3777 Fax (505) 344-4413

attn: *please invoice account* **T0608** and PINNACLE requires the following QC for all studies: BLANK, SPIKE & DUPLICATE.
Thank you

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals (8) RCRA	RCRA TCLP METALS	Metals-13 PP List	Metals-TAL (23 METALS)		TOX	TOC	Gen Chemistry	X Perchlorate	Oil and Grease	Volatile Organics GC/MS (8260)	BOD	COD	PESTICIDES/PCB (608/8082)	Herbicides (615/8151)	PNA (8310)	8240 (TCLP 1311) ZHE		Base/Neutral Acid Compounds GC/MS (625/8270)	URANIUM (ICP-MS)	RADIUM 226+228	Gross Alpha/Beta	TO-14	NUMBER OF CONTAINERS
008096-01	8/24	0955	AQ										X						0829	00-	33							

PROJECT INFORMATION	
PROJECT #:	008096
PROJ. NAME:	NM HWB
QC LEVEL:	STD IV
QC REQUIRED:	MS MSD BLANK
TAT:	STANDARD RUSH!!
DUE DATE:	9/12
RUSH SURCHARGE:	—
CLIENT DISCOUNT:	—
SPECIAL CERTIFICATION REQUIRED:	YES NO

SAMPLE RECEIPT	
Total Number of Containers	
Chain of Custody Seals	
Received Intact?	
Received Good Cond./Cold	
LAB NUMBER:	

COMMENTS:

SAMPLES SENT TO:	
PENSACOLA - STL-FL	
ESL - OR	
STL - CT	
ATEL - AZ	X
ATEL - MARION	
ATEL - MELMORE	
BARRINGER	
WCAS	
WOHL	

RELINQUISED BY: 1.	RELINQUISED BY: 2.
Signatue: Francine Jaramo Time: 1730	Signatue: Time:
Printed Name: Francine Tenorio Date: 8/28/00	Printed Name: Date:
Pinnacle Laboratories, Inc.	Company
RECEIVED BY: 1.	**RECEIVED BY: 2**
Signatue: Time:	Signatue: Time:
Printed Name: Date:	Printed Name: Date:
Company	Company

ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: T0608
Pinnacle Labs, Inc.
2709-D Pan-American Freeway, NE
Albuquerque,, NM 87107-

Attn: Mitch Rubenstein

Report Date: *14-Sep-00*

Phone: (505) 344-3777 **Ext:**
FAX: (505) 344-4413

Our Lab #: MAR00-22526
Date Logged-In: 8/30/00
Matrix: Groundwater
Project #: 008096

Your Sample ID: 008096-01 Pajarito @ Two Mile
Sample Source: RCRA
Client Project #:
PO#: 008096
Date Submitted to Lab: 8/29/2000

- COLLECTION INFORMATION -

Date/Time/By: 8/24/00 9:55 AM

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
HCO3	SM2320B	Alkalinity, Bicarbonate (as CaCO3)	152	MG/L			0
CO3	SM2320B	Alkalinity, Carbonate (as CaCO3)	< 2	MG/L			0
ALK	SM 2320B	Alkalinity, Total	152	MG/L	8/31/00	TLC	22441
AL-ICP	6010B	Aluminum, Al	12400	UG/L	8/30/00	SMM	22416
AL-ICP-D	6010B	Aluminum, Al, Dissolved	< 100	UG/L	8/30/00	SMM	22416
SB-MS	6020	Antimony, Sb	< 3.0	UG/L	9/5/00	RCM	22479
SB-MS-D	6020	Antimony, Sb, Dissolved	< 3.0	UG/L	9/5/00	RCM	22479
AS-MS	6020	Arsenic, As	6.2	UG/L	9/5/00	RCM	22479
AS-MS-D	6020	Arsenic, As, Dissolved	4.8	UG/L	9/5/00	RCM	22479
BA-ICP	6010B	Barium, Ba	467	UG/L	8/30/00	SMM	22416
BA-ICP-D	6010B	Barium, Ba, Dissolved	163	UG/L	8/30/00	SMM	22416
BE-MS	6020	Beryllium, Be	0.6	UG/L	9/5/00	RCM	22479
BE-MS-D	6020	Beryllium, Be, Dissolved	< 0.5	UG/L	9/5/00	RCM	22479
B-MS	6020	Boron, B	64	UG/L	9/5/00	RCM	22479
B-MS-D	6020	Boron, B, Dissolved	80	UG/L	9/5/00	RCM	22479
BR-IC-HI	300.0	Bromide, Br	< 0.5	MG/L	9/5/00	JEL	22472
CD-MS	6020	Cadmium, Cd	< 0.5	UG/L	9/5/00	RCM	22479
CD-MS-D	6020	Cadmium, Cd, Dissolved	< 0.5	UG/L	9/5/00	RCM	22479
CA-ICP	6010B	Calcium, Ca	50	MG/L	8/30/00	SMM	22416
CA-ICP-D	6010B	Calcium, Ca, Dissolved	44	MG/L	8/30/00	SMM	22416

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Pajarito @ Two Mile

Lab Number MAR00-22526 -Continued from Previous Page

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
TOC	SM 5310C/9060	Carbon, Total Organic, TOC	37	MG/L	9/1/00	DLQ	22465
CL-IC	300.0	Chloride, Cl	11	MG/L	9/5/00	JEL	22472
CR-ICP	6010B	Chromium, Cr	< 20	UG/L	8/30/00	SMM	22416
CR-ICP-D	6010B	Chromium, Cr, Dissolved	< 20	UG/L	8/30/00	SMM	22416
CO-ICP	6010B	Cobalt, Co	< 10	UG/L	8/30/00	SMM	22416
CO-ICP-D	6010B	Cobalt, Co, Dissolved	< 10	UG/L	8/30/00	SMM	22416
CU-ICP	6010B	Copper, Cu	19	UG/L	8/30/00	SMM	22416
CU-ICP-D	6010B	Copper, Cu, Dissolved	< 10	UG/L	8/30/00	SMM	22416
CN	335.4/9012A	Cyanide, Total, CN	< 0.005	MG/L	9/6/00	MDO	22492
F	SM 4500F-C	Fluoride, F, Dissolved	0.19	MG/L	8/31/00	JEL	22436
FE-ICP	6010B	Iron, Fe	7260	UG/L	8/30/00	SMM	22416
FE-ICP-D	6010B	Iron, Fe, Dissolved	175	UG/L	8/30/00	SMM	22416
PB-MS	6020	Lead, Pb	21	UG/L	9/5/00	RCM	22479
PB-MS-D	6020	Lead, Pb, Dissolved	< 2.0	UG/L	9/5/00	RCM	22479
LI-MS	6020	Lithium, Li	< 100	UG/L	9/5/00	RCM	22479
LI-MS-D	6020	Lithium, Li, Dissolved	< 100	UG/L	9/5/00	RCM	22479
MG-ICP	6010B	Magnesium, Mg	8.5	MG/L	8/30/00	SMM	22416
MG-ICP-D	6010B	Magnesium, Mg, Dissolved	7.3	MG/L	8/30/00	SMM	22416
MN-ICP	6010B	Manganese, Mn	1600	UG/L	8/30/00	SMM	22416
MN-ICP-D	6010B	Manganese, Mn, Dissolved	980	UG/L	8/30/00	SMM	22416
HG	7470A	Mercury, Hg	< 0.2	UG/L	9/1/00	SMM	22452
HG-D	7470A	Mercury, Hg, Dissolved	< 0.2	UG/L	9/1/00	SMM	22452
MO-MS	200.8	Molybdenum, Mo	< 30	UG/L	9/5/00	RCM	22479
MO-MS-D	200.8	Molybdenum, Mo, Dissolved	< 30	UG/L	9/5/00	RCM	22479
NI-ICP	6010B	Nickel, Ni	< 20	UG/L	8/30/00	SMM	22416
NI-ICP-D	6010B	Nickel, Ni, Dissolved	< 20	UG/L	8/30/00	SMM	22416
NH3	350.1	Nitrogen, Ammonia, N	< 0.05	MG/L	9/7/00	JEL	22505
NO3+NO2	353.2/9200	Nitrogen, Nitrate + Nitrite (as N)	< 0.05	MG/L	9/8/00	JEL	22530
TKN	351.3	Nitrogen, Total Kjeldahl, TKN	4.66	MG/L	9/7/00	KVS	22518
P	SM4500-P-E2	Phosphorus, P	1.58	MG/L	9/1/00	JA/BS	22451
PO4	Calc.	Phosphorus, PO4	4.84	MG/L			0
K-ICP	6010B	Potassium, K	12.1	MG/L	8/30/00	SMM	22416
K-ICP-D	6010B	Potassium, K, Dissolved	10	MG/L	8/30/00	SMM	22416

CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Pajarito @ Two Mile

Lab Number MAR00-22526 -Continued from Previous Page

Test Group	EPA Method	Test	Result	Units	Analysis Date	Analyst	WS#
TSS	160.2	Residue, Suspended (NonFilterable)	104	MG/L	8/30/00	MDO	22415
TDS	160.1	Residue, Total Dissolved	286	MG/L	8/31/00	TLC	22444
SE-GFAA	7740	Selenium, Se	< 3.0	UG/L	9/1/00	ROH	22455
SE-GFAA-D	7740	Selenium, Se, Dissolved	< 3.0	UG/L	9/1/00	ROH	22455
SI-MS	200.8	Silicon, Si	24.1	MG/L	9/5/00	RCM	22479
SI-MS-D	200.8/6020	Silicon, Si, Dissolved	12.5	MG/L	9/5/00	RCM	22479
AG-ICP	6010B	Silver, Ag	< 10	UG/L	8/30/00	SMM	22416
AG-ICP-D	6010B	Silver, Ag, Dissolved	< 10	UG/L	8/30/00	SMM	22416
NA-ICP	6010B	Sodium, Na	8.06	MG/L	8/30/00	SMM	22416
NA-ICP-D	6010B	Sodium, Na, Dissolved	7.4	MG/L	8/30/00	SMM	22416
SR-MS	200.8/6020	Strontium, Sr	290	UG/L	9/5/00	RCM	22479
SR-MS-D	6020	Strontium, Sr, Dissolved	240	UG/L	9/5/00	RCM	22479
SO4-IC	300.0	Sulfate, SO4	10	MG/L	9/5/00	JEL	22472
TAL Metals		TAL Metals List					0
TAL Metals-D		TAL Metals-Dissolved					0
TL-MS	6020	Thallium, Tl	< 1.0	UG/L	9/5/00	RCM	22479
TL-MS-D	6020	Thallium, Tl, Dissolved	< 1.0	UG/L	9/5/00	RCM	22479
SN-GFAA	3113B/7871	Tin, Sn	< 50	UG/L	9/11/00	RCM	22548
SN-GFAA-D	3113B/7871	Tin, Sn, Dissolved	< 50	UG/L	9/11/00	RCM	22548
U-MS	6020	Uranium, U	< 20.0	UG/L	9/5/00	RCM	22479
U-MS-D	6020	Uranium, U, Dissolved	< 20.0	UG/L	9/5/00	RCM	22479
V-ICP	6010B	Vanadium, V	< 20	UG/L	8/30/00	SMM	22416
V-ICP-D	6010B	Vanadium, V, Dissolved	< 20	UG/L	8/30/00	SMM	22416
ZN-ICP	6010B	Zinc, Zn	47	UG/L	8/30/00	SMM	22416
ZN-ICP-D	6010B	Zinc, Zn, Dissolved	< 10	UG/L	8/30/00	SMM	22416

End of Report

Report Approved By: Lana L. Jackson

Lana L. Jackson

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CERTIFICATIONS: NCDWQ263,NCDEH39700,AZ0071,OH4053,NY11071,A2LA102325

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ATEL

Aqua Tech Environmental Laboratories, Inc.

- QUALITY CONTROL REPORT -

Printed: 9/14/2000

WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
22492	ICB	CN	C	0	MG/L					
22518	ICB	TKN	C	.012	MG/L					
22492	ICB+S	CN	C	.202	MG/L	0.2	101 %R:		80	120
22472	ICV	BR	K	4.838	MG/L	5	97 %R:		90	110
22472	ICV	CL	K	45.707	MG/L	50	91 %R:		90	110
22492	ICV	CN	C	.147	MG/L	0.15	98 %R:		90	110
22436	ICV	F	K	1.95	MG/L	2	98 %R:		90	110
22505	ICV	NH3	K	2.561	MG/L	2.55	100 %R:		90	110
22530	ICV	NO3+	K	1.625	MG/L	1.568	104 %R:		90	110
22451	ICV	P	C	.3957	MG/L	0.4075	97 %R:		90	110
22472	ICV	SO4	K	48.826	MG/L	50	98 %R:		90	110
22518	ICV	TKN	C	2.491	MG/L	2.5	100 %R:		85	115
22465	ICV	TOC	C	5.308	MG/L	5	106 %R:		90	110
22451	LCSA	P	C	.2532	MG/L	0.25	101 %R:		80	120
22455	LCSA 8.31.3	SE	C	20.1	UG/L	20	101 %R:		70	125
22416	LCSA 8.24.2	AG	C	.10762	MG/L	0.1	108 %R:		80	120
22416	LCSA 8.24.2	AL	C	2.01005	MG/L	2	101 %R:		80	120
22416	LCSA 8.24.2	BA	C	2.07401	MG/L	2	104 %R:		80	120
22416	LCSA 8.24.2	CA	C	2.54312	MG/L	2.5	102 %R:		80	120
22416	LCSA 8.24.2	CD	C	.09734	MG/L	0.1	97 %R:		80	120
22416	LCSA 8.24.2	CO	C	1.04687	MG/L	1	105 %R:		80	120
22416	LCSA 8.24.2	CR	C	1.03622	MG/L	1	104 %R:		80	120
22416	LCSA 8.24.2	CU	C	1.02211	MG/L	1	102 %R:		80	120
22416	LCSA 8.24.2	FE	C	2.07168	MG/L	2	104 %R:		80	120
22416	LCSA 8.24.2	K	C	9.37044	MG/L	10	94 %R:		80	120
22416	LCSA 8.24.2	MG	C	2.53022	MG/L	2.5	101 %R:		80	120
22416	LCSA 8.24.2	MN	C	1.02206	MG/L	1	102 %R:		80	120
22416	LCSA 8.24.2	NA	C	2.81649	MG/L	2.5	113 %R:		80	120
22416	LCSA 8.24.2	NI	C	1.05949	MG/L	1	106 %R:		80	120
22416	LCSA 8.24.2	PB	C	1.08647	MG/L	1.1	99 %R:		80	120
22416	LCSA 8.24.2	V	C	2.01835	MG/L	2	101 %R:		80	120
22416	LCSA 8.24.2	ZN	C	1.00961	MG/L	1	101 %R:		80	120
22416	LCSA 8.25.2	AG	C	.10475	MG/L	0.1	105 %R:		80	120
22416	LCSA 8.25.2	AL	C	2.07068	MG/L	2	104 %R:		80	120
22416	LCSA 8.25.2	BA	C	2.06174	MG/L	2	103 %R:		80	120
22416	LCSA 8.25.2	CA	C	2.56235	MG/L	2.5	102 %R:		80	120
22416	LCSA 8.25.2	CD	C	.10129	MG/L	0.1	101 %R:		80	120

QC Code Legend

B	Blanks	K	Calibration Checks	S	Spikes
C	Control Samples	M	Matrix Spike Duplicates		
D	Duplicates	R	Surrogates		

PLI # 008096

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- QUALITY CONTROL REPORT -

Printed: 9/14/2000

WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
22416	LCSA 8.25.2	CO	C	1.03611	MG/L	1	104 %R:		80	120
22416	LCSA 8.25.2	CR	C	1.02433	MG/L	1	102 %R:		80	120
22416	LCSA 8.25.2	CU	C	1.01774	MG/L	1	102 %R:		80	120
22416	LCSA 8.25.2	FE	C	2.08026	MG/L	2	104 %R:		80	120
22416	LCSA 8.25.2	K	C	9.64206	MG/L	10	96 %R:		80	120
22416	LCSA 8.25.2	MG	C	2.53005	MG/L	2.5	101 %R:		80	120
22416	LCSA 8.25.2	MN	C	1.01181	MG/L	1	101 %R:		80	120
22416	LCSA 8.25.2	NA	C	2.90799	MG/L	2.5	116 %R:		80	120
22416	LCSA 8.25.2	NI	C	1.06564	MG/L	1	107 %R:		80	120
22416	LCSA 8.25.2	PB	C	1.01747	MG/L	1.1	92 %R:		80	120
22416	LCSA 8.25.2	V	C	1.99506	MG/L	2	100 %R:		80	120
22416	LCSA 8.25.2	ZN	C	1.00202	MG/L	1	100 %R:		80	120
22416	LCSA 8.29.2	AL	C	2.03827	MG/L	2	102 %R:		80	120
22416	LCSA 8.29.2	BA	C	2.06961	MG/L	2	103 %R:		80	120
22416	LCSA 8.29.2	CA	C	2.55199	MG/L	2.5	102 %R:		80	120
22416	LCSA 8.29.2	CD	C	.09717	MG/L	0.1	97 %R:		80	120
22416	LCSA 8.29.2	CO	C	1.04328	MG/L	1	104 %R:		80	120
22416	LCSA 8.29.2	CR	C	1.02433	MG/L	1	102 %R:		80	120
22416	LCSA 8.29.2	CU	C	1.0294	MG/L	1	103 %R:		80	120
22416	LCSA 8.29.2	FE	C	2.06704	MG/L	2	103 %R:		80	120
22416	LCSA 8.29.2	K	C	8.01235	MG/L	10	80 %R:		80	120
22416	LCSA 8.29.2	MG	C	2.52401	MG/L	2.5	101 %R:		80	120
22416	LCSA 8.29.2	MN	C	1.01328	MG/L	1	101 %R:		80	120
22416	LCSA 8.29.2	NA	C	2.87834	MG/L	2.5	115 %R:		80	120
22416	LCSA 8.29.2	NI	C	1.05713	MG/L	1	106 %R:		80	120
22416	LCSA 8.29.2	PB	C	1.02286	MG/L	1.1	93 %R:		80	120
22416	LCSA 8.29.2	V	C	1.99754	MG/L	2	100 %R:		80	120
22416	LCSA 8.29.2	ZN	C	1.00498	MG/L	1	100 %R:		80	120
22416	LCSA 8.30.2	AG	C	.10254	MG/L	0.1	103 %R:		80	120
22416	LCSA 8.30.2	AL	C	1.8773	MG/L	2	94 %R:		80	120
22416	LCSA 8.30.2	BA	C	2.0117	MG/L	2	101 %R:		80	120
22416	LCSA 8.30.2	CA	C	2.46488	MG/L	2.5	99 %R:		80	120
22416	LCSA 8.30.2	CD	C	.09917	MG/L	0.1	99 %R:		80	120
22416	LCSA 8.30.2	CO	C	.99206	MG/L	1	99 %R:		80	120
22416	LCSA 8.30.2	CR	C	.97084	MG/L	1	97 %R:		80	120
22416	LCSA 8.30.2	CU	C	.9842	MG/L	1	98 %R:		80	120
22416	LCSA 8.30.2	FE	C	1.96777	MG/L	2	98 %R:		80	120

QC Code Legend

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- QUALITY CONTROL REPORT -

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WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
22416	LCSA 8.30.2	K	C	10.04949	MG/L	10	100 %R:		80	120
22416	LCSA 8.30.2	MG	C	2.41399	MG/L	2.5	97 %R:		80	120
22416	LCSA 8.30.2	MN	C	.96024	MG/L	1	96 %R:		80	120
22416	LCSA 8.30.2	NA	C	2.54937	MG/L	2.5	102 %R:		80	120
22416	LCSA 8.30.2	NI	C	1.04946	MG/L	1	105 %R:		80	120
22416	LCSA 8.30.2	PB	C	.99951	MG/L	1.1	91 %R:		80	120
22416	LCSA 8.30.2	V	C	1.86988	MG/L	2	93 %R:		80	120
22416	LCSA 8.30.2	ZN	C	.93433	MG/L	1	93 %R:		80	120
22436	LCSA 8.31.00	F	C	.945	MG/L	1	95 %R:		80	120
22479	LCSA 8.31.3	AS	C	21.1385	UG/L	20	106 %R:		50	150
22479	LCSA 8.31.3	B	C	105.818	UG/L	100	106 %R:		50	150
22479	LCSA 8.31.3	BE	C	10.868	UG/L	10	109 %R:		50	150
22479	LCSA 8.31.3	CD	C	10.2508	UG/L	10	103 %R:		50	150
22479	LCSA 8.31.3	LI	C	10855.9779	UG/L	10000	109 %R:		50	150
22479	LCSA 8.31.3	MO	C	100.3486	UG/L	100	100 %R:		50	150
22479	LCSA 8.31.3	PB	C	9.6197	UG/L	10	96 %R:		50	150
22479	LCSA 8.31.3	SB	C	18.8098	UG/L	20	94 %R:		50	150
22479	LCSA 8.31.3	SI	C	2.7539	MG/L	2.5	110 %R:		50	150
22548	LCSA 8.31.3	SN	C	117.92	UG/L	100	118 %R:		70	125
22479	LCSA 8.31.3	SR	C	96.4192	UG/L	100	96 %R:		50	150
22479	LCSA 8.31.3	TL	C	10.563	UG/L	10	106 %R:		50	150
22479	LCSA 8.31.3	U	C	86.9051	UG/L	100	87 %R:		50	150
22452	LCSA 9.1	HG	C	1.98	UG/L	2.5	79 %R:		70	120
22465	LCSA 9.1.00	TOC	C	5.254	MG/L	5	105 %R:		80	120
22472	LCSA 9.5.00	BR	C	4.387	MG/L	4	110 %R:		80	120
22472	LCSA 9.5.00	CL	C	41.536	MG/L	40	104 %R:		80	120
22472	LCSA 9.5.00	SO4	C	42.6	MG/L	40	107 %R:		80	120
22505	LCSA 9.7.00	NH3	C	1.029	MG/L	1	103 %R:		80	120
22518	LCSA 9.7.00	TKN	C	2.49	MG/L	2.5	100 %R:		80	120
22548	LCSA 9.7.5	SN	C	286.7	UG/L	300	96 %R:		70	125
22530	LCSA 9.8.00	NO3+	C	1.007	MG/L	1	101 %R:		80	120
22416	LCSA DUP 8.2	AG	C	.10404	MG/L	0.1	104 %R:		80	120
22416	LCSA DUP 8.2	AL	C	2.0703	MG/L	2	104 %R:		80	120
22416	LCSA DUP 8.2	BA	C	2.09834	MG/L	2	105 %R:		80	120
22416	LCSA DUP 8.2	CA	C	2.5594	MG/L	2.5	102 %R:		80	120
22416	LCSA DUP 8.2	CD	C	.10002	MG/L	0.1	100 %R:		80	120
22416	LCSA DUP 8.2	CO	C	1.04172	MG/L	1	104 %R:		80	120

QC Code Legend

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- QUALITY CONTROL REPORT -

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WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
22416	LCSA DUP 8.2	CR	C	1.03424	MG/L	1	103 %R:		80	120
22416	LCSA DUP 8.2	CU	C	1.0469	MG/L	1	105 %R:		80	120
22416	LCSA DUP 8.2	FE	C	2.10598	MG/L	2	105 %R:		80	120
22416	LCSA DUP 8.2	K	C	8.96302	MG/L	10	90 %R:		80	120
22416	LCSA DUP 8.2	MG	C	2.53928	MG/L	2.5	102 %R:		80	120
22416	LCSA DUP 8.2	MN	C	1.01863	MG/L	1	102 %R:		80	120
22416	LCSA DUP 8.2	NA	C	2.88723	MG/L	2.5	115 %R:		80	120
22416	LCSA DUP 8.2	NI	C	1.0545	MG/L	1	105 %R:		80	120
22416	LCSA DUP 8.2	PB	C	1.02992	MG/L	1.1	94 %R:		80	120
22416	LCSA DUP 8.2	V	C	2.01406	MG/L	2	101 %R:		80	120
22416	LCSA DUP 8.2	ZN	C	1.00527	MG/L	1	101 %R:		80	120
22472	LCSA S 9.5.0	S	C	10.728	MG/L	10	107 %R:		80	120
22415	LCSA1 8.30.0	SS	C	124	MG/L	120	103 %R:		80	120
22492	LCSA1 9.1.00	CN	C	.156	MG/L	0.15	104 %R:		90	110
22492	LCSA1 9.6.00	CN	C	.144	MG/L	0.15	96 %R:		90	110
22441	LCSA8.31.00	ALK	C	263.4	MG/L	239	110 %R:		80	120
22444	LCSA8.31.00	TDS	C	275	MG/L	293	94 %R:		80	120
22455	LCSAL 8.30.3	SE	C	.1042	MG/L	0.1	104 %R:		80	120
22479	LCSS 8.28.4B	AS	C	94.7271080	MG/KG	95	100 %R:		50	150
22479	LCSS 8.28.4B	BE	C	123.767526	MG/KG	121	102 %R:		50	150
22479	LCSS 8.28.4B	CD	C	123.399581	MG/KG	123	100 %R:		50	150
22479	LCSS 8.28.4B	MO	C	126.952229	MG/KG	136	93 %R:		50	150
22479	LCSS 8.28.4B	SB	C	11.1652941	MG/KG	19	59 %R:		50	150
22479	LCSS 8.28.4B	TL	C	82.0141811	MG/KG	82.1	100 %R:		50	150
22416	LCSS 8.28A	AG	C	31.3840830	MG/KG	34	92 %R:		70	120
22416	LCSS 8.28A	AL	C	6278.75432	MG/KG	8527	74 %R:		70	120
22416	LCSS 8.28A	BA	C	260.380622	MG/KG	280	93 %R:		70	120
22416	LCSS 8.28A	CA	C	675.356401	MG/KG	653	103 %R:		70	120
22416	LCSS 8.28A	CD	C	112.238754	MG/KG	123	91 %R:		70	120
22416	LCSS 8.28A	CO	C	91.5536332	MG/KG	95	96 %R:		70	120
22416	LCSS 8.28A	CR	C	192.761245	MG/KG	196	98 %R:		70	120
22416	LCSS 8.28A	CU	C	137.602076	MG/KG	150	92 %R:		70	120
22416	LCSS 8.28A	FE	C	23082.7854	MG/KG	25000	92 %R:		70	120
22416	LCSS 8.28A	K	C	1033.70588	MG/KG	917	113 %R:		70	120
22416	LCSS 8.28A	MG	C	1146.28719	MG/KG	1407	81 %R:		70	120
22416	LCSS 8.28A	MN	C	830.435986	MG/KG	900	92 %R:		70	120
22416	LCSS 8.28A	NA	C	1333.08712	PPM	1210	110 %R:		70	120

QC Code Legend

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WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
22416	LCSS 8.28A	NI	C	156.605536	MG/KG	153	102 %R:		70	120
22416	LCSS 8.28A	PB	C	123.404844	MG/KG	131	94 %R:		70	120
22416	LCSS 8.28A	V	C	69.9896193	MG/KG	79	89 %R:		70	120
22416	LCSS 8.28A	ZN	C	188.816608	MG/KG	205	92 %R:		70	120
22479	LCSS 8.30.4C	AS	C	99.3432508	MG/KG	95	105 %R:		50	150
22479	LCSS 8.30.4C	CD	C	126.597809	MG/KG	123	103 %R:		50	150
22479	LCSS 8.30.4C	SB	C	1020.08833	MG/KG	980	104 %R:		50	150
22479	LCSS 8.30.4C	TL	C	79.3074204	MG/KG	82.1	97 %R:		50	150
22452	LCSS 9.1	HG	C	3.52	MG/KG	3.3	107 %R:		65	120
22416	LFB	AL	C	10.97415	MG/L	10	110 %R:		80	120
22479	LFB	AS	C	19.5634	UG/L	20	98 %R:		50	150
22479	LFB	B	C	100.2135	UG/L	100	100 %R:		50	150
22416	LFB	BA	C	10.64315	MG/L	10	106 %R:		80	120
22479	LFB	BE	C	10.4405	UG/L	10	104 %R:		50	150
22416	LFB	CA	C	27.90382	MG/L	25	112 %R:		80	120
22416	LFB	CD	C	1.38593	MG/L	1.25	111 %R:		80	120
22479	LFB	CD	C	9.7036	UG/L	10	97 %R:		50	150
22416	LFB	CO	C	2.76817	MG/L	2.5	111 %R:		80	120
22416	LFB	CR	C	1.10062	MG/L	1	110 %R:		80	120
22416	LFB	CU	C	1.35885	MG/L	1.25	109 %R:		80	120
22416	LFB	FE	C	5.47604	MG/L	5	110 %R:		80	120
22416	LFB	K	C	26.07499	MG/L	25	104 %R:		80	120
22416	LFB	MG	C	27.68013	MG/L	25	111 %R:		80	120
22416	LFB	MN	C	2.75412	MG/L	2.5	110 %R:		80	120
22479	LFB	MO	C	97.1574	UG/L	100	97 %R:		50	150
22416	LFB	NA	C	27.26787	MG/L	25	109 %R:		80	120
22416	LFB	NI	C	2.78102	MG/L	2.5	111 %R:		80	120
22416	LFB	PB	C	2.62573	MG/L	2.5	105 %R:		80	120
22479	LFB	PB	C	9.6532	UG/L	10	97 %R:		50	150
22479	LFB	SB	C	20.058	UG/L	20	100 %R:		50	150
22455	LFB	SE	C	23.72	UG/L	24	99 %R:		70	125
22479	LFB	SI	C	.0977	MG/L	0.1	98 %R:		50	150
22548	LFB	SN	C	19.73	UG/L	19.6	101 %R:		70	125
22479	LFB	SR	C	92.8203	UG/L	100	93 %R:		50	150
22479	LFB	TL	C	9.7431	UG/L	10	97 %R:		50	150
22479	LFB	U	C	97.469	UG/L	100	97 %R:		50	150
22416	LFB	V	C	2.74767	MG/L	2.5	110 %R:		80	120

QC Code Legend

B	Blanks	K	Calibration Checks	S	Spikes
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22416	LFB	ZN	C	2.82065	MG/L	2.5	113	%R:			80	120
22452	LFB1 9.1	HG	C	1.74	UG/L	2	87	%R:			85	115
22452	LFB2 9.1	HG	C	1.93	UG/L	2	97	%R:			85	115
22452	LFB3 9.1	HG	C	1.95	UG/L	2	98	%R:			85	115
22451	MAR00-21397D	P	D	.4432	MG/L		2	%D				20
22451	MAR00-21397S	P	S	.9434	MG/L	0.5	98	%R:			75	125
22452	MAR00-21731D	HG	D	0	MG/L		0	%D	(<5 x MDL)			20
22455	MAR00-21731D	SE	D	.0045	MG/L		50	%D *	(<5 x MDL)			20
22452	MAR00-21731S	HG	S	.0187	MG/L	0.02	94	%R:			50	150
22455	MAR00-21731S	SE	S	.51225	MG/L	0.5	101	%R:			50	150
22416	MAR00-21932D	FE	D	3622.66849	MG/KG		10	%D				20
22416	MAR00-21932D	MN	D	158.288645	MG/KG		2	%D				20
22416	MAR00-21976M	CD	M	53.3911637	MG/KG	54	96	%R:		2 %RPD	80	120
22416	MAR00-21976M	CU	M	529.938577	MG/KG	539	95	%R:		0 %RPD	80	120
22416	MAR00-21976M	NI	M	553.479525	MG/KG	539	100	%R:		1 %RPD	80	120
22416	MAR00-21976M	PB	M	157.868534	MG/KG	162	87	%R:		1 %RPD	80	120
22416	MAR00-21976M	ZN	M	547.071120	MG/KG	539	94	%R:		2 %RPD	80	120
22416	MAR00-21976S	CD	S	52.5915492	MG/KG	54	95	%R:			80	120
22416	MAR00-21976S	CU	S	528.425785	MG/KG	542	94	%R:			80	120
22416	MAR00-21976S	NI	S	545.438786	MG/KG	542	98	%R:			80	120
22416	MAR00-21976S	PB	S	158.904658	MG/KG	163	87	%R:			80	120
22416	MAR00-21976S	ZN	S	535.280606	MG/KG	542	91	%R:			80	120
22416	MAR00-21977D	AG	D	24.13	UG/L		9	%D	(<5 x MDL)			20
22416	MAR00-21977D	AL	D	31236.44	UG/L		0	%D				20
22416	MAR00-21977D	BA	D	644.84	UG/L		2	%D				20
22416	MAR00-21977D	CA	D	45.46057	MG/L		2	%D				20
22416	MAR00-21977D	CO	D	9.11	UG/L		49	%D *	(<5 x MDL)			20
22416	MAR00-21977D	CR	D	17.05	UG/L		11	%D	(<5 x MDL)			20
22416	MAR00-21977D	CU	D	27.2	UG/L		5	%D	(<5 x MDL)			20
22416	MAR00-21977D	FE	D	18006.17	UG/L		1	%D				20
22416	MAR00-21977D	K	D	16.16091	MG/L		2	%D				20
22416	MAR00-21977D	MG	D	8.69539	MG/L		1	%D				20
22416	MAR00-21977D	MN	D	1566.14	UG/L		0	%D				20
22416	MAR00-21977D	NA	D	8.90128	MG/L		3	%D				20
22416	MAR00-21977D	NI	D	20.11	UG/L		11	%D	(<5 x MDL)			20
22416	MAR00-21977D	V	D	33.88	UG/L		3	%D	(<5 x MDL)			20
22416	MAR00-21977D	ZN	D	105.16	UG/L		1	%D				20

QC Code Legend

B	Blanks	K	Calibration Checks	S	Spikes
C	Control Samples	M	Matrix Spike Duplicates		
D	Duplicates	R	Surrogates		

PLI # 008096

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- QUALITY CONTROL REPORT -

Printed: 9/14/2000

WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1			-- QC Calculations -- QC2	Lower Limit	Upper Limit
22416	MAR00-21978M	AL	M	11342	UG/L	10000	113	%R:		1 %RPD	80	120
22416	MAR00-21978M	BA	M	10853.52	UG/L	10000	108	%R:		0 %RPD	80	120
22416	MAR00-21978M	CA	M	37.6791	MG/L	25	114	%R:		1 %RPD	80	120
22416	MAR00-21978M	CO	M	2916.6	UG/L	2500	117	%R:		1 %RPD	80	120
22416	MAR00-21978M	CR	M	1161.06	UG/L	1000	116	%R:		1 %RPD	80	120
22416	MAR00-21978M	CU	M	1390.92	UG/L	1250	111	%R:		0 %RPD	80	120
22416	MAR00-21978M	FE	M	5718.23	UG/L	5000	114	%R:		1 %RPD	80	120
22416	MAR00-21978M	K	M	28.65536	MG/L	25	104	%R:		2 %RPD	80	120
22416	MAR00-21978M	MG	M	31.46306	MG/L	25	113	%R:		1 %RPD	80	120
22416	MAR00-21978M	MN	M	2884.05	UG/L	2500	115	%R:		1 %RPD	80	120
22416	MAR00-21978M	NA	M	31.976	MG/L	25	110	%R:		1 %RPD	80	120
22416	MAR00-21978M	NI	M	2926.93	UG/L	2500	117	%R:		1 %RPD	80	120
22416	MAR00-21978M	V	M	2851.59	UG/L	2500	114	%R:		1 %RPD	80	120
22416	MAR00-21978M	ZN	M	2986.32	UG/L	2500	119	%R:		1 %RPD	80	120
22416	MAR00-21978S	AL	S	11444.42	UG/L	10000	114	%R:			80	120
22416	MAR00-21978S	BA	S	10896.6	UG/L	10000	109	%R:			80	120
22416	MAR00-21978S	CA	S	37.9346	MG/L	25	115	%R:			80	120
22416	MAR00-21978S	CO	S	2938.08	UG/L	2500	118	%R:			80	120
22416	MAR00-21978S	CR	S	1168.74	UG/L	1000	117	%R:			80	120
22416	MAR00-21978S	CU	S	1388.01	UG/L	1250	111	%R:			80	120
22416	MAR00-21978S	FE	S	5759.31	UG/L	5000	115	%R:			80	120
22416	MAR00-21978S	K	S	29.33441	MG/L	25	106	%R:			80	120
22416	MAR00-21978S	MG	S	31.75418	MG/L	25	115	%R:			80	120
22416	MAR00-21978S	MN	S	2901.07	UG/L	2500	116	%R:			80	120
22416	MAR00-21978S	NA	S	32.23397	MG/L	25	111	%R:			80	120
22416	MAR00-21978S	NI	S	2956.29	UG/L	2500	118	%R:			80	120
22416	MAR00-21978S	V	S	2870.1	UG/L	2500	115	%R:			80	120
22416	MAR00-21978S	ZN	S	3009.28	UG/L	2500	120	%R:			80	120
22436	MAR00-21999D	F	D	2.1836	MG/L		9	%D				20
22436	MAR00-21999S	F	S	5.9136	MG/L	6	59	%R:	*		75	125
22416	MAR00-22040M	FE	M	2139.98	UG/L	2000	86	%R:		3 %RPD	80	120
22416	MAR00-22040S	FE	S	2196.06	UG/L	2000	89	%R:			80	120
22416	MAR00-22156D	AG	D	9.69	UG/L		68	%D	* (<5 x MDL)			20
22416	MAR00-22156D	AL	D	73615.9	UG/L		14	%D				20
22416	MAR00-22156D	BA	D	1274.12	UG/L		1	%D				20
22416	MAR00-22156D	CA	D	38.86788	MG/L		1	%D				20
22416	MAR00-22156D	CO	D	38.79	UG/L		8	%D	(<5 x MDL)			20

QC Code Legend

B	Blanks	K	Calibration Checks	S	Spikes
C	Control Samples	M	Matrix Spike Duplicates		
D	Duplicates	R	Surrogates		

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WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1		-- QC Calculations -- QC2	Lower Limit	Upper Limit
22416	MAR00-22156D	CR	D	43.29	UG/L		5 %D	(<5 x MDL)			20
22416	MAR00-22156D	CU	D	65.29	UG/L		4 %D				20
22416	MAR00-22156D	FE	D	63890.6	UG/L		18 %D				20
22416	MAR00-22156D	K	D	16.70415	MG/L		9 %D				20
22416	MAR00-22156D	MG	D	17.34436	MG/L		5 %D				20
22416	MAR00-22156D	MN	D	2548.74	UG/L		0 %D				20
22416	MAR00-22156D	NA	D	6.6296	MG/L		2 %D				20
22416	MAR00-22156D	NI	D	60.79	UG/L		5 %D	(<5 x MDL)			20
22416	MAR00-22156D	V	D	118.51	UG/L		13 %D				20
22416	MAR00-22156D	ZN	D	204.01	UG/L		10 %D				20
22441	MAR00-22230D	ALK	D	35.1	MG/L		0 %D				20
22441	MAR00-22230S	ALK	S	263.4	MG/L	239	96 %R:			75	125
22452	MAR00-22235D	HG	D	.046	UG/L		12 %D	(<5 x MDL)			20
22452	MAR00-22236M	HG	M	1.85	UG/L	2	91 %R:		1 %RPD	75	125
22452	MAR00-22236S	HG	S	1.86	UG/L	2	92 %R:			75	125
22441	MAR00-22240D	ALK	D	33.2	MG/L		0 %D				20
22441	MAR00-22240S	ALK	S	253.7	MG/L	239	92 %R:			75	125
22472	MAR00-22262D	CL	D	38.016	MG/L		0 %D				20
22530	MAR00-22262D	NO3+	D	8.915	MG/L		2 %D				20
22472	MAR00-22262D	SO4	D	19.94	MG/L		1 %D	(<5 x MDL)			20
22451	MAR00-22287D	P	D	.3356	MG/L		2 %D				20
22451	MAR00-22287S	P	S	.8356	MG/L	0.5	101 %R:			75	125
22479	MAR00-22311M	AS	M	15.8385714	MG/KG	16	95 %R:		0 %RPD	75	125
22479	MAR00-22311M	BE	M	8.20406099	MG/KG	8	101 %R:		0 %RPD	75	125
22479	MAR00-22311M	CD	M	7.79414125	MG/KG	8	95 %R:		1 %RPD	75	125
22479	MAR00-22311M	MO	M	75.3282343	MG/KG	80	92 %R:		0 %RPD	75	125
22479	MAR00-22311M	SB	M	4.51834051	MG/KG	5.4	79 %R:		0 %RPD	75	125
22479	MAR00-22311M	TL	M	7.56478330	MG/KG	8	93 %R:		0 %RPD	75	125
22479	MAR00-22311S	AS	S	15.86336	MG/KG	16	95 %R:			75	125
22479	MAR00-22311S	BE	S	8.218976	MG/KG	8	101 %R:			75	125
22479	MAR00-22311S	CD	S	7.860432	MG/KG	8	96 %R:			75	125
22479	MAR00-22311S	MO	S	75.609744	MG/KG	80	93 %R:			75	125
22479	MAR00-22311S	SB	S	4.51323275	MG/KG	5.4	79 %R:			75	125
22479	MAR00-22311S	TL	S	7.547936	MG/KG	8	93 %R:			75	125
22472	MAR00-22314S	CL	S	608.8	MG/L	400	90 %R:			80	120
22472	MAR00-22314S	SO4	S	620.45	MG/L	400	87 %R:			80	120
22530	MAR00-22322D	NO3+	D	.454	MG/L		2 %D				20

QC Code Legend

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- QUALITY CONTROL REPORT -

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22530	MAR00-22322S	NO3+	S	1.452	MG/L	1	101	%R:			75	125
22518	MAR00-22323D	TKN	D	.371	MG/L		22	%D *	(<5 x MDL)			20
22518	MAR00-22323S	TKN	S	2.764	MG/L	2.5	99	%R:			75	125
22530	MAR00-22330D	NO3+	D	6.89	MG/L		200	%D *				20
22444	MAR00-22330D	TDS	D	57	MG/L		31	%D *	(<5 x MDL)			20
22465	MAR00-22333D	DOC	D	1461	MG/L		3	%D				20
22452	MAR00-22386D	HG	D	.05	UG/L		0	%D	(<5 x MDL)			20
22441	MAR00-22428D	ALK	D	204.9	MG/L		2	%D				20
22436	MAR00-22428D	F	D	.258	MG/L		2	%D	(<5 x MDL)			20
22452	MAR00-22428M	HG	M	2.03	UG/L	2	99	%R:		13 %RPD	75	125
22441	MAR00-22428S	ALK	S	234.1	MG/L	239	11	%R: *			75	125
22436	MAR00-22428S	F	S	1.02	MG/L	1	76	%R:			75	125
22452	MAR00-22428S	HG	S	1.78	UG/L	2	87	%R:			75	125
22416	MAR00-22431D	AG	D	0	MG/KG		200	%D *	(<5 x MDL)			20
22416	MAR00-22431D	AL	D	19853.8835	MG/KG		2	%D				20
22479	MAR00-22431D	AS	D	5.05488636	MG/KG		5	%D	(<5 x MDL)			20
22416	MAR00-22431D	BA	D	514.191780	MG/KG		1	%D				20
22479	MAR00-22431D	BE	D	1.85666666	MG/KG		5	%D	(<5 x MDL)			20
22416	MAR00-22431D	CA	D	14607.6232	MG/KG		10	%D				20
22479	MAR00-22431D	CD	D	0	MG/KG		0	%D	(<5 x MDL)			20
22416	MAR00-22431D	CO	D	7.57534246	MG/KG		6	%D	(<5 x MDL)			20
22416	MAR00-22431D	CR	D	12.0136986	MG/KG		7	%D	(<5 x MDL)			20
22416	MAR00-22431D	CU	D	21.5273972	MG/KG		0	%D	(<5 x MDL)			20
22416	MAR00-22431D	FE	D	15987.9246	MG/KG		8	%D				20
22416	MAR00-22431D	K	D	3999.58904	MG/KG		23	%D *	(<5 x MDL)			20
22416	MAR00-22431D	MG	D	3110.07534	MG/KG		6	%D				20
22416	MAR00-22431D	MN	D	1853.61643	MG/KG		8	%D				20
22416	MAR00-22431D	NA	D	654.869863	MG/KG		5	%D	(<5 x MDL)			20
22416	MAR00-22431D	NI	D	16.3150684	MG/KG		37	%D *	(<5 x MDL)			20
22416	MAR00-22431D	PB	D	48.7671232	MG/KG		18	%D	(<5 x MDL)			20
22479	MAR00-22431D	SB	D	.214178082	MG/KG		10	%D	(<5 x MDL)			20
22479	MAR00-22431D	TL	D	.384545454	MG/KG		5	%D	(<5 x MDL)			20
22416	MAR00-22431D	V	D	26.0342465	MG/KG		2	%D	(<5 x MDL)			20
22416	MAR00-22431D	ZN	D	99.9657534	MG/KG		11	%D				20
22492	MAR00-22491S	CN	S	.207	MG/L	0.2	103	%R:			75	125
22530	MAR00-22512D	NO3+	D	2.308	MG/L		1	%D				20
22530	MAR00-22512S	NO3+	S	2.954	MG/L	1	67	%R: *			75	125

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WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1			-- QC Calculations -- QC2	Lower Limit	Upper Limit
22451	MAR00-22517D	P	D	1.051	MG/L		3	%D				20
22451	MAR00-22517S	P	S	1.4782	MG/L	0.5	91	%R:			75	125
22416	MAR00-22526D	AG	D	0	UG/L		0	%D		(<5 x MDL)		20
22416	MAR00-22526D	AL	D	10435.28	UG/L		17	%D				20
22479	MAR00-22526D	AS	D	4.9748	UG/L		21	%D	*	(<5 x MDL)		20
22479	MAR00-22526D	AS	D	7.3195	UG/L		17	%D		(<5 x MDL)		20
22479	MAR00-22526D	B	D	101.4943	UG/L		45	%D	*	(<5 x MDL)		20
22479	MAR00-22526D	B	D	65.4164	UG/L		2	%D		(<5 x MDL)		20
22416	MAR00-22526D	BA	D	434.94	UG/L		7	%D				20
22479	MAR00-22526D	BE	D	.4868	UG/L		24	%D	*	(<5 x MDL)		20
22479	MAR00-22526D	BE	D	0	UG/L		200	%D	*	(<5 x MDL)		20
22416	MAR00-22526D	CA	D	47.12513	MG/L		6	%D				20
22479	MAR00-22526D	CD	D	0	UG/L		0	%D		(<5 x MDL)		20
22479	MAR00-22526D	CD	D	.2815	UG/L		5	%D		(<5 x MDL)		20
22416	MAR00-22526D	CO	D	4.17	UG/L		91	%D	*	(<5 x MDL)		20
22416	MAR00-22526D	CR	D	8.88	UG/L		13	%D		(<5 x MDL)		20
22416	MAR00-22526D	CU	D	17.31	UG/L		8	%D		(<5 x MDL)		20
22416	MAR00-22526D	FE	D	6757.54	UG/L		7	%D				20
22416	MAR00-22526D	K	D	12.22244	MG/L		20	%D				20
22479	MAR00-22526D	LI	D	15.8953	UG/L		81	%D	*	(<5 x MDL)		20
22479	MAR00-22526D	LI	D	12.4717	UG/L		101	%D	*	(<5 x MDL)		20
22416	MAR00-22526D	MG	D	7.89426	MG/L		7	%D				20
22416	MAR00-22526D	MN	D	1509.28	UG/L		6	%D				20
22479	MAR00-22526D	MO	D	3.7831	UG/L		9	%D		(<5 x MDL)		20
22479	MAR00-22526D	MO	D	3.2782	UG/L		23	%D	*	(<5 x MDL)		20
22416	MAR00-22526D	NA	D	7.46882	MG/L		8	%D				20
22416	MAR00-22526D	NI	D	12.76	UG/L		24	%D	*	(<5 x MDL)		20
22479	MAR00-22526D	PB	D	0	UG/L		0	%D		(<5 x MDL)		20
22479	MAR00-22526D	PB	D	20.8036	UG/L		1	%D				20
22479	MAR00-22526D	SB	D	1.2795	UG/L		44	%D	*	(<5 x MDL)		20
22479	MAR00-22526D	SB	D	.462	UG/L		56	%D	*	(<5 x MDL)		20
22455	MAR00-22526D	SE	D	.4	UG/L		74	%D	*	(<5 x MDL)		20
22479	MAR00-22526D	SI	D	13.7053	MG/L		55	%D	*			20
22479	MAR00-22526D	SI	D	25.0585	MG/L		4	%D				20
22548	MAR00-22526D	SN	D	.55	UG/L		9	%D		(<5 x MDL)		20
22479	MAR00-22526D	SR	D	245.9815	UG/L		16	%D				20
22479	MAR00-22526D	SR	D	294.6481	UG/L		2	%D				20

QC Code Legend

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22479	MAR00-22526D	TL	D	.4587	UG/L		14	%D	(<5 x MDL)			20
22479	MAR00-22526D	TL	D	.0707	UG/L		153	%D *	(<5 x MDL)			20
22479	MAR00-22526D	U	D	3.0834	UG/L		7	%D	(<5 x MDL)			20
22479	MAR00-22526D	U	D	1.8607	UG/L		56	%D *	(<5 x MDL)			20
22416	MAR00-22526D	V	D	15.71	UG/L		1	%D	(<5 x MDL)			20
22416	MAR00-22526D	ZN	D	42	UG/L		12	%D	(<5 x MDL)			20
22472	MAR00-22527D	BR	D	0	MG/L		0	%D	(<5 x MDL)			20
22472	MAR00-22527D	CL	D	28.131	MG/L		0	%D				20
22472	MAR00-22527D	SO4	D	187.75	MG/L		1	%D	(<5 x MDL)			20
22416	MAR00-22527M	AG	M	100.24	UG/L	100	100	%R:		3 %RPD	80	120
22479	MAR00-22527M	AS	M	22.7177	UG/L	20	104	%R:		3 %RPD	75	125
22479	MAR00-22527M	B	M	234.3948	UG/L	100	108	%R:		7 %RPD	75	125
22479	MAR00-22527M	BE	M	11.16	UG/L	10	112	%R:		8 %RPD	75	125
22416	MAR00-22527M	CA	M	113.26983	UG/L	2.5	107	%R:		0 %RPD	80	120
22479	MAR00-22527M	CD	M	10.0746	UG/L	10	102	%R:		2 %RPD	75	125
22416	MAR00-22527M	CR	M	935.42	UG/L	1000	93	%R:		0 %RPD	80	120
22416	MAR00-22527M	CU	M	975.45	UG/L	1000	98	%R:		0 %RPD	80	120
22416	MAR00-22527M	K	M	13.71634	UG/L	10	86	%R:		13 %RPD	80	120
22479	MAR00-22527M	LI	M	10101	UG/L	10000	100	%R:		8 %RPD	75	125
22416	MAR00-22527M	MG	M	18.50988	UG/L	2.5	92	%R:		1 %RPD	80	120
22416	MAR00-22527M	NI	M	1005.85	UG/L	1000	101	%R:		1 %RPD	80	120
22479	MAR00-22527M	PB	M	9.897	UG/L	10	105	%R:		8 %RPD	75	125
22479	MAR00-22527M	SB	M	20.4502	UG/L	20	101	%R:		6 %RPD	75	125
22455	MAR00-22527M	SE	M	15.24	UG/L	20	76	%R: *		3 %RPD	80	120
22479	MAR00-22527M	SI	M	22.3013	MG/L	4	137	%R: *		7 %RPD	75	125
22479	MAR00-22527M	SR	M	916.3158	UG/L	100	129	%R: *		5 %RPD	75	125
22479	MAR00-22527M	TL	M	10.3313	UG/L	10	102	%R:		4 %RPD	75	125
22416	MAR00-22527M	ZN	M	918.04	UG/L	1000	91	%R:		0 %RPD	80	120
22416	MAR00-22527S	AG	S	97.37	UG/L	100	97	%R:			80	120
22479	MAR00-22527S	AS	S	22.0379	UG/L	20	101	%R:			75	125
22479	MAR00-22527S	B	S	217.7004	UG/L	100	92	%R:			75	125
22479	MAR00-22527S	BE	S	10.2729	UG/L	10	103	%R:			75	125
22472	MAR00-22527S	BR	S	4.464	MG/L	4	112	%R:			80	120
22416	MAR00-22527S	CA	S	112.93263	UG/L	2.5	94	%R:			80	120
22479	MAR00-22527S	CD	S	9.8557	UG/L	10	100	%R:			75	125
22472	MAR00-22527S	CL	S	63.669	MG/L	40	89	%R:			80	120
22416	MAR00-22527S	CR	S	932.69	UG/L	1000	93	%R:			80	120

QC Code Legend

B	Blanks	K	Calibration Checks	S	Spikes
C	Control Samples	M	Matrix Spike Duplicates		
D	Duplicates	R	Surrogates		

PLI # 008096

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Aqua Tech Environmental Laboratories, Inc.

- QUALITY CONTROL REPORT -

Printed: 9/14/2000

WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1			-- QC Calculations -- QC2	Lower Limit	Upper Limit
22416	MAR00-22527S	CU	S	975.45	UG/L	1000	98	%R:			80	120
22416	MAR00-22527S	K	S	15.61767	UG/L	10	105	%R:			80	120
22479	MAR00-22527S	LI	S	10918	UG/L	10000	109	%R:			75	125
22416	MAR00-22527S	MG	S	18.60372	UG/L	2.5	95	%R:			80	120
22416	MAR00-22527S	NI	S	992.35	UG/L	1000	99	%R:			80	120
22479	MAR00-22527S	PB	S	9.1237	UG/L	10	97	%R:			75	125
22479	MAR00-22527S	SB	S	19.2661	UG/L	20	95	%R:			75	125
22455	MAR00-22527S	SE	S	15.64	UG/L	20	78	%R:	*		80	120
22479	MAR00-22527S	SI	S	20.8264	MG/L	4	100	%R:			75	125
22472	MAR00-22527S	SO4	S	549.97	MG/L	400	91	%R:			80	120
22479	MAR00-22527S	SR	S	872.404	UG/L	100	85	%R:			75	125
22479	MAR00-22527S	TL	S	9.9089	UG/L	10	97	%R:			75	125
22416	MAR00-22527S	ZN	S	916.44	UG/L	1000	91	%R:			80	120
22465	MAR00-22530D	TOC	D	3.669	MG/L		4	%D				20
22465	MAR00-22530S	TOC	S	8.476	MG/L	5	93	%R:			75	125
22452	MAR00-22534D	HG	D	1.39692307	MG/KG		26	%D	*	(<5 x MDL)		20
22505	MAR00-22535D	NH3	D	.078	MG/L		1	%D		(<5 x MDL)		20
22505	MAR00-22535S	NH3	S	1.073	MG/L	1	100	%R:			75	125
22518	MAR00-22552D	TKN	D	1.778	MG/L		9	%D		(<5 x MDL)		20
22518	MAR00-22552S	TKN	S	5.13	MG/L	5	64	%R:	*		75	125
22416	MAR00-22557D	CD	D	2.33690360	PPM		135	%D	*	(<5 x MDL)		20
22416	MAR00-22557D	CR	D	.116845180	PPM		58	%D	*	(<5 x MDL)		20
22416	MAR00-22557D	PB	D	3.09737098	PPM		0	%D		(<5 x MDL)		20
22416	MAR00-22567M	CD	M	39.6211972	PPM	49	81	%R:		6 %RPD	80	120
22416	MAR00-22567M	CR	M	404.681059	PPM	491	82	%R:		7 %RPD	80	120
22416	MAR00-22567M	PB	M	118.866535	PPM	147	78	%R:	*	5 %RPD	80	120
22416	MAR00-22567S	CD	S	37.2924901	PPM	49	76	%R:	*		80	120
22416	MAR00-22567S	CR	S	379.167984	PPM	494	77	%R:	*		80	120
22416	MAR00-22567S	PB	S	113.164031	PPM	148	74	%R:	*		80	120
22452	MAR00-22569S	HG	S	.0186	MG/L	0.02	91	%R:			50	150
22455	MAR00-22569S	SE	S	.47525	MG/L	0.5	88	%R:			50	150
22530	MAR00-22588D	NO3+	D	.797	MG/L		5	%D				20
22530	MAR00-22588S	NO3+	S	1.72	MG/L	1	89	%R:			75	125
22518	MAR00-22597D	TKN	D	1.261	MG/L		5	%D		(<5 x MDL)		20
22518	MAR00-22597S	TKN	S	3.001	MG/L	2.5	67	%R:	*		75	125
22505	MAR00-22612D	NH3	D	.093	MG/L		7	%D		(<5 x MDL)		20
22505	MAR00-22612S	NH3	S	1.031	MG/L	1	94	%R:			75	125

QC Code Legend

B	Blanks	K	Calibration Checks	S	Spikes
C	Control Samples	M	Matrix Spike Duplicates		
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- QUALITY CONTROL REPORT -

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WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1			-- QC Calculations -- QC2	Lower Limit	Upper Limit
22451	MAR00-22614D	P	D	.1898	MG/L		7	%D				20
22451	MAR00-22614S	P	S	.6838	MG/L	0.5	96	%R:			75	125
22530	MAR00-22620D	NO3+	D	0	MG/L		200	%D *	(<5 x MDL)			20
22530	MAR00-22620S	NO3+	S	1.031	MG/L	1	102	%R:			75	125
22436	MAR00-22647D	F	D	.175	MG/L		1	%D				20
22436	MAR00-22647S	F	S	.961	MG/L	1	79	%R:			75	125
22472	MAR00-22653D	CL	D	89.375	MG/L		0	%D	(<5 x MDL)			20
22505	MAR00-22653D	NH3	D	.163	MG/L		1	%D	(<5 x MDL)			20
22530	MAR00-22653D	NO3+	D	.076	MG/L		8	%D	(<5 x MDL)			20
22472	MAR00-22653D	SO4	D	31.847	MG/L		1	%D				20
22472	MAR00-22653M	CL	M	259.7	MG/L	200	85	%R:		0 %RPD	80	120
22505	MAR00-22653M	NH3	M	1.125	MG/L	1	96	%R:		3 %RPD	75	125
22530	MAR00-22653M	NO3+	M	1.148	MG/L	1	108	%R:		2 %RPD	75	125
22472	MAR00-22653M	SO4	M	67.24	MG/L	40	88	%R:		1 %RPD	80	120
22472	MAR00-22653S	CL	S	260.435	MG/L	200	85	%R:			80	120
22505	MAR00-22653S	NH3	S	1.097	MG/L	1	93	%R:			75	125
22530	MAR00-22653S	NO3+	S	1.168	MG/L	1	110	%R:			75	125
22472	MAR00-22653S	SO4	S	66.651	MG/L	40	86	%R:			80	120
22492	MAR00-22684S	CN	S	.189	MG/L	0.2	95	%R:			75	125
22530	MAR00-22696D	NO3+	D	.258	MG/L		4	%D				20
22530	MAR00-22696S	NO3+	S	1.311	MG/L	1	104	%R:			75	125
22518	MAR00-22737D	TKN	D	1.042	MG/L		6	%D	(<5 x MDL)			20
22518	MAR00-22737S	TKN	S	3.208	MG/L	2.5	89	%R:			75	125
22530	MAR00-22747D	NO3+	D	1.181	MG/L		0	%D				20
22530	MAR00-22747S	NO3+	S	2.114	MG/L	1	93	%R:			75	125
22505	MAR00-22761D	NH3	D	.062	MG/L		18	%D	(<5 x MDL)			20
22505	MAR00-22761S	NH3	S	1.11	MG/L	1	104	%R:			75	125
22492	MAR00-22805S	CN	S	.198	MG/L	0.2	99	%R:			75	125
22472	MAR00-22835D	CL	D	6.433	MG/L		35	%D *	(<5 x MDL)			20
22472	MAR00-22835D	SO4	D	80.295	MG/L		0	%D	(<5 x MDL)			20
22472	MAR00-22835M	CL	M	44.163	MG/L	40	87	%R:		1 %RPD	80	120
22472	MAR00-22835M	SO4	M	255.03	MG/L	200	87	%R:		0 %RPD	80	120
22472	MAR00-22835S	CL	S	44.49	MG/L	40	88	%R:			80	120
22472	MAR00-22835S	SO4	S	256.075	MG/L	200	88	%R:			80	120
22548	MAR00-23016D	SN	D	0	UG/L		200	%D *	(<5 x MDL)			20
22548	MAR00-23017M	SN	M	281.95	UG/L	300	94	%R:		3 %RPD	80	120
22548	MAR00-23017S	SN	S	290	UG/L	300	97	%R:			80	120

QC Code Legend

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- QUALITY CONTROL REPORT -

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WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
22465	METH BLK 9.1	TOC	C	.2156	MG/L					
22436	MthBlk 8.31.	F	C	.0606	MG/L					
22472	MthBlk 9.5.0	BR	C	0	MG/L					
22472	MthBlk 9.5.0	CL	C	0	MG/L					
22472	MthBlk 9.5.0	SO4	C	0	MG/L					
22505	MthBlk 9.7.0	NH3	C	.02	MG/L					
22530	MthBlk 9.8.0	NO3+	C	0	MG/L					
22530	NO2 CHK	NO3+	C	2.96	MG/L	3	99 %R:		95	105
22416	OIL 8.24A	CD	C	37.9845150	PPM	41	93 %R:		70	120
22416	OIL 8.24A	CR	C	401.129584	PPM	407	99 %R:		70	120
22416	OIL 8.24A	PB	C	112.221678	PPM	122	92 %R:		70	120
22416	OIL 8.30A	CD	C	44.3375858	PPM	49	90 %R:		70	120
22416	OIL 8.30A	CR	C	451.344455	PPM	491	92 %R:		70	120
22416	OIL 8.30A	PB	C	125.863591	PPM	147	86 %R:		70	120
22455	PBL 8.30.3	SE	C	-.0002	MG/L					
22416	PBS 8.24A	CD	C	.00022	MG/L					
22416	PBS 8.24A	CR	C	.00095	MG/L		0			
22416	PBS 8.24A	PB	C	-.00181	MG/L					
22479	PBS 8.28.4A	SB	C	1.4384	UG/L					
22479	PBS 8.28.4B	AS	C	.7576	UG/L					
22479	PBS 8.28.4B	BE	C	-.0986	UG/L					
22479	PBS 8.28.4B	CD	C	-.1157	UG/L					
22479	PBS 8.28.4B	MO	C	9.2359	UG/L					
22479	PBS 8.28.4B	TL	C	-.0614	UG/L					
22416	PBS 8.28A	AG	C	.0043	MG/L					
22416	PBS 8.28A	AL	C	-.00956	MG/L					
22416	PBS 8.28A	BA	C	.00086	MG/L					
22416	PBS 8.28A	CA	C	.06764	MG/L					
22416	PBS 8.28A	CD	C	.00013	MG/L		0			
22416	PBS 8.28A	CO	C	.00045	MG/L					
22416	PBS 8.28A	CR	C	.00071	MG/L					
22416	PBS 8.28A	CU	C	-.00145	MG/L					
22416	PBS 8.28A	FE	C	.01093	MG/L					
22416	PBS 8.28A	K	C	-.54363	MG/L					
22416	PBS 8.28A	MG	C	-.03921	MG/L		0			
22416	PBS 8.28A	MN	C	-.00296	MG/L					
22416	PBS 8.28A	NA	C	.13987	MG/L					

QC Code Legend

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C	Control Samples	M	Matrix Spike Duplicates		
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WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
22416	PBS 8.28A	NI	C	.00547	MG/L					
22416	PBS 8.28A	PB	C	-.00529	MG/L					
22416	PBS 8.28A	V	C	-.0026	MG/L					
22416	PBS 8.28A	ZN	C	.00587	MG/L		0			
22479	PBS 8.30.4C	AS	C	-2.7767	UG/L					
22479	PBS 8.30.4C	CD	C	-.1005	UG/L					
22479	PBS 8.30.4C	SB	C	.538	UG/L					
22479	PBS 8.30.4C	TL	C	.1728	UG/L					
22416	PBS 8.30A	CD	C	.00105	MG/L					
22416	PBS 8.30A	CR	C	.00294	MG/L					
22416	PBS 8.30A	PB	C	.03537	MG/L					
22452	PBS 9.1	HG	C	.077	UG/L					
22451	PBW	P	C	0	MG/L		0 %R: *			
22416	PBW 8.24.2	AG	C	.00502	MG/L					
22416	PBW 8.24.2	AL	C	-.02947	MG/L					
22416	PBW 8.24.2	BA	C	.00039	MG/L		0			
22416	PBW 8.24.2	CA	C	.04752	MG/L					
22416	PBW 8.24.2	CD	C	-.00083	MG/L					
22416	PBW 8.24.2	CO	C	-.00159	MG/L					
22416	PBW 8.24.2	CR	C	-.00028	MG/L					
22416	PBW 8.24.2	CU	C	.00583	MG/L					
22416	PBW 8.24.2	FE	C	.01415	MG/L		0			
22416	PBW 8.24.2	K	C	.81446	MG/L					
22416	PBW 8.24.2	MG	C	-.00282	MG/L					
22416	PBW 8.24.2	MN	C	-.00101	MG/L					
22416	PBW 8.24.2	NA	C	.16147	MG/L					
22416	PBW 8.24.2	NI	C	.00547	MG/L					
22416	PBW 8.24.2	PB	C	.00707	MG/L		0			
22416	PBW 8.24.2	V	C	-.00065	MG/L					
22416	PBW 8.24.2	ZN	C	.00486	MG/L					
22416	PBW 8.25.2	AG	C	.00359	MG/L					
22416	PBW 8.25.2	AL	C	-.02493	MG/L					
22416	PBW 8.25.2	BA	C	.00039	MG/L					
22416	PBW 8.25.2	CA	C	.02176	MG/L		0			
22416	PBW 8.25.2	CD	C	-.00074	MG/L					
22416	PBW 8.25.2	CO	C	.00045	MG/L					
22416	PBW 8.25.2	CR	C	.00219	MG/L					

QC Code Legend

B	Blanks	K	Calibration Checks	S	Spikes
C	Control Samples	M	Matrix Spike Duplicates		
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WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
22416	PBW 8.25.2	CU	C	.00729	MG/L					
22416	PBW 8.25.2	FE	C	.03951	MG/L					
22416	PBW 8.25.2	K	C	.13541	MG/L		0			
22416	PBW 8.25.2	MG	C	-.01795	MG/L					
22416	PBW 8.25.2	MN	C	-.0015	MG/L					
22416	PBW 8.25.2	NA	C	.09751	MG/L					
22416	PBW 8.25.2	NI	C	.00812	MG/L					
22416	PBW 8.25.2	PB	C	.01412	MG/L					
22416	PBW 8.25.2	V	C	-.00026	MG/L		0			
22416	PBW 8.25.2	ZN	C	.00221	MG/L					
22416	PBW 8.29.2	AG	C	.00072	MG/L					
22416	PBW 8.29.2	AL	C	-.04194	MG/L					
22416	PBW 8.29.2	BA	C	.00086	MG/L					
22416	PBW 8.29.2	CA	C	.05255	MG/L					
22416	PBW 8.29.2	CD	C	.00033	MG/L		0			
22416	PBW 8.29.2	CO	C	-.00108	MG/L					
22416	PBW 8.29.2	CR	C	.00393	MG/L					
22416	PBW 8.29.2	CU	C	.00729	MG/L					
22416	PBW 8.29.2	FE	C	.01558	MG/L					
22416	PBW 8.29.2	K	C	-.54363	MG/L					
22416	PBW 8.29.2	MG	C	-.01494	MG/L					
22416	PBW 8.29.2	MN	C	-.00149	MG/L					
22416	PBW 8.29.2	NA	C	.13436	MG/L					
22416	PBW 8.29.2	NI	C	.01046	MG/L					
22416	PBW 8.29.2	PB	C	.00003	MG/L					
22416	PBW 8.29.2	V	C	-.00152	MG/L					
22416	PBW 8.29.2	ZN	C	.0022	MG/L					
22416	PBW 8.30.2	AG	C	-.00213	MG/L					
22416	PBW 8.30.2	AL	C	-.08958	MG/L					
22416	PBW 8.30.2	BA	C	-.00006	MG/L					
22416	PBW 8.30.2	CA	C	.01821	MG/L					
22416	PBW 8.30.2	CD	C	.00001	MG/L					
22416	PBW 8.30.2	CO	C	-.00056	MG/L					
22416	PBW 8.30.2	CR	C	.00046	MG/L					
22416	PBW 8.30.2	CU	C	-.00291	MG/L					
22416	PBW 8.30.2	FE	C	.00343	MG/L					
22416	PBW 8.30.2	K	C	.54284	MG/L					

QC Code Legend

B	Blanks	K	Calibration Checks	S	Spikes
C	Control Samples	M	Matrix Spike Duplicates		
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WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
22416	PBW 8.30.2	MG	C	-.0089	MG/L					
22416	PBW 8.30.2	MN	C	-.00197	MG/L					
22416	PBW 8.30.2	NA	C	.06016						
22416	PBW 8.30.2	NI	C	-.00009	MG/L					
22416	PBW 8.30.2	PB	C	-.01224	MG/L					
22416	PBW 8.30.2	V	C	-.00377	MG/L					
22416	PBW 8.30.2	ZN	C	.0003	MG/L					
22436	PBW 8.31.00	F	C	1.7	MG/L					
22479	PBW 8.31.3	AS	C	.4051	UG/L					
22479	PBW 8.31.3	B	C	10.9985	UG/L					
22479	PBW 8.31.3	BE	C	-.0406	UG/L					
22479	PBW 8.31.3	CD	C	-.1018	UG/L					
22479	PBW 8.31.3	LI	C	.8351	UG/L					
22479	PBW 8.31.3	MO	C	.2709	UG/L					
22479	PBW 8.31.3	PB	C	-.2923	UG/L					
22479	PBW 8.31.3	SB	C	-.0284	UG/L					
22455	PBW 8.31.3	SE	C	.92	UG/L					
22479	PBW 8.31.3	SI	C	.0281	MG/L					
22548	PBW 8.31.3	SN	C	.79	UG/L					
22479	PBW 8.31.3	SR	C	.2399	UG/L					
22479	PBW 8.31.3	TL	C	.7067	UG/L					
22479	PBW 8.31.3	U	C	.1347	UG/L					
22518	PBW 9.7.00	TKN	C	.012	MG/L					
22548	PBW 9.7.5	SN	C	.47	UG/L					
22472	PBW S 9.5.00	S	C	0	MG/L					
22415	PBW1 8.30.00	SS	C	-2	MG/L					
22452	PBW1 9.1	HG	C	-.017	UG/L					
22492	PBW1 9.1.00	CN	C	0	MG/L					
22492	PBW1 9.5.00	CN-R	C	0	MG/KG					
22492	PBW1 9.6.00	CN	C	0	MG/L					
22452	PBW2 9.1	HG	C	.015	UG/L					
22452	PBW3 9.1	HG	C	.01	UG/L					
22444	PBW8.31.00	TDS	C	-2	MG/L					
22472	RDLCHK	BR	C	.345	MG/L	0.5	69 %R:		50	150
22472	RDLCHK	CL	C	6.756	MG/L	5	135 %R:		50	150
22492	RDLCHK	CN	C	.00454	MG/L	0.005	91 %R:		50	150
22436	RDLCHK	F	C	.0893	MG/L	0.1	89 %R:		50	150

QC Code Legend

B	Blanks	K	Calibration Checks	S	Spikes
C	Control Samples	M	Matrix Spike Duplicates		
D	Duplicates	R	Surrogates		

PLI # 008096

1776 MARION-WALDO RD. • P.O. BOX 436 • MARION, OH 43301-0436
PHONE 740-389-5991 • 1-800-873-2835 • FAX 740-389-1481

ATEL

Aqua Tech Environmental Laboratories, Inc.

- QUALITY CONTROL REPORT -

Printed: 9/14/2000

WS#	Lab#	Test ID	QC Code	Result	Units	True Added	-- QC Calculations -- QC1	-- QC Calculations -- QC2	Lower Limit	Upper Limit
22505	RDLCHK	NH3	C	.069	MG/L	0.05	138 %R:		50	150
22530	RDLCHK	NO3+	C	.04	MG/L	0.05	80 %R:		50	150
22472	RDLCHK	SO4	C	6.792	MG/L	5	136 %R:		50	150
22518	RDLCHK	TKN	C	.481	MG/L	0.5	96 %R:		50	150
22465	RDLCHK	TOC	C	.9897	MG/L	0.7	141 %R:		50	150
22530	RDLCHK-LO	NO3+	C	.006	MG/L	0.01	60 %R:		50	150
22518	RDLCHK-LO	TKN	C	.088	MG/L	0.1	88 %R:		50	150

QC Code Legend

B	Blanks	K	Calibration Checks	S	Spikes
C	Control Samples	M	Matrix Spike Duplicates		
D	Duplicates	R	Surrogates		

PLI # 008096

1776 MARION-WALDO RD. • P.O. BOX 436 • MARION, OH 43301-0436
PHONE 740-389-5991 • 1-800-873-2835 • FAX 740-389-1481

Pinnacle Laboratories, Inc.

Inter Chain of Custody

Date: 8/28 Page: 1 of 1

Network Project Manager: Jacinta A. Tenorio

Pinnacle Laboratories, Inc.
2709-D Pan American Freeway, NE
Albuquerque, New Mexico 87107
(505) 344-3777 Fax (505) 344-4413

pH ok

attn: *please invoice account* **T0608** and PINNACLE requires the following QC for all studies: BLANK, SPIKE & DUPLICATE.
Thank you

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals (8) RCRA	RCRA TCLP METALS	Metals-13 PP List	Metals-TAL (23 METALS) Total & Diss.	Appendix IX Metals Total & Diss	Alk. + Bicarb. Cat, TOC	Total Phosphate, SO4	Gen Chemistry Total Cn, NH3, TKN	Total NO2/NO3, Br, Cl, F	TDS, TSS	Volatile Organics GC/MS (8260) App. IX	BOD	8141 Appendix IV	PESTICIDES/PCB (608/8082)	Herbicides (615/8151) App. IX	PNA (8310)	8240 (TCLP 1311) ZHE	Total & Diss. Sr, Li, B, Mo, Si	Base/Neutral Acid Compounds GC/MS (625/8270) Appendix IX	URANIUM (ICP-MS) Total & Diss.	RADIUM 226+228	Gross Alpha/Beta	TO-14	NUMBER OF CONTAINERS
008096-01	8/24	0955	AQ					X	X	X	X	X	X	X	X		X		X			X	X	X				
					22526																							
SEE Attached sheets																												

PROJECT INFORMATION	
PROJECT #:	008096
PROJ. NAME:	NMHWB
QC LEVEL:	STD IV
QC REQUIRED:	MS MSD BLANK
TAT:	STANDARD RUSH!!
DUE DATE:	9/12
RUSH SURCHARGE:	—
CLIENT DISCOUNT:	—
SPECIAL CERTIFICATION REQUIRED:	YES NO

SAMPLE RECEIPT	
Total Number of Containers	
Chain of Custody Seals	
Received Intact?	
Received Good Cond./Cold	
LAB NUMBER:	

COMMENTS:
*Sb, As, Ba, Be, Cd, Cr, Co, Cu
Pb, Hg, Ni, Se, Ag, Tl, Sn
V, Zn
3°

SAMPLES SENT TO:	
PENSACOLA - STL-FL	
ESL - OR	
STL - CT	
ATEL - AZ	
ATEL - MARION	X
ATEL - MELMORE	
BARRINGER	
WCAS	
WOHL	

RELINQUISED BY: 1.	RELINQUISED BY: 2.
Signature: Jameni Jones Time: 1730	Signature: Time:
Printed Name: Francine Tonvio Date: 8/28/00	Printed Name: Date:
Pinnacle Laboratories, Inc.	Company
RECEIVED BY: 1.	**RECEIVED BY: 2**
Signature: Time:	Signature: Kacey Green Time: 1500
Printed Name: Date:	Printed Name: Kacey Green Date: 8/29/00
Company	Company ATEL

Pinnacle Laboratories, Inc. — **Interlab Chain of Custody** — Date: 8/28 Page: 1 of 1

Network Project Manager: Jacinta A. Tenorio

Pinnacle Laboratories, Inc.
2709-D Pan American Freeway, NE
Albuquerque, New Mexico 87107
(505) 344-3777 Fax (505) 344-4413

pH ok

attn: *please invoice account* **T0608** and PINNACLE requires the following QC for all studies: BLANK, SPIKE & DUPLICATE.
Thank you

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals (8) RCRA	RCRA TCLP METALS	Metals-13 PP List	Metals-TAL (23 METALS) Total & Diss.	Appendix IX Metals*	Alk. + Bicarb. Carb, TOC	Total Phosphate, SO4	Gen Chemistry Total Cn, Nh3, TKN	Total NO2/NO3, Br, Cl, F	TDS, TSS	Volatile Organics GC/MS (8260) App. IX	BOD	8141 Appendix IX	PESTICIDES/PCB (608/8082)	Herbicides (615/8151) App. IX	PNA (8310)	8240 (TCLP 1311) ZHE	Total & Diss. Si, Sr, Li, B, Mo, Sn	Base/Neutral Acid Compounds GC/MS (625/8270) Appendix IX	URANIUM (ICP-MS)	RADIUM 226+228	Gross Alpha/Beta	TO-14	NUMBER OF CONTAINERS
008096-01	8/24	0955	AQ					X	X	X	X	X	X	X	X		X		X			X	X	X				
						22526																						

PROJECT INFORMATION	
PROJECT #:	008096
PROJ. NAME:	NMHWB
QC LEVEL:	STD IV
QC REQUIRED:	MS MSD BLANK
TAT:	STANDARD RUSH!!
DUE DATE:	9/12
RUSH SURCHARGE:	—
CLIENT DISCOUNT:	—
SPECIAL CERTIFICATION REQUIRED:	YES NO

SAMPLE RECEIPT	
Total Number of Containers	
Chain of Custody Seals	
Received Intact?	
Received Good Cond./Cold	
LAB NUMBER:	

COMMENTS: *Sb, As, Ba, Be, Cd, Cr, Co, Cu, Pb, Hg, Ni, Se, Ag, Tl, Sn, V, Zn 30

SAMPLES SENT TO:	
PENSACOLA - STL-FL	
ESL - OR	
STL - CT	
ATEL - AZ	
ATEL - MARION	X
ATEL - MELMORE	
BARRINGER	
WCAS	
WOHL	

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.
Signature: Francine Tonio Time: 1730	Signature: Time:
Printed Name: Francine Tonio Date: 8/28/00	Printed Name: Date:
Pinnacle Laboratories, Inc.	Company
RECEIVED BY: 1.	**RECEIVED BY: 2**
Signature: Time:	Signature: Kacey Green Time: 1500
Printed Name: Date:	Printed Name: Kacey Green Date: 8/29/00
Company	Company ATEL

Pinnacle Laboratories, Inc. **Interlab Chain of Custody** **Date: 8/25/2000 Page: 1 of 1**

Network Project Manager: Kimberly D. McNeill

Pinnacle Laboratories, Inc.
2709-D Pan American Freeway, NE
Albuquerque, New Mexico 87107
(505) 344-3777 Fax (505) 344-4413

ANALYSIS REQUEST

Authorized by/ Attn: John Young

CLIENT: NMED HWB
ADDRESS: 2044A Galisteo St.
CITY, STATE, ZIP: Santa Fe NM, 87505
(505) 827-1558 ext. 1036 Fax (505)827-1544

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Organochlorine Pest/PCBs (Line Item # 1)	Appendix IX VOCs (line item #11)	Semi-Volatile Organics and Appendix IX SVOCs (line item#12)	Dioxins/Furans (line Item #14)	Nitroaromatics & Nitroamines (Line Item # 16)	PNAs (Line Item # 21)	Issolved-Target Analyte List Metals NO CN (Line Item 44)	otal-Target Analyte List Metals plus CN (Line Item # 4)	mmonia, TKN, Nitrate, Br, Cl, F, PO4, SO4 (line item 77)	Alkalinity Carbonate/Bicarbonate (line item #79)	Total Organic Carbon (TOC) (line Item # 90)	Total Dissolved Solids (TDS) (line item#95)	Total Suspended solids (TSS) (line item#96)	Issolved and Total Isotopic Th,U,Pu,Am and Curium line item #111)	Issolved and Total Gamma Emitters (standard library line item #121)	Dissolved and Total Gross Alpha/Beta (Line Item # 125)	Dissolved and Total Sr - 90 (Line Item # 130)	Issolved and Total U calculated from isotopic analysis 6) (line item #136)	Acid Digestion-Total Dissolved Metals (Line Item #50)	Acid Digestion-Total Recoverable Metals (Line Item #50)	Issolved and Total Individual Metals by 6010 (Line item #33) Si, Sr, Li, B, Mo, Sn	Perchlorate (Line Item #144)			NUMBER OF CONTAINERS
Pajarito @Two Mile	08/24/2000	955 hrs	Water (Ponded)		✓	02	✓	02	02	02	01	02	02	01	✓	02	✓	✓	4	✓	✓	✓	✓	✓	✓	2			21

App IX 8.28.00 HWL
App IX (8270)
8270SIMS

PROJECT INFORMATION	SAMPLE RECEIPT	
PROJECT #: HWB 8.24.00 CG	Total Number of Containers	21
PROJ. NAME: LANL Pajarito 2-mile	Chain of Custody Seals	Y
QC LEVEL: STD.	Received Intact?	Y
QC REQUIRED: MS MSD BLANK	Received Good Cond./Cold	on ice @ 2.4 °C
TAT: STANDARD	LAB NUMBER:	008096

1 Relenquished by:
Signature: John Young
Printed Name: John Young
Company: NMED-HWB
Time: 1300 Date: 8/25/00

2 Relenquished by:
Signature:
Printed Name:
Company:
Time: Date:

3 Relenquished by:
Signature:
Printed Name:
Company:
Time: Date:

4 Relenquished by: RCVD
Signature: H Mitchell
Printed Name: H MITCHELL Pinnacle
Company: Pinnacle
Time: 1835 Date: 8/25/00

DUE DATE: 30 days
RUSH SURCHARGE:
CLIENT DISCOUNT:
SPECIAL CERTIFICATION REQUIRED: YES NO

*2 COOLERS *Total **and** Dissolved for Rad Samples *SVOCs and Dioxins/Furans **only** if enough sample is available for proper lab QA/QC ***No** filtered CN- sample, reflect on invoice

CASE NARRATIVE

Analysis of Samples for the Presence of

Polychlorinated Dibenzo-*p*-Dioxins and Dibenzofurans by

High-Resolution Chromatography / High-Resolution Mass Spectrometry

Method 8290 Rev. 0 (9/94)

Date:	September 7, 2000
Client ID:	Pinnacle Laboratories, Inc.
P.O. Number:	008096
TLI Project Number:	51755

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Rev. 11/19/97

Overview

The sample and associated QC samples were extracted and analyzed according to procedures described in EPA Method 8290 Rev. 0 (9/94). Any particular difficulties encountered during the sample handling by Triangle Laboratories will be discussed in the QC Remarks section below. This report contains results from only the 8290 dioxin/furan analysis of the water sample.

Quality Control Samples

A laboratory method blank, identified as the TLI Blank, was prepared along with the sample.

Laboratory control spike (LCS) and laboratory control spike duplicate (LCSD) samples were extracted and analyzed along with the samples. A report summarizing the analyte recoveries and relative percent differences for these samples is included in the data package.

Quality Control Remarks

This release of this particular set of Pinnacle Laboratories, Inc. analytical data by Triangle Laboratories was authorized by the Quality Control Chemist who has reviewed each sample data package following a series of inspections/reviews. When applicable, general deviations from acceptable QC requirements are identified below and comments are made on the effect of these deviations upon the validity and reliability of the results. Specific QC issues associated with this particular project are:

Sample receipt: One water sample was received from Pinnacle Laboratories, Inc. at 6.0 °C in good condition on August 29, 2000 and stored in a refrigerator at 4 °C. The client's chain-of-custody did not indicate whether or not chemical preservatives were utilized prior to shipment.

Sample Preparation Laboratory: None

Mass Spectrometry: None

Data Review: None

Other Comments: No 2,3,7,8-substituted target analytes were detected in the method blank above the target detection limit (TDL).

The analytical data presented in this report are consistent with the guidelines of EPA Method 8290 Rev. 0 (9/94). Any exceptions have been discussed in the QC Remarks section of this case narrative with emphasis on their effect on the data. Should Pinnacle Laboratories, Inc. have any questions or comments regarding this data package, please feel free to contact a Project Scientist, at (919) 544-5729.

For Triangle Laboratories, Inc.,

Released by,

Vijay S. Chhabra

Report Preparation Chemist

The total number of pages in the data package is : 118 .

Method 8290 Sample Calculations:

Analyte Concentration

The concentration or amount of any analyte is calculated using the following expression.

$$C_{(\sigma)} = \frac{A_\sigma * Q_\beta}{A_\beta * RRF_{(\sigma)} * W}$$

Where:

$C_{(\sigma)}$	=	concentration or amount of a given analyte
A_σ	=	integrated current for the characteristic ions of the analyte
A_β	=	integrated current of the characteristic ions of the corresponding internal standard
Q_β	=	amount of internal standard added to the sample before extraction
$RRF_{(\sigma)}$	=	mean analyte relative response factor from the initial calibration
W	=	sample weight or volume

Detection Limits

The detection limit reported for a target analyte that is not detected or presents an analyte response that is less than 2.5 times the background level is calculated by using the following expression. The area of the analyte is replaced by the noise level measured in a region of the chromatogram clear of genuine GC signals. The detection limits represent the maximum possible concentration of a target analyte that could be present without being detected.

$$DL_{(\sigma)} = \frac{2.5 * H * Q_\beta}{H_\beta * RRF_{(\sigma)} * W}$$

Where:

$DL_{(\sigma)}$	=	estimated detection limit for a target analyte
2.5	=	minimum response required for a GC signal
H	=	sum heights of the noise
H_β	=	sum of peak heights of the characteristic ions of the corresponding internal standard
Q_β	=	amount of internal standard added to the sample before extraction
$RRF_{(\sigma)}$	=	mean analyte relative response factor from the initial calibration
W	=	sample weight or volume

TRIANGLE LABORATORIES, INC.

LIST OF CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

American Association for Laboratory Accreditation. Extended Expiration Date of October 31, 1999. Certificate Number 0226-01. Accreditation for technical competence in Environmental Testing. 8280, 8290, 1613A Dioxin in Wastewater; Solid or Hazardous Waste, and Air Matrices: XAD Trains - M23, 8290X and PUF Trains 8290X. Absorbable Organic Halides (AOX)/ Toxic Organic Halides (TOX) in Pulp/Paper. Method 1613A & B, 2,3,7,8 TCDD for Drinking. *Pending Evaluation of On-Site Audit.*

State of Alabama, Department of Environmental Management. Expires December 31, 2000. Laboratory ID # 40950. 2,3,7,8 TCDD (Dioxin) in drinking water.

State of Alaska, Department of Environmental Conservation. Expires December 21, 2000. Lab ID #NC-06-00. Certificate number NC00140. 2,3,7,8- TCDD (Dioxin) in drinking water.

State of Arizona, Department of Health Services. Expires May 26, 2001. Certificate #AZ0423. Drinking Water for Dioxin, Dioxin in Waste Water and Solid or Hazardous Waste.

State of Arkansas, Department of Pollution Control and Ecology. Expires 8 August 2001. Pulp/paper, soil, water, and Hazardous Waste for Dioxin/Furans.

State of California, Department of Health Services. Expires August 31, 2001. Certificate #1922. Organic Chemistry of Drinking Water -Dioxin in DW; EPA Method 1613, Organic Chemistry of Hazardous Waste by GC/MS - EPA Methods 8240B, 8270B, 8280, 8290, 8260A, and Organic Chemistry of Wastewater by GC/MS - EPA Method 613.

State of Connecticut, Department of Health Services. Expires September 30, 2001. Registration # PH-0117. 2,3,7,8 TCDD (Dioxin) in drinking water (potable water for organic chemicals).

Delaware Health and Social Services. Expired December 31, 1998, **but** current certification will be maintained until DHSS has implemented their NEW Laboratory Certification Program. Certificate #NC 140. Dioxin in drinking water.

Florida Department of Health and Rehabilitative Services. Expires June 30, 2001. Method 1613 for Dioxin in Drinking Water. ID HRS# E87769.

Revised: 9/07/00 nch

Y:\CERTIFIC\ADMINIST\CERTLIST.MEM

Georgia Department of Environmental Quality. Initial application sent August 12, 1998 for Chemical Certification of Drinking Water for Dioxins, method 1613. *Currently applying*

Hawaii Department of Health. Expires March 1, 2000. Certified for Dioxin under the Safe Drinking Water Act. "Accepted" status for regulatory purposes.

Idaho Department of Health and Welfare. Expires December 31, 2000. Dioxin in drinking water.

Illinois Environmental Protection Agency. Sent initial application and fees December 18, 1998. Drinking Water, Wastewater and Hazardous Waste, Methods 608, 610, 624, 625, 8081A, 8260B, 8260C, 8270B, 8270C, 8310, 8315A. *Fees paid, Certificate pending.*

Indiana Department of Health. Expires December 31, 2000. Dioxin in drinking water, EPA method 1613. Lab ID # C-NC-01.

State of Kansas, Department of Health and Environment. Expires January 31, 2001. Cert. # E-10215. Method 1613, 2,3,7,8 TCDD for drinking water. Drinking water and/or pollution control; Cert. # E-10215. Solid or Hazardous Waste 8260B, 8270C.

Commonwealth of Kentucky, Department for Environmental Protection. Expires December 31, 2000. Lab ID #90060. 2,3,7,8 TCDD (Dioxin) in drinking water.

State of Louisiana Department of Environmental Quality. As of March 24, 2000, Triangle Laboratories, Inc. has "Pending Accreditation" until the LADEQ completes review of PT studies submitted.

State of Louisiana Department of Health & Hospitals. Expires December 31, 2000. Dioxin (2,3,7,8-TCDD) in Organics parameter. Certificate # LA000008.

Maryland Department of Health and Mental Hygiene. Expires September 30, 2000. Certification #728 - 2,3,7,8 TCDD (Dioxin) by 1613A for Water Quality[SOC II]. *Currently Applying.*

State of Michigan, Department of Environmental Quality. Expires April 1, 2001. 2,3,7,8 TCDD by Method 1613.

Mississippi State Department of Health. No expiration date. Dioxin in drinking water.

Montana Department of Health and Environmental Services. Expires December 31, 2000. Dioxin in drinking water.

Revised: 9/07/00 nch

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State of Nebraska Department of Health. Expires December 31, 2000. Reciprocal certification through the North Carolina Department of Health and Human services. 2,3,7,8-TCDD (Dioxin) in drinking water, EPA Method 1613.

State of Nevada, Department of Conservation and Natural Resources. Parameter: Dioxin under Clean Water Act; expires December 31, 2000.

State of Nevada, Department of Human Resources. Lab Certificate No. NC-00140-2000-46, expires June 30, 2001. Parameters: Dioxin under Safe Drinking Water Act, expires March 31 2001.

State of New Jersey, Department of Environmental Protection and Energy. Expires June 30, 2000. ID #67851. 8290 and 1613(2,3,7,8- TCDD). *Currently Applying*

State of New Mexico, Environment Department. Expired October 31, 1999. Dioxin in Drinking Water per A2LA. *Renewal pending A2LA Certificate of renewal.*

New York State Department of Health. Expires March 31, 2001. ID #11026. Environmental Analyses of Solid and Hazardous Waste for purgeable hydrocarbons, chlorinated hydrocarbons, pesticides, priority pollutant phenols; potable water 2,3,7,8 TCDD (Dioxin).

State of North Carolina, Department of Health and Human Services. Expires June 30, 2001. Certificate # 37751. Dioxin in drinking water.

North Dakota State Department of Health and Consolidated Laboratories. Expires March 31, 2000. Certificate # R-076. Effective October 4, 1993. Dioxin in drinking water. Current certification is extended, based on New York certificate renewal.

Oklahoma Department of Environmental Quality. Expires August 31, 2001. Laboratory #9612. 2,3,7,8 TCDD (Dioxin) by 613, 1613A, 8290 and 8280. *Currently applying*

State of South Carolina, Department of Health and Environmental Control. Expires April 1, 2001. Certificate number #99040001 (Other parameters). Dioxin/Furans by method 1613B - Safe Drinking Water Act; 2,3,7,8-TCDD for Drinking Water, and Organic extractables for Solid and Hazardous Waste. Reciprocal certification with New York. Certificate # 99040002 expires August 31, 2001. Solid Hazardous Waste- Dioxins/Furans by 8280A and 8290. Reciprocal certification with California.

State of Tennessee. Department of Environment and Conservation. Expires January 28, 2002. ID #02992. Dioxin in Drinking water.

U.S. Department of Agriculture Soil Permit. Expires June 30, 2002. Permit No. S-4958 (Revised). Under the authority of the Federal Plant Pest Act, permission is granted to receive foreign soil samples for use in laboratory analysis.

Revised: 9/07/00 nch

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U.S. Army Corps of Engineers. Expires November 15, 2001. Validated to perform analyses for the McAlester Army Ammunition Plant and various sites. EPA SW-846, Methods 8280 and 8290, water and solids.

U.S. EPA Region V. Expires January 19, 2003. 2,3,7,8 TCDD (Dioxin) in drinking water by method 1613A.

U.S. EPA Region VIII, for the State of Wyoming. Expires October 9, 2000. EPA Method 1613 for Dioxin in drinking water.

State of Utah, Department of Health. ID # TRIA, Account # 9195445729. **Organics** 1613 - RG Dioxin, expires November 31, 2001. **Metal Digestion** 3010A & 3050A; **Metals** 6010B & 7470; **Organic Extraction** 3540A; and, **Organic Instrumentation** 8240, 8280 & 8290; expires May 31, 2001.

Commonwealth of Virginia, Department of General Services, Division of Consolidated Laboratory Services. Expires June 30, 2001. ID # 00341. 2,3,7,8-TCDD (Dioxin) in drinking water.

State of Washington, Department of Ecology. Expires September 11, 2000. Lab Accreditation Number C067. Scope of Accreditation applies to Dioxins (PCDDs/PCDFs) by EPA methods 1613A, 8280, and 8290. *Renewal being processed.*

State of Washington, Department of Health. Expires April 30, 2001. Dioxin by 1613A in drinking water. Lab ID 129.

State of West Virginia, Department of Health. Expires December 31, 2000. Certificate No. 9923(C). 2,3,7,8-TCDD (Dioxin) in drinking water.

State of Wisconsin, Department of Natural Resources. Expires August 31, 2001: Certification for PCDD/PCDF. Laboratory ID Number 999869530. Expires August 31, 2001: Certified for 2,3,7,8-TCDD (Dioxin) in drinking water.

Revised: 9/07/00 nch

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PHARMACEUTICAL

Drug Enforcement Agency (DEA). Expires November 30, 2000. Registration number RT0195835. Controlled substance registration for schedules 1,2,3,3N,4,5.

N.C. Department of Human Resources. Expires October 31, 2000. Registration number NC-PT 0000 0031. North Carolina controlled substances registration for schedules 1, 2, 2N, 3, 3N, 4, 5, 6.

Food & Drug Administration (FDA) Registration. Registered June 17, 1999. ID #'s 001500 1053481(ATL). Annual registration of drug establishment.

OTHER

Clinical Laboratory Improvement Amendments (CLIA) Registration. Expires May 30, 2001. ID # 34D0705123. Department of Health & Human Services, Health Care Financing Administration. Certificate for the Acceptance of Human Specimans for the purposes of performing laboratory examinations or procedures - Chemistry, Toxicology, HCFA.

U.S. EPA Large Quantity Hazardous Waste Generator. No expiration date. EPA ID #NCD982156879. Permit indicates that the laboratory is a large generator of hazardous waste.

North Carolina General License for Radiation Protection. No expiration date. No License. 032-875-OG. The general license applies only to radioactive material contained in devices which have been manufactured and labeled in accordance with specific requirements.

Revised: 9/07/00 nch

Y:\CERTIFIC\ADMINIST\CERTLIST.MEM

TRIANGLE LABS

DOCUMENT CONTROL

Triangle Laboratories, Inc.
801 Capitola Drive
Durham, NC 27713-4411
919-544-5729

P.O. Box 13485
Research Triangle Park, NC 27709-3485
Fax # 919-544-5491

nacle Laboratories, Inc. Interl. Chain of Custody Date: 8/28 Page: 1 o.

Network Project Manager: Jacinta A. Tenorio

Pinnacle Laboratories, Inc.
2709-D Pan American Freeway, NE
Albuquerque, New Mexico 87107
(505) 344-3777 Fax (505) 344-4413

Low Level Detection Limits, EPA Tests submit 2 copies of the report!

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB ID	Metals (8) RCRA	RCRA TCLP METALS	Metals-13 PP List	Metals-TAL (23 METALS)		TOX	TOC	Gen Chemistry	Dioxin/Furans 8290	Oil and Grease	Volatile Organics GC/MS (8260)	BOD	COD	PESTICIDES/PCB (608/8082)	Herbicides (615/8151)	PNA (8310)	8240 (TCLP 1311) ZHE		Base/Neutral Acid Compounds GC/MS (625/8270)	URANIUM (ICP-MS)	RADIUM 226+228	Gross Alpha/Beta	TO-14	NUMBER OF CONTAINERS
C08096-01	8/24	0955	AQ										X															

PROJECT INFORMATION	SAMPLE RECEIPT	SAMPLES SENT TO:	RELINQUISED BY: 1.	RELINQUISED BY: 2.
PROJECT #: C08096	Total Number of Containers	PENSACOLA - STL-FL	Signatue: Francine Torivio Time: 1730	Signatue: Time:
PROJ. NAME: NMHWB	Chain of Custody Seals	ESL - OR	Printed Name: Francine Torivio Date: 8/28/00	Printed Name: Date:
QC LEVEL: STD IV	Received Intact?	STL - CT	Pinnacle Laboratories, Inc.	Company
QC REQUIRED: MS MSD BLANK	Received Good Cond./Cold	ATEL - AZ	RECEIVED BY: 1.	RECEIVED BY: 2
TAT: STANDARD RUSH!!	LAB NUMBER:	ATEL - MARION	Signatue: Bill Hurst Time: 0910	Signatue: Time:
DUE DATE: 9/18	COMMENTS:	ATEL - MELMORE	Printed Name: Bill Hurst Date: 8/29/00	Printed Name: Date:
RUSH SURCHARGE: —		BARRINGER	Company: TLF LTL	Company
CLIENT DISCOUNT: —		WCAS		
SPECIAL CERTIFICATION REQUIRED: YES NO		WOHL		
		Triangle X		

TRIANGLE LABORATORIES, INC. -- LOG IN RECORD/CHAIN OF CUSTODY

Custody Seal : Present/Intact
Chain of Custody : Present
Sample Tags : Absent
Sample Tag Numbers: Not Listed on Chain of Custody
SMO Forms : N/A

Sample Seals: Present
Container...: Intact

TLI Project Number 51755
Client: PIN01 - Pinnacle Laboratories, Inc.
Project: NMHWB

Date Received 08/29/00 By [illegible]

Carrier and Number UPS

Book 268 Page 82

Ice Chest ICE PACKS Temp 6.0 C

TLI Number.. mR/H:CPM.	Client Sample ID..... Client COC ID.....*	Location.....	Matrix	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	DISPOSED Date/Init
268-82-1A	008096-01		WATER	SS 8/30/00								
	008096-01	C02			USED							
268-82-1B	008096-01		WATER	SS 8/30/00	SS 8/30/00							
	008096-01	C02										

Receiving Remarks:

Archive Remarks:

Form Revised 05/27/1997 -- Page 1 OF 1

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TRIANGLE LABORATORIES, INC.
SAMPLE TRACKING AND PROJECT MANAGEMENT FORM

----------ADMINISTRATIVE INFORMATION----------

TLI Proj#: 51755-	Samples: 1	TurnAround.: 21 Day(s)
Prod Code: D01001	Matrix.: Water	Hold Time..: 30 Day(s)
DetectLim: 10 ppq	Type...: B	Start Date.: 08/29/00
	Recvd..: 08/29/00	Ship By....: 09/17/00
		DWL Due Dt.: 09/11/00

Analyte List.: Tetra - Octa

Method.....: Method 8290: Tetra-Octa
Client Proj..: NMHWB/008096
Client.....: Pinnacle Laboratories, Inc. (PIN01)
P.O. No.....: 008096 — Collect Dt/Tm: 08/24/00 09:55
Contact.....: Mitch Rubenstein — Phone.....: 505-344-3777
Proj. Mgr....: — Fax.....: 505-344-4413
Sample Origin:

----------SPECIAL INSTRUCTIONS / QA REQUIREMENTS----------

TEF.....: EPA — Prespike Standard: n/a
Extraction Exp...: 09/23/00

----------REPORTING REQUIREMENTS----------

Reporting Format: Report Option II

See MILES for Instructions/Communications.

Completed by: _____ DATE: 08-29-00

Reviewed by: _____ DATE: 08-29 (PMGT0197

TRIANGLE LABORATORIES, INC.
Wet Lab Extraction and Observations
Project: 51755

Sample #	crd	TLI_Number..	Customer.Sample.Id.....	Init. pH...	NaOH Adj. mL..	pH.1.	H2SO4 Adj. mL...	pH.2.	Appearance.	Color.....	Odor...	Vol.	Entered.By.....	Date....	Time....	S
000		TLI Blank	TLI Blank	7.00	n/a	n/a	n/a	n/a	HPLC H2O	colorless	none	1000	MILLER	08/30/00	19:55:03	F
001		268-82-1A	008096-01	7.00	n/a	n/a	n/a	n/a	opaque	brown	yes	990	MILLER	08/30/00	19:55:41	F
002		TLI LCS	TLI LCS	7.00	n/a	n/a	n/a	n/a	HPLC H2O	colorless	none	1000	MILLER	08/30/00	19:55:03	F
003		TLI LCSD	TLI LCSD	7.00	n/a	n/a	n/a	n/a	HPLC H2O	colorless	none	1000	MILLER	08/30/00	19:55:03	F

*** End of Report ***

TRIANGLE LABORATORIES, INC.

Dioxin Sample Preparation Tracking & Management Form

ect: 51755

Client: Pinnacle Laboratories, Inc. (PIN01)

Solvent(s)/Acid(s): MeCl2 / _____ / _____

Lot Numbers: 996614 / _____ / _____

Method: Method 8290: Tetra-Octa Matrix: H2O

Extraction Date: 8/30/00

IS Spike: 20 µl conc: 0.1000 ng/µl

SS Spike: ____ µl conc: __.____ ng/µl

MS Spike: 40 µl conc: 0.0100 ng/µl

LCS Spike: 40 µl conc: 0.0100 ng/µl

					JSr	JSr	PJS		Chemist
					75106	75111	7530D		Spike #
					USF-MS	USF-MS	USF-C		" ID
					7/3/01	7/2/01	7/2/01	__/__/__	" Expir
					8/30/00	8/30/00	9/1/00	__/__/__	" Date
					14:45	14:45	14:28	__:__	" Time
					0.1 ng/µl	0.01 ng/µl	0.01 ng/µl	____ng/µl	" Conc.
					20 µl	40 µl	20 µl	____ µl	" Vol.
S#.crd	TLI SAMPLE ID	CLIENT SAMPLE ID	GROSS WEIGHT Before	GROSS WEIGHT After	SAMPLE SIZE g / (ml)				
000	TLI Blank	TLI Blank	XXXXXXXXX	XXXXXXXXX	1000	JSr		PJS	Any Left yes/no
001	268-82-1A pH=7	008096-01	XXXXXXXXX .1365g	XXXXXXXXX .392g	990				Any Left (yes)/no
002	TLI LCS	TLI LCS	XXXXXXXXX	XXXXXXXXX	1000		* JSr		Any Left yes/no
003	TLI LCSD	TLI LCSD	XXXXXXXXX	XXXXXXXXX	1000	JSr	* JSr	PJS	Any Left yes/no
									Any Left yes/no
									Any Left yes/no
									Any Left yes/no
									Any Left yes/no
									Any Left yes/no
									Any Left yes/no

Gross weight of sample container + sample before/after aliquot removal.

Comments: HPLC H2O lot # 000976 was used for Blank, LCS, + LCSD.

001 - opaque, brown, w/ odor. JSr 8/30/00

Initials: _____ Date: __/__/__

Initials of both SPIKER AND OBSERVER must be entered.

XXXXX = Gross Weight not provided for WATER Samples.

REV 05/27/97 (PSTMF 7)

TRIANGLE LABORATORIES, INC.
DIOXIN SAMPLE EXTRACTION and CLEANUP TRACKING FORM
TLI Project No.: 51755

Ext S#.crd and TLI Number	1	2	3	4	7	8	9				
000 TLI Blank	SSm 8/30/00	QJS 9/1/00	MSC 9/2/00	MSC 9/2/00	MSC 9/2/00	FBm 9/3/00	JSY 9/5/00				
001 268-82-1A	↓	↓	↓	↓	↓	↓	↓				
002 TLI LCS	↓	↓	↓	↓	↓	↓	↓				
003 TLI LCSD	SSm 8/30/00	QJS 9/1/00	MSC 9/2/00	MSC 9/2/00	MSC 9/2/00	FBm 9/3/00	JSY 9/5/00				

Enter the procedure number below into the box at the top of each column to signify the step performed.
Initial and date each sample for each numbered procedure performed.

#.. ....PROCEDURE....	SOP.#.	.v..	DETAILS (circle)
1) EXTRACTION	161	16	Time On __ : __ Time Off __ : __
			Soxhlet / Jar / Sep Funnel / Steam Dist / Cont LL / ASE / Waste Dilution
2) SPIKE AFTER EXT'N			
3) ADD TRIDECANE			Lot# -4-1-23-2849
4) ROTOVAP			40mL / 10mL / Dryness
5) COMBINE			
6) DIV./LIP. DETERM.			20%/80% 50%/50% 5mL/20mL Other_____
7) SOLVENT EXCHANGE			Iso-Octane Lot#_____ Heptane Lot# VSSMT12E78
8) CLEANUP		12	DSP 260 / Modified DSP 260 / DSP 280 / Other _____
9) TRANSFER	272	7	
10) ADDITIONAL CLEANUP			DSP260(10g)
11) FINAL TRANSFER			

Comments: _____

Rev 11/25/97 (PSTMF 4)

TRIANGLE LABORATORIES, INC.
Transfer Chain-of-Custody Form
Project 51755

Transfer From: DWLL5 To: DMS5

	Initials..	Date.....	Time...
Released by:	JSY	09/05/00	12:00
Accepted by:	TRD	09/05/00	13:15

MILES.ID.....		TLI_No.....	Cust.Id.....
51755-	-000	TLI Blank	TLI Blank
51755-	-001	268-82-1A	008096-01
51755-	-002	TLI LCS	TLI LCS
51755-	-003	TLI LCSD	TLI LCSD

XfrCOC (Rev 11/01/94)

Additional comments or instructions:

TRIANGLE LABORATORIES, INC.
HR GC/HRMS ANALYSIS

Method: Method 8290: Tetra-Octa
Required Detection Limit: 10 ppq

PROJECT: 51755

SAMPLE INFORMATION

RS Conc 20 µl @ 100.0 PG/µl

S#.crd	TLI / SAMPLE ID / CLIENT / SAMPLE ID	1ST COLUMN GC/MS FILENAME COLUMN: DB5	CONFIRM	2ND COLUMN CONFIRM FILENAME COLUMN:	USF-RS 100 VOLUME 20µl SOLN ID 7450.Q	USF-RS 100 INIT. TMD DATE 09/05/00	ANALYSIS COMMENTS
000	TLI Blank / TLI Blank *	U141003 S003908	N				Batched Native
001	268-82-1A / 008096-01 *	U141004 S003909	N				
002	TLI LCS / TLI LCS *	U141005 S003910	—				Batched Native
003	TLI LCSD / TLI LCSD *	U140006 S003911	—				

Comments: * 12 hours clock violation MM 9/6/00

Type: B

Spike File: SPMIT22S

Amt of Extract: 100%

REV 03/07/95 (PSTMF 6)

Triangle Laboratories, Inc.
Run L

Instrument ID	Column Type	Column ID	Plot Name	Inj. Vol.	Acquisition	G/C
70M	DB5	0630312	T02	2.0 µl	NPD85W	NPD85W
				Signature		9/6/00 Date

Filename	Date*	Time*	Project #	Sample#	No.	Client Sample ID	Syr	332	Operator/Date	Comments**
U140412	09/06/00	10:24	51353Cnl	264-76-19	6	A22368	Auto	5.9E6	9/6/00	
↓ 13	↓		↓	↓ 20	7	A22369	↓		↓	
U001405	↓	12:04	—	7503B	—	8290/1613 Concal 10 (TMD 9/6/00)	Auto	2.0E7	TMD 09/06/00	Good 8290 F/B. S/N=1666 TMD 09/06/00
U001406		13:46	—	7461	—	RTCHK	Auto	170%	TMD 09/06/00	Changed syr. and liner. TSM 9/6/00
U140701	9/6/00	14:48	—	7450Q	—	RS 100	↓	1.7 E7	↓	clean bal 9/6/00
02	↓	1537	51765A	268-92-9	9	IJH0950-10		7.6 E6		
03		1626	↓	268-92-10 (TMD 9/6/00)	10	IJH0950-11		9.6 E6		
04		1714		268-92-13	11	IJH0950-14		9.0 E6		
05		1802		268-92-14	12	IJH0950-15		6.2 E6		
06		1851		268-92-15	13	IJH0950-16		8.7 E6		
07	9/6/00	1940	51765A	268-92-16	14	IJH0950-17	Auto	9.7 E6	TMD 09/06/00	~~Good Spike/blk bal 9/6/00~~
U001408	↓	2034	—	7503B	—	8290/1613 Concal 10	Auto	1.1 E7	bl 9/6/00	Good F/B 8290/M.93 MVL 9/6/00
U001409	↓	2134	—	7461	—	RTCHK	Auto	19%	MVL 9/6/00	

* Transcribed from chromatographic data
** Dated initials required

ConCal Due: 12:14 9/6/00
ConCal Due:

srvr1/qa/forms/hrrunlog.doc (02/05/97)

Triangle Laboratories, Inc.
Run Log

Instrument ID	Column Type	Column ID	Plot Name	Inj. Vol.	Acquisition	G/C
70U	DB5	0630312	T02	2.0µl	NDBSUS	NDBSUS

Signature: Mind Van

Date: 9/6/00

Filename	Date*	Time*	Project #	Sample#	No.	Client Sample ID	Syr	332	Operator/Date	Comments**
U141001	9/6/00	22:37	51630BN1	TLi Blank	0	TLi Blank	Auto	3.7 ng	MVL 9/6/00	
02	↓	23:20	↓	267-56-17	3	810-80-02		2.5 ng		
03	9/7/00	00:14	51755	TLi Blank	0	TLi Blank		1.8 ng		
04		01:03		268-82-1A	1	008096-01		1.7 ng		
05		01:52		TLi LCS	2	TLi LCS		1.9 ng		
06		02:41	↓	TLi LCSD	3	TLi LCSD		2.3 ng		
07		03:29	51729	268-56-1A	1	GWGM-70		2.3 ng		
08		04:18	51732	258-59-1A	1	903037-1/MW-2		2.6 ng		
09		05:07	51757	268-84-1A	1	Peroxide oxidation pH=4		2.7E7		
10		05:56		268-84-2	2	Peroxide oxidation pH=7		1.9E7		
11		06:44	↓	268-84-3A	3	Ozone oxidation pH=7	↓	4.2E7	↓	
12	↓	07:33	—	7503B	—	8240/613 concal 10	↓	2.8E7	↓	Good ranging only (8240T.0) TMD 09/07/00
U001411										

* Transcribed from chromatographic data
** Dated initials required

ConCal Due: 8:34 9-7-00
ConCal Due:

srvr1/qa/forms/hrrunlog.doc (02/05/97)

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TRIANGLE LABS

SAMPLE DATA

Triangle Laboratories, Inc.
801 Capitola Drive
Durham, NC 27713-4411
919-544-5729
P.O. Box 13485
Research Triangle Park, NC 27709-3485
Fax # 919-544-5491

TRIANGLE LABORATORIES, INC.
LAB CONTROL SPIKE RECOVERY ANALYSIS AND COMPARISON

Project: 51755
Matrix: WATER
Method: 8290

Isomer	U141003 ID: TLI Blank Sample (ppq)	U141005 ID: TLI LCS With Spike (ppq)	Percent Recovery	U141006 ID: TLI LCSD Spike Dup (ppq)	Percent Recovery	Relative Percent Difference
2378-TCDD	ND	405	101	423	106	4.83
12378-PeCDD	ND	1990	99.5	2130	106	6.33
123478-HxCDD	ND	2020	101	2150	108	6.70
123678-HxCDD	ND	2110	105	2120	106	0.95
123789-HxCDD	ND	2290	114	2360	118	3.45
1234678-HpCDD	ND	2110	106	2230	112	5.50
OCDD	[3.3]	4100	102	4310	108	5.71
2378-TCDF	ND	408	102	441	110	7.55
12378-PeCDF	ND	2060	103	2220	111	7.48
23478-PeCDF	ND	2290	115	2590	130	12.2
123478-HxCDF	ND	2050	103	2080	104	0.97
123678-HxCDF	ND	2030	101	2090	105	3.88
234678-HxCDF	ND	2290	114	2380	119	4.29
123789-HxCDF	ND	2200	110	2370	119	7.86
1234678-HpCDF	ND	1870	93.6	1980	98.9	5.51
1234789-HpCDF	ND	1930	96.7	2130	107	10.1
OCDF	ND	4230	106	4040	101	4.83

ND: Not Detected
NA: Not Applicable
[..]: EMPC Value

MILES 4.22.16
GRY_PSUM v1.10

Processed By: JCA Date: 09/07/00

Percent Recovery QC Limits: 70 to 130 percent.
Relative Percent Difference QC Limits: +/- 20 percent.

Nominal Spike Levels:
TCDD/TCDF..: 0.4 ng
PeCDD/PeCDF: 2.0 ng
HxCDD/HxCDF: 2.0 ng
HpCDD/HpCDF: 2.0 ng
OCDD/OCDF..: 4.0 ng

TRIANGLE LABORATORIES, INC.
Sample Results for Project 51755
Method MIT3 Analysis (DB-5)

09/07/2000

Data File	U141003		U141004		U141005	U141006
Sample ID	TLI Blank		008096-01		TLI LCS	TLI LCSD
Units	ppq		ppq		ppq	ppq
Extraction Date	08/30/2000		08/30/2000		08/30/2000	08/30/2000
Analysis Date	09/07/2000		09/07/2000		09/07/2000	09/07/2000
Instrument	U		U		U	U
Matrix	WATER		WATER		WATER	WATER
Extraction Type						
Analytes						
2378-TCDD	(1.0)		(1.9)		405	423
12378-PeCDD	(1.0)		(1.7)		1990	2130
123478-HxCDD	(1.0)		(1.6)		2020	2150
123678-HxCDD	(1.0)		(1.6)		2110	2120
123789-HxCDD	(1.0)		2.8	J	2290	2360
1234678-HpCDD	(1.5)		{3.2}	J	2110	2230
OCDD	{3.3}	J	29.4	JB	4100	4310
2378-TCDF	(0.7)		(1.3)		408	441
12378-PeCDF	(0.7)		2.7	J	2060	2220
23478-PeCDF	(0.7)		(1.2)		2290	2590
123478-HxCDF	(0.6)		2.6	J	2050	2080
123678-HxCDF	(0.6)		2.3	J	2030	2090
234678-HxCDF	(0.6)		1.8	J	2290	2380
123789-HxCDF	(0.8)		3.1	J	2200	2370
1234678-HpCDF	(0.8)		(1.3)		1870	1980
1234789-HpCDF	(1.0)		(1.6)		1930	2130
OCDF	(1.5)		{5.3}	J	4230	4040
TOTAL TCDD	{1.4}		(1.9)			
TOTAL PeCDD	{2.7}		(1.7)			
TOTAL HxCDD	(1.0)		2.8			
TOTAL HpCDD	(1.5)		3.1			
TOTAL TCDF	(0.7)		(1.3)			
TOTAL PeCDF	(0.7)		2.7			
TOTAL HxCDF	(0.7)		9.7			
TOTAL HpCDF	(0.9)		(1.4)			
Other Standards Percent Recovery Summary (% Rec)						
37Cl-TCDD	72.3		69.1		68.4	80.5
Other Standards Percent Recovery Summary (% Rec)						
13C12-PeCDF 234	88.2		71.7		74.9	85.8
13C12-HxCDF 478	80.4		65.8		70.2	74.6
13C12-HxCDD 478	83.6		70.5		74.6	80.4
13C12-HpCDF 789	88.0		74.8		77.0	84.4
Other Standards Percent Recovery Summary (% Rec)						
13C12-HxCDF 789	87.6		76.7		75.9	85.9
13C12-HxCDF 234	86.4		73.4		79.3	87.6
Internal Standards Percent Recovery Summary (% Rec)						
13C12-2378-TCDF	69.8		53.1		62.3	66.7
13C12-2378-TCDD	69.7		58.1		61.8	70.4

Data File	U141003	U141004	U141005	U141006
Sample ID	TLI Blank	008096-01	TLI LCS	TLI LCSD
Units	ppq	ppq	ppq	ppq
Extraction Date	08/30/2000	08/30/2000	08/30/2000	08/30/2000
Analysis Date	09/07/2000	09/07/2000	09/07/2000	09/07/2000
Instrument	U	U	U	U
Matrix	WATER	WATER	WATER	WATER
Extraction Type				
Internal Standards Percent Recovery Summary (% Rec)				
13C12-PeCDF 123	75.6	63.6	67.2	71.3
13C12-PeCDD 123	82.8	70.9	77.1	86.8
13C12-HxCDF 678	82.9	71.2	70.3	77.1
13C12-HxCDD 678	82.8	69.4	74.5	83.9
13C12-HpCDF 678	84.4	68.9	74.6	80.3
13C12-HpCDD 678	83.8	71.9	79.0	80.5
13C12-OCDD	90.4	73.6	79.3	85.7

{Estimated Maximum Possible Concentration}, (Detection Limit).

Pinnacle Laboratories, Inc.

TLI Project: **51755** Method 8290 PCDD/PCDF Analysis (b)
Client Sample: **TLI Blank** Analysis File: **U141003**

Client Project:	**NMHWB/008096**			ICal:	**UF57140**
Sample Matrix:	**WATER**	Date Received:	**/ /**	Spike File:	**SPMIT32S**
TLI ID:	**TLI Blank**	Date Extracted:	**08/30/2000**	1st CCal:	**U001408**
		Date Analyzed:	**09/07/2000**	End CCal:	**U141012**
Sample Size:	**1.000 L**	Dilution Factor:	**n/a**	% Moisture:	**n/a**
Dry Weight:	**n/a**	Blank File:	**U141003**	% Lipid:	**n/a**
GC Column:	**DB-5**	Analyst:	**MVL**	% Solids:	**n/a**

Analytes	Conc. (ppq)	DL	EMPC	Ratio	RT	Flags
2,3,7,8-TCDD	ND	1.0				___
1,2,3,7,8-PeCDD	ND	1.0				___
1,2,3,4,7,8-HxCDD	ND	1.0				___
1,2,3,6,7,8-HxCDD	ND	1.0				___
1,2,3,7,8,9-HxCDD	ND	1.0				___
1,2,3,4,6,7,8-HpCDD	ND	1.5				___
1,2,3,4,6,7,8,9-OCDD	EMPC		3.3			J__
2,3,7,8-TCDF	ND	0.7				___
1,2,3,7,8-PeCDF	ND	0.7				___
2,3,4,7,8-PeCDF	ND	0.7				___
1,2,3,4,7,8-HxCDF	ND	0.6				___
1,2,3,6,7,8-HxCDF	ND	0.6				___
2,3,4,6,7,8-HxCDF	ND	0.6				___
1,2,3,7,8,9-HxCDF	ND	0.8				___
1,2,3,4,6,7,8-HpCDF	ND	0.8				___
1,2,3,4,7,8,9-HpCDF	ND	1.0				___
1,2,3,4,6,7,8,9-OCDF	ND	1.5				___

Totals	Conc. (ppq)	Number	DL	EMPC	Flags
Total TCDD	EMPC			1.4	___
Total PeCDD	EMPC			2.7	___
Total HxCDD	ND		1.0		___
Total HpCDD	ND		1.5		___
Total TCDF	ND		0.7		___
Total PeCDF	ND		0.7		___
Total HxCDF	ND		0.7		___
Total HpCDF	ND		0.9		___

mit3_PSR v1.00, LARS 6.25.00

Triangle Laboratories, Inc.®
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Printed: 16:48 09/07/2000

Pinnacle Laboratories, Inc.

TLI Project: **51755** Method 8290 PCDD/PCDF Analysis (b)
Client Sample: **TLI Blank** Analysis File: **U141003**

Internal Standards	Conc. (ppq)	% Recovery	QC Limits	Ratio	RT	Flags
$^{13}C_{12}$-2,3,7,8-TCDF	1400	69.8	40%-130%	0.73	26:17	___
$^{13}C_{12}$-2,3,7,8-TCDD	1390	69.7	40%-130%	0.81	26:58	___
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1510	75.6	40%-130%	1.47	30:10	___
$^{13}C_{12}$-1,2,3,7,8-PeCDD	1660	82.8	40%-130%	1.48	31:10	___
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1660	82.9	40%-130%	0.52	33:42	___
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1660	82.8	40%-130%	1.18	34:22	___
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1690	84.4	25%-130%	0.43	36:36	___
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	1680	83.8	25%-130%	1.03	37:39	___
$^{13}C_{12}$-1,2,3,4,6,7,8,9-OCDD	3620	90.4	25%-130%	0.86	41:16	___

Surrogate Standards (Type B)	Conc. (ppq)	% Recovery	QC Limits	Ratio	RT	Flags
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1760	88.2	40%-130%	1.45	30:51	___
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1610	80.4	40%-130%	0.52	33:36	___
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	1670	83.6	40%-130%	1.19	34:17	___
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1760	88.0	25%-130%	0.42	38:09	___

Other Standard	Conc. (ppq)	% Recovery	QC Limits	RT	Flags
$^{37}Cl_4$-2,3,7,8-TCDD	145	72.3	40%-130%	26:59	___

Alternate Standards (Type B)	Conc. (ppq)	% Recovery	QC Limits	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1750	87.6	40%-130%	0.51	34:57	___
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1730	86.4	40%-130%	0.51	34:11	___

Recovery Standards	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.81	26:48	___
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.20	34:41	___

Data Reviewer: JCM 09/07/2000

mit3_PSR v1.00, LARS 6.25.00

Triangle Laboratories, Inc.®
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Printed: 16:48 09/07/2000

Pinnacle Laboratories, Inc.

TLI Project: **51755**
Client Sample: **TLI Blank**

Toxicity Equivalents Report
Analysis File: **U141003**

Client Project:	**NMHWB/008096**			ICal:	**UF57140**
Sample Matrix:	**WATER**	Date Received:	**08/29/00**	Spike File:	**SPMIT32S**
TLI ID:	**TLI Blank**	Date Extracted:	**08/30/00**	1st CCal:	**U001408**
		Date Analyzed:	**09/07/00**	End CCal:	**U141012**
Sample Size:	**1.000 L**	Dilution Factor:	**1**	% Moisture:	**n/a**
Dry Weight:	**n/a**	Blank File:	**U141003**	% Lipid:	**n/a**
GC Column:	**DB-5**	Analyst:	**MVL**	% Solids:	**n/a**

Analytes	Conc. (ppq)		TEF		Equivalent
2,3,7,8-TCDD	{1.0}	x	1.	=	1.0
1,2,3,7,8-PeCDD	{1.0}	x	0.5	=	0.50
1,2,3,4,7,8-HxCDD	{1.0}	x	0.1	=	0.10
1,2,3,6,7,8-HxCDD	{1.0}	x	0.1	=	0.10
1,2,3,7,8,9-HxCDD	{1.0}	x	0.1	=	0.10
1,2,3,4,6,7,8-HpCDD	{1.5}	x	0.01	=	0.015
1,2,3,4,6,7,8,9-OCDD	[3.3]	x	0.001	=	0.0033
TOTAL PCDD					1.8
2,3,7,8-TCDF	{0.7}	x	0.1	=	0.07
1,2,3,7,8-PeCDF	{0.7}	x	0.05	=	0.04
2,3,4,7,8-PeCDF	{0.7}	x	0.5	=	0.4
1,2,3,4,7,8-HxCDF	{0.6}	x	0.1	=	0.06
1,2,3,6,7,8-HxCDF	{0.6}	x	0.1	=	0.06
2,3,4,6,7,8-HxCDF	{0.6}	x	0.1	=	0.06
1,2,3,7,8,9-HxCDF	{0.8}	x	0.1	=	0.08
1,2,3,4,6,7,8-HpCDF	{0.8}	x	0.01	=	0.008
1,2,3,4,7,8,9-HpCDF	{1.0}	x	0.01	=	0.010
1,2,3,4,6,7,8,9-OCDF	{1.5}	x	0.001	=	0.0015
TOTAL PCDF					0.8

Total EPA TEFs, 1989a: 2.6 ppq

[...] indicates that the value is that of an EMPC.
{...} indicates that the value is that of a Detection Limit.

GRY_TEF v1.08, MILES 4.22.16

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Printed: 16:52 09/07/00

Initial ....Date...

Data Review By: JCA 9/7/00

Calculated Noise Height: 0.61

.he Total Area for each peak with an ion abundance ratio outside ratio limits has been recalculated according to method requirements.

Page No. 1 Listing of U141003B.dbf
09/07/2000 Matched GC Peaks / Ratio / Ret. Time

Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
TCDF				0.65-0.89						0.962-1.228			
304-306	DC	NL		Height			4.55	2.70	1.85				
304-306			0 Peaks				0.00						
13C12-TCDF				0.65-0.89						0.962-1.038			
316-318	DC	NL		Height			3.49	1.78	1.71				
			25:53			0.83	60.74	27.50	33.24	0.985			
			26:17			0.73	14,414.04	6,088.52	8,325.52	1.000	13C12-2378-TCDF	ISO	
				Height			3,896.28	1,638.63	2,257.65				
			26:42		RO	0.95	94.36	41.05	43.41	1.016			
316-318			3 Peaks				14,569.14						

---------- Above: TCDF / TCDD Follows ----------

TCDD				0.65-0.89						0.963-1.222			
320-322	DC	NL		Height			2.59	1.26	1.33				
M			26:17		RO	2.13	7.38	8.88	4.17	0.975			J
320-322			1 Peak				7.38						
37Cl-TCDD										0.926-1.074			
328	DC	NL		Height			1.12	1.12					
			25:35				2.25	2.25		0.949			
			26:21				4.72	4.72		0.977			
	DC	SN	26:25				1.09			0.980			
	DC	SN	26:30				2.09			0.983			
	DC	SN	26:53				2.35			0.997			
			26:59				974.64	974.64		1.001	37Cl-TCDD	CLS	
	DC	SN	27:19				1.86			1.013			
	DC	SN	27:25				1.75			1.017			
			27:33				3.21	3.21		1.022			
	DC	SN	27:41				3.33			1.027			
	DC	SN	27:53				1.29			1.034			
	DC	SN	28:10				1.59			1.044			
			28:17				1.04	1.04		1.049			
328			5 Peaks				985.86						
13C12-TCDD				0.65-0.89						0.926-1.074			
332-334	DC	NL		Height			5.56	3.70	1.86				
			26:48			0.81	14,060.67	6,307.06	7,753.61	0.994	13C12-1234-TCDD	RS1	
			26:58			0.81	10,574.85	4,744.94	5,829.91	1.000	13C12-2378-TCDD	IS1	
				Height			3,011.54	1,332.96	1,678.58				
			27:13		RO	0.57	32.18	14.00	24.71	1.009			
332-334			3 Peaks				24,667.70						

```
Compound/
i_Z.... QC.Log Omit Why ..RT. OK Ratio Total.Area/Ht Area/Ht.Peak1 Area/Ht.Peak2 Rel.RT Compound.Name.. ID.. Flags.

                ---------------------- Above: TCDD / PeCDF Follows --------------------

PeCDF                           1.32-1.78                                   0.867-1.133
340-342          DC  NL          Height          2.87          1.47          1.40
340-342               0 Peaks                    0.00

13C12-PeCDF                     1.32-1.78                                   0.867-1.133
352-354          DC  NL          Height          2.24          1.08          1.16
                        30:10     1.47     14,059.94      8,357.33      5,702.61  1.000 13C12-PeCDF 123 IS2
                                Height      4,481.33      2,693.91      1,787.42
                        30:26     1.54        121.08         73.44         47.64  1.009
                        30:51     1.45     16,111.14      9,537.74      6,573.40  1.023 13C12-PeCDF 234 SUR1
                        31:49     1.57        155.08         94.81         60.27  1.055
352-354               4 Peaks              30,447.24

                ---------------------- Above: PeCDF / PeCDD Follows --------------------

PeCDD                           1.32-1.78                                   0.872-1.128
356-358          DC  NL          Height          2.17          1.20          0.97
                 DC  SN  30:11 RO  2.69          7.09                              0.968
                         30:50 RO  1.97         12.47          9.63          4.89  0.989                          J
356-358               1 Peak                    12.47

13C12-PeCDD                     1.32-1.78                                   0.872-1.128
368-370          DC  NL          Height          2.23          1.16          1.07
                        30:06     1.54         67.86         41.16         26.70  0.966
                        30:16 RO  1.19         48.17         22.54         18.39  0.971
                        30:26 RO  1.27         11.37          5.66          4.46  0.976
                        31:10     1.48      8,418.14      5,025.93      3,392.21  1.000 13C12-PeCDD 123 IS3
                                Height      2,746.47      1,618.19      1,128.28
                        31:32 RO  1.80         14.56         10.28          5.71  1.012
                        31:41     1.62          8.10          5.01          3.09  1.017
368-370               6 Peaks               8,568.20

                ---------------------- Above: PeCDD / HxCDF Follows --------------------

HxCDF                           1.05-1.43                                   0.881-1.119
374-376          DC  NL          Height          1.50          0.85          0.65
      D          d   SN  33:36 RO  1.58          7.66                              0.997 123478-HxCDF     AN
                 DC  SN  33:42 RO  1.57          4.93                              1.000 123678-HxCDF     AN
                 DC  SN  33:49 RO  0.26          0.58                              1.003
                 DC  SN  34:00 RO  0.53          1.19                              1.009
                 DC  SN  34:18 RO  6.49          1.41                              1.018
      D          d   SN  34:23 RO  0.95          5.98                              1.020
                 DC  SN  34:34 RO  1.51          1.64                              1.026
                 DC  SN  34:42     1.28          8.62                              1.030
      D          d   SN  34:58 RO  0.76          3.59                              1.038 123789-HxCDF     AN
                 DC  SN  35:02 RO  3.11          1.19                              1.040
                 DC  SN  35:06 RO  3.83          0.65                              1.042
374-376               0 Peaks                    0.00
```

Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
13C12-HxCDF				0.43-0.59						0.881-1.119			
384-386	DC	NL				Height	1.52	0.55	0.97				
				32:38		0.52	35.63	12.20	23.43	0.968			
				33:36		0.52	13,156.97	4,473.45	8,683.52	0.997	13C12-HxCDF 478	SUR2	
				33:42		0.52	13,136.11	4,489.45	8,646.66	1.000	13C12-HxCDF 678	IS4	
						Height	4,453.68	1,529.88	2,923.80				
				34:11		0.51	13,209.36	4,464.42	8,744.94	1.014	13C12-HxCDF 234	ALT2	
				34:57		0.51	10,133.10	3,423.19	6,709.91	1.037	13C12-HxCDF 789	ALT1	
				35:12	RO	2.10	7.46	10.37	4.94	1.045			
384-386				6 Peaks			49,678.63						

---------- Above: HxCDF / HxCDD Follows ----------

HxCDD				1.05-1.43						0.884-1.116			
390-392		DC	NL			Height	1.36	0.67	0.69				
		DC	SN	32:58	RO	3.14	1.48			0.959			
		DC	SN	33:07		1.40	1.37			0.964			
		DC	SN	33:14	RO	5.71	0.38			0.967			
		DC	SN	33:25	RO	0.39	0.23			0.972			
	D	d	SN	33:36	RO	1.56	12.30			0.978			
	D	d	SN	33:42	RO	1.91	11.56			0.981			
	D	d	SN	34:11	RO	1.66	11.04			0.995			
		DC	SN	34:18	RO	0.57	2.38			0.998	123478-HxCDD	AN	
	D	d	SN	34:57	RO	1.59	11.51			1.017			
		DC	SN	35:05		1.39	1.67			1.021			
390-392				0 Peaks			0.00						
13C12-HxCDD				1.05-1.43						0.971-1.029			
402-404		DC	NL			Height	2.84	1.58	1.26				
				33:46		1.26	78.10	43.51	34.59	0.983			
				34:17		1.19	8,834.45	4,802.12	4,032.33	0.998	13C12-HxCDD 478	SUR3	
				34:22		1.18	8,329.95	4,507.78	3,822.17	1.000	13C12-HxCDD 678	IS5	
						Height	2,894.09	1,575.52	1,318.57				
				34:41		1.20	11,434.54	6,242.04	5,192.50	1.009	13C12-HxCDD 789	RS2	
				34:53	RO	0.70	16.42	9.09	12.90	1.015			
				34:58	RO	3.16	15.95	22.47	7.12	1.017			
402-404				6 Peaks			28,709.41						

---------- Above: HxCDD / HpCDF Follows ----------

HpCDF				0.88-1.20						0.891-1.109			
408-410		DC	NL			Height	1.45	0.94	0.51				
		DC	SN	36:31	RO	21.55	2.16			0.998			
		DC	SN	37:06	RO	0.76	1.45			1.014			
		DC	SN	37:21	RO	1.27	2.92			1.020			
		DC	SN	37:26	RO	0.82	1.86			1.023			
		DC	SN	37:39	RO	0.85	3.79			1.029			
		DC	SN	38:14	RO	4.01	2.31			1.045			
		DC	SN	38:36	RO	0.65	2.26			1.055			
408-410				0 Peaks			0.00						

```
Compound/
M_Z.... QC.Log Omit Why ..RT. OK Ratio Total.Area/Ht Area/Ht.Peak1 Area/Ht.Peak2 Rel.RT Compound.Name.. ID.. Flags.

13C12-HpCDF                    0.37-0.51                                    0.945-1.109
418-420          DC  NL          Height          2.20          1.20          1.00
                         36:36     0.43      9,806.47      2,925.51      6,880.96  1.000 13C12-HpCDF 678 IS6
                                 Height      2,963.31        880.29      2,083.02
                         38:09     0.42      8,514.60      2,501.37      6,013.23  1.042 13C12-HpCDF 789 SUR4
418-420                2 Peaks               18,321.07

                 ---------------------- Above: HpCDF / HpCDD Follows --------------------

HpCDD                          0.88-1.20                                    0.894-1.106
424-426          DC  NL          Height          1.10          0.58          0.52
                 DC  SN  37:26 RO  1.51          2.45                              0.994
                 DC  SN  37:39     0.89          4.48                              1.000 1234678-HpCDD   AN
         D       d   SN  38:09 RO  1.82         13.22                              1.013
424-426                0 Peaks                   0.00

13C12-HpCDD                    0.88-1.20                                    0.973-1.027
436-438          DC  NL          Height          4.88          2.60          2.28
                         36:54 RO  0.68         18.54          9.45         13.91  0.980
                         37:39     1.03      8,633.71      4,373.46      4,260.25  1.000 13C12-HpCDD 678 IS7
                                 Height      2,466.67      1,270.16      1,196.51
                         37:53 RO  0.63         15.05          7.67         12.18  1.006
436-438                3 Peaks               8,667.30

                 ---------------------- Above: HpCDD / Octa-CDD and CDF Follows ----------

OCDF                           0.76-1.02                                    0.903-1.097
442-444          DC  NL          Height          1.27          0.54          0.73
                 DC  WL  36:38 RO  1.33          6.44                              0.888
                 DC  WL  37:14 RO  0.44          1.53                              0.902
                 DC  SN  37:26 RO  0.21          1.53                              0.907
                         37:39 RO  1.63          8.11          6.98          4.29  0.912
                 DC  SN  38:41 RO  2.97          1.40                              0.937
                 DC  SN  40:02 RO  0.59          2.97                              0.970
         D       d   SN  41:27 RO  1.58          4.59                              1.004 OCDF            AN
                 DC  SN  43:09 RO  0.56          4.18                              1.046
                 DC  SN  43:15 RO  0.49          1.42                              1.048
                 DC  SN  43:20 RO  0.58          1.66                              1.050
                 DC  SN  44:18 RO  2.56          1.80                              1.074
442-444                1 Peak                    8.11

OCDD                           0.76-1.02                                    0.903-1.097
458-460          DC  NL          Height          1.05          0.53          0.52
         M               41:16 RO  1.24         11.13          7.31          5.89  1.000 OCDD            AN   J
458-460                1 Peak                   11.13

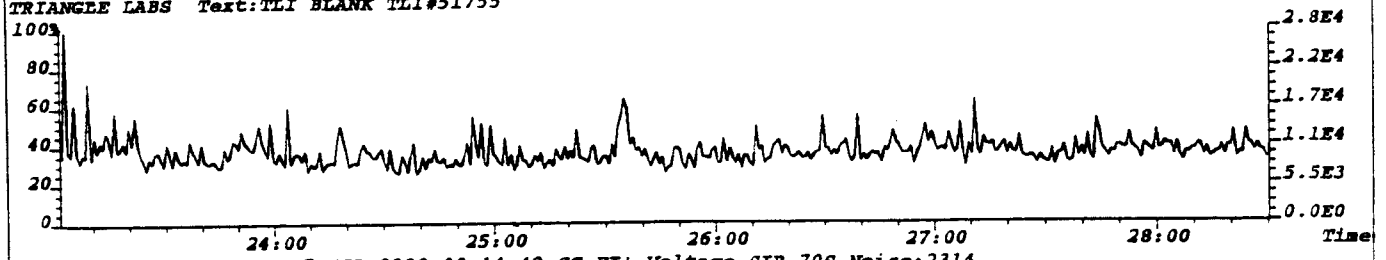
13C12-OCDD                     0.76-1.02                                    0.952-1.048
470-472          DC  NL          Height          1.38          0.87          0.51
                         41:16     0.86     14,370.30      6,639.74      7,730.56  1.000 13C12-OCDD      IS8
                                 Height      3,322.71      1,548.61      1,774.10
470-472                1 Peak               14,370.30
```

Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.

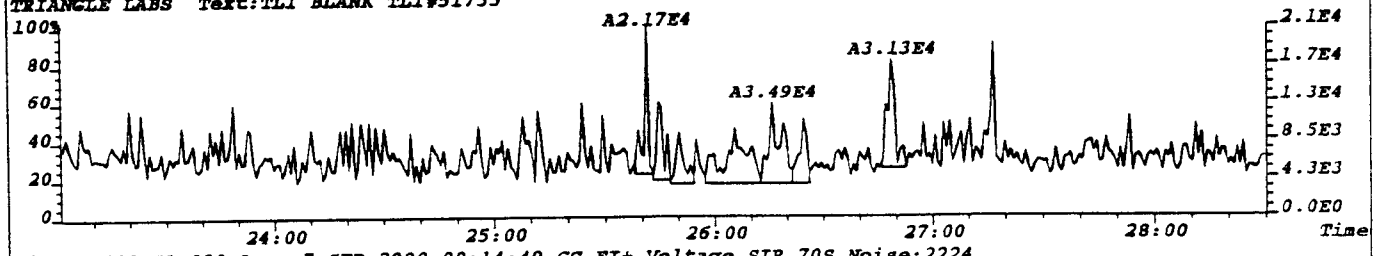
Column Description.....	"Why" Code Description.....	QC Log Desc.....
M_Z -Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT. -Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK -RO=Ratio Outside Limits	<M-Below Method Detection Limit	T-Time Changed
Rel.RT-Relative Retention Time	NL-Channel Specific Noise Level	M-Peak Area Changed
		N-Name Changed
		X-Ether Interference

*** End of Report ***

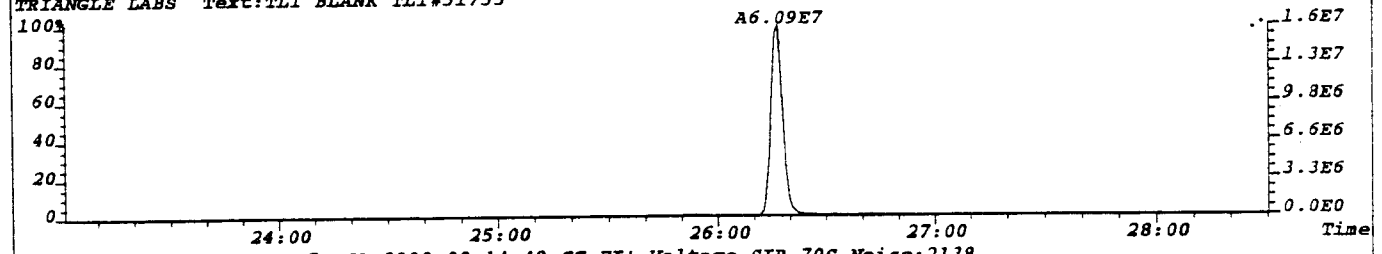
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:3381
303.9016 S:3 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,13524.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



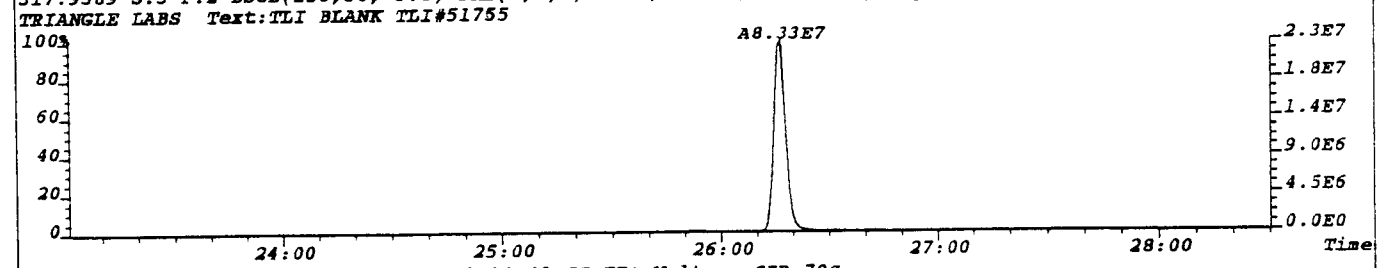
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:2314
305.8987 S:3 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,9256.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



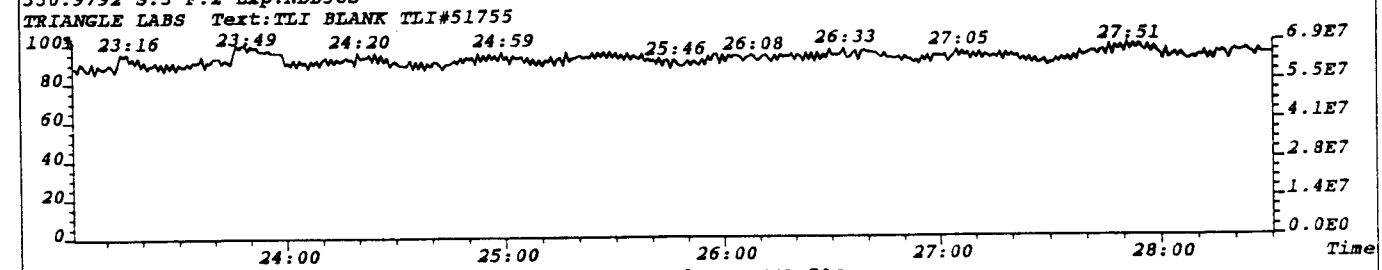
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:2224
315.9419 S:3 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,8896.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



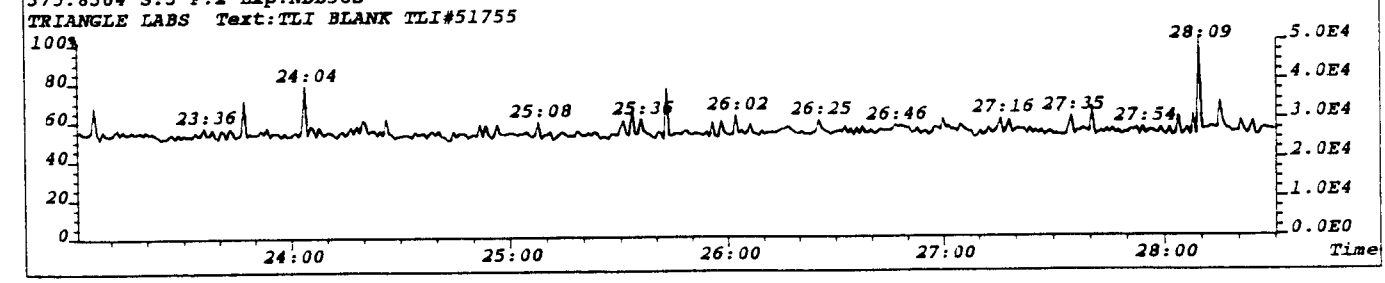
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:2138
317.9389 S:3 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,8552.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
330.9792 S:3 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
375.8364 S:3 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



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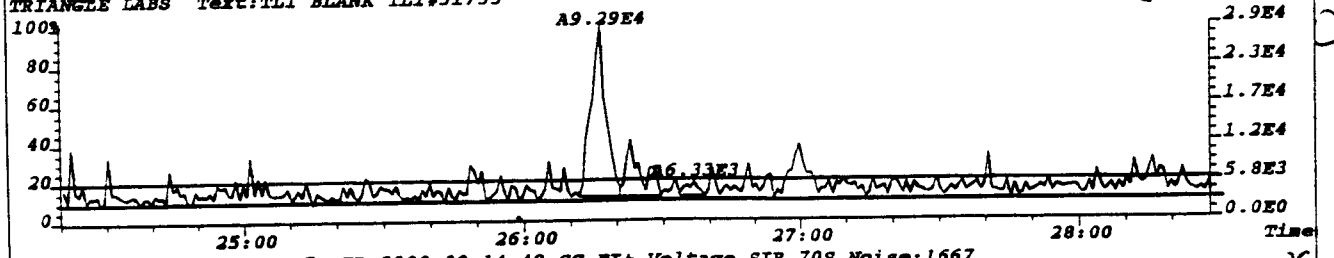
(.10)(2.9)=.29

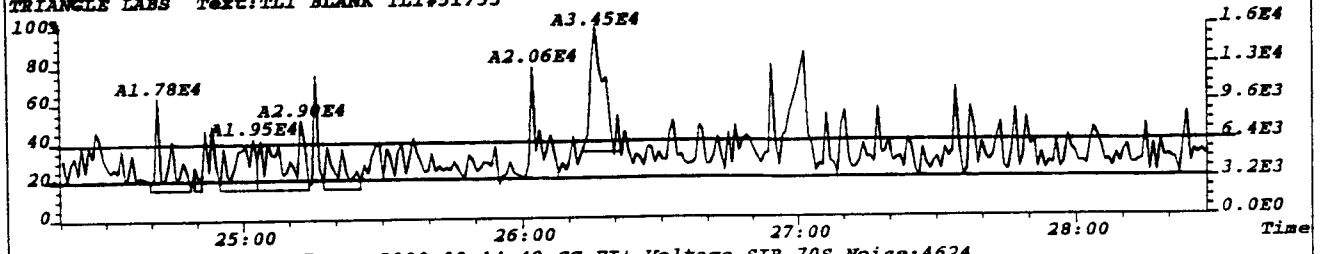
9.7

File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:1572
319.8965 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6288.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755

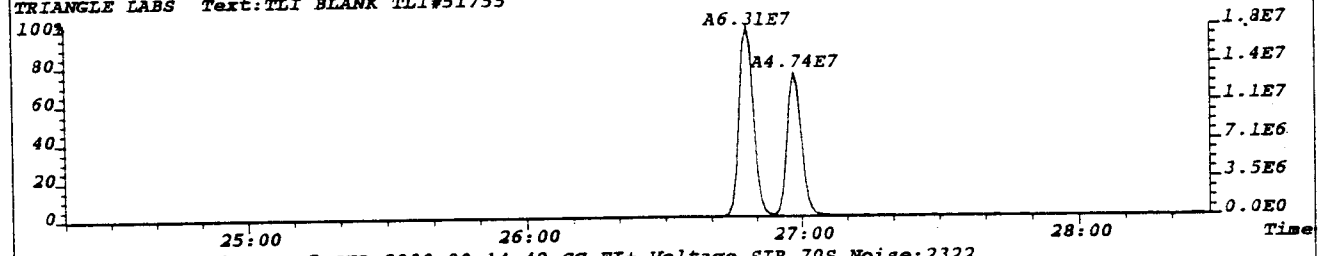


File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:1667
321.8936 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6668.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755

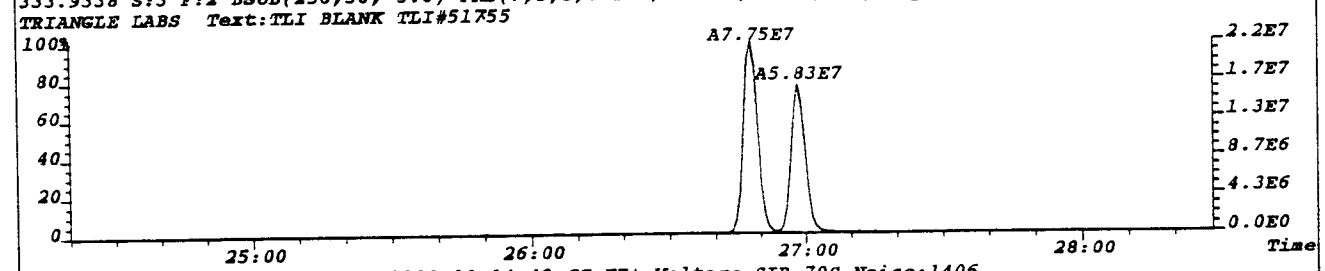
(.29)(1.0)=.32



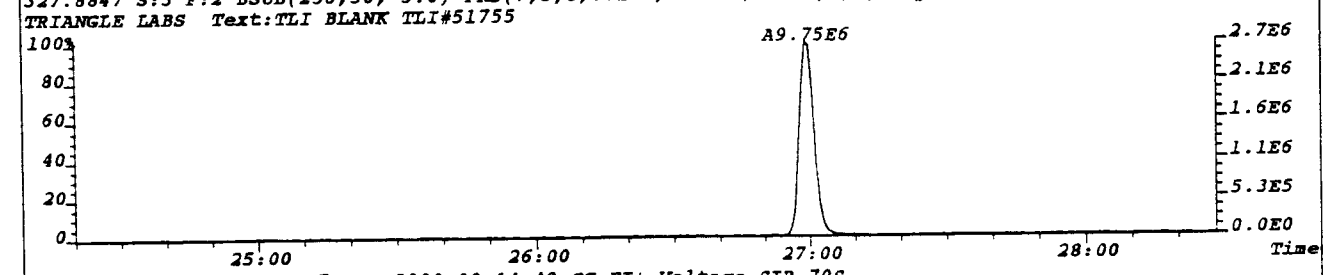
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:4624
331.9368 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,18496.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



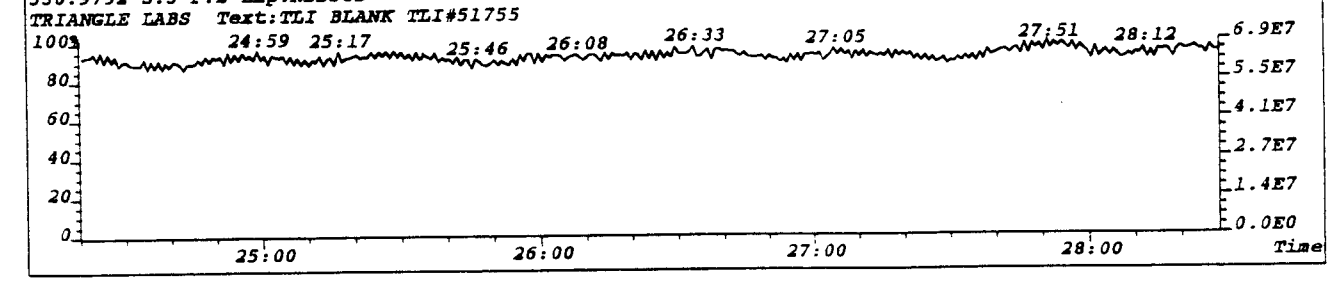
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:2322
333.9338 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9288.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



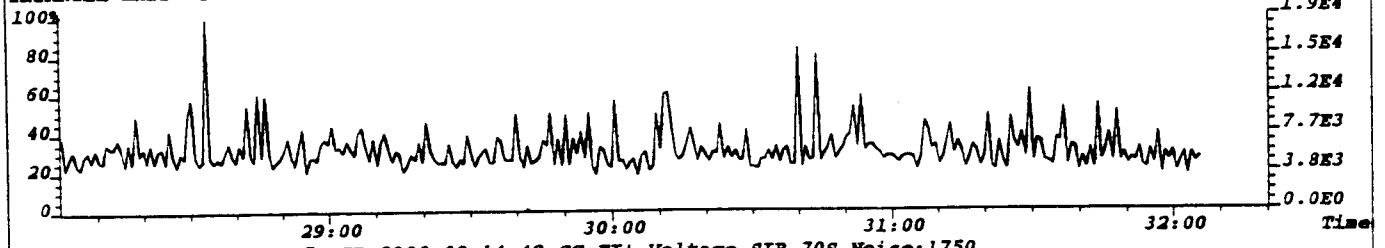
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:1406
327.8847 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5624.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



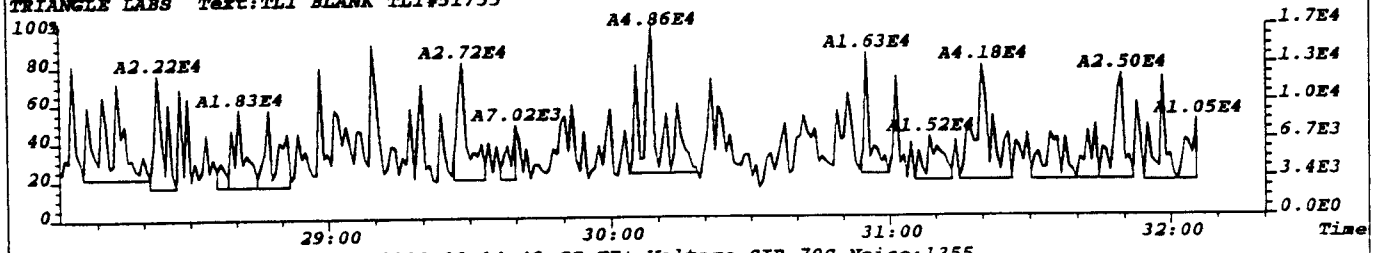
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
330.9792 S:3 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



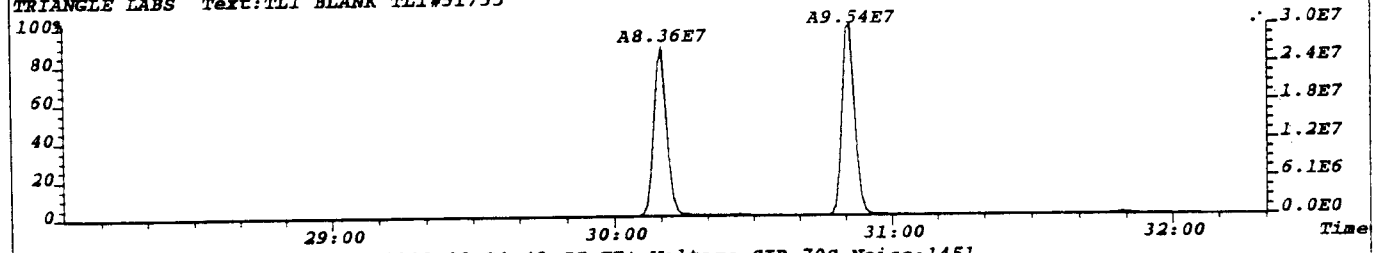
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:1835
339.8597 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7340.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



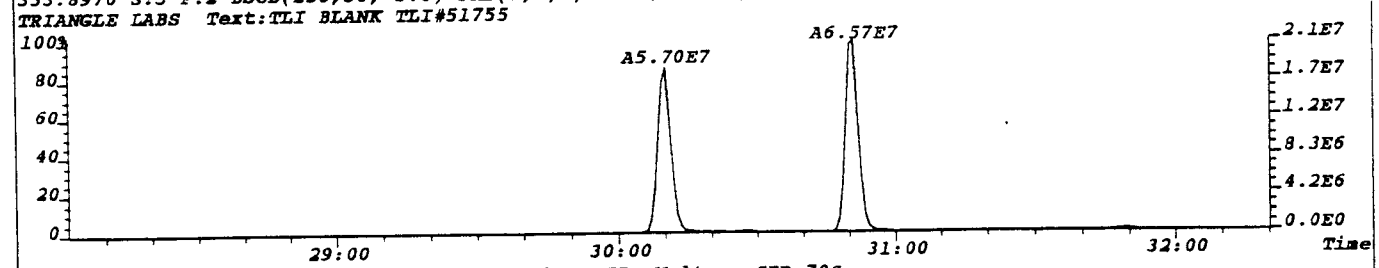
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:1750
341.8567 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7000.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



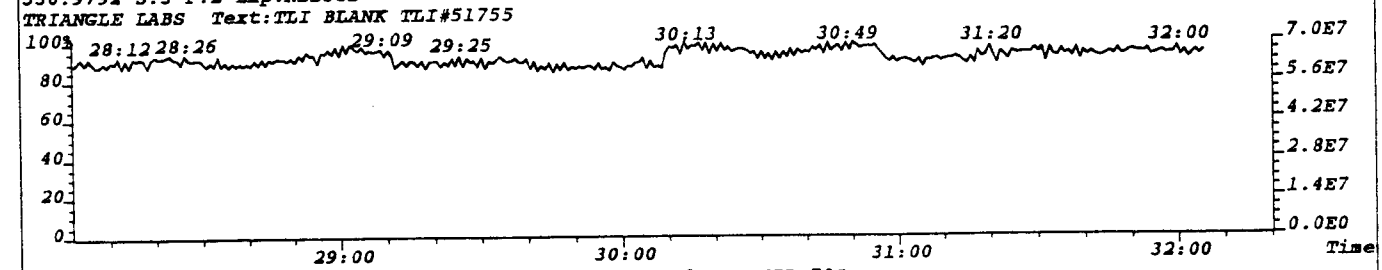
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:1355
351.9000 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5420.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



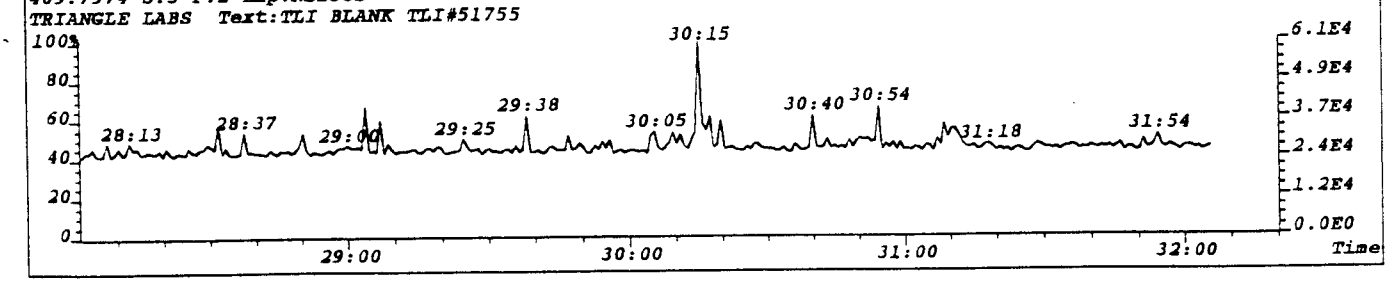
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:1451
353.8970 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5804.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



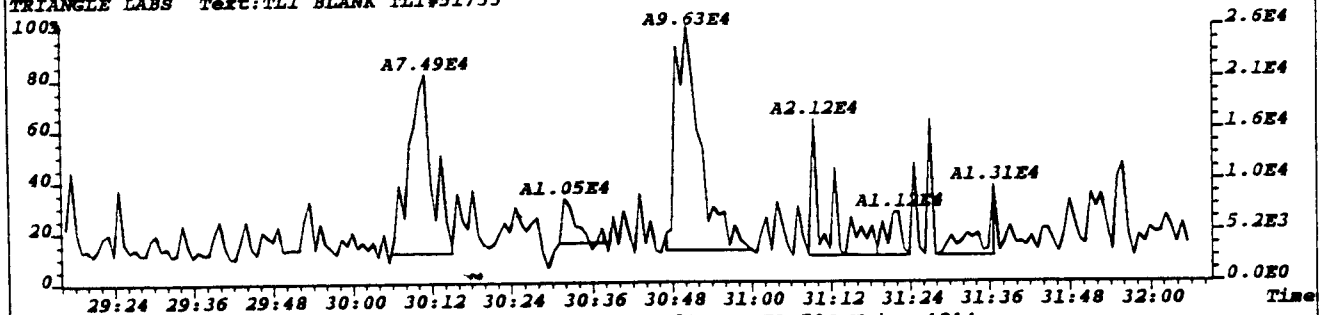
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
330.9792 S:3 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



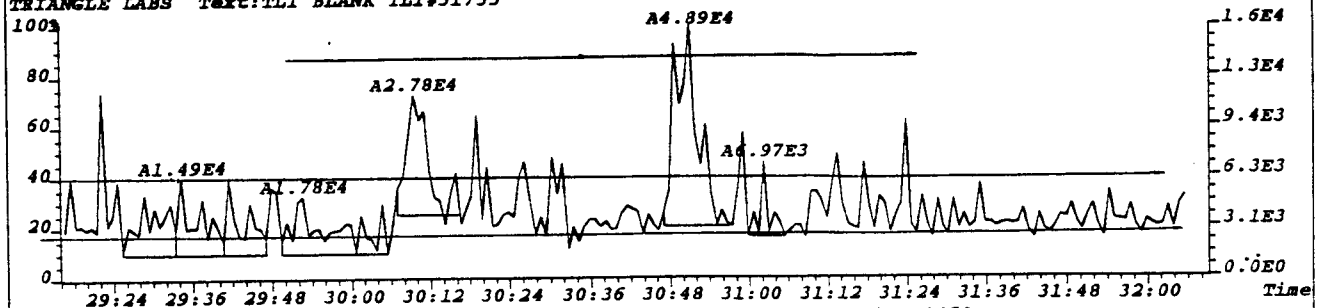
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
409.7974 S:3 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



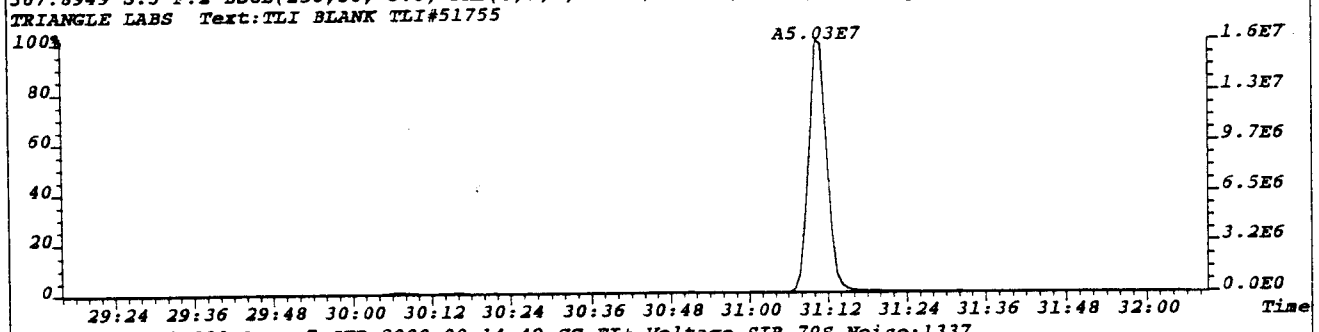
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:1496
355.8546 S:3 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,5984.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



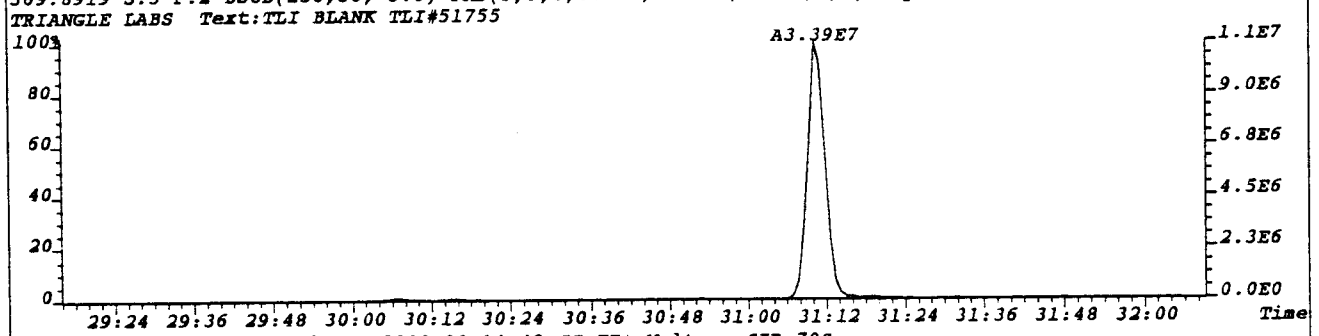
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:1214
357.8516 S:3 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,4856.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



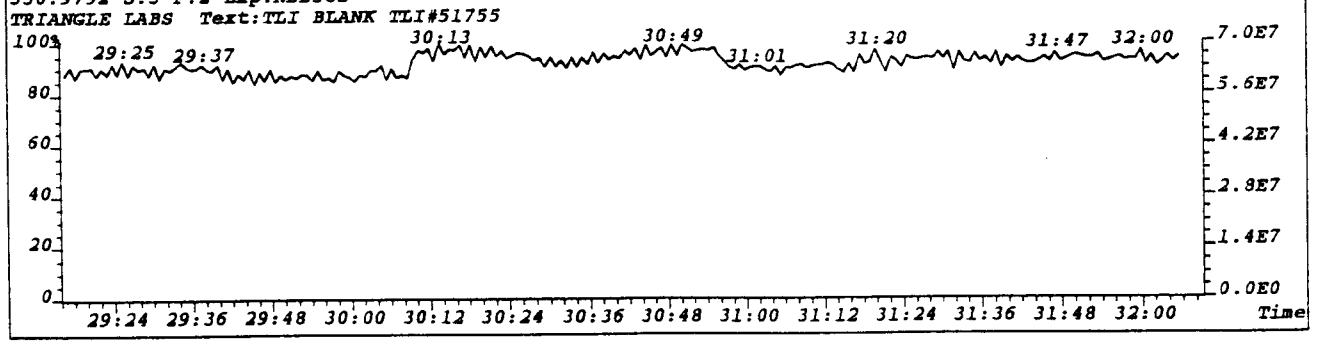
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:1450
367.8949 S:3 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,5800.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



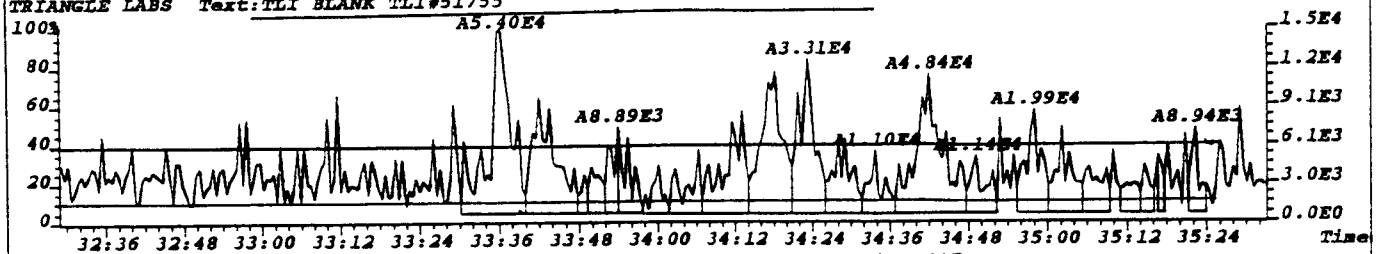
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:1337
369.8919 S:3 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,5348.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



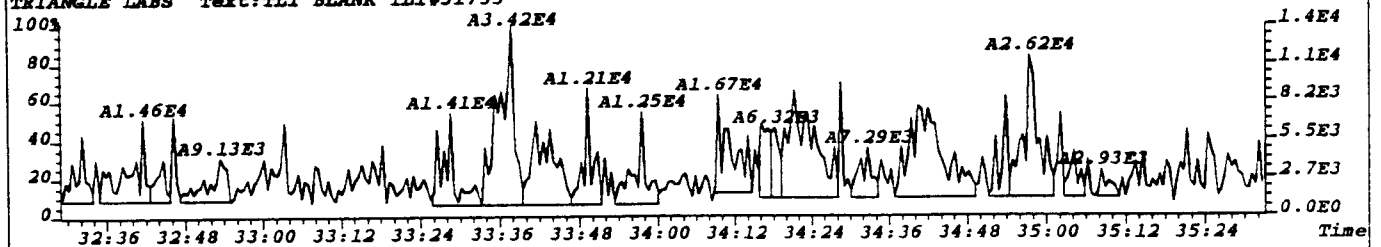
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
330.9792 S:3 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



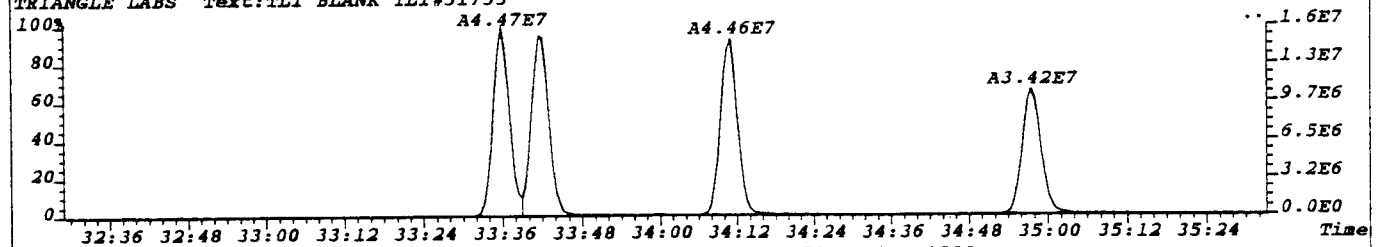
File:U1410 #1-452 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:1062
373.8208 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,4248.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



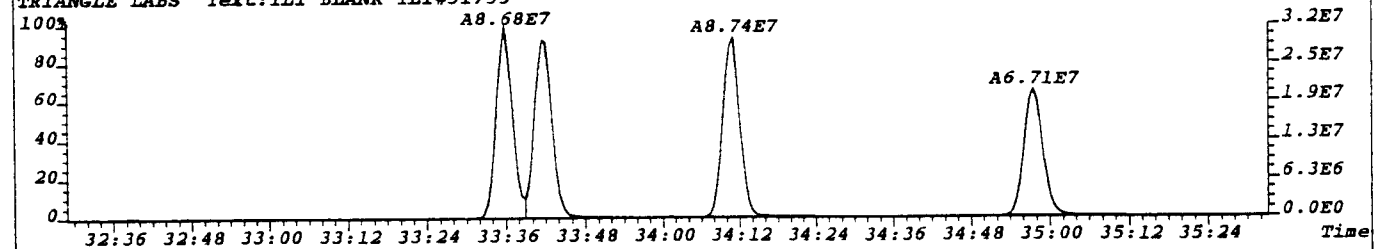
File:U1410 #1-452 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:817
375.8178 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,3268.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



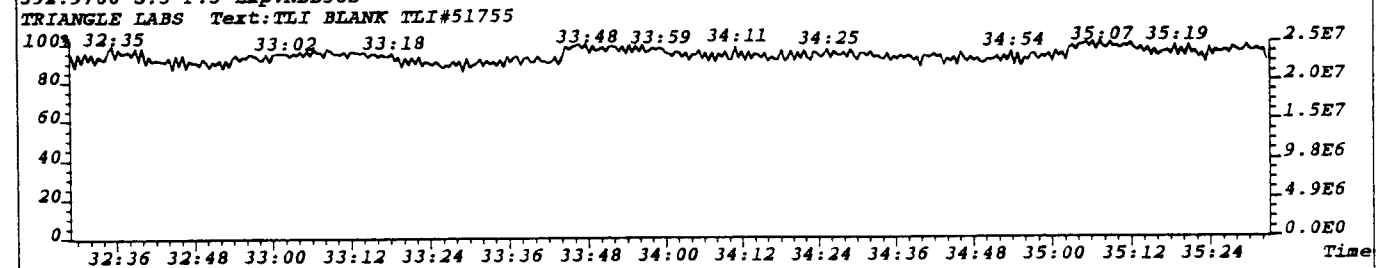
File:U1410 #1-452 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:683
383.8639 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2732.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



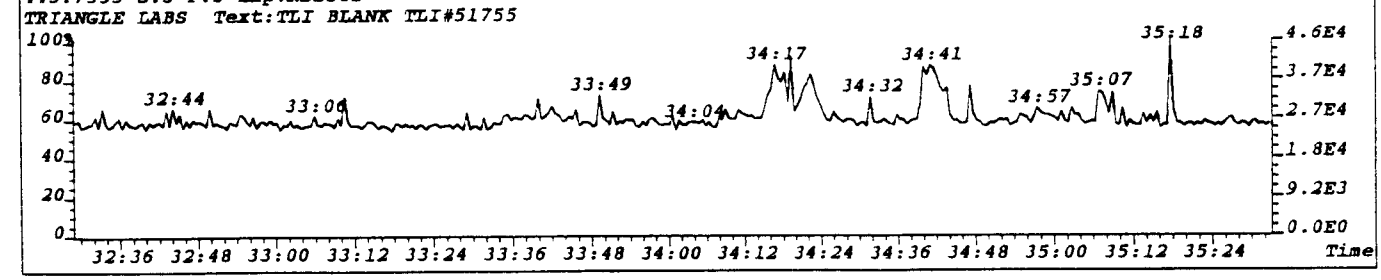
File:U1410 #1-452 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:1208
385.8610 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,4832.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



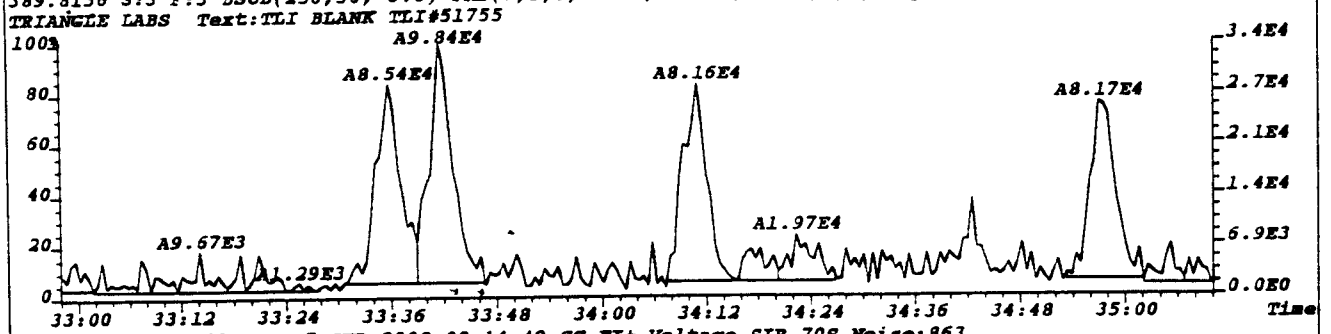
File:U1410 #1-452 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
392.9760 S:3 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



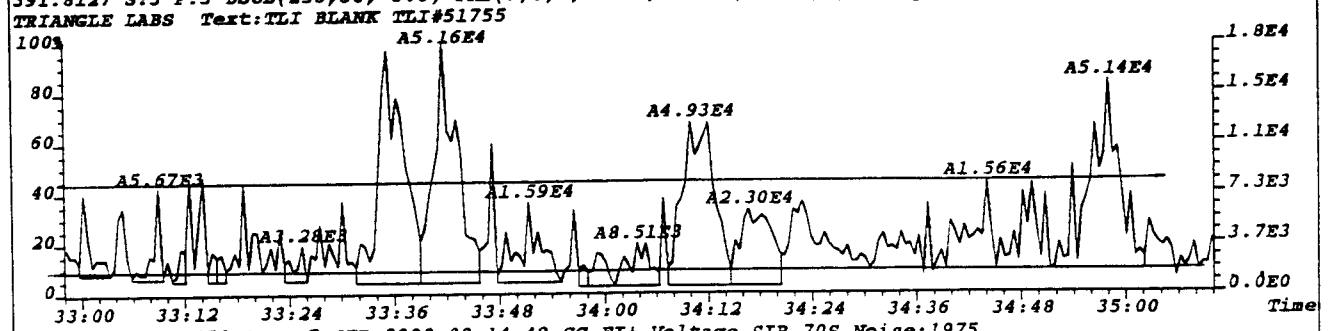
File:U1410 #1-452 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
445.7555 S:3 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



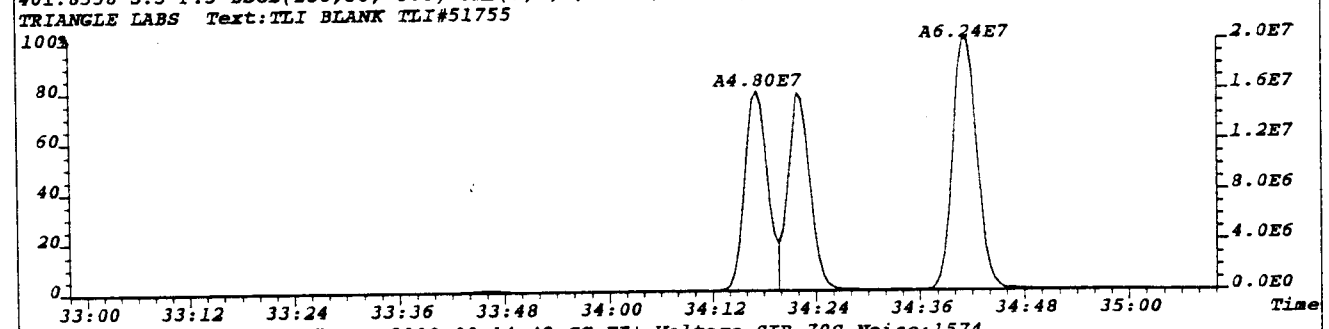
File:U1410 #1-452 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:832
389.8156 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,3328.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



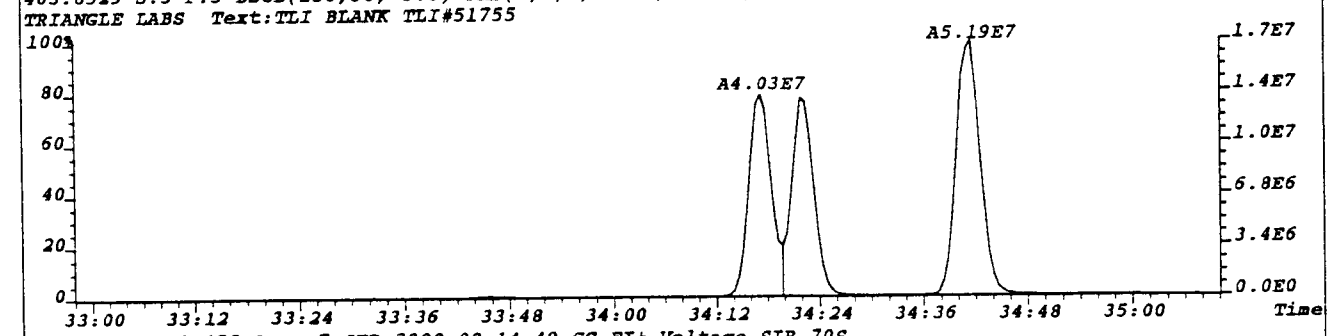
File:U1410 #1-452 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:863
391.8127 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,3452.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



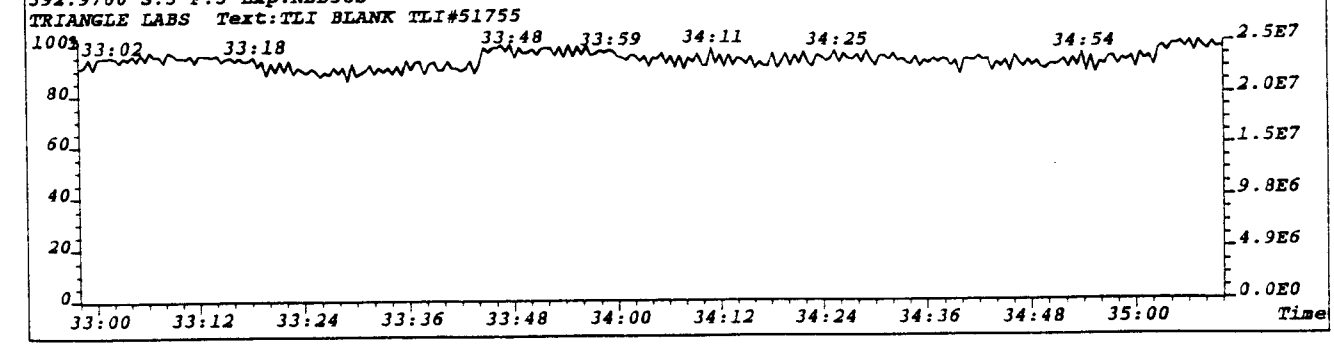
File:U1410 #1-452 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:1975
401.8558 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7900.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



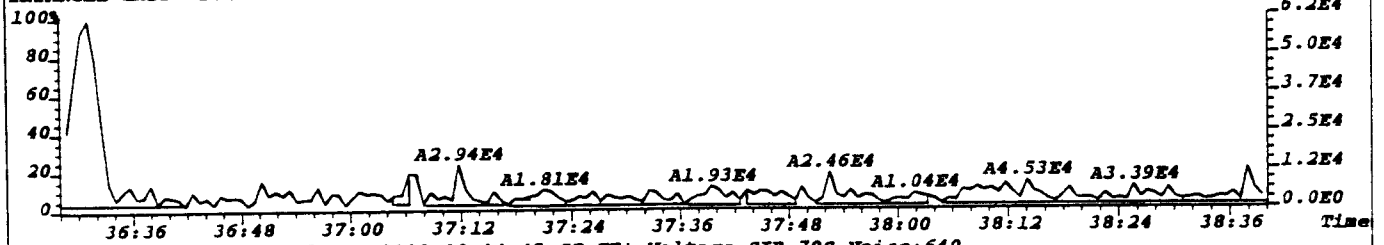
File:U1410 #1-452 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:1574
403.8529 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6296.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



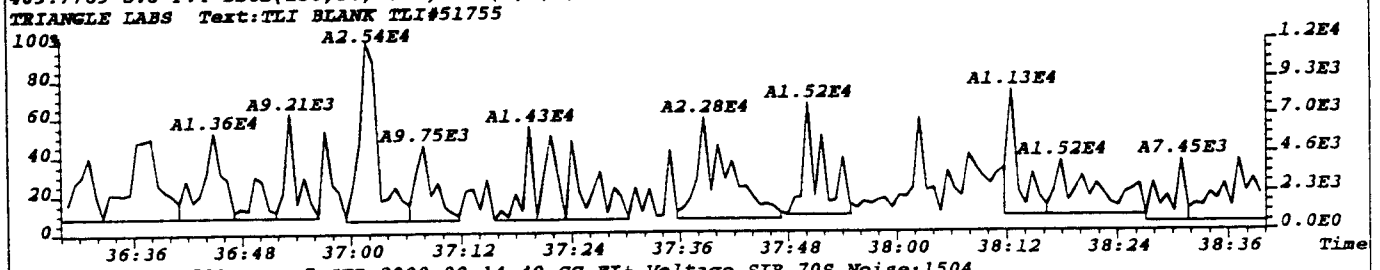
File:U1410 #1-452 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
392.9760 S:3 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



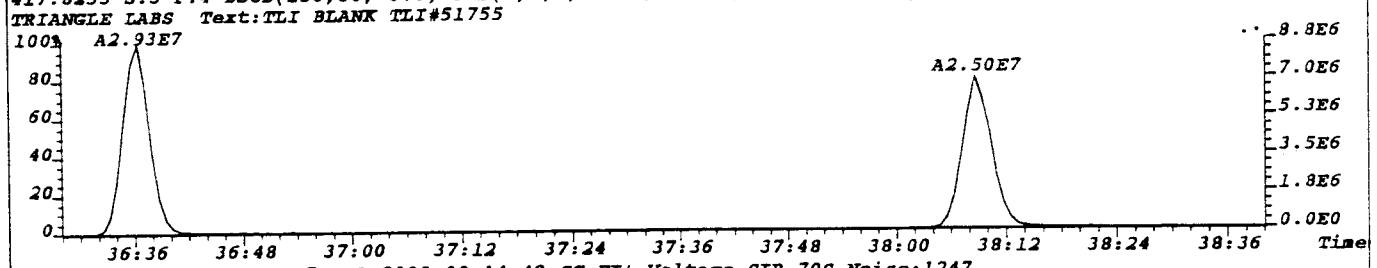
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:1178
407.7818 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,4712.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



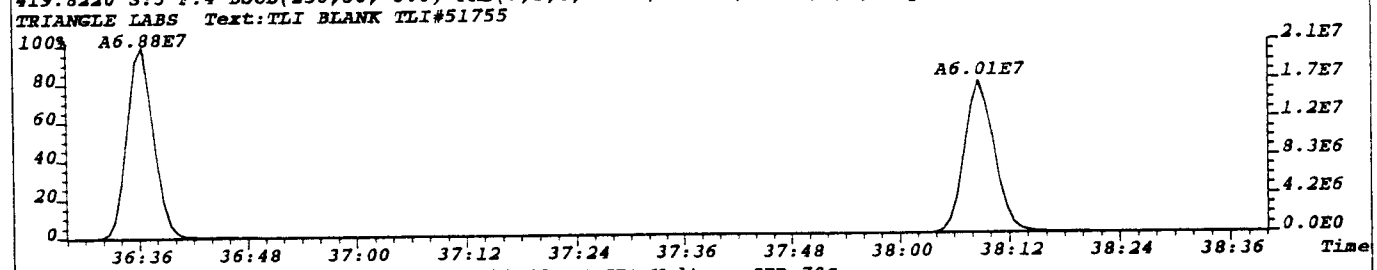
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:640
409.7789 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2560.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



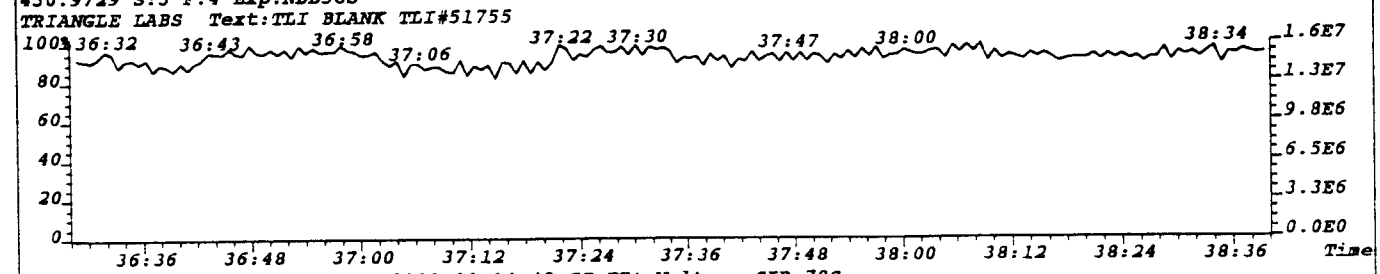
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:1504
417.8253 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6016.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



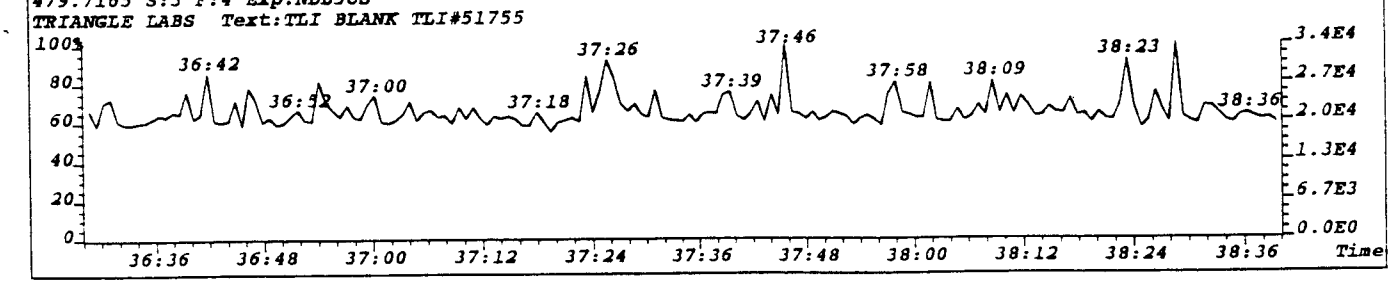
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:1247
419.8220 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,4988.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



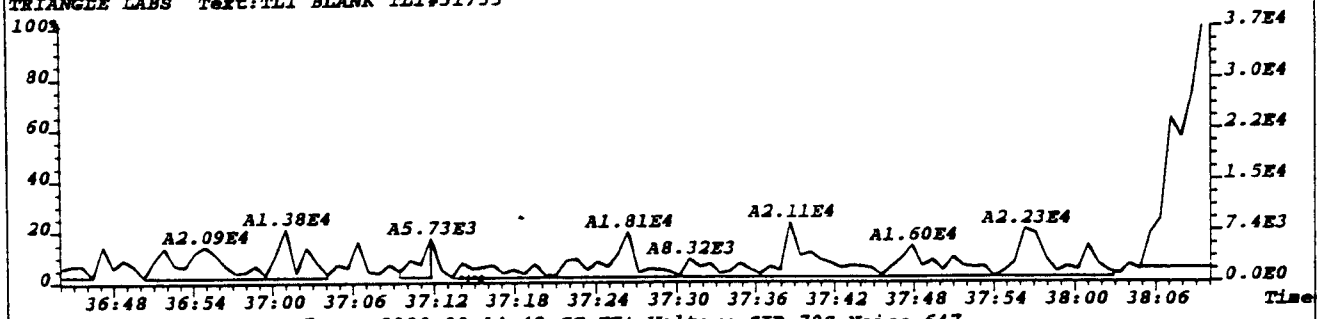
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
430.9729 S:3 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



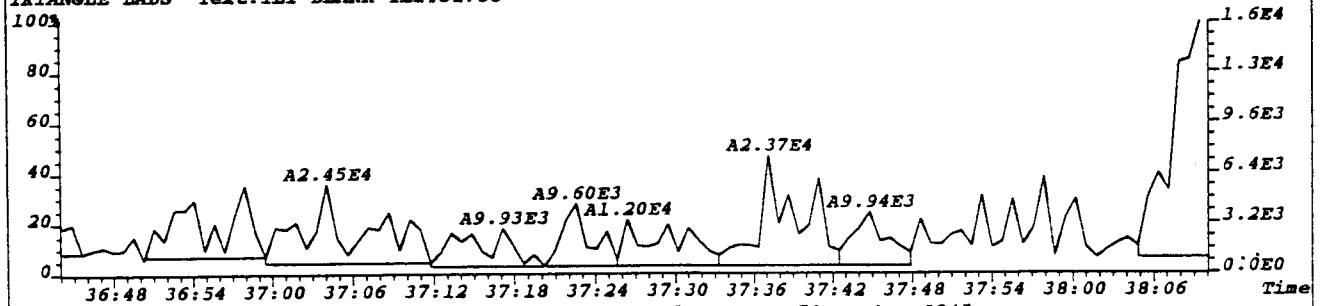
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
479.7165 S:3 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



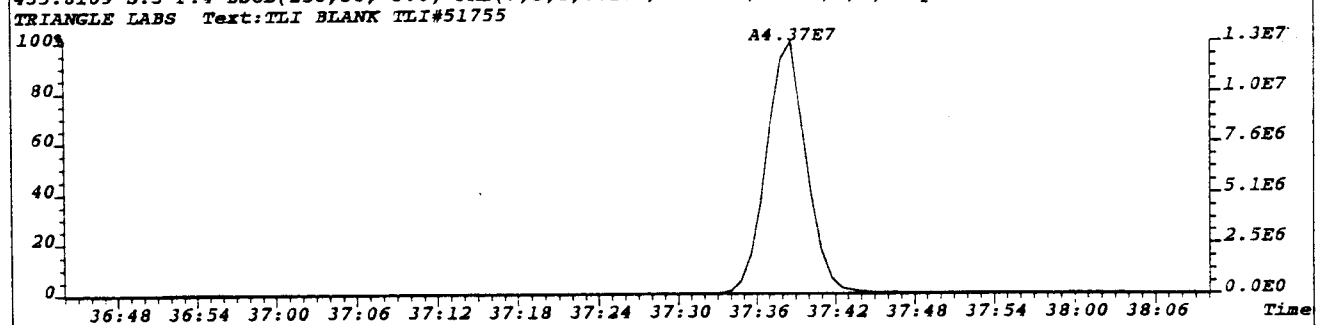
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:727
423.7766 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2908.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



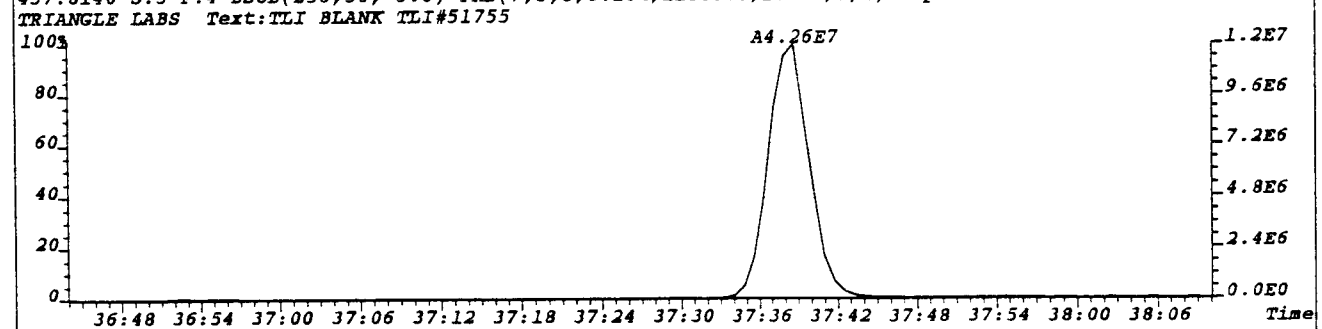
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:647
425.7737 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2588.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



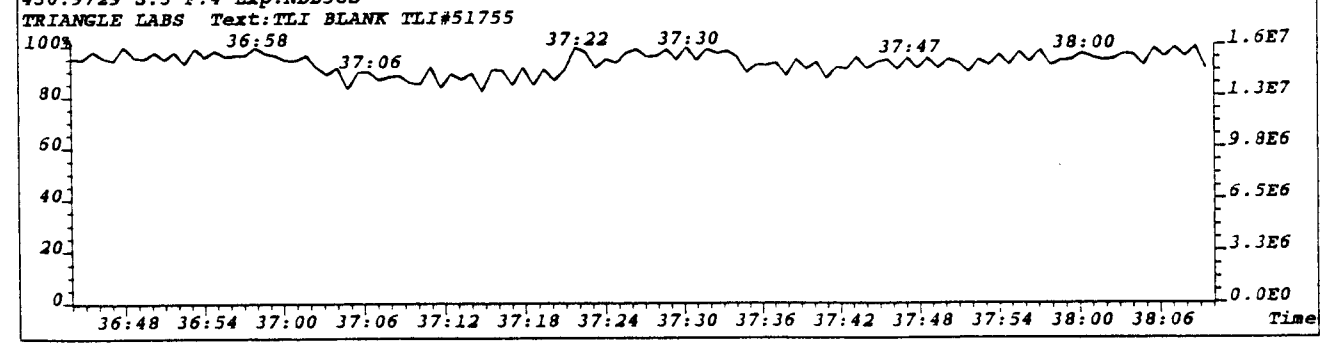
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:3245
435.8169 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12980.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



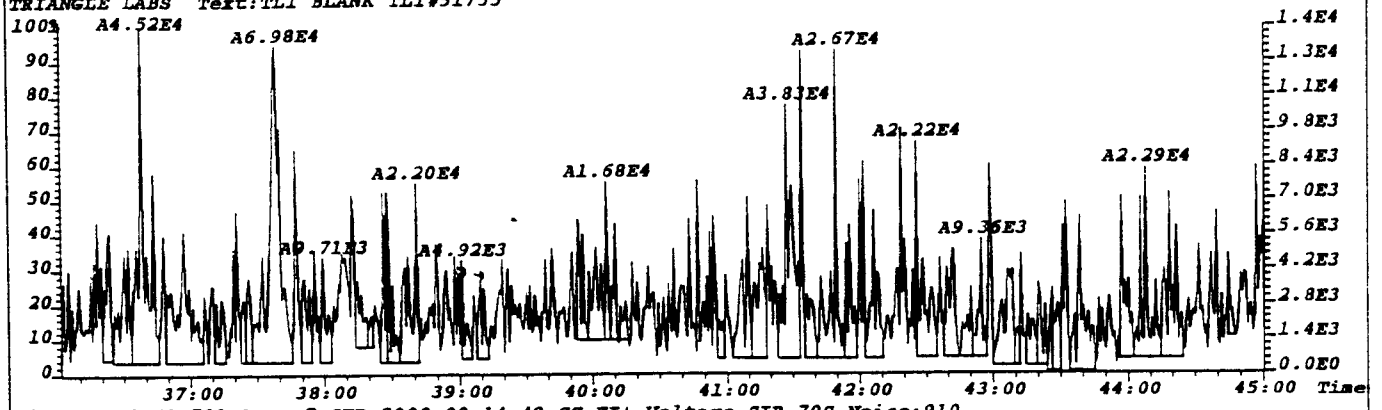
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:2845
437.8140 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11380.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



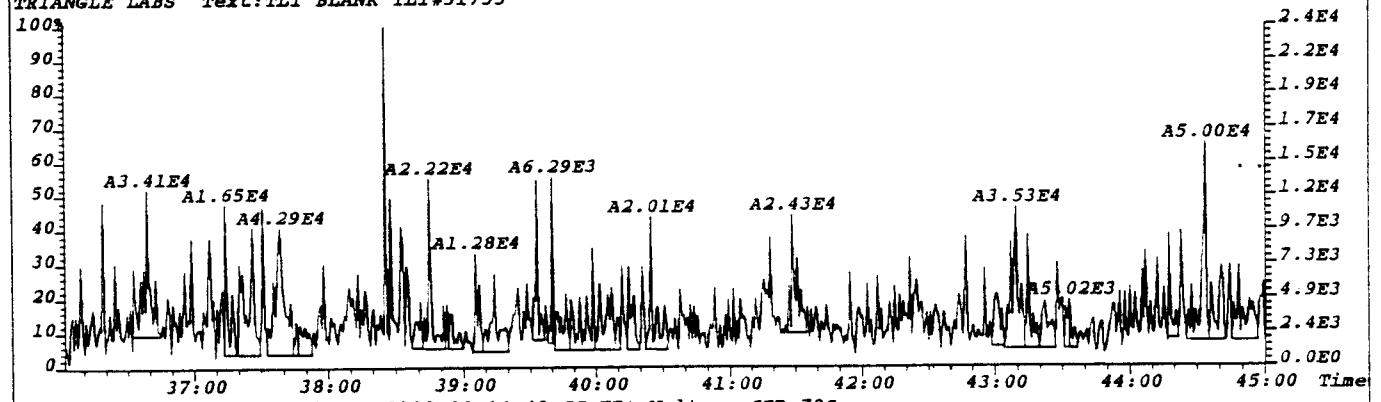
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
430.9729 S:3 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



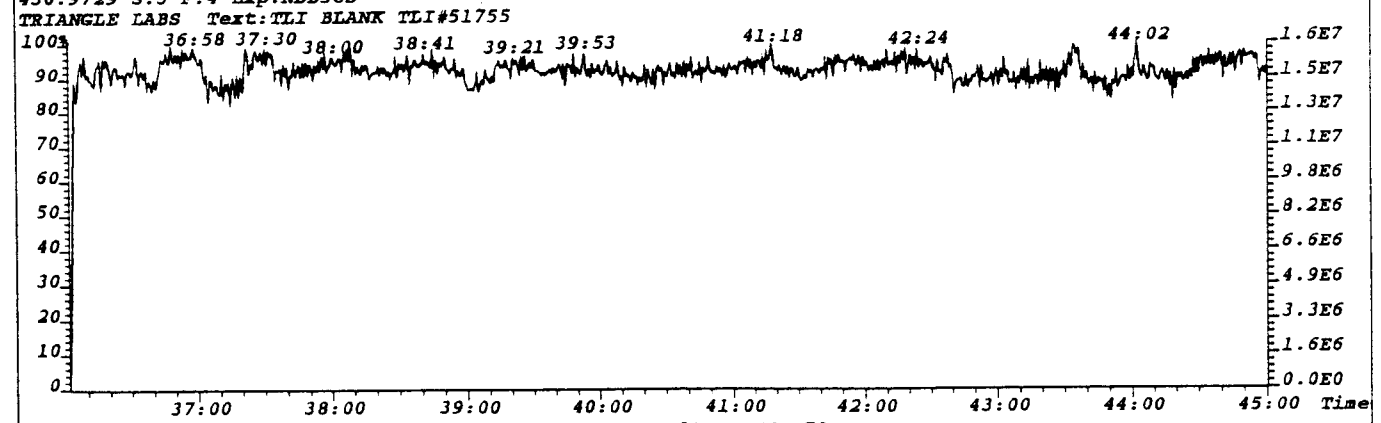
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:673
441.7428 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2692.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



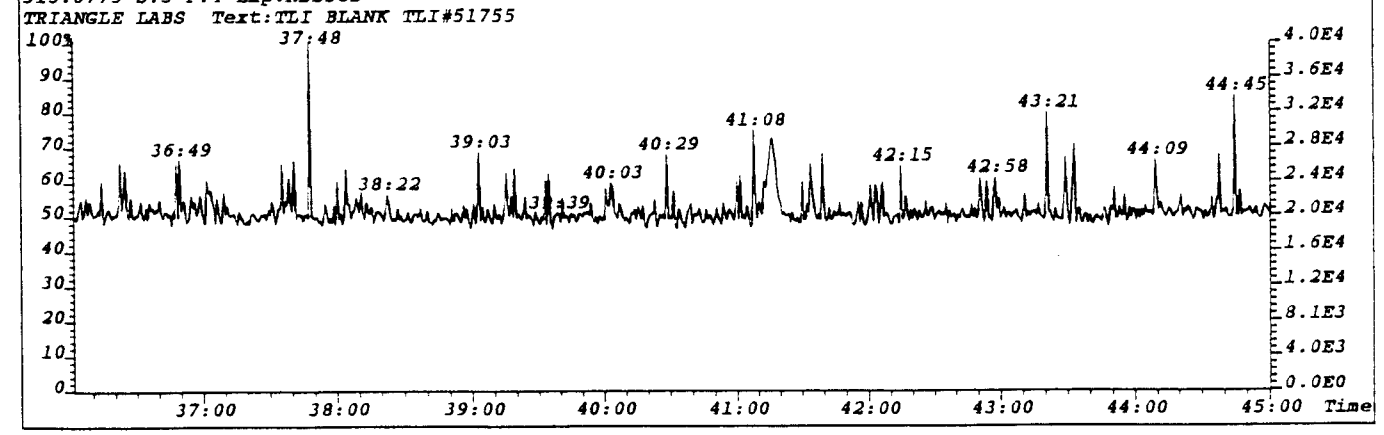
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:910
443.7399 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,3640.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



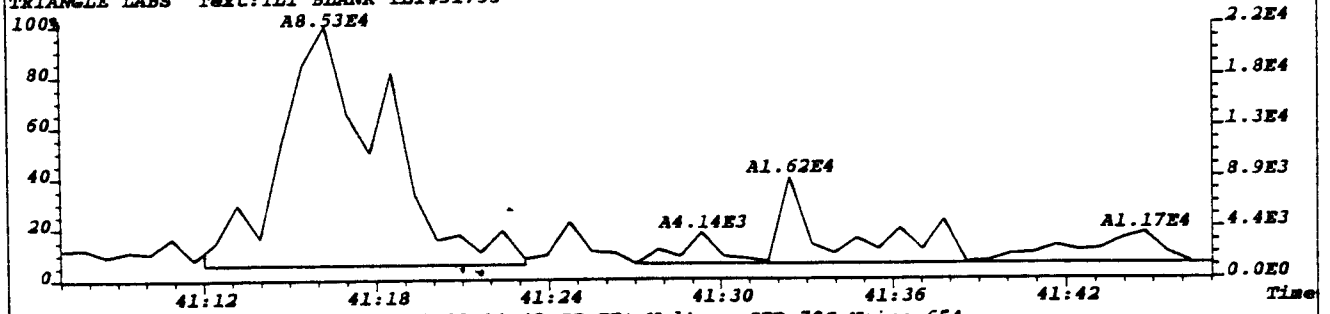
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
430.9729 S:3 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



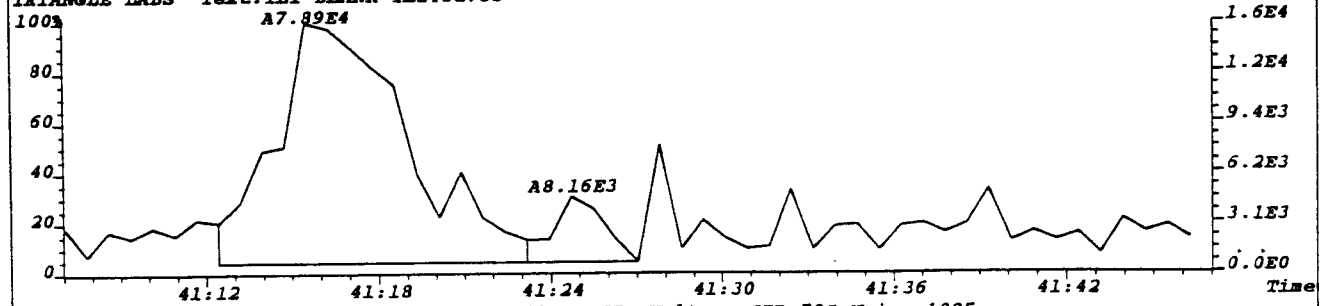
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
513.6775 S:3 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



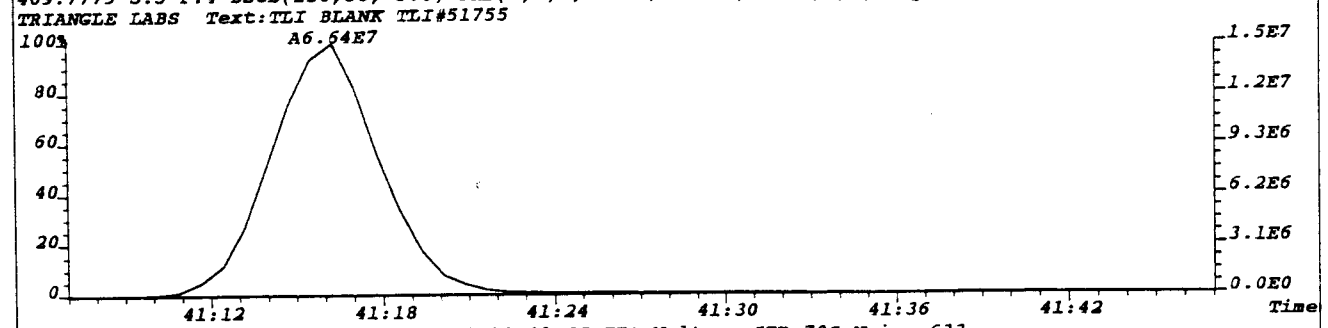
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:657
457.7377 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2628.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



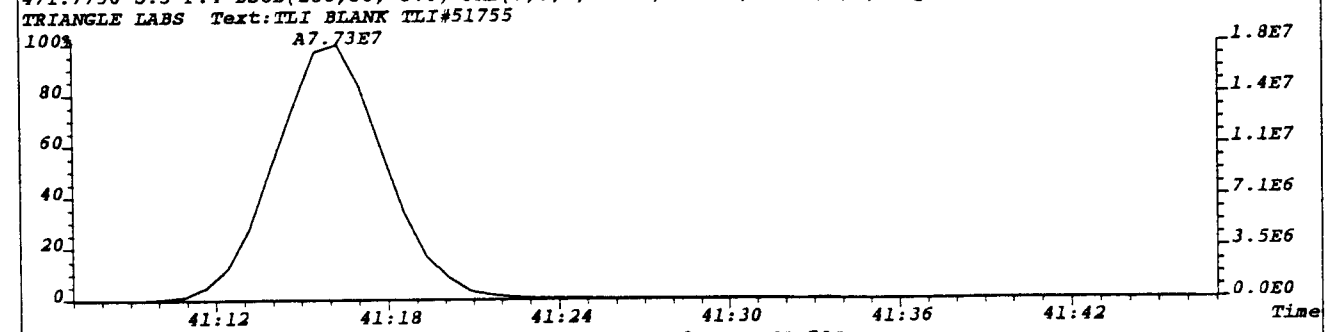
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:654
459.7348 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2616.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



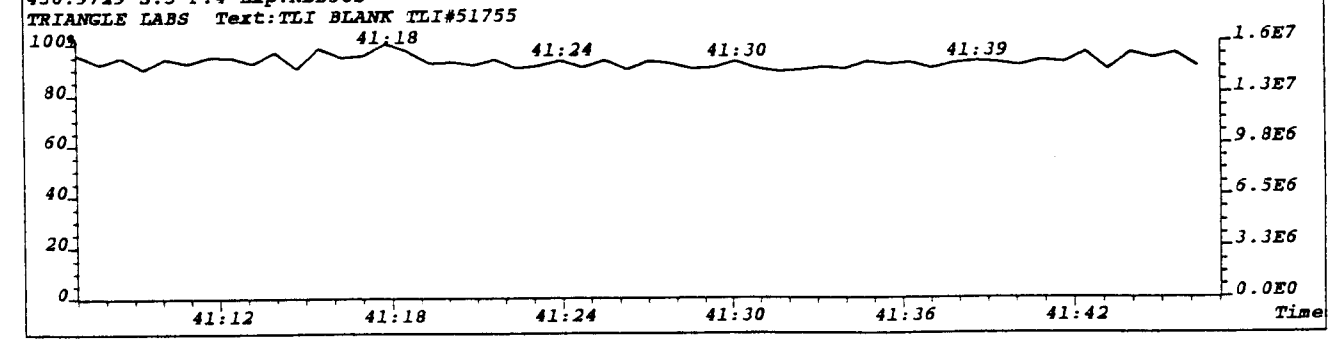
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:1085
469.7779 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,4340.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



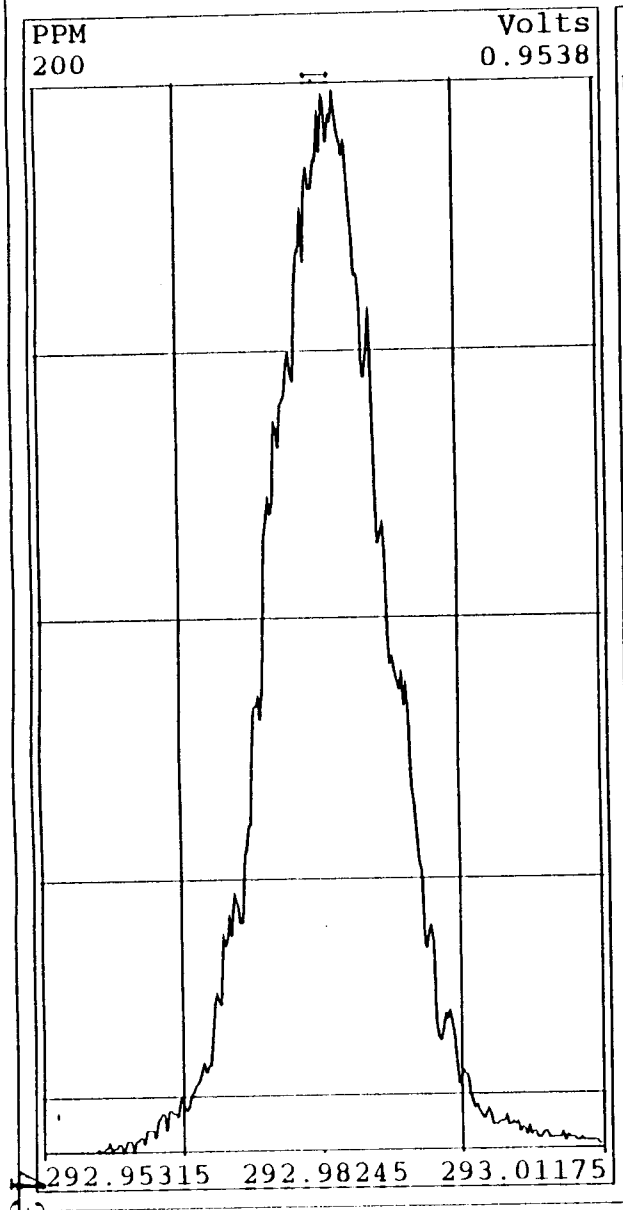
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S Noise:633
471.7750 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2532.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755

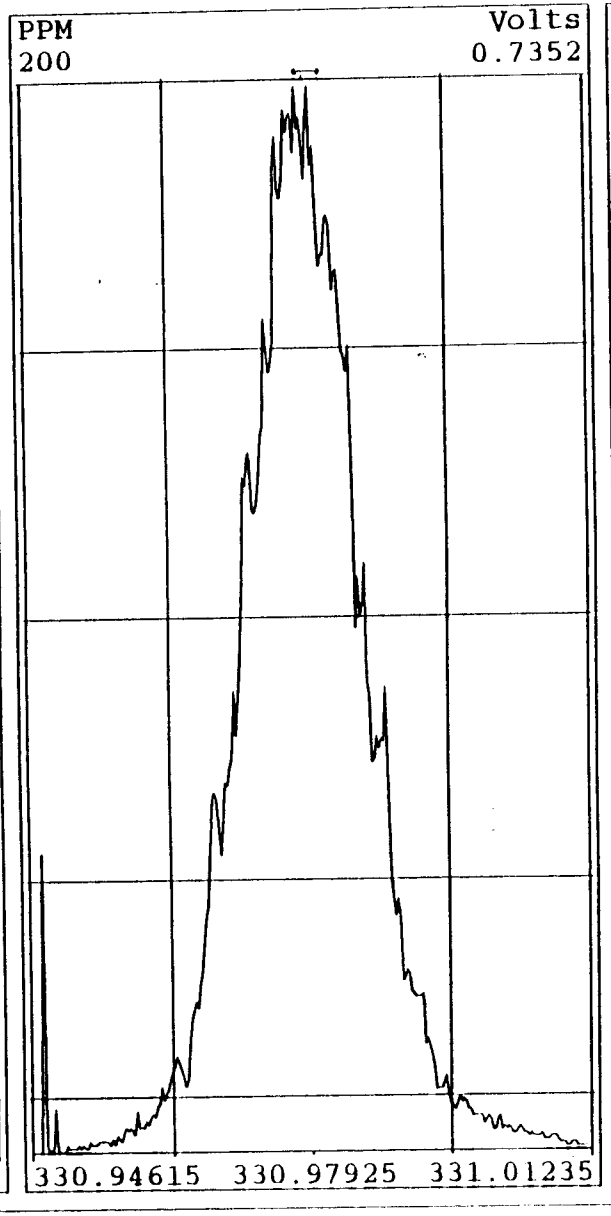


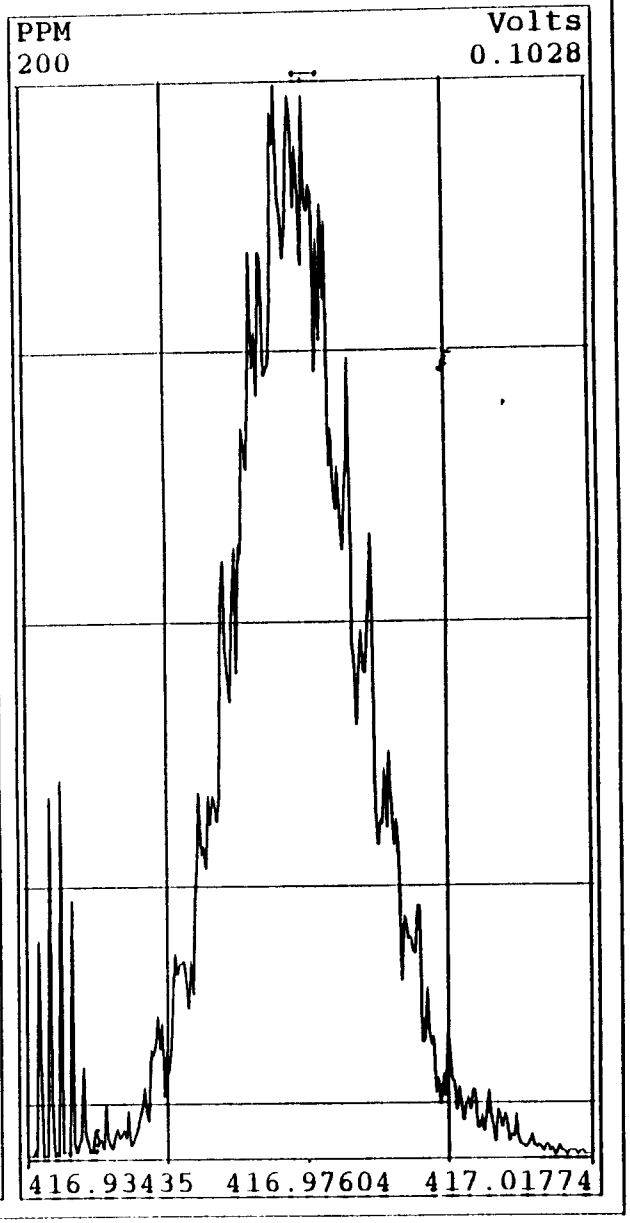
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
430.9729 S:3 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI BLANK TLI#51755



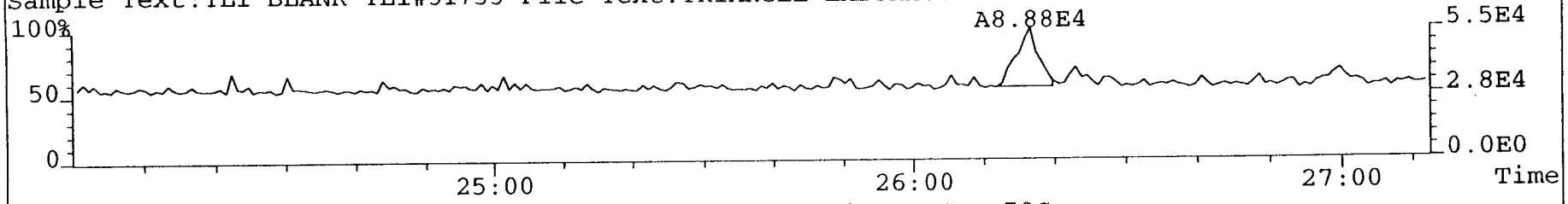
Peak Locate Examination: 6-SEP-2000:22:36 File:U1410
Experiment:NDB5US Function:2 Reference:PFK



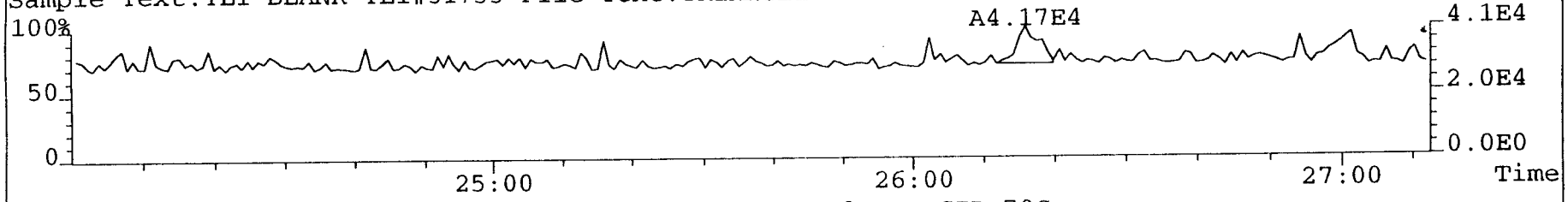




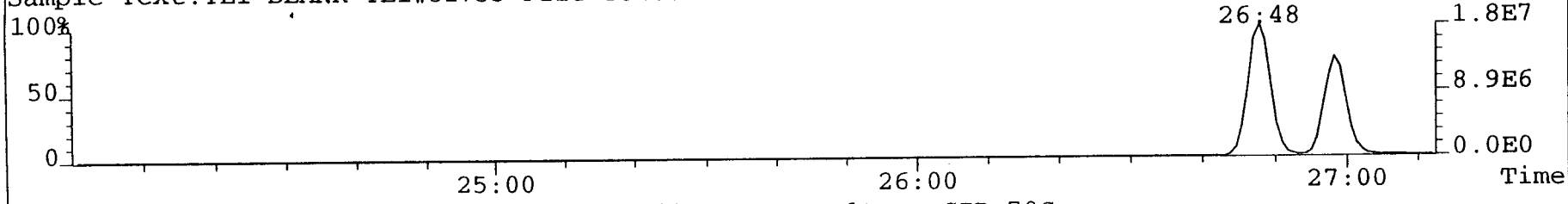
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
319.8965 S:3 F:2 Exp:NDB5US
Sample Text:TLI BLANK TLI#51755 File Text:TRIANGLE LABORATORIES INC.



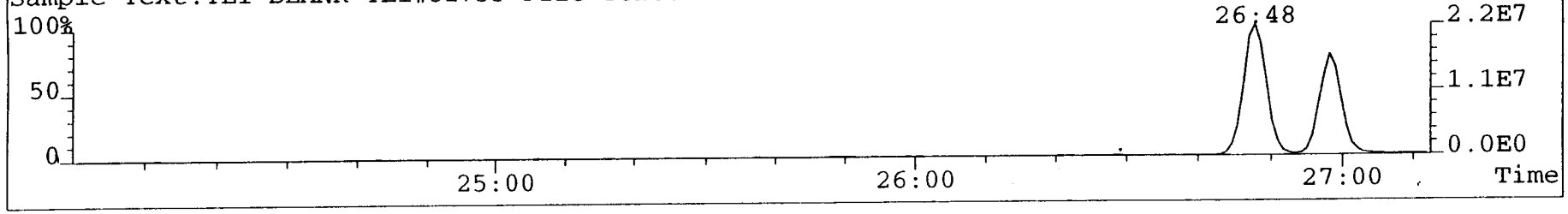
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
321.8936 S:3 F:2 Exp:NDB5US
Sample Text:TLI BLANK TLI#51755 File Text:TRIANGLE LABORATORIES INC.



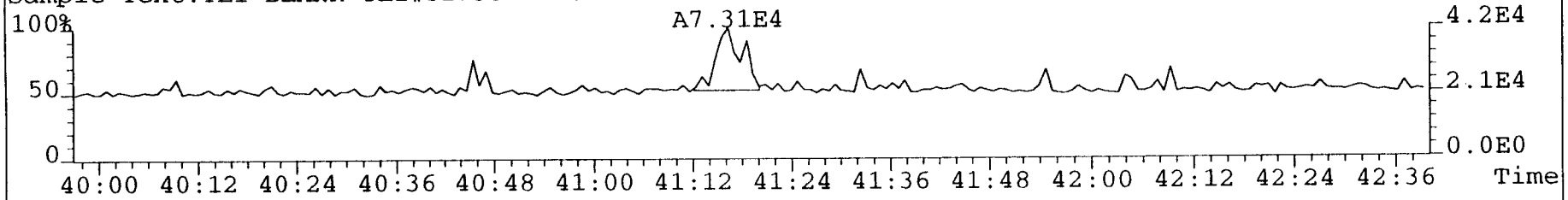
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
331.9368 S:3 F:2 Exp:NDB5US
Sample Text:TLI BLANK TLI#51755 File Text:TRIANGLE LABORATORIES INC.



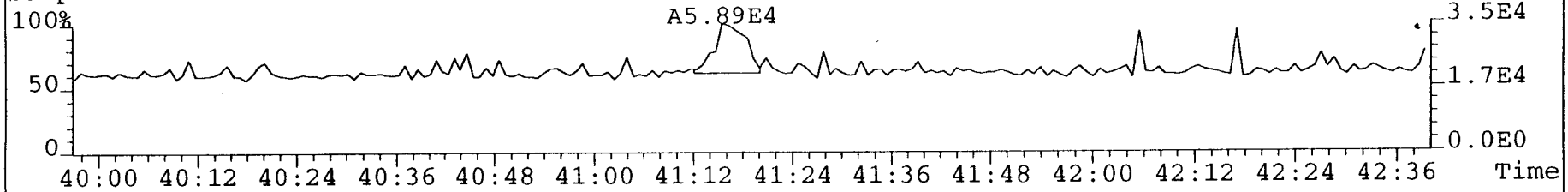
File:U1410 #1-830 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
333.9338 S:3 F:2 Exp:NDB5US
Sample Text:TLI BLANK TLI#51755 File Text:TRIANGLE LABORATORIES INC.



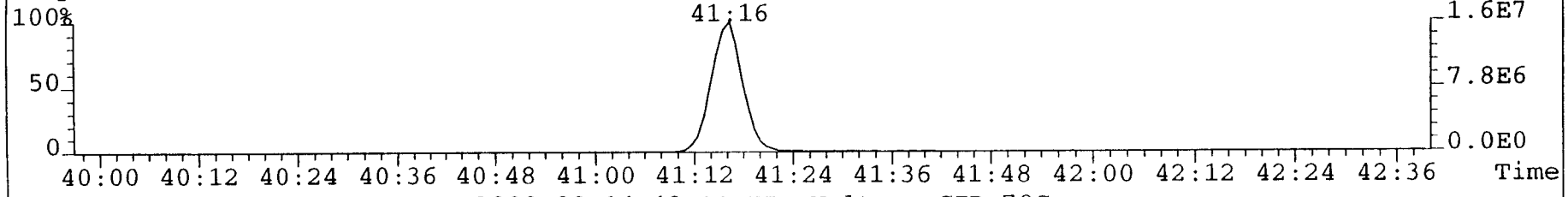
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
457.7377 S:3 F:4 Exp:NDB5US
Sample Text:TLI BLANK TLI#51755 File Text:TRIANGLE LABORATORIES INC.



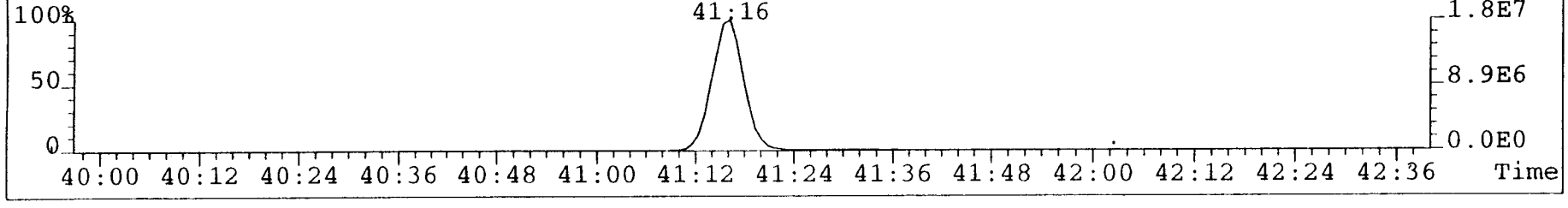
File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
459.7348 S:3 F:4 Exp:NDB5US
Sample Text:TLI BLANK TLI#51755 File Text:TRIANGLE LABORATORIES INC.



File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
469.7779 S:3 F:4 Exp:NDB5US
Sample Text:TLI BLANK TLI#51755 File Text:TRIANGLE LABORATORIES INC.



File:U1410 #1-701 Acq: 7-SEP-2000 00:14:49 GC EI+ Voltage SIR 70S
471.7750 S:3 F:4 Exp:NDB5US
Sample Text:TLI BLANK TLI#51755 File Text:TRIANGLE LABORATORIES INC.



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TLI Project: **51755** Method 8290 PCDD/PCDF Analysis (b)
Client Sample: **008096-01 Pajarito @ Two Mile** Analysis File: **U141004**

Client Project:	NMHWB/008096			ICal:	UF57140
Sample Matrix:	WATER	Date Received:	08/29/2000	Spike File:	SPMIT32S
TLI ID:	268-82-1A	Date Extracted:	08/30/2000	1st CCal:	U001408
		Date Analyzed:	09/07/2000	End CCal:	U141012
Sample Size:	0.990 L	Dilution Factor:	n/a	% Moisture:	n/a
Dry Weight:	n/a	Blank File:	U141003	% Lipid:	n/a
GC Column:	DB-5	Analyst:	MVL	% Solids:	n/a

Analytes	Conc. (ppq)	DL	EMPC	Ratio	RT	Flags
2,3,7,8-TCDD	ND	1.9				__
1,2,3,7,8-PeCDD	ND	1.7				__
1,2,3,4,7,8-HxCDD	ND	1.6				__
1,2,3,6,7,8-HxCDD	ND	1.6				__
1,2,3,7,8,9-HxCDD	2.8			1.05	34:42	J__
1,2,3,4,6,7,8-HpCDD	EMPC		3.2			J__
1,2,3,4,6,7,8,9-OCDD	29.4			0.76	41:18	JB_
2,3,7,8-TCDF	ND	1.3				__
1,2,3,7,8-PeCDF	2.7			1.43	30:10	J__
2,3,4,7,8-PeCDF	ND	1.2				__
1,2,3,4,7,8-HxCDF	2.6			1.27	33:37	J__
1,2,3,6,7,8-HxCDF	2.3			1.25	33:43	J__
2,3,4,6,7,8-HxCDF	1.8			1.13	34:13	J__
1,2,3,7,8,9-HxCDF	3.1			1.29	34:59	J__
1,2,3,4,6,7,8-HpCDF	ND	1.3				__
1,2,3,4,7,8,9-HpCDF	ND	1.6				__
1,2,3,4,6,7,8,9-OCDF	EMPC		5.3			J__

Totals	Conc. (ppq)	Number	DL	EMPC	Flags
Total TCDD	ND		1.9		__
Total PeCDD	ND		1.7		__
Total HxCDD	2.8	1		4.9	__
Total HpCDD	3.1	1		6.3	__
Total TCDF	ND		1.3		__
Total PeCDF	2.7	1		4.0	__
Total HxCDF	9.7	4			__
Total HpCDF	ND		1.4		__

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TLI Project: **51755** Method 8290 PCDD/PCDF Analysis (b)

Client Sample: **008096-01 Pajarito @ Two Mile** Analysis File: **U141004**

Internal Standards	Conc. (ppq)	% Recovery	QC Limits	Ratio	RT	Flags
$^{13}C_{12}$-2,3,7,8-TCDF	1070	53.1	40%-130%	0.73	26:17	___
$^{13}C_{12}$-2,3,7,8-TCDD	1170	58.1	40%-130%	0.80	26:58	___
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1280	63.6	40%-130%	1.49	30:10	___
$^{13}C_{12}$-1,2,3,7,8-PeCDD	1430	70.9	40%-130%	1.49	31:10	___
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1440	71.2	40%-130%	0.51	33:42	___
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1400	69.4	40%-130%	1.20	34:23	___
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1390	68.9	25%-130%	0.43	36:37	___
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	1450	71.9	25%-130%	0.99	37:38	___
$^{13}C_{12}$-1,2,3,4,6,7,8,9-OCDD	2970	73.6	25%-130%	0.86	41:16	___

Surrogate Standards (Type B)	Conc. (ppq)	% Recovery	QC Limits	Ratio	RT	Flags
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1450	71.7	40%-130%	1.47	30:50	___
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1330	65.8	40%-130%	0.51	33:36	___
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	1420	70.5	40%-130%	1.20	34:17	___
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1510	74.8	25%-130%	0.42	38:09	___

Other Standard	Conc. (ppq)	% Recovery	QC Limits	RT	Flags
$^{37}Cl_4$-2,3,7,8-TCDD	140	69.1	40%-130%	27:00	___

Alternate Standards (Type B)	Conc. (ppq)	% Recovery	QC Limits	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1550	76.7	40%-130%	0.51	34:58	___
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1480	73.4	40%-130%	0.51	34:11	___

Recovery Standards	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.83	26:48	___
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.19	34:41	___

Data Reviewer: JCA 09/07/2000

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TLI Project: **51755** — Toxicity Equivalents Report

Client Sample: **008096-01 Pajarito @ Two Mile** — Analysis File: **U141004**

Client Project:	**NMHWB/008096**			ICal:	**UF57140**
Sample Matrix:	**WATER**	Date Received:	**08/29/00**	Spike File:	**SPMIT32S**
TLI ID:	**268-82-1A**	Date Extracted:	**08/30/00**	1st CCal:	**U001408**
		Date Analyzed:	**09/07/00**	End CCal:	**U141012**
Sample Size:	**0.990 L**	Dilution Factor:	**1**	% Moisture:	**n/a**
Dry Weight:	**n/a**	Blank File:	**U141003**	% Lipid:	**n/a**
GC Column:	**DB-5**	Analyst:	**MVL**	% Solids:	**n/a**

Analytes	Conc. (ppq)		TEF		Equivalent
2,3,7,8-TCDD	{1.9}	x	1.	=	1.9
1,2,3,7,8-PeCDD	{1.7}	x	0.5	=	0.85
1,2,3,4,7,8-HxCDD	{1.6}	x	0.1	=	0.16
1,2,3,6,7,8-HxCDD	{1.6}	x	0.1	=	0.16
1,2,3,7,8,9-HxCDD	2.8	x	0.1	=	0.28
1,2,3,4,6,7,8-HpCDD	[3.2]	x	0.01	=	0.032
1,2,3,4,6,7,8,9-OCDD	29.4	x	0.001	=	0.0294
TOTAL PCDD					3.4
2,3,7,8-TCDF	{1.3}	x	0.1	=	0.13
1,2,3,7,8-PeCDF	2.7	x	0.05	=	0.14
2,3,4,7,8-PeCDF	{1.2}	x	0.5	=	0.60
1,2,3,4,7,8-HxCDF	2.6	x	0.1	=	0.26
1,2,3,6,7,8-HxCDF	2.3	x	0.1	=	0.23
2,3,4,6,7,8-HxCDF	1.8	x	0.1	=	0.18
1,2,3,7,8,9-HxCDF	3.1	x	0.1	=	0.31
1,2,3,4,6,7,8-HpCDF	{1.3}	x	0.01	=	0.013
1,2,3,4,7,8,9-HpCDF	{1.6}	x	0.01	=	0.016
1,2,3,4,6,7,8,9-OCDF	[5.3]	x	0.001	=	0.0053
TOTAL PCDF					1.88

Total EPA TEFs, 1989a: 5.3 ppq

[...] indicates that the value is that of an EMPC.
{...} indicates that the value is that of a Detection Limit.

GRY_TEF v1.08, MILES 4.22.16

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Printed: 16:52 09/07/00

Initial ....Date...

Data Review By: JKA 9/7/00

Calculated Noise Height: 0.82

The Total Area for each peak with an ion abundance ratio outside ratio limits has been recalculated according to method requirements.

Page No. 1 Listing of U141004B.dbf
09/07/2000 Matched GC Peaks / Ratio* / Ret. Time

Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
TCDF						0.65-0.89				0.962-1.228			
304-306	DC	NL				Height	4.44	2.66	1.78				
304-306		0	Peaks				0.00						
13C12-TCDF						0.65-0.89				0.962-1.038			
316-318	DC	NL				Height	3.70	1.90	1.80				
				25:52		0.66	46.74	18.62	28.12	0.984			
				26:17		0.73	10,574.05	4,475.61	6,098.44	1.000	13C12-2378-TCDF	ISO	
						Height	2,903.21	1,227.15	1,676.06				
				26:42		0.66	74.96	29.73	45.23	1.016			
316-318		3	Peaks				10,695.75						

---------- Above: TCDF / TCDD Follows ----------

TCDD						0.65-0.89				0.963-1.222			
320-322	DC	NL				Height	2.42	1.14	1.28				
	DC	SN		26:30	RO	0.57	2.30			0.983			
	DC	SN		26:38	RO	3.65	0.92			0.988			
320-322		0	Peaks				0.00						
37Cl-TCDD										0.926-1.074			
328	DC	NL				Height	1.19	1.19					
				25:04			1.36	1.36		0.930			
				25:38			4.57	4.57		0.951			
				25:52			2.76	2.76		0.959			
	DC	SN		26:04			1.16			0.967			
				27:00			897.77	897.77		1.001	37Cl-TCDD	CLS	
				27:19			2.16	2.16		1.013			
328		5	Peaks				908.62						
13C12-TCDD						0.65-0.89				0.926-1.074			
332-334	DC	NL				Height	5.67	3.90	1.77				
				26:48		0.83	13,547.94	6,143.43	7,404.51	0.994	13C12-1234-TCDD	RS1	
				26:58		0.80	8,494.34	3,785.29	4,709.05	1.000	13C12-2378-TCDD	IS1	
						Height	2,272.57	1,021.61	1,250.96				
332-334		2	Peaks				22,042.28						

---------- Above: TCDD / PeCDF Follows ----------

PeCDF						1.32-1.78				0.867-1.133			
340-342	DC	NL				Height	2.68	1.25	1.43				
				28:15	RO	0.53	6.84	4.16	7.83	0.936			J
M				30:10		1.43	14.10	8.30	5.80	1.000	12378-PeCDF	AN	J
D	d	SN		30:51		1.33	12.91			1.023	23478-PeCDF	AN	

```
Compound/
M_Z.... QC.Log Omit Why ..RT. OK Ratio Total.Area/Ht Area/Ht.Peak1 Area/Ht.Peak2 Rel.RT Compound.Name.. ID.. Flags.

340-342                2 Peaks                 20.94

13C12-PeCDF                     1.32-1.78                                   0.867-1.133
352-354          DC  NL          Height          2.47          1.16          1.31
                         30:10     1.49     11,387.75      6,815.32      4,572.43  1.000 13C12-PeCDF 123 IS2
                                 Height      3,555.75      2,116.76      1,438.99
                         30:27 RO  1.08        112.20         47.36         44.00  1.009
                         30:50     1.47     12,616.55      7,518.42      5,098.13  1.022 13C12-PeCDF 234 SUR1
                         31:50     1.62        125.86         77.80         48.06  1.055
352-354                4 Peaks              24,242.36

                 --------------------- Above: PeCDF / PeCDD Follows --------------------

PeCDD                           1.32-1.78                                   0.872-1.128
356-358          DC  NL          Height          2.17          1.11          1.06
                 DC  SN  29:29 RO  2.29          1.68                              0.946
         D       d   SN  30:50     1.59         12.75                              0.989
                 DC  SN  30:56 RO  2.75          2.55                              0.993
                 DC  SN  32:02 RO  0.72          2.43                              1.028
356-358                0 Peaks                   0.00

13C12-PeCDD                     1.32-1.78                                   0.872-1.128
368-370          DC  NL          Height          2.06          1.18          0.88
                         30:07     1.33         58.48         33.39         25.09  0.966
                         30:16 RO  1.89         25.04         18.54          9.82  0.971
                         31:10     1.49      6,948.93      4,153.48      2,795.45  1.000 13C12-PeCDD 123 IS3
                                 Height      2,215.19      1,307.07        908.12
                         31:28 RO  0.60          8.06          4.90          8.17  1.010
                         31:34 RO  1.19          9.77          4.57          3.83  1.013
                 DC  SN  31:39     1.71          8.54                              1.016
                 DC  SN  31:52 RO  1.08          5.61                              1.022
368-370                5 Peaks               7,050.28

                 --------------------- Above: PeCDD / HxCDF Follows --------------------

HxCDF                           1.05-1.43                                   0.881-1.119
374-376          DC  NL          Height          1.64          0.84          0.80
                 DC  SN  32:56 RO  2.76          0.94                              0.977
                 DC  SN  33:02 RO  0.90          0.49                              0.980
                 DC  SN  33:05 RO  0.83          1.25                              0.982
                 DC  SN  33:13 RO  2.64          2.82                              0.986
                         33:37     1.27         16.33          9.15          7.18  0.998 123478-HxCDF    AN   J
                         33:43     1.25         14.67          8.15          6.52  1.000 123678-HxCDF    AN   J
                 DC  SN  33:53 RO  1.71          2.11                              1.005
                 DC  SN  33:59 RO  0.25          0.33                              1.008
                         34:13     1.13         11.07          5.87          5.20  1.015 234678-HxCDF    AN   J
         D       d   SN  34:42 RO  1.84          4.39                              1.030
                         34:59     1.29         15.97          8.99          6.98  1.038 123789-HxCDF    AN   J
374-376                4 Peaks                  58.04

13C12-HxCDF                     0.43-0.59                                   0.881-1.119
384-386          DC  NL          Height          1.16          0.46          0.70
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Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
				32:39		0.52	32.37	11.09	21.28	0.969			
				32:47	RO	0.42	20.40	6.89	16.31	0.973			
				33:36		0.51	11,235.49	3,795.66	7,439.83	0.997	13C12-HxCDF 478	SUR2	
				33:42		0.51	11,777.96	4,000.87	7,777.09	1.000	13C12-HxCDF 678	IS4	
						Height	4,093.65	1,402.64	2,691.01				
				33:55	RO	0.28	13.00	4.39	15.95	1.006			
				33:59	RO	1.17	18.53	14.38	12.27	1.008			
				34:11		0.51	11,715.42	3,948.82	7,766.60	1.014	13C12-HxCDF 234	ALT2	
				34:23	RO	0.36	22.12	7.47	20.92	1.020			
				34:58		0.51	9,258.05	3,121.99	6,136.06	1.038	13C12-HxCDF 789	ALT1	
				35:11	RO	0.61	25.17	8.50	13.98	1.044			
384-386			10	Peaks			44,118.51						

---------- Above: HxCDF / HxCDD Follows ----------

HxCDD													
					1.05-1.43					0.884-1.116			
390-392		DC	NL			Height	1.23	0.55	0.68				
		DC	SN	32:58	RO	0.61	1.34			0.959			
		DC	SN	33:04	RO	0.72	0.87			0.962			
		DC	SN	33:08	RO	0.74	1.55			0.964			
		DC	SN	33:15	RO	0.55	0.85			0.967			
	D	d	SN	33:36		1.12	13.30			0.977			
	M			33:42	RO	2.20	7.88	7.74	3.52	0.980			J
		DC	SN	33:48	RO	0.26	1.14			0.983			
	D	d	SN	34:11	RO	1.57	13.42			0.994			
	D	d	SN	34:17		1.31	9.88			0.997	123478-HxCDD	AN	
	D	d	SN	34:23		1.19	9.78			1.000	123678-HxCDD	AN	
	M			34:42		1.05	10.77	5.51	5.26	1.009	123789-HxCDD	AN	J
	D	d	wh	34:57	RO	0.83	21.79			1.016			
		DC	SN	35:07	RO	0.46	1.17			1.021			
390-392			2	Peaks			18.65						

13C12-HxCDD													
					1.05-1.43					0.971-1.029			
402-404		DC	NL			Height	2.79	1.53	1.26				
				33:45		1.41	67.69	39.60	28.09	0.982			
				34:17		1.20	7,773.43	4,244.71	3,528.72	0.997	13C12-HxCDD 478	SUR3	
				34:23		1.20	7,285.16	3,979.86	3,305.30	1.000	13C12-HxCDD 678	IS5	
						Height	2,475.18	1,337.20	1,137.98				
				34:41		1.19	11,936.95	6,484.05	5,452.90	1.009	13C12-HxCDD 789	RS2	
				34:56		1.39	28.21	16.42	11.79	1.016			
402-404			5	Peaks			27,091.44						

---------- Above: HxCDD / HpCDF Follows ----------

HpCDF													
					0.88-1.20					0.891-1.109			
408-410		DC	NL			Height	1.45	0.87	0.58				
	D	d	SN	36:37		1.06	16.40			1.000	1234678-HpCDF	AN	
		DC	SN	37:03		0.97	6.49			1.012			
	D	d	SN	38:10	RO	1.45	10.00			1.042	1234789-HpCDF	AN	
408-410			0	Peaks			0.00						

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Compound/
M_Z.... QC.Log Omit Why ..RT. OK Ratio Total.Area/Ht Area/Ht.Peak1 Area/Ht.Peak2 Rel.RT Compound.Name.. ID.. Flags.

13C12-HpCDF                    0.37-0.51                                    0.945-1.109
418-420          DC  NL         Height          1.36          0.64          0.72
                         36:37    0.43      8,359.03      2,500.55      5,858.48  1.000 13C12-HpCDF 678 IS6
                                Height      2,455.71        750.50      1,705.21
                         38:09    0.42      7,552.36      2,234.97      5,317.39  1.042 13C12-HpCDF 789 SUR4
418-420                2 Peaks             15,911.39

                 --------------------- Above: HpCDF / HpCDD Follows --------------------

HpCDD                          0.88-1.20                                    0.894-1.106
424-426          DC  NL         Height          0.90          0.45          0.45
        M                 36:54    0.90         10.08          4.77          5.31  0.981                       J
                 DC  SN  37:26 RO  5.62          2.28                                0.995
        M                 37:40 RO  2.09         10.24         10.50          5.02  1.001 1234678-HpCDD   AN   J
                 DC  SN  37:55 RO  1.55          1.98                                1.008
        D        d   wh  38:10 RO  2.23          8.45                                1.014
424-426                2 Peaks                   20.32

13C12-HpCDD                    0.88-1.20                                    0.973-1.027
436-438          DC  NL         Height          3.54          1.99          1.55
                         37:38    0.99      7,736.17      3,839.30      3,896.87  1.000 13C12-HpCDD 678 IS7
                                Height      2,157.79      1,054.70      1,103.09
                         38:03 RO  1.32          6.34          4.09          3.11  1.011
436-438                2 Peaks               7,742.51

                 --------------------- Above: HpCDD / Octa-CDD and CDF Follows ----------

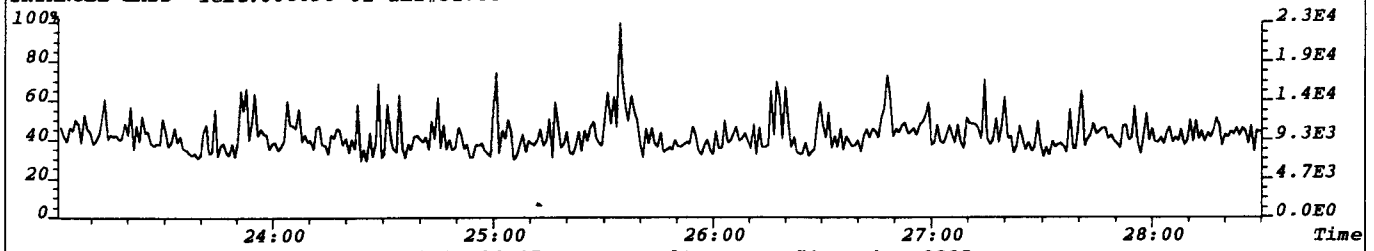
OCDF                           0.76-1.02                                    0.903-1.097
442-444          DC  NL         Height          1.39          0.63          0.76
                 DC  WL  36:36 RO  0.66          4.01                                0.887
                 DC  WL  36:53     0.92          3.99                                0.894
                 DC  SN  37:19     0.89          5.01                                0.904
                 DC  SN  37:27 RO  2.44          0.91                                0.908
                 DC  SN  37:31 RO  1.11          1.74                                0.909
                         37:39 RO  1.52          6.56          5.26          3.47  0.912
                 DC  SN  39:44 RO  1.43          2.21                                0.963
        M                 41:30 RO  1.13         19.47         11.60         10.30  1.006 OCDF            AN   J
                 DC  SN  41:55 RO  0.29          2.06                                1.016
                 DC  SN  42:06 RO  3.61          1.44                                1.020
                 DC  SN  42:20     0.76          0.90                                1.026
                 DC  SN  42:24 RO  0.33          0.53                                1.027
                 DC  SN  42:53 RO  0.60          1.59                                1.039
                 DC  SN  43:00 RO  2.05          1.06                                1.042
                 DC  SN  43:06 RO  1.63          2.91                                1.044
                 DC  SN  43:15 RO  0.29          1.47                                1.048
                 DC  SN  43:26 RO  1.71          2.99                                1.053
                 DC  SN  43:40     0.79          2.69                                1.058
                 DC  SN  44:14     0.88          5.85                                1.072
                 DC  SN  44:25 RO  0.16          1.47                                1.076
442-444                2 Peaks                   26.03
```

Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
OCDD					0.76-1.02					0.903-1.097			
458-460		DC	NL			Height	1.19	0.61	0.58				
				41:18		0.76	84.34	36.43	47.91	1.001	OCDD	AN	J
458-460				1	Peak		84.34						
13C12-OCDD					0.76-1.02					0.952-1.048			
470-472		DC	NL			Height	1.10	0.48	0.62				
				41:16		0.86	12,212.01	5,637.79	6,574.22	1.000	13C12-OCDD	IS8	
						Height	2,760.62	1,266.02	1,494.60				
470-472				1	Peak		12,212.01						

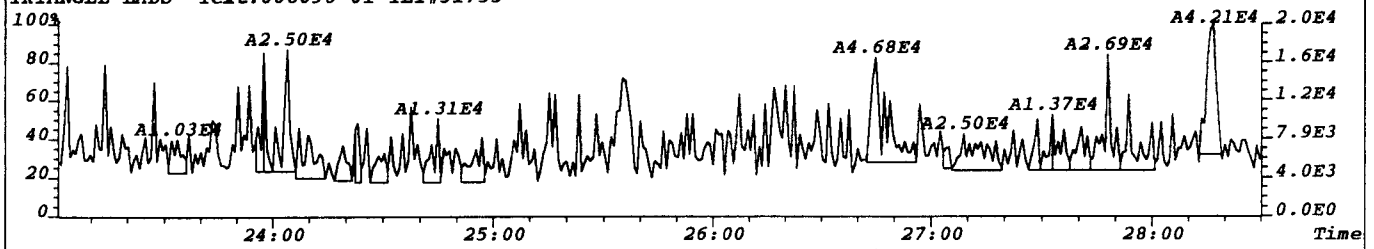
Column Description.....	"Why" Code Description.....	QC Log Desc.....
M_Z -Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT. -Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK -RO=Ratio Outside Limits	<M-Below Method Detection Limit	T-Time Changed
Rel.RT-Relative Retention Time	NL-Channel Specific Noise Level	M-Peak Area Changed
		N-Name Changed
		X-Ether Interference

*** End of Report ***

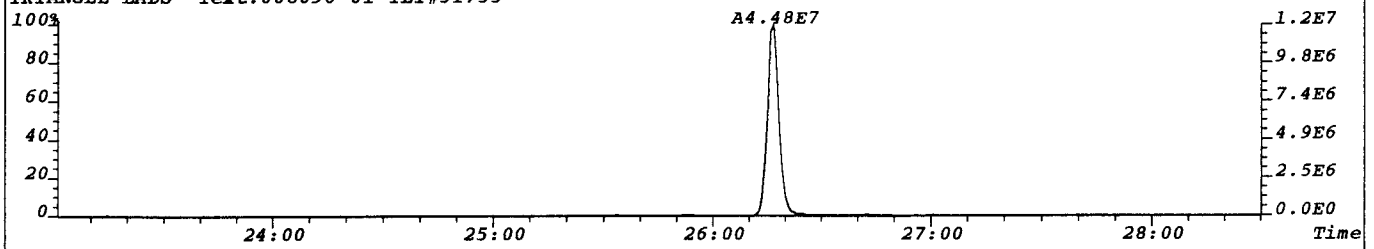
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:3323
303.9016 S:4 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,13292.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



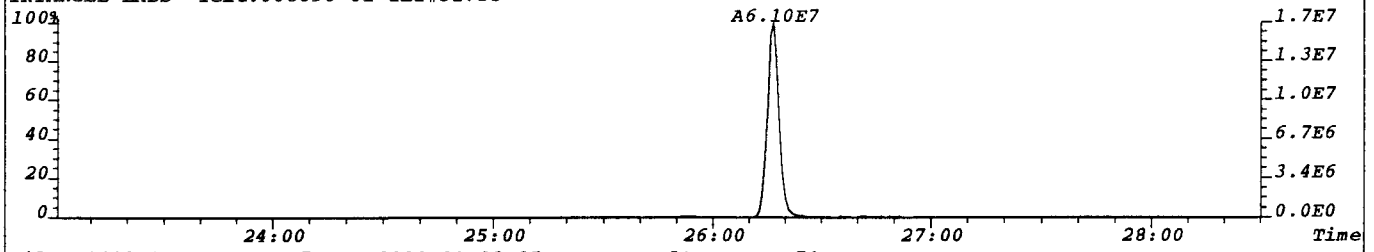
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:2225
305.8987 S:4 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,8900.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



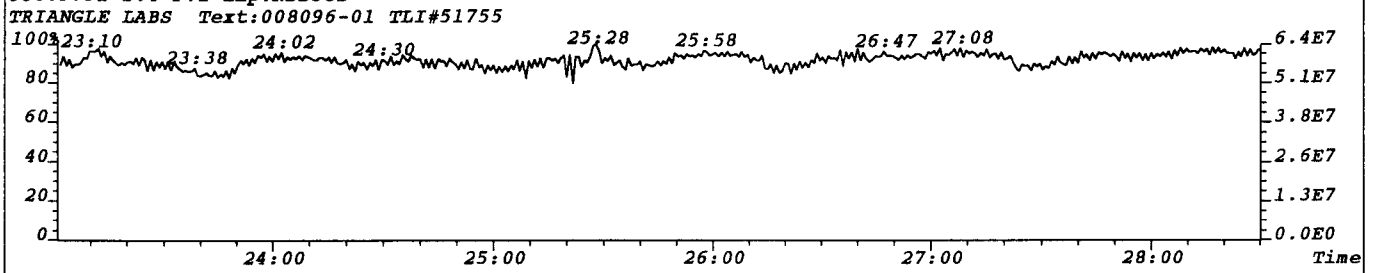
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:2380
315.9419 S:4 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,9520.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



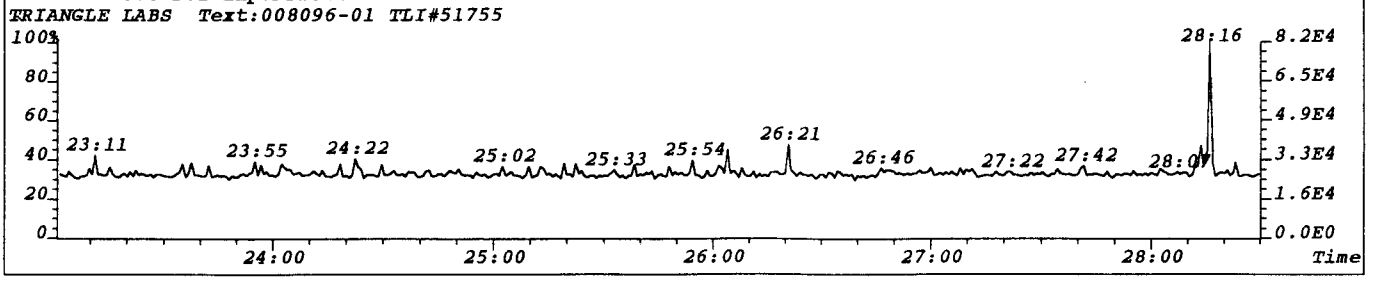
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:2244
317.9389 S:4 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,8976.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



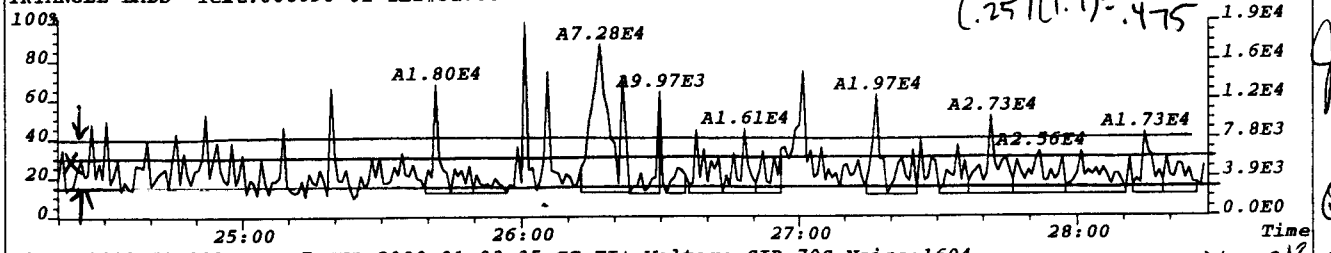
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
330.9792 S:4 F:2 Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



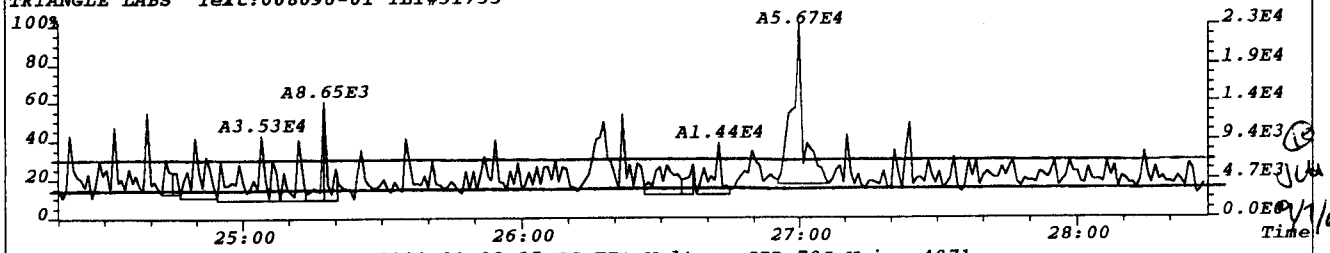
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
375.8364 S:4 F:2 Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



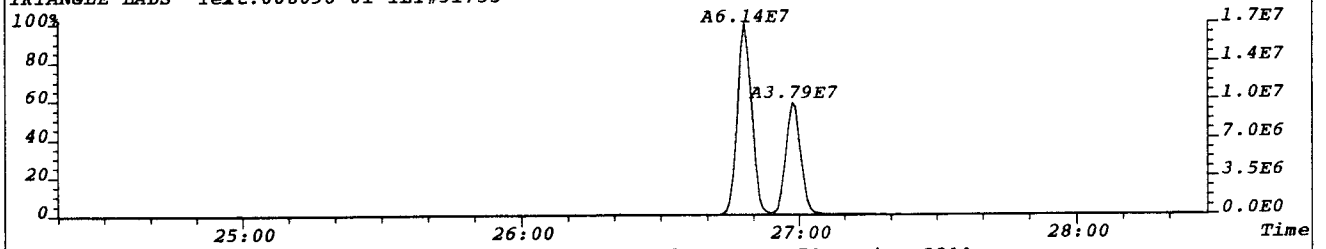
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:1421
319.8965 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5684.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



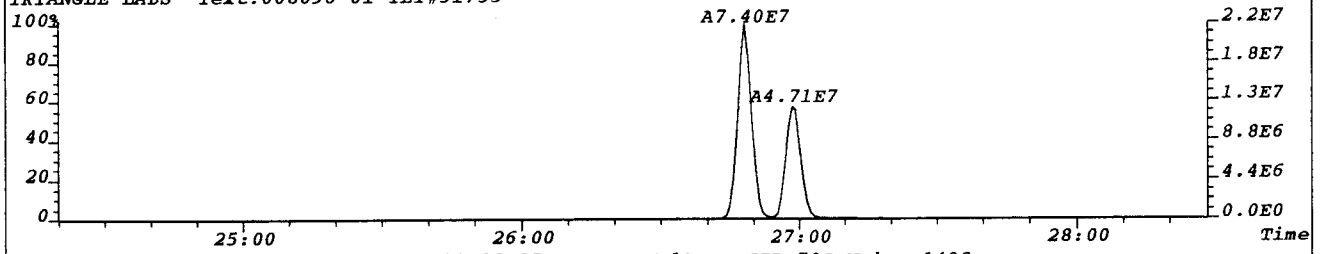
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:1604
321.8936 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6416.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



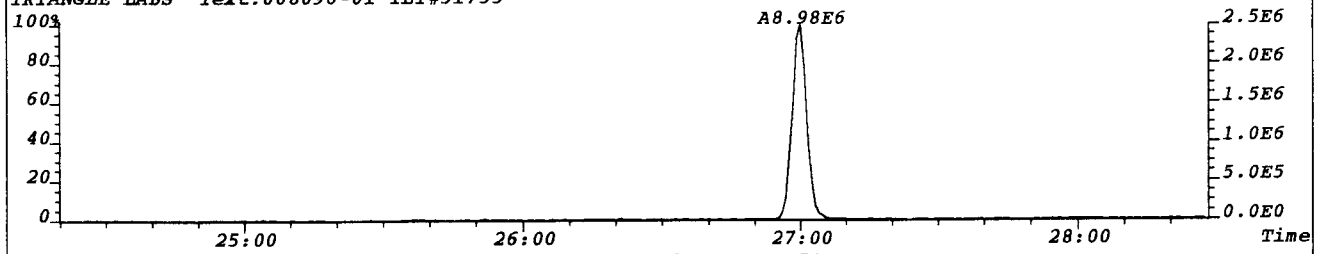
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:4871
331.9368 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,19484.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



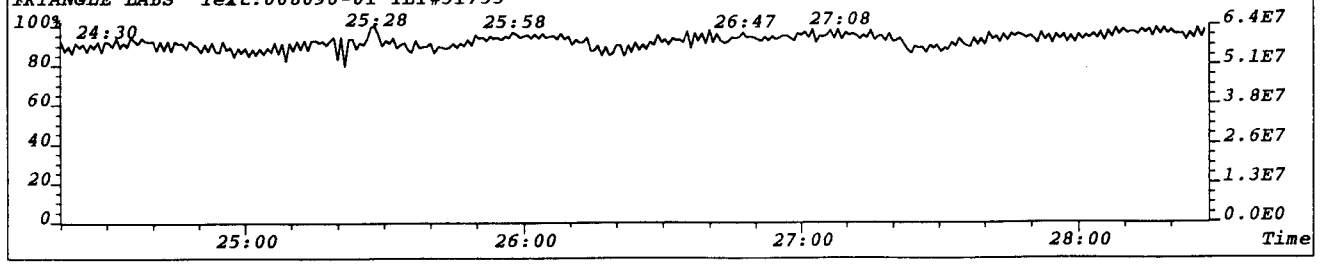
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:2210
333.9338 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,8840.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



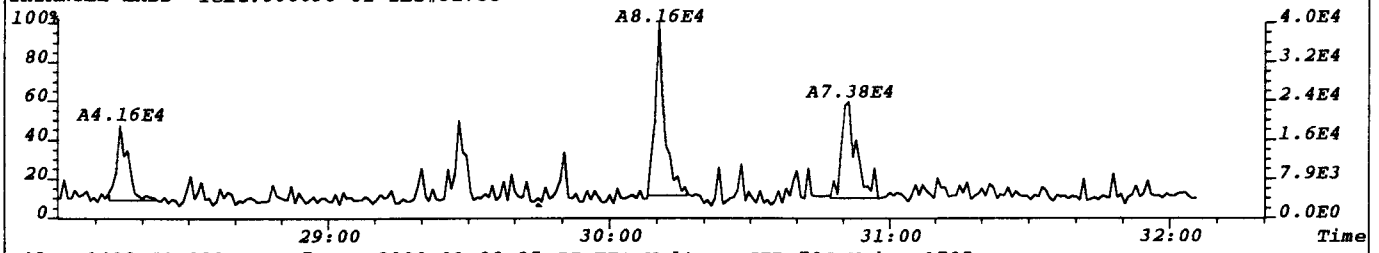
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:1492
327.8847 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5968.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



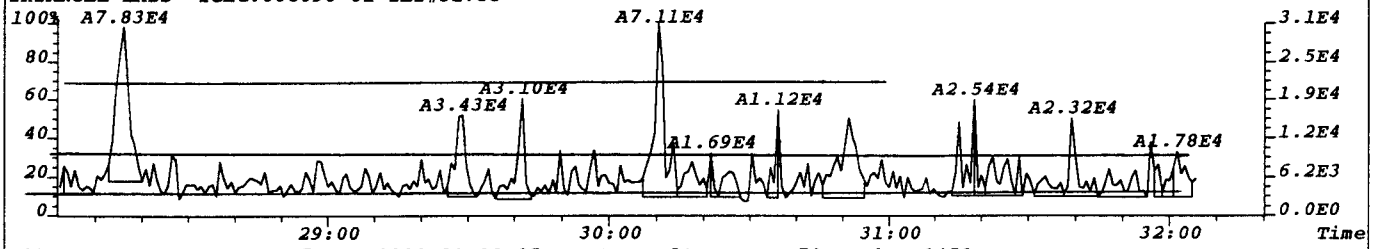
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
330.9792 S:4 F:2 Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



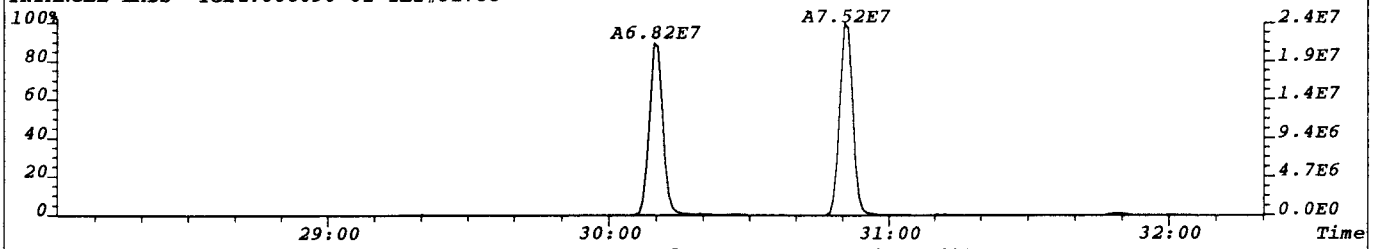
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:1562
339.8597 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6248.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



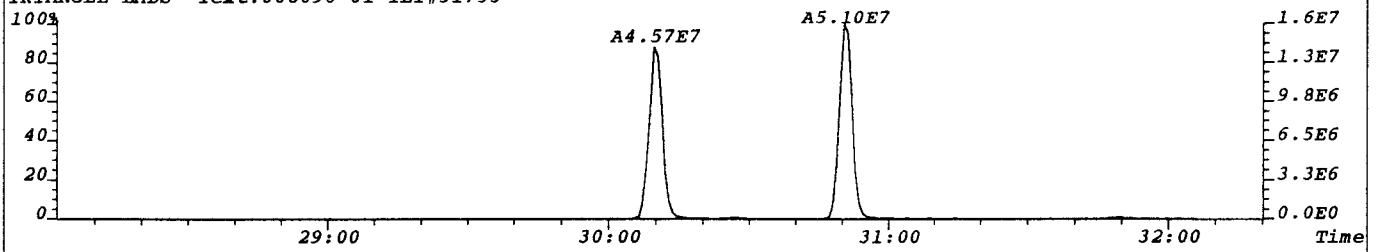
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:1785
341.8567 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7140.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



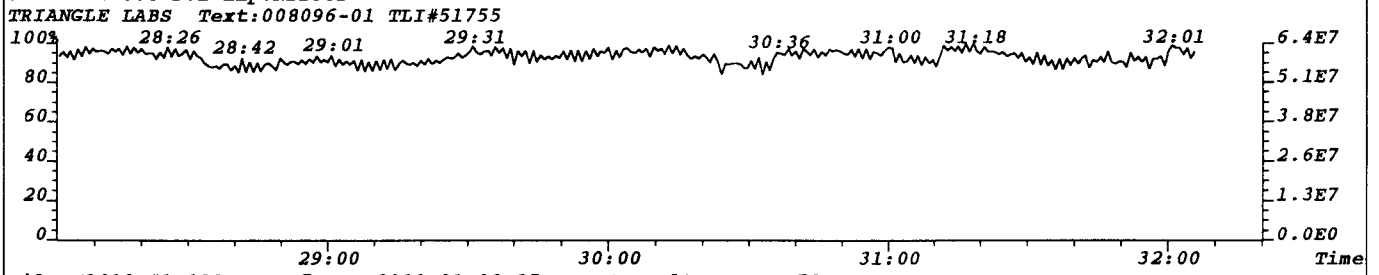
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:1453
351.9000 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5812.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



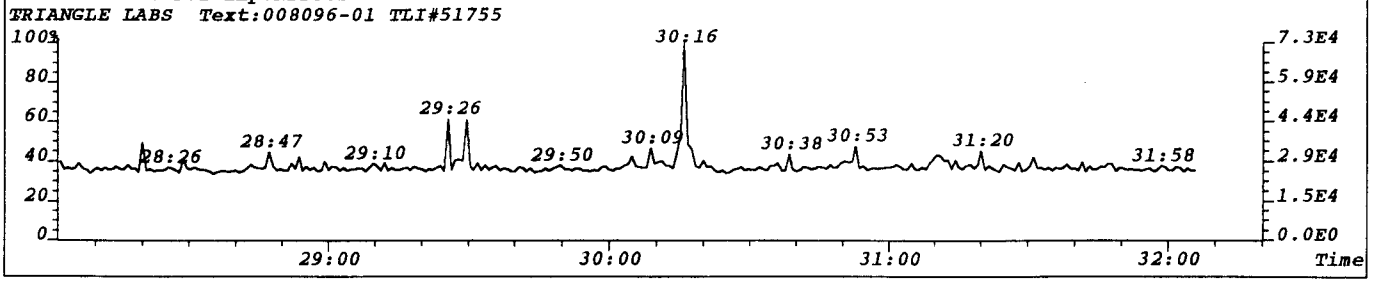
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:1633
353.8970 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6532.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



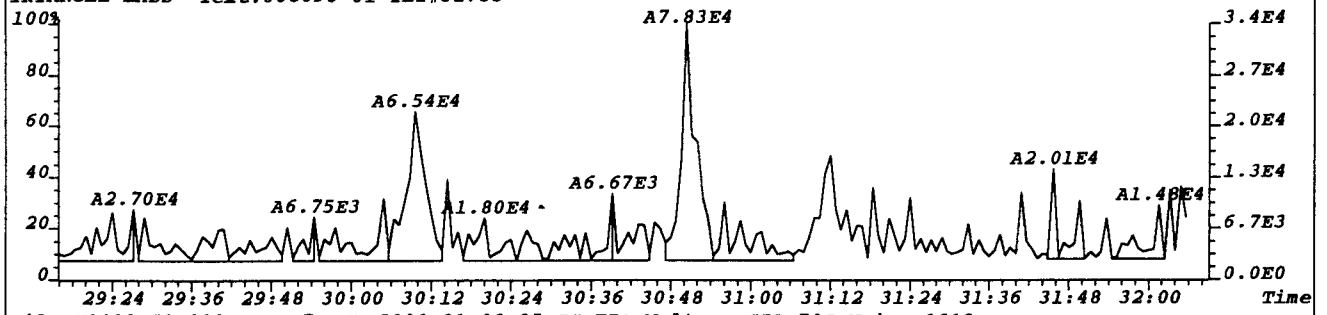
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
330.9792 S:4 F:2 Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



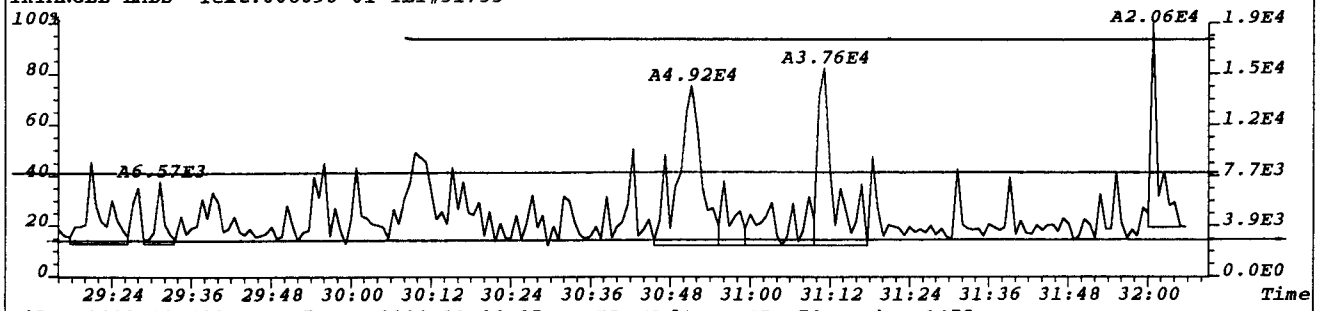
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
409.7974 S:4 F:2 Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



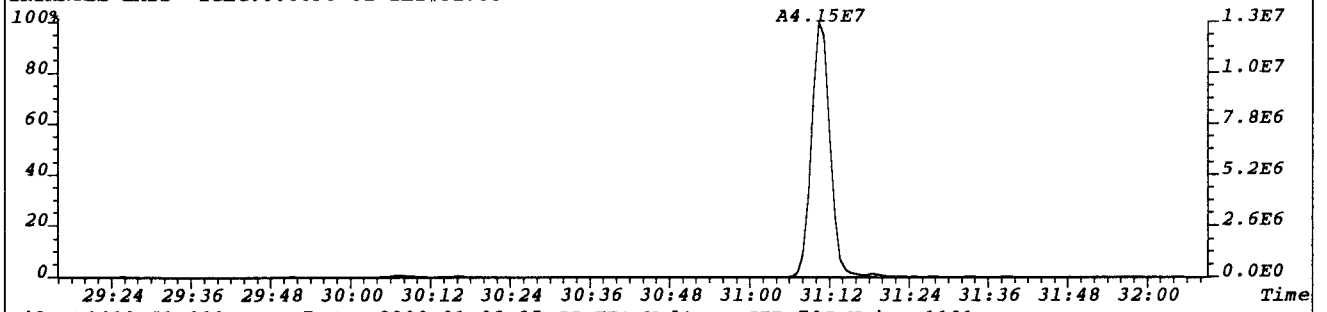
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:1388
355.8546 S:4 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,5552.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



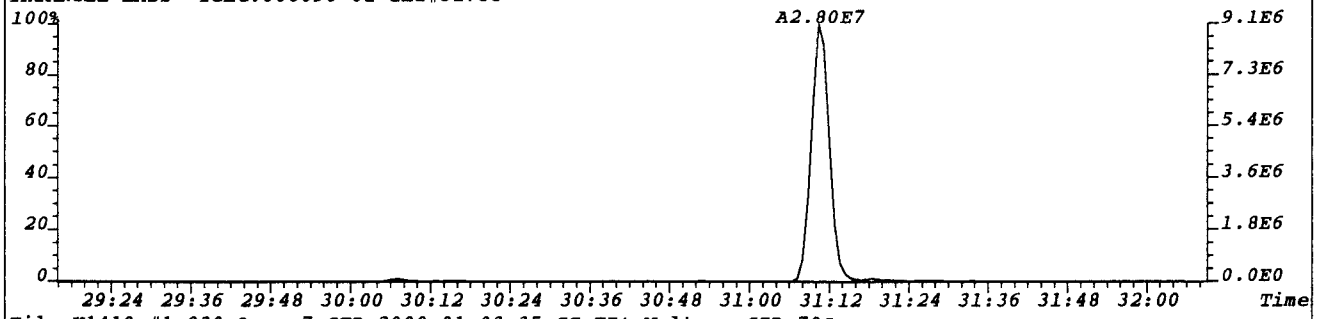
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:1319
357.8516 S:4 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,5276.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



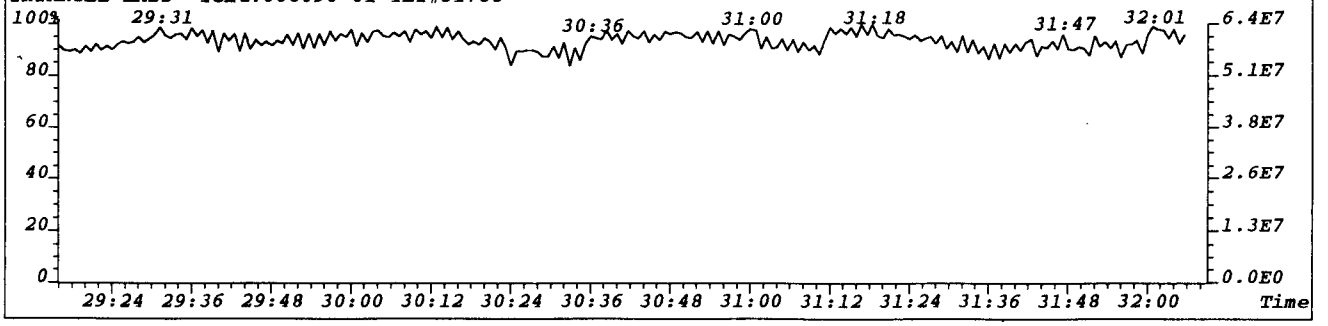
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:1475
367.8949 S:4 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,5900.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



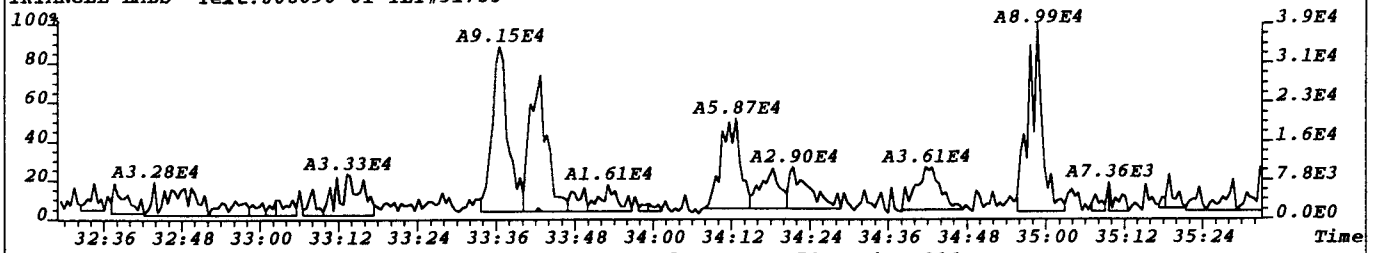
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:1101
369.8919 S:4 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,4404.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



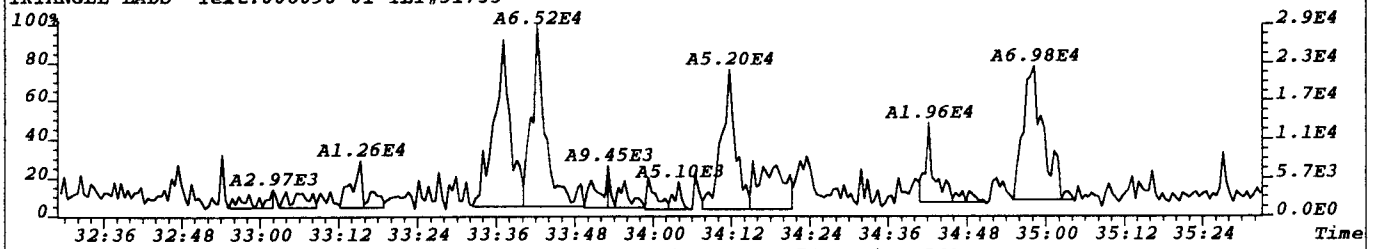
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
330.9792 S:4 F:2 Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



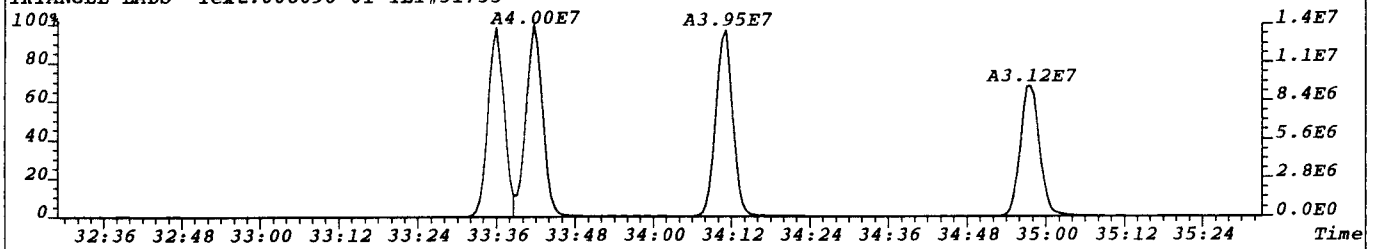
File:U1410 #1-452 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:1051
373.8208 S:4 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,4204.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



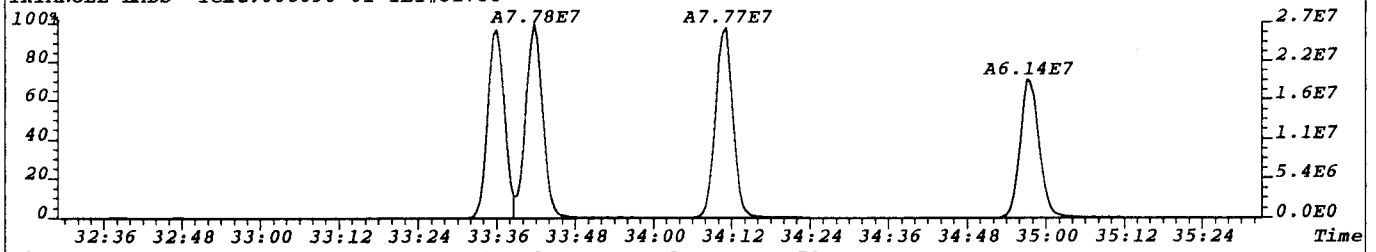
File:U1410 #1-452 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:996
375.8178 S:4 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,3984.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



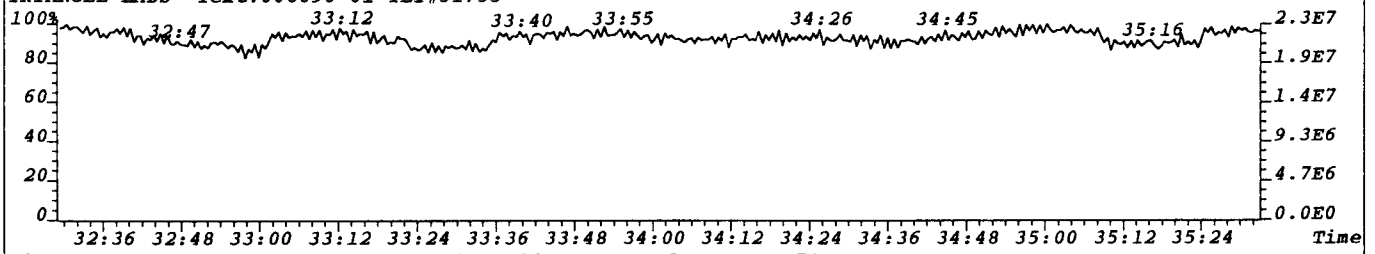
File:U1410 #1-452 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:569
383.8639 S:4 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2276.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



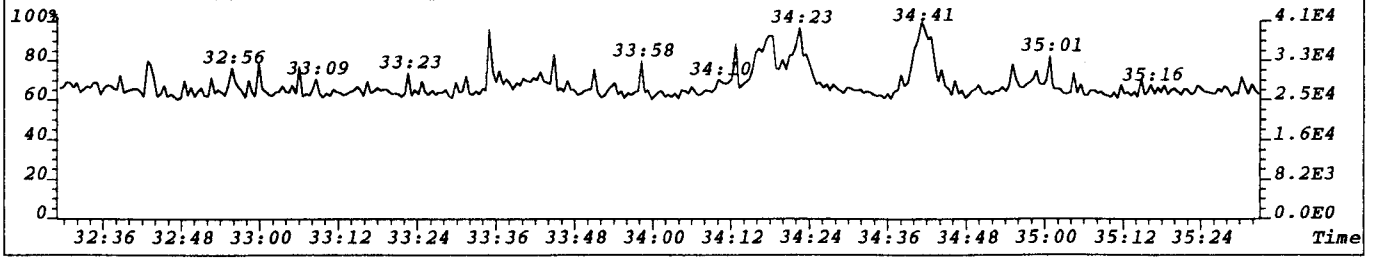
File:U1410 #1-452 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:881
385.8610 S:4 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,3524.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



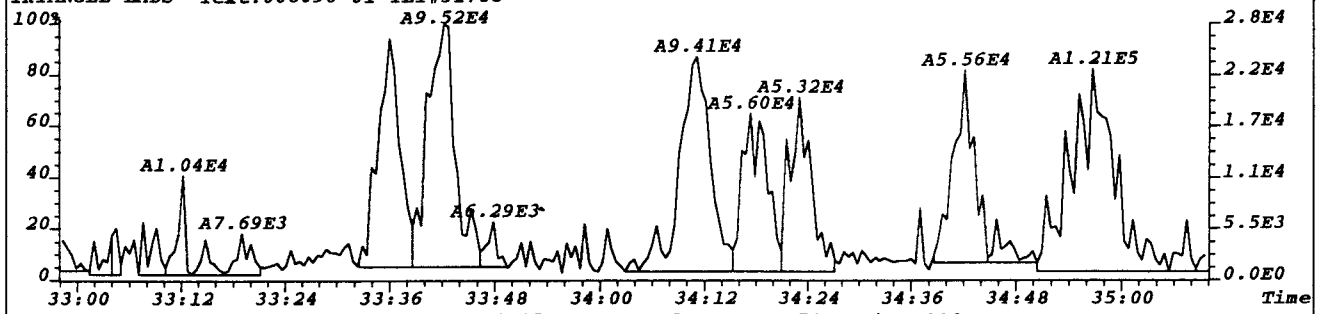
File:U1410 #1-452 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
392.9760 S:4 F:3 Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



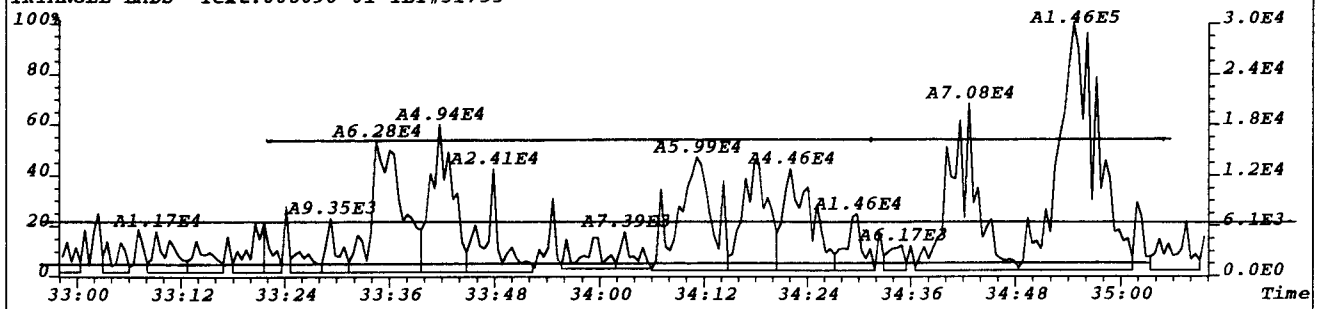
File:U1410 #1-452 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
445.7555 S:4 F:3 Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



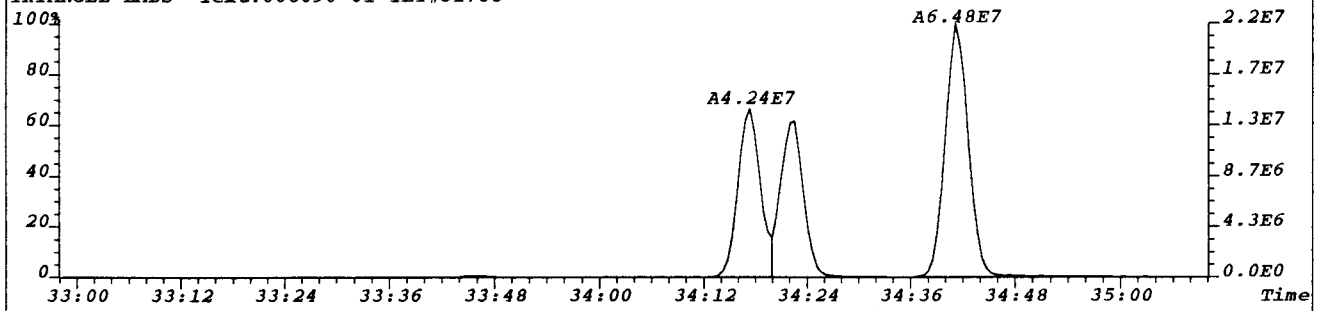
File:U1410 #1-452 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:682
389.8156 S:4 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2728.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



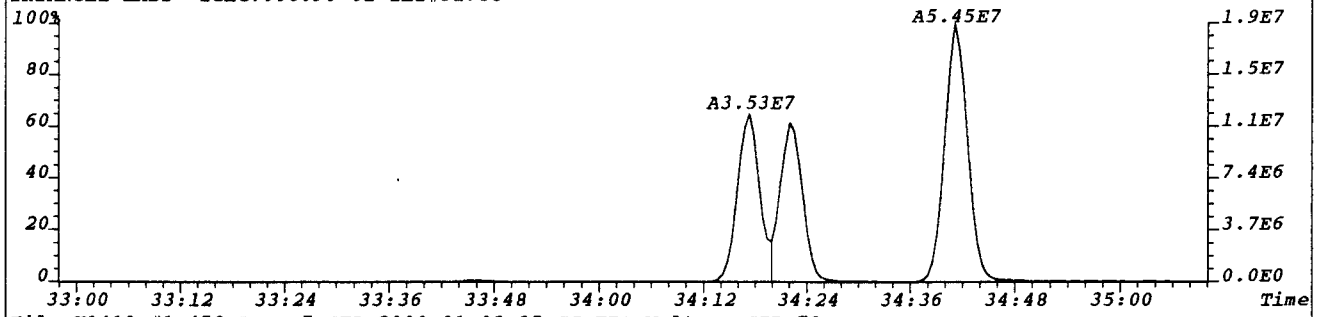
File:U1410 #1-452 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:846
391.8127 S:4 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,3384.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



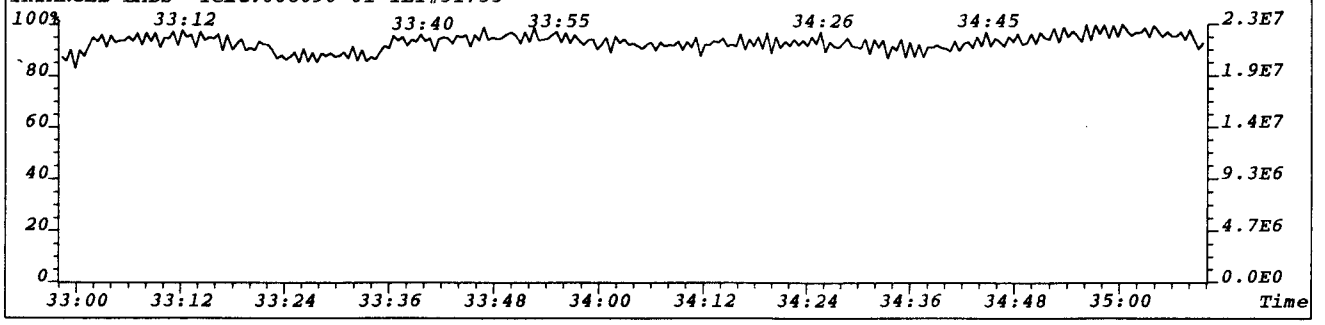
File:U1410 #1-452 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:1916
401.8558 S:4 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7664.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



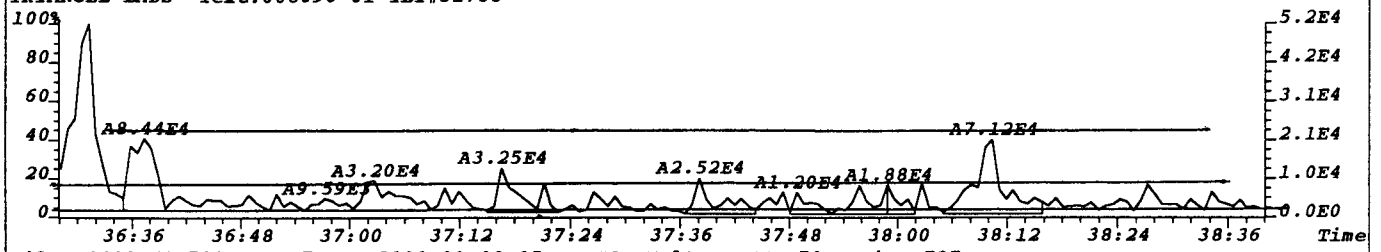
File:U1410 #1-452 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:1579
403.8529 S:4 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6316.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



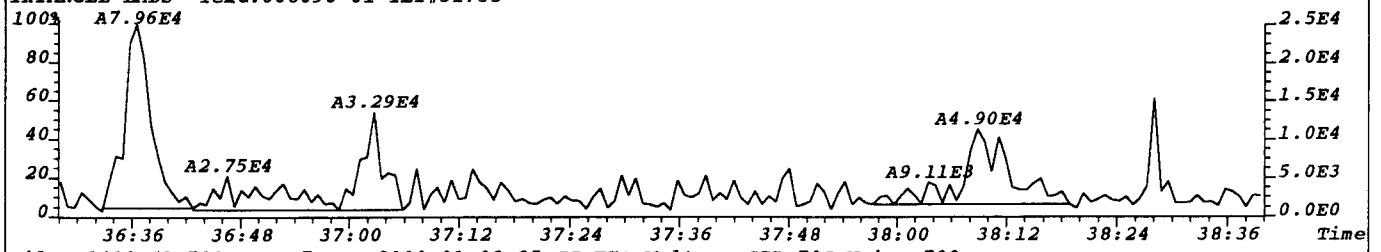
File:U1410 #1-452 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
392.9760 S:4 F:3 Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



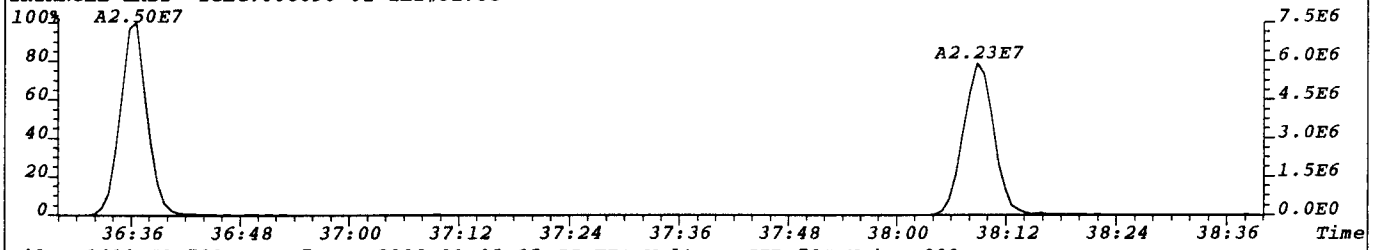
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:1085
407.7818 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,4340.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



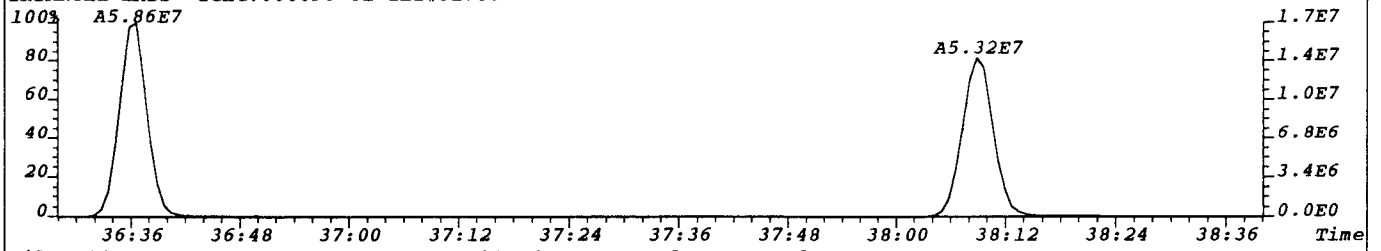
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:727
409.7789 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2908.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



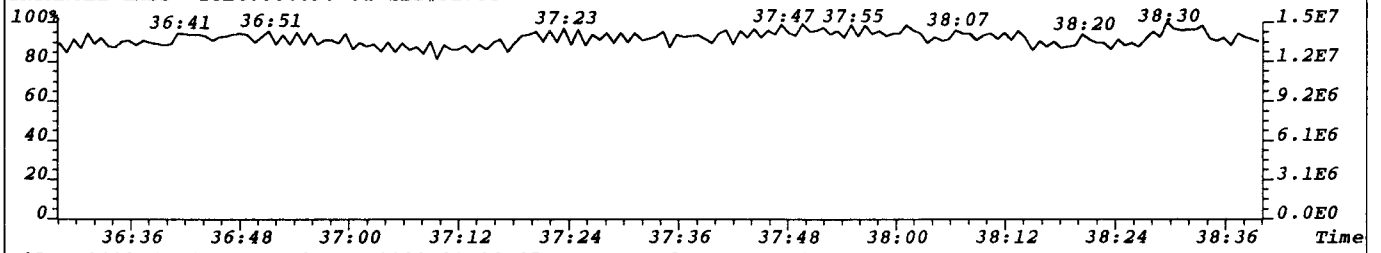
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:798
417.8253 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,3192.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



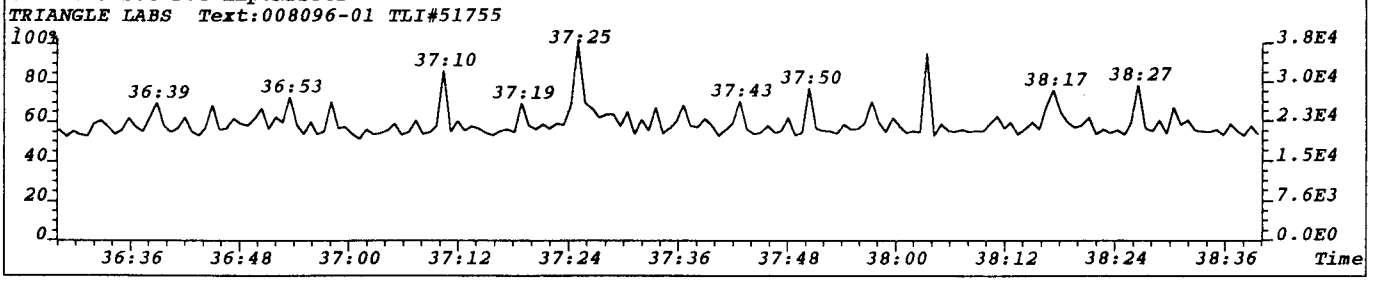
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:899
419.8220 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,3596.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



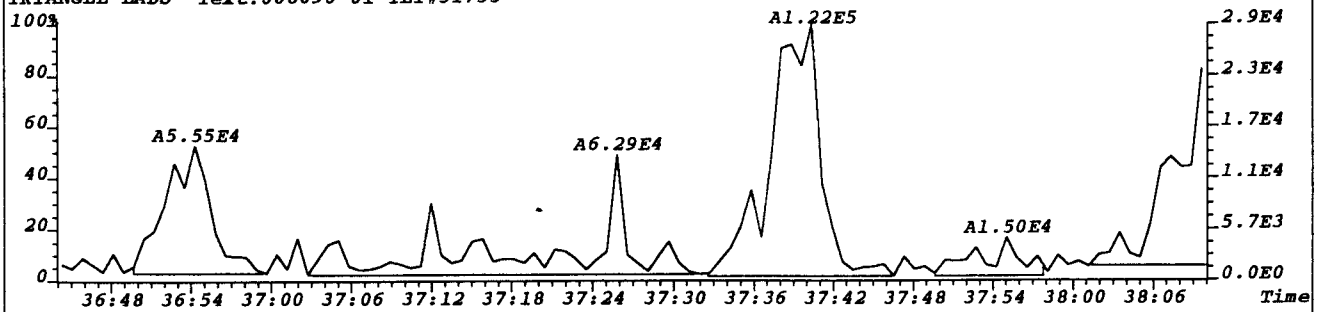
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
430.9729 S:4 F:4 Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



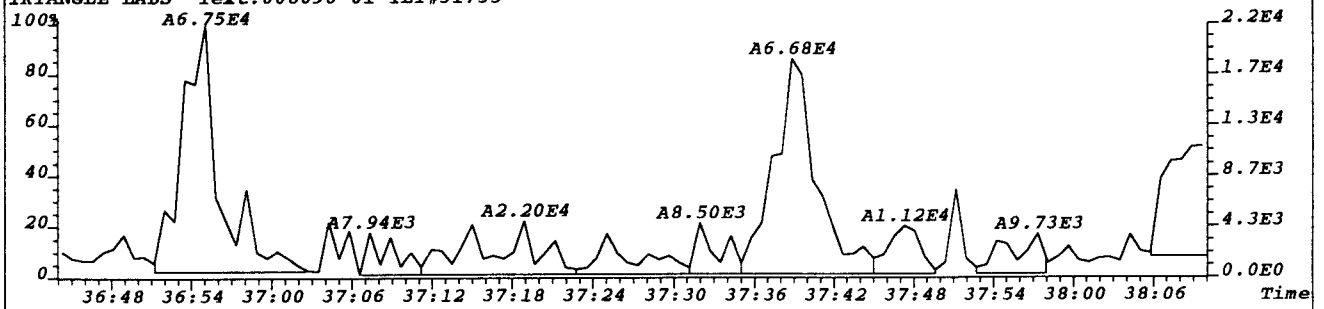
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
479.7165 S:4 F:4 Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



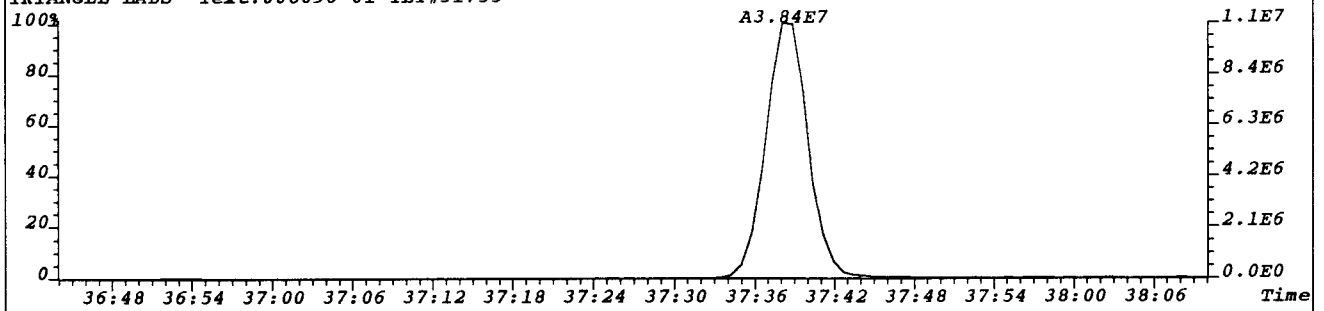
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:564
423.7766 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2256.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



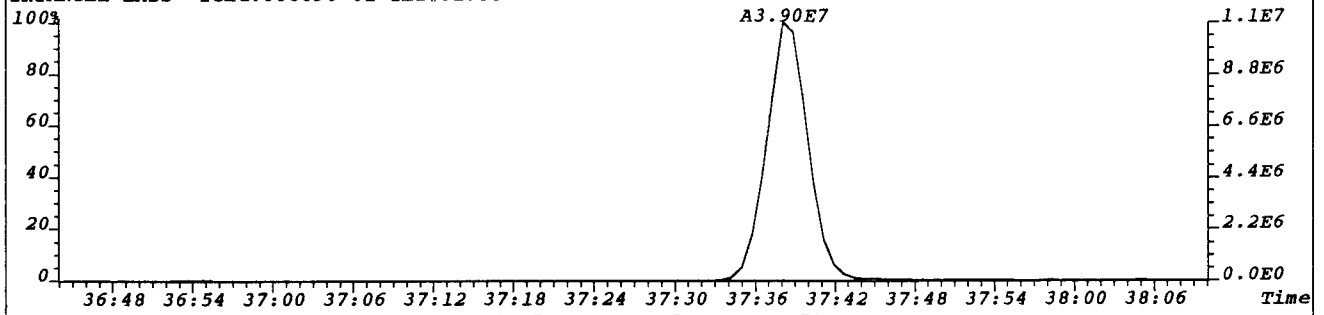
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:561
425.7737 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2244.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



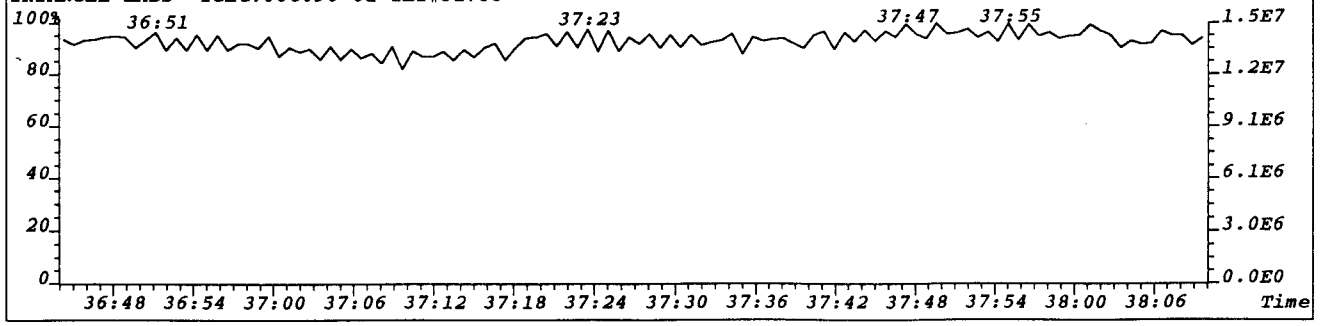
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:2482
435.8169 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9928.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



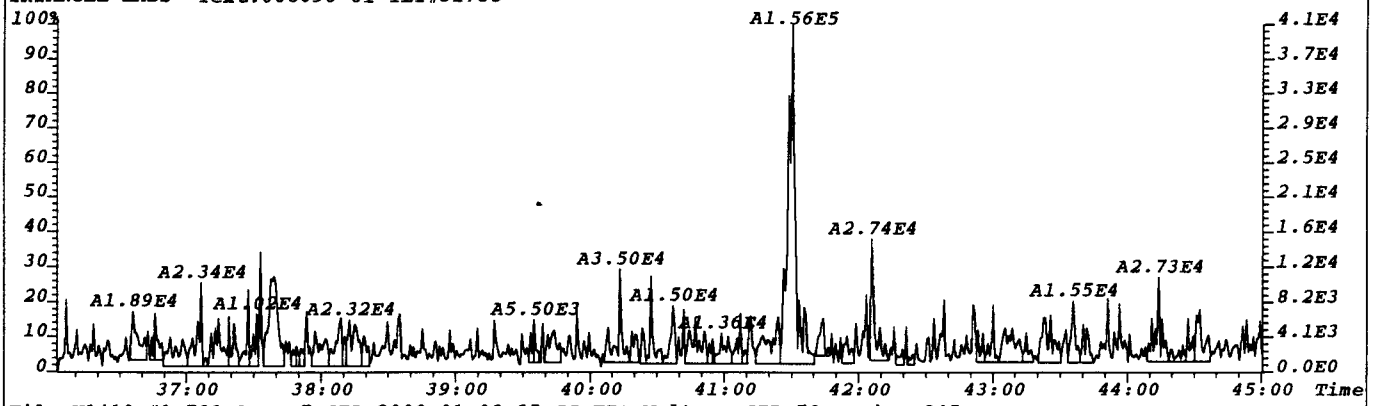
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:1941
437.8140 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7764.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



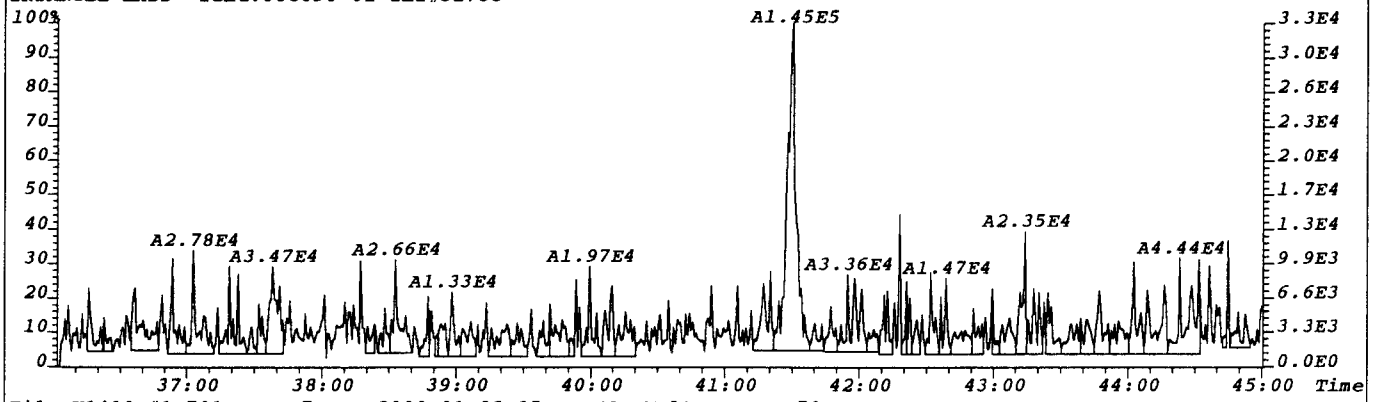
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
430.9729 S:4 F:4 Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



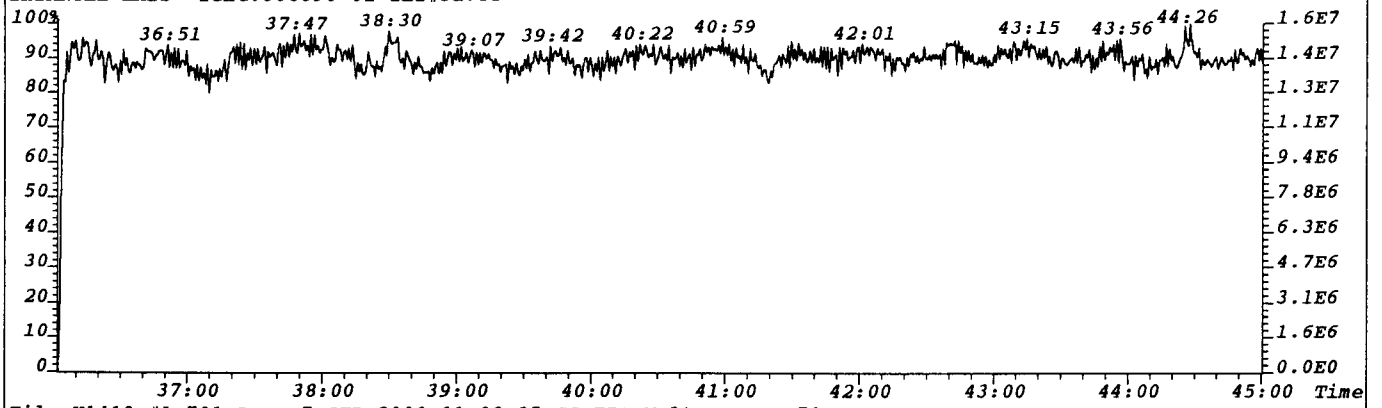
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:790
441.7428 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,3160.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



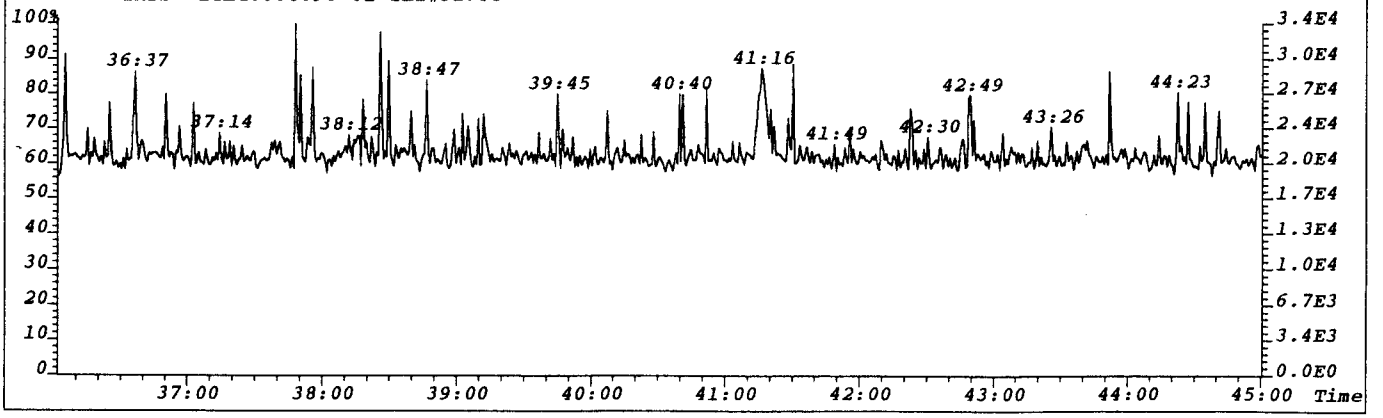
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:945
443.7399 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,3780.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



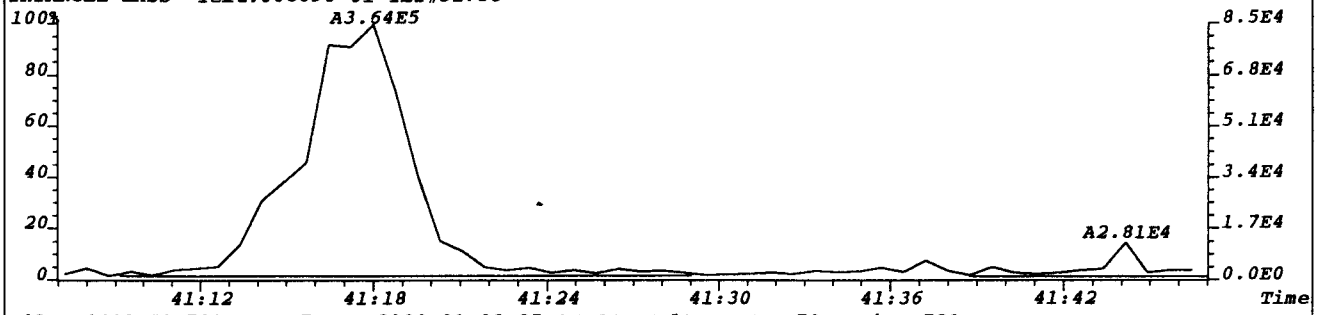
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
430.9729 S:4 F:4 Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



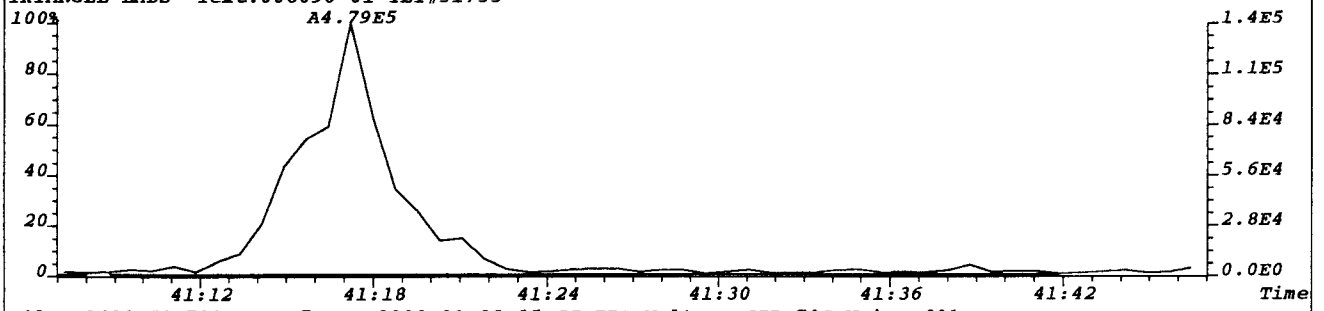
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
513.6775 S:4 F:4 Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



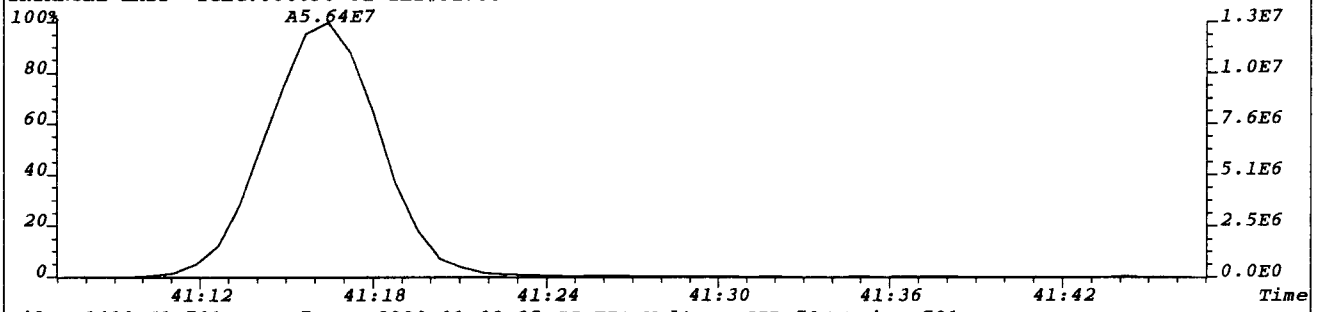
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:759
457.7377 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,3036.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



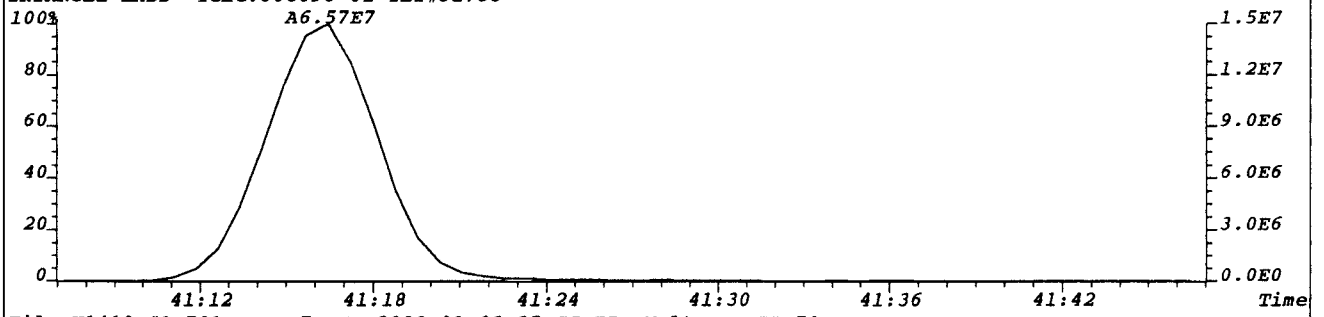
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:721
459.7348 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2884.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



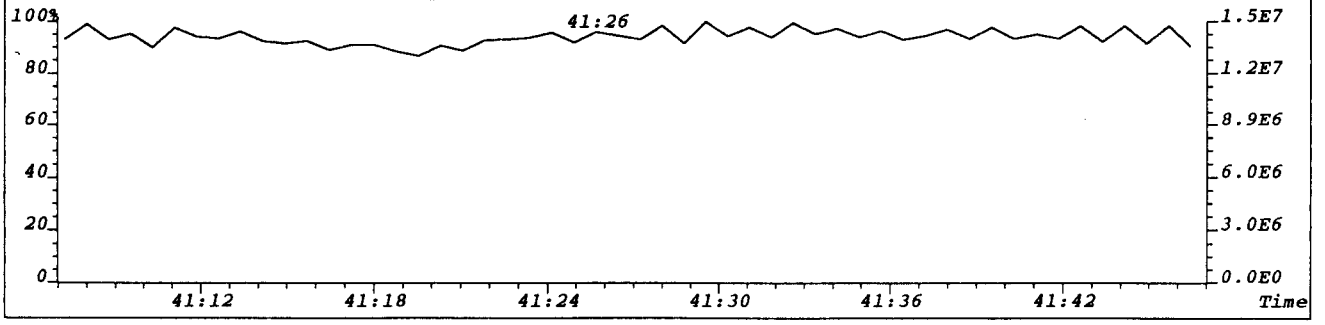
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:601
469.7779 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2404.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



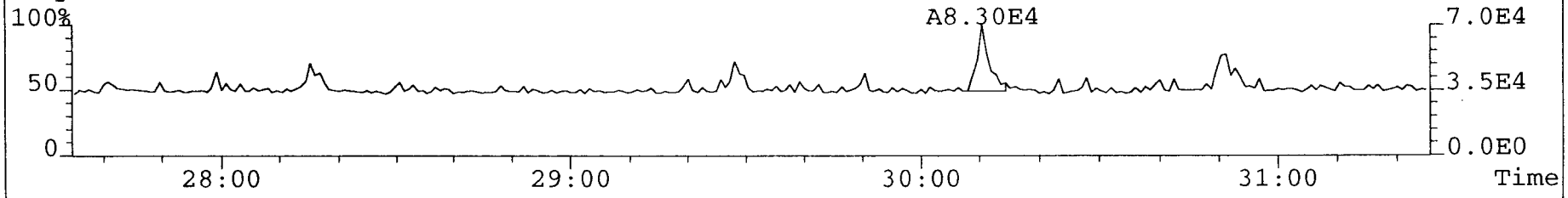
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S Noise:781
471.7750 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,3124.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



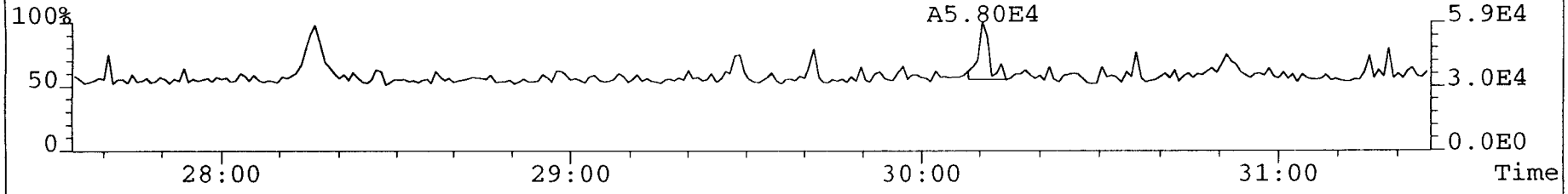
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
430.9729 S:4 F:4 Exp:NDB5US
TRIANGLE LABS Text:008096-01 TLI#51755



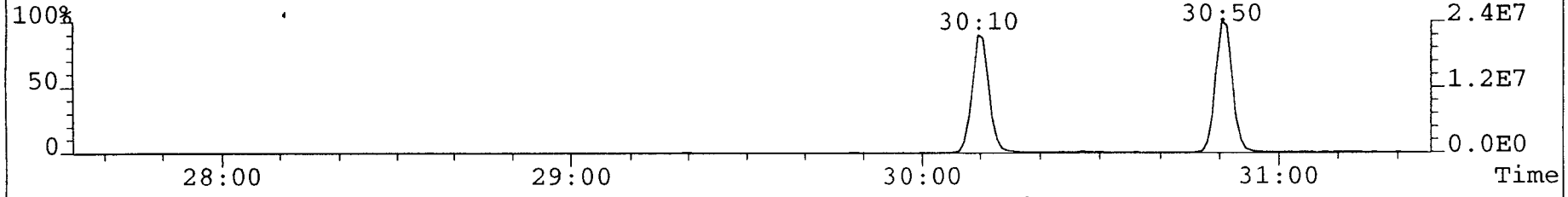
File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
339.8597 S:4 F:2 Exp:NDB5US
Sample Text:008096-01 TLI#51755 File Text:TRIANGLE LABORATORIES INC.



File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
341.8567 S:4 F:2 Exp:NDB5US
Sample Text:008096-01 TLI#51755 File Text:TRIANGLE LABORATORIES INC.

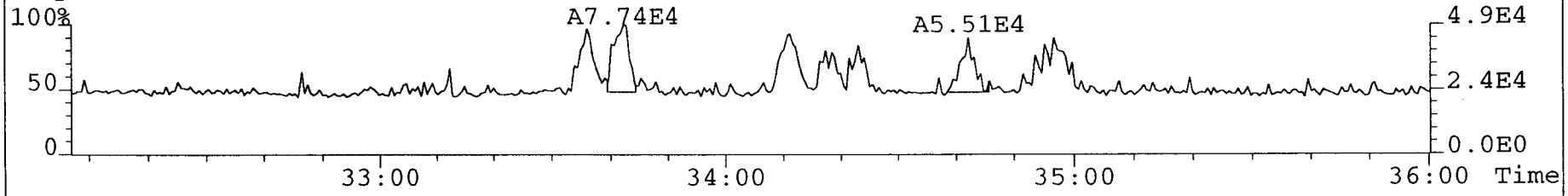


File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
351.9000 S:4 F:2 Exp:NDB5US
Sample Text:008096-01 TLI#51755 File Text:TRIANGLE LABORATORIES INC.

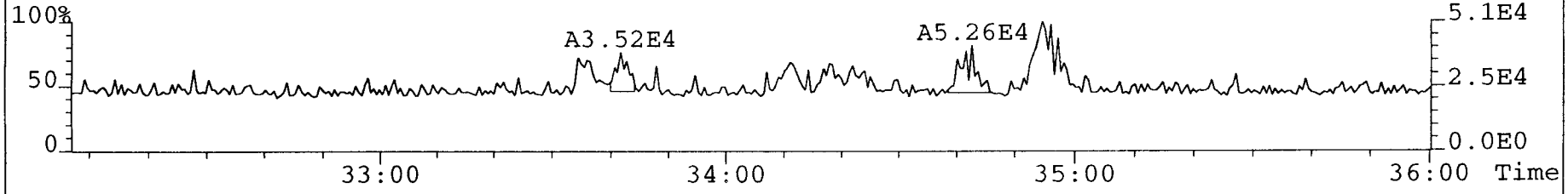


File:U1410 #1-830 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
353.8970 S:4 F:2 Exp:NDB5US
Sample Text:008096-01 TLI#51755 File Text:TRIANGLE LABORATORIES INC.

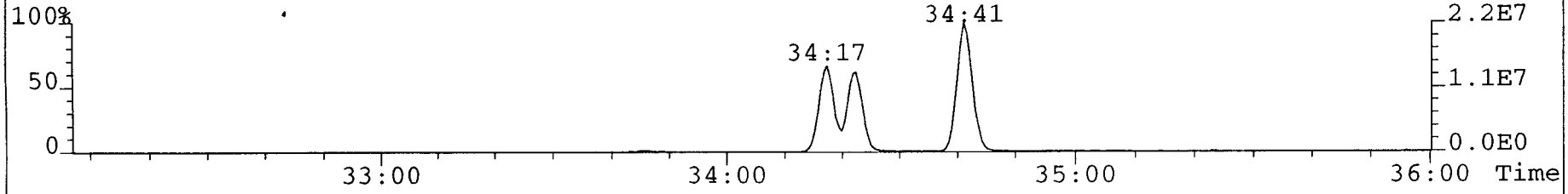
File:U1410 #1-452 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
389.8156 S:4 F:3 Exp:NDB5US
Sample Text:008096-01 TLI#51755 File Text:TRIANGLE LABORATORIES INC.



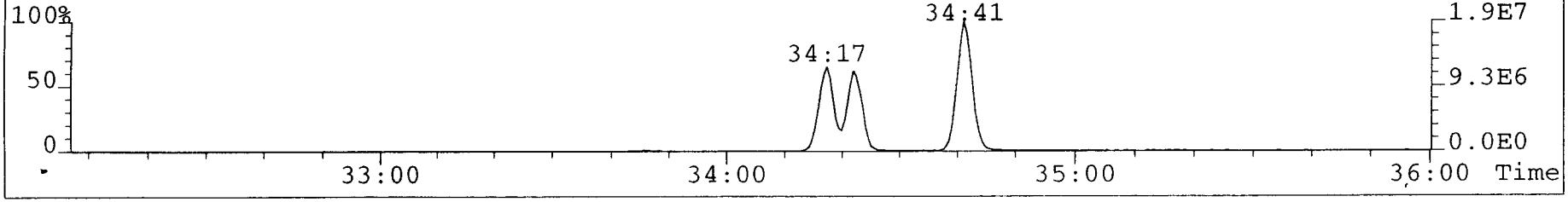
File:U1410 #1-452 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
391.8127 S:4 F:3 Exp:NDB5US
Sample Text:008096-01 TLI#51755 File Text:TRIANGLE LABORATORIES INC.



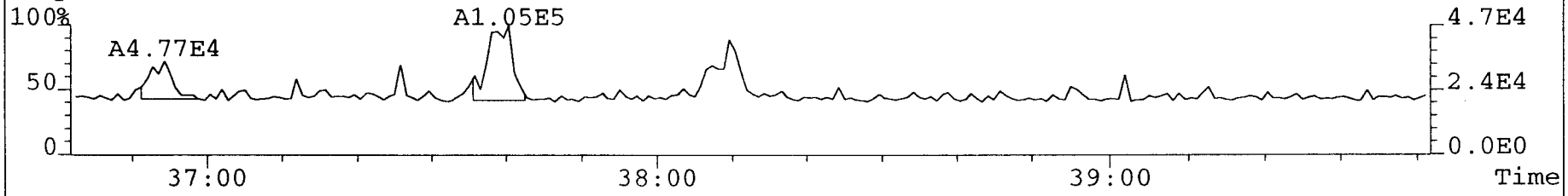
File:U1410 #1-452 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
401.8558 S:4 F:3 Exp:NDB5US
Sample Text:008096-01 TLI#51755 File Text:TRIANGLE LABORATORIES INC.



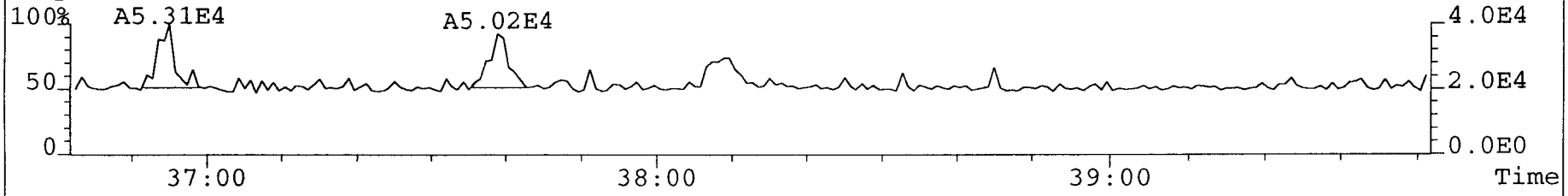
File:U1410 #1-452 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
403.8529 S:4 F:3 Exp:NDB5US
Sample Text:008096-01 TLI#51755 File Text:TRIANGLE LABORATORIES INC.



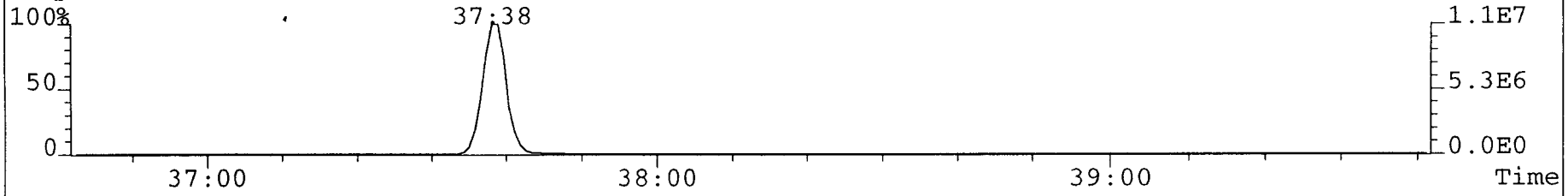
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
423.7766 S:4 F:4 Exp:NDB5US
Sample Text:008096-01 TLI#51755 File Text:TRIANGLE LABORATORIES INC.



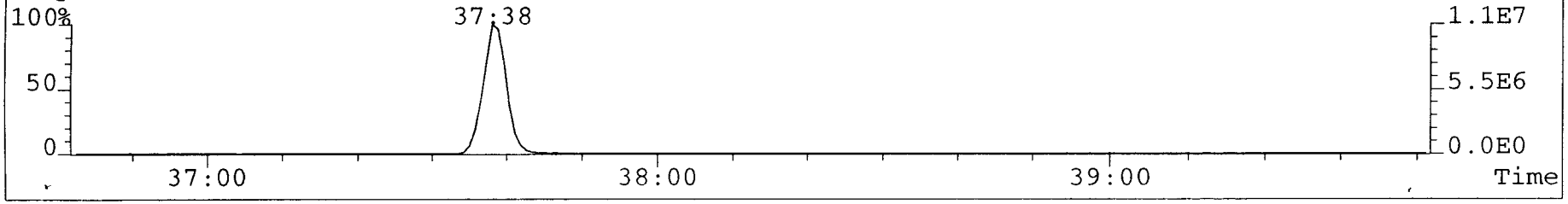
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
425.7737 S:4 F:4 Exp:NDB5US
Sample Text:008096-01 TLI#51755 File Text:TRIANGLE LABORATORIES INC.



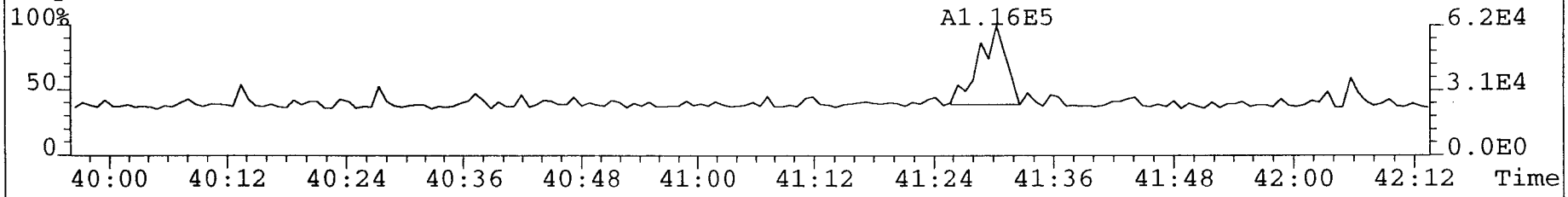
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
435.8169 S:4 F:4 Exp:NDB5US
Sample Text:008096-01 TLI#51755 File Text:TRIANGLE LABORATORIES INC.



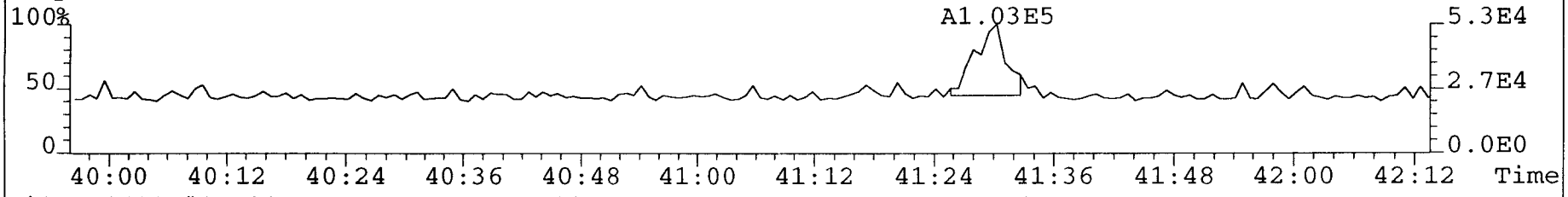
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
437.8140 S:4 F:4 Exp:NDB5US
Sample Text:008096-01 TLI#51755 File Text:TRIANGLE LABORATORIES INC.



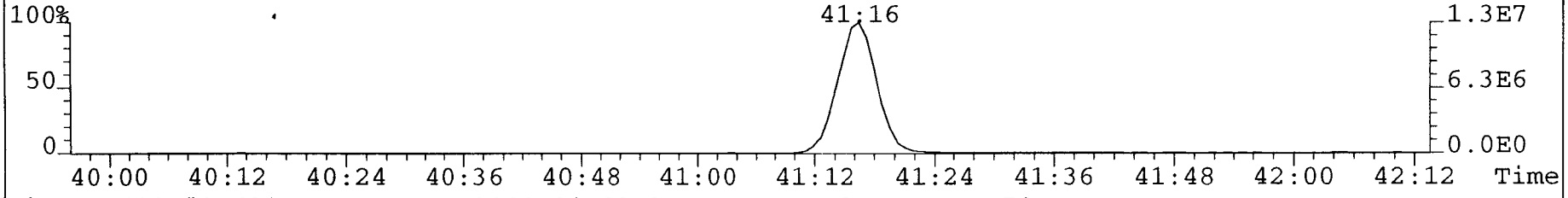
File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
441.7428 S:4 F:4 Exp:NDB5US
Sample Text:008096-01 TLI#51755 File Text:TRIANGLE LABORATORIES INC.



File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
443.7399 S:4 F:4 Exp:NDB5US
Sample Text:008096-01 TLI#51755 File Text:TRIANGLE LABORATORIES INC.



File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
469.7779 S:4 F:4 Exp:NDB5US
Sample Text:008096-01 TLI#51755 File Text:TRIANGLE LABORATORIES INC.



File:U1410 #1-701 Acq: 7-SEP-2000 01:03:35 GC EI+ Voltage SIR 70S
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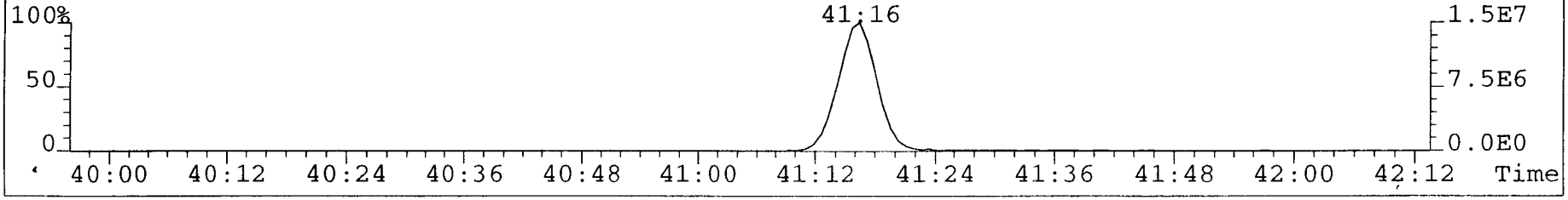
Sample Text:008096-01 TLI#51755 File Text:TRIANGLE LABORATORIES INC.



Pinnacle Laboratories, Inc.

TLI Project: **51755** Method 8290 PCDD/PCDF Analysis (b)
Client Sample: **TLI LCS** Analysis File: **U141005**

Client Project:	**NMHWB/008096**			ICal:	**UF57140**
Sample Matrix:	**WATER**	Date Received:	/ /	Spike File:	**SPMIT32S**
TLI ID:	**TLI LCS**	Date Extracted:	**08/30/2000**	1st CCal:	**U001408**
		Date Analyzed:	**09/07/2000**	End CCal:	**U141012**
Sample Size:	**1.000 L**	Dilution Factor:	**n/a**	% Moisture:	**n/a**
Dry Weight:	**n/a**	Blank File:	**U141003**	% Lipid:	**n/a**
GC Column:	**DB-5**	Analyst:	**MVL**	% Solids:	**n/a**

Analytes	Conc. (ppq)	DL	EMPC	Ratio	RT	Flags
2,3,7,8-TCDD	405			0.79	27:00	___
1,2,3,7,8-PeCDD	1990			1.55	31:11	___
1,2,3,4,7,8-HxCDD	2020			1.24	34:18	___
1,2,3,6,7,8-HxCDD	2110			1.24	34:23	___
1,2,3,7,8,9-HxCDD	2290			1.25	34:42	___
1,2,3,4,6,7,8-HpCDD	2110			1.05	37:39	___
1,2,3,4,6,7,8,9-OCDD	4100			0.85	41:17	___
2,3,7,8-TCDF	408			0.75	26:17	___
1,2,3,7,8-PeCDF	2060			1.53	30:10	___
2,3,4,7,8-PeCDF	2290			1.54	30:51	___
2,3,4,7,8-HxCDF	2050			1.27	33:36	___
1,2,3,6,7,8-HxCDF	2030			1.26	33:42	___
2,3,4,6,7,8-HxCDF	2290			1.27	34:11	___
1,2,3,7,8,9-HxCDF	2200			1.26	34:58	___
1,2,3,4,6,7,8-HpCDF	1870			1.02	36:36	___
1,2,3,4,7,8,9-HpCDF	1930			1.03	38:09	___
1,2,3,4,6,7,8,9-OCDF	4230			0.90	41:30	___

Internal Standards	Conc. (ppq)	% Recovery	QC Limits	Ratio	RT	Flags
$^{13}C_{12}$-2,3,7,8-TCDF	1250	62.3	40%-130%	0.73	26:17	___
$^{13}C_{12}$-2,3,7,8-TCDD	1240	61.8	40%-130%	0.81	26:58	___
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1340	67.2	40%-130%	1.46	30:10	___
$^{13}C_{12}$-1,2,3,7,8-PeCDD	1540	77.1	40%-130%	1.48	31:10	___
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1410	70.3	40%-130%	0.52	33:42	___
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1490	74.5	40%-130%	1.19	34:22	___
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1490	74.6	25%-130%	0.42	36:36	___
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	1580	79.0	25%-130%	1.01	37:38	___
$^{13}C_{12}$-1,2,3,4,6,7,8,9-OCDD	3170	79.3	25%-130%	0.86	41:16	___

mit3_PSR v1.00, LARS 6.25.00

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801 Capitola Drive • Durham, North Carolina 27713
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Printed: 16:48 09/07/2000

Pinnacle Laboratories, Inc.

TLI Project: **51755** Method 8290 PCDD/PCDF Analysis (b)

Client Sample: **TLI LCS** Analysis File: **U141005**

Surrogate Standards (Type B)	Conc. (ppq)	% Recovery	QC Limits	Ratio	RT	Flags
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1500	74.9	40%-130%	1.46	30:50	___
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1400	70.2	40%-130%	0.51	33:36	___
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	1490	74.6	40%-130%	1.19	34:17	___
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1540	77.0	25%-130%	0.42	38:09	___

Other Standard	Conc. (ppq)	% Recovery	QC Limits	RT	Flags
$^{37}Cl_4$-2,3,7,8-TCDD	137	68.4	40%-130%	26:59	___

Alternate Standards (Type B)	Conc. (ppq)	% Recovery	QC Limits	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1520	75.9	40%-130%	0.52	34:58	___
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1590	79.3	40%-130%	0.52	34:10	___

Recovery Standards	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.82	26:48	___
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.20	34:41	___

Data Reviewer: JCA 09/07/2000

mit3_PSR v1.00, LARS 6.25.00

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Printed: 16:48 09/07/2000

Initial ....Date...

Data Review By: JCH 9/7/00

Calculated Noise Height: 1.14

The Total Area for each peak with an ion abundance ratio outside ratio limits has been recalculated according to method requirements.

Page No. 1 Listing of U141005B.dbf
09/07/2000 Matched GC Peaks / Ratio / Ret. Time

Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
TCDF						0.65-0.89				0.962-1.228			
304-306	DC	NL				Height	3.92	2.43	1.49				
				25:34	RO	1.01	12.04	6.84	6.80	0.973			J
				25:54		0.66	71.08	28.38	42.70	0.985	1278-TCDF	AN	
				26:17		0.75	2,893.57	1,240.51	1,653.06	1.000	2378-TCDF	AN	
304-306			3 Peaks				2,976.69						
13C12-TCDF						0.65-0.89				0.962-1.038			
316-318	DC	NL				Height	3.07	1.61	1.46				
				25:53		0.78	53.24	23.38	29.86	0.985			
				26:17		0.73	13,317.46	5,621.54	7,695.92	1.000	13C12-2378-TCDF	ISO	
						Height	3,604.92	1,517.61	2,087.31				
				26:43	RO	1.00	85.42	37.16	37.18	1.016			
316-318			3 Peaks				13,456.12						

---------- Above: TCDF / TCDD Follows ----------

TCDD						0.65-0.89				0.963-1.222			
320-322	DC	NL				Height	2.23	1.14	1.09				
				26:17	RO	1.68	9.06	8.58	5.12	0.975			J
				27:00		0.79	1,935.58	853.77	1,081.81	1.001	2378-TCDD	AN	
320-322			2 Peaks				1,944.64						
37Cl-TCDD										0.926-1.074			
328	DC	NL				Height	1.14	1.14					
	DC	WL		24:51			0.68			0.922			
	DC	SN		26:19			2.79			0.976			
				26:59			954.82	954.82		1.001	37Cl-TCDD	CLS	
	DC	SN		28:12			2.90			1.046			
	DC	SN		28:25			1.62			1.054			
328			1 Peak				954.82						
13C12-TCDD						0.65-0.89				0.926-1.074			
332-334	DC	NL				Height	5.21	3.36	1.85				
				26:48		0.82	14,558.32	6,565.32	7,993.00	0.994	13C12-1234-TCDD	RS1	
				26:58		0.81	9,710.43	4,339.06	5,371.37	1.000	13C12-2378-TCDD	IS1	
						Height	2,742.35	1,195.91	1,546.44				
332-334			2 Peaks				24,268.75						

---------- Above: TCDD / PeCDF Follows ----------

PeCDF						1.32-1.78				0.867-1.133			
340-342	DC	NL				Height	2.52	1.18	1.34				
				29:21		1.34	38.09	21.82	16.27	0.973			J

Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
				29:49		1.67	25.01	15.65	9.36	0.988			J
				30:10		1.53	12,371.26	7,477.46	4,893.80	1.000	12378-PeCDF	AN	
				30:27		1.37	177.13	102.28	74.85	1.009			J
				30:51		1.54	13,985.42	8,478.19	5,507.23	1.023	23478-PeCDF	AN	
				31:49	RO	1.24	86.19	41.81	33.80	1.055			J
340-342				6 Peaks			26,683.10						
13C12-PeCDF						1.32-1.78				0.867-1.133			
352-354	DC	NL				Height	2.07	0.98	1.09				
				30:10		1.46	12,928.88	7,669.28	5,259.60	1.000	13C12-PeCDF 123	IS2	
						Height	4,022.73	2,375.77	1,646.96				
				30:26		1.64	107.12	66.47	40.65	1.009			
				30:50		1.46	14,178.70	8,415.69	5,763.01	1.022	13C12-PeCDF 234	SUR1	
				31:49	RO	1.31	157.97	81.00	61.95	1.055			
352-354				4 Peaks			27,372.67						

---------- Above: PeCDF / PeCDD Follows ----------

PeCDD						1.32-1.78				0.872-1.128			
356-358	DC	NL				Height	2.04	1.08	0.96				
				30:10		1.49	20.29	12.13	8.16	0.968			J
				30:26	RO	0.89	9.23	5.61	6.30	0.976			J
				30:50		1.52	15.81	9.53	6.28	0.989			J
				31:11		1.55	8,782.42	5,340.17	3,442.25	1.001	12378-PeCDD	AN	
356-358				4 Peaks			8,827.75						
13C12-PeCDD						1.32-1.78				0.872-1.128			
368-370	DC	NL				Height	1.89	0.98	0.91				
				30:07		1.37	66.38	38.39	27.99	0.966			
				30:15		1.40	35.45	20.65	14.80	0.971			
				30:23	RO	2.91	6.60	7.53	2.59	0.975			
				30:49		1.71	10.64	6.72	3.92	0.989			
				31:10		1.48	8,116.40	4,841.96	3,274.44	1.000	13C12-PeCDD 123	IS3	
						Height	2,722.67	1,642.21	1,080.46				
	DC	SN		31:39	RO	2.13	5.23			1.016			
	DC	SN		31:52	RO	1.07	5.64			1.022			
368-370				5 Peaks			8,235.47						

---------- Above: PeCDD / HxCDF Follows ----------

HxCDF						1.05-1.43				0.881-1.119			
374-376	DC	NL				Height	1.12	0.60	0.52				
				32:47		1.21	23.58	12.93	10.65	0.973			J
				33:36		1.27	14,149.57	7,909.77	6,239.80	0.997	123478-HxCDF	AN	
				33:42		1.26	14,175.82	7,892.08	6,283.74	1.000	123678-HxCDF	AN	
				34:11		1.27	15,460.98	8,641.76	6,819.22	1.014	234678-HxCDF	AN	
				34:58		1.26	12,388.91	6,904.42	5,484.49	1.038	123789-HxCDF	AN	
374-376				5 Peaks			56,198.86						
13C12-HxCDF						0.43-0.59				0.881-1.119			
384-386	DC	NL				Height	1.33	0.60	0.73				
				32:40		0.52	31.90	10.91	20.99	0.969			

Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
				32:47		0.58	25.46	9.34	16.12	0.973			
				33:36		0.51	13,052.91	4,422.05	8,630.86	0.997	13C12-HxCDF 478	SUR2	
				33:42		0.52	12,656.17	4,305.31	8,350.86	1.000	13C12-HxCDF 678	IS4	
						Height	4,375.75	1,505.19	2,870.56				
				34:00		0.58	15.40	5.66	9.74	1.009			
				34:10		0.52	13,774.18	4,688.33	9,085.85	1.014	13C12-HxCDF 234	ALT2	
				34:22	RO	0.75	41.60	14.05	18.80	1.020			
				34:58		0.52	9,972.21	3,397.81	6,574.40	1.038	13C12-HxCDF 789	ALT1	
384-386				8 Peaks			49,569.83						

---------- Above: HxCDF / HxCDD Follows ----------

HxCDD						1.05-1.43				0.884-1.116			
390-392	DC	NL				Height	1.11	0.58	0.53				
				33:35	RO	2.33	11.78	12.23	5.26	0.977			J
				34:18		1.24	9,090.26	5,023.30	4,066.96	0.998	123478-HxCDD	AN	
				34:23		1.24	9,215.84	5,108.99	4,106.85	1.000	123678-HxCDD	AN	
				34:42		1.25	10,431.21	5,791.10	4,640.11	1.010	123789-HxCDD	AN	
390-392				4 Peaks			28,749.09						
13C12-HxCDD						1.05-1.43				0.971-1.029			
402-404	DC	NL				Height	2.49	1.53	0.96				
				33:46		1.35	82.36	47.36	35.00	0.983			
				34:17		1.19	8,951.26	4,871.72	4,079.54	0.998	13C12-HxCDD 478	SUR3	
				34:22		1.19	8,516.29	4,634.90	3,881.39	1.000	13C12-HxCDD 678	IS5	
						Height	3,060.72	1,676.88	1,383.84				
				34:41		1.20	12,993.51	7,087.72	5,905.79	1.009	13C12-HxCDD 789	RS2	
402-404				4 Peaks			30,543.42						

---------- Above: HxCDD / HpCDF Follows ----------

HpCDF						0.88-1.20				0.891-1.109			
408-410	DC	NL				Height	4.19	2.19	2.00				
				36:36		1.02	11,951.71	6,036.58	5,915.13	1.000	1234678-HpCDF	AN	
				37:03	RO	1.46	23.22	16.57	11.38	1.012			J
				38:09		1.03	10,137.18	5,138.71	4,998.47	1.042	1234789-HpCDF	AN	
408-410				3 Peaks			22,112.11						
13C12-HpCDF						0.37-0.51				0.945-1.109			
418-420	DC	NL				Height	1.83	1.00	0.83				
				36:36		0.42	9,847.72	2,932.01	6,915.71	1.000	13C12-HpCDF 678	IS6	
						Height	3,085.35	922.96	2,162.39				
				36:50	RO	0.24	8.90	2.72	11.55	1.006			
				38:09		0.42	8,463.37	2,508.61	5,954.76	1.042	13C12-HpCDF 789	SUR4	
418-420				3 Peaks			18,319.99						

---------- Above: HpCDF / HpCDD Follows ----------

HpCDD						0.88-1.20				0.894-1.106			
424-426	DC	NL				Height	2.26	1.29	0.97				
				36:54		0.89	21.96	10.37	11.59	0.981			J
				37:39		1.05	8,222.01	4,209.51	4,012.50	1.000	1234678-HpCDD	AN	

Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
				38:08	RO	1.35	20.13	13.30	9.87	1.013			J
424-426			3 Peaks				8,264.10						
13C12-HpCDD						0.88-1.20				0.973-1.027			
436-438	DC	NL				Height	3.53	2.09	1.44				
				36:53		1.14	19.75	10.53	9.22	0.980			
				37:38		1.01	9,243.67	4,644.92	4,598.75	1.000	13C12-HpCDD 678	IS7	
						Height	2,544.94	1,287.02	1,257.92				
436-438			2 Peaks				9,263.42						

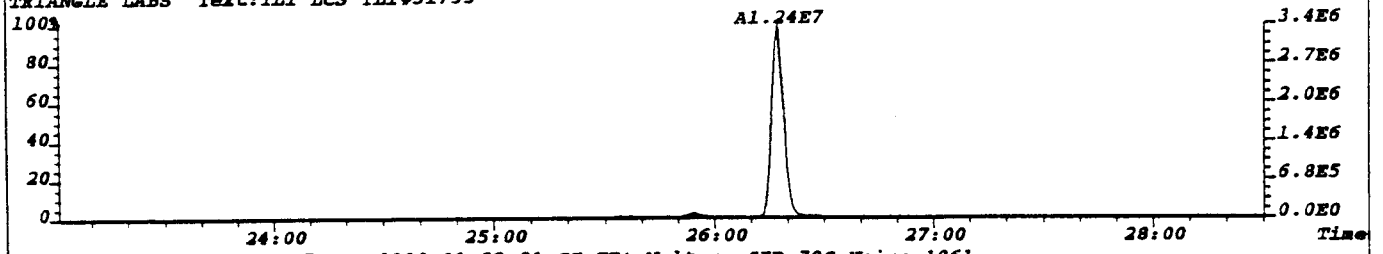
---------- Above: HpCDD / Octa-CDD and CDF Follows ----------

OCDF						0.76-1.02				0.903-1.097			
442-444	DC	NL				Height	1.14	0.56	0.58				
				41:30		0.90	18,254.34	8,633.94	9,620.40	1.006	OCDF		AN
442-444			1 Peak				18,254.34						
OCDD						0.76-1.02				0.903-1.097			
458-460	DC	NL				Height	1.06	0.52	0.54				
				41:17		0.85	13,923.52	6,387.03	7,536.49	1.000	OCDD		AN
458-460			1 Peak				13,923.52						
13C12-OCDD						0.76-1.02				0.952-1.048			
470-472	DC	NL				Height	0.82	0.41	0.41				
				41:16		0.86	14,323.69	6,624.87	7,698.82	1.000	13C12-OCDD		IS8
						Height	3,277.95	1,499.09	1,778.86				
470-472			1 Peak				14,323.69						

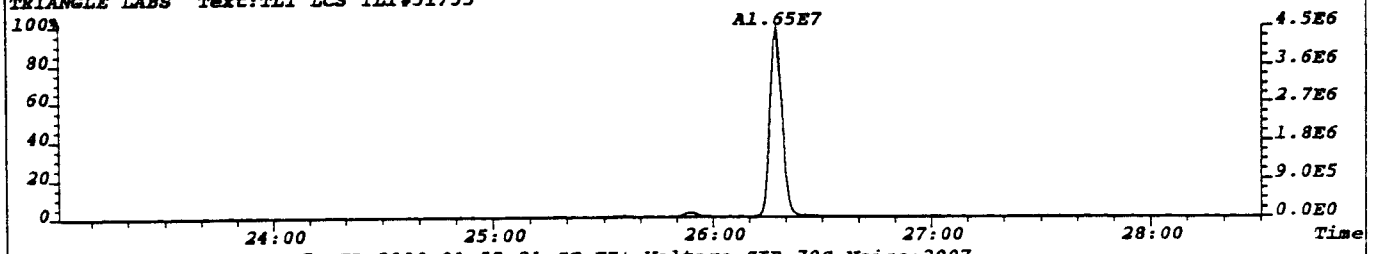
Column Description.....	"Why" Code Description.....	QC Log Desc.....
M_Z -Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT. -Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK -RO=Ratio Outside Limits	<M-Below Method Detection Limit	T-Time Changed
Rel.RT-Relative Retention Time	NL-Channel Specific Noise Level	M-Peak Area Changed
		N-Name Changed
		X-Ether Interference

*** End of Report ***

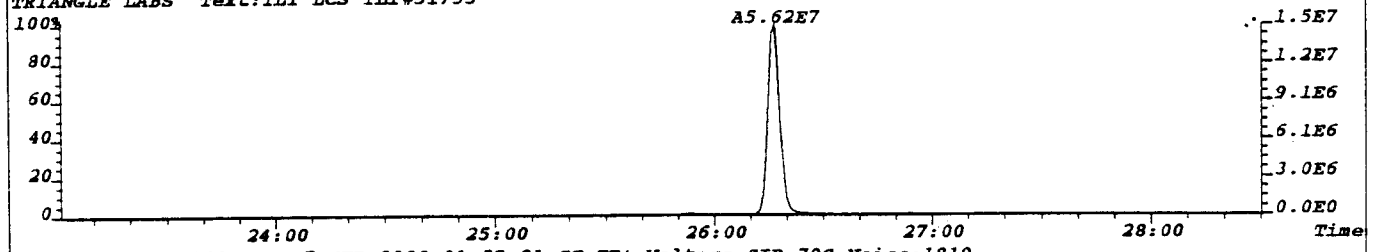
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:3040
303.9016 S:5 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,12160.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



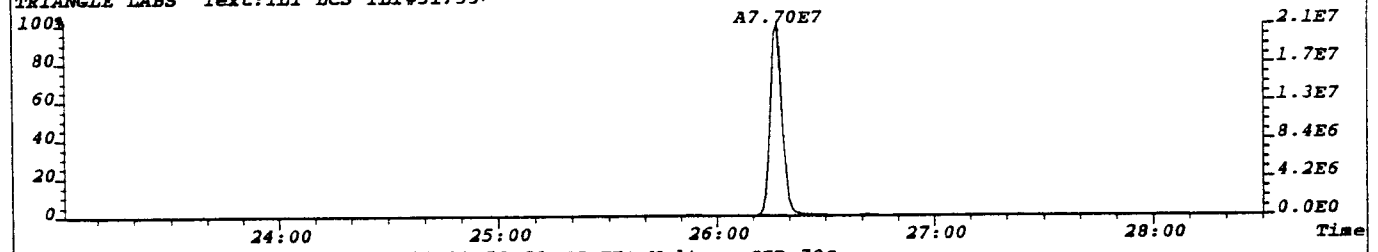
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1861
305.8987 S:5 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,7444.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



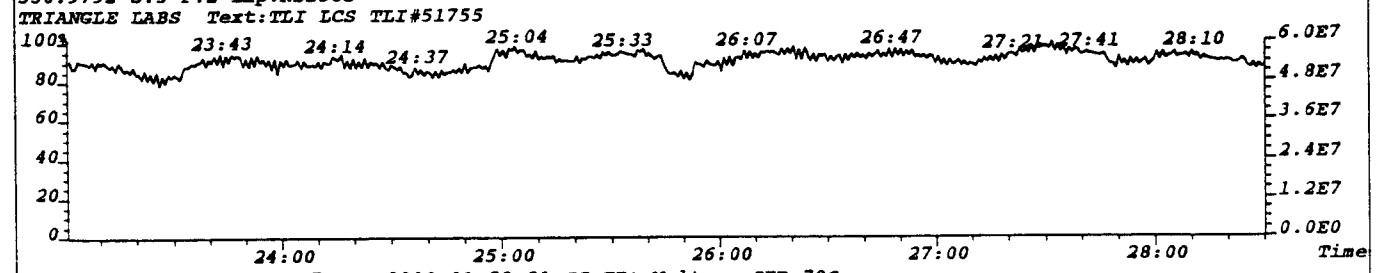
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:2007
315.9419 S:5 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,8028.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



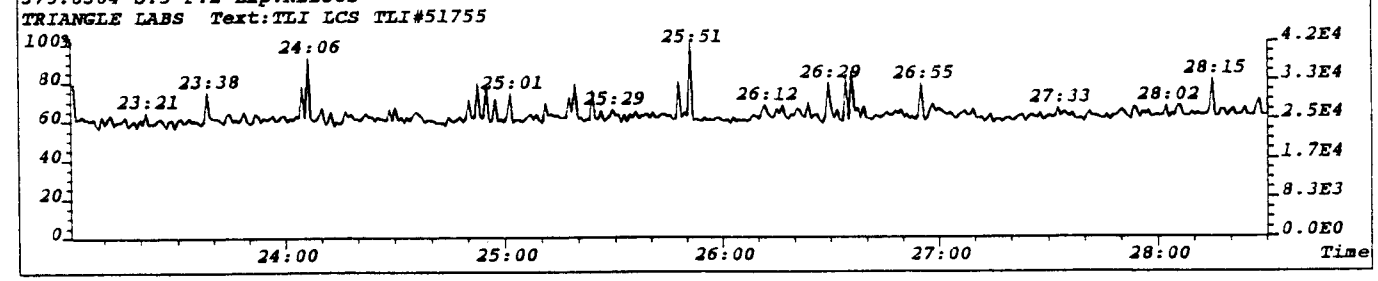
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1819
317.9389 S:5 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,7276.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



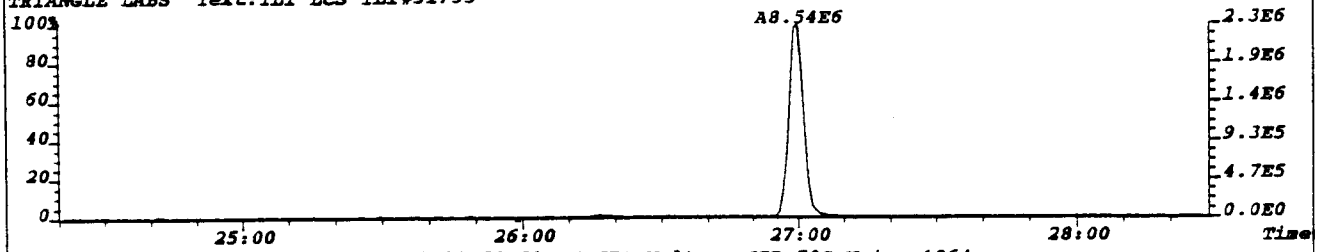
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S
330.9792 S:5 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



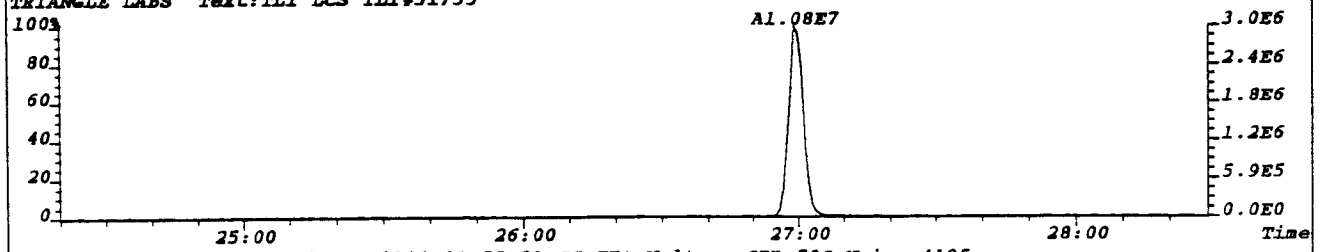
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S
375.8364 S:5 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



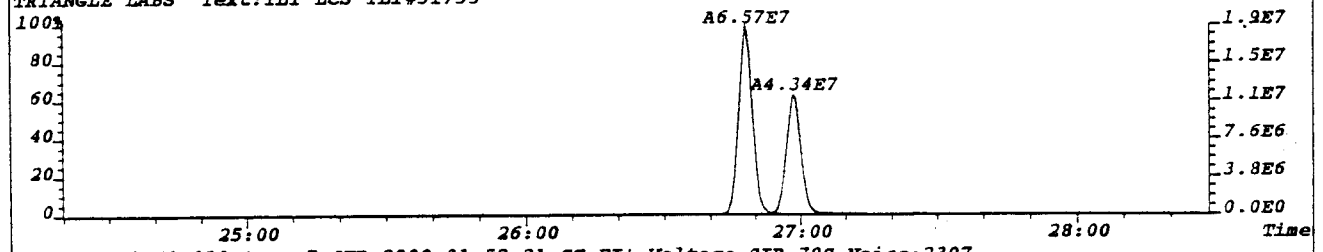
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1419
319.8965 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5676.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



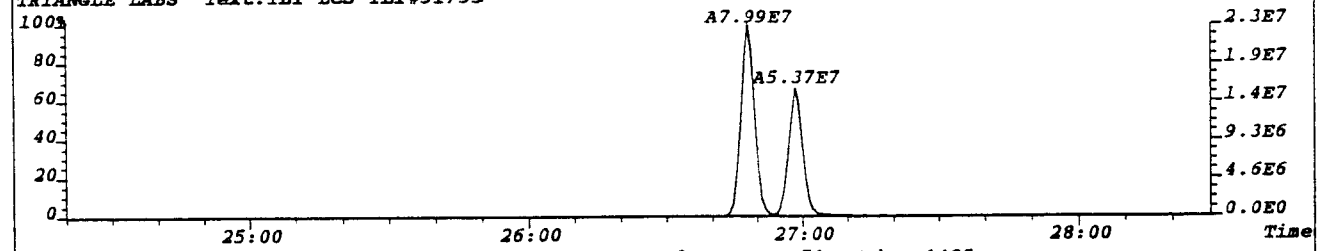
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1364
321.8936 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5456.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



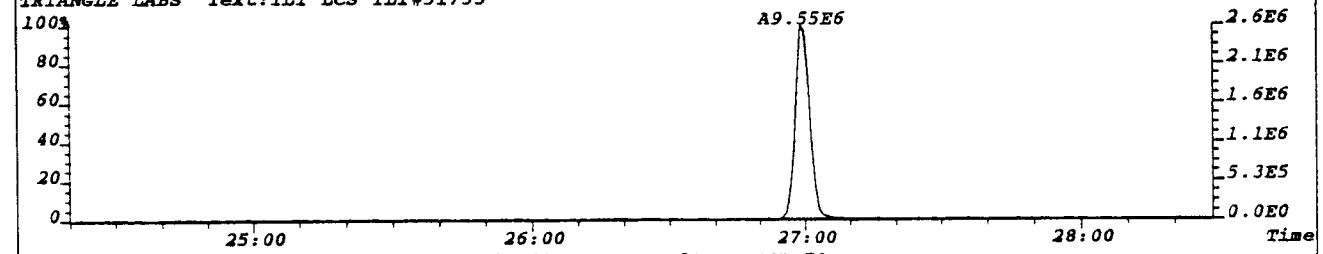
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:4195
331.9368 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,16780.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



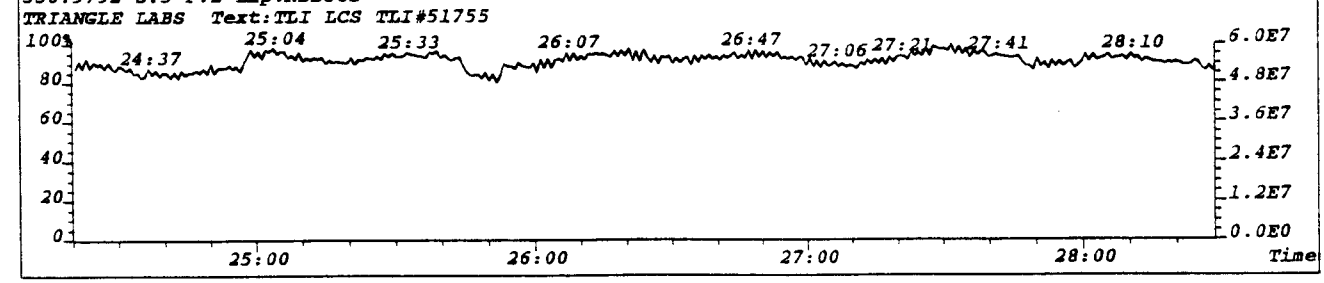
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:2307
333.9338 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9228.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



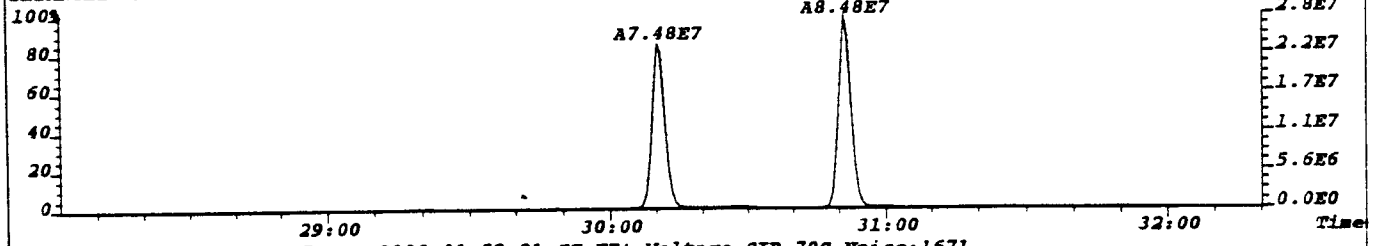
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1425
327.8847 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5700.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



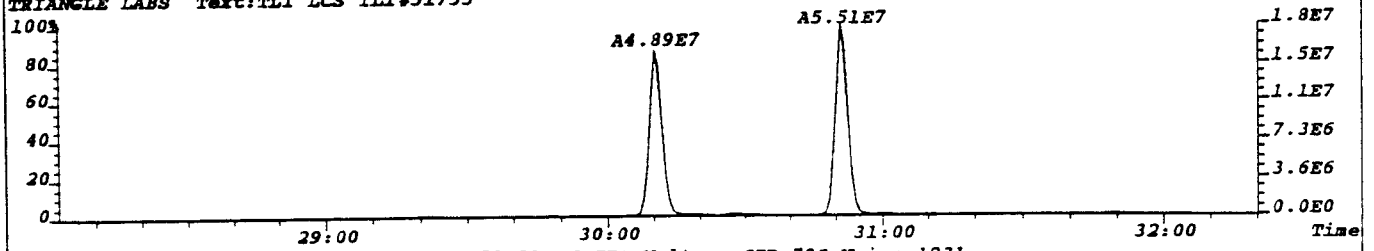
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S
330.9792 S:5 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



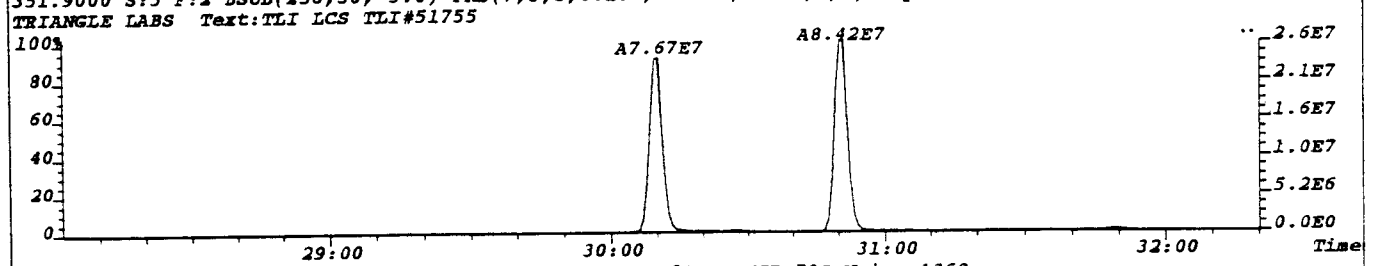
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1477
339.8597 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5908.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



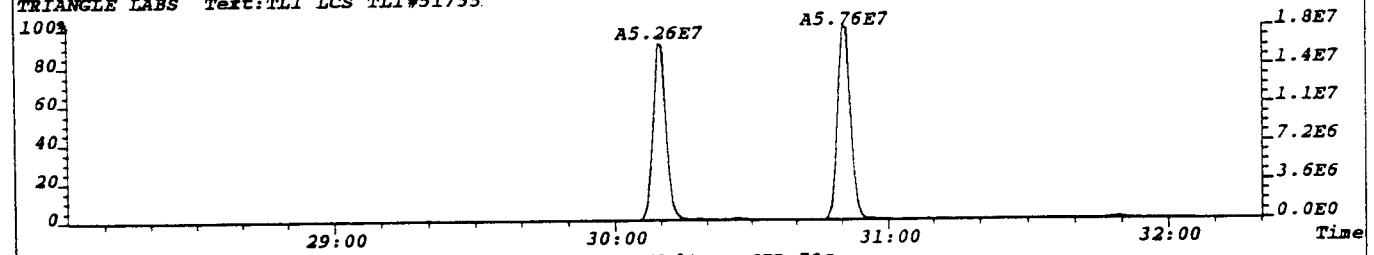
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1671
341.8567 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6684.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



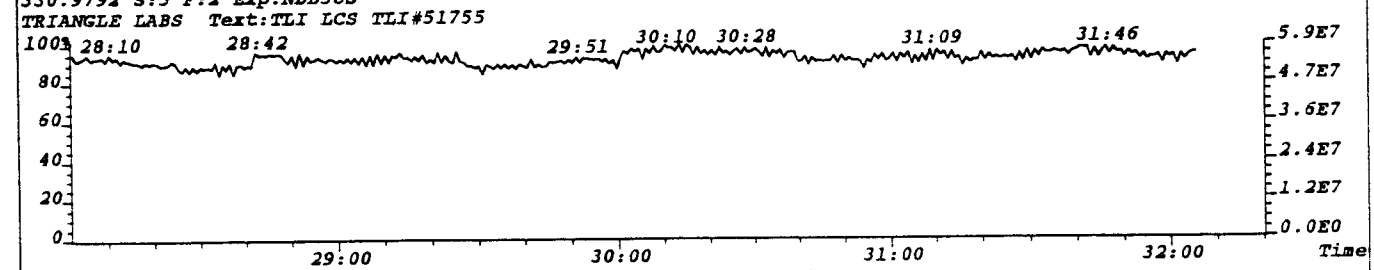
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1231
351.9000 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,4924.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



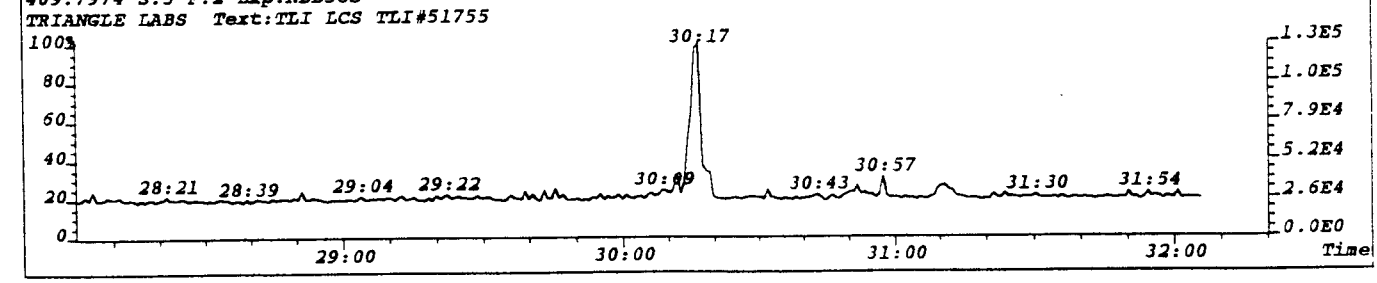
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1368
353.8970 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5472.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



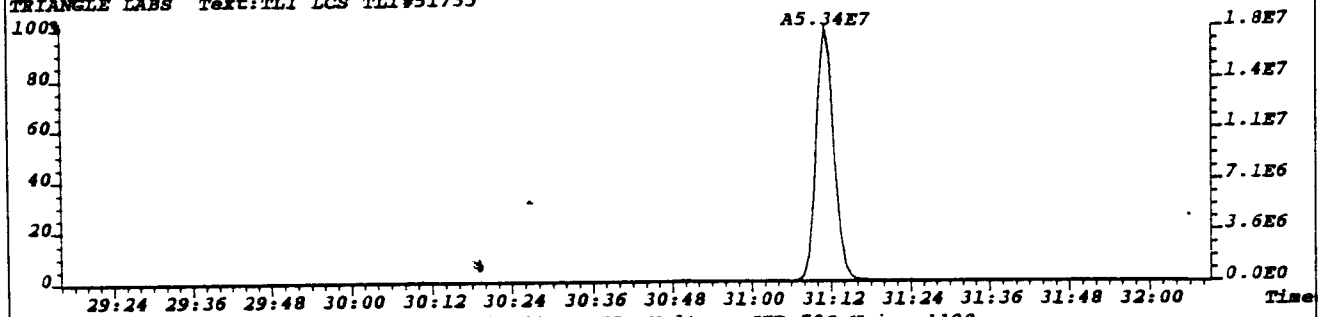
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S
330.9792 S:5 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



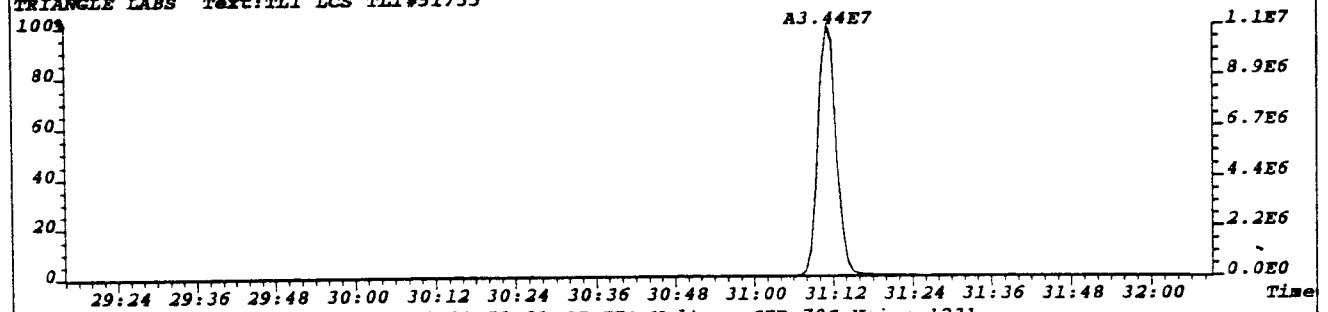
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S
409.7974 S:5 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



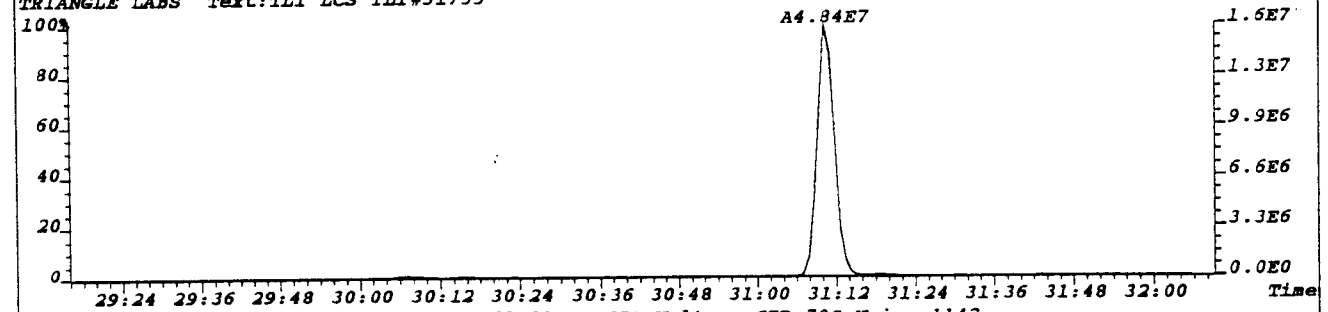
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1347
355.8546 S:5 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,5388.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



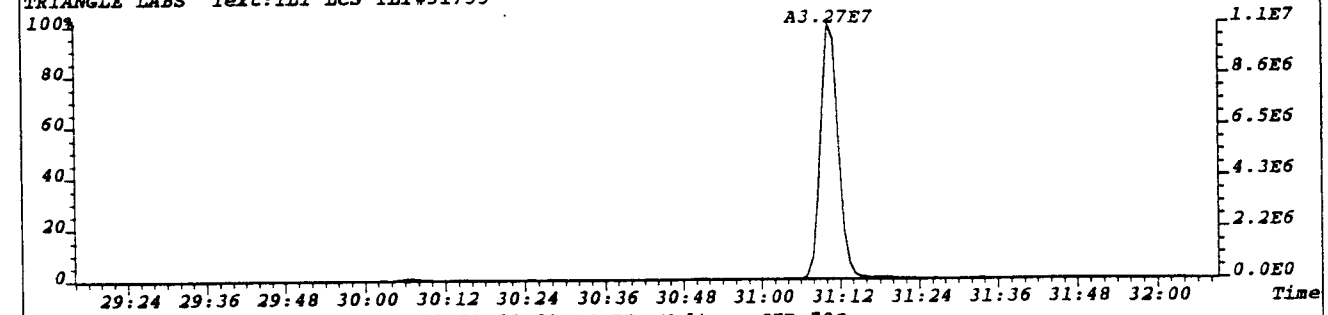
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1198
357.8516 S:5 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,4792.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



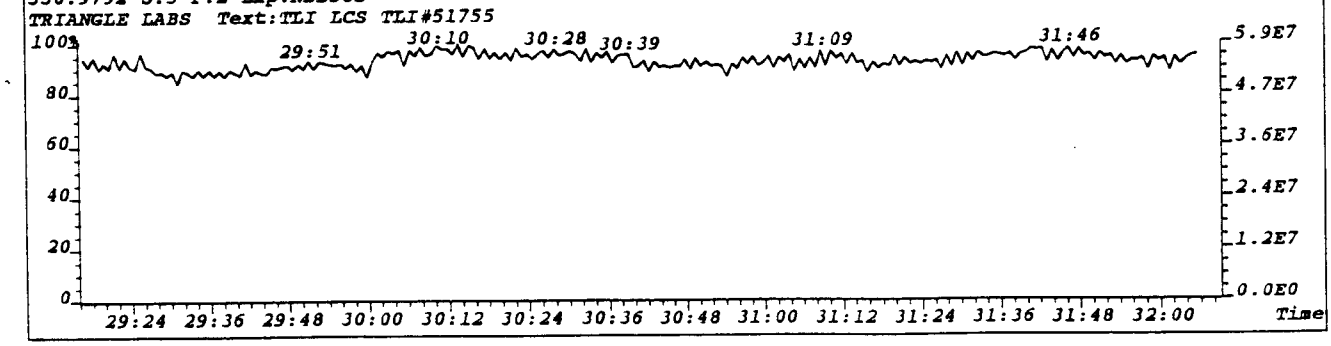
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1231
367.8949 S:5 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,4924.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



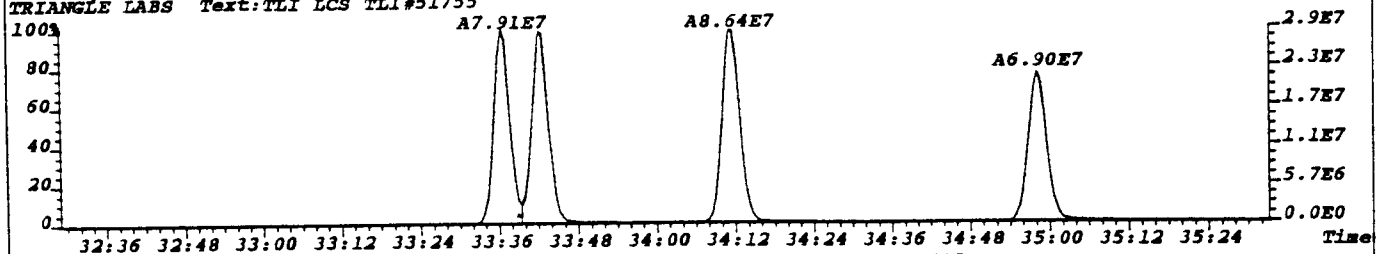
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1142
369.8919 S:5 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,4568.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



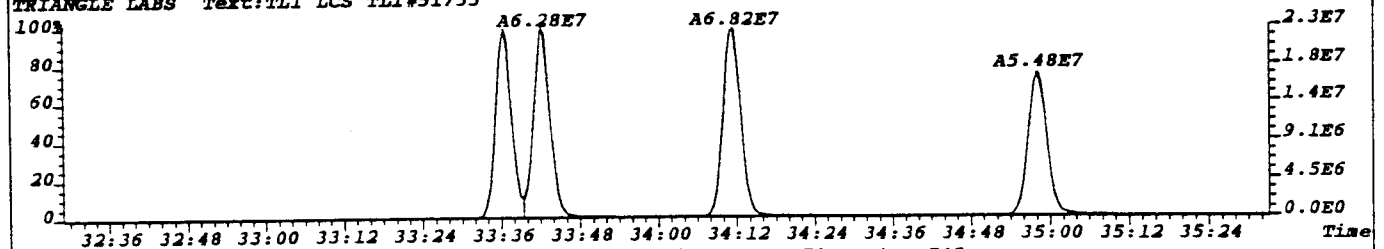
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S
330.9792 S:5 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



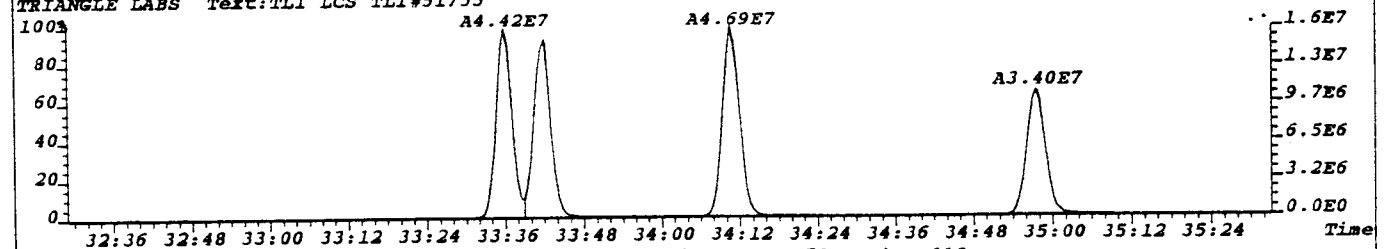
File:U1410 #1-452 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:749
373.8208 S:5 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2996.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



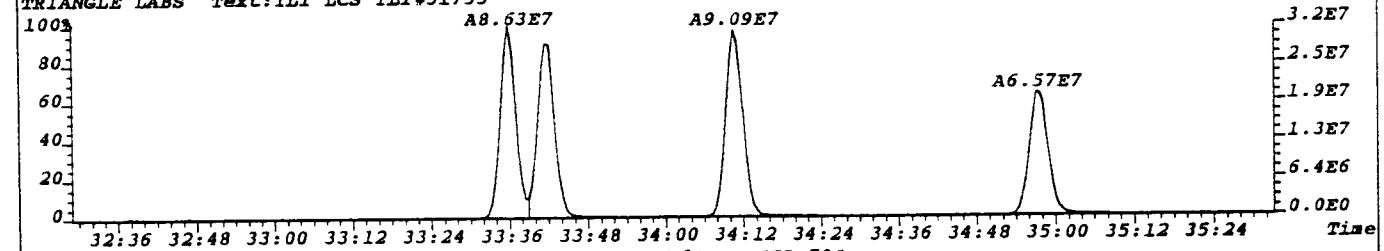
File:U1410 #1-452 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:645
375.8178 S:5 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2580.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



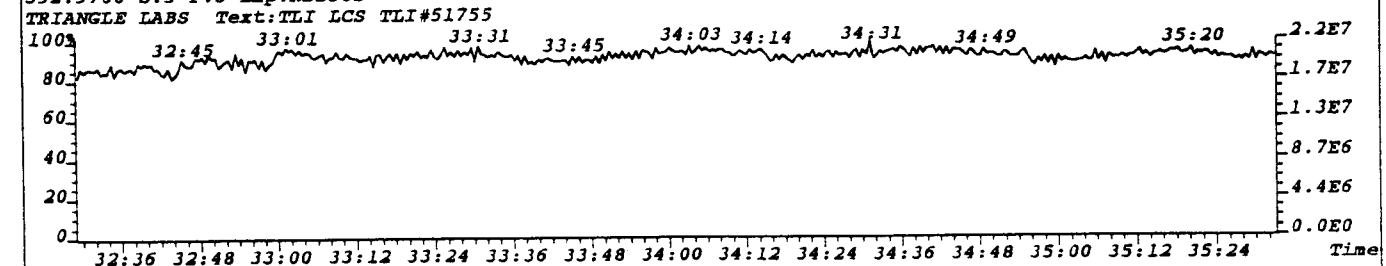
File:U1410 #1-452 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:745
383.8639 S:5 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2980.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



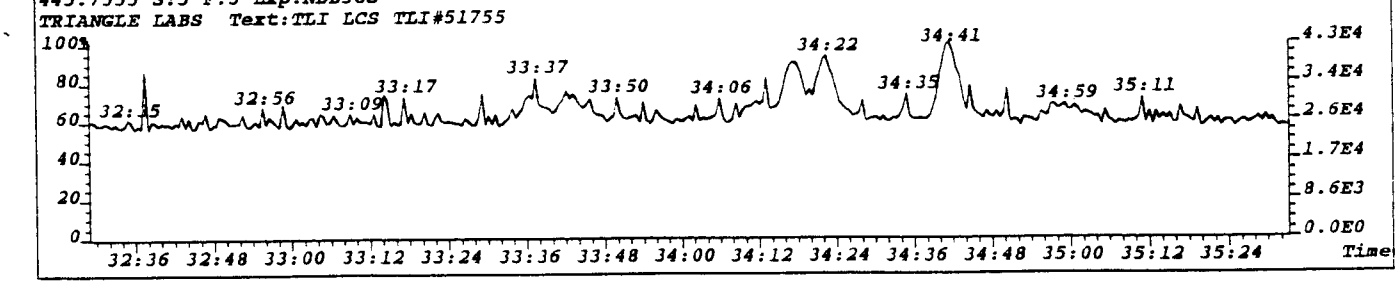
File:U1410 #1-452 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:913
385.8610 S:5 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,3652.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



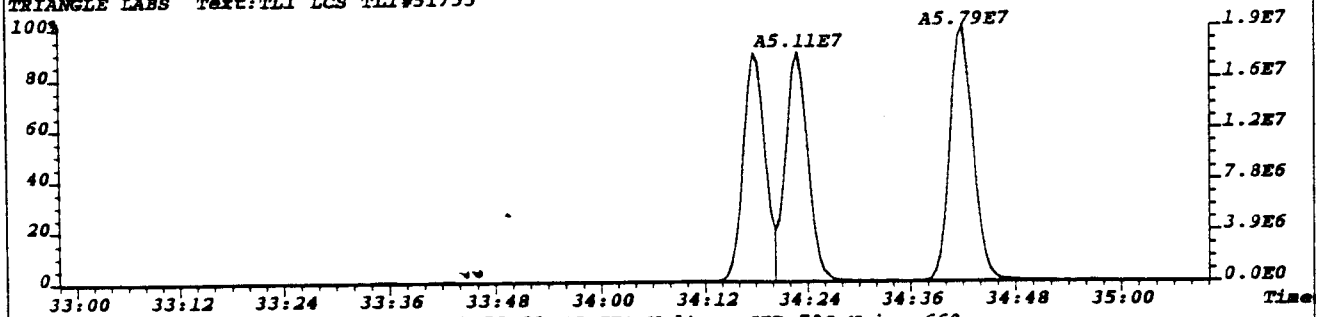
File:U1410 #1-452 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S
392.9760 S:5 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



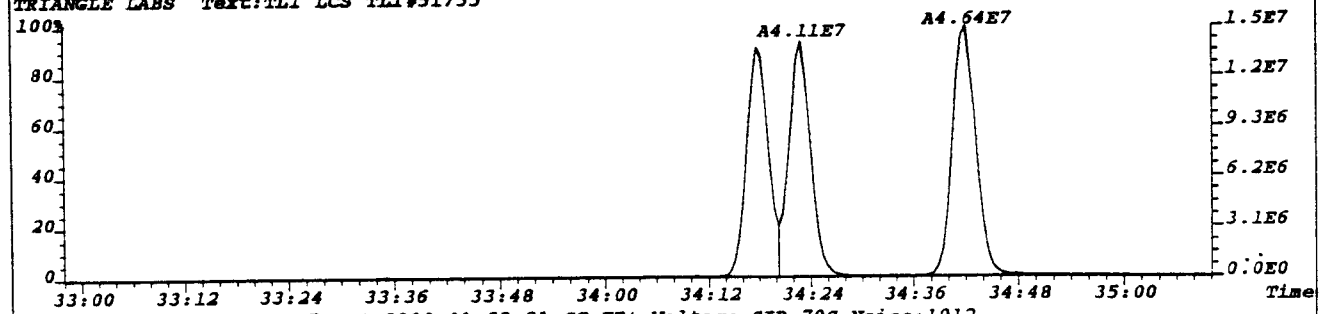
File:U1410 #1-452 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S
445.7555 S:5 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



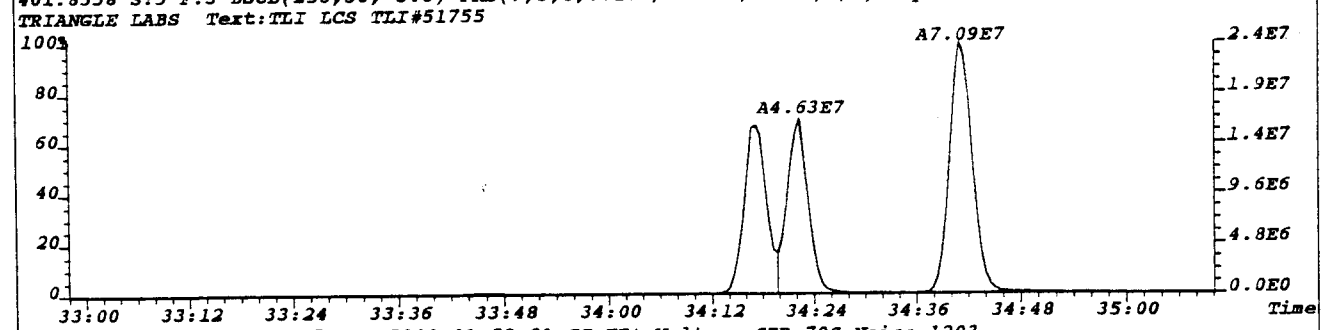
File:U1410 #1-452 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:725
389.8156 S:5 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2900.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



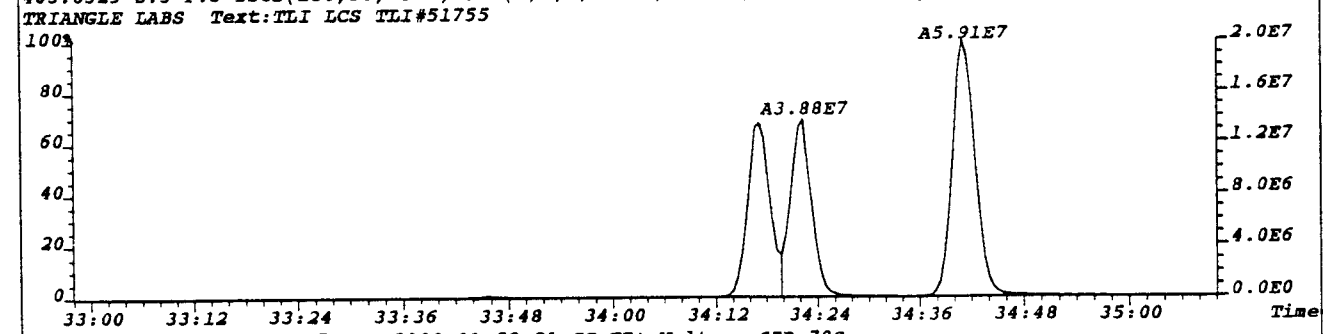
File:U1410 #1-452 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:660
391.8127 S:5 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2640.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



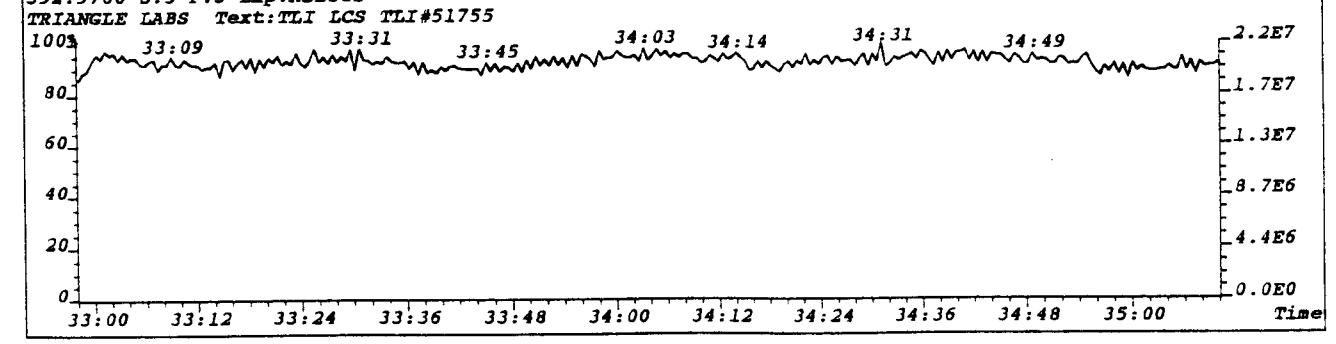
File:U1410 #1-452 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1912
401.8558 S:5 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7648.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



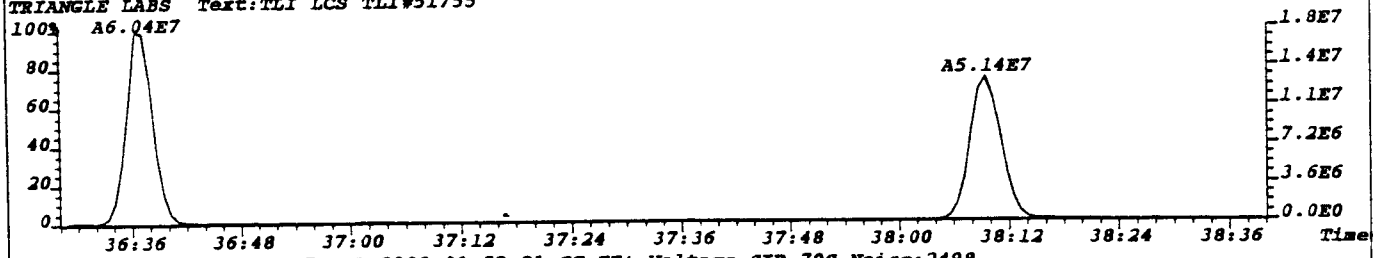
File:U1410 #1-452 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1203
403.8529 S:5 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,4812.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



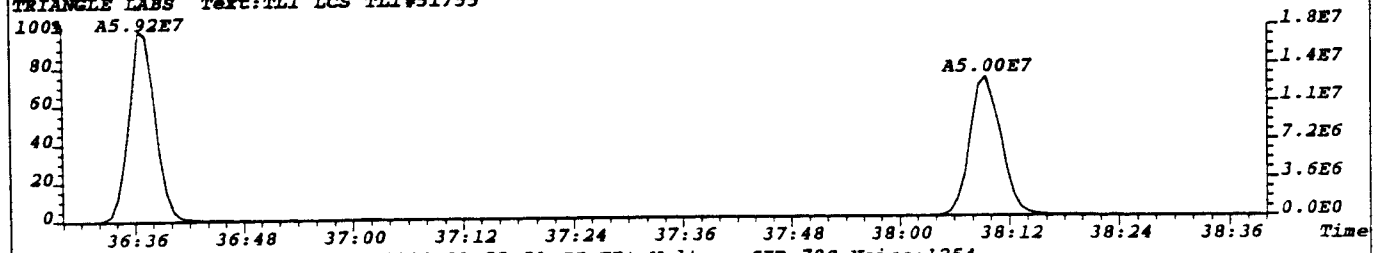
File:U1410 #1-452 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S
392.9760 S:5 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



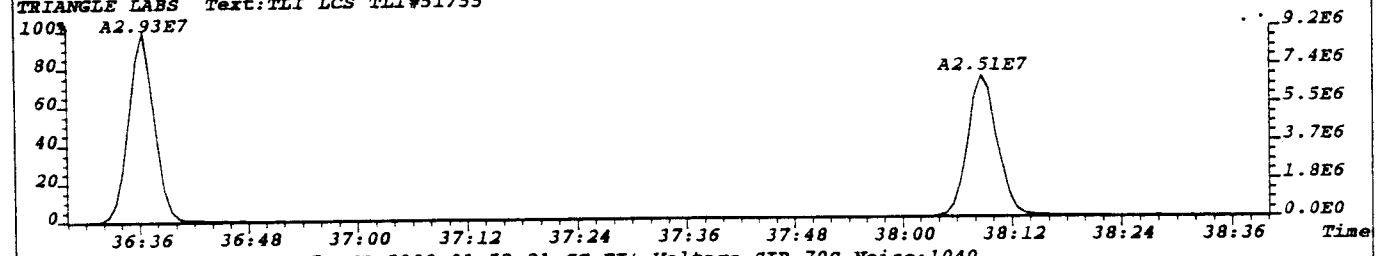
File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:2732
407.7818 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10928.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



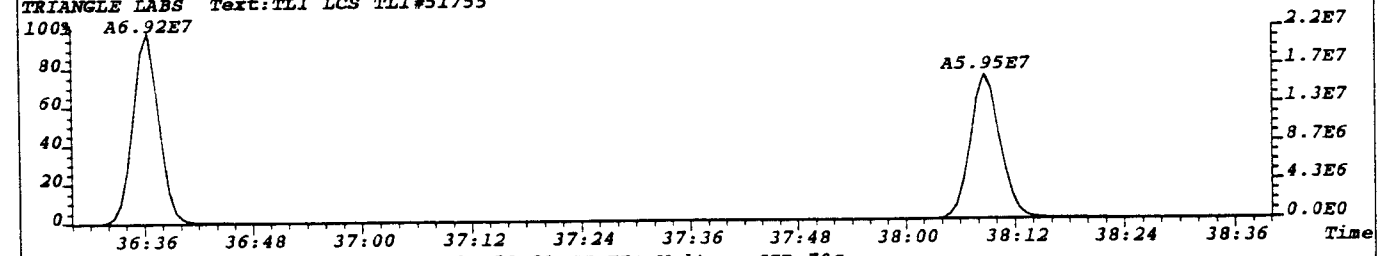
File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:2498
409.7789 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9992.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



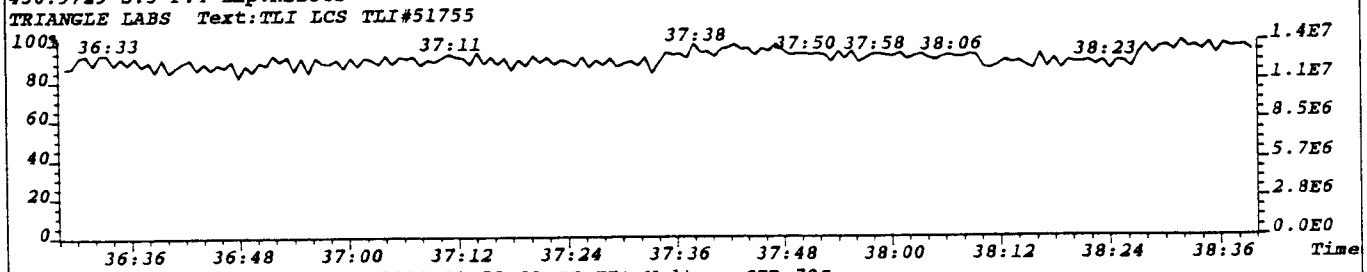
File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1254
417.8253 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5016.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



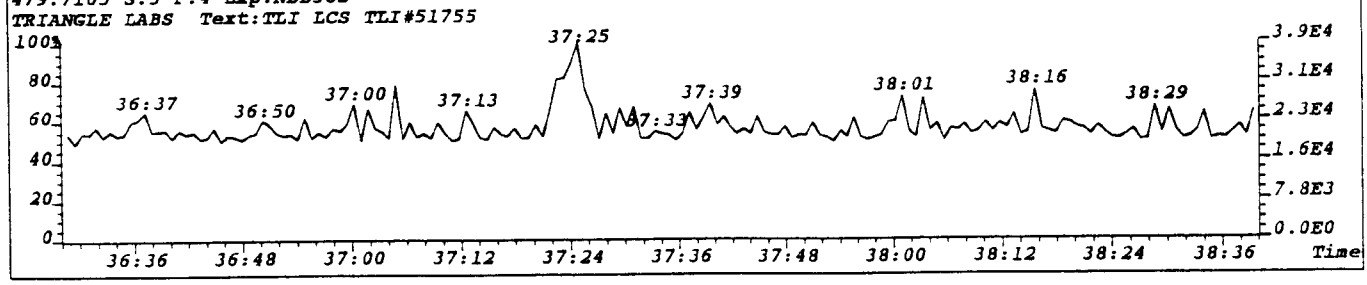
File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1040
419.8220 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,4160.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



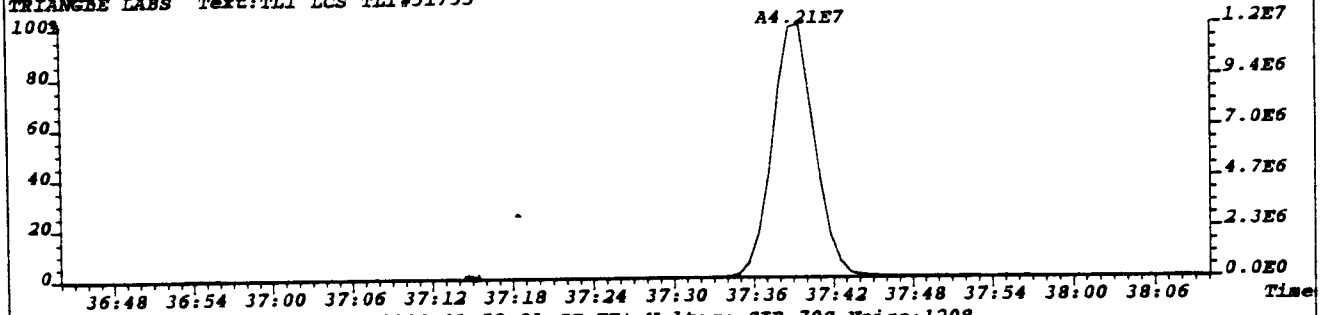
File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S
430.9729 S:5 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



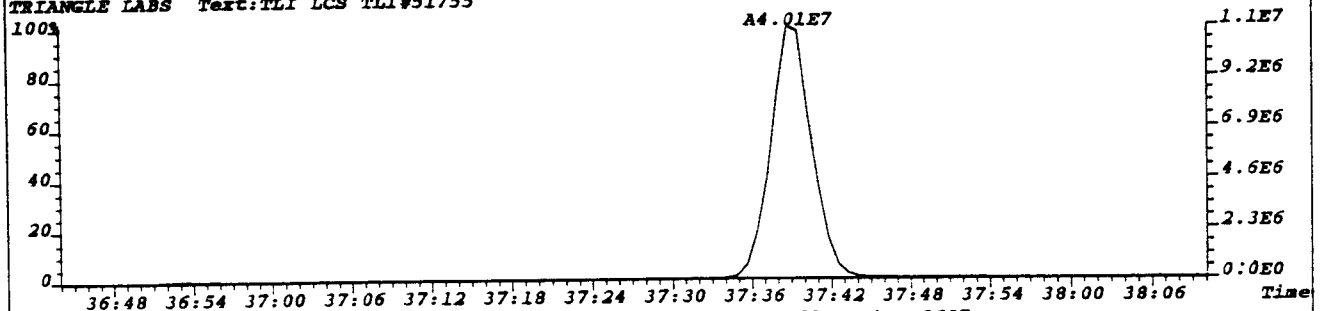
File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S
479.7165 S:5 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



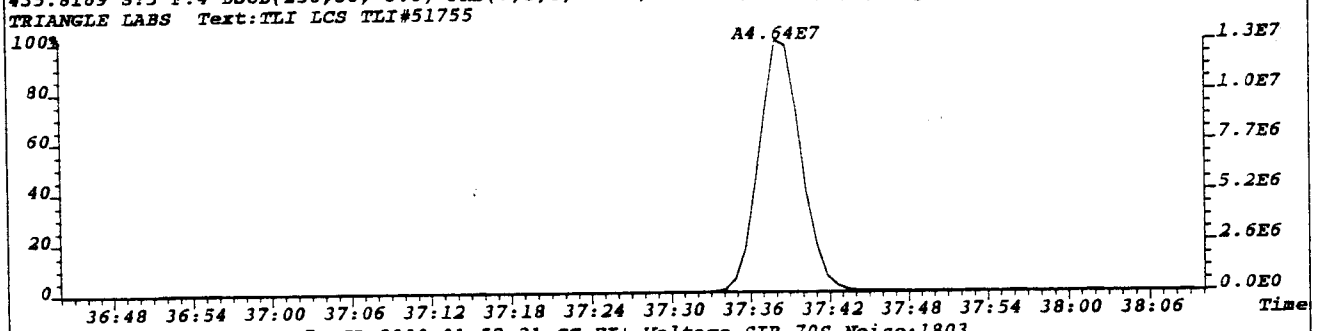
File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1609
423.7766 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6436.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



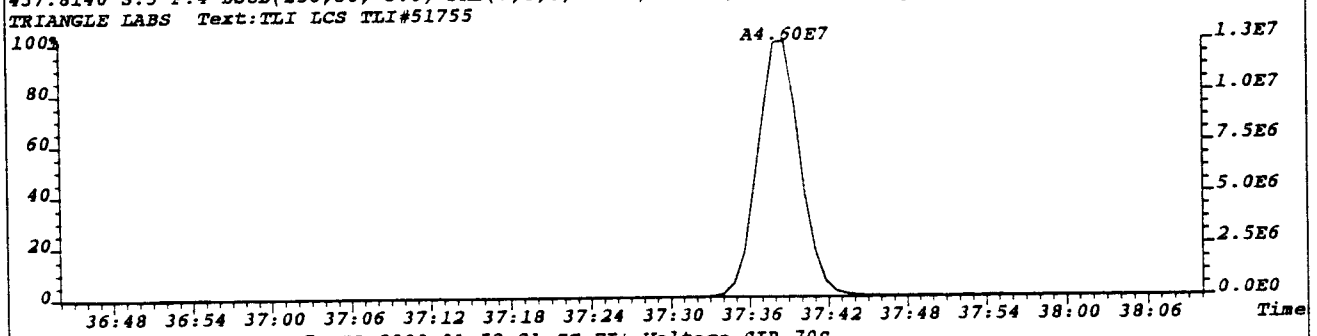
File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1208
425.7737 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,4832.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



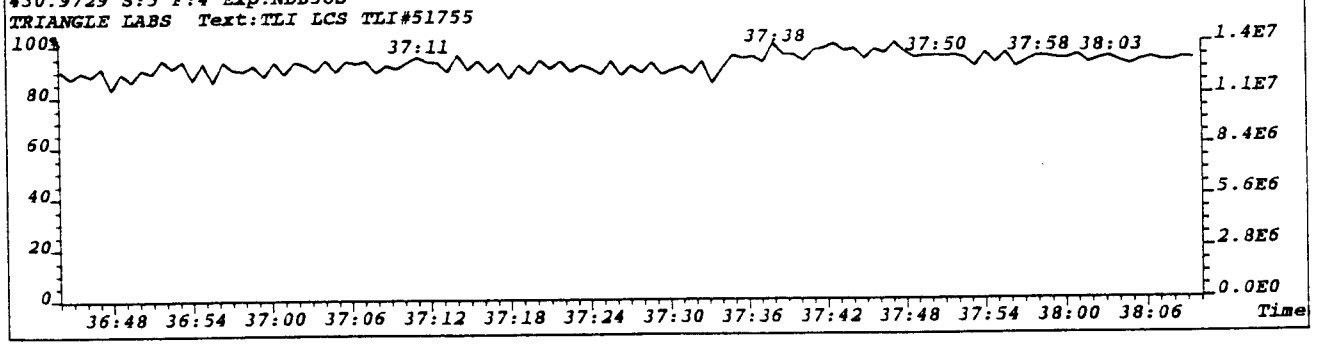
File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:2607
435.8169 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10428.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



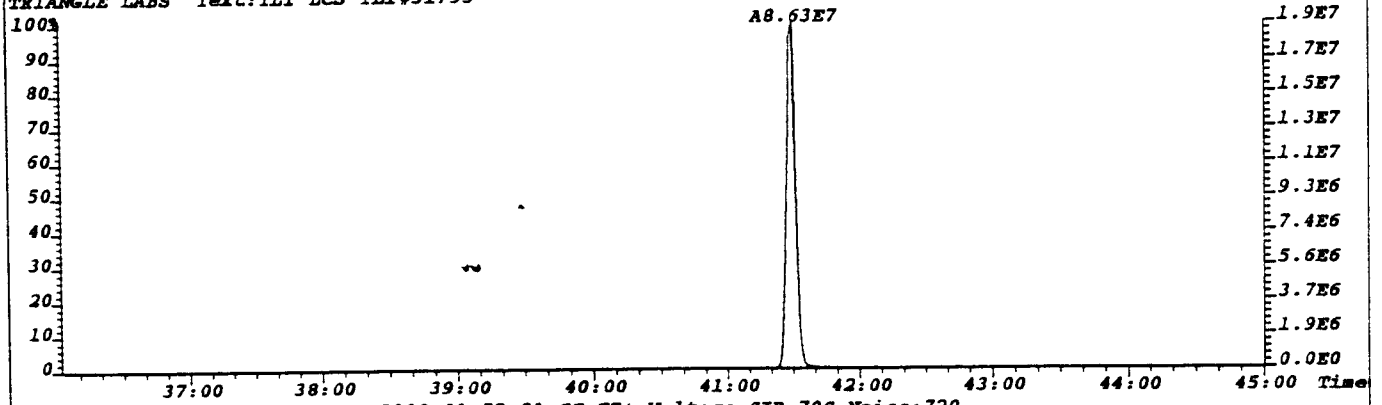
File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:1803
437.8140 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7212.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



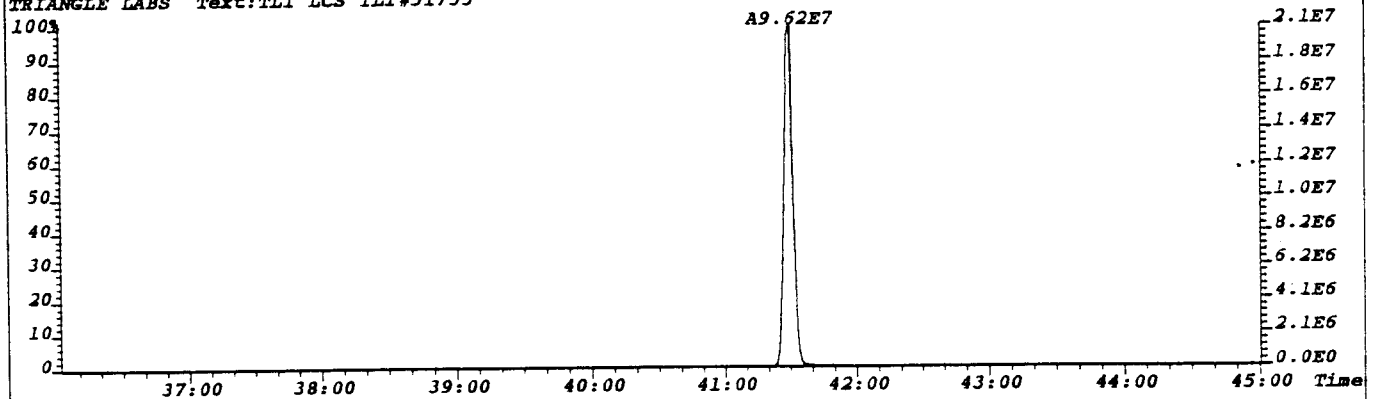
File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S
430.9729 S:5 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



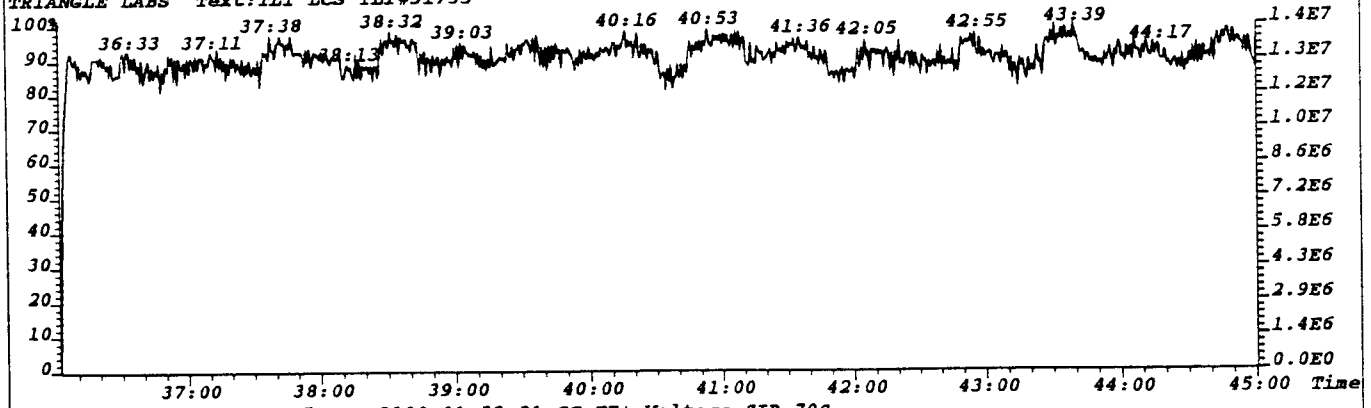
File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:705
441.7428 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2820.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



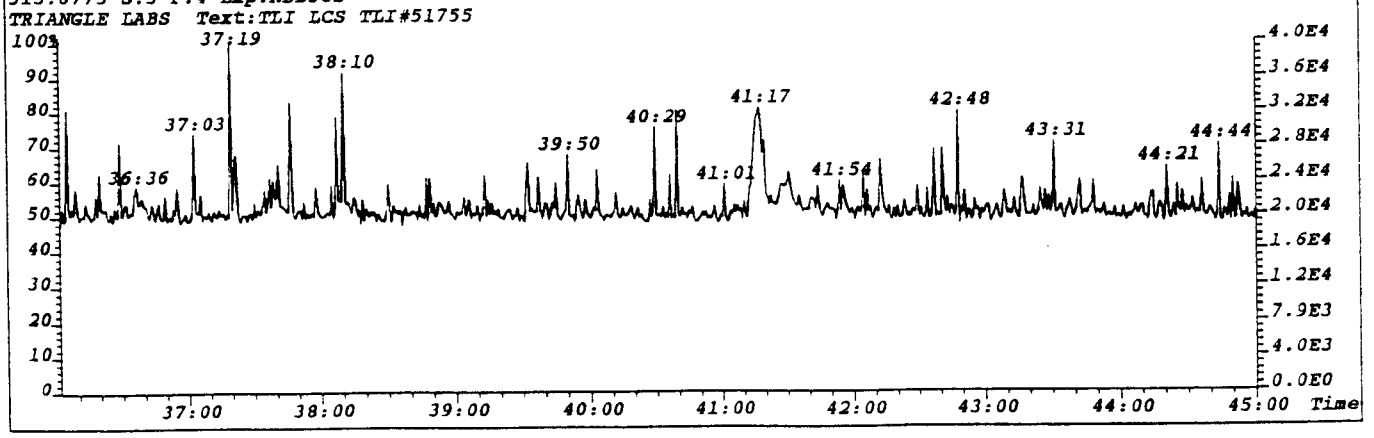
File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:720
443.7399 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2880.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



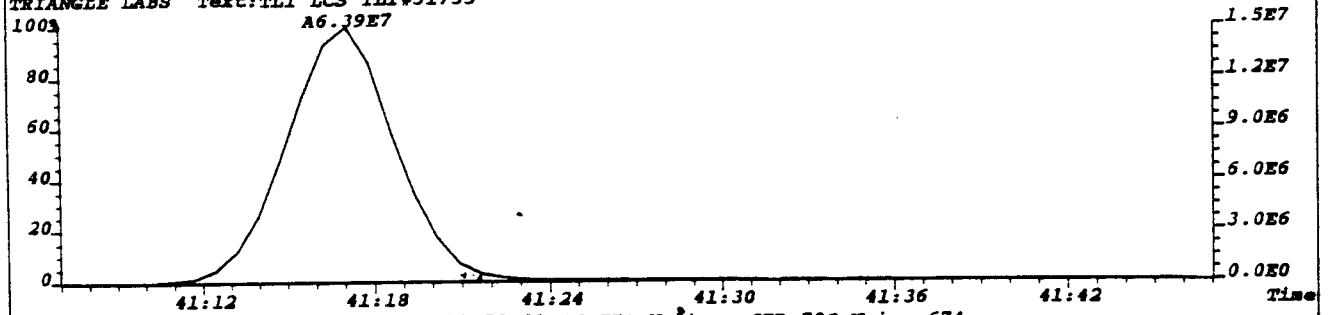
File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S
430.9729 S:5 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



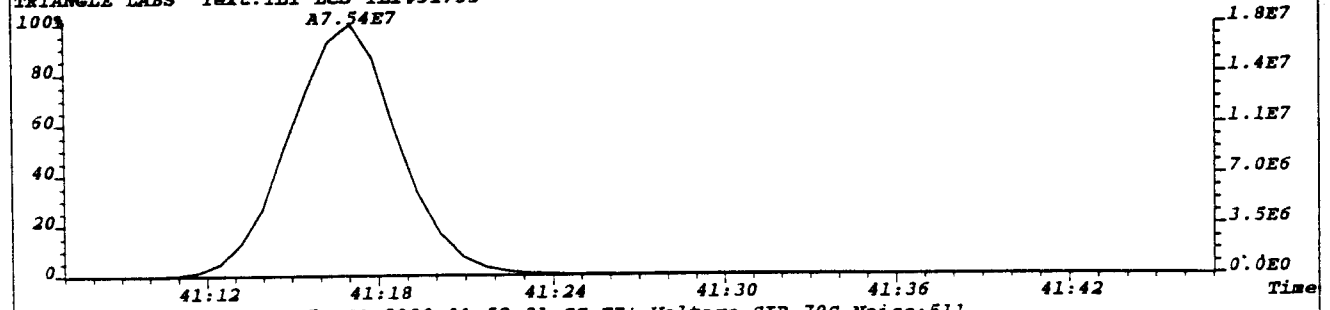
File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S
513.6775 S:5 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



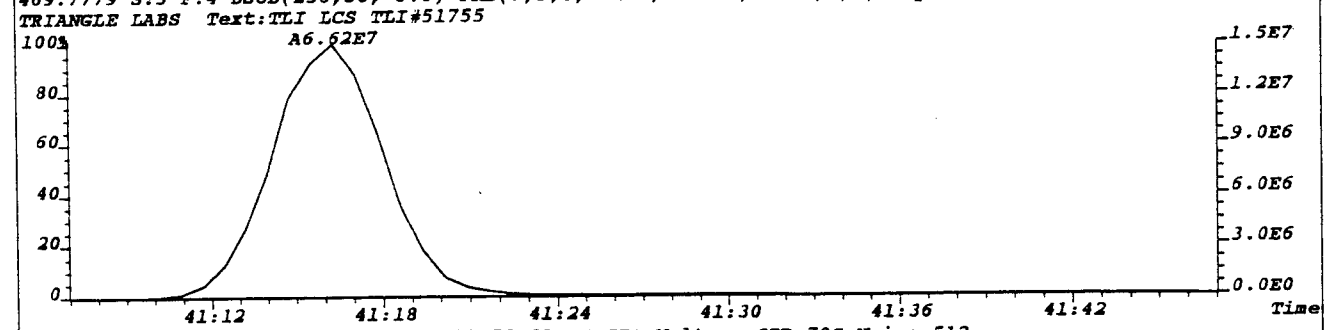
File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:653
457.7377 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2612.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



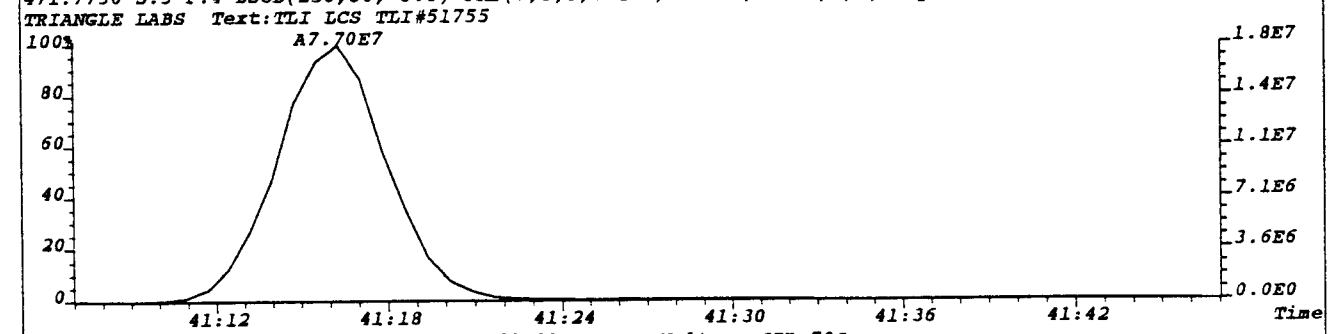
File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:674
459.7348 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2696.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



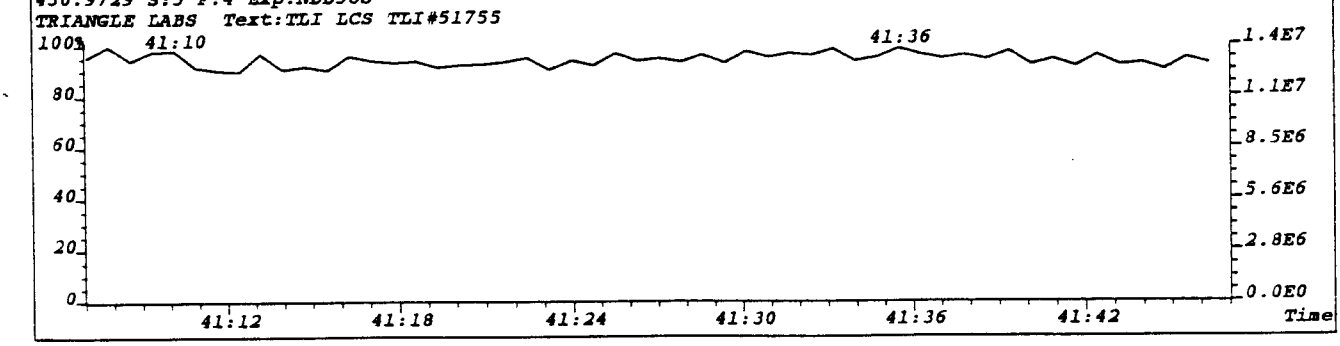
File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:511
469.7779 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2044.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



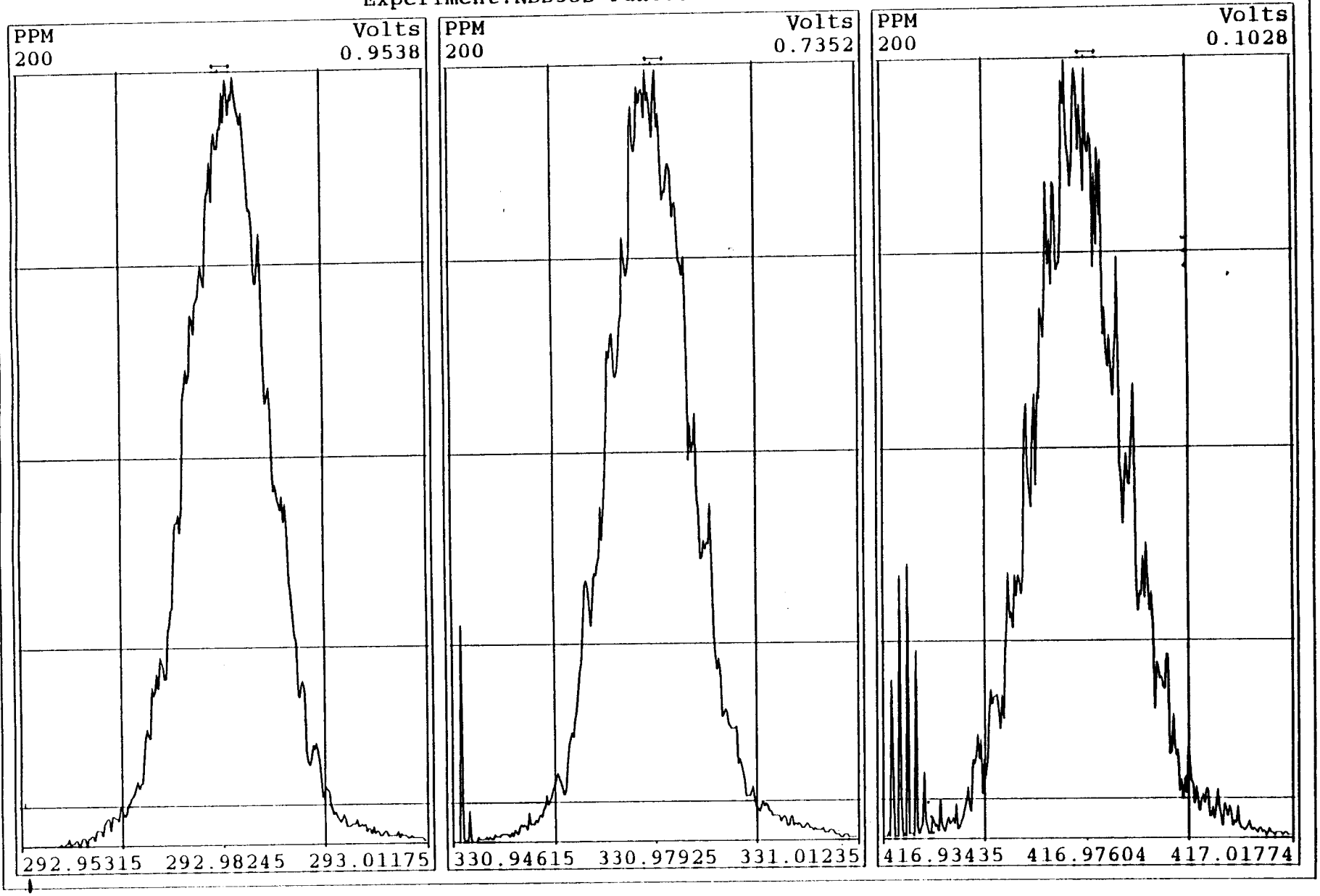
File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S Noise:512
471.7750 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2048.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755



File:U1410 #1-701 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S
430.9729 S:5 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI LCS TLI#51755

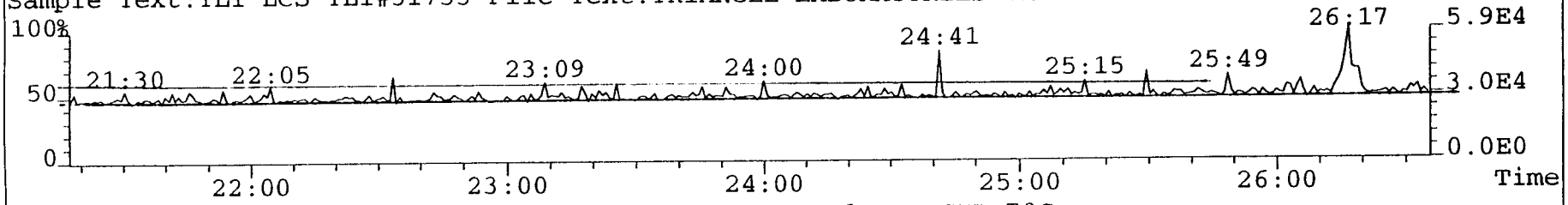


Peak Locate Examination: 6-SEP-2000:22:36 File:U1410
Experiment:NDB5US Function:2 Reference:PFK



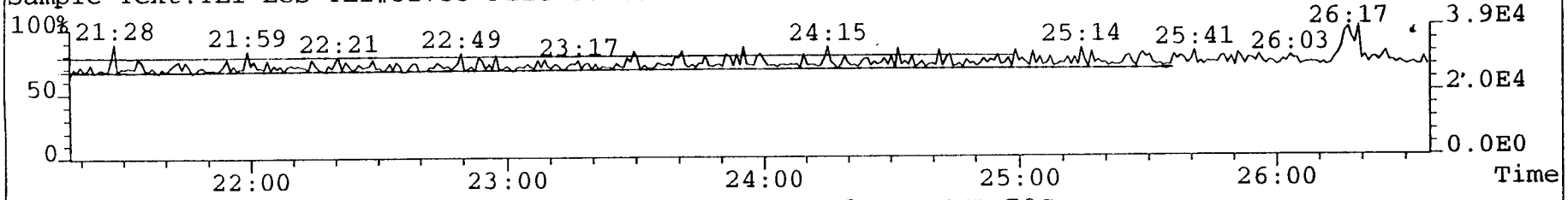
File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S
319.8965 S:5 F:2 Exp:NDB5US
Sample Text:TLI LCS TLI#51755 File Text:TRIANGLE LABORATORIES INC.

(.12)(5.9)= .708

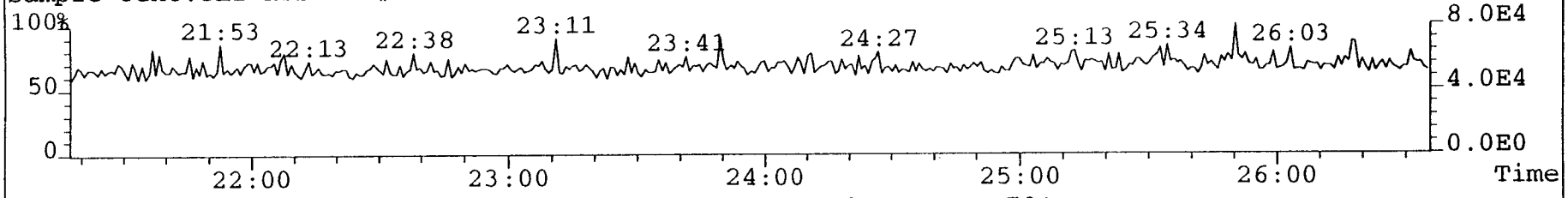


File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S
321.8936 S:5 F:2 Exp:NDB5US
Sample Text:TLI LCS TLI#51755 File Text:TRIANGLE LABORATORIES INC.

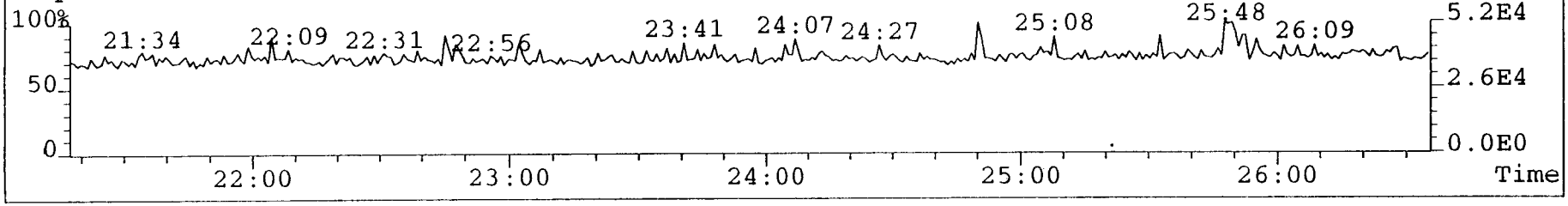
(.11)(3.9)= .429



File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S
331.9368 S:5 F:2 Exp:NDB5US
Sample Text:TLI LCS TLI#51755 File Text:TRIANGLE LABORATORIES INC.



File:U1410 #1-830 Acq: 7-SEP-2000 01:52:21 GC EI+ Voltage SIR 70S
333.9338 S:5 F:2 Exp:NDB5US
Sample Text:TLI LCS TLI#51755 File Text:TRIANGLE LABORATORIES INC.



.708
.429
1.137

JA
9/7/00

Pinnacle Laboratories, Inc.

TLI Project: **51755** Method 8290 PCDD/PCDF Analysis (b)
Client Sample: **TLI LCSD** Analysis File: **U141006**

Client Project:	**NMHWB/008096**			ICal:	**UF57140**
Sample Matrix:	**WATER**	Date Received:	**/ /**	Spike File:	**SPMIT32S**
TLI ID:	**TLI LCSD**	Date Extracted:	**08/30/2000**	1st CCal:	**U001408**
		Date Analyzed:	**09/07/2000**	End CCal:	**U141012**
Sample Size:	**1.000 L**	Dilution Factor:	**n/a**	% Moisture:	**n/a**
Dry Weight:	**n/a**	Blank File:	**U141003**	% Lipid:	**n/a**
GC Column:	**DB-5**	Analyst:	**MVL**	% Solids:	**n/a**

Analytes	Conc. (ppq)	DL	EMPC	Ratio	RT	Flags
2,3,7,8-TCDD	423			0.78	26:59	___
1,2,3,7,8-PeCDD	2130			1.56	31:11	___
1,2,3,4,7,8-HxCDD	2150			1.25	34:18	___
1,2,3,6,7,8-HxCDD	2120			1.24	34:23	___
1,2,3,7,8,9-HxCDD	2360			1.24	34:42	___
1,2,3,4,6,7,8-HpCDD	2230			1.06	37:39	___
1,2,3,4,6,7,8,9-OCDD	4310			0.85	41:16	___
2,3,7,8-TCDF	441			0.76	26:17	___
1,2,3,7,8-PeCDF	2220			1.52	30:11	___
2,3,4,7,8-PeCDF	2590			1.51	30:51	___
2,3,4,7,8-HxCDF	2080			1.25	33:36	___
1,2,3,6,7,8-HxCDF	2090			1.25	33:42	___
2,3,4,6,7,8-HxCDF	2380			1.23	34:11	___
1,2,3,7,8,9-HxCDF	2370			1.26	34:58	___
1,2,3,4,6,7,8-HpCDF	1980			1.02	36:37	___
1,2,3,4,7,8,9-HpCDF	2130			1.01	38:10	___
1,2,3,4,6,7,8,9-OCDF	4040			0.89	41:29	___

Internal Standards	Conc. (ppq)	% Recovery	QC Limits	Ratio	RT	Flags
$^{13}C_{12}$-2,3,7,8-TCDF	1330	66.7	40%-130%	0.74	26:16	___
$^{13}C_{12}$-2,3,7,8-TCDD	1410	70.4	40%-130%	0.81	26:59	___
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1430	71.3	40%-130%	1.46	30:10	___
$^{13}C_{12}$-1,2,3,7,8-PeCDD	1740	86.8	40%-130%	1.46	31:11	___
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1540	77.1	40%-130%	0.52	33:42	___
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1680	83.9	40%-130%	1.19	34:22	___
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1610	80.3	25%-130%	0.42	36:37	___
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	1610	80.5	25%-130%	1.02	37:38	___
$^{13}C_{12}$-1,2,3,4,6,7,8,9-OCDD	3430	85.7	25%-130%	0.85	41:16	___

mit3_PSR v1.00, LARS 6.25.00

Triangle Laboratories, Inc.®
801 Capitola Drive • Durham, North Carolina 27713
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Printed: 16:48 09/07/2000

Pinnacle Laboratories, Inc.

TLI Project: **51755** Method 8290 PCDD/PCDF Analysis (b)

Client Sample: **TLI LCSD** Analysis File: **U141006**

Surrogate Standards (Type B)	Conc. (ppq)	% Recovery	QC Limits	Ratio	RT	Flags
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1720	85.8	40%-130%	1.45	30:51	___
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1490	74.6	40%-130%	0.51	33:36	___
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	1610	80.4	40%-130%	1.21	34:17	___
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1690	84.4	25%-130%	0.42	38:09	___

Other Standard	Conc. (ppq)	% Recovery	QC Limits	RT	Flags
$^{37}Cl_4$-2,3,7,8-TCDD	161	80.5	40%-130%	26:59	___

Alternate Standards (Type B)	Conc. (ppq)	% Recovery	QC Limits	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1720	85.9	40%-130%	0.51	34:57	___
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1750	87.6	40%-130%	0.52	34:11	___

Recovery Standards	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.83	26:47	___
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.19	34:41	___

Data Reviewer: _____ 09/07/2000

mit3_PSR v1.00, LARS 6.25.00

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Printed: 16:48 09/07/2000

Initial ....Date...

Data Review By: JCA 9/7/00

Calculated Noise Height: 1.06

The Total Area for each peak with an ion abundance ratio outside ratio limits has been recalculated according to method requirements.

Page No. 1 Listing of U141006B.dbf
09/07/2000 Matched GC Peaks / Ratio / Ret. Time

Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
TCDF						0.65-0.89				0.962-1.228			
304-306	DC	NL				Height	3.88	2.30	1.58				
				25:55		0.71	83.59	34.76	48.83	0.987			J
				26:17		0.76	4,229.29	1,832.13	2,397.16	1.001	2378-TCDF	AN	
	DC	SN		26:49		0.81	7.38			1.021			
304-306			2	Peaks			4,312.88						
13C12-TCDF						0.65-0.89				0.962-1.038			
316-318	DC	NL				Height	3.06	1.64	1.42				
				25:52		0.71	73.00	30.20	42.80	0.985			
				26:16		0.74	18,003.51	7,634.21	10,369.30	1.000	13C12-2378-TCDF	ISO	.
						Height	4,958.68	2,112.57	2,846.11				
				26:43		0.86	90.33	41.65	48.68	1.017			
316-318			3	Peaks			18,166.84						

---------- Above: TCDF / TCDD Follows ----------

TCDD						0.65-0.89				0.963-1.222			
320-322	DC	NL				Height	2.14	1.03	1.11				
				26:16	RO	1.39	14.09	11.03	7.96	0.973			J
				26:59		0.78	2,907.13	1,277.57	1,629.56	1.000	2378-TCDD	AN	
320-322			2	Peaks			2,921.22						
37Cl-TCDD										0.926-1.074			
328	DC	NL				Height	1.02	1.02					
	DC	SN		26:18			2.93			0.975			
				26:59			1,419.54	1,419.54		1.000	37Cl-TCDD	CLS	
				27:13			5.71	5.71		1.009			
	DC	SN		27:25			2.04			1.016			
				27:34			3.61	3.61		1.022			
	DC	SN		27:43			2.10			1.027			
	DC	SN		27:51			2.09			1.032			
	DC	SN		27:54			1.22			1.034			
	DC	SN		28:01			2.33			1.038			
	DC	SN		28:07			4.02			1.042			
				28:19			1.87	1.87		1.049			
	DC	SN		28:24			1.67			1.053			
328			4	Peaks			1,430.73						
13C12-TCDD						0.65-0.89				0.926-1.074			
332-334	DC	NL				Height	4.28	2.64	1.64				
				26:47		0.83	18,384.19	8,347.49	10,036.70	0.993	13C12-1234-TCDD	RS1	
				26:59		0.81	13,958.72	6,251.99	7,706.73	1.000	13C12-2378-TCDD	IS1	
						Height	3,849.54	1,743.15	2,106.39				

Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
				27:19	RO	1.07	19.28	11.65	10.89	1.012			
332-334			3 Peaks				32,362.19						

---------- Above: TCDD / PeCDF Follows ----------

PeCDF				1.32-1.78					0.867-1.133			
340-342	DC	NL		Height		2.50	1.36	1.14				
			29:20	RO	1.86	46.33	33.80	18.17	0.972			J
			29:48	RO	1.31	37.31	19.18	14.63	0.988			J
			30:11		1.52	17,814.09	10,747.00	7,067.09	1.001	12378-PeCDF	AN	
			30:27		1.69	261.41	164.27	97.14	1.009			J
			30:51		1.51	21,163.38	12,744.70	8,418.68	1.023	23478-PeCDF	AN	
			31:50		1.43	104.94	61.82	43.12	1.055			J
340-342			6 Peaks				39,427.46					
13C12-PeCDF				1.32-1.78					0.867-1.133			
352-354	DC	NL		Height		2.07	1.06	1.01				
			30:10		1.46	17,318.92	10,267.80	7,051.12	1.000	13C12-PeCDF 123	IS2	
				Height		5,608.61	3,335.68	2,272.93				
			30:27		1.32	130.86	74.48	56.38	1.009			
			30:51		1.45	20,488.83	12,117.40	8,371.43	1.023	13C12-PeCDF 234	SUR1	
			31:49		1.57	195.36	119.21	76.15	1.055			
352-354			4 Peaks				38,133.97					

---------- Above: PeCDF / PeCDD Follows ----------

PeCDD				1.32-1.78					0.872-1.128			
356-358	DC	NL		Height		1.93	1.02	0.91				
			30:08		1.72	21.87	13.84	8.03	0.966			J
			30:27		1.47	14.03	8.34	5.69	0.976			J
			30:51		1.66	13.98	8.73	5.25	0.989			J
			31:11		1.56	13,344.86	8,133.93	5,210.93	1.000	12378-PeCDD	AN	
356-358			4 Peaks				13,394.74					
13C12-PeCDD				1.32-1.78					0.872-1.128			
368-370	DC	NL		Height		1.83	1.04	0.79				
			30:07		1.48	87.67	52.27	35.40	0.966			
			30:15		1.70	46.28	29.13	17.15	0.970			
			30:27	RO	1.88	9.49	6.99	3.72	0.976			
			31:11		1.46	11,538.01	6,856.96	4,681.05	1.000	13C12-PeCDD 123	IS3	
				Height		4,040.14	2,406.95	1,633.19				
			31:19		1.58	108.06	66.20	41.86	1.004			
368-370			5 Peaks				11,789.51					

---------- Above: PeCDD / HxCDF Follows ----------

HxCDF				1.05-1.43					0.881-1.119			
374-376	DC	NL		Height		1.29	0.69	0.60				
			32:47		1.29	29.34	16.55	12.79	0.973			J
			33:36		1.25	19,054.80	10,575.90	8,478.90	0.997	123478-HxCDF	AN	
			33:42		1.25	19,451.40	10,823.10	8,628.30	1.000	123678-HxCDF	AN	
			34:11		1.23	21,364.42	11,302.20	9,562.22	1.014	234678-HxCDF	AN	

Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
				34:58		1.26	17,713.92	9,870.76	7,843.16	1.038	123789-HxCDF	AN	
374-376			5 Peaks				77,613.88						
13C12-HxCDF				0.43-0.59						0.881-1.119			
384-386	DC	NL		Height			1.09	0.49	0.60				
				32:39		0.48	40.49	13.09	27.40	0.969			
				33:36		0.51	16,831.30	5,720.50	11,110.80	0.997	13C12-HxCDF 478	SUR2	
				33:42		0.52	16,828.36	5,735.06	11,093.30	1.000	13C12-HxCDF 678	IS4	
				Height			5,840.33	2,000.68	3,839.65				
				34:11		0.52	18,453.84	6,274.44	12,179.40	1.014	13C12-HxCDF 234	ALT2	
				34:57		0.51	13,689.71	4,614.32	9,075.39	1.037	13C12-HxCDF 789	ALT1	
384-386			5 Peaks				65,843.70						

---------- Above: HxCDF / HxCDD Follows ----------

HxCDD				1.05-1.43						0.884-1.116			
390-392	DC	NL		Height			1.09	0.53	0.56				
				33:36		1.11	19.22	10.12	9.10	0.978			J
				34:18		1.25	13,260.31	7,361.58	5,898.73	0.998	123478-HxCDD	AN	
				34:23		1.24	12,688.14	7,017.84	5,670.30	1.000	123678-HxCDD	AN	
				34:42		1.24	14,719.09	8,142.90	6,576.19	1.010	123789-HxCDD	AN	
390-392			4 Peaks				40,686.76						
13C12-HxCDD				1.05-1.43						0.971-1.029			
402-404	DC	NL		Height			2.44	1.37	1.07				
				33:45		1.23	103.28	57.00	46.28	0.982			
				34:17		1.21	11,709.41	6,404.81	5,304.60	0.998	13C12-HxCDD 478	SUR3	
				34:22		1.19	11,631.97	6,318.17	5,313.80	1.000	13C12-HxCDD 678	IS5	
				Height			3,943.15	2,134.82	1,808.33				
				34:41		1.19	15,764.01	8,575.52	7,188.49	1.009	13C12-HxCDD 789	RS2	
402-404			4 Peaks				39,208.67						

---------- Above: HxCDD / HpCDF Follows ----------

HpCDF				0.88-1.20						0.891-1.109			
408-410	DC	NL		Height			4.86	2.58	2.28				
				36:37		1.02	16,482.77	8,342.70	8,140.07	1.000	1234678-HpCDF	AN	
				37:03		1.18	49.39	26.72	22.67	1.012			J
				38:10		1.01	14,606.40	7,336.10	7,270.30	1.042	1234789-HpCDF	AN	
408-410			3 Peaks				31,138.56						
13C12-HpCDF				0.37-0.51						0.945-1.109			
418-420	DC	NL		Height			1.87	0.74	1.13				
				36:37		0.42	12,853.74	3,824.82	9,028.92	1.000	13C12-HpCDF 678	IS6	
				Height			3,796.05	1,138.06	2,657.99				
				38:09		0.42	11,260.02	3,311.12	7,948.90	1.042	13C12-HpCDF 789	SUR4	
418-420			2 Peaks				24,113.76						

---------- Above: HpCDF / HpCDD Follows ----------

HpCDD				0.88-1.20						0.894-1.106			
424-426	DC	NL		Height			2.94	1.39	1.55				

```
Compound/
M_Z.... QC.Log Omit Why ..RT. OK Ratio Total.Area/Ht Area/Ht.Peak1 Area/Ht.Peak2 Rel.RT Compound.Name.. ID.. Flags.

                        37:39     1.06     10,757.37      5,527.83      5,229.54  1.000 1234678-HpCDD   AN
                        37:54 RO  1.79          8.38          7.36          4.11  1.007                      J
424-426               2 Peaks              10,765.75

13C12-HpCDD                     0.88-1.20                                   0.973-1.027
436-438          DC  NL          Height          3.44          1.44          2.00
                        36:53 RO  0.87         23.85         12.16         14.04  0.980
                        37:38     1.02     11,432.69      5,784.87      5,647.82  1.000 13C12-HpCDD 678 IS7
                                 Height      3,231.02      1,642.56      1,588.46
436-438               2 Peaks              11,456.54

                ---------------------- Above: HpCDD / Octa-CDD and CDF Follows ----------

OCDF                            0.76-1.02                                   0.903-1.097
442-444          DC  NL          Height          1.17          0.60          0.57
                        41:29     0.89     22,882.70     10,805.60     12,077.10  1.005 OCDF            AN
442-444               1 Peak              22,882.70

OCDD                            0.76-1.02                                   0.903-1.097
458-460          DC  NL          Height          0.92          0.46          0.46
                        41:16     0.85     19,175.13      8,783.53     10,391.60  1.000 OCDD            AN
458-460               1 Peak              19,175.13

13C12-OCDD                      0.76-1.02                                   0.952-1.048
470-472          DC  NL          Height          0.94          0.43          0.51
                        41:16     0.85     18,779.20      8,638.90     10,140.30  1.000 13C12-OCDD      IS8
                                 Height      4,373.66      1,969.80      2,403.86
470-472               1 Peak              18,779.20


Column Description............  "Why" Code Description.........  QC Log Desc.........

M_Z   -Nominal Ion Mass(es)     WL-Below Retention Time Window   A-Peak Added
..RT. -Retention Time (mm:ss)   WH-Above Retention Time Window   K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions      SN-Below Signal to Noise Level   D-Peak Deleted
OK    -RO=Ratio Outside Limits  <M-Below Method Detection Limit  T-Time Changed
Rel.RT-Relative Retention Time  NL-Channel Specific Noise Level  M-Peak Area Changed
                                                                 N-Name Changed
                                                                 X-Ether Interference

*** End of Report ***
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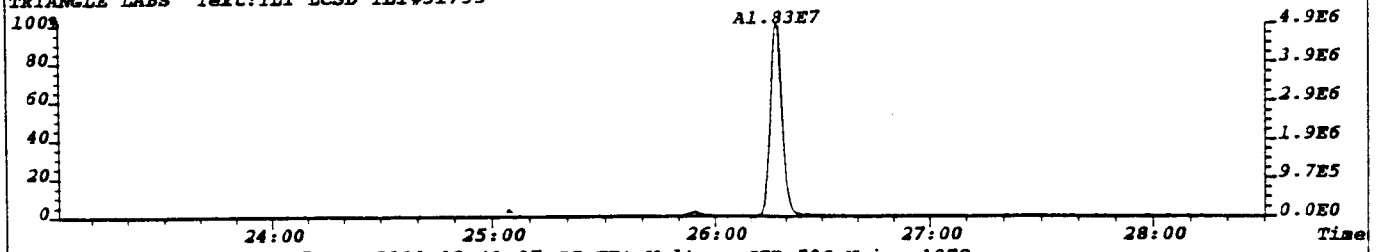
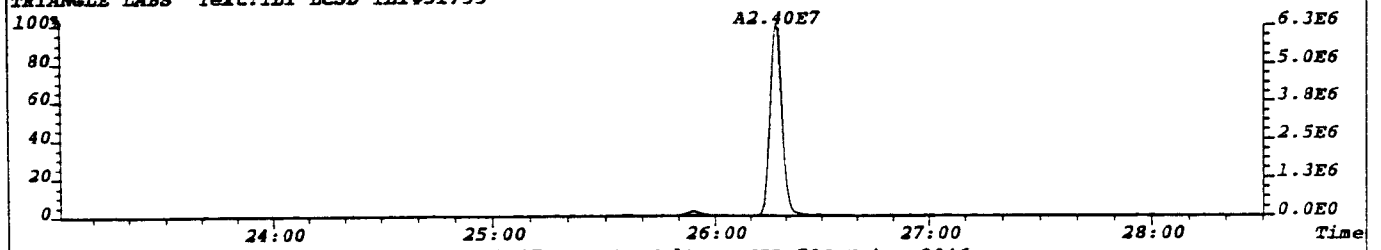
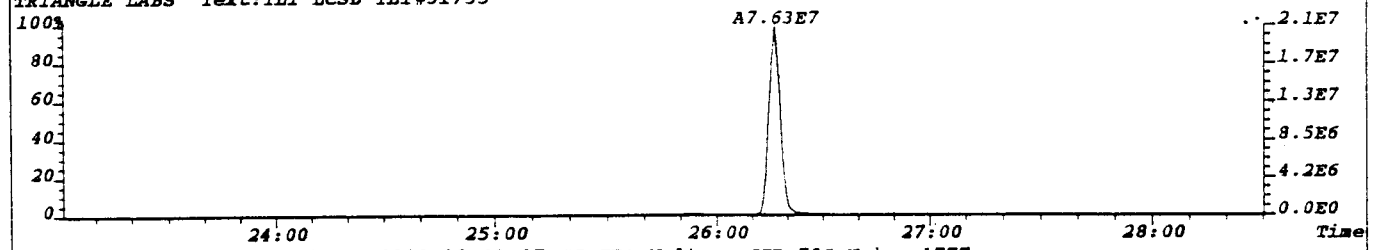
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:2876
303.9016 S:6 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,11504.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



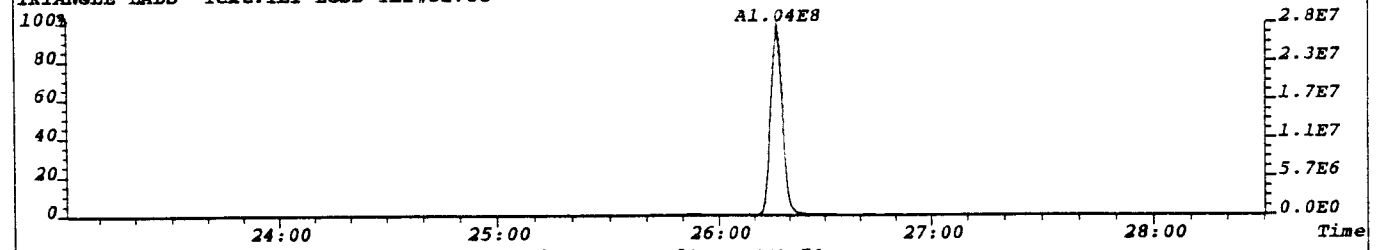
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:1972
305.8987 S:6 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,7888.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



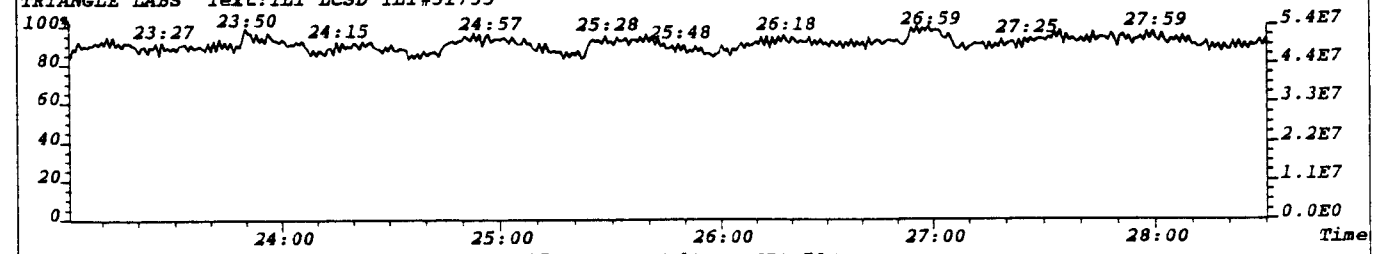
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:2046
315.9419 S:6 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,8184.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



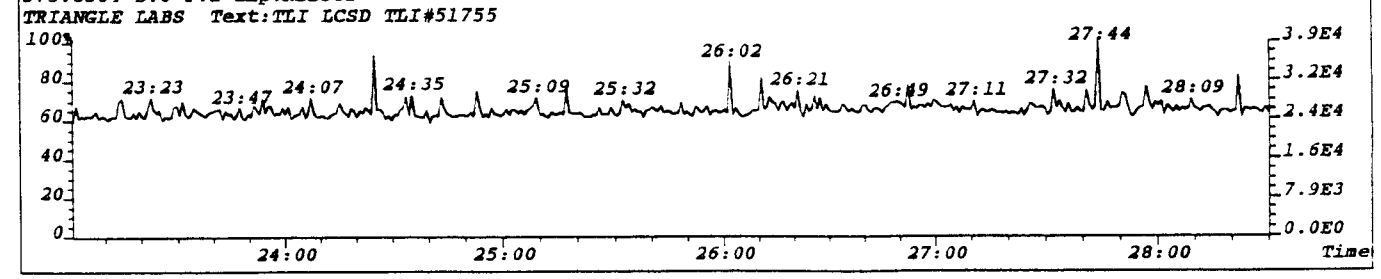
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:1777
317.9389 S:6 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,7108.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



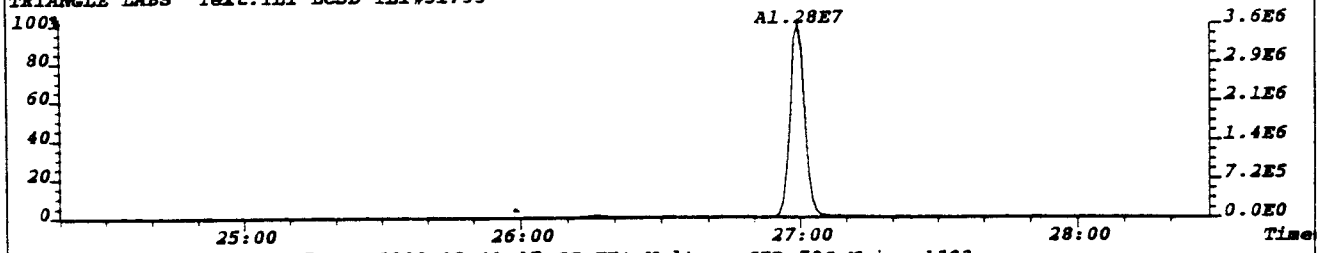
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S
330.9792 S:6 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



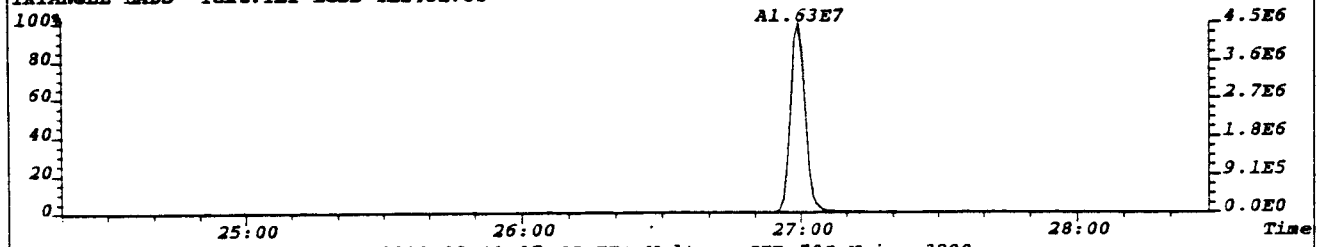
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S
375.8364 S:6 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



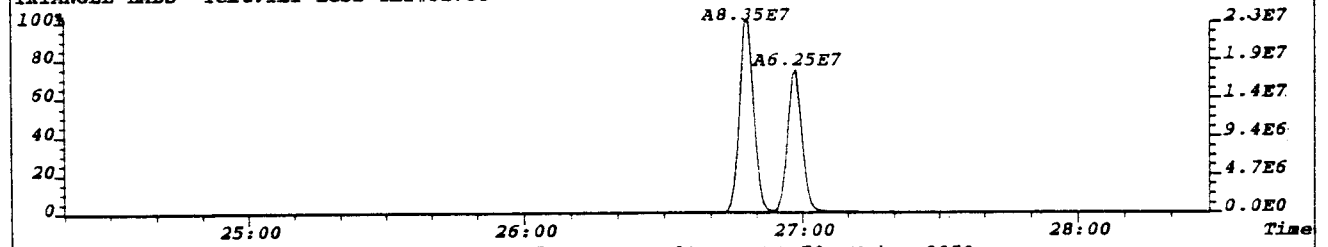
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:1293
319.8965 S:6 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5172.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



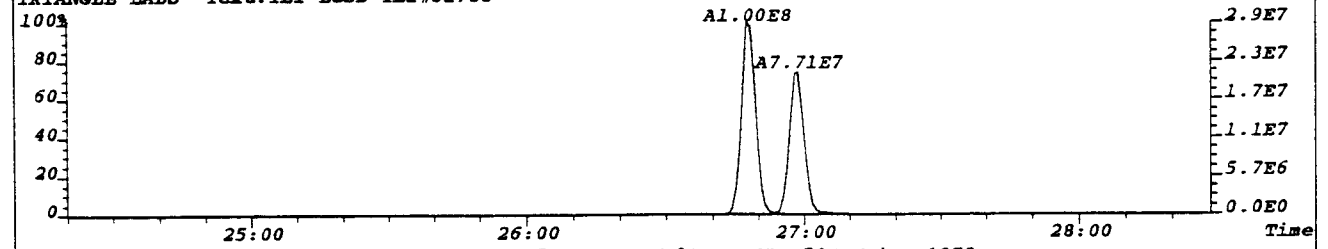
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:1383
321.8936 S:6 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5532.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



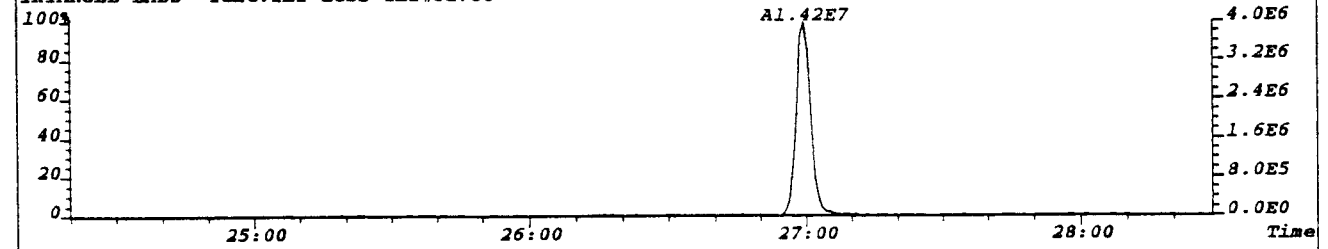
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:3299
331.9368 S:6 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,13196.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



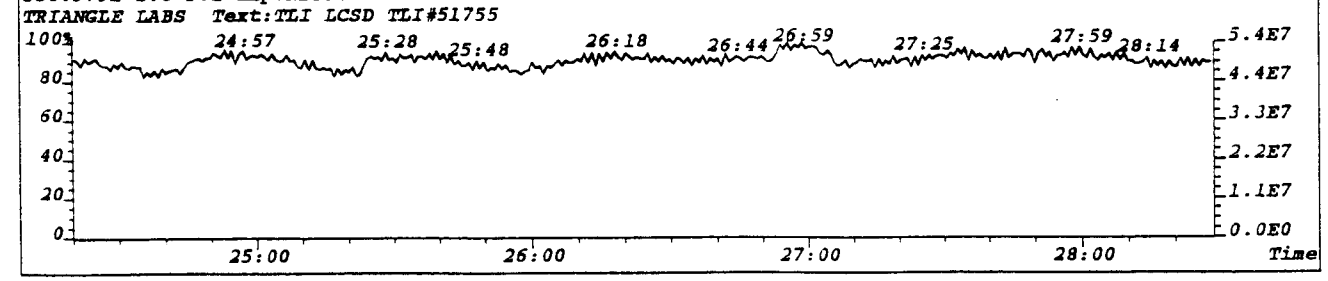
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:2050
333.9338 S:6 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,8200.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



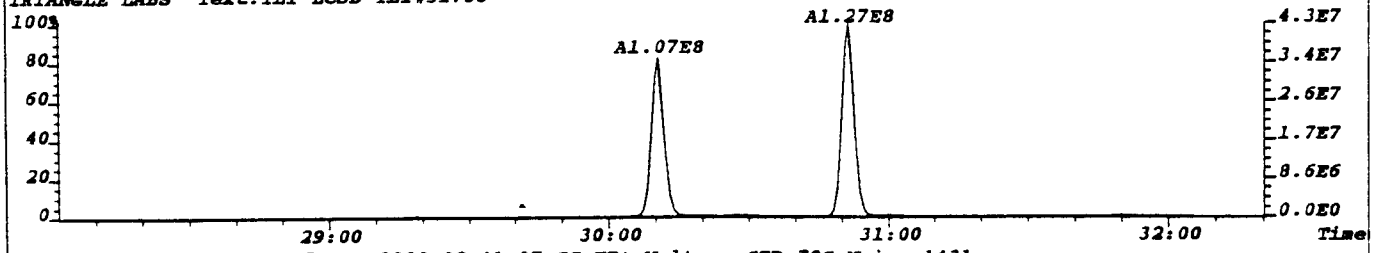
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:1272
327.8847 S:6 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5088.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



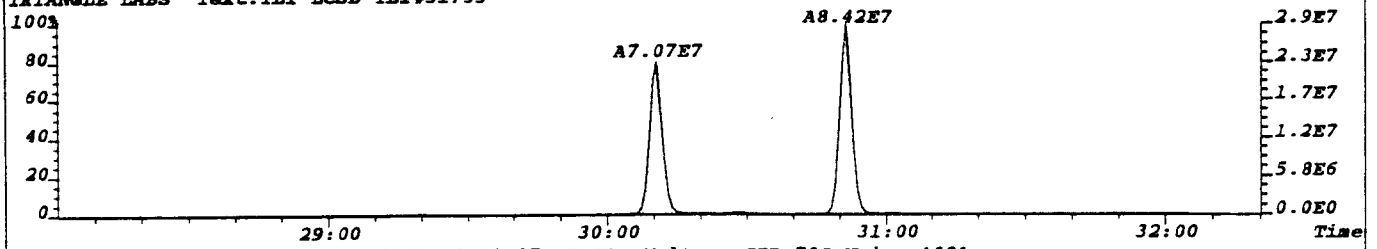
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S
330.9792 S:6 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



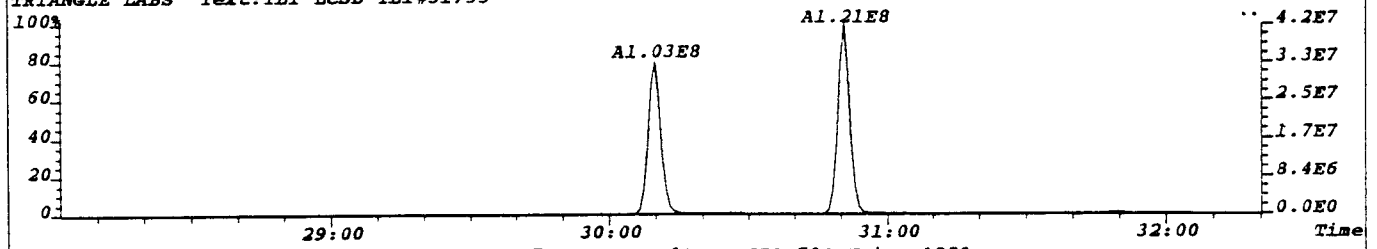
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:1705
339.8597 S:6 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6820.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



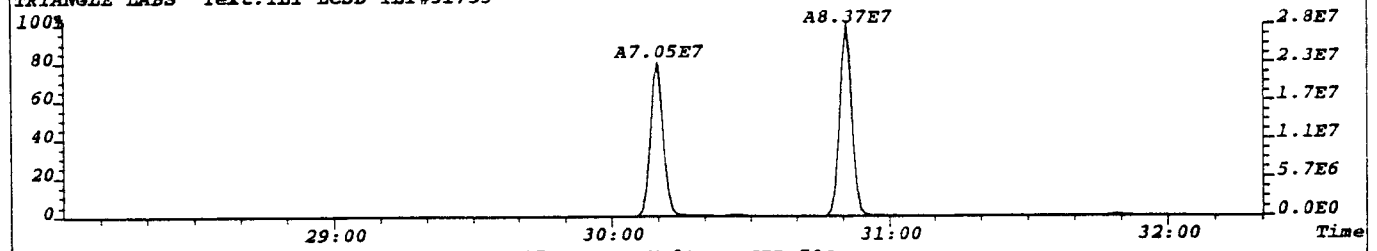
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:1431
341.8567 S:6 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5724.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



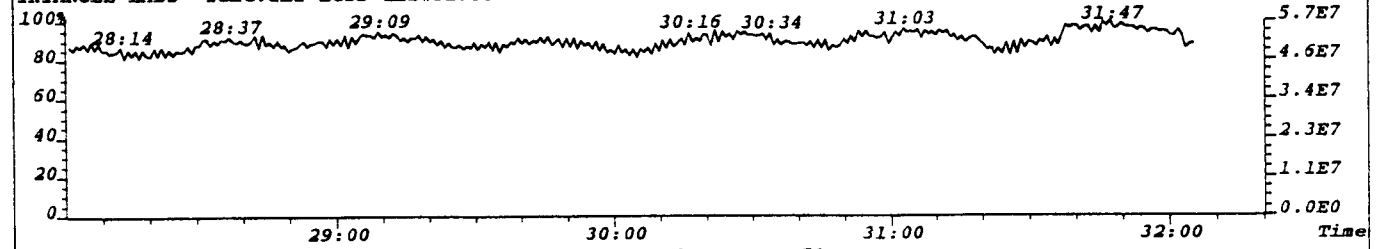
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:1321
351.9000 S:6 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5284.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



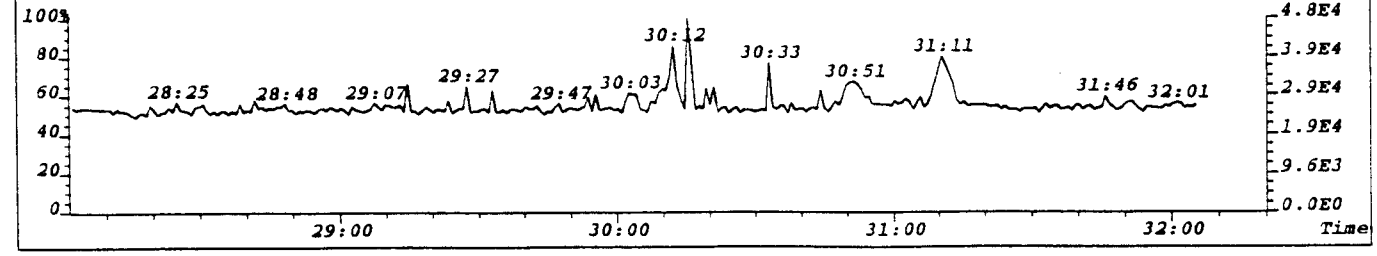
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:1259
353.8970 S:6 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5036.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



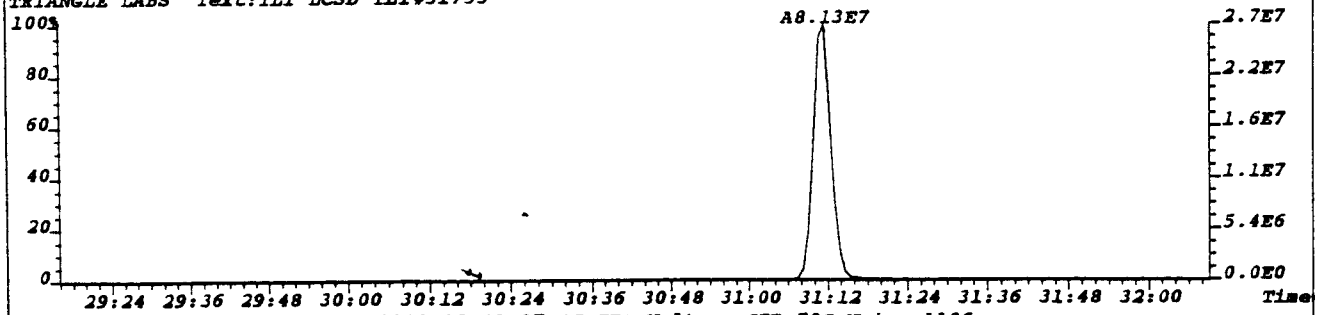
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S
330.9792 S:6 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



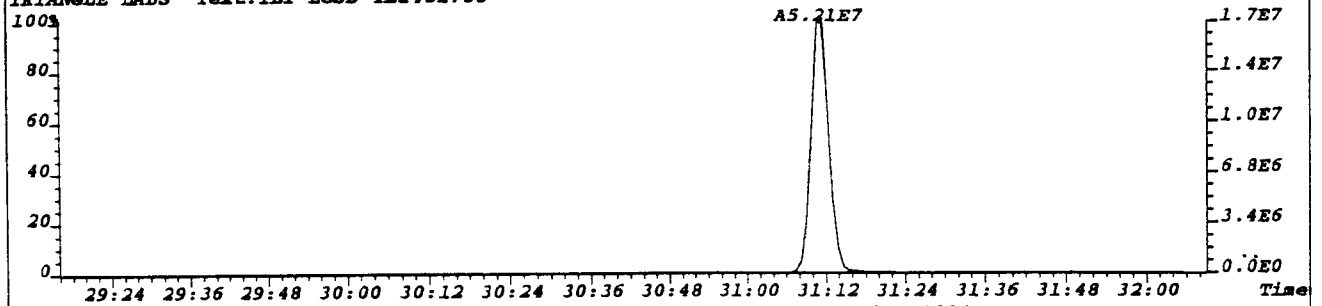
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S
409.7974 S:6 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



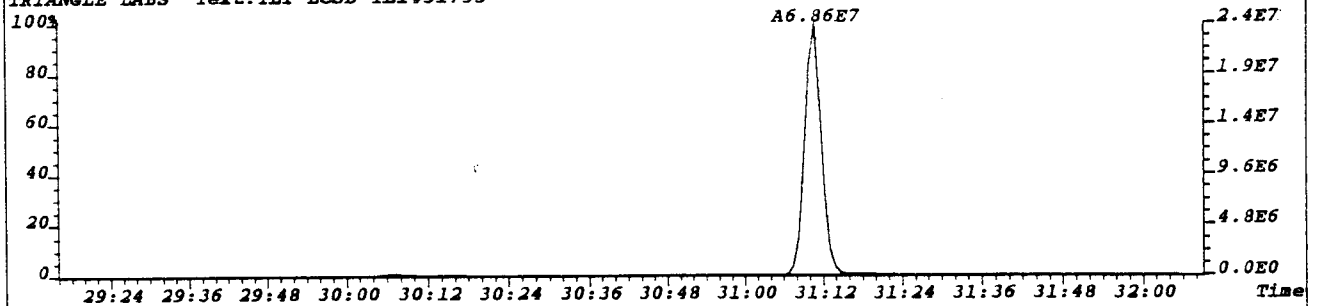
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:1279
355.8546 S:6 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,5116.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



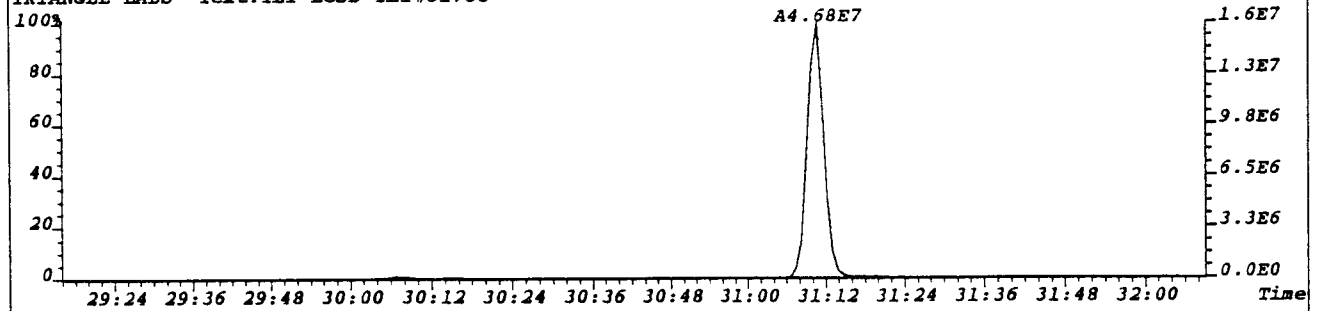
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:1136
357.8516 S:6 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,4544.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



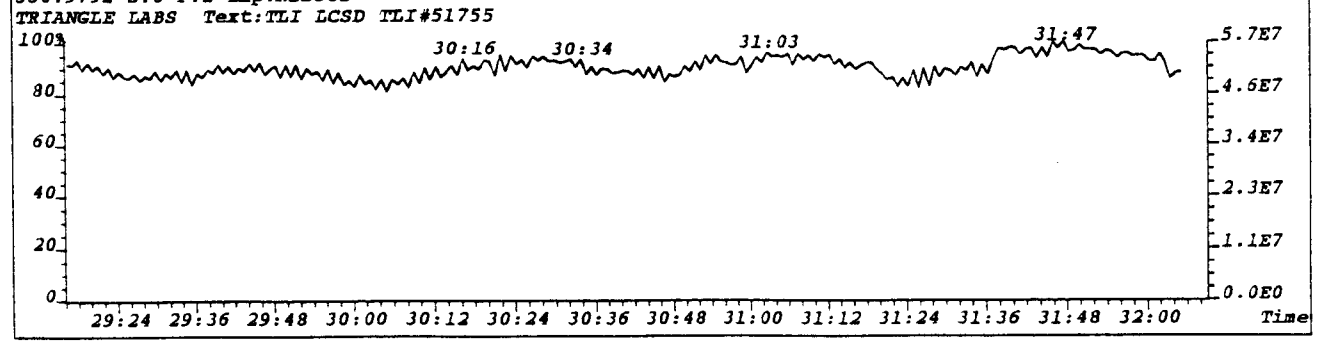
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:1294
367.8949 S:6 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,5176.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



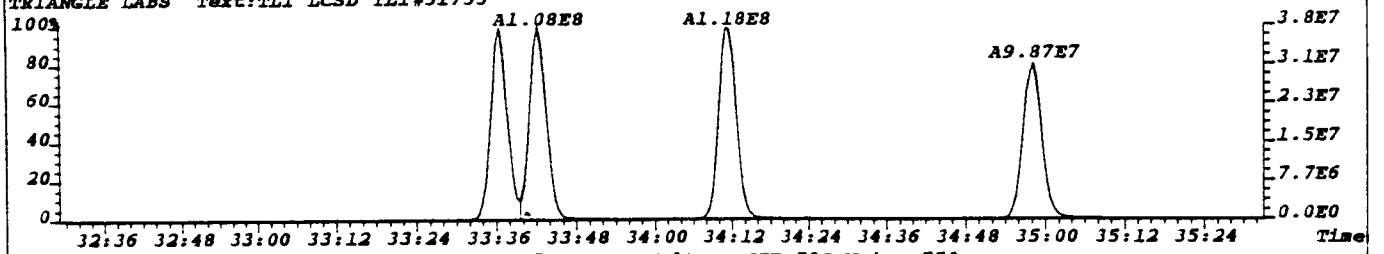
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:989
369.8919 S:6 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,3956.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



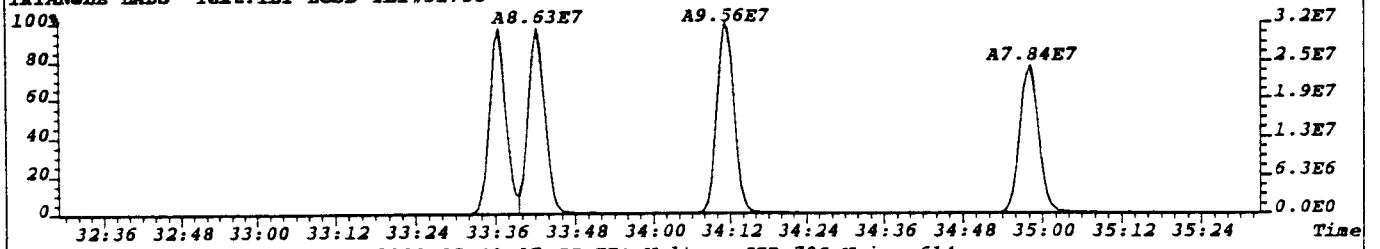
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S
330.9792 S:6 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



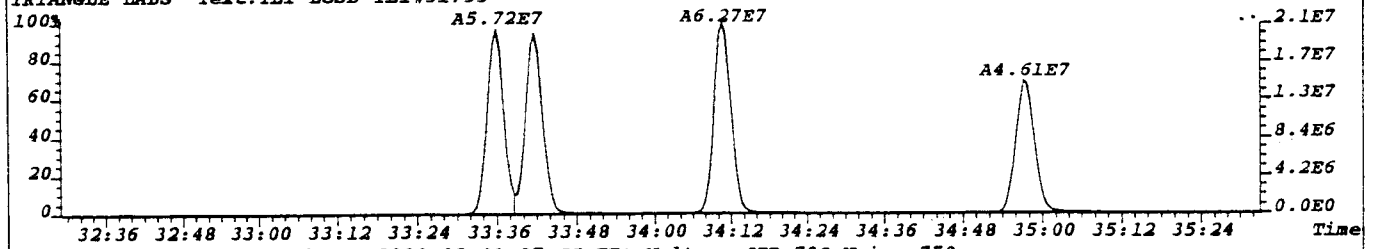
File:U1410 #1-453 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:861
373.8208 S:6 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,3444.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



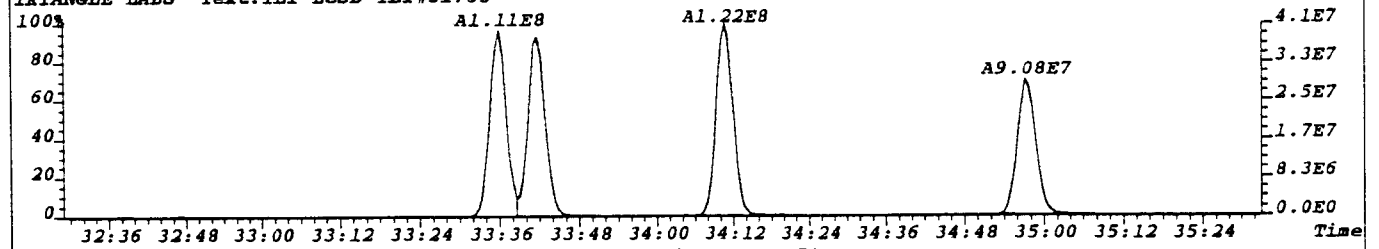
File:U1410 #1-453 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:750
375.8178 S:6 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,3000.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



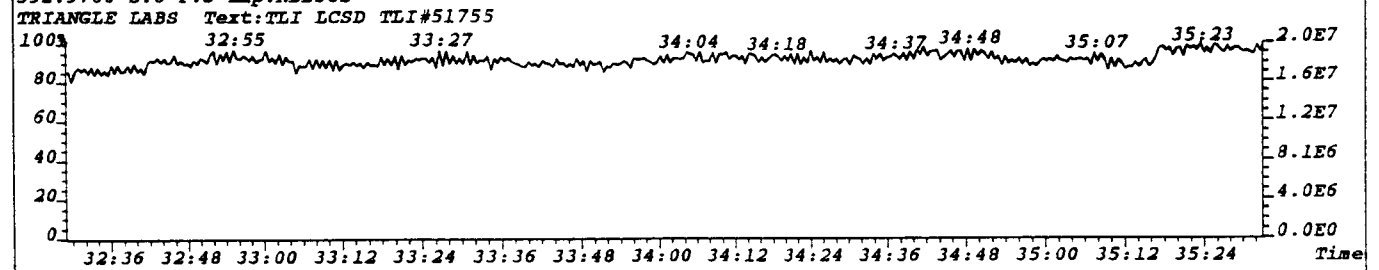
File:U1410 #1-453 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:614
383.8639 S:6 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2456.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



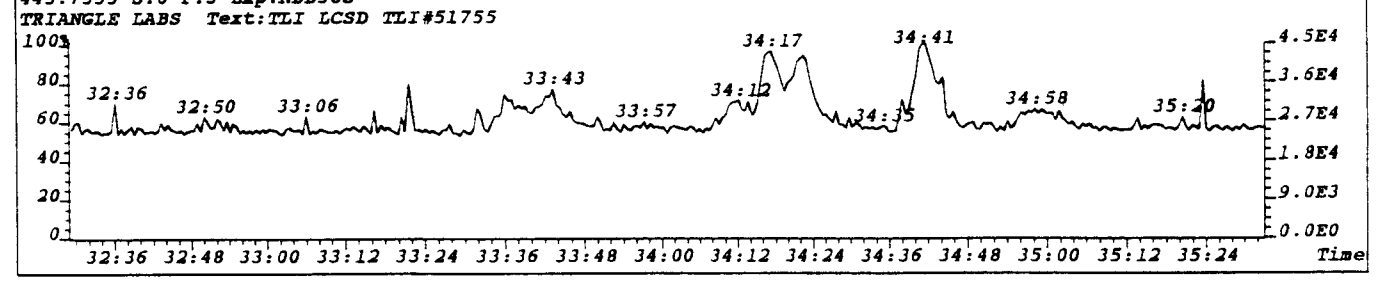
File:U1410 #1-453 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:750
385.8610 S:6 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,3000.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



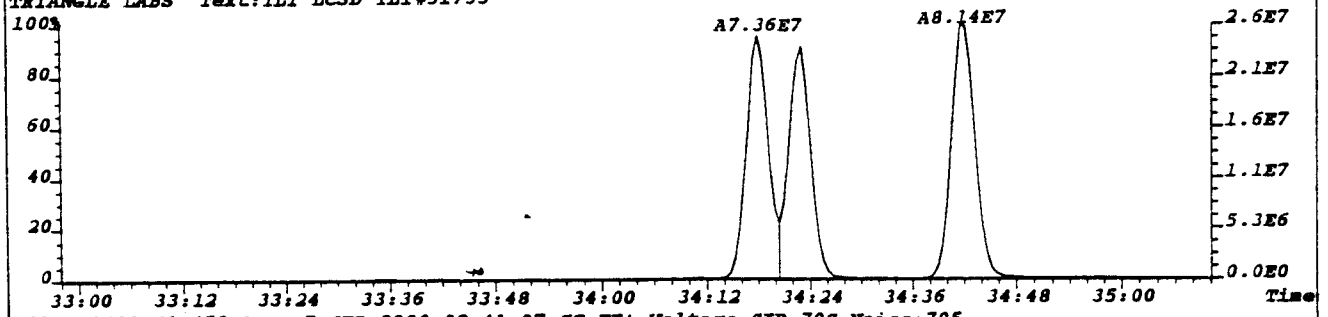
File:U1410 #1-453 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S
392.9760 S:6 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



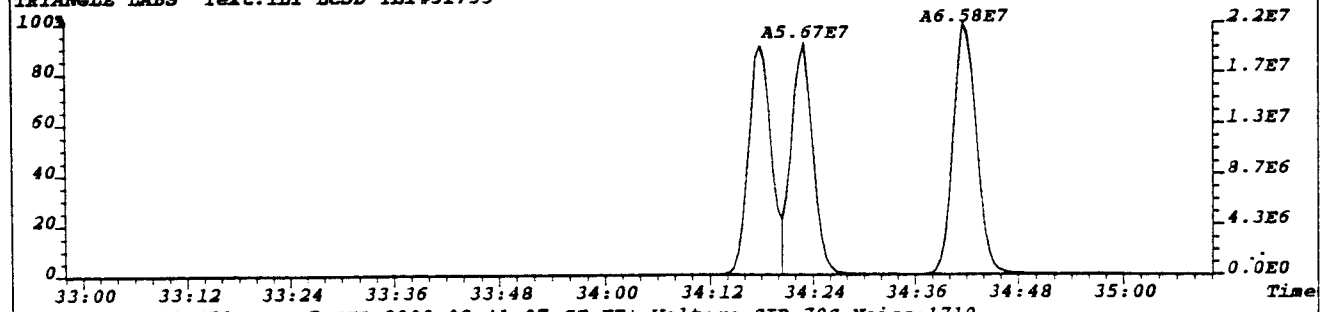
File:U1410 #1-453 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S
445.7555 S:6 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



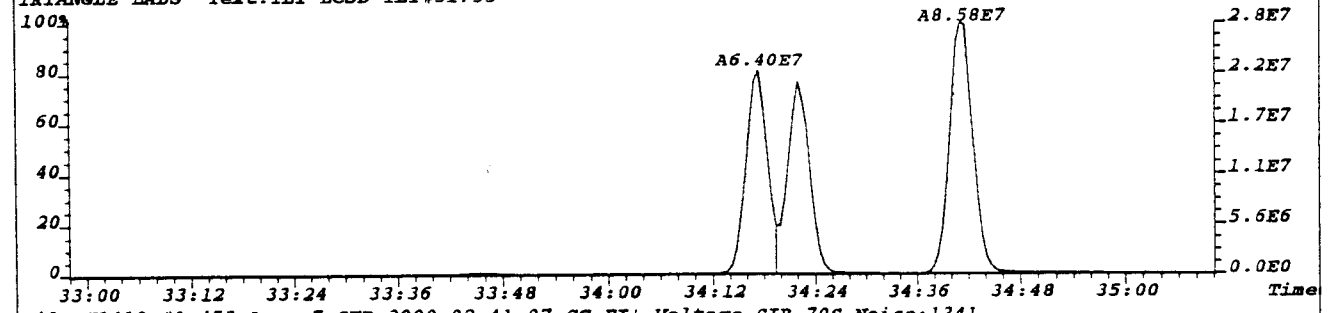
File:U1410 #1-453 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:657
389.8156 S:6 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2628.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



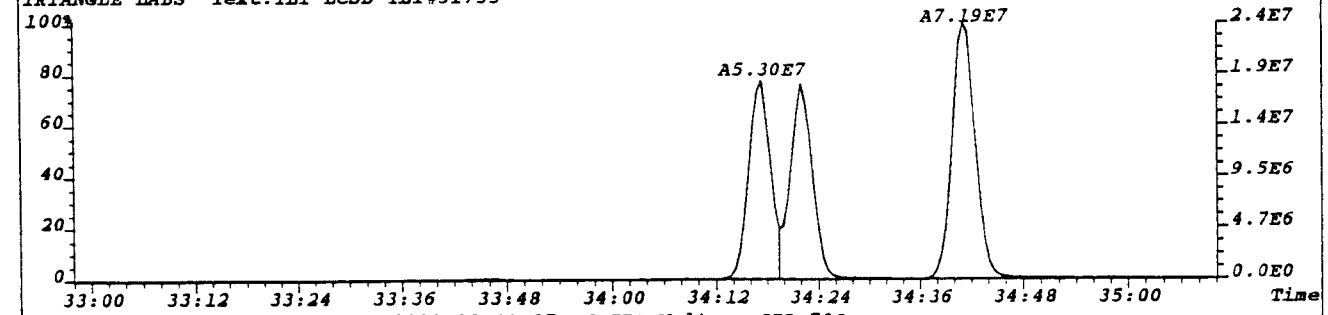
File:U1410 #1-453 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:705
391.8127 S:6 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2820.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



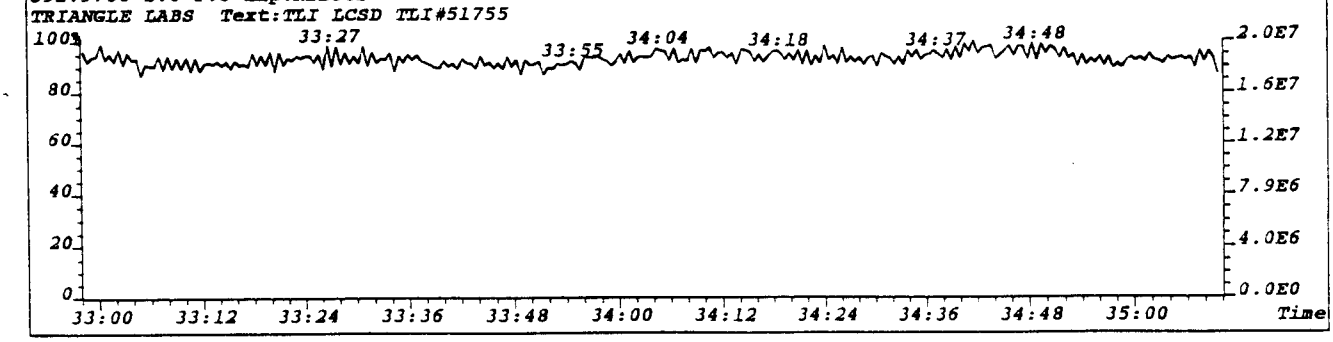
File:U1410 #1-453 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:1710
401.8558 S:6 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6840.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



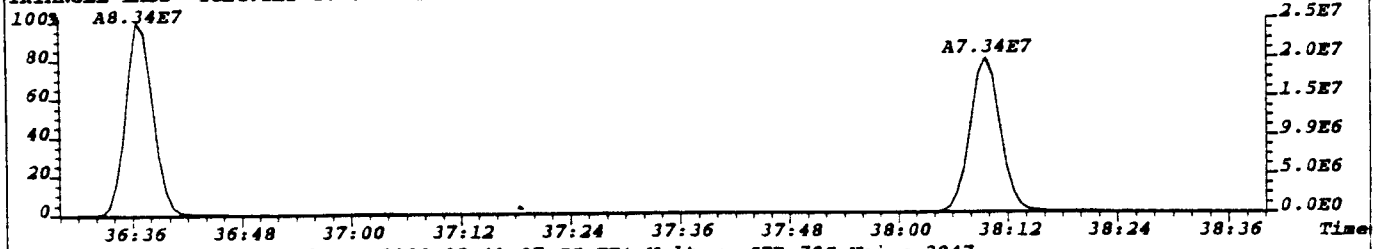
File:U1410 #1-453 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:1341
403.8529 S:6 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5364.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



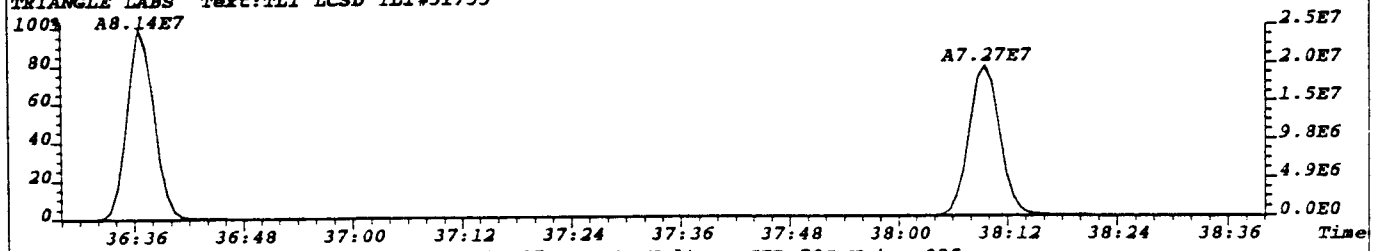
File:U1410 #1-453 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S
392.9760 S:6 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



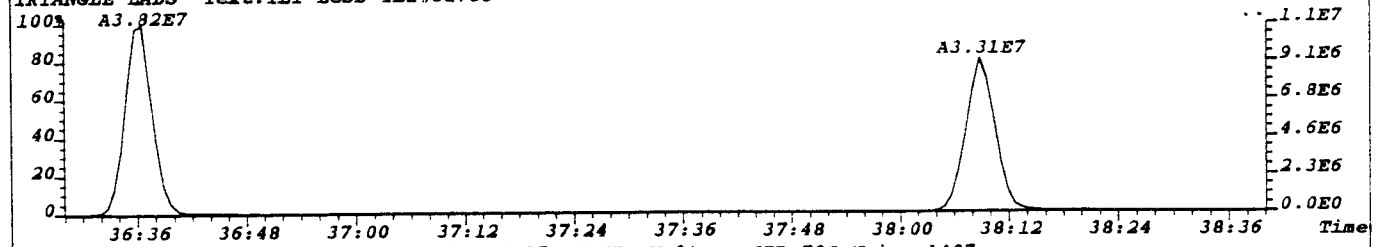
File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:3231
407.7818 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12924.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



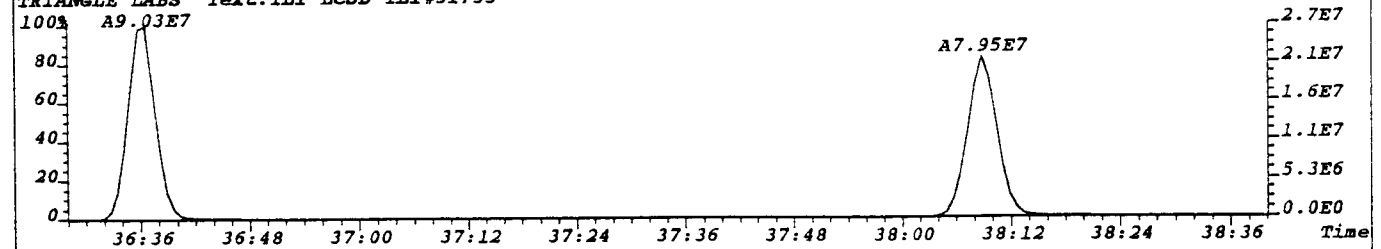
File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:2847
409.7789 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11388.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



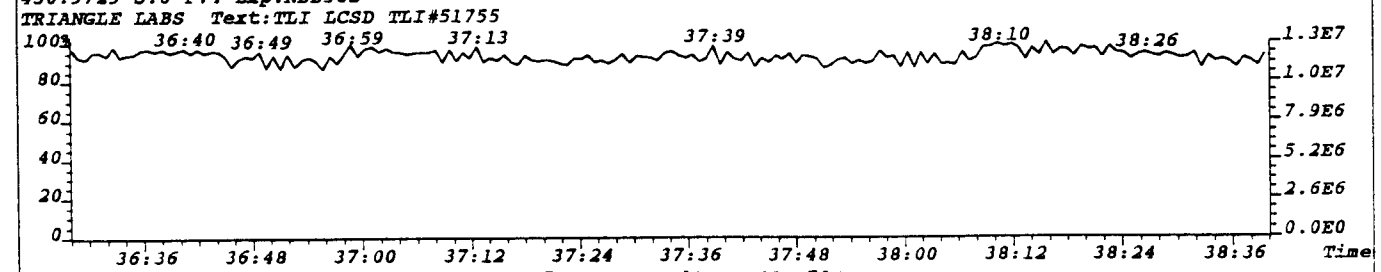
File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:925
417.8253 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,3700.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



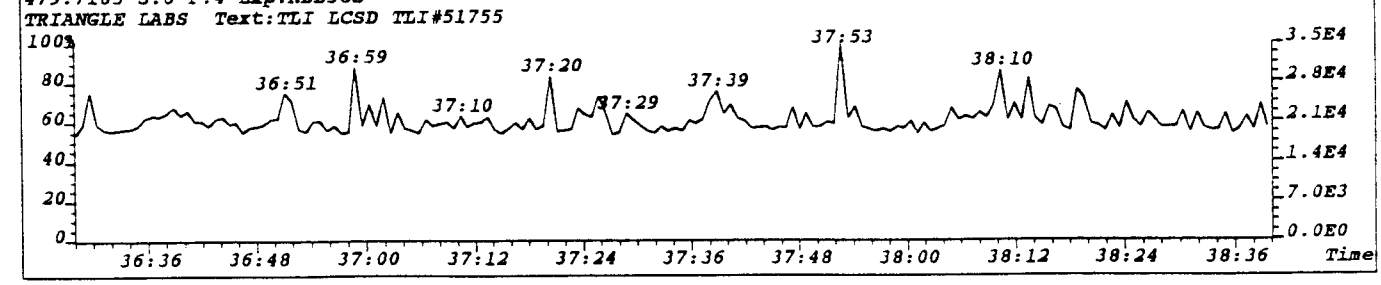
File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:1407
419.8220 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5628.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



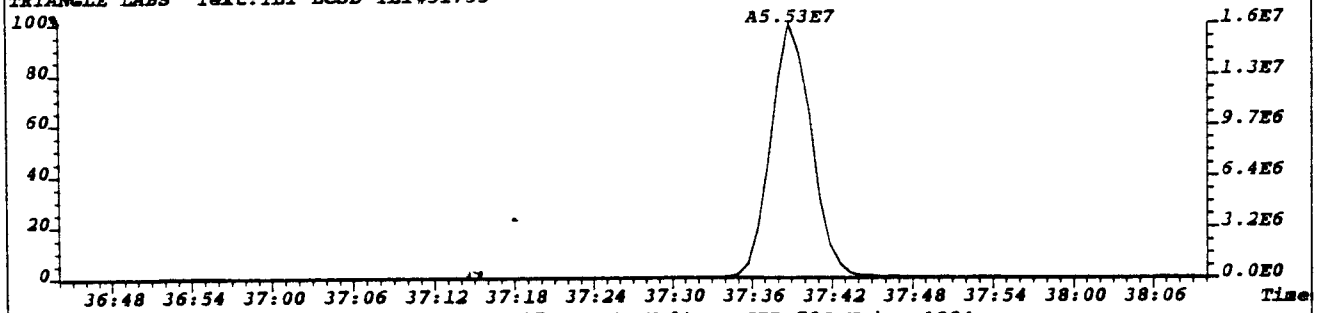
File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S
430.9729 S:6 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



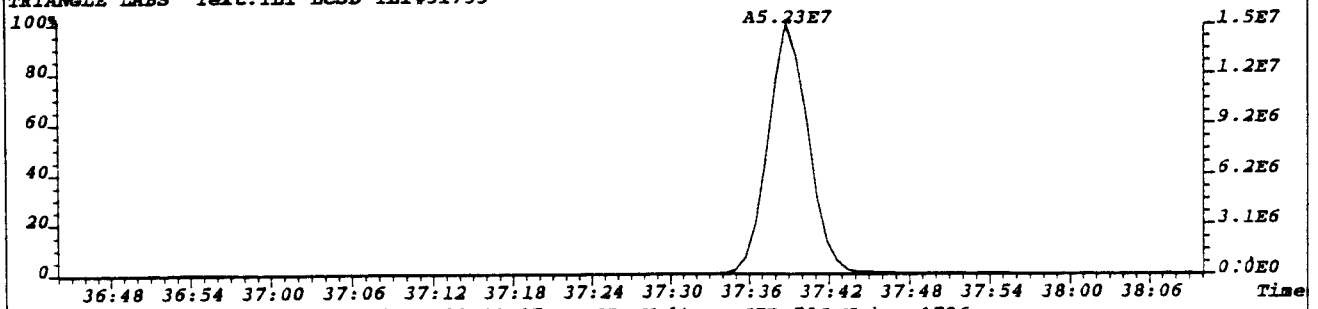
File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S
479.7165 S:6 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



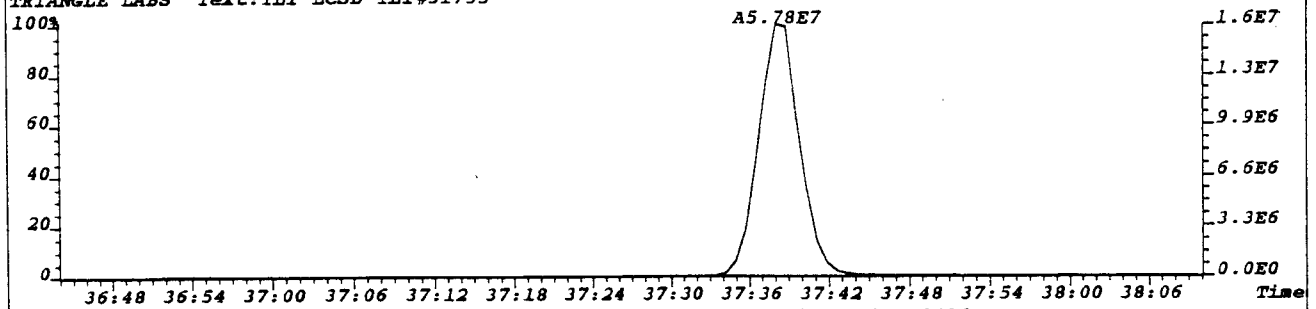
File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:1735
423.7766 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6940.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



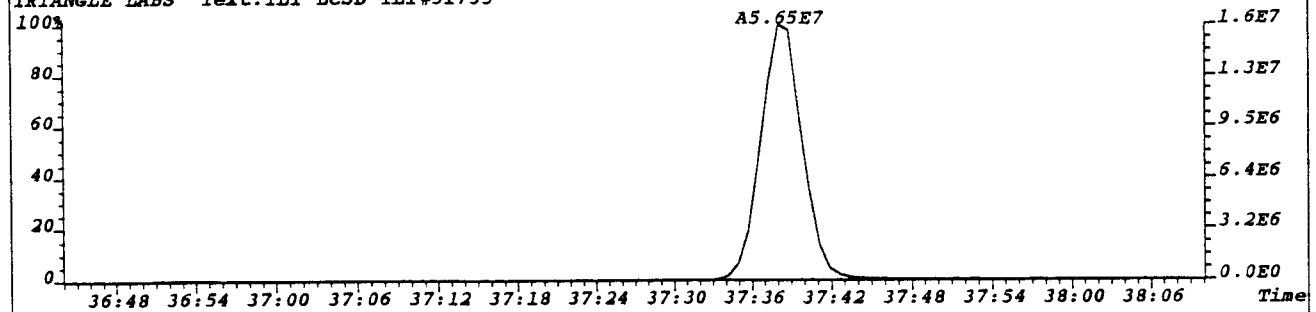
File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:1934
425.7737 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7736.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



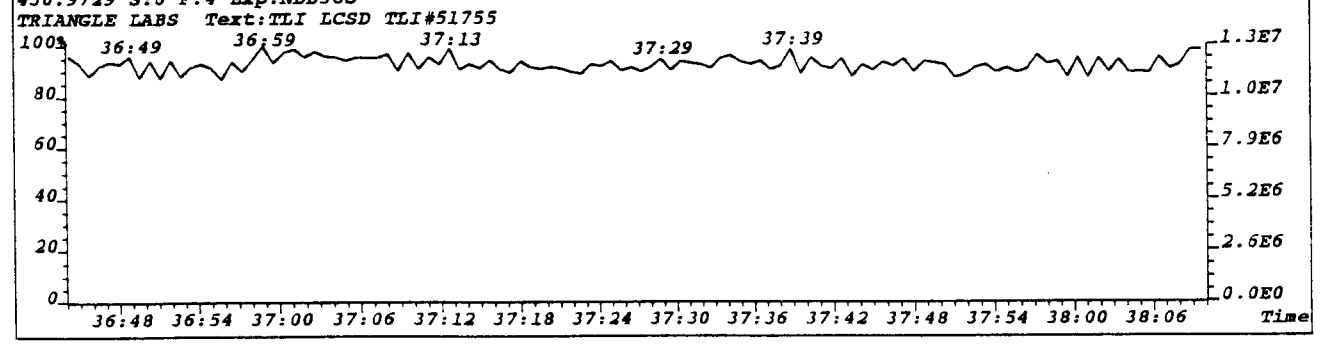
File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:1796
435.8169 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7184.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



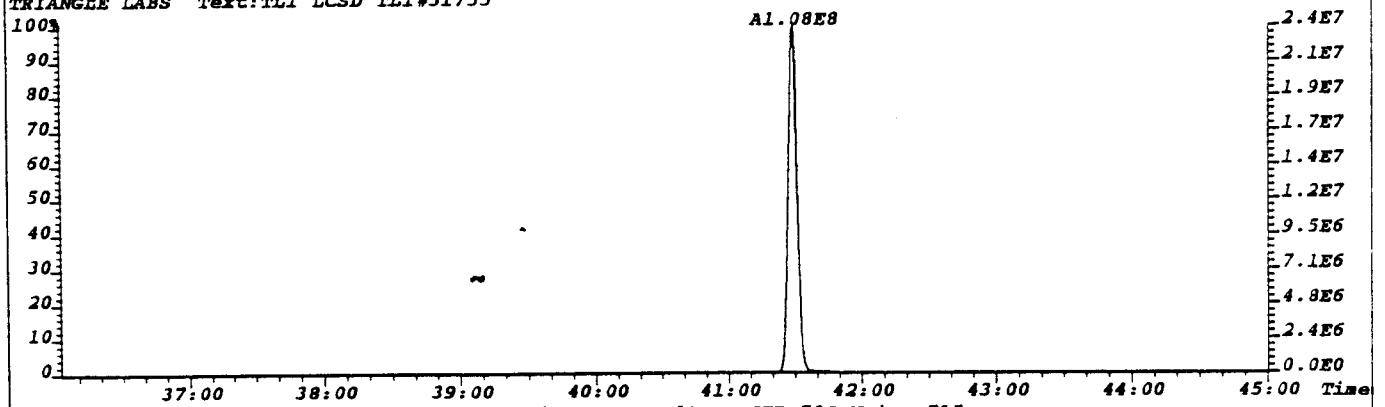
File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:2496
437.8140 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9984.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



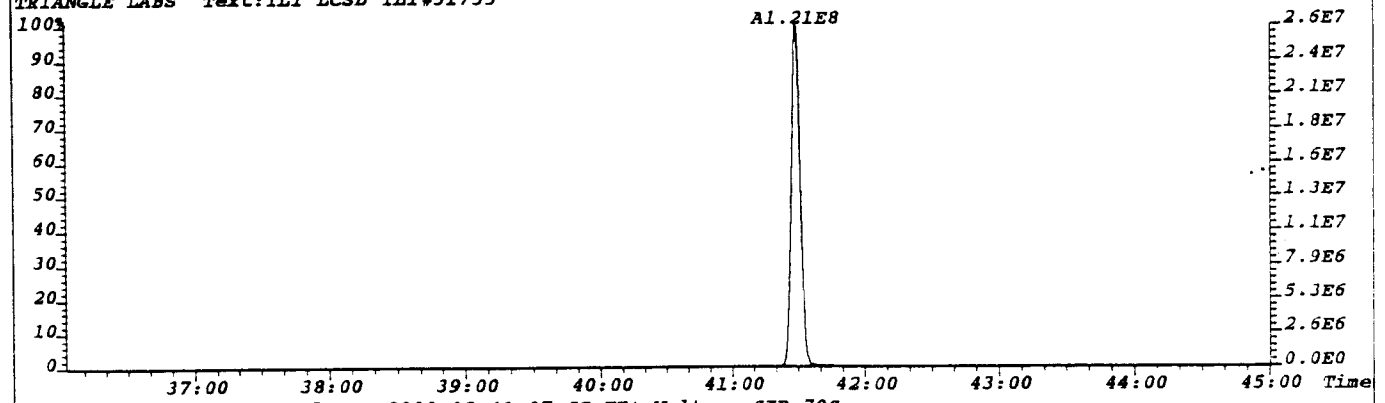
File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S
430.9729 S:6 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



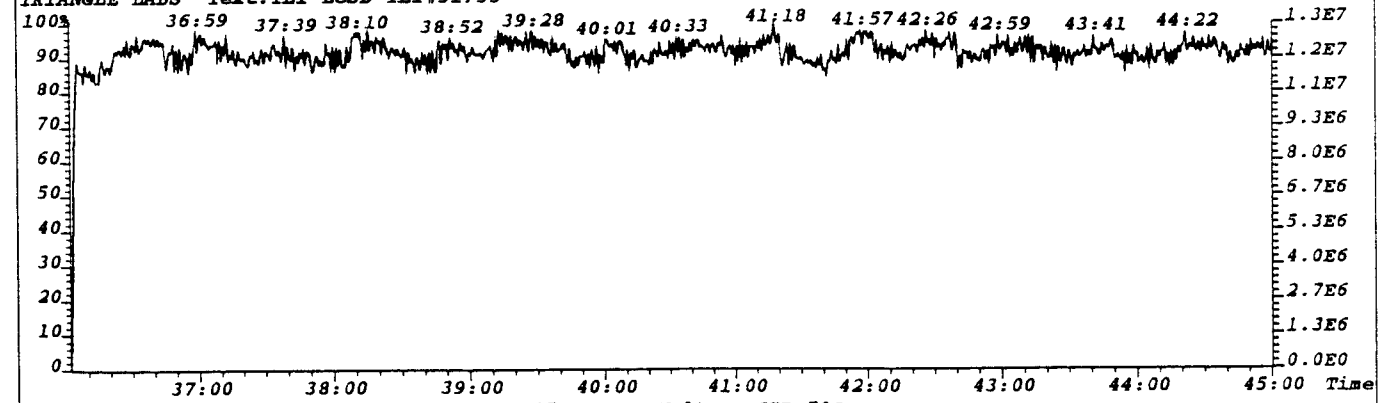
File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:750
441.7428 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,3000.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



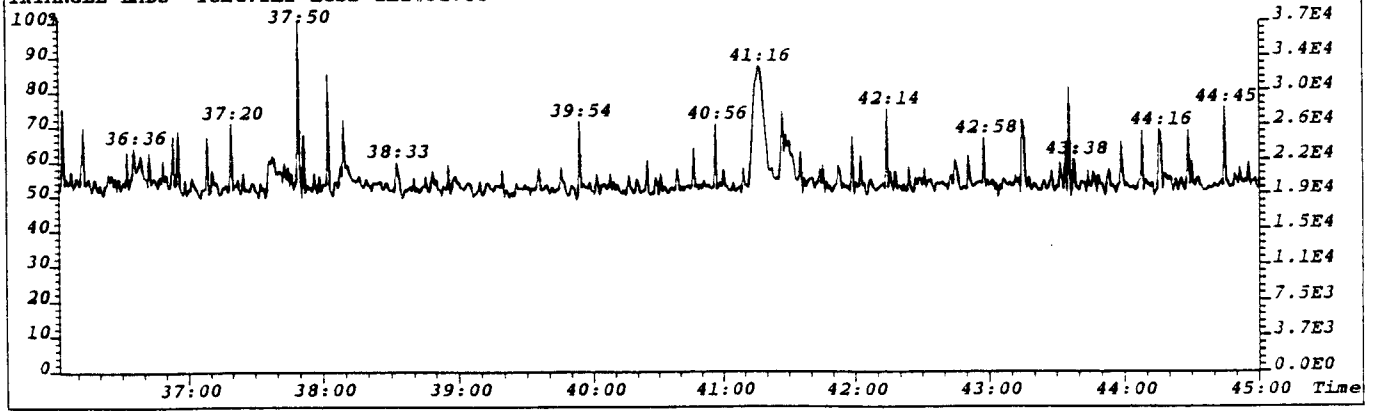
File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:715
443.7399 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2860.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



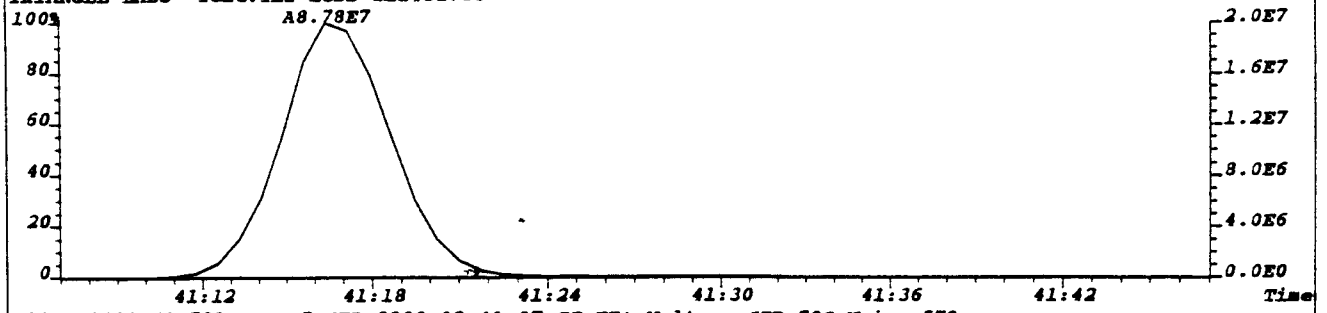
File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S
430.9729 S:6 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



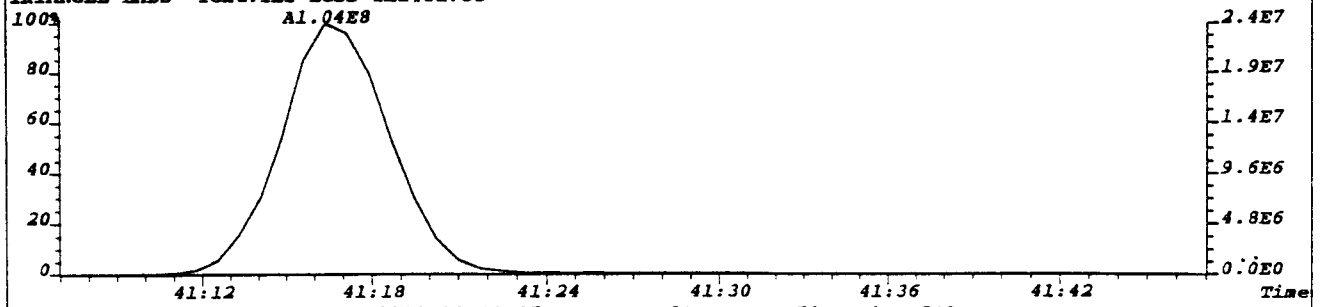
File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S
513.6775 S:6 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



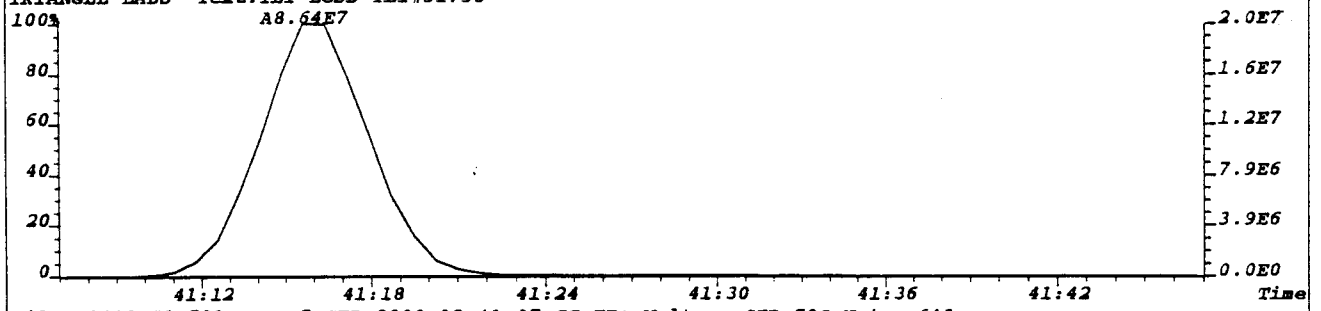
File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:580
457.7377 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2320.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



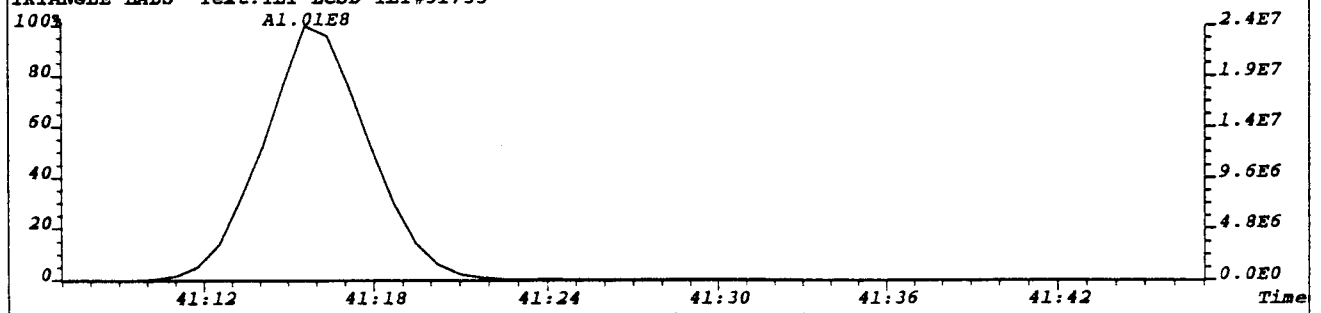
File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:579
459.7348 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2316.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



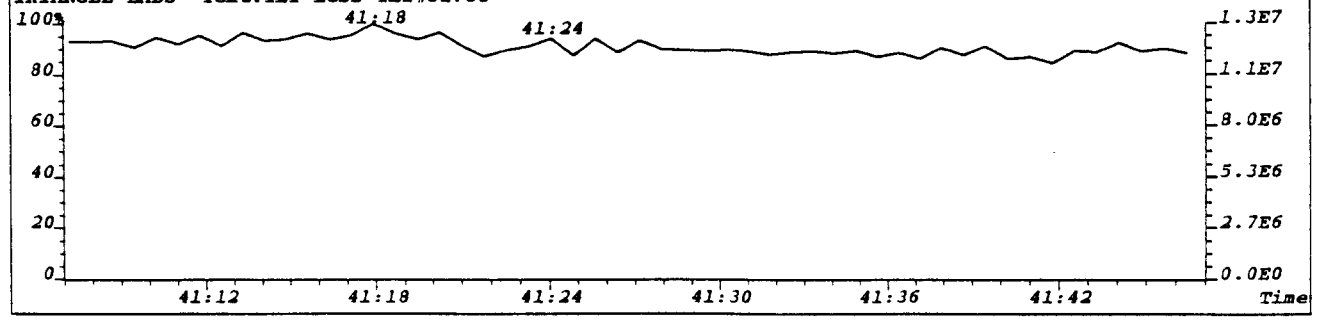
File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:542
469.7779 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2168.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



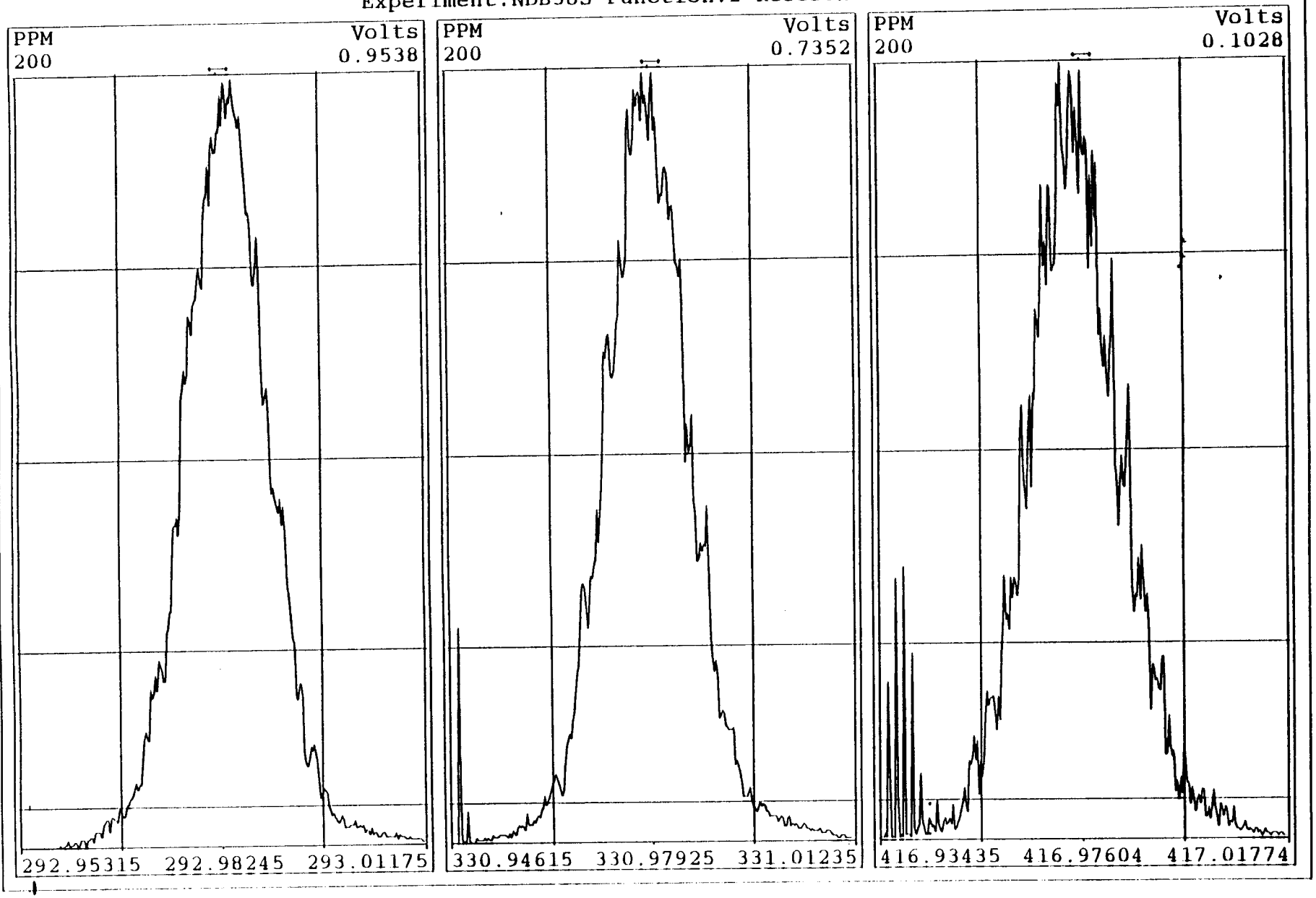
File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S Noise:643
471.7750 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,2572.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755



File:U1410 #1-701 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S
430.9729 S:6 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI LCSD TLI#51755

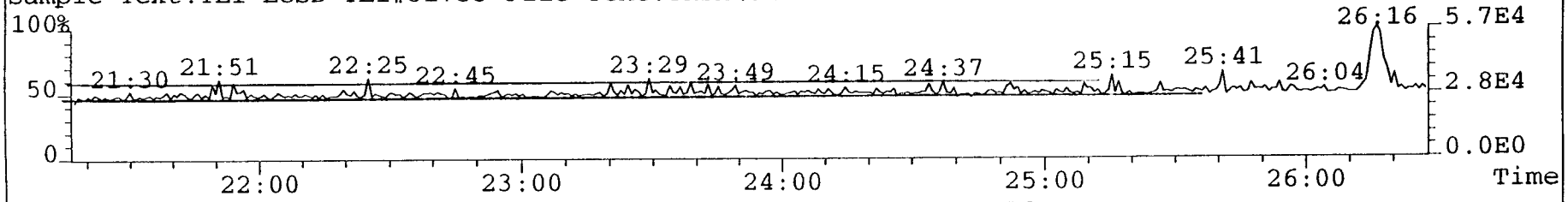


Peak Locate Examination: 6-SEP-2000:22:36 File:U1410
Experiment:NDB5US Function:2 Reference:PFK



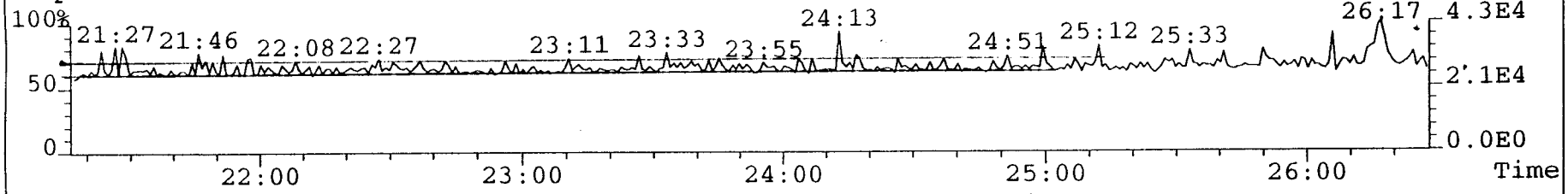
File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S
319.8965 S:6 F:2 Exp:NDB5US
Sample Text:TLI LCSD TLI#51755 File Text:TRIANGLE LABORATORIES INC.

(.11)(5.7) = .627

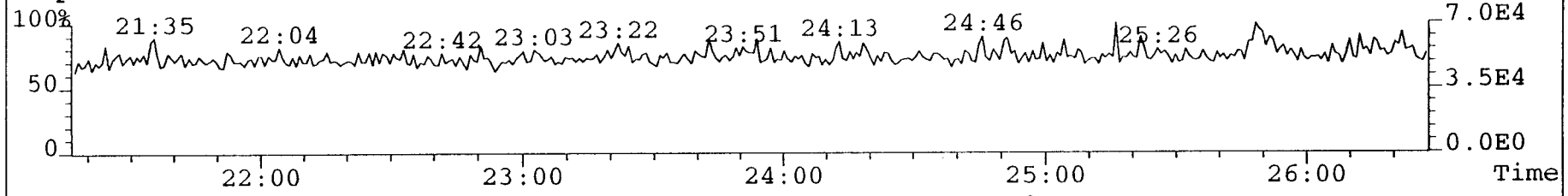


File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S
321.8936 S:6 F:2 Exp:NDB5US
Sample Text:TLI LCSD TLI#51755 File Text:TRIANGLE LABORATORIES INC.

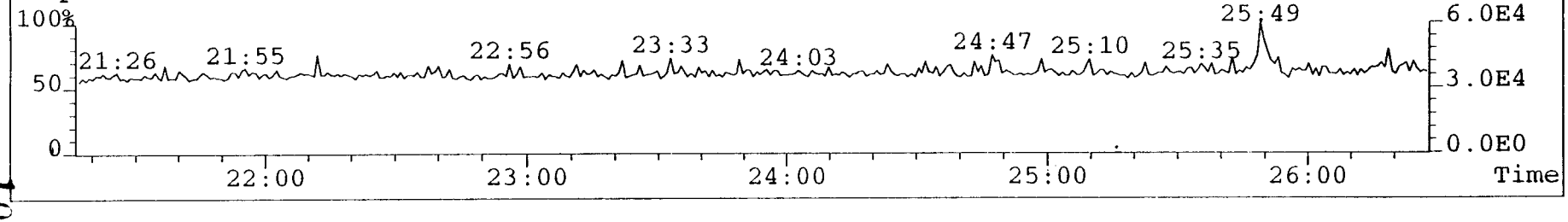
(.1)(4.3) = .43



File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S
331.9368 S:6 F:2 Exp:NDB5US
Sample Text:TLI LCSD TLI#51755 File Text:TRIANGLE LABORATORIES INC.



File:U1410 #1-830 Acq: 7-SEP-2000 02:41:07 GC EI+ Voltage SIR 70S
333.9338 S:6 F:2 Exp:NDB5US
Sample Text:TLI LCSD TLI#51755 File Text:TRIANGLE LABORATORIES INC.



.627
.43
1.057

JA
9/7/00

103

TRIANGLE LABS

CALIBRATION DATA

Triangle Laboratories, Inc.
801 Capitola Drive
Durham, NC 27713-4411
919-544-5729
P.O. Box 13485
Research Triangle Park, NC 27709-3485
Fax # 919-544-5491

TRIANGLE LABORATORIES, INC. Date: 07/15/2000

Initial Calibration Summary for UF57140

Analysis Date....: 07/14/2000 Method.....: MIT3

Instrument.....: U

Analytes	RF	SD	%RSD	RT	RT/LO	RT/HI	Ratio1	Ratio2	N
Total MCDF	0.000	0.000	100%		6:16	20:16			0
Total MCDD	0.000	0.000	100%		6:58	20:58			0
Total DCDF	0.000	0.000	100%		13:16	21:16			0
Total DCDD	0.000	0.000	100%		13:58	21:58			0
Total TriCDF	0.000	0.000	100%		17:16	24:16			0
Total TriCDD	0.000	0.000	100%		18:58	24:58			0
1368-TCDF	1.129	0.066	6%	23:11	25:16	32:16	0.742		6
1278-TCDF	1.022	0.041	4%	25:53			0.731		6
2378-TCDF	1.030	0.057	6%	26:17			0.736		6
TOTAL TCDF	1.030	0.057	6%				0.736		6
1368-TCDD	1.013	0.058	6%	24:29	25:58	32:58	0.780		6
1379-TCDD	0.872	0.033	4%	24:52			0.783		6
2378-TCDD	1.019	0.091	9%	26:59			0.786		6
TOTAL TCDD	1.019	0.091	9%				0.783		6
12378-PeCDF	0.920	0.036	4%	30:11	26:10	34:10	1.528		6
23478-PeCDF	0.928	0.049	5%	30:52			1.503		6
TOTAL PeCDF	0.924	0.041	4%				1.515		6
12378-PeCDD	1.048	0.047	4%	31:12	27:12	35:12	1.517		6
TOTAL PeCDD	1.048	0.047	4%				1.517		6
123478-HxCDF	1.022	0.041	4%	33:38	29:43	37:43	1.250		6
123678-HxCDF	1.086	0.047	4%	33:44			1.252		6
234678-HxCDF	0.960	0.060	6%	34:13			1.253		6
123789-HxCDF	0.793	0.055	7%	35:00			1.254		6
TOTAL HxCDF	0.965	0.049	5%				1.252		6
123478-HxCDD	1.077	0.062	6%	34:20	30:24	38:24	1.225		6
123678-HxCDD	1.101	0.056	5%	34:25			1.221		6
123789-HxCDD	1.096	0.061	6%	34:44			1.224		6
TOTAL HxCDD	1.092	0.058	5%				1.223		6
1234678-HpCDF	1.227	0.057	5%	36:40	32:39	40:39	1.034		6
1234789-HpCDF	0.946	0.076	8%	38:13			1.016		6
TOTAL HpCDF	1.087	0.065	6%				1.026		6
1234678-HpCDD	0.857	0.039	5%	37:43	33:42	41:42	1.044		6
TOTAL HpCDD	0.857	0.039	5%				1.044		6
OCDF	1.185	0.041	3%	41:36	37:23	45:23	0.890		6
OCDD	0.947	0.051	5%	41:23	37:23	45:23	0.846		6

Other Standards	RF	SD	%RSD	RT	RT/LO	RT/HI	Ratio1	Ratio2	N
37Cl-TCDD	0.921	0.075	8%	26:59	24:58	28:58			6
13C12-PeCDF 234	0.972	0.023	2%	30:52	28:10	32:10	1.476		6
13C12-HxCDF 478	0.973	0.012	1%	33:38			0.510		6
13C12-HxCDF 234	0.889	0.031	3%	34:12			0.509		6
13C12-HxCDF 789	0.662	0.016	2%	34:59			0.507		6
13C12-HxCDD 478	1.006	0.046	5%	34:19			1.229		6
13C12-HpCDF 789	0.771	0.030	4%	38:13	34:39	40:39	0.425		6

Triangle Laboratories, Inc.®
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Printed: 03:08 07/15/2000

TRIANGLE LABORATORIES, INC. Date: 07/15/2000

Initial Calibration Summary for UF57140

Internal Standards	RF	SD	%RSD	RT	RT/LO	RT/HI	Ratio1	Ratio2	N
13C12-2378-TCDF	1.375	0.022	2%	26:16	25:16	27:16	0.750		6
13C12-2378-TCDD	1.054	0.016	2%	26:58	24:58	28:58	0.802		6
13C12-PeCDF 123	1.210	0.069	6%	30:10	26:10	34:10	1.469		6
13C12-PeCDD 123	0.716	0.025	3%	31:12	27:12	35:12	1.481		6
13C12-HxCDF 678	1.456	0.019	1%	33:43	29:43	37:43	0.512		6
13C12-HxCDD 678	0.915	0.029	3%	34:24	33:24	35:24	1.230		6
13C12-HpCDF 678	1.001	0.020	2%	36:39	34:39	40:39	0.430		6
13C12-HpCDD 678	0.906	0.033	4%	37:42	36:42	38:42	1.006		6
13C12-OCDD	0.704	0.050	7%	41:23	39:23	43:23	0.862		6

Recovery Standards	RF	SD	%RSD	RT	RT/LO	RT/HI	Ratio1	Ratio2	N
13C12-1234-TCDD	1.000	0.000	0%	26:47			0.818		6
13C12-HxCDD 789	1.000	0.000	0%	34:43			1.219		6

*** End of Report ***

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801 Capitola Drive • Durham, North Carolina 27713
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Printed: 03:08 07/15/2000

Date: 09/06/2000 TRIANGLE LABORATORIES, INC.

Continuing Calibration for U001408

Analysis Date....: 09/06/2000 Method.....: MIT3
Operator.....: BWL Instrument..: U
Init Calibration.: UF57140 Std.Conc....: 10.00
ICal Date.....: 07/14/2000

Analyte Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
Total MCDF	0.000		6:17 20:17			0.000	0.000	100.0%
Total MCDD	0.000		7:00 21:00			0.000	0.000	100.0%
Total DCDF	0.000		13:17 21:17			0.000	0.000	100.0%
Total DCDD	0.000		14:00 22:00			0.000	0.000	100.0%
Total TriCDF	0.000		17:17 24:17			0.000	0.000	100.0%
Total TriCDD	0.000		19:00 25:00			0.000	0.000	100.0%
1368-TCDF	0.979	0.77	23:01 28:10	23:13	0.8836	1.129	-0.150	-13.3%
1278-TCDF	0.854	0.71		25:55	0.9863	1.022	-0.168	-16.4%
2378-TCDF	1.057	0.73		26:18	1.0008	1.030	0.027	2.7%
TOTAL TCDF	1.057	0.74				1.030	0.027	2.7%
1368-TCDD	0.893	0.77	24:20 28:08	24:31	0.9081	1.013	-0.120	-11.9%
1379-TCDD	0.755	0.80		24:54	0.9222	0.872	-0.117	-13.5%
2378-TCDD	0.975	0.77		27:01	1.0007	1.019	-0.044	-4.3%
TOTAL TCDD	0.975	0.78				1.019	-0.044	-4.3%
12378-PeCDF	0.923	1.54	28:02 32:00	30:11	1.0000	0.920	0.003	0.4%
23478-PeCDF	0.897	1.49		30:52	1.0229	0.928	-0.031	-3.3%
TOTAL PeCDF	0.910	1.51				0.924	-0.014	-1.5%
12378-PeCDD	1.096	1.54	29:15 31:49	31:13	1.0013	1.048	0.048	4.6%
TOTAL PeCDD	1.096	1.54				1.048	0.048	4.6%
123478-HxCDF	1.095	1.26	32:29 35:13	33:37	0.9976	1.022	0.073	7.2%
123678-HxCDF	1.113	1.25		33:43	1.0006	1.086	0.027	2.5%
234678-HxCDF	1.033	1.28		34:12	1.0148	0.960	0.073	7.6%

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123789-HxCDF	0.809	1.26		34:58	1.0377	0.793	0.016	2.1%
TOTAL HxCDF	1.013	1.26				0.965	0.048	4.9%
123478-HxCDD	1.068	1.22	32:58 34:50	34:19	0.9983	1.077	-0.009	-0.9%
123678-HxCDD	1.006	1.21		34:23	1.0000	1.101	-0.095	-8.7%
123789-HxCDD	1.062	1.20		34:42	1.0093	1.096	-0.034	-3.1%
TOTAL HxCDD	1.045	1.21				1.092	-0.047	-4.3%
1234678-HpCDF	1.384	1.08	36:28 38:20	36:37	1.0000	1.227	0.157	12.8%
1234789-HpCDF	1.078	1.07		38:10	1.0423	0.946	0.132	13.9%
TOTAL HpCDF	1.231	1.07				1.087	0.144	13.2%
1234678-HpCDD	0.823	1.05	36:44 37:50	37:40	1.0005	0.857	-0.034	-4.0%
TOTAL HpCDD	0.823	1.05				0.857	-0.034	-4.0%
OCDF	1.185	0.90	37:17 45:17	41:30	1.0053	1.185	0.000	0.0%
OCDD	0.949	0.83	37:17 45:17	41:18	1.0005	0.947	0.002	0.2%

Other Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
37Cl-TCDD	0.872		25:00 29:00	27:01	1.0007	0.921	-0.049	-5.3%
13C12-PeCDF 234	0.958	1.46	26:11 34:11	30:52	1.0229	0.972	-0.014	-1.5%
13C12-HxCDF 478	1.022	0.51	29:42 37:42	33:36	0.9970	0.973	0.049	5.0%
13C12-HxCDF 234	0.933	0.51		34:11	1.0142	0.889	0.044	4.9%
13C12-HxCDF 789	0.662	0.51		34:58	1.0377	0.662	0.000	0.0%
13C12-HxCDD 478	1.048	1.18	33:23 35:23	34:18	0.9977	1.006	0.042	4.2%
13C12-HpCDF 789	0.785	0.43	34:37 40:37	38:09	1.0418	0.771	0.014	1.8%

Internal Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
13C12-2378-TCDF	1.529	0.74	25:17 27:17	26:17	1.0000	1.375	0.154	11.2%
13C12-2378-TCDD	1.082	0.79	25:00 29:00	27:00	1.0000	1.054	0.028	2.6%

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13C12-PeCDF 123	1.257	1.46	26:11 34:11	30:11	1.0000	1.210	0.047	3.9%
13C12-PeCDD 123	0.672	1.44	27:11 35:11	31:11	1.0000	0.716	-0.044	-6.1%
13C12-HxCDF 678	1.381	0.51	29:42 37:42	33:42	1.0000	1.456	-0.075	-5.2%
13C12-HxCDD 678	0.885	1.21	33:23 35:23	34:23	1.0000	0.915	-0.030	-3.3%
13C12-HpCDF 678	0.999	0.42	34:37 40:37	36:37	1.0000	1.001	-0.002	-0.2%
13C12-HpCDD 678	0.899	1.01	36:39 38:39	37:39	1.0000	0.906	-0.007	-0.8%
13C12-OCDD	0.670	0.85	41:07 41:27	41:17	1.0000	0.704	-0.034	-4.8%

Recovery Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
13C12-1234-TCDD	1.000	0.81	25:00 29:00	26:49	0.9933	1.000	0.000	0.0%
13C12-HxCDD 789	1.000	1.20	33:23 35:23	34:42	1.0093	1.000	0.000	0.0%

QC Front End Check: 1.1738 TetraRS/HexaRS: 1.194

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Listing of U001408
GC Peaks / Ratio / Ret. Time

Compound/ M_Z....	..RT.	OK	Ratio	Total.Area...	Area.Peak.1..	Area.Peak.2..	Rel.RT	Compound.Name..	ID..
TCDF		0.65-0.89							
304-306	23:13		0.77	1,234.23	535.34	698.89	0.884	1368-TCDF	AN
	25:55		0.71	1,077.35	449.09	628.26	0.986	1278-TCDF	AN
	26:18		0.73	1,333.21	560.45	772.76	1.001	2378-TCDF	AN
304-306		3 Peaks							
13C12-TCDF		0.65-0.89							
316-318	26:17		0.74	12,608.08	5,344.80	7,263.28	1.000	13C12-2378-TCDF	IS0
316-318		1 Peak							

---------- Above: TCDF / TCDD Follows ----------

TCDD		0.65-0.89							
320-322	24:31		0.77	796.29	346.64	449.65	0.908	1368-TCDD	AN
	24:54		0.80	673.05	300.03	373.02	0.922	1379-TCDD	AN
	27:01		0.77	869.79	378.95	490.84	1.001	2378-TCDD	AN
320		3 Peaks							
37Cl-TCDD									
328	27:01			777.91	777.91		1.001	37Cl-TCDD	CLS
328-330		1 Peak							
13C12-TCDD		0.65-0.89							
332-334	26:49		0.81	8,244.25	3,698.27	4,545.98	0.993	13C12-1234-TCDD	RS1
	27:00		0.79	8,919.65	3,949.62	4,970.03	1.000	13C12-2378-TCDD	IS1
332-334		2 Peaks							

---------- Above: TCDD / PeCDF Follows ----------

PeCDF		1.32-1.78							
340-342	30:11		1.54	4,786.06	2,904.77	1,881.29	1.000	12378-PeCDF	AN
	30:52		1.49	4,650.68	2,779.23	1,871.45	1.023	23478-PeCDF	AN
340-342		2 Peaks							
13C12-PeCDF		1.32-1.78							
352-354	30:11		1.46	10,366.58	6,147.13	4,219.45	1.000	13C12-PeCDF 123	IS2
	30:52		1.46	9,930.02	5,886.99	4,043.03	1.023	13C12-PeCDF 234	SUR1
352-354		2 Peaks							

---------- Above: PeCDF / PeCDD Follows ----------

PeCDD		1.32-1.78							
356-358	31:13		1.54	3,037.97	1,842.06	1,195.91	1.001	12378-PeCDD	AN
356-358		1 Peak							
13C12-PeCDD		1.32-1.78							
368-370	31:11		1.44	5,543.89	3,274.73	2,269.16	1.000	13C12-PeCDD 123	IS3
368-370		1 Peak							

---------- Above: PeCDD / HxCDF Follows ----------

Compound/ M_Z....	..RT.	OK Ratio	Total.Area...	Area.Peak.1..	Area.Peak.2..	Rel.RT	Compound.Name..	ID..
HxCDF		1.05-1.43						
374-376	33:37	1.26	4,289.04	2,388.78	1,900.26	0.998	123478-HxCDF	AN
	33:43	1.25	4,358.44	2,422.64	1,935.80	1.001	123678-HxCDF	AN
	34:12	1.28	4,044.29	2,267.83	1,776.46	1.015	234678-HxCDF	AN
	34:58	1.26	3,169.84	1,765.27	1,404.57	1.038	123789-HxCDF	AN
374-376		4 Peaks						
13C12-HxCDF		0.43-0.59						
384-386	33:36	0.51	8,005.75	2,711.06	5,294.69	0.997	13C12-HxCDF 478	SUR2
	33:42	0.51	7,832.87	2,632.39	5,200.48	1.000	13C12-HxCDF 678	IS4
	34:11	0.51	7,307.33	2,455.30	4,852.03	1.014	13C12-HxCDF 234	ALT2
	34:58	0.51	5,185.22	1,744.85	3,440.37	1.038	13C12-HxCDF 789	ALT1
384-386		4 Peaks						

---------- Above: HxCDF / HxCDD Follows ----------

HxCDD		1.05-1.43						
390-392	34:19	1.22	2,678.58	1,471.04	1,207.54	0.998	123478-HxCDD	AN
	34:23	1.21	2,522.77	1,382.17	1,140.60	1.000	123678-HxCDD	AN
	34:42	1.20	2,663.11	1,451.39	1,211.72	1.009	123789-HxCDD	AN
390-392		3 Peaks						
13C12-HxCDD		1.05-1.43						
402-404	34:18	1.18	5,258.52	2,841.43	2,417.09	0.998	13C12-HxCDD 478	SUR3
	34:23	1.21	5,016.99	2,746.27	2,270.72	1.000	13C12-HxCDD 678	IS5
	34:42	1.20	5,671.88	3,098.60	2,573.28	1.009	13C12-HxCDD 789	RS2
402-404		3 Peaks						

---------- Above: HxCDD / HpCDF Follows ----------

HpCDF		0.88-1.20						
408-410	36:37	1.08	3,922.59	2,034.39	1,888.20	1.000	1234678-HpCDF	AN
	38:10	1.07	3,053.78	1,579.79	1,473.99	1.042	1234789-HpCDF	AN
408-410		2 Peaks						
13C12-HpCDF		0.37-0.51						
418-420	36:37	0.42	5,667.32	1,676.70	3,990.62	1.000	13C12-HpCDF 678	IS6
	38:09	0.43	4,449.23	1,331.75	3,117.48	1.042	13C12-HpCDF 789	SUR4
418-420		2 Peaks						

---------- Above: HpCDF / HpCDD Follows ----------

HpCDD		0.88-1.20						
424-426	37:40	1.05	2,098.22	1,072.38	1,025.84	1.001	1234678-HpCDD	AN
424-426		1 Peak						
13C12-HpCDD		0.88-1.20						
436-438	37:39	1.01	5,098.42	2,560.29	2,538.13	1.000	13C12-HpCDD 678	IS7
436-438		1 Peak						

---------- Above: HpCDD / Octa-CDD and CDF Follows ----

Compound/ M_Z....	..RT.	OK	Ratio	Total.Area...	Area.Peak.1..	Area.Peak.2..	Rel.RT	Compound.Name..	ID..
OCDF			0.76-1.02						
442-444	41:30		0.90	4,503.22	2,127.08	2,376.14	1.005	OCDF	AN
442-444			1 Peak						
OCDD			0.76-1.02						
458-460	41:18		0.83	3,606.77	1,638.91	1,967.86	1.001	OCDD	AN
458-460			1 Peak						
13C12-OCDD			0.76-1.02						
470-472	41:17		0.85	7,598.78	3,483.43	4,115.35	1.000	13C12-OCDD	IS8
470			1 Peak						

Column Description.....

M_Z - Nominal Ion Mass(es)
..RT. - Retention Time (mm:ss)
Rat.1 - Ratio of M/M+2 Ions
OK - RO=Ratio Outside Limits
Rel.RT - Relative Retention Time

*** End of Report ***

Date: 09/07/2000 TRIANGLE LABORATORIES, INC.

Continuing Calibration for U141012

Analysis Date....: 09/07/2000 Method.....: MIT3
Operator.....: MVL Instrument..: U
Init Calibration.: UF57140 Std.Conc....: 10.00
Cal Date.....: 07/14/2000 Related CCal: U001408

Analyte Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
Total MCDF	0.000		6:17 20:17			0.000	0.000	100.0%
Total MCDD	0.000		6:58 20:58			0.000	0.000	100.0%
Total DCDF	0.000		13:17 21:17			0.000	0.000	100.0%
Total DCDD	0.000		13:58 21:58			0.000	0.000	100.0%
Total TriCDF	0.000		17:17 24:17			0.000	0.000	100.0%
Total TriCDD	0.000		18:58 24:58			0.000	0.000	100.0%
1368-TCDF	1.082	0.76	25:17 32:17	23:12	0.8828	1.129	-0.047	-4.2%
1278-TCDF	1.036	0.75		25:53	0.9848	1.022	0.014	1.4%
2378-TCDF	1.074	0.73		26:17	1.0000	1.030	0.044	4.3%
TOTAL TCDF	1.074	0.75				1.030	0.044	4.3%
1368-TCDD	0.795	0.77	25:58 32:58	24:29	0.9077	1.013	-0.218	-21.5%
1379-TCDD	0.796	0.79		24:53	0.9225	0.872	-0.076	-8.7%
2378-TCDD	0.994	0.79		26:59	1.0004	1.019	-0.025	-2.5%
TOTAL TCDD	0.994	0.79				1.019	-0.025	-2.5%
12378-PeCDF	0.932	1.52	26:09 34:09	30:10	1.0007	0.920	0.012	1.3%
23478-PeCDF	0.990	1.50		30:51	1.0232	0.928	0.062	6.6%
TOTAL PeCDF	0.961	1.51				0.924	0.037	4.0%
12378-PeCDD	1.079	1.58	27:10 35:10	31:11	1.0003	1.048	0.031	2.9%
TOTAL PeCDD	1.079	1.58				1.048	0.031	2.9%
123478-HxCDF	1.084	1.26	29:41 37:41	33:36	0.9976	1.022	0.062	6.1%
123678-HxCDF	1.097	1.25		33:42	1.0006	1.086	0.011	1.0%
234678-HxCDF	1.102	1.26		34:11	1.0148	0.960	0.142	14.8%

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Date: 09/07/2000 TRIANGLE LABORATORIES, INC.

Continuing Calibration for U141012

123789-HxCDF	0.967	1.26		34:58	1.0383	0.793	0.174	22.0%
TOTAL HxCDF	1.063	1.26				0.965	0.098	10.1%
123478-HxCDD	1.049	1.26	30:22 38:22	34:18	0.9980	1.077	-0.028	-2.6%
123678-HxCDD	1.051	1.26		34:23	1.0003	1.101	-0.050	-4.6%
123789-HxCDD	1.081	1.24		34:42	1.0096	1.096	-0.015	-1.3%
TOTAL HxCDD	1.060	1.25				1.092	-0.032	-2.9%
1234678-HpCDF	1.209	1.02	32:36 40:36	36:37	1.0005	1.227	-0.018	-1.5%
1234789-HpCDF	1.052	1.02		38:09	1.0423	0.946	0.106	11.2%
TOTAL HpCDF	1.131	1.02				1.087	0.044	4.0%
1234678-HpCDD	0.862	1.07	33:38 41:38	37:39	1.0005	0.857	0.005	0.5%
TOTAL HpCDD	0.862	1.07				0.857	0.005	0.5%
OCDF	1.224	0.89	37:16 45:16	41:29	1.0051	1.185	0.039	3.3%
OCDD	0.946	0.83	37:16 45:16	41:17	1.0002	0.947	-0.001	-0.1%

Other Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
37Cl-TCDD	0.905		24:58 28:58	27:00	1.0011	0.921	-0.016	-1.7%
13C12-PeCDF 234	1.009	1.47	26:09 34:09	30:51	1.0232	0.972	0.037	3.8%
13C12-HxCDF 478	1.044	0.51	29:41 37:41	33:36	0.9976	0.973	0.071	7.3%
13C12-HxCDF 234	0.997	0.52		34:11	1.0148	0.889	0.108	12.2%
13C12-HxCDF 789	0.798	0.52		34:57	1.0377	0.662	0.136	20.5%
13C12-HxCDD 478	1.052	1.21	33:22 35:22	34:17	0.9974	1.006	0.046	4.6%
13C12-HpCDF 789	0.881	0.42	34:36 40:36	38:09	1.0423	0.771	0.110	14.2%

Internal Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
13C12-2378-TCDF	1.409	0.74	25:17 27:17	26:17	1.0000	1.375	0.034	2.5%
13C12-2378-TCDD	1.076	0.81	24:58 28:58	26:58	1.0000	1.054	0.022	2.1%

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Continuing Calibration for U141012

13C12-PeCDF 123	1.386	1.47	26:09 34:09	30:09	1.0000	1.210	0.176	14.6%
13C12-PeCDD 123	0.774	1.45	27:10 35:10	31:10	1.0000	0.716	0.058	8.1%
13C12-HxCDF 678	1.388	0.52	29:41 37:41	33:41	1.0000	1.456	-0.068	-4.6%
13C12-HxCDD 678	0.875	1.20	33:22 35:22	34:22	1.0000	0.915	-0.040	-4.4%
13C12-HpCDF 678	1.034	0.42	34:36 40:36	36:36	1.0000	1.001	0.033	3.3%
13C12-HpCDD 678	0.903	1.01	36:38 38:38	37:38	1.0000	0.906	-0.003	-0.4%
13C12-OCDD	0.720	0.87	39:16 43:16	41:16	1.0000	0.704	0.016	2.3%

Recovery Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
13C12-1234-TCDD	1.000	0.82	24:58 28:58	26:48	0.9937	1.000	0.000	0.0%
13C12-HxCDD 789	1.000	1.20	33:22 35:22	34:41	1.0090	1.000	0.000	0.0%

QC Front End Check: 0.8110 TetraRS/HexaRS: 0.898

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Compound/ 1_Z....	..RT.	OK Ratio	Total.Area...	Area.Peak.1..	Area.Peak.2..	Rel.RT	Compound.Name..	ID..
TCDF		0.65-0.89						
304-306	23:12	0.76	3,153.94	1,362.08	1,791.86	0.883	1368-TCDF	AN
	25:53	0.75	3,019.85	1,292.59	1,727.26	0.985	1278-TCDF	AN
	26:17	0.73	3,131.56	1,322.04	1,809.52	1.000	2378-TCDF	AN
304-306		3 Peaks						
13C12-TCDF		0.65-0.89						
316-318	26:17	0.74	29,152.80	12,400.40	16,752.40	1.000	13C12-2378-TCDF	IS0
316-318		1 Peak						
---------- Above: TCDF / TCDD Follows ----------								
TCDD		0.65-0.89						
320-322	24:29	0.77	1,771.05	771.01	1,000.04	0.908	1368-TCDD	AN
	24:53	0.79	1,773.45	784.01	989.44	0.923	1379-TCDD	AN
	26:59	0.79	2,213.11	977.85	1,235.26	1.000	2378-TCDD	AN
320		3 Peaks						
37Cl-TCDD								
328	27:00		2,014.93	2,014.93		1.001	37Cl-TCDD	CLS
328-330		1 Peak						
13C12-TCDD		0.65-0.89						
332-334	26:48	0.82	20,689.33	9,340.83	11,348.50	0.994	13C12-1234-TCDD	RS1
	26:58	0.81	22,266.65	9,958.35	12,308.30	1.000	13C12-2378-TCDD	IS1
332-334		2 Peaks						
---------- Above: TCDD / PeCDF Follows ----------								
eCDF		1.32-1.78						
340-342	30:10	1.52	13,368.54	8,059.98	5,308.56	1.001	12378-PeCDF	AN
	30:51	1.50	14,193.78	8,515.81	5,677.97	1.023	23478-PeCDF	AN
340-342		2 Peaks						
13C12-PeCDF		1.32-1.78						
352-354	30:09	1.47	28,683.20	17,069.70	11,613.50	1.000	13C12-PeCDF 123	IS2
	30:51	1.47	28,937.50	17,199.40	11,738.10	1.023	13C12-PeCDF 234	SUR1
352-354		2 Peaks						
---------- Above: PeCDF / PeCDD Follows ----------								
PeCDD		1.32-1.78						
356-358	31:11	1.58	8,634.61	5,285.20	3,349.41	1.000	12378-PeCDD	AN
356-358		1 Peak						
13C12-PeCDD		1.32-1.78						
368-370	31:10	1.45	16,008.98	9,482.35	6,526.63	1.000	13C12-PeCDD 123	IS3
368-370		1 Peak						
---------- Above: PeCDD / HxCDF Follows ----------								

Compound/ Z....	..RT.	OK Ratio	Total.Area...	Area.Peak.1..	Area.Peak.2..	Rel.RT	Compound.Name..	ID..
HxCDF		1.05-1.43						
374-376	33:36	1.26	14,341.91	7,983.81	6,358.10	0.998	123478-HxCDF	AN
	33:42	1.25	14,508.43	8,067.25	6,441.18	1.001	123678-HxCDF	AN
	34:11	1.26	14,574.87	8,132.77	6,442.10	1.015	234678-HxCDF	AN
	34:58	1.26	12,795.50	7,133.55	5,661.95	1.038	123789-HxCDF	AN
374-376		4 Peaks						
13C12-HxCDF		0.43-0.59						
384-386	33:36	0.51	27,616.18	9,345.18	18,271.00	0.998	13C12-HxCDF 478	SUR2
	33:41	0.52	26,455.56	9,019.76	17,435.80	1.000	13C12-HxCDF 678	IS4
	34:11	0.52	26,381.51	8,971.91	17,409.60	1.015	13C12-HxCDF 234	ALT2
	34:57	0.52	21,107.83	7,179.23	13,928.60	1.038	13C12-HxCDF 789	ALT1
384-386		4 Peaks						

---------- Above: HxCDF / HxCDD Follows ----------

HxCDD		1.05-1.43						
390-392	34:18	1.26	8,745.36	4,869.50	3,875.86	0.998	123478-HxCDD	AN
	34:23	1.26	8,758.88	4,889.29	3,869.59	1.000	123678-HxCDD	AN
	34:42	1.24	9,012.94	4,993.36	4,019.58	1.010	123789-HxCDD	AN
390-392		3 Peaks						
13C12-HxCDD		1.05-1.43						
402-404	34:17	1.21	17,542.03	9,599.66	7,942.37	0.997	13C12-HxCDD 478	SUR3
	34:22	1.20	16,670.67	9,101.87	7,568.80	1.000	13C12-HxCDD 678	IS5
	34:41	1.20	19,054.86	10,401.60	8,653.26	1.009	13C12-HxCDD 789	RS2
402-404		3 Peaks						

---------- Above: HxCDD / HpCDF Follows ----------

HpCDF		0.88-1.20						
408-410	36:37	1.02	11,908.85	6,013.88	5,894.97	1.001	1234678-HpCDF	AN
	38:09	1.02	10,365.28	5,225.01	5,140.27	1.042	1234789-HpCDF	AN
408-410		2 Peaks						
13C12-HpCDF		0.37-0.51						
418-420	36:36	0.42	19,698.94	5,856.54	13,842.40	1.000	13C12-HpCDF 678	IS6
	38:09	0.42	17,345.82	5,116.62	12,229.20	1.042	13C12-HpCDF 789	SUR4
418-420		2 Peaks						

---------- Above: HpCDF / HpCDD Follows ----------

HpCDD		0.88-1.20						
424-426	37:39	1.07	7,409.69	3,838.31	3,571.38	1.001	1234678-HpCDD	AN
424-426		1 Peak						
13C12-HpCDD		0.88-1.20						
436-438	37:38	1.01	17,200.75	8,630.62	8,570.13	1.000	13C12-HpCDD 678	IS7
436-438		1 Peak						

---------- Above: HpCDD / Octa-CDD and CDF Follows ----

Compound/ M_Z....	..RT.	OK	Ratio	Total.Area...	Area.Peak.1..	Area.Peak.2..	Rel.RT	Compound.Name..	ID..
OCDF			0.76-1.02						
442-444	41:29		0.89	16,800.63	7,928.52	8,872.11	1.005	OCDF	AN
442-444			1 Peak						
OCDD			0.76-1.02						
458-460	41:17		0.83	12,988.87	5,894.22	7,094.65	1.000	OCDD	AN
458-460			1 Peak						
13C12-OCDD			0.76-1.02						
470-472	41:16		0.87	27,455.60	12,782.00	14,673.60	1.000	13C12-OCDD	IS8
470			1 Peak						

Column Description.....

M_Z - Nominal Ion Mass(es)
..RT. - Retention Time (mm:ss)
Rat.1 - Ratio of M/M+2 Ions
OK - RO=Ratio Outside Limits
Rel.RT - Relative Retention Time

*** End of Report ***