

## 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)**

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<b>Date:</b>	September 5, 2002
<b>Client ID:</b>	Mississippi Dept. of Environmental Quality
<b>P.O. Number:</b>	
<b>TLI Project Number:</b>	58258

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Dept. of Environmental Quality have any questions or comments regarding this data package, please feel free to contact one of our Project Scientists at (919) 544-5729.

For Triangle Laboratories, Inc.,

Released by,

*Penny A. Brock*

Penny A. Brock  
Report Preparation Chemist

The total number of pages in the data package is : 270 .

***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
- $A_{\sigma}$  = integrated current for the characteristic ions of the analyte
- $A_{\beta}$  = integrated current of the characteristic ions of the corresponding internal standard
- $Q_{\beta}$  = 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
- $H_{\beta}$  = sum of peak heights of the characteristic ions of the corresponding internal standard
- $Q_{\beta}$  = 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

### ***Data Flags***

In order to assist with data interpretation, data qualifier flags are used on the final reports. Please note that all data qualifier flags are subjective and are applied as consistently as possible. Each flag has been reviewed by two independent Chemists and the impact of the data qualifier flag on the quality of the data discussed above. The most commonly used flags are:

A '**B**' flag is used to indicate that an analyte has been detected in the laboratory method blank as well as in an associated field sample. The '**B**' flag is used only when the concentration of analyte found in the sample is less than 20 times that found in the associated blank. This flag denotes possible contribution of background laboratory contamination to the concentration or amount of that analyte detected in the field sample.

An '**E**' flag is used to indicate a concentration based on an analyte to internal standard ratio which exceeds the range of the calibration curve. Values which are outside the calibration curve are estimates only.

An '**I**' flag is used to indicate labeled standards have been interfered with on the GC column by coeluting, interferent peaks. The interference may have caused the standard's area to be overestimated. All quantitations relative to this standard, therefore, may be underestimated.

A '**J**' flag is used to indicate a concentration based on an analyte to internal standard ratio which is below the calibration curve. Values which are outside the calibration curve are estimates only.

A '**PR**' flag is used to indicate that a GC peak is poorly resolved. This resolution problem may be seen as two closely eluting peaks without a reasonable valley between the peak tops, overly broad peaks, or peaks whose shapes vary greatly from a normal distribution. The concentrations or amounts reported for such peaks are most likely overestimated.

A '**Q**' flag is used to indicate the presence of QC ion instabilities caused by quantitative interferences.

An '**RO**' flag is used to indicate that a labeled standard has an ion abundance ratio that is outside of the acceptable QC limits, most likely due to a coeluting interference. This may have caused the percent recovery of the standard to be overestimated. All quantitations versus this standard, therefore, may be underestimated.

An '**S**' flag indicates that the response of a specific PCDD/PCDF isomer has exceeded the normal dynamic range of the mass spectrometer detection system. The corresponding signal is saturated and the reported analyte concentration is a 'minimum estimate'. When the '**S**' qualifier is used in the reporting of 'totals', there is saturation of one (not

necessarily from a specific isomer) or more saturated signals for a given class of compounds. Results for saturated analytes are reported as greater than the upper calibration limit.

A 'U' flag is used to indicate that a specific isomer cannot be resolved from a large, co-eluting interferent GC peak. The specific isomer is reported as not detected as a valid concentration cannot be determined. The calculated detection limit, therefore, should be considered an underestimated value.

A 'V' flag is used to indicate that, although the percent recovery of a labeled standard may be below a specific QC limit, the signal-to-noise ratio of the peak is greater than ten-to-one. The standard is considered reliably quantifiable. All quantitations derived from the standard are considered valid as well.

An 'X' flag is used to indicate that a polychlorodibenzofuran (PCDF) peak has eluted at the same time as the associated diphenyl ether (DPE) and that the DPE peak intensity is at least ten percent of the total PCDF peak intensity. Total PCDF values are flagged 'X' if the total DPE contribution to the total PCDF value is greater than ten percent. All PCDF peaks that are significantly influenced by the presence of DPE peaks are either reported as "estimated maximum possible concentration (EMPC) values without regard to the isotopic abundance ratio, or are included in the detection limit value depending on the analytical method.



Triangle Laboratories, Inc.

**TRIANGLE LABORATORIES, INC.**

**LIST OF CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

**Primary NELAC Certificate:** Florida Department of Health, #E87769; SDWA, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; CWA, Method 613, 2,3,7,8-TCDD AND Method 1613, PCDD/PCDF & totals; RCRA/CERCLA, Methods 8280/8290, PCDD/PCDF & totals; CAA, TO-9A, all dioxins/furans AND TO-13A, semi-volatiles. Expires June 30, 2003.

**Primary NELAC Certificate:** State of New Jersey, Department of Environmental Protection. ID #NC851. CAA, Methods 0023A and MM5 (Sampling Train). **Secondary NELAC Certificate:** SDWA, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; CWA, Method 1613, PCDD/PCDF & totals; RCRA/CERCLA, Method 8290, PCDD/PCDF & totals. Expires June 30, 2003.

**State of Alabama, Department of Environmental Management.** Laboratory ID # 40950. 2,3,7,8 TCDD (Dioxin) in drinking water. Expires 31 July 2002.

**State of Alaska, Department of Environmental Conservation.** Lab ID #NC-06-00. Certificate number NC00140. 2,3,7,8- TCDD (Dioxin) in drinking water. Expires December 21, 2002.

**State of Arizona, Department of Health Services.** Certificate #AZ0423. Drinking Water for Dioxin, Dioxins in Waste Water and Solid or Hazardous Waste. Expires May 25, 2003.

**State of Arkansas, Department of Environmental Quality.** Pulp/paper, soil, water, and Hazardous Waste for Dioxin/Furans. Expires 8 January 2003.

**Secondary NELAC Certificate:** State of California, Department of Health Services, Certificate No. 01167CA. SDWA, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; CWA, Method 613, 2,3,7,8-TCDD AND Method 1613, PCDD/PCDF & totals; RCRA/CERCLA, Methods 8280/8290, PCDD/PCDF & totals; CAA, TO-9A, all dioxins/furans AND TO-13A, semi-volatiles. Expires October 31, 2002.

**State of Colorado, Department of Public Health and Environment.** SDWA, Dioxin by EPA 1613. Expires April 30, 2003.

**State of Connecticut, Department of Health Services.** Registration # PH-0117. SDWA, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; CWA, Method 1613, PCDD/PCDF & totals; RCRA/CERCLA, Methods 8280/8290, PCDD/PCDF & totals. Expires September 30, 2003.

**Delaware Health and Social Services.** Dioxin Certification waived for out-of-state laboratories; accept home-state Certifications.

**Primary NELAC Certificates:** **Florida Department of Health, #E87769;** SDWA, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; CWA, Method 613, 2,3,7,8-TCDD AND Method 1613, PCDD/PCDF & totals; RCRA/CERCLA, Methods 8280/8290, PCDD/PCDF & totals; CAA, TO-9A, all dioxins/furans AND TO-13A, semi-volatiles. Expires June 30, 2003.

**Georgia Department of Environmental Quality.** Chemical Certification of Drinking Water for Dioxins, method 1613, reciprocity based on North Carolina Certification. SDWA, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; CWA, Method 613, 2,3,7,8-TCDD AND Method 1613, PCDD/PCDF & totals; RCRA/CERCLA, Methods 8280/8290, PCDD/PCDF & totals; CAA, TO-9A, all dioxins/furans AND TO-13A, semi-volatiles; reciprocity based on **FL-DOH NELAC Certificates**. Certificate # 953, expires June 30, 2002.

**Hawaii Department of Health.** Certified for Dioxin under the Safe Drinking Water Act. "Accepted" status for regulatory purposes. Expires June 30, 2003.

**Idaho Department of Health and Welfare.** Dioxin in drinking water, EPA Method 1613. Expires December 31, 2002.

**Secondary NELAC Certificate:** **Illinois Environmental Protection Agency.** Accreditation Number #200007, Certificate #000468; **Drinking Water**, Method 1613, 2,3,7,8-TCDD; **Wastewater, Organic**, Methods 1613 and 613; **Hazardous and Solid Waste, Organic**, Methods 8280A and 8290. Expires 30 September 2002.

**Indiana Department of Health.** Dioxin in drinking water, EPA method 1613. Lab ID # C-NC-01. Expires July 31, 2002.

**Secondary NELAC Certificate:** **State of Kansas, Department of Health and Environment.** Cert. # E-10215. SDWA, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; CWA, Method 1613, PCDD/PCDF; RCRA/CERCLA, Methods 8280/8290, PCDD/PCDF & totals. Expires 31 January 2003.

**Commonwealth of Kentucky, Department for Environmental Protection.** Lab ID #90060. 2,3,7,8 TCDD (Dioxin) in drinking water. Expires December 31, 2002.

**Secondary NELAC Certificate:** **State of Louisiana Department of Environmental Quality.** Certificate # 01979. CAA, TO-9A and TO-13A; CWA, Method 613 2,3,7,8-TCDD and Method 1613 PCDDs/PCDFs; Solid and Hazardous Waste Methods 8280A & 8290 PCDDs/PCDFs; Misc. Methods 1613, 8280A & 8290. Expires 30 June 2003.

**Secondary NELAC Certificate:** **State of Louisiana Department of Health & Hospitals.** Dioxin (2,3,7,8-TCDD) in Drinking Water. Certificate # LA020003. Expires December 31, 2002.

**Maine Department of Human Services.** Certification #: NC140. SDWA, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; CWA, Method 1613, PCDD/PCDF. Expires May 30, 2004.

**Maryland Department of Health and Mental Hygiene.** Certification # 235, SOC 2 (Dioxin). Expires September 30, 2002.

**Commonwealth of Massachusetts, Department of Environmental Protection,** does not require Certification for Drinking Water Dioxin/Furan analysis.

**State of Michigan, Department of Environmental Quality.** 2,3,7,8 TCDD by Method 1613. Expires 31 July 2003.

**Minnesota Department of Health.** The certification program in MN does not include dioxins/furans for CWA, SDWA of RCRA/CERCLA. See U.S. EPA Region V.

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

**Montana Department of Health and Environmental Services.** CERT0019. Dioxin in drinking water. Expires December 31, 2002.

**State of Nebraska Department of Health.** Reciprocal certification through the North Carolina Department of Health and Human services and Florida DOH NELAC Certification. SDWA, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; CWA, Method 613, 2,3,7,8-TCDD AND Method 1613, PCDD/PCDF & totals; RCRA/CERCLA, Methods 8280/8290, PCDD/PCDF & totals; CAA, TO-9A, all dioxins/furans AND TO-13A, semi-volatiles. Expires July 31, 2002.

**State of Nevada, Department of Conservation and Natural Resources.** Lab Certificate No. NC-00140-2002-73, expires July 31, 2002. CWA, Method 1613, PCDD/PCDF & totals, expires July 31, 2002.

**State of Nevada, Department of Human Resources.** Lab Certificate No. NC-00140-2002-73, expires July 31, 2002. SDWA, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water, expires July 31, 2002.

**Primary NELAC Certificate:** State of New Jersey, Department of Environmental Protection. ID #NC851. CAA, Methods 0023A and MM5 (Sampling Train). **Secondary NELAC Certificate:** SDWA, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; CWA, Method 1613, PCDD/PCDF & totals; RCRA/CERCLA, Method 8290, PCDD/PCDF & totals. Expires June 30, 2003.

**State of New Mexico, Environment Department.** Safe Drinking Water Act; 2,3,7,8-TCDD by Method 1613. Expires 30 June 2002.

**Secondary NELAC Certificate:** New York State Department of Health, LAB ID #11026. Potable Water, 2,3,7,8-TCDD, EPA 1613, Serial # 16965; Non-Potable Water, 2,3,7,8-TCDD, EPA 1613, Serial # 16966. Valid through 1 April 2003.

**State of North Carolina, Department of Health and Human Services.** Certificate # 37751. Dioxin in drinking water. Expires July 31, 2003.

**North Dakota State Department of Health and Consolidated Laboratories.** Certificate # R-076. Dioxin in drinking water. Expires June 30, 2002.

**Ohio EPA.** Ohio does not offer out-of-state lab certifications; certification by EPA Region 5 is honored.

**Oklahoma Department of Environmental Quality.** Laboratory #9612. 2,3,7,8 TCDD (Dioxin). Expires August 31, 2003.



**Secondary NELAC Certificate: Oregon Environmental Laboratory Accreditation**

**Program.** Certificate No:-911918452. **SDWA**, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; **CWA**, Method 613, 2,3,7,8-TCDD AND Method 1613, PCDD/PCDF & totals; **RCRA/CERCLA**, Methods 8280/8290, PCDD/PCDF & totals; **CAA**, TO-9A, all dioxins/furans AND TO-13A, semi-volatiles. Expires January 31, 2003.

**State of South Carolina, Department of Health and Environmental Control. 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. Expires June 03, 2001. **Certificate # 99040002** Solid Hazardous Waste- Dioxins/Furans by 8280A and 8290. Expires August 31, 2001. *\*Renewal pending.*

**State of Tennessee. Department of Environment and Conservation.** ID #02992. Dioxin in Drinking water. Expires February 20, 2005.

**Texas Natural Resource Conservation Commission.** Certification Number: TX264-2002A. **SDWA:** Chemistry, Dioxin (2378-TCDD), EPA 1613. Expires January 31, 2004.

**U.S. Army Corps of Engineers.** Validated to perform EPA SW-846, Method 8290, water and solids. Validation expires May 2, 2004.

**Department of the Navy, Naval Facilities Engineering Service Center (NFESC).** Letter of Acceptance for analysis of water and solids by Methods 8280 and 8290. Expires June 30, 2002.

**U.S. EPA Region V.** 2,3,7,8 TCDD (Dioxin) in drinking water by method 1613B. Expires January 19, 2003. [Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin]

**U.S. EPA Region VIII, for the State of Wyoming.** EPA Method 1613 for Dioxin in drinking water. Expires December 30, 2002.

**Secondary NELAC Certificate: State of Utah, Department of Health.** ID # TRIA, Account # 9195445729 **SDWA**, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; **CWA**, Method 1613, PCDD/PCDF & totals; **RCRA/CERCLA**, Methods 8280/8290, PCDD/PCDF & totals. Expires June 30, 2003.

**Commonwealth of Virginia, Department of General Services, Division of Consolidated Laboratory Services.** ID # 00341. 2,3,7,8-TCDD (Dioxin) in drinking water, EPA Method 1613B. Expires June 30, 2003.

**State of Washington, Department of Ecology.** Lab Accreditation Number C067. Scope of Accreditation applies to Dioxins (PCDDs/PCDFs) by EPA methods 613, 1613, 8280, and 8290 in potable and non-potable water. Expires September 11, 2002.

**State of Washington, Department of Health.** Dioxin by 1613 in drinking water. Lab ID 129. Expires April 30, 2003.

**State of West Virginia, Department of Health.** Certificate No. 9923(C). 2,3,7,8-TCDD (Dioxin) in drinking water, SOC III. Expires December 31, 2002.

**State of Wisconsin, Department of Natural Resources.** Laboratory ID Number 999869530. Certified for 2,3,7,8-TCDD (Dioxin) in drinking water and for PCDD/PCDF. Expires August 31, 2002.

**State of Wyoming, see U.S. EPA Region VIII above.**

### **PHARMACEUTICAL**

**Drug Enforcement Agency (DEA).** Registration number RT0195835. Controlled substance registration for schedules 1,2,3,3N,4,5. Expires November 30, 2002.

**N.C. Department of Human Resources.** Registration number NC-PT 0000 0031. North Carolina controlled substances registration for schedules 1, 2, 2N, 3, 3N, 4, 5, 6. Expires October 31, 2002.

**Food & Drug Administration (FDA) Registration.** ID #'s 001500 1053481(ATL). Annual registration of drug establishment. Current for 2002.

### **OTHER**

**Clinical Laboratory Improvement Amendments (CLIA) Registration.** ID # 34D0705123. Department of Health & Human Services, Health Care Financing Administration. Certificate for the Acceptance of Human Specimens for the purposes of performing laboratory examinations or procedures - Chemistry, Toxicology, HCFA. Expires May 30, 2003.

**U.S. Department of Agriculture Soil Permit.** Permit No. S-56724. Under the authority of the Federal Plant Pest Act, permission is granted to receive foreign soil samples for use in laboratory analysis. Expires March 31, 2007.

**U.S. EPA Large Quantity Hazardous Waste Generator.** EPA ID #NCR000137232. Permit indicates that the laboratory is a large generator of hazardous waste. No expiration date.

**U.S. Fish and Wildlife Permit.** Number LE027890-1. Authorization to import/export wildlife and/or wildlife products. Expires April 30, 2003.



DOCUMENT  
CONTROL



# CHAIN OF CUSTODY RECORD

**PROJECT NAME:** Crystal Springs Basin

**LOCATION:**

**SAMPLE TYPES:**  
 1. SURFACE WATER  
 2. GROUND WATER  
 3. POTABLE WATER  
 4. WASTEWATER  
 5. LEACHATE  
 11. OTHER

**SAMPLES (SIGN):**  
 A. *Al Gibson*  
 B. \_\_\_\_\_  
 C. \_\_\_\_\_  
 D. \_\_\_\_\_

**STATION LOCATION/DESCRIPTION:**

SITE NO.	DATE	TIME	COMPL	REMARKS
5	7/9	9:5	X	DF-PP-139
"	"	10:5	X	DE-PP-133
"	"	10:25	X	DE-PP-82
"	"	14:50	X	DF-PP-682

**SHIPPED TO:** *George Lab's Inc.*  
*2415 South Acker Ave.*  
*Dumbarton, AR 72713*

**DATA TO:**

ANALYSIS	REMARKS
COD, TOC, NITRITES	
BOD, SOLIDS	
MEALS (Total) (TOLN)	
PURE MONOMALS	
EXT. ORES/PTCS (TOLN)	
HALOCARBONS	
CHLORIDES	
FECAL COLIFORM	
CH & GROWTH	
PHOSPHORUS	
RETD-RETD-RETD	# 12861
	# 12864
	# 12865
	# 12872

**LAB USE ONLY**

**RECEIVED BY:** *Al Gibson* DATE/TIME: *8/10/95*

**RELINQUISHED BY:** *Al Gibson* DATE/TIME: *8/10/95*

**RECEIVED BY:** *Al Gibson* DATE/TIME: *8/10/95*

**RELINQUISHED BY:** *Al Gibson* DATE/TIME: *8/10/95*

**RECEIVED BY:** *Al Gibson* DATE/TIME: *8/10/95*

**RELINQUISHED BY:** *Al Gibson* DATE/TIME: *8/10/95*

**NOTICE:** Must use a separate form for each ice chest.

DISTRIBUTION: White and Yellow copies accompany sample shipment to lab; Yellow copy retained by lab; White copy is returned to sampler; Pink copy retained by samplers.

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

TLI Project Number 58258  
 Client: MPC01 - Mississippi Dept. of Env. Quality

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Date Received 08/27/02 By *Quinn*  
 Carrier and Number FEDEX

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

Ice Chest ICE PACKS Temp 12.0 C

TLI Number..	Client Sample ID.....	Matrix Location.....	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
334-48-1	DF-DP-179/12861 DF-DP-179/12861	SOIL CO2 SHLF 4 MIDD	<i>Spw</i> 8-28-02	<i>Spw</i> 8-28-02					
334-48-2	DF-DP-137/12864 DF-DP-137/12864	SOIL CO2 SHLF 4 MIDD	✓	✓					
334-48-3	DF-DP-82/12865 DF-DP-82/12865	SOIL CO2 SHLF 4 MIDD	✓	✓					
334-48-4	DF-DP-642/12872 DF-DP-642/12872	SOIL CO2 SHLF 4 MIDD	✓	✓					

Receiving Remarks: Ice packs arrived thawed. 08/27/02 DT

Archive Remarks:

TRIANGLE LABORATORIES, INC.  
SAMPLE TRACKING AND PROJECT MANAGEMENT FORM

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

TLI Proj#: 58258-	Samples: 4	TurnAround.: 21 Day(s)
Prod Code: D01011	Matrix.: Soil	Hold Time.: 30 Day(s)
DetectLim: 1 ppt	Type...: B	Start Date.: 08/27/02
	Recvd...: 08/27/02	Ship By....: 09/15/02
		DWL Due Dt.: 09/06/02

Analyte List.: Tetra - Octa

Method.....: M 8290: Tetra-Octa Dioxin/Furan  
Client Proj.: Crystal Springs Dioxin  
Client.....: Mississippi Dept. of Env. Quality (MPC01)  
P.O. No.....: Contract Collect Dt/Tm: 07/09/02  
Contact.....: Al Gibson Phone.....: 601-664-3900  
Proj. Mgr....: Fax.....: 601-664-3938  
Sample Origin:

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

TEF.....: EPA Prespike Standard: n/a

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

Reporting Format: Report Option II

See MILES for Instructions/Communications.

Completed by: AG / Q. P. DATE: 08-27-02  
Reviewed by: AG / Q. P. DATE: 08-27-02 (PMGT0197)

Sample #	Empty crd R	Wet Vial Vial.Wt	Dry Vial Weight...	Entered.By.....	Date....	Time....	%Moist	%Solid	Valid Weight From.....To.....	Target Weight...
002	Y	19.7500	0.0000	RAGSDALEC	08/28/02	10:04:22	19.8	80.3	11.9552-12.9514	12.4533
003	Y	9.4000	0.0000	RAGSDALEC	08/28/02	10:04:22	9.4	90.6	10.5980-11.4790	11.0375
0031	<no FINAL results found>									
004	Y	12.5700	0.0000	RAGSDALEC	08/28/02	10:04:22	12.6	87.4	10.9840-11.8993	11.4416
0041	<no FINAL results found>									
005	Y	13.3400	0.0000	RAGSDALEC	08/28/02	10:04:22	13.3	86.7	11.0727-11.9954	11.5340
0051	<no FINAL results found>									

Percent Moisture/Solid Summary

TLI.MILES.ID....	TLI.Number..	Client.Id.Number.....	%Moist	%Solid	ExtrectWt	DryWtEqu	RPD..
58258-	-002	334-48-1	DF-DP-179/12861	19.8	80.3	12.500	<del>10.028</del> 10.025
58258-	-003	334-48-2	DF-DP-137/12864	9.4	90.6	11.100	10.057
58258-	-004	334-48-3	DF-DP-82/12865	12.6	87.4	11.500	10.051
58258-	-005	334-48-4	DF-DP-642/12872	13.3	86.7	11.600	10.057

\*\*\* End of Report \*\*\*

18 PaB 9/6/02

Date: 06/28/02  
Time: 16:23

TRIANGLE LABORATORIES, INC.  
Wet Lab Extraction and Observations  
Project: 58258

PRDPERC v4.04  
Page: 1

Sample #	crd	TLI_Number	Customer_Sample_Id	Init. NaOH Adj. pH...	mL...	pH.1.	mL...	pH.2.	Appearance.	Color.....	Odor....	Vol.	Entered.By	Date....	Time.....	S
002		334-48-1	DF-DP-179/12861	n/a	n/a	n/a	n/a	n/a	clay	gray	none	0	white	08/28/02	16:23:27	F
003		334-48-2	DF-DP-137/12864	n/a	n/a	n/a	n/a	n/a	soil	brown	none	0	white	08/28/02	16:23:27	F
004		334-48-3	DF-DP-82/12865	n/a	n/a	n/a	n/a	n/a	soil	brown	none	0	white	08/28/02	16:23:27	F
005		334-48-4	DF-DP-642/12872	n/a	n/a	n/a	n/a	n/a	soil	gray	yes	0	white	08/28/02	16:23:27	F

\*\*\* End of Report \*\*\*



58258

Extraction

Type: Soxhlet / Jar / Sep Funnel / Steam Dist / Cont LL / ASE / Waste Dilution / Solid Phase

S.O.P.: 105 Version: 16

Solvents/Acids	Lot Numbers
Toluene	017635

Time On: 16:15  
Time Off: 8:15

Comments / Observations: Blank/LCS/LSD are Sand (Lot# S3-8-57P), 58139-002-sand, tan, no odor, 003-sand, gray, no odor, 004-soil, brown, no odor, 58258-002-clay, gray, no odor, 003-soil, brown, no odor, 004-soil, brown, no odor, 005-soil, gray, odor. SPW 8-28-02

Concentration

Type: Rotovap / KD / Speedvac

S.O.P.: 124 Version: 18 8/29/02

Solvent Exchange	Lot Number
Heptane	024949
Iso - Octane	N/A

Tridecane Lot # FT-1-25-3046 AA 8/29/02

Division: 20%/80% 50%/50% 5ml/20ml Other \_\_\_\_\_

Comments / Observations: \_\_\_\_\_

Cleanup

S.O.P.: 280 Version: 4 J.Lewis  
S.O.P.: 260 Version: 5 8/29/02  
S.O.P.: 2100 Version: 15 JJ 8/29/02  
L.P. 8/30/02

MeCl2/Hept	Lot
1.5% (W-0118-11)	CUSPL-18-111
20% (W-0118-11)	CUSPL-18-111
6% Hept	024949

Comments / Observations: Acid coated silica-gel (SEA-8010), glass wool (GUND-10-940) 50 grams, 200-200 (204557) 38139 (4) 100 grams clean-up blank 50 grams J.Lewis 8/29/02

Transfers

S.O.P.: 272 Version: 9  
Division: 90/10 ESP 010 v. 1 JJ 8/30/02

Solvents	Lot Numbers
Heptane	024949

Comments: 90/10 split was done on 58139-002, 003 and 004. Both fractions will be sent to ms. JJ 8/30/02

\*\*\* Indicate the portion of any division that is processed or relinquished to mass spec.

Method: 8290  
 Matrix: Soil  
 Ext. Date: 8-28-02  
 Analyst: S. White

SPW	SPW	CSC		Chemist
8272J	8269F	8268T		Spike #
USF-ALS	USF-mx	USF-C		Spike ID
5/24/03	4/29/03	06/24/03	1/1	" Exp.
8/28/02	8/28/02	08/29/02	1/1	" Date
15:30	15:30	15:30		" Time
0.10 ug/mL	0.01 ug/mL	1.01 ug/mL		Concn.
20 uL	40 uL	20 uL		Volume

Project-Sample ID / TLI ID			Gross Weight Before (g) After (g)		Sample Size (g) / mL					
58139	1	TLI Blank			10.0	SPW		CSC		Any Left Yes/No
58139	2	PC01157 333-28-1A	74.7	64.6	10.1					Yes/No
58139	3	PC00816 333-28-1B	75.4	65.3	10.1					Yes/No
58139	4	333-28-2	374.3	362.8	11.4					Yes/No
58139	5	TLI LCS			10.0	SPW	SPW			Yes/No
58139	6	TLI LCSD			10.0	SPW	SPW	CSC		Yes/No
<del>58128 r1</del>	<del>2</del>	<del>333-17-1</del>	<del>195.5</del>	<del>187.2</del>	<del>11.2</del>					<del>Yes/No</del>
<del>58128 r1</del>	<del>3</del>	<del>333-17-2</del>	<del>270.1</del>	<del>259.9</del>	<del>10.1</del>					<del>Yes/No</del>
<del>58128 r1</del>	<del>4</del>	<del>333-17-3</del>	<del>136.6</del>	<del>133.0</del>	<del>3.59</del>					<del>Yes/No</del>
58212 r1	2	334-2-1	283.9	265.0	18.8	SPW		CSC		Yes/No
58212 r1	3	334-2-2	265.9	251.5	14.2					Yes/No
58212 r1	4	334-2-3	279.8	263.2	16.4					Yes/No
58212 r1	5	334-2-4	295.0	279.2	15.7					Yes/No
58212 r1	6	334-2-5	297.4	282.7	14.3	SPW		CSC		Yes/No

Method: 8290  
 Matrix: SWI  
 Ext. Date: 8-28-02  
 Analyst: S. White

SW	CSC	CSC	CSC	Chemist
8272J	87685	8190E	82686	Spike #
USFALS	USFC	USFAPS	USFC	Spike ID
5/12/03	06/24/03	04/29/03	06/24/03	" Exp.
8/28/02	08/29/02	08/29/02	08/29/02	" Date
15:30	15:30	16:30	16:30	" Time
0.10ug/mL	0.21ug/mL	0.10ug/mL	0.10ug/mL	Concen.
20 uL	20 uL	20 uL	20 uL	Volume

Project-Sample ID / TLI ID			Gross Weight Before (g)	Gross Weight After (g)	Sample Size (g) / mL	SW	CSC	CSC	CSC	Chemist
58258	2	334-48-1	642.2	629.4	12.5	SW	CSC	NA	NA	(Yes) No
58258	3	334-48-2	579.6	568.3	11.1	↓	↓	↓	↓	(Yes) No
58258	4	334-48-3	489.2	477.6	11.5	↓	↓	↓	↓	(Yes) No
58258	5	334-48-4	510.8	499.2	11.6	SW	CSC	NA	NA	(Yes) No
58139-007 + TLI Clean-Up						NA	NA	CSC	CSC	Yes / No
										Yes / No
										Yes / No
										Yes / No
										Yes / No
										Yes / No
										Yes / No
										Yes / No
										Yes / No
										Yes / No
										Yes / No
										Yes / No

Project-Sample ID / TLI ID			1	2	3	4	7	8A	3/LI	8B	6	9
58139	1	TLI Blank	SW 8/28/02	CSC 8/29/02	AA 8/29/02	AA 8/29/02	AA 8/29/02	N/A	RP	LP 8/29/02	N/A	JJ 8/30/02
58139	2	333-28-1A	↓	↓	↓	↓	↓	N/A	↓	↓	JJ 8/30/02	↓
58139	3	333-28-1B	↓	↓	↓	↓	↓	N/A	RP	↓	↓	↓
58139	4	333-28-2	↓	↓	↓	↓	↓	8/29/02 JL	8/29/02 JL	↓	JJ 8/30/02	↓
58139	5	TLI LCS	↓	↓	↓	↓	↓	N/A	JL	↓	N/A	↓
58139	6	TLI LCSD	SW 8/28/02	CSC 8/29/02	AA 8/29/02	AA 8/29/02	AA 8/29/02	JL 8/29/02	N/A	LP 8/29/02	N/A	JJ 8/30/02
<del>58128 r1</del>	<del>2</del>	<del>333-17-1</del>	<hr/>									
<del>58128 r1</del>	<del>3</del>	<del>333-17-2</del>	<hr/>									
<del>58128 r1</del>	<del>4</del>	<del>333-17-3</del>	<hr/>									
58212 r1	2	334-2-1	SW 8/28/02	CSC 8/29/02	AA 8/29/02	AA 8/29/02	AA 8/29/02	N/A	ASA	LP 8/29/02	N/A	JJ 8/30/02
58212 r1	3	334-2-2	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
58212 r1	4	334-2-3	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
58212 r1	5	334-2-4	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
58212 r1	6	334-2-5	SW 8/28/02	CSC 8/29/02	AA 8/29/02	AA 8/29/02	AA 8/29/02	JL 8/29/02	N/A	LP 8/29/02	N/A	JJ 8/30/02

- 1) Extraction 2) Spike after extraction 3) Add Tridecane 4) Concentrate (40mL / 10 mL / Tridecane) 5) Combine  
 6) Divide / Lipid Determ. 7) Solvent Exchange 8) Cleanup (DSP260 / DSP280 / SA / SA) 9) Transfer ( ) Other:



TRIANGLE LABORATORIES, INC.  
Transfer Chain-of-Custody Form  
Project 58258

Transfer From: DWLH5 To: DMS5

	Initials..	Date.....	Time...
Released by:	<u>JJ</u>	<u>8/30/02</u>	<u>19:51</u>
Accepted by:	<u>JSY</u>	<u>8/31/02</u>	<u>19:41</u>

MILES.ID.....	TLI_No.....	Cust.Id.....
58258- -002	334-48-1	DF-DP-179/12861
58258- -003	334-48-2	DF-DP-137/12864
58258- -004	334-48-3	DF-DP-82/12865
58258- -005	334-48-4	DF-DP-642/12872

-----XfrCOC (Rev 11/01/94)-----

Additional comments or instructions:

TRIANGLE LABORATORIES, INC.  
HR GC/HRMS ANALYSIS

Method: M 8290: Tetra-Octa Dioxin/Furan  
Required Detection Limit: 1 ppt

PROJECT: 58258

SAMPLE INFORMATION

RS Conc

1ST COLUMN

2ND COLUMN

20 µl @ 100.0 PG/µl

S#.ord	TLI /	CLIENT	GC/MS FILENAME	CONFIRM	CONFIRM FILENAME	USF-RS	USF-RS	ANALYSIS
	SAMPLE ID /		COLUMN: <u>DB5</u>		COLUMN: <u>DB-225</u>	VOLUME	INIT.	COMMENTS
	SAMPLE ID	SAMPLE ID				SOLN ID	DATE	
002	334-48-1	DF-DP-179/12861	<u>U131905</u>	<u>N</u>		<u>20ul</u> <u>826914</u>	<u>6/14/02</u>	<u>Batched with</u> <u>58139</u>
003	334-48-2	DF-DP-137/12864	<u>U131904</u>	<u>Y</u>	<u>P023219</u>			
004	334-48-3	DF-DP-82/12865	<u>U131905</u>	<u>Y</u>	<u>P023220</u>			
005	334-48-4	DF-DP-642/12872	<u>U131906</u>	<u>Y</u>	<u>P023221</u>	<u>20ul</u> <u>826914</u>	<u>6/14/02</u>	

Comments: \_\_\_\_\_

Type: B

Spike File: SPMIT22S

Amt of Extract: 100%

---REV 03/07/95 (PSTMF 6)---

Triangle Laboratories, Inc.  
Run Log

Instrument ID: 704-84 Column Type: DB5 Column ID: 2287026 Plot Name: 102 Inj. Vol.: 2.011 Acquisition: MS545 G/C: MS545  
 Date: 9/3/02 Signature: John Wilton Date: 9/3/02

Filename	Date*	Time*	Project #	Sample#	No.	Client Sample ID	Syr	332	Operator/Date	Comments**
1131406	9/3/02	22:28	580701	332-75-26	6	PH4-5B-79.1	Auto	2.7 E7	Jan 9/3/02	
07	9/3/02	23:17		332-75-27	7	PH4-5B-79.4		6.0 E6		
08	9/4/02	00:06		332-75-32	12	PH4-5B-75.1		2.3 E7		
09		00:55		332-75-33	13	PH4-5B-75.4		1.2 E7		
10		01:44		332-75-35	14	PH4-5B-67.0		1.7 E7		
11		02:33		332-75-36	15	PH4-5B-67.1		1.8 E7		
1131412	9/4/02	03:20	580701	332-75-38	17	ST-MMS-005	Auto	4.0 E6	Jan 9/3/02	
11021315	9/4/02	04:25		8217	-	12901613 Coned 10	Aut	1.1 E7	Jan 9/4/02	Check F16 8030702 Jan
1131401		05:35		8250	-	PTCHK	Aut	18.0	Jan 9/4/02	
02		06:23	58139	TLG Blank	1	TLG Blank		9.3 E6		
03		07:12	580702	332-00-14	15	02B75-2124SL		1.4 E7		
04		08:01		↓ -5	14	02B75-2045L		1.1 E7		
1131405	9/4/02	08:50	580702	332-00-10	17	02B75-2735L	Aut	1.2E7	Jan 9/4/02	

Transcribed from chromatographic data  
 Dated initials required

ConCal Due: \_\_\_\_\_  
 ConCal Due: \_\_\_\_\_



Instrument ID: 900-84      Column Type: PBS      Column ID: 2087824      Plot Name: TR      Ini. Vol: 2.22      Acquisition: MDP562      GIC: MDP562  
 Date: 9/4/02      Signature: [Signature]      Date: 9/4/02

Filename	Date*	Time*	Project #	Sample#	No.	Client Sample ID	Syr	332	Operator/Date	Comments**
U131604	9/4/02	1023	5802A2	332-62-MS	18	02875270 SL MS	Aut	1.4E7	Jan 9/4/02	
07		1112	↓	↓ - 16MP	19	02875270SL-MS#		1.5E7		
08		1200	58139	333-28-1A	2	007710		9.5EG		
09		1248		↓ - 16MP	3	007710		1.4E7		
10		1336		333-28-2	4	007705		1.0E7		
11		1425		TRUS	5	TRUS		9.9EG		
12		1513		TRUS	4	TRUS		7.8EG		
U131613	9/4/02	-	58139	TRUS	7	Clamp BK	Aut	-	Jan 9/4/02	Sample Removed from Auton 080 9402
U021317	9402	1610	-	8217	-	8290/1613 CONCALIO	AUTO	1.8E7	Jan 9/4/02	GOOD 8290 T-20 FIB TFE 9/4/02
U021318	9402	1720	-	8280	-	RECHK	Auto	16%	TFE 9402	
U021319	9/4/02	18:20	-	8269F	-	85100/A15	Aut	1.3	Jan 9/4/02	Use 4.5/02
↓ 02		19:11	58139	TRUS	-	Clamp BK	↓	1.1		
U131908	9/4/02	20:00	58258	334-48-1	2	58258-179000 Aut	Auto	1.1	Jan 9/4/02	

Instrument ID: 701184 Column Type: 385 Column ID: 2287826 Plot Name: TR2 Inj. Vol.: 20µl Acquisition: 180545 G/C: 180545  
 Date: 9/10/02 Signature: [Signature] Date: 9/10/02

Filename	Date*	Time*	Project #	Sample#	No.	Client Sample ID	Syr	332	Operator/Date	Comments**
1131904	9/10/02	20:48	58258	334-48-2	3	SF-SP-157/2864	Auto	1.5 E7	Jan 9/10/02	
05		21:37	↓	334-48-2	4	SF-SP-82/2865		1.9 E7		
06		22:26	58258	334-48-3	5	SF-SP-82/2872		6.8 E6		
07		23:14	58258	334-2-1	2	SU-844-081602		1.5 E7		
08	9/5/02	00:03	↓	334-2-2	3	SU-140081602		1.1 E7		
09		00:51	↓	334-2-3	4	SU-145081602		1.2 E7		
1131910	9/5/02	01:40	58258	334-2-4	5	SU-846-081602	Auto	1.0 E7	Jan 9/10/02	Good F18 8205, and not good 1400 7-3 9/15/02
11321320	9/5/02	02:49	—	8210	—	8290/1413 0mcl10	Auto	1.7 E7	Jan 9/15/02	
1132101	9/5/02	03:09	—	8290	—	PTCCK	Auto	1.7 E7	Jan 9/15/02	
↓ 02		04:42	57981A1	OPR	0	OPR	↓	4.8 E6	Jan 9/15/02	
1132103	9/5/02	05:31	↓	Tra Blank	1	Tra Blank	Auto		Jan 9/15/02	
1132201			58102r1	OPR	0	OPR	↓		Jan 9/15/02	
1132202	9/5/02		58102r1	Tra Blank	1	Tra Blank	Auto		Jan 9/15/02	

ConCal Due: 4:10 Jan 9/10/02  
 ConCal Due: \_\_\_\_\_

\* Transcribed from chromatographic data  
 \* Dated initials required

Run Log

Instrument ID 109-38 Column Type DB 225 Column ID 2153914 Plot Name T77 Inj. Vol. 20ul Acquisition DB 225 G/C DB 225  
 Date 9/4/02 Signature [Signature] Date 9/4/02

Filename	Date*	Time*	Project #	Sample#	No.	Client Sample ID	Syr	332	Operator/Date	Comments**
P023208	9/4/02	0843	58246	M23 dring	3	DF-2A, 2B, 2C	Aut	1.5EG	Jan 9/4/02	
P023209	J	0929	↓	↓	4	DF-3A, 3B, 3C	AUTO	1.3EG	↓	
P023210	9402	1300	-	8217	-	8290/1613 CONCALID	AUTO	9.6E5	QA 9402	Good All Methods F/B QA 9402
P023211	9402	1353	-	8280	-	RTCHK	AUTO	18%	QA 9402	
↓ 212	↓	1449	-	8269/8234E	-	RS/AIS BLANK	↓	5.2E5	↓	Clean QA 9402
↓ 213	↓	1533	58139	333-28-1B	3	D07710	↓	9.4E5	↓	
P023214	9402	1619	58139	333-28-2	4	D07705	AUTO	2.5E5	QA 9402	
P023215	9/4/02	20:42	-	8217	-	8290/1613 CONCALID	Auto	8.0	Jan 9/4/02	QA 9402, 5, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100
P023217	9/5/02	01:30	-	8220	-	RTCHK	Aut	20%	Jan 9/5/02	
P023218	↓	04:10	-	8202	-	RS-100	Aut	1.5	Jan 9/5/02	Clean QA 9402
P023219	↓	04:57	58258	334-48-2	3	DF-08-137/12804	↓	7.7	↓	
P023220	↓	11:543	↓	↓ -3	4	DF-08-82/12805	↓	5.3	↓	
P023221	9/5/02		58258	334-48-4	5	DF-08-040/12872	Aut		Jan 9/5/02	

Transcribed from chromatographic data

Dated initials required

[Signature]

ConCal Due: \_\_\_\_\_  
 ConCal Due: \_\_\_\_\_





SAMPLE  
DATA

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

Project: 58258  
Matrix: SAND  
Method: 8290

Isomer	U131602 ID: TLI Blank Sample (pg/g)	U131611 ID: TLI LCS With Spike (pg/g)	Percent Recovery	U131612 ID: TLI LCSD Spike Dup (pg/g)	Percent Recovery	Relative Percent Difference
2378-TCDD	ND	46.5	116	47.0	118	1.71
12378-PeCDD	ND	226	113	237	118	4.33
123478-HxCDD	ND	218	109	222	111	1.82
123678-HxCDD	ND	211	105	227	113	7.34
123789-HxCDD	ND	230	115	241	121	5.08
1234678-HpCDD	ND	200	100	201	101	1.00
OCDD	ND	319	79.7	308	77.0	3.45
2378-TCDF	ND	46.6	117	48.7	122	4.18
12378-PeCDF	ND	224	112	227	113	0.89
23478-PeCDF	ND	213	107	245	122	13.1
123478-HxCDF	ND	208	104	217	108	3.77
123678-HxCDF	ND	210	105	216	108	2.82
234678-HxCDF	ND	227	113	221	110	2.69
123789-HxCDF	ND	213	107	230	115	7.21
1234678-HpCDF	ND	228	114	233	117	2.60
1234789-HpCDF	ND	214	107	216	108	0.93
OCDF	ND	294	73.6	302	75.5	2.55

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

MILES 4.22.16  
GRY\_PSUM v1.11

Processed By: \_\_\_\_\_

Date: 09/05/02

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

Data File	U131602	U131903	U131904	U131905
Sample ID	TLI Blank	DF-DP-179/12861	DF-DP-137/12864	DF-DP-82/12865
Units	pg/g	pg/g	pg/g	pg/g
Extraction Date	08/28/2002	08/28/2002	08/28/2002	08/28/2002
Analysis Date	09/04/2002	09/04/2002	09/04/2002	09/04/2002
Instrument	U	U	U	U
Matrix	SAND	SOIL	SOIL	SOIL
Extraction Type				

Analytes				
2378-TCDD	(0.6)	(0.5)	{0.94} J	{0.19} J
12378-PeCDD	(0.7)	(0.6)	9.1	{14.3}
123478-HxCDD	(0.8)	(0.7)	8.2	9.9
123678-HxCDD	(0.8)	(0.6)	74.7	104
123789-HxCDD	(0.8)	{0.71} J	33.5	38.2
1234678-HpCDD	(1.1)	9.7	204	433
OCDD	(1.6)	191	8120 E	3440
2378-TCDF	(0.4)	(0.3)	14.1	197
12378-PeCDF	(0.4)	(0.4)	14.2	47.8
23478-PeCDF	(0.4)	(0.4)	29.2	114
123478-HxCDF	(0.5)	6.3	191	1500
123678-HxCDF	(0.4)	{0.73} J	76.0	135
234678-HxCDF	(0.5)	{0.72} J	82.8	130
123789-HxCDF	(0.6)	(0.6)	1.2 J	{0.3}
1234678-HpCDF	(0.7)	25.9	3050 E	4720 E
1234789-HpCDF	(0.9)	(0.9)	47.6	176
OCDF	(1.2)	5.1 J	545	1750
TOTAL TCDD	(0.6)	(0.5)	24.5	21.6 Q
TOTAL PeCDD	(0.7)	(0.6)	40.5	17.2
TOTAL HxCDD	(0.8)	3.7	484	270
TOTAL HpCDD	(1.1)	22.0	379	749
TOTAL TCDF	(0.4)	11.3	229 X	4400 E
TOTAL PeCDF	(0.4)	28.7	897	13590 E
TOTAL HxCDF	(0.5)	23.3	2070	6900 XE
TOTAL HpCDF	(0.8)	38.4	4830 E	8200 E

Other Standards Percent Recovery Summary (% Rec)

37C1-TCDD	59.5	60.6	86.2	909
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Other Standards Percent Recovery Summary (% Rec)

13C12-PeCDF 234	70.3	65.9	66.4	77.5
13C12-HxCDF 478	86.9	77.6	70.5	92.7
13C12-HxCDD 478	79.2	77.8	73.1	86.9
13C12-HpCDF 789	88.7	66.0	66.3	77.5

Other Standards Percent Recovery Summary (% Rec)

13C12-HxCDF 789	100	76.9	74.1	99.2
13C12-HxCDF 234	96.9	81.7	73.7	90.9

Internal Standards Percent Recovery Summary (% Rec)

13C12-2378-TCDF	62.0	63.3	65.5	82.4
13C12-2378-TCDD	62.1	62.0	65.4	86.7

Data File	U131602	U131903	U131904	U131905
Sample ID	TLI Blank	DF-DP-179/12861	DF-DP-137/12864	DF-DP-82/12865
Units	pg/g	pg/g	pg/g	pg/g
Extraction Date	08/28/2002	08/28/2002	08/28/2002	08/28/2002
Analysis Date	09/04/2002	09/04/2002	09/04/2002	09/04/2002
Instrument	U	U	U	U
Matrix	SAND	SOIL	SOIL	SOIL
Extraction Type				

Internal Standards	Percent Recovery	Summary (% Rec)			
13C12-PeCDF 123	68.4	65.7	68.6	78.2	
13C12-PeCDD 123	74.0	73.3	75.1	94.3	
13C12-HxCDF 678	91.5	78.4	72.0	84.3	
13C12-HxCDD 678	76.1	78.2	67.7	83.3	
13C12-HpCDF 678	81.9	66.6	66.9	74.9	
13C12-HpCDD 678	93.6	67.6	67.4	81.2	
13C12-OCDD	108	77.1	96.8	90.7	



```

=====
Data File      U131906      U131611      U131612
Sample ID     DF-DP-642/12872  TLI LCS      TLI LCSD

Units
Extraction Date 08/28/2002  08/28/2002  08/28/2002
Analysis Date  09/04/2002  09/04/2002  09/04/2002
Instrument       U            U            U
Matrix          SOIL        SAND         SAND
Extraction Type
=====
  
```

```

Analytes
2378-TCDD      (1.5)          46.5          47.0
12378-PeCDD   (1.8)          226           237
123478-HxCDD  (2.9) J        218           222
123678-HxCDD  (7.2)          211           227
123789-HxCDD  (4.6) J        230           241
1234678-HpCDD 53.8          200           201
OCDD          2380          319           308
2378-TCDF     600 E         46.6          48.7
12378-PeCDF   184 X         224           227
23478-PeCDF   527           213           245
123478-HxCDF 1460          208           217
123678-HxCDF 195           210           216
234678-HxCDF 226           227           221
123789-HxCDF 7.9           213           230
1234678-HpCDF 1780          228           233
1234789-HpCDF 513           214           216
OCDF          3580          294           302
TOTAL TCDD    {26.7} Q
TOTAL PeCDD   {109} Q
TOTAL HxCDD   19.4
TOTAL HpCDD   120
TOTAL TCDF    2440 E
TOTAL PeCDF   3720
TOTAL HxCDF   3890
TOTAL HpCDF   4150
  
```

```

Other Standards Percent Recovery Summary (% Rec)
37C1-TCDD      133           61.5          62.8
  
```

```

Other Standards Percent Recovery Summary (% Rec)
13C12-PeCDF 234 124 81.8 73.9
13C12-HxCDF 478 83.6 84.8 97.6
13C12-HxCDD 478 87.9 89.5 87.6
13C12-HpCDF 789 82.5 71.5 88.4
  
```

```

Other Standards Percent Recovery Summary (% Rec)
13C12-HxCDF 789 79.8 90.2 106
13C12-HxCDF 234 88.4 96.2 103
  
```

```

Internal Standards Percent Recovery Summary (% Rec)
13C12-2378-TCDF 86.2 64.9 66.8
13C12-2378-TCDD 92.7 65.7 64.0
  
```

```
=====
Data File          U131906          U131611          U131612
Sample ID         DF-DP-642/12872      TLI LCS          TLI LCSD

Units             pg/g             pg/g             pg/g
Extraction Date   08/28/2002       08/28/2002       08/28/2002
Analysis Date     09/04/2002       09/04/2002       09/04/2002
Instrument         U                 U                 U
Matrix            SOIL             SAND             SAND
Extraction Type
```

```
=====
Internal Standards Percent Recovery Summary (% Rec)
13C12-PeCDF 123      108             88.9            72.0
13C12-PeCDD 123      134             96.9            81.0
13C12-HxCDF 678      83.5            87.9            98.1
13C12-HxCDD 678      83.0            79.7            85.7
13C12-HpCDF 678      71.5            71.4            88.0
13C12-HpCDD 678      76.9            72.2            90.0
13C12-OCDD          77.6            85.3            97.4
=====
```

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

```
=====
Data File          P023219          P023220          P023221
Sample ID         DF-DP-137/12864 DF-DP-82/12865  DF-DP-642/12872

Units             pg/g             pg/g             pg/g
Extraction Date   08/28/2002      08/28/2002      08/28/2002
Analysis Date     09/05/2002      09/05/2002      09/05/2002
Instrument         P                P                P
Matrix            SOIL            SOIL            SOIL
Extraction Type

=====
Analytes
2378-TCDF         5.4             103             440             E

Internal Standards Percent Recovery Summary (% Rec)
13C12-2378-TCDF  63.3           92.2           96.2
=====
```

**Mississippi Dept. of Env. Quality**

TLI Project: **58258**  
 Client Sample: **TLI Blank**

Method 8290 PCDD/PCDF Analysis (b)  
 Analysis File: **U131602**

Client Project:	<b>Crystal Springs Dioxin</b>		
Sample Matrix:	<b>SAND</b>	Date Received:	<b>/ /</b>
TLI ID:	<b>TLI Blank</b>	Date Extracted:	<b>08/28/2002</b>
		Date Analyzed:	<b>09/04/2002</b>
		Spike File:	<b>SPMIT32S</b>
		ICal:	<b>UF57092</b>
		ConCal:	<b>U021315</b>
Sample Size:	<b>10.000 g</b>	Dilution Factor:	<b>n/a</b>
Dry Weight:	<b>n/a</b>	Blank File:	<b>U131602</b>
GC Column:	<b>DB-5</b>	Analyst:	<b>JMM</b>
		% Moisture:	<b>n/a</b>
		% Lipid:	<b>n/a</b>
		% Solids:	<b>n/a</b>

Analytes	Conc. (pg/g)	DL	EMPC	Ratio	RT	Flags
2,3,7,8-TCDD	ND	0.6				—
1,2,3,7,8-PeCDD	ND	0.7				—
1,2,3,4,7,8-HxCDD	ND	0.8				—
1,2,3,6,7,8-HxCDD	ND	0.8				—
1,2,3,7,8,9-HxCDD	ND	0.8				—
1,2,3,4,6,7,8-HpCDD	ND	1.1				—
1,2,3,4,6,7,8,9-OCDD	ND	1.6				—
2,3,7,8-TCDF	ND	0.4				—
1,2,3,7,8-PeCDF	ND	0.4				—
2,3,4,7,8-PeCDF	ND	0.4				—
1,2,3,4,7,8-HxCDF	ND	0.5				—
1,2,3,6,7,8-HxCDF	ND	0.4				—
2,3,4,6,7,8-HxCDF	ND	0.5				—
1,2,3,7,8,9-HxCDF	ND	0.6				—
1,2,3,4,6,7,8-HpCDF	ND	0.7				—
1,2,3,4,7,8,9-HpCDF	ND	0.9				—
1,2,3,4,6,7,8,9-OCDF	ND	1.2				—

Totals	Conc. (pg/g)	Number	DL	EMPC	Flags
Total TCDD	ND		0.6		—
Total PeCDD	ND		0.7		—
Total HxCDD	ND		0.8		—
Total HpCDD	ND		1.1		—
Total TCDF	ND		0.4		—
Total PeCDF	ND		0.4		—
Total HxCDF	ND		0.5		—
Total HpCDF	ND		0.8		—

**Mississippi Dept. of Env. Quality**

TLI Project: **58258**  
 Client Sample: **TLI Blank**

Method 8290 PCDD/PCDF Analysis (b)  
 Analysis File: **U131602**

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	124	62.0	40%-135%	0.78	26:02	---
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	124	62.1	40%-135%	0.78	26:45	---
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	137	68.4	40%-135%	1.58	29:58	---
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	148	74.0	40%-135%	1.59	30:59	---
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	183	91.5	40%-135%	0.51	33:32	---
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	152	76.1	40%-135%	1.32	34:12	---
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	164	81.9	40%-135%	0.48	36:26	---
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	187	93.6	40%-135%	1.10	37:27	---
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8,9-OCDD	433	108	40%-135%	0.87	41:03	---

Surrogate Standards (Type B)	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	141	70.3	40%-135%	1.58	30:40	---
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	174	86.9	40%-135%	0.52	33:26	---
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	158	79.2	40%-135%	1.29	34:07	---
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	177	88.7	40%-135%	0.46	37:58	---

Other Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	Flags
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	11.9	59.5	40%-135%	26:46	---

Alternate Standards (Type B)	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	201	100	40%-135%	0.51	34:47	---
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	194	96.9	40%-135%	0.52	34:01	---

Recovery Standards	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	0.82	26:33	---
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	1.33	34:31	---

Data Reviewer: \_\_\_\_\_ *AT* \_\_\_\_\_ 09/05/2002

**Mississippi Dept. of Env. Quality**

TLI Project: **58258**  
 Client Sample: **TLI Blank**

Toxicity Equivalents Report  
 Analysis File: **U131602**

Client Project:	<b>Crystal Springs Dioxin</b>		
Sample Matrix:	<b>SAND</b>	Date Received:	<b>08/27/02</b>
TLI ID:	<b>TLI Blank</b>	Date Extracted:	<b>08/28/02</b>
		Date Analyzed:	<b>09/04/02</b>
		Spike File:	<b>SPMIT32S</b>
		ICal:	<b>UF57092</b>
		ConCal:	<b>U021315</b>
Sample Size:	<b>10.000 g</b>	Dilution Factor:	<b>1</b>
Dry Weight:	<b>n/a</b>	Blank File:	<b>U131602</b>
GC Column:	<b>DB-5</b>	Analyst:	<b>JMM</b>
		% Moisture:	<b>n/a</b>
		% Lipid:	<b>n/a</b>
		% Solids:	<b>n/a</b>

Analytes	Conc. (pg/g)		TEF		Equivalent
2,3,7,8-TCDD	{0.6}	x	1	=	0.6
1,2,3,7,8-PeCDD	{0.7}	x	0.5	=	0.4
1,2,3,4,7,8-HxCDD	{0.8}	x	0.1	=	0.08
1,2,3,6,7,8-HxCDD	{0.8}	x	0.1	=	0.08
1,2,3,7,8,9-HxCDD	{0.8}	x	0.1	=	0.08
1,2,3,4,6,7,8-HpCDD	{1.1}	x	0.01	=	0.011
1,2,3,4,6,7,8,9-OCDD	{1.6}	x	0.001	=	0.0016
TOTAL PCDD					1.3
2,3,7,8-TCDF	{0.4}	x	0.1	=	0.04
1,2,3,7,8-PeCDF	{0.4}	x	0.05	=	0.02
2,3,4,7,8-PeCDF	{0.4}	x	0.5	=	0.2
1,2,3,4,7,8-HxCDF	{0.5}	x	0.1	=	0.05
1,2,3,6,7,8-HxCDF	{0.4}	x	0.1	=	0.04
2,3,4,6,7,8-HxCDF	{0.5}	x	0.1	=	0.05
1,2,3,7,8,9-HxCDF	{0.6}	x	0.1	=	0.06
1,2,3,4,6,7,8-HpCDF	{0.7}	x	0.01	=	0.007
1,2,3,4,7,8,9-HpCDF	{0.9}	x	0.01	=	0.009
1,2,3,4,6,7,8,9-OCDF	{1.2}	x	0.001	=	0.0012
TOTAL PCDF					0.5

**Total EPA TEFs, 1989a: 1.7 pg/g**

{...} indicates that the value is that of a Detection Limit.

Initial .....Date....

Data Review By:

AV 9/5/02

Calculated Noise Height: 1.82

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 U131602B.dbf  
09/05/2002 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.

		0.65-0.89			0.962-1.038		
13C12-TCDF							
316-318	DC NL	Height	5.50	2.87	2.63		
		25:02	0.74	31.36	13.37	17.99	0.962
		25:20	RO 0.41	28.92	12.58	30.83	0.973
		25:38	RO 0.59	80.80	35.15	59.71	0.985
		26:02	0.78	7,569.00	3,309.12	4,259.88	1.000
			Height	1,801.61	782.86	1,018.75	
		26:33	0.83	23.77	10.78	12.99	1.020
		26:45	RO 1.27	17.08	12.29	9.65	1.028
316-318		6 Peaks		7,750.93			

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

		0.65-0.89			0.900-1.044		
TCDD							
320-322	DC NL	Height	3.94	1.94	2.00		
	DC SN	27:26	RO 1.43	6.69		1.026	
320-322		0 Peaks		0.00			
37C1-TCDD					0.925-1.075		
328	DC NL	Height	1.85	1.85			
	DC WL	24:14		7.80		0.906	
	DC WL	24:30		6.27		0.916	
	DC WL	24:32		0.98		0.917	
	DC WL	24:35		3.56		0.919	
		25:24		31.99	31.99	0.950	
	DC SN	25:35		5.05		0.956	
		26:46		543.85	543.85	1.001	37C1-TCDD CLS
	DC SN	27:06		6.37		1.013	
	DC SN	27:18		12.97		1.021	
	DC SN	27:31		6.07		1.029	
	DC SN	27:39		3.02		1.034	
	DC SN	27:42		1.72		1.036	
	DC SN	27:50		6.42		1.040	
	DC SN	27:58		3.19		1.045	
	DC SN	27:59		9.39		1.046	
	DC SN	28:23		9.47		1.061	
328		2 Peaks		575.84			

		0.65-0.89			0.925-1.075		
13C12-TCDD							
332-334	DC NL	Height	12.83	8.56	4.27		
		26:33	0.82	7,612.26	3,420.15	4,192.11	0.993
		26:45	0.78	5,337.45	2,345.33	2,992.12	1.000
			Height	1,363.82	616.89	746.93	
332-334		2 Peaks		12,949.71			

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.

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

PeCDF		1.32-1.78			0.928-1.062
340-342	DC NL	Height	4.10	2.00	2.10
340-342		0 Peaks	0.00		
13C12-PeCDF		1.32-1.78			0.867-1.133
352-354	DC NL	Height	3.79	1.75	2.04
		29:06 1.71	53.74	33.89	19.85 0.971
		29:58 1.58	5,806.62	3,553.85	2,252.77 1.000 13C12-PeCDF 123 IS2
		Height	1,663.24	1,019.29	643.95
		30:15 RO 2.69	83.41	88.02	32.71 1.009
		30:40 1.58	5,992.25	3,673.86	2,318.39 1.023 13C12-PeCDF 234 SUR1
	DC SN	31:27 1.75	18.09		1.049
		31:38 RO 2.06	89.58	72.50	35.13 1.056
352-354		5 Peaks	12,025.60		

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

PeCDD		1.32-1.78			0.938-1.022
356-358	DC NL	Height	3.31	1.72	1.59
356-358	DC SN	31:15 RO 1.22	12.04		1.009
356-358		0 Peaks	0.00		
13C12-PeCDD		1.32-1.78			0.871-1.129
368-370	DC NL	Height	3.73	2.08	1.65
	DC SN	29:55 RO 1.95	16.60		0.966
	DC SN	30:15 1.57	12.09		0.976
	DC SN	30:41 RO 1.02	21.62		0.990
		30:59 1.59	3,744.57	2,297.76	1,446.81 1.000 13C12-PeCDD 123 IS3
		Height	1,115.75	695.81	419.94
	DC SN	31:17 RO 1.14	24.40		1.010
	DC SN	31:29 1.37	35.35		1.016
	DC SN	31:38 RO 0.82	8.59		1.021
	DC SN	31:54 RO 0.72	8.80		1.030
	DC SN	32:05 RO 0.68	6.78		1.036
368-370		1 Peak	3,744.57		

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

13C12-HxCDF		0.43-0.59			0.881-1.119
384-386	DC NL	Height	5.95	2.72	3.23
		33:26 0.52	5,439.98	1,866.37	3,573.61 0.997 13C12-HxCDF 478 SUR2
		33:32 0.51	5,712.20	1,936.66	3,775.54 1.000 13C12-HxCDF 678 IS4
		Height	1,750.90	591.21	1,159.69
	DC SN	33:49 RO 0.29	13.26		1.008
		34:01 0.52	5,562.04	1,892.11	3,669.93 1.014 13C12-HxCDF 234 ALT2
		34:47 0.51	4,581.92	1,542.21	3,039.71 1.037 13C12-HxCDF 789 ALT1
		35:01 RO 0.41	47.55	16.06	39.28 1.044
	DC SN	35:16 0.56	12.10		1.052
384-386		5 Peaks	21,343.69		



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.

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

HxCDD		1.05-1.43			0.959-1.013		
390-392	DC NL	Height	3.41	1.61	1.80		
	DC SN	33:47 RO 0.46	2.15		0.988		
	DC SN	33:56 RO 0.36	1.12		0.992		
	DC SN	34:02 RO 1.53	7.41		0.995		
	DC SN	34:11 RO 0.76	2.57		1.000	123678-HxCDD AN	
390-392		0 Peaks	0.00				

13C12-HxCDD		1.05-1.43			0.971-1.029		
402-404	DC NL	Height	5.00	2.59	2.41		
		33:35 RO 1.81	32.35	26.14	14.44	0.982	
		34:07 1.29	3,142.57	1,773.02	1,369.55	0.998 13C12-HxCDD 478 SUR3	
		34:12 1.32	3,341.81	1,902.73	1,439.08	1.000 13C12-HxCDD 678 IS5	
		Height	1,095.52	614.36	481.16		
		34:31 1.33	4,225.64	2,409.20	1,816.44	1.009 13C12-HxCDD 789 RS2	
	DC SN	34:58 1.29	10.59		1.022		
402-404		4 Peaks	10,742.37				

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

HpCDF		0.88-1.20			0.996-1.047		
408-410	DC NL	Height	3.43	1.58	1.85		
	DC SN	36:25 RO 1.34	8.10		1.000	1234678-HpCDF AN	
408-410		0 Peaks	0.00				

13C12-HpCDF		0.37-0.51			0.945-1.110		
418-420	DC NL	Height	4.10	2.18	1.92		
		36:26 0.48	3,636.03	1,171.77	2,464.26	1.000 13C12-HpCDF 678 IS6	
		Height	939.45	303.55	635.90		
	DC SN	36:43 0.49	21.79		1.008		
	DC SN	36:55 RO 2.81	4.74		1.013		
	DC SN	37:11 RO 3.28	4.05		1.021		
		37:58 0.46	2,766.03	877.63	1,888.40	1.042 13C12-HpCDF 789 SUR4	
418-420		2 Peaks	6,402.06				

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

HpCDD		0.88-1.20			0.976-1.005		
424-426	DC NL	Height	2.96	1.51	1.45		
	DC SN	36:38 RO 0.49	4.04		0.978		
	DC SN	37:04 RO 0.22	1.75		0.990		
	DC SN	37:12 1.04	9.20		0.993		
424-426		0 Peaks	0.00				

13C12-HpCDD		0.88-1.20			0.973-1.027		
436-438	DC NL	Height	4.10	2.25	1.85		
		37:27 1.10	3,198.42	1,672.60	1,525.82	1.000 13C12-HpCDD 678 IS7	
		Height	813.27	432.97	380.30		
436-438		1 Peak	3,198.42				

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.

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

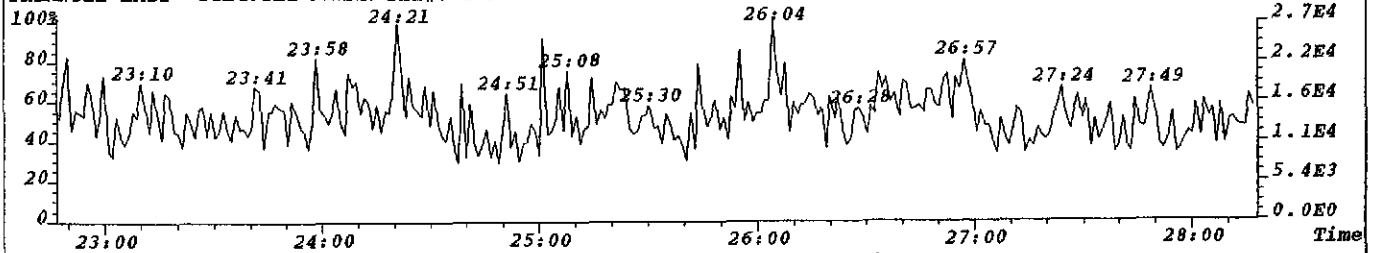
OCDF	0.76-1.02				0.903-1.097			
442-444	DC	NL	Height	3.60	1.77	1.83		
	DC	SN	40:30 RO 0.39	8.56		0.987		
	DC	SN	42:13 RO 0.50	5.27		1.028		
	DC	SN	42:25 RO 0.18	2.68		1.033		
	DC	SN	42:32 RO 1.03	3.29		1.036		
	DC	SN	42:40 RO 1.19	15.67		1.039		
	DC	SN	43:04 RO 0.12	1.74		1.049		
	DC	SN	43:40 RO 11.92	1.00		1.064		
	DC	SN	43:50 RO 7.89	2.21		1.068		
442-444	0 Peaks			0.00				
OCDD	0.76-1.02				0.903-1.097			
458-460	DC	NL	Height	3.20	1.61	1.59		
	DC	SN	41:03 RO 4.94	6.27		1.000	OCDD	AN
	DC	SN	41:25 RO 0.32	3.53		1.009		
	DC	SN	41:36 0.94	10.47		1.013		
458-460	0 Peaks			0.00				
13C12-OCDD	0.76-1.02				0.996-1.004			
470-472	DC	NL	Height	2.69	1.30	1.39		
			41:03 0.87	5,008.36	2,324.23	2,684.13	1.000	13C12-OCDD ISS
			Height	1,016.55	475.75	540.80		
470-472	1 Peak			5,008.36				

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

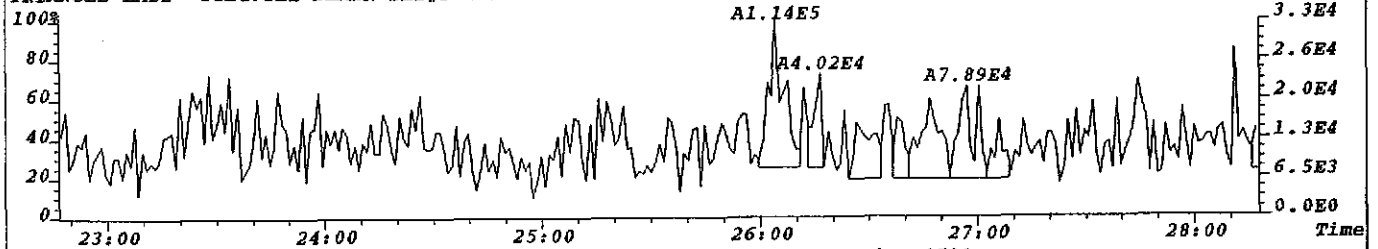
M_Z	-Nominal Ion Mass (es)	WL	-Below Retention Time Window	A	-Peak Added
..RT.	-Retention Time (mm:ss)	WH	-Above Retention Time Window	K	-Peak Kept
Rat.1	-Ratio of M/M+2 Ions	SN	-Below Signal to Noise Level	D	-Peak Deleted
OK	-RO=Ratio Outside Limits	<M	-Below Method Detection Limit	T	-Time Changed
Rel.RT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

\*\*\* End of Report \*\*\*

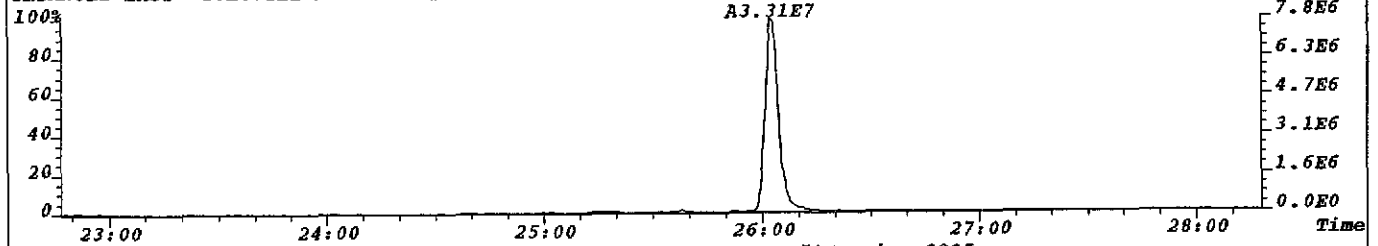
File:U1316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:4820  
303.9016 S:2 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,19280.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



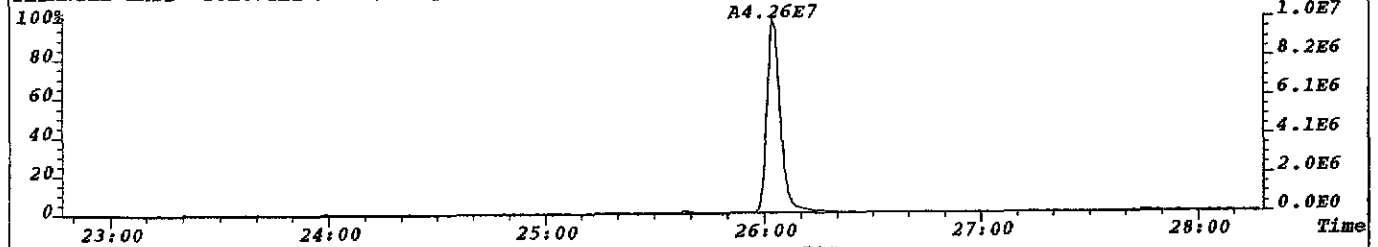
File:U1316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:3886  
305.8987 S:2 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,15544.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



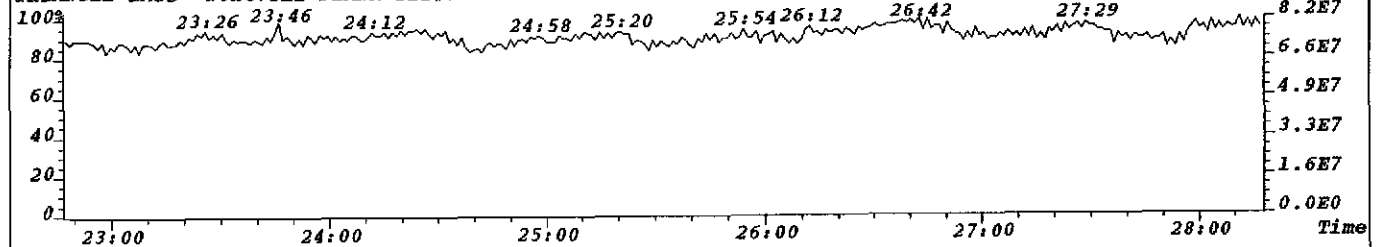
File:U1316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:3591  
315.9419 S:2 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,14364.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



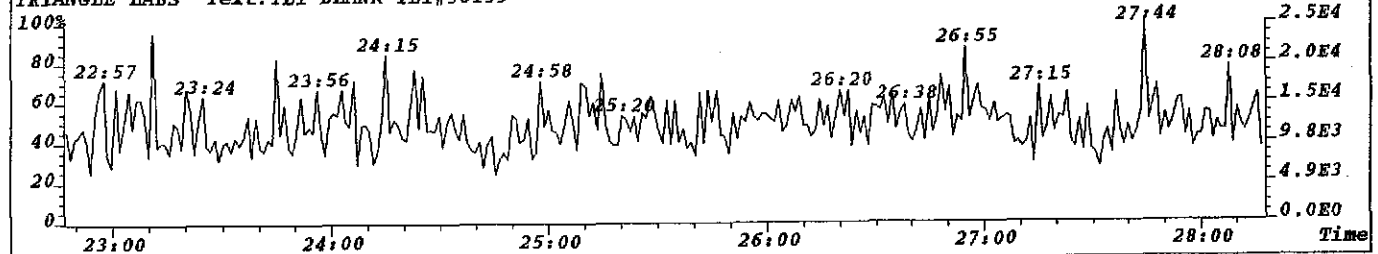
File:U1316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:3285  
317.9389 S:2 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,13140.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



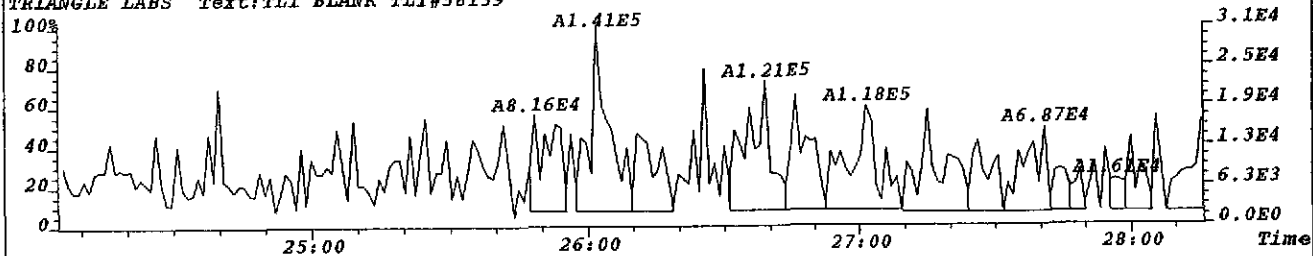
File:U1316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S  
330.9792 S:2 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



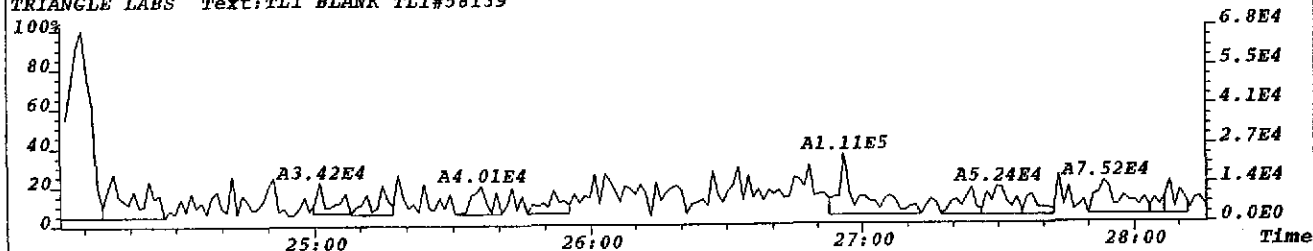
File:U1316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S  
375.8364 S:2 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



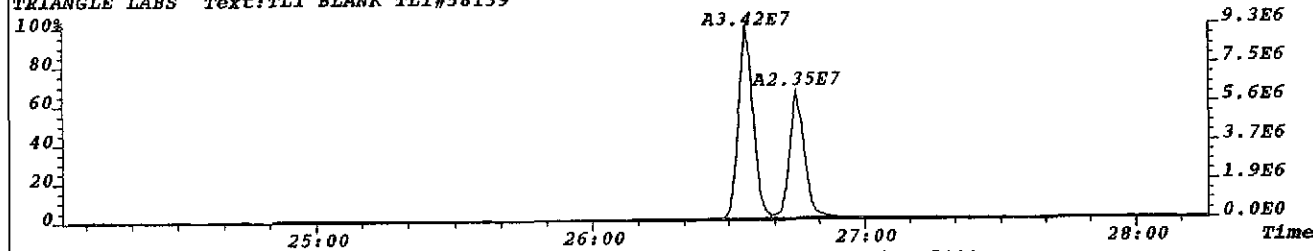
File:U1316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:2430  
319.8965 S:2 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9720.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



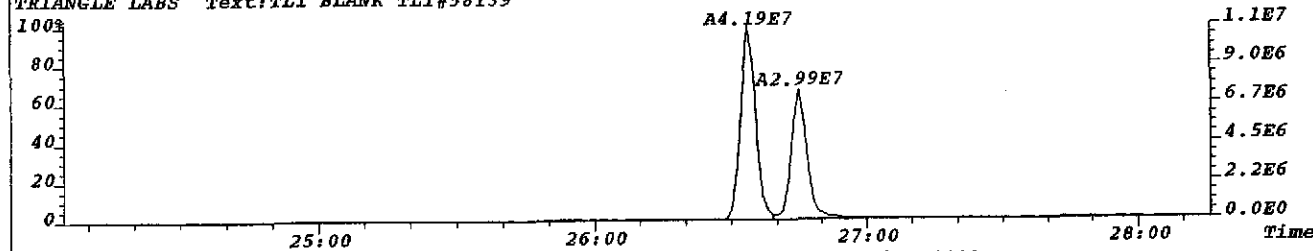
File:U1316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:2501  
321.8936 S:2 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10004.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



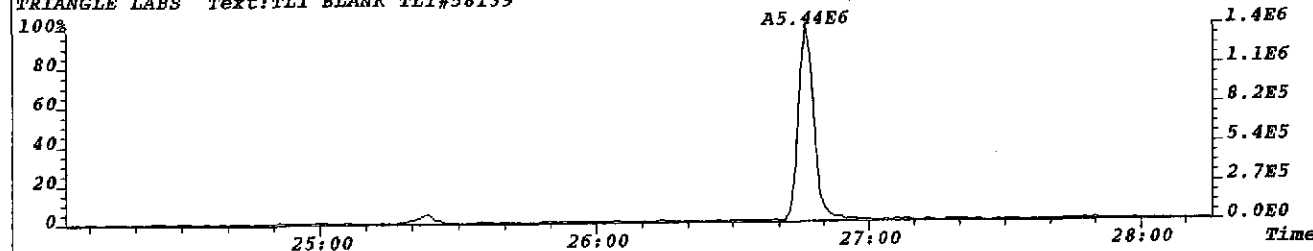
File:U1316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:10698  
331.9368 S:2 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,42792.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



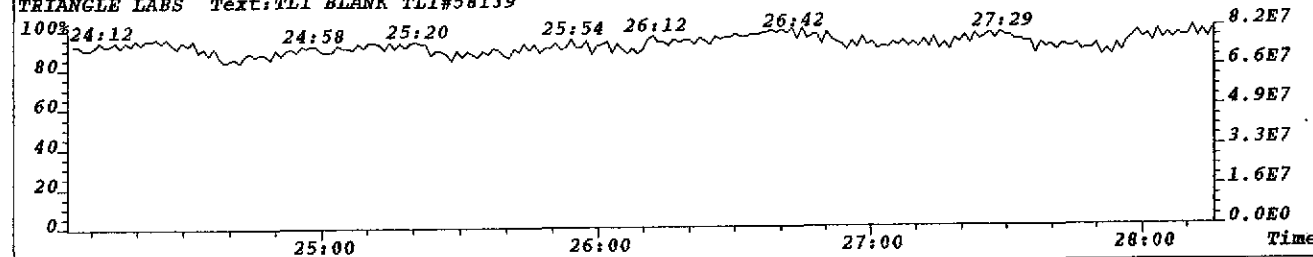
File:U1316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:5332  
333.9338 S:2 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,21328.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



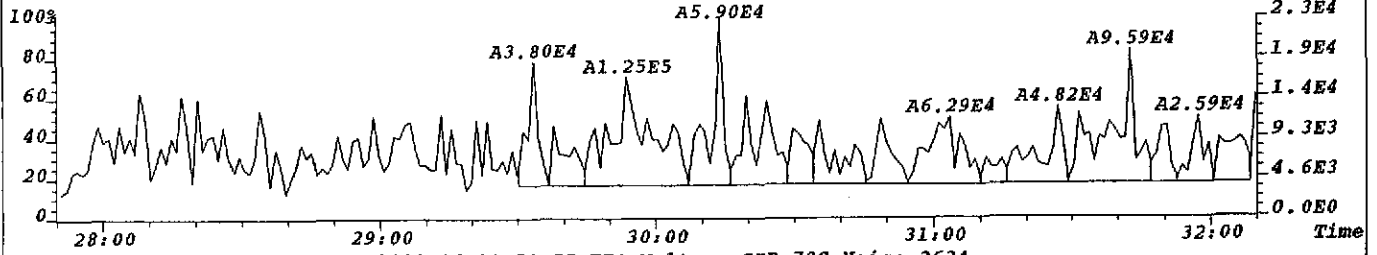
File:U1316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:2312  
327.8847 S:2 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9248.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



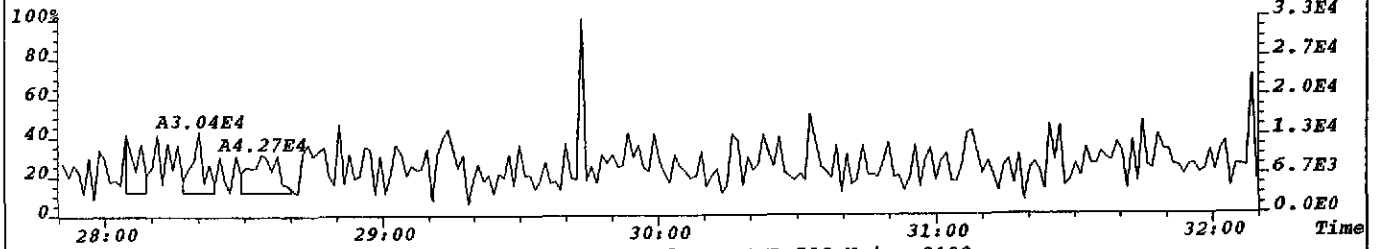
File:U1316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S  
330.9792 S:2 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



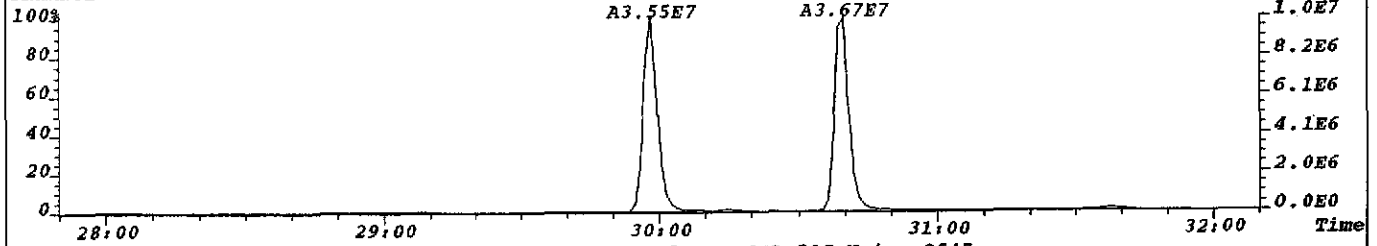
File:U1316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:2500  
339.8597 S:2 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10000.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



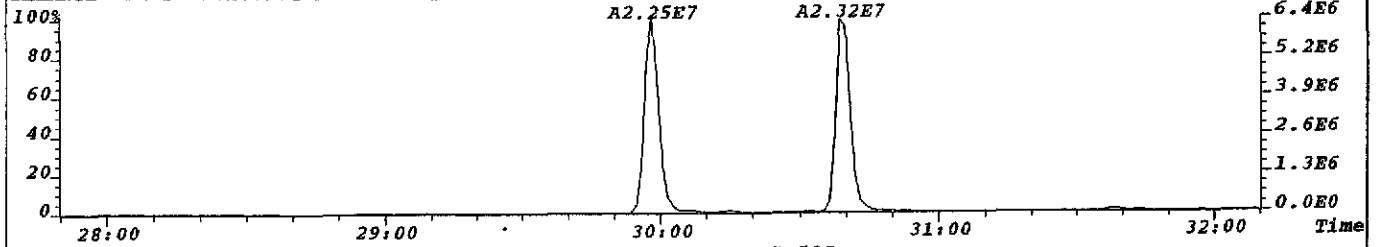
File:U1316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:2624  
341.8567 S:2 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10496.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



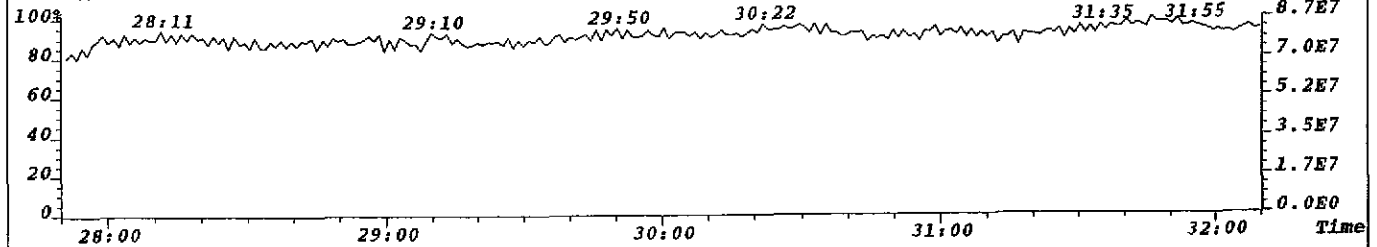
File:U1316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:2182  
351.9000 S:2 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,8728.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



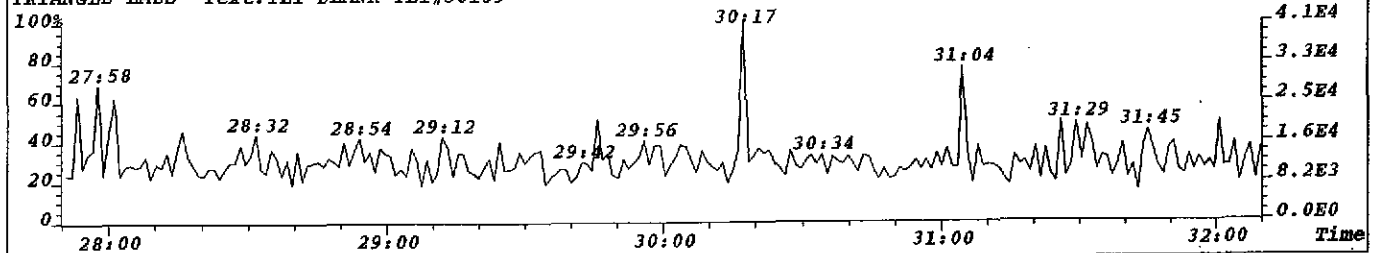
File:U1316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:2547  
353.8970 S:2 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10188.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



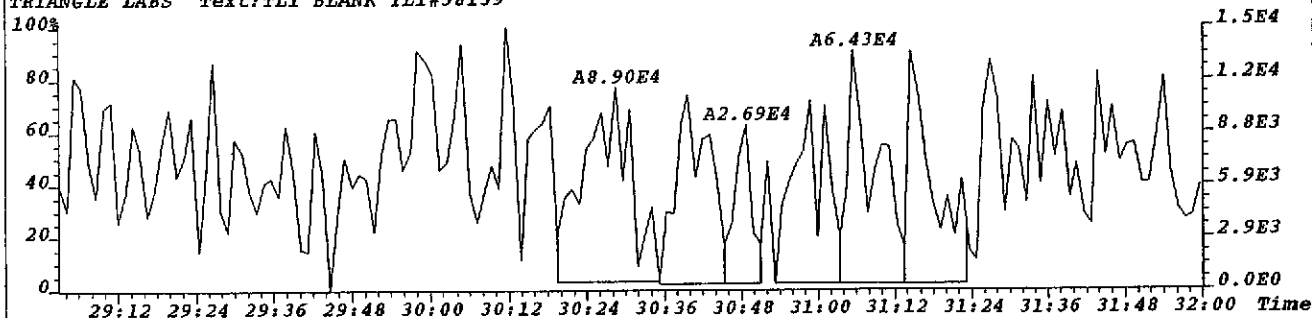
File:U1316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S  
330.9792 S:2 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



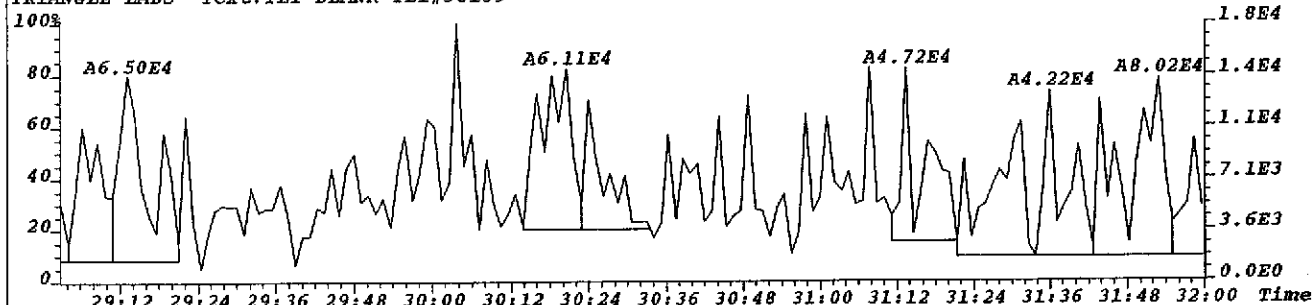
File:U1316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S  
409.7974 S:2 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



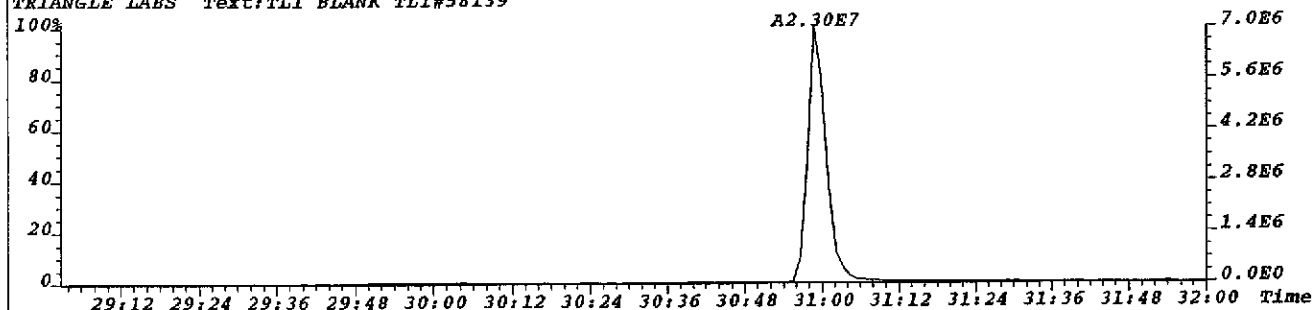
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355.8546 S:2 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,8588.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



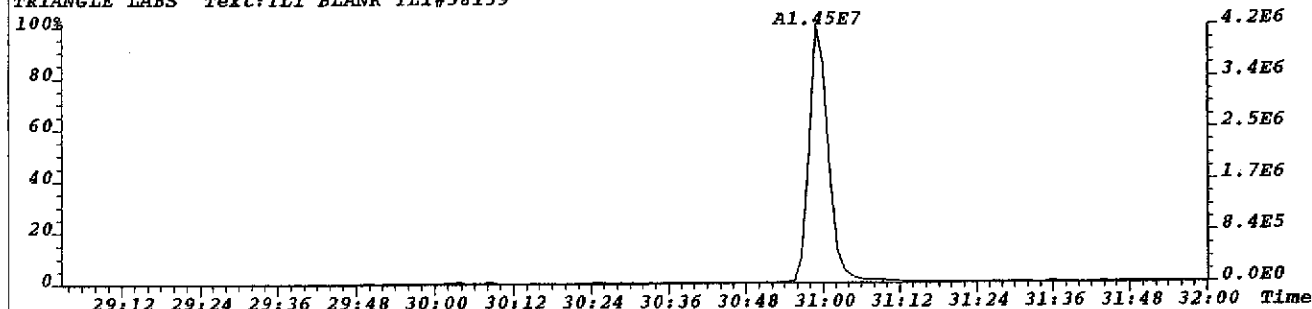
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357.8516 S:2 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,7948.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



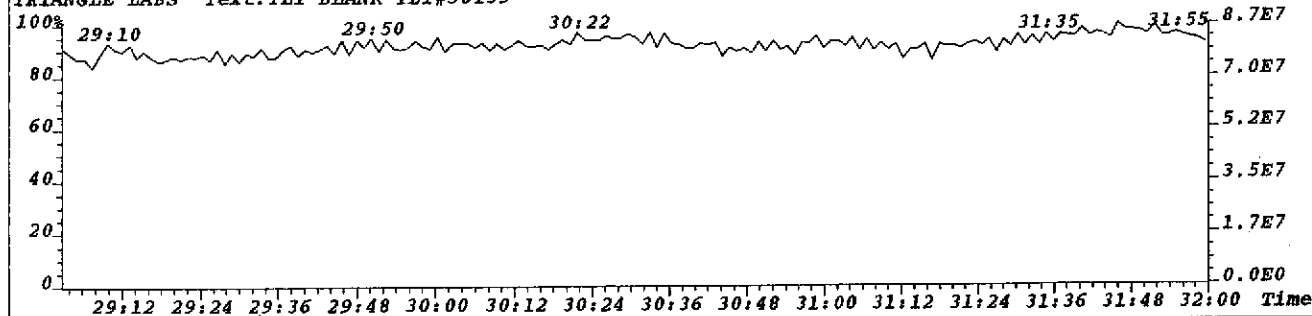
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367.8949 S:2 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,10400.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



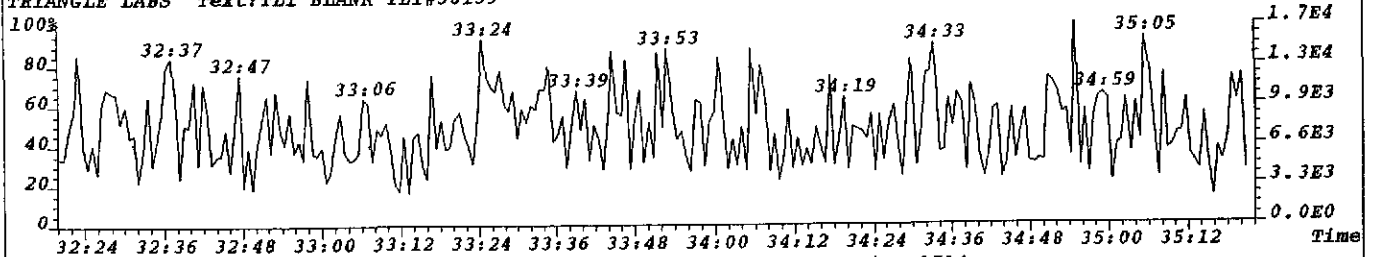
File:U1316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:2058  
369.8919 S:2 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,8232.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



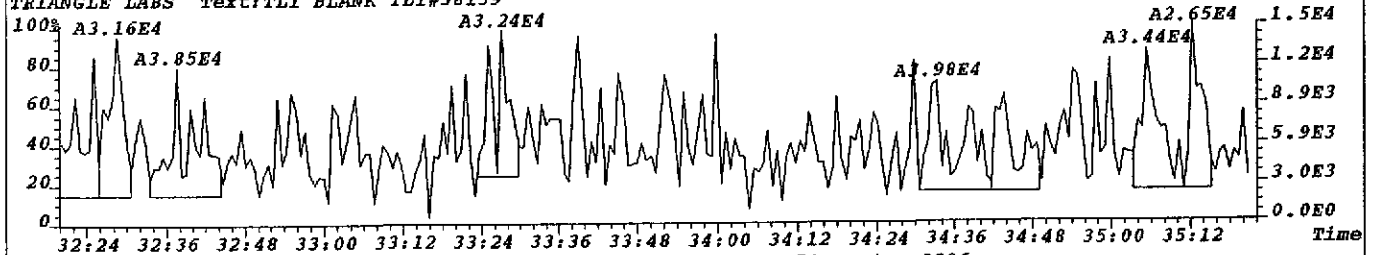
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330.9792 S:2 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



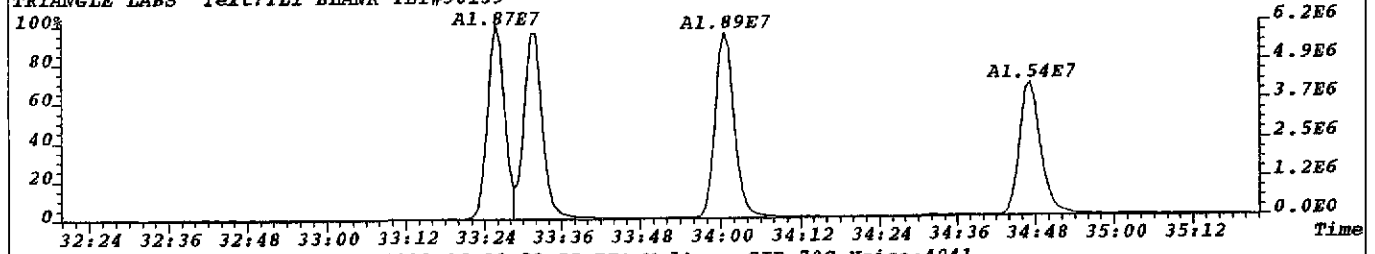
File:U1316 #1-271 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:2487  
373.8208 S:2 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9948.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



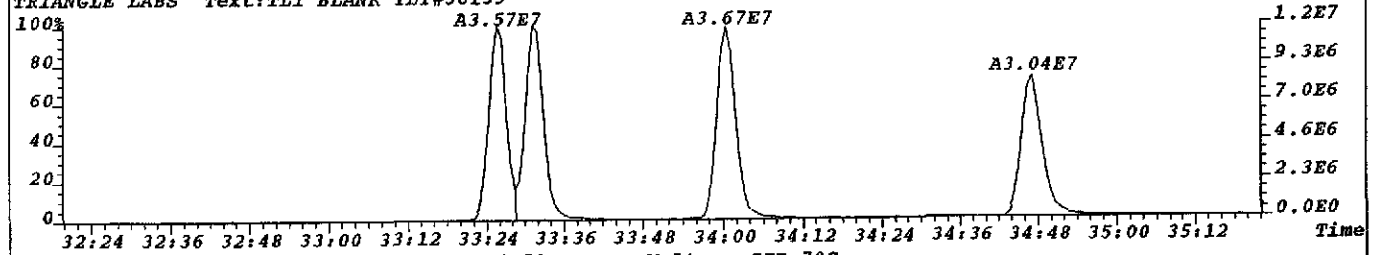
File:U1316 #1-271 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:1714  
375.8178 S:2 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6856.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



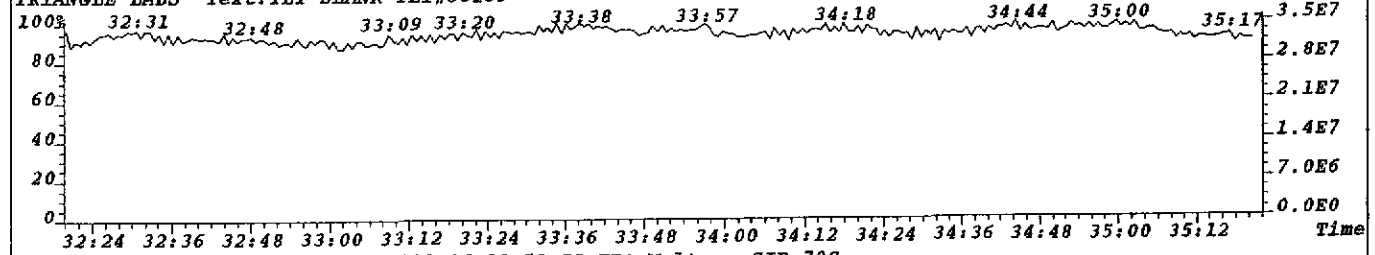
File:U1316 #1-271 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:3396  
383.8639 S:2 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,13584.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



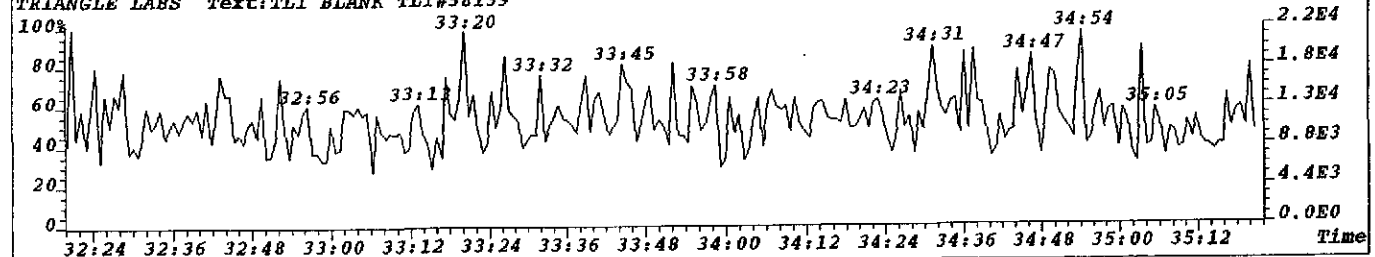
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385.8610 S:2 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,16164.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



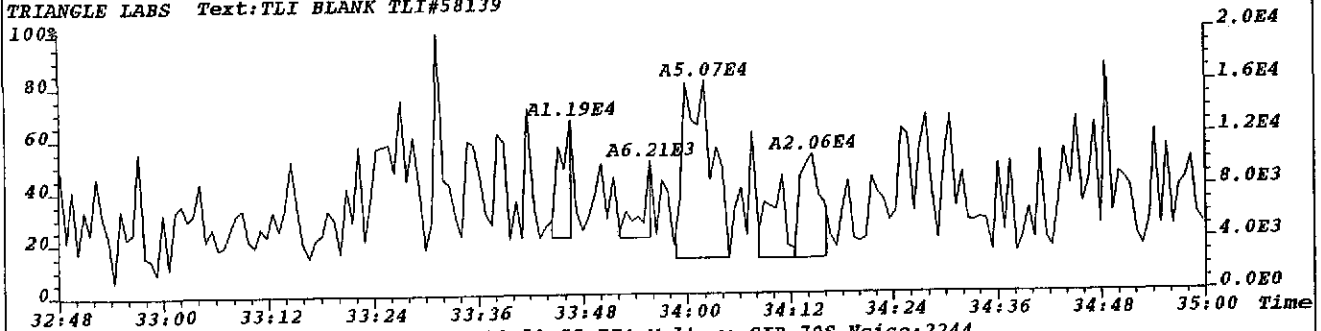
File:U1316 #1-271 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S  
392.9760 S:2 F:3 Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



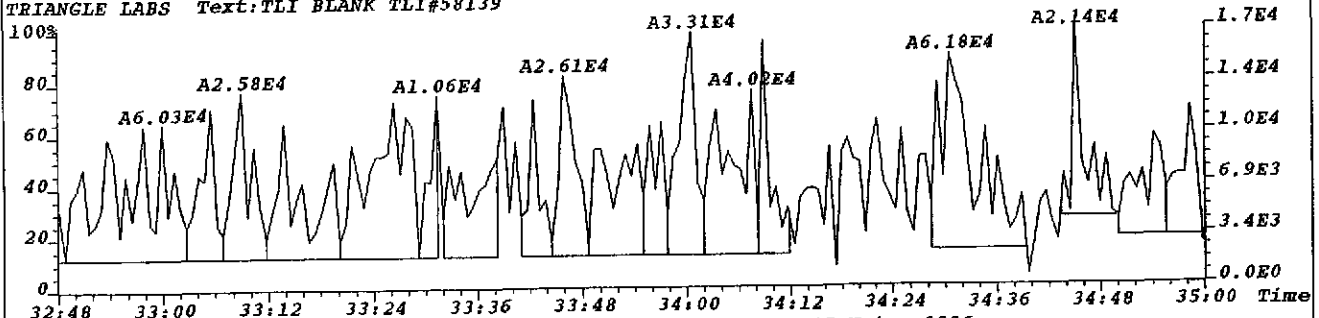
File:U1316 #1-271 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S  
445.7555 S:2 F:3 Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



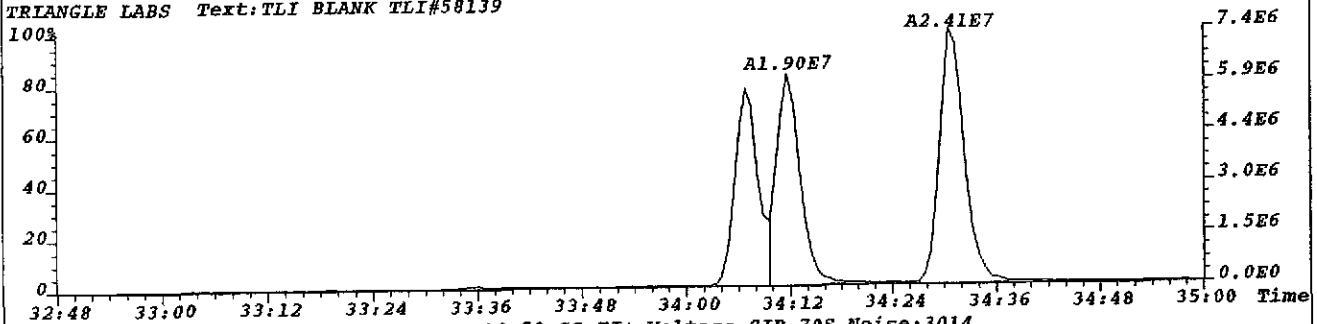
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389.8156 S:2 F:3 BSub(256,30,-3.0) PKD(7,5,3,0.10%,8052.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



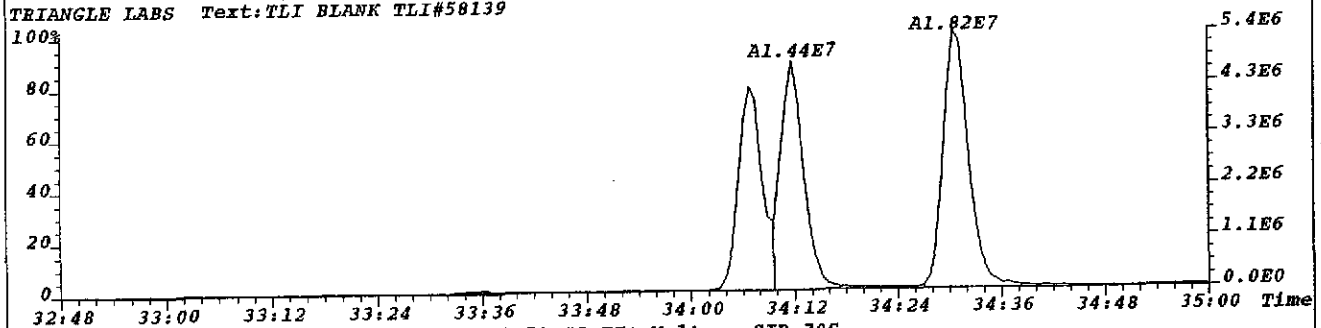
File:U1316 #1-271 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:2244  
391.8127 S:2 F:3 BSub(256,30,-3.0) PKD(7,5,3,0.10%,8976.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



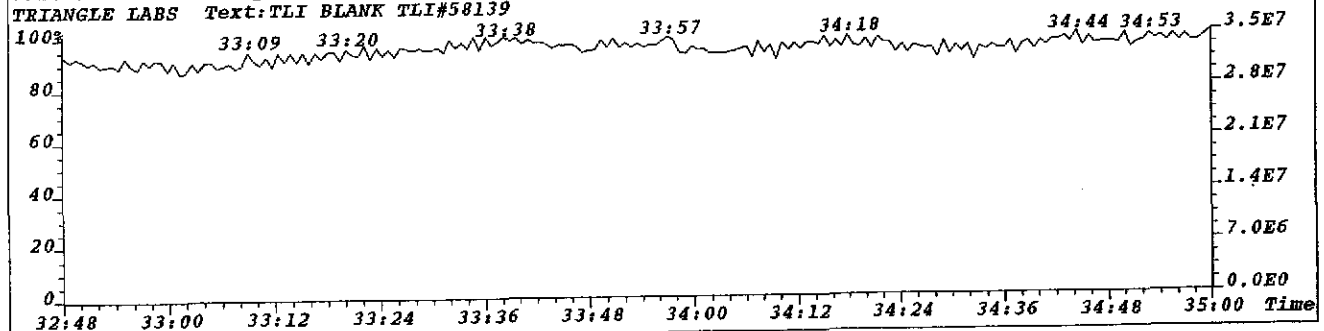
File:U1316 #1-271 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:3236  
401.8558 S:2 F:3 BSub(256,30,-3.0) PKD(7,5,3,0.10%,12944.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



File:U1316 #1-271 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:3014  
403.8529 S:2 F:3 BSub(256,30,-3.0) PKD(7,5,3,0.10%,12056.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139

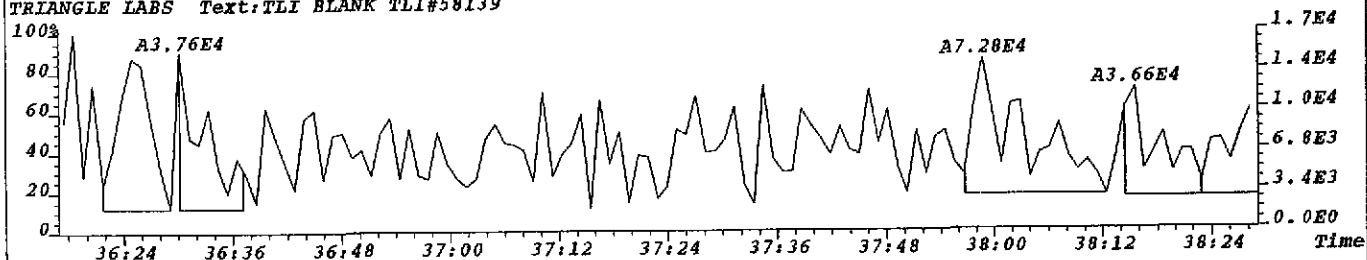


File:U1316 #1-271 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S  
392.9760 S:2 F:3 Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139

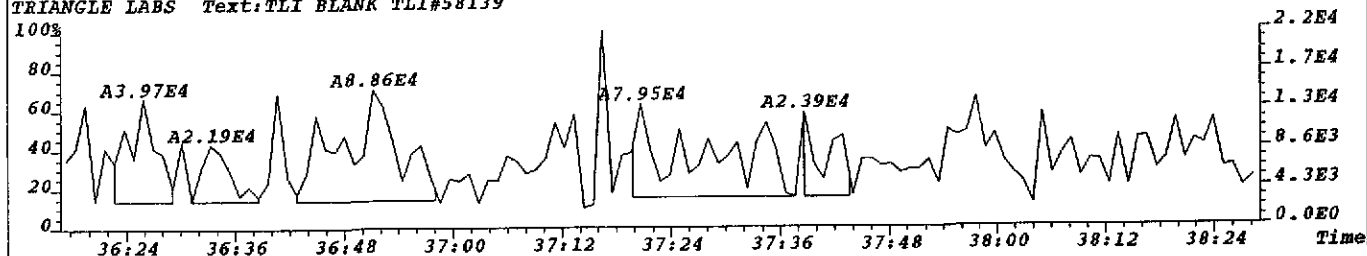




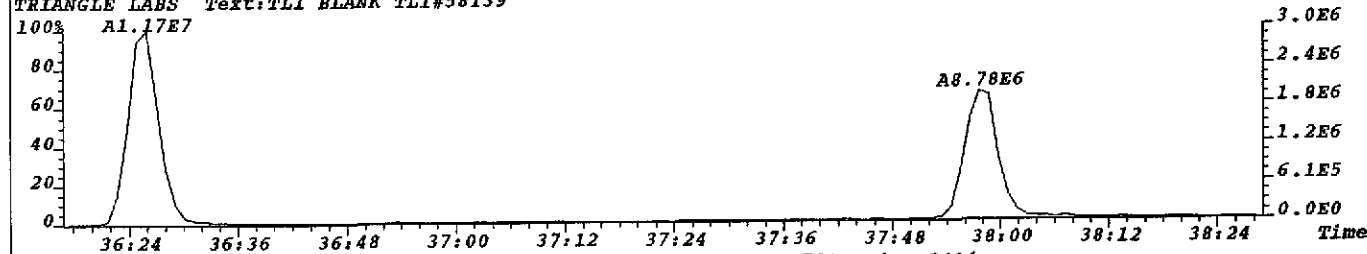
File:U1316 #1-549 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:1970  
407.7818 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7880.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



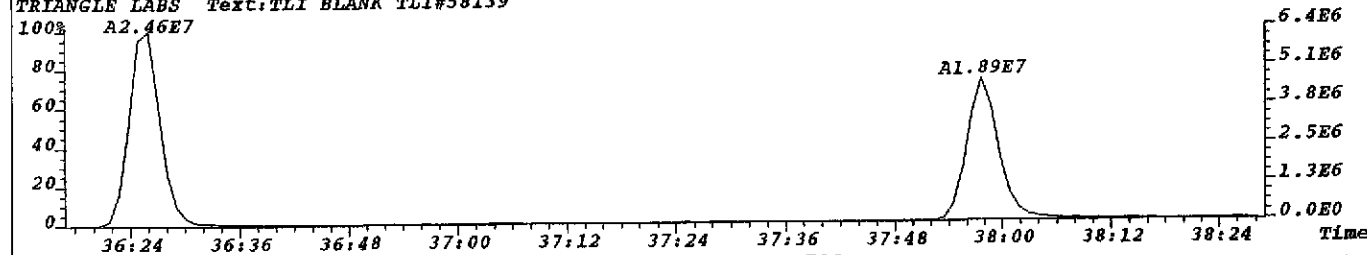
File:U1316 #1-549 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:2308  
409.7789 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9232.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



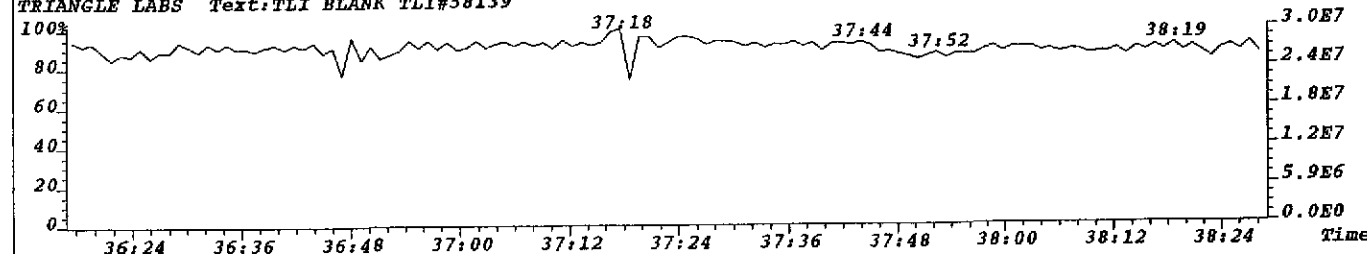
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417.8253 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10892.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



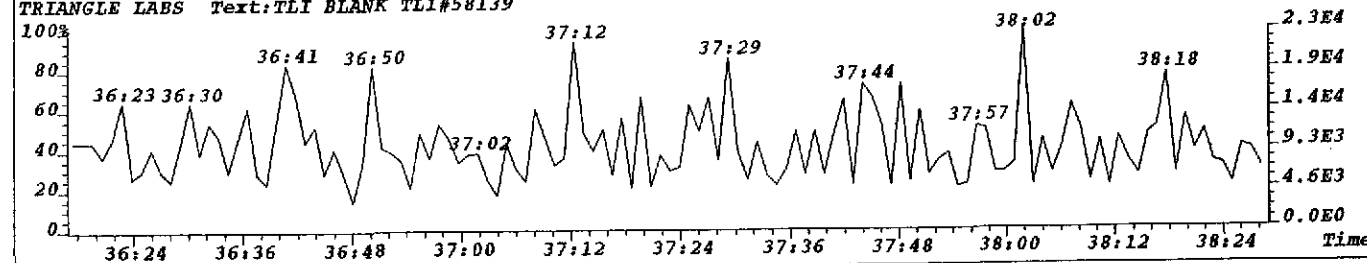
File:U1316 #1-549 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:2404  
419.8220 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9616.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



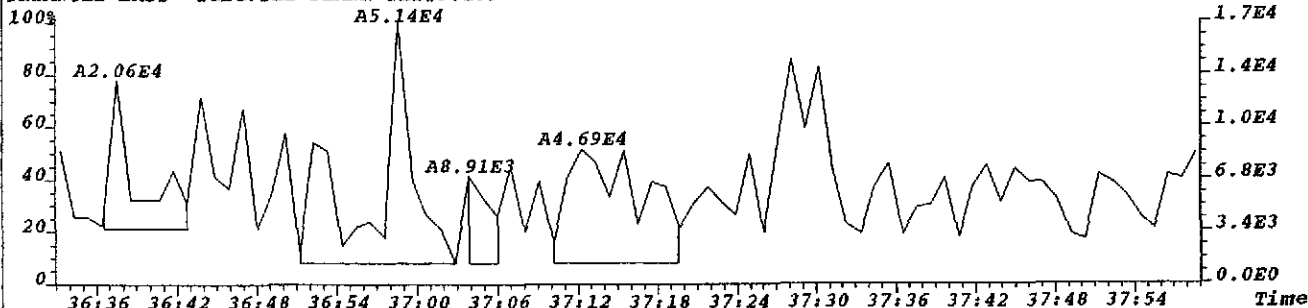
File:U1316 #1-549 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S  
430.9729 S:2 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



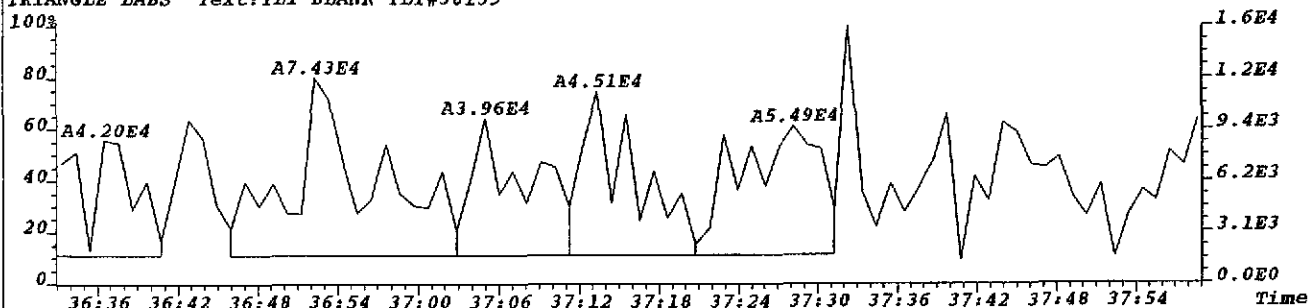
File:U1316 #1-549 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S  
479.7165 S:2 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



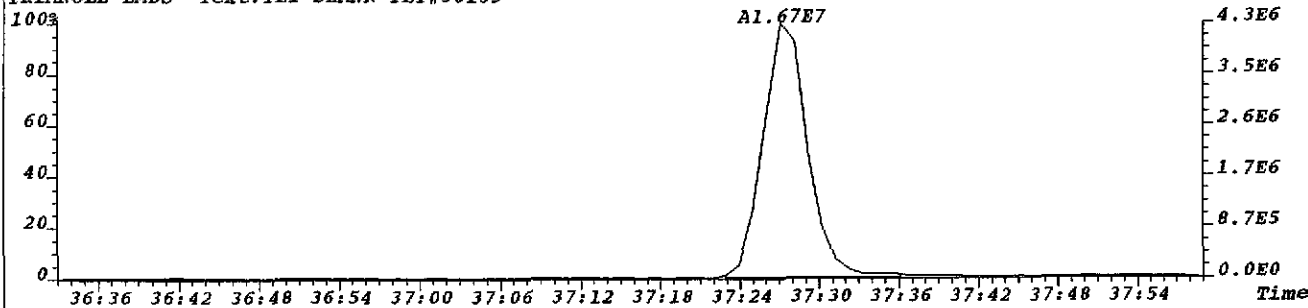
File:U1316 #1-549 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:1891  
423.7766 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7564.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



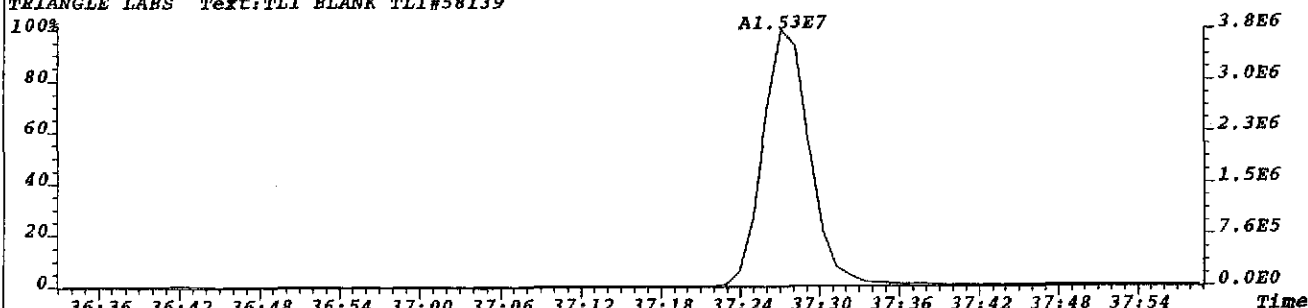
File:U1316 #1-549 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:1811  
425.7737 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7244.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



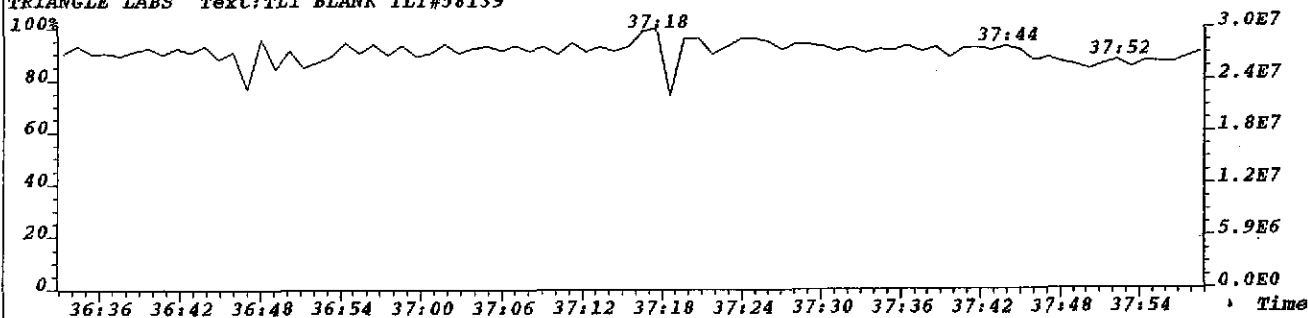
File:U1316 #1-549 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:2810  
435.8169 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11240.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



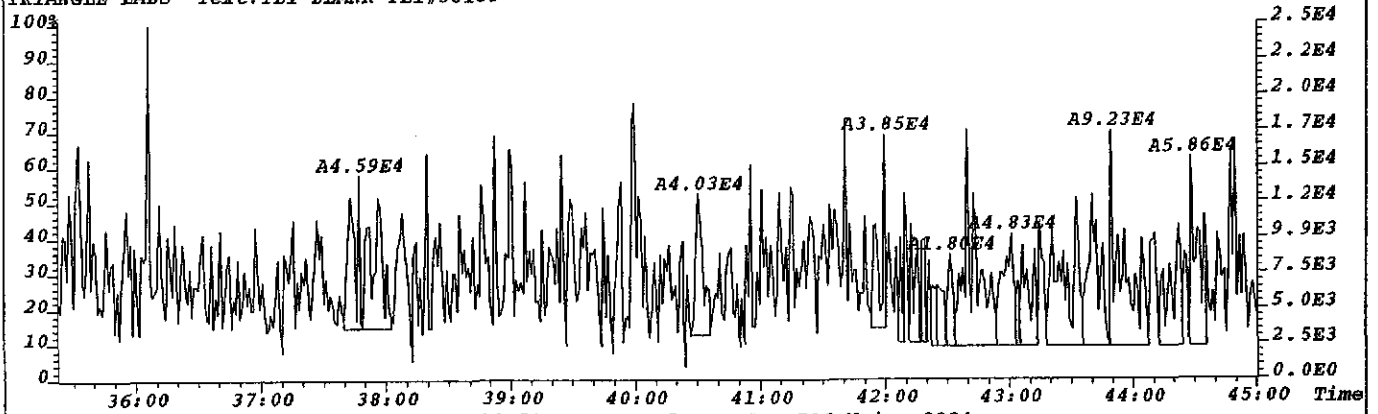
File:U1316 #1-549 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:2312  
437.8140 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9248.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



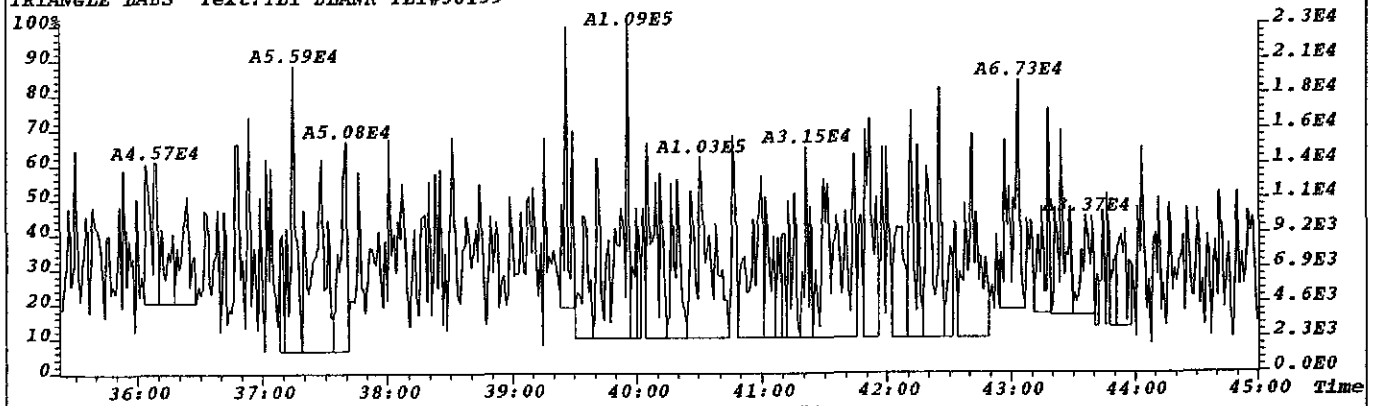
File:U1316 #1-549 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S  
430.9729 S:2 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



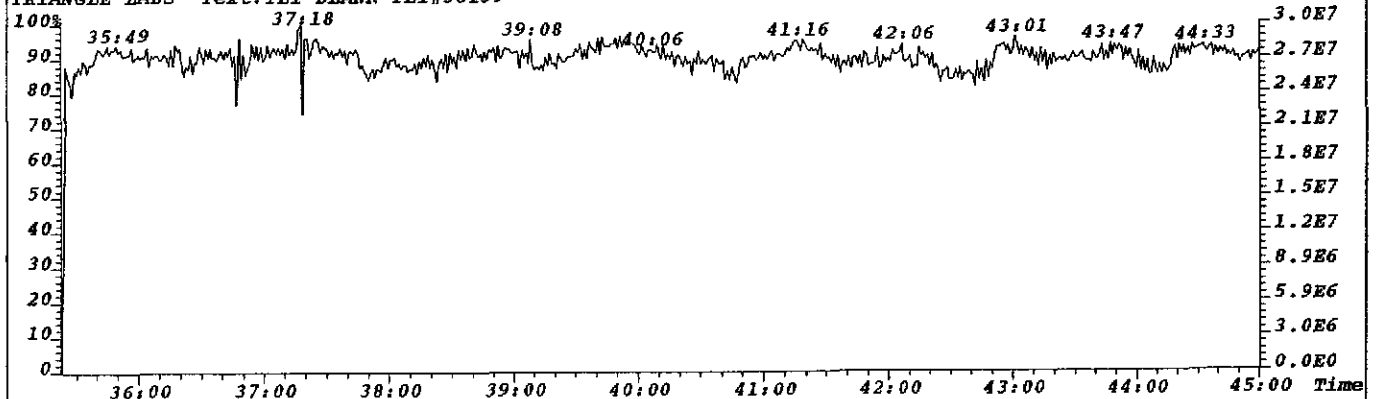
File:U1316 #1-549 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:2216  
441.7428 S:2 F:4 BSub(256,30,-3.0) PKD(7,5,3,0.10%,8864.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



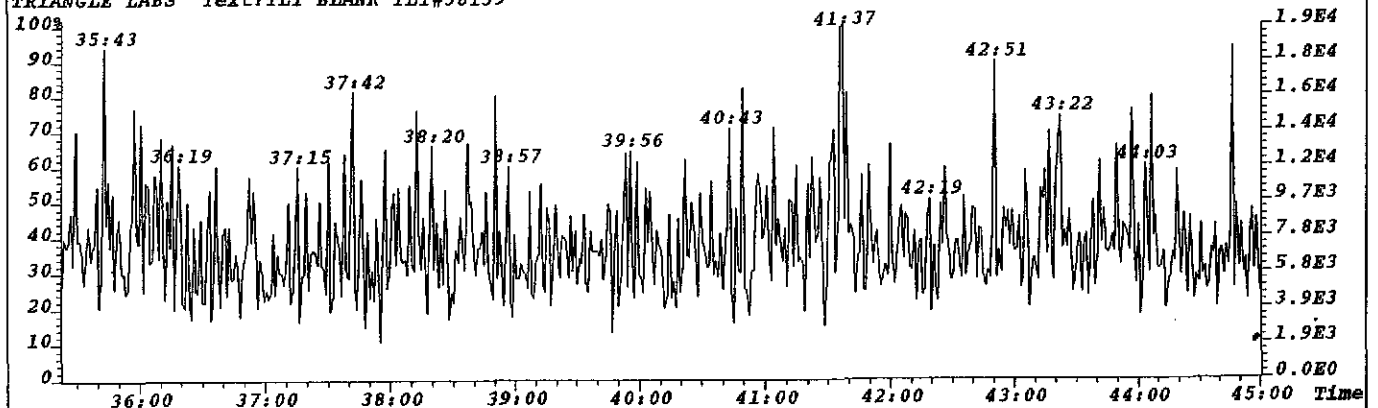
File:U1316 #1-549 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:2284  
443.7399 S:2 F:4 BSub(256,30,-3.0) PKD(7,5,3,0.10%,9136.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



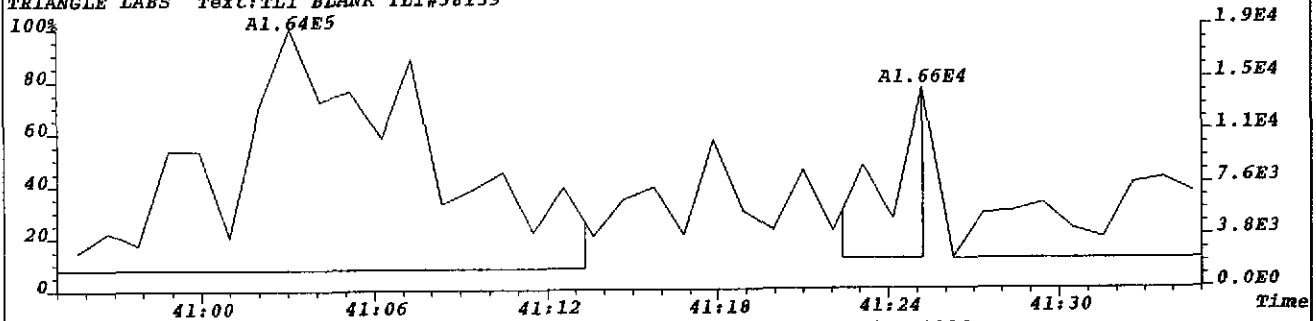
File:U1316 #1-549 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S  
430.9729 S:2 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



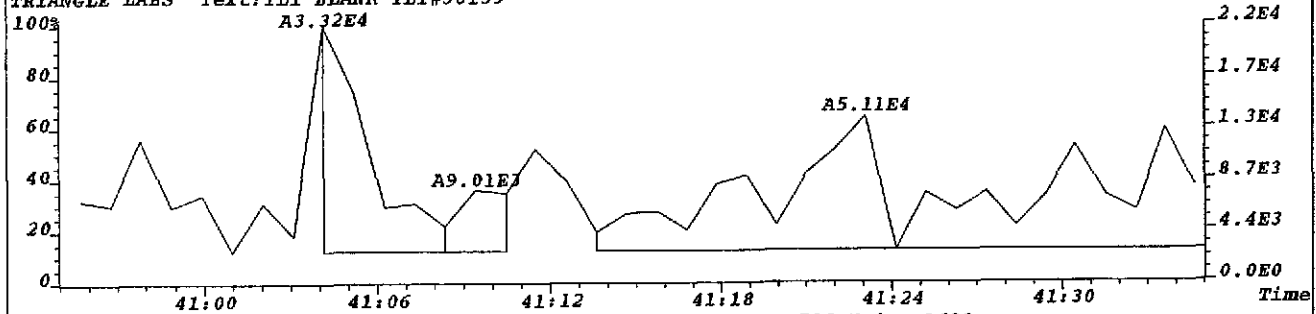
File:U1316 #1-549 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S  
513.6775 S:2 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



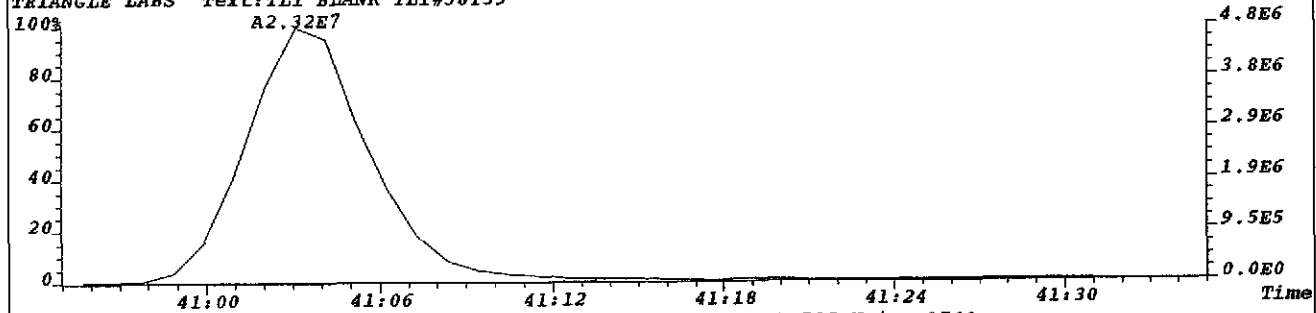
File:U1316 #1-549 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:2009  
457.7377 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,8036.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



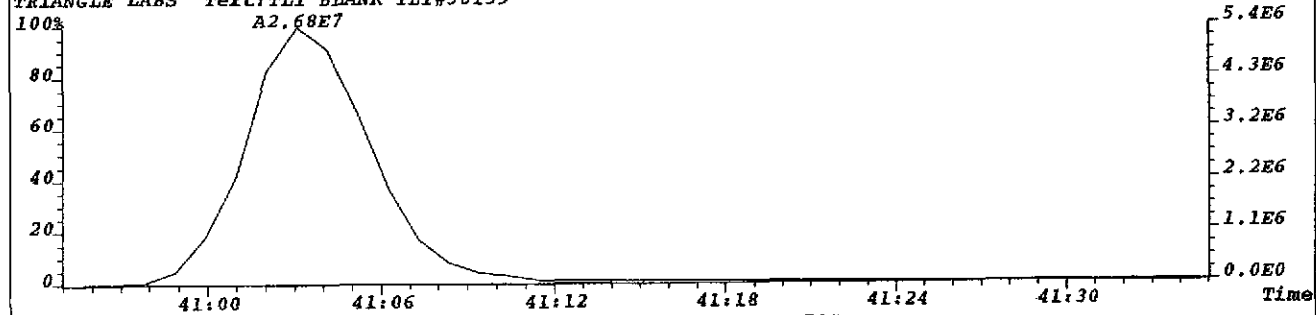
File:U1316 #1-549 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:1986  
459.7348 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7944.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



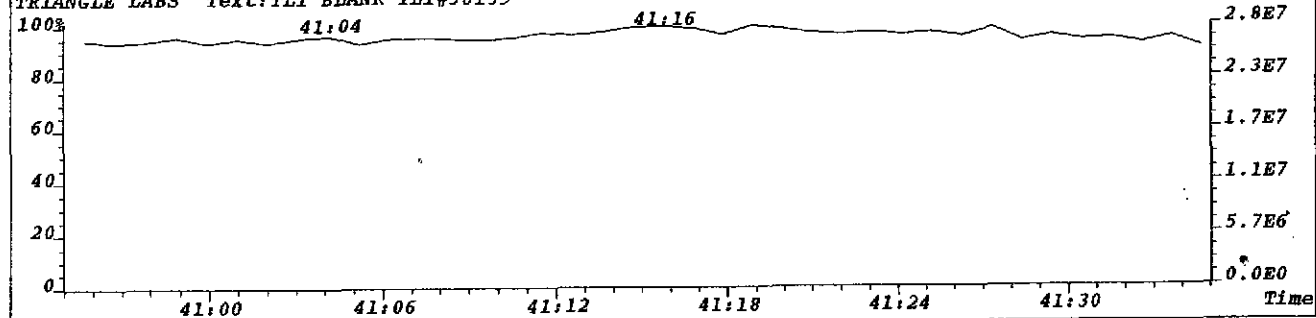
File:U1316 #1-549 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:1623  
469.7779 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6492.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



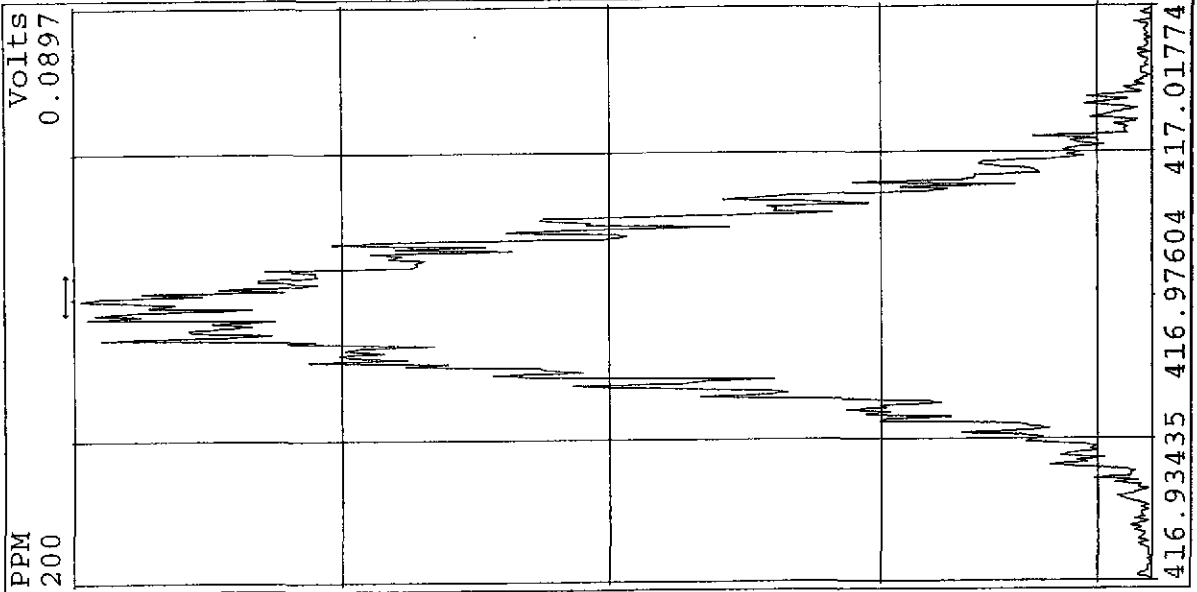
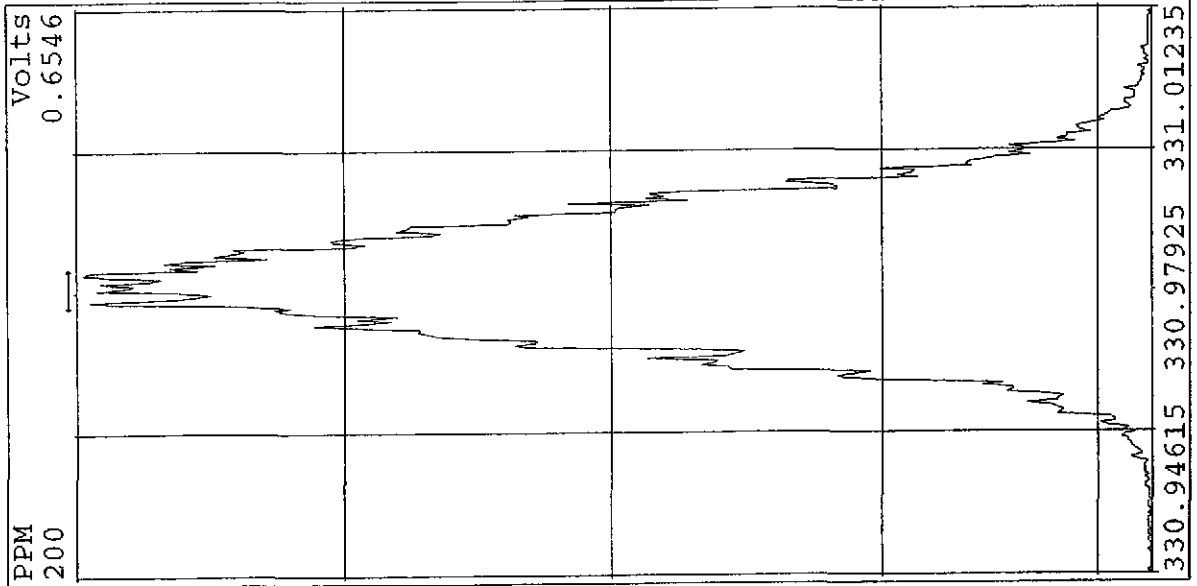
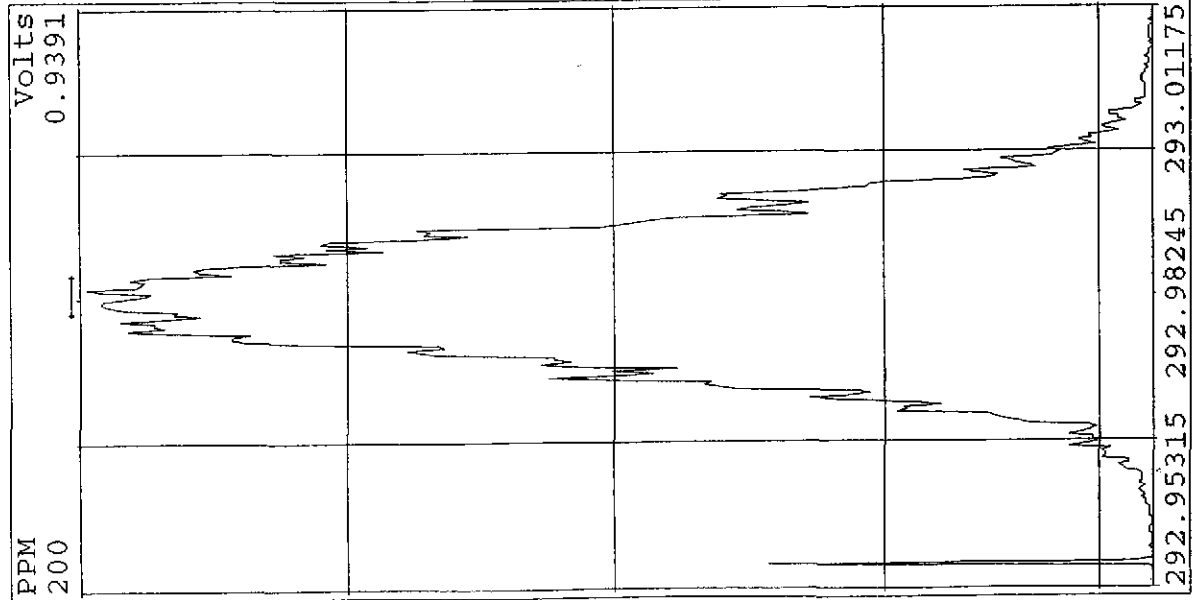
File:U1316 #1-549 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S Noise:1740  
471.7750 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6960.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139



File:U1316 #1-549 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S  
430.9729 S:2 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI BLANK TLI#58139

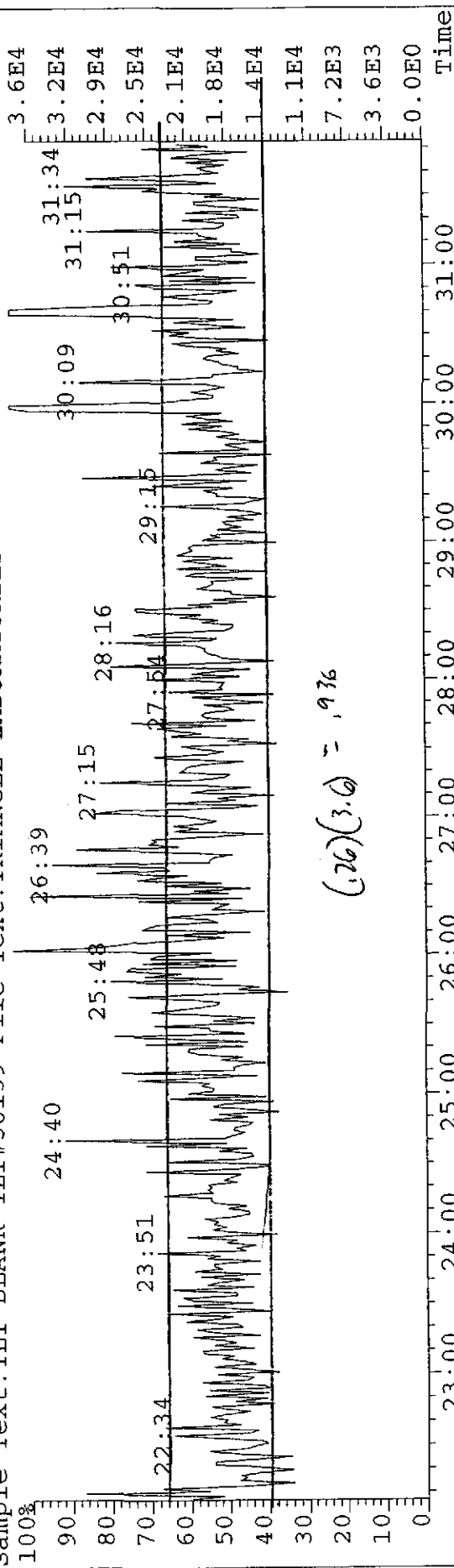


Peak Locate Examination: 4-SEP-2002:05:34 File:U1316  
Experiment:NDB5US Function:2 Reference:PFK



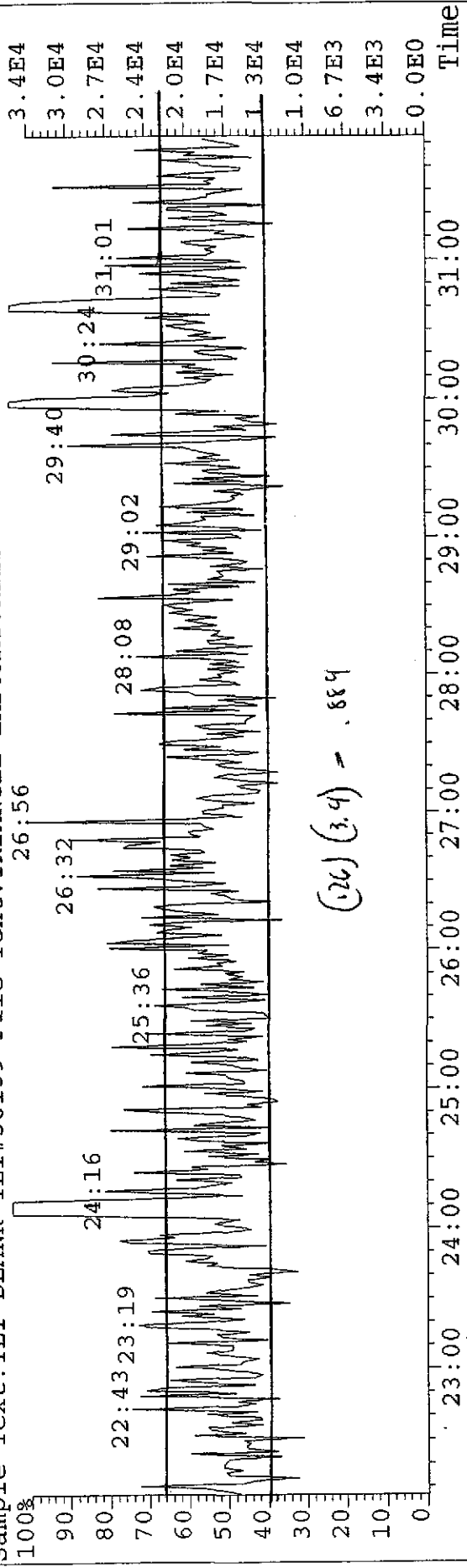
W = .476 + .684 = 1.82 1/9/1/02

File: UI316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S  
319.8965 S:2 F:2 Exp:NDB5US  
Sample Text: TLI BLANK TLI#58139 File Text: TRIANGLE LABORATORIES INC.



(26)(3.6) = .936

File: UI316 #1-648 Acq: 4-SEP-2002 06:23:58 GC EI+ Voltage SIR 70S  
321.8936 S:2 F:2 Exp:NDB5US  
Sample Text: TLI BLANK TLI#58139 File Text: TRIANGLE LABORATORIES INC.



(26)(3.4) = .884

**Mississippi Dept. of Env. Quality**

TLI Project: **58258**  
 Client Sample: **DF-DP-179/12861**

Method **8290 PCDD/PCDF Analysis (b)**  
 Analysis File: **U131903**

Client Project:	<b>Crystal Springs Dioxin</b>		
Sample Matrix:	<b>SOIL</b>	Date Received:	<b>08/27/2002</b>
TLI ID:	<b>334-48-1</b>	Date Extracted:	<b>08/28/2002</b>
		Date Analyzed:	<b>09/04/2002</b>
		Spike File:	<b>SPMIT32S</b>
		ICal:	<b>UF57092</b>
		ConCal:	<b>U021317</b>
Sample Size:	<b>12.500 g</b>	Dilution Factor:	<b>n/a</b>
Dry Weight:	<b>10.025 g</b>	Blank File:	<b>U131602</b>
GC Column:	<b>DB-5</b>	Analyst:	<b>JWL</b>
		% Moisture:	<b>19.8</b>
		% Lipid:	<b>n/a</b>
		% Solids:	<b>80.2</b>

Analytes	Conc. (pg/g)	DL	EMPC	Ratio	RT	Flags
2,3,7,8-TCDD	ND	0.5				---
1,2,3,7,8-PeCDD	ND	0.6				---
1,2,3,4,7,8-HxCDD	ND	0.7				---
1,2,3,6,7,8-HxCDD	ND	0.6				---
1,2,3,7,8,9-HxCDD	EMPC		0.71			J_
1,2,3,4,6,7,8-HpCDD	9.7			0.99	37:30	---
1,2,3,4,6,7,8,9-OCDD	191			0.90	41:06	---
2,3,7,8-TCDF	ND	0.3				---
1,2,3,7,8-PeCDF	ND	0.4				---
2,3,4,7,8-PeCDF	ND	0.4				---
1,2,3,4,7,8-HxCDF	6.3			1.13	33:26	---
1,2,3,6,7,8-HxCDF	EMPC		0.73			J_
2,3,4,6,7,8-HxCDF	EMPC		0.72			J_
1,2,3,7,8,9-HxCDF	ND	0.6				---
1,2,3,4,6,7,8-HpCDF	25.9			1.07	36:28	---
1,2,3,4,7,8,9-HpCDF	ND	0.9				---
1,2,3,4,6,7,8,9-OCDF	5.1			1.00	41:20	J_

Totals	Conc. (pg/g)	Number	DL	EMPC	Flags
Total TCDD	ND		0.5		---
Total PeCDD	ND		0.6		---
Total HxCDD	3.7	2		4.4	---
Total HpCDD	22.0	2			---
Total TCDF	11.3	2		11.9	---
Total PeCDF	28.7	7		29.8	---
Total HxCDF	23.3	5		25.9	---
Total HpCDF	38.4	2			---

**Mississippi Dept. of Env. Quality**

TLI Project: **58258**  
 Client Sample: **DF-DP-179/12861**

Method 8290 PCDD/PCDF Analysis (b)  
 Analysis File: **U131903**

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	126	63.3	40%-135%	0.81	26:04	—
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	124	62.0	40%-135%	0.82	26:47	—
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	131	65.7	40%-135%	1.59	29:59	—
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	146	73.3	40%-135%	1.59	31:01	—
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	156	78.4	40%-135%	0.52	33:33	—
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	156	78.2	40%-135%	1.26	34:14	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	133	66.6	40%-135%	0.46	36:28	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	135	67.6	40%-135%	1.03	37:29	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8,9-OCDD	308	77.1	40%-135%	0.88	41:06	—

Surrogate Standards (Type B)	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	132	65.9	40%-135%	1.59	30:41	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	155	77.6	40%-135%	0.52	33:28	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	155	77.8	40%-135%	1.31	34:08	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	132	66.0	40%-135%	0.47	38:00	—

Other Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	Flags
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	12.1	60.6	40%-135%	26:48	—

Alternate Standards (Type B)	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	153	76.9	40%-135%	0.51	34:49	—
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	163	81.7	40%-135%	0.51	34:03	—

Recovery Standards	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	0.82	26:36	—
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	1.23	34:32	—

Data Reviewer: PAB 09/06/2002



**Mississippi Dept. of Env. Quality**

TLI Project: **58258**  
 Client Sample: **DF-DP-179/12861**

Toxicity Equivalents Report  
 Analysis File: **U131903**

Client Project:	<b>Crystal Springs Dioxin</b>		
Sample Matrix:	<b>SOIL</b>	Date Received:	<b>08/27/02</b>
TLI ID:	<b>334-48-1</b>	Date Extracted:	<b>08/28/02</b>
		Date Analyzed:	<b>09/04/02</b>
		Spike File:	<b>SPMIT32S</b>
		ICal:	<b>UF57092</b>
		ConCal:	<b>U021317</b>
Sample Size:	<b>12.500 g</b>	Dilution Factor:	<b>1</b>
Dry Weight:	<b>10.025 g</b>	Blank File:	<b>U131602</b>
GC Column:	<b>DB-5</b>	Analyst:	<b>JWL</b>
		% Moisture:	<b>19.8</b>
		% Lipid:	<b>n/a</b>
		% Solids:	<b>80.2</b>

Analytes	Conc. (pg/g)		TEF		Equivalent
2,3,7,8-TCDD	{0.5}	x	1	=	0.5
1,2,3,7,8-PeCDD	{0.6}	x	0.5	=	0.3
1,2,3,4,7,8-HxCDD	{0.7}	x	0.1	=	0.07
1,2,3,6,7,8-HxCDD	{0.6}	x	0.1	=	0.06
1,2,3,7,8,9-HxCDD	[0.71]	x	0.1	=	0.071
1,2,3,4,6,7,8-HpCDD	9.7	x	0.01	=	0.097
1,2,3,4,6,7,8,9-OCDD	191	x	0.001	=	0.191
TOTAL PCDD					1.3
2,3,7,8-TCDF	{0.3}	x	0.1	=	0.03
1,2,3,7,8-PeCDF	{0.4}	x	0.05	=	0.02
2,3,4,7,8-PeCDF	{0.4}	x	0.5	=	0.2
1,2,3,4,7,8-HxCDF	6.3	x	0.1	=	0.63
1,2,3,6,7,8-HxCDF	[0.73]	x	0.1	=	0.073
2,3,4,6,7,8-HxCDF	[0.72]	x	0.1	=	0.072
1,2,3,7,8,9-HxCDF	{0.6}	x	0.1	=	0.06
1,2,3,4,6,7,8-HpCDF	25.9	x	0.01	=	0.259
1,2,3,4,7,8,9-HpCDF	{0.9}	x	0.01	=	0.009
1,2,3,4,6,7,8,9-OCDF	5.1	x	0.001	=	0.0051
TOTAL PCDF					1.4

**Total EPA TEFs, 1989a: 2.6 pg/g**

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

Initial ....Date...

Data Review By:

LAB 9/6/02

Calculated Noise Height: 1.76

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 U131903B.dbf  
09/06/2002 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			0.874-1.072		
304-306	DC NL	Height	7.18	4.02	3.16		
		23:40 RO	1.22	32.48	22.46	18.35	0.908 J
		26:57	0.66	51.11	20.29	30.82	1.034 J
		27:17	0.73	526.66	223.09	303.57	1.047
	DC WH	28:04 RO	0.61	21.81			1.077
304-306		3 Peaks		610.25			

13C12-TCDF		0.65-0.89			0.962-1.038		
316-318	DC NL	Height	5.47	2.81	2.66		
		25:04	0.79	83.04	36.66	46.38	0.962
		25:20 RO	0.45	45.95	19.99	44.31	0.972
		25:40	0.66	101.82	40.63	61.19	0.985
		26:04	0.81	9,069.60	4,048.08	5,021.52	1.000 13C12-2378-TCDF ISO
		Height	2,241.04	991.31	1,249.73		
	DC WH	27:14	0.77	34.72			1.045
	DC WH	27:49 RO	1.89	8.27			1.067
	DC WH	28:00 RO	0.20	7.13			1.074
316-318		4 Peaks		9,300.41			

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

TCDD		0.65-0.89			0.900-1.043		
320-322	DC NL	Height	4.15	2.07	2.08		
	DC SN	24:16 RO	0.37	17.98		0.906	1368-TCDD AN
	DC SN	27:03 RO	0.43	6.07		1.010	
	DC SN	27:50 RO	0.45	2.92		1.039	
320-322		0 Peaks		0.00			

37C1-TCDD					0.925-1.075		
328	DC NL	Height	2.23	2.23			
		25:25		250.30	250.30	0.949	
		26:48		650.30	650.30	1.001	37C1-TCDD CLS
		27:09		276.69	276.69	1.014	
		27:37		3.76	3.76	1.031	
	DC SN	27:48		0.96		1.038	
	DC SN	27:57		2.37		1.044	
		28:07		23.15	23.15	1.050	
328		5 Peaks		1,204.20			

13C12-TCDD		0.65-0.89			0.925-1.075		
332-334	DC NL	Height	10.29	6.79	3.50		
		26:36	0.82	8,940.23	4,029.44	4,910.79	0.993 13C12-1234-TCDD RS1
		26:47	0.82	6,257.32	2,822.15	3,435.17	1.000 13C12-2378-TCDD IS1
		Height	1,607.53	737.75	869.78		

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.

332-334 2 Peaks 15,197.55

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

PeCDF		1.32-1.78		0.928-1.061	
340-342	DC NL	Height	4.42	2.01	2.41
		28:02	1.40	105.74	61.67
		28:19 RO	1.82	44.42	31.64
		29:10	1.62	71.95	44.46
		29:19	1.56	237.85	144.94
		29:31	1.54	220.58	133.69
		29:54	1.50	387.14	232.11
		31:02	1.52	24.18	14.60
	M	31:32	1.71	127.60	80.60
340-342		8 Peaks	1,219.46		

13C12-PeCDF		1.32-1.78		0.867-1.133	
352-354	DC NL	Height	3.18	1.53	1.65
		29:09	1.47	151.73	90.39
		29:36 RO	2.04	56.28	44.94
		29:59	1.59	6,555.17	4,027.21
			Height	1,810.45	1,082.06
		30:16	1.67	124.01	77.56
		30:41	1.59	6,596.20	4,045.13
		31:40	1.65	96.14	59.89
352-354		6 Peaks	13,579.53		

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

PeCDD		1.32-1.78		0.938-1.021	
356-358	DC NL	Height	3.52	1.77	1.75
	D	D SN 29:14 RO	0.15	17.03	0.943
		DC SN 29:27 RO	0.27	15.84	0.949
		DC SN 29:43 RO	0.91	7.06	0.958
		DC SN 29:59 RO	1.04	24.17	0.967
		DC SN 30:07	1.74	13.45	0.971
		DC SN 30:18 RO	0.81	8.49	0.977
		DC SN 31:02 RO	0.76	7.49	1.001
		DC WH 31:54 RO	0.38	20.86	1.028
356-358		0 Peaks	0.00		

13C12-PeCDD		1.32-1.78		0.871-1.129	
368-370	DC NL	Height	3.22	1.82	1.40
		30:06 RO	1.04	41.46	16.97
		DC SN 30:16 RO	1.18	14.64	
		DC SN 30:26 RO	1.02	8.29	
		31:01	1.59	4,355.11	2,670.38
			Height	1,324.49	815.77
		DC SN 31:34	1.46	12.90	
		DC SN 31:40 RO	0.21	3.50	
		DC SN 31:57 RO	6.37	3.90	
368-370		2 Peaks	4,396.57		

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.

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

HxCDF		1.05-1.43			0.964-1.045				
374-376	DC NL	Height	3.29	1.41	1.88				
		32:30	1.25	98.03	54.39	43.64	0.969		J
		32:38	1.10	189.77	99.31	90.46	0.973		
		32:47	1.37	34.27	19.78	14.49	0.977		J
K		32:56 RO	0.95	18.44	10.21	10.79	0.982		J
		33:06	1.22	214.46	117.96	96.50	0.987		
		33:18 RO	0.93	16.47	9.12	9.79	0.993		J
		33:26	1.13	212.23	112.79	99.44	0.997	123478-HxCDF	AN
		33:34 RO	1.67	25.76	19.19	11.50	1.000	123678-HxCDF	AN J
		34:03 RO	0.93	22.27	12.33	13.22	1.015	234678-HxCDF	AN J
	DC SN	34:12 RO	0.53	5.60		1.019			
	DC SN	34:37 RO	0.19	3.90		1.032			
	DC SN	34:48 RO	0.03	0.58		1.037	123789-HxCDF	AN	
	DC SN	35:03 RO	3.36	2.51		1.045			
374-376		9 Peaks		831.70					

13C12-HxCDF		0.43-0.59			0.881-1.119				
384-386	DC NL	Height	5.62	2.73	2.89				
		32:30 RO	0.74	29.79	10.06	13.65	0.969		
		32:37 RO	0.76	53.29	18.00	23.83	0.972		
		33:28	0.52	5,862.01	2,005.13	3,856.88	0.998	13C12-HxCDF 478	SUR2
		33:33	0.52	5,905.16	2,024.64	3,880.52	1.000	13C12-HxCDF 678	IS4
				Height	1,850.64	634.75	1,215.89		
		34:03	0.51	5,663.15	1,915.39	3,747.76	1.015	13C12-HxCDF 234	ALT2
	DC SN	34:34 RO	2.13	3.23		1.030			
		34:49	0.51	4,235.97	1,434.17	2,801.80	1.038	13C12-HxCDF 789	ALT1
384-386		6 Peaks		21,749.37					

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

HxCDD		1.05-1.43			0.959-1.013				
390-392	DC NL	Height	3.66	1.73	1.93				
		32:59	1.38	31.01	17.96	13.05	0.963		J
M		33:39	1.10	52.50	27.50	25.00	0.983		J
	DC SN	34:04 RO	2.97	4.86		0.995			
	DC SN	34:14 RO	2.77	9.54		1.000	123678-HxCDD	AN	
N		34:32 RO	0.81	15.72	8.70	10.73	1.009	123789-HxCDD	AN J
	DC WH	34:46 RO	0.37	44.31		1.016			
	DC WH	34:53 RO	0.46	4.10		1.019			
	DC WH	35:02 RO	2.07	7.93		1.023			
390-392		3 Peaks		99.23					

13C12-HxCDD		1.05-1.43			0.971-1.029				
402-404	DC NL	Height	4.48	2.39	2.09				
		33:37 RO	1.47	39.98	26.16	17.85	0.982		
		34:08	1.31	3,725.16	2,110.14	1,615.02	0.997	13C12-HxCDD 478	SUR3
		34:14	1.26	4,144.28	2,312.07	1,832.21	1.000	13C12-HxCDD 678	IS5
				Height	1,244.72	697.13	547.59		
		34:32	1.23	5,100.39	2,817.62	2,282.77	1.009	13C12-HxCDD 789	RS2

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.

34:50 1.33 21.60 12.32 9.28 1.018  
402-404 5 Peaks 13,031.41

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

HpCDF 0.88-1.20 0.995-1.047  
408-410 DC NL Height 3.18 1.64 1.54  
36:28 1.07 668.24 345.60 322.64 1.000 1234678-HpCDF AN  
36:53 0.96 275.17 134.70 140.47 1.011  
408-410 2 Peaks 943.41

13C12-HpCDF 0.37-0.51 0.945-1.110  
418-420 DC NL Height 3.42 1.67 1.75  
36:28 0.46 3,564.77 1,131.43 2,433.34 1.000 13C12-HpCDF 678 IS6  
Height 923.90 297.29 626.61  
DC SN 36:47 RO 0.66 13.84 1.009  
DC SN 37:00 RO 0.79 19.21 1.015  
38:00 0.47 2,483.86 789.00 1,694.86 1.042 13C12-HpCDF 789 SUR4  
418-420 2 Peaks 6,048.63

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

HpCDD 0.88-1.20 0.976-1.005  
424-426 DC NL Height 2.76 1.36 1.40  
36:45 0.93 173.98 83.88 90.10 0.980  
37:30 0.99 137.05 68.18 68.87 1.000 1234678-HpCDD AN  
424-426 2 Peaks 311.03

13C12-HpCDD 0.88-1.20 0.973-1.027  
436-438 DC NL Height 3.75 2.26 1.49  
36:45 RO 0.81 24.21 12.34 15.24 0.980  
37:29 1.03 2,788.21 1,412.68 1,375.53 1.000 13C12-HpCDD 678 IS7  
Height 702.12 351.98 350.14  
436-438 2 Peaks 2,812.42

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

OCDF 0.76-1.02 0.903-1.097  
442-444 DC NL Height 3.10 1.52 1.58  
DC WL 35:49 RO 1.98 8.62 0.871  
DC WL 36:03 RO 0.62 2.85 0.877  
DC WL 36:08 0.90 7.81 0.879  
DC SN 39:26 RO 1.35 7.09 0.959  
41:20 1.00 81.94 40.90 41.04 1.006 OCDF AN J  
DC SN 43:52 RO 0.64 7.24 1.067  
DC SN 44:06 RO 2.74 7.37 1.073  
442-444 1 Peak 81.94

OCDD 0.76-1.02 0.903-1.097  
458-460 DC NL Height 2.56 1.12 1.44  
41:06 0.90 2,284.56 1,080.38 1,204.18 1.000 OCDD AN  
DC SN 41:28 RO 0.34 3.23 1.009

Compound/

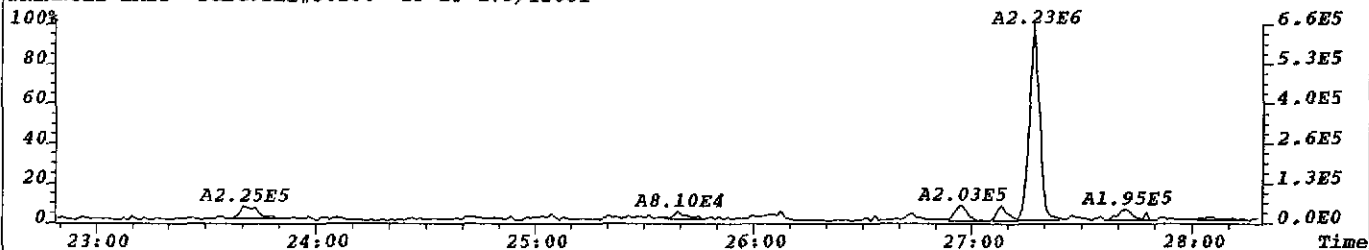
M_Z	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
458-460							2,284.56						
13C12-OCDD						0.76-1.02				0.996-1.004			
470-472	DC	NL				Height	2.87	1.43	1.44				
			41:06			0.88	4,304.02	2,015.01	2,289.01	1.000	13C12-OCDD	IS8	
						Height	891.16	414.42	476.74				
	DC	WH	41:28			0.78	24.04			1.009			
470-472							4,304.02						

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

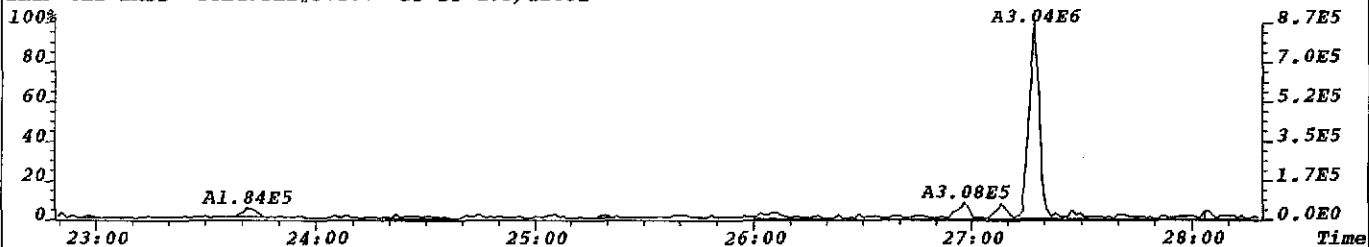
M_Z	-Nominal Ion Mass(es)	WL	-Below Retention Time Window	A	-Peak Added
..RT.	-Retention Time (mm:ss)	WH	-Above Retention Time Window	K	-Peak Kept
Rat.1	-Ratio of M/M+2 Ions	SN	-Below Signal to Noise Level	D	-Peak Deleted
OK	-RO=Ratio Outside Limits	<M	-Below Method Detection Limit	T	-Time Changed
Rel.RT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

\*\*\* End of Report \*\*\*

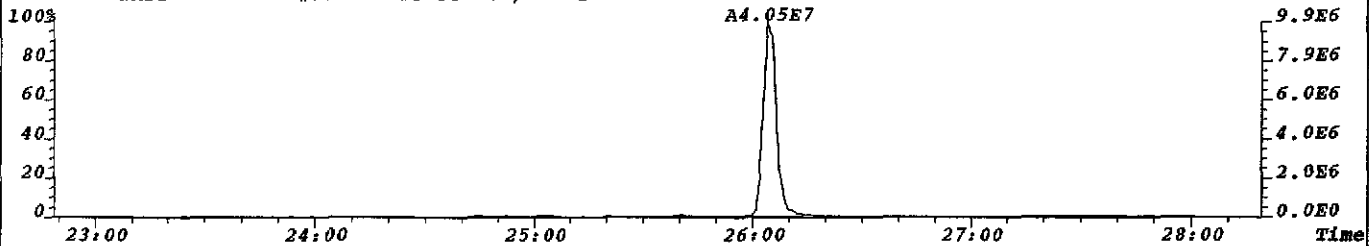
File:U1319 #1-648 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:5019  
303.9016 S:3 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,20076.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



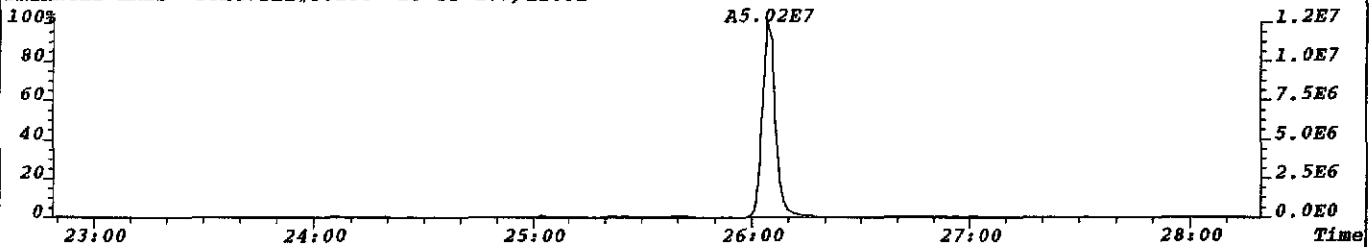
File:U1319 #1-648 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:3950  
305.8987 S:3 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,15800.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



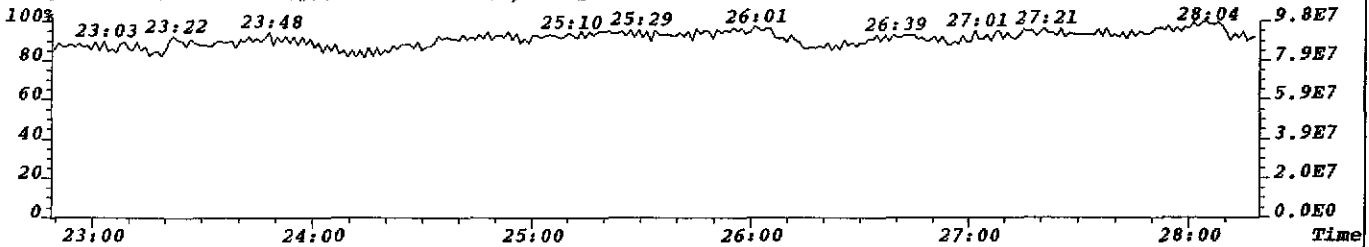
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315.9419 S:3 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,14040.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



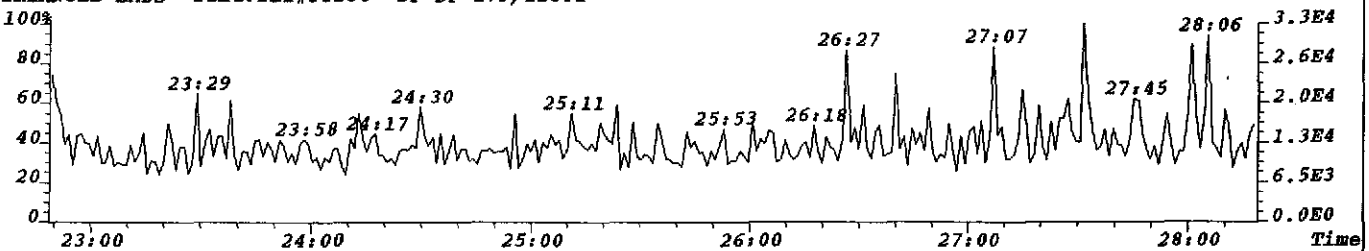
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317.9389 S:3 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,13320.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



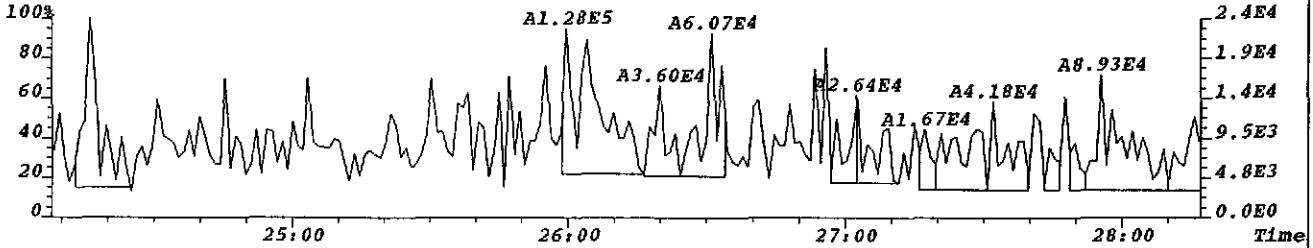
File:U1319 #1-648 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S  
330.9792 S:3 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



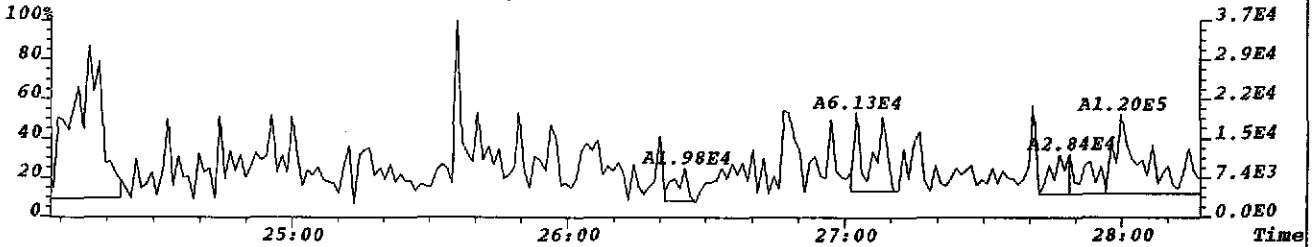
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375.8364 S:3 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



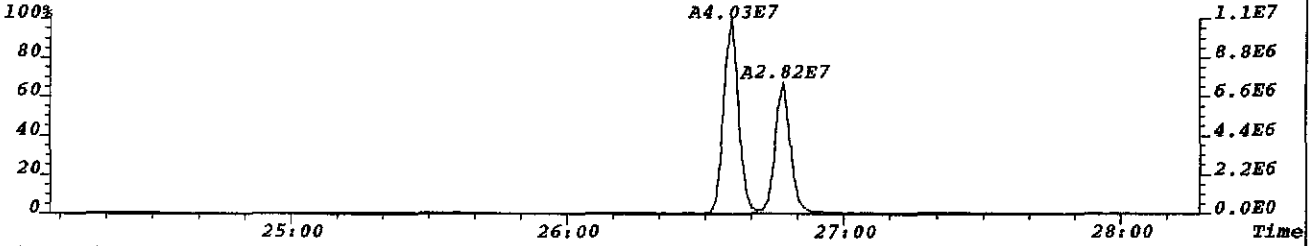
File:U1319 #1-648 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:2584  
319.8965 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10336.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



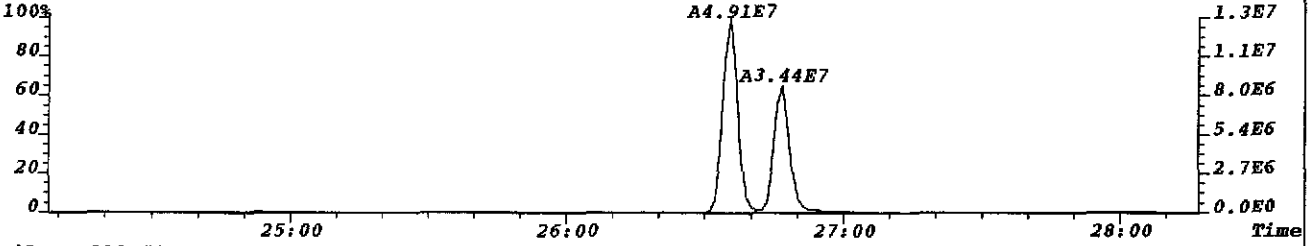
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321.8936 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10412.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



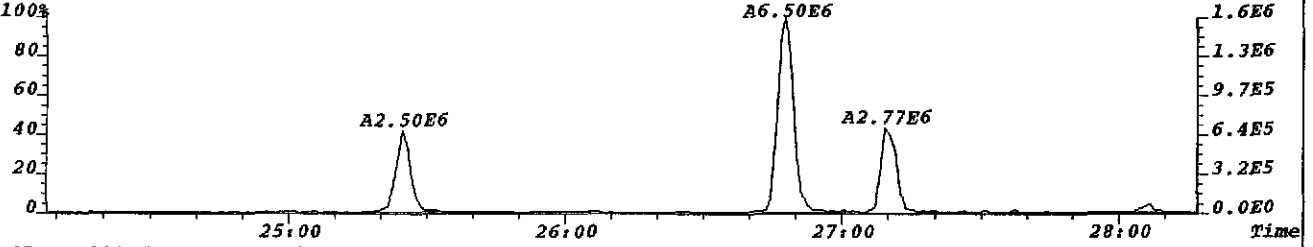
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331.9368 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,33972.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



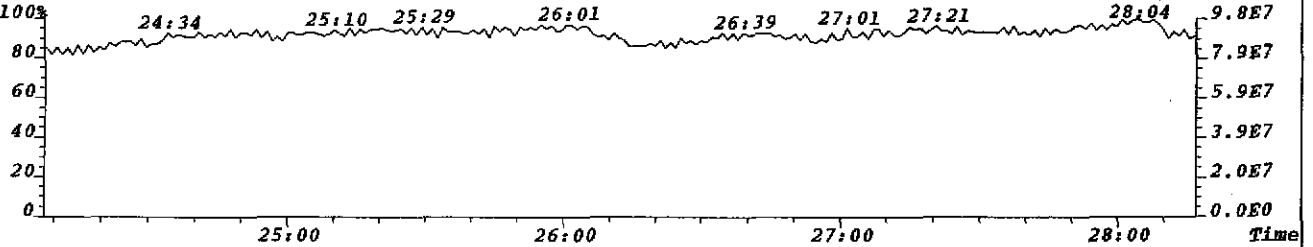
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333.9338 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,17500.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



File:U1319 #1-648 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:2793  
327.8847 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11172.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861

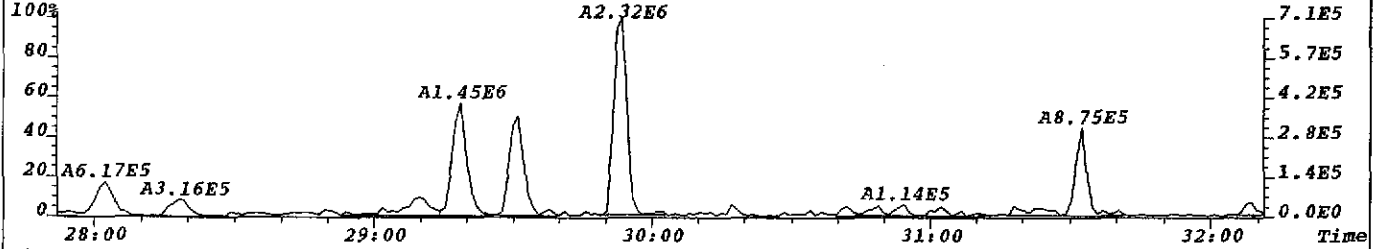


File:U1319 #1-648 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S  
330.9792 S:3 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861

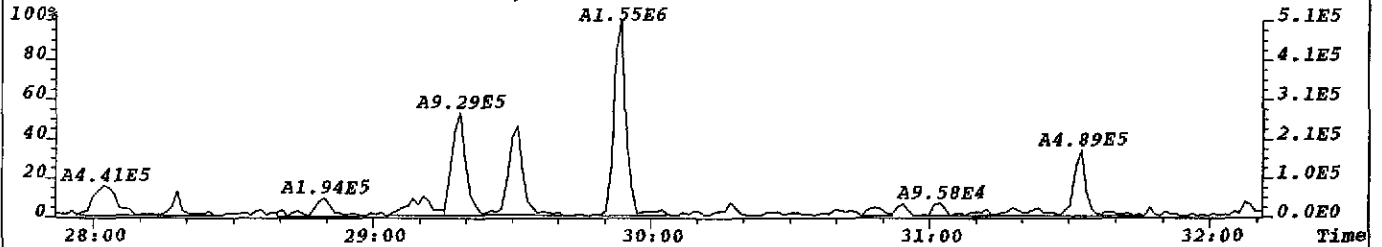




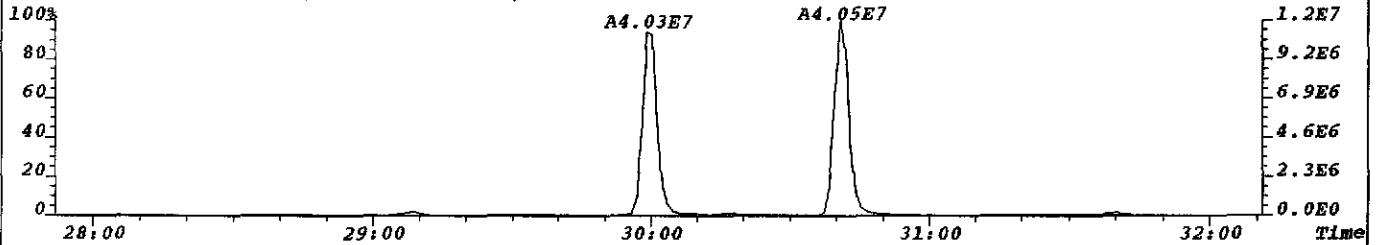
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339.8597 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10040.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



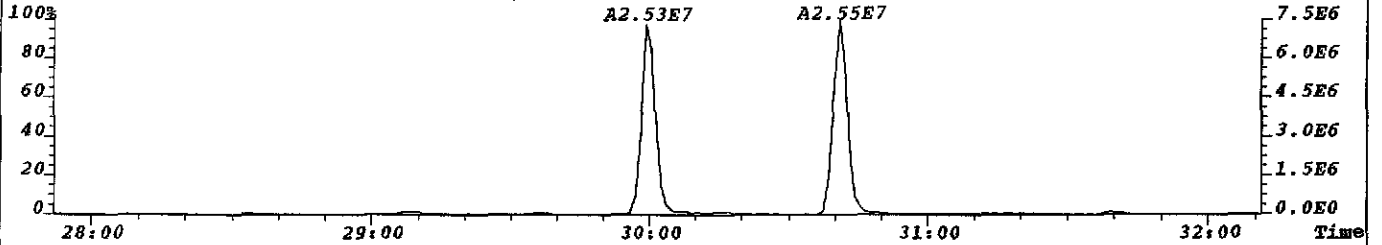
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341.8567 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12040.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



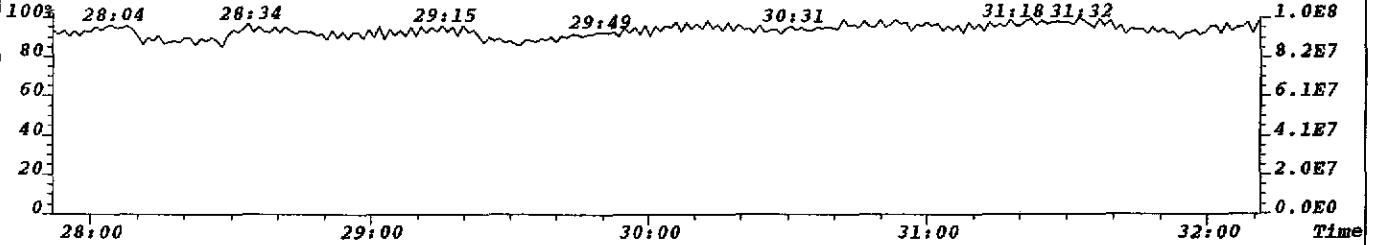
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351.9000 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7628.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



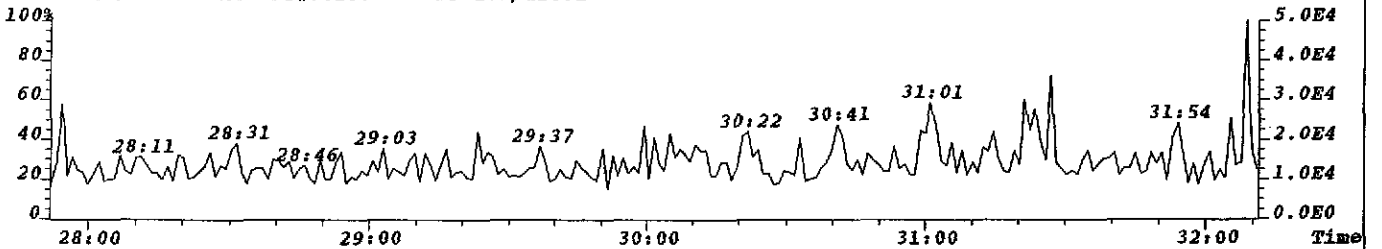
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353.8970 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,8240.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



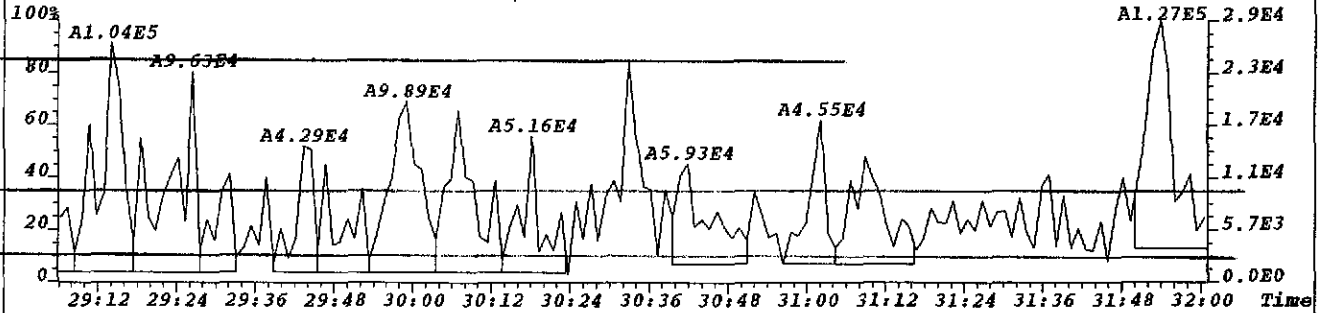
File:U1319 #1-648 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S  
330.9792 S:3 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



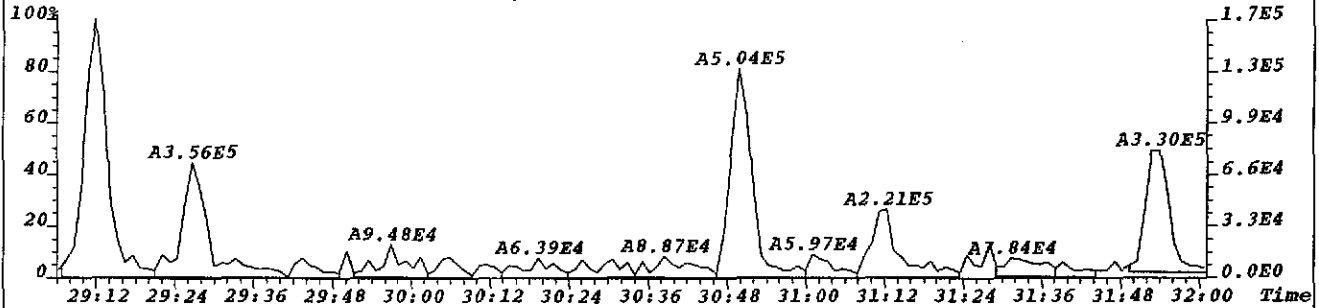
File:U1319 #1-648 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S  
409.7974 S:3 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



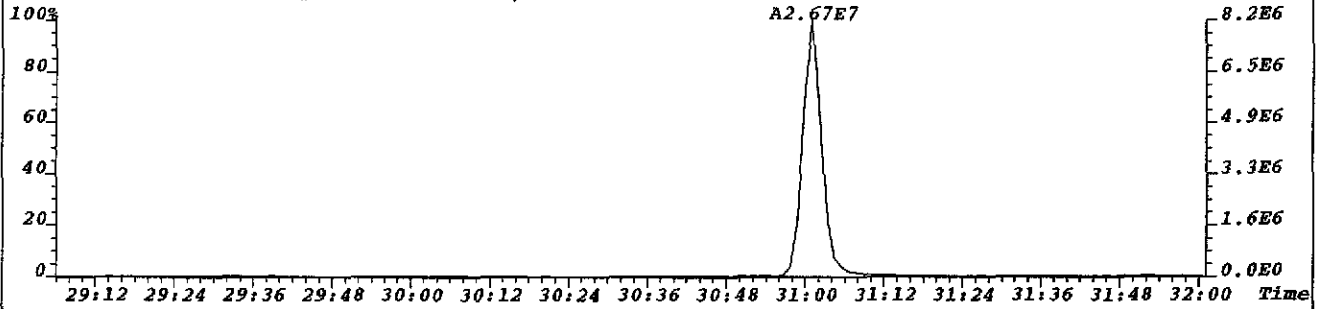
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355.8546 S:3 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,8872.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



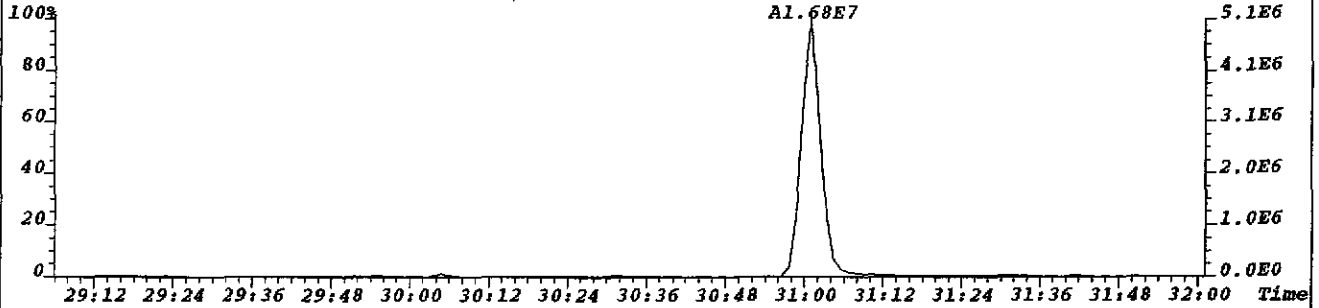
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357.8516 S:3 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,8760.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



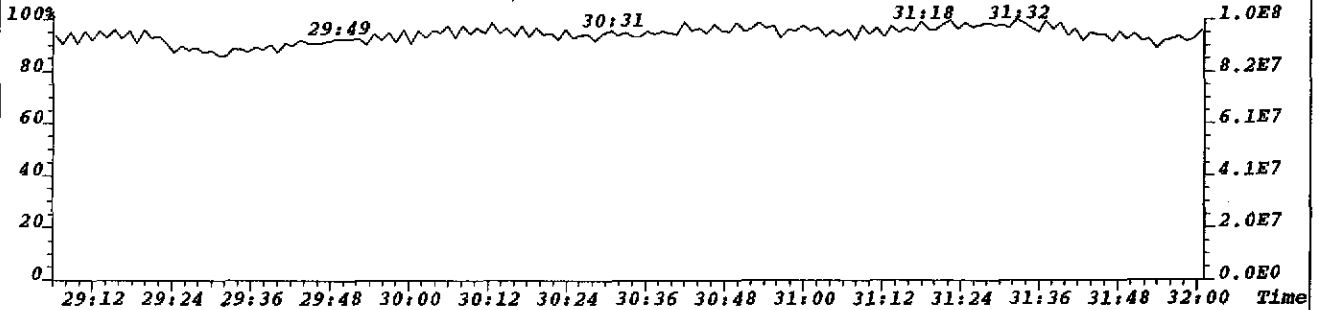
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367.8949 S:3 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,9092.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861

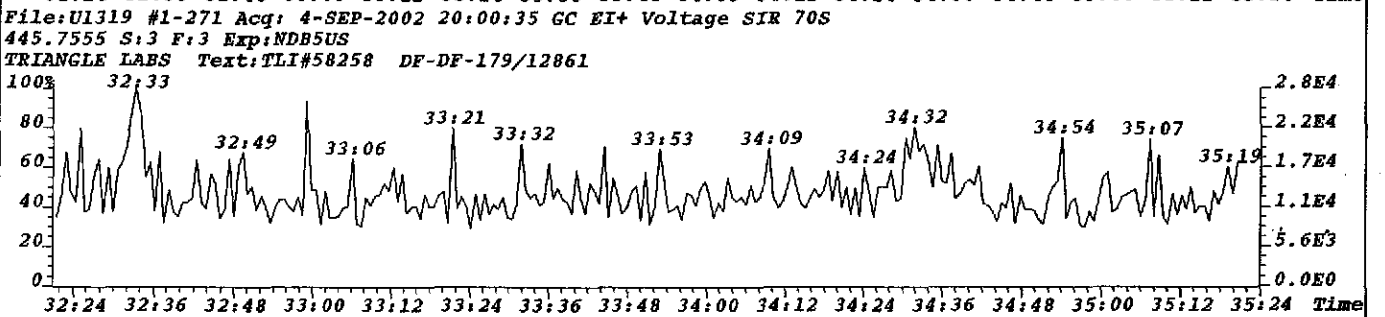
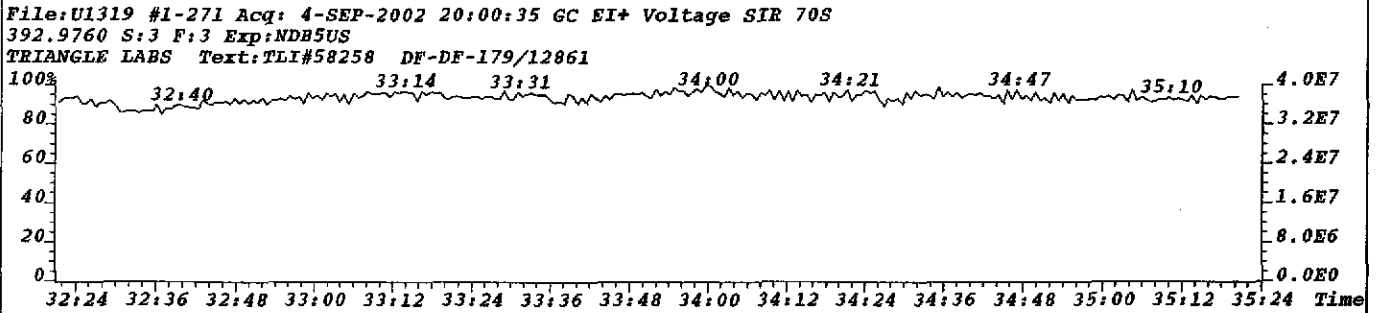
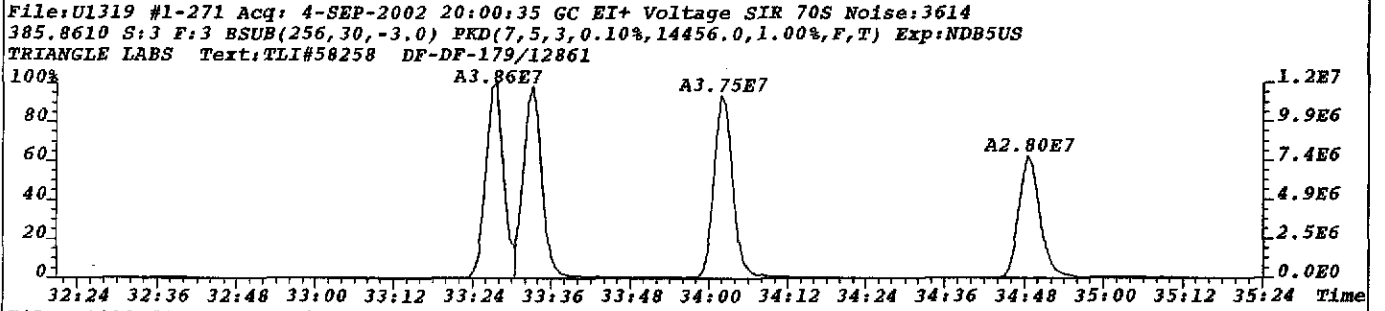
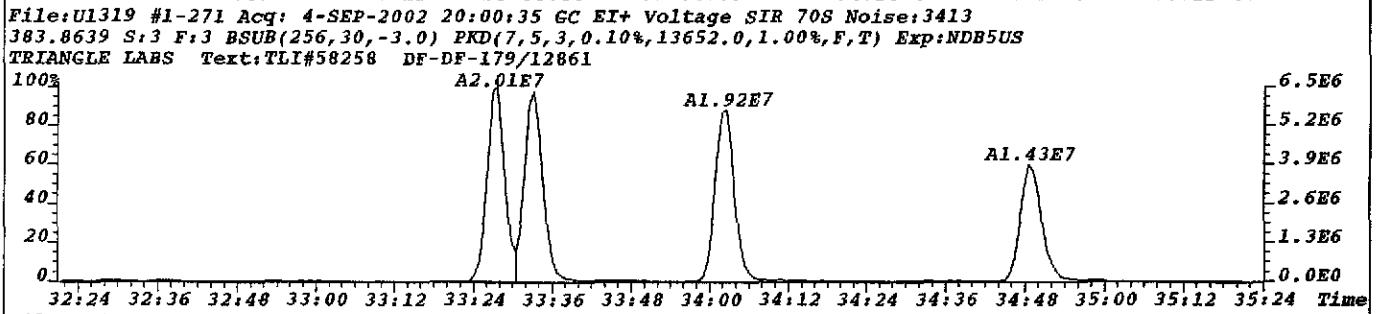
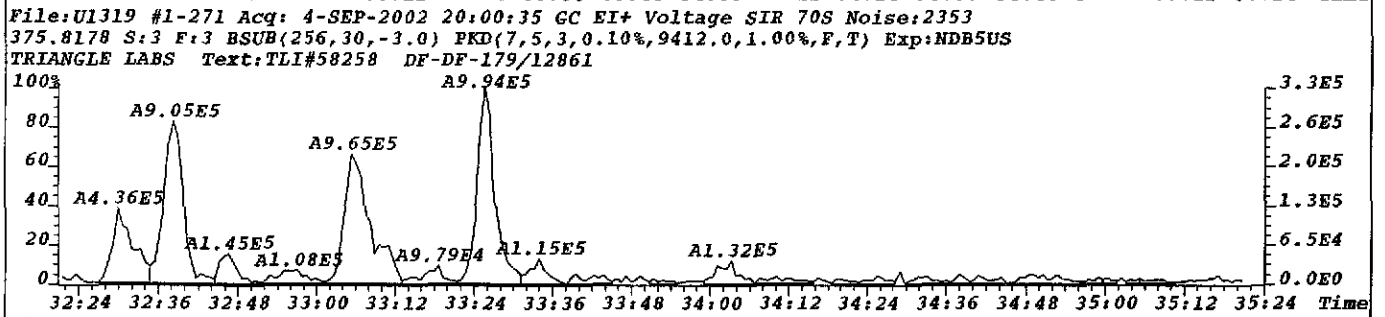
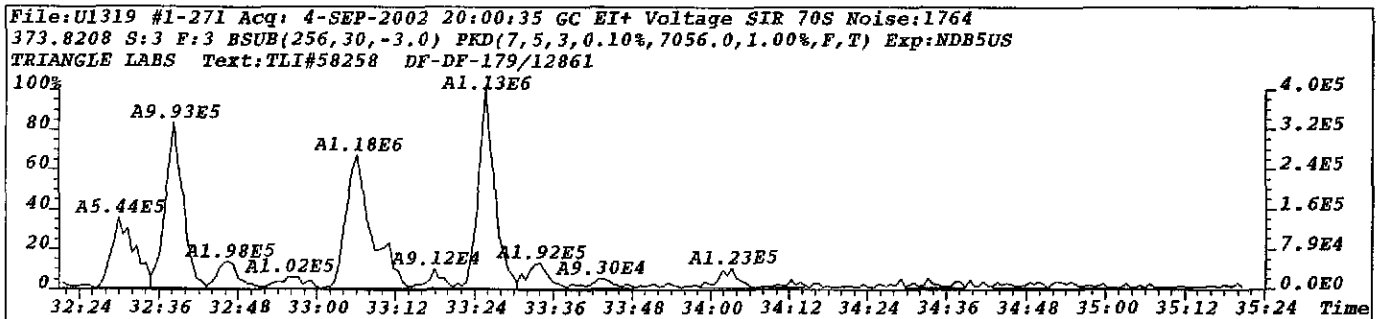


File:U1319 #1-648 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:1749  
369.8919 S:3 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,6996.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861

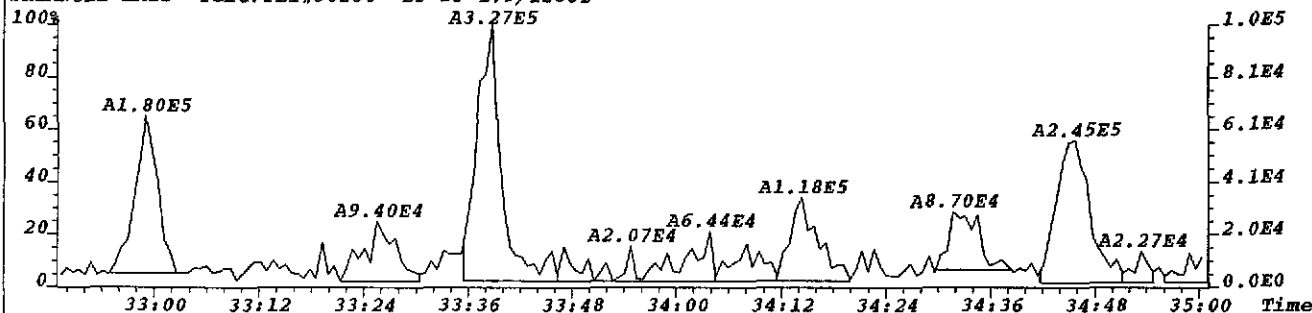


File:U1319 #1-648 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S  
330.9792 S:3 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861

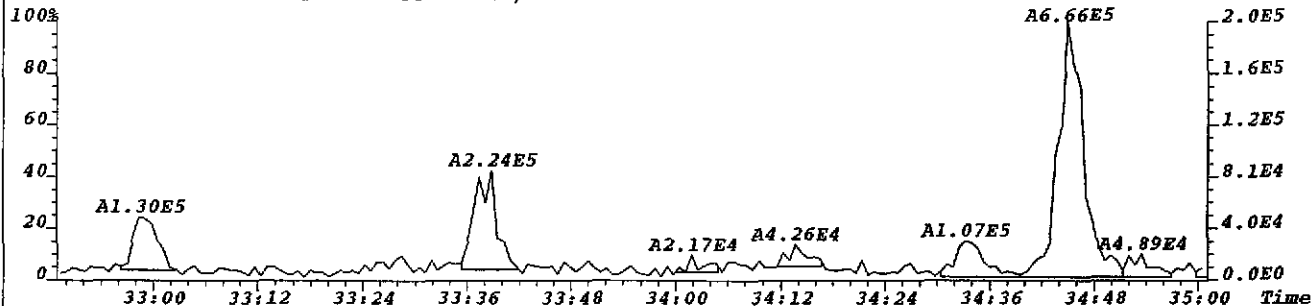




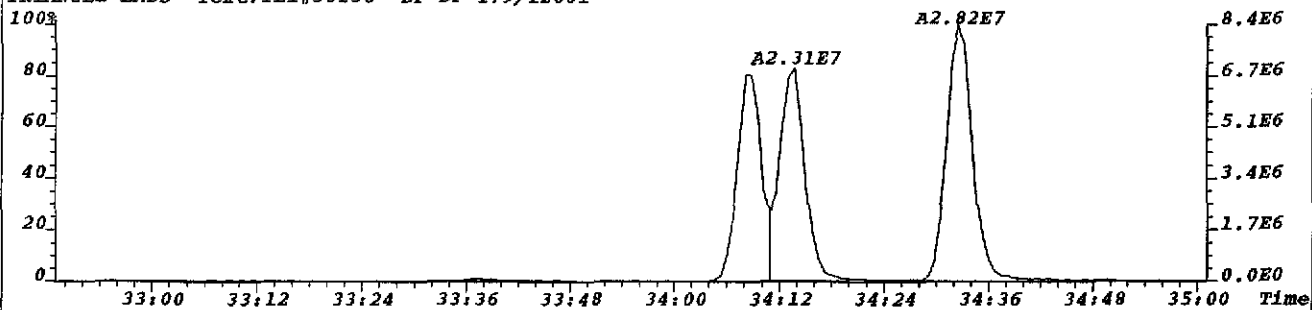
File:U1319 #1-271 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:2163  
389.8156 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,8652.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



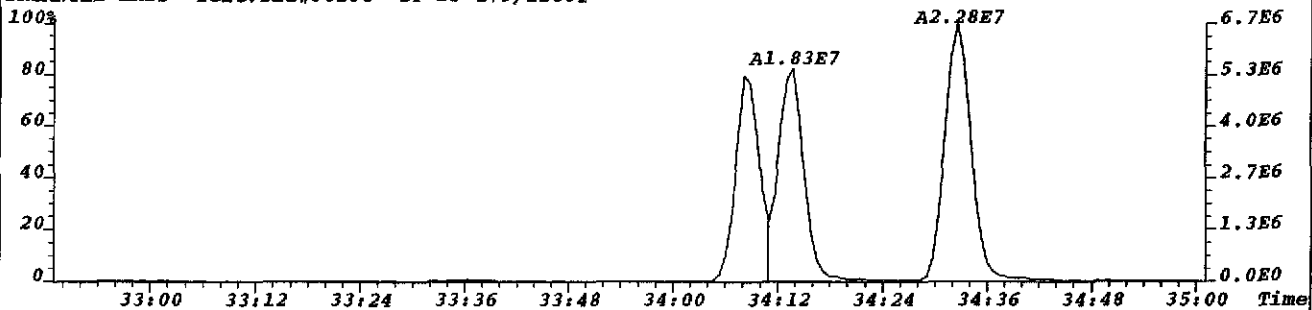
File:U1319 #1-271 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:2408  
391.8127 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9632.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



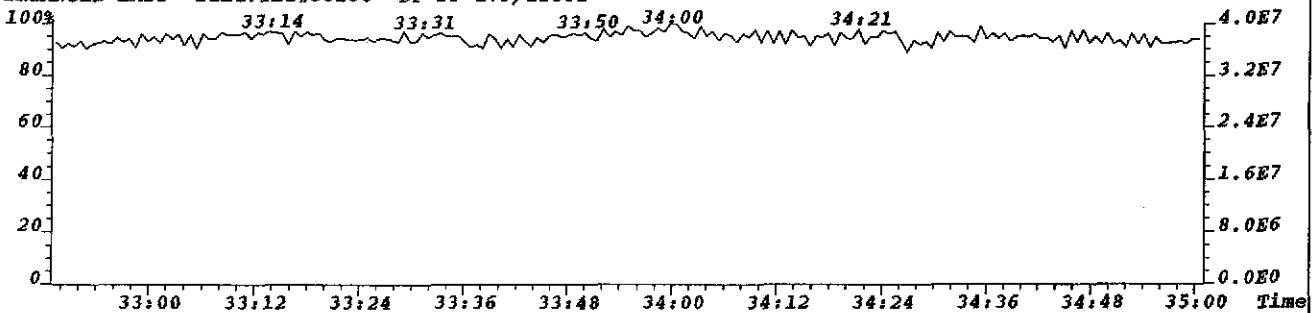
File:U1319 #1-271 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:2986  
401.8558 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11944.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



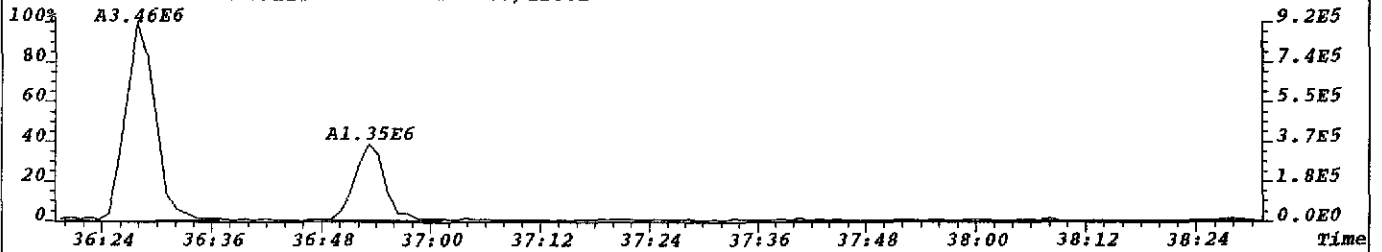
File:U1319 #1-271 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:2610  
403.8529 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10440.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



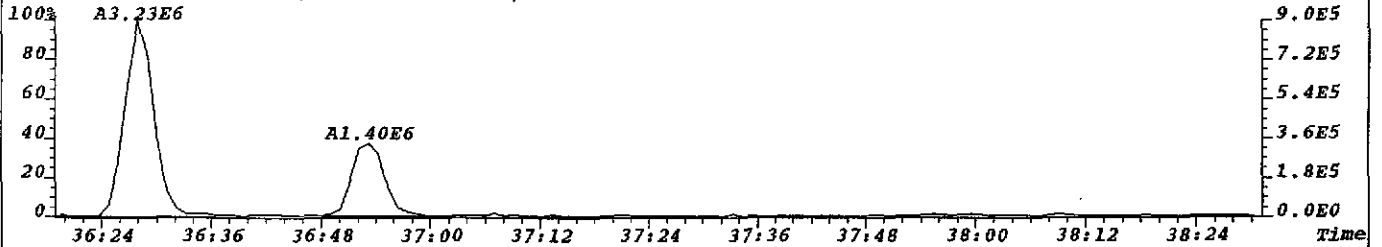
File:U1319 #1-271 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S  
392.9760 S:3 F:3 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



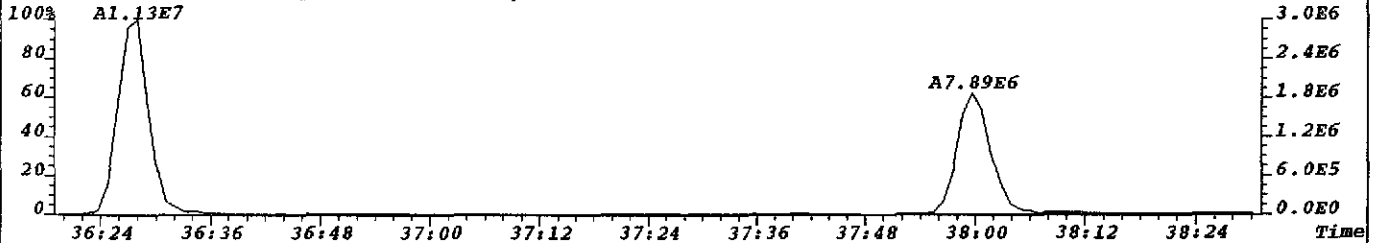
File:UL1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:2052  
407.7818 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,8208.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



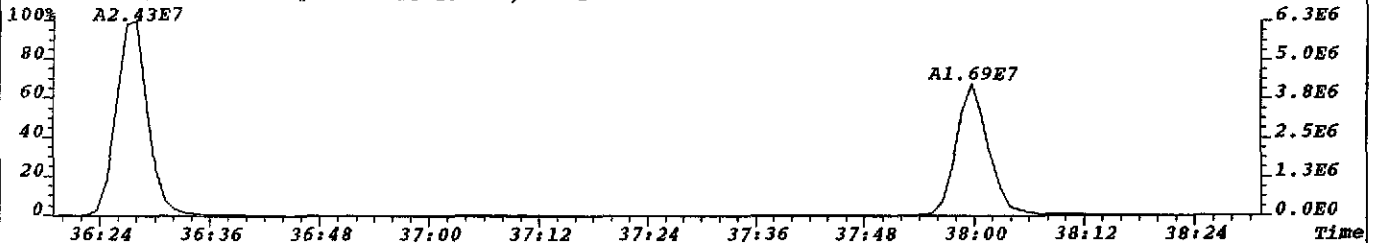
File:UL1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:1923  
409.7789 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7692.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



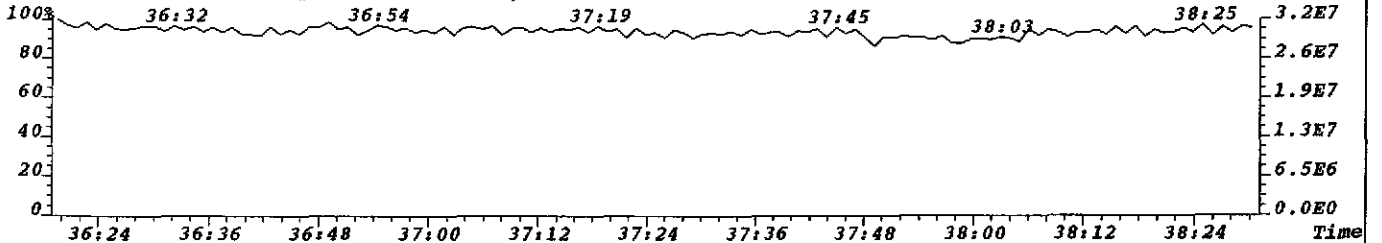
File:UL1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:2089  
417.8253 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,8356.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



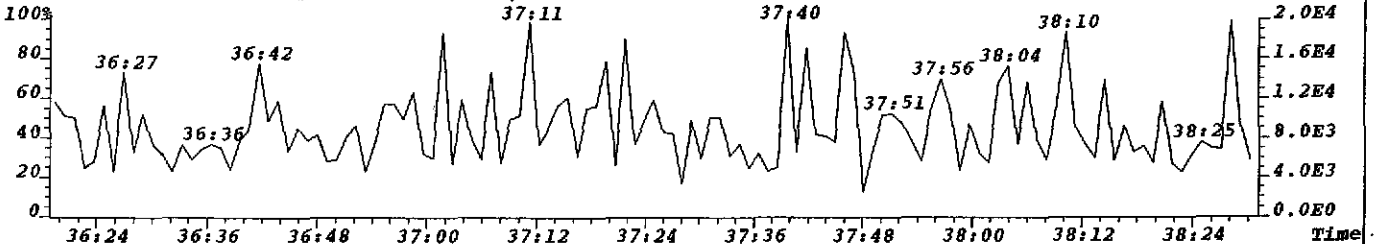
File:UL1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:2185  
419.8220 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,8740.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



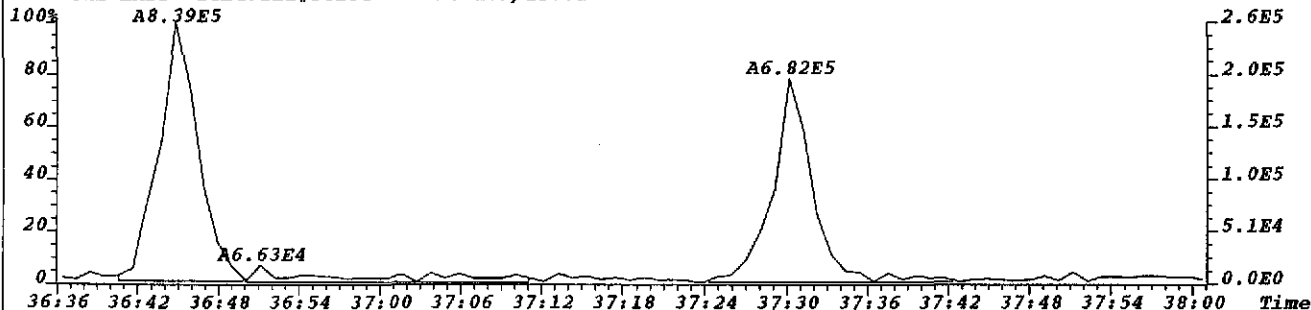
File:UL1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S  
430.9729 S:3 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



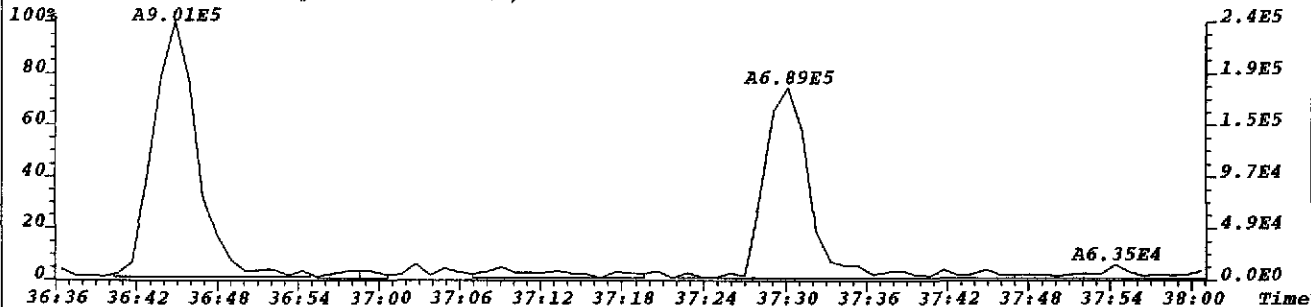
File:UL1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S  
479.7165 S:3 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



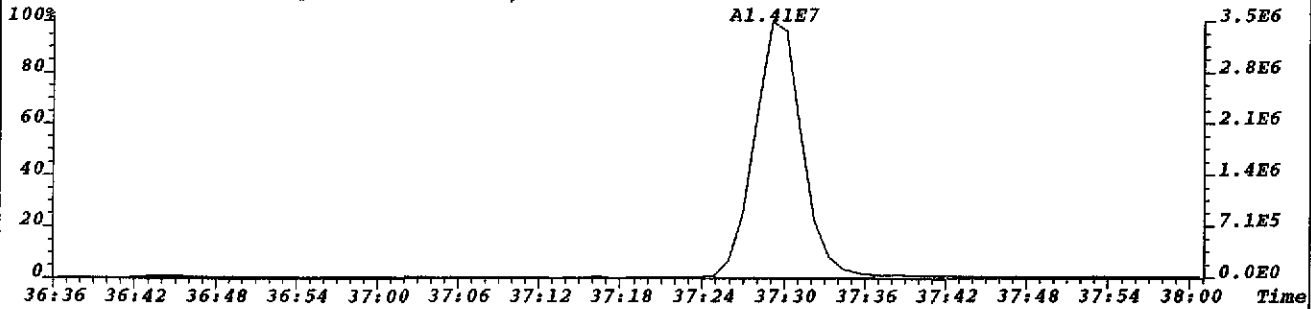
File:U1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:1700  
423.7766 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6800.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



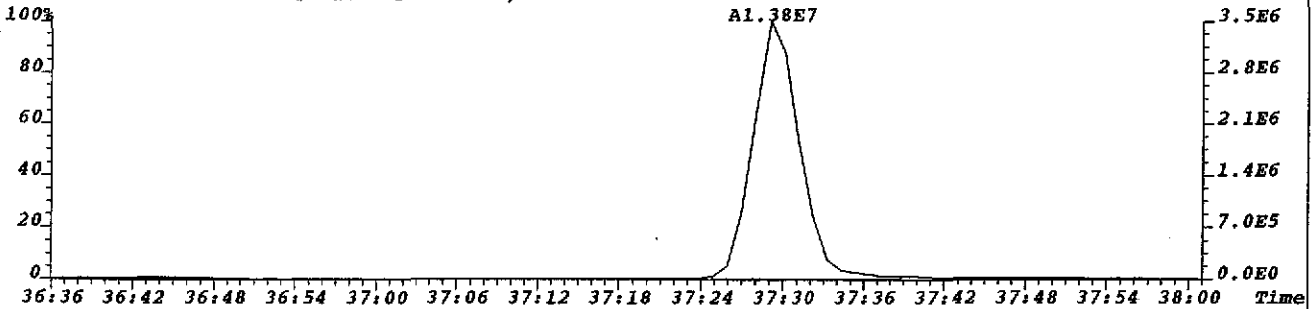
File:U1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:1750  
425.7737 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7000.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



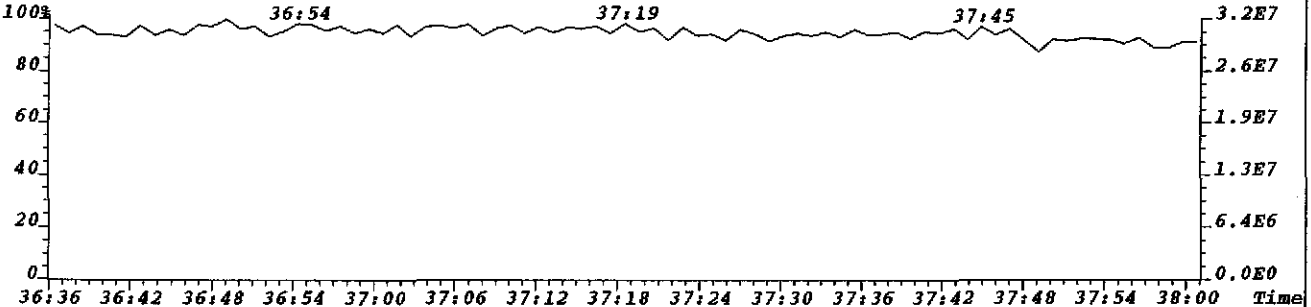
File:U1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:2819  
435.8169 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11276.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



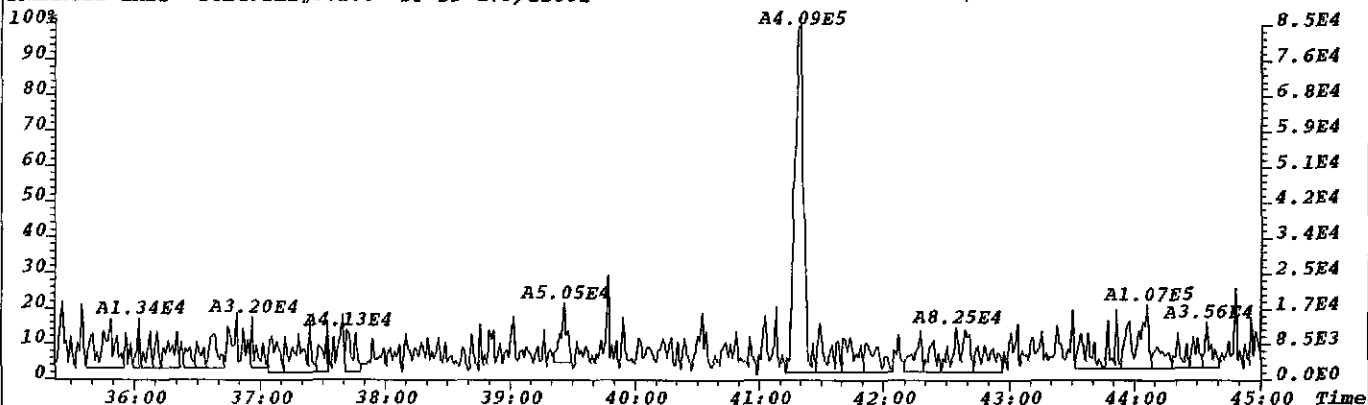
File:U1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:1868  
437.8140 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7472.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



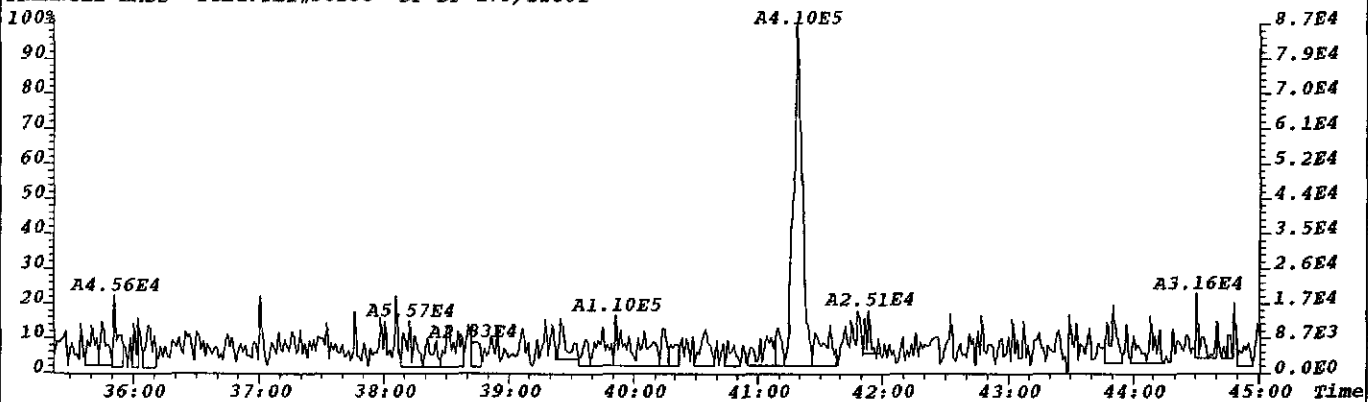
File:U1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S  
430.9729 S:3 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



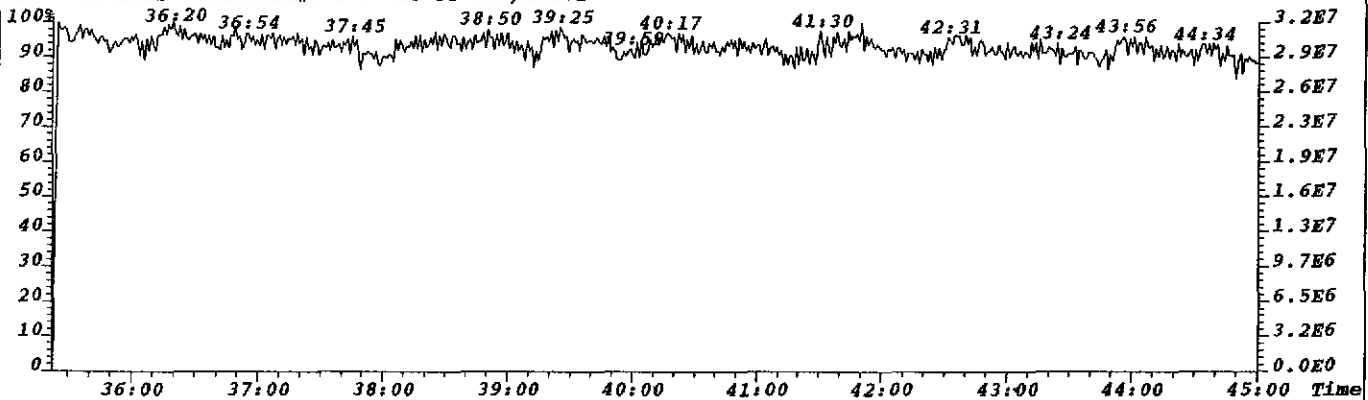
File:UL1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:1905  
441.7428 S:3 F:4 BSub(256,30,-3.0) PKD(7,5,3,0.10%,7620.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



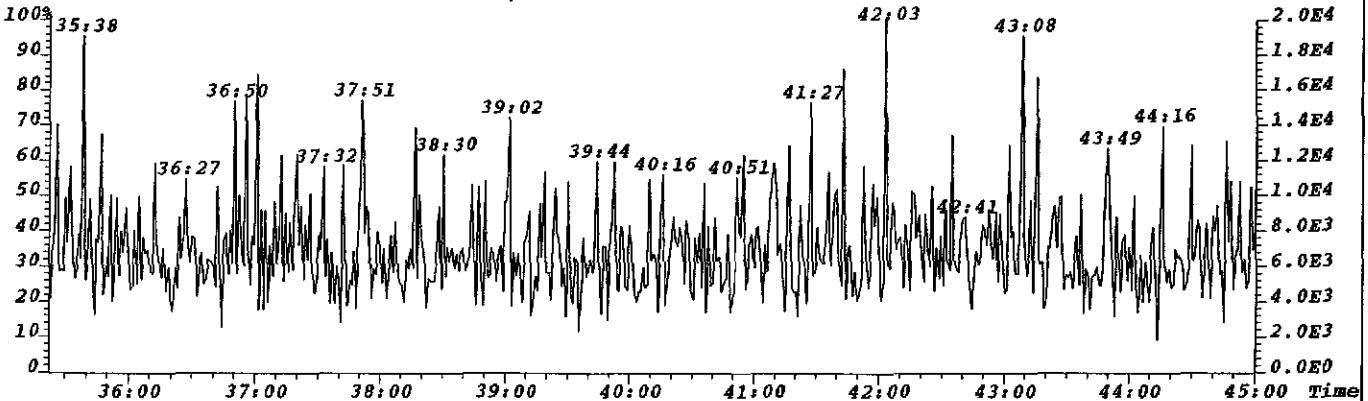
File:UL1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:1980  
443.7399 S:3 F:4 BSub(256,30,-3.0) PKD(7,5,3,0.10%,7920.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



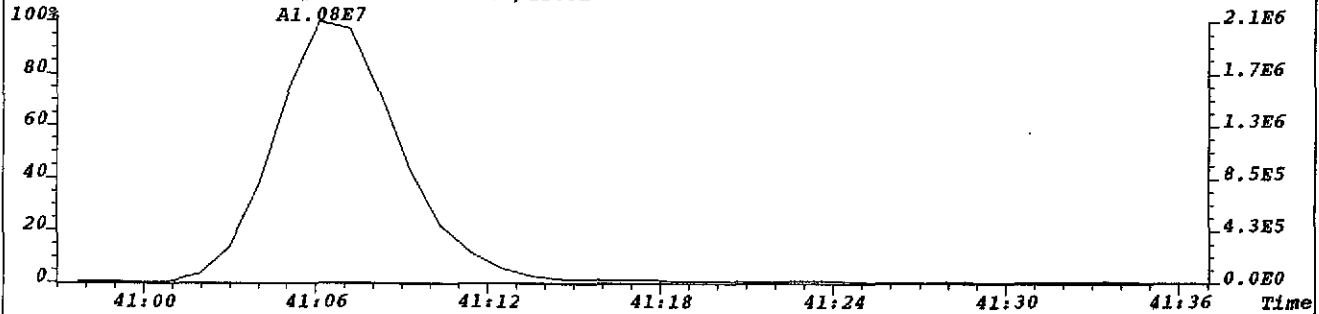
File:UL1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S  
430.9729 S:3 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



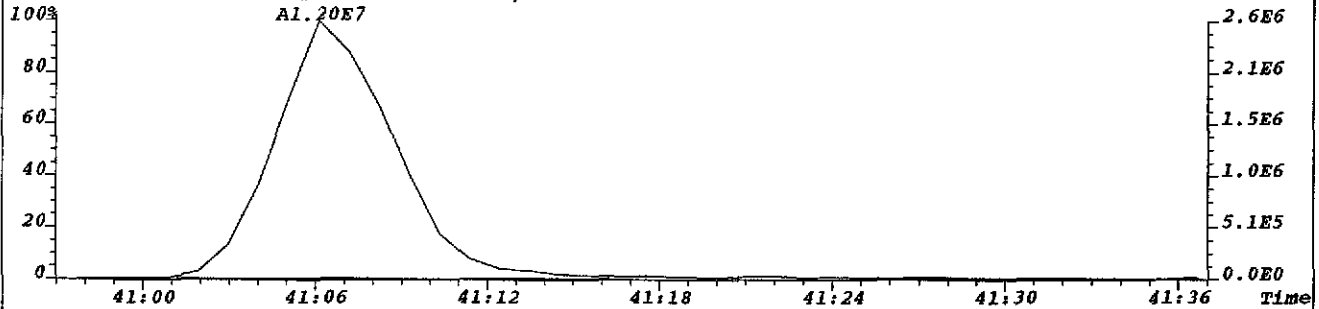
File:UL1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S  
513.6775 S:3 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



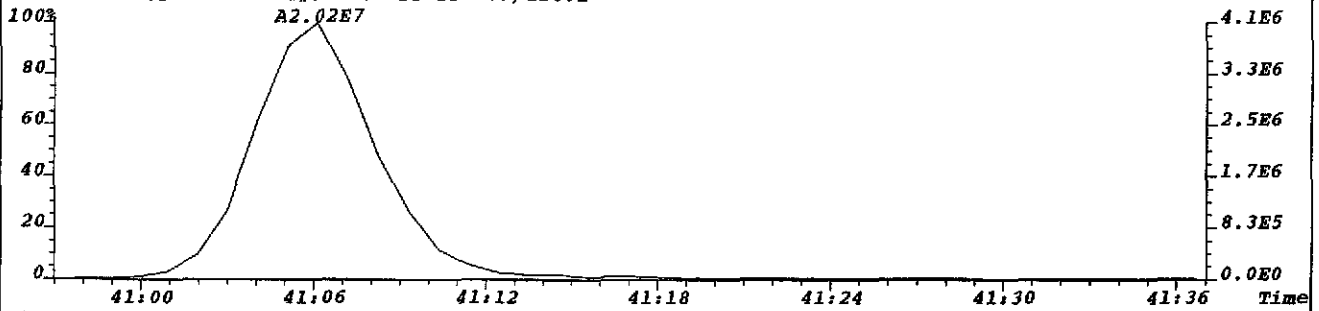
File:U1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:1400  
457.7377 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5600.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



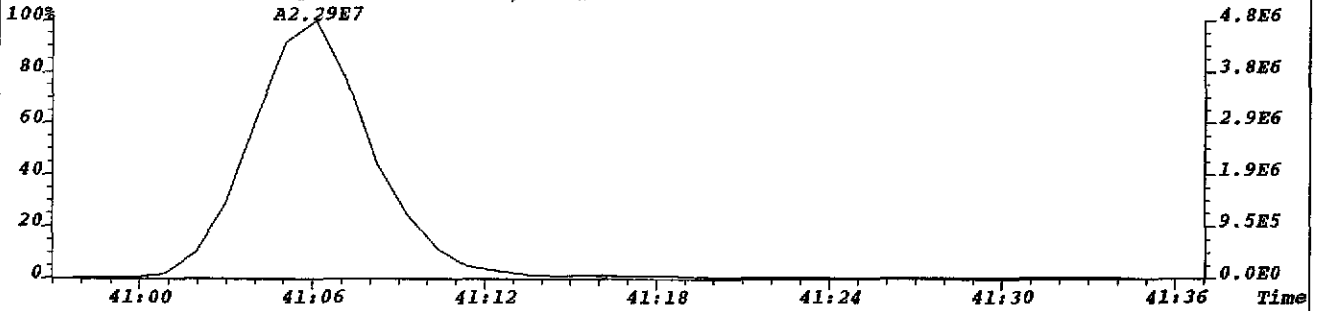
File:U1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:1795  
459.7348 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7180.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



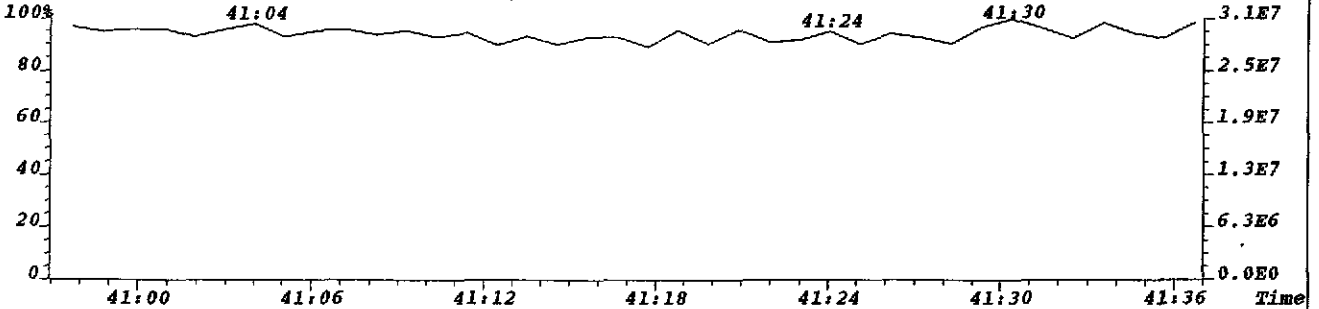
File:U1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:1793  
469.7779 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7172.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



File:U1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S Noise:1800  
471.7750 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7200.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861

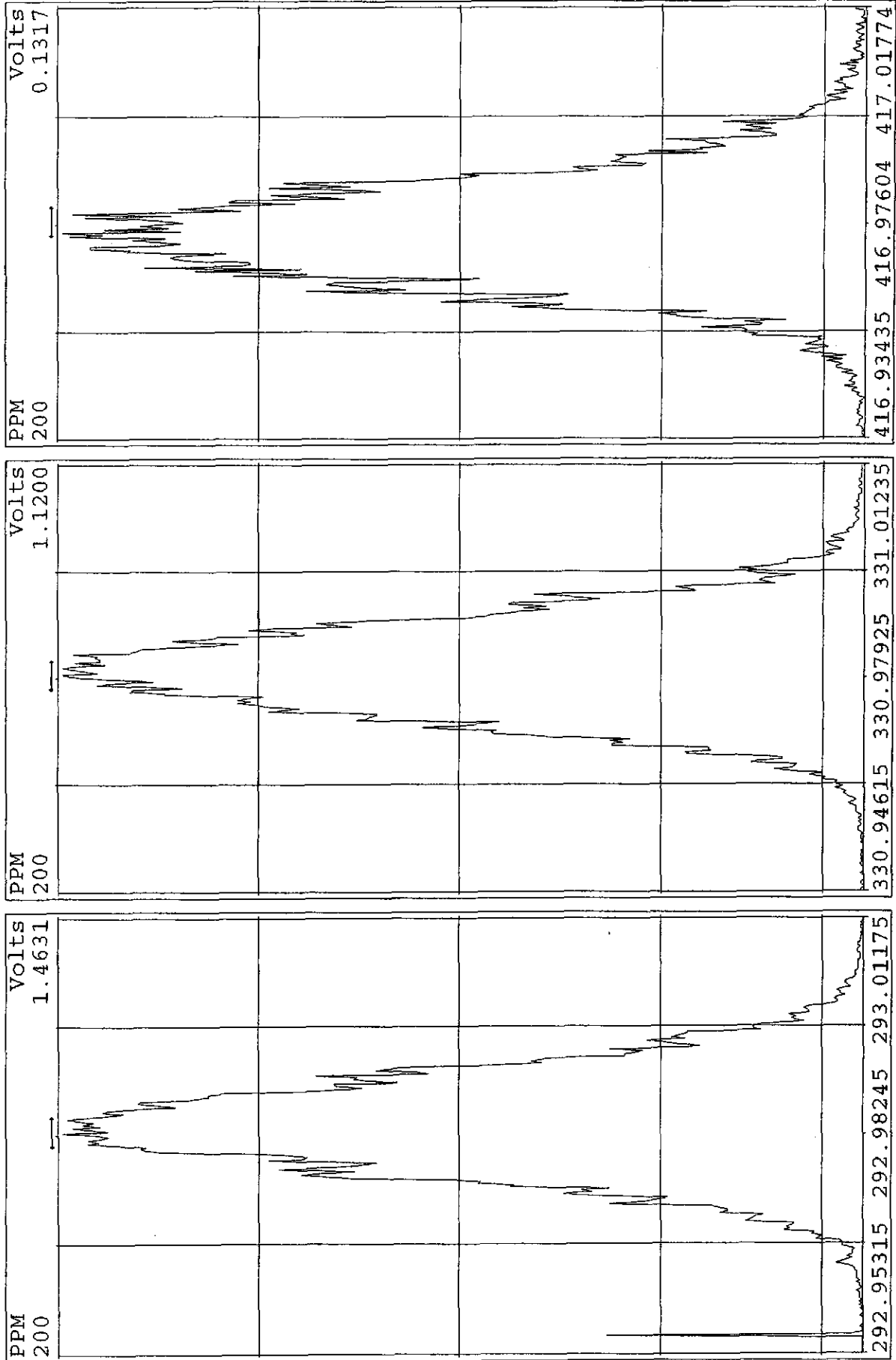


File:U1319 #1-549 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S  
430.9729 S:3 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DF-179/12861



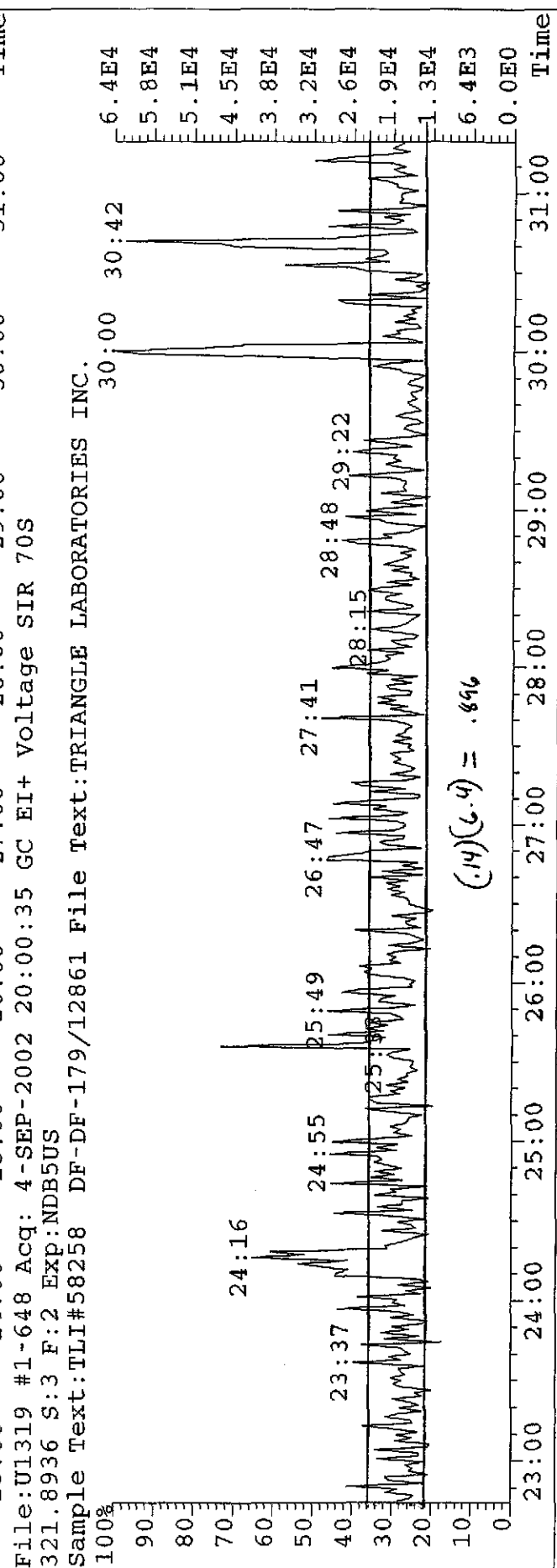
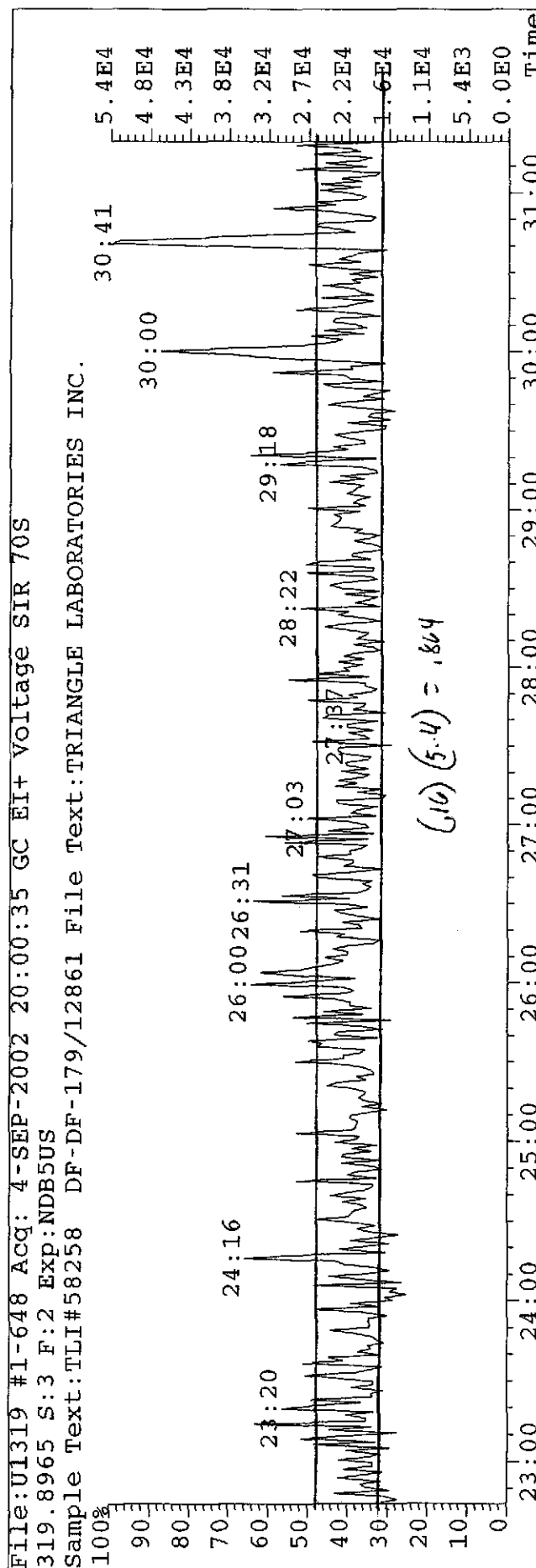


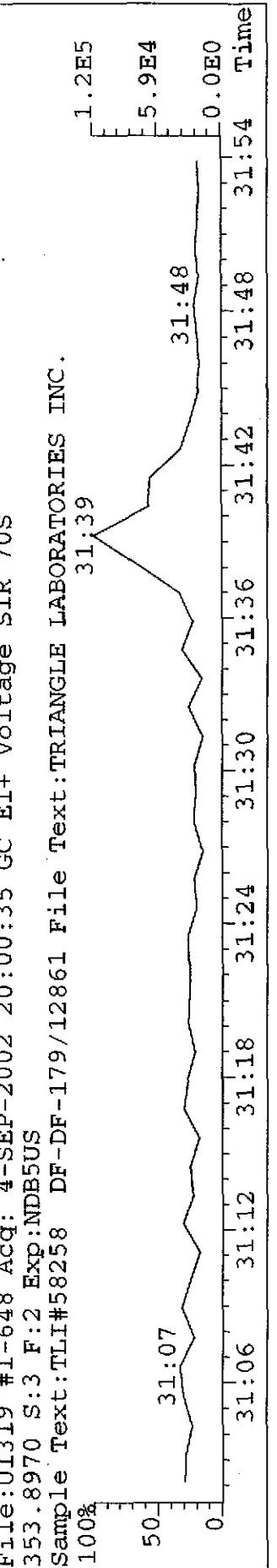
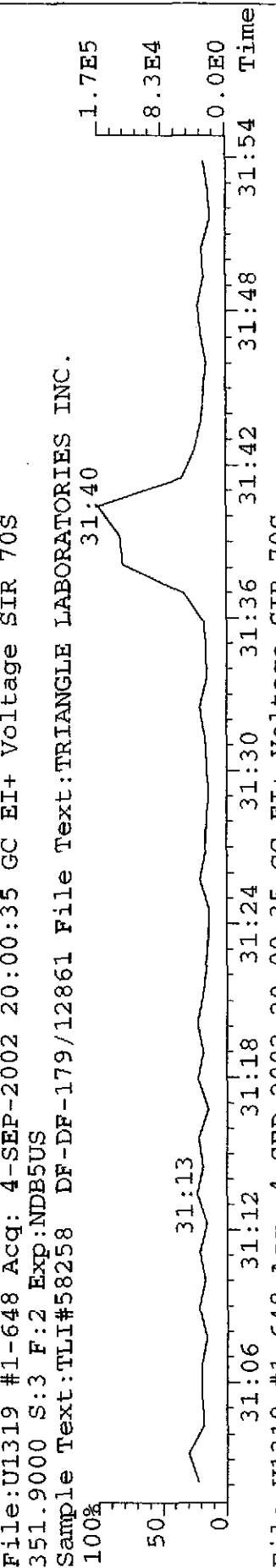
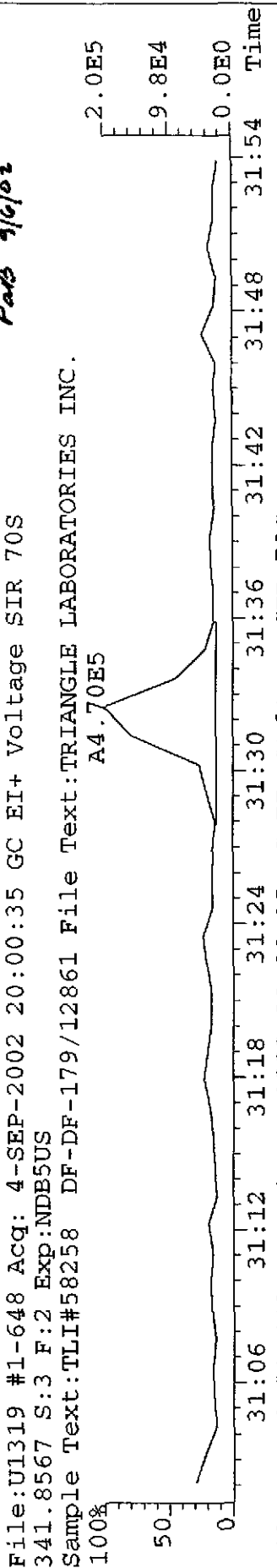
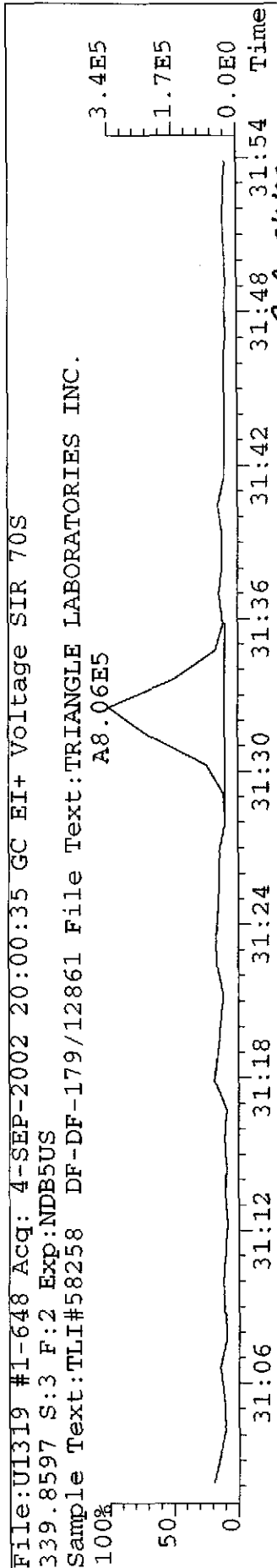
Peak Locate Examination: 4-SEP-2002:18:21 File:U1319  
Experiment:NDB5US Function:2 Reference:PFK



$N = .864 \times .896 = 1.76$

8/15/02



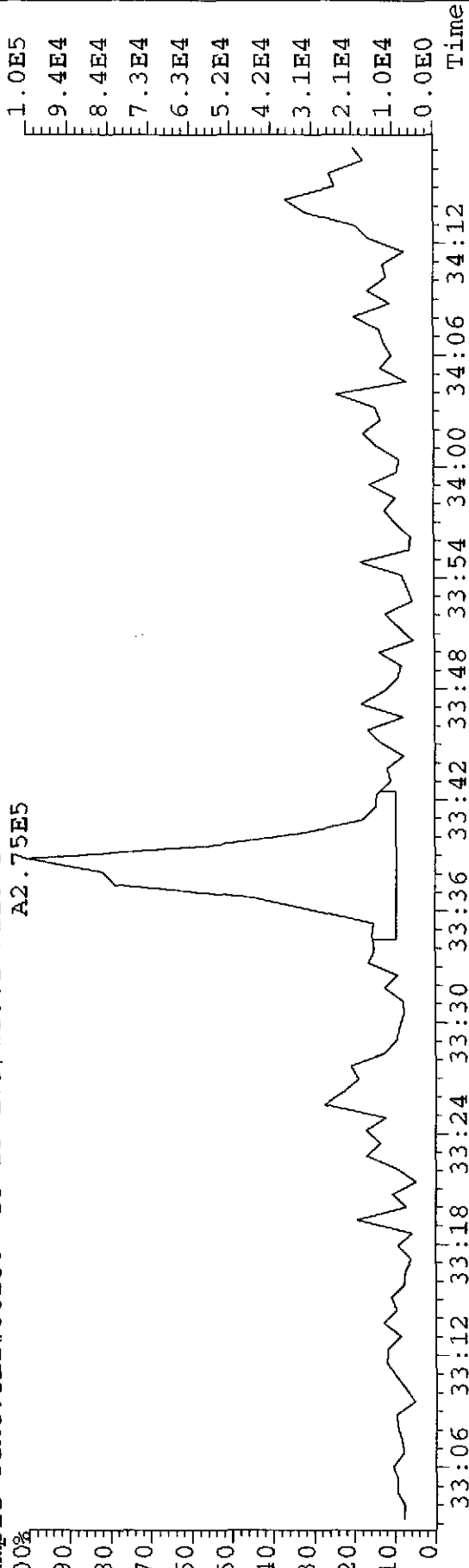


File:U1319 #1-271 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S

389.8156 S:3 F:3 Exp:NDB5US

Sample Text:TLI#58258 DF-DF-179/12861 File Text:TRIANGLE LABORATORIES INC.

100% A2.75E5

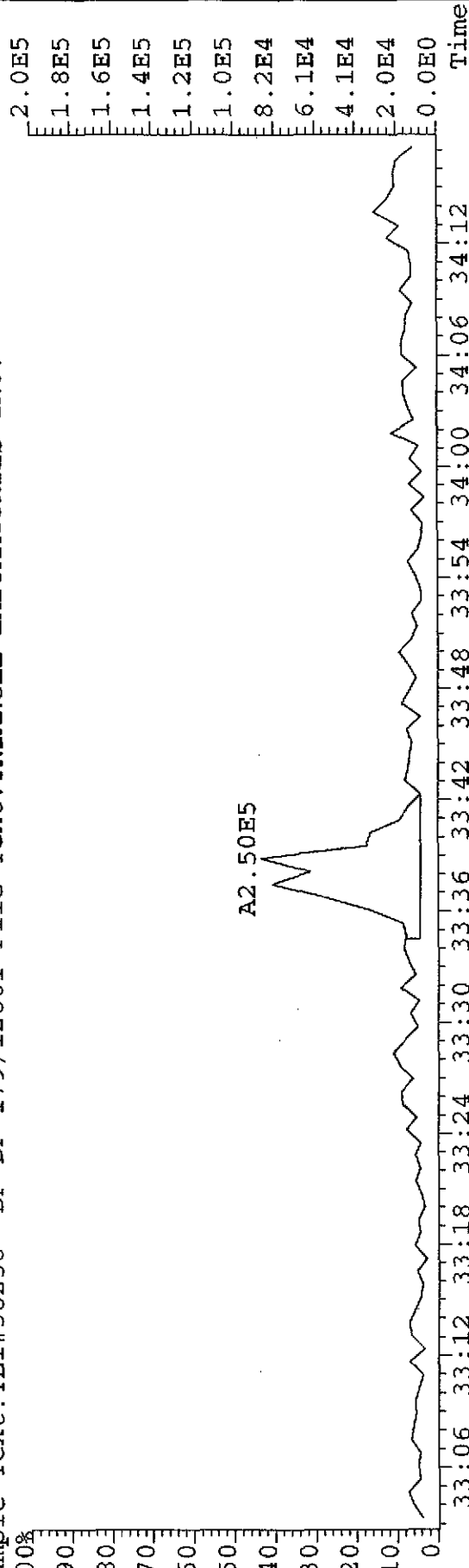


File:U1319 #1-271 Acq: 4-SEP-2002 20:00:35 GC EI+ Voltage SIR 70S

391.8127 S:3 F:3 Exp:NDB5US

Sample Text:TLI#58258 DF-DF-179/12861 File Text:TRIANGLE LABORATORIES INC.

100% A2.50E5



**Mississippi Dept. of Env. Quality**

TLI Project: **58258**  
 Client Sample: **DF-DP-137/12864**

Method 8290 PCDD/PCDF Analysis (b)  
 Analysis File: **U131904**

Client Project:	<b>Crystal Springs Dioxin</b>		
Sample Matrix:	<b>SOIL</b>	Date Received:	<b>08/27/2002</b>
TLI ID:	<b>334-48-2</b>	Date Extracted:	<b>08/28/2002</b>
		Date Analyzed:	<b>09/04/2002</b>
		Spike File:	<b>SPMIT32S</b>
		ICal:	<b>UF57092</b>
		ConCal:	<b>U021317</b>
Sample Size:	<b>11.100 g</b>	Dilution Factor:	<b>n/a</b>
Dry Weight:	<b>10.057 g</b>	Blank File:	<b>U131602</b>
GC Column:	<b>DB-5</b>	Analyst:	<b>JWL</b>
		% Moisture:	<b>9.4</b>
		% Lipid:	<b>n/a</b>
		% Solids:	<b>90.6</b>

Analytes	Conc. (pg/g)	DL	EMPC	Ratio	RT	Flags
2,3,7,8-TCDD	EMPC		0.94			J_
1,2,3,7,8-PeCDD	9.1			1.33	31:01	___
1,2,3,4,7,8-HxCDD	8.2			1.24	34:09	___
1,2,3,6,7,8-HxCDD	74.7			1.25	34:14	___
1,2,3,7,8,9-HxCDD	33.5			1.24	34:33	___
1,2,3,4,6,7,8-HpCDD	204			1.00	37:30	___
1,2,3,4,6,7,8,9-OCDD	8120			0.88	41:06	E_
2,3,7,8-TCDF	14.1			0.71	26:06	___
1,2,3,7,8-PeCDF	14.2			1.56	30:01	___
2,3,4,7,8-PeCDF	29.2			1.63	30:42	___
1,2,3,4,7,8-HxCDF	191			1.26	33:28	___
1,2,3,6,7,8-HxCDF	76.0			1.20	33:33	___
2,3,4,6,7,8-HxCDF	82.8			1.22	34:03	___
1,2,3,7,8,9-HxCDF	1.2			1.24	34:49	J_
1,2,3,4,6,7,8-HpCDF	3050			1.05	36:28	E_
1,2,3,4,7,8,9-HpCDF	47.6			1.03	38:00	___
1,2,3,4,6,7,8,9-OCDF	545			0.90	41:19	___

Totals	Conc. (pg/g)	Number	DL	EMPC	Flags
Total TCDD	24.5	9		29.2	___
Total PeCDD	40.5	5		74.0	___
Total HxCDD	484	8			___
Total HpCDD	379	2			___
Total TCDF	229	17		272	X_
Total PeCDF	897	12		975	___
Total HxCDF	2070	13		2090	___
Total HpCDF	4830	3			E_

**Mississippi Dept. of Env. Quality**

TLI Project: **58258**  
 Client Sample: **DF-DP-137/12864**

Method 8290 PCDD/PCDF Analysis (b)  
 Analysis File: **U131904**

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	130	65.5	40%-135%	0.81	26:04	—
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	130	65.4	40%-135%	0.82	26:46	—
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	136	68.6	40%-135%	1.55	29:59	—
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	149	75.1	40%-135%	1.61	31:01	—
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	143	72.0	40%-135%	0.52	33:33	—
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	135	67.7	40%-135%	1.26	34:13	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	133	66.9	40%-135%	0.47	36:27	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	134	67.4	40%-135%	1.07	37:29	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8,9-OCDD	385	96.8	40%-135%	0.91	41:05	—

Surrogate Standards (Type B)	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	132	66.4	40%-135%	1.58	30:41	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	140	70.5	40%-135%	0.52	33:27	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	145	73.1	40%-135%	1.25	34:08	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	132	66.3	40%-135%	0.47	38:00	—

Other Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	Flags
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	17.1	86.2	40%-135%	26:47	—

Alternate Standards (Type B)	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	147	74.1	40%-135%	0.52	34:49	—
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	146	73.7	40%-135%	0.52	34:02	—

Recovery Standards	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	0.83	26:36	—
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	1.26	34:32	—

Data Reviewer: gab 09/06/2002

**Mississippi Dept. of Env. Quality**

TLI Project: **58258**  
 Client Sample: **DF-DP-137/12864**

Toxicity Equivalents Report  
 Analysis File: **U131904**

Client Project:	<b>Crystal Springs Dioxin</b>		
Sample Matrix:	<b>SOIL</b>	Date Received:	<b>08/27/02</b>
TLI ID:	<b>334-48-2</b>	Date Extracted:	<b>08/28/02</b>
		Date Analyzed:	<b>09/04/02</b>
		Spike File:	<b>SPMIT32S</b>
		ICal:	<b>UF57092</b>
		ConCal:	<b>U021317</b>
Sample Size:	<b>11.100 g</b>	Dilution Factor:	<b>1</b>
Dry Weight:	<b>10.057 g</b>	Blank File:	<b>U131602</b>
GC Column:	<b>DB-5</b>	Analyst:	<b>JWL</b>
		% Moisture:	<b>9.4</b>
		% Lipid:	<b>n/a</b>
		% Solids:	<b>90.6</b>

Analytes	Conc. (pg/g)		TEF		Equivalent
2,3,7,8-TCDD	[0.94]	x	1.	=	0.94
1,2,3,7,8-PeCDD	9.1	x	0.5	=	4.6
1,2,3,4,7,8-HxCDD	8.2	x	0.1	=	0.82
1,2,3,6,7,8-HxCDD	74.7	x	0.1	=	7.47
1,2,3,7,8,9-HxCDD	33.5	x	0.1	=	3.35
1,2,3,4,6,7,8-HpCDD	204	x	0.01	=	2.04
1,2,3,4,6,7,8,9-OCDD	8120	x	0.001	=	8.120
TOTAL PCDD					27.3
2,3,7,8-TCDF	5.4	x	0.1	=	0.54
1,2,3,7,8-PeCDF	14.2	x	0.05	=	0.710
2,3,4,7,8-PeCDF	29.2	x	0.5	=	14.6
1,2,3,4,7,8-HxCDF	191	x	0.1	=	19.1
1,2,3,6,7,8-HxCDF	76.0	x	0.1	=	7.60
2,3,4,6,7,8-HxCDF	82.8	x	0.1	=	8.28
1,2,3,7,8,9-HxCDF	1.2	x	0.1	=	0.12
1,2,3,4,6,7,8-HpCDF	3050	x	0.01	=	30.50
1,2,3,4,7,8,9-HpCDF	47.6	x	0.01	=	0.476
1,2,3,4,6,7,8,9-OCDF	545	x	0.001	=	0.545
TOTAL PCDF					82.5

**Total EPA TEFs, 1989a: 109.8 pg/g**

[...] indicates that the value is that of an EMPC.

Initial ... Date...

Data Review By:

LAB 9/6/02

Channel specific noise levels computed from 'NL' heights.

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 U131904B.dbf
09/06/2002 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.

Table with columns: TCDF, DC, NL, Height, 0.65-0.89, 10.86, 6.00, 0.874-1.072, 4.86, 0.875, 0.900, 0.909, 0.918, 0.928, 0.936, 0.948, 0.964, 0.976, 0.984, 0.993, 0.997, 1.001, 1.017, 1.024, 1.030, 1.036, 1.036, 1.041, 1.047, 1.052, 1.053, 1.077, 1.086. Includes rows for 304-306 and 19 Peaks.

Table with columns: 13C12-TCDF, DC, NL, Height, 0.65-0.89, 5.95, 2.73, 0.962-1.038, 3.22, 0.960, 0.971, 0.984, 1.000, 1.012, 1.020, 1.051. Includes rows for 316-318 and 4 Peaks.

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

Table with columns: TCDD, DC, NL, Height, 0.65-0.89, 3.96, 1.97, 0.900-1.043, 1.99. Includes row for 320-322.



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.
A				24:16		0.83	54.10	24.60	29.50	0.907			
	DC	SN		24:31		0.70	8.12			0.916			
				24:40		0.65	34.87	13.73	21.14	0.922	1379-TCDD	AN	J
M				24:57		0.76	50.10	21.70	28.40	0.932			J
				25:35		0.83	388.64	176.09	212.55	0.956			
M				25:48		0.74	208.80	88.80	120.00	0.964			
M				26:17	RO	1.02	57.35	33.20	32.40	0.982			
M				26:41		0.76	275.00	119.00	156.00	0.997			
AN				26:46	RO	0.96	49.21	26.80	27.80	1.000	2378-TCDD	AN	J
				26:56		0.74	49.11	20.94	28.17	1.006			J
				27:06		0.79	129.77	57.14	72.63	1.012			
				27:21	RO	1.21	75.35	51.69	42.57	1.022			
				27:45	RO	0.51	63.40	27.58	54.22	1.037			
K				27:59		0.74	85.19	36.15	49.04	1.045			
	DC	WH		28:18		0.77	23.78			1.057			
320-322				13 Peaks			1,520.89						

37C1-TCDD													
										0.925-1.075			
328	DC	NL				Height	3.82	3.82					
	DC	WL		24:40			111.17			0.922			
				25:07			122.26	122.26		0.938			
				25:25			33,367.70	33,367.70		0.950			
				25:52			99.77	99.77		0.966			
				26:47			1,231.32	1,231.32		1.001	37C1-TCDD	CLS	
				27:09			27,168.70	27,168.70		1.014			
				27:33			48.90	48.90		1.029			
				28:06			3,434.69	3,434.69		1.050			
328				7 Peaks			65,473.34						

13C12-TCDD													
										0.925-1.075			
332-334	DC	NL				Height	10.65	7.10	3.55				
	DC	SN		25:35	RO	1.49	36.02			0.956			
	DC	SN		26:04		0.75	27.79			0.974			
				26:36		0.83	11,900.59	5,387.12	6,513.47	0.994	13C12-1234-TCDD	RS1	
				26:46		0.82	8,789.60	3,972.75	4,816.85	1.000	13C12-2378-TCDD	ISI	
						Height	2,256.97	1,030.03	1,226.94				
	DC	SN		27:05	RO	1.86	41.22			1.012			
332-334				2 Peaks			20,690.19						

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

PeCDF													
										0.928-1.061			
340-342	DC	NL				Height	4.91	2.46	2.45				
				28:01		1.57	11,158.77	6,823.89	4,334.88	0.934			
				28:18		1.50	2,106.61	1,265.04	841.57	0.944			
				28:32		1.51	474.45	285.76	188.69	0.952			
				28:43		1.52	1,389.87	837.77	552.10	0.958			
				29:09		1.58	7,844.17	4,799.23	3,044.94	0.972			
				29:20		1.54	8,338.65	5,052.27	3,286.38	0.978			
M				29:30		1.59	5,890.00	3,620.00	2,270.00	0.984			
M				29:54		1.59	8,320.00	5,110.00	3,210.00	0.997			
				30:01		1.56	815.51	496.83	318.68	1.001	12378-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.

X	X		30:17	RO	1.58	1,619.24	990.48	628.76	1.010		
A			30:36	RO	1.81	530.40	376.00	208.00	1.021		
M			30:42		1.63	1,647.00	1,020.00	627.00	1.024	23478-PeCDF	AN
			30:53		1.61	1,992.99	1,228.30	764.69	1.030		
X	X		31:01	RO	1.62	447.38	276.56	170.82	1.034		
X	X		31:24	RO	1.58	1,814.02	1,110.70	703.32	1.047		
			31:31		1.48	1,171.26	698.26	473.00	1.051		
340-342			16 Peaks			55,560.32					

13C12-PeCDF			1.32-1.78					0.867-1.133			
352-354	DC	NL	Height		4.14	1.69	2.45				
			29:20	RO	0.03	22.95	13.95	482.33	0.978		
			29:37	RO	0.08	62.27	37.85	457.77	0.988		
			29:59		1.55	9,107.69	5,530.13	3,577.56	1.000	13C12-PeCDF 123	IS2
			Height		2,755.97	1,680.02	1,075.95				
			30:41		1.58	8,847.69	5,415.21	3,432.48	1.023	13C12-PeCDF 234	SUR1
			31:18	RO	0.33	42.10	25.59	78.14	1.044		
			31:39	RO	1.02	234.57	93.61	91.99	1.056		
352-354			6 Peaks			18,317.27					

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

PeCDD			1.32-1.78					0.938-1.021			
356-358	DC	NL	Height		3.87	1.80	2.07				
D	D	SN	29:28	RO	0.01	14.58			0.950		
			29:43		1.36	156.82	90.51	66.31	0.958		J
			29:57	RO	0.76	440.84	267.96	352.24	0.966		
M			30:06	RO	1.30	450.77	274.00	211.00	0.970		
M			30:16		1.56	147.70	90.00	57.70	0.976		J
			30:31		1.59	567.64	348.69	218.95	0.984		
A			30:43		1.51	187.80	113.00	74.80	0.990		
D	D	SN	30:51	RO	0.01	75.00			0.995		
			31:01		1.33	306.21	174.82	131.39	1.000	12378-PeCDD	AN
D	D	SN	31:10	RO	0.17	157.90			1.005		
M			31:30	RO	0.82	236.90	144.00	176.00	1.016		
	DC	WH	31:53	RO	0.42	16.99			1.028		
356-358			8 Peaks			2,494.68					

13C12-PeCDD			1.32-1.78					0.871-1.129			
368-370	DC	NL	Height		3.65	1.93	1.72				
			29:57		1.76	26.86	17.13	9.73	0.966		
			30:05	RO	1.10	48.65	21.01	19.08	0.970		
			30:16	RO	1.19	23.36	10.88	9.16	0.976		
	DC	SN	30:41	RO	2.15	10.53			0.989		
	DC	SN	30:50	RO	0.78	9.26			0.994		
			31:01		1.61	5,942.93	3,665.60	2,277.33	1.000	13C12-PeCDD 123	IS3
			Height		1,767.90	1,083.44	684.46				
	DC	SN	31:19	RO	1.08	27.34			1.010		
368-370			4 Peaks			6,041.80					

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

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.

HxCDF		1.05-1.43			0.964-1.045		
374-376	DC NL	Height	11.34	6.96	4.38		
		32:30	1.24	14,393.66	7,965.68	6,427.98	0.969
		32:38	1.25	31,236.60	17,336.60	13,900.00	0.973
		32:46	1.27	1,402.79	785.98	616.81	0.977
		32:56	1.32	532.90	303.17	229.73	0.982
		33:05	1.24	26,935.40	14,909.30	12,026.10	0.986
		33:18	1.34	485.50	277.95	207.55	0.993
		33:28	1.26	9,058.53	5,051.51	4,007.02	0.998 123478-HxCDF AN
		33:33	1.20	3,788.08	2,064.12	1,723.96	1.000 123678-HxCDF AN
X	X	33:43 RO	1.29	1,127.95	635.42	492.53	1.005
		33:50	1.23	194.62	107.35	87.27	1.008 J
		34:03	1.22	3,599.59	1,978.58	1,621.01	1.015 234678-HxCDF AN
A		34:46	1.15	44.20	23.60	20.60	1.036 J
AN		34:49	1.24	43.30	24.00	19.30	1.038 123789-HxCDF AN J
M		34:53	1.22	524.00	288.00	236.00	1.040
	DC WH	35:18	1.26	180.71			1.052
374-376		14 Peaks		93,367.12			

13C12-HxCDF		0.43-0.59			0.881-1.119		
384-386	DC NL	Height	6.49	2.74	3.75		
		32:29	0.50	34.25	11.35	22.90	0.968
		32:38 RO	0.71	77.10	26.04	36.84	0.973
		33:27	0.52	8,105.78	2,787.67	5,318.11	0.997 13C12-HxCDF 478 SUR2
		33:33	0.52	8,262.78	2,827.53	5,435.25	1.000 13C12-HxCDF 678 IS4
		Height	2,602.09	887.06	1,715.03		
	DC SN	33:49 RO	0.41	20.34			1.008
		34:02	0.52	7,774.31	2,664.67	5,109.64	1.014 13C12-HxCDF 234 ALT2
		34:49	0.52	6,216.42	2,126.03	4,090.39	1.038 13C12-HxCDF 789 ALT1
384-386		6 Peaks		30,470.64			

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

HxCDD		1.05-1.43			0.959-1.013		
390-392	DC NL	Height	7.21	3.60	3.61		
		32:59	1.20	2,099.97	1,146.04	953.93	0.964
		33:26	1.31	445.16	252.13	193.03	0.977
		33:38	1.24	8,214.29	4,542.60	3,671.69	0.983
		33:47	1.15	102.53	54.86	47.67	0.987 J
A		34:04	1.25	96.40	53.60	42.80	0.996 J
AN		34:09	1.24	244.00	135.00	109.00	0.998 123478-HxCDD AN
M		34:14	1.25	2,270.00	1,260.00	1,010.00	1.000 123678-HxCDD AN
		34:33	1.24	988.69	547.23	441.46	1.010 123789-HxCDD AN
	DC WH	34:45 RO	0.35	61.42			1.016
390-392		8 Peaks		14,461.04			

13C12-HxCDD		1.05-1.43			0.971-1.029		
402-404	DC NL	Height	7.49	3.80	3.69		
		33:38	1.17	68.48	36.95	31.53	0.983
	DC SN	33:45 RO	0.18	7.82			0.986
		34:08	1.25	5,329.00	2,957.90	2,371.10	0.998 13C12-HxCDD 478 SUR3
		34:13	1.26	5,461.92	3,043.98	2,417.94	1.000 13C12-HxCDD 678 IS5
		Height	1,731.27	955.67	775.60		

Compound/

M\_2... QC.Log Omit Why ..RT. OK Ratio Total.Area/Ht Area/Ht.Peak1 Area/Ht.Peak2 Rel.RT Compound.Name.. ID.. Flags.

			34:32	1.26	7,766.52	4,325.86	3,440.66	1.009	13C12-HxCDD 789	RS2
	DC	SN	34:49	RO 0.35	10.48			1.018		
402-404			4 Peaks		18,625.92					

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

HpCDF			0.88-1.20				0.995-1.047			
408-410	DC	NL	Height		6.36	3.42	2.94			
			36:28	1.05	121,019.10	61,913.20	59,105.90	1.000	1234678-HpCDF	AN E
			36:52	1.05	58,526.10	29,936.00	28,590.10	1.011		
			38:00	1.03	1,338.04	678.31	659.73	1.043	1234789-HpCDF	AN
408-410			3 Peaks		180,883.24					

13C12-HpCDF			0.37-0.51				0.945-1.110			
418-420	DC	NL	Height		4.05	2.20	1.85			
			36:27	0.47	5,452.03	1,748.19	3,703.84	1.000	13C12-HpCDF 678	IS6
			Height		1,628.56	505.69	1,122.87			
			36:52	RO 1.54	27.60	29.45	19.17	1.011		
			38:00	0.47	3,801.98	1,211.98	2,590.00	1.043	13C12-HpCDF 789	SUR4
418-420			3 Peaks		9,281.61					

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

HpCDD			0.88-1.20				0.976-1.005			
424-426	DC	NL	Height		11.20	5.75	5.45			
			36:45	1.05	3,767.86	1,928.01	1,839.85	0.980		
			37:30	1.00	4,382.96	2,187.74	2,195.22	1.000	1234678-HpCDD	AN
424-426			2 Peaks		8,150.82					

13C12-HpCDD			0.88-1.20				0.973-1.027			
436-438	DC	NL	Height		4.70	2.38	2.32			
			36:43	0.93	26.77	12.91	13.86	0.980		
	DC	SN	36:53	RO 0.67	14.89			0.984		
			37:29	1.07	4,232.23	2,183.41	2,048.82	1.000	13C12-HpCDD 678	IS7
			Height		1,065.91	541.49	524.42			
	DC	SN	37:54	RO 0.56	7.20			1.011		
436-438			2 Peaks		4,259.00					

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

OCDF			0.76-1.02				0.903-1.097			
442-444	DC	NL	Height		3.65	1.59	2.06			
	DC	WL	36:09	RO 1.27	19.32			0.880		
			39:01	RO 1.11	26.37	15.42	13.95	0.950		
			41:06	RO 1.32	70.57	49.27	37.34	1.000		
			41:19	0.90	16,799.07	7,946.86	8,852.21	1.006	OCDF	AN
442-444			3 Peaks		16,896.01					

OCDD			0.76-1.02				0.903-1.097			
458-460	DC	NL	Height		2.64	1.12	1.52			
			41:06	0.88	185,775.40	86,994.50	98,780.90	1.000	OCDD	AN E
458-460			1 Peak		185,775.40					

Compound/

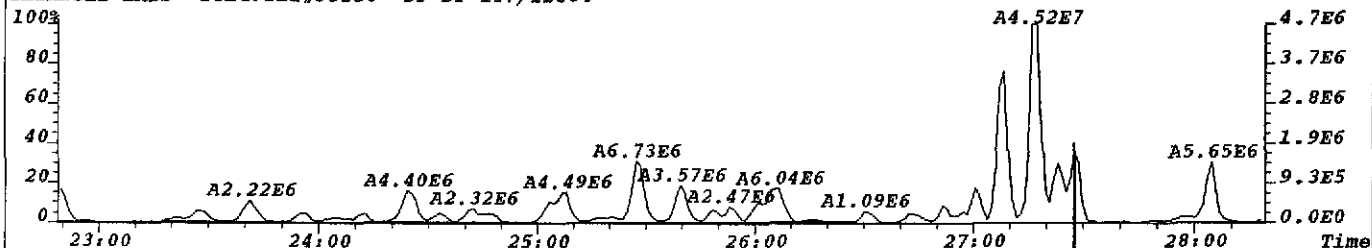
M_Z	QC	Log	Omit	Why	..RT.	OK	Ratio	Total	Area/Ht	Area/Ht	Peak1	Area/Ht	Peak2	Rel	RT	Compound	Name	ID	Flags	
13C12-OCDD								0.76-1.02							0.996-1.004					
470-472				DC NL				Height		3.31		1.62		1.69						
					41:05			0.91	8,221.86		3,920.00		4,301.86	1.000	13C12-OCDD			IS8		
								Height	1,820.85		883.39		937.46							
470-472				1 Peak					8,221.86											

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

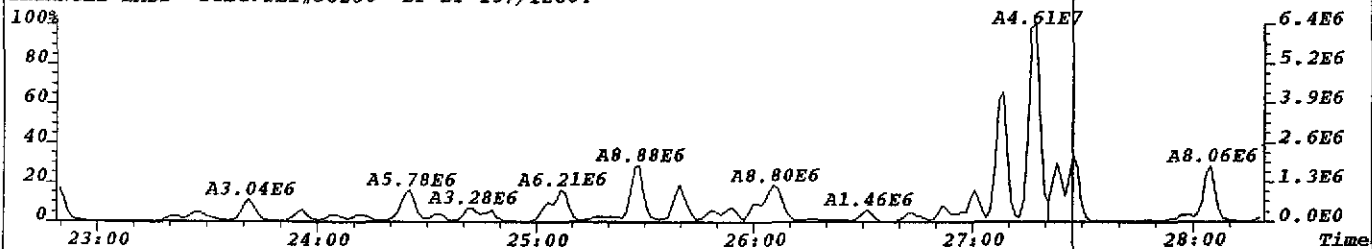
M_Z	-Nominal Ion Mass(es)	WL	-Below Retention Time Window	A	-Peak Added
..RT.	-Retention Time (mm:ss)	WH	-Above Retention Time Window	K	-Peak Kept
Rat.1	-Ratio of M/M+2 Ions	SN	-Below Signal to Noise Level	D	-Peak Deleted
OK	-RO=Ratio Outside Limits	<M	-Below Method Detection Limit	T	-Time Changed
Rel.RT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

\*\*\* End of Report \*\*\*

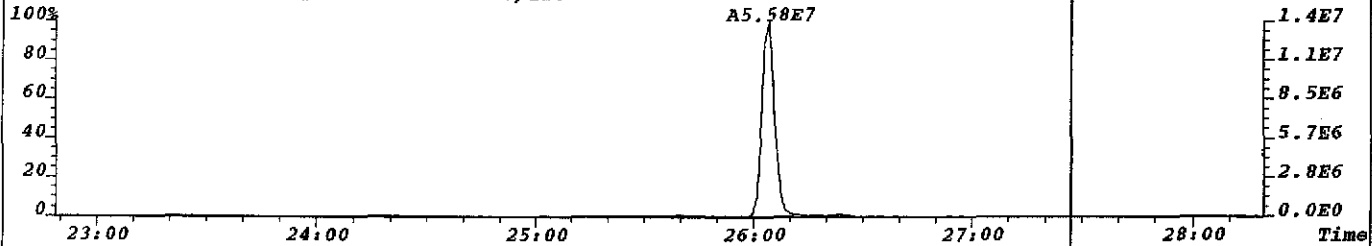
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TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



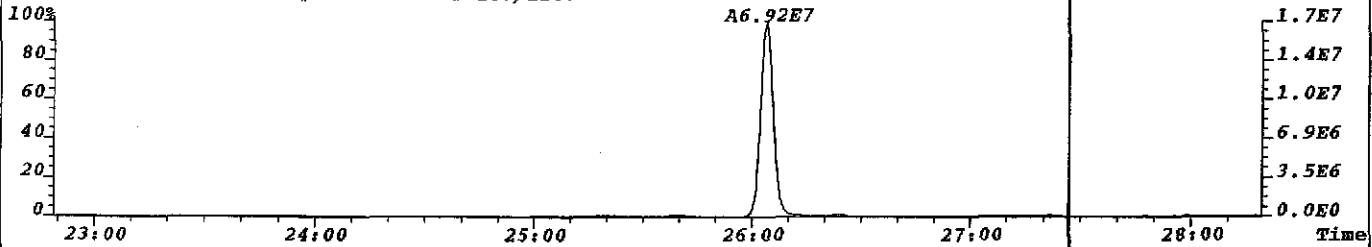
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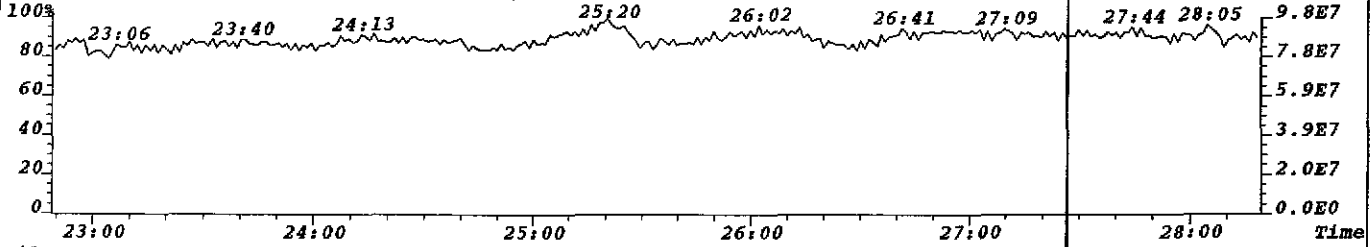
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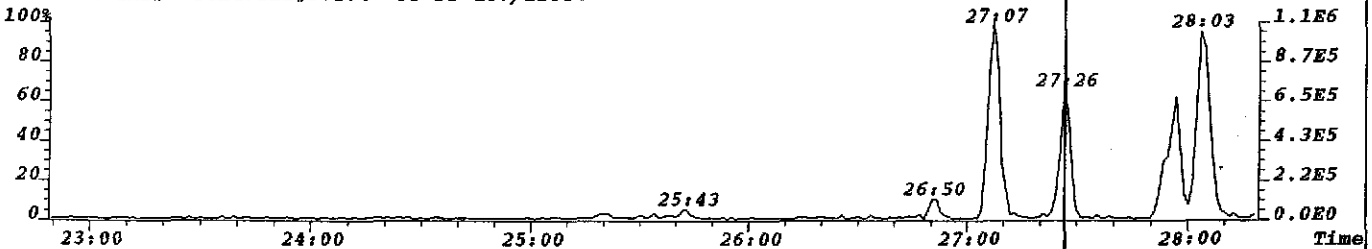
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TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



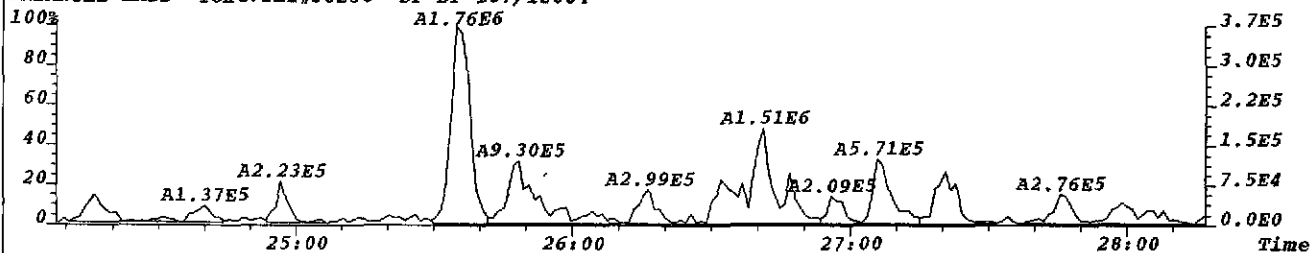
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330.9792 S:4 F:2 Exp:NDB5US  
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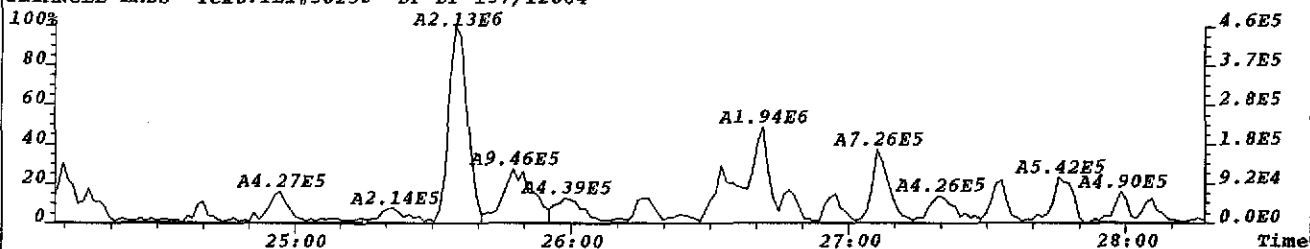
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375.8364 S:4 F:2 Exp:NDB5US  
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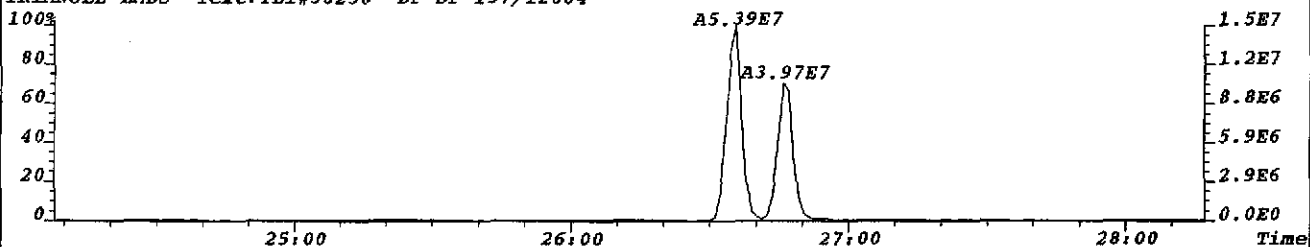
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319.8965 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9836.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



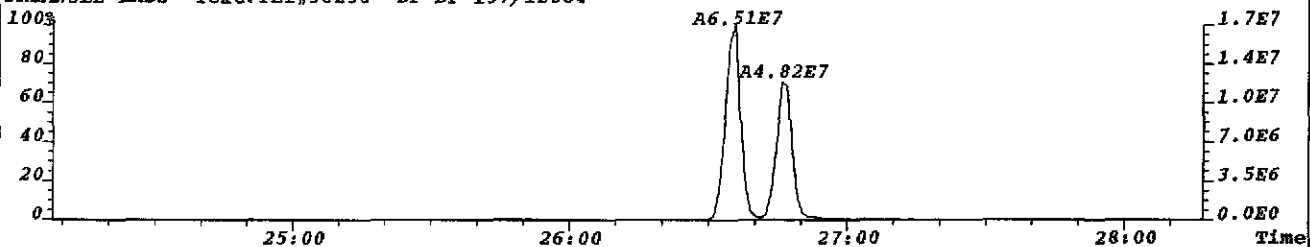
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TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S Noise:8879  
331.9368 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,35516.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



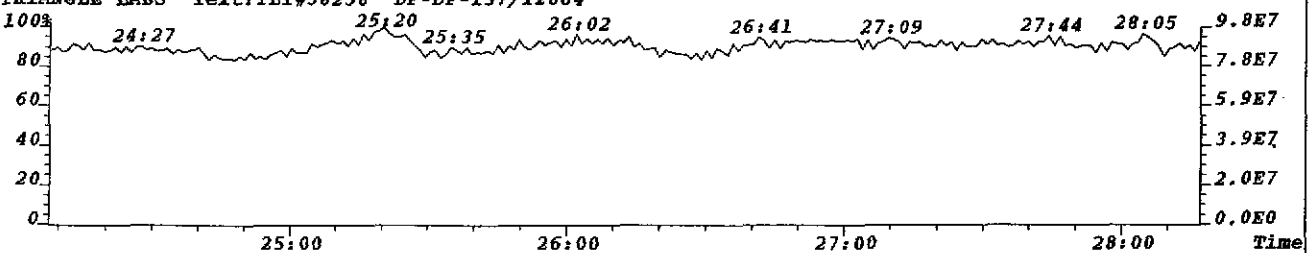
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TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



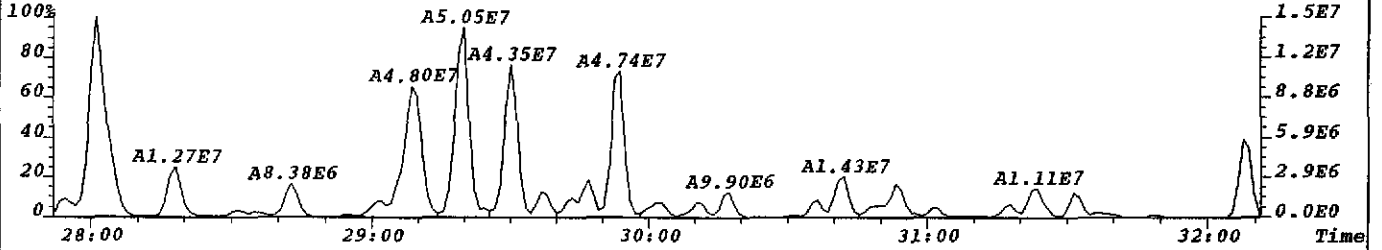
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327.8847 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,19116.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



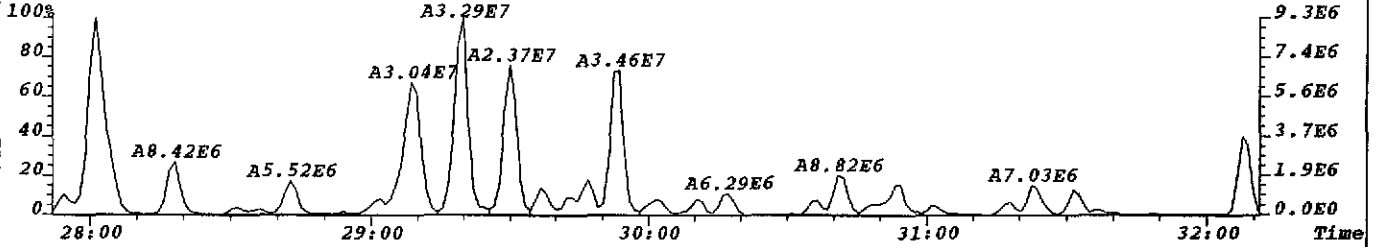
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TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



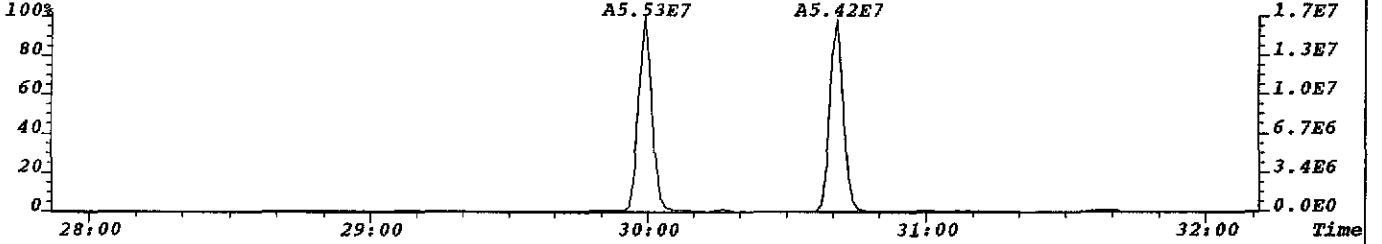
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339.8597 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12324.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



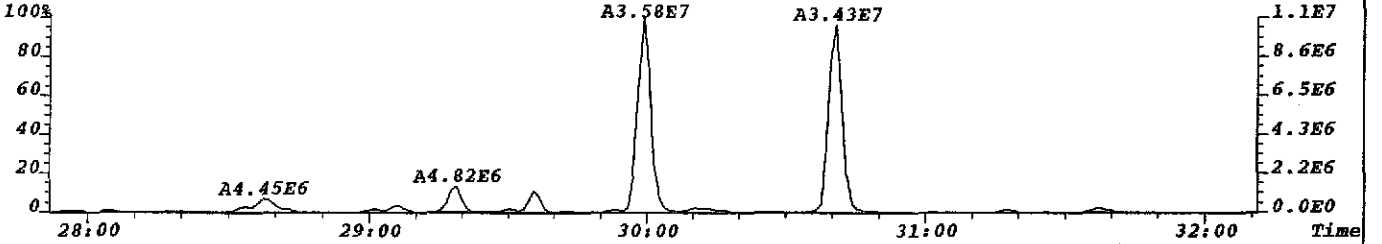
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341.8567 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12236.0,1.00%,F,T) Exp:NDB5US  
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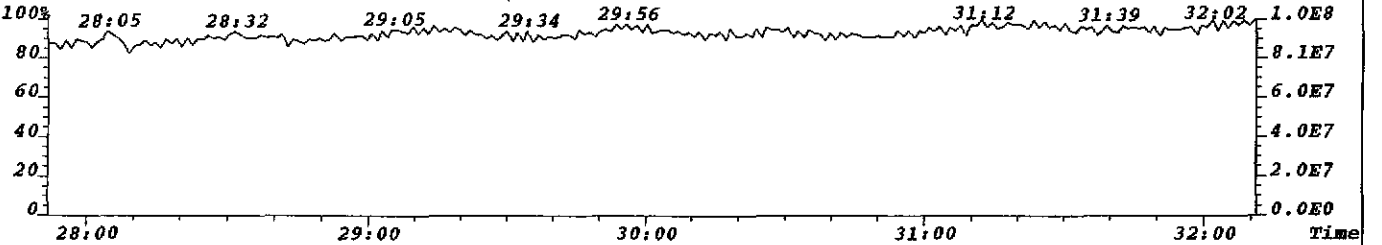
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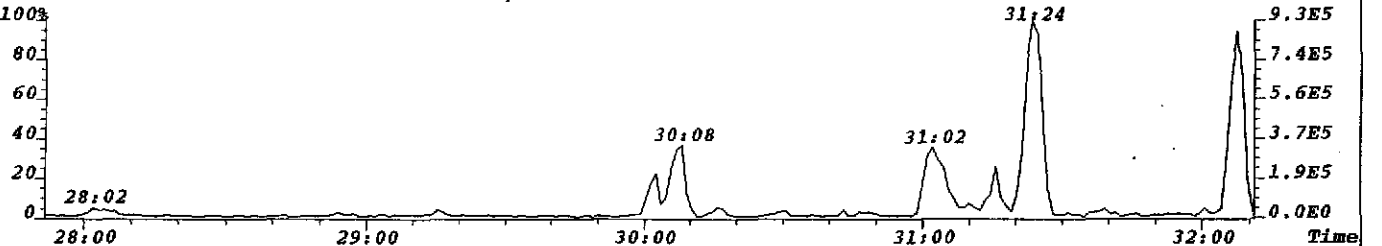
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TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
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TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864

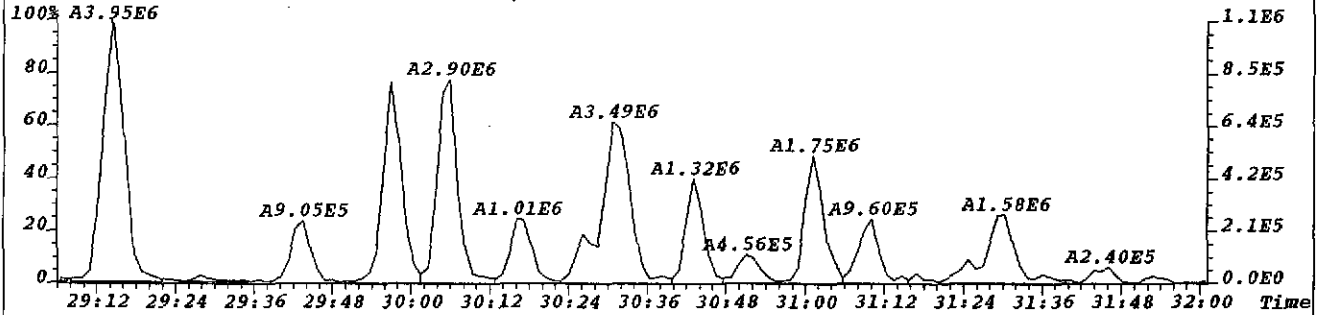


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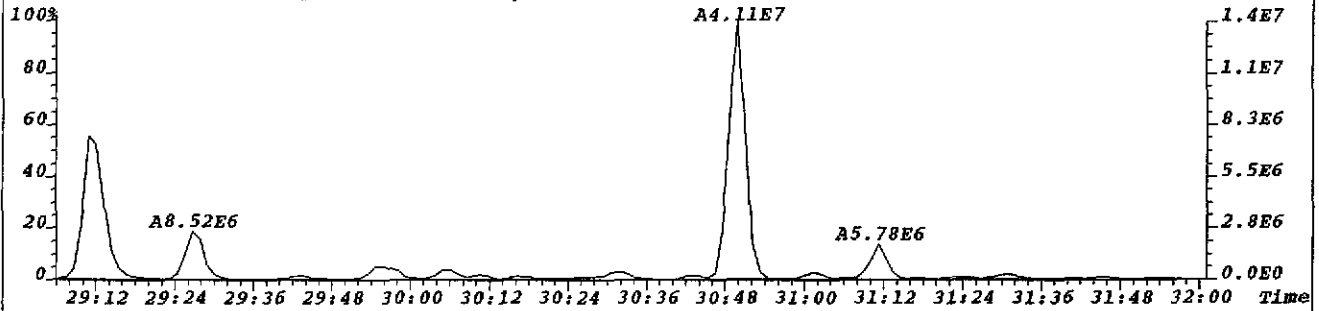




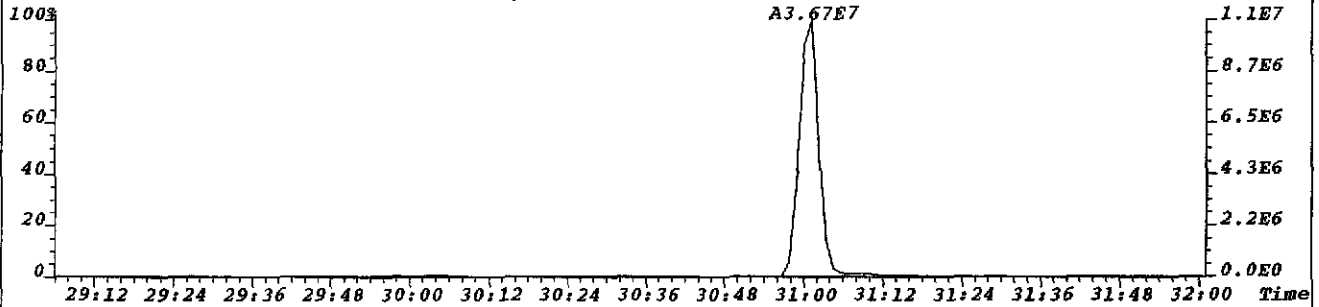
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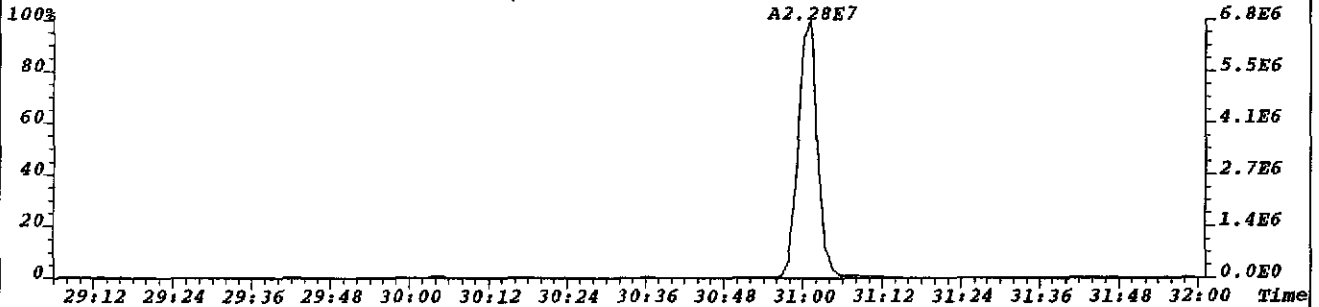
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357.8516 S:4 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,10332.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



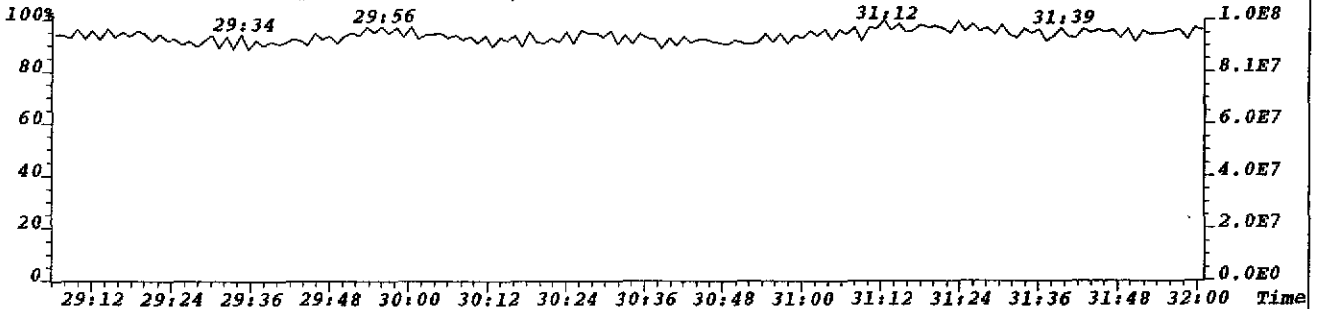
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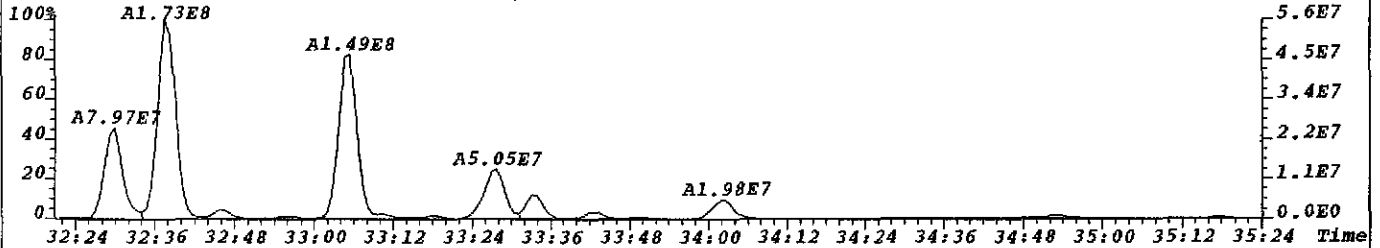
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369.8919 S:4 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,8620.0,1.00%,F,T) Exp:NDB5US  
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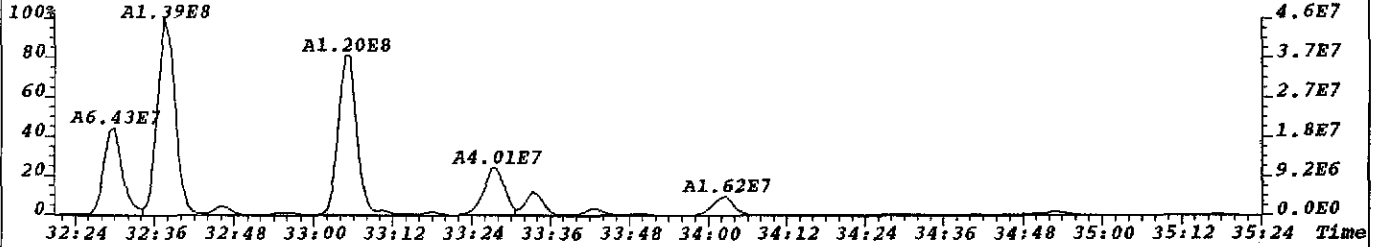
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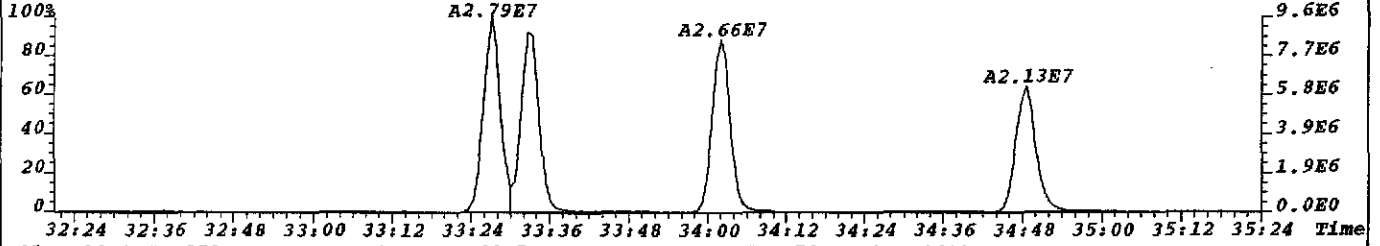
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 373.8208 S:4 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,34800.0,1.00%,F,T) Exp:NDB5US  
 TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



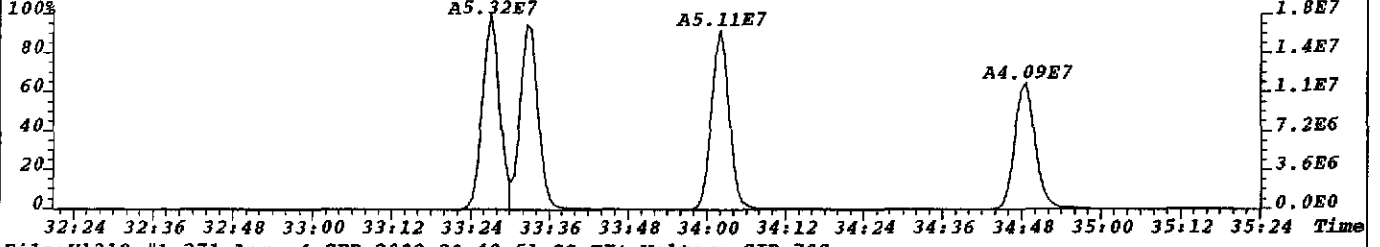
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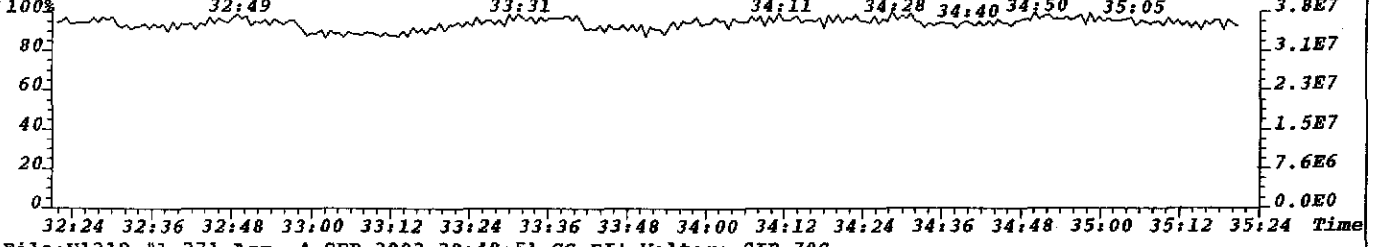
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 383.8639 S:4 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,13692.0,1.00%,F,T) Exp:NDB5US  
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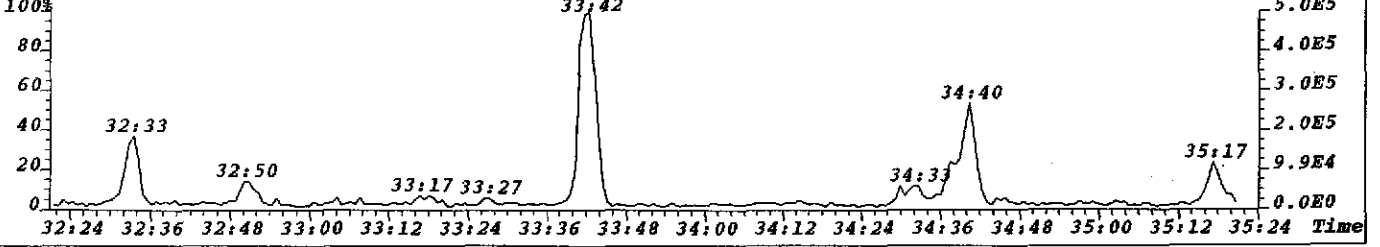
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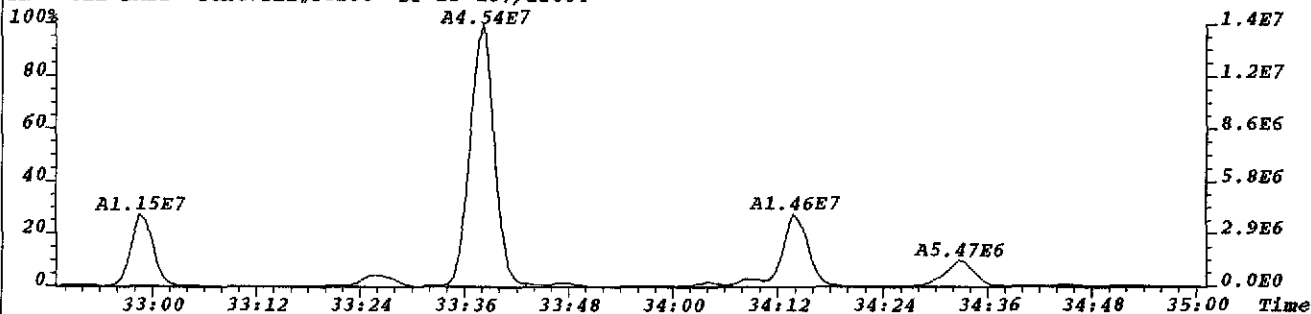
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 392.9760 S:4 F:3 Exp:NDB5US  
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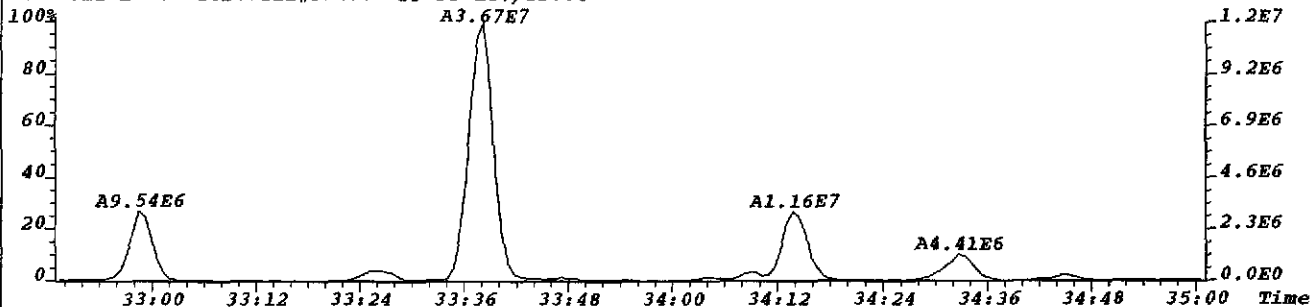
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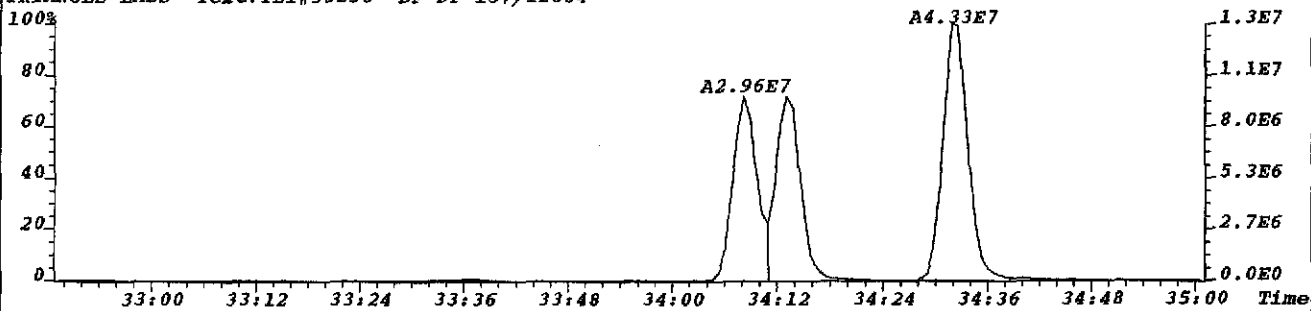
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TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



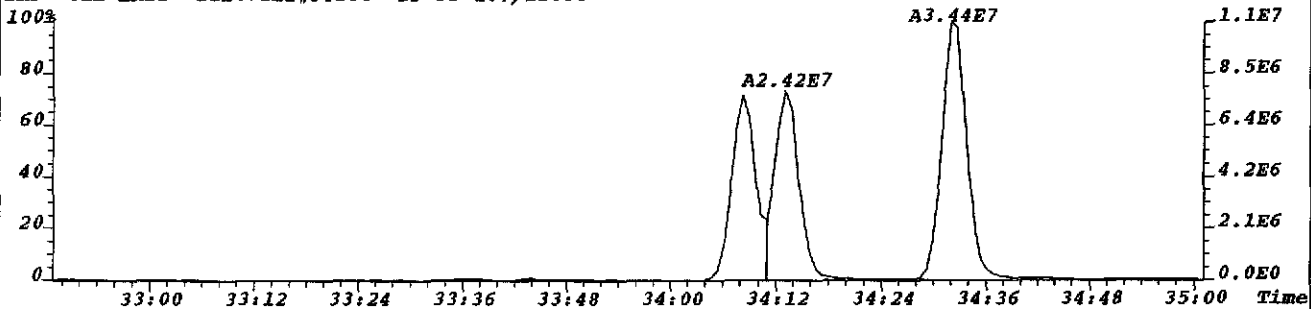
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TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



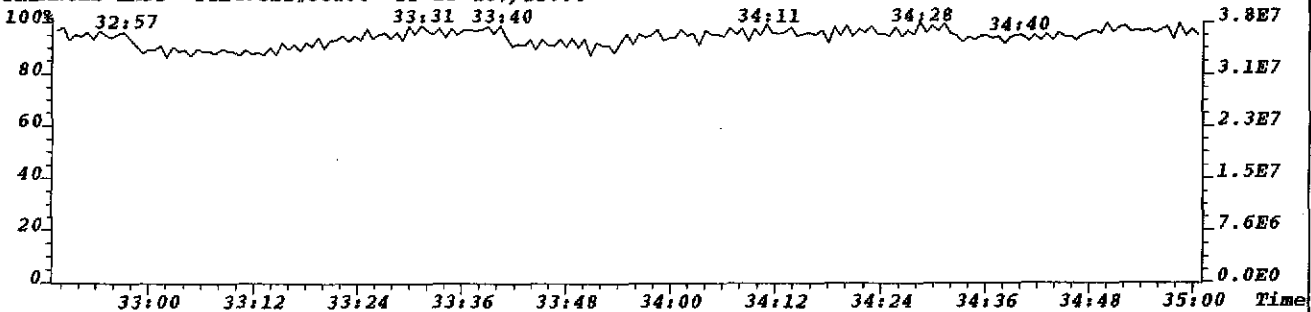
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TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



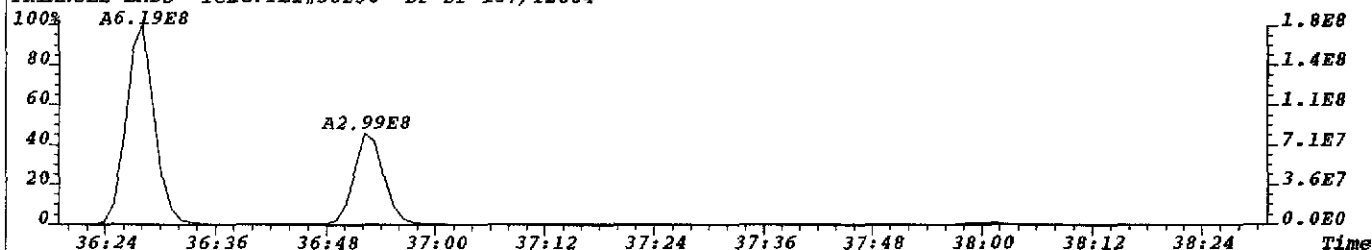
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TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



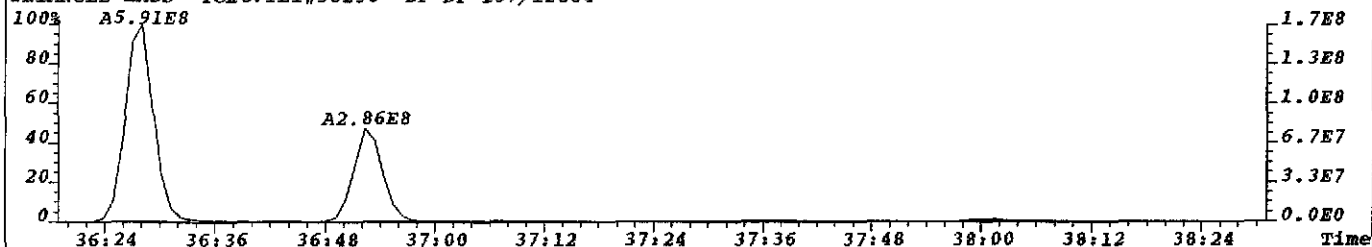
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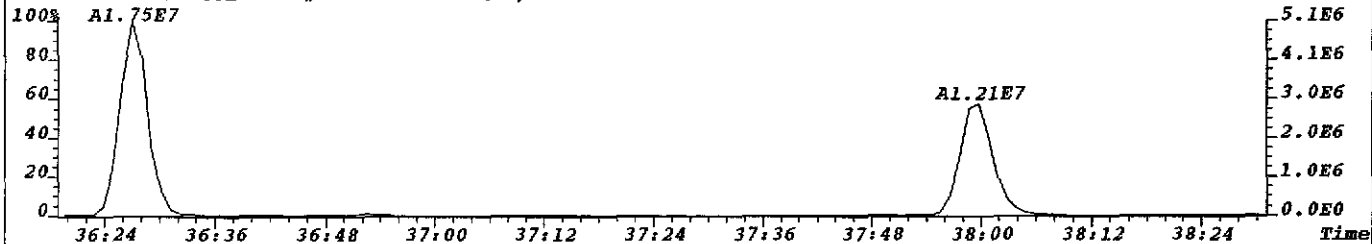
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TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



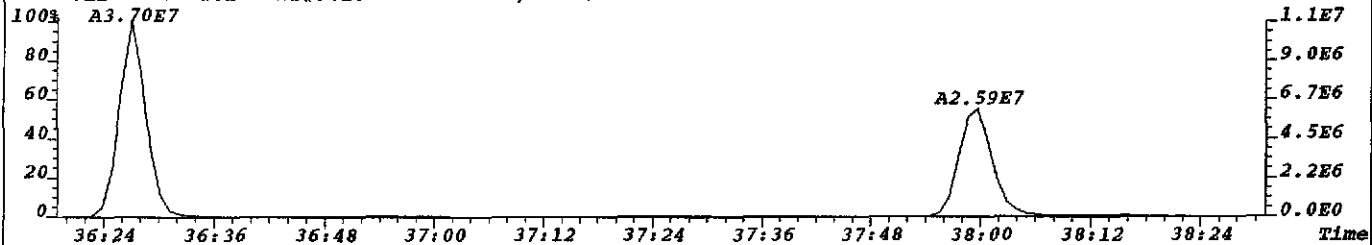
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TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



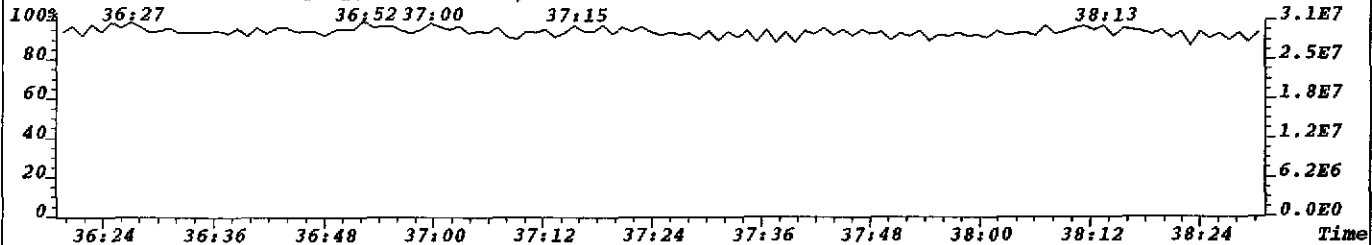
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TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



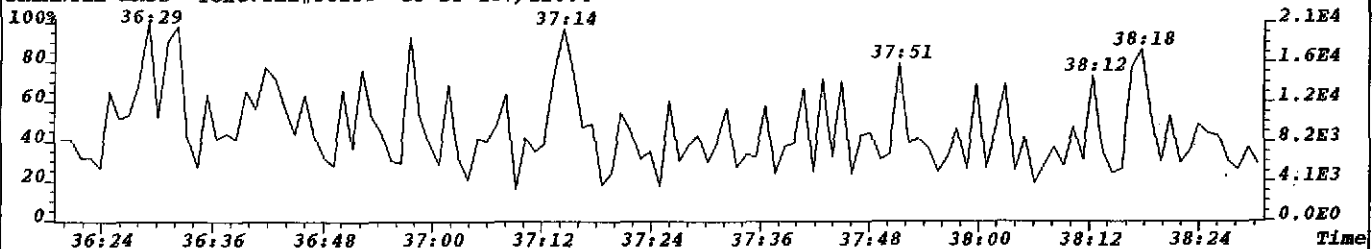
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419.8220 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9272.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



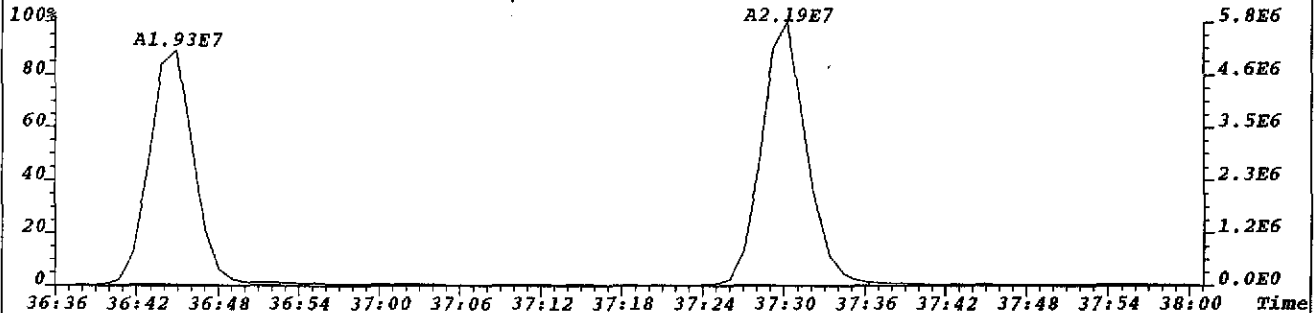
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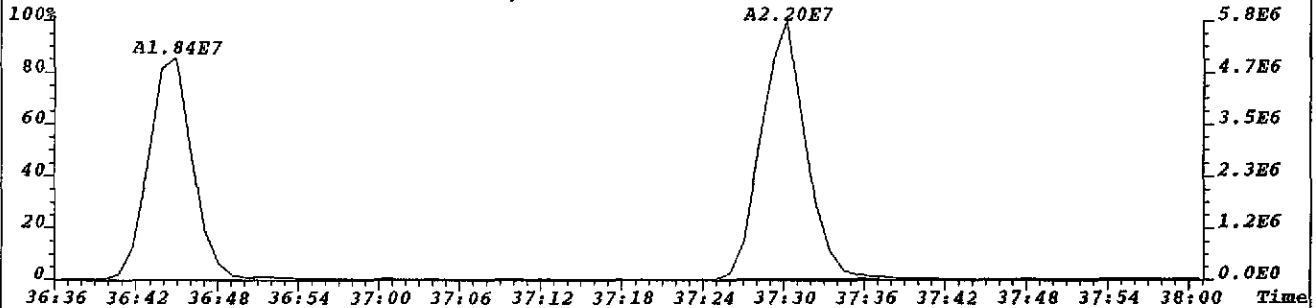
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479.7165 S:4 F:4 Exp:NDB5US  
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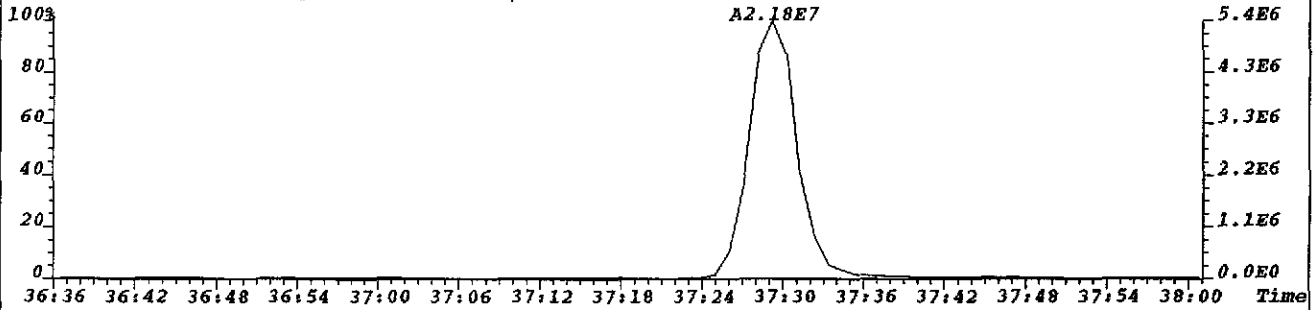
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423.7766 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,28748.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



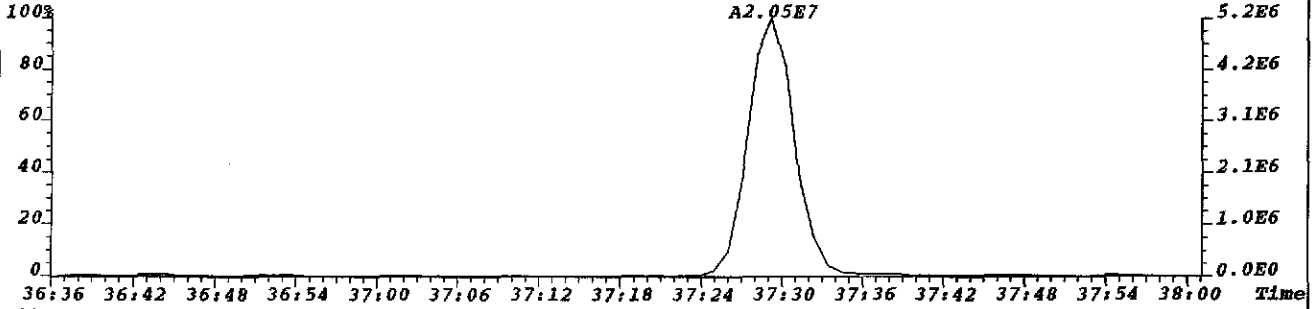
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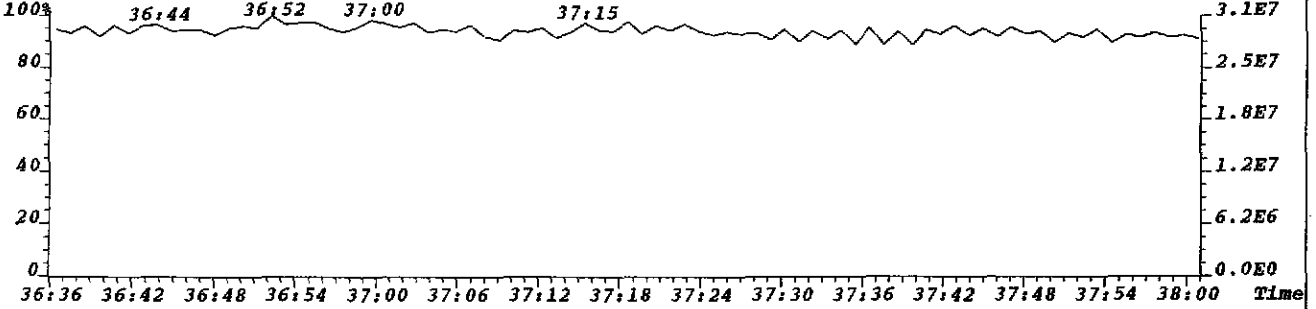
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435.8169 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11880.0,1.00%,F,T) Exp:NDB5US  
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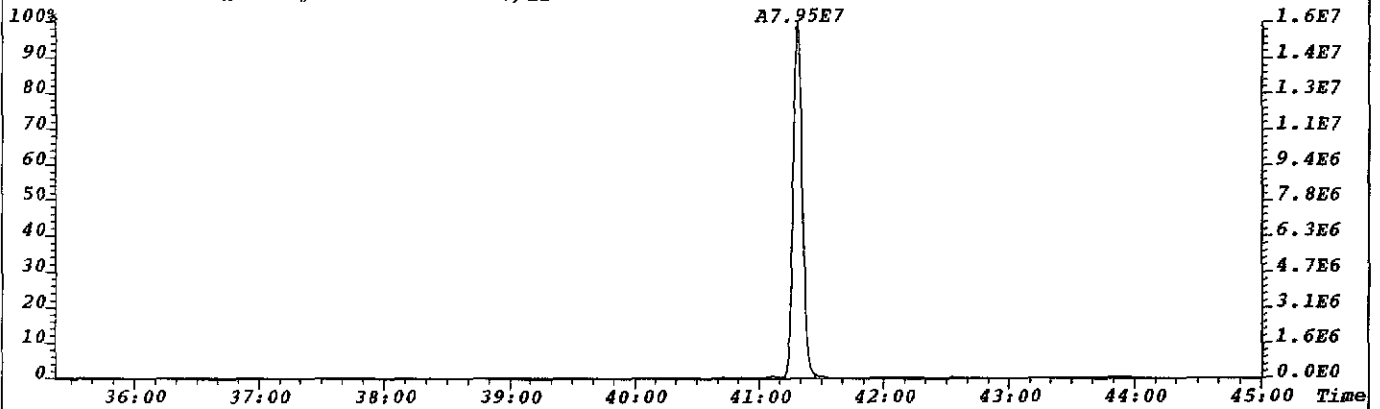
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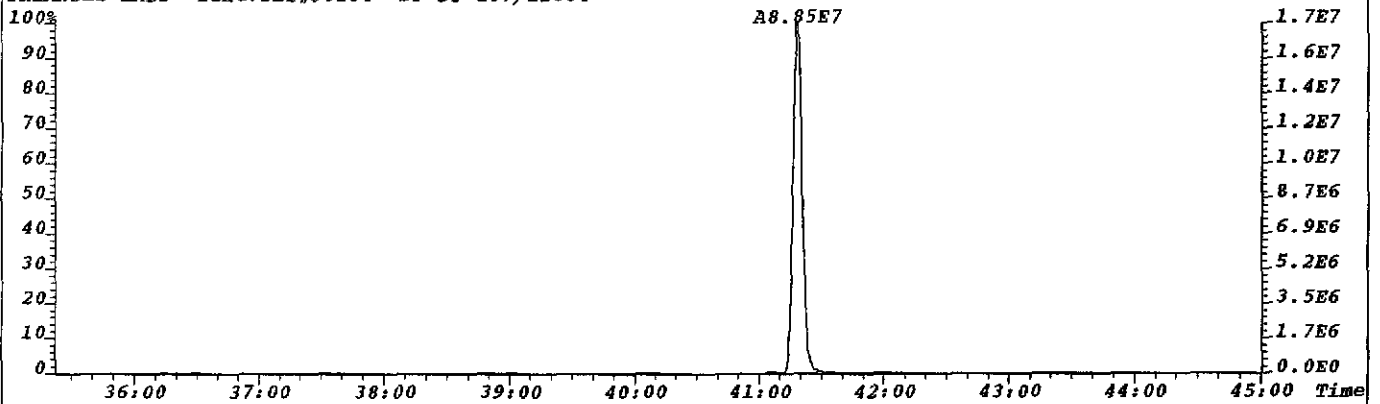
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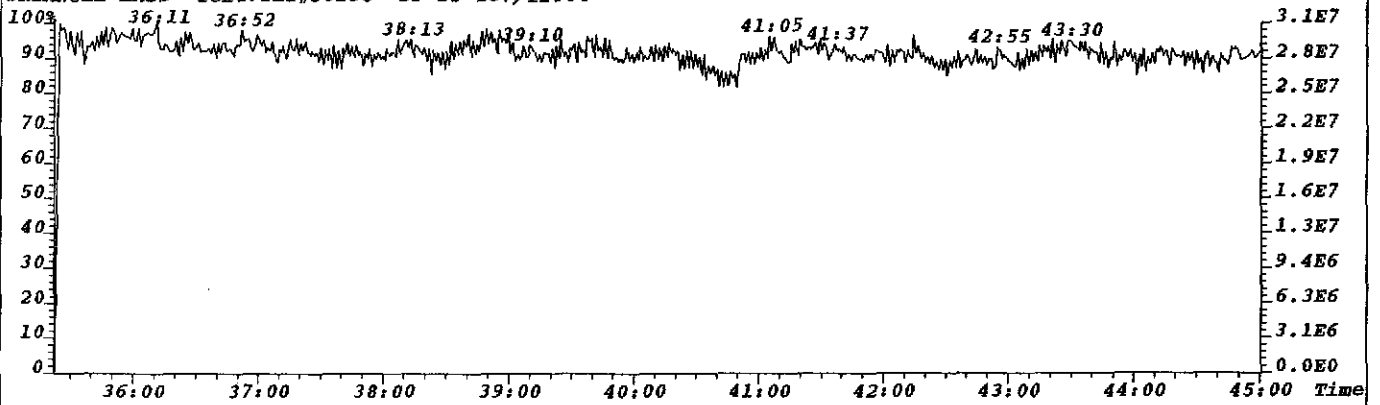
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441.7428 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7948.0,1.00%,F,T) Exp:NDB5US  
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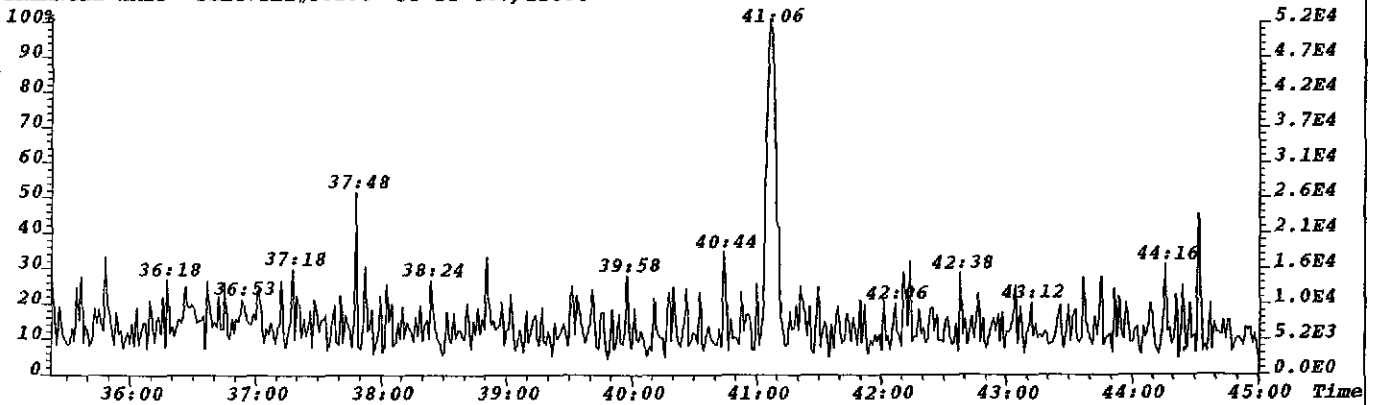
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TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



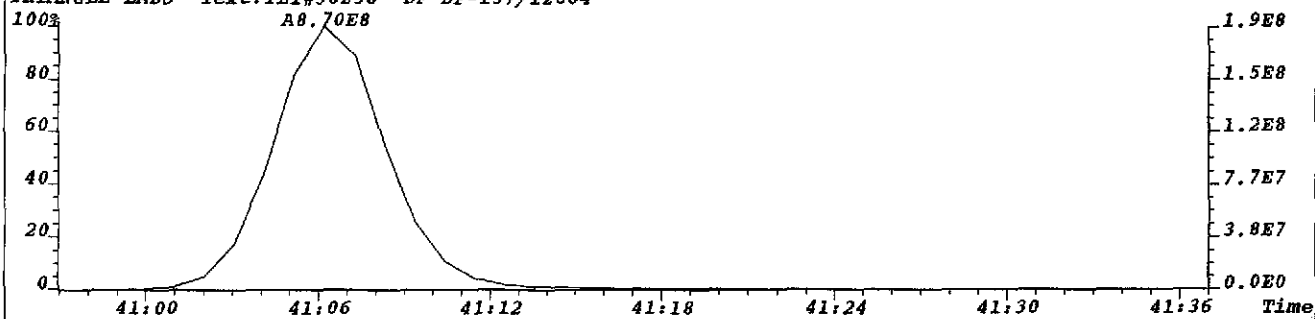
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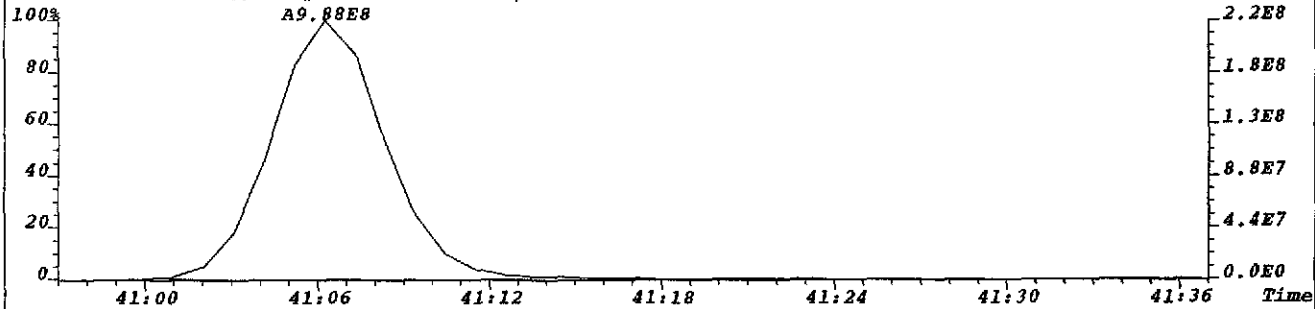
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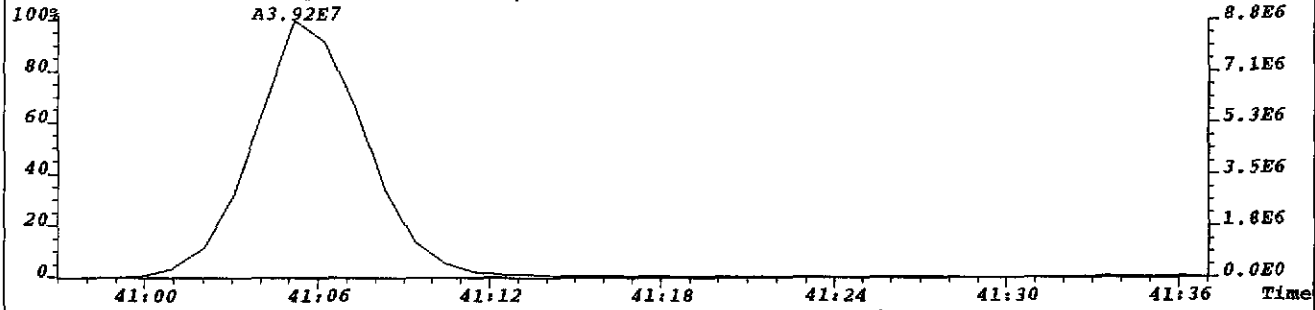
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457.7377 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5604.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



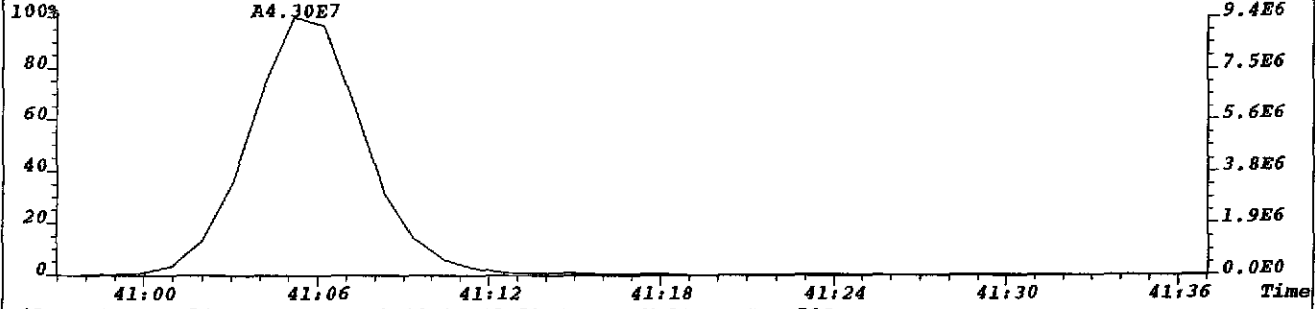
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TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



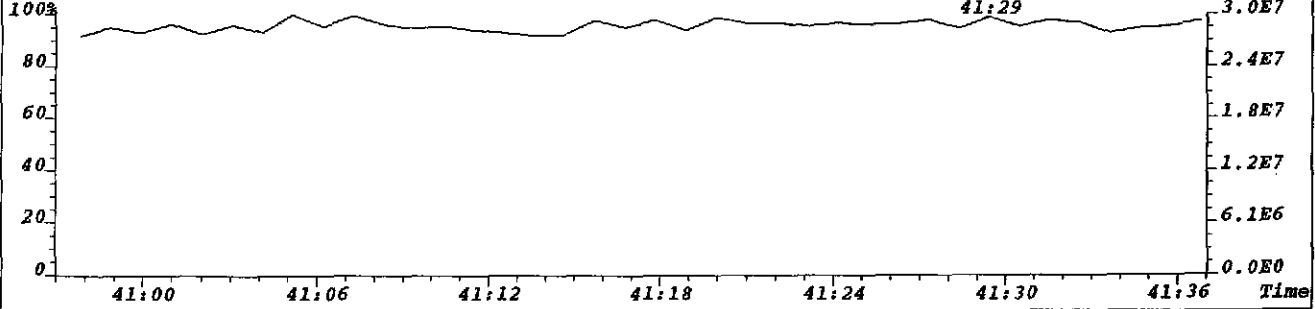
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TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



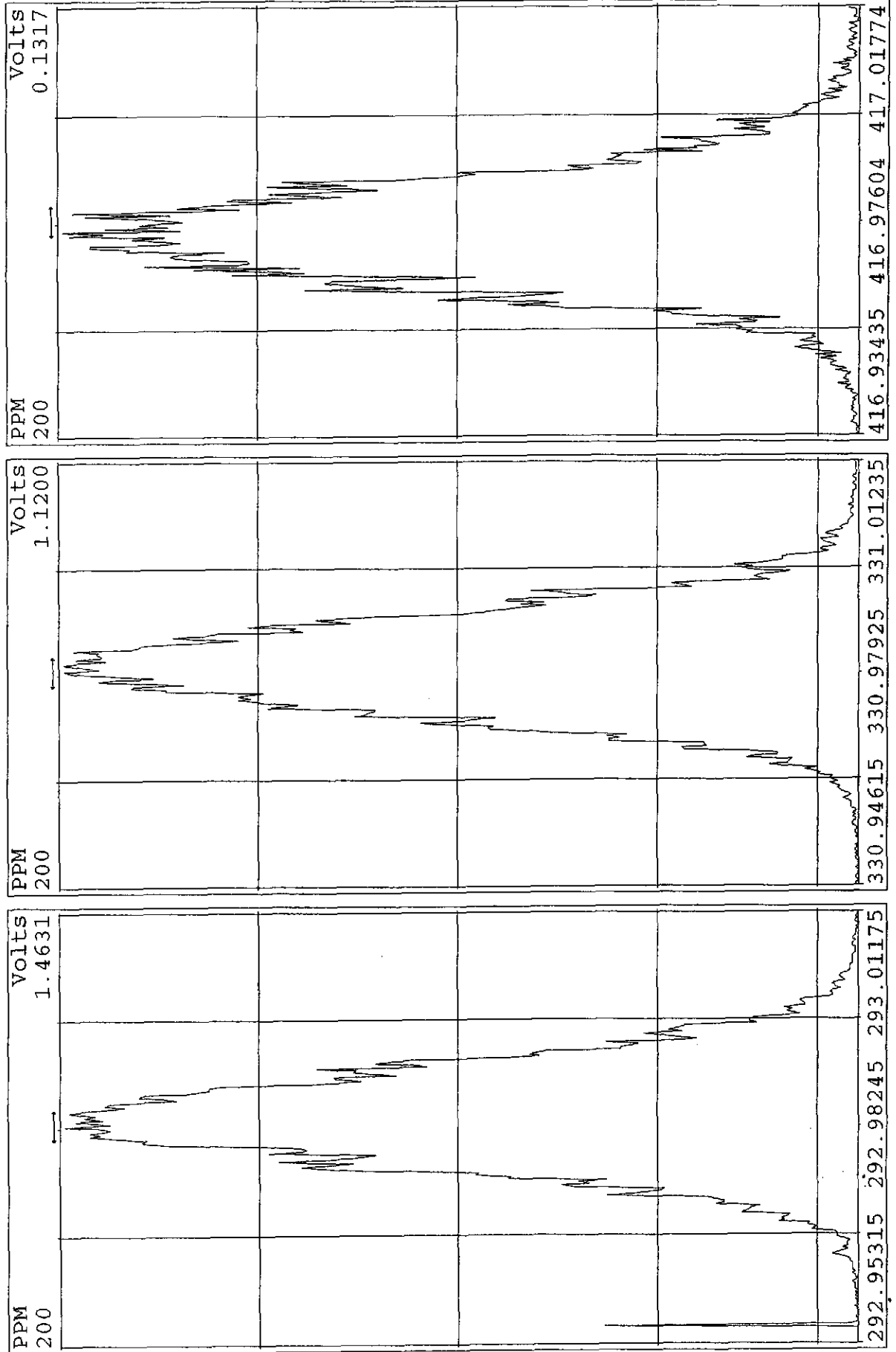
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TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864



File:U1319 #1-549 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
430.9729 S:4 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-137/12864

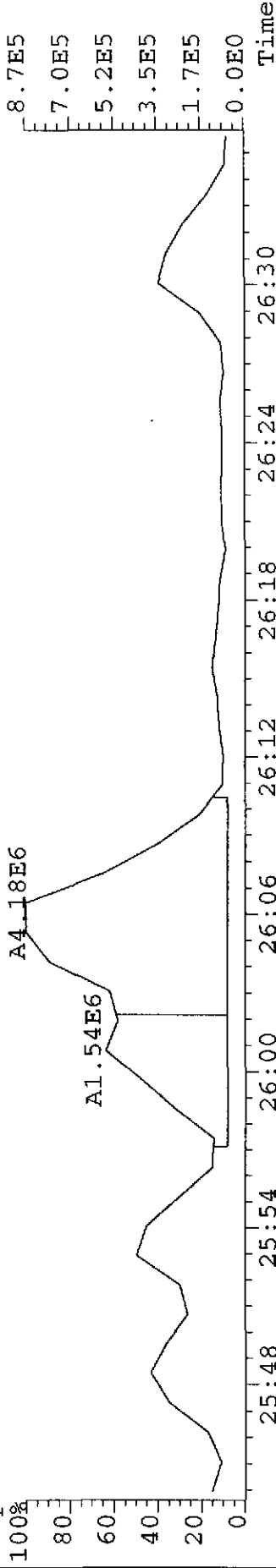


Peak Locate Examination: 4-SEP-2002:18:21 File:U1319  
Experiment:NDB5US Function:2 Reference:PFK

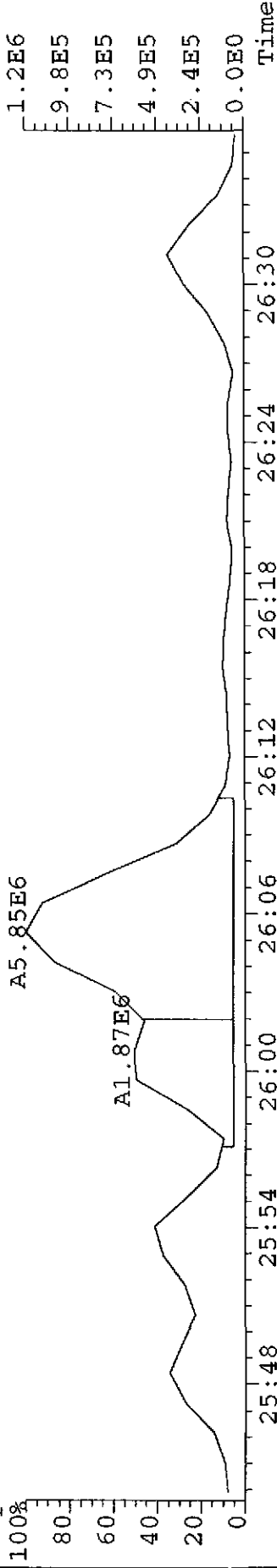




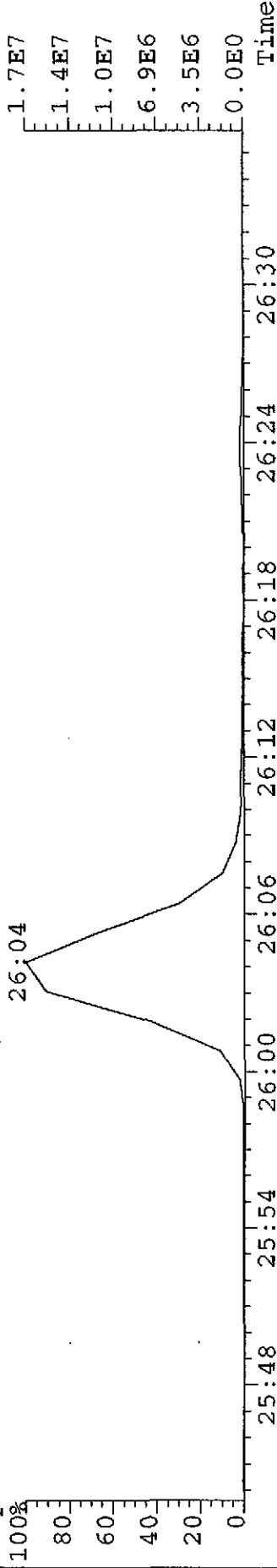
File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
303.9016 S:4 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
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Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.

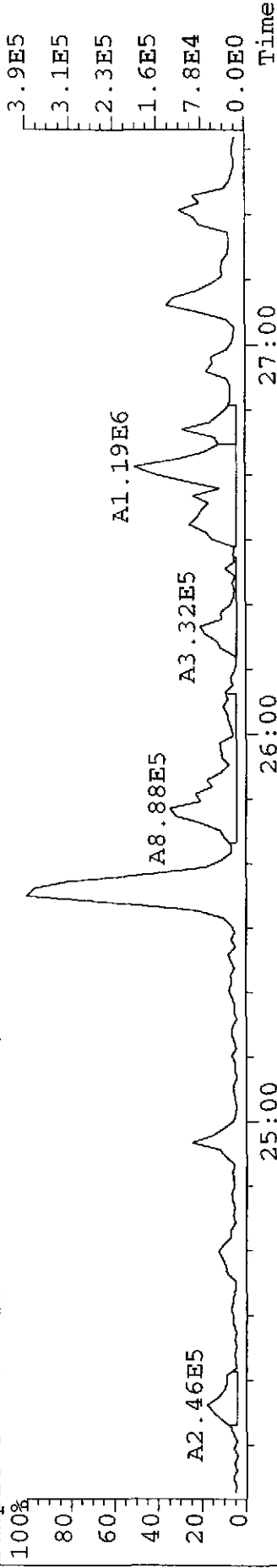


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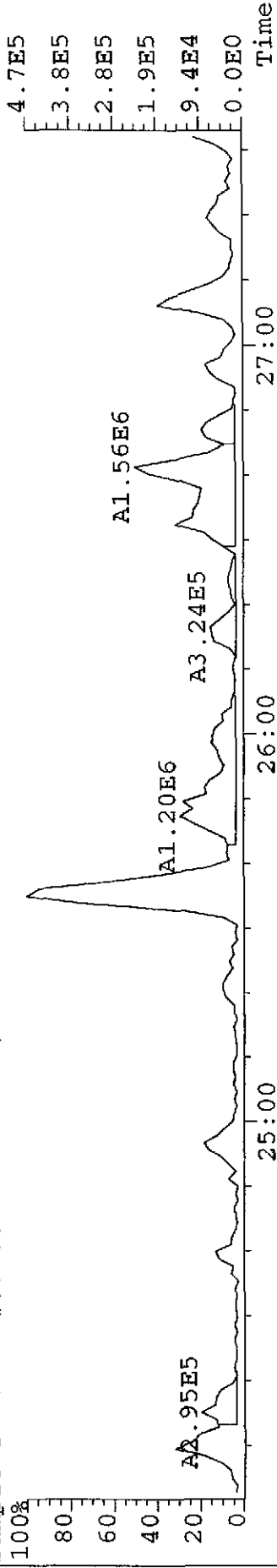


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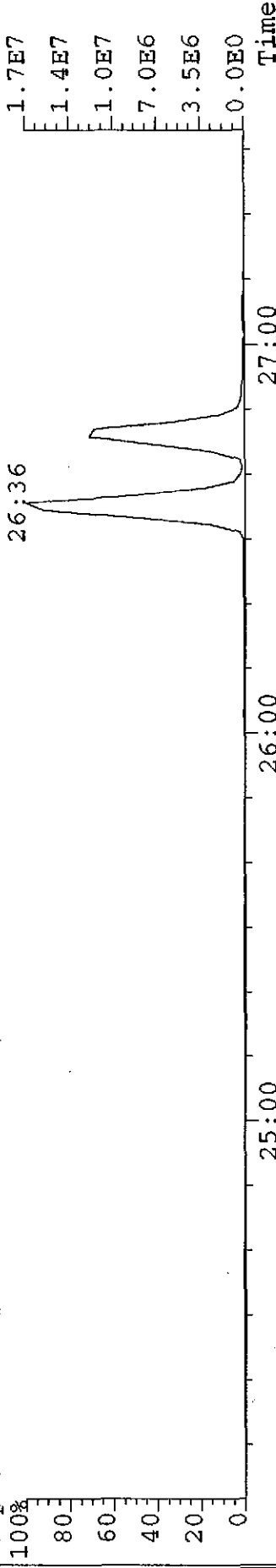
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319.8965 S:4 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
321.8936 S:4 F:2 Exp:NDB5US  
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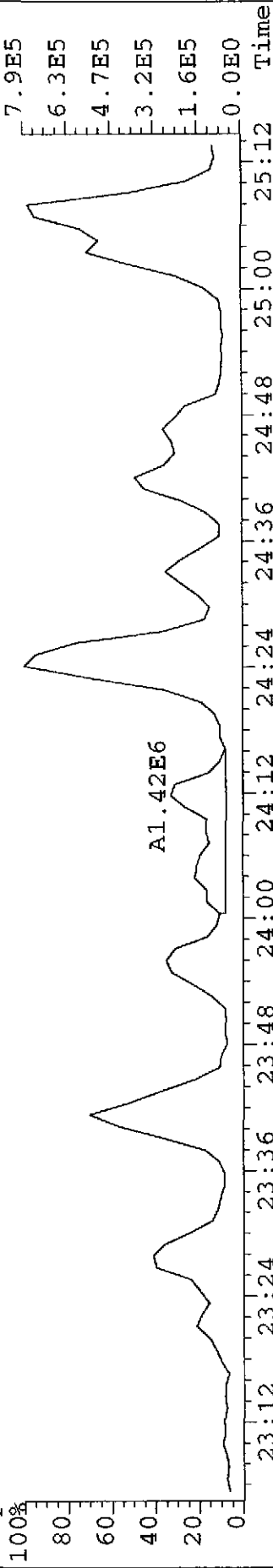


File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
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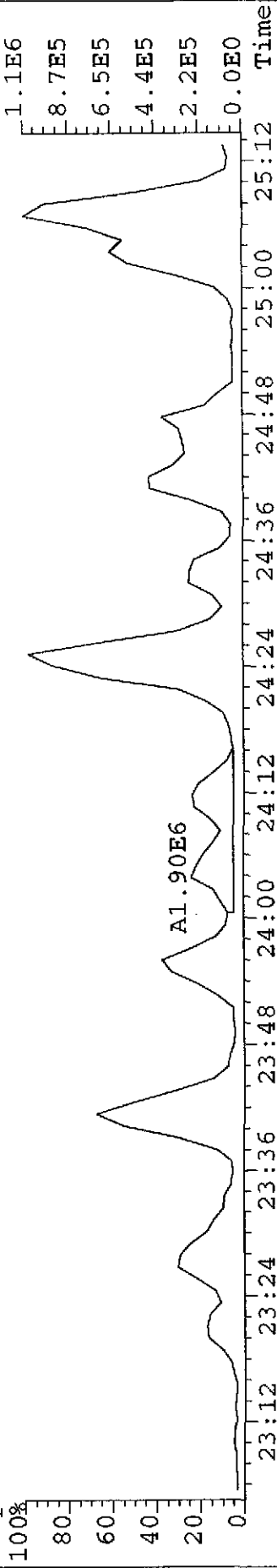
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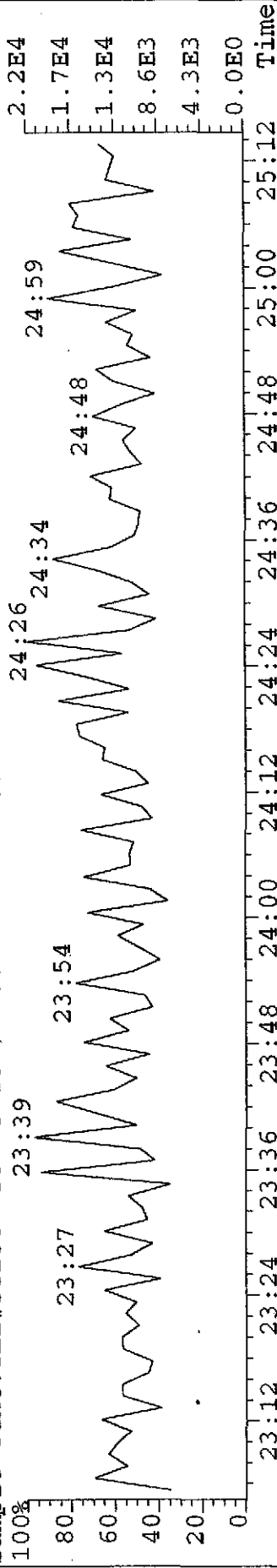


*QAB 9/4/02*

File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
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Sample Text:TII#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.



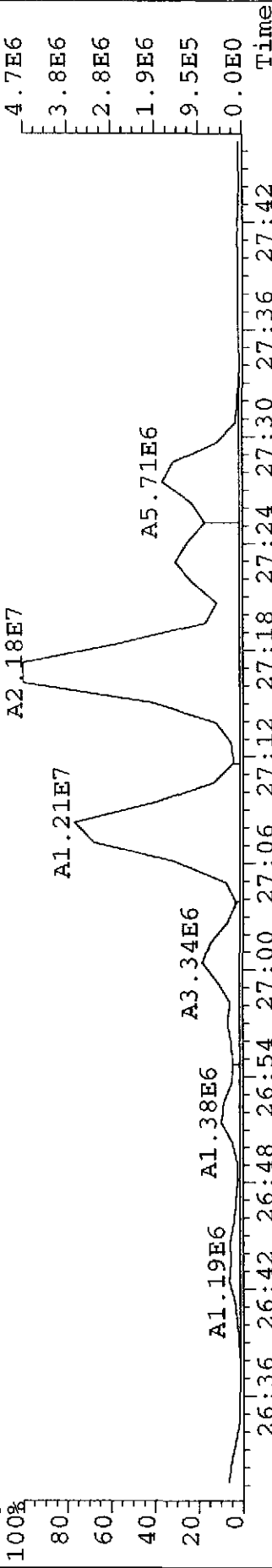
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375.8364 S:4 F:2 Exp:NDB5US  
Sample Text:TII#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S

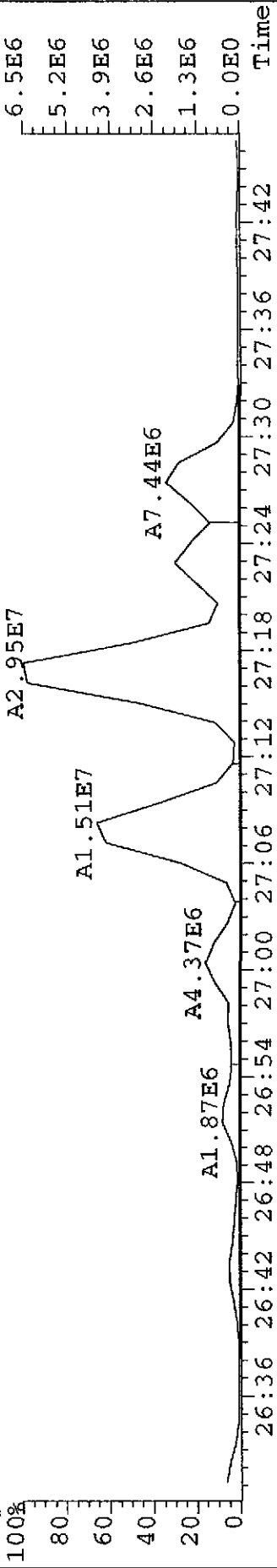
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Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
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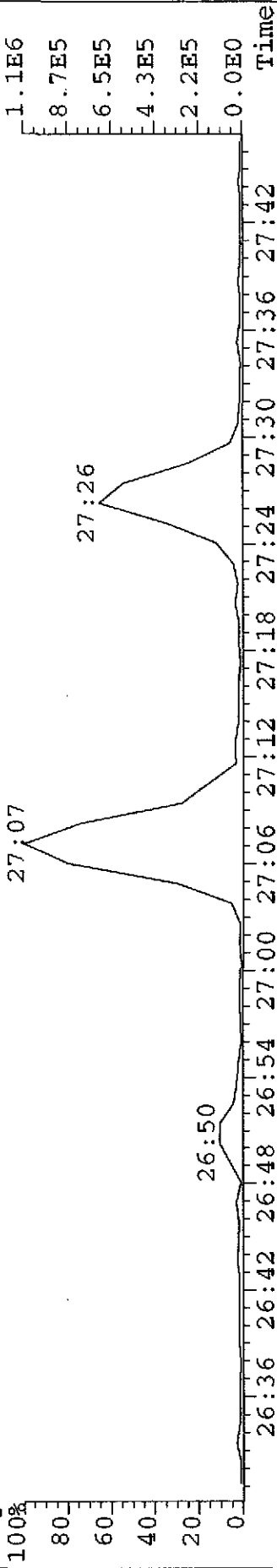
*Gas 9/6/02*



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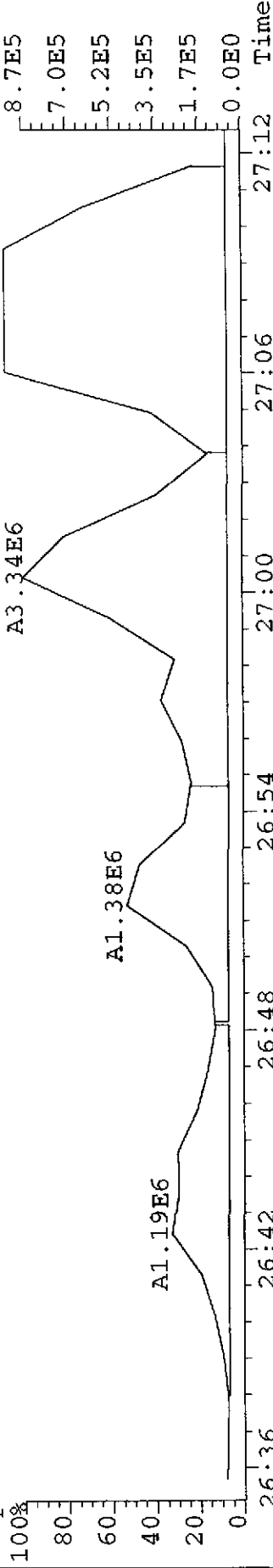
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303.9016 S:4 F:2 Exp:NDB5US

Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.

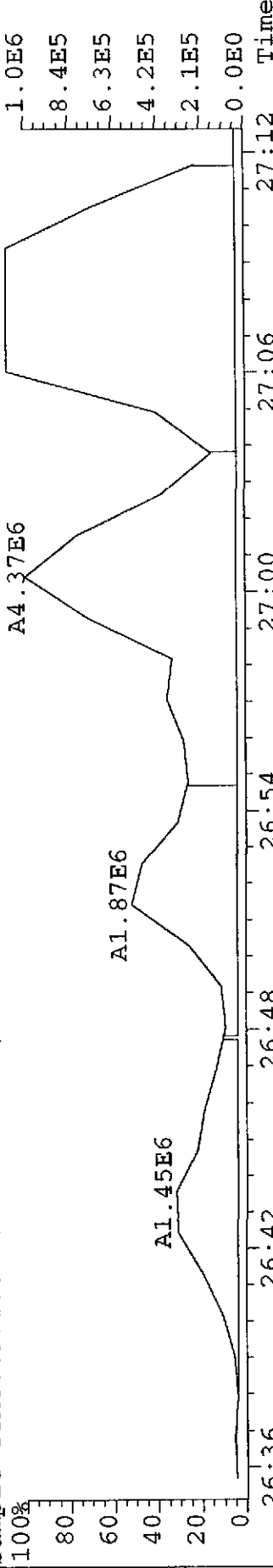


*Pass 9/6/02*

File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S

305.8987 S:4 F:2 Exp:NDB5US

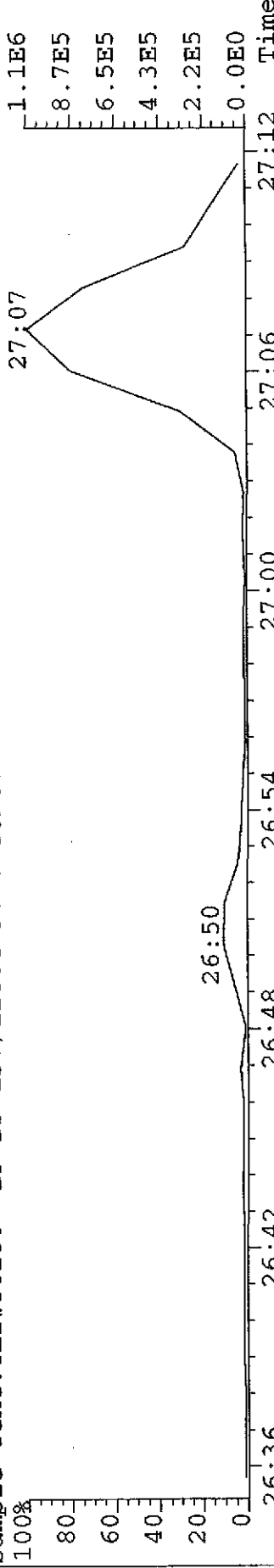
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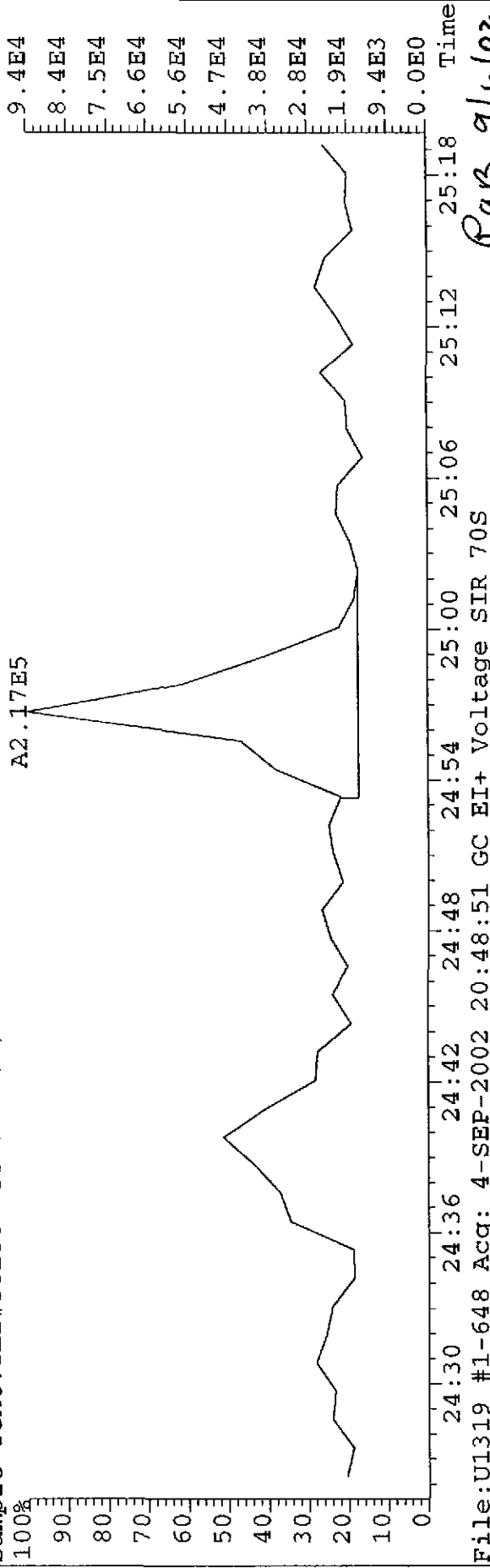
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File: UI319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S

319.8965 S:4 F:2 Exp:NDB5US

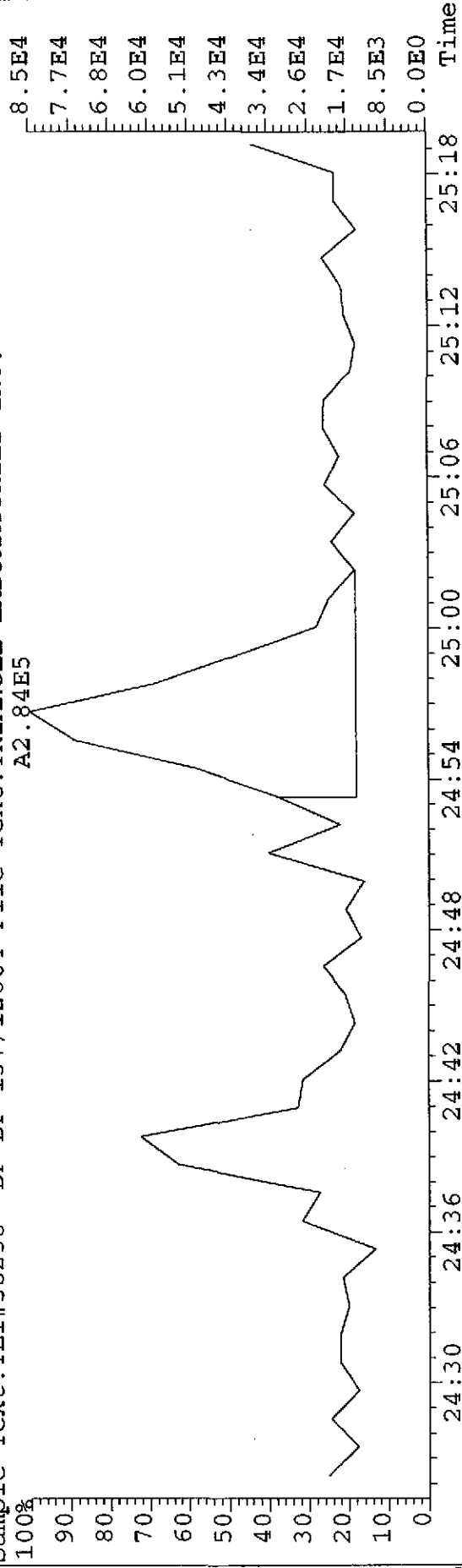
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File: UI319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S

321.8936 S:4 F:2 Exp:NDB5US

Sample Text: TLI#58258 DF-DP-137/12864 File Text: TRIANGLE LABORATORIES INC.  
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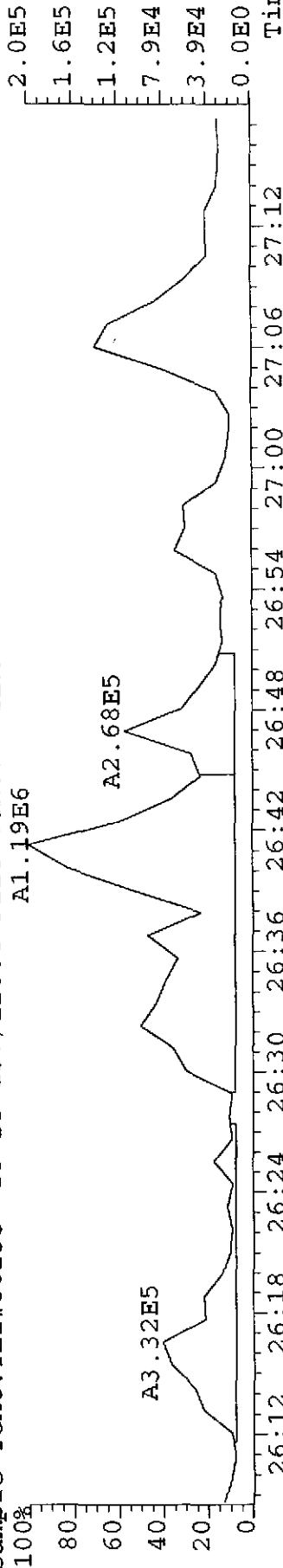
PARS 9/6/02

File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S

319.8965 S:4 F:2 Exp:NDB5US

Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.

A1.19E6

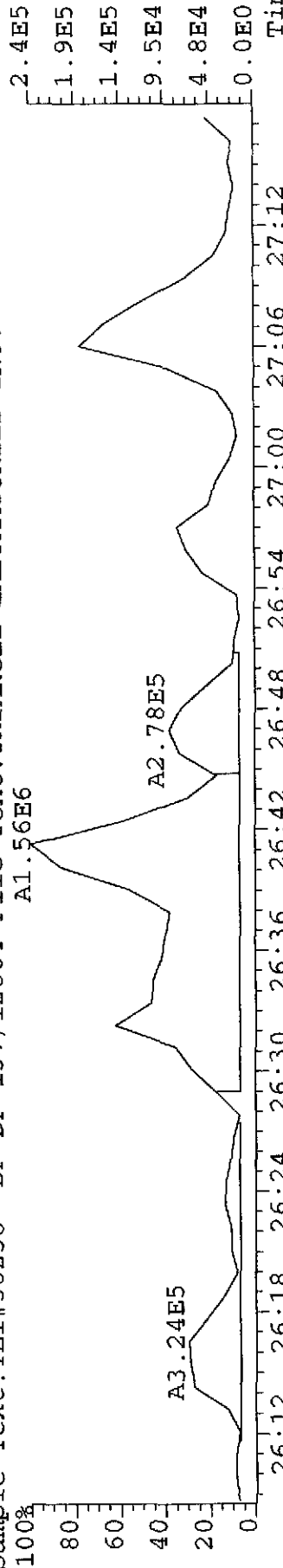


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321.8936 S:4 F:2 Exp:NDB5US

Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.

A1.56E6

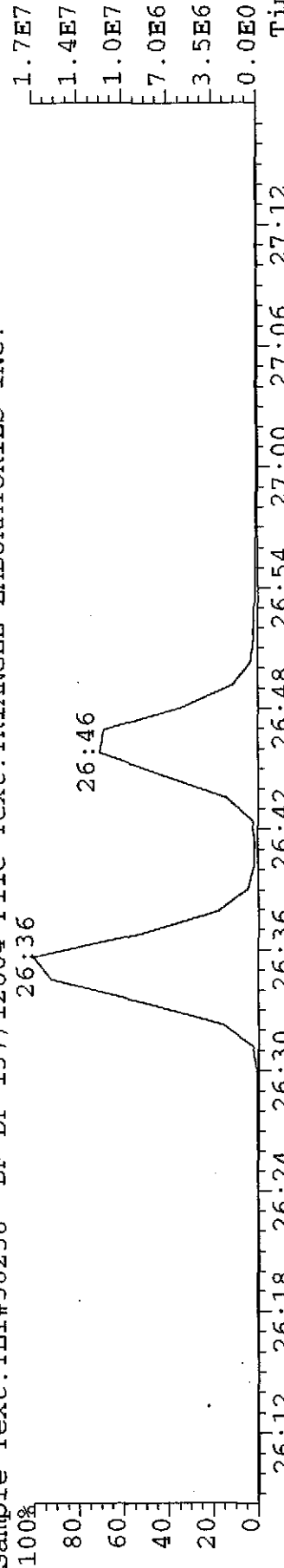


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333.9338 S:4 F:2 Exp:NDB5US

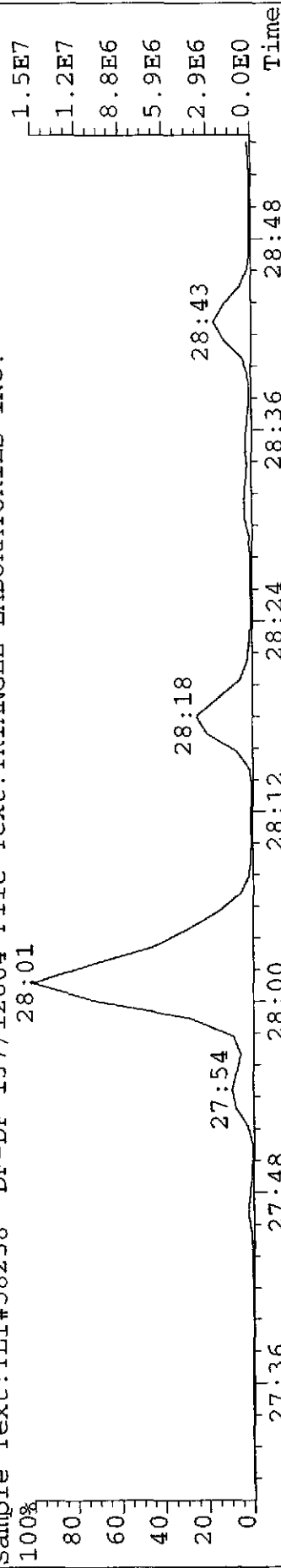
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26:36

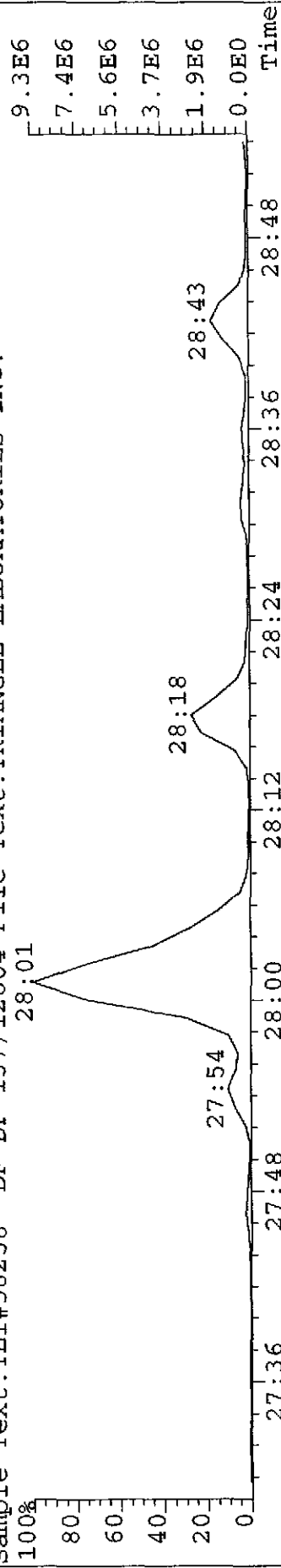


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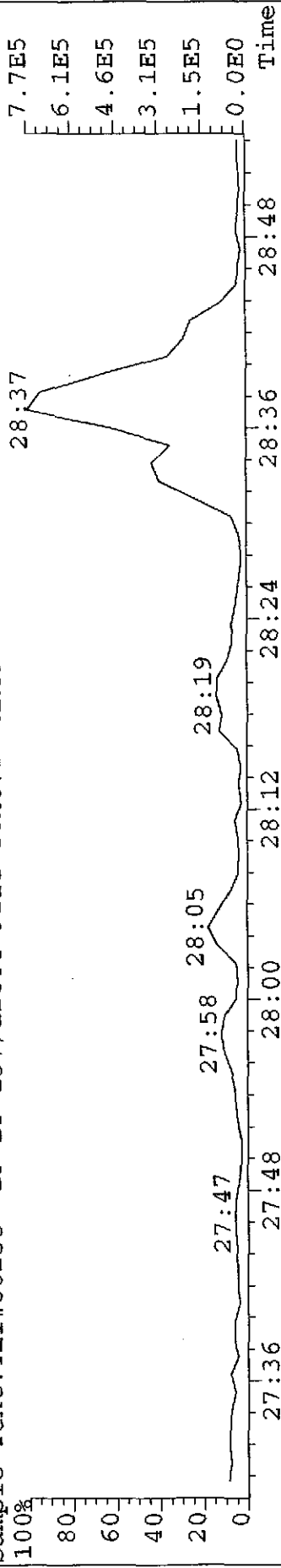
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339.8597 S:4 F:2 Exp:NDB5US  
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File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
341.8567 S:4 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.



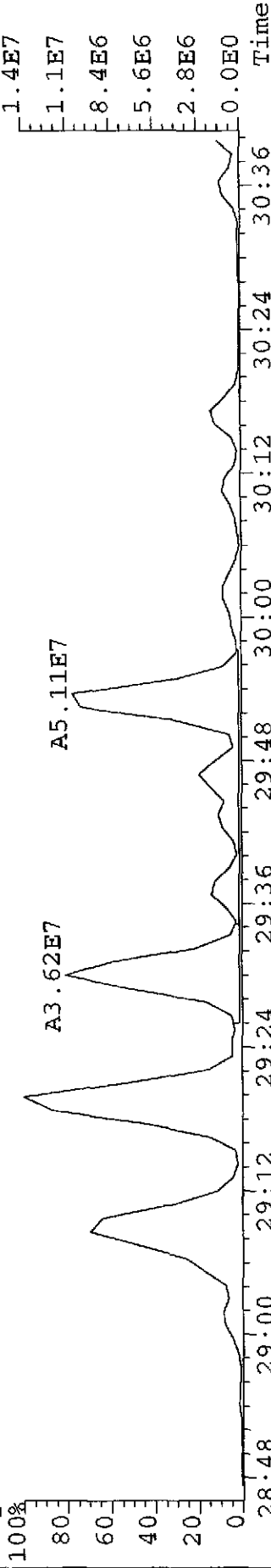
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353.8970 S:4 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.



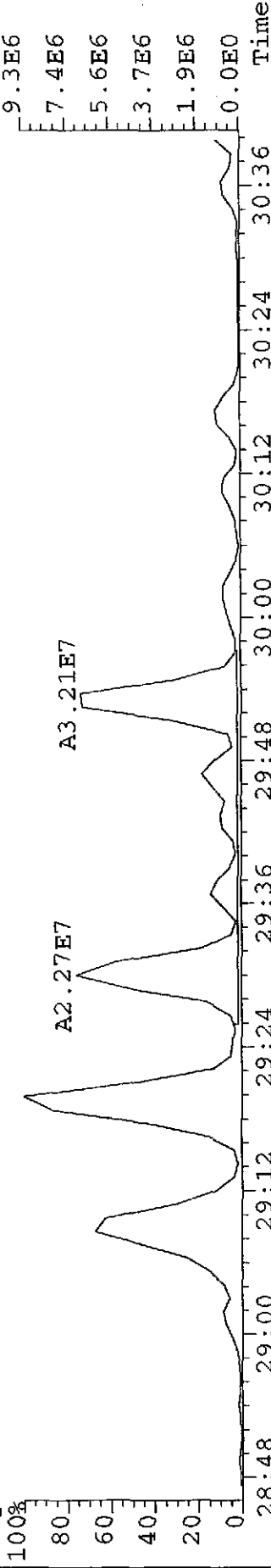
Handwritten signature or initials.



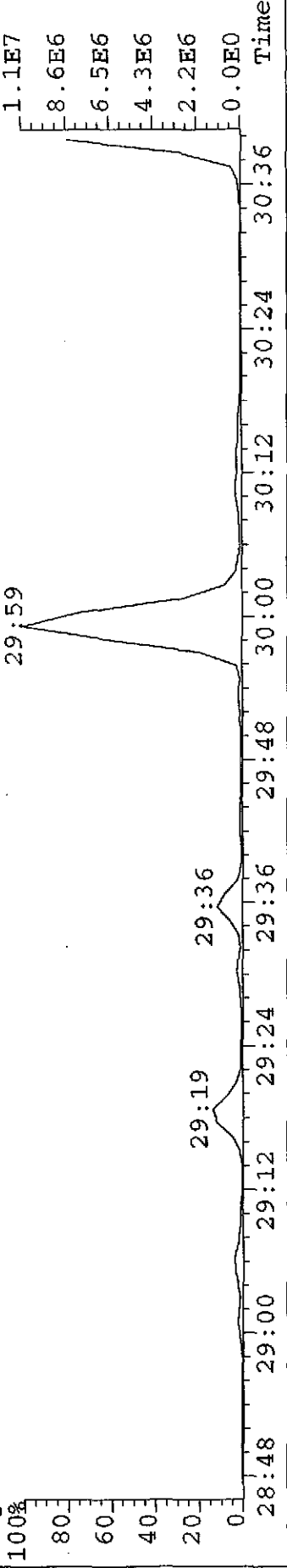
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339.8597 S:4 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
341.8567 S:4 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
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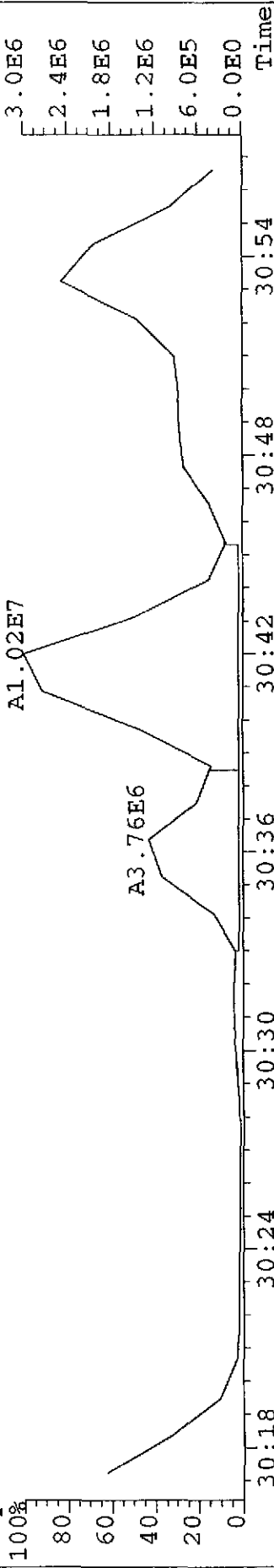
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File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S

339.8597 S:4 F:2 Exp:NDB5US

Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.

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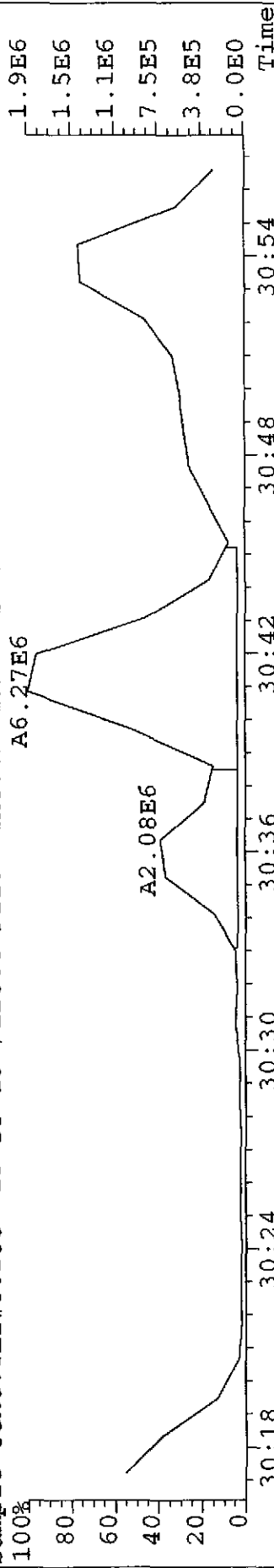


File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S

341.8567 S:4 F:2 Exp:NDB5US

Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.

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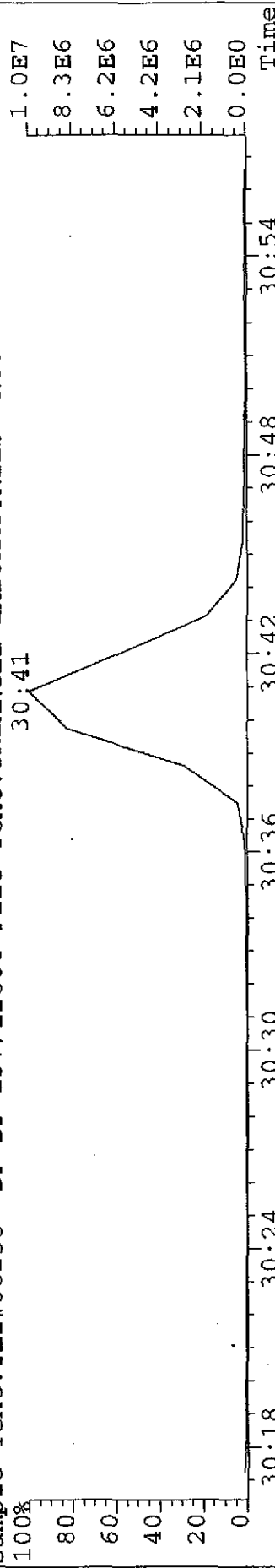


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Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.

100% 30:41

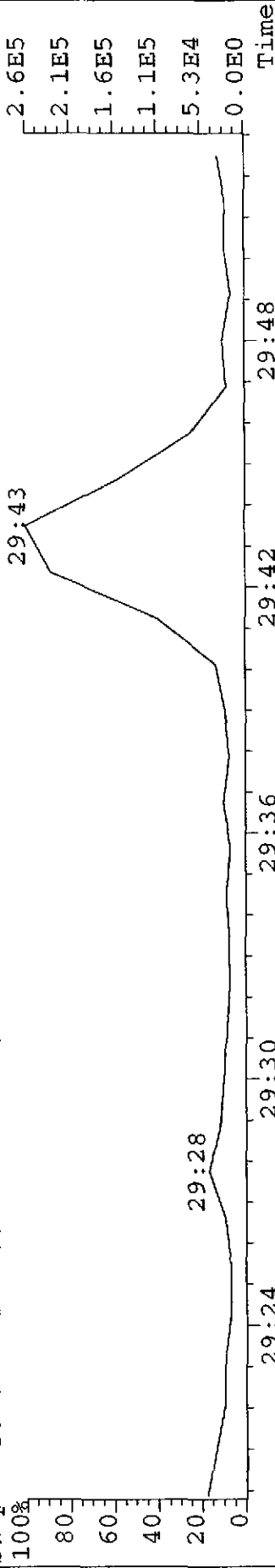


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355.8546 S:4 F:2 Exp:NDB5US

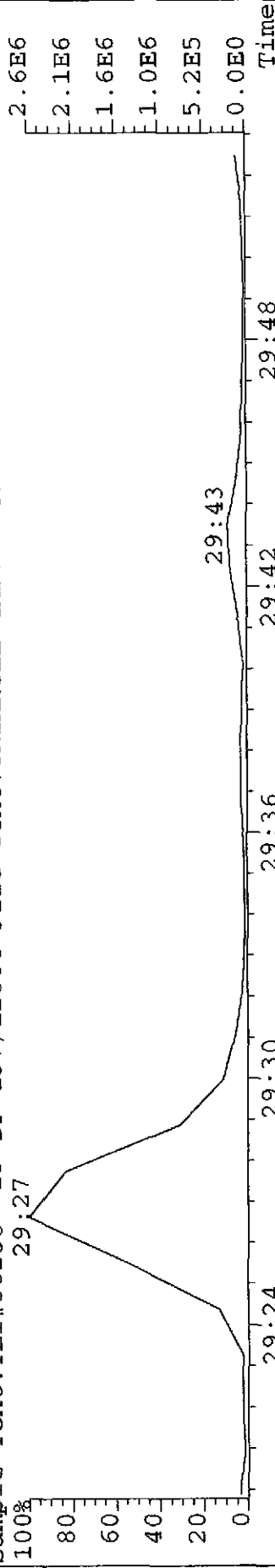
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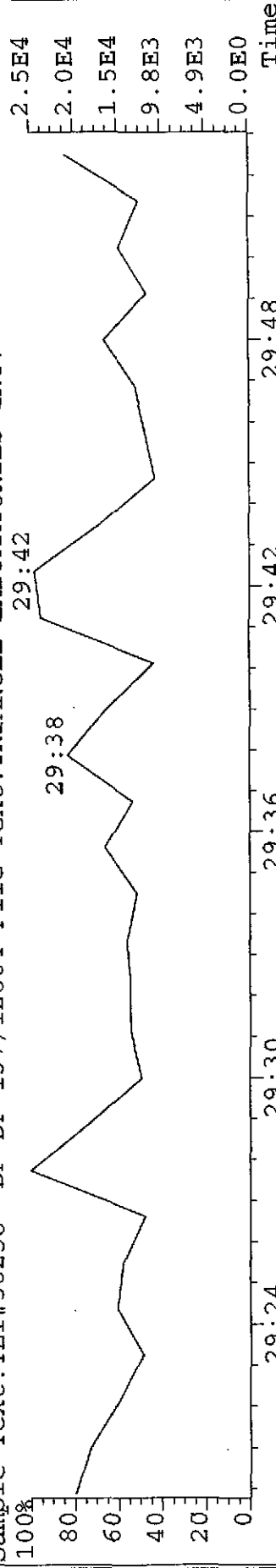
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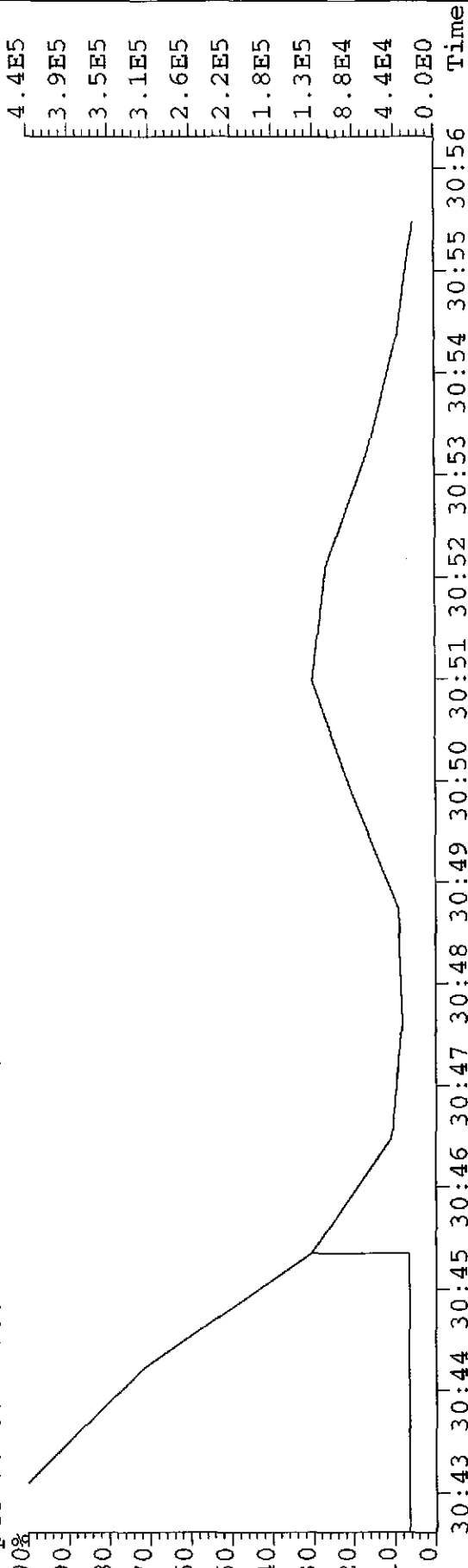
369.8919 S:4 F:2 Exp:NDB5US

Sample Text: TLI#58258 DF-DP-137/12864 File Text: TRIANGLE LABORATORIES INC.



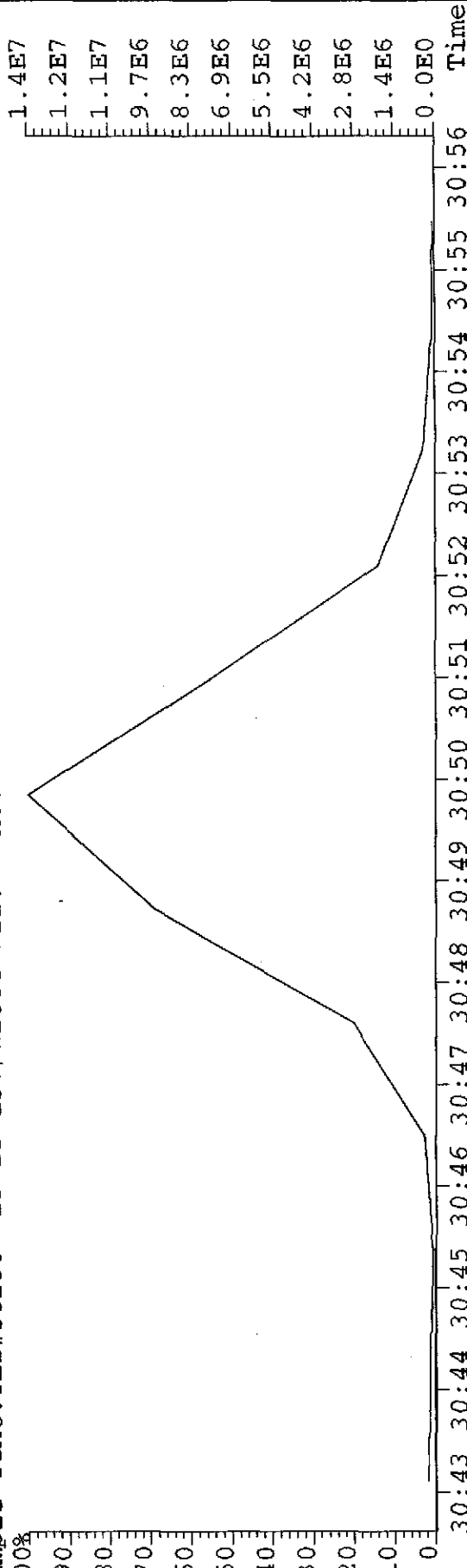
*Handwritten signature*

File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
355.8546 S:4 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.

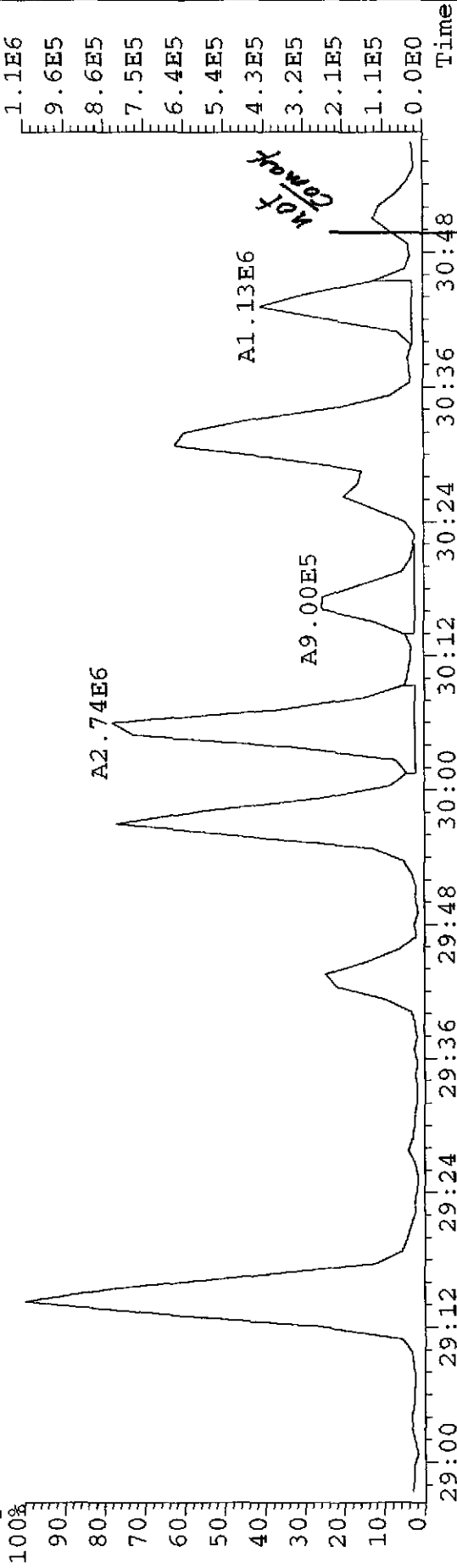


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357.8516 S:4 F:2 Exp:NDB5US

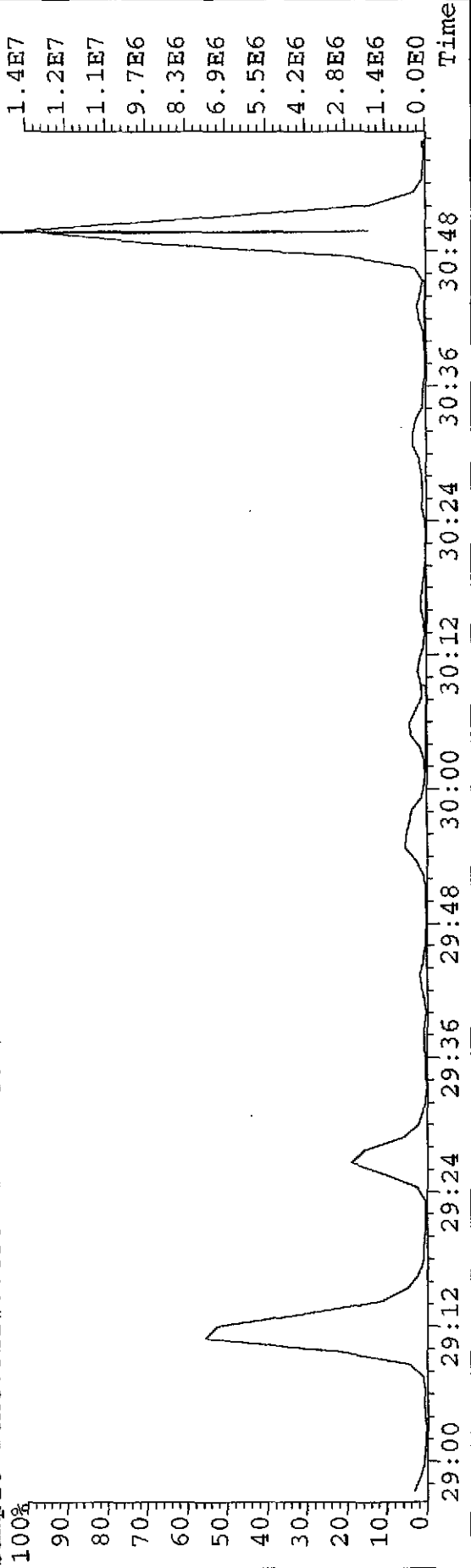
Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.



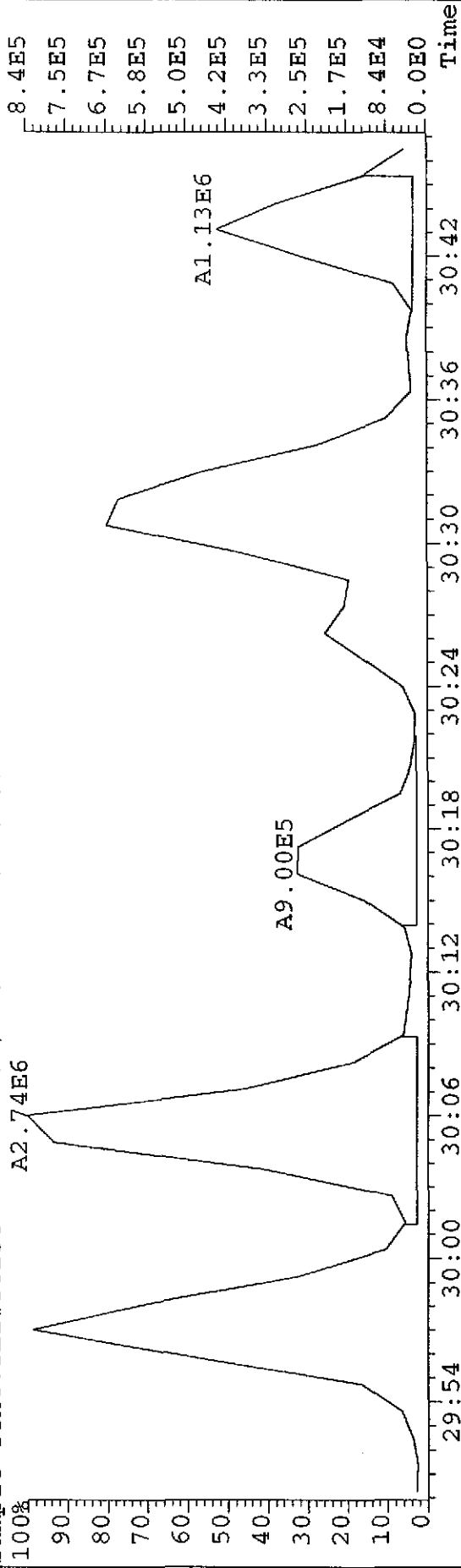
File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
355.8546 S:4 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.



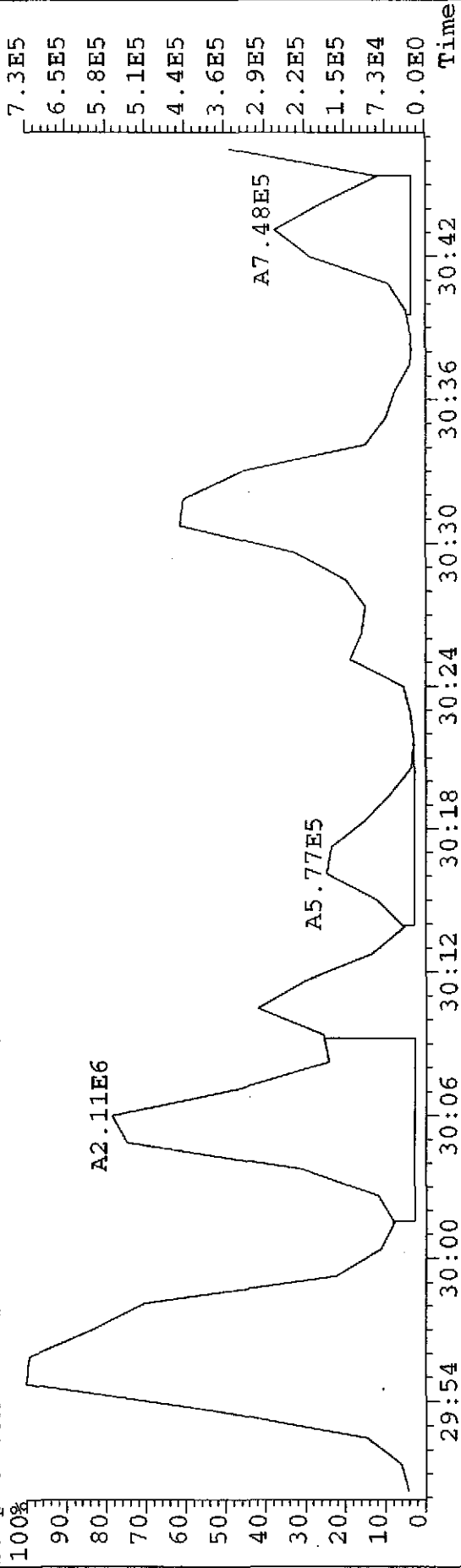
File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
357.8516 S:4 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
355.8546 S:4 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.  
A2.74E6



File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
357.8516 S:4 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.



Garb 9/6/02

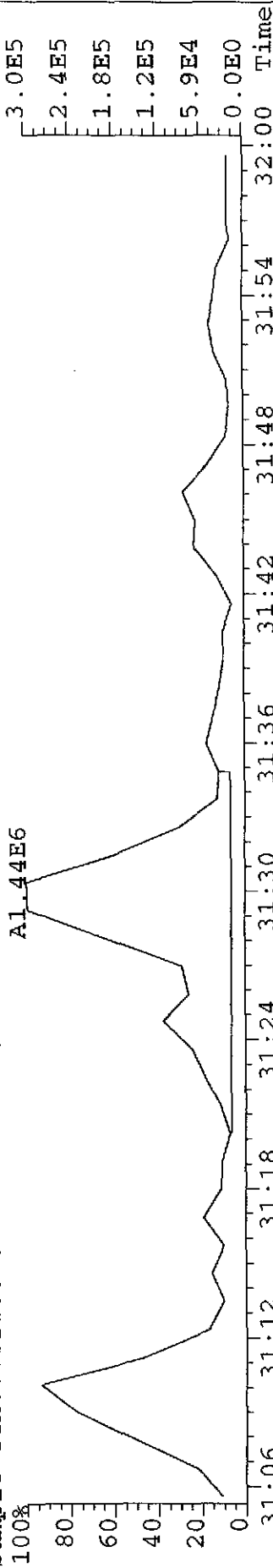
File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S

355.8546 S:4 F:2 Exp:NDB5US

Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.

A1.44E6

3.0E5  
2.4E5  
1.8E5  
1.2E5  
5.9E4  
0.0E0

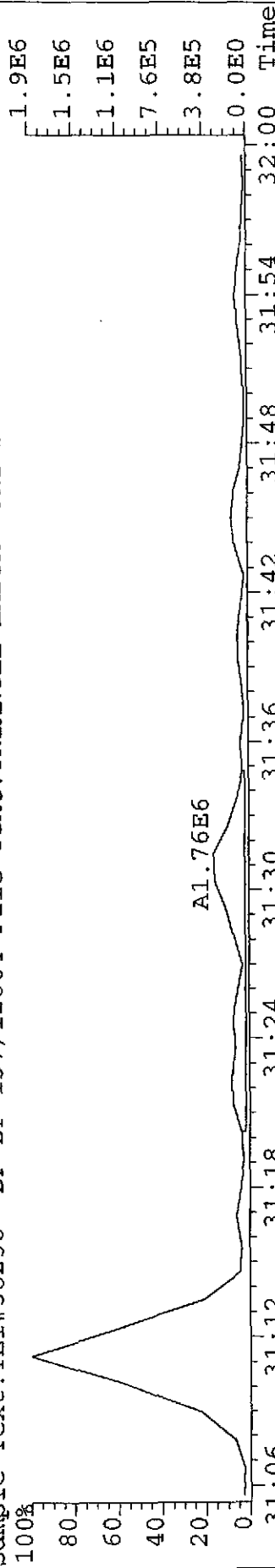


File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S

357.8516 S:4 F:2 Exp:NDB5US

Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.

1.9E6  
1.5E6  
1.1E6  
7.6E5  
3.8E5  
0.0E0

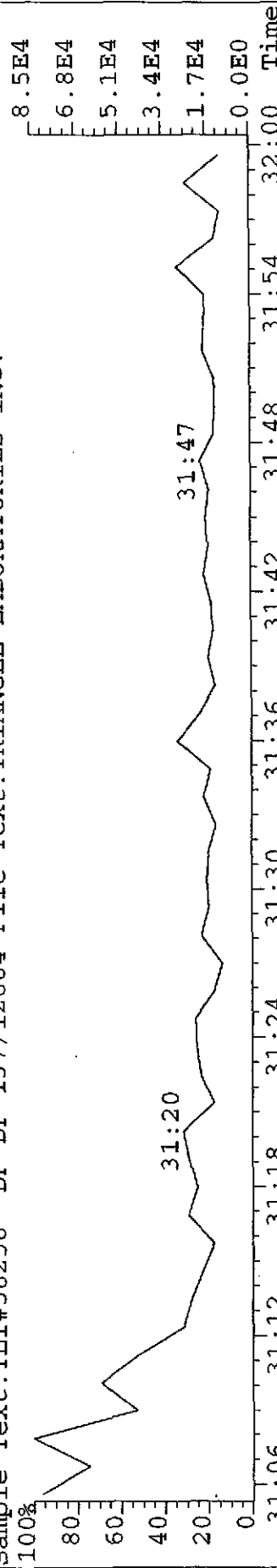


File:U1319 #1-648 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S

369.8919 S:4 F:2 Exp:NDB5US

Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.

8.5E4  
6.8E4  
5.1E4  
3.4E4  
1.7E4  
0.0E0



*Handwritten signature*

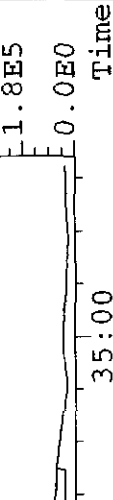
File:U1319 #1-271 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S

373.8208 S:4 F:3 Exp:NDB5US

Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.

A2.88E6

9.0E5  
7.2E5  
5.4E5  
3.6E5  
1.8E5  
0.0E0



A2.36E5 A2.40E5

File:U1319 #1-271 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
375.8178 S:4 F:3 Exp:NDB5US

Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.

A2.36E6

7.4E5  
5.9E5  
4.4E5  
3.0E5  
1.5E5  
0.0E0



A2.06E5 A1.93E5

File:U1319 #1-271 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
385.8610 S:4 F:3 Exp:NDB5US

Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.

34:49

1.2E7  
9.4E6  
7.0E6  
4.7E6  
2.3E6  
0.0E0



34:42 34:48 34:54 35:00

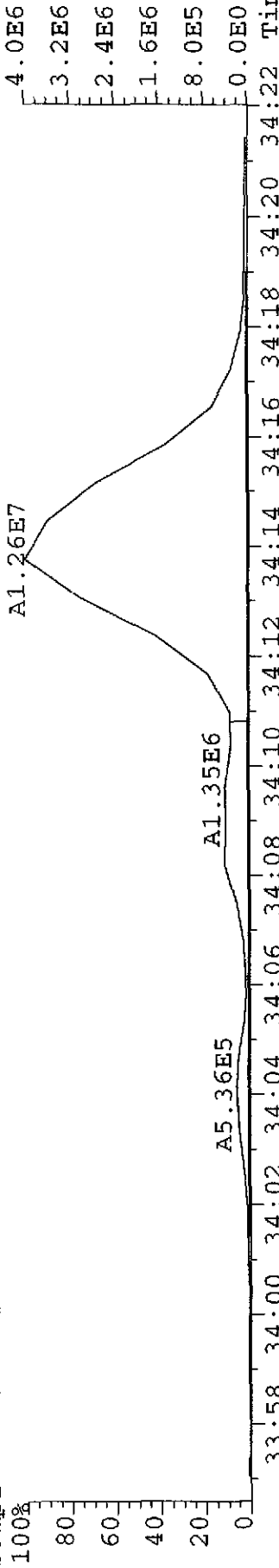
*Handwritten signature*



File:U1319 #1-271 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S

389.8156 S:4 F:3 Exp:NDB5US

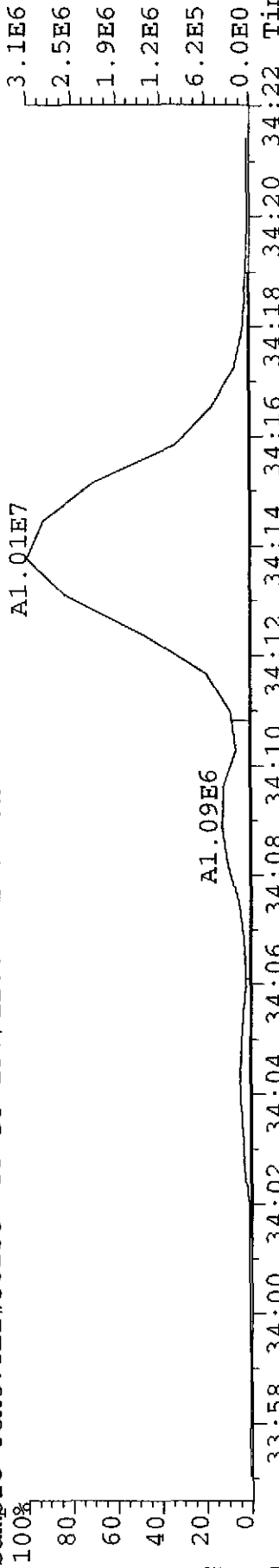
Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-271 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S

391.8127 S:4 F:3 Exp:NDB5US

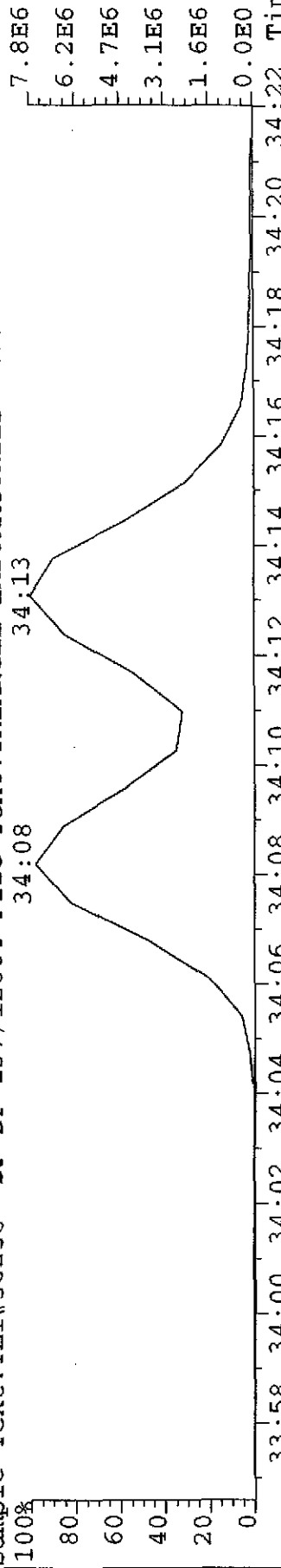
Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-271 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S

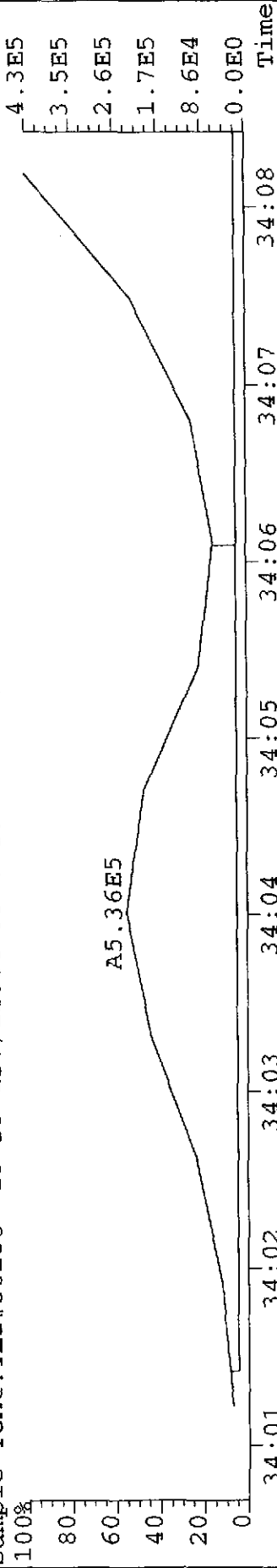
403.8529 S:4 F:3 Exp:NDB5US

Sample Text:TLI#58258 DF-DP-137/12864 File Text:TRIANGLE LABORATORIES INC.

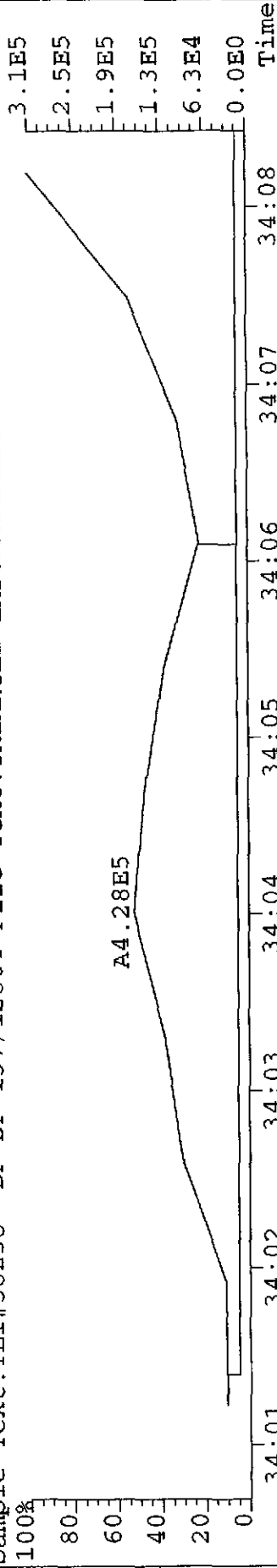


12/90

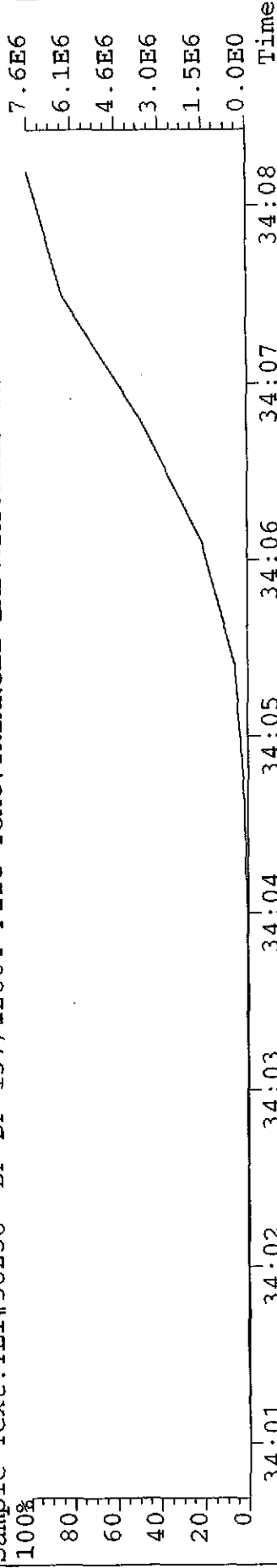
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389.8156 S:4 F:3 Exp:NDB5US  
Sample Text: TLI#58258 DF-DP-137/12864 File Text: TRIANGLE LABORATORIES INC.



File: UI319 #1-271 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
391.8127 S:4 F:3 Exp:NDB5US  
Sample Text: TLI#58258 DF-DP-137/12864 File Text: TRIANGLE LABORATORIES INC.



File: UI319 #1-271 Acq: 4-SEP-2002 20:48:51 GC EI+ Voltage SIR 70S  
403.8529 S:4 F:3 Exp:NDB5US  
Sample Text: TLI#58258 DF-DP-137/12864 File Text: TRIANGLE LABORATORIES INC.



9/9/02

**Mississippi Dept. of Env. Quality**

**TLI Project: 58258**

**Method 8290 TCDD/TCDF Analysis (DB-225)**

**Client Sample: DF-DP-137/12864**

**Analysis File: P023219**

<b>Client Project:</b>	<b>Crystal Springs Dioxin</b>		
<b>Sample Matrix:</b>	<b>SOIL</b>	<b>Date Received:</b>	<b>08/27/2002</b>
<b>TLI ID:</b>	<b>334-48-2</b>	<b>Date Extracted:</b>	<b>08/28/2002</b>
		<b>Date Analyzed:</b>	<b>09/05/2002</b>
		<b>Spike File:</b>	<b>SPC2NF2S</b>
		<b>ICal:</b>	<b>PF56152</b>
		<b>ConCal:</b>	<b>P023216</b>
<b>Sample Size:</b>	<b>11.100 g</b>	<b>Dilution Factor:</b>	<b>n/a</b>
<b>Dry Weight:</b>	<b>10.057 g</b>	<b>Blank File:</b>	<b>U131602</b>
<b>GC Column:</b>	<b>DB-225</b>	<b>Analyst:</b>	<b>JMM</b>
		<b>% Moisture:</b>	<b>9.4</b>
		<b>% Lipid:</b>	<b>n/a</b>
		<b>% Solids:</b>	<b>90.6</b>

<b>Analytes</b>	<b>Conc. (pg/g)</b>	<b>DL</b>	<b>EMPC</b>	<b>Ratio</b>	<b>RT</b>	<b>Flags</b>
2,3,7,8-TCDF	5.4			0.73	22:41	—

<b>Internal Standard</b>	<b>Conc. (pg/g)</b>	<b>% Recovery</b>	<b>QC Limits</b>	<b>Ratio</b>	<b>RT</b>	<b>Flags</b>
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	126	63.3	40%-130%	0.76	22:39	—

<b>Recovery Standard</b>	<b>Ratio</b>	<b>RT</b>	<b>Flags</b>
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	0.82	21:32	—

Data Reviewer:           AEM           09/05/2002

Initial ....Date...

QEM 9/5/02

Data Review By:

Channel specific noise levels computed from 'NL' heights.

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 P023219B.dbf  
09/05/2002 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				0.792-1.102				
304-306	DC	NL	Height	0.22	0.10	0.12			
	DC	SN	18:13 RO	1.50	0.42		0.804		
	DC	SN	18:19 RO	0.20	0.32		0.809		
	DC	SN	18:26 RO	0.20	0.55		0.814		
			18:37 RO	0.61	0.90	0.39	0.64	0.822 J	
			18:43 RO	0.59	1.38	0.60	1.01	0.826 J	
			18:57	0.79	62.81	27.71	35.10	0.837	
			19:06	0.73	1.83	0.77	1.06	0.843 J	
			19:12 RO	0.53	2.16	0.94	1.77	0.848 J	
			19:20	0.71	22.83	9.45	13.38	0.854	
			19:37 RO	0.60	3.08	1.34	2.23	0.866 J	
			19:50 RO	0.14	0.18	0.08	0.57	0.876 J	
			19:59	0.75	36.50	15.69	20.81	0.882	
			20:08	0.70	4.94	2.03	2.91	0.889	
			20:16	0.74	19.43	8.29	11.14	0.895	
			20:26	0.77	31.33	13.66	17.67	0.902	
			20:47	0.66	4.56	1.81	2.75	0.918	
			20:57	0.72	22.94	9.63	13.31	0.925	
			21:07	0.78	71.08	31.21	39.87	0.932	
			21:22	0.69	1.40	0.57	0.83	0.943 J	
			21:28	0.77	18.13	7.88	10.25	0.948	
			21:35	0.65	4.98	1.96	3.02	0.953	
			21:40	0.79	11.93	5.27	6.66	0.957	
			21:52 RO	1.01	5.13	2.94	2.90	0.965	
			22:06	0.72	10.39	4.34	6.05	0.976	
			22:17	0.80	82.85	36.71	46.14	0.984	
			22:33	0.80	49.39	22.00	27.39	0.996	
			22:41	0.73	20.62	8.68	11.94	1.001 2378-TCDF AN	
			22:55 RO	1.07	6.39	3.86	3.61	1.012	
			23:04	0.81	8.91	4.00	4.91	1.018	
			23:11 RO	0.43	2.05	0.89	2.07	1.024 J	
			23:20	0.76	168.97	72.93	96.04	1.030	
			23:30	0.85	31.44	14.47	16.97	1.038	
			23:41	0.74	27.82	11.87	15.95	1.046	
			24:05	0.78	38.76	17.02	21.74	1.063	
			24:21 RO	0.97	8.87	4.88	5.01	1.075	
			24:34	0.81	17.96	8.01	9.95	1.085	
			24:39 RO	0.60	1.33	0.58	0.97	1.088 J	
	DC	SN	24:48 RO	2.60	0.09		1.095		
	DC	WH	25:04	0.78	169.35		1.107		
	DC	WH	25:14 RO	1.84	0.90		1.114		
304-306			34 Peaks		803.27				

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.

		0.65-0.89			0.956-1.044					
13C12-TCDF										
316-318	DC NL		Height	0.33	0.12	0.21				
	DC WL 18:26		0.74	28.18			0.814			
	DC WL 18:36	RO	0.59	0.94			0.821			
	DC WL 18:40	RO	0.41	0.44			0.824			
	DC WL 18:46	RO	2.43	0.50			0.829			
	DC WL 18:59	RO	1.95	0.65			0.838			
	DC WL 19:21	RO	0.23	0.21			0.854			
	DC WL 19:30	RO	4.06	0.30			0.861			
	DC WL 19:43	RO	2.75	0.14			0.870			
	DC WL 19:49	RO	1.55	0.83			0.875			
	DC WL 19:52	RO	2.74	0.41			0.877			
	DC WL 19:57	RO	1.39	0.73			0.881			
	DC WL 20:02	RO	1.91	0.19			0.884			
	DC WL 20:44	RO	1.26	2.07			0.915			
	DC WL 20:53	RO	1.82	0.19			0.922			
	DC WL 21:03	RO	0.53	0.57			0.929			
	DC WL 21:12	RO	1.21	4.66			0.936			
	DC WL 21:23	RO	2.63	0.28			0.944			
	DC WL 21:28	RO	1.01	2.85			0.948			
	DC WL 21:34	RO	0.50	1.17			0.952			
	DC SN 21:43	RO	1.09	0.62			0.959			
	DC SN 21:48	RO	1.03	0.51			0.962			
			21:53	RO	0.93	0.81	0.43	0.46	0.966	
			21:55	RO	0.38	0.46	0.20	0.53	0.968	
			22:00	RO	0.60	0.62	0.27	0.45	0.971	
			22:06	RO	1.32	0.60	0.45	0.34	0.976	
	DC SN 22:10	RO	2.11	0.32				0.979		
	DC SN 22:14	RO	0.38	0.25				0.982		
			22:28	RO	0.39	0.99	0.43	1.11	0.992	
			22:39		0.76	674.99	291.96	383.03	1.000	13C12-2378-TCDF ISO
			Height		140.70	60.53	80.17			
			22:53	RO	1.20	4.07	2.77	2.30	1.010	
			22:58	RO	1.06	2.53	1.51	1.43	1.014	
			23:08	RO	0.38	2.71	1.18	3.07	1.021	
			23:20		0.65	31.03	12.28	18.75	1.030	
	DC WH 24:43	RO	0.64	2.74					1.091	
	DC WH 24:46	RO	0.98	1.08					1.093	
	DC WH 25:04	RO	4.44	0.16					1.107	
	DC WH 25:11	RO	1.45	1.06					1.112	
316-318			10 Peaks		718.81					

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

		0.65-0.89			0.906-1.094					
13C12-TCDD										
332-334	DC NL		Height	0.40	0.27	0.13				
			19:30	RO	2.30	0.71	0.92	0.40	0.918	
	DC SN 19:42	RO	2.50	0.39					0.927	
			21:15		0.79	489.91	216.46	273.45	1.000	13C12-2378-TCDD IS1
			Height		110.50	48.87	61.63			
			21:32		0.82	702.35	315.99	386.36	1.013	13C12-1234-TCDD RS1
	DC SN 22:51		0.65	0.38					1.075	

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
332-334	DC	WH	24:13	RO	2.41			0.48					1.140				
					3	Peaks		1,192.97									

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

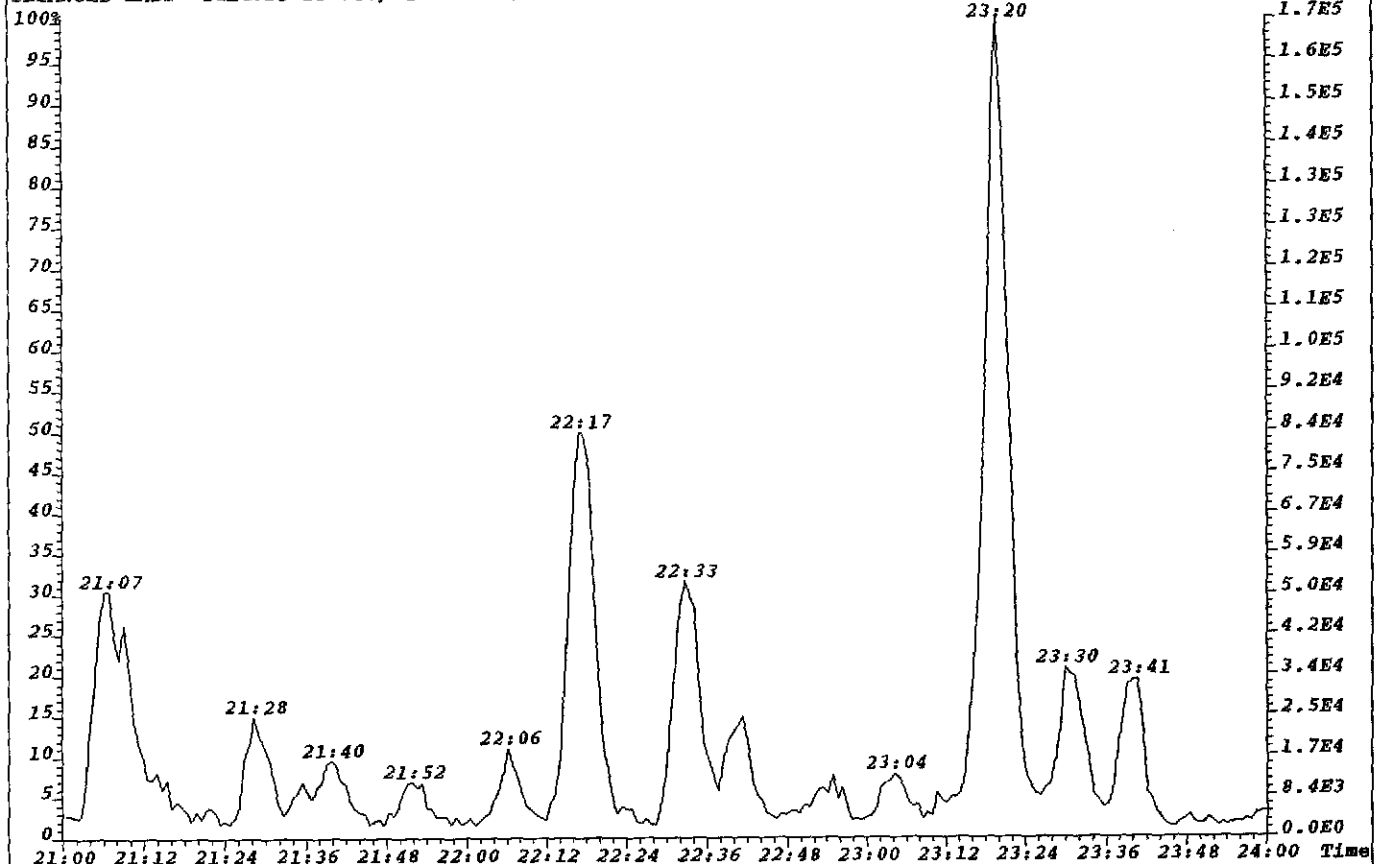
\*\*\* End of Report \*\*\*

File: P023219 #1-3025 Acq: 5-SEP-02 04:57:50 EI+ Voltage SIR 70P

303.9016 GC: DB225 Exp: none

TRIANGLE LABS Text: DF-DP-137/12864 TLI#58258

INJ. TIME = 04:57

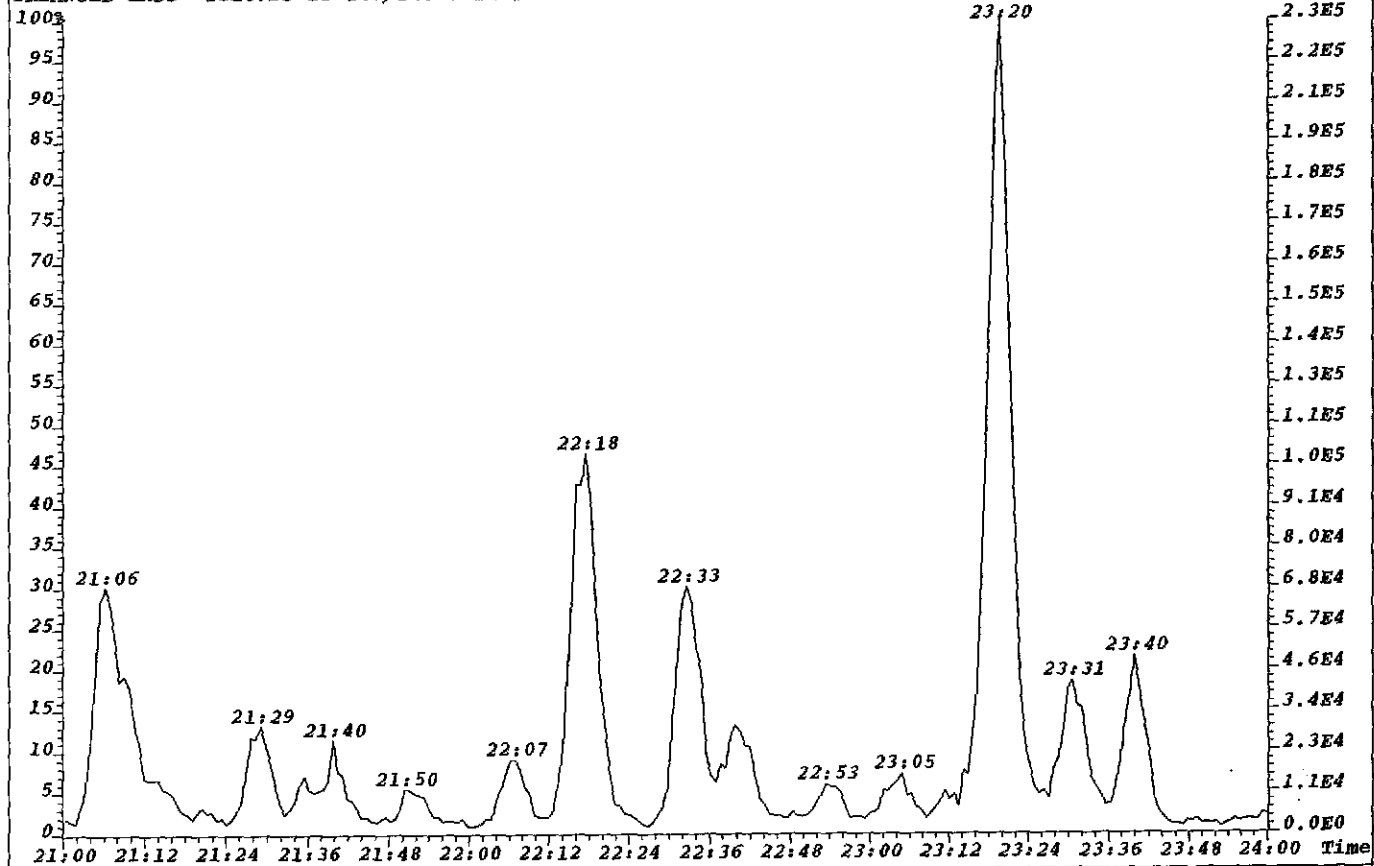


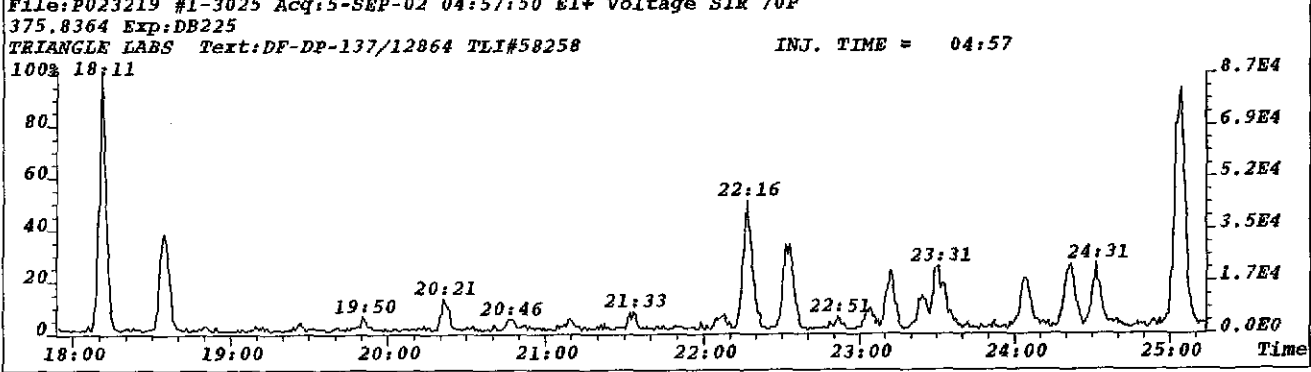
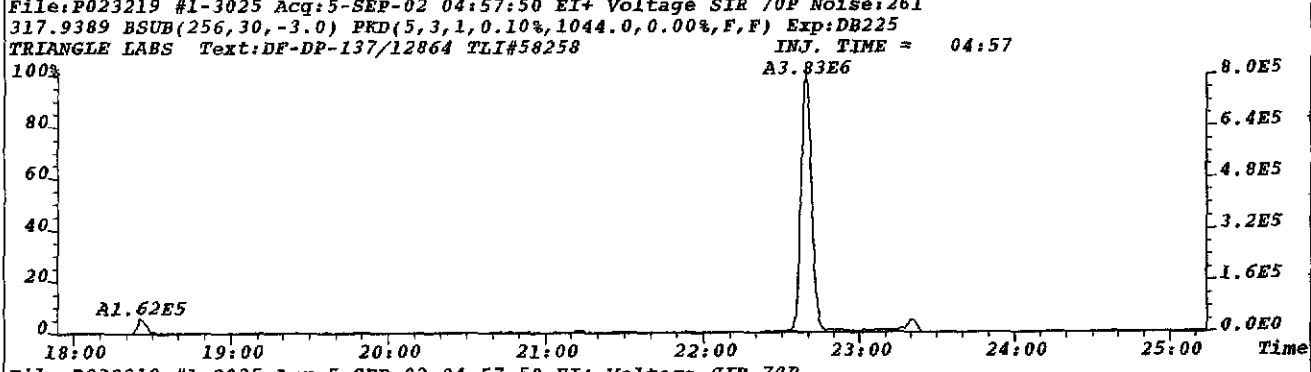
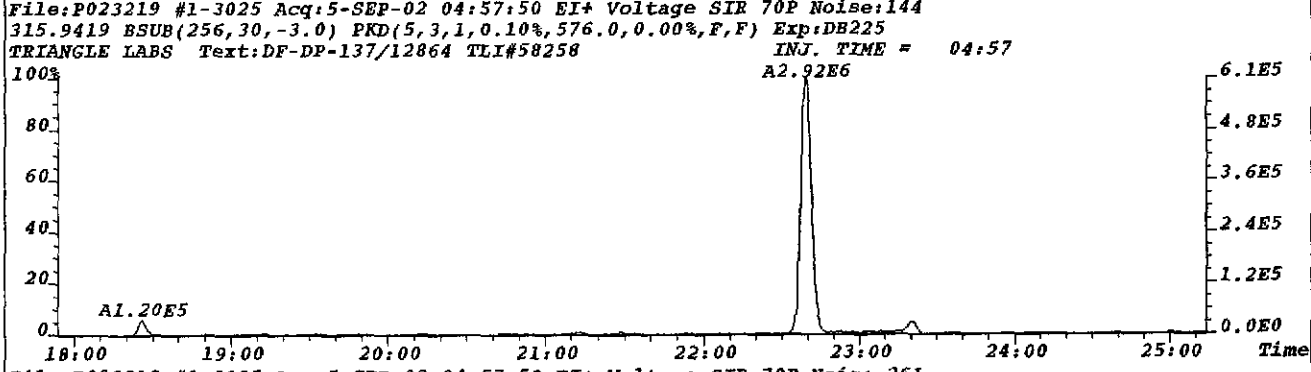
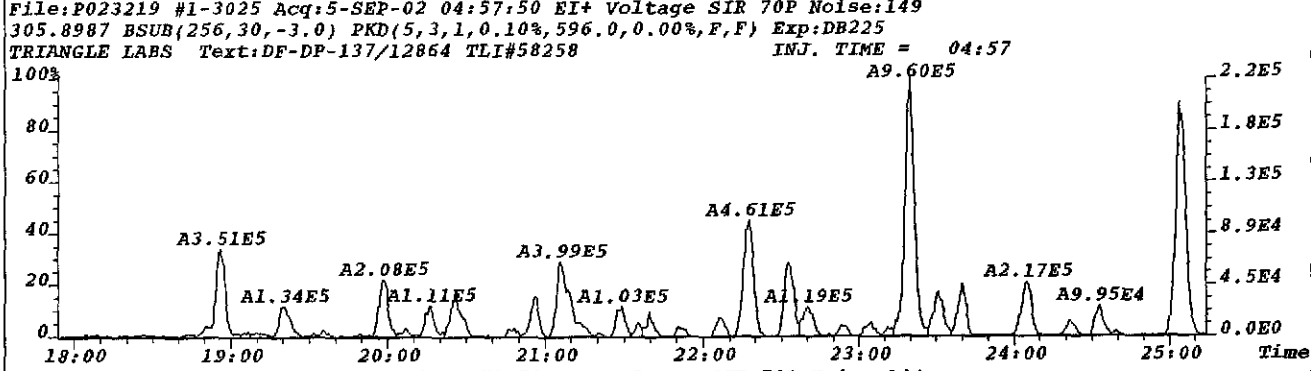
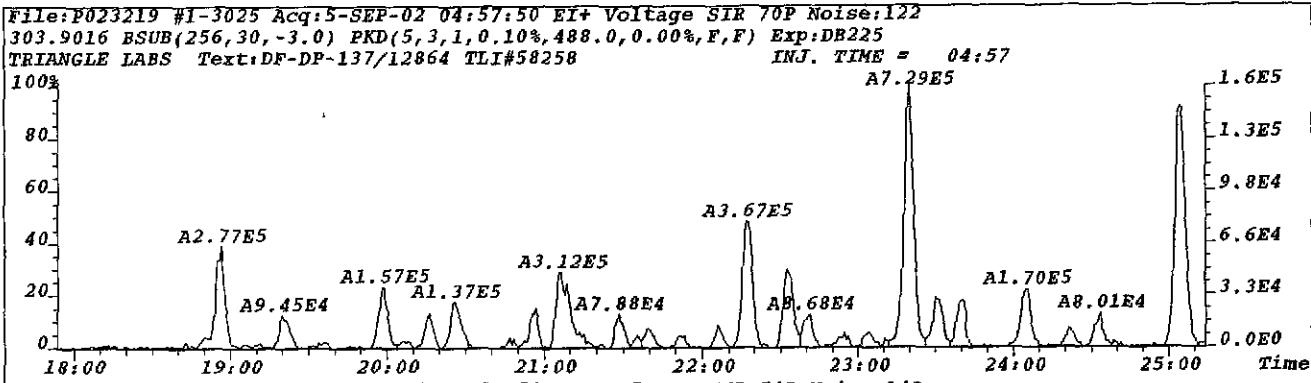
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305.8987 GC: DB225 Exp: none

TRIANGLE LABS Text: DF-DP-137/12864 TLI#58258

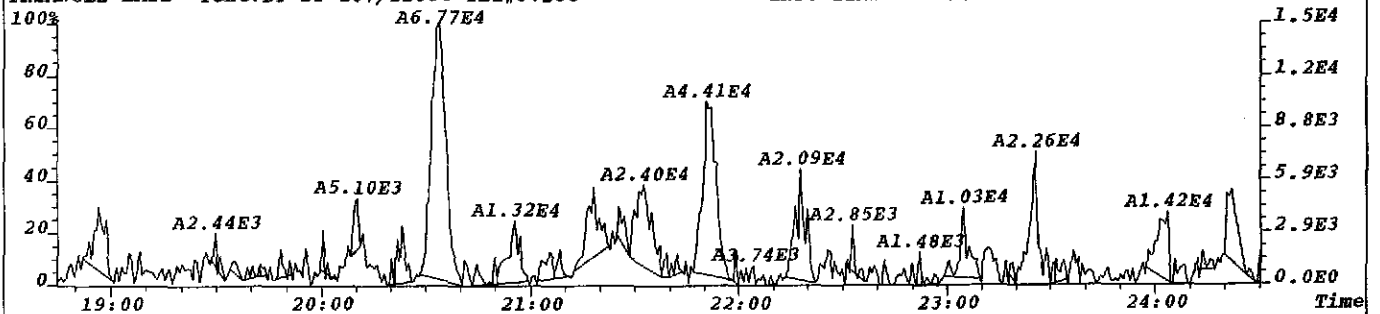
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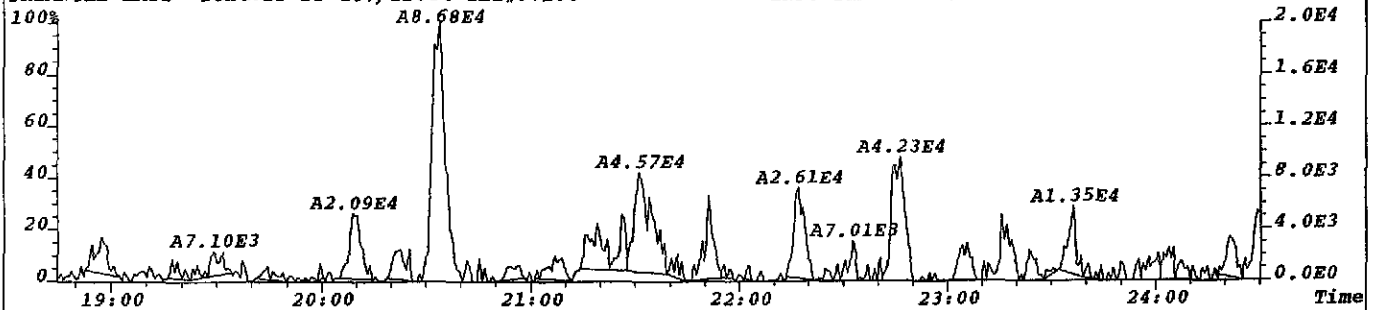




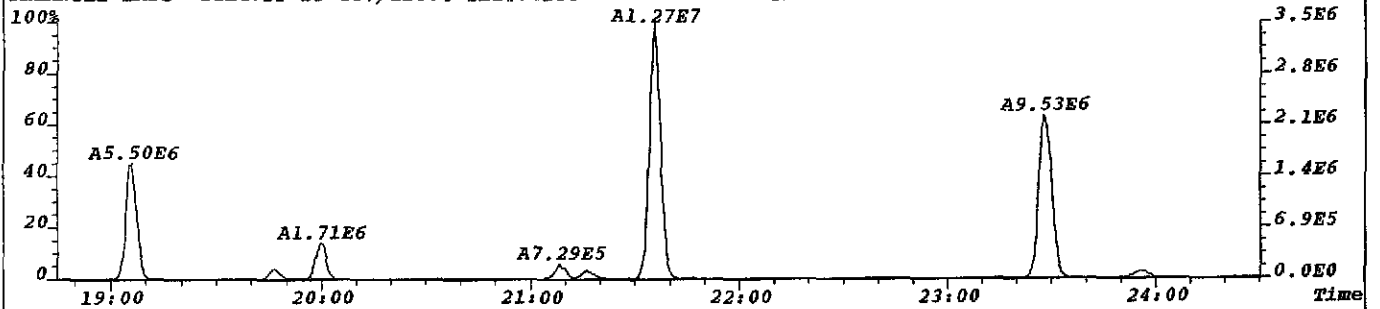
File:P023219 #1-3025 Acq:5-SEP-02 04:57:50 EI+ Voltage SIR 70P Noise:221  
319.8965 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,884.0,0.00%,F,F) Exp:DB225  
TRIANGLE LABS Text:DF-DP-137/12864 TLI#58258 INJ. TIME = 04:57



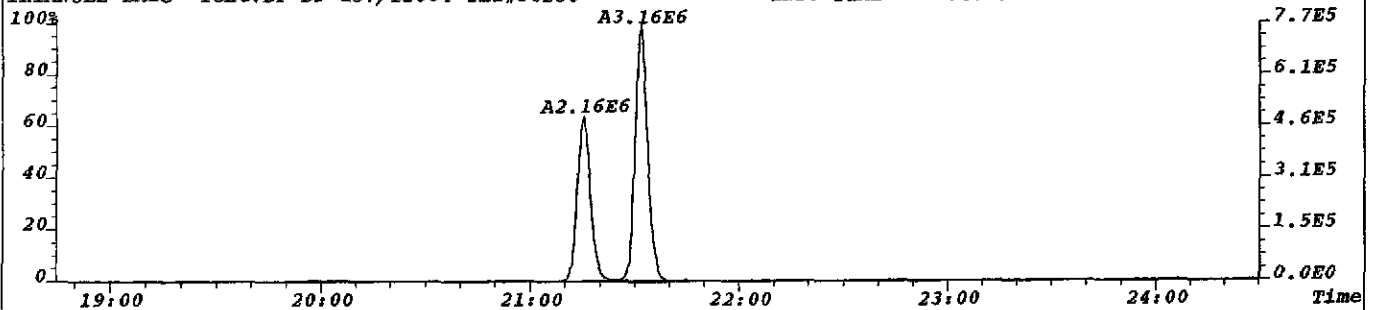
File:P023219 #1-3025 Acq:5-SEP-02 04:57:50 EI+ Voltage SIR 70P Noise:170  
321.8936 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,680.0,0.00%,F,F) Exp:DB225  
TRIANGLE LABS Text:DF-DP-137/12864 TLI#58258 INJ. TIME = 04:57



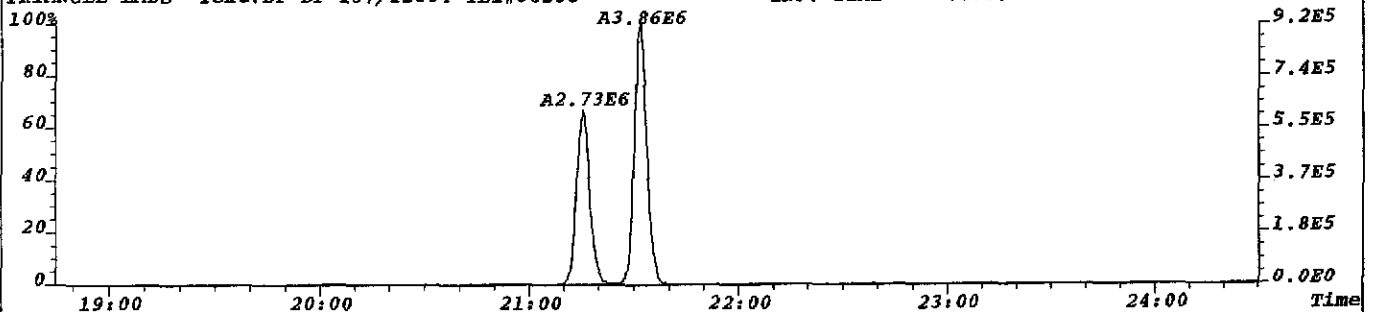
File:P023219 #1-3025 Acq:5-SEP-02 04:57:50 EI+ Voltage SIR 70P Noise:202  
327.8847 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,808.0,0.00%,F,F) Exp:DB225  
TRIANGLE LABS Text:DF-DP-137/12864 TLI#58258 INJ. TIME = 04:57



File:P023219 #1-3025 Acq:5-SEP-02 04:57:50 EI+ Voltage SIR 70P Noise:335  
331.9368 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,1340.0,0.00%,F,F) Exp:DB225  
TRIANGLE LABS Text:DF-DP-137/12864 TLI#58258 INJ. TIME = 04:57



File:P023219 #1-3025 Acq:5-SEP-02 04:57:50 EI+ Voltage SIR 70P Noise:160  
333.9338 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,640.0,0.00%,F,F) Exp:DB225  
TRIANGLE LABS Text:DF-DP-137/12864 TLI#58258 INJ. TIME = 04:57

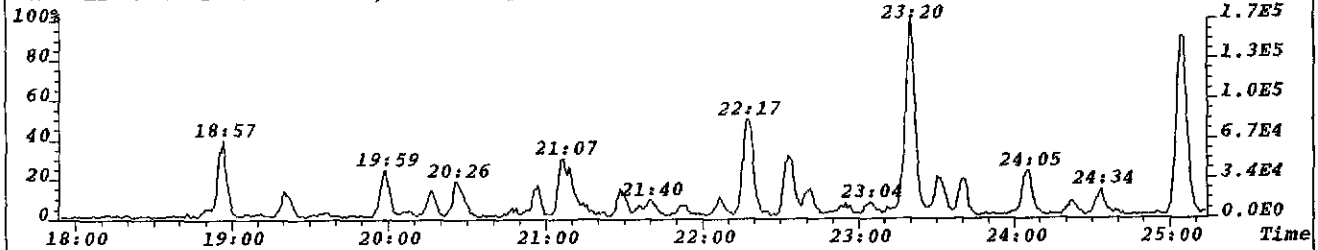


File:P023219 #1-3025 Acq:5-SEP-02 04:57:50 EI+ Voltage SIR 70P

303.9016 Exp:DB225

TRIANGLE LABS Text:DF-DP-137/12864 TLI#58258

INJ. TIME = 04:57

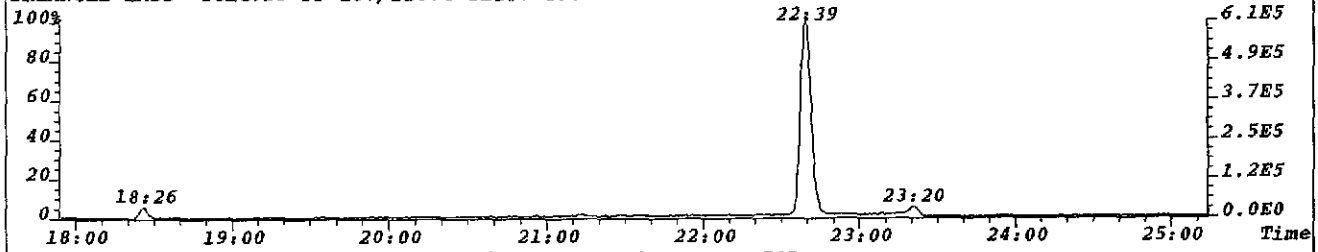


File:P023219 #1-3025 Acq:5-SEP-02 04:57:50 EI+ Voltage SIR 70P

315.9419 Exp:DB225

TRIANGLE LABS Text:DF-DP-137/12864 TLI#58258

INJ. TIME = 04:57

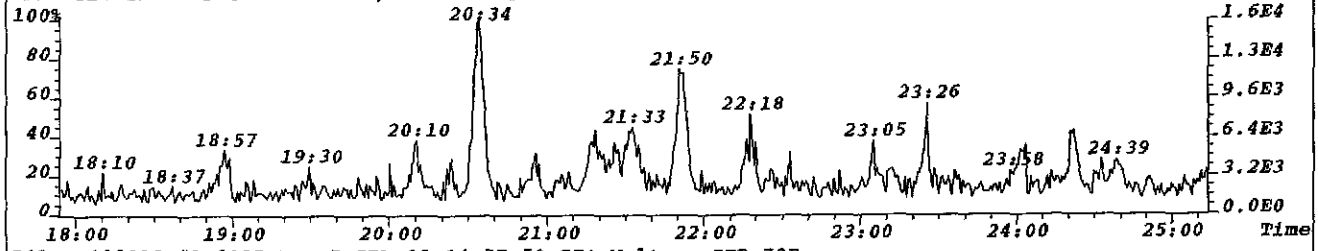


File:P023219 #1-3025 Acq:5-SEP-02 04:57:50 EI+ Voltage SIR 70P

319.8965 Exp:DB225

TRIANGLE LABS Text:DF-DP-137/12864 TLI#58258

INJ. TIME = 04:57

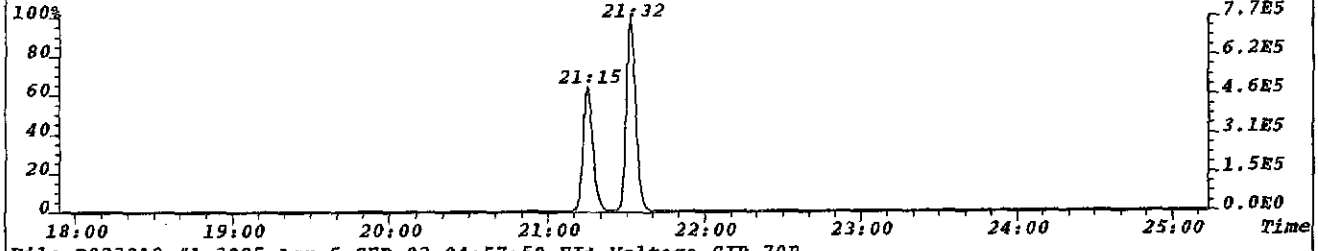


File:P023219 #1-3025 Acq:5-SEP-02 04:57:50 EI+ Voltage SIR 70P

331.9368 Exp:DB225

TRIANGLE LABS Text:DF-DP-137/12864 TLI#58258

INJ. TIME = 04:57

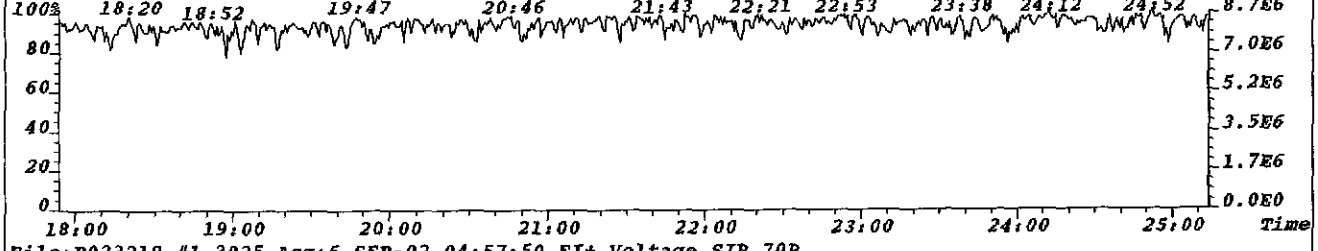


File:P023219 #1-3025 Acq:5-SEP-02 04:57:50 EI+ Voltage SIR 70P

292.9825 Exp:DB225

TRIANGLE LABS Text:DF-DP-137/12864 TLI#58258

INJ. TIME = 04:57

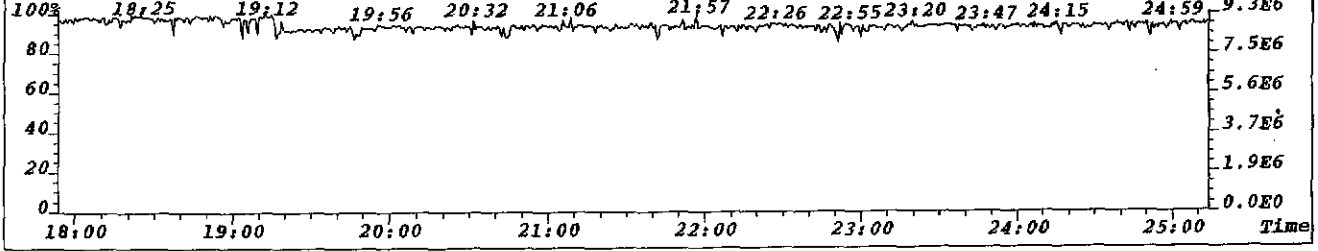


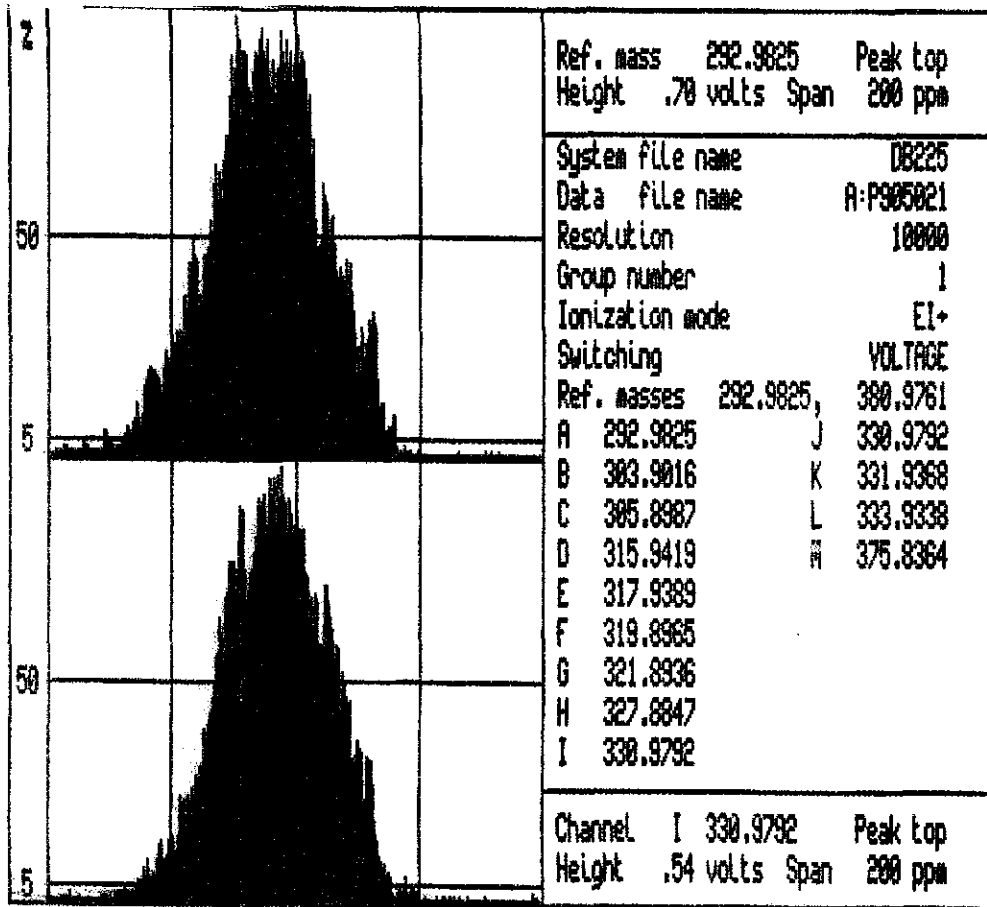
File:P023219 #1-3025 Acq:5-SEP-02 04:57:50 EI+ Voltage SIR 70P

330.9792 Exp:DB225

TRIANGLE LABS Text:DF-DP-137/12864 TLI#58258

INJ. TIME = 04:57





**Mississippi Dept. of Env. Quality**

TLI Project: **58258**  
 Client Sample: **DF-DP-82/12865**

Method 8290 PCDD/PCDF Analysis (b)  
 Analysis File: **U131905**

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	164	82.4	40%-135%	0.79	26:05	—
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	173	86.7	40%-135%	0.81	26:48	—
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	156	78.2	40%-135%	1.44	30:00	—
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	188	94.3	40%-135%	1.55	31:01	—
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	168	84.3	40%-135%	0.54	33:33	—
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	166	83.3	40%-135%	1.27	34:14	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	149	74.9	40%-135%	0.48	36:28	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	162	81.2	40%-135%	1.02	37:30	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8,9-OCDD	361	90.7	40%-135%	0.89	41:07	—

Surrogate Standards (Type B)	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	154	77.5	40%-135%	1.55	30:42	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	184	92.7	40%-135%	0.53	33:28	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	173	86.9	40%-135%	1.26	34:09	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	154	77.5	40%-135%	0.47	38:01	—

Other Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	Flags
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	181	909	40%-135%	26:42	—

Alternate Standards (Type B)	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	197	99.2	40%-135%	0.53	34:49	—
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	181	90.9	40%-135%	0.54	34:02	—

Recovery Standards	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	0.82	26:37	—
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	1.23	34:33	—

Data Reviewer: PaB 09/06/2002

**Mississippi Dept. of Env. Quality**

TLI Project: **58258**  
 Client Sample: **DF-DP-82/12865**

Toxicity Equivalents Report  
 Analysis File: **U131905**

Client Project:	<b>Crystal Springs Dioxin</b>		
Sample Matrix:	<b>SOIL</b>	Date Received:	<b>08/27/02</b>
TLI ID:	<b>334-48-3</b>	Date Extracted:	<b>08/28/02</b>
		Date Analyzed:	<b>09/04/02</b>
		Spike File:	<b>SPMIT32S</b>
		ICal:	<b>UF57092</b>
		ConCal:	<b>U021317</b>
Sample Size:	<b>11.500 g</b>	Dilution Factor:	<b>1</b>
Dry Weight:	<b>10.051 g</b>	Blank File:	<b>U131602</b>
GC Column:	<b>DB-5</b>	Analyst:	<b>JWL</b>
		% Moisture:	<b>12.6</b>
		% Lipid:	<b>n/a</b>
		% Solids:	<b>87.4</b>

Analytes	Conc. (pg/g)		TEF		Equivalent
2,3,7,8-TCDD	[0.19]	x	1.	=	0.19
1,2,3,7,8-PeCDD	[14.3]	x	0.5	=	7.15
1,2,3,4,7,8-HxCDD	9.9	x	0.1	=	0.99
1,2,3,6,7,8-HxCDD	104	x	0.1	=	10.4
1,2,3,7,8,9-HxCDD	38.2	x	0.1	=	3.82
1,2,3,4,6,7,8-HpCDD	433	x	0.01	=	4.33
1,2,3,4,6,7,8,9-OCDD	3440	x	0.001	=	3.440
TOTAL PCDD					30.3
2,3,7,8-TCDF	103	x	0.1	=	10.3
1,2,3,7,8-PeCDF	47.8	x	0.05	=	2.39
2,3,4,7,8-PeCDF	114	x	0.5	=	57.0
1,2,3,4,7,8-HxCDF	1500	x	0.1	=	150.0
1,2,3,6,7,8-HxCDF	135	x	0.1	=	13.5
2,3,4,6,7,8-HxCDF	130	x	0.1	=	13.0
1,2,3,7,8,9-HxCDF	{0.3}	x	0.1	=	0.03
1,2,3,4,6,7,8-HpCDF	4720	x	0.01	=	47.20
1,2,3,4,7,8,9-HpCDF	176	x	0.01	=	1.76
1,2,3,4,6,7,8,9-OCDF	1750	x	0.001	=	1.750
TOTAL PCDF					296.9

**Total EPA TEFs, 1989a: 327.2 pg/g**

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

Initial ....Date...

Data Review By:

PAB 9/6/02

Calculated Noise Height: 1.50

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 U131905B.dbf
09/06/2002 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.

Table with columns: TCDF, DC, NL, Height, 0.65-0.89, 12.21, 7.04, 5.17, 0.874-1.072. Rows include peak data for 304-306 with various retention times and flags.

Table with columns: 13C12-TCDF, DC, NL, Height, 0.65-0.89, 47.69, 20.81, 26.88, 0.962-1.038. Rows include peak data for 316-318.

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

Table with columns: TCDD, DC, NL, Height, 0.65-0.89, 6.56, 3.49, 3.07, 0.900-1.043. Rows include peak data for 320-322.

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.

Compound	RT	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name	ID	Flags
	25:23	RO	0.28	498.01	216.65	771.12	0.947			Q
	25:38		0.86	597.33	276.56	320.77	0.956			
A	25:50		0.76	205.50	88.50	117.00	0.964			
	26:19	RO	1.26	102.55	72.91	57.94	0.982			
M	26:43	RO	0.59	618.35	269.00	456.00	0.997			
AN	26:48	RO	8.70	16.64	81.77	9.40	1.000	2378-TCDD	AN	J
	26:56	RO	1.54	84.11	73.28	47.52	1.005			J
A	27:08	RO	0.56	232.17	101.00	180.00	1.012			
A	27:10	RO	1.75	230.10	227.00	130.00	1.014			
	27:23	RO	1.84	790.75	822.16	446.75	1.022			
	27:47	RO	0.21	97.99	42.63	203.19	1.037			
K	28:00		0.85	801.91	369.05	432.86	1.045			
K	28:08	RO	0.35	597.94	260.12	749.22	1.050			Q
	28:19	RO	1.09	220.86		1.057				
320-322	DC WH									
	17 Peaks			5,218.49						

Compound	RT	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name	ID	Flags
37C1-TCDD							0.925-1.075			
328	DC NL			66.99	66.99					
	DC WL	24:24		2,694.74			0.910			
	DC WL	24:40		15,322.40			0.920			
		25:09		2,021.19	2,021.19		0.938			
		25:26		809,152.00	809,152.00		0.949			
		25:53		2,952.92	2,952.92		0.966			
		26:24		979.74	979.74		0.985			
N		26:42		16,330.20	16,330.20		0.996	37C1-TCDD	CLS	
		27:09		583,044.00	583,044.00		1.013			
		27:24		1,404.40	1,404.40		1.022			
		28:09		80,109.60	80,109.60		1.050			
328		8 Peaks		1,495,994.05						

Compound	RT	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name	ID	Flags
13C12-TCDD							0.65-0.89			
332-334	DC NL			12.25	7.43	4.82				
		25:28	RO	1.28	527.48	381.10	298.01	0.950		
		26:37		0.82	14,966.72	6,760.64	8,206.08	0.993	13C12-1234-TCDD	RS1
		26:48		0.81	14,654.20	6,548.17	8,106.03	1.000	13C12-2378-TCDD	IS1
					Height	3,962.37	1,768.44	2,193.93		
		27:11	RO	1.42	219.92	176.07	124.25	1.014		
	DC SN	27:23		0.78	97.55		1.022			
		28:10	RO	1.03	202.68	118.12	114.51	1.051		
332-334		5 Peaks		30,571.00						

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

Compound	RT	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name	ID	Flags
PeCDF							1.32-1.78			
340-342	DC NL			11.16	6.03	5.13				
		27:55		1.56	41,862.00	25,508.30	16,353.70	0.931		
		28:07		1.57	66,240.10	40,488.00	25,752.10	0.937		Q
		28:19		1.56	59,326.80	36,177.70	23,149.10	0.944		
		28:32		1.52	12,058.78	7,282.41	4,776.37	0.951		
		28:44		1.57	33,774.20	20,635.20	13,139.00	0.958		
		29:06		1.56	83,532.30	50,849.80	32,682.50	0.970		
		29:21		1.57	282,133.00	172,224.00	109,909.00	0.978		E

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.

Compound	QC	Log	Omit	Why	RT	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name	ID	Flags
					29:31		1.56	110,258.90	67,163.10	43,095.80	0.984			
					29:53		1.56	280,312.00	170,988.00	109,324.00	0.996			E
AN					30:01		1.59	3,940.00	2,420.00	1,520.00	1.001	12378-PeCDF	AN	
M					30:11		1.56	34,100.00	20,800.00	13,300.00	1.006			
M					30:36		1.52	21,220.00	12,800.00	8,420.00	1.020			
AN					30:42		1.54	9,230.00	5,600.00	3,630.00	1.023	23478-PeCDF	AN	
					30:54		1.57	36,568.80	22,356.40	14,212.40	1.030			
X	X				31:02	RO	1.60	10,535.65	6,487.97	4,047.68	1.034			
X	X				31:18	RO	1.54	22,048.81	13,365.60	8,683.21	1.043			
					31:32		1.55	36,095.60	21,952.90	14,142.70	1.051			
340-342					17 Peaks			1,143,236.94						

Compound	QC	Log	Omit	Why	RT	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name	ID	Flags
13C12-PeCDF					1.32-1.78						0.867-1.133			
352-354	DC	NL			Height			4.78	2.22	2.56				
					27:58	RO	0.07	77.31	46.99	718.00	0.932			
					28:08	RO	0.13	223.18	135.66	1,017.68	0.938			
					29:06	RO	0.03	224.28	136.33	4,250.21	0.970			
					29:20	RO	0.09	720.20	437.77	4,727.02	0.978			
M					30:00		1.44	13,060.00	7,710.00	5,350.00	1.000	13C12-PeCDF	123	IS2
					Height			4,030.69	2,457.03	1,573.66				
M					30:42		1.55	12,980.00	7,880.00	5,100.00	1.023	13C12-PeCDF	234	SUR1
					31:19	RO	0.44	1,876.13	1,140.39	2,565.92	1.044			
					31:38	RO	0.58	1,835.33	1,115.59	1,921.65	1.054			
352-354					8 Peaks			30,996.43						

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

Compound	QC	Log	Omit	Why	RT	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name	ID	Flags
PeCDD					1.32-1.78						0.938-1.021			
356-358	DC	NL			Height			13.12	2.56	10.56				
					29:43	RO	0.51	198.19	120.47	234.57	0.958			J
D	D	SN			29:58	RO	0.16	818.11			0.966			
M					30:33		1.35	916.00	527.00	389.00	0.985			
A					30:37	RO	0.62	340.55	207.00	335.00	0.987			
D	D	SN			30:53	RO	0.00	103.65			0.996			
M					31:02	RO	0.57	760.06	462.00	804.00	1.001	12378-PeCDD	AN	
D	D	SN			31:11	RO	0.02	681.49			1.005			Q
M					31:31	RO	0.47	605.42	368.00	791.00	1.016			
A					31:41	RO	0.27	704.13	428.00	1,590.00	1.021			
	DC	WH			31:54	RO	0.14	151.90			1.028			
356-358					6 Peaks			3,524.35						

Compound	QC	Log	Omit	Why	RT	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name	ID	Flags
13C12-PeCDD					1.32-1.78						0.871-1.129			
368-370	DC	NL			Height			3.99	1.94	2.05				
					29:13	RO	1.83	120.31	86.44	47.18	0.942			
					29:20	RO	1.13	91.62	40.75	35.93	0.946			
					29:28	RO	2.06	105.06	84.75	41.20	0.950			
					29:42	RO	0.69	32.38	19.68	28.72	0.958			
					29:57	RO	1.12	75.23	33.12	29.50	0.966			
					30:05	RO	0.57	48.88	29.71	52.37	0.970			
					30:51	RO	0.50	113.86	69.21	139.49	0.995			
					31:01		1.55	9,387.42	5,702.54	3,684.88	1.000	13C12-PeCDD	123	IS3
					Height			2,732.62	1,668.28	1,064.34				



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.
				31:09		1.78	114.18	73.08	41.10	1.004			
				31:41	RO	0.73	242.30	147.28	200.64	1.021			
368-370				10 Peaks			10,331.24						

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

HxCDF	DC	NL	Height	1.05-1.43	31.32	14.63	0.964-1.045	16.69					
374-376			32:23	1.25	1,466.12	813.32	652.80	0.965					
A			32:30	1.25	15,710.00	8,740.00	6,970.00	0.969					
XM		X	32:33	RO 1.26	33,900.00	18,900.00	15,000.00	0.970					
			32:39	1.26	61,094.00	34,048.50	27,045.50	0.973					
			32:46	1.24	29,795.30	16,468.60	13,326.70	0.977					
			32:56	1.26	8,230.87	4,593.60	3,637.27	0.982					
			33:06	1.24	118,921.50	65,864.80	53,056.70	0.987					E
			33:18	1.26	11,084.74	6,187.68	4,897.06	0.993					
			33:26	1.25	79,301.30	44,008.30	35,293.00	0.997	123478-HxCDF			AN	
			33:34	1.26	7,481.90	4,168.14	3,313.76	1.000	123678-HxCDF			AN	
X		X	33:43	RO 1.25	4,844.18	2,687.41	2,156.77	1.005					
			33:51	1.29	937.16	528.74	408.42	1.009					
			34:03	1.26	6,277.33	3,499.07	2,778.26	1.015	234678-HxCDF			AN	
			34:23	1.33	595.88	339.94	255.94	1.025					
X		X	34:32	RO 1.34	517.22	296.02	221.20	1.029					
XM		X	34:41	RO 1.23	1,051.00	579.00	472.00	1.034					
A			34:46	1.14	427.00	227.00	200.00	1.036					
			34:53	1.25	3,533.97	1,959.86	1,574.11	1.040					
374-376			18 Peaks		385,169.47								

13C12-HxCDF	DC	NL	Height	0.43-0.59	53.12	18.84	0.881-1.119	34.28					
384-386			33:06	RO 1.35	48.32		0.987 ..						
			33:28	0.53	10,130.47	3,507.72	6,622.75	0.998	13C12-HxCDF 478	SUR2			
			33:33	0.54	9,185.25	3,211.92	5,973.33	1.000	13C12-HxCDF 678	IS4			
			Height		3,019.55	1,026.67	1,992.88						
	DC	SN	33:43	RO 1.41	94.95		1.005						
			34:02	0.54	9,114.10	3,184.04	5,930.06	1.014	13C12-HxCDF 234	ALT2			
	DC	SN	34:14	RO 1.06	130.99		1.020						
			34:49	0.53	7,902.82	2,735.78	5,167.04	1.038	13C12-HxCDF 789	ALT1			
	DC	SN	35:00	0.56	122.37		1.043						
384-386			4 Peaks		36,332.64								

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

HxCDD	DC	NL	Height	1.05-1.43	115.55	17.43	0.959-1.013	98.12					
390-392			33:00	1.15	3,290.00	1,760.00	1,530.00	0.964					
M			33:06	RO 0.60	109.22		0.967						
K			33:26	1.17	810.60	437.21	373.39	0.977					
M			33:39	RO 1.02	11,127.74	6,160.00	6,030.00	0.983					
A			33:44	RO 0.59	700.90	388.00	653.00	0.985					
A			34:04	RO 0.98	172.15	95.30	97.60	0.995					J
AN			34:09	1.10	344.00	180.00	164.00	0.998	123478-HxCDD			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.

M			34:15	1.18	3,690.00	2,000.00	1,690.00	1.000	123678-HxCDD	AN
M			34:34	1.06	1,314.00	676.00	638.00	1.010	123789-HxCDD	AN
	DC	WH	34:51	RO 0.38	365.55			1.018		
	DC	WH	35:02	RO 0.69	702.84			1.023		
390-392			8 Peaks		21,449.39					

13C12-HxCDD			1.05-1.43					0.971-1.029		
402-404	DC	NL	Height		19.89	7.93	11.96			
	DC	WL	32:54	1.13	415.18			0.961		
			33:16	RO 0.37	123.02	68.10	183.09	0.972		
	DC	SN	33:45	RO 0.01	16.26			0.986		
			34:09	1.26	6,022.13	3,356.26	2,665.87	0.998	13C12-HxCDD 478	SUR3
			34:14	1.27	6,384.80	3,569.77	2,815.03	1.000	13C12-HxCDD 678	IS5
			Height		1,975.26	1,101.77	873.49			
			34:33	1.23	7,378.07	4,066.11	3,311.96	1.009	13C12-HxCDD 789	RS2
	DC	SN	34:49	RO 0.01	19.64			1.017		
402-404			4 Peaks		19,908.02					

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

HpCDF			0.88-1.20					0.995-1.047		
408-410	DC	NL	Height		11.46	5.63	5.83			
	D	NH	36:18	1.07	1,211.69			0.995		
			36:29	1.05	199,031.00	101,875.00	97,156.00	1.000	1234678-HpCDF	AN E
			36:53	1.05	119,006.50	60,838.40	58,168.10	1.011		E
			38:01	1.04	5,257.20	2,681.89	2,575.31	1.043	1234789-HpCDF	AN
408-410			3 Peaks		323,294.70					

13C12-HpCDF			0.37-0.51					0.945-1.110		
418-420	DC	NL	Height		15.82	5.94	9.88			
	DC	SN	36:11	RO 0.25	62.61			0.992		
			36:28	0.48	5,803.40	1,885.50	3,917.90	1.000	13C12-HpCDF 678	IS6
			Height		1,648.24	532.03	1,116.21			
			36:53	RO 1.05	106.21	77.43	73.76	1.011		
			37:02	RO 0.84	413.31	126.29	149.48	1.016		
			37:23	RO 0.91	135.88	41.52	45.61	1.025		
	DC	SN	37:31	RO 0.69	86.30			1.029		
			38:01	0.47	4,220.69	1,345.36	2,875.33	1.043	13C12-HpCDF 789	SUR4
			38:15	RO 0.81	284.17	86.83	107.26	1.049		
418-420			6 Peaks		10,963.66					

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

HpCDD			0.88-1.20					0.976-1.005		
424-426	DC	NL	Height		11.78	5.10	6.68			
			36:46	0.99	7,777.19	3,865.38	3,911.81	0.980		
	DC	SN	37:04	RO 1.45	49.25			0.988		
	D	NH	37:10	RO 0.61	53.61			0.991		
			37:31	1.01	10,638.18	5,352.90	5,285.28	1.000	1234678-HpCDD	AN
424-426			2 Peaks		18,415.37					

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-HpCDD		0.88-1.20			0.973-1.027		
436-438	DC NL		Height	15.43	8.03	7.40	
	DC SN	36:52	RO 1.89	35.92			0.983
		37:30	1.02	4,845.83	2,444.20	2,401.63	1.000 13C12-HpCDD 678 IS7
			Height	1,207.81	620.62	587.19	
436-438		1 Peak		4,845.83			

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

OCDF		0.76-1.02			0.903-1.097		
442-444	DC NL		Height	5.19	2.41	2.78	
	DC WL	35:51	0.95	109.52			0.872
	DC WL	36:10	0.89	535.12			0.880
		41:20	0.89	48,070.80	22,688.70	25,382.10	1.005 OCDF AN
442-444		1 Peak		48,070.80			

OCDD		0.76-1.02			0.903-1.097		
458-460	DC NL		Height	4.63	2.39	2.24	
		41:08	0.89	69,990.10	32,985.90	37,004.20	1.000 OCDD AN
458-460		1 Peak		69,990.10			

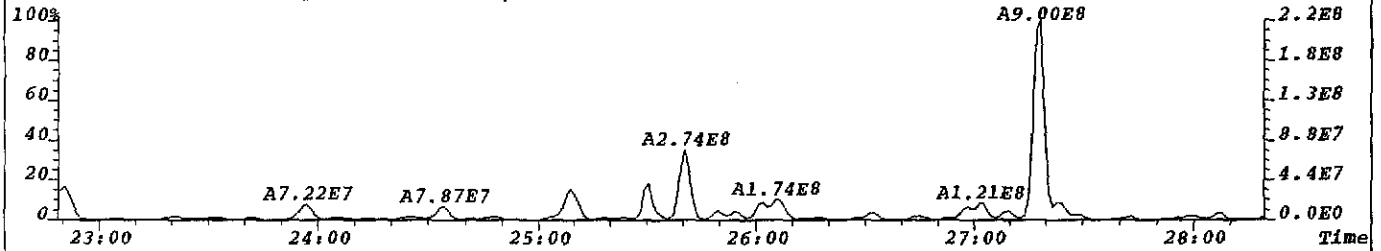
13C12-OCDD		0.76-1.02			0.996-1.004		
470-472	DC NL		Height	8.56	4.32	4.24	
		41:07	0.89	7,324.92	3,451.63	3,873.29	1.000 13C12-OCDD IS8
			Height	1,618.88	763.33	855.55	
470-472		1 Peak		7,324.92			

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

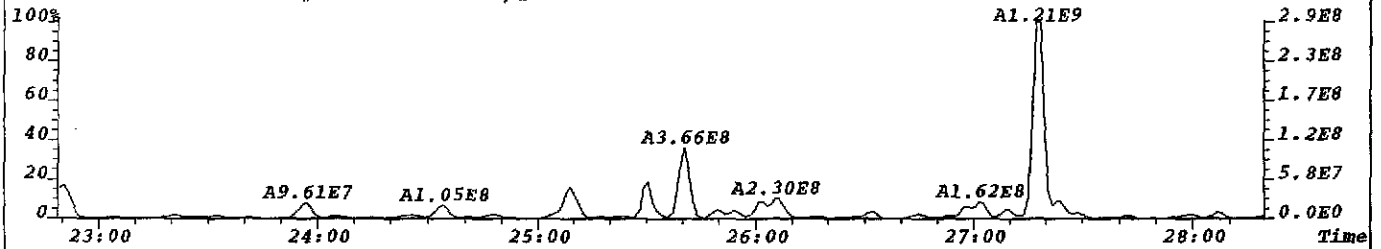
M_Z	-Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT.	-Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1	-Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK	-RO=Ratio Outside Limits	<M-Below Method Detection Limit	T-Time Changed
Rel.RT	-Relative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

\*\*\* End of Report \*\*\*

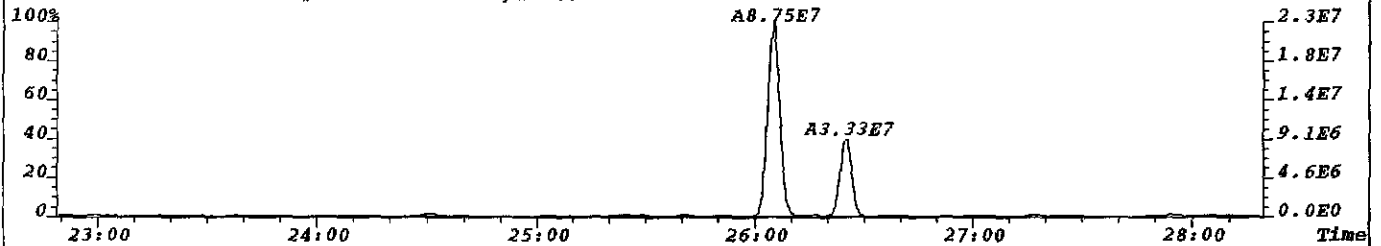
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303.9016 S:5 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,35216.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



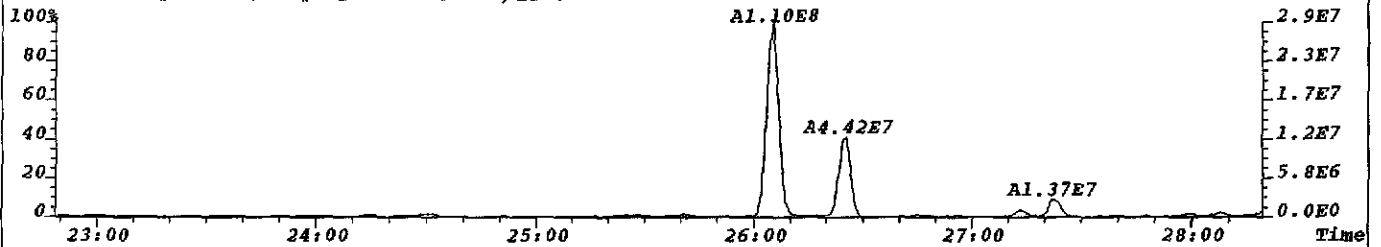
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305.8987 S:5 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,25844.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



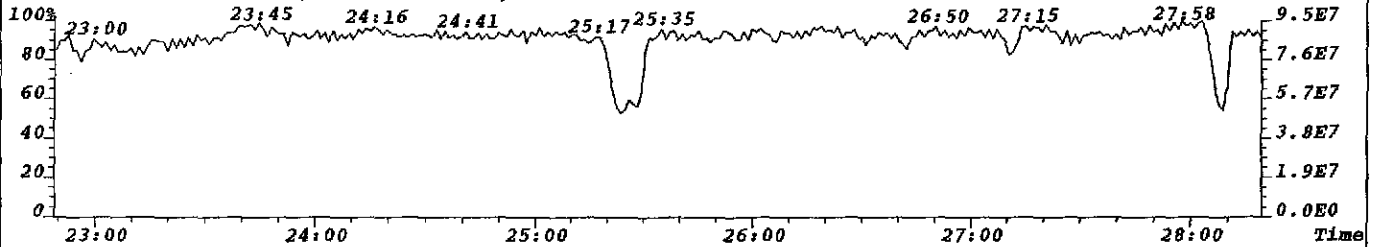
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315.9419 S:5 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,104028.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



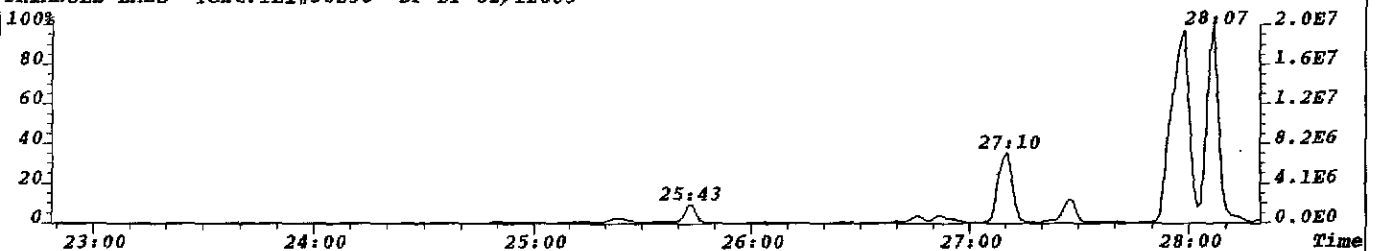
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317.9389 S:5 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,134388.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



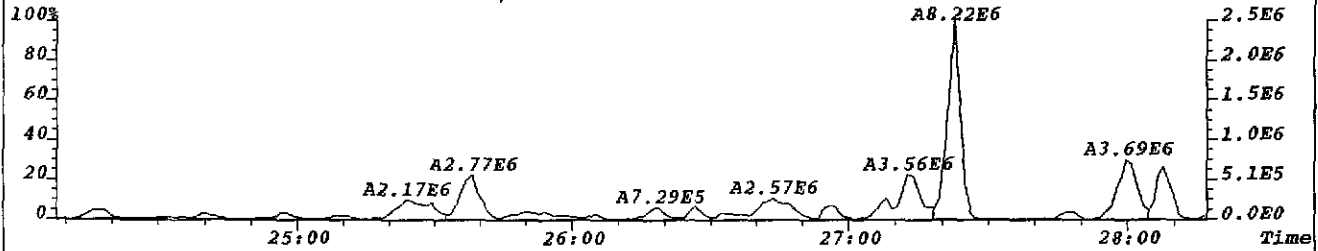
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330.9792 S:5 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



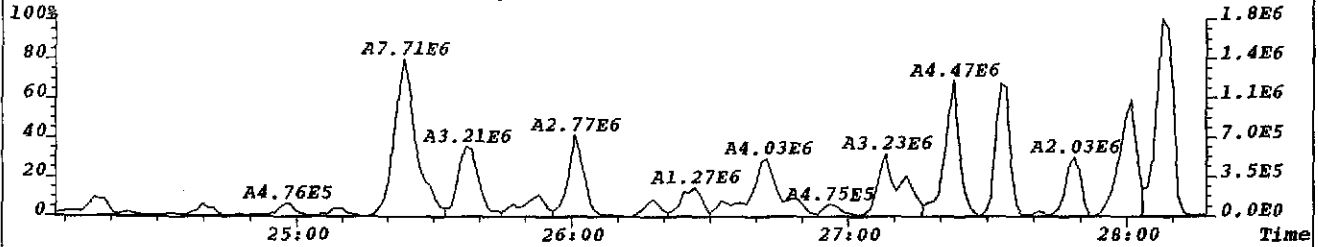
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375.8364 S:5 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



File:U1319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S Noise:4358  
319.8965 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,17432.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



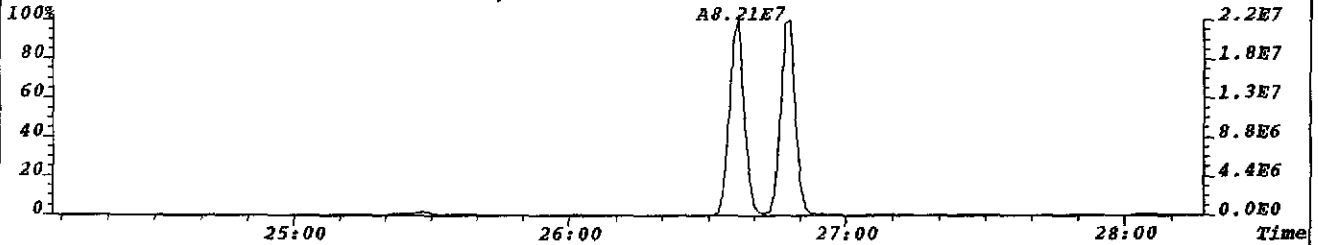
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321.8936 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,15372.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



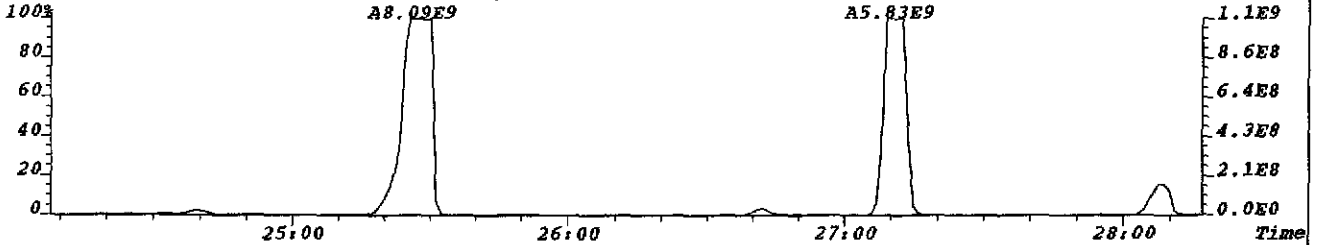
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331.9368 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,37164.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



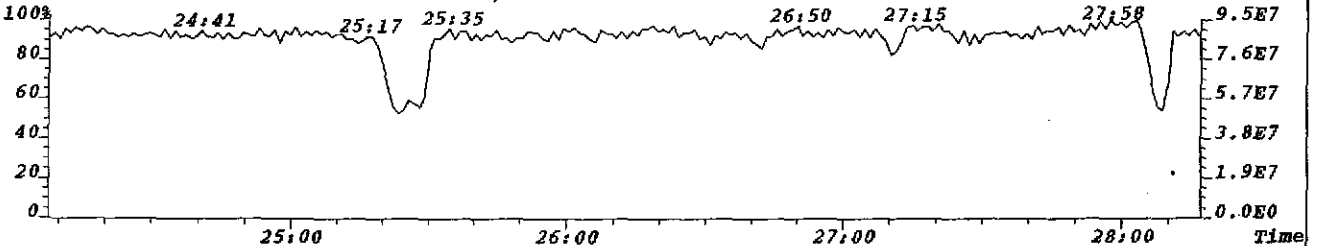
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333.9338 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,24084.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



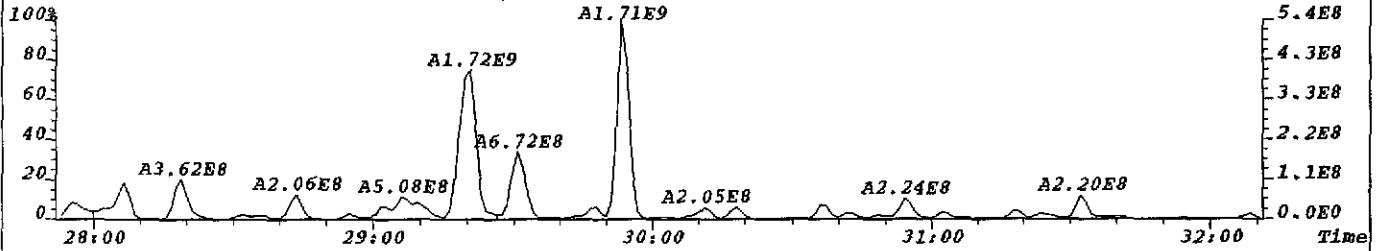
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327.8847 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,334964.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



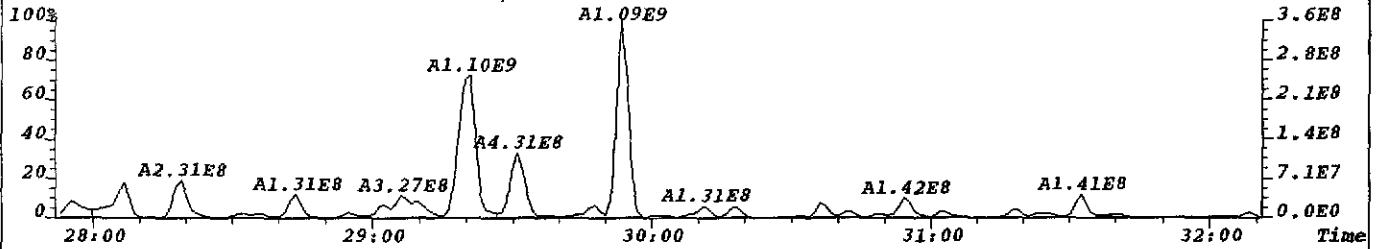
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330.9792 S:5 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



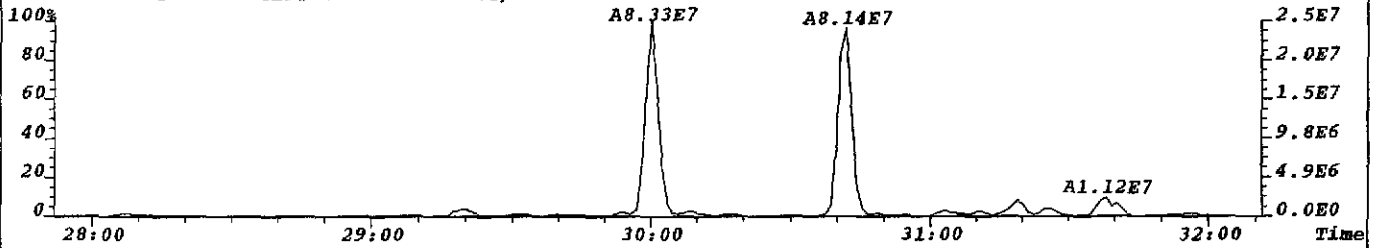
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339.8597 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,30132.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



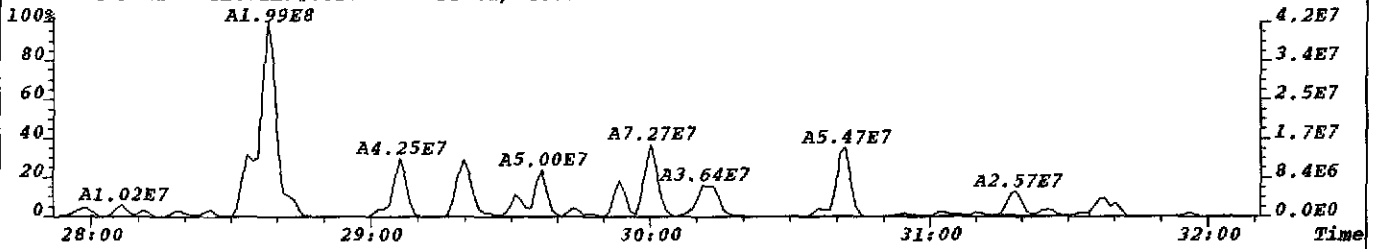
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341.9567 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,25656.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



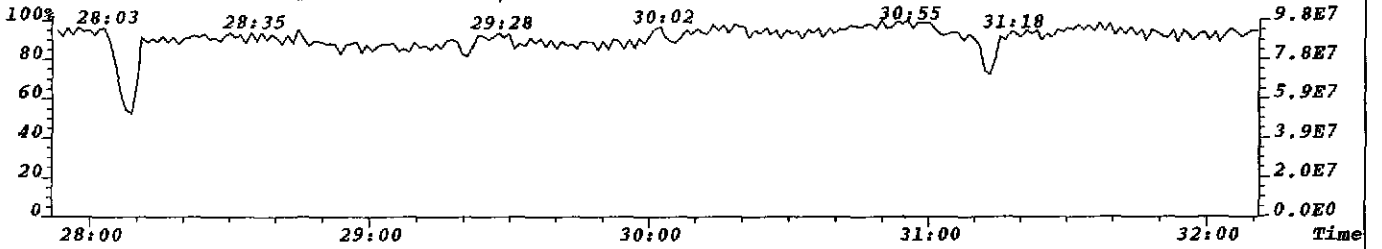
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351.9000 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11080.0,1.00%,F,T) Exp:NDB5US  
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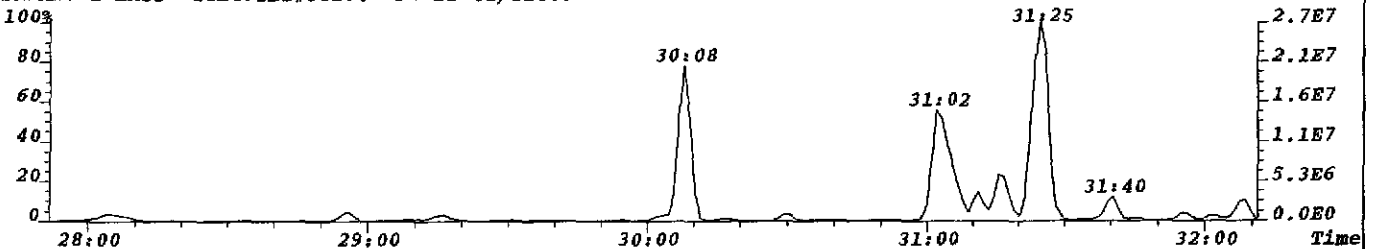
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353.8970 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12820.0,1.00%,F,T) Exp:NDB5US  
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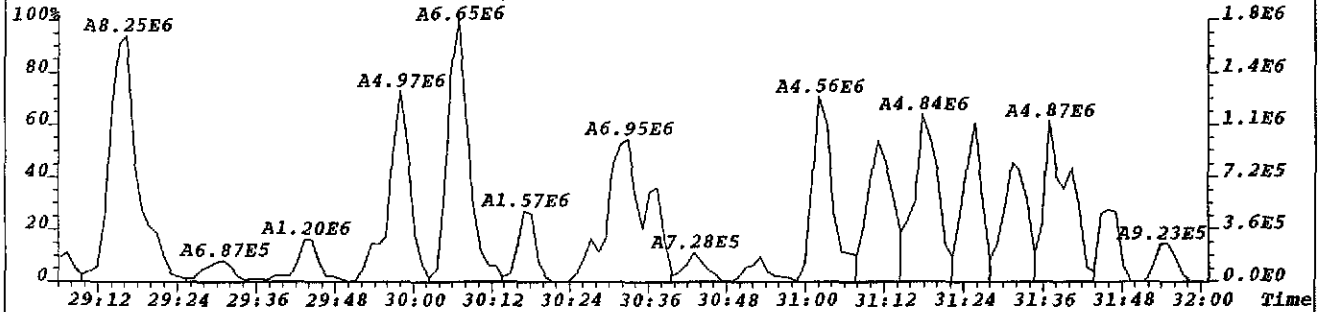
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330.9792 S:5 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



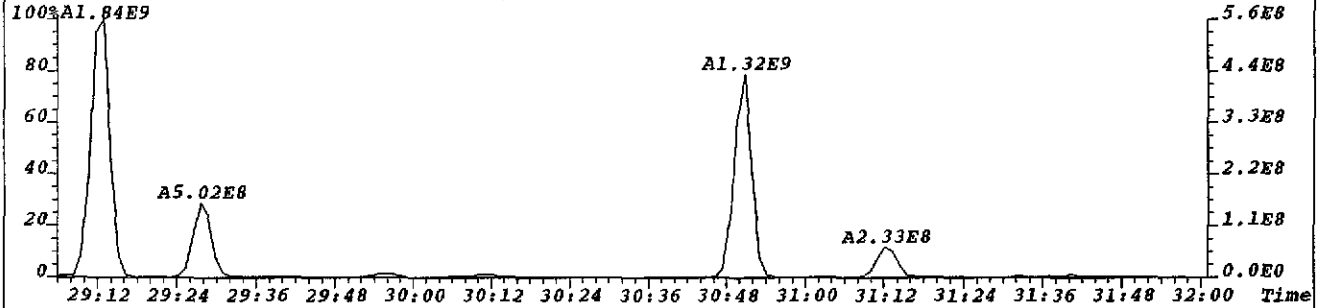
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409.7974 S:5 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



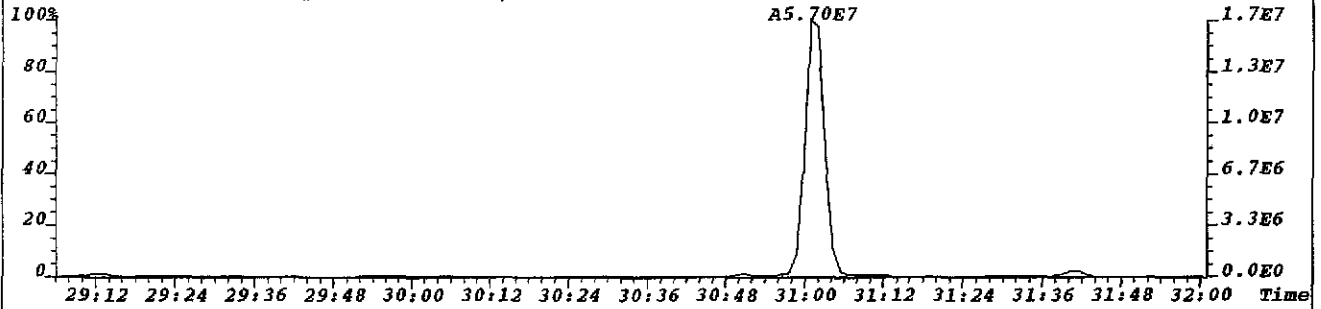
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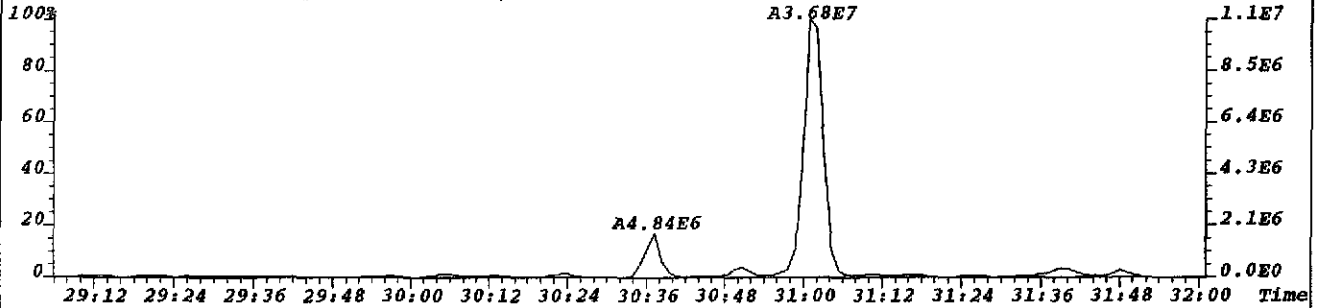
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357.8516 S:5 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,52796.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



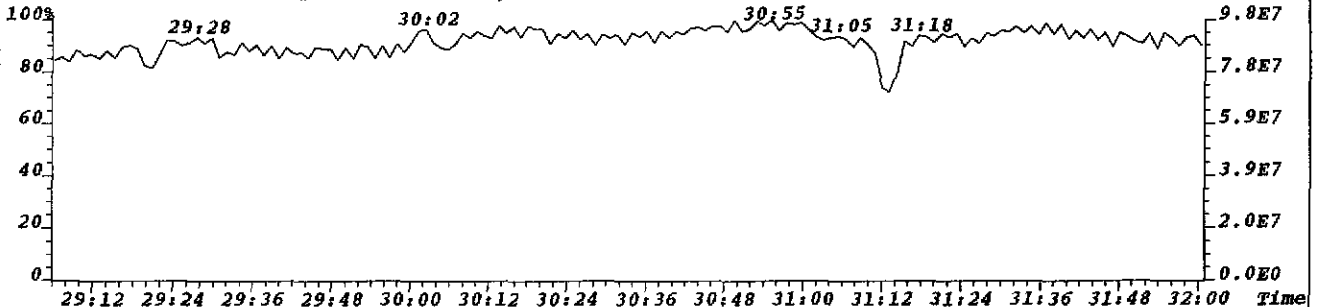
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367.8949 S:5 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,9704.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



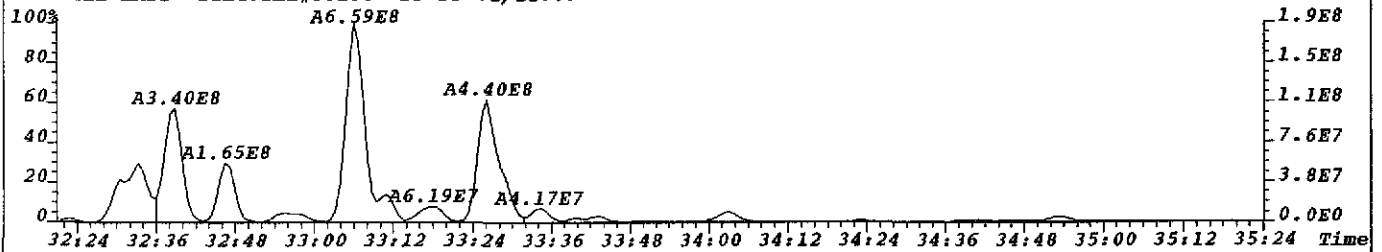
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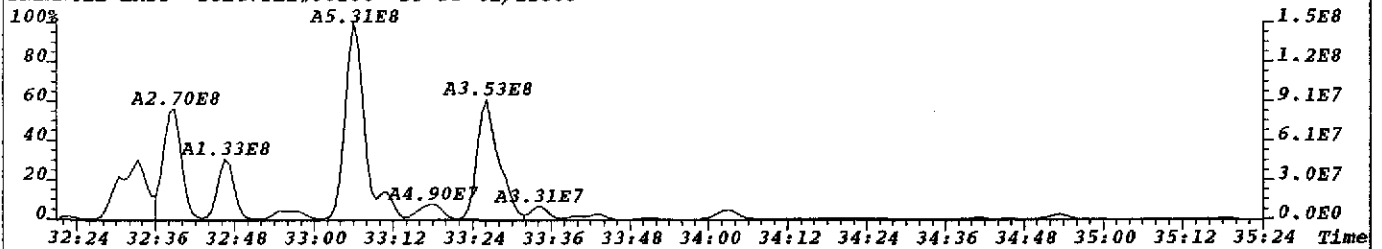
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TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



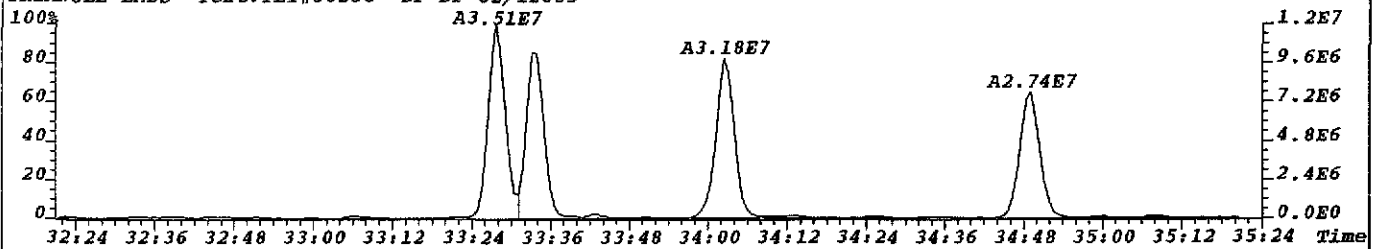
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373.8208 S:5 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,73168.0,1.00%,F,T) Exp:NDB5US  
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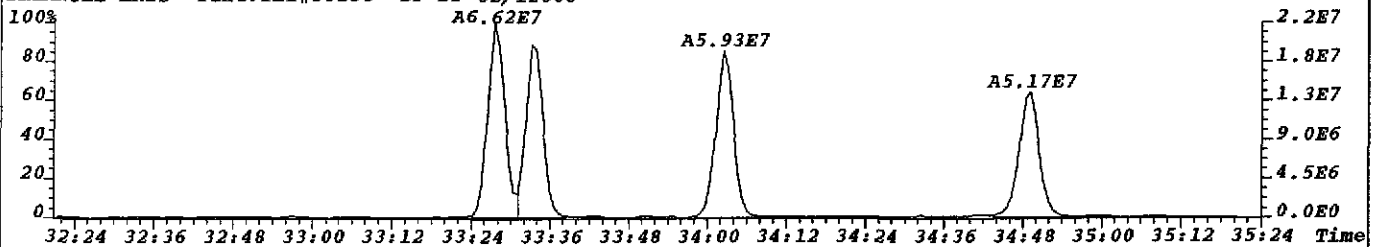
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TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



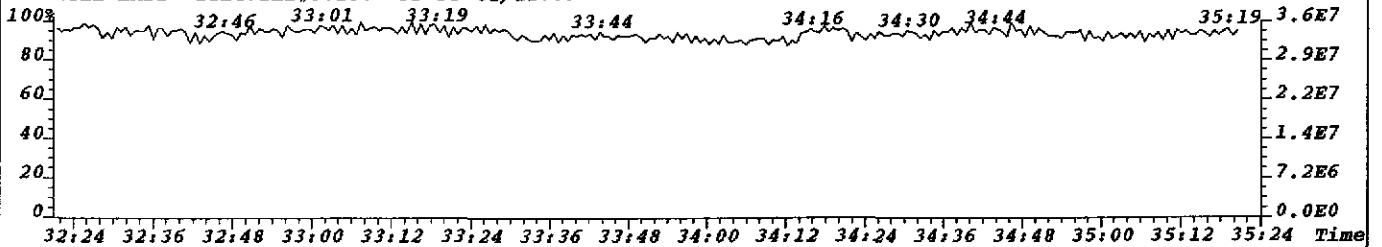
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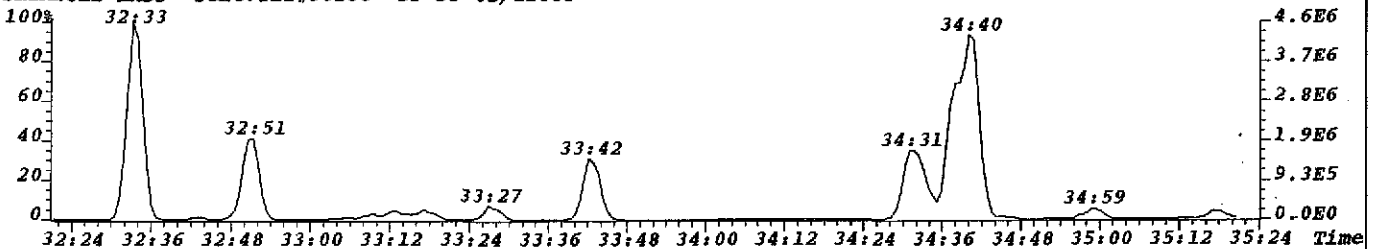
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File:U1319 #1-271 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
392.9760 S:5 F:3 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865

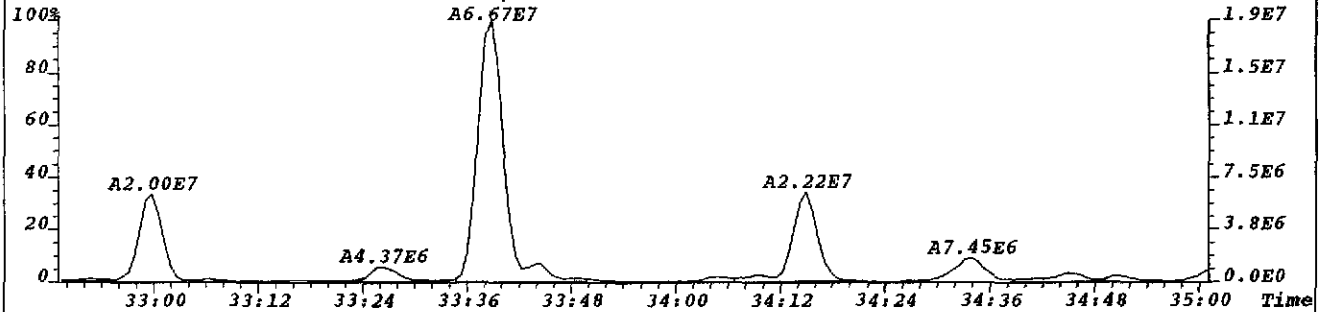


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445.7555 S:5 F:3 Exp:NDB5US  
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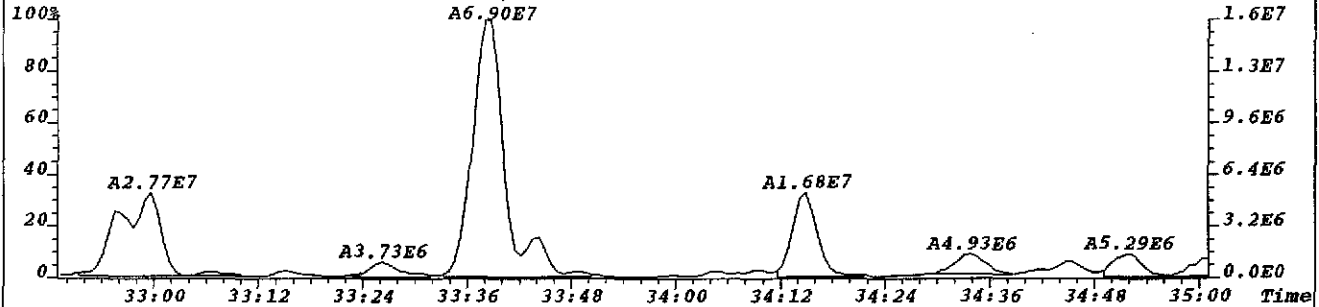




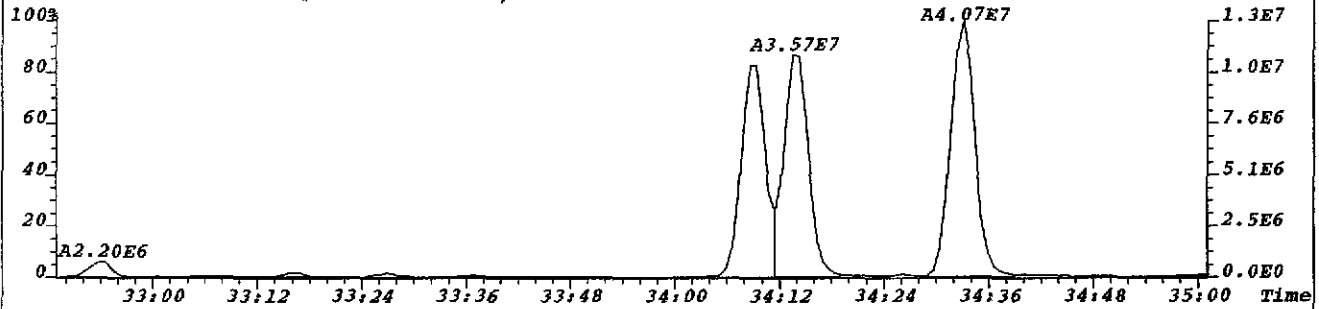
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TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



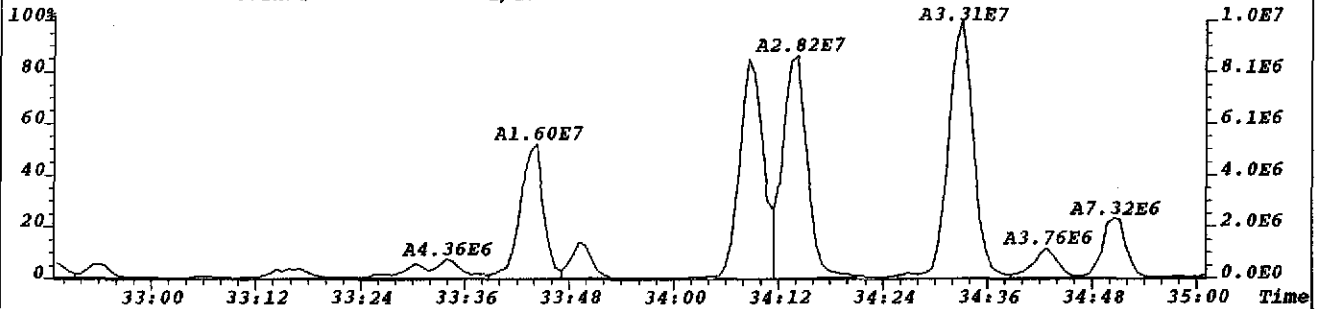
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TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



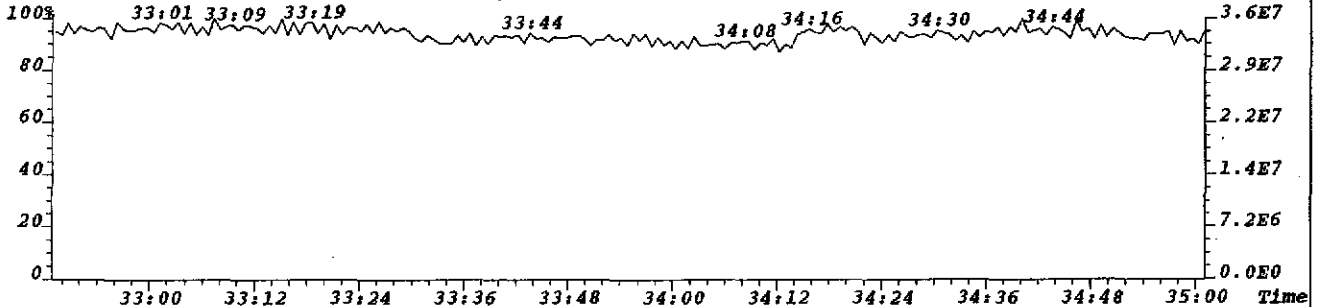
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TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



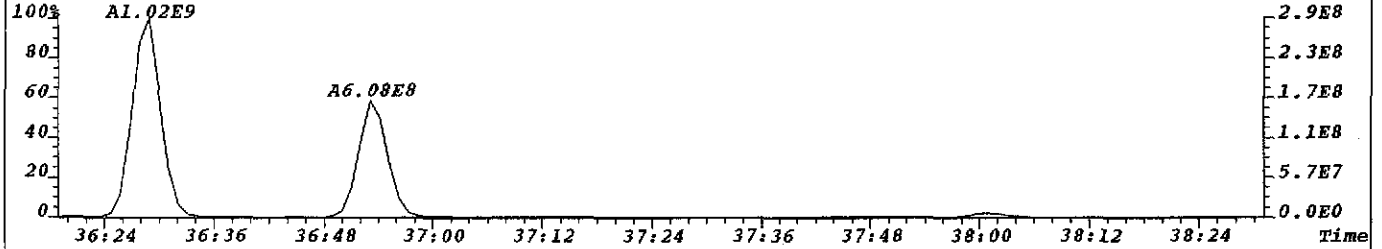
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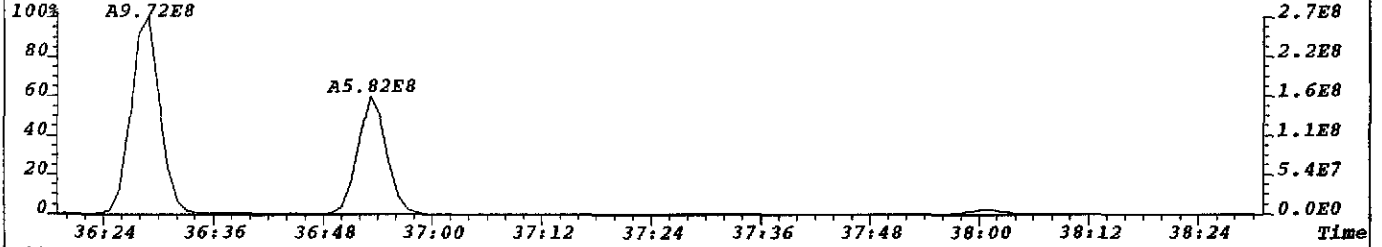
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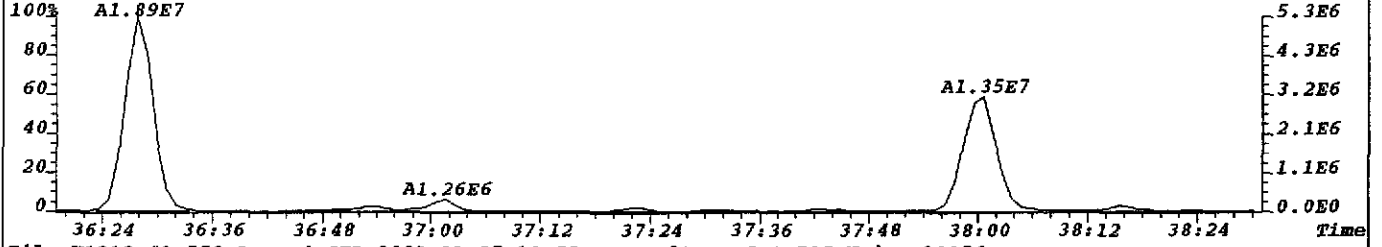
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407.7818 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,28128.0,1.00%,F,T) Exp:NDB5US  
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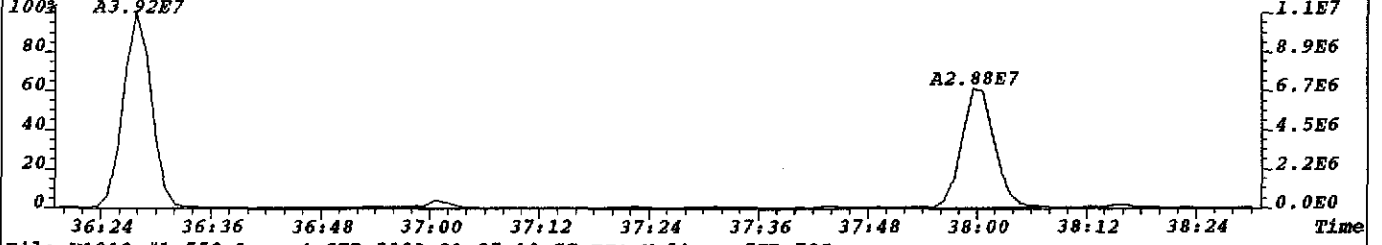
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409.7789 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,29152.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



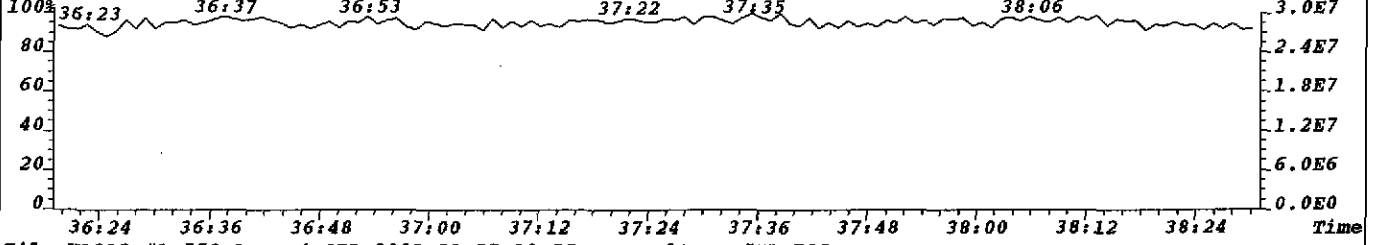
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417.8253 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,29680.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



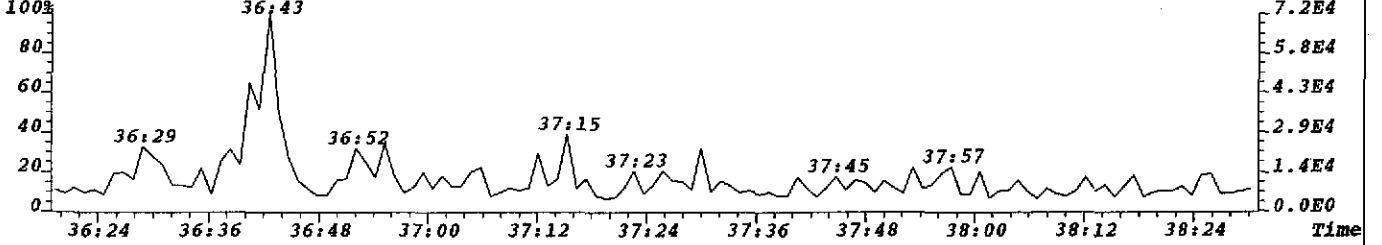
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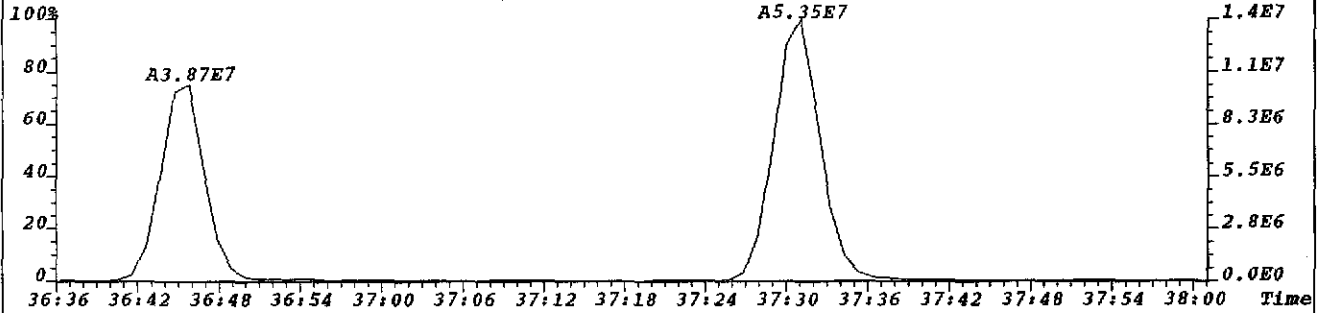
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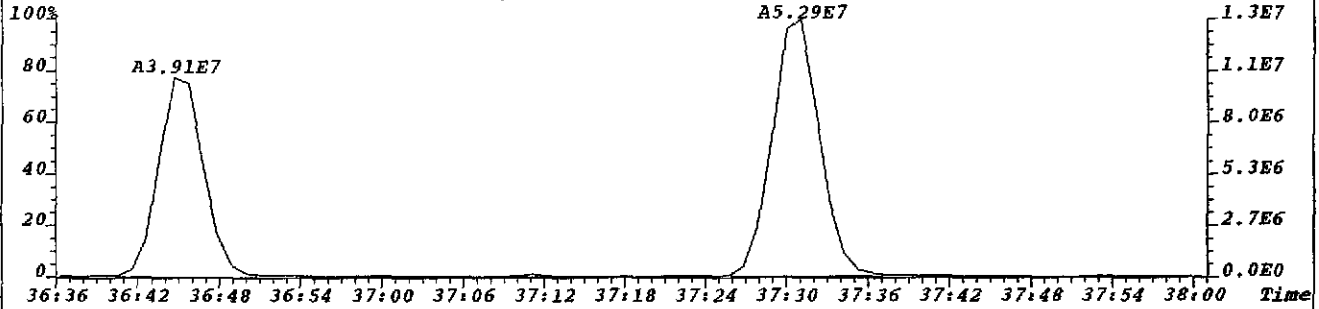
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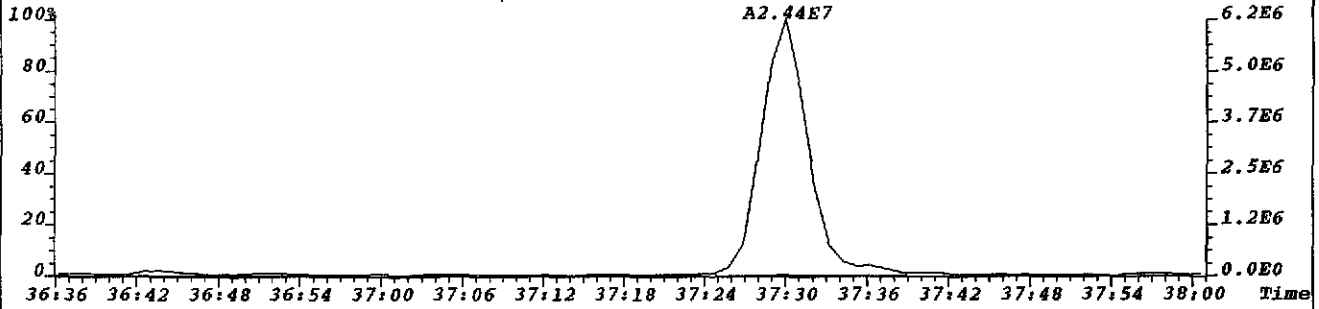
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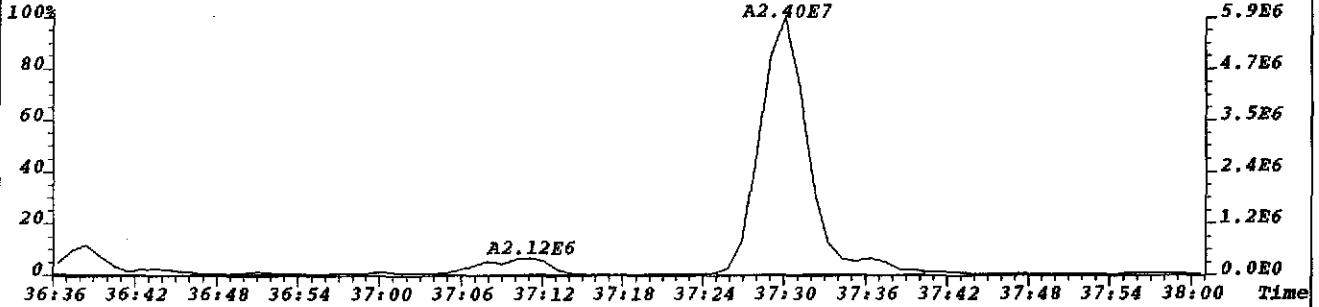
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TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



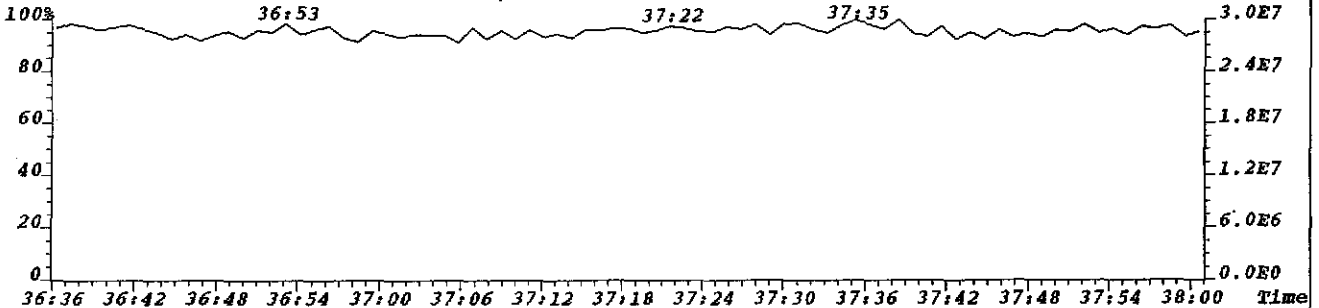
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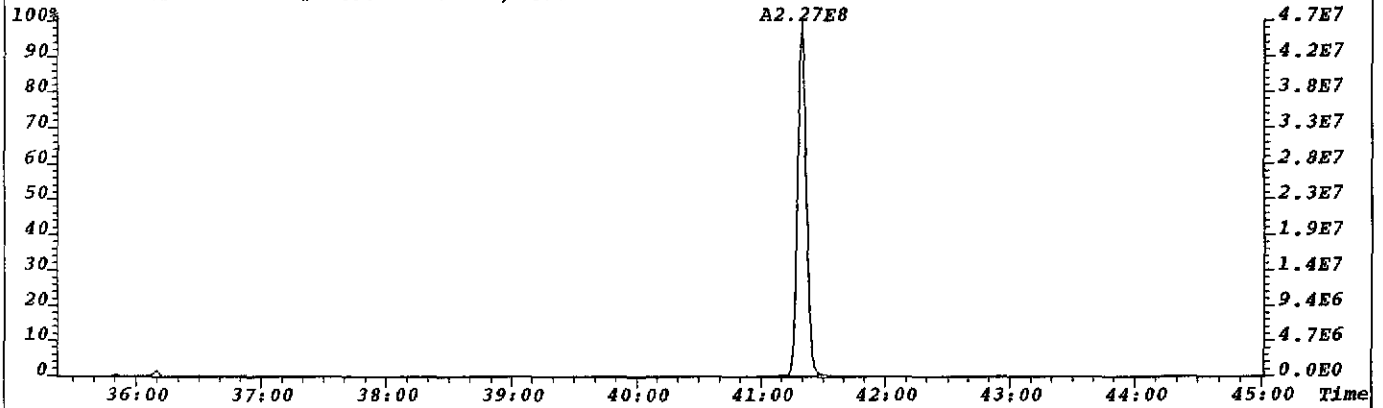
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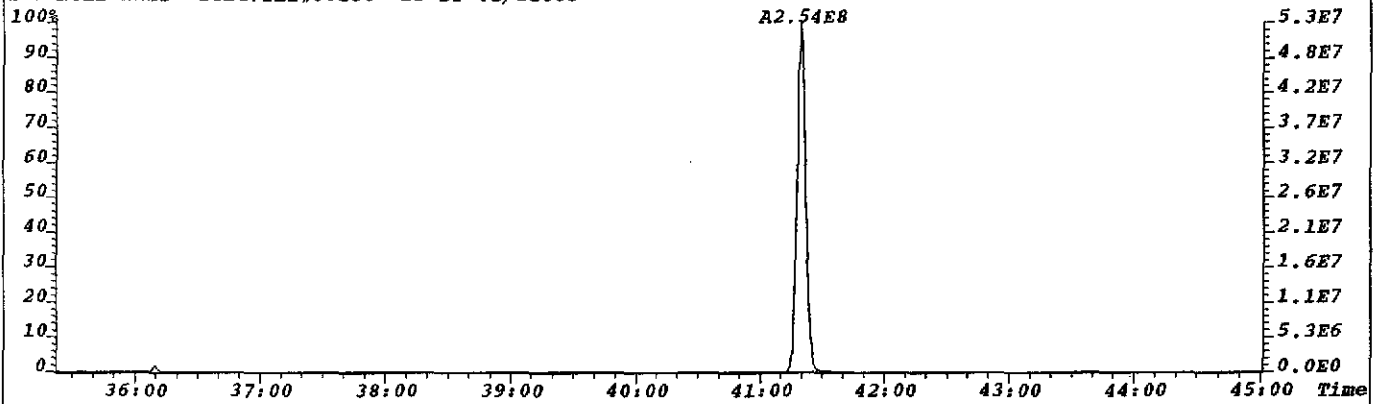
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TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



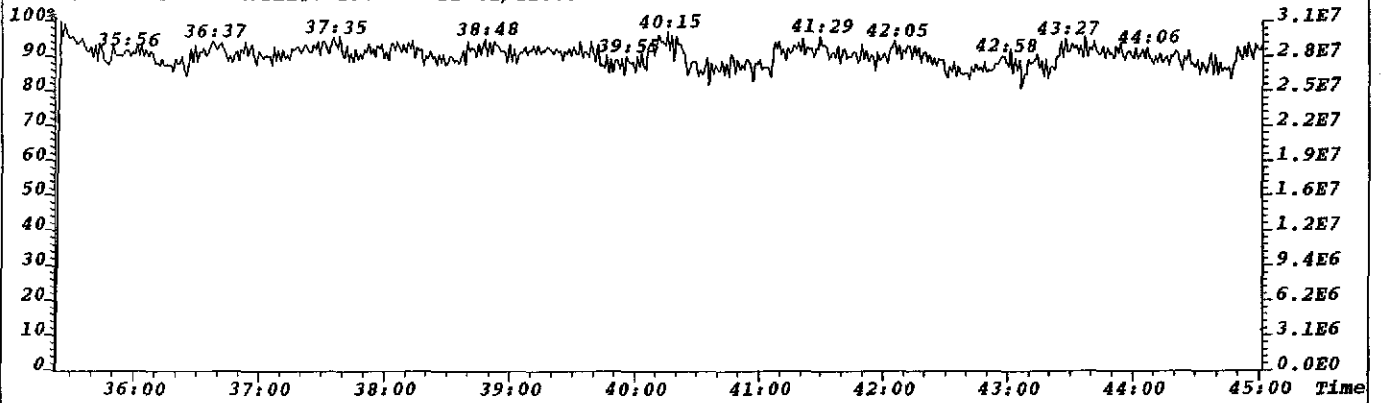
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TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



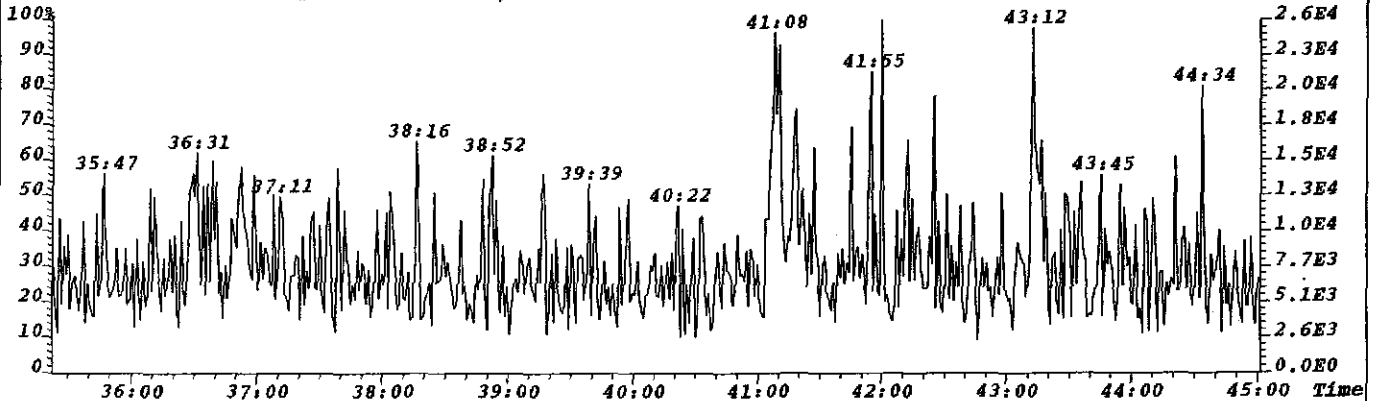
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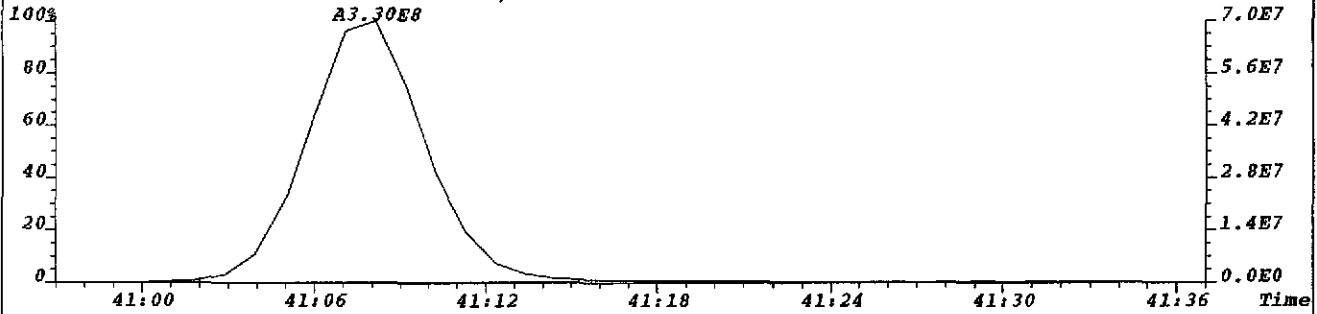
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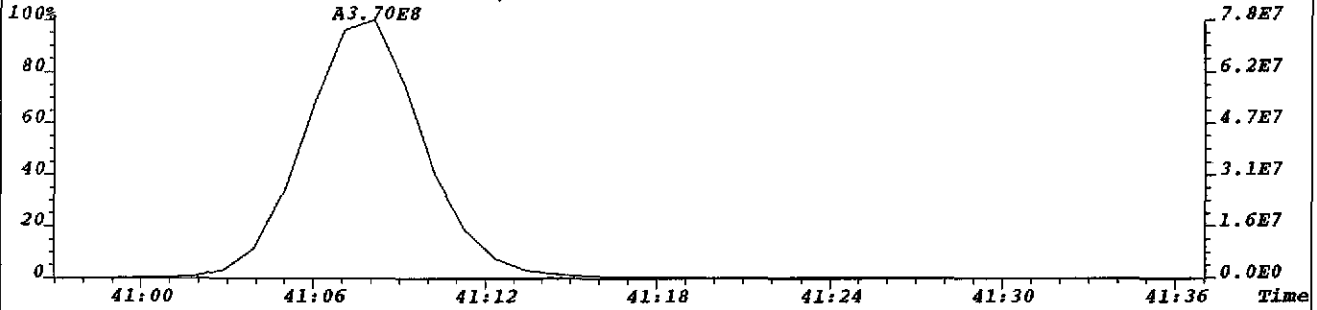
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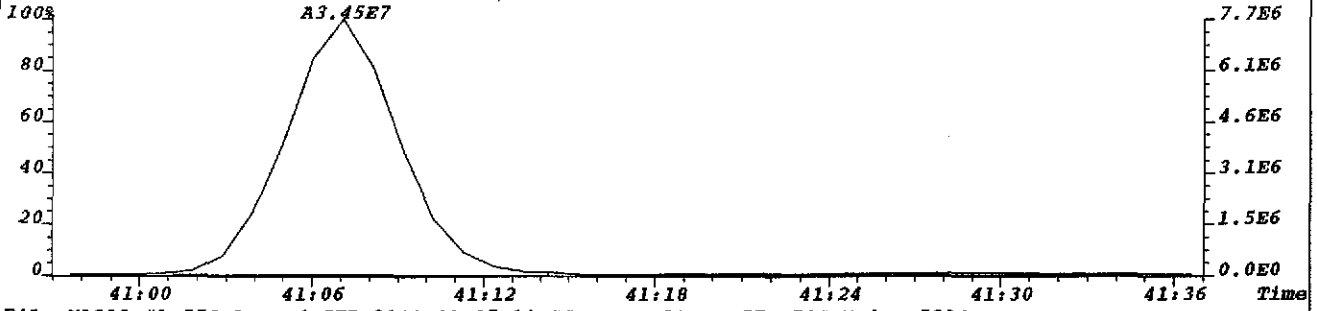
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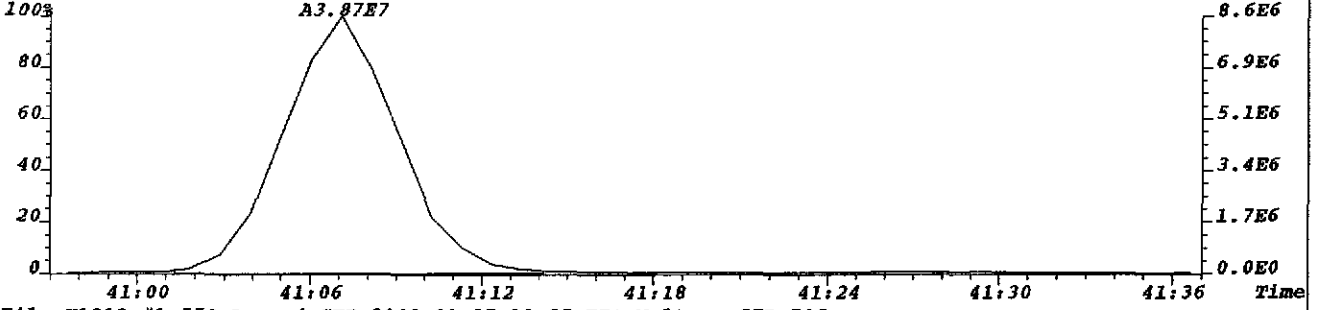
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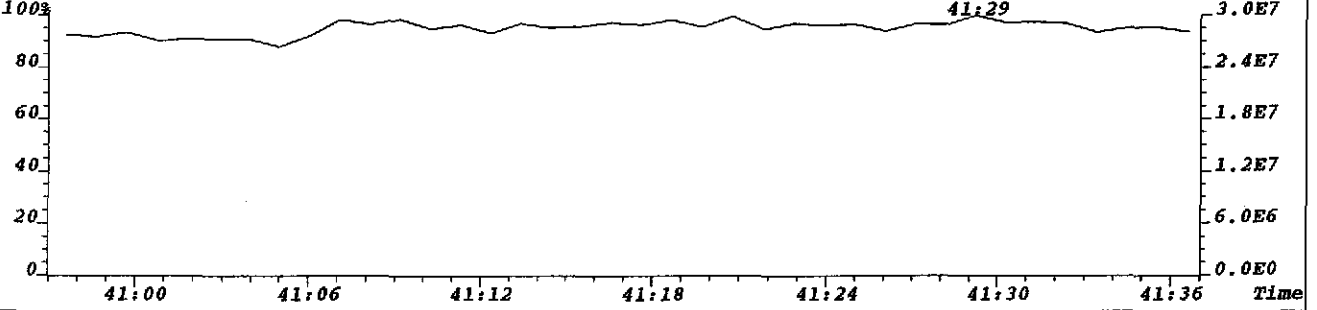
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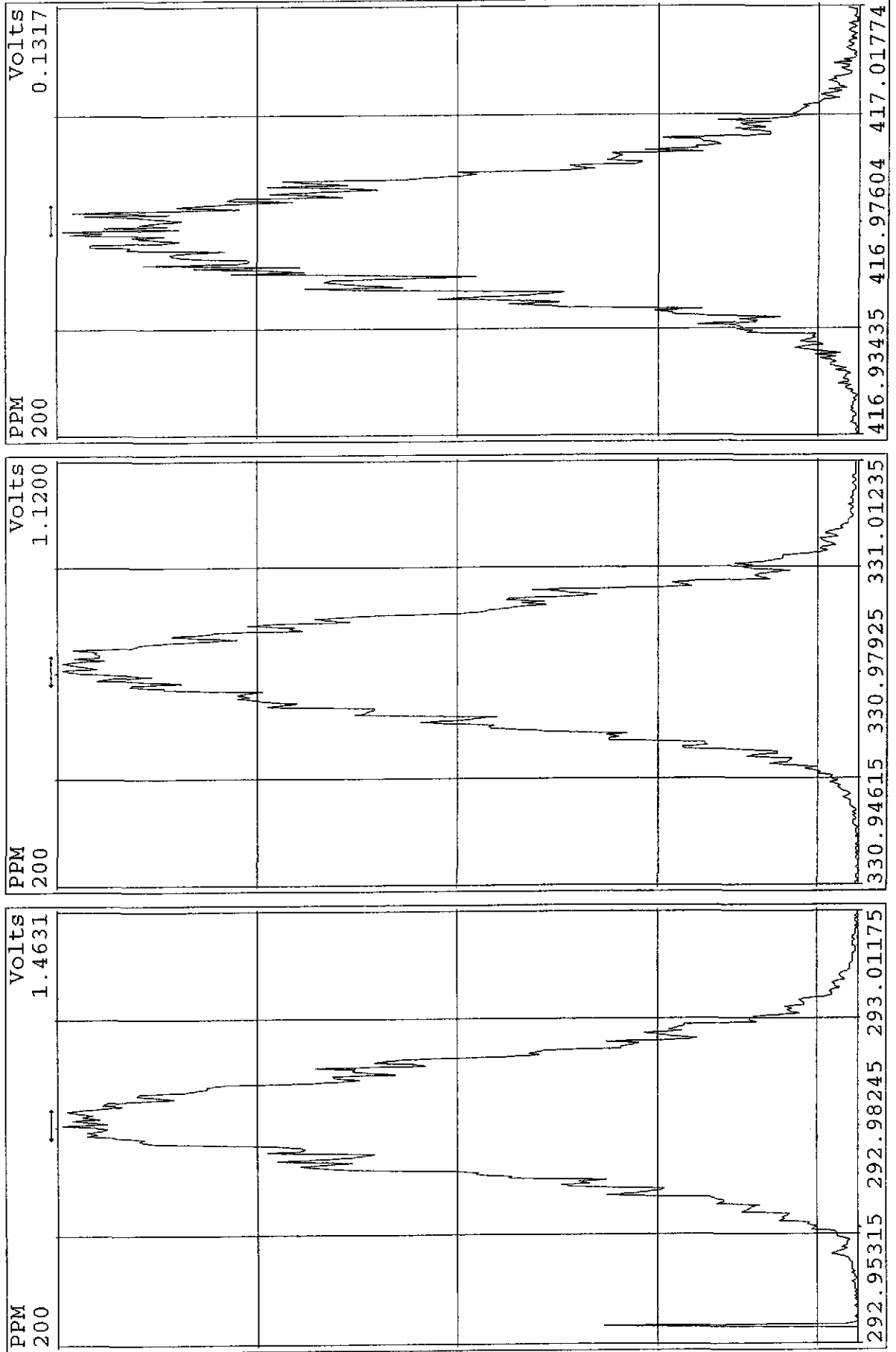
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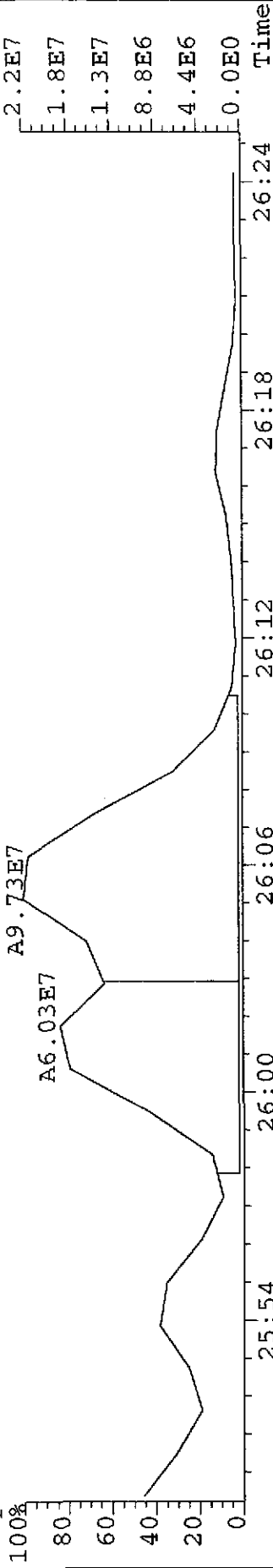
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TRIANGLE LABS Text:TLI#58258 DF-DP-82/12865



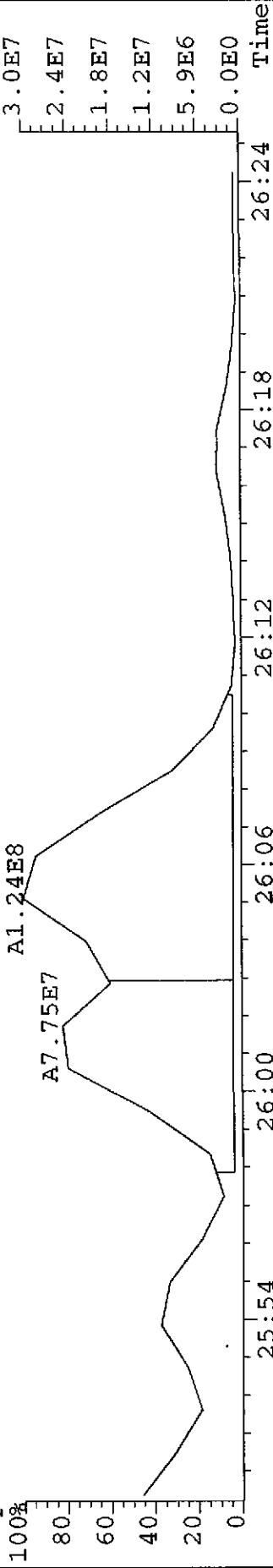
Peak Locate Examination: 4-SEP-2002:18:21 File:U1319  
Experiment:NDB5US Function:2 Reference:PFK



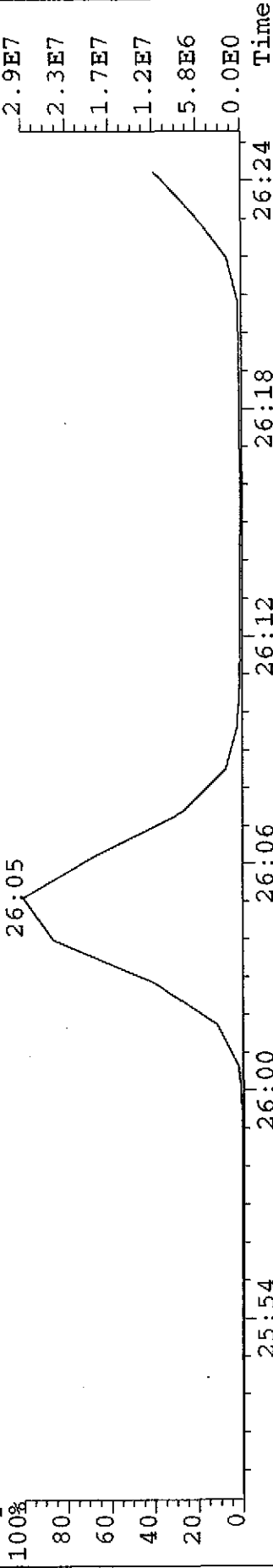
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303.9016 S:5 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
305.8987 S:5 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
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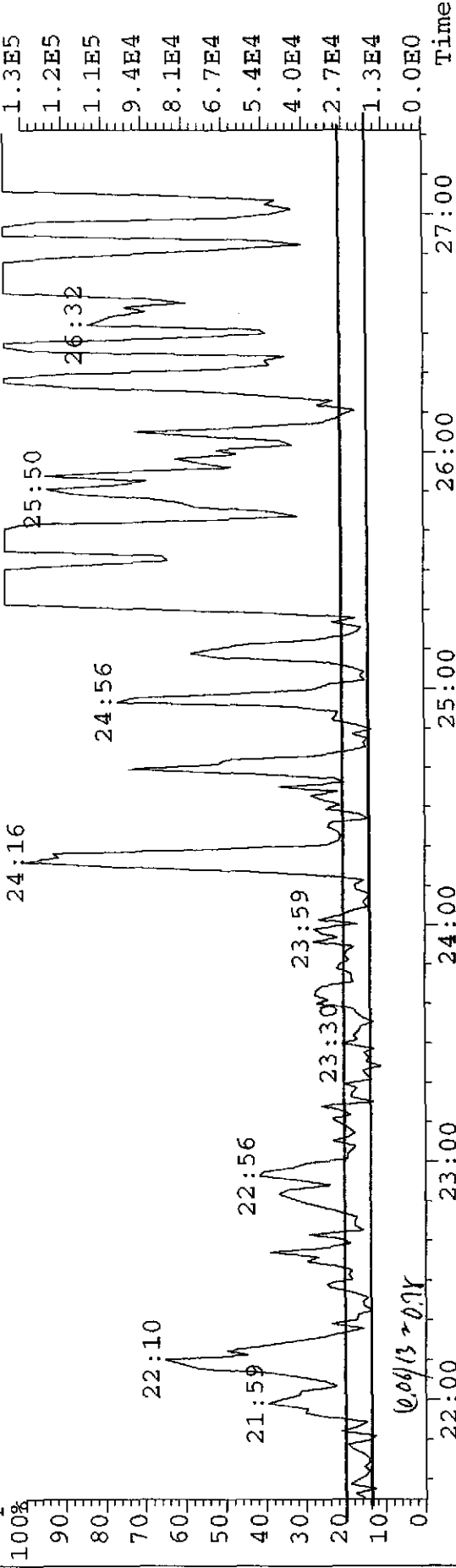


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319.8965 S:5 F:2 Exp:NDB5US

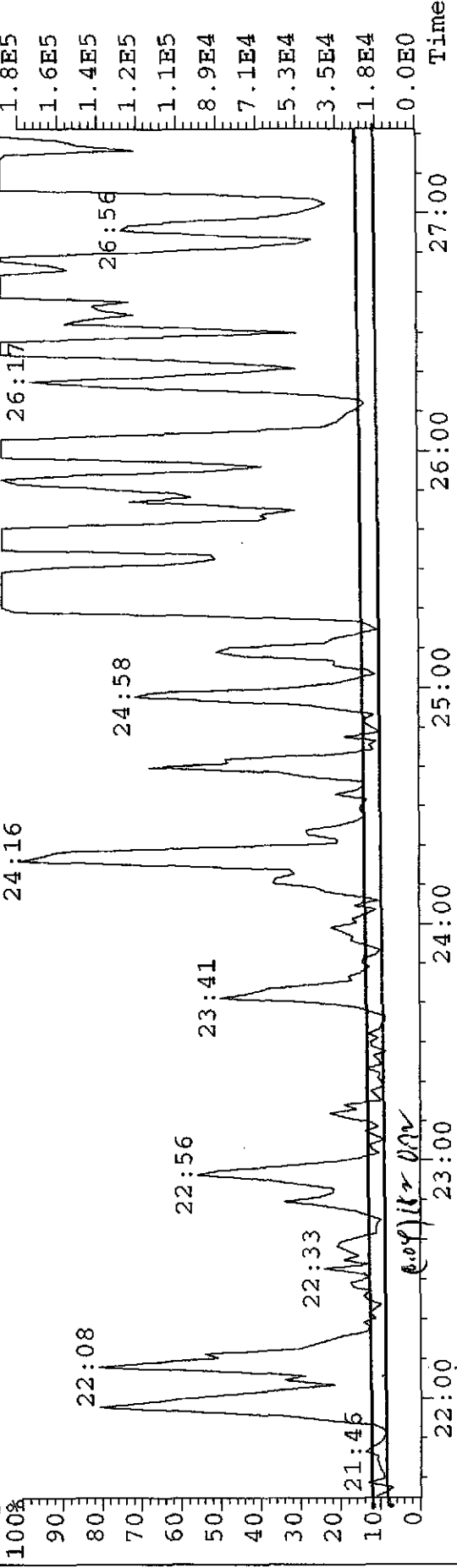
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S

321.8936 S:5 F:2 Exp:NDB5US

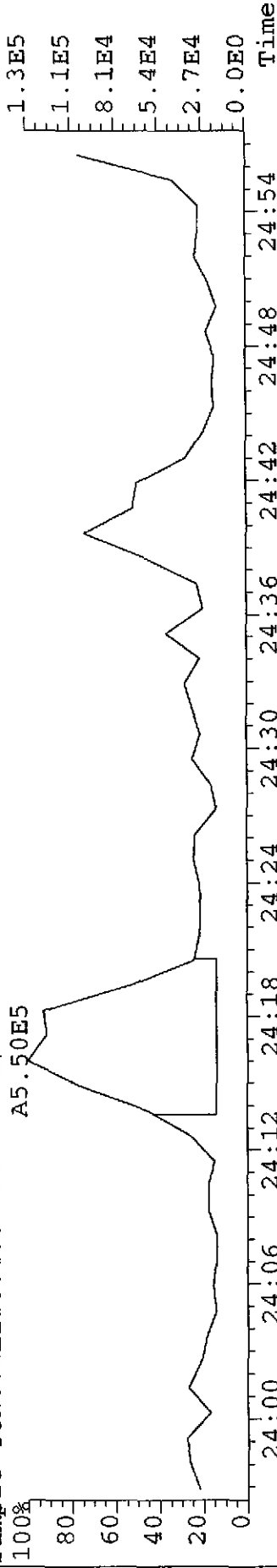
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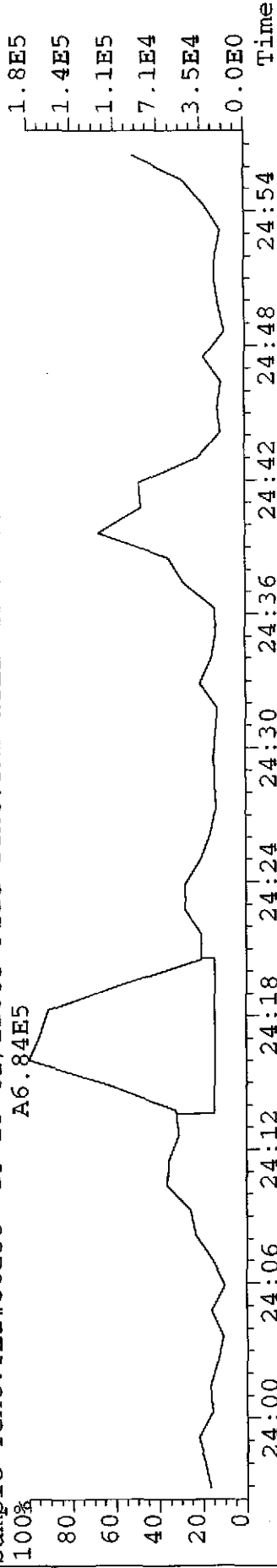
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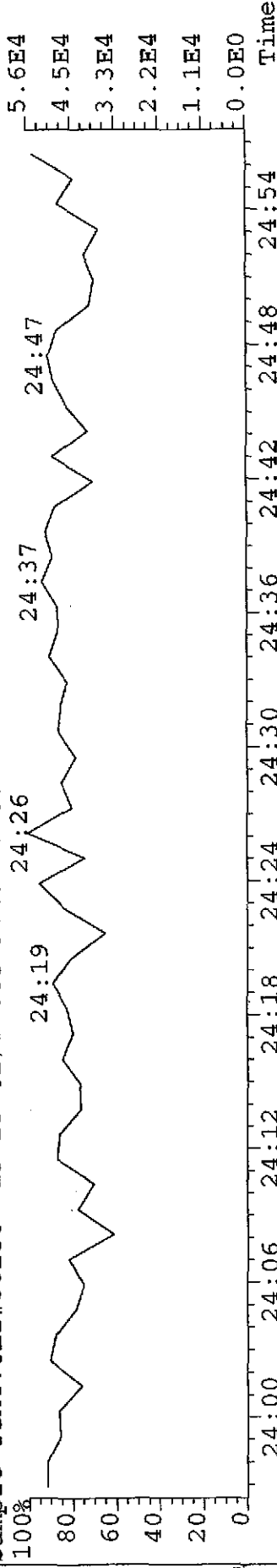
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Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
321.8936 S:5 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
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Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.

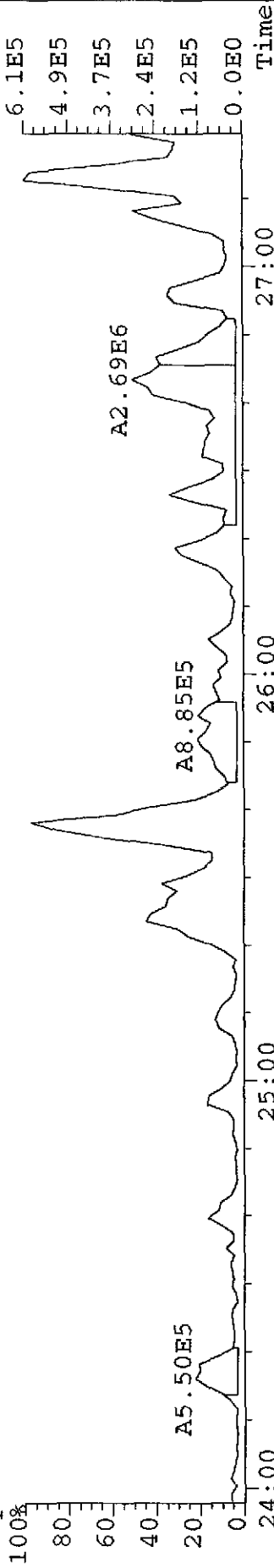


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File:UL1319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S

319.8965 S:5 F:2 Exp:NDB5US

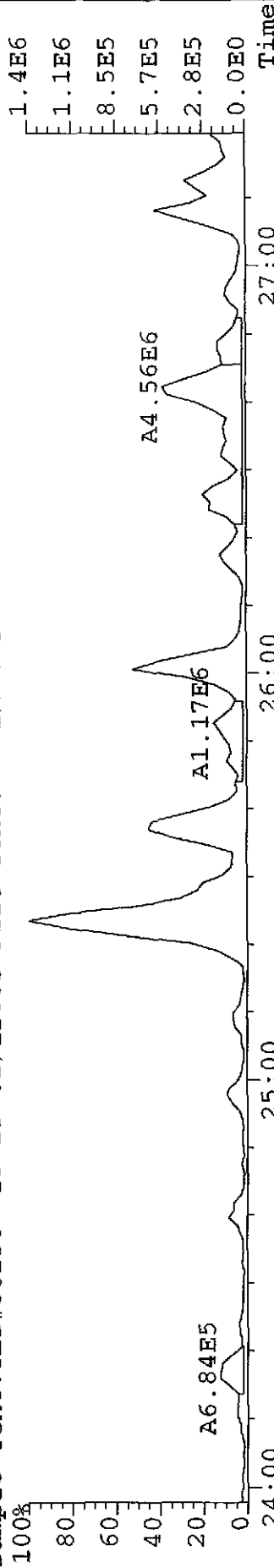
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321.8936 S:5 F:2 Exp:NDB5US

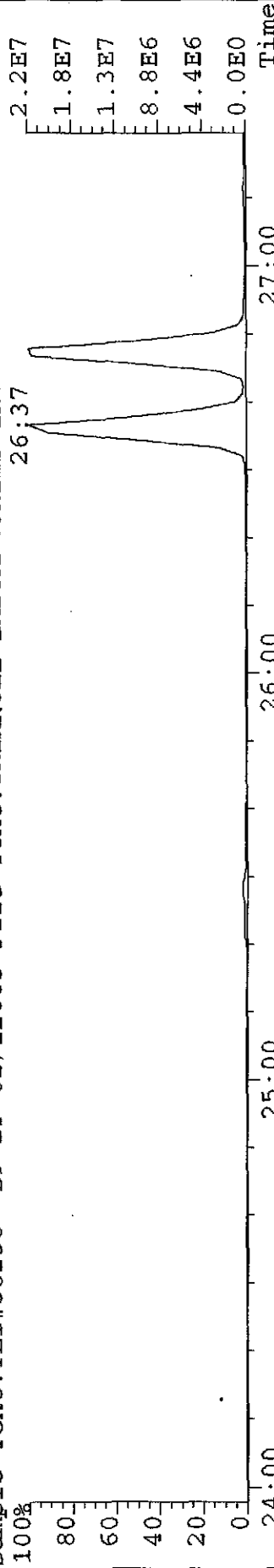
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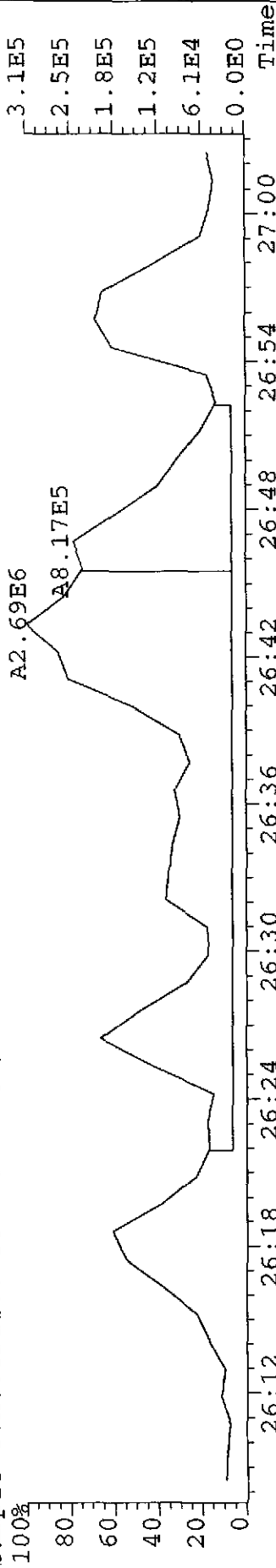
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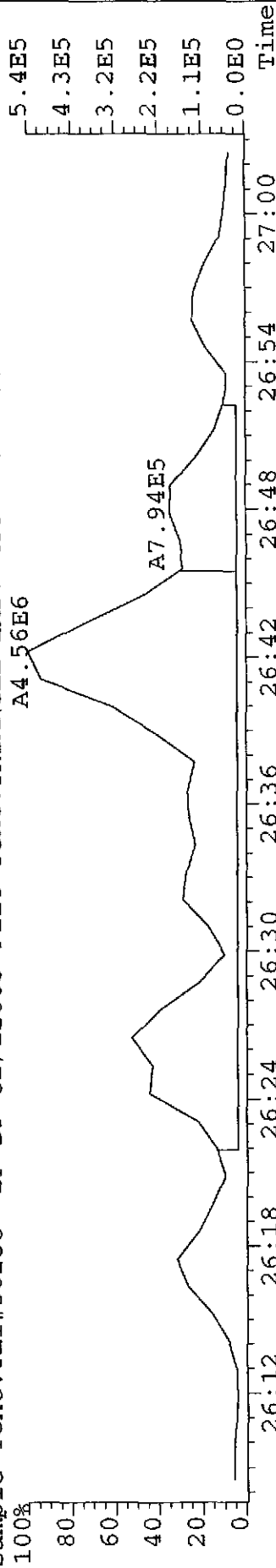


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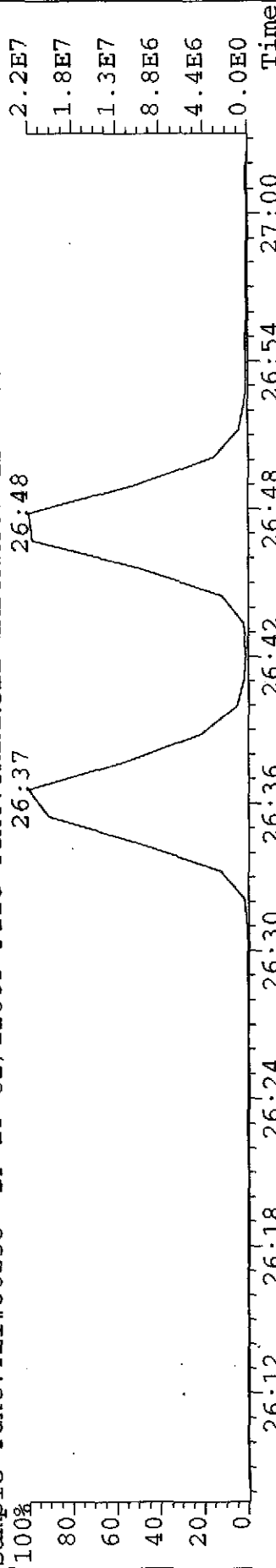
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Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
321.8936 S:5 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.

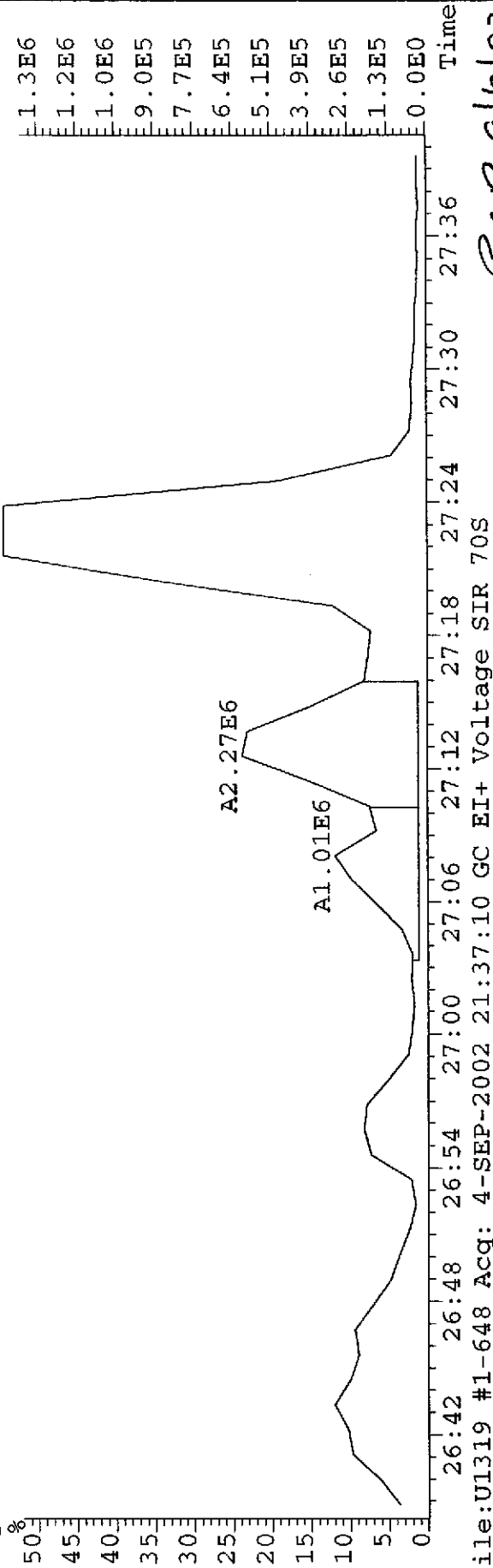


File:U1319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
333.9338 S:5 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.

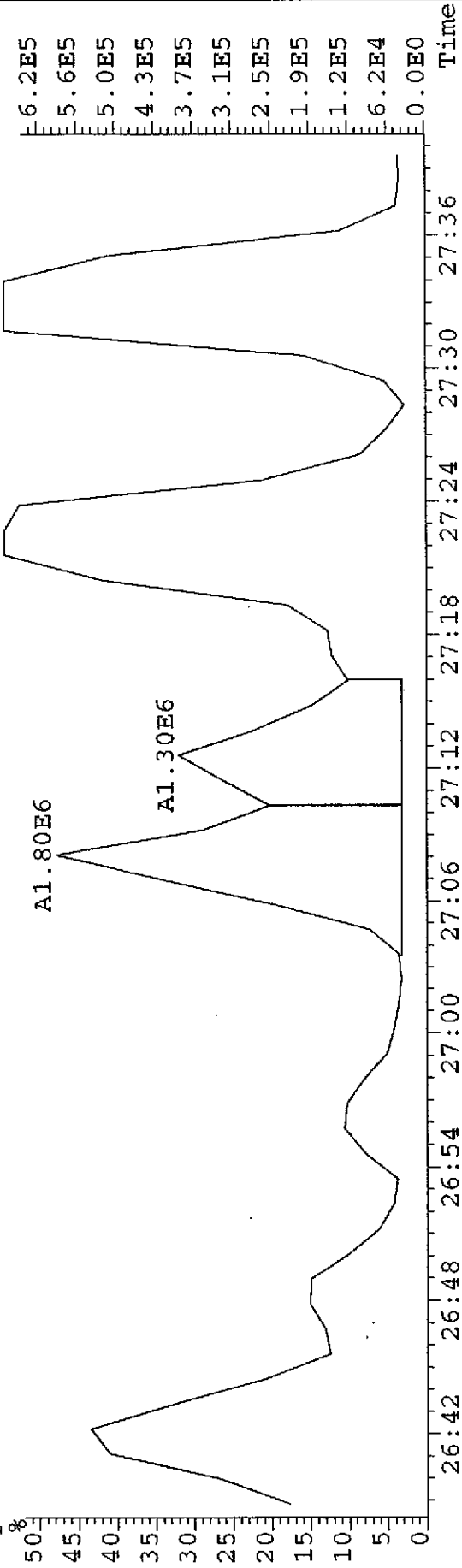


*Handwritten signature*

File: UI319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
319.8965 S:5 F:2 Exp:NDB5US  
Sample Text: TLI#58258 DF-DP-82/12865 File Text: TRIANGLE LABORATORIES INC.



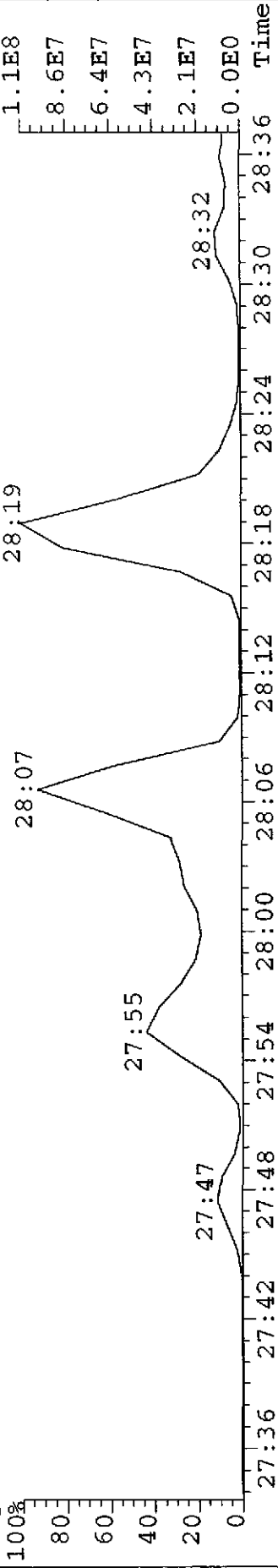
File: UI319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
321.8936 S:5 F:2 Exp:NDB5US  
Sample Text: TLI#58258 DF-DP-82/12865 File Text: TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S

339.8597 S:5 F:2 Exp:NDB5US

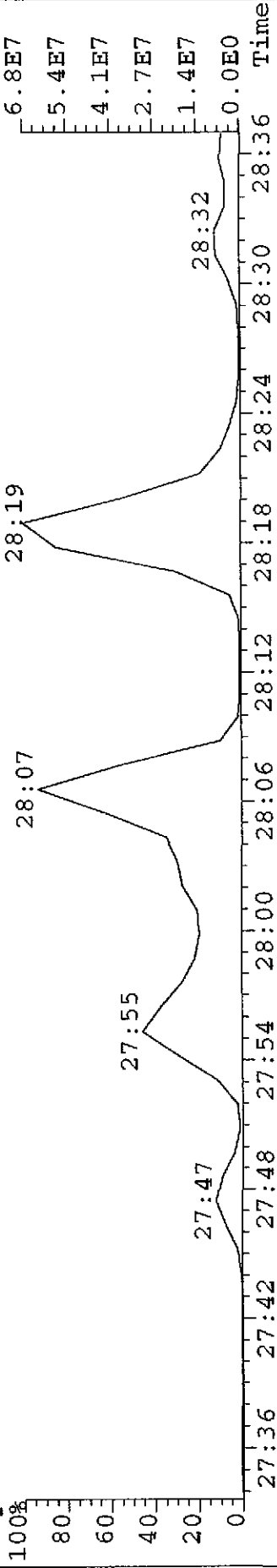
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S

341.8567 S:5 F:2 Exp:NDB5US

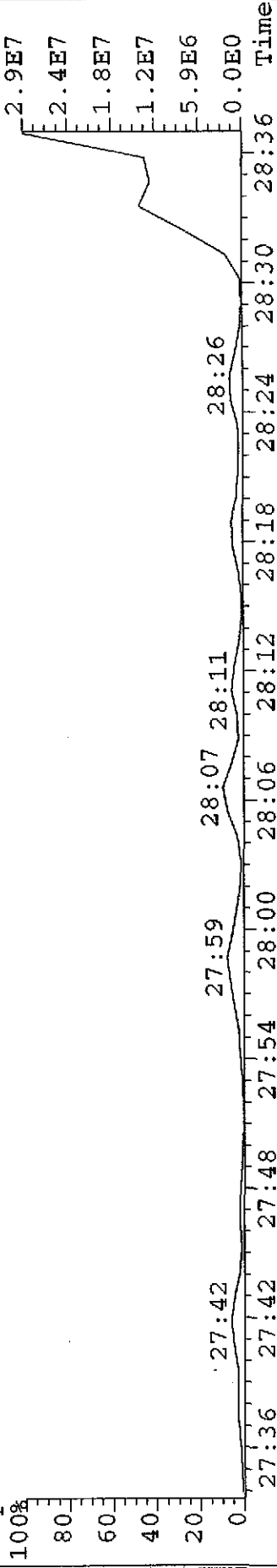
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S

353.8970 S:5 F:2 Exp:NDB5US

Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.

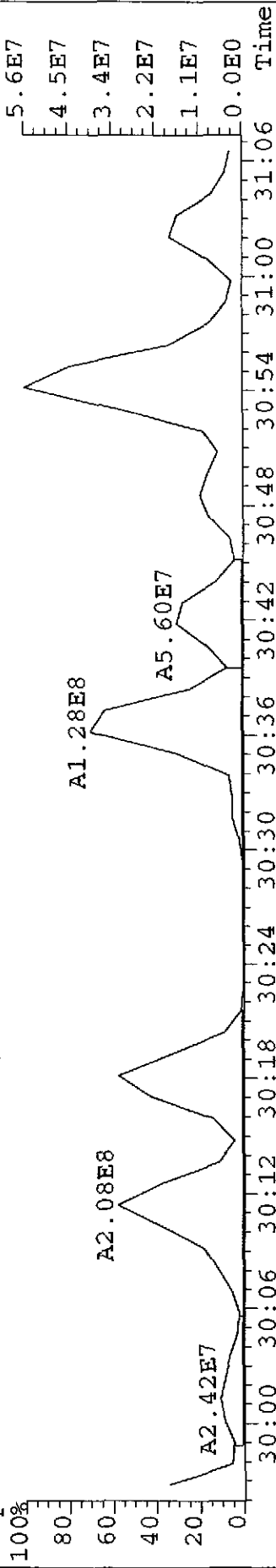


*Handwritten mark*

File:U1319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S

339.8597 S:5 F:2 Exp:NDB5US

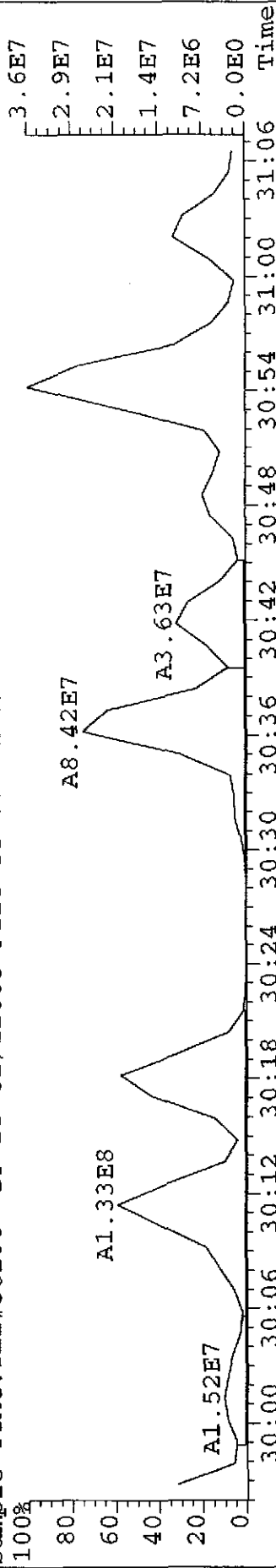
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S

341.8567 S:5 F:2 Exp:NDB5US

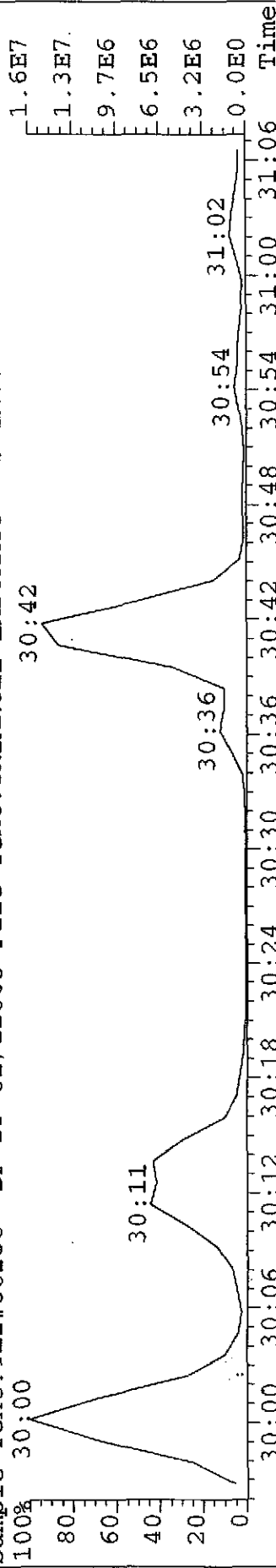
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



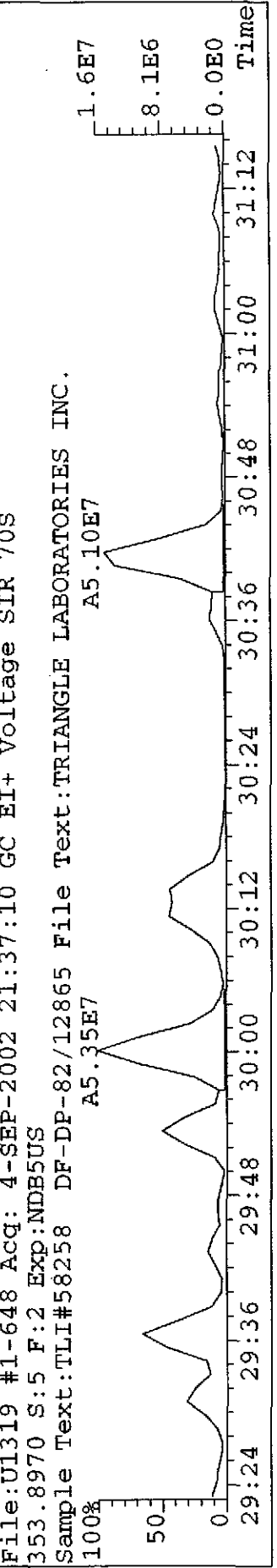
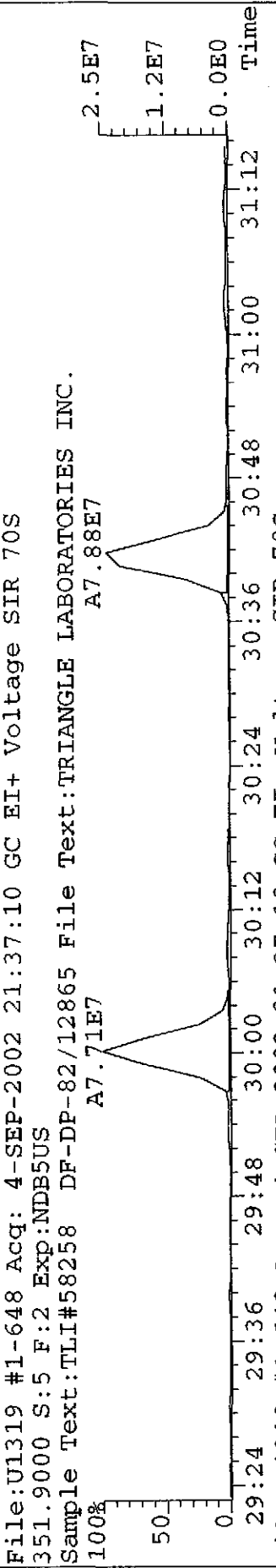
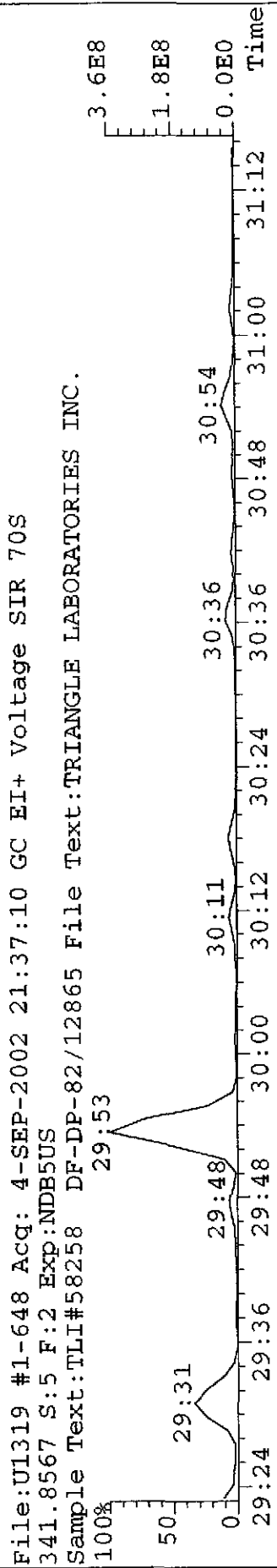
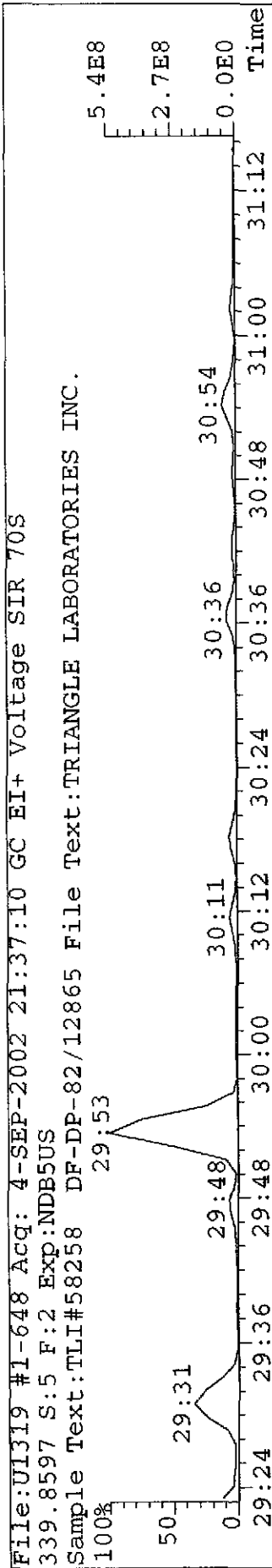
File:U1319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S

353.8970 S:5 F:2 Exp:NDB5US

Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.

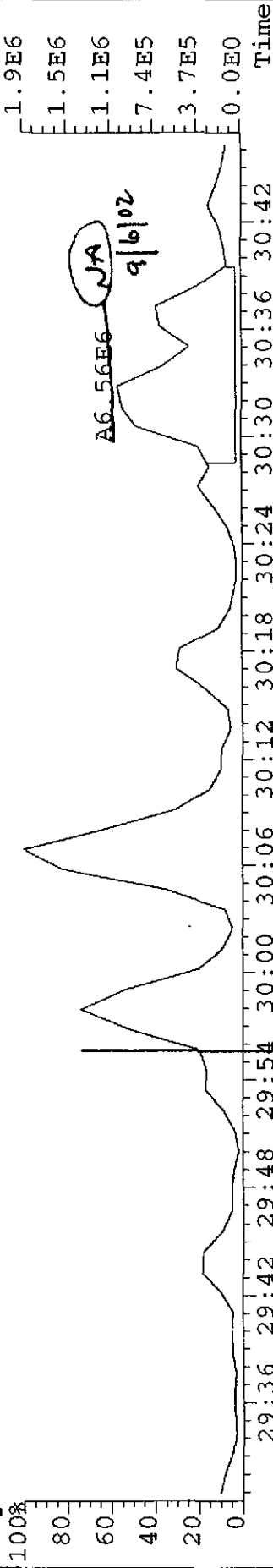


*Handwritten signature*

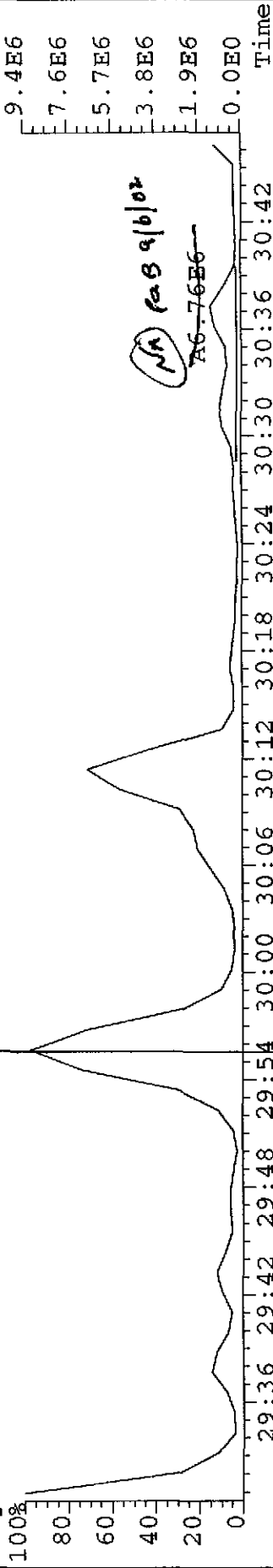


9/19/02

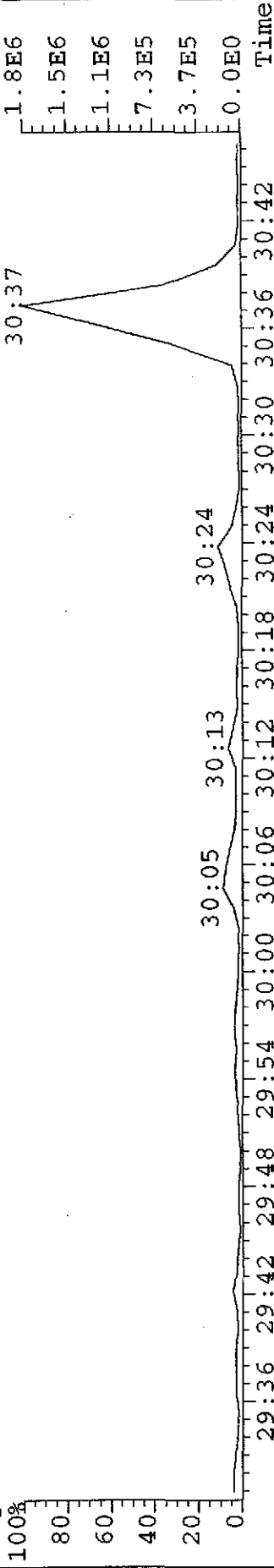
File:U1319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
355.8546 S:5 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
357.8516 S:5 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



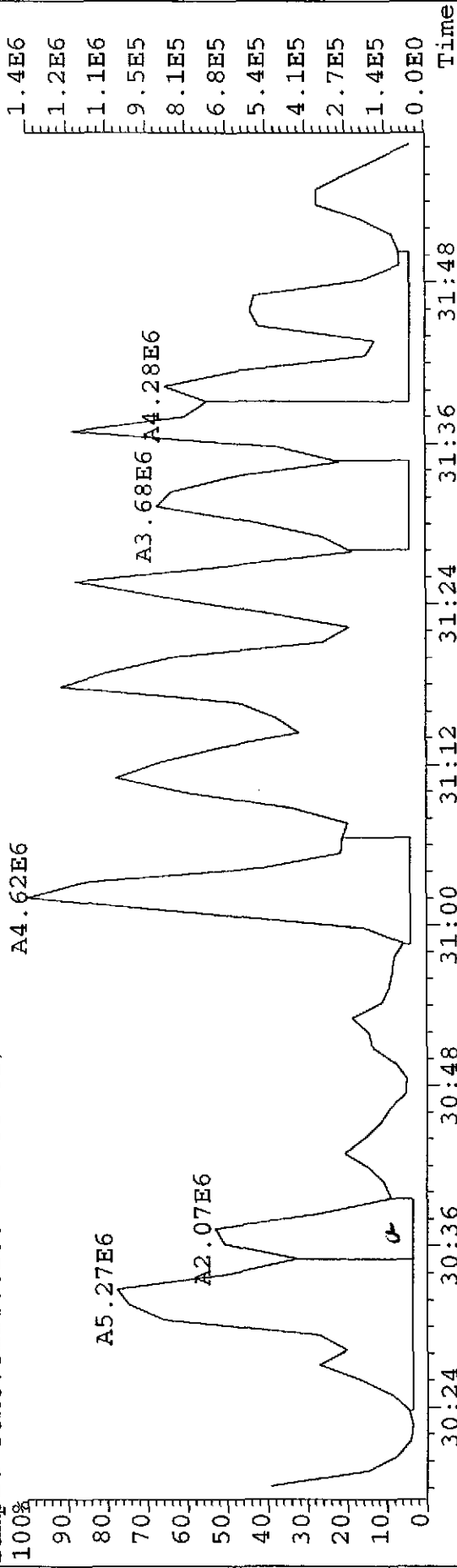
File:U1319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
369.8919 S:5 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



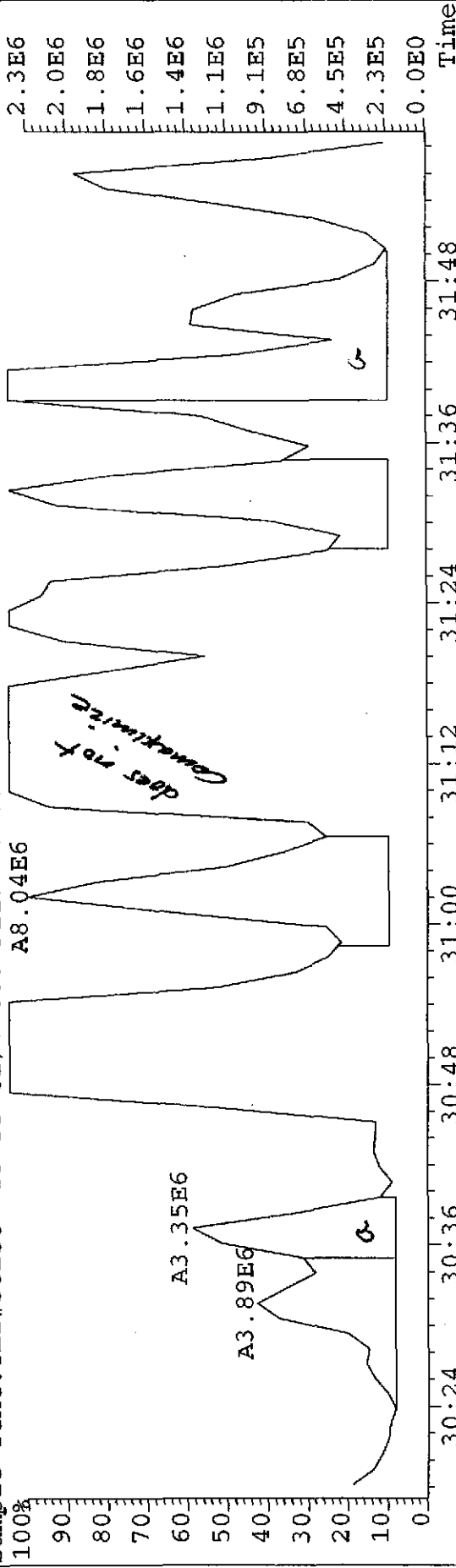
9/10/02



File: UI319 #1-648 ACQ: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
 355.8546 S:5 F:2 Exp:NDB5US  
 Sample Text: TLI#58258 DF-DP-82/12865 File Text: TRIANGLE LABORATORIES INC.  
 A4.62E6

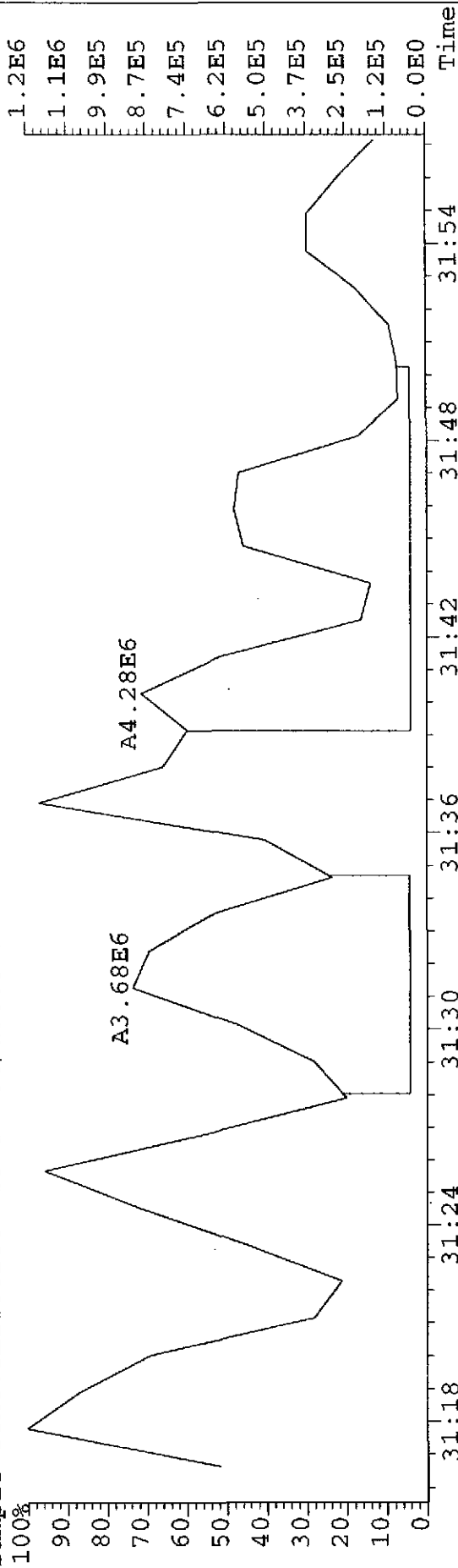


File: UI319 #1-648 ACQ: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
 357.8516 S:5 F:2 Exp:NDB5US  
 Sample Text: TLI#58258 DF-DP-82/12865 File Text: TRIANGLE LABORATORIES INC.  
 A8.04E6

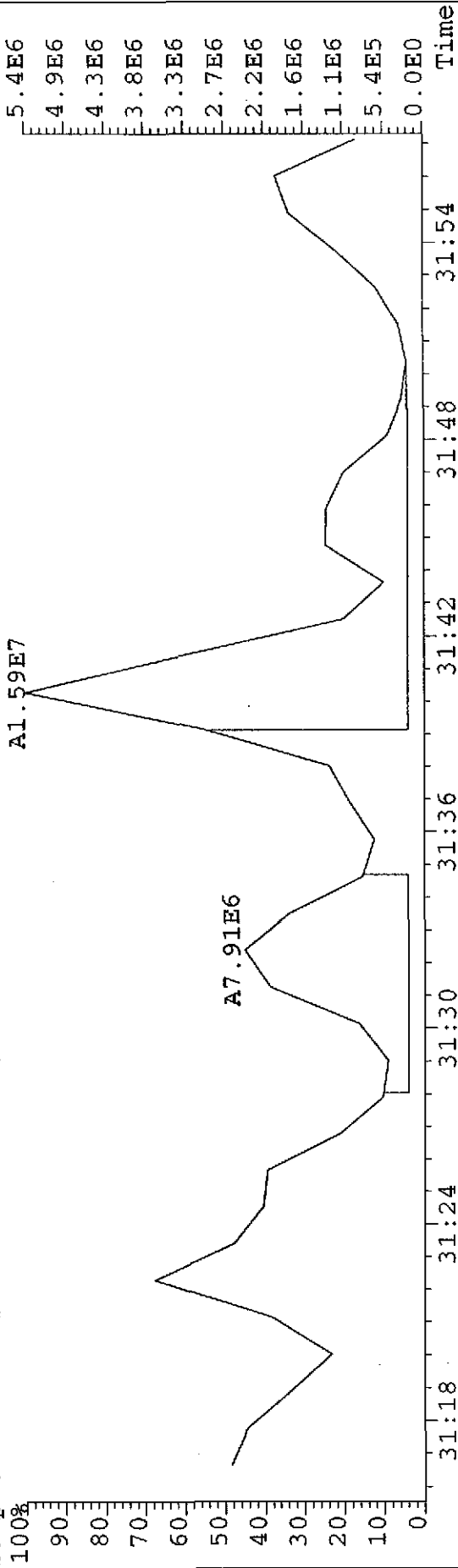


8 a 3 9 1 6 0 2

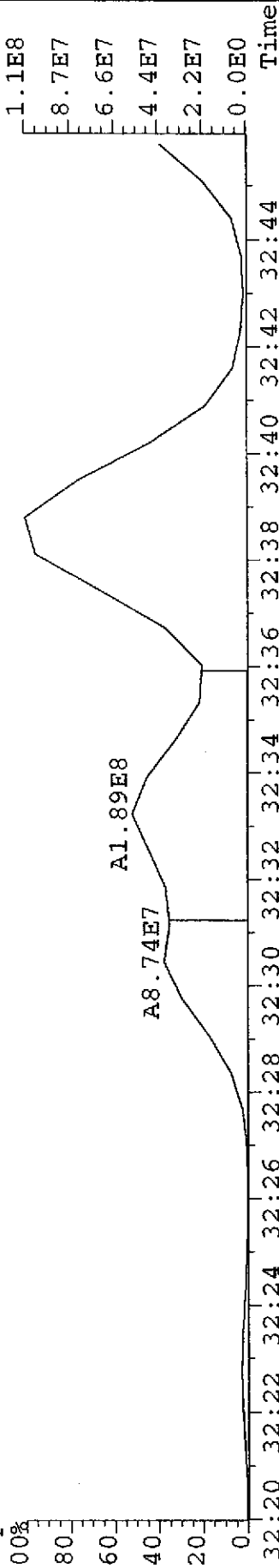
File: UI319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
355.8546 S:5 F:2 Exp:NDB5US  
Sample Text: TLI#58258 DF-DP-82/12865 File Text: TRIANGLE LABORATORIES INC.



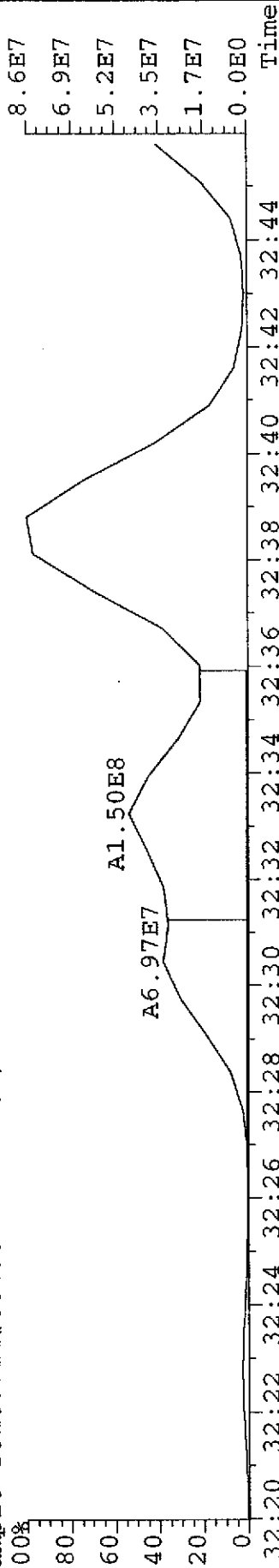
File: UI319 #1-648 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
357.8516 S:5 F:2 Exp:NDB5US  
Sample Text: TLI#58258 DF-DP-82/12865 File Text: TRIANGLE LABORATORIES INC.



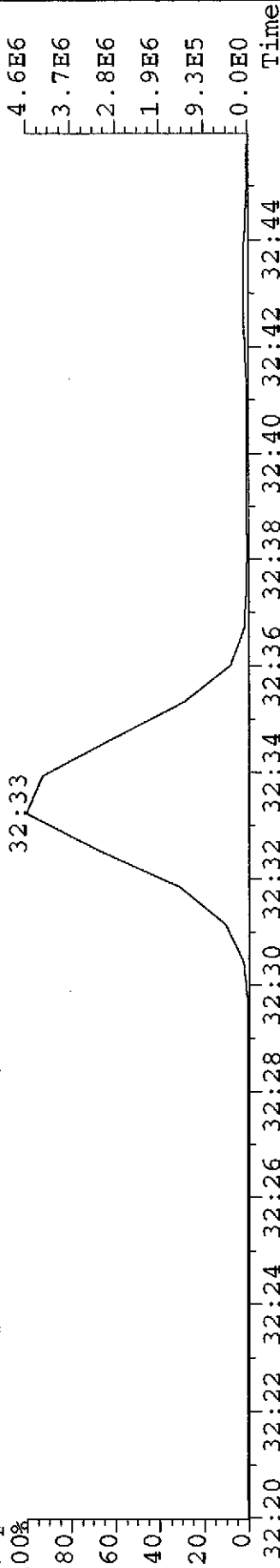
File:U1319 #1-271 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
373.8208 S:5 F:3 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



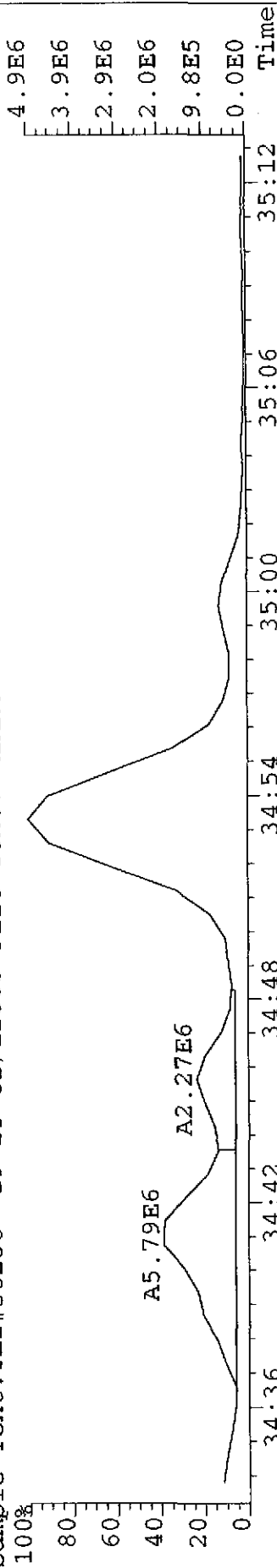
File:U1319 #1-271 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
375.8178 S:5 F:3 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



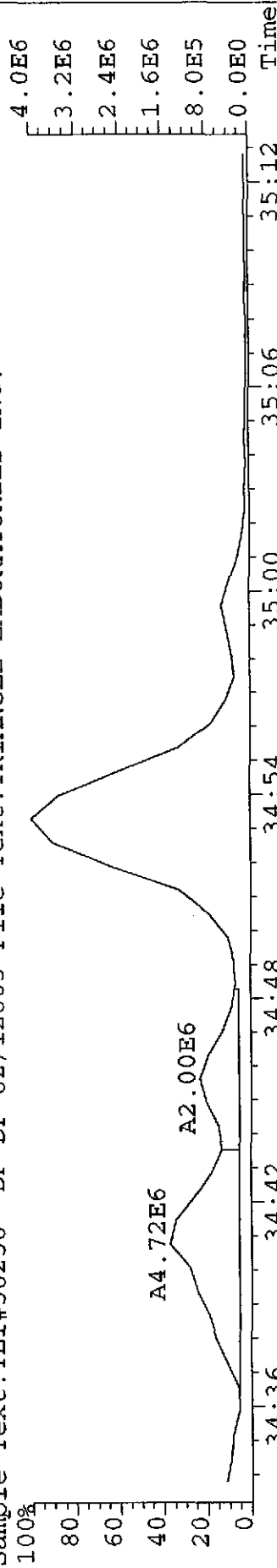
File:U1319 #1-271 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
445.7555 S:5 F:3 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



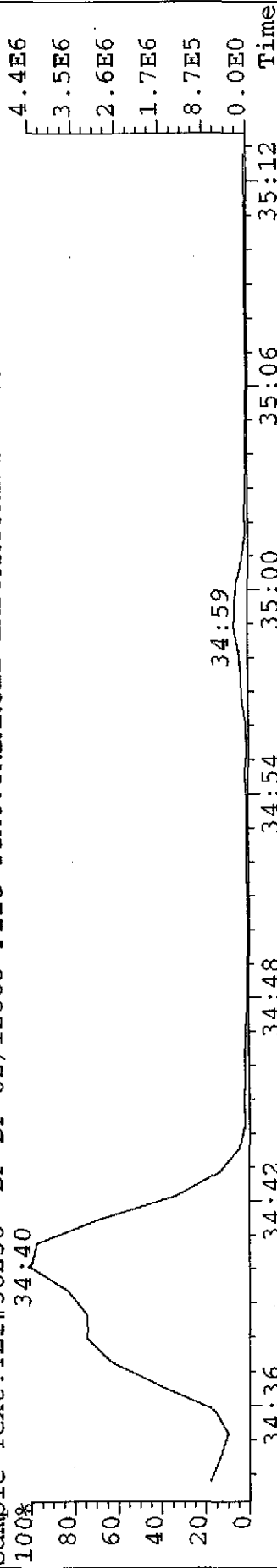
File:U1319 #1-271 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
373.8208 S:5 F:3 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



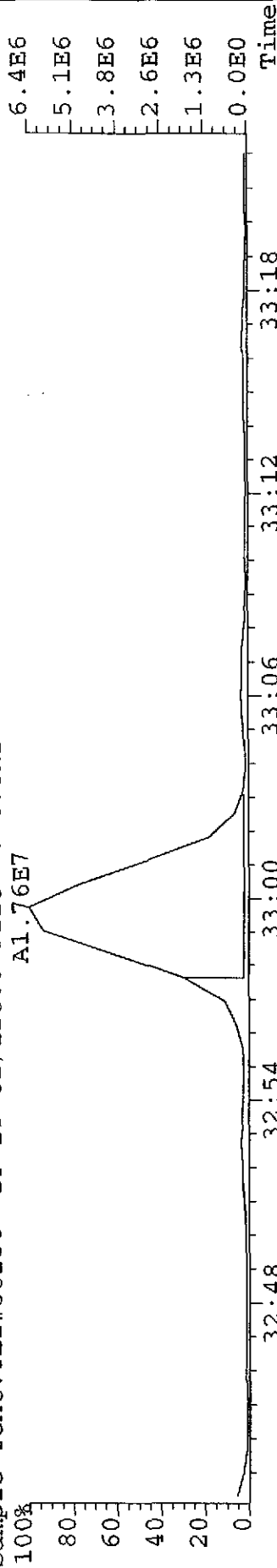
File:U1319 #1-271 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
375.8178 S:5 F:3 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



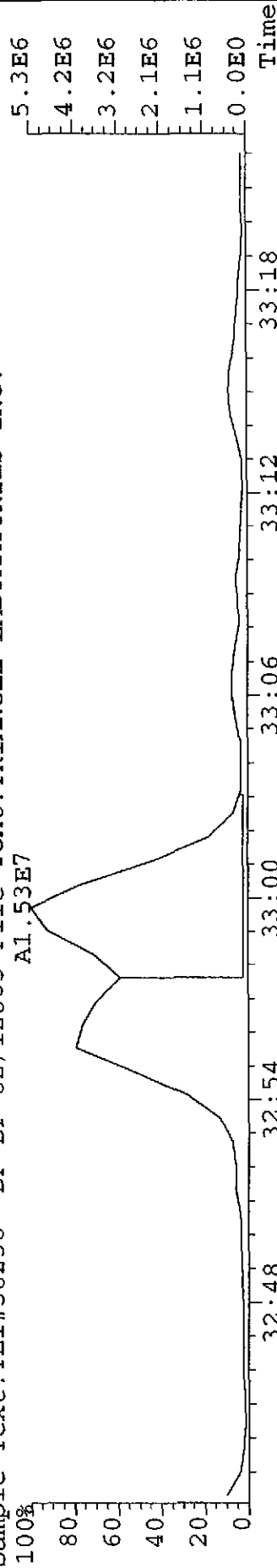
File:U1319 #1-271 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
445.7555 S:5 F:3 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



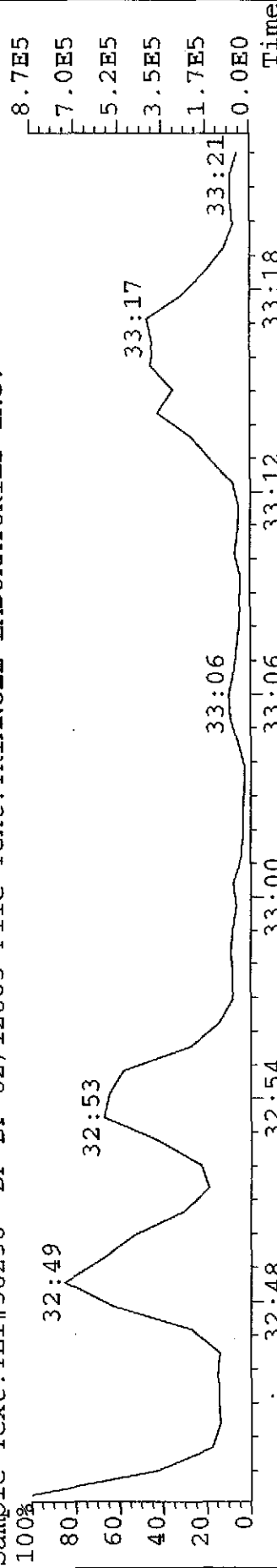
File:U1319 #1-271 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
389.8156 S:5 F:3 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.  
A1.76E7



File:U1319 #1-271 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
391.8127 S:5 F:3 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.  
A1.53E7

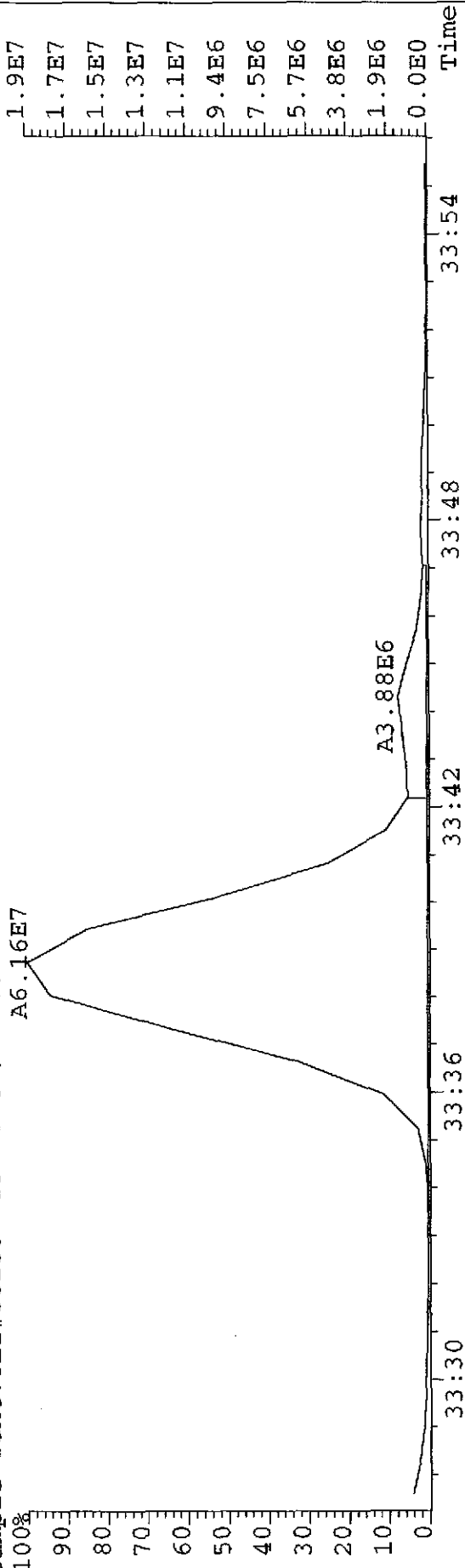


File:U1319 #1-271 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
403.8529 S:5 F:3 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



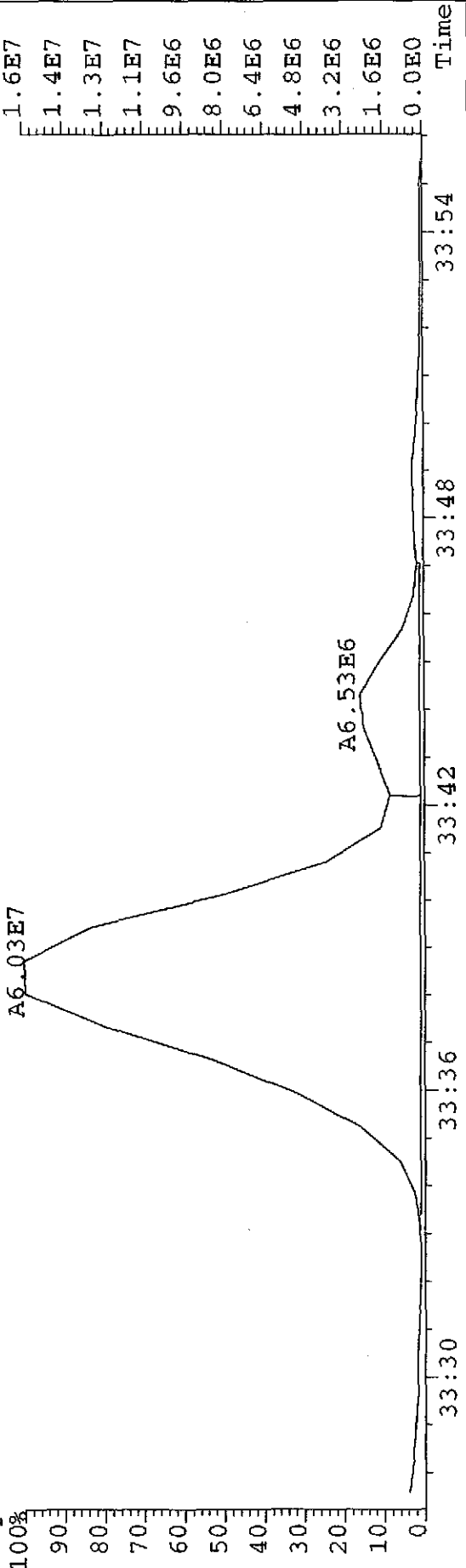
*Handwritten signature or initials*

File:U1319 #1-271 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
389.8156 S:5 F:3 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



PAG 9/6/02

File:U1319 #1-271 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S  
391.8127 S:5 F:3 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-271 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S

389.8156 S:5 F:3 Exp:NDB5US

Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.

A2.00E7

6.5E6  
5.2E6  
3.9E6  
2.6E6  
1.3E6  
0.0E0  
Time

A9.53E5 A1.80E6

33:54 34:00 34:06 34:12 34:18 34:24 34:30

File:U1319 #1-271 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S

391.8127 S:5 F:3 Exp:NDB5US

Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.

A1.69E7

5.3E6  
4.3E6  
3.2E6  
2.1E6  
1.1E6  
0.0E0  
Time

A9.76E5 A1.64E6

33:54 34:00 34:06 34:12 34:18 34:24 34:30

File:U1319 #1-271 Acq: 4-SEP-2002 21:37:10 GC EI+ Voltage SIR 70S

403.8529 S:5 F:3 Exp:NDB5US

Sample Text:TLI#58258 DF-DP-82/12865 File Text:TRIANGLE LABORATORIES INC.

34:09 34:14

8.8E6  
7.0E6  
5.3E6  
3.5E6  
1.8E6  
0.0E0  
Time

33:54 34:00 34:06 34:12 34:18 34:24 34:30

*Handwritten signature*

**Mississippi Dept. of Env. Quality**

TLI Project: **58258**  
 Client Sample: **DF-DP-82/12865**

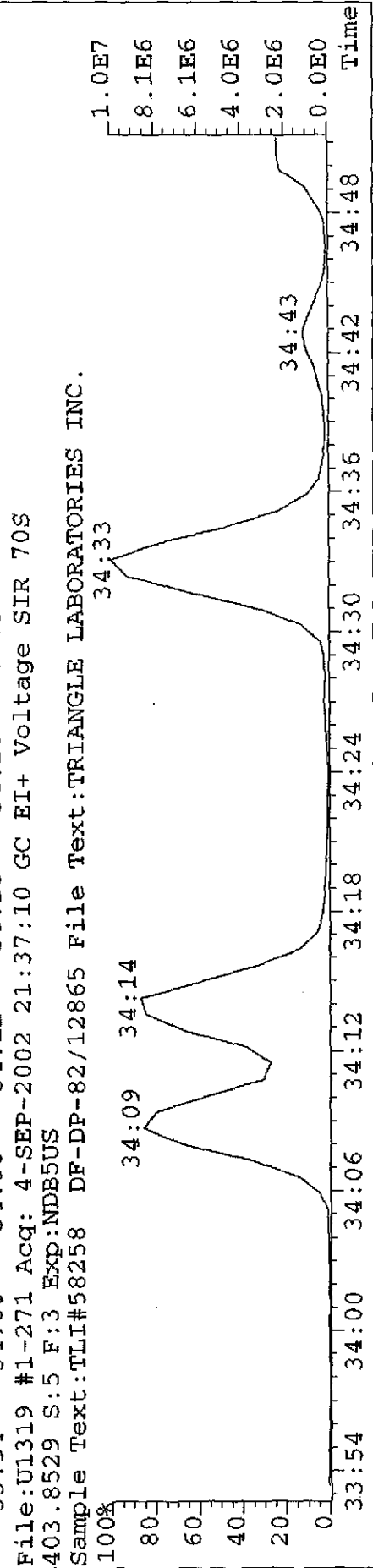
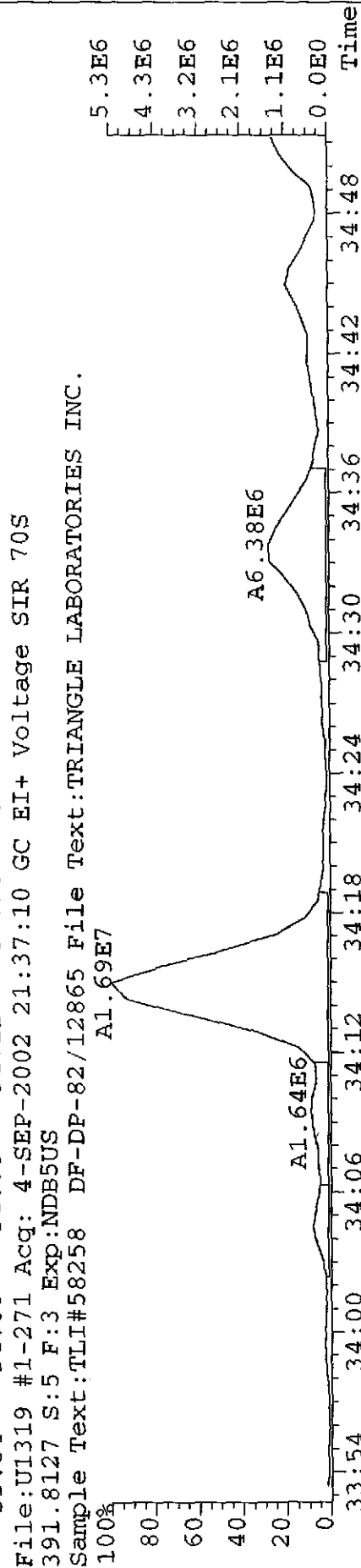
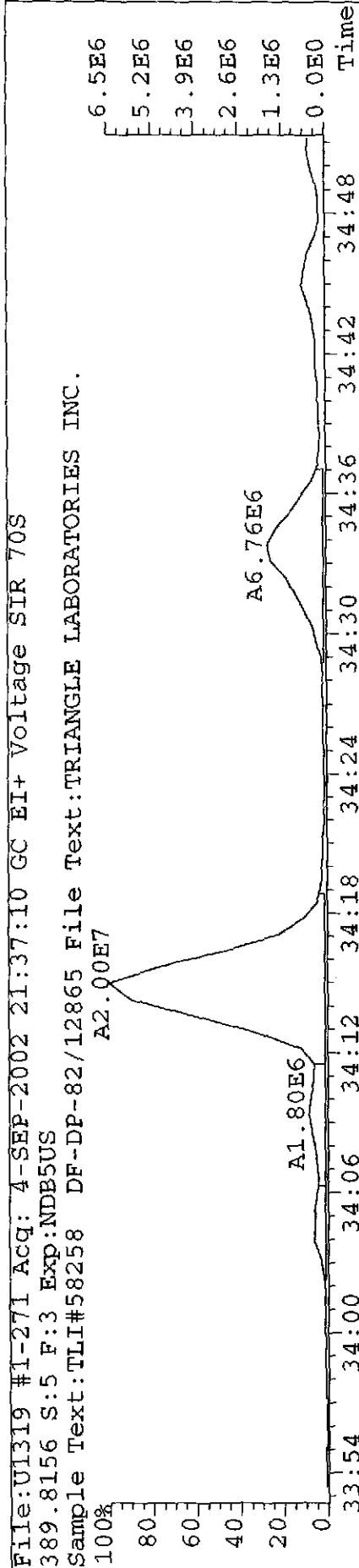
Method 8290 PCDD/PCDF Analysis (b)  
 Analysis File: **U131905**

Client Project:	<b>Crystal Springs Dioxin</b>		
Sample Matrix:	<b>SOIL</b>	Date Received:	<b>08/27/2002</b>
TLI ID:	<b>334-48-3</b>	Date Extracted:	<b>08/28/2002</b>
		Date Analyzed:	<b>09/04/2002</b>
		Spike File:	<b>SPMIT32S</b>
		ICal:	<b>UF57092</b>
		ConCal:	<b>U021317</b>
Sample Size:	<b>11.500 g</b>	Dilution Factor:	<b>n/a</b>
Dry Weight:	<b>10.051 g</b>	Blank File:	<b>U131602</b>
GC Column:	<b>DB-5</b>	Analyst:	<b>JWL</b>
		% Moisture:	<b>12.6</b>
		% Lipid:	<b>n/a</b>
		% Solids:	<b>87.4</b>

Analytes	Conc. (pg/g)	DL	EMPC	Ratio	RT	Flags
2,3,7,8-TCDD	EMPC		0.19			J_
1,2,3,7,8-PeCDD	EMPC		14.3			___
1,2,3,4,7,8-HxCDD	9.9			1.10	34:09	___
1,2,3,6,7,8-HxCDD	104			1.18	34:15	___
1,2,3,7,8,9-HxCDD	38.2			1.06	34:34	___
1,2,3,4,6,7,8-HpCDD	433			1.01	37:31	___
1,2,3,4,6,7,8,9-OCDD	3440			0.89	41:08	___
2,3,7,8-TCDF	197			0.78	26:05	___
1,2,3,7,8-PeCDF	47.8			1.59	30:01	___
2,3,4,7,8-PeCDF	114			1.54	30:42	___
1,2,3,4,7,8-HxCDF	1500			1.25	33:26	___
1,2,3,6,7,8-HxCDF	135			1.26	33:34	___
2,3,4,6,7,8-HxCDF	130			1.26	34:03	___
1,2,3,7,8,9-HxCDF	ND	0.3				___
1,2,3,4,6,7,8-HpCDF	4720			1.05	36:29	E_
1,2,3,4,7,8,9-HpCDF	176			1.04	38:01	___
1,2,3,4,6,7,8,9-OCDF	1750			0.89	41:20	___

Totals	Conc. (pg/g)	Number	DL	EMPC	Flags
Total TCDD	21.6	6		60.0	Q_
Total PeCDD	17.2	1		66.2	___
Total HxCDD	270	5		614	___
Total HpCDD	749	2			___
Total TCDF	4400	17			E_
Total PeCDF	13590	15		13990	E_
Total HxCDF	6900	14		7720	XE_
Total HpCDF	8200	3			E_





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**Mississippi Dept. of Env. Quality**

TLI Project: **58258** Method 8290 TCDD/TCDF Analysis (DB-225)  
 Client Sample: **DF-DP-82/12865** Analysis File: **P023220**

Client Project:	<b>Crystal Springs Dioxin</b>		
Sample Matrix:	<b>SOIL</b>	Date Received:	<b>08/27/2002</b>
TLI ID:	<b>334-48-3</b>	Date Extracted:	<b>08/28/2002</b>
		Date Analyzed:	<b>09/05/2002</b>
		Spike File:	<b>SPC2NF2S</b>
		ICal:	<b>PF56152</b>
		ConCal:	<b>P023216</b>
Sample Size:	<b>11.500 g</b>	Dilution Factor:	<b>n/a</b>
Dry Weight:	<b>10.051 g</b>	Blank File:	<b>U131602</b>
GC Column:	<b>DB-225</b>	Analyst:	<b>JMM</b>
		% Moisture:	<b>12.6</b>
		% Lipid:	<b>n/a</b>
		% Solids:	<b>87.4</b>

Analytes	Conc. (pg/g)	DL	EMPC	Ratio	RT	Flags
2,3,7,8-TCDF	103			0.77	22:41	—

Internal Standard	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	183	92.2	40%-130%	0.78	22:40	—

Recovery Standard	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	0.83	21:34	—

Data Reviewer:                     *PAB*                     09/06/2002

Initial ....Date...

PAB 9/6/02

Data Review By:

Channel specific noise levels computed from 'NL' heights.

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 P023220B.dbf
09/06/2002 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.

Table with columns: TCDF, 304-306, DC, NL, Height, 0.65-0.89, 0.27, 0.13, 0.14, 0.792-1.102, 0.999, 1.016, 1.022, 1.027, 1.040, 1.048, 1.075, 1.084, 1.090, 1.099, 1.111, 1.127, 1.136, 1.147, 1.165, 1.171, 1.174, 1.185, 1.200, 1.209, 1.214, 1.223, 1.229, 1.240, 1.251, 1.266, 1.275, 1.284, 1.291, 1.306, 1.322, 1.331, 1.360, 1.369, 11 Peaks, 3,530.22

Table with columns: 13C12-TCDF, 316-318, DC, NL, Height, 0.65-0.89, 0.42, 0.18, 0.24, 0.956-1.044, 0.972, 1.000, 1.042, 1.079

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
	DC	WH			20:06	RO	0.33	9.88			1.089			
	DC	WH			20:17	RO	0.29	7.38			1.099			
	DC	WH			20:33	RO	0.51	43.08			1.114			
	DC	WH			20:48		0.67	5.80			1.127			
	DC	WH			21:03	RO	0.43	11.38			1.141			
	DC	WH			21:08	RO	1.52	1.43			1.145			
	DC	WH			21:14	RO	0.51	2.92			1.151			
	DC	WH			21:28	RO	0.33	3.01			1.164			
	DC	WH			21:30	RO	1.21	1.19			1.165			
	DC	WH			22:05		0.88	5.24			1.197			
	DC	WH			22:21	RO	1.12	14.58			1.211			
	DC	WH			22:28	RO	1.06	16.89			1.218			
	KNM				22:40		0.78	727.00	319.00	408.00	1.229	13C12-2378-TCDF	ISO	
							Height	160.51	68.94	91.57				
	DC	WH			22:55	RO	0.39	75.19			1.242			
	DC	WH			23:21		0.68	1,162.74			1.266			
316-318					4 Peaks			5,927.99						

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

13C12-TCDD			0.65-0.89			0.906-1.094					
332-334	DC	NL	Height	0.49	0.34	0.15					
	DC	WL	18:49	0.68		0.872					
	DC	WL	18:56	RO 1.48		0.878					
	DC	WL	19:07	RO 2.26		0.886					
	DC	SN	19:34	RO 1.87		0.907					
	N		21:16	0.80	493.01	219.66	273.35	0.986	13C12-2378-TCDD	IS1	
				Height	119.13	52.97	66.16				
	N		21:34	0.83	519.29	235.41	283.88	1.000	13C12-1234-TCDD	RS1	
	DC	SN	21:44	RO 3.14	0.25			1.008			
	DC	SN	21:58	RO 1.79	0.25			1.019			
	DC	SN	22:03	RO 1.00	0.87			1.022			
			23:19	0.71	1.16	0.48	0.68	1.081			
	DC	SN	23:23	RO 0.22	0.21			1.084			
			23:29	RO 1.76	1.58	1.57	0.89	1.089			
	DC	WH	23:40	RO 2.46	0.50			1.097			
332-334			4 Peaks		1,015.04						

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

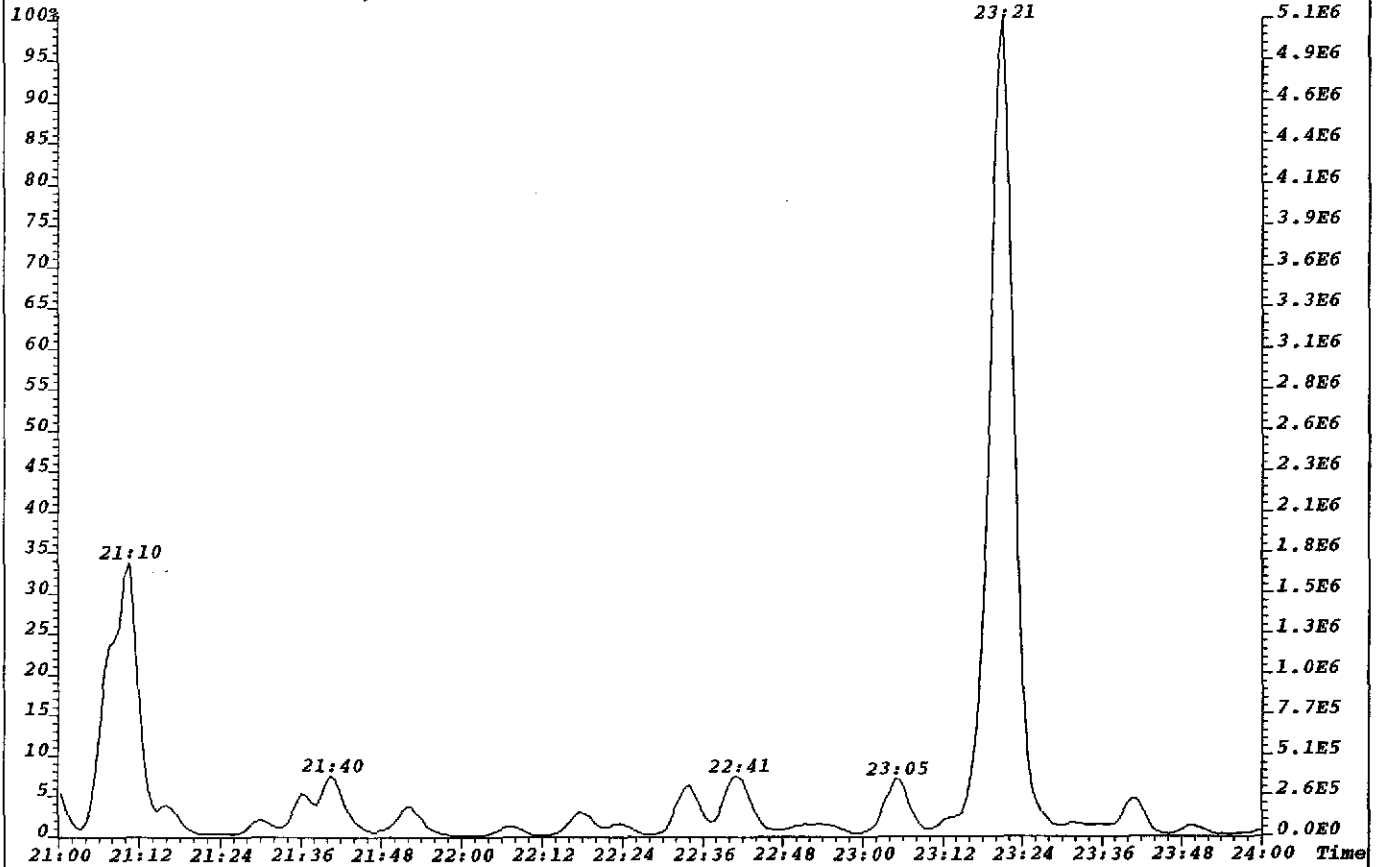
M\_Z -Nominal Ion Mass(es) WL-Below Retention Time Window A-Peak Added  
 ..RT. -Retention Time (mm:ss) WH-Above Retention Time Window K-Peak Kept  
 Rat.1 -Ratio of M/M+2 Ions SN-Below Signal to Noise Level D-Peak Deleted  
 OK -RO=Ratio Outside Limits <M-Below Method Detection Limit T-Time Changed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

\*\*\* End of Report \*\*\*

File:P023220 #1-3025 Acq:5-SEP-02 05:43:01 EI+ Voltage SIR 70P  
303.9016 GC:DB225 Exp:none

TRIANGLE LABS Text:DF-DP-82/12865 TLI#58258

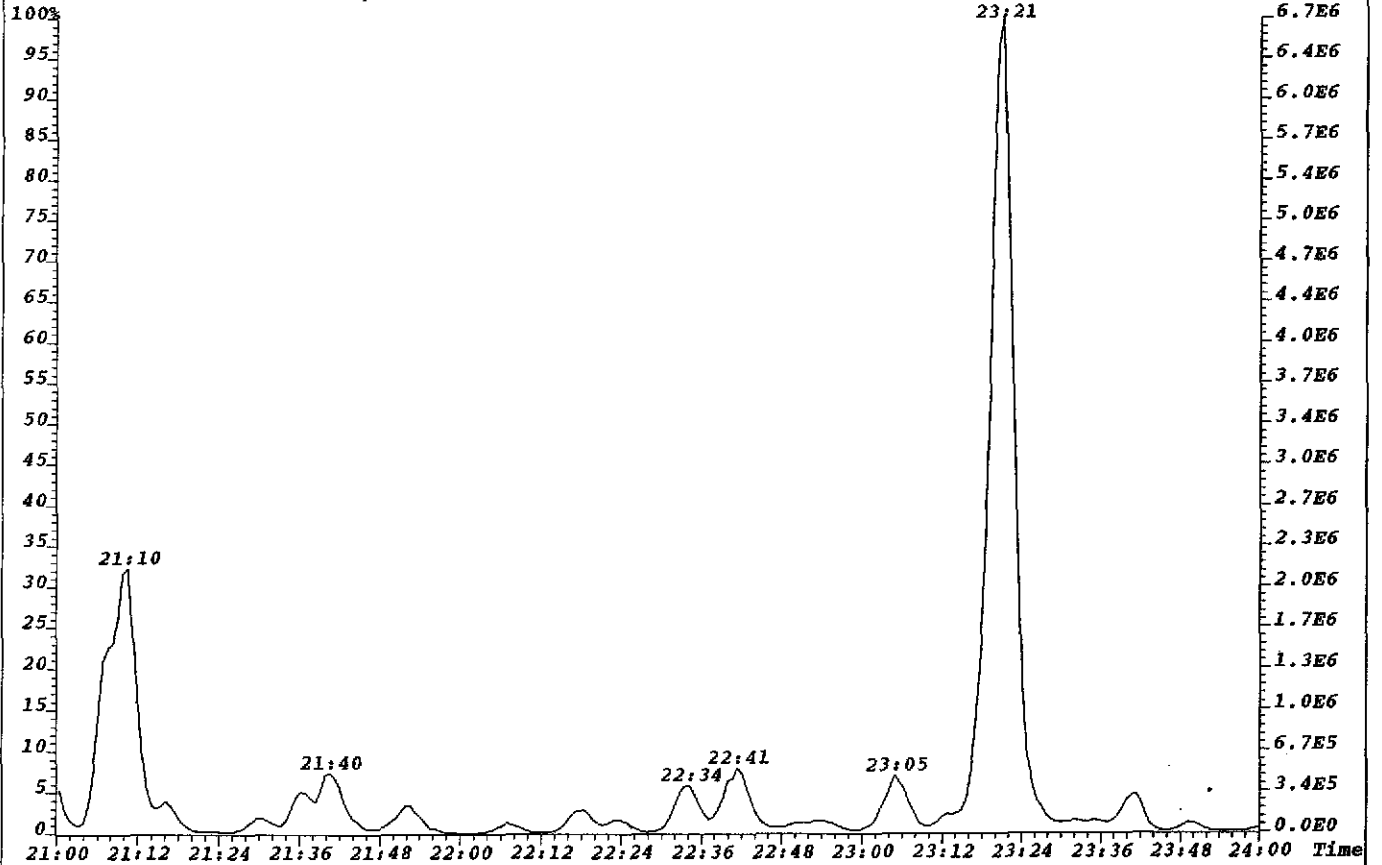
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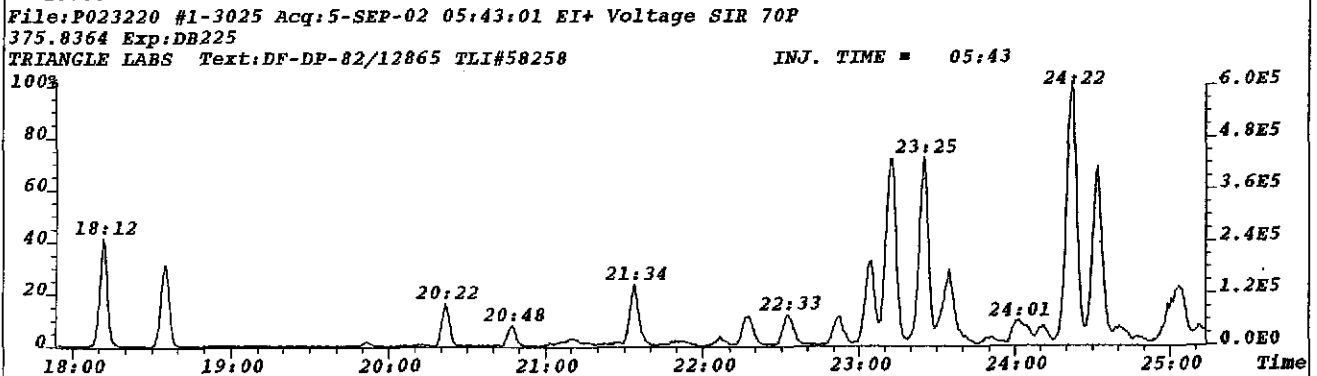
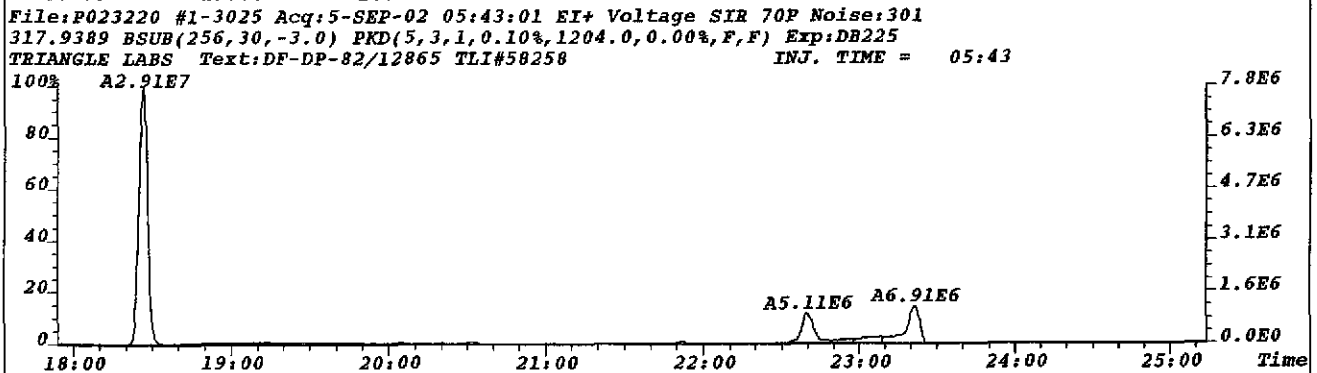
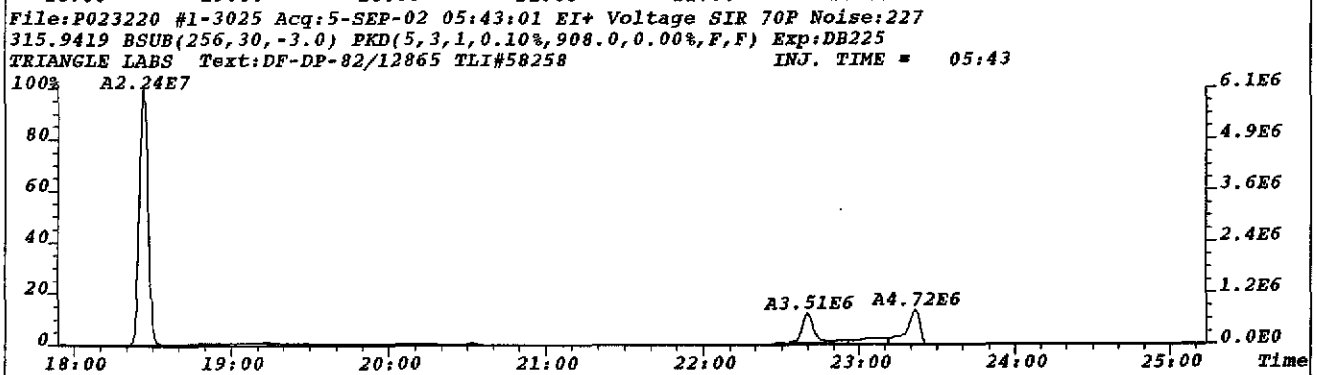
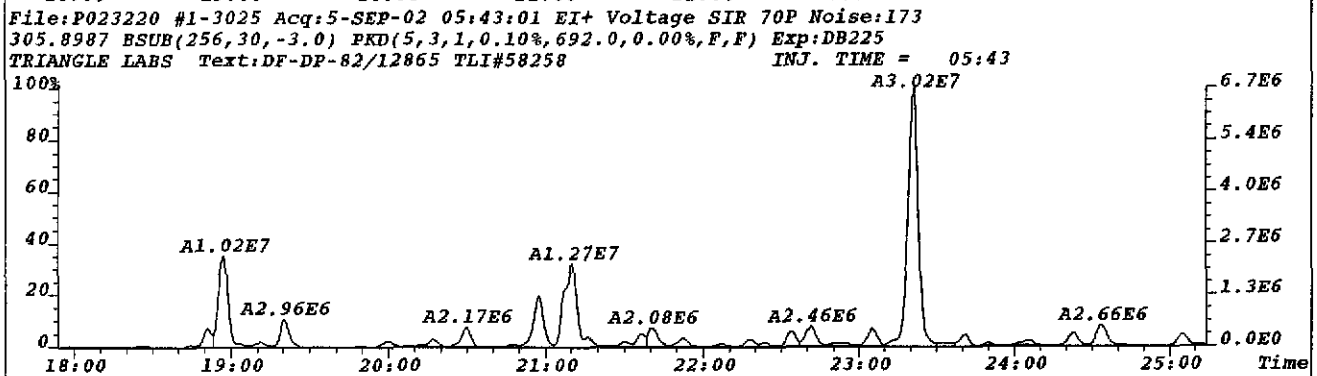
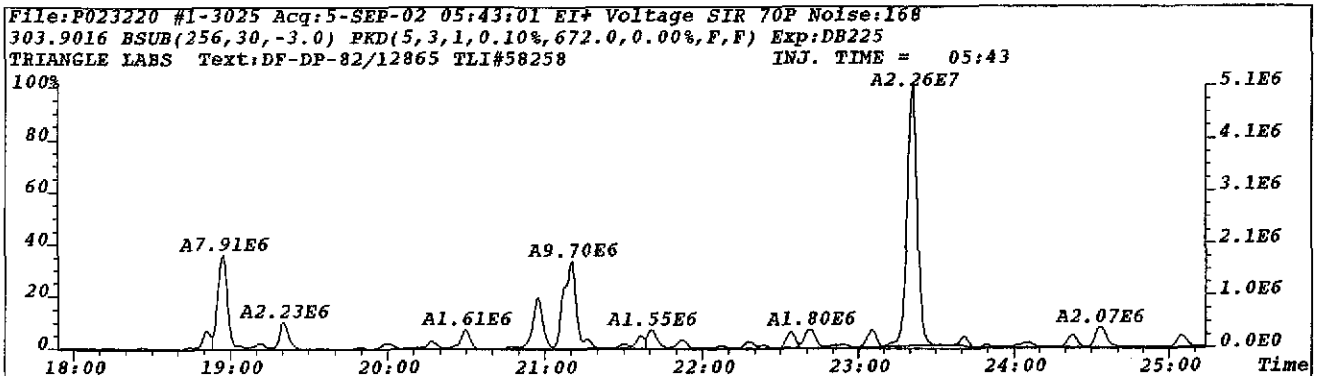


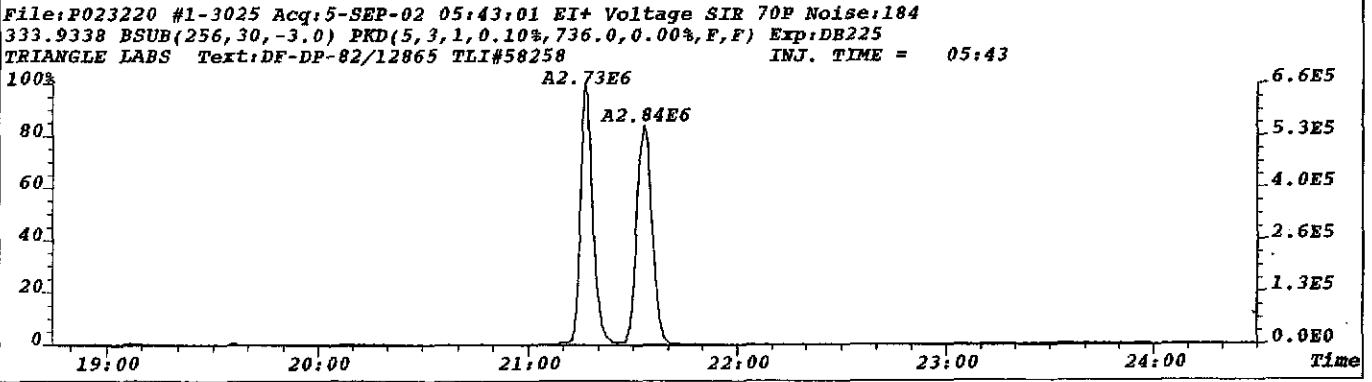
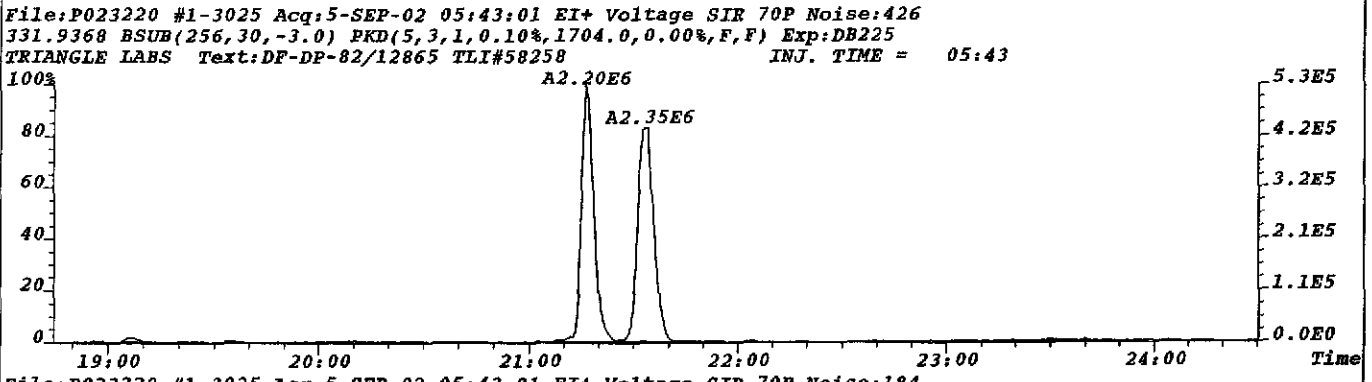
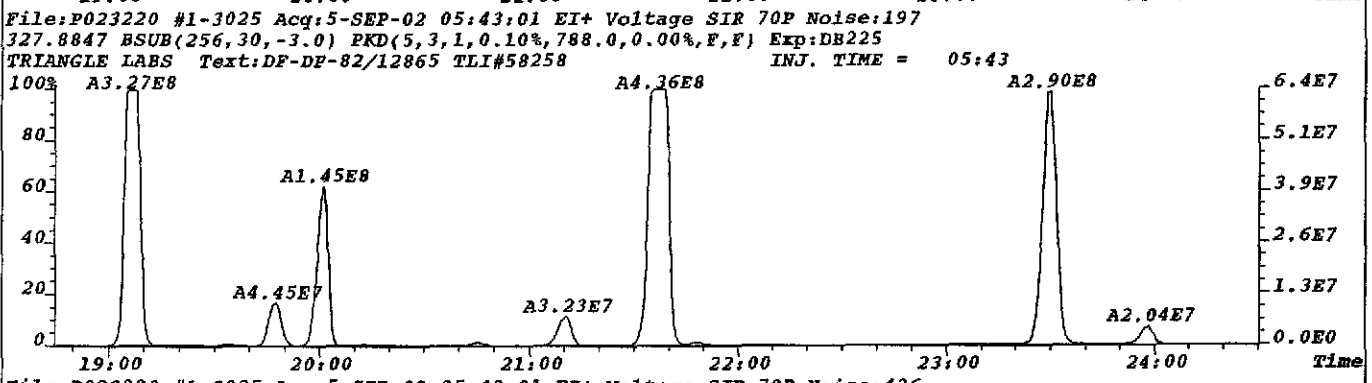
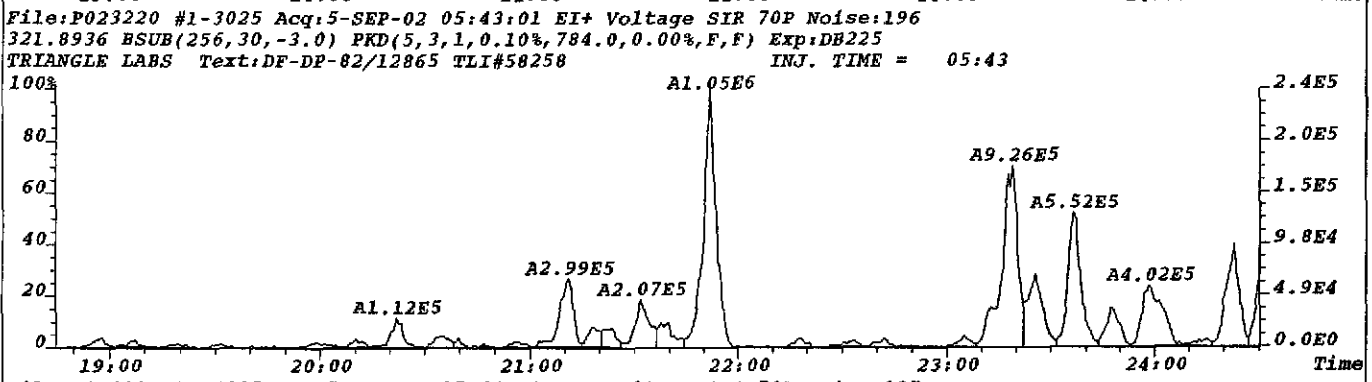
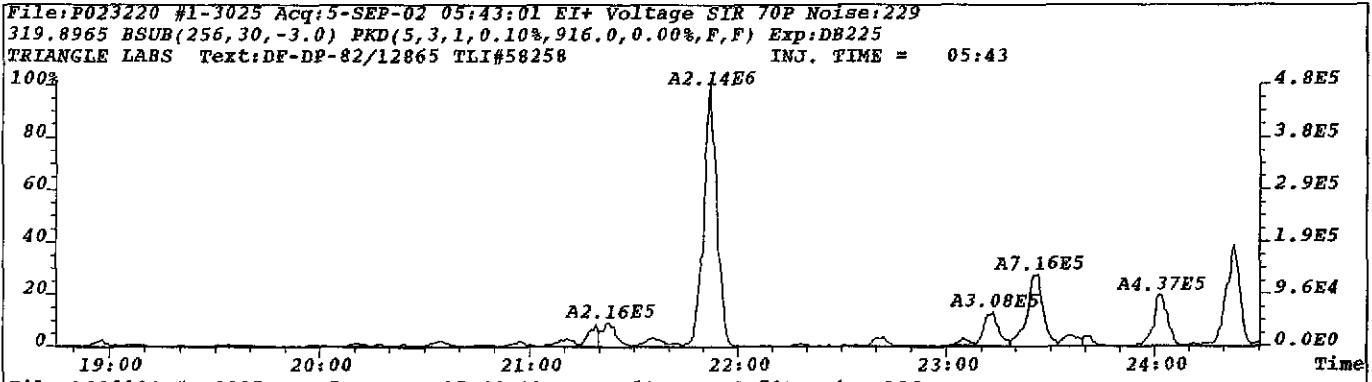
File:P023220 #1-3025 Acq:5-SEP-02 05:43:01 EI+ Voltage SIR 70P  
305.8987 GC:DB225 Exp:none

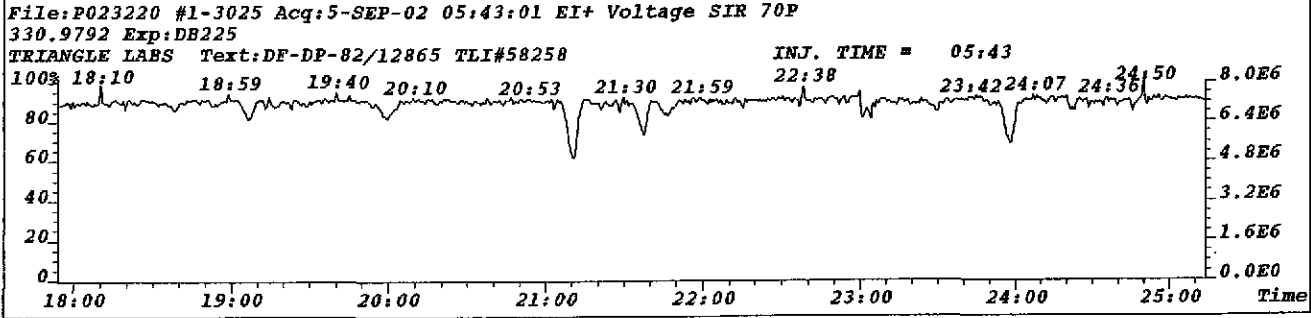
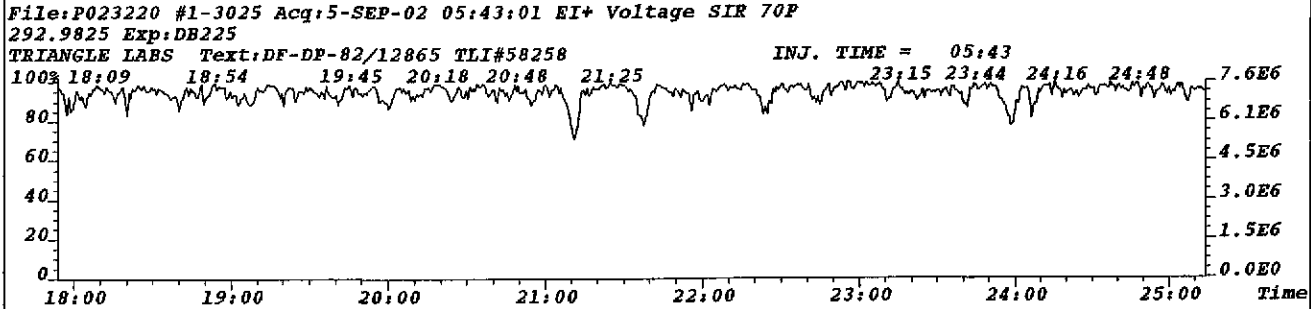
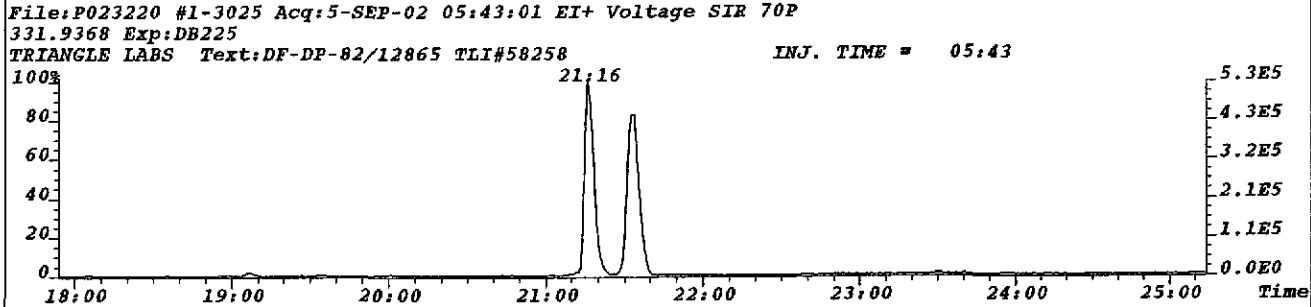
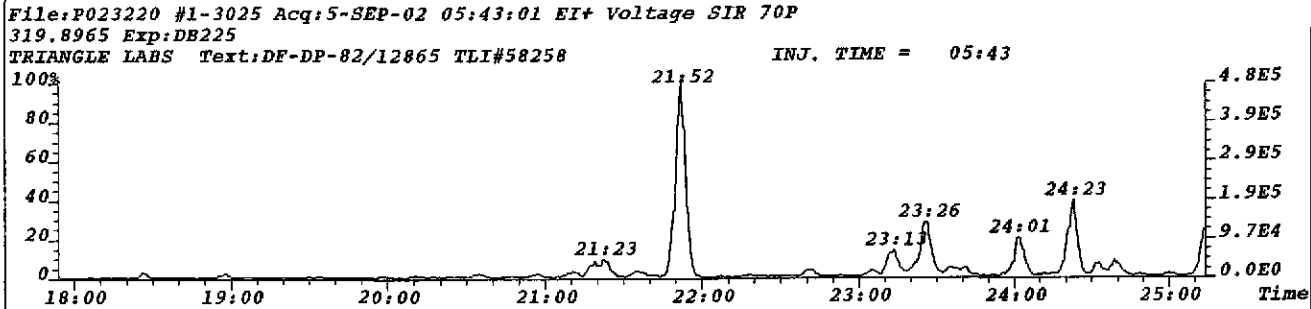
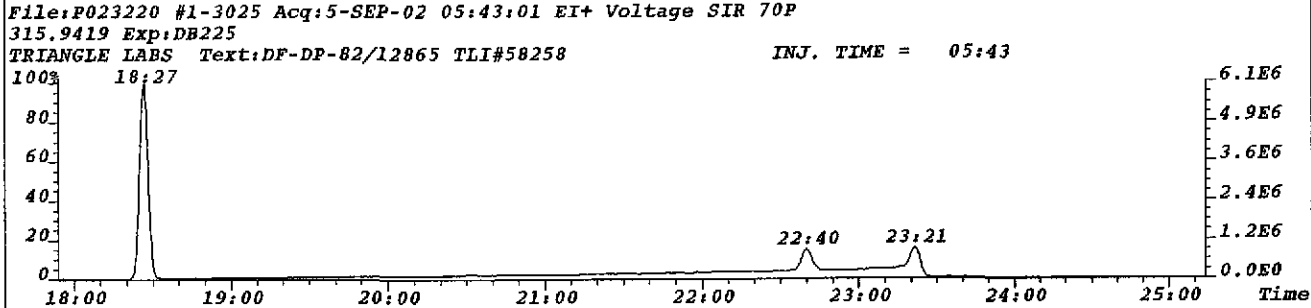
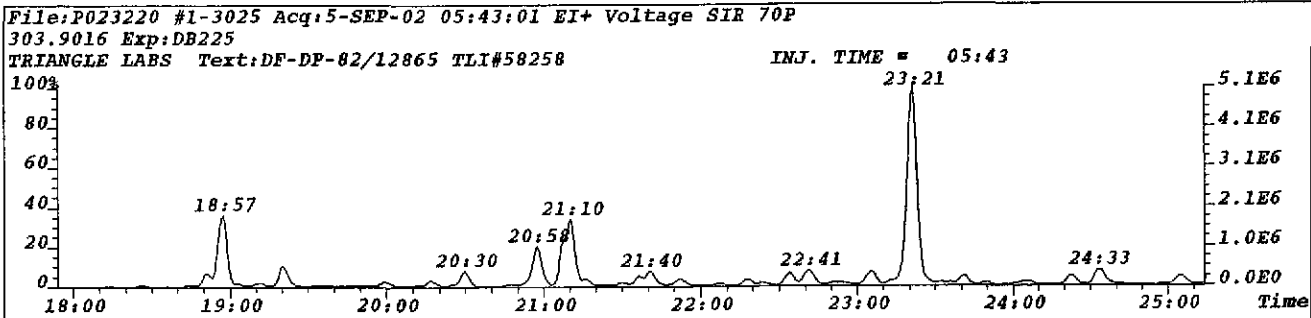
TRIANGLE LABS Text:DF-DP-82/12865 TLI#58258

INJ. TIME = 05:43

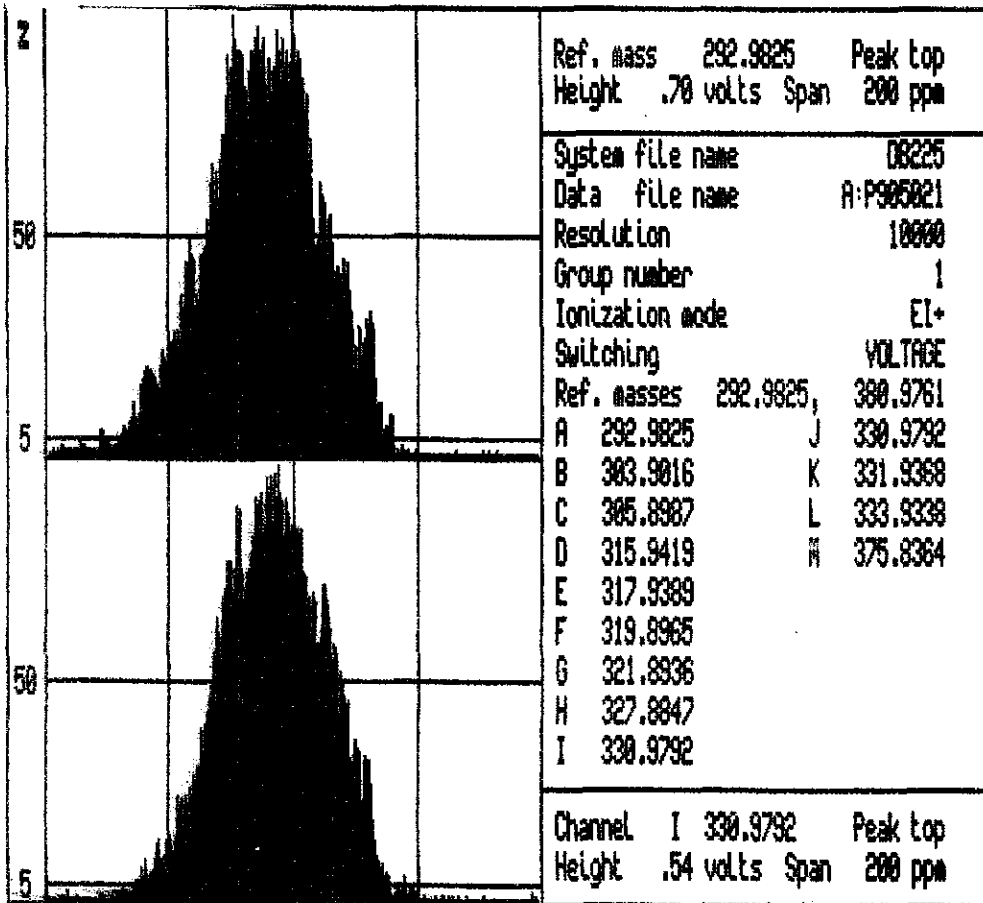












File:P023220 #1-3025 Acq:5-SEP-02 05:43:01 EI+ Voltage SIR 70P

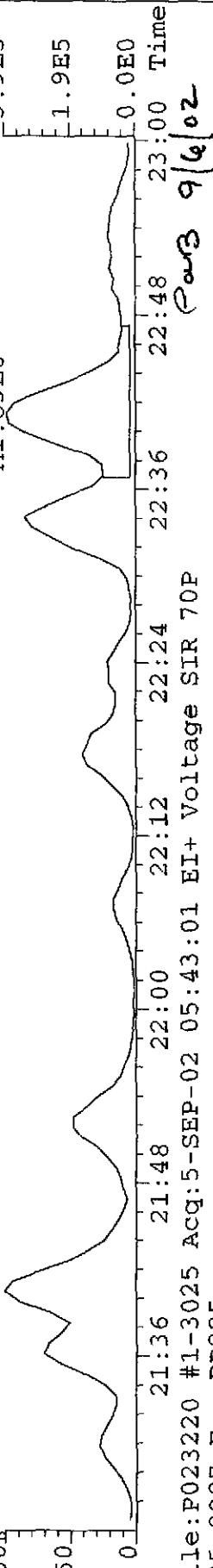
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Sample Text:DF-DP-82/12865 TLI#58258

INJ. TIME = 05:43 File Text:DF-DP-82/1286»

A1.83E6

3.9E5



File:P023220 #1-3025 Acq:5-SEP-02 05:43:01 EI+ Voltage SIR 70P

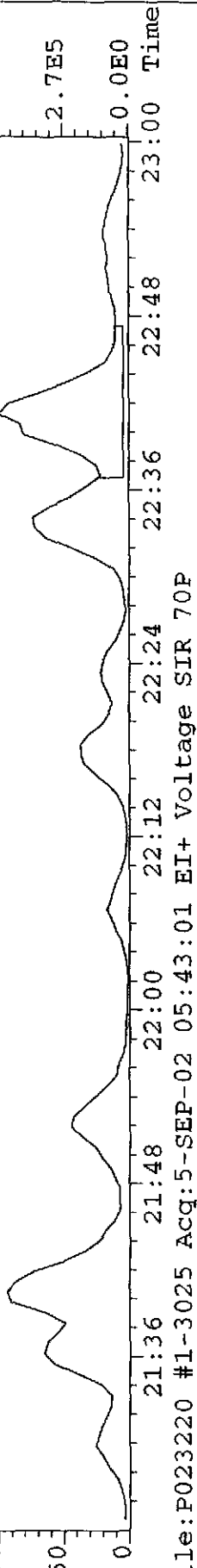
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Sample Text:DF-DP-82/12865 TLI#58258

INJ. TIME = 05:43 File Text:DF-DP-82/1286»

A2.37E6

5.3E5



File:P023220 #1-3025 Acq:5-SEP-02 05:43:01 EI+ Voltage SIR 70P

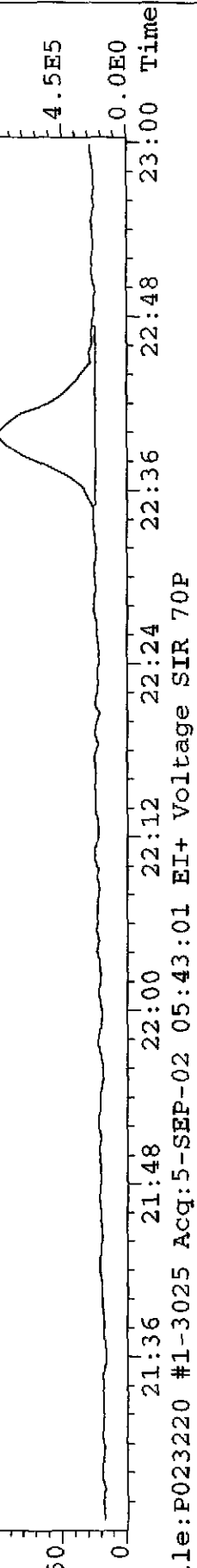
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Sample Text:DF-DP-82/12865 TLI#58258

INJ. TIME = 05:43 File Text:DF-DP-82/1286»

A3.19E6

8.9E5



File:P023220 #1-3025 Acq:5-SEP-02 05:43:01 EI+ Voltage SIR 70P

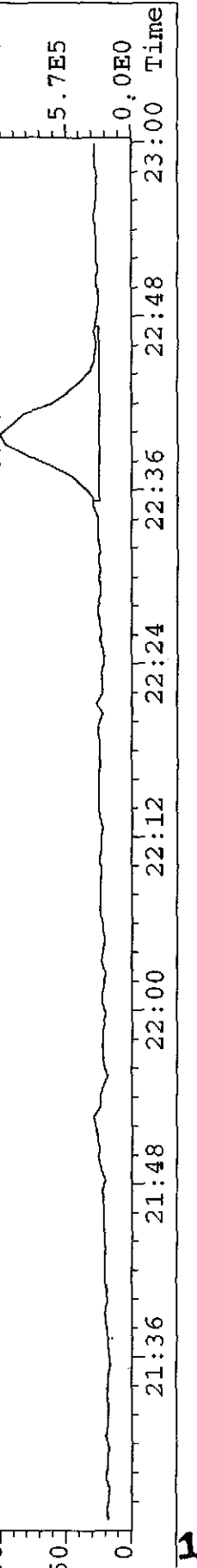
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Sample Text:DF-DP-82/12865 TLI#58258

INJ. TIME = 05:43 File Text:DF-DP-82/1286»

A4.08E6

1.1E6



**Mississippi Dept. of Env. Quality**

TLI Project: **58258**  
 Client Sample: **DF-DP-642/12872**

Method 8290 PCDD/PCDF Analysis (b)  
 Analysis File: **U131906**

Client Project:	<b>Crystal Springs Dioxin</b>		
Sample Matrix:	<b>SOIL</b>	Date Received:	<b>08/27/2002</b>
TLI ID:	<b>334-48-4</b>	Date Extracted:	<b>08/28/2002</b>
		Date Analyzed:	<b>09/04/2002</b>
		Spike File:	<b>SPMIT32S</b>
		ICal:	<b>UF57092</b>
		ConCal:	<b>U021317</b>
Sample Size:	<b>11.600 g</b>	Dilution Factor:	<b>n/a</b>
Dry Weight:	<b>10.057 g</b>	Blank File:	<b>U131602</b>
GC Column:	<b>DB-5</b>	Analyst:	<b>JWL</b>
		% Moisture:	<b>13.3</b>
		% Lipid:	<b>n/a</b>
		% Solids:	<b>86.7</b>

Analytes	Conc. (pg/g)	DL	EMPC	Ratio	RT	Flags
2,3,7,8-TCDD	ND	1.5				—
1,2,3,7,8-PeCDD	ND	1.8				—
1,2,3,4,7,8-HxCDD	EMPC		2.9			J_
1,2,3,6,7,8-HxCDD	EMPC		7.2			—
1,2,3,7,8,9-HxCDD	EMPC		4.6			J_
1,2,3,4,6,7,8-HpCDD	53.8			1.05	37:36	—
1,2,3,4,6,7,8,9-OCDD	2380			0.88	41:12	—
2,3,7,8-TCDF	600			0.74	26:41	E_
1,2,3,7,8-PeCDF	184			1.62	30:19	X_
2,3,4,7,8-PeCDF	527			1.56	30:59	—
1,2,3,4,7,8-HxCDF	1460			1.24	33:38	—
1,2,3,6,7,8-HxCDF	195			1.27	33:44	—
2,3,4,6,7,8-HxCDF	226			1.26	34:12	—
1,2,3,7,8,9-HxCDF	7.9			1.19	34:57	—
1,2,3,4,6,7,8-HpCDF	1780			1.05	36:35	—
1,2,3,4,7,8,9-HpCDF	513			1.05	38:07	—
1,2,3,4,6,7,8,9-OCDF	3580			0.87	41:25	—

Totals	Conc. (pg/g)	Number	DL	EMPC	Flags
Total TCDD	EMPC			26.7	Q_
Total PeCDD	EMPC			109	Q_
Total HxCDD	19.4	1		44.0	—
Total HpCDD	120	2			—
Total TCDF	2440	16		2510	E_
Total PeCDF	3720	13		3820	—
Total HxCDF	3890	12		3910	—
Total HpCDF	4150	4			—

**Mississippi Dept. of Env. Quality**

TLI Project: 58258  
 Client Sample: DF-DP-642/12872

Method 8290 PCDD/PCDF Analysis (b)  
 Analysis File: U131906

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	171	86.2	40%-135%	0.82	26:40	—
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	184	92.7	40%-135%	0.82	27:18	—
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	214	108	40%-135%	1.52	30:19	—
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	267	134	40%-135%	1.63	31:17	—
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	166	83.5	40%-135%	0.55	33:43	—
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	165	83.0	40%-135%	1.28	34:22	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	142	71.5	40%-135%	0.51	36:34	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	153	76.9	40%-135%	1.13	37:35	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8,9-OCDD	309	77.6	40%-135%	0.94	41:12	—

Surrogate Standards (Type B)	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	246	124	40%-135%	1.66	30:59	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	166	83.6	40%-135%	0.55	33:37	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	175	87.9	40%-135%	1.28	34:18	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	164	82.5	40%-135%	0.50	38:06	—

Other Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	Flags
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	26.4	133	40%-135%	27:19	—

Alternate Standards (Type B)	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	159	79.8	40%-135%	0.54	34:57	—
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	176	88.4	40%-135%	0.53	34:11	—

Recovery Standards	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	0.82	27:07	—
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	1.26	34:41	—

Data Reviewer: PAB 09/06/2002

**Mississippi Dept. of Env. Quality**

TLI Project: **58258**  
 Client Sample: **DF-DP-642/12872**

Toxicity Equivalents Report  
 Analysis File: **U131906**

Client Project:	<b>Crystal Springs Dioxin</b>		
Sample Matrix:	<b>SOIL</b>	Date Received:	<b>08/27/02</b>
TLI ID:	<b>334-48-4</b>	Date Extracted:	<b>08/28/02</b>
		Date Analyzed:	<b>09/04/02</b>
		Spike File:	<b>SPMIT32S</b>
		ICal:	<b>UF57092</b>
		ConCal:	<b>U021317</b>
Sample Size:	<b>11.600 g</b>	Dilution Factor:	<b>1</b>
Dry Weight:	<b>10.057 g</b>	Blank File:	<b>U131602</b>
GC Column:	<b>DB-5</b>	Analyst:	<b>JWL</b>
		% Moisture:	<b>13.3</b>
		% Lipid:	<b>n/a</b>
		% Solids:	<b>86.7</b>

Analytes	Conc. (pg/g)		TEF		Equivalent
2,3,7,8-TCDD	{1.5}	x	1.	=	1.5
1,2,3,7,8-PeCDD	{1.8}	x	0.5	=	0.90
1,2,3,4,7,8-HxCDD	[2.9]	x	0.1	=	0.29
1,2,3,6,7,8-HxCDD	[7.2]	x	0.1	=	0.72
1,2,3,7,8,9-HxCDD	[4.6]	x	0.1	=	0.46
1,2,3,4,6,7,8-HpCDD	53.8	x	0.01	=	0.538
1,2,3,4,6,7,8,9-OCDD	2380	x	0.001	=	2.380
TOTAL PCDD					6.8
2,3,7,8-TCDF	440	x	0.1	=	44.0
1,2,3,7,8-PeCDF	184	x	0.05	=	9.20
2,3,4,7,8-PeCDF	527	x	0.5	=	264
1,2,3,4,7,8-HxCDF	1460	x	0.1	=	146.0
1,2,3,6,7,8-HxCDF	195	x	0.1	=	19.5
2,3,4,6,7,8-HxCDF	226	x	0.1	=	22.6
1,2,3,7,8,9-HxCDF	7.9	x	0.1	=	0.79
1,2,3,4,6,7,8-HpCDF	1780	x	0.01	=	17.80
1,2,3,4,7,8,9-HpCDF	513	x	0.01	=	5.13
1,2,3,4,6,7,8,9-OCDF	3580	x	0.001	=	3.580
TOTAL PCDF					533

**Total EPA TEFs, 1989a: 539 pg/g**

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

Initial . . . . . Date . . . . .

PAB 9/6/02

Data Review By:

Calculated Noise Height: 5.40

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 U131906B.dbf  
09/06/2002 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				0.874-1.072			
304-306	DC NL	Height	10.79	6.20	4.59				
	DC WL	22:53 RO	3.94	26.57				0.858	
K		23:16	0.77	1,190.36	519.36	671.00		0.873	
		23:27	0.80	1,350.82	601.78	749.04		0.879	
		23:58	0.76	370.65	160.34	210.31		0.899	
		24:17	0.74	1,874.83	794.36	1,080.47		0.911	
		24:31	0.74	1,284.89	548.45	736.44		0.919	
		24:51	0.76	3,827.93	1,651.68	2,176.25		0.932	
		25:08	0.76	7,695.12	3,315.61	4,379.51		0.943	
		25:28	0.75	10,844.32	4,631.67	6,212.65		0.955	
		25:46	0.77	4,922.47	2,138.62	2,783.85		0.966	
		25:57	0.77	5,906.22	2,571.14	3,335.08		0.973	
		26:19	0.76	7,797.55	3,354.68	4,442.87		0.987	
		26:30	0.75	3,662.74	1,568.49	2,094.25		0.994	
		26:41	0.74	21,097.50	8,985.10	12,112.40	1.001	2378-TCDF	AN E
		27:04	0.74	8,627.20	3,659.54	4,967.66		1.015	
X	X	27:16 RO	0.74	2,513.57	1,071.62	1,441.95		1.023	
		27:40	0.74	4,679.08	1,993.37	2,685.71		1.038	
		28:16	0.78	812.04	356.70	455.34		1.060	
304-306		17 Peaks		88,457.29					

13C12-TCDF		0.65-0.89				0.962-1.038			
316-318	DC NL	Height	12.86	6.34	6.52				
	DC WL	23:15	0.75	556.24				0.872	
	DC WL	25:27 RO	1.00	79.97				0.954	
		25:54 RO	1.15	406.00	264.36	229.38		0.971	
	DC SN	26:18 RO	1.82	57.67				0.986	
		26:40	0.82	6,201.79	2,795.05	3,406.74	1.000	13C12-2378-TCDF ISO	
		Height		1,699.21	749.01	950.20			
	DC SN	27:09 RO	1.30	65.08				1.018	
	DC WH	27:53 RO	1.62	70.78				1.046	
	DC WH	28:02 RO	2.79	58.73				1.051	
316-318		2 Peaks		6,607.79					

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

TCDD		0.65-0.89				0.900-1.043			
320-322	DC NL	Height	6.01	3.07	2.94				
	DC SN	24:16 RO	0.45	60.13				0.889	
	DC SN	24:52 RO	0.22	54.62				0.911	
	DC SN	25:12 RO	0.12	6.74				0.923	1379-TCDD AN
		25:54 RO	0.15	525.46	228.59	1,524.69		0.949	
D	D	SN 26:13 RO	0.53	47.58				0.960	Q

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.

	DC	SN	26:27	RO	0.01	11.59			0.969		
			27:05	RO	0.17	74.00	32.19	187.87	0.992		
A			27:37	RO	0.55	145.51	63.30	115.00	1.012		
AD	D	WH	28:29	RO	0.15	531.00			1.043		
320-322			3 Peaks			744.97					

37Cl-TCDD									0.925-1.075		
328	DC	NL				Height	103.70	103.70			
	DC	WL	24:17				7,977.34		0.889		
	DC	WL	24:27				46,285.40		0.896		
	DC	WL	24:55				1,596.32		0.913		
	DC	WL	25:11				3,661.67		0.922		
			26:00				652,887.00	652,887.00	0.952		
			26:20				1,710.06	1,710.06	0.965		
			26:50				545.76	545.76	0.983		
			27:06				7,122.02	7,122.02	0.993		
			27:19				714.07	714.07	1.001	37Cl-TCDD	CLS
			27:38				634,282.00	634,282.00	1.012		
			27:59				1,749.98	1,749.98	1.025		
328			7 Peaks			1,299,010.89					

13C12-TCDD									0.925-1.075		
332-334	DC	NL				Height	8.75	5.66	3.09		
			25:58	RO	1.29		374.27	273.81	211.45	0.951	
			27:07		0.82		4,486.48	2,019.90	2,466.58	0.993	13C12-1234-TCDD RS1
			27:18		0.82		4,694.45	2,114.28	2,580.17	1.000	13C12-2378-TCDD IS1
						Height	1,498.14	682.14	816.00		
			27:37	RO	2.03		137.99	158.12	77.96	1.012	
			28:05	RO	2.64		61.01	90.90	34.47	1.029	
332-334			5 Peaks			9,754.20					

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

PeCDF									0.928-1.061		
340-342	DC	NL				Height	6.67	3.96	2.71		
	DC	WL	27:54				79.68		0.920		
			28:14				2,419.02	1,458.47	960.55	0.931	
X		X	28:23	RO	1.57		2,699.20	1,650.80	1,048.40	0.936	
			28:31		1.51		6,038.49	3,633.29	2,405.20	0.941	
			29:02		1.46		3,020.38	1,790.72	1,229.66	0.958	Q
			29:19		1.54		2,450.90	1,484.34	966.56	0.967	
			29:32		1.55		48,727.60	29,595.00	19,132.60	0.974	
			29:46		1.57		5,061.95	3,095.26	1,966.69	0.982	
			30:07		1.52		8,609.99	5,193.27	3,416.72	0.993	
M			30:15		1.58		8,890.00	5,450.00	3,440.00	0.998	
AN		X	30:19		1.62		6,270.00	3,880.00	2,390.00	1.000	12378-PeCDF AN
			30:35		1.49		8,027.96	4,808.20	3,219.76	1.009	
			30:49		1.50		1,002.86	601.09	401.77	1.016	
			30:59		1.56		17,644.10	10,744.80	6,899.30	1.022	23478-PeCDF AN
			31:07		1.51		7,279.21	4,378.02	2,901.19	1.026	
X		X	31:28	RO	0.71		683.60	415.52	587.40	1.038	
340-342			15 Peaks			128,825.26					

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-PeCDF		1.32-1.78			0.867-1.133		
352-354	DC NL	Height	5.68	2.49	3.19		
		28:08	1.62	689.73	426.44	263.29	0.928
		28:29 RO	0.57	148.77	90.43	159.65	0.940
		29:17 RO	0.30	57.22	34.78	116.44	0.966
		30:19	1.52	5,396.83	3,254.61	2,142.22	1.000 13C12-PeCDF 123 IS2
		Height		1,629.50	983.74	645.76	
		30:59	1.66	6,219.90	3,881.64	2,338.26	1.022 13C12-PeCDF 234 SUR1
		31:37 RO	2.01	181.56	143.13	71.20	1.043
		31:47 RO	0.83	446.09	271.15	328.29	1.048
352-354	7 Peaks			13,140.10			

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

PeCDD		1.32-1.78			0.938-1.021		
356-358	DC NL	Height	4.65	2.13	2.52		
K		29:15 RO	0.01	95.91	58.30	3,918.02	0.935 J
		29:28 RO	0.00	160.95	97.83	211,831.00	0.942
		29:43 RO	0.00	129.56	78.75	36,970.10	0.950
		30:10 RO	0.02	79.18	48.13	2,600.76	0.964 J
M		31:04 RO	0.00	85.22	51.80	209,000.00	0.993 J
M		31:25 RO	0.02	556.06	338.00	20,900.00	1.004 Q
		31:43 RO	0.50	713.23	433.53	861.87	1.014
		31:56 RO	0.51	669.37	406.87	799.75	1.021
356-358	8 Peaks			2,489.48			

13C12-PeCDD		1.32-1.78			0.871-1.129		
368-370	DC NL	Height	4.21	2.13	2.08		
		29:30 RO	2.05	161.03	129.38	63.15	0.943
		29:44 RO	2.15	64.03	54.07	25.11	0.950
		30:25 RO	0.32	14.02	8.52	26.52	0.972
		30:56 RO	1.01	64.06	25.36	25.12	0.989
		31:04 RO	1.12	218.13	95.62	85.54	0.993
		31:17	1.63	4,010.06	2,485.47	1,524.59	1.000 13C12-PeCDD 123 IS3
		Height		1,345.68	839.48	506.20	
368-370	6 Peaks			4,531.33			

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

HxCDF		1.05-1.43			0.964-1.045		
374-376	DC NL	Height	21.26	14.81	6.45		
	DC SN	32:31	1.40	72.46			0.967
		32:42	1.24	6,954.25	3,847.38	3,106.87	0.973
		32:51	1.24	28,391.30	15,724.90	12,666.40	0.977
		33:07	1.28	755.11	423.23	331.88	0.985
		33:16	1.29	9,816.22	5,530.37	4,285.85	0.990
		33:25 RO	1.92	321.46	276.14	143.51	0.994
MN		33:38	1.24	39,200.00	21,700.00	17,500.00	1.000 123478-HxCDF AN
N		33:44	1.27	5,505.99	3,076.78	2,429.21	1.003 123678-HxCDF AN
		33:50	1.28	590.27	331.10	259.17	1.006
		34:00	1.27	1,904.40	1,066.63	837.77	1.011
N		34:12	1.26	5,556.18	3,096.56	2,459.62	1.017 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.

			34:40	RO	1.82	131.47	106.86	58.69	1.031			
			34:46	RO	1.64	67.27	49.28	30.03	1.034			J
N			34:53		1.17	91.91	49.52	42.39	1.038			J
AN			34:57		1.19	160.40	87.20	73.20	1.040	123789-HxCDF	AN	
M			35:02		1.23	1,626.00	897.00	729.00	1.042			
374-376		15 Peaks				101,072.23						

13C12-HxCDF			0.43-0.59			0.881-1.119						
384-386	DC	NL	Height			230.85	94.43	136.42				
			32:48		0.50	1,561.82	522.94	1,038.88	0.976			
N			33:37		0.55	4,701.73	1,673.01	3,028.72	1.000	13C12-HxCDF	478 SUR2	
N			33:43		0.55	4,678.09	1,668.77	3,009.32	1.003	13C12-HxCDF	678 IS4	
			Height			1,494.16	515.39	978.77				
	DC	SN	33:49	RO	1.65	700.97			1.006			
MN			34:11		0.53	4,560.00	1,570.00	2,990.00	1.017	13C12-HxCDF	234 ALT2	
	DC	SN	34:25		0.44	215.57			1.024			
MKTN			34:57		0.54	3,270.00	1,150.00	2,120.00	1.037	13C12-HxCDF	789 ALT1	
	DC	SN	35:05	RO	1.29	195.27			1.044			
	DC	SN	35:13	RO	1.29	346.74			1.048			
384-386		5 Peaks				18,771.64						

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

HxCDD			1.05-1.43			0.959-1.013						
390-392	DC	NL	Height			42.66	12.39	30.27				
	DC	SN	32:58	RO	0.52	60.19			0.961			
A			33:10	RO	1.77	120.51	95.20	53.80	0.967			
	DC	SN	33:18		1.21	66.48			0.971			
A			33:48		1.24	347.00	192.00	155.00	0.985			
A			34:06	RO	1.81	56.45	45.70	25.20	0.994			J
AN			34:18	RO	0.84	51.85	28.70	34.20	1.000	123478-HxCDD	AN	J
MKN			34:23	RO	0.86	130.61	72.30	83.60	1.002	123678-HxCDD	AN	
AN			34:41	RO	0.62	81.29	45.00	73.00	1.011	123789-HxCDD	AN	J
	DC	WH	34:53	RO	0.40	324.94			1.017			
390-392		6 Peaks				787.71						

13C12-HxCDD			1.05-1.43			0.971-1.029						
402-404	DC	NL	Height			33.22	19.74	13.48				
	DC	SN	34:04	RO	2.50	41.33			0.993			
N			34:18		1.28	3,134.02	1,757.48	1,376.54	1.000	13C12-HxCDD	478 SUR3	
N			34:22		1.28	3,270.60	1,839.17	1,431.43	1.002	13C12-HxCDD	678 IS5	
			Height			1,079.66	614.24	465.42				
N			34:41		1.26	3,794.59	2,112.58	1,682.01	1.011	13C12-HxCDD	789 RS2	
	DC	SN	34:50	RO	0.39	68.84			1.016			
402-404		3 Peaks				10,199.21						

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

HpCDF			0.88-1.20			0.995-1.047						
408-410	DC	NL	Height			16.65	10.47	6.18				
N			36:35		1.05	36,835.60	18,823.20	18,012.40	1.007	1234678-HpCDF	AN	
			36:51		1.04	1,711.63	873.99	837.64	1.014			

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.

				36:59	1.04	31,172.40	15,928.90	15,243.50	1.018			
	KN			38:07	1.05	7,536.18	3,864.84	3,671.34	1.049	1234789-HpCDF	AN	
408-410			4 Peaks			77,255.81						

13C12-HpCDF				0.37-0.51			0.945-1.110					
418-420	DC	NL		Height		50.06	17.02	33.04				
	N			36:20	RO 0.70	147.77	72.12	102.62	1.000			
	NM			36:34	0.51	2,849.00	959.00	1,890.00	1.006	13C12-HpCDF 678	IS6	
				Height		818.71	269.34	549.37				
				36:57	RO 0.84	744.51	434.25	517.02	1.017			
				37:05	RO 0.79	1,263.17	692.74	877.20	1.021			
				37:32	RO 1.25	738.03	638.20	512.52	1.033			
				37:47	RO 0.75	737.57	383.36	512.20	1.040			
	MN			38:06	0.50	2,311.00	771.00	1,540.00	1.049	13C12-HpCDF 789	SUR4	
				38:20	RO 0.81	785.56	443.42	545.53	1.055			
	DC	SN		38:27	RO 0.90	412.92			1.058			
418-420			8 Peaks			9,576.61						

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

HpCDD				0.88-1.20			0.976-1.005					
424-426	DC	NL		Height		14.52	6.88	7.64				
				36:51	1.01	796.18	399.40	396.78	0.980			
	D	D	NH	37:05	RO 1.33	67.69			0.987			
	M			37:36	1.05	645.00	330.00	315.00	1.000	1234678-HpCDD	AN	
424-426			2 Peaks			1,441.18						

13C12-HpCDD				0.88-1.20			0.973-1.027					
436-438	DC	NL		Height		46.32	29.42	16.90				
	M			37:35	1.13	2,360.00	1,250.00	1,110.00	1.000	13C12-HpCDD 678	IS7	
				Height		600.35	307.98	292.37				
436-438			1 Peak			2,360.00						

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

OCDF				0.76-1.02			0.903-1.097					
442-444	DC	NL		Height		9.57	4.98	4.59				
				41:25	0.87	43,243.70	20,170.50	23,073.20	1.005	OCDF	AN	
				41:47	RO 1.33	70.72	49.92	37.42	1.014			
				43:17	RO 2.39	42.32	53.46	22.39	1.051			
442-444			3 Peaks			43,356.74						

OCDD				0.76-1.02			0.903-1.097					
458-460	DC	NL		Height		6.21	3.80	2.41				
				41:12	0.88	21,289.77	9,977.07	11,312.70	1.000	OCDD	AN	
458-460			1 Peak			21,289.77						

13C12-OCDD				0.76-1.02			0.996-1.004					
470-472	DC	NL		Height		43.10	30.84	12.26				
	M			41:12	0.94	3,220.00	1,560.00	1,660.00	1.000	13C12-OCDD	IS8	
				Height		654.78	319.04	335.74				
	DC	WH		41:32	RO 1.13	669.10			1.008			

Compound/

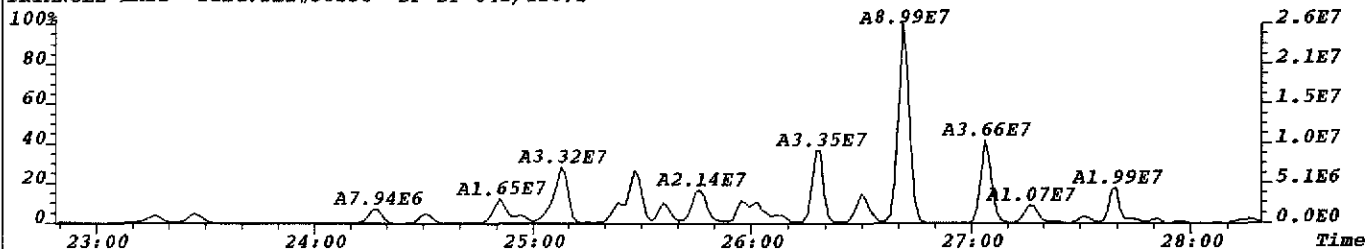
M\_Z.... QC.Log Omit Why ..RT. OK Ratio Total.Area/Ht Area/Ht.Peak1 Area/Ht.Peak2 Rel.RT Compound.Name.. ID.. Flags.  
470-472 1 Peak 3,220.00

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

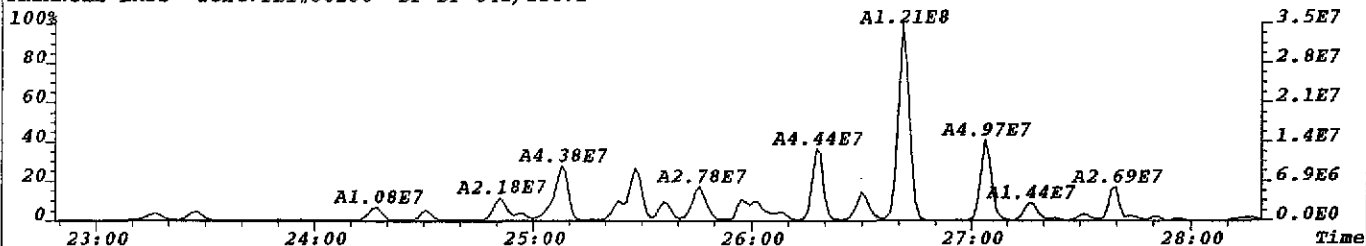
M_Z	-Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT.	-Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1	-Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK	-RO=Ratio Outside Limits	<M-Below Method Detection Limit	T-Time Changed
Rel.RT	-Relative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

\*\*\* End of Report \*\*\*

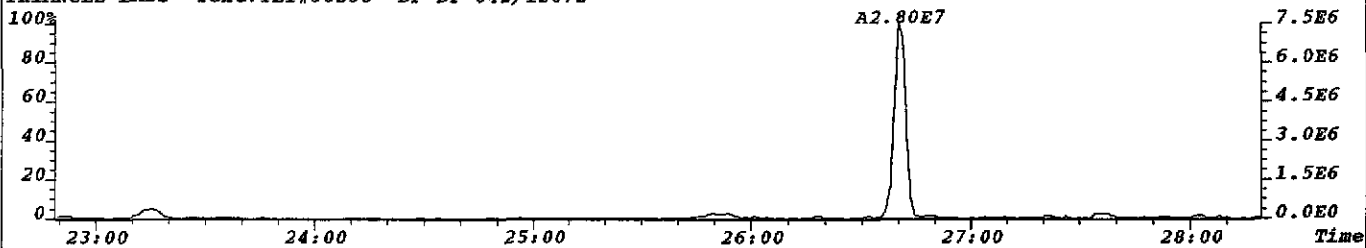
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TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



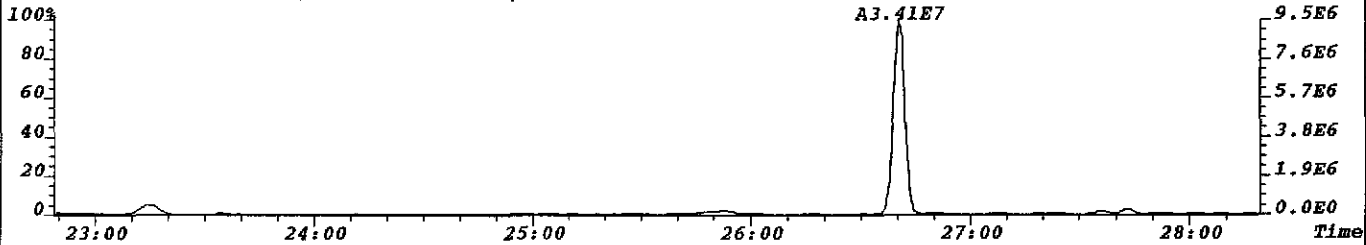
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TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



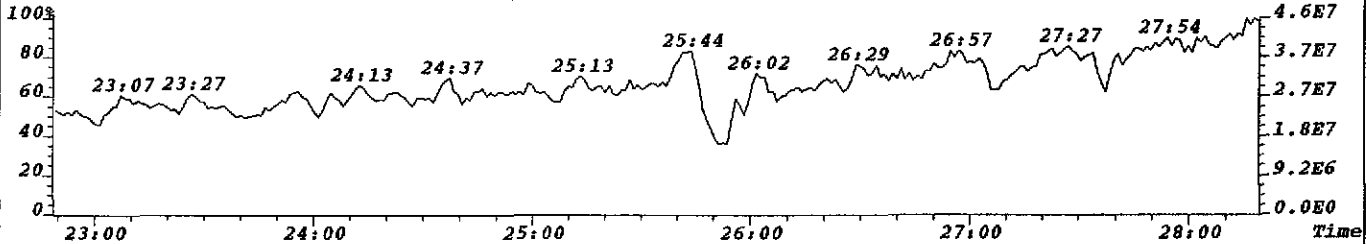
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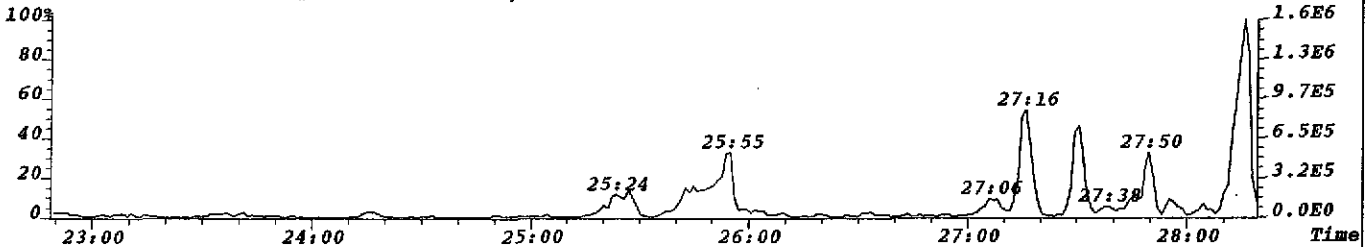
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TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872

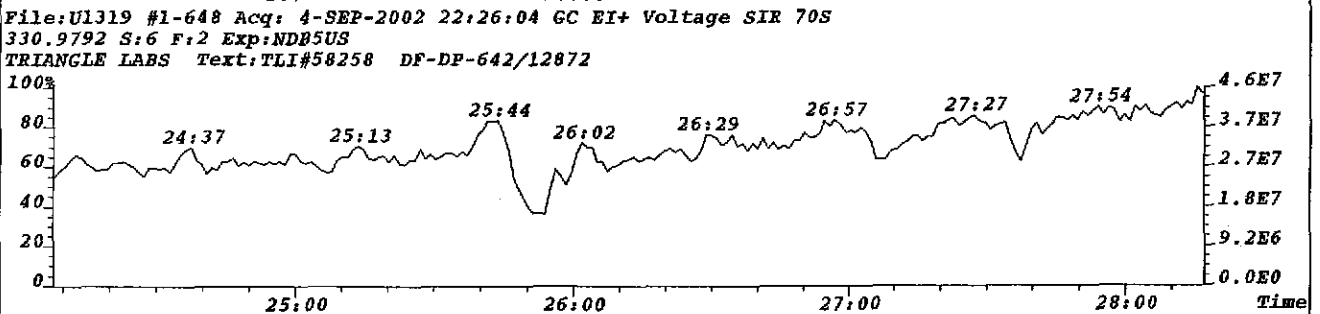
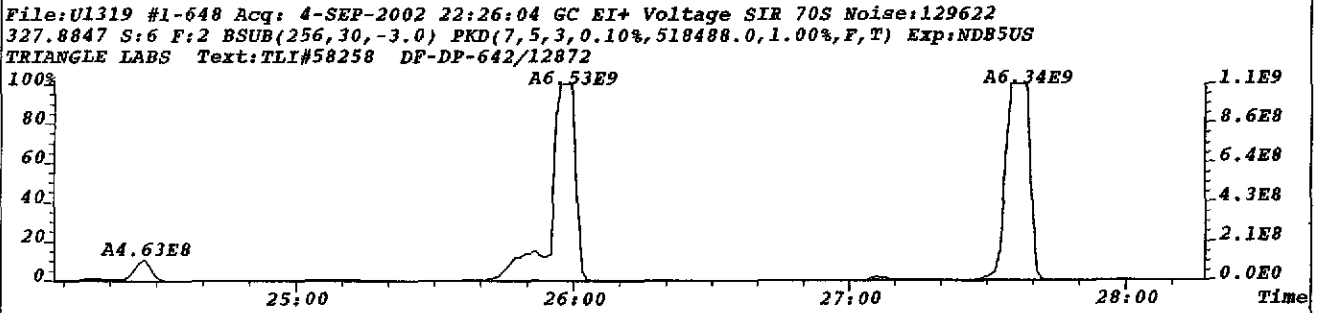
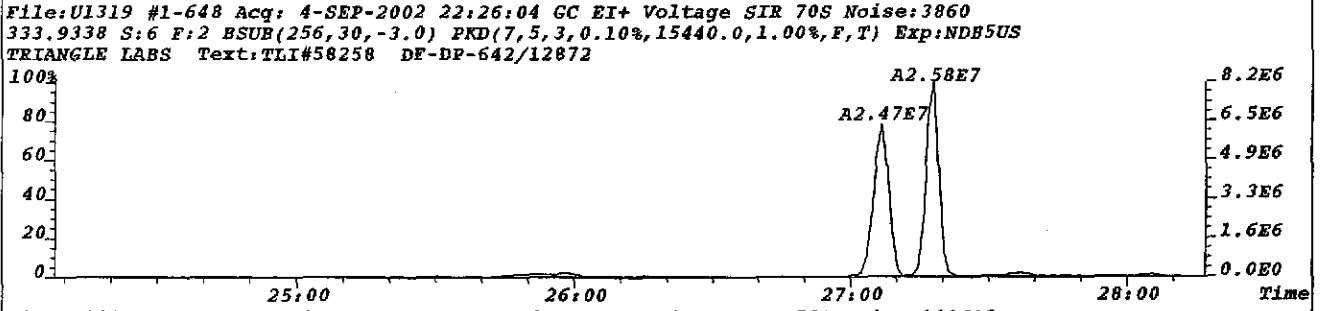
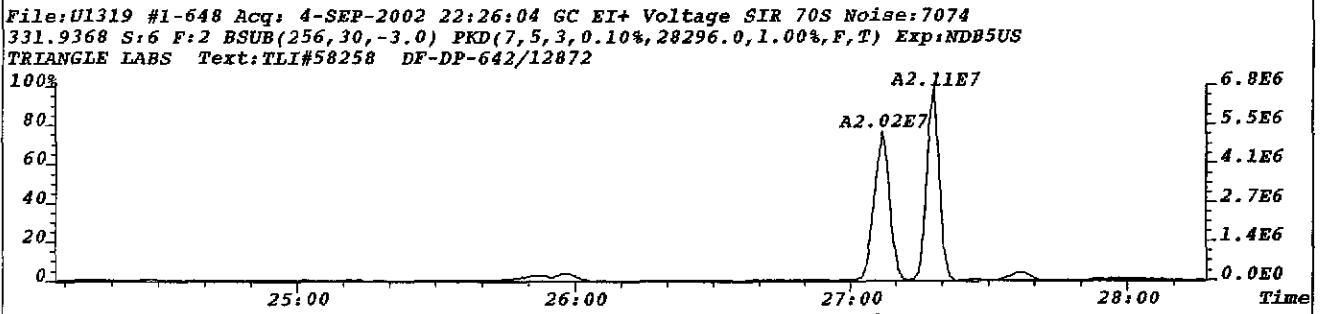
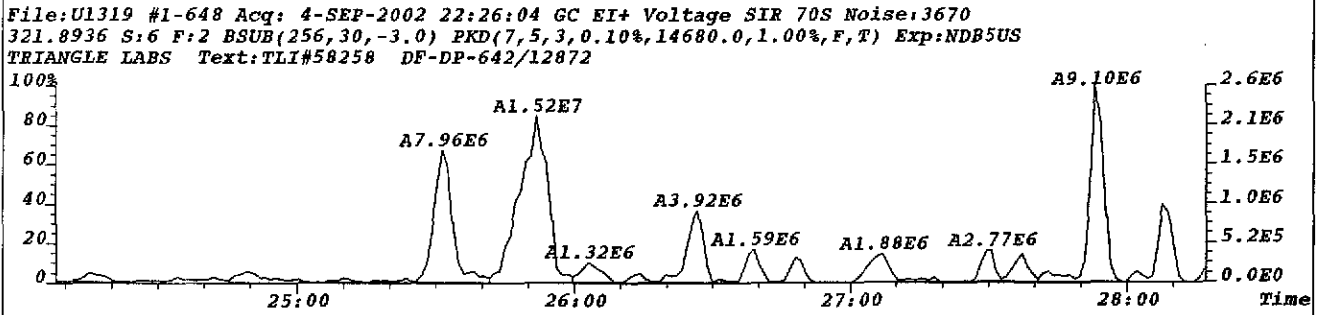
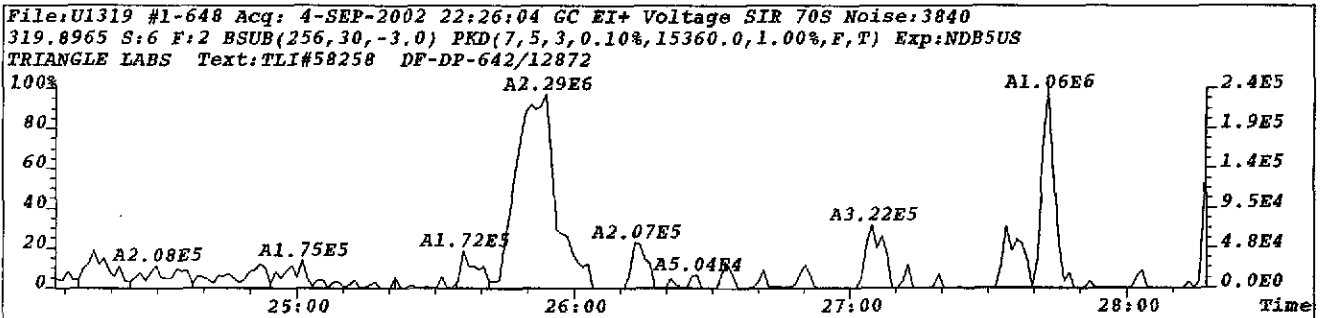


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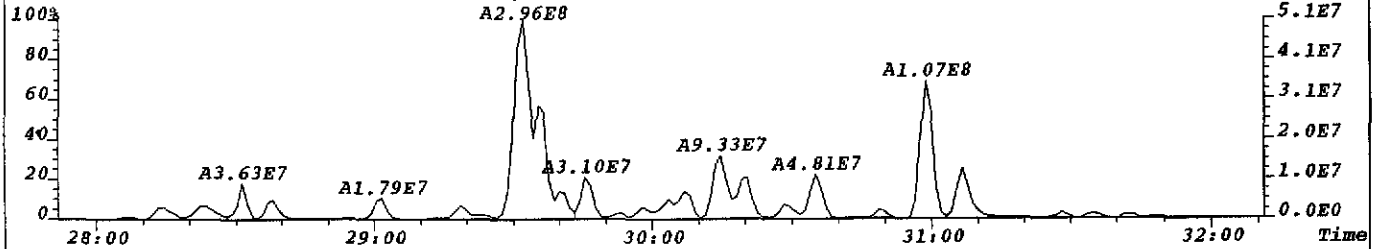


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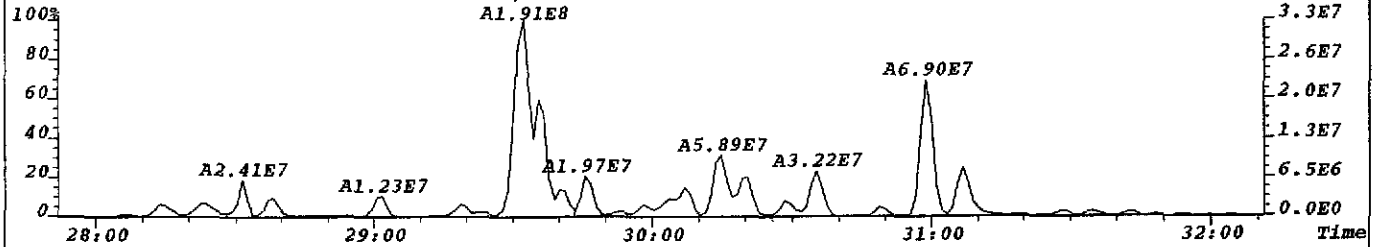




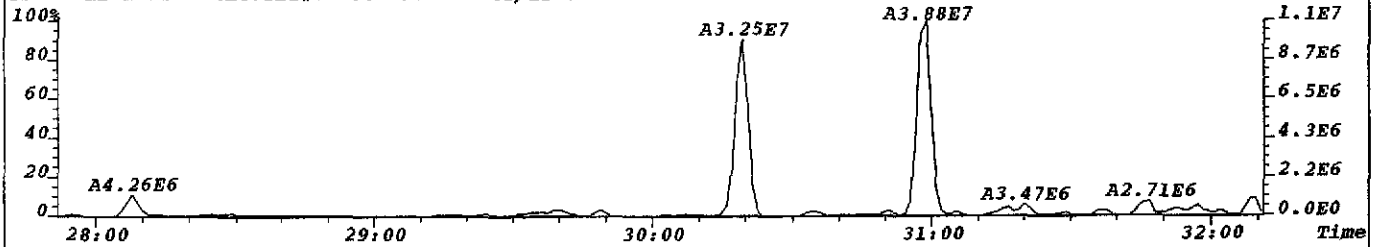
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TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



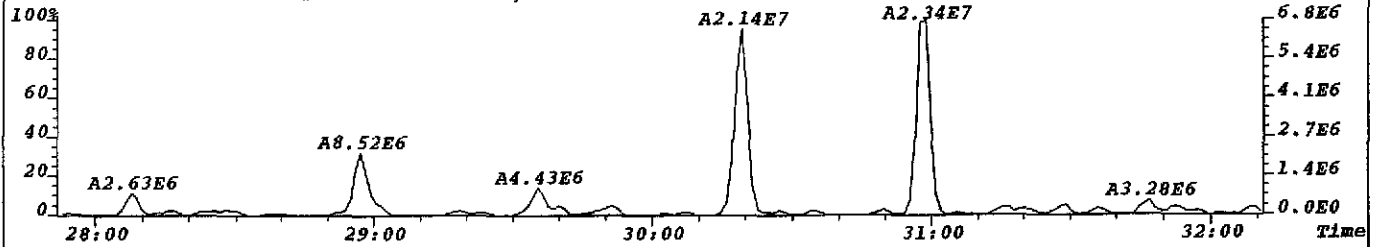
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TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



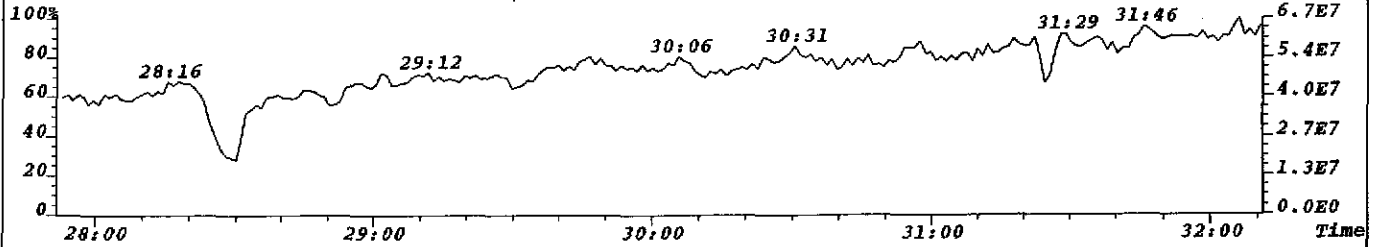
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351.9000 S:6 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12468.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



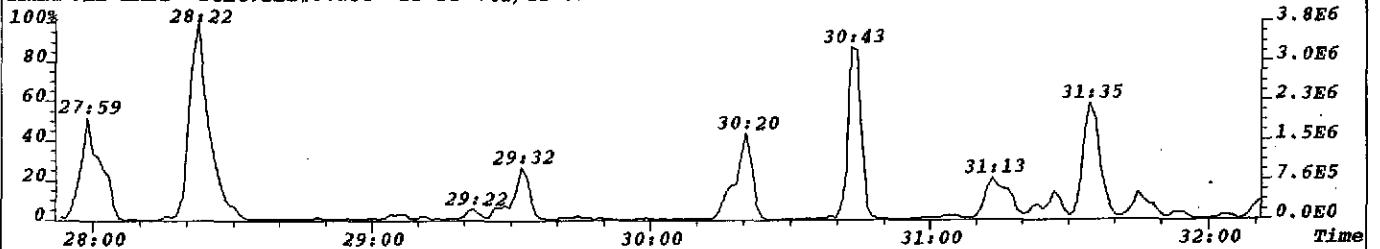
File:U1319 #1-648 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S Noise:3987  
353.8970 S:6 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,15948.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



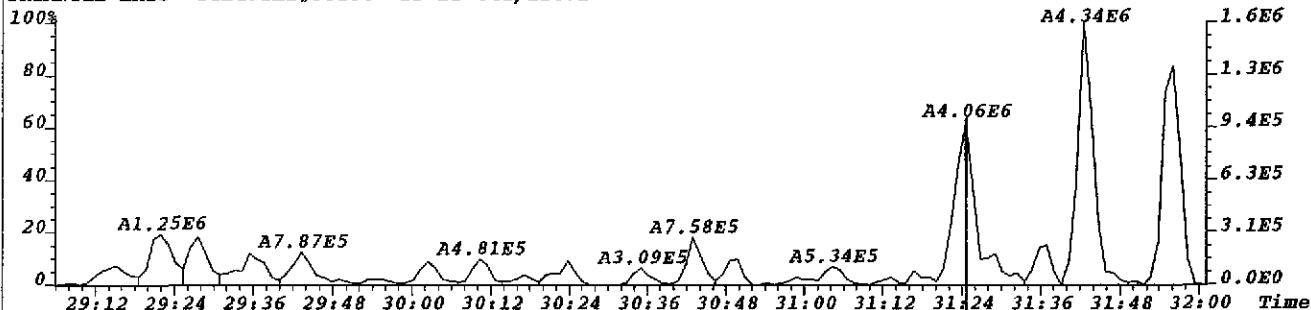
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330.9792 S:6 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



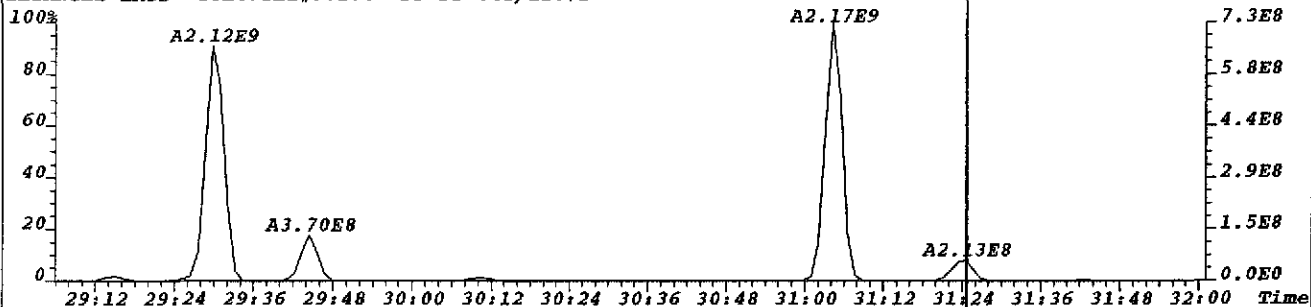
File:U1319 #1-648 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
409.7974 S:6 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



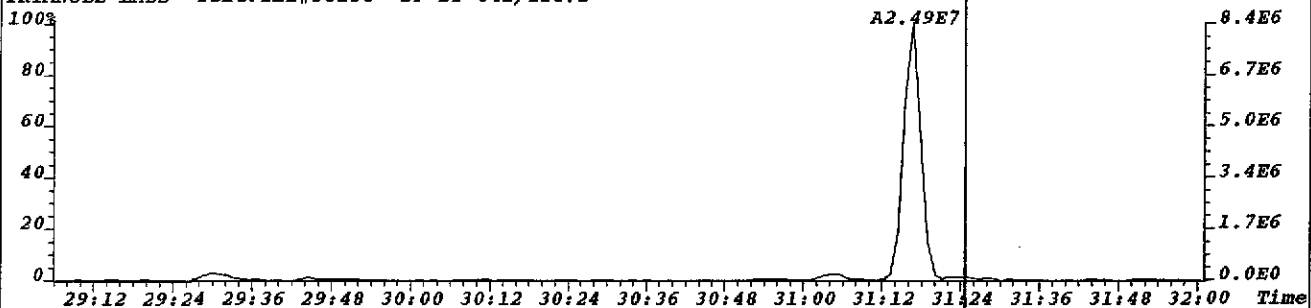
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355.8546 S:6 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,10672.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



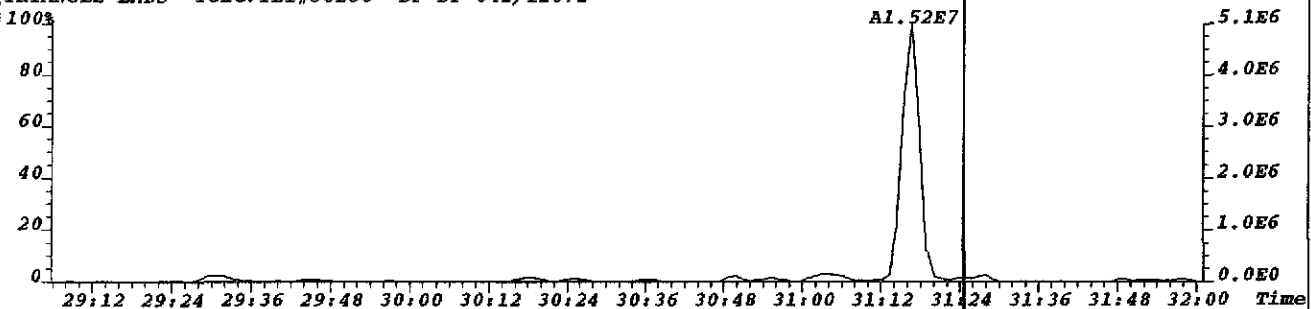
File:U1319 #1-648 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S Noise:3145  
357.8516 S:6 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,12580.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



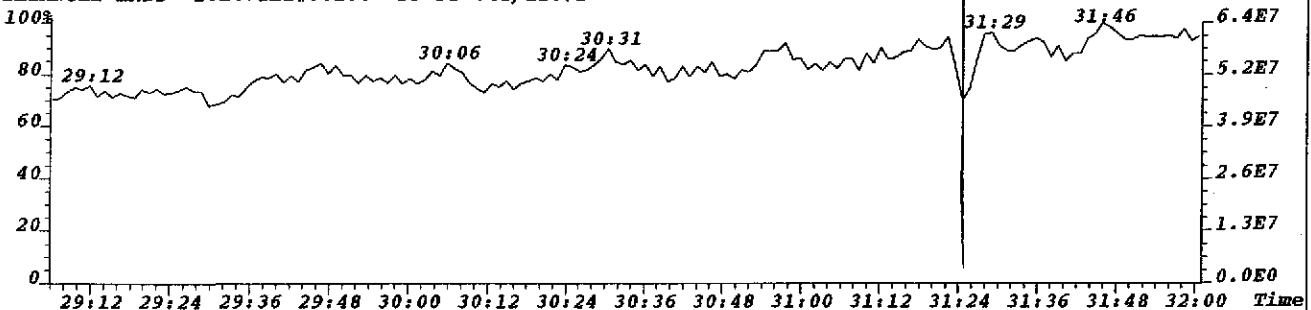
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367.8949 S:6 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,10644.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



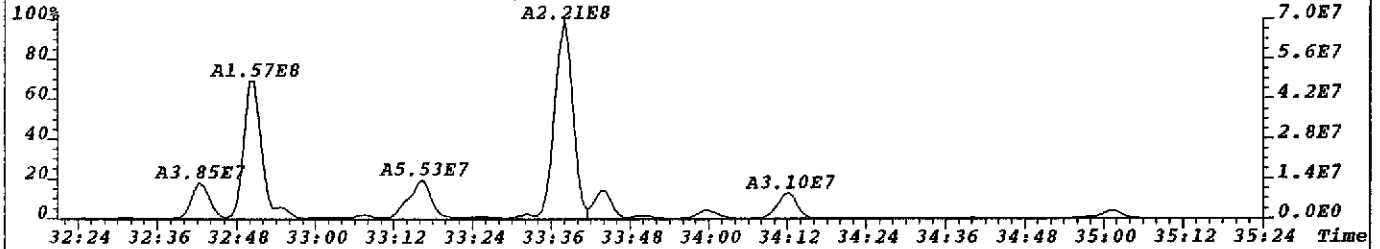
File:U1319 #1-648 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S Noise:2597  
369.8919 S:6 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,10388.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



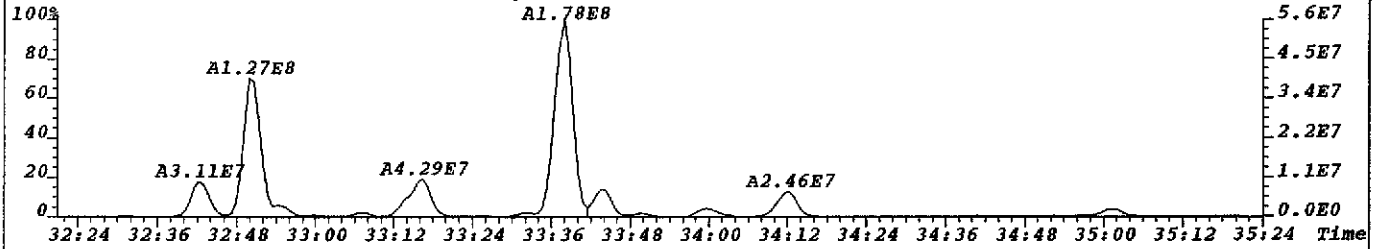
File:U1319 #1-648 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
330.9792 S:6 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



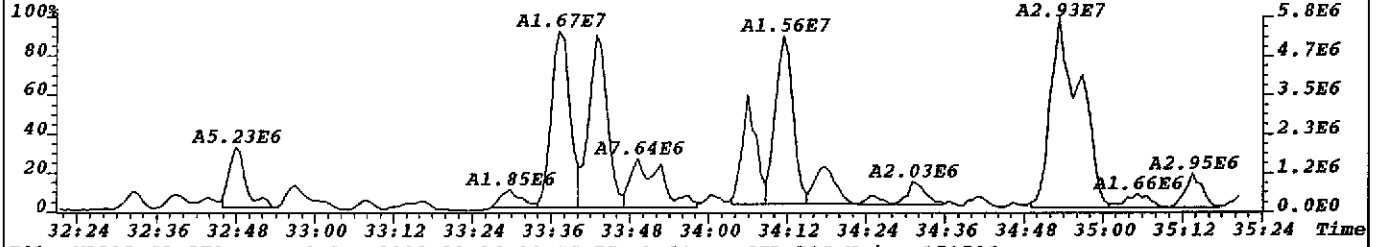
File:U1319 #1-271 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S Noise:18507  
373.8208 S:6 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,74028.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



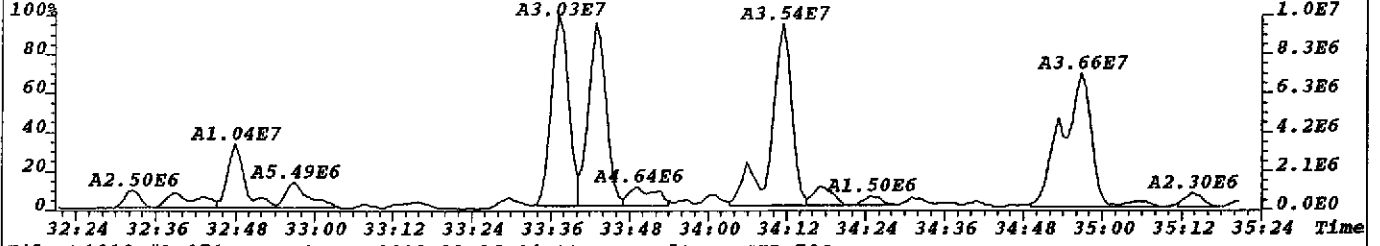
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375.8178 S:6 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,32228.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



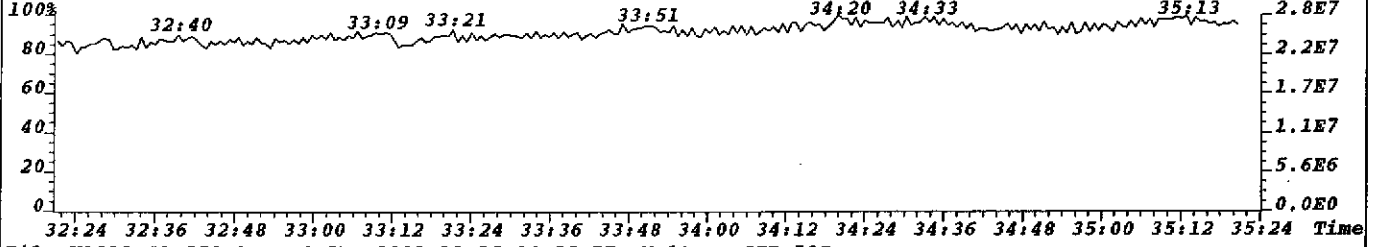
File:U1319 #1-271 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S Noise:118035  
383.8639 S:6 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,472140.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



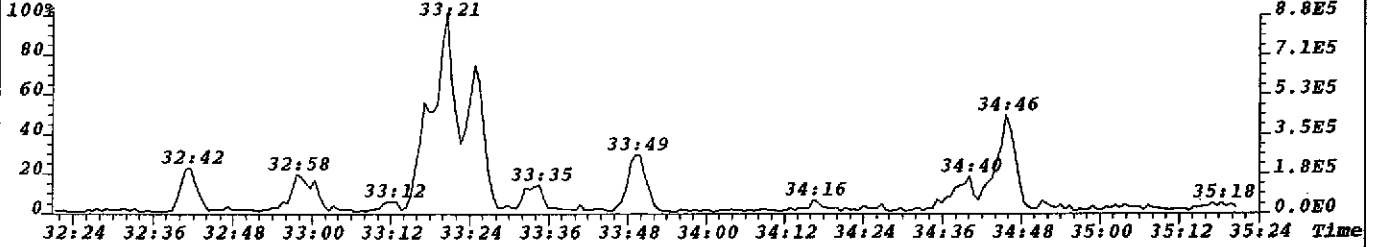
File:U1319 #1-271 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S Noise:170526  
385.8610 S:6 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,682104.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



File:U1319 #1-271 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
392.9760 S:6 F:3 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872

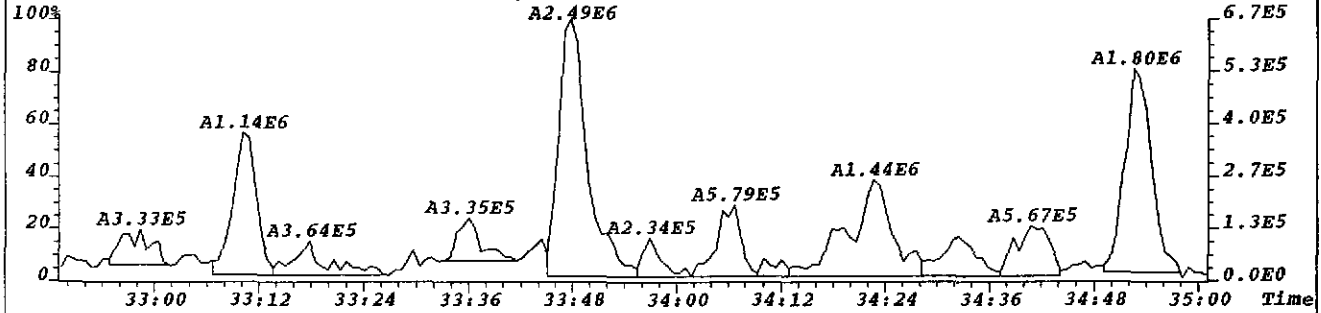


File:U1319 #1-271 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
445.7555 S:6 F:3 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872

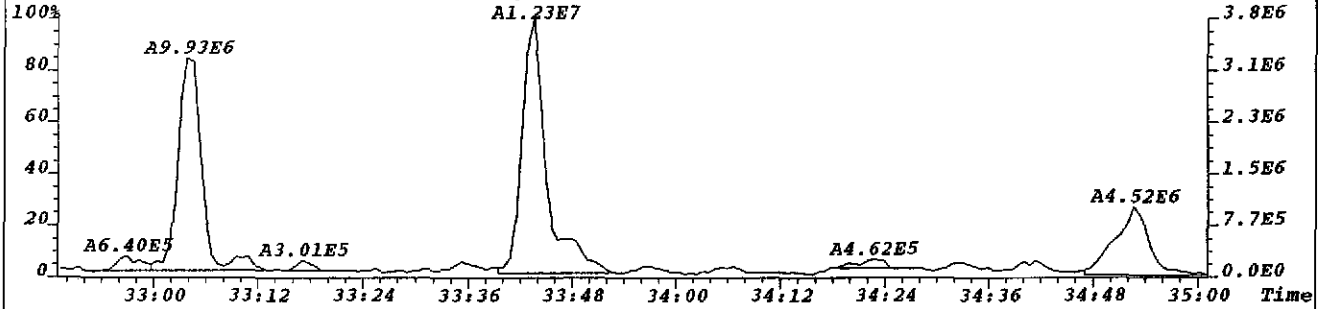




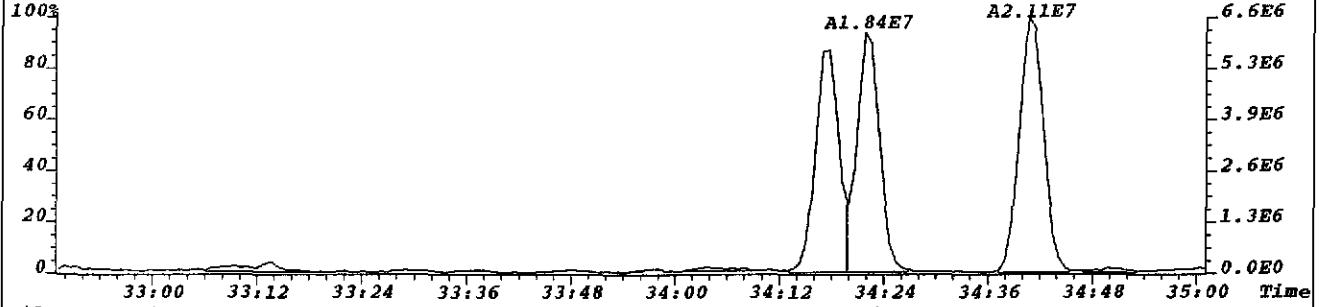
File:U1319 #1-271 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S Noise:15485  
389.8156 S:6 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,61940.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



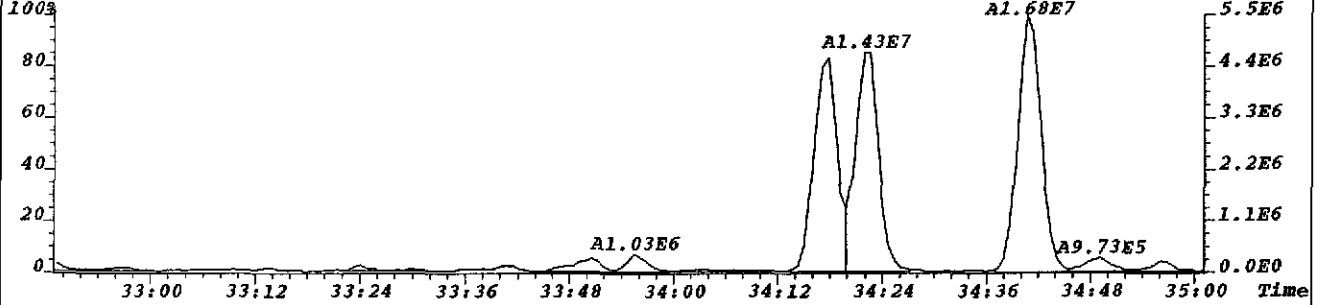
File:U1319 #1-271 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S Noise:37841  
391.8127 S:6 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,151364.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



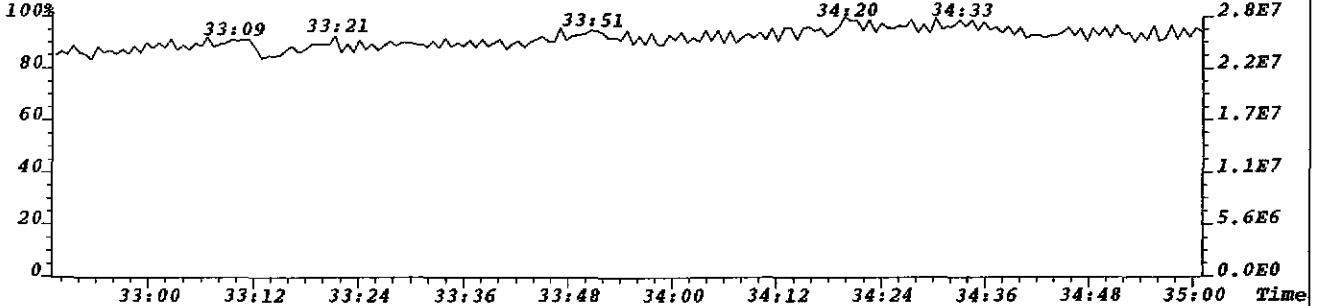
File:U1319 #1-271 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S Noise:24673  
401.8558 S:6 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,98692.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



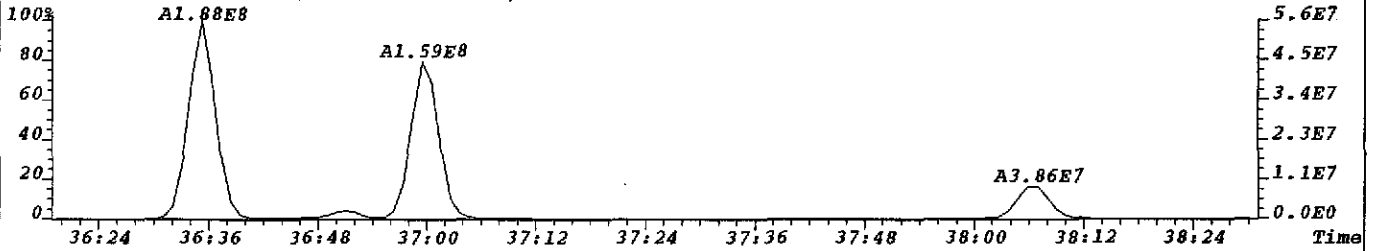
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403.8529 S:6 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,67400.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



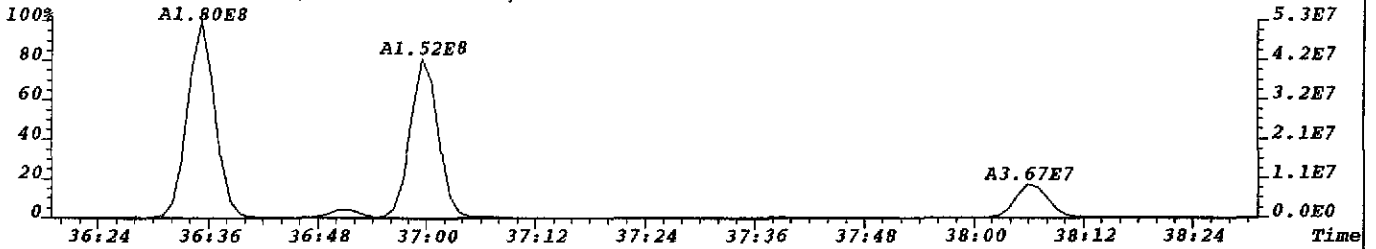
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392.9760 S:6 F:3 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



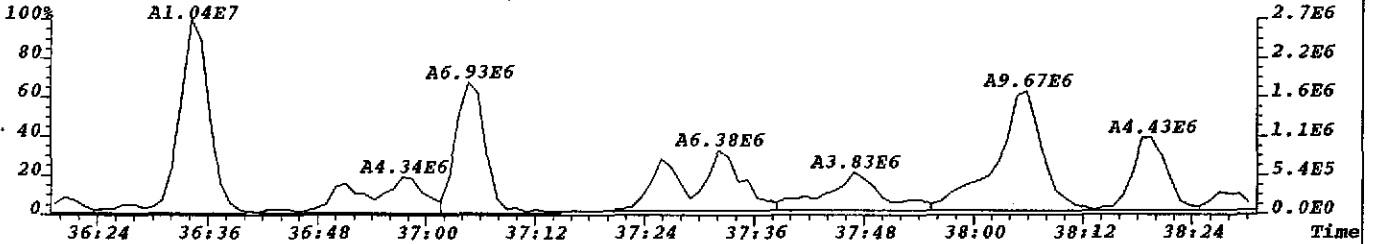
File:U1319 #1-550 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S Noise:13083  
407.7818 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,52332.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



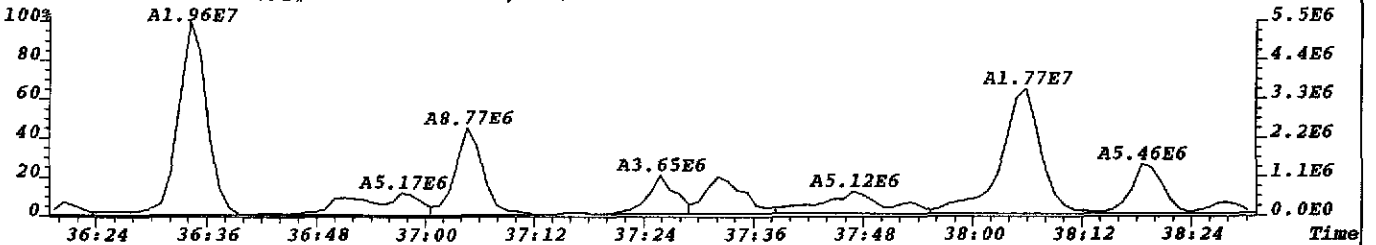
File:U1319 #1-550 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S Noise:7719  
409.7789 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,30876.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



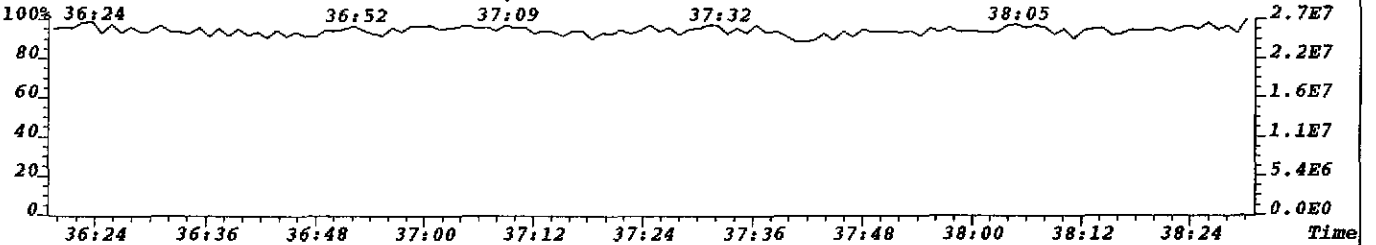
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417.8253 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,85092.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



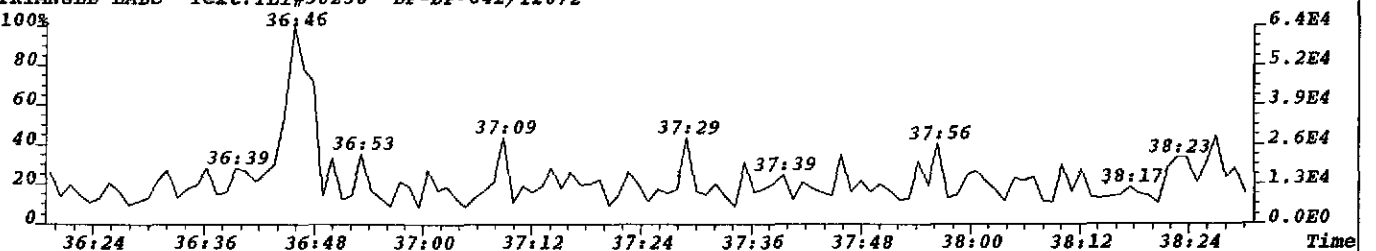
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419.8220 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,165184.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872

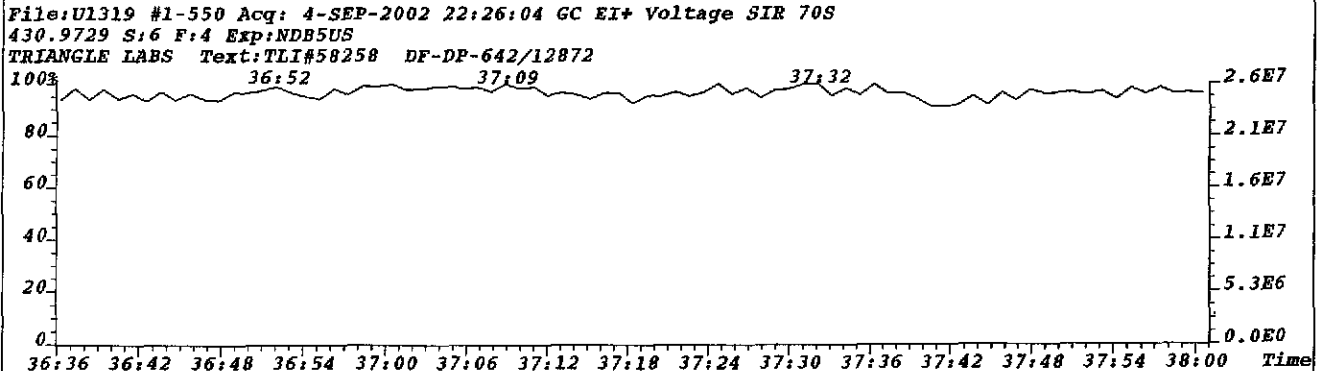
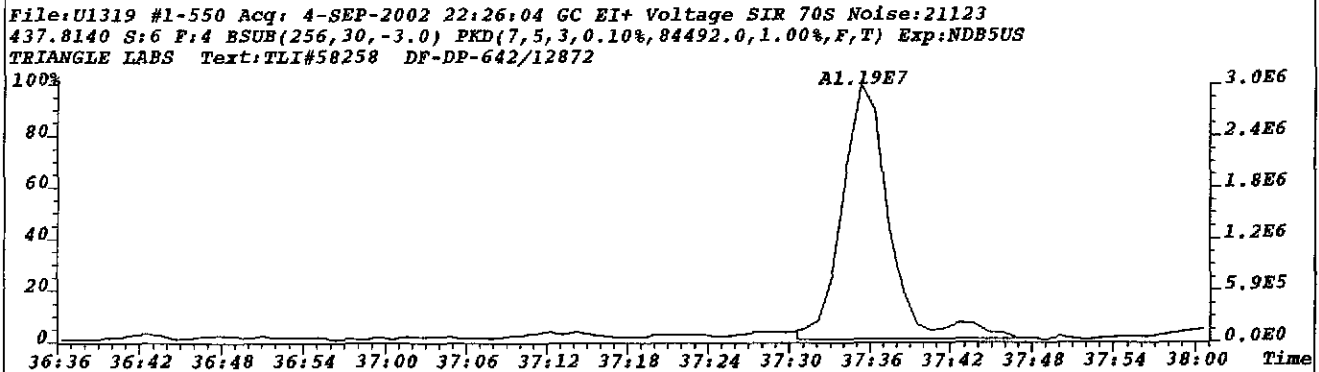
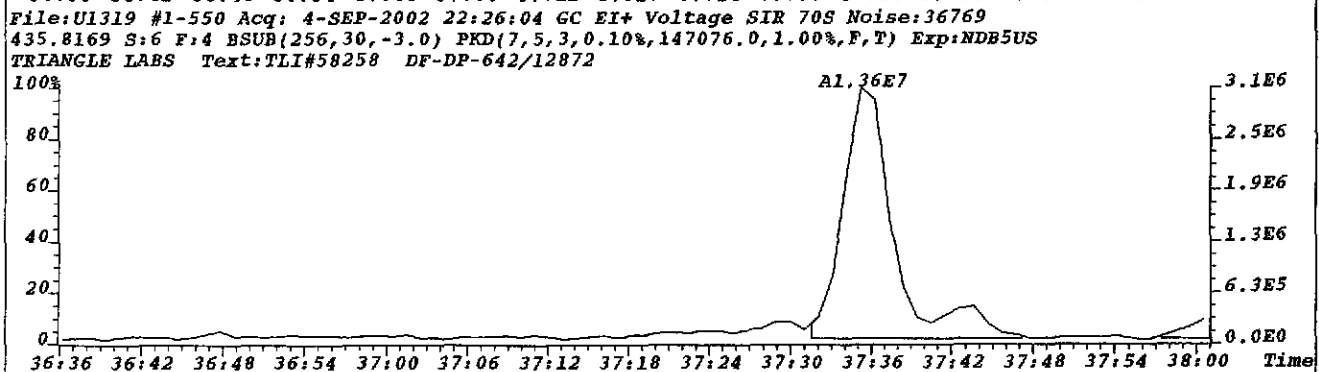
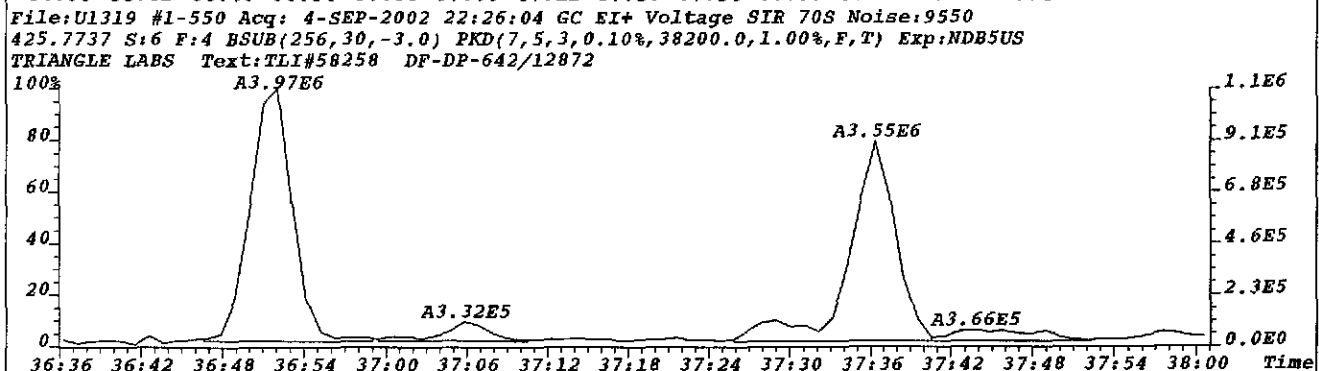
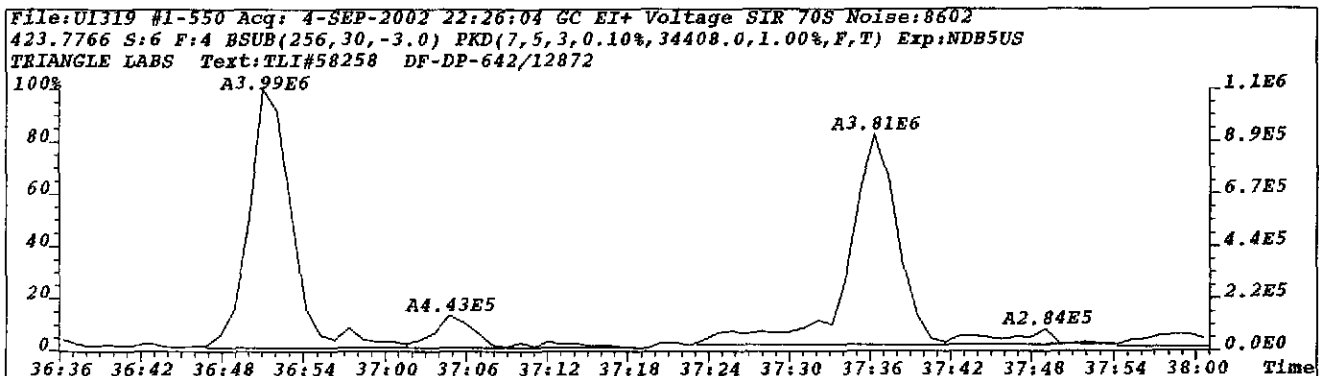


File:U1319 #1-550 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
430.9729 S:6 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872

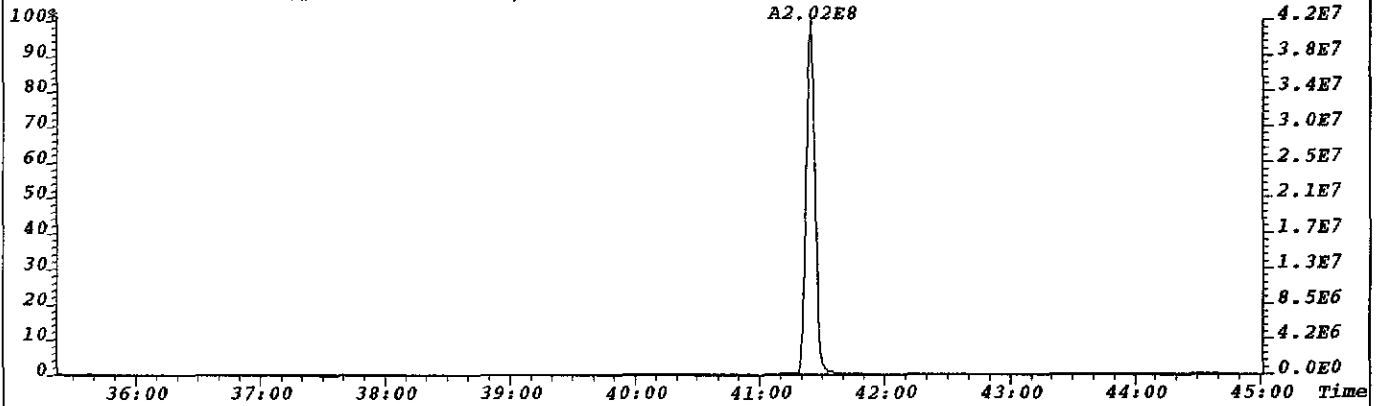


File:U1319 #1-550 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
479.7165 S:6 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872

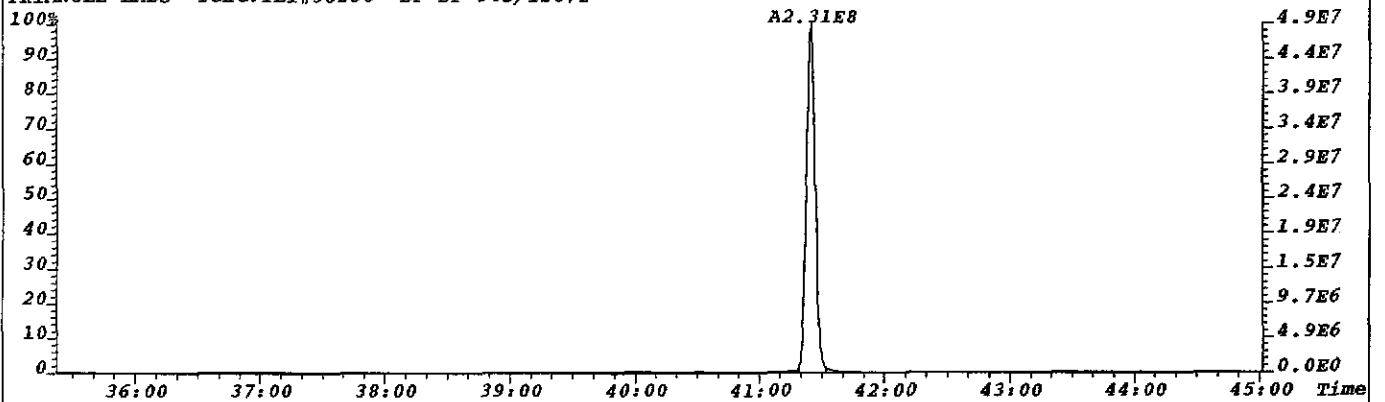




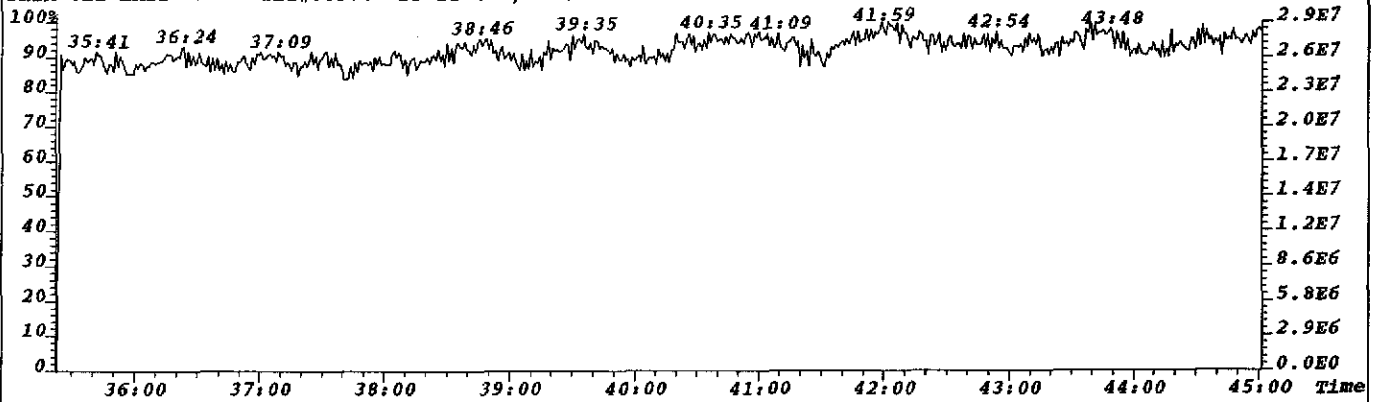
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441.7428 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,24924.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



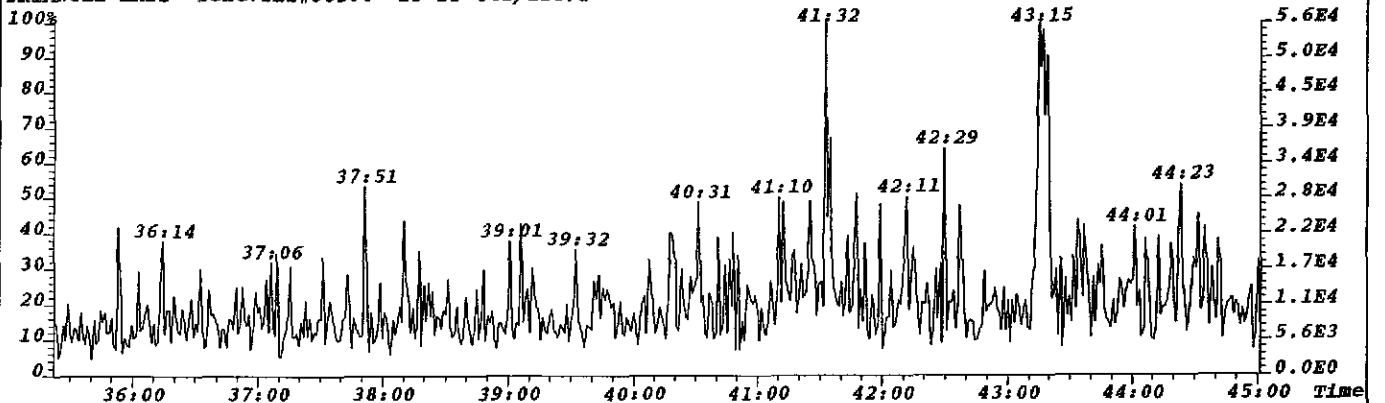
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443.7399 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,22936.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



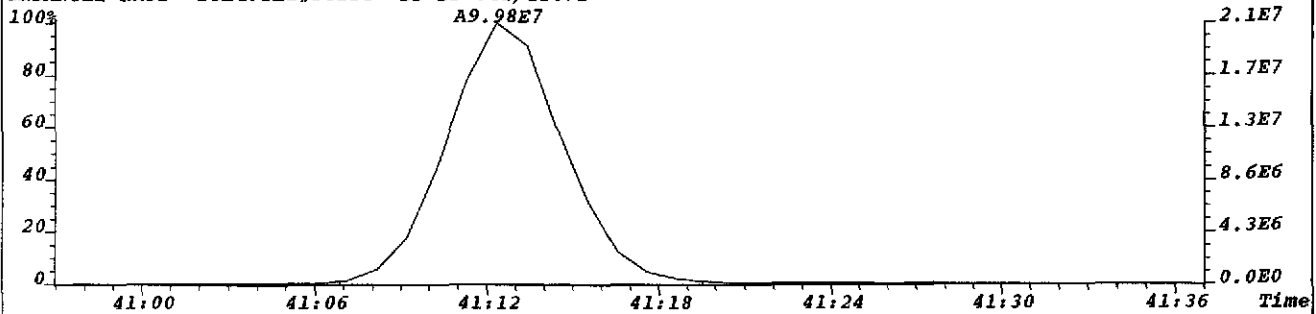
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430.9729 S:6 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



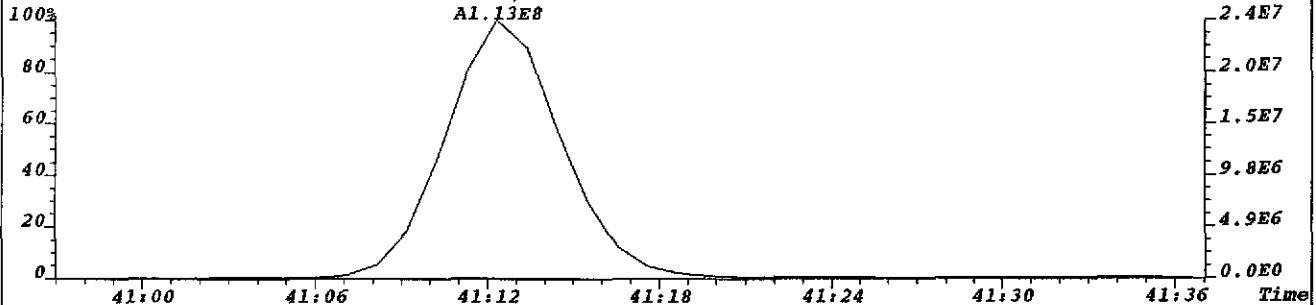
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513.6775 S:6 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



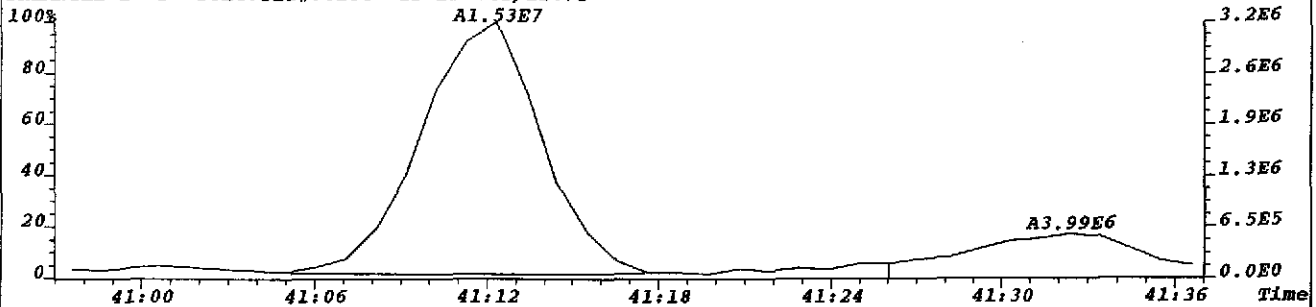
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457.7377 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,19012.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



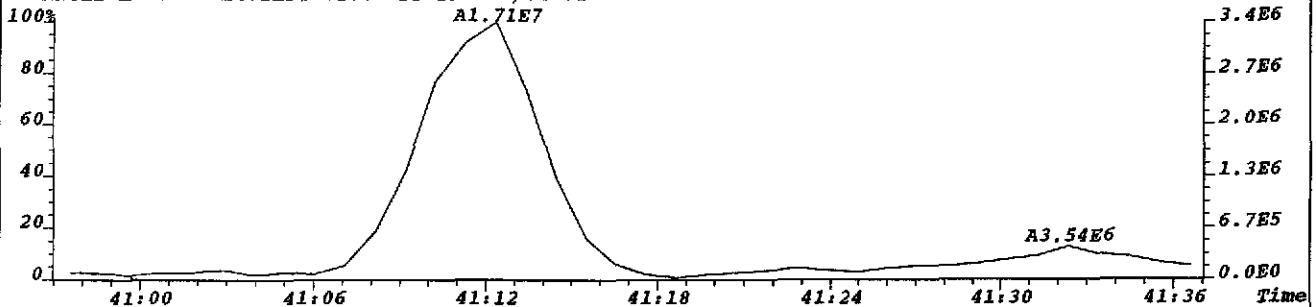
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459.7348 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12072.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



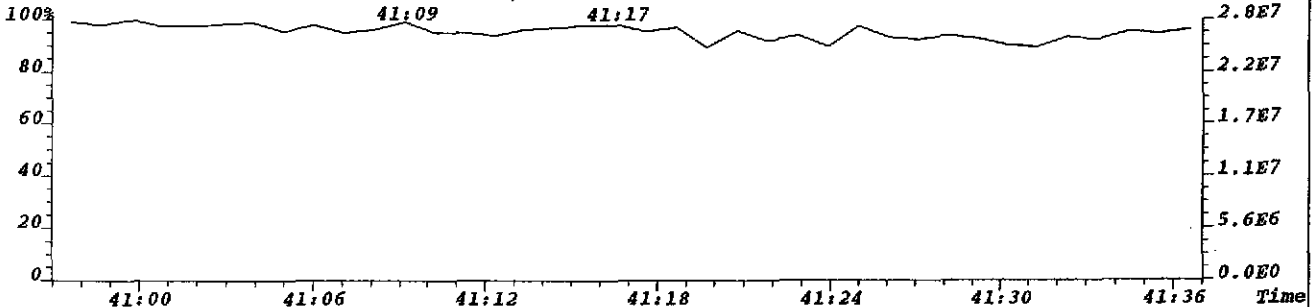
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469.7779 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,154216.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



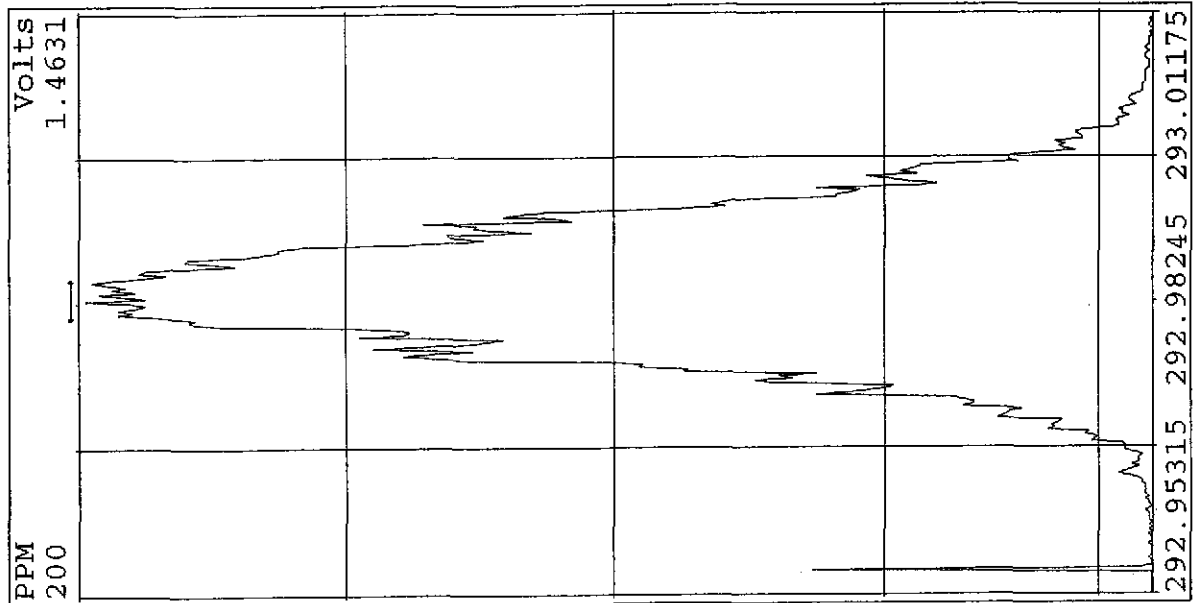
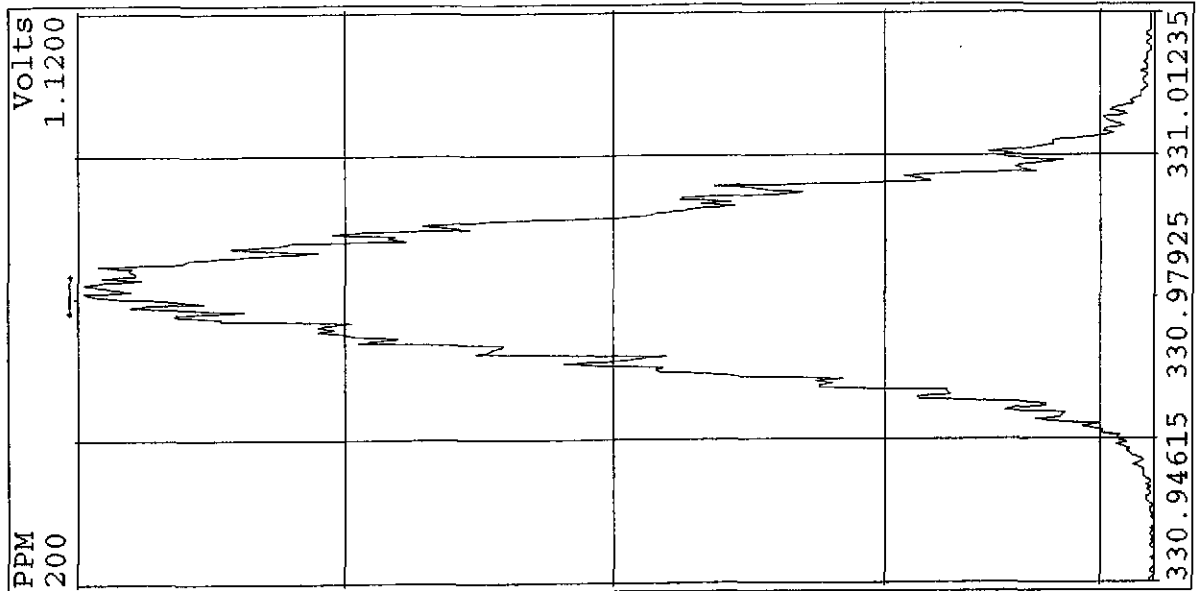
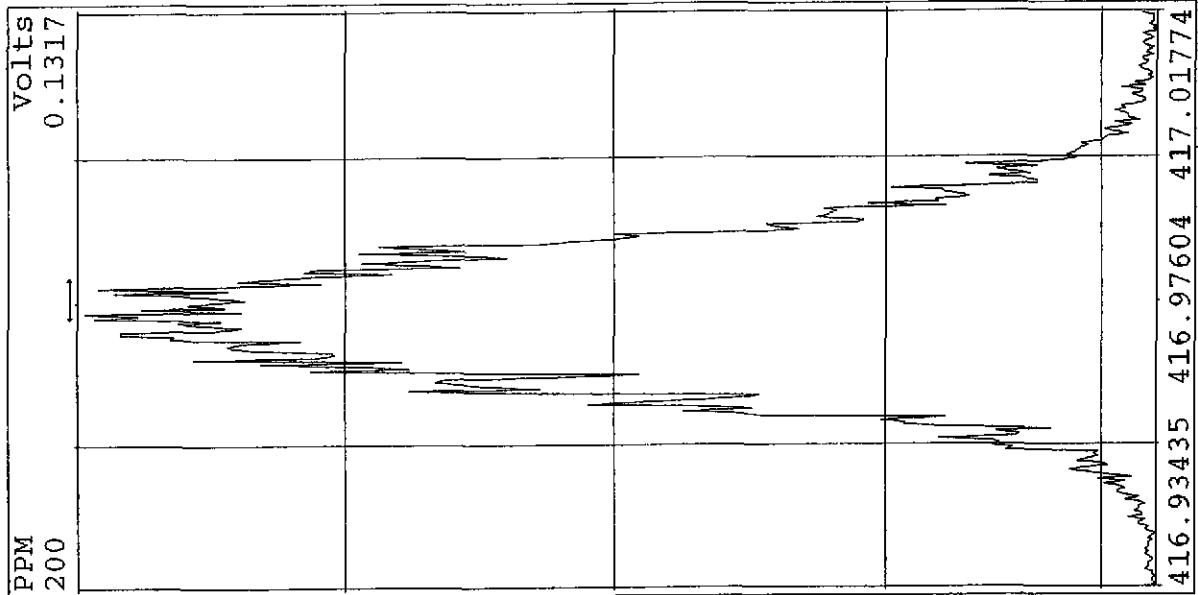
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471.7750 S:6 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,61308.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872



File:U1319 #1-550 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
430.9729 S:6 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI#58258 DF-DP-642/12872

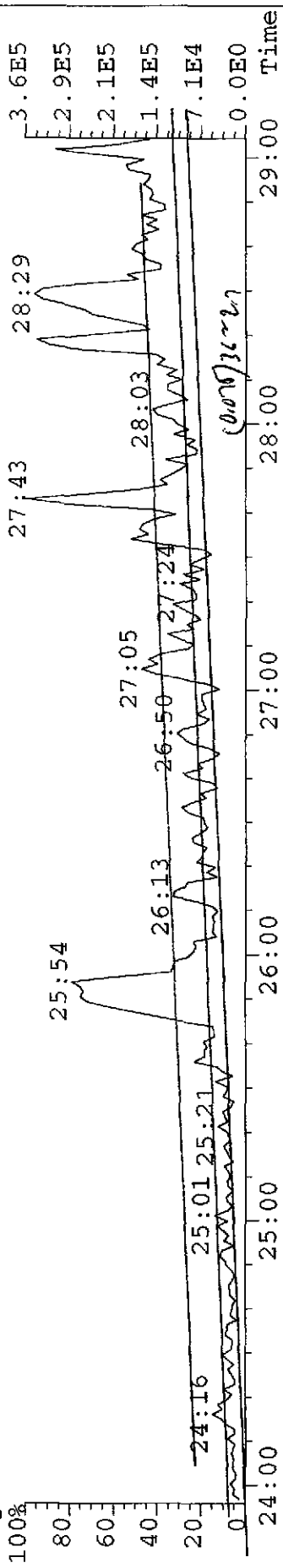


Peak Locate Examination: 4-SEP-2002:18:21 File:U1319  
Experiment:NDB5US Function:2 Reference:PFK

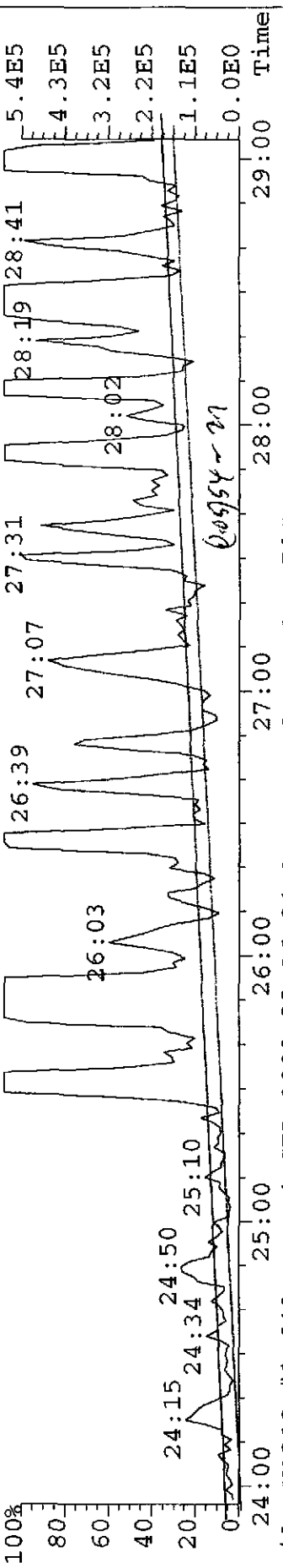


Nr 21521 ~ 5.8 of 9/15/02

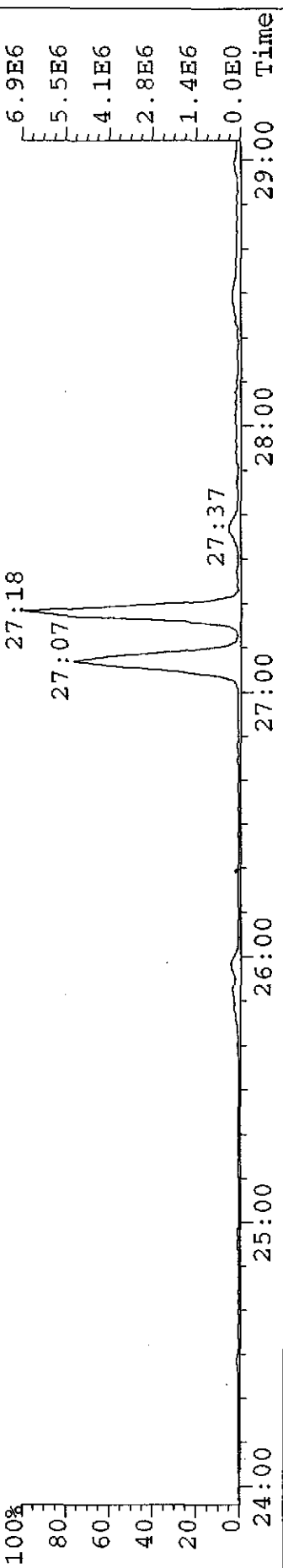
File:U1319 #1-648 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
319.8965 S:6 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
321.8936 S:6 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.



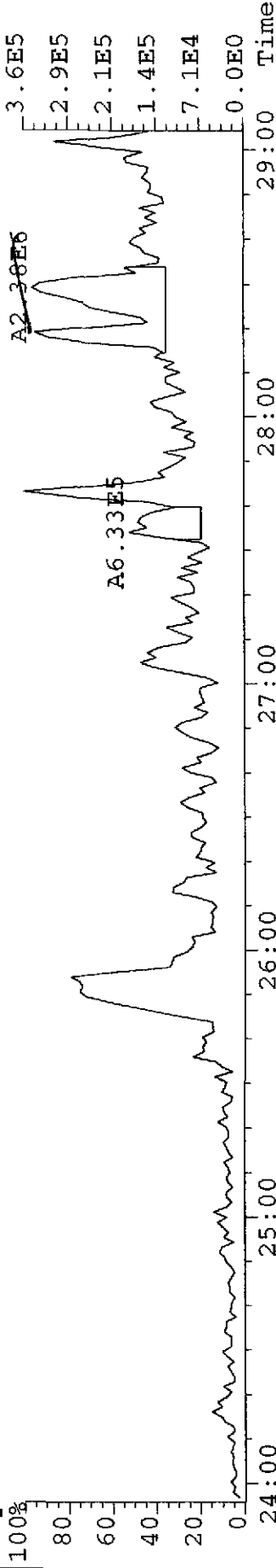
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331.9368 S:6 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S

319.8965 S:6 F:2 Exp:NDB5US

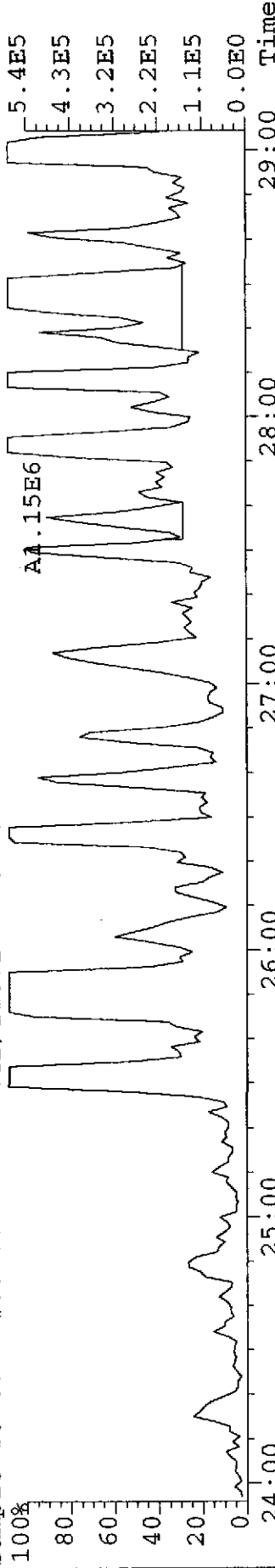
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S

321.8936 S:6 F:2 Exp:NDB5US

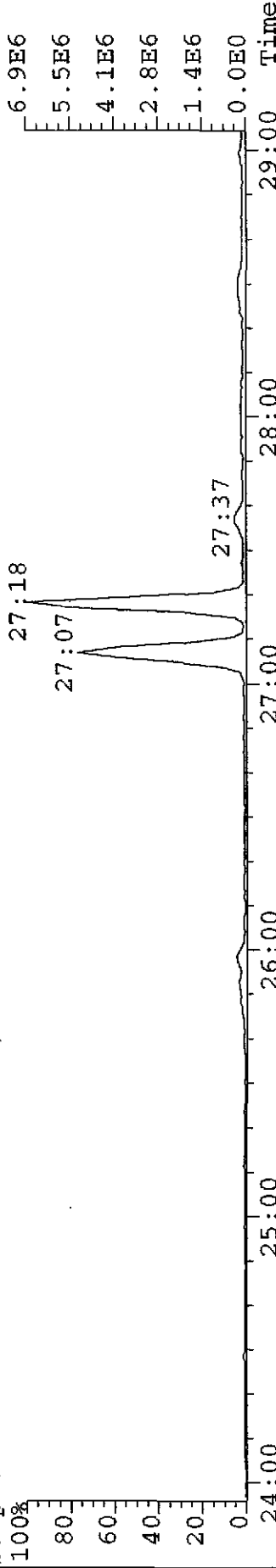
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S

331.9368 S:6 F:2 Exp:NDB5US

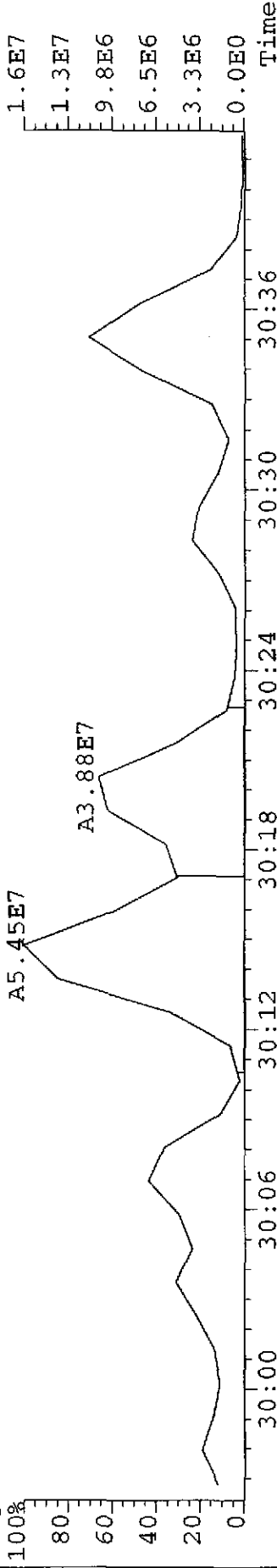
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.



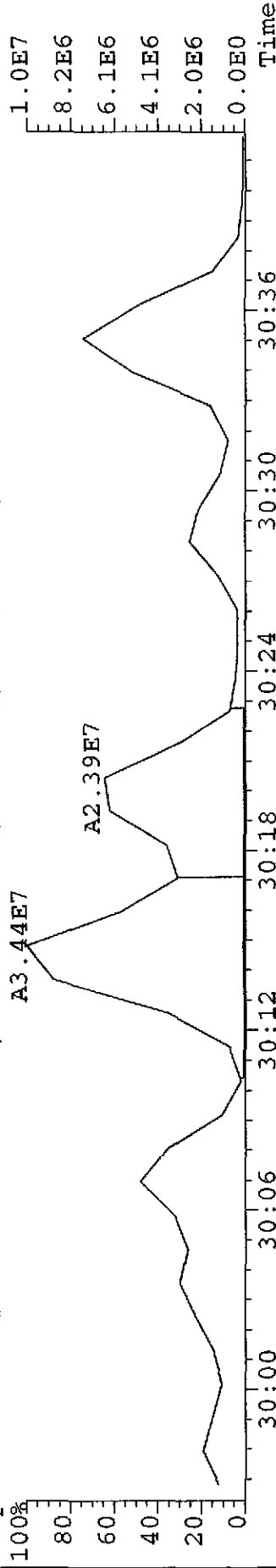
9/18/02



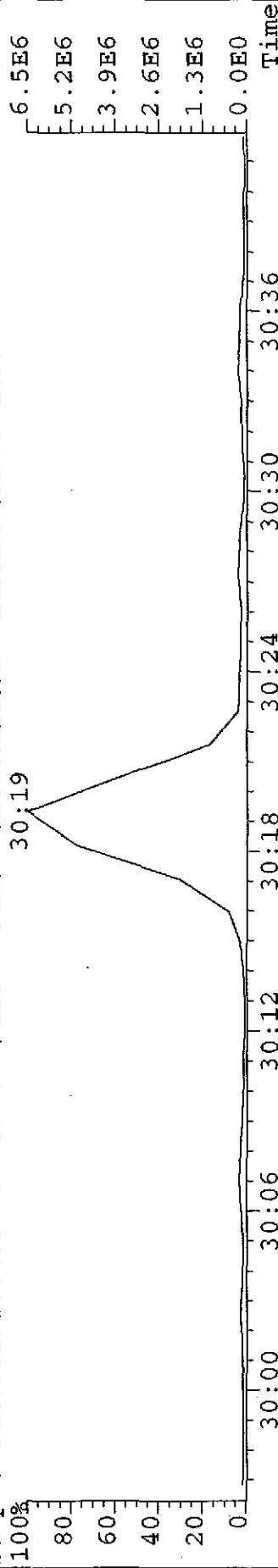
File:U1319 #1-648 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
339.8597 S:6 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
341.8567 S:6 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.

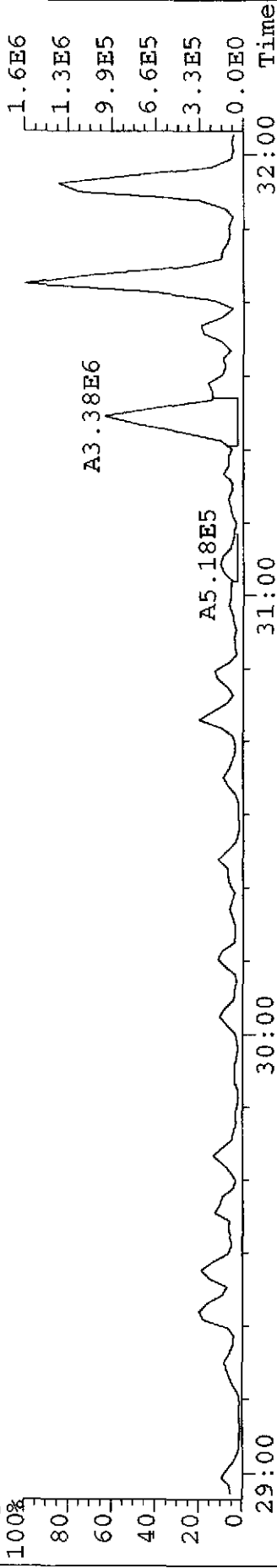


File:U1319 #1-648 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
353.8970 S:6 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.

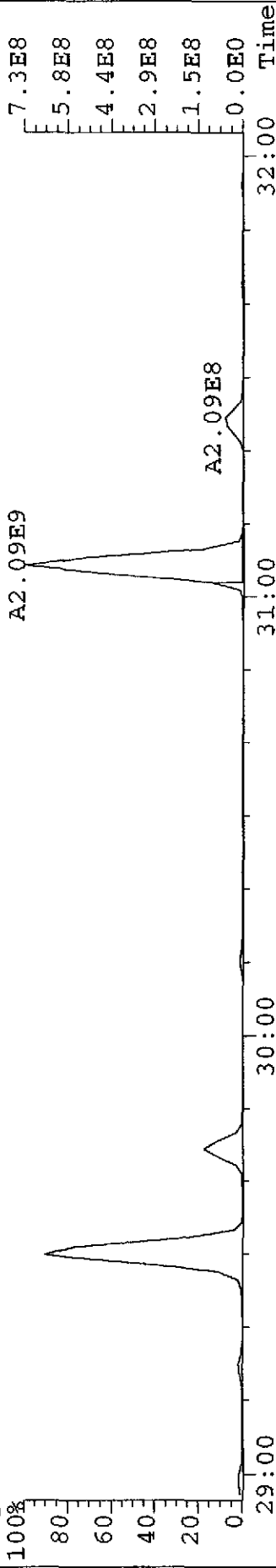


*V200*

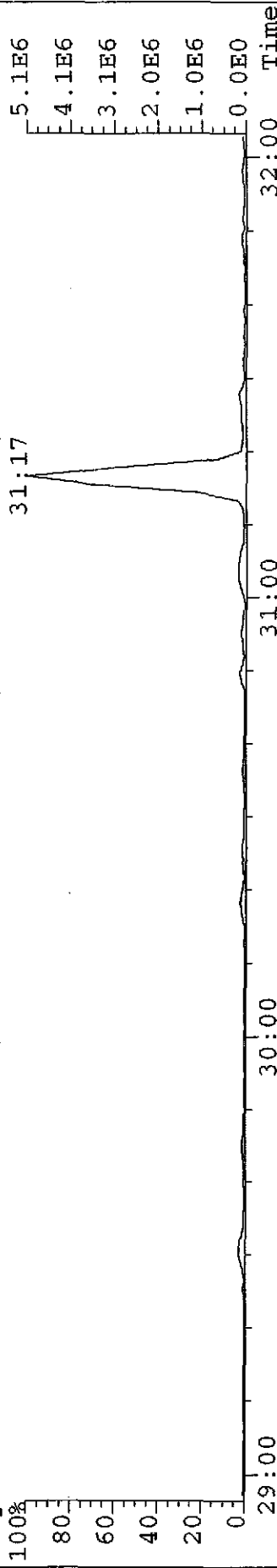
File:U1319 #1-648 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
355.8546 S:6 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-648 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
357.8516 S:6 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.

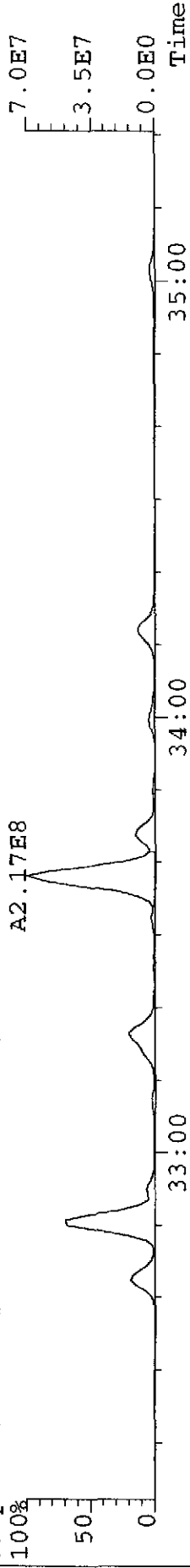


File:U1319 #1-648 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
369.8919 S:6 F:2 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.

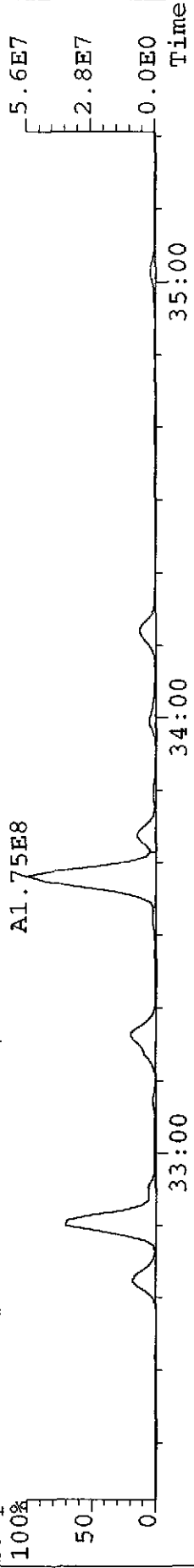


7/18/02

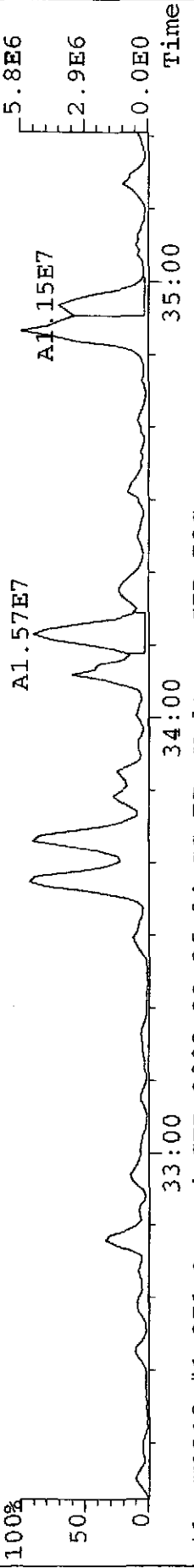
File:U1319 #1-271 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
373.8208 S:6 F:3 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.  
A2.17E8



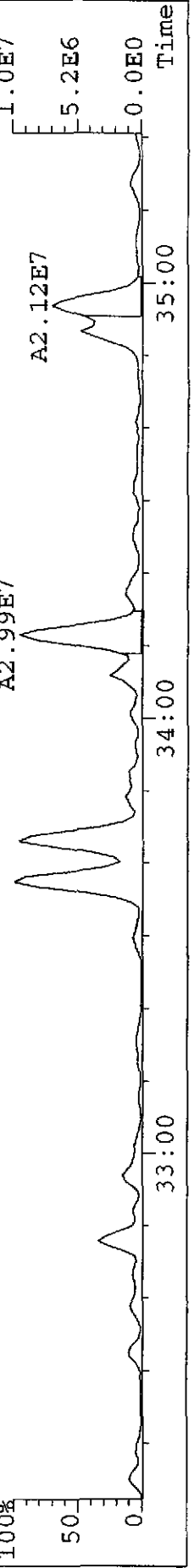
File:U1319 #1-271 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
375.8178 S:6 F:3 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.  
A1.75E8



File:U1319 #1-271 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
383.8639 S:6 F:3 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.  
A1.57E7

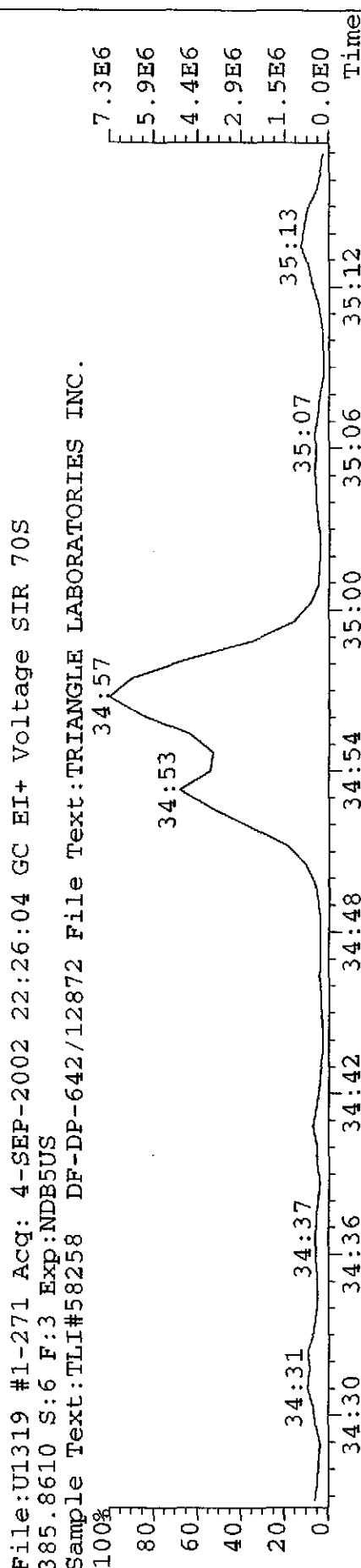
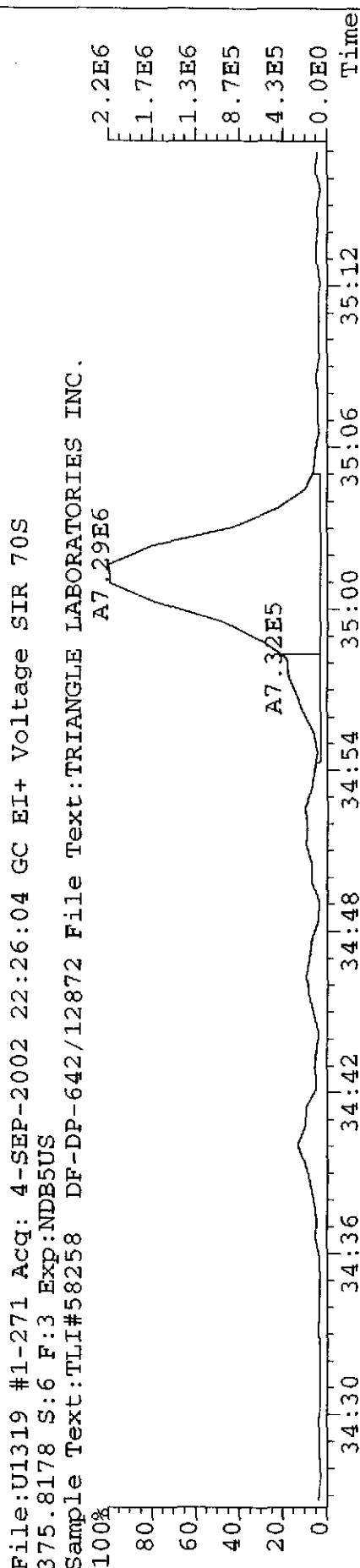
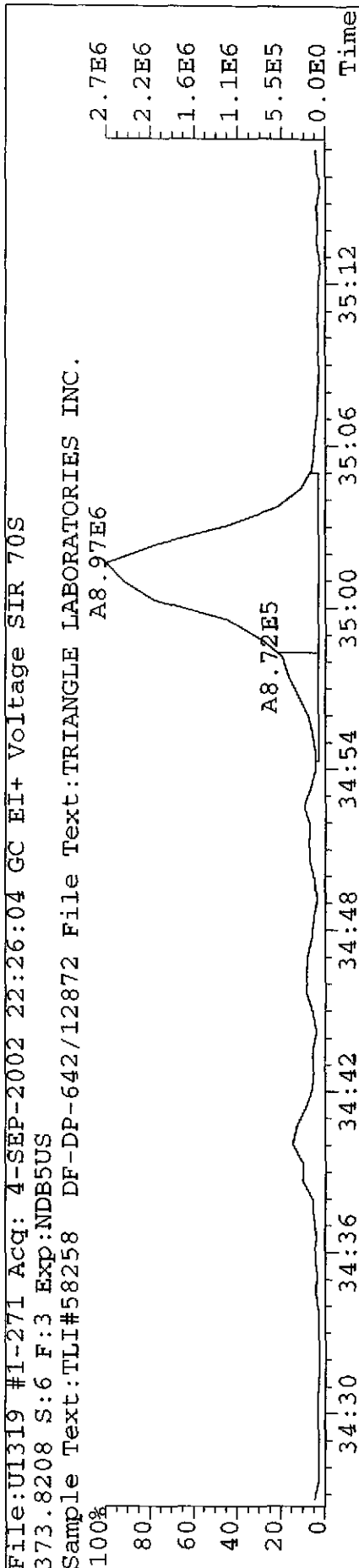


File:U1319 #1-271 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
385.8610 S:6 F:3 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.  
A2.99E7



Handwritten signature or initials.

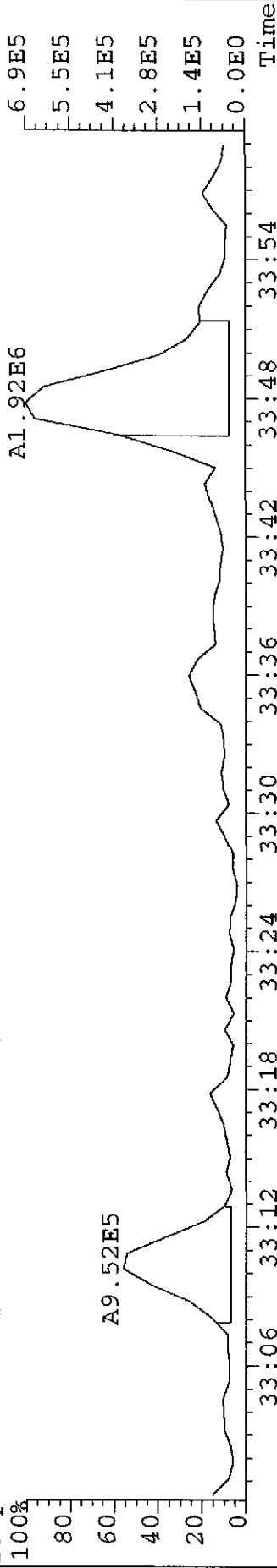
Handwritten mark



File:U1319 #1-271 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S

389.8156 S:6 F:3 Exp:NDB5US

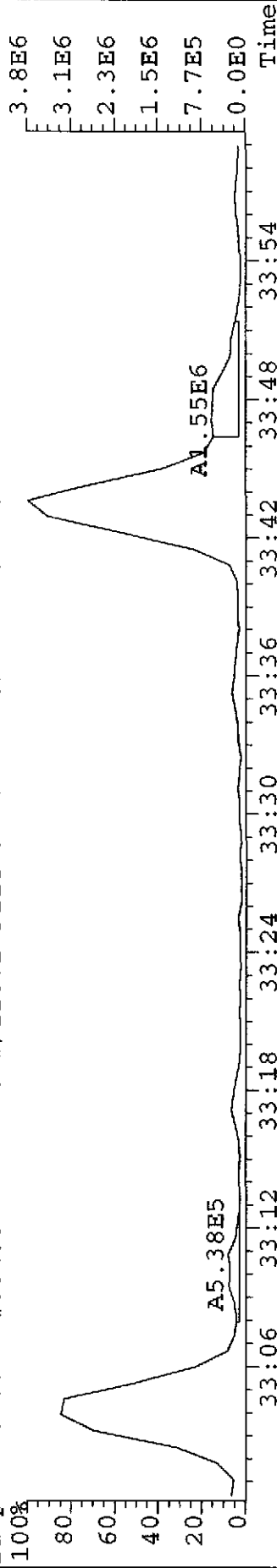
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-271 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S

391.8127 S:6 F:3 Exp:NDB5US

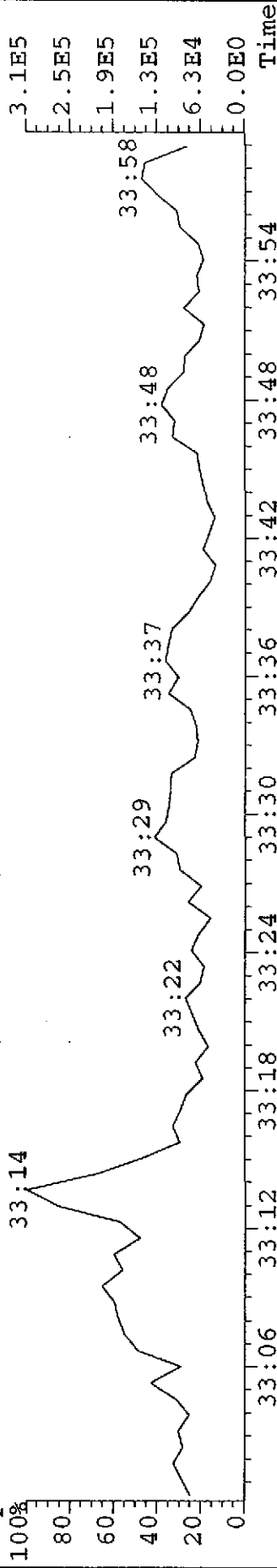
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-271 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S

401.8558 S:6 F:3 Exp:NDB5US

Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.

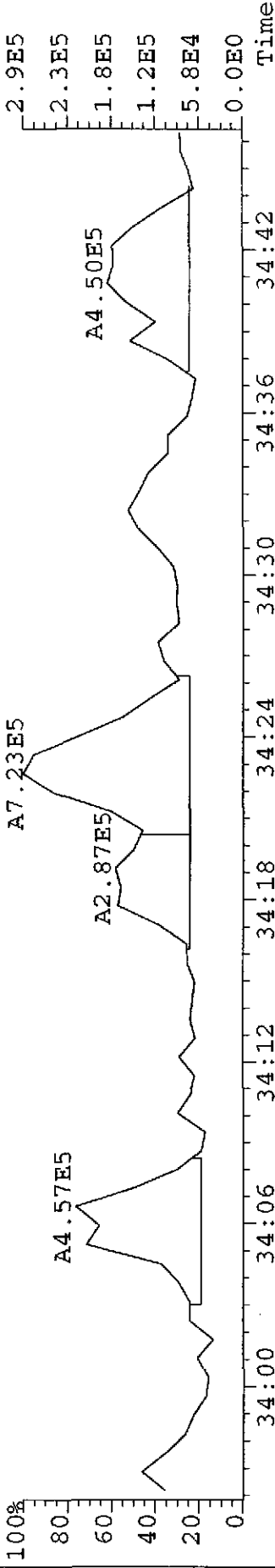


Handwritten mark

File:U1319 #1-271 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S

389.8156 S:6 F:3 Exp:NDB5US

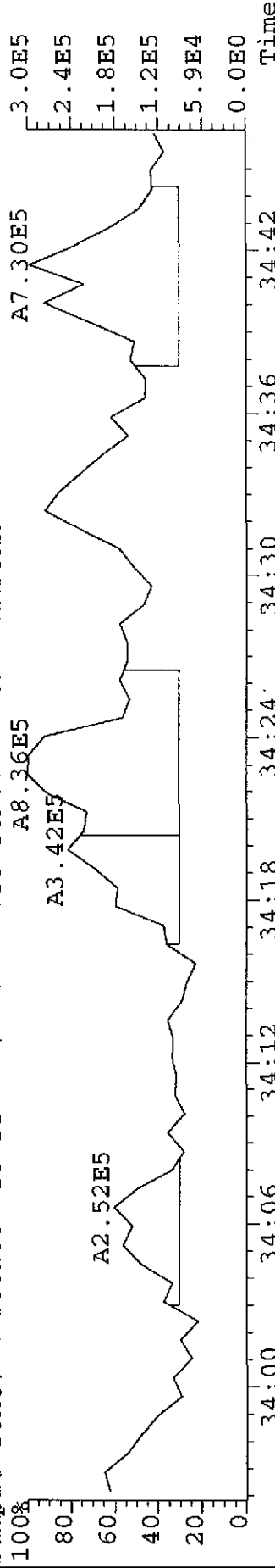
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-271 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S

391.8127 S:6 F:3 Exp:NDB5US

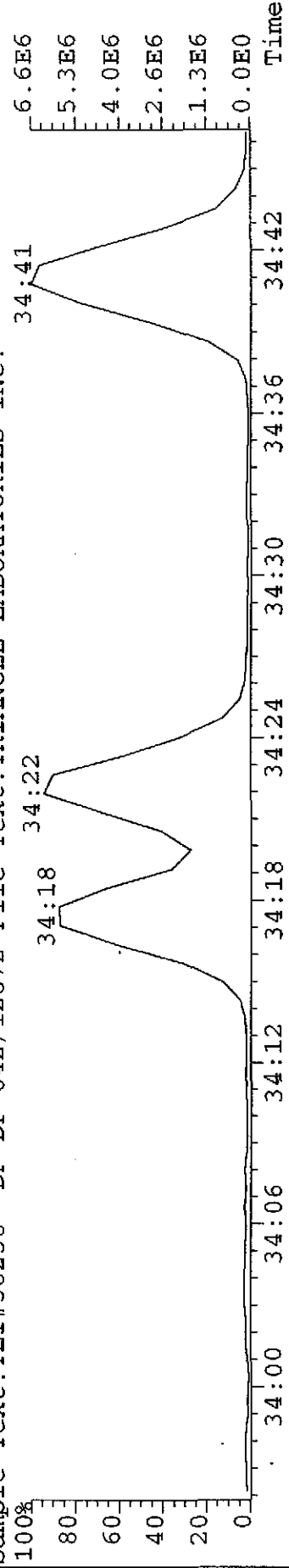
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-271 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S

401.8558 S:6 F:3 Exp:NDB5US

Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.



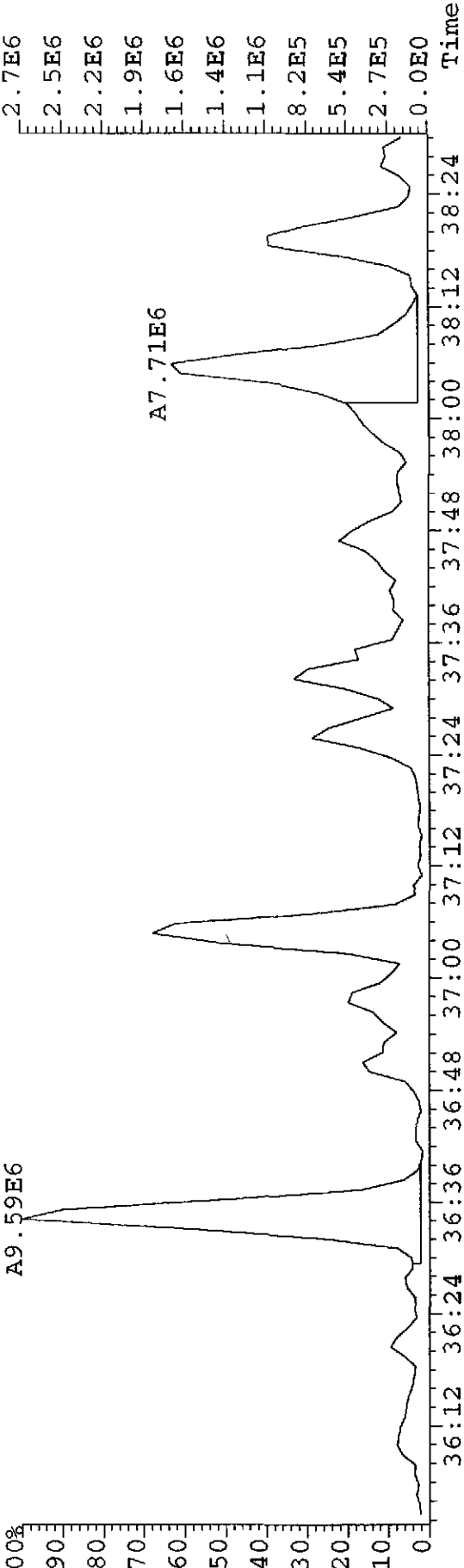
*N 191*

File: UI319 #1-550 ACQ: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S

417.8253 S:6 F:4 Exp:NDB5US

Sample Text: TLI#58258 DF-DP-642/12872 File Text: TRIANGLE LABORATORIES INC.

A9.59E6

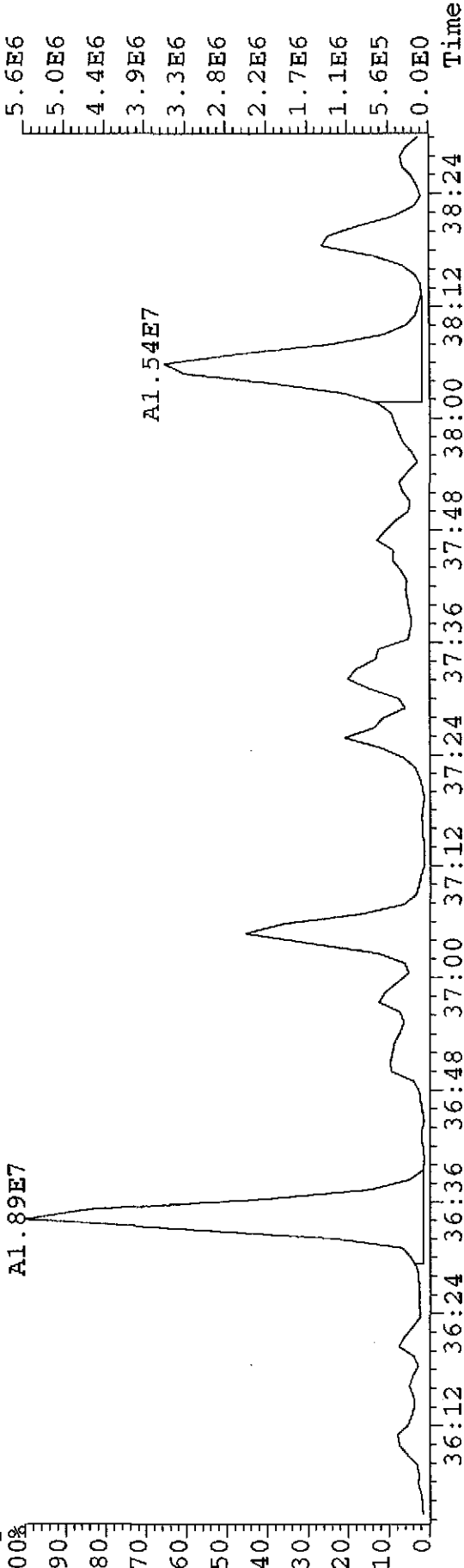


File: UI319 #1-550 ACQ: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S

419.8220 S:6 F:4 Exp:NDB5US

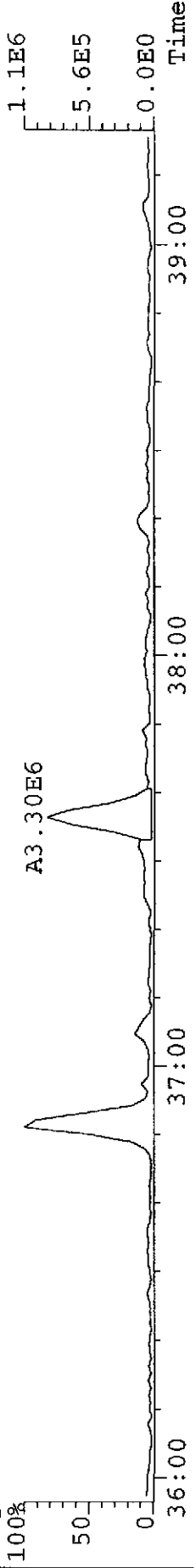
Sample Text: TLI#58258 DF-DP-642/12872 File Text: TRIANGLE LABORATORIES INC.

A1.89E7

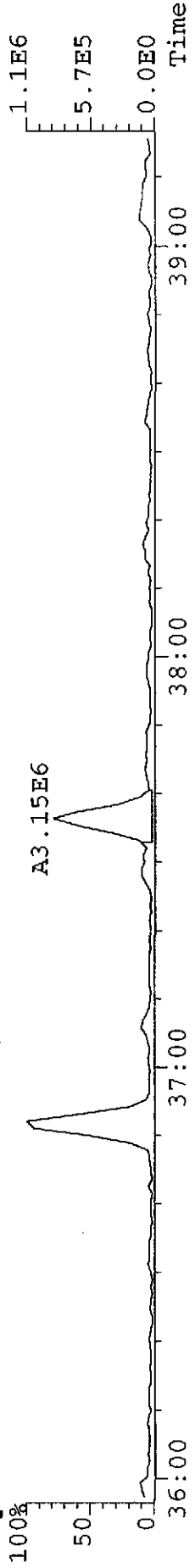


*PARS 9/6/02*

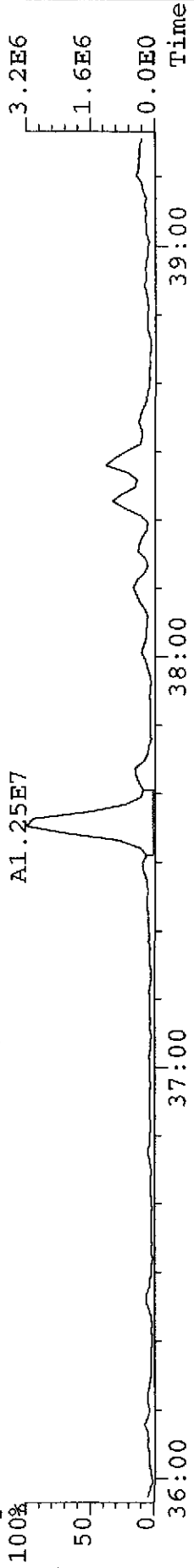
File:U1319 #1-550 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
423.7766 S:6 F:4 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.



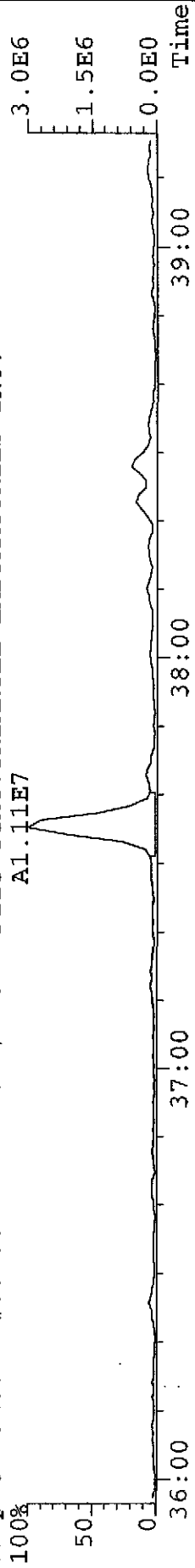
File:U1319 #1-550 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
425.7737 S:6 F:4 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.



File:U1319 #1-550 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
435.8169 S:6 F:4 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.

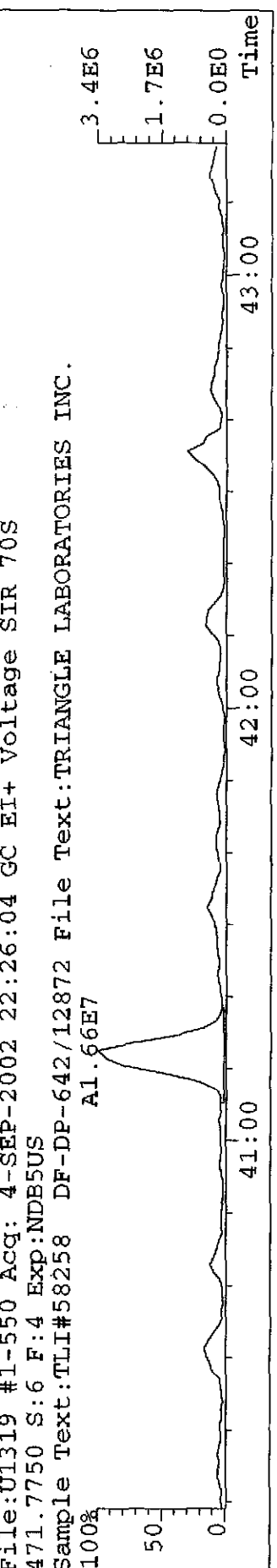
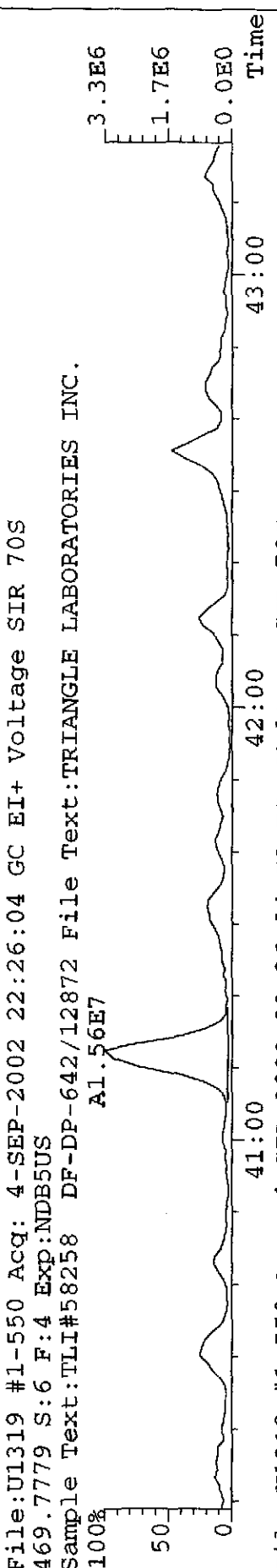
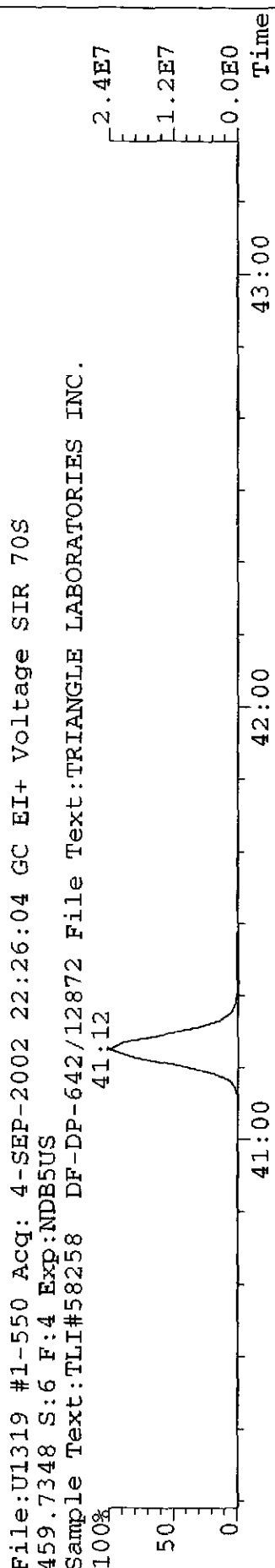
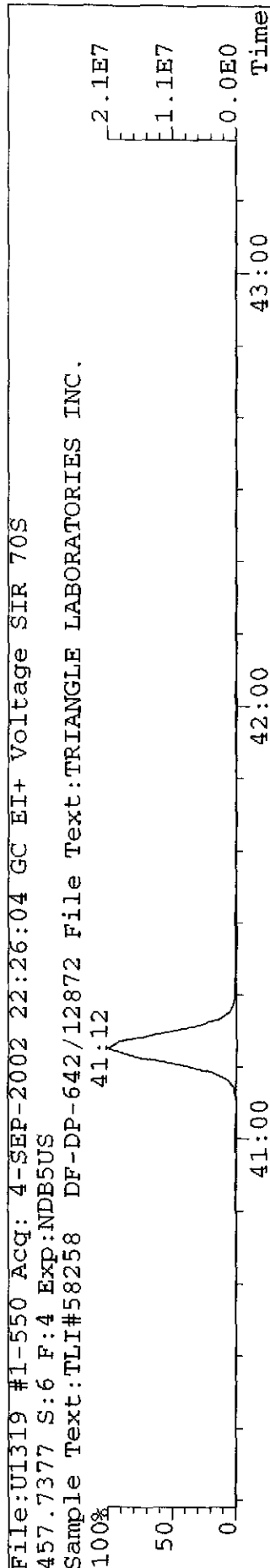


File:U1319 #1-550 Acq: 4-SEP-2002 22:26:04 GC EI+ Voltage SIR 70S  
437.8140 S:6 F:4 Exp:NDB5US  
Sample Text:TLI#58258 DF-DP-642/12872 File Text:TRIANGLE LABORATORIES INC.



*Handwritten signature*





9/9/02

**Mississippi Dept. of Env. Quality**

TLI Project: **58258**                      Method 8290 TCDD/TCDF Analysis (DB-225)  
 Client Sample: **DF-DP-642/12872**                      Analysis File: **P023221**

Client Project:	<b>Crystal Springs Dioxin</b>		
Sample Matrix:	<b>SOIL</b>	Date Received:	<b>08/27/2002</b>
TLI ID:	<b>334-48-4</b>	Date Extracted:	<b>08/28/2002</b>
		Date Analyzed:	<b>09/05/2002</b>
		Spike File:	<b>SPC2NF2S</b>
		ICal:	<b>PF56152</b>
		ConCal:	<b>P023216</b>
Sample Size:	<b>11.600 g</b>	Dilution Factor:	<b>n/a</b>
Dry Weight:	<b>10.057 g</b>	Blank File:	<b>U131602</b>
GC Column:	<b>DB-225</b>	Analyst:	<b>JMM</b>
		% Moisture:	<b>13.3</b>
		% Lipid:	<b>n/a</b>
		% Solids:	<b>86.7</b>

Analytes	Conc. (pg/g)	DL	EMPC	Ratio	RT	Flags
2,3,7,8-TCDF	440			0.83	22:59	E_

Internal Standard	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	191	96.2	40%-130%	0.76	22:58	__

Recovery Standard	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	0.85	21:53	__

Data Reviewer:  09/05/2002

Initial ....Date...

Data Review By:

CEM 9.5.02

Channel specific noise levels computed from 'NL' heights.

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 P023221B.dbf
09/05/2002 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.

Table with columns: TCDF, DC, NL, WL, RO, Height, 0.65-0.89, 0.11, 0.12, 0.792-1.102, 0.23, 0.14, 0.781, 0.28, 0.787, 0.65, 1.01, 0.37, 0.792, 0.23, 0.10, 0.26, 0.793, 0.58, 6.07, 0.33, 0.807, 0.812, 34.17, 5.75, 0.812, 0.78, 3.32, 1.45, 1.87, 0.818, 0.73, 0.44, 0.41, 0.821, 0.48, 0.21, 0.82, 0.826, 1.33, 2.51, 1.89, 1.42, 0.833, 0.76, 8.25, 3.57, 4.68, 0.835, 0.78, 53.33, 23.44, 29.89, 0.840, 0.98, 4.71, 2.62, 2.66, 0.851, 0.69, 29.99, 12.25, 17.74, 0.856, 0.59, 10.30, 4.48, 7.54, 0.860, 0.77, 84.56, 36.79, 47.77, 0.865, 0.54, 3.63, 1.58, 2.95, 0.873, 0.85, 29.38, 13.52, 15.86, 0.883, 0.80, 160.40, 71.06, 89.34, 0.890, 0.87, 16.88, 7.85, 9.03, 0.895, 0.80, 226.87, 101.06, 125.81, 0.901, 0.66, 16.41, 6.54, 9.87, 0.906, 0.76, 167.89, 72.30, 95.59, 0.922, 0.79, 28.65, 12.61, 16.04, 0.932, 0.78, 241.50, 105.93, 135.57, 0.941, 0.80, 133.03, 59.07, 73.96, 0.951, 0.77, 63.11, 27.49, 35.62, 0.961, 0.81, 31.94, 14.26, 17.68, 0.977, 0.56, 7.84, 3.41, 6.09, 0.981, 0.83, 562.00, 255.00, 307.00, 1.001, 2378-TCDF, AN, E, 0.80, 120.95, 53.94, 67.01, 1.009, 0.79, 447.53, 197.68, 249.85, 1.025, 1.09, 14.46, 8.94, 8.17, 1.059, 0.53, 6.25, 2.72, 5.10, 1.069, 0.85, 18.14, 8.32, 9.82, 1.078, 0.47, 1.40, 0.61, 1.30, 1.089, 0.76, 33.65, 14.52, 19.13, 1.099, 35 Peaks, 2,541.73

Table with columns: 13C12-TCDF, DC, NL, WL, RO, Height, 0.65-0.89, 0.11, 0.16, 0.956-1.044, 0.27, 0.60, 0.802

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.
DC	WL			18:27	RO	1.11	0.97			0.803			
DC	WL			18:49		0.78	84.62			0.819			
DC	WL			18:57	RO	0.36	0.28			0.825			
DC	WL			19:07	RO	0.06	0.14			0.832			
DC	WL			19:34	RO	0.95	10.21			0.852			
DC	WL			19:47	RO	1.66	0.83			0.861			
DC	WL			19:54	RO	0.60	5.82			0.866			
DC	WL			20:39	RO	0.26	0.46			0.899			
DC	WL			20:50	RO	0.28	0.28			0.907			
DC	WL			20:54	RO	1.12	0.30			0.910			
DC	WL			20:58		0.80	0.45			0.913			
DC	WL			21:15	RO	0.04	0.32			0.925			
DC	WL			21:28	RO	1.93	1.89			0.935			
DC	WL			21:35	RO	0.48	3.13			0.940			
DC	WL			21:48	RO	1.38	1.98			0.949			
DC	WL			21:54	RO	1.50	0.35			0.954			
				22:05		0.65	2.83	1.12	1.71	0.962			
DC	SN			22:23	RO	12.09	0.19			0.975			
				22:28	RO	5.18	1.20	3.52	0.68	0.978			
DC	SN			22:37	RO	1.92	0.21			0.985			
				22:42		0.67	0.50	0.20	0.30	0.988			
				22:58		0.76	226.93	97.83	129.10	1.000	13C12-2378-TCDF	ISO	
						Height	45.96	19.93	26.03				
				23:08	RO	1.95	1.12	1.23	0.63	1.007			
				23:19	RO	1.61	0.64	0.58	0.36	1.015			
				23:30	RO	0.19	0.62	0.27	1.42	1.023			
				23:48	RO	0.06	0.99	0.43	7.02	1.036			
DC	WH			24:04	RO	1.65	0.46			1.048			
DC	WH			24:11	RO	1.07	5.08			1.053			
DC	WH			24:22		0.67	2.00			1.061			
DC	WH			24:42	RO	2.04	2.18			1.075			
DC	WH			24:49	RO	0.60	0.21			1.081			
DC	WH			24:56	RO	2.00	0.42			1.086			
DC	WH			25:01	RO	7.69	0.23			1.089			
316-318				8 Peaks			234.83						

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

13C12-TCDD 332-334				0.65-0.89		0.906-1.094				
DC	NL			Height	0.30	0.22	0.08			
DC	WL			18:49	0.77		0.870			
DC	WL			18:56	RO	2.92	0.44	0.875		
DC	WL			19:05	RO	0.43	0.60	0.882		
DC	WL			19:15	RO	1.40	0.53	0.890		
DC	WL			19:24	RO	2.00	0.81	0.897		
DC	WL			19:28	RO	2.88	2.16	0.900		
DC	WL			19:35	RO	1.45	0.67	0.905		
DC	SN			19:43	RO	0.58	0.34	0.911		
				19:54	RO	6.21	0.50	1.74	0.28	0.920
DC	SN			20:03	RO	2.41	0.30			0.927
				20:05	RO	0.97	0.60	0.33	0.34	0.928
				20:15	RO	5.50	0.25	0.77	0.14	0.936

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.
				20:19	RO	4.18	0.30	0.71	0.17	0.939			
DC	SN			20:47	RO	0.36	0.51			0.961			
DC	SN			20:55		0.86	0.80			0.967			
DC	SN			20:58	RO	1.19	0.65			0.969			
DC	SN			21:03	RO	1.00	0.48			0.973			
				21:38		0.86	135.23	62.67	72.56	1.000	13C12-2378-TCDD	IS1	
						Height	29.16	13.02	16.14				
				21:53		0.85	155.28	71.16	84.12	1.012	13C12-1234-TCDD	RS1	
				22:02	RO	3.04	0.41	0.70	0.23	1.018			
				22:23	RO	1.39	0.78	0.61	0.44	1.035			
				22:31	RO	1.09	0.76	0.47	0.43	1.041			
				23:10	RO	1.18	0.78	0.52	0.44	1.071			
				23:20	RO	3.97	0.58	1.31	0.33	1.079			
				23:31	RO	10.96	0.81	5.04	0.46	1.087			
DC	WH			23:42	RO	1.93	4.25			1.096			
DC	WH			23:51	RO	1.40	0.18			1.102			
DC	WH			23:59		0.87	0.86			1.109			
DC	WH			24:03		0.65	0.71			1.112			
DC	WH			24:11	RO	0.29	0.92			1.118			
332-334				12 Peaks			296.28						

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

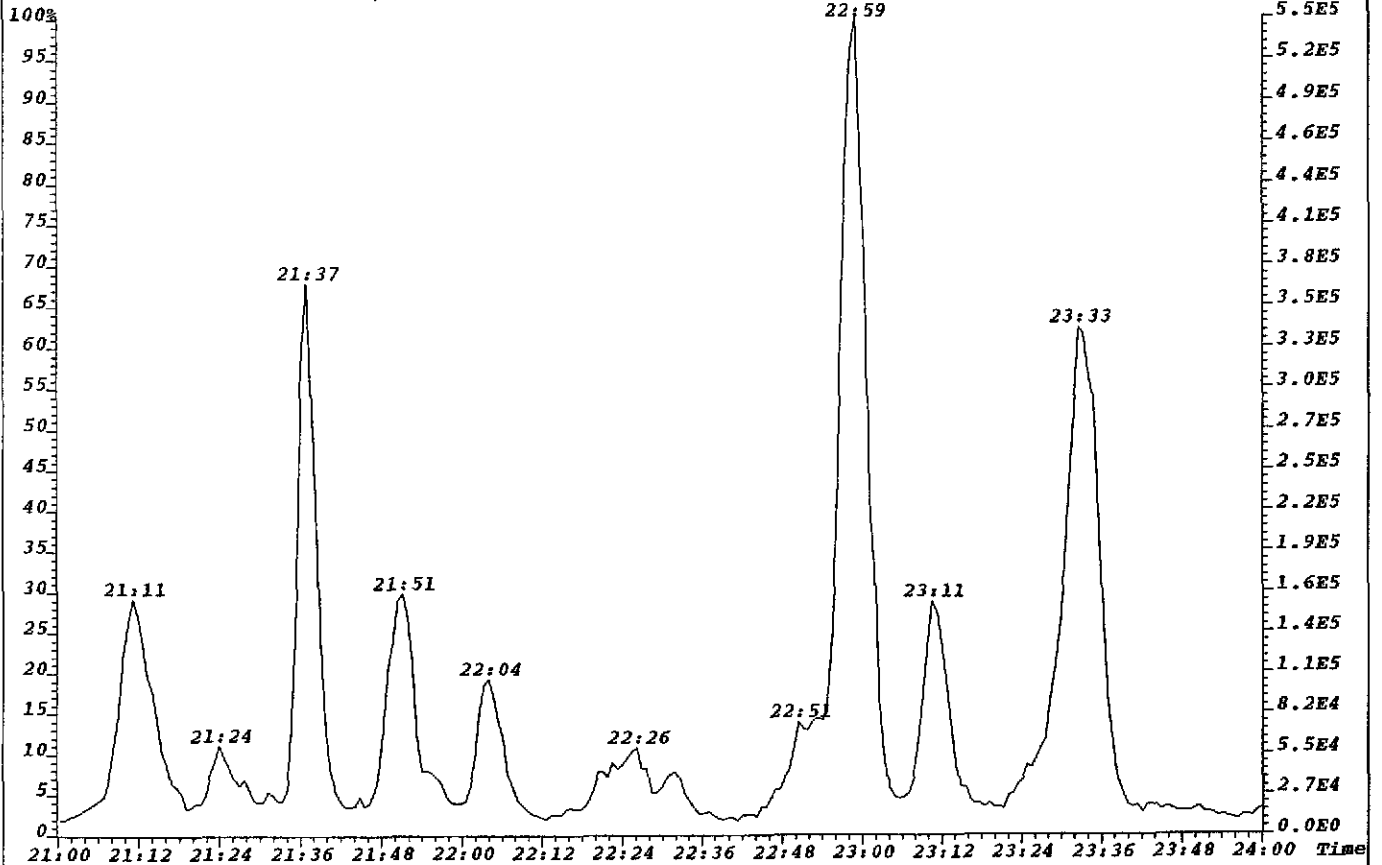
M\_Z -Nominal Ion Mass(es) WL-Below Retention Time Window A-Peak Added  
 ..RT. -Retention Time (mm:ss) WH-Above Retention Time Window K-Peak Kept  
 Rat.1 -Ratio of M/M+2 Ions SN-Below Signal to Noise Level D-Peak Deleted  
 OK -RO=Ratio Outside Limits <M-Below Method Detection Limit T-Time Changed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

\*\*\* End of Report \*\*\*

File:P023221 #1-3025 Acq:5-SEP-02 06:28:13 EI+ Voltage SIR 70P  
303.9016 GC:DB225 Exp:none

TRIANGLE LABS Text:DF-DP-642/12872 TLI#58258

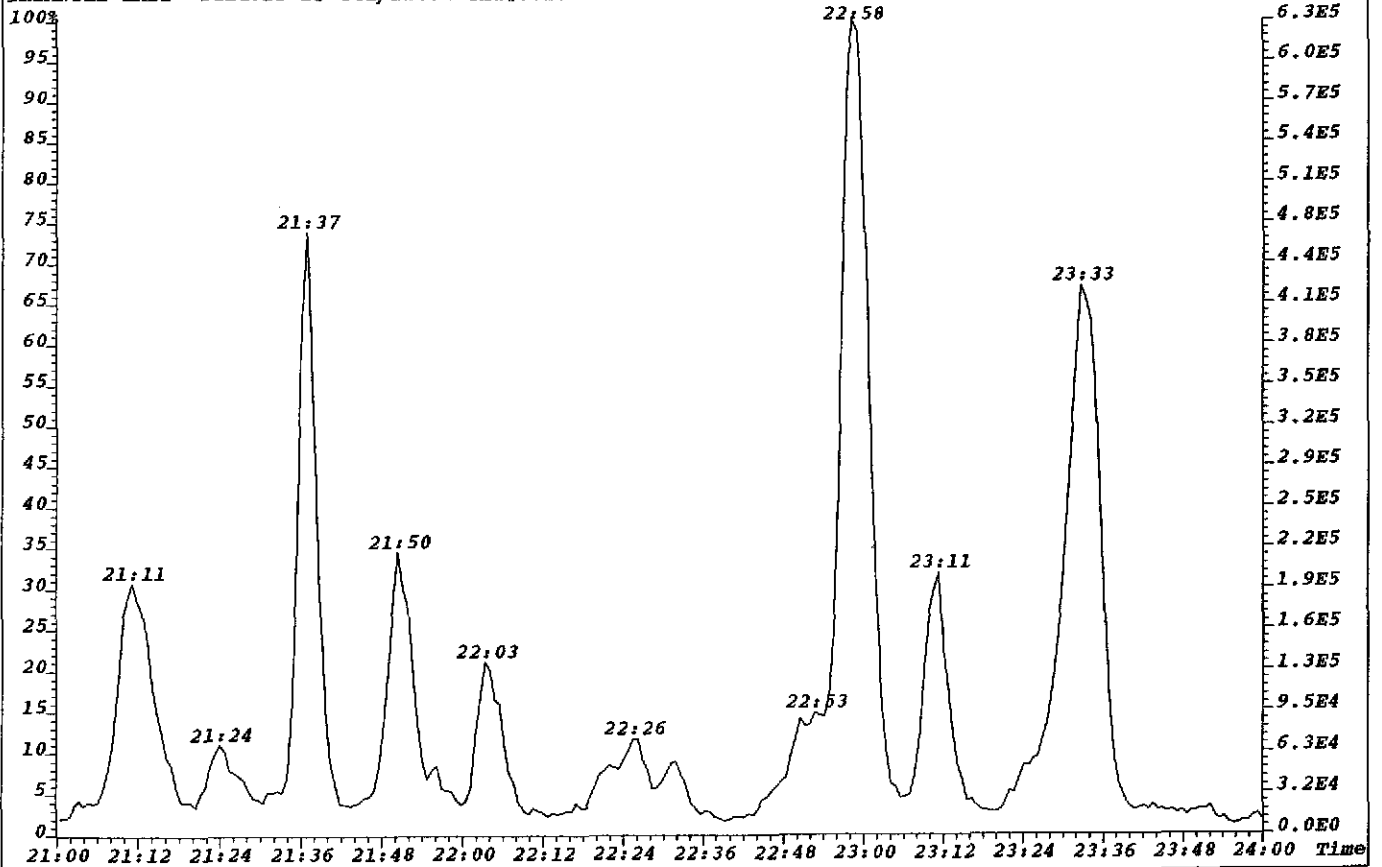
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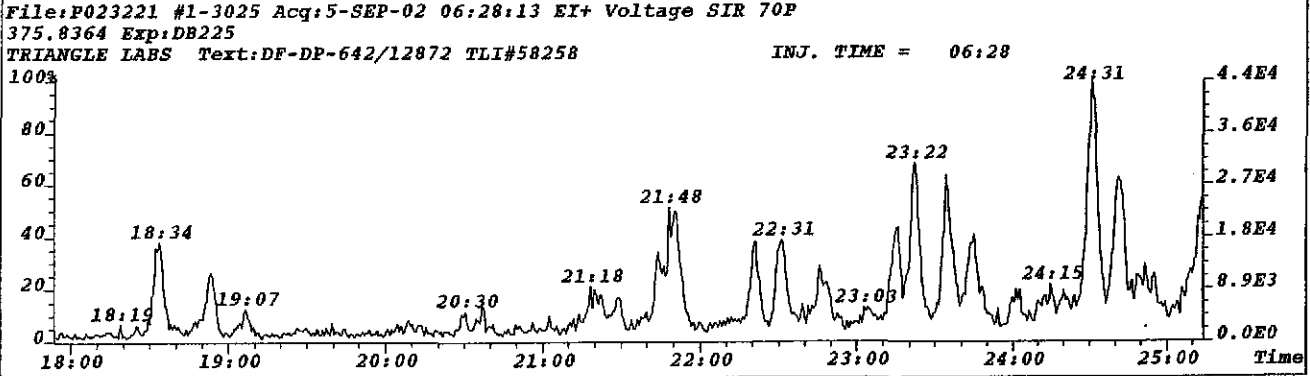
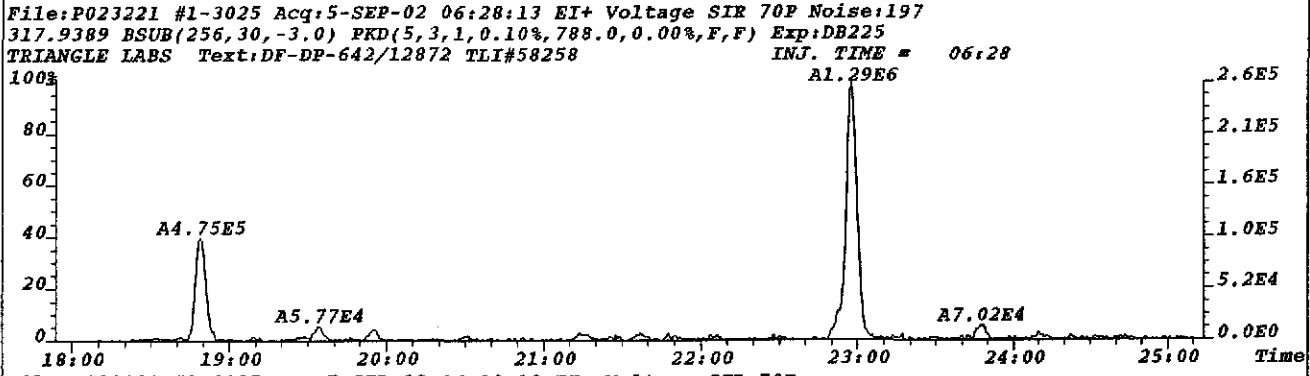
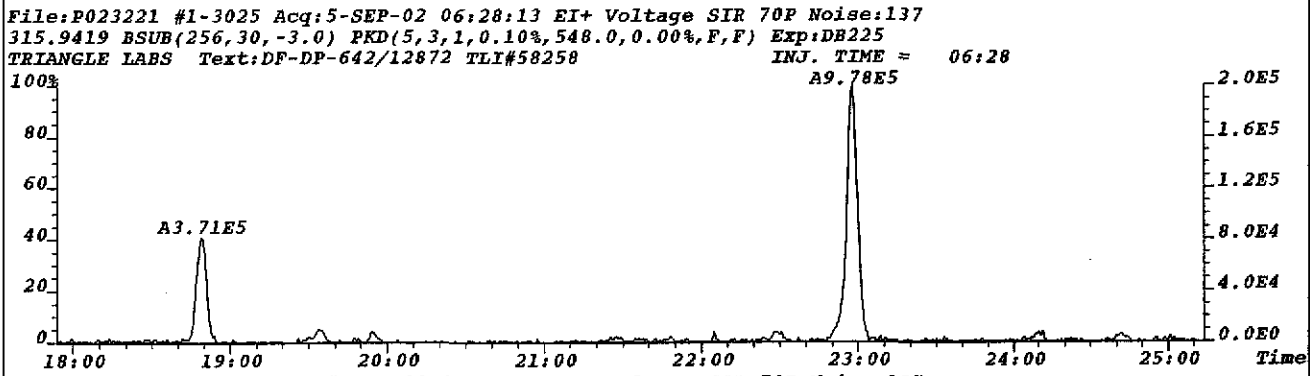
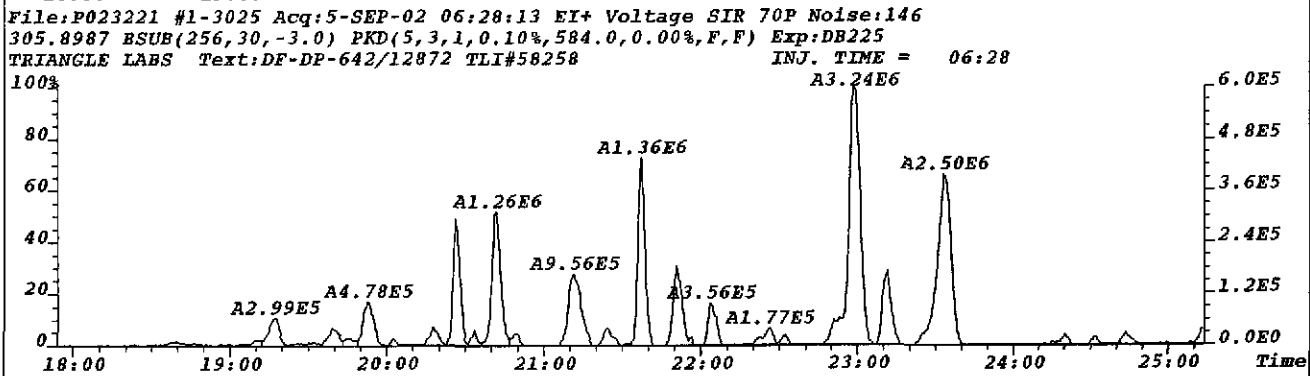
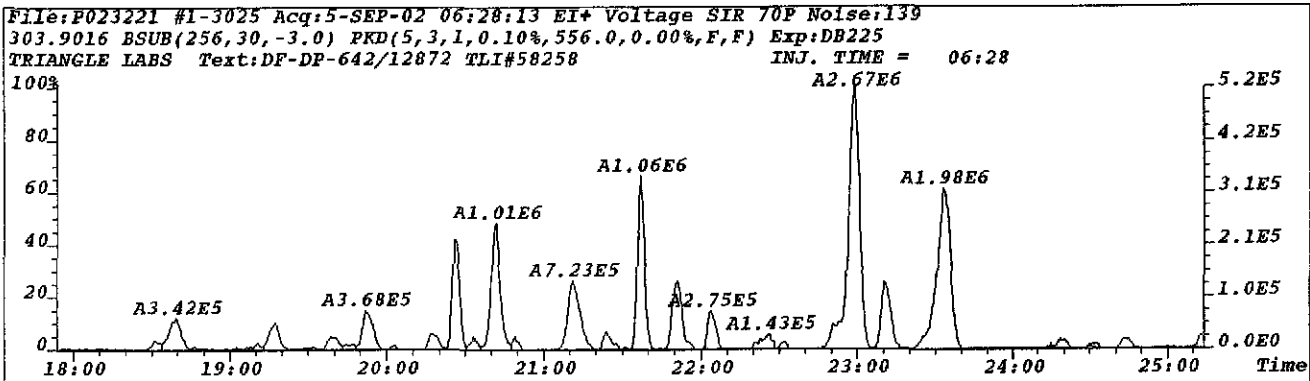


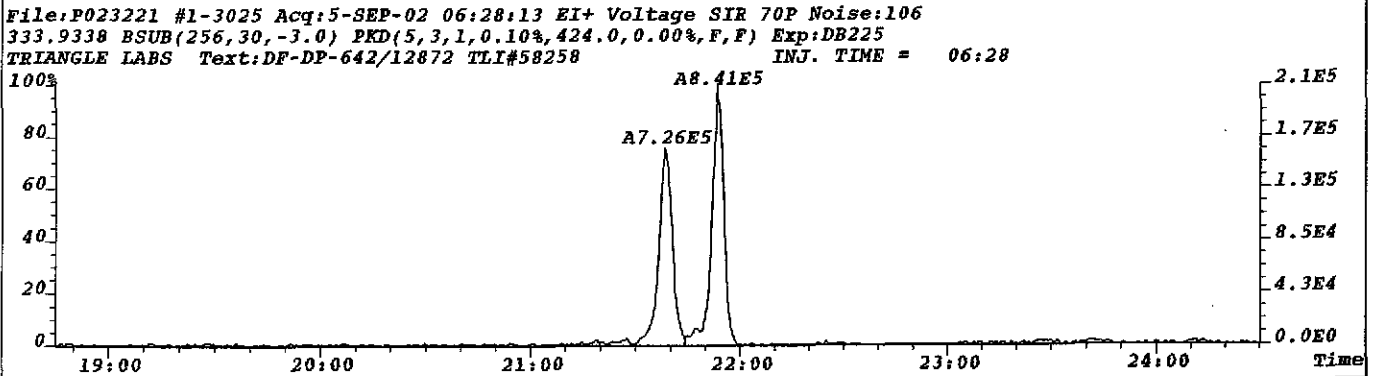
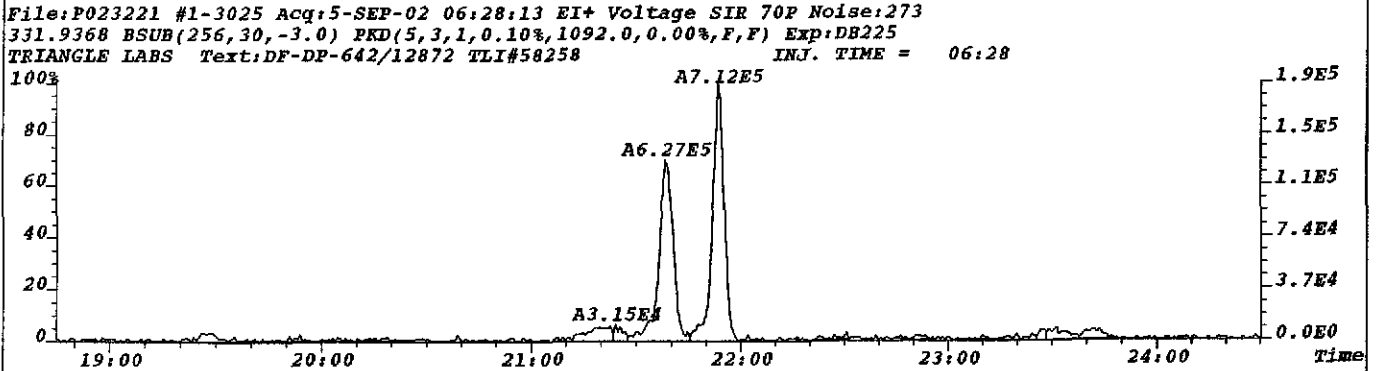
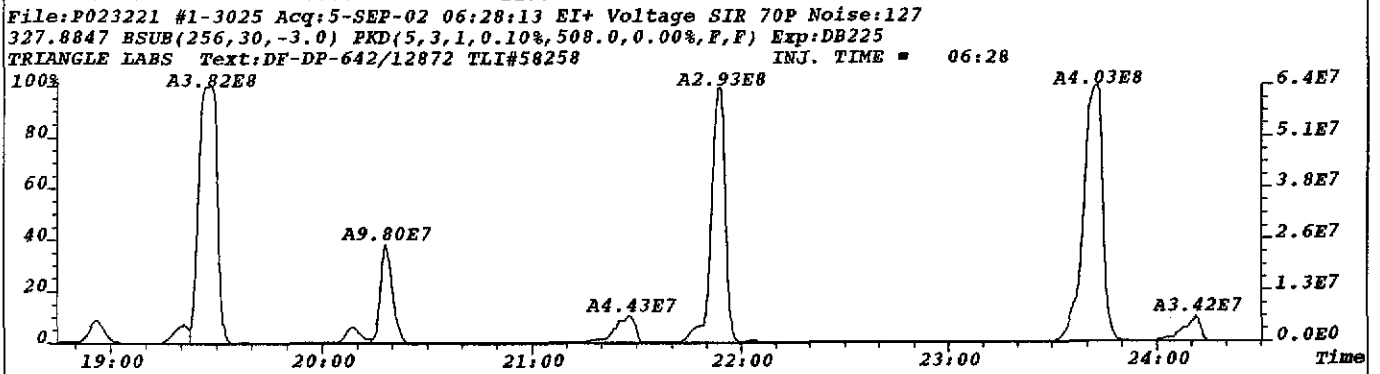
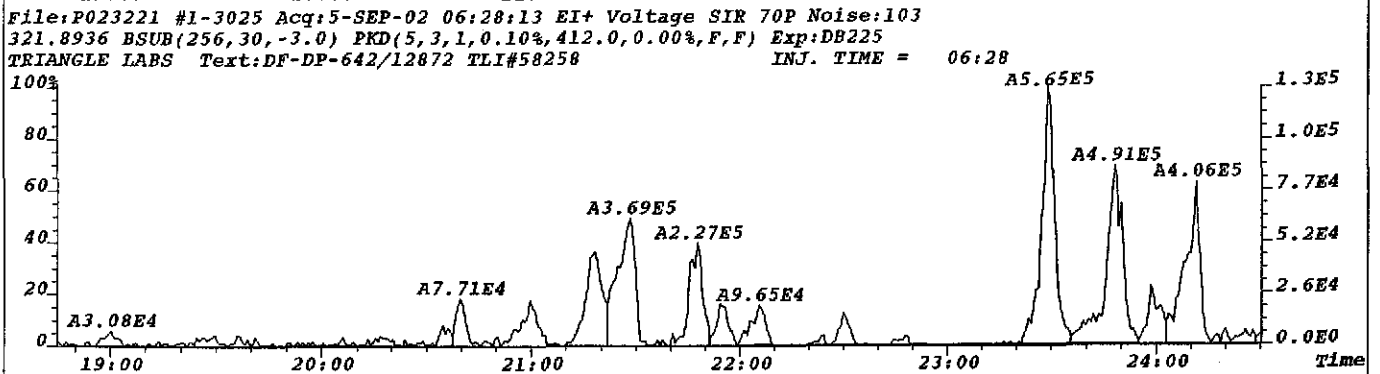
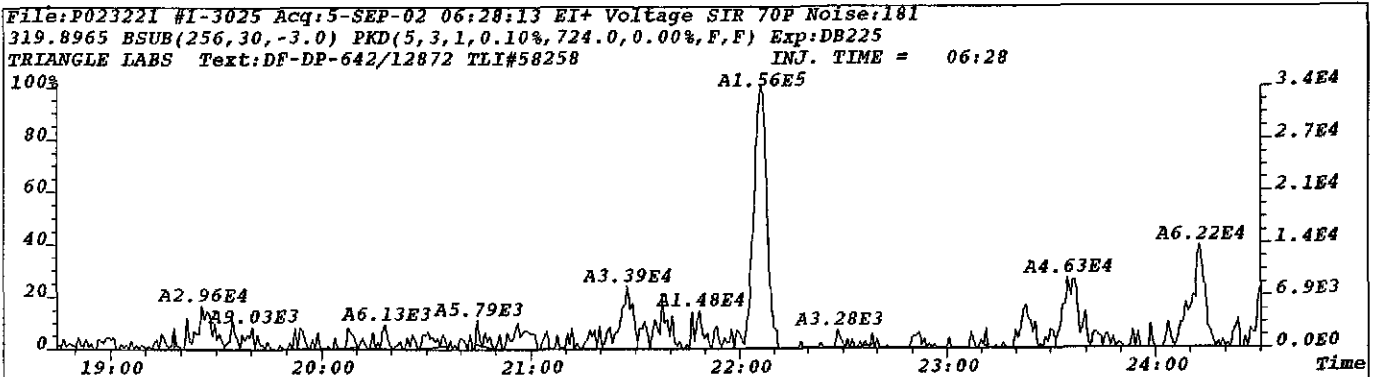
File:P023221 #1-3025 Acq:5-SEP-02 06:28:13 EI+ Voltage SIR 70P  
305.8987 GC:DH225 Exp:none

TRIANGLE LABS Text:DF-DP-642/12872 TLI#58258

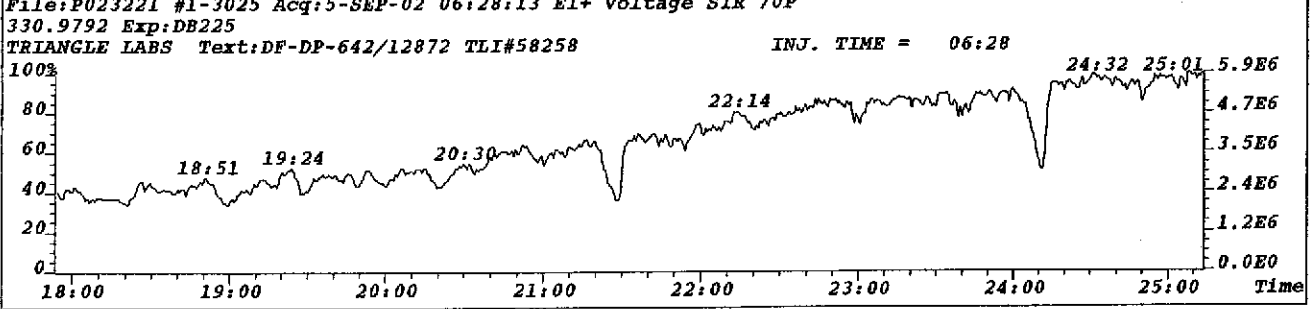
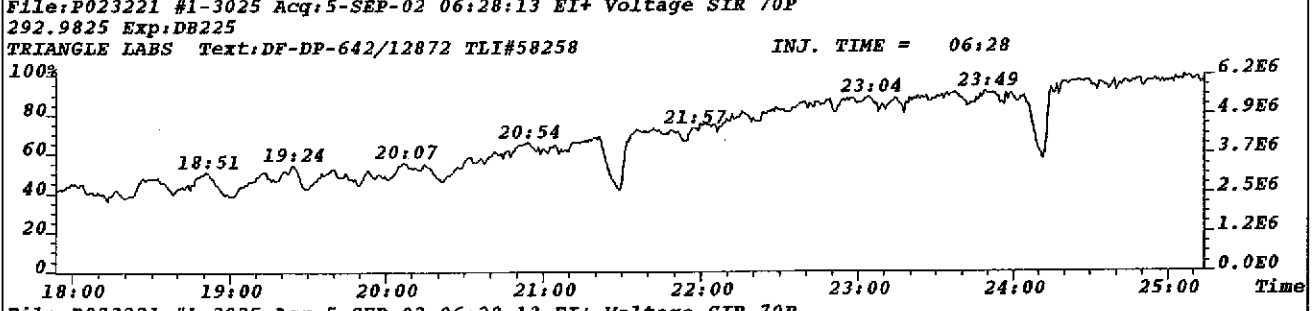
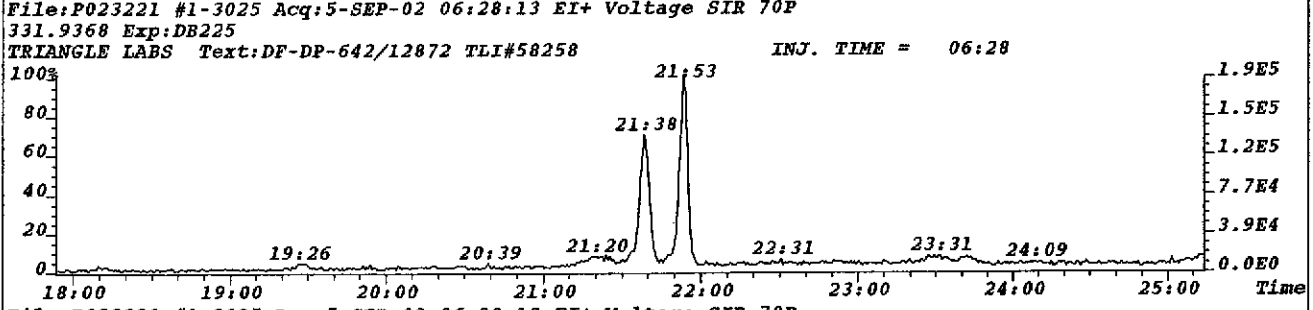
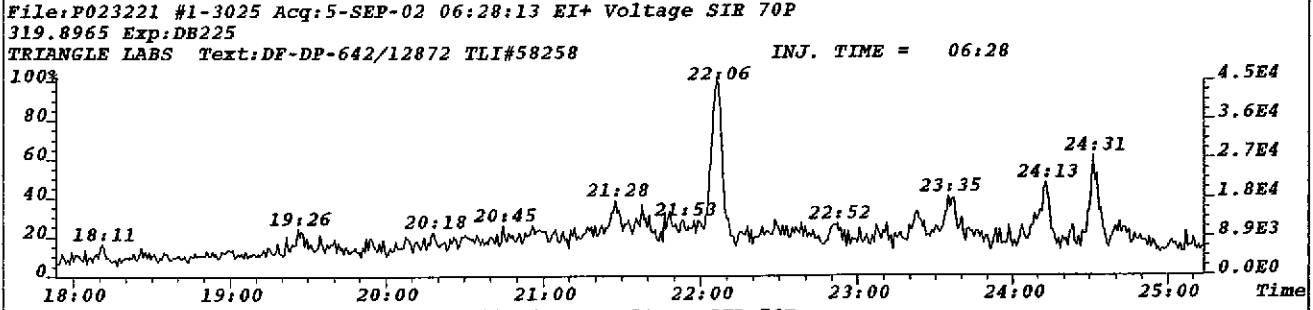
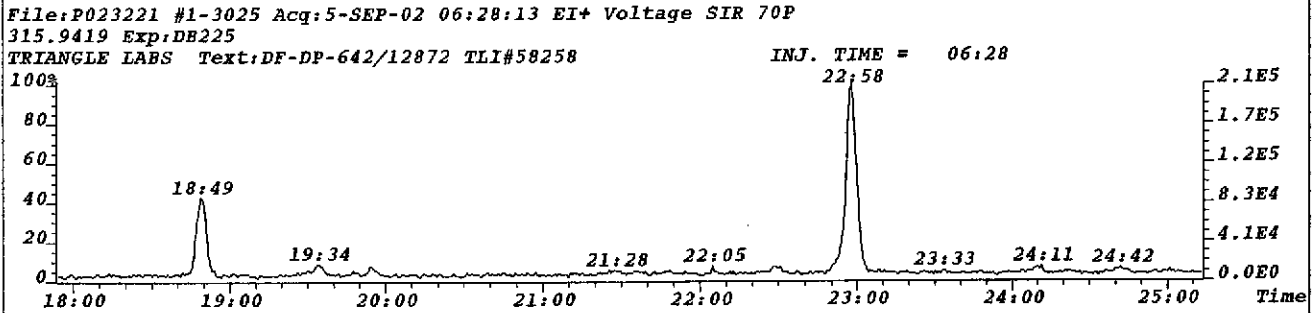
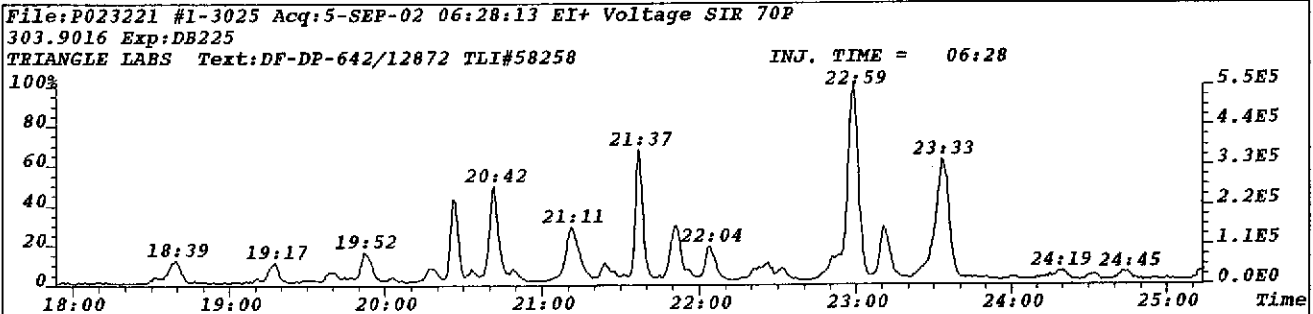
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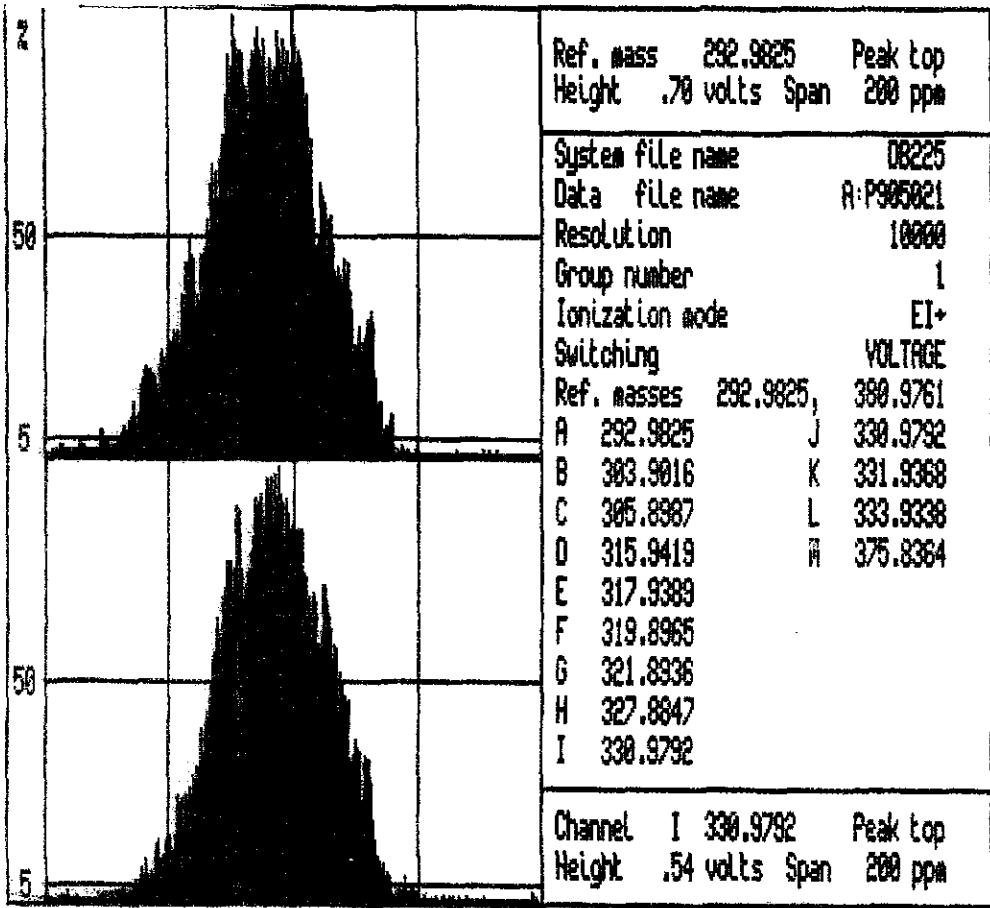




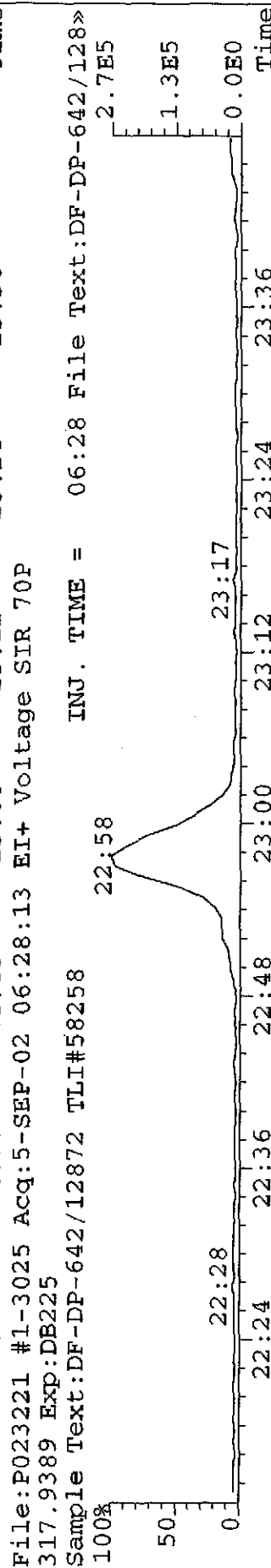
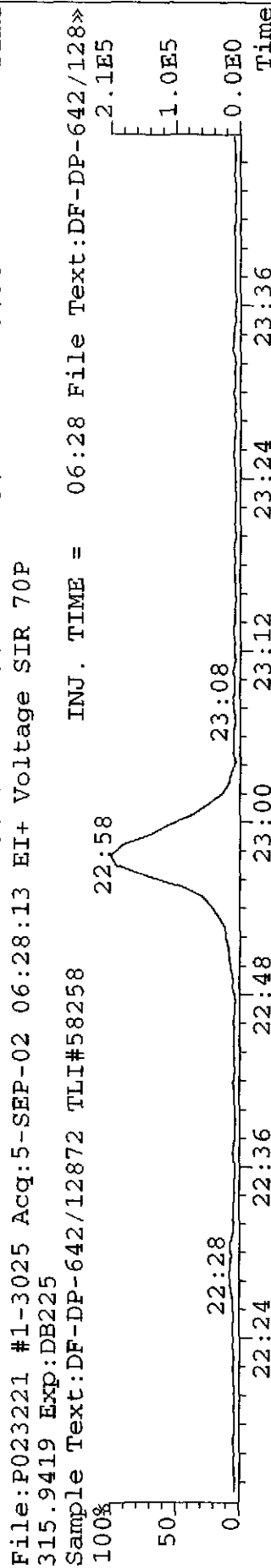
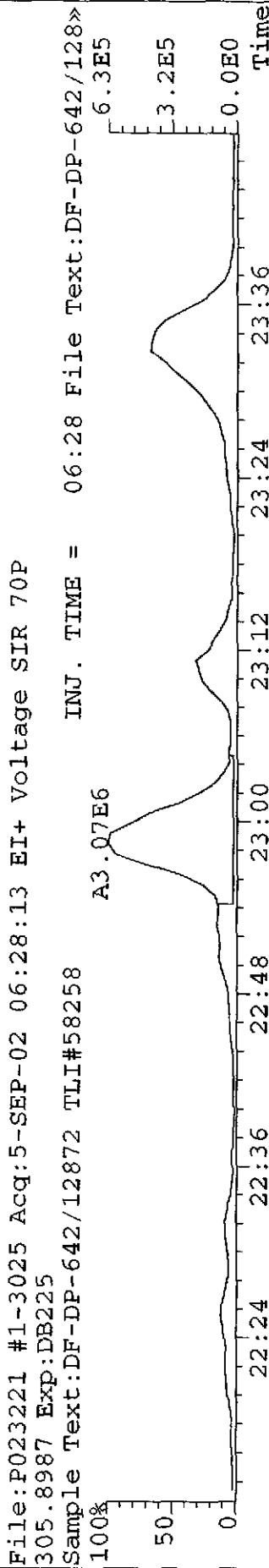
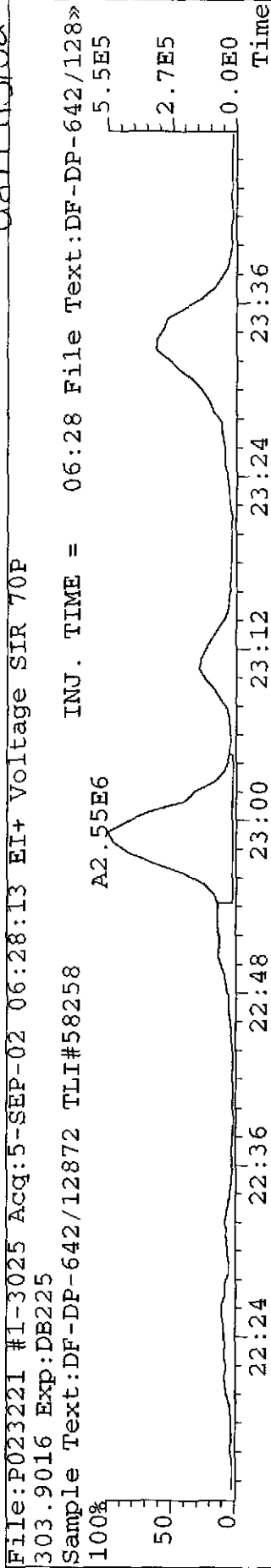








080915102



**Mississippi Dept. of Env. Quality**

TLI Project: **58258**  
 Client Sample: **TLI LCS**

Method 8290 PCDD/PCDF Analysis (b)  
 Analysis File: **U131611**

Client Project:	<b>Crystal Springs Dioxin</b>		
Sample Matrix:	<b>SAND</b>	Date Received:	<b>//</b>
TLI ID:	<b>TLI LCS</b>	Date Extracted:	<b>08/28/2002</b>
		Date Analyzed:	<b>09/04/2002</b>
		Spike File:	<b>SPMIT32S</b>
		ICal:	<b>UF57092</b>
		ConCal:	<b>U021315</b>
Sample Size:	<b>10.000 g</b>	Dilution Factor:	<b>n/a</b>
Dry Weight:	<b>n/a</b>	Blank File:	<b>U131602</b>
GC Column:	<b>DB-5</b>	Analyst:	<b>JMM</b>
		% Moisture:	<b>n/a</b>
		% Lipid:	<b>n/a</b>
		% Solids:	<b>n/a</b>

Analytes	Conc. (pg/g)	DL	EMPC	Ratio	RT	Flags
2,3,7,8-TCDD	46.5			0.83	26:46	---
1,2,3,7,8-PeCDD	226			1.58	31:00	---
1,2,3,4,7,8-HxCDD	218			1.25	34:08	---
1,2,3,6,7,8-HxCDD	211			1.25	34:13	---
1,2,3,7,8,9-HxCDD	230			1.27	34:32	---
1,2,3,4,6,7,8-HpCDD	200			1.00	37:28	---
1,2,3,4,6,7,8,9-OCDD	319			0.90	41:05	---
2,3,7,8-TCDF	46.6			0.74	26:04	---
1,2,3,7,8-PeCDF	224			1.56	29:59	---
2,3,4,7,8-PeCDF	213			1.56	30:40	---
1,2,3,4,7,8-HxCDF	208			1.25	33:26	---
1,2,3,6,7,8-HxCDF	210			1.25	33:33	---
2,3,4,6,7,8-HxCDF	227			1.27	34:01	---
1,2,3,7,8,9-HxCDF	213			1.28	34:48	---
1,2,3,4,6,7,8-HpCDF	228			1.05	36:27	---
1,2,3,4,7,8,9-HpCDF	214			1.06	37:59	---
1,2,3,4,6,7,8,9-OCDF	294			0.91	41:17	---

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	130	64.9	40%-135%	0.80	26:03	---
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	131	65.7	40%-135%	0.87	26:45	---
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	178	88.9	40%-135%	1.60	29:58	---
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	194	96.9	40%-135%	1.69	31:00	---
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	176	87.9	40%-135%	0.51	33:32	---
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	159	79.7	40%-135%	1.37	34:12	---
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	143	71.4	40%-135%	0.47	36:26	---
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	144	72.2	40%-135%	1.06	37:28	---
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8,9-OCDD	341	85.3	40%-135%	0.91	41:04	---

**Mississippi Dept. of Env. Quality**

TLI Project: **58258**  
 Client Sample: **TLI LCS**

Method 8290 PCDD/PCDF Analysis (b)  
 Analysis File: **U131611**

Surrogate Standards (Type B)	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	164	81.8	40%-135%	1.57	30:40	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	170	84.8	40%-135%	0.51	33:26	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	179	89.5	40%-135%	1.38	34:07	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	143	71.5	40%-135%	0.45	37:58	—

Other Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	Flags
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	12.3	61.5	40%-135%	26:46	—

Alternate Standards (Type B)	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	180	90.2	40%-135%	0.50	34:47	—
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	192	96.2	40%-135%	0.52	34:00	—

Recovery Standards	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	0.85	26:33	—
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	1.43	34:31	—

Data Reviewer: \_\_\_\_\_  \_\_\_\_\_ 09/05/2002

Initial .....Date...

Data Review By:

Q 9/5/02

Channel specific noise levels computed from 'NL' heights.

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 U131611B.dbf  
09/05/2002 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.

		0.65-0.89			0.874-1.073		
TCDF		Height					
304-306	DC NL	9.71	5.05	4.66			
		25:02 0.76	112.78	48.59	64.19	0.961	
		25:39 RO 0.62	69.81	30.37	49.32	0.985	1278-TCDF AN
		26:04 0.74	2,329.87	987.31	1,342.56	1.001	2378-TCDF AN
	DC SN	27:07 RO 0.50	36.69		1.041		
		27:26 RO 0.95	54.07	23.52	24.83	1.053	
	DC SN	27:39 RO 2.38	18.18		1.061		
	DC SN	27:48 RO 1.71	23.45		1.067		
304-306		4 Peaks	2,566.53				

		0.65-0.89			0.962-1.038		
13C12-TCDF		Height					
316-318	DC NL	8.09	4.96	3.13			
	DC WL	25:00 RO 1.21	117.40		0.960		
	DC SN	25:19 0.74	54.68		0.972		
		25:39 RO 0.96	127.42	55.43	57.94	0.985	
		26:03 0.80	8,857.86	3,927.01	4,930.85	1.000	13C12-2378-TCDF ISO
		Height	2,123.66	937.73	1,185.93		
	DC WH	28:00 RO 2.35	158.73		1.075		
316-318		2 Peaks	8,985.28				

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

		0.65-0.89			0.900-1.044		
TCDD		Height					
320-322	DC NL	4.49	2.08	2.41			
	DC SN	24:52 0.75	25.64		0.930		
		26:46 0.83	1,734.60	789.08	945.52	1.001	2378-TCDD AN
		27:06 RO 1.07	27.17	16.44	15.35	1.013	J
	DC SN	27:17 RO 1.93	10.44		1.020		
	DC SN	27:27 RO 2.47	4.48		1.026		
	DC SN	27:52 RO 0.16	10.07		1.042		
320-322		2 Peaks	1,761.77				

		0.925-1.075		
37C1-TCDD		Height		
328	DC NL	3.22	3.22	
		25:24	27.62	27.62
	DC SN	26:36	12.04	0.950
		26:46	629.16	629.16
	DC SN	27:17	14.76	0.994
	DC SN	27:25	13.04	1.001
	DC SN	27:39	10.85	1.020
		28:04	103.25	103.25
				1.025
				1.034
				1.049
328		3 Peaks	760.03	

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.

13C12-TCDD		0.65-0.89		0.925-1.075	
332-334	DC NL	Height	19.26	14.28	4.98
M		26:33	0.85	8,520.00	3,910.00
M		26:45	0.87	6,320.00	2,940.00
		Height	1,589.91	734.22	855.69
332-334	2 Peaks		14,840.00		

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

PeCDF		1.32-1.78		0.928-1.062	
340-342	DC NL	Height	3.91	2.04	1.87
		29:07	1.33	158.55	90.61
		29:37	1.66	99.65	62.25
		29:59	1.56	11,907.24	7,261.86
		30:16	1.60	155.48	95.63
		30:40	1.56	11,099.35	6,764.11
		30:59	1.70	55.67	35.05
		31:11 RO	2.27	38.33	34.14
		31:38 RO	2.73	33.74	36.15
340-342	8 Peaks		23,548.01		

13C12-PeCDF		1.32-1.78		0.867-1.133	
352-354	DC NL	Height	4.35	2.75	1.60
		27:53 RO	2.98	21.98	25.70
		29:06 RO	1.26	155.93	77.34
		29:25	1.67	22.11	13.83
		29:36 RO	1.19	99.04	46.35
		29:58	1.60	8,450.55	5,200.19
		Height	2,460.47	1,501.58	958.89
		30:15 RO	1.02	168.35	67.33
		30:40	1.57	7,803.74	4,765.26
		31:00 RO	1.10	94.32	40.66
		31:38	1.57	126.86	77.54
352-354	9 Peaks		16,942.88		

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

PeCDD		1.32-1.78		0.938-1.022	
356-358	DC NL	Height	3.49	1.71	1.78
	DC SN	29:43 RO	0.70	8.65	0.959
		30:05 RO	0.78	18.79	11.42
	DC SN	30:39	1.33	20.64	0.989
		31:00	1.58	6,987.37	4,283.21
		31:28 RO	1.22	59.90	28.74
		31:37 RO	0.85	12.29	7.47
	DC WH	31:54	1.51	9.85	1.029
356-358	4 Peaks		7,078.35		

13C12-PeCDD		1.32-1.78		0.871-1.129	
368-370	DC NL	Height	12.65	10.68	1.97
		28:56 RO	11.17	59.54	260.76
		29:24 RO	22.75	28.92	257.95
					11.34
					0.933
					0.948

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.

			29:46	RO	16.56	37.08	240.82	14.54	0.960		
			30:04	RO	7.66	128.21	385.24	50.28	0.970		
			30:35	RO	18.13	35.01	248.91	13.73	0.987		
			31:00		1.69	5,488.64	3,445.66	2,042.98	1.000	13C12-PeCDD 123	IS3
					Height	1,516.61	937.56	579.05			
			31:34	RO	19.53	25.58	195.84	10.03	1.018		
368-370			7 Peaks			5,802.98					

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

HxCDF			1.05-1.43			0.964-1.045				
374-376	DC	NL			Height	7.30	3.48	3.82		
			32:36		1.25	58.01	32.25	25.76	0.972	J
			33:26		1.25	7,348.59	4,078.40	3,270.19	0.997	123478-HxCDF AN
			33:33		1.25	7,773.23	4,312.70	3,460.53	1.000	123678-HxCDF AN
	DC	SN	33:49	RO	0.41	13.82		1.008		
			34:01		1.27	7,321.71	4,101.90	3,219.81	1.014	234678-HxCDF AN
			34:48		1.28	5,677.73	3,184.63	2,493.10	1.038	123789-HxCDF AN
374-376			5 Peaks			28,179.27				

13C12-HxCDF			0.43-0.59			0.881-1.119				
384-386	DC	NL			Height	14.43	8.07	6.36		
	DC	SN	32:36		0.54	43.01		0.972		
			33:26		0.51	5,974.82	2,024.91	3,949.91	0.997	13C12-HxCDF 478 SUR2
			33:32		0.51	6,177.67	2,089.26	4,088.41	1.000	13C12-HxCDF 678 IS4
					Height	1,962.84	658.70	1,304.14		
			34:00		0.52	6,219.23	2,135.62	4,083.61	1.014	13C12-HxCDF 234 ALT2
			34:47		0.50	4,635.15	1,543.50	3,091.65	1.037	13C12-HxCDF 789 ALT1
384-386			4 Peaks			23,006.87				

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

HxCDD			1.05-1.43			0.959-1.013				
390-392	DC	NL			Height	5.84	2.85	2.99		
			34:08		1.25	4,648.43	2,585.84	2,062.59	0.998	123478-HxCDD AN
			34:13		1.25	4,595.71	2,551.48	2,044.23	1.000	123678-HxCDD AN
			34:32		1.27	4,869.12	2,724.63	2,144.49	1.010	123789-HxCDD AN
390-392			3 Peaks			14,113.26				

13C12-HxCDD			1.05-1.43			0.971-1.029				
402-404	DC	NL			Height	62.88	56.02	6.86		
	DC	WL	32:47	RO	5.61	170.67		0.959		
	DC	SN	33:36	RO	3.73	127.32		0.982		
M			34:07		1.38	4,000.00	2,320.00	1,680.00	0.998	13C12-HxCDD 478 SUR3
M			34:12		1.37	3,940.00	2,280.00	1,660.00	1.000	13C12-HxCDD 678 IS5
					Height	1,170.02	662.93	507.09		
			34:31		1.43	4,757.29	2,795.88	1,961.41	1.009	13C12-HxCDD 789 RS2
	DC	SN	34:42	RO	4.45	65.99		1.015		
			34:59	RO	5.94	178.48	473.22	79.68	1.023	
402-404			4 Peaks			12,875.77				



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.

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

Compound	Retention Range	Peak	Retention	Height	Area	Area/Ht	Rel. RT	Compound Name	ID	Flags	
408-410	0.88-1.20	DC NL	Height	4.77	2.57	2.20					
			36:27	1.05	5,879.35	3,015.97	2,863.38	1.000	1234678-HpCDF	AN	
			36:52 RO	0.70	24.74	12.61	18.00	1.012			J
			DC SN 37:06 RO	1.26	7.06		1.018				
			37:59	1.06	3,911.14	2,016.72	1,894.42	1.043	1234789-HpCDF	AN	
408-410	3 Peaks			9,815.23							

Compound	Retention Range	Peak	Retention	Height	Area	Area/Ht	Rel. RT	Compound Name	ID	Flags	
418-420	0.37-0.51	DC NL	Height	8.04	4.13	3.91					
			36:26	0.47	3,566.04	1,143.26	2,422.78	1.000	13C12-HpCDF 678	IS6	
			Height	1,020.66	326.97	693.69					
			37:58	0.45	2,512.30	779.59	1,732.71	1.042	13C12-HpCDF 789	SUR4	
418-420	2 Peaks			6,078.34							

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

Compound	Retention Range	Peak	Retention	Height	Area	Area/Ht	Rel. RT	Compound Name	ID	Flags	
424-426	0.88-1.20	DC NL	Height	4.05	2.21	1.84					
			DC SN 36:44	0.92	14.16		0.980				
			37:28	1.00	2,814.63	1,407.06	1,407.57	1.000	1234678-HpCDD	AN	
			DC WH 37:46 RO	0.38	8.34		1.008				
424-426	1 Peak			2,814.63							

Compound	Retention Range	Peak	Retention	Height	Area	Area/Ht	Rel. RT	Compound Name	ID	Flags	
436-438	0.88-1.20	DC NL	Height	54.17	44.67	9.50					
			M 37:28	1.06	2,780.00	1,430.00	1,350.00	1.000	13C12-HpCDD 678	IS7	
			Height	724.28	375.97	348.31					
436-438	1 Peak			2,780.00							

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

Compound	Retention Range	Peak	Retention	Height	Area	Area/Ht	Rel. RT	Compound Name	ID	Flags	
442-444	0.76-1.02	DC NL	Height	4.53	2.18	2.35					
			DC WL 36:39 RO	1.16	9.58		0.892				
			41:17	0.91	4,868.42	2,319.67	2,548.75	1.005	OCDF	AN	
			DC SN 41:54 RO	0.60	8.39		1.020				
442-444	1 Peak			4,868.42							

Compound	Retention Range	Peak	Retention	Height	Area	Area/Ht	Rel. RT	Compound Name	ID	Flags
458-460	0.76-1.02	DC NL	Height	3.57	1.67	1.90				
			41:05	0.90	3,919.38	1,860.93	2,058.45	1.000	OCDD	AN
458-460	1 Peak			3,919.38						

Compound	Retention Range	Peak	Retention	Height	Area	Area/Ht	Rel. RT	Compound Name	ID	Flags	
470-472	0.76-1.02	DC NL	Height	110.93	76.61	34.32					
			M 41:04	0.91	4,440.00	2,120.00	2,320.00	1.000	13C12-OCDD	IS8	
			Height	896.01	426.93	469.08					
470-472	1 Peak			4,440.00							

Compound/

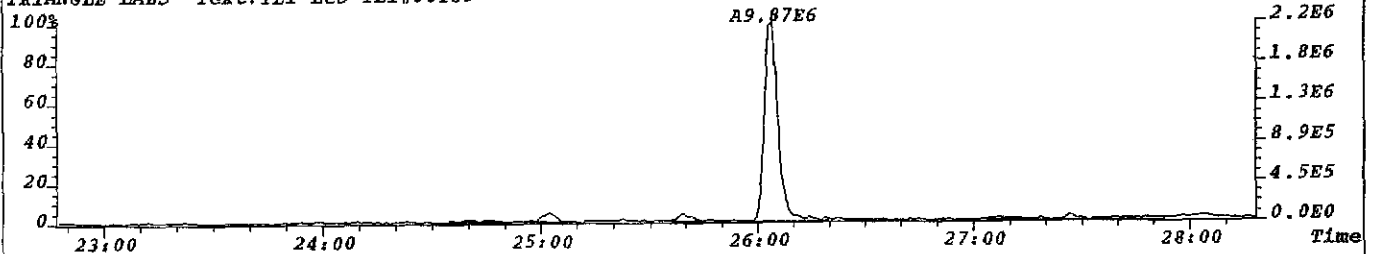
M\_Z.... QC.Log Omit Why ..RT. OK Ratio Total.Area/Ht Area/Ht.Peak1 Area/Ht.Peak2 Rel.RT Compound.Name.. ID.. Flags.

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

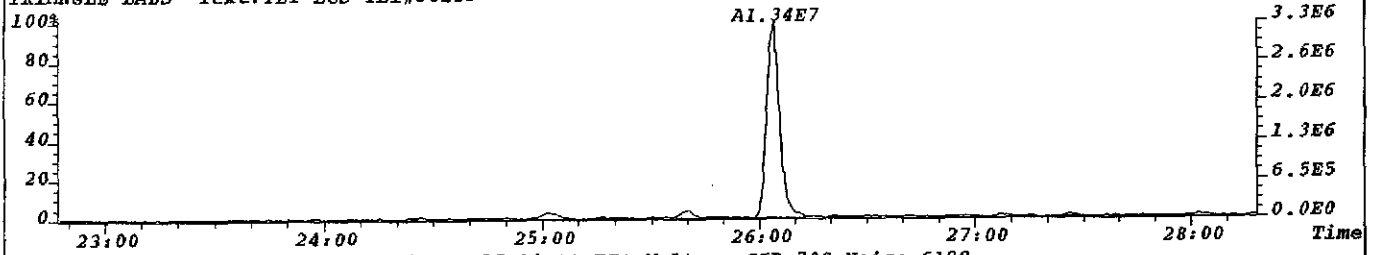
M_Z	-Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT.	-Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1	-Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK	-RO=Ratio Outside Limits	<M-Below Method Detection Limit	T-Time Changed
Rel.RT	-Relative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

\*\*\* End of Report \*\*\*

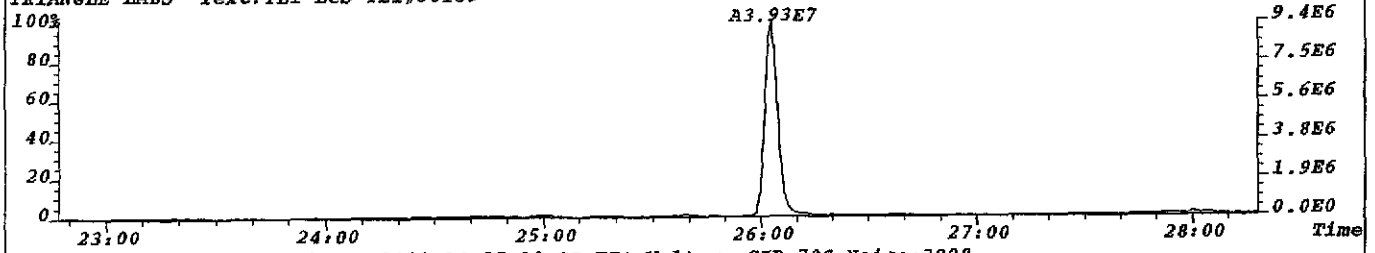
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303.9016 S:11 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,25236.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



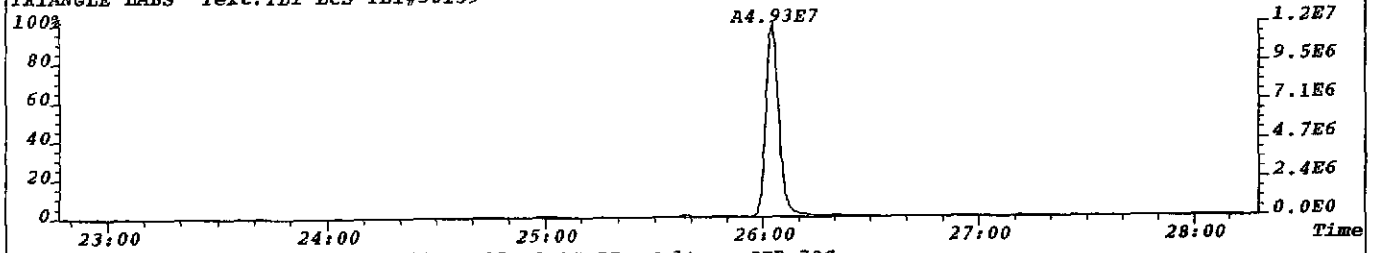
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305.8987 S:11 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,23280.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



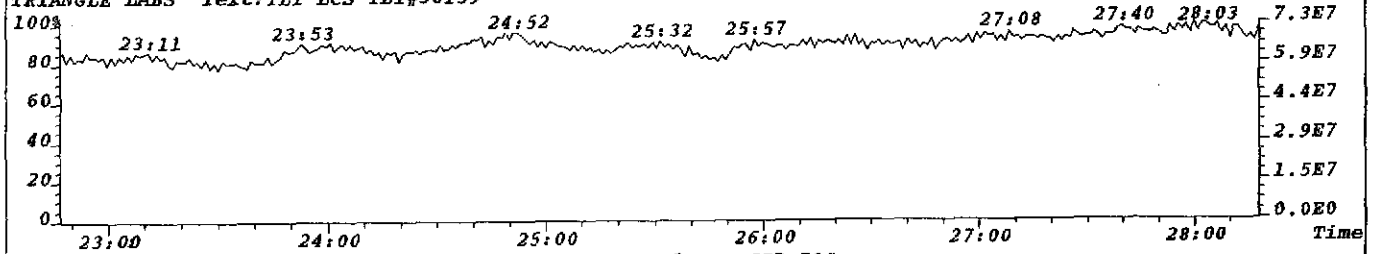
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315.9419 S:11 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,24796.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



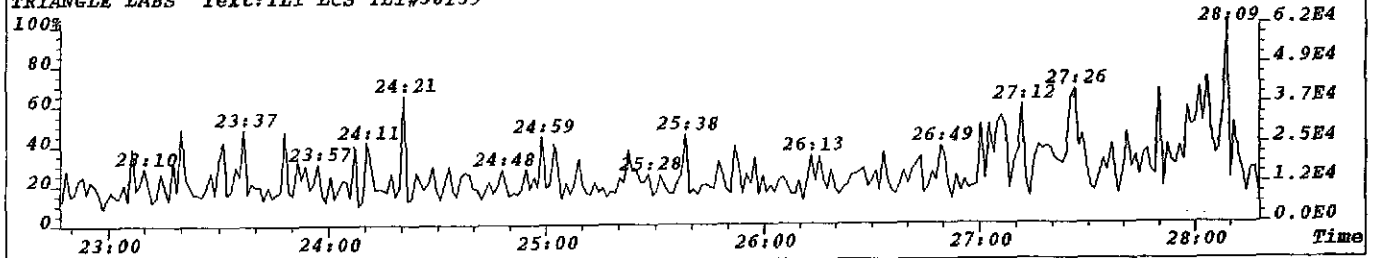
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317.9389 S:11 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,15632.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



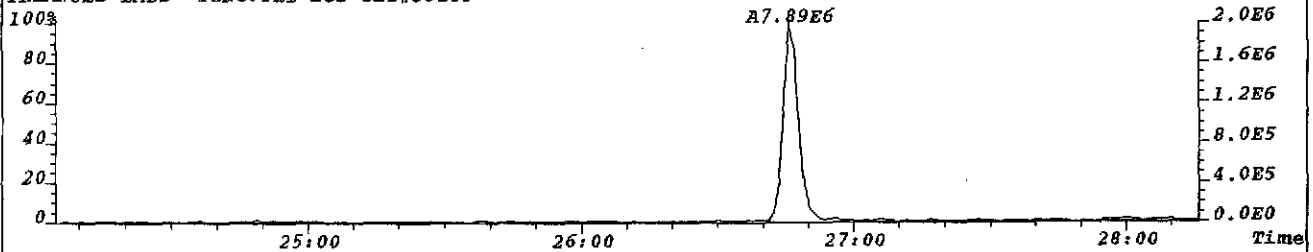
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330.9792 S:11 F:2 Exp:NDB5US  
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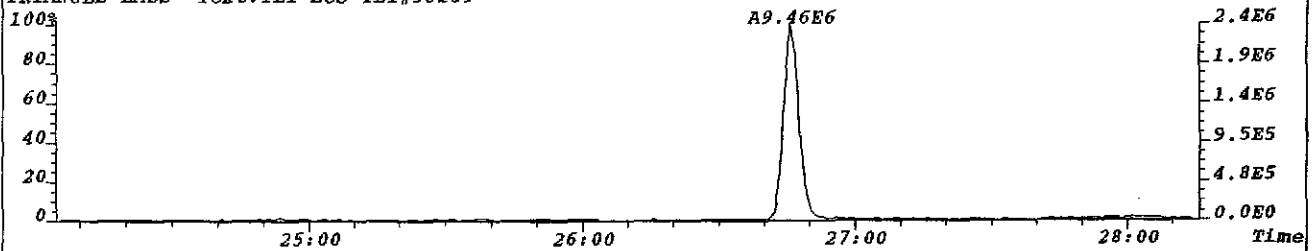
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375.8364 S:11 F:2 Exp:NDB5US  
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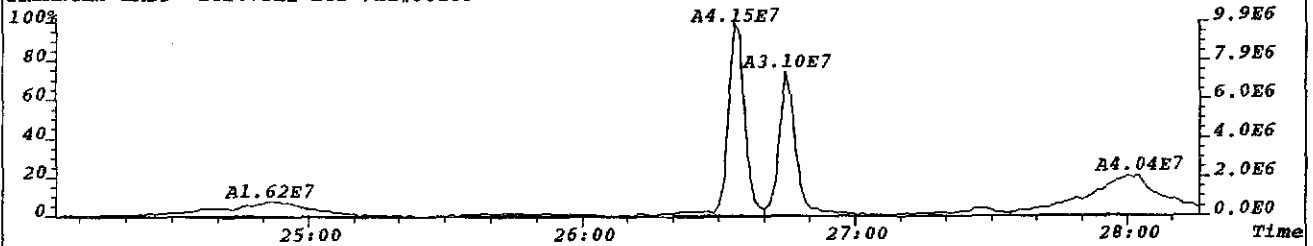
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TRIANGLE LABS Text:TLI LCS TLI#58139



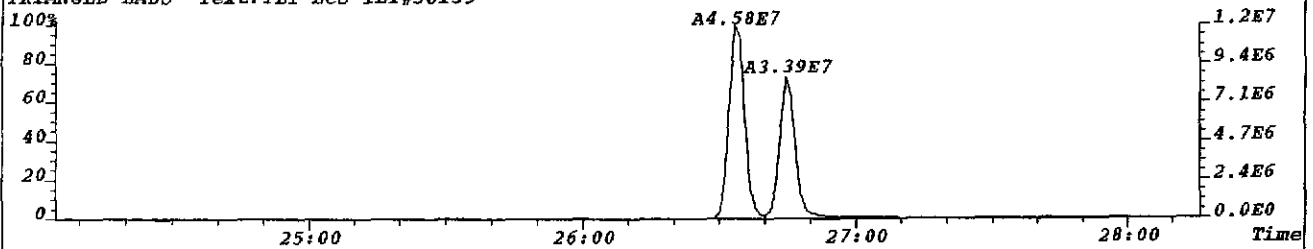
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321.9368 S:11 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12064.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



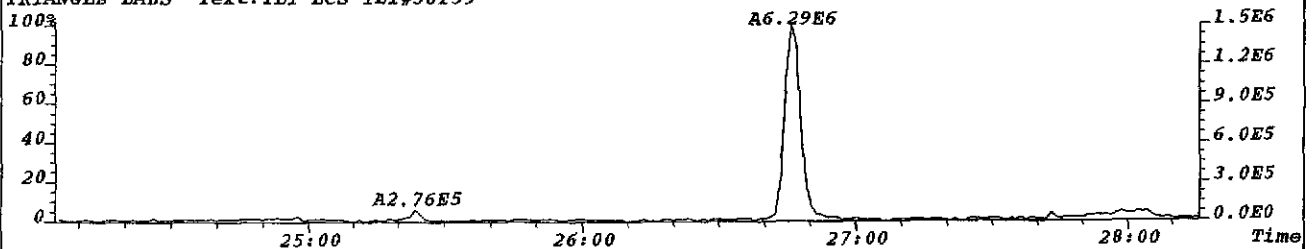
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331.9368 S:11 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,71384.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



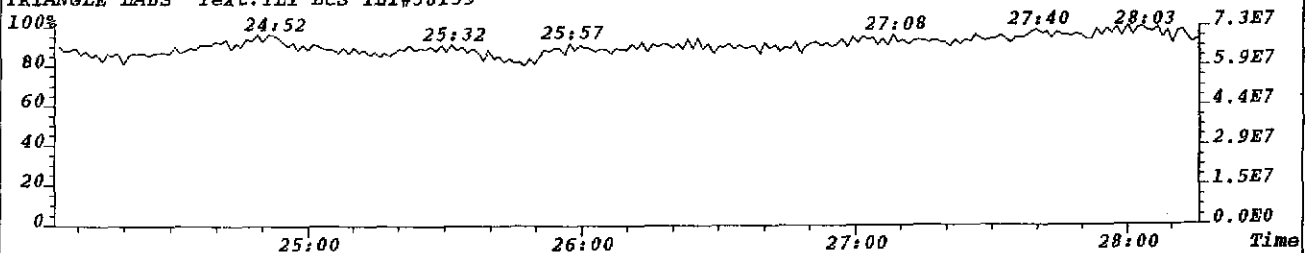
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333.9368 S:11 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,24892.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



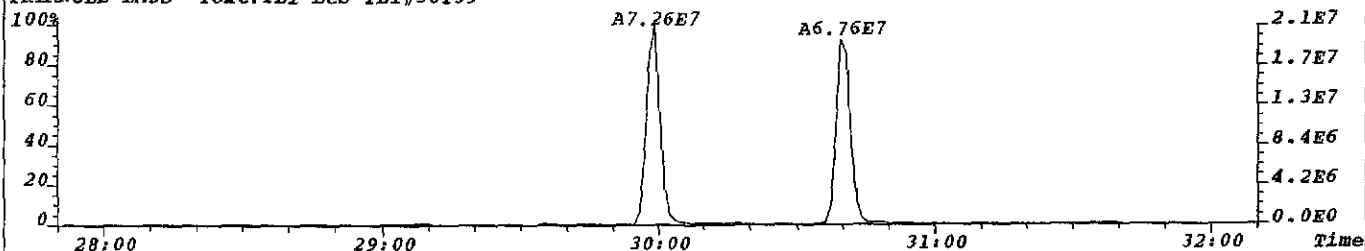
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327.8847 S:11 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,16088.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



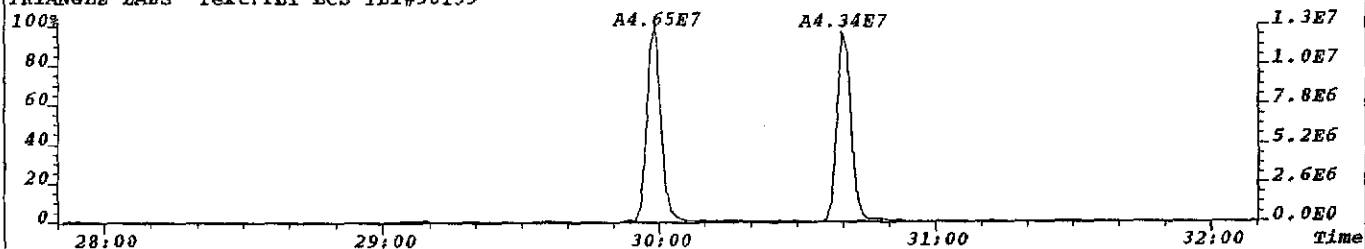
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330.9792 S:11 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



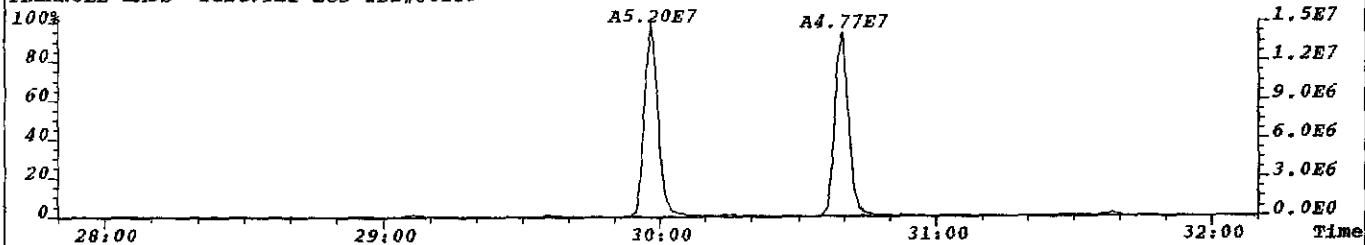
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339.8597 S:11 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10220.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



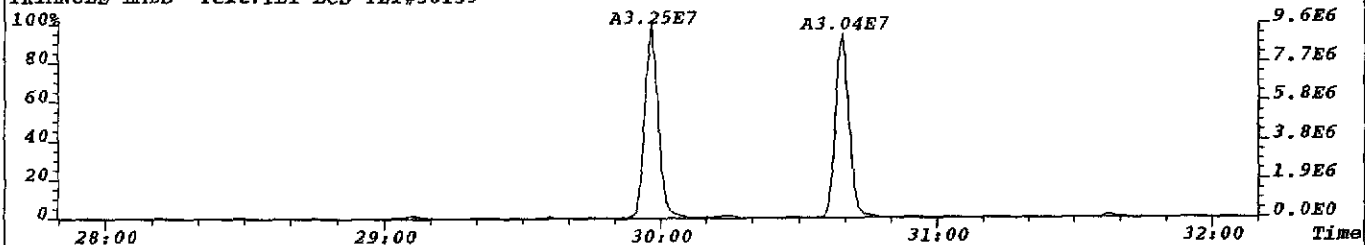
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341.8567 S:11 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9328.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



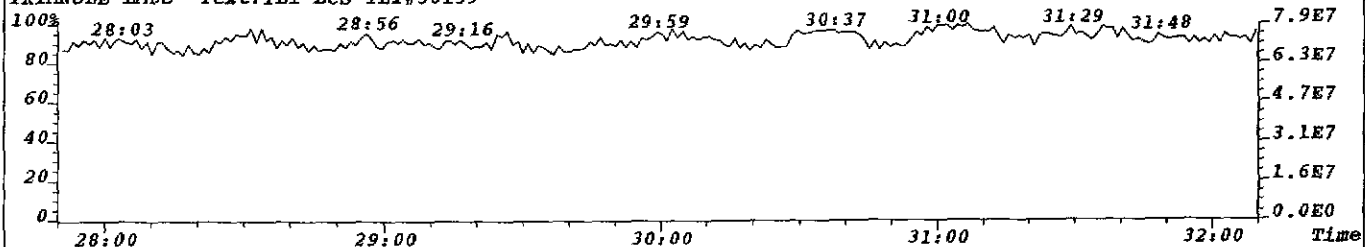
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351.9000 S:11 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,13748.0,1.00%,F,T) Exp:NDB5US  
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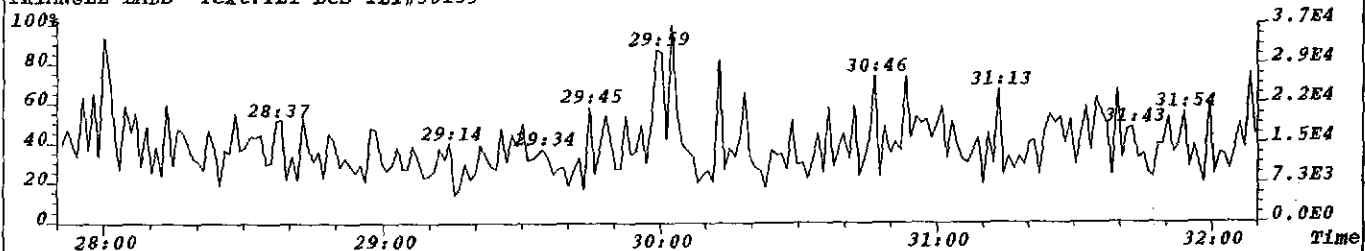
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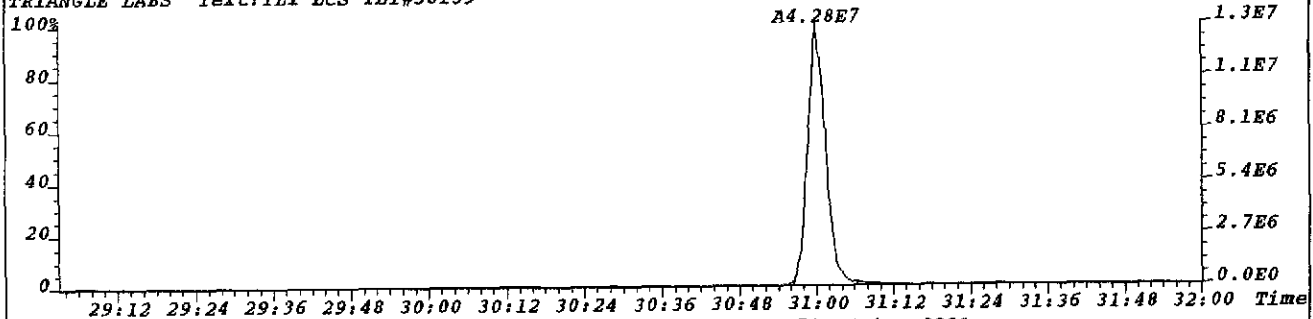
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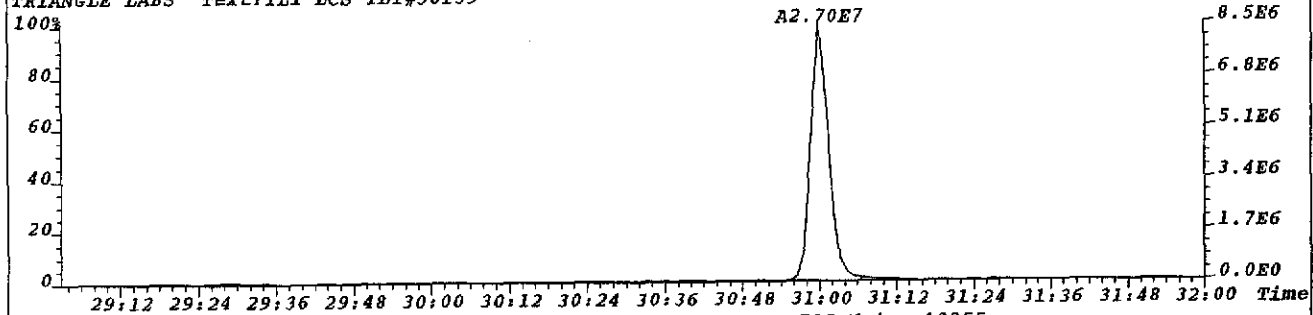
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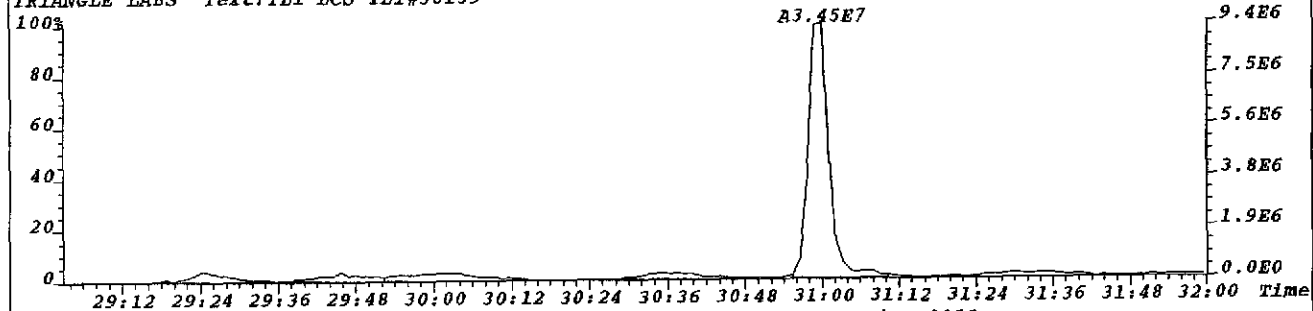
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TRIANGLE LABS Text:TLI LCS TLI#58139



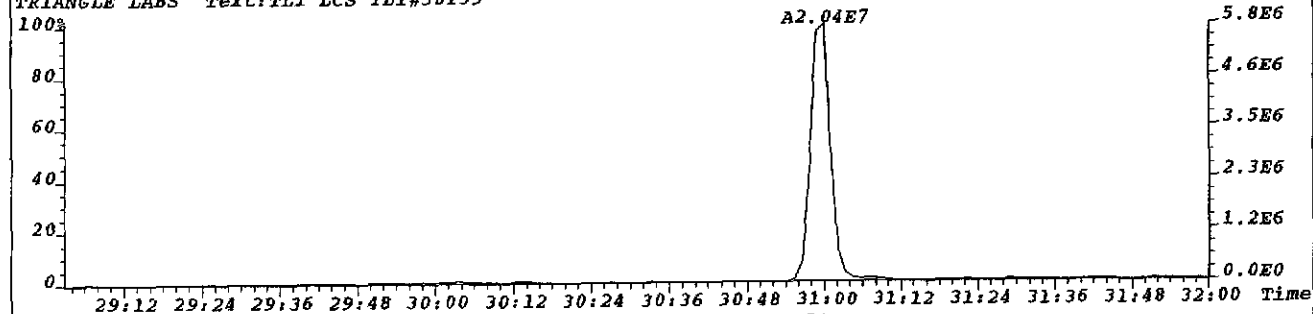
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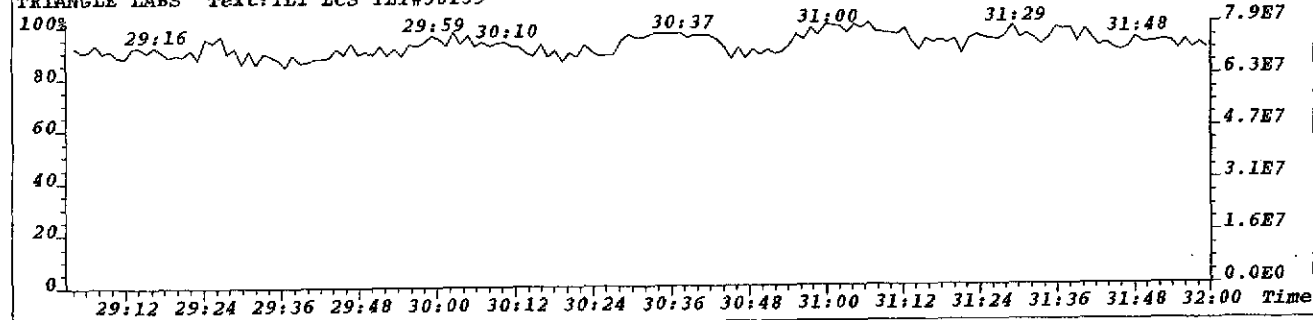
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TRIANGLE LABS Text:TLI LCS TLI#58139



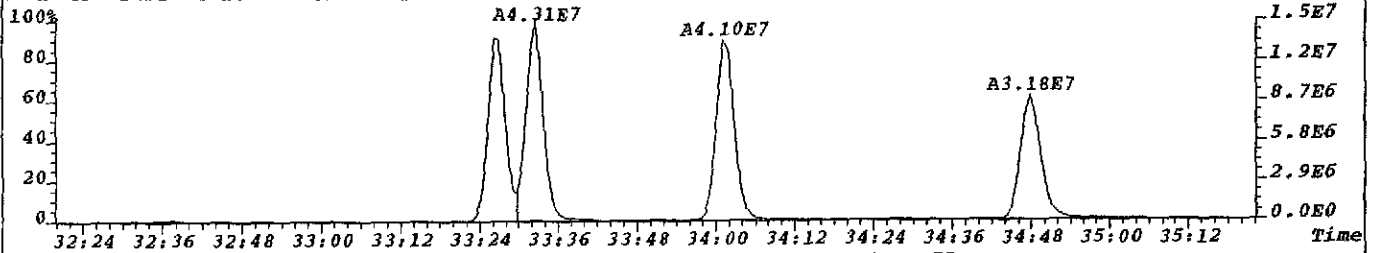
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369.8919 S:11 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,9864.0,1.00%,F,T) Exp:NDB5US  
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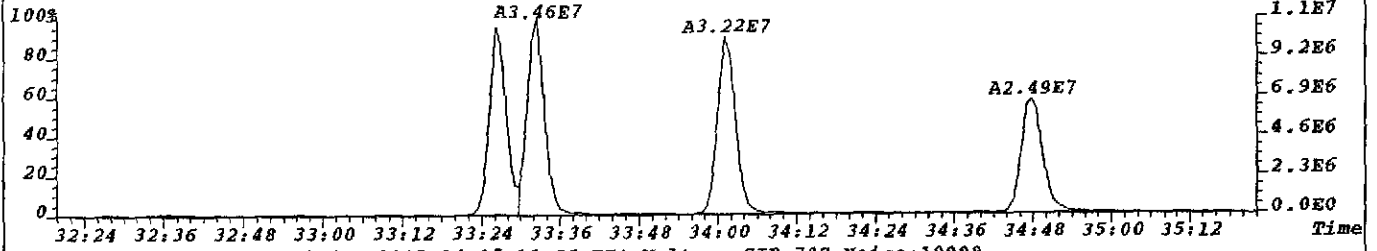
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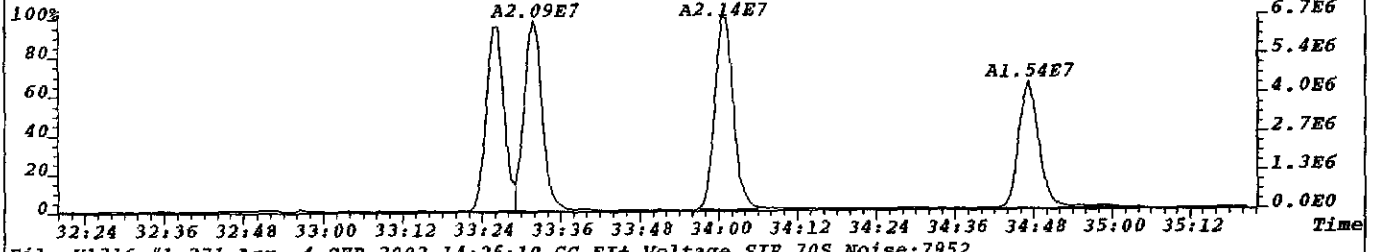
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373.8208 S:11 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,17412.0,1.00%,F,T) Exp:NDB5US  
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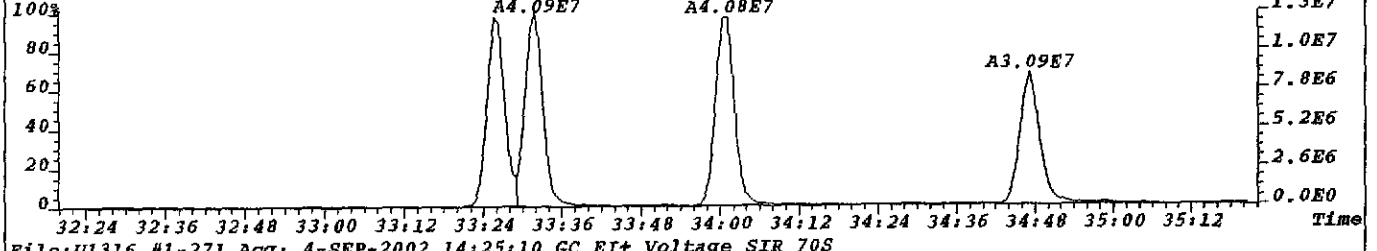
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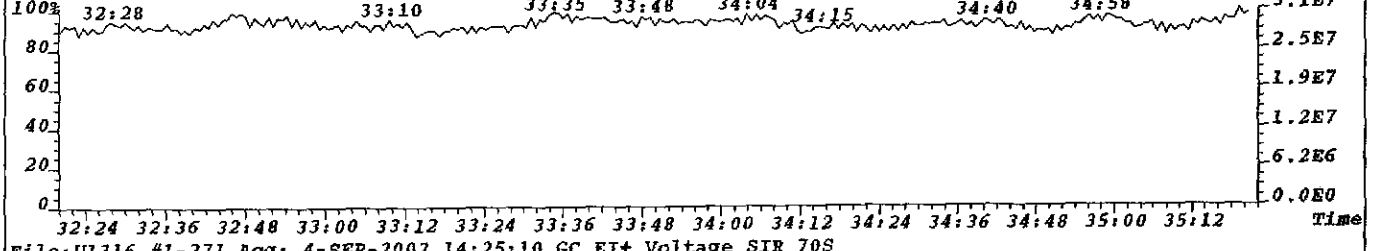
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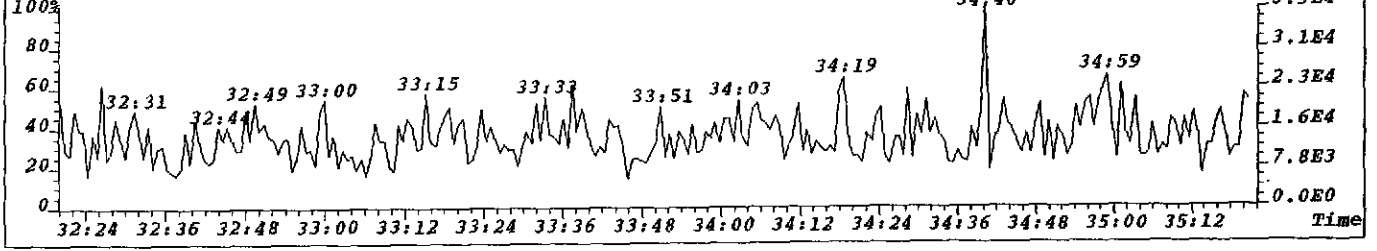
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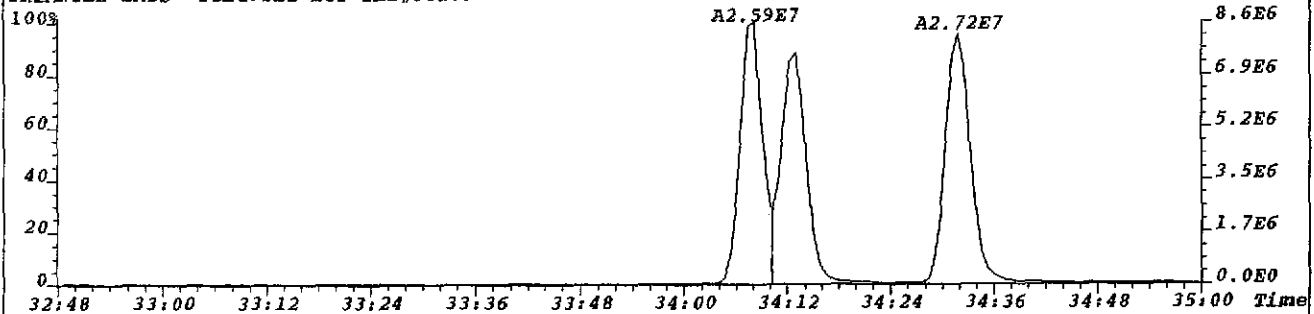
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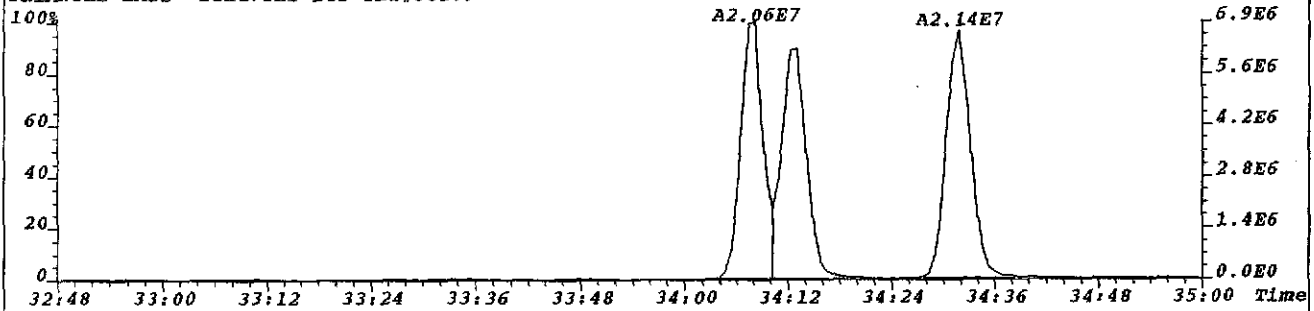
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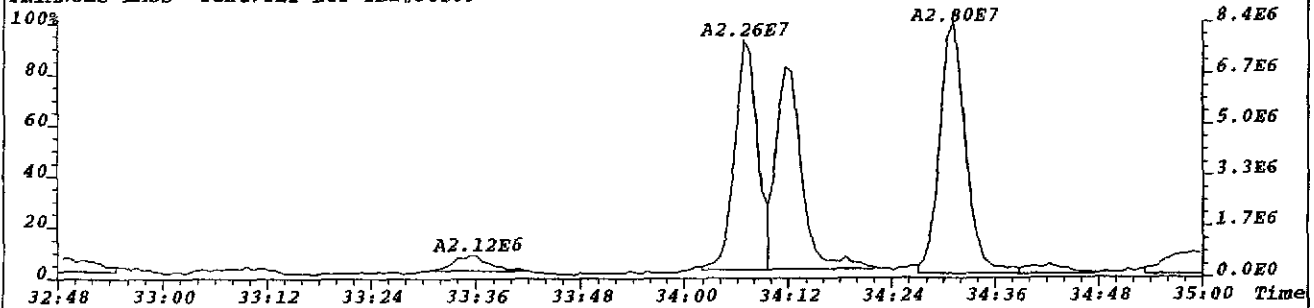
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389.8156 S:11 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,14256.0,1.00%,F,T) Exp:NDB5US  
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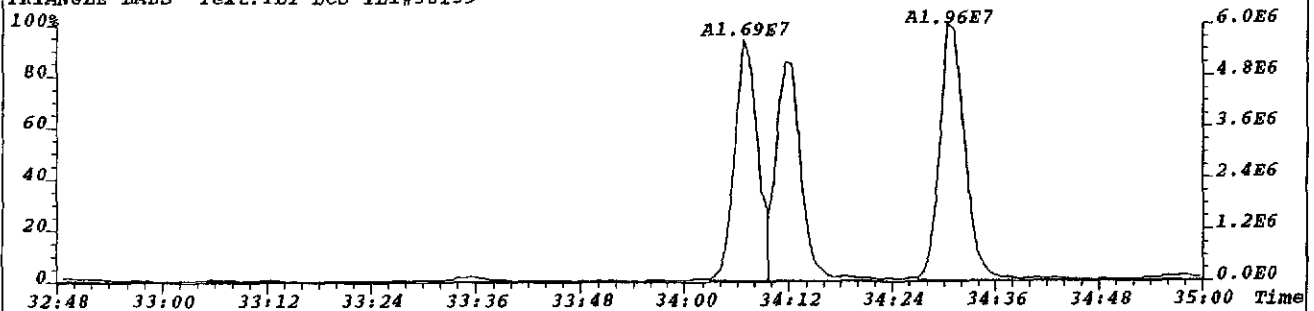
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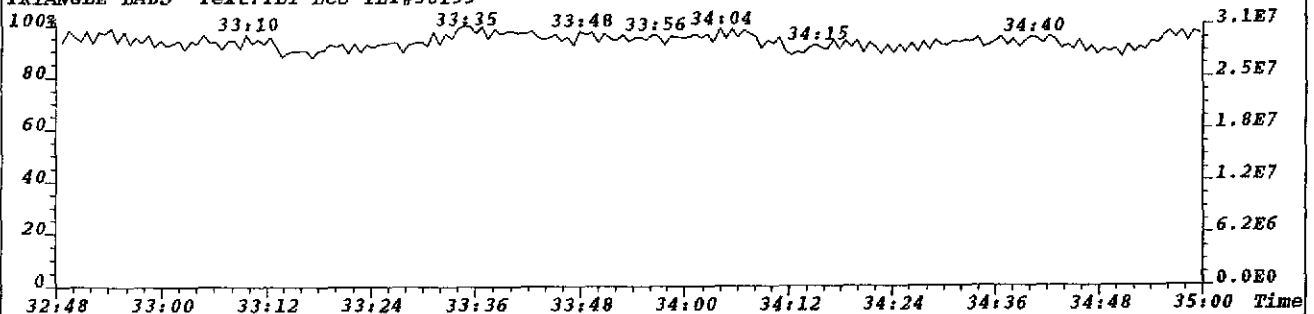
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TRIANGLE LABS Text:TLI LCS TLI#58139



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403.8529 S:11 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,34276.0,1.00%,F,T) Exp:NDB5US  
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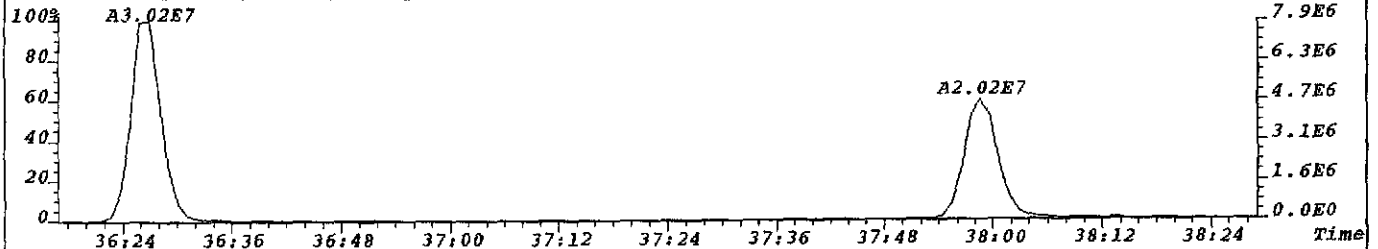


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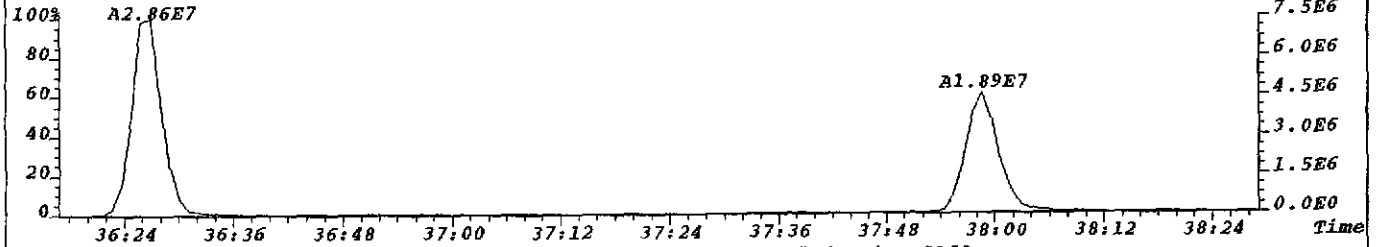




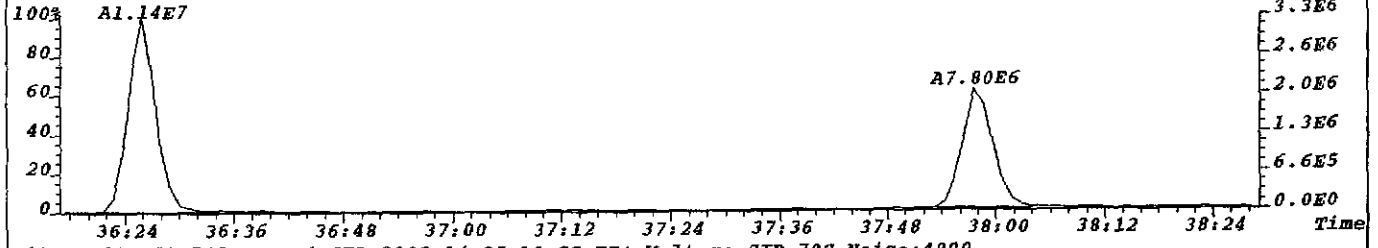
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S Noise:3218  
407.7818 S:11 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12872.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



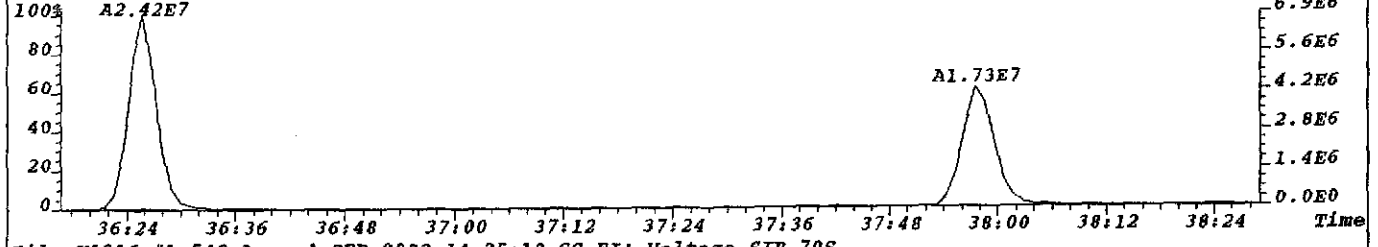
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S Noise:2751  
409.7789 S:11 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11004.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



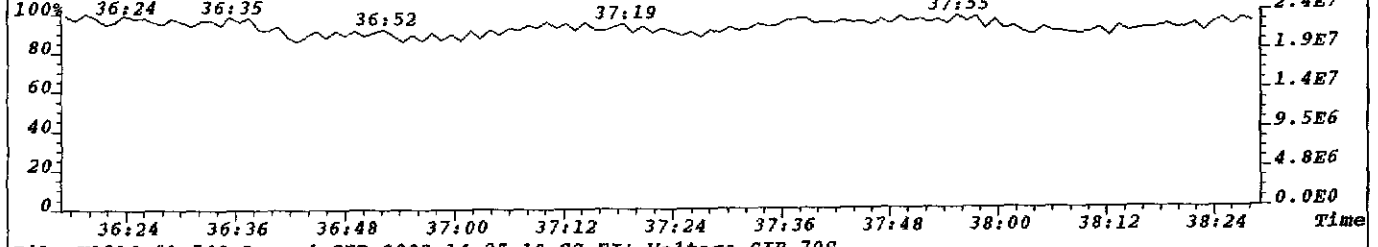
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S Noise:5168  
417.8253 S:11 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,20672.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



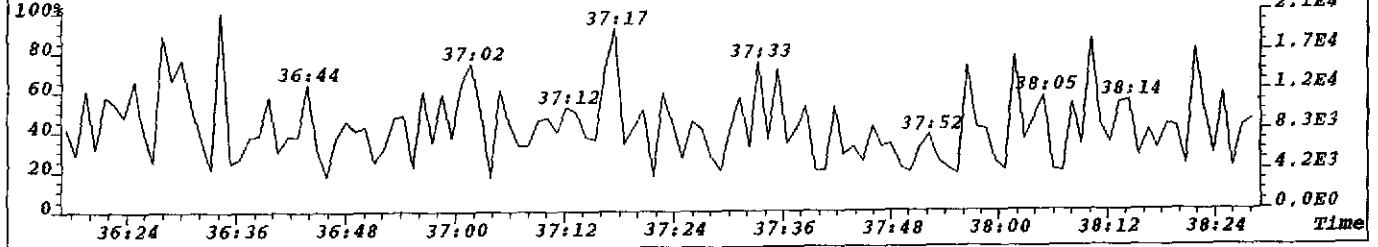
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S Noise:4890  
419.8220 S:11 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,19560.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



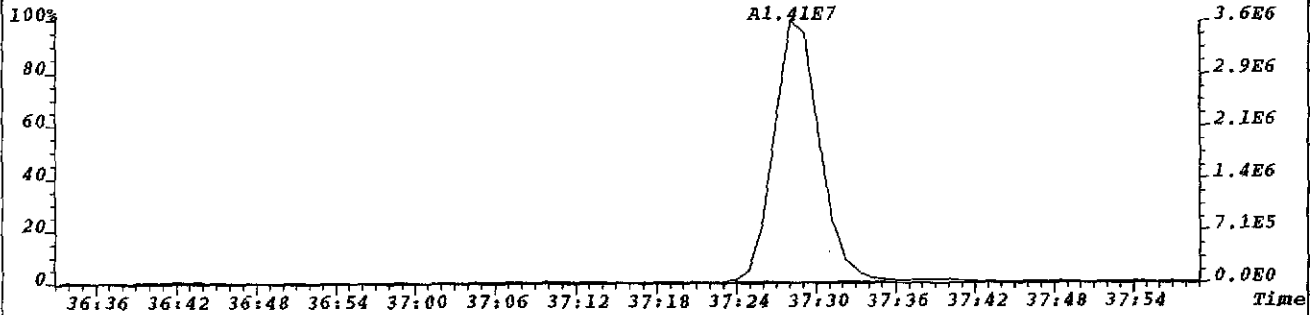
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S  
430.9729 S:11 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



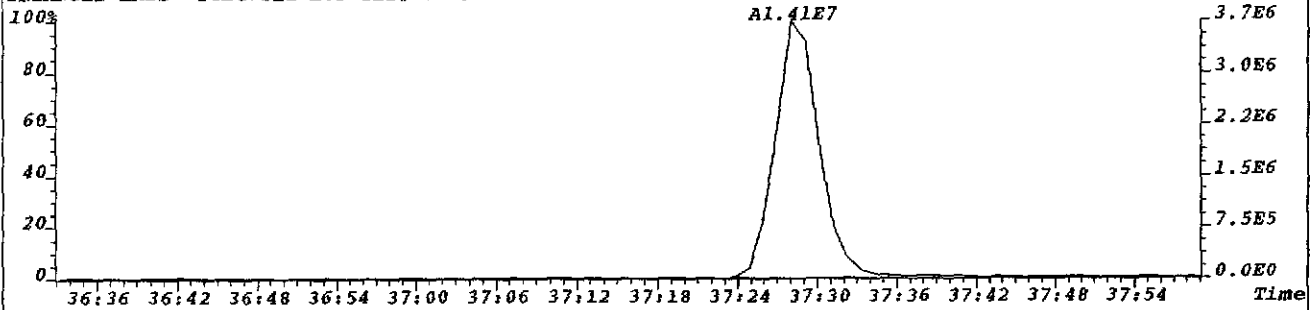
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S  
479.7165 S:11 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



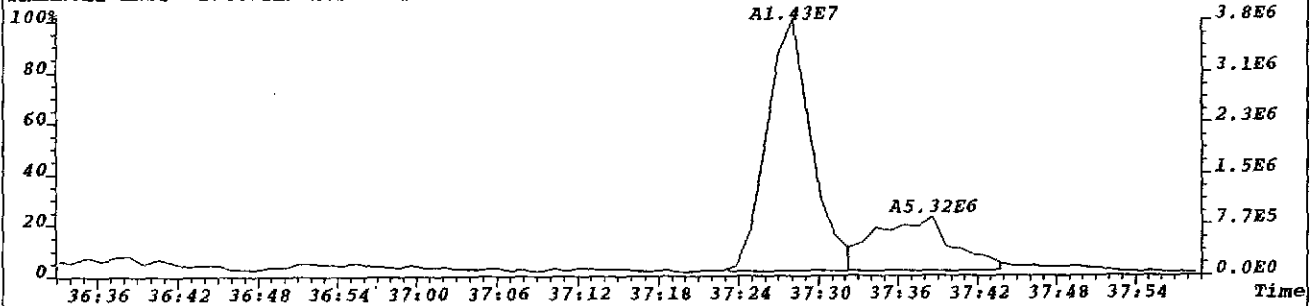
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S Noise:2766  
423.7766 S:11 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11064.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



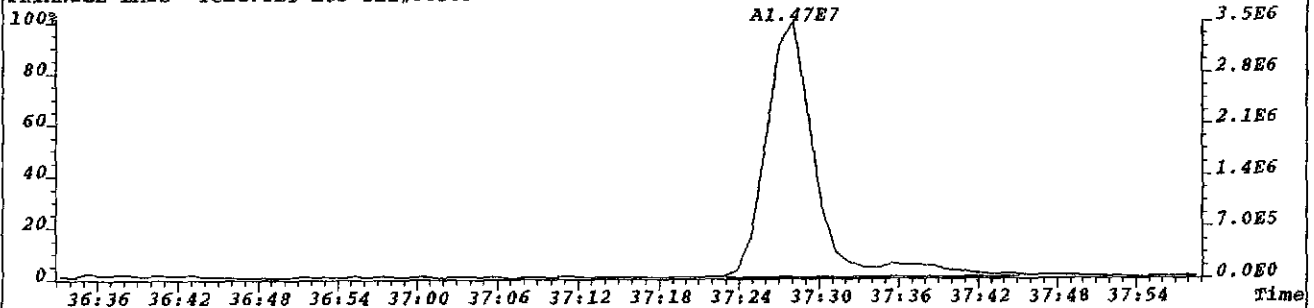
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S Noise:2300  
425.7737 S:11 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9200.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



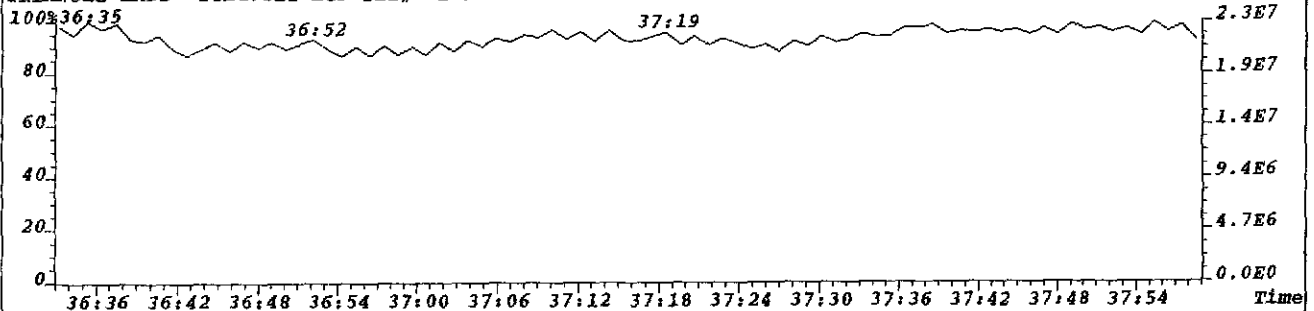
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S Noise:55834  
435.8169 S:11 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,223336.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



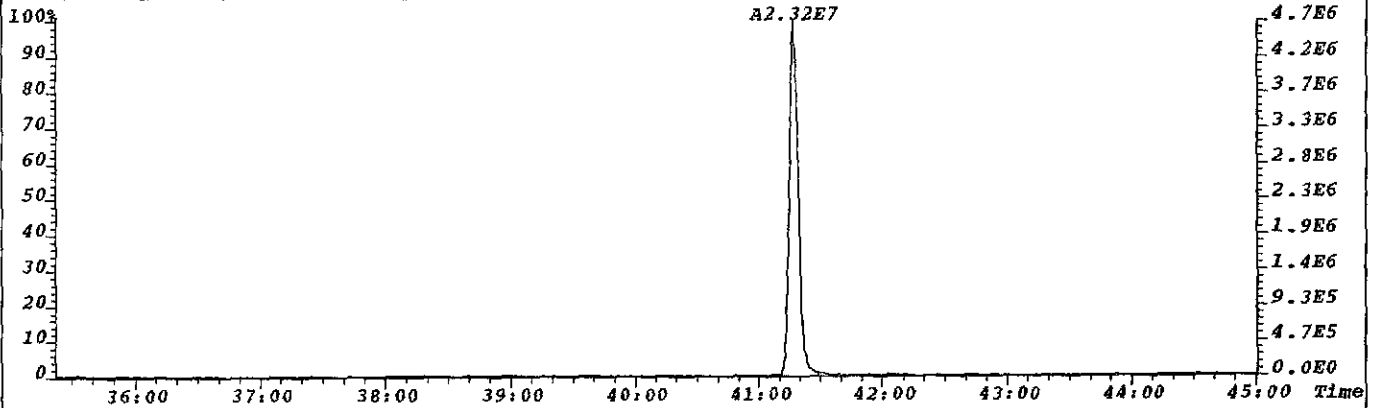
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S Noise:11870  
437.8140 S:11 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,47480.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



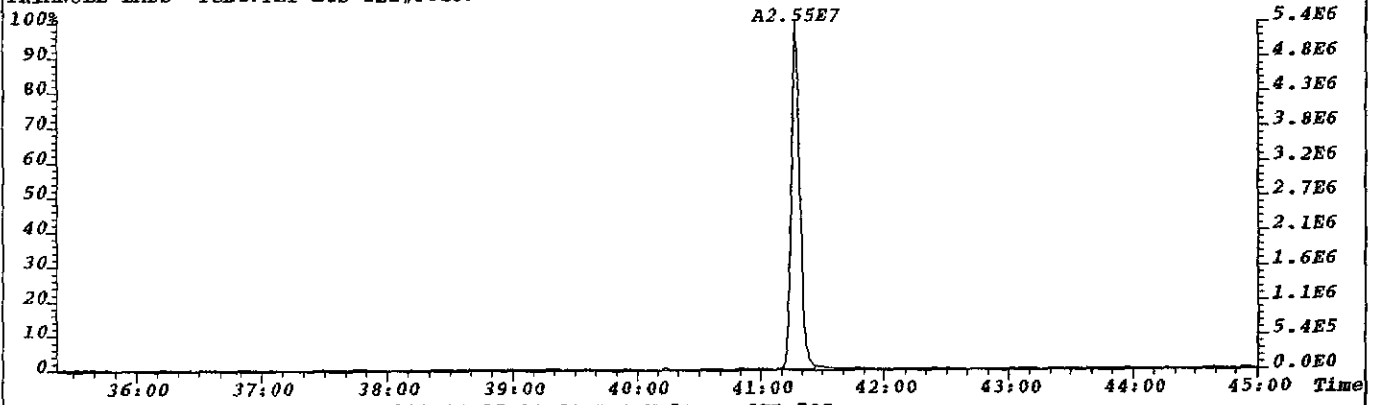
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S  
430.9729 S:11 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



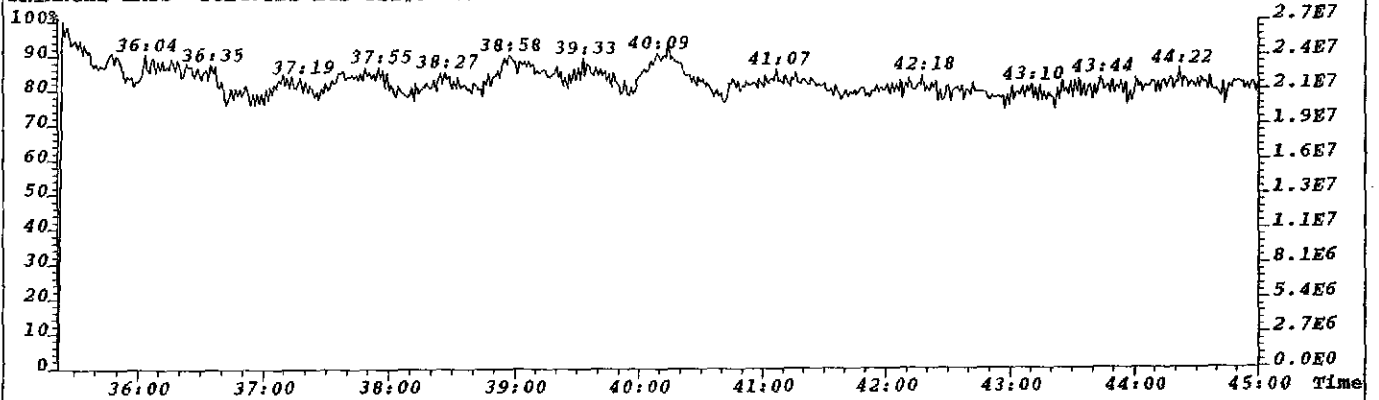
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S Noise:2727  
441.7428 S:11 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10908.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



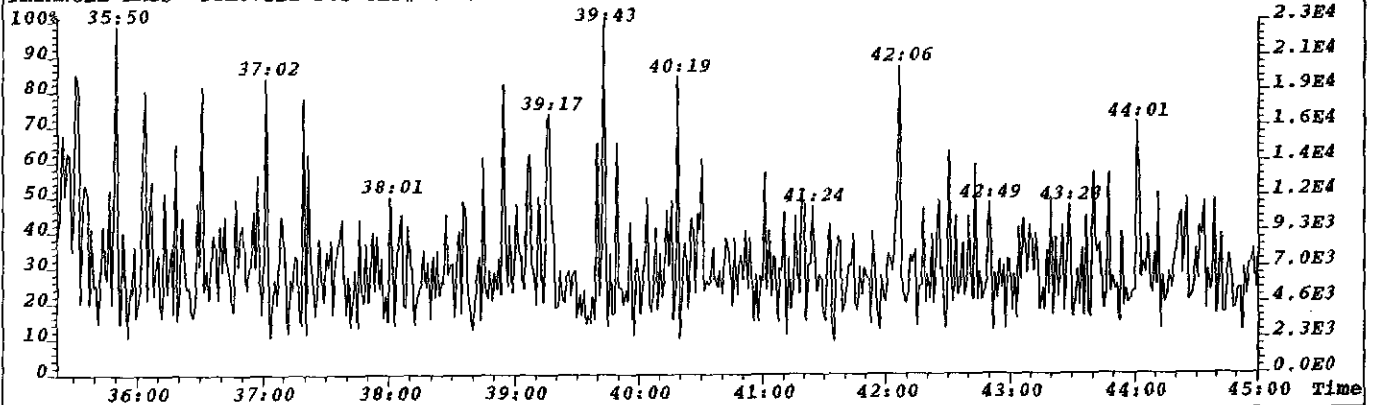
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S Noise:2939  
443.7399 S:11 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11756.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



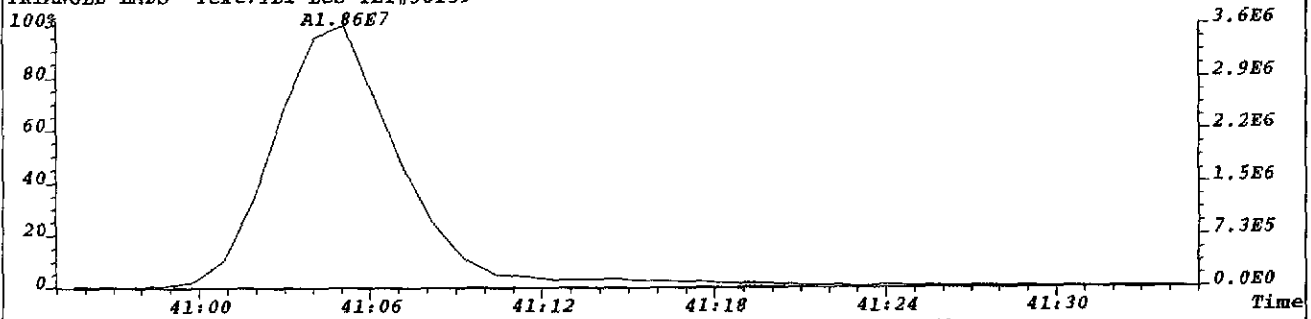
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S  
430.9729 S:11 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



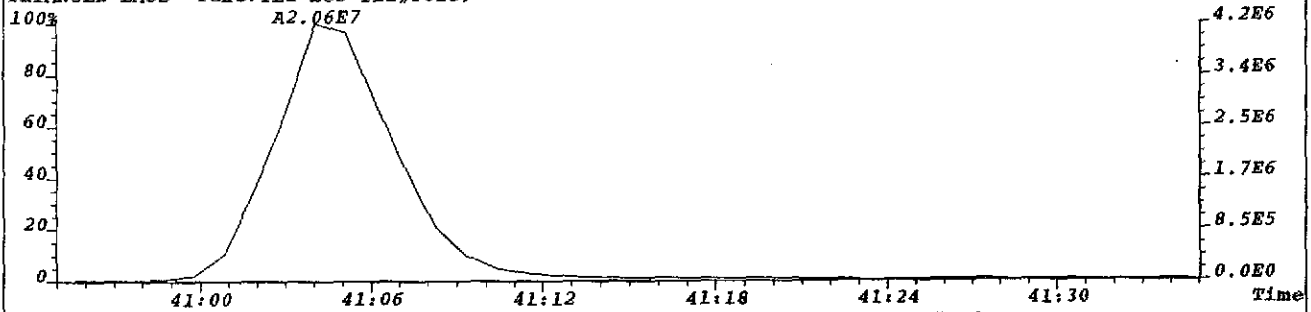
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S  
513.6775 S:11 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



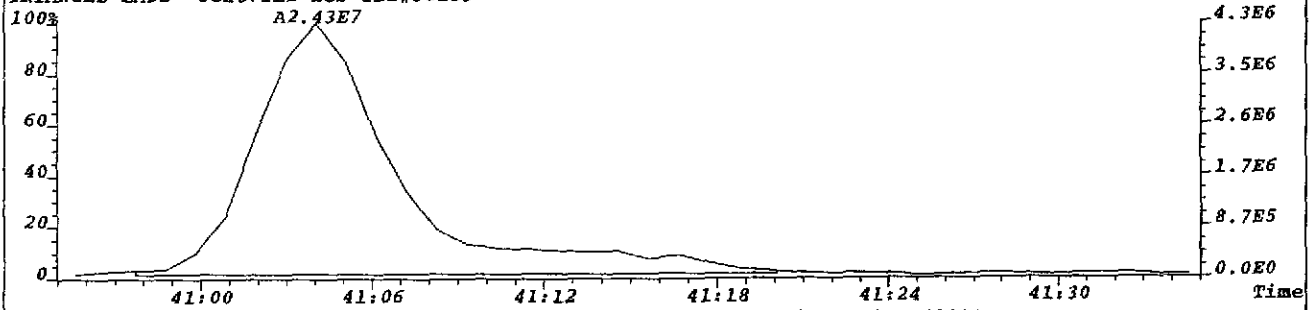
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S Noise:2086  
457.7377 S:11 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,8344.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



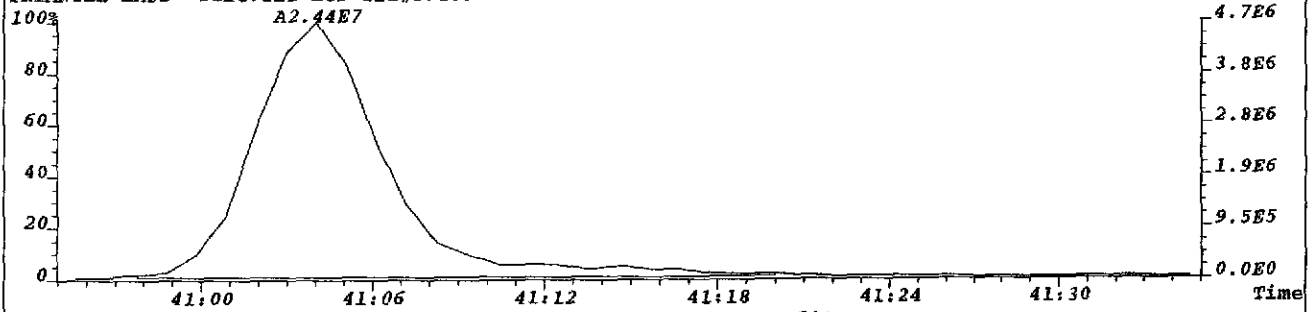
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S Noise:2374  
459.7348 S:11 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9496.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



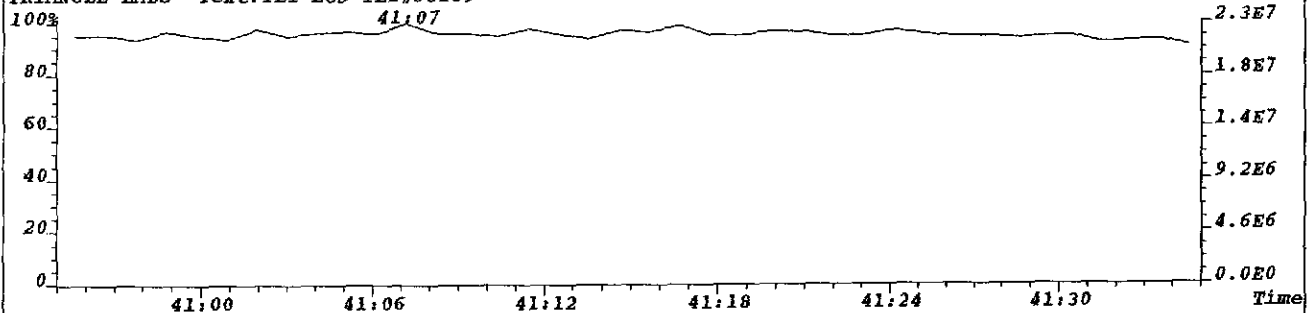
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S Noise:95765  
469.7779 S:11 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,383060.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



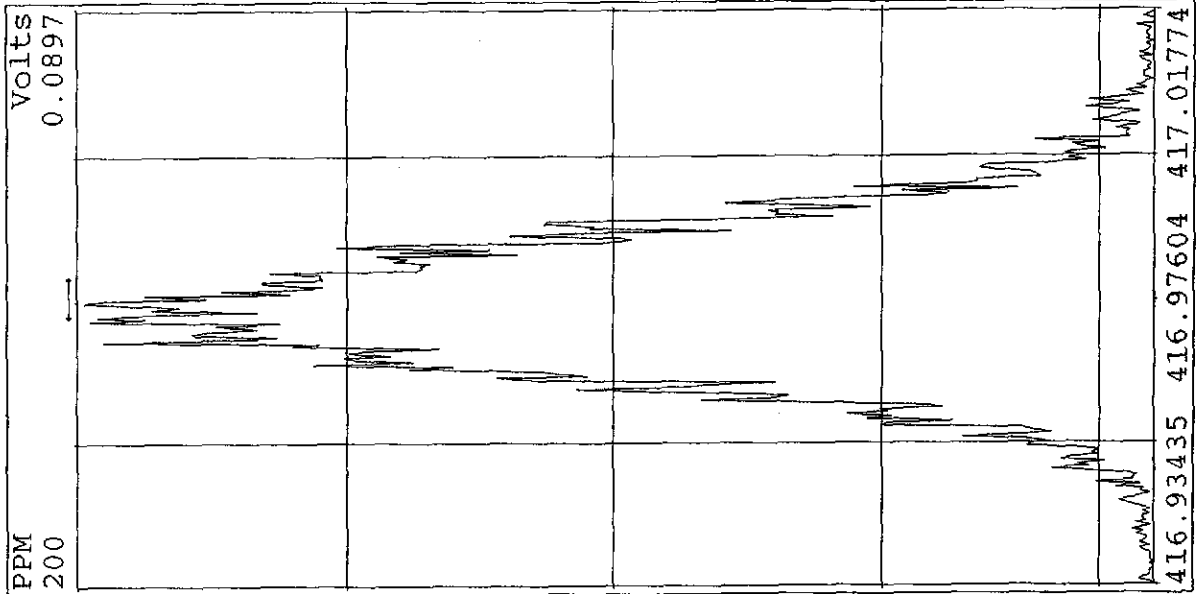
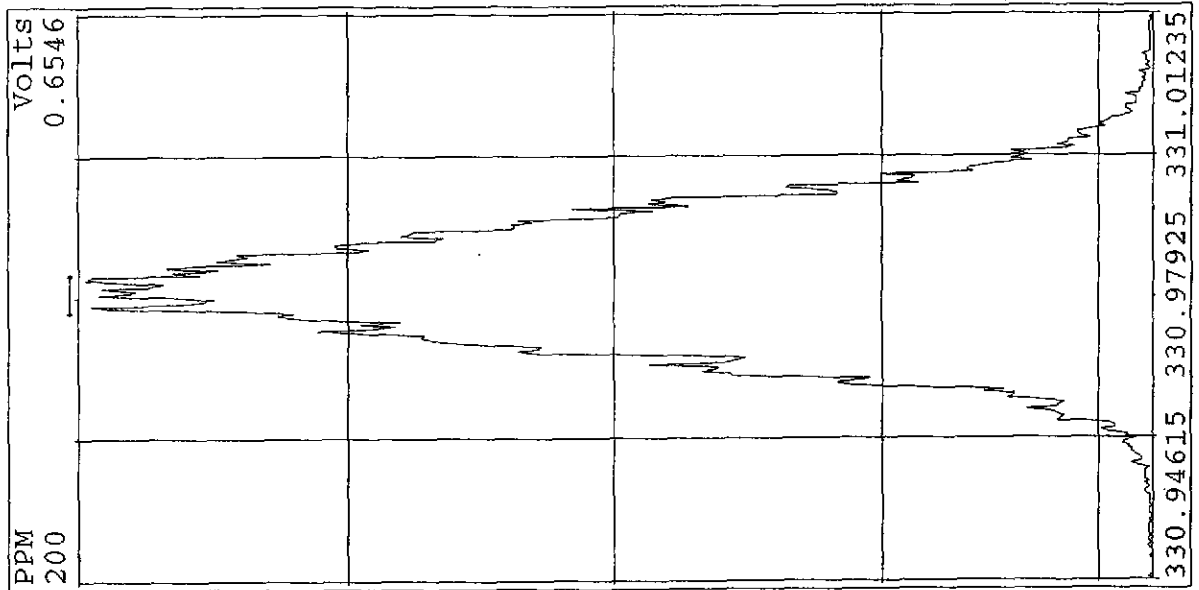
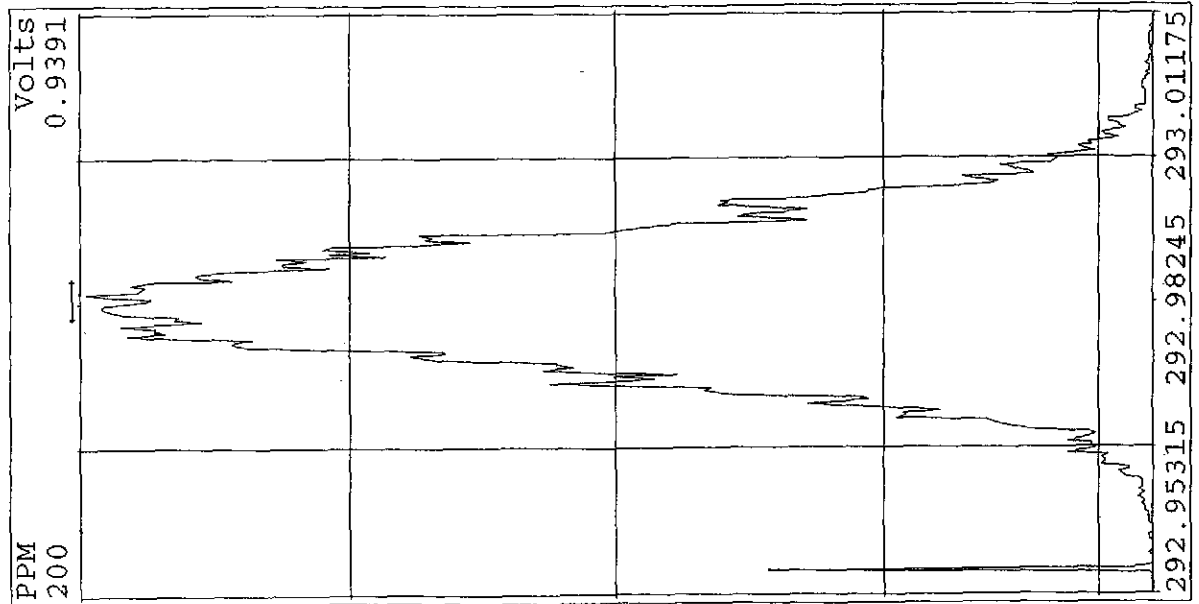
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S Noise:42898  
471.7750 S:11 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,171592.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S  
430.9729 S:11 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI LCS TLI#58139



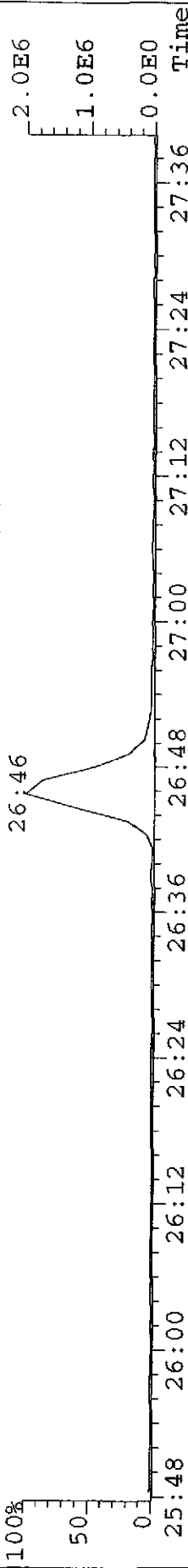
Peak Locate Examination: 4-SEP-2002:05:34 File:U1316  
Experiment:NDB5US Function:2 Reference:PFK



File:U1316 #1-648 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S

319.8965 S:11 F:2 Exp:NDB5US

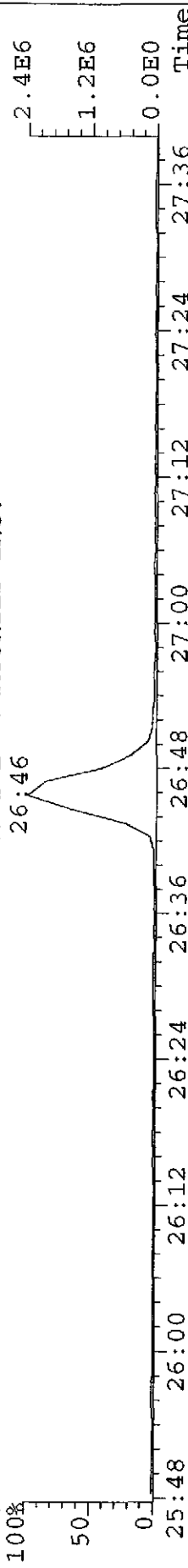
Sample Text:TLI LCS TLI#58139 File Text:TRIANGLE LABORATORIES INC.



File:U1316 #1-648 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S

321.8936 S:11 F:2 Exp:NDB5US

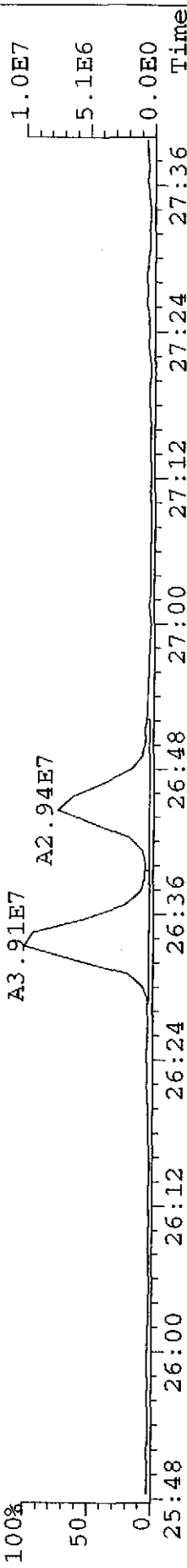
Sample Text:TLI LCS TLI#58139 File Text:TRIANGLE LABORATORIES INC.



File:U1316 #1-648 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S

331.9368 S:11 F:2 Exp:NDB5US

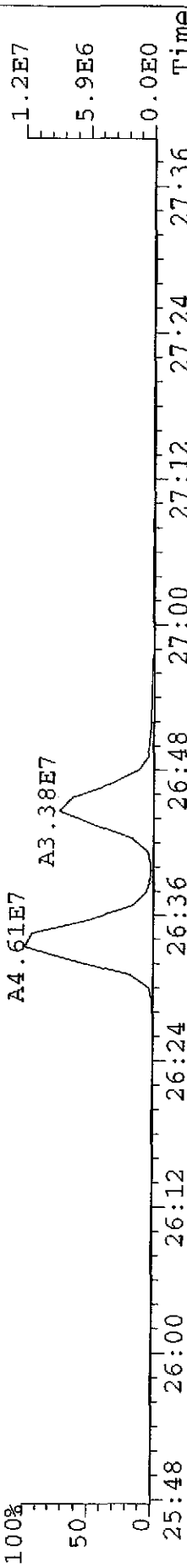
Sample Text:TLI LCS TLI#58139 File Text:TRIANGLE LABORATORIES INC.



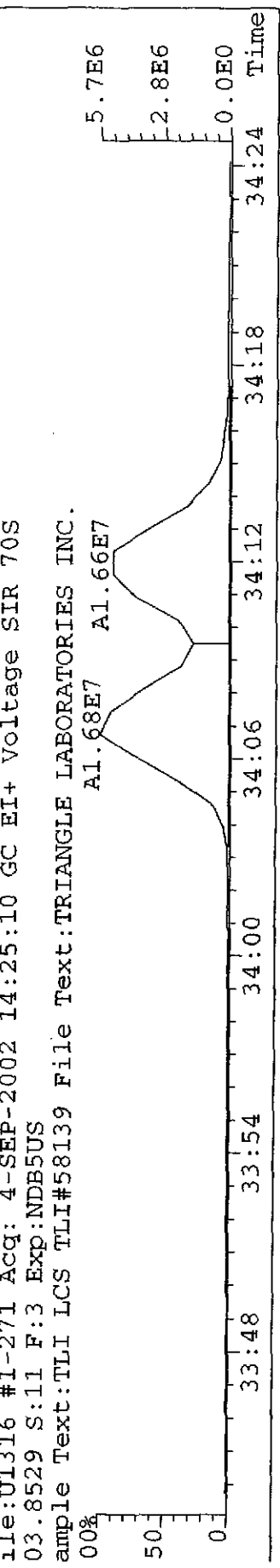
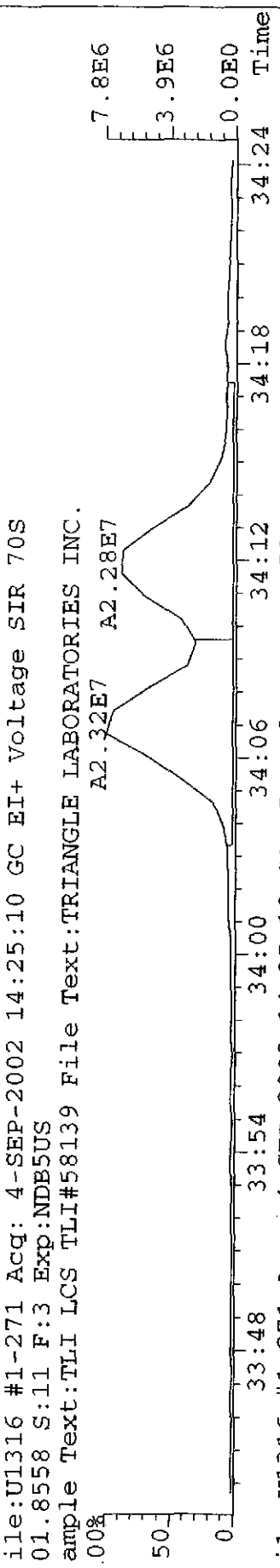
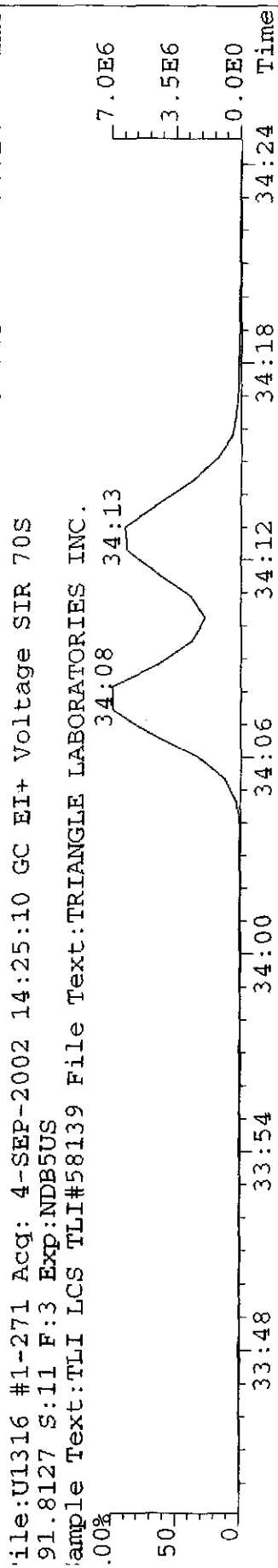
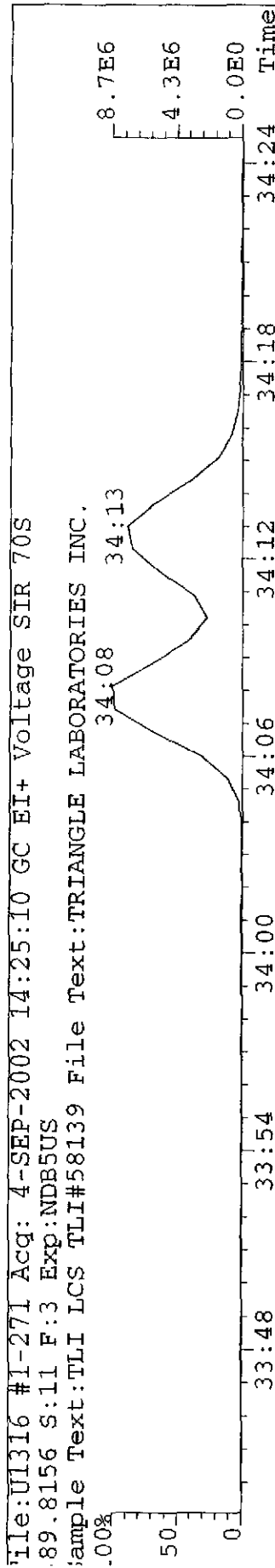
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333.9338 S:11 F:2 Exp:NDB5US

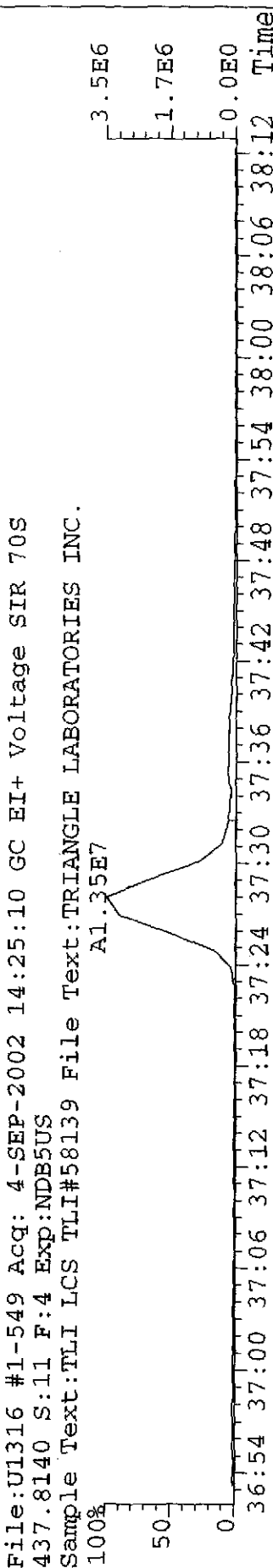
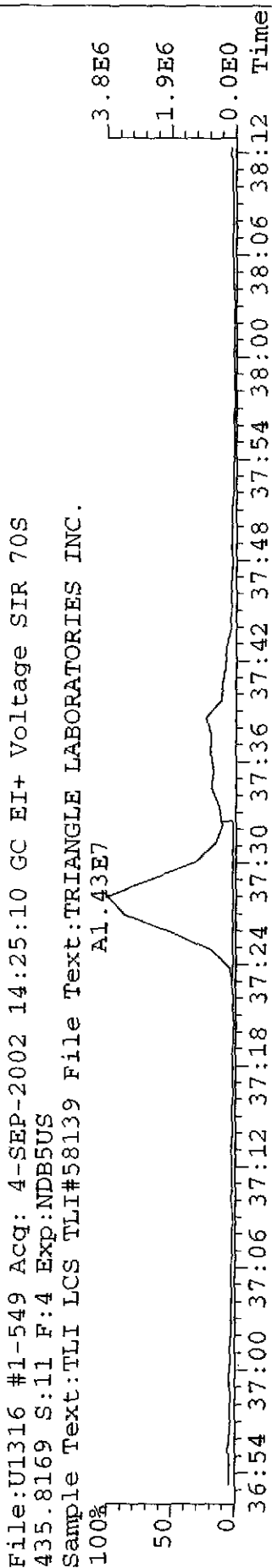
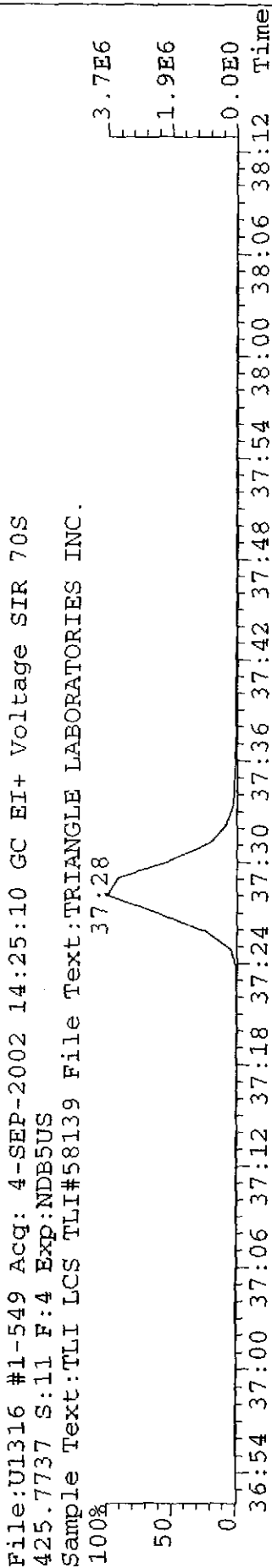
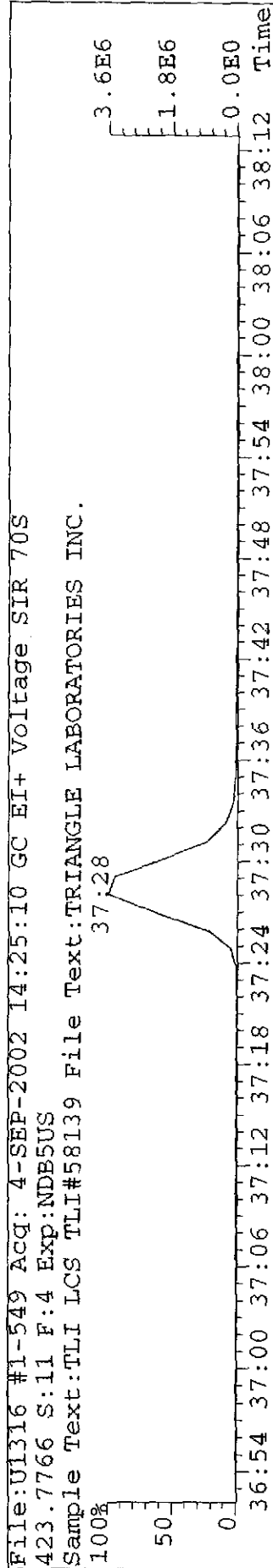
Sample Text:TLI LCS TLI#58139 File Text:TRIANGLE LABORATORIES INC.



WMM 9/5/02



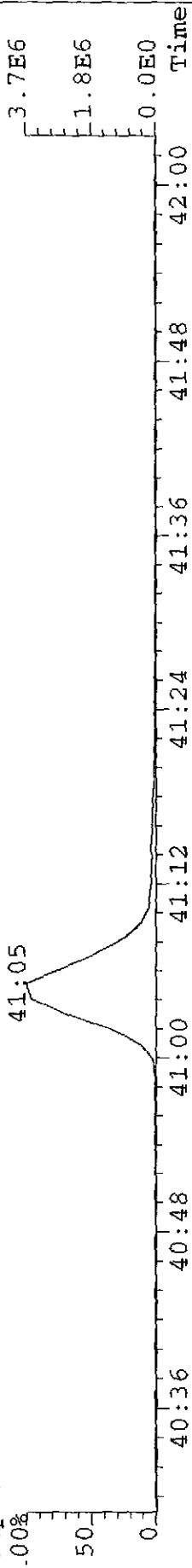
*Aug 15/02*



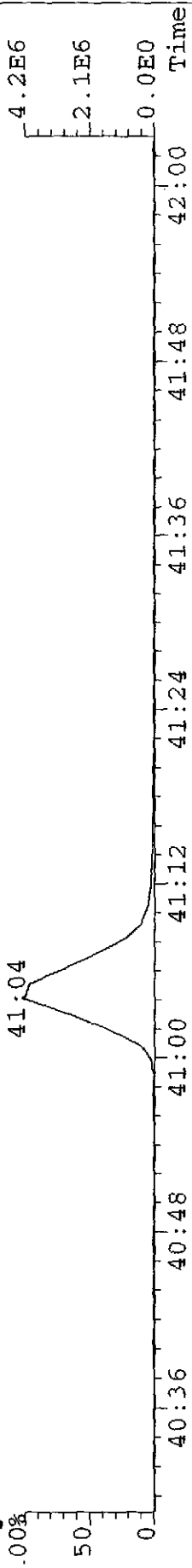
WMMV  
9/5/02



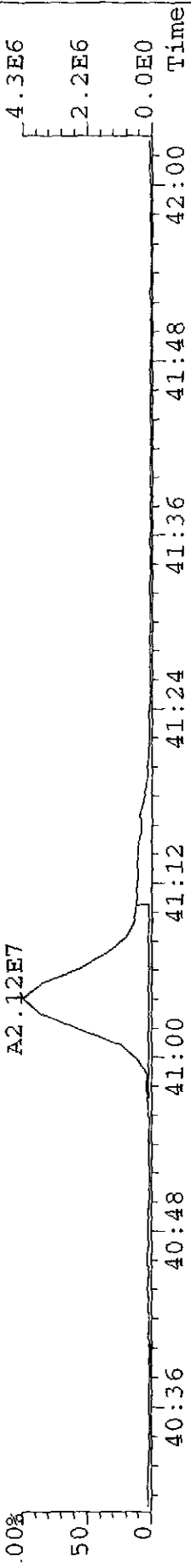
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S  
57.7377 S:11 F:4 Exp:NDB5US  
Sample Text:TLI LCS TLI#58139 File Text:TRIANGLE LABORATORIES INC.  
41:05



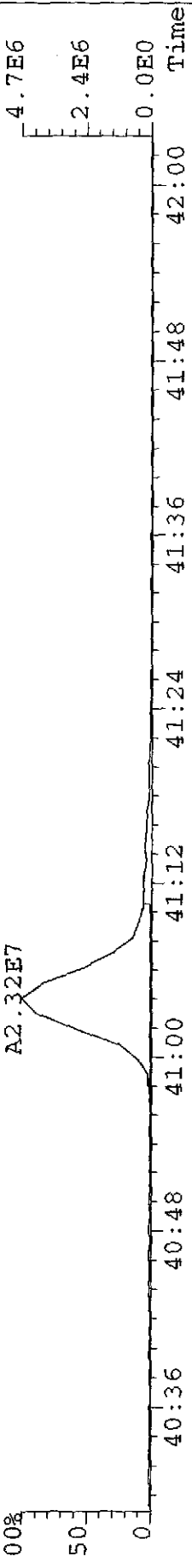
File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S  
59.7348 S:11 F:4 Exp:NDB5US  
Sample Text:TLI LCS TLI#58139 File Text:TRIANGLE LABORATORIES INC.  
41:04



File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S  
69.7779 S:11 F:4 Exp:NDB5US  
Sample Text:TLI LCS TLI#58139 File Text:TRIANGLE LABORATORIES INC.  
A2.12E7



File:U1316 #1-549 Acq: 4-SEP-2002 14:25:10 GC EI+ Voltage SIR 70S  
71.7750 S:11 F:4 Exp:NDB5US  
Sample Text:TLI LCS TLI#58139 File Text:TRIANGLE LABORATORIES INC.  
A2.32E7



WMMY  
9/5/02

**Mississippi Dept. of Env. Quality**

TLI Project: **58258**  
 Client Sample: **TLI LCSD**

Method 8290 PCDD/PCDF Analysis (b)  
 Analysis File: **U131612**

Client Project:	<b>Crystal Springs Dioxin</b>		
Sample Matrix:	<b>SAND</b>	Date Received:	<b>/ /</b>
TLI ID:	<b>TLI LCSD</b>	Date Extracted:	<b>08/28/2002</b>
		Date Analyzed:	<b>09/04/2002</b>
		Spike File:	<b>SPMIT32S</b>
		ICal:	<b>UF57092</b>
		ConCal:	<b>U021315</b>
Sample Size:	<b>10.000 g</b>	Dilution Factor:	<b>n/a</b>
Dry Weight:	<b>n/a</b>	Blank File:	<b>U131602</b>
GC Column:	<b>DB-5</b>	Analyst:	<b>JMM</b>
		% Moisture:	<b>n/a</b>
		% Lipid:	<b>n/a</b>
		% Solids:	<b>n/a</b>

Analytes	Conc. (pg/g)	DL	EMPC	Ratio	RT	Flags
2,3,7,8-TCDD	47.0			0.82	26:46	—
1,2,3,7,8-PeCDD	237			1.60	31:00	—
1,2,3,4,7,8-HxCDD	222			1.26	34:08	—
1,2,3,6,7,8-HxCDD	227			1.27	34:13	—
1,2,3,7,8,9-HxCDD	241			1.28	34:32	—
1,2,3,4,6,7,8-HpCDD	201			1.01	37:28	—
1,2,3,4,6,7,8,9-OCDD	308			0.91	41:05	—
2,3,7,8-TCDF	48.7			0.76	26:04	—
1,2,3,7,8-PeCDF	227			1.54	29:59	—
2,3,4,7,8-PeCDF	245			1.54	30:40	—
1,2,3,4,7,8-HxCDF	217			1.26	33:27	—
1,2,3,6,7,8-HxCDF	216			1.25	33:32	—
2,3,4,6,7,8-HxCDF	221			1.24	34:01	—
1,2,3,7,8,9-HxCDF	230			1.25	34:48	—
1,2,3,4,6,7,8-HpCDF	233			1.08	36:27	—
1,2,3,4,7,8,9-HpCDF	216			1.05	37:58	—
1,2,3,4,6,7,8,9-OCDF	302			0.91	41:17	—

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDF	134	66.8	40%-135%	0.80	26:03	—
<sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD	128	64.0	40%-135%	0.82	26:44	—
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDF	144	72.0	40%-135%	1.57	29:58	—
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8-PeCDD	162	81.0	40%-135%	1.60	30:59	—
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDF	196	98.1	40%-135%	0.52	33:32	—
<sup>13</sup> C <sub>12</sub> -1,2,3,6,7,8-HxCDD	171	85.7	40%-135%	1.27	34:12	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDF	176	88.0	40%-135%	0.48	36:26	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8-HpCDD	180	90.0	40%-135%	1.07	37:28	—
<sup>13</sup> C <sub>12</sub> -1,2,3,4,6,7,8,9-OCDD	390	97.4	40%-135%	0.91	41:04	—

**Mississippi Dept. of Env. Quality**

TLI Project: **58258**  
 Client Sample: **TLI LCSD**


Method 8290 PCDD/PCDF Analysis (b)  
 Analysis File: **U131612**

Surrogate Standards (Type B)	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -2,3,4,7,8-PeCDF	148	73.9	40%-135%	1.55	30:40	---
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDF	195	97.6	40%-135%	0.51	33:25	---
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8-HxCDD	175	87.6	40%-135%	1.30	34:07	---
<sup>13</sup> C <sub>12</sub> -1,2,3,4,7,8,9-HpCDF	177	88.4	40%-135%	0.46	37:57	---

Other Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	Flags
<sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD	12.6	62.8	40%-135%	26:46	---

Alternate Standards (Type B)	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDF	212	106	40%-135%	0.51	34:47	---
<sup>13</sup> C <sub>12</sub> -2,3,4,6,7,8-HxCDF	205	103	40%-135%	0.51	34:00	---

Recovery Standards	Ratio	RT	Flags
<sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD	0.80	26:34	---
<sup>13</sup> C <sub>12</sub> -1,2,3,7,8,9-HxCDD	1.32	34:31	---

Data Reviewer: \_\_\_\_\_  \_\_\_\_\_ 09/05/2002

Initial Date...

Data Review By:

WAMTL 9, 5, 02

Channel specific noise levels computed from 'NL' heights.

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 U131612B.dbf
09/05/2002 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.

Table with columns: TCDF, DC, NL, Height, 0.65-0.89, 7.22, 3.85, 0.874-1.073, 3.37, 25:03, 0.65, 111.94, 44.06, 67.88, 0.962, 25:21, 0.77, 43.48, 18.89, 24.59, 0.973, 25:39, RO, 0.57, 62.55, 27.21, 47.39, 0.985, 1278-TCDF, AN, 26:04, 0.76, 2,028.15, 878.18, 1,149.97, 1.001, 2378-TCDF, AN, DC, SN, 26:33, RO, 0.93, 26.16, 1.019, DC, WH, 28:16, RO, 1.15, 13.43, 1.085, 304-306, 4 Peaks, 2,246.12

Table with columns: 13C12-TCDF, DC, NL, Height, 0.65-0.89, 5.56, 2.77, 0.962-1.038, 2.79, DC, WL, 25:01, RO, 0.61, 73.93, 0.960, 25:20, 0.86, 49.08, 22.71, 26.37, 0.972, 25:39, 0.69, 95.71, 39.19, 56.52, 0.985, 26:03, 0.80, 7,383.96, 3,275.33, 4,108.63, 1.000, 13C12-2378-TCDF, ISO, Height, 1,755.12, 788.99, 966.13, DC, SN, 26:57, RO, 1.73, 18.09, 1.035, DC, WH, 27:09, RO, 0.48, 16.92, 1.042, 316-318, 3 Peaks, 7,528.75

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

Table with columns: TCDD, DC, NL, Height, 0.65-0.89, 3.89, 1.75, 0.900-1.044, 2.14, DC, SN, 24:12, RO, 1.63, 10.25, 0.905, DC, SN, 24:40, RO, 0.26, 5.68, 0.923, 1379-TCDD, AN, DC, SN, 25:36, RO, 1.43, 16.50, 0.958, DC, SN, 25:50, RO, 0.09, 4.02, 0.966, DC, SN, 26:17, RO, 1.21, 14.53, 0.983, 26:46, 0.82, 1,382.31, 621.66, 760.65, 1.001, 2378-TCDD, AN, 320-322, 1 Peak, 1,382.31

Table with columns: 37Cl-TCDD, DC, NL, Height, 0.925-1.075, 1.80, 1.80, 0.903, DC, WL, 24:08, 11.49, 0.913, DC, WL, 24:25, 6.48, 0.920, DC, WL, 24:36, 9.61, 0.949, 25:22, 15.11, 15.11, DC, SN, 25:36, 4.13, 0.958, DC, SN, 25:44, 6.92, 0.963, DC, SN, 25:56, 2.70, 0.970, DC, SN, 26:04, 5.56, 0.975, DC, SN, 26:16, 3.08, 0.983

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.

	DC	SN	26:23			2.42			0.987		
	DC	SN	26:33			2.33			0.993		
	DC	SN	26:37			2.80			0.996		
			26:46			519.48	519.48		1.001	37Cl-TCDD	CLS
	DC	SN	26:59			6.72			1.009		
	DC	SN	27:24			6.39			1.025		
			27:40			11.61	11.61		1.035		
	DC	SN	27:55			4.75			1.044		
328			3 Peaks			546.20					

13C12-TCDD			0.65-0.89						0.925-1.075		
332-334	DC	NL	Height			11.83	7.77		4.06		
			26:34	0.80		6,893.57	3,069.97		3,823.60	0.994	13C12-1234-TCDD RS1
			26:44	0.82		4,980.11	2,239.86		2,740.25	1.000	13C12-2378-TCDD IS1
			Height			1,247.76	555.47		692.29		
332-334			2 Peaks			11,873.68					

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

PeCDF			1.32-1.78						0.928-1.062		
340-342	DC	NL	Height			3.86	1.85		2.01		
			29:07	1.37		135.66	78.53		57.13	0.972	J
			29:37	1.41		93.91	54.89		39.02	0.988	J
			29:59	1.54		7,880.67	4,782.31		3,098.36	1.001	12378-PeCDF AN
			30:16	1.52		152.68	92.11		60.57	1.010	J
			30:40	1.54		8,359.63	5,074.48		3,285.15	1.023	23478-PeCDF AN
	DC	SN	31:26	RO 0.91		9.57			1.049		
			31:38	RO 0.75		27.21	16.54		22.16	1.056	J
340-342			6 Peaks			16,649.76					

13C12-PeCDF			1.32-1.78						0.867-1.133		
352-354	DC	NL	Height			3.12	1.56		1.56		
			29:06	1.62		126.79	78.31		48.48	0.971	
			29:34	RO 2.00		59.03	46.39		23.15	0.987	
			29:58	1.57		5,535.28	3,379.29		2,155.99	1.000	13C12-PeCDF 123 IS2
			Height			1,629.20	982.43		646.77		
			30:16	1.49		86.31	51.67		34.64	1.010	
			30:40	1.55		5,699.25	3,466.02		2,233.23	1.023	13C12-PeCDF 234 SUR1
			31:38	RO 1.21		100.39	47.59		39.37	1.056	
	DC	SN	31:47	1.68		13.01			1.061		
352-354			6 Peaks			11,607.05					

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

PeCDD			1.32-1.78						0.938-1.022		
356-358	DC	NL	Height			2.89	1.48		1.41		
			30:16	RO 1.09		22.31	9.54		8.75	0.977	J
			30:41	RO 1.31		23.89	12.25		9.37	0.990	J
	DC	SN	30:49	1.45		7.46			0.995		
			31:00	1.60		4,961.69	3,054.28		1,907.41	1.001	12378-PeCDD AN
	DC	SN	31:17	RO 1.97		10.40			1.010		
			31:29	RO 2.20		12.55	10.82		4.92	1.016	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.. Fl ags.

356-358 4 Peaks 5,020.44

13C12-PeCDD		1.32-1.78		0.871-1.129	
368-370	DC NL	Height	2.83	1.60	1.23
	DC SN	29:14	1.73	10.31	0.944
	DC SN	29:28 RO	2.22	9.95	0.951
		29:56 RO	2.34	17.34	15.94 0.966
		30:04 RO	1.25	34.45	16.88 13.51 0.970
		30:15	1.32	14.03	7.99 6.04 0.976
	DC SN	30:24 RO	0.99	8.95	0.981
		30:59	1.60	3,712.97	2,286.02 1,426.95 1.000 13C12-PeCDD 123 IS3
		Height	1,047.68	638.53	409.15
	DC SN	31:40 RO	2.72	4.72	1.022
	DC SN	31:46 RO	1.90	4.41	1.025
368-370	4 Peaks		3,778.79		

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

HxCDF		1.05-1.43		0.964-1.045	
374-376	DC NL	Height	4.62	2.09	2.53
		32:28	1.12	24.39	12.90 11.49 0.968
		32:36	1.22	58.42	32.06 26.36 0.972
		33:27	1.26	5,268.79	3,489.70 2,779.09 0.998 123478-HxCDF AN
		33:32	1.25	6,561.48	3,640.28 2,921.20 1.000 123678-HxCDF AN
		34:01	1.24	5,841.19	3,238.34 2,602.85 1.014 234678-HxCDF AN
		34:48	1.25	5,010.18	2,778.96 2,231.22 1.038 123789-HxCDF AN
374-376	6 Peaks		23,764.45		

13C12-HxCDF		0.43-0.59		0.881-1.119	
384-386	DC NL	Height	6.70	2.57	4.03
		32:36	0.47	41.39	13.29 28.10 0.972
N		33:25	0.51	5,050.08	1,716.28 3,333.80 0.997 13C12-HxCDF 478 SUR2
		33:32	0.52	5,062.02	1,724.92 3,337.10 1.000 13C12-HxCDF 678 IS4
		Height	1,635.49	556.68	1,078.81
	DC SN	33:51 RO	1.27	8.79	1.009
		34:00	0.51	4,871.02	1,646.15 3,224.87 1.014 13C12-HxCDF 234 ALT2
		34:47	0.51	3,989.80	1,351.88 2,637.92 1.037 13C12-HxCDF 789 ALT1
	DC SN	35:12 RO	0.73	12.58	1.050
384-386	5 Peaks		19,014.31		

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

HxCDD		1.05-1.43		0.959-1.013	
390-392	DC NL	Height	4.29	2.00	2.29
		34:08	1.26	3,731.07	2,078.99 1,652.08 0.998 123478-HxCDD AN
		34:13	1.27	3,896.96	2,178.92 1,718.04 1.000 123678-HxCDD AN
		34:32	1.28	4,025.33	2,259.53 1,765.80 1.010 123789-HxCDD AN
	DC WH	34:44 RO	4.90	9.32	1.016
	DC WH	34:53 RO	0.66	6.83	1.020
390-392	3 Peaks		11,653.36		

Compound/

M\_Z.... QC.Log Omit Why ..RT. OK Ratio Total.Area/Ht Area/Ht.Peak1 Area/Ht.Peak2 Rel.RT Compound.Name.. ID.. Fl ags.

13C12-HxCDD		1.05-1.43			0.971-1.029		
402-404	DC NL	Height	6.17	3.45	2.72		
		33:36	1.37	30.13	17.40	12.73 0.982	
		34:07	1.30	2,874.68	1,625.42	1,249.26 0.998 13C12-HxCDD 478 SUR3	
		34:12	1.27	3,110.33	1,742.69	1,367.64 1.000 13C12-HxCDD 678 IS5	
		Height	951.24	532.86	418.38		
		34:31	1.32	3,492.35	1,984.91	1,507.44 1.009 13C12-HxCDD 789 RS2	
402-404	4 Peaks		9,507.49				

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

HpCDF		0.88-1.20			0.996-1.047		
408-410	DC NL	Height	2.82	1.47	1.35		
		36:27	1.08	5,440.36	2,821.42	2,618.94 1.000 1234678-HpCDF AN	
		36:50 RO	0.74	36.90	18.81	25.29 1.011	
		37:58	1.05	3,577.32	1,830.10	1,747.22 1.042 1234789-HpCDF AN	
408-410	3 Peaks		9,054.58				

13C12-HpCDF		0.37-0.51			0.945-1.110		
418-420	DC NL	Height	3.59	1.95	1.64		
		36:26	0.48	3,228.33	1,041.58	2,186.75 1.000 13C12-HpCDF 678 IS6	
		Height	927.52	289.69	637.83		
	DC SN	37:39 RO	1.80	5.66		1.033	
		37:57	0.46	2,278.37	713.34	1,565.03 1.042 13C12-HpCDF 789 SUR4	
418-420	2 Peaks		5,506.70				

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

HpCDD		0.88-1.20			0.976-1.005		
424-426	DC NL	Height	2.93	1.58	1.35		
	DC SN	37:12 RO	1.68	4.14		0.993	
		37:28	1.01	2,586.73	1,296.89	1,289.84 1.000 1234678-HpCDD AN	
	DC WH	37:44	0.89	15.89		1.007	
424-426	1 Peak		2,586.73				

13C12-HpCDD		0.88-1.20			0.973-1.027		
436-438	DC NL	Height	5.92	3.56	2.36		
	DC SN	36:43 RO	2.11	11.85		0.980	
		37:28	1.07	2,542.71	1,314.48	1,228.23 1.000 13C12-HpCDD 678 IS7	
		Height	667.57	347.87	319.70		
	DC SN	37:49 RO	4.37	14.18		1.009	
	DC SN	37:54 RO	27.92	6.24		1.012	
436-438	1 Peak		2,542.71				

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

OCDF		0.76-1.02			0.903-1.097		
442-444	DC NL	Height	3.16	1.52	1.64		
	DC WL	36:21 RO	1.34	7.50		0.885	
		41:17	0.91	4,187.65	1,995.36	2,192.29 1.005 OCDF AN	
	DC SN	41:45 RO	0.73	15.65		1.017	
	DC SN	42:44 RO	0.47	4.99		1.041	

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.

442-444 1 Peak 4,187.65

OCDD 0.76-1.02 0.903-1.097

458-460 DC NL Height 2.40 1.15 1.25  
41:05 0.91 3,174.55 1,510.25 1,664.30 1.000 OCDD AN  
DC SN 41:27 RO 1.68 10.00 1.009

458-460 1 Peak 3,174.55

13C12-OCDD 0.76-1.02 0.996-1.004

470-472 DC NL Height 3.74 2.26 1.48  
41:04 0.91 3,722.08 1,777.15 1,944.93 1.000 13C12-OCDD IS8  
Height 729.94 356.86 373.08

470-472 1 Peak 3,722.08

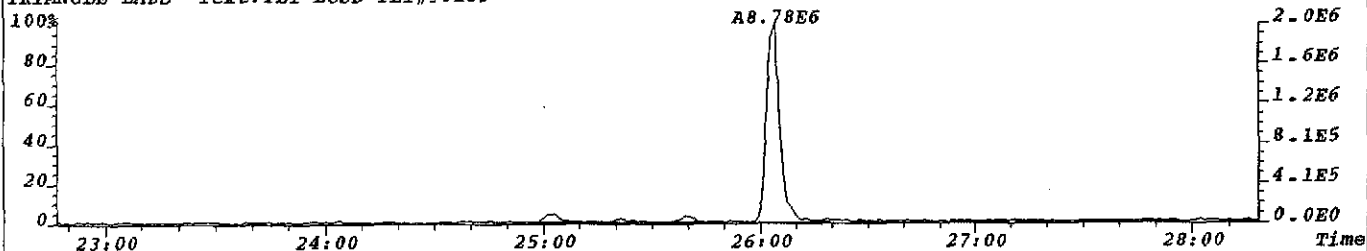
Column Description..... "Why" Code Description..... QC Log Desc.....

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

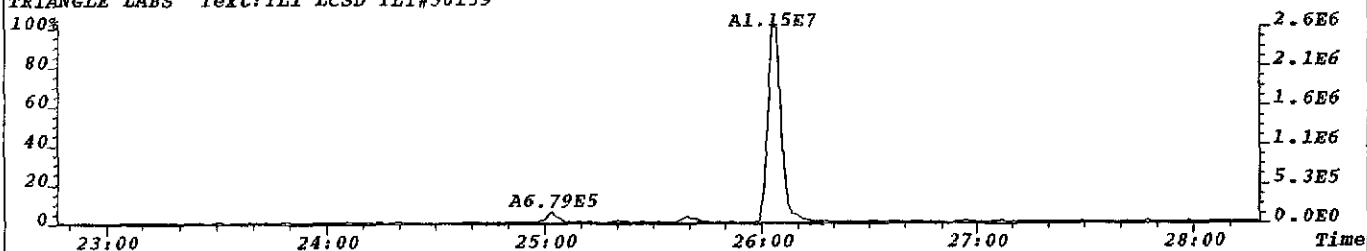
\*\*\* End of Report \*\*\*



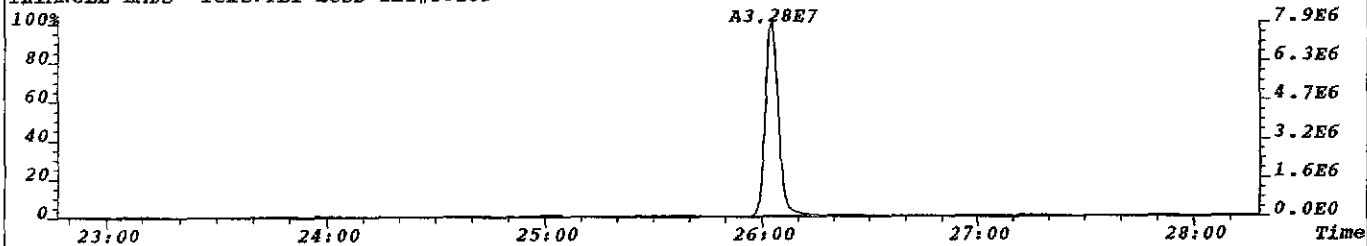
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303.9016 S:12 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,19240.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



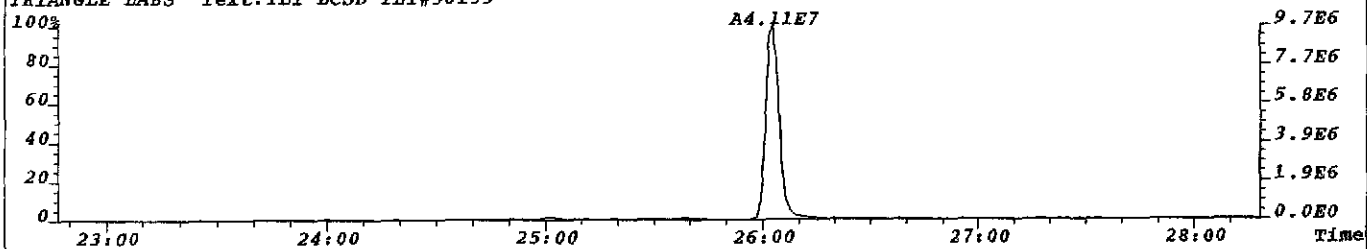
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TRIANGLE LABS Text:TLI LCSD TLI#58139



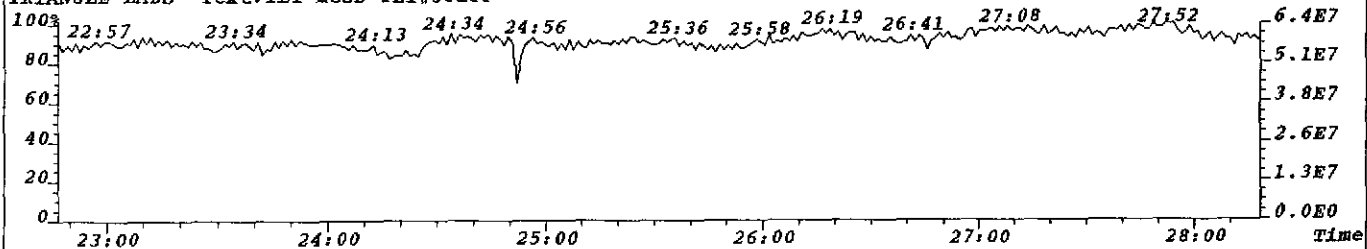
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TRIANGLE LABS Text:TLI LCSD TLI#58139



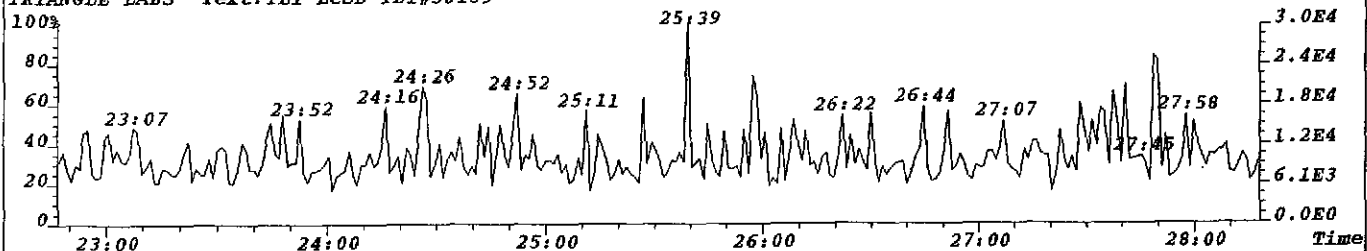
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TRIANGLE LABS Text:TLI LCSD TLI#58139



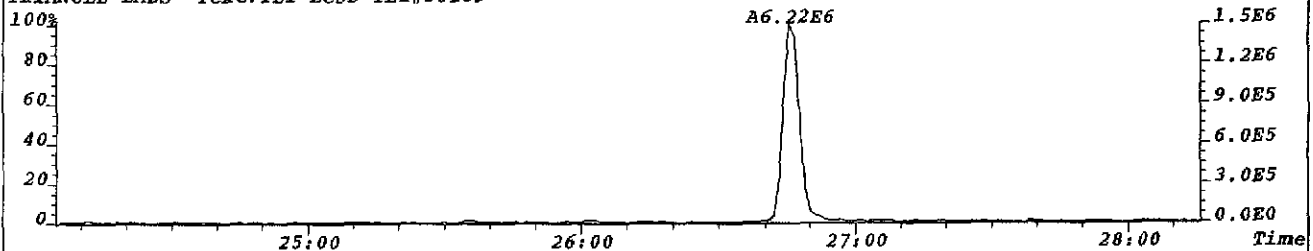
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TRIANGLE LABS Text:TLI LCSD TLI#58139



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TRIANGLE LABS Text:TLI LCSD TLI#58139



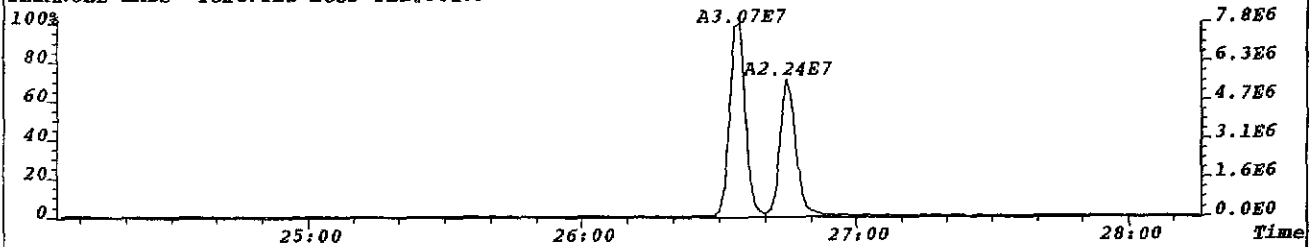
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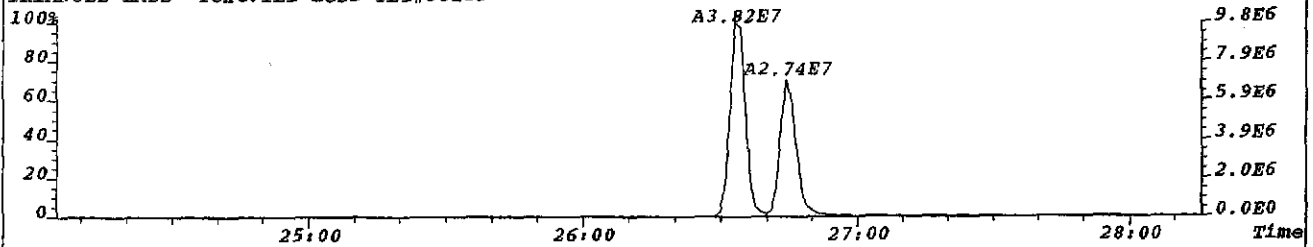
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TRIANGLE LABS Text:TLI LCS D TLI#58139



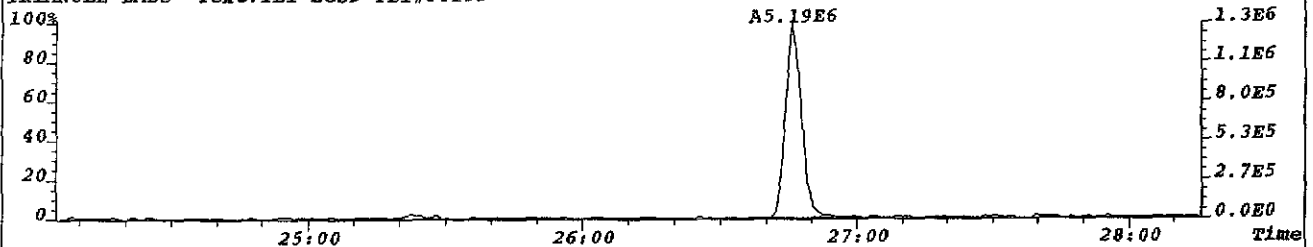
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TRIANGLE LABS Text:TLI LCS D TLI#58139



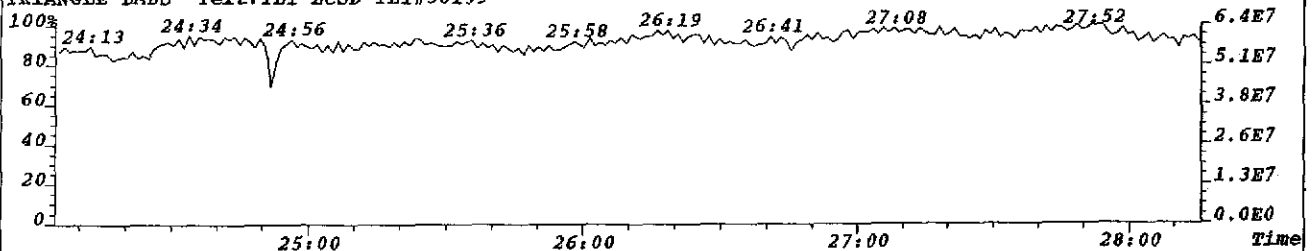
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TRIANGLE LABS Text:TLI LCS D TLI#58139



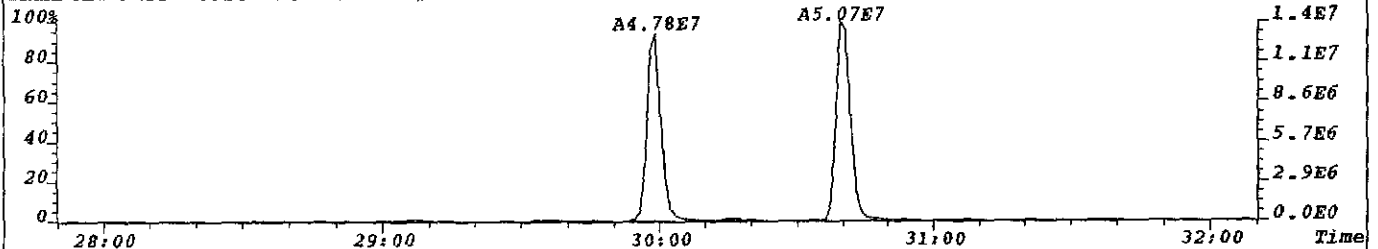
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TRIANGLE LABS Text:TLI LCS D TLI#58139



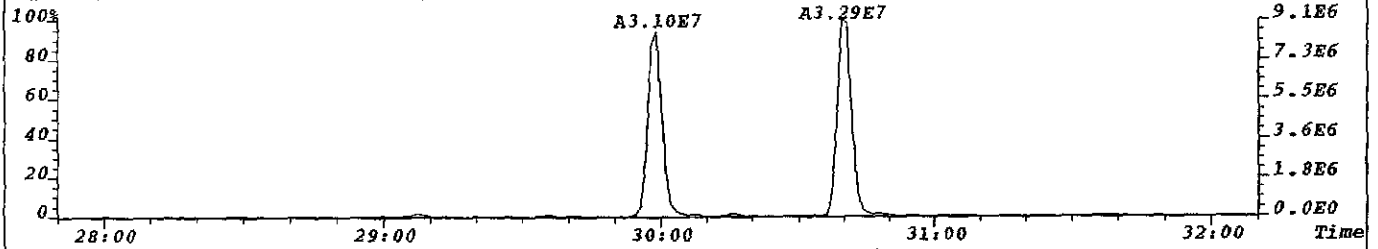
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TRIANGLE LABS Text:TLI LCS D TLI#58139



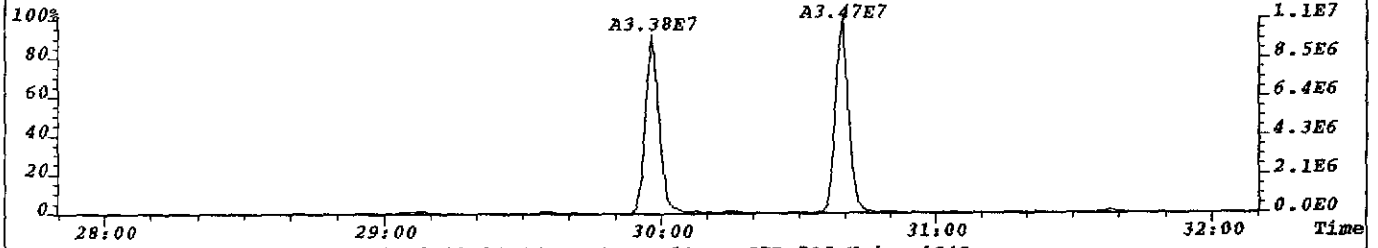
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TRIANGLE LABS Text:TLI LCSD TLI#58139



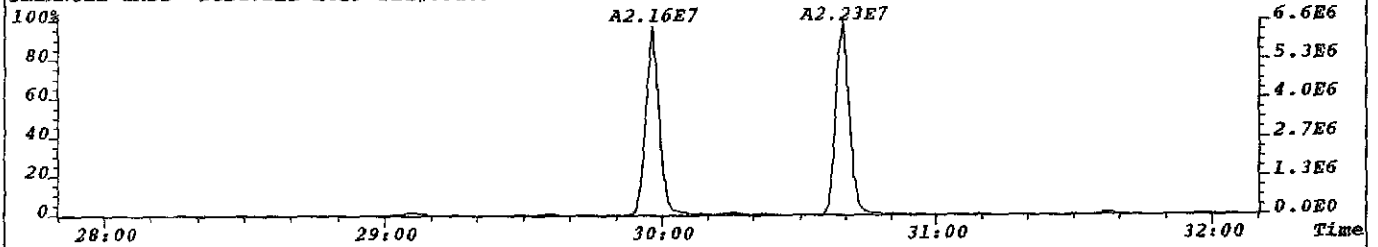
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TRIANGLE LABS Text:TLI LCSD TLI#58139



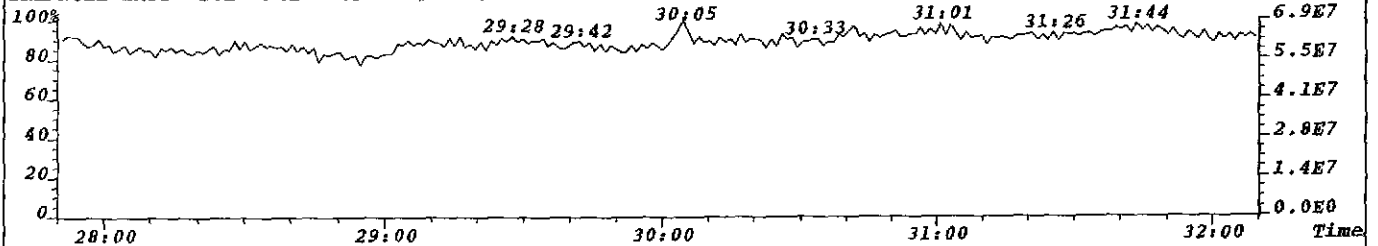
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351.9000 S:12 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7796.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



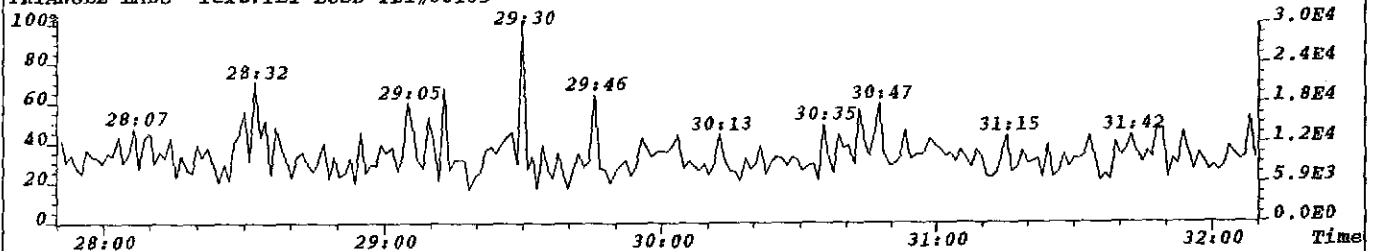
File:U1316 #1-648 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S Noise:1949  
353.8970 S:12 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7796.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



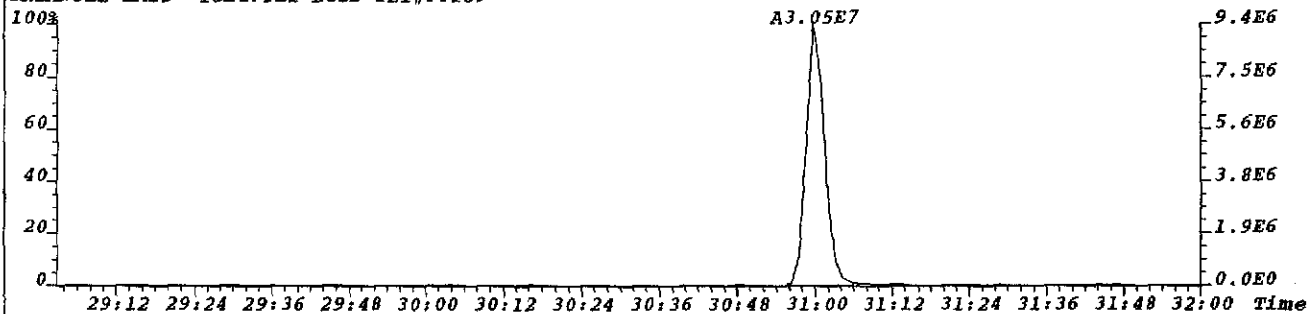
File:U1316 #1-648 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S  
330.9792 S:12 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



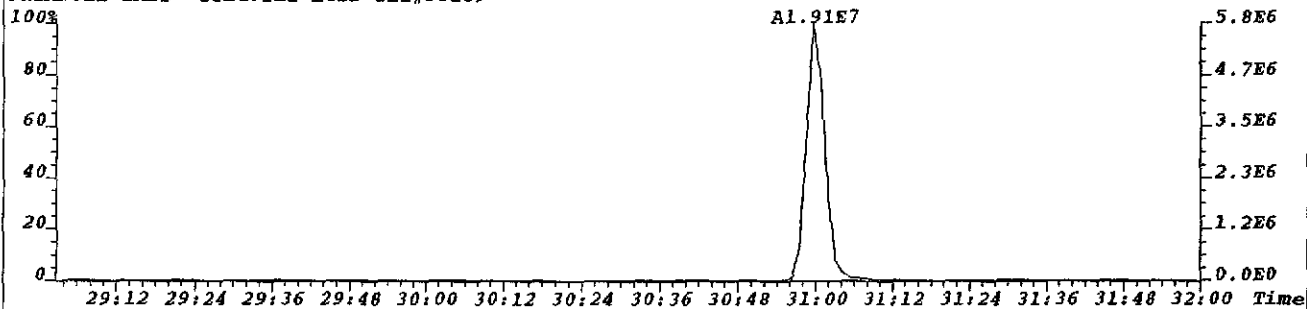
File:U1316 #1-648 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S  
409.7974 S:12 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



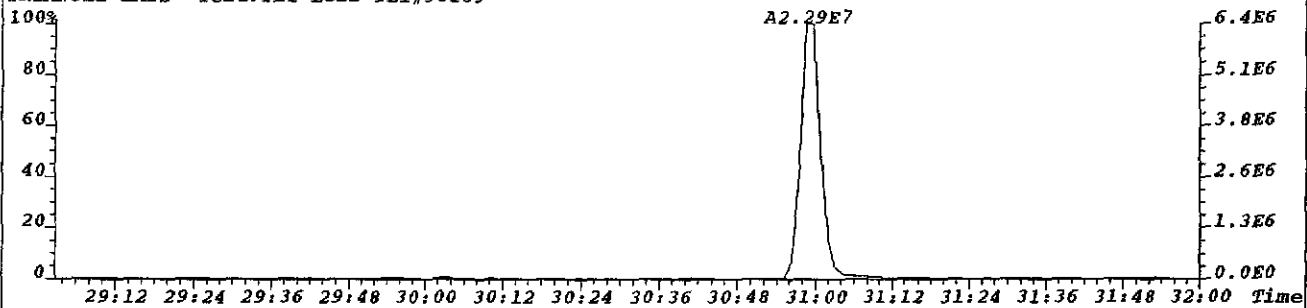
File:U1316 #1-648 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S Noise:1852  
355.8546 S:12 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,7408.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



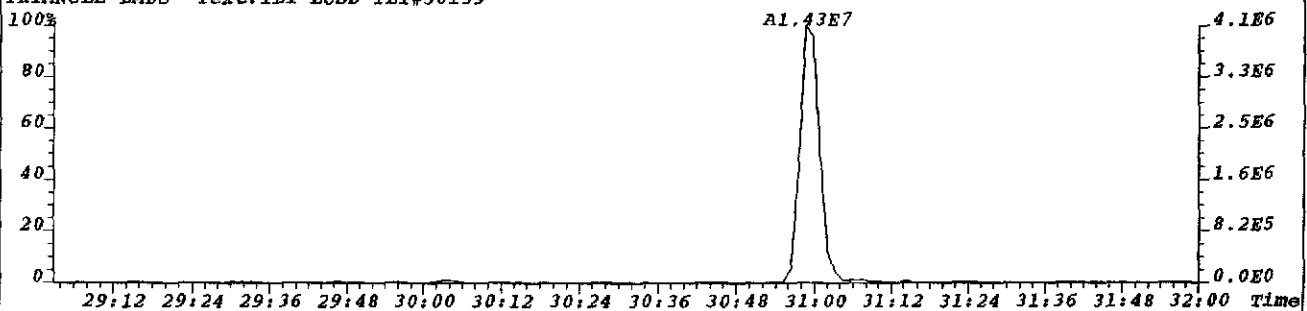
File:U1316 #1-648 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S Noise:1758  
357.8516 S:12 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,7032.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



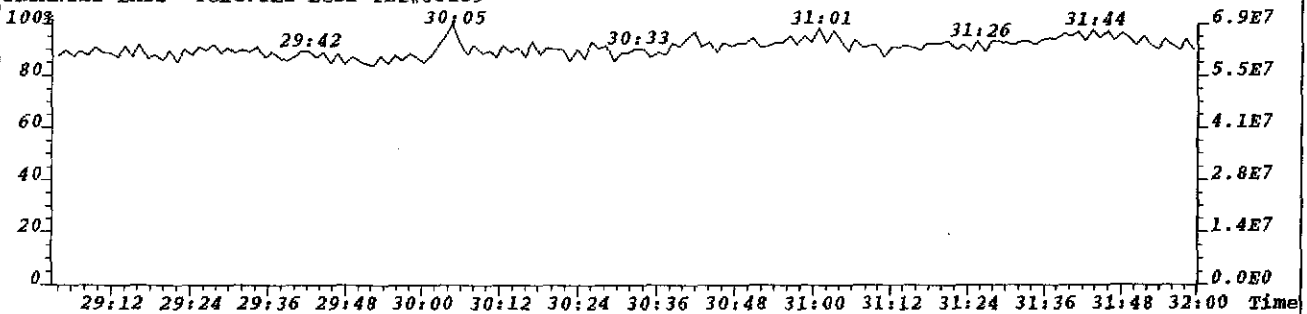
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367.8949 S:12 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,8016.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



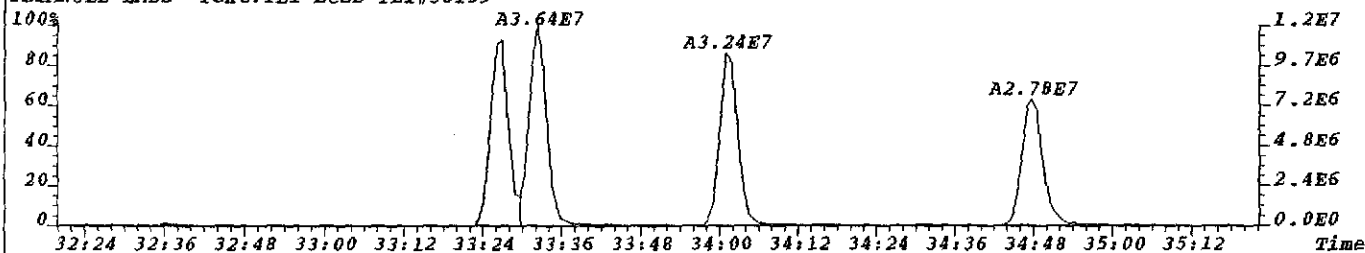
File:U1316 #1-648 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S Noise:1541  
369.8919 S:12 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,6164.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



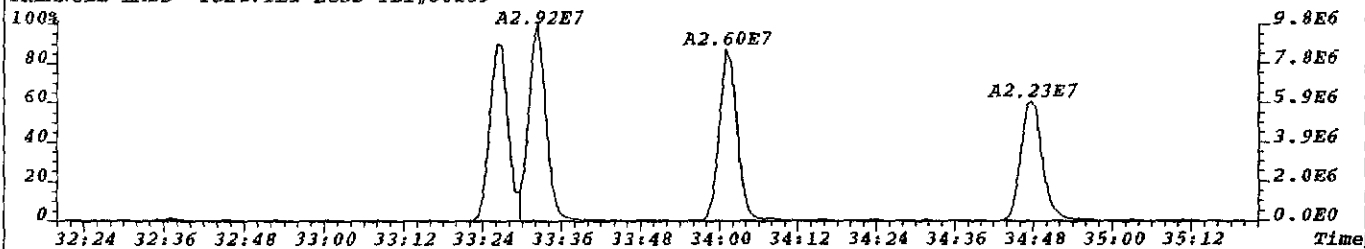
File:U1316 #1-648 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S  
330.9792 S:12 F:2 Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



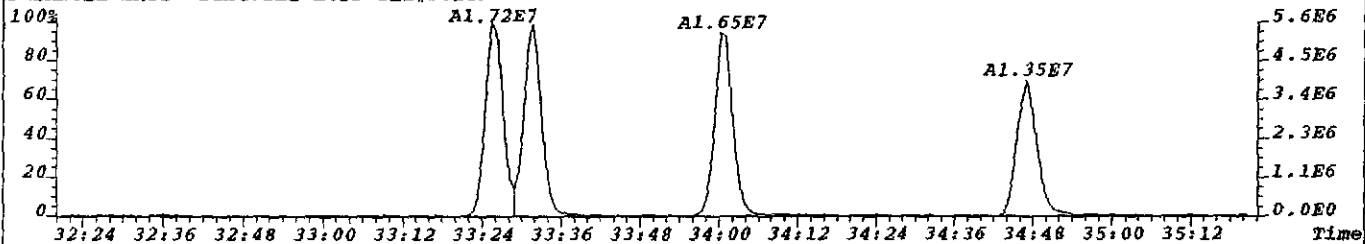
File:UL316 #1-271 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S Noise:2611  
373.8208 S:12 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10444.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



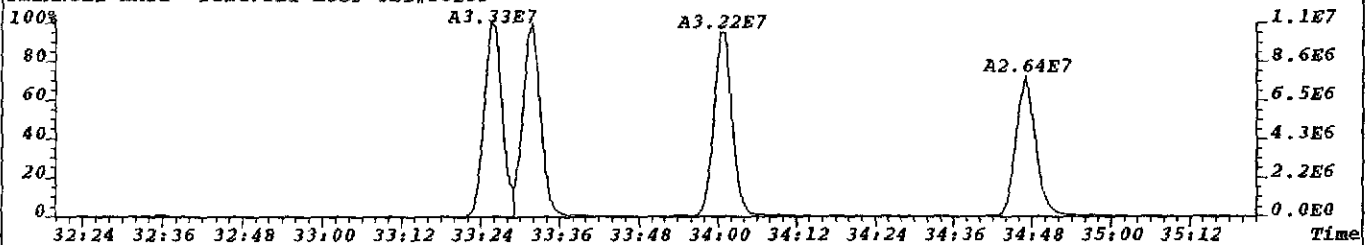
File:UL316 #1-271 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S Noise:3161  
375.8178 S:12 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12644.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



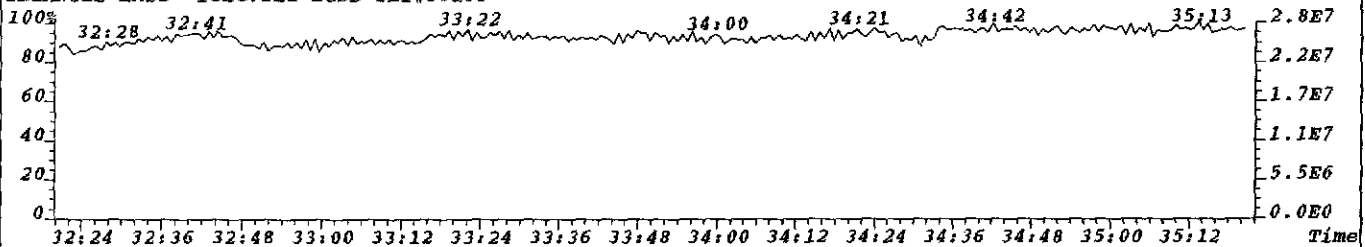
File:UL316 #1-271 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S Noise:3341  
383.8639 S:12 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,13364.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



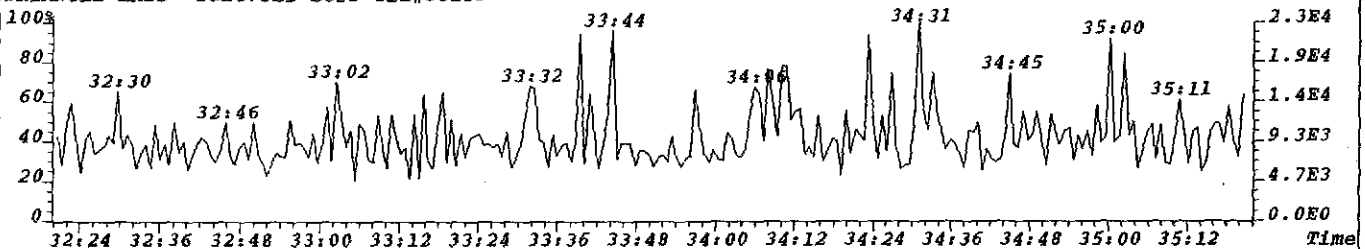
File:UL316 #1-271 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S Noise:5037  
385.8610 S:12 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,20148.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



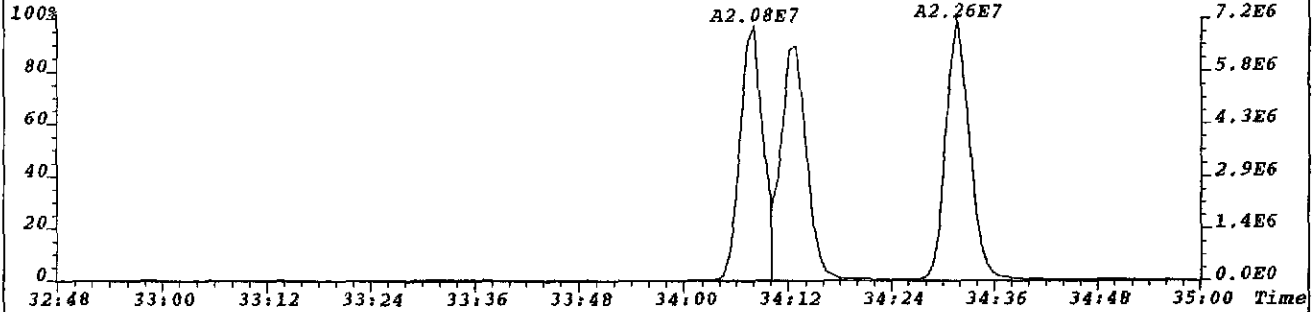
File:UL316 #1-271 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S  
392.9760 S:12 F:3 Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



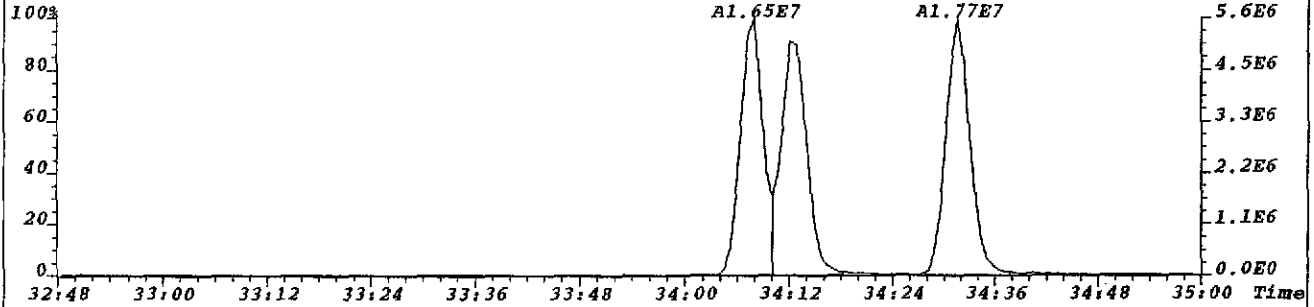
File:UL316 #1-271 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S  
445.7555 S:12 F:3 Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



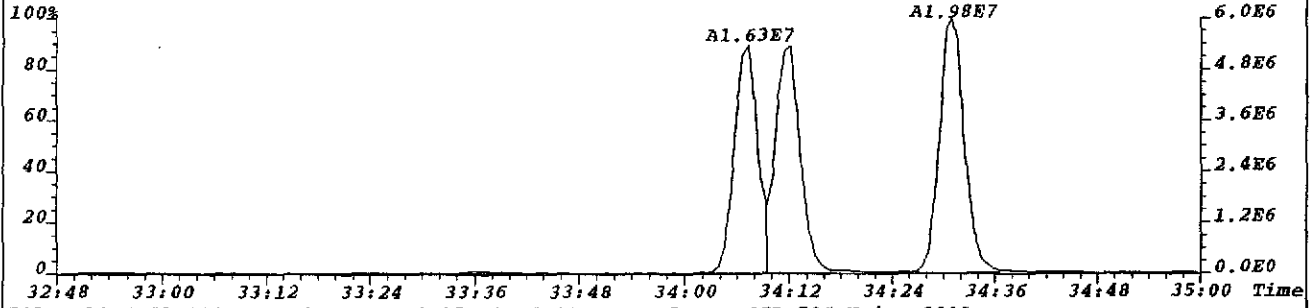
File:U1316 #1-271 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S Noise:2500  
389.8156 S:12 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10000.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



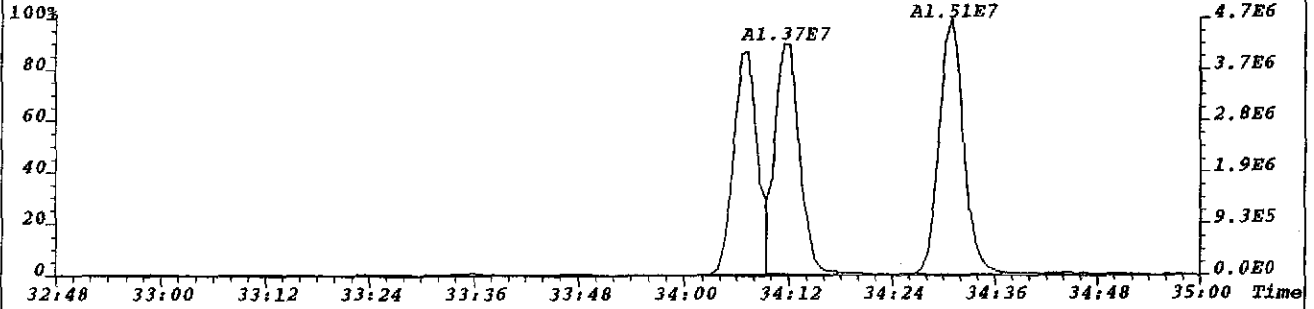
File:U1316 #1-271 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S Noise:2865  
391.8127 S:12 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11460.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



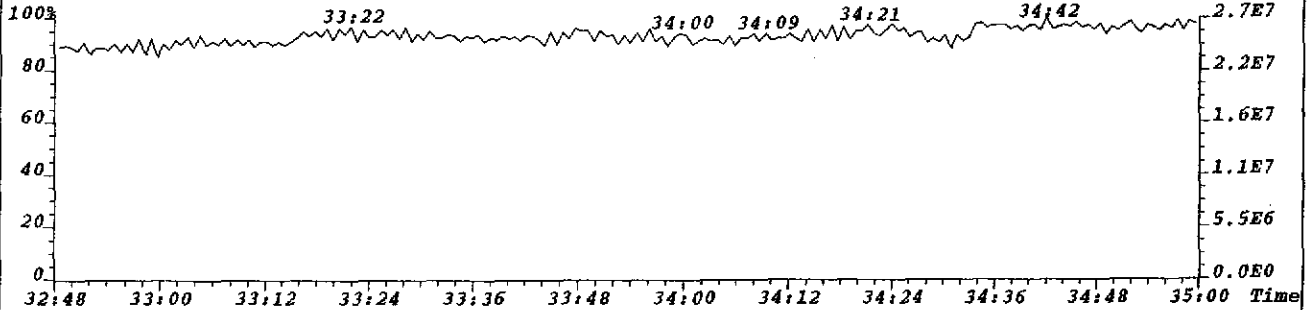
File:U1316 #1-271 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S Noise:4315  
401.8558 S:12 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,17260.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



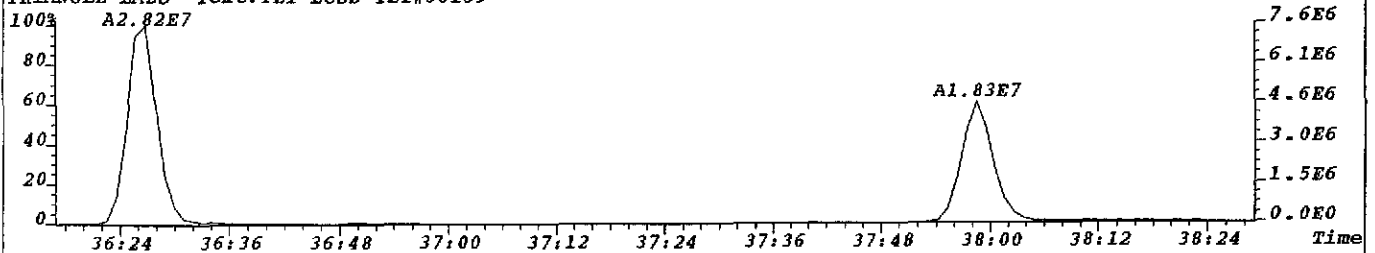
File:U1316 #1-271 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S Noise:3399  
403.8529 S:12 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,13596.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



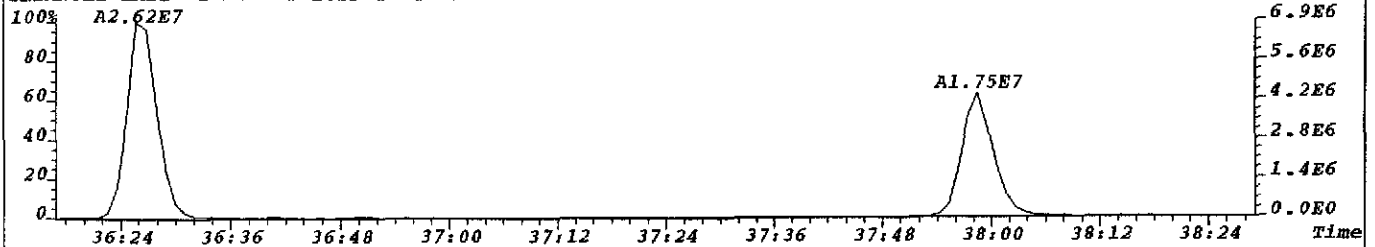
File:U1316 #1-271 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S  
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TRIANGLE LABS Text:TLI LCSD TLI#58139



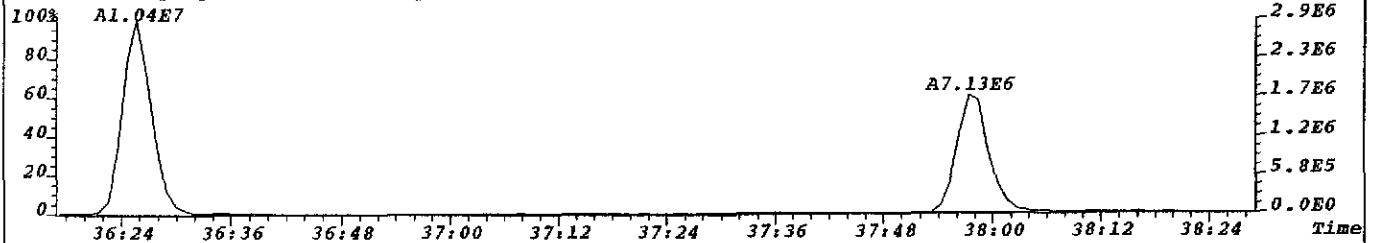
File:U1316 #1-550 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S Noise:1841  
407.7818 S:12 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7364.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



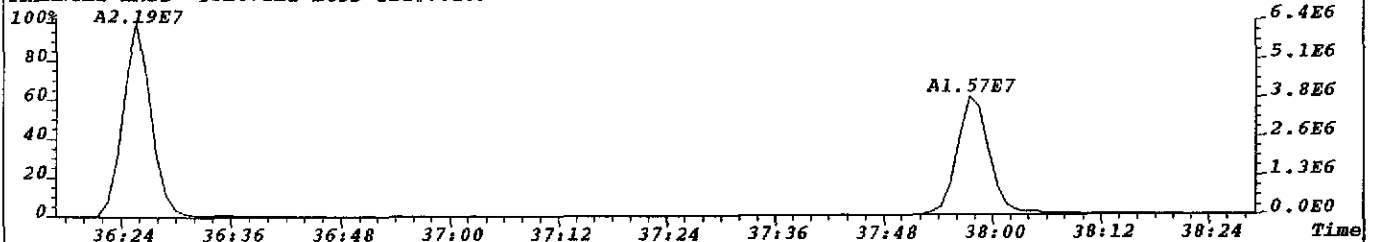
File:U1316 #1-550 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S Noise:1686  
409.7789 S:12 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6744.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



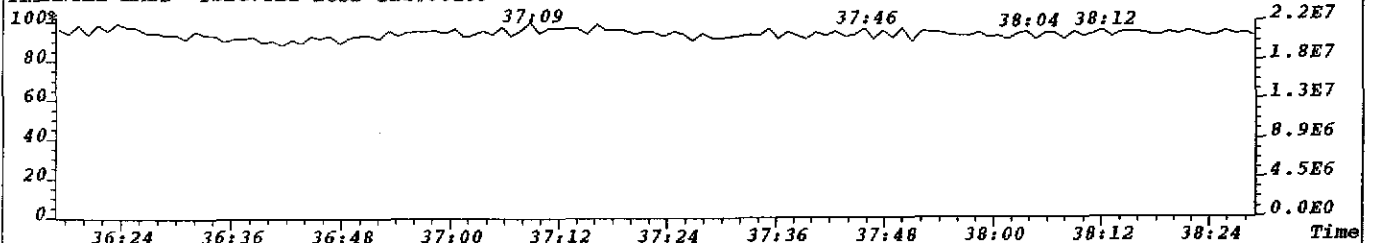
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417.8253 S:12 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9756.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



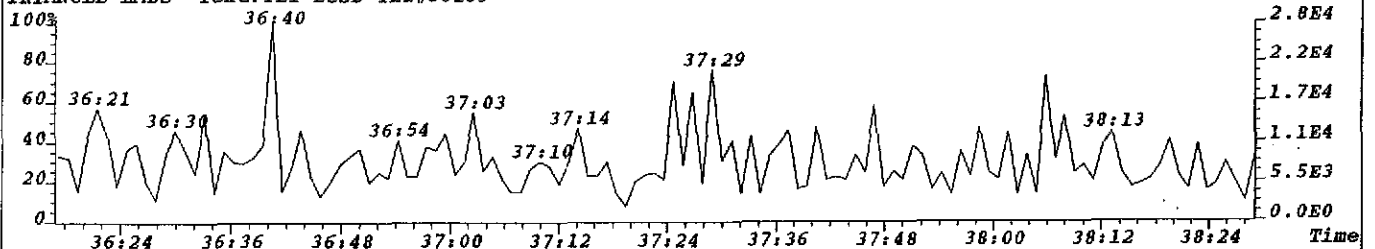
File:U1316 #1-550 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S Noise:2049  
419.8220 S:12 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,8196.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



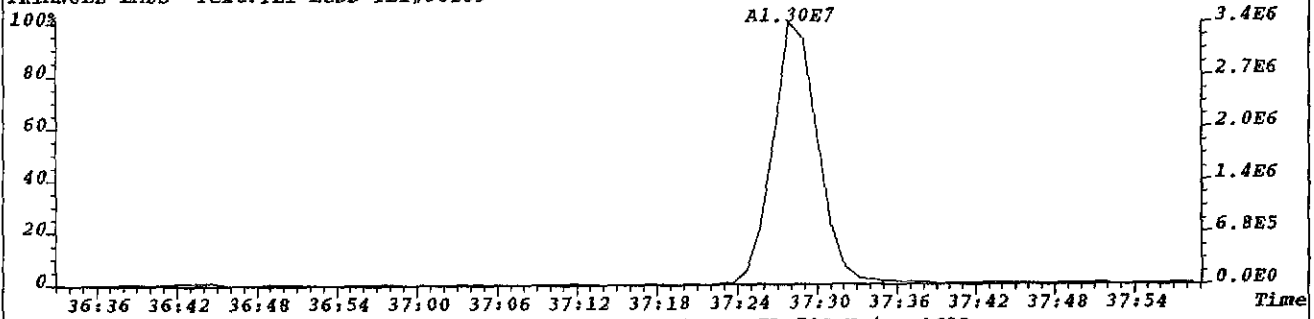
File:U1316 #1-550 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S  
430.9729 S:12 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



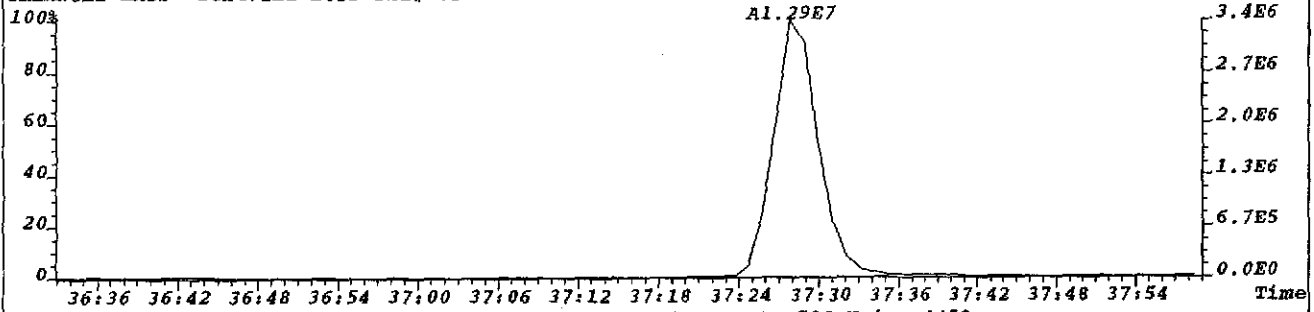
File:U1316 #1-550 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S  
479.7165 S:12 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



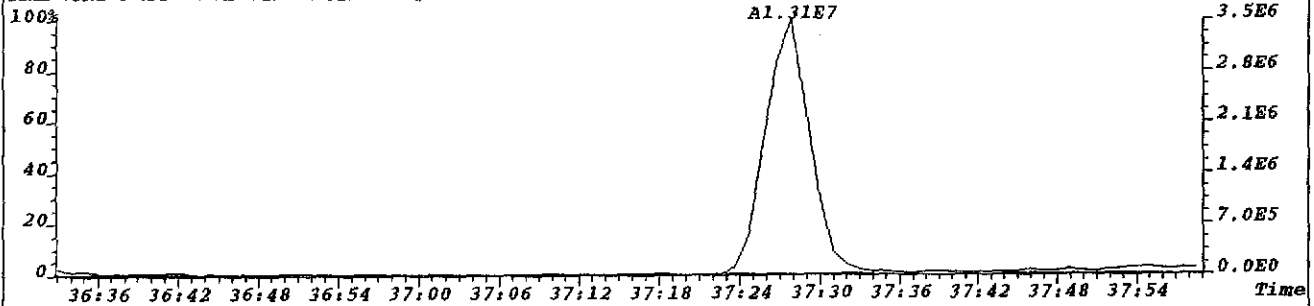
File:UL316 #1-550 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S Noise:1669  
423.7766 S:12 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7876.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



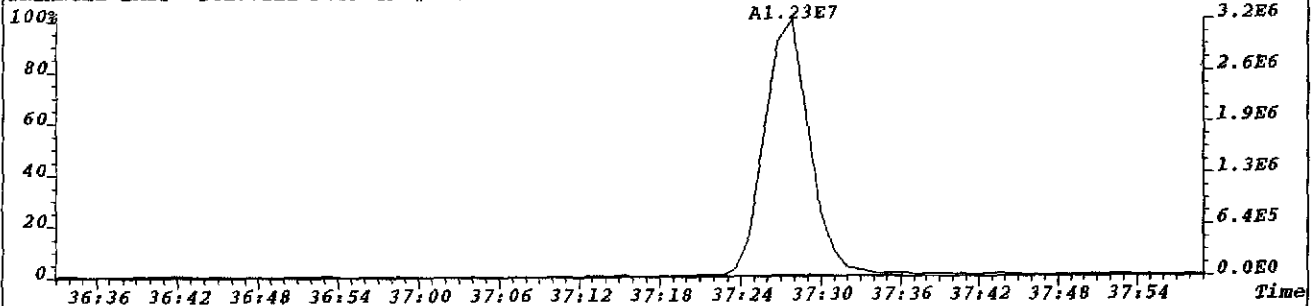
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425.7737 S:12 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6772.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



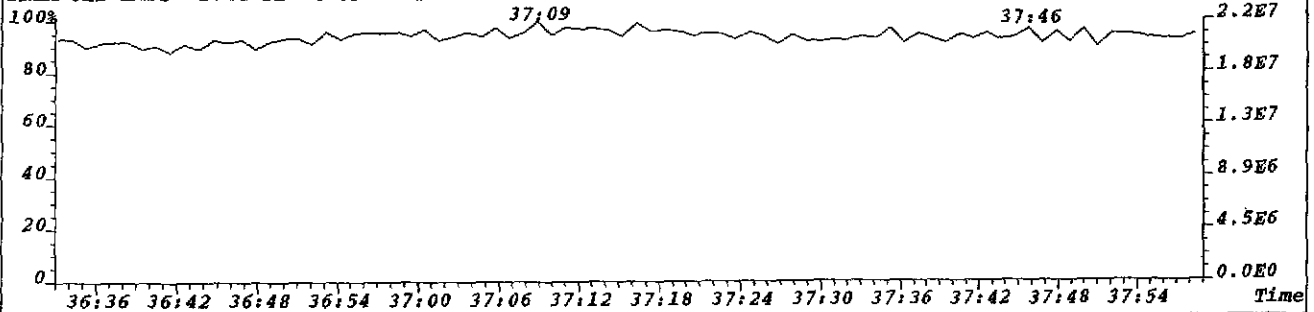
File:UL316 #1-550 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S Noise:4452  
435.8169 S:12 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,17808.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



File:UL316 #1-550 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S Noise:2951  
437.8140 S:12 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11804.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139

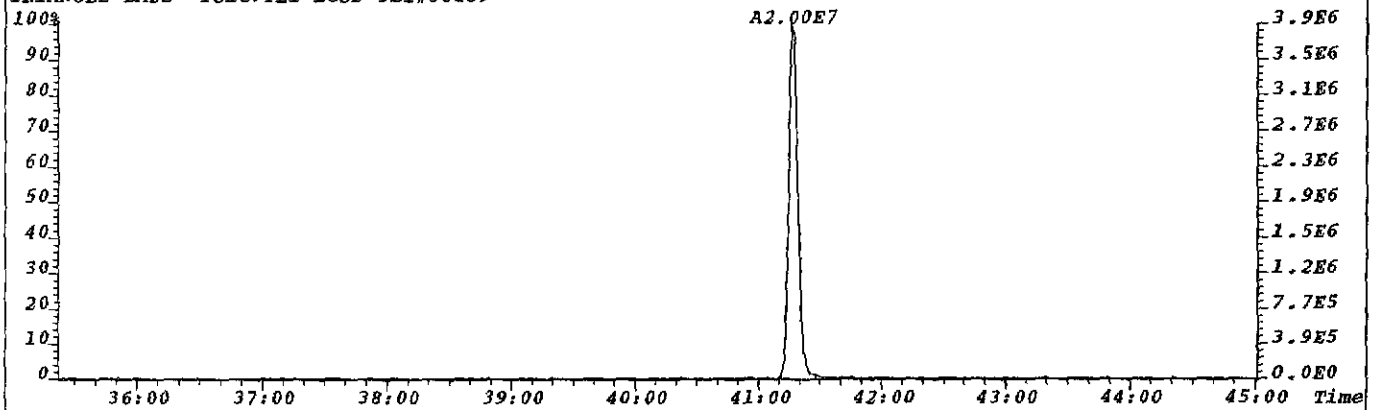


File:UL316 #1-550 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S  
430.9729 S:12 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139

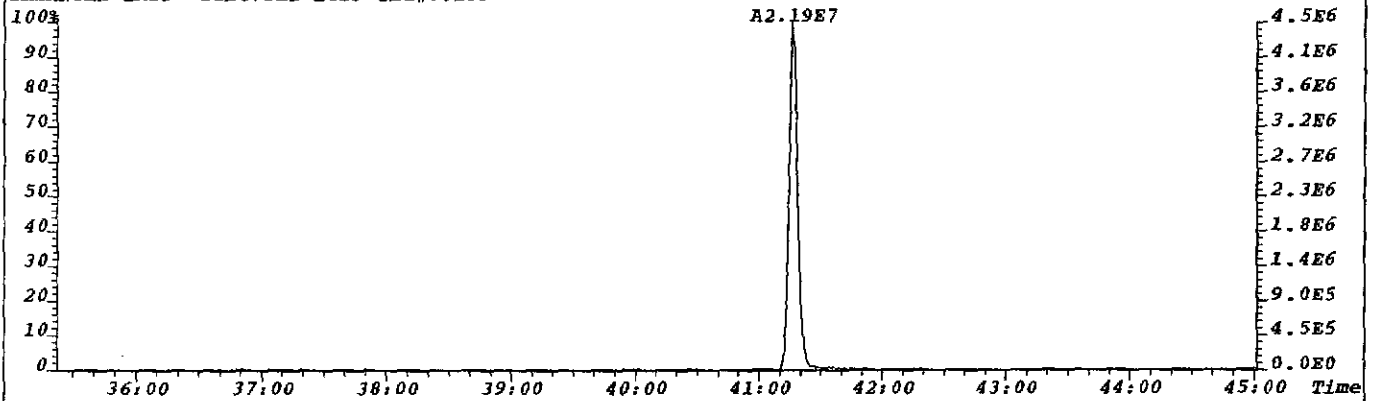




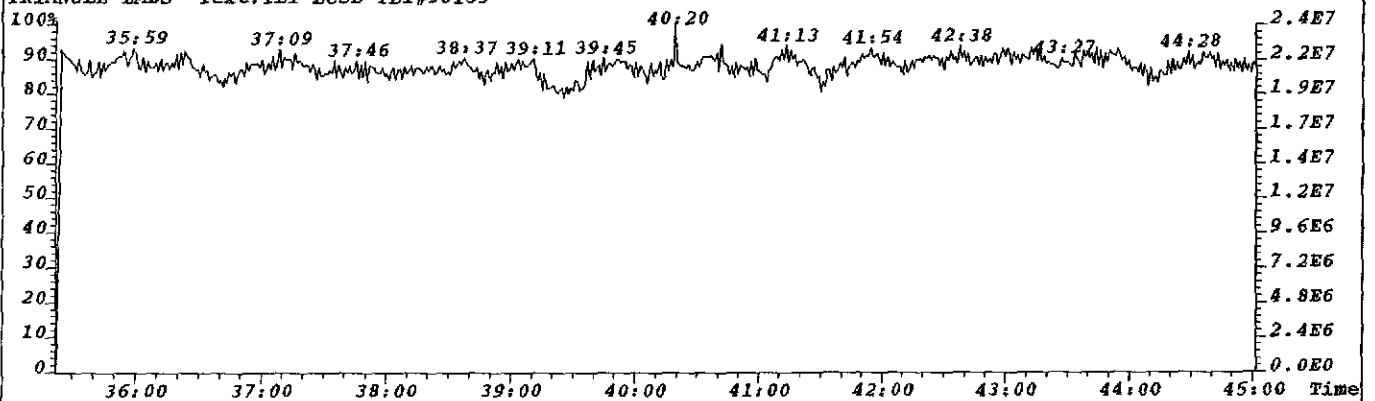
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441.7428 S:12 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7596.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



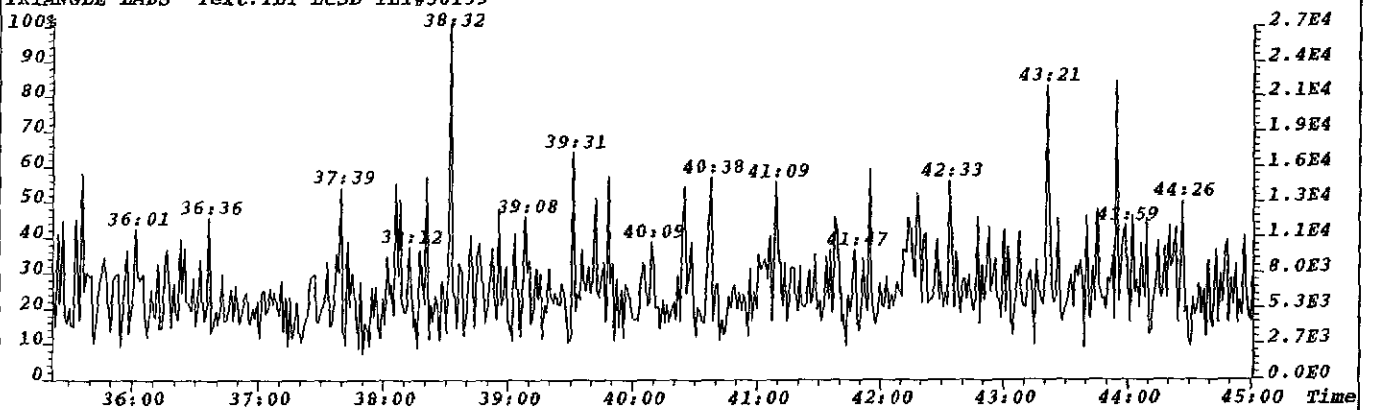
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443.7399 S:12 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,8180.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



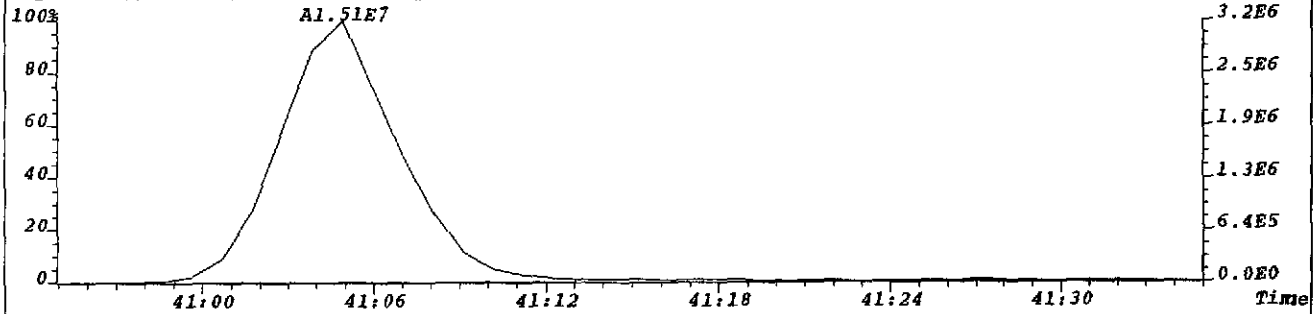
File:U1316 #1-550 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S  
430.9729 S:12 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



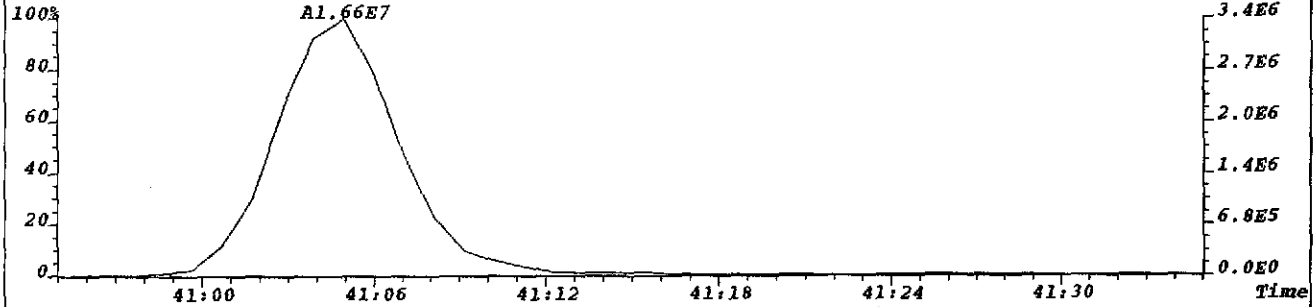
File:U1316 #1-550 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S  
513.6775 S:12 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



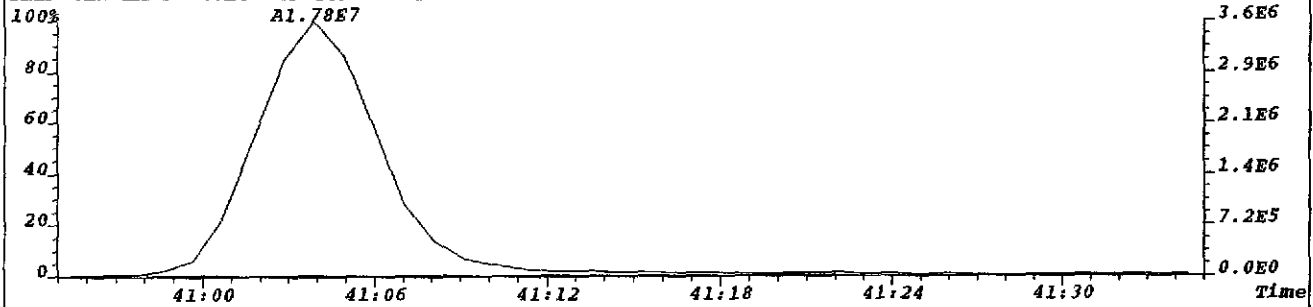
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457.7377 S:12 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,5732.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



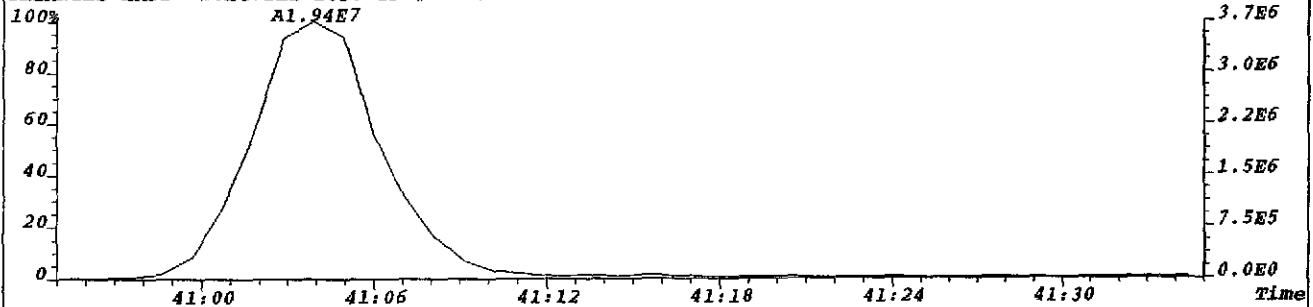
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459.7348 S:12 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,6248.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



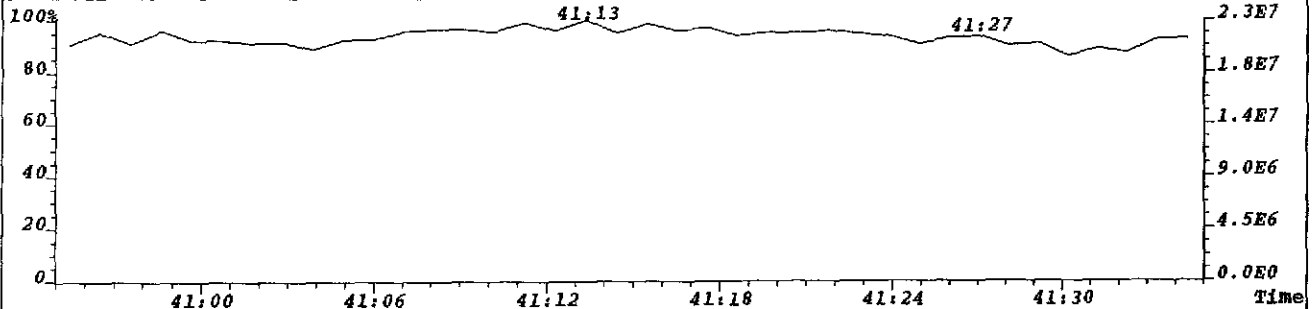
File:U1316 #1-550 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S Noise:2823  
469.7779 S:12 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11292.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



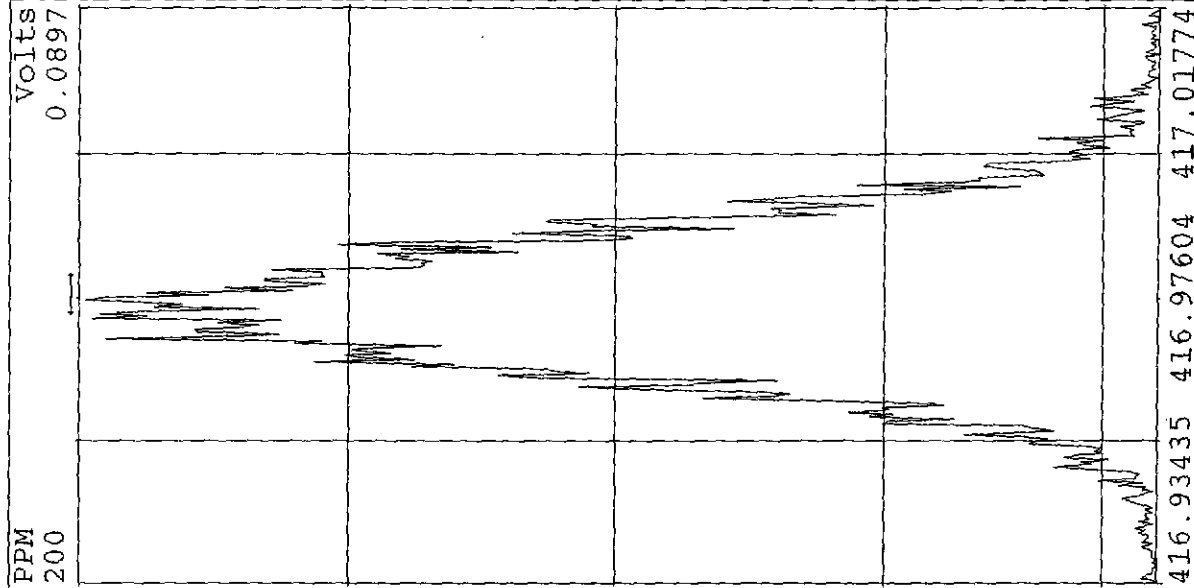
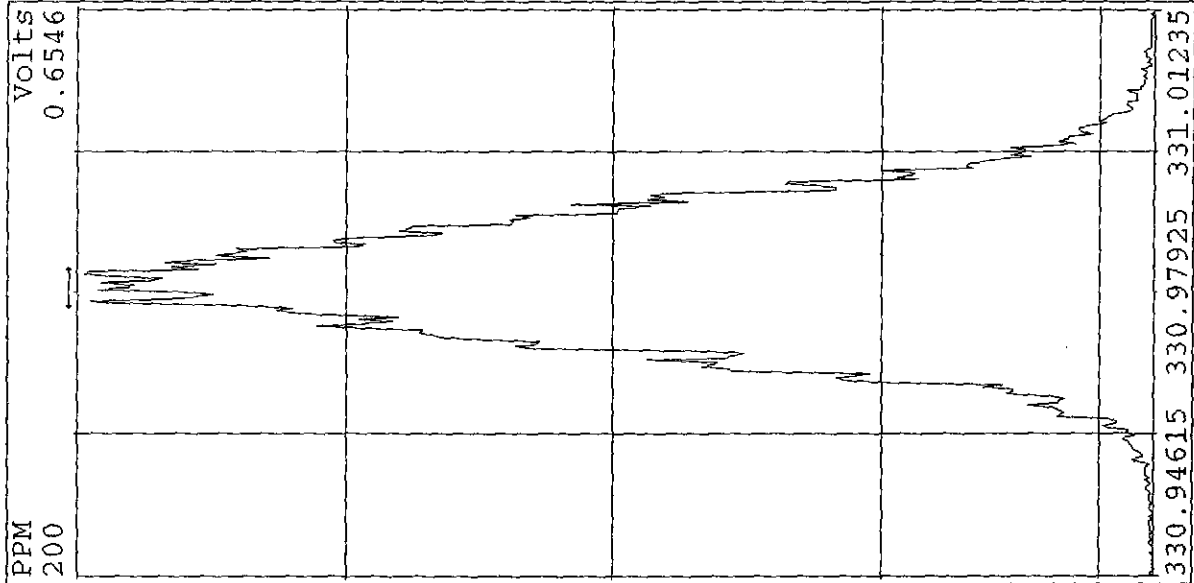
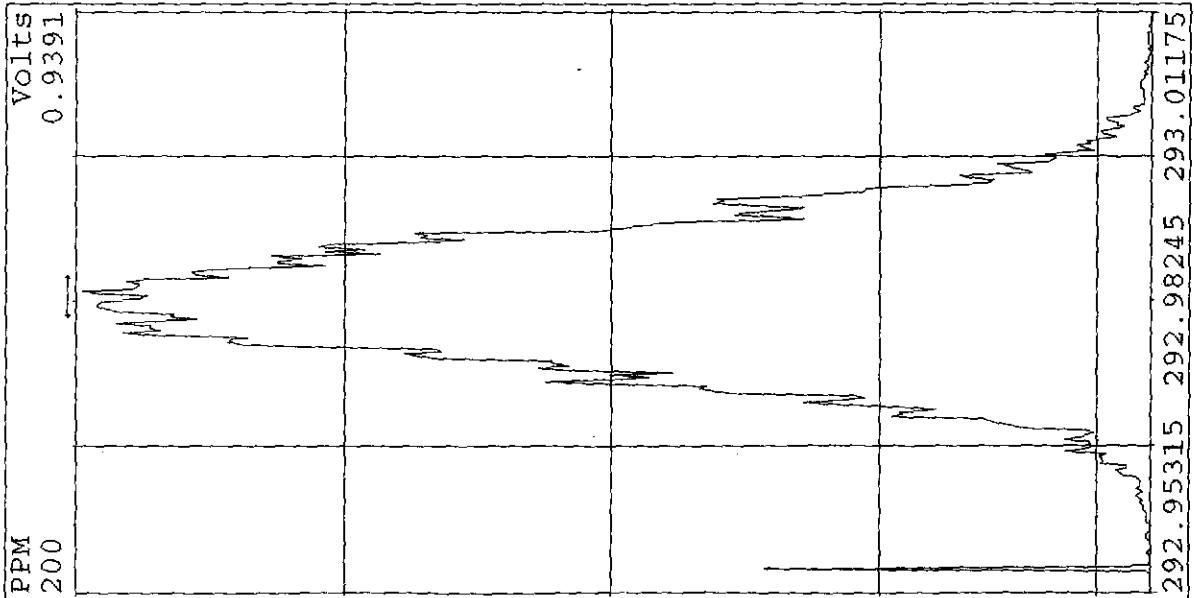
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471.7750 S:12 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7384.0,1.00%,F,T) Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



File:U1316 #1-550 Acq: 4-SEP-2002 15:13:25 GC EI+ Voltage SIR 70S  
430.9729 S:12 F:4 Exp:NDB5US  
TRIANGLE LABS Text:TLI LCSD TLI#58139



Peak Locate Examination: 4-SEP-2002:05:34 File:U1316  
Experiment:NDB5US Function:2 Reference:PFK





CALIBRATION  
DATA

Analysis Date....: 07/09/2002  
Instrument.....: U

Method.....: MIT3

Analytes	RF	SD	%RSD	RT	RT/LO	RT/HI	Ratio1	Ratio2	N
Total MCDF	0.000	0.000	100%		5:18	19:18			0
Total MCDD	0.000	0.000	100%		6:03	20:03			0
Total DCDF	0.000	0.000	100%		12:18	20:18			0
Total DCDD	0.000	0.000	100%		13:03	21:03			0
Total TriCDF	0.000	0.000	100%		16:18	23:18			0
Total TriCDD	0.000	0.000	100%		18:03	24:03			0
1368-TCDF	1.150	0.168	15%	22:02	24:18	31:18	0.769		6
1278-TCDF	1.156	0.067	6%	24:54			0.775		6
2378-TCDF	1.128	0.084	7%	25:19			0.787		6
TOTAL TCDF	1.128	0.084	7%				0.777		6
1368-TCDD	1.079	0.108	10%	23:26	25:03	32:03	0.788		6
1379-TCDD	1.037	0.205	20%	23:50			0.805		6
2378-TCDD	1.181	0.112	9%	26:04			0.791		6
TOTAL TCDD	1.181	0.112	9%				0.793		6
12378-PeCDF	1.257	0.098	8%	29:22	25:22	33:22	1.602		6
23478-PeCDF	1.233	0.121	10%	30:05			1.544		6
TOTAL PeCDF	1.245	0.109	9%				1.572		6
12378-PeCDD	1.128	0.106	9%	30:26	26:25	34:25	1.583		6
TOTAL PeCDD	1.128	0.106	9%				1.583		6
123478-HxCDF	1.142	0.077	7%	32:55	29:00	37:00	1.234		6
123678-HxCDF	1.200	0.079	7%	33:01			1.238		6
234678-HxCDF	1.046	0.114	11%	33:31			1.234		6
123789-HxCDF	0.862	0.073	8%	34:16			1.235		6
TOTAL HxCDF	1.063	0.080	8%				1.235		6
123478-HxCDD	1.083	0.083	8%	33:37	29:41	37:41	1.229		6
123678-HxCDD	1.106	0.091	8%	33:42			1.243		6
123789-HxCDD	1.073	0.081	8%	34:00			1.228		6
TOTAL HxCDD	1.087	0.079	7%				1.233		6
1234678-HpCDF	1.445	0.119	8%	35:52	31:52	39:52	1.053		6
1234789-HpCDF	1.026	0.095	9%	37:22			1.037		6
TOTAL HpCDF	1.235	0.095	8%				1.047		6
1234678-HpCDD	1.010	0.120	12%	36:53	32:52	40:52	1.060		6
TOTAL HpCDD	1.010	0.120	12%				1.060		6
OCDF	1.490	0.103	7%	40:34	36:22	44:22	0.911		6
OCDD	1.107	0.095	9%	40:23	36:22	44:22	0.900		6
Other Standards	RF	SD	%RSD	RT	RT/LO	RT/HI	Ratio1	Ratio2	N
37C1-TCDD	1.063	0.060	6%	26:04	24:03	28:03			6
13C12-PeCDF 234	1.003	0.027	3%	30:04	27:22	31:22	1.595		6
13C12-HxCDF 478	1.003	0.033	3%	32:55			0.518		6
13C12-HxCDF 234	0.920	0.040	4%	33:30			0.517		6
13C12-HxCDF 789	0.731	0.040	5%	34:15			0.519		6
13C12-HxCDD 478	0.904	0.024	3%	33:36			1.284		6
13C12-HpCDF 789	0.703	0.065	9%	37:21	33:52	39:52	0.466		6

Internal Standards	RF	SD	%RSD	RT	RT/LO	RT/HI	Ratio1	Ratio2	N
13C12-2378-TCDF	1.603	0.066	4%	25:18	24:18	26:18	0.795		6
13C12-2378-TCDD	1.129	0.021	2%	26:03	24:03	28:03	0.801		6
13C12-PeCDF 123	1.116	0.031	3%	29:22	25:22	33:22	1.589		6
13C12-PeCDD 123	0.665	0.048	7%	30:25	26:25	34:25	1.602		6
13C12-HxCDF 678	1.477	0.043	3%	33:00	29:00	37:00	0.523		6
13C12-HxCDD 678	1.039	0.038	4%	33:41	32:41	34:41	1.267		6
13C12-HpCDF 678	1.050	0.046	4%	35:52	33:52	39:52	0.469		6
13C12-HpCDD 678	0.809	0.020	2%	36:52	35:52	37:52	1.071		6
13C12-OCDD	0.547	0.048	9%	40:22	38:22	42:22	0.896		6

Recovery Standards	RF	SD	%RSD	RT	RT/LO	RT/HI	Ratio1	Ratio2	N
13C12-1234-TCDD	1.000	0.000	0%	25:51			0.819		6
13C12-HxCDD 789	1.000	0.000	0%	34:00			1.275		6

\*\*\* End of Report \*\*\*

Analysis Date.....: 06/15/2002  
Instrument.....: P

Method.....: C2NF  
GC Column...: DB-225

Analytes	RF	SD	%RSD	RT	RT/LO	RT/HI	Ratio1	Ratio2	N
2378-TCDF	1.120	0.033	3%	22:41	15:41	26:41	0.778		6
TOTAL TCDF	1.120	0.033	3%				0.778		6
2378-TCDD	1.131	0.028	2%	21:18	17:17	25:17	0.780		6
TOTAL TCDD	1.131	0.028	2%				0.780		6
Other Standards	RF	SD	%RSD	RT	RT/LO	RT/HI	Ratio1	Ratio2	N
37Cl-TCDD	1.037	0.029	3%	21:18	19:17	23:17			6
Internal Standards	RF	SD	%RSD	RT	RT/LO	RT/HI	Ratio1	Ratio2	N
13C12-2378-TCDF	1.519	0.052	3%	22:41	21:41	23:41	0.802		6
13C12-2378-TCDD	1.075	0.057	5%	21:17	19:17	23:17	0.788		6
Recovery Standards	RF	SD	%RSD	RT	RT/LO	RT/HI	Ratio1	Ratio2	N
13C12-1234-TCDD	1.000	0.000	0%	21:33			0.813		6

\*\*\* End of Report \*\*\*

Date: 09/04/2002

TRIANGLE LABORATORIES, INC.  
Continuing Calibration for U021315

Analysis Date....: 09/04/2002  
Operator.....: JMM  
Init Calibration.: UF57092  
ICal Date.....: 07/09/2002

Method.....: MIT3  
Instrument...: U  
Std. Conc....: 10.00

Analyte Summary Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
Total MCDF	0.000		6:04			0.000	0.000	100.0%
			20:04					
Total MCDD	0.000		6:45			0.000	0.000	100.0%
			20:45					
Total DCDF	0.000		13:04			0.000	0.000	100.0%
			21:04					
Total DCDD	0.000		13:45			0.000	0.000	100.0%
			21:45					
Total TriCDF	0.000		17:04			0.000	0.000	100.0%
			24:04					
Total TriCDD	0.000		18:45			0.000	0.000	100.0%
			24:45					
1368-TCDF	1.155	0.74	22:47	22:57	0.8803	1.150	0.005	0.4%
			27:58					
1278-TCDF	1.258	0.75		25:40	0.9847	1.156	0.102	8.8%
2378-TCDF	1.142	0.77		26:05	1.0004	1.128	0.014	1.2%
TOTAL TCDF	1.142	0.75				1.128	0.014	1.2%
1368-TCDD	1.064	0.80	24:05	24:16	0.9073	1.079	-0.015	-1.4%
			27:56					
1379-TCDD	0.920	0.79		24:39	0.9215	1.037	-0.117	-11.3%
2378-TCDD	1.126	0.83		26:46	1.0007	1.181	-0.055	-4.6%
TOTAL TCDD	1.126	0.81				1.181	-0.055	-4.6%
12378-PeCDF	1.183	1.59	27:50	30:00	1.0007	1.257	-0.074	-5.9%
			31:50					
23478-PeCDF	1.076	1.59		30:40	1.0230	1.233	-0.157	-12.8%
TOTAL PeCDF	1.129	1.59				1.245	-0.116	-9.3%
12378-PeCDD	1.074	1.56	29:03	31:01	1.0013	1.128	-0.054	-4.8%
			31:40					
TOTAL PeCDD	1.074	1.56				1.128	-0.054	-4.8%
123478-HxCDF	1.183	1.24	32:20	33:27	0.9976	1.142	0.041	3.6%
			35:02					
123678-HxCDF	1.208	1.25		33:33	1.0006	1.200	0.008	0.7%
234678-HxCDF	1.077	1.22		34:02	1.0149	1.046	0.031	2.9%



Date: 09/04/2002

TRIANGLE LABORATORIES, INC.  
Continuing Calibration for U021315

123789-HxCDF	0.896	1.23		34:48	1.0379	0.862	0.034	3.9%
TOTAL HxCDF	1.091	1.24				1.063	0.028	2.6%
123478-HxCDD	1.014	1.25	32:48	34:08	0.9974	1.083	-0.069	-6.3%
			34:40					
123678-HxCDD	1.084	1.26		34:13	1.0000	1.106	-0.022	-1.9%
123789-HxCDD	1.071	1.26		34:32	1.0091	1.073	-0.002	-0.2%
TOTAL HxCDD	1.056	1.25				1.087	-0.031	-2.8%
1234678-HpCDF	1.244	1.02	36:17	36:26	1.0000	1.445	-0.201	-13.9%
			38:09					
1234789-HpCDF	0.922	1.02		37:59	1.0425	1.026	-0.104	-10.1%
TOTAL HpCDF	1.083	1.02				1.235	-0.152	-12.3%
1234678-HpCDD	0.958	1.00	36:33	37:29	1.0003	1.010	-0.052	-5.2%
			37:39					
TOTAL HpCDD	0.958	1.00				1.010	-0.052	-5.2%
OCDF	1.335	0.92	37:05	41:17	1.0049	1.490	-0.155	-10.4%
			45:05					
OCDD	1.062	0.90	37:05	41:05	1.0000	1.107	-0.045	-4.1%
			45:05					

Other Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
37C1-TCDD	1.031		24:45	26:46	1.0007	1.063	-0.032	-3.0%
			28:45					
13C12-PeCDF 234	0.963	1.59	25:59	30:40	1.0230	1.003	-0.040	-4.0%
			33:59					
13C12-HxCDF 478	1.005	0.53	29:32	33:27	0.9976	1.003	0.002	0.2%
			37:32					
13C12-HxCDF 234	0.945	0.53		34:01	1.0146	0.920	0.025	2.7%
13C12-HxCDF 789	0.738	0.53		34:47	1.0373	0.731	0.007	1.0%
13C12-HxCDD 478	0.919	1.25	33:13	34:08	0.9974	0.904	0.015	1.7%
			35:13					
13C12-HpCDF 789	0.756	0.47	34:26	37:58	1.0423	0.703	0.053	7.6%
			40:26					

Internal Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
13C12-2378-TCDF	1.486	0.81	25:04	26:04	1.0000	1.603	-0.117	-7.3%
			27:04					
13C12-2378-TCDD	1.099	0.81	24:45	26:45	1.0000	1.129	-0.030	-2.7%
			28:45					

Date: 09/04/2002

TRIANGLE LABORATORIES, INC.  
Continuing Calibration for U021315

13C12-PeCDF 123	1.085	1.57	25:59	29:59	1.0000	1.116	-0.031	-2.8%
			33:59					
13C12-PeCDD 123	0.664	1.62	26:59	30:59	1.0000	0.665	-0.001	-0.1%
			34:59					
13C12-HxCDF 678	1.454	0.53	29:32	33:32	1.0000	1.477	-0.023	-1.6%
			37:32					
13C12-HxCDD 678	0.962	1.24	33:13	34:13	1.0000	1.039	-0.077	-7.4%
			35:13					
13C12-HpCDF 678	0.805	0.48	34:26	36:26	1.0000	1.050	-0.245	-23.3%
			40:26					
13C12-HpCDD 678	0.665	1.07	36:28	37:28	1.0000	0.809	-0.144	-17.8%
			38:28					
13C12-OCDD	0.439	0.93	40:55	41:05	1.0000	0.547	-0.108	-19.7%
			41:15					

Recovery Standard Summary

Name	RF	Ratio	RT	RT	Rel. RT	ICal RF	Delta RF	%D
		1&2	Lo/High					
13C12-1234-TCDD	1.000	0.82	24:45	26:35	0.9936	1.000	0.000	0.0%
			28:45					
13C12-HxCDD 789	1.000	1.27	33:13	34:31	1.0088	1.000	0.000	0.0%
			35:13					

QC Front End Check: 2.1500 TetraRS/HexaRS: 1.383

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 22:57 0.74 1,573.11 669.14 903.97 0.880 1368-TCDF AN  
25:40 0.75 1,713.13 734.61 978.52 0.985 1278-TCDF AN  
26:05 0.77 1,555.11 675.63 879.48 1.000 2378-TCDF AN

304-306 3 Peaks

13C12-TCDF 0.65-0.89  
316-318 26:04 0.81 13,620.11 6,091.69 7,528.42 1.000 13C12-2378-TCDF ISO  
316-318 1 Peak

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

TCDD 0.65-0.89  
320-322 24:16 0.80 1,071.77 475.87 595.90 0.907 1368-TCDD AN  
24:39 0.79 926.04 409.20 516.84 0.922 1379-TCDD AN  
26:46 0.83 1,134.02 515.31 618.71 1.001 2378-TCDD AN

320 3 Peaks

37C1-TCDD  
328 26:46 1,038.20 1,038.20 1.001 37C1-TCDD CLS  
328-330 1 Peak

13C12-TCDD 0.65-0.89  
332-334 26:35 0.82 9,165.61 4,125.90 5,039.71 0.994 13C12-1234-TCDD RS1  
26:45 0.81 10,069.61 4,505.17 5,564.44 1.000 13C12-2378-TCDD IS1  
332-334 2 Peaks

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

PeCDF 1.32-1.78  
340-342 30:00 1.59 5,880.48 3,614.37 2,266.11 1.001 12378-PeCDF AN  
30:40 1.59 5,347.47 3,286.49 2,060.98 1.023 23478-PeCDF AN  
340-342 2 Peaks

13C12-PeCDF 1.32-1.78  
352-354 29:59 1.57 9,942.68 6,078.80 3,863.88 1.000 13C12-PeCDF 123 IS2  
30:40 1.59 9,574.97 5,873.60 3,701.37 1.023 13C12-PeCDF 234 SUR1  
352-354 2 Peaks

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

PeCDD 1.32-1.78  
356-358 31:01 1.56 3,269.38 1,994.67 1,274.71 1.001 12378-PeCDD AN  
356-358 1 Peak

13C12-PeCDD 1.32-1.78  
368-370 30:59 1.62 6,089.24 3,769.52 2,319.72 1.000 13C12-PeCDD 123 IS3  
368-370 1 Peak

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

Compound/  
M\_2.... ..RT. OK Ratio Total.Area... Area.Peak.1.. Area.Peak.2.. Rel.RT Compound.Name.. ID..

HxCDF		1.05-1.43						
374-376	33:27	1.24	4,587.86	2,540.26	2,047.60	0.998	123478-HxCDF	AN
	33:33	1.25	4,684.99	2,605.95	2,079.04	1.001	123678-HxCDF	AN
	34:02	1.22	4,173.69	2,294.69	1,879.00	1.015	234678-HxCDF	AN
	34:48	1.23	3,472.94	1,918.07	1,554.87	1.038	123789-HxCDF	AN
374-376	4 Peaks							

13C12-HxCDF		0.43-0.59						
384-386	33:27	0.53	7,795.66	2,687.16	5,108.50	0.998	13C12-HxCDF 478	SUR2
	33:32	0.53	7,753.71	2,688.16	5,065.55	1.000	13C12-HxCDF 678	IS4
	34:01	0.53	7,325.88	2,531.72	4,794.16	1.015	13C12-HxCDF 234	ALT2
	34:47	0.53	5,723.44	1,989.03	3,734.41	1.037	13C12-HxCDF 789	ALT1
384-386	4 Peaks							

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

HxCDD		1.05-1.43						
390-392	34:08	1.25	2,602.13	1,443.22	1,158.91	0.997	123478-HxCDD	AN
	34:13	1.26	2,782.13	1,548.63	1,233.50	1.000	123678-HxCDD	AN
	34:32	1.26	2,746.75	1,532.05	1,214.70	1.009	123789-HxCDD	AN
390-392	3 Peaks							

13C12-HxCDD		1.05-1.43						
402-404	34:08	1.25	4,715.68	2,620.90	2,094.78	0.997	13C12-HxCDD 478	SUR3
	34:13	1.24	5,130.98	2,840.10	2,290.88	1.000	13C12-HxCDD 678	IS5
	34:31	1.27	5,332.81	2,982.99	2,349.82	1.009	13C12-HxCDD 789	RS2
402-404	3 Peaks							

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

HpCDF		0.88-1.20						
408-410	36:26	1.02	2,669.03	1,346.13	1,322.90	1.000	1234678-HpCDF	AN
	37:59	1.02	1,978.73	1,001.09	977.64	1.043	1234789-HpCDF	AN
408-410	2 Peaks							

13C12-HpCDF		0.37-0.51						
418-420	36:26	0.48	4,292.28	1,386.48	2,905.80	1.000	13C12-HpCDF 678	IS6
	37:58	0.47	3,245.82	1,035.38	2,210.44	1.042	13C12-HpCDF 789	SUR4
418-420	2 Peaks							

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

HpCDD		0.88-1.20						
424-426	37:29	1.00	1,699.58	849.77	849.81	1.000	1234678-HpCDD	AN
424-426	1 Peak							

13C12-HpCDD		0.88-1.20						
436-438	37:28	1.07	3,548.45	1,830.97	1,717.48	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	41:17		0.92	3,126.17	1,497.72	1,628.45	1.005	OCDF	AN
442-444			1 Peak						
OCDD			0.76-1.02						
458-460	41:05		0.90	2,486.34	1,181.12	1,305.22	1.000	OCDD	AN
458-460			1 Peak						
13C12-OCDD			0.76-1.02						
470-472	41:05		0.93	4,683.52	2,263.08	2,420.44	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: 09/04/2002

TRIANGLE LABORATORIES, INC.  
Continuing Calibration for U021317

Analysis Date.....: 09/04/2002

Method.....: MIT3

Operator.....: JMM

Instrument...: U

Init Calibration.: UF57092

Std.Conc.....: 10.00

ICal Date.....: 07/09/2002

Analyte Summary

Name	RF	Ratio 1&2	RT		Rel. RT	ICal		Delta	
			Lo/High	RT		RF	RF	%D	
Total MCDF	0.000		6:06			0.000	0.000	100.0%	
			20:06						
Total MCDD	0.000		6:48			0.000	0.000	100.0%	
			20:48						
Total DCDF	0.000		13:06			0.000	0.000	100.0%	
			21:06						
Total DCDD	0.000		13:48			0.000	0.000	100.0%	
			21:48						
Total TriCDF	0.000		17:06			0.000	0.000	100.0%	
			24:06						
Total TriCDD	0.000		18:48			0.000	0.000	100.0%	
			24:48						
1368-TCDF	1.230	0.74	22:49	22:59	0.8805	1.150	0.080	7.0%	
			27:59						
1278-TCDF	1.167	0.75		25:42	0.9847	1.156	0.011	1.0%	
2378-TCDF	1.116	0.78		26:07	1.0008	1.128	-0.012	-1.1%	
TOTAL TCDF	1.116	0.76				1.128	-0.012	-1.1%	
1368-TCDD	1.177	0.76	24:08	24:18	0.9067	1.079	0.098	9.1%	
			27:57						
1379-TCDD	0.988	0.78		24:42	0.9216	1.037	-0.049	-4.7%	
2378-TCDD	1.304	0.78		26:50	1.0011	1.181	0.123	10.4%	
TOTAL TCDD	1.304	0.77				1.181	0.123	10.4%	
12378-PeCDF	1.160	1.59	27:52	30:01	1.0000	1.257	-0.097	-7.7%	
			31:51						
23478-PeCDF	1.009	1.52		30:43	1.0233	1.233	-0.224	-18.1%	
TOTAL PeCDF	1.085	1.56				1.245	-0.160	-12.9%	
12378-PeCDD	1.174	1.67	29:06	31:03	1.0006	1.128	0.046	4.1%	
			31:41						
TOTAL PeCDD	1.174	1.67				1.128	0.046	4.1%	
123478-HxCDF	1.223	1.27	32:21	33:29	0.9973	1.142	0.081	7.1%	
			35:04						
123678-HxCDF	1.275	1.25		33:35	1.0003	1.200	0.075	6.3%	
234678-HxCDF	1.126	1.26		34:03	1.0143	1.046	0.080	7.6%	

123789-HxCDF	0.961	1.27		34:50	1.0375	0.862	0.099	11.5%
TOTAL HxCDF	1.146	1.26				1.063	0.083	7.8%
123478-HxCDD	1.097	1.25	32:49	34:10	0.9982	1.083	0.014	1.3%
			34:41					
123678-HxCDD	1.095	1.26		34:15	1.0006	1.106	-0.011	-1.0%
123789-HxCDD	1.156	1.27		34:34	1.0099	1.073	0.083	7.7%
TOTAL HxCDD	1.116	1.26				1.087	0.029	2.7%
1234678-HpCDF	1.487	1.06	36:19	36:29	1.0000	1.445	0.042	2.9%
			38:11					
1234789-HpCDF	1.071	1.07		38:01	1.0422	1.026	0.045	4.4%
TOTAL HpCDF	1.279	1.06				1.235	0.044	3.6%
1234678-HpCDD	1.009	1.04	36:36	37:31	1.0005	1.010	-0.001	-0.1%
			37:41					
TOTAL HpCDD	1.009	1.04				1.010	-0.001	-0.1%
OCDF	1.365	0.93	37:07	41:19	1.0049	1.490	-0.125	-8.4%
			45:07					
OCDD	0.992	0.86	37:07	41:08	1.0002	1.107	-0.115	-10.4%
			45:07					

Other Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
37C1-TCDD	1.163		24:48	26:49	1.0007	1.063	0.100	9.4%
			28:48					
13C12-PeCDF 234	0.896	1.57	26:01	30:41	1.0220	1.003	-0.107	-10.7%
			34:01					
13C12-HxCDF 478	1.004	0.51	29:34	33:28	0.9970	1.003	0.001	0.1%
			37:34					
13C12-HxCDF 234	0.952	0.52		34:03	1.0143	0.920	0.032	3.5%
13C12-HxCDF 789	0.767	0.51		34:49	1.0372	0.731	0.036	4.9%
13C12-HxCDD 478	0.933	1.41	33:14	34:09	0.9977	0.904	0.029	3.2%
			35:14					
13C12-HpCDF 789	0.710	0.46	34:29	38:00	1.0417	0.703	0.007	1.0%
			40:29					

Internal Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
13C12-2378-TCDF	1.672	0.81	25:06	26:06	1.0000	1.603	0.069	4.3%
			27:06					
13C12-2378-TCDD	1.174	0.81	24:48	26:48	1.0000	1.129	0.045	4.0%
			28:48					

Date: 09/04/2002

TRIANGLE LABORATORIES, INC.  
Continuing Calibration for U021317

13C12-PeCDF 123	0.965	1.58	26:01 34:01	30:01	1.0000	1.116	-0.151	-13.5%
13C12-PeCDD 123	0.520	1.58	27:02 35:02	31:02	1.0000	0.665	-0.145	-21.8%
13C12-HxCDF 678	1.548	0.51	29:34 37:34	33:34	1.0000	1.477	0.071	4.8%
13C12-HxCDD 678	0.937	1.20	33:14 35:14	34:14	1.0000	1.039	-0.102	-9.8%
13C12-HpCDF 678	0.936	0.48	34:29 40:29	36:29	1.0000	1.050	-0.114	-10.8%
13C12-HpCDD 678	0.674	1.09	36:30 38:30	37:30	1.0000	0.809	-0.135	-16.7%
13C12-OCDD	0.420	0.89	40:57 41:17	41:07	1.0000	0.547	-0.127	-23.3%

Recovery Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
13C12-1234-TCDD	1.000	0.83	24:48 28:48	26:37	0.9933	1.000	0.000	0.0%
13C12-HxCDD 789	1.000	1.29	33:14 35:14	34:33	1.0093	1.000	0.000	0.0%

QC Front End Check: 2.7368 TetraRS/HexaRS: 1.576



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 22:59 0.74 2,850.97 1,212.60 1,638.37 0.881 1368-TCDF AN  
25:42 0.75 2,705.57 1,158.87 1,546.70 0.985 1278-TCDF AN  
26:07 0.78 2,585.83 1,133.24 1,452.59 1.001 2378-TCDF AN  
304-306 3 Peaks

13C12-TCDF 0.65-0.89  
316-318 26:06 0.81 23,174.70 10,337.50 12,837.20 1.000 13C12-2378-TCDF ISO  
316-318 1 Peak

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

TCDD 0.65-0.89  
320-322 24:18 0.76 1,915.99 829.38 1,086.61 0.907 1368-TCDD AN  
24:42 0.78 1,608.31 705.03 903.28 0.922 1379-TCDD AN  
26:50 0.78 2,122.35 927.88 1,194.47 1.001 2378-TCDD AN  
320 3 Peaks

37C1-TCDD  
328 26:49 1,892.01 1,892.01 1.001 37C1-TCDD CLS  
328-330 1 Peak

13C12-TCDD 0.65-0.89  
332-334 26:37 0.83 13,863.18 6,296.33 7,566.85 0.993 13C12-1234-TCDD RS1  
26:48 0.81 16,272.23 7,297.22 8,975.01 1.000 13C12-2378-TCDD IS1  
332-334 2 Peaks

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

PeCDF 1.32-1.78  
340-342 30:01 1.59 7,761.30 4,762.22 2,999.08 1.000 12378-PeCDF AN  
30:43 1.52 6,753.72 4,073.98 2,679.74 1.023 23478-PeCDF AN  
340-342 2 Peaks

13C12-PeCDF 1.32-1.78  
352-354 30:01 1.58 13,381.75 8,187.16 5,194.59 1.000 13C12-PeCDF 123 IS2  
30:41 1.57 11,989.59 7,321.55 4,668.04 1.022 13C12-PeCDF 234 SUR1  
352-354 2 Peaks

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

PeCDD 1.32-1.78  
356-358 31:03 1.67 4,230.43 2,643.59 1,586.84 1.001 12378-PeCDD AN  
356-358 1 Peak

13C12-PeCDD 1.32-1.78  
368-370 31:02 1.58 7,204.70 4,408.04 2,796.66 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 33:29 1.27 6,704.29 3,745.51 2,958.78 0.997 123478-HxCDF AN  
33:35 1.25 6,990.94 3,888.27 3,102.67 1.000 123678-HxCDF AN  
34:03 1.26 6,169.99 3,434.53 2,735.46 1.014 234678-HxCDF AN  
34:50 1.27 5,266.85 2,941.61 2,325.24 1.038 123789-HxCDF AN  
374-376 4 Peaks

13C12-HxCDF 0.43-0.59  
384-386 33:28 0.51 11,006.20 3,733.45 7,272.75 0.997 13C12-HxCDF 478 SUR2  
33:34 0.51 10,963.72 3,695.58 7,268.14 1.000 13C12-HxCDF 678 IS4  
34:03 0.52 10,438.71 3,557.85 6,880.86 1.014 13C12-HxCDF 234 ALT2  
34:49 0.51 8,405.97 2,847.63 5,558.34 1.037 13C12-HxCDF 789 ALT1  
384-386 4 Peaks

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

HxCDD 1.05-1.43  
390-392 34:10 1.25 3,639.81 2,020.32 1,619.49 0.998 123478-HxCDD AN  
34:15 1.26 3,630.66 2,025.64 1,605.02 1.001 123678-HxCDD AN  
34:34 1.27 3,834.05 2,148.04 1,686.01 1.010 123789-HxCDD AN  
390-392 3 Peaks

13C12-HxCDD 1.05-1.43  
402-404 34:09 1.41 6,191.85 3,617.67 2,574.18 0.998 13C12-HxCDD 478 SUR3  
34:14 1.20 6,634.21 3,612.65 3,021.56 1.000 13C12-HxCDD 678 IS5  
34:33 1.29 7,081.83 3,994.84 3,086.99 1.009 13C12-HxCDD 789 RS2  
402-404 3 Peaks

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

HpCDF 0.88-1.20  
408-410 36:29 1.06 4,931.04 2,532.53 2,398.51 1.000 1234678-HpCDF AN  
38:01 1.07 3,551.08 1,833.33 1,717.75 1.042 1234789-HpCDF AN  
408-410 2 Peaks

13C12-HpCDF 0.37-0.51  
418-420 36:29 0.48 6,632.07 2,140.80 4,491.27 1.000 13C12-HpCDF 678 IS6  
38:00 0.46 4,710.02 1,487.61 3,222.41 1.042 13C12-HpCDF 789 SUR4  
418-420 2 Peaks

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

HpCDD 0.88-1.20  
424-426 37:31 1.04 2,406.27 1,228.67 1,177.60 1.001 1234678-HpCDD AN  
424-426 1 Peak

13C12-HpCDD 0.88-1.20  
436-438 37:30 1.09 4,771.12 2,487.76 2,283.36 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	41:19		0.93	4,058.85	1,953.51	2,105.34	1.005	OCDF	AN
442-444			1 Peak						
OCDD			0.76-1.02						
458-460	41:08		0.86	2,948.34	1,366.25	1,582.09	1.000	OCDD	AN
458-460			1 Peak						
13C12-OCDD			0.76-1.02						
470-472	41:07		0.89	5,945.71	2,801.97	3,143.74	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: 09/04/2002

TRIANGLE LABORATORIES, INC.

Continuing Calibration for P023216

Analysis Date: 09/04/2002

Method: C2NF

Operator: JWJ

Instrument: F

Init Calibration: PF56152

Std. Conc.: 10.00

ICal Date: 06/15/2002

Analysis Time: 20:42

GC Column: DB-225

Analyte Summary

Name	RF	Ratio 1&2	RT		Rel. RT	ICal		Delta RF	%D
			Lo/High			RF	RF		
2378-TCDF	1.013	0.79	17:54 24:54	22:37	1.0009	1.120	-0.107	-9.5%	
TOTAL TCDF	1.013	0.79				1.120	-0.107	-9.5%	
2378-TCDD	1.058	0.82	18:45 24:10	21:13	1.0000	1.131	-0.073	-6.4%	
TOTAL TCDD	1.058	0.82				1.131	-0.073	-6.4%	

Other Standard Summary

Name	RF	Ratio 1&2	RT		Rel. RT	ICal		Delta RF	%D
			Lo/High			RF	RF		
37Cl-TCDD	0.964		19:13 23:13	21:13	1.0000	1.037	-0.073	-7.1%	

Internal Standard Summary

Name	RF	Ratio 1&2	RT		Rel. RT	ICal		Delta RF	%D
			Lo/High			RF	RF		
13C12-2378-TCDF	1.392	0.77	21:36 23:36	22:36	1.0000	1.519	-0.127	-8.4%	
13C12-2378-TCDD	0.997	0.80	19:13 23:13	21:13	1.0000	1.075	-0.078	-7.3%	

Recovery Standard Summary

Name	RF	Ratio 1&2	RT		Rel. RT	ICal		Delta RF	%D
			Lo/High			RF	RF		
13C12-1234-TCDD	1.000	0.81		21:28	1.0118	1.000	0.000	0.0%	

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 22:37 0.79 97.62 43.08 54.54 1.001 2378-TCDF AN  
304-306 1 Peak

13C12-TCDF 0.65-0.89  
316-318 22:36 0.77 963.40 420.18 543.22 1.000 13C12-2378-TCDF ISO  
316-318 1 Peak

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

TCDD 0.65-0.89  
320-322 21:13 0.82 73.01 32.81 40.20 1.000 2378-TCDD AN  
320 1 Peak

37Cl-TCDD  
328 21:13 66.46 66.46 1.000 37Cl-TCDD SUR1  
328-330 1 Peak

13C12-TCDD 0.65-0.89  
332-334 21:13 0.80 689.77 305.55 384.22 1.000 13C12-2378-TCDD IS1  
21:28 0.81 692.10 309.75 382.35 1.012 13C12-1234-TCDD RS1  
332 2 Peaks

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 \*\*\*