TRIANGLE LAB DATA

Analytical Results
Dioxin/Furan

Crystal Springs, Mississippi

BOOK VII

July 29, 2002 Report
Project # 57930

August 1, 2002 Report
Project # 57930r1

GeoEnvironmental Associates, LLC | MARTIN&SLAGLE

TRIANGLE LAB
Sample Analysis - Dioxin/Furan
July 29, 2002
Crystal Springs, MS
Book VII
Sample Data

Project # 57930

Dates of Samples/ COC	Sample #	Pages	Depth
Sample Data (continued from Book VI)			
	DF-DP159	292-320	0-0.5'
	DF-DP159 (tetra only)	321-330	0-0.5'
	DF-DP159	331-360	0.5-1'
	DF-DP159	361-384	1-2'
	DF-DP157	385-412	0-0.5'
Bk VII, rpt 57930r1	DF-DP157	67-92	0.5-1
	DF-DP157	413-436	1-2'
	DF-DP177	437-465	0-0.5'
	DF-DP177 (tetra only)	466-473	0-0.5'
	DF-DP177	474-501	0.5-1'
	DF-DP177	502-526	1-2'
	DF-DP177 (tetra only)	527-535	1-2'
	DF-DP177	536-554	1-2' MS
	DF-DP177	555-572	1-2' MSD
	Calibration Data	**573-594**	

TLI Project: **57930** 1613, Revision B PCDD/PCDF Analysis (c)
Client Sample: **DF-DP159-0-0,5'** Analysis File: **T023769**

Client Project:	Kuhlman Electric				
Sample Matrix:	SOLID	Date Received:	07/20/2002	Spike File:	SP161B2S
TLI ID:	331-18-7	Date Extracted:	07/23/2002	ICal:	TF5612B
		Date Analyzed:	07/26/2002	ConCal:	TB23758
Sample Size:	12.400 g	Dilution Factor:	n/a	% Moisture:	19.1
Dry Weight:	10.032 g	Blank File:	T023762	% Lipid:	n/a
GC Column:	DB-5	Analyst:	VSC	% Solids:	80.9

Analytes	Conc. (pg/g)	DL	Ratio	RT	RRT	Flags
2,3,7,8-TCDD	2.8		0.85	27:28	1.001	
1,2,3,7,8-PeCDD	8.4		1.41	31:36	1.001	
1,2,3,4,7,8-HxCDD	5.3		1.12	34:41	1.000	
1,2,3,6,7,8-HxCDD	40.9		1.26	34:47	1.000	
1,2,3,7,8,9-HxCDD	28.3		1.23	35:06	1.010	
1,2,3,4,6,7,8-HpCDD	327		1.02	38:07	1.000	
1,2,3,4,6,7,8,9-OCDD	5580		0.84	41:54	1.000	E
2,3,7,8-TCDF	9.6		0.79	26:45	1.001	
1,2,3,7,8-PeCDF	3.4		1.56	30:36	1.001	J
2,3,4,7,8-PeCDF	10.7		1.45	31:16	1.001	
1,2,3,4,7,8-HxCDF	43.0		1.28	33:59	1.000	
1,2,3,6,7,8-HxCDF	24.7		1.32	34:05	1.000	
2,3,4,6,7,8-HxCDF	24.1		1.27	34:35	1.000	
1,2,3,7,8,9-HxCDF	ND	0.2				
1,2,3,4,6,7,8-HpCDF	1560		1.07	37:02	1.000	
1,2,3,4,7,8,9-HpCDF	16.3		1.16	38:38	1.000	
1,2,3,4,6,7,8,9-OCDF	514		0.87	42:07	1.005	

Totals	Conc. (pg/g)	Number	DL	Flags
Total TCDD	17.4	9		
Total PeCDD	82.3	6		
Total HxCDD	303	8		
Total HpCDD	635	2		
Total TCDF	175	20		
Total PeCDF	644	17		
Total HxCDF	966	13		
Total HpCDF	2570	3		

161B_PSR v2.04, LARS 6.25.05

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Printed: 15:37 07/26/2002

TLI Project: **57930** 1613, Revision B PCDD/PCDF Analysis (c)
Client Sample: **DF-DP159-0-0,5′** Analysis File: **T023769**

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	RRT	Flags
$^{13}C_{12}$-2,3,7,8-TCDD	176	88.3	25%-164%	0.80	27:27	1.008	—
$^{13}C_{12}$-1,2,3,7,8-PeCDD	146	73.3	25%-181%	1.46	31:35	1.160	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	192	96.3	32%-141%	1.21	34:40	0.988	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	189	94.9	28%-130%	1.21	34:46	0.991	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	162	81.3	23%-140%	1.04	38:06	1.086	—
$^{13}C_{12}$-1,2,3,4,6,7,8,9-OCDD	206	51.6	17%-157%	0.87	41:54	1.194	—
$^{13}C_{12}$-2,3,7,8-TCDF	220	110	24%-169%	0.75	26:44	0.982	—
$^{13}C_{12}$-1,2,3,7,8-PeCDF	159	79.9	24%-185%	1.46	30:35	1.123	—
$^{13}C_{12}$-2,3,4,7,8-PeCDF	150	75.3	21%-178%	1.49	31:15	1.147	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	227	114	26%-152%	0.51	33:58	0.968	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	221	111	26%-123%	0.52	34:04	0.971	—
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	218	109	28%-136%	0.52	34:34	0.985	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	218	109	29%-147%	0.51	35:22	1.008	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	202	102	28%-143%	0.45	37:02	1.056	—
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	164	82.1	26%-138%	0.45	38:38	1.101	—

Cleanup Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	RRT	Flags
$^{37}Cl_4$-2,3,7,8-TCDD	18.8	94.1	35%-197%	27:28	1.009	—

Recovery Standards	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.80	27:14	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.23	35:05	—

Data Reviewer: KJ 07/26/2002

161B_PSR v2.04, LARS 6.25.05

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TLI Project: **57930**
Client Sample: **DF-DP159-0-0,5′**

Toxicity Equivalents Report
Analysis File: **T023769**

Client Project:	**Kuhlman Electric**				
Sample Matrix:	**SOLID**	Date Received:	**07/20/02**	Spike File:	**SP161B2S**
TLI ID:	**331-18-7**	Date Extracted:	**07/23/02**	ICal:	**TF5612B**
		Date Analyzed:	**07/26/02**	ConCal:	**TB23758**
Sample Size:	**12.400 g**	Dilution Factor:	**1**	% Moisture:	**19.1**
Dry Weight:	**10.032 g**	Blank File:	**T023762**	% Lipid:	**n/a**
GC Column:	**DB-5**	Analyst:	**VSC**	% Solids:	**80.9**

Analytes	Conc. (pg/g)		TEF		Equivalent
2,3,7,8-TCDD	2.8	x	1.	=	2.8
1,2,3,7,8-PeCDD	8.4	x	0.5	=	4.2
1,2,3,4,7,8-HxCDD	5.3	x	0.1	=	0.53
1,2,3,6,7,8-HxCDD	40.9	x	0.1	=	4.09
1,2,3,7,8,9-HxCDD	28.3	x	0.1	=	2.83
1,2,3,4,6,7,8-HpCDD	327	x	0.01	=	3.27
1,2,3,4,6,7,8,9-OCDD	5580	x	0.001	=	5.580
TOTAL PCDD					23.3
2,3,7,8-TCDF	7.9	x	0.1	=	0.79
1,2,3,7,8-PeCDF	3.4	x	0.05	=	0.17
2,3,4,7,8-PeCDF	10.7	x	0.5	=	5.35
1,2,3,4,7,8-HxCDF	43.0	x	0.1	=	4.30
1,2,3,6,7,8-HxCDF	24.7	x	0.1	=	2.47
2,3,4,6,7,8-HxCDF	24.1	x	0.1	=	2.41
1,2,3,7,8,9-HxCDF	{0.2}	x	0.1	=	0.02
1,2,3,4,6,7,8-HpCDF	1560	x	0.01	=	15.60
1,2,3,4,7,8,9-HpCDF	16.3	x	0.01	=	0.163
1,2,3,4,6,7,8,9-OCDF	514	x	0.001	=	0.514
TOTAL PCDF					31.79

Total EPA TEFs, 1989a: 55.1 pg/g

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

GRY_TEP v1.08, MILES 4.22.16

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Initial ....Date...

Data Review By: KW 7/26/02

Calculated Noise Height: 0.08

Page No. 1 Listing of T023769B.dbf
07/26/2002 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						0.880-1.070			
304-306		DC	NL				Height	0.30	0.19	0.11			
	D	D	WL	23:33			0.82	39.70			0.881		
				24:02			0.78	8.10	3.56	4.54	0.899		J
				24:10			0.72	18.64	7.79	10.85	0.904		
				24:24			0.82	24.58	11.11	13.47	0.913		
				24:38			0.80	20.38	9.04	11.34	0.921		
				24:46			0.81	25.37	11.35	14.02	0.926		
				25:05			0.81	24.84	11.13	13.71	0.938		
				25:13			0.87	20.89	9.73	11.16	0.943		
				25:27			0.86	42.42	19.62	22.80	0.952		
				25:47			0.81	51.89	23.26	28.63	0.964		
				25:59			0.85	17.10	7.85	9.25	0.972		
				26:07			0.81	63.22	28.30	34.92	0.977		
				26:18			0.85	91.41	41.94	49.47	0.984		
				26:28			0.82	72.26	32.59	39.67	0.990		
	A			26:40			0.79	25.20	11.10	14.10	0.998		
	M			26:45			0.79	85.80	38.00	47.80	1.001	2378-TCDF	AN
				27:10			0.84	51.27	23.45	27.82	1.016		
				27:23			0.89	28.44	13.39	15.05	1.024		
				27:35			0.85	92.25	42.28	49.97	1.032		
				27:57			0.82	788.42	354.75	433.67	1.046		
			X	28:34			0.65	5.32	2.10	3.22	1.069		J
		DC	WH	28:41			0.81	6.81			1.073		
		DC	WH	28:55	RO		0.98	3.82			1.082		
304-306			20	Peaks				1,557.80					
13C12-TCDF				0.65-0.89						0.944-1.131			
316-318		DC	NL				Height	0.24	0.11	0.13			
				25:43	RO		0.95	1.91	0.93	0.98	0.962		
				26:00			0.71	3.05	1.27	1.78	0.973		
				26:18			0.72	12.78	5.37	7.41	0.984		
				26:44			0.75	1,677.16	717.86	959.30	1.000	13C12-2378-TCDF	ISO
							Height	439.03	187.64	251.39			
				27:02			0.81	10.57	4.72	5.85	1.011		
316-318			5	Peaks				1,705.47					

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

TCDD				0.65-0.89						0.905-1.042			
320-322		DC	NL				Height	0.15	0.08	0.07			
				24:57			0.75	5.50	2.36	3.14	0.909		J
				25:19			0.79	4.09	1.81	2.28	0.922		J
				25:37			0.83	7.64	3.46	4.18	0.933		
		DC	SN	25:47	RO		0.91	0.63			0.939		
				26:16			0.78	28.30	12.43	15.87	0.957		
	M			26:32			0.68	14.60	5.91	8.69	0.967		

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.
				26:55		0.73	8.32	3.50	4.82	0.981			
				27:11		0.70	7.94	3.28	4.66	0.990			
				27:20		0.83	13.54	6.16	7.38	0.996			
				27:28		0.85	17.11	7.87	9.24	1.001	2378-TCDD	AN	
				27:35	RO	0.90	3.14	1.49	1.65	1.005			
				27:46	RO	0.97	15.63	7.69	7.94	1.012			
				28:01	RO	1.49	11.67	6.98	4.69	1.021			
		DC	SN	28:13	RO	0.04	2.35			1.028			
				28:25	RO	0.61	4.81	1.83	2.98	1.035			Q
				28:35	RO	1.63	1.05	0.65	0.40	1.041			
		DC	WH	28:42	RO	1.63	1.05			1.046			
320-322			14	Peaks			143.34						
37Cl-TCDD										0.927-1.073			
328		DC	NL			Height	0.07	0.07					
		DC	WL	25:25			1.83			0.926			
				25:47			6.58	6.58		0.939			
				26:03			143.05	143.05		0.949			
				26:29			3.69	3.69		0.965			
				26:40			1.43	1.43		0.971			
				27:19			6.30	6.30		0.995			
				27:28			120.47	120.47		1.001	37Cl-TCDD	CLS	
				27:39			1.28	1.28		1.007			
				27:50			1,124.37	1,124.37		1.014			
				28:04			2.08	2.08		1.022			
				28:14			2.89	2.89		1.029			
				28:42			11.79	11.79		1.046			
				28:53			0.89	0.89		1.052			
328			12	Peaks			1,424.82						
13C12-TCDD						0.65-0.89				0.920-1.066			
332-334		DC	NL			Height	0.32	0.22	0.10				
				27:14		0.80	1,158.10	516.16	641.94	0.992	13C12-1234-TCDD	RS1	
				27:27		0.80	1,154.08	511.24	642.84	1.000	13C12-2378-TCDD	IS1	
						Height	305.70	133.76	171.94				
332-334			2	Peaks			2,312.18						

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

PeCDF						1.32-1.78				0.911-1.036			
340-342		DC	NL			Height	0.18	0.08	0.10				
				28:31		1.51	54.80	33.00	21.80	0.913			
				28:41		1.45	142.80	84.59	58.21	0.918			
				28:54		1.45	120.27	71.09	49.18	0.925			
				29:07		1.41	49.16	28.74	20.42	0.932			
				29:19		1.43	84.32	49.62	34.70	0.938			
				29:30	RO	1.06	14.18	7.28	6.90	0.944			
				29:46		1.48	348.38	208.04	140.34	0.953			
				29:55		1.50	950.90	570.73	380.17	0.957			
				30:06		1.47	428.97	255.48	173.49	0.963			
				30:28		1.48	999.24	596.08	403.16	0.975			
	M			30:36		1.56	20.67	12.60	8.07	1.001	12378-PeCDF	AN	J

Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
				30:46		1.38	65.30	37.92	27.38	0.985			
				30:52		1.41	51.05	29.90	21.15	0.988			
				31:10		1.33	36.19	20.66	15.53	0.997			
				31:16		1.45	61.14	36.21	24.93	1.001	23478-PeCDF	AN	
				31:27		1.36	95.75	55.12	40.63	1.006			
			X	31:35		1.39	46.85	27.21	19.64	1.011			
				31:43	RO	1.01	5.06	2.54	2.52	1.015			
				31:51	RO	1.30	71.66	40.45	31.21	1.019			
				32:05		1.48	253.92	151.65	102.27	1.027			
				32:21	RO	0.93	3.64	1.75	1.89	1.035			
		DC	WH	32:40	RO	1.19	5.26			1.045			
340-342			21 Peaks				3,904.25						
13C12-PeCDF				1.32-1.78					0.807-1.127				
352-354		DC	NL	Height			0.15	0.07	0.08				
				28:18	RO	0.40	10.32	2.96	7.36	0.906			
				29:55	RO	0.08	27.59	2.07	25.52	0.957			
				30:13	RO	0.03	45.45	1.22	44.23	0.967			
				30:18	RO	0.25	5.96	1.19	4.77	0.970			
				30:35		1.46	1,074.95	637.09	437.86	1.000	13C12-PeCDF 123	IS2	
				Height			310.78	184.96	125.82				
				30:44	RO	0.20	26.92	4.45	22.47	0.983			
				31:15		1.49	1,032.85	617.61	415.24	1.000	13C12-PeCDF 234	IS3	
				Height			331.50	198.70	132.80				
				31:35	RO	0.86	4.72	2.18	2.54	1.011			
				31:43	RO	0.81	4.08	1.82	2.26	1.015			
				31:52	RO	0.48	16.51	5.37	11.14	1.020			
				31:57	RO	0.84	5.11	2.34	2.77	1.022			
				32:12	RO	0.79	26.24	11.57	14.67	1.030			
352-354			12 Peaks				2,280.70						

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

PeCDD				1.32-1.78					0.940-1.021				
356-358		DC	NL	Height			0.18	0.10	0.08				
	M			29:51		1.42	93.60	55.00	38.60	0.945			
				30:05	RO	0.14	9.23	1.11	8.12	0.953			
				30:20		1.50	26.40	15.85	10.55	0.960			
				30:33	RO	1.28	42.89	24.06	18.83	0.967			
	M			30:41		1.42	47.70	28.00	19.70	0.972			
				30:52		1.61	24.95	15.38	9.57	0.977			
				31:07		1.56	78.86	48.02	30.84	0.985			
				31:36		1.41	31.03	18.15	12.88	1.001	12378-PeCDD	AN	
				31:44	RO	1.09	32.18	16.81	15.37	1.005			
	M			32:03	RO	1.28	20.64	11.60	9.04	1.015			
	A			32:10	RO	1.01	10.76	5.41	5.35	1.018			
		DC	WH	32:19	RO	0.62	2.16			1.023			
		DC	WH	32:26	RO	0.48	6.65			1.027			
356-358			11 Peaks				418.24						
13C12-PeCDD				1.32-1.78					0.735-1.052				
368-370		DC	NL	Height			0.15	0.09	0.06				

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.
				30:32		1.58	1.60	0.98	0.62	0.967			
				30:40		1.36	2.97	1.71	1.26	0.971			
				31:35		1.46	705.25	418.87	286.38	1.000	13C12-PeCDD 123	IS4	
						Height	222.51	131.24	91.27				
				32:13	RO	1.00	1.08	0.54	0.54	1.020			
368-370			4	Peaks			710.90						

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

HxCDF						1.05-1.43				0.929-1.007			
374-376		DC	NL			Height	0.61	0.27	0.34				
	D	D	WL	32:53		1.27	9.84			0.930			
			X	33:02		1.26	460.71	257.18	203.53	0.934			
				33:09		1.27	1,345.27	752.16	593.11	0.937			
				33:17		1.25	126.68	70.37	56.31	0.941			
				33:27		1.25	70.02	38.90	31.12	0.946			
				33:36		1.25	2,002.33	1,112.21	890.12	0.950			
				33:48		1.29	77.78	43.80	33.98	0.956			
	NM			33:55		1.24	372.00	206.00	166.00	0.999			
	AN			33:59		1.28	237.00	133.00	104.00	1.000	123478-HxCDF	AN	
				34:05		1.32	137.50	78.31	59.19	1.000	123678-HxCDF	AN	
				34:21		1.27	13.60	7.62	5.98	0.971			J
				34:35		1.27	122.23	68.29	53.94	1.000	234678-HxCDF	AN	
			X	35:13	RO	2.04	4.17	2.80	1.37	0.996			
				35:17		1.19	4.47	2.43	2.04	0.998			J
				35:26		1.27	38.00	21.23	16.77	1.002			
		DC	WH	35:50	RO	1.45	1.96			1.013			
374-376			14	Peaks			5,011.76						
13C12-HxCDF						0.43-0.59				0.879-1.105			
384-386		DC	NL			Height	0.48	0.17	0.31				
				33:01		0.46	1.67	0.53	1.14	0.934			
				33:09	RO	1.00	1.90	0.95	0.95	0.937			
				33:58		0.51	976.32	330.96	645.36	1.000	13C12-HxCDF 478	IS5	
						Height	315.60	106.74	208.86				
				34:04		0.52	966.33	329.42	636.91	1.000	13C12-HxCDF 678	IS6	
						Height	306.68	105.25	201.43				
				34:34		0.52	929.79	317.68	612.11	1.000	13C12-HxCDF 234	IS7	
						Height	302.64	103.27	199.37				
				35:22		0.51	780.00	263.83	516.17	1.000	13C12-HxCDF 789	IS8	
						Height	222.82	73.89	148.93				
384-386			6	Peaks			3,656.01						

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

HxCDD						1.05-1.43				0.959-1.013			
390-392		DC	NL			Height	0.42	0.23	0.19				
				33:30		1.23	205.97	113.64	92.33	0.964			
				33:56		1.24	59.27	32.81	26.46	0.976			
				34:09		1.22	483.21	265.96	217.25	0.982			
				34:19		1.21	35.15	19.28	15.87	0.987			
		DC	SN	34:27		1.38	0.50			0.991			

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.
N				34:34		1.34	3.74	2.14	1.60	0.997			J
AN				34:41		1.12	17.48	9.24	8.24	1.000	123478-HxCDD	AN	
M				34:47		1.26	140.50	78.20	62.30	1.000	123678-HxCDD	AN	
				35:06		1.23	100.71	55.52	45.19	1.010	123789-HxCDD	AN	
	DC	WH		35:17	RO	0.61	21.74			1.015			
	DC	WH		35:33	RO	1.01	3.90			1.023			
390-392			8	Peaks			1,046.03						
13C12-HxCDD				1.05-1.43					0.983-1.041				
402-404	DC	NL		Height			0.26	0.15	0.11				
	DC	WL		33:18	RO	0.43	0.50			0.961			
				34:07	RO	2.76	5.27	3.87	1.40	0.984			
				34:40		1.21	612.01	335.02	276.99	1.000	13C12-HxCDD 478	IS9	
				Height			208.04	114.08	93.96				
				34:46		1.21	659.81	360.86	298.95	1.000	13C12-HxCDD 678	IS10	
				Height			200.82	109.93	90.89				
				35:05		1.23	724.97	399.90	325.07	1.012	13C12-HxCDD 789	RS2	
	DC	SN		35:22	RO	0.26	3.17			1.020			
402-404			4	Peaks			2,002.06						

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

HpCDF				0.88-1.20					0.955-1.005				
408-410	DC	NL		Height			0.51	0.29	0.22				
				37:02		1.07	6,462.23	3,344.45	3,117.78	1.000	1234678-HpCDF	AN	
				37:20	RO	1.23	25.27	13.92	11.35	0.966			
				37:28		1.07	3,361.53	1,735.22	1,626.31	0.970			
				38:38		1.16	43.57	23.37	20.20	1.000	1234789-HpCDF	AN	
408-410			4	Peaks			9,892.60						
13C12-HpCDF				0.37-0.51					0.856-1.141				
418-420	DC	NL		Height			0.25	0.12	0.13				
				37:02		0.45	613.05	190.16	422.89	1.000	13C12-HpCDF 678	IS11	
				Height			167.96	52.11	115.85				
				38:38		0.45	398.73	123.08	275.65	1.000	13C12-HpCDF 789	IS12	
				Height			93.28	29.08	64.20				
	DC	SN		39:00	RO	0.68	1.31			1.009			
418-420			2	Peaks			1,011.78						

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

HpCDD				0.88-1.20					0.976-1.005				
424-426	DC	NL		Height			0.49	0.25	0.24				
				37:20		1.01	670.86	337.85	333.01	0.980			
	DC	SN		37:38	RO	0.62	1.26			0.988			
				38:07		1.02	712.00	359.72	352.28	1.000	1234678-HpCDD	AN	
424-426			2	Peaks			1,382.86						
13C12-HpCDD				0.88-1.20					0.868-1.078				
436-438	DC	NL		Height			0.31	0.18	0.13				
				38:06		1.04	465.15	237.27	227.88	1.000	13C12-HpCDD 678	IS13	
				Height			121.48	61.80	59.68				

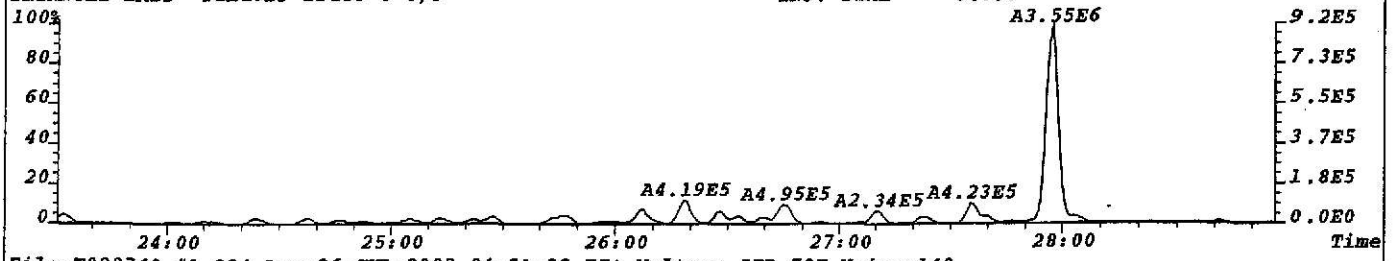
Listing of T023769B.dbf
Matched GC Peaks / Ratio / Ret. Time

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.
436-438			1 Peak				465.15						
---------- Above: HpCDD / Octa-CDD and CDF Follows ----------													
OCDF				0.76-1.02						0.952-1.048			
442-444	DC	NL		Height		0.79	0.18	0.09	0.09				
	DC	WL		36:23		0.79	1.02			0.868			
	DC	WL		36:43	RO	1.07	3.08			0.876			
	DC	WL		39:29	RO	0.63	2.31			0.942			
	DC	WL		39:41		0.91	14.77			0.947			
				41:54		0.98	3.77	1.87	1.90	1.000			
				42:07		0.87	870.28	405.19	465.09	1.005	OCDF	AN	
	DC	SN		42:35	RO	1.26	1.13			1.016			
442-444			2 Peaks				874.05						
OCDD				0.76-1.02						0.952-1.048			
458-460	DC	NL		Height			0.14	0.07	0.07				
N				41:54		0.84	7,870.78	3,591.64	4,279.14	1.000	OCDD	AN	E
458-460			1 Peak				7,870.78						
13C12-OCDD				0.76-1.02						0.996-1.004			
470-472	DC	NL		Height			0.17	0.08	0.09				
				41:54		0.87	554.64	258.57	296.07	1.000	13C12-OCDD	IS14	
				Height			117.49	54.94	62.55				
	DC	WH		42:18	RO	0.68	1.11			1.010			
	DC	WH		42:25	RO	2.30	1.09			1.012			
470-472			1 Peak				554.64						

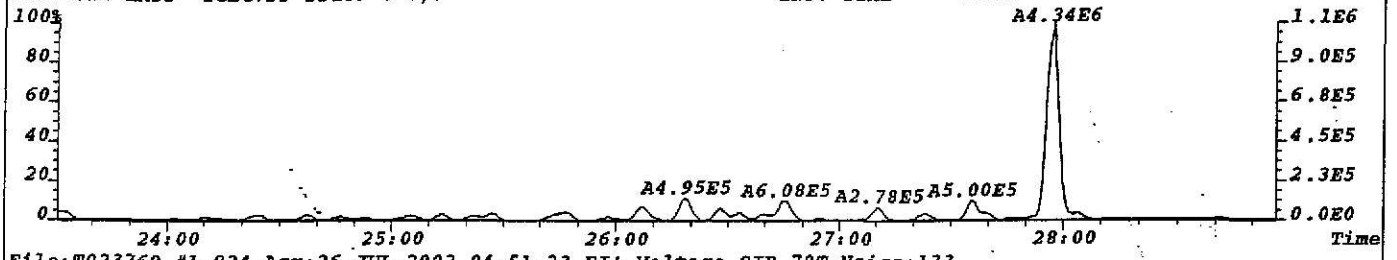
Column Description.....	"Why" Code Description.....	QC Log Desc.....
M_Z -Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT. -Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK -RO=Ratio Outside 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 ***

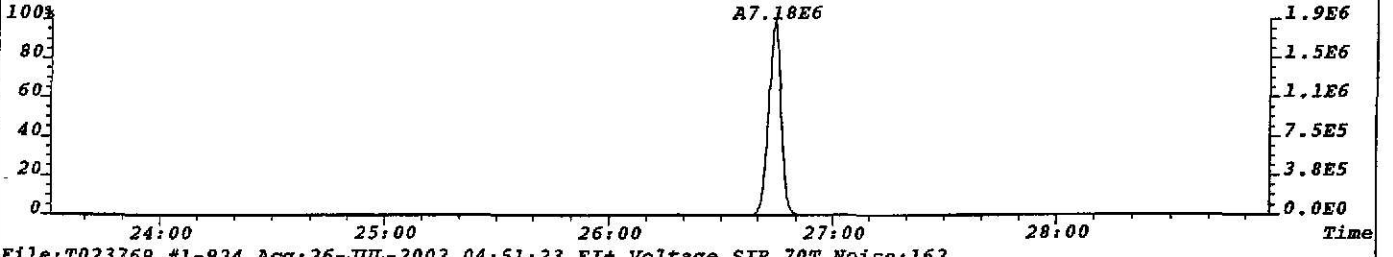
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:233
303.9016 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,932.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



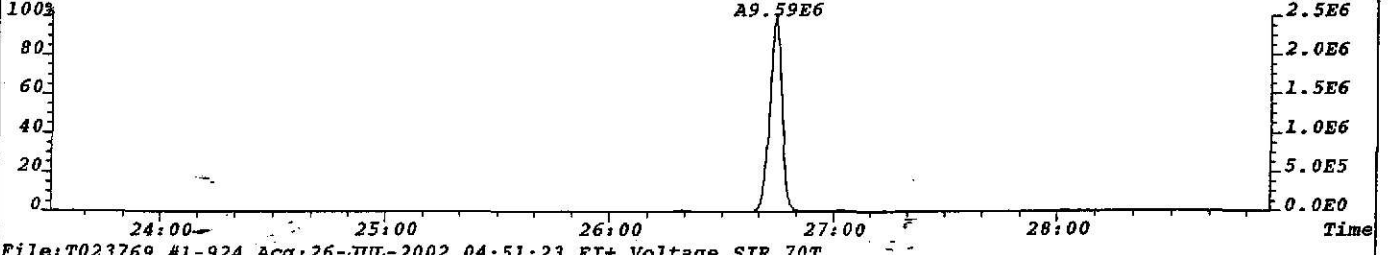
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:140
305.8987 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,560.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



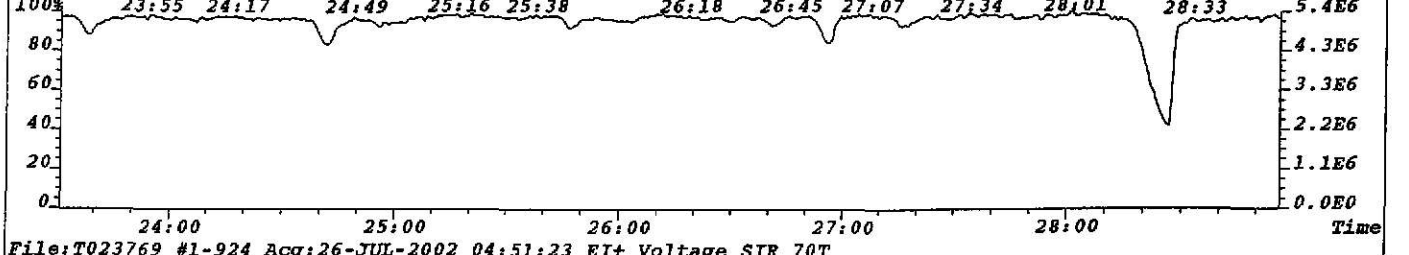
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:133
315.9419 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,532.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



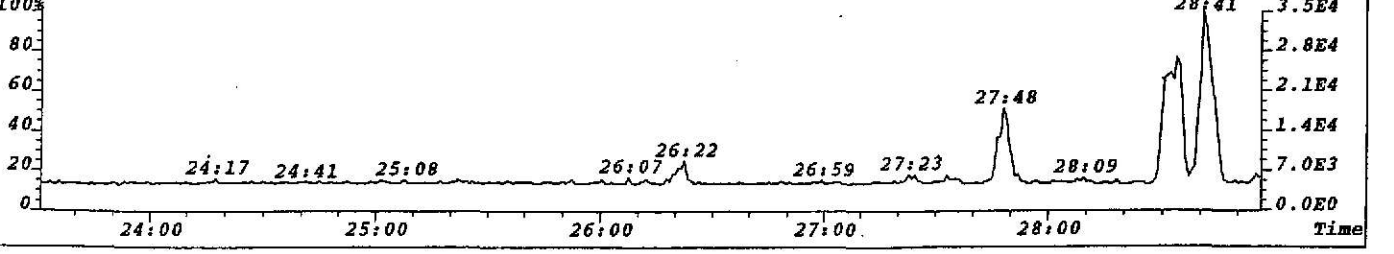
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:162
317.9389 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,648.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



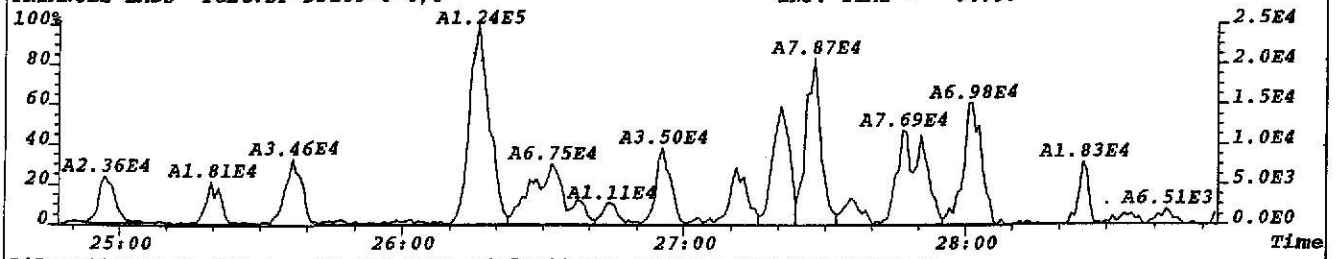
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



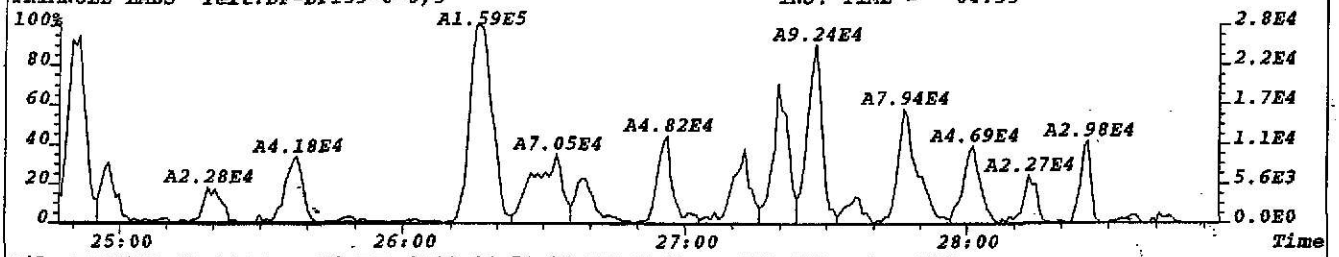
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
375.8364 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



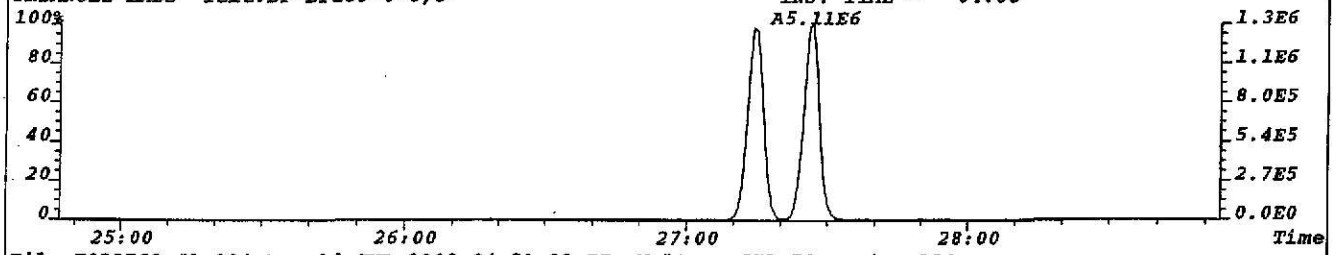
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:95
319.8965 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,380.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



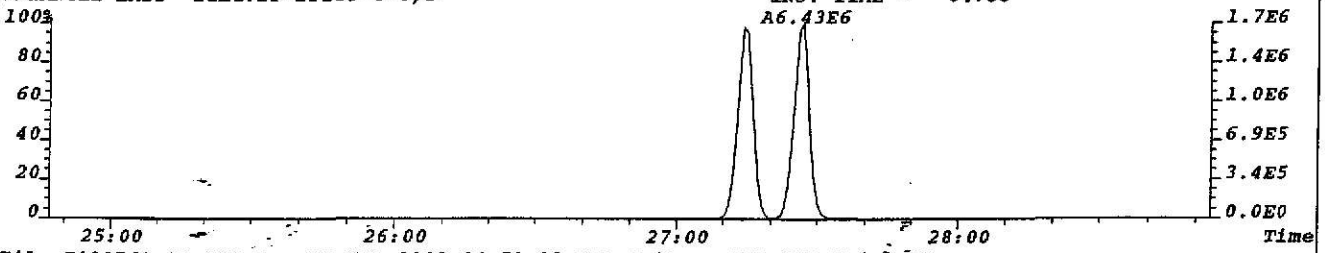
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:91
321.8936 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,364.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



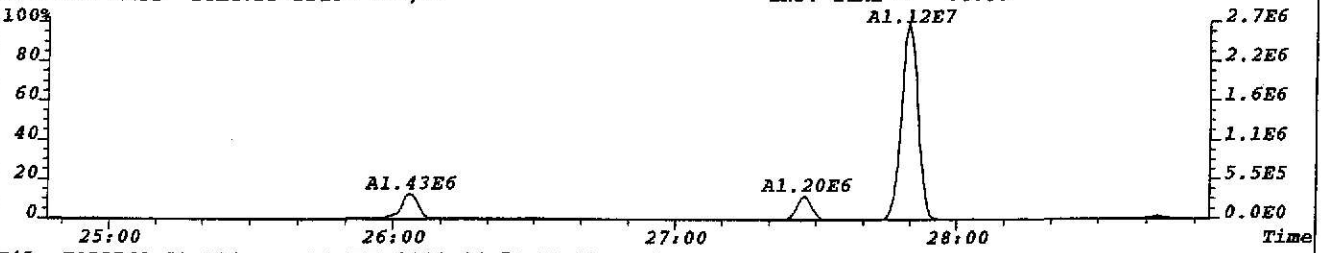
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:275
331.9368 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,1100.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



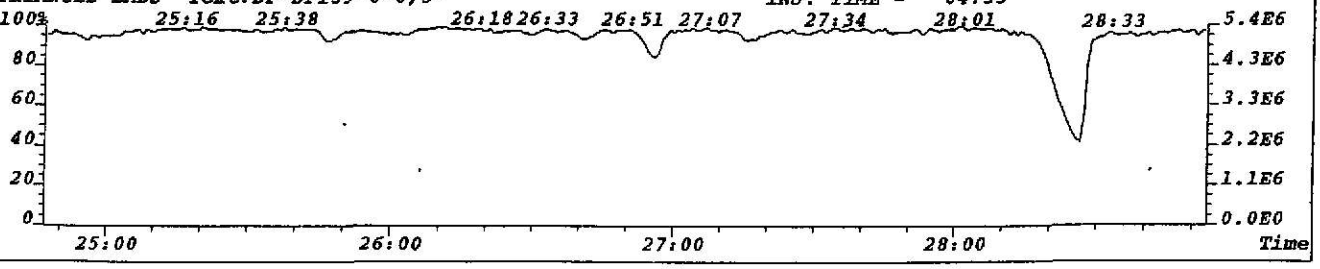
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:124
333.9338 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,496.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



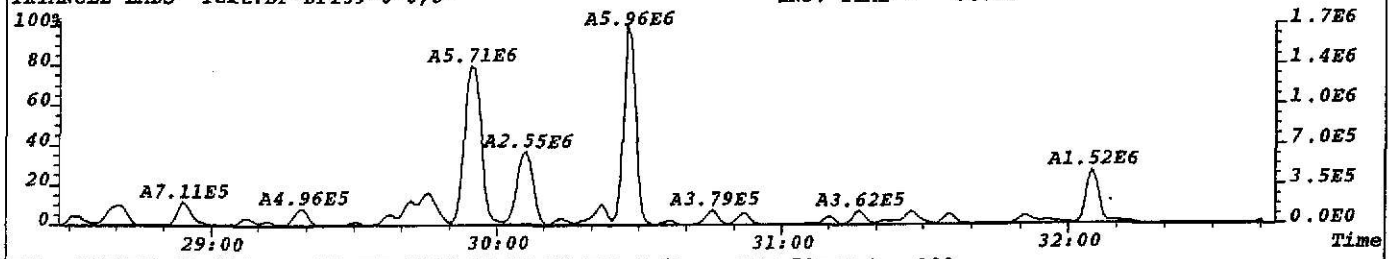
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:93
327.8847 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,372.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



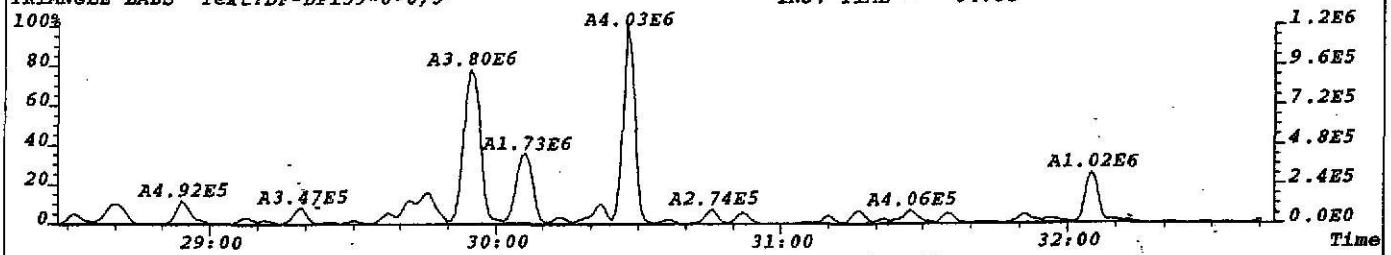
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



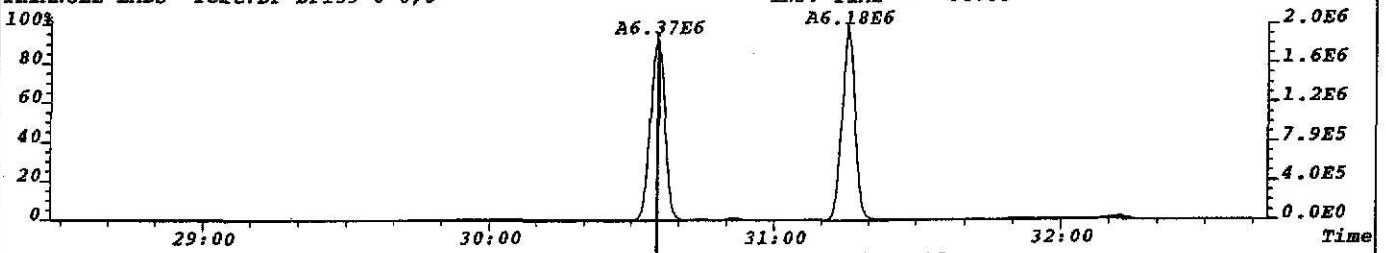
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:106
339.8597 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,424.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



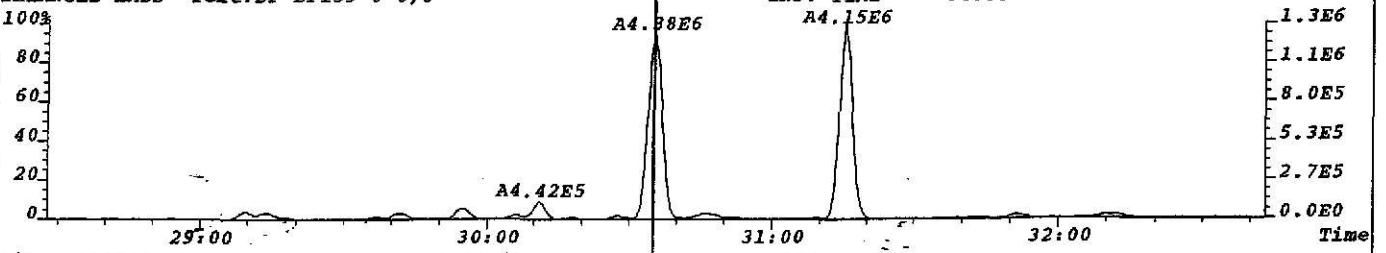
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:122
341.8567 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,488.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



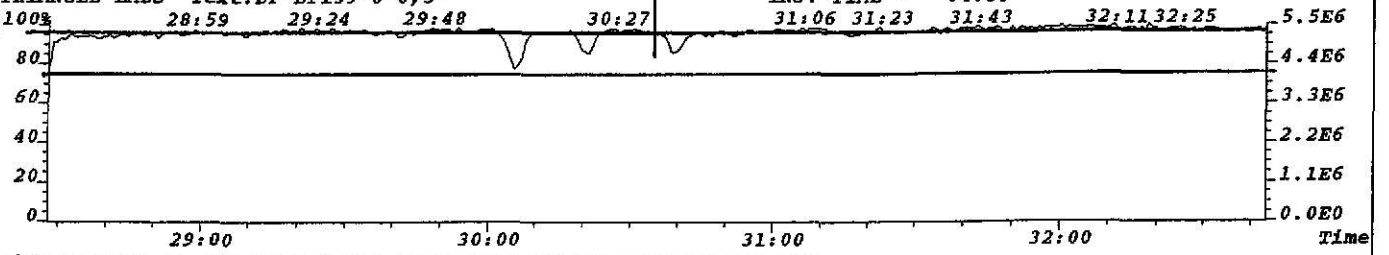
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:93
351.9000 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,372.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



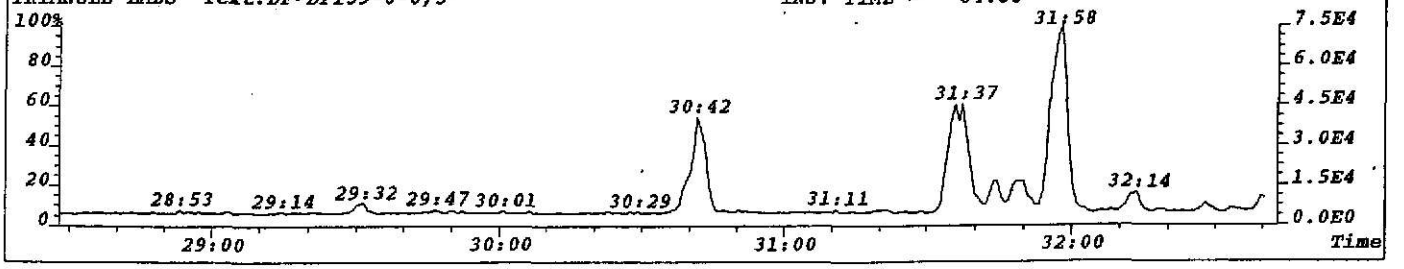
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:105
353.8970 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,420.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



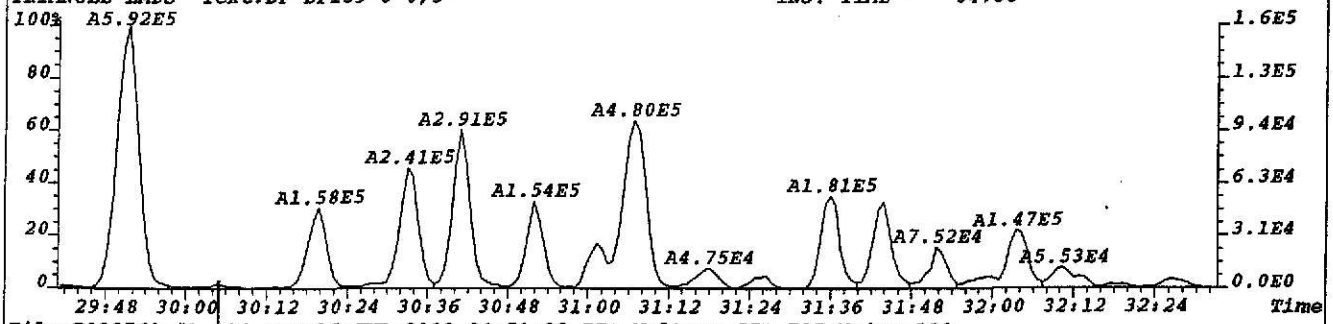
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



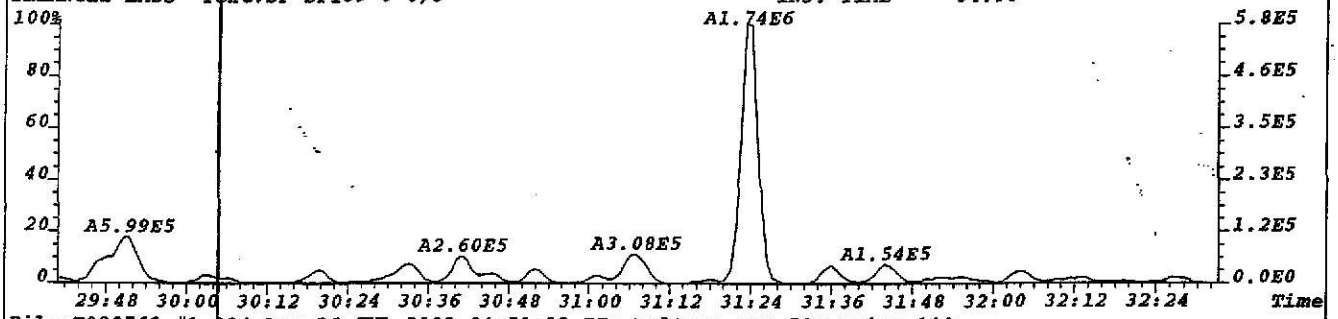
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
409.7974 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



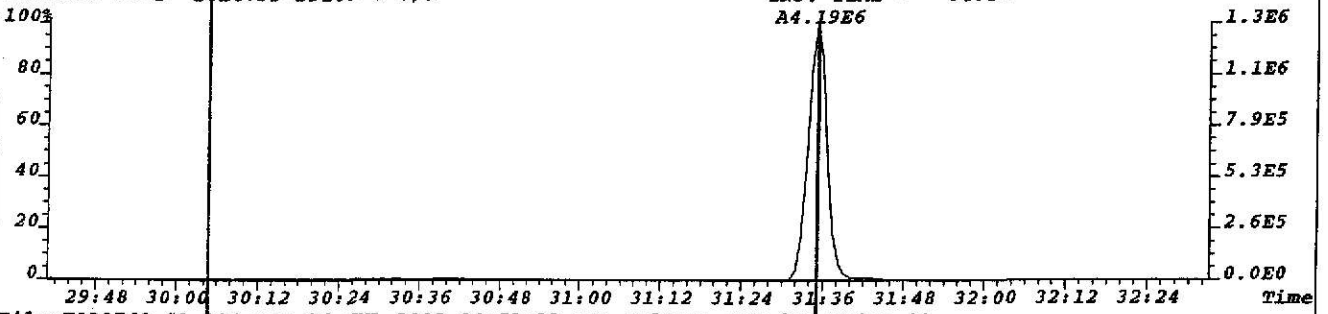
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:121
355.8546 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,484.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



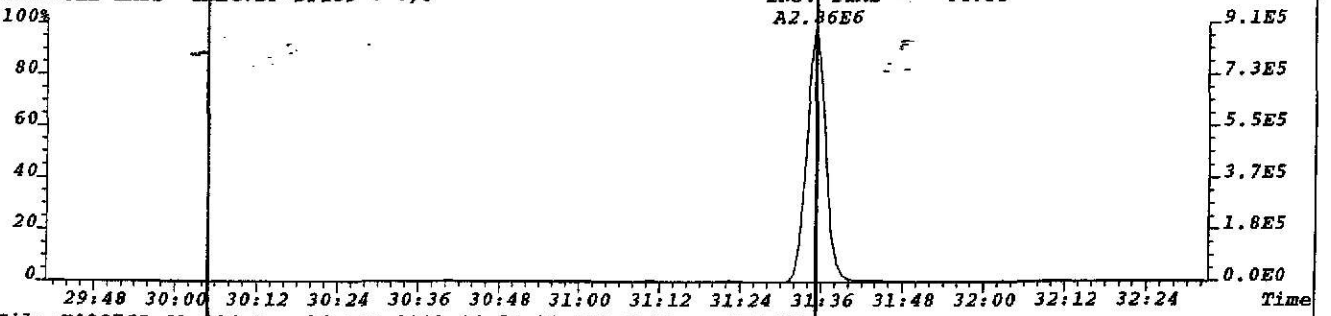
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:100
357.8516 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,400.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



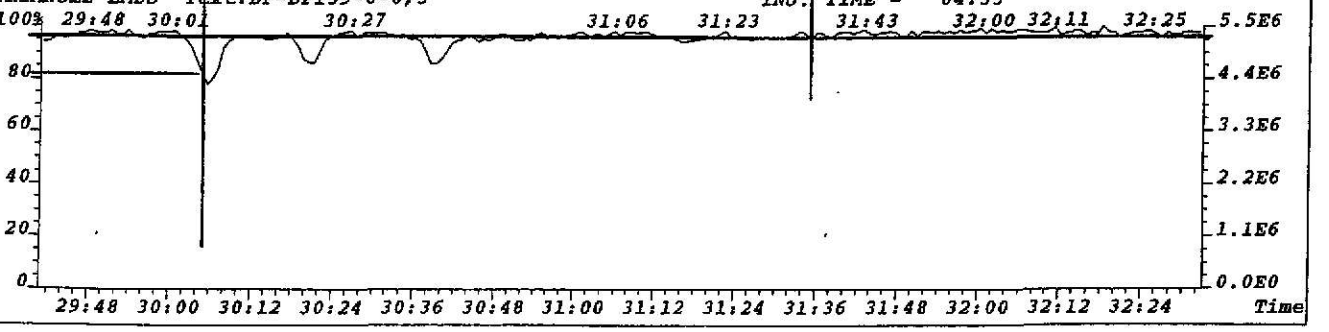
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:108
367.8949 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,432.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



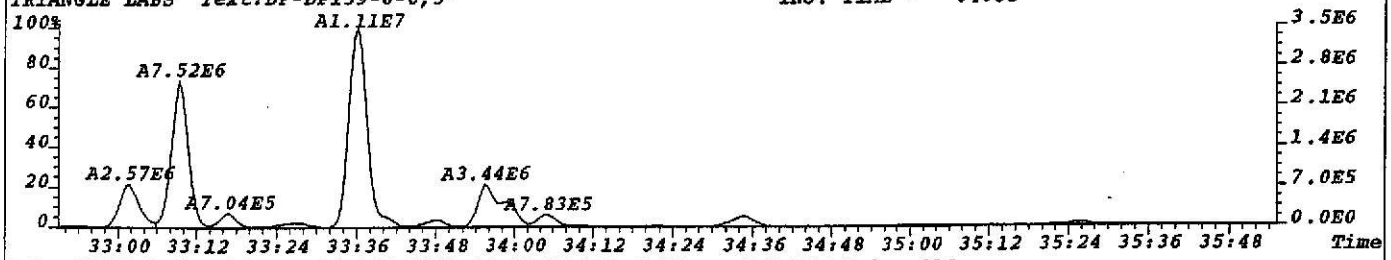
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:81
369.8919 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,324.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



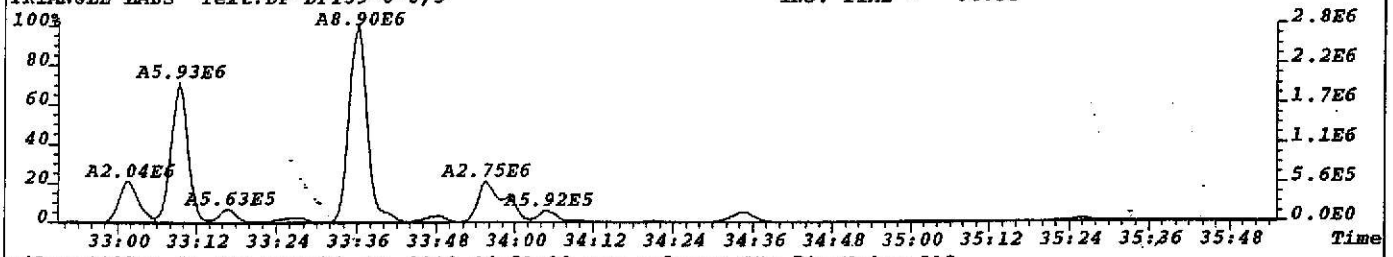
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



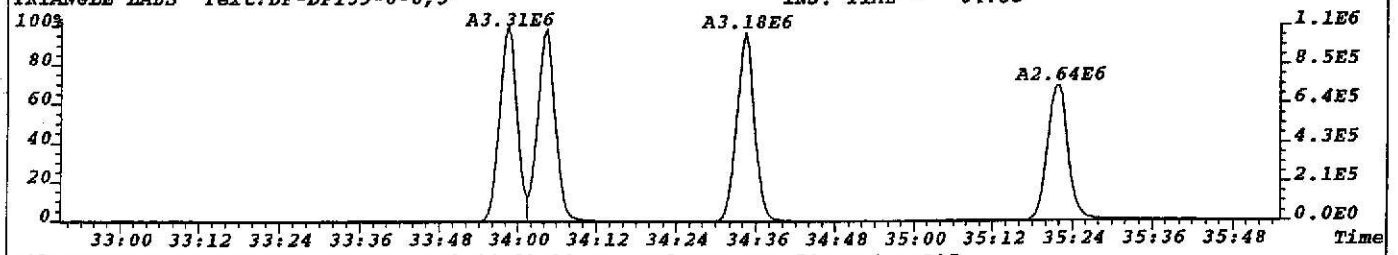
File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:338
373.8208 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,1352.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



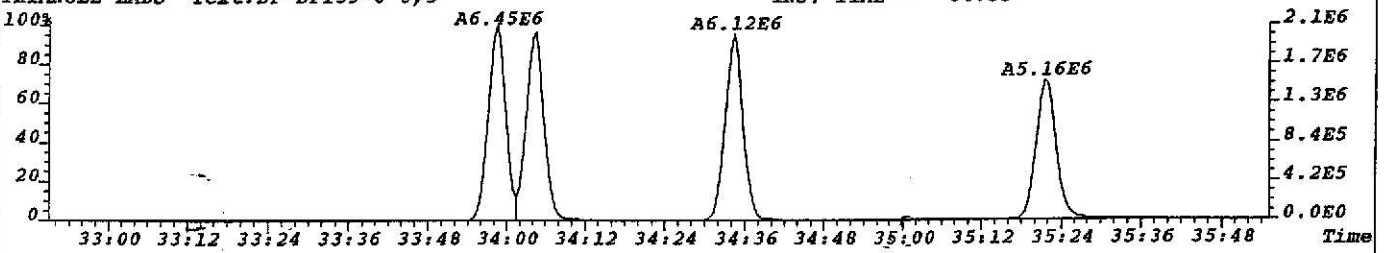
File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:426
375.8178 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,1704.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



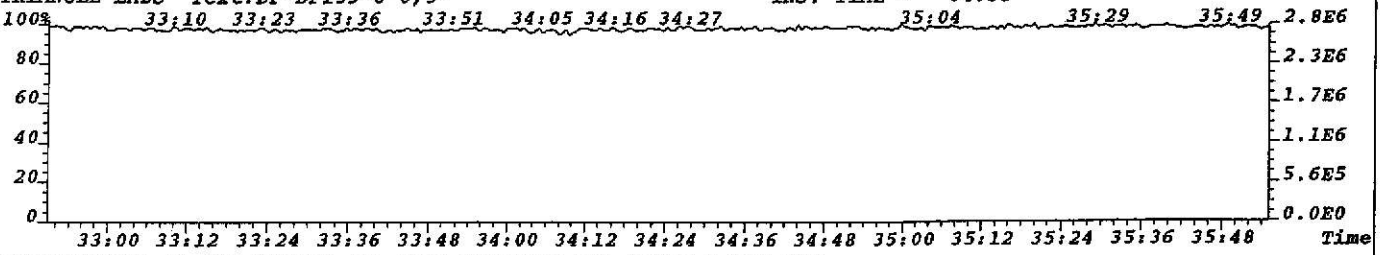
File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:213
383.8639 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,852.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



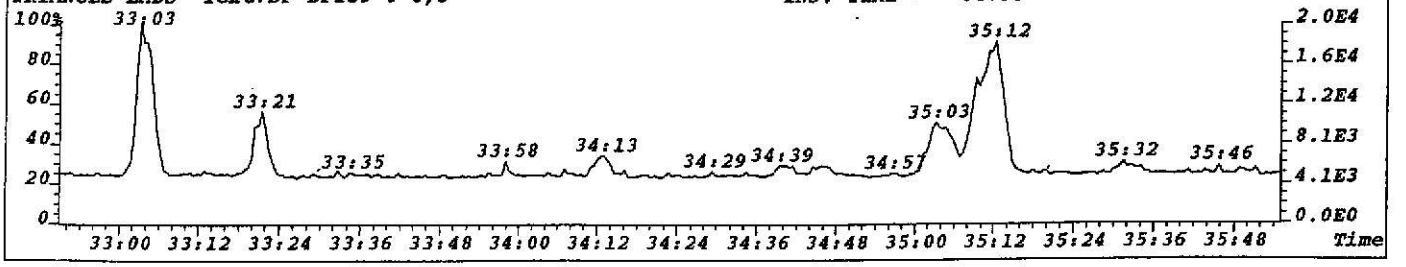
File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:385
385.8610 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,1540.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



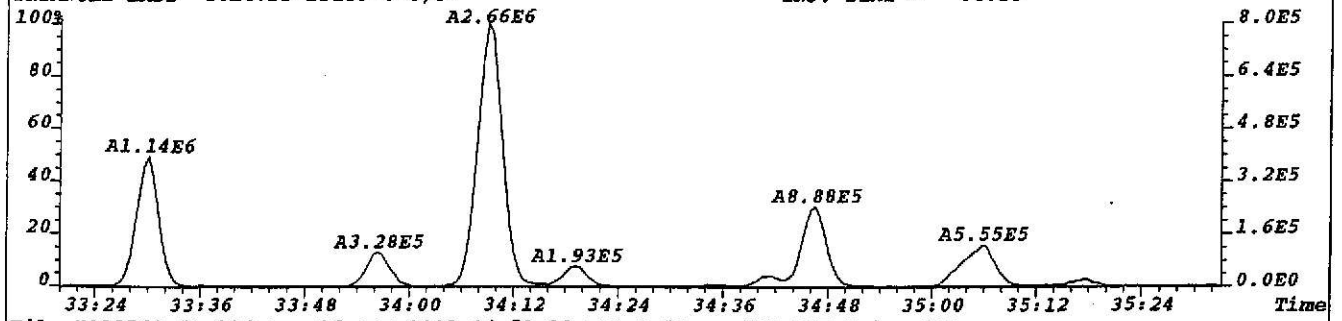
File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



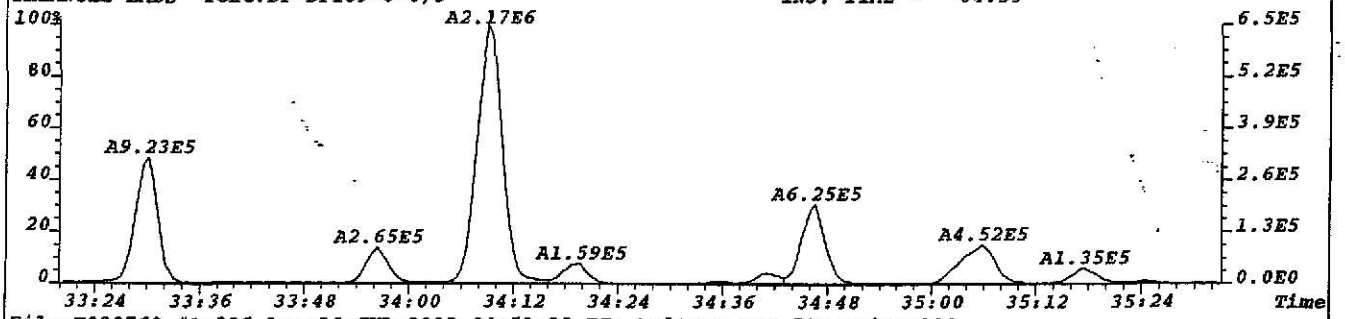
File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
445.7555 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



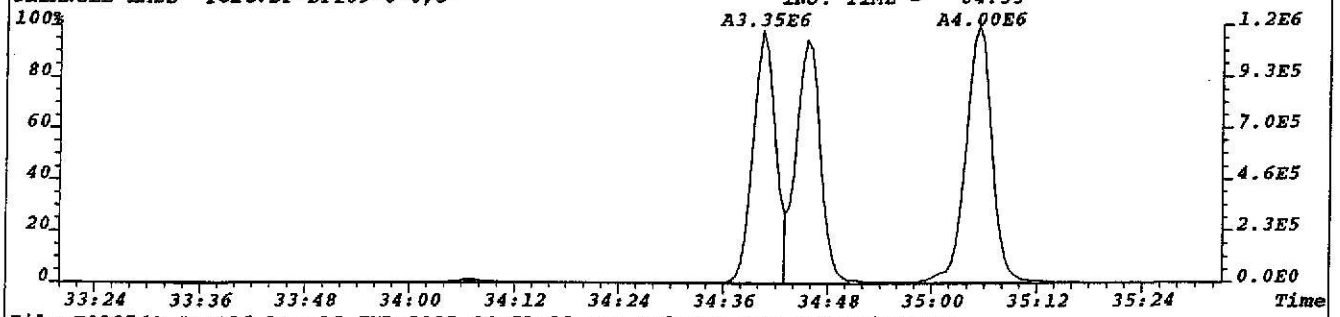
File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:289
389.8156 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,1156.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



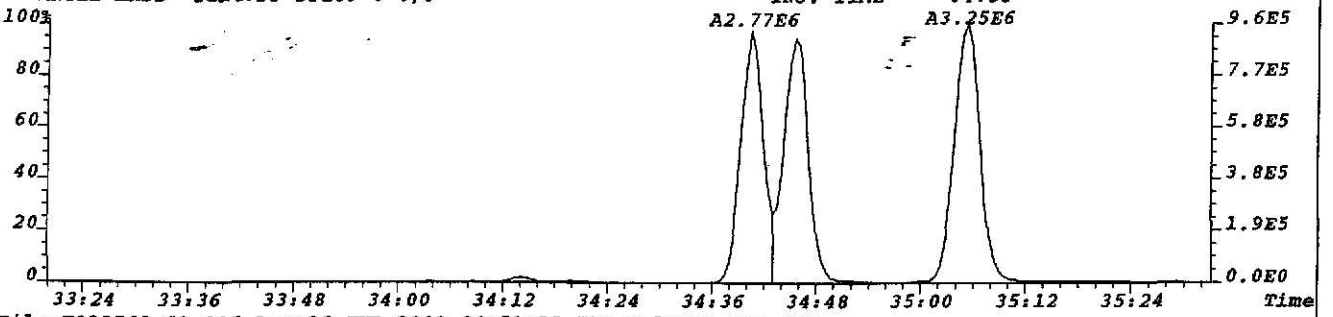
File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:232
391.8127 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,928.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



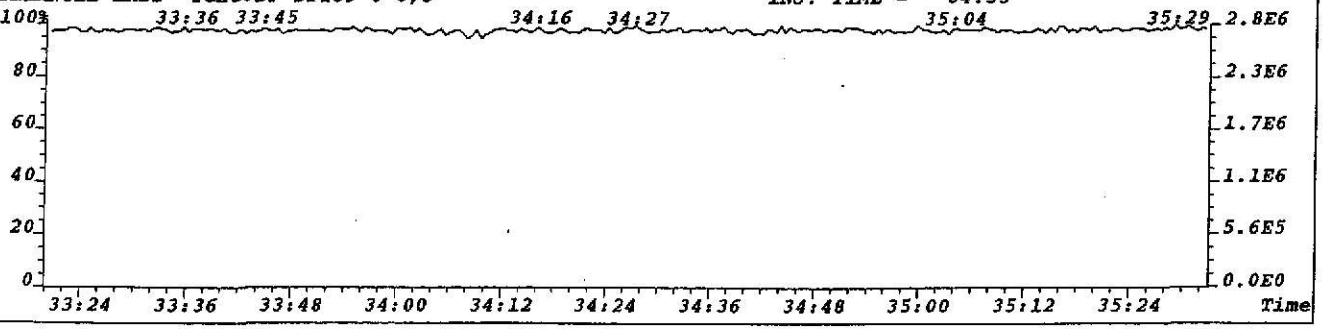
File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:189
401.8558 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,756.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



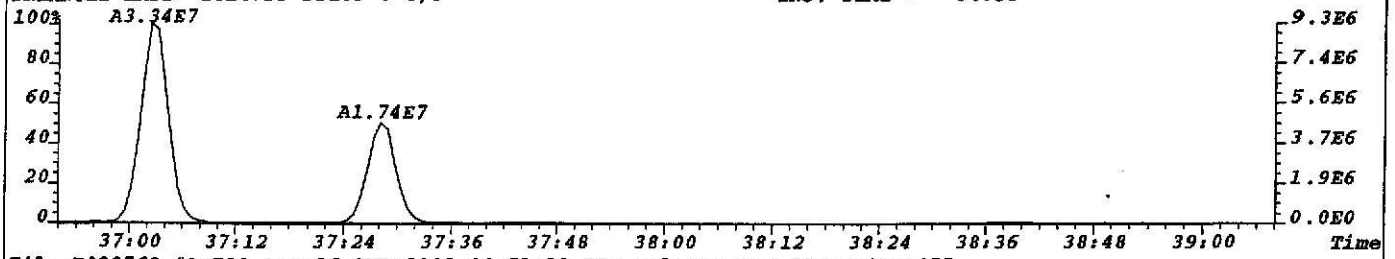
File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:143
403.8529 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,572.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



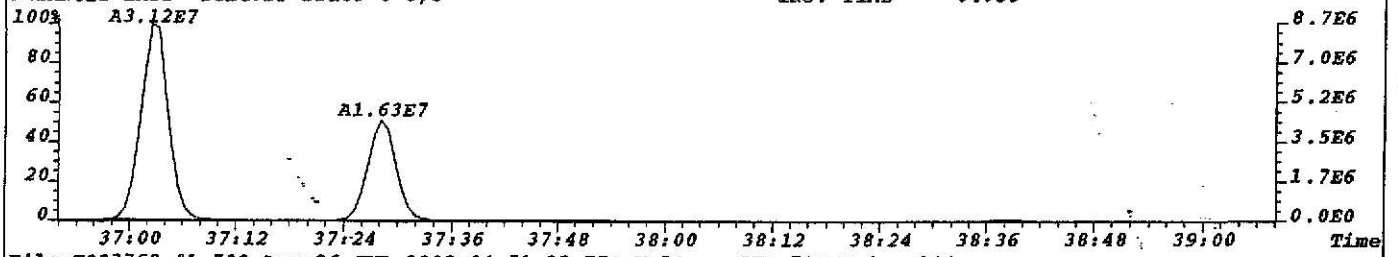
File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



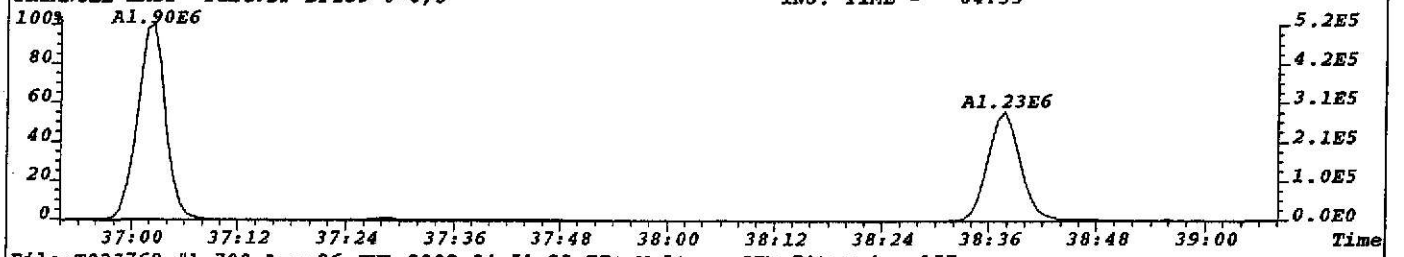
File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:364
407.7818 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,1456.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



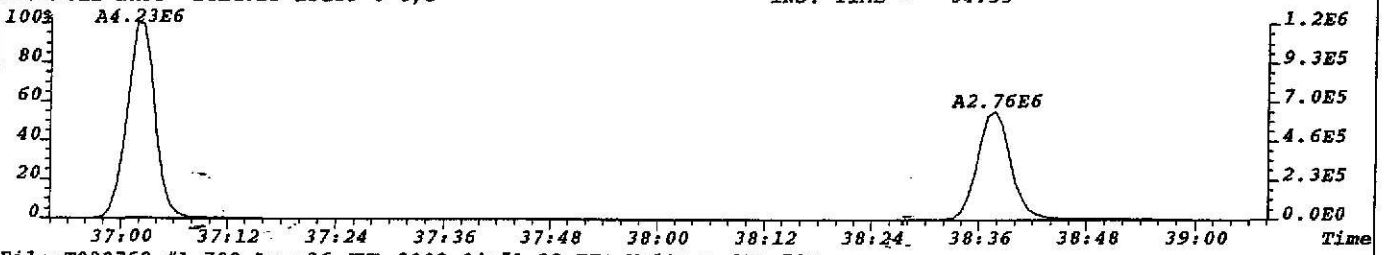
File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:277
409.7789 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,1108.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



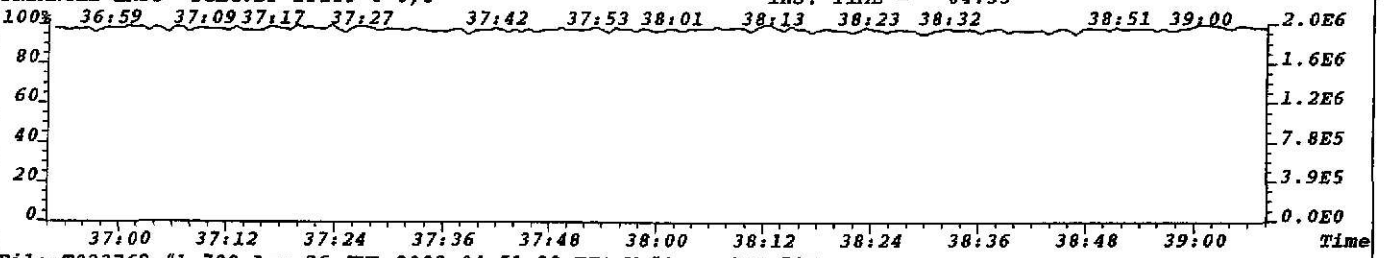
File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:144
417.8253 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,576.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



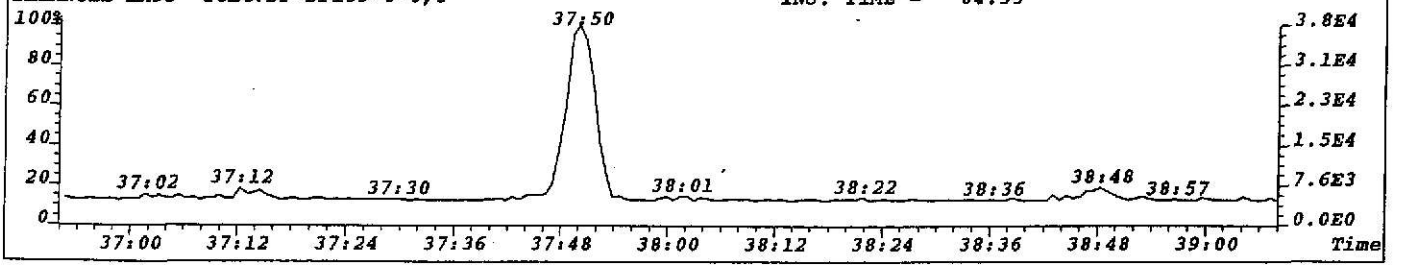
File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:157
419.8220 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,628.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



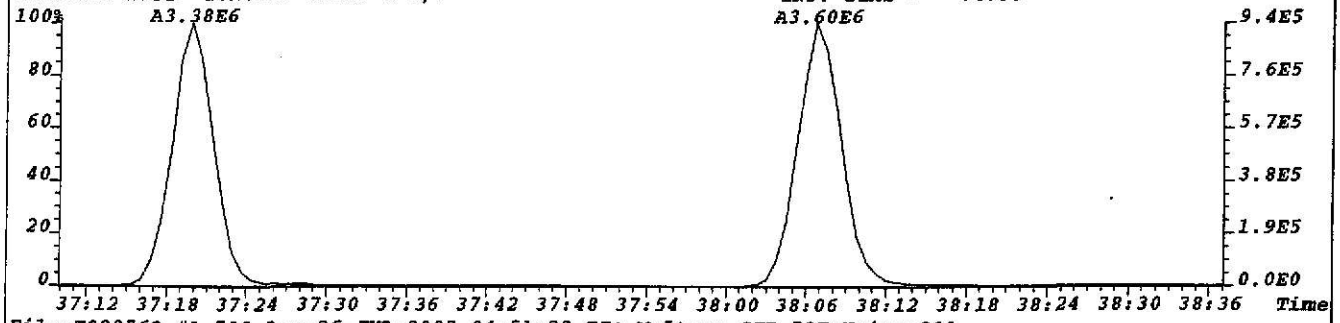
File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



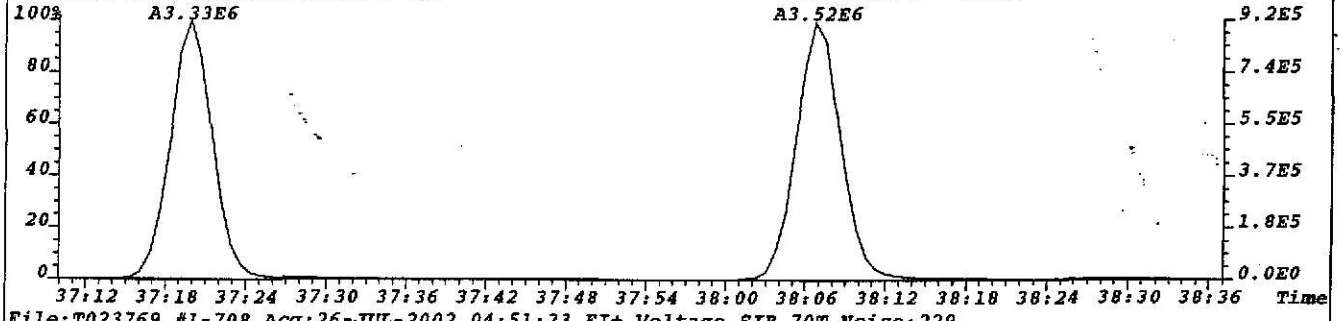
File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
479.7165 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



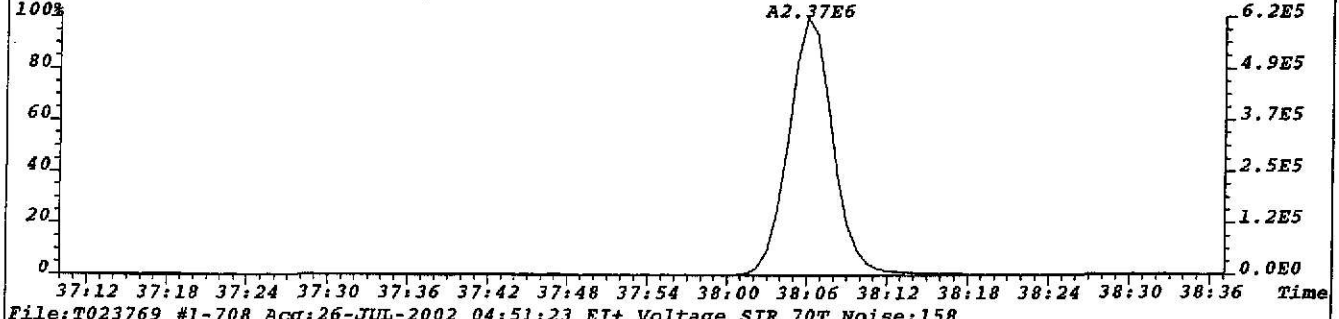
File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:308
423.7766 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,1232.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



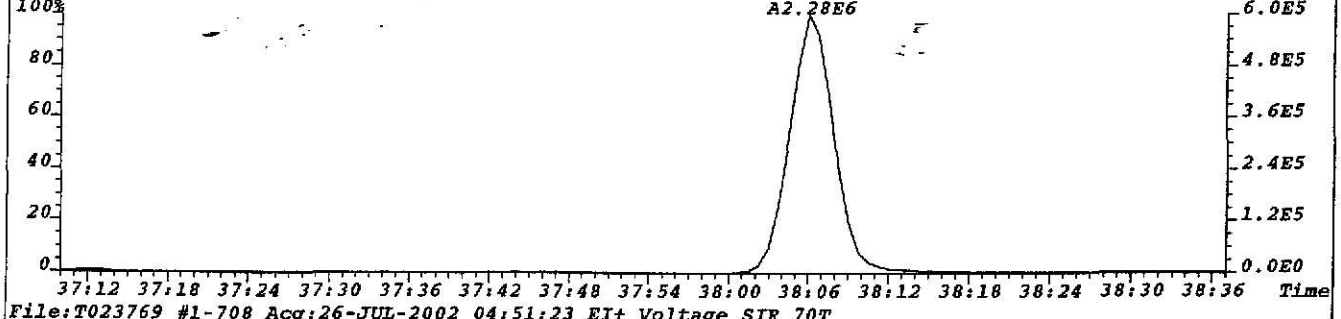
File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:301
425.7737 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,1204.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



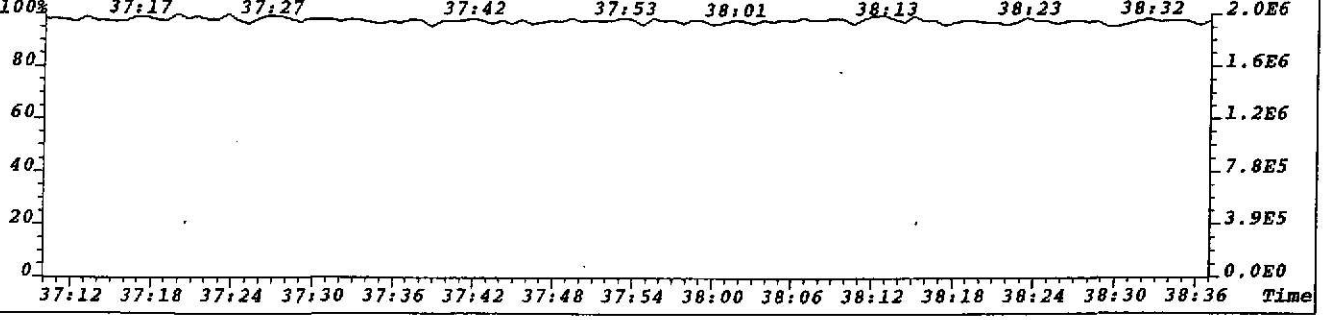
File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:229
435.8169 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,916.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



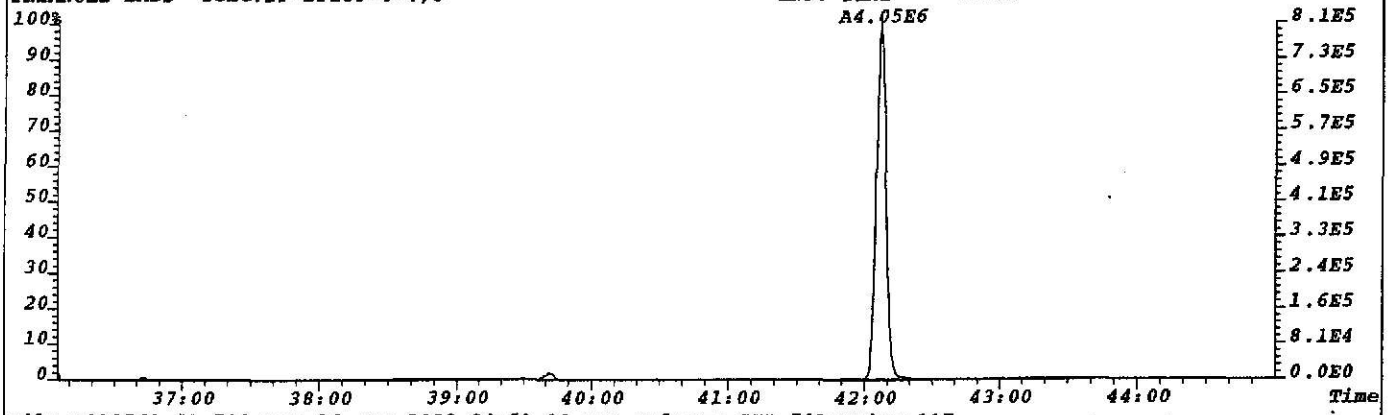
File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:158
437.8140 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,632.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



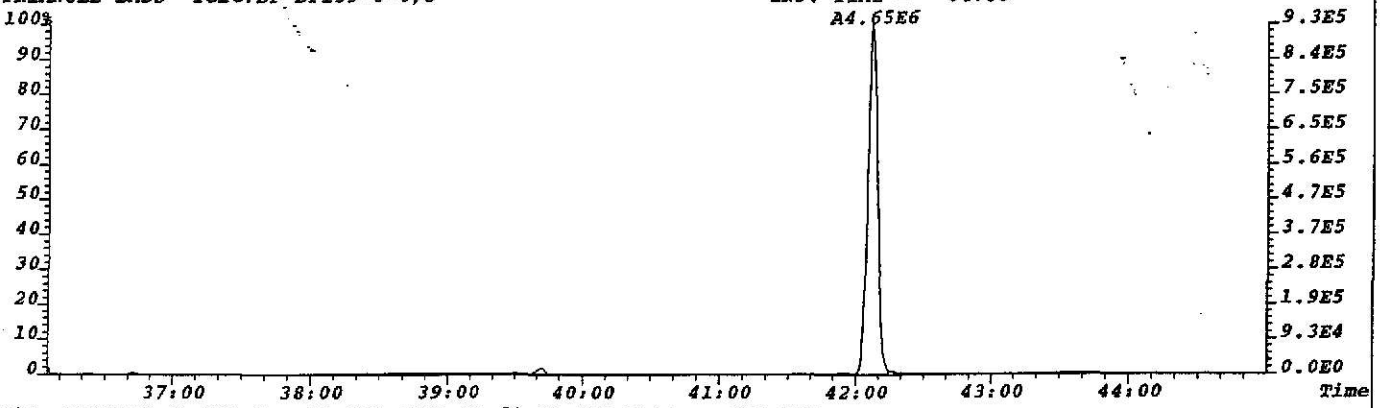
File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



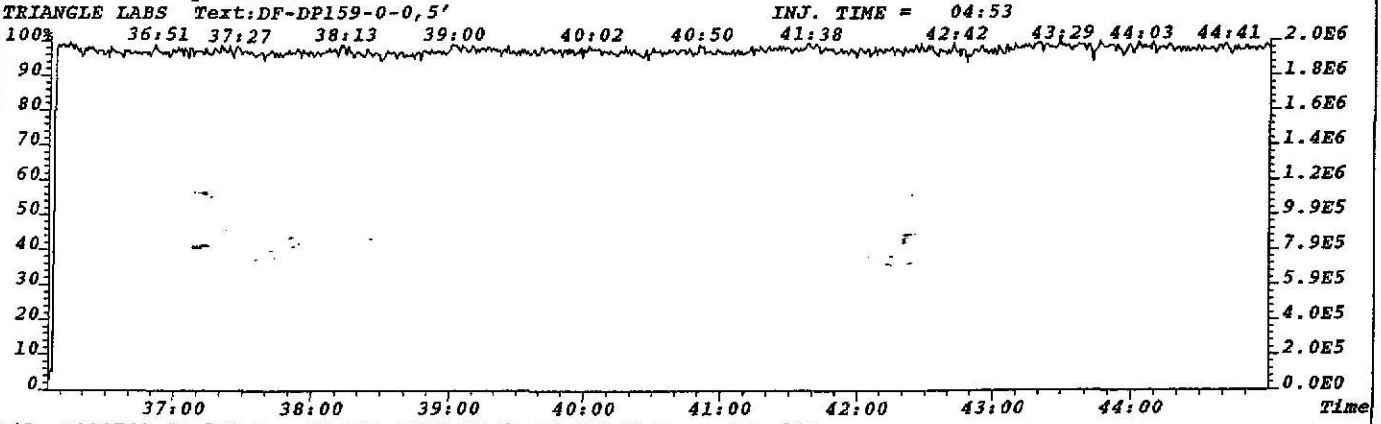
File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:111
441.7428 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,444.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



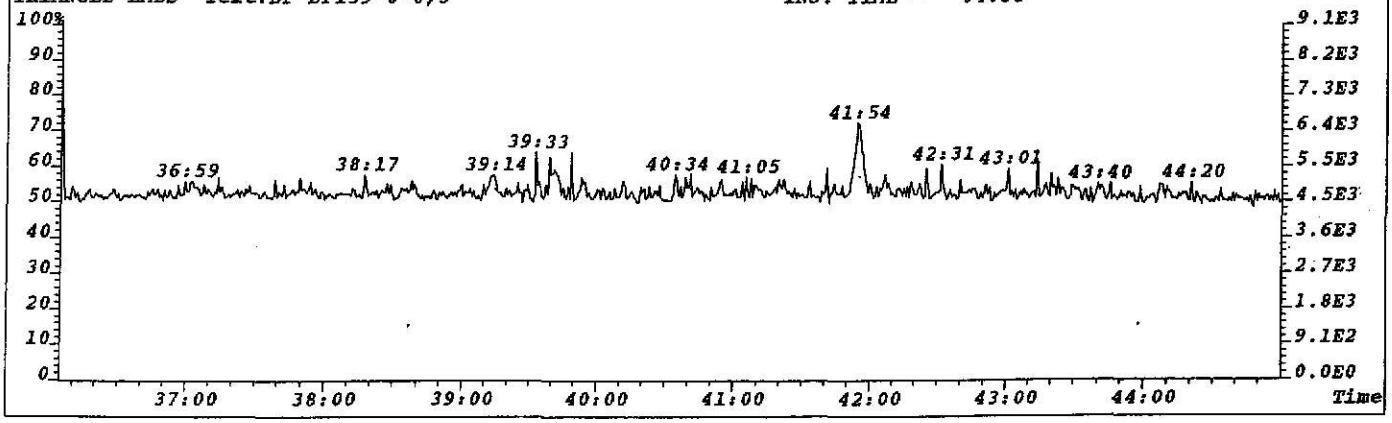
File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:117
443.7399 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,468.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



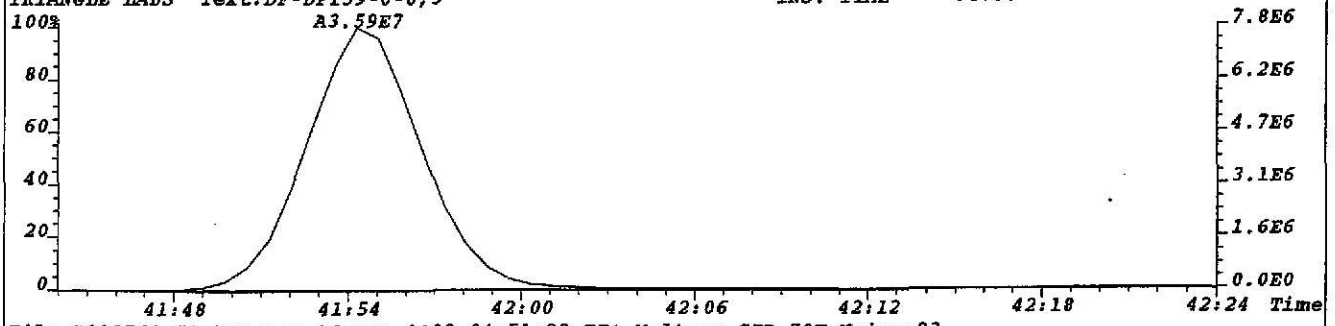
File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



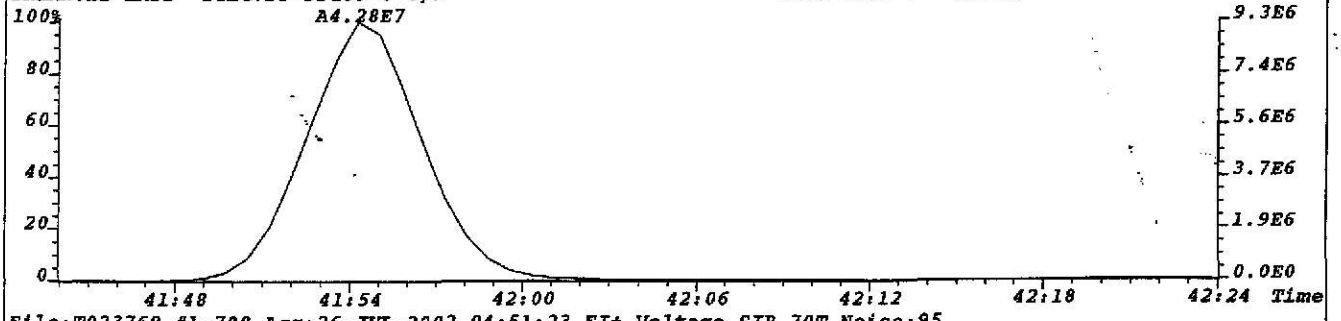
File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
513.6775 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



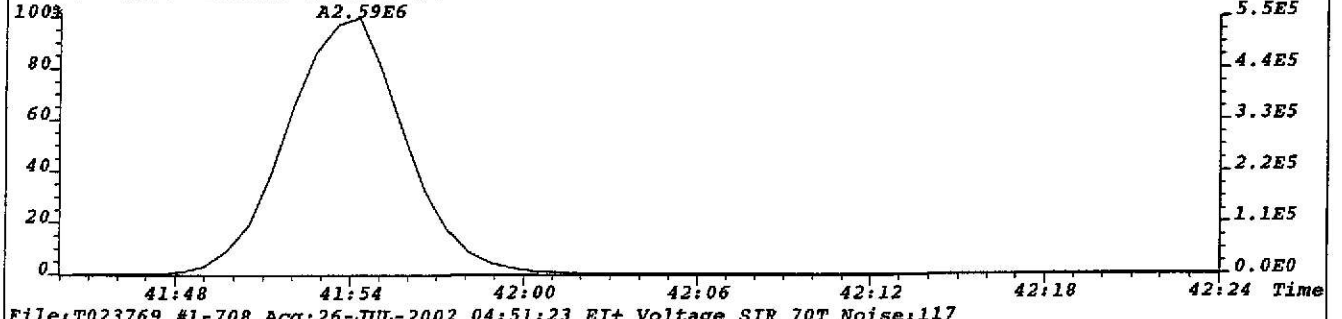
File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:84
457.7377 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,336.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



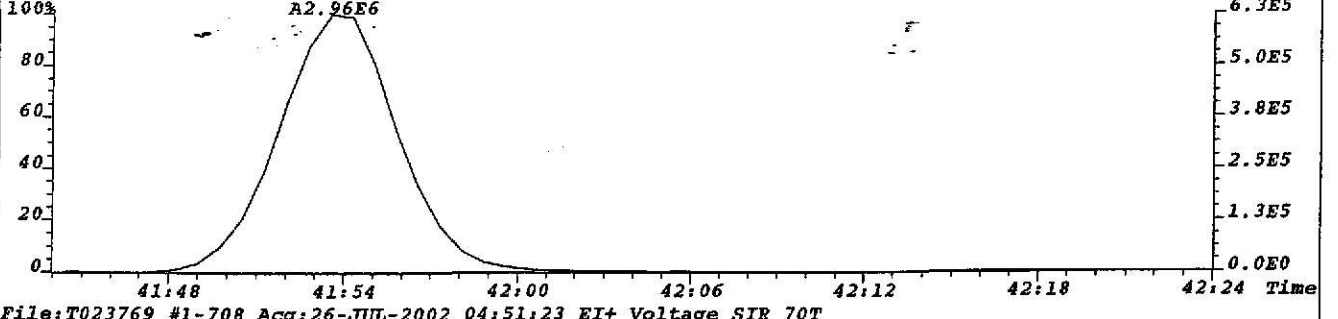
File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:93
459.7348 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,372.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



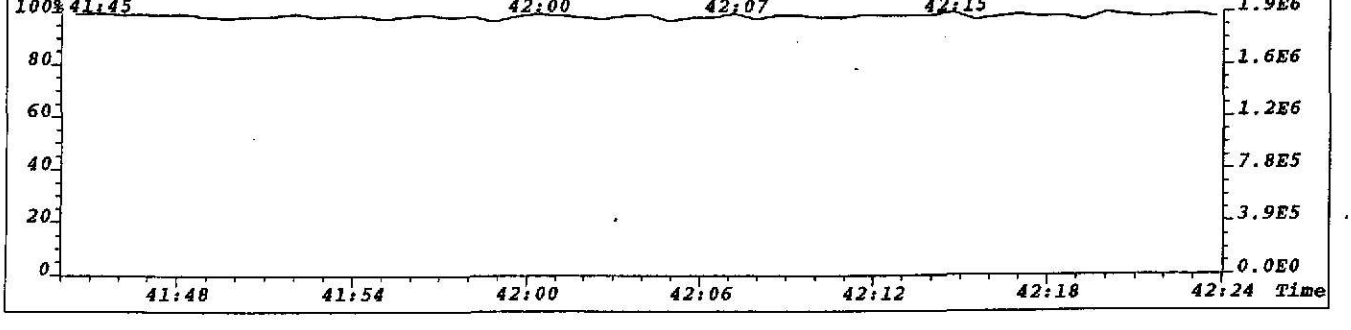
File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:95
469.7779 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,380.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53

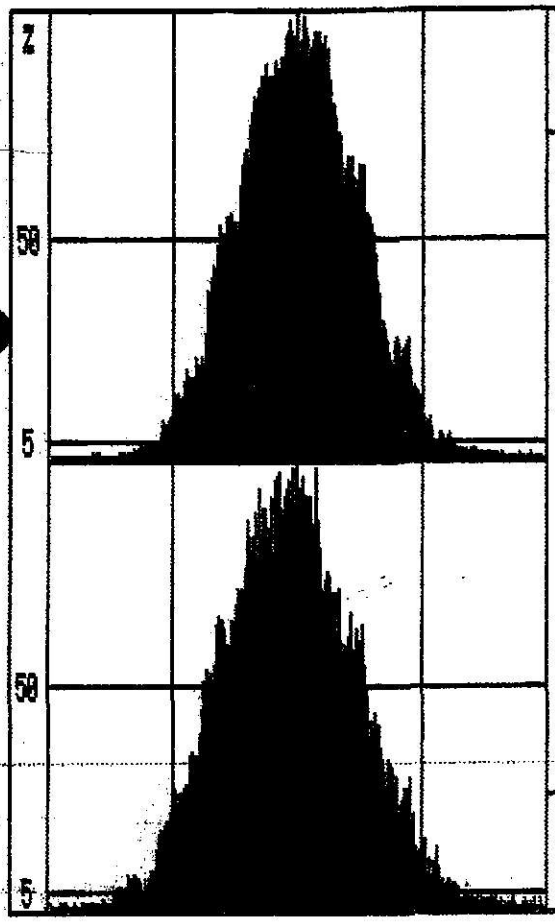


File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T Noise:117
471.7750 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,468.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53



File:T023769 #1-708 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0-0,5' INJ. TIME = 04:53





Channel I 330.9792 Peak top
Height 1.27 volts Span 200 ppm

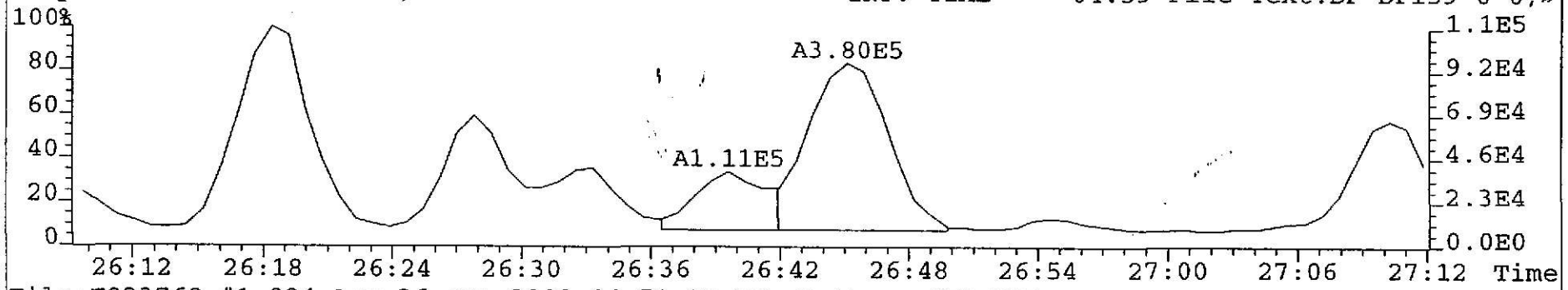
System file name	NOBSUS
Data file name	A:T725022
Resolution	10000
Group number	2
Ionization mode	EI+
Switching	VOLTAGE
Ref. masses	292.9825, 416.9760

A	293	J	331	S	368
B	304	K	332	T	370
C	306	L	334	U	376
D	316	M	340	V	410
E	318	N	342		
F	320	O	352		
G	322	P	354		
H	328	Q	356		
I	331	R	358		

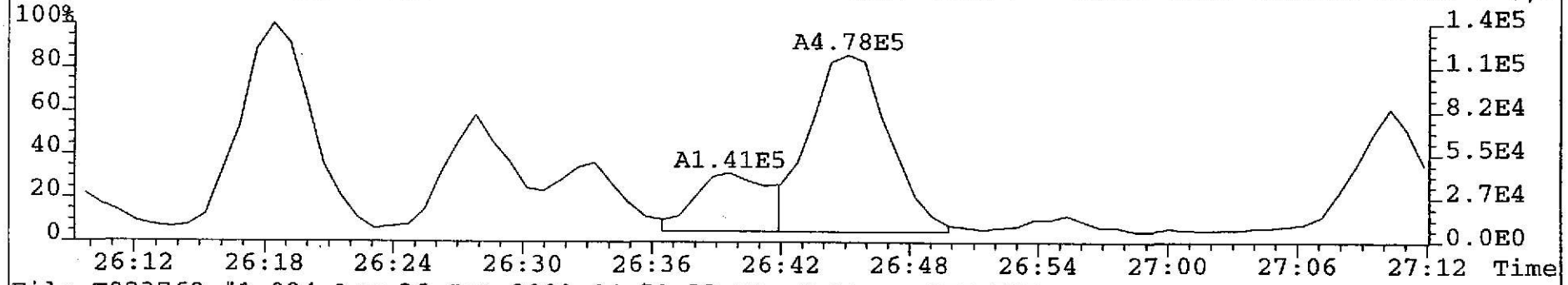
Ref. mass 416.9760 Peak top
Height .25 volts Span 200 ppm

GEM 7/26/02

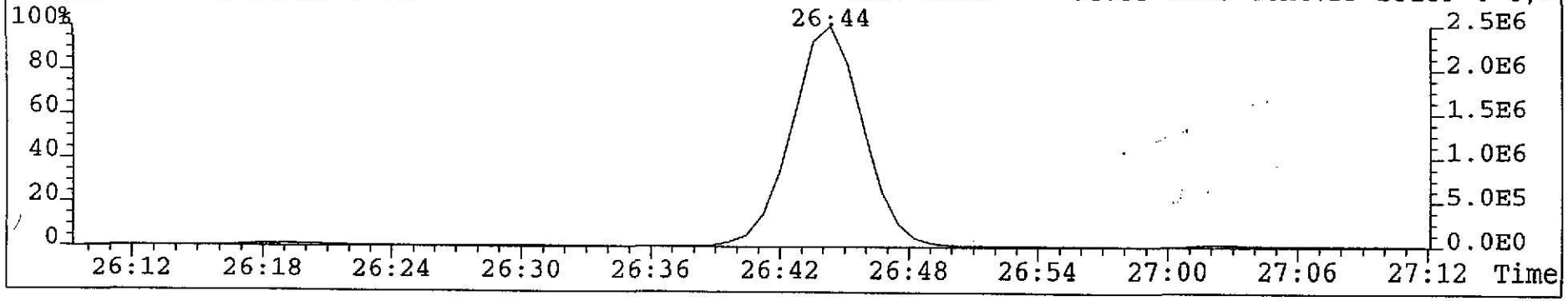
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
303.9016 F:2 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»



File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
305.8987 F:2 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»

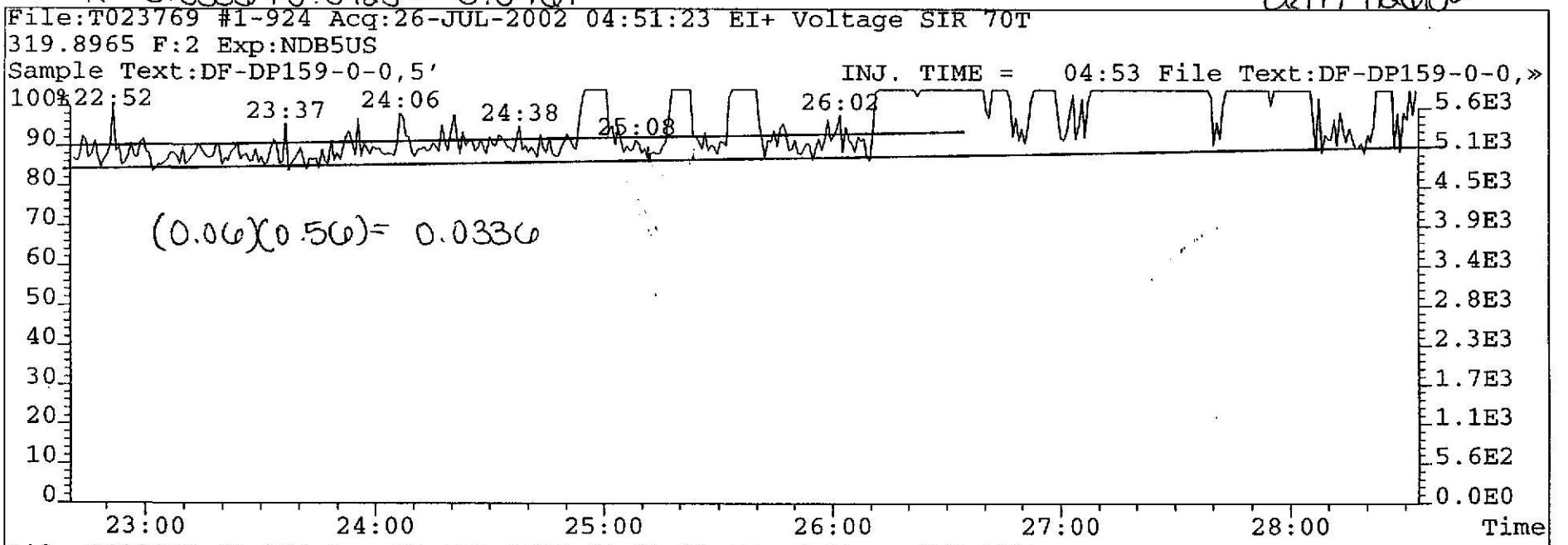


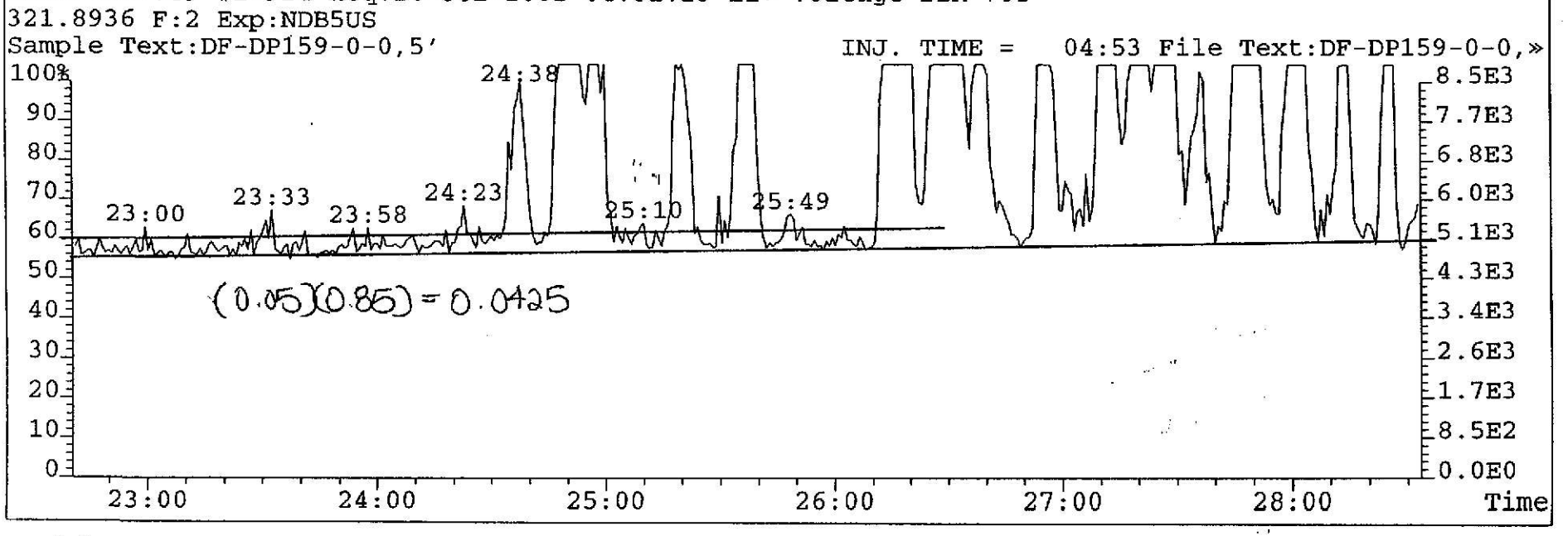
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
317.9389 F:2 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»



N = 0.0336 + 0.0425 = 0.0761

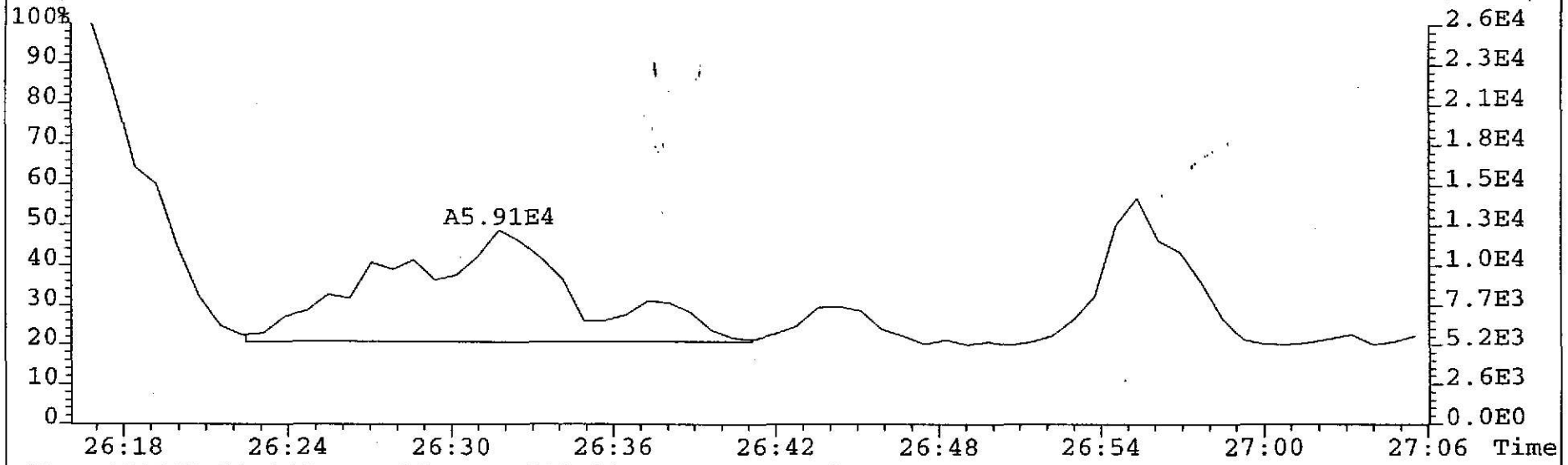
OEM 726102



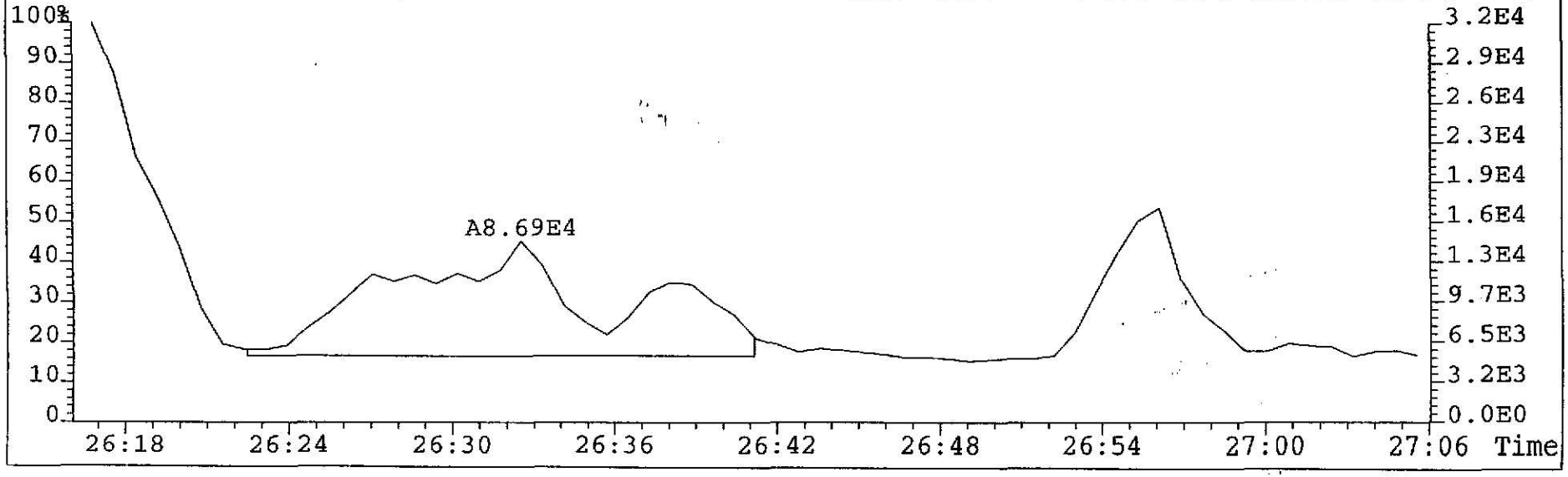


OEM 7/26/02

File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
319.8965 F:2 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»

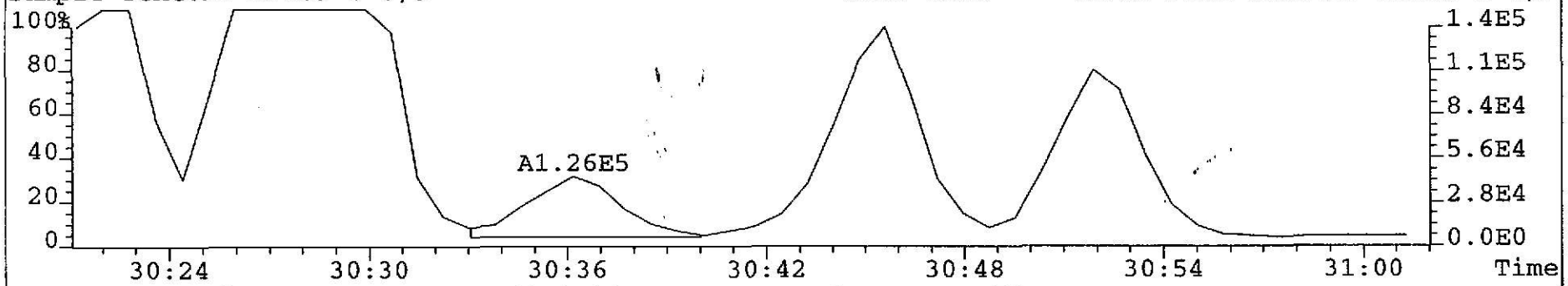


File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
321.8936 F:2 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»

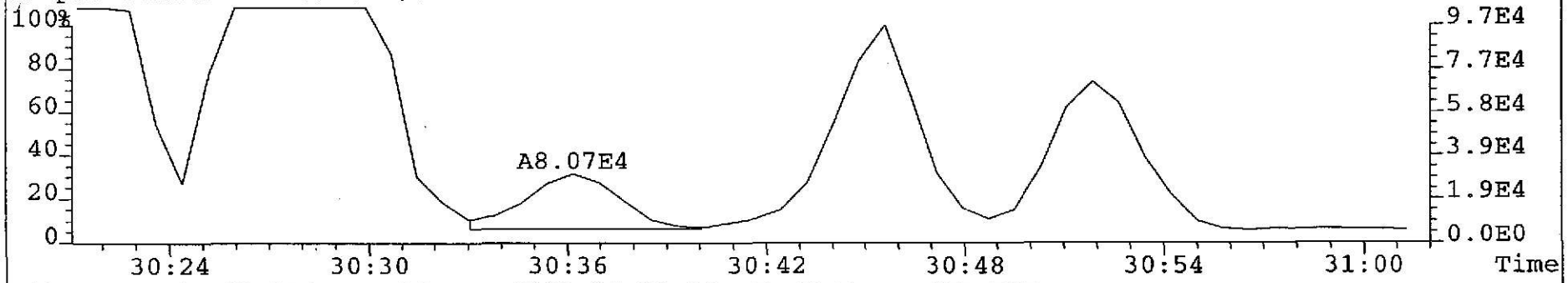


CBM7126102

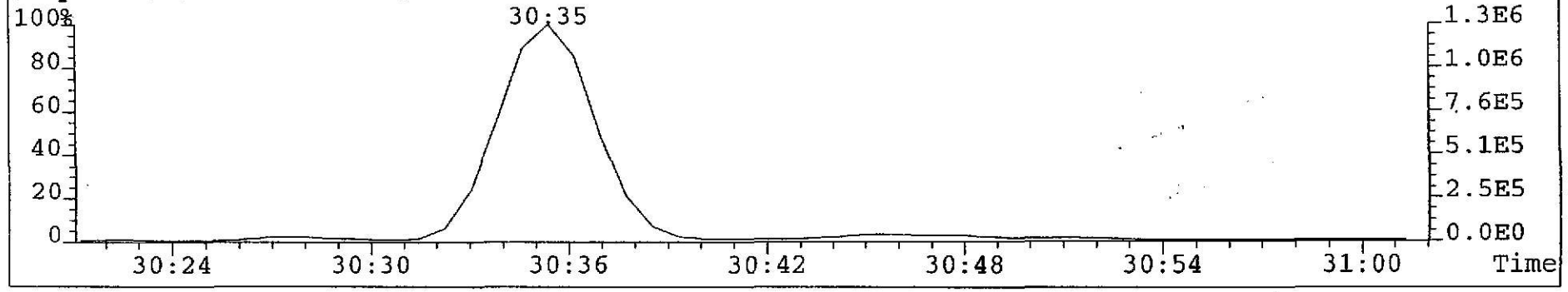
File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
339.8597 F:2 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»



File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
341.8567 F:2 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»

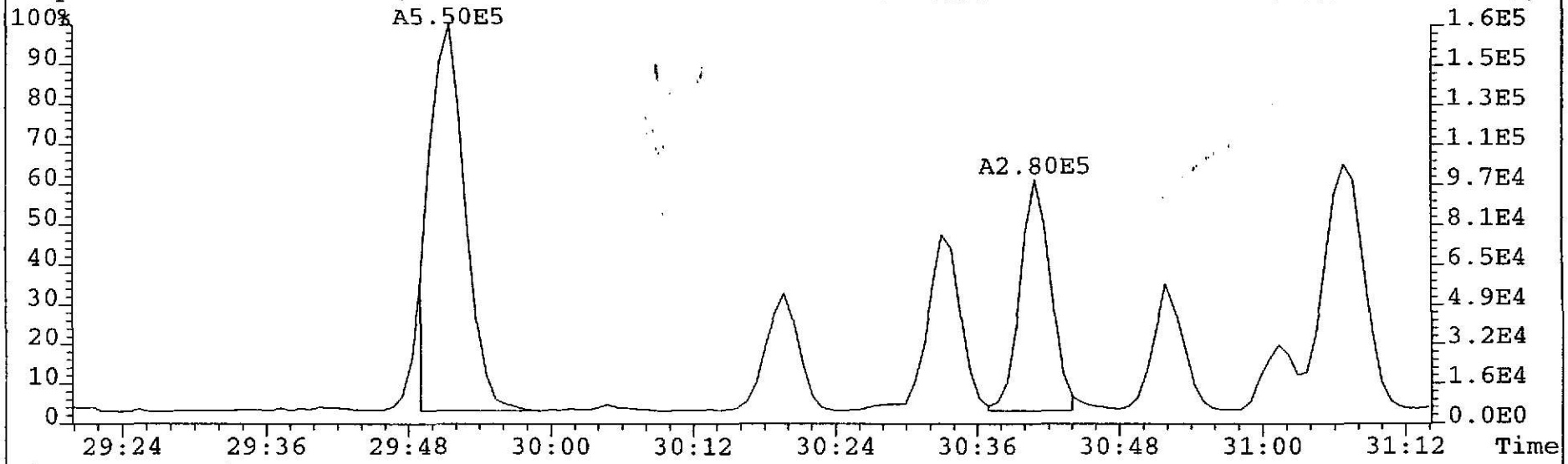


File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
353.8970 F:2 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»

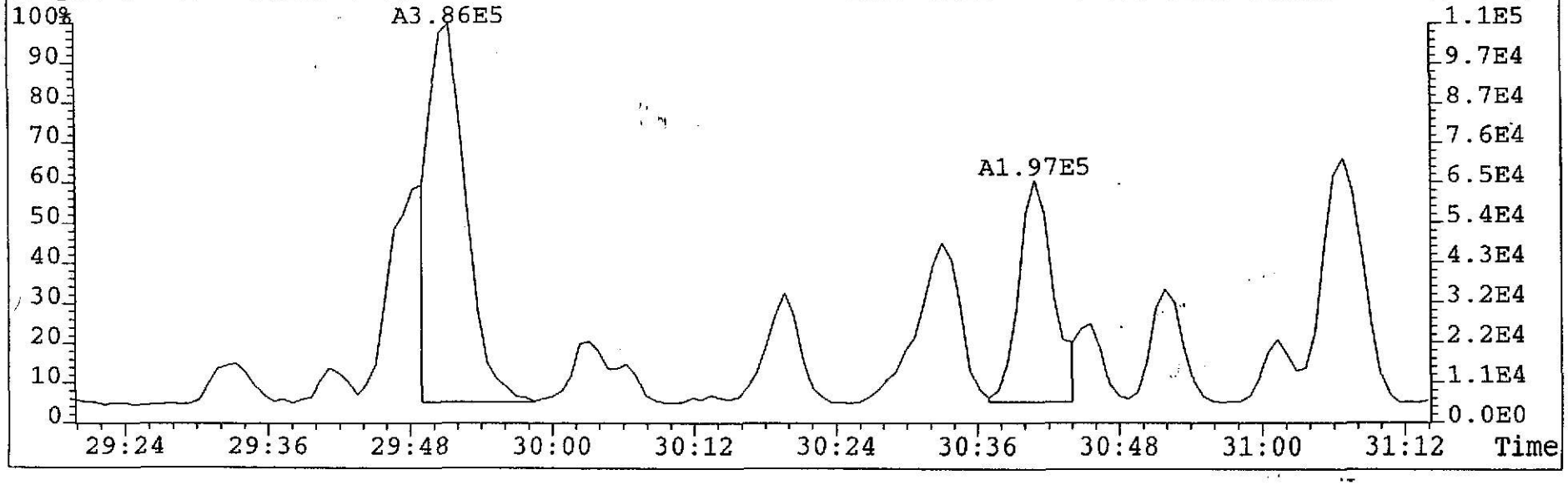


OEM 7/26/02

File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
355.8546 F:2 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»

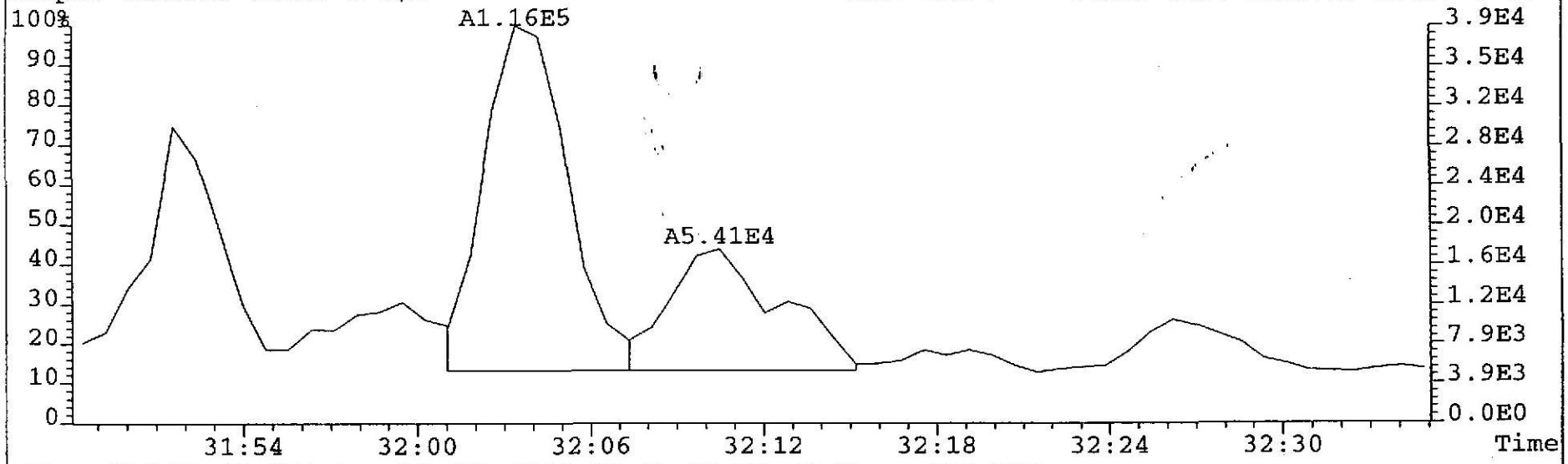


File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
357.8516 F:2 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»

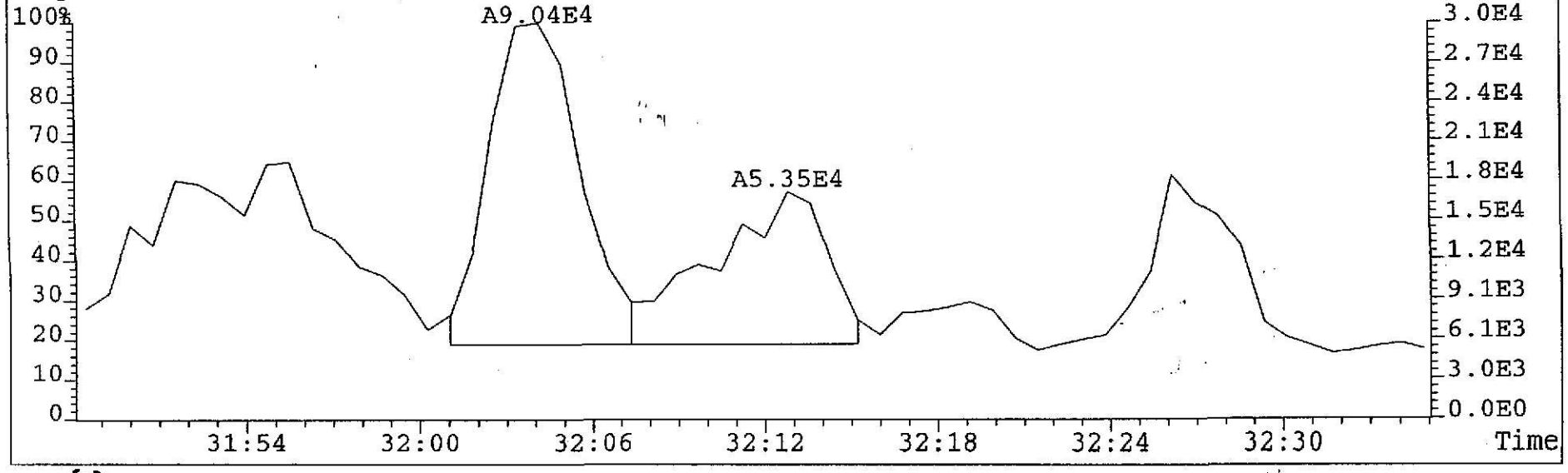


OEM 7/26/02

File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
355.8546 F:2 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»

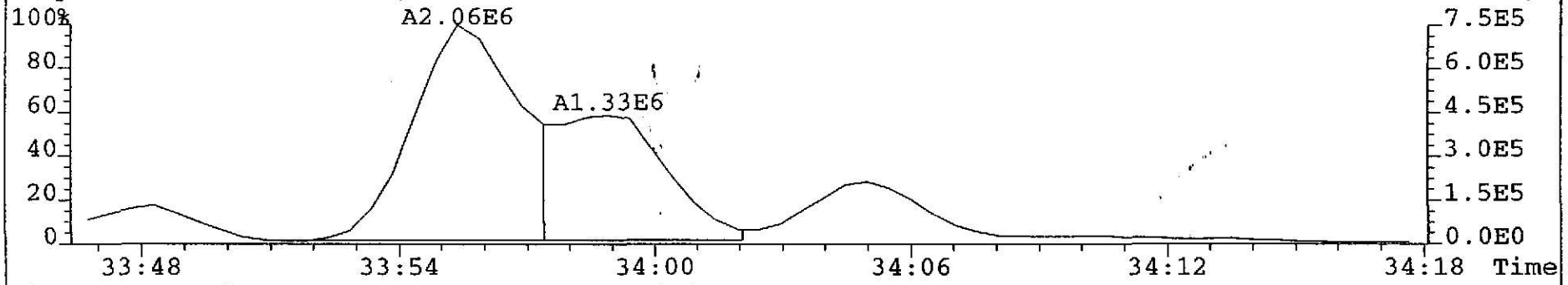


File:T023769 #1-924 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
357.8516 F:2 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»

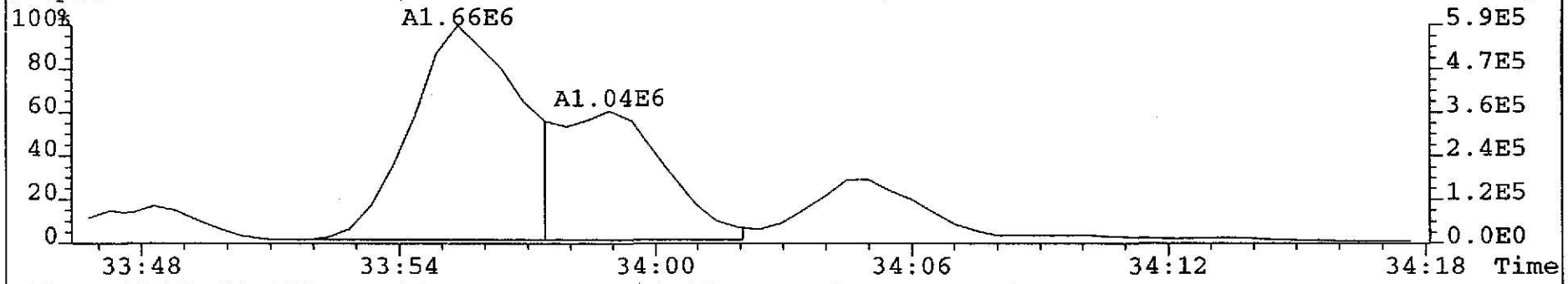


ABM 7/26/02

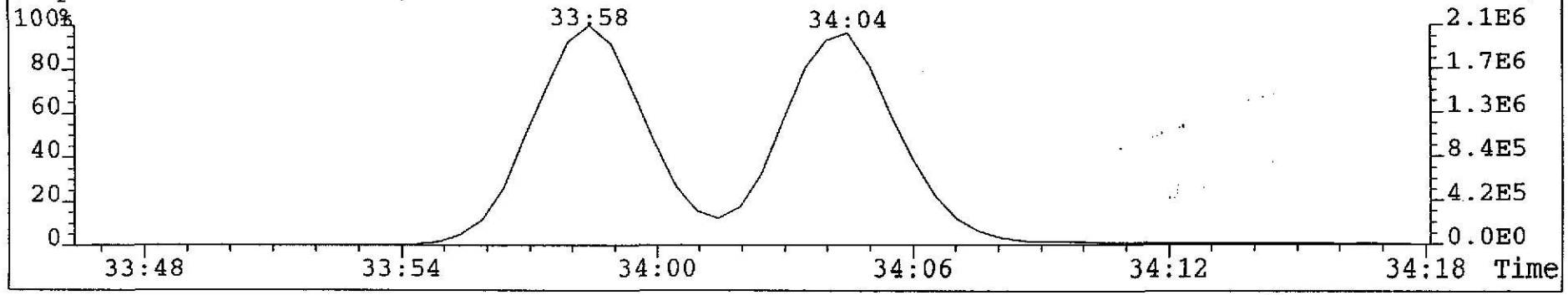
File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
373.8208 F:3 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»



File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
375.8178 F:3 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»

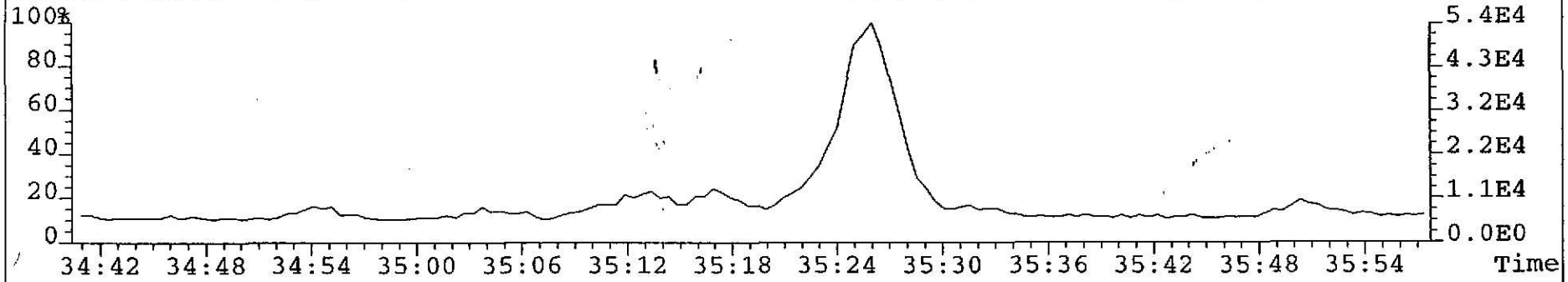


File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
385.8610 F:3 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»

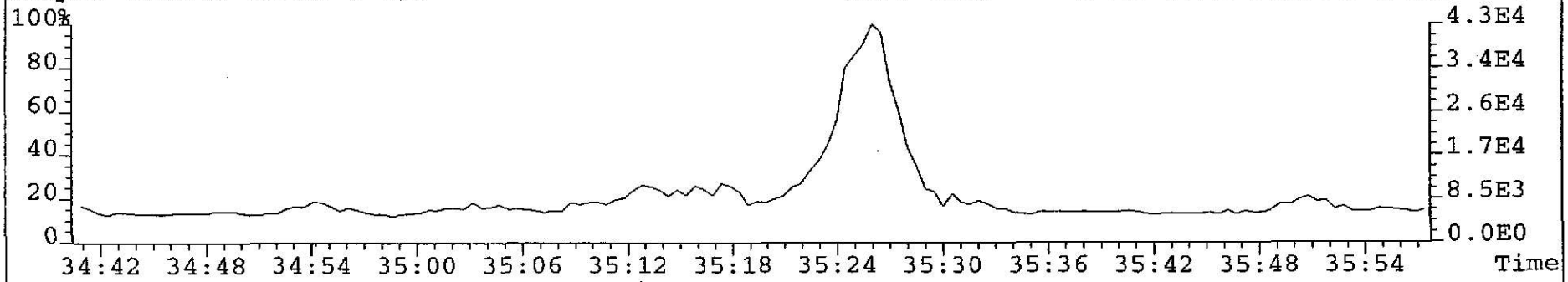


OBM 7/26/02

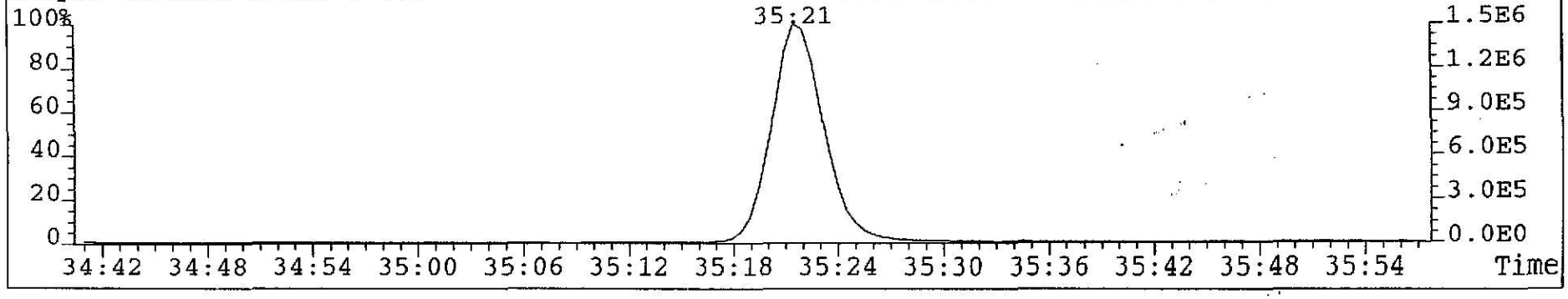
File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
373.8208 F:3 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»



File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
375.8178 F:3 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»

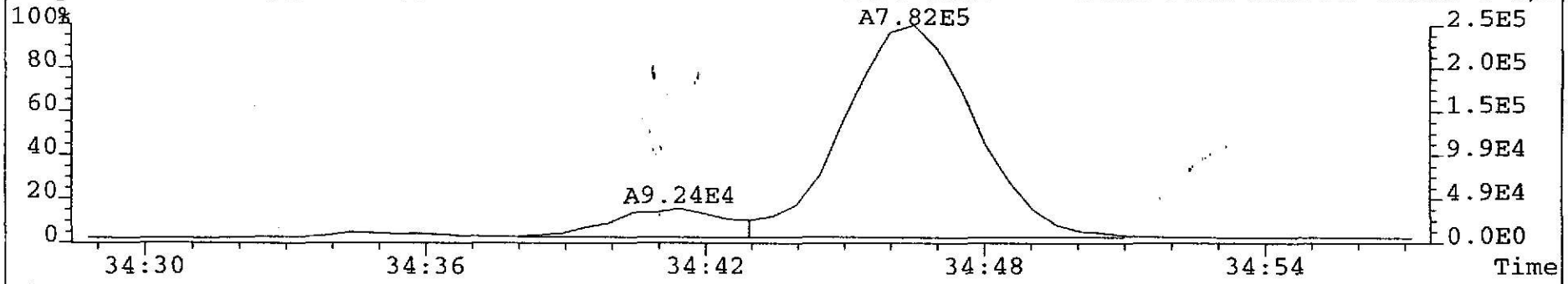


File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
385.8610 F:3 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»

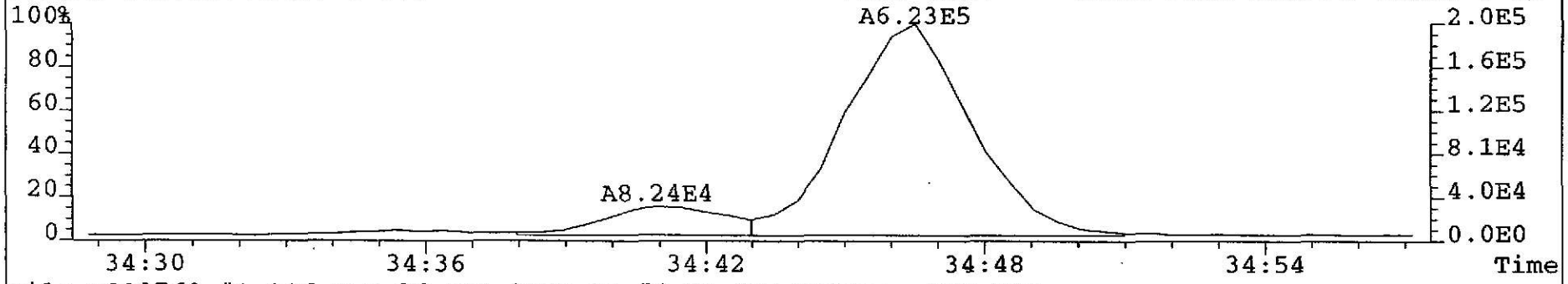


08M76602

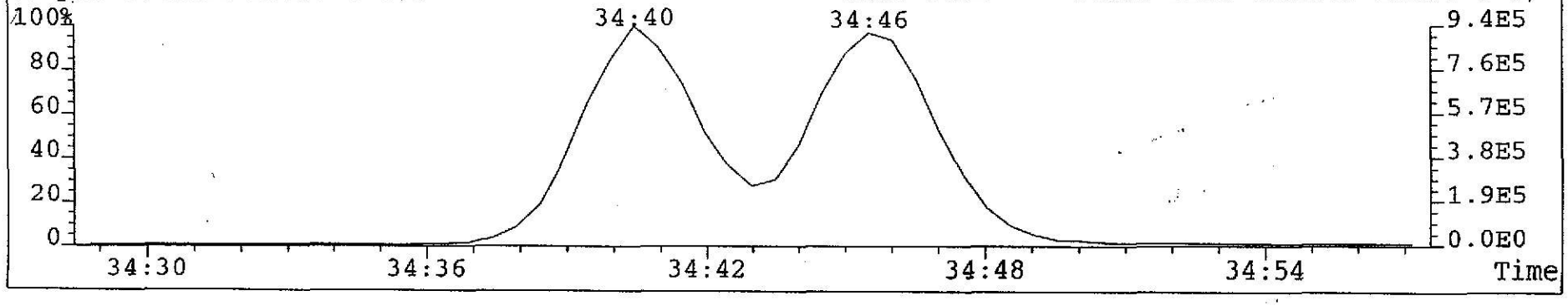
File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
389.8156 F:3 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»



File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
391.8127 F:3 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»



File:T023769 #1-386 Acq:26-JUL-2002 04:51:23 EI+ Voltage SIR 70T
403.8529 F:3 Exp:NDB5US
Sample Text:DF-DP159-0-0,5' INJ. TIME = 04:53 File Text:DF-DP159-0-0,»



TLI Project: **57930** 1613, Revision B, Tetra Only PCDD/PCDF Analysis (c)
Client Sample: **DF-DP159-0-0,5'** Analysis File: **P022712**

Client Project:	Kuhlman Electric				
Sample Matrix:	SOLID	Date Received:	07/20/2002	Spike File:	SPCONB2S
TLI ID:	331-18-7	Date Extracted:	07/23/2002	ICal:	PF56152
		Date Analyzed:	07/27/2002	ConCal:	P022705
Sample Size:	12.400 g	Dilution Factor:	n/a	% Moisture:	19.1
Dry Weight:	10.032 g	Blank File:	T023762	% Lipid:	n/a
GC Column:	DB-225	Analyst:	JMM	% Solids:	80.9

Analytes	Conc. (pg/g)	DL	Ratio	RT	RRT	Flags
2,3,7,8-TCDF	7.9		0.72	23:18	1.001	—

Internal Standard	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	RRT	Flags
$^{13}C_{12}$-2,3,7,8-TCDF	211	106	29%-140%	0.79	23:17	1.053	—

Recovery Standard	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.83	22:07	—

Data Reviewer: _____ 07/27/2002

CONB_PSR v1.00, LARS 6.25.05

Triangle Laboratories, Inc.®
2445 S. Alston Ave. • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Printed: 16:01 07/27/2002

Initial ....Date...

Data Review By: Ku 7/27

Channel specific noise levels computed from 'NL' heights.

Page No. 1 Listing of P022712B.dbf
07/27/2002 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						0.795-1.102			
304-306	DC	NL		Height			0.23	0.12	0.11				
	DC	SN		18:40	RO	1.50	0.70			0.802			
	DC	SN		18:47	RO	0.94	0.31			0.807			
	DC	SN		19:23		0.81	6.74			0.832			
	DC	SN		19:49	RO	1.93	0.85			0.851			
	DC	SN		19:51	RO	1.03	0.75			0.853			
	DC	SN		20:09	RO	4.00	0.35			0.865			
	DC	SN		20:19	RO	1.12	0.53			0.873			
	DC	SN		20:33	RO	0.08	1.34			0.883			
	DC	SN		20:49	RO	0.56	2.48			0.894			
	DC	SN		20:58	RO	0.49	2.52			0.901			
	DC	SN		21:25	RO	0.43	3.21			0.920			
				21:39		0.88	9.08	4.24	4.84	0.930			
	DC	SN		21:48	RO	1.06	0.99			0.936			
	DC	SN		22:26	RO	2.10	0.31			0.963			
	DC	SN		22:51	RO	1.80	0.14			0.981			
	DC	SN		22:59	RO	0.92	0.46			0.987			
	DC	SN		23:07		0.84	2.93			0.993			
MK				23:18		0.72	6.39	2.67	3.72	1.001	2378-TCDF		AN
	DC	SN		23:35		0.71	6.05			1.013			
				23:53		0.79	57.72	25.41	32.31	1.026			
	DC	SN		24:05	RO	1.89	0.26			1.034			
	DC	SN		24:09	RO	0.07	0.64			1.037			
	DC	SN		24:39	RO	1.06	0.35			1.059			
	DC	SN		24:46		0.89	1.74			1.064			
	DC	SN		25:00	RO	1.01	1.53			1.074			
	DC	SN		25:13		0.87	1.61			1.083			
	DC	SN		25:17	RO	2.00	0.21			1.086			
	DC	SN		25:23		0.87	0.43			1.090			
	DC	SN		25:28		0.76	0.30			1.094			
	DC	SN		25:38	RO	2.50	0.21			1.101			
	DC	WH		25:46		0.75	3.11			1.107			
	DC	WH		25:55	RO	2.11	0.59			1.113			
	DC	WH		25:58	RO	1.73	0.30			1.115			
	DC	WH		26:02		0.73	0.97			1.118			
	DC	WH		26:16		0.88	4.46			1.128			
304-306			3	Peaks			73.19						
13C12-TCDF				0.65-0.89						0.957-1.043			
316-318	DC	NL		Height			0.26	0.10	0.16				
	DC	WL		18:55	RO	0.59	1.80			0.812			
	DC	WL		19:35	RO	6.60	0.38			0.841			
	DC	WL		19:57	RO	5.13	0.49			0.857			
	DC	WL		20:01	RO	0.41	0.65			0.860			
	DC	WL		20:53	RO	0.93	0.52			0.897			
	DC	WL		21:26	RO	0.63	0.31			0.921			

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		21:48	RO	1.07	0.89			0.936			
	DC	WL		21:54		0.71	0.29			0.941			
	DC	SN		22:59	RO	0.21	0.58			0.987			
	DC	SN		23:02		0.78	0.16			0.989			
				23:17		0.79	144.43	63.58	80.85	1.000	13C12-2378-TCDF	IS0	
						Height	31.25	13.49	17.76				
	DC	SN		23:28	RO	0.40	0.63			1.008			
	DC	SN		23:31	RO	3.28	0.77			1.010			
	DC	SN		23:43	RO	1.94	0.53			1.019			
	DC	SN		23:53		0.89	3.04			1.026			
	DC	SN		24:01	RO	1.95	0.56			1.031			
	DC	SN		24:04		0.80	0.18			1.034			
	DC	WH		24:23	RO	0.35	0.23			1.047			
	DC	WH		24:27	RO	1.40	0.24			1.050			
	DC	WH		24:34	RO	1.02	0.97			1.055			
	DC	WH		25:26	RO	1.69	0.35			1.092			
	DC	WH		25:46	RO	0.50	0.21			1.107			
	DC	WH		25:53	RO	0.64	0.59			1.112			
	DC	WH		25:56	RO	0.20	0.53			1.114			
	DC	WH		26:10	RO	3.00	0.24			1.124			
	DC	WH		26:14	RO	1.29	0.39			1.127			
316-318			1	Peak			144.43						

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

TCDD						0.65-0.89				0.884-1.139			
320-322	DC	NL				Height	0.26	0.16	0.10				
	DC	SN		19:45		0.80	0.63			0.905			
	DC	SN		21:06		0.65	1.09			0.966			
	DC	SN		21:50	RO	1.08	2.23			1.000	2378-TCDD		AN
	DC	SN		22:03		0.81	0.67			1.010			
	DC	SN		22:24	RO	2.59	1.47			1.026			
	DC	SN		23:52	RO	0.15	0.70			1.093			
	DC	SN		23:56	RO	2.20	0.64			1.096			
	DC	SN		24:28		0.69	0.27			1.121			
	DC	SN		24:42	RO	0.29	0.40			1.131			
	DC	SN		24:50	RO	1.26	0.52			1.137			
	DC	WH		25:11	RO	0.19	0.50			1.153			
	DC	WH		25:14	RO	0.90	0.40			1.156			
320-322			0	Peaks			0.00						
37Cl-TCDD										0.908-1.092			
328	DC	NL				Height	0.08	0.08					
	DC	WL		19:18			0.07			0.884			
	DC	WL		19:22			0.46			0.887			
	DC	WL		19:35			9.14			0.897			
	DC	WL		19:46			1.09			0.905			
	DC	SN		19:51			0.53			0.909			
	DC	SN		20:02			0.54			0.918			
	DC	SN		20:15			2.33			0.927			
	DC	SN		20:29			1.82			0.938			
	DC	SN		20:36			0.09			0.944			

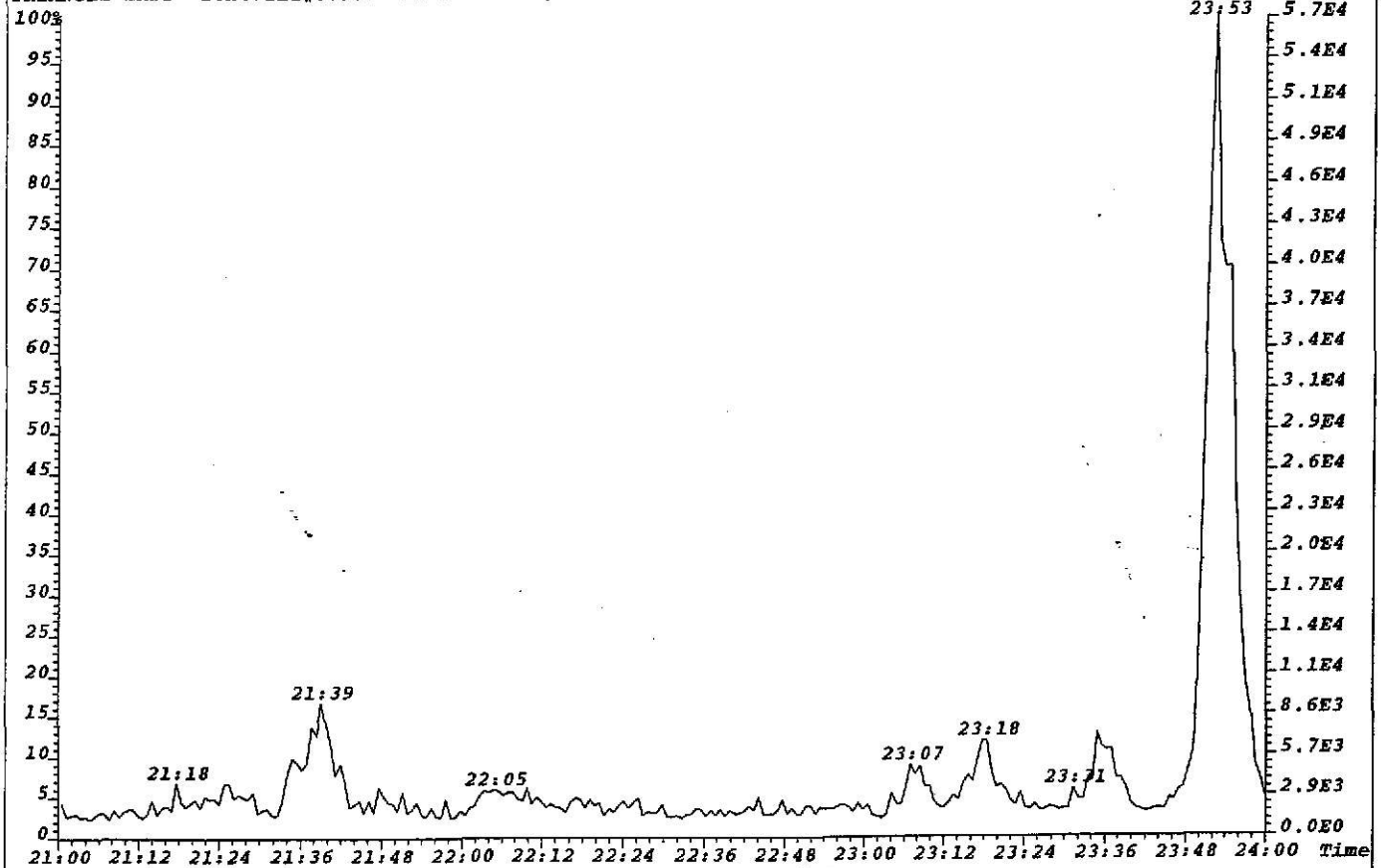
Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
		DC	SN	20:41			0.20			0.947			
		DC	SN	20:45			0.10			0.950			
		DC	SN	20:52			0.32			0.956			
		DC	SN	21:01			0.20			0.963			
		DC	SN	21:04			0.22			0.965			
		DC	SN	21:18			0.11			0.976			
		DC	SN	21:20			0.07			0.977			
		DC	SN	21:28			0.68			0.983			
		DC	SN	21:38			1.23			0.991			
				21:52			10.16	10.16		1.002	37Cl-TCDD	SUR1	
		DC	SN	22:00			0.19			1.008			
				22:09			10.69	10.69		1.015			
		DC	SN	22:21			0.46			1.024			
		DC	SN	22:24			0.13			1.026			
		DC	SN	22:26			0.16			1.027			
		DC	SN	22:36			0.19			1.035			
		DC	SN	22:41			0.17			1.039			
		DC	SN	22:51			0.11			1.047			
		DC	SN	23:18			0.11			1.067			
		DC	SN	23:31			0.04			1.077			
		DC	SN	23:38			0.13			1.082			
		DC	SN	23:44			0.11			1.087			
		DC	WH	23:53			0.19			1.094			
		DC	WH	24:04			110.41			1.102			
		DC	WH	24:14			0.28			1.110			
		DC	WH	24:23			0.13			1.117			
		DC	WH	24:26			0.08			1.119			
		DC	WH	24:34			0.17			1.125			
		DC	WH	24:48			0.11			1.136			
		DC	WH	24:51			0.16			1.138			
		DC	WH	24:56			0.12			1.142			
		DC	WH	24:58			0.46			1.144			
328			2	Peaks			20.85						
13C12-TCDD					0.65-0.89					0.908-1.092			
332-334		DC	NL		Height		0.34	0.24	0.10				
				21:50	0.80		87.31	38.68	48.63	1.000	13C12-2378-TCDD	IS1	
					Height		16.06	7.32	8.74				
				22:07	0.83		90.01	40.92	49.09	1.013	13C12-1234-TCDD	RS1	
		DC	SN	22:48	RO	1.50	0.35			1.044			
		DC	SN	23:44	RO	1.50	0.25			1.087			
		DC	WH	24:41	RO	6.60	0.38			1.131			
332-334			2	Peaks			177.32						

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

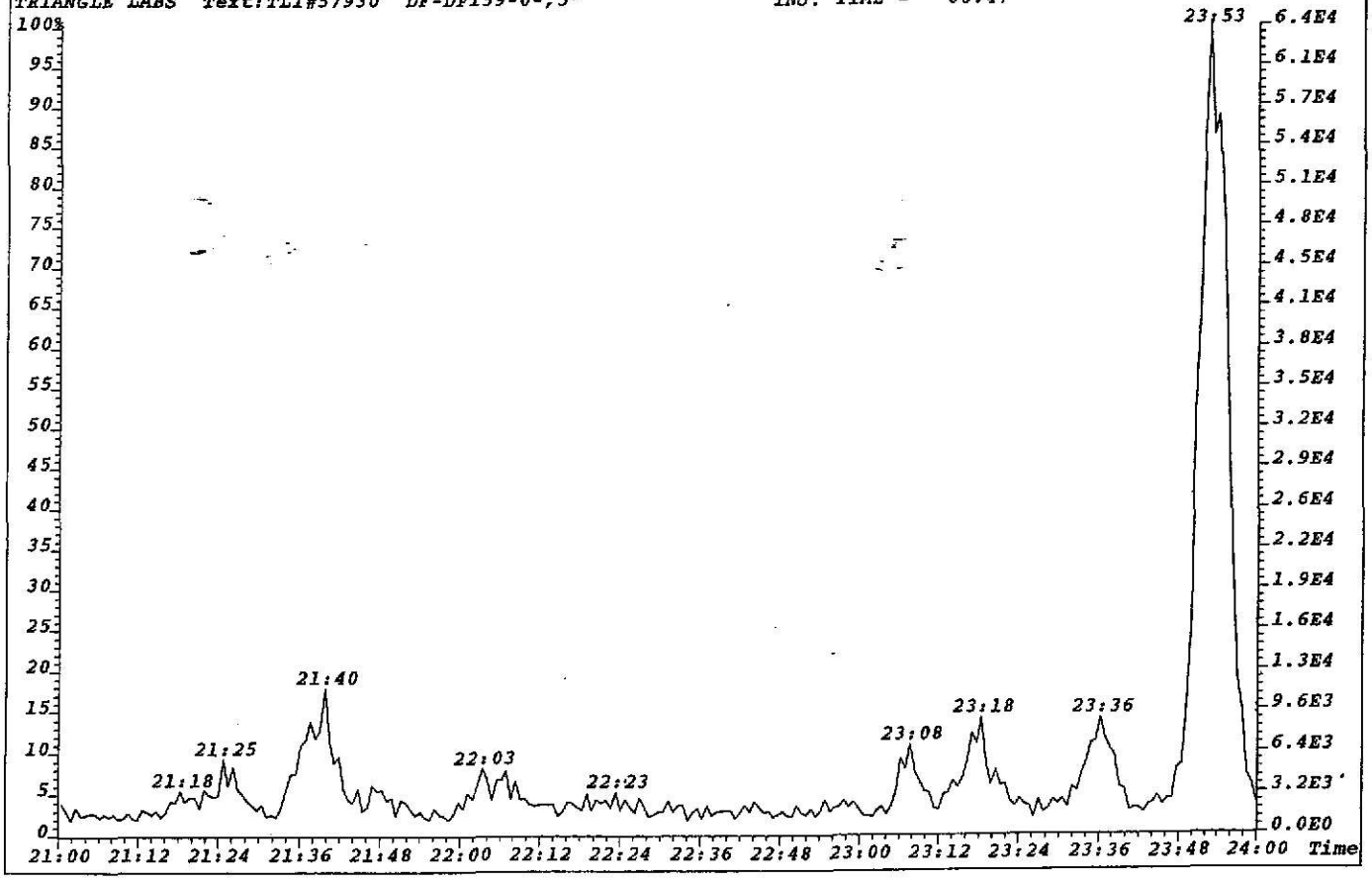
Column Description.....	"Why" Code Description.....	QC Log Desc.....
M_Z -Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT. -Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK -RO=Ratio Outside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

*** End of Report ***

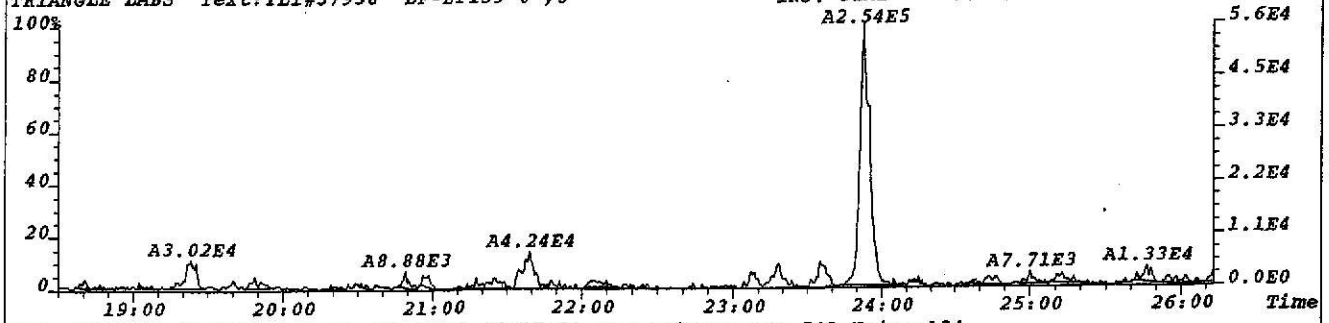
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P
303.9016 GC:DB225 Exp:none
TRIANGLE LABS Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47



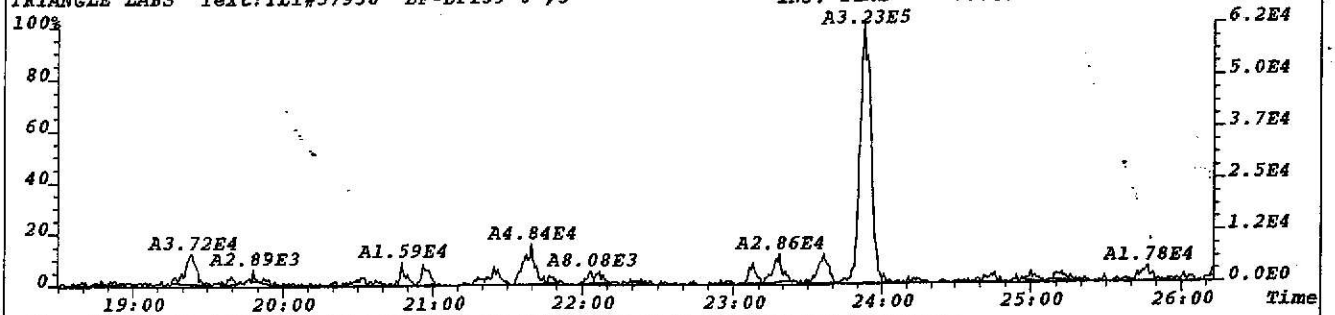
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P
305.8987 GC:DB225 Exp:none
TRIANGLE LABS Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47



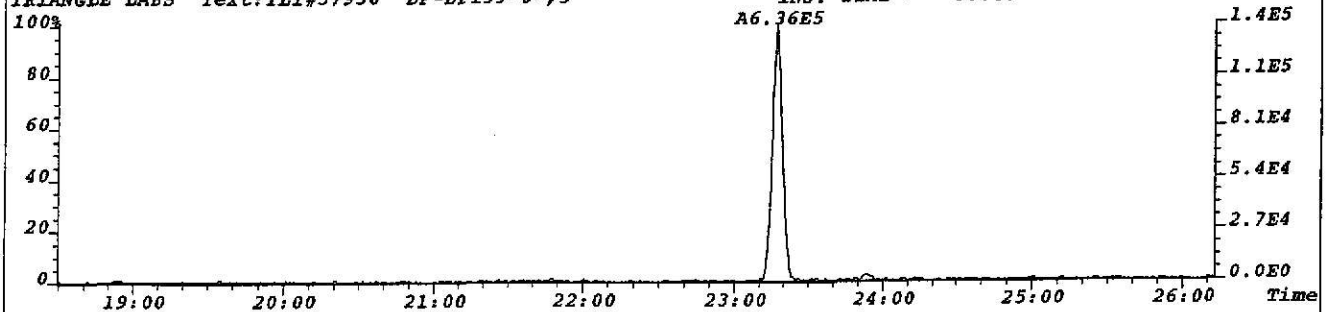
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P Noise:153
303.9016 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,612.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47



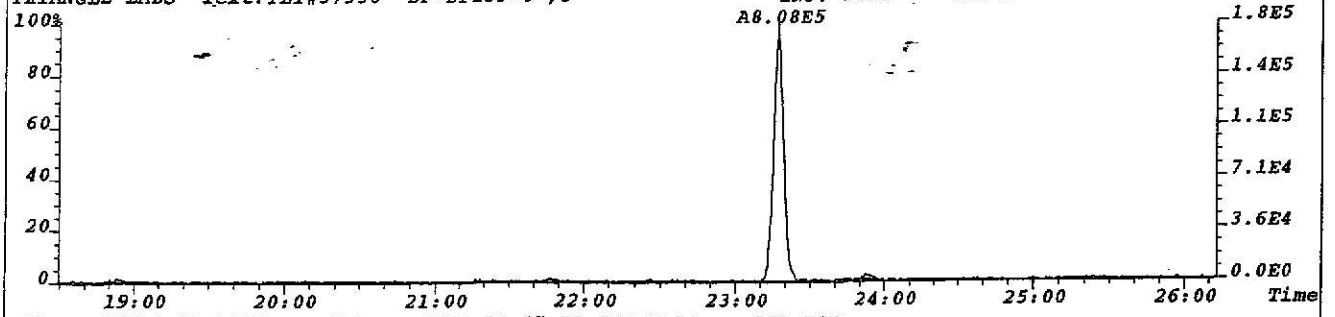
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P Noise:134
305.8987 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,536.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47



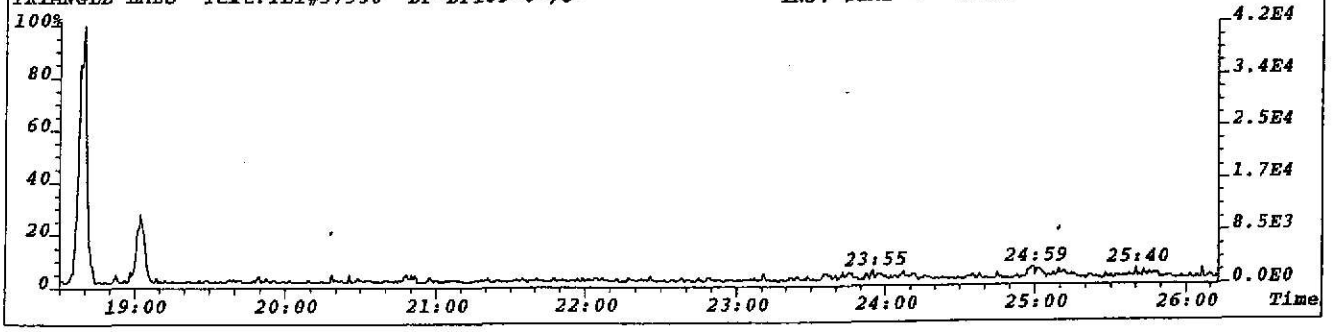
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P Noise:120
315.9419 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,480.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47



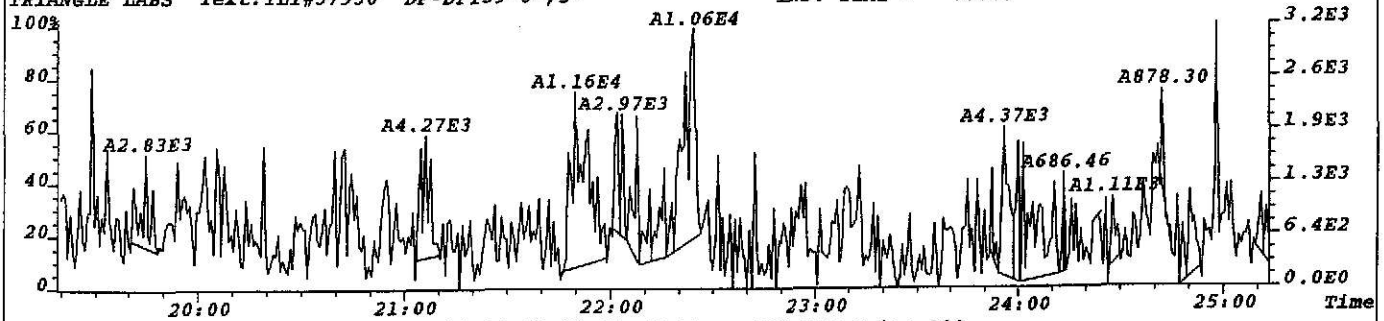
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P Noise:195
317.9389 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,780.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47



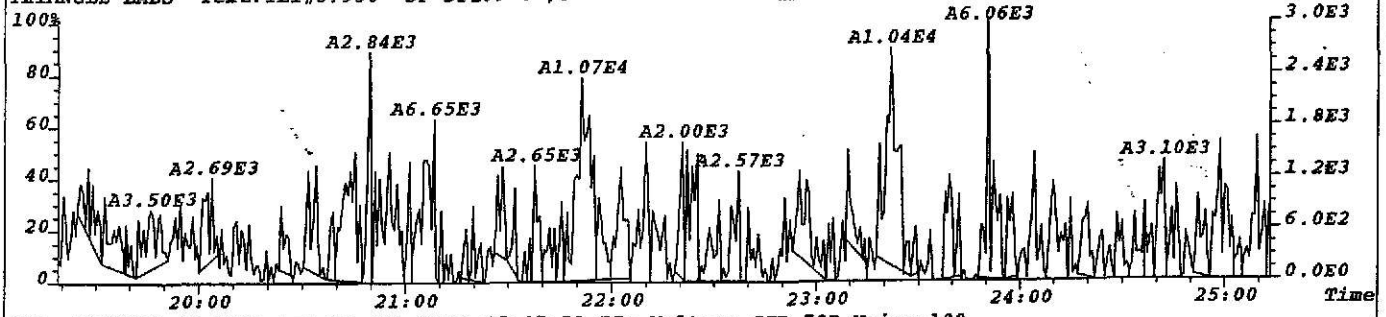
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P
375.8364 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47



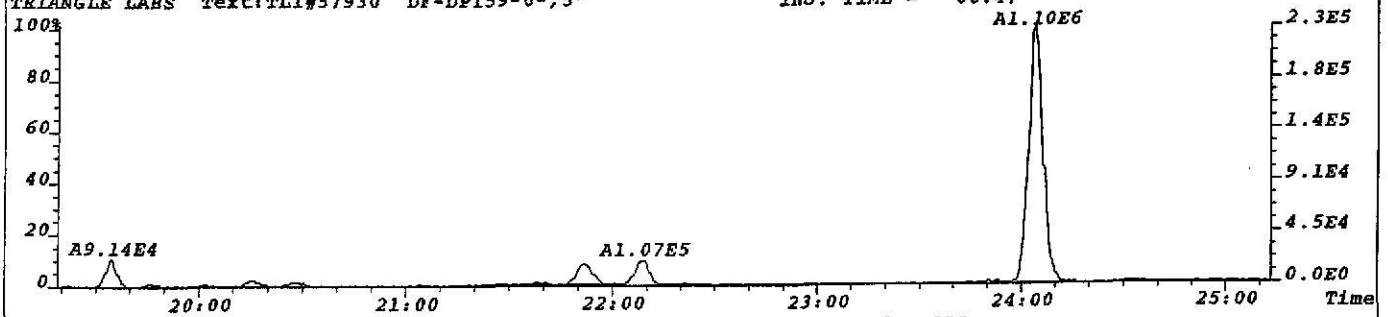
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P Noise:202
319.8965 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,808.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47



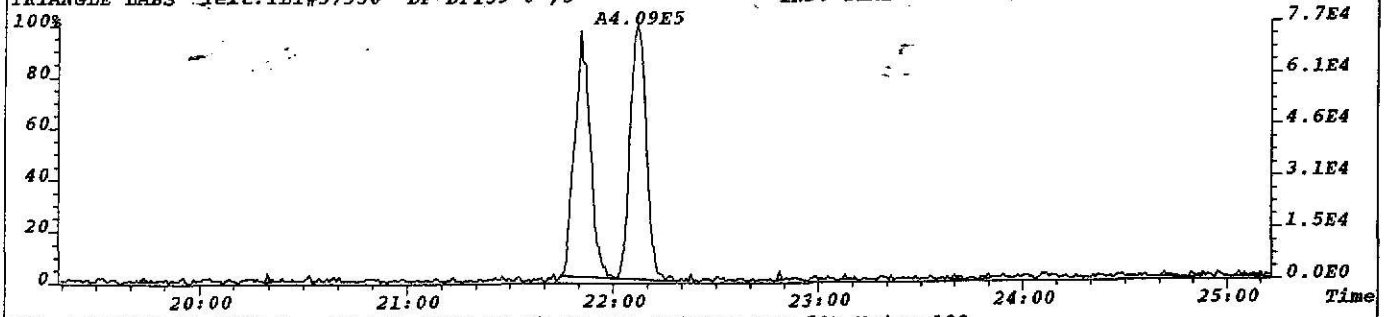
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P Noise:120
321.8936 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,480.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47



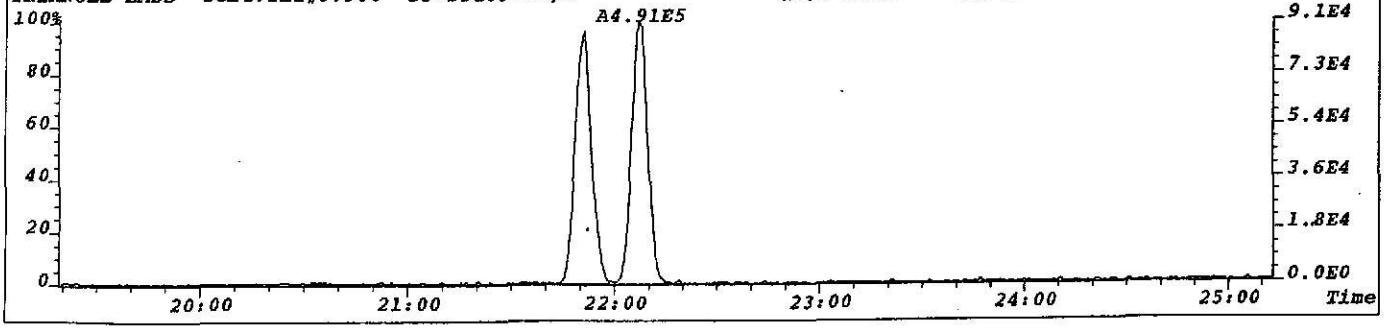
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P Noise:100
327.8847 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,400.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47



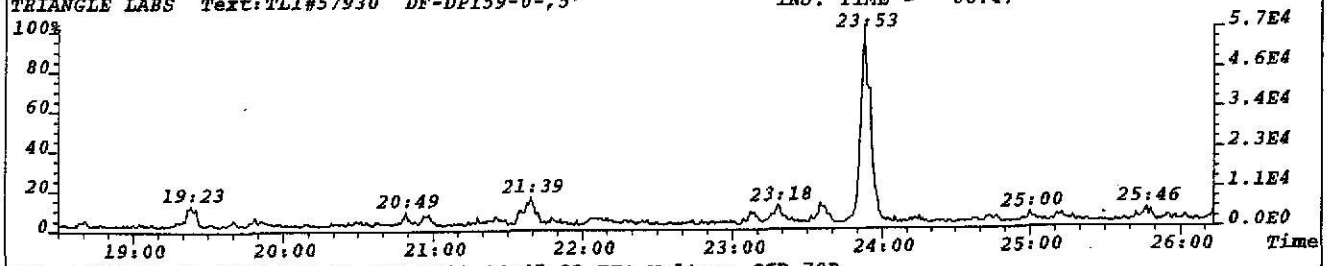
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P Noise:299
331.9368 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,1196.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47



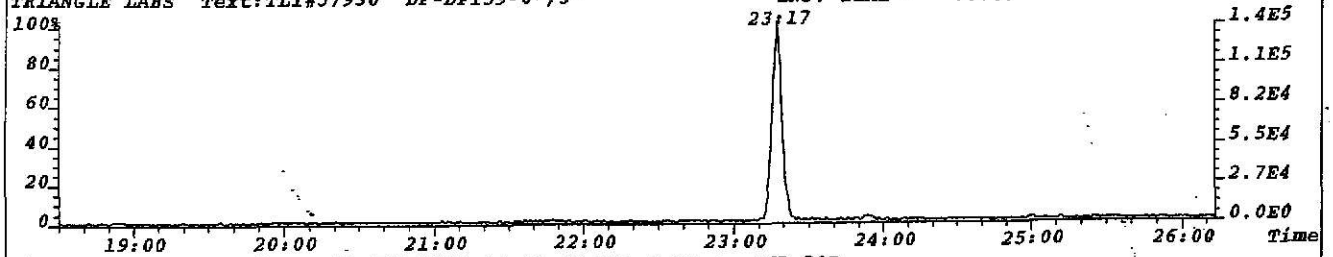
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P Noise:128
333.9338 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,512.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47



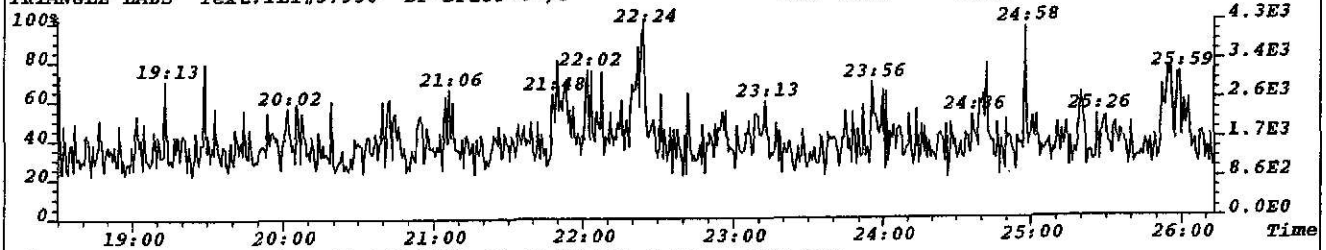
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P
303.9016 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47



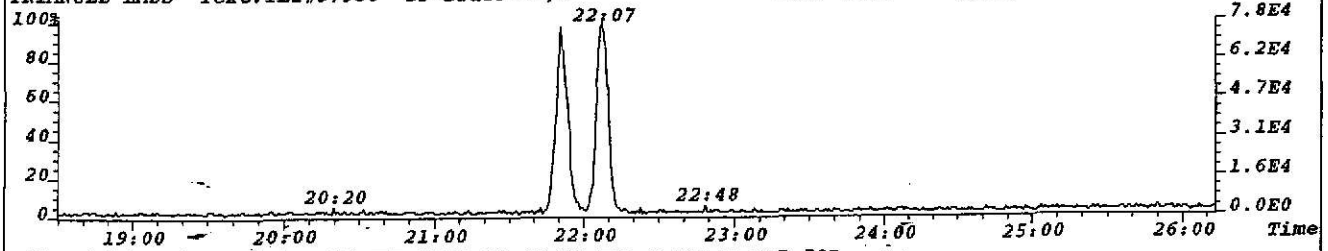
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P
315.9419 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47



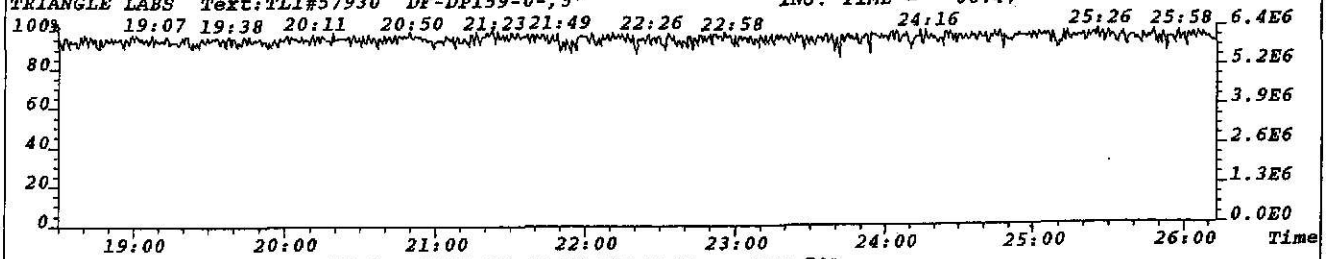
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P
319.8965 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47



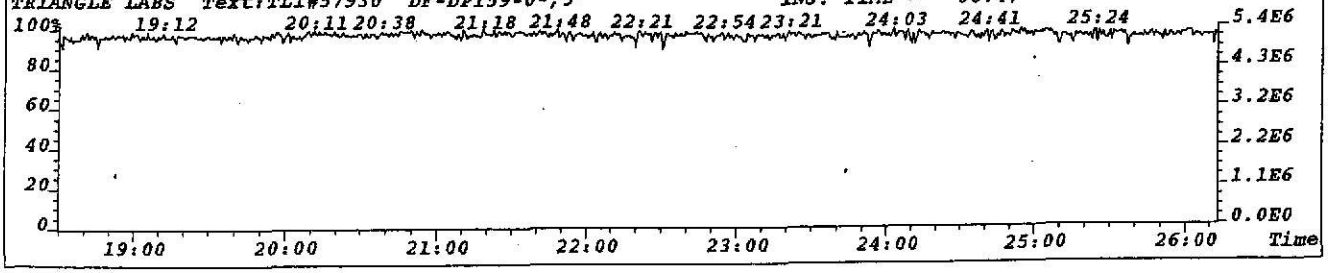
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P
331.9368 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47



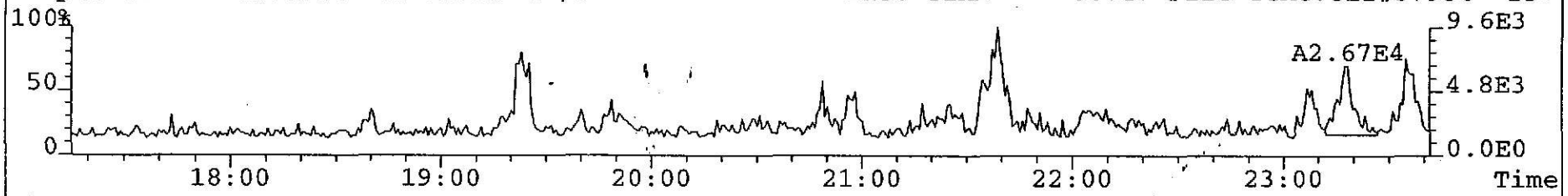
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P
292.9825 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47



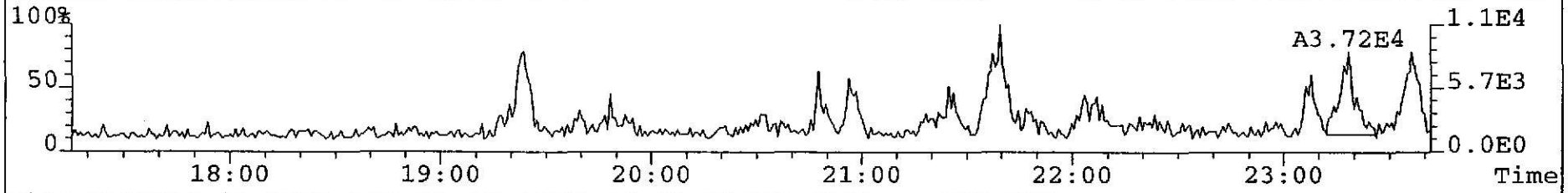
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P
330.9792 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47



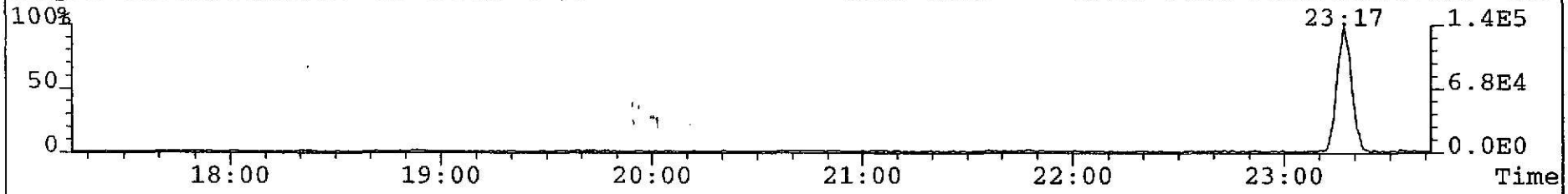
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P
303.9016 Exp:DB225
Sample Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47 File Text:TLI#57930 DF»



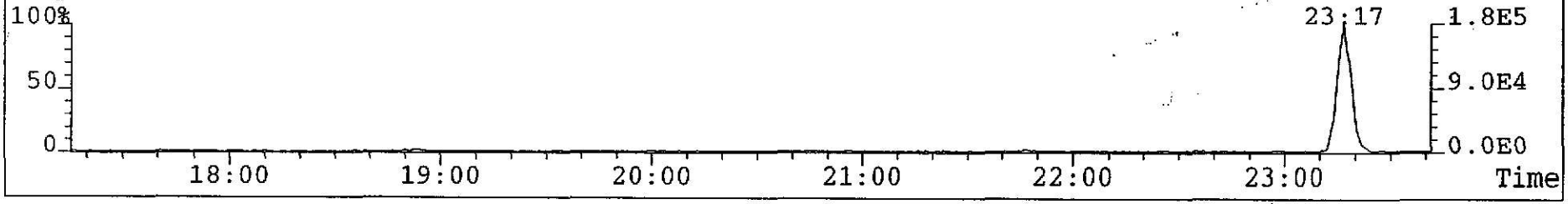
File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P
305.8987 Exp:DB225
Sample Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47 File Text:TLI#57930 DF»



File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P
315.9419 Exp:DB225
Sample Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47 File Text:TLI#57930 DF»



File:P022712 #1-3025 Acq:27-JUL-2002 06:47:39 EI+ Voltage SIR 70P
317.9389 Exp:DB225
Sample Text:TLI#57930 DF-DP159-0-,5' INJ. TIME = 06:47 File Text:TLI#57930 DF»



Kw 7/27/02

Martin & Slagle

TLI Project: 57930 — 1613, Revision B PCDD/PCDF Analysis (c)

Client Sample: DF-DP159-0.5'-1' — Analysis File: T023770

Client Project:	Kuhlman Electric				
Sample Matrix:	SOLID	Date Received:	07/20/2002	Spike File:	SP161B2S
TLI ID:	331-18-8	Date Extracted:	07/23/2002	ICal:	TF5612B
		Date Analyzed:	07/26/2002	ConCal:	TB23758
Sample Size:	12.700 g	Dilution Factor:	n/a	% Moisture:	20.8
Dry Weight:	10.058 g	Blank File:	T023762	% Lipid:	n/a
GC Column:	DB-5	Analyst:	VSC	% Solids:	79.2

Analytes	Conc. (pg/g)	DL	Ratio	RT	RRT	Flags
2,3,7,8-TCDD	1.1		0.69	27:24	1.000	—
1,2,3,7,8-PeCDD	0.97		1.71	31:35	1.001	J
1,2,3,4,7,8-HxCDD	0.49		1.17	34:40	1.000	J
1,2,3,6,7,8-HxCDD	3.3		1.22	34:46	1.000	J
1,2,3,7,8,9-HxCDD	2.6		1.38	35:05	1.010	J
1,2,3,4,6,7,8-HpCDD	17.3		1.02	38:06	1.000	—
1,2,3,4,6,7,8,9-OCDD	876		0.85	41:54	1.000	—
2,3,7,8-TCDF	ND	0.2				—
1,2,3,7,8-PeCDF	ND	0.2				—
2,3,4,7,8-PeCDF	ND	0.8				—
1,2,3,4,7,8-HxCDF	3.6		1.21	33:58	1.000	J
1,2,3,6,7,8-HxCDF	ND	2.0				—
2,3,4,6,7,8-HxCDF	2.6		1.16	34:34	1.000	J
1,2,3,7,8,9-HxCDF	ND	0.2				—
1,2,3,4,6,7,8-HpCDF	152		1.07	37:02	1.000	—
1,2,3,4,7,8,9-HpCDF	ND	1.4				—
1,2,3,4,6,7,8,9-OCDF	38.4		0.90	42:06	1.005	—

Totals	Conc. (pg/g)	Number	DL	Flags
Total TCDD	1.1	1		—
Total PeCDD	5.9	5		—
Total HxCDD	26.8	7		—
Total HpCDD	37.6	2		—
Total TCDF	7.1	2		—
Total PeCDF	24.4	6		—
Total HxCDF	74.0	7		—
Total HpCDF	241	2		—

161B_PSR v2.04, LARS 6.25.05

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Printed: 11:44 07/27/2002

TLI Project: 57930
Client Sample: DF-DP159-0.5'-1'

1613, Revision B PCDD/PCDF Analysis (c)
Analysis File: T023770

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	RRT	Flags
$^{13}C_{12}$-2,3,7,8-TCDD	132	66.4	25%-164%	0.82	27:24	1.007	—
$^{13}C_{12}$-1,2,3,7,8-PeCDD	151	75.8	25%-181%	1.47	31:34	1.160	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	165	82.9	32%-141%	1.20	34:39	0.988	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	183	91.8	28%-130%	1.21	34:45	0.991	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	179	90.2	23%-140%	1.02	38:05	1.086	—
$^{13}C_{12}$-1,2,3,4,6,7,8,9-OCDD	277	69.7	17%-157%	0.86	41:53	1.194	—
$^{13}C_{12}$-2,3,7,8-TCDF	152	76.5	24%-169%	0.75	26:42	0.981	—
$^{13}C_{12}$-1,2,3,7,8-PeCDF	149	74.8	24%-185%	1.48	30:34	1.123	—
$^{13}C_{12}$-2,3,4,7,8-PeCDF	151	75.8	21%-178%	1.49	31:15	1.148	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	174	87.7	26%-152%	0.56	33:57	0.968	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	201	101	26%-123%	0.52	34:03	0.971	—
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	200	101	28%-136%	0.51	34:33	0.985	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	192	96.7	29%-147%	0.51	35:21	1.008	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	197	99.2	28%-143%	0.44	37:02	1.056	—
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	182	91.7	26%-138%	0.43	38:37	1.101	—

Cleanup Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	RRT	Flags
$^{37}Cl_4$-2,3,7,8-TCDD	13.8	69.3	35%-197%	27:24	1.007	—

Recovery Standards	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.81	27:13	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.21	35:04	—

Data Reviewer: KL 07/27/2002

161B_PSR v2.04, LARS 6.25.05

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Printed: 11:44 07/27/2002

Martin & Slagle

TLI Project: 57930
Client Sample: DF-DP159-0.5'-1'

Toxicity Equivalents Report
Analysis File: T023770

Client Project:	Kuhlman Electric				
Sample Matrix:	SOLID	Date Received:	07/20/02	Spike File:	SP161B2S
TLI ID:	331-18-8	Date Extracted:	07/23/02	ICal:	TF5612B
		Date Analyzed:	07/26/02	ConCal:	TB23758
Sample Size:	12.700 g	Dilution Factor:	1	% Moisture:	20.8
Dry Weight:	10.058 g	Blank File:	T023762	% Lipid:	n/a
GC Column:	DB-5	Analyst:	VSC	% Solids:	79.2

Analytes	Conc. (pg/g)		TEF		Equivalent
2,3,7,8-TCDD	1.1	x	1.	=	1.1
1,2,3,7,8-PeCDD	0.97	x	0.5	=	0.49
1,2,3,4,7,8-HxCDD	0.49	x	0.1	=	0.049
1,2,3,6,7,8-HxCDD	3.3	x	0.1	=	0.33
1,2,3,7,8,9-HxCDD	2.6	x	0.1	=	0.26
1,2,3,4,6,7,8-HpCDD	17.3	x	0.01	=	0.173
1,2,3,4,6,7,8,9-OCDD	876	x	0.001	=	0.876
TOTAL PCDD					3.3
2,3,7,8-TCDF	{0.2}	x	0.1	=	0.02
1,2,3,7,8-PeCDF	{0.2}	x	0.05	=	0.01
2,3,4,7,8-PeCDF	{0.8}	x	0.5	=	0.4
1,2,3,4,7,8-HxCDF	3.6	x	0.1	=	0.36
1,2,3,6,7,8-HxCDF	{2.0}	x	0.1	=	0.20
2,3,4,6,7,8-HxCDF	2.6	x	0.1	=	0.26
1,2,3,7,8,9-HxCDF	{0.2}	x	0.1	=	0.02
1,2,3,4,6,7,8-HpCDF	152	x	0.01	=	1.52
1,2,3,4,7,8,9-HpCDF	{1.4}	x	0.01	=	0.014
1,2,3,4,6,7,8,9-OCDF	38.4	x	0.001	=	0.0384
TOTAL PCDF					2.8

Total EPA TEFs, 1989a: 6.1 pg/g

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

ORY_TEF v1.08, MILES 4.22.16

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Printed: 22:18 07/29/02

Initial ....Date...

Data Review By: CEM 7/26/02

Calculated Noise Height: 0.07

Page No. 1 Listing of T023770B.dbf
07/26/2002 Matched GC Peaks / Ratio / Ret. Time

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.
TCDF				0.65-0.89						0.880-1.070			
304-306		DC	NL			Height	0.22	0.14	0.08				
		DC	SN	25:42	RO	1.02	1.01			0.963			
	D	D	SN	26:18		0.84	1.42			0.985			
	D	D	SN	26:44		0.79	1.40			1.001	2378-TCDF	AN	
				27:34		0.73	2.71	1.14	1.57	1.032			J
				27:53		0.74	21.61	9.20	12.41	1.044			
304-306			2	Peaks			24.32						
13C12-TCDF				0.65-0.89						0.944-1.131			
316-318		DC	NL			Height	0.17	0.08	0.09				
				25:41	RO	0.96	6.16	3.01	3.15	0.962			
				26:00		0.65	2.18	0.86	1.32	0.974			
				26:18		0.80	5.54	2.46	3.08	0.985			
				26:42		0.75	640.66	274.48	366.18	1.000	13C12-2378-TCDF	ISO	
						Height	160.10	68.18	91.92				
				27:11	RO	0.92	2.63	1.26	1.37	1.018			
				27:23	RO	1.12	1.82	0.96	0.86	1.026			
316-318			6	Peaks			658.99						

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

TCDD				0.65-0.89						0.905-1.042			
320-322		DC	NL			Height	0.12	0.06	0.06				
		DC	SN	25:00	RO	0.61	0.37			0.912	1368-TCDD	AN	
		DC	SN	25:40	RO	0.32	0.50			0.937			
				26:15	RO	0.44	1.35	0.41	0.94	0.958			
		DC	SN	26:29	RO	1.32	0.51			0.967			
		DC	SN	26:42	RO	1.58	0.62			0.974			
	M			27:24		0.69	2.87	1.17	1.70	1.000	2378-TCDD	AN	
		DC	SN	27:35	RO	1.44	0.39			1.007			
		DC	SN	27:44		0.79	0.50			1.012			
		DC	SN	27:50	RO	1.92	0.35			1.016			
	D	D	SN	27:57	RO	1.13	0.49			1.020			
		DC	WH	28:42	RO	1.09	0.23			1.047			
320-322			2	Peaks			4.22						
37Cl-TCDD										0.927-1.073			
328		DC	NL			Height	0.08	0.08					
				26:03			7.57	7.57		0.951			
		DC	SN	26:12			0.26			0.956			
		DC	SN	26:23			0.16			0.963			
		DC	SN	26:36			0.14			0.971			
		DC	SN	26:40			0.07			0.973			
		DC	SN	26:43			0.08			0.975			
		DC	SN	26:47			0.11			0.977			
		DC	SN	26:58			0.23			0.984			

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	27:06			0.14			0.989			
				27:24			48.97	48.97		1.000	37Cl-TCDD	CLS	
				27:46			24.12	24.12		1.013			
	DC		SN	28:00			0.30			1.022			
	DC		SN	28:12			0.11			1.029			
	DC		SN	28:17			0.31			1.032			
	DC		SN	28:32			0.12			1.041			
				28:41			0.74	0.74		1.047			
	DC		SN	28:49			0.15			1.052			
328			4	Peaks			81.40						
13C12-TCDD				0.65-0.89						0.920-1.066			
332-334	DC		NL			Height	0.37	0.26	0.11				
	DC		SN	26:16	RO	2.00	1.83			0.959			
				27:13		0.81	639.12	285.57	353.55	0.993	13C12-1234-TCDD	RS1	
				27:24		0.82	479.01	216.21	262.80	1.000	13C12-2378-TCDD	IS1	
						Height	119.83	53.07	66.76				
				27:47	RO	2.95	3.83	2.86	0.97	1.014			
				27:54	RO	2.73	2.50	1.83	0.67	1.018			
	DC		SN	28:28	RO	3.04	1.98			1.039			
332-334			4	Peaks			1,124.46						

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

PeCDF				1.32-1.78						0.911-1.036			
340-342	DC		NL			Height	0.15	0.06	0.09				
				28:38	RO	1.21	5.58	3.05	2.53	0.916			
A				28:54	RO	1.14	1.95	1.04	0.91	0.925			
D	D		SN	29:18		1.42	0.58			0.938			
	DC		SN	29:29	RO	0.75	0.93			0.943			
				29:45		1.33	7.91	4.52	3.39	0.952			J
				29:53		1.44	18.54	10.94	7.60	0.956			
M				30:05		1.50	17.35	10.40	6.95	0.963			
				30:28		1.47	20.66	12.31	8.35	0.975			
D	D		SN	30:35		1.44	1.10			1.001	12378-PeCDF	AN	
				30:50	RO	1.07	2.21	1.14	1.07	0.987			
				31:15	RO	1.18	2.60	1.41	1.19	1.000	23478-PeCDF	AN	
				31:26		1.58	2.73	1.67	1.06	1.006			J
	DC		SN	31:34	RO	0.82	0.60			1.010			
	DC		SN	31:41	RO	1.29	0.39			1.014			
				32:04		1.58	10.39	6.36	4.03	1.026			J
	DC		WH	32:40		1.50	1.20			1.045			
340-342			10	Peaks			89.92						
13C12-PeCDF				1.32-1.78						0.807-1.127			
352-354	DC		NL			Height	0.13	0.06	0.07				
				29:44		1.46	7.81	4.64	3.17	0.951			
				30:11		1.49	6.89	4.12	2.77	0.966			
				30:34		1.48	555.29	331.23	224.06	1.000	13C12-PeCDF 123	IS2	
						Height	158.09	93.93	64.16				
				30:50		1.33	10.96	6.25	4.71	0.987			
				31:15		1.49	574.35	343.71	230.64	1.000	13C12-PeCDF 234	IS3	
						Height	168.34	101.92	66.42				

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.
				31:34	RO	4.67	4.59	3.78	0.81	1.010			
				32:12		1.55	7.31	4.44	2.87	1.030			
352-354			7	Peaks			1,167.20						

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

PeCDD						1.32-1.78				0.940-1.021			
356-358		DC	NL			Height	0.14	0.08	0.06				
	D	D	WL	29:42	RO	0.82	0.40			0.941			
				29:50	RO	1.11	6.13	3.22	2.91	0.945			
		DC	SN	30:07	RO	0.86	0.13			0.954			
	M			30:18		1.65	1.22	0.76	0.46	0.960			J
				30:31	RO	1.28	2.58	1.45	1.13	0.967			
				30:40		1.48	3.18	1.90	1.28	0.971			J
				30:52		1.48	1.71	1.02	0.69	0.978			J
				31:07		1.55	4.36	2.65	1.71	0.986			J
		DC	SN	31:23	RO	0.07	3.60			0.994			
				31:35		1.71	2.03	1.28	0.75	1.001	12378-PeCDD	AN	J
				31:43	RO	0.97	1.91	0.94	0.97	1.005			
	D	D	SN	31:51	RO	1.83	0.51			1.009			
				32:03	RO	1.25	1.24	0.69	0.55	1.015			
		DC	WH	32:26	RO	0.89	1.02			1.027			
356-358			9	Peaks			24.36						
13C12-PeCDD						1.32-1.78				0.735-1.052			
368-370		DC	NL			Height	0.15	0.08	0.07				
				30:31	RO	1.87	1.32	0.86	0.46	0.967			
				30:39		1.70	2.27	1.43	0.84	0.971			
				30:50		1.55	1.20	0.73	0.47	0.977			
		DC	SN	31:16	RO	3.10	0.86			0.990			
				31:34		1.47	402.43	239.35	163.08	1.000	13C12-PeCDD 123	IS4	
						Height	119.13	70.85	48.28				
				32:04	RO	0.48	0.62	0.20	0.42	1.016			
		DC	SN	32:13	RO	0.58	0.52			1.021			
368-370			5	Peaks			407.84						

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

HxCDF						1.05-1.43				0.929-1.007			
374-376		DC	NL			Height	0.29	0.16	0.13				
				33:00		1.28	24.50	13.77	10.73	0.934			
				33:09		1.25	76.95	42.73	34.22	0.938			
				33:16	RO	0.92	2.84	1.36	1.48	0.941			
				33:26		1.38	2.59	1.50	1.09	0.946			J
				33:36		1.26	102.24	56.91	45.33	0.950			
	NM			33:55		1.27	15.51	8.69	6.82	0.999			J
	AN			33:58		1.21	11.04	6.05	4.99	1.000	123478-HxCDF	AN	J
				34:04	RO	1.54	7.26	4.40	2.86	1.000	123678-HxCDF	AN	
				34:34		1.16	8.69	4.66	4.03	1.000	234678-HxCDF	AN	J
374-376			9	Peaks			251.62						

Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
13C12-HxCDF				0.43-0.59						0.879-1.105			
384-386	DC	NL				Height	0.32	0.14	0.18				
				32:59		0.54	2.00	0.70	1.30	0.933			
				33:07		0.49	4.11	1.36	2.75	0.937			
				33:57		0.56	546.96	195.22	351.74	1.000	13C12-HxCDF 478	IS5	
						Height	183.85	62.20	121.65				
				34:03		0.52	638.37	217.59	420.78	1.000	13C12-HxCDF 678	IS6	
						Height	183.74	62.25	121.49				
				34:18		0.51	2.95	1.00	1.95	0.970			
				34:23	RO	0.89	1.64	0.77	0.87	0.973			
				34:33		0.51	621.77	209.68	412.09	1.000	13C12-HxCDF 234	IS7	
						Height	189.11	65.15	123.96				
				34:52	RO	0.38	1.26	0.35	0.91	0.986			
				35:21		0.51	500.94	170.05	330.89	1.000	13C12-HxCDF 789	IS8	
						Height	130.01	43.81	86.20				
				35:40	RO	0.18	1.45	0.22	1.23	1.009			
	DC	SN		35:48		0.59	0.70			1.013			
384-386			10	Peaks			2,321.45						

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

HxCDD				1.05-1.43						0.959-1.013			
390-392	DC	NL				Height	0.21	0.08	0.13				
				33:29		1.17	11.67	6.28	5.39	0.964			J
	DC	SN		33:44	RO	0.50	0.21			0.971			
				33:55		1.26	3.78	2.11	1.67	0.976			J
				34:08		1.26	29.09	16.21	12.88	0.982			
				34:19		1.20	2.27	1.24	1.03	0.988			J
	DC	SN		34:34	RO	1.54	0.61			0.995			
M				34:40		1.17	1.02	0.55	0.47	1.000	123478-HxCDD	AN	J
M				34:46		1.22	8.08	4.44	3.64	1.000	123678-HxCDD	AN	J
				35:05		1.38	6.13	3.55	2.58	1.010	123789-HxCDD	AN	J
	DC	WH		35:17	RO	0.56	1.87			1.015			
390-392			7	Peaks			62.04						
13C12-HxCDD				1.05-1.43						0.983-1.041			
402-404	DC	NL				Height	0.30	0.19	0.11				
	DC	WL		33:40	RO	4.16	1.91			0.972			
	DC	WL		33:46	RO	1.86	0.80			0.975			
				34:08		1.09	2.15	1.12	1.03	0.985			
				34:39		1.20	382.50	208.93	173.57	1.000	13C12-HxCDD 478	IS9	
						Height	121.76	66.25	55.51				
				34:45		1.21	463.24	253.70	209.54	1.000	13C12-HxCDD 678	IS10	
						Height	130.46	71.65	58.81				
				35:04		1.21	526.28	288.23	238.05	1.012	13C12-HxCDD 789	RS2	
				35:22	RO	0.80	2.49	1.11	1.38	1.021			
				35:29	RO	0.75	1.73	0.74	0.99	1.024			
402-404			6	Peaks			1,378.39						

---------- Above: HxCDD / HpCDF 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.

HpCDF                          0.88-1.20                                    0.955-1.005
408-410          DC  NL          Height          0.15          0.07          0.08
                         37:02     1.07        446.66        230.63        216.03  1.000 1234678-HpCDF   AN
                         37:18 RO  0.83          2.44          1.11          1.33  0.966
                         37:27     1.06        227.06        117.02        110.04  0.970
                 DC  SN  38:01 RO  2.44          0.55                              0.984
        M                38:39 RO  0.87          3.08          1.43          1.65  1.001 1234789-HpCDF   AN
408-410                4 Peaks                  679.24

13C12-HpCDF                    0.37-0.51                                    0.856-1.141
418-420          DC  NL          Height          0.25          0.13          0.12
                         37:02     0.44        434.74        133.80        300.94  1.000 13C12-HpCDF 678 IS11
                                 Height        111.60         34.30         77.30
                         38:37     0.43        323.31         96.96        226.35  1.000 13C12-HpCDF 789 IS12
                                 Height         71.38         21.27         50.11
418-420                2 Peaks                  758.05

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

HpCDD                          0.88-1.20                                    0.976-1.005
424-426          DC  NL          Height          0.17          0.09          0.08
                         37:19     1.09         35.73         18.61         17.12  0.980
                 DC  SN  37:42 RO  3.00          0.28                              0.990
                         38:06     1.02         30.40         15.37         15.03  1.000 1234678-HpCDD   AN
                 DC  WH  38:26 RO  0.85          0.37                              1.009
424-426                2 Peaks                   66.13

13C12-HpCDD                    0.88-1.20                                    0.868-1.078
436-438          DC  NL          Height          0.64          0.47          0.17
                         37:31 RO  5.86          9.26          7.91          1.35  0.985
                         38:05     1.02        374.35        189.45        184.90  1.000 13C12-HpCDD 678 IS13
                                 Height         92.26         47.02         45.24
436-438                2 Peaks                  383.61

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

OCDF                           0.76-1.02                                    0.952-1.048
442-444          DC  NL          Height          0.16          0.07          0.09
                 DC  WL  36:33 RO  0.69          0.22                              0.873
                 DC  WL  36:41 RO  0.33          0.44                              0.876
                 DC  WL  39:43 RO  0.12          0.83                              0.948
                 DC  WL  39:46     0.79          0.34                              0.949
                 DC  SN  41:14 RO  9.33          0.31                              0.984
                 DC  SN  41:25 RO  1.14          0.15                              0.989
                 DC  SN  41:32 RO  0.71          0.12                              0.992
                         41:54 RO  0.66          0.73          0.29          0.44  1.000
                         42:06     0.90         63.96         30.35         33.61  1.005 OCDF            AN
                 DC  SN  42:24 RO  0.50          0.30                              1.012
                 DC  SN  42:30 RO  0.42          0.37                              1.015
                 DC  WH  44:22 RO  0.57          0.11                              1.059
                 DC  WH  44:47 RO  0.13          0.26                              1.069
                 DC  WH  44:52 RO  0.36          0.30                              1.071
```

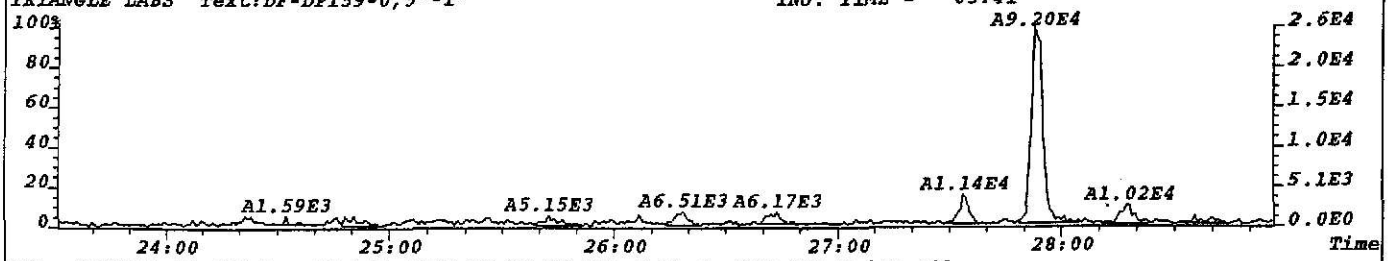
Listing of T023770B.dbf
Matched GC Peaks / Ratio / Ret. Time

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.
442-444			2 Peaks				64.69						
OCDD						0.76-1.02				0.952-1.048			
458-460		DC	NL			Height	0.12	0.07	0.05				
				41:54		0.85	1,216.05	560.14	655.91	1.000	OCDD		AN
458-460			1 Peak				1,216.05						
13C12-OCDD						0.76-1.02				0.996-1.004			
470-472		DC	NL			Height	0.33	0.21	0.12				
				41:53		0.86	544.26	251.93	292.33	1.000	13C12-OCDD		IS14
						Height	111.14	50.80	60.34				
		DC	WH	42:22	RO	0.41	0.65			1.012			
470-472			1 Peak				544.26						

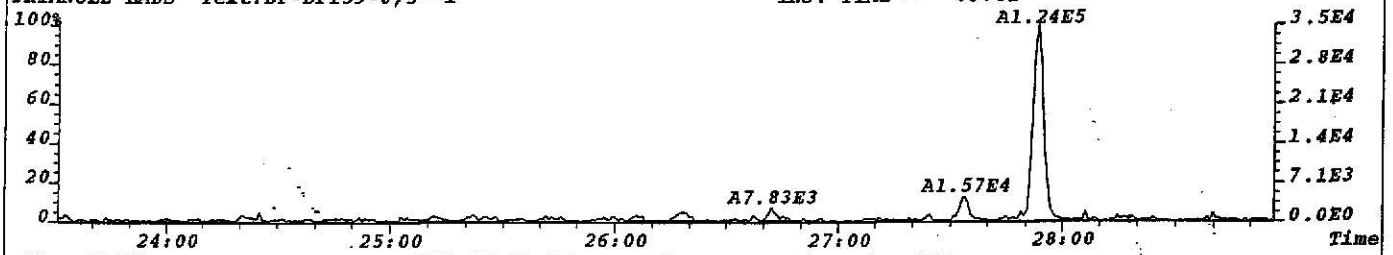
Column Description.....	"Why" Code Description.....	QC Log Desc.....
M_Z -Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT. -Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK -RO=Ratio Outside 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 ***

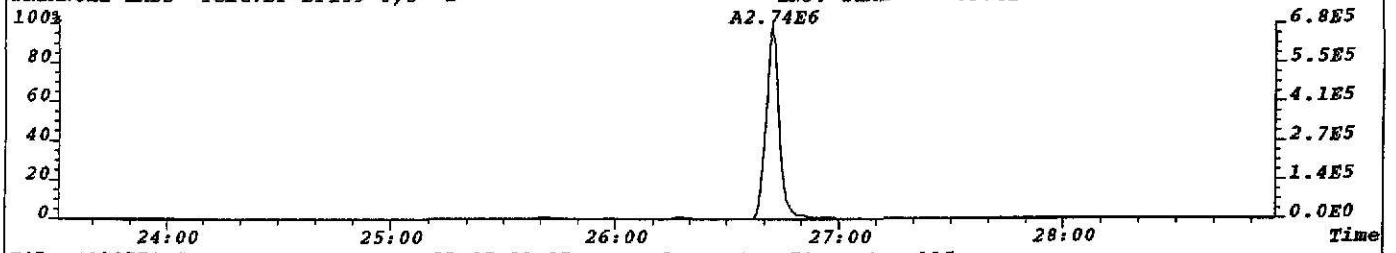
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:175
303.9016 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,700.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



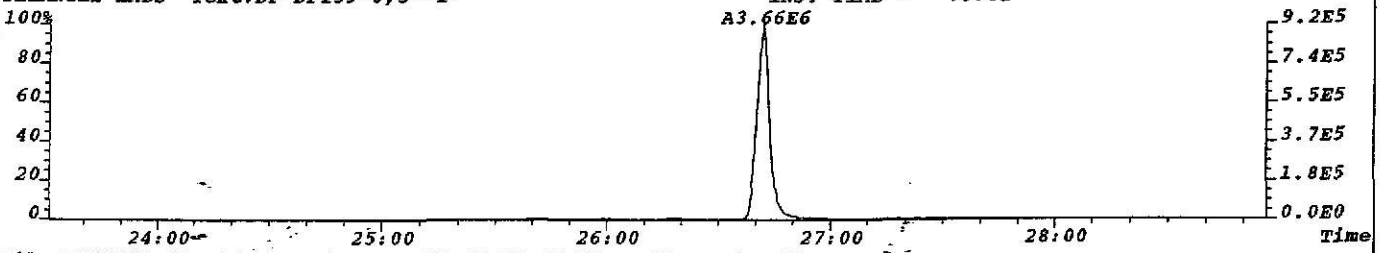
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:101
305.8987 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,404.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



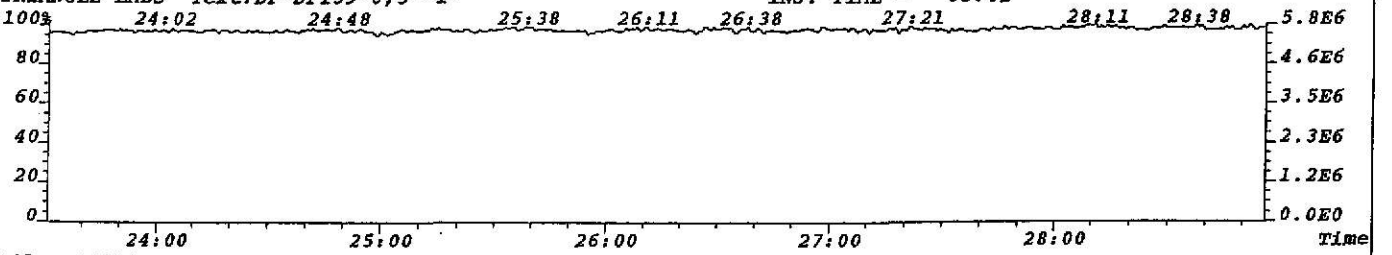
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:104
315.9419 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,416.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



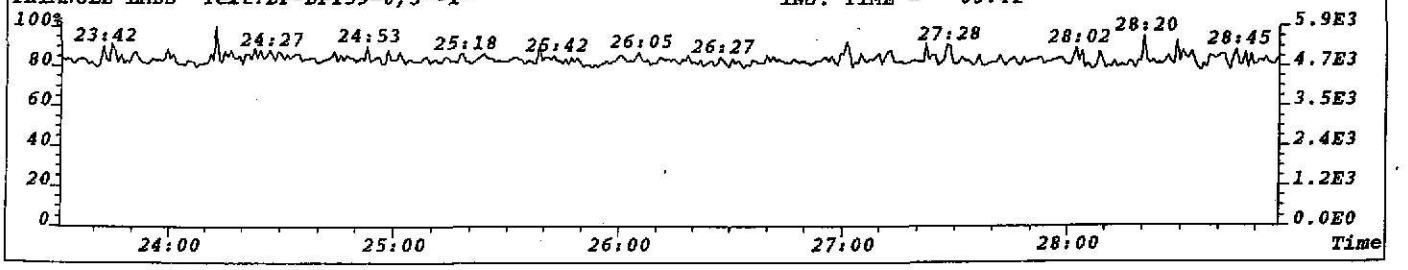
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:115
317.9389 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,460.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



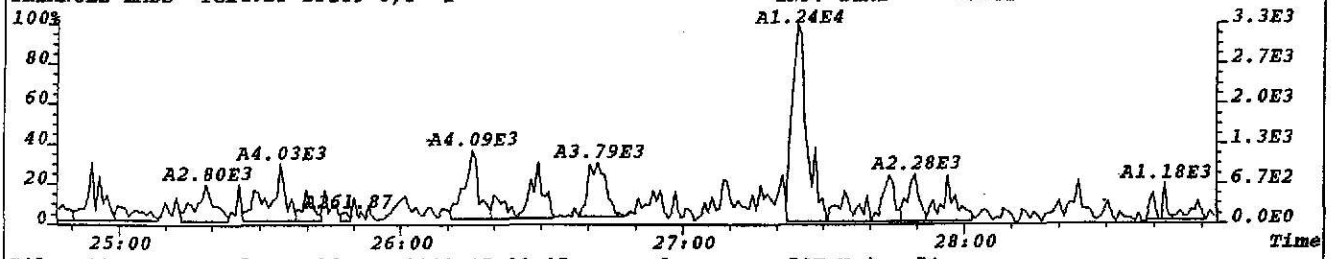
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



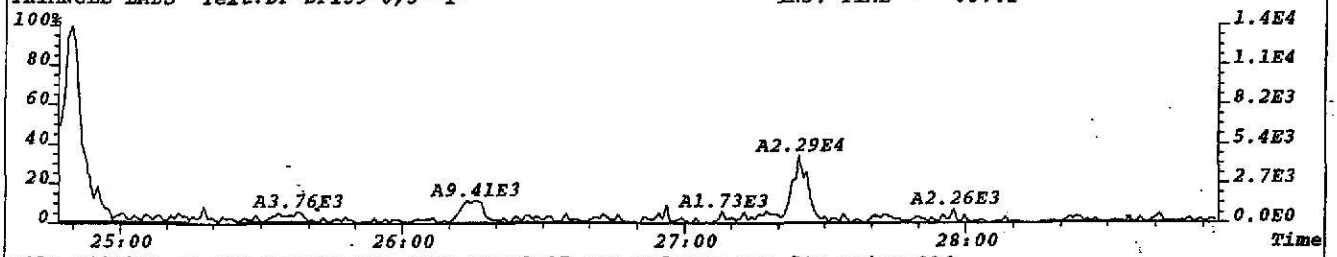
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
375.8364 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



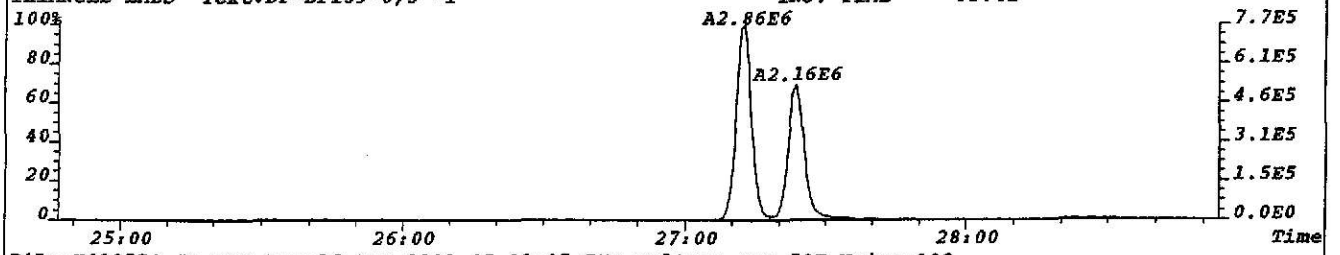
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:81
319.8965 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,324.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



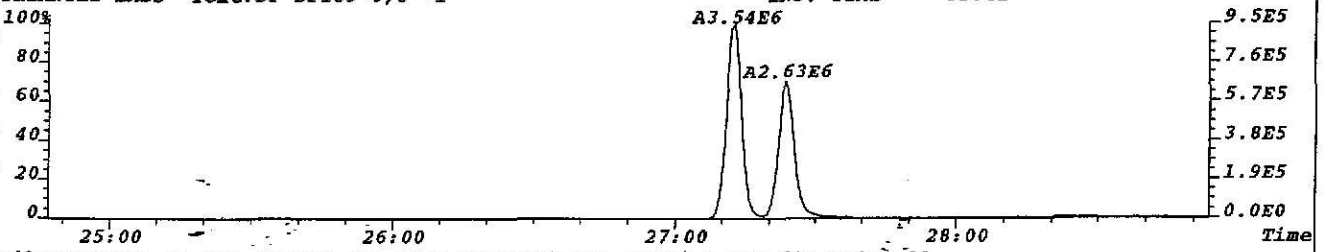
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:74
321.8936 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,296.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



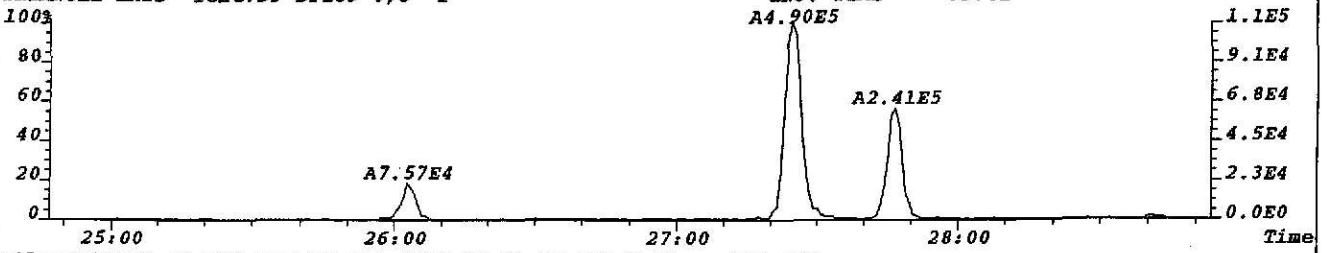
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:326
331.9368 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,1304.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



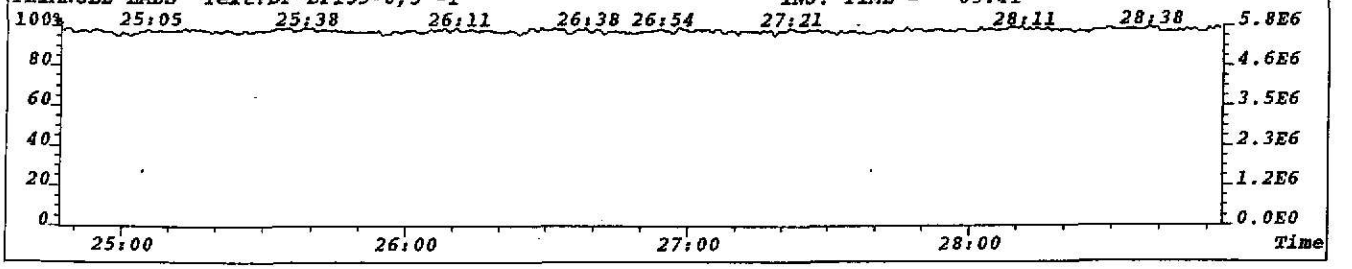
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:132
333.9338 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,528.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



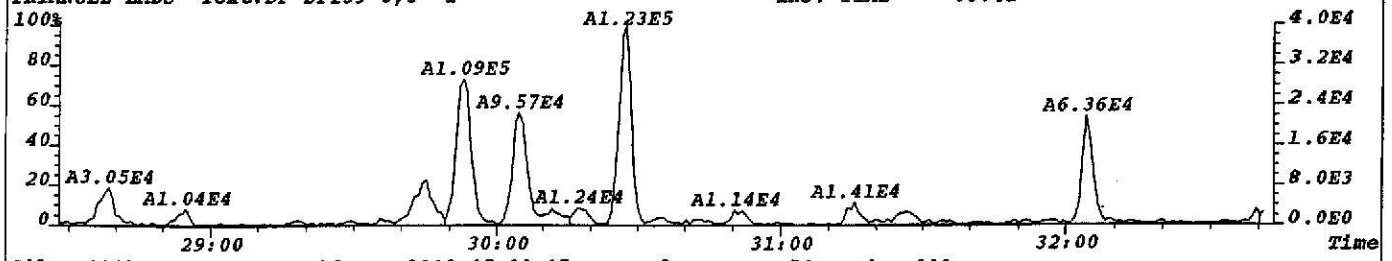
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:99
327.8847 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,396.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



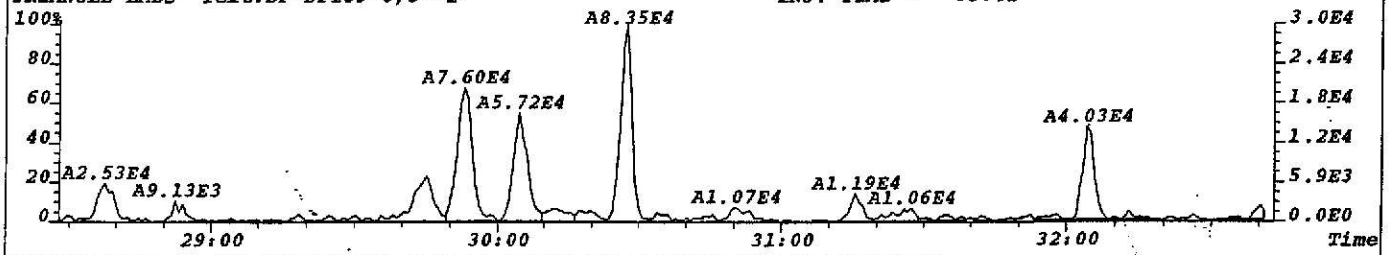
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



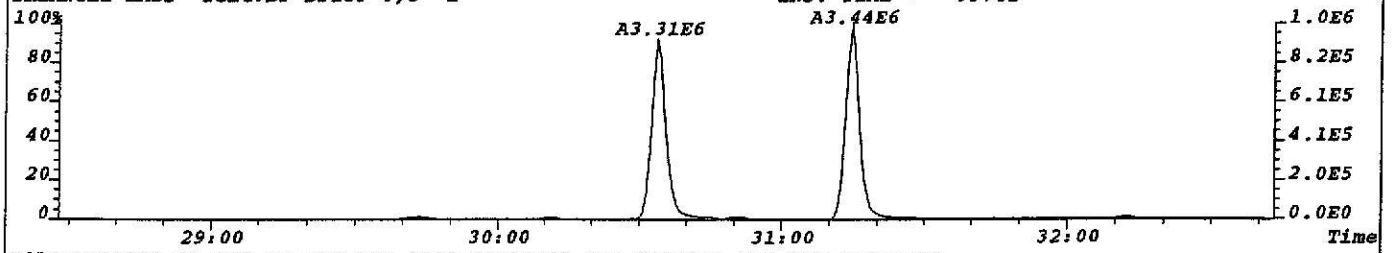
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:81
339.8597 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,324.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



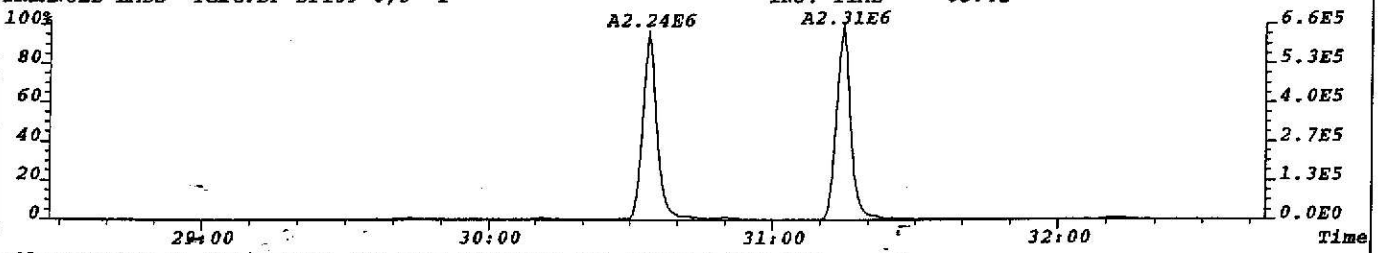
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:111
341.8567 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,444.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



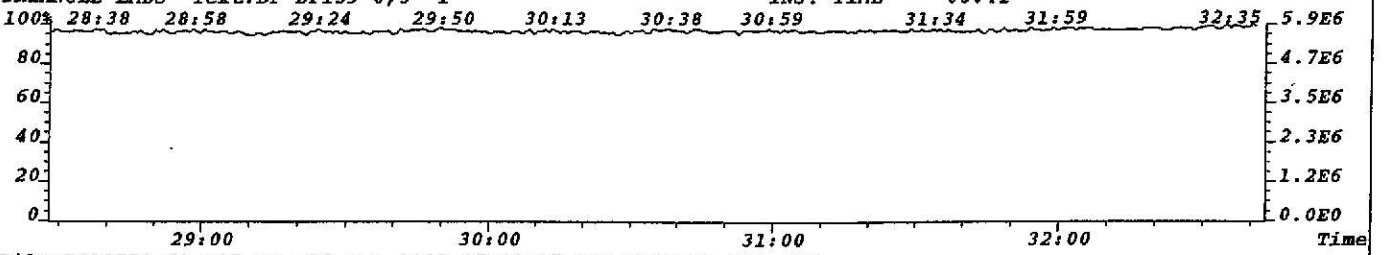
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:73
351.9000 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,292.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



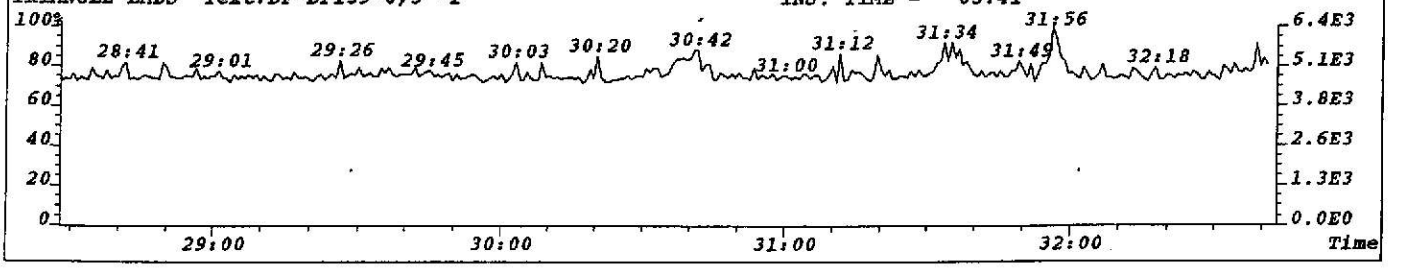
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:93
353.8970 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,372.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



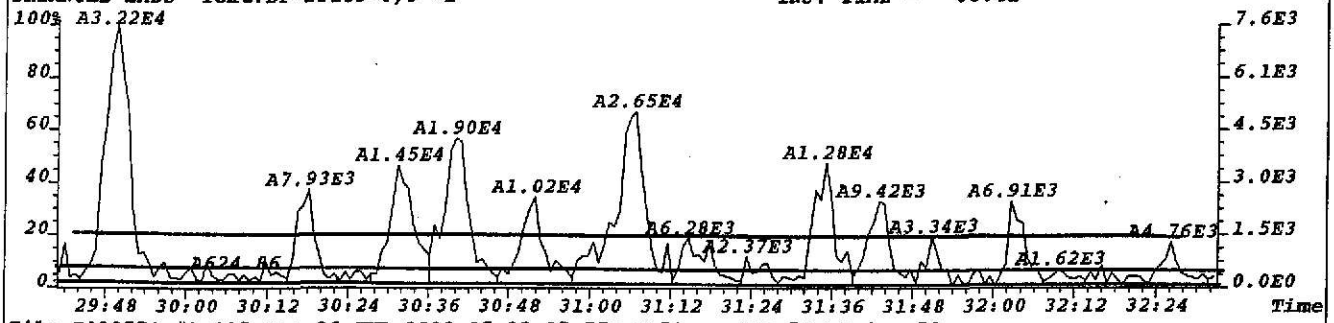
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



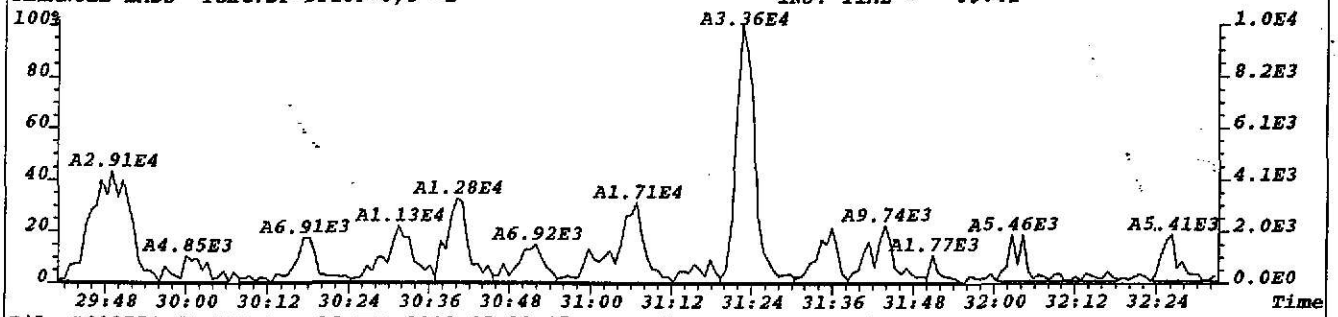
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
409.7974 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



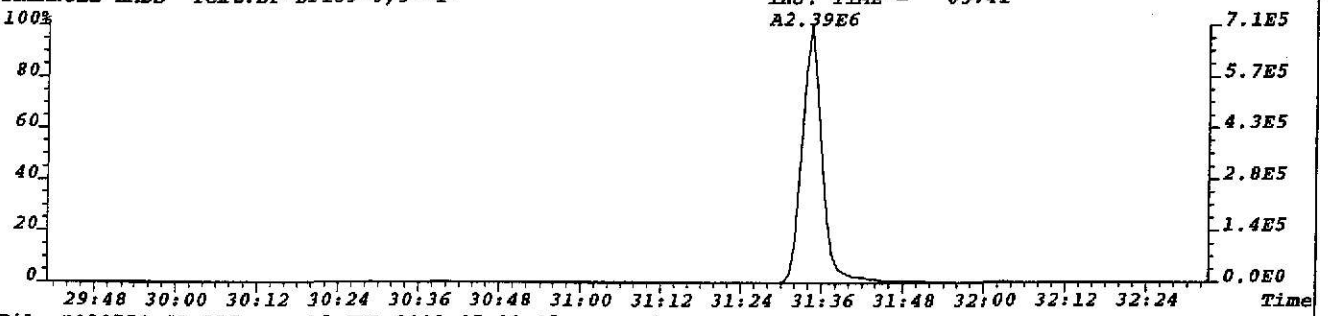
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:95
355.8546 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,380.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



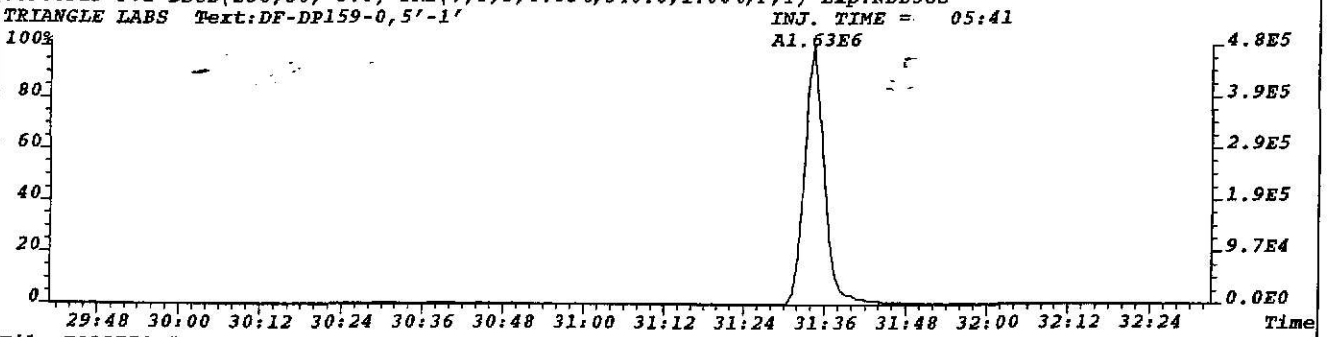
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:79
357.8516 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,316.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



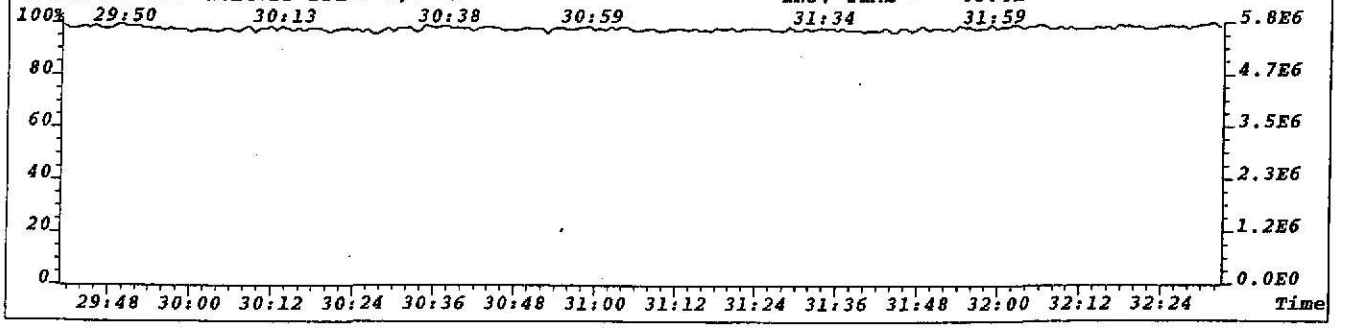
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:105
367.8949 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,420.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



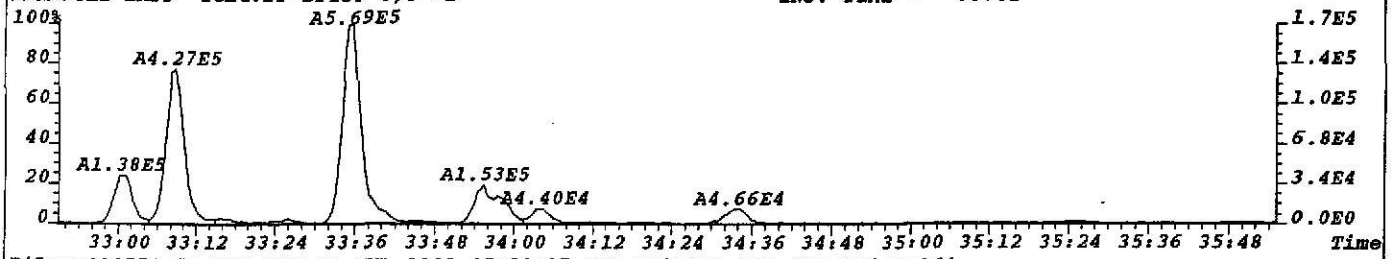
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:85
369.8919 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,340.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



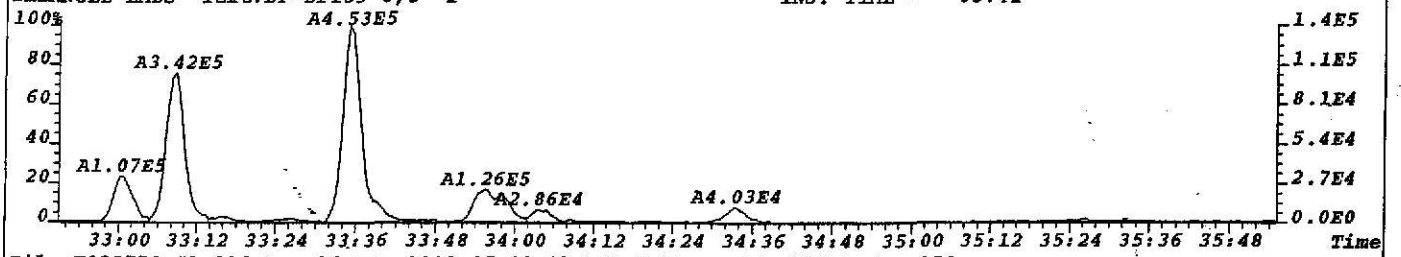
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



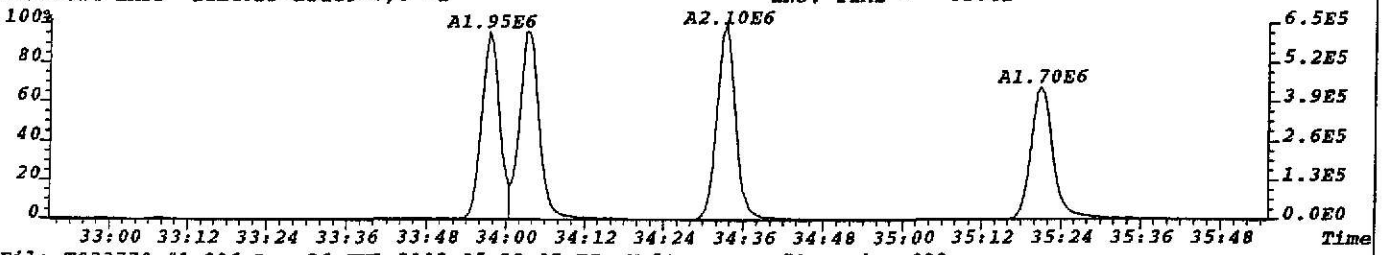
File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:200
373.8208 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,800.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



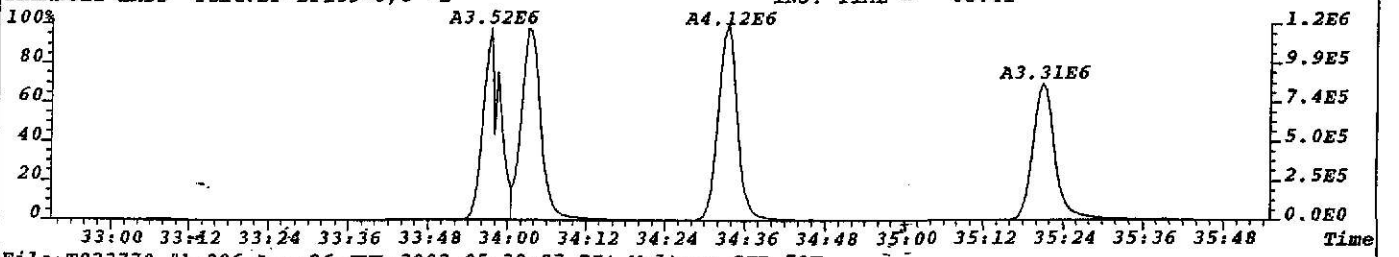
File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:164
375.8178 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,656.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



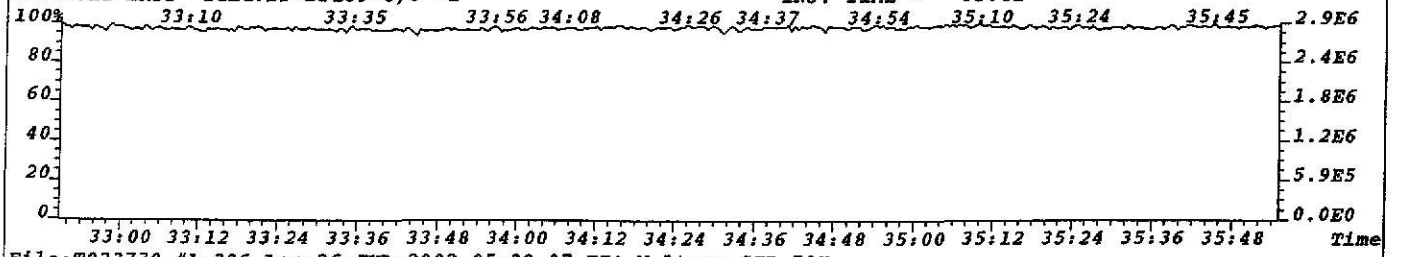
File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:172
383.8639 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,688.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



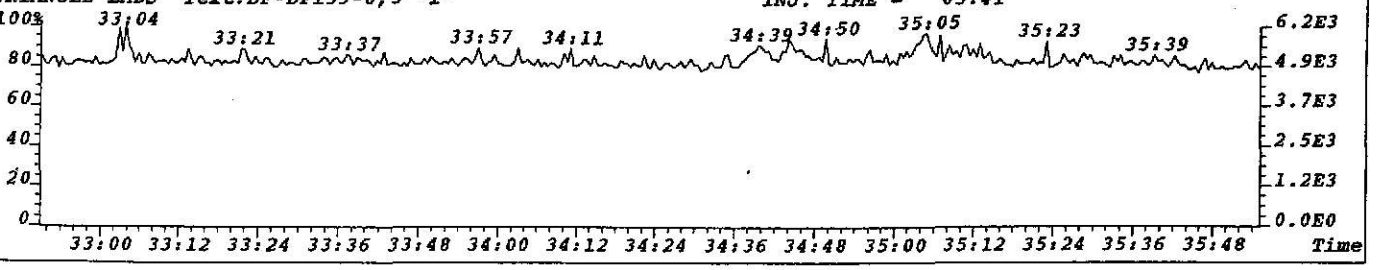
File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:222
385.8610 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,888.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



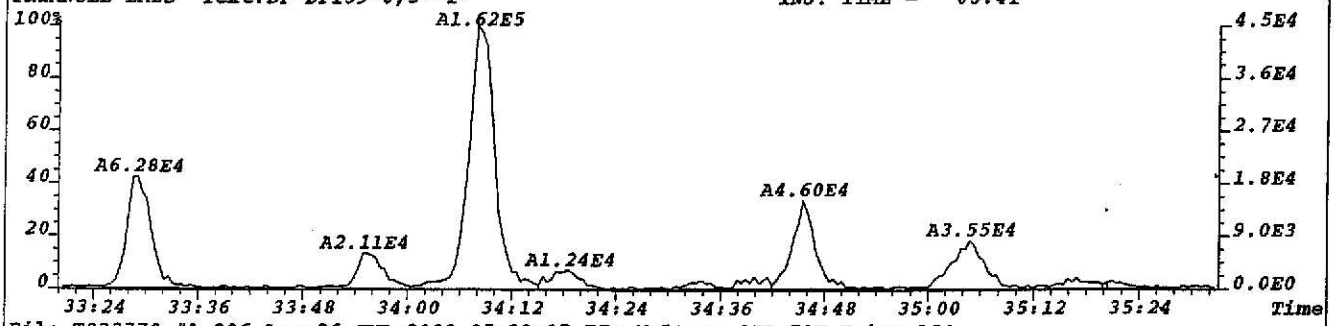
File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



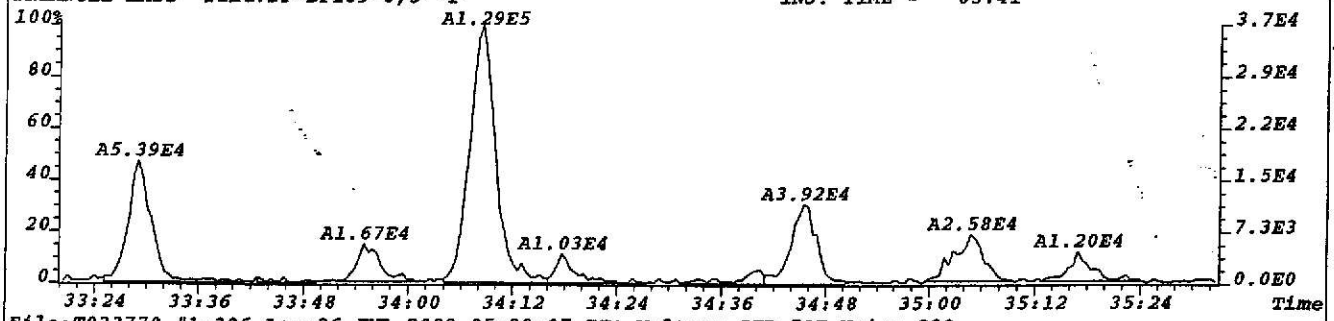
File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
445.7555 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



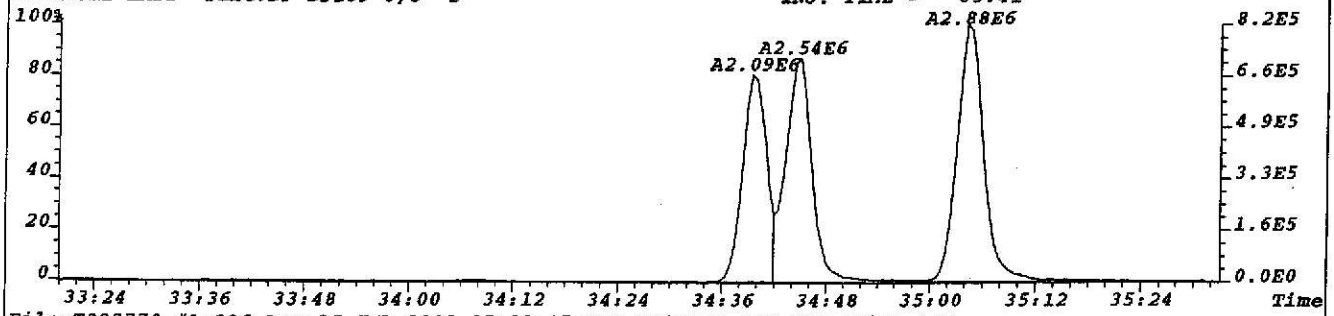
File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:106
389.8156 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,424.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



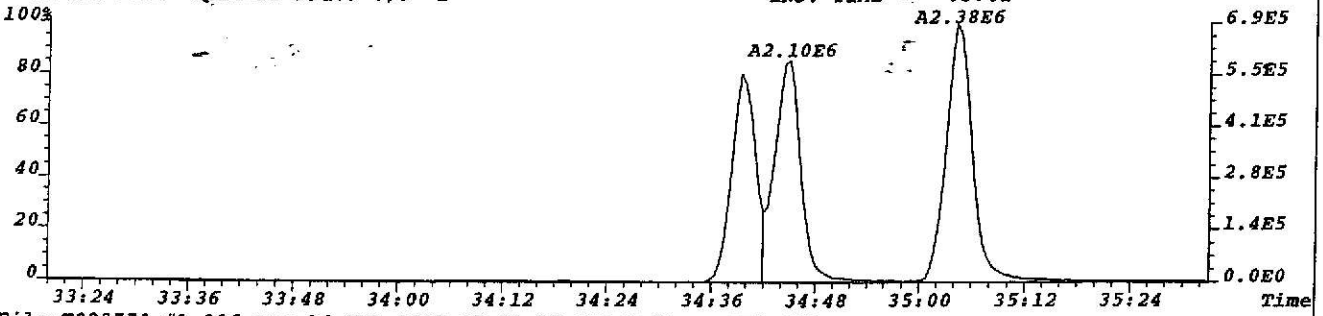
File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:164
391.8127 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,656.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



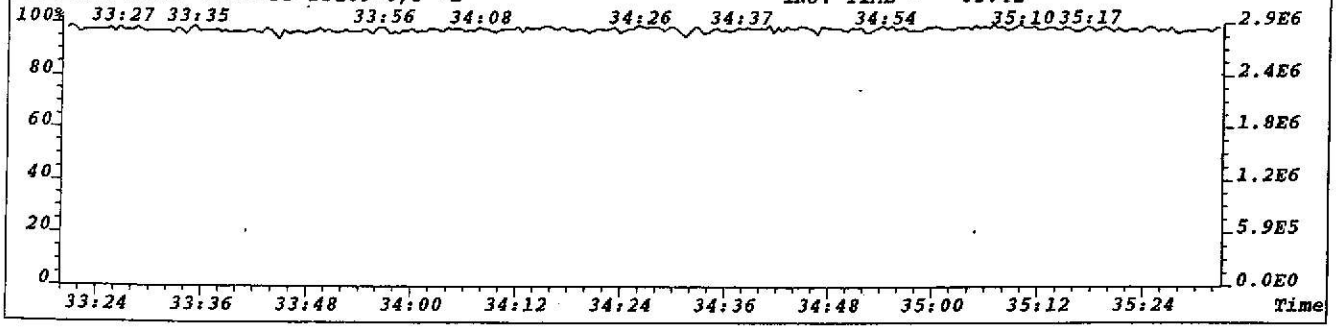
File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:238
401.8558 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,952.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



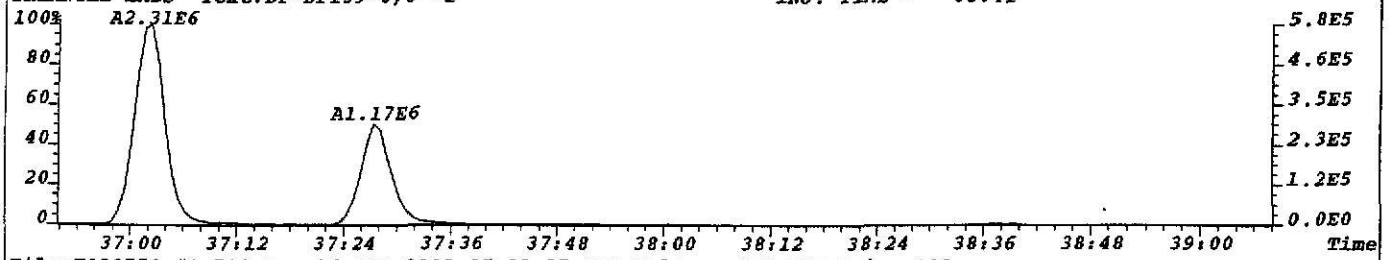
File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:140
403.8529 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,560.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



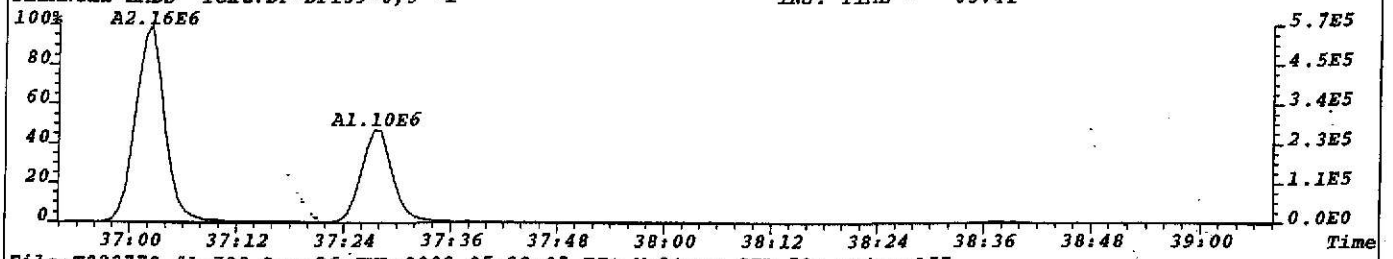
File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



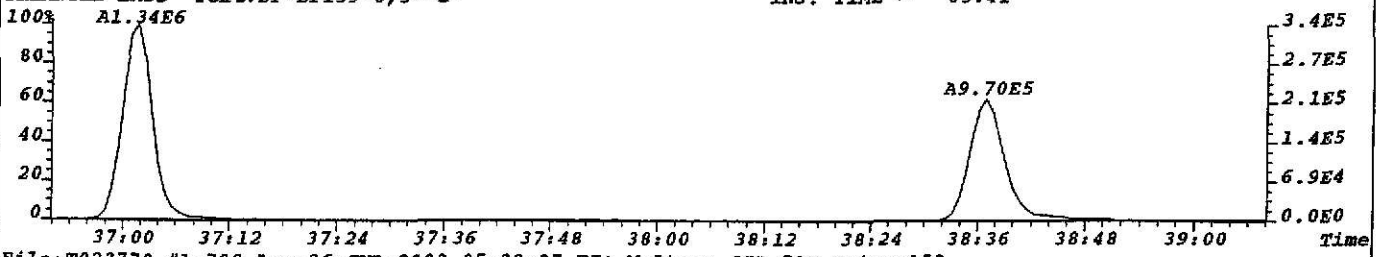
File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:86
407.7818 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,344.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



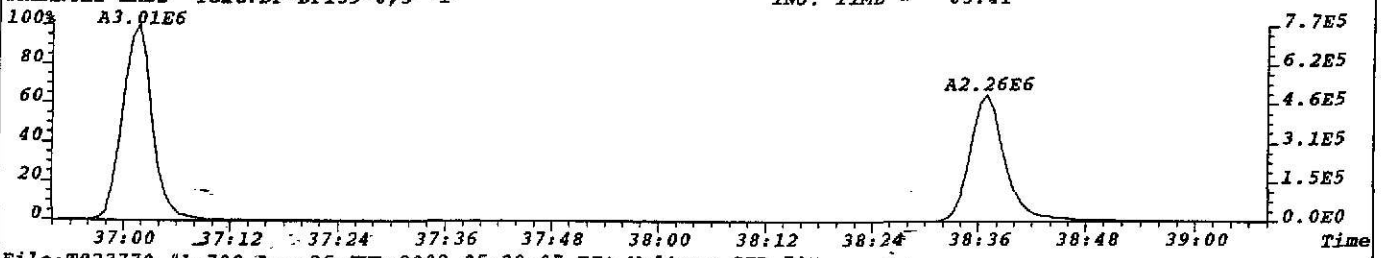
File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:103
409.7789 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,412.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



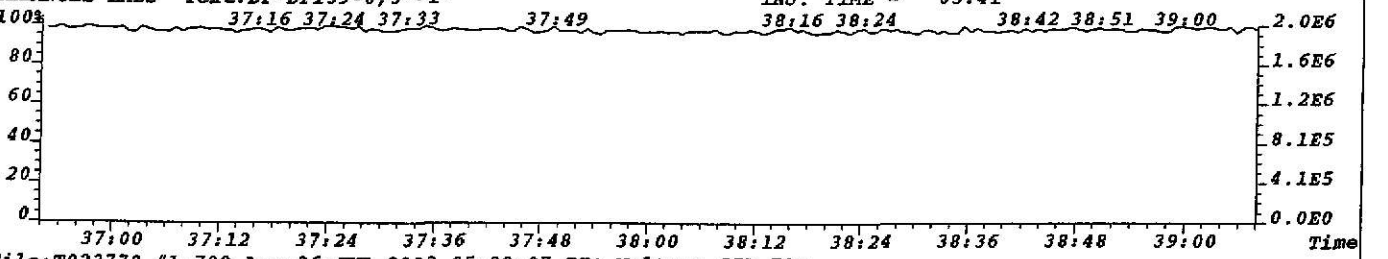
File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:157
417.8253 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,628.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



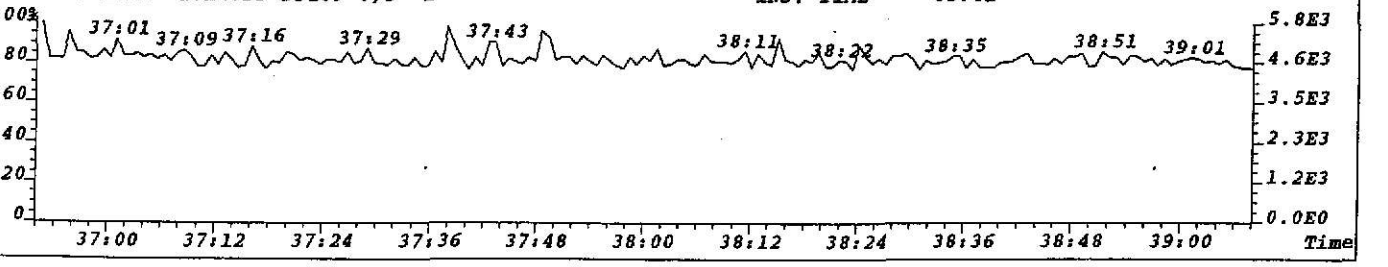
File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:152
419.8220 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,608.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



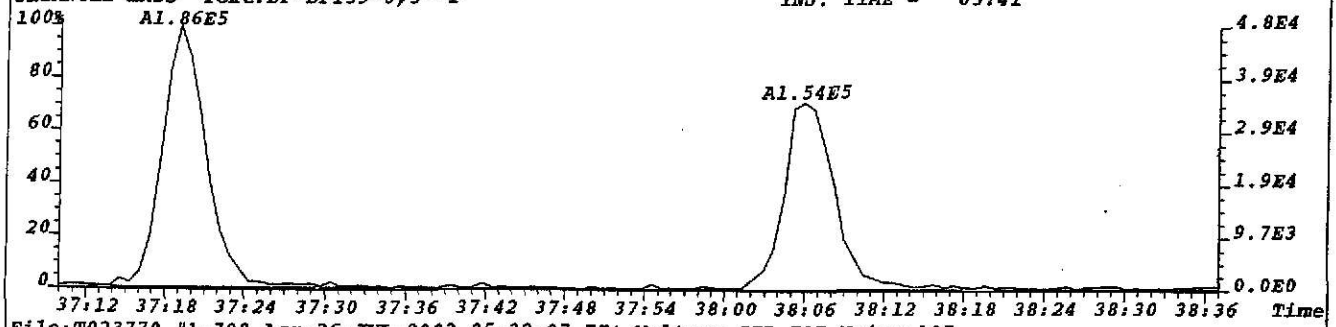
File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



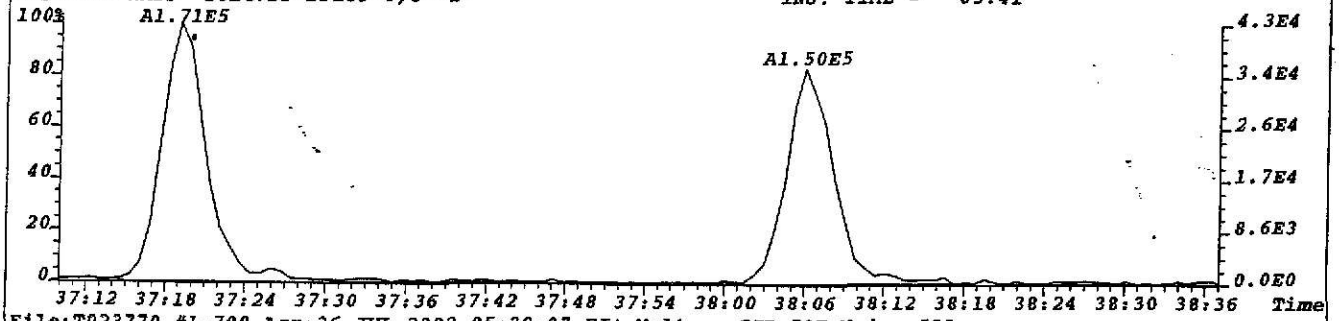
File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
479.7165 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



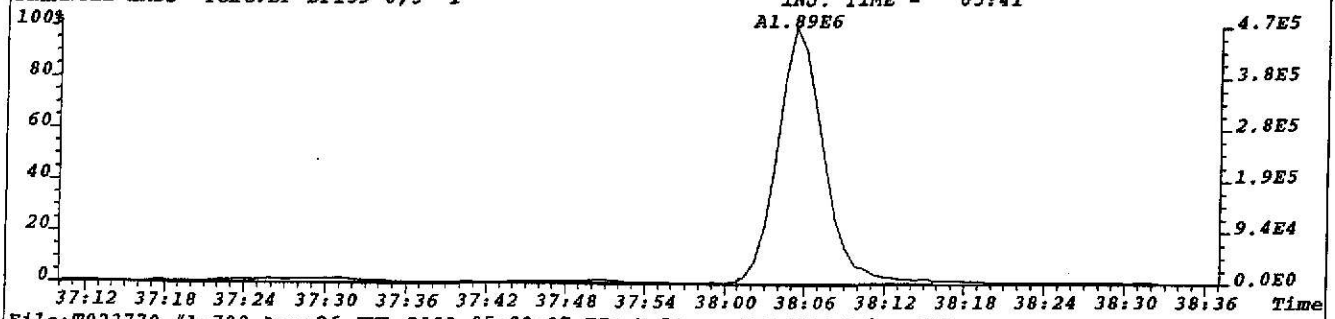
File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:115
423.7766 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,460.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



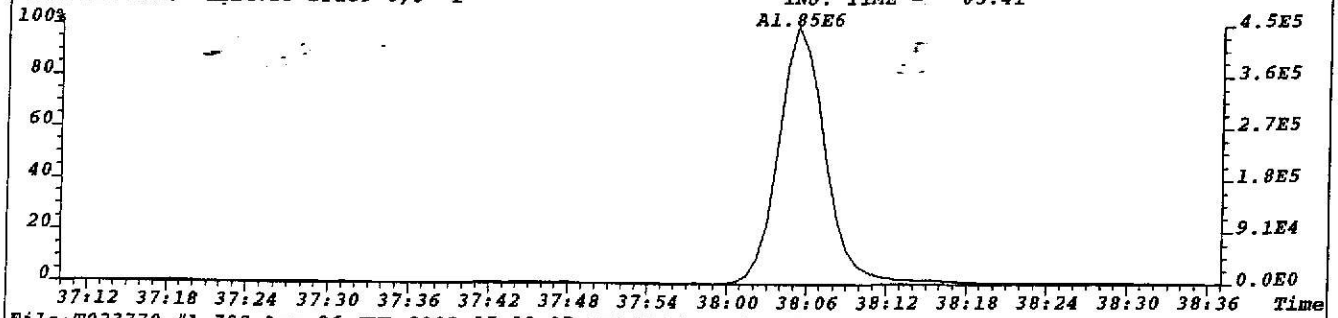
File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:105
425.7737 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,420.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



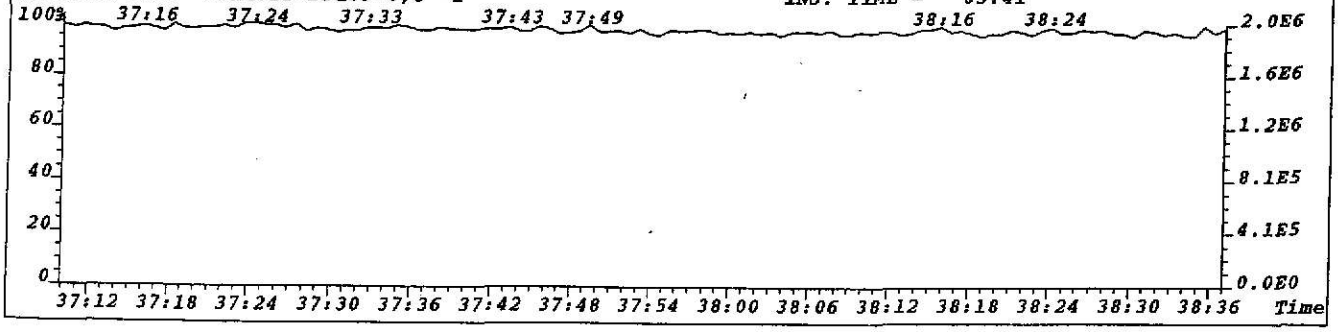
File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:583
435.8169 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,2332.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



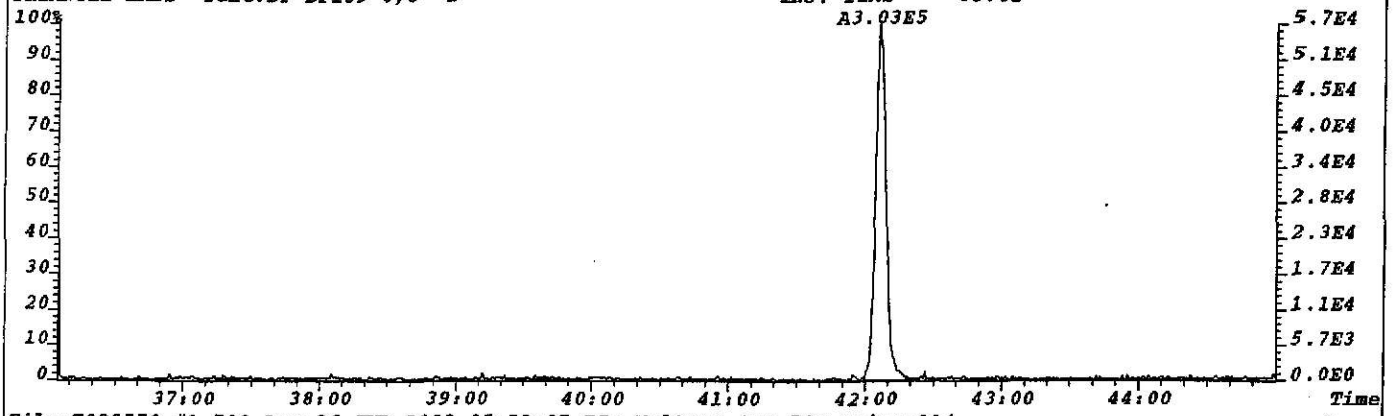
File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:211
437.8140 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,844.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



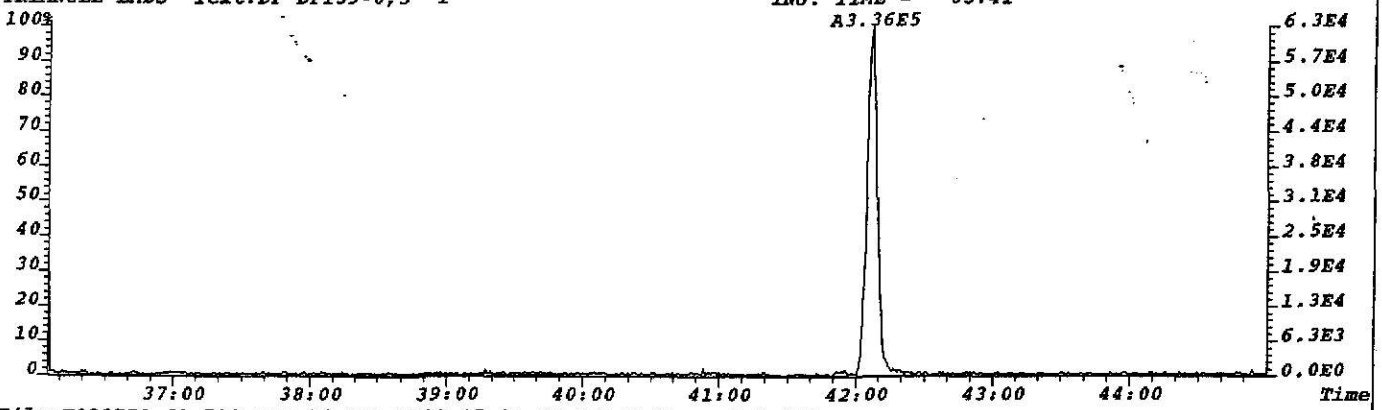
File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



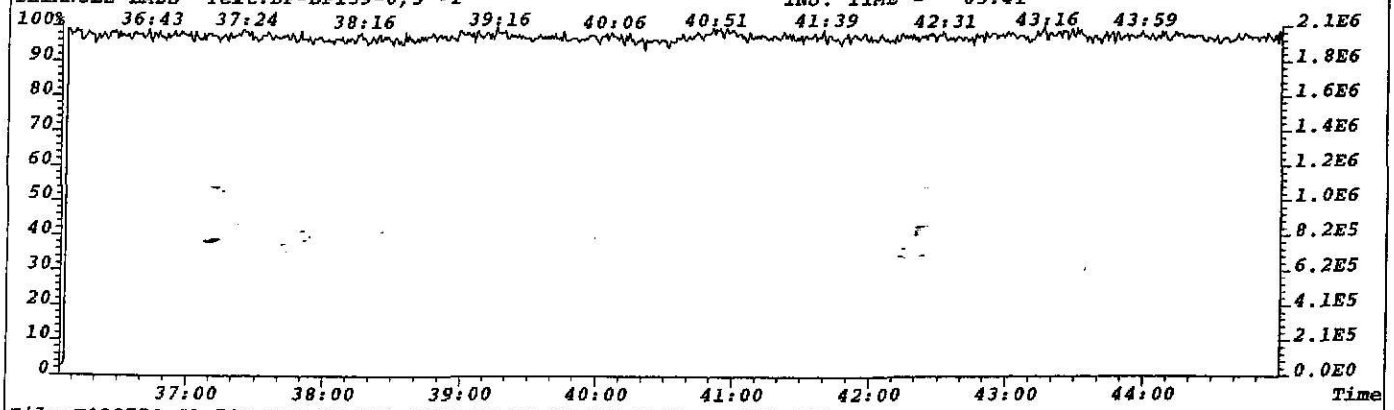
File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:84
441.7428 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,336.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



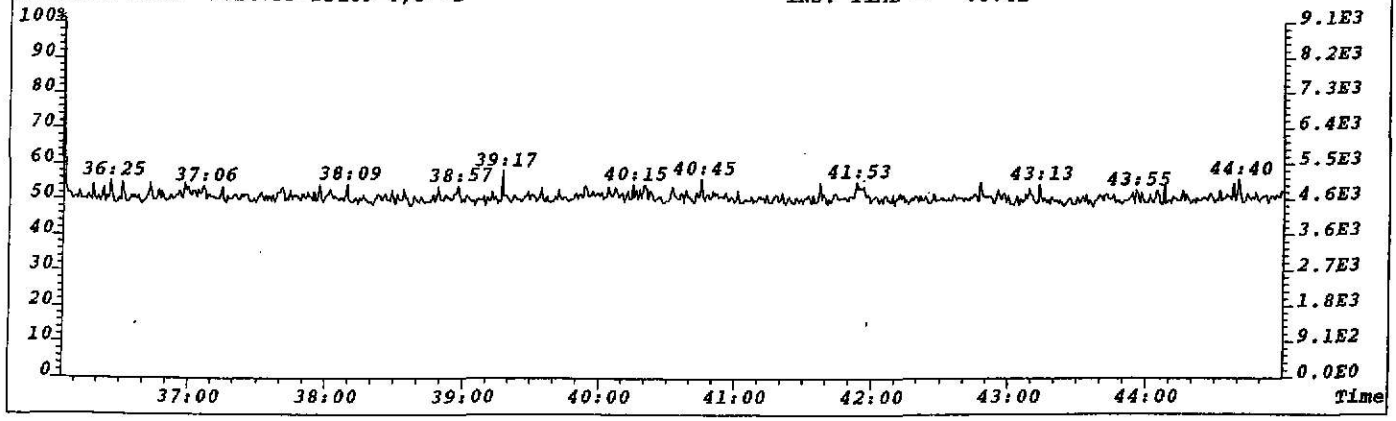
File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:114
443.7399 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,456.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



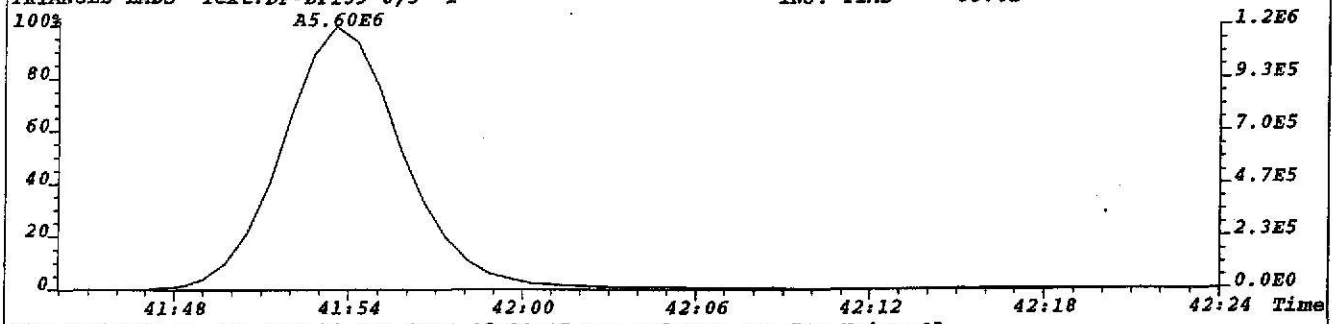
File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



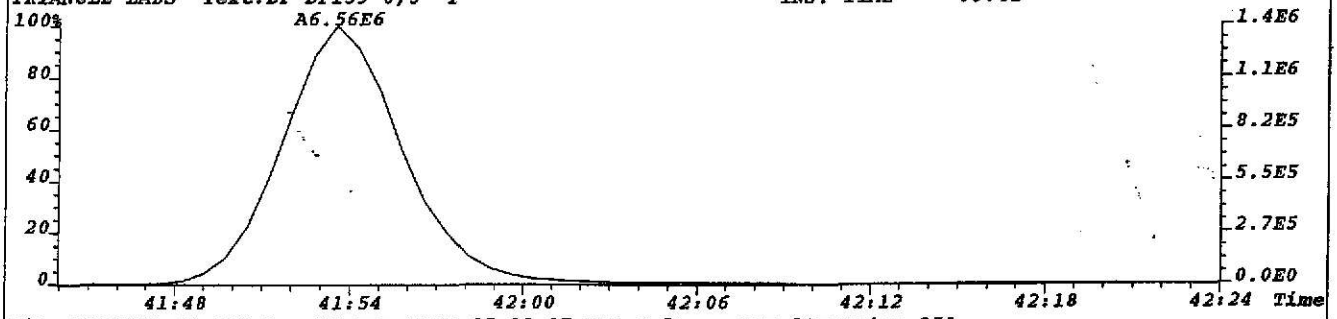
File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
513.6775 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



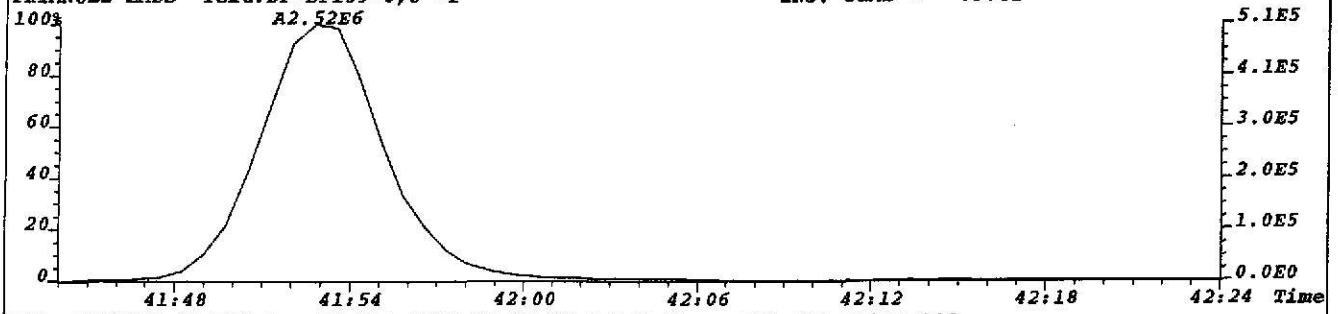
File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:84
457.7377 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,336.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



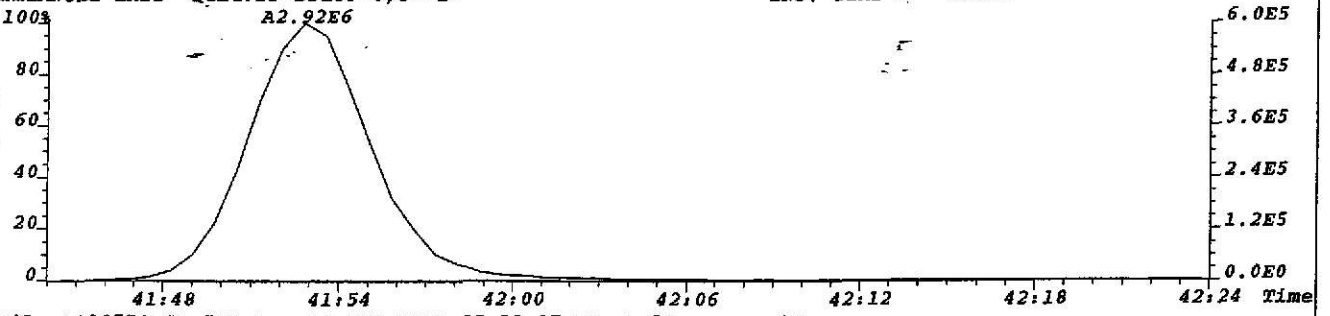
File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:65
459.7348 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,260.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



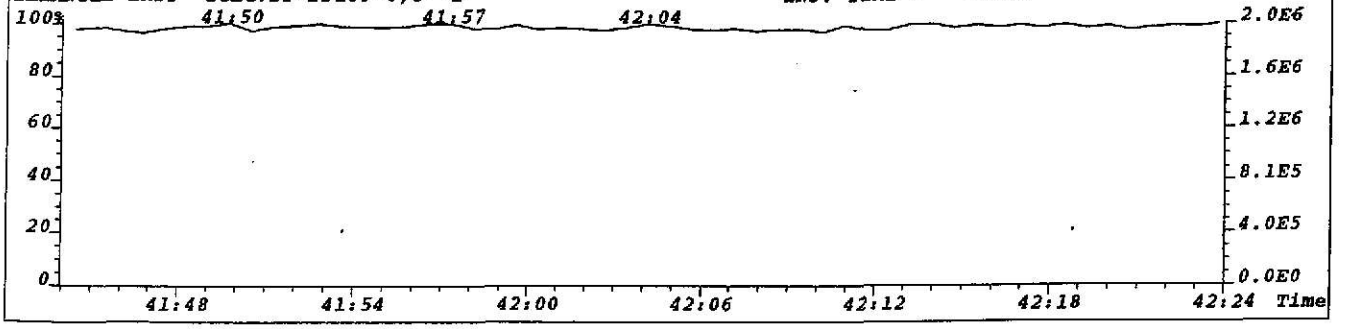
File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:259
469.7779 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,1036.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41

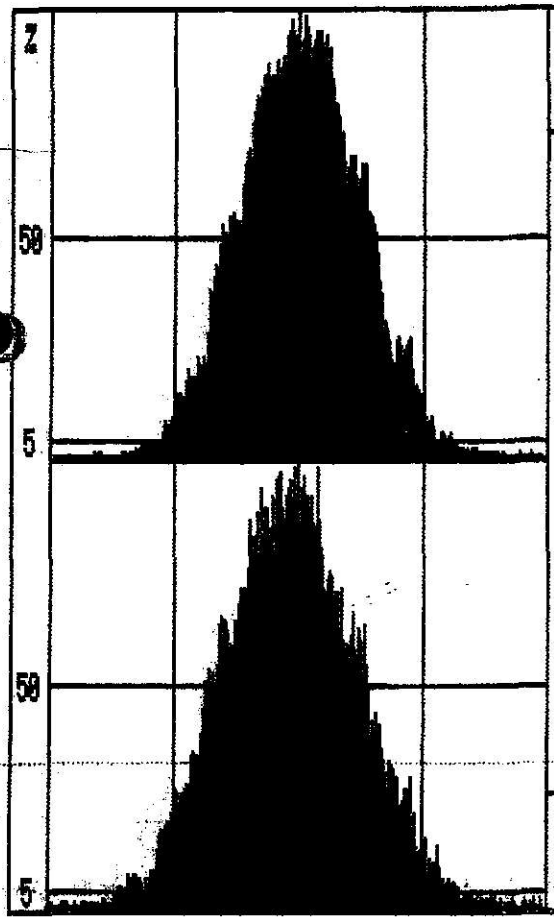


File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T Noise:146
471.7750 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,584.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41



File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-0,5'-1' INJ. TIME = 05:41





Channel I 330.9792 Peak top
Height 1.27 volts Span 200 ppm

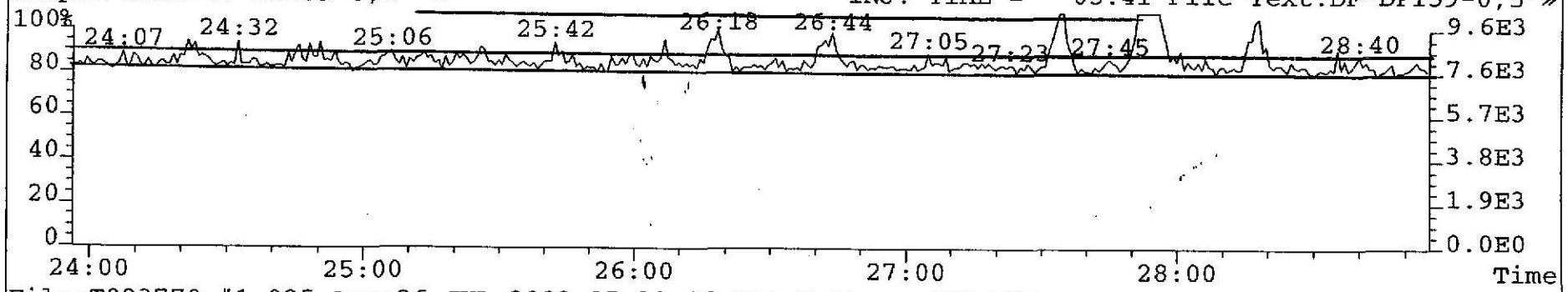
System file name	NOBSUS
Data file name	A:T725022
Resolution	10000
Group number	2
Ionization mode	EI+
Switching	VOLTAGE
Ref. masses	292.9825, 416.9760

A	293	J	331	S	368
B	304	K	332	T	370
C	306	L	334	U	376
D	316	M	340	V	410
E	318	N	342		
F	320	O	352		
G	322	P	354		
H	328	Q	356		
I	331	R	358		

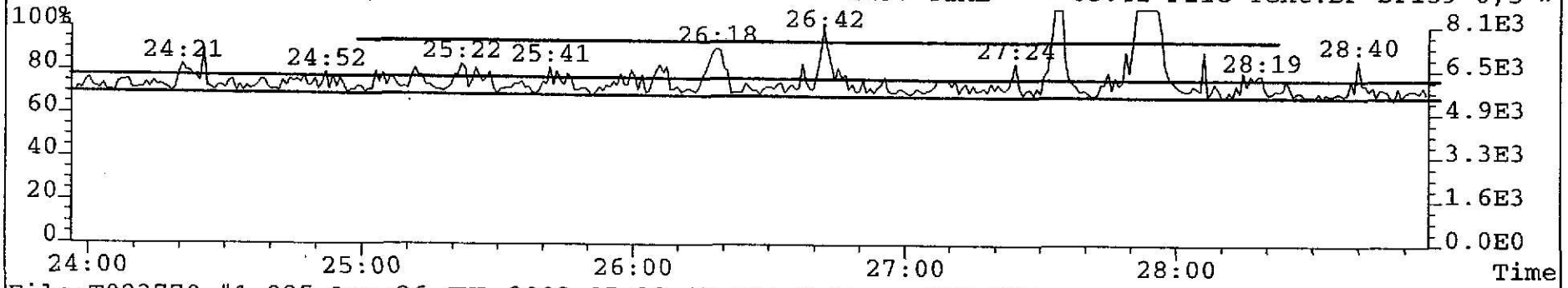
Ref. mass 416.9760 Peak top
Height .25 volts Span 200 ppm

OEM 72002

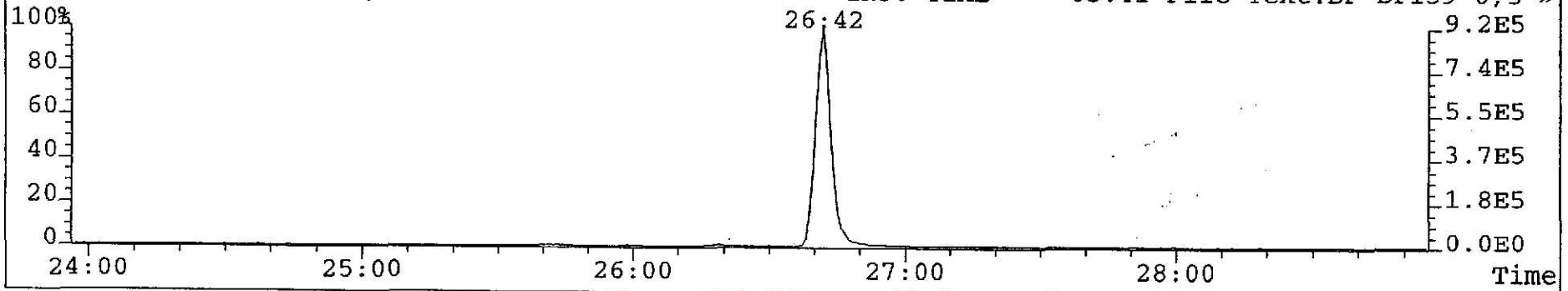
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
303.9016 F:2 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1' INJ. TIME = 05:41 File Text:DF-DP159-0,5'»



File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
305.8987 F:2 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1' INJ. TIME = 05:41 File Text:DF-DP159-0,5'»



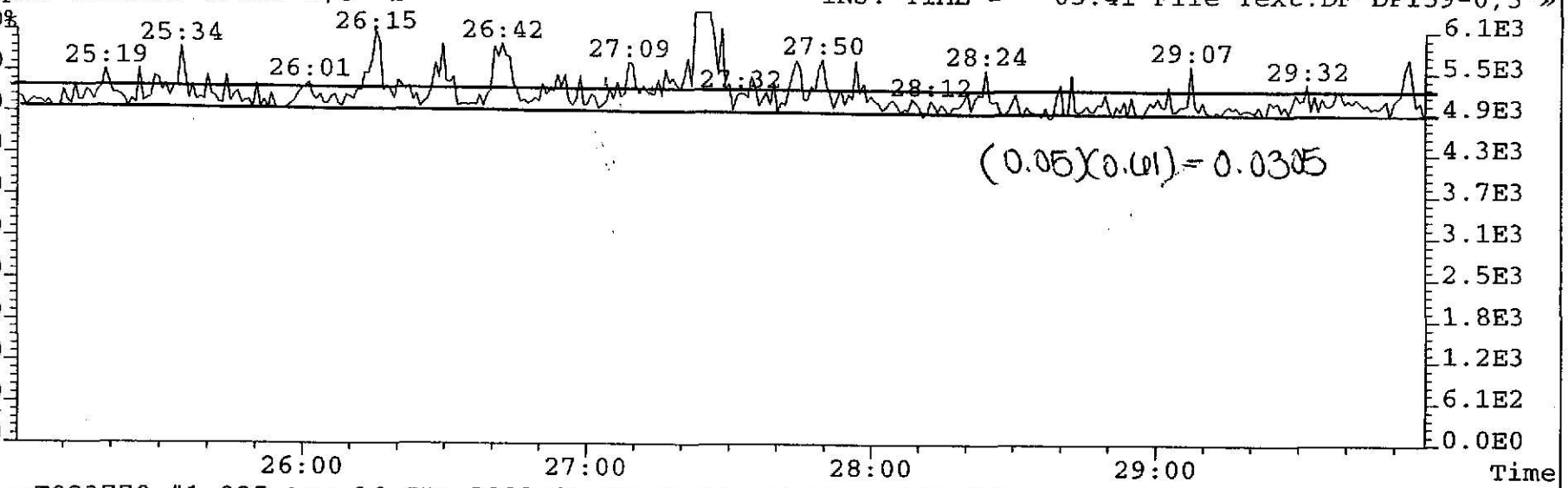
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
317.9389 F:2 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1' INJ. TIME = 05:41 File Text:DF-DP159-0,5'»



N = 0.0305 + 0.039 = 0.0695

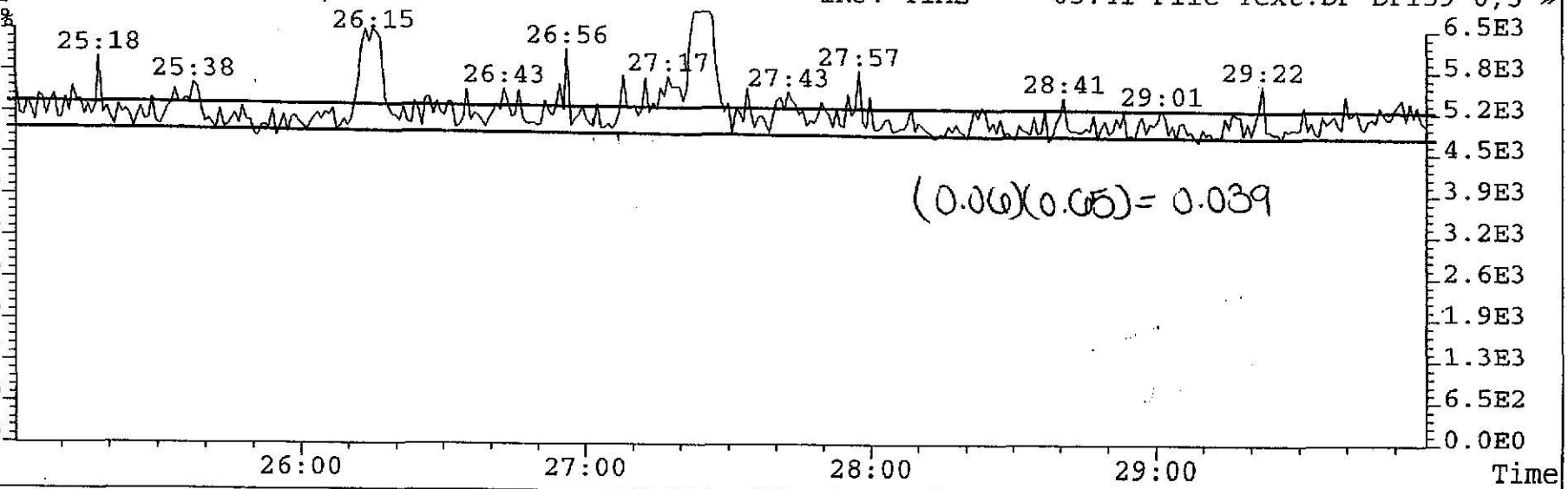
ABM 7/26/02

File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
319.8965 F:2 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1'
INJ. TIME = 05:41 File Text:DF-DP159-0,5'»



(0.05)(0.61) = 0.0305

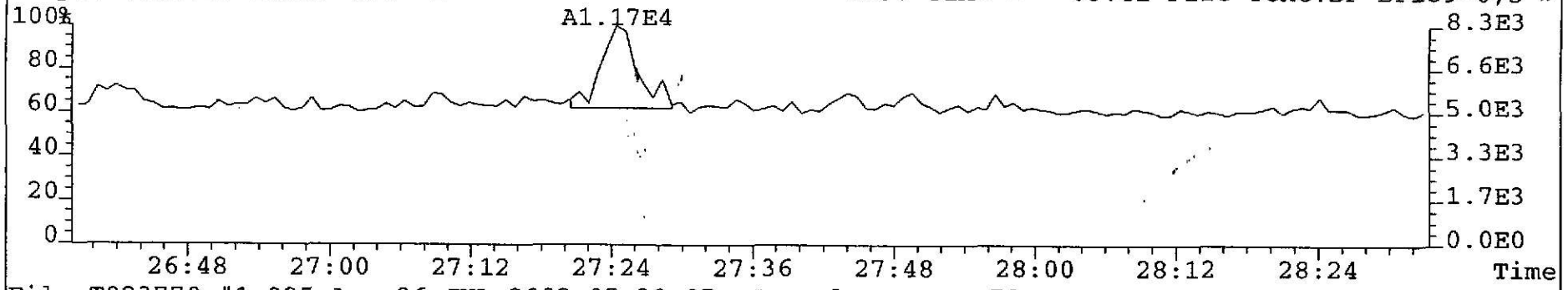
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
321.8936 F:2 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1'
INJ. TIME = 05:41 File Text:DF-DP159-0,5'»



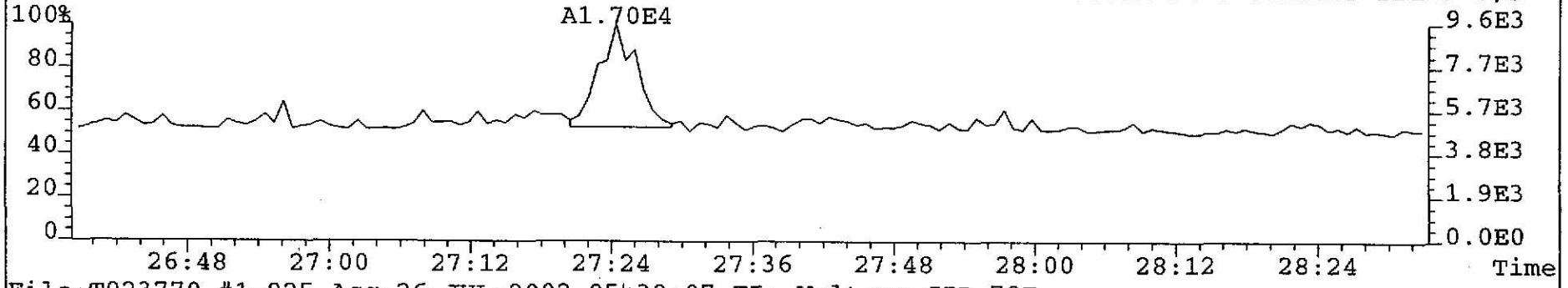
(0.06)(0.65) = 0.039

GEM 7/26/02

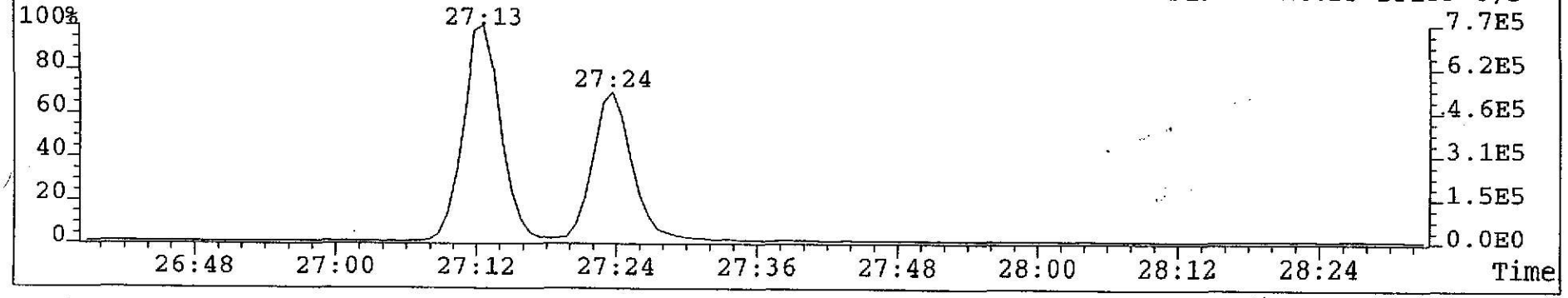
File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
319.8965 F:2 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1' INJ. TIME = 05:41 File Text:DF-DP159-0,5'»



File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
321.8936 F:2 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1' INJ. TIME = 05:41 File Text:DF-DP159-0,5'»

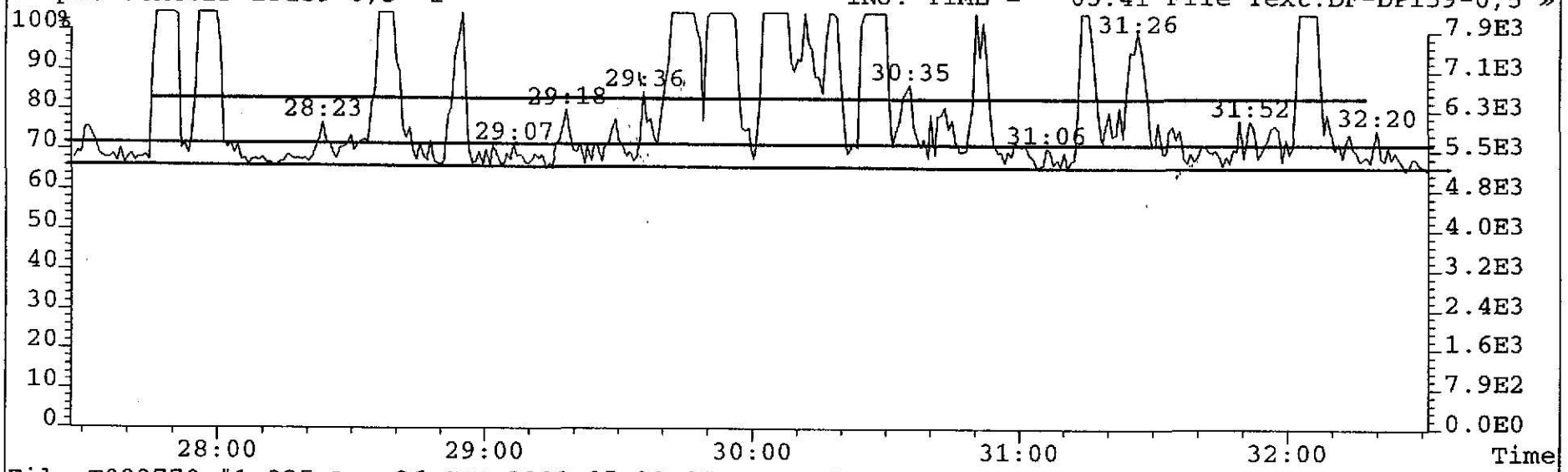


File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
331.9368 F:2 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1' INJ. TIME = 05:41 File Text:DF-DP159-0,5'»

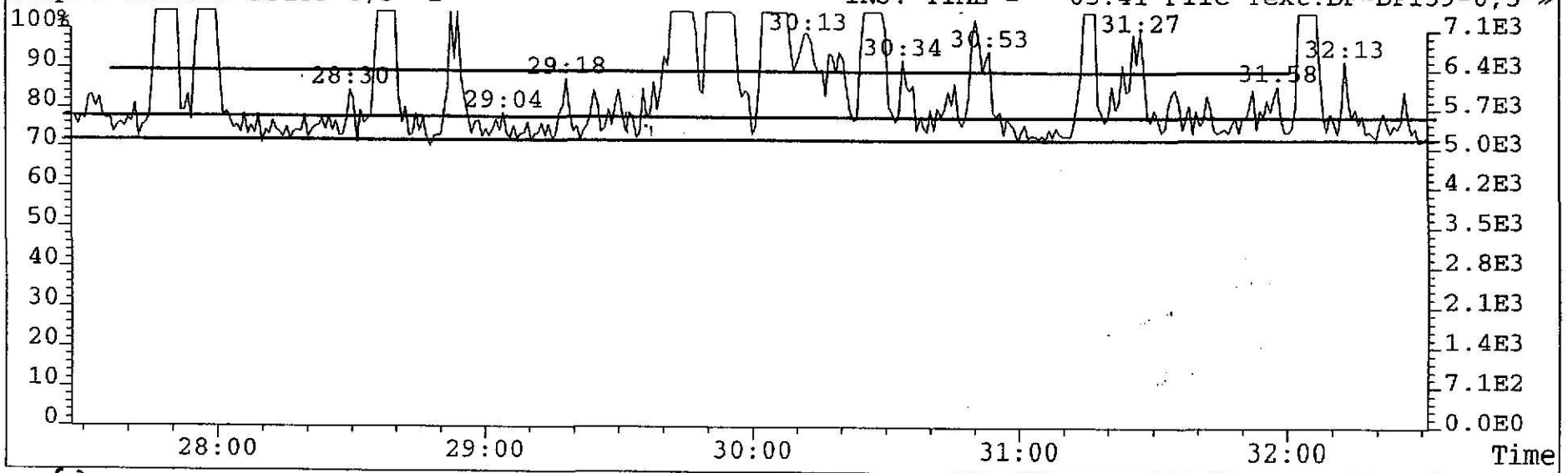


08M7126102

File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
339.8597 F:2 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1' INJ. TIME = 05:41 File Text:DF-DP159-0,5'»

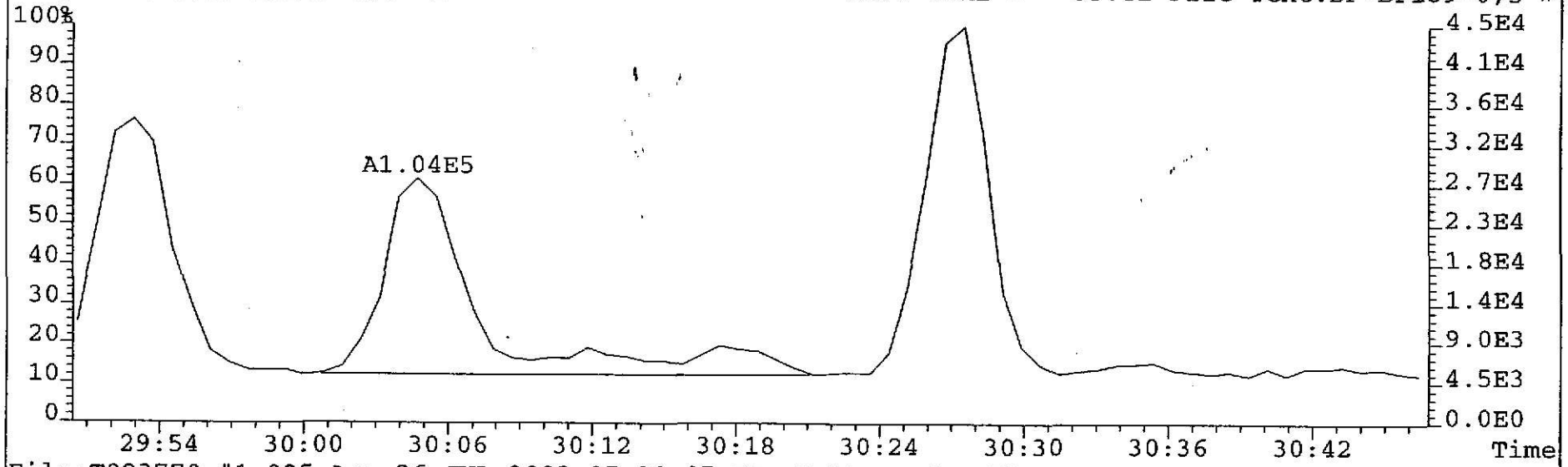


File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
341.8567 F:2 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1' INJ. TIME = 05:41 File Text:DF-DP159-0,5'»

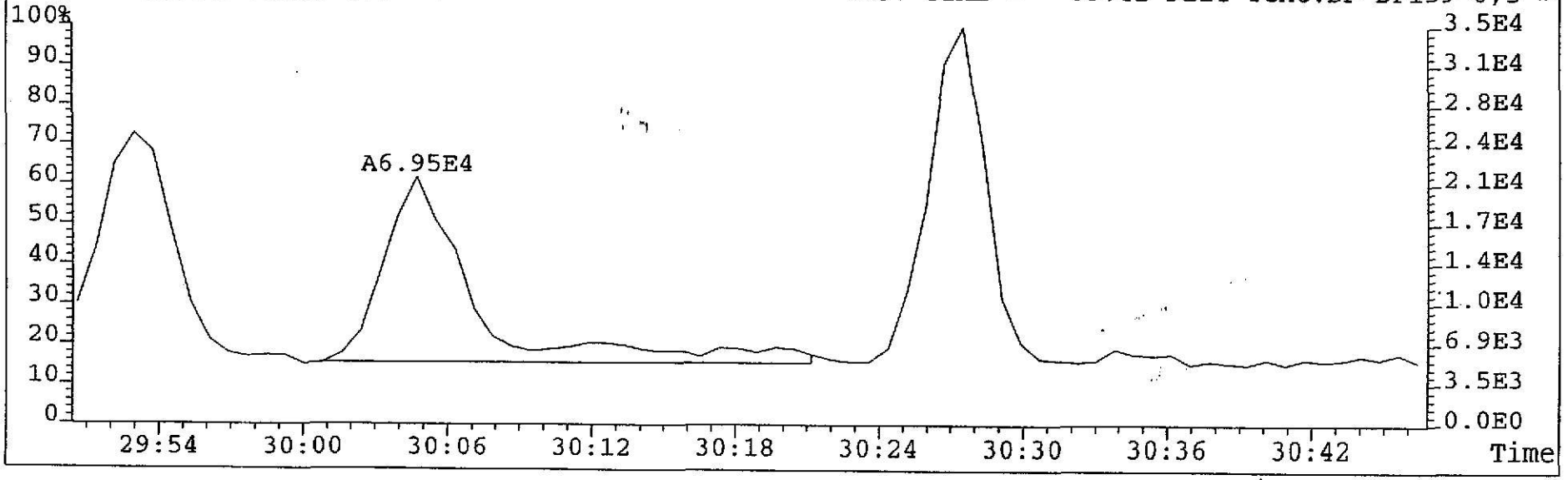


OEM 7/26/02

File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
339.8597 F:2 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1' INJ. TIME = 05:41 File Text:DF-DP159-0,5'»

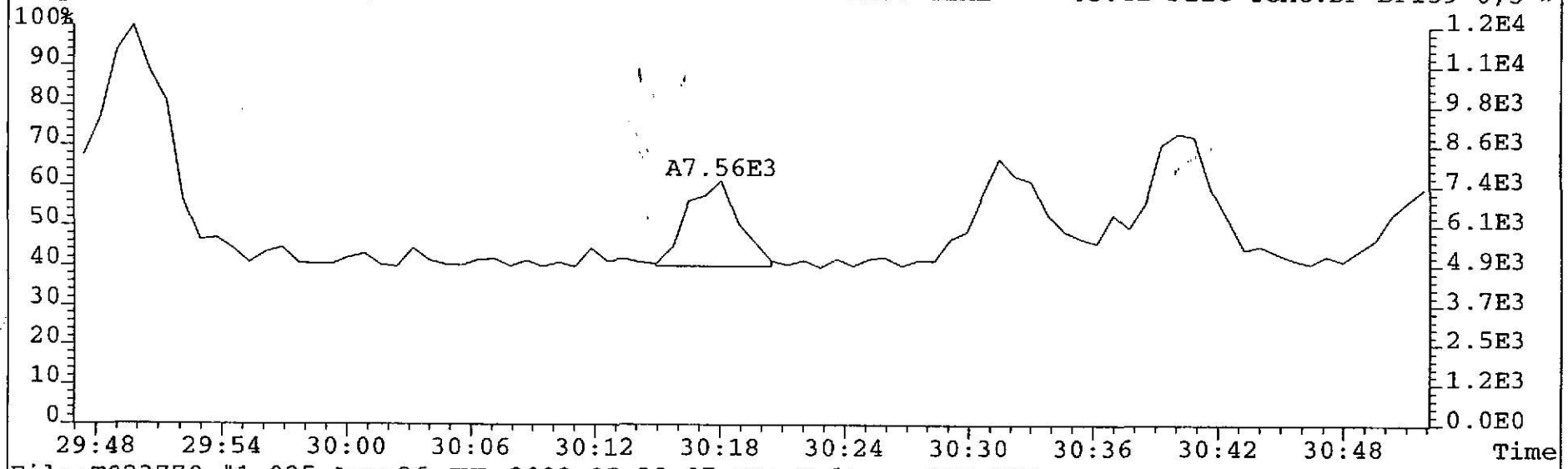


File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
341.8567 F:2 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1' INJ. TIME = 05:41 File Text:DF-DP159-0,5'»

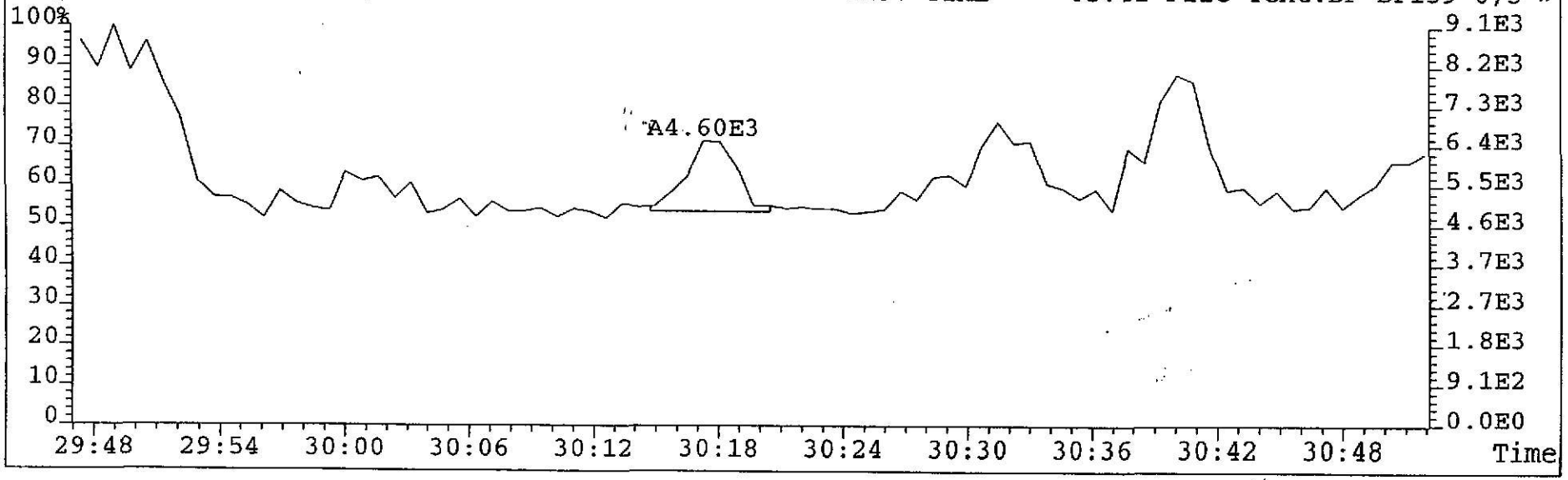


08M7126/02

File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
355.8546 F:2 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1' INJ. TIME = 05:41 File Text:DF-DP159-0,5'»

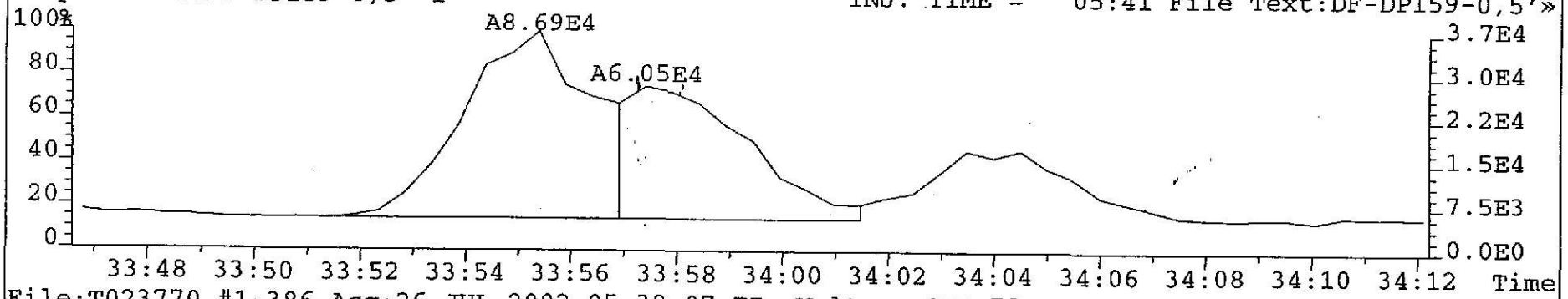


File:T023770 #1-925 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
357.8516 F:2 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1' INJ. TIME = 05:41 File Text:DF-DP159-0,5'»

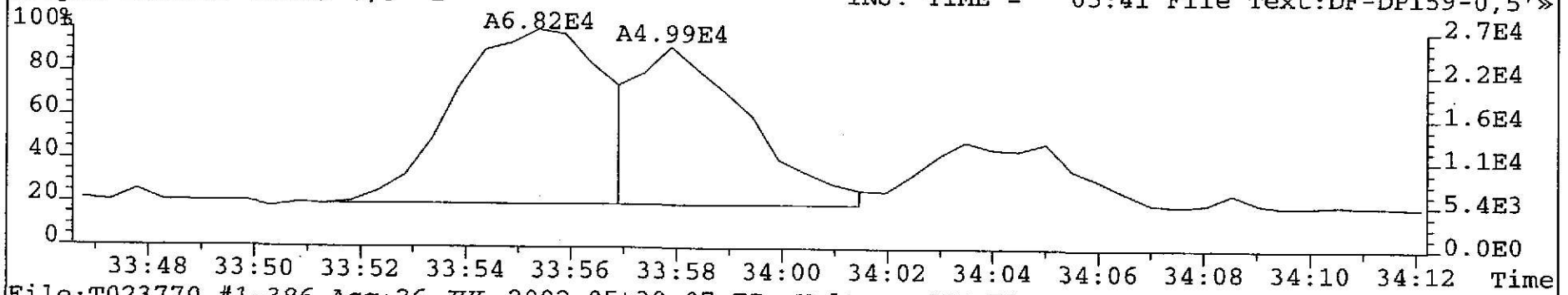


CEM 7/24/02

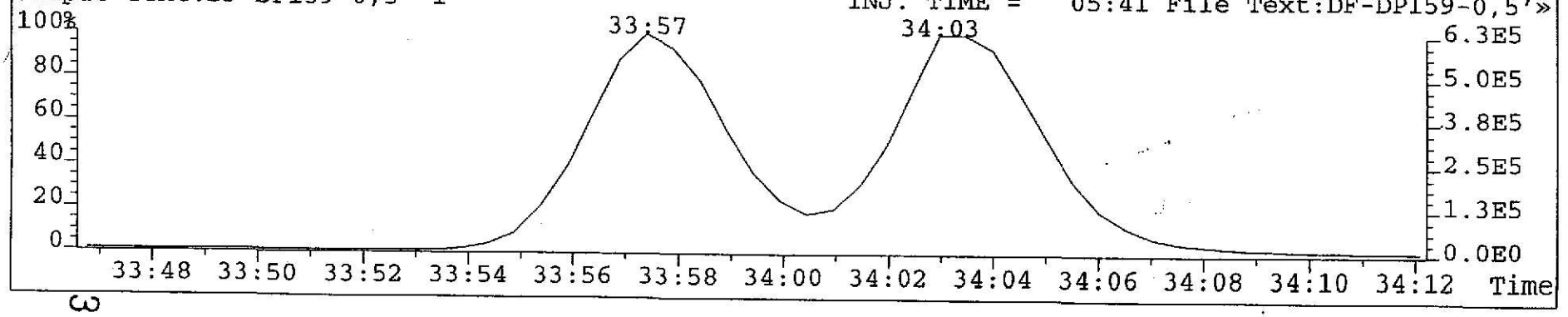
File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
373.8208 F:3 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1'
INJ. TIME = 05:41 File Text:DF-DP159-0,5'»



File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
375.8178 F:3 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1'
INJ. TIME = 05:41 File Text:DF-DP159-0,5'»

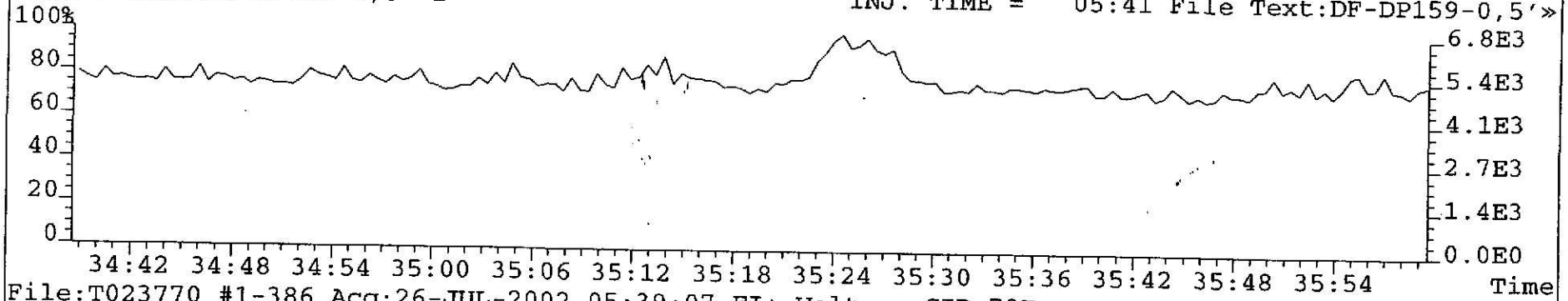


File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
383.8639 F:3 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1'
INJ. TIME = 05:41 File Text:DF-DP159-0,5'»

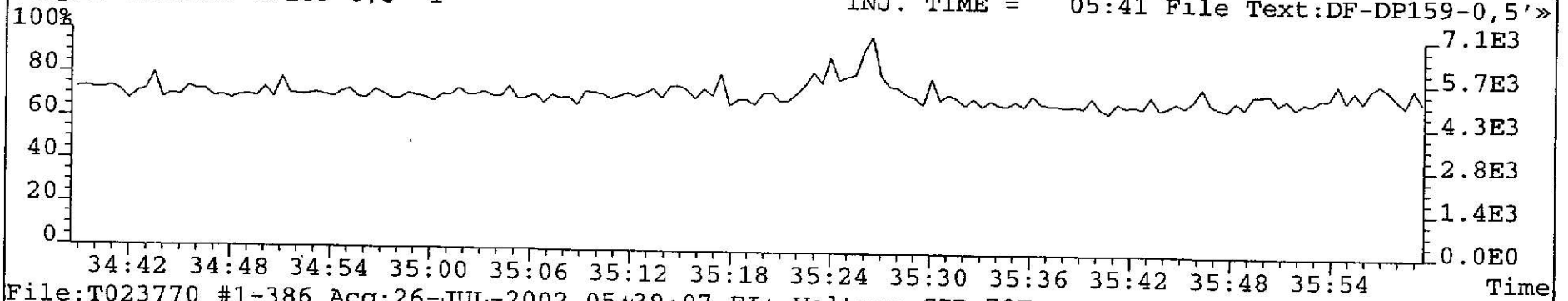


GEM 7/26/02

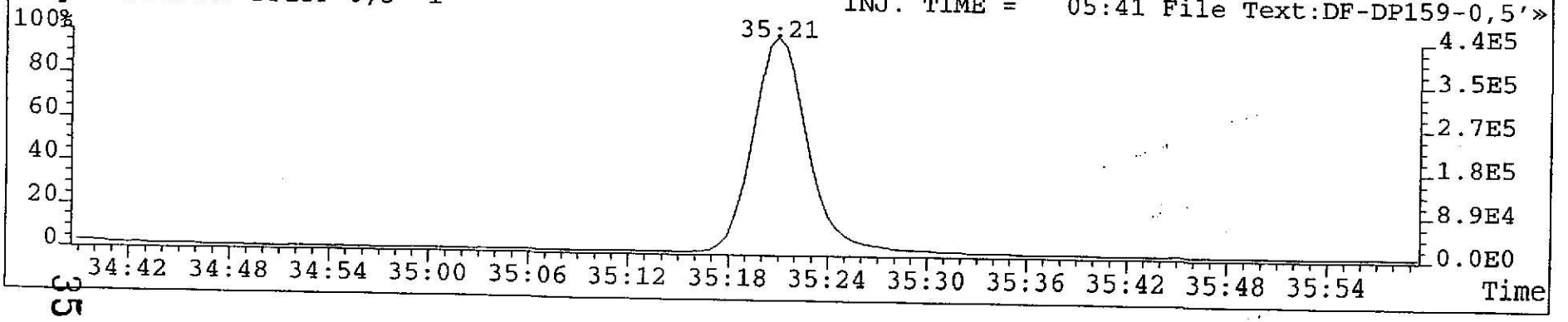
File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
373.8208 F:3 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1'
INJ. TIME = 05:41 File Text:DF-DP159-0,5'»



File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
375.8178 F:3 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1'
INJ. TIME = 05:41 File Text:DF-DP159-0,5'»

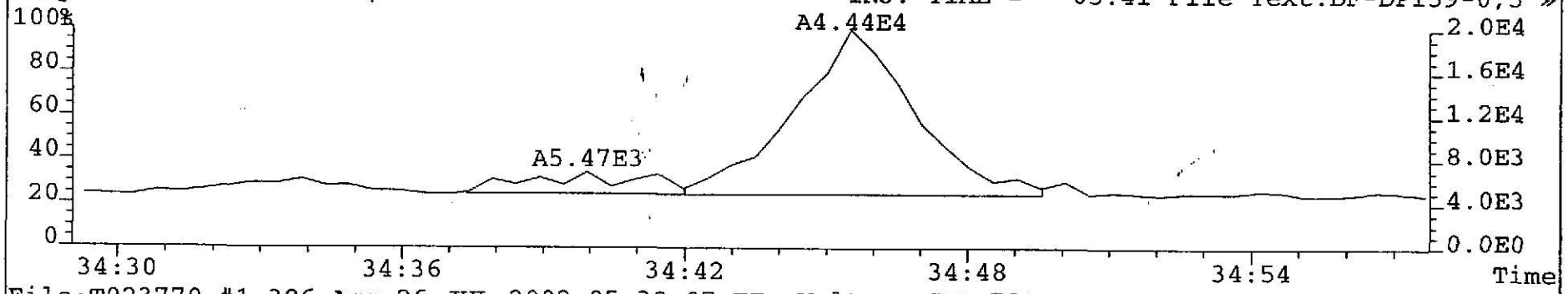


File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
383.8639 F:3 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1'
INJ. TIME = 05:41 File Text:DF-DP159-0,5'»

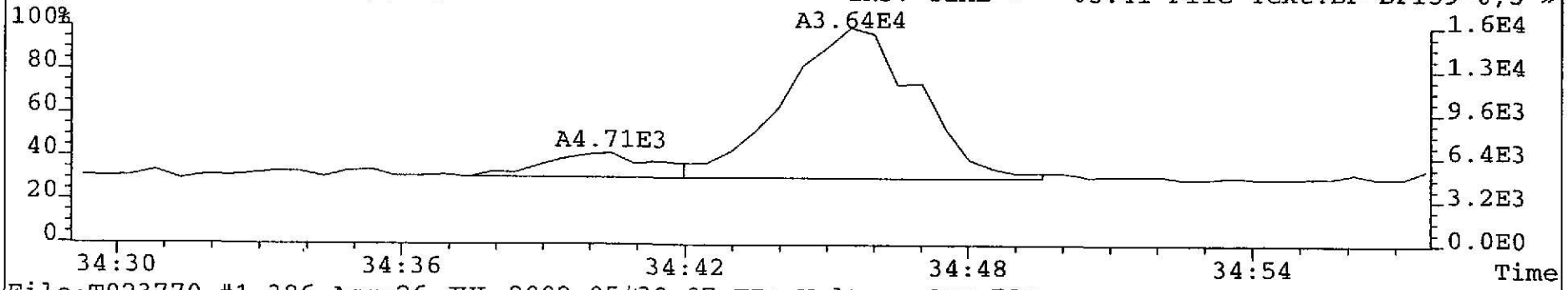


OEM 7/26/02

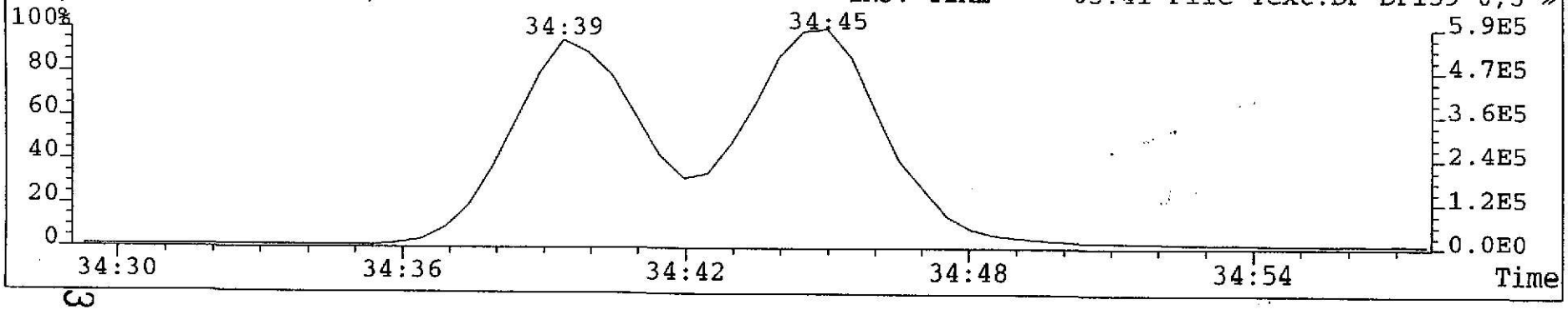
File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
389.8156 F:3 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1'
INJ. TIME = 05:41 File Text:DF-DP159-0,5'»



File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
391.8127 F:3 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1'
INJ. TIME = 05:41 File Text:DF-DP159-0,5'»

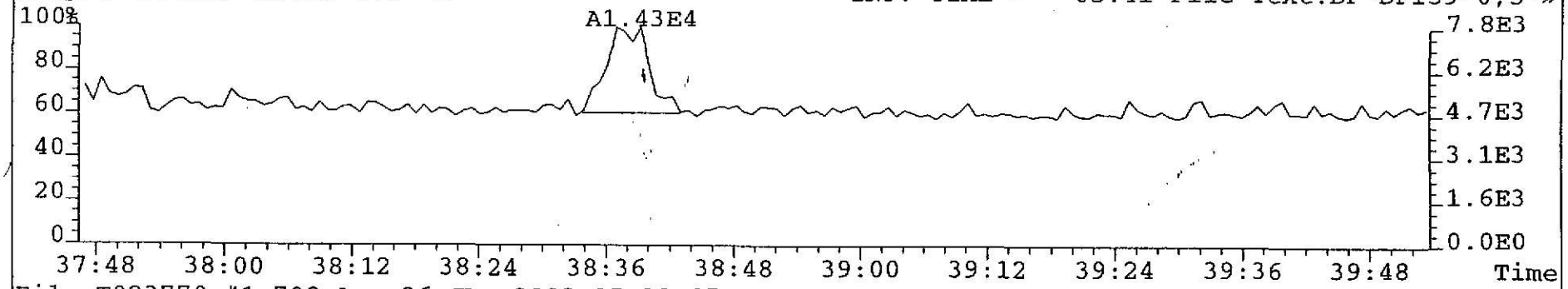


File:T023770 #1-386 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
403.8529 F:3 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1'
INJ. TIME = 05:41 File Text:DF-DP159-0,5'»

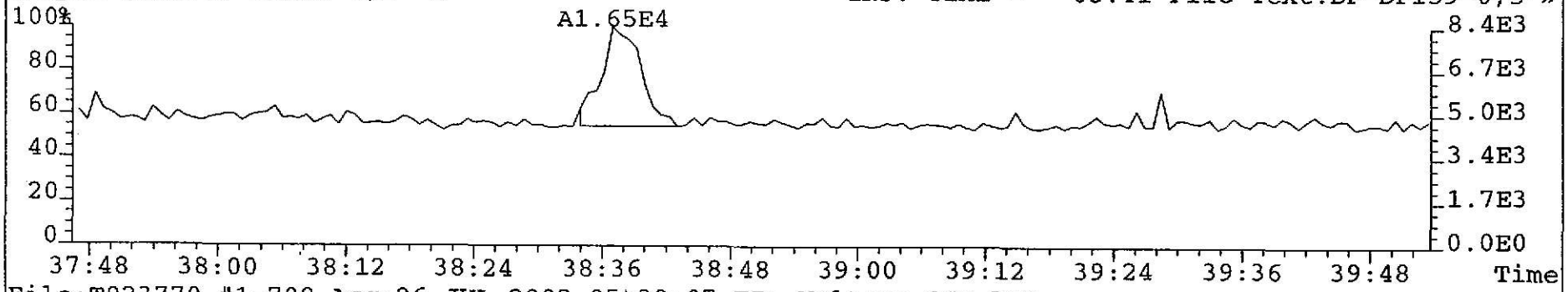


OEM 7/26/02

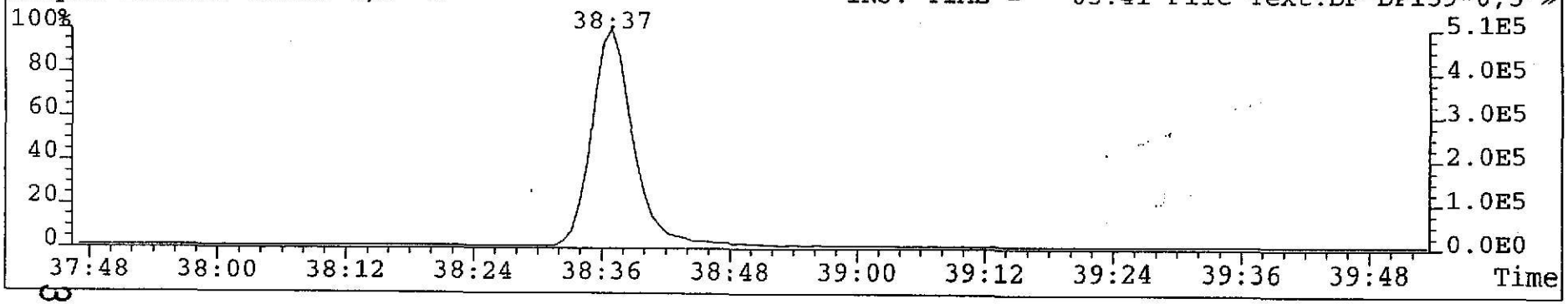
File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
407.7818 F:4 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1' INJ. TIME = 05:41 File Text:DF-DP159-0,5'»



File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
409.7789 F:4 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1' INJ. TIME = 05:41 File Text:DF-DP159-0,5'»



File:T023770 #1-708 Acq:26-JUL-2002 05:39:07 EI+ Voltage SIR 70T
419.8220 F:4 Exp:NDB5US
Sample Text:DF-DP159-0,5'-1' INJ. TIME = 05:41 File Text:DF-DP159-0,5'»



TLI Project: **57930** — 1613, Revision B PCDD/PCDF Analysis (c)

Client Sample: **DF-DP159-1'-2'** — Analysis File: **T023775**

Client Project:	Kuhlman Electric				
Sample Matrix:	SOLID	Date Received:	07/20/2002	Spike File:	SP161B2S
TLI ID:	331-18-9	Date Extracted:	07/23/2002	ICal:	TF5612B
		Date Analyzed:	07/26/2002	ConCal:	TB23771
Sample Size:	13.000 g	Dilution Factor:	n/a	% Moisture:	22.5
Dry Weight:	10.075 g	Blank File:	T023762	% Lipid:	n/a
GC Column:	DB-5	Analyst:	JMM	% Solids:	77.5

Analytes	Conc. (pg/g)	DL	Ratio	RT	RRT	Flags
2,3,7,8-TCDD	ND	0.2				
1,2,3,7,8-PeCDD	ND	0.3				
1,2,3,4,7,8-HxCDD	ND	0.3				
1,2,3,6,7,8-HxCDD	ND	0.3				
1,2,3,7,8,9-HxCDD	ND	0.3				
1,2,3,4,6,7,8-HpCDD	5.8		1.01	38:03	1.000	
1,2,3,4,6,7,8,9-OCDD	455		0.85	41:50	1.000	
2,3,7,8-TCDF	ND	0.2				
1,2,3,7,8-PeCDF	ND	0.2				
2,3,4,7,8-PeCDF	ND	0.2				
1,2,3,4,7,8-HxCDF	0.73		1.06	33:55	1.000	J
1,2,3,6,7,8-HxCDF	ND	0.2				
2,3,4,6,7,8-HxCDF	ND	0.2				
1,2,3,7,8,9-HxCDF	ND	0.3				
1,2,3,4,6,7,8-HpCDF	11.1		1.00	36:59	1.000	
1,2,3,4,7,8,9-HpCDF	ND	0.5				
1,2,3,4,6,7,8,9-OCDF	ND	2.7				

Totals	Conc. (pg/g)	Number	DL	Flags
Total TCDD	ND		0.2	
Total PeCDD	ND		0.3	
Total HxCDD	1.9	2		
Total HpCDD	12.8	2		
Total TCDF	0.47	1		
Total PeCDF	0.35	1		
Total HxCDF	5.1	3		
Total HpCDF	17.4	2		

161B_PSR v2.04, LARS 6.25.05

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Printed: 12:19 07/26/2002

TLI Project: **57930** 1613, Revision B PCDD/PCDF Analysis (c)
Client Sample: **DF-DP159-1'-2'** Analysis File: **T023775**

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	RRT	Flags
$^{13}C_{12}$-2,3,7,8-TCDD	127	64.1	25%-164%	0.81	27:20	1.007	—
$^{13}C_{12}$-1,2,3,7,8-PeCDD	119	59.8	25%-181%	1.52	31:31	1.161	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	166	83.8	32%-141%	1.21	34:37	0.989	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	171	86.2	28%-130%	1.22	34:42	0.991	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	148	74.5	23%-140%	1.02	38:02	1.086	—
$^{13}C_{12}$-1,2,3,4,6,7,8,9-OCDD	170	42.8	17%-157%	0.90	41:49	1.194	—
$^{13}C_{12}$-2,3,7,8-TCDF	147	73.9	24%-169%	0.74	26:38	0.981	—
$^{13}C_{12}$-1,2,3,7,8-PeCDF	123	61.9	24%-185%	1.47	30:31	1.124	—
$^{13}C_{12}$-2,3,4,7,8-PeCDF	121	61.1	21%-178%	1.49	31:12	1.149	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	188	94.8	26%-152%	0.51	33:55	0.969	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	213	107	26%-123%	0.52	34:00	0.971	—
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	200	101	28%-136%	0.51	34:30	0.985	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	184	92.7	29%-147%	0.51	35:18	1.008	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	168	84.6	28%-143%	0.44	36:58	1.056	—
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	147	74.0	26%-138%	0.44	38:33	1.101	—

Cleanup Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	RRT	Flags
$^{37}Cl_4$-2,3,7,8-TCDD	13.0	65.6	35%-197%	27:20	1.007	—

Recovery Standards	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.80	27:09	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.21	35:01	—

Data Reviewer: CAM 07/26/2002

161B_PSR v2.04, LARS 6.25.05

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Printed: 12:19 07/26/2002

TLI Project: 57930
Client Sample: DF-DP159-1'-2'

Toxicity Equivalents Report
Analysis File: T023775

Client Project:	Kuhlman Electric				
Sample Matrix:	SOLID	Date Received:	07/20/02	Spike File:	SP161B2S
TLI ID:	331-18-9	Date Extracted:	07/23/02	ICal:	TF5612B
		Date Analyzed:	07/26/02	ConCal:	TB23771
Sample Size:	13.000 g	Dilution Factor:	1	% Moisture:	22.5
Dry Weight:	10.075 g	Blank File:	T023762	% Lipid:	n/a
GC Column:	DB-5	Analyst:	JMM	% Solids:	77.5

Analytes	Conc. (pg/g)		TEF		Equivalent
2,3,7,8-TCDD	{0.2}	x	1.	=	0.2
1,2,3,7,8-PeCDD	{0.3}	x	0.5	=	0.2
1,2,3,4,7,8-HxCDD	{0.3}	x	0.1	=	0.03
1,2,3,6,7,8-HxCDD	{0.3}	x	0.1	=	0.03
1,2,3,7,8,9-HxCDD	{0.3}	x	0.1	=	0.03
1,2,3,4,6,7,8-HpCDD	5.8	x	0.01	=	0.058
1,2,3,4,6,7,8,9-OCDD	455	x	0.001	=	0.455
TOTAL PCDD					1.0
2,3,7,8-TCDF	{0.2}	x	0.1	=	0.02
1,2,3,7,8-PeCDF	{0.2}	x	0.05	=	0.01
2,3,4,7,8-PeCDF	{0.2}	x	0.5	=	0.1
1,2,3,4,7,8-HxCDF	0.73	x	0.1	=	0.073
1,2,3,6,7,8-HxCDF	{0.2}	x	0.1	=	0.02
2,3,4,6,7,8-HxCDF	{0.2}	x	0.1	=	0.02
1,2,3,7,8,9-HxCDF	{0.3}	x	0.1	=	0.03
1,2,3,4,6,7,8-HpCDF	11.1	x	0.01	=	0.111
1,2,3,4,7,8,9-HpCDF	{0.5}	x	0.01	=	0.005
1,2,3,4,6,7,8,9-OCDF	{2.7}	x	0.001	=	0.0027
TOTAL PCDF					0.4

Total EPA TEFs, 1989a: 1.4 pg/g

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

GRY_TEF v1.08, MILES 4.22.16

Triangle Laboratories, Inc.®
2445 S. Alston Ave. • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Printed: 22:18 07/29/02

Initial ....Date...

Data Review By: CEM 7/26/02

Calculated Noise Height: 0.07

Page No. 1 Listing of T023775B.dbf
07/26/2002 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						0.879-1.071			
304-306	DC	NL				Height	0.18	0.11	0.07				
				27:50		0.84	2.14	0.98	1.16	1.045			J
304-306				1 Peak			2.14						
13C12-TCDF				0.65-0.89						0.944-1.131			
316-318	DC	NL				Height	0.14	0.07	0.07				
				25:38		0.82	8.15	3.67	4.48	0.962			
				25:54		0.79	2.49	1.10	1.39	0.972			
				26:14		0.82	7.61	3.44	4.17	0.985			
				26:38		0.74	849.18	361.42	487.76	1.000	13C12-2378-TCDF	ISO	
						Height	208.03	89.75	118.28				
				27:22		0.65	1.67	0.66	1.01	1.028			
316-318				5 Peaks			869.10						

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

TCDD				0.65-0.89						0.904-1.042			
320-322	DC	NL				Height	0.14	0.07	0.07				
	DC	SN	24:45	RO	0.01		5.38			0.905			
	DC	SN	26:11	RO	0.40		0.74			0.958			
	DC	SN	26:38	RO	1.91		0.99			0.974			
	DC	SN	26:52	RO	0.36		0.30			0.983			
	DC	WH	28:39	RO	2.67		0.33			1.048			
	DC	WH	28:45	RO	1.00		0.32			1.052			
320-322				0 Peaks			0.00						
37Cl-TCDD										0.927-1.073			
328	DC	NL				Height	0.09	0.09					
	DC	WL	24:43				0.16			0.904			
	DC	WL	24:50				0.11			0.909			
	DC	WL	24:55				0.15			0.912			
	DC	WL	25:00				0.12			0.915			
	DC	WL	25:03				0.21			0.916			
	DC	WL	25:13				0.71			0.923			
	DC	SN	25:26				0.30			0.930			
	DC	SN	25:38				0.16			0.938			
	DC	SN	25:41				0.09			0.940			
	DC	SN	25:49				0.15			0.945			
	DC	SN	26:00				0.32			0.951			
	DC	SN	26:44				0.10			0.978			
	DC	SN	26:49				0.09			0.981			
			27:20				63.55	63.55		1.000	37Cl-TCDD	CLS	
			27:43				1.87	1.87		1.014			
	DC	SN	28:18				0.30			1.035			
	DC	SN	28:34				0.38			1.045			
	DC	SN	28:49				0.12			1.054			

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.
328						2 Peaks	65.42						
13C12-TCDD						0.65-0.89				0.920-1.066			
332-334	DC	NL				Height	0.27	0.18	0.09				
				26:12	RO	1.13	1.47	0.78	0.69	0.959			
				27:09		0.80	876.19	390.56	485.63	0.993	13C12-1234-TCDD	RS1	
				27:20		0.81	633.61	284.43	349.18	1.000	13C12-2378-TCDD	IS1	
						Height	162.00	72.52	89.48				
332-334						3 Peaks	1,511.27						
---------- Above: TCDD / PeCDF Follows ----------													
PeCDF						1.32-1.78				0.911-1.037			
340-342	DC	NL				Height	0.14	0.06	0.08				
	DC	SN		29:39		1.44	1.10			0.950			
				29:49	RO	2.22	1.48	1.02	0.46	0.956			
D	D	SN		30:01	RO	1.85	1.34			0.962			
				30:24		1.68	1.26	0.79	0.47	0.974			J
	DC	SN		30:41	RO	6.50	0.45			0.983			
	DC	SN		30:48	RO	1.82	0.62			0.987			
D	D	SN		32:03	RO	2.29	0.92			1.027			
	DC	SN		32:11	RO	0.62	0.21			1.032			
	DC	WH		32:22	RO	0.55	0.51			1.037			
340-342						2 Peaks	2.74						
13C12-PeCDF						1.32-1.78				0.807-1.127			
352-354	DC	NL				Height	0.13	0.07	0.06				
				29:41		1.52	10.37	6.25	4.12	0.951			
				30:08		1.46	7.66	4.54	3.12	0.966			
				30:31		1.47	630.73	375.32	255.41	1.000	13C12-PeCDF 123	IS2	
						Height	174.14	103.34	70.80				
				30:47		1.55	12.50	7.59	4.91	0.987			
				31:12		1.49	634.15	379.35	254.80	1.000	13C12-PeCDF 234	IS3	
						Height	184.81	111.77	73.04				
	DC	SN		31:44	RO	0.91	0.86			1.017			
	DC	SN		31:56	RO	2.63	0.69			1.024			
				32:10		1.48	6.80	4.06	2.74	1.031			
352-354						6 Peaks	1,302.21						
---------- Above: PeCDF / PeCDD Follows ----------													
PeCDD						1.32-1.78				0.940-1.021			
356-358	DC	NL				Height	0.14	0.07	0.07				
	DC	SN		29:47	RO	1.93	1.20			0.945			
	DC	SN		29:55		1.35	0.40			0.949			
	DC	SN		30:31	RO	2.74	0.86			0.968			
	DC	SN		30:37	RO	2.22	0.74			0.971			
	DC	SN		31:03		1.47	0.79			0.985			
	DC	SN		31:11	RO	2.60	0.90			0.989			
	DC	SN		31:41	RO	0.38	0.36			1.005			
	DC	SN		31:48	RO	1.06	0.33			1.009			
356-358						0 Peaks	0.00						

Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
13C12-PeCDD				1.32-1.78						0.735-1.052			
368-370	DC	NL				Height	0.14	0.07	0.07				
				30:28		1.35	1.22	0.70	0.52	0.967			
				30:36	RO	1.21	2.85	1.56	1.29	0.971			
	DC	SN		30:49	RO	1.88	0.69			0.978			
				31:31		1.52	435.61	262.89	172.72	1.000	13C12-PeCDD 123	IS4	
						Height	127.38	76.59	50.79				
				31:59		1.41	1.90	1.11	0.79	1.015			
	DC	SN		32:28	RO	4.50	0.44			1.030			
368-370			4	Peaks			441.58						

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

HxCDF				1.05-1.43						0.929-1.007			
374-376	DC	NL				Height	0.15	0.08	0.07				
				32:58	RO	1.49	1.89	1.13	0.76	0.934			
				33:06		1.26	5.93	3.31	2.62	0.938			J
				33:33		1.27	7.86	4.39	3.47	0.950			J
				33:55		1.06	2.31	1.19	1.12	1.000	123478-HxCDF	AN	J
	DC	SN		34:02		1.35	0.80			1.001	123678-HxCDF	AN	
	DC	SN		34:30		1.13	0.68			1.000	234678-HxCDF	AN	
	DC	SN		35:22		1.20	0.22			1.002			
374-376			4	Peaks			17.99						
13C12-HxCDF				0.43-0.59						0.879-1.106			
384-386	DC	NL				Height	0.34	0.10	0.24				
				32:57		0.47	2.37	0.76	1.61	0.933			
				33:05		0.58	4.57	1.67	2.90	0.937			
				33:55		0.51	555.33	187.41	367.92	1.000	13C12-HxCDF 478	IS5	
						Height	172.39	59.11	113.28				
				34:00		0.52	637.16	216.99	420.17	1.000	13C12-HxCDF 678	IS6	
						Height	182.08	61.23	120.85				
				34:18		0.55	1.27	0.45	0.82	0.972			
				34:30		0.51	584.69	196.88	387.81	1.000	13C12-HxCDF 234	IS7	
						Height	174.80	58.53	116.27				
				34:50	RO	0.68	1.26	0.51	0.75	0.987			
				35:18		0.51	450.93	152.19	298.74	1.000	13C12-HxCDF 789	IS8	
						Height	119.86	40.49	79.37				
				35:34	RO	0.25	2.07	0.42	1.65	1.008			
				35:42	RO	0.68	1.38	0.56	0.82	1.011			
384-386			10	Peaks			2,241.03						

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

HxCDD				1.05-1.43						0.959-1.013			
390-392	DC	NL				Height	0.17	0.08	0.09				
M				33:27		1.12	1.61	0.85	0.76	0.964			J
	DC	SN		33:53	RO	3.40	0.88			0.976			
				34:06		1.05	2.44	1.25	1.19	0.983			J
	DC	SN		34:15	RO	0.59	0.27			0.987			
	DC	SN		34:25	RO	0.57	0.11			0.992			
	DC	SN		34:36	RO	0.50	0.36			1.000	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.

                DC  SN  34:43 RO  0.88          0.75                                  1.000 123678-HxCDD    AN
        MK              35:01 RO  1.00          0.76          0.38          0.38  1.009 123789-HxCDD    AN
390-392               3 Peaks                   4.81

13C12-HxCDD                     1.05-1.43                                   0.983-1.041
402-404         DC  NL           Height         0.17          0.09          0.08
                        34:04     1.21          1.77          0.97          0.80  0.984
                        34:37     1.21        363.34        199.24        164.10  1.000 13C12-HxCDD 478 IS9
                                 Height        115.07         64.00         51.07
                        34:42     1.22        408.69        224.27        184.42  1.000 13C12-HxCDD 678 IS10
                                 Height        116.34         62.65         53.69
                        35:01     1.21        494.59        270.59        224.00  1.012 13C12-HxCDD 789 RS2
402-404               4 Peaks               1,268.39

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

HpCDF                           0.88-1.20                                   0.955-1.005
408-410         DC  NL           Height         0.13          0.07          0.06
                        36:59     1.00         26.31         13.13         13.18  1.000 1234678-HpCDF   AN
                DC  SN  37:17 RO  3.89          0.44                                0.967
                        37:25     1.11         12.55          6.60          5.95  0.971                       J
408-410               2 Peaks                  38.86

13C12-HpCDF                     0.37-0.51                                   0.857-1.142
418-420         DC  NL           Height         0.21          0.12          0.09
                        36:58     0.44        348.62        106.16        242.46  1.000 13C12-HpCDF 678 IS11
                                 Height         85.80         25.71         60.09
                DC  SN  37:20 RO  0.75          0.98                                0.968
                DC  SN  37:46 RO  1.30          0.62                                0.980
                DC  SN  38:01 RO  1.16          0.97                                0.986
                DC  SN  38:14 RO  0.79          0.25                                0.992
                        38:33     0.44        245.28         74.49        170.79  1.000 13C12-HpCDF 789 IS12
                                 Height         52.18         15.47         36.71
                        38:54 RO  1.72          1.06          0.67          0.39  1.009
418-420               3 Peaks                 594.96

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

HpCDD                           0.88-1.20                                   0.976-1.005
424-426         DC  NL           Height         0.12          0.06          0.06
                        37:17     1.06          9.54          4.91          4.63  0.980
                        38:03     1.01          7.97          4.01          3.96  1.000 1234678-HpCDD   AN
                DC  WH  38:21 RO  1.29          0.39                                1.008
424-426               2 Peaks                  17.51

13C12-HpCDD                     0.88-1.20                                   0.869-1.079
436-438         DC  NL           Height         0.17          0.11          0.06
                        37:15     0.91          1.78          0.85          0.93  0.979
                        38:02     1.02        290.53        147.03        143.50  1.000 13C12-HpCDD 678 IS13
                                 Height         67.21         34.16         33.05
436-438               2 Peaks                 292.31
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Compound/
M_Z.... QC.Log Omit Why ..RT. OK Ratio Total.Area/Ht Area/Ht.Peak1 Area/Ht.Peak2 Rel.RT Compound.Name.. ID.. Flags.

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

OCDF                                0.76-1.02                                    0.952-1.048
442-444          DC  NL              Height          0.14          0.07          0.07
                 DC  WL  36:45 RO  0.38            0.29                                0.879
                 DC  WL  37:00 RO  0.28            0.37                                0.885
                 DC  WL  38:02 RO  1.90            0.61                                0.910
                 DC  WL  38:49 RO  2.86            0.27                                0.928
                 DC  WL  39:01 RO  3.33            0.26                                0.933
                 DC  WL  39:08     1.00            0.14                                0.936
                 DC  WL  39:16     0.77            0.23                                0.939
                 DC  WL  39:19 RO  0.45            0.29                                0.940
                 DC  WL  39:25 RO  0.63            0.52                                0.943
                 DC  SN  40:58 RO  0.67            0.25                                0.980
                 DC  SN  41:50 RO  0.27            0.38                                1.000
        M                42:03 RO  1.18            2.60          1.41          1.19  1.006 OCDF            AN
442-444                1 Peak                      2.60

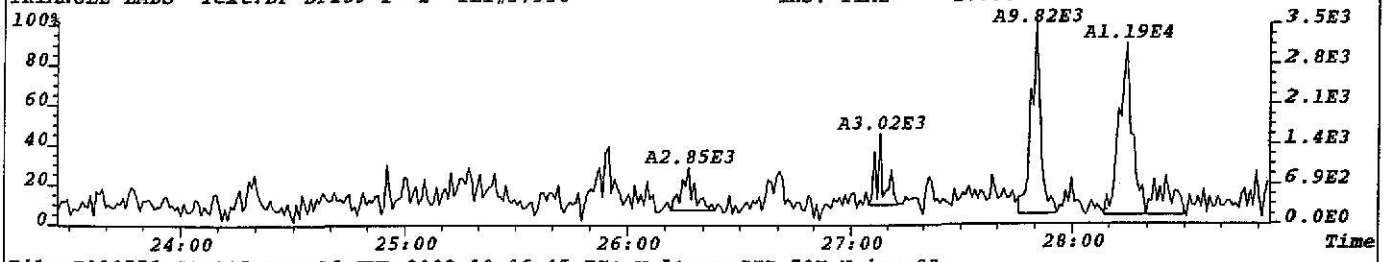
OCDD                                0.76-1.02                                    0.952-1.048
458-460          DC  NL              Height          0.12          0.06          0.06
                         41:50      0.85          365.33        168.33        197.00  1.000 OCDD            AN
                 DC  SN  42:13 RO  1.11            0.59                                1.010
                 DC  SN  42:22 RO  0.58            0.98                                1.013
458-460                1 Peak                    365.33

13C12-OCDD                          0.76-1.02                                    0.996-1.004
470-472          DC  NL              Height          0.12          0.06          0.06
                         41:49      0.90          314.04        148.45        165.59  1.000 13C12-OCDD      IS14
                                    Height         63.52         29.45         34.07
470-472                1 Peak                    314.04
```

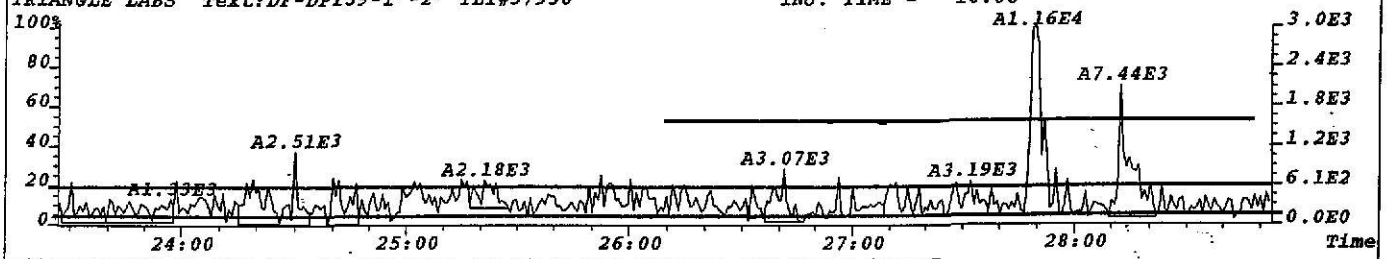
Column Description.....	"Why" Code Description.....	QC Log Desc.....
M_Z -Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT. -Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK -RO=Ratio Outside 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 ***

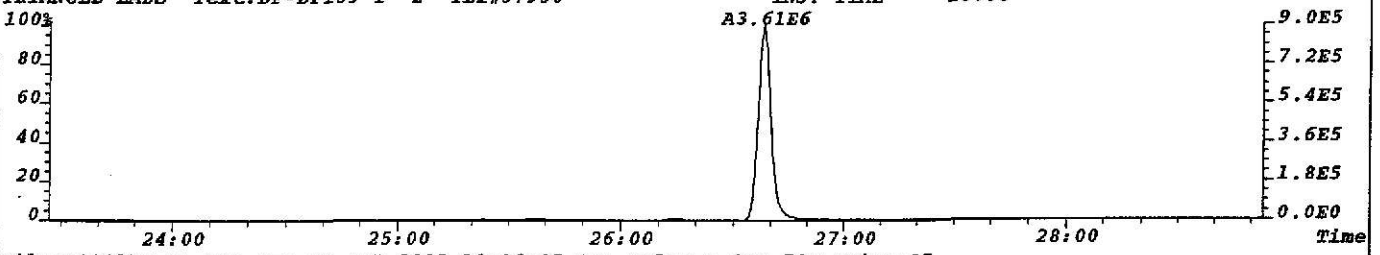
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:136
303.9016 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,544.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



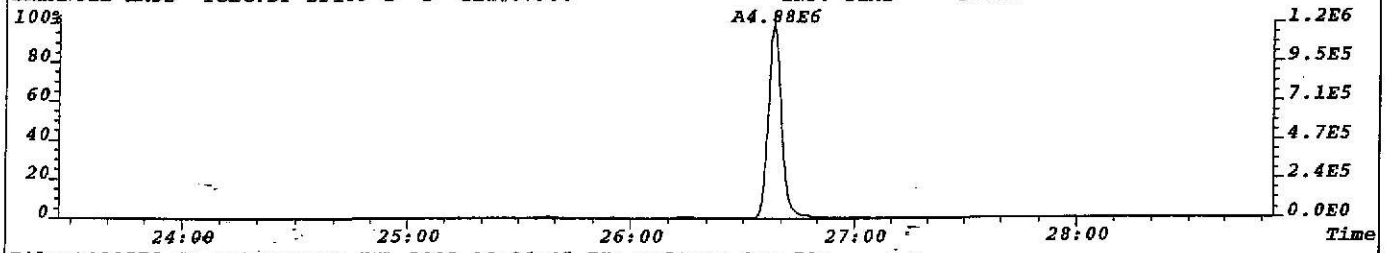
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:93
305.8987 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,372.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



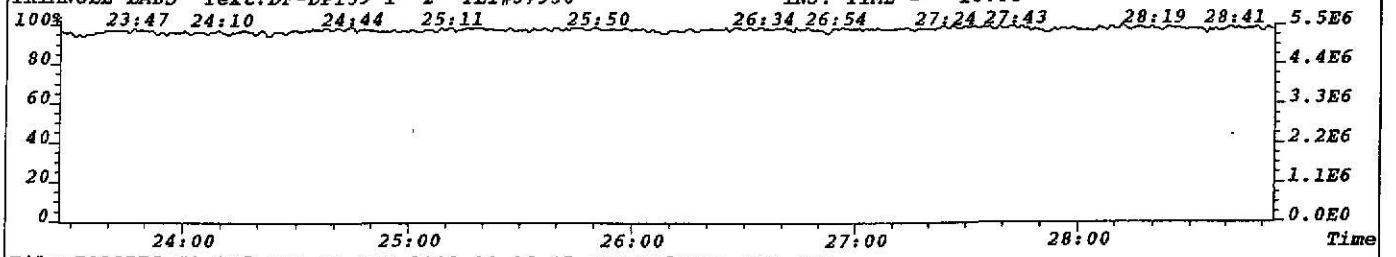
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:87
315.9419 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,348.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



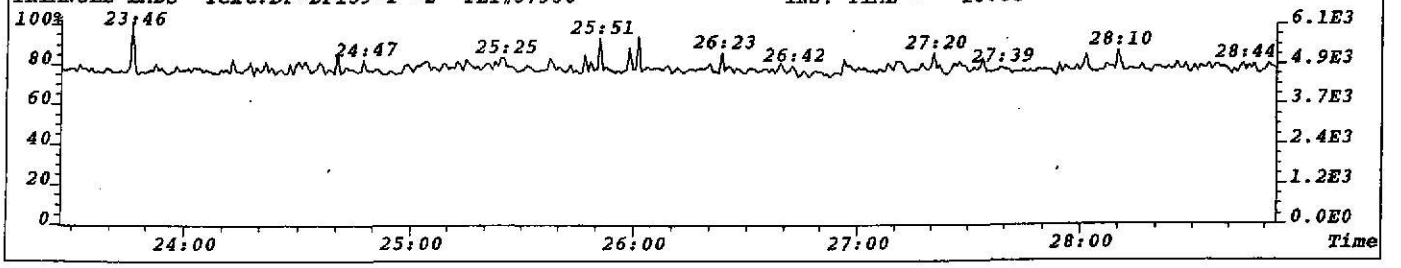
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:87
317.9389 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,348.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



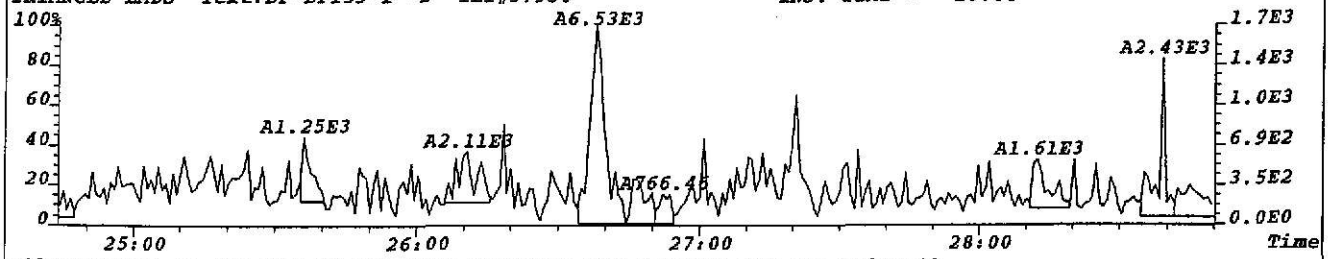
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



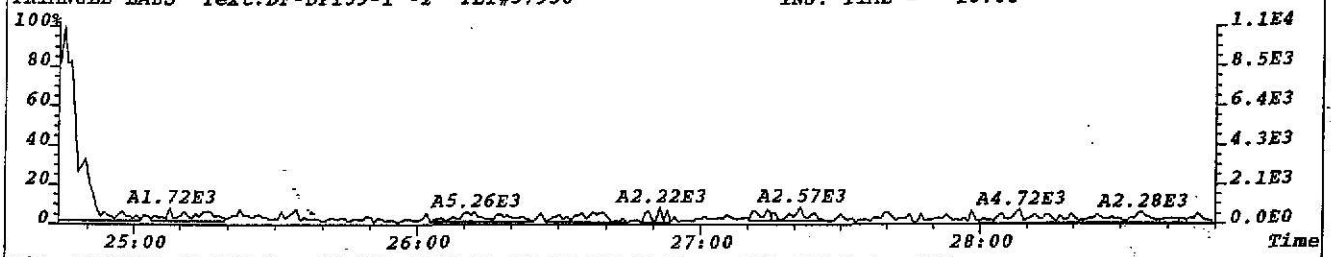
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
375.8364 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



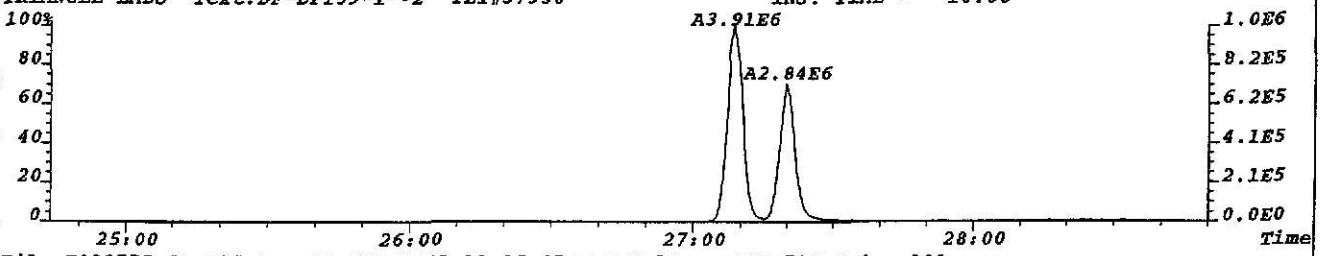
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:83
319.8965 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,332.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



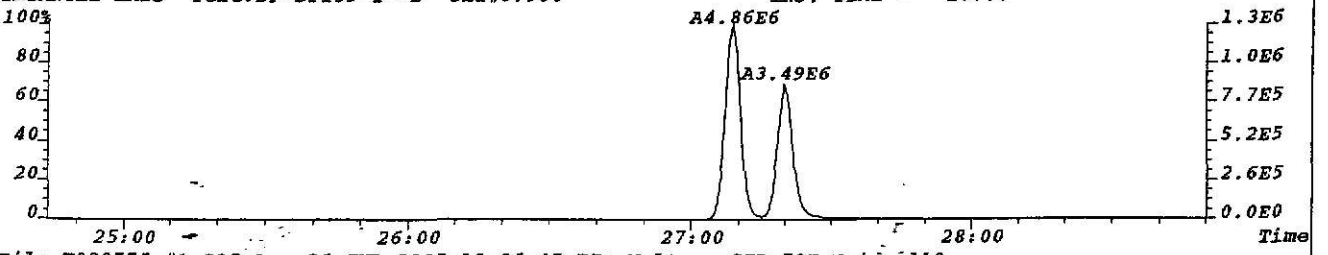
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:89
321.8936 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,356.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



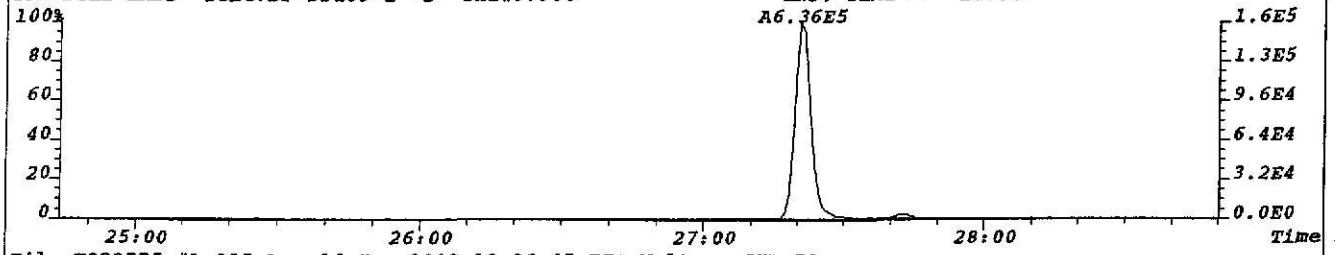
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:220
331.9368 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,880.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



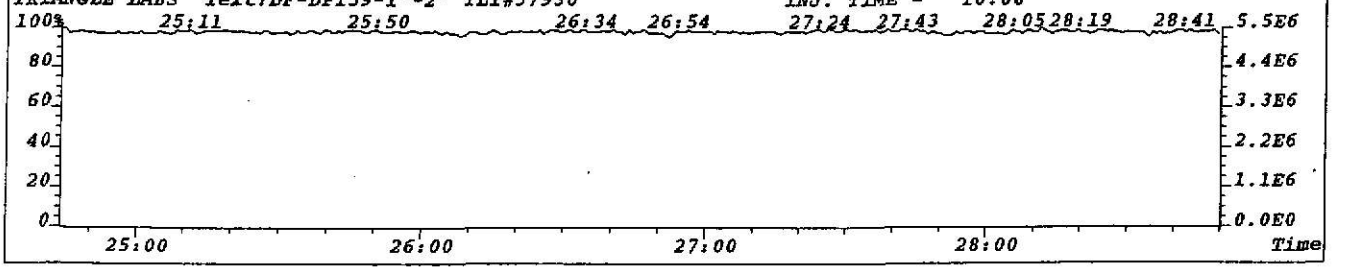
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:109
333.9338 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,436.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



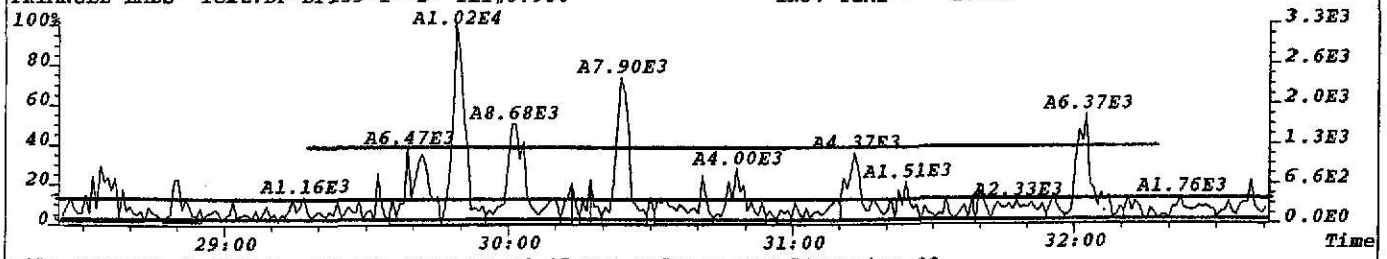
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:110
327.8847 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,440.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



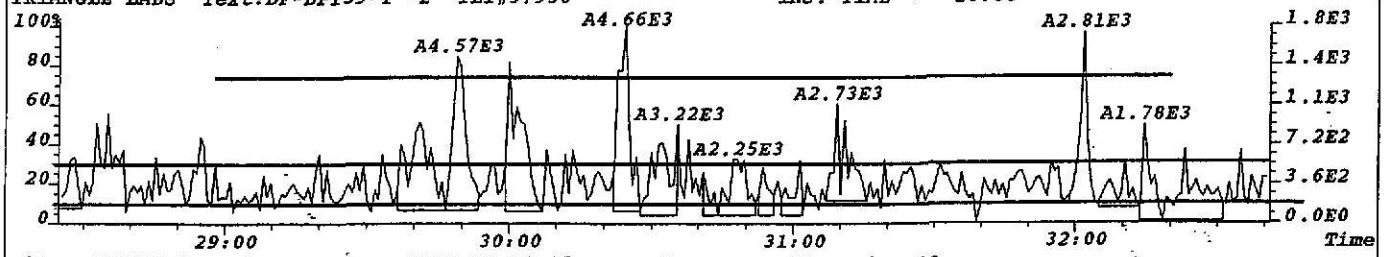
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



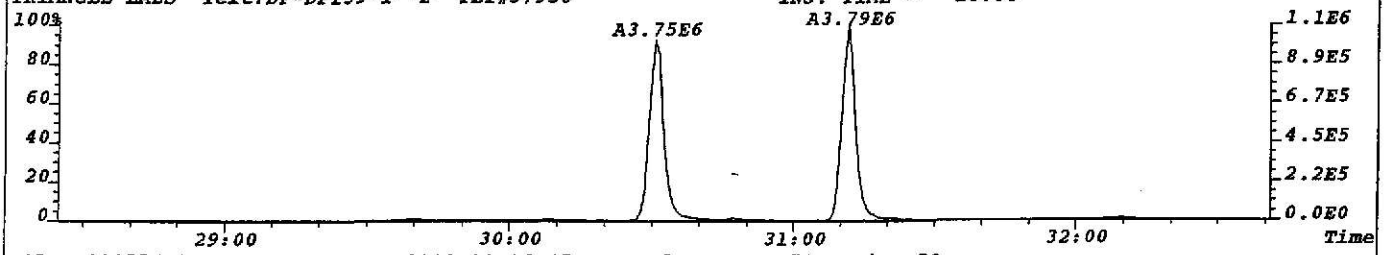
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:72
339.8597 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,288.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



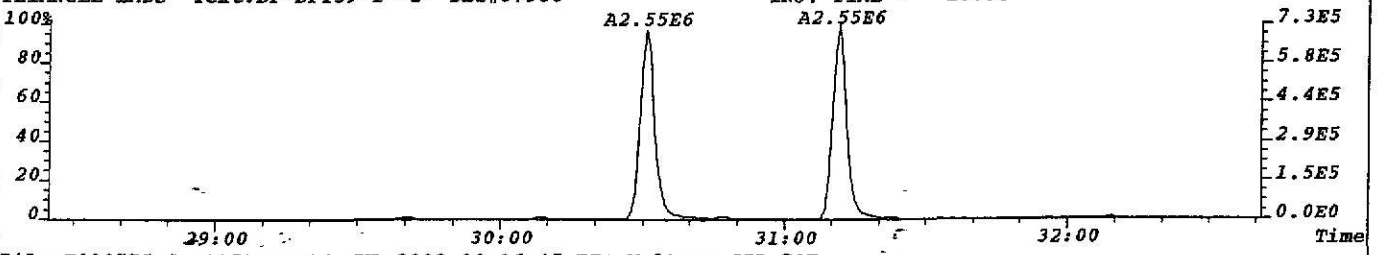
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:98
341.8567 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,392.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



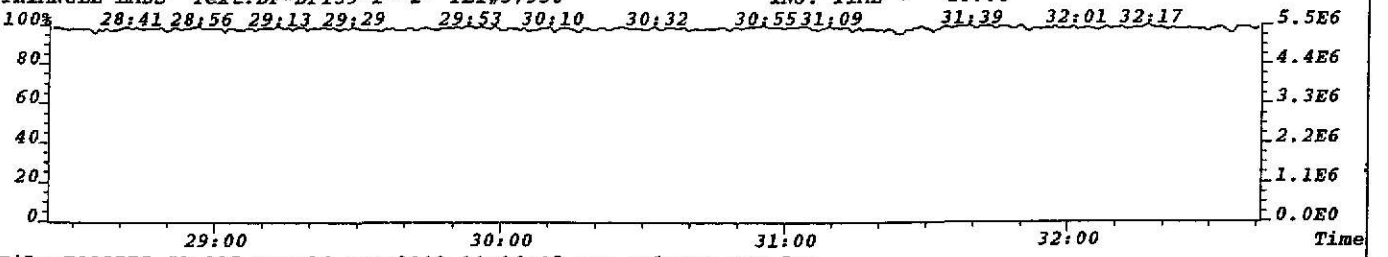
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:82
351.9000 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,328.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



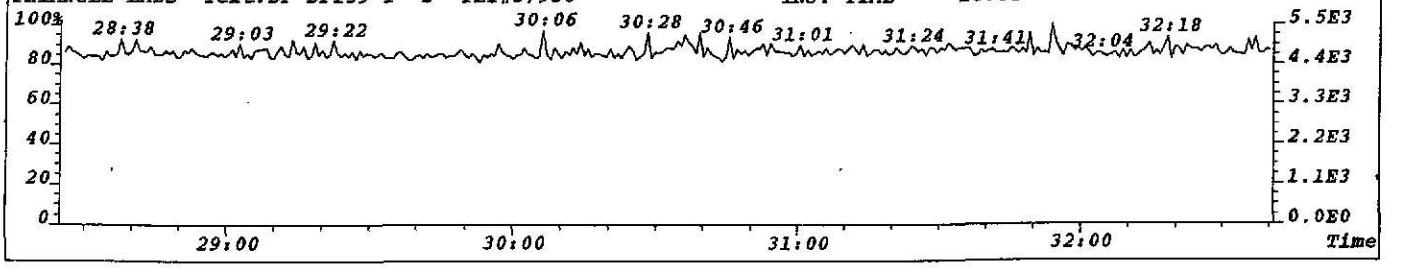
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:79
353.8970 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,316.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



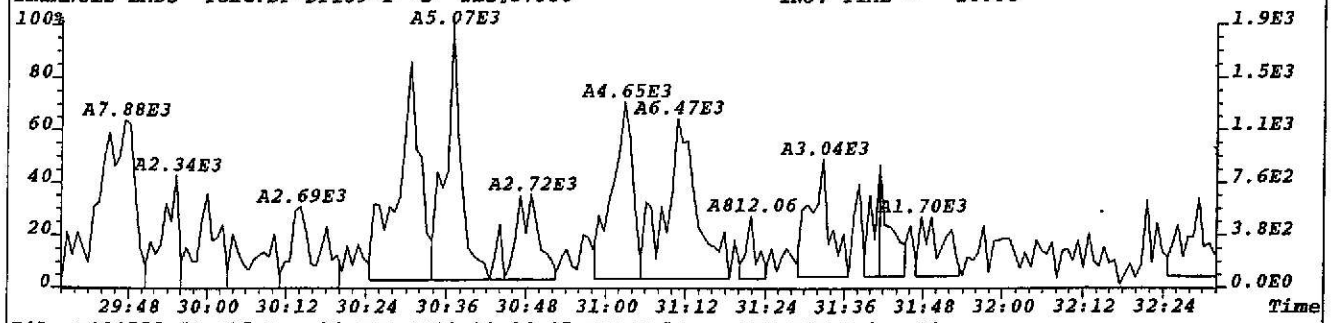
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



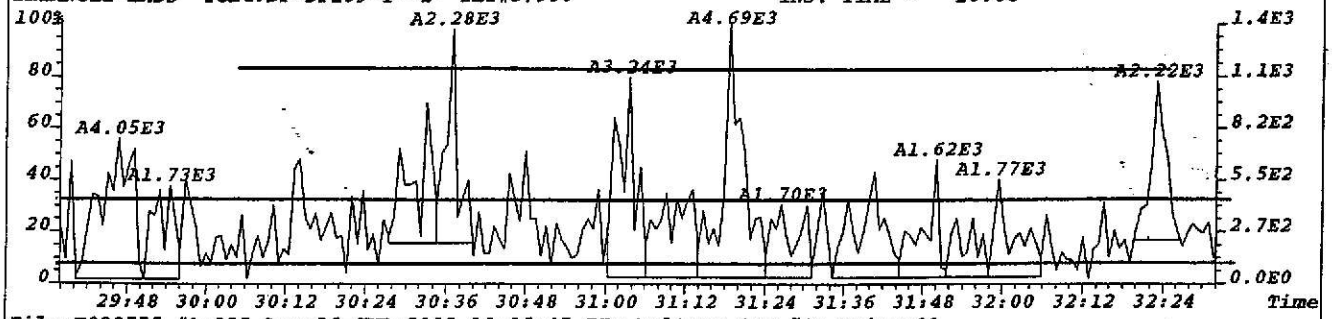
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
409.7974 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



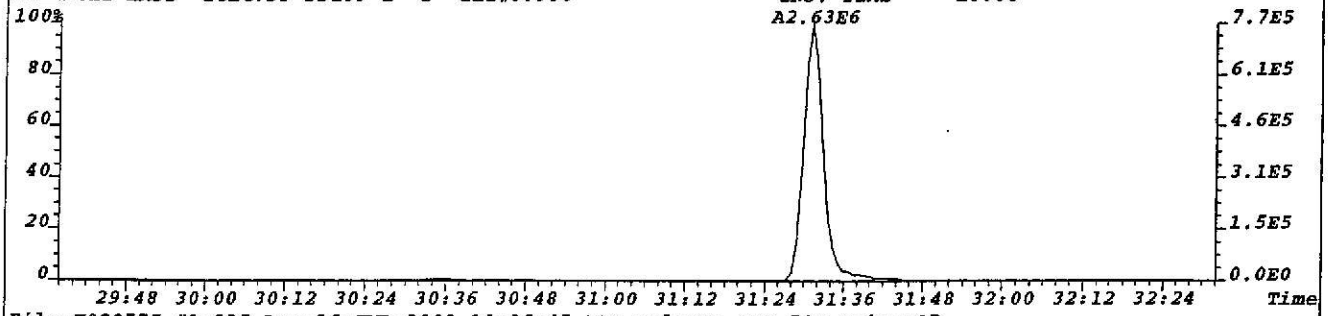
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:88
355.8546 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,352.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



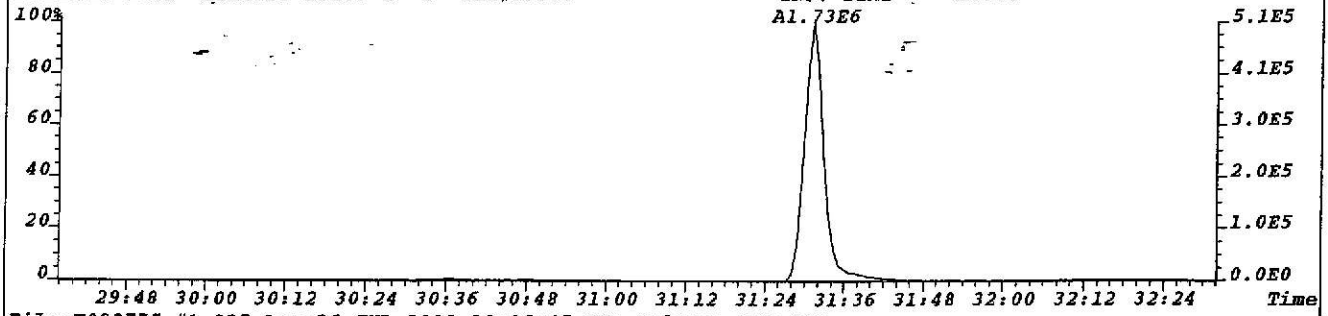
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:82
357.8516 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,328.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



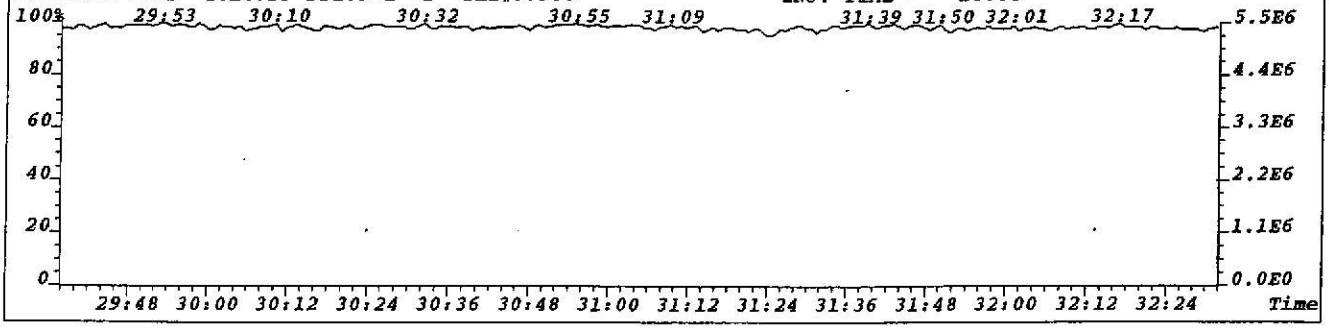
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:91
367.8949 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,364.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



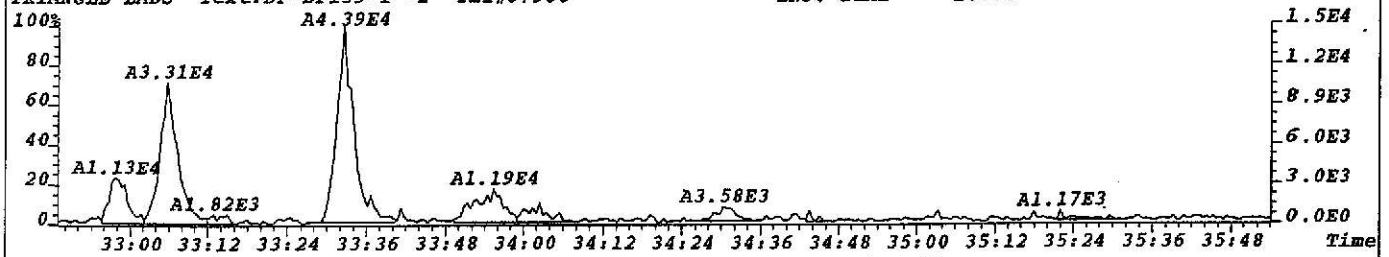
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:87
369.8919 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,348.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



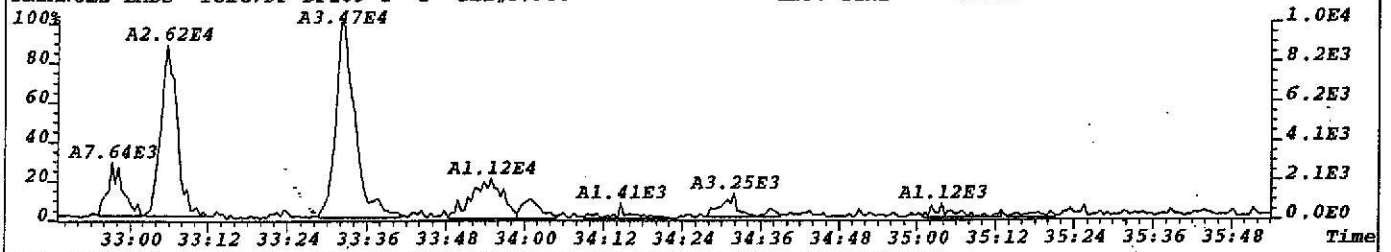
File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



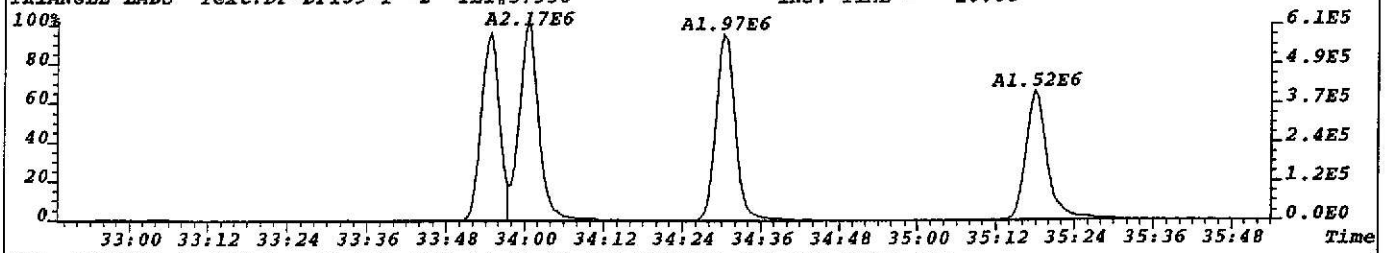
File:T023775 #1-386 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:104
373.8208 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,416.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



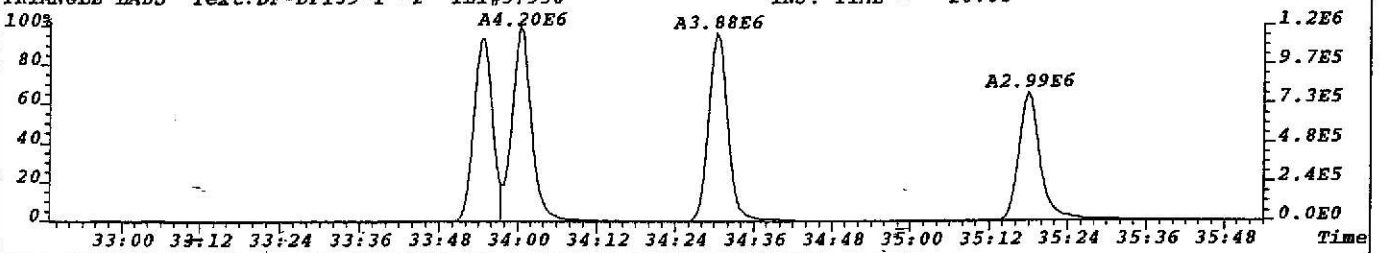
File:T023775 #1-386 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:85
375.8178 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,340.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



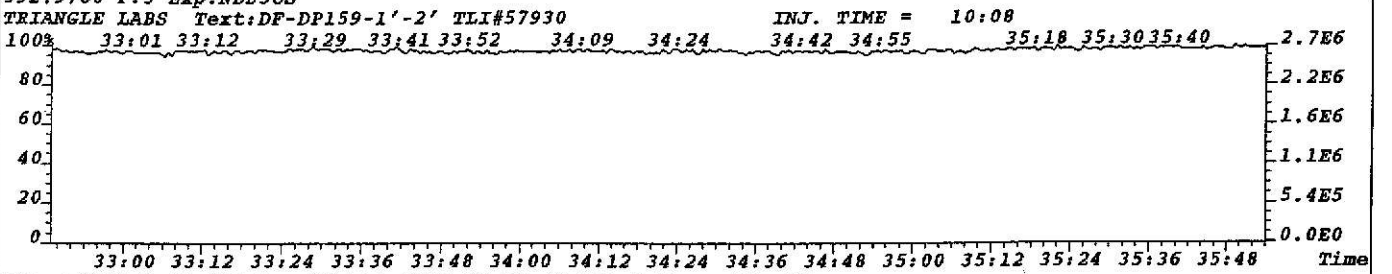
File:T023775 #1-386 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:119
383.8639 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,476.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



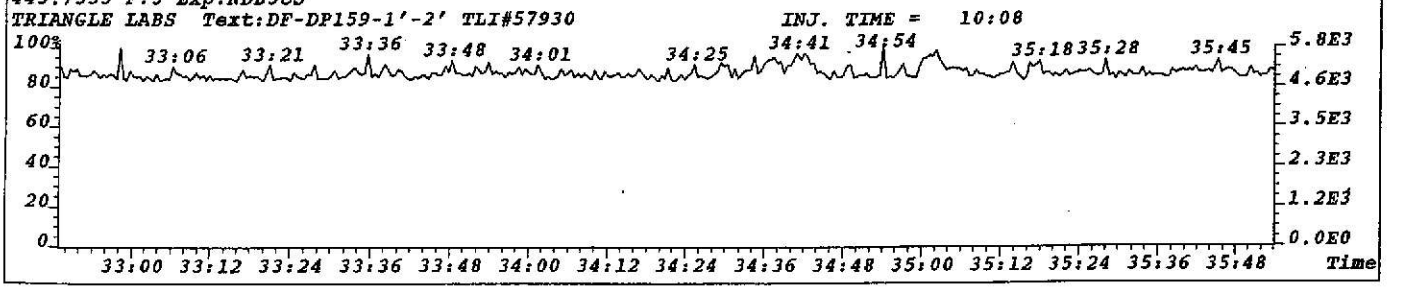
File:T023775 #1-386 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:303
385.8610 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,1212.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



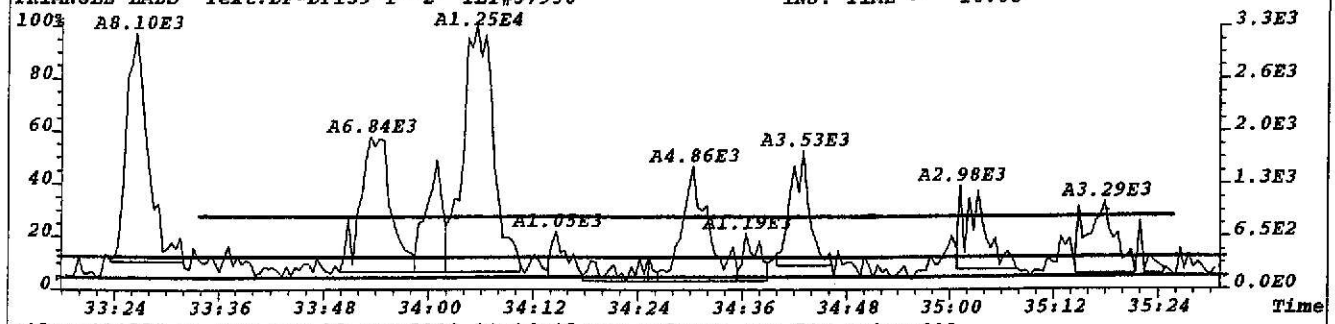
File:T023775 #1-386 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



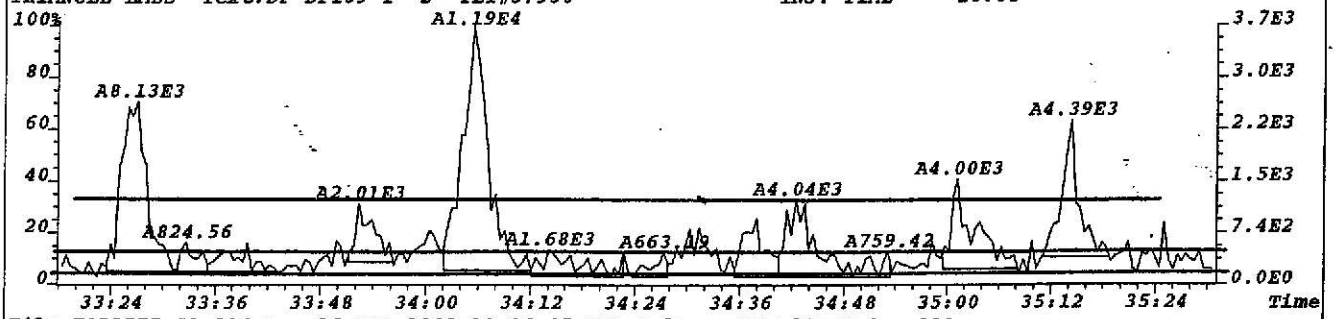
File:T023775 #1-386 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
445.7555 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



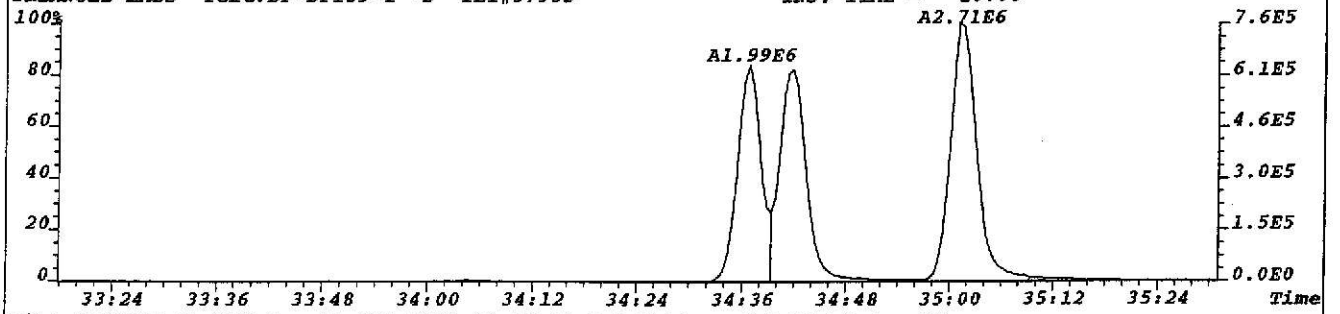
File:T023775 #1-386 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:97
389.8156 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,388.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



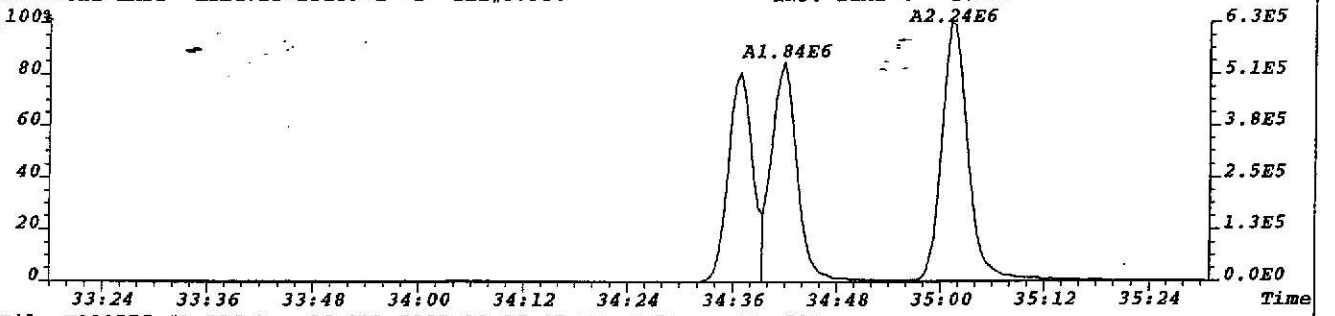
File:T023775 #1-386 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:111
391.8127 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,444.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



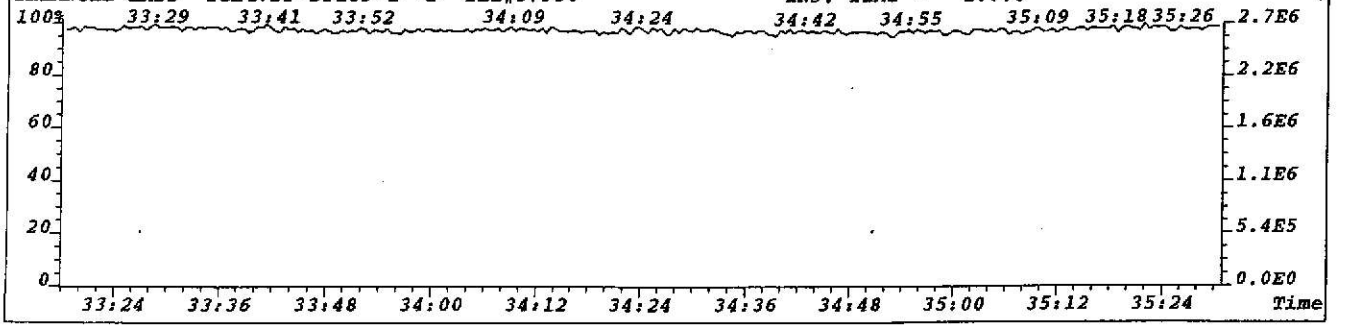
File:T023775 #1-386 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:111
401.8558 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,444.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



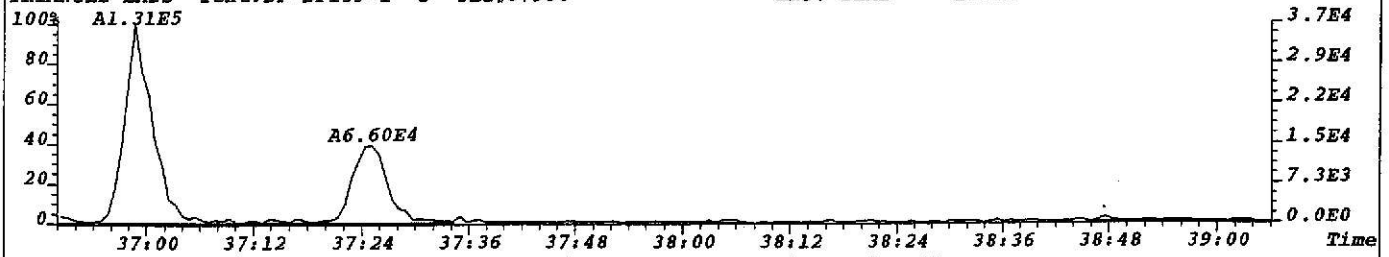
File:T023775 #1-386 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:95
403.8529 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,380.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



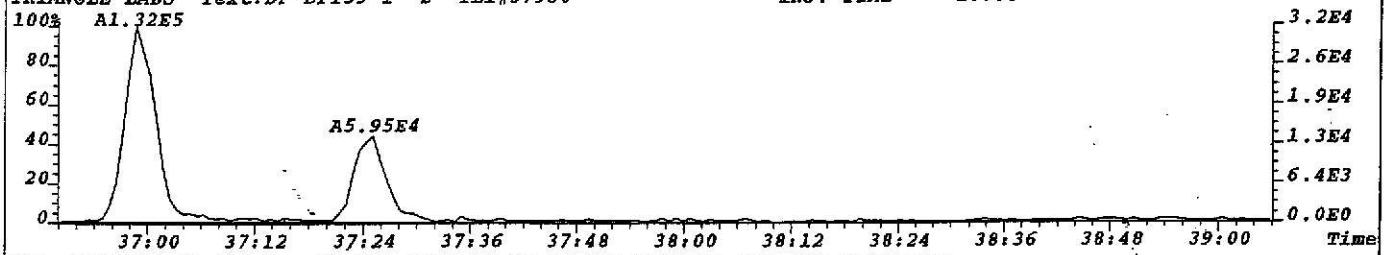
File:T023775 #1-386 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



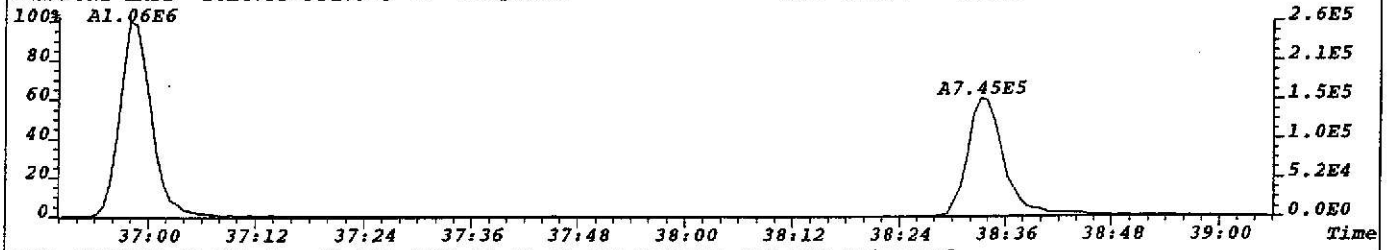
File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:86
407.7818 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,344.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



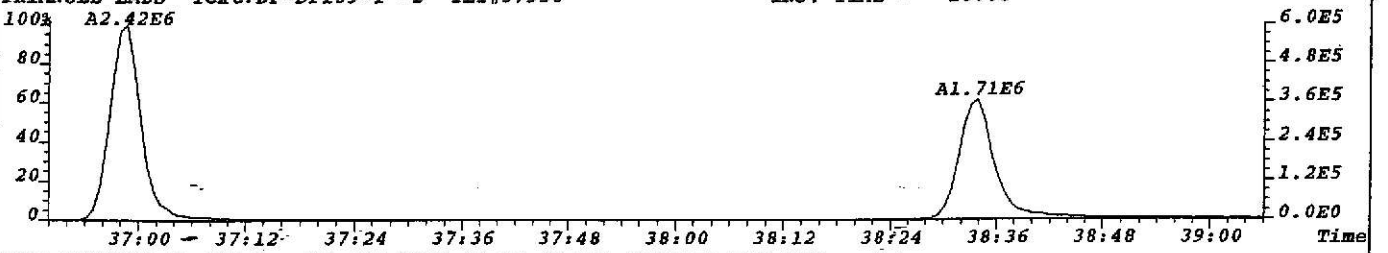
File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:80
409.7789 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,320.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



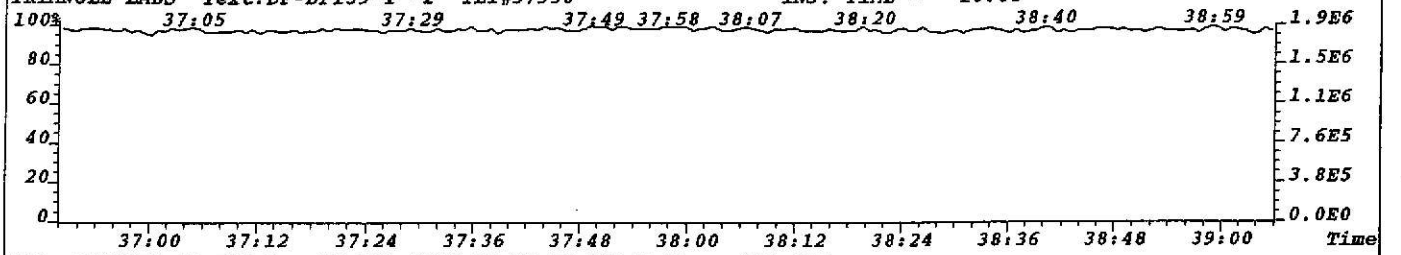
File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:144
417.8253 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,576.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



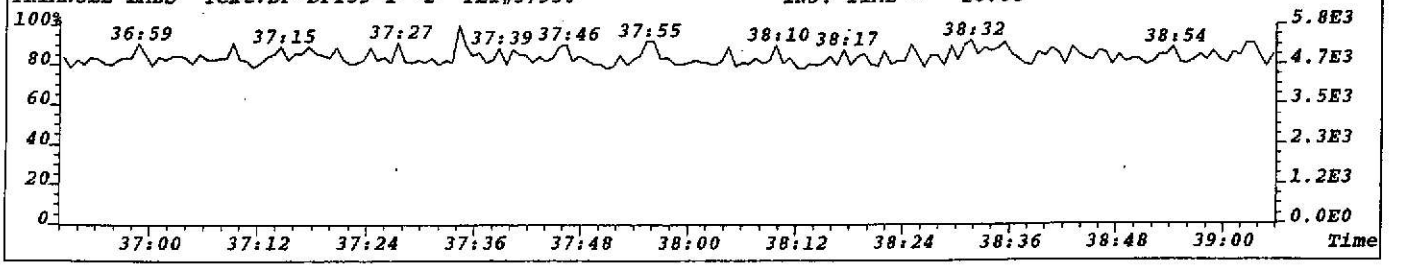
File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:115
419.8220 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,460.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



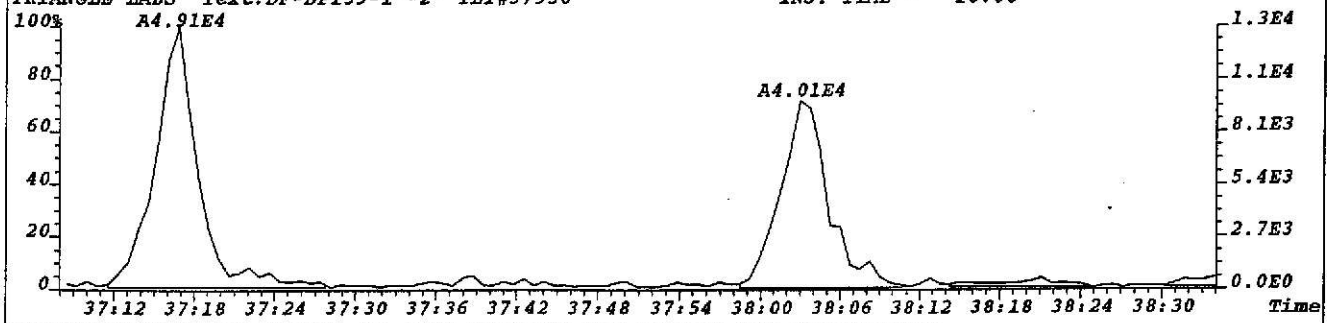
File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



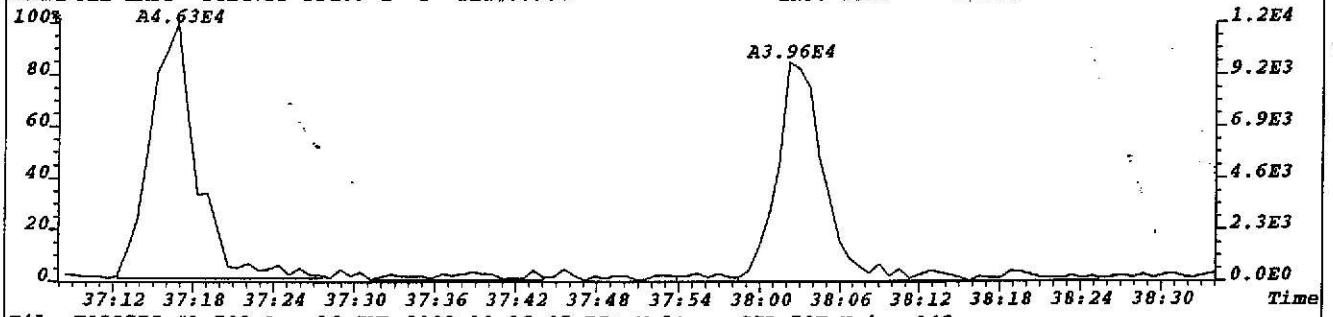
File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
479.7165 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



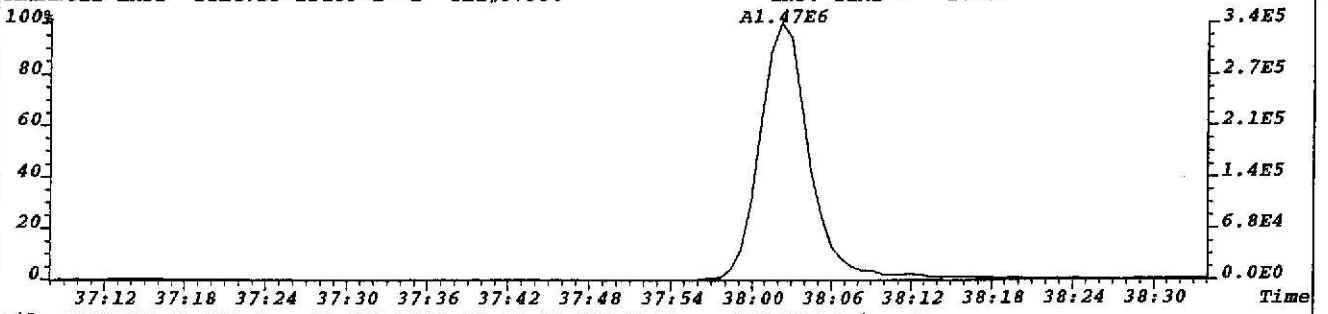
File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:70
423.7766 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,280.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



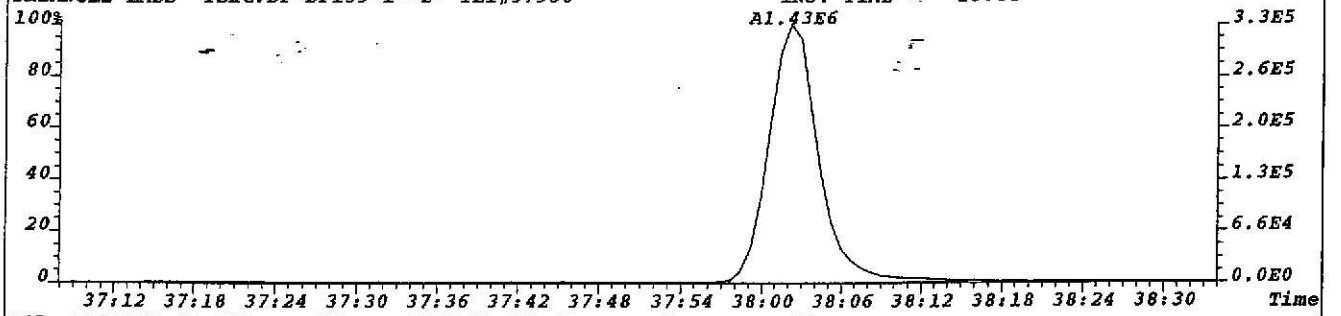
File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:69
425.7737 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,276.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



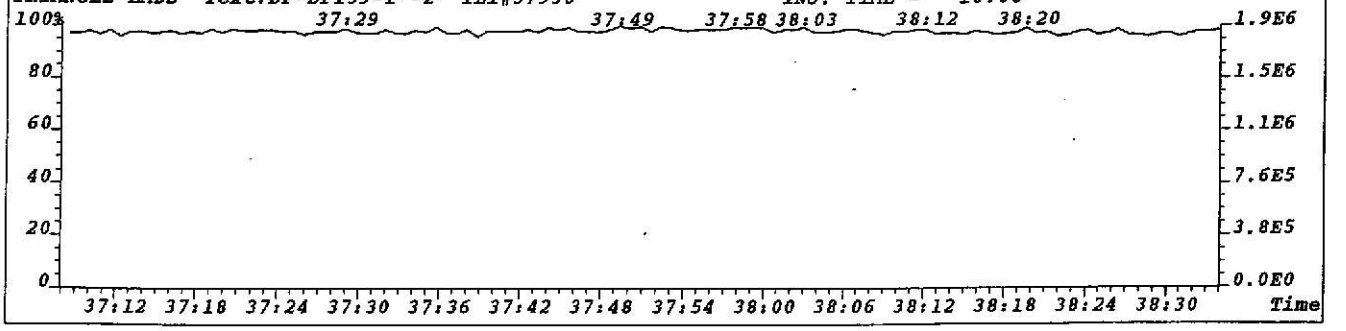
File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:143
435.8169 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,572.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



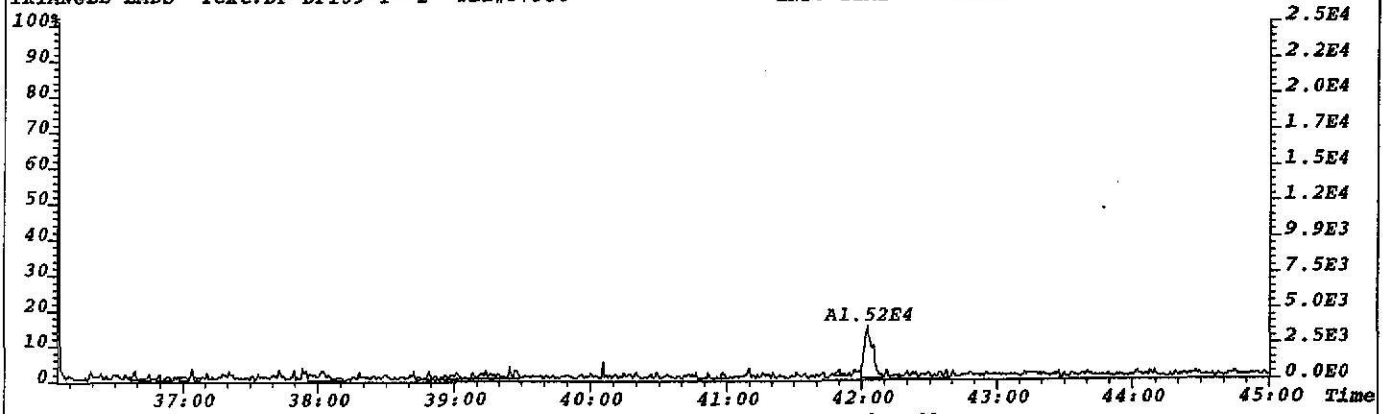
File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:74
437.8140 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,296.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



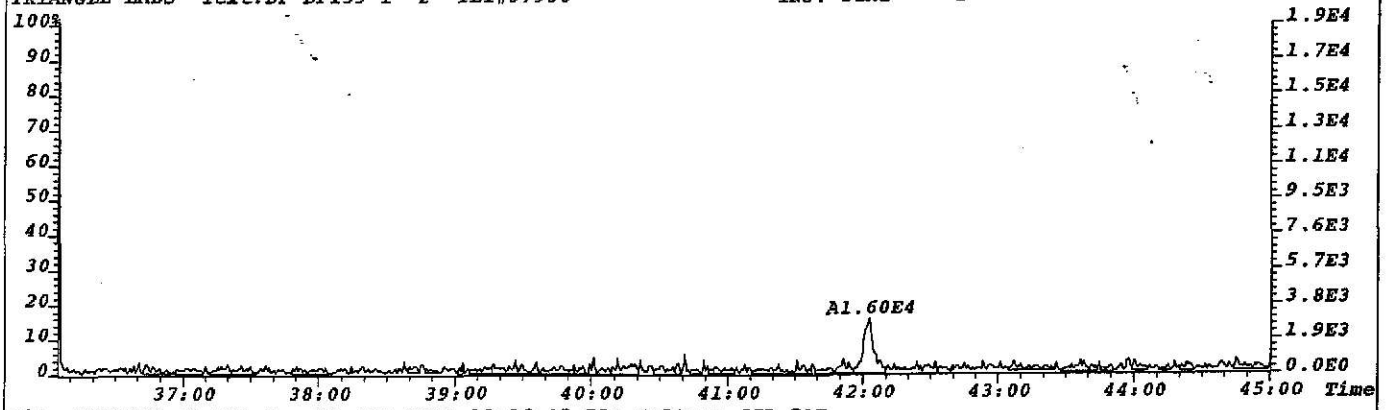
File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



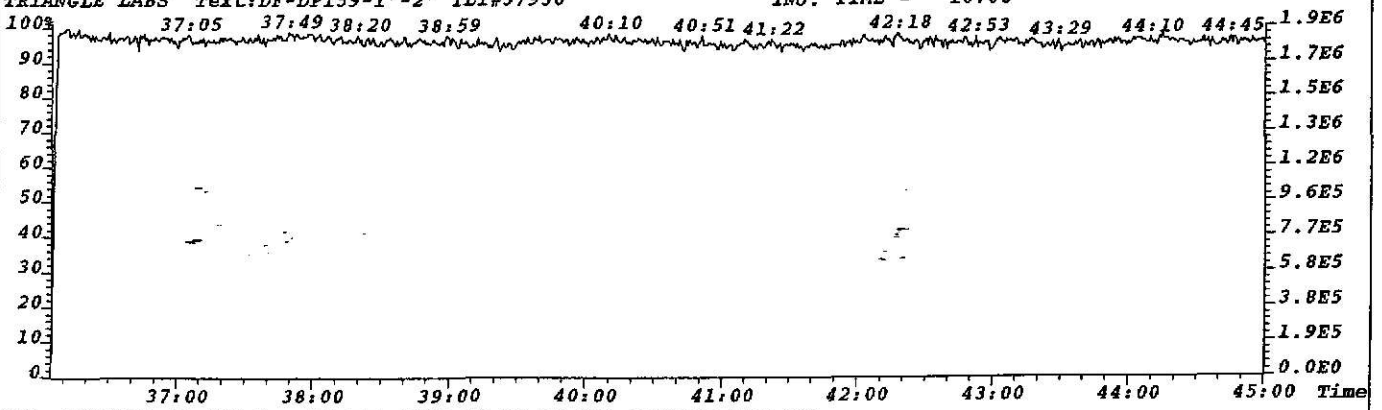
File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:92
441.7428 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,368.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



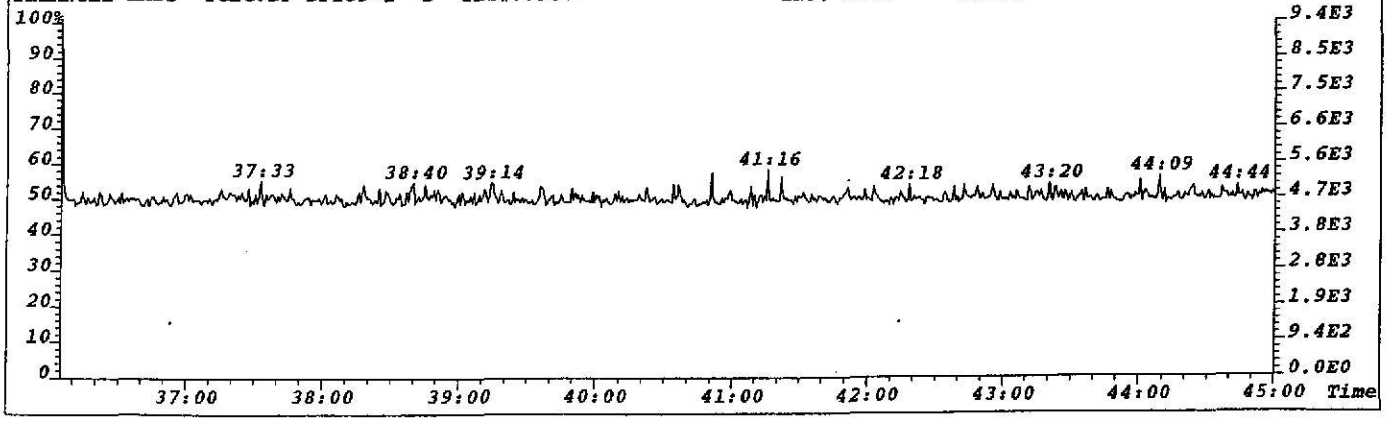
File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:91
443.7399 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,364.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



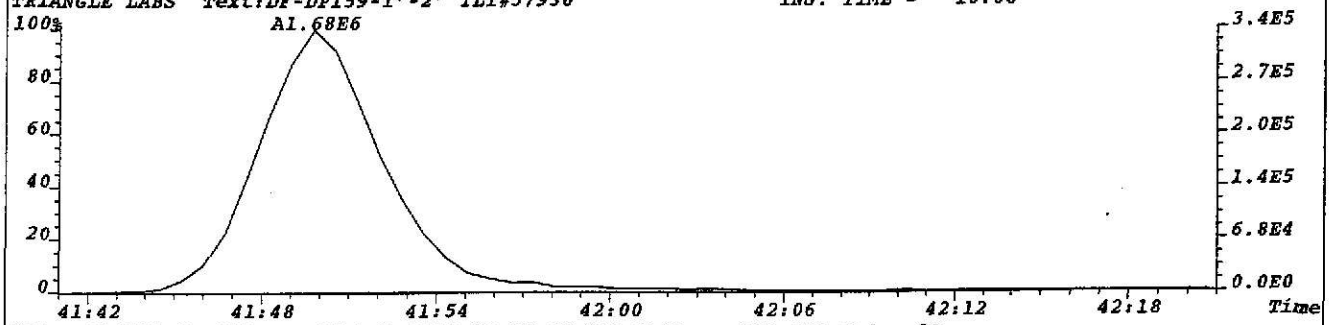
File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



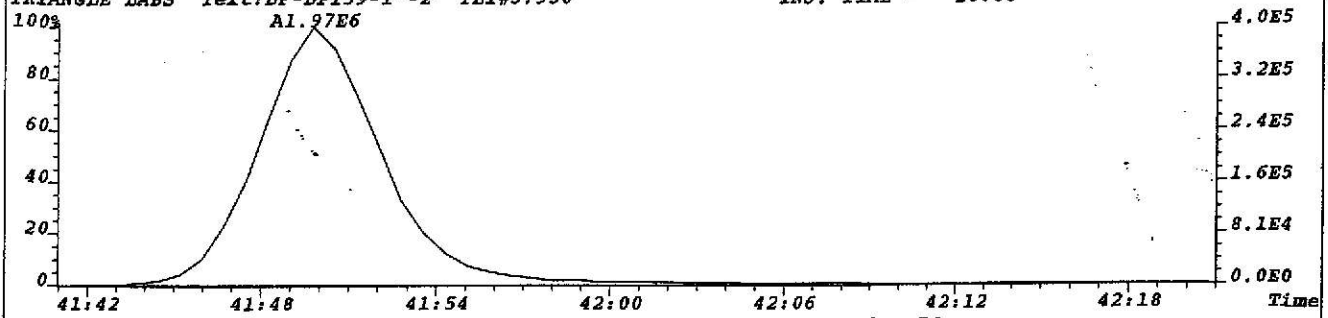
File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
513.6775 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



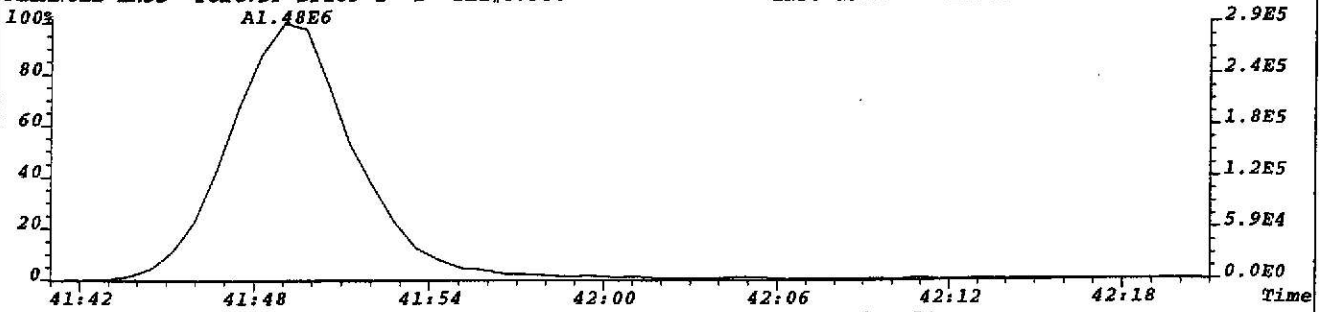
File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:75
457.7377 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,300.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



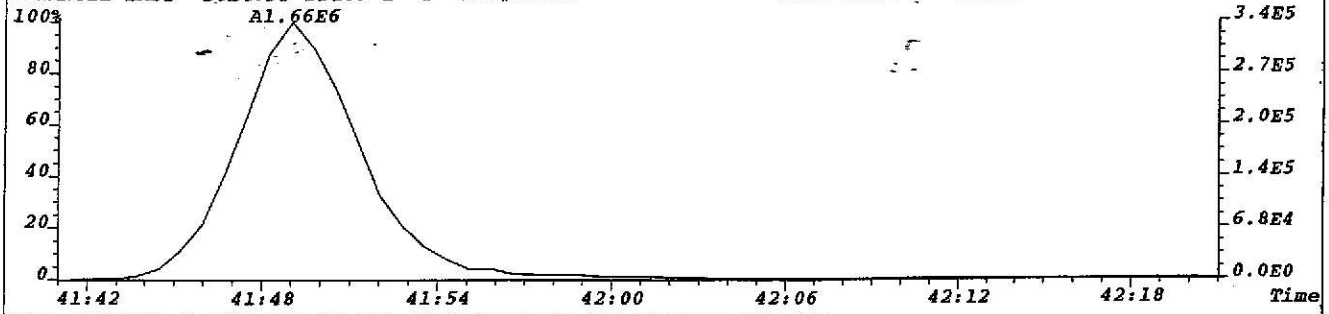
File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:70
459.7348 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,280.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



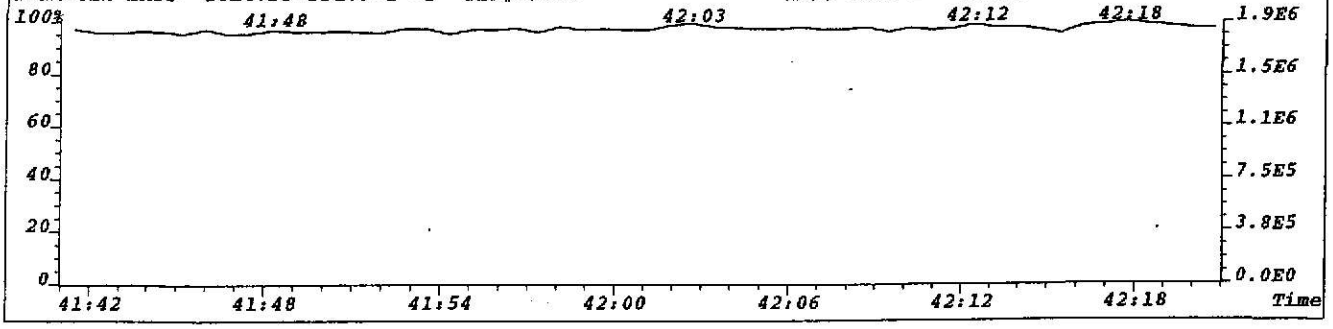
File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:76
469.7779 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,304.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08

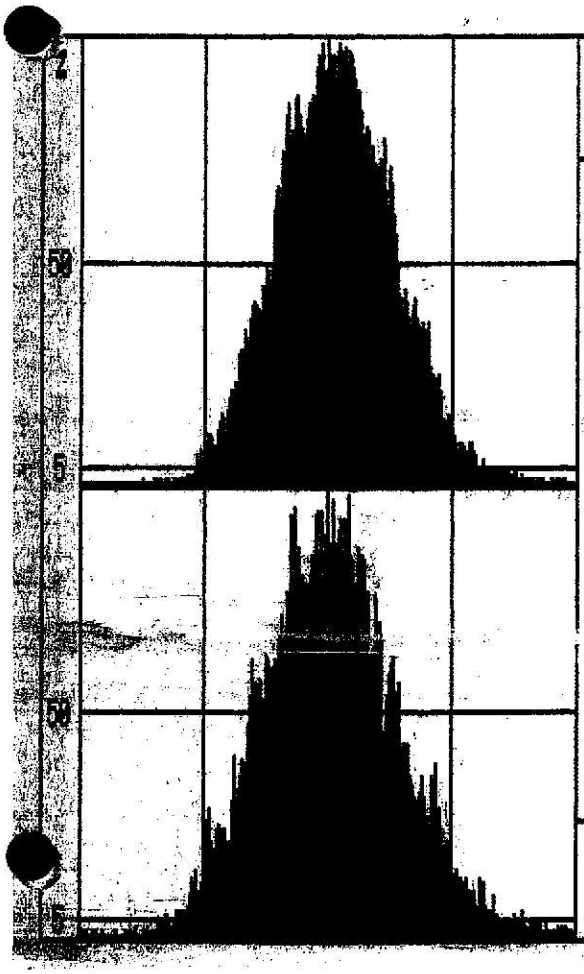


File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T Noise:74
471.7750 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,296.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08



File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08





Channel I 330.9792 Peak top
Height .83 volts Span 200 ppm

System file name	NDB5US
Data file name	A:T726021
Resolution	10000
Group number	2
Ionization mode	EI+
Switching	VOLTAGE
Ref. masses	292.9825, 416.9760

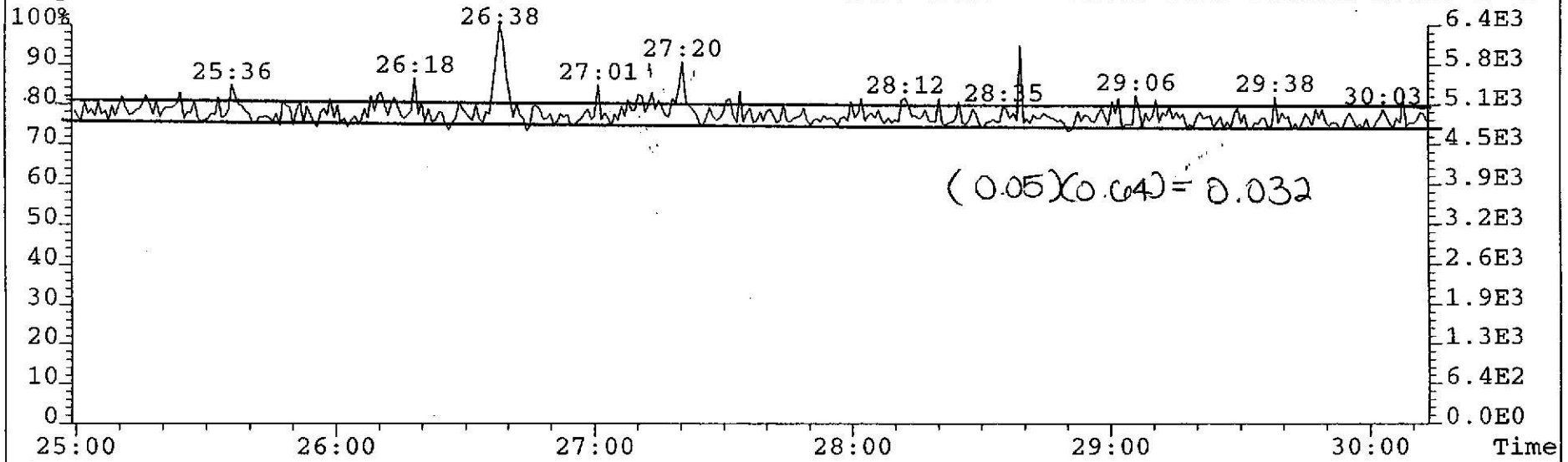
A	293	J	331	S	368
B	304	K	332	T	370
C	306	L	334	U	376
D	316	M	340	V	410
E	318	N	342		
F	[illegible]	O	[illegible]		
G	322	P	354		
H	328	Q	356		
I	331	R	358		

Ref. mass 416.9760 Peak top
Height .16 volts Span 200 ppm

N = 0.032 + 0.0342 = 0.06662

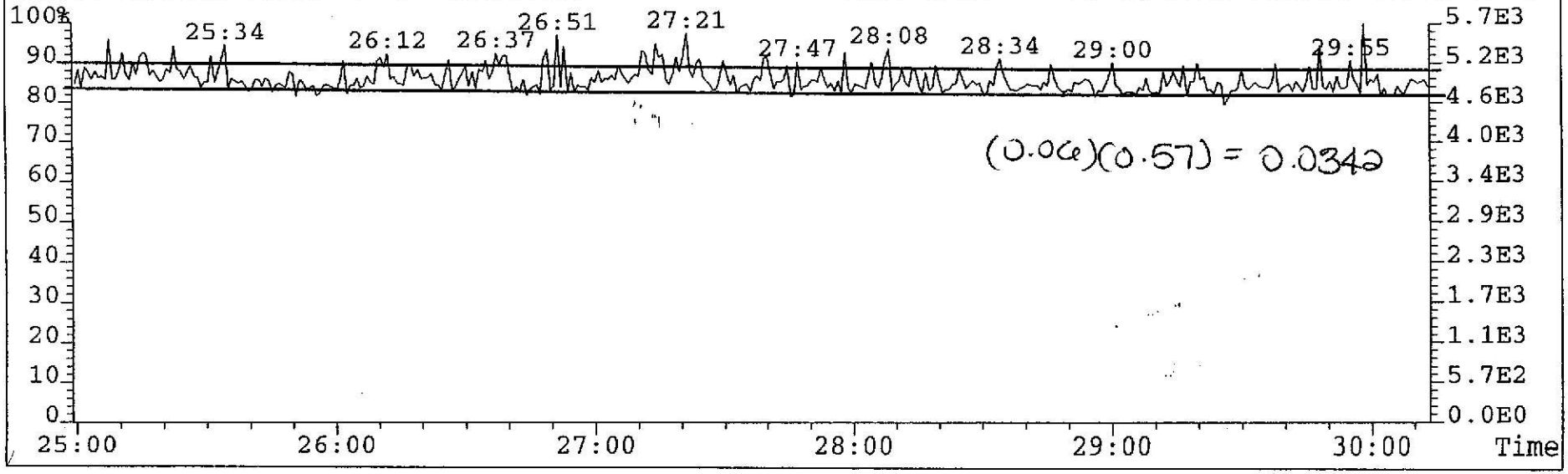
CBM 7/26/02

File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
319.8965 F:2 Exp:NDB5US
Sample Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08 File Text:DF-DP159-1'-2»



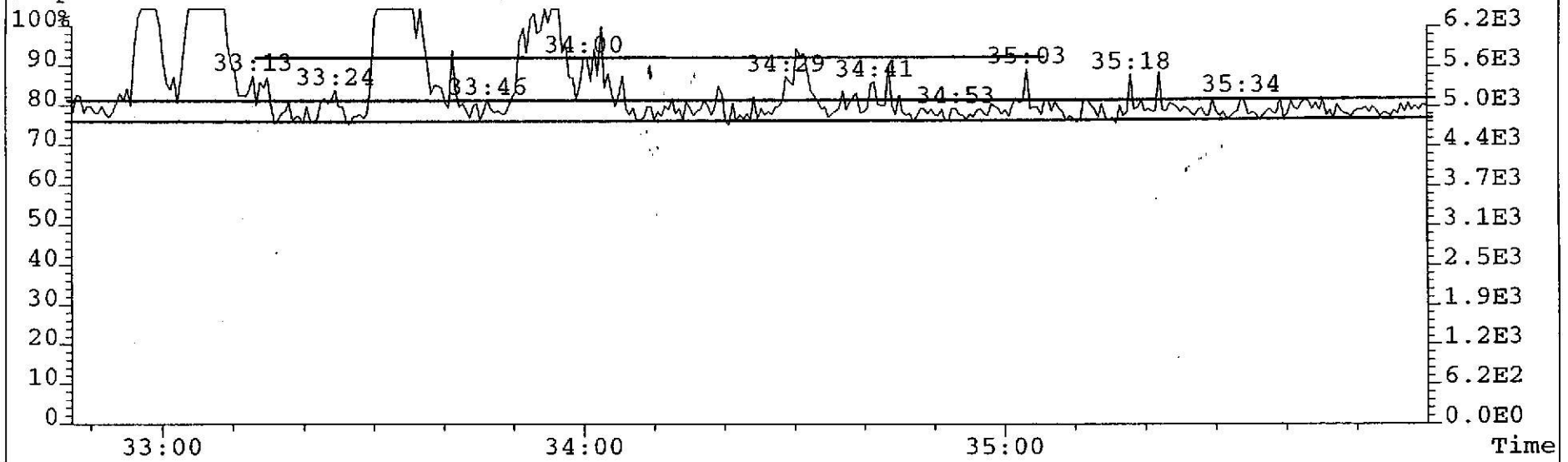
(0.05)(0.64) = 0.032

File:T023775 #1-925 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
321.8936 F:2 Exp:NDB5US
Sample Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08 File Text:DF-DP159-1'-2»

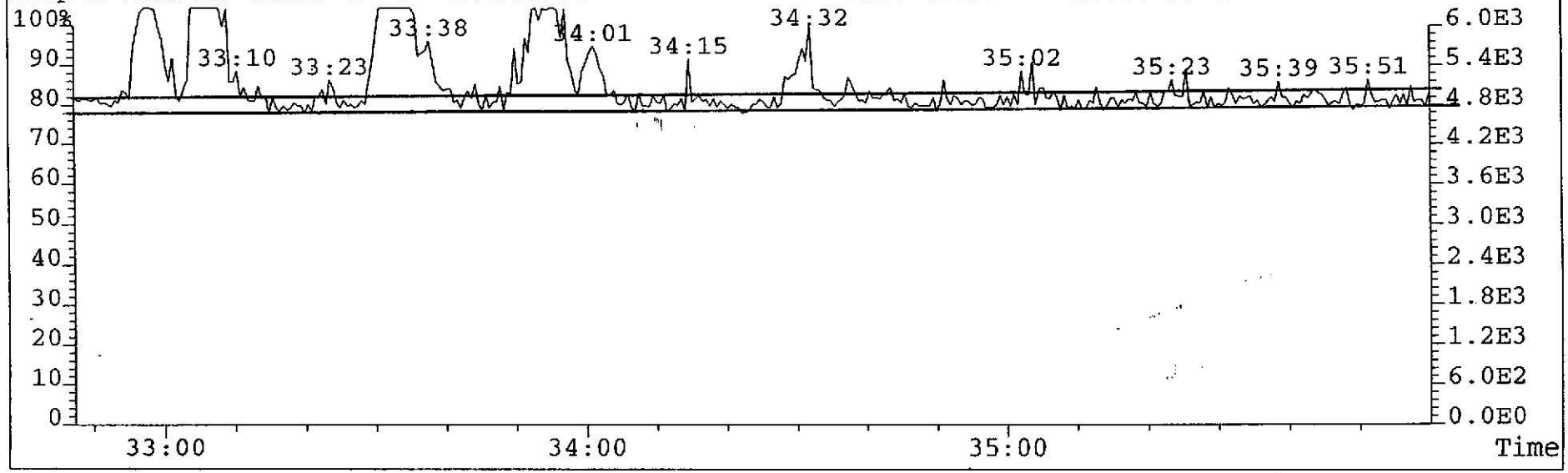


(0.06)(0.57) = 0.0342

File:T023775 #1-386 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
373.8208 F:3 Exp:NDB5US
Sample Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08 File Text:DF-DP159-1'-2»

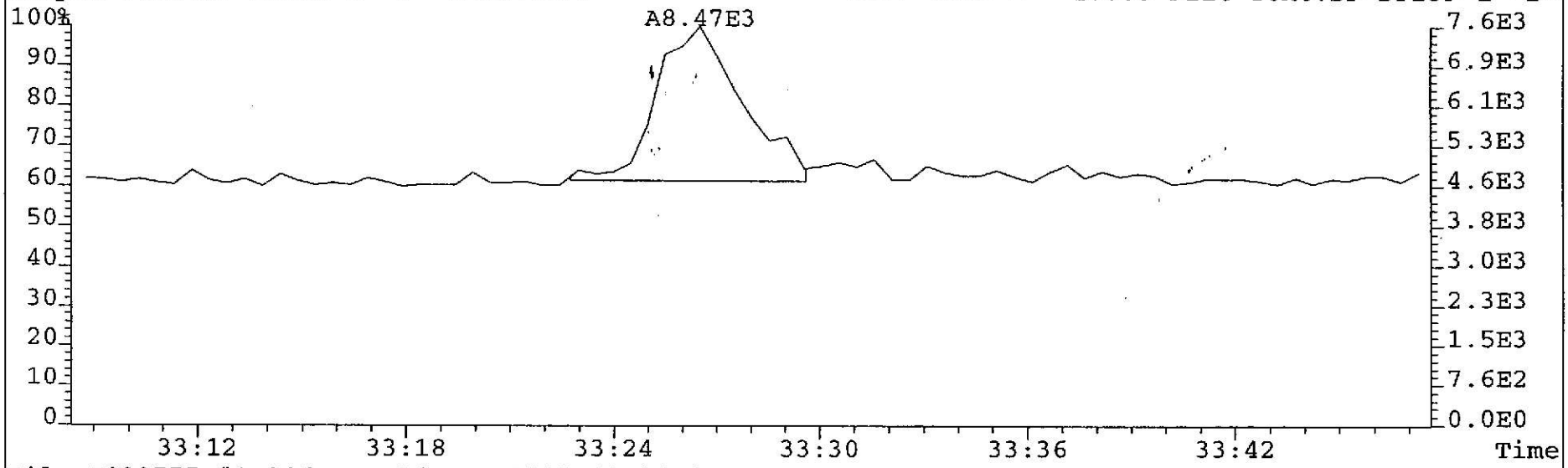


File:T023775 #1-386 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
375.8178 F:3 Exp:NDB5US
Sample Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08 File Text:DF-DP159-1'-2»

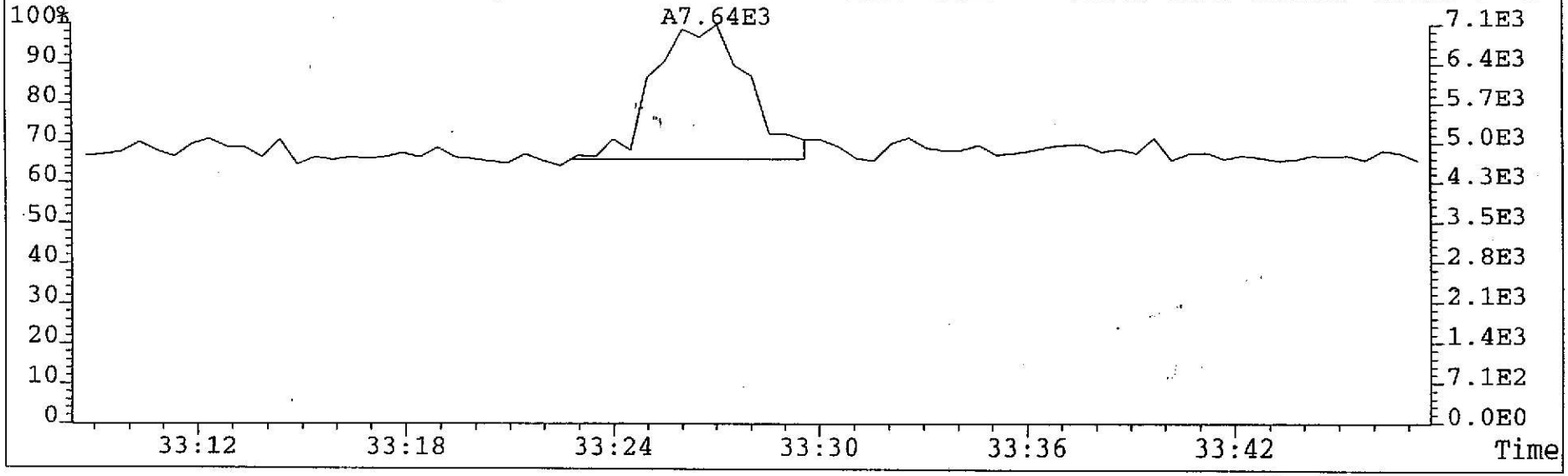


DEM 7/26/02

File:T023775 #1-386 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
389.8156 F:3 Exp:NDB5US
Sample Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08 File Text:DF-DP159-1'-2»

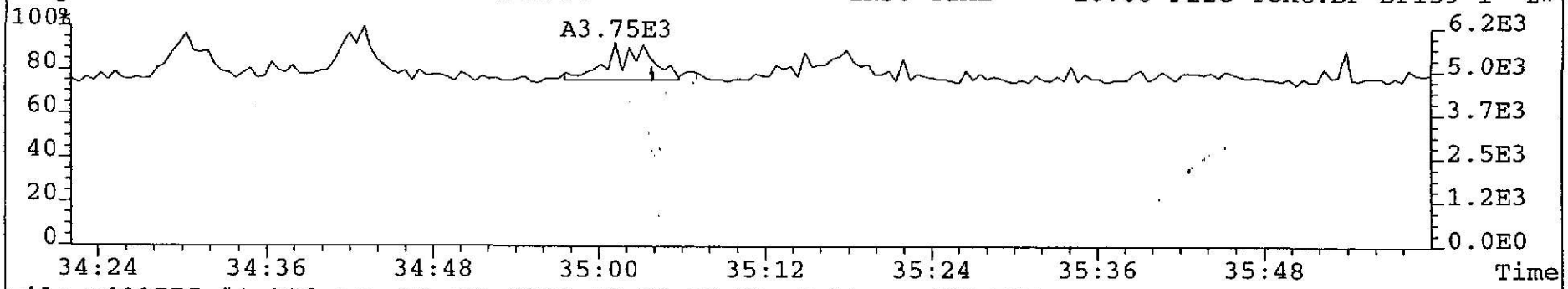


File:T023775 #1-386 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
391.8127 F:3 Exp:NDB5US
Sample Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08 File Text:DF-DP159-1'-2»

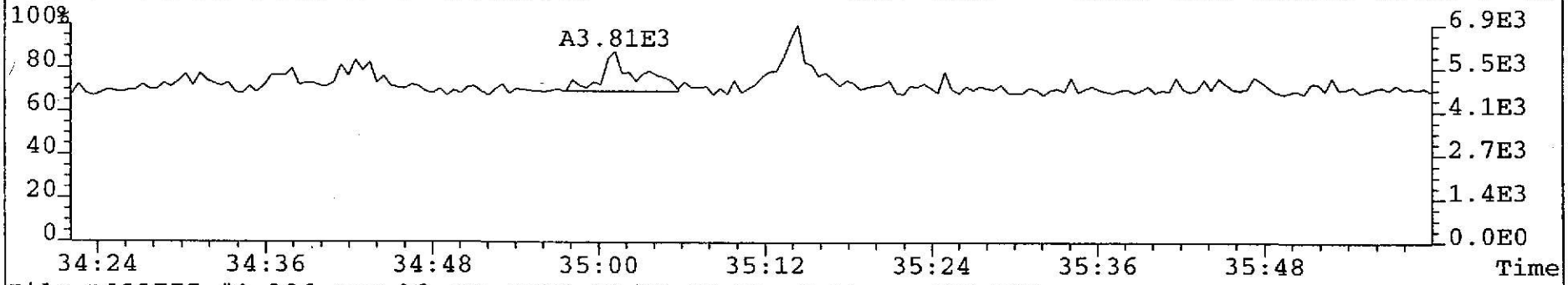


OPM 7/26/02

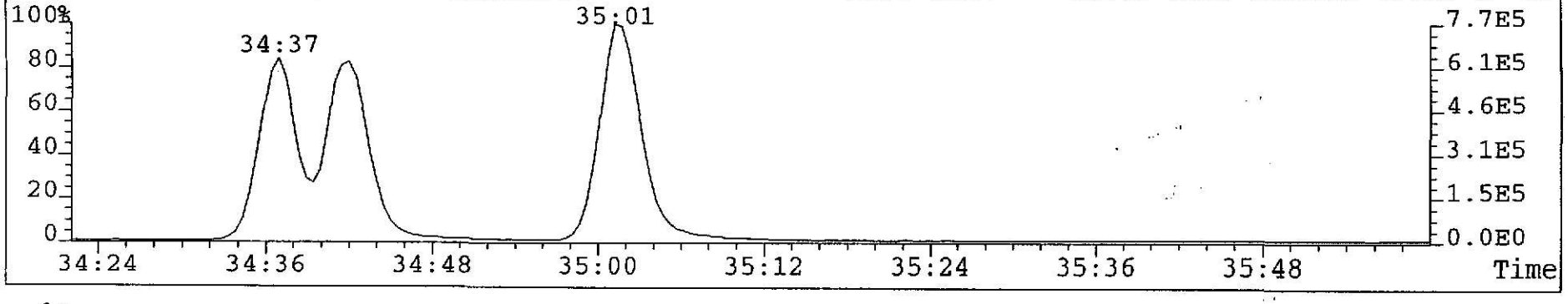
File:T023775 #1-386 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
389.8156 F:3 Exp:NDB5US
Sample Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08 File Text:DF-DP159-1'-2»



File:T023775 #1-386 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
391.8127 F:3 Exp:NDB5US
Sample Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08 File Text:DF-DP159-1'-2»

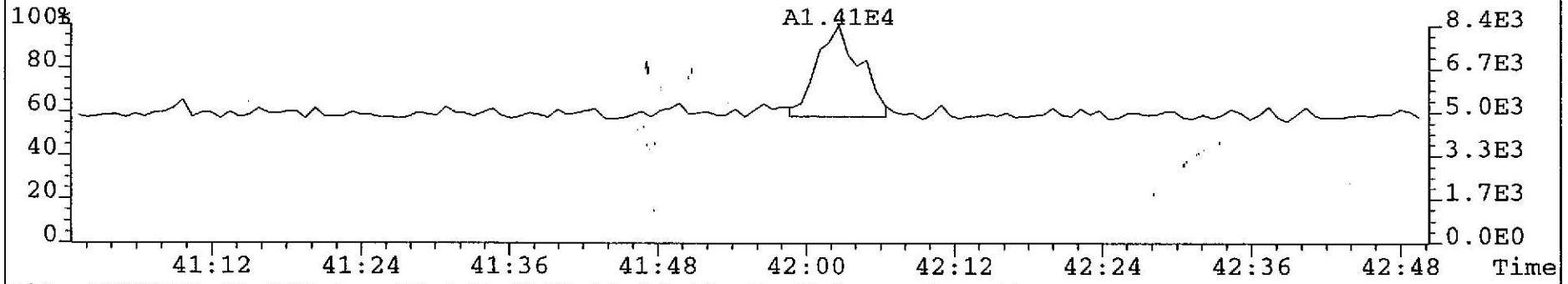


File:T023775 #1-386 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
401.8558 F:3 Exp:NDB5US
Sample Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08 File Text:DF-DP159-1'-2»

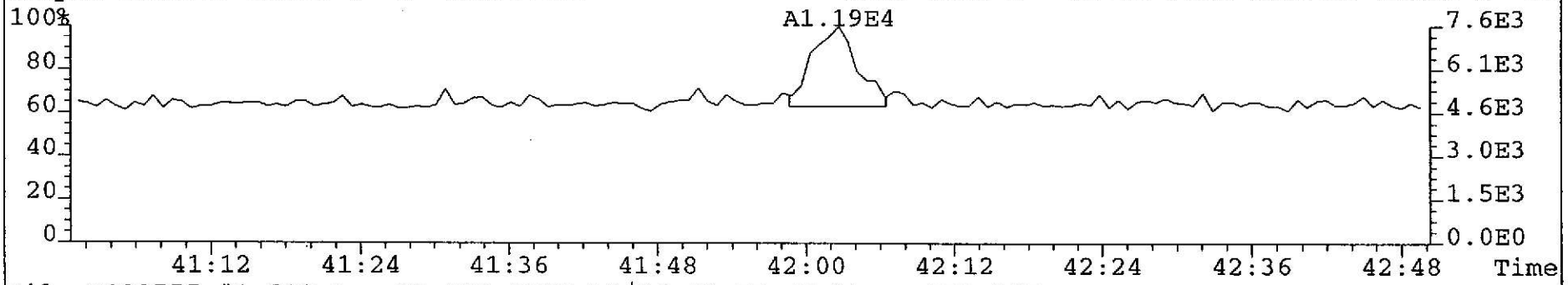


OBM 7/26/02

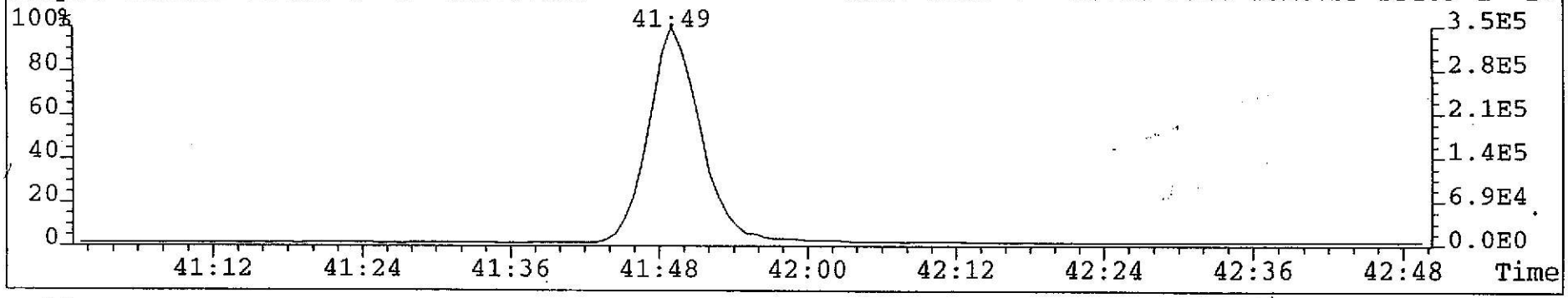
File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
441.7428 F:4 Exp:NDB5US
Sample Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08 File Text:DF-DP159-1'-2»



File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
443.7399 F:4 Exp:NDB5US
Sample Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08 File Text:DF-DP159-1'-2»



File:T023775 #1-709 Acq:26-JUL-2002 10:06:45 EI+ Voltage SIR 70T
471.7750 F:4 Exp:NDB5US
Sample Text:DF-DP159-1'-2' TLI#57930 INJ. TIME = 10:08 File Text:DF-DP159-1'-2»



Martin & Slagle

TLI Project: **57930** — 1613, Revision B PCDD/PCDF Analysis (c)

Client Sample: **DF-DP157-0-0,5′** — Analysis File: **T023776**

Client Project:	**Kuhlman Electric**				
Sample Matrix:	**SOLID**	Date Received:	**07/20/2002**	Spike File:	**SP161B2S**
TLI ID:	**331-18-10**	Date Extracted:	**07/23/2002**	ICal:	**TF5612B**
		Date Analyzed:	**07/26/2002**	ConCal:	**TB23771**
Sample Size:	**12.500 g**	Dilution Factor:	**n/a**	% Moisture:	**19.4**
Dry Weight:	**10.075 g**	Blank File:	**T023762**	% Lipid:	**n/a**
GC Column:	**DB-5**	Analyst:	**JMM**	% Solids:	**80.6**

Analytes	Conc. (pg/g)	DL	Ratio	RT	RRT	Flags
2,3,7,8-TCDD	ND	0.2				__
1,2,3,7,8-PeCDD	ND	0.3				__
1,2,3,4,7,8-HxCDD	ND	0.4				__
1,2,3,6,7,8-HxCDD	1.2		1.13	34:43	1.000	J__
1,2,3,7,8,9-HxCDD	0.93		1.16	35:02	1.010	J__
1,2,3,4,6,7,8-HpCDD	13.2		1.05	38:04	1.000	__
1,2,3,4,6,7,8,9-OCDD	294		0.87	41:51	1.000	__
2,3,7,8-TCDF	ND	0.2				__
1,2,3,7,8-PeCDF	ND	0.2				__
2,3,4,7,8-PeCDF	ND	0.2				__
1,2,3,4,7,8-HxCDF	ND	1.5				__
1,2,3,6,7,8-HxCDF	0.90		1.24	34:01	1.000	J__
2,3,4,6,7,8-HxCDF	1.0		1.23	34:31	1.000	J__
1,2,3,7,8,9-HxCDF	ND	0.3				__
1,2,3,4,6,7,8-HpCDF	46.5		1.03	36:59	1.000	__
1,2,3,4,7,8,9-HpCDF	ND	0.7				__
1,2,3,4,6,7,8,9-OCDF	13.7		0.91	42:03	1.005	__

Totals	Conc. (pg/g)	Number	DL	Flags
Total TCDD	ND		0.2	__
Total PeCDD	ND		0.3	__
Total HxCDD	9.5	4		__
Total HpCDD	30.9	2		__
Total TCDF	19.8	2		__
Total PeCDF	80.6	14		__
Total HxCDF	63.3	11		X__
Total HpCDF	71.6	2		__

161B_PSR v2.04, LARS 6.25.05

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Printed: 16:56 07/28/2002

TLI Project: **57930** 1613, Revision B PCDD/PCDF Analysis (c)
Client Sample: **DF-DP157-0-0,5'** Analysis File: **T023776**

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	RRT	Flags
$^{13}C_{12}$-2,3,7,8-TCDD	133	66.9	25%-164%	0.80	27:20	1.007	—
$^{13}C_{12}$-1,2,3,7,8-PeCDD	119	60.0	25%-181%	1.46	31:32	1.161	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	173	87.3	32%-141%	1.20	34:37	0.988	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	186	93.8	28%-130%	1.19	34:42	0.990	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	143	71.9	23%-140%	1.04	38:03	1.086	—
$^{13}C_{12}$-1,2,3,4,6,7,8,9-OCDD	167	42.0	17%-157%	0.89	41:50	1.194	—
$^{13}C_{12}$-2,3,7,8-TCDF	157	79.0	24%-169%	0.77	26:39	0.982	—
$^{13}C_{12}$-1,2,3,7,8-PeCDF	126	63.5	24%-185%	1.47	30:31	1.124	—
$^{13}C_{12}$-2,3,4,7,8-PeCDF	120	60.5	21%-178%	1.52	31:12	1.149	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	199	100	26%-152%	0.50	33:55	0.968	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	216	109	26%-123%	0.51	34:01	0.971	—
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	215	109	28%-136%	0.51	34:31	0.985	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	192	96.6	29%-147%	0.51	35:18	1.008	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	170	85.4	28%-143%	0.44	36:59	1.056	—
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	141	71.0	26%-138%	0.45	38:34	1.101	—

Cleanup Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	RRT	Flags
$^{37}Cl_4$-2,3,7,8-TCDD	13.9	70.1	35%-197%	27:22	1.008	—

Recovery Standards	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.81	27:09	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.20	35:02	—

Data Reviewer: WJby 07/28/2002

161B_PSR v2.04, LARS 6.25.05

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Printed: 16:56 07/28/2002

TLI Project: 57930
Client Sample: DF-DP157-0-0,5′

Toxicity Equivalents Report
Analysis File: T023776

Client Project:	Kuhlman Electric				
Sample Matrix:	SOLID	Date Received:	07/20/02	Spike File:	SP161B2S
TLI ID:	331-18-10	Date Extracted:	07/23/02	ICal:	TF5612B
		Date Analyzed:	07/26/02	ConCal:	TB23771
Sample Size:	12.500 g	Dilution Factor:	1	% Moisture:	19.4
Dry Weight:	10.075 g	Blank File:	T023762	% Lipid:	n/a
GC Column:	DB-5	Analyst:	JMM	% Solids:	80.6

Analytes	Conc. (pg/g)		TEF		Equivalent
2,3,7,8-TCDD	{0.2}	x	1.	=	0.2
1,2,3,7,8-PeCDD	{0.3}	x	0.5	=	0.2
1,2,3,4,7,8-HxCDD	{0.4}	x	0.1	=	0.04
1,2,3,6,7,8-HxCDD	1.2	x	0.1	=	0.12
1,2,3,7,8,9-HxCDD	0.93	x	0.1	=	0.093
1,2,3,4,6,7,8-HpCDD	13.2	x	0.01	=	0.132
1,2,3,4,6,7,8,9-OCDD	294	x	0.001	=	0.294
TOTAL PCDD					1.1
2,3,7,8-TCDF	{0.2}	x	0.1	=	0.02
1,2,3,7,8-PeCDF	{0.2}	x	0.05	=	0.01
2,3,4,7,8-PeCDF	{0.2}	x	0.5	=	0.1
1,2,3,4,7,8-HxCDF	{1.5}	x	0.1	=	0.15
1,2,3,6,7,8-HxCDF	0.90	x	0.1	=	0.090
2,3,4,6,7,8-HxCDF	1.0	x	0.1	=	0.10
1,2,3,7,8,9-HxCDF	{0.3}	x	0.1	=	0.03
1,2,3,4,6,7,8-HpCDF	46.5	x	0.01	=	0.465
1,2,3,4,7,8,9-HpCDF	{0.7}	x	0.01	=	0.007
1,2,3,4,6,7,8,9-OCDF	13.7	x	0.001	=	0.0137
TOTAL PCDF					1.0

Total EPA TEFs, 1989a: 2.1 pg/g

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

GRY_TEF v1.08, MILES 4.22.16

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Printed: 22:18 07/29/02

Initial ....Date...

Data Review By: UBY 7/28/02

Calculated Noise Height: 0.06

Page No. 1 Listing of T023776B.dbf
07/28/2002 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						0.879-1.071			
304-306		DC	NL			Height	0.20	0.11	0.09				
				24:20	RO	1.39	2.10	1.22	0.88	0.913			
	D	D	SN	24:32	RO	1.63	0.92			0.921			
	D	D	SN	25:22	RO	0.46	0.95			0.952			
	D	D	SN	25:57		0.86	1.77			0.974			
				26:03		0.68	2.32	0.94	1.38	0.977			J
				26:14	RO	0.98	4.77	2.36	2.41	0.984			
	D	D	SN	26:40		0.79	3.34			1.001	2378-TCDF	AN	
		DC	SN	27:19		0.78	0.91			1.025			
				27:31	RO	0.94	4.02	1.95	2.07	1.033			
				27:50		0.82	71.34	32.24	39.10	1.044			
		DC	WH	28:52	RO	1.11	0.80			1.083			
304-306				5 Peaks			84.55						
13C12-TCDF				0.65-0.89						0.944-1.131			
316-318		DC	NL			Height	0.17	0.07	0.10				
				25:38		0.72	6.50	2.73	3.77	0.962			
				25:57	RO	1.18	1.83	0.99	0.84	0.974			
				26:14	RO	1.03	6.39	3.24	3.15	0.984			
				26:39		0.77	696.25	302.67	393.58	1.000	13C12-2378-TCDF	ISO	
						Height	176.79	77.46	99.33				
				26:58	RO	0.58	8.53	3.14	5.39	1.012			
				27:12	RO	1.82	2.62	1.69	0.93	1.021			
				27:20	RO	1.55	1.20	0.73	0.47	1.026			
316-318				7 Peaks			723.32						

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

TCDD				0.65-0.89						0.904-1.042			
320-322		DC	NL			Height	0.15	0.07	0.08				
		DC	SN	25:00	RO	0.56	0.28			0.915			
		DC	SN	25:08	RO	0.57	0.22			0.920			
		DC	SN	25:31		0.77	0.39			0.934			
		DC	SN	25:46		0.81	0.38			0.943			
	D	D	SN	26:11	RO	1.86	0.80			0.958			
	D	D	SN	26:39	RO	1.94	0.91			0.975			
	D	D	SN	27:22	RO	0.32	0.87			1.001	2378-TCDD	AN	
	D	D	SN	27:46	RO	0.95	0.76			1.016			
320-322				0 Peaks			0.00						
37Cl-TCDD										0.927-1.073			
328		DC	NL			Height	0.08	0.08					
		DC	WL	24:44			0.06			0.905			
		DC	WL	24:49			0.08			0.908			
		DC	SN	25:50			0.05			0.945			
				26:01			0.45	0.45		0.952			

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.
				26:21			0.24	0.24		0.964			
				26:29			0.28	0.28		0.969			
	DC		SN	26:39			0.24			0.975			
				26:55			0.44	0.44		0.985			
	DC		SN	26:58			0.21			0.987			
	DC		SN	27:02			0.05			0.989			
	DC		SN	27:14			0.49			0.996			
				27:22			52.06	52.06		1.001	37Cl-TCDD		CLS
				27:43			18.91	18.91		1.014			
				28:05			0.26	0.26		1.027			
	DC		SN	28:12			0.26			1.032			
				28:17			0.40	0.40		1.035			
				28:28			0.39	0.39		1.041			
				28:40			0.38	0.38		1.049			
				28:52			0.58	0.58		1.056			
328			11	Peaks			74.39						
13C12-TCDD						0.65-0.89				0.920-1.066			
332-334	DC		NL			Height	0.25	0.16		0.09			
				26:14		0.80	1.24	0.55		0.69	0.960		
				27:09		0.81	672.22	300.69		371.53	0.993	13C12-1234-TCDD	RS1
				27:20		0.80	507.41	225.03		282.38	1.000	13C12-2378-TCDD	IS1
						Height	131.60	58.30		73.30			
				27:43	RO	0.33	1.48	0.37		1.11	1.014		
				27:57		0.70	0.80	0.33		0.47	1.023		
				28:02	RO	0.56	0.53	0.19		0.34	1.026		
332-334			6	Peaks			1,183.68						

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

PeCDF						1.32-1.78				0.911-1.037			
340-342	DC		NL			Height	0.14	0.06		0.08			
				28:28		1.43	7.53	4.43		3.10	0.912		J
				28:37		1.68	5.22	3.27		1.95	0.917		J
				28:51		1.38	9.63	5.58		4.05	0.925		J
				29:09	RO	1.25	2.05	1.14		0.91	0.934		
				29:14	RO	2.40	3.09	2.18		0.91	0.937		
				29:27		1.39	1.46	0.85		0.61	0.944		J
				29:38		1.56	11.29	6.88		4.41	0.950		J
				29:51		1.47	55.58	33.07		22.51	0.957		
				30:02		1.56	51.83	31.57		20.26	0.963		
	N			30:25		1.52	47.03	28.38		18.65	0.997		
				30:42		1.65	2.65	1.65		1.00	0.984		J
				30:49		1.39	2.80	1.63		1.17	0.988		J
	N			31:06	RO	1.10	1.62	0.85		0.77	0.997		
				31:19	RO	1.20	4.09	2.23		1.86	1.004		
				31:24		1.41	5.43	3.18		2.25	1.006		J
			X	31:33		1.60	3.17	1.95		1.22	1.011		J
				31:48		1.78	2.00	1.28		0.72	1.019		J
			X	31:54	RO	1.22	2.97	1.63		1.34	1.022		
				32:02		1.60	16.37	10.07		6.30	1.027		
				32:10	RO	1.03	1.20	0.61		0.59	1.031		

```
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  32:39 RO  1.20          0.77                                1.046
340-342              20 Peaks                  237.01

13C12-PeCDF                     1.32-1.78                                     0.807-1.127
352-354         DC  NL          Height          0.14          0.07          0.07
                        28:20 RO  0.40          0.98          0.28          0.70  0.908
                        29:41 RO  1.06          7.44          3.82          3.62  0.951
                        30:09 RO  1.15          6.18          3.30          2.88  0.966
                        30:31     1.47        495.66        295.29        200.37  1.000 13C12-PeCDF 123 IS2
                                Height        136.86         81.63         55.23
                        30:47     1.75          8.50          5.41          3.09  0.987
                        31:12     1.52        481.83        290.29        191.54  1.000 13C12-PeCDF 234 IS3
                                Height        138.85         84.58         54.27
                        31:41     1.41          1.69          0.99          0.70  1.015
                        31:48 RO  0.36          1.32          0.35          0.97  1.019
                        32:10 RO  0.95          6.08          2.97          3.11  1.031
352-354               9 Peaks                 1,009.68

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

PeCDD                           1.32-1.78                                     0.940-1.021
356-358         DC  NL          Height          0.13          0.08          0.05
                DC  WL  29:36 RO  1.07          0.31                                0.939
                DC  SN  30:02 RO  0.37          0.59                                0.952
        D       D   SN  30:15 RO  1.05          0.76                                0.959
        D       D   SN  30:30 RO  1.87          1.09                                0.967
        D       D   SN  30:38 RO  1.96          1.33                                0.971
        D       D   SN  30:51     1.74          0.74                                0.978
        D       D   SN  31:03     1.78          1.25                                0.985
        D       D   SN  31:34 RO  0.65          1.17                                1.001 12378-PeCDD     AN
        D       D   SN  31:40 RO  1.08          0.79                                1.004
        D       D   SN  31:49 RO  3.19          1.13                                1.009
        D       D   SN  32:09 RO  0.39          1.17                                1.020
                DC  WH  32:23 RO  0.61          1.48                                1.027
356-358               0 Peaks                   0.00

13C12-PeCDD                     1.32-1.78                                     0.735-1.052
368-370         DC  NL          Height          0.14          0.07          0.07
                        30:29     1.53          1.01          0.61          0.40  0.967
                        30:37 RO  1.86          2.12          1.38          0.74  0.971
                DC  SN  31:14 RO  1.00          0.48                              0.990
                        31:32     1.46        335.13        198.77        136.36  1.000 13C12-PeCDD 123 IS4
                                Height        100.46         59.39         41.07
                        32:16 RO  0.51          1.04          0.35          0.69  1.023
368-370               4 Peaks                   339.30

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

HxCDF                           1.05-1.43                                     0.929-1.007
374-376         DC  NL          Height          0.19          0.11          0.08
        D       D   WL  32:51     1.17          0.89                                0.931
                    X   33:01     1.22         45.02         24.77         20.25  0.935
```

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.
				33:07		1.26	20.13	11.24	8.89	0.938			
				33:14		1.32	6.83	3.89	2.94	0.941			J
				33:22		1.28	3.55	1.99	1.56	0.945			J
				33:34		1.30	34.49	19.47	15.02	0.951			
				33:46		1.15	5.60	3.00	2.60	0.957			J
	MN			33:53		1.25	18.35	10.20	8.15	0.999			
	ANK			33:55	RO	1.46	3.45	2.05	1.40	1.000	123478-HxCDF	AN	
	AD	d	de	33:57	RO	1.47	2.05			0.962			
				34:01		1.24	2.26	1.25	1.01	1.000	123678-HxCDF	AN	J
				34:07		1.25	1.19	0.66	0.53	0.966			J
				34:31		1.23	2.36	1.30	1.06	1.000	234678-HxCDF	AN	J
			X	35:07		1.38	1.33	0.77	0.56	0.995			J
		DC	SN	35:14	RO	0.89	0.17			0.998			
				35:23	RO	1.50	0.70	0.42	0.28	1.002			
374-376			13	Peaks			145.26						
13C12-HxCDF						0.43-0.59				0.879-1.106			
384-386		DC	NL			Height	0.24	0.09	0.15				
				32:58		0.45	1.42	0.44	0.98	0.934			
				33:06		0.55	2.74	0.97	1.77	0.938			
				33:55		0.50	395.21	131.60	263.61	1.000	13C12-HxCDF 478	IS5	
						Height	117.90	39.44	78.46				
				34:01		0.51	434.71	146.36	288.35	1.000	13C12-HxCDF 678	IS6	
						Height	126.94	42.46	84.48				
				34:15		0.54	1.71	0.60	1.11	0.970			
				34:31		0.51	423.30	142.39	280.91	1.000	13C12-HxCDF 234	IS7	
						Height	123.68	42.07	81.61				
				34:47	RO	0.88	1.39	0.65	0.74	0.985			
				34:54	RO	0.31	0.55	0.13	0.42	0.989			
				35:18		0.51	315.98	106.67	209.31	1.000	13C12-HxCDF 789	IS8	
						Height	82.07	27.75	54.32				
				35:40		0.48	0.65	0.21	0.44	1.010			
				35:42	RO	0.65	0.61	0.24	0.37	1.011			
				35:45		0.53	0.61	0.21	0.40	1.013			
384-386			12	Peaks			1,578.88						

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

HxCDD						1.05-1.43				0.959-1.013			
390-392		DC	NL			Height	0.23	0.10	0.13				
				33:27		1.18	4.25	2.30	1.95	0.964			J
				33:54	RO	1.70	1.46	0.92	0.54	0.977			
				34:07		1.36	6.86	3.95	2.91	0.983			J
	D	D	SN	34:15	RO	0.64	0.41			0.987			
	N			34:32	RO	1.60	0.52	0.32	0.20	0.998			
				34:43		1.13	1.83	0.97	0.86	1.000	123678-HxCDD	AN	J
	M			35:02		1.16	1.45	0.78	0.67	1.010	123789-HxCDD	AN	J
		DC	WH	35:15	RO	0.43	5.38			1.016			
390-392			6	Peaks			16.37						
13C12-HxCDD						1.05-1.43				0.983-1.041			
402-404		DC	NL			Height	0.15	0.07	0.08				

```
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.

                        34:06     1.13          1.49          0.79          0.70  0.985
                        34:37     1.20        254.49        138.77        115.72  1.000 13C12-HxCDD 478 IS9
                               Height         77.24         42.89         34.35
                        34:42     1.19        299.04        162.38        136.66  1.000 13C12-HxCDD 678 IS10
                               Height         82.00         44.17         37.83
                        35:02     1.20        332.58        181.11        151.47  1.012 13C12-HxCDD 789 RS2
                        35:19 RO  2.20          1.47          1.01          0.46  1.020
                        35:25     1.35          0.40          0.23          0.17  1.023
                        35:29 RO  2.25          0.65          0.45          0.20  1.025
                        35:31 RO  2.33          0.40          0.28          0.12  1.026
402-404               8 Peaks                 890.52

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

HpCDF                          0.88-1.20                                   0.955-1.005
408-410          DC  NL         Height          0.16          0.10          0.06
                        36:59     1.03         74.54         37.86         36.68  1.000 1234678-HpCDF   AN
                        37:25     1.03         33.47         17.00         16.47  0.970
        D        D   NH  37:36 RO  1.41          0.53                              0.975
                 DC  SN  38:07 RO  0.23          0.32                              0.988
        D        D   SN  38:34 RO  1.37          0.64                              1.000 1234789-HpCDF   AN
408-410               2 Peaks                 108.01

13C12-HpCDF                    0.37-0.51                                   0.857-1.142
418-420          DC  NL         Height          0.17          0.08          0.09
                        36:59     0.44        236.61         72.63        163.98  1.000 13C12-HpCDF 678 IS11
                               Height         58.58         18.18         40.40
                        37:24 RO  0.91          0.61          0.29          0.32  0.970
                        38:34     0.45        158.22         48.91        109.31  1.000 13C12-HpCDF 789 IS12
                               Height         32.85         10.55         22.30
                        38:56     0.49          1.13          0.37          0.76  1.010
418-420               4 Peaks                 396.57

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

HpCDD                          0.88-1.20                                   0.976-1.005
424-426          DC  NL         Height          0.15          0.08          0.07
                        37:17     1.00         15.73          7.86          7.87  0.980
        D        D   NH  37:34 RO  0.77          0.55                              0.987
                        38:04     1.05         11.72          6.00          5.72  1.000 1234678-HpCDD   AN
                 DC  WH  38:20 RO  0.31          0.21                              1.007
424-426               2 Peaks                  27.45

13C12-HpCDD                    0.88-1.20                                   0.869-1.079
436-438          DC  NL         Height          0.19          0.10          0.09
                        37:17     0.98          1.13          0.56          0.57  0.980
                        38:03     1.04        188.72         96.01         92.71  1.000 13C12-HpCDD 678 IS13
                               Height         44.00         22.66         21.34
436-438               2 Peaks                 189.85

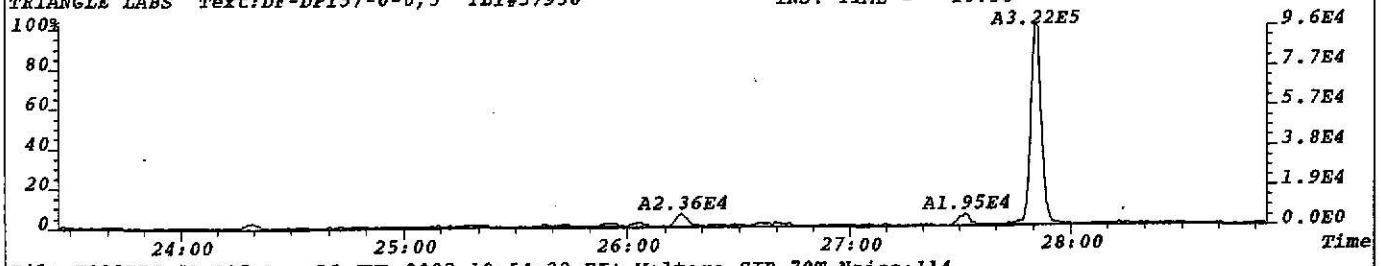
                 ---------------------- Above: HpCDD / Octa-CDD and CDF Follows ----------
```

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.
OCDF						0.76-1.02				0.952-1.048			
442-444	DC	NL				Height	0.14	0.07	0.07				
	DC	WL		36:19	RO	1.58	0.80			0.868			
	DC	WL		36:39	RO	1.14	1.41			0.876			
	DC	WL		36:47	RO	0.36	0.30			0.879			
	DC	WL		36:54	RO	2.60	0.36			0.882			
	DC	WL		37:08	RO	0.20	0.18			0.888			
	DC	WL		37:18	RO	1.30	0.53			0.892			
	DC	WL		37:26	RO	0.56	0.56			0.895			
	DC	WL		38:23	RO	1.07	0.31			0.918			
	DC	WL		38:37	RO	0.69	0.22			0.923			
	DC	WL		38:51	RO	1.38	0.19			0.929			
	DC	WL		39:36	RO	1.15	0.71			0.947			
				42:03		0.91	8.73	4.15	4.58	1.005	OCDF		AN
	DC	SN		42:22	RO	0.50	0.27			1.013			
	DC	SN		42:34	RO	0.41	0.31			1.018			
442-444			1	Peak			8.73						
OCDD						0.76-1.02				0.952-1.048			
458-460	DC	NL				Height	0.11	0.05	0.06				
				41:51		0.87	155.41	72.52	82.89	1.000	OCDD		AN
458-460			1	Peak			155.41						
13C12-OCDD						0.76-1.02				0.996-1.004			
470-472	DC	NL				Height	0.12	0.06	0.06				
				41:50		0.89	207.25	97.50	109.75	1.000	13C12-OCDD		IS14
						Height	39.82	18.40	21.42				
470-472			1	Peak			207.25						

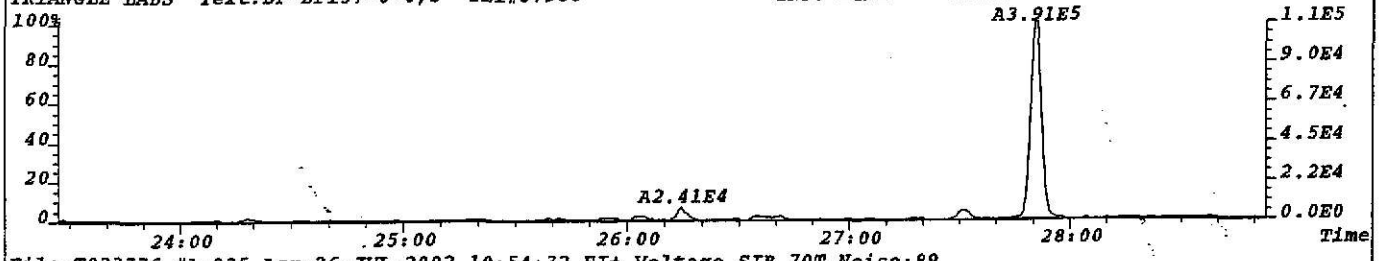
Column Description.....	"Why" Code Description.....	QC Log Desc.....
M_Z -Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT. -Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK -RO=Ratio Outside 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 ***

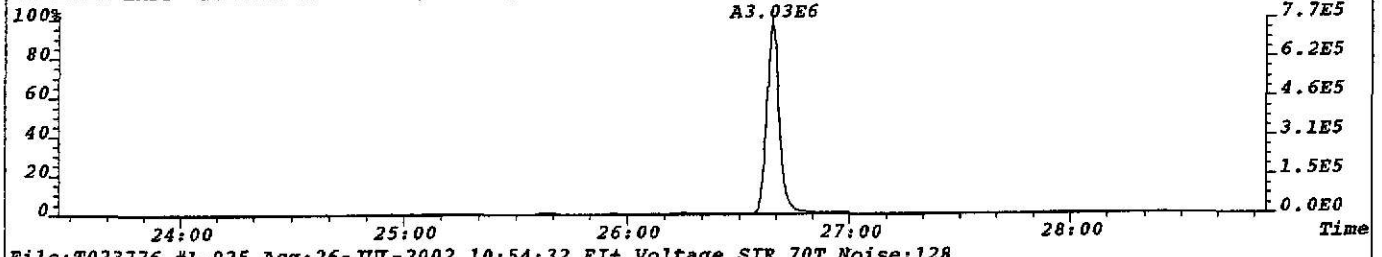
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:139
303.9016 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,556.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



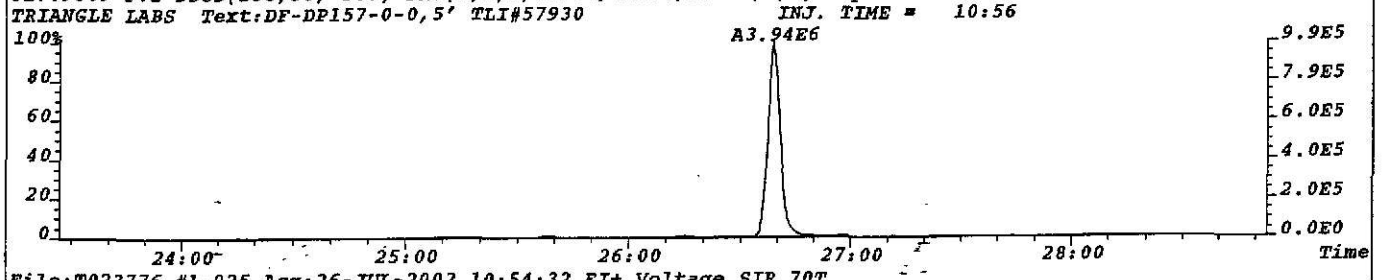
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:114
305.8987 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,456.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



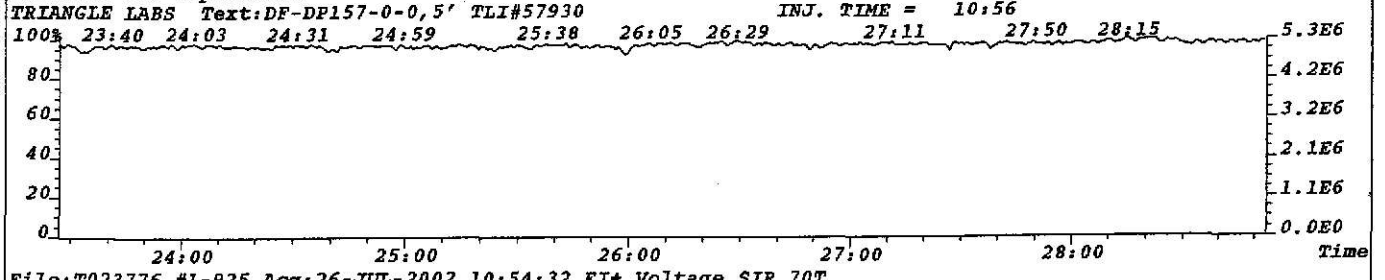
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:89
315.9419 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,356.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



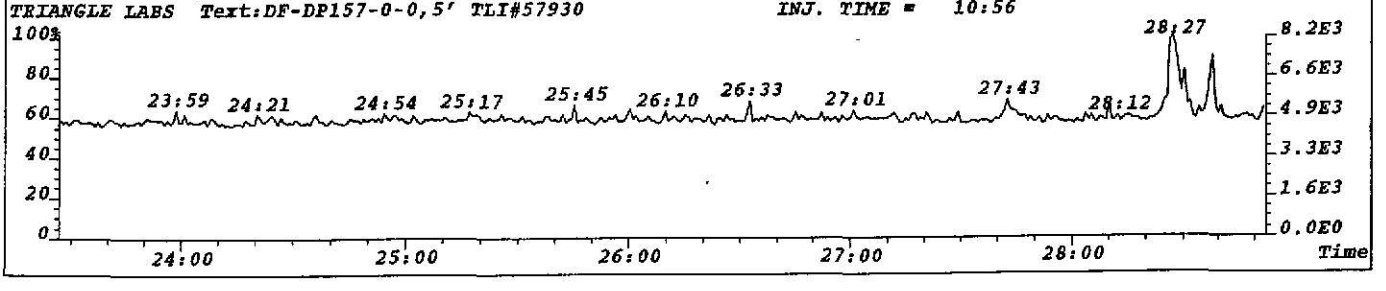
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:128
317.9389 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,512.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



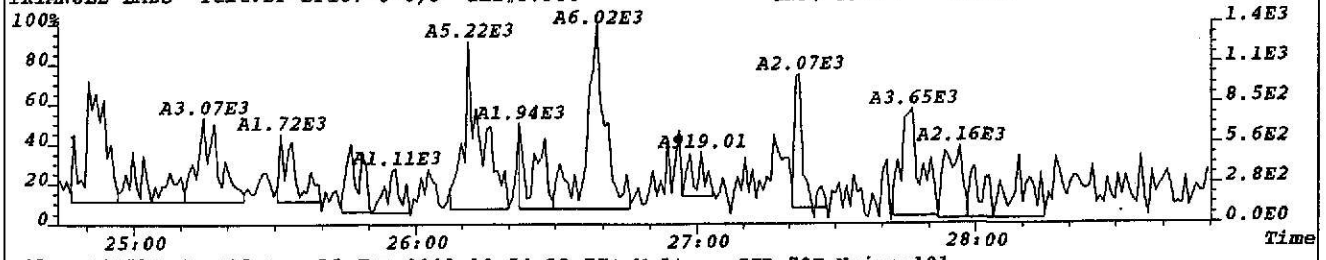
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



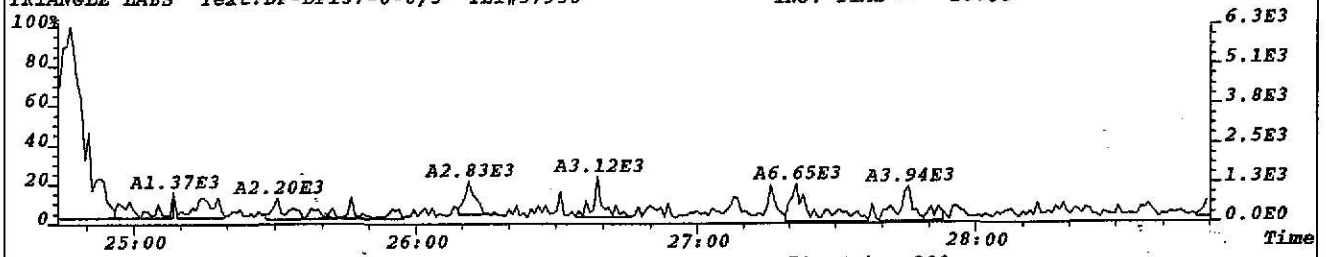
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
375.8364 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



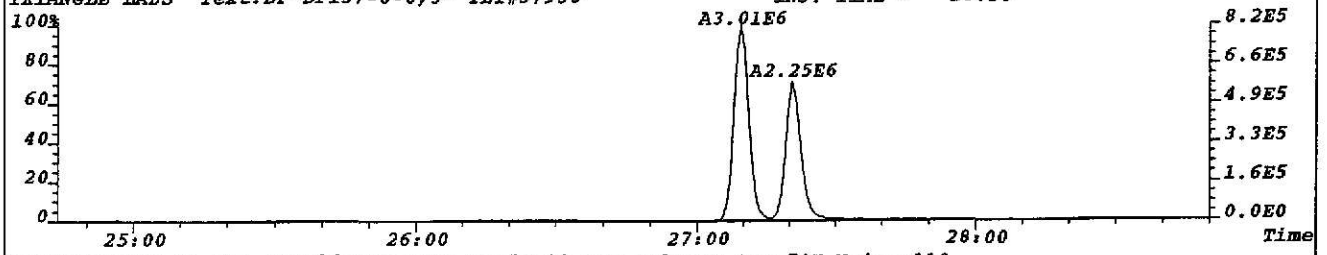
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:84
319.8965 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,336.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



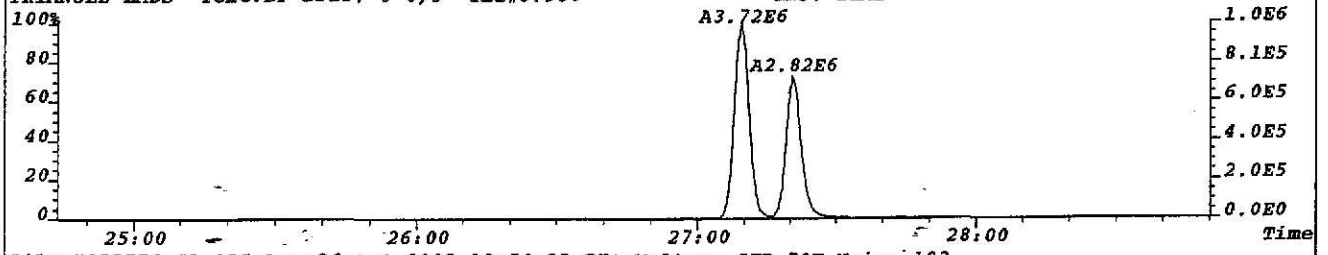
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:101
321.8936 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,404.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



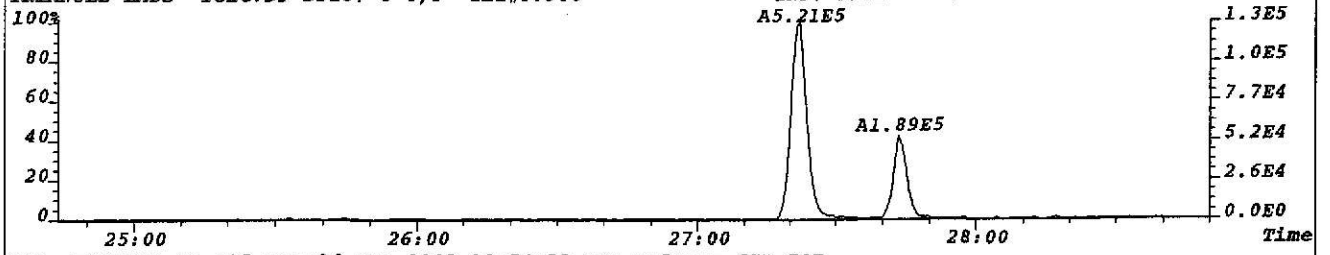
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:200
331.9368 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,800.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



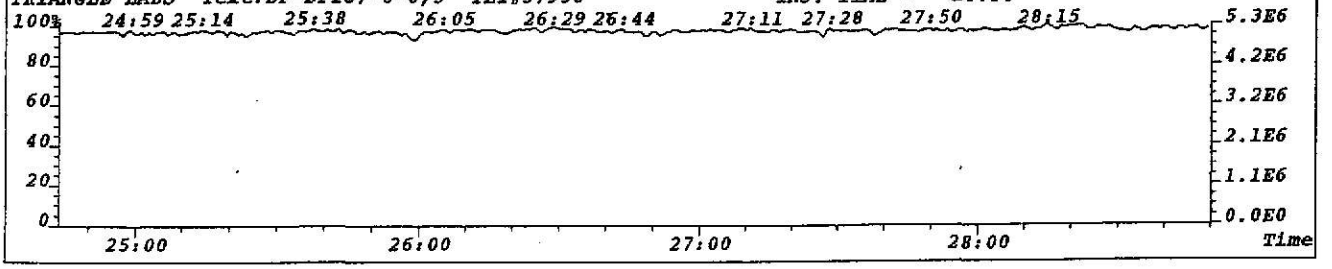
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:110
333.9338 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,440.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



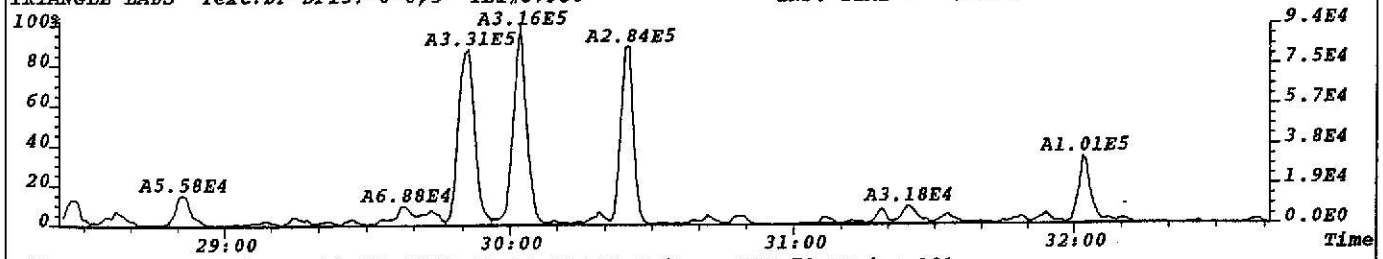
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:102
327.8847 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,408.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



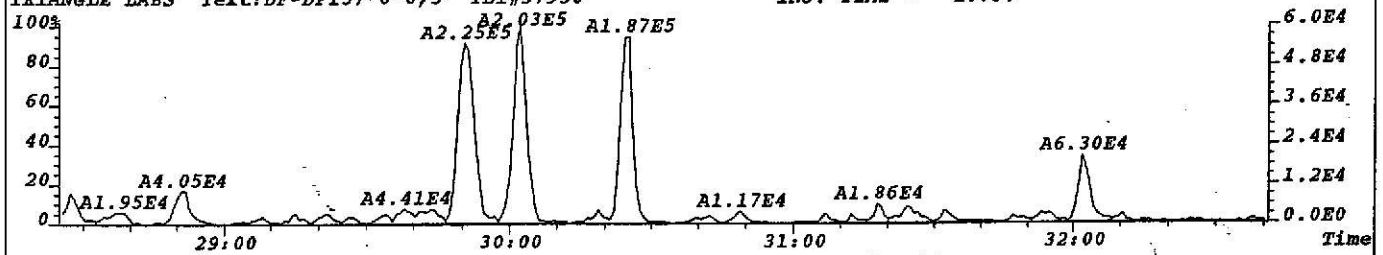
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



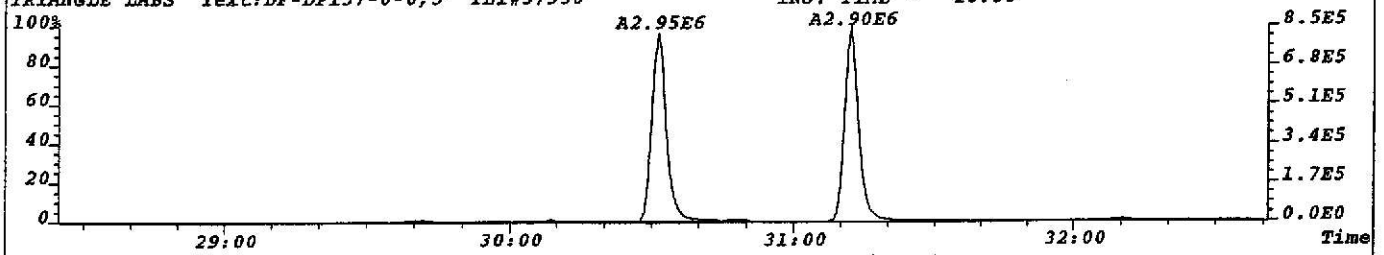
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:72
339.8597 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,288.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



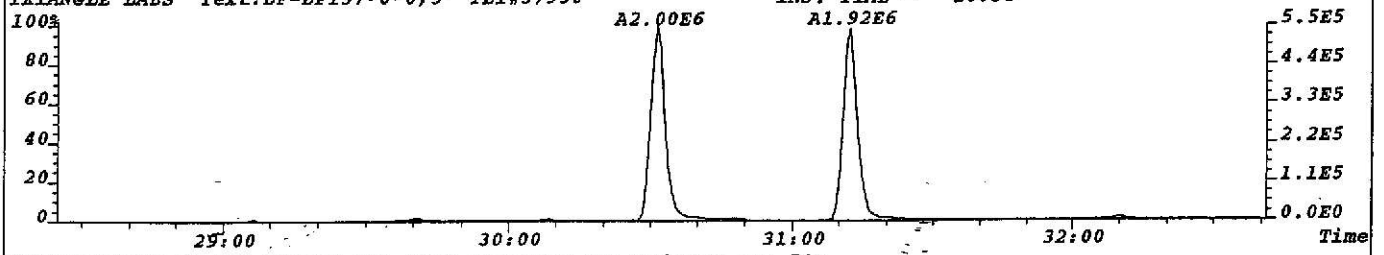
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:101
341.8567 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,404.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



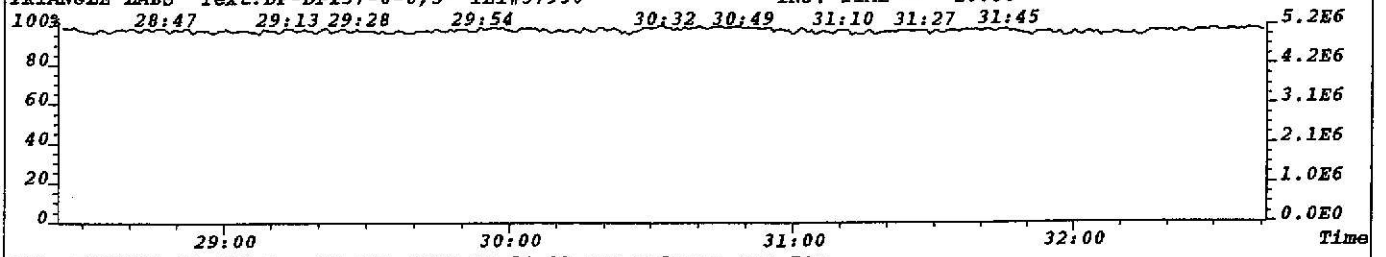
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:82
351.9000 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,328.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



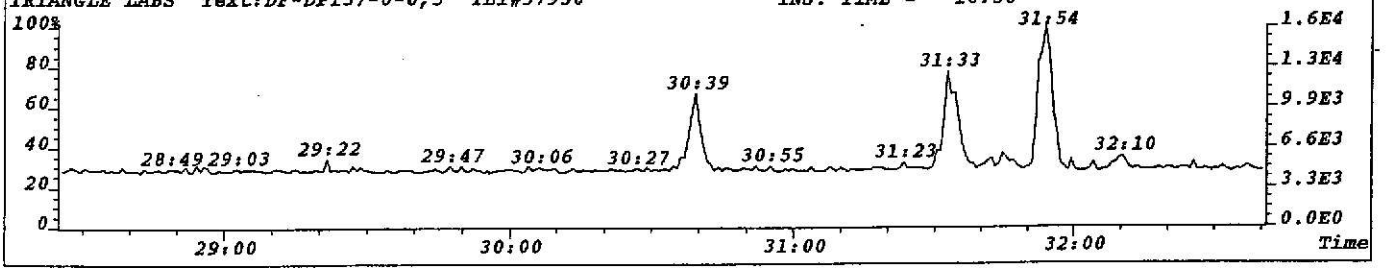
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:89
353.8970 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,356.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



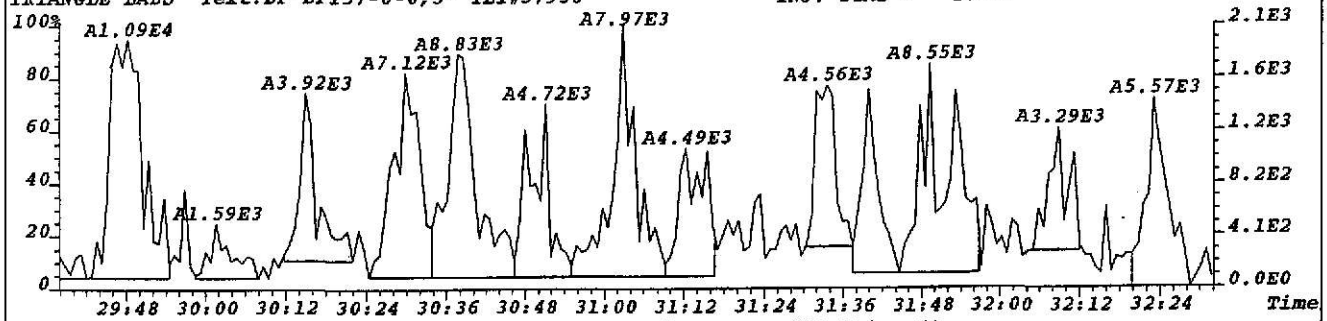
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



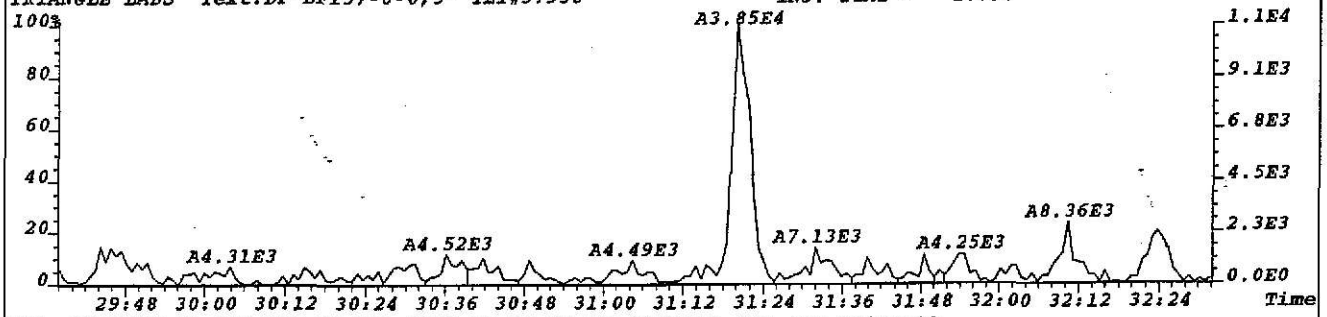
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
409.7974 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



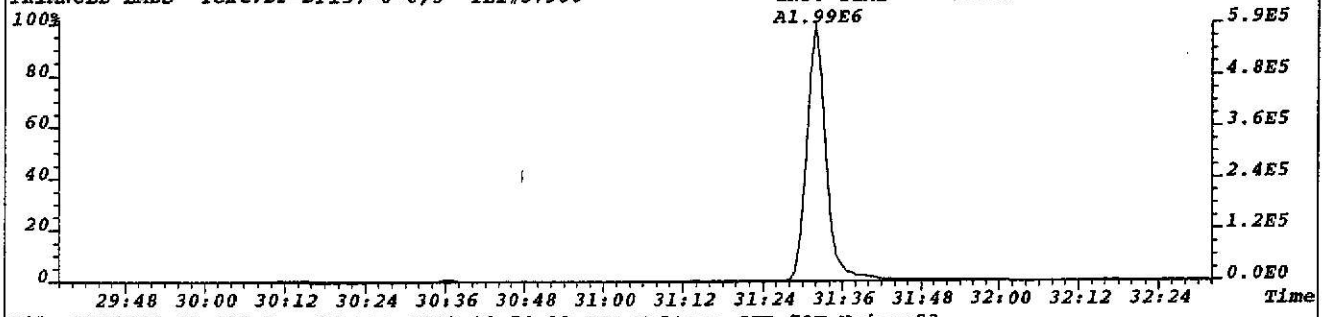
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:96
355.8546 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,384.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



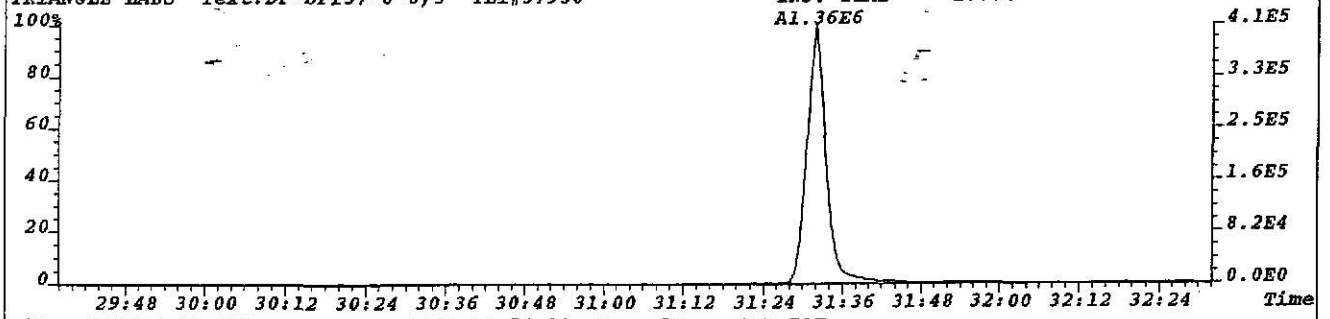
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:68
357.8516 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,272.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



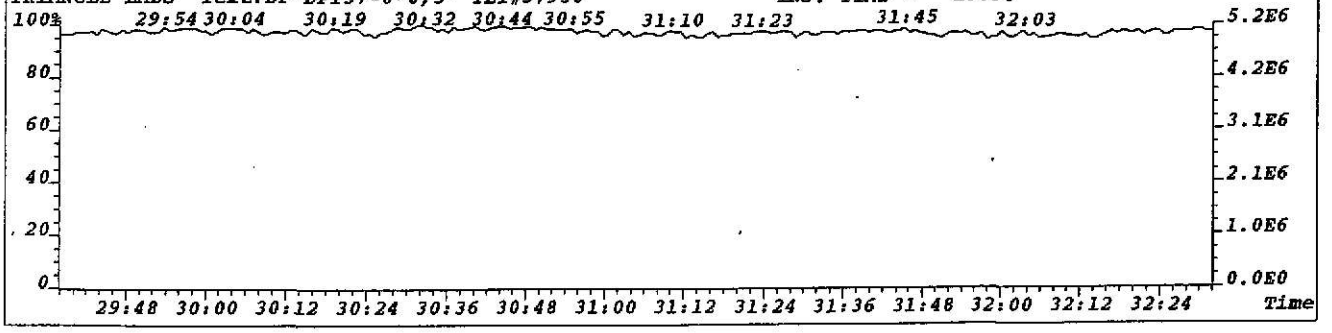
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:93
367.8949 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,372.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



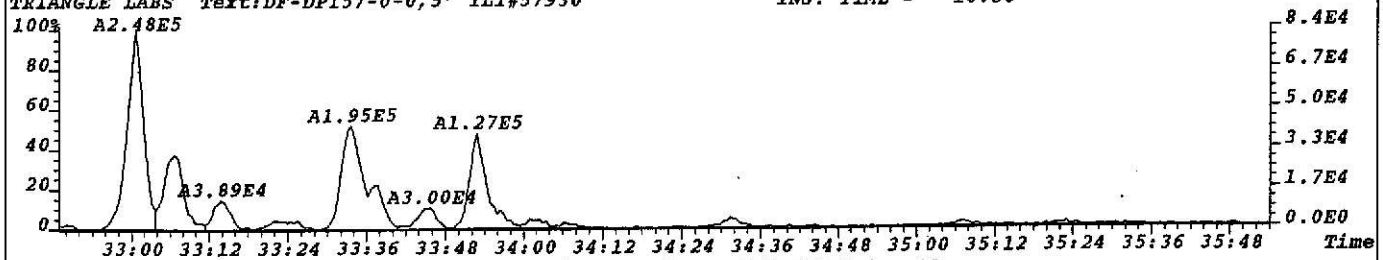
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:93
369.8919 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,372.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



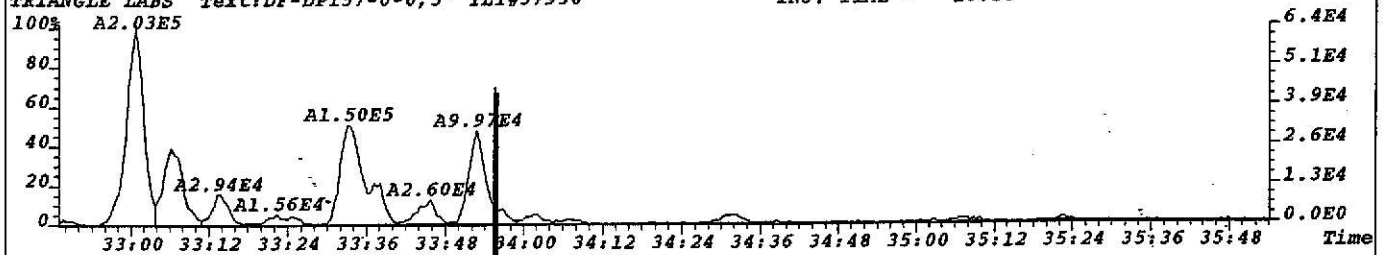
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



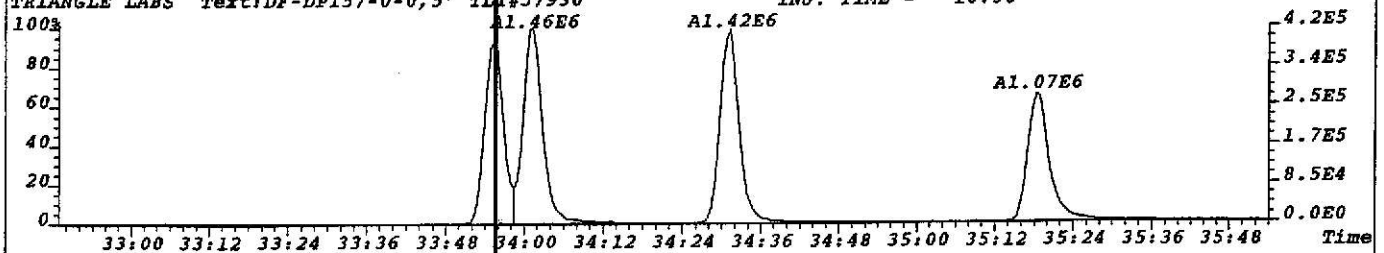
File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:141
373.8208 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,564.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



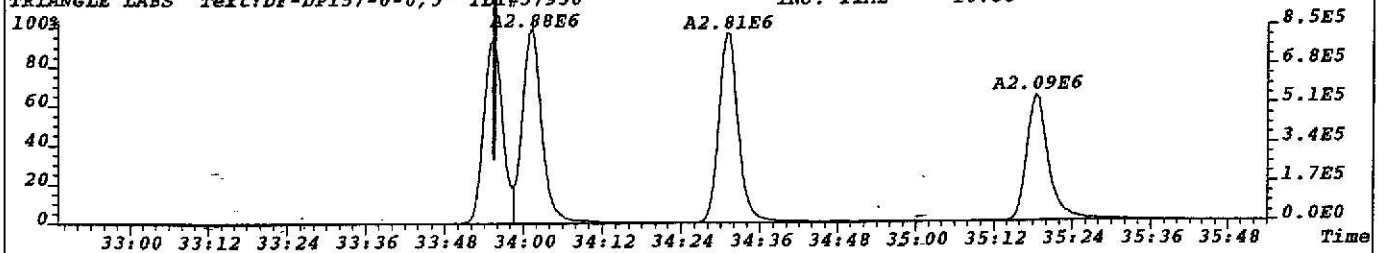
File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:99
375.8178 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,396.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



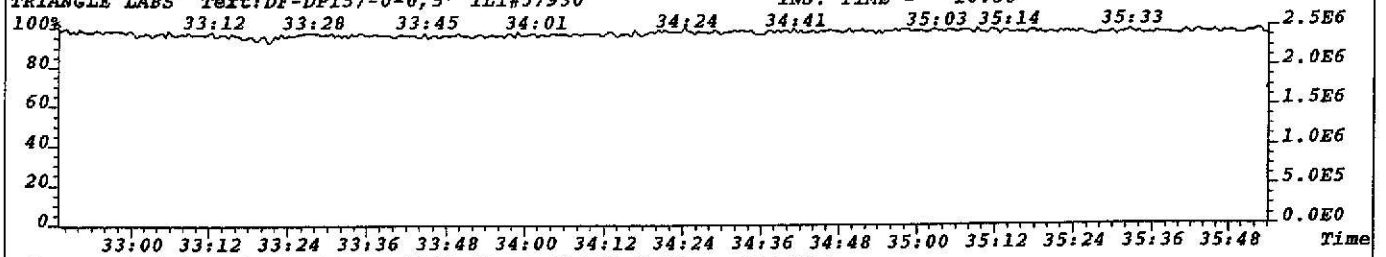
File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:115
383.8639 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,460.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



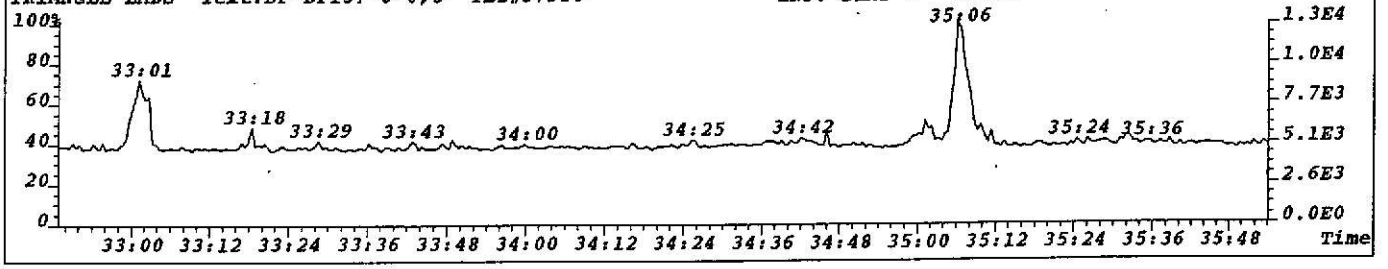
File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:186
385.8610 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,744.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



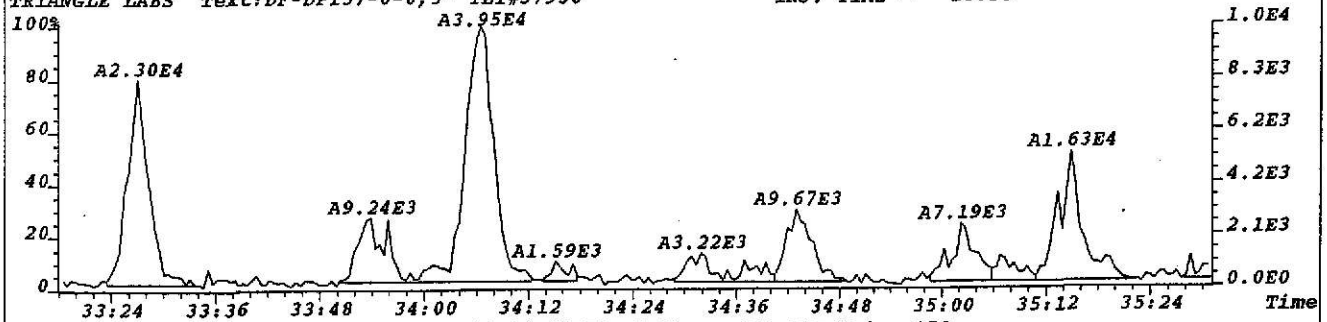
File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



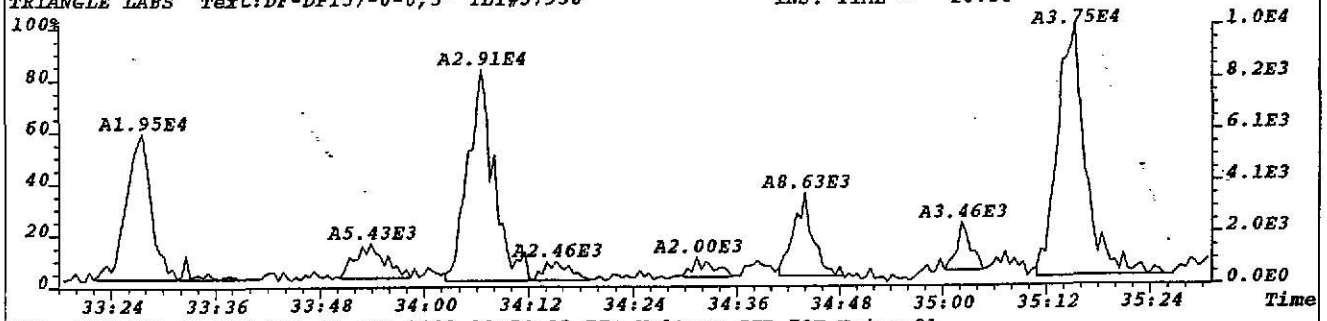
File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
445.7555 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



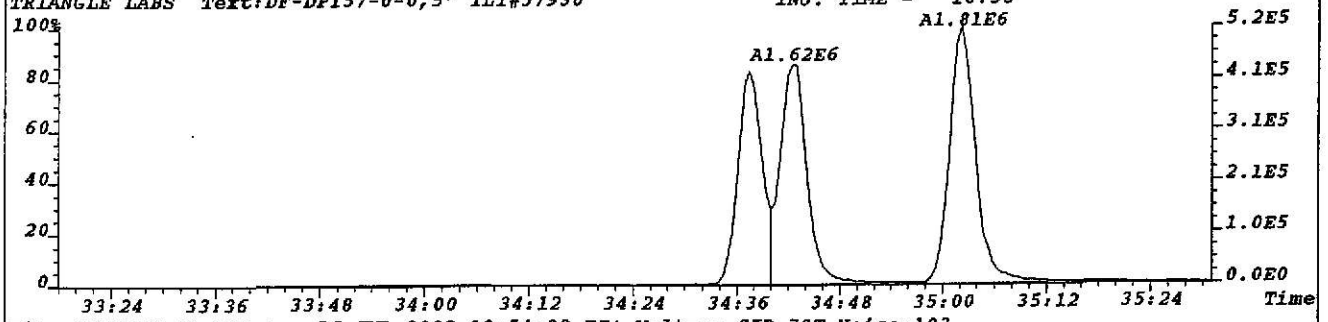
File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:122
389.8156 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,488.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



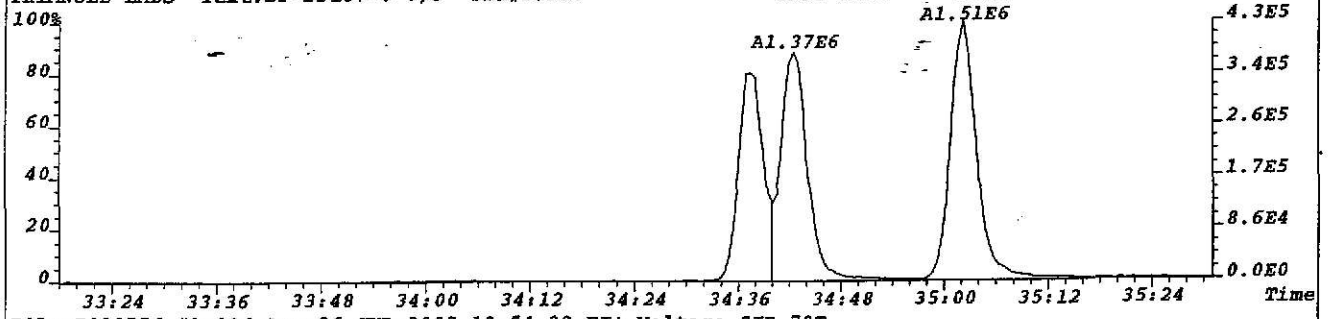
File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:158
391.8127 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,632.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



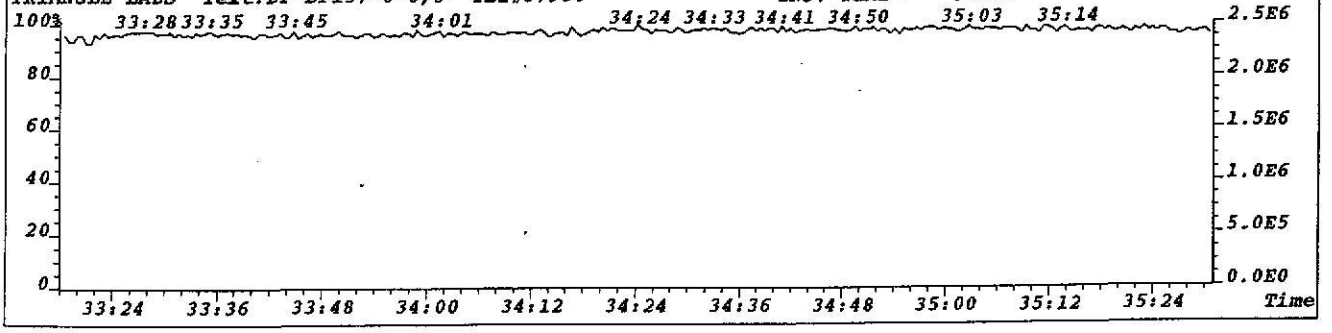
File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:91
401.8558 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,364.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



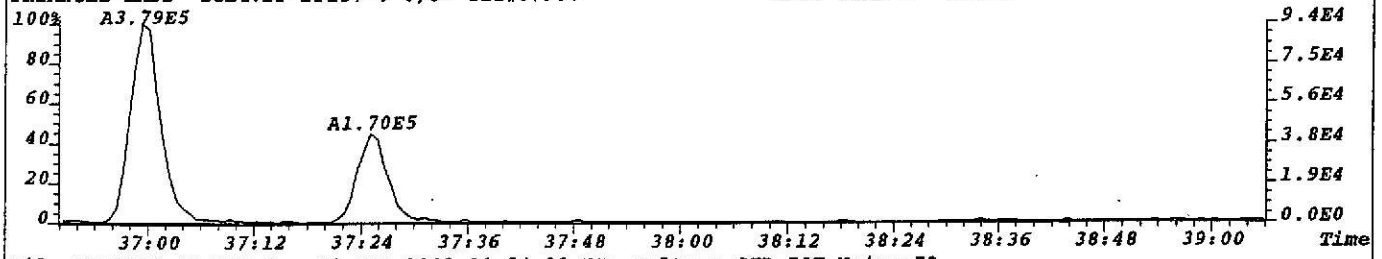
File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:103
403.8529 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,412.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



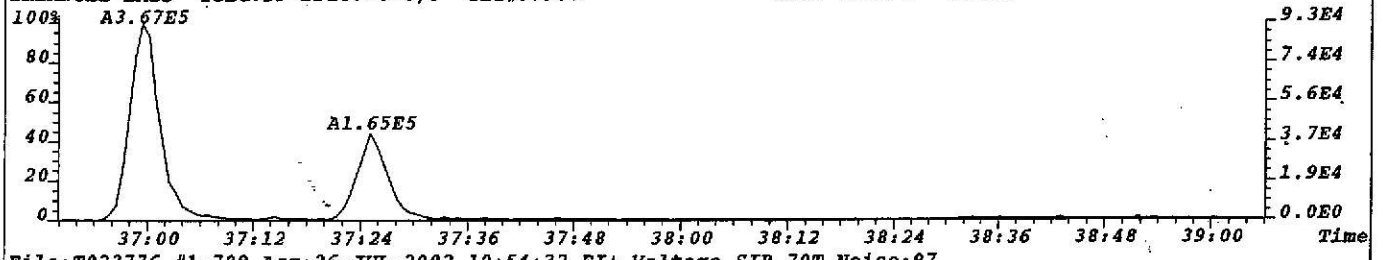
File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



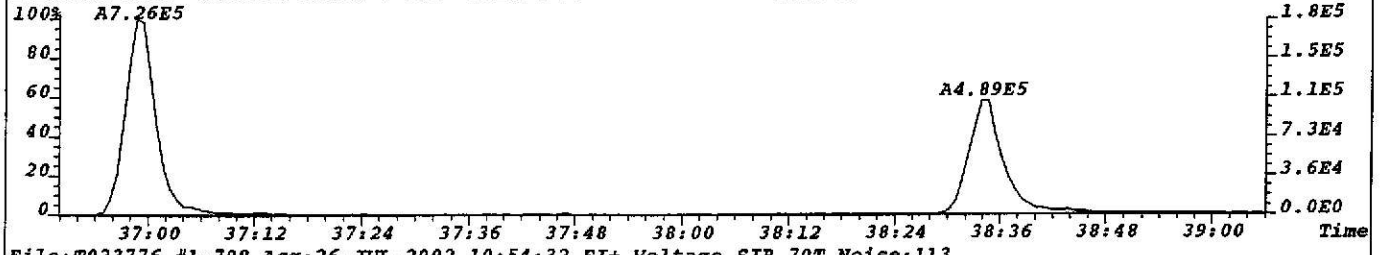
File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:128
407.7818 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,512.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



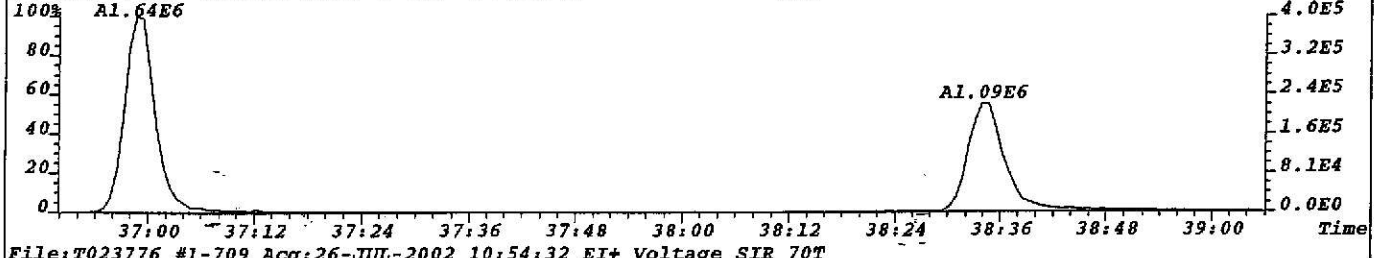
File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:72
409.7789 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,288.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



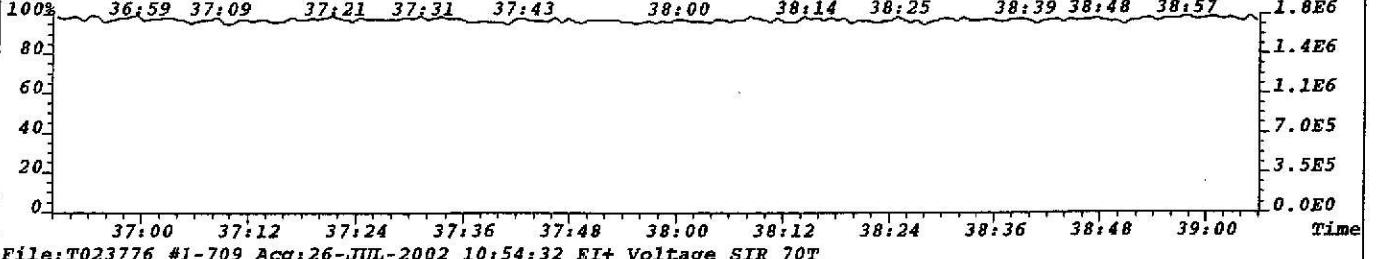
File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:97
417.8253 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,388.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



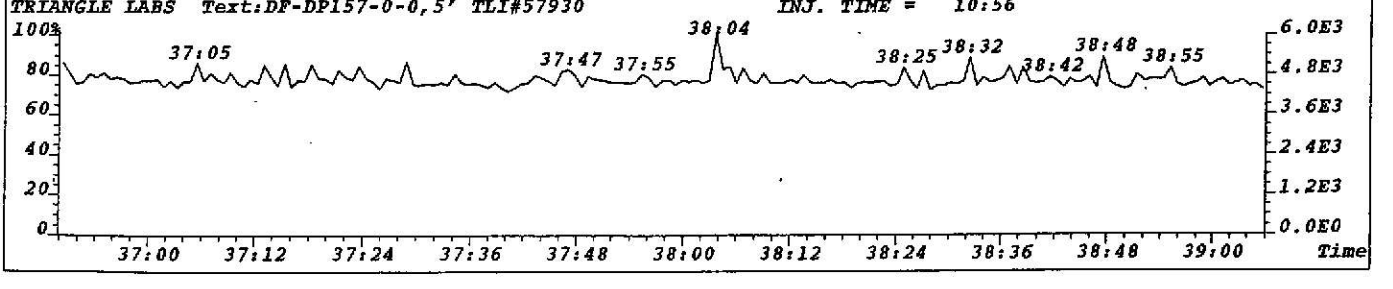
File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:113
419.8220 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,452.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



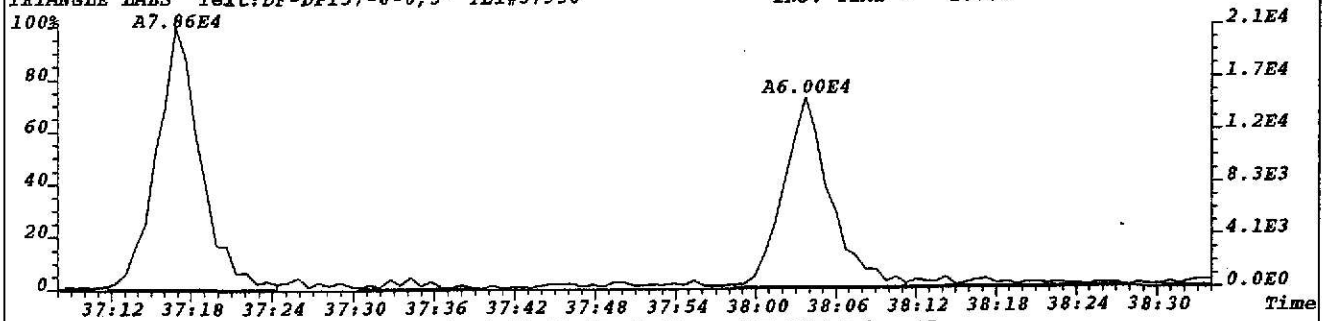
File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



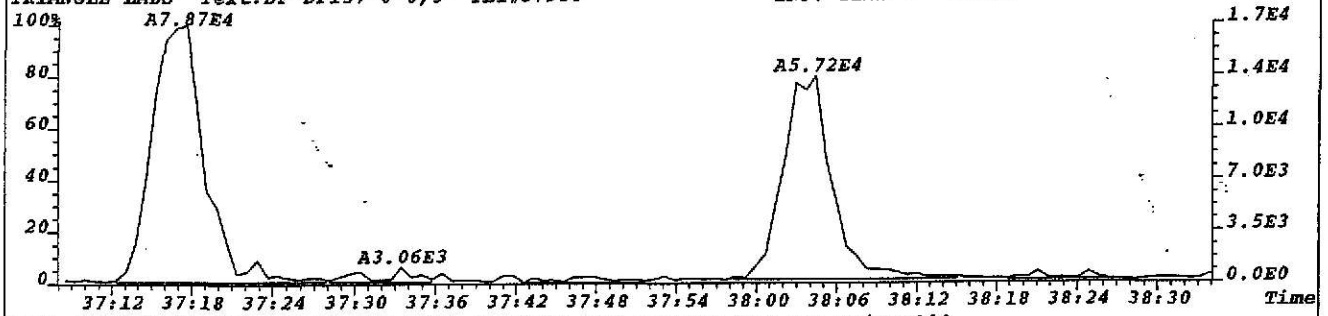
File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
479.7165 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



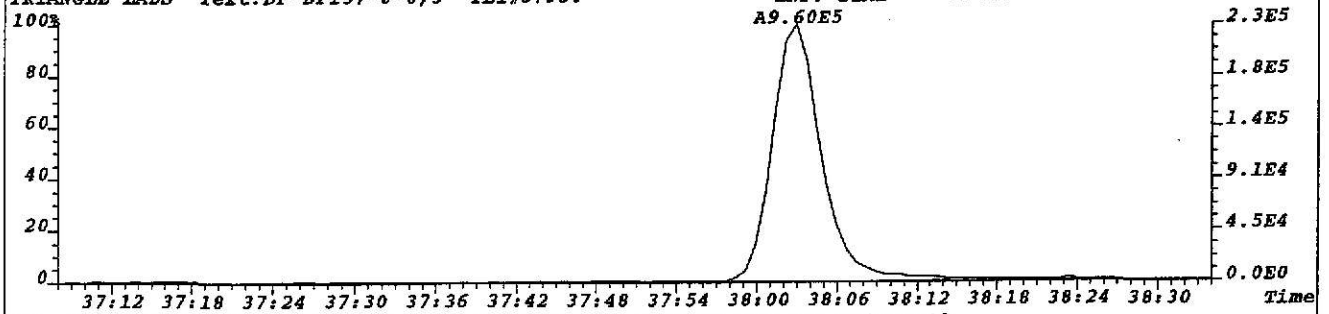
File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:100
423.7766 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,400.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



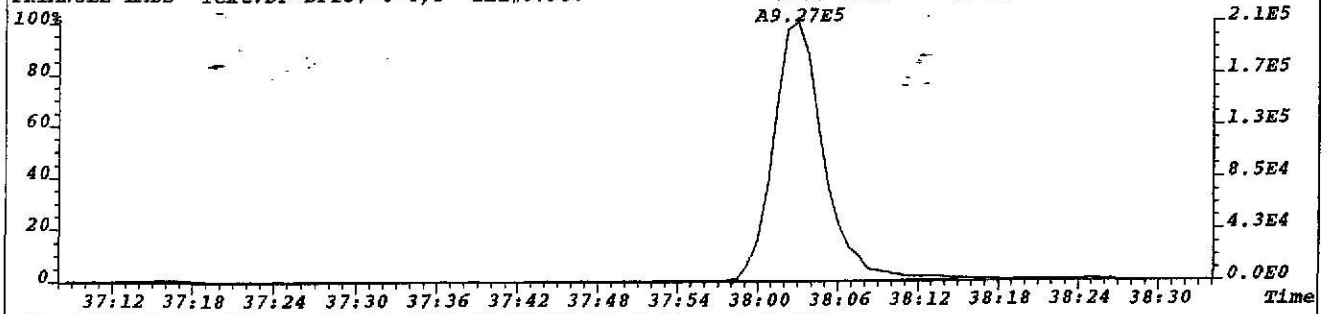
File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:87
425.7737 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,348.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



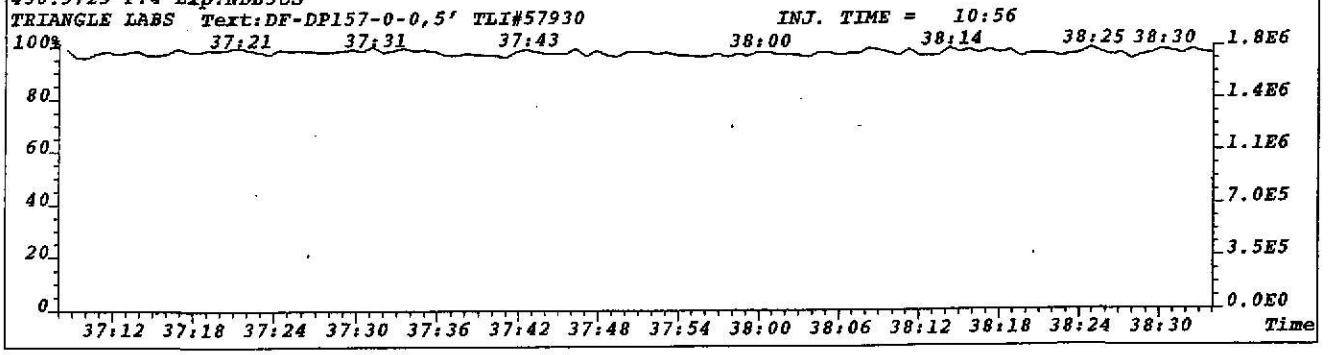
File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:130
435.8169 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,520.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



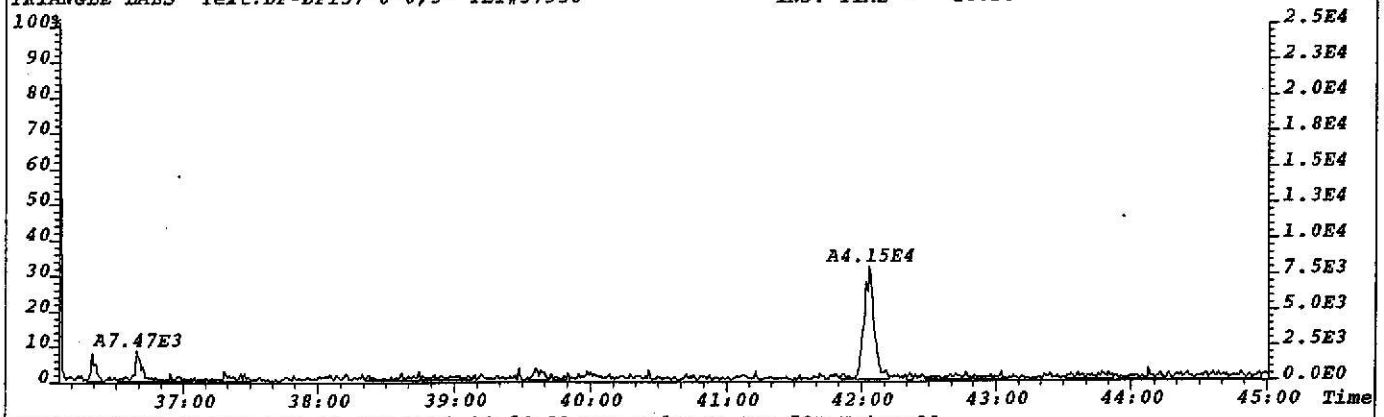
File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:117
437.8140 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,468.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



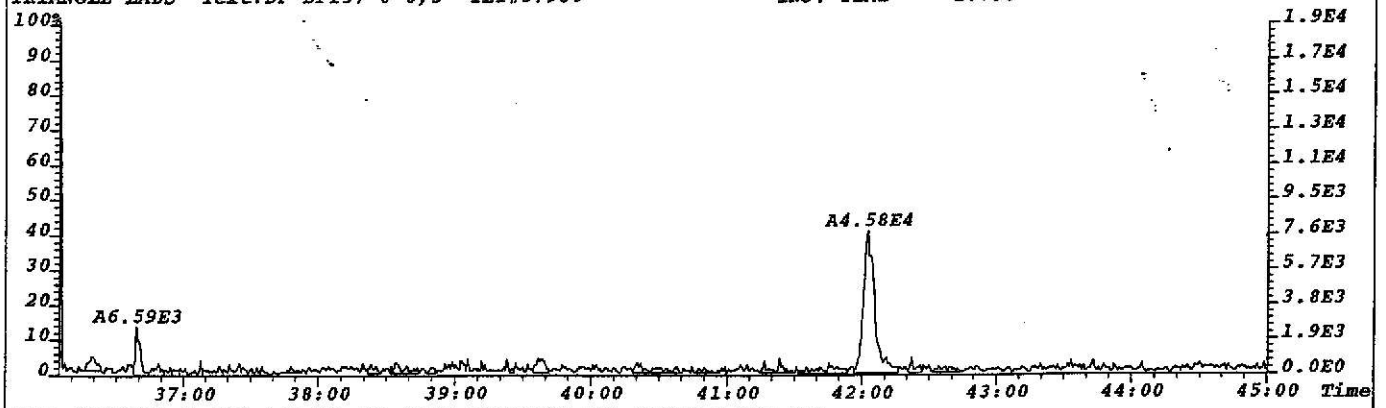
File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



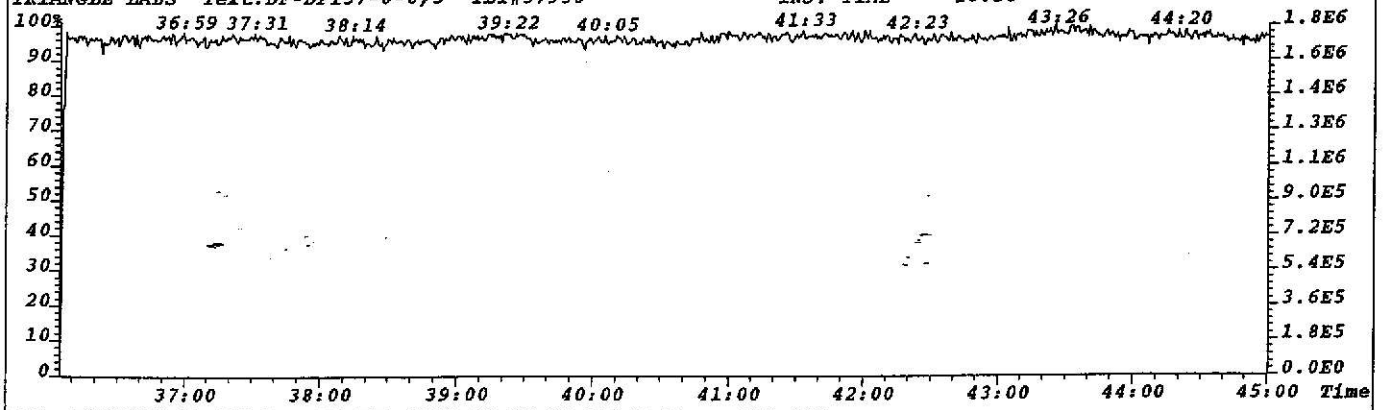
File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:90
441.7428 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,360.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



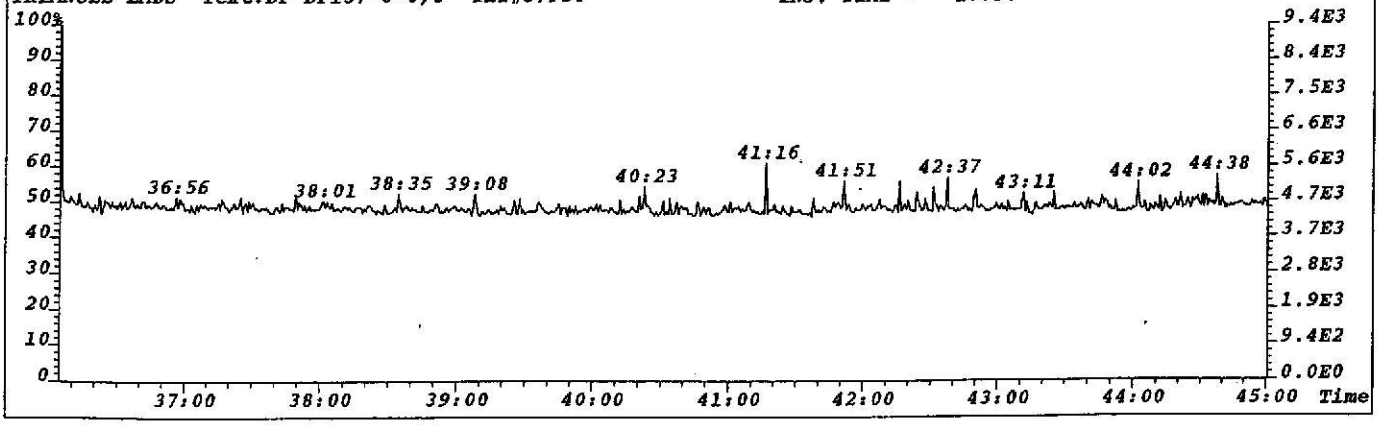
File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:90
443.7399 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,360.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



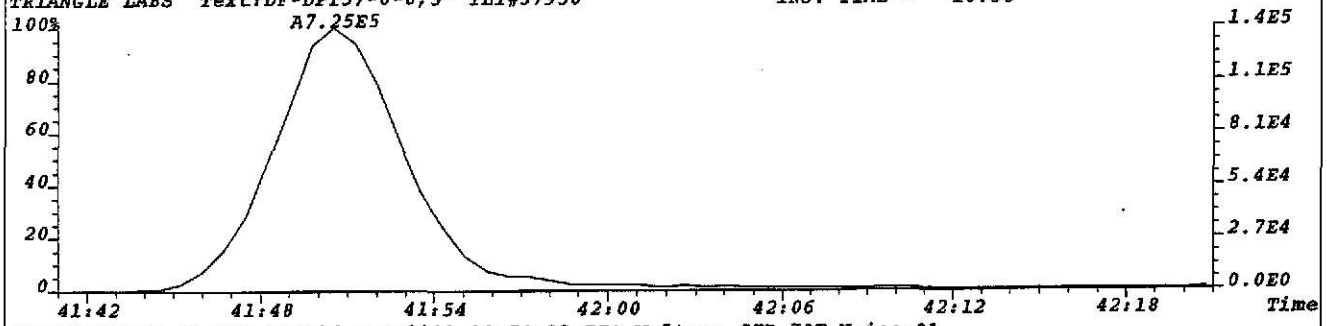
File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



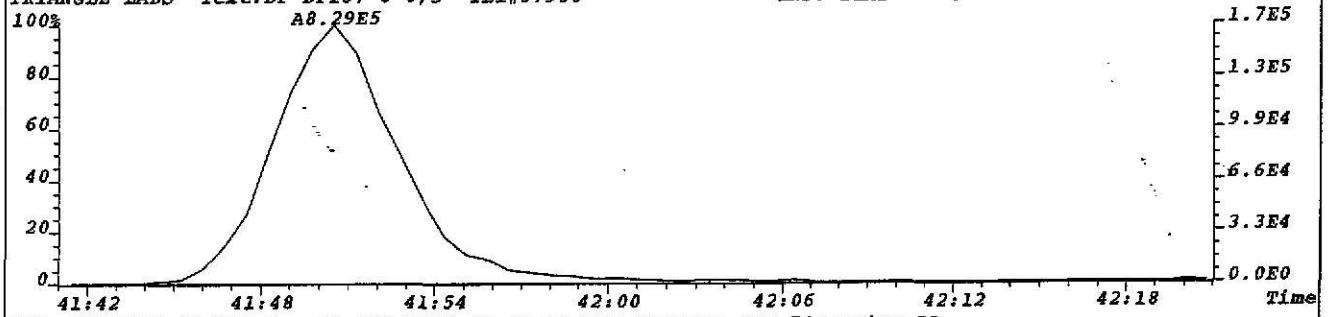
File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
513.6775 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



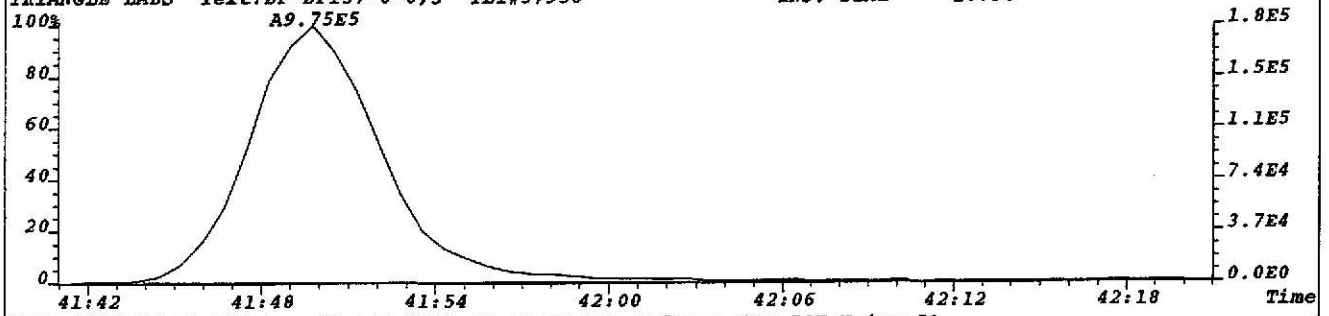
File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:68
457.7377 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,272.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



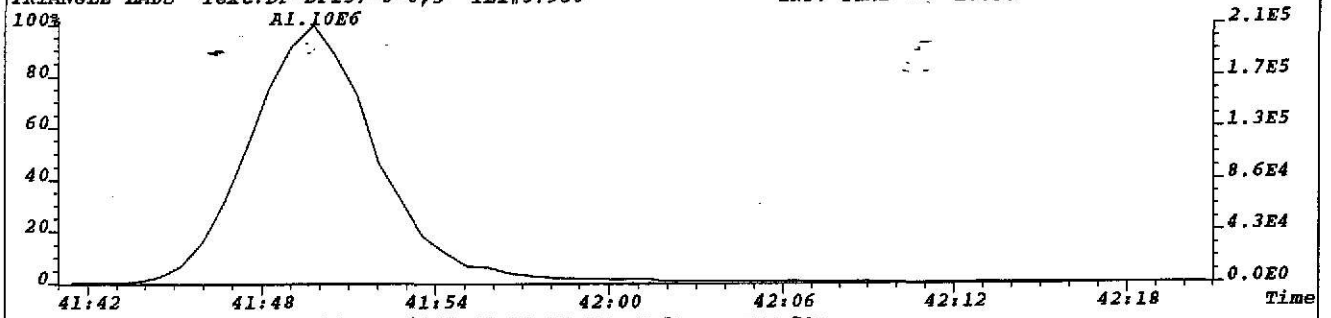
File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:81
459.7348 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,324.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



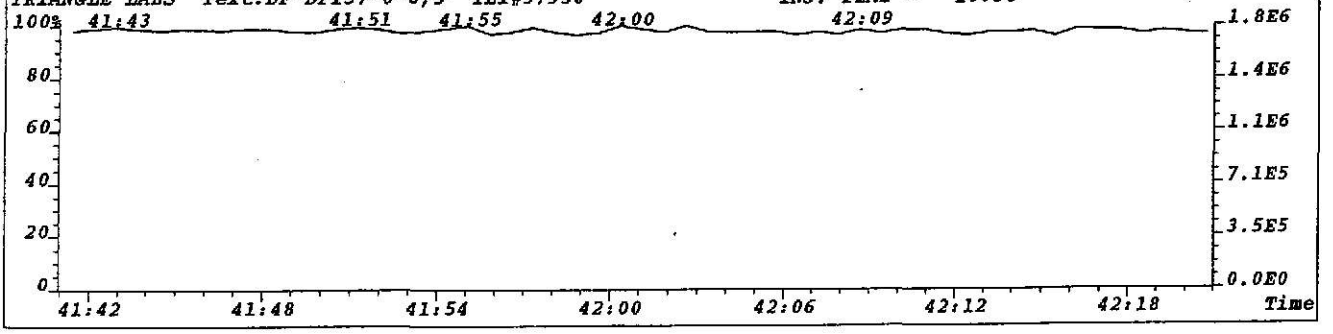
File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:79
469.7779 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,316.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T Noise:71
471.7750 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,284.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56



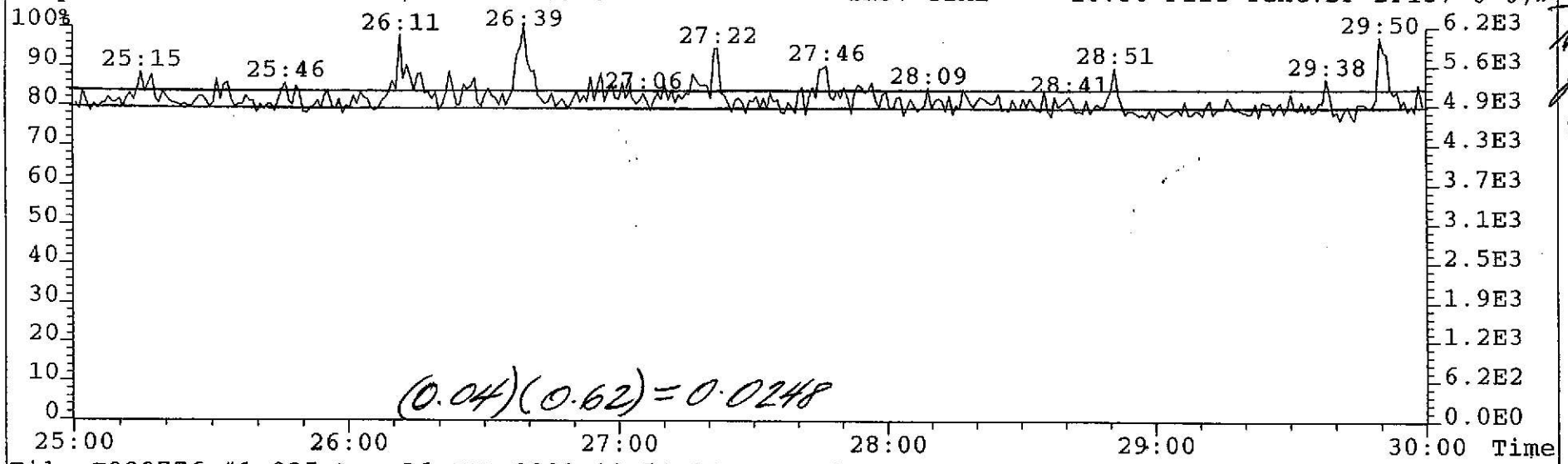
Channel I 330.9792 Peak top
Height .83 volts Span 200 ppm

System file name	ND85US
Data file name	A:T726021
Resolution	10000
Group number	2
Ionization mode	EI+
Switching	VOLTAGE
Ref. masses	292.9825, 416.9760

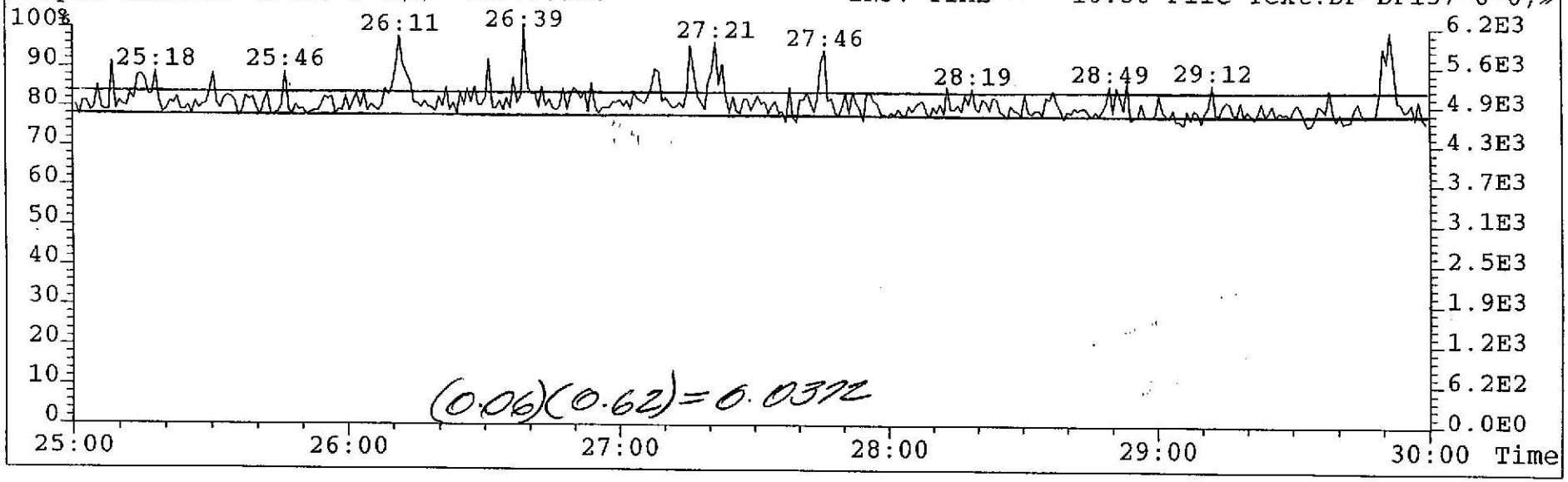
A	293	J	331	S	368
B	304	K	332	T	370
C	306	L	334	U	376
D	316	M	340	V	410
E	318	N	342		
F	[illegible]	O	[illegible]		
G	322	P	354		
H	328	Q	356		
I	331	R	358		

Ref. mass 416.9760 Peak top
Height .16 volts Span 200 ppm

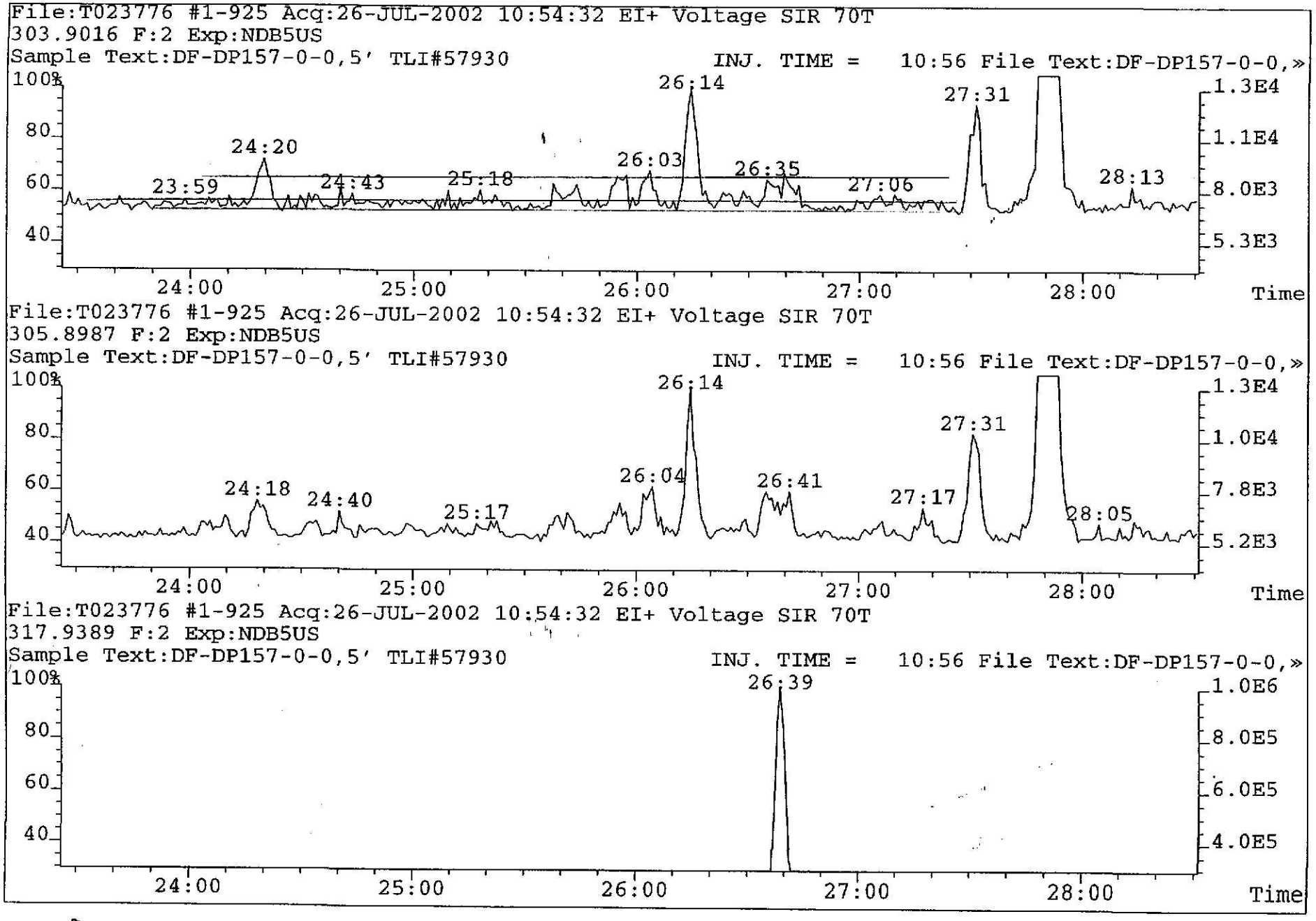
File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
319.8965 F:2 Exp:NDB5US
Sample Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56 File Text:DF-DP157-0-0,»



File:T023776 #1-925 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
321.8936 F:2 Exp:NDB5US
Sample Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56 File Text:DF-DP157-0-0,»



0.0248
0.0372
N=0.0620
7/24/02



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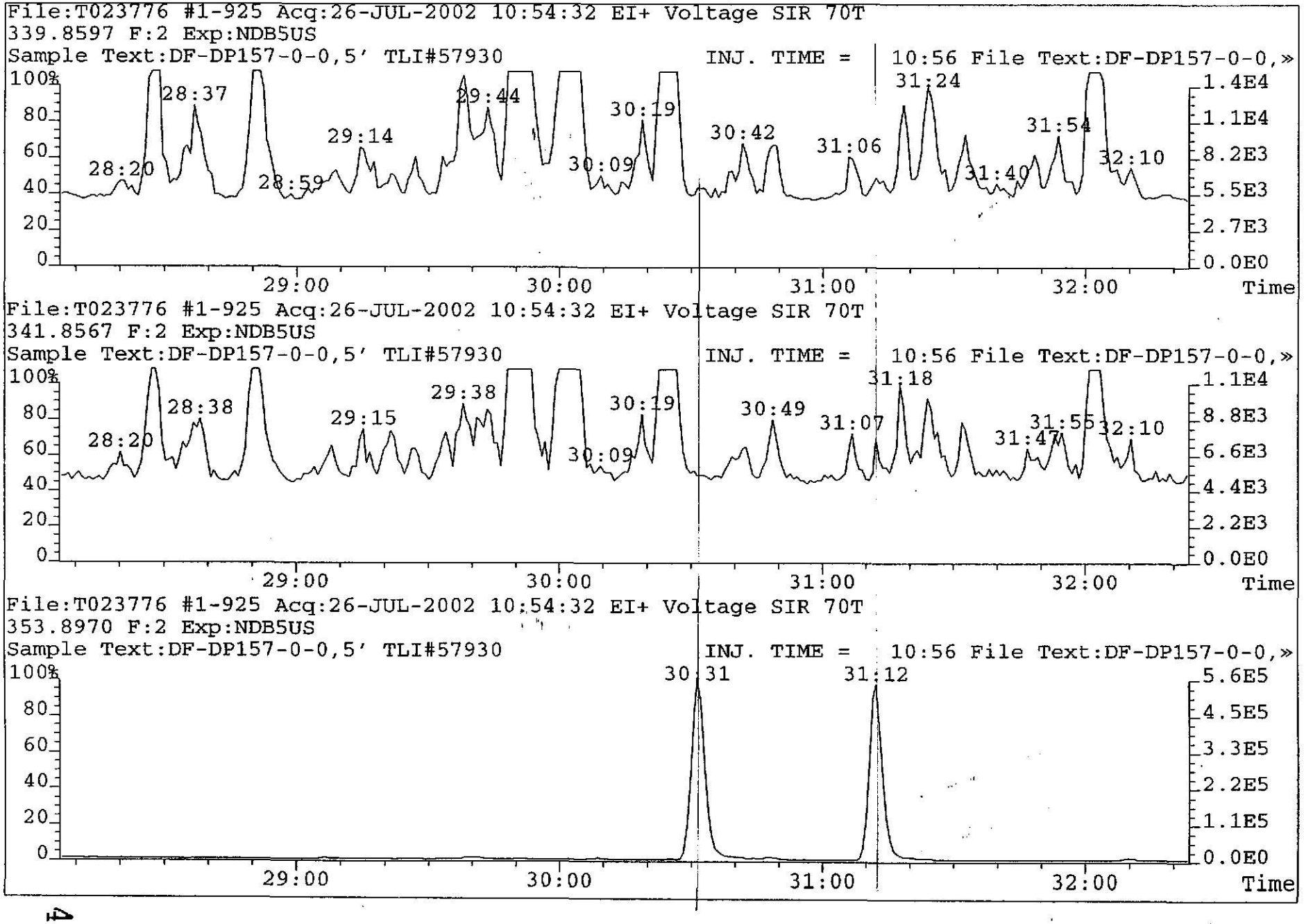
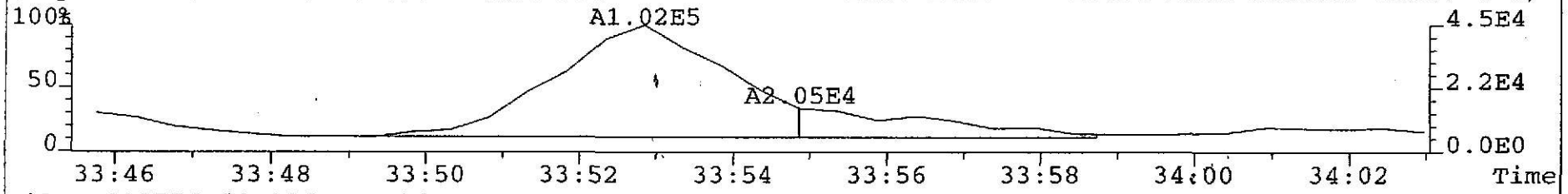
LJB7 7/26/02



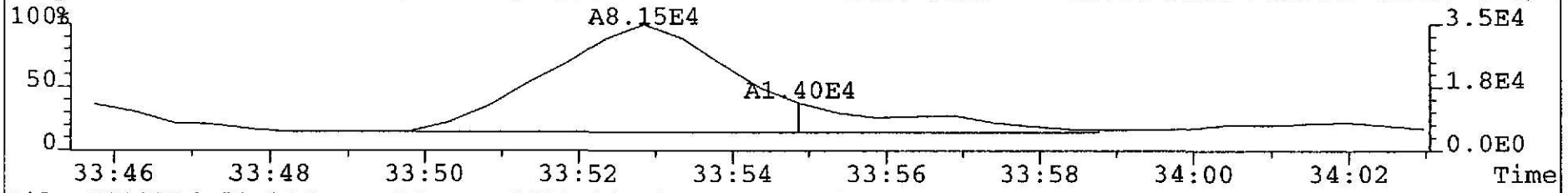
407

WBY 7/26/02

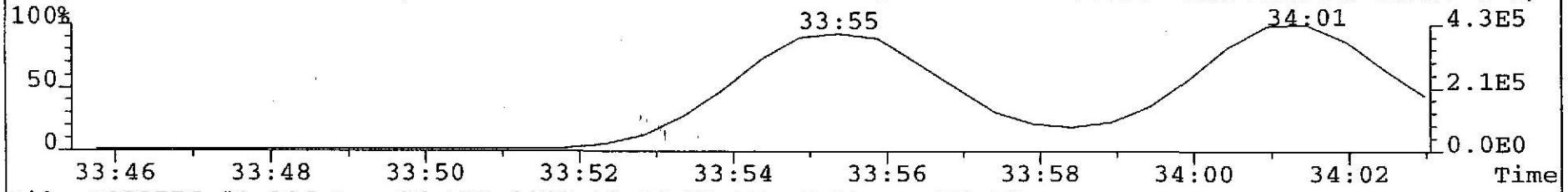
File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
373.8208 F:3 Exp:NDB5US
Sample Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56 File Text:DF-DP157-0-0,»



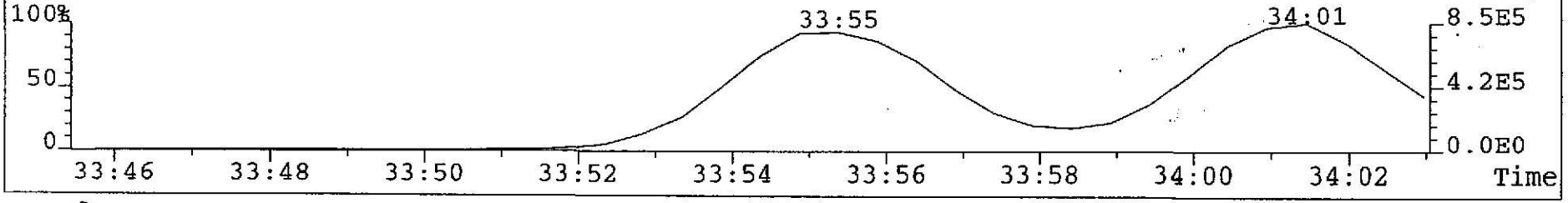
File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
375.8178 F:3 Exp:NDB5US
Sample Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56 File Text:DF-DP157-0-0,»



File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
383.8639 F:3 Exp:NDB5US
Sample Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56 File Text:DF-DP157-0-0,»



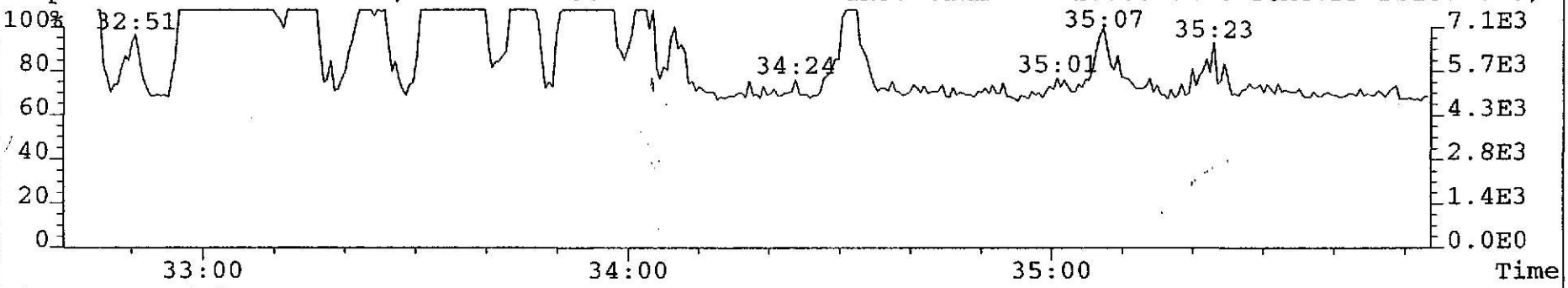
File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
385.8610 F:3 Exp:NDB5US
Sample Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56 File Text:DF-DP157-0-0,»



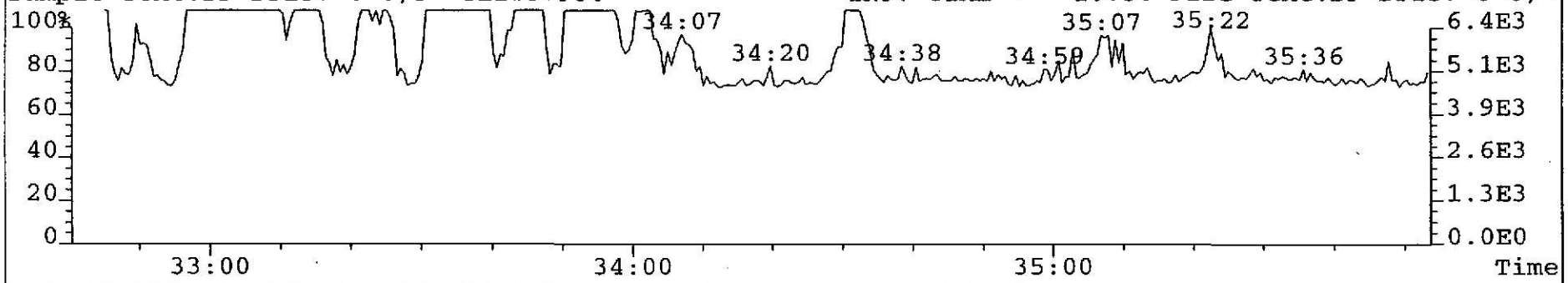
408

KW 7/27/02

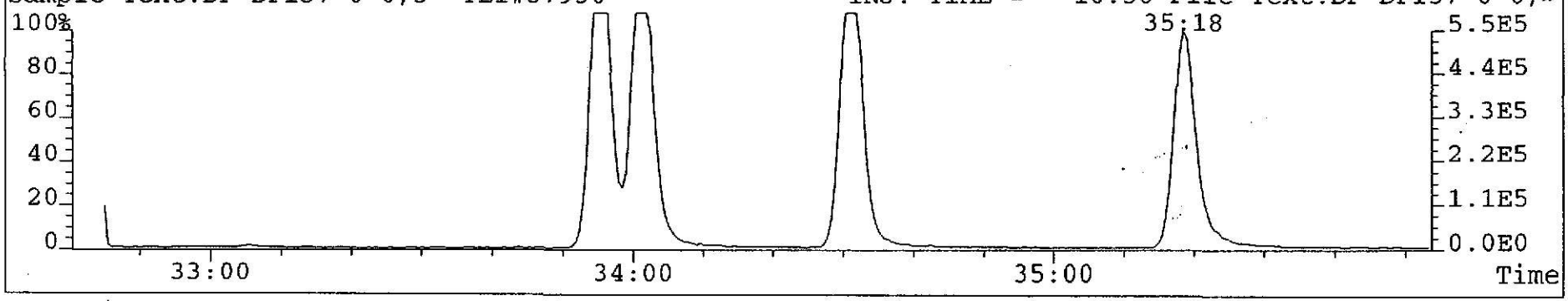
File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
373.8208 F:3 Exp:NDB5US
Sample Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56 File Text:DF-DP157-0-0,»



File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
375.8178 F:3 Exp:NDB5US
Sample Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56 File Text:DF-DP157-0-0,»



File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
385.8610 F:3 Exp:NDB5US
Sample Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56 File Text:DF-DP157-0-0,»



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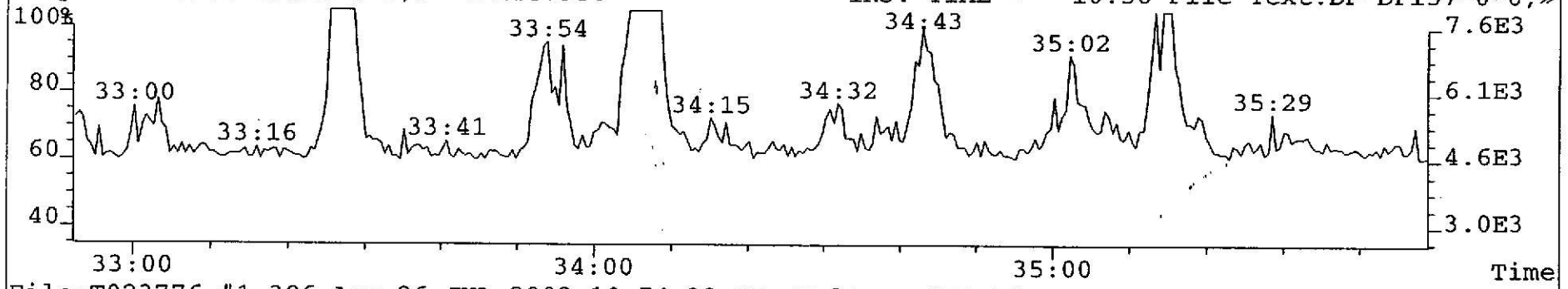
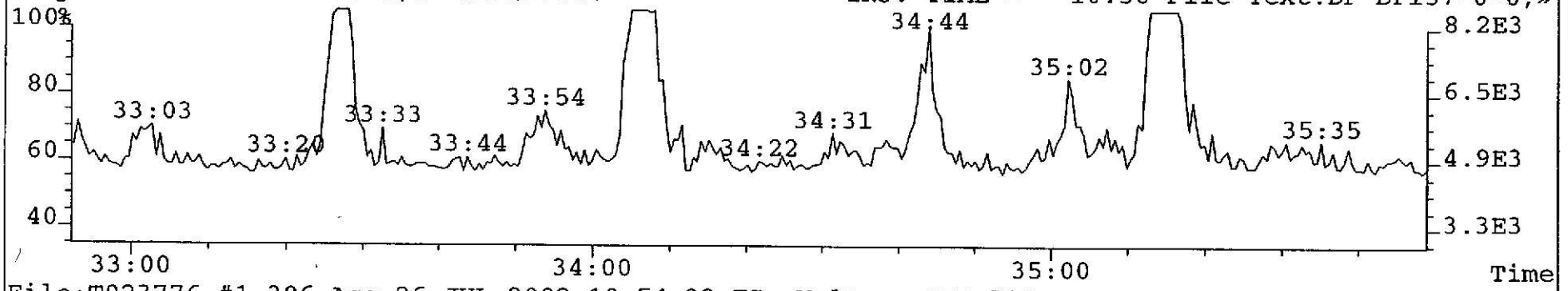
WJA 7/26/02

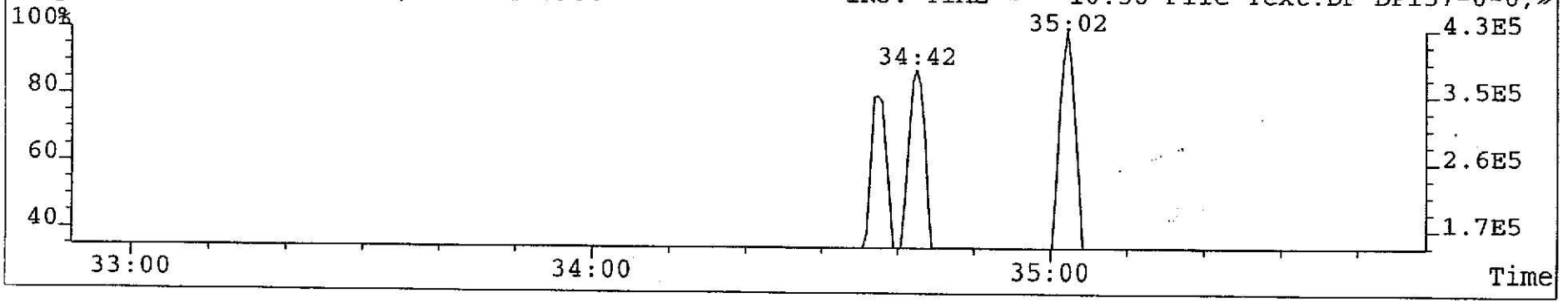
File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
389.8156 F:3 Exp:NDB5US
Sample Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56 File Text:DF-DP157-0-0,»



File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
391.8127 F:3 Exp:NDB5US
Sample Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56 File Text:DF-DP157-0-0,»



File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
403.8529 F:3 Exp:NDB5US
Sample Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56 File Text:DF-DP157-0-0,»



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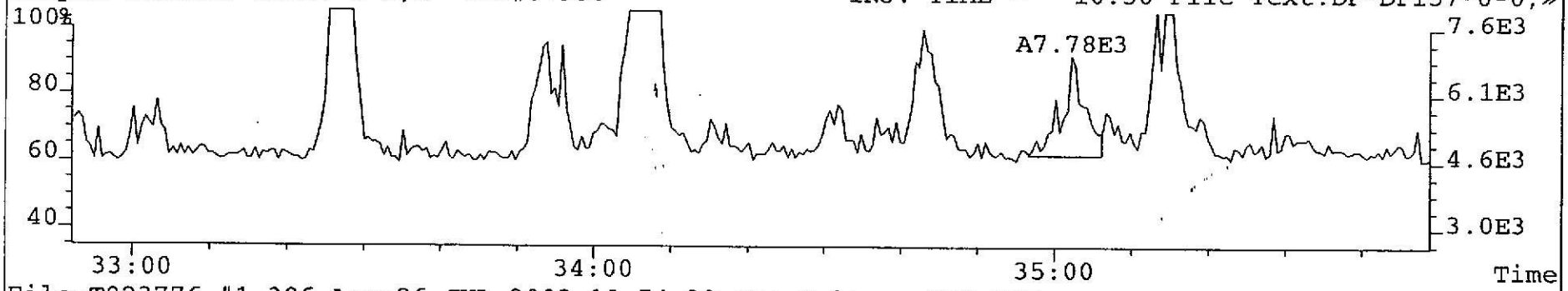
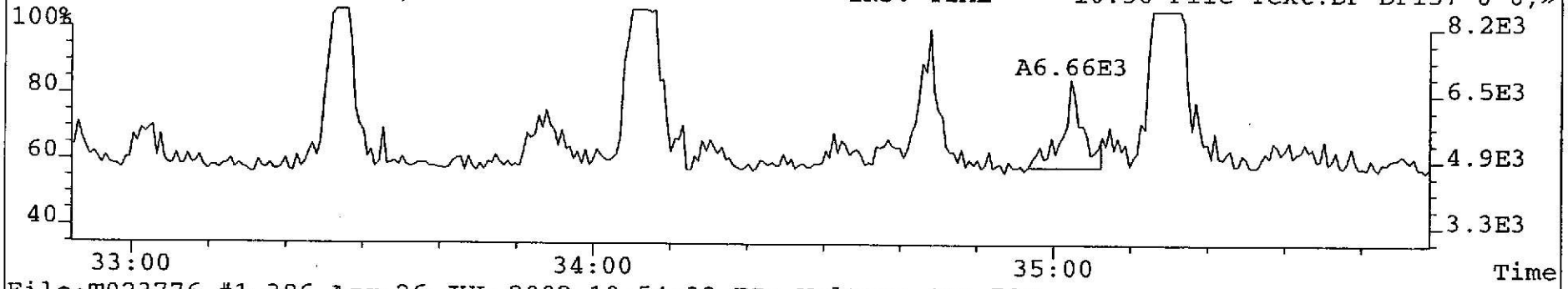
WJY 7/24/02

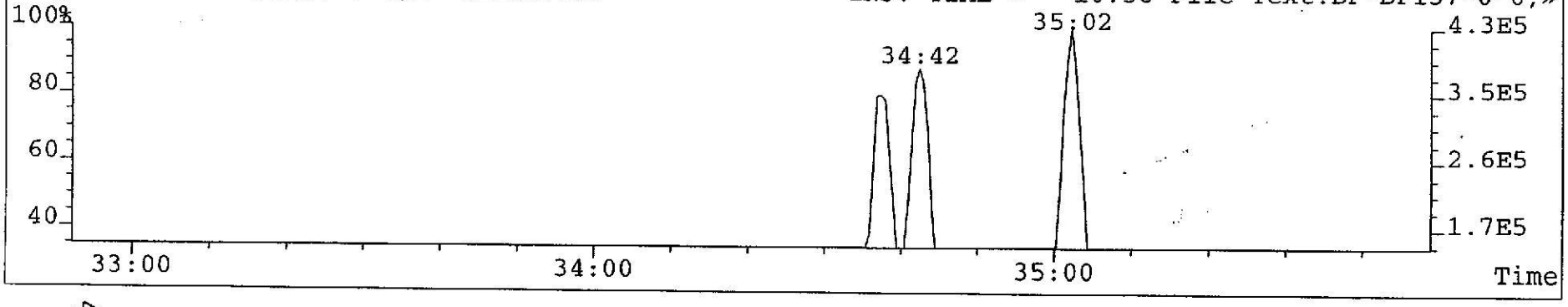
File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
389.8156 F:3 Exp:NDB5US
Sample Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56 File Text:DF-DP157-0-0,»



File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
391.8127 F:3 Exp:NDB5US
Sample Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56 File Text:DF-DP157-0-0,»



File:T023776 #1-386 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
403.8529 F:3 Exp:NDB5US
Sample Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56 File Text:DF-DP157-0-0,»



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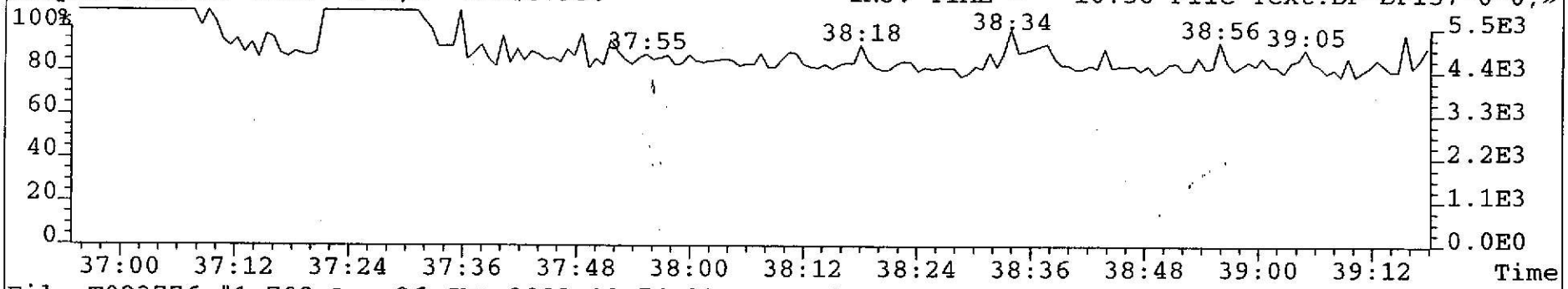
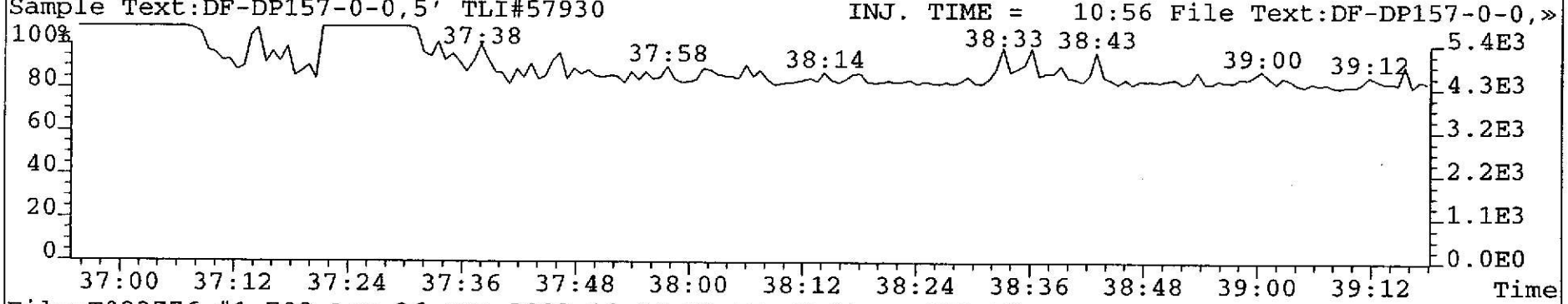
JBY 7/26/02

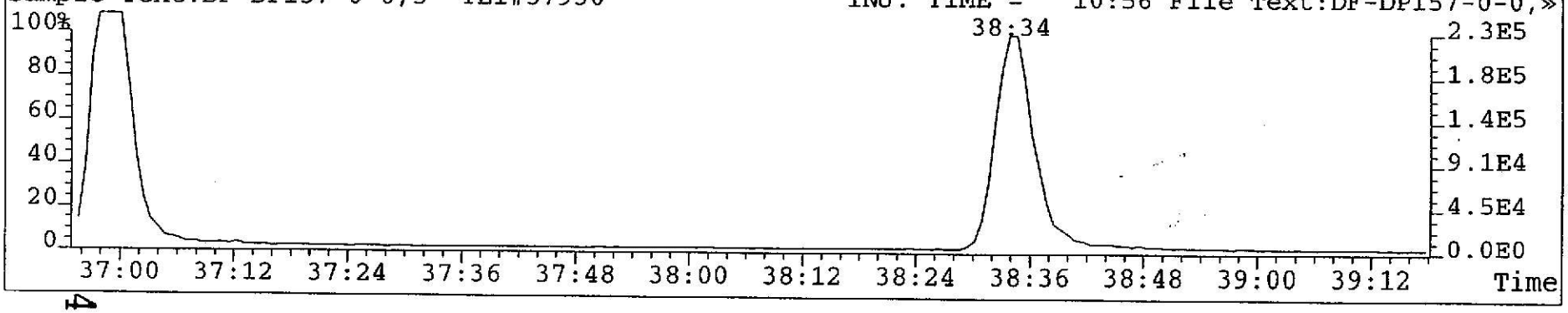
File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
407.7818 F:4 Exp:NDB5US
Sample Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56 File Text:DF-DP157-0-0,»



File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
409.7789 F:4 Exp:NDB5US
Sample Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56 File Text:DF-DP157-0-0,»



File:T023776 #1-709 Acq:26-JUL-2002 10:54:32 EI+ Voltage SIR 70T
419.8220 F:4 Exp:NDB5US
Sample Text:DF-DP157-0-0,5' TLI#57930 INJ. TIME = 10:56 File Text:DF-DP157-0-0,»



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[illegible] 7/26/02

Martin & Slagle

TLI Project: **57930** — 1613, Revision B PCDD/PCDF Analysis (c)

Client Sample: **DF-DP157-1'-2'** — Analysis File: **T023778**

Client Project:	Kuhlman Electric				
Sample Matrix:	SOLID	Date Received:	07/20/2002	Spike File:	SP161B2S
TLI ID:	331-18-12	Date Extracted:	07/23/2002	ICal:	TF5612B
		Date Analyzed:	07/26/2002	ConCal:	TB23771
Sample Size:	12.800 g	Dilution Factor:	n/a	% Moisture:	21.8
Dry Weight:	10.010 g	Blank File:	T023762	% Lipid:	n/a
GC Column:	DB-5	Analyst:	JMM	% Solids:	78.2

Analytes	Conc. (pg/g)	DL	Ratio	RT	RRT	Flags
2,3,7,8-TCDD	ND	0.3				—
1,2,3,7,8-PeCDD	ND	0.4				—
1,2,3,4,7,8-HxCDD	ND	0.5				—
1,2,3,6,7,8-HxCDD	ND	0.5				—
1,2,3,7,8,9-HxCDD	ND	0.5				—
1,2,3,4,6,7,8-HpCDD	8.4		0.98	38:03	1.000	—
1,2,3,4,6,7,8,9-OCDD	227		0.84	41:51	1.000	—
2,3,7,8-TCDF	ND	0.2				—
1,2,3,7,8-PeCDF	ND	0.3				—
2,3,4,7,8-PeCDF	ND	0.3				—
1,2,3,4,7,8-HxCDF	ND	0.7				—
1,2,3,6,7,8-HxCDF	ND	0.3				—
2,3,4,6,7,8-HxCDF	ND	0.3				—
1,2,3,7,8,9-HxCDF	ND	0.5				—
1,2,3,4,6,7,8-HpCDF	ND	1.6				—
1,2,3,4,7,8,9-HpCDF	ND	1.2				—
1,2,3,4,6,7,8,9-OCDF	ND	2.2				—

Totals	Conc. (pg/g)	Number	DL	Flags
Total TCDD	ND		1.6	—
Total PeCDD	ND		0.4	—
Total HxCDD	ND		0.9	—
Total HpCDD	22.3	2		—
Total TCDF	1.9	1		—
Total PeCDF	ND		11.4	—
Total HxCDF	0.73	1		—
Total HpCDF	ND		1.6	—

161B_PSR v2.04, LARS 6.25.05

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Printed: 11:45 07/27/2002

TLI Project: **57930** 1613, Revision B PCDD/PCDF Analysis (c)

Client Sample: **DF-DP157-1'-2'** Analysis File: **T023778**

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	RRT	Flags
$^{13}C_{12}$-2,3,7,8-TCDD	126	63.2	25%-164%	0.82	27:21	1.007	—
$^{13}C_{12}$-1,2,3,7,8-PeCDD	108	54.2	25%-181%	1.51	31:32	1.161	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	161	80.4	32%-141%	1.21	34:37	0.988	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	170	85.2	28%-130%	1.22	34:42	0.990	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	115	57.6	23%-140%	1.07	38:03	1.086	—
$^{13}C_{12}$-1,2,3,4,6,7,8,9-OCDD	122	30.5	17%-157%	0.89	41:50	1.194	—
$^{13}C_{12}$-2,3,7,8-TCDF	147	73.6	24%-169%	0.76	26:39	0.982	—
$^{13}C_{12}$-1,2,3,7,8-PeCDF	113	56.6	24%-185%	1.47	30:31	1.124	—
$^{13}C_{12}$-2,3,4,7,8-PeCDF	112	56.0	21%-178%	1.48	31:12	1.149	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	195	97.5	26%-152%	0.49	33:55	0.968	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	218	109	26%-123%	0.53	34:01	0.971	—
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	204	102	28%-136%	0.50	34:31	0.985	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	171	85.7	29%-147%	0.50	35:18	1.008	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	151	75.6	28%-143%	0.45	36:59	1.056	—
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	107	53.5	26%-138%	0.45	38:34	1.101	—

Cleanup Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	RRT	Flags
$^{37}Cl_4$-2,3,7,8-TCDD	12.5	62.6	35%-197%	27:22	1.008	—

Recovery Standards	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.81	27:09	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.20	35:02	—

Data Reviewer: _____ 07/27/2002

161B_PSR v2.04, LARS 6.25.05

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Printed: 11:45 07/27/2002

TLI Project: 57930
Client Sample: DF-DP157-1'-2'

Toxicity Equivalents Report
Analysis File: T023778

Client Project:	Kuhlman Electric				
Sample Matrix:	SOLID	Date Received:	07/20/02	Spike File:	SP161B2S
TLI ID:	331-18-12	Date Extracted:	07/23/02	ICal:	TF5612B
		Date Analyzed:	07/26/02	ConCal:	TB23771
Sample Size:	12.800 g	Dilution Factor:	1	% Moisture:	21.8
Dry Weight:	10.010 g	Blank File:	T023762	% Lipid:	n/a
GC Column:	DB-5	Analyst:	JMM	% Solids:	78.2

Analytes	Conc. (pg/g)		TEF		Equivalent
2,3,7,8-TCDD	{0.3}	x	1.	=	0.3
1,2,3,7,8-PeCDD	{0.4}	x	0.5	=	0.2
1,2,3,4,7,8-HxCDD	{0.5}	x	0.1	=	0.05
1,2,3,6,7,8-HxCDD	{0.5}	x	0.1	=	0.05
1,2,3,7,8,9-HxCDD	{0.5}	x	0.1	=	0.05
1,2,3,4,6,7,8-HpCDD	8.4	x	0.01	=	0.084
1,2,3,4,6,7,8,9-OCDD	227	x	0.001	=	0.227
TOTAL PCDD					1.0
2,3,7,8-TCDF	{0.2}	x	0.1	=	0.02
1,2,3,7,8-PeCDF	{0.3}	x	0.05	=	0.02
2,3,4,7,8-PeCDF	{0.3}	x	0.5	=	0.2
1,2,3,4,7,8-HxCDF	{0.7}	x	0.1	=	0.07
1,2,3,6,7,8-HxCDF	{0.3}	x	0.1	=	0.03
2,3,4,6,7,8-HxCDF	{0.3}	x	0.1	=	0.03
1,2,3,7,8,9-HxCDF	{0.5}	x	0.1	=	0.05
1,2,3,4,6,7,8-HpCDF	{1.6}	x	0.01	=	0.016
1,2,3,4,7,8,9-HpCDF	{1.2}	x	0.01	=	0.012
1,2,3,4,6,7,8,9-OCDF	{2.2}	x	0.001	=	0.0022
TOTAL PCDF					0.5

Total EPA TEFs, 1989a: 1.4 pg/g

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

GRY_TEF v1.08, MILES 4.22.16

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Printed: 22:18 07/29/02

Initial ....Date...

Data Review By: CEM 7/26/02

Calculated Noise Height: 0.06

Page No. 1 Listing of T023778B.dbf
07/26/2002 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				0.879-1.071			
304-306	DC	NL				Height	0.18	0.10	0.08				
				24:19		0.82	5.36	2.42	2.94	0.912			
	DC	SN		27:09	RO	0.90	0.59			1.019			
				27:51	RO	0.90	2.85	1.35	1.50	1.045			
	DC	SN		28:03	RO	3.67	0.70			1.053			
304-306			2	Peaks			8.21						
13C12-TCDF						0.65-0.89				0.944-1.131			
316-318	DC	NL				Height	0.16	0.08	0.08				
				25:38	RO	0.63	4.10	1.59	2.51	0.962			
				25:56		0.84	1.78	0.81	0.97	0.973			
				26:16		0.74	5.19	2.21	2.98	0.986			
				26:39		0.76	541.98	234.75	307.23	1.000	13C12-2378-TCDF	ISO	
						Height	131.25	56.53	74.72				
				27:20	RO	1.25	2.18	1.21	0.97	1.026			
				27:31		0.83	0.64	0.29	0.35	1.033			
	DC	SN		27:39	RO	0.30	1.29			1.038			
316-318			6	Peaks			555.87						

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

TCDD						0.65-0.89				0.904-1.042			
320-322	DC	NL				Height	0.13	0.07	0.06				
A				24:53	RO	0.52	3.35	1.14	2.21	0.910			
	DC	SN		26:40	RO	3.09	0.45			0.975			
	DC	SN		27:45	RO	0.33	0.28			1.015			
	DC	WH		28:31		0.88	0.32			1.043			
320-322			1	Peak			3.35						
37Cl-TCDD										0.927-1.073			
328	DC	NL				Height	0.08	0.08					
	DC	WL		25:17			0.19			0.924			
	DC	SN		25:30			0.23			0.932			
	DC	SN		25:40			0.16			0.938			
	DC	SN		25:50			0.32			0.945			
	DC	SN		26:24			0.23			0.965			
	DC	SN		26:37			0.19			0.973			
	DC	SN		26:46			0.17			0.979			
	DC	SN		27:02			0.44			0.988			
				27:22			38.88	38.88		1.001	37Cl-TCDD		CLS
				27:44			1.69	1.69		1.014			
	DC	SN		27:57			0.24			1.022			
	DC	SN		28:09			0.09			1.029			
	DC	SN		28:13			0.05			1.032			
	DC	SN		28:20			0.18			1.036			
328			2	Peaks			40.57						

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.
13C12-TCDD				0.65-0.89						0.920-1.066			
332-334	DC	NL				Height	0.26	0.18	0.08				
				26:13	RO	1.30	1.24	0.70	0.54	0.959			
				27:09		0.81	561.91	252.14	309.77	0.993	13C12-1234-TCDD	RS1	
				27:21		0.82	400.86	180.99	219.87	1.000	13C12-2378-TCDD	IS1	
						Height	92.52	41.80	50.72				
				27:47	RO	0.58	2.44	0.90	1.54	1.016			
				28:04	RO	0.92	1.67	0.80	0.87	1.026			
332-334				5 Peaks			968.12						

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

PeCDF				1.32-1.78						0.911-1.037			
340-342	DC	NL				Height	0.14	0.06	0.08				
				28:37	RO	0.55	6.80	2.41	4.39	0.917			
				29:22	RO	0.61	6.57	2.50	4.07	0.941			
	DC	SN		29:37	RO	3.14	0.29			0.949			
				29:50	RO	1.25	3.39	1.88	1.51	0.956			
				30:02	RO	1.28	2.37	1.33	1.04	0.963			
				30:24	RO	1.20	3.43	1.87	1.56	0.974			
	DC	SN		31:12	RO	0.53	0.29			1.000	23478-PeCDF		AN
	DC	SN		31:24	RO	1.24	0.38			1.006			
				32:03	RO	1.20	1.21	0.66	0.55	1.027			
340-342				6 Peaks			23.77						
13C12-PeCDF				1.32-1.78						0.807-1.127			
352-354	DC	NL				Height	0.13	0.06	0.07				
	DC	SN		28:19	RO	0.86	0.80			0.908			
				29:40		1.46	4.75	2.82	1.93	0.951			
	DC	SN		29:49	RO	2.69	0.59			0.956			
				30:09	RO	1.03	4.22	2.14	2.08	0.966			
				30:31		1.47	369.83	220.06	149.77	1.000	13C12-PeCDF 123	IS2	
						Height	96.83	57.71	39.12				
				30:47	RO	1.08	8.23	4.27	3.96	0.987			
				30:58	RO	1.19	1.16	0.63	0.53	0.993			
				31:12		1.48	372.87	222.70	150.17	1.000	13C12-PeCDF 234	IS3	
						Height	102.16	60.97	41.19				
				31:44	RO	2.28	0.95	0.66	0.29	1.017			
				31:48	RO	1.21	1.06	0.58	0.48	1.019			
				32:10	RO	1.18	4.29	2.32	1.97	1.031			
352-354				9 Peaks			767.36						

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

PeCDD				1.32-1.78						0.940-1.021			
356-358	DC	NL				Height	0.14	0.08	0.06				
	DC	SN		29:44	RO	0.38	0.54			0.943			
	DC	SN		29:57		1.33	0.21			0.950			
	DC	SN		30:05	RO	0.45	0.45			0.954			
	DC	SN		30:31		1.69	0.43			0.968			
	DC	SN		31:09	RO	2.80	0.19			0.988			
	DC	SN		31:12	RO	6.00	0.28			0.989			

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		31:23	RO	0.55	0.34			0.995			
	DC	SN		31:56		1.60	0.26			1.013			
	DC	SN		32:02	RO	0.23	0.27			1.016			
	DC	WH		32:23	RO	0.44	1.34			1.027			
356-358			0	Peaks			0.00						
13C12-PeCDD				1.32-1.78					0.735-1.052				
368-370	DC	NL				Height	0.11	0.05	0.06				
	DC	SN		30:29	RO	0.73	0.64			0.967			
				30:38	RO	1.27	1.50	0.84	0.66	0.971			
	DC	SN		30:51	RO	0.82	0.69			0.978			
	DC	SN		30:55	RO	0.91	0.21			0.980			
	DC	SN		31:13	RO	0.48	0.43			0.990			
				31:32		1.51	253.22	152.16	101.06	1.000	13C12-PeCDD 123	IS4	
						Height	69.55	41.36	28.19				
	DC	SN		31:54	RO	2.24	1.07			1.012			
				32:04	RO	0.63	0.85	0.33	0.52	1.017			
	DC	SN		32:16	RO	0.47	0.75			1.023			
	DC	SN		32:24	RO	2.06	0.55			1.027			
	DC	SN		32:34		1.45	0.27			1.033			
368-370			3	Peaks			255.57						

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

HxCDF				1.05-1.43					0.929-1.007				
374-376	DC	NL				Height	0.12	0.06	0.06				
	DC	SN		33:00	RO	0.36	0.30			0.935			
D	D	SN		33:07	RO	0.74	0.75			0.938			
	DC	SN		33:14	RO	1.50	0.30			0.941			
	DC	SN		33:23	RO	1.00	0.16			0.946			
M				33:34		1.20	1.21	0.66	0.55	0.951			J
	DC	SN		33:46	RO	1.00	0.32			0.957			
				33:53	RO	1.51	1.28	0.77	0.51	0.999	123478-HxCDF	AN	
	DC	SN		34:09	RO	0.67	0.05			0.967			
	DC	SN		34:10	RO	0.67	0.05			0.968			
	DC	SN		34:16	RO	2.00	0.18			0.971			
	DC	SN		34:27	RO	1.80	0.14			0.976			
	DC	SN		34:32	RO	0.78	0.32			1.000	234678-HxCDF	AN	
374-376			2	Peaks			2.49						
13C12-HxCDF				0.43-0.59					0.879-1.106				
384-386	DC	NL				Height	0.22	0.11	0.11				
				32:58		0.50	0.75	0.25	0.50	0.934			
				33:05		0.50	1.98	0.66	1.32	0.937			
				33:55		0.49	303.45	99.71	203.74	1.000	13C12-HxCDF 478	IS5	
						Height	94.74	31.35	63.39				
				34:01		0.53	343.64	118.74	224.90	1.000	13C12-HxCDF 678	IS6	
						Height	94.97	31.99	62.98				
				34:21	RO	0.86	1.19	0.55	0.64	0.973			
				34:31		0.50	314.49	105.21	209.28	1.000	13C12-HxCDF 234	IS7	
						Height	90.61	29.86	60.75				
				34:50	RO	1.11	0.74	0.39	0.35	0.987			

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	35:00	RO	0.29	0.75			0.992			
				35:18		0.50	221.63	74.09	147.54	1.000	13C12-HxCDF 789	IS8	
						Height	54.94	18.57	36.37				
		DC	SN	35:40	RO	0.11	0.69			1.010			
				35:43	RO	1.17	0.52	0.28	0.24	1.012			
		DC	SN	35:48	RO	0.93	0.52			1.014			
		DC	SN	35:52	RO	0.31	0.21			1.016			
384-386				9 Peaks			1,188.39						

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

HxCDD						1.05-1.43				0.959-1.013			
390-392		DC	NL			Height	0.14	0.05	0.09				
				33:27	RO	1.55	1.02	0.62	0.40	0.964			
	D	D	SN	35:03	RO	1.46	0.64			1.010	123789-HxCDD		AN
		DC	WH	35:14	RO	0.52	2.50			1.015			
		DC	WH	35:24		1.25	0.18			1.020			
390-392				1 Peak			1.02						
13C12-HxCDD						1.05-1.43				0.983-1.041			
402-404		DC	NL			Height	0.14	0.07	0.07				
		DC	WL	33:58	RO	0.44	0.26			0.981			
				34:06		1.42	1.09	0.64	0.45	0.985			
		DC	SN	34:15	RO	0.19	0.19			0.989			
				34:37		1.21	185.32	101.47	83.85	1.000	13C12-HxCDD 478	IS9	
						Height	56.41	30.61	25.80				
				34:42		1.22	214.65	117.86	96.79	1.000	13C12-HxCDD 678	IS10	
						Height	60.90	32.59	28.31				
				35:02		1.20	262.68	143.29	119.39	1.012	13C12-HxCDD 789	RS2	
				35:19	RO	0.37	1.33	0.36	0.97	1.020			
				35:26	RO	0.75	0.56	0.24	0.32	1.024			
				35:30	RO	1.85	0.57	0.37	0.20	1.026			
402-404				7 Peaks			666.20						

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

HpCDF						0.88-1.20				0.955-1.005			
408-410		DC	NL			Height	0.13	0.07	0.06				
	M			36:59	RO	1.31	1.73	0.98	0.75	1.000	1234678-HpCDF		AN
		DC	SN-	37:09	RO	1.25	0.18			0.963			
	D	D	SN	37:25	RO	0.69	0.83			0.970			
		DC	SN	38:23	RO	0.06	0.18			0.995			
408-410				1 Peak			1.73						
13C12-HpCDF						0.37-0.51				0.857-1.142			
418-420		DC	NL			Height	0.16	0.08	0.08				
				36:59		0.45	165.43	51.55	113.88	1.000	13C12-HpCDF 678	IS11	
						Height	40.83	12.82	28.01				
		DC	SN	37:28	RO	0.33	0.36			0.971			
		DC	SN	37:37		0.46	0.19			0.975			
		DC	SN	37:44	RO	3.20	0.21			0.978			
		DC	SN	37:47	RO	1.80	0.14			0.980			

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

                        38:34     0.45        94.07        29.20        64.87  1.000 13C12-HpCDF 789 IS12
                                Height        19.45         5.79        13.66
                DC  SN  39:01 RO  0.11         0.30                              1.012
418-420               2 Peaks                259.50

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

HpCDD                           0.88-1.20                                     0.976-1.005
424-426         DC  NL          Height        0.14         0.08         0.06
                        37:17     0.92        7.75         3.71         4.04  0.980
                DC  SN  37:33 RO  3.33        0.26                              0.987
                DC  SN  37:43 RO  7.00        0.32                              0.991
                        38:03     0.98        4.71         2.33         2.38  1.000 1234678-HpCDD   AN
                DC  SN  38:14 RO  0.47        0.22                              1.005
424-426               2 Peaks                12.46

13C12-HpCDD                     0.88-1.20                                     0.869-1.079
436-438         DC  NL          Height        0.17         0.08         0.09
                        37:15     0.91        0.61         0.29         0.32  0.979
                        38:03     1.07      119.36        61.67        57.69  1.000 13C12-HpCDD 678 IS13
                                Height       26.58        13.40        13.18
                DC  SN  38:29     1.05        0.39                              1.011
436-438               2 Peaks               119.97

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

OCDF                            0.76-1.02                                     0.952-1.048
442-444         DC  NL          Height        0.16         0.08         0.08
                DC  SN  40:33 RO  2.64        0.51                              0.969
                DC  SN  43:12 RO  1.45        0.27                              1.033
                DC  SN  43:24 RO  0.62        0.21                              1.037
                DC  SN  43:34 RO  0.09        0.36                              1.041
                DC  SN  43:44 RO  1.74        0.52                              1.045
                DC  WH  44:05 RO  2.67        0.22                              1.054
442-444               0 Peaks                 0.00

OCDD                            0.76-1.02                                     0.952-1.048
458-460         DC  NL          Height        0.13         0.06         0.07
                        41:51     0.84       68.58        31.35        37.23  1.000 OCDD            AN
                DC  SN  42:06     0.85        0.48                              1.006
458-460               1 Peak                 68.58

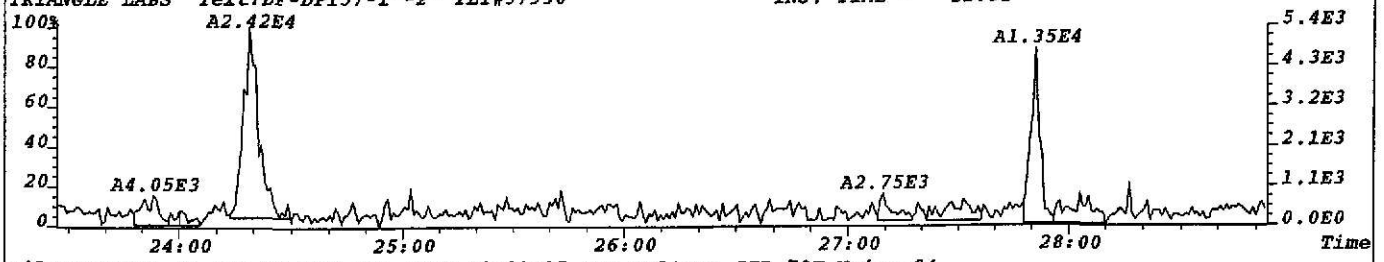
13C12-OCDD                      0.76-1.02                                     0.996-1.004
470-472         DC  NL          Height        0.13         0.07         0.06
                        41:50     0.89      118.89        55.91        62.98  1.000 13C12-OCDD      IS14
                                Height       21.99        10.04        11.95
470-472               1 Peak                118.89
```

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

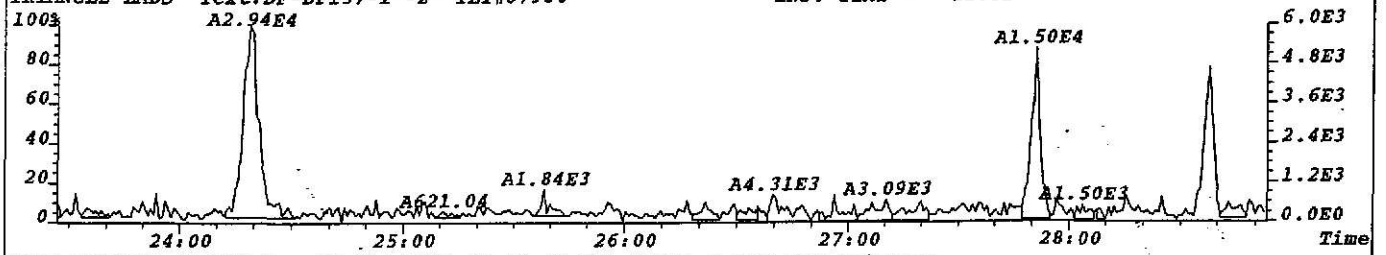
Column Description.....	"Why" Code Description.....	QC Log Desc.....
M_Z -Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT. -Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK -RO=Ratio Outside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

*** End of Report ***

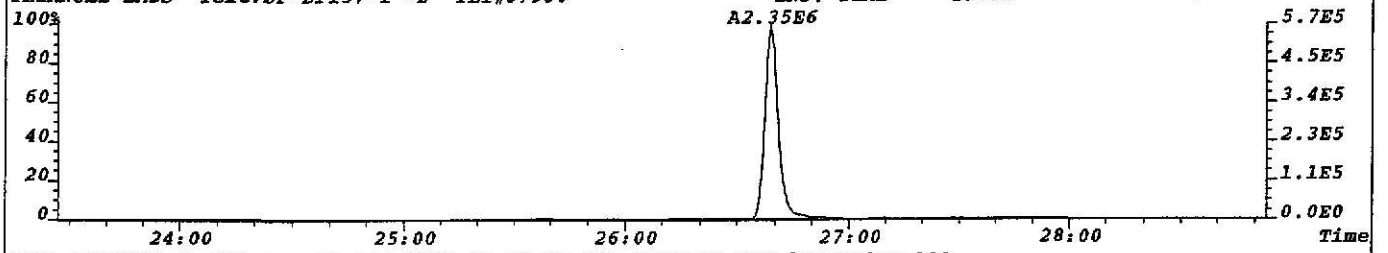
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:123
303.9016 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,492.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



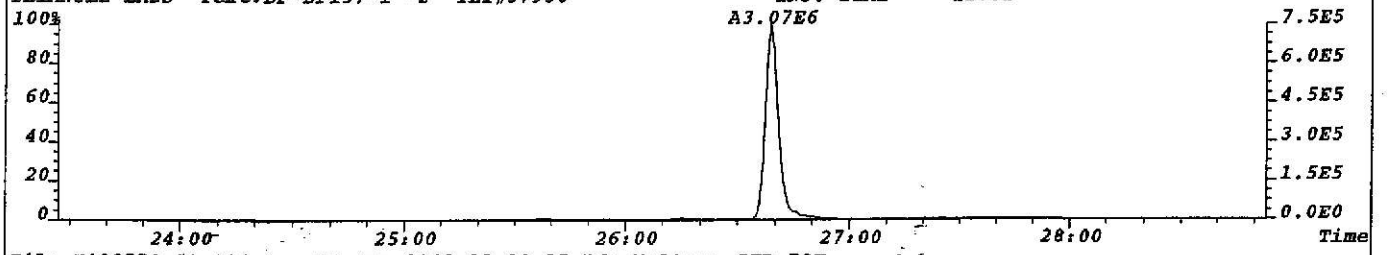
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:94
305.8987 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,376.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



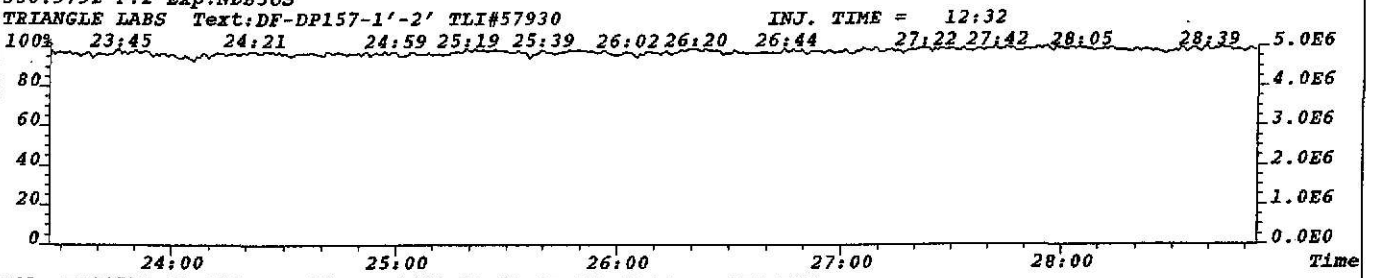
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:97
315.9419 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,388.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



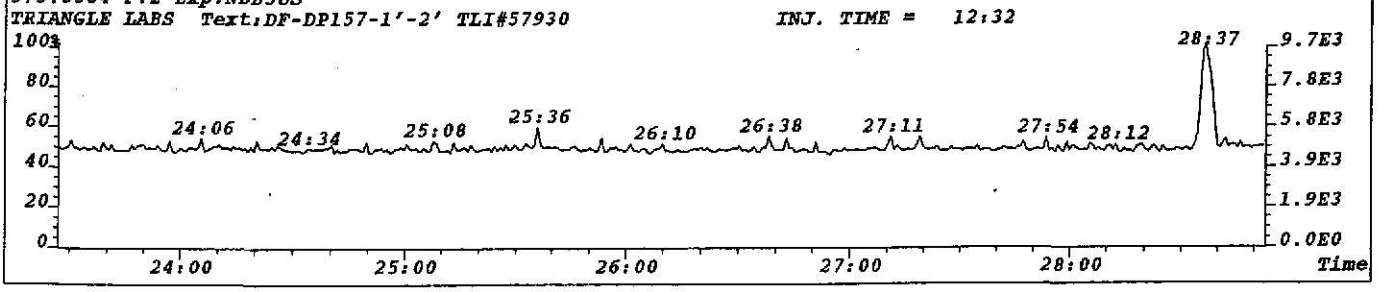
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:100
317.9389 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,400.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



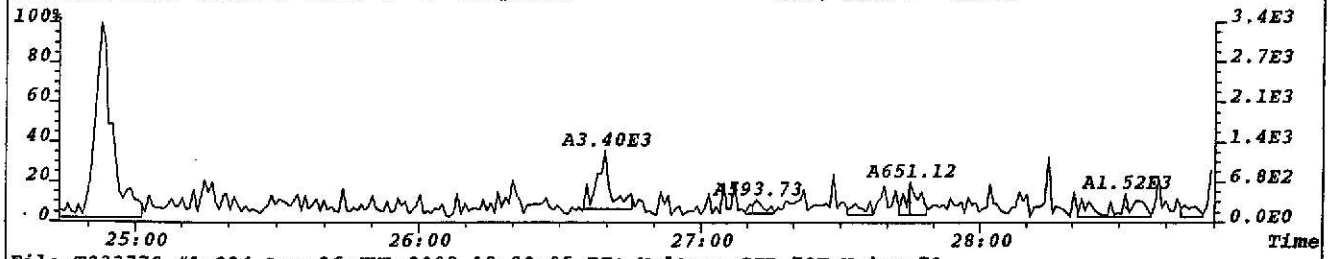
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



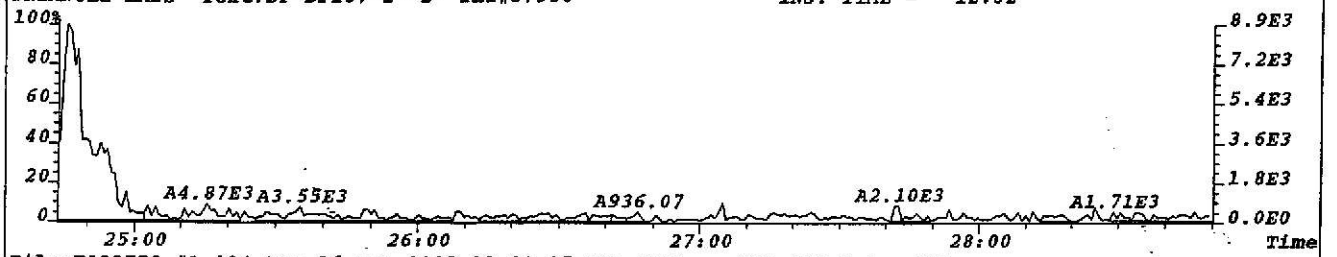
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
375.8364 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



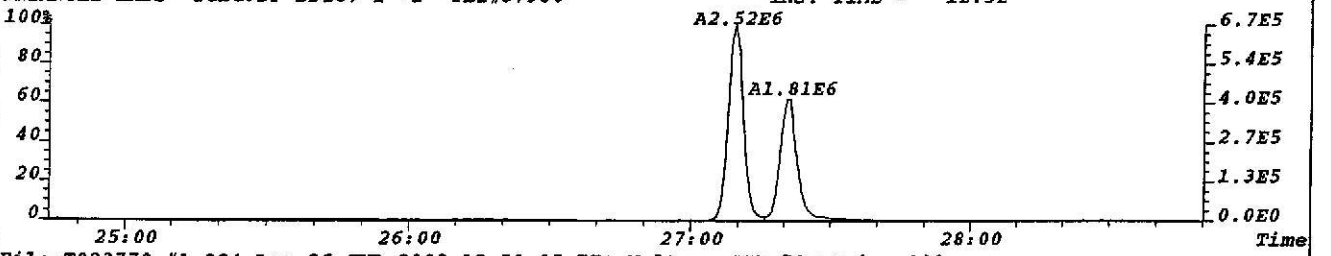
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:83
319.8965 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,332.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



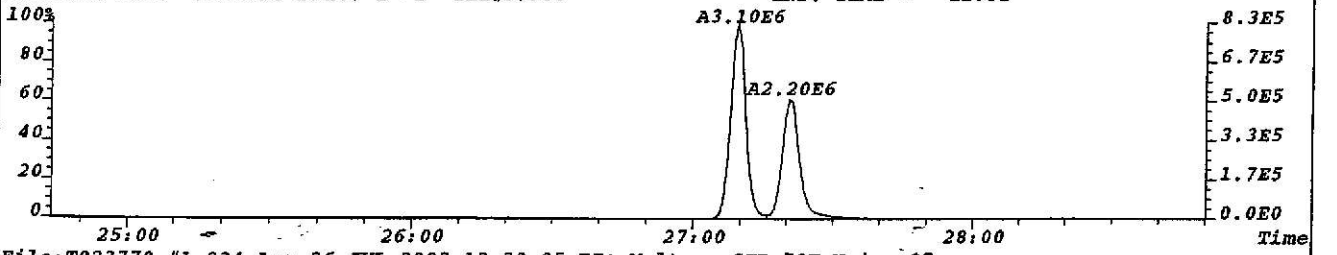
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:79
321.8936 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,316.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



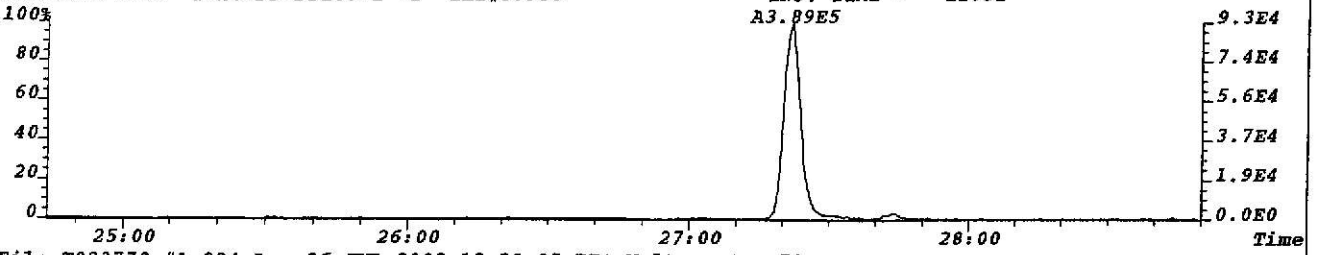
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:220
331.9368 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,880.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



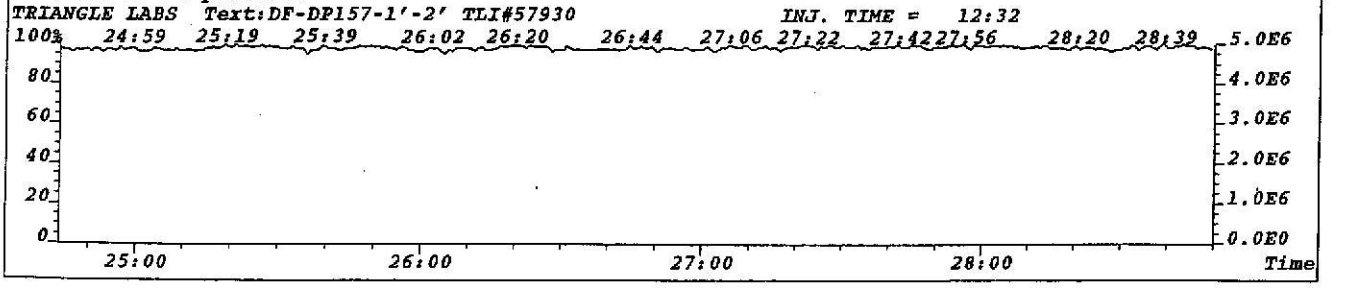
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:103
333.9338 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,412.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



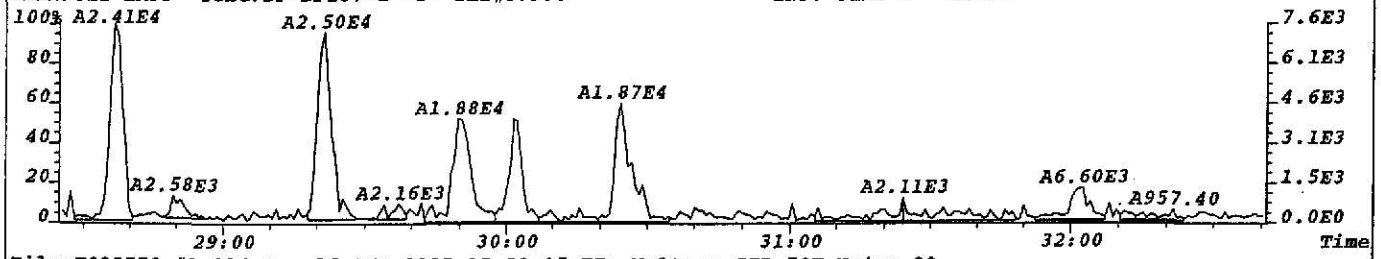
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:97
327.8847 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,388.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



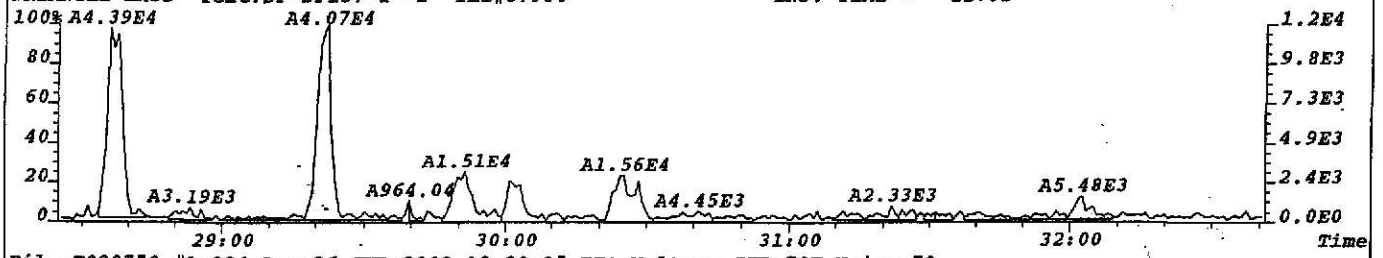
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



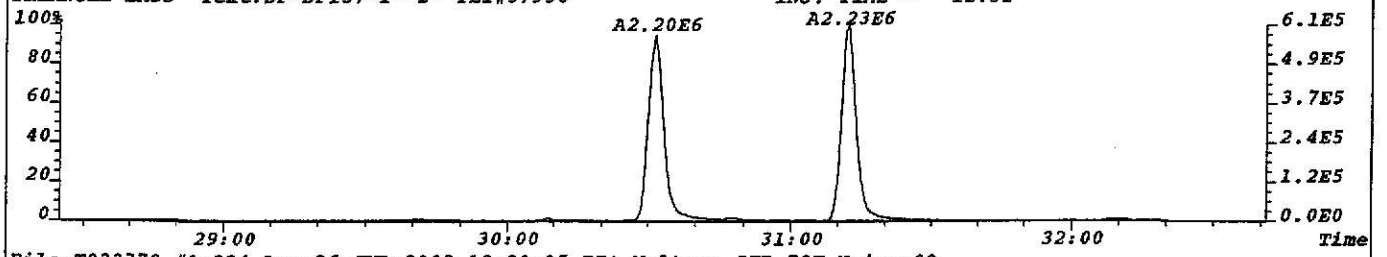
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:80
339.8597 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,320.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



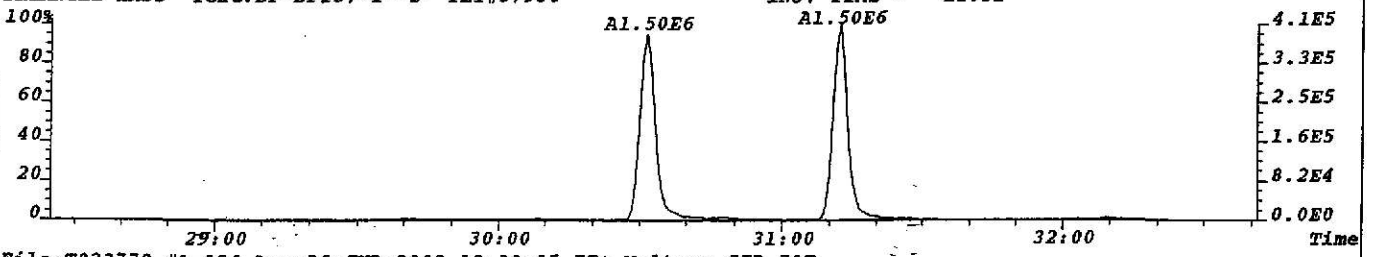
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:99
341.8567 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,396.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



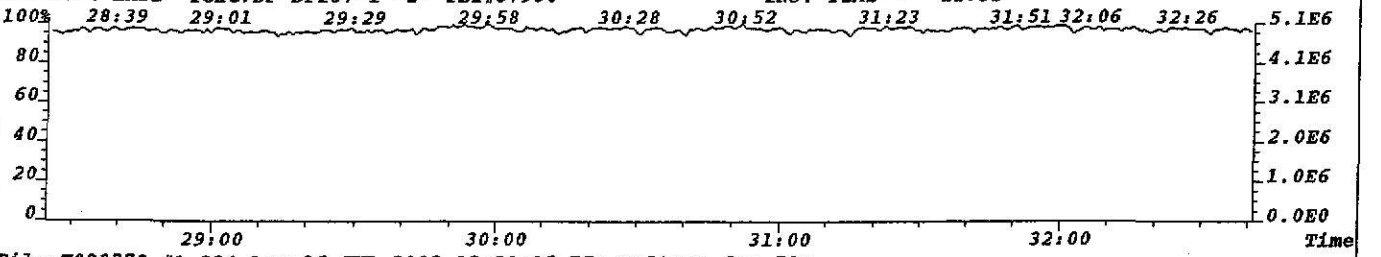
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:70
351.9000 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,280.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



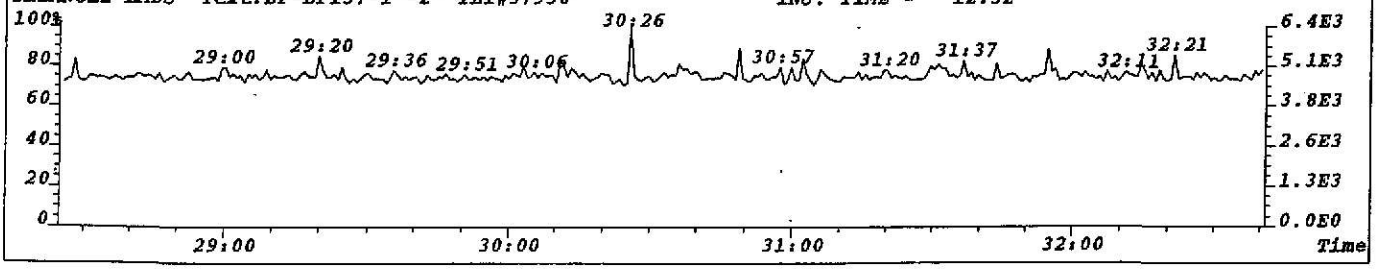
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:89
353.8970 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,356.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



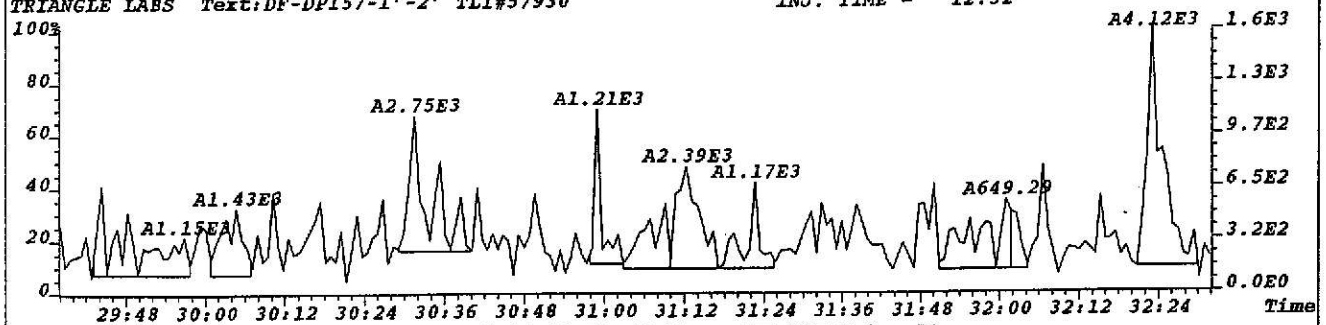
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



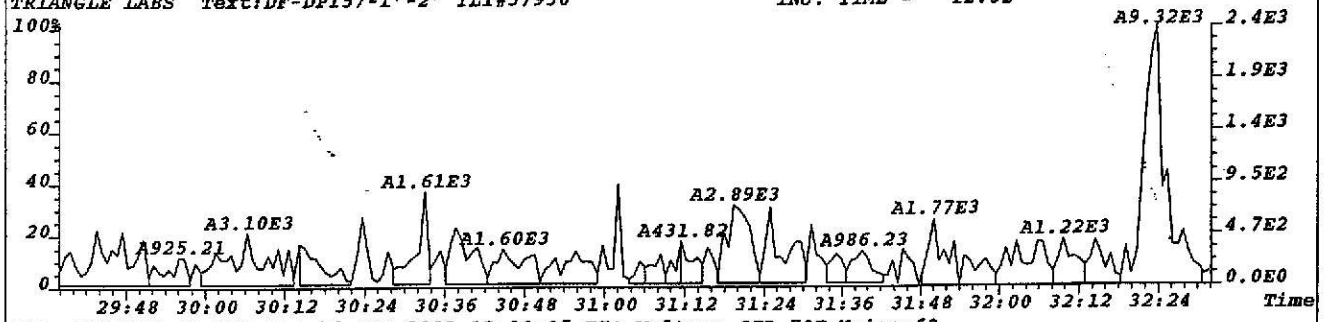
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
409.7974 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



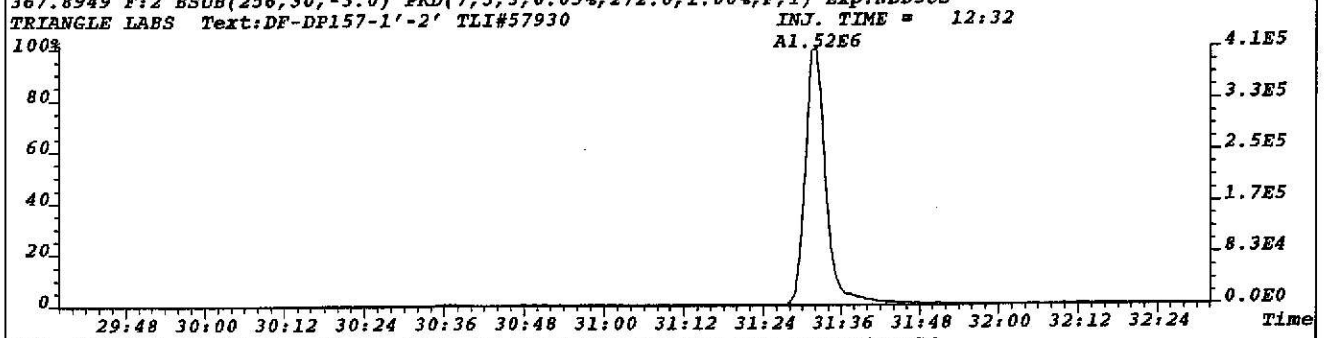
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:95
355.8546 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,380.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



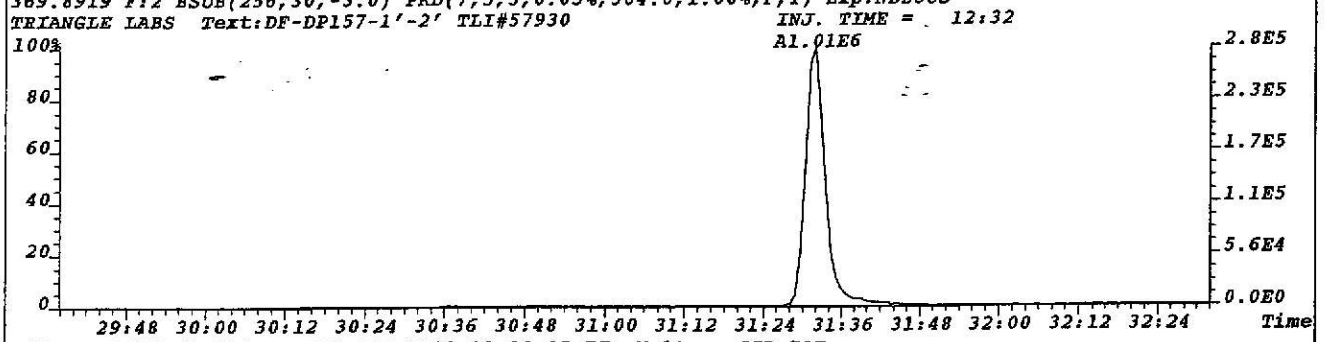
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:73
357.8516 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,292.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



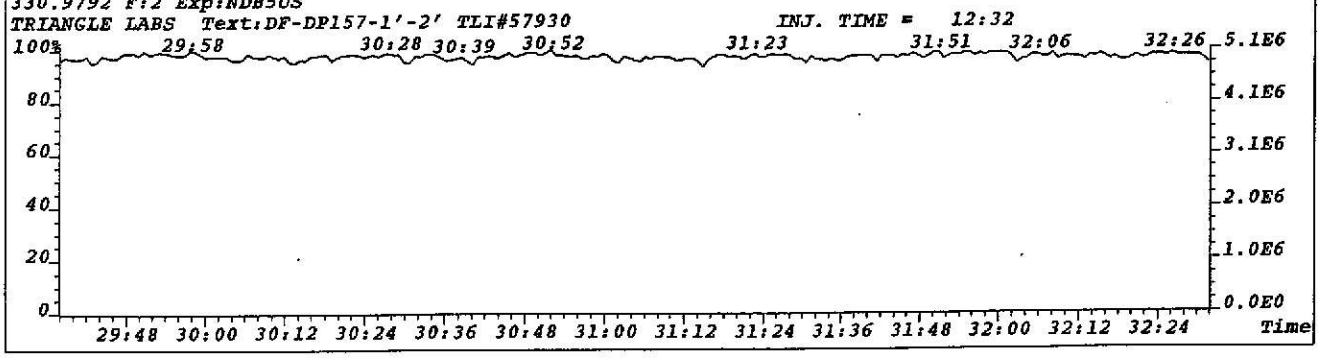
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:68
367.8949 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,272.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



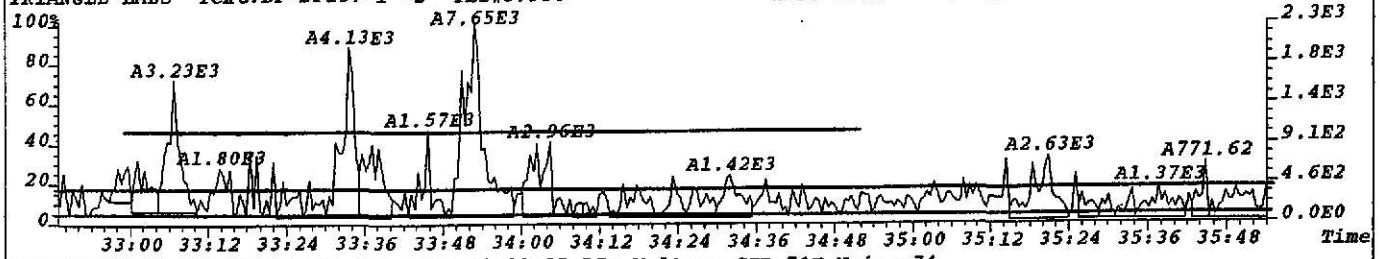
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:76
369.8919 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,304.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



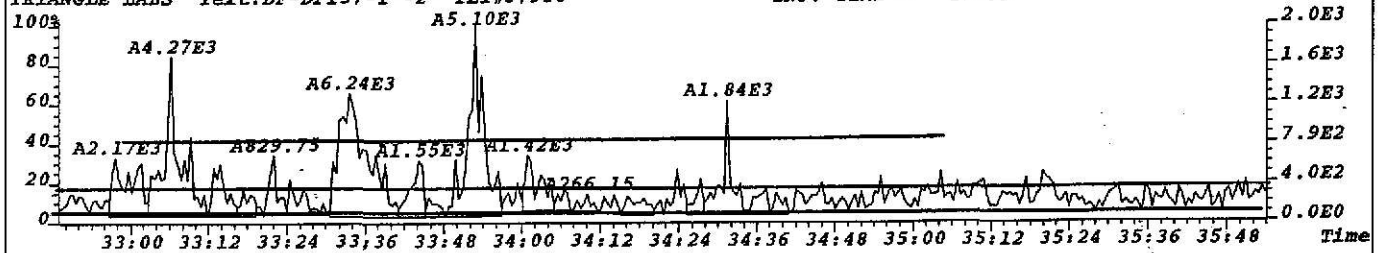
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



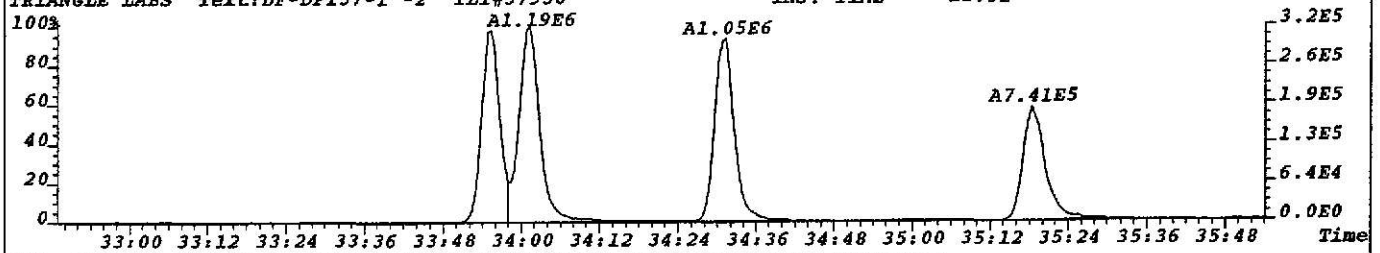
File:T023778 #1-386 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:73
373.8208 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,292.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



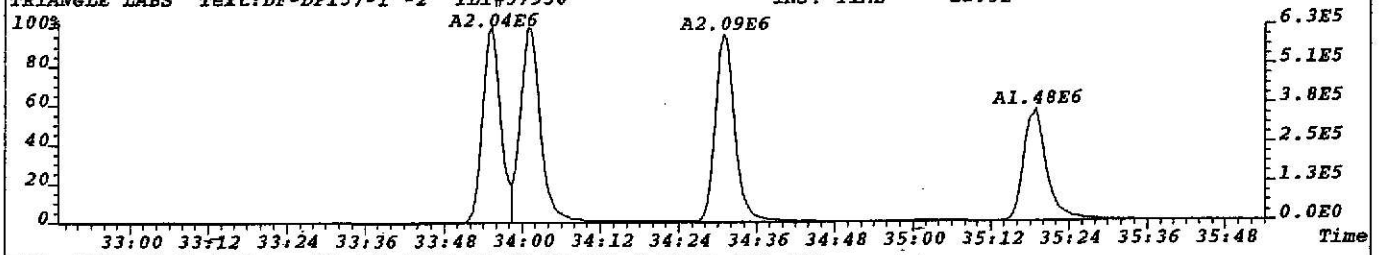
File:T023778 #1-386 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:74
375.8178 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,296.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



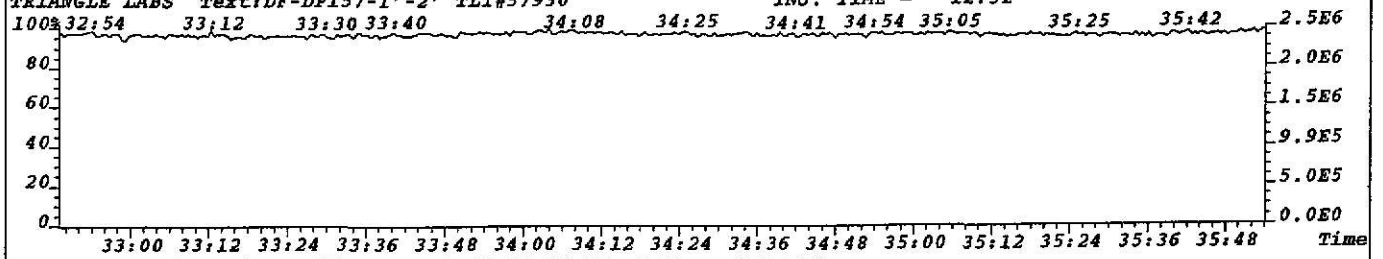
File:T023778 #1-386 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:136
383.8639 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,544.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



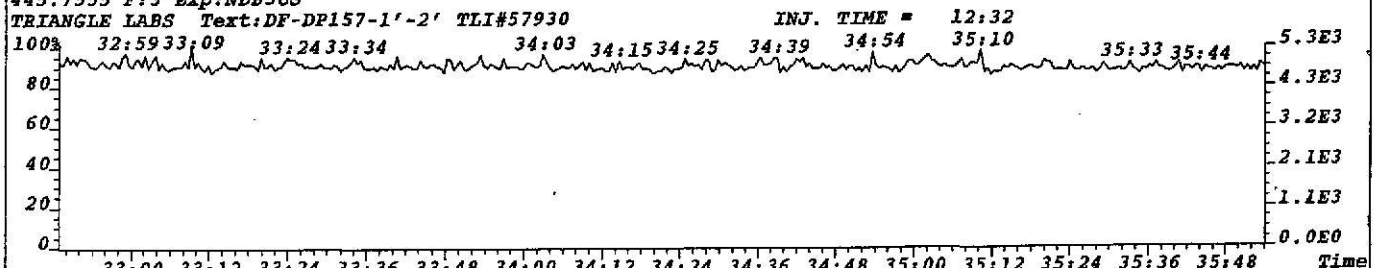
File:T023778 #1-386 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:141
385.8610 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,564.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



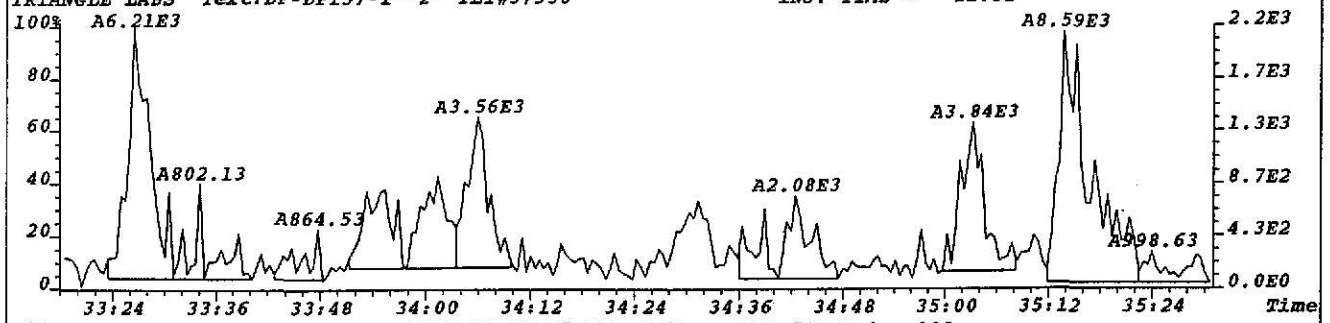
File:T023778 #1-386 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



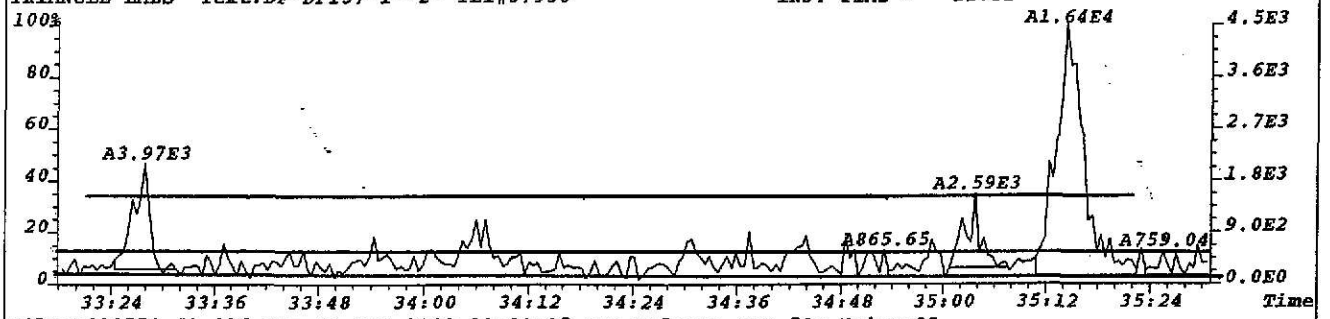
File:T023778 #1-386 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
445.7555 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



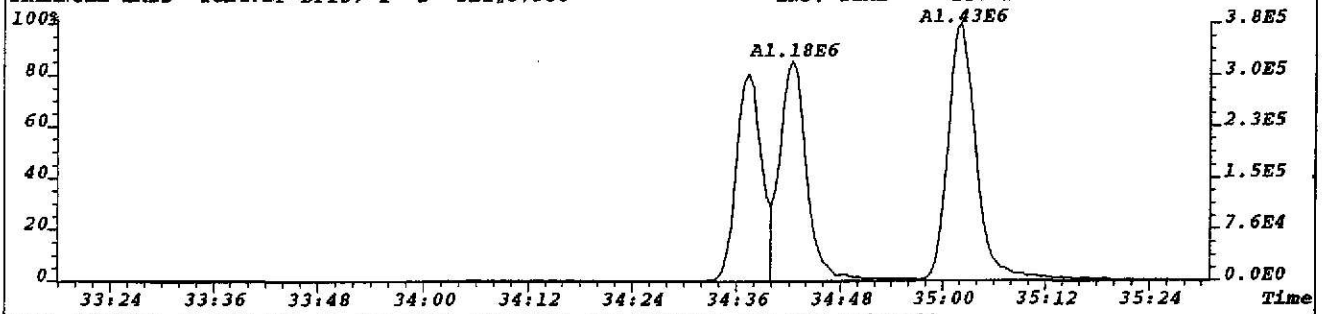
File:T023778 #1-386 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:67
389.8156 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,268.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



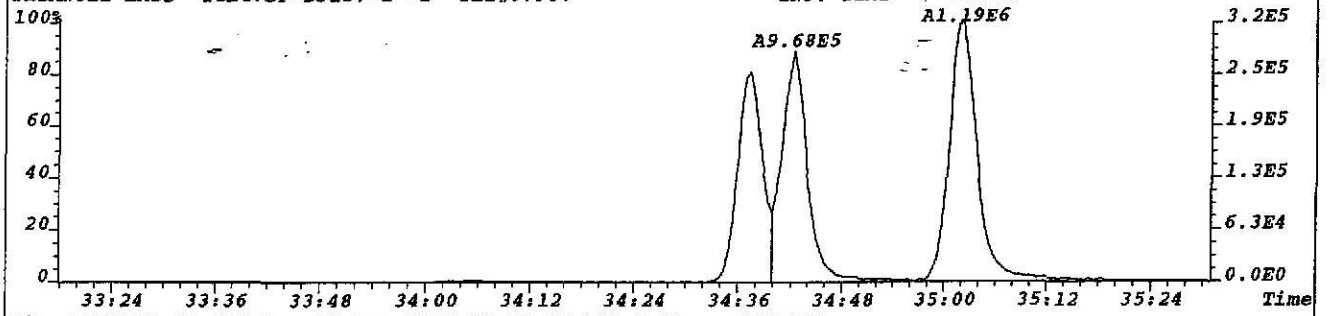
File:T023778 #1-386 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:108
391.8127 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,432.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



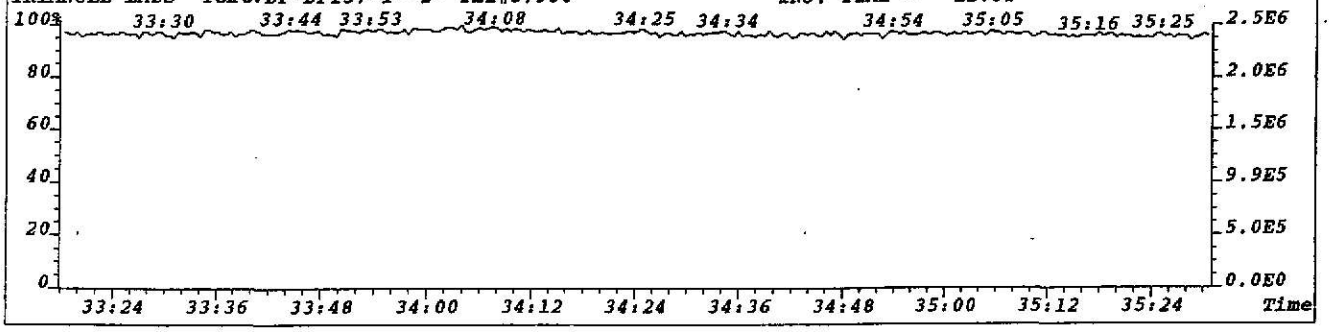
File:T023778 #1-386 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:88
401.8558 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,352.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



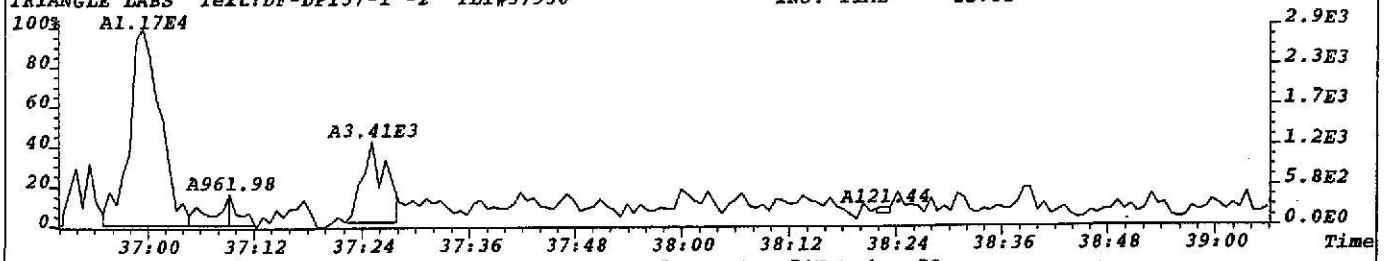
File:T023778 #1-386 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:90
403.8529 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,360.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



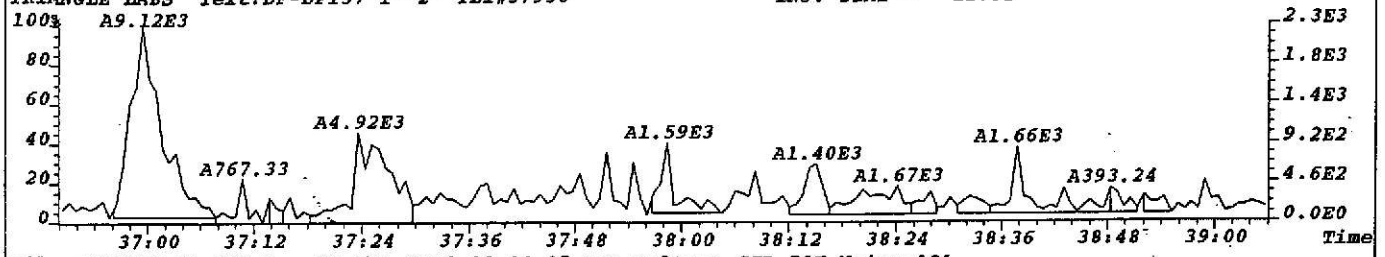
File:T023778 #1-386 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



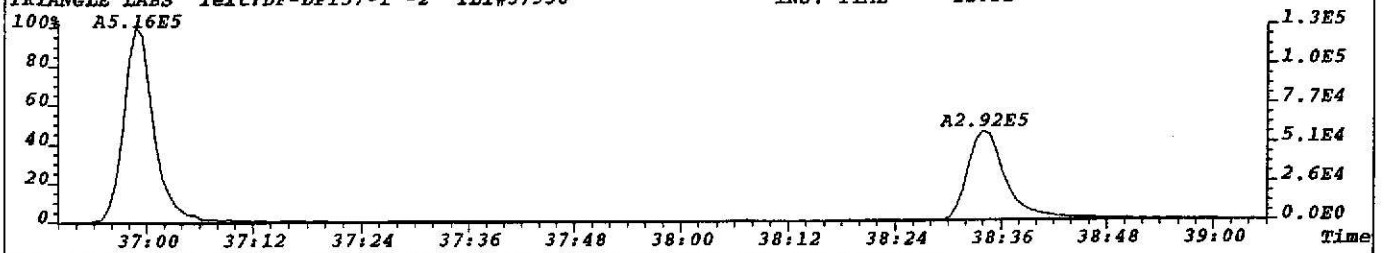
File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:85
407.7818 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,340.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



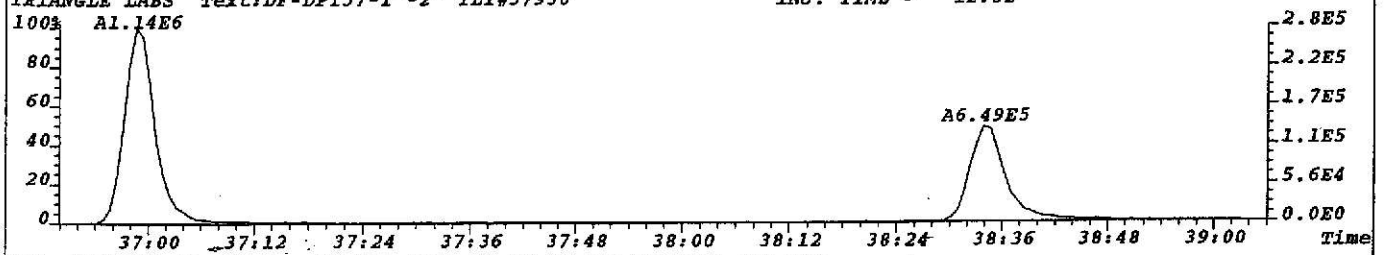
File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:73
409.7789 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,292.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



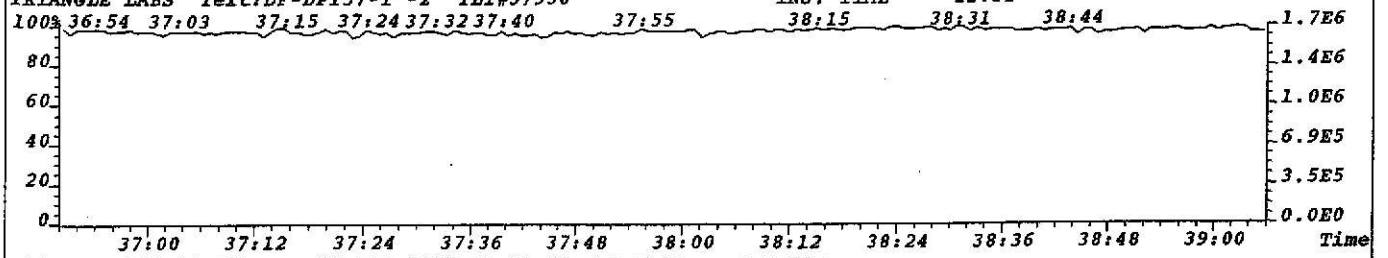
File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:101
417.8253 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,404.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



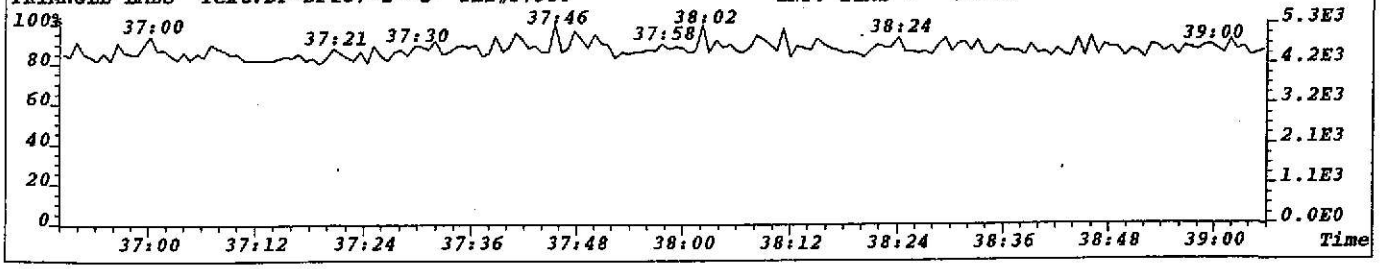
File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:95
419.8220 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,380.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



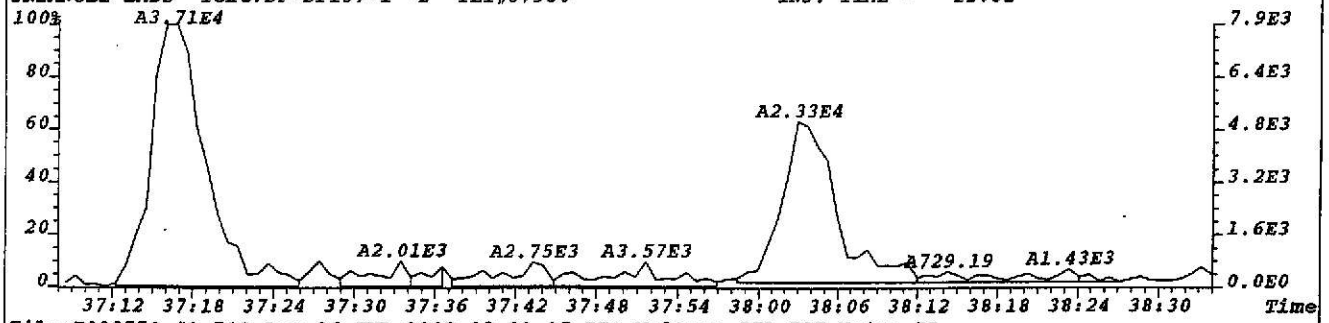
File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



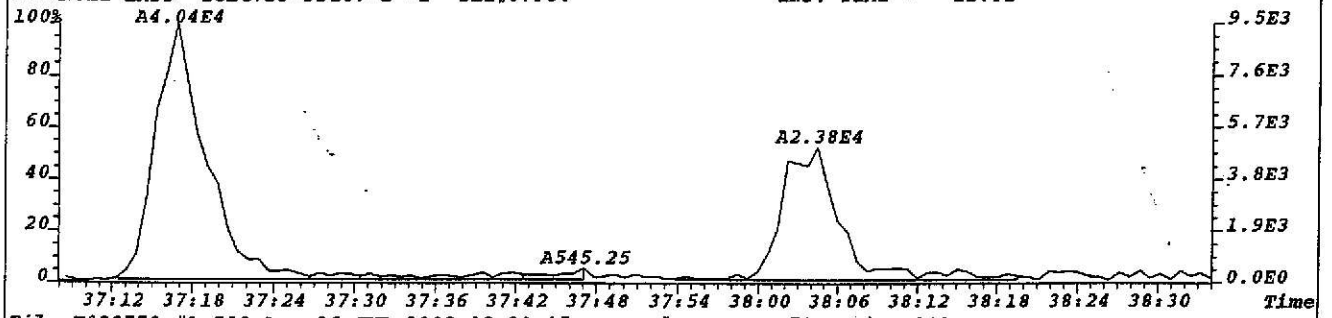
File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
479.7165 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



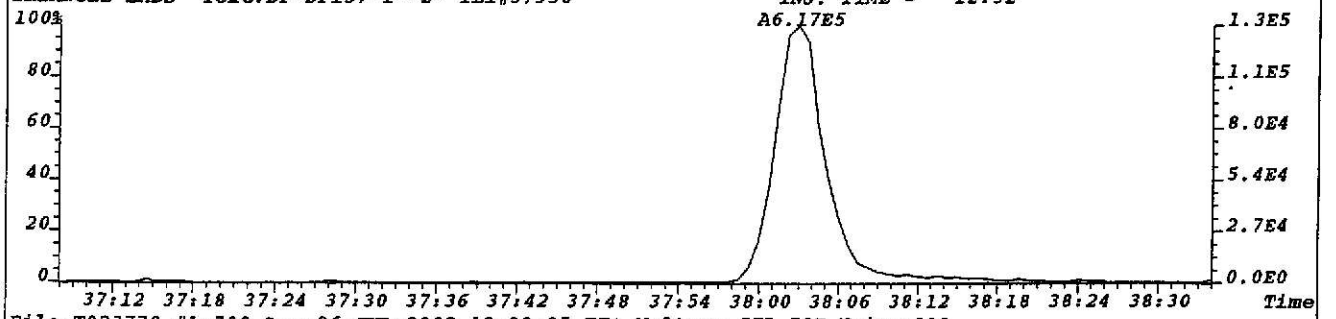
File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:97
423.7766 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,388.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



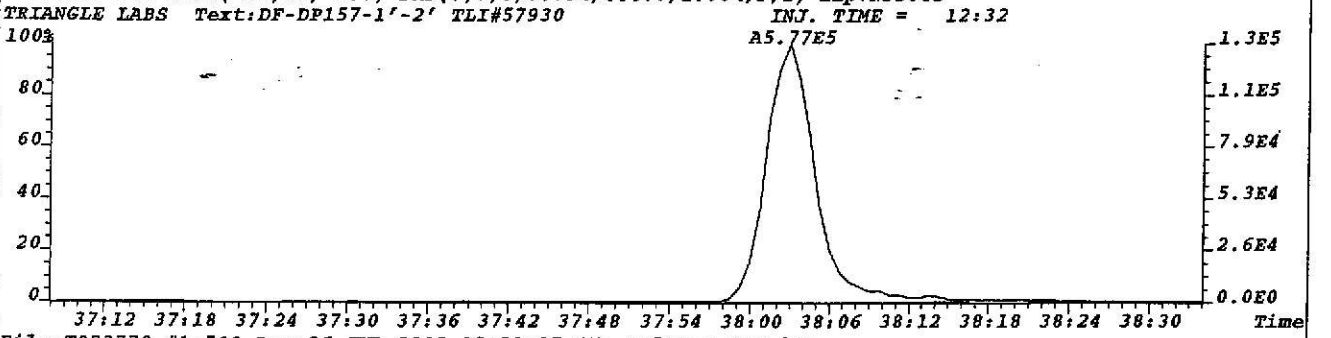
File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:72
425.7737 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,288.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



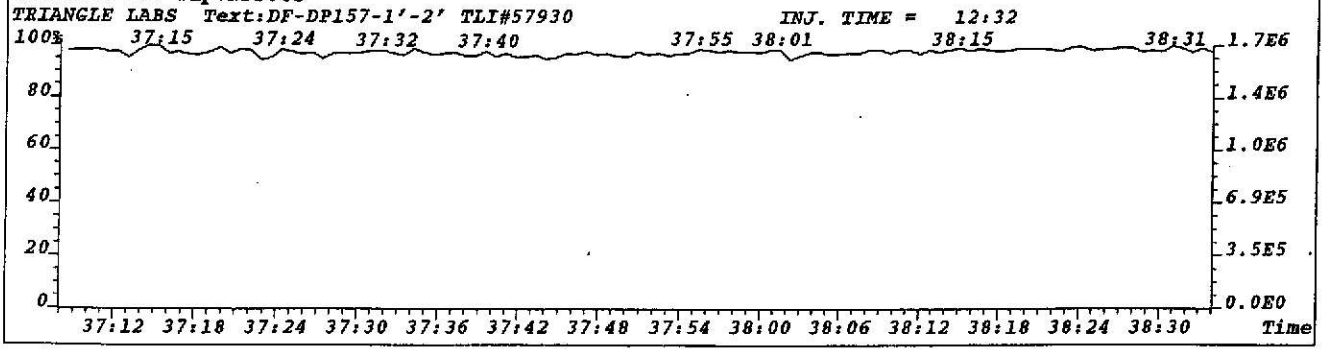
File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:101
435.8169 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,404.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



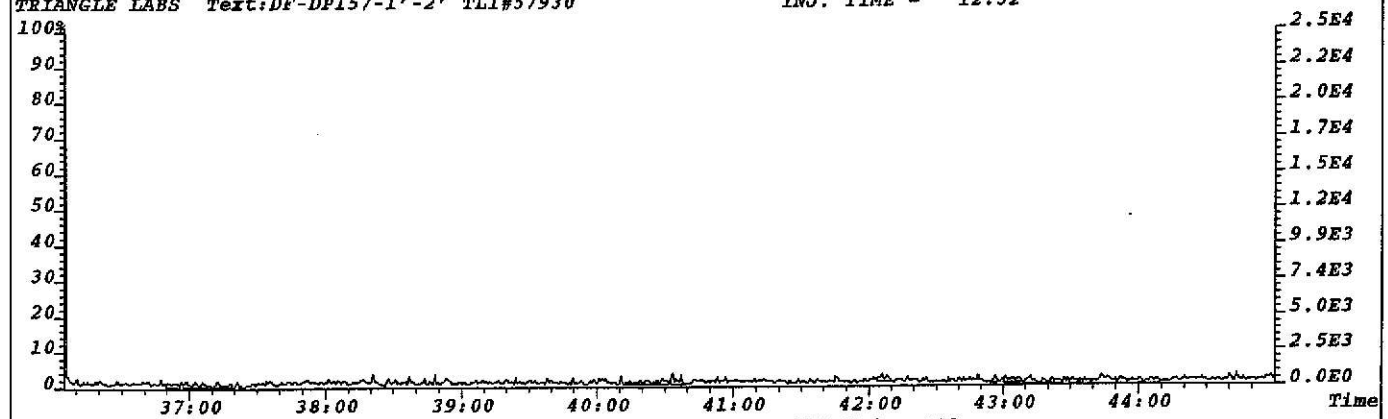
File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:111
437.8140 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,444.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



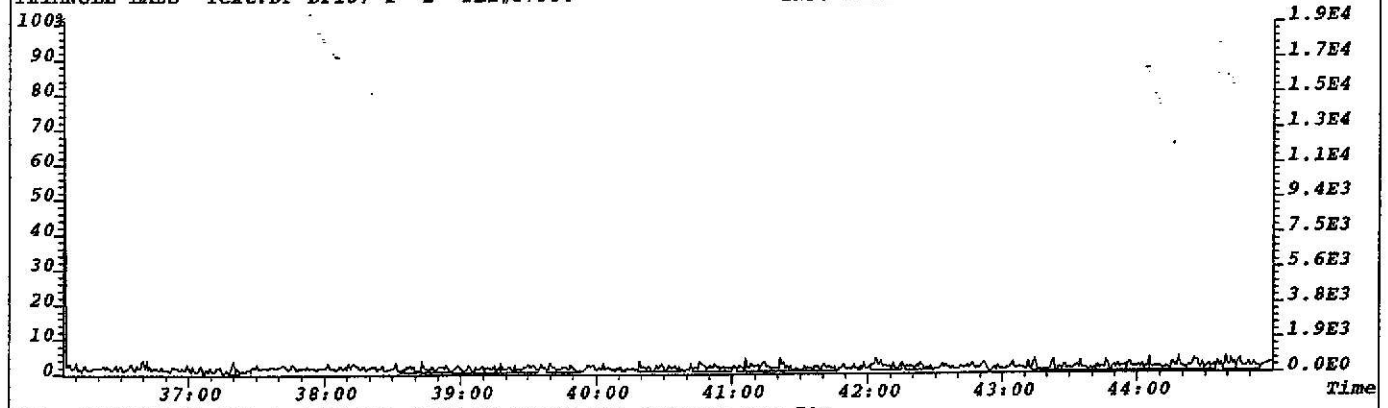
File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



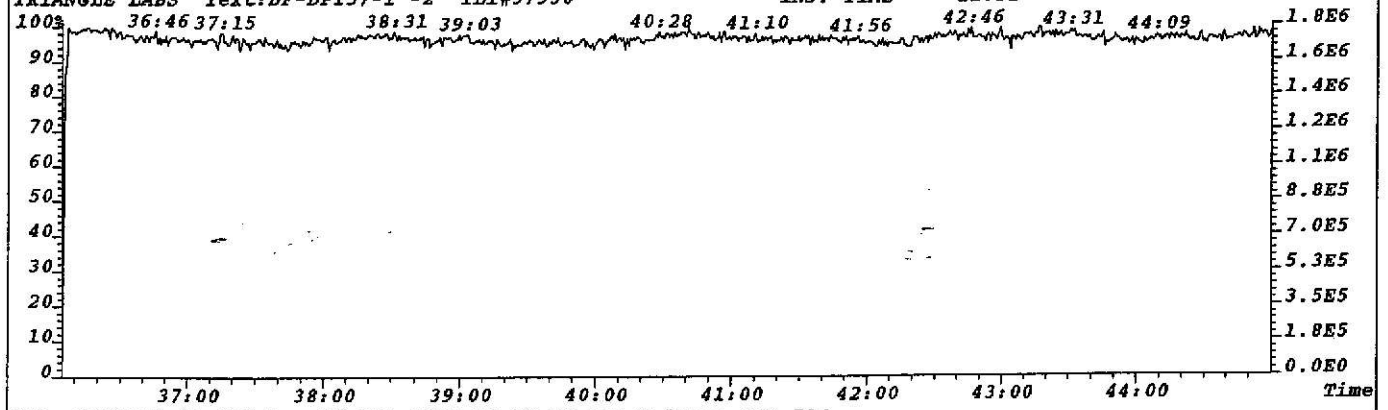
File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:104
441.7428 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,416.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



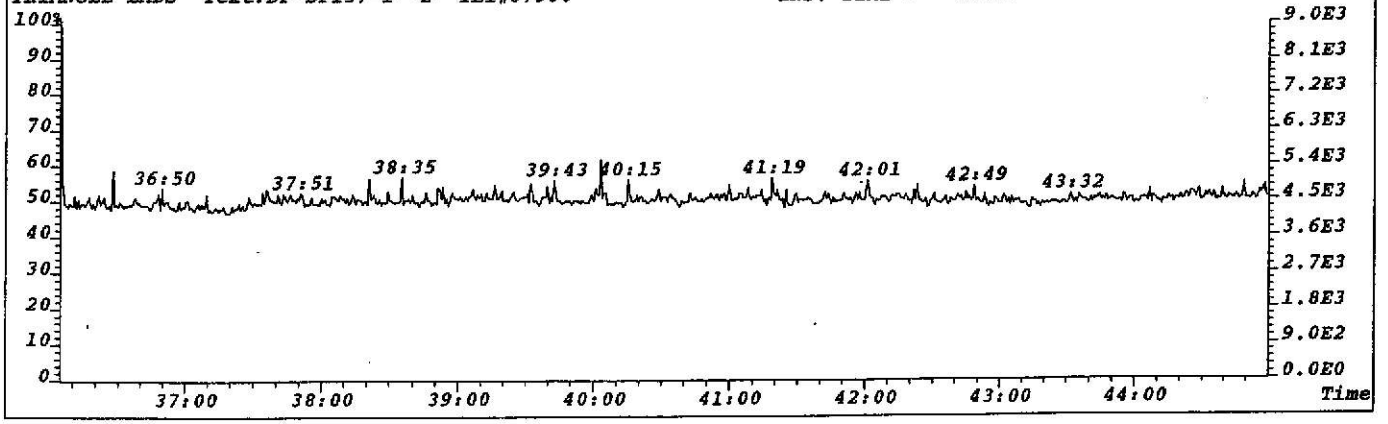
File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:103
443.7399 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,412.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



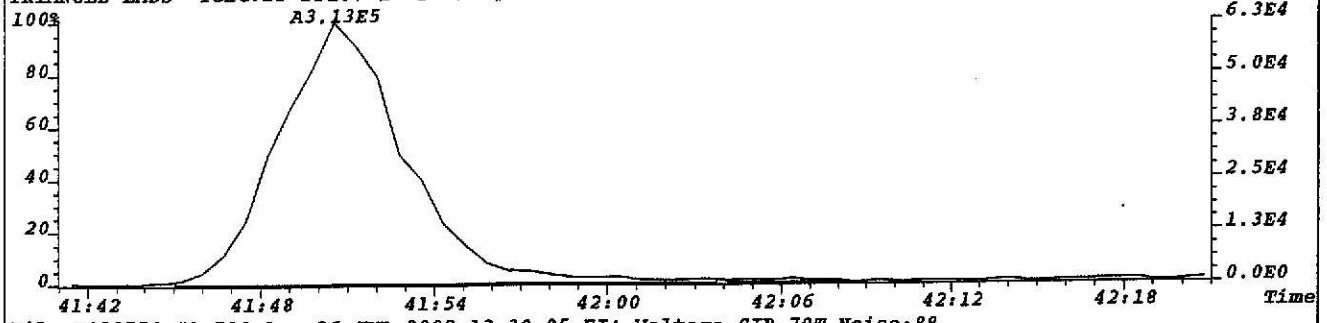
File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



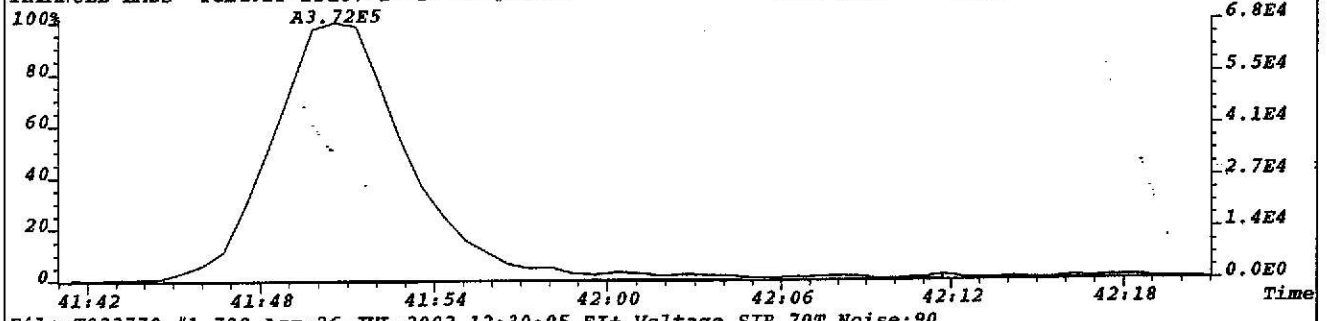
File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
513.6775 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



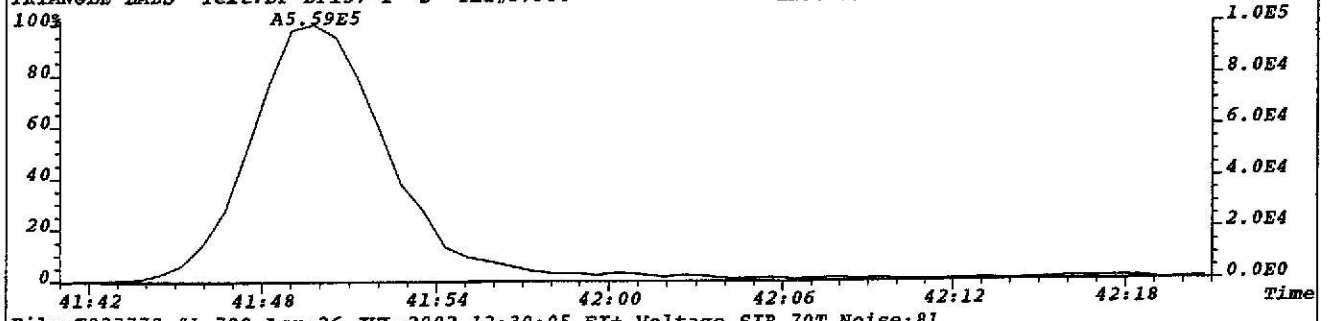
File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:78
457.7377 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,312.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



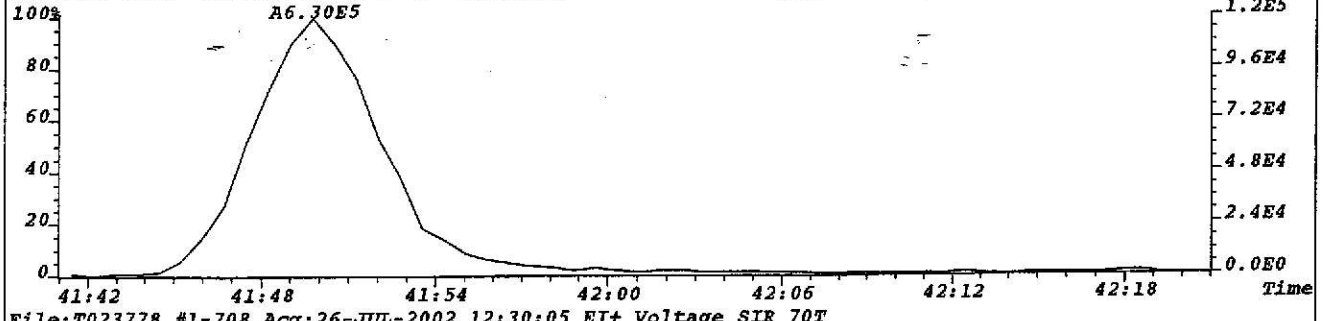
File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:88
459.7348 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,352.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



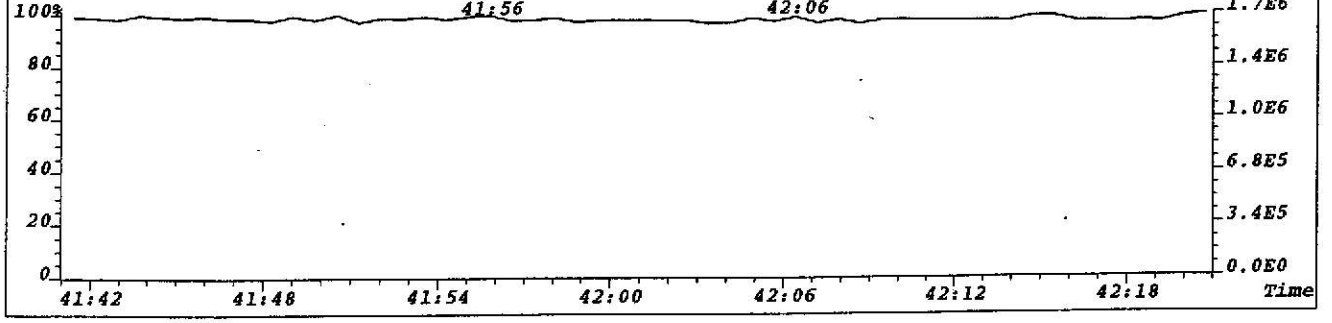
File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:90
469.7779 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,360.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T Noise:81
471.7750 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,324.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32



Channel I 330.9792 Peak top
Height .83 volts Span 200 ppm

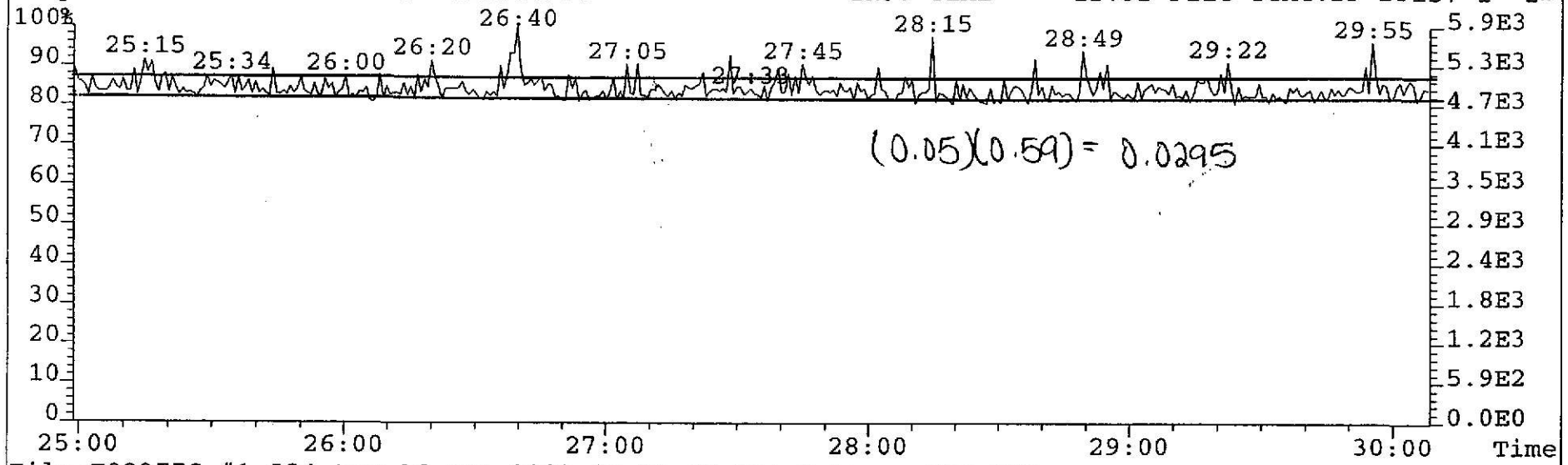
System file name	ND85US
Data file name	A:T726821
Resolution	10000
Group number	2
Ionization mode	EI+
Switching	VOLTAGE
Ref. masses	292.9825, 416.9760

A	293	J	331	S	368
B	304	K	332	T	370
C	306	L	334	U	376
D	316	M	340	V	410
E	318	N	342		
F	[illegible]	O	[illegible]		
G	322	P	354		
H	328	Q	356		
I	331	R	358		

Ref. mass 416.9760 Peak top
Height .16 volts Span 200 ppm

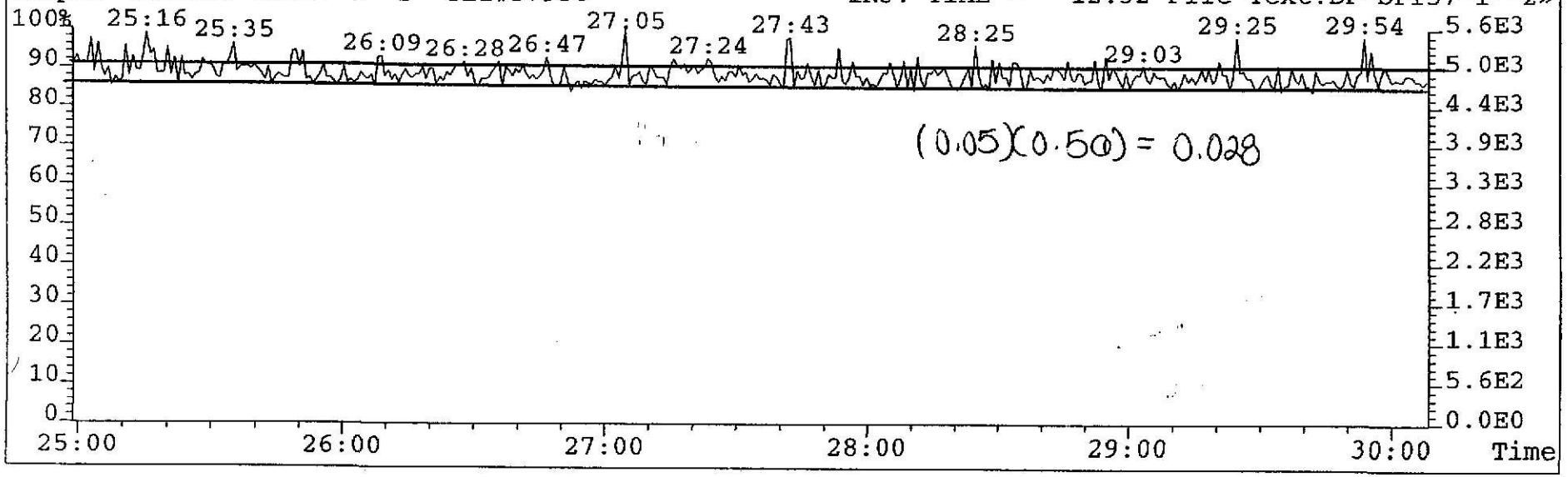
N = 0.0295 + 0.028 = 0.0575 ABM 7/26/02

File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
319.8965 F:2 Exp:NDB5US
Sample Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32 File Text:DF-DP157-1'-2»



(0.05)(0.59) = 0.0295

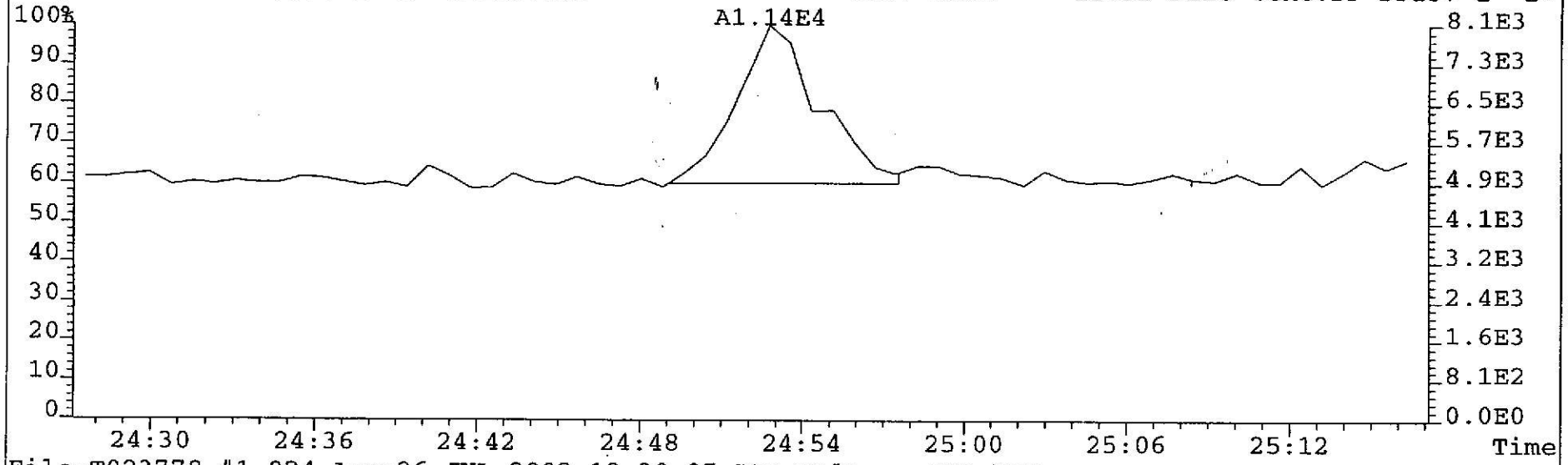
File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
321.8936 F:2 Exp:NDB5US
Sample Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32 File Text:DF-DP157-1'-2»



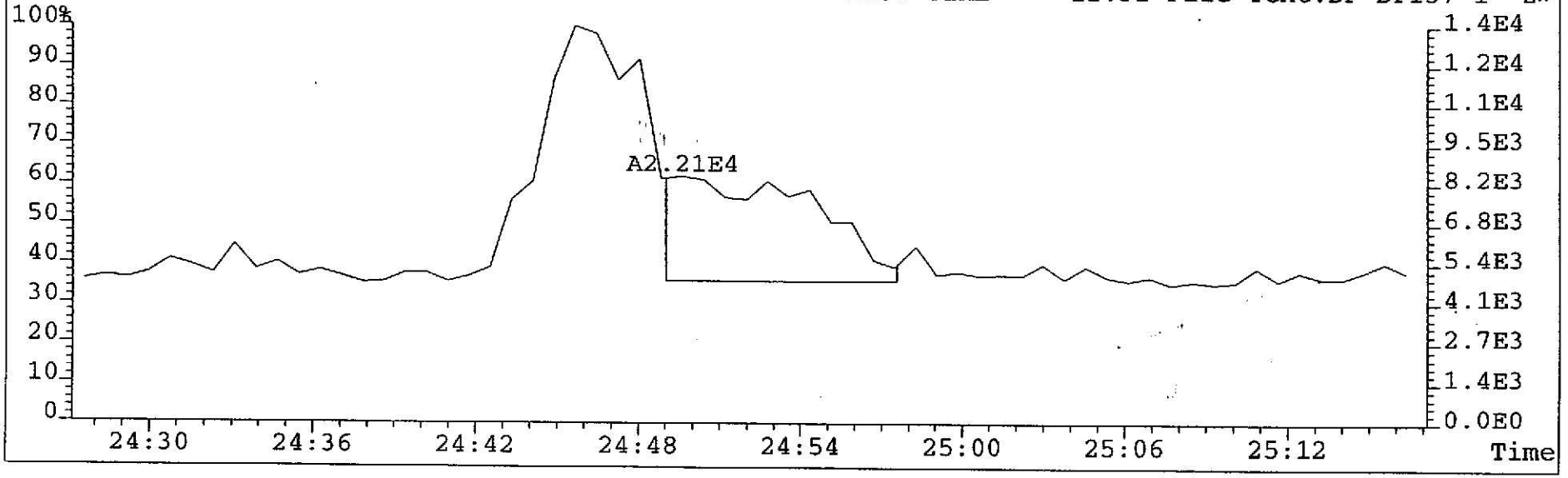
(0.05)(0.50) = 0.028

OEM 7/26/02

File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
319.8965 F:2 Exp:NDB5US
Sample Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32 File Text:DF-DP157-1'-2»

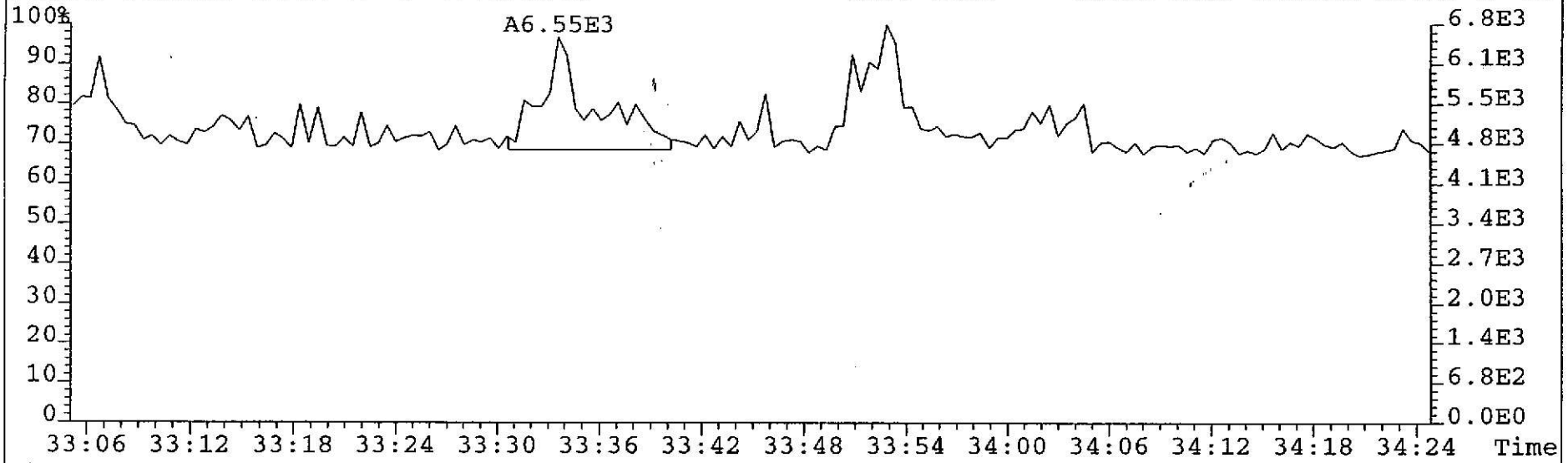


File:T023778 #1-924 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
321.8936 F:2 Exp:NDB5US
Sample Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32 File Text:DF-DP157-1'-2»

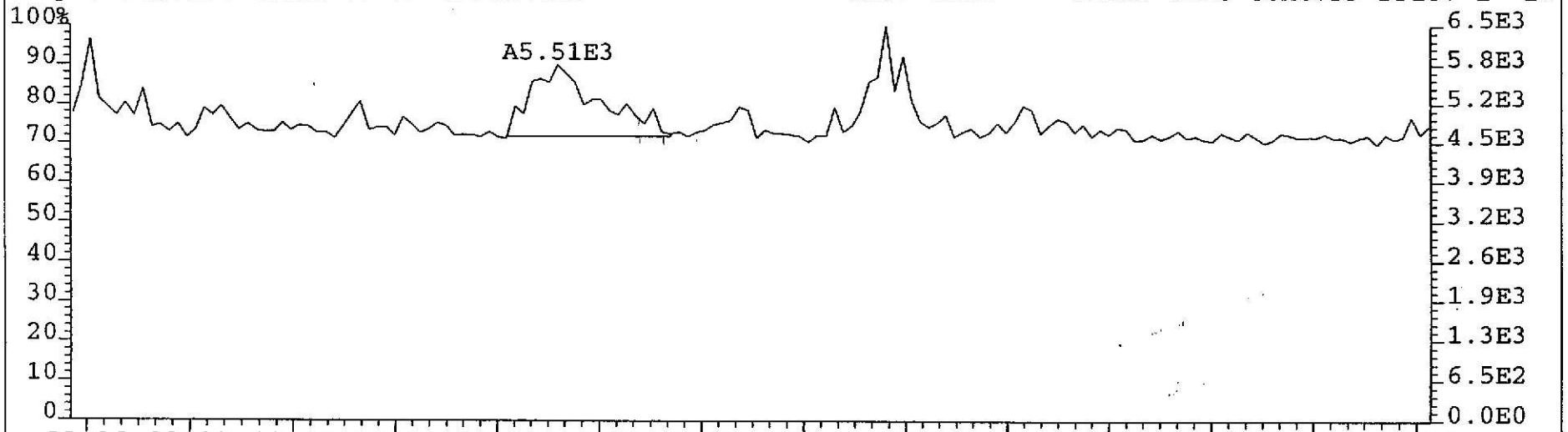


OEM 7/26/02

File:T023778 #1-386 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
373.8208 F:3 Exp:NDB5US
Sample Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32 File Text:DF-DP157-1'-2»

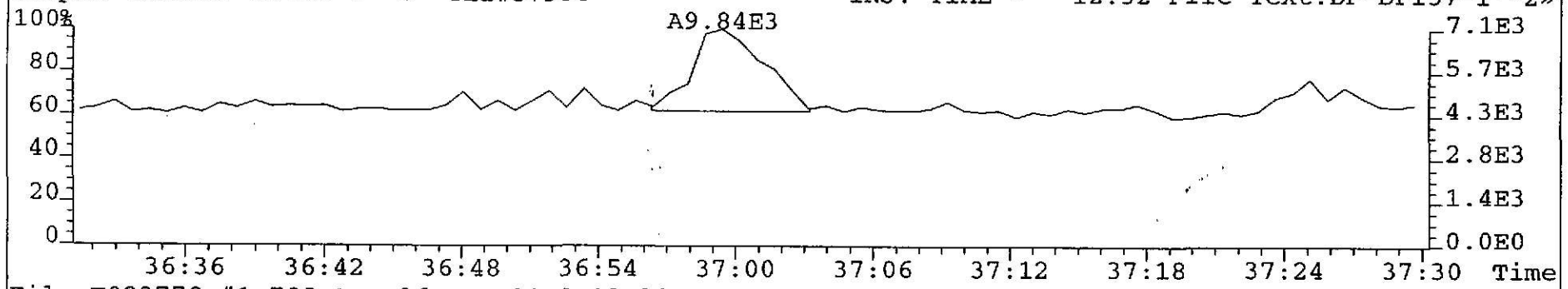


File:T023778 #1-386 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
375.8178 F:3 Exp:NDB5US
Sample Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32 File Text:DF-DP157-1'-2»

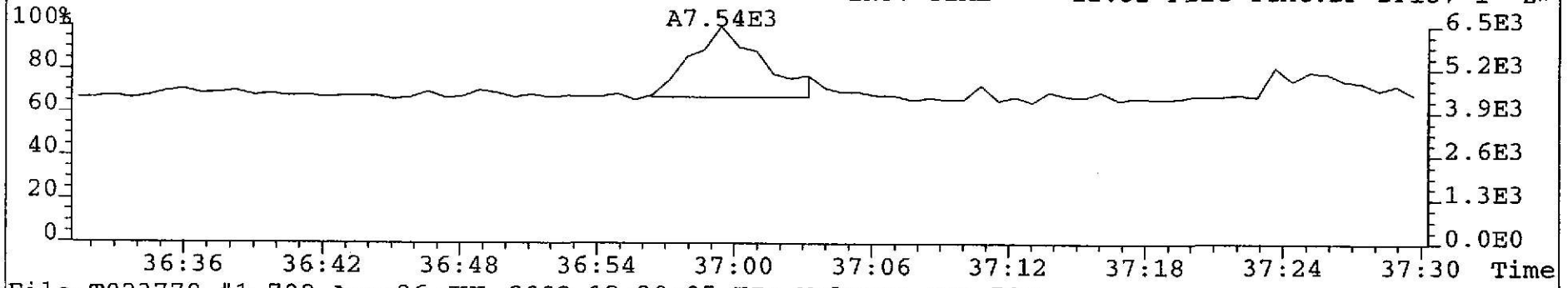


OEM 7/26/02

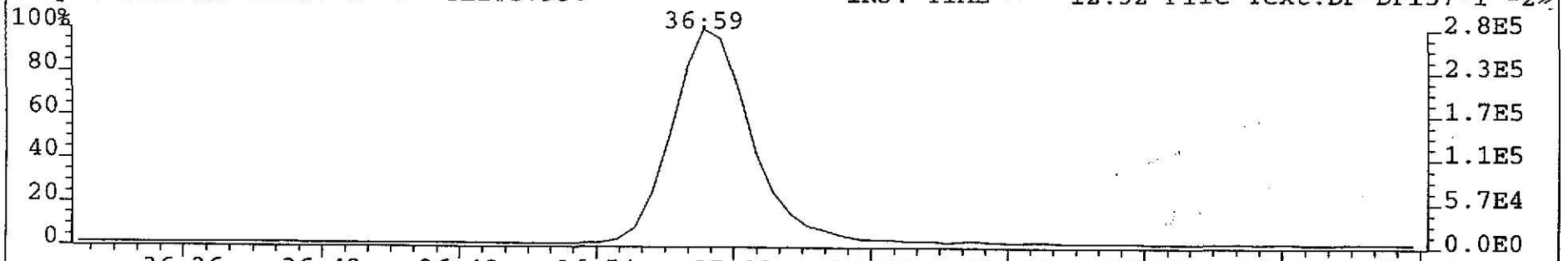
File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
407.7818 F:4 Exp:NDB5US
Sample Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32 File Text:DF-DP157-1'-2»



File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
409.7789 F:4 Exp:NDB5US
Sample Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32 File Text:DF-DP157-1'-2»



File:T023778 #1-708 Acq:26-JUL-2002 12:30:05 EI+ Voltage SIR 70T
419.8220 F:4 Exp:NDB5US
Sample Text:DF-DP157-1'-2' TLI#57930 INJ. TIME = 12:32 File Text:DF-DP157-1'-2»



Martin & Slagle

TLI Project: **57930** — 1613, Revision B PCDD/PCDF Analysis (c)

Client Sample: **DF-DP177-0-0,5'** — Analysis File: **T023780**

Client Project:	Kuhlman Electric				
Sample Matrix:	SOLID	Date Received:	07/20/2002	Spike File:	SP161B2S
TLI ID:	331-18-14	Date Extracted:	07/23/2002	ICal:	TF5612B
		Date Analyzed:	07/26/2002	ConCal:	TB23771
Sample Size:	12.800 g	Dilution Factor:	n/a	% Moisture:	21.6
Dry Weight:	10.035 g	Blank File:	T023762	% Lipid:	n/a
GC Column:	DB-5	Analyst:	JMM	% Solids:	78.4

Analytes	Conc. (pg/g)	DL	Ratio	RT	RRT	Flags
2,3,7,8-TCDD	ND	0.3				___
1,2,3,7,8-PeCDD	ND	0.5				___
1,2,3,4,7,8-HxCDD	ND	0.6				___
1,2,3,6,7,8-HxCDD	2.6		1.07	34:43	1.000	J__
1,2,3,7,8,9-HxCDD	1.2		1.37	35:03	1.010	J__
1,2,3,4,6,7,8-HpCDD	11.9		0.91	38:04	1.000	___
1,2,3,4,6,7,8,9-OCDD	270		0.85	41:51	1.000	___
2,3,7,8-TCDF	1.2		0.80	26:40	1.001	___
1,2,3,7,8-PeCDF	ND	0.3				___
2,3,4,7,8-PeCDF	0.88		1.65	31:12	1.000	J__
1,2,3,4,7,8-HxCDF	4.3		1.31	33:55	1.000	J__
1,2,3,6,7,8-HxCDF	2.2		1.30	34:02	1.000	J__
2,3,4,6,7,8-HxCDF	2.5		1.14	34:32	1.000	J__
1,2,3,7,8,9-HxCDF	ND	0.6				___
1,2,3,4,6,7,8-HpCDF	82.4		1.04	36:59	1.000	___
1,2,3,4,7,8,9-HpCDF	ND	1.6				___
1,2,3,4,6,7,8,9-OCDF	28.7		0.91	42:02	1.005	___

Totals	Conc. (pg/g)	Number	DL	Flags
Total TCDD	ND		1.1	___
Total PeCDD	ND		0.5	___
Total HxCDD	15.8	4		___
Total HpCDD	28.8	2		___
Total TCDF	83.7	9		___
Total PeCDF	222	13		___
Total HxCDF	131	10		___
Total HpCDF	125	2		___

161B_PSR v2.04, LARS 6.25.05

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Printed: 12:32 07/27/2002

TLI Project: **57930** 1613, Revision B PCDD/PCDF Analysis (c)
Client Sample: **DF-DP177-0-0,5′** Analysis File: **T023780**

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	RRT	Flags
$^{13}C_{12}$-2,3,7,8-TCDD	129	64.9	25%-164%	0.80	27:20	1.007	—
$^{13}C_{12}$-1,2,3,7,8-PeCDD	104	52.1	25%-181%	1.48	31:32	1.161	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	153	76.7	32%-141%	1.22	34:37	0.988	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	166	83.1	28%-130%	1.25	34:42	0.990	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	102	51.1	23%-140%	1.04	38:03	1.086	—
$^{13}C_{12}$-1,2,3,4,6,7,8,9-OCDD	97.2	24.4	17%-157%	0.90	41:50	1.194	—
$^{13}C_{12}$-2,3,7,8-TCDF	150	75.3	24%-169%	0.76	26:39	0.982	—
$^{13}C_{12}$-1,2,3,7,8-PeCDF	115	57.7	24%-185%	1.48	30:31	1.124	—
$^{13}C_{12}$-2,3,4,7,8-PeCDF	102	51.0	21%-178%	1.51	31:12	1.149	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	192	96.1	26%-152%	0.51	33:55	0.968	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	206	104	26%-123%	0.51	34:01	0.971	—
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	179	89.6	28%-136%	0.51	34:31	0.985	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	165	82.6	29%-147%	0.50	35:18	1.008	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	142	71.1	28%-143%	0.45	36:59	1.056	—
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	106	53.3	26%-138%	0.44	38:35	1.101	—

Cleanup Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	RRT	Flags
$^{37}Cl_4$-2,3,7,8-TCDD	14.1	70.6	35%-197%	27:21	1.007	—

Recovery Standards	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.81	27:09	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.22	35:02	—

Data Reviewer: Kh 07/27/2002

161B_PSR v2.04, LARS 6.25.05

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Printed: 12:32 07/27/2002

TLI Project: **57930**
Client Sample: **DF-DP177-0-0,5′**

Toxicity Equivalents Report
Analysis File: **T023780**

Client Project:	**Kuhlman Electric**				
Sample Matrix:	**SOLID**	Date Received:	**07/20/02**	Spike File:	**SP161B2S**
TLI ID:	**331-18-14**	Date Extracted:	**07/23/02**	ICal:	**TF5612B**
		Date Analyzed:	**07/26/02**	ConCal:	**TB23771**
Sample Size:	**12.800 g**	Dilution Factor:	**1**	% Moisture:	**21.6**
Dry Weight:	**10.035 g**	Blank File:	**T023762**	% Lipid:	**n/a**
GC Column:	**DB-5**	Analyst:	**JMM**	% Solids:	**78.4**

Analytes	Conc. (pg/g)		TEF		Equivalent
2,3,7,8-TCDD	{0.3}	x	1.	=	0.3
1,2,3,7,8-PeCDD	{0.5}	x	0.5	=	0.3
1,2,3,4,7,8-HxCDD	{0.6}	x	0.1	=	0.06
1,2,3,6,7,8-HxCDD	2.6	x	0.1	=	0.26
1,2,3,7,8,9-HxCDD	1.2	x	0.1	=	0.12
1,2,3,4,6,7,8-HpCDD	11.9	x	0.01	=	0.119
1,2,3,4,6,7,8,9-OCDD	270	x	0.001	=	0.270
TOTAL PCDD					1.4
2,3,7,8-TCDF	{1.0}	x	0.1	=	0.10
1,2,3,7,8-PeCDF	{0.3}	x	0.05	=	0.02
2,3,4,7,8-PeCDF	0.88	x	0.5	=	0.44
1,2,3,4,7,8-HxCDF	4.3	x	0.1	=	0.43
1,2,3,6,7,8-HxCDF	2.2	x	0.1	=	0.22
2,3,4,6,7,8-HxCDF	2.5	x	0.1	=	0.25
1,2,3,7,8,9-HxCDF	{0.6}	x	0.1	=	0.06
1,2,3,4,6,7,8-HpCDF	82.4	x	0.01	=	0.824
1,2,3,4,7,8,9-HpCDF	{1.6}	x	0.01	=	0.016
1,2,3,4,6,7,8,9-OCDF	28.7	x	0.001	=	0.0287
TOTAL PCDF					2.39

Total EPA TEFs, 1989a: 3.8 pg/g

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

GRY_TEF v1.08, MILES 4.22.16

Triangle Laboratories, Inc.®
2445 S. Alston Ave. • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Printed: 22:18 07/29/02

Initial ....Date...

Data Review By: KW 7/27/02

Calculated Noise Height: 0.08

Page No. 1 Listing of T023780B.dbf
07/27/2002 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						0.879-1.071			
304-306		DC	NL			Height	0.19	0.11	0.08				
	D	d	wl	23:28	RO	1.05	4.33			0.881			
	D	d	SN	24:09		0.85	1.33			0.906			
				24:18		0.82	3.15	1.42	1.73	0.912			J
				24:33		0.86	4.14	1.92	2.22	0.921			
				24:41	RO	1.15	1.85	0.99	0.86	0.926			
				25:01		0.67	1.80	0.72	1.08	0.939			J
				25:10		0.74	11.52	4.91	6.61	0.944			
	D	d	SN	25:21	RO	0.56	1.95			0.951			
				26:03		0.67	4.52	1.81	2.71	0.977			
				26:14	RO	0.91	11.47	5.47	6.00	0.984			
				26:22	RO	0.99	3.17	1.58	1.59	0.989			
	A			26:34		0.83	2.30	1.04	1.26	0.997			J
	M			26:40		0.80	4.41	1.96	2.45	1.001	2378-TCDF	AN	
				27:05	RO	1.03	2.21	1.12	1.09	1.016			
		DC	SN	27:19	RO	0.63	1.04			1.025			
				27:31		0.86	19.33	8.92	10.41	1.033			
				27:50		0.82	244.30	110.04	134.26	1.044			
		DC	WH	28:51	RO	1.50	0.80			1.083			
304-306			13	Peaks			314.17						
13C12-TCDF				0.65-0.89						0.944-1.131			
316-318		DC	NL			Height	0.16	0.08	0.08				
				25:38	RO	0.52	4.70	1.61	3.09	0.962			
		DC	SN	25:56	RO	0.50	1.85			0.973			
				26:14		0.75	6.27	2.69	3.58	0.984			
				26:39		0.76	664.44	285.87	378.57	1.000	13C12-2378-TCDF	ISO	
						Height	167.14	72.10	95.04				
				27:09	RO	1.36	3.05	1.76	1.29	1.019			
				27:22	RO	0.49	2.07	0.68	1.39	1.027			
316-318			5	Peaks			680.53						

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

TCDD				0.65-0.89						0.904-1.042			
320-322		DC	NL			Height	0.13	0.06	0.07				
		DC	SN	24:46	RO	0.03	2.75			0.906			
		DC	SN	25:14	RO	1.30	0.62			0.923	1379-TCDD	AN	
		DC	SN	25:52	RO	1.00	0.24			0.946			
		DC	SN	26:11	RO	1.14	0.60			0.958			
		DC	SN	26:38	RO	4.10	0.51			0.974			
		DC	SN	27:20		0.88	0.90			1.000	2378-TCDD	AN	
	M			27:45	RO	1.96	1.54	1.02	0.52	1.015			
				27:56	RO	1.68	1.26	0.79	0.47	1.022			
		DC	WH	28:51		0.71	0.60			1.055			
320-322			2	Peaks			2.80						

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.
37Cl-TCDD										0.927-1.073			
328	DC	NL				Height	0.12	0.12					
	DC	WL		24:48			0.20			0.907			
	DC	WL		25:07			0.41			0.919			
	DC	WL		25:15			1.01			0.924			
				25:43			0.44	0.44		0.941			
				26:00			88.39	88.39		0.951			
				27:21			52.48	52.48		1.001	37Cl-TCDD		CLS
				27:43			125.47	125.47		1.014			
	DC	SN		28:00			0.25			1.024			
				28:39			4.43	4.43		1.048			
328			5	Peaks			271.21						
13C12-TCDD						0.65-0.89				0.920-1.066			
332-334	DC	NL				Height	0.24	0.16	0.08				
				26:11		0.82	1.77	0.80	0.97	0.958			
				27:09		0.81	672.91	300.77	372.14	0.993	13C12-1234-TCDD		RS1
				27:20		0.80	492.86	219.54	273.32	1.000	13C12-2378-TCDD		IS1
						Height	124.46	56.54	67.92				
				27:54	RO	3.51	1.94	1.51	0.43	1.021			
				28:03	RO	1.18	0.85	0.46	0.39	1.026			
	DC	SN		28:09		0.84	0.57			1.030			
332-334			5	Peaks			1,170.33						

---------- Above: TCDD / PeCDF 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.
PeCDF						1.32-1.78				0.911-1.037			
340-342	DC	NL				Height	0.14	0.07	0.07				
				28:27	RO	1.22	2.98	1.64	1.34	0.912			
				28:35	RO	1.25	6.23	3.46	2.77	0.916			
				28:51		1.54	17.91	10.85	7.06	0.925			
				29:04		1.50	2.88	1.73	1.15	0.932			J
				29:15		1.77	5.02	3.21	1.81	0.938			J
				29:26	RO	1.15	2.62	1.40	1.22	0.943			
				29:43		1.50	18.85	11.30	7.55	0.952			
				29:50		1.52	148.60	89.58	59.02	0.956			
				30:02		1.58	103.56	63.36	40.20	0.963			
				30:24		1.48	165.92	99.15	66.77	0.974			
D	d	SN		30:42		1.35	1.13			0.984			
				30:49		1.36	4.15	2.39	1.76	0.988			J
				31:12		1.65	1.99	1.24	0.75	1.000	23478-PeCDF	AN	J
				31:24		1.42	4.79	2.81	1.98	1.006			J
		X		31:32		1.47	4.02	2.39	1.63	1.011			J
	DC	SN		31:40	RO	1.85	1.11			1.015			
				31:49		1.70	6.27	3.95	2.32	1.020			J
				32:02		1.52	50.88	30.67	20.21	1.027			
	DC	WH		32:38		1.77	1.69			1.046			
340-342			16	Peaks			546.67						
13C12-PeCDF						1.32-1.78				0.807-1.127			
352-354	DC	NL				Height	0.15	0.06	0.09				
				29:40	RO	1.10	5.43	2.84	2.59	0.951			

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		29:50	RO	0.36	1.48			0.956			
				30:09		1.57	3.01	1.84	1.17	0.966			
				30:31		1.48	451.47	269.23	182.24	1.000	13C12-PeCDF 123	IS2	
						Height	121.43	72.78	48.65				
				30:47	RO	1.04	11.90	6.08	5.82	0.987			
				31:12		1.51	406.52	244.40	162.12	1.000	13C12-PeCDF 234	IS3	
						Height	109.38	66.01	43.37				
				31:39	RO	1.21	2.72	1.49	1.23	1.014			
				31:49	RO	0.76	4.23	1.83	2.40	1.020			
				31:56	RO	0.83	1.48	0.67	0.81	1.024			
				32:09	RO	0.99	6.70	3.33	3.37	1.030			
	DC	SN		32:18	RO	0.94	0.35			1.035			
352-354			9	Peaks			893.46						

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

PeCDD				1.32-1.78						0.940-1.021			
356-358	DC	NL				Height	0.14	0.08	0.06				
	DC	SN		30:38		1.32	1.16			0.971			
	DC	SN		30:50	RO	2.04	0.73			0.978			
	DC	SN		31:11	RO	3.64	0.51			0.989			
D	D	SN		31:32	RO	0.87	0.99			1.000	12378-PeCDD	AN	
D	D	SN		31:39	RO	0.18	5.49			1.004			
D	D	SN		31:48	RO	1.31	2.40			1.008			
	DC	WH		32:24	RO	0.46	1.31			1.027			
356-358			0	Peaks			0.00						
13C12-PeCDD				1.32-1.78						0.735-1.052			
368-370	DC	NL				Height	0.13	0.07	0.06				
	DC	SN		30:29	RO	3.03	1.25			0.967			
				30:37		1.55	1.94	1.18	0.76	0.971			
	DC	SN		30:47	RO	8.80	0.49			0.976			
				31:32		1.48	291.59	174.10	117.49	1.000	13C12-PeCDD 123	IS4	
						Height	82.91	50.13	32.78				
				31:54	RO	0.42	1.41	0.42	0.99	1.012			
	DC	SN		32:07	RO	0.54	1.46			1.018			
	DC	SN		32:19	RO	0.44	0.72			1.025			
	DC	SN		32:30		1.52	0.53			1.031			
368-370			3	Peaks			294.94						

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

HxCDF				1.05-1.43						0.929-1.007			
374-376	DC	NL				Height	0.29	0.20	0.09				
D	D	WL		32:50		1.33	2.56			0.930			
		X		32:59		1.36	14.73	8.49	6.24	0.934			
				33:06		1.26	33.02	18.39	14.63	0.938			
				33:13		1.32	12.90	7.34	5.56	0.941			
				33:21		1.35	7.79	4.48	3.31	0.945			J
				33:34		1.28	65.82	36.99	28.83	0.951			
				33:45		1.33	3.89	2.22	1.67	0.956			J
NM				33:53		1.27	78.60	43.90	34.70	0.999			

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.
AN				33:55		1.31	8.15	4.62	3.53	1.000	123478-HxCDF	AN	J
				34:02		1.30	4.71	2.66	2.05	1.000	123678-HxCDF	AN	J
				34:08	RO	1.59	1.63	1.00	0.63	0.967			
				34:32		1.14	4.17	2.22	1.95	1.000	234678-HxCDF	AN	J
				35:11	RO	1.04	1.53	0.78	0.75	0.997			
				35:22	RO	1.44	1.51	0.89	0.62	1.002			
374-376			13	Peaks			238.45						
13C12-HxCDF				0.43-0.59					0.879-1.106				
384-386	DC	NL		Height			0.34	0.09	0.25				
				32:58	RO	0.77	0.92	0.40	0.52	0.934			
				33:55		0.51	337.13	113.53	223.60	1.000	13C12-HxCDF 478	IS5	
				Height			103.64	35.26	68.38				
				34:01		0.51	367.88	123.68	244.20	1.000	13C12-HxCDF 678	IS6	
				Height			106.44	36.14	70.30				
				34:31		0.51	311.08	105.02	206.06	1.000	13C12-HxCDF 234	IS7	
				Height			90.98	30.92	60.06				
	DC	SN		34:51		0.47	0.66			0.987			
				35:18		0.50	240.49	80.52	159.97	1.000	13C12-HxCDF 789	IS8	
				Height			61.04	20.32	40.72				
384-386			5	Peaks			1,257.50						

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

HxCDD				1.05-1.43					0.959-1.013				
390-392	DC	NL		Height			0.23	0.11	0.12				
				33:27		1.09	4.26	2.22	2.04	0.964			J
				33:54	RO	1.45	1.15	0.68	0.47	0.977			
				34:07		1.11	9.86	5.18	4.68	0.983			J
	DC	SN		34:17	RO	0.59	0.54			0.988			
	DC	SN		34:37	RO	2.75	0.30			1.000	123478-HxCDD	AN	
				34:43		1.07	3.23	1.67	1.56	1.000	123678-HxCDD	AN	J
M				35:03		1.37	1.47	0.85	0.62	1.010	123789-HxCDD	AN	J
	DC	WH		35:14	RO	0.54	10.06			1.015			
	DC	WH		35:31	RO	0.86	2.44			1.024			
390-392			5	Peaks			19.97						
13C12-HxCDD				1.05-1.43					0.983-1.041				
402-404	DC	NL		Height			0.15	0.05	0.10				
	DC	SN		34:17	RO	0.12	0.95			0.990			
				34:37		1.22	199.00	109.50	89.50	1.000	13C12-HxCDD 478	IS9	
				Height			61.69	33.78	27.91				
				34:42		1.25	235.81	130.83	104.98	1.000	13C12-HxCDD 678	IS10	
				Height			67.15	38.10	29.05				
				35:02		1.22	296.02	162.59	133.43	1.012	13C12-HxCDD 789	RS2	
				35:18	RO	0.12	2.01	0.22	1.79	1.020			
				35:28	RO	0.82	0.71	0.32	0.39	1.025			
402-404			5	Peaks			733.55						

---------- Above: HxCDD / HpCDF 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.

HpCDF                          0.88-1.20                                  0.955-1.005
408-410          DC  NL          Height        0.18         0.10         0.08
                 DC  WL  36:47 RO  1.37        1.28                            0.953
                         36:59     1.04       97.60        49.70        47.90  1.000 1234678-HpCDF   AN
                         37:25     0.96       39.92        19.57        20.35  0.970
                         38:34 RO  0.87        1.16         0.54         0.62  1.000 1234789-HpCDF   AN
408-410                3 Peaks                138.68

13C12-HpCDF                    0.37-0.51                                  0.857-1.142
418-420          DC  NL          Height        0.20         0.10         0.10
                         36:59     0.45      175.36        54.08       121.28  1.000 13C12-HpCDF 678 IS11
                                 Height       42.81        12.68        30.13
                         38:35     0.44      105.76        32.15        73.61  1.000 13C12-HpCDF 789 IS12
                                 Height       22.14         6.68        15.46
418-420                2 Peaks.               281.12

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

HpCDD                          0.88-1.20                                  0.976-1.005
424-426          DC  NL          Height        0.16         0.08         0.08
                         37:17     0.97        9.44         4.66         4.78  0.980
                         38:04     0.91        6.63         3.15         3.48  1.000 1234678-HpCDD   AN
                 DC  WH  38:20 RO  2.40        0.17                            1.007
424-426                2 Peaks                 16.07

13C12-HpCDD                    0.88-1.20                                  0.869-1.079
436-438          DC  NL          Height        0.15         0.08         0.07
                 DC  SN  37:16     1.14        0.79                            0.979
                 DC  SN  37:25     1.16        0.41                            0.983
                 DC  SN  37:40 RO  0.55        0.93                            0.990
                         38:03     1.04      119.25        60.75        58.50  1.000 13C12-HpCDD 678 IS13
                                 Height       27.44        13.52        13.92
                 DC  SN  38:30     1.14        0.62                            1.012
436-438                1 Peak                 119.25

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

OCDF                           0.76-1.02                                  0.952-1.048
442-444          DC  NL          Height        0.15         0.07         0.08
                         42:02     0.91        9.38         4.46         4.92  1.005 OCDF            AN
                 DC  WH  44:24 RO  1.13        0.34                            1.061
442-444                1 Peak                   9.38

OCDD                           0.76-1.02                                  0.952-1.048
458-460          DC  NL          Height        0.13         0.07         0.06
                         41:51     0.85       73.53        33.82        39.71  1.000 OCDD            AN
                 DC  SN  42:18 RO  0.61        0.45                            1.011
458-460                1 Peak                  73.53

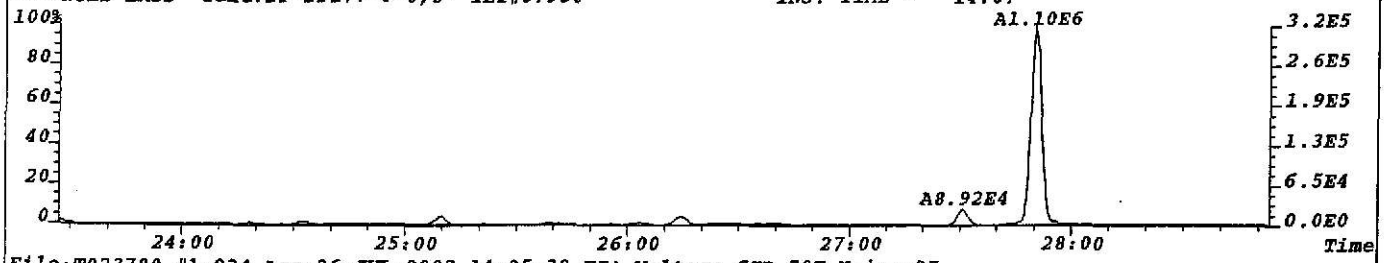
13C12-OCDD                     0.76-1.02                                  0.996-1.004
470-472          DC  NL          Height        0.12         0.06         0.06
                         41:50     0.90      107.10        50.63        56.47  1.000 13C12-OCDD      IS14
                                 Height       20.14         9.52        10.62
```

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					107.10					

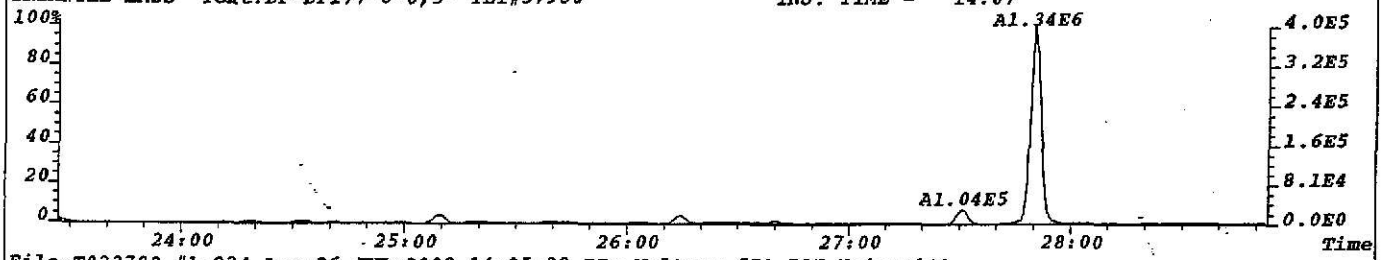
Column Description.....	"Why" Code Description.....	QC Log Desc.....
M_Z -Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT. -Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK -RO=Ratio Outside 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 ***

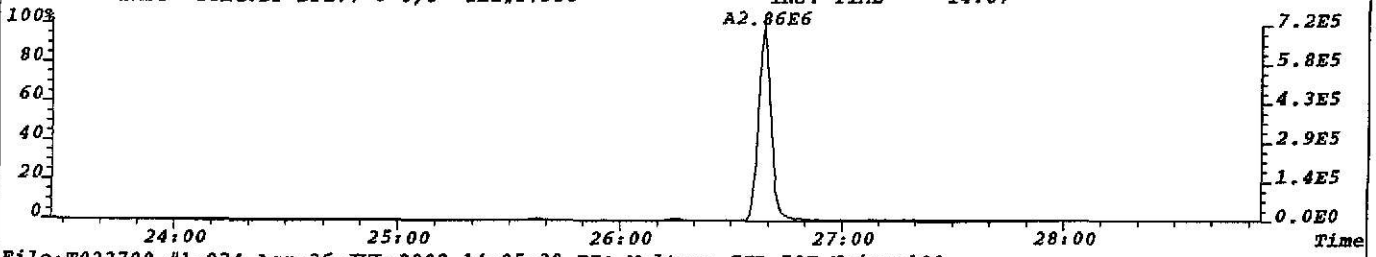
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:141
303.9016 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,564.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



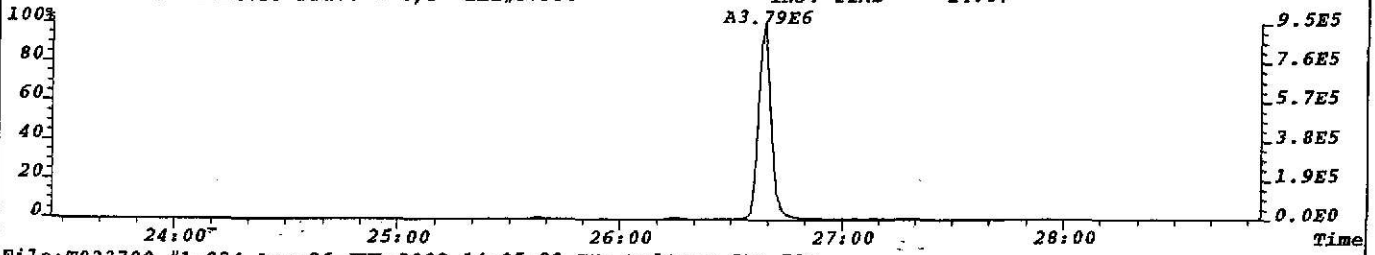
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:97
305.8987 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,388.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



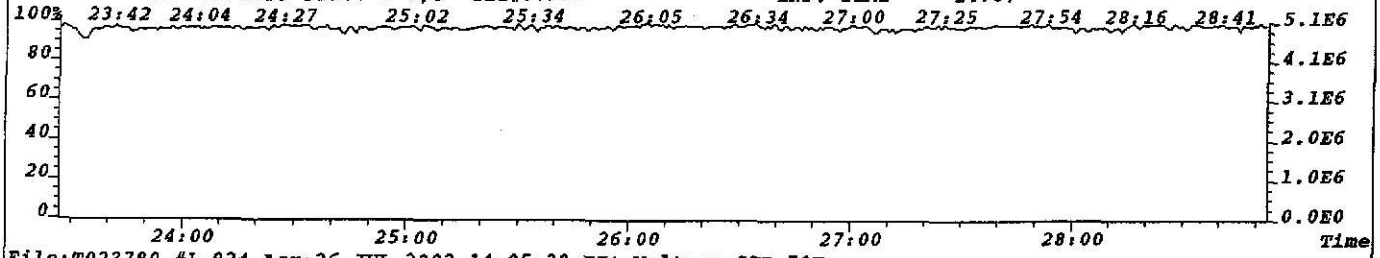
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:101
315.9419 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,404.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



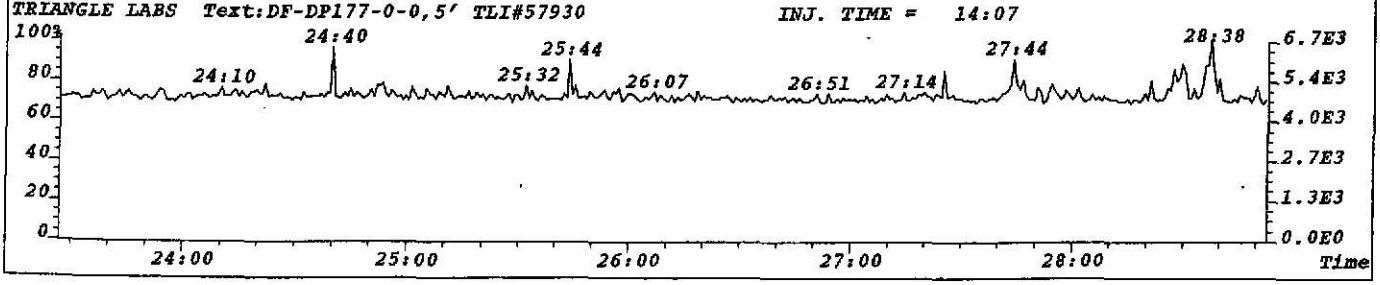
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:100
317.9389 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,400.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



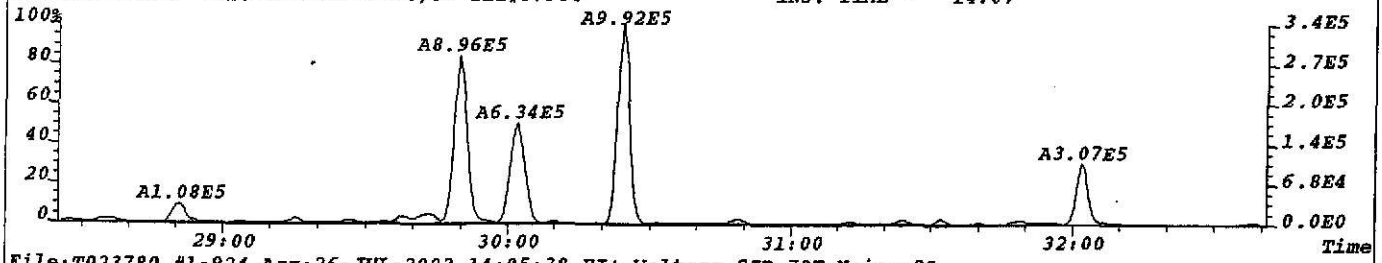
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



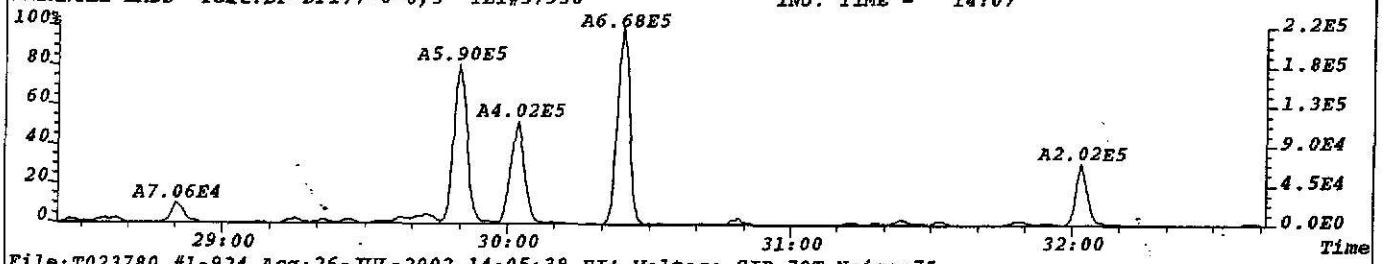
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
375.8364 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



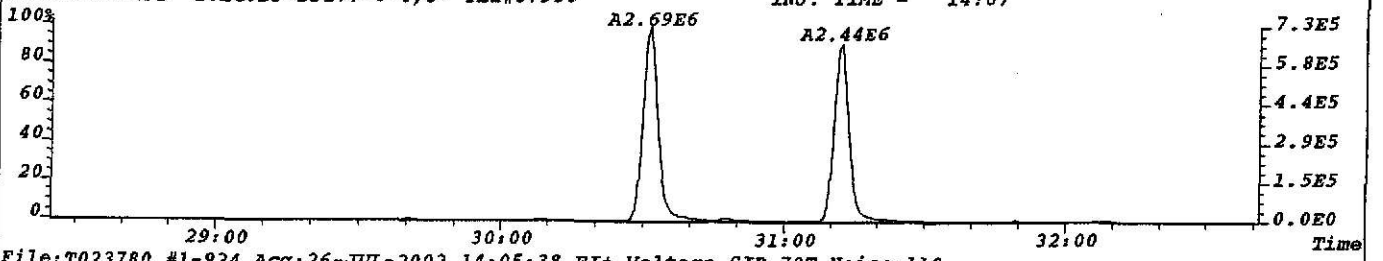
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:85
339.8597 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,340.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



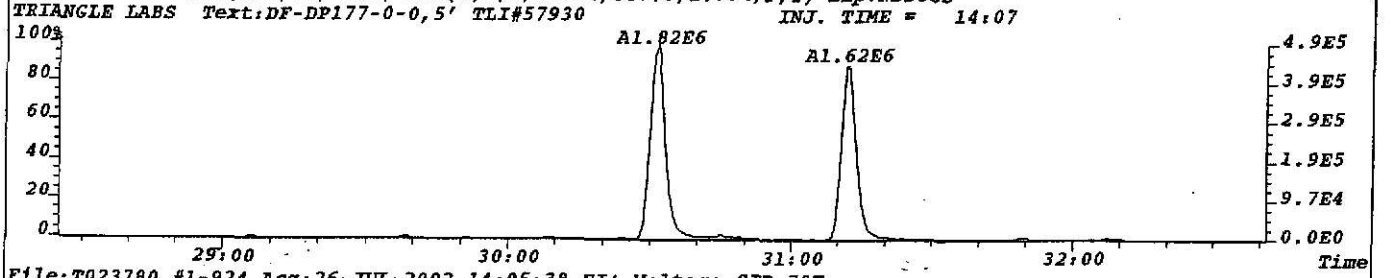
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:93
341.8567 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,372.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



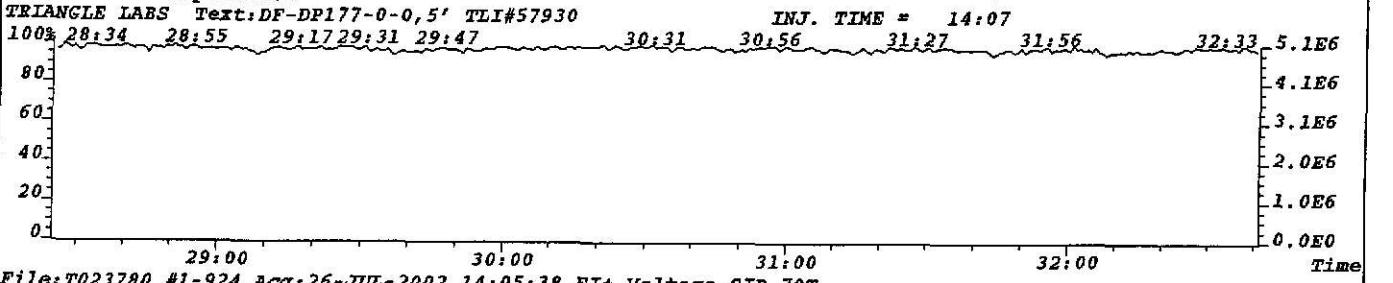
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:75
351.9000 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,300.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



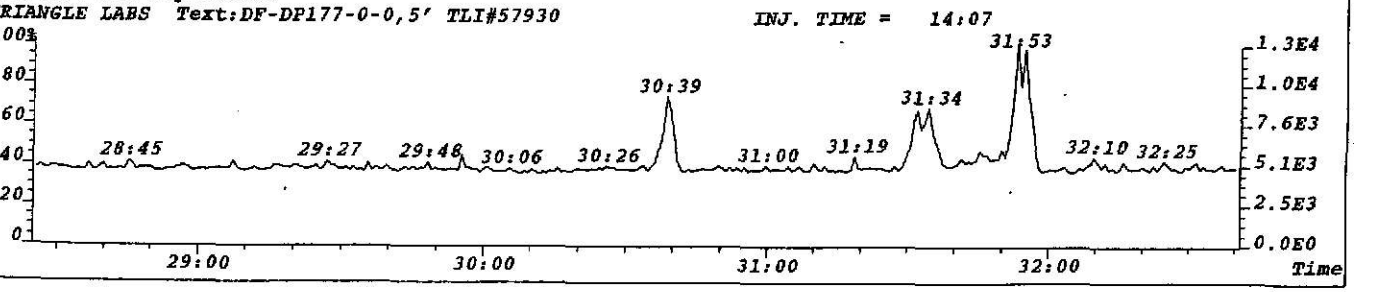
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:110
353.8970 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,440.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



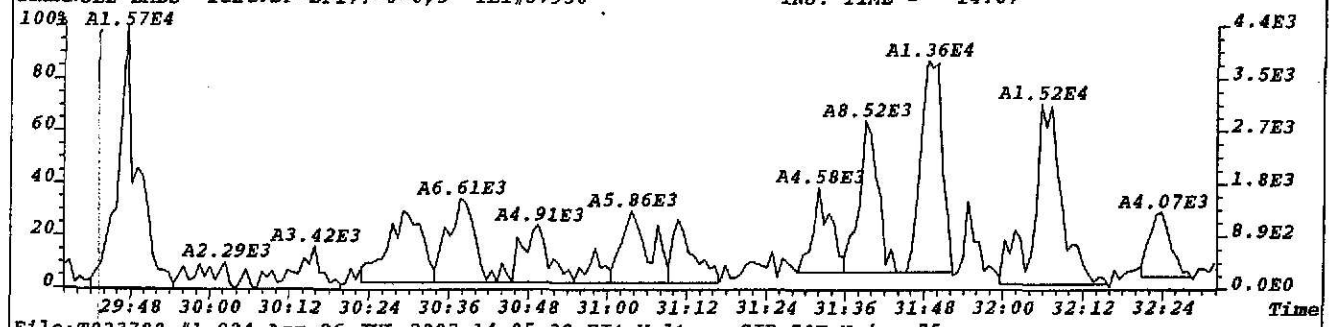
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



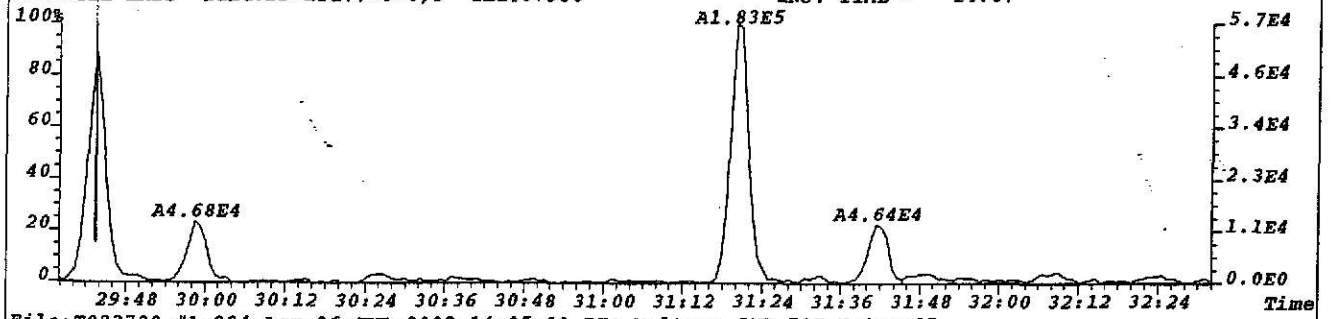
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
409.7974 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



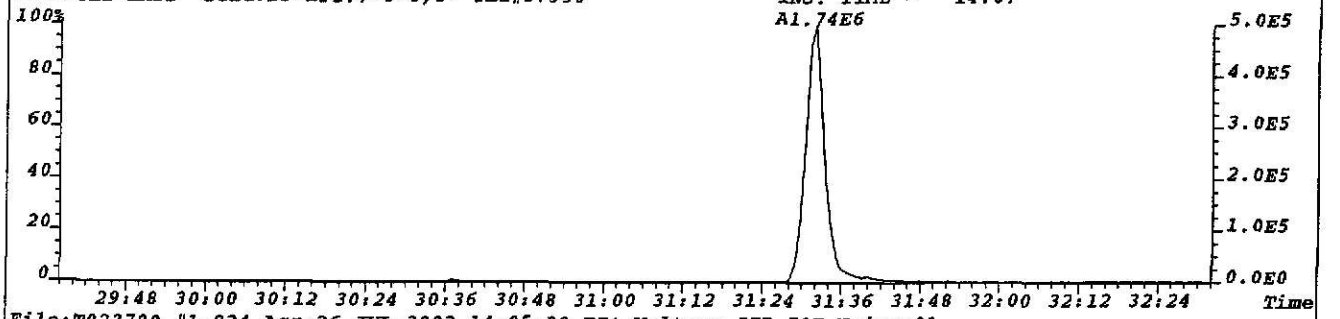
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:96
355.8546 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,384.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



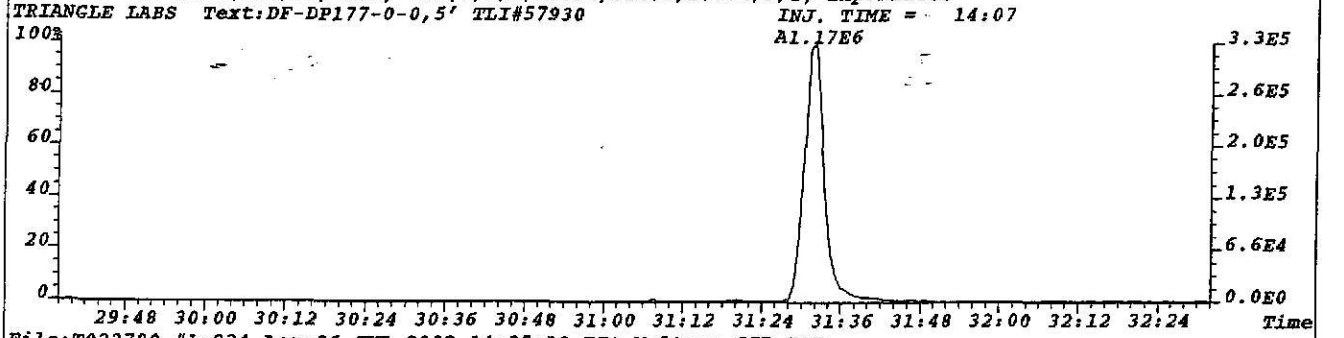
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:75
357.8516 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,300.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



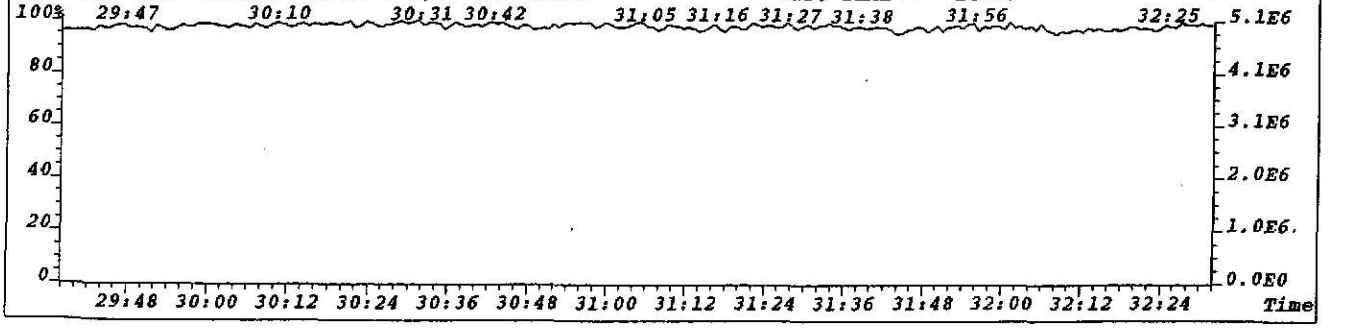
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:87
367.8949 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,348.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



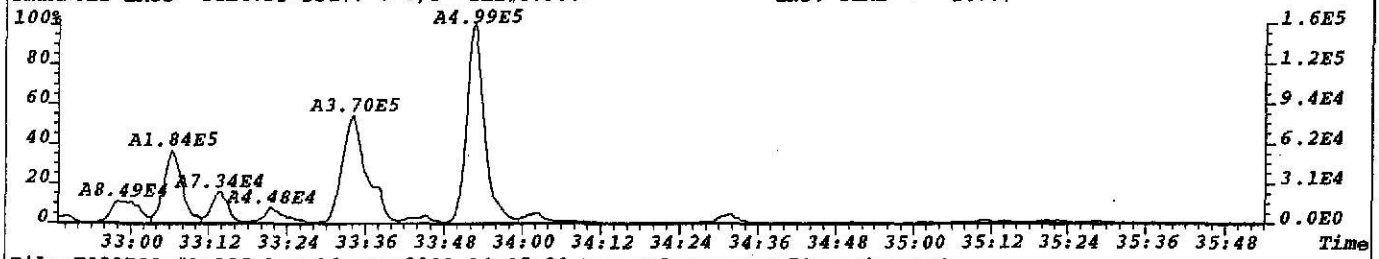
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:81
369.8919 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,324.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



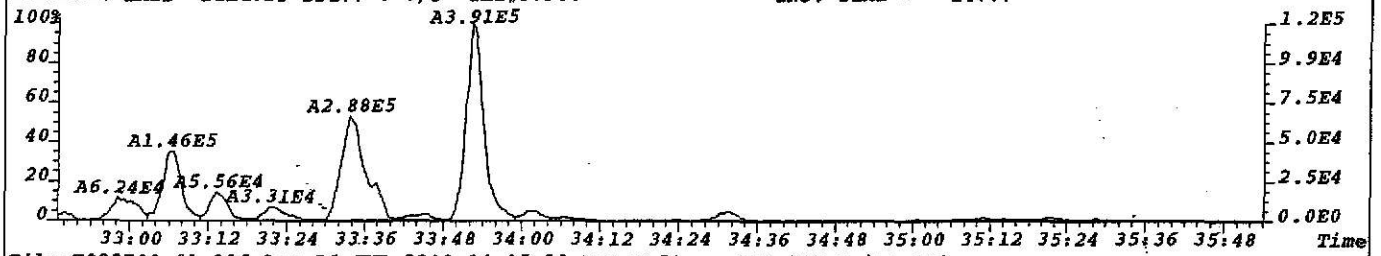
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



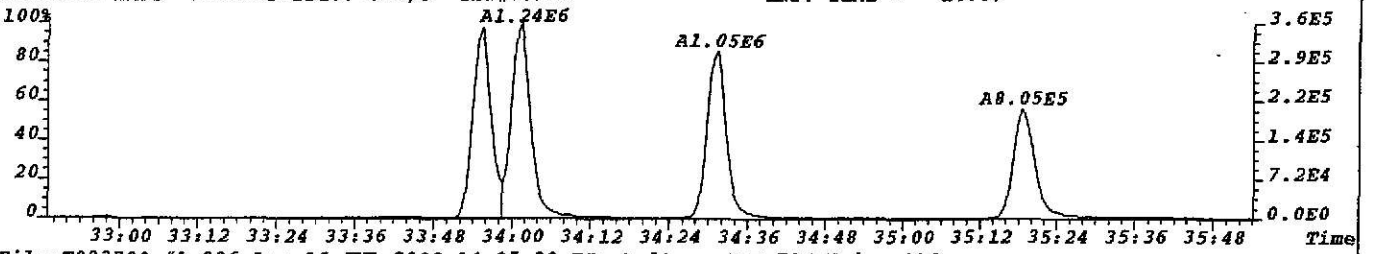
File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:254
373.8208 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,1016.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



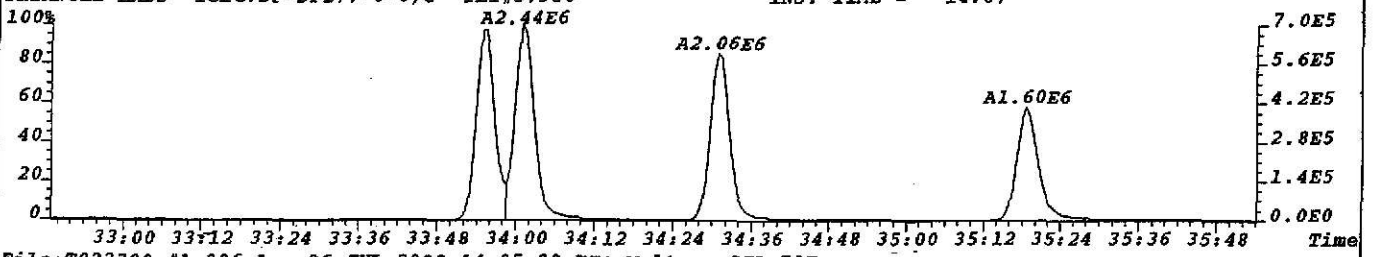
File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:118
375.8178 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,472.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



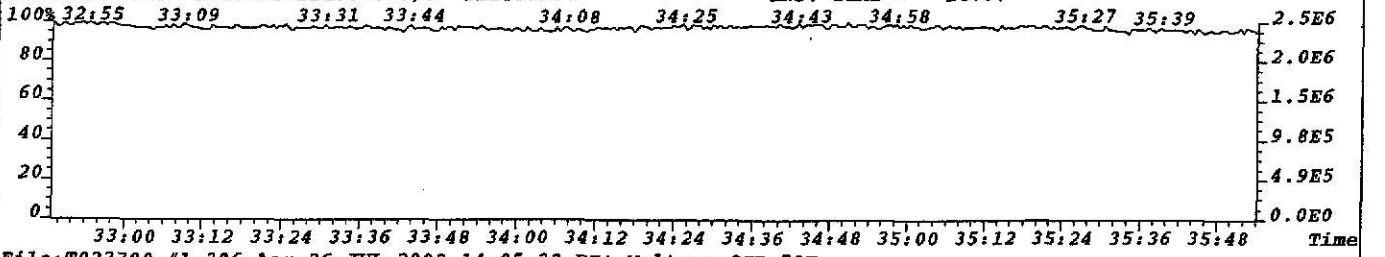
File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:110
383.8639 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,440.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



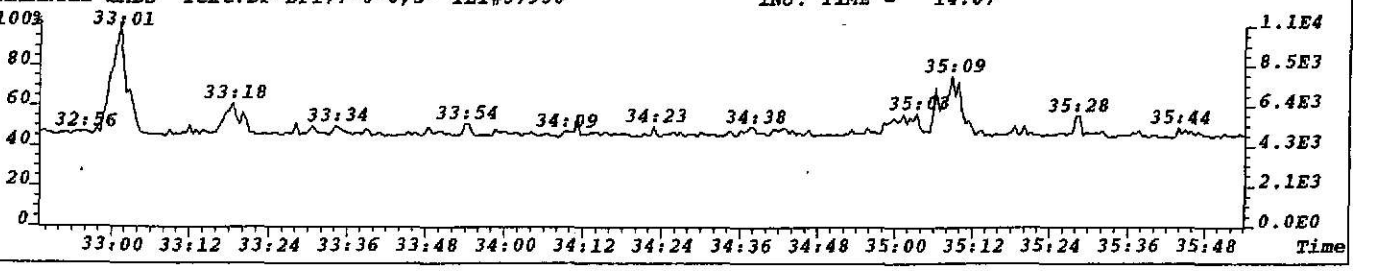
File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:316
385.8610 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,1264.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



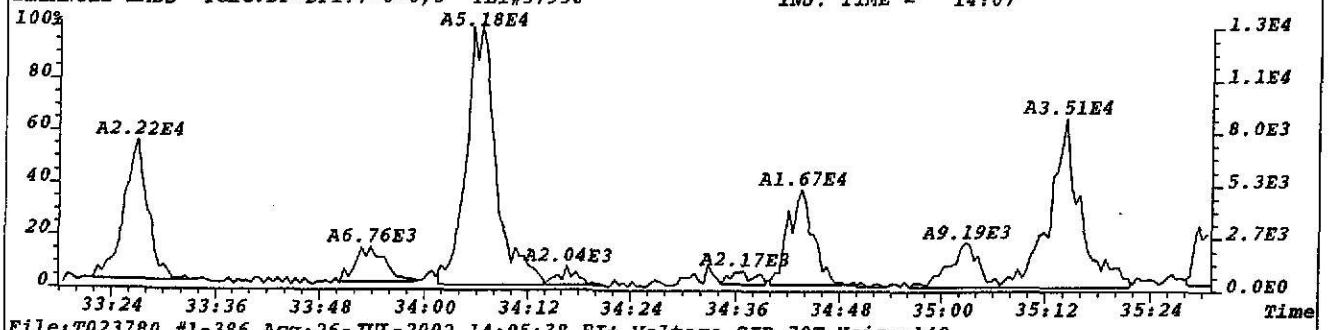
File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



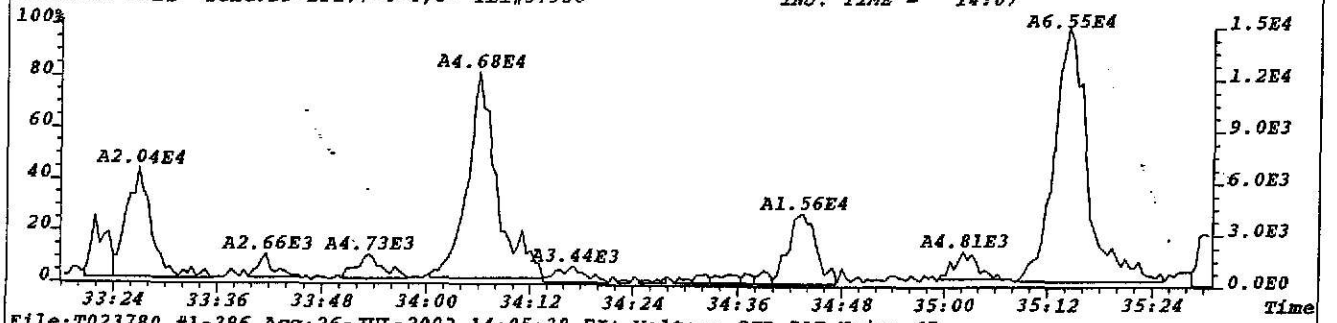
File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
445.7555 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



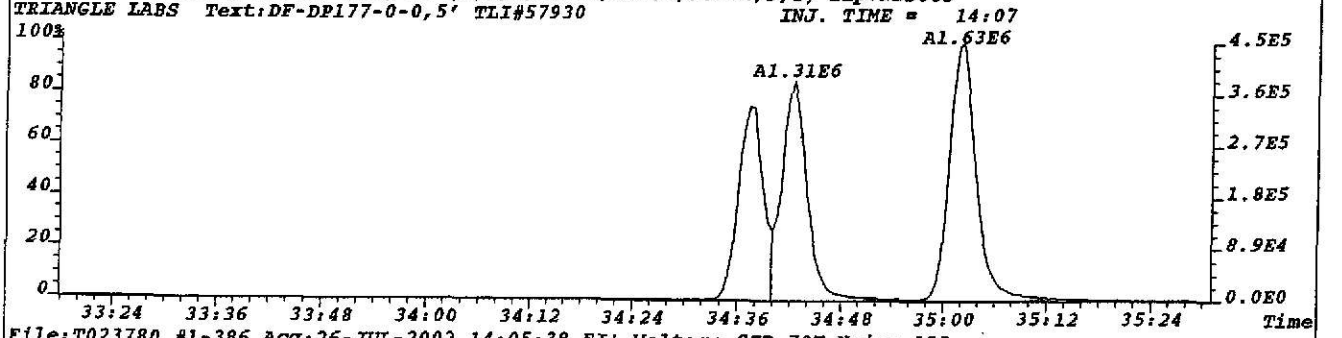
File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:134
389.8156 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,536.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



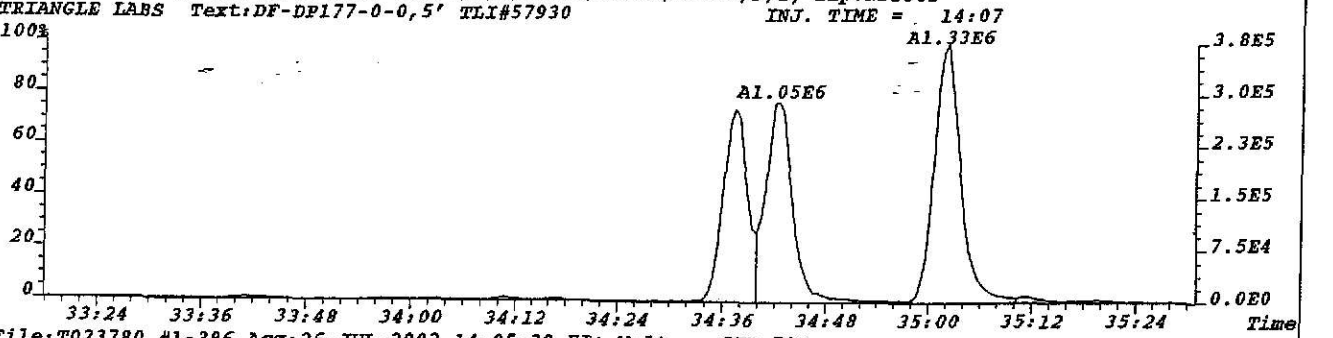
File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:148
391.8127 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,592.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



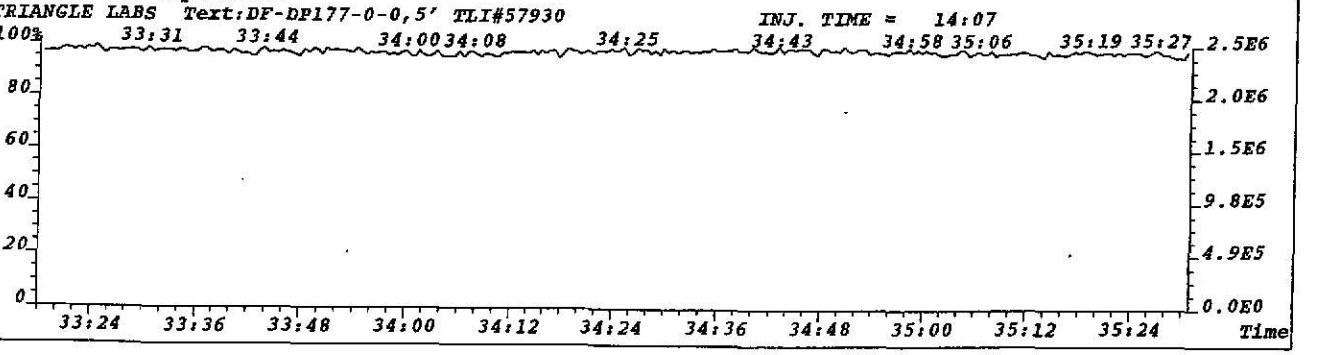
File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:67
401.8558 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,268.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



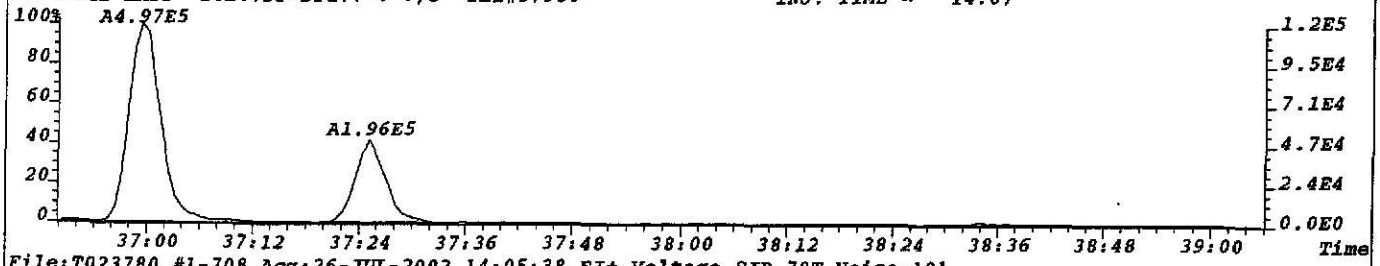
File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:129
403.8529 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,516.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



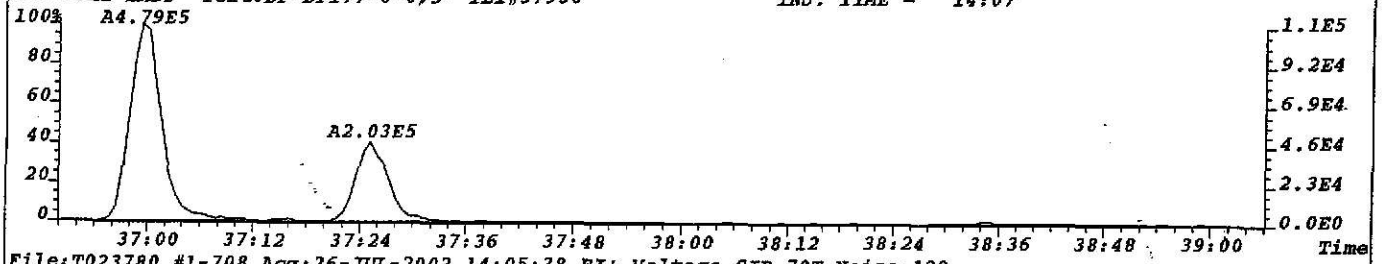
File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



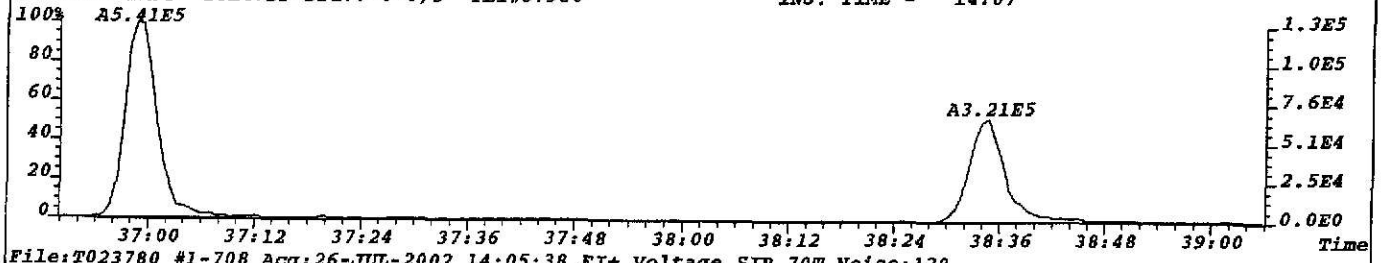
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:121
407.7818 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,484.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



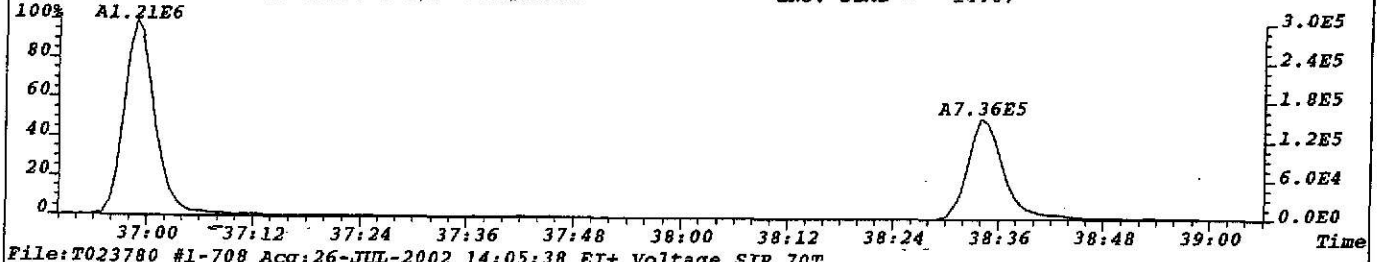
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:101
409.7789 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,404.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



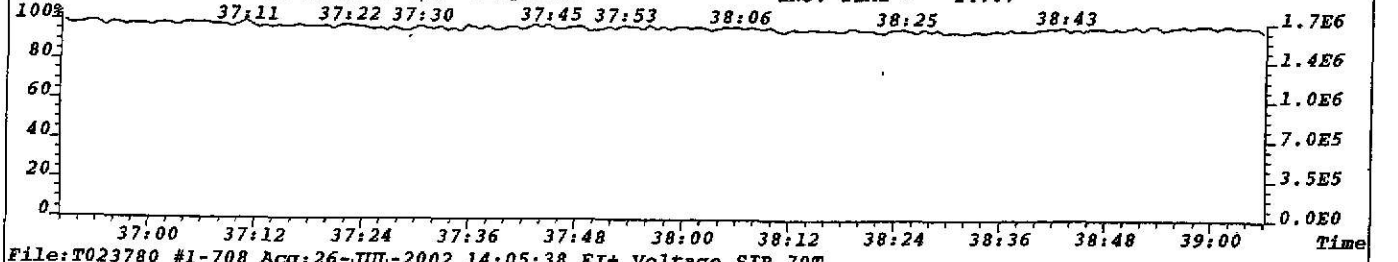
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:129
417.8253 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,516.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



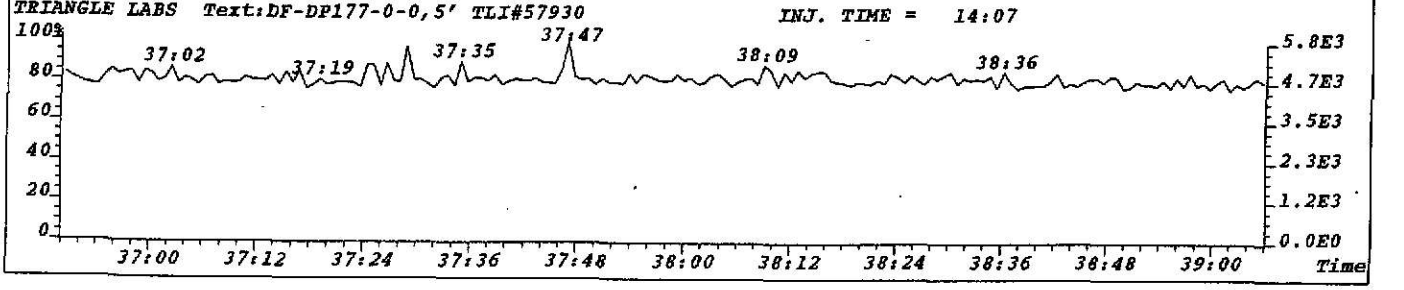
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:120
419.8220 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,480.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



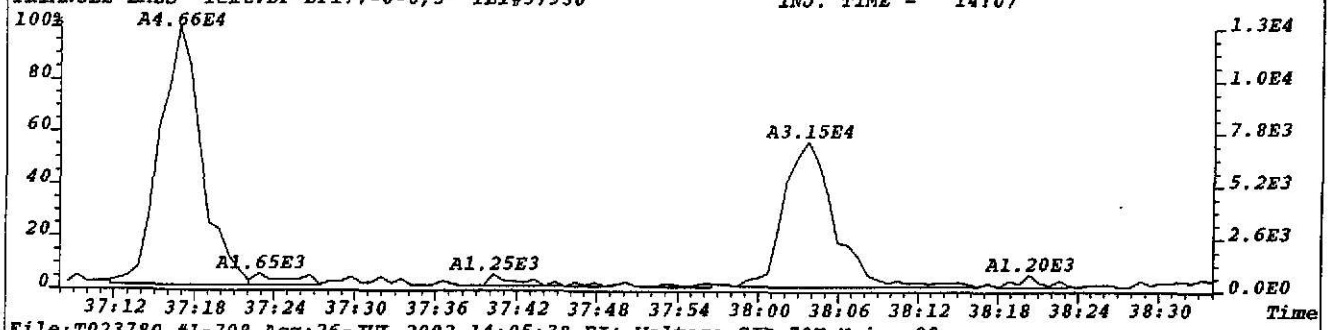
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



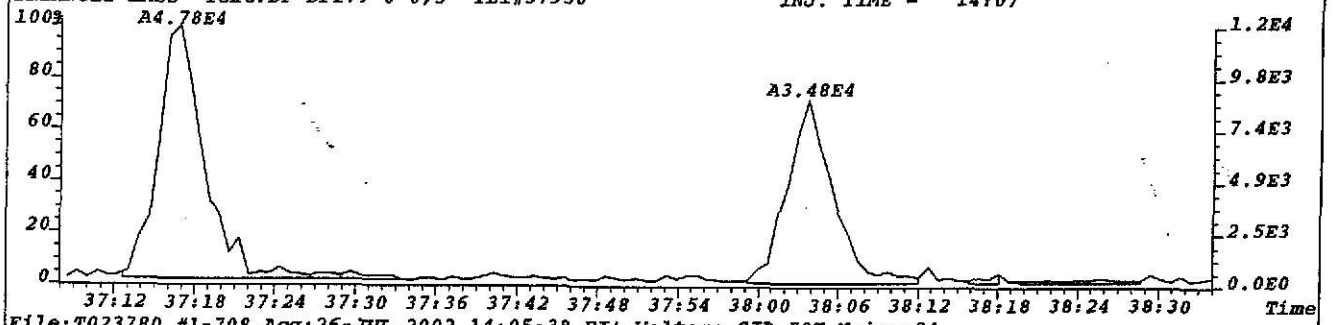
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
479.7165 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



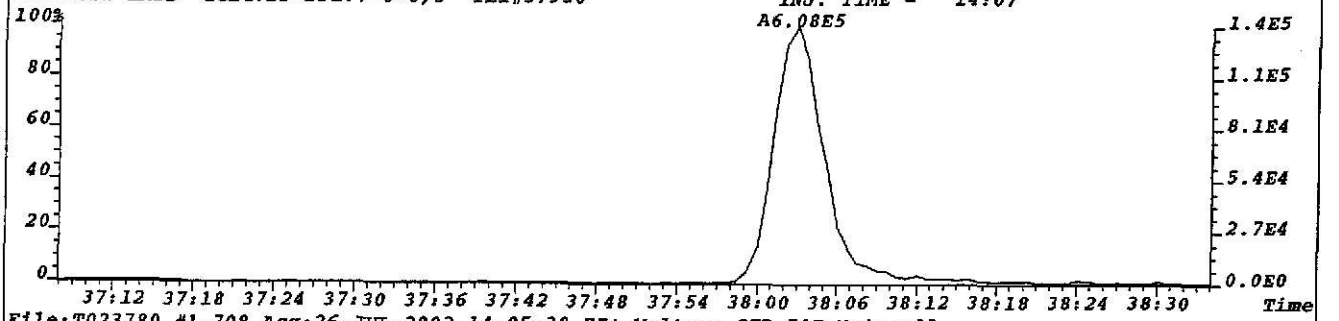
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:96
423.7766 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,384.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



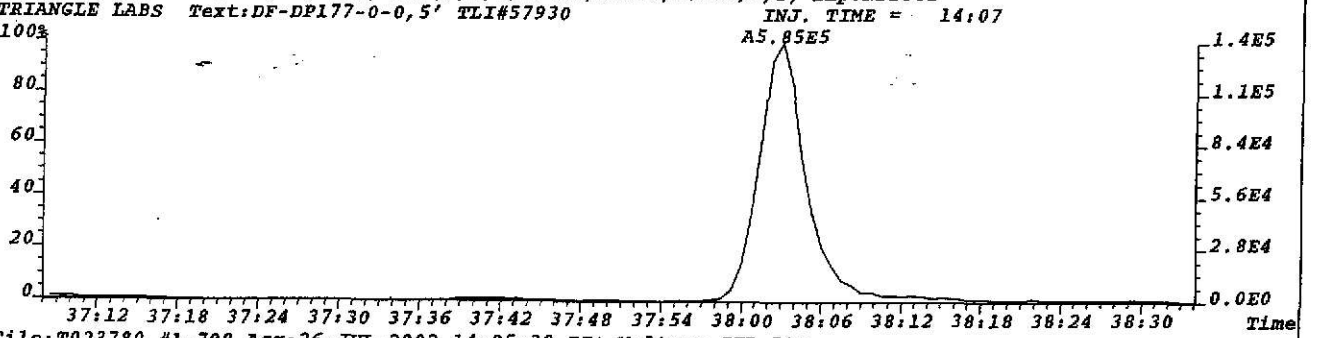
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:98
425.7737 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,392.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



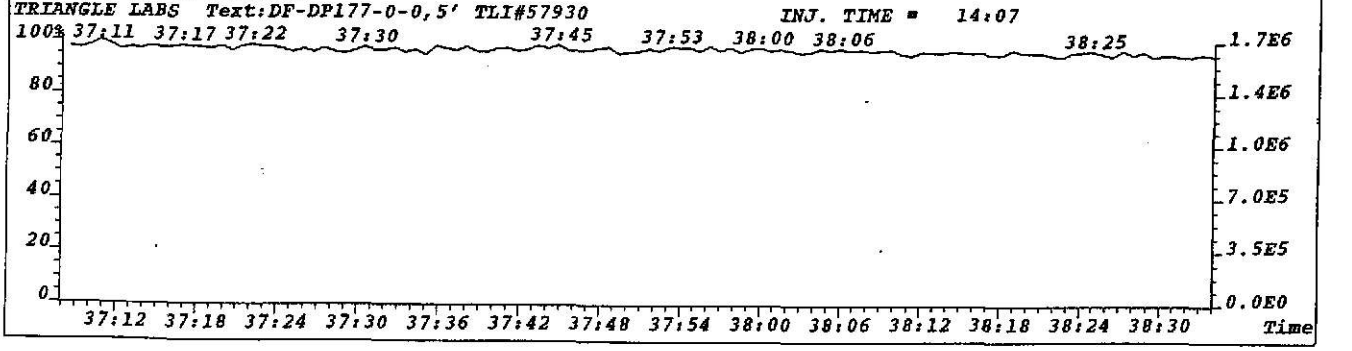
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:94
435.8169 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,376.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



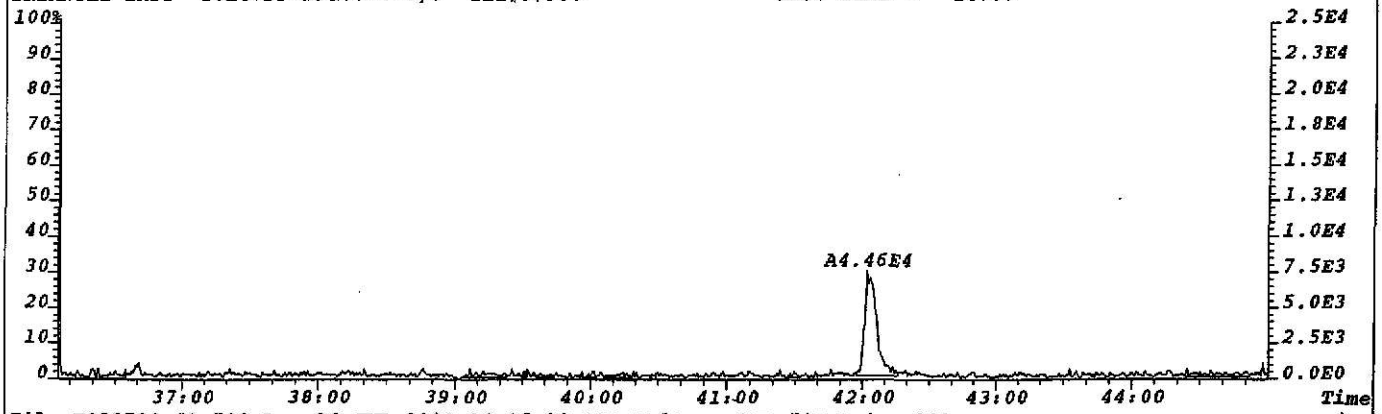
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:83
437.8140 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,332.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



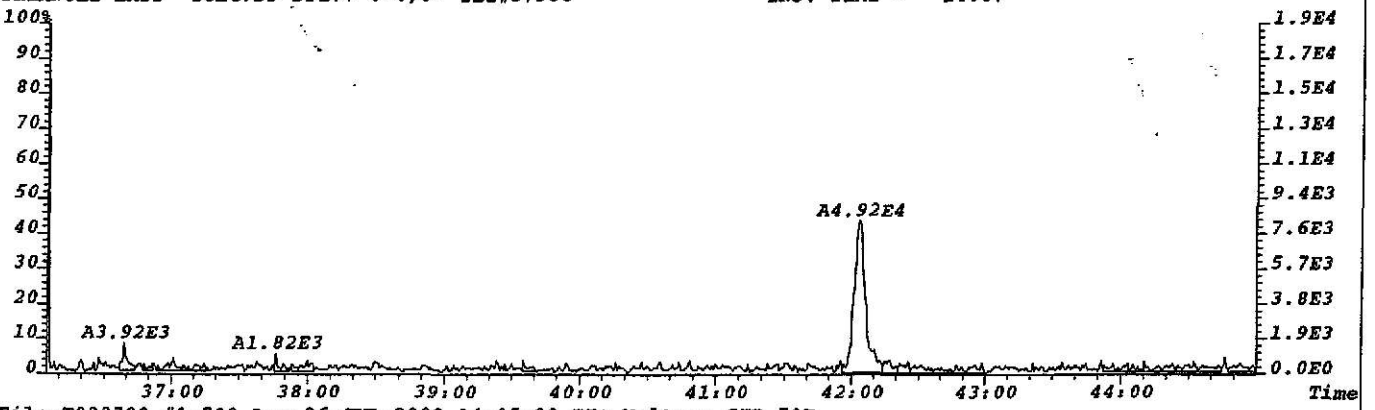
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



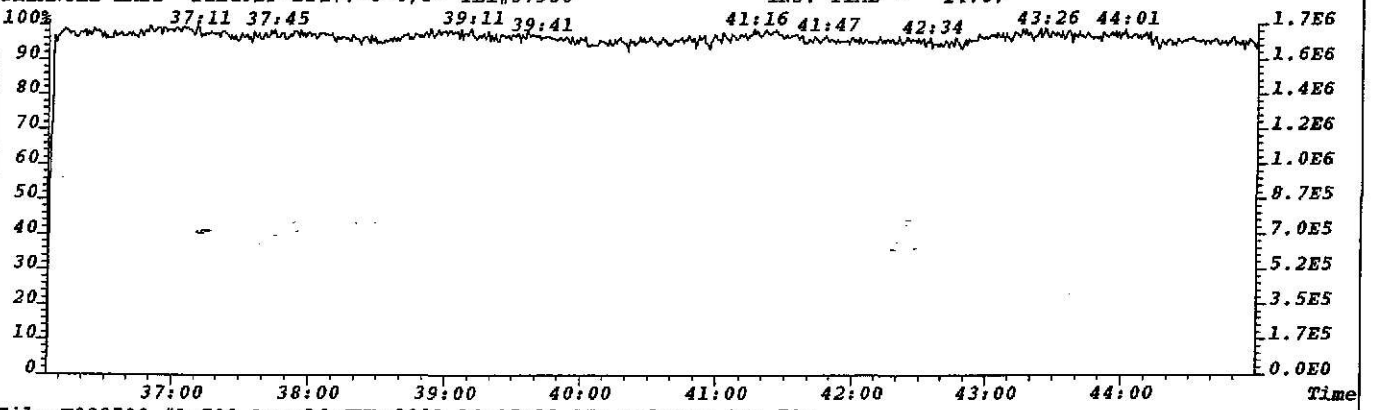
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:89
441.7428 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,356.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



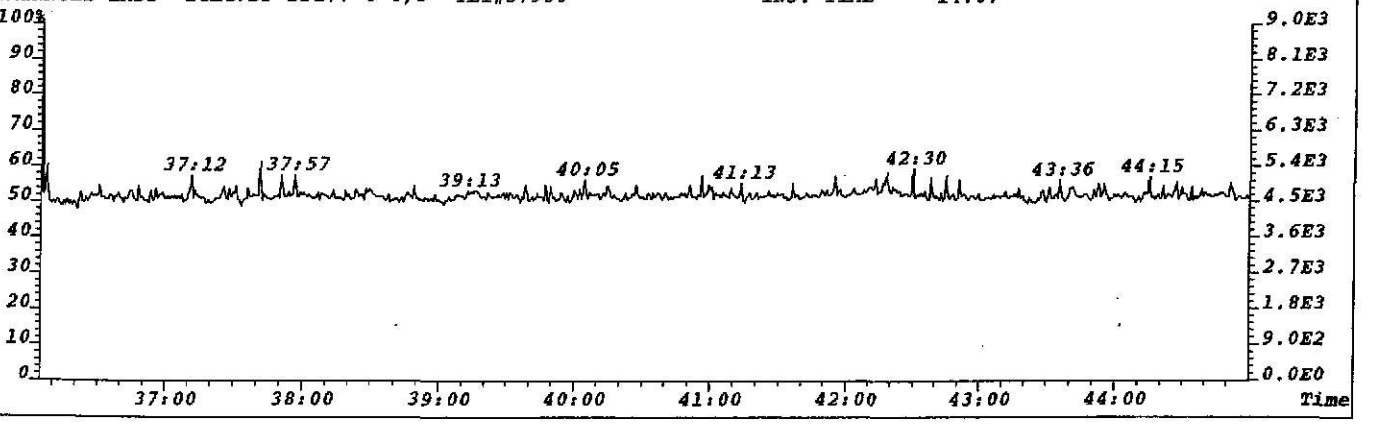
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:101
443.7399 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,404.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



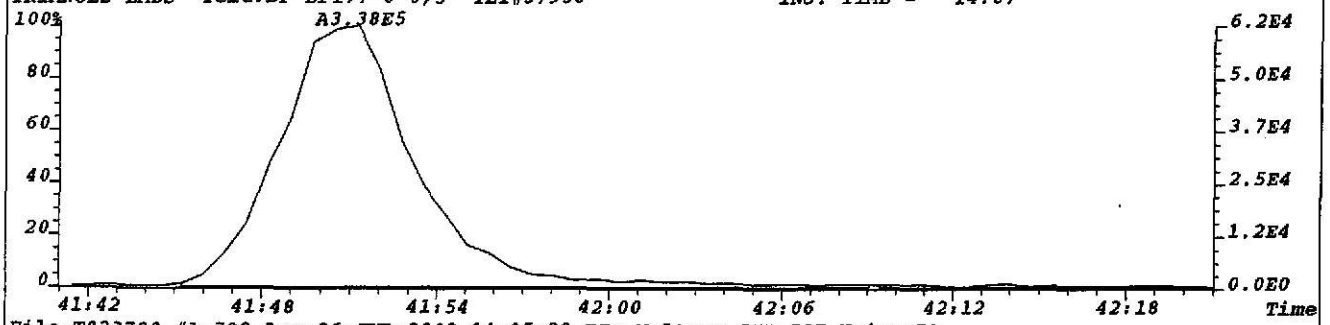
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



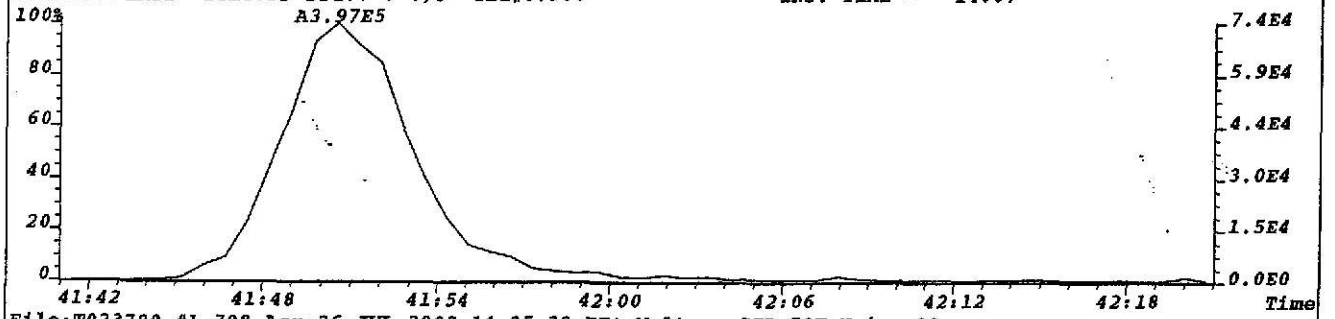
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
513.6775 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



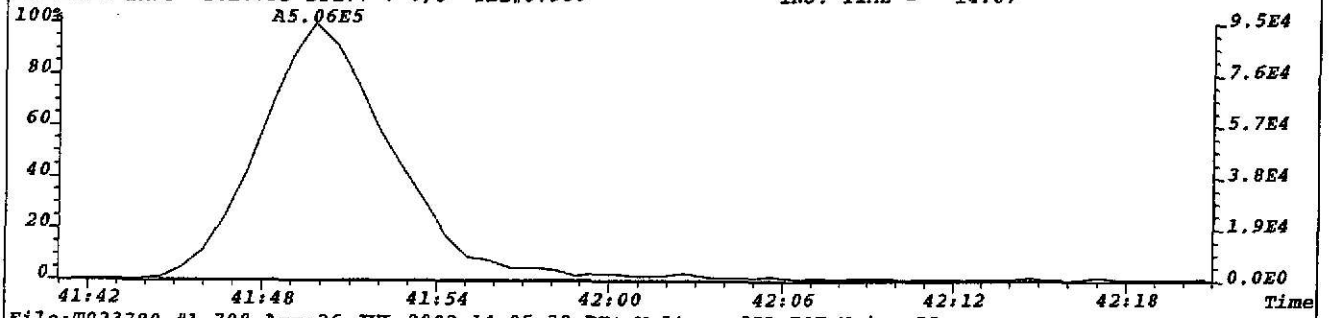
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:82
457.7377 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,328.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



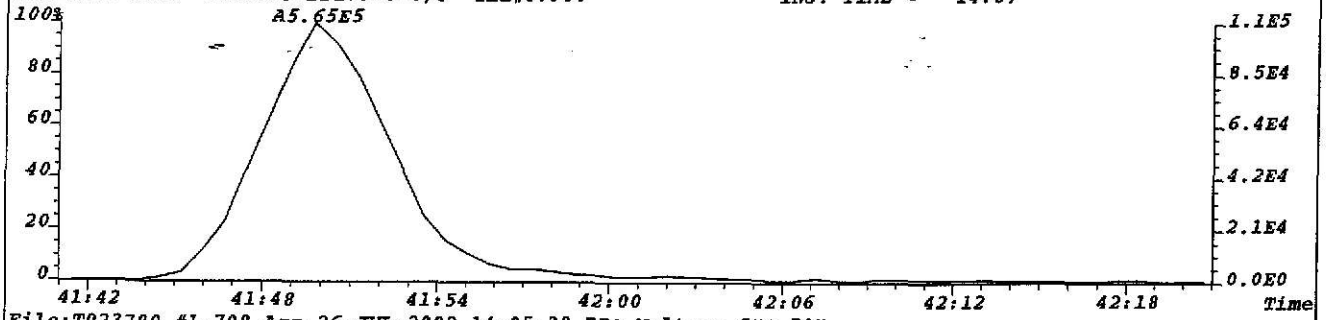
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:72
459.7348 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,288.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



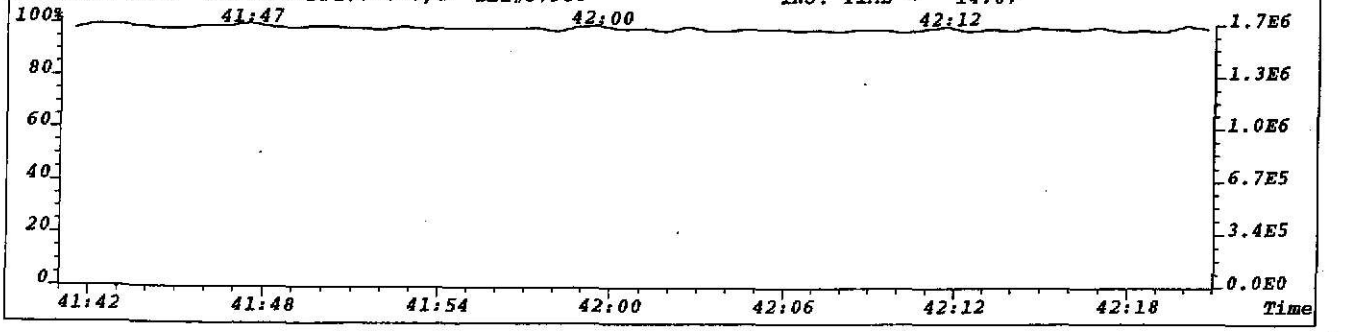
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:80
469.7779 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,320.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:75
471.7750 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,300.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



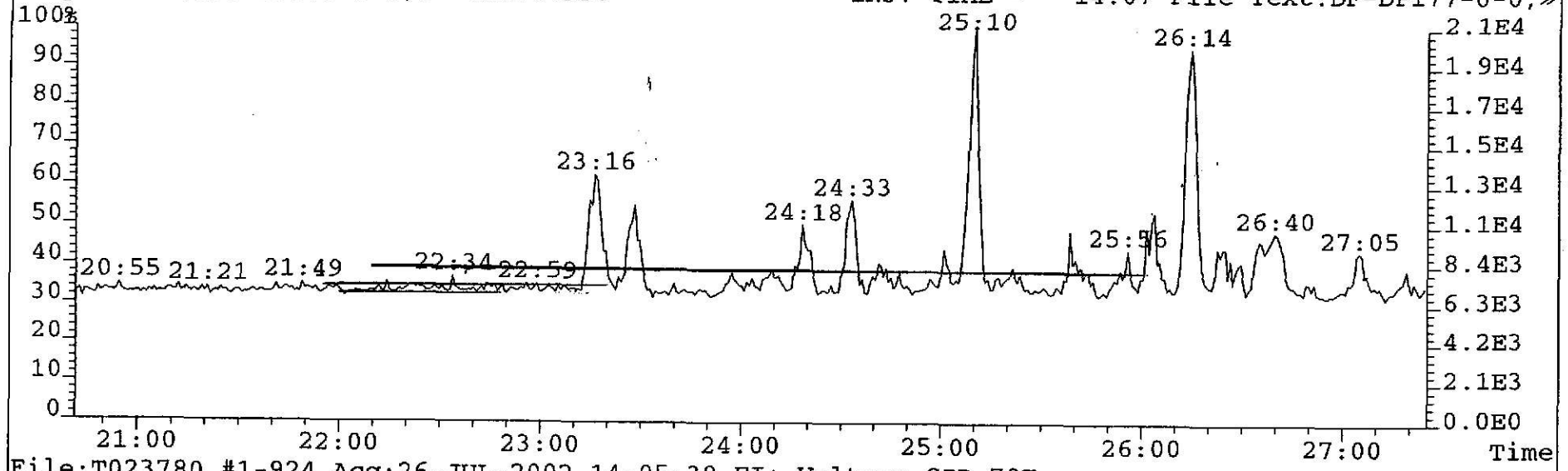
Channel I 330.9792 Peak top
Height .83 volts Span 200 ppm

System file name	NOBSUS
Data file name	A:T726021
Resolution	10000
Group number	2
Ionization mode	EI+
Switching	VOLTAGE
Ref. masses	292.9825, 416.9760

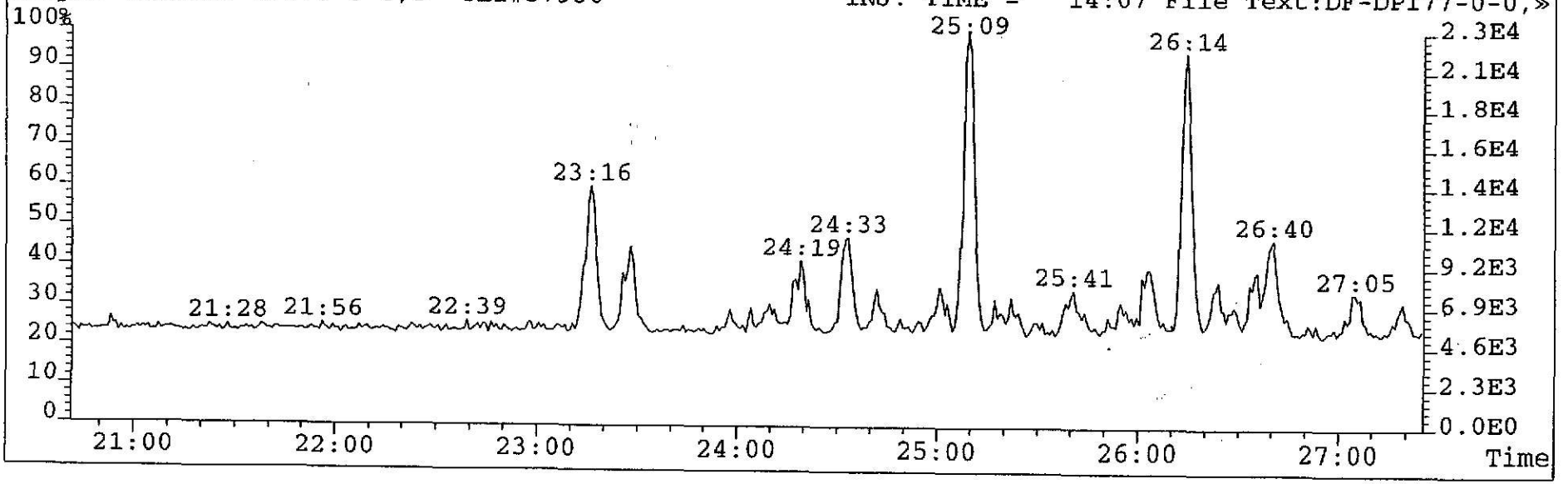
A	293	J	331	S	368
B	304	K	332	T	370
C	306	L	334	U	376
D	316	M	340	V	410
E	318	N	342		
F	[illegible]	O	[illegible]		
G	322	P	354		
H	328	Q	356		
I	331	R	358		

Ref. mass 416.9760 Peak top
Height .16 volts Span 200 ppm

File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
303.9016 F:2 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»



File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
305.8987 F:2 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»



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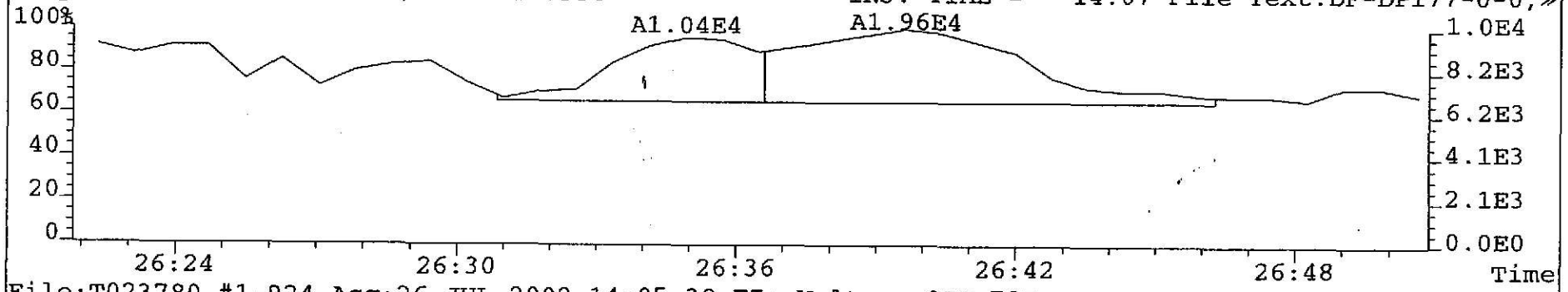
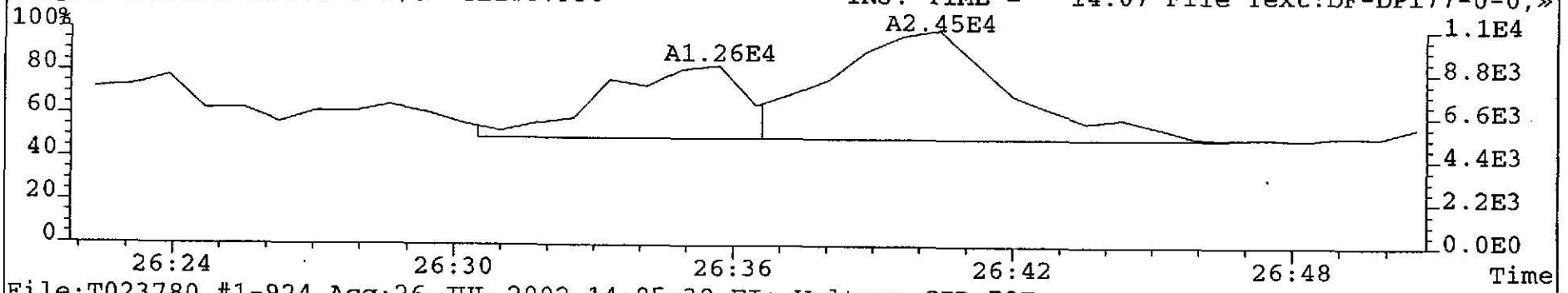
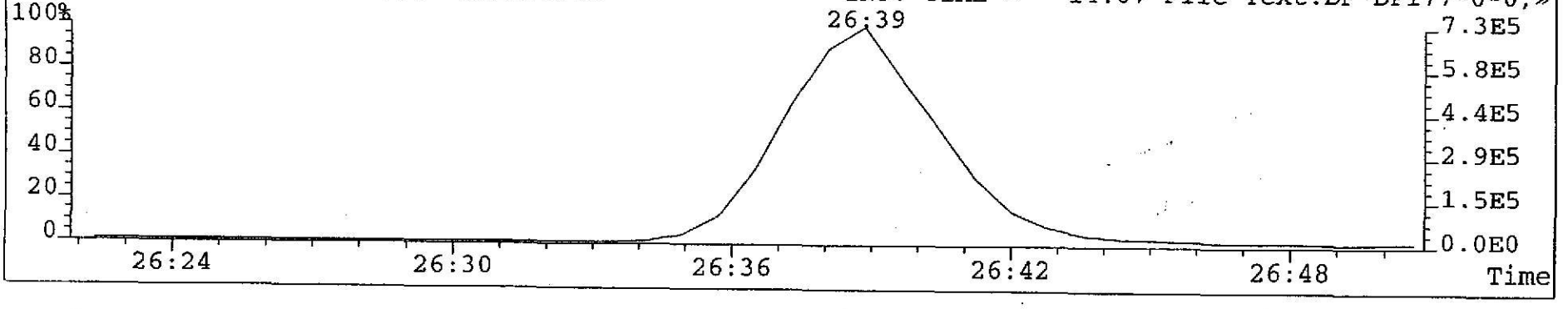
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
303.9016 F:2 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»



File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
305.8987 F:2 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»



File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
315.9419 F:2 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»



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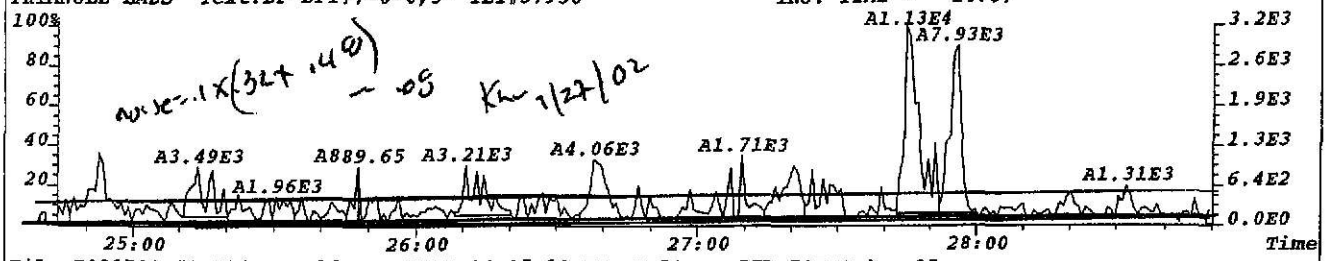
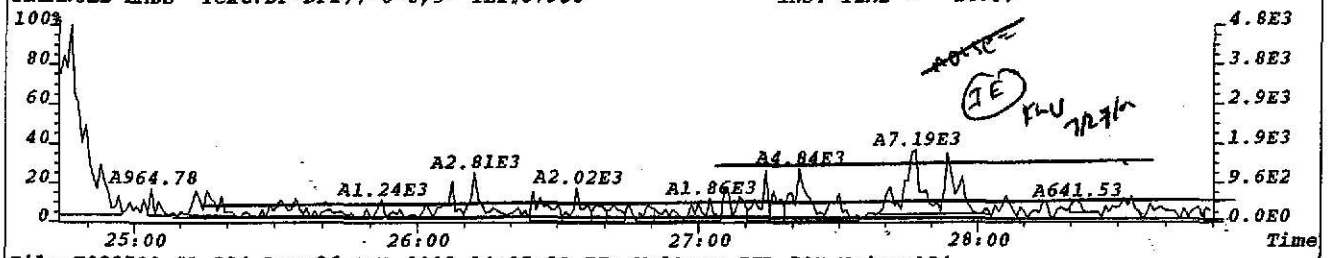
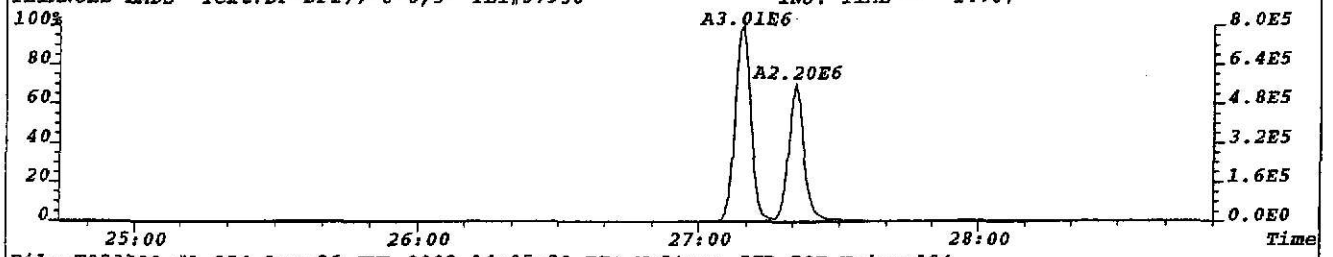
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:74
319.8965 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,296.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



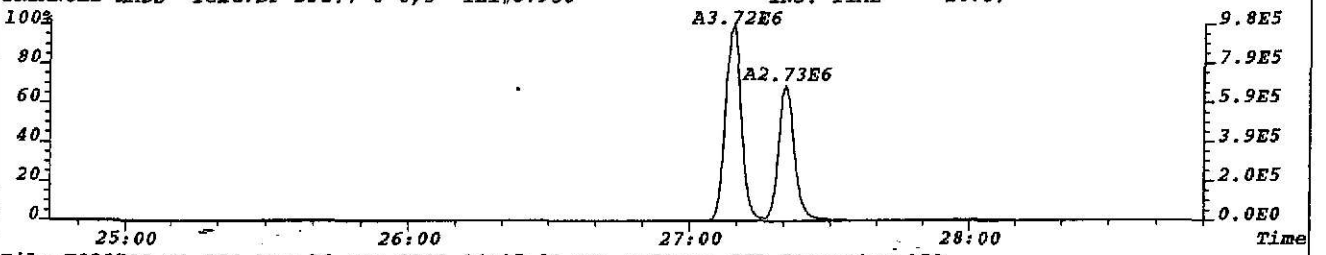
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:85
321.8936 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,340.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



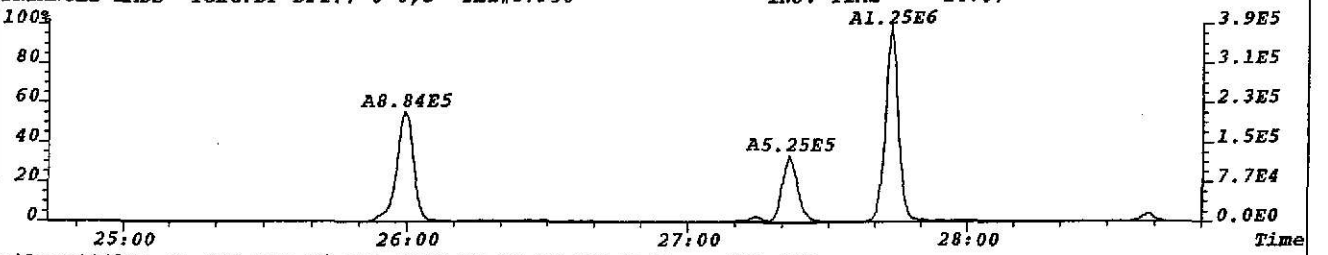
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:194
331.9368 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,776.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



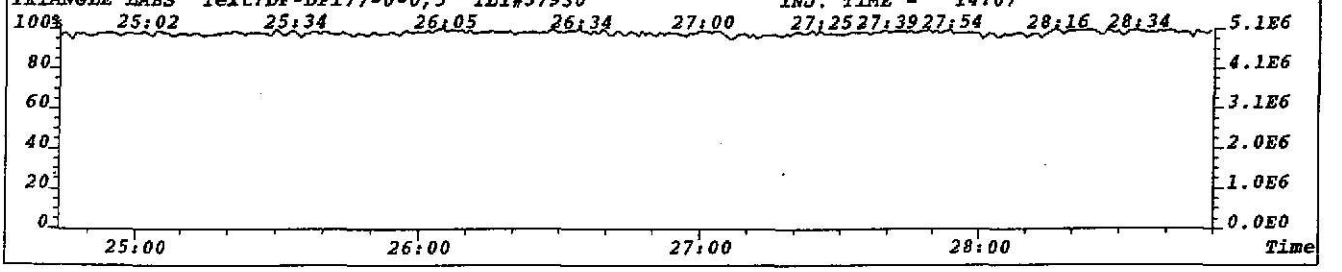
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:104
333.9338 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,416.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



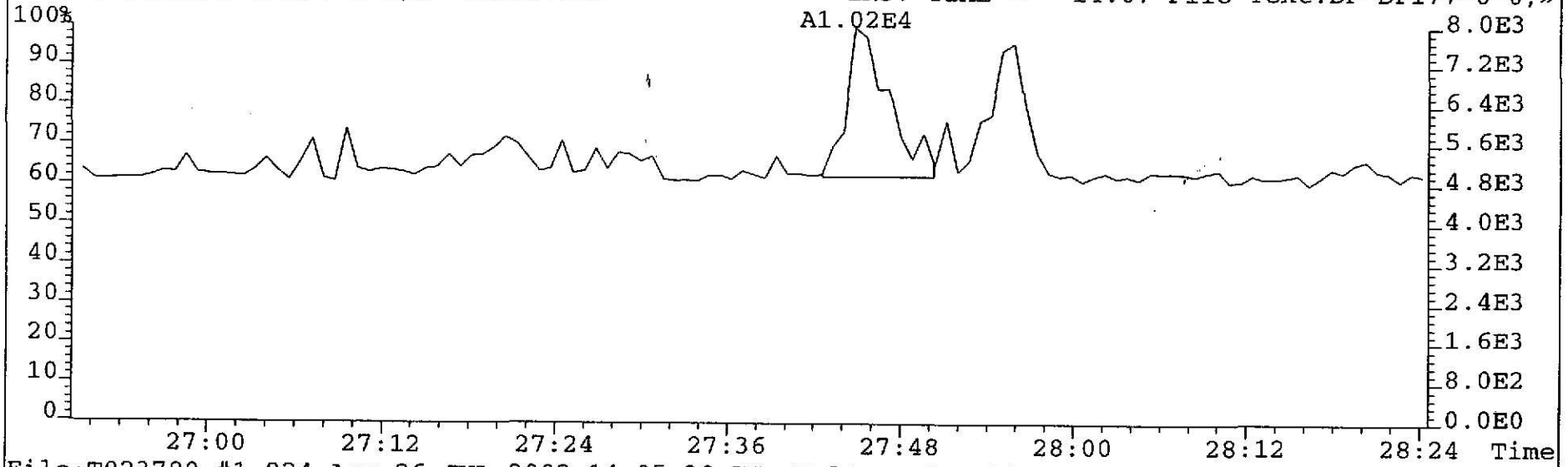
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T Noise:150
327.8847 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,600.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



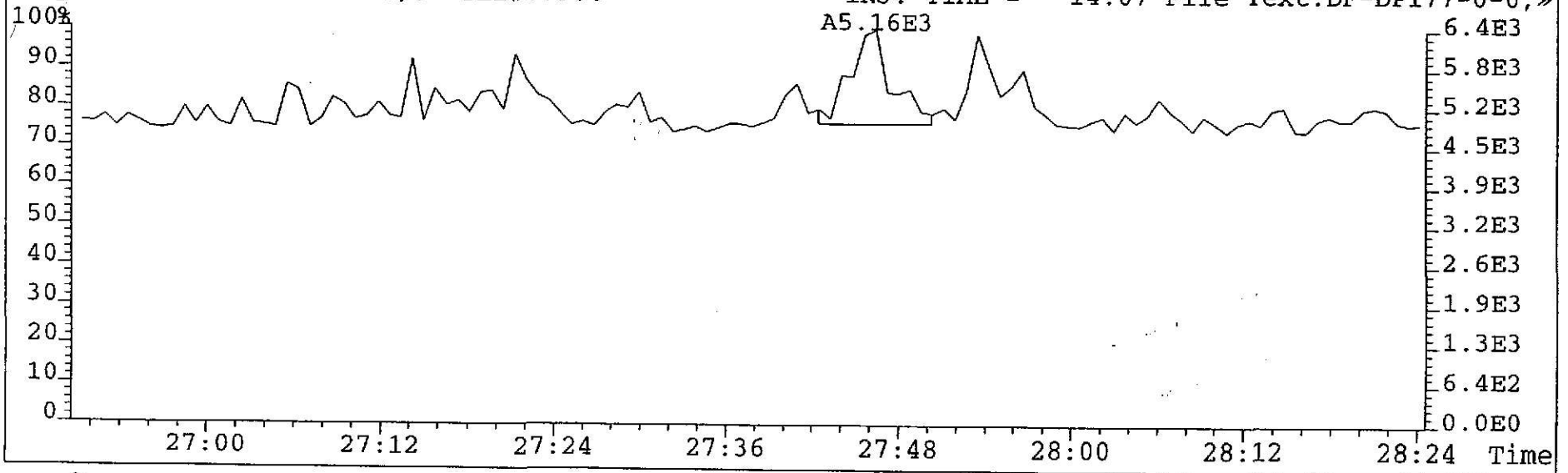
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07



File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
319.8965 F:2 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»



File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
321.8936 F:2 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»



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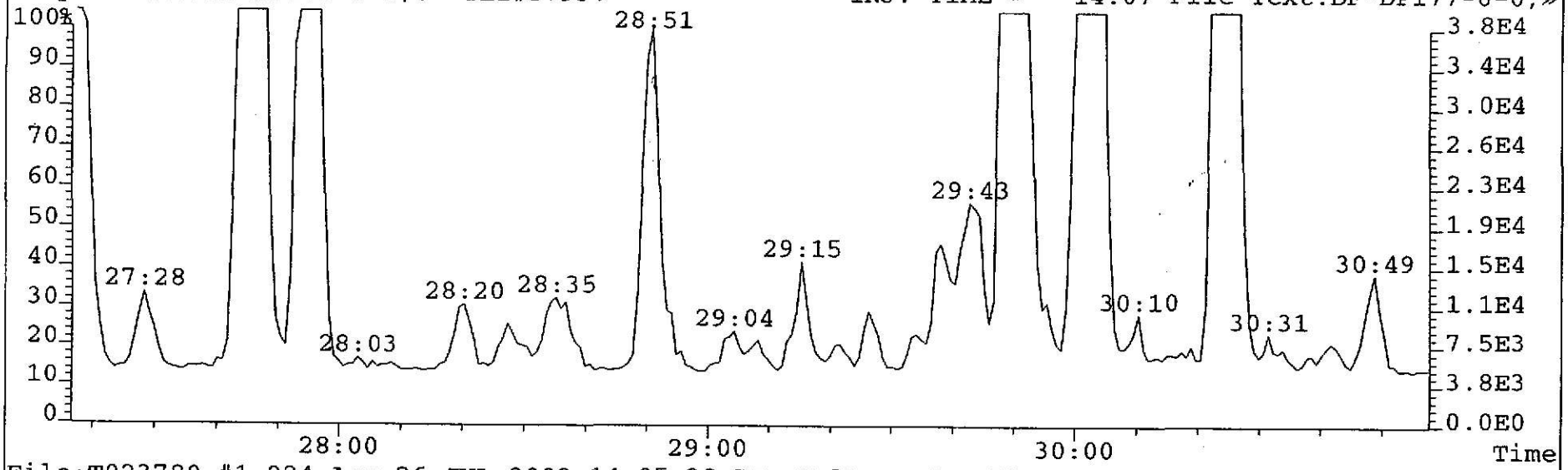
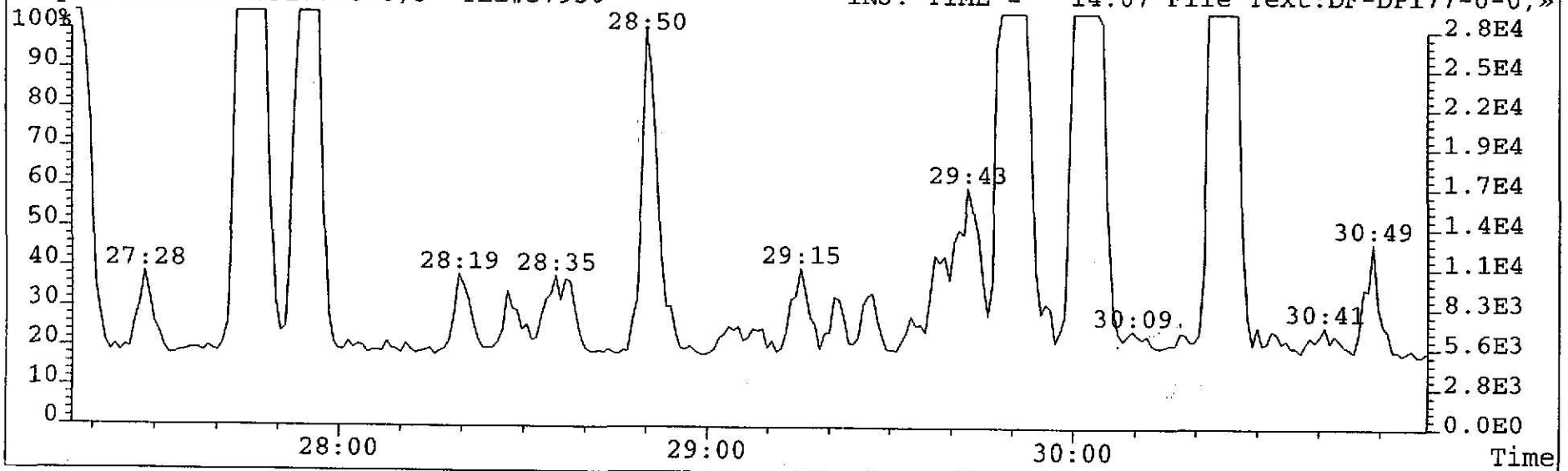
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
339.8597 F:2 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»



File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
341.8567 F:2 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»



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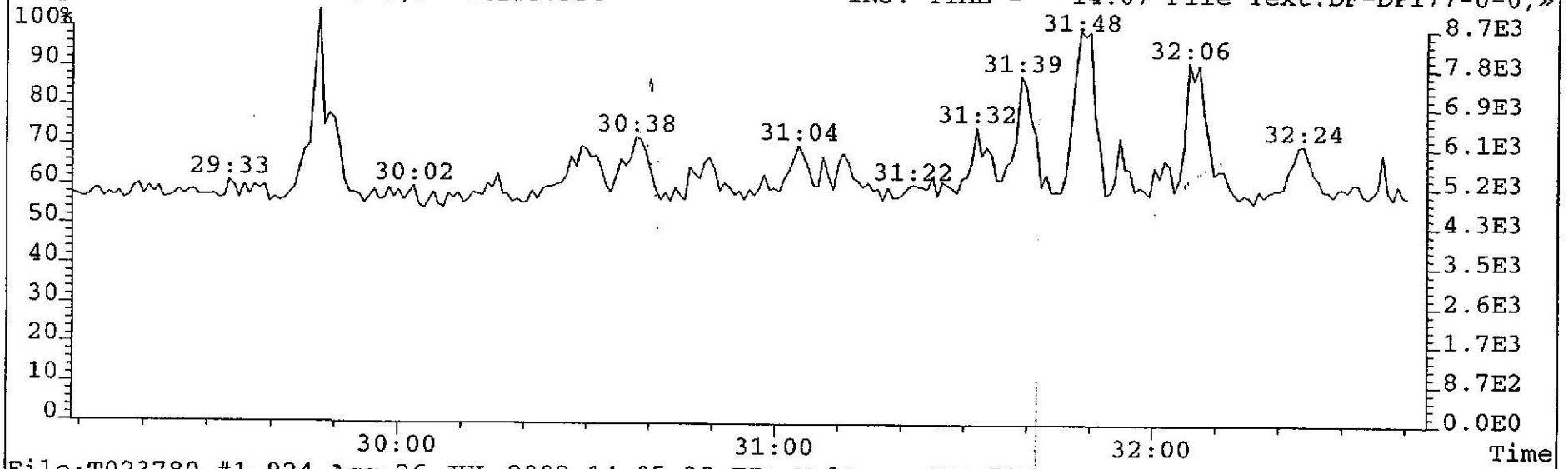
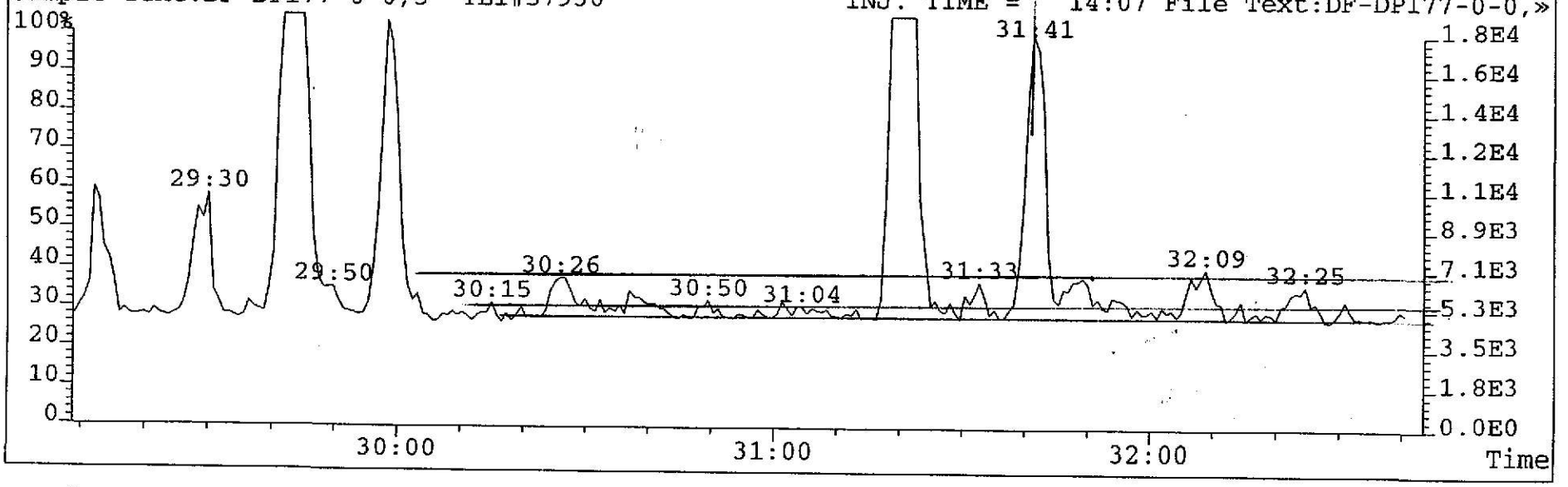
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
355.8546 F:2 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»



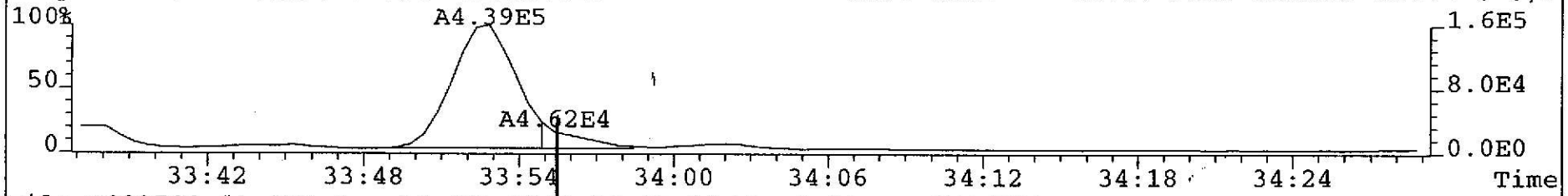
File:T023780 #1-924 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
357.8516 F:2 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»



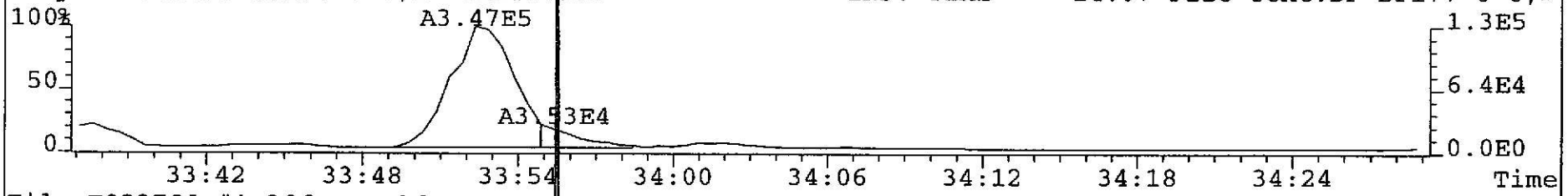
461

Kw 7/27/02

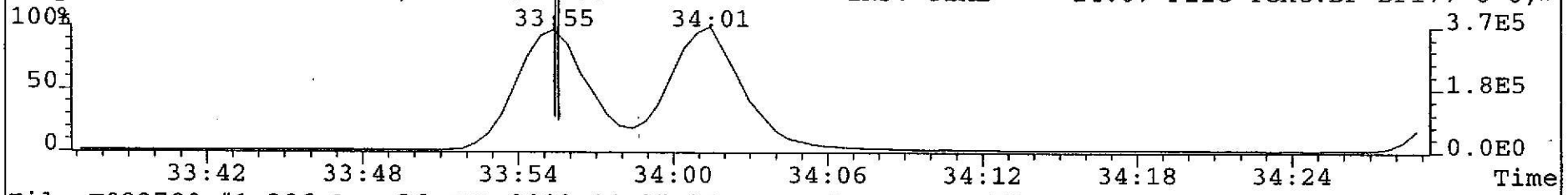
File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
373.8208 F:3 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»



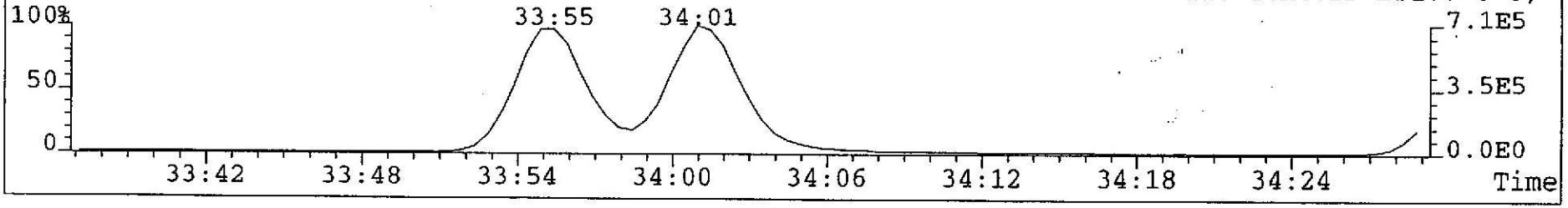
File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
375.8178 F:3 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»



File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
383.8639 F:3 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»

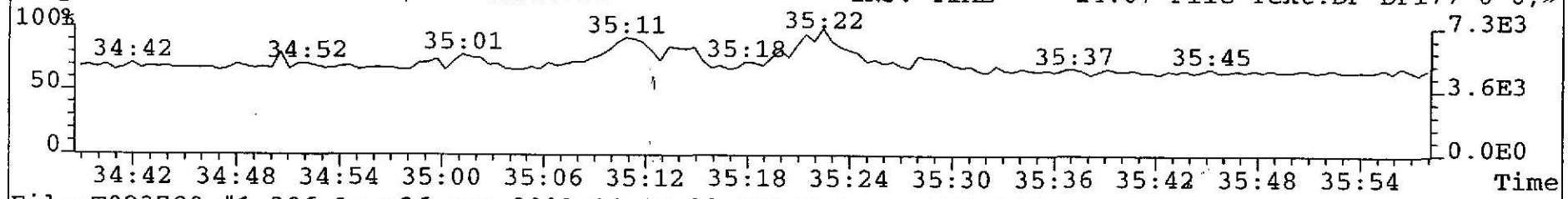


File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
385.8610 F:3 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»

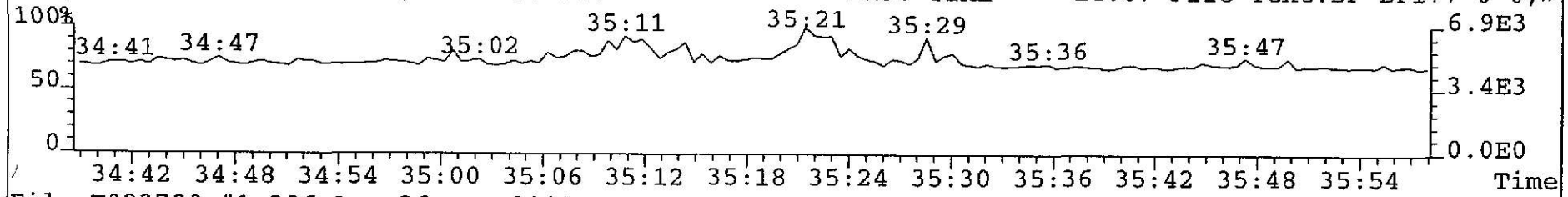


KLW 7/27/02

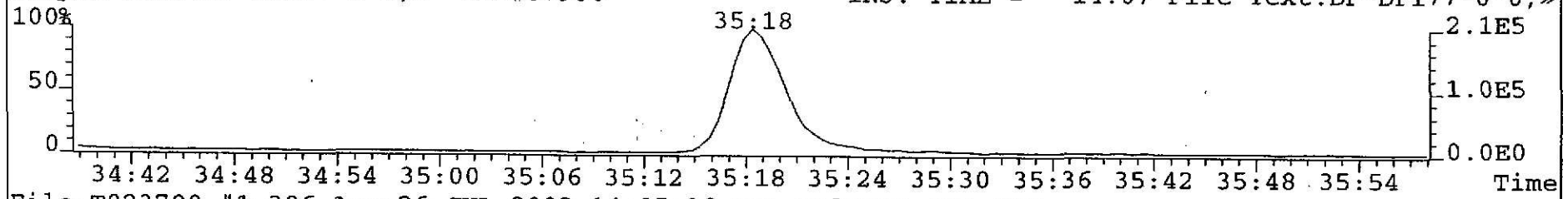
File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
373.8208 F:3 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»



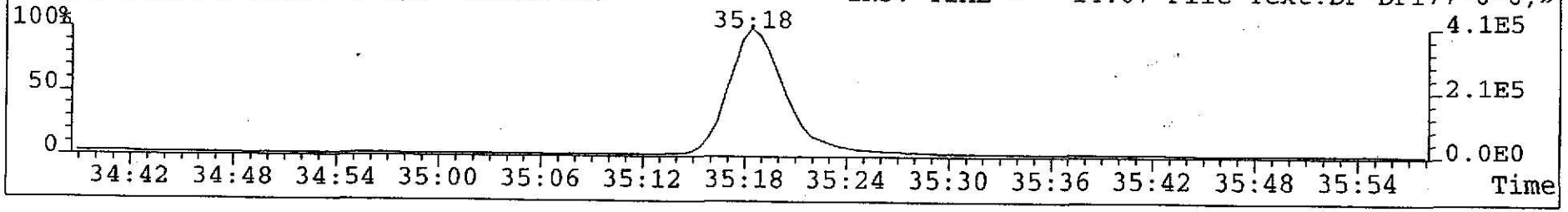
File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
375.8178 F:3 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»



File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
383.8639 F:3 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»

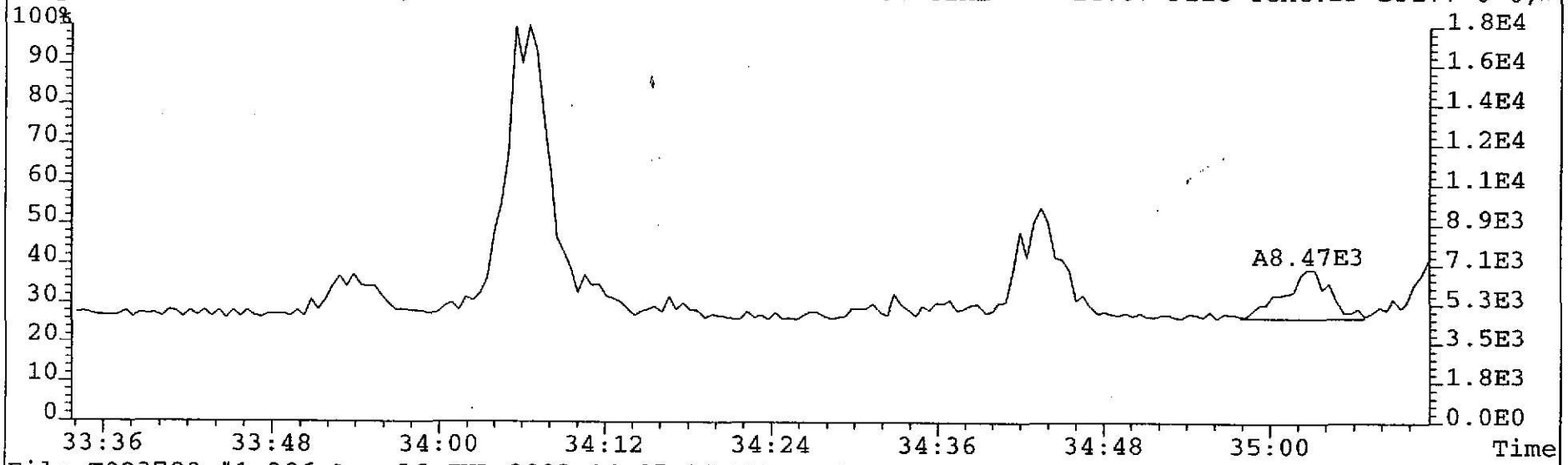


File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
385.8610 F:3 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»

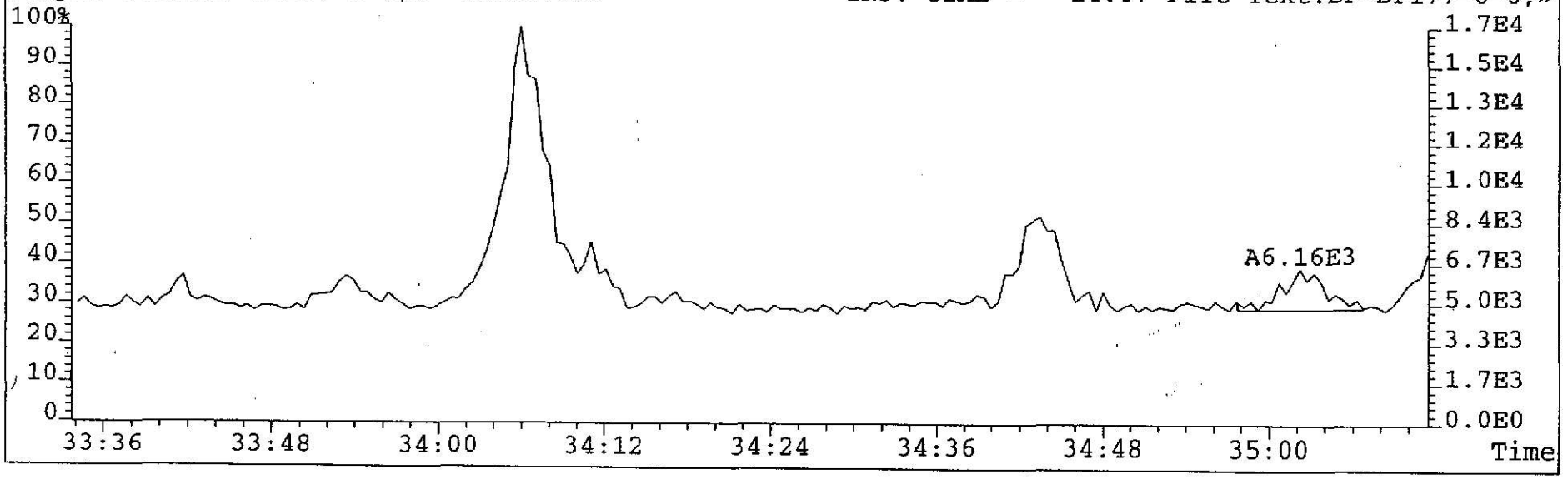


Fw 7/27/02

File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
389.8156 F:3 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»

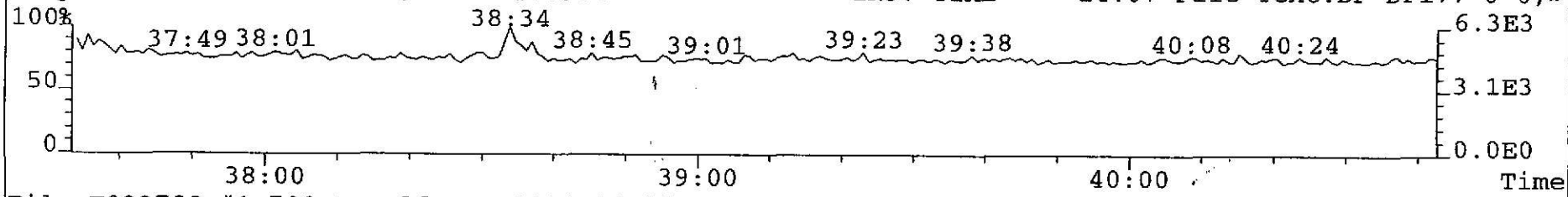


File:T023780 #1-386 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
391.8127 F:3 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»

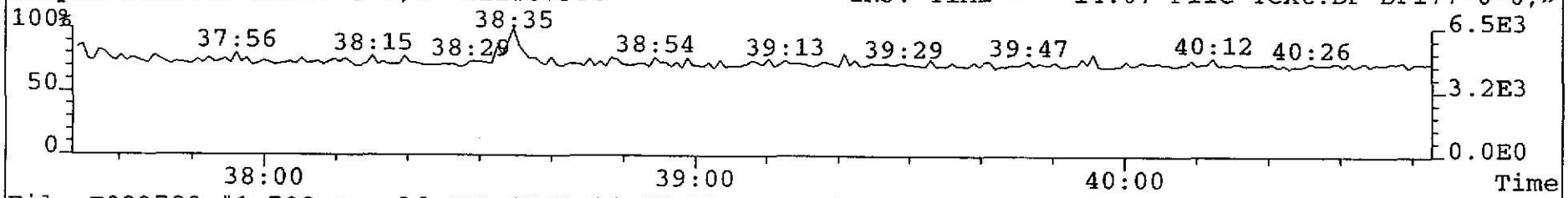


KLU 7/27/07

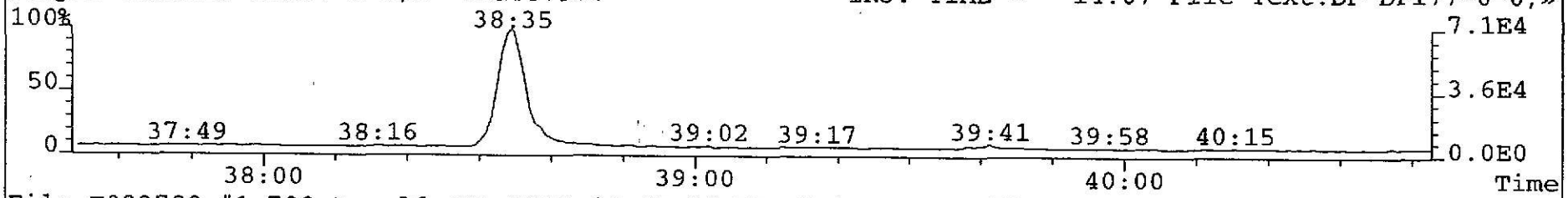
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
407.7818 F:4 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»



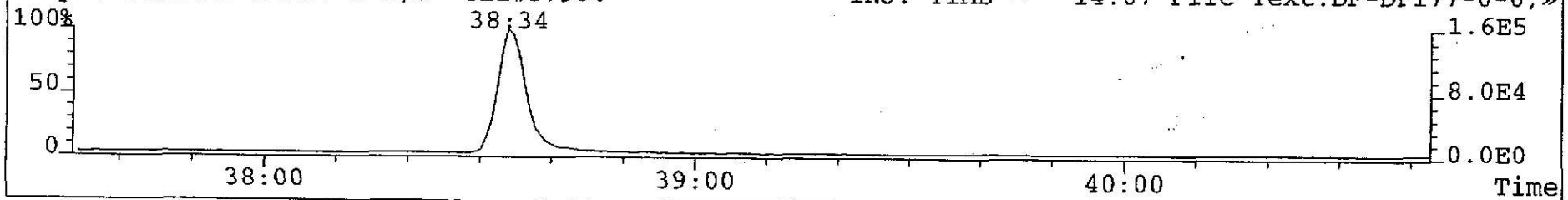
File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
409.7789 F:4 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»



File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
417.8253 F:4 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»



File:T023780 #1-708 Acq:26-JUL-2002 14:05:38 EI+ Voltage SIR 70T
419.8220 F:4 Exp:NDB5US
Sample Text:DF-DP177-0-0,5' TLI#57930 INJ. TIME = 14:07 File Text:DF-DP177-0-0,»



Kwy 1/27/02

Martin & Slagle

TLI Project: **57930** 1613, Revision B, Tetra Only PCDD/PCDF Analysis (c)
Client Sample: **DF-DP177-0-0,5′** Analysis File: **P022731**

Client Project:	**Kuhlman Electric**				
Sample Matrix:	**SOLID**	Date Received:	**07/20/2002**	Spike File:	**SPCONB2S**
TLI ID:	**331-18-14**	Date Extracted:	**07/23/2002**	ICal:	**PF56152**
		Date Analyzed:	**07/29/2002**	ConCal:	**P022724**
Sample Size:	**12.800 g**	Dilution Factor:	**n/a**	% Moisture:	**21.6**
Dry Weight:	**10.035 g**	Blank File:	**T023762**	% Lipid:	**n/a**
GC Column:	**DB-225**	Analyst:	**JLD**	% Solids:	**78.4**

Analytes	Conc. (pg/g)	DL	Ratio	RT	RRT	Flags
2,3,7,8-TCDF	ND	1.0				—

Internal Standard	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	RRT	Flags
$^{13}C_{12}$-2,3,7,8-TCDF	113	56.9	29%-140%	0.79	23:48	1.052	—

Recovery Standard	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.80	22:37	—

Data Reviewer: VJC 07/29/2002

CONB_PSR v1.00, LARS 6.25.05

Triangle Laboratories, Inc.®
2445 S. Alston Ave. • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Printed: 20:40 07/29/2002

Initial ....Date...

Data Review By: VL 7/29/02

Calculated Noise Height: 0.44

Page No. 1 Listing of P022731B.dbf
07/29/2002 Matched GC Peaks / Ratio / Ret. Time

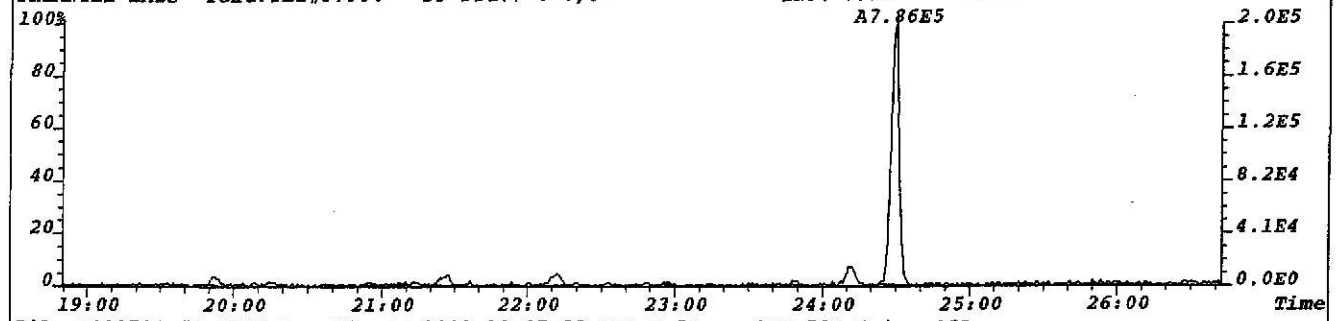
Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
TCDF				0.65-0.89						0.791-1.108			
304-306	DC	NL				Height	0.64	0.27	0.37				
	DC	SN		18:54	RO	1.03	0.63			0.794			
	DC	SN		18:57	RO	1.24	0.76			0.796			
	DC	SN		19:02	RO	0.46	0.83			0.800			
	DC	SN		19:39	RO	1.56	1.05			0.826			
	DC	SN		19:46		0.88	0.64			0.831			
				19:52		0.88	5.96	2.79	3.17	0.835			
	DC	SN		20:08	RO	0.60	1.78			0.846			
				20:15		0.70	3.80	1.57	2.23	0.851			J
	DC	SN		21:10	RO	1.26	0.95			0.889			
				21:28		0.74	9.32	3.96	5.36	0.902			
				21:53	RO	0.40	1.19	0.34	0.85	0.919			J
				22:12		0.89	10.91	5.15	5.76	0.933			
	DC	SN		22:57	RO	1.12	1.40			0.964			
D	d	SN		23:48	RO	0.54	2.22			1.000	2378-TCDF	AN	
				24:12	RO	0.99	14.78	7.35	7.43	1.017			
				24:30		0.74	184.82	78.55	106.27	1.029			
	DC	SN		25:01	RO	0.43	0.83			1.051			
	DC	WH		26:27	RO	0.59	2.08			1.111			
	DC	WH		26:41	RO	1.07	1.57			1.121			
304-306			7	Peaks			230.78						
13C12-TCDF				0.65-0.89						0.958-1.042			
316-318	DC	NL				Height	0.86	0.39	0.47				
	DC	WL		19:22		0.82	11.99			0.814			
	DC	WL		19:32	RO	0.90	2.55			0.821			
	DC	WL		19:47	RO	1.04	1.61			0.831			
	DC	WL		20:01	RO	1.13	2.92			0.841			
	DC	WL		20:25	RO	2.00	2.16			0.858			
	DC	WL		21:01	RO	2.76	1.43			0.883			
	DC	WL		21:35	RO	0.41	0.58			0.907			
	DC	WL		21:45	RO	1.69	4.06			0.914			
	DC	WL		22:00	RO	0.90	0.55			0.924			
	DC	WL		22:35	RO	2.73	2.05			0.949			
				23:48		0.79	757.82	334.59	423.23	1.000	13C12-2378-TCDF	ISO	
						Height	193.44	86.29	107.15				
	DC	SN		24:04	RO	1.10	2.35			1.011			
				24:26	RO	2.00	1.92	1.28	0.64	1.027			
	DC	SN		24:30	RO	0.34	1.95			1.029			
	DC	SN		24:37	RO	2.76	1.54			1.034			
	DC	SN		24:47	RO	0.64	2.68			1.041			
	DC	WH		24:52	RO	1.58	1.65			1.045			
	DC	WH		24:57	RO	1.11	1.52			1.048			
	DC	WH		25:43	RO	1.38	0.95			1.081			
	DC	WH		26:02	RO	0.58	6.48			1.094			
316-318			2	Peaks			759.74						

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: TCDF / TCDD Follows ----------													
13C12-TCDD						0.65-0.89				0.910-1.090			
332-334	DC	NL				Height	1.01	0.60	0.41				
	DC	WL		19:48	RO	0.21	1.37			0.889			
	DC	WL		19:55	RO	4.16	0.98			0.894			
	DC	WL		20:02	RO	2.52	1.55			0.899			
	DC	WL		20:05	RO	1.08	0.77			0.901			
	DC	SN		21:50	RO	2.59	1.04			0.980			
	DC	SN		21:53	RO	0.64	0.95			0.982			
				22:17		0.78	635.91	278.86	357.05	1.000	13C12-2378-TCDD	IS1	
						Height	166.07	72.76	93.31				
	DC	SN		22:27	RO	1.98	1.49			1.007			
				22:37		0.80	877.13	391.10	486.03	1.015	13C12-1234-TCDD	RS1	
332-334			2 Peaks				1,513.04						

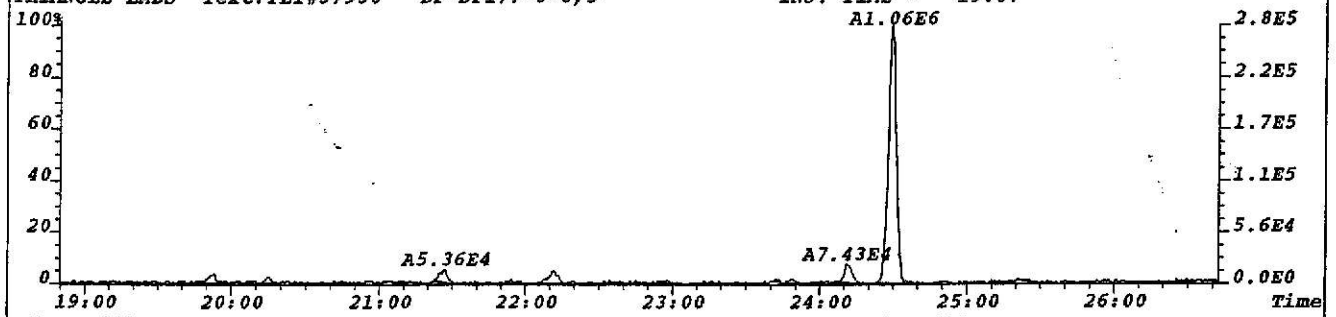
Column Description.....	"Why" Code Description.....	QC Log Desc.....
M_Z -Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT. -Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK -RO=Ratio Outside 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 ***

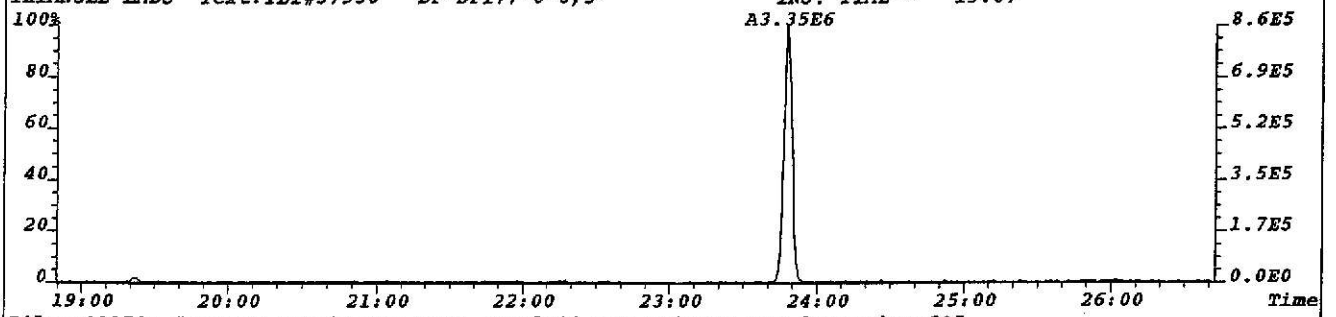
File:P022731 #1-3027 Acq:29-JUL-2002 19:07:22 EI+ Voltage SIR 70P Noise:336
303.9016 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,1344.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-0-0,5' INJ. TIME = 19:07



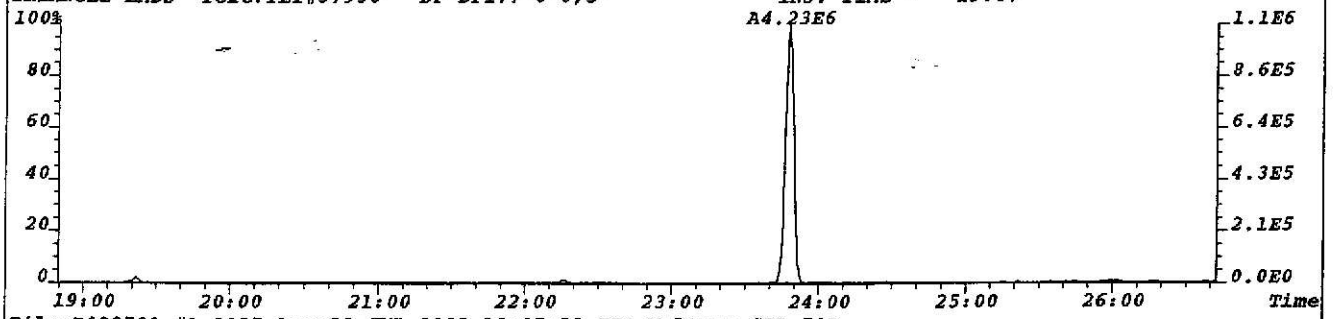
File:P022731 #1-3027 Acq:29-JUL-2002 19:07:22 EI+ Voltage SIR 70P Noise:460
305.8987 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,1840.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-0-0,5' INJ. TIME = 19:07



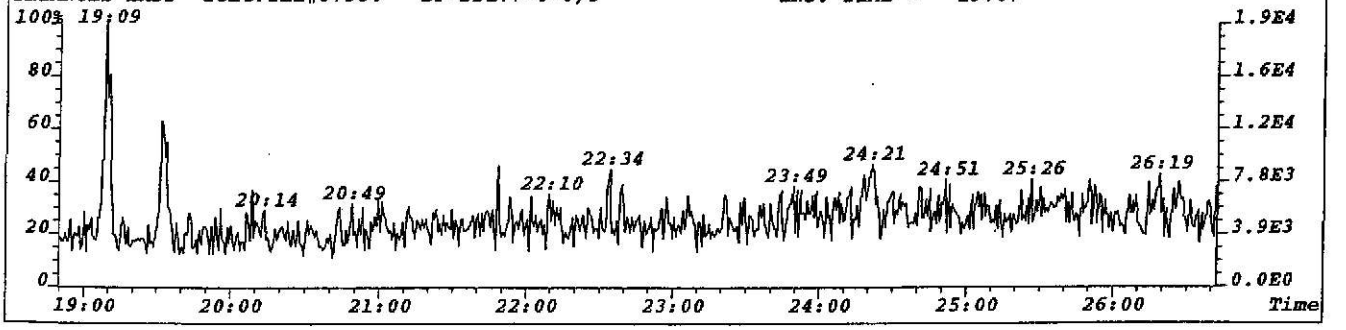
File:P022731 #1-3027 Acq:29-JUL-2002 19:07:22 EI+ Voltage SIR 70P Noise:488
315.9419 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,1952.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-0-0,5' INJ. TIME = 19:07



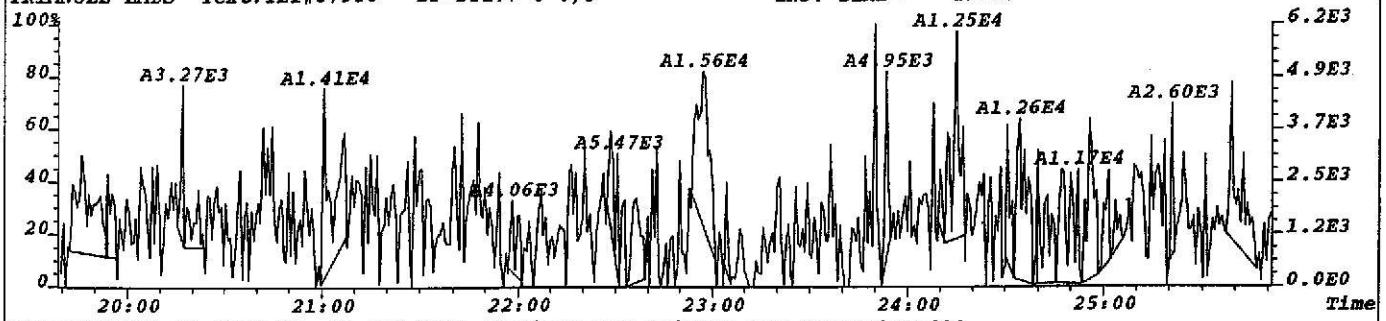
File:P022731 #1-3027 Acq:29-JUL-2002 19:07:22 EI+ Voltage SIR 70P Noise:585
317.9389 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,2340.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-0-0,5' INJ. TIME = 19:07



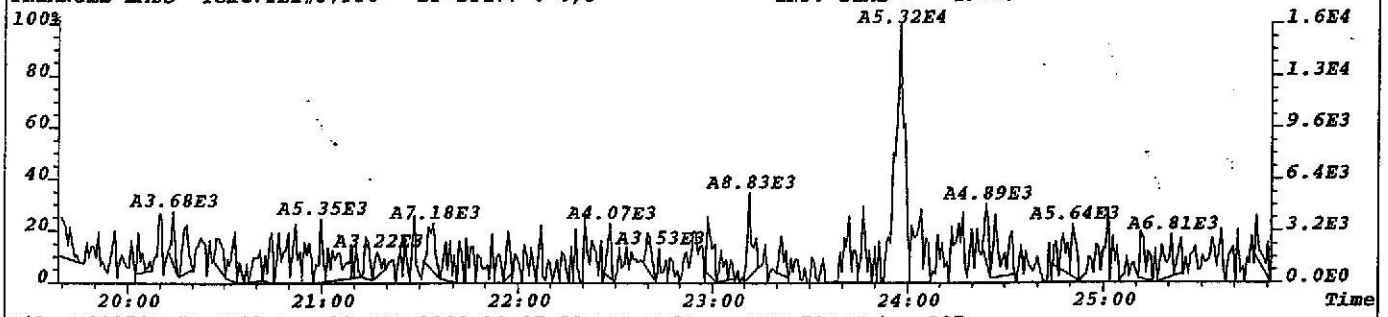
File:P022731 #1-3027 Acq:29-JUL-2002 19:07:22 EI+ Voltage SIR 70P
375.8364 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-0-0,5' INJ. TIME = 19:07



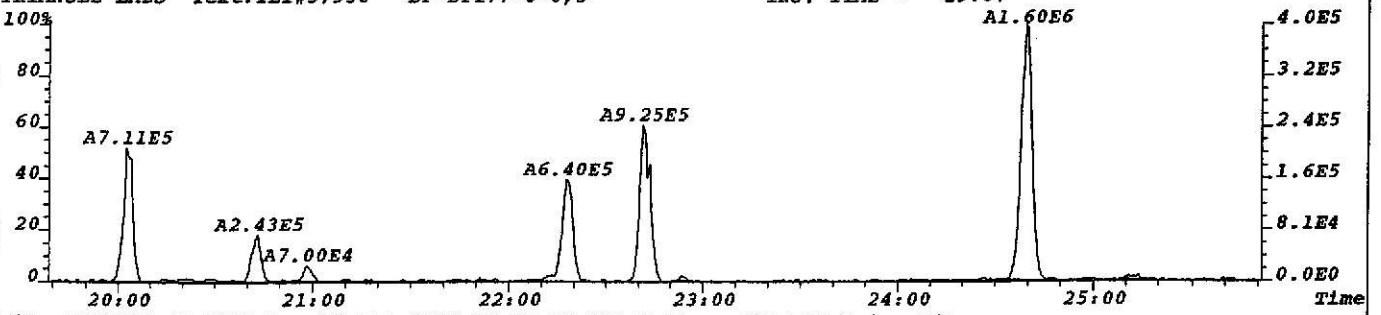
File:P022731 #1-3027 Acq:29-JUL-2002 19:07:22 EI+ Voltage SIR 70P Noise:508
319.8965 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,2032.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-0-0,5' INJ. TIME = 19:07



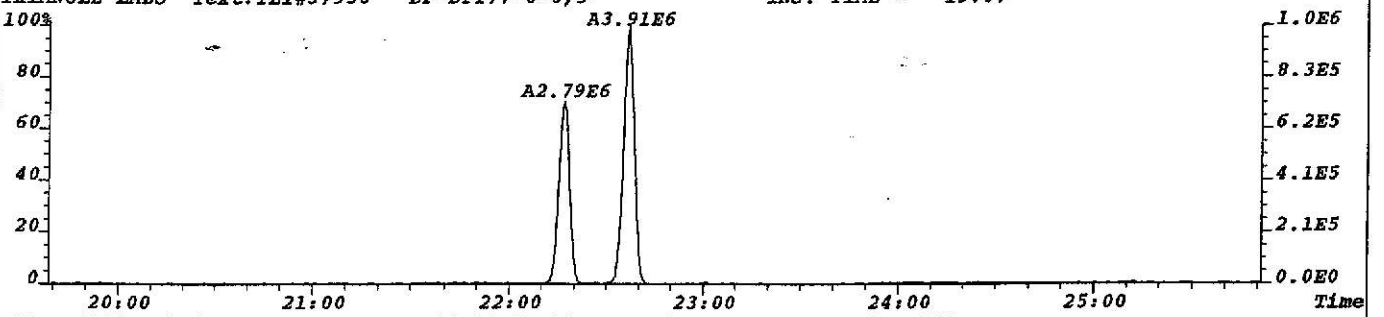
File:P022731 #1-3027 Acq:29-JUL-2002 19:07:22 EI+ Voltage SIR 70P Noise:434
321.8936 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,1736.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-0-0,5' INJ. TIME = 19:07



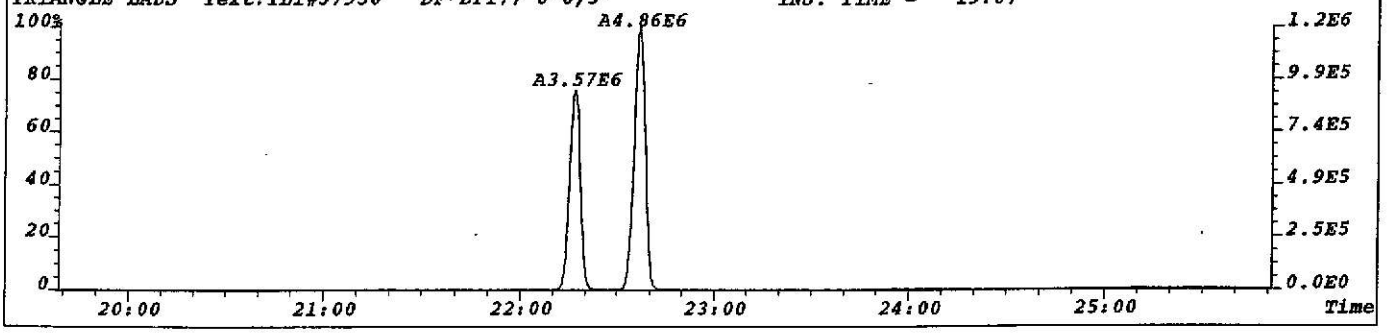
File:P022731 #1-3027 Acq:29-JUL-2002 19:07:22 EI+ Voltage SIR 70P Noise:397
327.8847 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,1588.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-0-0,5' INJ. TIME = 19:07



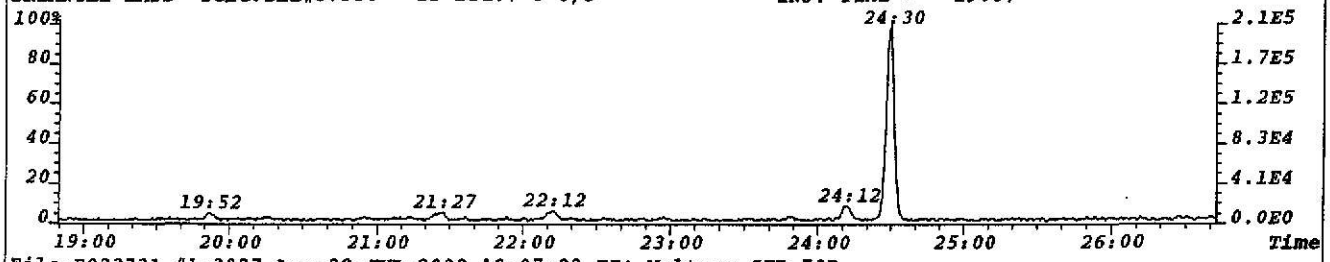
File:P022731 #1-3027 Acq:29-JUL-2002 19:07:22 EI+ Voltage SIR 70P Noise:753
331.9368 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,3012.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-0-0,5' INJ. TIME = 19:07



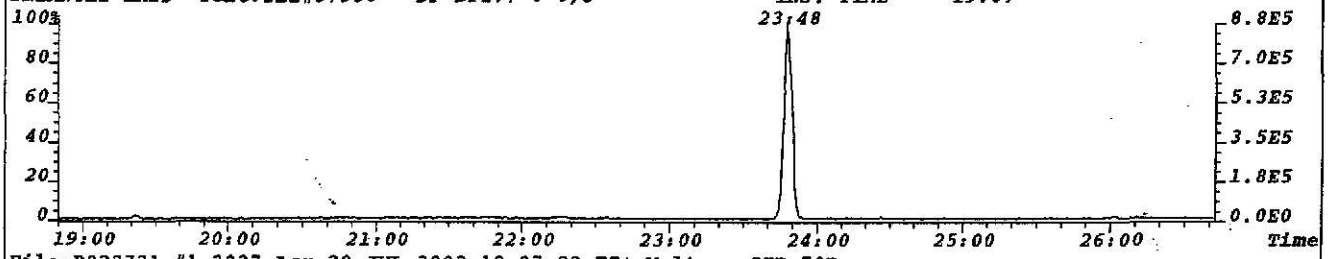
File:P022731 #1-3027 Acq:29-JUL-2002 19:07:22 EI+ Voltage SIR 70P Noise:518
333.9338 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,2072.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-0-0,5' INJ. TIME = 19:07



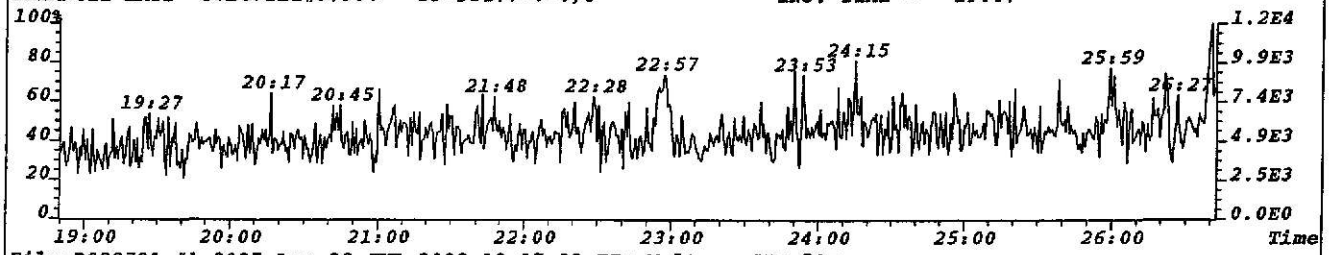
File:P022731 #1-3027 Acq:29-JUL-2002 19:07:22 EI+ Voltage SIR 70P
303.9016 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-0-0,5' INJ. TIME = 19:07



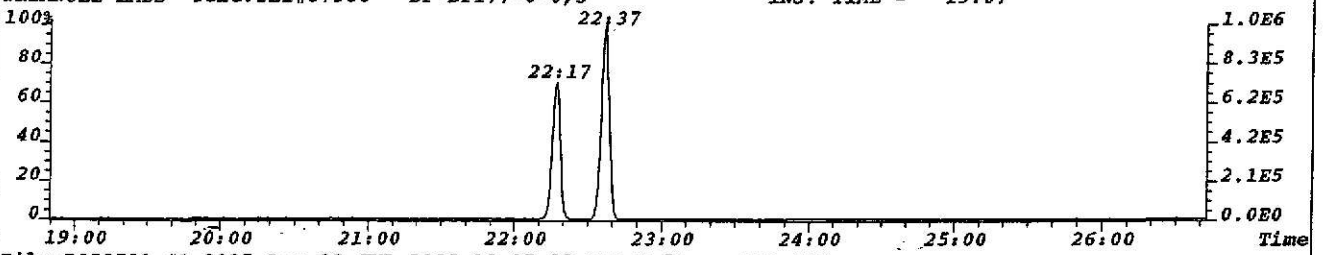
File:P022731 #1-3027 Acq:29-JUL-2002 19:07:22 EI+ Voltage SIR 70P
315.9419 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-0-0,5' INJ. TIME = 19:07



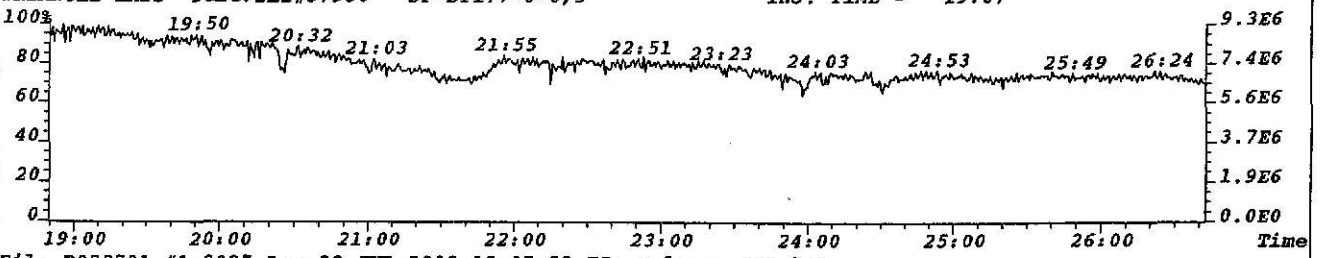
File:P022731 #1-3027 Acq:29-JUL-2002 19:07:22 EI+ Voltage SIR 70P
319.8965 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-0-0,5' INJ. TIME = 19:07



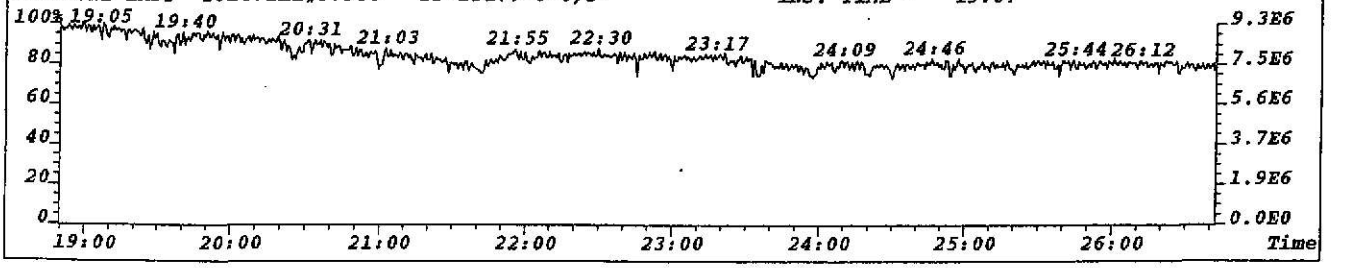
File:P022731 #1-3027 Acq:29-JUL-2002 19:07:22 EI+ Voltage SIR 70P
331.9368 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-0-0,5' INJ. TIME = 19:07

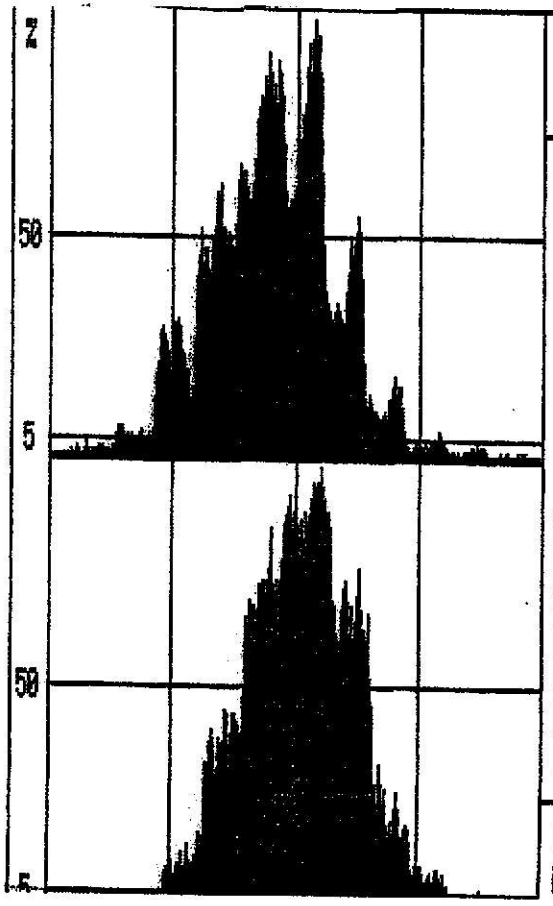


File:P022731 #1-3027 Acq:29-JUL-2002 19:07:22 EI+ Voltage SIR 70P
292.9825 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-0-0,5' INJ. TIME = 19:07



File:P022731 #1-3027 Acq:29-JUL-2002 19:07:22 EI+ Voltage SIR 70P
330.9792 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-0-0,5' INJ. TIME = 19:07





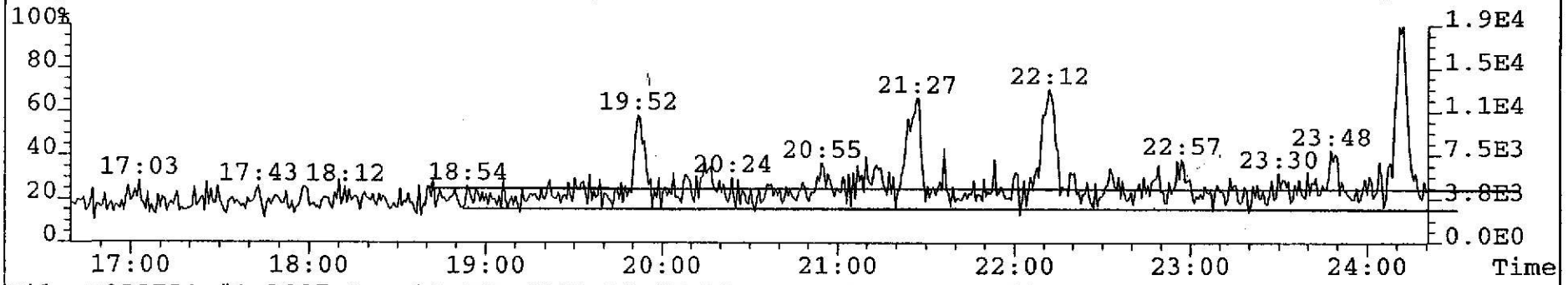
Channel I 330.9792 Peak top
Height 1.81 volts Span 200 ppm

System file name	D8225
Data file name	A:P729022
Resolution	10000
Group number	1
Ionization mode	EI+
Switching	VOLTAGE
Ref. masses	292.9825, 380.9761

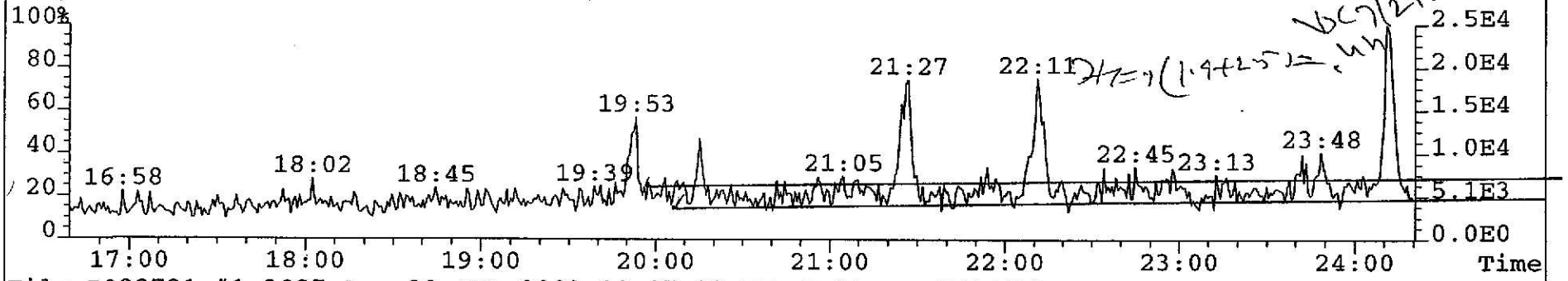
A	292.9825	J	330.9792
B	303.9016	K	331.9368
C	305.8987	L	333.9338
D	315.9419	M	375.8364
E	317.9389		
F	319.8965		
G	321.8936		
H	327.8847		
I	330.9792		

Ref. mass 380.9761 Peak top
Height .95 volts Span 200 ppm

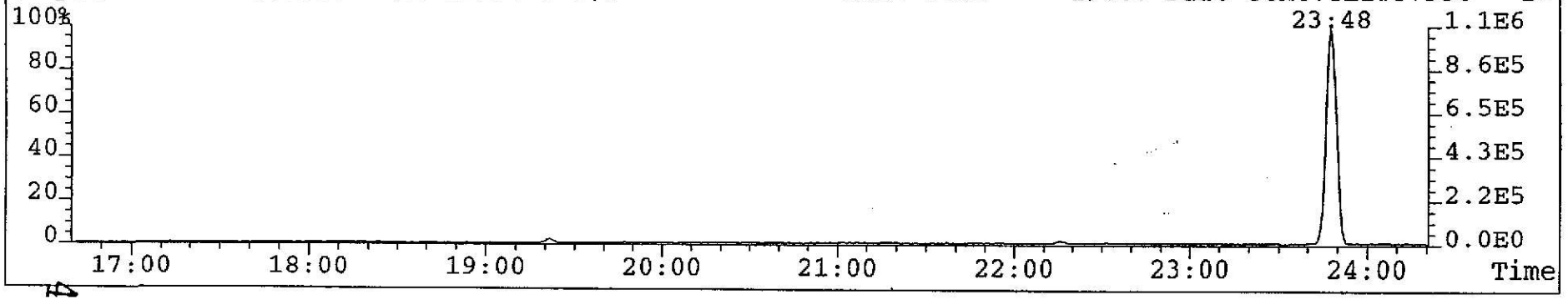
File:P022731 #1-3027 Acq:29-JUL-2002 19:07:22 EI+ Voltage SIR 70P
303.9016 Exp:DB225
Sample Text:TLI#57930 DF-DP177-0-0,5' INJ. TIME = 19:07 File Text:TLI#57930 D»



File:P022731 #1-3027 Acq:29-JUL-2002 19:07:22 EI+ Voltage SIR 70P
305.8987 Exp:DB225
Sample Text:TLI#57930 DF-DP177-0-0,5' INJ. TIME = 19:07 File Text:TLI#57930 D»



File:P022731 #1-3027 Acq:29-JUL-2002 19:07:22 EI+ Voltage SIR 70P
317.9389 Exp:DB225
Sample Text:TLI#57930 DF-DP177-0-0,5' INJ. TIME = 19:07 File Text:TLI#57930 D»



Martin & Slagle

TLI Project: **57930** — 1613, Revision B PCDD/PCDF Analysis (c)

Client Sample: **DF-DP177-0,5'-1'** — Analysis File: **T023781**

Client Project:	Kuhlman Electric				
Sample Matrix:	SOLID	Date Received:	07/20/2002	Spike File:	SP161B2S
TLI ID:	331-18-15	Date Extracted:	07/23/2002	ICal:	TF5612B
		Date Analyzed:	07/26/2002	ConCal:	TB23771
Sample Size:	12.800 g	Dilution Factor:	n/a	% Moisture:	21.3
Dry Weight:	10.074 g	Blank File:	T023762	% Lipid:	n/a
GC Column:	DB-5	Analyst:	JMM	% Solids:	78.7

Analytes	Conc. (pg/g)	DL	Ratio	RT	RRT	Flags
2,3,7,8-TCDD	ND	0.4				—
1,2,3,7,8-PeCDD	ND	0.3				—
1,2,3,4,7,8-HxCDD	ND	0.7				—
1,2,3,6,7,8-HxCDD	1.3		1.23	34:43	1.000	J
1,2,3,7,8,9-HxCDD	1.3		1.08	35:02	1.010	J
1,2,3,4,6,7,8-HpCDD	6.1		1.06	38:04	1.001	—
1,2,3,4,6,7,8,9-OCDD	133		0.88	41:51	1.000	—
2,3,7,8-TCDF	0.93		0.80	26:40	1.001	J
1,2,3,7,8-PeCDF	ND	1.0				—
2,3,4,7,8-PeCDF	1.0		1.32	31:13	1.001	J
1,2,3,4,7,8-HxCDF	1.8		1.13	33:55	1.000	J
1,2,3,6,7,8-HxCDF	1.1		1.22	34:02	1.000	J
2,3,4,6,7,8-HxCDF	1.3		1.27	34:31	1.000	J
1,2,3,7,8,9-HxCDF	ND	0.4				—
1,2,3,4,6,7,8-HpCDF	25.7		1.00	36:59	1.000	—
1,2,3,4,7,8,9-HpCDF	ND	1.3				—
1,2,3,4,6,7,8,9-OCDF	10.4		0.85	42:03	1.005	—

Totals	Conc. (pg/g)	Number	DL	Flags
Total TCDD	ND		0.4	—
Total PeCDD	ND		2.5	—
Total HxCDD	4.1	3		—
Total HpCDD	13.0	2		—
Total TCDF	44.6	10		—
Total PeCDF	118	15		—
Total HxCDF	64.8	11		—
Total HpCDF	39.5	2		—

161B_PSR v2.04, LARS 6.25.05

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Printed: 13:03 07/27/2002

TLI Project: 57930 — 1613, Revision B PCDD/PCDF Analysis (c)

Client Sample: DF-DP177-0,5'-1' — Analysis File: T023781

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	RRT	Flags
$^{13}C_{12}$-2,3,7,8-TCDD	131	65.8	25%-164%	0.81	27:20	1.007	—
$^{13}C_{12}$-1,2,3,7,8-PeCDD	110	55.6	25%-181%	1.50	31:32	1.161	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	175	88.1	32%-141%	1.22	34:37	0.988	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	177	89.1	28%-130%	1.22	34:42	0.990	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	121	61.0	23%-140%	1.03	38:02	1.086	—
$^{13}C_{12}$-1,2,3,4,6,7,8,9-OCDD	121	30.4	17%-157%	0.90	41:50	1.194	—
$^{13}C_{12}$-2,3,7,8-TCDF	158	79.4	24%-169%	0.76	26:39	0.982	—
$^{13}C_{12}$-1,2,3,7,8-PeCDF	118	59.6	24%-185%	1.46	30:31	1.124	—
$^{13}C_{12}$-2,3,4,7,8-PeCDF	114	57.3	21%-178%	1.50	31:12	1.149	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	191	96.1	26%-152%	0.51	33:55	0.968	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	212	107	26%-123%	0.50	34:01	0.971	—
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	214	108	28%-136%	0.51	34:31	0.985	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	185	93.4	29%-147%	0.51	35:18	1.008	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	147	74.2	28%-143%	0.44	36:59	1.056	—
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	122	61.5	26%-138%	0.44	38:34	1.101	—

Cleanup Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	RRT	Flags
$^{37}Cl_4$-2,3,7,8-TCDD	13.6	68.4	35%-197%	27:21	1.007	—

Recovery Standards	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.82	27:09	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.19	35:02	—

Data Reviewer: KL 07/27/2002

161B_PSR v2.04, LARS 6.25.05

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Printed: 13:03 07/27/2002

Martin & Slagle

TLI Project: **57930**
Client Sample: **DF-DP177-0,5'-1'**

Toxicity Equivalents Report
Analysis File: **T023781**

Client Project:	**Kuhlman Electric**				
Sample Matrix:	**SOLID**	Date Received:	**07/20/02**	Spike File:	**SP161B2S**
TLI ID:	**331-18-15**	Date Extracted:	**07/23/02**	ICal:	**TF5612B**
		Date Analyzed:	**07/26/02**	ConCal:	**TB23771**
Sample Size:	**12.800 g**	Dilution Factor:	**1**	% Moisture:	**21.3**
Dry Weight:	**10.074 g**	Blank File:	**T023762**	% Lipid:	**n/a**
GC Column:	**DB-5**	Analyst:	**JMM**	% Solids:	**78.7**

Analytes	Conc. (pg/g)		TEF		Equivalent
2,3,7,8-TCDD	{0.4}	x	1.	=	0.4
1,2,3,7,8-PeCDD	{0.3}	x	0.5	=	0.2
1,2,3,4,7,8-HxCDD	{0.7}	x	0.1	=	0.07
1,2,3,6,7,8-HxCDD	1.3	x	0.1	=	0.13
1,2,3,7,8,9-HxCDD	1.3	x	0.1	=	0.13
1,2,3,4,6,7,8-HpCDD	6.1	x	0.01	=	0.061
1,2,3,4,6,7,8,9-OCDD	133	x	0.001	=	0.133
TOTAL PCDD					1.1
2,3,7,8-TCDF	0.93	x	0.1	=	0.093
1,2,3,7,8-PeCDF	{1.0}	x	0.05	=	0.050
2,3,4,7,8-PeCDF	1.0	x	0.5	=	0.50
1,2,3,4,7,8-HxCDF	1.8	x	0.1	=	0.18
1,2,3,6,7,8-HxCDF	1.1	x	0.1	=	0.11
2,3,4,6,7,8-HxCDF	1.3	x	0.1	=	0.13
1,2,3,7,8,9-HxCDF	{0.4}	x	0.1	=	0.04
1,2,3,4,6,7,8-HpCDF	25.7	x	0.01	=	0.257
1,2,3,4,7,8,9-HpCDF	{1.3}	x	0.01	=	0.013
1,2,3,4,6,7,8,9-OCDF	10.4	x	0.001	=	0.0104
TOTAL PCDF					1.38

Total EPA TEFs, 1989a: 2.5 pg/g

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

GRY_TEF v1.08, MILES 4.22.16

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Printed: 22:18 07/29/02

Initial ....Date...

Data Review By: KL 7/27/01

Calculated Noise Height: 0.06

Page No. 1 Listing of T023781B.dbf
07/27/2002 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				0.879-1.071			
304-306	AD	D	DE			Height	<0.01						
		DC	NL			Height	0.17	0.09	0.08				
	D	S	WL	23:26		0.85	4.52			0.879			
				23:58	RO	0.53	1.15	0.40	0.75	0.899			
				24:11	RO	0.61	1.45	0.55	0.90	0.907			
				24:19	RO	0.91	2.61	1.24	1.37	0.912			
				24:32		0.83	3.19	1.45	1.74	0.921			J
		DC	SN	25:00		0.80	0.97			0.938			
				25:09		0.88	4.80	2.25	2.55	0.944			
				26:03	RO	1.14	6.97	3.72	3.25	0.977			
				26:14		0.76	7.50	3.24	4.26	0.984			
				26:23		0.81	8.04	3.61	4.43	0.990			
	A			26:33		0.74	1.95	0.83	1.12	0.996			J
	M			26:40		0.80	3.49	1.55	1.94	1.001	2378-TCDF	AN	J
				26:51		0.76	1.20	0.52	0.68	1.008			J
				27:19		0.71	1.47	0.61	0.86	1.025			J
				27:31		0.80	10.16	4.52	5.64	1.033			
				27:50		0.79	125.19	55.18	70.01	1.044			
304-306				14	Peaks		179.17						
13C12-TCDF						0.65-0.89				0.944-1.131			
316-318		DC	NL			Height	0.15	0.07	0.08				
				25:38		0.84	4.17	1.90	2.27	0.962			
				25:57	RO	0.98	2.02	1.00	1.02	0.974			
				26:14		0.87	5.95	2.76	3.19	0.984			
				26:39		0.76	702.48	304.10	398.38	1.000	13C12-2378-TCDF	ISO	
						Height	178.35	76.99	101.36				
				27:09		0.77	1.98	0.86	1.12	1.019			
316-318				5	Peaks		716.60						

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

TCDD						0.65-0.89				0.904-1.042			
320-322		DC	NL			Height	0.14	0.07	0.07				
		DC	SN	26:40	RO	1.96	0.83			0.976			
				27:20	RO	0.98	1.13	0.56	0.57	1.000	2378-TCDD	AN	
320-322				1	Peak		1.13						
37Cl-TCDD										0.927-1.073			
328		DC	NL			Height	0.09	0.09					
		DC	WL	24:42			0.19			0.904			
				26:00			17.59	17.59		0.951			
		DC	SN	26:07			0.16			0.955			
		DC	SN	26:18			0.10			0.962			
		DC	SN	26:29			0.04			0.969			
		DC	SN	26:40			0.19			0.976			

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		26:57			0.16			0.986			
	DC	SN		27:02			0.09			0.989			
	DC	SN		27:09			0.13			0.993			
				27:21			51.02	51.02		1.001	37Cl-TCDD	CLS	
				27:35			0.42	0.42		1.009			
				27:43			44.51	44.51		1.014			
				27:54			0.78	0.78		1.021			
				27:59			0.52	0.52		1.024			
	DC	SN		28:10			0.12			1.030			
	DC	SN		28:13			0.11			1.032			
				28:39			0.99	0.99		1.048			
	DC	SN		28:50			0.23			1.055			
328			7	Peaks			115.83						
13C12-TCDD				0.65-0.89					0.920-1.066				
332-334	DC	NL				Height	0.29	0.20	0.09				
				27:09		0.82	674.59	304.65	369.94	0.993	13C12-1234-TCDD	RS1	
				27:20		0.81	501.07	224.18	276.89	1.000	13C12-2378-TCDD	IS1	
						Height	127.80	56.84	70.96				
				27:46	RO	0.52	2.88	0.98	1.90	1.016			
	DC	SN		27:57	RO	1.16	1.08			1.023			
	DC	SN		28:29	RO	2.30	0.66			1.042			
332-334			3	Peaks			1,178.54						

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

PeCDF				1.32-1.78					0.911-1.037				
340-342	DC	NL				Height	0.15	0.07	0.08				
				28:27		1.47	2.30	1.37	0.93	0.912			J
				28:38	RO	1.21	4.95	2.71	2.24	0.918			
				28:51		1.44	11.56	6.82	4.74	0.925			J
				29:04		1.54	8.45	5.12	3.33	0.932			J
				29:15		1.51	4.65	2.80	1.85	0.938			J
				29:27	RO	2.88	2.17	1.61	0.56	0.944			
				29:38		1.43	13.00	7.65	5.35	0.950			
				29:50		1.47	56.66	33.73	22.93	0.956			
				30:02		1.46	42.70	25.33	17.37	0.963			
				30:24		1.50	119.23	71.62	47.61	0.974			
				30:32	RO	1.80	2.55	1.64	0.91	1.001	12378-PeCDF	AN	
				30:42		1.66	3.24	2.02	1.22	0.984			J
				30:50		1.47	2.17	1.29	0.88	0.988			J
A				31:02	RO	1.03	2.52	1.28	1.24	0.995			
				31:13		1.32	2.55	1.45	1.10	1.001	23478-PeCDF	AN	J
				31:18		1.37	3.79	2.19	1.60	1.003			J
				31:25	RO	1.27	3.86	2.16	1.70	1.007			
				31:32		1.71	9.79	6.18	3.61	1.011			J
				31:41	RO	1.23	0.67	0.37	0.30	1.015			
				31:48	RO	1.18	6.28	3.40	2.88	1.019			
				32:02		1.38	25.30	14.68	10.62	1.027			
				32:10		1.65	1.59	0.99	0.60	1.031			J
	DC	SN		32:18	RO	0.86	0.41			1.035			
	DC	WH		32:26	RO	1.30	0.53			1.040			

```
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  32:37 RO  0.81        1.32                                1.045
340-342              22 Peaks               329.98

13C12-PeCDF                    1.32-1.78                                  0.807-1.127
352-354         DC  NL          Height        0.14          0.06          0.08
                        30:09 RO  0.79        4.89          2.16          2.73  0.966
                        30:31     1.46      467.00        277.06        189.94  1.000 13C12-PeCDF 123 IS2
                                Height      132.22         79.37         52.85
                        30:47 RO  1.08        9.45          4.90          4.55  0.987
                DC  SN  30:59     1.78        0.50                              0.993
                        31:12     1.50      458.13        274.82        183.31  1.000 13C12-PeCDF 234 IS3
                                Height      134.05         80.43         53.62
                        31:32 RO  3.05        2.59          1.95          0.64  1.011
                        31:40 RO  0.48        1.64          0.53          1.11  1.015
                        31:48 RO  0.69        1.83          0.75          1.08  1.019
                        32:09 RO  1.10        6.82          3.57          3.25  1.030
352-354                8 Peaks               952.35

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

PeCDD                          1.32-1.78                                  0.940-1.021
356-358         DC  NL          Height        0.14          0.07          0.07
                DC  SN  31:13 RO  3.10        0.82                              0.990
        D       d   SN  31:33 RO  1.29        1.51                              1.001 12378-PeCDD     AN
                        31:48 RO  0.89        2.06          0.97          1.09  1.008
                        32:09 RO  0.76        2.08          0.90          1.18  1.020
                DC  WH  32:21 RO  0.44        1.54                              1.026
                DC  WH  32:35     1.71        0.76                              1.033
356-358                2 Peaks                4.14

13C12-PeCDD                    1.32-1.78                                  0.735-1.052
368-370         DC  NL          Height        0.14          0.09          0.05
                        30:29 RO  1.02        0.97          0.49          0.48  0.967
                        30:37 RO  1.29        1.92          1.08          0.84  0.971
                        31:13 RO  2.27        0.49          0.34          0.15  0.990
                        31:32     1.50      311.45        186.66        124.79  1.000 13C12-PeCDD 123 IS4
                                Height       94.76         56.46         38.30
                        31:56 RO  0.32        0.91          0.22          0.69  1.013
                DC  SN  32:25     1.69        0.35                              1.028
368-370                5 Peaks               315.74

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

HxCDF                          1.05-1.43                                  0.929-1.007
374-376         DC  NL          Height        0.18          0.12          0.06
        D       D   WL  32:50     1.21        0.73                              0.930
                    X   33:00     1.20       10.76          5.86          4.90  0.935
                        33:06     1.22        9.57          5.26          4.31  0.938
                        33:13     1.23        9.64          5.31          4.33  0.941
                        33:24     1.34        7.41          4.24          3.17  0.946                    J
                        33:34     1.31       24.63         13.98         10.65  0.951
                        33:45     1.24        9.78          5.41          4.37  0.956
```

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.
	MN			33:52		1.23	39.87	22.00	17.87	0.999			
	AN			33:55		1.13	3.45	1.83	1.62	1.000	123478-HxCDF	AN	J
				34:02		1.22	2.31	1.27	1.04	1.000	123678-HxCDF	AN	J
				34:07	RO	1.68	2.14	1.34	0.80	0.966			
				34:31		1.27	2.56	1.43	1.13	1.000	234678-HxCDF	AN	J
		DC	SN	34:59	RO	1.50	0.35			0.991			
		DC	SN	35:09	RO	4.22	0.47			0.996			
				35:21		1.26	3.88	2.16	1.72	1.001			J
		DC	SN	35:27		1.24	0.38			1.004			
374-376			12	Peaks			126.00						
13C12-HxCDF				0.43-0.59					0.879-1.106				
384-386		DC	NL	Height			0.17	0.07	0.10				
				32:57	RO	0.97	0.75	0.37	0.38	0.933			
				33:05	RO	0.62	1.44	0.55	0.89	0.937			
				33:55		0.51	332.47	112.15	220.32	1.000	13C12-HxCDF 478	IS5	
				Height			104.59	35.70	68.89				
				34:01		0.50	373.44	124.25	249.19	1.000	13C12-HxCDF 678	IS6	
				Height			110.17	36.49	73.68				
				34:31		0.51	369.15	124.21	244.94	1.000	13C12-HxCDF 234	IS7	
				Height			112.40	37.66	74.74				
				34:52	RO	0.67	0.55	0.22	0.33	0.988			
				35:06	RO	1.03	0.59	0.30	0.29	0.994			
				35:18		0.51	268.37	90.76	177.61	1.000	13C12-HxCDF 789	IS8	
				Height			69.34	23.86	45.48				
				35:39	RO	0.41	0.69	0.20	0.49	1.010			
384-386			9	Peaks			1,347.45						

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

HxCDD				1.05-1.43					0.959-1.013				
390-392		DC	NL	Height			0.26	0.11	0.15				
	A			33:27		1.13	1.79	0.95	0.84	0.964			J
		DC	SN	33:54	RO	2.43	0.79			0.977			
	M			34:07	RO	0.96	4.14	2.03	2.11	0.983			
	KM			34:38	RO	1.56	0.87	0.53	0.34	1.000	123478-HxCDD	AN	
	M			34:43		1.23	1.76	0.97	0.79	1.000	123678-HxCDD	AN	J
	M			35:02		1.08	1.79	0.93	0.86	1.010	123789-HxCDD	AN	J
		DC	WH	35:14	RO	0.57	4.06			1.015			
		DC	WH	35:19	RO	0.46	0.57			1.018			
		DC	WH	35:31	RO	1.47	1.31			1.024			
390-392			5	Peaks			10.35						
13C12-HxCDD				1.05-1.43					0.983-1.041				
402-404		DC	NL	Height			0.20	0.09	0.11				
		DC	WL	33:32	RO	3.27	0.47			0.969			
		DC	WL	33:42	RO	0.12	1.52			0.974			
				34:37		1.22	225.62	124.18	101.44	1.000	13C12-HxCDD 478	IS9	
				Height			70.16	38.62	31.54				
				34:42		1.22	249.56	137.29	112.27	1.000	13C12-HxCDD 678	IS10	
				Height			73.94	40.32	33.62				
				35:02		1.19	292.04	158.71	133.33	1.012	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.

                        35:17 RO  0.46          2.59          0.82          1.77  1.019
402-404               4 Peaks                 769.81

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

HpCDF                           0.88-1.20                                   0.955-1.005
408-410          DC  NL          Height          0.15          0.07          0.08
                 DC  WL  36:47     1.17          1.69                                0.954
                         36:59     1.00         31.46         15.74         15.72  1.000 1234678-HpCDF   AN
                         37:25     1.13         13.96          7.41          6.55  0.970
        M                38:35 RO  1.33          1.07          0.61          0.46  1.000 1234789-HpCDF   AN
408-410               3 Peaks                  46.49

13C12-HpCDF                     0.37-0.51                                   0.857-1.142
418-420          DC  NL          Height          0.13          0.06          0.07
                         36:59     0.44        180.45         54.95        125.50  1.000 13C12-HpCDF 678 IS11
                                 Height         47.52         14.58         32.94
                 DC  SN  37:39 RO  1.64          0.29                                0.976
                 DC  SN  37:49 RO  0.56          0.28                                0.981
                         38:34     0.44        120.25         36.96         83.29  1.000 13C12-HpCDF 789 IS12
                                 Height         25.50          7.92         17.58
418-420               2 Peaks                 300.70

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

HpCDD                           0.88-1.20                                   0.976-1.005
424-426          DC  NL          Height          0.12          0.06          0.06
                         37:16     1.10          4.55          2.38          2.17  0.980
                 DC  SN  37:27     1.00          0.20                                0.985
        D        D   SN  37:43 RO  0.77          0.46                                0.992
                         38:04     1.06          4.03          2.07          1.96  1.001 1234678-HpCDD   AN
424-426               2 Peaks                   8.58

13C12-HpCDD                     0.88-1.20                                   0.869-1.079
436-438          DC  NL          Height          0.25          0.16          0.09
                         37:16     1.08          0.79          0.41          0.38  0.980
                 DC  SN  37:21 RO  8.41          1.60                                0.982
                         38:02     1.03        140.64         71.37         69.27  1.000 13C12-HpCDD 678 IS13
                                 Height         31.79         15.84         15.95
436-438               2 Peaks                 141.43

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

OCDF                            0.76-1.02                                   0.952-1.048
442-444          DC  NL          Height          0.15          0.08          0.07
                         42:03     0.85          4.20          1.93          2.27  1.005 OCDF            AN
                 DC  WH  43:59 RO  1.67          0.32                                1.051
442-444               1 Peak                    4.20

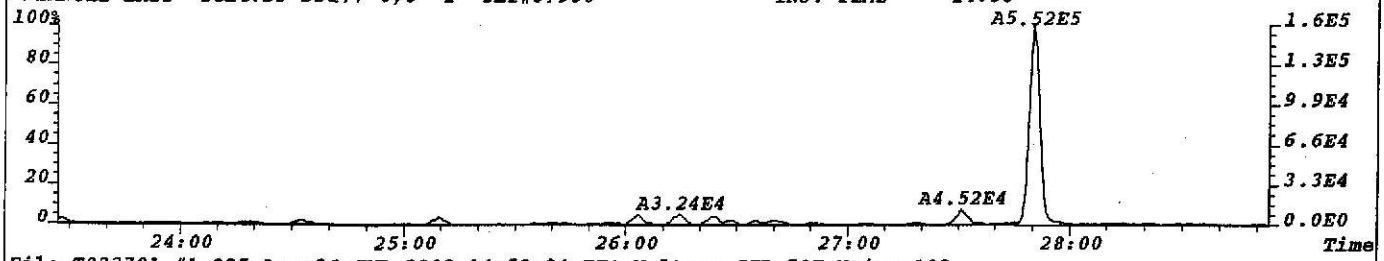
OCDD                            0.76-1.02                                   0.952-1.048
458-460          DC  NL          Height          0.11          0.05          0.06
                         41:51     0.88         44.66         20.93         23.73  1.000 OCDD            AN
```

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.
				42:06		0.98	1.17	0.58	0.59	1.006			
		DC	SN	42:21		1.00	0.28			1.012			
458-460			2 Peaks				45.83						
13C12-OCDD						0.76-1.02			0.996-1.004				
470-472		DC	NL			Height	0.14	0.08	0.06				
				41:50		0.90	131.75	62.38	69.37	1.000	13C12-OCDD	IS14	
						Height	25.01	12.05	12.96				
470-472			1 Peak				131.75						

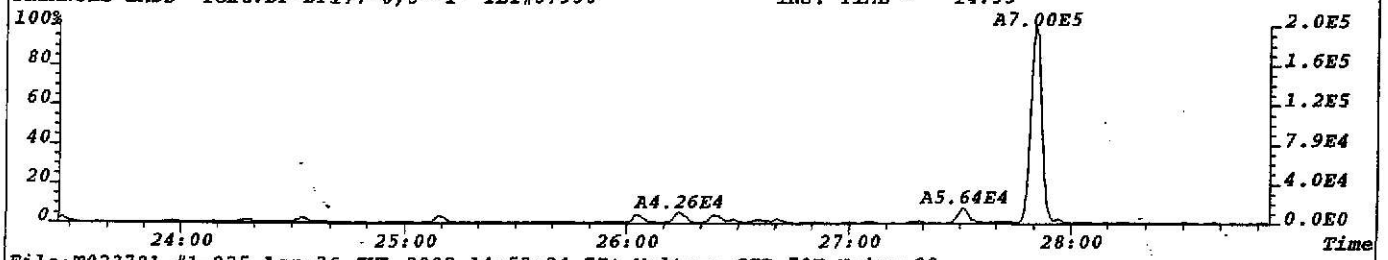
Column Description.....	"Why" Code Description.....	QC Log Desc.....
M_Z -Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT. -Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK -RO=Ratio Outside 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 ***

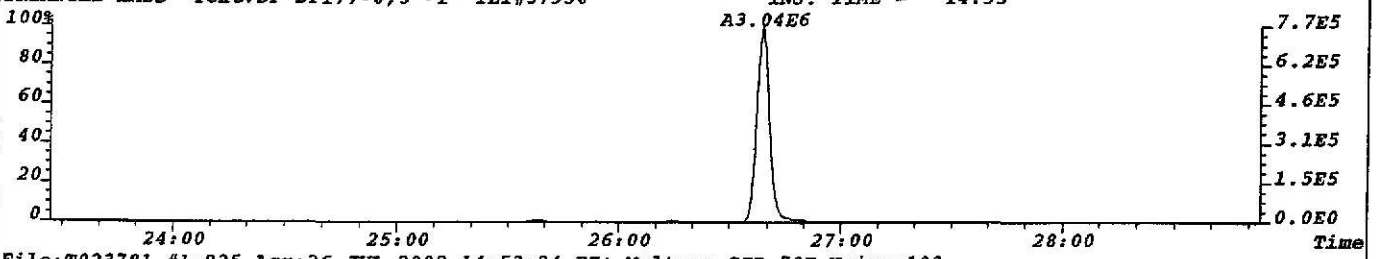
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:111
303.9016 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,444.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



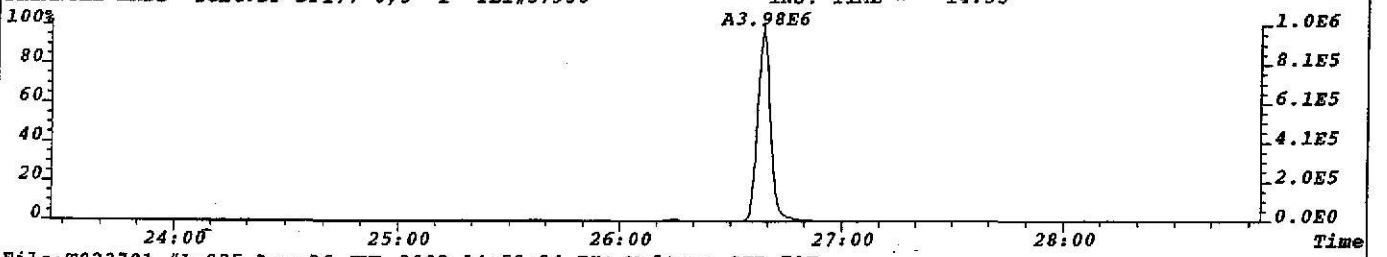
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:102
305.8987 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,408.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



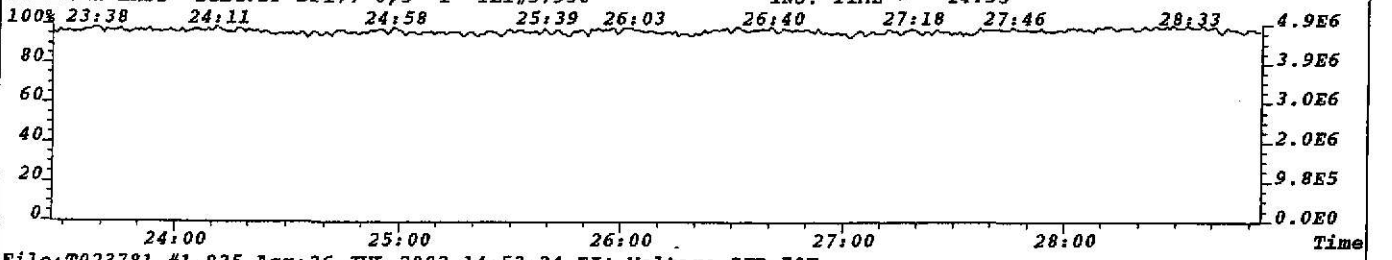
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:90
315.9419 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,360.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



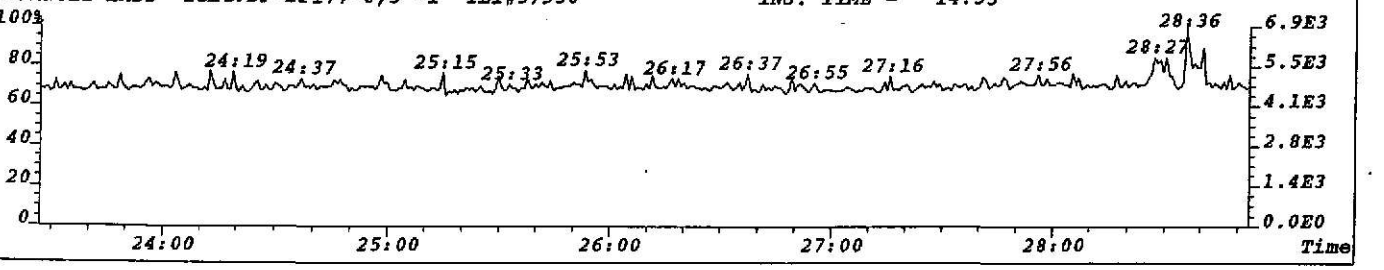
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:103
317.9389 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,412.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



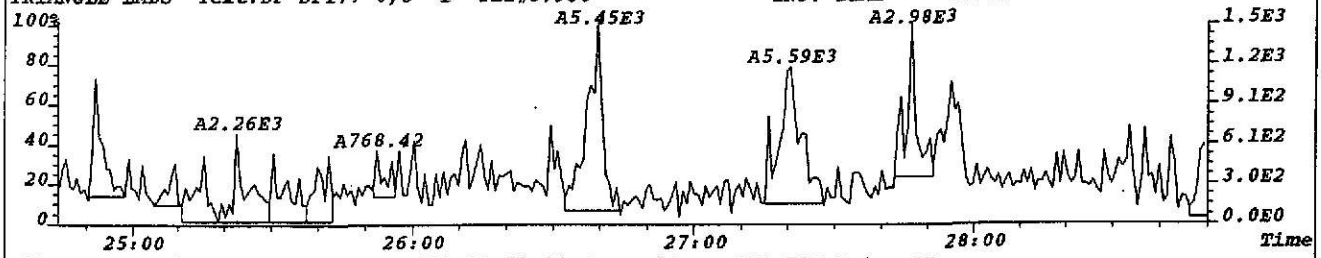
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



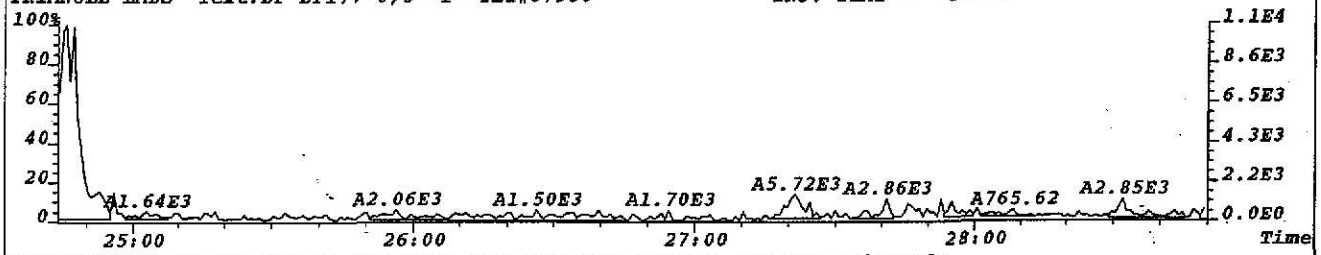
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
375.8364 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



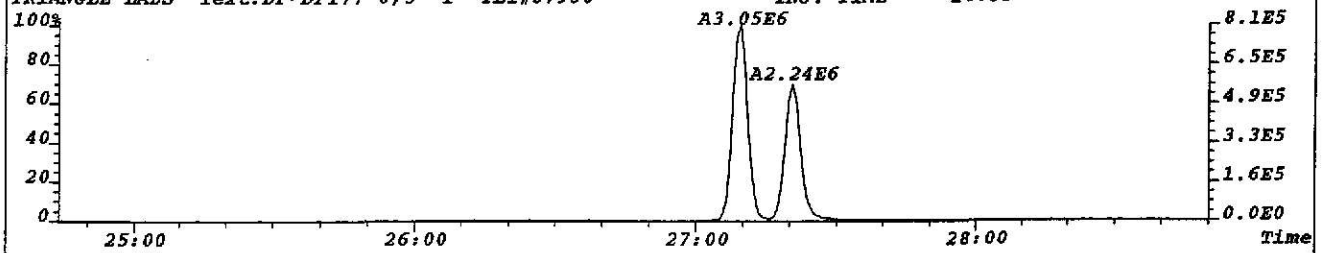
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:85
319.8965 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,340.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



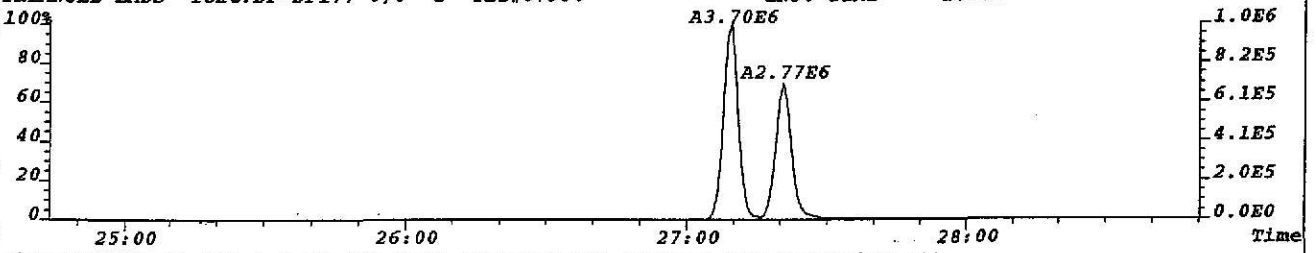
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:85
321.8936 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,340.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



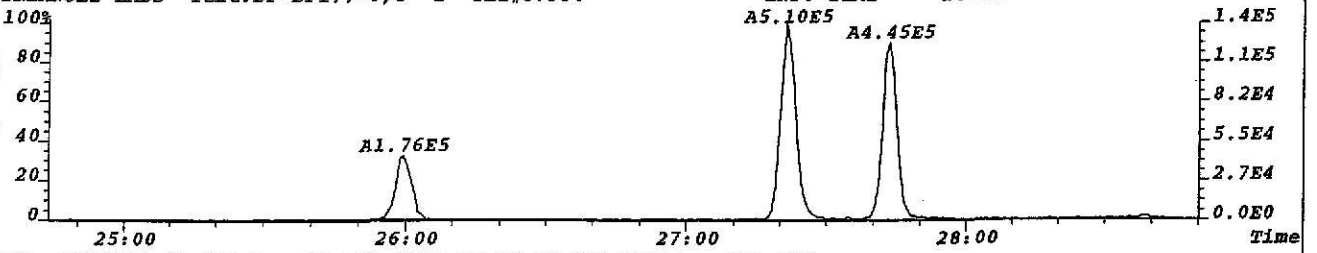
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:252
331.9368 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,1008.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



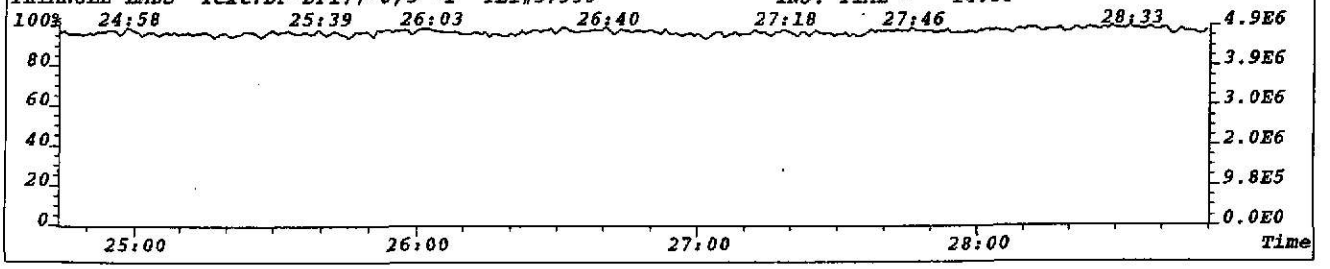
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:114
333.9338 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,456.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



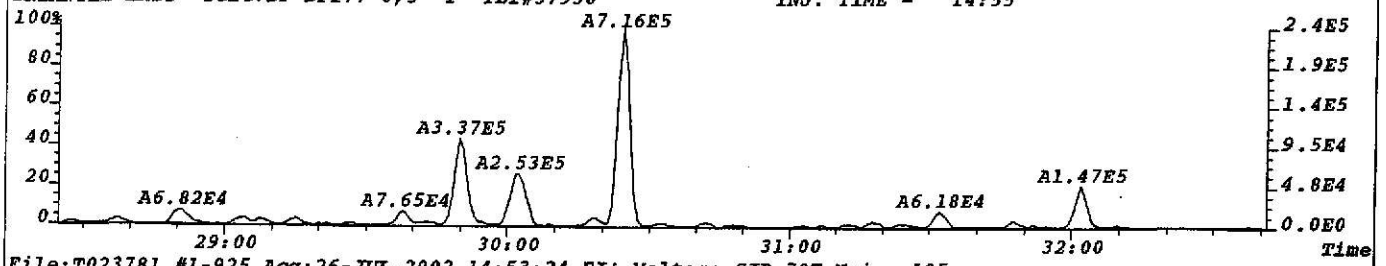
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:112
327.8847 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,448.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



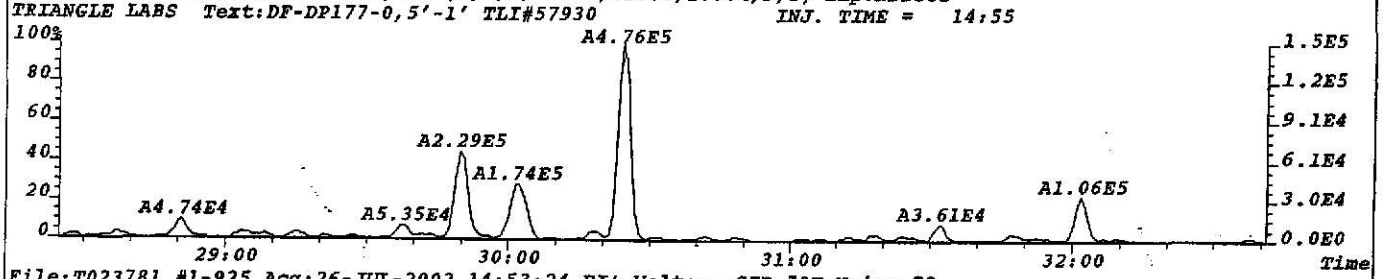
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



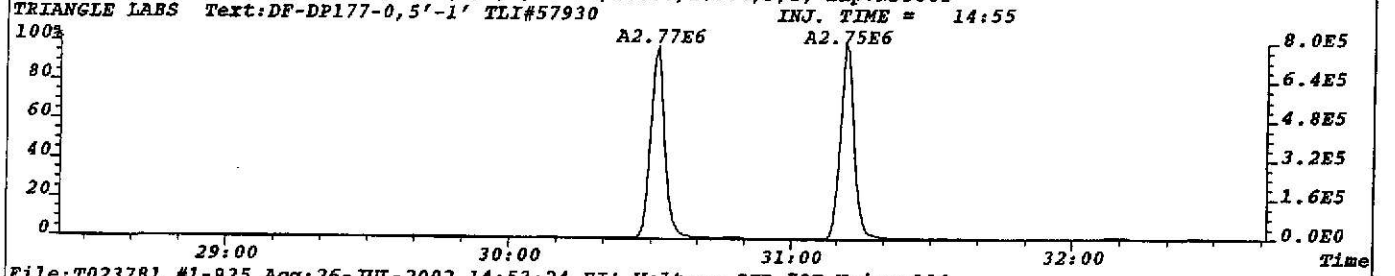
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:84
339.8597 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,336.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



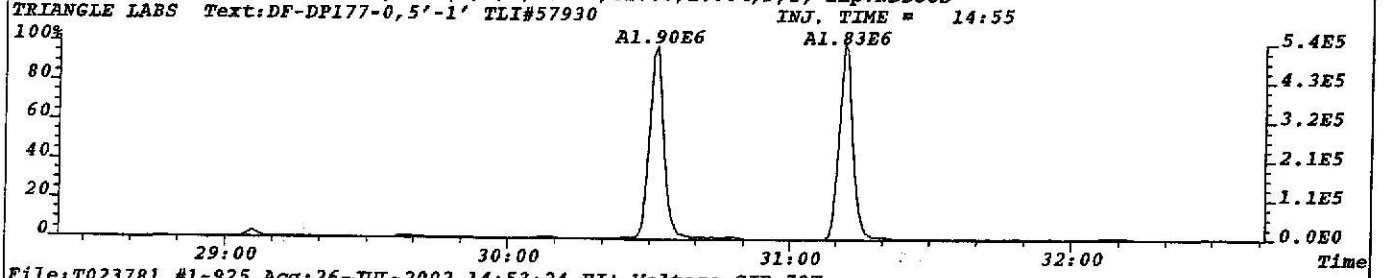
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:105
341.8567 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,420.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



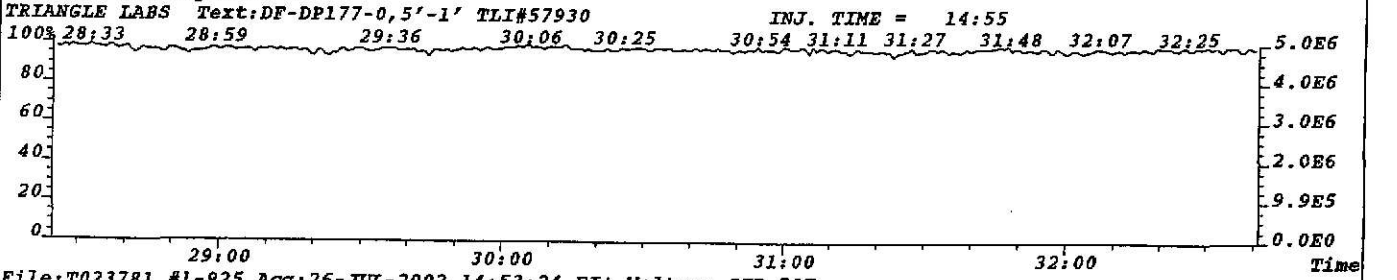
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:72
351.9000 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,288.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



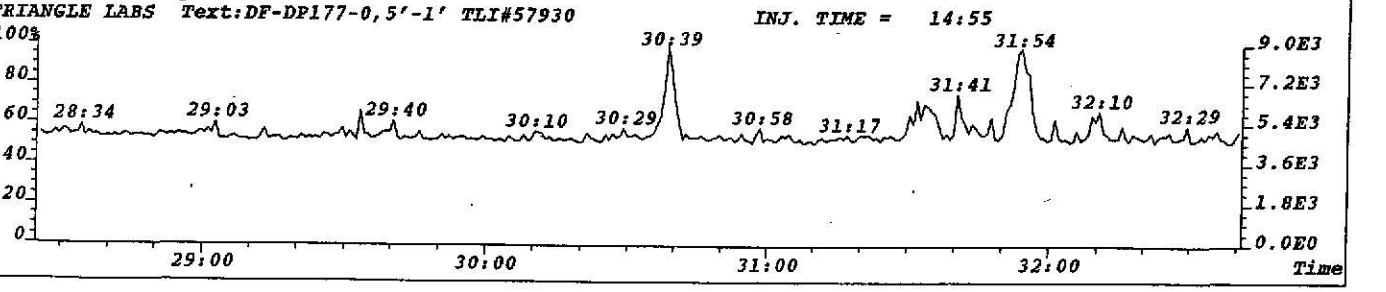
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:104
353.8970 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,416.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



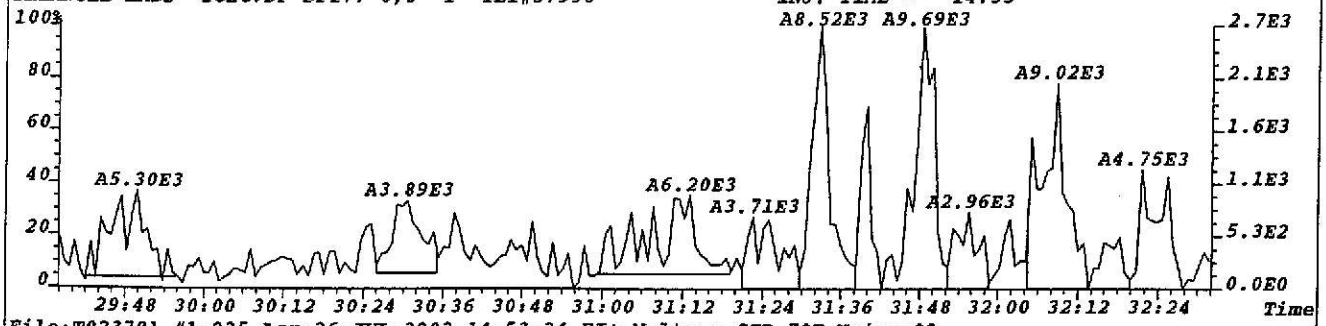
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



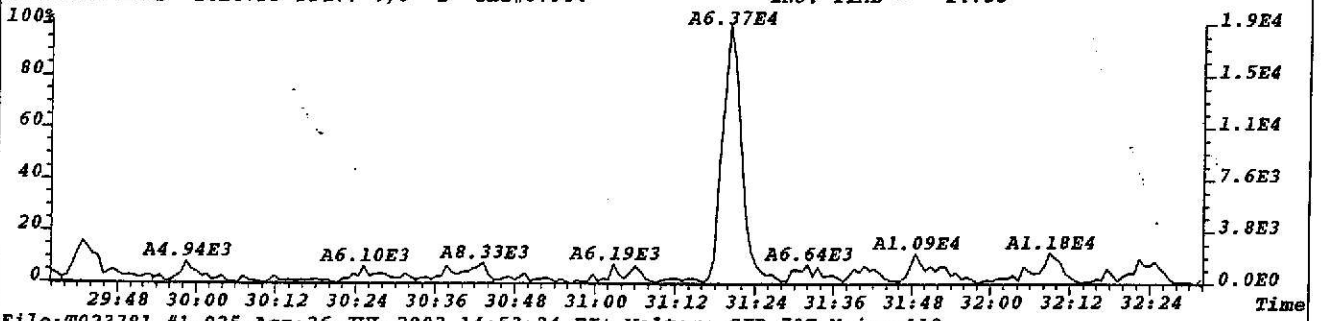
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
409.7974 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



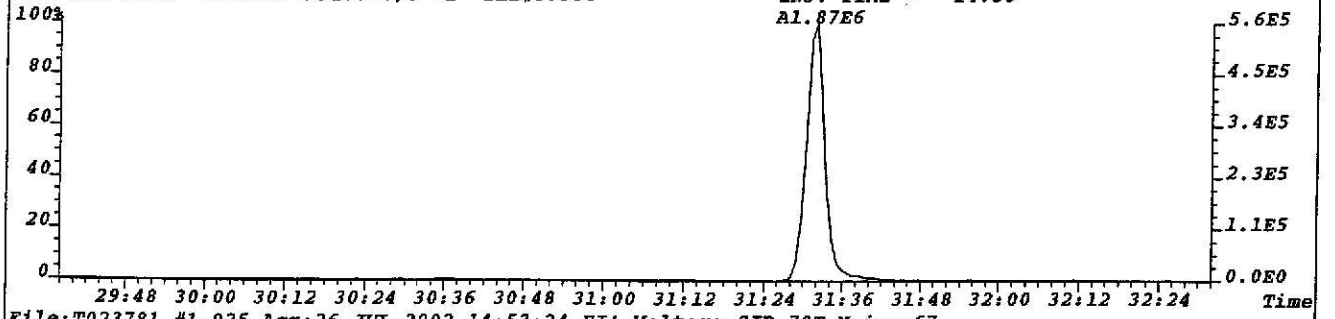
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:92
355.8546 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,368.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



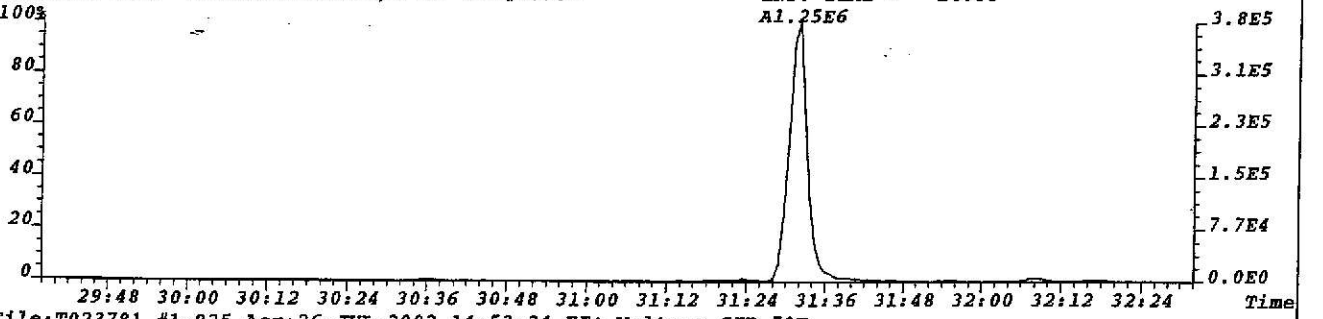
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:89
357.8516 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,356.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



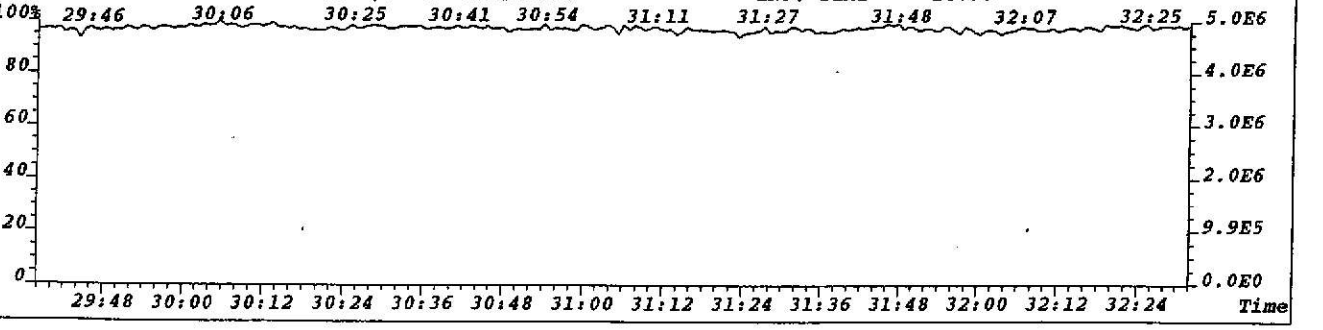
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:112
367.8949 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,448.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



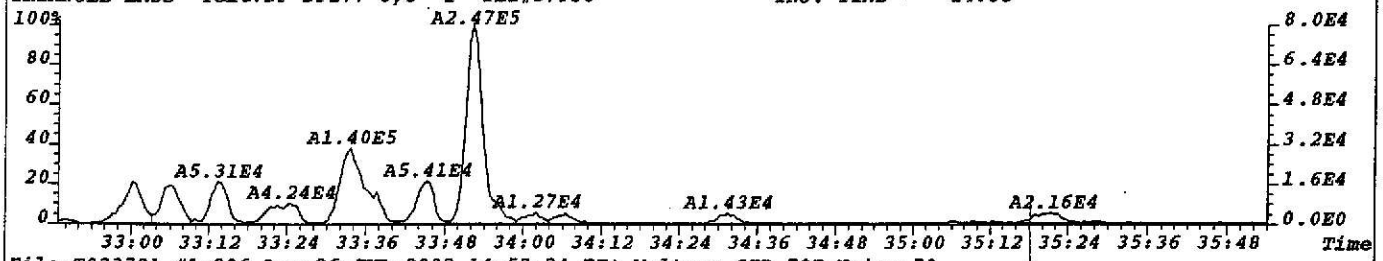
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:67
369.8919 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,268.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



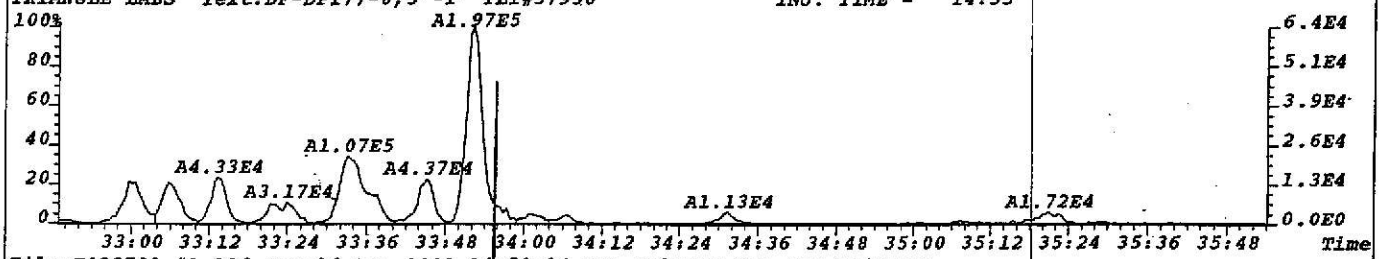
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



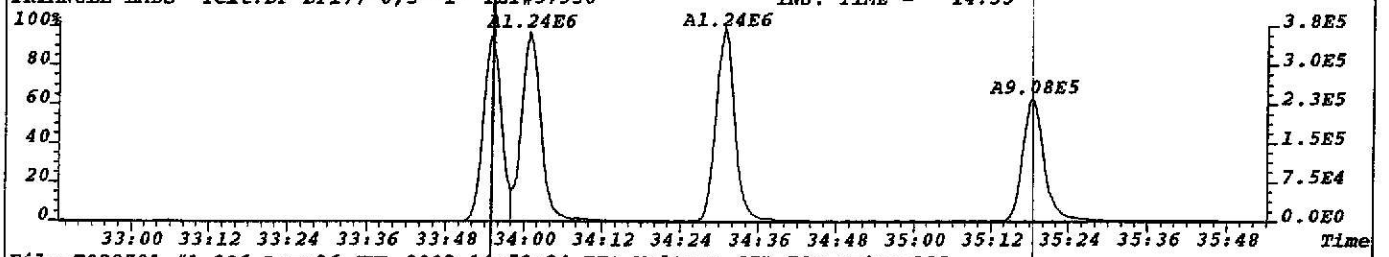
File:T023781 #1-386 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:144
373.8208 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,576.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



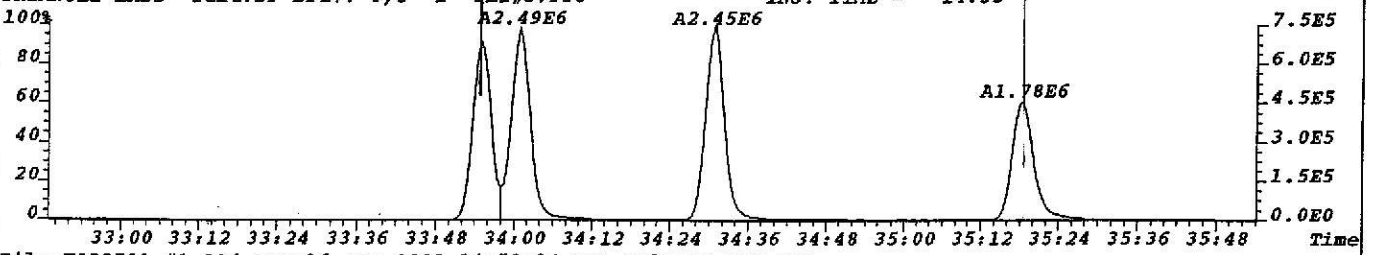
File:T023781 #1-386 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:78
375.8178 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,312.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



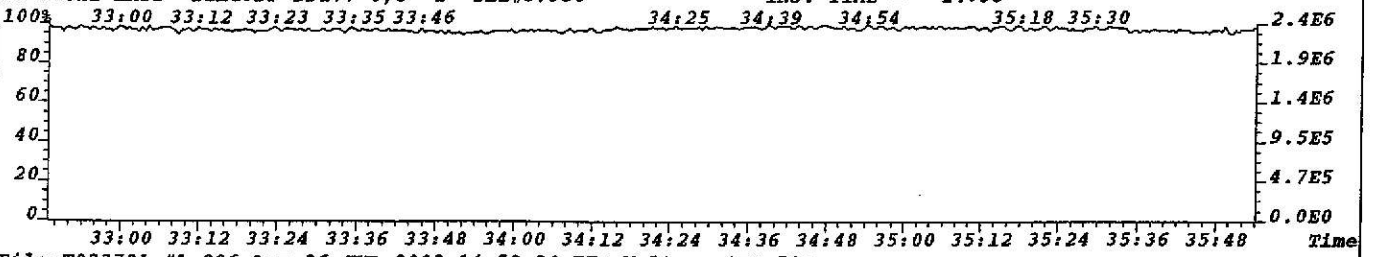
File:T023781 #1-386 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:91
383.8639 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,364.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



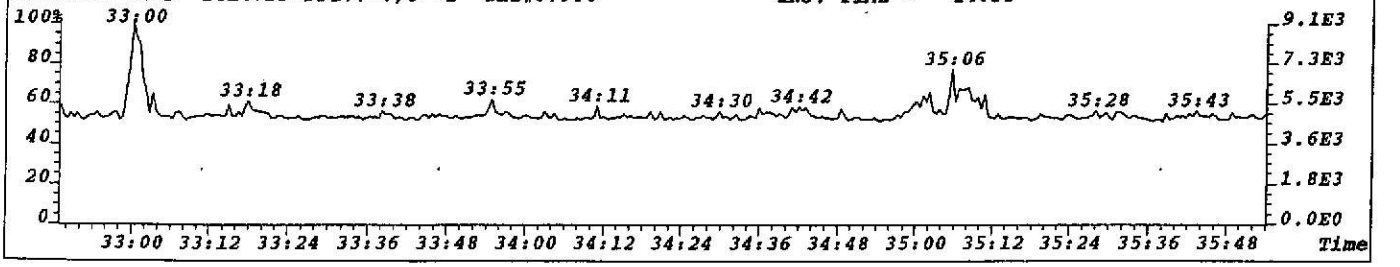
File:T023781 #1-386 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:122
385.8610 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,488.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



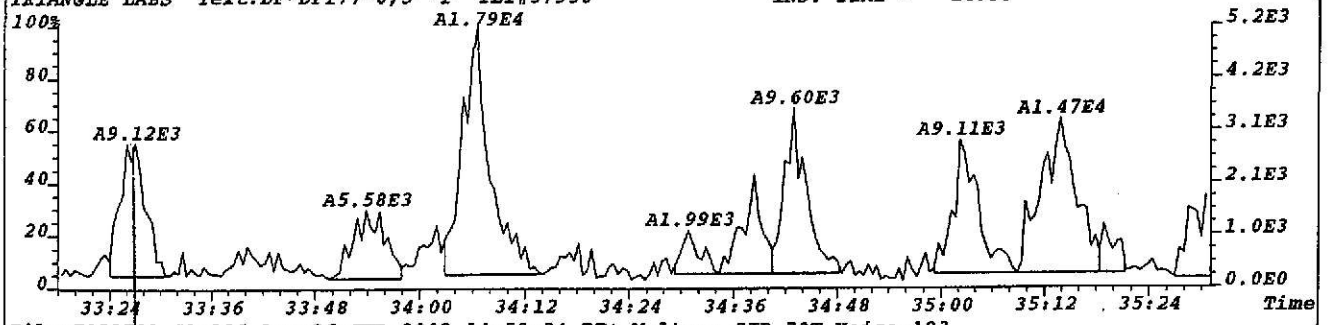
File:T023781 #1-386 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



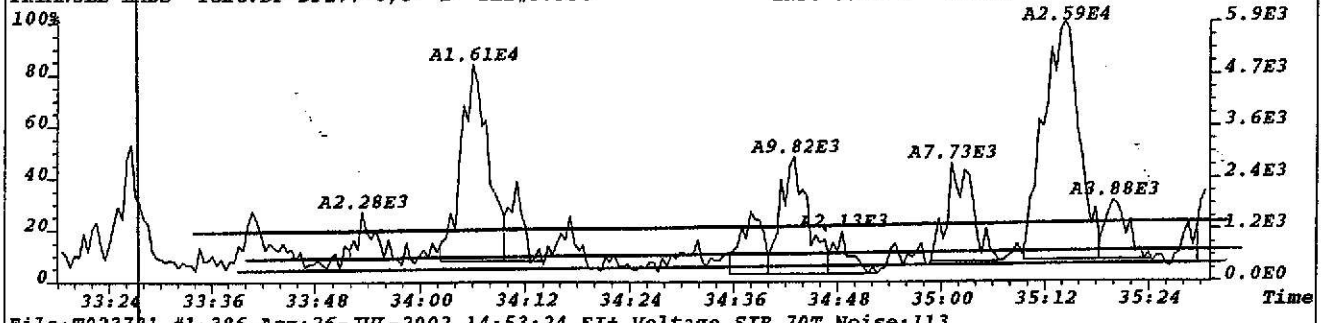
File:T023781 #1-386 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
445.7555 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



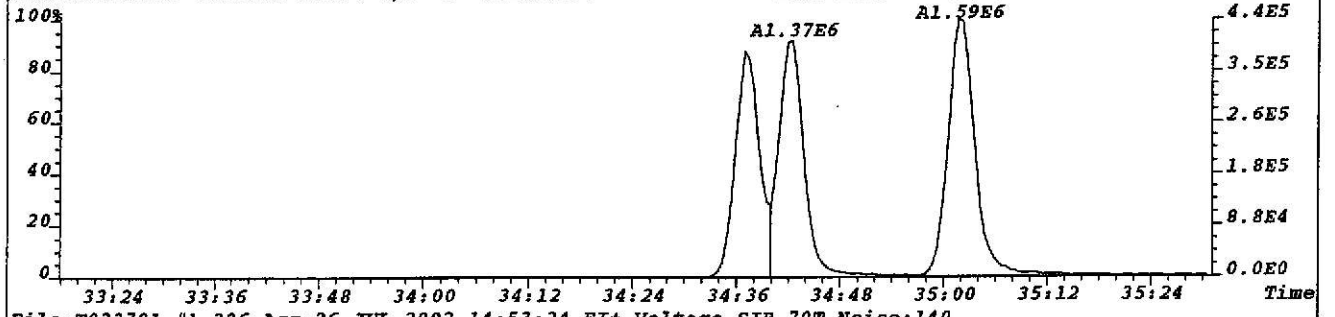
File:T023781 #1-386 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:132
389.8156 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,528.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



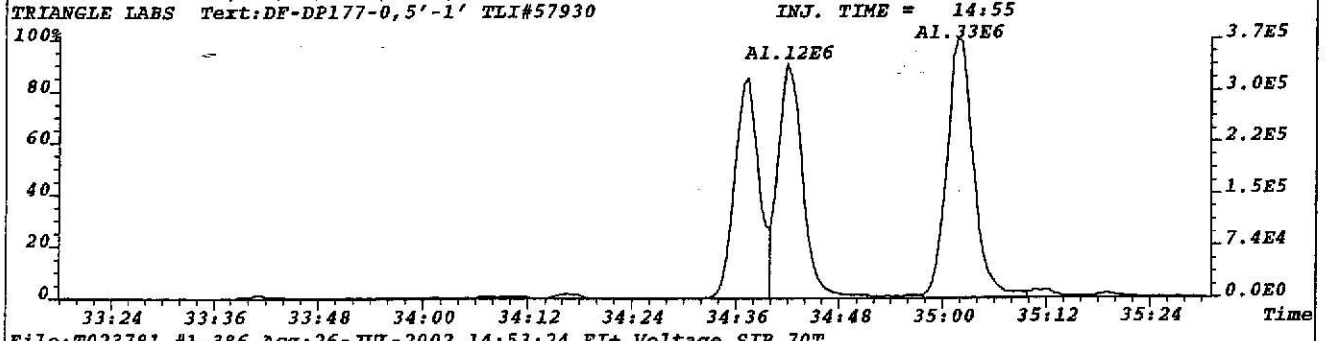
File:T023781 #1-386 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:193
391.8127 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,772.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



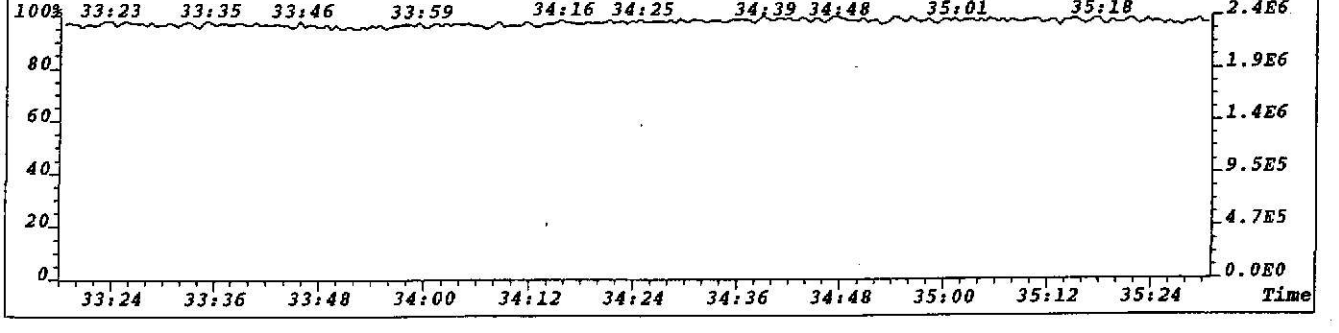
File:T023781 #1-386 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:113
401.8558 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,452.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



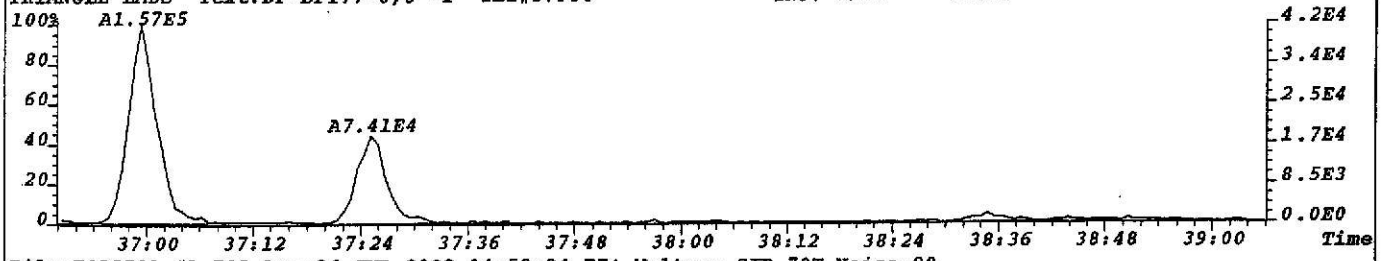
File:T023781 #1-386 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:140
403.8529 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,560.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



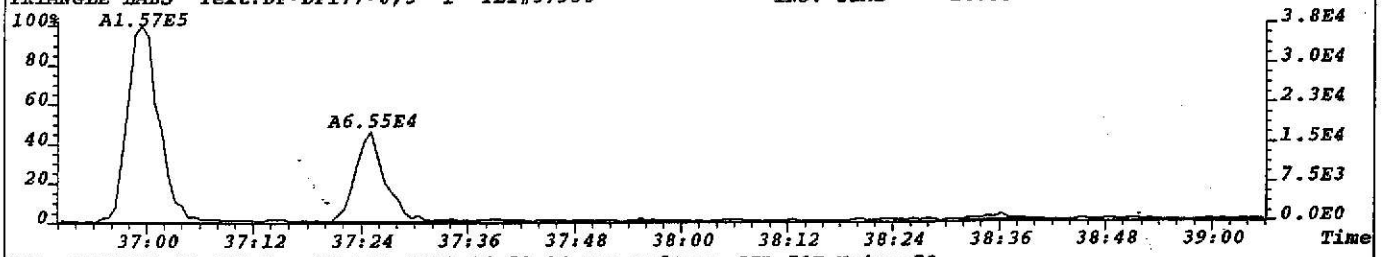
File:T023781 #1-386 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



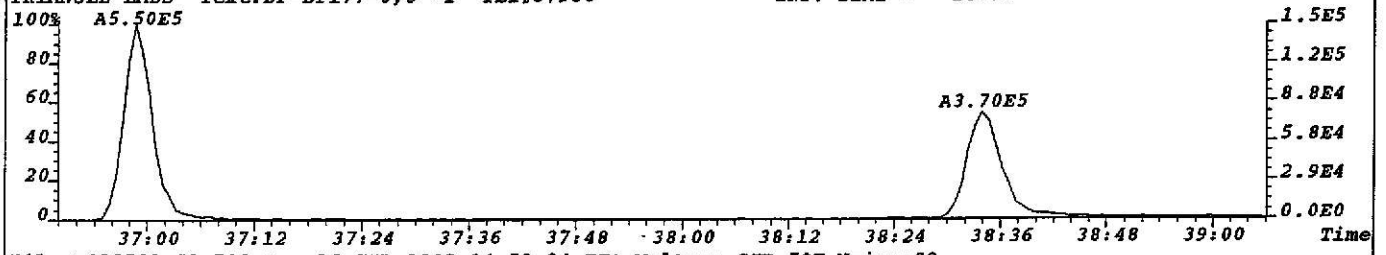
File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:88
407.7818 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,352.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



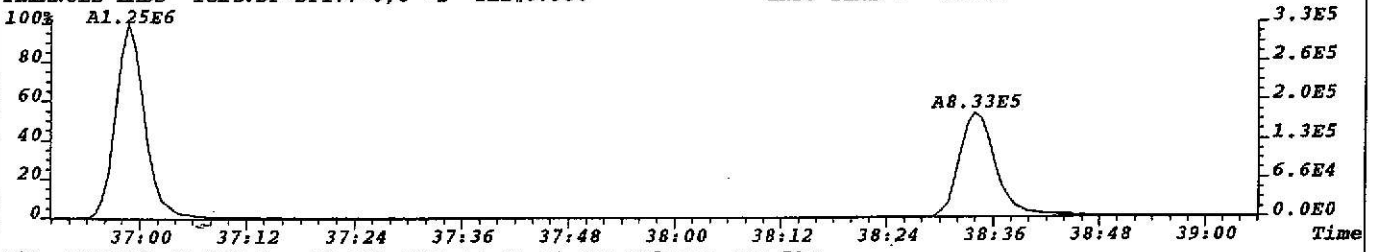
File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:98
409.7789 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,392.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



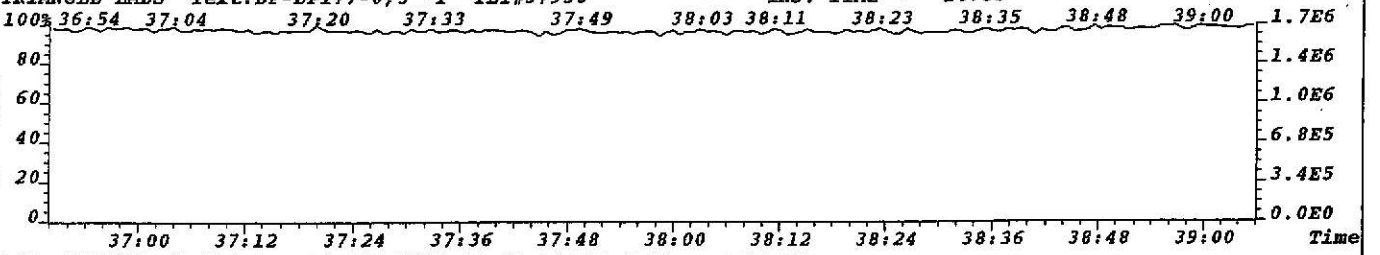
File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:78
417.8253 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,312.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



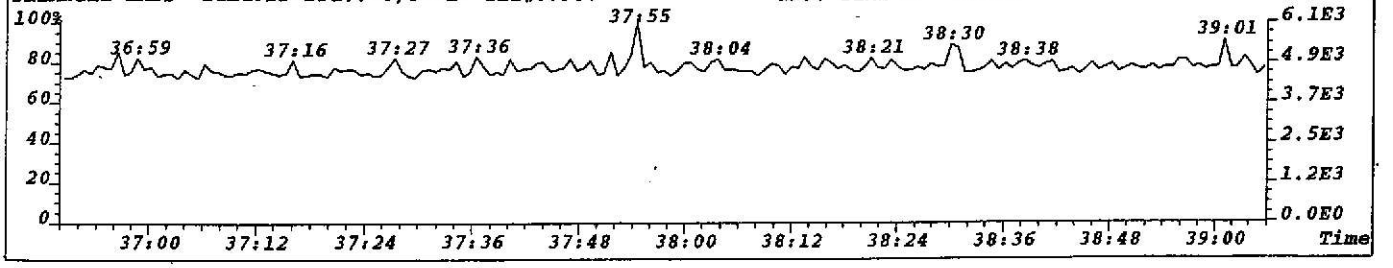
File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:89
419.8220 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,356.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



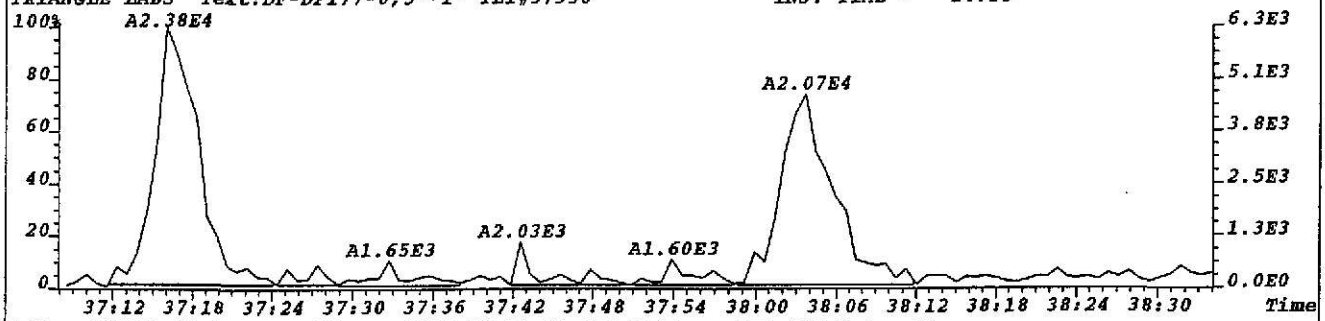
File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



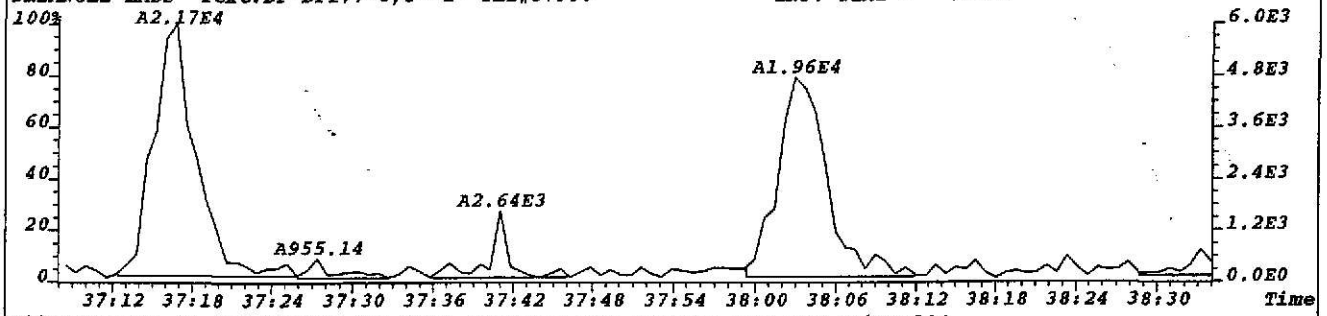
File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
479.7165 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



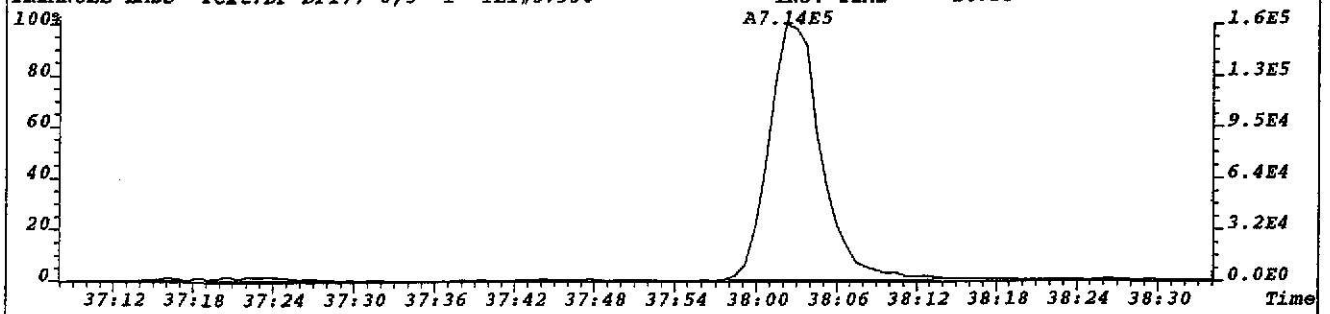
File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:79
423.7766 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,316.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



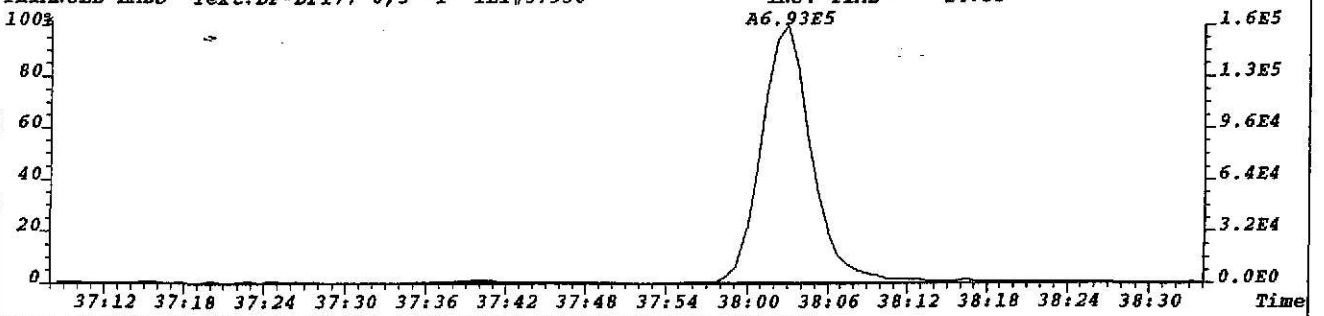
File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:81
425.7737 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,324.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



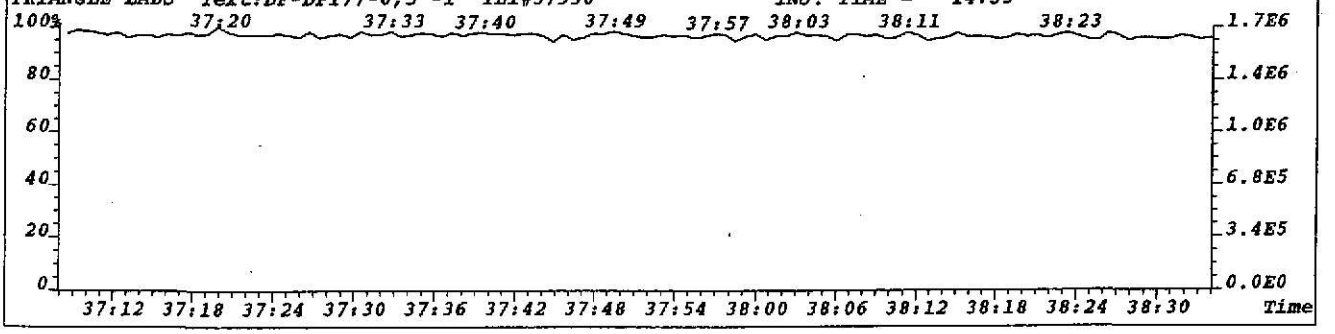
File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:194
435.8169 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,776.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



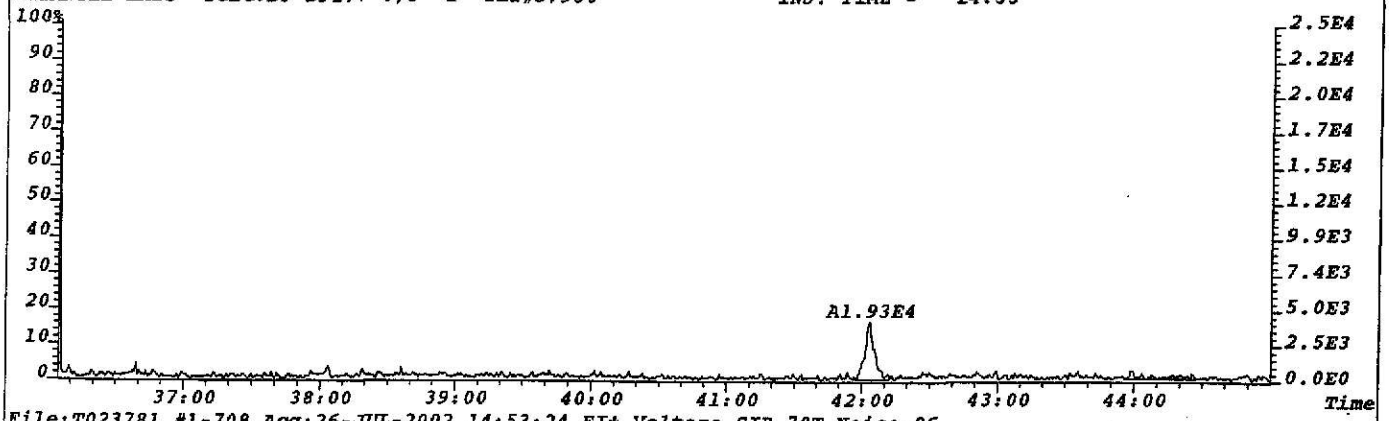
File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:111
437.8140 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,444.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



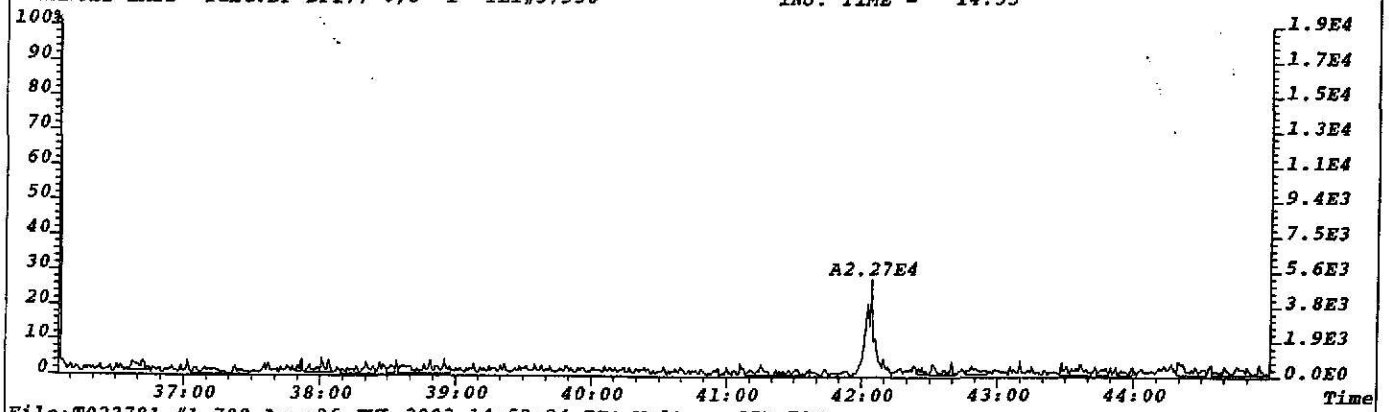
File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



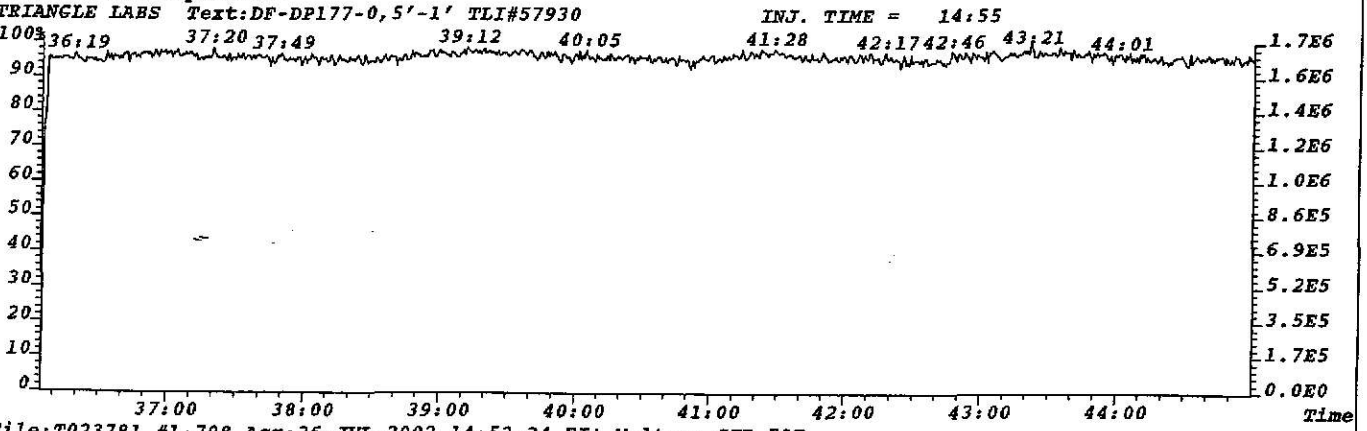
File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:97
441.7428 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,388.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



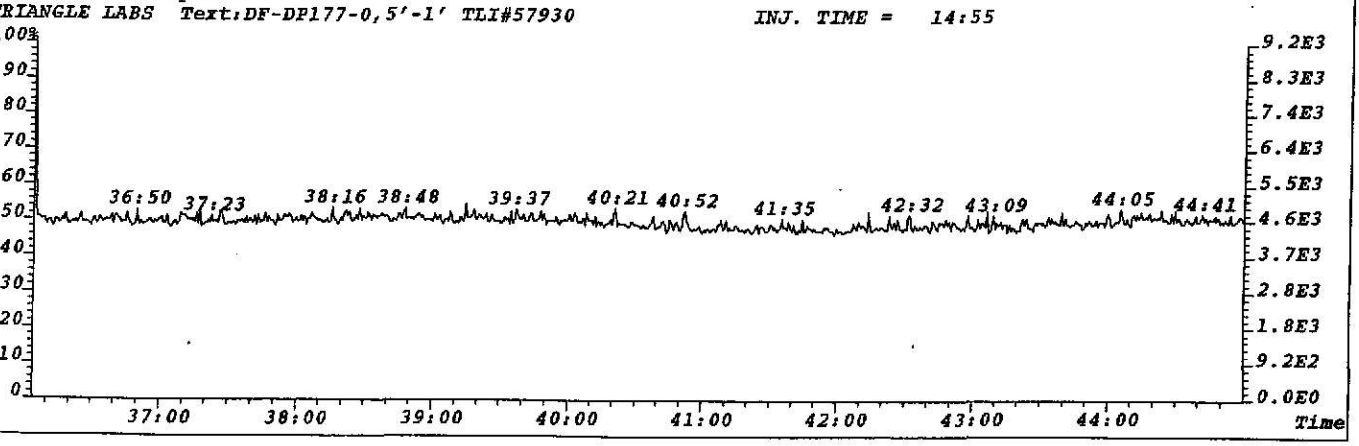
File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:86
443.7399 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,344.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



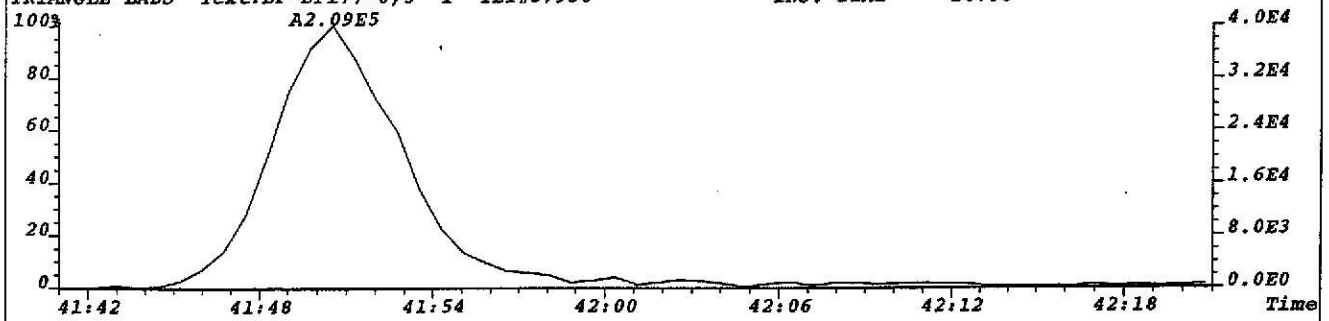
File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



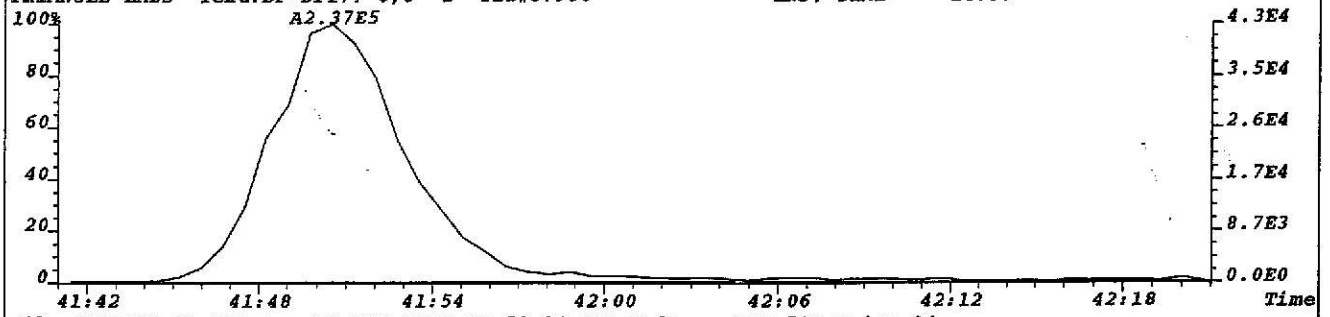
File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
513.6775 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



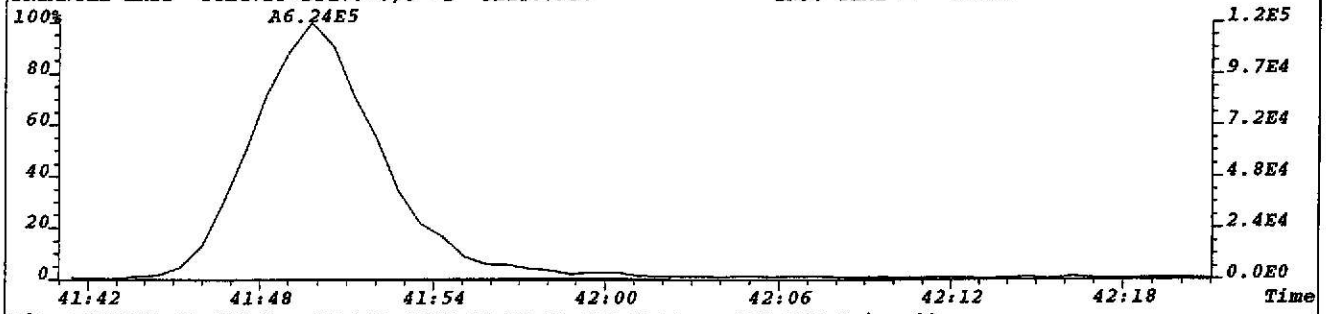
File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:66
457.7377 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,264.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



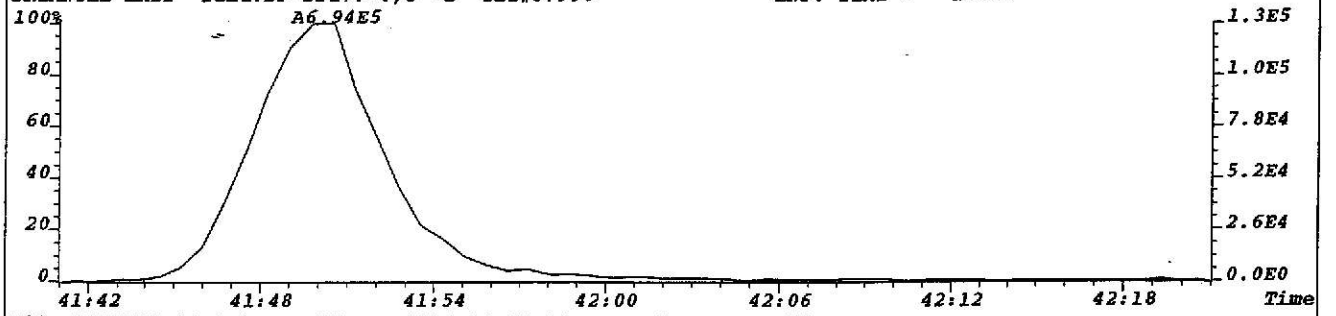
File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:75
459.7348 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,300.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55



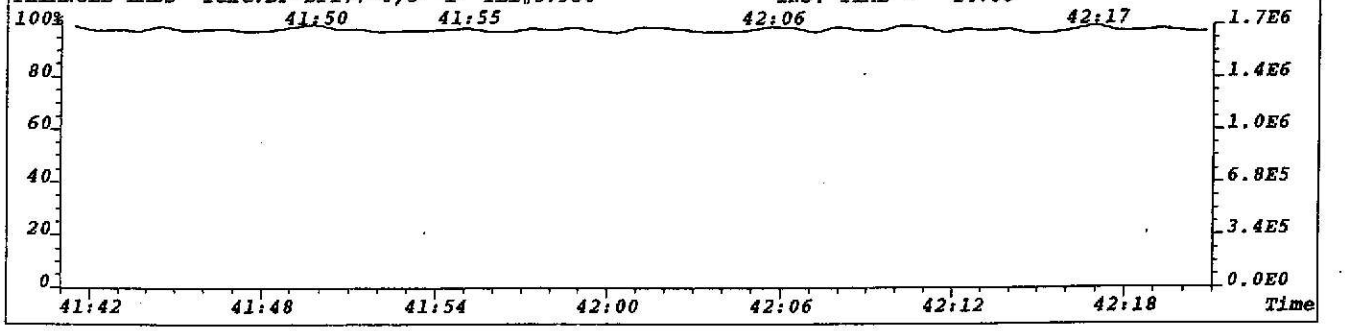
File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:94
469.7779 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,376.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55

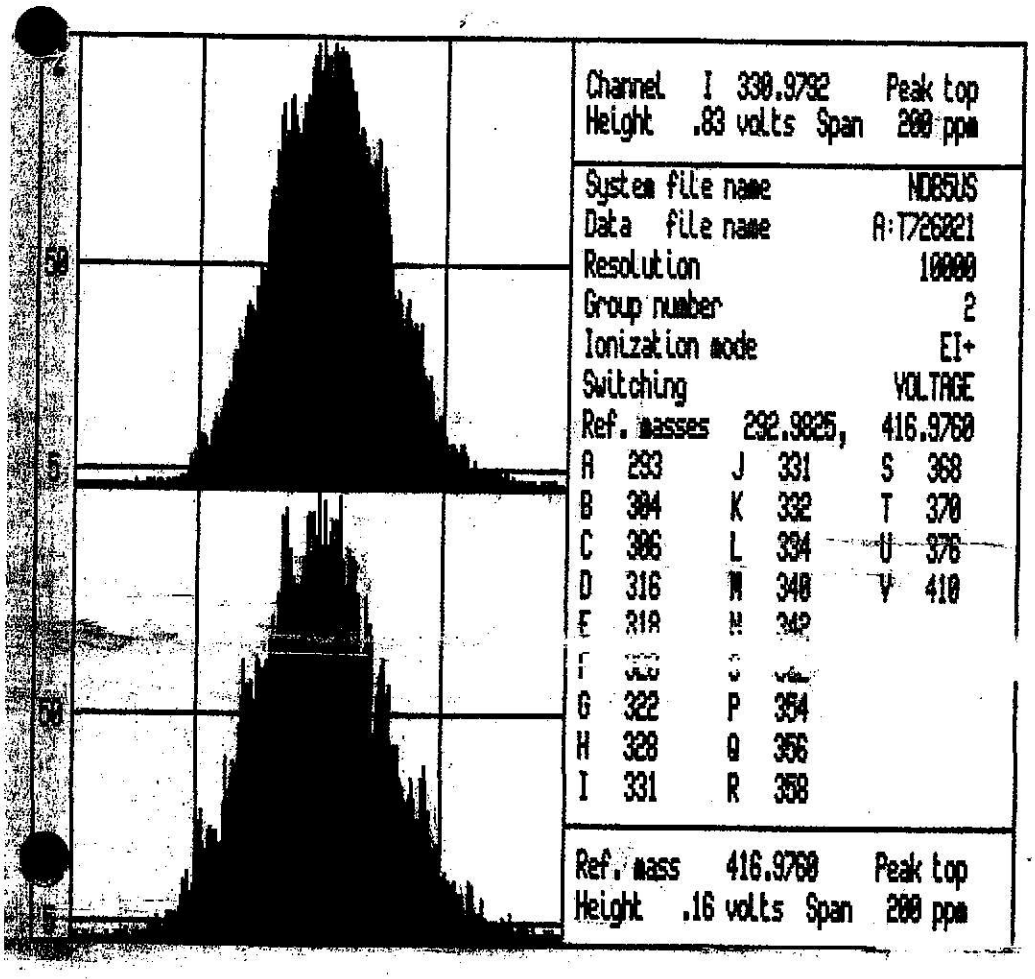


File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T Noise:80
471.7750 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,320.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55

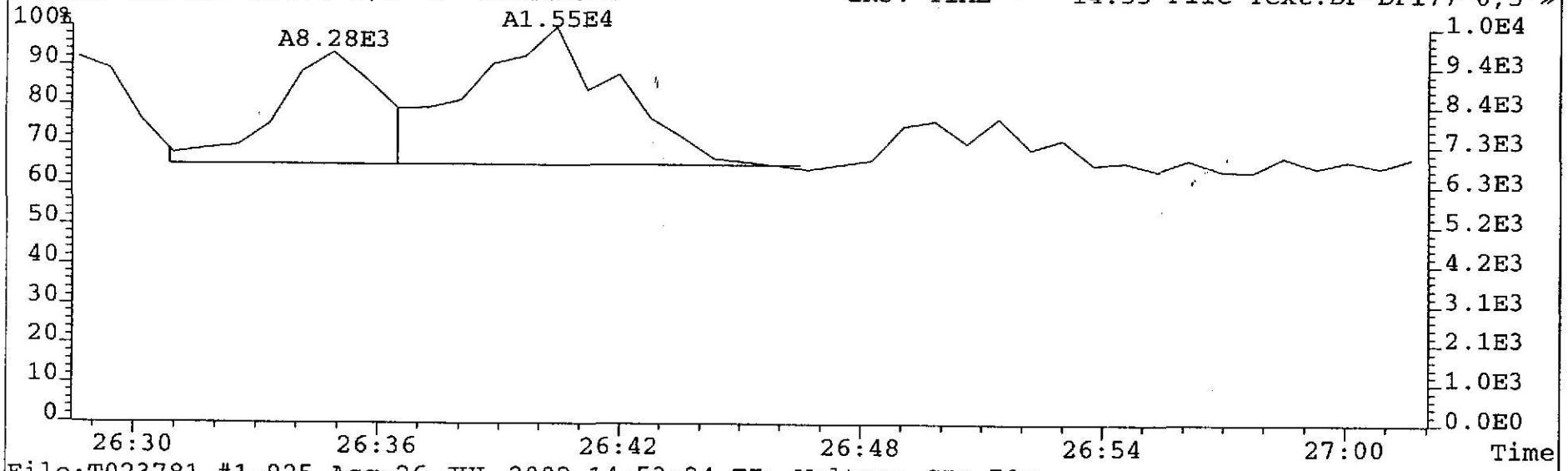


File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55

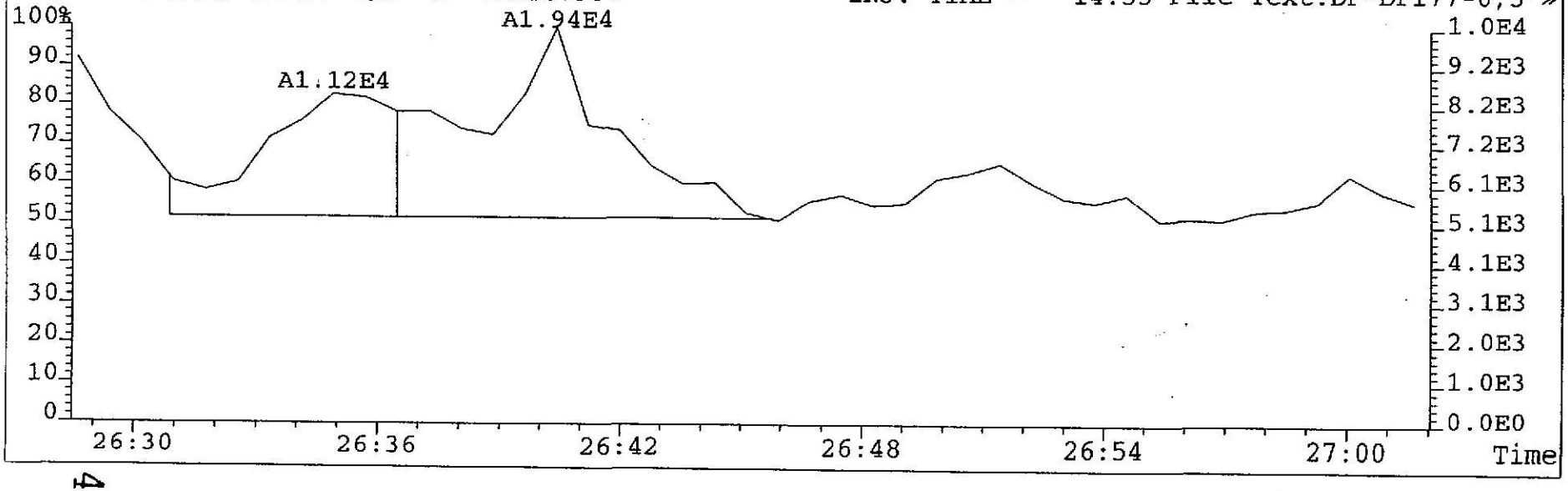



Channel I 330.9792 Peak top
Height .83 volts Span 200 ppm
System file name MOBSUS
Data file name A:T726021
Resolution 10000
Group number 2
Ionization mode EI+
Switching VOLTAGE
Ref. masses 292.9825, 416.9760
A 293 J 331 S 368
B 304 K 332 T 370
C 306 L 334 U 376
D 316 M 340 V 410
E 319 N 342
G 322 P 354
H 328 Q 356
I 331 R 358
Ref. mass 416.9760 Peak top
Height .16 volts Span 200 ppm

File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
303.9016 F:2 Exp:NDB5US
Sample Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55 File Text:DF-DP177-0,5'»



File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
305.8987 F:2 Exp:NDB5US
Sample Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55 File Text:DF-DP177-0,5'»



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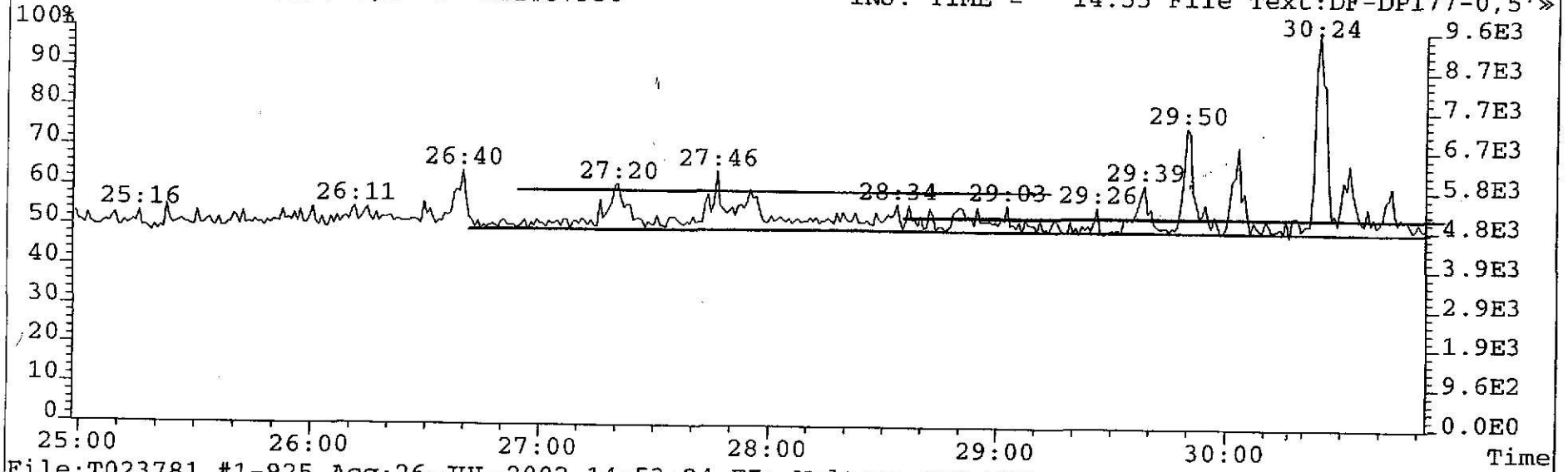
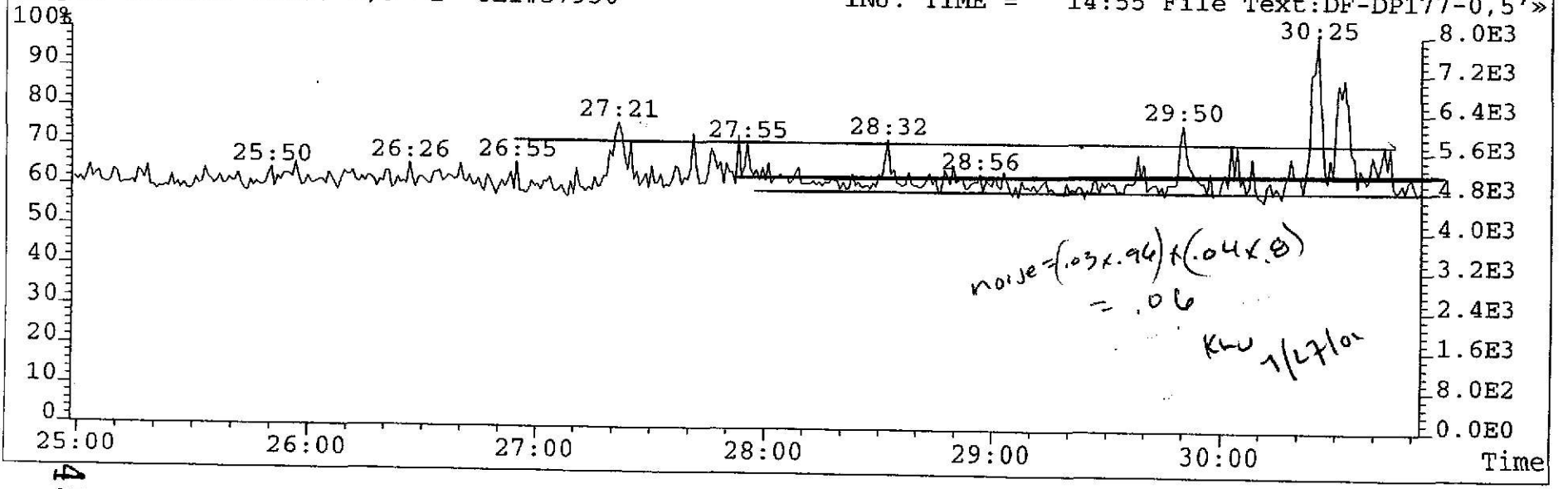
KLU 7/17/01

File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
319.8965 F:2 Exp:NDB5US
Sample Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55 File Text:DF-DP177-0,5'»

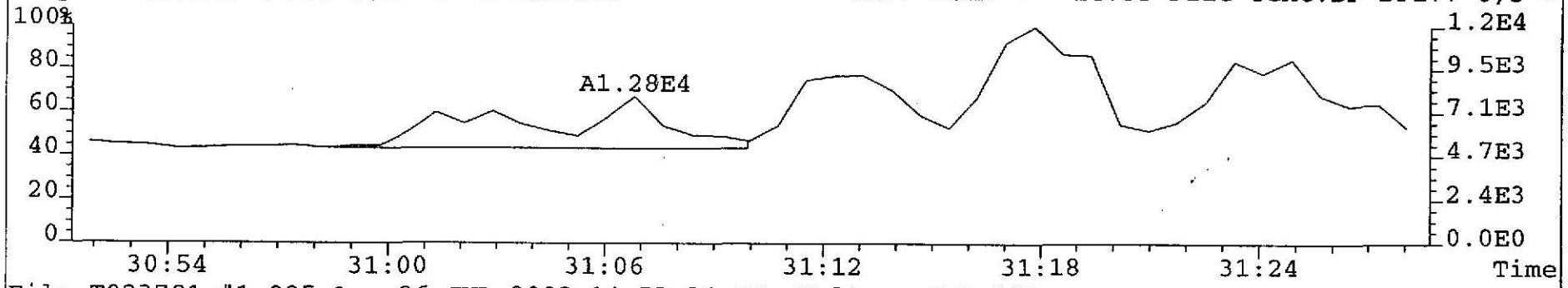


File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
321.8936 F:2 Exp:NDB5US
Sample Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55 File Text:DF-DP177-0,5'»

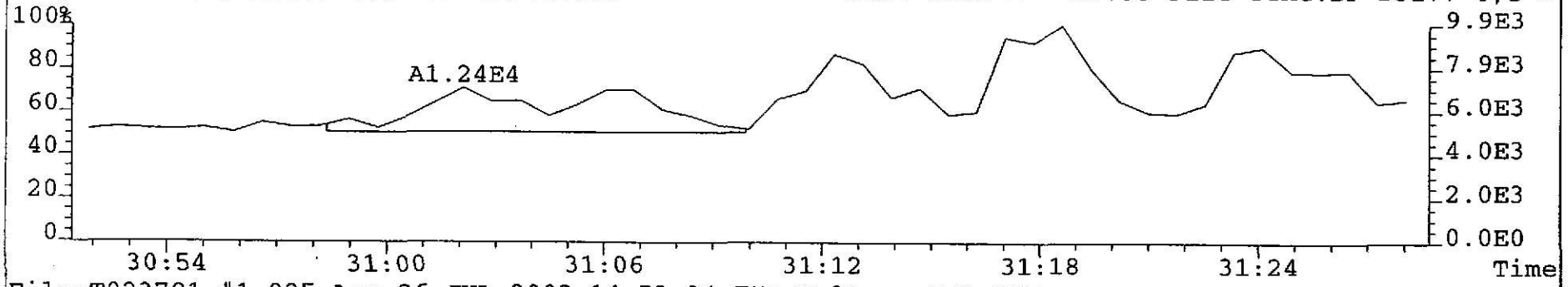


noise = (.03x.96) + (.04x.8)
= .06
KLU 7/27/02

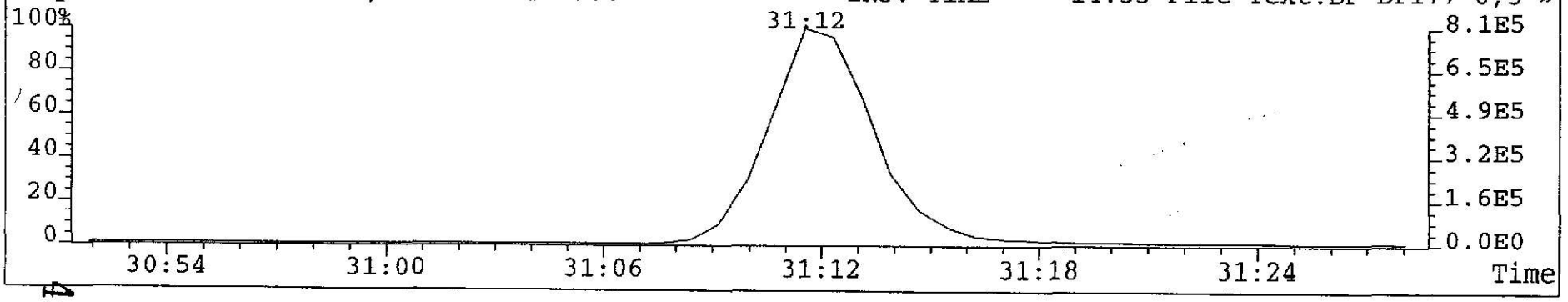
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
339.8597 F:2 Exp:NDB5US
Sample Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55 File Text:DF-DP177-0,5'»



File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
341.8567 F:2 Exp:NDB5US
Sample Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55 File Text:DF-DP177-0,5'»

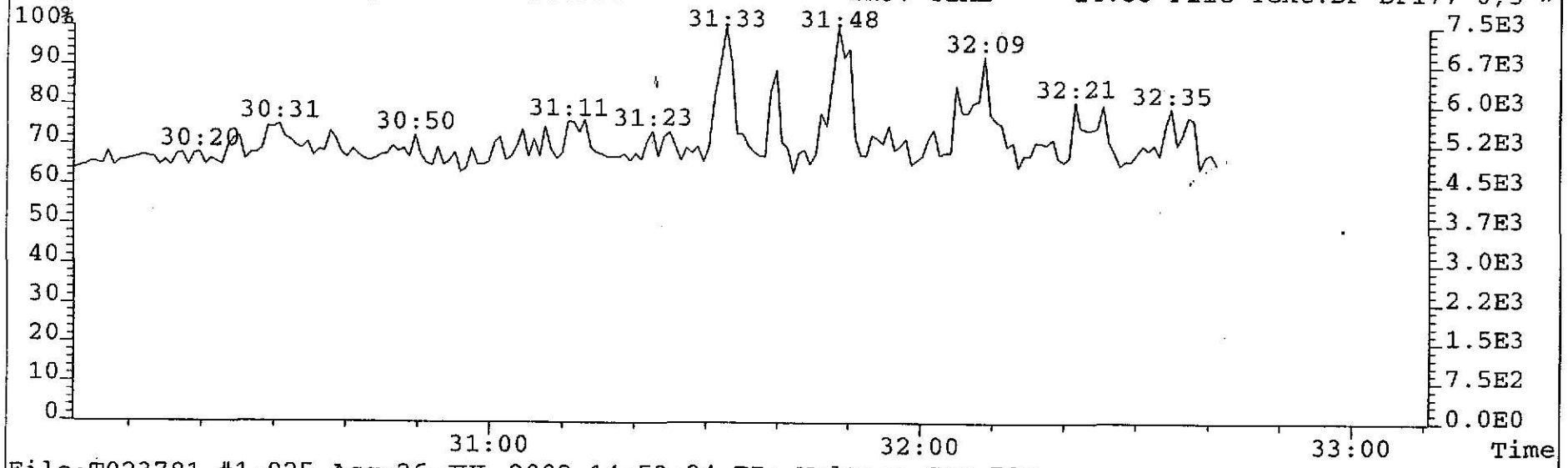


File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
351.9000 F:2 Exp:NDB5US
Sample Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55 File Text:DF-DP177-0,5'»

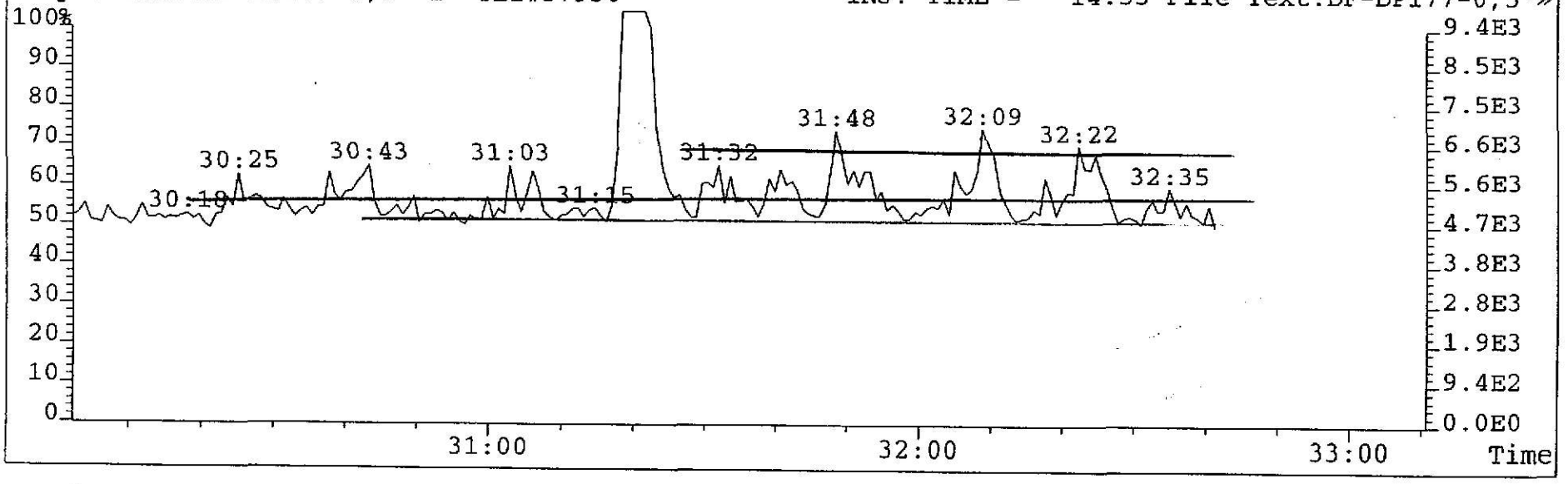


Kw 7/27/02

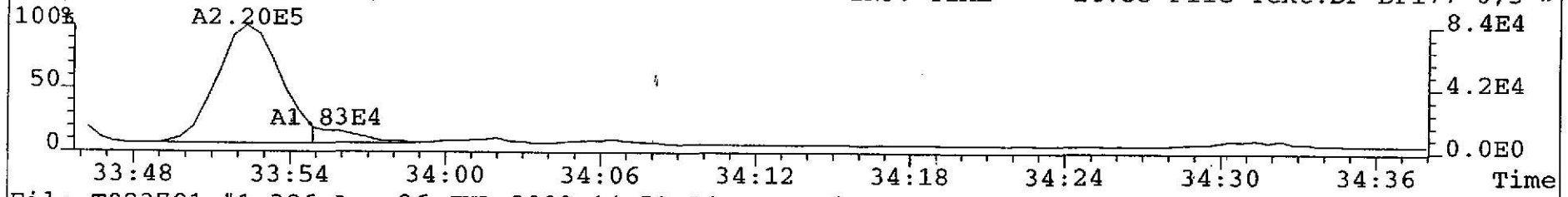
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
355.8546 F:2 Exp:NDB5US
Sample Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55 File Text:DF-DP177-0,5'»



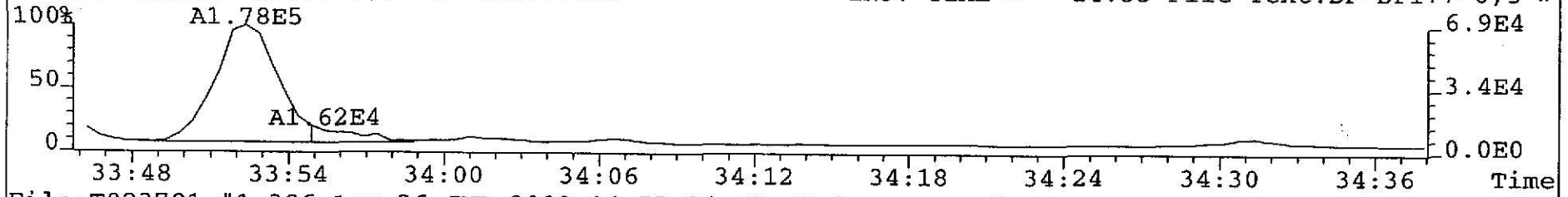
File:T023781 #1-925 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
357.8516 F:2 Exp:NDB5US
Sample Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55 File Text:DF-DP177-0,5'»



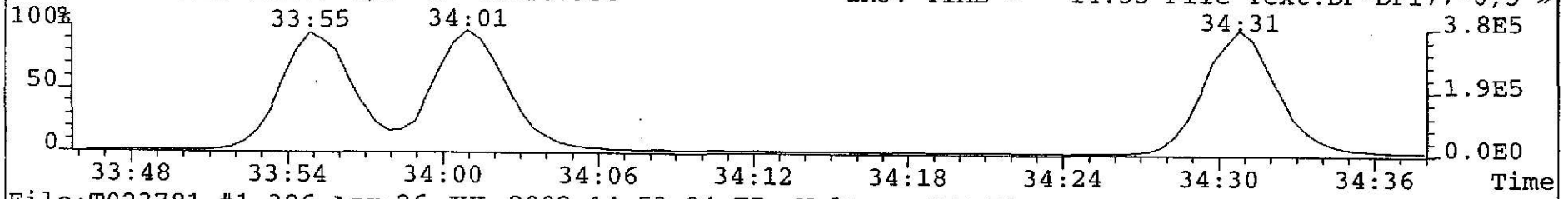
File:T023781 #1-386 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
373.8208 F:3 Exp:NDB5US
Sample Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55 File Text:DF-DP177-0,5'»



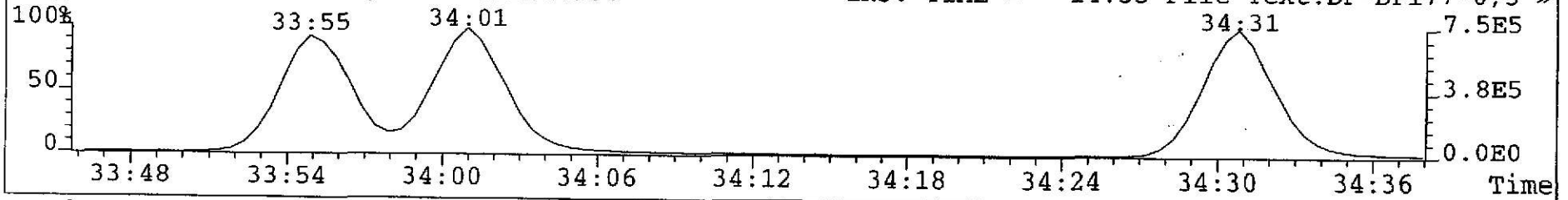
File:T023781 #1-386 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
375.8178 F:3 Exp:NDB5US
Sample Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55 File Text:DF-DP177-0,5'»



File:T023781 #1-386 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
383.8639 F:3 Exp:NDB5US
Sample Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55 File Text:DF-DP177-0,5'»

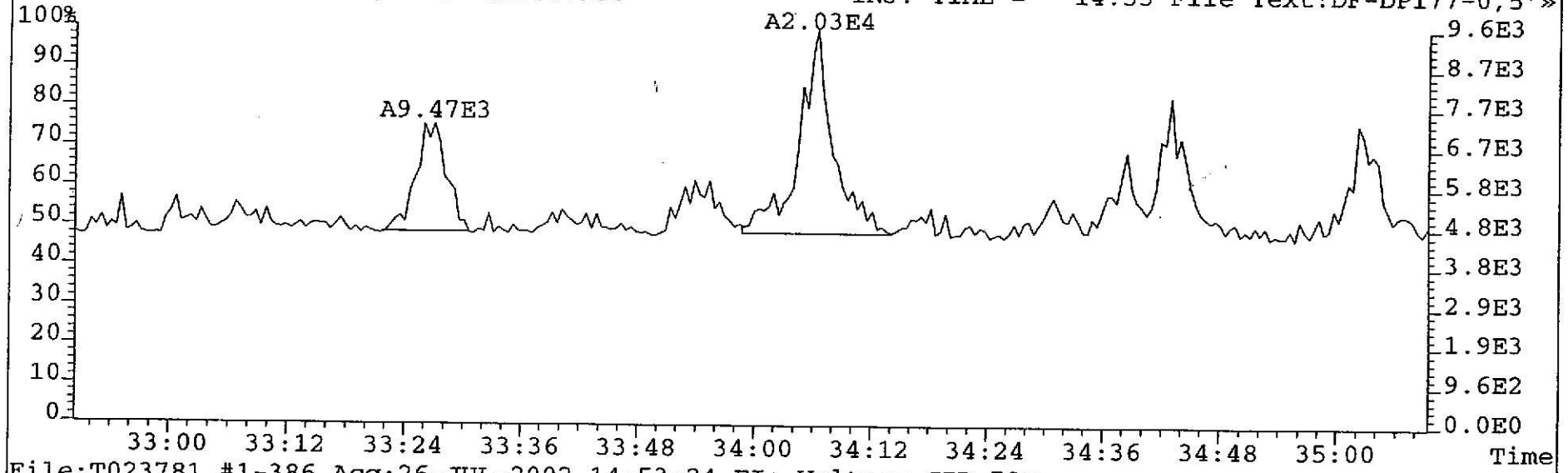


File:T023781 #1-386 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
385.8610 F:3 Exp:NDB5US
Sample Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55 File Text:DF-DP177-0,5'»

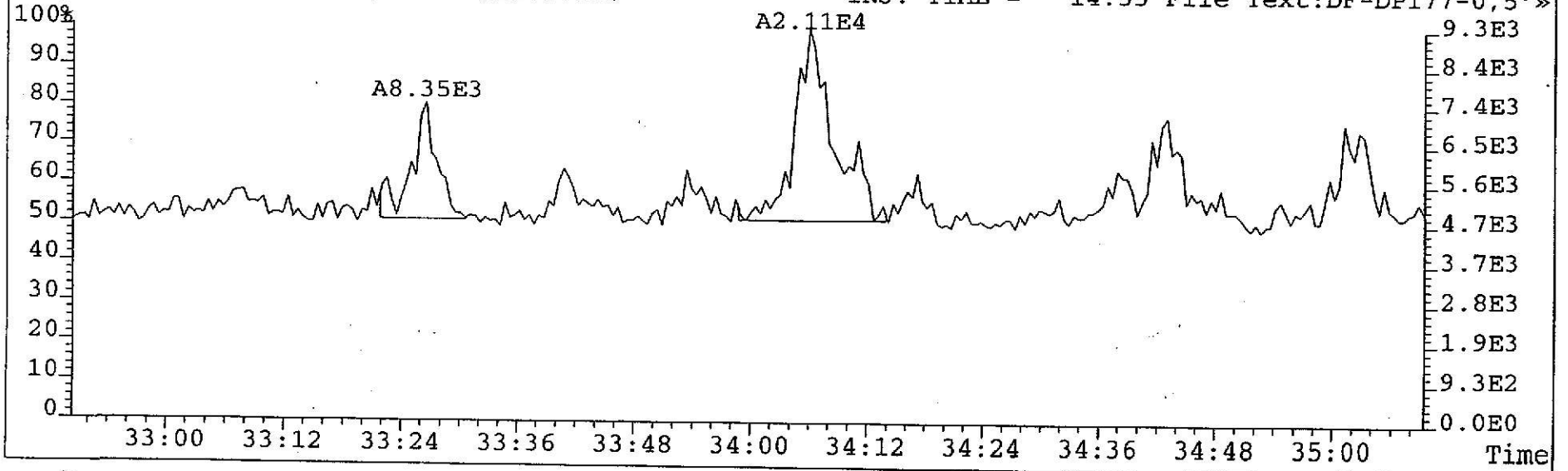


KLW 7/27/02

File:T023781 #1-386 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
389.8156 F:3 Exp:NDB5US
Sample Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55 File Text:DF-DP177-0,5'»

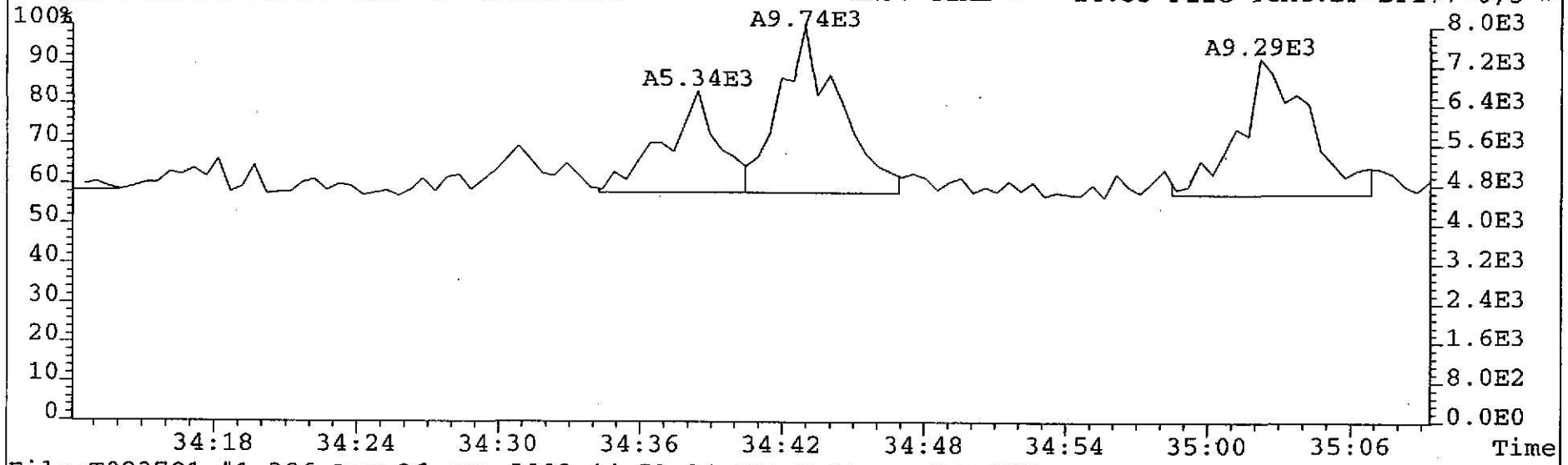


File:T023781 #1-386 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
391.8127 F:3 Exp:NDB5US
Sample Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55 File Text:DF-DP177-0,5'»

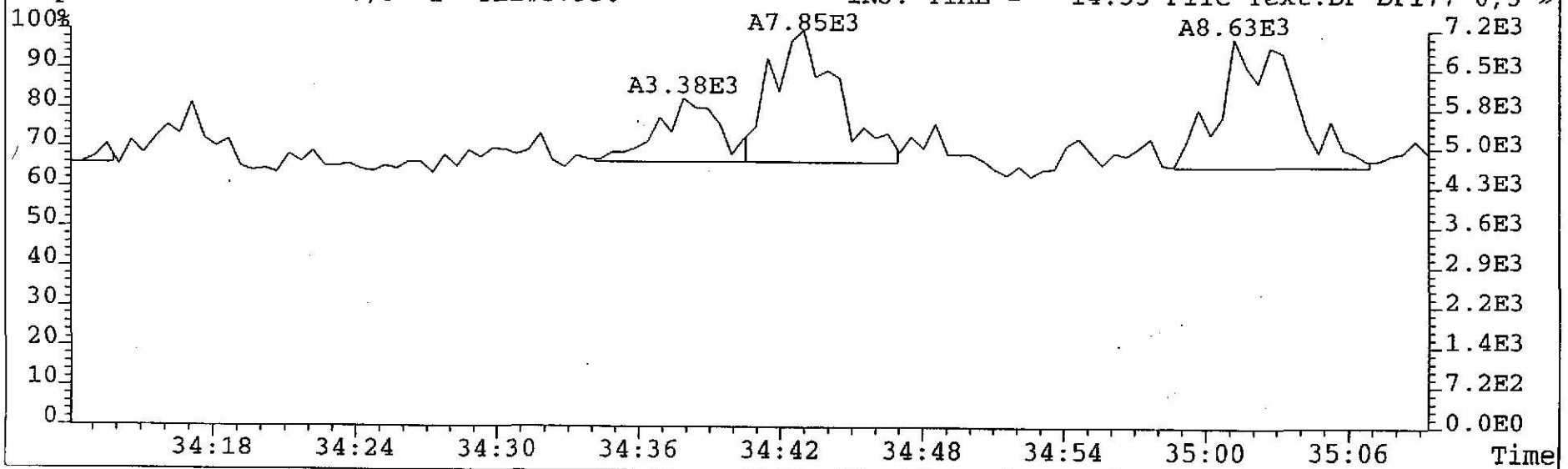


KLW 7/27/02

File:T023781 #1-386 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
389.8156 F:3 Exp:NDB5US
Sample Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55 File Text:DF-DP177-0,5'»



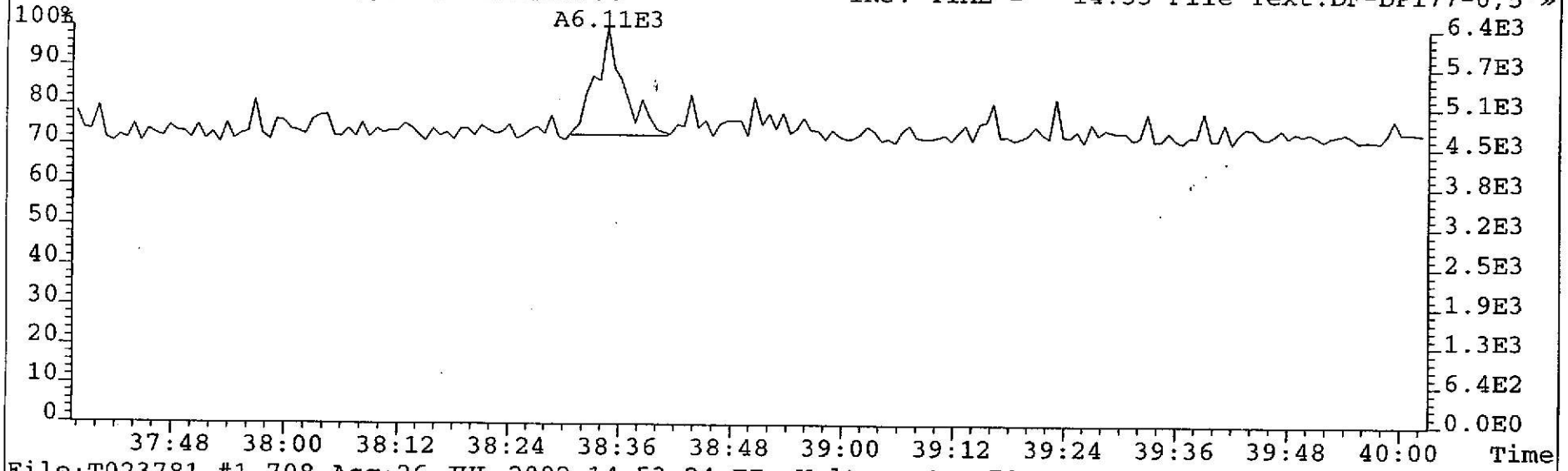
File:T023781 #1-386 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
391.8127 F:3 Exp:NDB5US
Sample Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55 File Text:DF-DP177-0,5'»



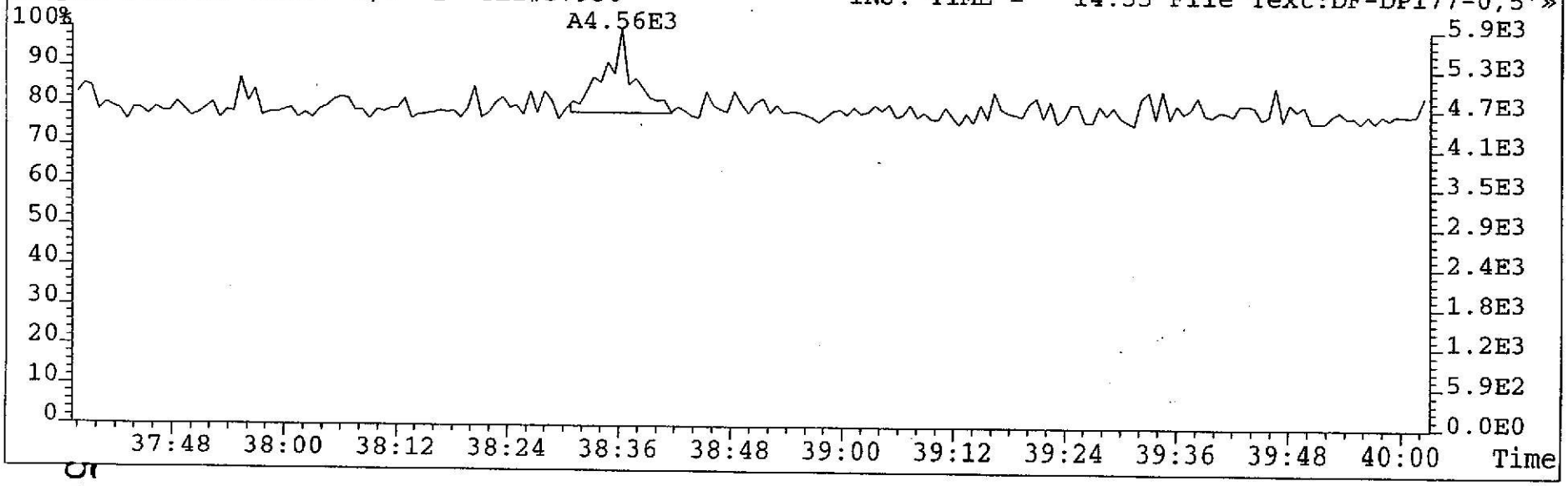
500

KW 7/27/a

File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
407.7818 F:4 Exp:NDB5US
Sample Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55 File Text:DF-DP177-0,5'»



File:T023781 #1-708 Acq:26-JUL-2002 14:53:24 EI+ Voltage SIR 70T
409.7789 F:4 Exp:NDB5US
Sample Text:DF-DP177-0,5'-1' TLI#57930 INJ. TIME = 14:55 File Text:DF-DP177-0,5'»



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RLW 7/27/02

Martin & Slagle

TLI Project: **57930**
Client Sample: **DF-DP177-1′-2′**

1613, Revision B PCDD/PCDF Analysis (c)
Analysis File: **T023782**

Client Project:	**Kuhlman Electric**				
Sample Matrix:	**SOLID**	Date Received:	**07/20/2002**	Spike File:	**SP161B2S**
TLI ID:	**331-18-16**	Date Extracted:	**07/23/2002**	ICal:	**TF5612B**
		Date Analyzed:	**07/26/2002**	ConCal:	**TB23771**
Sample Size:	**13.000 g**	Dilution Factor:	**n/a**	% Moisture:	**22.6**
Dry Weight:	**10.062 g**	Blank File:	**T023762**	% Lipid:	**n/a**
GC Column:	**DB-5**	Analyst:	**JMM**	% Solids:	**77.4**

Analytes	Conc. (pg/g)	DL	Ratio	RT	RRT	Flags
2,3,7,8-TCDD	0.62		0.89	27:22	1.001	J__
1,2,3,7,8-PeCDD	2.5		1.46	31:33	1.000	J__
1,2,3,4,7,8-HxCDD	2.5		1.17	34:38	1.000	J__
1,2,3,6,7,8-HxCDD	3.3		1.20	34:43	1.000	J__
1,2,3,7,8,9-HxCDD	4.6		1.20	35:04	1.010	J__
1,2,3,4,6,7,8-HpCDD	11.4		1.14	38:04	1.000	__
1,2,3,4,6,7,8,9-OCDD	181		0.86	41:51	1.000	__
2,3,7,8-TCDF	1.1		0.74	26:40	1.000	__
1,2,3,7,8-PeCDF	2.6		1.47	30:32	1.000	J__
2,3,4,7,8-PeCDF	2.3		1.53	31:13	1.001	J__
1,2,3,4,7,8-HxCDF	3.3		1.32	33:56	1.000	J__
1,2,3,6,7,8-HxCDF	3.6		1.17	34:02	1.000	J__
2,3,4,6,7,8-HxCDF	3.9		1.28	34:32	1.000	J__
1,2,3,7,8,9-HxCDF	5.2		1.26	35:20	1.000	__
1,2,3,4,6,7,8-HpCDF	19.0		1.07	37:00	1.000	__
1,2,3,4,7,8,9-HpCDF	4.9		1.17	38:36	1.000	J__
1,2,3,4,6,7,8,9-OCDF	13.1		0.89	42:04	1.005	__

Totals	Conc. (pg/g)	Number	DL	Flags
Total TCDD	1.1	2		__
Total PeCDD	2.5	1		__
Total HxCDD	12.4	4		__
Total HpCDD	23.7	2		__
Total TCDF	14.6	7		__
Total PeCDF	38.9	12		__
Total HxCDF	37.5	10		__
Total HpCDF	32.8	3		__

161B_PSR v2.04, LARS 6.25.05

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Printed: 16:48 07/28/2002

TLI Project: **57930** 1613, Revision B PCDD/PCDF Analysis (c)
Client Sample: **DF-DP177-1'-2'** Analysis File: **T023782**

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	RRT	Flags
$^{13}C_{12}$-2,3,7,8-TCDD	133	66.8	25%-164%	0.80	27:21	1.007	—
$^{13}C_{12}$-1,2,3,7,8-PeCDD	111	55.8	25%-181%	1.50	31:33	1.162	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	167	84.2	32%-141%	1.19	34:38	0.988	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	180	90.8	28%-130%	1.24	34:43	0.990	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	112	56.6	23%-140%	1.04	38:04	1.086	—
$^{13}C_{12}$-1,2,3,4,6,7,8,9-OCDD	106	26.7	17%-157%	0.91	41:51	1.194	—
$^{13}C_{12}$-2,3,7,8-TCDF	157	78.8	24%-169%	0.76	26:40	0.982	—
$^{13}C_{12}$-1,2,3,7,8-PeCDF	117	59.0	24%-185%	1.51	30:32	1.125	—
$^{13}C_{12}$-2,3,4,7,8-PeCDF	113	57.1	21%-178%	1.49	31:12	1.149	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	189	95.3	26%-152%	0.51	33:56	0.968	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	209	105	26%-123%	0.51	34:01	0.971	—
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	214	108	28%-136%	0.50	34:32	0.985	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	178	89.8	29%-147%	0.51	35:19	1.008	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	145	72.7	28%-143%	0.44	36:59	1.055	—
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	112	56.2	26%-138%	0.43	38:35	1.101	—

Cleanup Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	RRT	Flags
$^{37}Cl_4$-2,3,7,8-TCDD	13.3	67.0	35%-197%	27:22	1.008	—

Recovery Standards	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.81	27:09	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.21	35:03	—

Data Reviewer: Ushy 07/28/2002

161B_PSR v2.04, LARS 6.25.05

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Printed: 16:48 07/28/2002

TLI Project: **57930**
Client Sample: **DF-DP177-1'-2'**

Toxicity Equivalents Report
Analysis File: **T023782**

Client Project:	**Kuhlman Electric**				
Sample Matrix:	**SOLID**	Date Received:	**07/20/02**	Spike File:	**SP161B2S**
TLI ID:	**331-18-16**	Date Extracted:	**07/23/02**	ICal:	**TF5612B**
		Date Analyzed:	**07/26/02**	ConCal:	**TB23771**
Sample Size:	**13.000 g**	Dilution Factor:	**1**	% Moisture:	**22.6**
Dry Weight:	**10.062 g**	Blank File:	**T023762**	% Lipid:	**n/a**
GC Column:	**DB-5**	Analyst:	**JMM**	% Solids:	**77.4**

Analytes	Conc. (pg/g)		TEF		Equivalent
2,3,7,8-TCDD	0.62	x	1.	=	0.62
1,2,3,7,8-PeCDD	2.5	x	0.5	=	1.3
1,2,3,4,7,8-HxCDD	2.5	x	0.1	=	0.25
1,2,3,6,7,8-HxCDD	3.3	x	0.1	=	0.33
1,2,3,7,8,9-HxCDD	4.6	x	0.1	=	0.46
1,2,3,4,6,7,8-HpCDD	11.4	x	0.01	=	0.114
1,2,3,4,6,7,8,9-OCDD	181	x	0.001	=	0.181
TOTAL PCDD					3.3
2,3,7,8-TCDF	0.67	x	0.1	=	0.067
1,2,3,7,8-PeCDF	2.6	x	0.05	=	0.13
2,3,4,7,8-PeCDF	2.3	x	0.5	=	1.2
1,2,3,4,7,8-HxCDF	3.3	x	0.1	=	0.33
1,2,3,6,7,8-HxCDF	3.6	x	0.1	=	0.36
2,3,4,6,7,8-HxCDF	3.9	x	0.1	=	0.39
1,2,3,7,8,9-HxCDF	5.2	x	0.1	=	0.52
1,2,3,4,6,7,8-HpCDF	19.0	x	0.01	=	0.190
1,2,3,4,7,8,9-HpCDF	4.9	x	0.01	=	0.049
1,2,3,4,6,7,8,9-OCDF	13.1	x	0.001	=	0.0131
TOTAL PCDF					3.2

Total EPA TEFs, 1989a: 6.5 pg/g

GRY_TEF v1.08, MILES 4.22.16

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Printed: 22:18 07/29/02

Initial ....Date...

Data Review By: WHY 7/28/02

Calculated Noise Height: 0.06

Page No. 1 Listing of T023782B.dbf
07/28/2002 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				0.879-1.071			
304-306		DC	NL			Height	0.16	0.09	0.07				
	D	D	WL	23:27		0.82	3.78			0.879			
				24:19		0.78	6.42	2.81	3.61	0.912			
				24:33	RO	0.99	2.90	1.44	1.46	0.921			
		DC	SN	24:41	RO	0.55	0.87			0.926			
				25:10		0.65	3.07	1.21	1.86	0.944			J
				25:43		0.67	4.12	1.65	2.47	0.964			J
				26:03	RO	0.53	5.39	1.86	3.53	0.977			
				26:15		0.74	4.15	1.76	2.39	0.984			J
	M			26:40		0.74	5.25	2.23	3.02	1.000	2378-TCDF	AN	
	D	D	SN	27:06	RO	1.05	1.68			1.016			
	D	D	SN	27:20	RO	1.83	0.82			1.025			
				27:31		0.76	4.33	1.87	2.46	1.032			J
				27:51		0.83	41.74	18.87	22.87	1.044			
304-306			9	Peaks			77.37						
13C12-TCDF						0.65-0.89				0.944-1.131			
316-318		DC	NL			Height	0.15	0.07	0.08				
				25:38		0.75	5.77	2.47	3.30	0.961			
				25:56		0.85	1.96	0.90	1.06	0.973			
				26:15		0.73	7.68	3.23	4.45	0.984			
				26:40		0.76	890.27	384.51	505.76	1.000	13C12-2378-TCDF	ISO	
						Height	218.19	94.55	123.64				
				27:10	RO	3.49	2.56	1.99	0.57	1.019			
316-318			5	Peaks			908.24						

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

TCDD						0.65-0.89				0.904-1.042			
320-322 MKT				24:52	RO	0.51	5.37	1.81	3.56	0.909			
				25:16		0.68	1.51	0.61	0.90	0.924	1379-TCDD	AN	J
		DC	SN	25:56	RO	0.95	0.37			0.948			
		DC	SN	26:05	RO	1.00	0.10			0.954			
		DC	SN	26:39	RO	3.29	0.90			0.974			
		DC	SN	26:51	RO	0.59	0.27			0.982			
		DC	SN	27:07	RO	6.33	0.22			0.991			
				27:22		0.89	2.15	1.01	1.14	1.001	2378-TCDD	AN	J
		DC	SN	27:30		0.78	0.41			1.005			
	D	D	SN	27:46	RO	0.45	0.55			1.015			
	D	D	SN	27:55	RO	0.54	0.94			1.021			
		DC	SN	28:16	RO	0.11	0.39			1.034			
		DC	WH	28:31	RO	1.04	0.98			1.043			
320-322			3	Peaks			9.03						
37Cl-TCDD										0.927-1.073			
328		DC	NL			Height	0.07	0.07					

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	24:40			0.20			0.902			
		DC	WL	24:46			0.10			0.906			
		DC	WL	25:01			0.28			0.915			
		DC	WL	25:12			0.33			0.921			
		DC	SN	25:22			0.18			0.927			
		DC	SN	25:30			0.15			0.932			
		DC	SN	25:34			0.19			0.935			
		DC	SN	25:41			0.14			0.939			
				26:00			33.62	33.62		0.951			
				26:13			0.23	0.23		0.959			
		DC	SN	26:21			0.14			0.963			
		DC	SN	26:28			0.24			0.968			
		DC	SN	26:40			0.19			0.975			
		DC	SN	26:54			0.10			0.984			
				27:22			63.77	63.77		1.001	37Cl-TCDD	CLS	
				27:44			68.68	68.68		1.014			
				28:05			0.36	0.36		1.027			
				28:14			0.19	0.19		1.032			
		DC	SN	28:20			0.22			1.036			
		DC	SN	28:31			0.18			1.043			
				28:40			1.37	1.37		1.048			
		DC	SN	28:48			0.07			1.053			
328			7	Peaks			168.22						
13C12-TCDD					0.65-0.89				0.920-1.066				
332-334		DC	NL		Height		0.27	0.18	0.09				
		DC	SN	26:14		0.84	1.25			0.959			
				27:09		0.81	861.74	386.11	475.63	0.993	13C12-1234-TCDD	RS1	
				27:21		0.80	649.43	288.40	361.03	1.000	13C12-2378-TCDD	IS1	
					Height		169.09	75.11	93.98				
				27:43	RO	0.52	2.18	0.75	1.43	1.013			
332-334			3	Peaks			1,513.35						

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

PeCDF					1.32-1.78				0.911-1.037				
340-342		DC	NL		Height		0.13	0.06	0.07				
				28:28		1.71	3.80	2.40	1.40	0.912			J
				28:38	RO	1.30	5.03	2.84	2.19	0.918			
				28:51	RO	1.27	12.01	6.71	5.30	0.925			
				29:17		1.76	3.40	2.17	1.23	0.939			J
				29:22	RO	0.64	7.86	3.07	4.79	0.941			
				29:34	RO	1.21	1.17	0.64	0.53	0.948			
	K			29:43		1.39	6.05	3.52	2.53	0.952			J
				29:51		1.46	30.75	18.25	12.50	0.957			
				30:02		1.49	25.86	15.49	10.37	0.963			
				30:17		1.59	0.70	0.43	0.27	0.971			J
				30:25		1.52	24.67	14.88	9.79	0.975			
				30:32		1.47	8.85	5.27	3.58	1.000	12378-PeCDF	AN	J
	D	D	SN	30:43	RO	0.71	0.48			0.985			
				30:49		1.77	1.80	1.15	0.65	0.988			J
	M			31:13		1.53	7.54	4.56	2.98	1.001	23478-PeCDF	AN	J

Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
M				31:25		1.77	3.68	2.35	1.33	1.007			J
				31:34	RO	1.14	1.05	0.56	0.49	1.012			
	DC	SN		31:43	RO	1.29	0.16			1.017			
				31:48	RO	1.94	1.56	1.03	0.53	1.019			
				32:03		1.40	11.31	6.59	4.72	1.027			J
	DC	SN		32:18	RO	2.83	0.23			1.035			
	DC	WH		32:39		1.37	0.45			1.046			
340-342			18	Peaks			157.09						
13C12-PeCDF				1.32-1.78					0.807-1.127				
352-354	DC	NL				Height	0.12	0.06	0.06				
				29:41	RO	1.25	5.68	3.16	2.52	0.951			
				30:09		1.51	6.42	3.86	2.56	0.966			
				30:32		1.51	590.53	355.14	235.39	1.000	13C12-PeCDF 123	IS2	
						Height	164.09	98.33	65.76				
				30:48		1.54	11.70	7.10	4.60	0.987			
				31:12		1.49	582.69	348.79	233.90	1.000	13C12-PeCDF 234	IS3	
						Height	168.02	100.01	68.01				
				31:30	RO	2.27	2.94	2.04	0.90	1.010			
				31:41	RO	0.95	1.93	0.94	0.99	1.015			
				31:50	RO	2.04	1.61	1.08	0.53	1.020			
				31:54		1.46	1.13	0.67	0.46	1.022			
				32:10	RO	1.27	7.56	4.23	3.33	1.031			
352-354			10	Peaks			1,212.19						
---------- Above: PeCDF / PeCDD Follows ----------													
PeCDD				1.32-1.78					0.940-1.021				
356-358	DC	NL				Height	0.12	0.07	0.05				
	DC	SN		30:24	RO	1.00	0.38			0.964			
D	D	SN		31:04	RO	1.86	0.40			0.985			
				31:33		1.46	5.14	3.05	2.09	1.000	12378-PeCDD	AN	J
				31:49	RO	2.73	0.82	0.60	0.22	1.008			
	DC	SN		31:58	RO	7.14	0.57			1.013			
	DC	WH		32:24	RO	0.90	0.76			1.027			
	DC	WH		32:30	RO	1.80	0.14			1.030			
356-358			2	Peaks			5.96						
13C12-PeCDD				1.32-1.78					0.735-1.052				
368-370	DC	NL				Height	0.15	0.08	0.07				
				30:30		1.58	1.34	0.82	0.52	0.967			
				30:37		1.67	2.51	1.57	0.94	0.970			
				31:33		1.50	399.88	239.62	160.26	1.000	13C12-PeCDD 123	IS4	
						Height	114.79	68.77	46.02				
368-370			3	Peaks			403.73						
---------- Above: PeCDD / HxCDF Follows ----------													
HxCDF				1.05-1.43					0.929-1.007				
374-376	DC	NL				Height	0.15	0.09	0.06				
D	D	WL		32:51	RO	2.00	0.69			0.930			
		X		33:01		1.15	4.20	2.25	1.95	0.935			J

Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
				33:07		1.33	8.45	4.83	3.62	0.938			J
				33:14		1.29	5.43	3.06	2.37	0.941			J
				33:23	RO	1.73	1.12	0.71	0.41	0.945			
				33:34		1.18	18.25	9.87	8.38	0.950			
				33:45		1.28	0.89	0.50	0.39	0.956			J
	MN			33:54		1.27	14.66	8.20	6.46	0.999			
	AN			33:56		1.32	7.99	4.54	3.45	1.000	123478-HxCDF	AN	J
				34:02		1.17	9.70	5.22	4.48	1.000	123678-HxCDF	AN	J
				34:32		1.28	9.98	5.61	4.37	1.000	234678-HxCDF	AN	J
				35:20		1.26	9.76	5.44	4.32	1.000	123789-HxCDF	AN	
		DC	WH	35:37	RO	0.40	0.07			1.008			
		DC	WH	35:40	RO	0.80	0.09			1.010			
		DC	WH	35:45	RO	1.00	0.18			1.012			
		DC	WH	35:48		1.33	0.14			1.014			
374-376			11	Peaks			90.43						
13C12-HxCDF				0.43-0.59					0.879-1.106				
384-386		DC	NL			Height	0.21	0.11	0.10				
				32:59		0.58	1.52	0.56	0.96	0.934			
				33:07		0.46	2.79	0.88	1.91	0.938			
				33:56		0.51	421.78	142.41	279.37	1.000	13C12-HxCDF 478	IS5	
						Height	132.21	44.63	87.58				
				34:01		0.51	472.19	159.60	312.59	1.000	13C12-HxCDF 678	IS6	
						Height	139.08	47.54	91.54				
				34:20	RO	1.02	1.27	0.64	0.63	0.972			
				34:32		0.50	472.02	157.53	314.49	1.000	13C12-HxCDF 234	IS7	
						Height	137.84	45.63	92.21				
				34:46	RO	0.28	2.28	0.50	1.78	0.984			
		DC	SN	34:54	RO	0.74	0.68			0.988			
				35:19		0.51	329.89	110.76	219.13	1.000	13C12-HxCDF 789	IS8	
						Height	85.86	28.48	57.38				
				35:34	RO	0.19	1.62	0.26	1.36	1.007			
		DC	SN	35:42	RO	0.64	0.64			1.011			
384-386			9	Peaks			1,705.36						

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

HxCDD				1.05-1.43					0.959-1.013				
390-392		DC	NL			Height	0.18	0.09	0.09				
				33:28		1.25	3.13	1.74	1.39	0.964			J
				34:07	RO	1.55	2.93	1.78	1.15	0.983			
				34:38		1.17	3.79	2.04	1.75	1.000	123478-HxCDD	AN	J
				34:43		1.20	5.62	3.07	2.55	1.000	123678-HxCDD	AN	J
		DC	SN	34:55	RO	0.71	0.12			1.006			
				35:04		1.20	7.75	4.23	3.52	1.010	123789-HxCDD	AN	J
		DC	WH	35:15	RO	0.40	2.18			1.015			
390-392			5	Peaks			23.22						
13C12-HxCDD				1.05-1.43					0.983-1.041				
402-404		DC	NL			Height	0.18	0.08	0.10				
				34:06		1.20	1.23	0.67	0.56	0.985			
				34:38		1.19	275.79	150.02	125.77	1.000	13C12-HxCDD 478	IS9	
						Height	86.63	46.57	40.06				

```
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.

                        34:43     1.24        325.15        179.68        145.47  1.000 13C12-HxCDD 678 IS10
                               Height         90.69         49.27         41.42
                        35:03     1.21        373.49        204.77        168.72  1.012 13C12-HxCDD 789 RS2
                        35:20     1.31          3.00          1.70          1.30  1.020
                        35:29 RO  0.39          0.61          0.17          0.44  1.025
402-404               6 Peaks                 979.27

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

HpCDF                          0.88-1.20                                  0.955-1.005
408-410          DC  NL               Height          0.16          0.08          0.08
                        37:00     1.07         29.03         14.98         14.05  1.000 1234678-HpCDF   AN
                        37:25     1.01         11.13          5.59          5.54  0.970                      J
                 DC  SN 37:39 RO  0.60          0.16                              0.976
                        38:36     1.17          4.59          2.47          2.12  1.000 1234789-HpCDF   AN   J
                 DC  SN 38:46 RO  0.33          0.20                              1.005
                 DC  WH 38:55     1.15          0.28                              1.009
                 DC  WH 39:00 RO  1.75          0.22                              1.011
                 DC  WH 39:04 RO  2.00          0.15                              1.013
408-410               3 Peaks                  44.75

13C12-HpCDF                    0.37-0.51                                  0.857-1.142
418-420          DC  NL               Height          0.20          0.08          0.12
                        36:59     0.44        226.18         69.23        156.95  1.000 13C12-HpCDF 678 IS11
                               Height         57.58         17.95         39.63
                        37:15 RO  0.64          1.21          0.47          0.74  0.965
                 DC  SN 38:11     0.47          0.25                              0.990
                        38:35     0.43        140.63         42.56         98.07  1.000 13C12-HpCDF 789 IS12
                               Height         29.71          9.07         20.64
                        38:51 RO  0.98          1.03          0.51          0.52  1.007
                 DC  SN 39:06 RO  1.31          1.18                              1.013
418-420               4 Peaks                 369.05

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

HpCDD                          0.88-1.20                                  0.976-1.005
424-426          DC  NL               Height          0.14          0.08          0.06
                        37:18     1.10          9.68          5.08          4.60  0.980
                        38:04     1.14          8.90          4.75          4.15  1.000 1234678-HpCDD   AN
                 DC  SN 38:15 RO  0.60          0.24                              1.005
424-426               2 Peaks                  18.58

13C12-HpCDD                    0.88-1.20                                  0.869-1.079
436-438          DC  NL               Height          0.17          0.10          0.07
                        37:18     0.88          1.37          0.64          0.73  0.980
                 DC  SN 37:27 RO  4.33          0.32                              0.984
                 DC  SN 37:33 RO  2.33          0.20                              0.986
                 DC  SN 37:42 RO  1.29          0.39                              0.990
                        38:04     1.04        166.65         84.76         81.89  1.000 13C12-HpCDD 678 IS13
                               Height         38.53         19.42         19.11
                        38:24 RO  0.44          0.59          0.18          0.41  1.009
                 DC  SN 38:27 RO  1.63          0.71                              1.010
```

Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
				38:32		0.94	0.68	0.33	0.35	1.012			
436-438			4 Peaks				169.29						

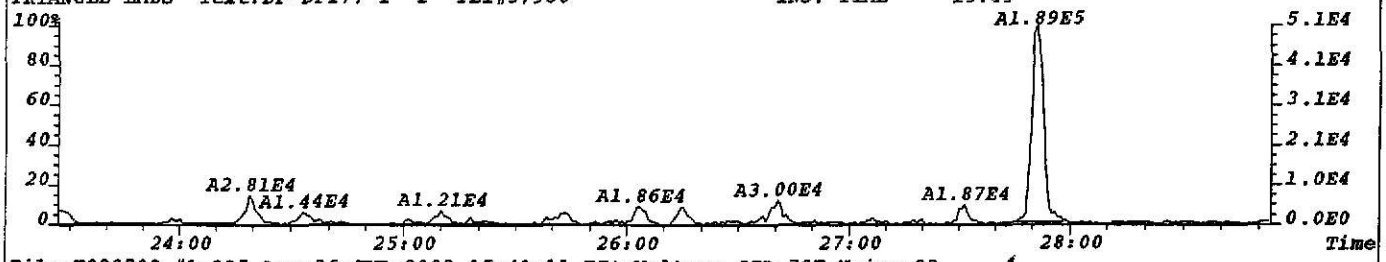
---------- Above: HpCDD / Octa-CDD and CDF Follows ----------

OCDF						0.76-1.02				0.952-1.048			
442-444	DC	NL				Height	0.15	0.08	0.07				
	DC	WL		39:37	RO	2.30	0.66			0.947			
	DC	SN		41:15	RO	0.55	0.17			0.986			
	DC	SN		41:41	RO	2.14	0.22			0.996			
				42:04		0.89	5.92	2.78	3.14	1.005	OCDF		AN
442-444			1 Peak				5.92						
OCDD						0.76-1.02				0.952-1.048			
458-460	DC	NL				Height	0.12	0.06	0.06				
				41:51		0.86	68.42	31.69	36.73	1.000	OCDD		AN
458-460			1 Peak				68.42						
13C12-OCDD						0.76-1.02				0.996-1.004			
470-472	DC	NL				Height	0.12	0.06	0.06				
				41:51		0.91	148.02	70.72	77.30	1.000	13C12-OCDD		IS14
						Height	28.22	13.40	14.82				
470-472			1 Peak				148.02						

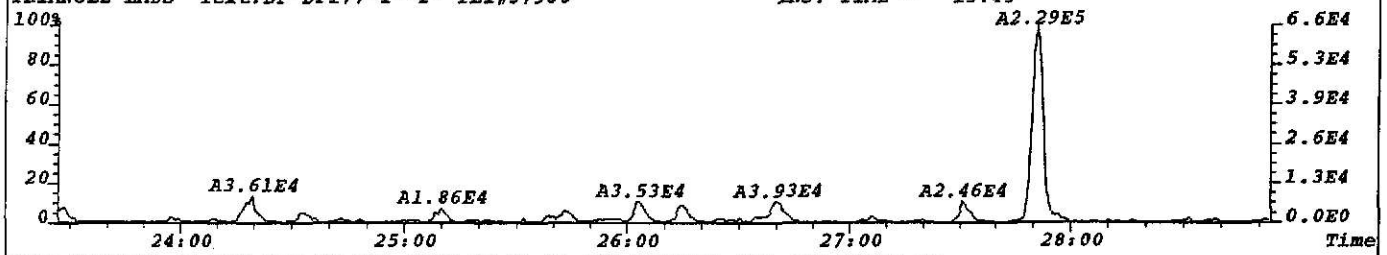
Column Description.....	"Why" Code Description.....	QC Log Desc.....
M_Z -Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT. -Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK -RO=Ratio Outside 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 ***

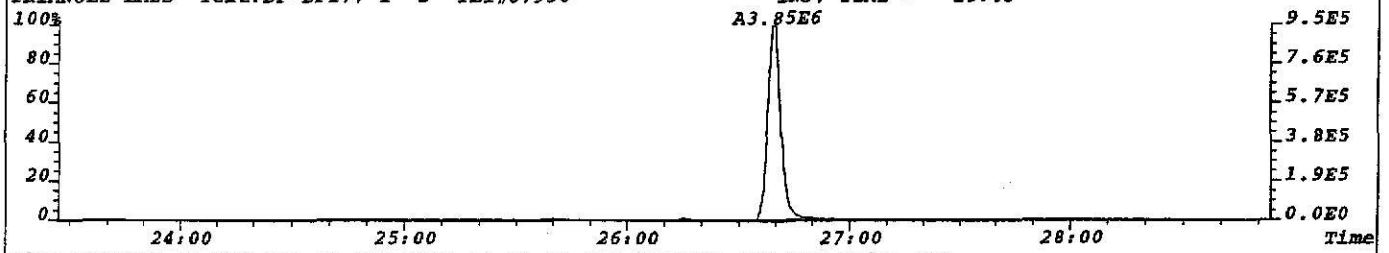
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:114
303.9016 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,456.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



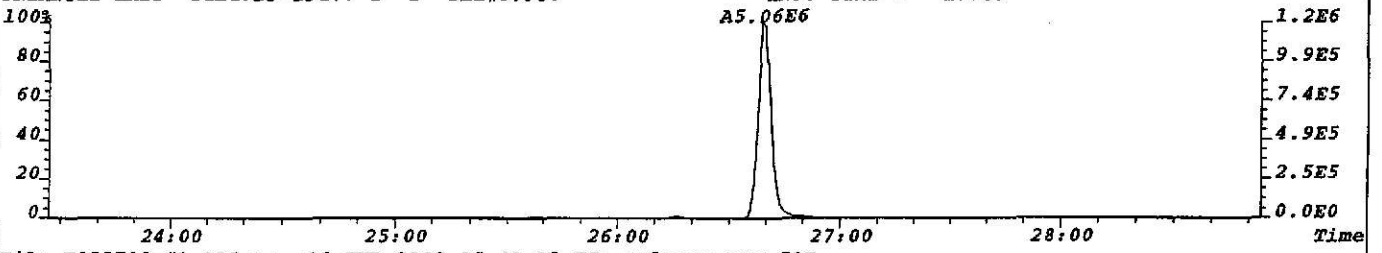
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:92
305.8987 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,368.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



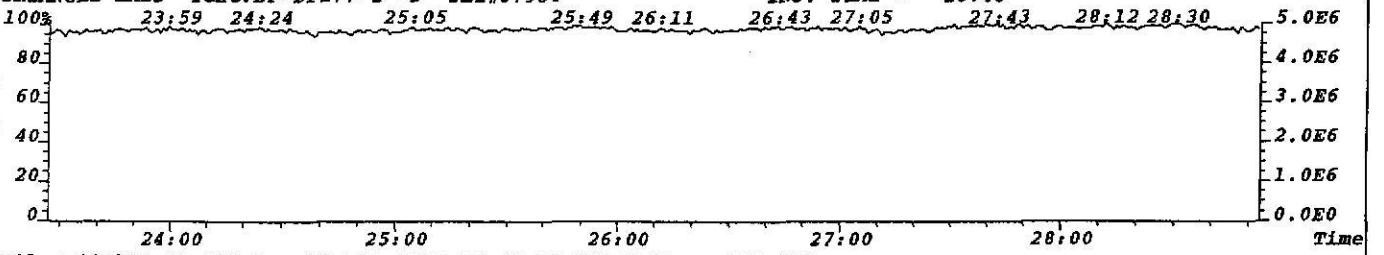
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:90
315.9419 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,360.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



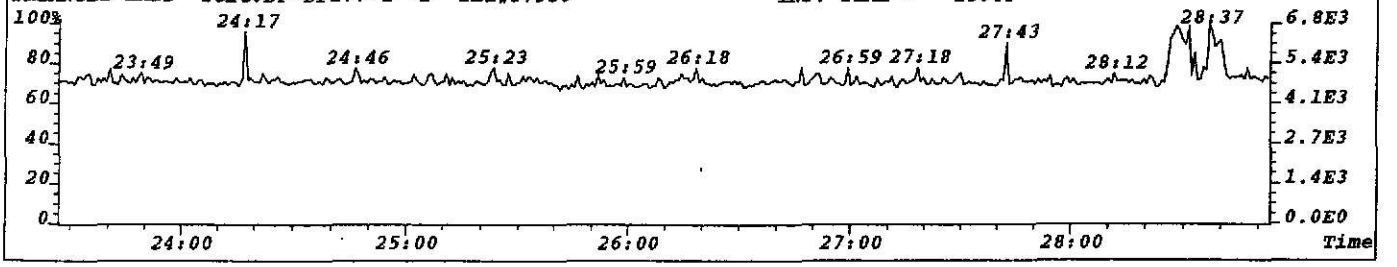
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:106
317.9389 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,424.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



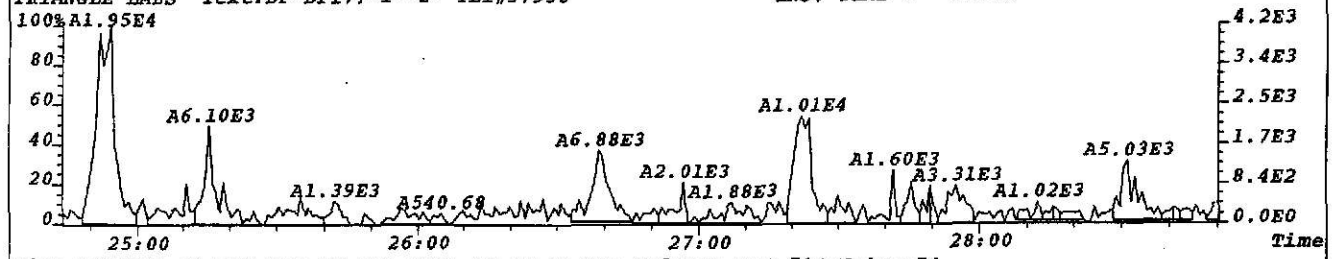
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



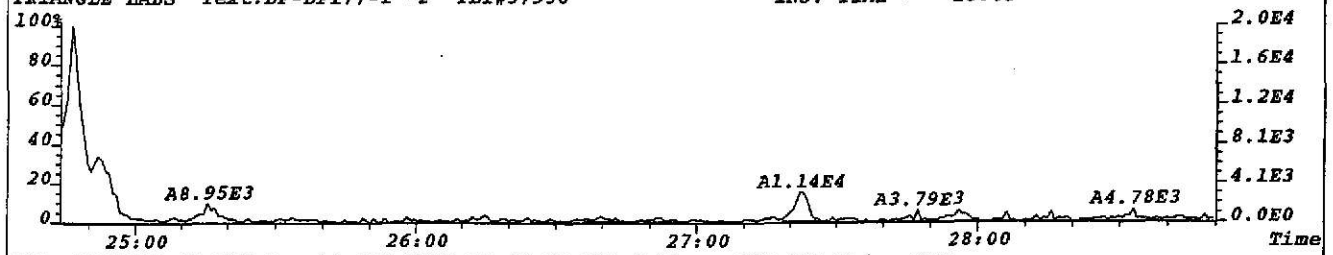
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
375.8364 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



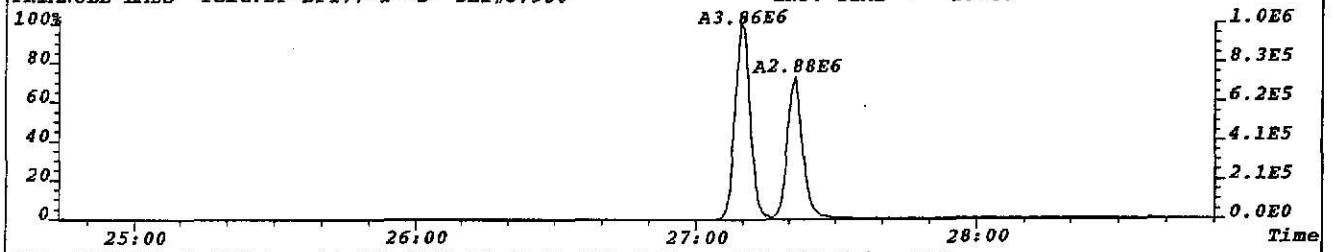
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:69
319.8965 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,276.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



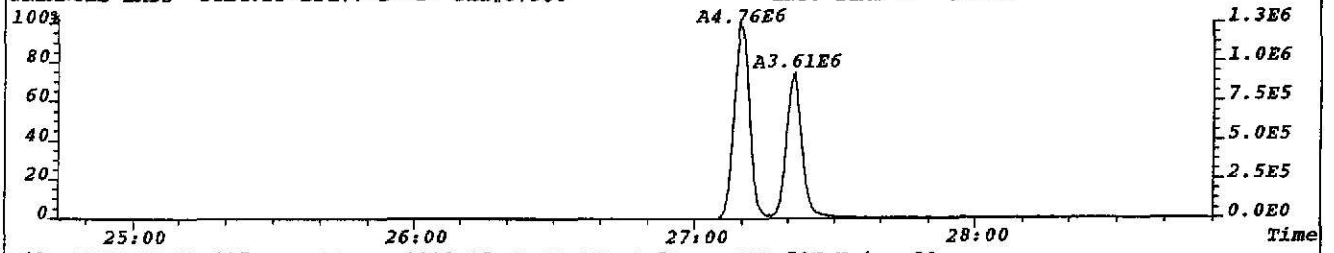
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:74
321.8936 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,296.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



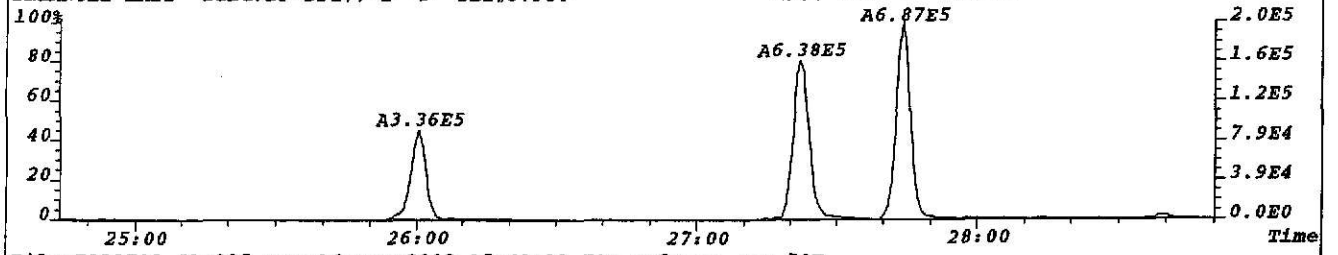
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:228
331.9368 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,912.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



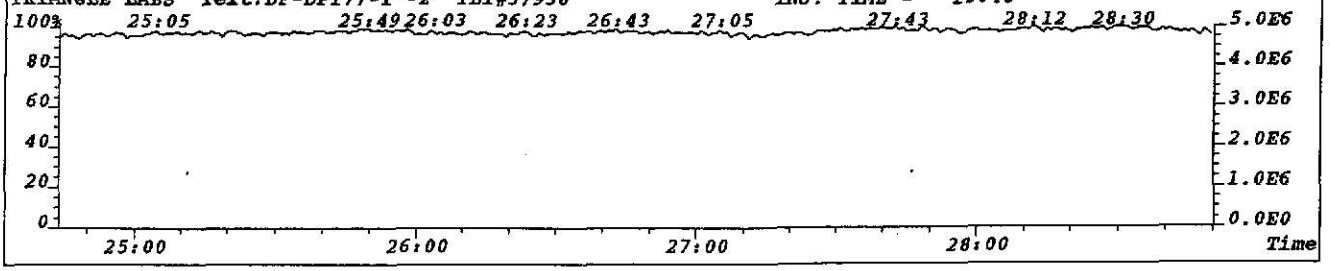
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:118
333.9338 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,472.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



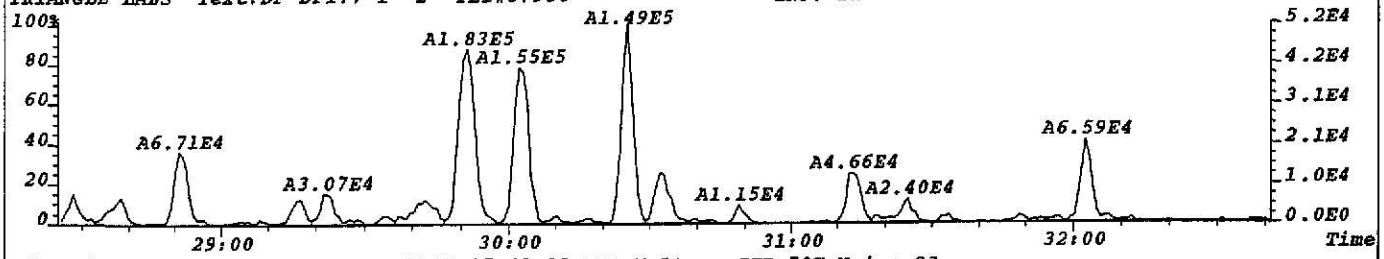
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:88
327.8847 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,352.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



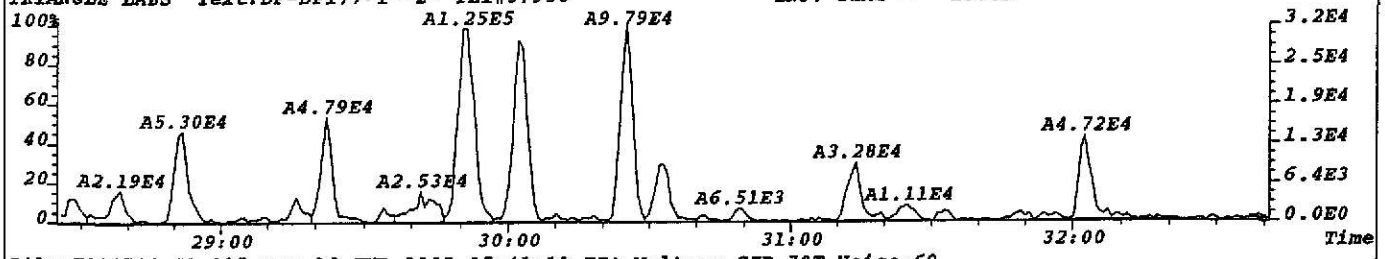
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



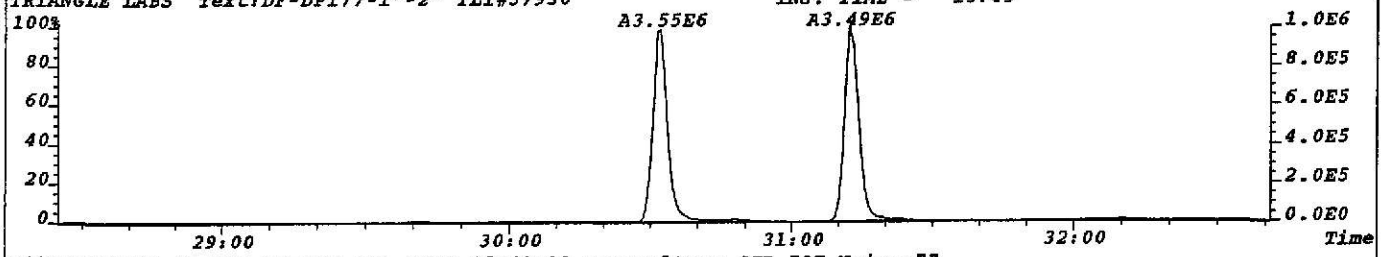
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:70
339.8597 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,280.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



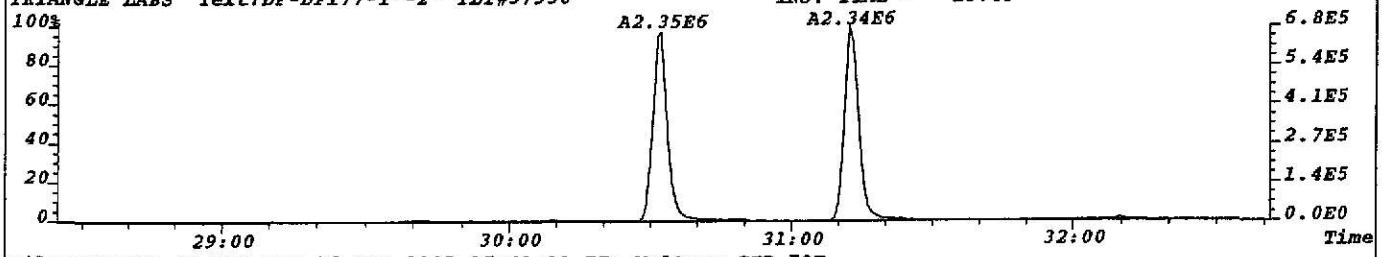
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:93
341.8567 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,372.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



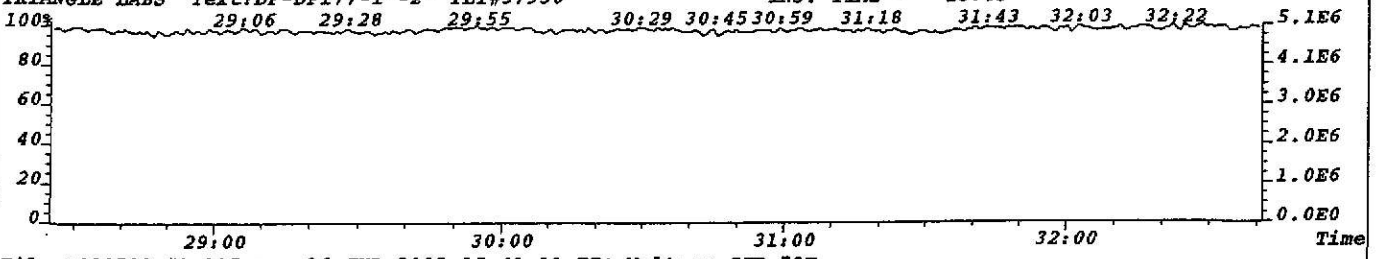
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:69
351.9000 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,276.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



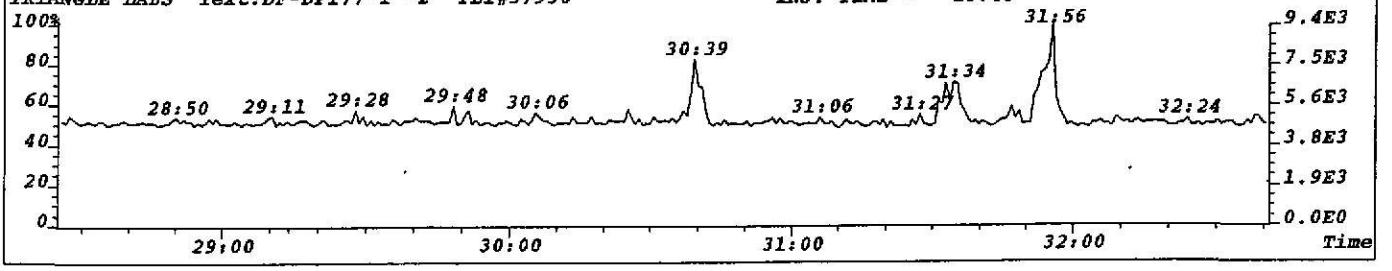
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:77
353.8970 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,308.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



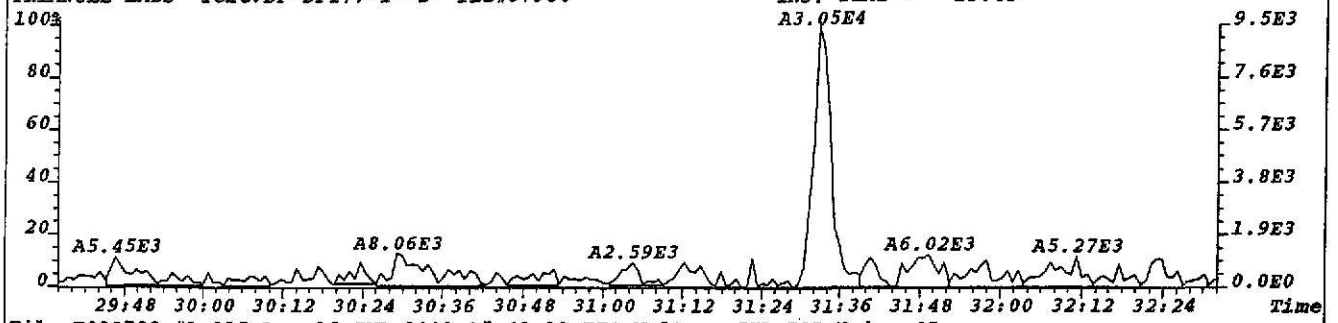
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



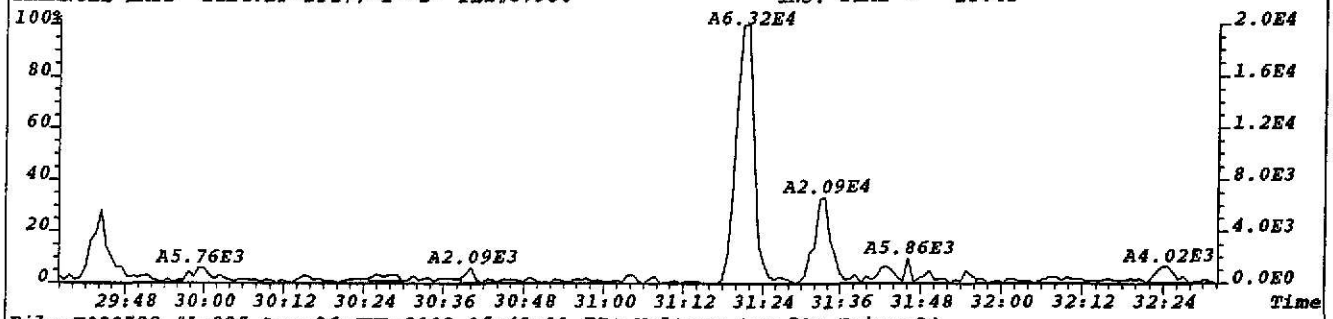
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
409.7974 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



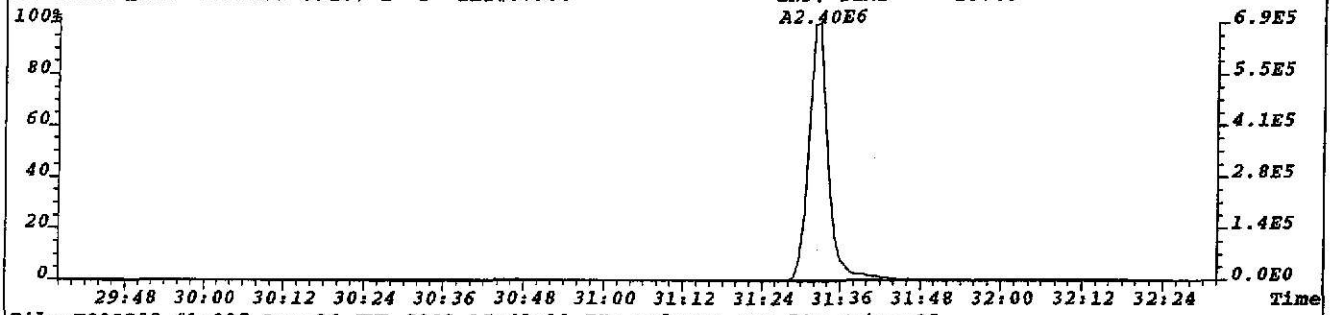
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:82
355.8546 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,328.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



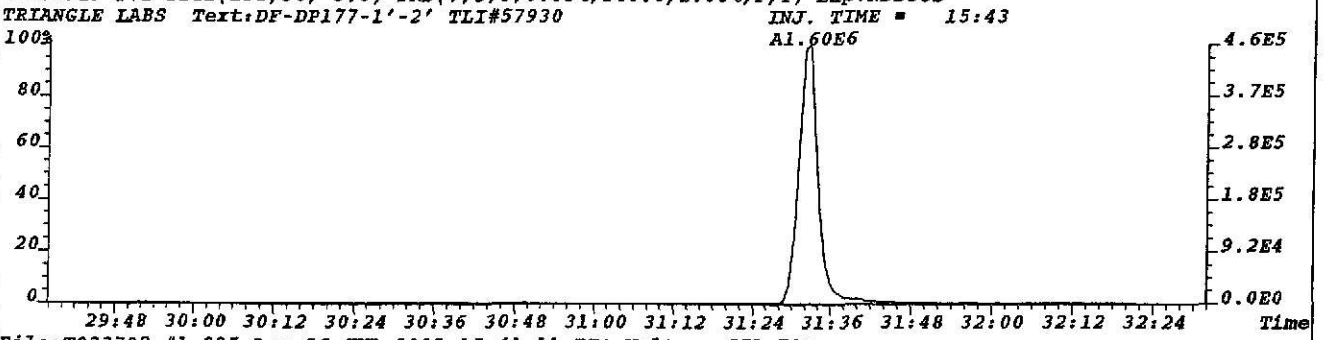
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:65
357.8516 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,260.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



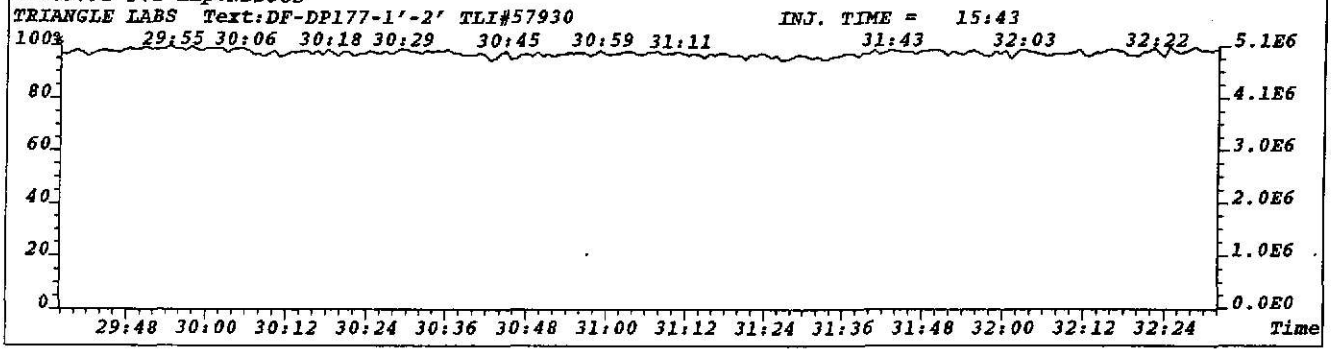
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:94
367.8949 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,376.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



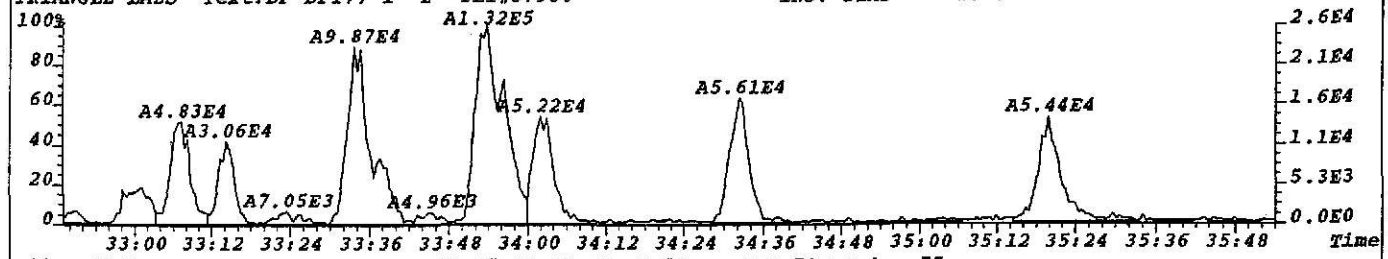
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:85
369.8919 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,340.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



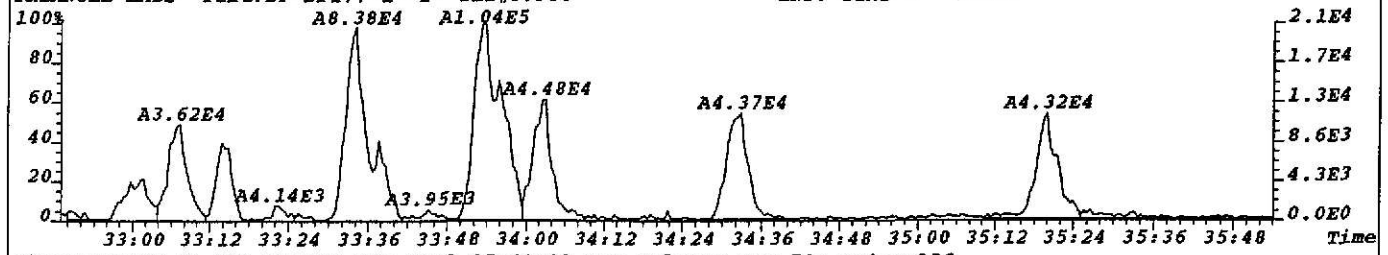
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



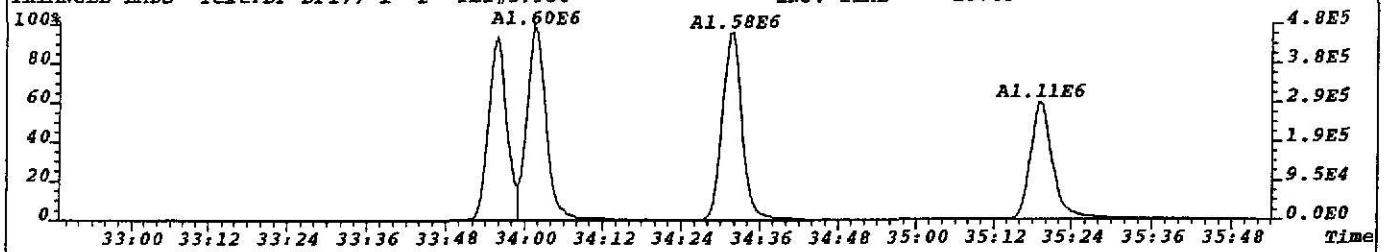
File:T023782 #1-386 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:114
373.8208 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,456.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



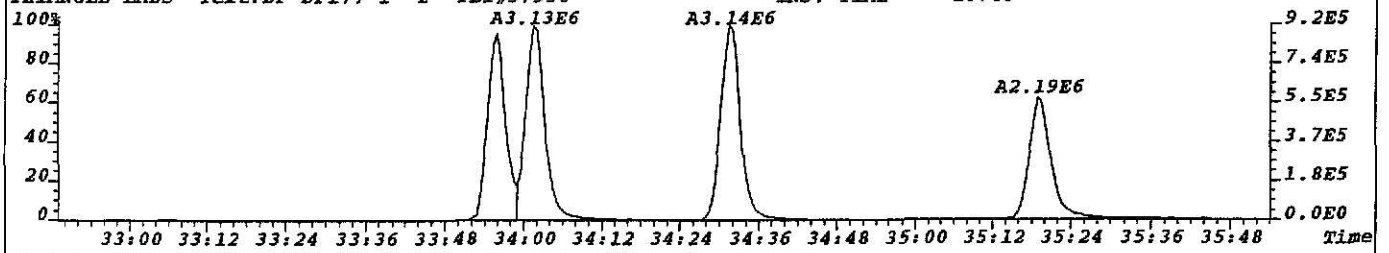
File:T023782 #1-386 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:75
375.8178 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,300.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



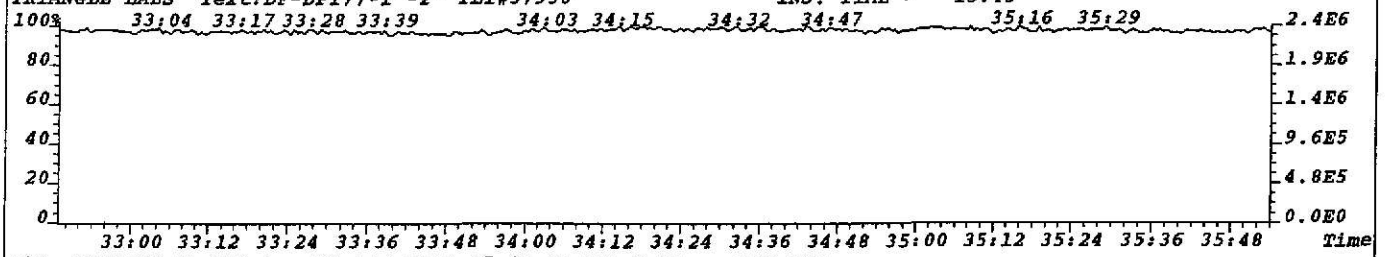
File:T023782 #1-386 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:136
383.8639 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,544.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



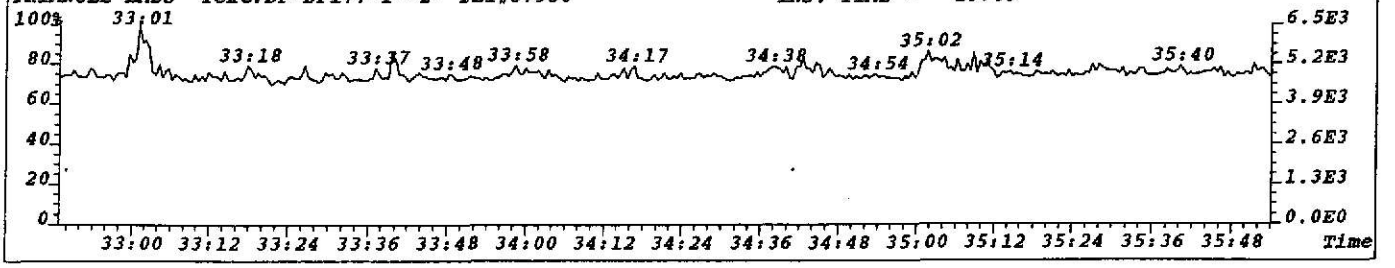
File:T023782 #1-386 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:119
385.8610 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,476.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



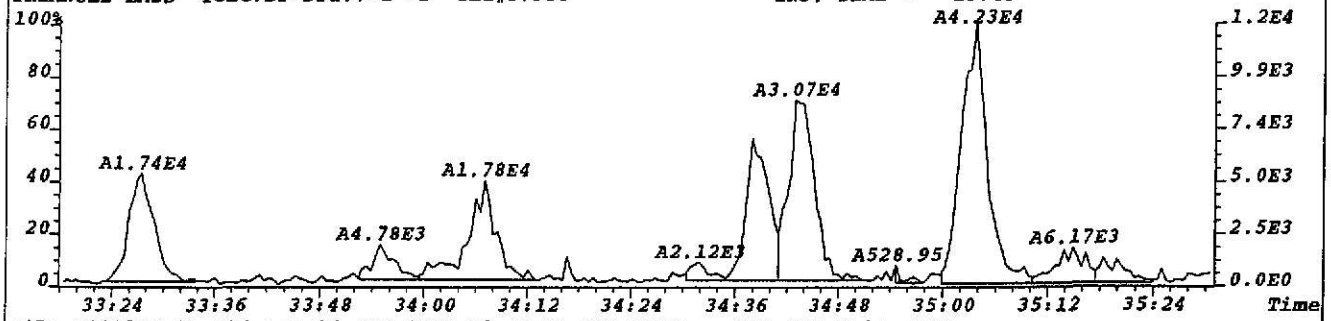
File:T023782 #1-386 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



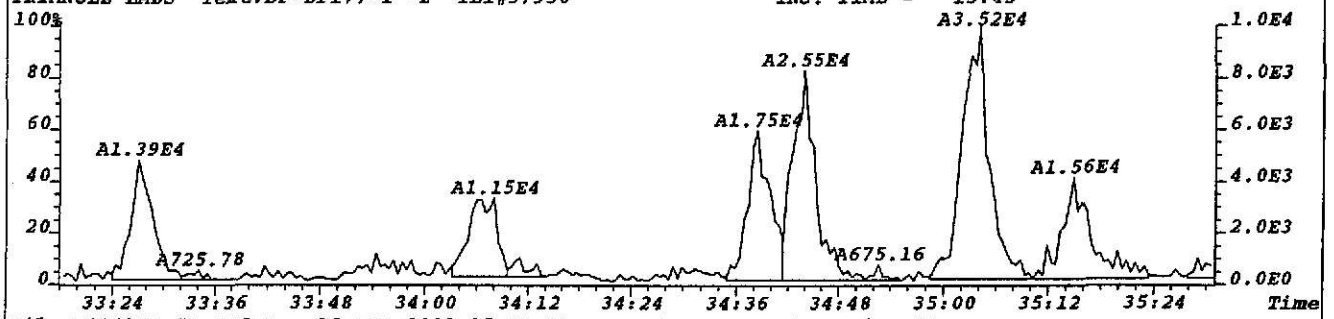
File:T023782 #1-386 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
445.7555 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



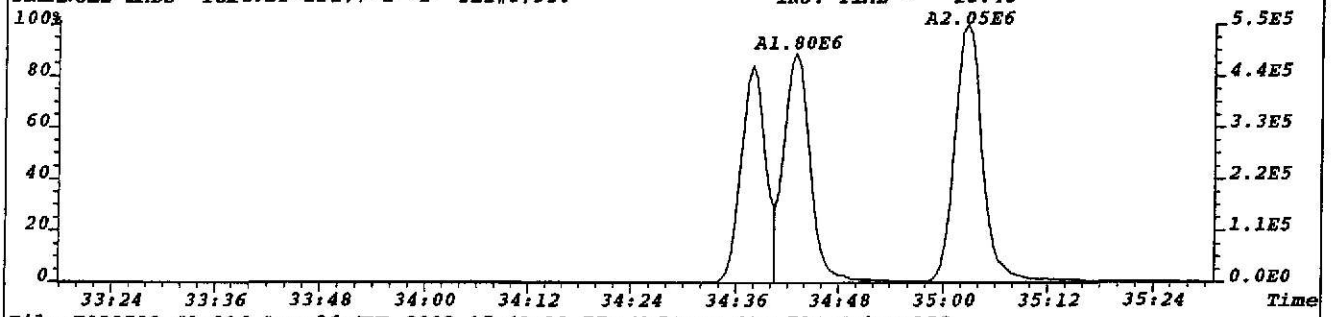
File:T023782 #1-386 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:110
389.8156 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,440.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



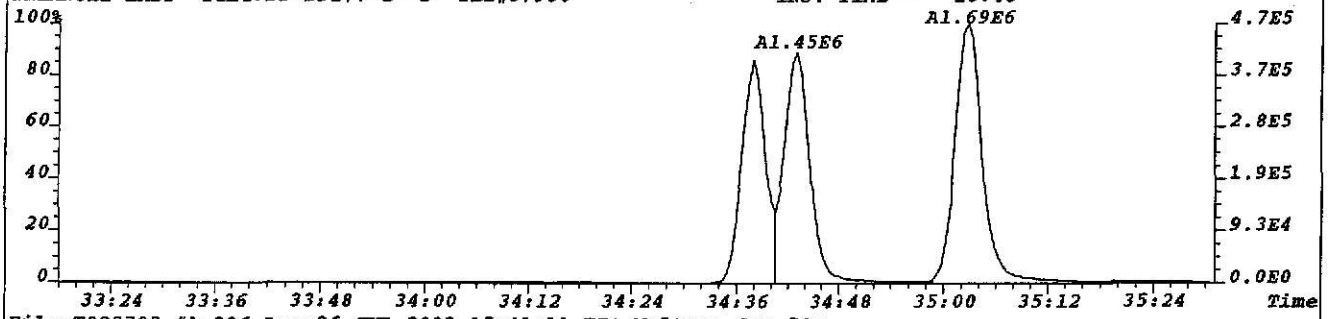
File:T023782 #1-386 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:115
391.8127 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,460.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



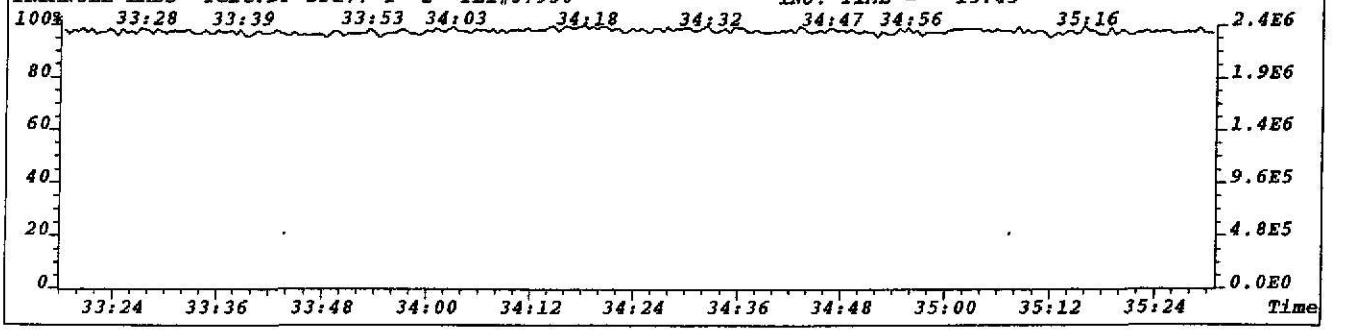
File:T023782 #1-386 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:94
401.8558 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,376.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



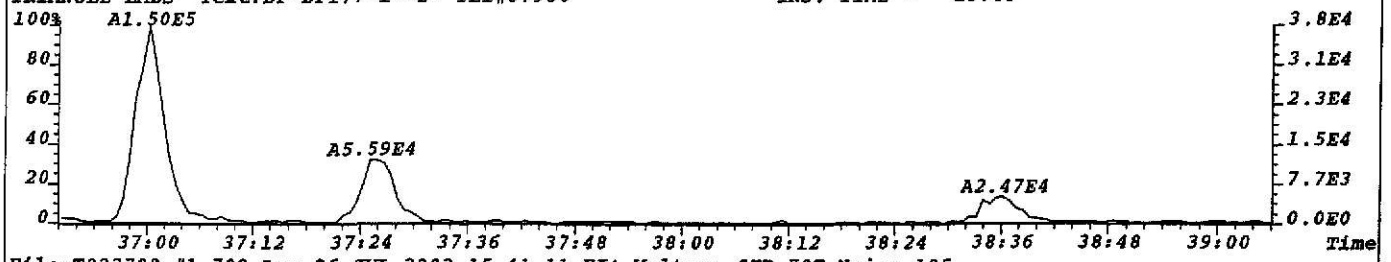
File:T023782 #1-386 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:123
403.8529 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,492.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



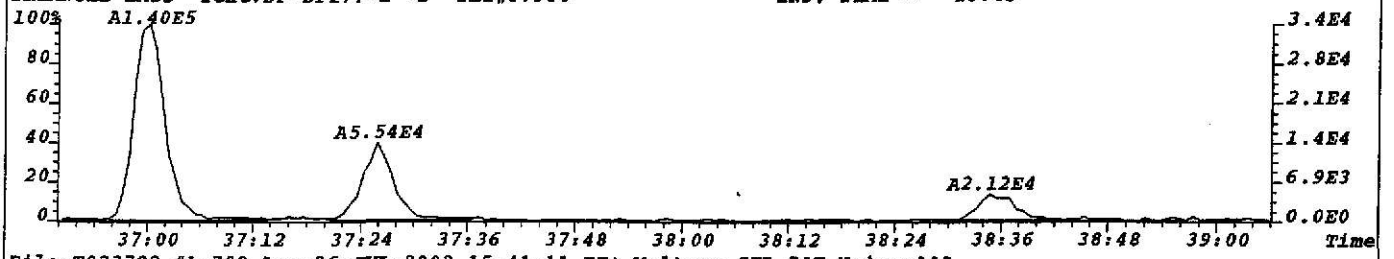
File:T023782 #1-386 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



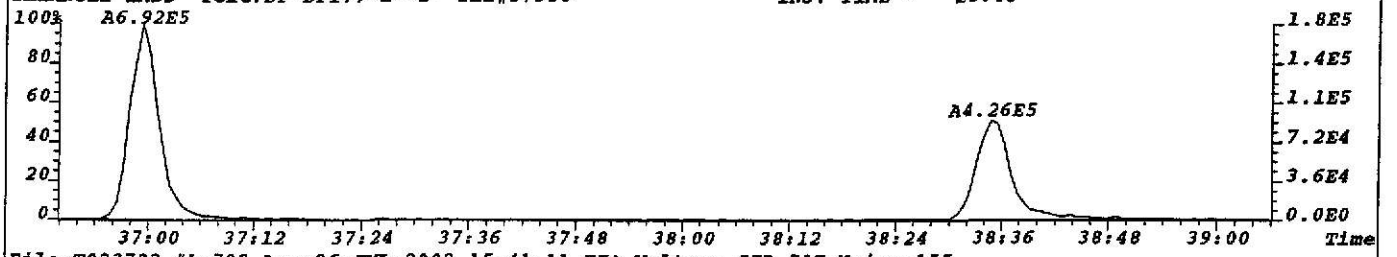
File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:103
407.7818 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,412.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



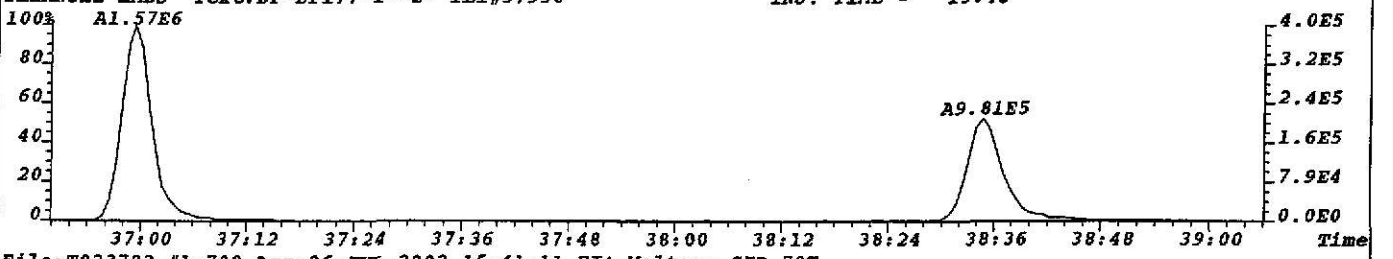
File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:105
409.7789 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,420.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



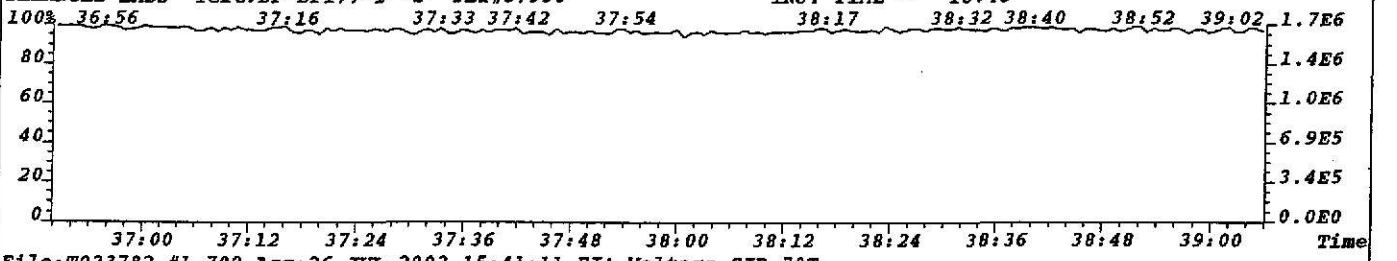
File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:102
417.8253 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,408.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



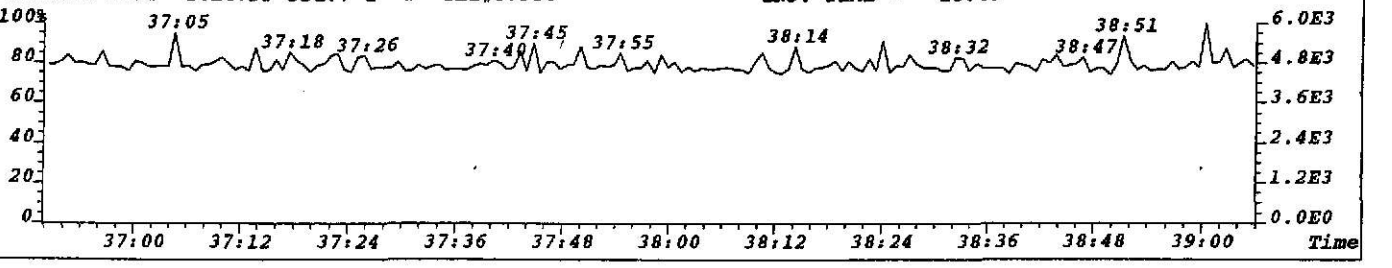
File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:155
419.8220 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,620.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



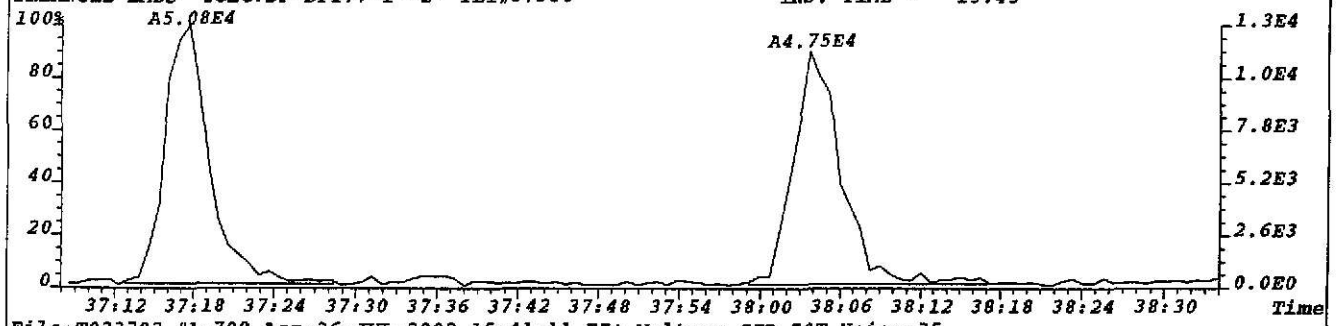
File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



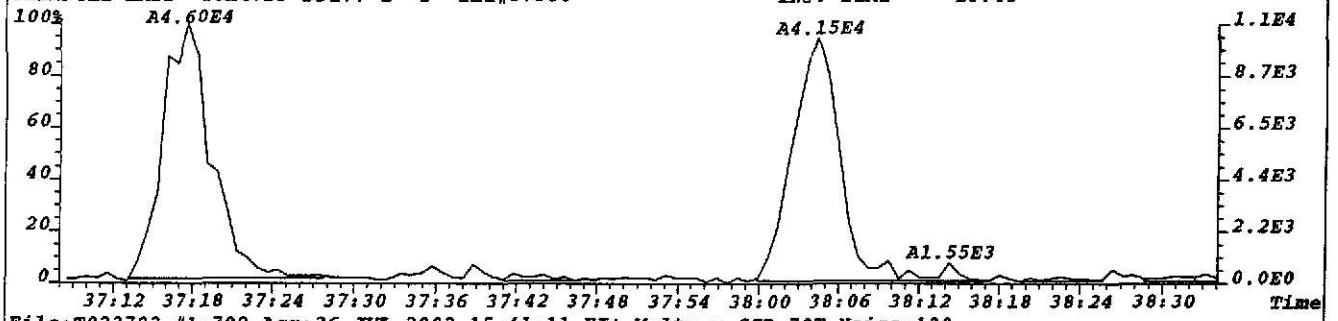
File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
479.7165 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



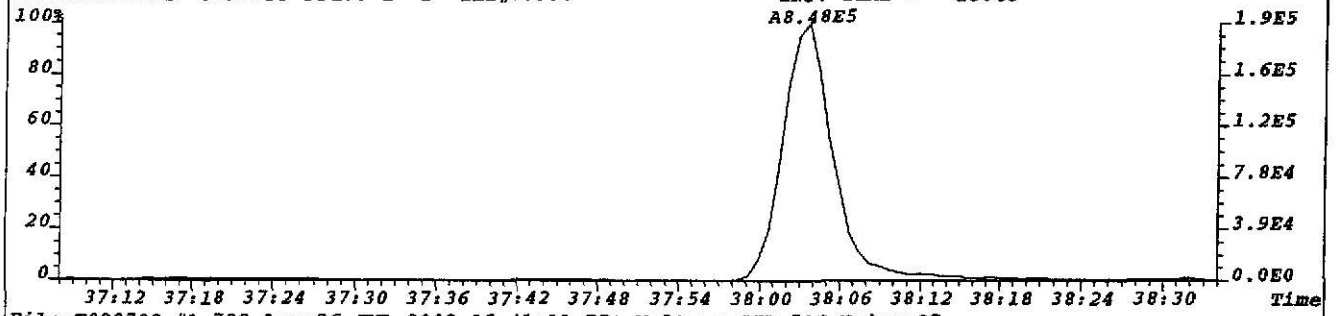
File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:96
423.7766 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,384.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



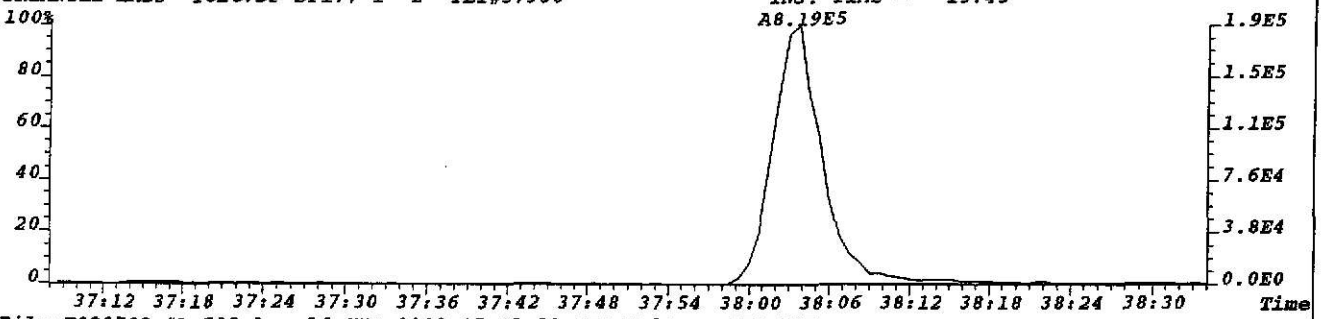
File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:75
425.7737 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,300.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



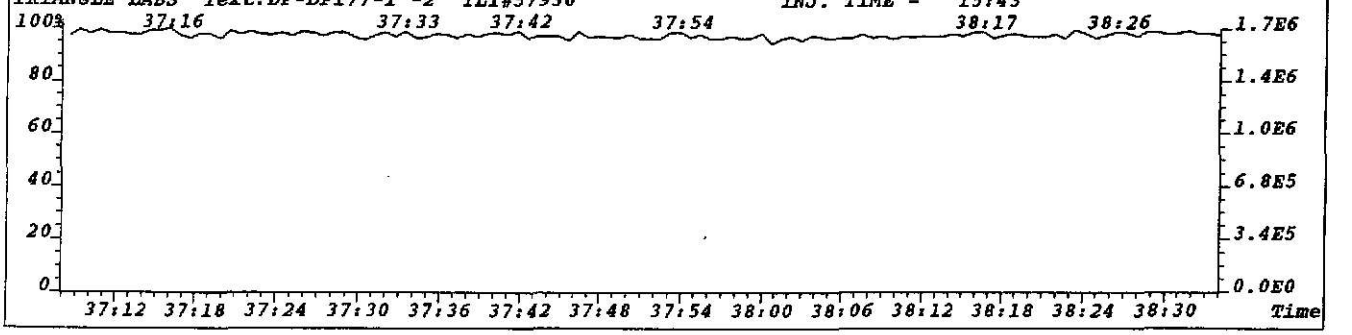
File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:130
435.8169 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,520.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



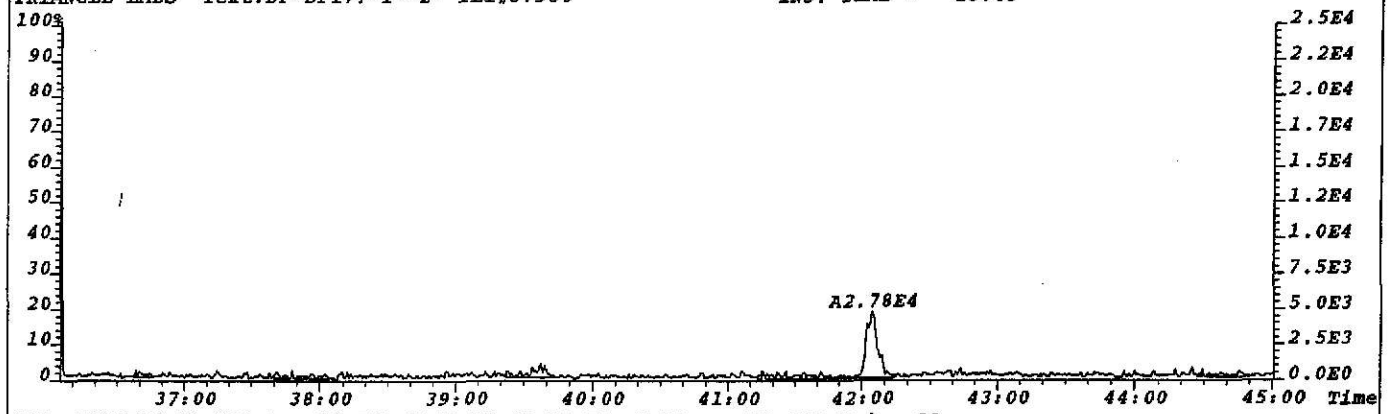
File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:87
437.8140 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,348.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



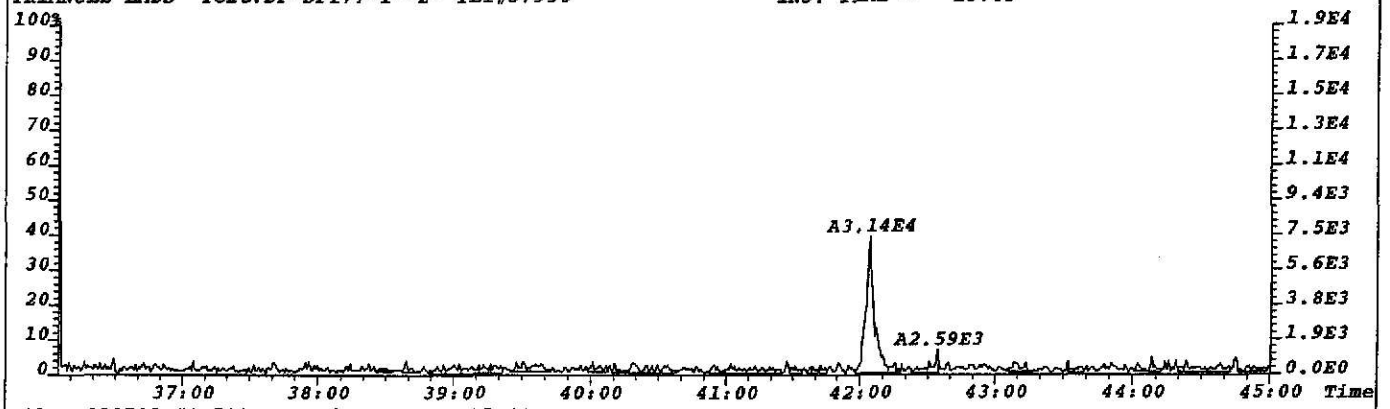
File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



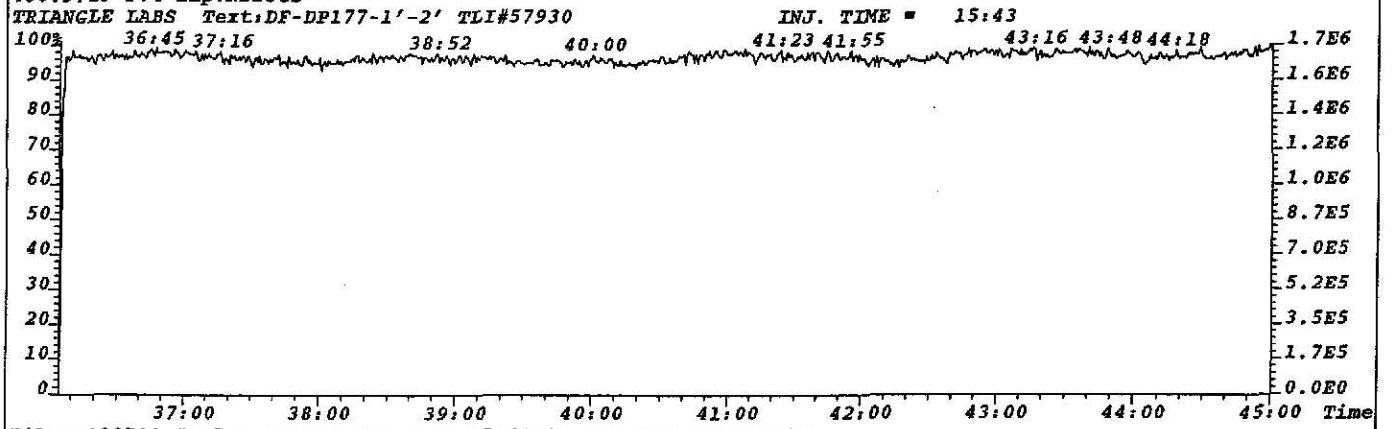
File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:105
441.7428 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,420.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



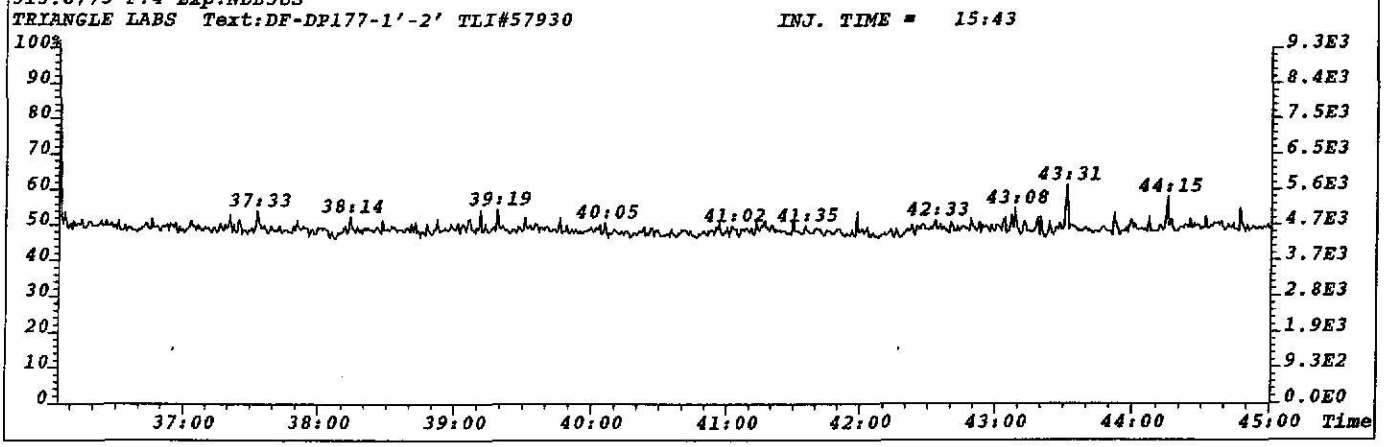
File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:89
443.7399 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,356.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



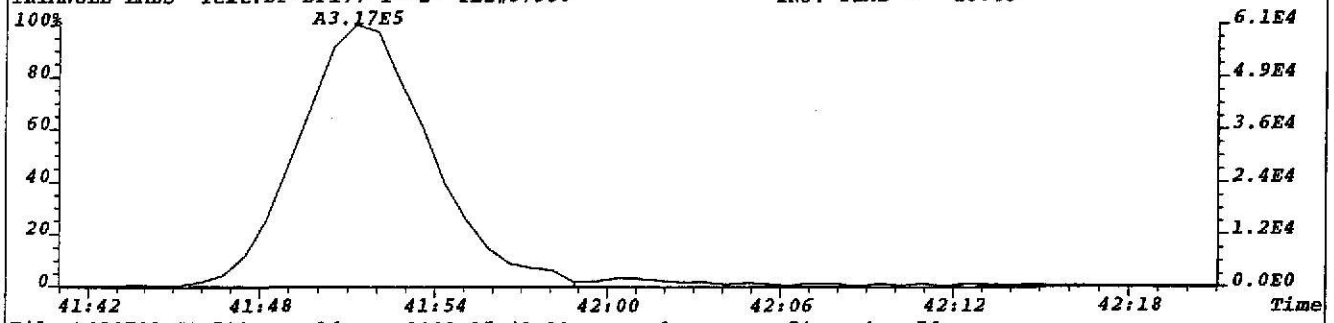
File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



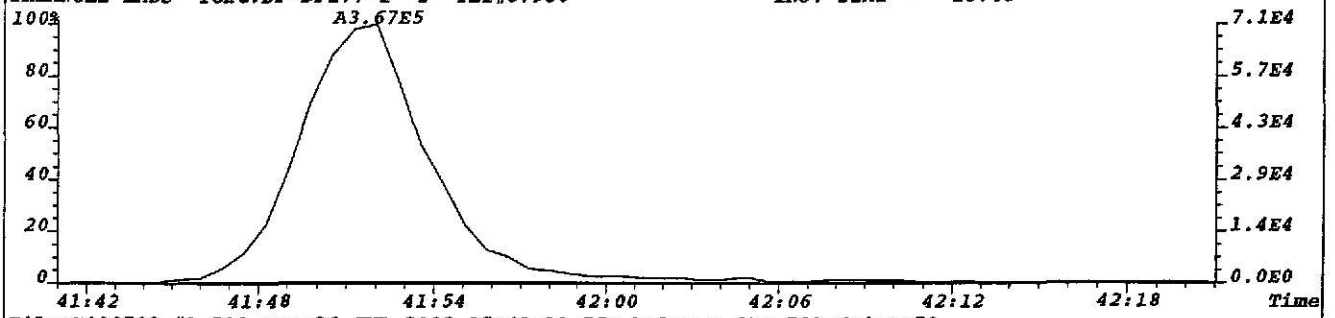
File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
513.6775 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



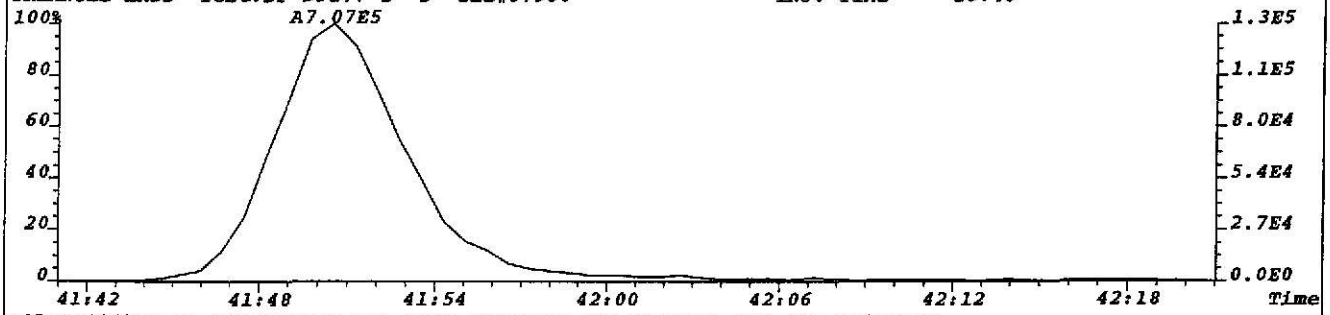
File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:71
457.7377 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,284.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



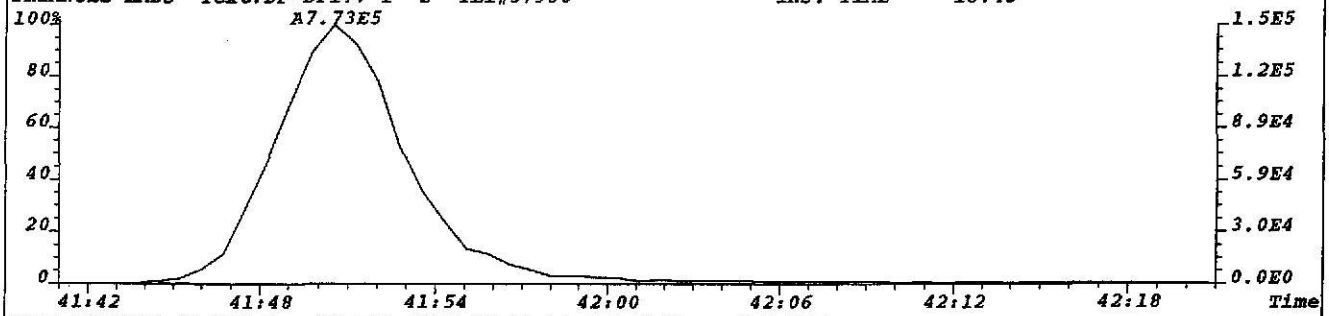
File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:76
459.7348 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,304.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



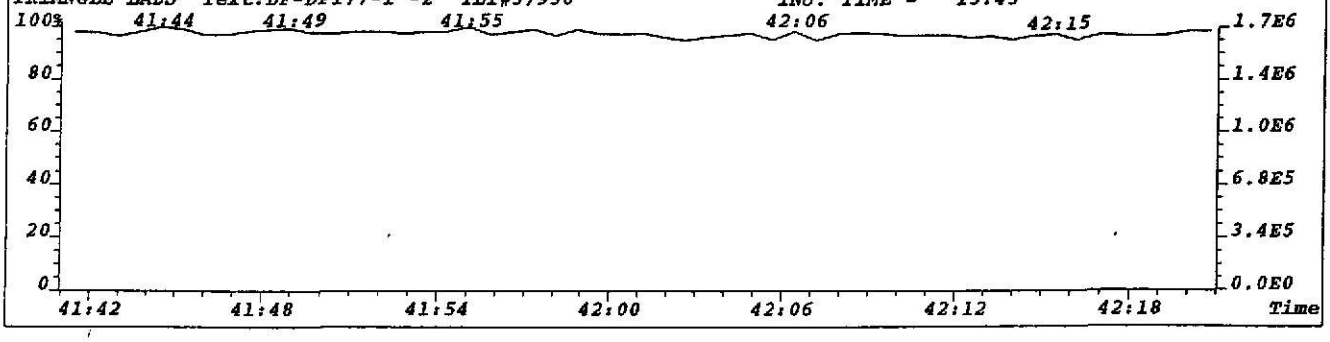
File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:70
469.7779 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,280.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T Noise:70
471.7750 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,280.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



File:T023782 #1-709 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43



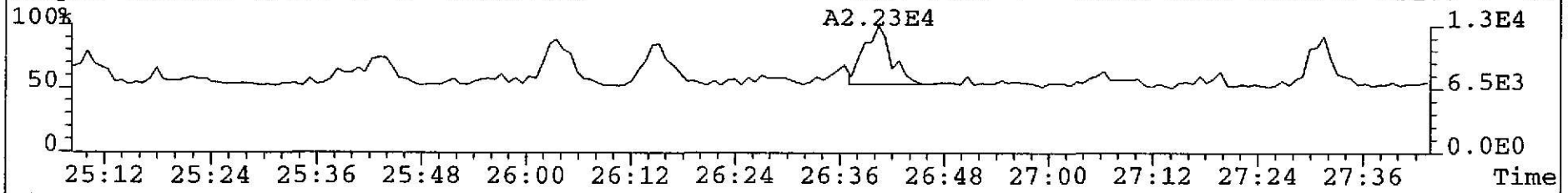
Channel I 330.9792 Peak top
Height .83 volts Span 200 ppm

System file name	ND85US
Data file name	A:T726021
Resolution	10000
Group number	2
Ionization mode	EI+
Switching	VOLTAGE
Ref. masses	292.9825, 416.9760

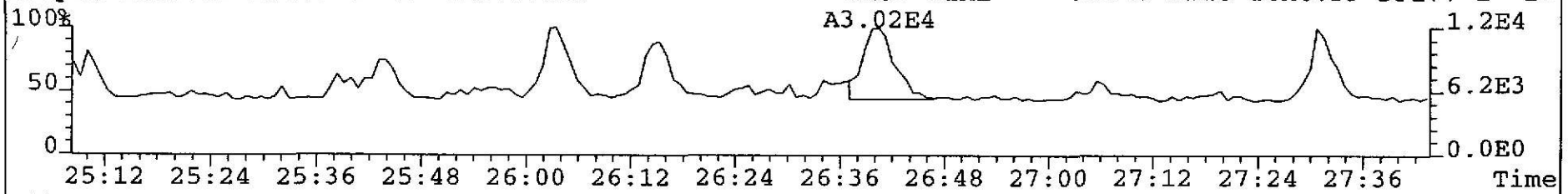
A	293	J	331	S	368
B	304	K	332	T	370
C	306	L	334	U	376
D	316	M	340	V	410
E	319	N	342		
F	[illegible]	O	[illegible]		
G	322	P	354		
H	328	Q	356		
I	331	R	358		

Ref. mass 416.9760 Peak top
Height .16 volts Span 200 ppm

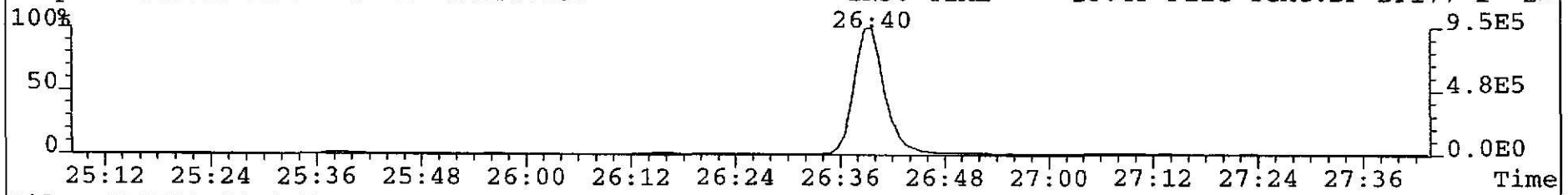
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
303.9016 F:2 Exp:NDB5US
Sample Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43 File Text:DF-DP177-1'-2»



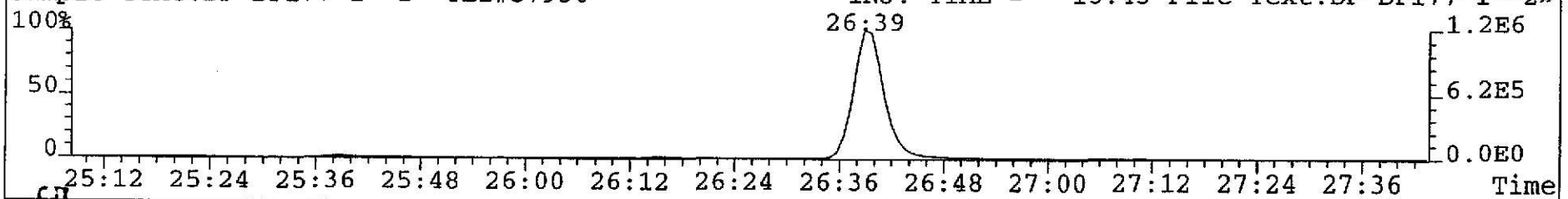
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
305.8987 F:2 Exp:NDB5US
Sample Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43 File Text:DF-DP177-1'-2»



File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
315.9419 F:2 Exp:NDB5US
Sample Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43 File Text:DF-DP177-1'-2»



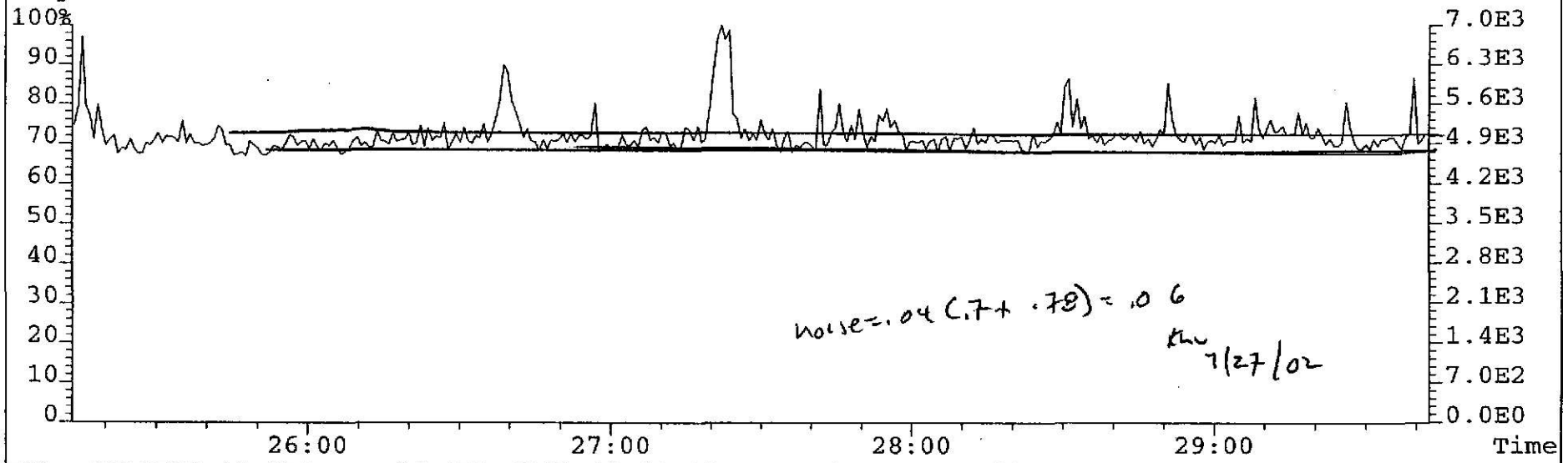
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
317.9389 F:2 Exp:NDB5US
Sample Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43 File Text:DF-DP177-1'-2»



522

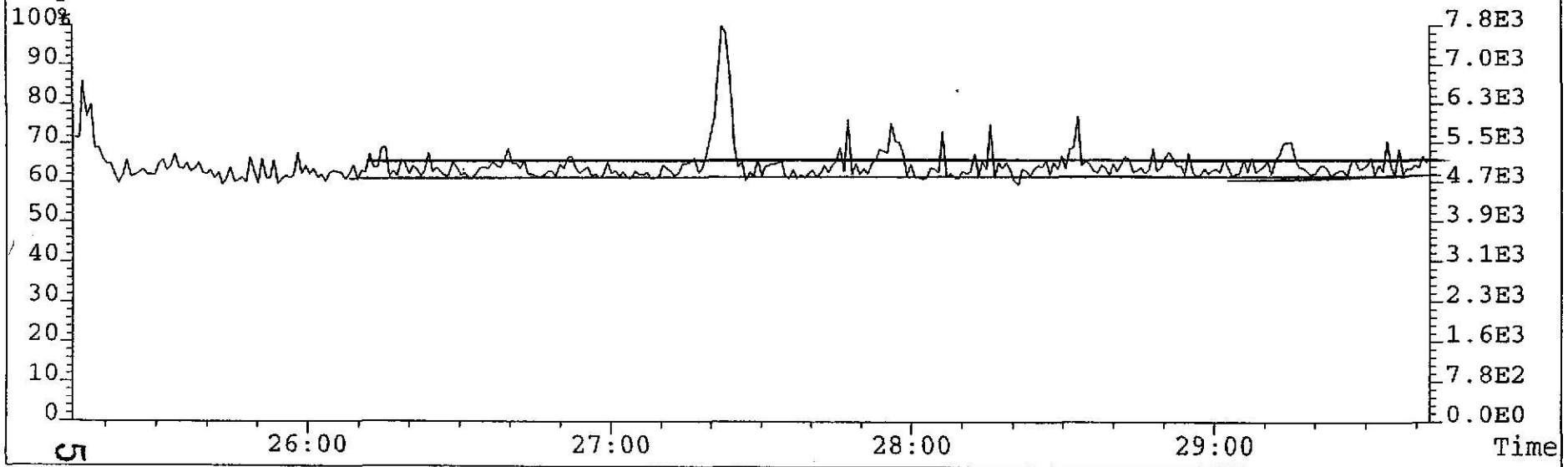
KLW 7/27/02

File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
319.8965 F:2 Exp:NDB5US
Sample Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43 File Text:DF-DP177-1'-2»

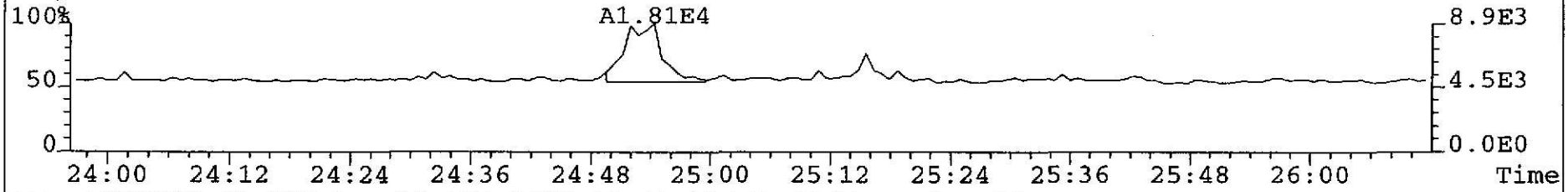


noise = .04 (.7+ .78) = .06
7/27/02

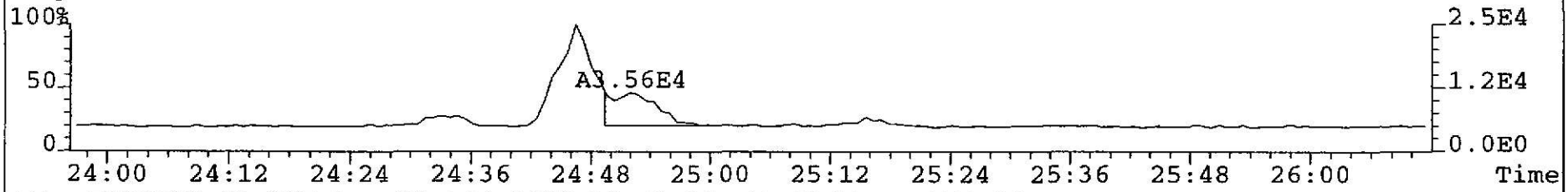
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
321.8936 F:2 Exp:NDB5US
Sample Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43 File Text:DF-DP177-1'-2»



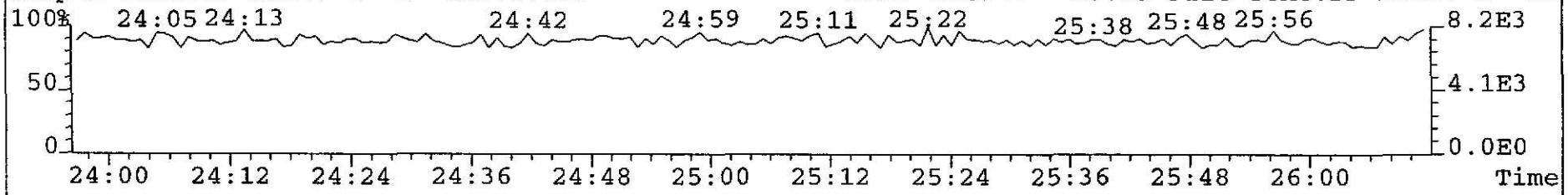
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
319.8965 F:2 Exp:NDB5US
Sample Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43 File Text:DF-DP177-1'-2»



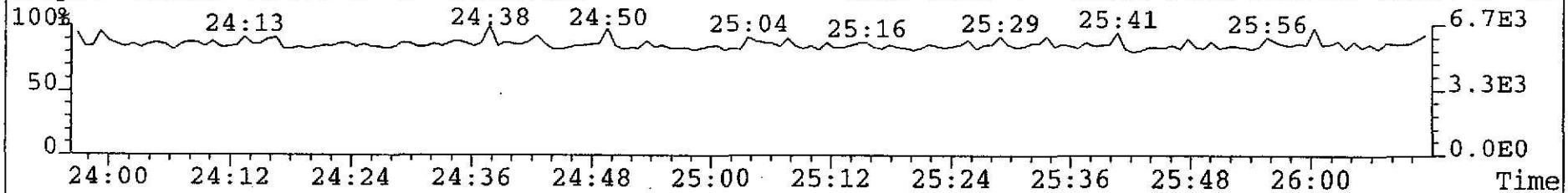
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
321.8936 F:2 Exp:NDB5US
Sample Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43 File Text:DF-DP177-1'-2»



File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
331.9368 F:2 Exp:NDB5US
Sample Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43 File Text:DF-DP177-1'-2»

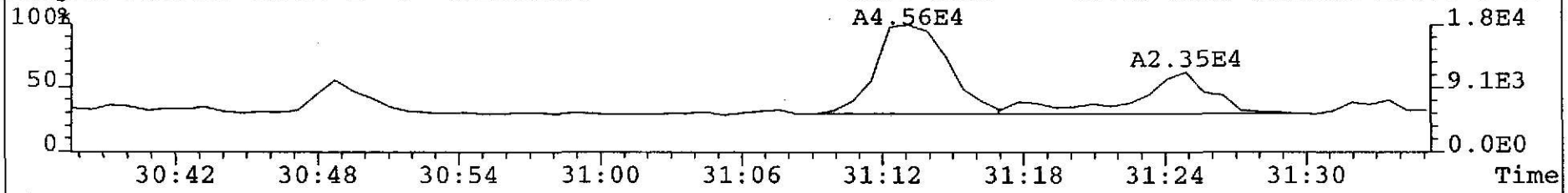


File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
333.9338 F:2 Exp:NDB5US
Sample Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43 File Text:DF-DP177-1'-2»

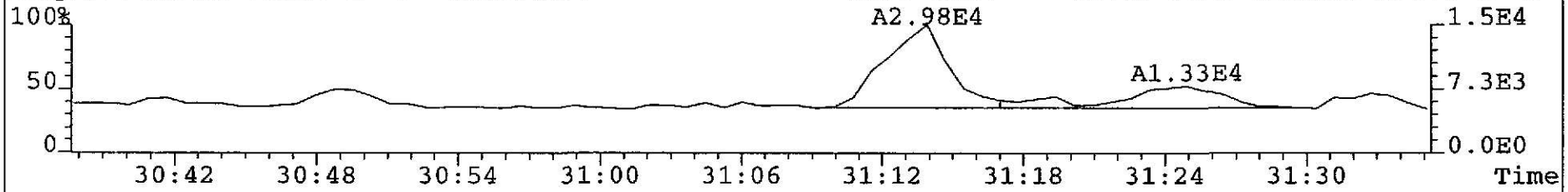


KMW 7/27/02

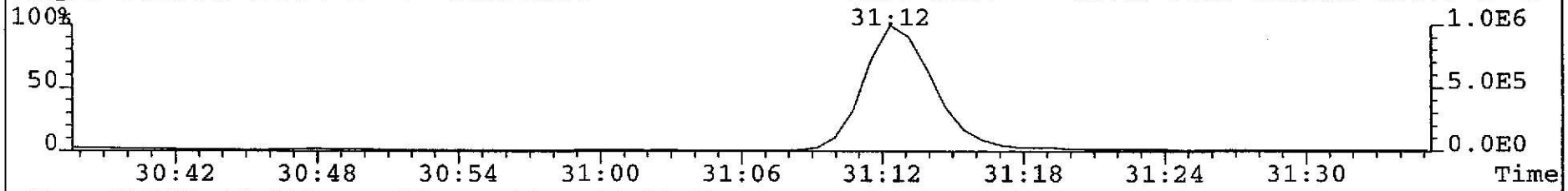
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
339.8597 F:2 Exp:NDB5US
Sample Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43 File Text:DF-DP177-1'-2»



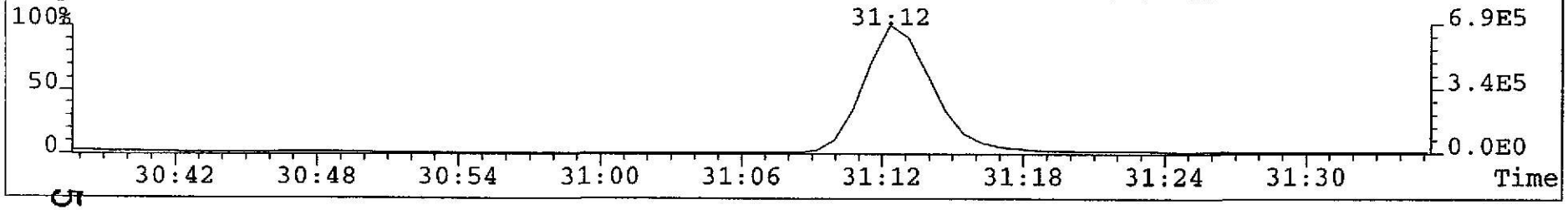
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
341.8567 F:2 Exp:NDB5US
Sample Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43 File Text:DF-DP177-1'-2»



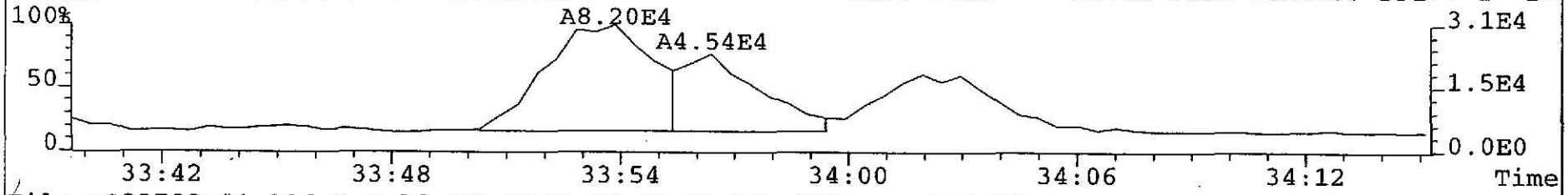
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
351.9000 F:2 Exp:NDB5US
Sample Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43 File Text:DF-DP177-1'-2»



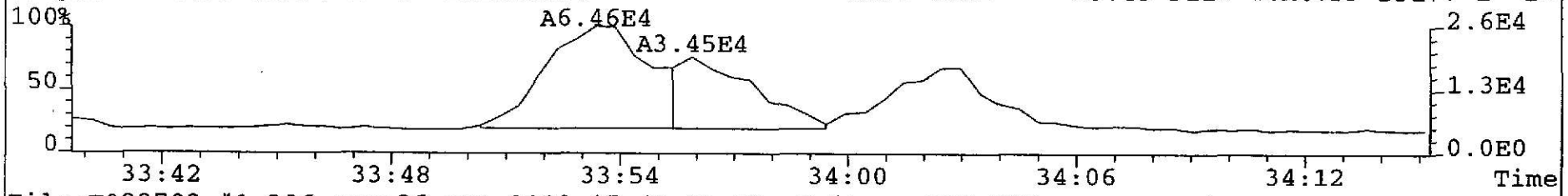
File:T023782 #1-925 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
353.8970 F:2 Exp:NDB5US
Sample Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43 File Text:DF-DP177-1'-2»



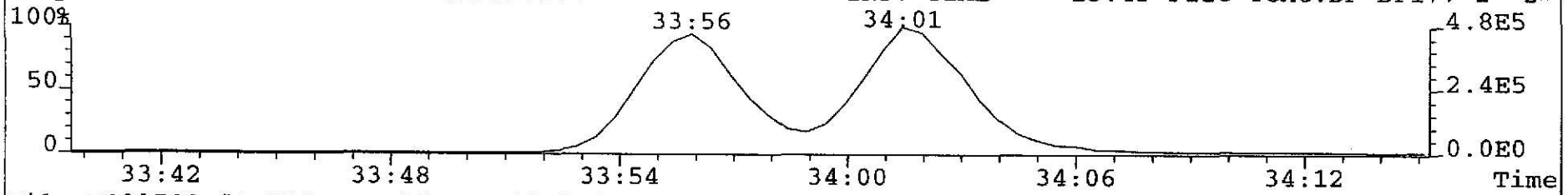
File:T023782 #1-386 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
373.8208 F:3 Exp:NDB5US
Sample Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43 File Text:DF-DP177-1'-2»



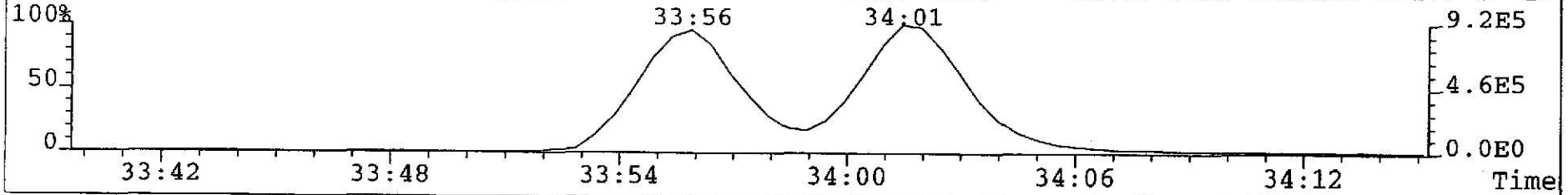
File:T023782 #1-386 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
375.8178 F:3 Exp:NDB5US
Sample Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43 File Text:DF-DP177-1'-2»



File:T023782 #1-386 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
383.8639 F:3 Exp:NDB5US
Sample Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43 File Text:DF-DP177-1'-2»



File:T023782 #1-386 Acq:26-JUL-2002 15:41:11 EI+ Voltage SIR 70T
385.8610 F:3 Exp:NDB5US
Sample Text:DF-DP177-1'-2' TLI#57930 INJ. TIME = 15:43 File Text:DF-DP177-1'-2»



WBY 7/28/02

Martin & Slagle

TLI Project: **57930** 1613, Revision B, Tetra Only PCDD/PCDF Analysis (c)
Client Sample: **DF-DP177-1'-2'** Analysis File: **P022733**

Client Project:	**Kuhlman Electric**				
Sample Matrix:	**SOLID**	Date Received:	**07/20/2002**	Spike File:	**SPCONB2S**
TLI ID:	**331-18-16**	Date Extracted:	**07/23/2002**	ICal:	**PF56152**
		Date Analyzed:	**07/29/2002**	ConCal:	**P022724**
Sample Size:	**13.000 g**	Dilution Factor:	**n/a**	% Moisture:	**22.6**
Dry Weight:	**10.062 g**	Blank File:	**T023762**	% Lipid:	**n/a**
GC Column:	**DB-225**	Analyst:	**JLD**	% Solids:	**77.4**

Analytes	Conc. (pg/g)	DL	Ratio	RT	RRT	Flags
2,3,7,8-TCDF	0.67		0.65	23:48	1.001	J__

Internal Standard	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	RRT	Flags
$^{13}C_{12}$-2,3,7,8-TCDF	126	63.5	29%-140%	0.78	23:46	1.052	___

Recovery Standard	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.81	22:36	___

Data Reviewer: _____ 07/29/2002

CONB_PSR v1.00, LARS 6.25.05

Triangle Laboratories, Inc.®
2445 S. Alston Ave. • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Printed: 22:03 07/29/2002

Initial ....Date

Data Review By: NJ 7/29/02

Channel specific noise levels computed from 'NL' heights.

Page No. 1 Listing of P022733B.dbf
07/29/2002 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						0.791-1.108			
304-306	DC	NL				Height	0.47	0.23	0.24				
	DC	SN		18:52	RO	0.24	0.73			0.794			
	DC	SN		18:58	RO	7.10	0.81			0.798			
	DC	SN		19:12	RO	0.46	0.54			0.808			
	DC	SN		19:20	RO	1.23	0.58			0.813			
	DC	SN		19:24	RO	1.78	0.50			0.816			
				19:52	RO	0.53	6.88	2.39	4.49	0.836			J
	DC	SN		19:57	RO	0.54	0.57			0.839			
				20:07	RO	0.53	1.01	0.35	0.66	0.846			J
				20:15	RO	0.56	4.52	1.62	2.90	0.852			J
	DC	SN		20:43	RO	0.54	0.40			0.872			
	DC	SN		20:57	RO	1.67	0.72			0.881			
				21:23		0.69	11.19	4.55	6.64	0.900			
	DC	SN		21:45	RO	0.42	1.29			0.915			
				21:56		0.76	1.85	0.80	1.05	0.923			J
				22:08	RO	1.05	6.01	3.08	2.93	0.931			J
				22:33		0.85	1.76	0.81	0.95	0.949			J
	DC	SN		22:39	RO	0.37	1.48			0.953			
	DC	SN		22:43	RO	1.86	1.03			0.956			
				22:58	RO	1.20	2.99	1.63	1.36	0.966			J
	DC	SN		23:02		0.86	0.67			0.969			
	DC	SN		23:10	RO	2.08	0.40			0.975			
	DC	SN		23:26	RO	1.88	0.69			0.986			
M				23:48		0.65	6.62	2.60	4.02	1.001	2378-TCDF	AN	J
	DC	SN		23:54		0.86	1.10			1.006			
	DC	SN		24:03	RO	1.60	1.09			1.012			
				24:11	RO	1.07	4.86	2.51	2.35	1.018			J
				24:29		0.77	51.89	22.50	29.39	1.030			
				24:35	RO	1.07	1.24	0.64	0.60	1.034			J
	DC	SN		24:41		0.82	0.62			1.039			
	DC	SN		25:00	RO	0.44	0.62			1.052			
	DC	SN		25:32	RO	1.89	1.04			1.074			
				25:38	RO	1.20	1.34	0.73	0.61	1.079			J
	DC	SN		25:42	RO	0.64	0.54			1.081			
	DC	SN		25:47	RO	1.68	0.99			1.085			
				25:52		0.89	5.54	2.61	2.93	1.088			J
	DC	SN		26:05	RO	0.62	0.86			1.097			
	DC	SN		26:17	RO	0.21	1.19			1.106			
304-306			14	Peaks			107.70						
13C12-TCDF				0.65-0.89						0.958-1.042			
316-318	DC	NL				Height	0.85	0.40	0.45				
	DC	WL		19:21	RO	5.33	1.71			0.814			
	DC	WL		20:29	RO	1.11	0.93			0.862			
	DC	WL		20:59	RO	0.95	2.28			0.883			
	DC	WL		21:45	RO	1.17	2.67			0.915			

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	22:15		0.69	14.26			0.936			
		DC	WL	22:31	RO	0.97	10.38			0.947			
				23:46		0.78	1,753.74	771.22	982.52	1.000	13C12-2378-TCDF	IS0	
						Height	427.75	186.16	241.59				
				24:03	RO	1.41	3.40	1.99	1.41	1.012			
		DC	WH	24:50	RO	0.61	1.92			1.045			
		DC	WH	24:59		0.79	1.02			1.051			
		DC	WH	25:41	RO	0.55	1.27			1.081			
		DC	WH	26:00	RO	1.44	14.06			1.094			
		DC	WH	26:38	RO	4.92	4.26			1.121			
316-318			2	Peaks			1,757.14						

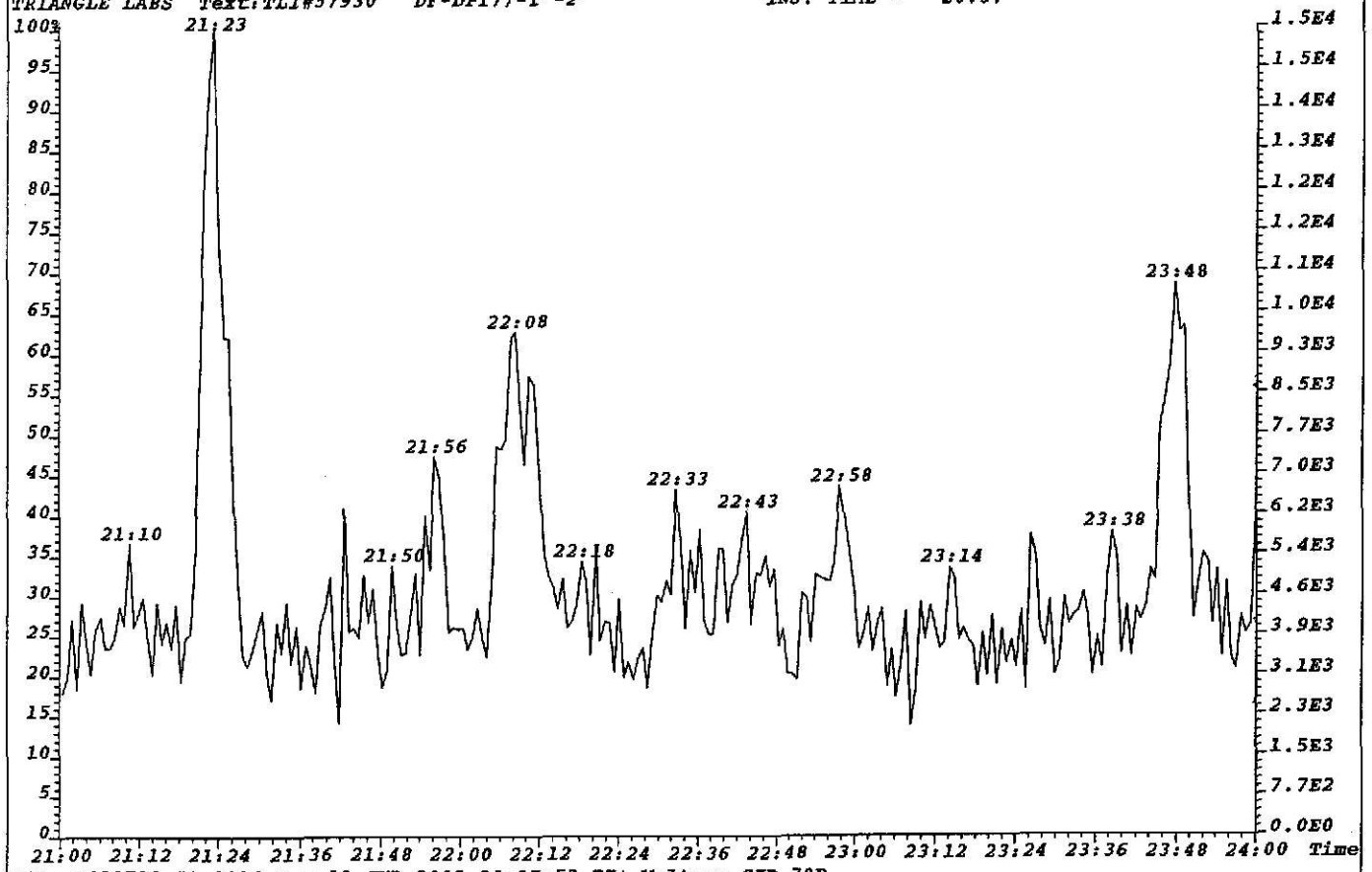
---------- Above: TCDF / TCDD Follows ----------

13C12-TCDD						0.65-0.89				0.910-1.090			
332-334		DC	NL			Height	0.84	0.48	0.36				
				22:16		0.82	1,334.64	600.85	733.79	1.000	13C12-2378-TCDD	IS1	
						Height	354.44	158.94	195.50				
				22:36		0.81	1,818.39	813.74	1,004.65	1.015	13C12-1234-TCDD	RS1	
332-334			2	Peaks			3,153.03						

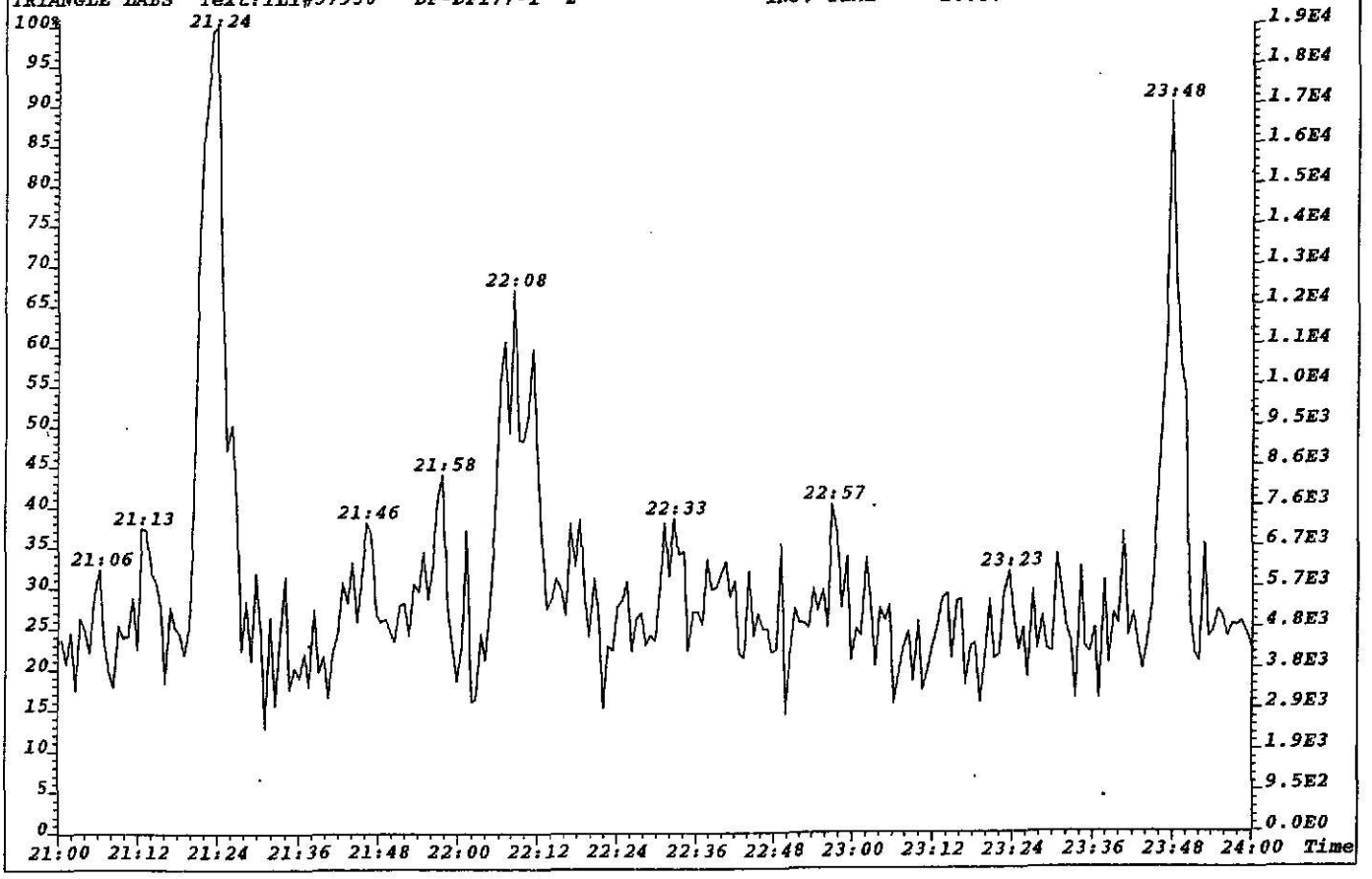
Column Description.....	"Why" Code Description.....	QC Log Desc.....
M_Z -Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT. -Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK -RO=Ratio Outside 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 ***

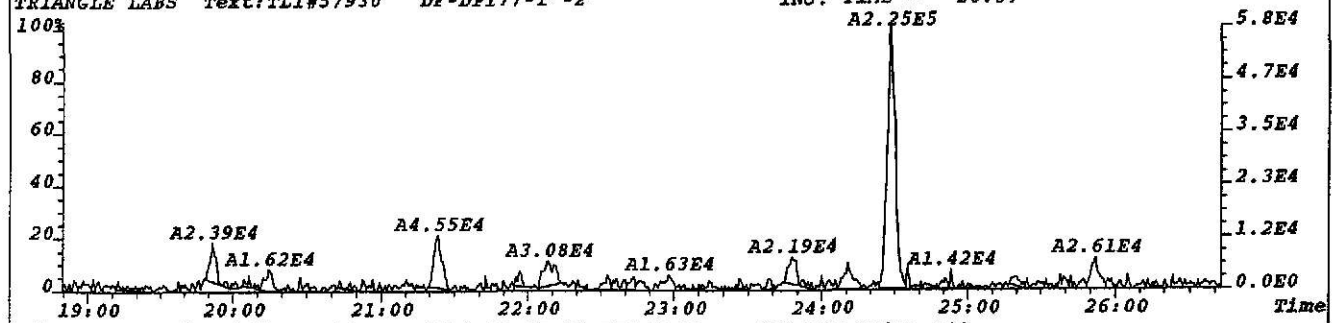
File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P
303.9016 GC:DB225 Exp:none
TRIANGLE LABS Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37



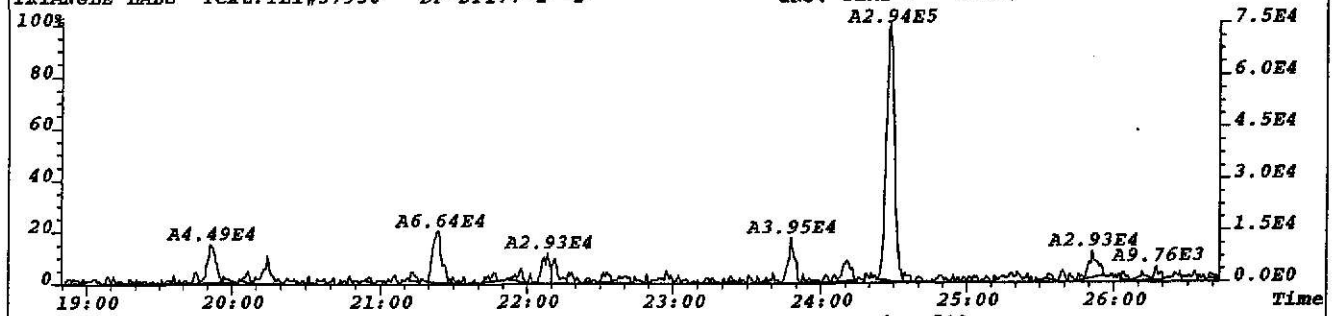
File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P
305.8987 GC:DB225 Exp:none
TRIANGLE LABS Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37



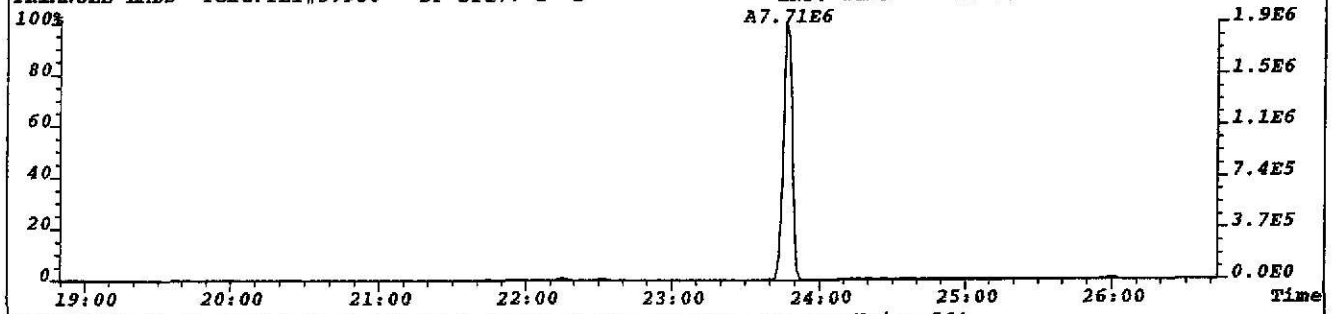
File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P Noise:282
303.9016 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,1128.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37



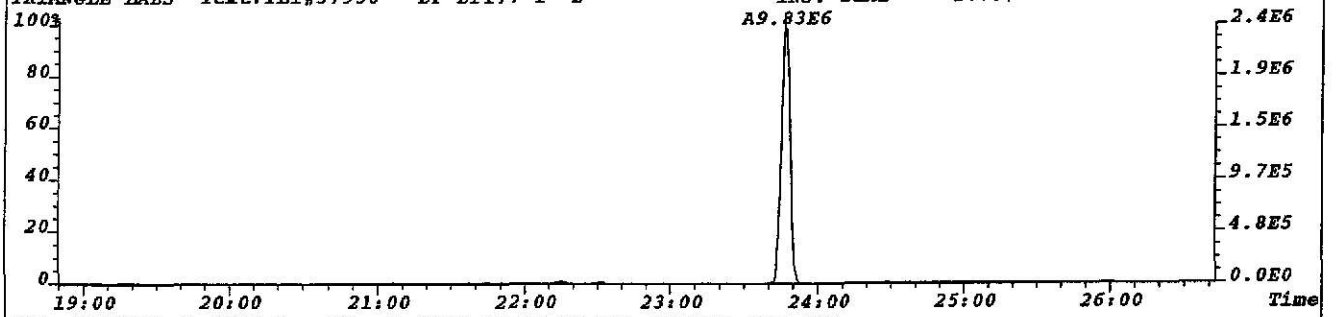
File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P Noise:303
305.8987 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,1212.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37



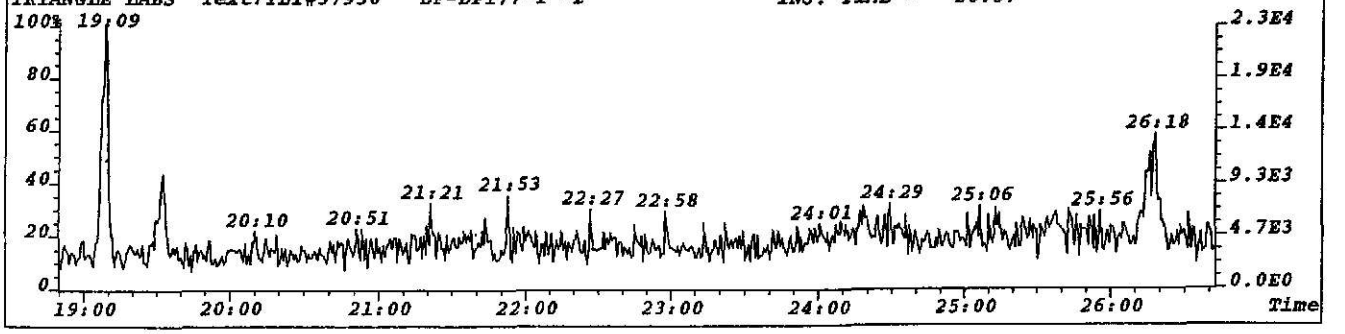
File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P Noise:502
315.9419 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,2008.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37



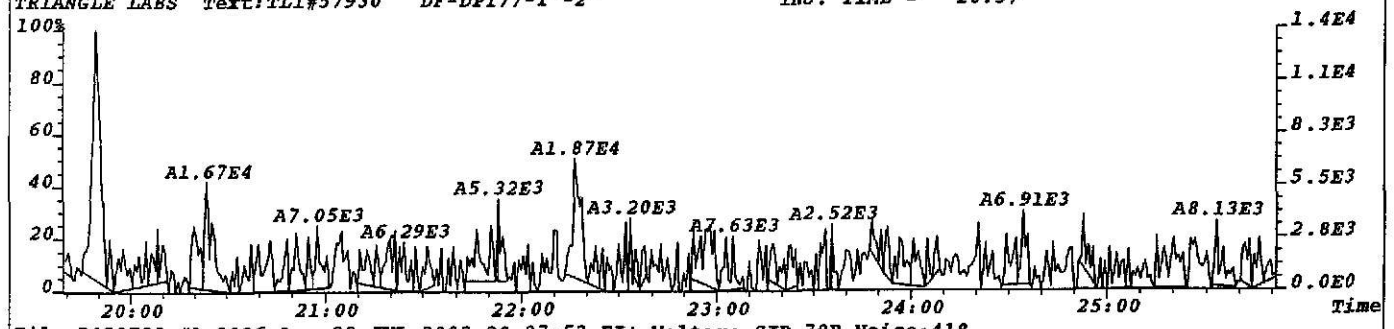
File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P Noise:564
317.9389 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,2256.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37



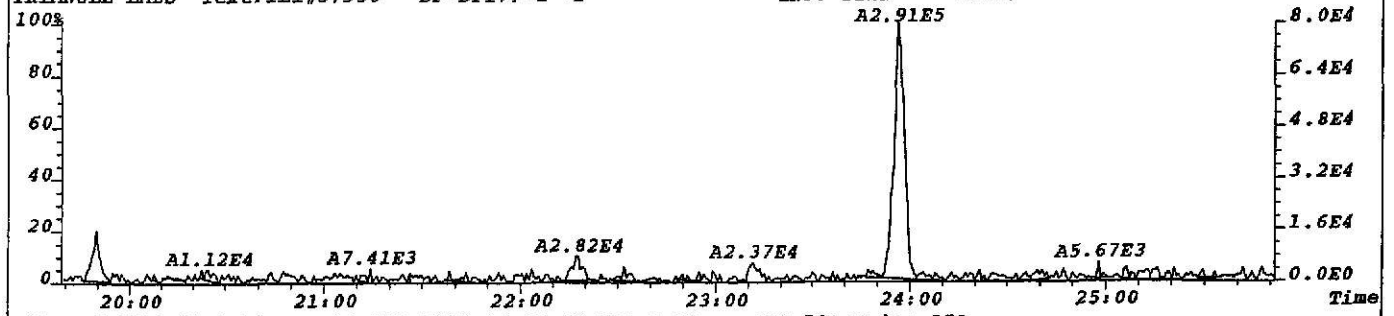
File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P
375.8364 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37



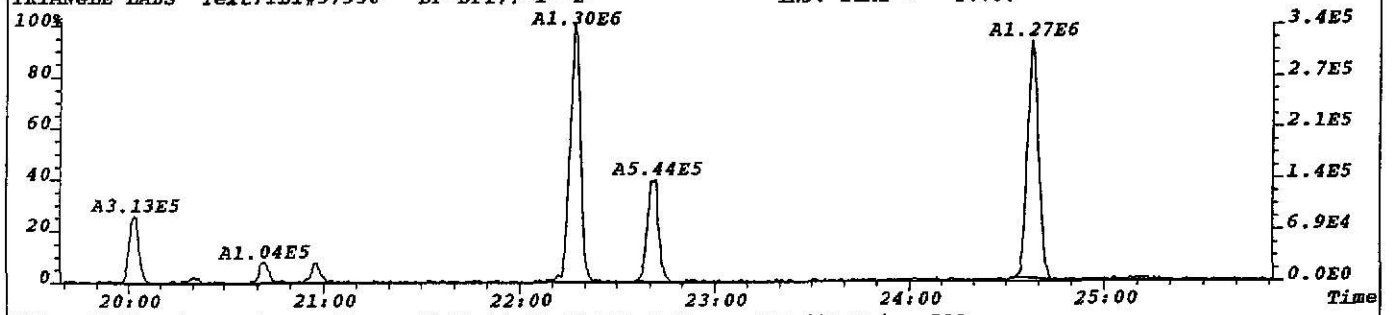
File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P Noise:386
319.8965 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,1544.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37



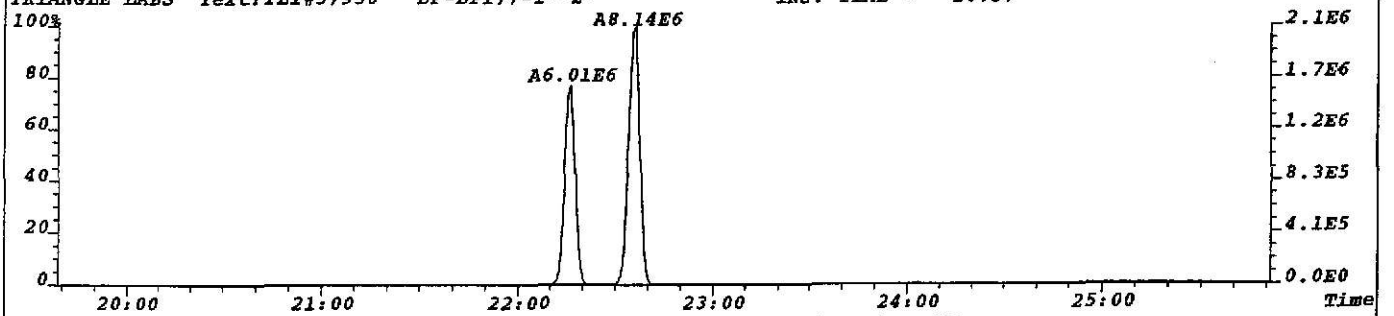
File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P Noise:418
321.8936 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,1672.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37



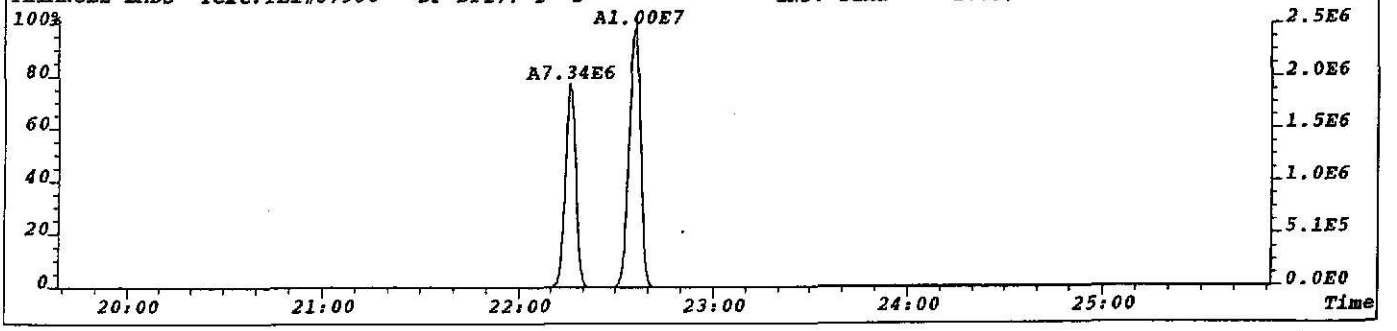
File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P Noise:358
327.8847 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,1432.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37



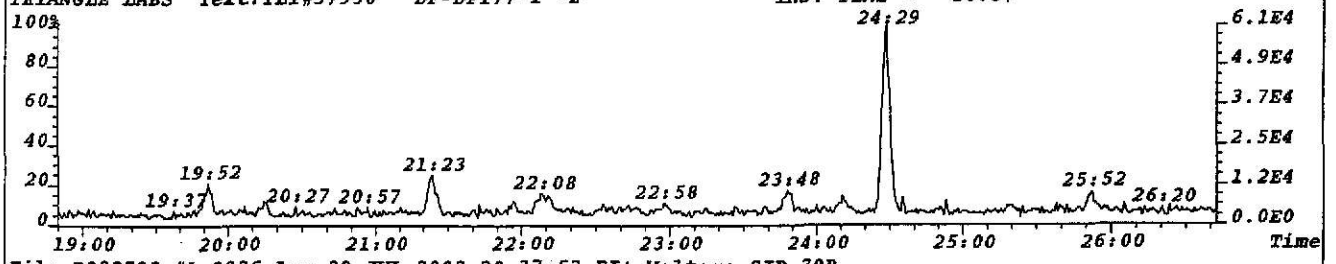
File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P Noise:599
331.9368 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,2396.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37



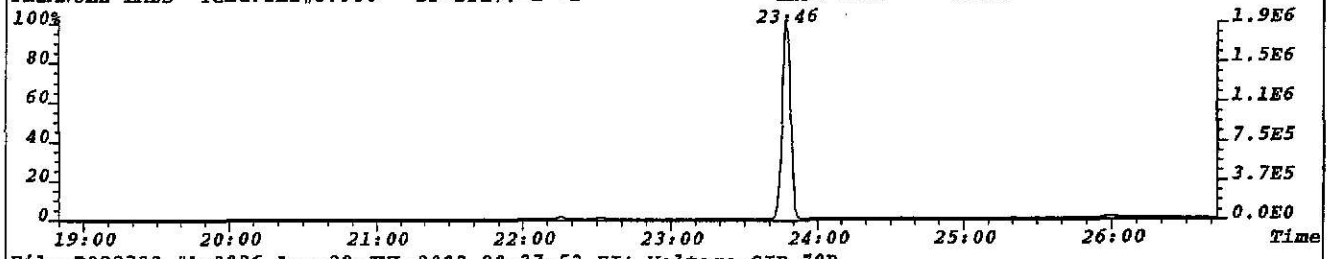
File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P Noise:448
333.9338 BSUB(256,30,-3.0) PKD(5,3,1,0.10%,1792.0,0.00%,F,F) Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37



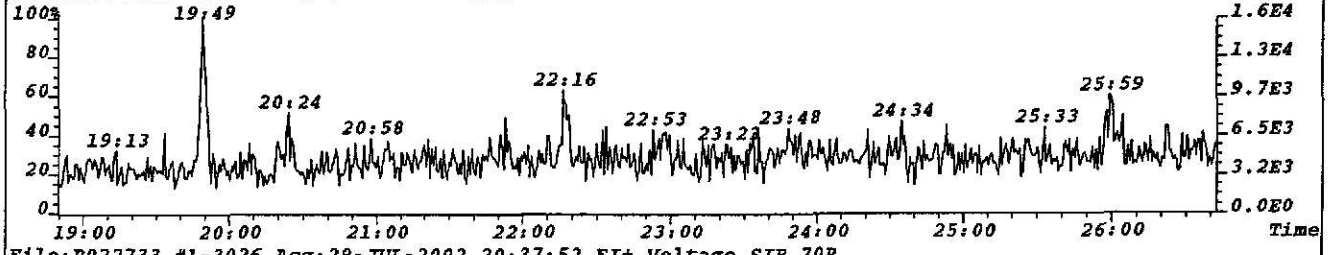
File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P
303.9016 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37



File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P
315.9419 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37



File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P
319.8965 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37



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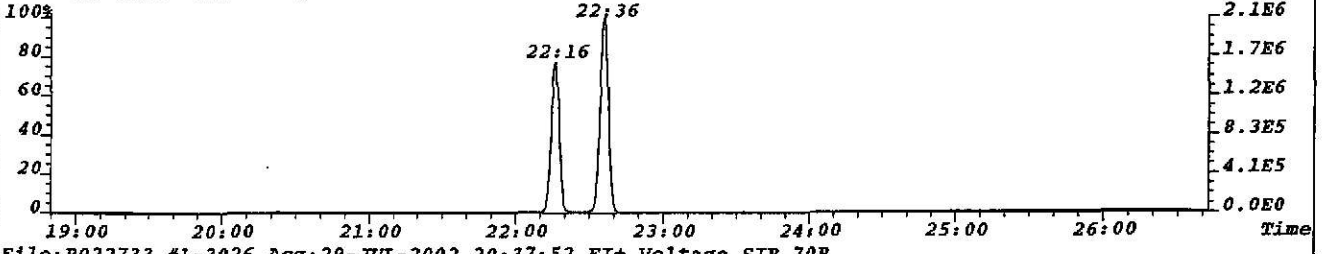
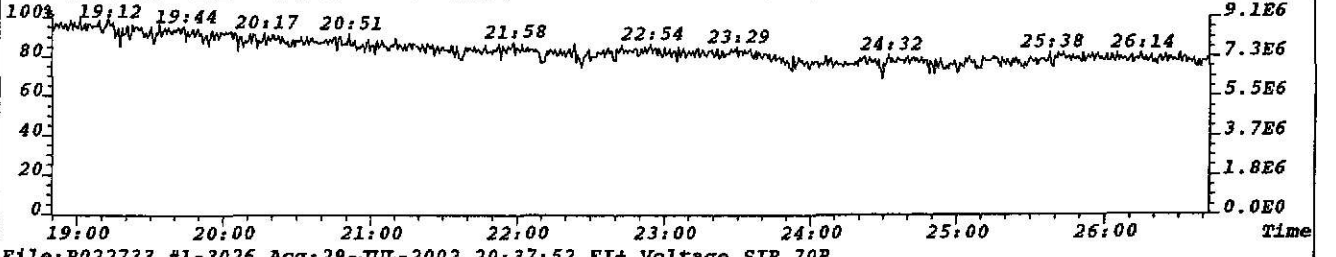
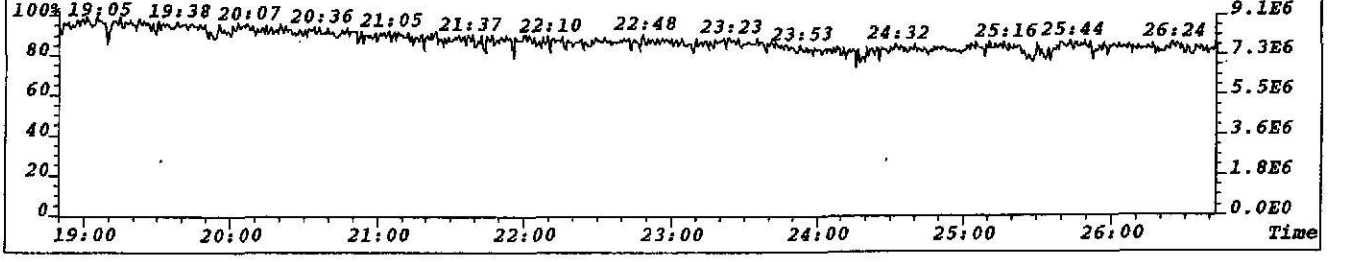
331.9368 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37

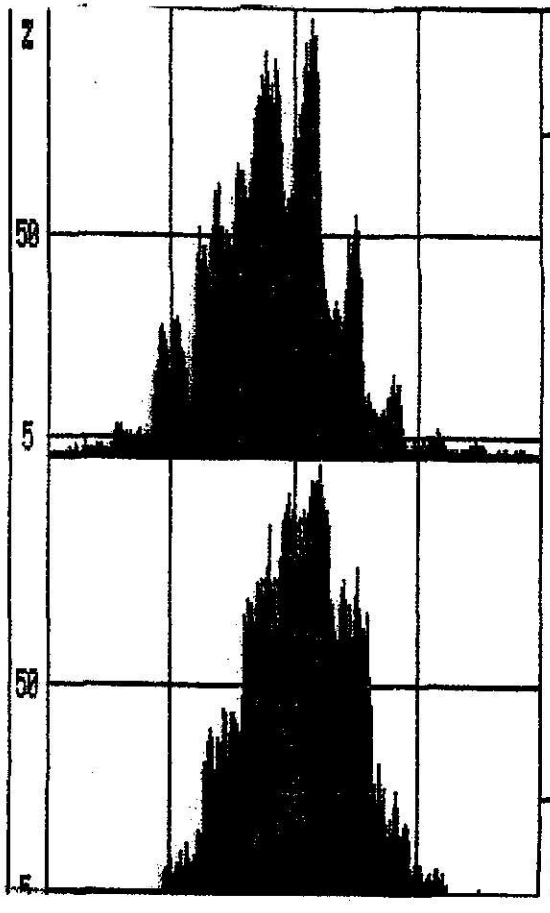


File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P
292.9825 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37



File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P
330.9792 Exp:DB225
TRIANGLE LABS Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37





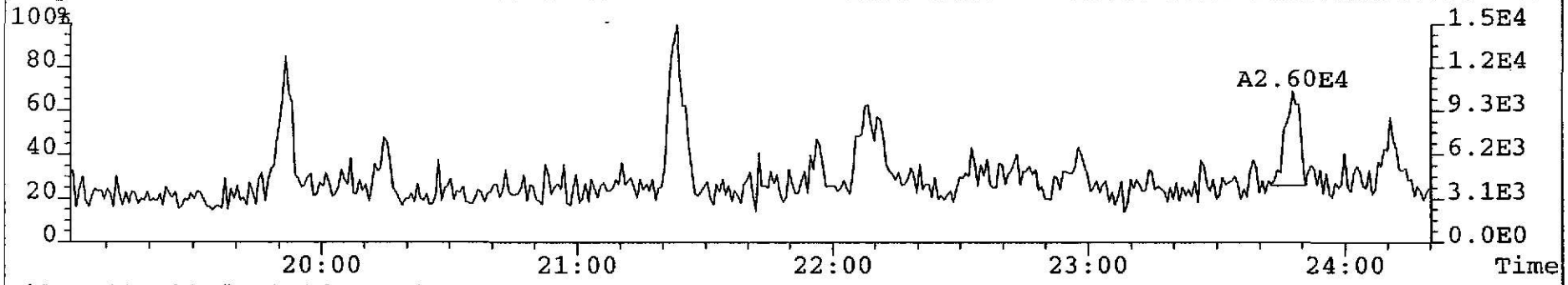
Channel I 330.9792 Peak top
Height 1.81 volts Span 200 ppm

System file name	D8225
Data file name	A:P729022
Resolution	10000
Group number	1
Ionization mode	EI+
Switching	VOLTAGE
Ref. masses	292.9825, 380.9761

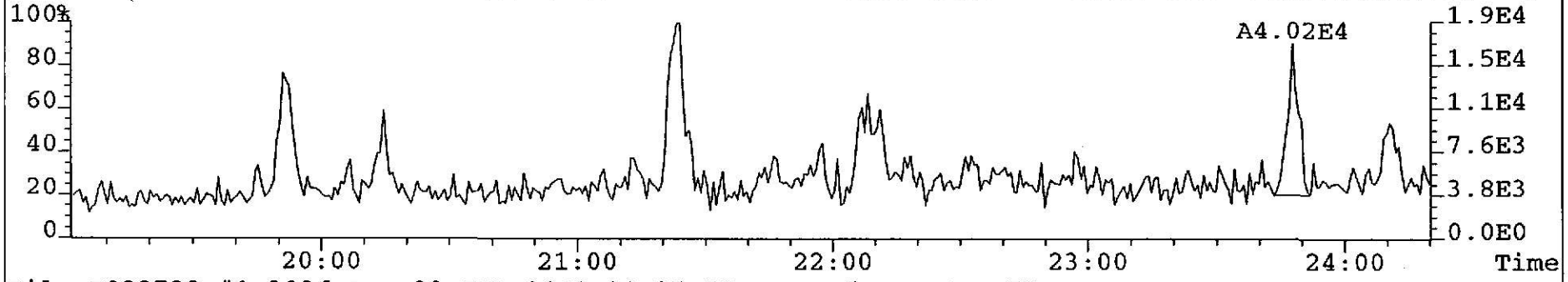
A	292.9825	J	330.9792
B	303.9016	K	331.9368
C	305.8987	L	333.9338
D	315.9419	M	375.8364
E	317.9389		
F	319.8965		
G	321.8936		
H	327.8847		
I	330.9792		

Ref. mass 380.9761 Peak top
Height .95 volts Span 200 ppm

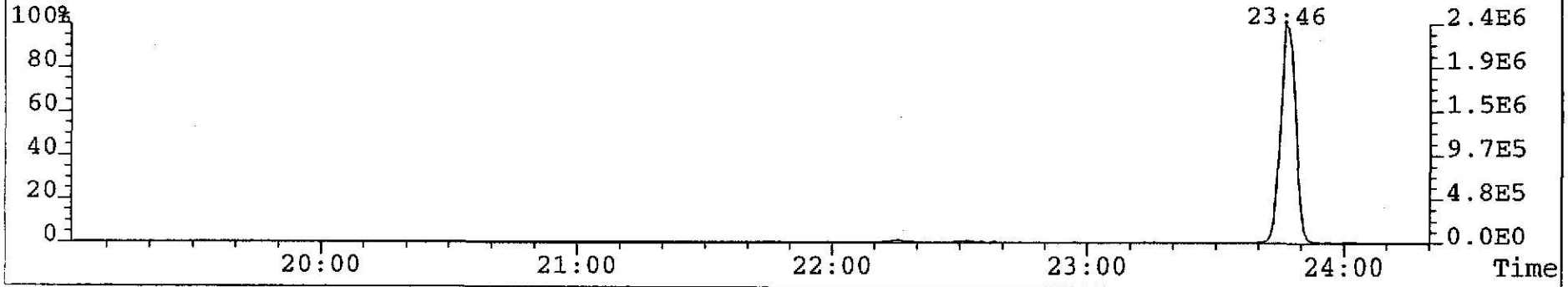
File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P
303.9016 Exp:DB225
Sample Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37 File Text:TLI#57930 D»



File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P
305.8987 Exp:DB225
Sample Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37 File Text:TLI#57930 D»



File:P022733 #1-3026 Acq:29-JUL-2002 20:37:52 EI+ Voltage SIR 70P
317.9389 Exp:DB225
Sample Text:TLI#57930 DF-DP177-1'-2' INJ. TIME = 20:37 File Text:TLI#57930 D»



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VJC 7/29/02

Martin & Slagle

TLI Project: **57930** — 1613, Revision B PCDD/PCDF Analysis (c)

Client Sample: **DF-DP177-1'-2' MS** — Analysis File: **T023783**

Client Project:	Kuhlman Electric				
Sample Matrix:	SOLID	Date Received:	07/20/2002	Spike File:	SP161B2S
TLI ID:	331-18-16MS	Date Extracted:	07/23/2002	ICal:	TF5612B
		Date Analyzed:	07/26/2002	ConCal:	TB23771
Sample Size:	13.000 g	Dilution Factor:	n/a	% Moisture:	22.6
Dry Weight:	10.062 g	Blank File:	T023762	% Lipid:	n/a
GC Column:	DB-5	Analyst:	JMM	% Solids:	77.4

Analytes	Conc. (pg/g)	DL	Ratio	RT	RRT	Flags
2,3,7,8-TCDD	48.9		0.78	27:22	1.001	—
1,2,3,7,8-PeCDD	244		1.56	31:33	1.001	—
1,2,3,4,7,8-HxCDD	209		1.22	34:38	1.000	—
1,2,3,6,7,8-HxCDD	213		1.25	34:43	1.000	—
1,2,3,7,8,9-HxCDD	209		1.26	35:03	1.010	—
1,2,3,4,6,7,8-HpCDD	217		1.00	38:04	1.000	—
1,2,3,4,6,7,8,9-OCDD	601		0.88	41:51	1.000	—
2,3,7,8-TCDF	48.5		0.84	26:40	1.001	—
1,2,3,7,8-PeCDF	246		1.52	30:32	1.001	—
2,3,4,7,8-PeCDF	259		1.50	31:13	1.001	—
1,2,3,4,7,8-HxCDF	229		1.27	33:56	1.000	—
1,2,3,6,7,8-HxCDF	220		1.26	34:02	1.000	—
2,3,4,6,7,8-HxCDF	213		1.25	34:32	1.000	—
1,2,3,7,8,9-HxCDF	219		1.27	35:19	1.000	—
1,2,3,4,6,7,8-HpCDF	262		1.06	37:00	1.000	—
1,2,3,4,7,8,9-HpCDF	223		1.06	38:35	1.000	—
1,2,3,4,6,7,8,9-OCDF	381		0.91	42:04	1.005	—

161B_PSR v2.04, LARS 6.25.05

Triangle Laboratories, Inc.®
2445 S. Alston Ave. • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Printed: 13:29 07/27/2002

TLI Project: 57930

Client Sample: DF-DP177-1'-2' MS

1613, Revision B PCDD/PCDF Analysis (c)

Analysis File: T023783

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	RRT	Flags
$^{13}C_{12}$-2,3,7,8-TCDD	133	66.7	25%-164%	0.80	27:21	1.007	—
$^{13}C_{12}$-1,2,3,7,8-PeCDD	110	55.4	25%-181%	1.50	31:32	1.161	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	180	90.7	32%-141%	1.21	34:38	0.988	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	186	93.6	28%-130%	1.22	34:43	0.990	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	106	53.4	23%-140%	1.04	38:04	1.086	—
$^{13}C_{12}$-1,2,3,4,6,7,8,9-OCDD	98.1	24.7	17%-157%	0.93	41:51	1.194	—
$^{13}C_{12}$-2,3,7,8-TCDF	154	77.5	24%-169%	0.75	26:39	0.982	—
$^{13}C_{12}$-1,2,3,7,8-PeCDF	116	58.5	24%-185%	1.49	30:31	1.124	—
$^{13}C_{12}$-2,3,4,7,8-PeCDF	111	55.9	21%-178%	1.49	31:12	1.149	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	170	85.4	26%-152%	0.51	33:56	0.968	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	190	95.5	26%-123%	0.51	34:02	0.971	—
$^{12}C_{12}$-2,3,4,6,7,8-HxCDF	230	116	28%-136%	0.52	34:31	0.985	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	183	92.0	29%-147%	0.51	35:19	1.008	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	112	56.5	28%-143%	0.44	36:59	1.055	—
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	99.3	50.0	26%-138%	0.44	38:35	1.101	—

Cleanup Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	RRT	Flags
$^{37}Cl_4$-2,3,7,8-TCDD	13.1	65.8	35%-197%	27:22	1.008	—

Recovery Standards	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.81	27:09	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.21	35:03	—

Data Reviewer: _____ 07/27/2002

161B_PSR v2.04, LARS 6.25.05

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2445 S. Alston Ave. • Durham, North Carolina 27713
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Printed: 13:29 07/27/2002

Initial ....Date...

Data Review By: Why 7/28/02

Channel specific noise levels computed from 'NL' heights.

Page No. 1 Listing of T023783B.dbf
07/26/2002 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						0.879-1.071			
304-306	DC	NL				Height	0.17	0.09	0.08				
				23:28	RO	0.96	2.27	1.11	1.16	0.881			
	DC	SN		24:08	RO	1.15	0.58			0.906			
				24:19		0.86	7.91	3.65	4.26	0.912			
				24:34	RO	1.00	2.12	1.06	1.06	0.922			
				25:10		0.72	3.49	1.46	2.03	0.944			J
				25:41		0.74	8.19	3.49	4.70	0.964			
				26:03	RO	1.45	3.14	1.86	1.28	0.977			
				26:15		0.81	9.32	4.16	5.16	0.985			
				26:40		0.84	187.28	85.28	102.00	1.001	2378-TCDF	AN	
				27:31	RO	0.95	4.82	2.35	2.47	1.033			
				27:50		0.81	58.95	26.31	32.64	1.044			
304-306				10 Peaks			287.49						
13C12-TCDF				0.65-0.89						0.944-1.131			
316-318	DC	NL				Height	0.15	0.07	0.08				
				25:40		0.75	5.22	2.23	2.99	0.963			
				25:56		0.88	1.90	0.89	1.01	0.973			
				26:14	RO	0.91	6.35	3.02	3.33	0.984			
				26:39		0.75	724.24	311.18	413.06	1.000	13C12-2378-TCDF	ISO	
						Height	176.07	76.54	99.53				
				27:21	RO	1.14	1.67	0.89	0.78	1.026			
316-318				5 Peaks			739.38						

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

TCDD				0.65-0.89						0.904-1.042			
320-322	DC	NL				Height	0.12	0.06	0.06				
	DC	SN		24:46	RO	0.03	7.34			0.906			
				25:16		0.71	0.84	0.35	0.49	0.924	1379-TCDD	AN	J
	DC	SN		25:27	RO	0.47	0.22			0.931			
				26:39		0.71	0.82	0.34	0.48	0.974			J
				27:22		0.78	140.36	61.32	79.04	1.001	2378-TCDD	AN	
				27:45		0.67	0.95	0.38	0.57	1.015			J
	DC	SN		28:04	RO	1.06	0.37			1.026			
320-322				4 Peaks			142.97						
37Cl-TCDD										0.927-1.073			
328	DC	NL				Height	0.10	0.10					
	DC	WL		25:08			1.11			0.919			
	DC	WL		25:16			1.58			0.924			
	DC	SN		25:44			0.24			0.941			
				26:00			113.65	113.65		0.951			
				26:13			0.49	0.49		0.959			
				26:19			0.32	0.32		0.962			
				26:26			0.65	0.65		0.966			

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		26:34			0.22			0.971			
				26:58			0.45	0.45		0.986			
	DC	SN		27:06			0.13			0.991			
				27:15			3.55	3.55		0.996			
				27:22			51.78	51.78		1.001	37Cl-TCDD	CLS	
				27:44			33.62	33.62		1.014			
	DC	SN		28:08			0.42			1.029			
	DC	SN		28:19			0.20			1.035			
	DC	SN		28:29			0.08			1.041			
				28:39			4.24	4.24		1.048			
328			9	Peaks			208.75						
13C12-TCDD				0.65-0.89						0.920-1.066			
332-334	DC	NL		Height			0.24	0.16	0.08				
				27:09		0.81	712.46	318.75	393.71	0.993	13C12-1234-TCDD	RS1	
				27:21		0.80	536.39	237.95	298.44	1.000	13C12-2378-TCDD	IS1	
				Height			135.89	59.38	76.51				
				27:56	RO	1.34	2.29	1.31	0.98	1.021			
				28:25	RO	0.17	1.58	0.23	1.35	1.039			
332-334			4	Peaks			1,252.72						

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

PeCDF				1.32-1.78						0.911-1.037			
340-342	DC	NL		Height			0.13	0.05	0.08				
				28:27	RO	1.14	1.20	0.64	0.56	0.912			
				28:51		1.54	5.85	3.55	2.30	0.925			J
				29:15	RO	1.19	1.84	1.00	0.84	0.938			
				29:22	RO	0.60	6.65	2.50	4.15	0.941			
				29:42		1.34	8.09	4.64	3.45	0.952			J
				29:51		1.42	24.88	14.59	10.29	0.957			
				30:02		1.47	22.84	13.58	9.26	0.963			
				30:09		1.36	4.77	2.75	2.02	0.966			J
				30:25		1.39	35.97	20.94	15.03	0.975			
				30:32		1.52	680.70	410.25	270.45	1.001	12378-PeCDF	AN	
				30:49	RO	1.23	12.40	6.83	5.57	0.988			
				31:13		1.50	679.46	407.40	272.06	1.001	23478-PeCDF	AN	
				31:33	RO	1.22	3.78	2.08	1.70	1.011			
				31:40	RO	3.39	0.79	0.61	0.18	1.015			
				31:48	RO	0.77	1.33	0.58	0.75	1.019			
				31:56	RO	1.09	1.36	0.71	0.65	1.024			
				32:02		1.34	13.31	7.61	5.70	1.027			J
				32:11	RO	1.25	1.82	1.01	0.81	1.032			
	DC	WH		32:38	RO	0.70	0.80			1.046			
340-342			18	Peaks			1,507.04						
13C12-PeCDF				1.32-1.78						0.807-1.127			
352-354	DC	NL		Height			0.14	0.06	0.08				
				29:09	RO	0.18	1.41	0.22	1.19	0.934			
				29:41	RO	0.92	4.50	2.16	2.34	0.951			
				30:09		1.70	4.42	2.78	1.64	0.966			
				30:31		1.49	484.63	289.92	194.71	1.000	13C12-PeCDF 123	IS2	
				Height			143.04	85.85	57.19				

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

                        30:48 RO  1.26          8.03          4.48          3.55  0.987
                        31:12     1.49        472.11        282.31        189.80  1.000 13C12-PeCDF 234 IS3
                              Height          142.88         85.08         57.80
                        31:33     1.42          1.86          1.09          0.77  1.011
                        31:39 RO  2.35          0.87          0.61          0.26  1.014
                        32:10     1.56          5.11          3.11          2.00  1.031
352-354               9 Peaks                 982.94

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

PeCDD                         1.32-1.78                                   0.940-1.021
356-358          DC  NL          Height          0.13          0.06          0.07
                        30:29 RO  0.69          1.79          0.73          1.06  0.967
                        30:38 RO  1.26          0.77          0.43          0.34  0.971
                        30:50 RO  1.81          1.01          0.65          0.36  0.978
                        31:33     1.56        419.02        255.07        163.95  1.001 12378-PeCDD     AN
                        31:55 RO  1.97          0.92          0.61          0.31  1.012
                        32:02 RO  1.16          2.27          1.22          1.05  1.016
                 DC  WH 32:25 RO  0.71          0.99                              1.028
356-358               6 Peaks                 425.78

13C12-PeCDD                   1.32-1.78                                   0.735-1.052
368-370          DC  NL          Height          0.13          0.07          0.06
                        30:28     1.53          0.91          0.55          0.36  0.966
                        30:37     1.32          1.76          1.00          0.76  0.971
                        30:49     1.58          0.62          0.38          0.24  0.977
                 DC  SN 31:14 RO  1.21          0.64                              0.990
                        31:32     1.50        327.89        196.51        131.38  1.000 13C12-PeCDD 123 IS4
                              Height           98.07         58.18         39.89
                        31:55 RO  6.29          1.24          1.07          0.17  1.012
368-370               5 Peaks                 332.42

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

HxCDF                         1.05-1.43                                   0.929-1.007
374-376          DC  NL          Height          0.51          0.35          0.16
                        33:01     1.23          4.83          2.66          2.17  0.935                       J
                        33:07     1.34          7.64          4.38          3.26  0.938                       J
                        33:14     1.34          4.80          2.75          2.05  0.941                       J
                 DC  SN 33:22 RO  0.68          1.23                              0.945
                        33:34     1.32         13.99          7.96          6.03  0.950
                        33:56     1.27        352.49        197.14        155.35  1.000 123478-HxCDF    AN
                        34:02     1.26        390.75        217.87        172.88  1.000 123678-HxCDF    AN
                        34:32     1.25        426.29        236.94        189.35  1.000 234678-HxCDF    AN
                        35:19     1.27        304.76        170.55        134.21  1.000 123789-HxCDF    AN
                 DC  WH 35:40     1.25          0.45                              1.010
                 DC  WH 35:44 RO  2.00          0.24                              1.012
374-376               8 Peaks               1,505.55

13C12-HxCDF                   0.43-0.59                                   0.879-1.106
384-386          DC  NL          Height          0.22          0.08          0.14
                 DC  SN 32:58     0.47          0.75                              0.933
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Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
				33:06	RO	0.42	1.26	0.37	0.89	0.937			
				33:56		0.51	271.76	91.74	180.02	1.000	13C12-HxCDF 478	IS5	
						Height	82.51	27.86	54.65				
				34:02		0.51	307.59	103.40	204.19	1.000	13C12-HxCDF 678	IS6	
						Height	92.83	30.92	61.91				
				34:18		0.46	0.98	0.31	0.67	0.971			
				34:20		0.53	1.42	0.49	0.93	0.972			
				34:31		0.52	365.01	124.28	240.73	1.000	13C12-HxCDF 234	IS7	
						Height	106.53	36.26	70.27				
				34:48	RO	1.07	1.47	0.76	0.71	0.985			
				34:54	RO	0.41	0.90	0.26	0.64	0.988			
				35:01	RO	1.14	0.79	0.42	0.37	0.992			
	DC	SN		35:06	RO	0.64	0.23			0.994			
	DC	SN		35:10	RO	1.05	0.43			0.996			
				35:19		0.51	243.14	81.90	161.24	1.000	13C12-HxCDF 789	IS8	
						Height	62.60	21.24	41.36				
				35:37	RO	0.32	1.53	0.37	1.16	1.008			
	DC	SN		35:45	RO	0.65	0.33			1.012			
	DC	SN		35:48	RO	0.31	0.46			1.014			
384-386				11 Peaks			1,195.85						
---------- Above: HxCDF / HxCDD Follows ----------													
HxCDD						1.05-1.43				0.959-1.013			
390-392	DC	NL				Height	0.14	0.08	0.06				
				33:28		1.31	2.86	1.62	1.24	0.964			J
				33:53		1.37	0.64	0.37	0.27	0.976			J
				34:08	RO	0.76	4.45	1.92	2.53	0.983			
				34:38		1.22	241.91	132.86	109.05	1.000	123478-HxCDD	AN	
				34:43		1.25	268.23	149.05	119.18	1.000	123678-HxCDD	AN	
				35:03		1.26	267.19	148.74	118.45	1.010	123789-HxCDD	AN	
	DC	WH		35:15	RO	0.86	5.16			1.015			
	DC	WH		35:29	RO	2.33	0.30			1.022			
	DC	WH		35:30	RO	2.94	0.63			1.023			
390-392				6 Peaks			785.28						
13C12-HxCDD						1.05-1.43				0.983-1.041			
402-404	DC	NL				Height	0.12	0.06	0.06				
				34:38		1.21	213.56	116.83	96.73	1.000	13C12-HxCDD 478	IS9	
						Height	66.27	36.11	30.16				
				34:43		1.22	240.99	132.39	108.60	1.000	13C12-HxCDD 678	IS10	
						Height	68.22	37.42	30.80				
				35:03		1.21	268.44	146.71	121.73	1.012	13C12-HxCDD 789	RS2	
				35:17	RO	0.34	1.26	0.32	0.94	1.019			
				35:23	RO	2.00	1.08	0.72	0.36	1.022			
402-404				5 Peaks			725.33						
---------- Above: HxCDD / HpCDF Follows ----------													
HpCDF						0.88-1.20				0.955-1.005			
408-410	DC	NL				Height	0.20	0.10	0.10				
				37:00		1.06	224.56	115.77	108.79	1.000	1234678-HpCDF	AN	

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

                        37:15 RO  1.29        1.33         0.75         0.58  0.965
                        37:27     0.94        8.62         4.18         4.44  0.971
                        38:35     1.06      134.43        69.10        65.33  1.000 1234789-HpCDF   AN
                 DC  WH 38:58 RO  0.87        0.28                            1.010
408-410               4 Peaks               368.94

13C12-HpCDF                     0.37-0.51                                   0.857-1.142
418-420          DC  NL          Height       0.15         0.08         0.07
                        36:59     0.44      126.40        38.54        87.86  1.000 13C12-HpCDF 678 IS11
                                Height       30.74         9.16        21.58
                 DC  SN 37:18 RO  0.57        0.44                            0.967
                 DC  SN 37:42 RO  1.09        0.23                            0.977
                 DC  SN 37:56     0.43        0.20                            0.983
                        38:35     0.44       89.87        27.40        62.47  1.000 13C12-HpCDF 789 IS12
                                Height       20.09         6.28        13.81
                        38:55 RO  0.65        0.38         0.15         0.23  1.009
418-420               3 Peaks               216.65

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

HpCDD                           0.88-1.20                                   0.976-1.005
424-426          DC  NL          Height       0.15         0.08         0.07
                        37:18     1.10        7.42         3.88         3.54  0.980
                        38:04     1.00      115.22        57.73        57.49  1.000 1234678-HpCDD   AN
                 DC  WH 38:23 RO  0.65        0.76                            1.008
424-426               2 Peaks               122.64

13C12-HpCDD                     0.88-1.20                                   0.869-1.079
436-438          DC  NL          Height       0.14         0.07         0.07
                 DC  SN 37:18 RO  0.31        0.72                            0.980
                        38:04     1.04      113.10        57.53        55.57  1.000 13C12-HpCDD 678 IS13
                                Height       24.90        12.68        12.22
                 DC  SN 38:25 RO  0.50        0.45                            1.009
436-438               1 Peak                113.10

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

OCDF                            0.76-1.02                                   0.952-1.048
442-444          DC  NL          Height       0.14         0.07         0.07
                 DC  WL 38:06 RO  0.17        0.34                            0.910
                 DC  WL 38:18 RO  0.63        0.49                            0.915
                        42:04     0.91      114.58        54.65        59.93  1.005 OCDF            AN
                        42:21 RO  0.64        0.95         0.37         0.58  1.012
                        42:27 RO  0.31        0.55         0.13         0.42  1.014
                        42:32 RO  1.40        0.60         0.35         0.25  1.016
                 DC  SN 42:37 RO  3.00        0.56                            1.018
                 DC  SN 42:45 RO  2.00        0.51                            1.022
                 DC  SN 43:02 RO  0.60        0.24                            1.028
                 DC  SN 43:09 RO  1.81        0.45                            1.031
                 DC  SN 43:30 RO  1.75        0.11                            1.039
442-444               4 Peaks               116.68
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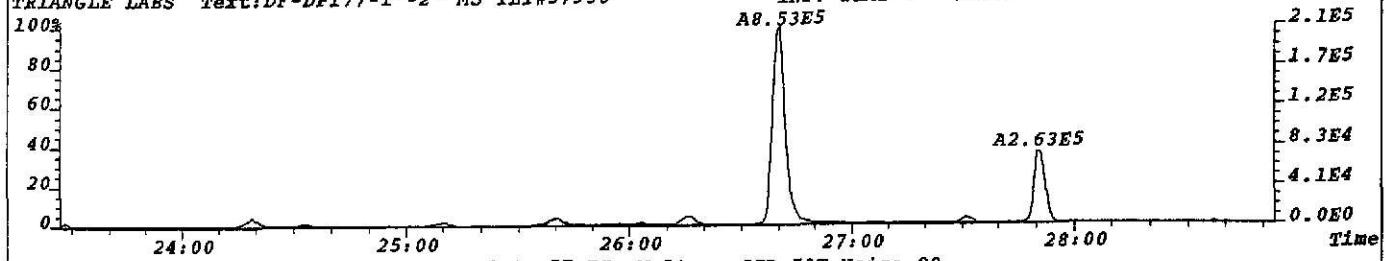
Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
OCDD						0.76-1.02				0.952-1.048			
458-460		DC	NL			Height	0.13	0.07	0.06				
				41:51		0.88	150.81	70.46	80.35	1.000	OCDD		AN
				42:08	RO	1.13	1.17	0.62	0.55	1.007			
		DC	SN	42:22	RO	2.82	0.42			1.012			
458-460			2	Peaks			151.98						
13C12-OCDD						0.76-1.02				0.996-1.004			
470-472		DC	NL			Height	0.12	0.06	0.06				
				41:51		0.93	98.34	47.46	50.88	1.000	13C12-OCDD		IS14
						Height	18.27	8.84	9.43				
		DC	WH	42:13	RO	1.10	0.42			1.009			
470-472			1	Peak			98.34						

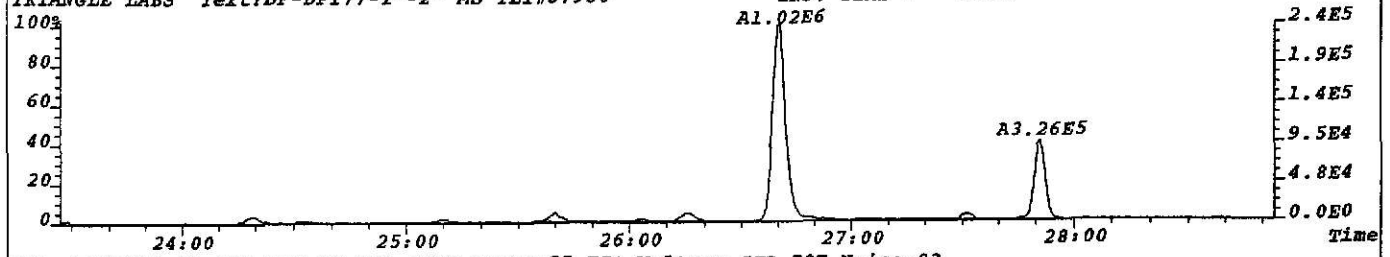
Column Description.....	"Why" Code Description.....	QC Log Desc.....
M_Z -Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT. -Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK -RO=Ratio Outside 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 ***

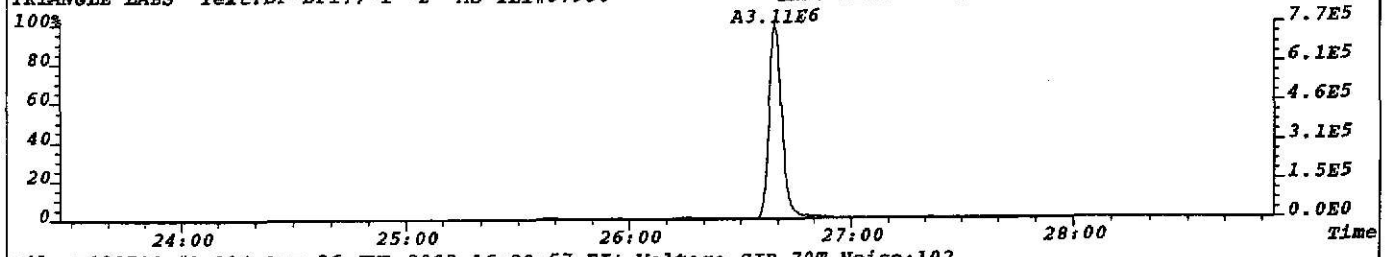
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:113
303.9016 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,452.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



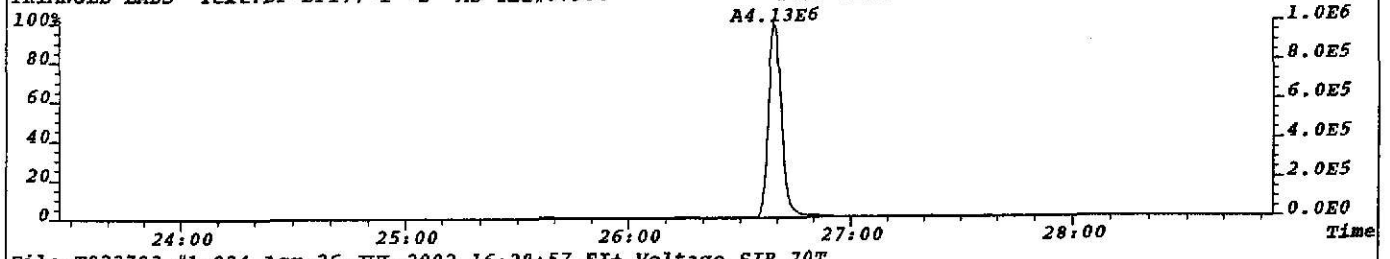
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:99
305.8987 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,396.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



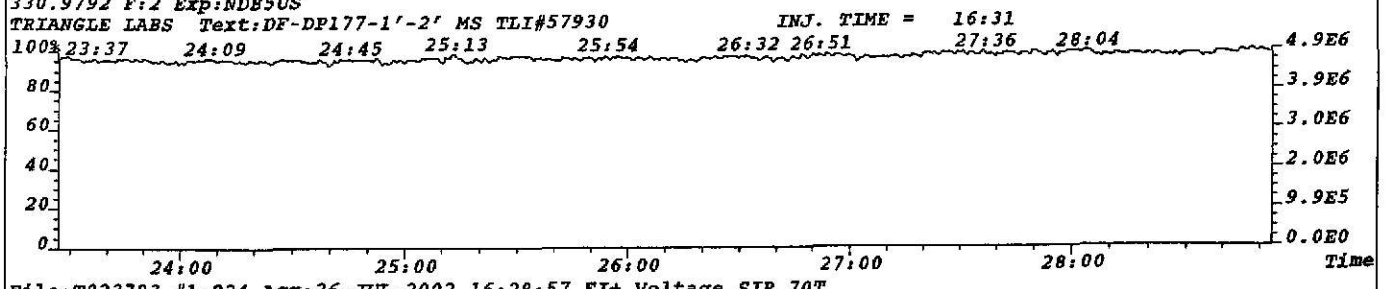
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:82
315.9419 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,328.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



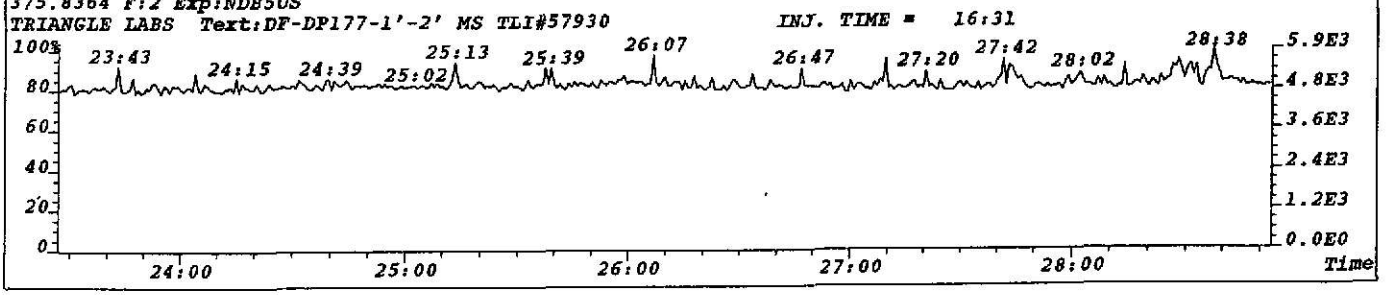
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:102
317.9389 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,408.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



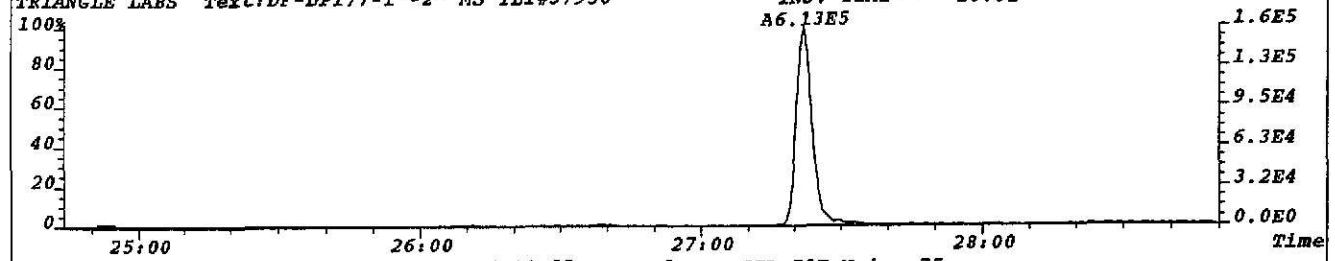
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



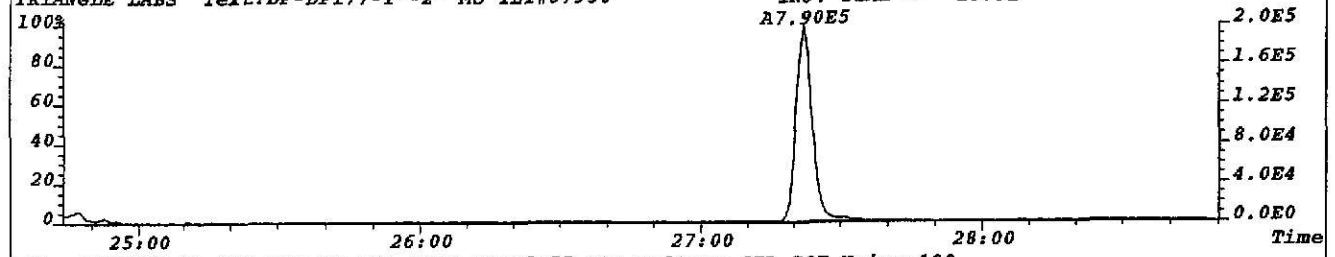
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T
375.8364 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



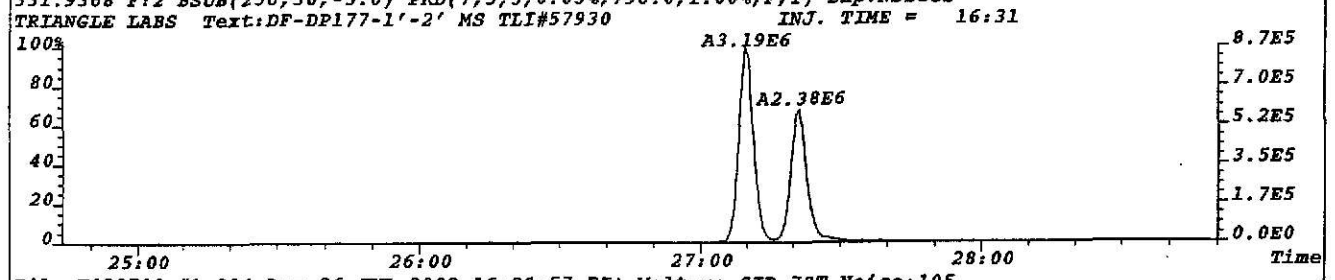
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:72
319.8965 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,288.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



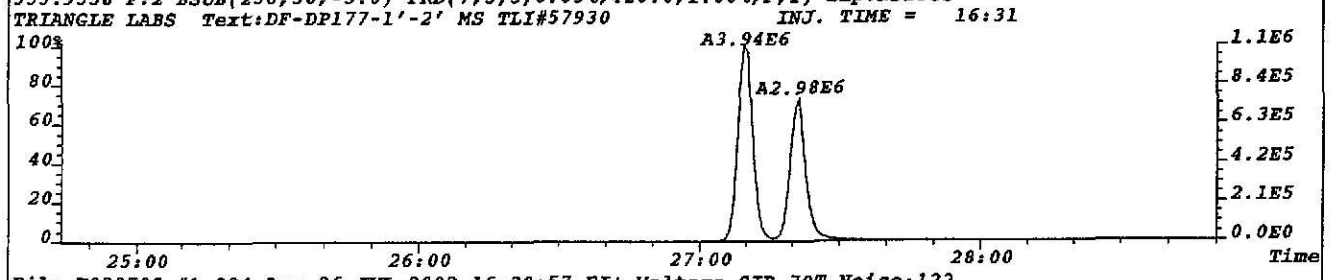
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:75
321.8936 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,300.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



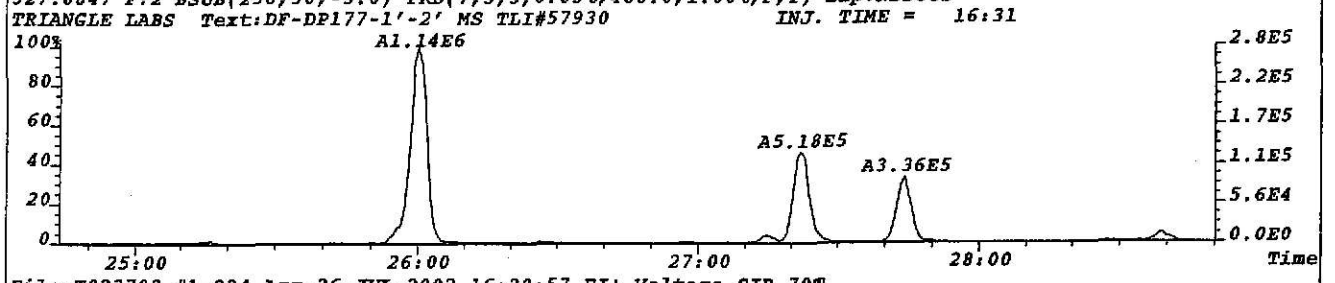
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:199
331.9368 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,796.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



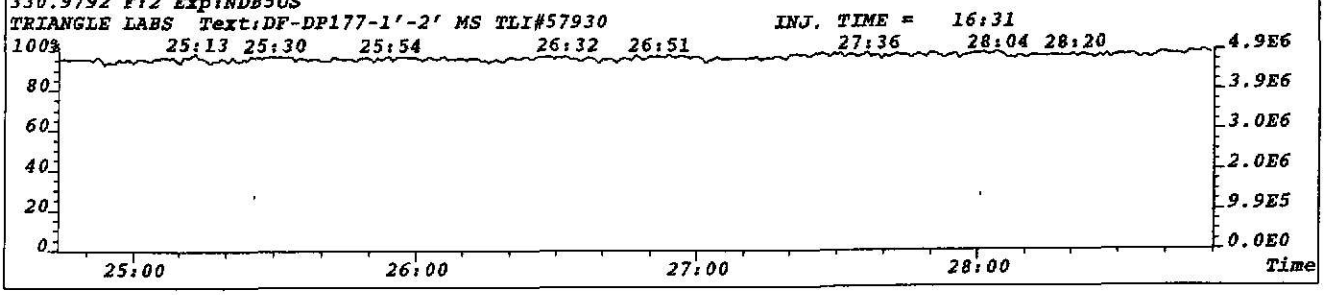
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:105
333.9338 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,420.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



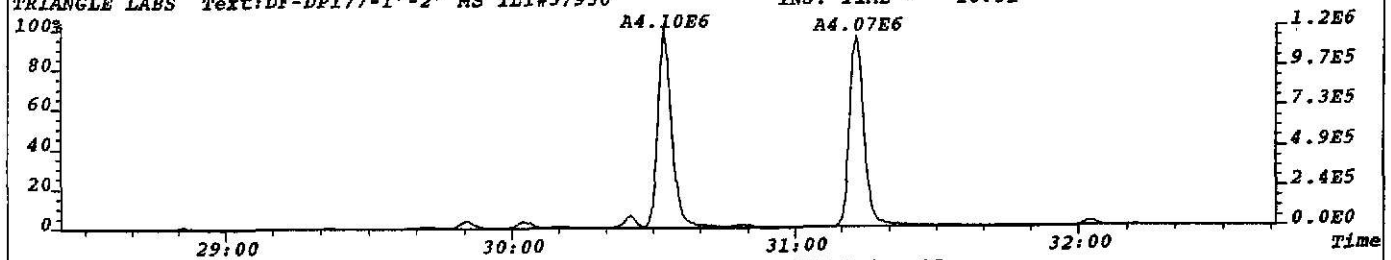
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:122
327.8847 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,488.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



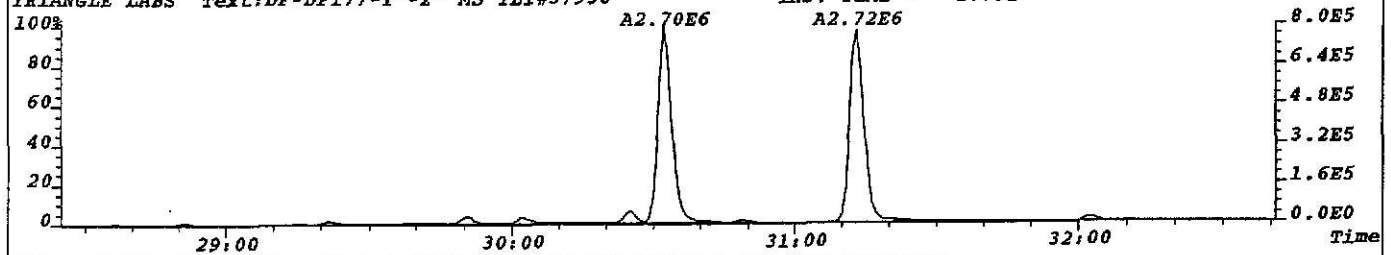
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



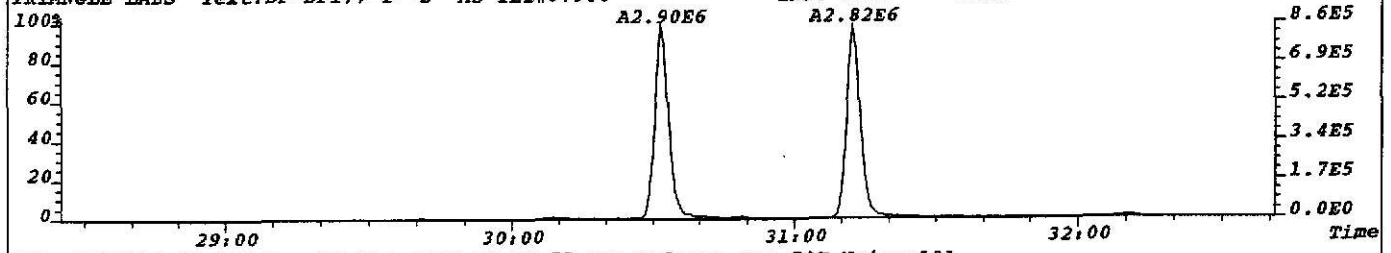
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:63
339.8597 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,252.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



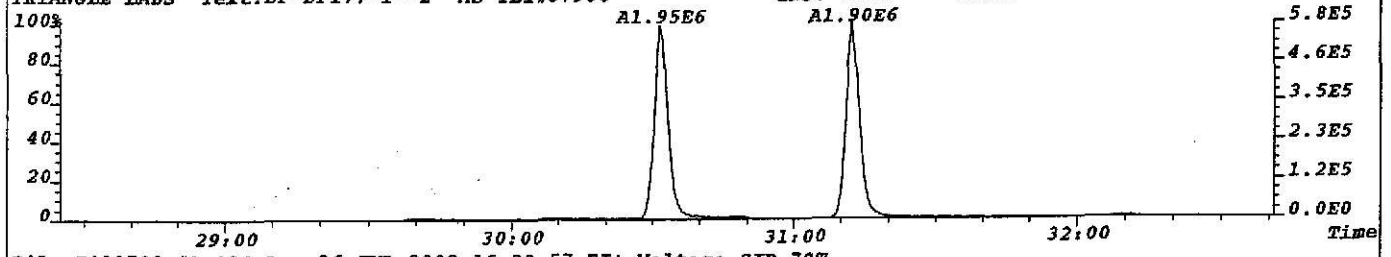
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:95
341.8567 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,380.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



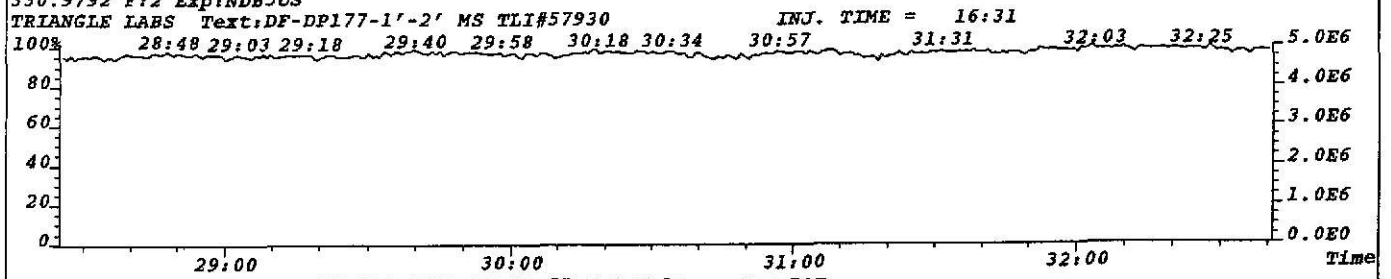
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:76
351.9000 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,304.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



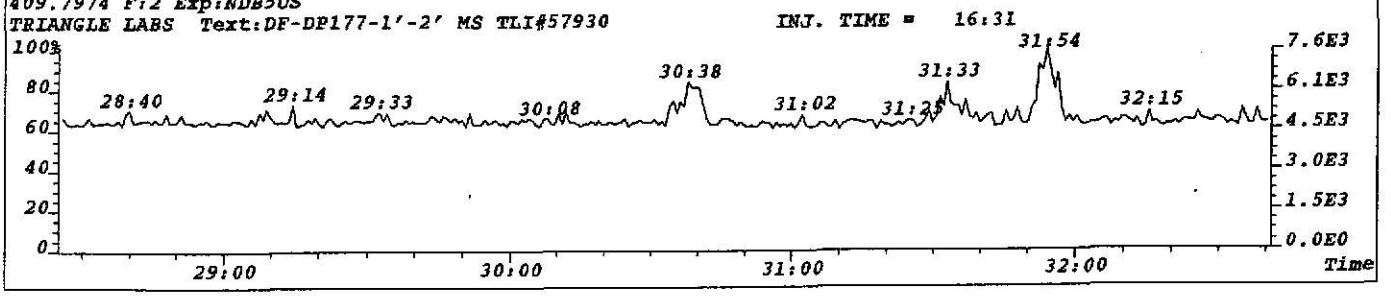
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:101
353.8970 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,404.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



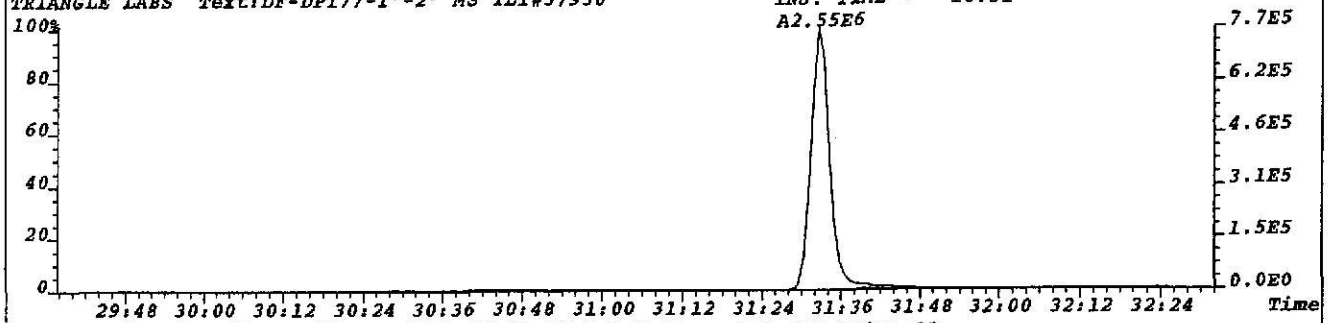
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



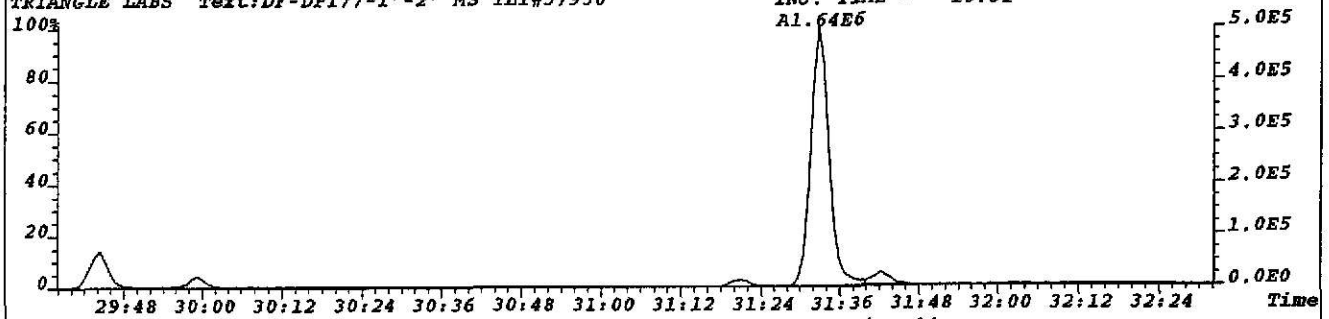
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T
409.7974 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



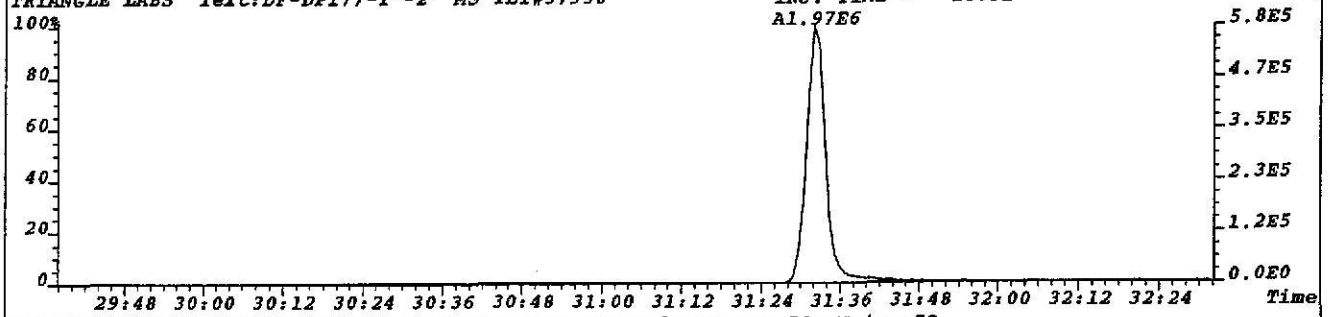
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:74
355.8546 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,296.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



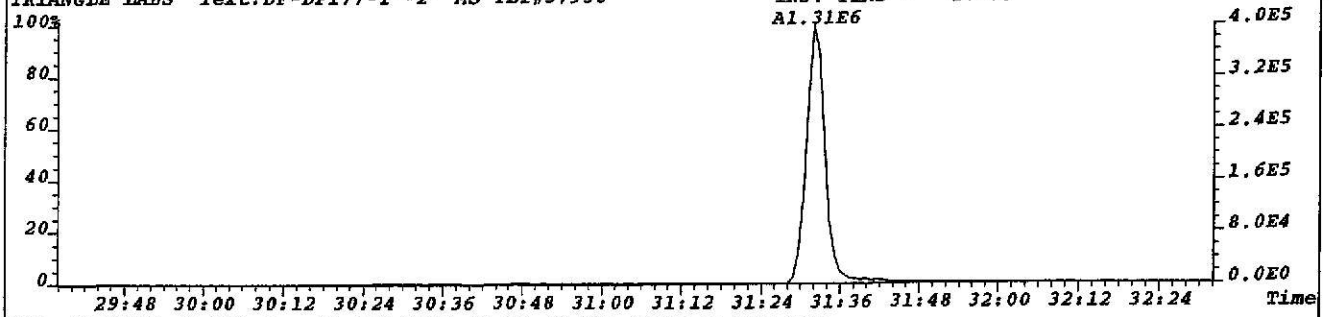
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:83
357.8516 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,332.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



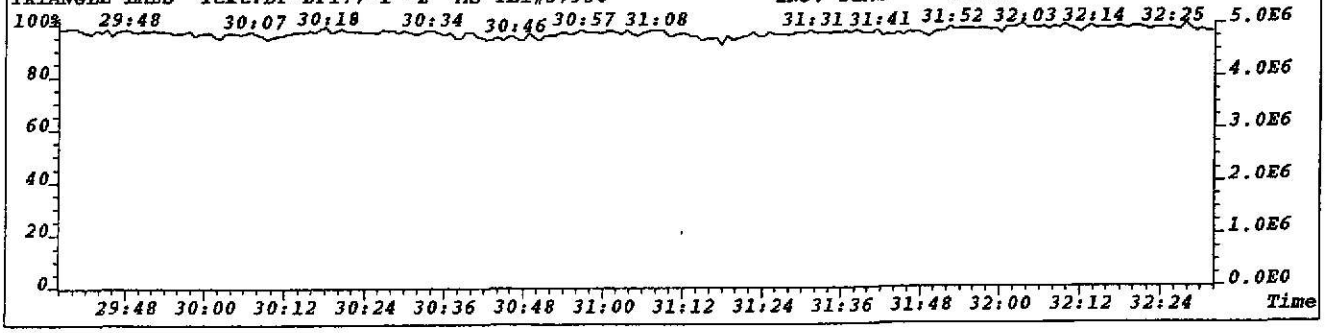
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:84
367.8949 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,336.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



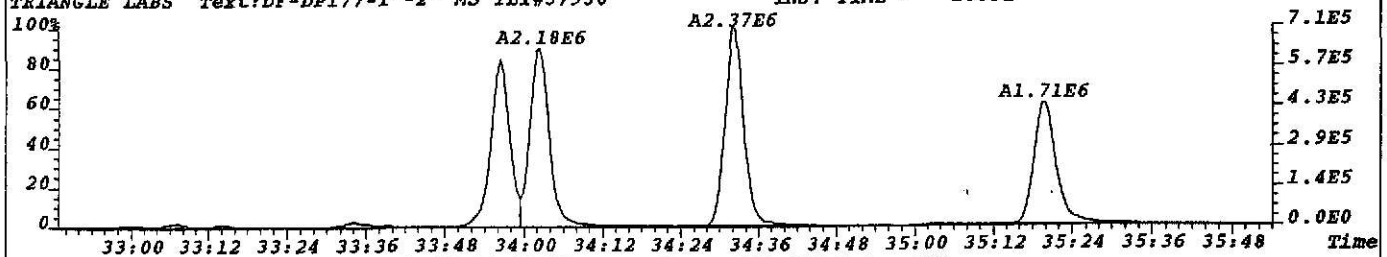
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:72
369.8919 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,288.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



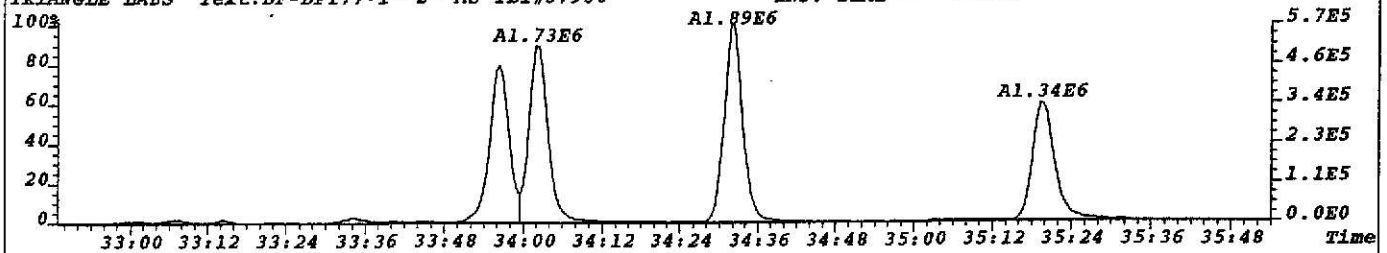
File:T023783 #1-924 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



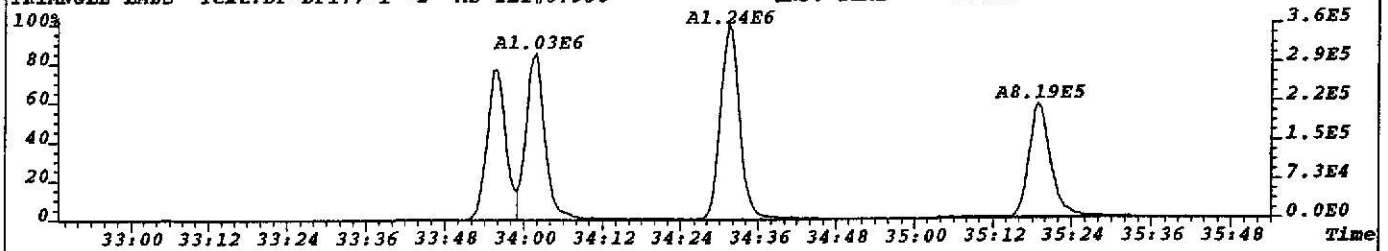
File:T023783 #1-386 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:434
373.8208 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,1736.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



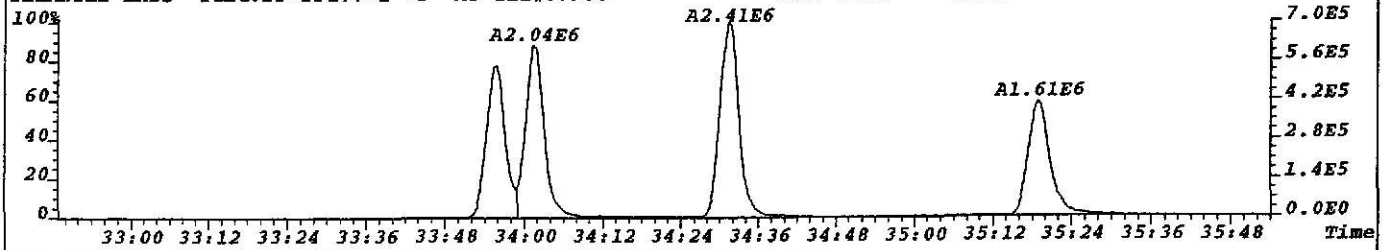
File:T023783 #1-386 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:204
375.8178 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,816.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



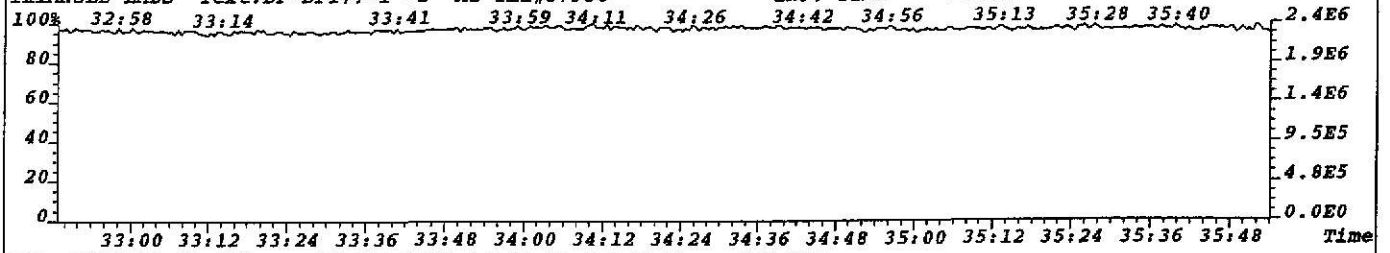
File:T023783 #1-386 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:101
383.8639 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,404.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



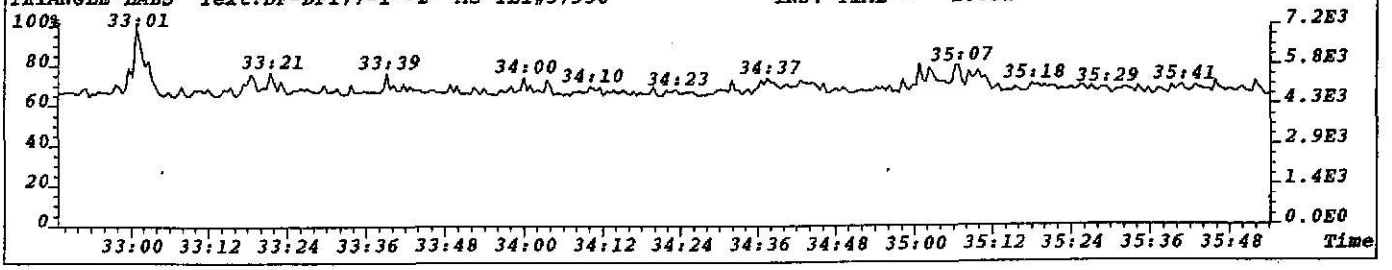
File:T023783 #1-386 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:171
385.8610 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,684.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



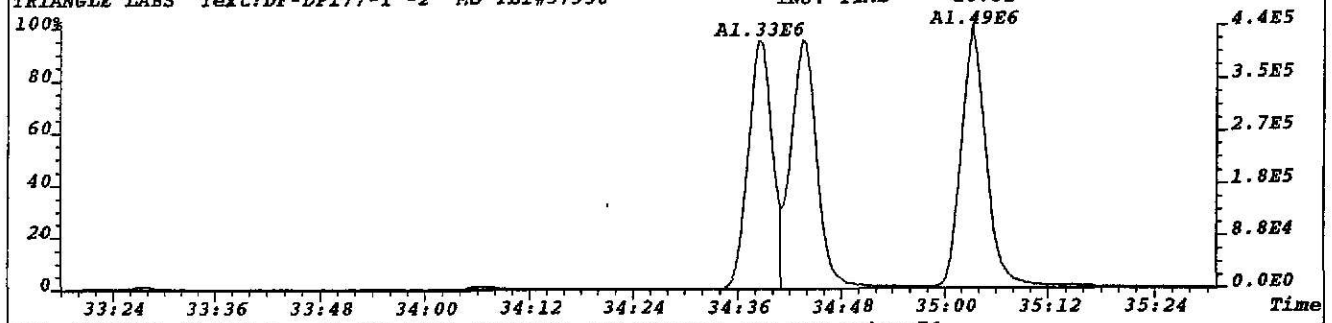
File:T023783 #1-386 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



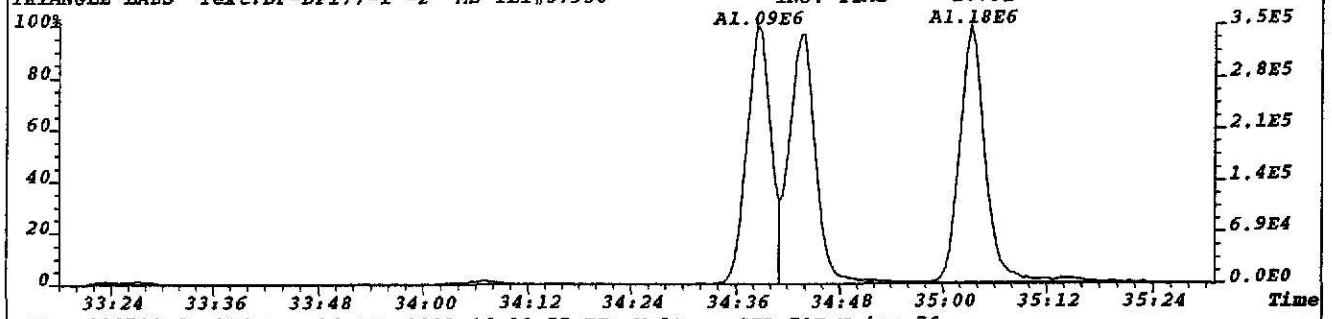
File:T023783 #1-386 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T
445.7555 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



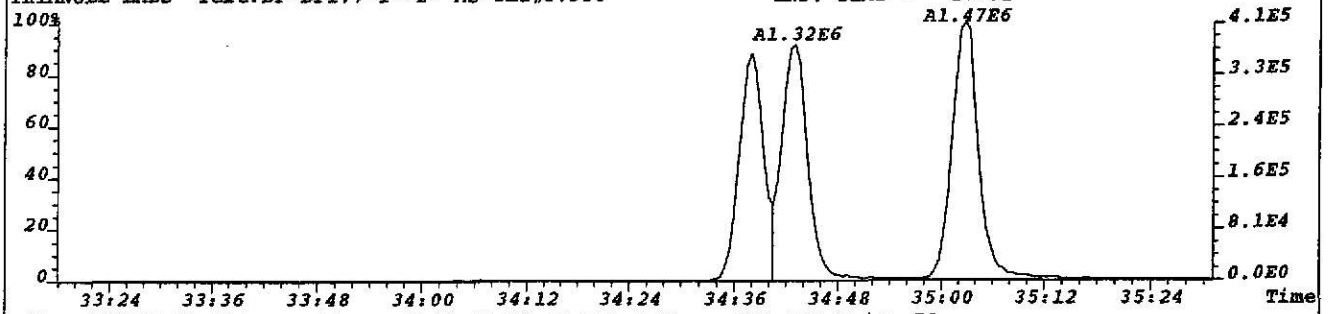
File:T023783 #1-386 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:94
389.8156 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,376.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



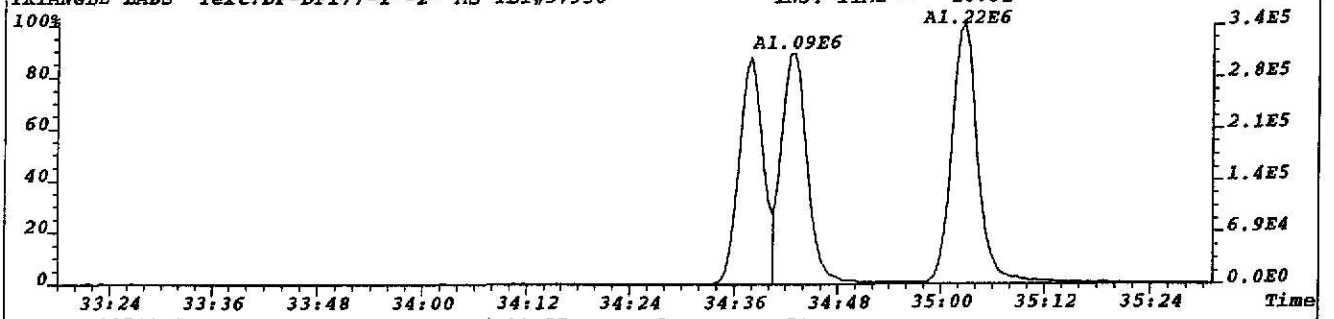
File:T023783 #1-386 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:76
391.8127 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,304.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



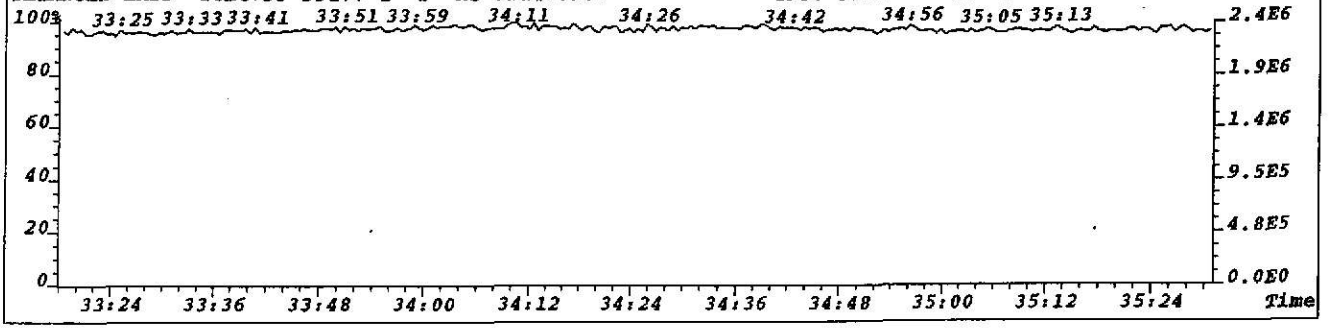
File:T023783 #1-386 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:76
401.8558 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,304.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



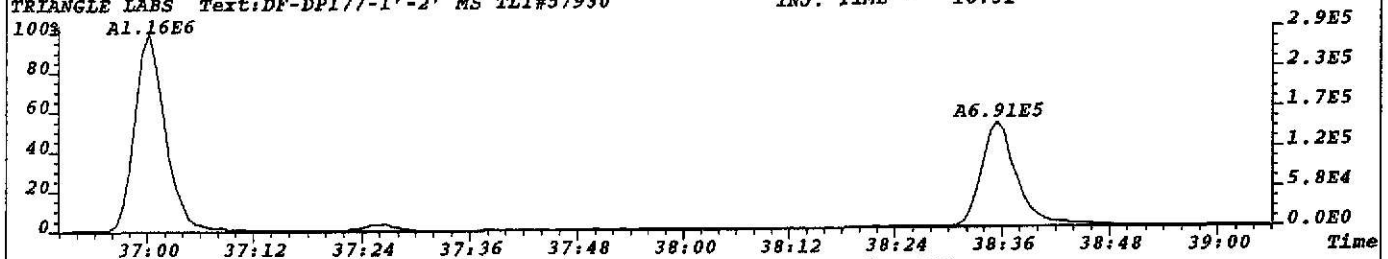
File:T023783 #1-386 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:70
403.8529 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,280.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



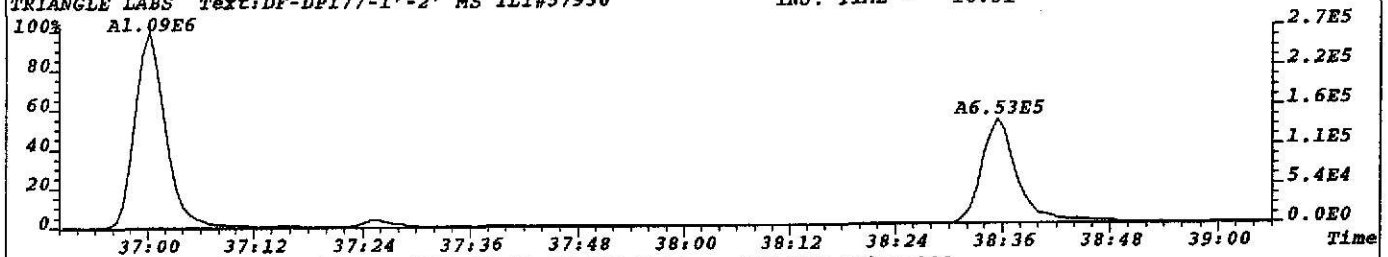
File:T023783 #1-386 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



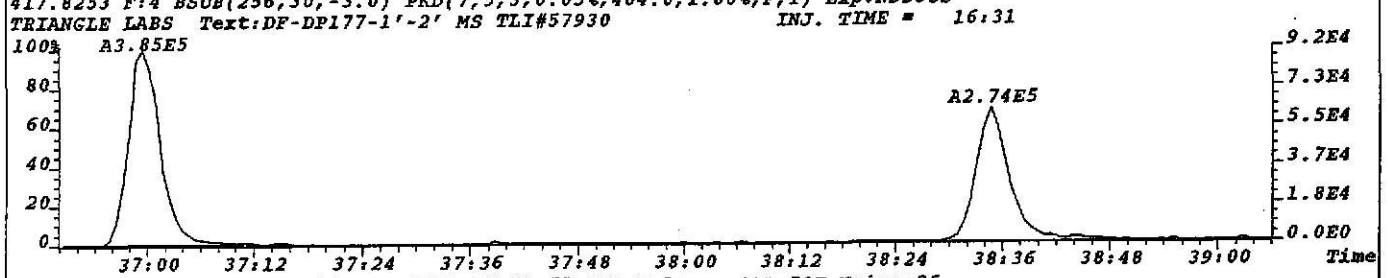
File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:130
407.7818 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,520.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



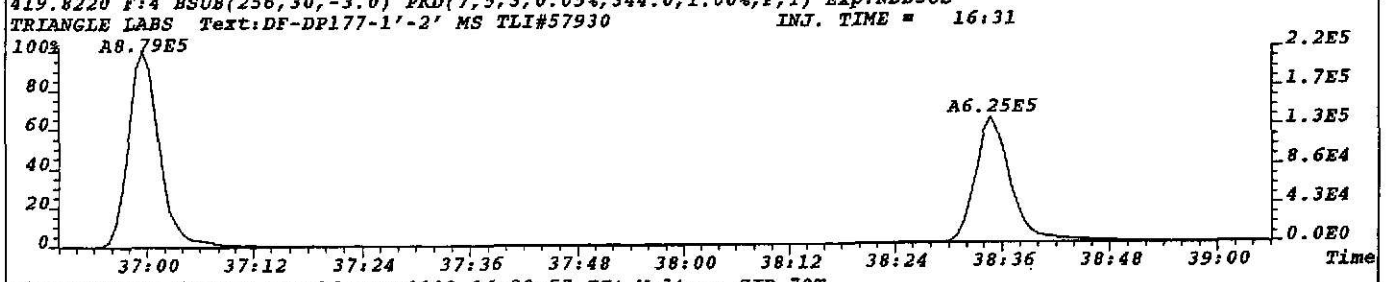
File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:128
409.7789 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,512.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



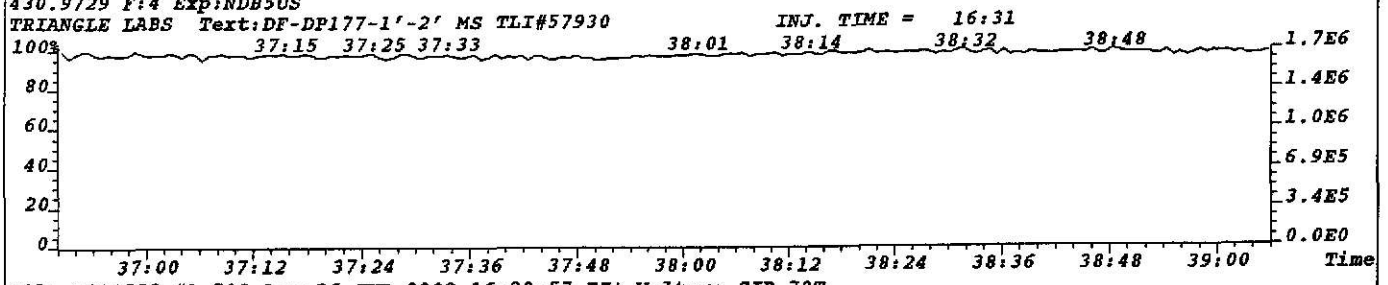
File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:101
417.8253 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,404.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



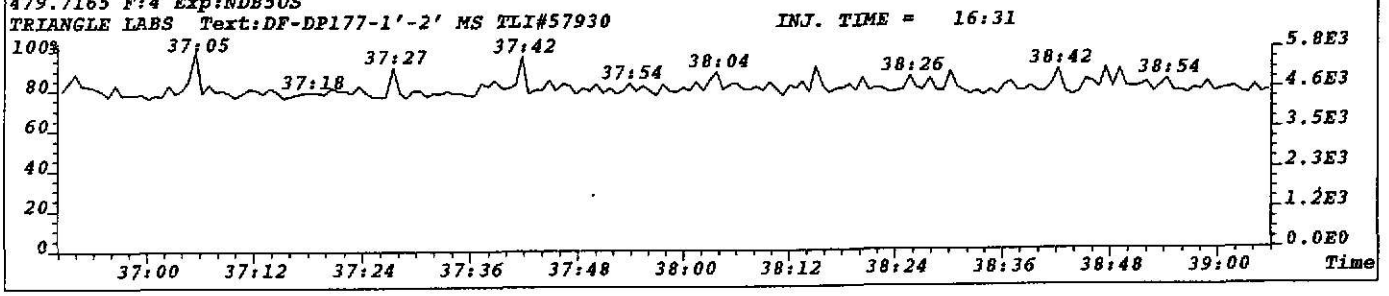
File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:86
419.8220 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,344.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



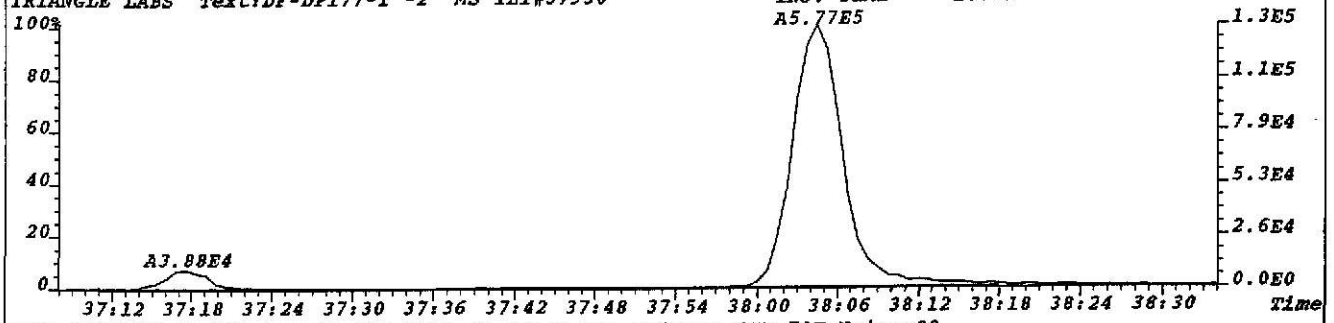
File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



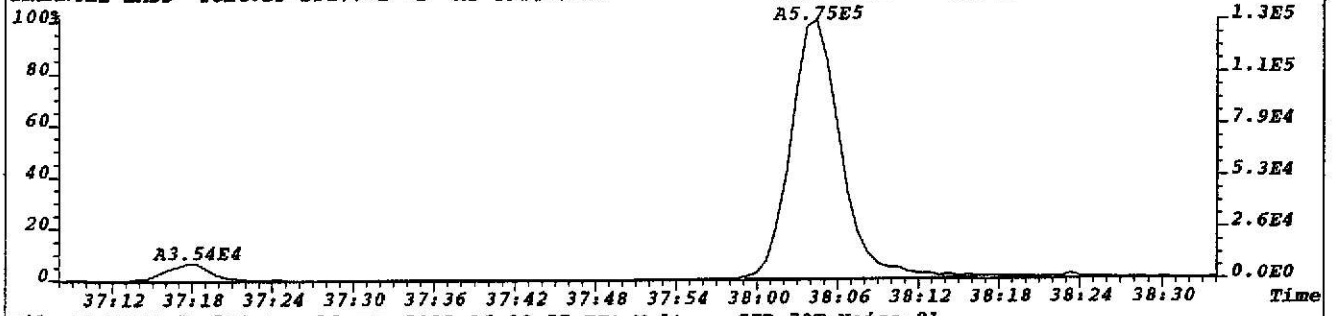
File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T
479.7165 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



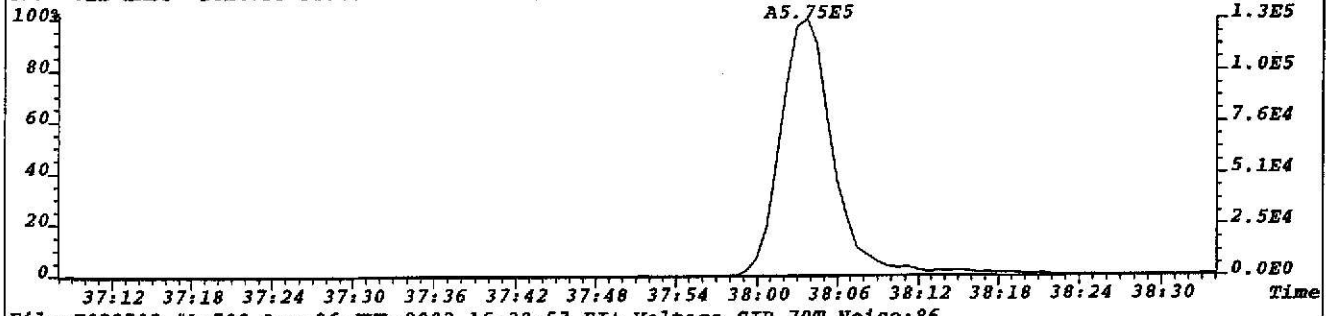
File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:95
423.7766 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,380.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



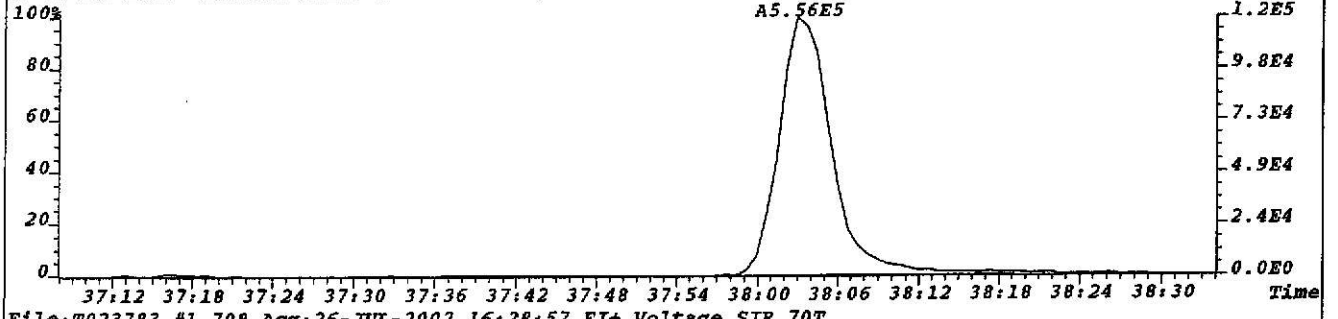
File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:83
425.7737 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,332.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



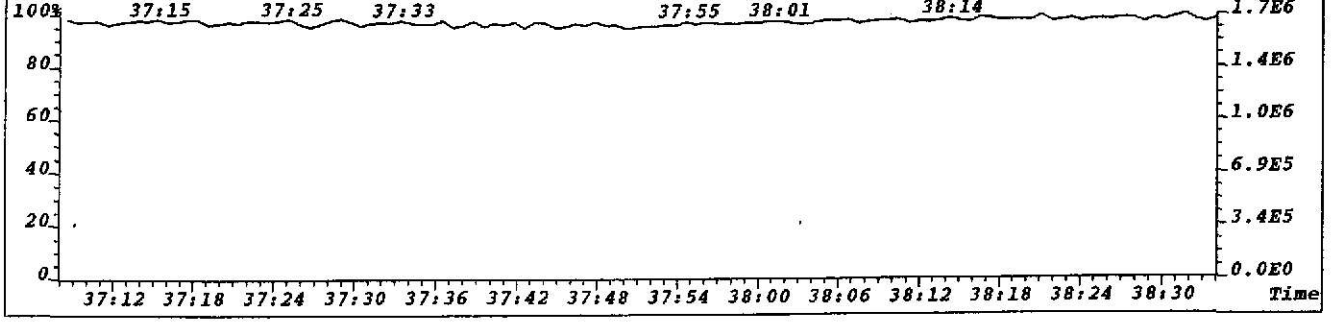
File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:91
435.8169 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,364.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



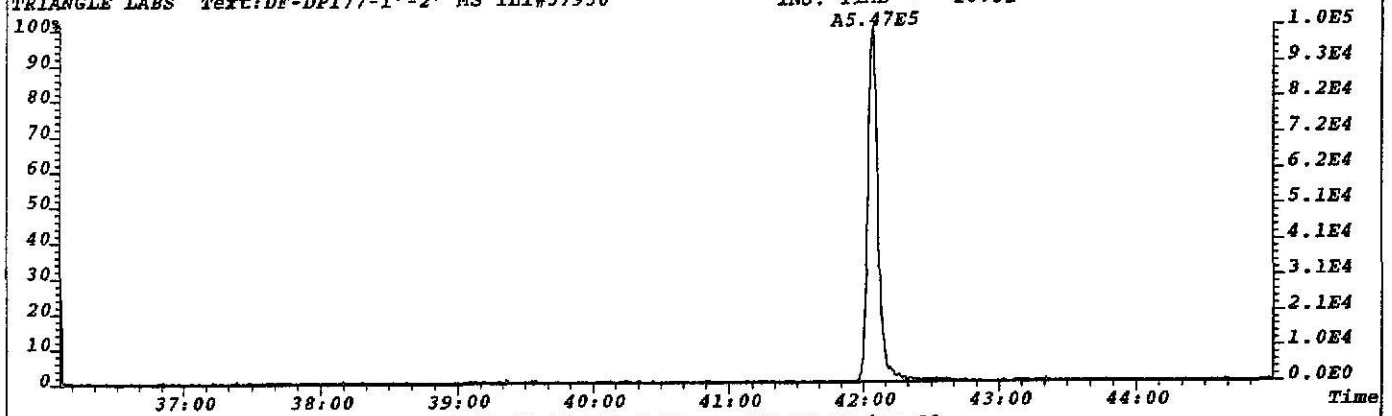
File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:86
437.8140 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,344.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



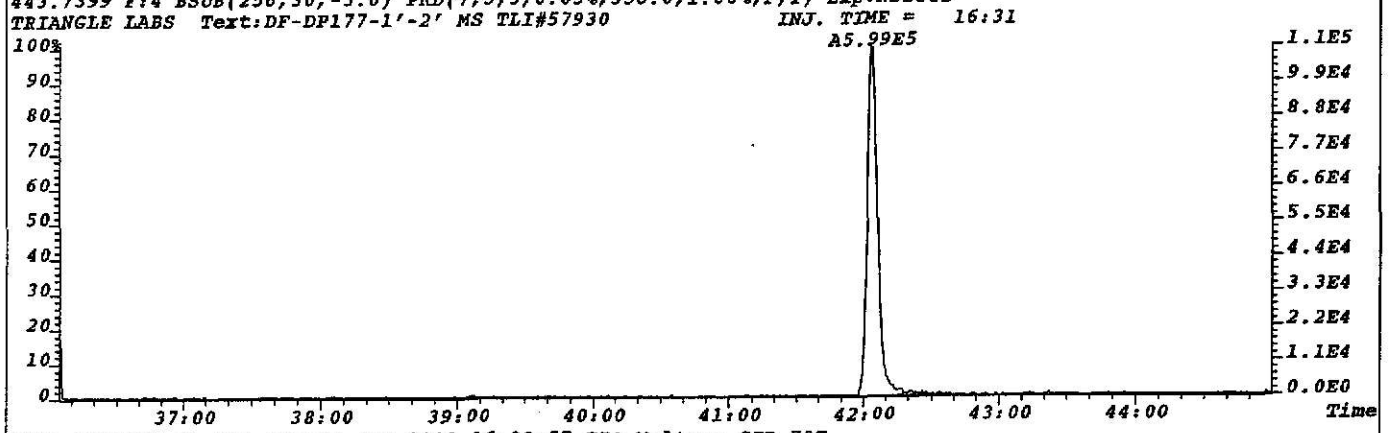
File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



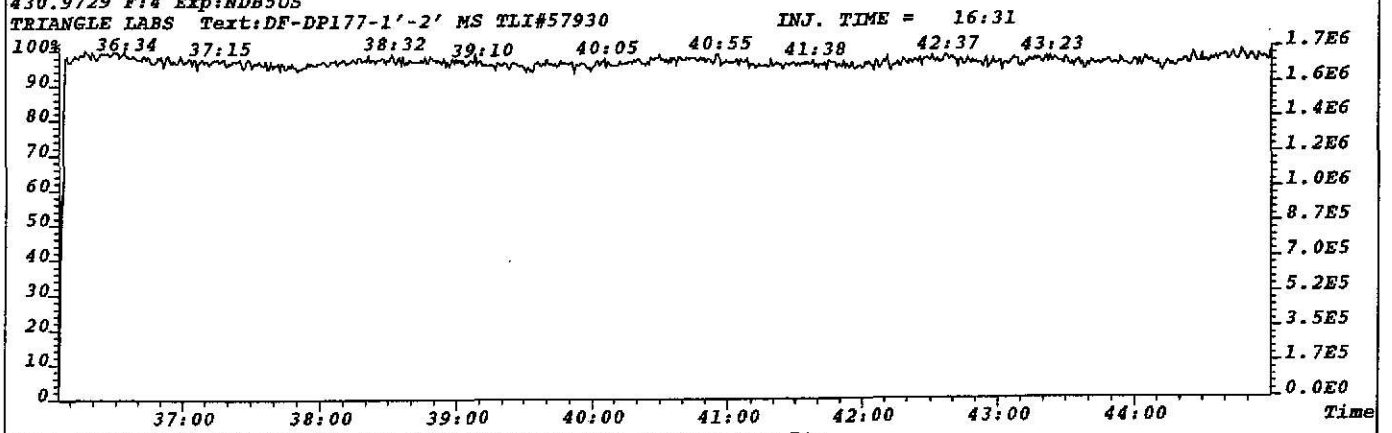
File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:90
441.7428 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,360.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



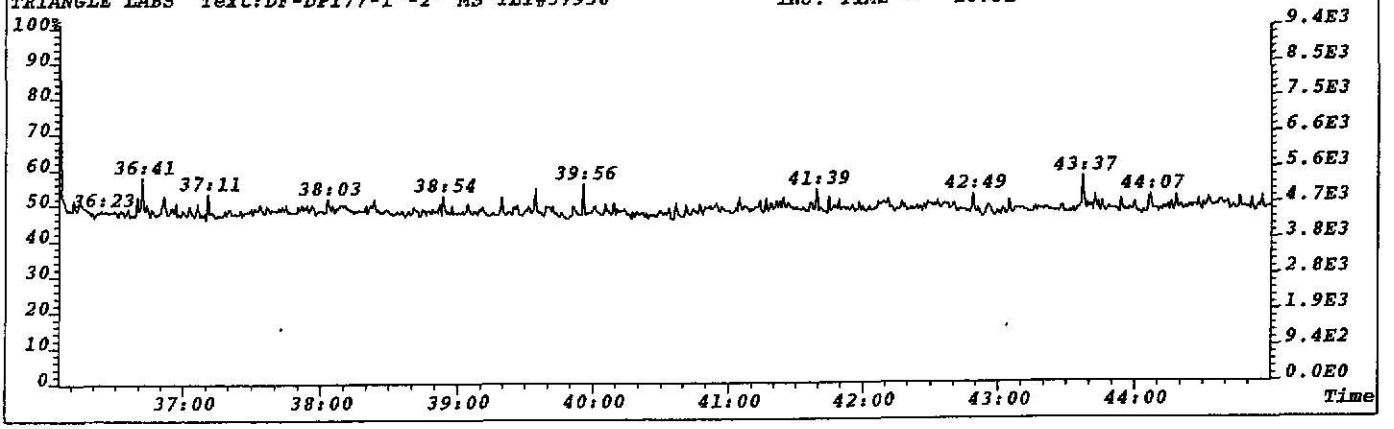
File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:89
443.7399 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,356.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



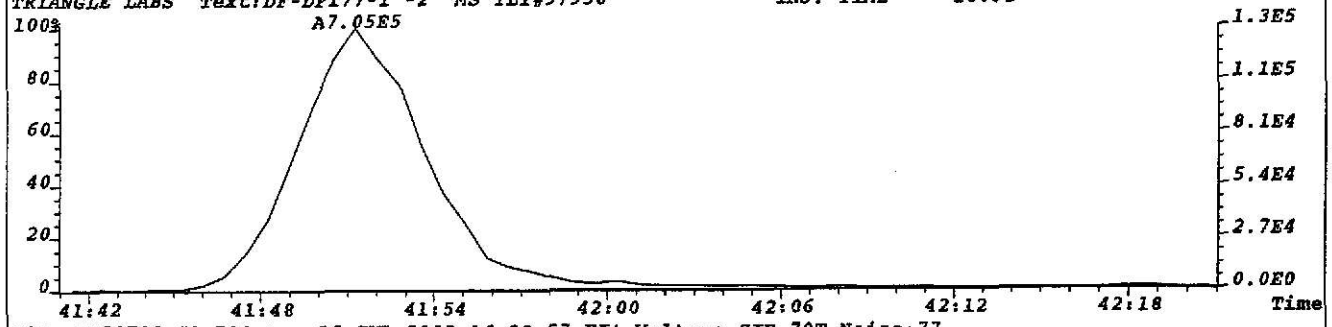
File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



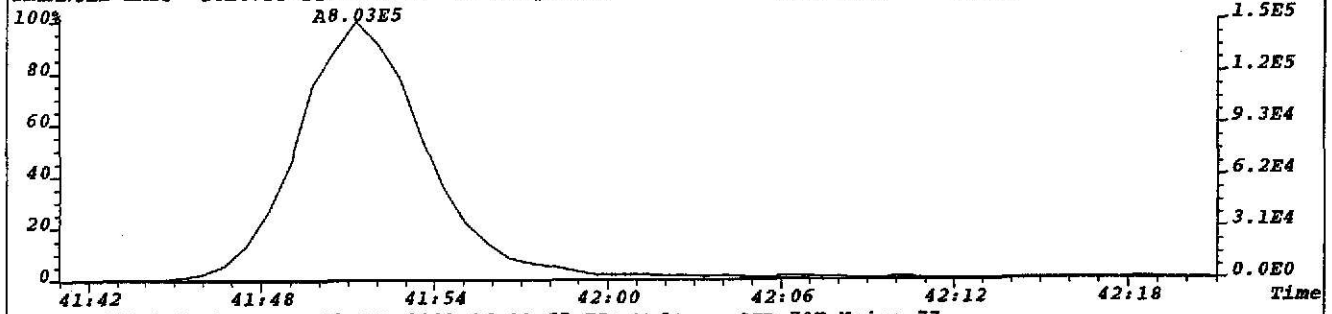
File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T
513.6775 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



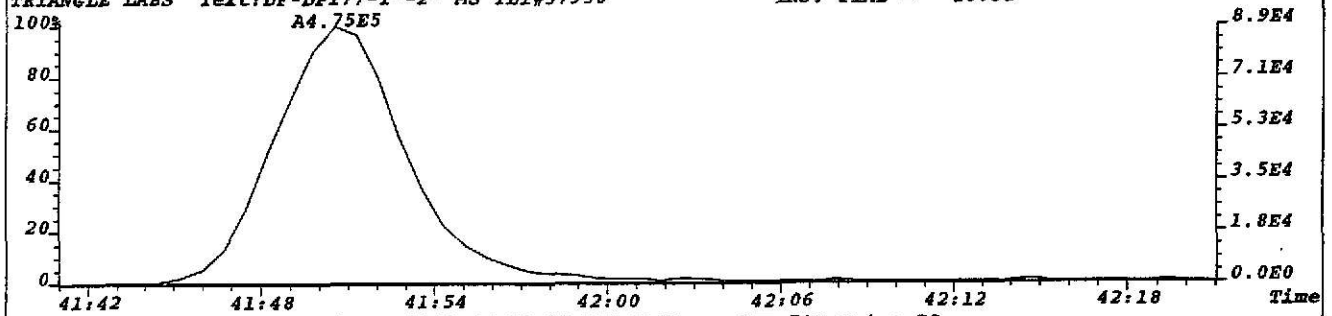
File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:82
457.7377 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,328.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



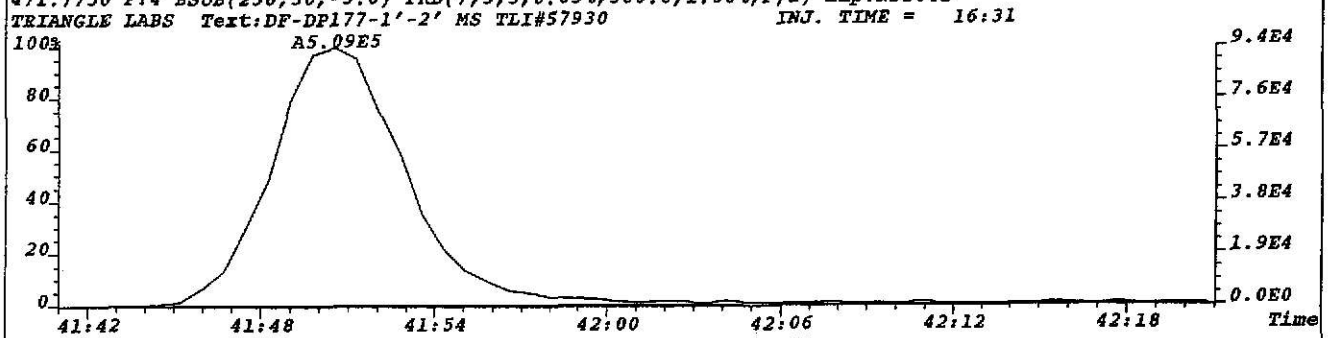
File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:77
459.7348 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,308.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



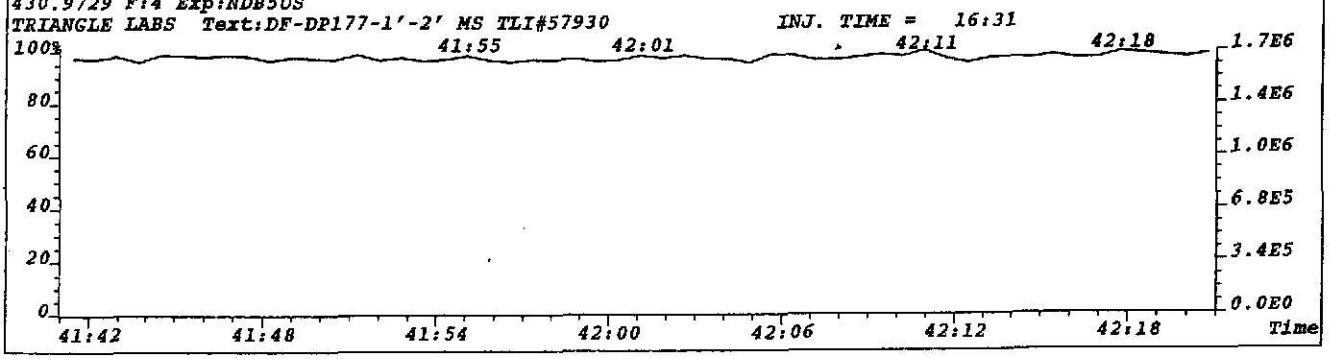
File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:77
469.7779 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,308.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31

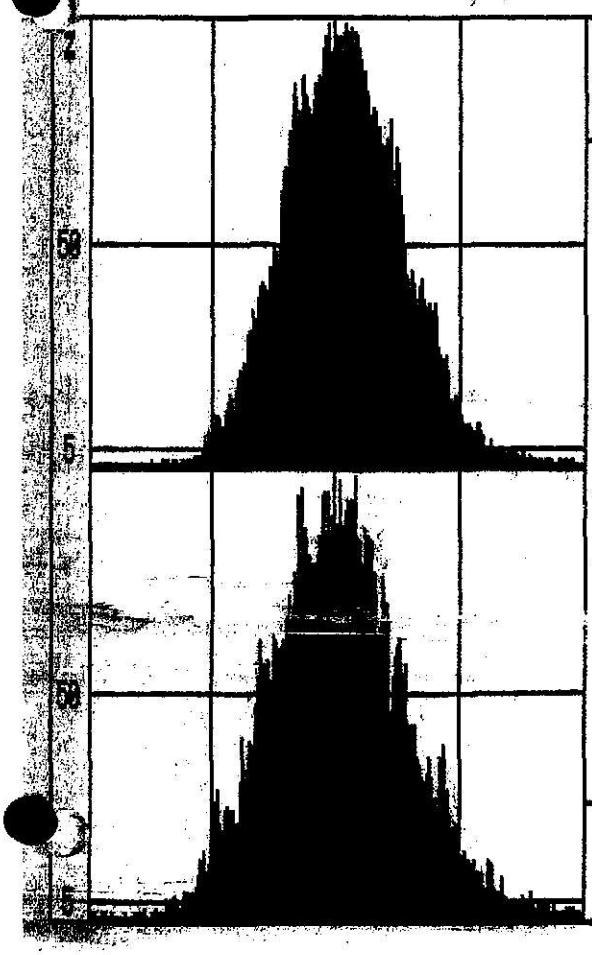


File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T Noise:75
471.7750 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,300.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31



File:T023783 #1-708 Acq:26-JUL-2002 16:28:57 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MS TLI#57930 INJ. TIME = 16:31





Channel I 330.9792 Peak top
Height .83 volts Span 200 ppm

System file name	ND85US
Data file name	A:T726021
Resolution	10000
Group number	2
Ionization mode	EI+
Switching	VOLTAGE
Ref. masses	292.9825, 416.9760

A	293	J	331	S	368
B	304	K	332	T	370
C	306	L	334	U	376
D	316	M	340	V	410
E	318	N	342		
F	[illegible]	O	[illegible]		
G	322	P	354		
H	328	Q	356		
I	331	R	358		

Ref. mass 416.9760 Peak top
Height .16 volts Span 200 ppm

TLI Project: **57930**
Client Sample: **DF-DP177-1'-2' MSD**

1613, Revision B PCDD/PCDF Analysis (c)

Analysis File: **T023784**

Client Project:	**Kuhlman Electric**				
Sample Matrix:	**SOLID**	Date Received:	**07/20/2002**	Spike File:	**SP161B2S**
TLI ID:	**331-18-16MSD**	Date Extracted:	**07/23/2002**	ICal:	**TF5612B**
		Date Analyzed:	**07/26/2002**	ConCal:	**TB23771**
Sample Size:	**13.000 g**	Dilution Factor:	**n/a**	% Moisture:	**22.6**
Dry Weight:	**10.062 g**	Blank File:	**T023762**	% Lipid:	**n/a**
GC Column:	**DB-5**	Analyst:	**JMM**	% Solids:	**77.4**

Analytes	Conc. (pg/g)	DL	Ratio	RT	RRT	Flags
2,3,7,8-TCDD	48.2		0.77	27:22	1.001	—
1,2,3,7,8-PeCDD	252		1.54	31:33	1.001	—
1,2,3,4,7,8-HxCDD	207		1.25	34:38	1.000	—
1,2,3,6,7,8-HxCDD	216		1.23	34:43	1.000	—
1,2,3,7,8,9-HxCDD	209		1.23	35:04	1.010	—
1,2,3,4,6,7,8-HpCDD	211		1.00	38:04	1.000	—
1,2,3,4,6,7,8,9-OCDD	508		0.87	41:51	1.000	—
2,3,7,8-TCDF	48.5		0.82	26:40	1.001	—
1,2,3,7,8-PeCDF	251		1.50	30:32	1.001	—
2,3,4,7,8-PeCDF	265		1.51	31:13	1.001	—
1,2,3,4,7,8-HxCDF	224		1.24	33:56	1.000	—
1,2,3,6,7,8-HxCDF	214		1.26	34:02	1.000	—
2,3,4,6,7,8-HxCDF	216		1.23	34:32	1.000	—
1,2,3,7,8,9-HxCDF	215		1.26	35:19	1.000	—
1,2,3,4,6,7,8-HpCDF	253		1.05	37:00	1.000	—
1,2,3,4,7,8,9-HpCDF	220		1.05	38:35	1.000	—
1,2,3,4,6,7,8,9-OCDF	380		0.89	42:03	1.005	—

161B_PSR v2.04, LARS 6.25.05

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Printed: 13:29 07/27/2002

TLI Project: **57930** 1613, Revision B PCDD/PCDF Analysis (c)

Client Sample: **DF-DP177-1'-2' MSD** Analysis File: **T023784**

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	RRT	Flags
$^{13}C_{12}$-2,3,7,8-TCDD	128	64.3	25%-164%	0.80	27:21	1.007	___
$^{13}C_{12}$-1,2,3,7,8-PeCDD	107	54.0	25%-181%	1.47	31:32	1.161	___
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	181	91.0	32%-141%	1.21	34:38	0.988	___
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	184	92.6	28%-130%	1.20	34:43	0.990	___
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	108	54.2	23%-140%	1.09	38:04	1.086	___
$^{13}C_{12}$-1,2,3,4,6,7,8,9-OCDD	96.0	24.1	17%-157%	0.89	41:51	1.194	___
$^{13}C_{12}$-2,3,7,8-TCDF	152	76.5	24%-169%	0.76	26:39	0.981	___
$^{13}C_{12}$-1,2,3,7,8-PeCDF	115	57.9	24%-185%	1.48	30:31	1.123	___
$^{13}C_{12}$-2,3,4,7,8-PeCDF	109	55.0	21%-178%	1.53	31:12	1.148	___
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	223	112	26%-152%	0.53	33:56	0.968	___
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	248	125	26%-123%	0.50	34:01	0.971	***___
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	226	114	28%-136%	0.52	34:31	0.985	___
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	184	92.4	29%-147%	0.50	35:19	1.008	___
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	148	74.7	28%-143%	0.43	36:59	1.055	___
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	107	53.9	26%-138%	0.47	38:35	1.101	___

Cleanup Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	RRT	Flags
$^{37}Cl_4$-2,3,7,8-TCDD	12.4	62.5	35%-197%	27:22	1.007	___

Recovery Standards	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.82	27:10	___
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.20	35:03	___

Data Reviewer: kv 07/27/2002

161B_PSR v2.04, LARS 6.25.05

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Printed: 13:29 07/27/2002

Initial ....Date...

Data Review By: LJH 7-28-02

Channel specific noise levels computed from 'NL' heights.

Page No. 1 Listing of T023784B.dbf
07/26/2002 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				0.879-1.071			
304-306	DC	NL				Height	0.15	0.08	0.07				
				24:19		0.75	3.48	1.49	1.99	0.912			
				25:10		0.82	2.08	0.94	1.14	0.944			J
				25:40	RO	0.97	5.50	2.71	2.79	0.963			
				25:56		0.83	1.10	0.50	0.60	0.973			J
				26:16	RO	0.93	5.09	2.45	2.64	0.986			
				26:40		0.82	142.50	64.38	78.12	1.001	2378-TCDF	AN	
	DC	SN		27:01	RO	1.13	1.02			1.014			
				27:51		0.85	18.82	8.62	10.20	1.045			
304-306			7	Peaks			178.57						
13C12-TCDF						0.65-0.89				0.944-1.131			
316-318	DC	NL				Height	0.16	0.08	0.08				
				25:38		0.68	4.02	1.63	2.39	0.962			
				25:58	RO	0.56	1.12	0.40	0.72	0.974			
				26:15		0.67	4.97	2.00	2.97	0.985			
				26:39		0.76	552.02	238.94	313.08	1.000	13C12-2378-TCDF	ISO	
						Height	133.07	57.22	75.85				
316-318			4	Peaks			562.13						

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

TCDD						0.65-0.89				0.904-1.042			
320-322	DC	NL				Height	0.12	0.06	0.06				
				24:53	RO	0.63	3.27	1.26	2.01	0.910	1368-TCDD	AN	
	DC	SN		25:04	RO	0.41	0.24			0.917			
	DC	SN		25:50	RO	2.60	0.18			0.945			
	DC	SN		26:40	RO	2.39	0.61			0.975			
				27:22		0.77	103.00	44.84	58.16	1.001	2378-TCDD	AN	
320-322			2	Peaks			106.27						
37Cl-TCDD										0.927-1.073			
328	DC	NL				Height	0.07	0.07					
	DC	WL		24:37			0.35			0.900			
	DC	WL		25:00			0.09			0.914			
	DC	WL		25:04			0.11			0.917			
	DC	SN		25:36			0.11			0.936			
	DC	SN		25:39			0.11			0.938			
				26:00			3.43	3.43		0.951			
	DC	SN		26:21			0.06			0.963			
	DC	SN		26:40			0.12			0.975			
	DC	SN		26:47			0.14			0.979			
	DC	SN		26:55			0.12			0.984			
	DC	SN		26:57			0.05			0.985			
	DC	SN		27:02			0.04			0.988			
	DC	SN		27:04			0.07			0.990			

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Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
				27:09			0.19	0.19		0.993			
				27:22			38.03	38.03		1.001	37Cl-TCDD	CLS	
				27:45			13.43	13.43		1.015			
				27:55			0.33	0.33		1.021			
328				5 Peaks			55.41						
13C12-TCDD				0.65-0.89					0.920-1.066				
332-334	DC	NL					Height	0.27	0.18	0.09			
				27:10		0.82	550.40	248.06	302.34	0.993	13C12-1234-TCDD	RS1	
				27:21		0.80	399.34	177.01	222.33	1.000	13C12-2378-TCDD	IS1	
							Height	95.73	42.11	53.62			
				27:49	RO	1.15	2.62	1.40	1.22	1.017			
	DC	SN		28:08		0.79	0.84			1.029			
	DC	SN		28:28	RO	0.93	0.79			1.041			
	DC	SN		28:40	RO	2.11	0.84			1.048			
332-334				3 Peaks			952.36						

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

PeCDF				1.32-1.78					0.911-1.037				
340-342	DC	NL					Height	0.12	0.05	0.07			
				28:37	RO	0.70	1.87	0.77	1.10	0.917			
				28:51	RO	0.97	1.46	0.72	0.74	0.925			
				29:22	RO	0.64	14.72	5.72	9.00	0.941			
				29:42		1.37	7.25	4.19	3.06	0.952			J
				29:51		1.55	11.59	7.05	4.54	0.957			
				30:03		1.37	8.54	4.93	3.61	0.963			J
				30:09	RO	1.82	4.68	3.02	1.66	0.966			
				30:32		1.50	530.11	318.14	211.97	1.001	12378-PeCDF	AN	
				30:50	RO	1.94	10.91	7.20	3.71	0.988			
				31:13		1.51	527.90	317.90	210.00	1.001	23478-PeCDF	AN	
				31:40		1.53	1.47	0.89	0.58	1.015			J
				32:02		1.47	4.89	2.91	1.98	1.027			J
				32:10		1.74	2.03	1.29	0.74	1.031			J
340-342				13 Peaks			1,127.42						
13C12-PeCDF				1.32-1.78					0.807-1.127				
352-354	DC	NL					Height	0.12	0.06	0.06			
				29:42		1.37	5.39	3.12	2.27	0.952			
				30:09	RO	2.26	3.75	2.60	1.15	0.966			
				30:31		1.48	370.23	221.08	149.15	1.000	13C12-PeCDF 123	IS2	
							Height	103.43	62.41	41.02			
				30:49	RO	1.11	7.18	3.78	3.40	0.988			
				31:12		1.53	358.72	216.75	141.97	1.000	13C12-PeCDF 234	IS3	
							Height	103.32	61.95	41.37			
				31:34	RO	1.26	2.12	1.18	0.94	1.012			
	DC	SN		31:47	RO	4.38	0.70			1.019			
				32:10		1.39	4.83	2.81	2.02	1.031			
352-354				7 Peaks			752.22						

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

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Compound/ M_Z....	QC.Log	Omit	Why	..RT.	OK	Ratio	Total.Area/Ht	Area/Ht.Peak1	Area/Ht.Peak2	Rel.RT	Compound.Name..	ID..	Flags.
PeCDD				1.32-1.78						0.940-1.021			
356-358	DC	NL				Height	0.12	0.07	0.05				
				30:38	RO	0.83	0.88	0.40	0.48	0.971			
				30:50	RO	0.82	0.62	0.28	0.34	0.978			
				31:33		1.54	325.27	197.18	128.09	1.001	12378-PeCDD	AN	
				32:01	RO	1.89	1.36	0.89	0.47	1.015			
356-358			4	Peaks			328.13						
13C12-PeCDD				1.32-1.78						0.735-1.052			
368-370	DC	NL				Height	0.13	0.07	0.06				
	DC	SN		30:23	RO	2.78	0.34			0.964			
				30:29	RO	1.25	0.81	0.45	0.36	0.967			
				30:38		1.50	1.70	1.02	0.68	0.971			
				31:32		1.47	246.98	146.89	100.09	1.000	13C12-PeCDD 123	IS4	
						Height	72.11	42.50	29.61				
				31:55	RO	1.10	1.41	0.74	0.67	1.012			
	DC	SN		32:03	RO	0.59	0.27			1.016			
				32:09	RO	0.33	0.56	0.14	0.42	1.020			
368-370			5	Peaks			251.46						

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

HxCDF				1.05-1.43						0.929-1.007			
374-376	DC	NL				Height	0.37	0.17	0.20				
				32:59		1.43	2.02	1.19	0.83	0.934			J
				33:06		1.19	5.28	2.87	2.41	0.937			J
	DC	SN		33:14		1.07	0.85			0.941			
				33:34		1.18	4.98	2.70	2.28	0.950			J
				33:56		1.24	339.86	188.33	151.53	1.000	123478-HxCDF	AN	
				34:02		1.26	374.53	208.60	165.93	1.000	123678-HxCDF	AN	
				34:32		1.23	318.48	175.83	142.65	1.000	234678-HxCDF	AN	
				34:43	RO	0.95	2.73	1.33	1.40	0.983			
				35:19		1.26	227.21	126.69	100.52	1.000	123789-HxCDF	AN	
	DC	WH		35:37	RO	0.61	0.92			1.008			
374-376			8	Peaks			1,275.09						
13C12-HxCDF				0.43-0.59						0.879-1.106			
384-386	DC	NL				Height	0.33	0.15	0.18				
	DC	SN		32:58		0.48	0.93			0.933			
	DC	SN		33:04		0.52	1.49			0.936			
				33:56		0.53	268.24	92.89	175.35	1.000	13C12-HxCDF 478	IS5	
						Height	86.03	28.98	57.05				
				34:01		0.50	302.36	100.66	201.70	1.000	13C12-HxCDF 678	IS6	
						Height	87.57	29.58	57.99				
				34:31		0.52	269.49	91.96	177.53	1.000	13C12-HxCDF 234	IS7	
						Height	80.75	27.93	52.82				
				35:19		0.50	183.85	61.37	122.48	1.000	13C12-HxCDF 789	IS8	
						Height	46.72	15.59	31.13				
	DC	SN		35:38		0.57	0.69			1.009			
384-386			4	Peaks			1,023.94						

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

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

HxCDD                           1.05-1.43                                   0.959-1.013
390-392          DC  NL           Height        0.14         0.07        0.07
                         33:28 RO  1.46         1.23         0.73        0.50  0.964
                 DC  SN  33:55     1.27         0.59                           0.977
                         34:07     1.05         1.54         0.79        0.75  0.983                    J
                 DC  SN  34:13 RO  0.45         0.32                           0.986
                 DC  SN  34:31 RO  0.83         0.33                           0.994
                         34:38     1.25       181.08       100.59       80.49  1.000 123478-HxCDD    AN
                         34:43     1.23       202.49       111.88       90.61  1.000 123678-HxCDD    AN
                         35:04     1.23       200.17       110.21       89.96  1.010 123789-HxCDD    AN
                 DC  WH  35:16     1.43         2.02                           1.016
                 DC  WH  35:30 RO  0.68         0.84                           1.023
390-392               5 Peaks                 586.51

13C12-HxCDD                     1.05-1.43                                   0.983-1.041
402-404          DC  NL           Height        0.14         0.06        0.08
                 DC  WL  33:29     1.17         0.13                           0.967
                 DC  WL  33:42 RO  0.50         0.24                           0.973
                 DC  SN  34:30     1.17         0.13                           0.996
                         34:38     1.21       161.37        88.23       73.14  1.000 13C12-HxCDD 478 IS9
                                  Height       49.29        27.07       22.22
                         34:43     1.20       179.43        97.90       81.53  1.000 13C12-HxCDD 678 IS10
                                  Height       52.36        28.42       23.94
                         35:03     1.20       202.12       110.44       91.68  1.012 13C12-HxCDD 789 RS2
402-404               3 Peaks                 542.92

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

HpCDF                           0.88-1.20                                   0.955-1.005
408-410          DC  NL           Height        0.18         0.09        0.09
                         37:00     1.05       215.84       110.48      105.36  1.000 1234678-HpCDF   AN
                         37:26     0.94         3.91         1.89        2.02  0.970                    J
                 DC  SN  37:44 RO  0.79         0.34                           0.978
                         38:35     1.05       107.97        55.22       52.75  1.000 1234789-HpCDF   AN
408-410               3 Peaks                 327.72

13C12-HpCDF                     0.37-0.51                                   0.857-1.142
418-420          DC  NL           Height        0.15         0.08        0.07
                         36:59     0.43       125.74        38.05       87.69  1.000 13C12-HpCDF 678 IS11
                                  Height       30.82         9.51       21.31
                 DC  SN  37:30 RO  0.77         0.39                           0.972
                 DC  SN  37:37 RO  0.96         0.49                           0.975
                 DC  SN  37:51 RO  1.20         0.33                           0.981
                 DC  SN  37:57 RO  1.38         0.50                           0.984
                 DC  SN  38:14 RO  4.33         0.32                           0.991
                 DC  SN  38:20 RO  0.55         0.17                           0.994
                         38:35     0.47        73.02        23.19       49.83  1.000 13C12-HpCDF 789 IS12
                                  Height       15.38         4.97       10.41
418-420               2 Peaks                 198.76
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Compound/
M_Z.... QC.Log Omit Why ..RT. OK Ratio Total.Area/Ht Area/Ht.Peak1 Area/Ht.Peak2 Rel.RT Compound.Name.. ID.. Flags.

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

HpCDD                              0.88-1.20                                        0.976-1.005
424-426          DC  NL             Height          0.15          0.08          0.07
                         37:17      1.18           4.07          2.20          1.87  0.979
                         38:04      1.00          85.68         42.91         42.77  1.000 1234678-HpCDD   AN
                 DC  WH  38:34 RO   1.33           0.21                              1.013
424-426                2 Peaks                     89.75

13C12-HpCDD                        0.88-1.20                                        0.869-1.079
436-438          DC  NL             Height          0.16          0.08          0.08
                         38:04      1.09          86.48         45.16         41.32  1.000 13C12-HpCDD 678 IS13
                                    Height        19.45         10.37          9.08
436-438                1 Peak                      86.48

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

OCDF                               0.76-1.02                                        0.952-1.048
442-444          DC  NL             Height          0.13          0.06          0.07
                 DC  WL  37:36 RO   1.08           0.27                              0.898
                 DC  WL  37:44 RO   0.67           0.35                              0.902
                 DC  SN  40:56 RO   1.56           0.46                              0.978
                 DC  SN  41:13      1.00           0.28                              0.985
                         42:03      0.89          84.16         39.73         44.43  1.005 OCDF            AN
                         42:25      0.97           0.69          0.34          0.35  1.014
                         42:34      0.76           0.37          0.16          0.21  1.017
                 DC  SN  42:51 RO   0.68           0.32                              1.024
                 DC  SN  42:55 RO   0.69           0.44                              1.025
442-444                3 Peaks                     85.22

OCDD                               0.76-1.02                                        0.952-1.048
458-460          DC  NL             Height          0.11          0.06          0.05
                         41:51      0.87          93.91         43.67         50.24  1.000 OCDD            AN
                         42:18 RO   0.59           0.43          0.16          0.27  1.011
458-460                2 Peaks                     94.34

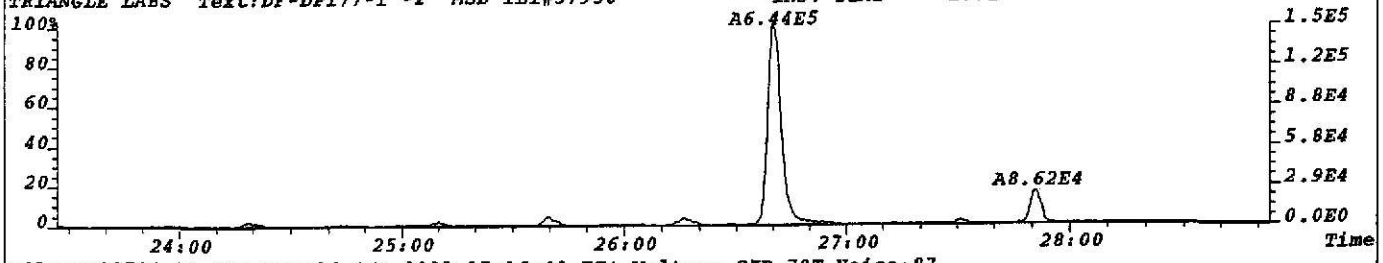
13C12-OCDD                         0.76-1.02                                        0.996-1.004
470-472          DC  NL             Height          0.12          0.06          0.06
                         41:51      0.89          72.41         34.09         38.32  1.000 13C12-OCDD      IS14
                                    Height        13.56          6.43          7.13
470-472                1 Peak                      72.41


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

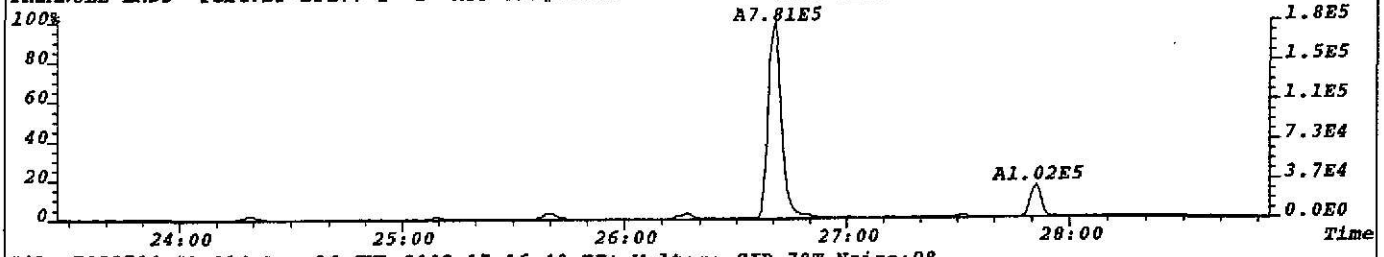
M_Z   -Nominal Ion Mass(es)     WL-Below Retention Time Window   A-Peak Added
..RT. -Retention Time (mm:ss)   WH-Above Retention Time Window   K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions      SN-Below Signal to Noise Level   D-Peak Deleted
OK    -RO=Ratio Outside Limits  <M-Below Method Detection Limit  T-Time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

*** End of Report ***
```

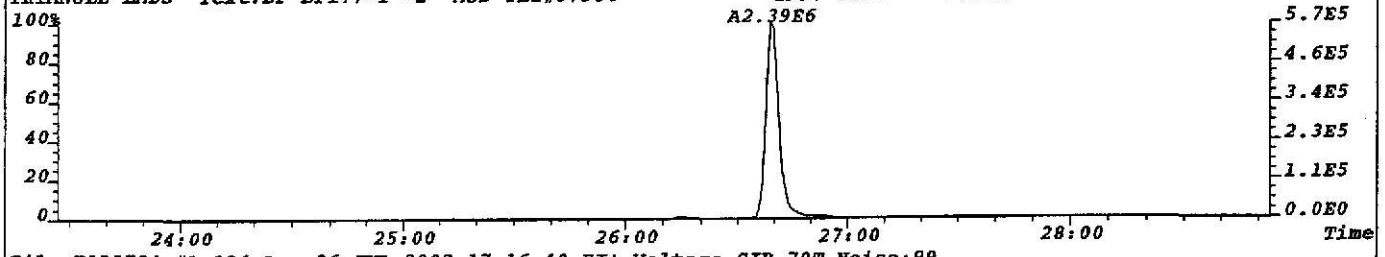
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:101
303.9016 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,404.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



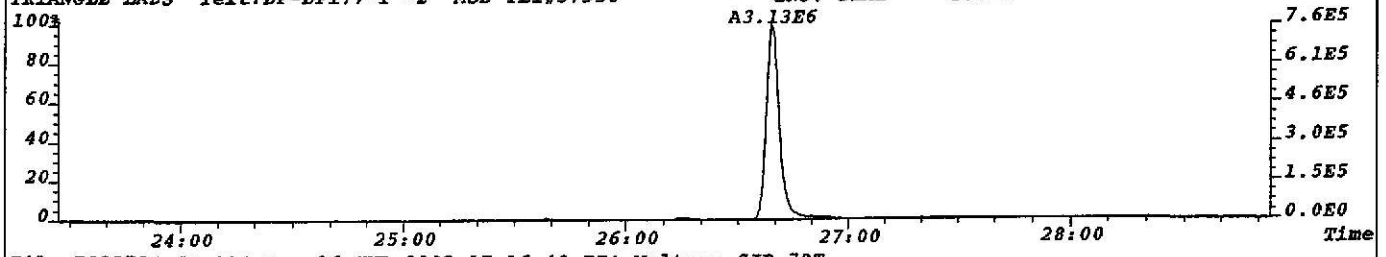
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:87
305.8987 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,348.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



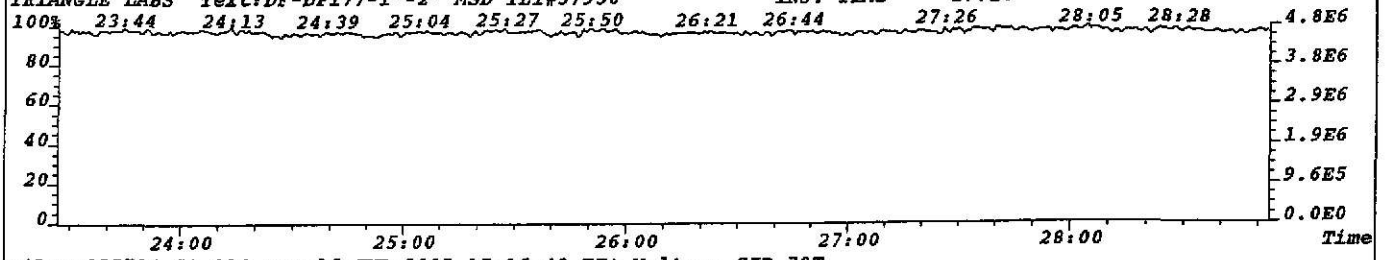
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:98
315.9419 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,392.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



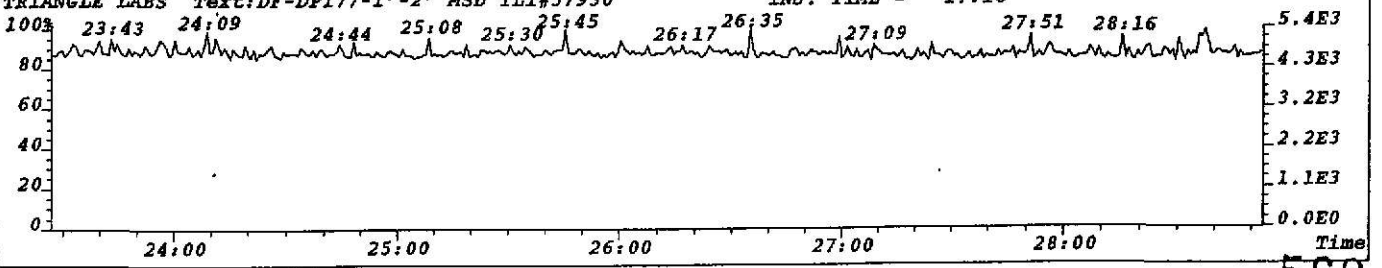
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:99
317.9389 F:2 BSUB(256,30,-3.0) PKD(9,5,5,0.05%,396.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



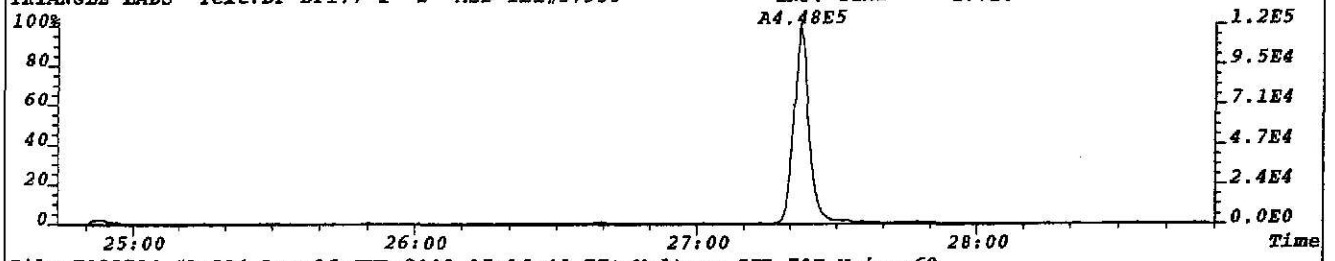
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



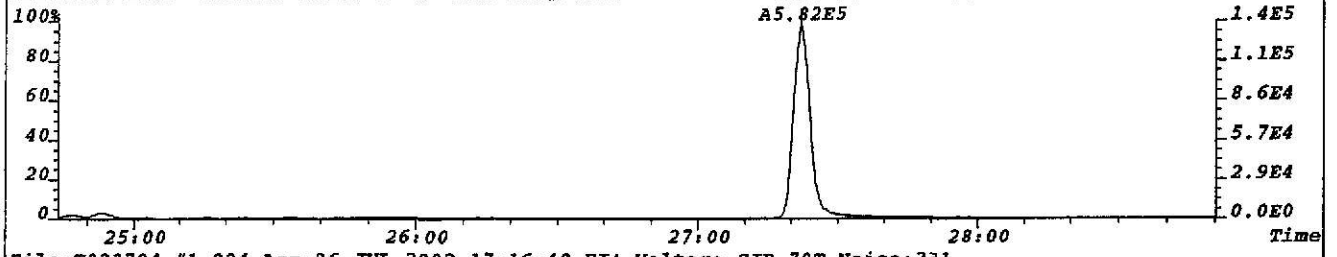
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T
375.8364 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



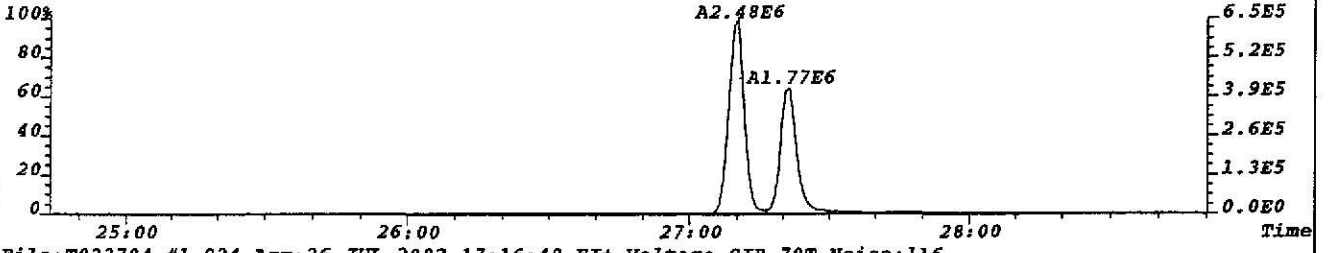
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:77
319.8965 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,308.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



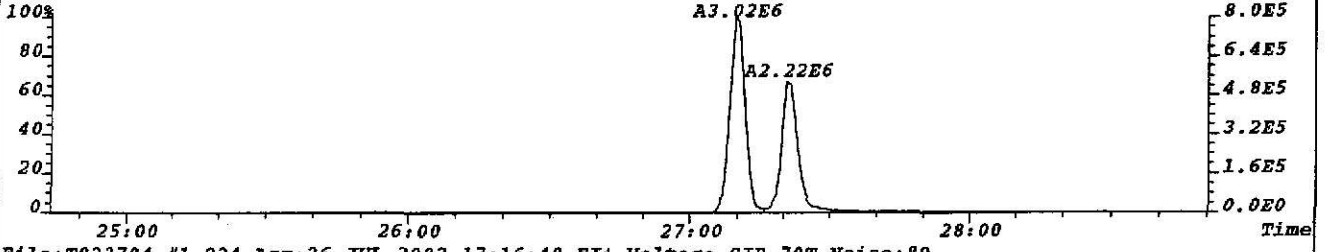
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:69
321.8936 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,276.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



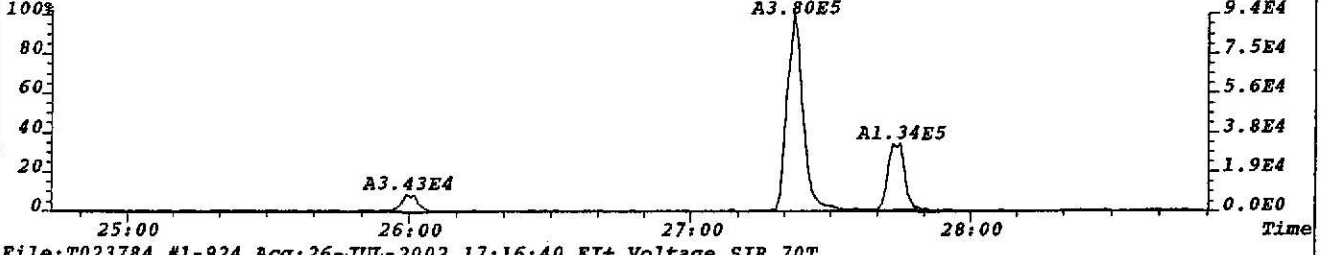
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:231
331.9368 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,924.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



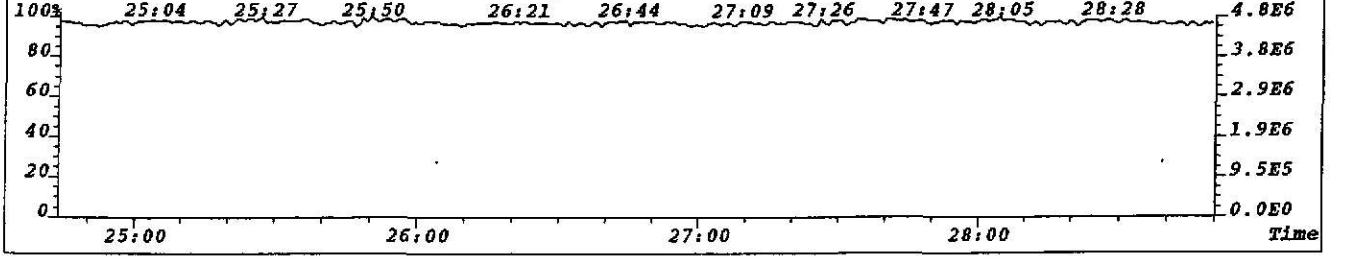
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:116
333.9338 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,464.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



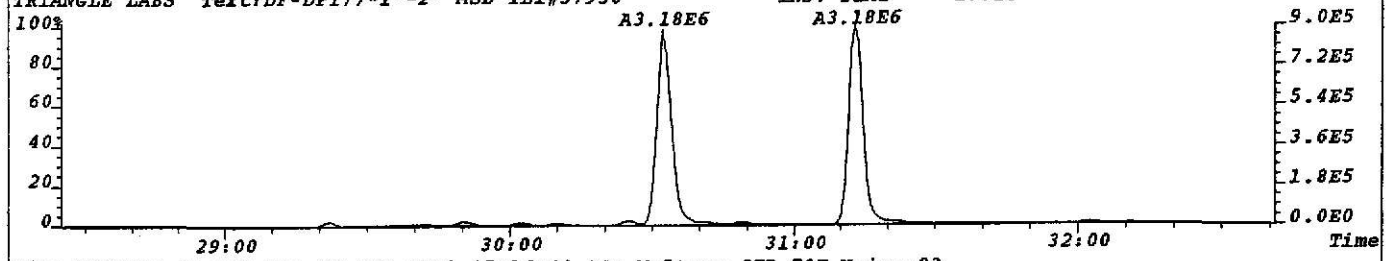
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:89
327.8847 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,356.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



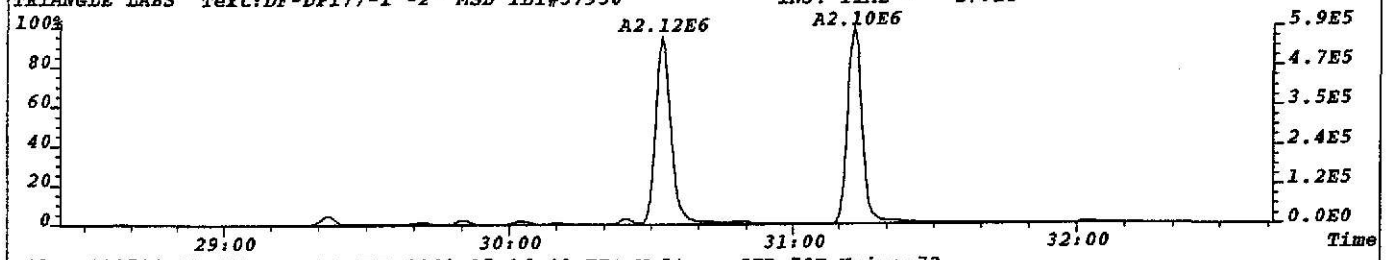
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



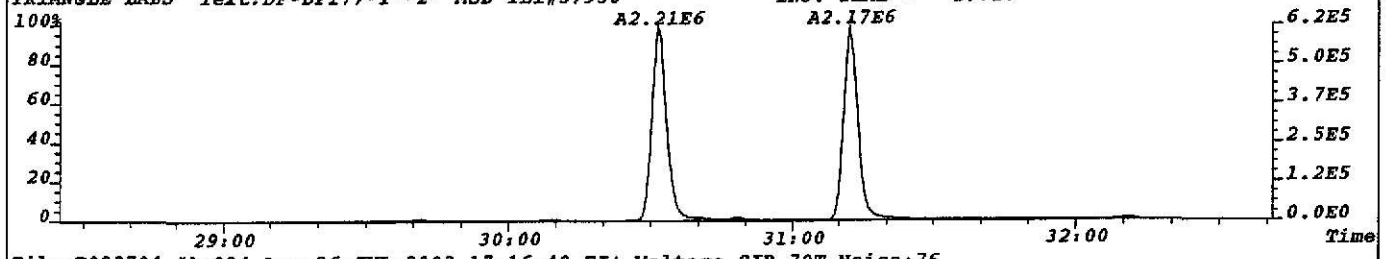
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:67
339.8597 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,268.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



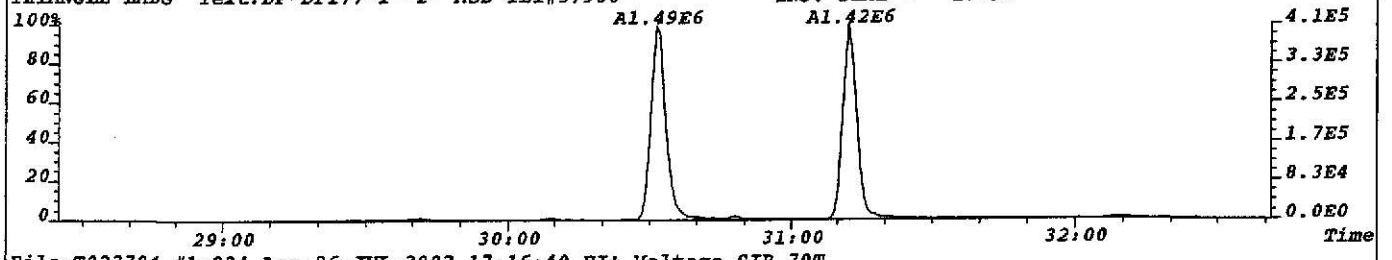
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:83
341.8567 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,332.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



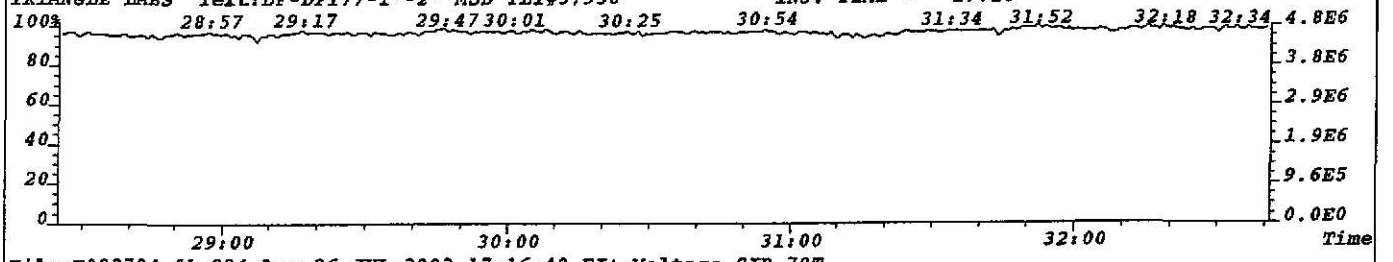
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:72
351.9000 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,288.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



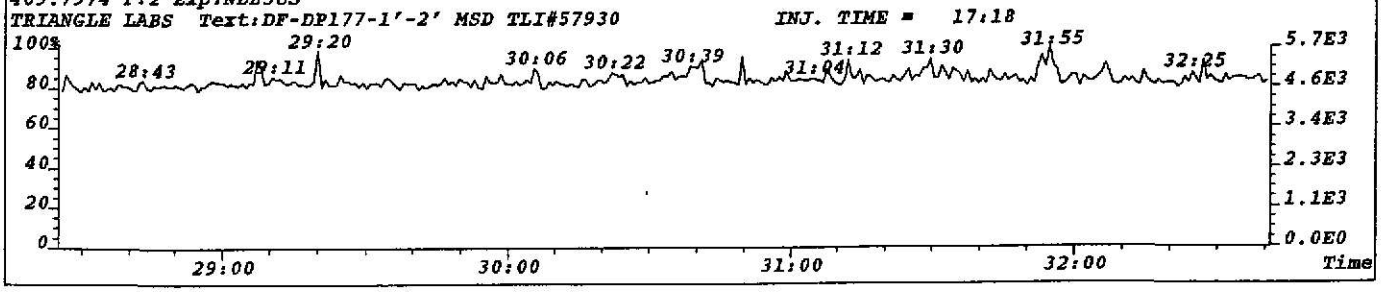
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:76
353.8970 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,304.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



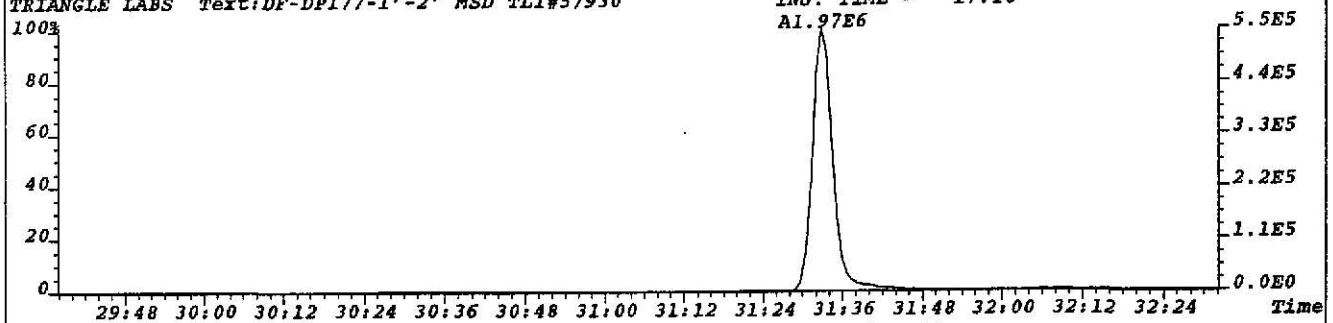
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



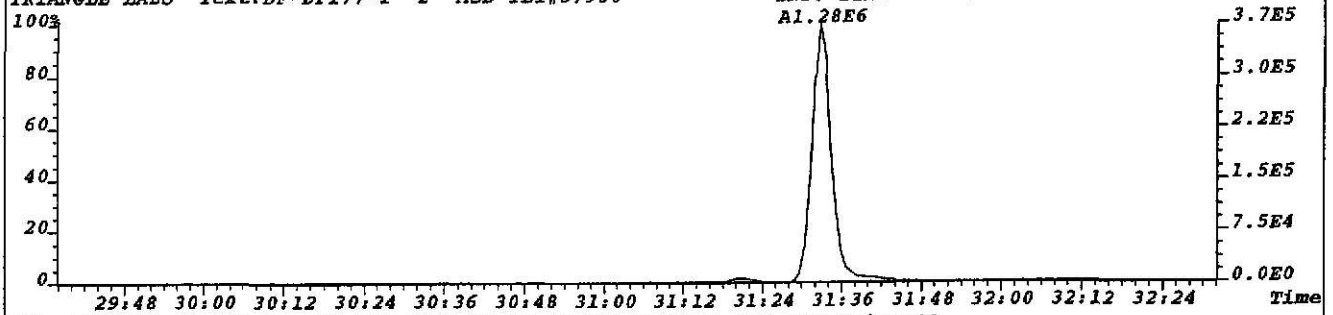
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T
409.7974 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



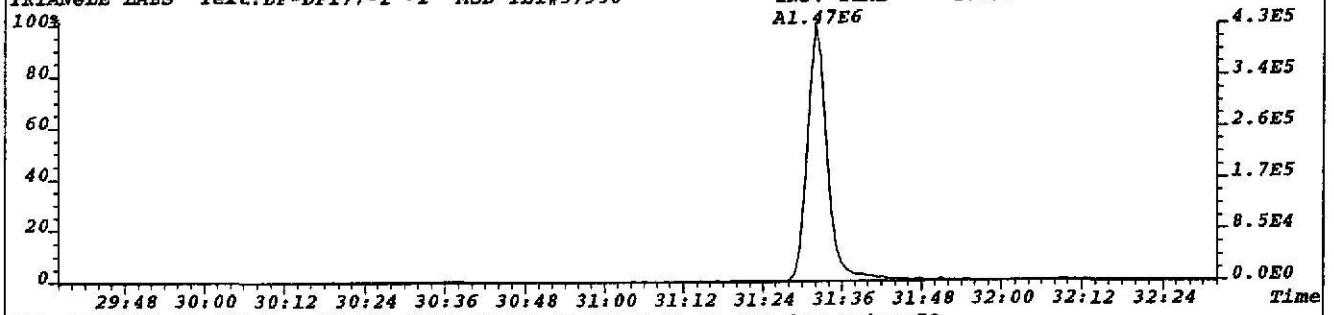
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:84
355.8546 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,336.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18
A1.97E6



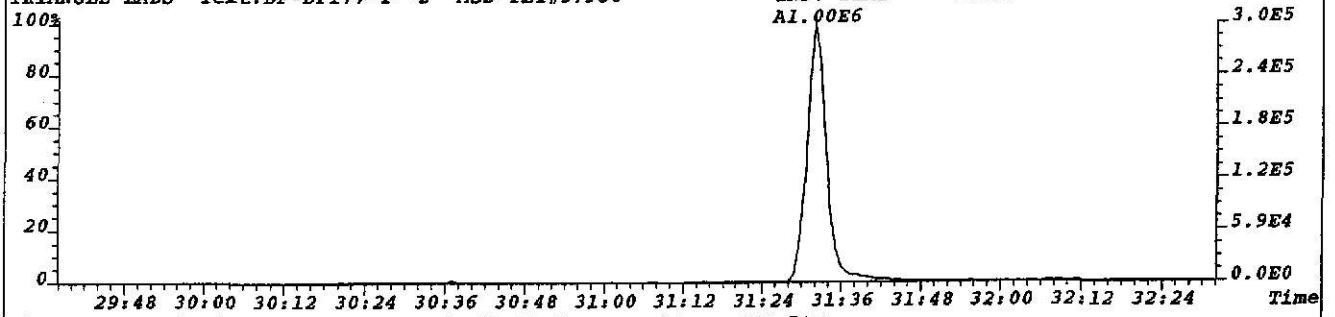
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:65
357.8516 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,260.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18
A1.28E6



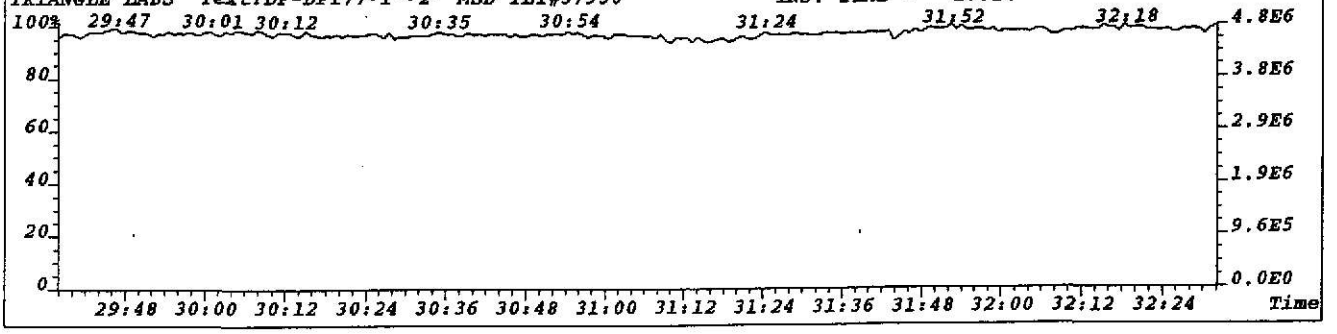
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:82
367.8949 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,328.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18
A1.47E6



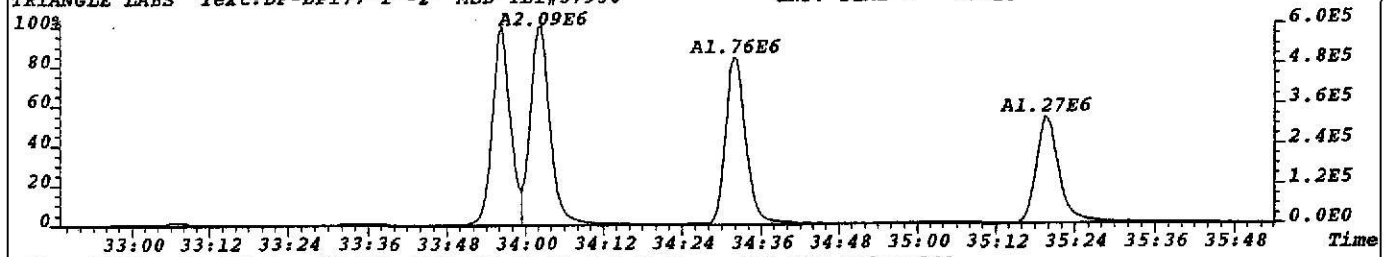
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:72
369.8919 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,288.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18
A1.00E6



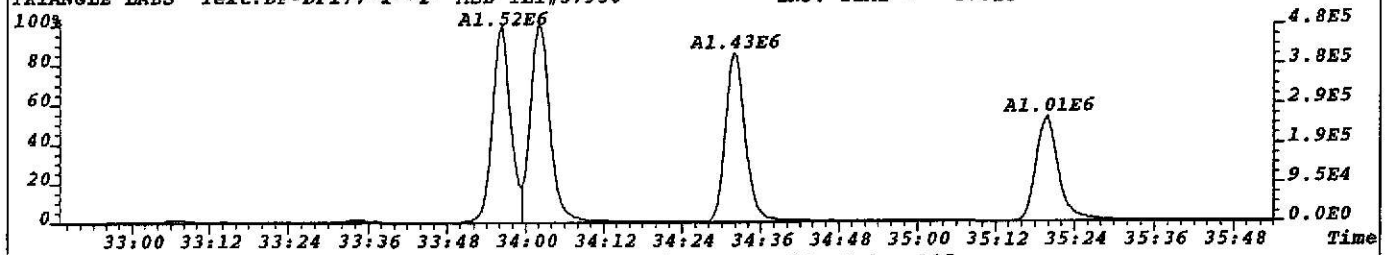
File:T023784 #1-924 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T
330.9792 F:2 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



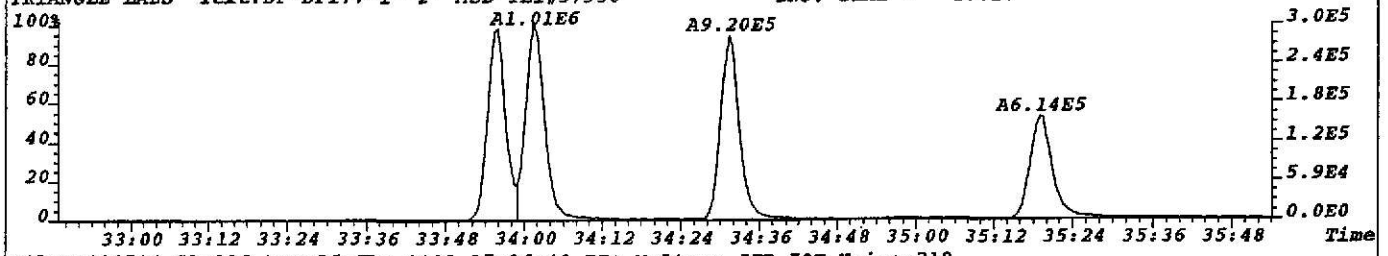
File:T023784 #1-386 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:214
373.8208 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,856.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



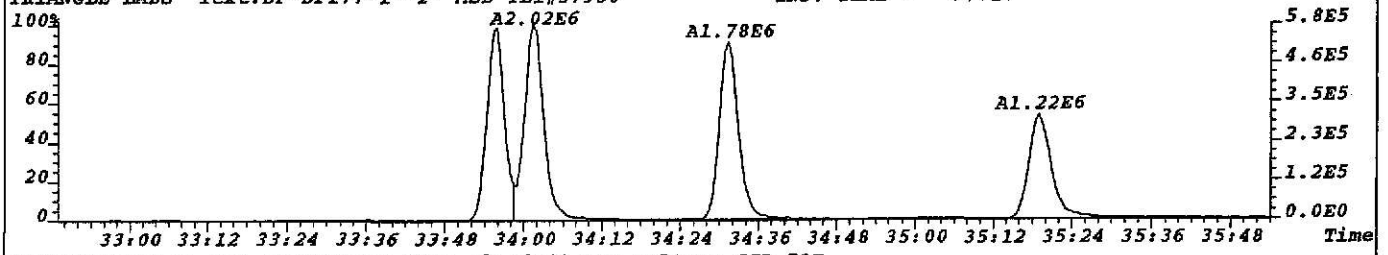
File:T023784 #1-386 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:249
375.8178 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,996.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



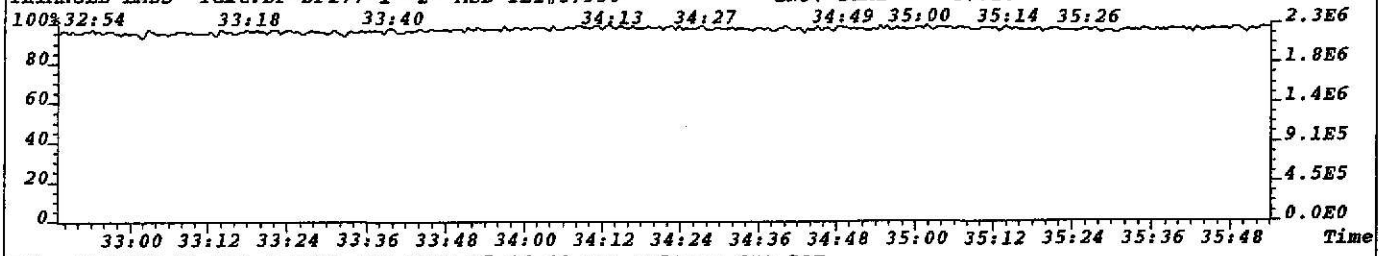
File:T023784 #1-386 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:185
383.8639 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,740.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



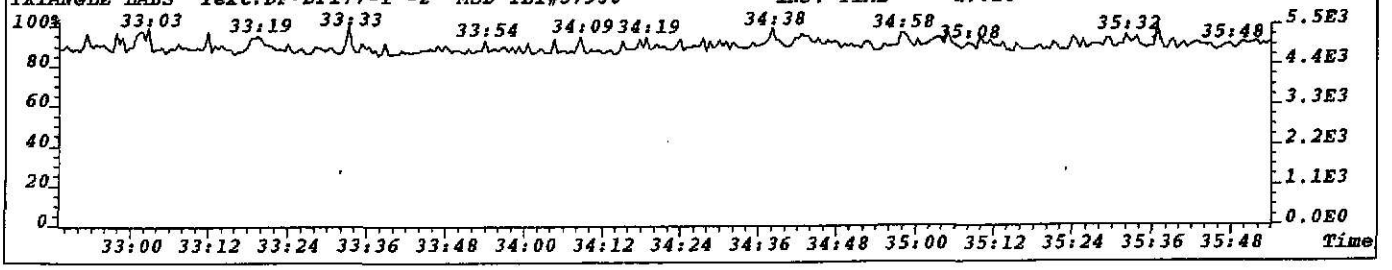
File:T023784 #1-386 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:219
385.8610 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,876.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



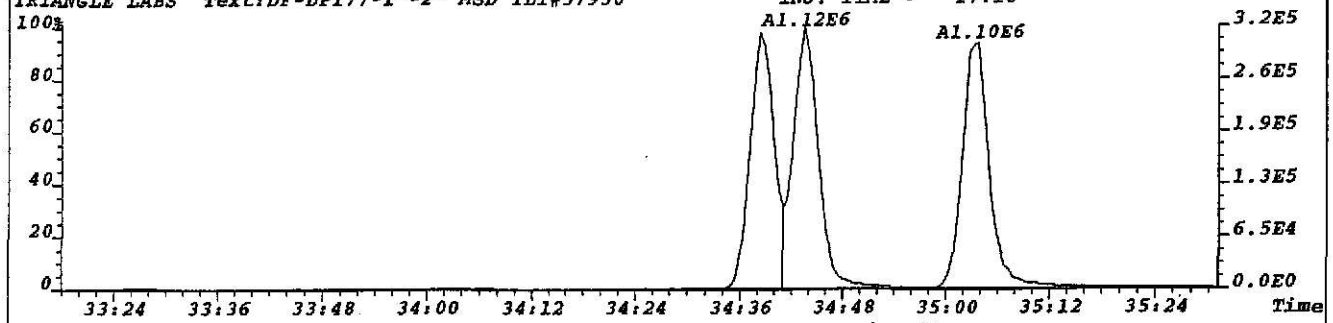
File:T023784 #1-386 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



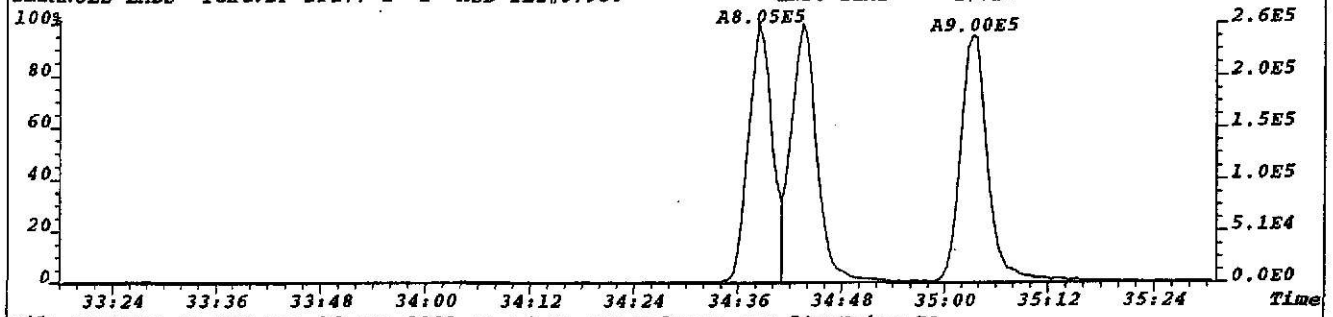
File:T023784 #1-386 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T
445.7555 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



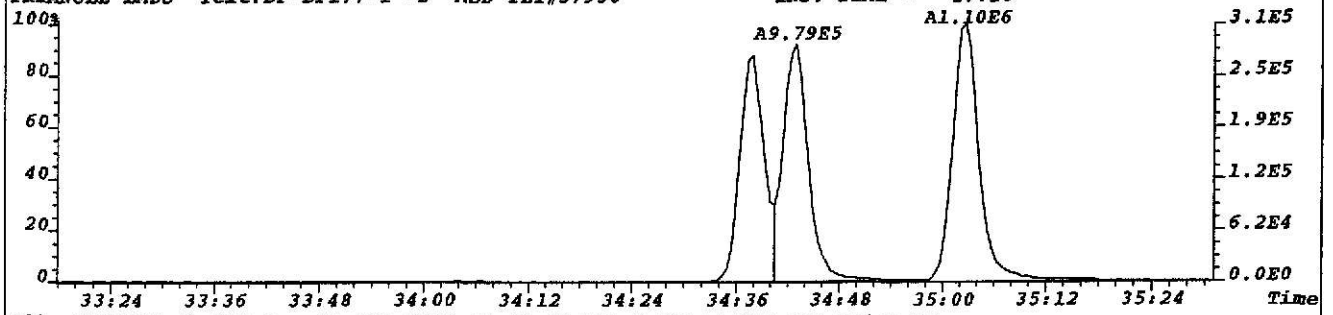
File:T023784 #1-386 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:92
389.8156 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,368.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



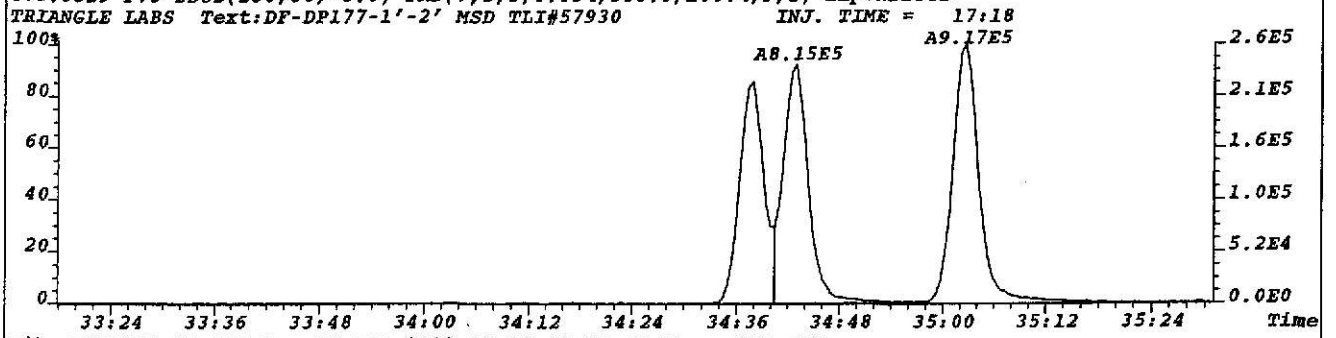
File:T023784 #1-386 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:92
391.8127 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,368.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



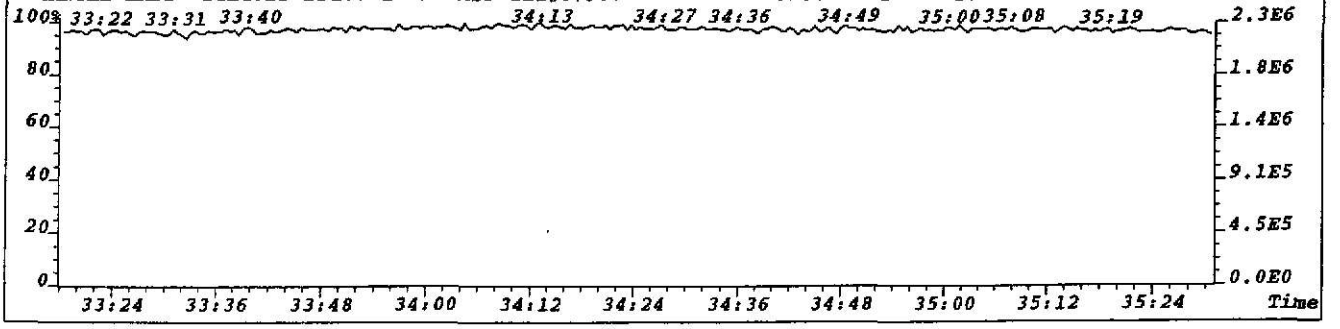
File:T023784 #1-386 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:79
401.8558 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,316.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



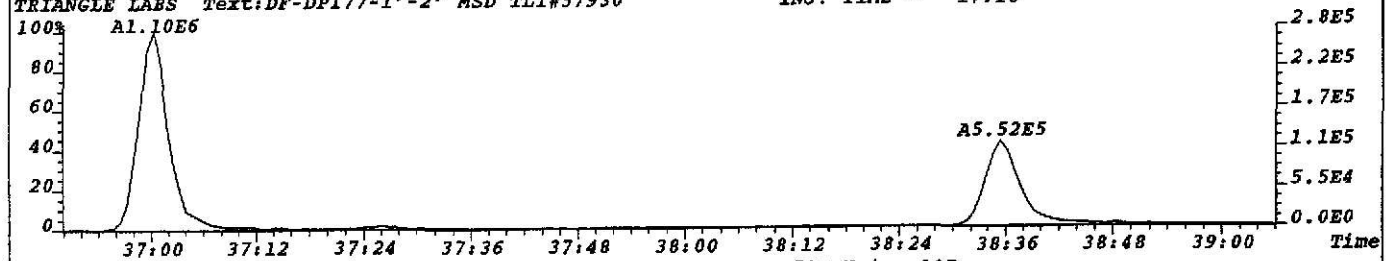
File:T023784 #1-386 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:97
403.8529 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,388.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



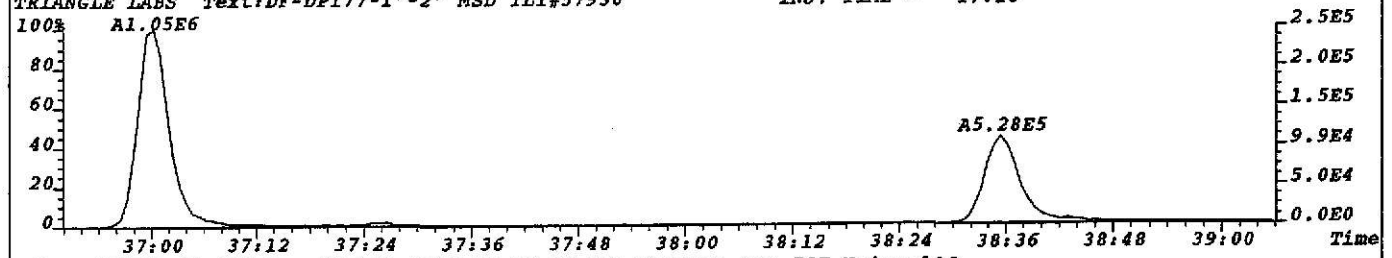
File:T023784 #1-386 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T
392.9760 F:3 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



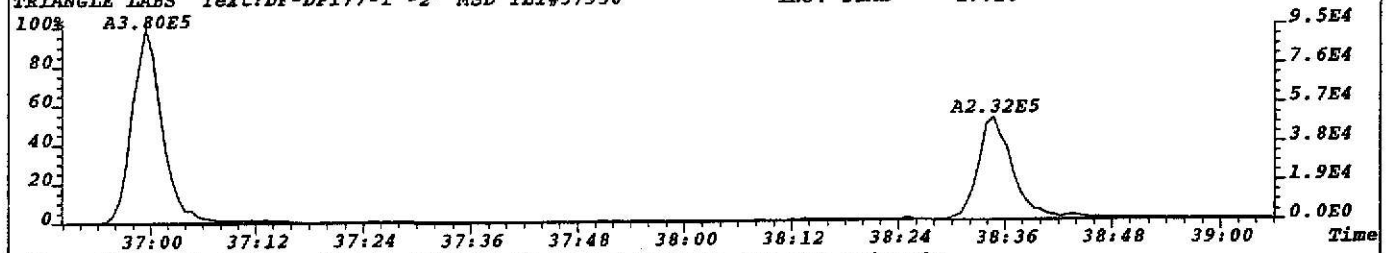
File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:117
407.7818 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,468.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



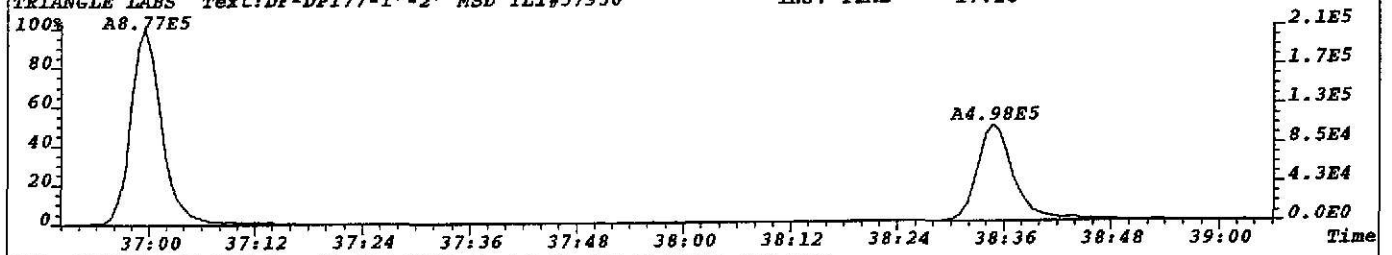
File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:107
409.7789 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,428.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



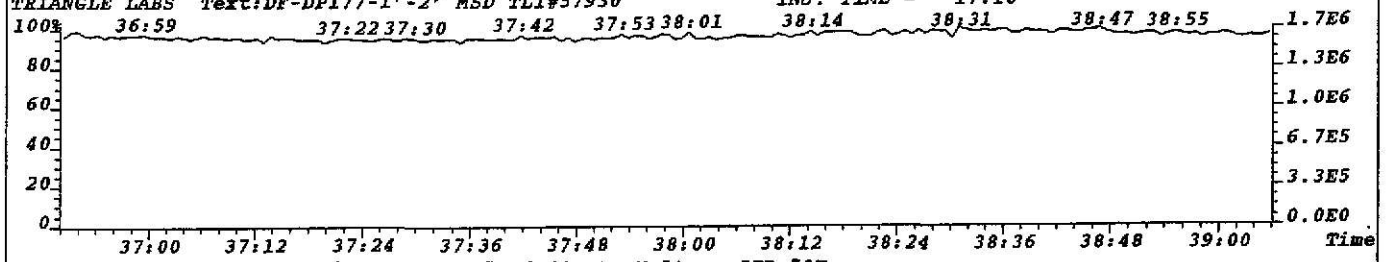
File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:106
417.8253 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,424.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



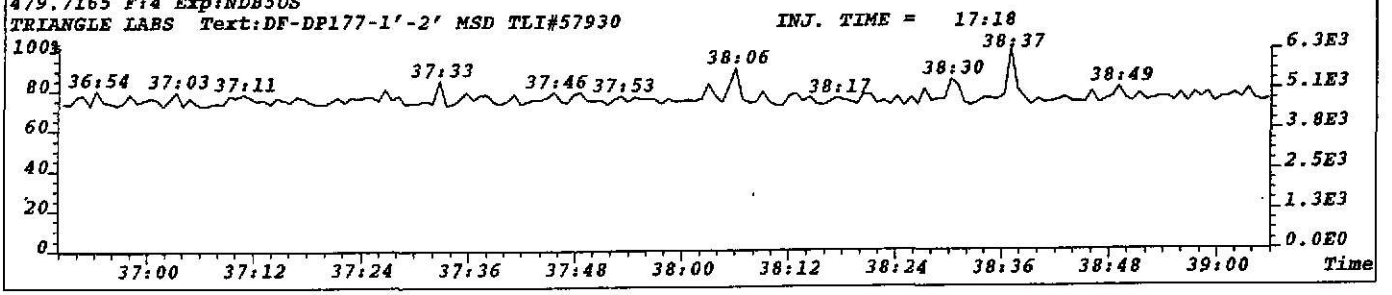
File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:84
419.8220 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,336.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



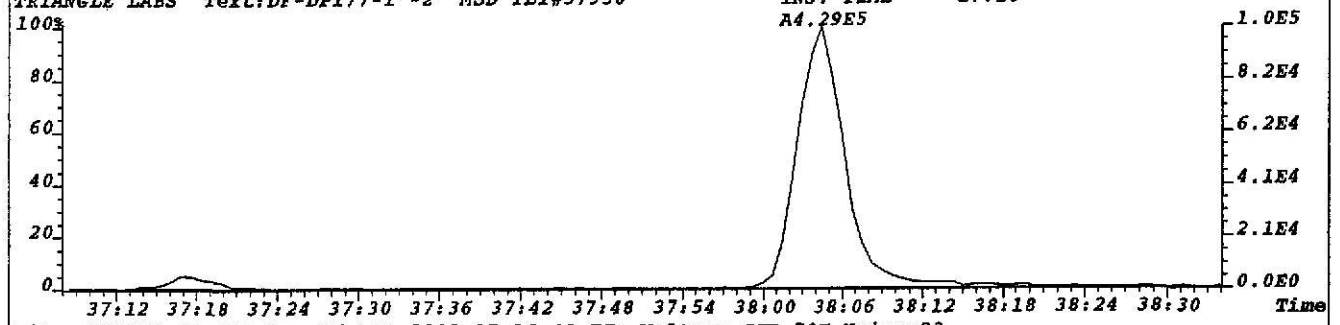
File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



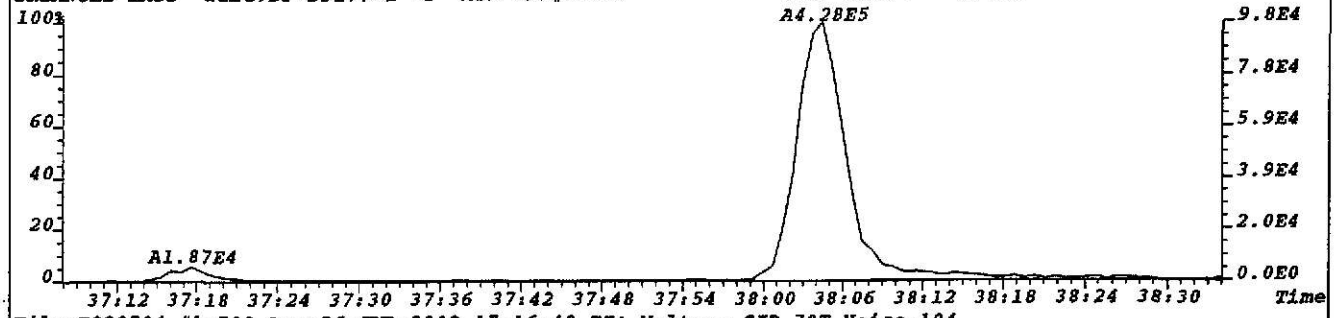
File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T
479.7165 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



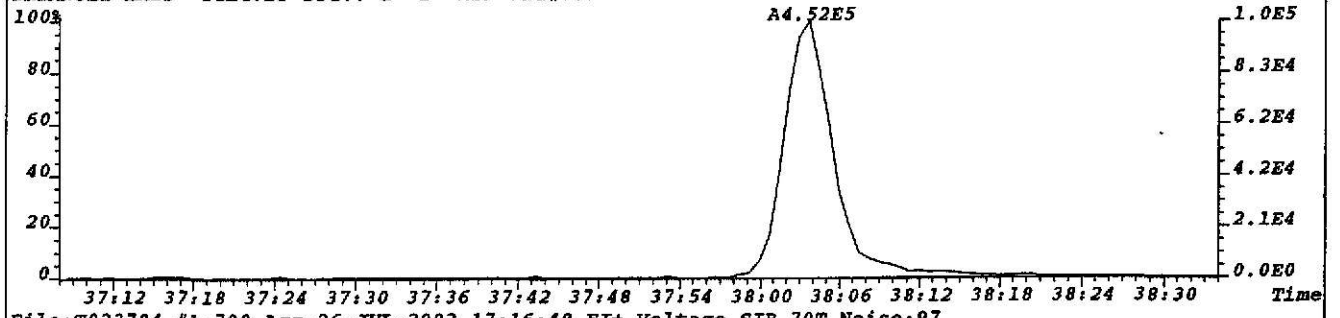
File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:94
423.7766 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,376.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



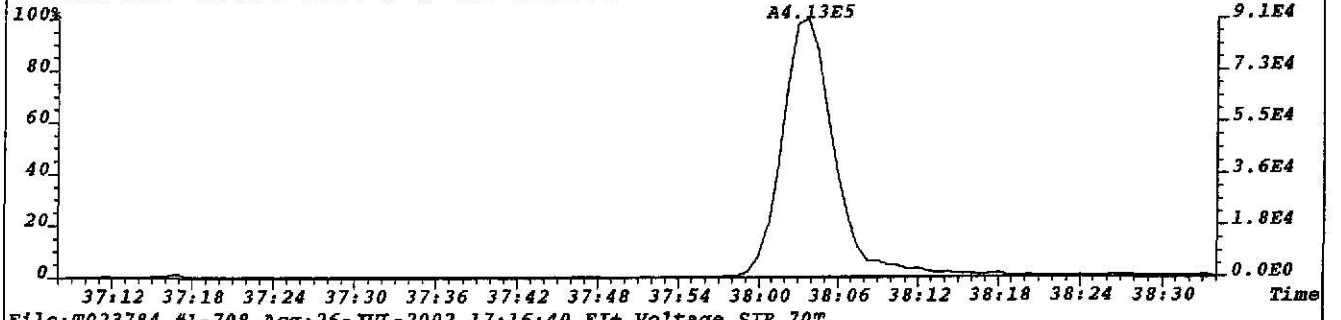
File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:93
425.7737 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,372.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



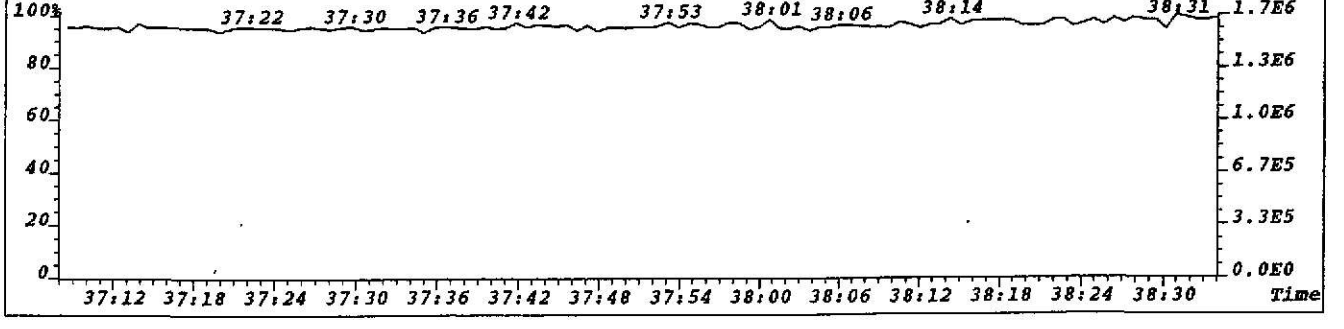
File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:104
435.8169 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,416.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



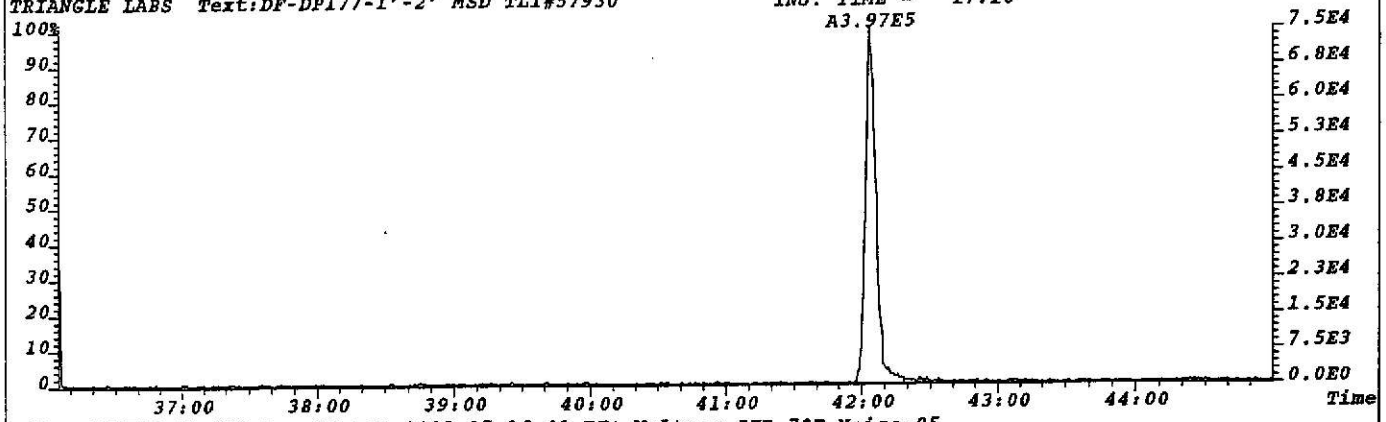
File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:97
437.8140 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,388.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



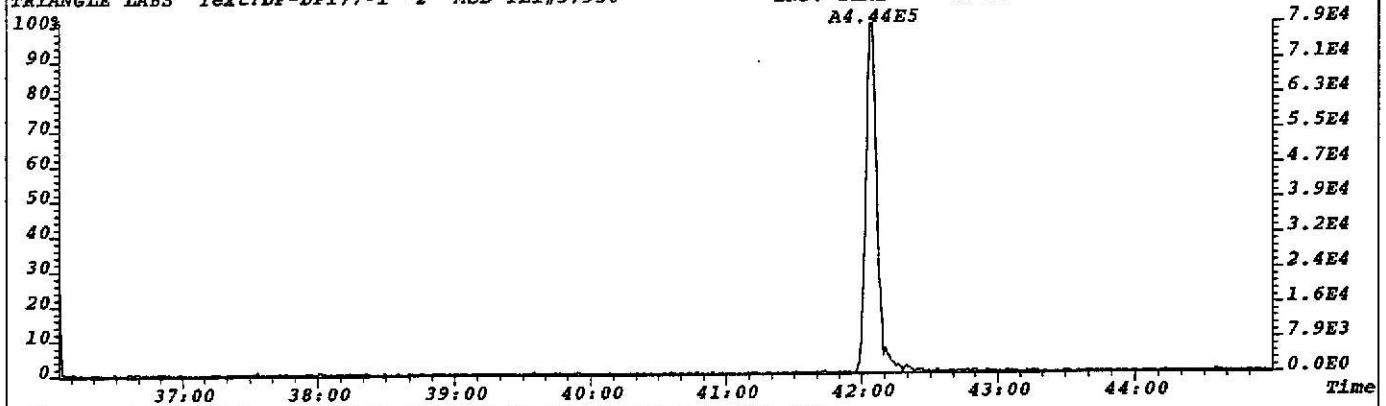
File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



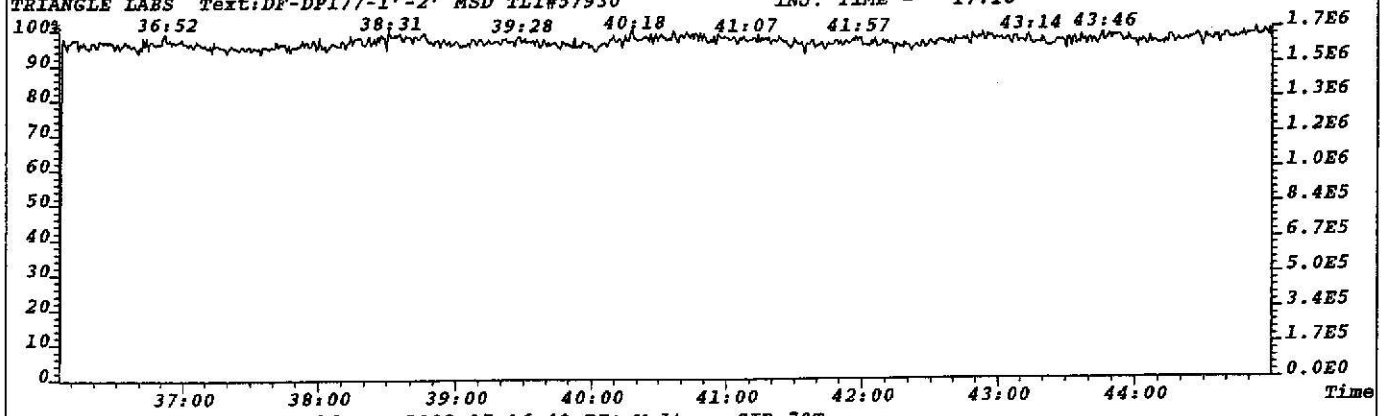
File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:78
441.7428 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,312.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



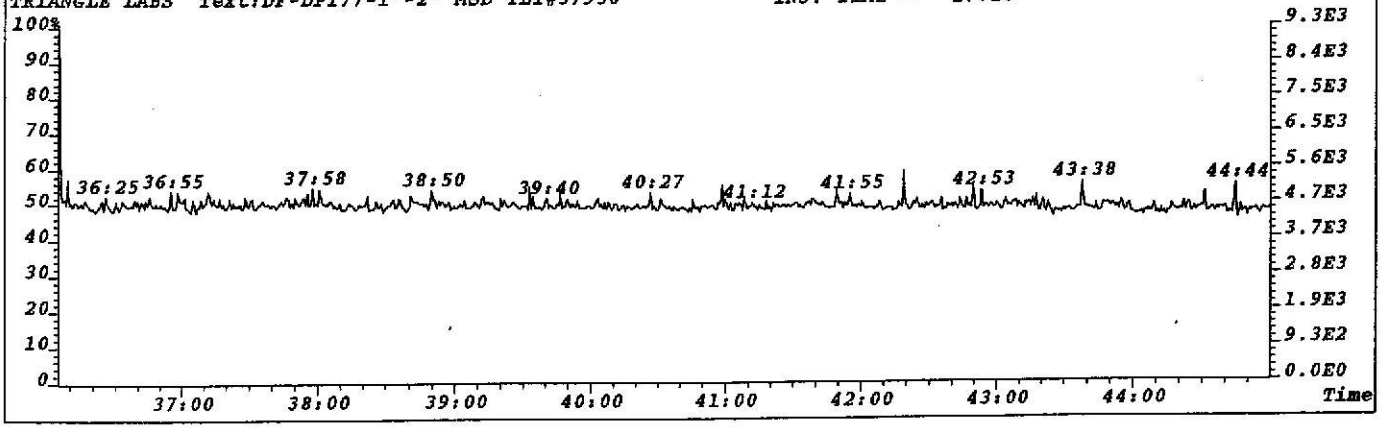
File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:85
443.7399 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,340.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



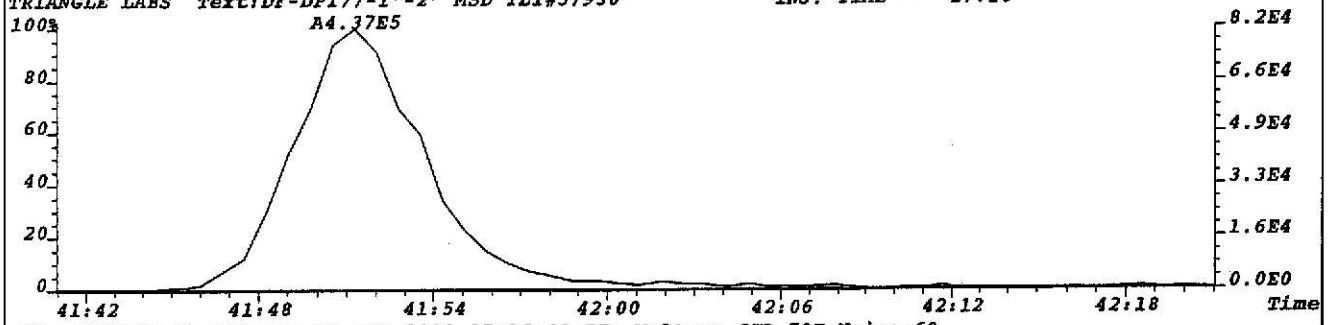
File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



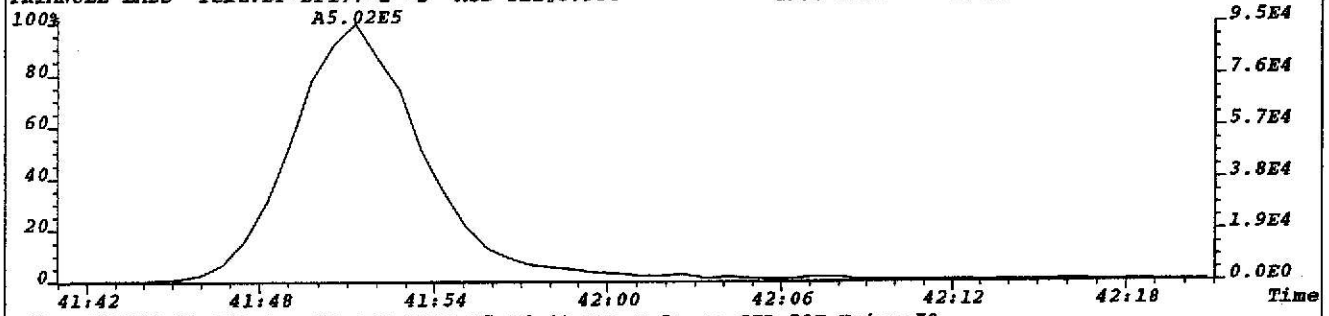
File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T
513.6775 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



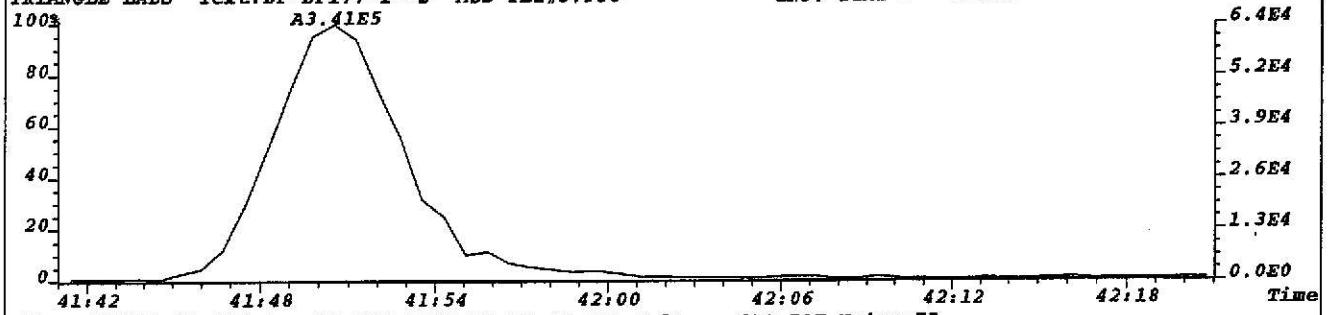
File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:69
457.7377 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,276.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



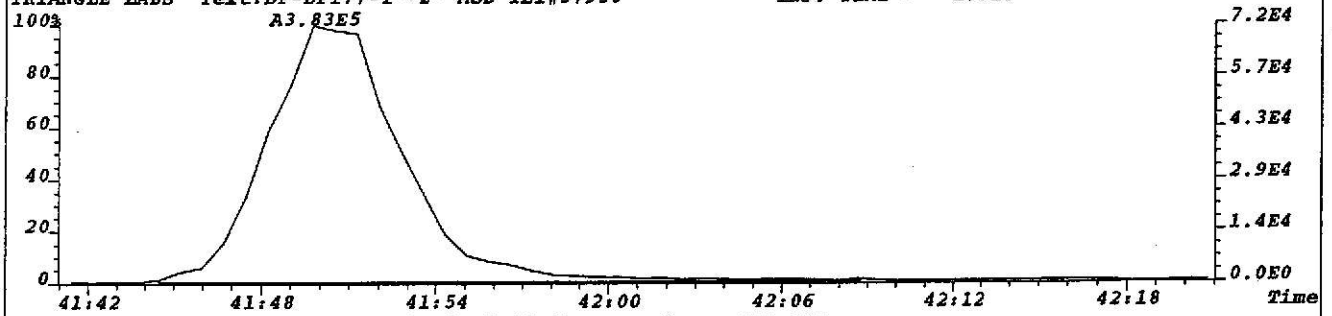
File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:68
459.7348 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,272.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



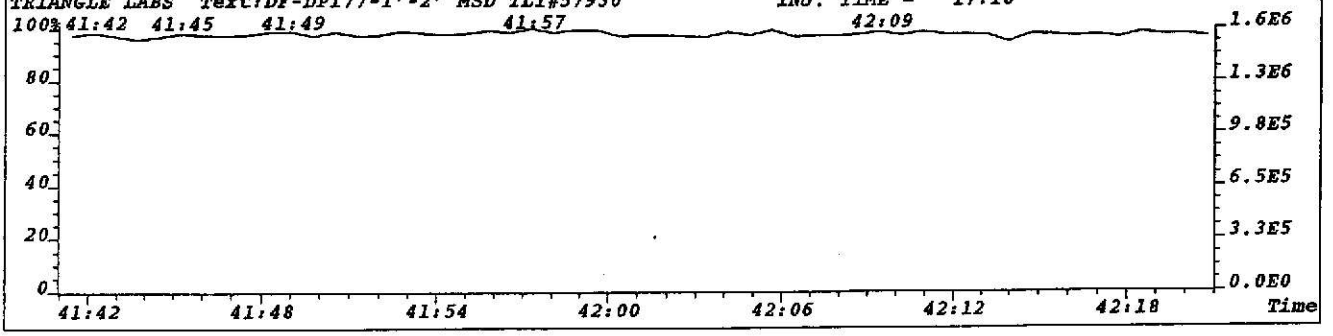
File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:79
469.7779 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,316.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18

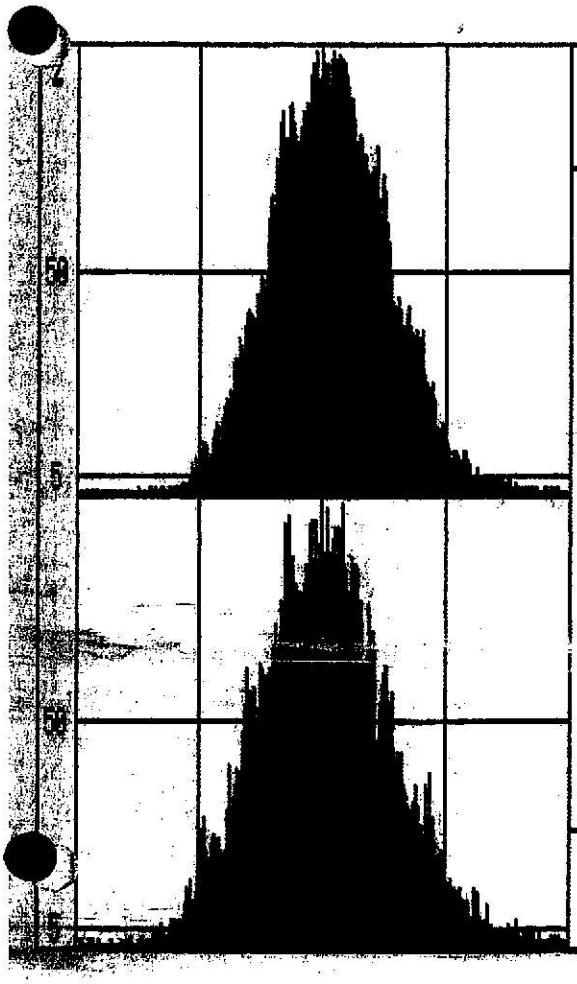


File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T Noise:77
471.7750 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.05%,308.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18



File:T023784 #1-708 Acq:26-JUL-2002 17:16:40 EI+ Voltage SIR 70T
430.9729 F:4 Exp:NDB5US
TRIANGLE LABS Text:DF-DP177-1'-2' MSD TLI#57930 INJ. TIME = 17:18





Channel I 330.9792 Peak top
Height .83 volts Span 200 ppm

System file name	NDBSUS
Data file name	A:T726821
Resolution	10000
Group number	2
Ionization mode	EI+
Switching	VOLTAGE
Ref. masses	292.9825, 416.9760

A	293	J	331	S	368
B	304	K	332	T	370
C	306	L	334	U	376
D	316	M	340	V	410
E	318	N	342		
F	[illegible]	O	[illegible]		
G	322	P	354		
H	328	Q	356		
I	331	R	358		

Ref. mass 416.9760 Peak top
Height .16 volts Span 200 ppm

CALIBRATION DATA

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www.trianglelabs.com

TRIANGLE LABORATORIES, INC. Date: 06/12/2002

Initial Calibration Summary for TF5612B

Analysis Date....: 06/12/2002
Instrument.....: T

Method.....: 161B
GC Column...: DB-5
GC Column ID: 2213722

Analytes	RF	SD	%RSD	RT	RT/LO	RT/HI	Ratio1	Ratio2	N
Total TriCDF	0.000	0.000	100%		17:51	24:51			0
1368-TCDF	1.027	0.023	2%	23:50	22:51	29:51	0.771		6
2378-TCDF	1.027	0.023	2%	26:52			0.800		6
TOTAL TCDF	1.027	0.023	2%				0.784		6
1368-TCDD	1.063	0.059	6%	25:06	23:32	30:32	0.770		6
1379-TCDD	1.063	0.059	6%	25:29			0.755		6
2378-TCDD	1.063	0.059	6%	27:33			0.776		6
TOTAL TCDD	1.063	0.059	6%				0.767		6
12378-PeCDF	1.134	0.022	2%	30:41	26:41	34:41	1.474		6
23478-PeCDF	1.104	0.038	3%	31:22			1.476		6
TOTAL PeCDF	1.119	0.027	2%				1.475		6
12378-PeCDD	1.039	0.034	3%	31:41	27:41	35:41	1.514		6
TOTAL PeCDD	1.039	0.034	3%				1.514		6
123478-HxCDF	1.125	0.028	2%	34:04	32:03	38:03	1.238		6
123678-HxCDF	1.149	0.028	2%	34:10			1.224		6
234678-HxCDF	1.089	0.028	3%	34:40			1.230		6
123789-HxCDF	1.140	0.025	2%	35:28			1.219		6
TOTAL HxCDF	1.126	0.022	2%				1.228		6
123478-HxCDD	1.078	0.026	2%	34:47	30:46	38:46	1.231		6
123678-HxCDD	1.039	0.051	5%	34:52			1.186		6
123789-HxCDD	1.117	0.015	1%	35:11			1.231		6
TOTAL HxCDD	1.078	0.021	2%				1.215		6
1234678-HpCDF	1.346	0.028	2%	37:09	35:08	40:08	1.025		6
1234789-HpCDF	1.335	0.020	1%	38:45			1.016		6
TOTAL HpCDF	1.340	0.024	2%				1.021		6
1234678-HpCDD	0.934	0.029	3%	38:13	36:12	41:12	1.005		6
TOTAL HpCDD	0.934	0.029	3%				1.005		6
OCDF	1.217	0.035	3%	42:15	40:01	44:01	0.888		6
OCDD	1.014	0.040	4%	42:02	40:01	44:01	0.813		6

Other Standards	RF	SD	%RSD	RT	RT/LO	RT/HI	Ratio1	Ratio2	N
37Cl-TCDD	1.105	0.047	4%	27:33	25:32	29:32			6

Internal Standards	RF	SD	%RSD	RT	RT/LO	RT/HI	Ratio1	Ratio2	N
13C12-2378-TCDF	1.311	0.072	5%	26:51	24:51	29:51	0.721		6
13C12-2378-TCDD	1.129	0.056	5%	27:32	25:32	29:32	0.787		6
13C12-PeCDF 123	1.162	0.075	6%	30:41	28:41	38:41	1.501		6
13C12-PeCDF 234	1.185	0.107	9%	31:21			1.491		6
13C12-PeCDD 123	0.831	0.066	8%	31:41	27:41	37:41	1.465		6
13C12-HxCDF 478	1.185	0.035	3%	34:03	30:03	38:03	0.495		6
13C12-HxCDF 678	1.200	0.035	3%	34:09			0.496		6
13C12-HxCDF 234	1.173	0.043	4%	34:39			0.500		6
13C12-HxCDF 789	0.984	0.027	3%	35:27			0.498		6
13C12-HxCDD 478	0.877	0.022	3%	34:46	33:46	35:46	1.212		6
13C12-HxCDD 678	0.959	0.044	5%	34:51			1.182		6

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Printed: 19:44 06/12/2002

Initial Calibration Summary for TF5612B

13C12-HpCDF 678	0.833	0.011	1%	37:08	35:08	46:08	0.417		6
13C12-HpCDF 789	0.670	0.039	6%	38:44			0.414		6
13C12-HpCDD 678	0.789	0.018	2%	38:12	36:12	44:12	1.015		6
13C12-OCDD	0.742	0.064	9%	42:01	42:01	54:01	0.864		6

Recovery Standards	RF	SD	%RSD	RT	RT/LO	RT/HI	Ratio1	Ratio2	N
13C12-1234-TCDD	1.000	0.000	0%	27:22			0.799		6
13C12-HxCDD 789	1.000	0.000	0%	35:10			1.193		6

*** End of Report ***

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TRIANGLE LABORATORIES, INC. Date: 06/15/2002

Initial Calibration Summary for PF56152

Analysis Date....: 06/15/2002 Method.....: C2NF

Instrument.....: P 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

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TRIANGLE LABORATORIES, INC. Date: 07/25/2002

VER TB23758

Analysis Date....: 07/25/2002
Operator.....: CRW
Init Calibration.: TF5612B
ICal Date.....: 06/12/2002

Method.....: 161B
Instrument..: T
Std.Conc....: 10.00
GC Column...: DB-5
GC Column ID:2213722

Analyte Summary

Name	Ratio 1&2	RT Lo/Hi	RT	Rel. RT	ICal RF	Conc	Conc Range
Total TriCDF		17:43 24:43			0.000		
1368-TCDF	0.801	23:31 28:36	23:40	0.8859	1.059		
2378-TCDF	0.810		26:44	1.0004	1.059	11.19	8.60 - 11.60
TOTAL TCDF	0.810				1.059		
1368-TCDD	0.804	24:47 28:33	24:57	0.9106	1.063		
1379-TCDD	0.782		25:19	0.9241	1.063		
2378-TCDD	0.788		27:25	1.0007	1.063	10.33	8.20 - 12.30
TOTAL TCDD	0.792				1.063		
12378-PeCDF	1.533	28:28 32:23	30:35	1.0000	1.134	50.92	41.00 - 60.00
23478-PeCDF	1.572		31:15	1.0000	1.104	51.90	41.00 - 61.00
TOTAL PeCDF	1.552				1.119		
12378-PeCDD	1.534	29:41 32:13	31:35	1.0003	1.039	50.28	39.00 - 65.00
TOTAL PeCDD	1.534				1.039		
123478-HxCDF	1.280	32:51 35:35	33:58	1.0006	1.125	54.49	45.00 - 56.00
123678-HxCDF	1.273		34:04	1.0006	1.149	55.90	44.00 - 57.00
234678-HxCDF	1.262		34:34	1.0006	1.089	54.83	44.00 - 57.00
123789-HxCDF	1.264		35:21	1.0000	1.140	54.18	45.00 - 56.00
TOTAL HxCDF	1.270				1.126		
123478-HxCDD	1.224	33:20 35:13	34:40	1.0006	1.078	53.05	39.00 - 64.00
123678-HxCDD	1.224		34:46	1.0006	1.039	52.73	39.00 - 64.00
123789-HxCDD	1.200		35:05	1.0095	1.117	51.61	41.00 - 61.00
TOTAL HxCDD	1.216				1.078		

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1234678-HpCDF	1.071	36:52 38:48	37:02	1.0000	1.346	53.43	45.00 - 55.00
1234789-HpCDF	1.080		38:38	1.0003	1.335	54.42	43.00 - 58.00
TOTAL HpCDF	1.075				1.340		
1234678-HpCDD	1.047	37:10 38:17	38:06	1.0005	0.934	53.46	43.00 - 58.00
TOTAL HpCDD	1.047				0.934		
OCDF	0.904	39:53 43:53	42:06	1.0053	1.217	120.92	63.00 -159.00
OCDD	0.901	39:53 43:53	41:54	1.0005	1.014	107.29	79.00 -126.00

Other Standard Summary

Name	Ratio 1&2	RT Lo/Hi	RT	Rel. RT	ICal RF	Conc	Conc Range
37Cl-TCDD		25:24 29:24	27:25	1.0007	1.105	9.96	8.30 - 12.10

Internal Standard Summary

Name	Ratio 1&2	RT Lo/Hi	RT	Rel. RT	ICal RF	Conc	Conc Range
13C12-2378-TCDF	0.761	25:13 30:13	26:43	0.9816	1.311	111.98	76.00 -131.00
13C12-2378-TCDD	0.780	25:13 29:13	27:24	1.0066	1.129	98.83	85.00 -117.00
13C12-PeCDF 123	1.449	25:13 35:13	30:35	1.1234	1.162	88.24	76.00 -130.00
13C12-PeCDF 234	1.455		31:15	1.1481	1.185	85.83	77.00 -130.00
13C12-PeCDD 123	1.456	23:13 33:13	31:34	1.1598	0.831	83.47	62.00 -160.00
13C12-HxCDF 478	0.501	31:04 39:04	33:57	0.9681	1.185	122.23	76.00 -131.00
13C12-HxCDF 678	0.507		34:03	0.9709	1.200	126.86	70.00 -143.00
13C12-HxCDF 234	0.506		34:33	0.9852	1.173	121.10	73.00 -137.00
13C12-HxCDF 789	0.501		35:21	1.0080	0.984	118.94	74.00 -135.00
13C12-HxCDD 478	1.289	34:04 36:04	34:39	0.9880	0.877	100.82	85.00 -117.00
13C12-HxCDD 678	1.155		34:45	0.9909	0.959	100.79	85.00 -118.00
13C12-HpCDF 678	0.438	33:04 44:04	37:02	1.0559	0.833	109.33	78.00 -129.00
13C12-HpCDF 789	0.421		38:37	1.1012	0.670	96.19	77.00 -129.00
13C12-HpCDD 678	1.040	33:04 41:04	38:05	1.0858	0.789	85.47	72.00 -138.00

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13C12-OCDD	0.811	41:44 42:04	41:53	1.1942	0.742	103.79	96.00	-415.00

Recovery Standard Summary

Name	Ratio 1&2	RT Lo/Hi	RT	Rel. RT	ICal RF	Conc	Conc	Range
13C12-1234-TCDD	0.802	25:13 29:13	27:13	0.9934	1.000			
13C12-HxCDD 789	1.190	34:04 36:04	35:04	1.0121	1.000			

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Compound/ M_Z....	..RT.	OK Ratio	Total.Area...	Area.Peak.1..	Area.Peak.2..	Rel.RT	Compound.Name..	ID..
TCDF		0.65-0.89						
304-306	23:40	0.80	97.66	43.44	54.22	0.886	1368-TCDF	AN
	26:44	0.81	91.32	40.88	50.44	1.000	2378-TCDF	AN
304-306		2 Peaks						
13C12-TCDF		0.65-0.89						
316-318	26:43	0.76	770.58	333.10	437.48	0.982	13C12-2378-TCDF	IS0
316-318		1 Peak						

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

TCDD		0.65-0.89						
320-322	24:57	0.80	62.53	27.86	34.67	0.911	1368-TCDD	AN
	25:19	0.78	53.42	23.44	29.98	0.924	1379-TCDD	AN
	27:25	0.79	64.33	28.35	35.98	1.001	2378-TCDD	AN
320		3 Peaks						
37Cl-TCDD								
328	27:25		57.74	57.74		1.001	37Cl-TCDD	CLS
328-330		1 Peak						
13C12-TCDD		0.65-0.89						
332-334	27:13	0.80	524.92	233.55	291.37	0.993	13C12-1234-TCDD	RS1
	27:24	0.78	585.67	256.61	329.06	1.007	13C12-2378-TCDD	IS1
332-334		2 Peaks						

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

PeCDF		1.32-1.78						
340-342	30:35	1.53	310.77	188.08	122.69	1.000	12378-PeCDF	AN
	31:15	1.57	305.90	186.95	118.95	1.000	23478-PeCDF	AN
340-342		2 Peaks						
13C12-PeCDF		1.32-1.78						
352-354	30:35	1.45	538.23	318.41	219.82	1.123	13C12-PeCDF 123	IS2
	31:15	1.45	533.87	316.40	217.47	1.148	13C12-PeCDF 234	IS3
352-354		2 Peaks						

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

PeCDD		1.32-1.78						
356-358	31:35	1.53	190.21	115.15	75.06	1.000	12378-PeCDD	AN
356-358		1 Peak						
13C12-PeCDD		1.32-1.78						
368-370	31:34	1.46	364.08	215.82	148.26	1.160	13C12-PeCDD 123	IS4
368-370		1 Peak						

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

HxCDF		1.05-1.43						
374-376	33:58	1.28	299.87	168.35	131.52	1.001	123478-HxCDF	AN

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Compound/ M_Z....	..RT.	OK Ratio	Total.Area...	Area.Peak.1..	Area.Peak.2..	Rel.RT	Compound.Name..	ID..
	34:04	1.27	330.22	184.96	145.26	1.001	123678-HxCDF	AN
	34:34	1.26	286.49	159.85	126.64	1.001	234678-HxCDF	AN
	35:21	1.26	244.15	136.33	107.82	1.000	123789-HxCDF	AN
374-376		4 Peaks						
13C12-HxCDF		0.43-0.59						
384-386	33:57	0.50	489.20	163.36	325.84	0.968	13C12-HxCDF 478	IS5
	34:03	0.51	514.17	173.04	341.13	0.971	13C12-HxCDF 678	IS6
	34:33	0.51	479.79	161.29	318.50	0.985	13C12-HxCDF 234	IS7
	35:21	0.50	395.28	131.85	263.43	1.008	13C12-HxCDF 789	IS8
384-386		4 Peaks						

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

HxCDD		1.05-1.43						
390-392	34:40	1.22	170.77	94.00	76.77	1.001	123478-HxCDD	AN
	34:46	1.22	178.85	98.44	80.41	1.001	123678-HxCDD	AN
	35:05	1.20	180.18	98.28	81.90	1.010	123789-HxCDD	AN
390-392		3 Peaks						
13C12-HxCDD		1.05-1.43						
402-404	34:39	1.29	298.64	168.20	130.44	0.988	13C12-HxCDD 478	IS9
	34:45	1.15	326.46	174.97	151.49	0.991	13C12-HxCDD 678	IS10
	35:04	1.19	337.75	183.56	154.19	1.012	13C12-HxCDD 789	RS2
402-404		3 Peaks						

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

HpCDF		0.88-1.20						
408-410	37:02	1.07	221.21	114.42	106.79	1.000	1234678-HpCDF	AN
	38:38	1.08	158.15	82.10	76.05	1.000	1234789-HpCDF	AN
408-410		2 Peaks						
13C12-HpCDF		0.37-0.51						
418-420	37:02	0.44	307.58	93.76	213.82	1.056	13C12-HpCDF 678	IS11
	38:37	0.42	217.67	64.46	153.21	1.101	13C12-HpCDF 789	IS12
418-420		2 Peaks						

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

HpCDD		0.88-1.20						
424-426	38:06	1.05	113.72	58.17	55.55	1.001	1234678-HpCDD	AN
424-426		1 Peak						
13C12-HpCDD		0.88-1.20						
436-438	38:05	1.04	227.77	116.14	111.63	1.086	13C12-HpCDD 678	IS13
436-438		1 Peak						

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

OCDF		0.76-1.02						
442-444	42:06	0.90	191.38	90.87	100.51	1.005	OCDF	AN

Compound/ M_Z....	..RT.	OK	Ratio	Total.Area...	Area.Peak.1..	Area.Peak.2..	Rel.RT	Compound.Name..	ID..
442-444		1 Peak							
OCDD		0.76-1.02							
458-460	41:54		0.90	141.49	67.05	74.44	1.001	OCDD	AN
458-460		1 Peak							
13C12-OCDD		0.76-1.02							
470-472	41:53		0.81	260.11	116.45	143.66	1.194	13C12-OCDD	IS14
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 ***

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Date: 07/26/2002 TRIANGLE LABORATORIES, INC.

Continuing Calibration for P022684

Analysis Date....: 07/26/2002 Method.....: C2NF
Operator.....: JMM Instrument..: P
Init Calibration.: PF56152 Std.Conc....: 10.00
ICal Date.....: 06/15/2002
Analysis Time....: 04:28 GC Column...: DB-225

Analyte Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
2378-TCDF	1.037	0.75	18:37 25:51	23:27	1.0009	1.120	-0.083	-7.4%
TOTAL TCDF	1.037	0.75				1.120	-0.083	-7.4%
2378-TCDD	1.253	0.85	19:27 25:03	22:00	1.0000	1.131	0.122	10.8%
TOTAL TCDD	1.253	0.85				1.131	0.122	10.8%

Other Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
37Cl-TCDD	1.086		20:00 24:00	22:00	1.0000	1.037	0.049	4.7%

Internal Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
13C12-2378-TCDF	1.657	0.79	22:26 24:26	23:26	1.0000	1.519	0.138	9.1%
13C12-2378-TCDD	1.034	0.79	20:00 24:00	22:00	1.0000	1.075	-0.041	-3.8%

Recovery Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
13C12-1234-TCDD	1.000	0.83		22:16	1.0123	1.000	0.000	0.0%

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Compound/ M_Z....	..RT.	OK	Ratio	Total.Area...	Area.Peak.1..	Area.Peak.2..	Rel.RT	Compound.Name..	ID..
TCDF			0.65-0.89						
304-306	23:27		0.75	42.33	18.21	24.12	1.001	2378-TCDF	AN
304-306			1 Peak						
13C12-TCDF			0.65-0.89						
316-318	23:26		0.79	408.19	180.68	227.51	1.000	13C12-2378-TCDF	IS0
316-318			1 Peak						
---------- Above: TCDF / TCDD Follows ----------									
TCDD			0.65-0.89						
320-322	22:00		0.85	31.93	14.64	17.29	1.000	2378-TCDD	AN
320			1 Peak						
37Cl-TCDD									
328	22:00			27.67	27.67		1.000	37Cl-TCDD	SUR1
328-330			1 Peak						
13C12-TCDD			0.65-0.89						
332-334	22:00		0.79	254.73	112.36	142.37	1.000	13C12-2378-TCDD	IS1
	22:16		0.83	246.40	112.06	134.34	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 ***

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Continuing Calibration for P022724

Analysis Date....: 07/29/2002
Operator.....: JSY
Init Calibration.: PF56152
ICal Date.....: 06/15/2002
Analysis Time....: 13:20

Method.....: C2NF
Instrument..: P
Std.Conc....: 10.00

GC Column...: DB-225

Analyte Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
2378-TCDF	1.002	0.71	18:50 26:22	23:48	1.0000	1.120	-0.118	-10.5%
TOTAL TCDF	1.002	0.71				1.120	-0.118	-10.5%
2378-TCDD	1.033	0.88	19:39 25:31	22:18	1.0013	1.131	-0.098	-8.6%
TOTAL TCDD	1.033	0.88				1.131	-0.098	-8.6%

Other Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
37Cl-TCDD	0.981		20:16 24:16	22:18	1.0013	1.037	-0.056	-5.4%

Internal Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
13C12-2378-TCDF	1.176	0.78	22:48 24:48	23:48	1.0000	1.519	-0.343	-22.6%
13C12-2378-TCDD	1.101	0.78	20:16 24:16	22:16	1.0000	1.075	0.026	2.4%

Recovery Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
13C12-1234-TCDD	1.000	0.80		22:37	1.0157	1.000	0.000	0.0%

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Compound/ M_Z....	..RT.	OK	Ratio	Total.Area...	Area.Peak.1..	Area.Peak.2..	Rel.RT	Compound.Name..	ID..
TCDF			0.65-0.89						
304-306	23:48		0.71	48.25	20.04	28.21	1.000	2378-TCDF	AN
304-306			1 Peak						
13C12-TCDF			0.65-0.89						
316-318	23:48		0.78	481.34	211.48	269.86	1.000	13C12-2378-TCDF	IS0
316-318			1 Peak						

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

TCDD			0.65-0.89						
320-322	22:18		0.88	46.56	21.82	24.74	1.001	2378-TCDD	AN
320			1 Peak						
37Cl-TCDD									
328	22:18			44.21	44.21		1.001	37Cl-TCDD	SUR1
328-330			1 Peak						
13C12-TCDD			0.65-0.89						
332-334	22:16		0.78	450.55	197.79	252.76	1.000	13C12-2378-TCDD	IS1
	22:37		0.80	409.29	182.18	227.11	1.016	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 ***

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Continuing Calibration for P022705

Analysis Date....: 07/27/2002 Method.....: C2NF
Operator.....: JMM Instrument..: P
Init Calibration.: PF56152 Std.Conc....: 10.00
ICal Date.....: 06/15/2002
Analysis Time....: 01:03 GC Column...: DB-225

Analyte Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
2378-TCDF	1.182	0.73	18:30 25:40	23:18	1.0009	1.120	0.062	5.6%
TOTAL TCDF	1.182	0.73				1.120	0.062	5.6%
2378-TCDD	1.221	0.77	19:19 24:53	21:53	1.0014	1.131	0.090	7.9%
TOTAL TCDD	1.221	0.77				1.131	0.090	7.9%

Other Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
37Cl-TCDD	1.028		19:51 23:51	21:52	1.0009	1.037	-0.009	-0.9%

Internal Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
13C12-2378-TCDF	1.767	0.80	22:17 24:17	23:17	1.0000	1.519	0.248	16.3%
13C12-2378-TCDD	1.077	0.85	19:51 23:51	21:51	1.0000	1.075	0.002	0.2%

Recovery Standard Summary

Name	RF	Ratio 1&2	RT Lo/High	RT	Rel. RT	ICal RF	Delta RF	%D
13C12-1234-TCDD	1.000	0.86		22:07	1.0124	1.000	0.000	0.0%

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Compound/ M_Z....	..RT.	OK	Ratio	Total.Area...	Area.Peak.1..	Area.Peak.2..	Rel.RT	Compound.Name..	ID..
TCDF			0.65-0.89						
304-306	23:18		0.73	10.66	4.51	6.15	1.001	2378-TCDF	AN
304-306			1 Peak						
13C12-TCDF			0.65-0.89						
316-318	23:17		0.80	90.16	39.99	50.17	1.000	13C12-2378-TCDF	IS0
316-318			1 Peak						
---------- Above: TCDF / TCDD Follows ----------									
TCDD			0.65-0.89						
320-322	21:53		0.77	6.71	2.91	3.80	1.001	2378-TCDD	AN
320			1 Peak						
37Cl-TCDD									
328	21:52			5.65	5.65		1.001	37Cl-TCDD	SUR1
328-330			1 Peak						
13C12-TCDD			0.65-0.89						
332-334	21:51		0.85	54.96	25.32	29.64	1.000	13C12-2378-TCDD	IS1
	22:07		0.86	51.02	23.58	27.44	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 ***

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TRIANGLE LABORATORIES, INC. Date: 07/26/2002

VER TB23771

Analysis Date....: 07/26/2002
Operator.....: JMM
Init Calibration.: TF5612B
ICal Date.....: 06/12/2002

Method.....: 161B
Instrument..: T
Std.Conc....: 10.00
GC Column...: DB-5
GC Column ID:2213722

Analyte Summary

Name	Ratio 1&2	RT Lo/Hi	RT	Rel. RT	ICal RF	Conc	Conc Range
Total TriCDF		17:40 24:40			0.000		
1368-TCDF	0.826	23:27 28:33	23:37	0.8856	1.059		
2378-TCDF	0.807		26:41	1.0004	1.059	11.01	8.60 - 11.60
TOTAL TCDF	0.822				1.059		
1368-TCDD	0.792	24:44 28:30	24:54	0.9104	1.063		
1379-TCDD	0.783		25:17	0.9243	1.063		
2378-TCDD	0.765		27:23	1.0011	1.063	10.72	8.20 - 12.30
TOTAL TCDD	0.780				1.063		
12378-PeCDF	1.511	28:25 32:21	30:33	1.0007	1.134	53.26	41.00 - 60.00
23478-PeCDF	1.522		31:13	1.0006	1.104	54.27	41.00 - 61.00
TOTAL PeCDF	1.516				1.119		
12378-PeCDD	1.590	29:38 32:12	31:33	1.0006	1.039	52.04	39.00 - 65.00
TOTAL PeCDD	1.590				1.039		
123478-HxCDF	1.245	32:49 35:34	33:56	1.0000	1.125	54.68	45.00 - 56.00
123678-HxCDF	1.261		34:02	1.0000	1.149	56.33	44.00 - 57.00
234678-HxCDF	1.264		34:32	1.0003	1.089	54.45	44.00 - 57.00
123789-HxCDF	1.284		35:20	1.0003	1.140	55.07	45.00 - 56.00
TOTAL HxCDF	1.262				1.126		
123478-HxCDD	1.258	33:18 35:11	34:39	1.0006	1.078	53.40	39.00 - 64.00
123678-HxCDD	1.264		34:43	1.0000	1.039	54.98	39.00 - 64.00
123789-HxCDD	1.240		35:03	1.0095	1.117	52.51	41.00 - 61.00
TOTAL HxCDD	1.254				1.078		

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1234678-HpCDF	1.014	36:50 38:46	37:00	1.0005	1.346	53.96	45.00 - 55.00
1234789-HpCDF	1.040		38:35	1.0000	1.335	54.41	43.00 - 58.00
TOTAL HpCDF	1.025				1.340		
1234678-HpCDD	1.024	37:08 38:14	38:04	1.0005	0.934	53.85	43.00 - 58.00
TOTAL HpCDD	1.024				0.934		
OCDF	0.910	39:51 43:51	42:04	1.0053	1.217	117.50	63.00 -159.00
OCDD	0.887	39:51 43:51	41:51	1.0000	1.014	105.18	79.00 -126.00

Other Standard Summary

Name	Ratio 1&2	RT Lo/Hi	RT	Rel. RT	ICal RF	Conc	Conc Range
37Cl-TCDD		25:21 29:21	27:23	1.0011	1.105	9.94	8.30 - 12.10

Internal Standard Summary

Name	Ratio 1&2	RT Lo/Hi	RT	Rel. RT	ICal RF	Conc	Conc Range
13C12-2378-TCDF	0.760	25:10 30:10	26:40	0.9816	1.311	110.11	76.00 -131.00
13C12-2378-TCDD	0.805	25:10 29:10	27:21	1.0066	1.129	95.73	85.00 -117.00
13C12-PeCDF 123	1.510	25:10 35:10	30:32	1.1237	1.162	81.62	76.00 -130.00
13C12-PeCDF 234	1.500		31:12	1.1483	1.185	78.26	77.00 -130.00
13C12-PeCDD 123	1.464	23:10 33:10	31:32	1.1605	0.831	78.77	62.00 -160.00
13C12-HxCDF 478	0.514	31:03 39:03	33:56	0.9680	1.185	119.19	76.00 -131.00
13C12-HxCDF 678	0.514		34:02	0.9709	1.200	121.05	70.00 -143.00
13C12-HxCDF 234	0.513		34:31	0.9849	1.173	125.67	73.00 -137.00
13C12-HxCDF 789	0.517		35:19	1.0077	0.984	112.96	74.00 -135.00
13C12-HxCDD 478	1.212	34:03 36:03	34:38	0.9880	0.877	102.10	85.00 -117.00
13C12-HxCDD 678	1.220		34:43	0.9906	0.959	101.43	85.00 -118.00
13C12-HpCDF 678	0.440	33:03 44:03	36:59	1.0551	0.833	108.38	78.00 -129.00
13C12-HpCDF 789	0.437		38:35	1.1007	0.670	103.50	77.00 -129.00
13C12-HpCDD 678	1.002	33:03 41:03	38:03	1.0856	0.789	87.28	72.00 -138.00

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13C12-OCDD	0.844	41:41 42:01	41:51	1.1940	0.742	120.60	96.00	-415.00

Recovery Standard Summary

Name	Ratio 1&2	RT Lo/Hi	RT	Rel. RT	ICal RF	Conc	Conc Range
13C12-1234-TCDD	0.811	25:10 29:10	27:10	0.9934	1.000		
13C12-HxCDD 789	1.216	34:03 36:03	35:03	1.0121	1.000		

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Listing of TB23771
GC Peaks / Ratio / Ret. Time

Compound/ M_Z....	..RT.	OK Ratio	Total.Area...	Area.Peak.1..	Area.Peak.2..	Rel.RT	Compound.Name..	ID..
TCDF		0.65-0.89						
304-306	23:37	0.83	147.45	66.71	80.74	0.886	1368-TCDF	AN
	26:41	0.81	136.88	61.12	75.76	1.000	2378-TCDF	AN
304-306		2 Peaks						
13C12-TCDF		0.65-0.89						
316-318	26:40	0.76	1,173.99	506.91	667.08	0.982	13C12-2378-TCDF	IS0
316-318		1 Peak						
---------- Above: TCDF / TCDD Follows ----------								
TCDD		0.65-0.89						
320-322	24:54	0.79	97.51	43.11	54.40	0.910	1368-TCDD	AN
	25:17	0.78	80.14	35.20	44.94	0.924	1379-TCDD	AN
	27:23	0.76	100.14	43.39	56.75	1.001	2378-TCDD	AN
320		3 Peaks						
37Cl-TCDD								
328	27:23		89.36	89.36		1.001	37Cl-TCDD	CLS
328-330		1 Peak						
13C12-TCDD		0.65-0.89						
332-334	27:10	0.81	813.31	364.16	449.15	0.993	13C12-1234-TCDD	RS1
	27:21	0.80	879.05	392.01	487.04	1.007	13C12-2378-TCDD	IS1
332-334		2 Peaks						
---------- Above: TCDD / PeCDF Follows ----------								
PeCDF		1.32-1.78						
340-342	30:33	1.51	465.85	280.29	185.56	1.001	12378-PeCDF	AN
	31:13	1.52	451.89	272.74	179.15	1.001	23478-PeCDF	AN
340-342		2 Peaks						
13C12-PeCDF		1.32-1.78						
352-354	30:32	1.51	771.33	464.05	307.28	1.124	13C12-PeCDF 123	IS2
	31:12	1.50	754.24	452.53	301.71	1.148	13C12-PeCDF 234	IS3
352-354		2 Peaks						
---------- Above: PeCDF / PeCDD Follows ----------								
PeCDD		1.32-1.78						
356-358	31:33	1.59	287.88	176.73	111.15	1.001	12378-PeCDD	AN
356-358		1 Peak						
13C12-PeCDD		1.32-1.78						
368-370	31:32	1.46	532.39	316.30	216.09	1.161	13C12-PeCDD 123	IS4
368-370		1 Peak						
---------- Above: PeCDD / HxCDF Follows ----------								
HxCDF		1.05-1.43						
374-376	33:56	1.25	469.05	260.14	208.91	1.000	123478-HxCDF	AN

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Compound/ M_Z....	..RT.	OK	Ratio	Total.Area...	Area.Peak.1..	Area.Peak.2..	Rel.RT	Compound.Name..	ID..
	34:02		1.26	507.48	283.05	224.43	1.000	123678-HxCDF	AN
	34:32		1.26	471.88	263.43	208.45	1.000	234678-HxCDF	AN
	35:20		1.28	376.70	211.79	164.91	1.000	123789-HxCDF	AN
374-376		4 Peaks							
13C12-HxCDF		0.43-0.59							
384-386	33:56		0.51	762.45	258.73	503.72	0.968	13C12-HxCDF 478	IS5
	34:02		0.51	784.13	266.28	517.85	0.971	13C12-HxCDF 678	IS6
	34:31		0.51	795.76	269.85	525.91	0.985	13C12-HxCDF 234	IS7
	35:19		0.52	600.01	204.45	395.56	1.008	13C12-HxCDF 789	IS8
384-386		4 Peaks							

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

HxCDD		1.05-1.43							
390-392	34:39		1.26	278.26	155.05	123.21	1.001	123478-HxCDD	AN
	34:43		1.26	299.96	167.45	132.51	1.000	123678-HxCDD	AN
	35:03		1.24	295.73	163.72	132.01	1.010	123789-HxCDD	AN
390-392		3 Peaks							
13C12-HxCDD		1.05-1.43							
402-404	34:38		1.21	483.37	264.80	218.57	0.988	13C12-HxCDD 478	IS9
	34:43		1.22	525.11	288.57	236.54	0.991	13C12-HxCDD 678	IS10
	35:03		1.22	539.83	296.24	243.59	1.012	13C12-HxCDD 789	RS2
402-404		3 Peaks							

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

HpCDF		0.88-1.20							
408-410	37:00		1.01	353.98	178.22	175.76	1.001	1234678-HpCDF	AN
	38:35		1.04	271.91	138.59	133.32	1.000	1234789-HpCDF	AN
408-410		2 Peaks							
13C12-HpCDF		0.37-0.51							
418-420	36:59		0.44	487.36	148.97	338.39	1.055	13C12-HpCDF 678	IS11
	38:35		0.44	374.33	113.76	260.57	1.101	13C12-HpCDF 789	IS12
418-420		2 Peaks							

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

HpCDD		0.88-1.20							
424-426	38:04		1.02	186.98	94.62	92.36	1.001	1234678-HpCDD	AN
424-426		1 Peak							
13C12-HpCDD		0.88-1.20							
436-438	38:03		1.00	371.73	186.07	185.66	1.086	13C12-HpCDD 678	IS13
436-438		1 Peak							

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

OCDF		0.76-1.02							
442-444	42:04		0.91	345.39	164.60	180.79	1.005	OCDF	AN

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Compound/ M_Z....	..RT.	OK	Ratio	Total.Area...	Area.Peak.1..	Area.Peak.2..	Rel.RT	Compound.Name..	ID..
442-444		1 Peak							
OCDD			0.76-1.02						
458-460	41:51		0.89	257.60	121.09	136.51	1.000	OCDD	AN
458-460		1 Peak							
13C12-OCDD			0.76-1.02						
470-472	41:51		0.84	483.08	221.09	261.99	1.194	13C12-OCDD	IS14
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 ***

TRIANGLE LAB
Sample Analysis - Dioxin/Furan
August 1, 2002
Crystal Springs, MS
Book VII
Revised Sample Data

Project # 57930r1

Dates of Samples/ COC	Sample #	Pages	Depth
	Case Narrative	**1-11**	
	Document Control	**12-26**	
	Sample Data	**27-117**	
	OPR	31-48	
	TLI Blank	49-66	
7/19/02	DF-DP157	67-92	0.5-1'
	Duplicate	93-117	
	Calibration Data	**118-126**	

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CASE NARRATIVE

Analysis of Samples for the Presence of

Polychlorinated Dibenzo-*p*-Dioxins and Dibenzofurans by

High-Resolution Chromatography / High-Resolution Mass Spectrometry

Method 1613B (9/97)

Date:	August 1, 2002
Client ID:	Martin and Slagle
P.O. Number:	224410
TLI Project Number:	57930r1

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Overview

The samples and associated QC samples were extracted and analyzed according to procedures described in EPA Method 1613B (September 1997). Any particular difficulties encountered during the sample handling by Triangle Laboratories will be discussed in the QC Remarks section below. This report contains results from only the 1613 dioxin/furan analyses of two soil samples.

Quality Control Samples

A laboratory method blank and an ongoing precision and recovery (OPR) sample are extracted and analyzed with each batch of samples.

Quality Control Remarks

This analytical data has been released after being subjected to a series of inspections. General deviations from acceptable QC requirements are identified below. Specific QC issues associated with this particular project are:

Sample receipt: Sixteen soil sample were received from Martin and Slagle in good condition on July 20, 2002 at 4.0 °C and stored in a refrigerator at 4°C

Sample Preparation Laboratory: None

Mass Spectrometry: None

Data Review: None

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

The analytical data presented in this report are consistent with the guidelines of Method 1613B. Any exceptions have been discussed in the QC Remarks section of this case narrative with emphasis on their effect on the data. Should Martin and Slagle 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,

Kenneth Varley

Kenneth Varley

Report Preparation Chemist

The total number of pages in the data package is: 126 .

Method 1613 Sample Calculations:

Analyte Concentration

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

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

Where:

$Amt_{(\sigma)}$	=	amount of a given analyte, expressed in nanograms (ng) or picograms (pg).
A_σ	=	integrated current for the characteristic ions of the analyte
A_β	=	integrated current of the characteristic ions of the corresponding internal standard
Q_β	=	amount of internal standard added to the sample before extraction
$RRF_{(\sigma)}$	=	mean analyte relative response factor from the initial calibration
W	=	sample weight or volume (W = 1.0 for Method 23 samples)

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, expressed in ng or pg
2.5	=	minimum response required for a GC signal
H	=	sum of the height of the noise level
H_β	=	sum of the height of the characteristic ions of the corresponding internal standard
Q_β	=	amount of internal standard added to the sample before extraction
$RRF_{(\sigma)}$	=	mean analyte relative response factor from the initial calibration
W	=	sample weight or volume

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.

ACCREDITED IN ACCORDANCE WITH nelac

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 August 16, 2002.

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.

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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 April 1, 2001. **Renewal pending.*

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 August 16, 2002.

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 # 14199; Non-Potable Water, 2,3,7,8-TCDD, EPA 613, Serial # 14200. Valid through 15 June 2002.

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, 2002.

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, 2002.

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.

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CHAIN OF CUSTODY

DIOXIN/FURAN SPLS

No. 004205 *

Page 1 of 2

Turn Around (circle one) Normal Rush
Report Due:
Invoice To:
Company:
Address:
P.O. No.: Quote No.:

Project Number:
Project Name: KUHLMAN ELECTRIC
Project Location: CRYSTAL SPRING OHIO
Sampled By (Print): CHUCK PREL

Mail Report To: ROBERT MARTIN
Company: MARTIN & SCAGLE
Address: 208A SUTTON AVE
BLACK MOUNTAIN NC
28711

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	METHOD	JAR SERIAL # Comments	Laboratory Number
DF-DP220-0-0.5'	19 JL02	1121	S	1	A	DIOXINS & FURANS ALL	1613B	AS583952	
DF-DP220-0.5-1'	19 JL02	1136	S	1	A		1613B	AS583934	
DF-DP220-1'-2'	19 JL02	1157	S	1	A		1613B	AS583935	
DF-DP164-0-0.5'	19 JL02	1225	S	1	A		1613B	AS583938	
DF-DP164-0.5-1'	19 JL02	1242	S	1	A		1613B	AS583953	
DF-DP164-1'-2'	19 JL02	1304	S	1	A		1613B	AS583954	
DF-DP159-~~0.5-1'~~ 0-0.5'	19 JL02	1322	S	1	A		1613B	AS583971	
DF-DP159-0.5-1'	19 JL02	1331	S	1	A		1613B	AS583972	
DF-DP159-1'-2'	19 JL02	1400	S	1	A		1613B	AS583973	
DF-DP157-0-0.5'	19 JL02	1408	S	1	A		1613B	AS583951	
DF-DP157-0.5-1'	19 JL02	1416	S	1	A		1613B	AS583959	
DF-DP157-1'-2'	19 JL02	1441	S	1	A		1613B	AS583960	

*Preservation Code
(A=None) B=HCL C=H2SO4
D=HNO3 E=EnCore F=Methanol
G=NaOH O=Other(Indicate)

Relinquished By:	Date/Time:	Received By:	Date/Time:
Robert W Johnson	1530	[illegible]	7/20/02
Relinquished By:	Date/Time:	Received By:	Date/Time:

Custody Seal: Present/Absent Intact/Not Intact Seal #'s
Shipped Via:

Receipt Temp:
Temp Blank Y N 4°C

JARS EAGLE PITCHER LOT F 2049040

WHITE - REPORT COPY YELLOW - LABORATORY COPY PINK - SAMPLER/SUBMITTER

19JC02

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CHAIN OF CUSTODY

DIOXIN / FURAN SPCS

No. 004206 *

Page 2 of 2

Turn Around (circle one) Normal Rush
Report Due:
Invoice To:
Company:
Address:
P.O. No.: Quote No.:

Project Number:
Project Name: KUHLMAN ELECTRIC
Project Location: CRYSTAL SPRINGS, MISS
Sampled By (Print): CHUCK PEEL

Mail Report To: ROBERT MARTIN
Company: MARTIN + SLAGLE
Address: 208A SUTTON AVE, BLACK MOUNTAIN, N.C. 28711

Sample Description	Collection Date	Collection Time	Matrix	Total Bottles	Preserv*	Analysis Requested	Method	SPL BTL SERIAL # / Comments	Laboratory Number
DUPLICATE	19JC02	—	S	1	A	DIOXIN² FURAN² ALL	1613B	AS 583950	
DF-DP177-0-0.5'	19JC02	1457	S	1	A	↓	1613B	AS 583968	
DF-DP177-0.5-1'	19JC02	1510	S	1	A	↓	1613B	AS 583969	
DF-DP177-1-2'	19JC02	1519	S	1	A	↓	1613B	AS 583967	
						DW RONG TIME RLJ 19JC02			

*Preservation Code
A=None B=HCL C=H2SO4
D=HNO3 E=EnCore F=Methanol
G=NaOH O=Other(Indicate)

Relinquished By:	Date/Time:	Received By:	Date/Time:
Richard W Johnson 19JC02	1530	[signature]	7/10/02
Relinquished By:	Date/Time:	Received By:	Date/Time:

Custody Seal: Present/Absent Intact/Not Intact Seal #'s
Shipped Via:
Receipt Temp:
Temp Blank Y N

WHITE - REPORT COPY YELLOW - LABORATORY COPY PINK - SAMPLER/SUBMITTER

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

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

Sample Seals: Present
Container...: Intact

TLI Project Number 57930
Client: MAS07 - Martin & Slagle
Project: KOHLMAN ELECTRIC

Date Received 07/20/02 By B/Dm

Carrier and Number FedEx/823929085061

Book 331 Page 18

Ice Chest ICE Temp 4.0 C

TLI Number.. mR/H:CPM.	Client Sample ID..... Client COC ID.....*	Location.....	Matrix	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	DISPOSED Date/Init
331-18-1	DF-DP220-0-0.5' DF-DP220-0-0.5'	CO2	SOIL	SPW 7-23-02	SPW 7-23-02	SPW 7-30-02	SPW 7-30-02					
331-18-2	DF-DP220-0.5-1' DF-DP220-0.5-1'	CO2	SOIL									
331-18-3	DF-DP220-1'-2' DF-DP220-1'-2'	CO2	SOIL									
331-18-4	DF-DP164-0-0.5' DF-DP164-0-0.5'	CO2	SOIL									
331-18-5	DF-DP164-0.5'-1' DF-DP164-0.5'-1'	CO2	SOIL									
331-18-6	DF-DP164-1'-2' DF-DP164-1'-2'	CO2	SOIL									
331-18-7	DF-DP159-0-0.5' DF-DP159-0-0.5'	CO2	SOIL									
331-18-8	DF-DP159-0.5'-1' DF-DP159-0.5'-1'	CO2	SOIL									
331-18-9	DF-DP159-1'-2' DF-DP159-1'-2'	CO2	SOIL									
331-18-10	DF-DP157-0-0.5' DF-DP157-0-0.5'	CO2	SOIL									
331-18-11	DF-DP157-0.5'-1' DF-DP157-0.5'-1'	CO2	SOIL									
331-18-12	DF-DP157-1'-2' DF-DP157-1'-2'	CO2	SOIL									
331-18-13	DUPLICATE DUPLICATE	CO2	SOIL									
331-18-14	DF-DP177-0-0.5' DF-DP177-0-0.5'	CO2	SOIL	✓	✓	✓	✓					

Receiving Remarks:

Archive Remarks:

15

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

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

Sample Seals: Present
Container...: Intact

TLI Project Number 57930
Client: MAS07 - Martin & Slagle
Project: KOHLMAN ELECTRIC

Date Received 07/20/02 By

Carrier and Number FedEx/823929085061

Ice Chest ICE Temp 4.0 C

Book 331

Page 18

TLI Number.. mR/H:CPM.	Client Sample ID..... Client COC 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	To LAB Date/Init	To STORAGE Date/Init	DISPOSED Date/Init
331-18-15	DF-DP177-0,5'-1'	SOIL	SPW 7-23-02	SPW 7-23-02	SPW 7-30-02	SPW 7-30-02					
	DF-DP177-0,5'-1'	CO2									
331-18-16	DF-DP177-1'-2'	SOIL	↓	↓	↓	↓					
	DF-DP177-1'-2'	CO2									

Receiving Remarks:

Archive Remarks:

Form Revised 05/27/1997 -- Page 2 OF 2

TRIANGLE LABORATORIES, INC.
SAMPLE TRACKING AND PROJECT MANAGEMENT FORM

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

TLI Proj#: 57930-r1	Samples: 2	TurnAround.: 18 Day(s)
Prod Code: D70011	Matrix.: SOIL	Hold Time..: 365 Day(s)
DetectLim: 1 ppt	Type...: C	Start Date.: 07/22/02
	Recvd..: 07/20/02	Ship By....: 08/07/02
		DWL Due Dt.: 07/30/02

Analyte List.: Tetra - Octa

Method.....: 1613B Tetra-Octa
Client Proj..: Kuhlman Electric
Client.....: Martin & Slagle (MAS07)
P.O. No.....: 224410
Contact.....: Robert Martin
Proj. Mgr....:

Collect Dt/Tm: 07/19/02 11:22
Phone.....: 828-669-3929
Fax.....: 828-669-5289
Sample Origin: NC

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

TEF.....: EPA

Prespike Standard: n/a
Extraction Exp...: 07/19/03

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

Reporting Format: Report Option II

See MILES for Instructions/Communications.

Completed by: _____ / _____ DATE: _____

Reviewed by: _____ / _____ DATE: 07-29-02 (PMGT0197)

Date: 07/30/02
Time: 13:53

TRIANGLE LABORATORIES, INC.
Percent Moisture/Solid Calculations
Project: 57930-r1

PRDPERC v4.04
Page: 1

Sample #	crd R	Empty Vial.Wt	Wet Vial Weight...	Dry Vial Weight...	Entered.By.....	Date....	Time....	%Moist	%Solid	Valid Weight From.....-To.....	Target Weight...
012	Y	17.6500	0.0000	0.0000	gatchet	07/29/02	13:38:43	17.7	82.4	11.6505-12.6214	12.1359
014	Y	18.2800	0.0000	0.0000	gatchet	07/29/02	13:38:43	18.3	81.7	11.7503-12.7295	12.2399

Percent Moisture/Solid Summary

TLI.MILES.ID....	TLI.Number..	Client.Id.Number.....	%Moist	%Solid	ExtrctWt	DryWtEqu	RPD..
57930-r1 -012	331-18-11	DF-DP157-0,5'-1'	17.7	82.4			
57930-r1 -014	331-18-13	DUPLICATE	18.3	81.7			

*** End of Report ***

Date: 07/30/02
Time: 18:30

TRIANGLE LABORATORIES, INC.
Sample Size and Extraction Date/Time
Project: 57930-r1

PRDPERC v4.04
Page: 1

Sample # crd	Sample Weight...	Unit	Extract Date....	Extr. Time.	Adjusted Weight...
000	10.0000	G	07/30/02	16:55	0.0000
001	10.0000	G	07/30/02	16:55	0.0000
012	12.2000	G	07/30/02	16:55	10.0530
014	12.3000	G	07/30/02	16:55	10.0490

*** End of Report ***

Date: 07/30/02
Time: 18:30

TRIANGLE LABORATORIES, INC.
Wet Lab Extraction and Observations
Project: 57930-r1

PRDPERC v4.04
Page: 1

Sample #	crd	TLI_Number..	Customer.Sample.Id.....	Init. pH...	NaOH Adj. mL..	pH.1.	H2SO4 Adj. mL...	pH.2.	Appearance.	Color.....	Odor...	Vol.	Entered.By.....	Date....	Time....	S
000		TLI Blank	TLI Blank	n/a	n/a	n/a	n/a	n/a	SAND	TAN	NONE	0	WHITE	07/30/02	18:29:29	F
001		OPR	OPR	n/a	n/a	n/a	n/a	n/a	SAND	TAN	NONE	0	WHITE	07/30/02	18:29:29	F
012		331-18-11	DF-DP157-0,5'-1'	n/a	n/a	n/a	n/a	n/a	SOIL	BROWN	NONE	0	gatchet	07/29/02	13:38:43	F
014		331-18-13	DUPLICATE	n/a	n/a	n/a	n/a	n/a	SOIL	BROWN	NONE	0	gatchet	07/29/02	13:38:43	F

*** End of Report ***

Extraction

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

S.O.P: 218 Version: 10

Time On: 18:00
Time Off: 10:00

Solvents/Acids	Lot Numbers
Toluene	017635

Comments / Observations: Blank/OPR are Sand (Lot#S3-8-56L). SPW 7-30-02 ~~57987-002 Solid, brown, odor. SPW 7-30-02~~ JE SPW 7-30-02

Concentration

Type: Rotovap / KD / Speedvac C.H. 7/31/02

S.O.P: 124 Version: 17

Tridecane Lot # FT-1-05-304D J.L. 7/31/02

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

Solvent Exchange	Lot Number
Heptane	024949 CH 7/31/02
Iso - Octane	N/A

Comments / Observations:

Cleanup

S.O.P: 260 Version: 14 LP. 7/31/02
S.O.P: Version:
S.O.P: Version:

MeCl2/Hept	ID
1.5%	(USP)-18-71-
20%	(USP)-18-71-
6%	

Comments / Observations:

Transfers

S.O.P: 272 Version: 9

Division: 90/10 ESP010v.1 7/31/02

Solvents	Lot Numbers
Heptane	024949

Comments: 90/10 split was done on samples 012 and 014. Both fractions will be sent to MS. 7/31/02

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

Method: 1613
Matrix: Soil
Ext. Date: 7-30-02
Analyst: S. White

Project-Sample ID / TLI ID			Gross Weight Before (g)	Gross Weight After (g)	Sample Size g / mL	SPW 8234J USF-ALS 6/19/03 7/30/02 16:55 0.1 ug/mL 20 uL	SPW 8259B USF-MX 4/29/03 7/30/02 16:55 0.01 ug/mL 20 uL	JLewis 8260A USF-C 10/24/03 7/31/02 11:15 0.01 ug/mL 20 uL	/ / / / : ug/mL uL	Chemist Spike # Spike ID " Exp. " Date " Time Concen. Volume
57930 r1	0	TLI Blank	\	\	10.0	SPW		J Lewis		Any Left ~~Yes / No~~
57930 r1	1	OPR	\	\	10.0		SPW	J Lewis		~~Yes / No~~
57930 r1	12	331-18-11	439.2	427.0	12.2			J Lewis		Yes / No
57930 r1	14	331-18-13	393.8	381.4	12.3	SPW		J Lewis		Yes / No
~~57987~~	~~2~~	~~331-75-1~~	~~1673.7~~	~~1653.0~~	~~20.0~~	~~SPW 7-30-02~~				~~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	8	6	9				
57930 r1	0	TLI Blank	SPW 7-30-02	7/31/02 JL	7/31/02 JL	7/31/02 C.A	7/31/02 C.A	L.P. 7/31/02	N/A	JJ 7/31/02				
57930 r1	1	OPR							N/A					
57930 r1	12	331-18-11							JJ 7/31/02					
57930 r1	14	331-18-13	SPW 7-30-02	7/31/02 JL.	7/31/02 JL.	C.A 7/31/02	7/31/02 C.A	L.P. 7/31/02	JJ 7/31/02	JJ 7/31/02				
~~57987~~	~~2~~	~~331-75-1~~	~~ID SPW 7-30-02~~											

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 / _____} 9) Transfer ( ) Other:

TRIANGLE LABORATORIES, INC.
Transfer Chain-of-Custody Form
Project 57930-r1

Transfer From: DWLH5 To: DMS5

	Initials..	Date.....	Time...
Released by:	JJ	7/31/02	20:13
Accepted by:	CPW	7/31/02	21:45

MILES.ID.....	TLI_No.....	Cust.Id.....
57930-r1 -000	TLI Blank	TLI Blank
57930-r1 -001	OPR	OPR
57930-r1 -012	331-18-11	DF-DP157-0,5'-1'
57930-r1 -014	331-18-13	DUPLICATE

XfrCOC (Rev 11/01/94)

Additional comments or instructions:

TRIANGLE LABORATORIES, INC.

HR GC/HRMS ANALYSIS

Method: 1613B Tetra-Octa

Required Detection Limit: 1 ppt

PROJECT: 57930r1

SAMPLE INFORMATION

RS Conc 20 µl @ 0.1 NG/µl

S#.crd	TLI / SAMPLE ID / CLIENT SAMPLE ID	1ST COLUMN GC/MS FILENAME COLUMN: DB-5	CONFIRM	2ND COLUMN CONFIRM FILENAME COLUMN:	USF-RS/IND VOLUME 20µl SOLN ID 8237N	USF-RS/IND INIT CEW DATE 7/31/02	ANALYSIS COMMENTS
r1 000	TLI Blank / TLI Blank	U114403					
r1 001	OPR / OPR	U114402					
r1 012	331-18-11 / DF-DP157-0,5'-1'	U114404					
r1 014	331-18-13 / DUPLICATE	U114405			CEW 7/31/02		

Comments:

Type: C Analysis Order: OPR, Blank, then Samples.

Spike File: SP161B2S

Amt of Extract: 100%

REV 03/07/95 (PSTMF 6)

Triangle Laboratories, Inc.
Run Log

Instrument ID	Column Type	Column ID	Plot Name	Inj. Vol.	Acquisition	G/C
70U-83	DB5	2213727	TO2	2.0 µl	NDB5US	NDB5US

Signature: [signature] Date: 7/31/02

Filename	Date*	Time*	Project #	Sample#	No.	Client Sample ID	Syr	332	Operator/Date	Comments**
U021142	7/31/02	20:00	57980r1	331-68-2	3	OU6-SO-DP03	Auto	2.2 ET	CCC 7/31/02	
U021143	7/31/02	21:14	—	8217	—	8290/1613 Concal 10	Auto	1.7 ET	CCC 7/31/02	good for bottomends VC 7/31/02
U114401	↓	22:43	—	8136B	—	Rtchk	Auto	16%	CCC 7/31/02	Concal 1613B T-O CCC 7/31/02
02	↓	23:31	57930r1	OPR	0	OPR	↓	1.8 ET	↓	
03	8/1/02	00:19	↓	TLI Blank	1	TLI Blank	↓	1.1 ET	↓	
04	↓	01:07	↓	331-18-11	12	DF-DP157-0.5'-1'	↓	1.1 ET	↓	
05	↓	01:55	57930r1	331-18-13	14	Duplicate	↓	1.9 ET	↓	
06	↓	02:43	58001	OPR	0	OPR	↓	1.6 ET	↓	
07	↓	03:32	↓	TLI Blank	1	TLI Blank	↓	1.2 ET	↓	
08	↓	04:20	58001	331-89-7	2	VCC02210	↓	1.9 ET	↓	
09	↓	↓	57928r1	331-16-4B	4	L40121-4	↓	↓	↓	
10	↓	↓	57998	331-86-1A	2	PLG0648-01	↓	↓	↓	
114411	8/1/02	↓	57999	331-87-1A	2	PLG0650-01	Auto	↓	CCC 7/31/02	

Transcribed from chromatographic data
Dated initials required

ConCal Due: _____
ConCal Due: _____

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

SAMPLE DATA

2445 S. Alston Ave. • Durham, NC 27713 • (919) 544-5729 • FAX (919) 544-5491
www.trianglelabs.com

TRIANGLE LABORATORIES, INC.
Ongoing Precision and Recovery - Sample Results

Project: 57930 - r1
Matrix: SOLID
Method: 161B

File: U114402
SAS#:
Contract#: n/a

Extraction Date: 07/30/02
Analysis Date: 07/31/02
Analysis Time: 23:31

NOTE: Concentrations are concentrations in the final extract.
3rd Revision Table 7 Performance Specifications.

ISOMER	SPIKED. (ng/mL)	OBSERVED (ng/mL)	Perf.Specs.... from	to	%Recovery
2378-TCDD	10.0	11.0	6.7	15.8	110
2378-TCDF	10.0	10.0	7.5	15.8	100.0
12378-PeCDD	50.0	50.2	35.0	71.0	100
12378-PeCDF	50.0	55.4	40.0	67.0	111
23478-PeCDF	50.0	57.0	34.0	80.0	114
123478-HxCDD	50.0	49.7	35.0	82.0	99.4
123678-HxCDD	50.0	46.0	38.0	67.0	92.1
123789-HxCDD	50.0	48.4	32.0	81.0	96.8
123478-HxCDF	50.0	52.2	36.0	67.0	104
123678-HxCDF	50.0	50.1	42.0	65.0	100
234678-HxCDF	50.0	49.1	35.0	78.0	98.2
123789-HxCDF	50.0	50.3	39.0	65.0	101
1234678-HpCDD	50.0	46.6	35.0	70.0	93.2
1234678-HpCDF	50.0	54.3	41.0	61.0	109
1234789-HpCDF	50.0	50.5	39.0	69.0	101
OCDD	100.0	89.4	78.0	144.0	89.4
OCDF	100.0	80.1	63.0	170.0	80.1

Labeled Compound	SPIKED. (ng/mL)	OBSERVED (ng/mL)	Perf.Specs.... from	to	%Recovery
13C12-2378-TCDD	100.0	66.9	20.0	175.0	66.9
13C12-2378-TCDF	100.0	67.7	22.0	152.0	67.7
13C12-12378-PeCDD	100.0	122	21.0	227.0	122
13C12-12378-PeCDF	100.0	87.4	21.0	192.0	87.4
13C12-23478-PeCDF	100.0	92.3	13.0	328.0	92.3
13C12-123478-HxCDD	100.0	90.7	21.0	193.0	90.7
13C12-123678-HxCDD	100.0	95.1	25.0	163.0	95.1
13C12-123478-HxCDF	100.0	88.8	19.0	202.0	88.8
13C12-123678-HxCDF	100.0	95.2	21.0	159.0	95.2
13C12-234678-HxCDF	100.0	106	22.0	176.0	106
13C12-123789-HxCDF	100.0	100	17.0	205.0	100
13C12-1234678-HpCDD	100.0	107	26.0	166.0	107
13C12-1234678-HpCDF	100.0	91.6	21.0	158.0	91.6
13C12-1234789-HpCDF	100.0	101	20.0	186.0	101
13C12-OCDD	200.0	241	26.0	397.0	120
37Cl-2378-TCDD	10.0	6.0	3.1	19.1	59.8

MILES 4.22.16
GRY_PSUM v1.11

Processed By: _____ Date: 08/01/02

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Phone: (919) 544-5729 • Fax: (919) 544-5491

TRIANGLE LABORATORIES, INC.
Sample Results for Project 57930r1
Method 1613B Full Screen Analyses (DB-5)

Data File	U114402	U114403	U114404	U114405
Sample ID	OPR	TLI Blank	DF-DP157-0,5'-1	DUPLICATE
Units	pg/g	pg/g	pg/g	pg/g
Extraction Date	07/30/2002	07/30/2002	07/30/2002	07/30/2002
Analysis Date	07/31/2002	08/01/2002	08/01/2002	08/01/2002
Instrument	U	U	U	U
Matrix	SOLID	SOLID	SOLID	SOLID
Extraction Type				
Analytes				
2378-TCDD	22.0	< 1.0	< 0.99	< 1.0
12378-PeCDD	100	< 5.0	< 5.0	< 5.0
123478-HxCDD	99.4	< 5.0	< 5.0	< 5.0
123678-HxCDD	92.1	< 5.0	< 5.0	< 5.0
123789-HxCDD	96.8	< 5.0	< 5.0	< 5.0
1234678-HpCDD	93.2	< 5.0	< 5.0	6.2
OCDD	179	< 10	117	117
2378-TCDF	20.0	< 1.0	< 0.99	< 1.0
12378-PeCDF	111	< 5.0	< 5.0	< 5.0
23478-PeCDF	114	< 5.0	< 5.0	< 5.0
123478-HxCDF	104	< 5.0	< 5.0	< 5.0
123678-HxCDF	100	< 5.0	< 5.0	< 5.0
234678-HxCDF	98.2	< 5.0	< 5.0	< 5.0
123789-HxCDF	101	< 5.0	< 5.0	< 5.0
1234678-HpCDF	109	< 5.0	< 5.0	12.6
1234789-HpCDF	101	< 5.0	< 5.0	< 5.0
OCDF	160	< 10	< 9.9	< 10
TOTAL TCDD		< 1.0	< 0.99	< 1.0
TOTAL PeCDD		< 5.0	< 5.0	< 5.0
TOTAL HxCDD		< 5.0	< 5.0	< 5.0
TOTAL HpCDD		< 5.0	7.5	16.5
TOTAL TCDF		< 1.0	1.1	3.1
TOTAL PeCDF		< 5.0	< 5.0	12.1
TOTAL HxCDF		< 5.0	< 5.0	8.7
TOTAL HpCDF		< 5.0	< 5.0	19.7
Other Standards Percent Recovery Summary (% Rec)				
37Cl-TCDD	59.8	63.0	65.9	58.2
Internal Standards Percent Recovery Summary (% Rec)				
13C12-2378-TCDD	66.9	70.8	73.2	67.7
13C12-PeCDD 123	122	115	129	120
13C12-HxCDD 478	90.7	86.0	96.6	90.8
13C12-HxCDD 678	95.1	91.9	103	97.4
13C12-HpCDD 678	107	102	113	105
13C12-OCDD	120	115	124	113
13C12-2378-TCDF	67.7	69.4	73.6	69.8
13C12-PeCDF 123	87.4	88.0	97.5	88.8
13C12-PeCDF 234	92.3	90.5	98.1	91.7
13C12-HxCDF 478	88.8	86.4	95.5	88.1
13C12-HxCDF 678	95.2	91.7	102	93.3
13C12-HxCDF 234	106	104	112	103

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Phone: (919) 544-5729 • Fax: (919) 544-5491

Data File	U114402	U114403	U114404	U114405
Sample ID	OPR	TLI Blank	DF-DP157-0,5'-1	DUPLICATE
Units	pg/g	pg/g	pg/g	pg/g
Extraction Date	07/30/2002	07/30/2002	07/30/2002	07/30/2002
Analysis Date	07/31/2002	08/01/2002	08/01/2002	08/01/2002
Instrument	U	U	U	U
Matrix	SOLID	SOLID	SOLID	SOLID
Extraction Type				

Internal Standards Percent Recovery Summary (% Rec)

13C12-HxCDF 789	100	94.3	103	97.2
13C12-HpCDF 678	91.6	89.9	95.1	88.4
13C12-HpCDF 789	101	98.5	103	99.0

(Concentration of GC peaks out of theoretical isotopic abundance ratio range expressed as a detection limit).
Minimum levels are reported for non-detected GC peaks.
***** = INTERFERENCE
This report is in accordance with Method 1613B requirements and may not exactly match the sample topsheets.

TLI Project: **57930r1** 1613, Revision B PCDD/PCDF Analysis (c)
Client Sample: **OPR** Analysis File: **U114402**

Client Project:	**Kuhlman Electric**				
Sample Matrix:	**SOLID**	Date Received:	/ /	Spike File:	**SP161B2S**
TLI ID:	**OPR**	Date Extracted:	**07/30/2002**	ICal:	**UF5709B**
		Date Analyzed:	**07/31/2002**	ConCal:	**UB21143**
Sample Size:	**10.000 g**	Dilution Factor:	**n/a**	% Moisture:	**n/a**
Dry Weight:	**n/a**	Blank File:	**U114403**	% Lipid:	**n/a**
GC Column:	**DB-5**	Analyst:	**CGK**	% Solids:	**n/a**

Analytes	Conc. (pg/g)	DL	Ratio	RT	RRT	Flags
2,3,7,8-TCDD	22.0		0.78	26:40	1.001	—
1,2,3,7,8-PeCDD	100		1.56	30:56	1.000	—
1,2,3,4,7,8-HxCDD	99.4		1.23	34:06	1.000	—
1,2,3,6,7,8-HxCDD	92.1		1.23	34:10	1.000	—
1,2,3,7,8,9-HxCDD	96.8		1.25	34:29	1.009	—
1,2,3,4,6,7,8-HpCDD	93.2		1.06	37:27	1.000	—
1,2,3,4,6,7,8,9-OCDD	179		0.89	41:04	1.000	—
2,3,7,8-TCDF	20.0		0.75	25:57	1.001	—
1,2,3,7,8-PeCDF	111		1.53	29:54	1.000	—
2,3,4,7,8-PeCDF	114		1.55	30:36	1.001	—
1,2,3,4,7,8-HxCDF	104		1.23	33:24	1.000	—
1,2,3,6,7,8-HxCDF	100		1.23	33:30	1.000	—
2,3,4,6,7,8-HxCDF	98.2		1.23	33:59	1.000	—
1,2,3,7,8,9-HxCDF	101		1.23	34:45	1.000	—
1,2,3,4,6,7,8-HpCDF	109		1.04	36:24	1.000	—
1,2,3,4,7,8,9-HpCDF	101		1.05	37:57	1.000	—
1,2,3,4,6,7,8,9-OCDF	160		0.92	41:16	1.005	—

161B_PSR v2.04, LARS 6.25.05

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Printed: 10:52 08/01/2002

TLI Project: **57930r1** 1613, Revision B PCDD/PCDF Analysis (c)
Client Sample: **OPR** Analysis File: **U114402**

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	RRT	Flags
$^{13}C_{12}$-2,3,7,8-TCDD	134	66.9	20%-175%	0.80	26:39	1.007	—
$^{13}C_{12}$-1,2,3,7,8-PeCDD	244	122	21%-227%	1.59	30:56	1.169	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	181	90.7	21%-193%	1.27	34:05	0.988	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	190	95.1	25%-163%	1.30	34:10	0.991	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	213	107	26%-166%	1.08	37:27	1.086	—
$^{13}C_{12}$-1,2,3,4,6,7,8,9-OCDD	481	120	13%-199%	0.90	41:03	1.190	—
$^{13}C_{12}$-2,3,7,8-TCDF	135	67.7	22%-152%	0.79	25:56	0.980	—
$^{13}C_{12}$-1,2,3,7,8-PeCDF	175	87.4	21%-192%	1.57	29:54	1.130	—
$^{13}C_{12}$-2,3,4,7,8-PeCDF	185	92.3	13%-328%	1.55	30:35	1.156	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	178	88.8	19%-202%	0.53	33:23	0.968	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	190	95.2	21%-159%	0.52	33:29	0.971	—
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	212	106	22%-176%	0.52	33:59	0.986	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	200	100	17%-205%	0.53	34:45	1.008	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	183	91.6	21%-158%	0.48	36:23	1.055	—
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	203	101	20%-186%	0.47	37:56	1.100	—

Cleanup Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	RRT	Flags
$^{37}Cl_4$-2,3,7,8-TCDD	12.0	59.8	31%-191%	26:40	1.008	—

Recovery Standards	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.82	26:28	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.27	34:29	—

Data Reviewer: CEM 08/01/2002

161B_PSR v2.04, LARS 6.25.05

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Printed: 10:52 08/01/2002

Initial ....Date...

Data Review By: AEM 8/1/02

Channel specific noise levels computed from 'NL' heights.

Page No. 1 Listing of U114402B.dbf
08/01/2002 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						0.872-1.073			
304-306	DC	NL		Height			4.03	2.03	2.00				
	DC	SN		22:46	RO	1.70	10.07			0.878			
	DC	SN		23:12	RO	1.61	8.18			0.895			
	DC	SN		24:24	RO	2.66	9.37			0.941			
	DC	SN		24:40	RO	2.82	10.20			0.951			
				24:56		0.70	64.91	26.69	38.22	0.961			
				25:32		0.67	39.04	15.72	23.32	0.985			J
				25:57		0.75	1,011.59	432.96	578.63	1.001	2378-TCDF	AN	
304-306			3	Peaks			1,115.54						
13C12-TCDF				0.65-0.89						0.944-1.136			
316-318	DC	NL		Height			4.42	2.11	2.31				
	DC	WL		23:55	RO	0.21	19.20			0.922			
	DC	WL		24:00	RO	1.00	11.78			0.925			
				24:54		0.78	77.09	33.81	43.28	0.960			
	DC	SN		25:12	RO	1.16	30.35			0.972			
				25:32		0.69	98.68	40.24	58.44	0.985			
				25:56		0.79	8,971.89	3,950.18	5,021.71	1.000	13C12-2378-TCDF	ISO	
				Height			2,359.34	1,046.63	1,312.71				
	DC	SN		26:19	RO	0.37	23.42			1.015			
	DC	SN		26:40		0.68	13.28			1.028			
316-318			3	Peaks			9,147.66						

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

TCDD				0.65-0.89						0.899-1.043			
320-322	DC	NL		Height			4.14	2.24	1.90				
				26:40		0.78	810.37	354.59	455.78	1.001	2378-TCDD	AN	
	DC	SN		26:52		0.66	17.08			1.008			
	DC	SN		27:09	RO	1.03	13.47			1.019			
	DC	SN		27:19	RO	1.59	3.93			1.025			
320-322			1	Peak			810.37						
37Cl-TCDD										0.925-1.075			
328	DC	NL		Height			1.96	1.96					
	DC	SN		24:40			1.96			0.926			
	DC	SN		24:48			3.48			0.931			
	DC	SN		24:52			3.24			0.933			
	DC	SN		24:56			3.47			0.936			
	DC	SN		25:55			3.15			0.972			
	DC	SN		26:22			8.82			0.989			
				26:40			593.19	593.19		1.001	37Cl-TCDD	CLS	
				26:54			6.85	6.85		1.009			
	DC	SN		27:06			13.79			1.017			
	DC	SN		27:19			3.09			1.025			
	DC	SN		27:27			4.01			1.030			

```
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  27:43                 6.48                                 1.040
                DC  SN  27:53                 5.53                                 1.046
                DC  SN  27:57                 4.74                                 1.049
                DC  SN  28:07                 3.72                                 1.055
                DC  SN  28:13                 1.26                                 1.059
328                   2 Peaks               600.04

13C12-TCDD                      0.65-0.89                                   0.918-1.068
332-334         DC  NL            Height        6.45          3.94          2.51
                         26:28     0.82     8,261.88      3,723.56      4,538.32  0.993 13C12-1234-TCDD RS1
                         26:39     0.80     6,242.71      2,782.32      3,460.39  1.000 13C12-2378-TCDD IS1
                                  Height    1,684.49        753.22        931.27
                DC  SN  27:47 RO  1.22         10.73                               1.043
332-334               2 Peaks            14,504.59

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

PeCDF                           1.32-1.78                                   0.906-1.038
340-342         DC  NL            Height        4.40          2.10          2.30
                DC  SN  28:45 RO  0.86         10.67                               0.940
                         29:03 RO  1.20        80.32         43.77         36.55  0.950
                         29:32     1.56        57.66         35.17         22.49  0.966                        J
                         29:54     1.53     5,606.81      3,389.53      2,217.28  1.000 12378-PeCDF     AN
                         30:11 RO  1.13        94.48         50.19         44.29  0.987
                         30:36     1.55     5,991.98      3,642.79      2,349.19  1.001 23478-PeCDF     AN
                         30:58 RO  0.56        18.06          6.45         11.61  1.013
                         31:35 RO  0.74        26.80         11.36         15.44  1.033
340-342               7 Peaks            11,876.11

13C12-PeCDF                     1.32-1.78                                   0.801-1.127
352-354         DC  NL            Height        3.77          1.84          1.93
                DC  SN  27:42 RO  1.00        20.32                               0.906
                         29:03     1.40       140.59         81.98         58.61  0.950
                         29:31 RO  1.22        97.35         53.49         43.86  0.965
                         29:54     1.57     8,055.96      4,921.51      3,134.45  1.000 13C12-PeCDF 123 IS2
                                  Height    2,311.20      1,421.21        889.99
                         30:11 RO  1.30       124.65         70.53         54.12  0.987
                         30:35     1.55     8,540.12      5,188.84      3,351.28  1.000 13C12-PeCDF 234 IS3
                                  Height    2,540.77      1,549.26        991.51
                         30:57 RO  0.52        44.22         15.19         29.03  1.012
                         31:34 RO  1.97        99.45         65.92         33.53  1.032
352-354               7 Peaks            17,102.34

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

PeCDD                           1.32-1.78                                   0.936-1.020
356-358         DC  NL            Height        3.58          2.12          1.46
                         29:25 RO  3.94        20.35         16.23          4.12  0.951
                DC  SN  30:12 RO  0.66        20.53                               0.976
                         30:56     1.56     3,787.35      2,306.84      1,480.51  1.000 12378-PeCDD     AN
                DC  SN  31:19 RO  0.59        18.68                               1.012
                DC  SN  31:26 RO  0.38        14.95                               1.016
```

```
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.

356-358              2 Peaks              3,807.70

13C12-PeCDD                    1.32-1.78                                    0.728-1.051
368-370        DC  NL          Height          4.34          2.30          2.04
                       30:00 RO  1.06         41.55         21.34         20.21  0.970
                       30:56     1.59      6,694.66      4,114.76      2,579.90  1.000 13C12-PeCDD 123 IS4
                               Height      2,003.21      1,227.77        775.44
               DC  SN  31:19 RO  2.32         35.94                              1.012
               DC  SN  31:49 RO  0.96         14.26                              1.029
368-370              2 Peaks              6,736.21

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

HxCDF                          1.05-1.43                                    0.928-1.007
374-376        DC  NL          Height          6.78          3.24          3.54
                       32:33 RO  1.71         43.04         27.13         15.91  0.937
                       33:24     1.23      5,097.00      2,816.04      2,280.96  1.000 123478-HxCDF    AN
                       33:30     1.23      5,504.44      3,038.58      2,465.86  1.000 123678-HxCDF    AN
                       33:59     1.23      5,242.99      2,888.81      2,354.18  1.000 234678-HxCDF    AN
                       34:45     1.23      4,176.08      2,306.16      1,869.92  1.000 123789-HxCDF    AN
               DC  WH  35:01 RO  0.69         25.19                              1.008
               DC  WH  35:07     1.37          9.20                              1.011
374-376              5 Peaks             20,063.55

13C12-HxCDF                    0.43-0.59                                    0.877-1.107
384-386        DC  NL          Height          7.76          3.53          4.23
                       32:33     0.59         48.23         17.89         30.34  0.937
                       33:23     0.53      8,584.99      2,974.59      5,610.40  1.000 13C12-HxCDF 478 IS5
                               Height      3,054.73      1,066.84      1,987.89
                       33:29     0.52      9,164.64      3,149.32      6,015.32  1.000 13C12-HxCDF 678 IS6
                               Height      2,873.69        989.84      1,883.85
                       33:59     0.52      9,400.66      3,213.94      6,186.72  1.000 13C12-HxCDF 234 IS7
                               Height      2,982.54      1,018.56      1,963.98
                       34:45     0.53      7,036.75      2,425.45      4,611.30  1.000 13C12-HxCDF 789 IS8
                               Height      2,113.21        732.43      1,380.78
384-386              5 Peaks             34,235.27

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

HxCDD                          1.05-1.43                                    0.959-1.013
390-392        DC  NL          Height          4.83          2.27          2.56
                       34:06     1.23      3,307.31      1,826.63      1,480.68  1.000 123478-HxCDD    AN
                       34:10     1.23      3,279.66      1,812.09      1,467.57  1.000 123678-HxCDD    AN
                       34:29     1.25      3,271.87      1,819.58      1,452.29  1.009 123789-HxCDD    AN
               DC  WH  34:46     1.12         26.60                              1.018
390-392              3 Peaks              9,858.84

13C12-HxCDD                    1.05-1.43                                    0.983-1.042
402-404        DC  NL          Height          6.53          3.51          3.02
                       33:33 RO  0.98         35.09         17.41         17.68  0.984
                       34:05     1.27      5,552.46      3,105.85      2,446.61  1.000 13C12-HxCDD 478 IS9
                               Height      1,936.45      1,079.38        857.07
```

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

                        34:10     1.30      6,440.28      3,640.08      2,800.20  1.000 13C12-HxCDD 678 IS10
                                Height      2,076.49      1,180.93        895.56
                        34:29     1.27      6,519.66      3,643.39      2,876.27  1.012 13C12-HxCDD 789 RS2
402-404               4 Peaks               18,547.49

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

HpCDF                           0.88-1.20                                     0.955-1.004
408-410          DC  NL         Height          5.18          2.80          2.38
                        36:24     1.04      4,922.77      2,507.93      2,414.84  1.000 1234678-HpCDF   AN
                        37:57     1.05      3,594.75      1,841.36      1,753.39  1.000 1234789-HpCDF   AN
408-410               2 Peaks               8,517.52

13C12-HpCDF                     0.37-0.51                                     0.856-1.146
418-420          DC  NL         Height          4.38          2.20          2.18
                        36:23     0.48      6,272.03      2,023.56      4,248.47  1.000 13C12-HpCDF 678 IS11
                                Height      1,698.56        531.93      1,166.63
                        36:56 RO  0.61         24.55          9.31         15.24  0.974
                 DC  SN 37:02 RO  0.81         21.08                               0.976
                 DC  SN 37:27     0.44         14.27                               0.987
                        37:56     0.47      4,863.31      1,551.64      3,311.67  1.000 13C12-HpCDF 789 IS12
                                Height      1,226.27        382.11        844.16
                 DC  SN 38:22 RO  0.58         26.80                               1.011
418-420               3 Peaks              11,159.89

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

HpCDD                           0.88-1.20                                     0.976-1.005
424-426          DC  NL         Height          4.51          2.06          2.45
                 DC  SN 36:41 RO  1.34         16.49                               0.980
                        37:27     1.06      2,650.07      1,363.65      1,286.42  1.000 1234678-HpCDD   AN
                 DC  WH 37:48 RO  0.84         12.10                               1.009
424-426               1 Peak                2,650.07

13C12-HpCDD                     0.88-1.20                                     0.868-1.081
436-438          DC  NL         Height          5.33          2.55          2.78
                        37:27     1.08      5,629.76      2,926.19      2,703.57  1.000 13C12-HpCDD 678 IS13
                                Height      1,392.43        724.35        668.08
436-438               1 Peak                5,629.76

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

OCDF                            0.76-1.02                                     0.951-1.049
442-444          DC  NL         Height          4.84          2.30          2.54
                        41:16     0.92      5,123.74      2,450.45      2,673.29  1.005 OCDF            AN
                 DC  SN 41:55 RO  0.51         13.20                               1.021
442-444               1 Peak                5,123.74

OCDD                            0.76-1.02                                     0.951-1.049
458-460          DC  NL         Height          4.26          2.12          2.14
                        41:04     0.89      4,245.72      1,999.77      2,245.95  1.000 OCDD            AN
                 DC  SN 41:33 RO  0.41         20.32                               1.012
```

```
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.

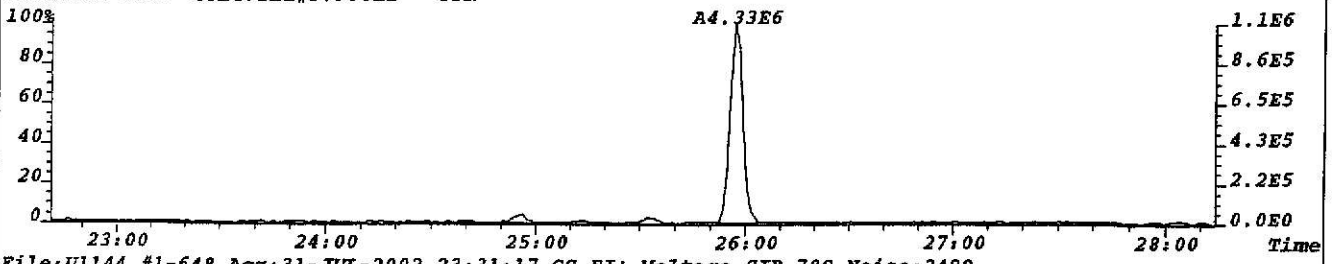
458-460              1 Peak                4,245.72

13C12-OCDD                     0.76-1.02                                    0.996-1.004
470-472         DC  NL          Height          4.39          2.05          2.34
                        41:03     0.90      8,580.96      4,066.78      4,514.18  1.000 13C12-OCDD      IS14
                                Height      1,721.84        810.83        911.01
                DC  WH  41:27 RO  1.69         70.33                              1.010
470-472              1 Peak                8,580.96
```

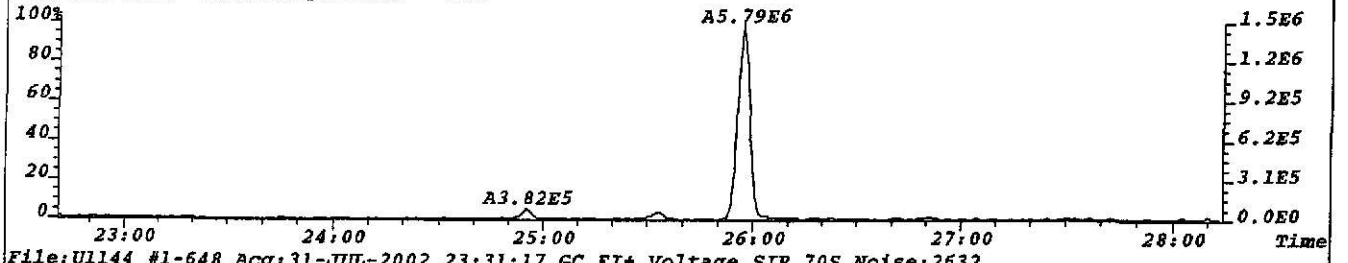
Column Description.....	"Why" Code Description.....	QC Log Desc.....
M_Z -Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT. -Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK -RO=Ratio Outside 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 ***

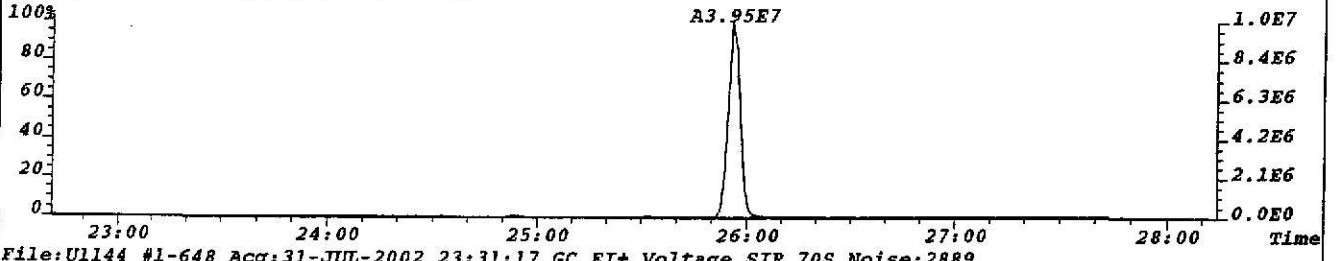
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2532
303.9016 S:2 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,10128.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



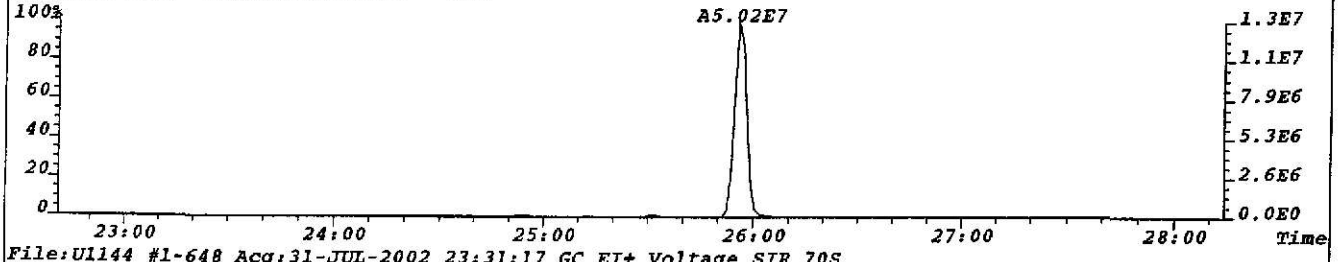
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2499
305.8987 S:2 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,9996.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



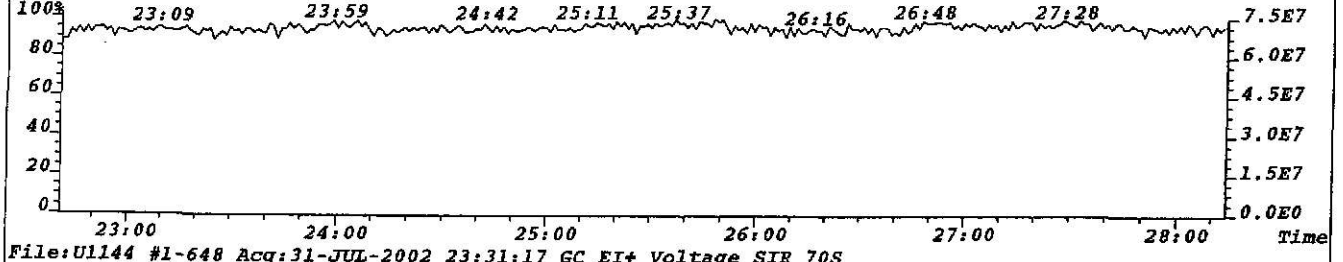
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2632
315.9419 S:2 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,10528.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



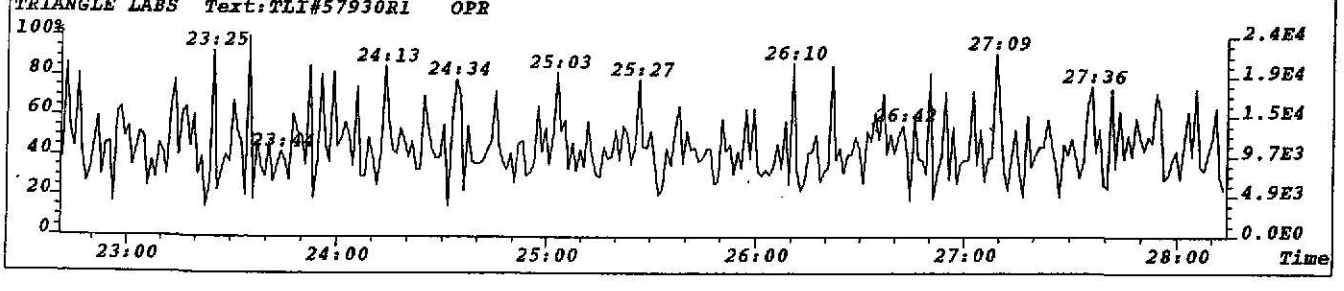
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2889
317.9389 S:2 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,11556.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



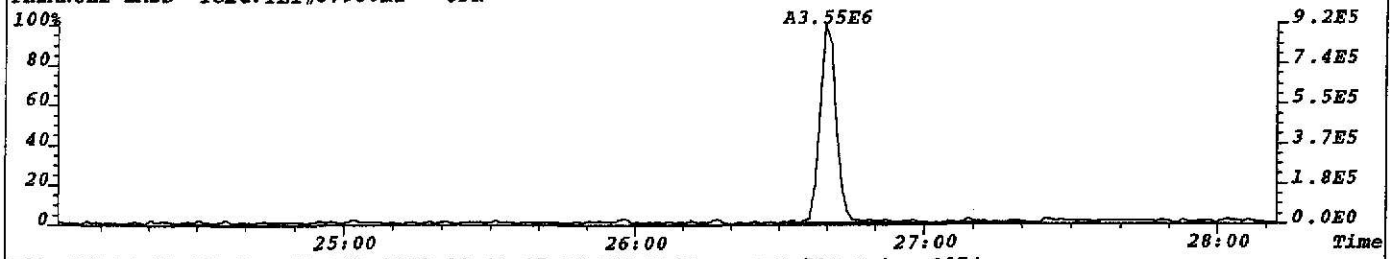
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S
330.9792 S:2 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



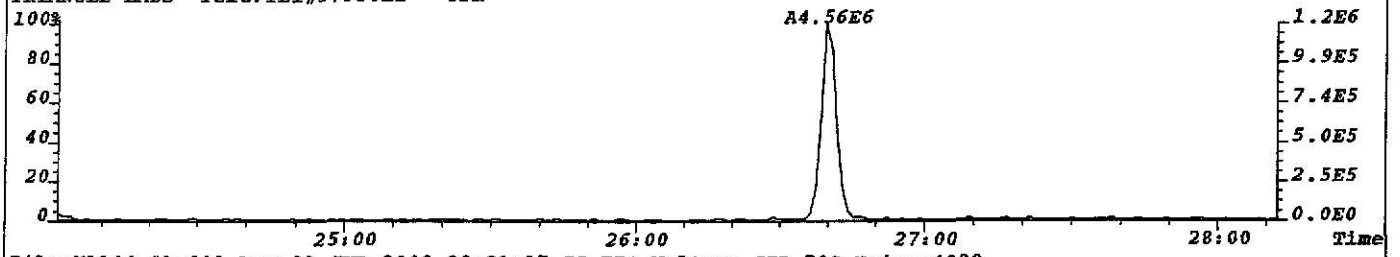
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S
375.8364 S:2 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



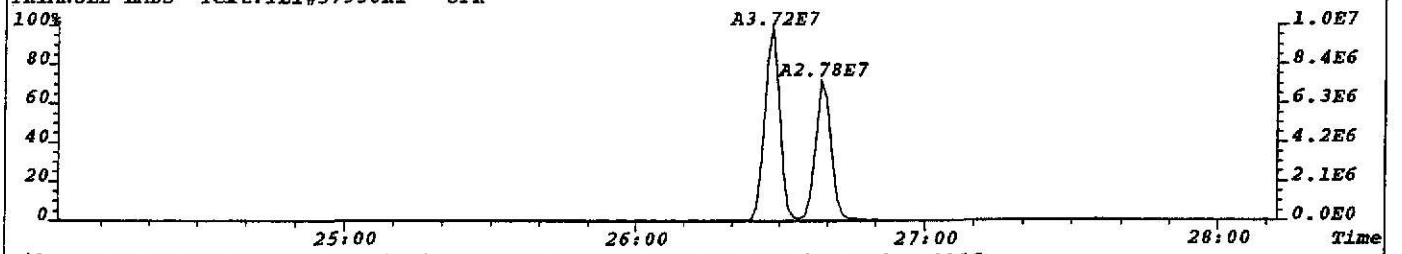
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2806
319.8965 S:2 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11224.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



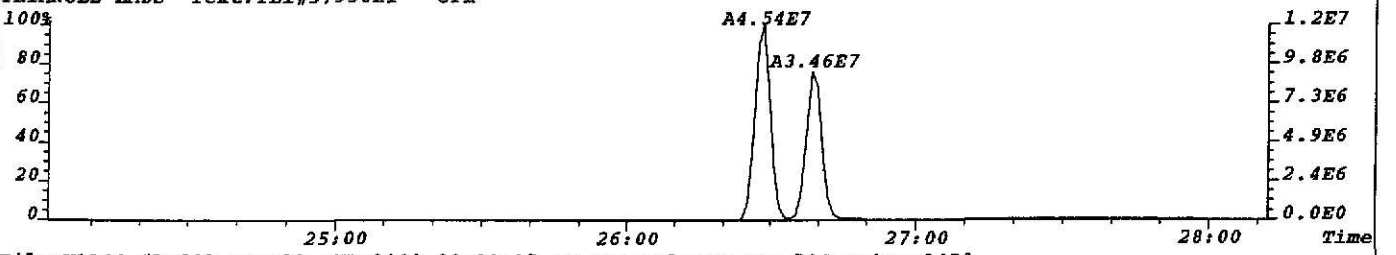
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2374
321.8936 S:2 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9496.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



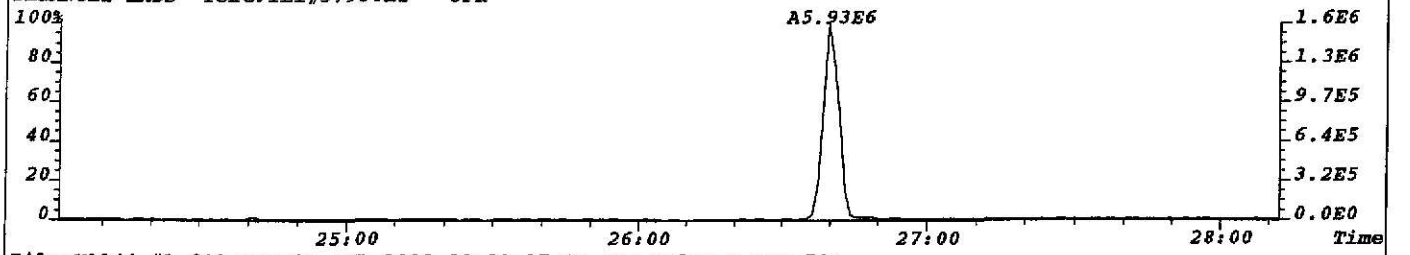
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:4929
331.9368 S:2 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,19716.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



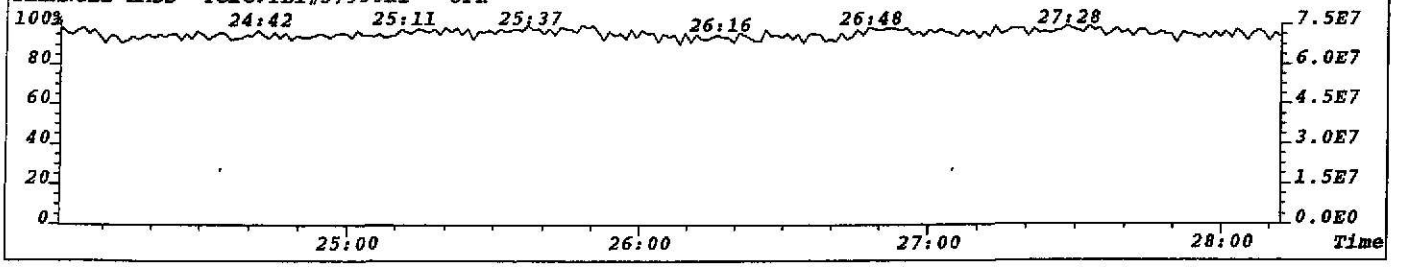
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:3136
333.9338 S:2 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12544.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



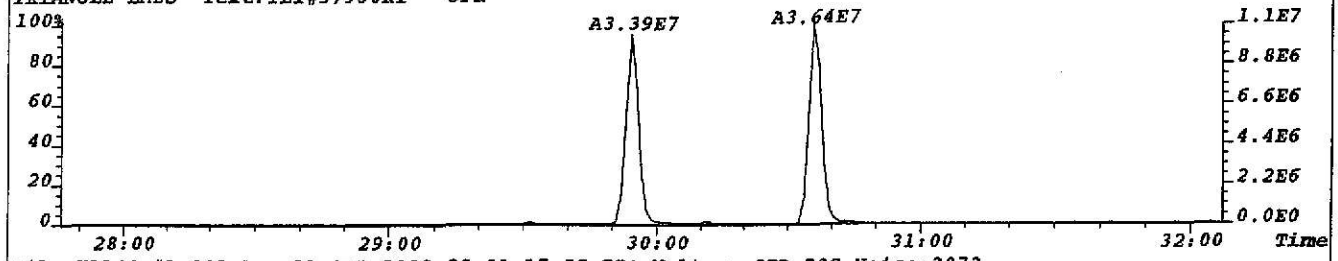
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2450
327.8847 S:2 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9800.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



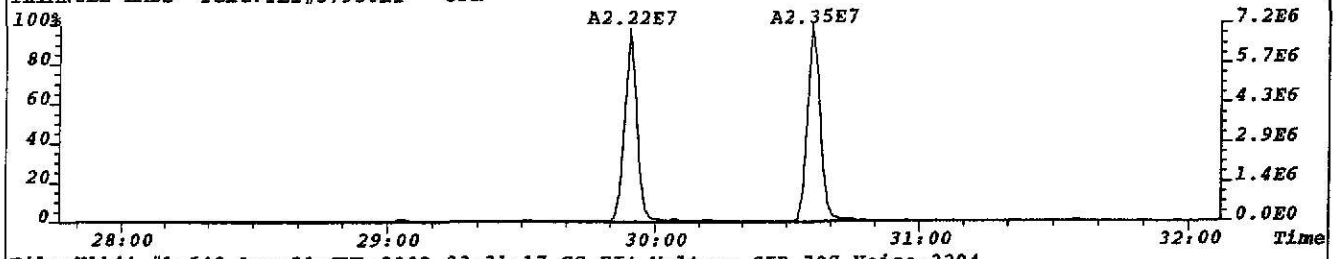
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S
330.9792 S:2 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



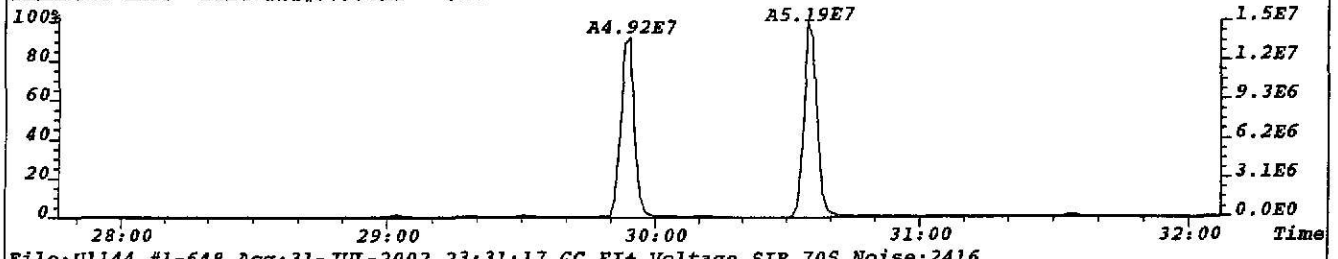
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2629
339.8597 S:2 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10516.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



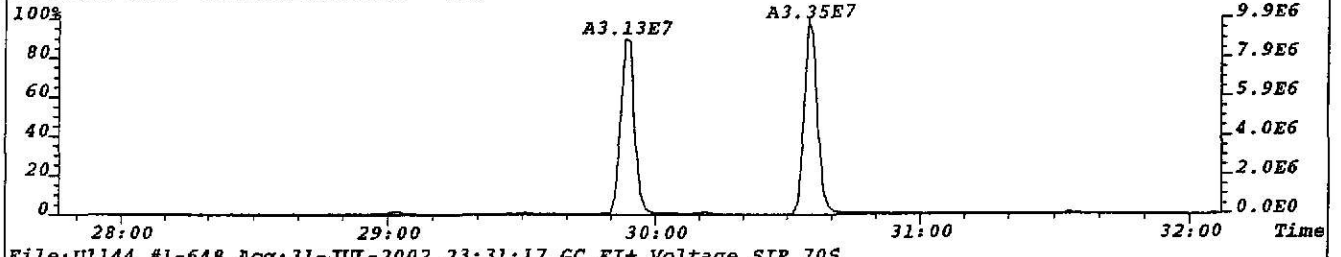
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2872
341.8567 S:2 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11488.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



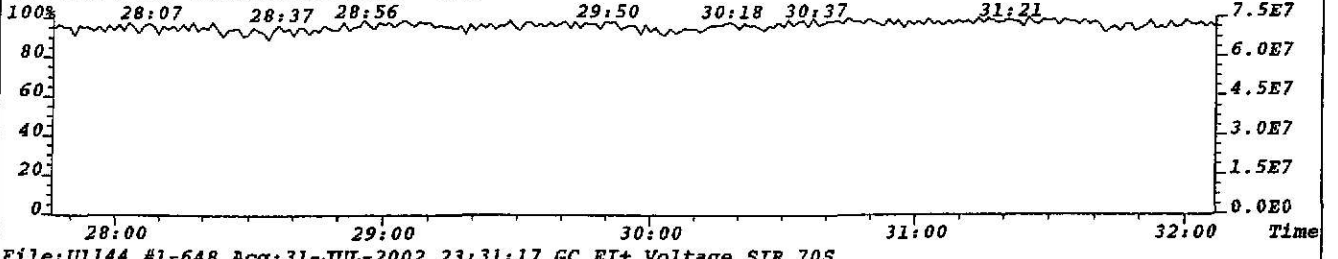
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2294
351.9000 S:2 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9176.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



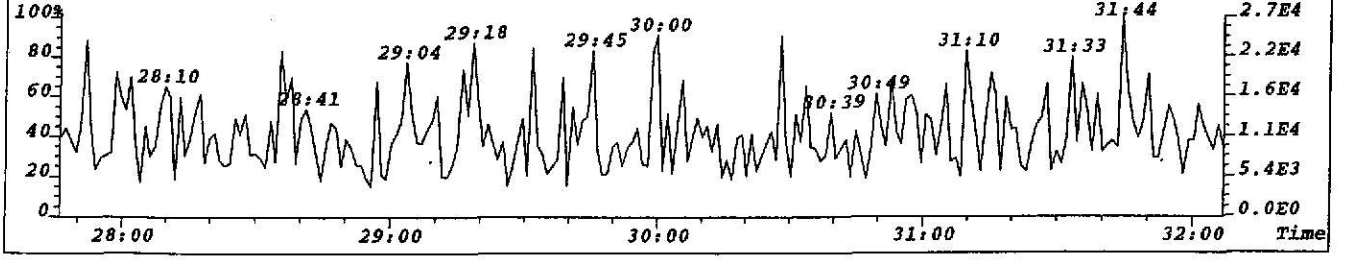
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2416
353.8970 S:2 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9664.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



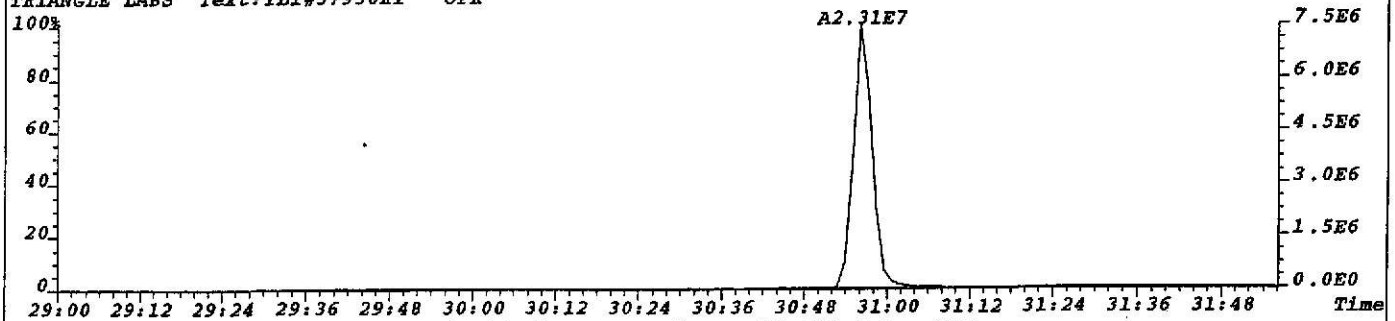
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S
330.9792 S:2 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



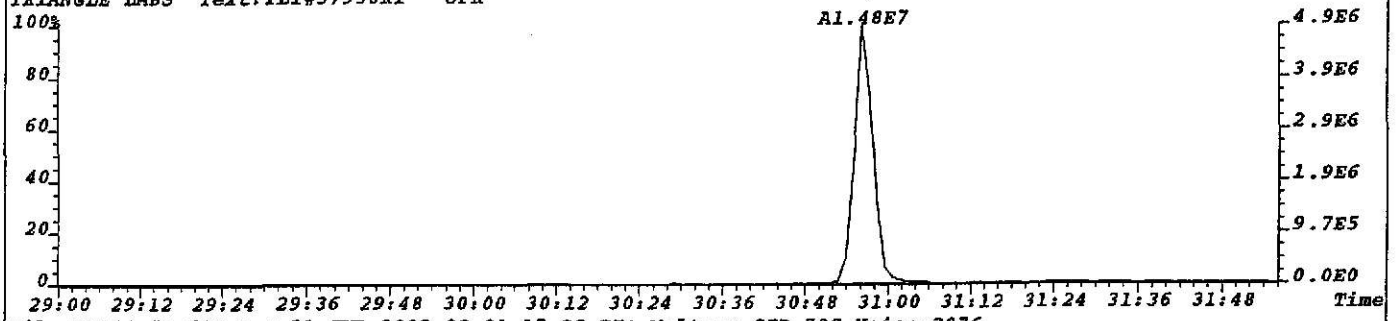
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S
409.7974 S:2 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



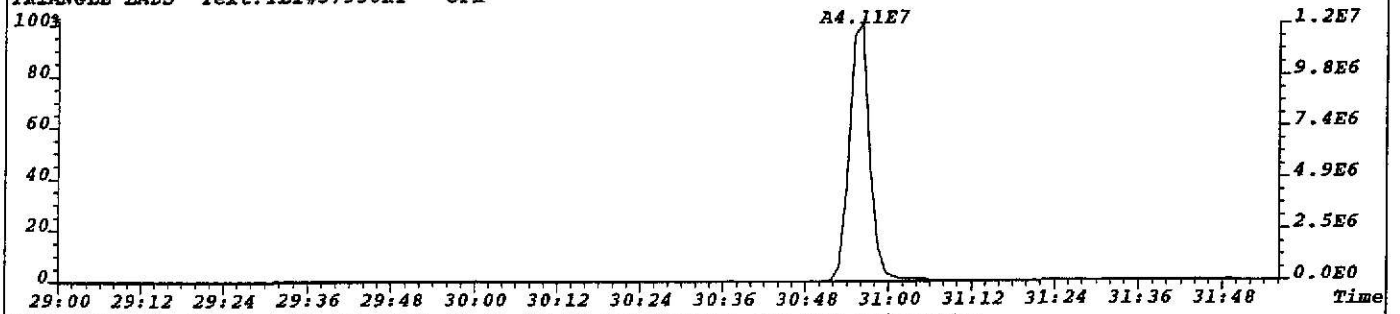
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2651
355.8546 S:2 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,10604.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



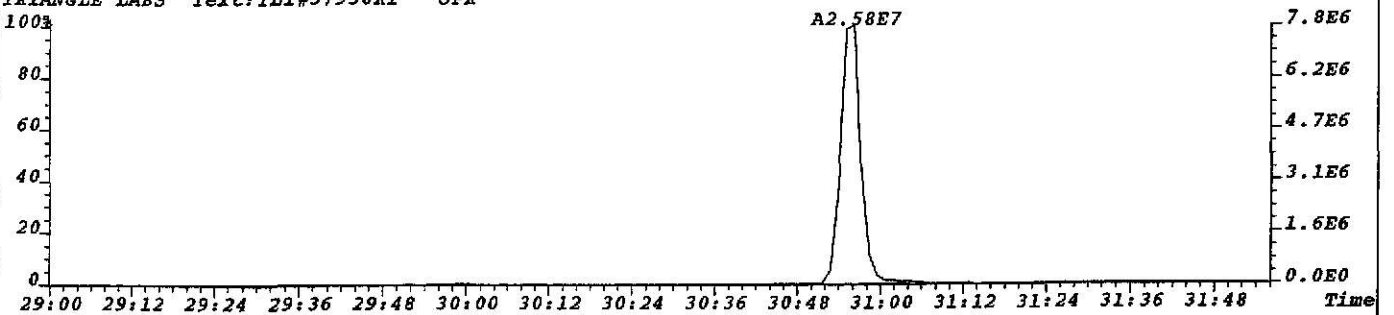
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:1831
357.8516 S:2 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,7324.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



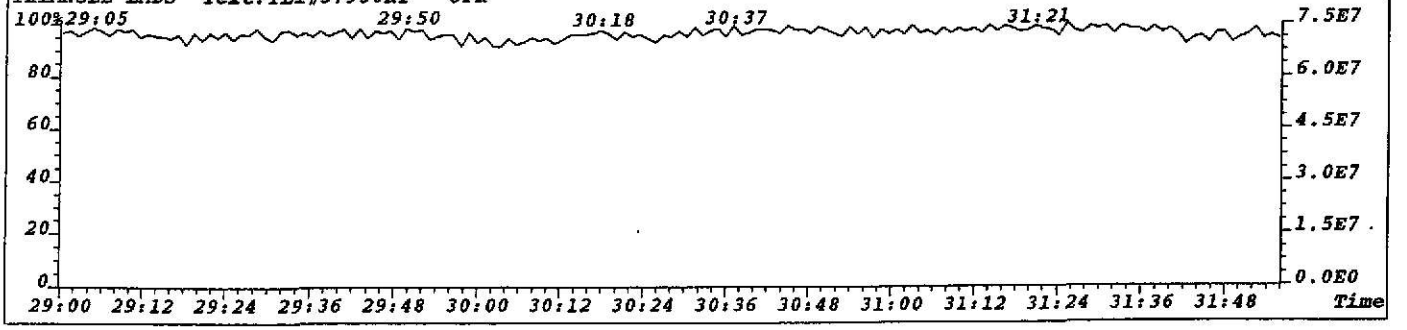
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2876
367.8949 S:2 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,11504.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



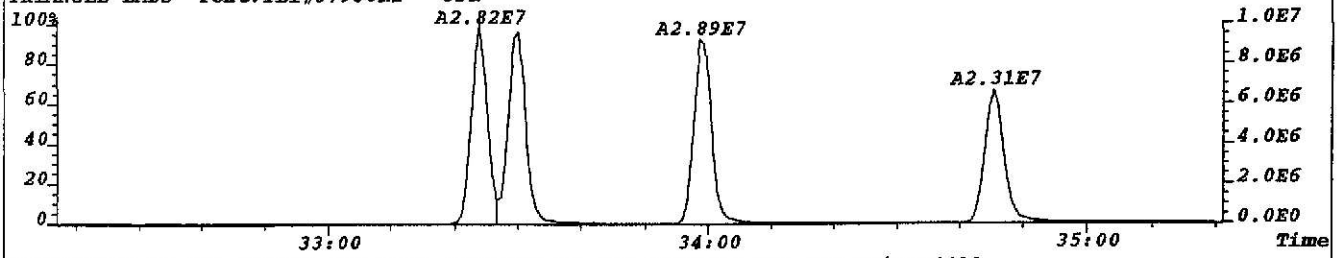
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2549
369.8919 S:2 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,10196.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



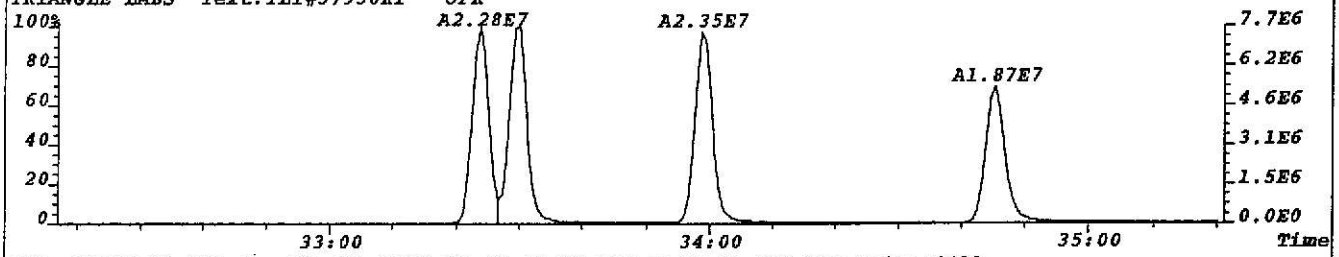
File:U1144 #1-648 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S
330.9792 S:2 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



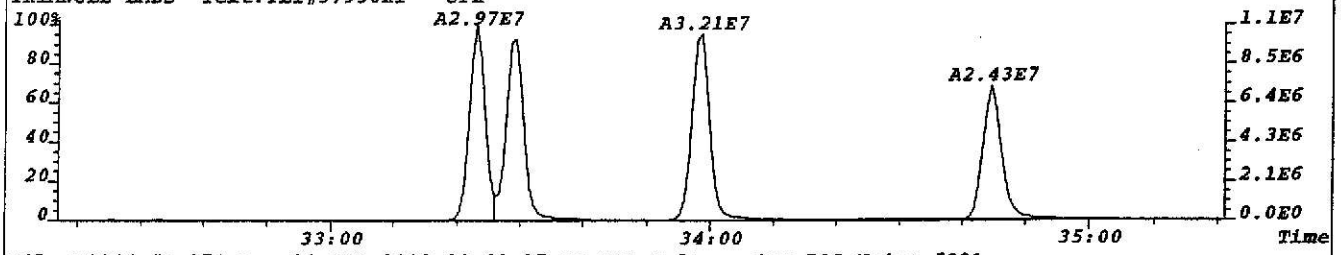
File:U1144 #1-271 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:4052
373.8208 S:2 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,16208.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



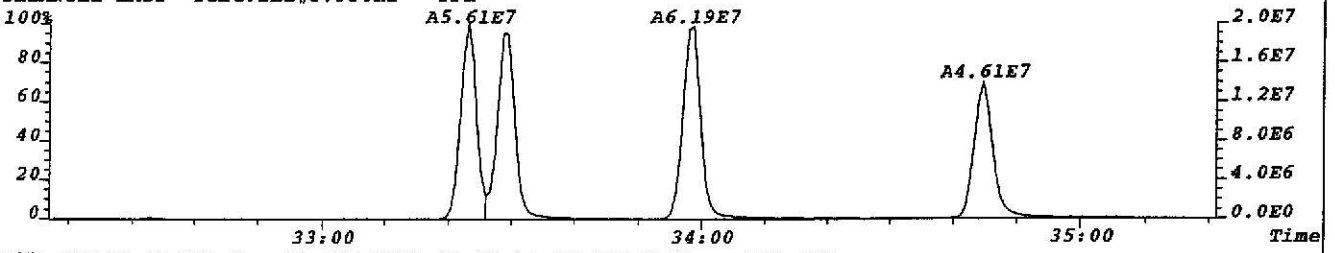
File:U1144 #1-271 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:4423
375.8178 S:2 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,17692.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



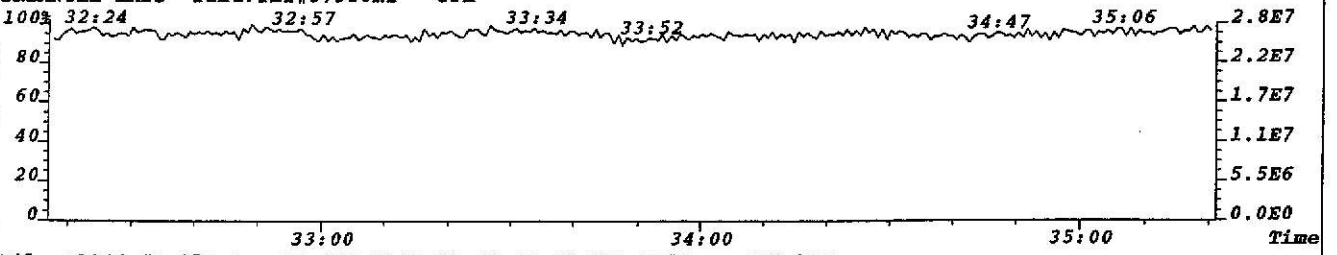
File:U1144 #1-271 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:4411
383.8639 S:2 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,17644.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



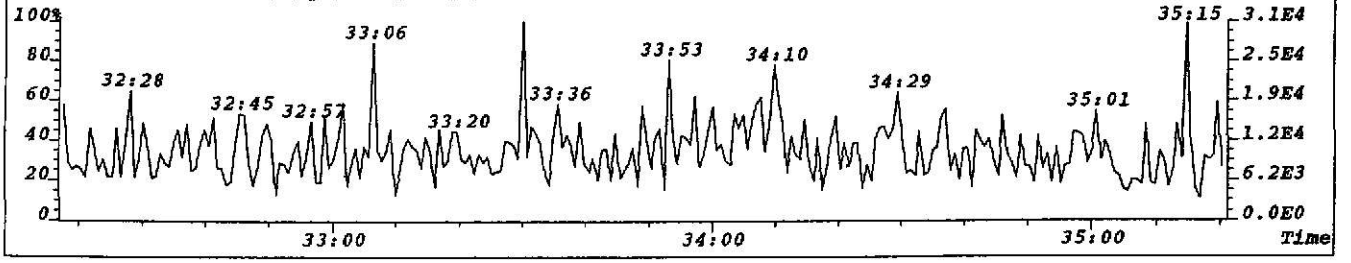
File:U1144 #1-271 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:5291
385.8610 S:2 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,21164.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



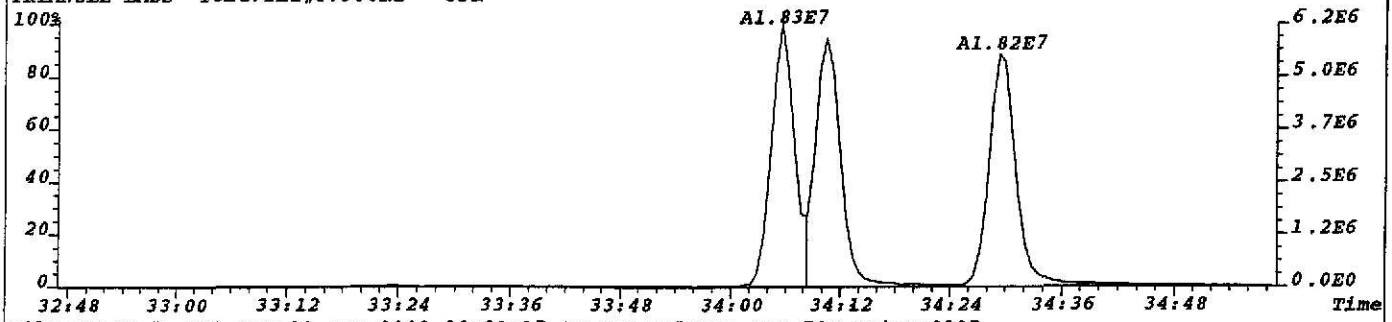
File:U1144 #1-271 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S
392.9760 S:2 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



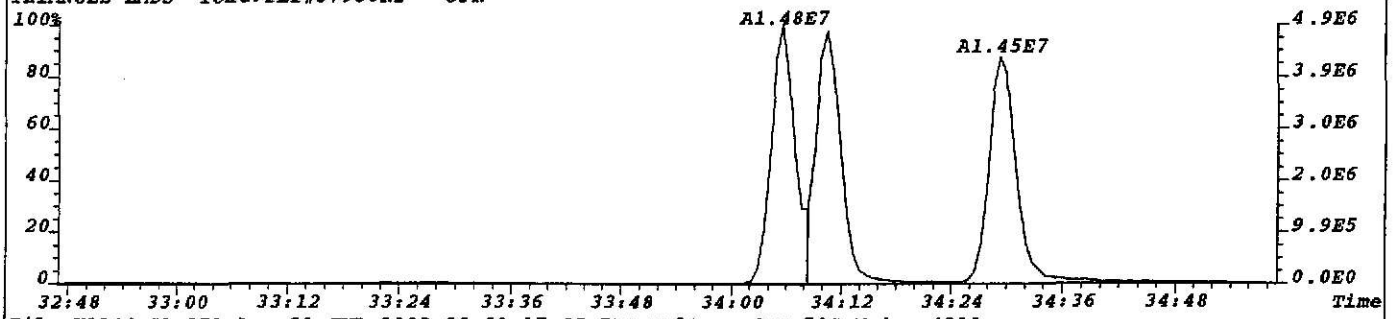
File:U1144 #1-271 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S
445.7555 S:2 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



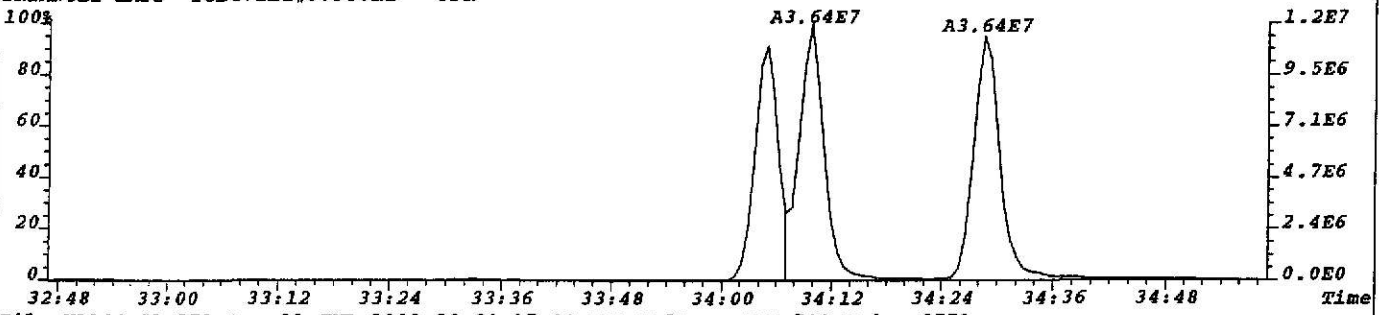
File:U1144 #1-271 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2840
389.8156 S:2 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11360.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



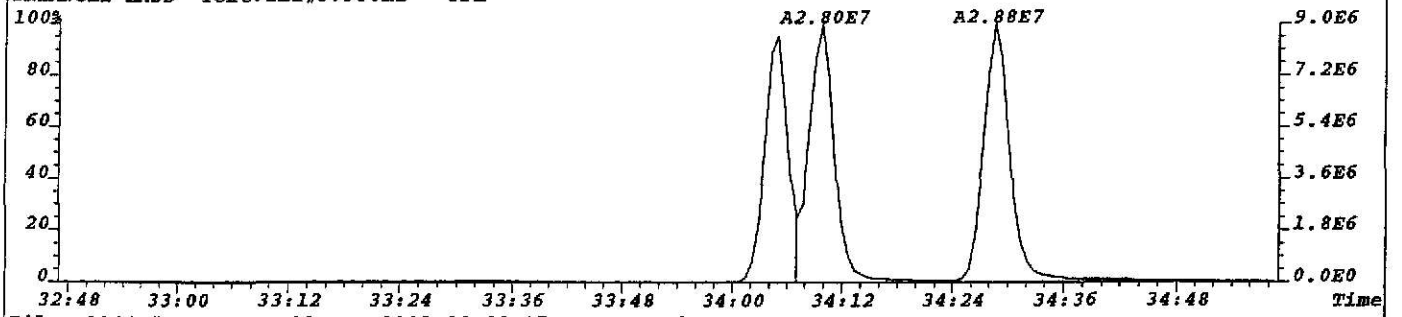
File:U1144 #1-271 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:3205
391.8127 S:2 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12820.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



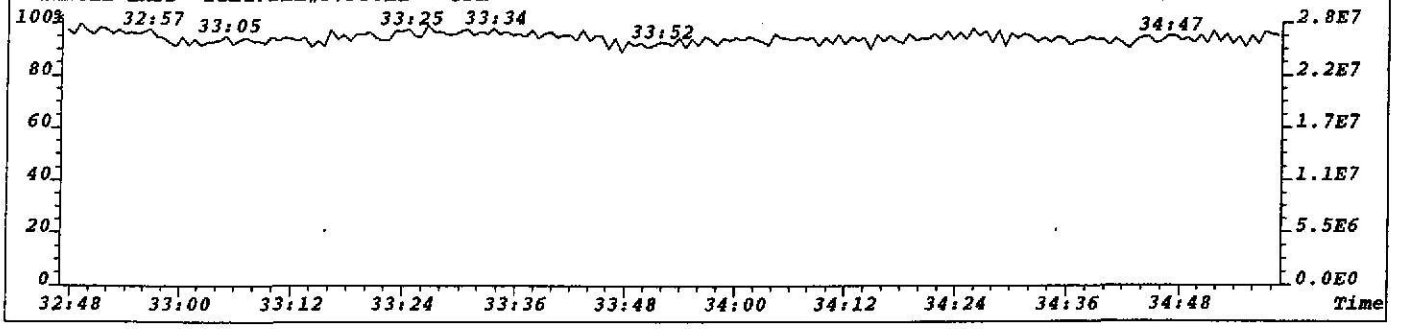
File:U1144 #1-271 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:4388
401.8558 S:2 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,17552.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



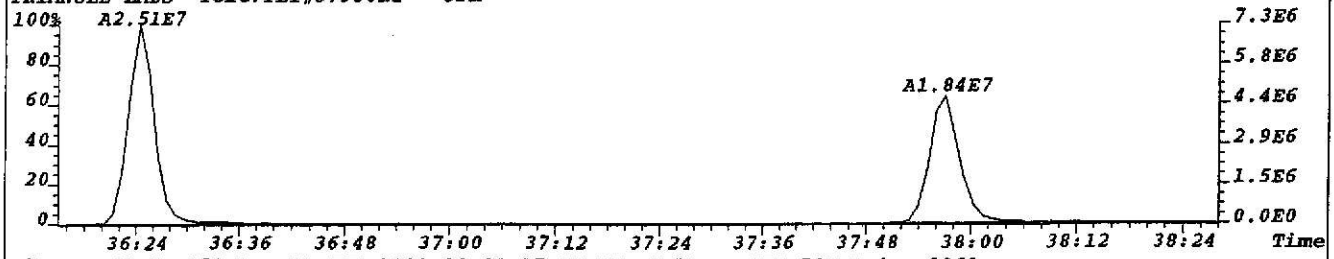
File:U1144 #1-271 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:3771
403.8529 S:2 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,15084.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



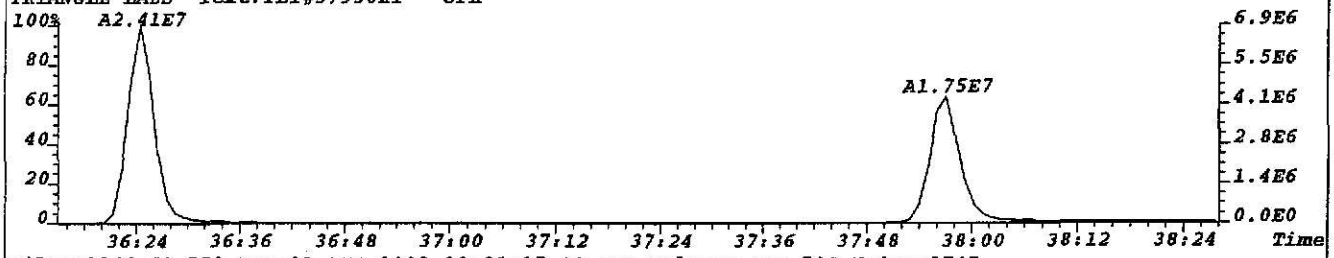
File:U1144 #1-271 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S
392.9760 S:2 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



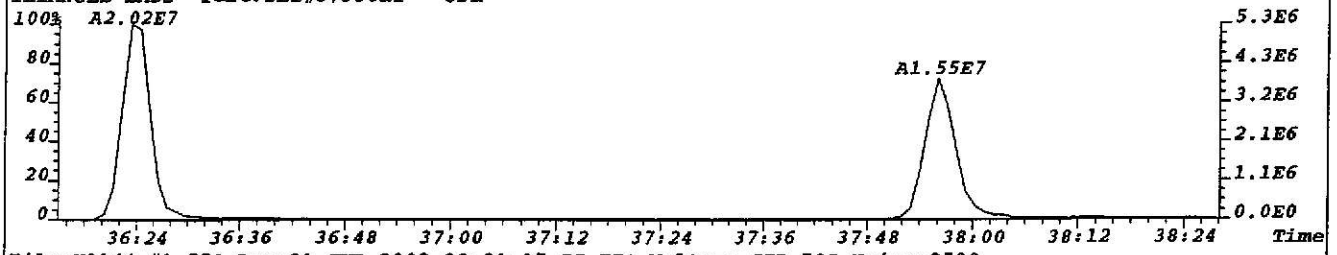
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:3498
407.7818 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,13992.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



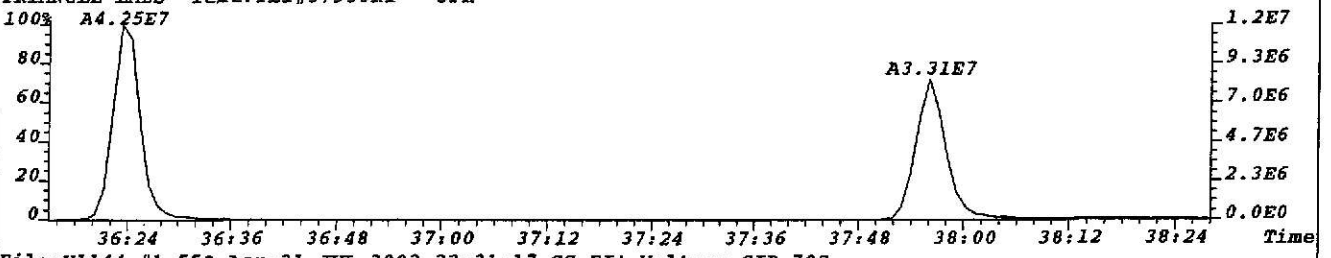
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2969
409.7789 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11876.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



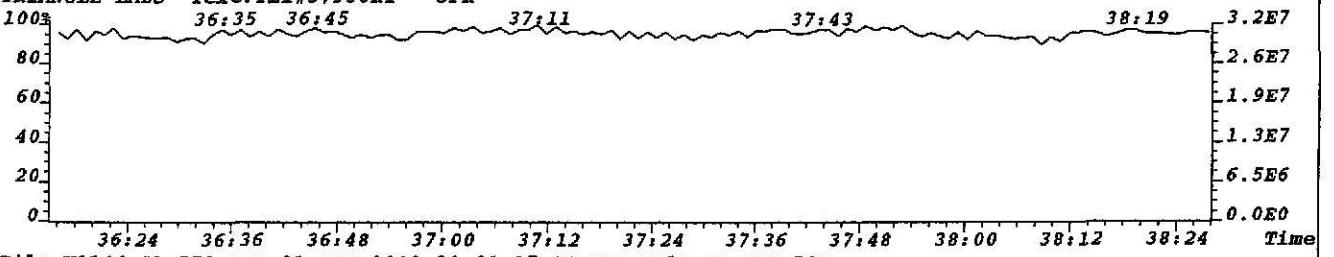
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2747
417.8253 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10988.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



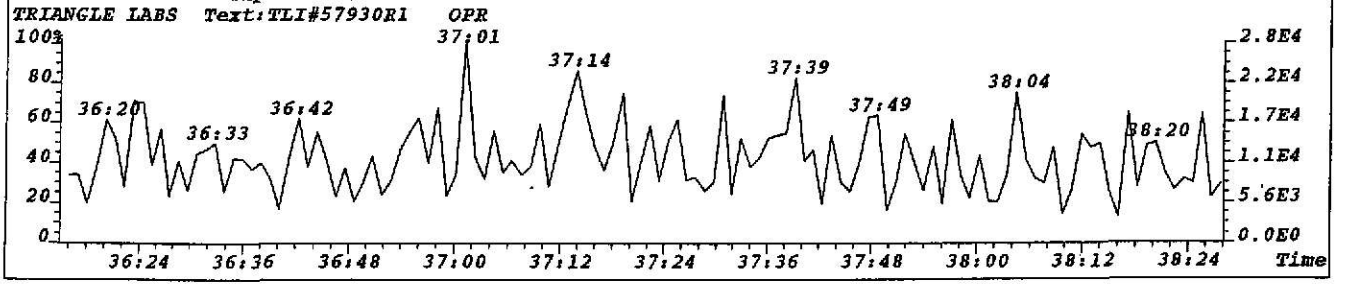
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2728
419.8220 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10912.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



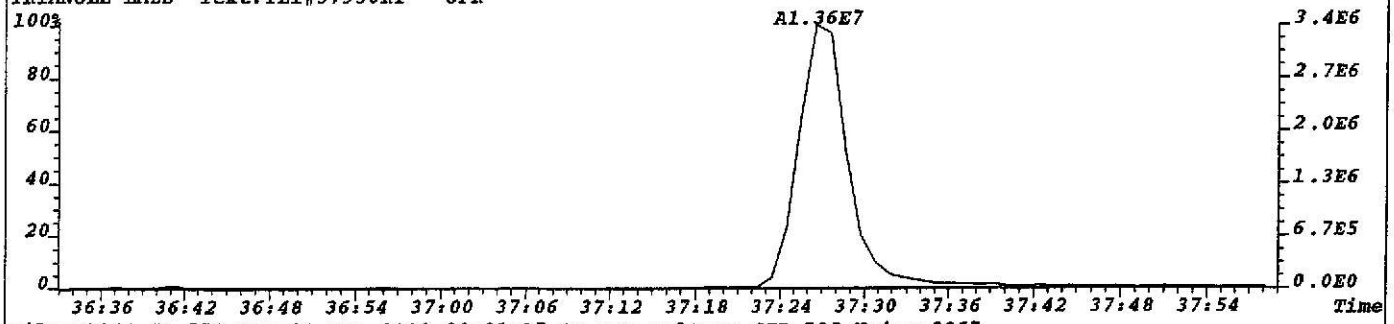
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S
430.9729 S:2 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



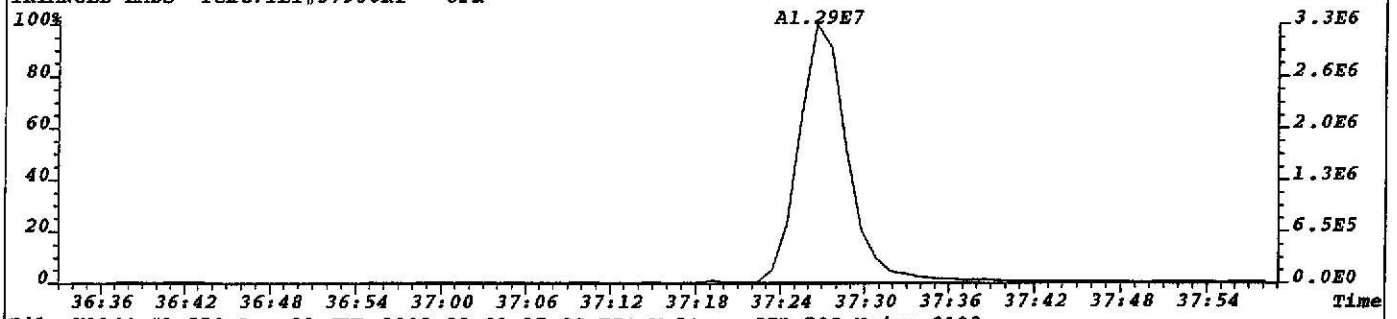
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S
479.7165 S:2 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



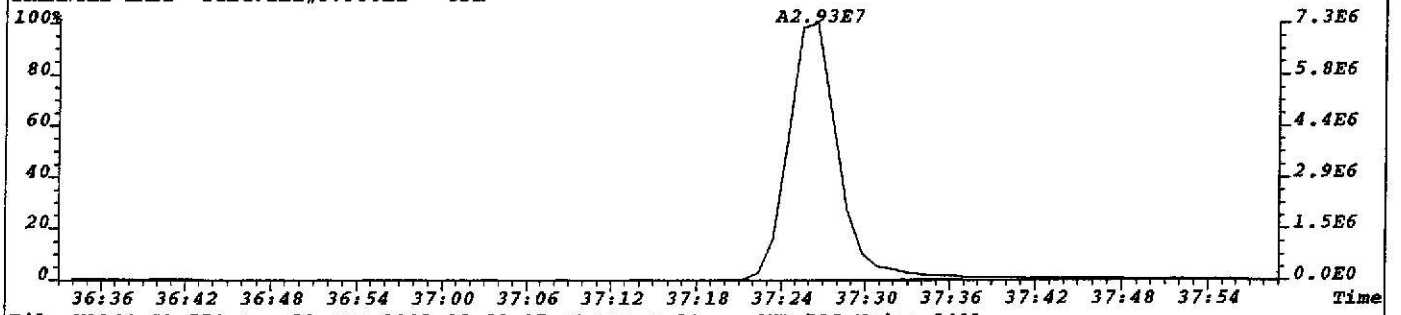
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2574
423.7766 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10296.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



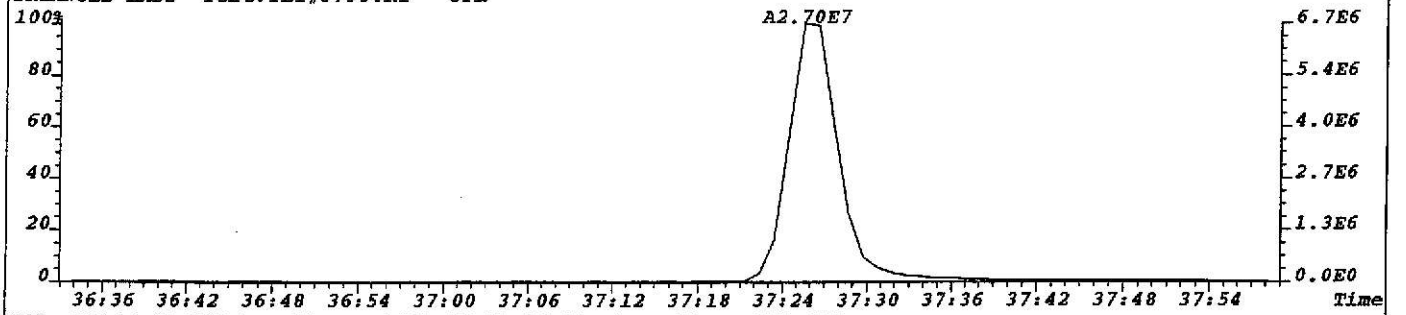
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:3067
425.7737 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12268.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



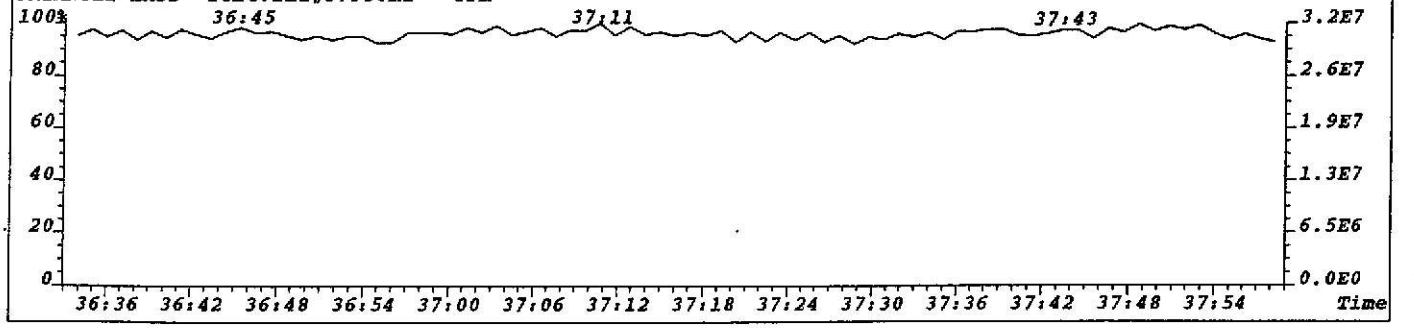
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:3183
435.8169 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12732.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



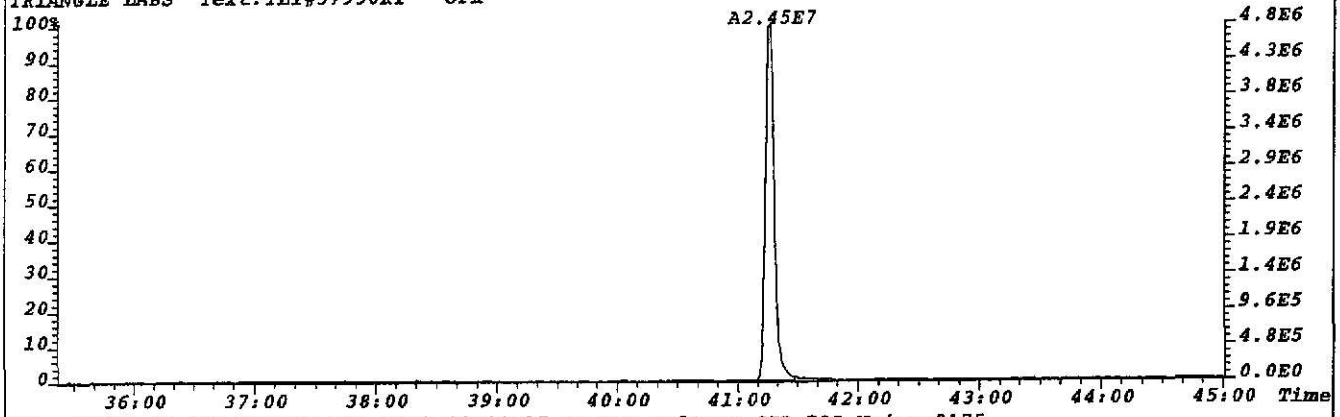
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:3481
437.8140 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,13924.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



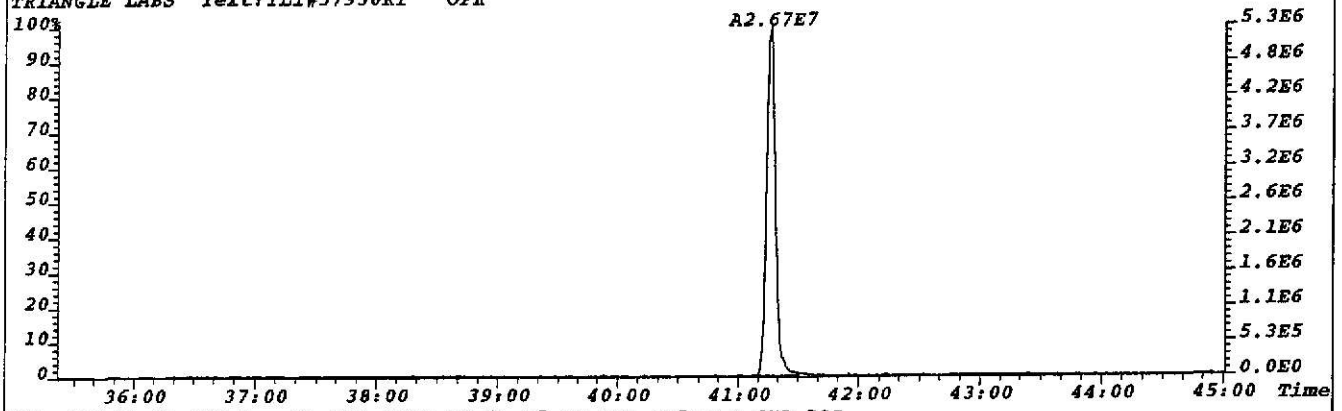
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S
430.9729 S:2 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



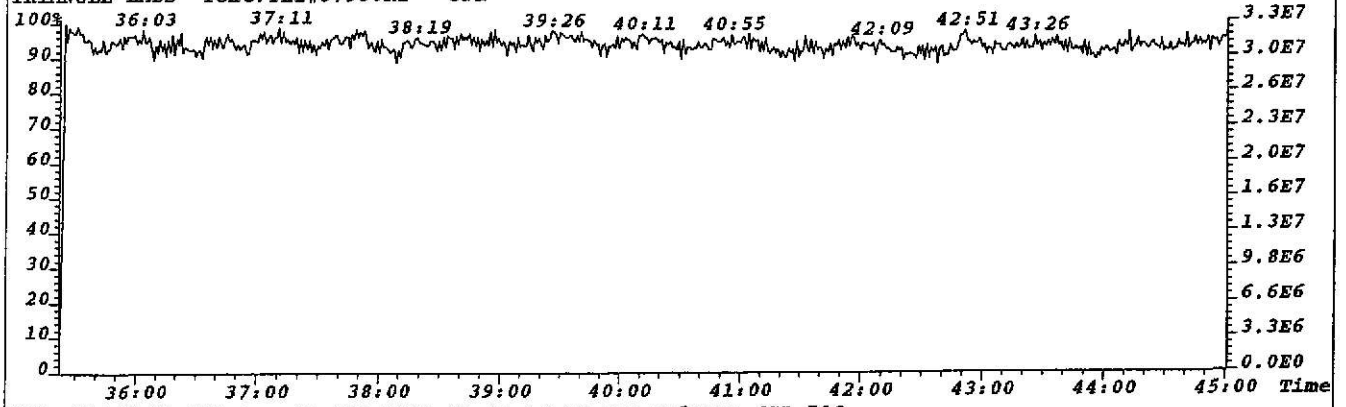
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2872
441.7428 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11488.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



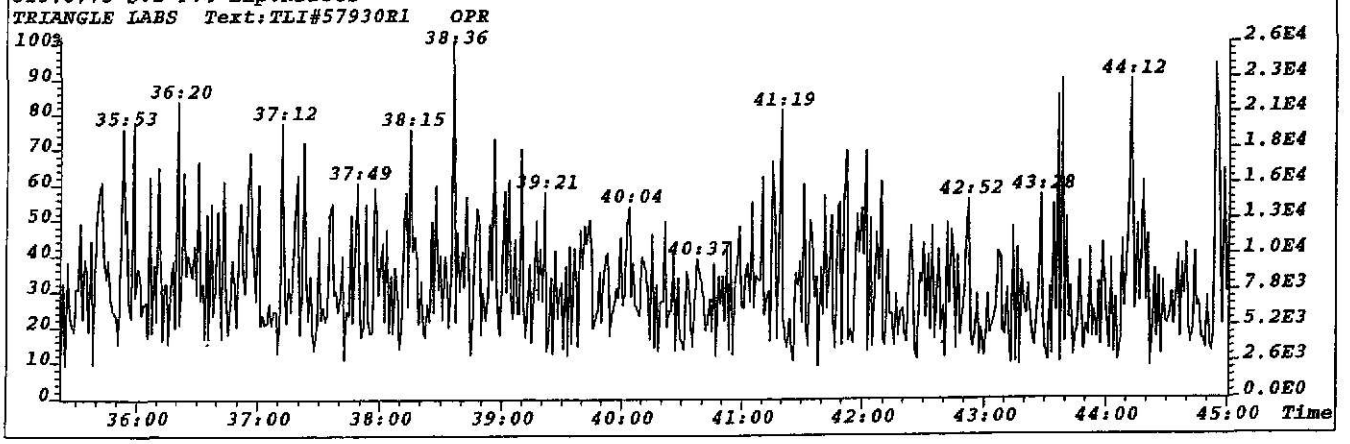
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:3175
443.7399 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12700.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



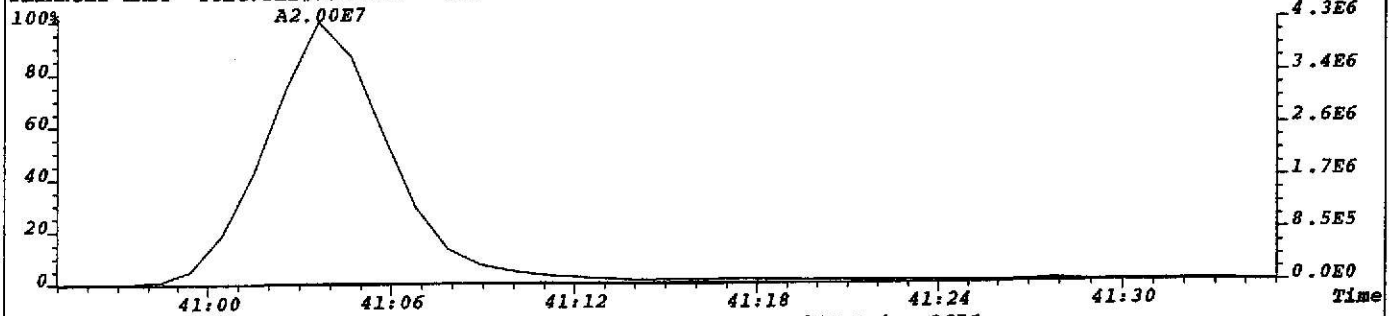
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S
430.9729 S:2 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



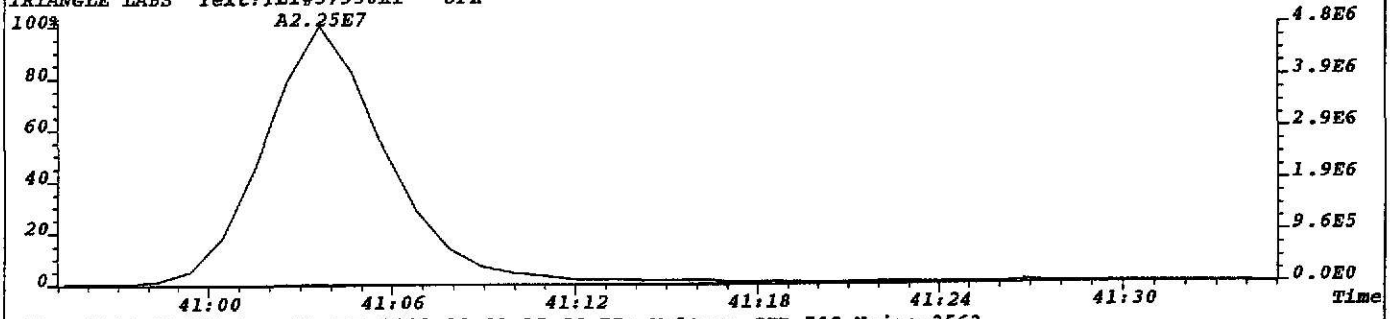
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S
513.6775 S:2 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



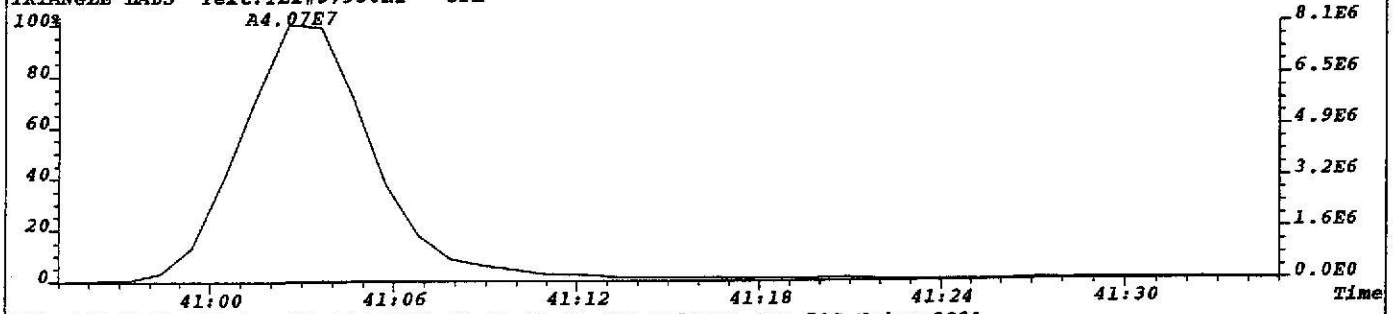
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2656
457.7377 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10624.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



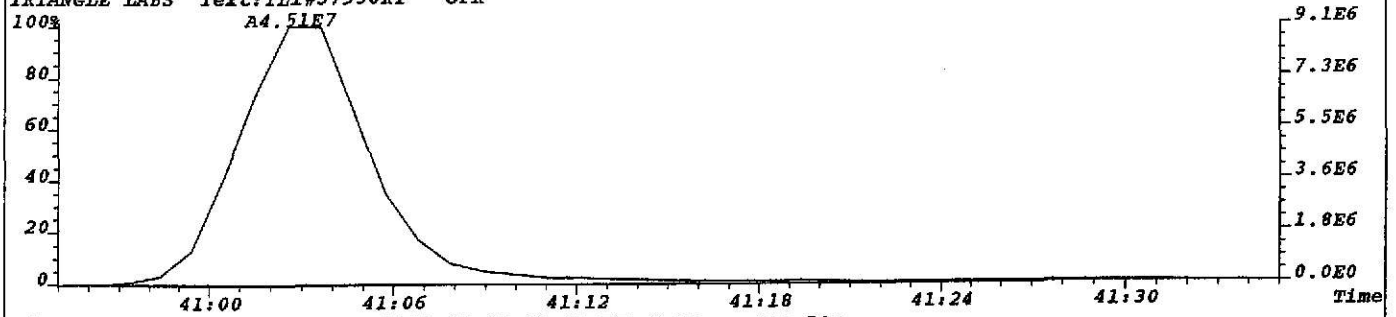
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2676
459.7348 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10704.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



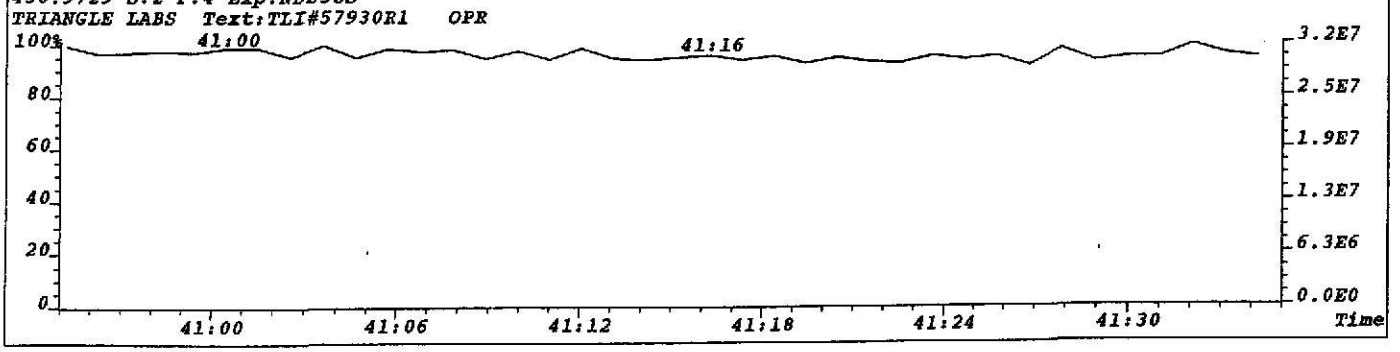
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2562
469.7779 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10248.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



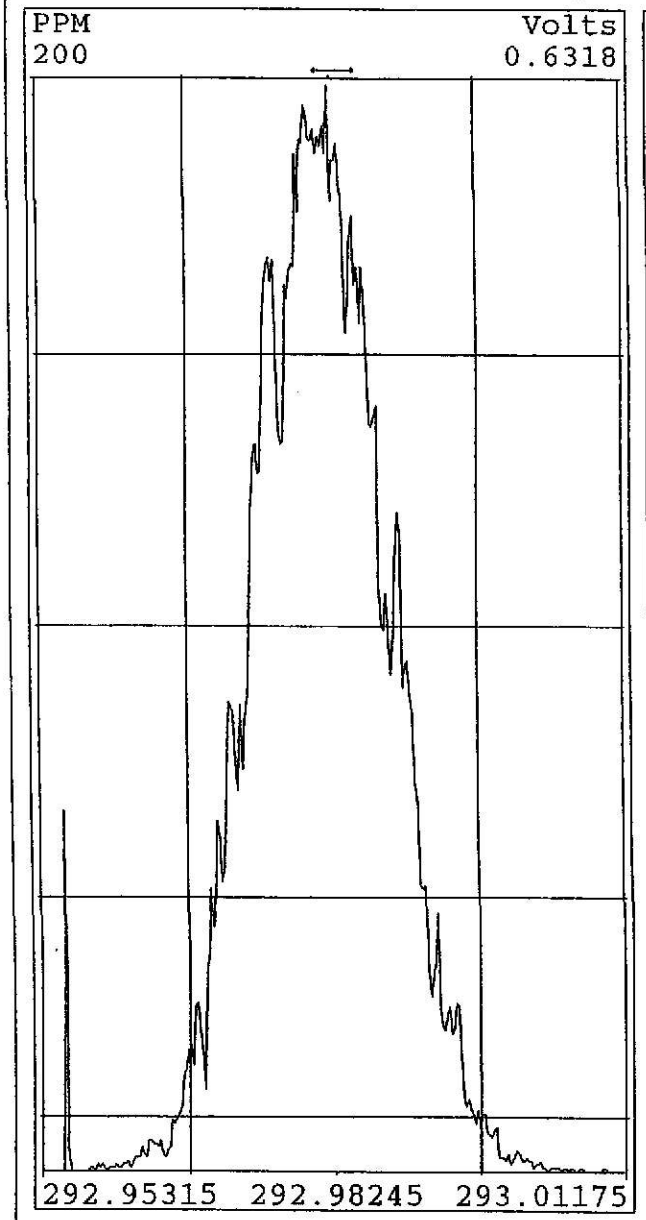
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S Noise:2931
471.7750 S:2 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11724.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR

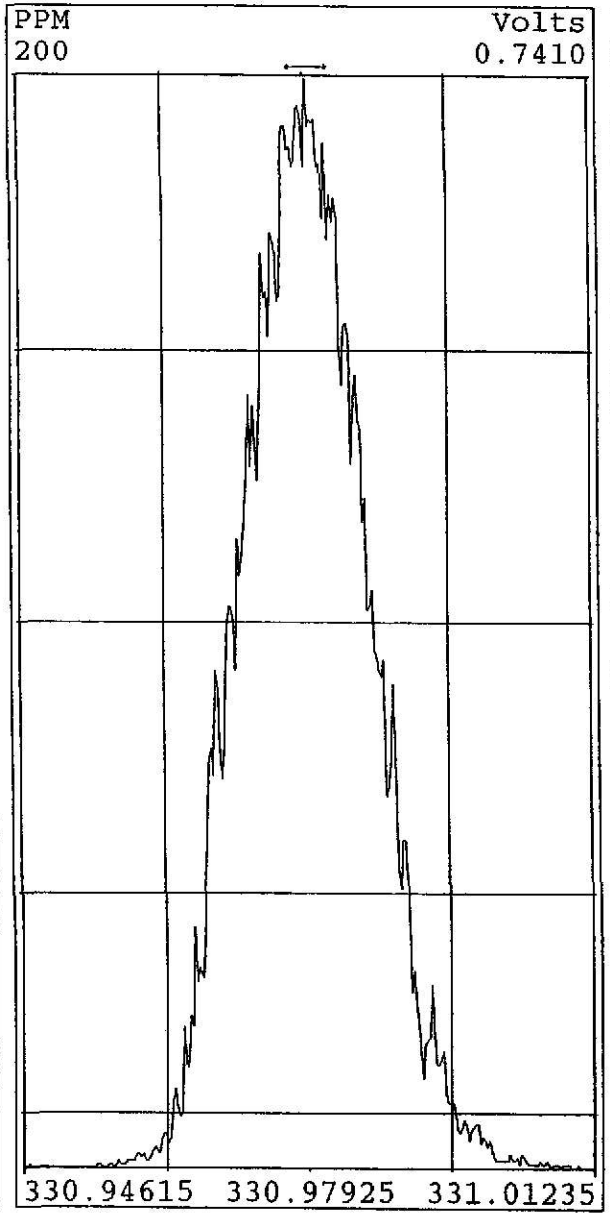


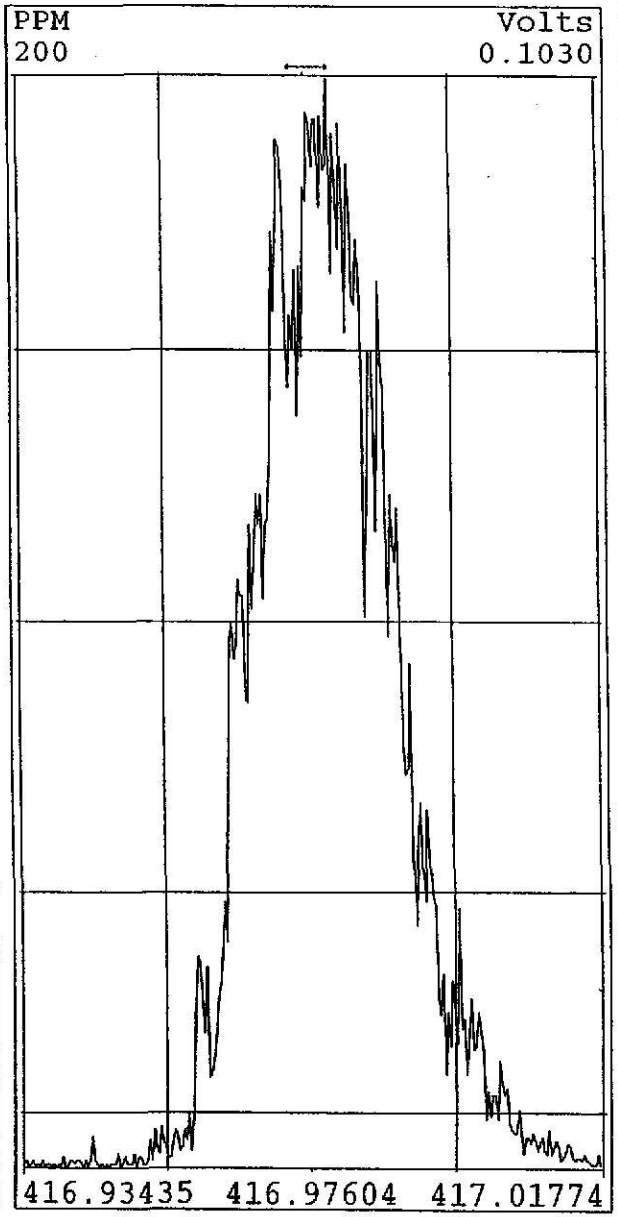
File:U1144 #1-550 Acq:31-JUL-2002 23:31:17 GC EI+ Voltage SIR 70S
430.9729 S:2 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 OPR



Peak Locate Examination:31-JUL-2002:22:41 File:U1144
Experiment:NDB5US Function:2 Reference:PFK







TLI Project: **57930r1** 1613, Revision B PCDD/PCDF Analysis (c)
Client Sample: **TLI Blank** Analysis File: **U114403**

Client Project:	**Kuhlman Electric**				
Sample Matrix:	**SOLID**	Date Received:	/ /	Spike File:	**SP161B2S**
TLI ID:	**TLI Blank**	Date Extracted:	**07/30/2002**	ICal:	**UF5709B**
		Date Analyzed:	**08/01/2002**	ConCal:	**UB21143**
Sample Size:	**10.000 g**	Dilution Factor:	**n/a**	% Moisture:	**n/a**
Dry Weight:	**n/a**	Blank File:	**U114403**	% Lipid:	**n/a**
GC Column:	**DB-5**	Analyst:	**CGK**	% Solids:	**n/a**

Analytes	Conc. (pg/g)	DL	Ratio	RT	RRT	Flags
2,3,7,8-TCDD	ND	0.2				—
1,2,3,7,8-PeCDD	ND	0.2				—
1,2,3,4,7,8-HxCDD	ND	0.2				—
1,2,3,6,7,8-HxCDD	ND	0.2				—
1,2,3,7,8,9-HxCDD	ND	0.2				—
1,2,3,4,6,7,8-HpCDD	ND	0.3				—
1,2,3,4,6,7,8,9-OCDD	ND	0.5				—
2,3,7,8-TCDF	ND	0.2				—
1,2,3,7,8-PeCDF	ND	0.2				—
2,3,4,7,8-PeCDF	ND	0.2				—
1,2,3,4,7,8-HxCDF	ND	0.2				—
1,2,3,6,7,8-HxCDF	ND	0.1				—
2,3,4,6,7,8-HxCDF	ND	0.1				—
1,2,3,7,8,9-HxCDF	ND	0.2				—
1,2,3,4,6,7,8-HpCDF	ND	0.2				—
1,2,3,4,7,8,9-HpCDF	ND	0.3				—
1,2,3,4,6,7,8,9-OCDF	ND	0.4				—

Totals	Conc. (pg/g)	Number	DL	Flags
Total TCDD	ND		0.2	—
Total PeCDD	ND		0.2	—
Total HxCDD	ND		0.2	—
Total HpCDD	ND		0.3	—
Total TCDF	ND		0.2	—
Total PeCDF	ND		0.2	—
Total HxCDF	ND		0.2	—
Total HpCDF	ND		0.2	—

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TLI Project: **57930r1** 1613, Revision B PCDD/PCDF Analysis (c)
Client Sample: **TLI Blank** Analysis File: **U114403**

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	RRT	Flags
$^{13}C_{12}$-2,3,7,8-TCDD	142	70.8	25%-164%	0.79	26:38	1.007	—
$^{13}C_{12}$-1,2,3,7,8-PeCDD	229	115	25%-181%	1.57	30:55	1.169	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	172	86.0	32%-141%	1.26	34:05	0.989	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	184	91.9	28%-130%	1.26	34:10	0.991	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	205	102	23%-140%	1.05	37:26	1.086	—
$^{13}C_{12}$-1,2,3,4,6,7,8,9-OCDD	462	115	17%-157%	0.89	41:02	1.191	—
$^{13}C_{12}$-2,3,7,8-TCDF	139	69.4	24%-169%	0.78	25:56	0.980	—
$^{13}C_{12}$-1,2,3,7,8-PeCDF	176	88.0	24%-185%	1.62	29:53	1.130	—
$^{13}C_{12}$-2,3,4,7,8-PeCDF	181	90.5	21%-178%	1.60	30:35	1.156	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	173	86.4	26%-152%	0.52	33:23	0.969	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	183	91.7	26%-123%	0.53	33:29	0.971	—
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	208	104	28%-136%	0.52	33:58	0.985	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	189	94.3	29%-147%	0.53	34:44	1.008	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	180	89.9	28%-143%	0.47	36:24	1.056	—
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	197	98.5	26%-138%	0.46	37:55	1.100	—

Cleanup Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	RRT	Flags
$^{37}Cl_4$-2,3,7,8-TCDD	12.6	63.0	35%-197%	26:39	1.008	—

Recovery Standards	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.81	26:27	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.27	34:28	—

Data Reviewer: OEM 08/01/2002

161B_PSR v2.04, LARS 6.25.05

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TLI Project: **57930r1**
Client Sample: **TLI Blank**

Toxicity Equivalents Report
Analysis File: **U114403**

Client Project:	**Kuhlman Electric**				
Sample Matrix:	**SOLID**	Date Received:	**07/20/02**	Spike File:	**SP161B2S**
TLI ID:	**TLI Blank**	Date Extracted:	**07/30/02**	ICal:	**UF5709B**
		Date Analyzed:	**08/01/02**	ConCal:	**UB21143**
Sample Size:	**10.000 g**	Dilution Factor:	**1**	% Moisture:	**n/a**
Dry Weight:	**n/a**	Blank File:	**U114403**	% Lipid:	**n/a**
GC Column:	**DB-5**	Analyst:	**CGK**	% Solids:	**n/a**

Analytes	Conc. (pg/g)		TEF		Equivalent
2,3,7,8-TCDD	{0.2}	x	1.	=	0.2
1,2,3,7,8-PeCDD	{0.2}	x	0.5	=	0.1
1,2,3,4,7,8-HxCDD	{0.2}	x	0.1	=	0.02
1,2,3,6,7,8-HxCDD	{0.2}	x	0.1	=	0.02
1,2,3,7,8,9-HxCDD	{0.2}	x	0.1	=	0.02
1,2,3,4,6,7,8-HpCDD	{0.3}	x	0.01	=	0.003
1,2,3,4,6,7,8,9-OCDD	{0.5}	x	0.001	=	0.0005
TOTAL PCDD					0.4
2,3,7,8-TCDF	{0.2}	x	0.1	=	0.02
1,2,3,7,8-PeCDF	{0.2}	x	0.05	=	0.01
2,3,4,7,8-PeCDF	{0.2}	x	0.5	=	0.1
1,2,3,4,7,8-HxCDF	{0.2}	x	0.1	=	0.02
1,2,3,6,7,8-HxCDF	{0.1}	x	0.1	=	0.01
2,3,4,6,7,8-HxCDF	{0.1}	x	0.1	=	0.01
1,2,3,7,8,9-HxCDF	{0.2}	x	0.1	=	0.02
1,2,3,4,6,7,8-HpCDF	{0.2}	x	0.01	=	0.002
1,2,3,4,7,8,9-HpCDF	{0.3}	x	0.01	=	0.003
1,2,3,4,6,7,8,9-OCDF	{0.4}	x	0.001	=	0.0004
TOTAL PCDF					0.2

Total EPA TEFs, 1989a: 0.6 pg/g

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

GRY_TEF v1.08, MILES 4.22.16

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Printed: 12:16 08/01/02

Initial ....Date...

Data Review By: GBM 8/1/02

Calculated Noise Height: 1.23

Page No. 1 Listing of U114403B.dbf
08/01/2002 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						0.872-1.073			
304-306	DC	NL				Height	3.91	1.99	1.92				
304-306			0 Peaks				0.00						
13C12-TCDF				0.65-0.89						0.944-1.136			
316-318	DC	NL				Height	4.47	2.11	2.36				
				24:53		0.87	85.26	39.60	45.66	0.960			
				25:12	RO	0.52	40.95	14.03	26.92	0.972			
				25:31		0.67	104.72	42.08	62.64	0.984			
				25:56		0.78	12,042.94	5,293.14	6,749.80	1.000	13C12-2378-TCDF	IS0	
						Height	3,139.07	1,371.06	1,768.01				
				26:27	RO	1.83	8.83	5.71	3.12	1.020			
				26:30	RO	1.04	18.12	9.22	8.90	1.022			
				26:37		0.77	12.13	5.26	6.87	1.026			
316-318			7 Peaks				12,312.95						

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

TCDD				0.65-0.89						0.899-1.043			
320-322	DC	NL				Height	3.91	1.97	1.94				
320-322			0 Peaks				0.00						
37Cl-TCDD										0.925-1.075			
328	DC	NL				Height	1.87	1.87					
	DC	WL		24:03			4.75			0.903			
				26:39			817.98	817.98		1.001	37Cl-TCDD		CLS
	DC	SN		26:53			7.22			1.009			
				27:02			8.14	8.14		1.015			
	DC	SN		27:14			6.85			1.023			
	DC	SN		27:37			5.08			1.037			
	DC	SN		27:45			4.91			1.042			
	DC	SN		27:56			3.17			1.049			
	DC	SN		28:05			5.49			1.054			
	DC	SN		28:15			6.48			1.061			
328			2 Peaks				826.12						
13C12-TCDD				0.65-0.89						0.918-1.068			
332-334	DC	NL				Height	5.97	3.87	2.10				
				25:30	RO	1.12	20.57	10.85	9.72	0.957			
				26:27		0.81	10,826.49	4,834.73	5,991.76	0.993	13C12-1234-TCDD	RS1	
				26:38		0.79	8,656.73	3,818.23	4,838.50	1.000	13C12-2378-TCDD	IS1	
						Height	2,442.31	1,071.97	1,370.34				
332-334			3 Peaks				19,503.79						

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

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

PeCDF                          1.32-1.78                                  0.906-1.038
340-342          DC  NL          Height          3.81          1.77          2.04
                 DC  SN  30:44 RO  0.54          6.93                              1.005
                 DC  SN  30:50 RO  0.43          6.06                              1.008
                 DC  SN  30:59 RO  3.62          5.31                              1.013
                 DC  SN  31:39 RO  1.29          9.52                              1.035
340-342               0 Peaks                    0.00

13C12-PeCDF                    1.32-1.78                                  0.801-1.127
352-354          DC  NL          Height          3.52          1.71          1.81
                         29:01 RO  1.20        158.52         86.47         72.05  0.949
                         29:30 RO  1.79        114.16         73.17         40.99  0.965
                         29:53     1.62     10,633.14      6,569.98      4,063.16  1.000 13C12-PeCDF 123 IS2
                                 Height      3,006.18      1,867.60      1,138.58
                         30:11     1.61        160.35         98.85         61.50  0.987
                         30:35     1.60     10,979.35      6,752.83      4,226.52  1.000 13C12-PeCDF 234 IS3
                                 Height      3,265.59      2,018.97      1,246.62
                 DC  SN  31:09 RO  1.86         19.02                              1.019
                         31:34     1.67        137.90         86.17         51.73  1.032
352-354               6 Peaks                22,183.42

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

PeCDD                          1.32-1.78                                  0.936-1.020
356-358          DC  NL          Height          3.63          1.86          1.77
                 DC  SN  29:53     1.50         26.24                              0.967
                 DC  SN  30:30     1.59         11.83                              0.987
                 DC  SN  30:35 RO  0.84         10.03                              0.989
                 DC  SN  30:42 RO  1.94         11.65                              0.993
                 DC  SN  30:58 RO  0.80         11.03                              1.002 12378-PeCDD     AN
356-358               0 Peaks                    0.00

13C12-PeCDD                    1.32-1.78                                  0.728-1.051
368-370          DC  NL          Height          3.46          1.87          1.59
                 DC  SN  29:16     1.55          8.07                              0.947
                         29:51     1.53         25.30         15.30         10.00  0.965
                         30:00 RO  1.25         38.22         21.22         17.00  0.970
                 DC  SN  30:10 RO  3.05         21.31                              0.976
                         30:55     1.57      8,253.21      5,047.30      3,205.91  1.000 13C12-PeCDD 123 IS4
                                 Height      2,465.62      1,507.75        957.87
                         31:12 RO  0.66         19.79          7.86         11.93  1.009
                         31:16     1.46         39.24         23.32         15.92  1.011
368-370               5 Peaks                 8,375.76

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

HxCDF                          1.05-1.43                                  0.928-1.007
374-376          DC  NL          Height          4.21          2.05          2.16
374-376               0 Peaks                    0.00

13C12-HxCDF                    0.43-0.59                                  0.877-1.107
384-386          DC  NL          Height          6.23          3.38          2.85
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Compound/
M_Z.... QC.Log Omit Why ..RT. OK Ratio Total.Area/Ht Area/Ht.Peak1 Area/Ht.Peak2 Rel.RT Compound.Name.. ID.. Flags.

                        32:25 RO  0.77        22.36         9.70        12.66  0.933
                        32:33     0.52        51.17        17.56        33.61  0.937
                        33:23     0.52    10,547.59     3,597.95     6,949.64  1.000 13C12-HxCDF 478 IS5
                               Height     3,557.42     1,215.47     2,341.95
                        33:29     0.53    11,150.48     3,840.41     7,310.07  1.000 13C12-HxCDF 678 IS6
                               Height     3,454.54     1,211.77     2,242.77
                        33:58     0.52    11,605.00     3,992.63     7,612.37  1.000 13C12-HxCDF 234 IS7
                               Height     3,870.60     1,342.21     2,528.39
                        34:44     0.53     8,368.09     2,891.25     5,476.84  1.000 13C12-HxCDF 789 IS8
                               Height     2,414.47       837.46     1,577.01
384-386              6 Peaks            41,744.69

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

HxCDD                             1.05-1.43                                  0.959-1.013
390-392          DC  NL            Height         4.44         2.34         2.10
        D        D   SN  33:22 RO  0.58          12.56                              0.977
        D        D   SN  33:28     1.16          11.20                              0.980
                 DC  SN  33:40 RO  0.46           5.99                              0.985
        D        D   SN  33:58 RO  0.76          14.58                              0.994
                 DC  SN  34:07 RO  0.99           4.00                              1.001 123478-HxCDD    AN
                 DC  SN  34:15 RO  0.58           6.95                              1.002 123678-HxCDD    AN
                 DC  SN  34:19 RO  0.58           6.65                              1.004
390-392              0 Peaks                      0.00

13C12-HxCDD                       1.05-1.43                                  0.983-1.042
402-404          DC  NL            Height         5.62         3.17         2.45
                        33:33 RO  0.90          30.94        14.68        16.26  0.984
                        34:05     1.26       6,649.19     3,708.54     2,940.65  1.000 13C12-HxCDD 478 IS9
                               Height       2,278.58     1,273.22     1,005.36
                        34:10     1.26       7,858.90     4,388.76     3,470.14  1.000 13C12-HxCDD 678 IS10
                               Height       2,483.32     1,398.93     1,084.39
                        34:28     1.27       8,231.41     4,604.91     3,626.50  1.011 13C12-HxCDD 789 RS2
                        34:52 RO  2.12          21.62        14.70         6.92  1.023
402-404              5 Peaks            22,792.06

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

HpCDF                             0.88-1.20                                  0.955-1.004
408-410          DC  NL            Height         4.05         2.11         1.94
                 DC  SN  37:42 RO  1.90          19.45                              0.994
408-410              0 Peaks                      0.00

13C12-HpCDF                       0.37-0.51                                  0.856-1.146
418-420          DC  NL            Height         5.72         2.66         3.06
                        36:24     0.47       7,769.00     2,488.71     5,280.29  1.000 13C12-HpCDF 678 IS11
                               Height       2,167.51       700.18     1,467.33
                        36:58 RO  0.80          12.04         5.36         6.68  0.975
                        37:07 RO  2.80          11.31         8.33         2.98  0.979
                        37:55     0.46       5,965.55     1,886.06     4,079.49  1.000 13C12-HpCDF 789 IS12
                               Height       1,461.77       459.07     1,002.70
418-420              4 Peaks            13,757.90
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Compound/
M_Z.... QC.Log Omit Why ..RT. OK Ratio Total.Area/Ht Area/Ht.Peak1 Area/Ht.Peak2 Rel.RT Compound.Name.. ID.. Flags.

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

HpCDD                              0.88-1.20                                        0.976-1.005
424-426          DC  NL             Height          3.71          1.88          1.83
424-426                0 Peaks                       0.00

13C12-HpCDD                        0.88-1.20                                        0.868-1.081
436-438          DC  NL             Height          5.75          3.05          2.70
                         36:40 RO  0.79           25.65         11.30         14.35  0.980
                         37:26     1.05       6,813.98      3,491.57      3,322.41  1.000 13C12-HpCDD 678 IS13
                                   Height     1,769.99        906.68        863.31
436-438                2 Peaks                 6,839.63

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

OCDF                               0.76-1.02                                        0.951-1.049
442-444          DC  NL             Height          4.88          2.36          2.52
                 DC  WL   37:04 RO  0.39          18.19                                0.903
                 DC  SN   39:30 RO  0.59          16.89                                0.963
442-444                0 Peaks                       0.00

OCDD                               0.76-1.02                                        0.951-1.049
458-460          DC  NL             Height          3.80          2.04          1.76
                 DC  SN   40:54 RO  0.38           6.17                                0.997
                 DC  SN   41:03 RO  1.64          15.75                                1.000 OCDD            AN
458-460                0 Peaks                       0.00

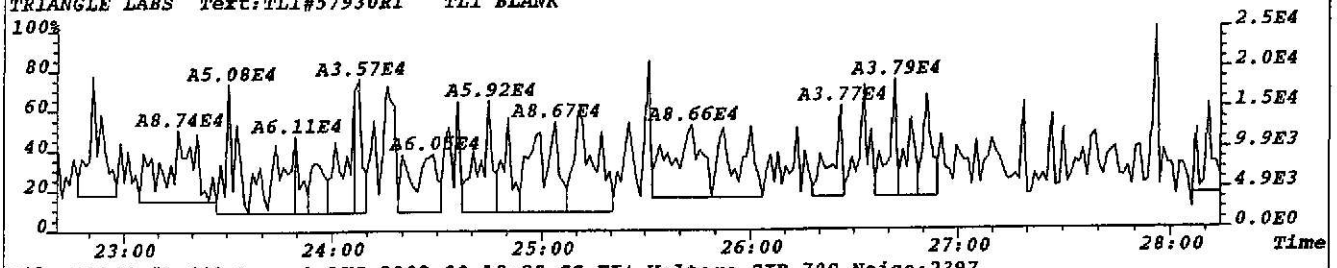
13C12-OCDD                         0.76-1.02                                        0.996-1.004
470-472          DC  NL             Height          3.64          1.99          1.65
                         41:02     0.89      10,396.27      4,890.28      5,505.99  1.000 13C12-OCDD      IS14
                                   Height     2,079.19        994.13      1,085.06
470-472                1 Peak                 10,396.27


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:U1144 #1-648 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:2491
303.9016 S:3 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,9964.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



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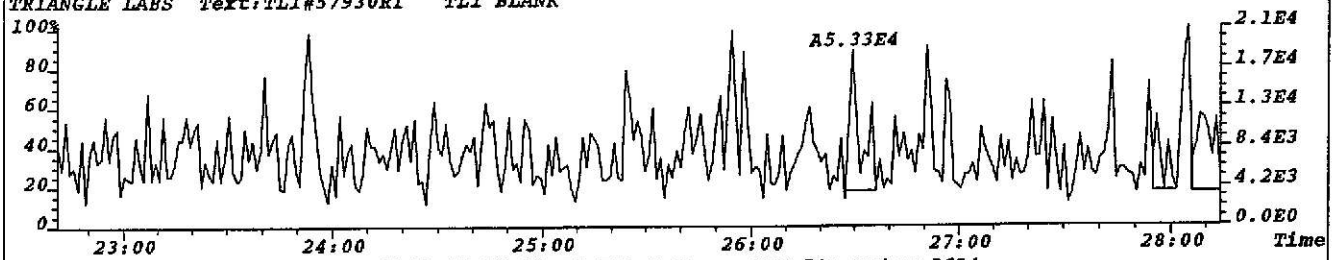
305.8987 S:3 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,9588.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



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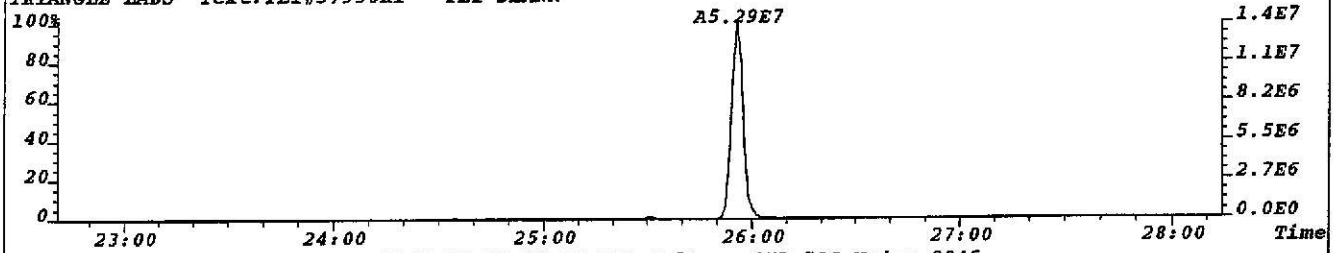
315.9419 S:3 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,10536.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



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317.9389 S:3 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,11780.0,1.00%,F,T) Exp:NDB5US
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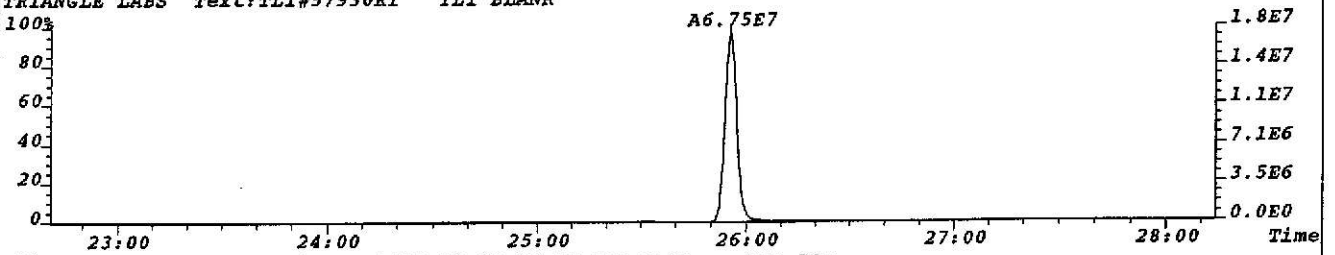
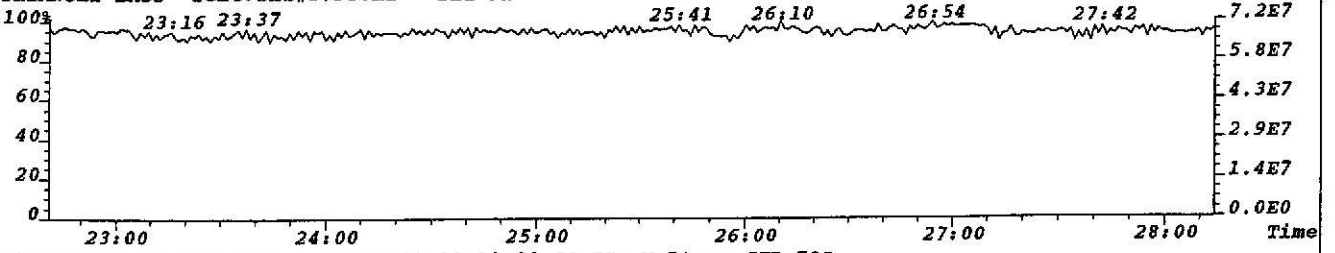


File:U1144 #1-648 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S
330.9792 S:3 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



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375.8364 S:3 F:2 Exp:NDB5US
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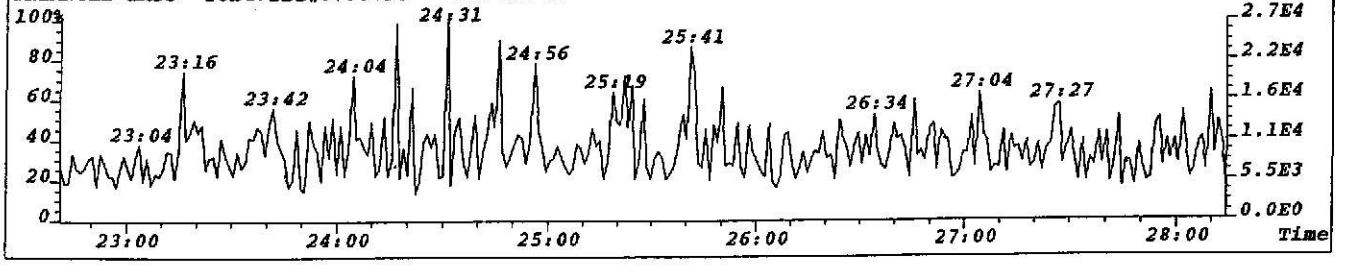

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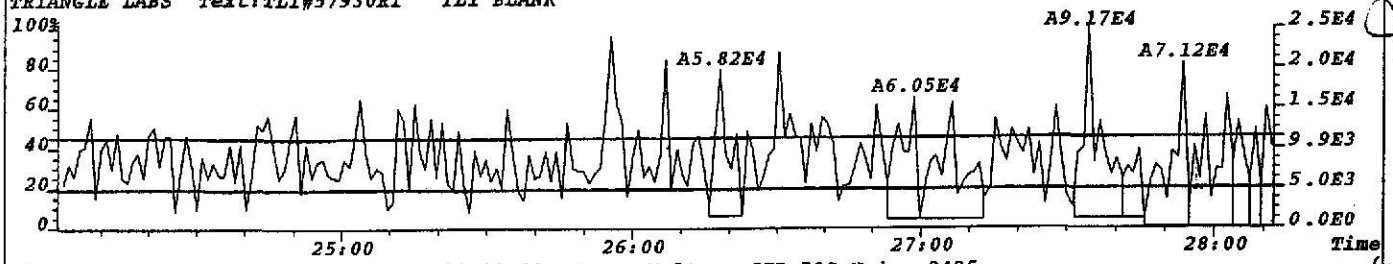

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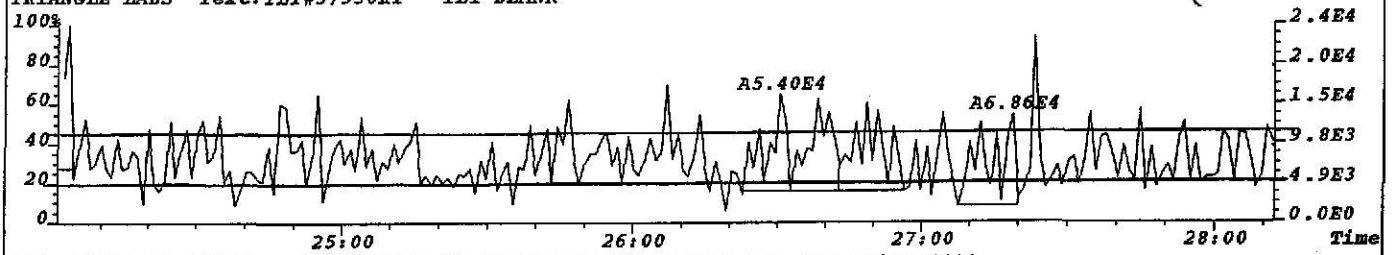

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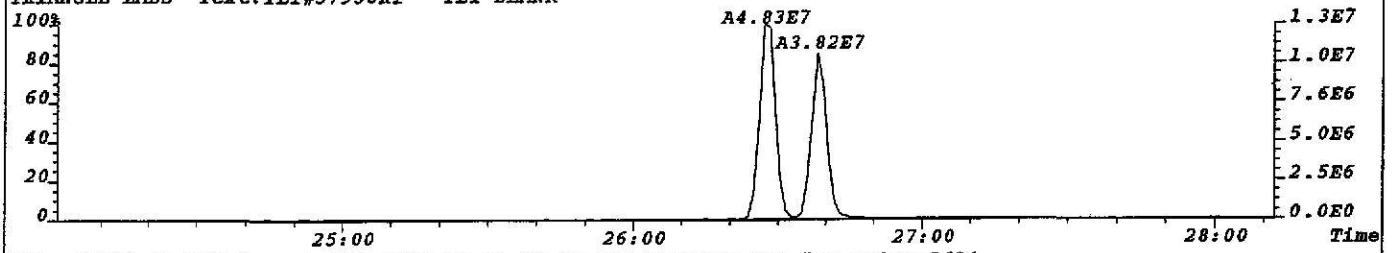

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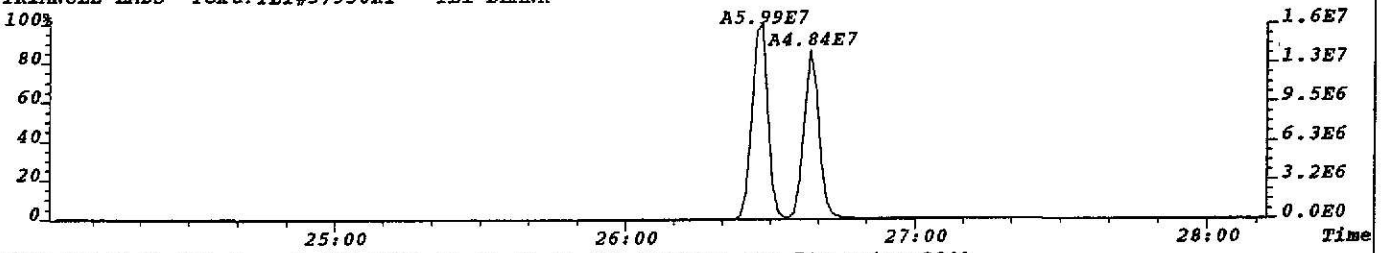

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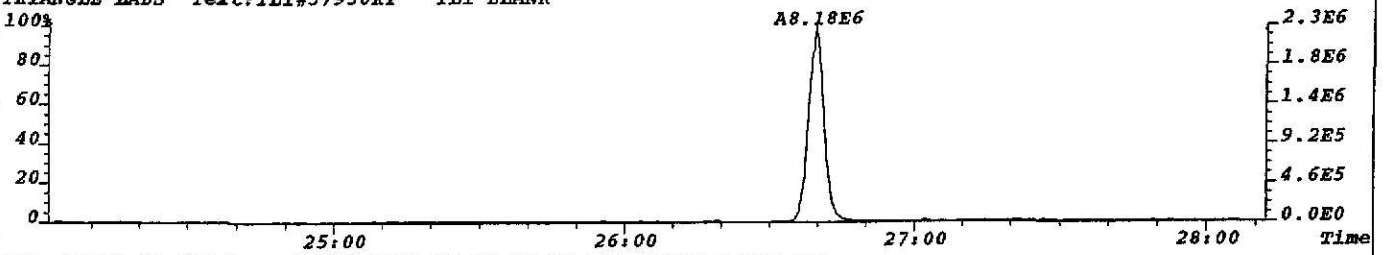

File:U1144 #1-648 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S
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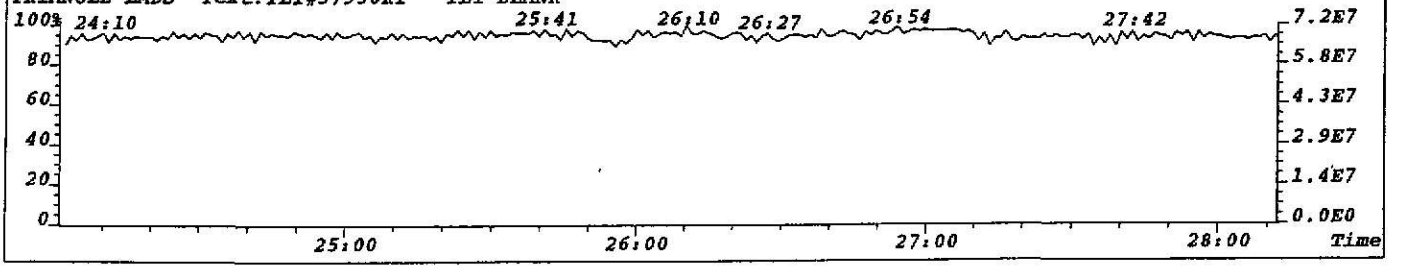
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



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339.8597 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,8840.0,1.00%,F,T) Exp:NDB5US
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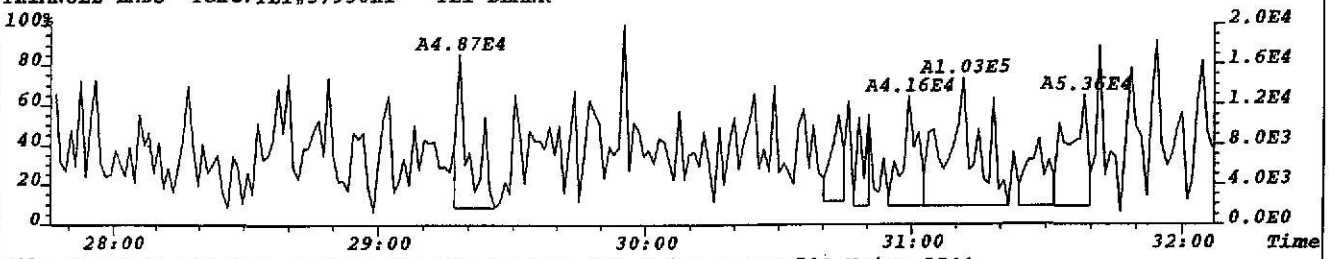

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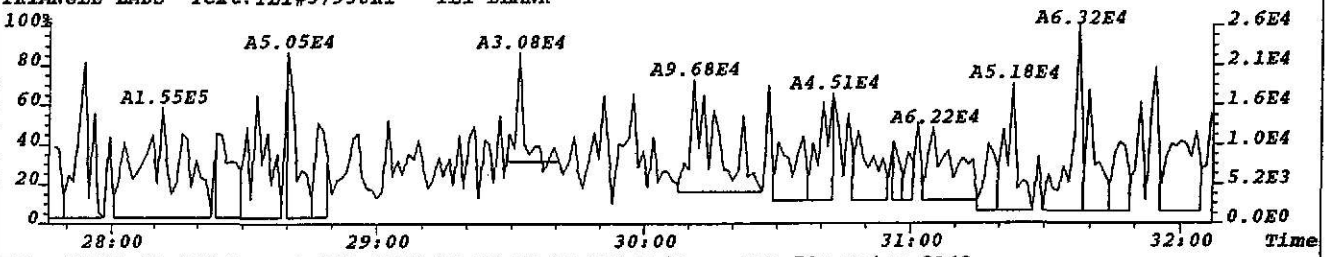
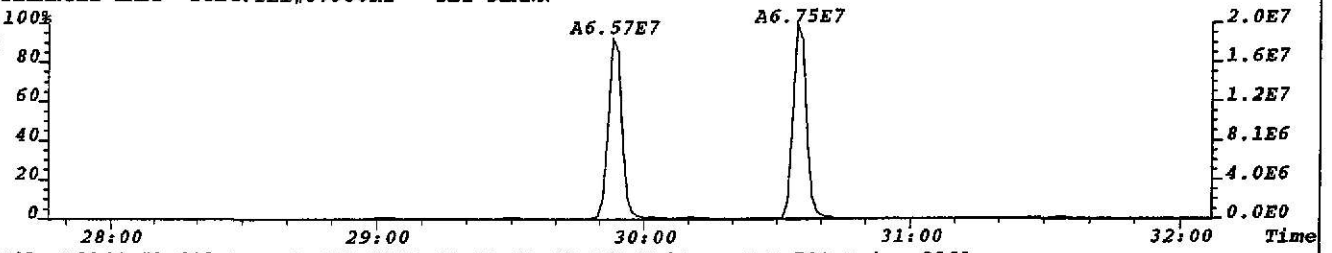
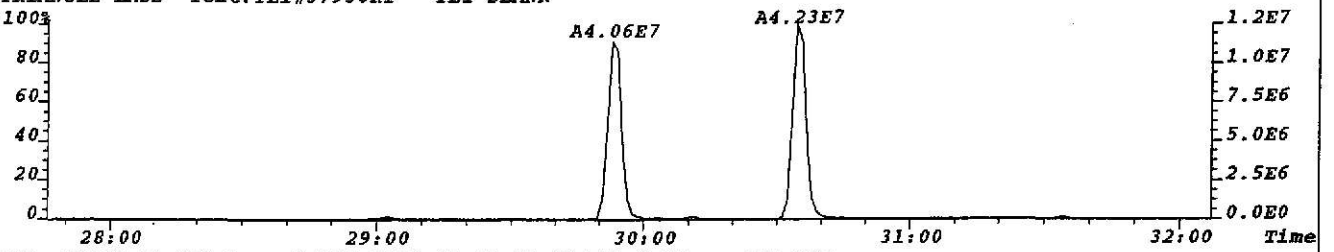
341.8567 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10176.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



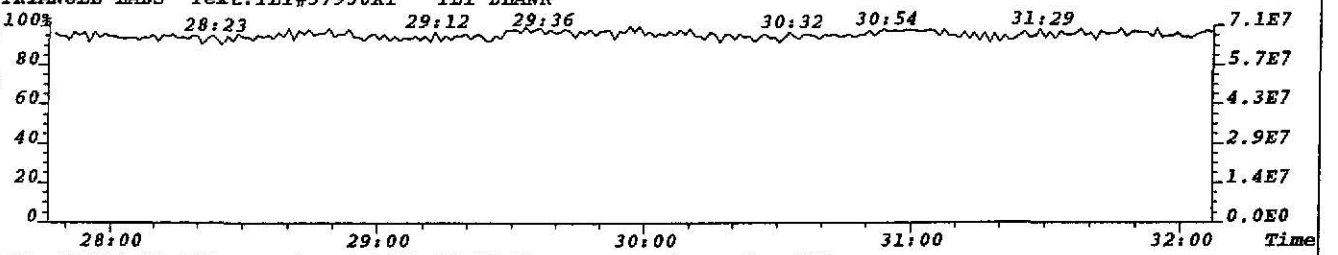
File:U1144 #1-648 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:2142
351.9000 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,8568.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



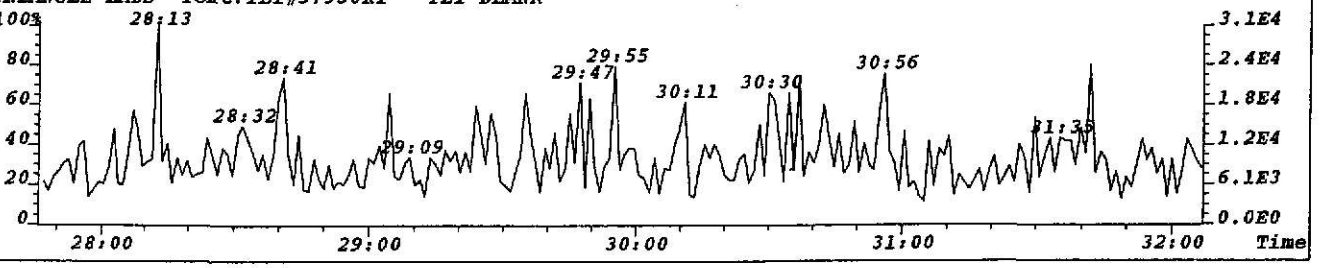
File:U1144 #1-648 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:2261
353.8970 S:3 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9044.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



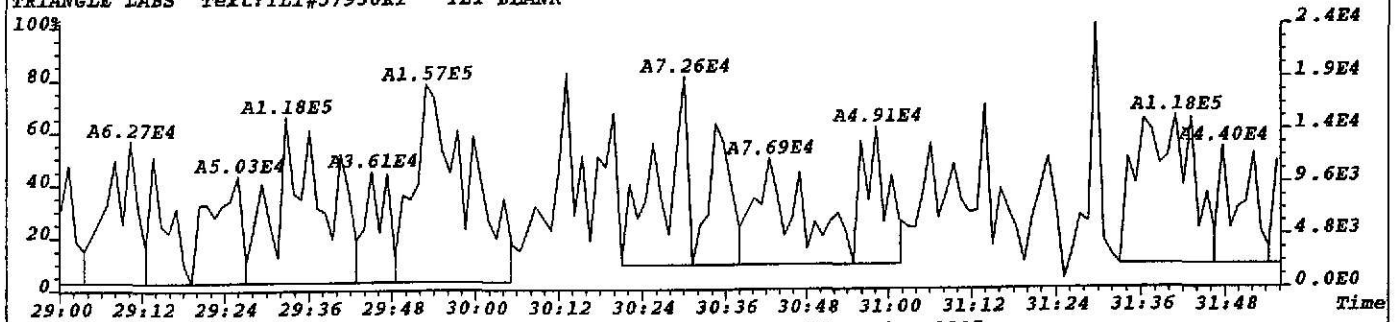
File:U1144 #1-648 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S
330.9792 S:3 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



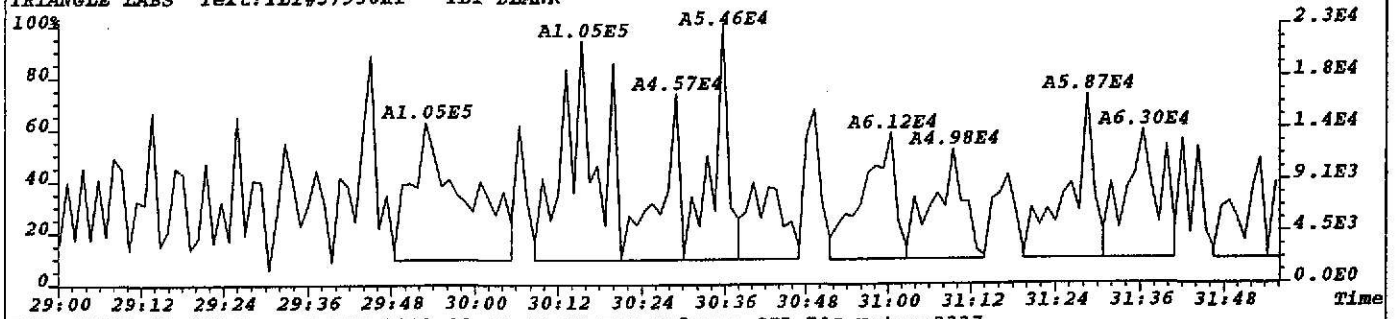
File:U1144 #1-648 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S
409.7974 S:3 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



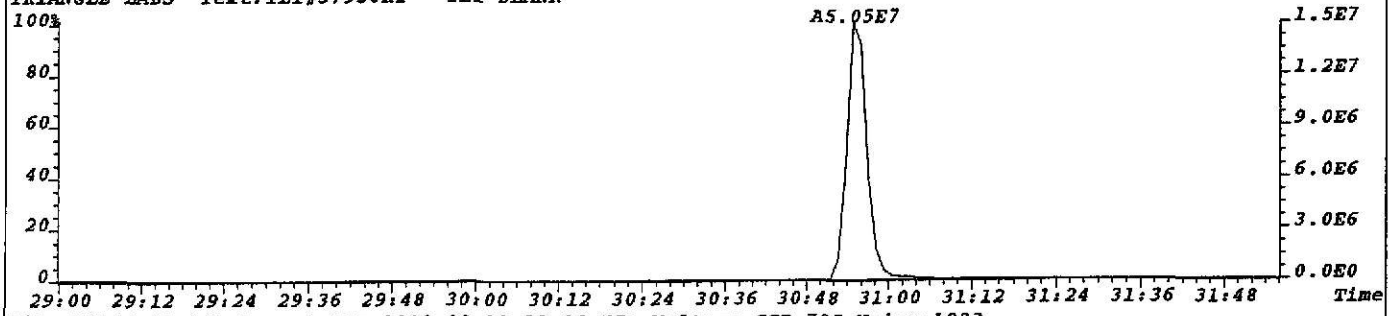
File:U1144 #1-648 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:2329
355.8546 S:3 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,9316.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



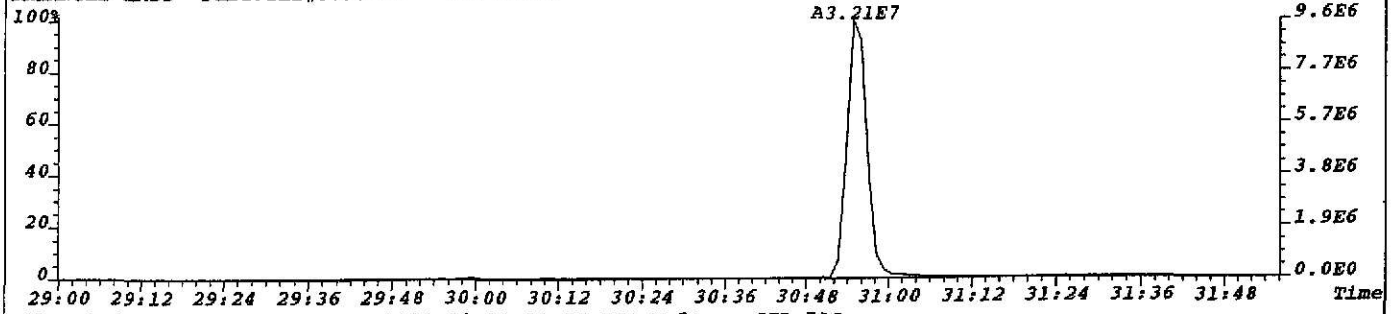
File:U1144 #1-648 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:2207
357.8516 S:3 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,8828.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



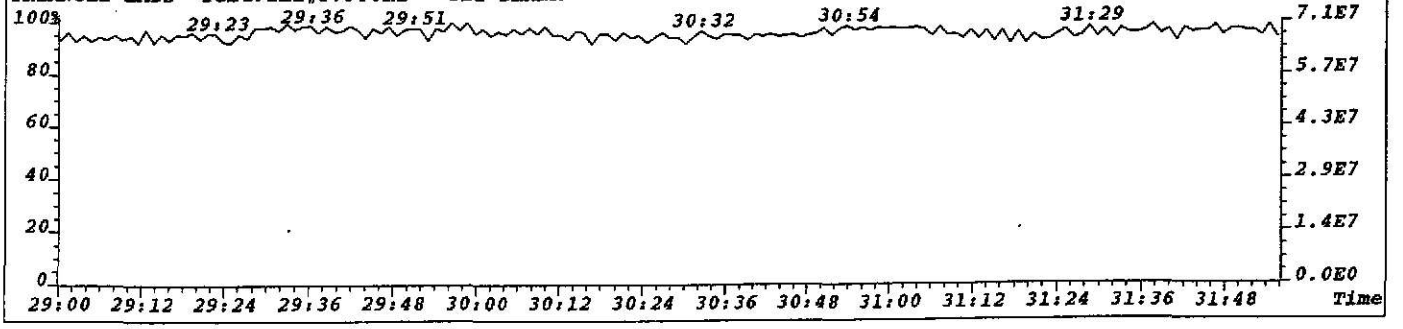
File:U1144 #1-648 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:2337
367.8949 S:3 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,9348.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



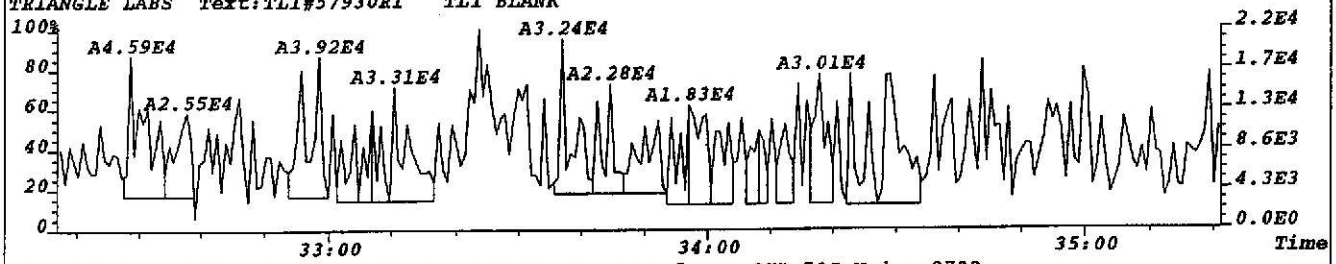
File:U1144 #1-648 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:1983
369.8919 S:3 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,7932.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



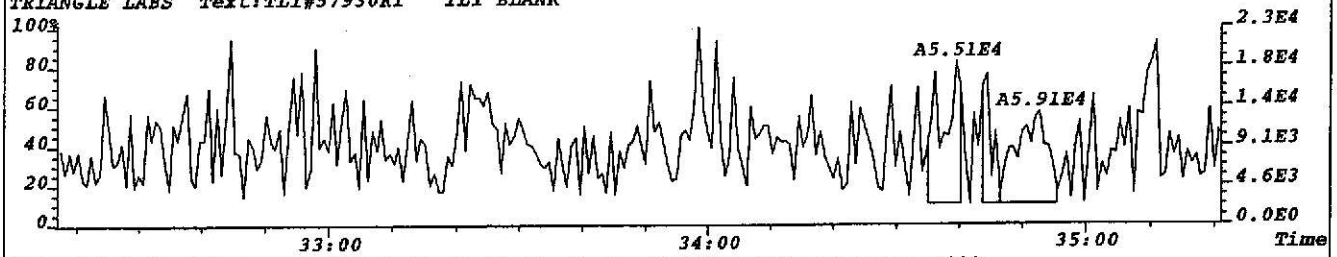
File:U1144 #1-648 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S
330.9792 S:3 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



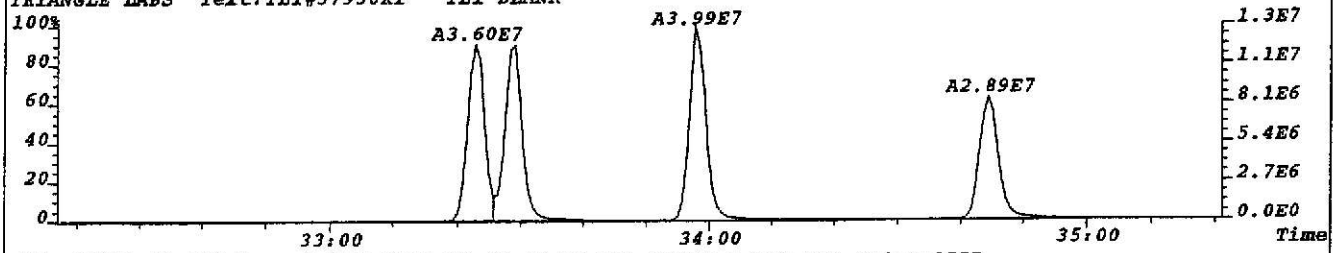
File:U1144 #1-272 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:2558
373.8208 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10232.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



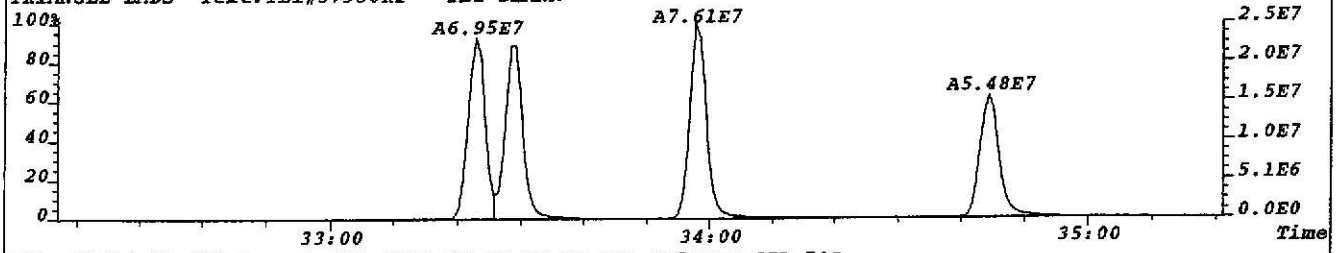
File:U1144 #1-272 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:2702
375.8178 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10808.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



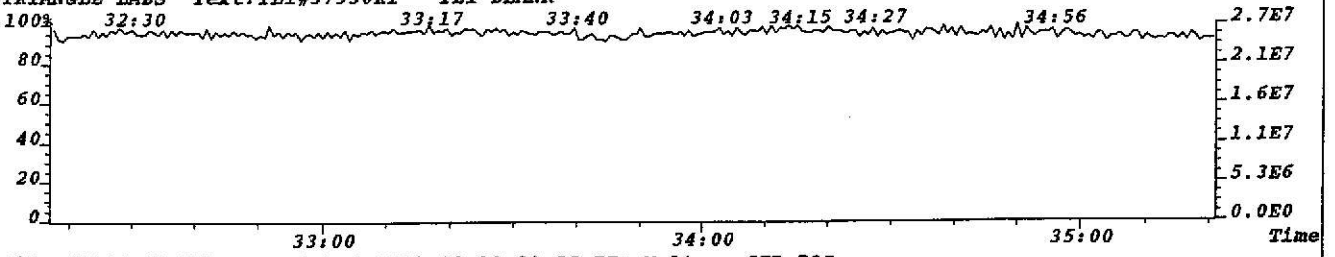
File:U1144 #1-272 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:4229
383.8639 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,16916.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



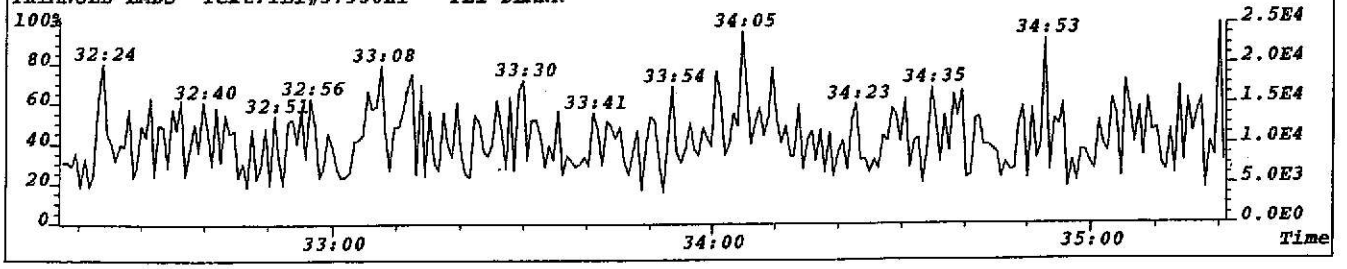
File:U1144 #1-272 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:3557
385.8610 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,14228.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



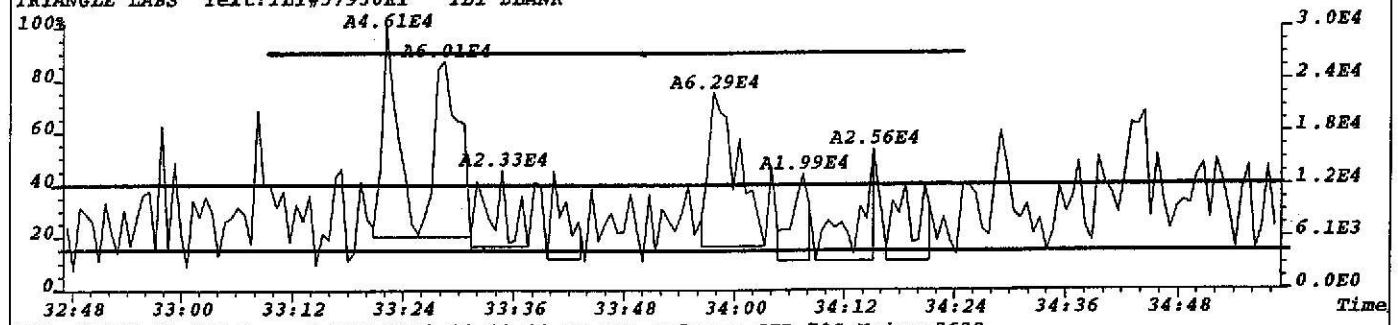
File:U1144 #1-272 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S
392.9760 S:3 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



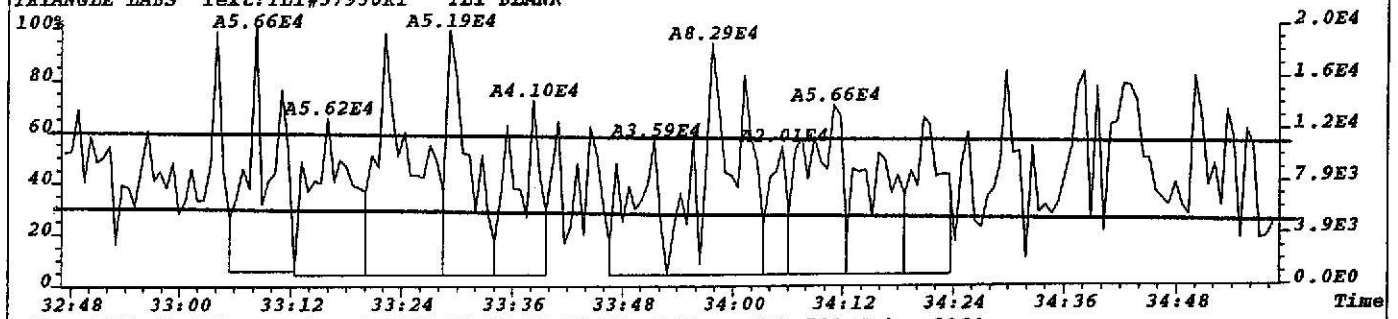
File:U1144 #1-272 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S
445.7555 S:3 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



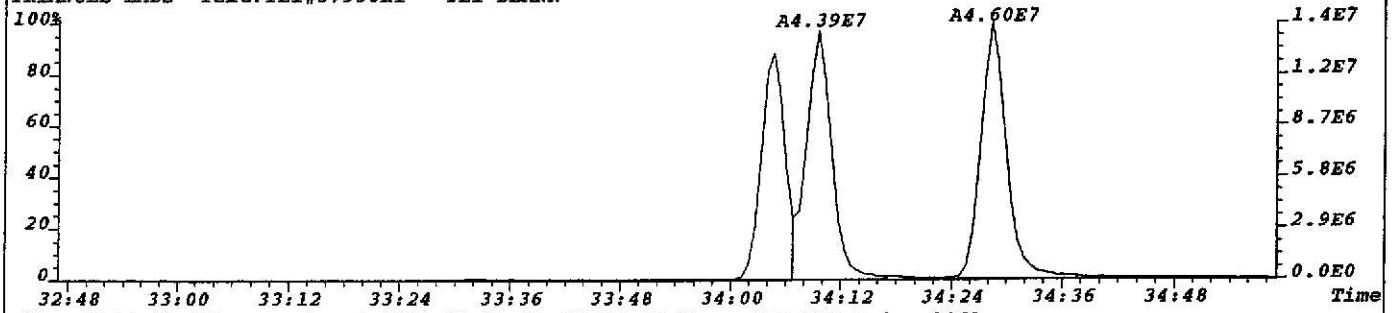
File:U1144 #1-272 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:2929
389.8156 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11716.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



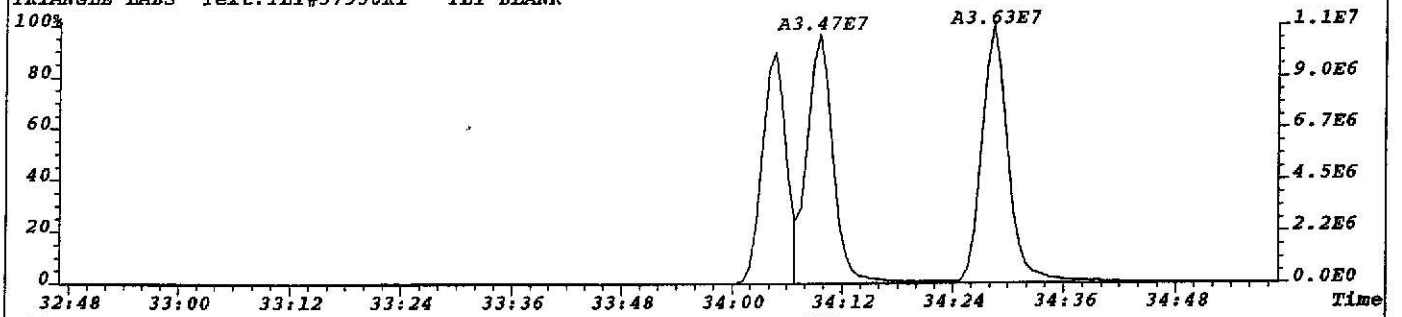
File:U1144 #1-272 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:2622
391.8127 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10488.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



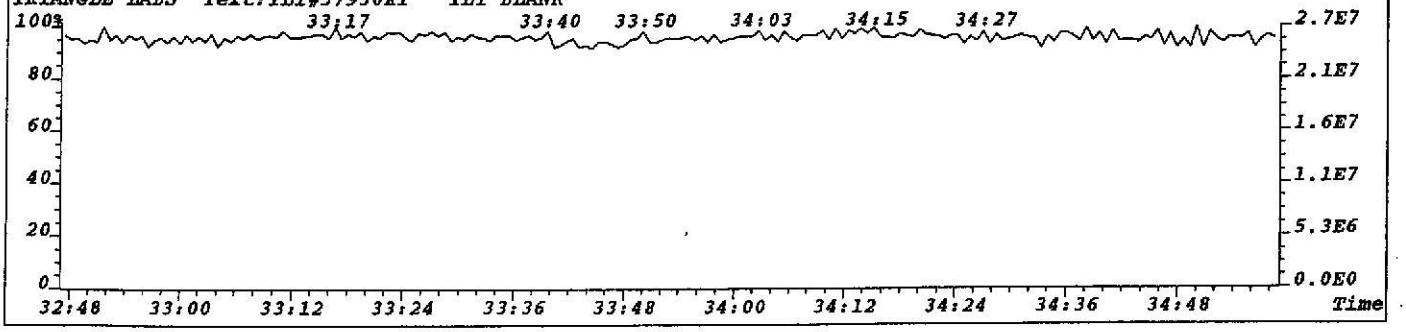
File:U1144 #1-272 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:3964
401.8558 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,15856.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



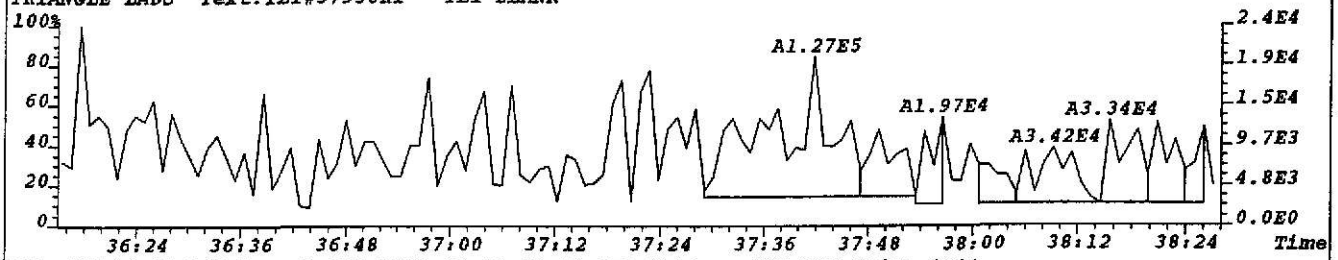
File:U1144 #1-272 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:3061
403.8529 S:3 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12244.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



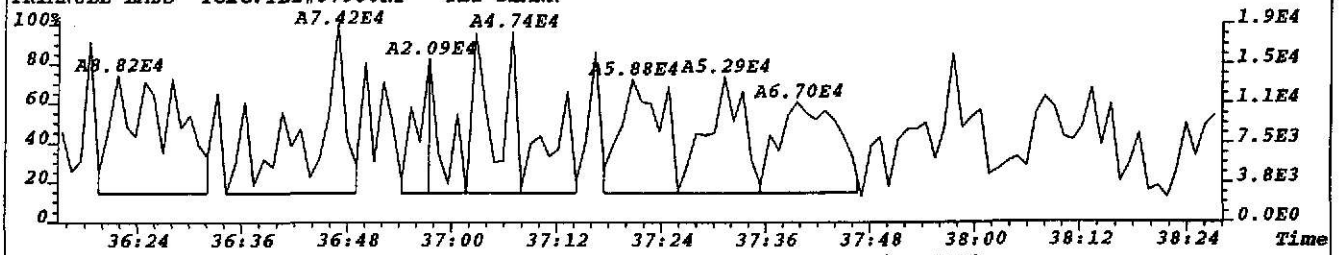
File:U1144 #1-272 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S
392.9760 S:3 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



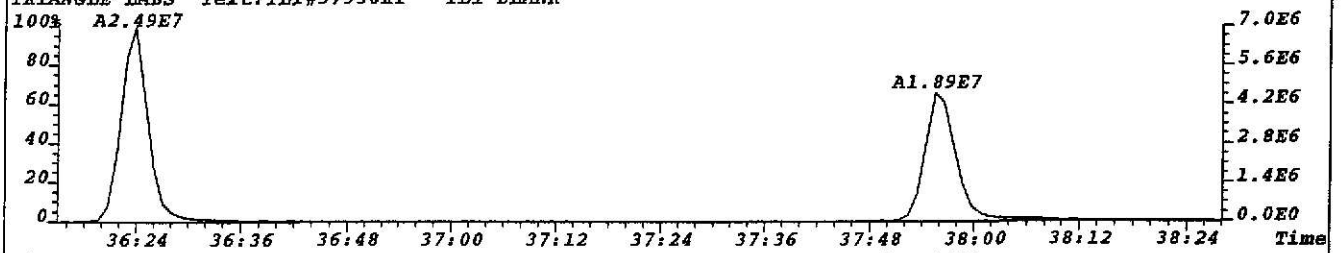
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:2636
407.7818 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10544.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



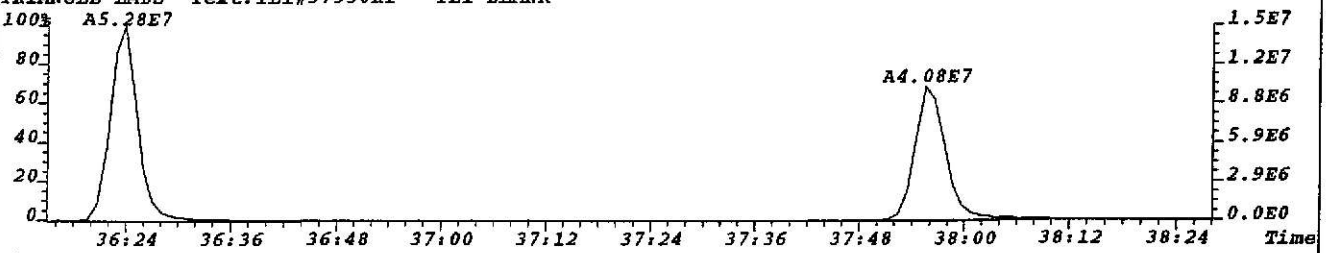
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:2430
409.7789 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9720.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



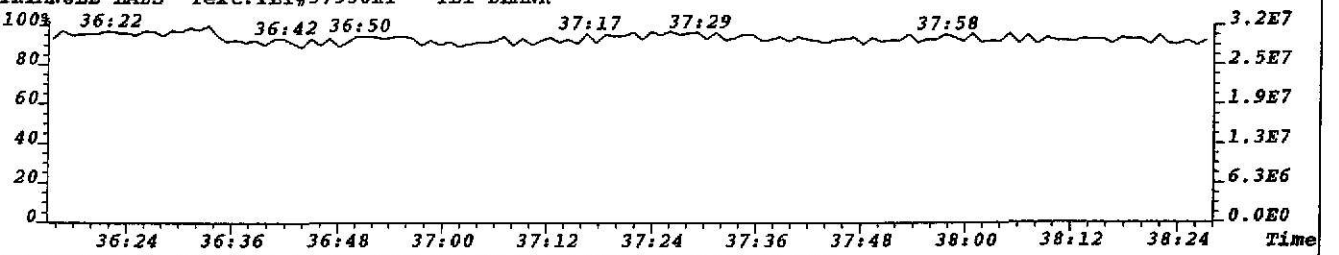
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:3325
417.8253 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,13300.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



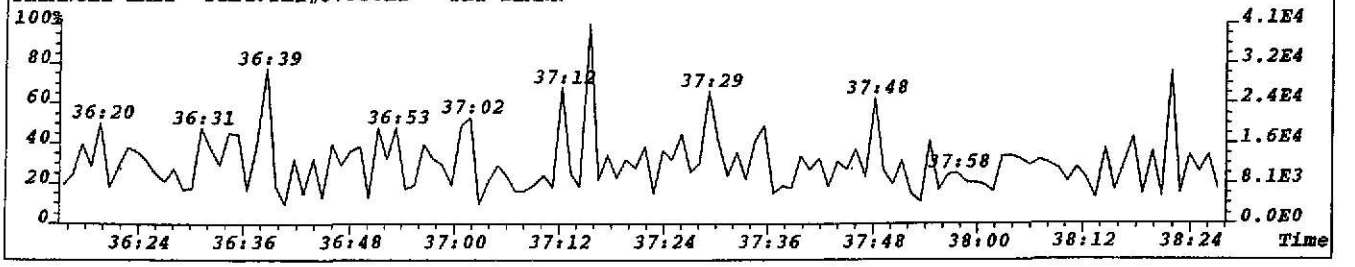
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:3828
419.8220 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,15312.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



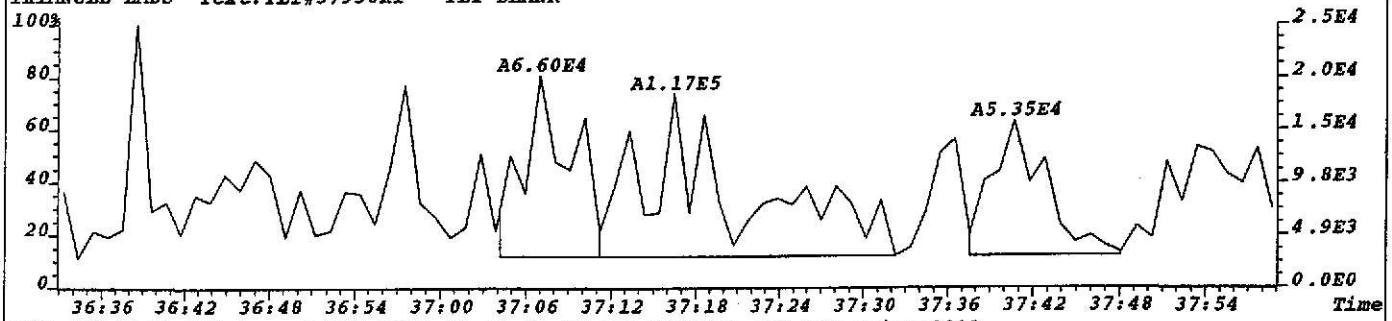
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S
430.9729 S:3 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



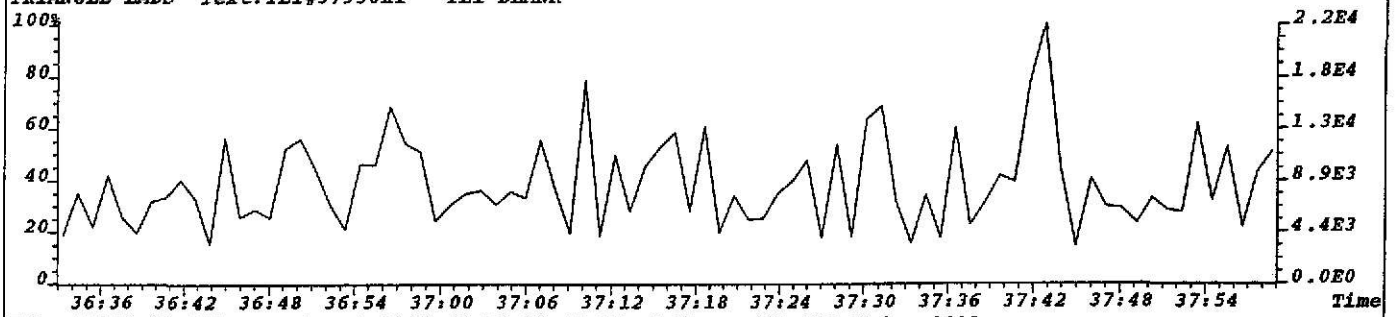
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S
479.7165 S:3 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



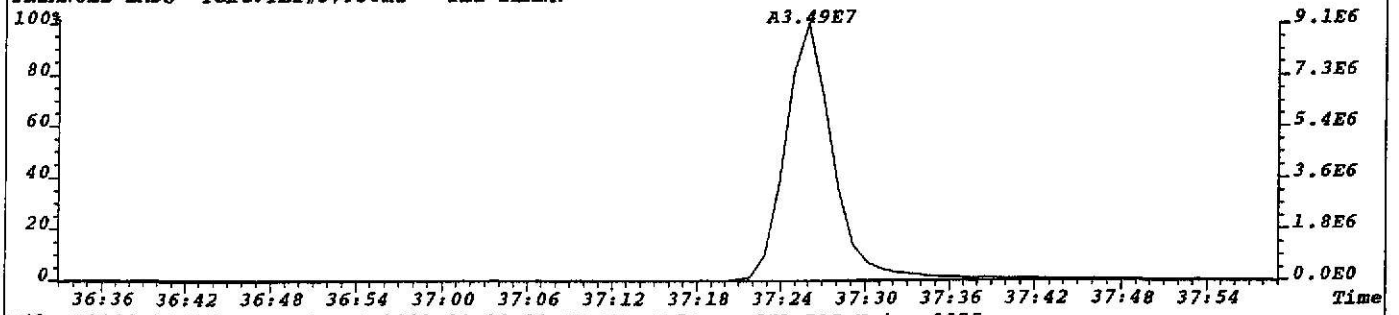
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:2347
423.7766 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9388.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



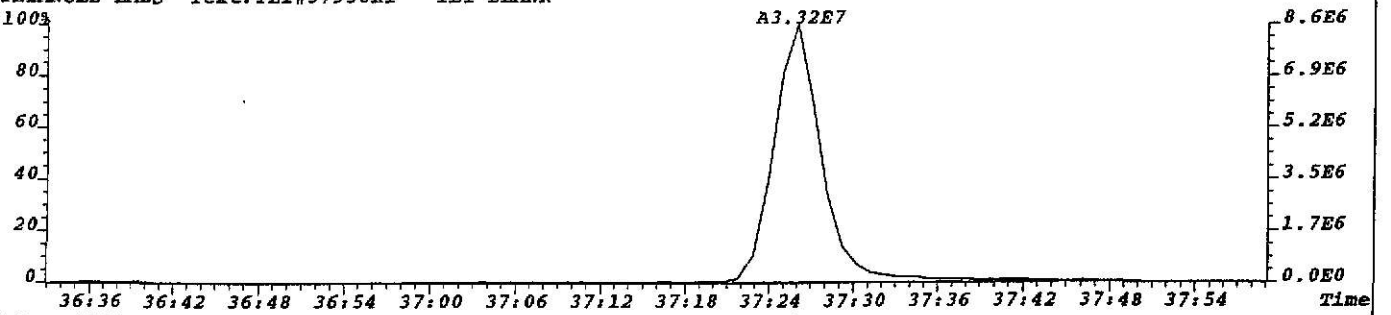
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:2291
425.7737 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9164.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



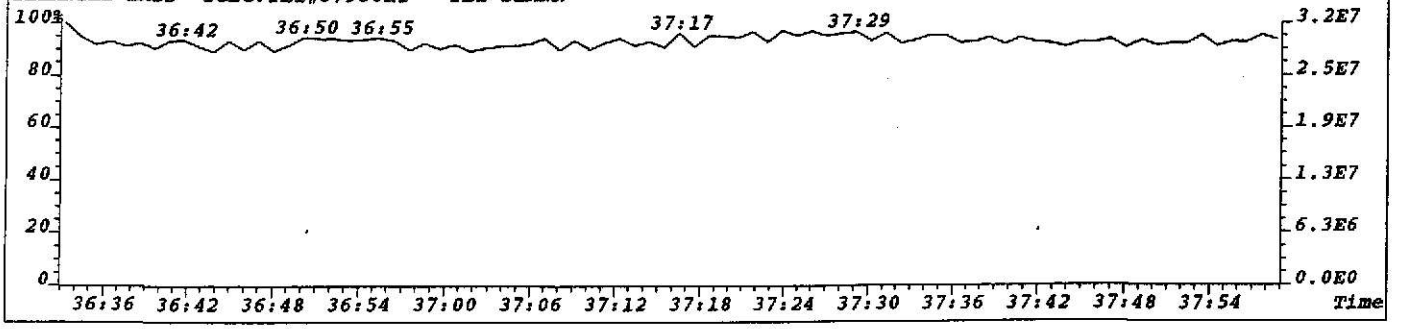
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:3811
435.8169 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,15244.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



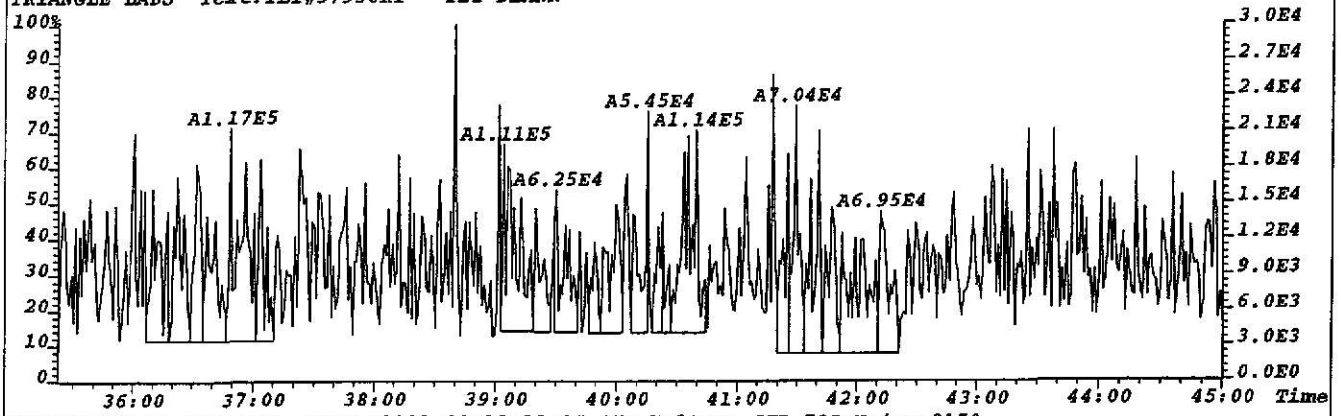
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:3375
437.8140 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,13500.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



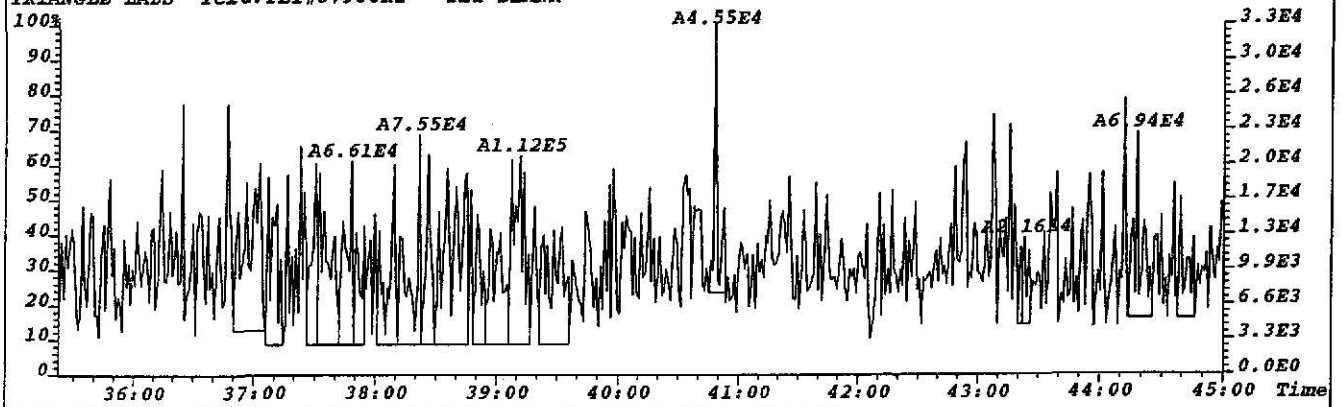
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S
430.9729 S:3 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



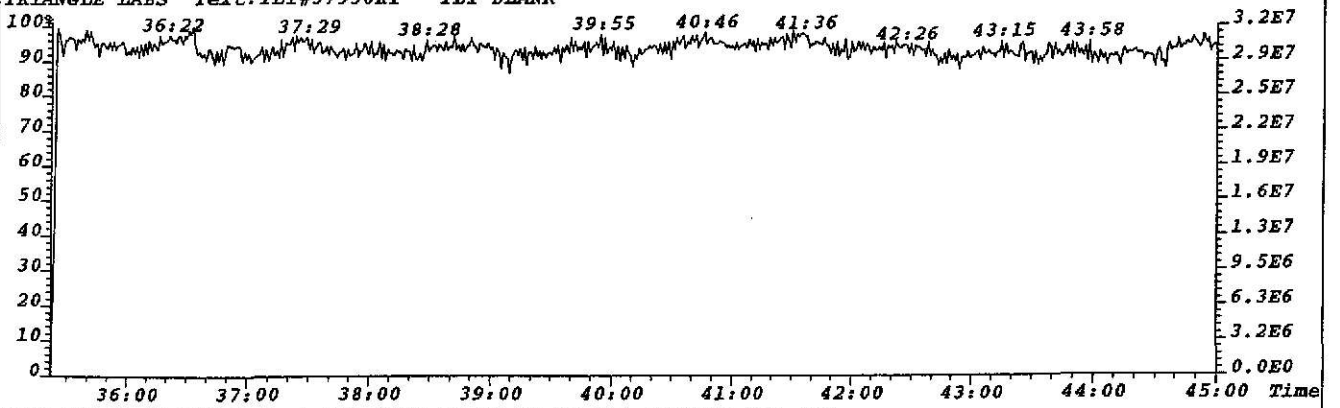
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:2949
441.7428 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11796.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



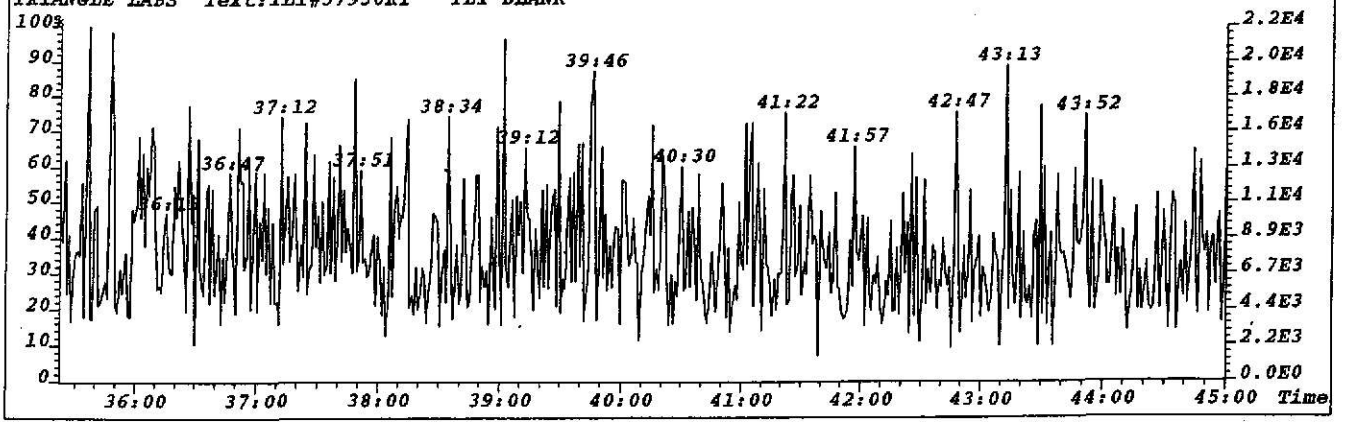
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:3150
443.7399 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12600.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



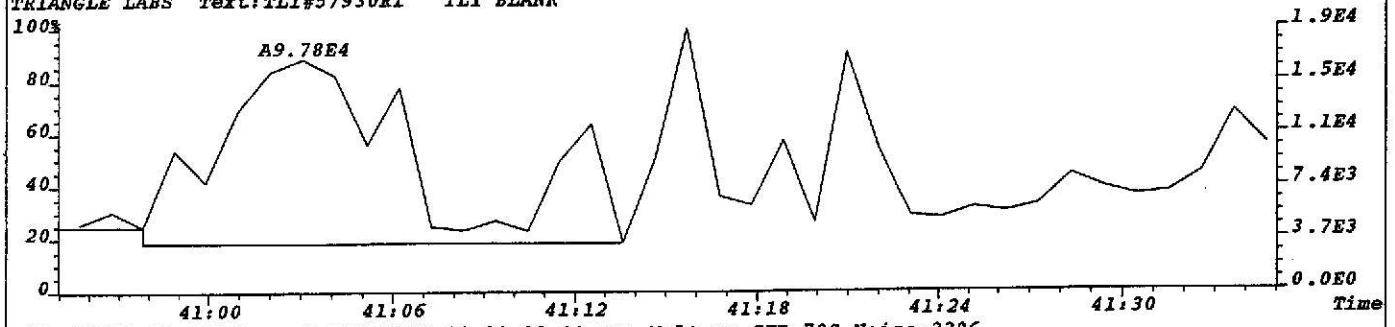
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S
430.9729 S:3 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



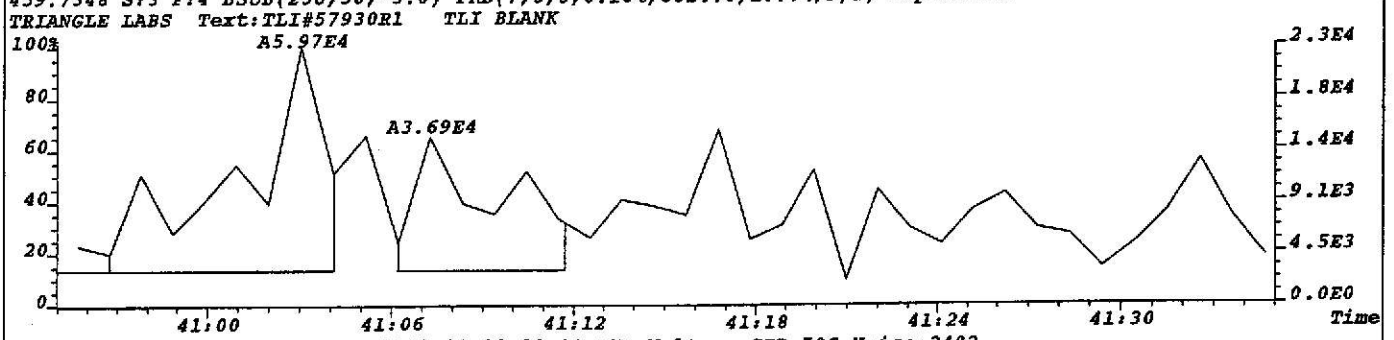
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S
513.6775 S:3 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



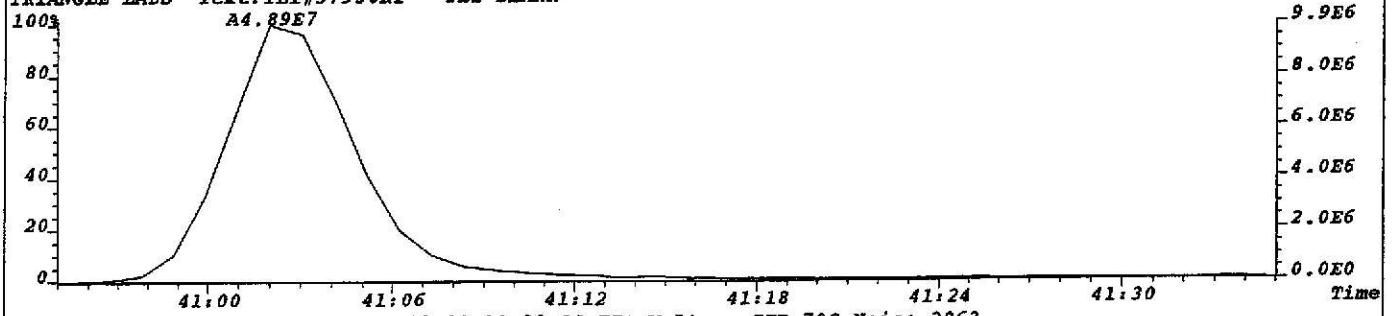
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:2547
457.7377 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10188.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



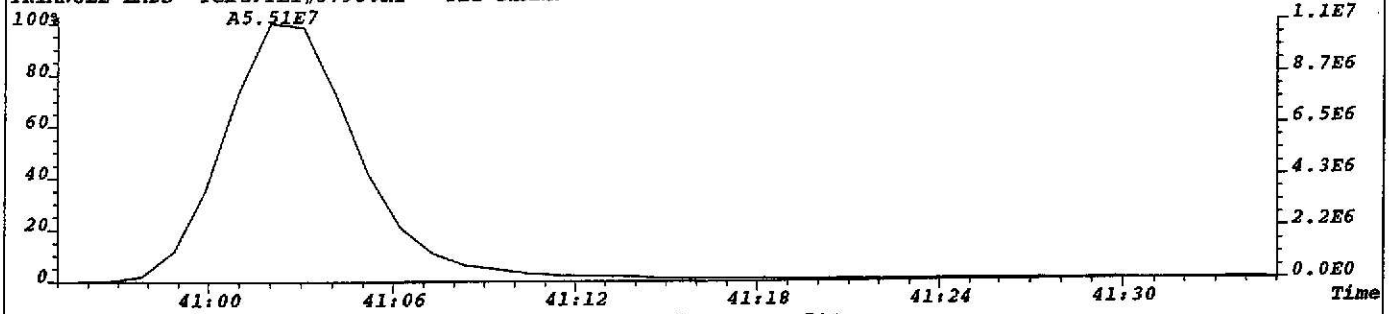
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:2206
459.7348 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,8824.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



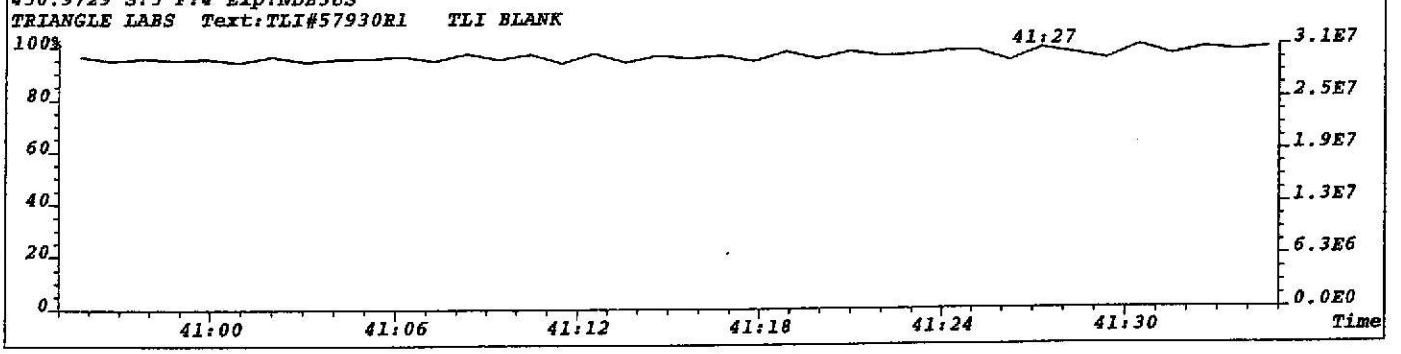
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:2482
469.7779 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9928.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



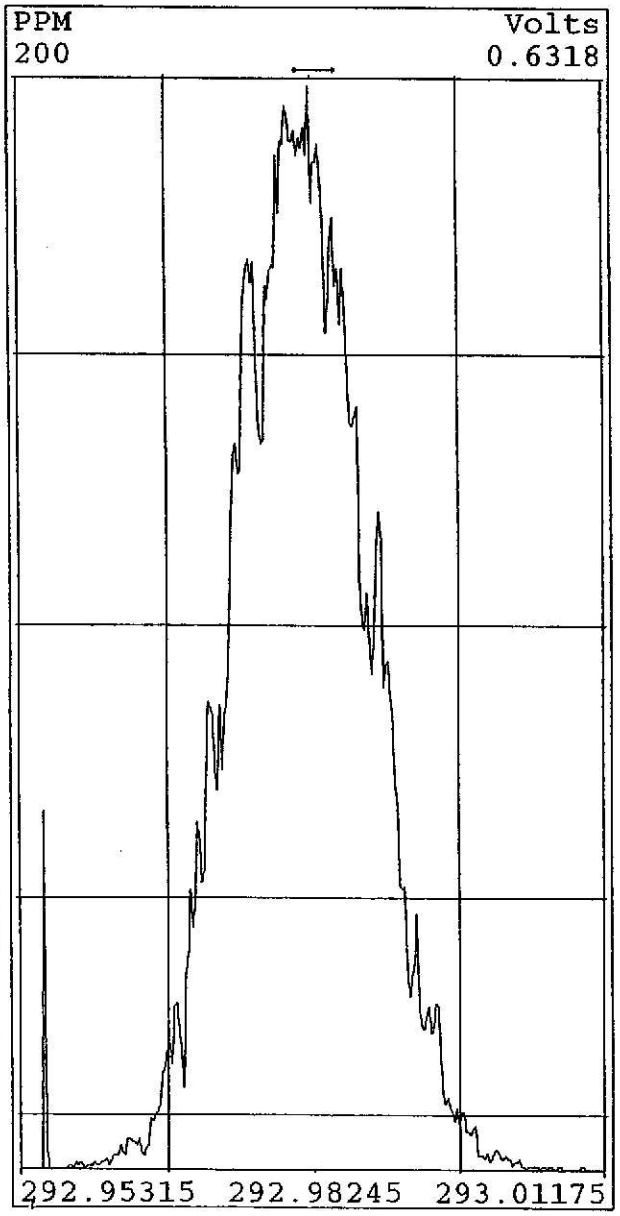
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S Noise:2063
471.7750 S:3 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,8252.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK

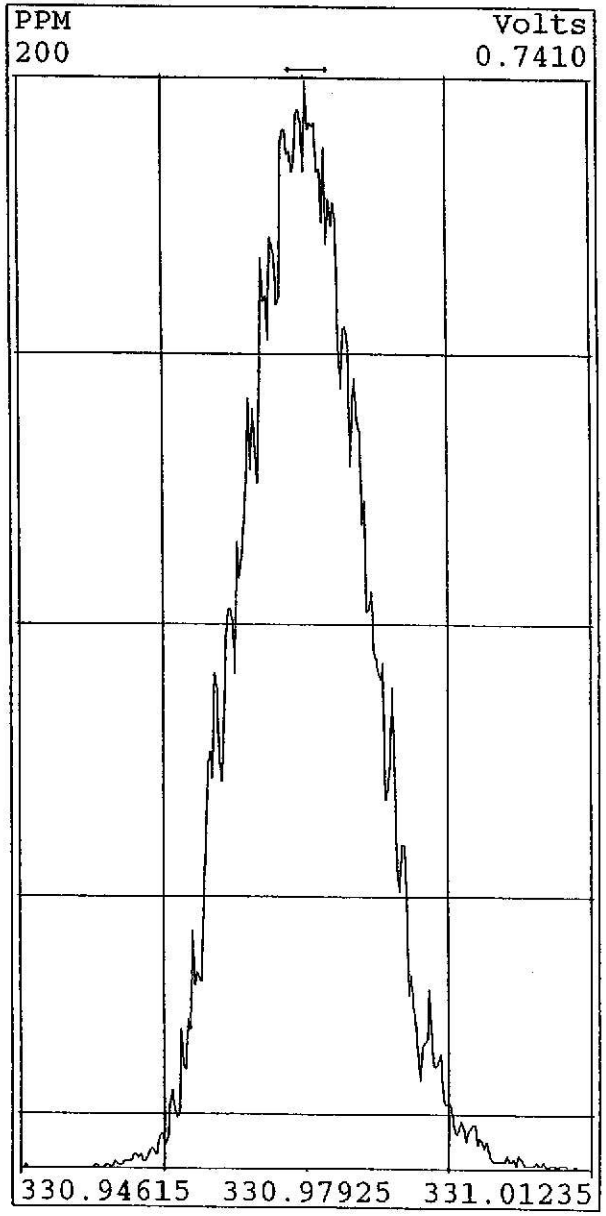


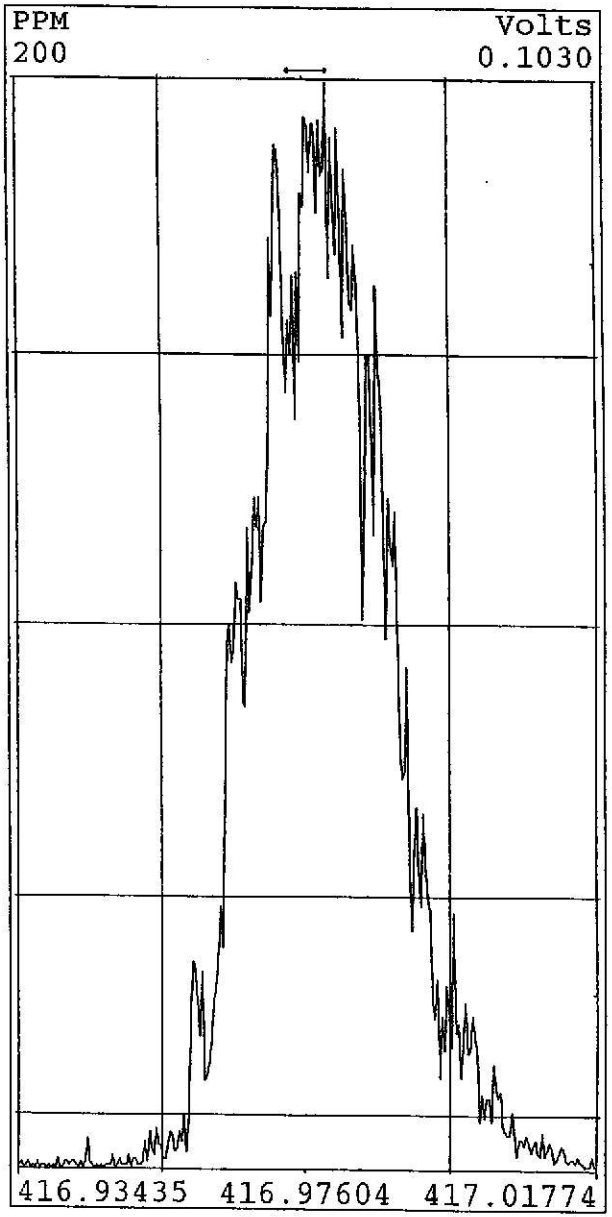
File:U1144 #1-549 Acq: 1-AUG-2002 00:19:29 GC EI+ Voltage SIR 70S
430.9729 S:3 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 TLI BLANK



Peak Locate Examination:31-JUL-2002:22:41 File:U1144
Experiment:NDB5US Function:2 Reference:PFK







Martin & Slagle

TLI Project: **57930r1** 1613, Revision B PCDD/PCDF Analysis (c)
Client Sample: **DF-DP157-0,5'-1'** Analysis File: **U114404**

Client Project:	**Kuhlman Electric**				
Sample Matrix:	**SOLID**	Date Received:	**07/20/2002**	Spike File:	**SP161B22**
TLI ID:	**331-18-11**	Date Extracted:	**07/30/2002**	ICal:	**UF5709B**
		Date Analyzed:	**08/01/2002**	ConCal:	**UB21143**
Sample Size:	**12.200 g**	Dilution Factor:	**n/a**	% Moisture:	**17.7**
Dry Weight:	**10.053 g**	Blank File:	**U114403**	% Lipid:	**n/a**
GC Column:	**DB-5**	Analyst:	**CGK**	% Solids:	**82.4**

Analytes	Conc. (pg/g)	DL	Ratio	RT	RRT	Flags
2,3,7,8-TCDD	ND	0.3				__
1,2,3,7,8-PeCDD	ND	0.3				__
1,2,3,4,7,8-HxCDD	ND	0.3				__
1,2,3,6,7,8-HxCDD	ND	0.3				__
1,2,3,7,8,9-HxCDD	ND	0.3				__
1,2,3,4,6,7,8-HpCDD	3.7		1.03	37:26	1.000	J__
1,2,3,4,6,7,8,9-OCDD	117		0.93	41:02	1.000	__
2,3,7,8-TCDF	ND	0.3				__
1,2,3,7,8-PeCDF	ND	0.2				__
2,3,4,7,8-PeCDF	ND	0.2				__
1,2,3,4,7,8-HxCDF	ND	0.5				__
1,2,3,6,7,8-HxCDF	ND	0.2				__
2,3,4,6,7,8-HxCDF	ND	0.2				__
1,2,3,7,8,9-HxCDF	ND	0.3				__
1,2,3,4,6,7,8-HpCDF	1.8		0.88	36:24	1.000	J__
1,2,3,4,7,8,9-HpCDF	ND	0.4				__
1,2,3,4,6,7,8,9-OCDF	0.86		0.98	41:16	1.006	J__

Totals	Conc. (pg/g)	Number	DL	Flags
Total TCDD	ND		0.3	__
Total PeCDD	ND		0.3	__
Total HxCDD	ND		0.3	__
Total HpCDD	7.5	2		__
Total TCDF	1.1	2		__
Total PeCDF	2.1	3		__
Total HxCDF	0.87	1		__
Total HpCDF	3.0	2		__

161B_PSR v2.04, LARS 6.25.05

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Printed: 13:18 08/01/2002

TLI Project: **57930r1** 1613, Revision B PCDD/PCDF Analysis (c)
Client Sample: **DF-DP157-0,5'-1'** Analysis File: **U114404**

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	RRT	Flags
$^{13}C_{12}$-2,3,7,8-TCDD	146	73.2	25%-164%	0.78	26:38	1.006	—
$^{13}C_{12}$-1,2,3,7,8-PeCDD	257	129	25%-181%	1.58	30:55	1.168	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	192	96.6	32%-141%	1.28	34:05	0.989	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	204	103	28%-130%	1.26	34:10	0.991	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	225	113	23%-140%	1.07	37:25	1.086	—
$^{13}C_{12}$-1,2,3,4,6,7,8,9-OCDD	494	124	17%-157%	0.91	41:02	1.191	—
$^{13}C_{12}$-2,3,7,8-TCDF	146	73.6	24%-169%	0.77	25:56	0.980	—
$^{13}C_{12}$-1,2,3,7,8-PeCDF	194	97.5	24%-185%	1.56	29:53	1.129	—
$^{13}C_{12}$-2,3,4,7,8-PeCDF	195	98.1	21%-178%	1.57	30:35	1.156	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	190	95.5	26%-152%	0.53	33:23	0.969	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	203	102	26%-123%	0.53	33:29	0.971	—
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	222	112	28%-136%	0.53	33:58	0.985	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	205	103	29%-147%	0.52	34:44	1.008	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	189	95.1	28%-143%	0.47	36:23	1.056	—
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	206	103	26%-138%	0.48	37:56	1.101	—

Cleanup Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	RRT	Flags
$^{37}Cl_4$-2,3,7,8-TCDD	13.1	65.9	35%-197%	26:40	1.008	—

Recovery Standards	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.79	26:28	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.28	34:28	—

Data Reviewer: AEM 08/01/2002

161B_PSR v2.04, LARS 6.25.05

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Printed: 13:18 08/01/2002

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TLI Project: **57930r1**
Client Sample: **DF-DP157-0,5'-1'**

Toxicity Equivalents Report
Analysis File: **U114404**

Client Project:	**Kuhlman Electric**				
Sample Matrix:	**SOLID**	Date Received:	**07/20/02**	Spike File:	**SP161B22**
TLI ID:	**331-18-11**	Date Extracted:	**07/30/02**	ICal:	**UF5709B**
		Date Analyzed:	**08/01/02**	ConCal:	**UB21143**
Sample Size:	**12.200 g**	Dilution Factor:	**1**	% Moisture:	**17.7**
Dry Weight:	**10.053 g**	Blank File:	**U114403**	% Lipid:	**n/a**
GC Column:	**DB-5**	Analyst:	**CGK**	% Solids:	**82.4**

Analytes	Conc. (pg/g)		TEF		Equivalent
2,3,7,8-TCDD	{0.3}	x	1.	=	0.3
1,2,3,7,8-PeCDD	{0.3}	x	0.5	=	0.2
1,2,3,4,7,8-HxCDD	{0.3}	x	0.1	=	0.03
1,2,3,6,7,8-HxCDD	{0.3}	x	0.1	=	0.03
1,2,3,7,8,9-HxCDD	{0.3}	x	0.1	=	0.03
1,2,3,4,6,7,8-HpCDD	3.7	x	0.01	=	0.037
1,2,3,4,6,7,8,9-OCDD	117	x	0.001	=	0.117
TOTAL PCDD					0.7
2,3,7,8-TCDF	{0.3}	x	0.1	=	0.03
1,2,3,7,8-PeCDF	{0.2}	x	0.05	=	0.01
2,3,4,7,8-PeCDF	{0.2}	x	0.5	=	0.1
1,2,3,4,7,8-HxCDF	{0.5}	x	0.1	=	0.05
1,2,3,6,7,8-HxCDF	{0.2}	x	0.1	=	0.02
2,3,4,6,7,8-HxCDF	{0.2}	x	0.1	=	0.02
1,2,3,7,8,9-HxCDF	{0.3}	x	0.1	=	0.03
1,2,3,4,6,7,8-HpCDF	1.8	x	0.01	=	0.018
1,2,3,4,7,8,9-HpCDF	{0.4}	x	0.01	=	0.004
1,2,3,4,6,7,8,9-OCDF	0.86	x	0.001	=	0.00086
TOTAL PCDF					0.3

Total EPA TEFs, 1989a: 1.0 pg/g

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

GRY_TEF v1.08, MILES 4.22.16

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Printed: 12:16 08/01/02

Initial ....Date...

Data Review By: ABM 8/1/02

Calculated Noise Height: 1.61

Page No. 1 Listing of U114404B.dbf
08/01/2002 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						0.872-1.073			
304-306	DC	NL					Height	3.80	1.81	1.99			
A				23:32		0.79	27.00	11.90	15.10	0.907			J
A				27:12		0.79	40.00	17.70	22.30	1.049			J
	DC	SN		27:35	RO	4.12	6.66			1.064			
	DC	SN		27:46	RO	3.08	8.98			1.071			
	DC	WH		28:12	RO	2.02	19.26			1.087			
304-306			2	Peaks			67.00						
13C12-TCDF				0.65-0.89						0.944-1.136			
316-318	DC	NL					Height	4.28	2.02	2.26			
				24:54		0.88	75.00	35.20	39.80	0.960			
				25:11	RO	1.08	31.18	16.22	14.96	0.971			
				25:32		0.83	77.05	35.06	41.99	0.985			
				25:56		0.77	10,334.05	4,488.75	5,845.30	1.000	13C12-2378-TCDF	IS0	
						Height	2,771.46	1,217.83	1,553.63				
				26:17	RO	0.93	82.09	39.62	42.47	1.013			
316-318			5	Peaks			10,599.37						

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

TCDD				0.65-0.89						0.899-1.043			
320-322	DC	NL					Height	4.03	2.12	1.91			
	DC	SN		25:57	RO	1.38	23.31			0.974			
320-322			0	Peaks			0.00						
37Cl-TCDD										0.925-1.075			
328	DC	NL					Height	1.92	1.92				
	DC	WL		24:08			11.67			0.906			
	DC	WL		24:12			2.10			0.909			
	DC	WL		24:16			1.99			0.911			
	DC	WL		24:19			5.89			0.913			
	DC	WL		24:35			10.29			0.923			
	DC	SN		24:46			10.91			0.930			
	DC	SN		25:16			5.24			0.949			
	DC	SN		25:32			4.42			0.959			
				26:40			692.23	692.23		1.001	37Cl-TCDD		CLS
				26:55			7.81	7.81		1.011			
				27:03			28.02	28.02		1.016			
	DC	SN		27:26			1.62			1.030			
	DC	SN		27:31			3.00			1.033			
328			3	Peaks			728.06						
13C12-TCDD				0.65-0.89						0.918-1.068			
332-334	DC	NL					Height	6.01	3.94	2.07			
				26:28		0.79	9,732.32	4,286.40	5,445.92	0.994	13C12-1234-TCDD	RS1	
				26:38		0.78	7,237.76	3,176.77	4,060.99	1.000	13C12-2378-TCDD	IS1	
							Height	1,959.04	870.15	1,088.89			

```
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              16,970.08

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

PeCDF                            1.32-1.78                                  0.906-1.038
340-342          DC  NL           Height          4.02          1.87          2.15
        A                28:00 RO  0.82          25.30         11.40         13.90  0.916
                 DC  SN  28:32 RO  0.40          23.40                               0.933
                         29:14     1.33          53.92         30.73         23.19  0.956                        J
        M                29:27     1.53          37.20         22.50         14.70  0.963                        J
        MN               29:48     1.42          33.90         19.90         14.00  0.997                        J
                 DC  SN  30:32 RO  0.31          21.34                               0.998 23478-PeCDF      AN
                 DC  SN  30:53     1.44          12.86                               1.010
                 DC  SN  31:35 RO  0.54          15.81                               1.033
                 DC  WH  32:07 RO  0.42          10.22                               1.050
340-342              4 Peaks                    150.32

13C12-PeCDF                      1.32-1.78                                  0.801-1.127
352-354          DC  NL           Height          3.23          1.59          1.64
                         29:01     1.55         104.71         63.69         41.02  0.949
                         29:30     1.37          82.41         47.71         34.70  0.965
                         29:53     1.56       9,532.05      5,812.67      3,719.38  1.000 13C12-PeCDF 123 IS2
                                  Height       2,868.24      1,751.45      1,116.79
                         30:10     1.69         147.52         92.69         54.83  0.986
                         30:35     1.57       9,620.62      5,882.85      3,737.77  1.000 13C12-PeCDF 234 IS3
                                  Height       2,955.42      1,814.83      1,140.59
                         30:54     1.38          48.19         27.91         20.28  1.010
                         31:34 RO  1.28         117.60         65.96         51.64  1.032
352-354              7 Peaks                 19,653.10

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

PeCDD                            1.32-1.78                                  0.936-1.020
356-358          DC  NL           Height          3.26          1.67          1.59
                 DC  SN  29:06 RO  3.06           9.86                               0.941
                 DC  SN  30:55 RO  0.68          14.20                               1.000 12378-PeCDD      AN
                 DC  SN  31:07 RO  0.30          11.99                               1.006
356-358              0 Peaks                      0.00

13C12-PeCDD                      1.32-1.78                                  0.728-1.051
368-370          DC  NL           Height          3.48          1.99          1.49
                 DC  SN  29:36 RO  0.56          11.29                               0.957
                         29:52 RO  1.29          30.09         16.95         13.14  0.966
                         29:59     1.51          47.88         28.80         19.08  0.970
                 DC  SN  30:10 RO  1.00          18.35                               0.976
                 DC  SN  30:26 RO  0.84          14.43                               0.984
                         30:55     1.58       7,510.85      4,598.10      2,912.75  1.000 13C12-PeCDD 123 IS4
                                  Height       2,229.59      1,339.32        890.27
                         31:22 RO  0.98          25.16         12.48         12.68  1.015
                 DC  SN  31:31 RO  0.63          14.51                               1.019
368-370              4 Peaks                  7,613.98
```

```
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                                    0.928-1.007
374-376 D        7C  NL            Height          5.02          2.35          2.67
                         32:33      1.32         47.98         27.26         20.72  0.937                        J
        D        D   SN  33:01 RO  2.87         29.68                               0.951
        M                33:23 RO  1.02         25.80         13.00         12.80  1.000 123478-HxCDF    AN
                 DC  SN  33:30 RO  0.97         11.77                               1.000 123678-HxCDF    AN
374-376                2 Peaks                   73.78

13C12-HxCDF                        0.43-0.59                                    0.877-1.107
384-386          DC  NL            Height          7.76          2.96          4.80
                         32:24 RO  0.73         24.06         10.14         13.92  0.933
                         32:33      0.46         58.34         18.35         39.99  0.937
                         33:23      0.53      9,626.15      3,330.89      6,295.26  1.000 13C12-HxCDF 478 IS5
                                   Height      3,310.95      1,154.63      2,156.32
                         33:29      0.53     10,249.29      3,557.97      6,691.32  1.000 13C12-HxCDF 678 IS6
                                   Height      3,258.89      1,133.70      2,125.19
                         33:58      0.53     10,321.21      3,556.10      6,765.11  1.000 13C12-HxCDF 234 IS7
                                   Height      3,391.58      1,162.59      2,228.99
                         34:44      0.52      7,547.14      2,586.80      4,960.34  1.000 13C12-HxCDF 789 IS8
                                   Height      2,190.55        748.17      1,442.38
384-386                6 Peaks                 37,826.19

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

HxCDD                              1.05-1.43                                    0.959-1.013
390-392          DC  NL            Height          4.10          1.79          2.31
                 DC  SN  33:24 RO  1.68         14.46                               0.978
                 DC  SN  34:10 RO  0.84         12.03                               1.002 123478-HxCDD    AN
                 DC  WH  34:42 RO  0.58         45.55                               1.016
390-392                0 Peaks                   0.00

13C12-HxCDD                        1.05-1.43                                    0.983-1.042
402-404          DC  NL            Height          5.04          2.61          2.43
                         33:33 RO  0.96         35.16         17.18         17.98  0.984
                         34:05      1.28      6,166.38      3,463.51      2,702.87  1.000 13C12-HxCDD 478 IS9
                                   Height      2,054.14      1,149.99        904.15
                         34:10      1.26      7,243.16      4,041.71      3,201.45  1.000 13C12-HxCDD 678 IS10
                                   Height      2,287.56      1,278.99      1,008.57
                         34:28      1.28      7,555.06      4,244.43      3,310.63  1.011 13C12-HxCDD 789 RS2
                         34:51 RO  0.85         28.26         12.97         15.29  1.022
                         34:57 RO  1.45         12.83          7.60          5.23  1.025
402-404                6 Peaks                 21,040.85

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

HpCDF                              0.88-1.20                                    0.955-1.004
408-410          DC  NL            Height          3.80          1.98          1.82
        M                36:24      0.88         89.30         41.70         47.60  1.000 1234678-HpCDF   AN   J
                 DC  SN  36:39 RO  1.82         12.68                               0.966
                         36:50      1.06         51.45         26.44         25.01  0.971                        J
```

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

408-410              2 Peaks                140.75

13C12-HpCDF                     0.37-0.51                                    0.856-1.146
418-420          DC  NL          Height          4.46          2.50          1.96
                         36:23     0.47      6,788.47      2,160.19      4,628.28  1.000 13C12-HpCDF 678 IS11
                                 Height      1,878.13        602.13      1,276.00
                 DC  SN  37:01 RO  0.96          8.59                                0.976
                         37:56     0.48      5,178.84      1,675.74      3,503.10  1.000 13C12-HpCDF 789 IS12
                                 Height      1,250.99        405.04        845.95
                         38:22 RO  0.82         32.14         14.48         17.66  1.011
418-420              3 Peaks            11,999.45

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

HpCDD                           0.88-1.20                                    0.976-1.005
424-426          DC  NL          Height          3.88          1.92          1.96
                         36:41     0.96        118.58         57.98         60.60  0.980                        J
                         37:26     1.03        117.80         59.78         58.02  1.000 1234678-HpCDD   AN   J
424-426              2 Peaks               236.38

13C12-HpCDD                     0.88-1.20                                    0.868-1.081
436-438          DC  NL          Height          5.19          2.38          2.81
                         36:40 RO  1.52         29.42         17.73         11.69  0.980
                 DC  SN  36:59     0.95         11.45                                0.988
                         37:25     1.07      6,212.49      3,209.66      3,002.83  1.000 13C12-HpCDD 678 IS13
                                 Height      1,606.61        831.01        775.60
436-438              2 Peaks             6,241.91

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

OCDF                            0.76-1.02                                    0.951-1.049
442-444          DC  NL          Height          4.48          2.28          2.20
                 DC  WL  38:50     0.99          8.12                                0.946
                 DC  SN  39:03 RO  0.69         13.02                                0.952
        M                41:16     0.98         29.70         14.70         15.00  1.006 OCDF            AN   J
442-444              1 Peak                 29.70

OCDD                            0.76-1.02                                    0.951-1.049
458-460          DC  NL          Height          3.58          1.46          2.12
                         41:02     0.93      3,009.35      1,448.80      1,560.55  1.000 OCDD            AN
458-460              1 Peak              3,009.35

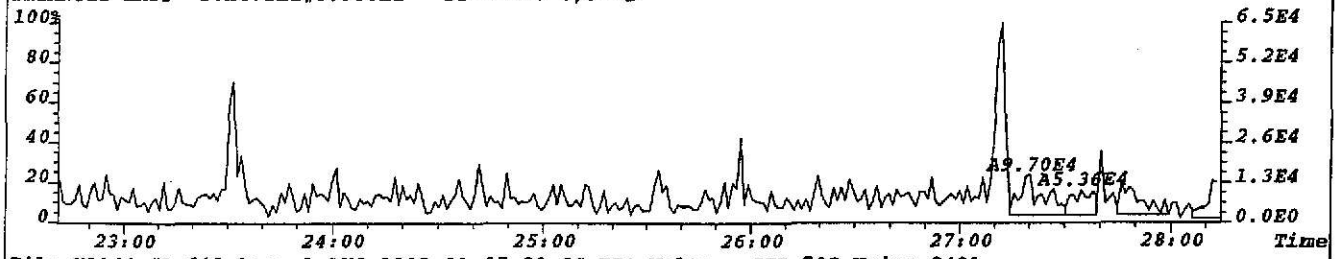
13C12-OCDD                      0.76-1.02                                    0.996-1.004
470-472          DC  NL          Height          3.93          1.92          2.01
                         41:02     0.91      9,236.56      4,393.99      4,842.57  1.000 13C12-OCDD      IS14
                                 Height      1,934.37        921.46      1,012.91
470-472              1 Peak              9,236.56
```

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

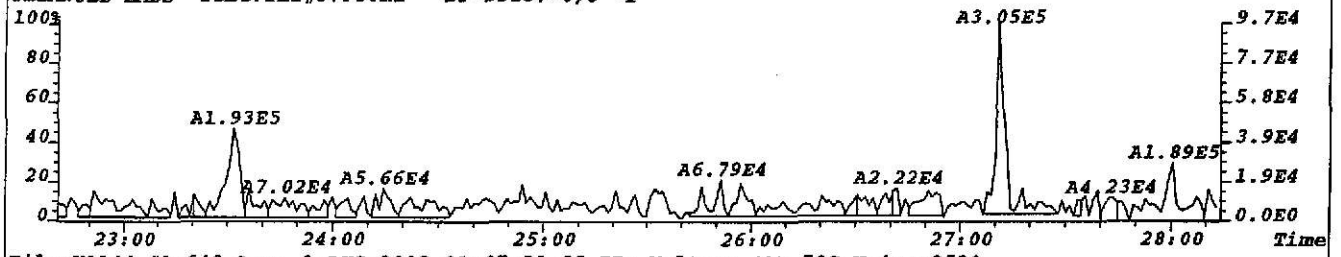
Column Description.....	"Why" Code Description.....	QC Log Desc.....
M_Z -Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT. -Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK -RO=Ratio Outside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

*** End of Report ***

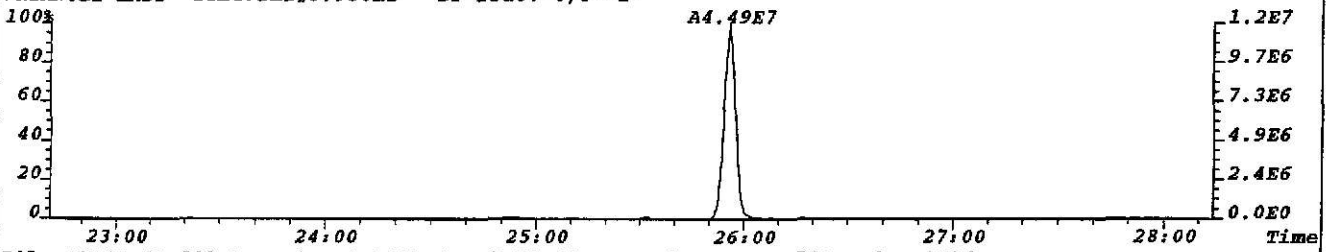
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2268
303.9016 S:4 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,9072.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



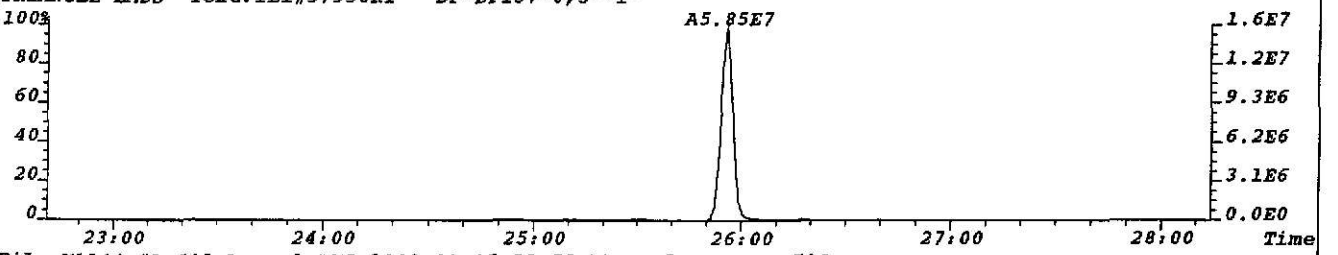
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2491
305.8987 S:4 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,9964.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



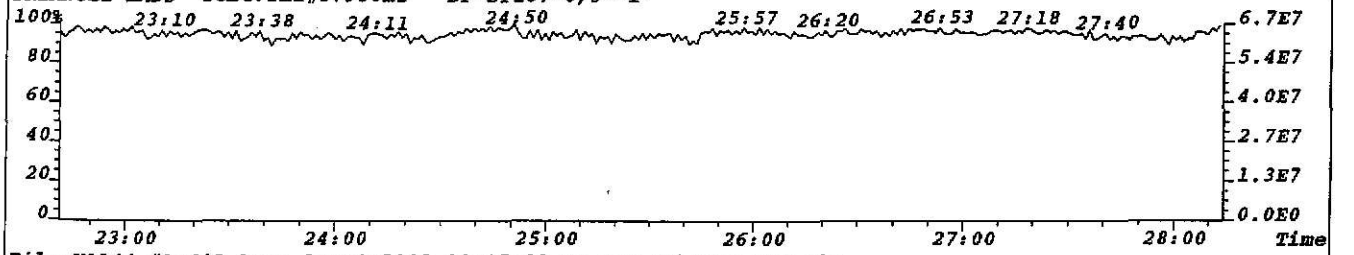
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2530
315.9419 S:4 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,10120.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



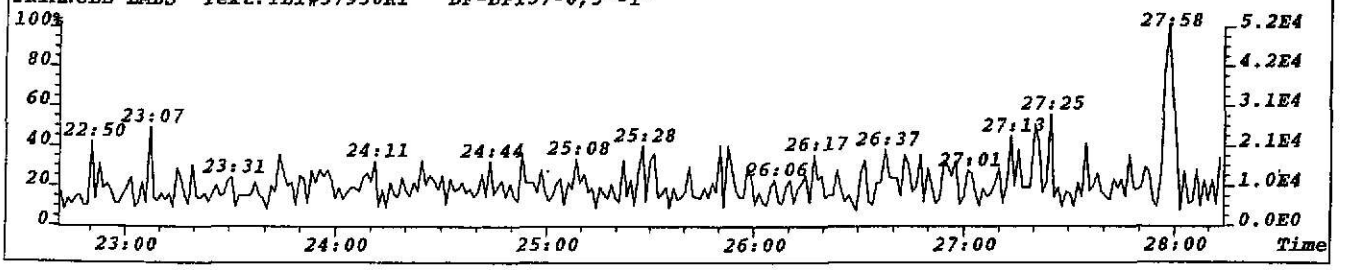
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2826
317.9389 S:4 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,11304.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
330.9792 S:4 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
375.8364 S:4 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'

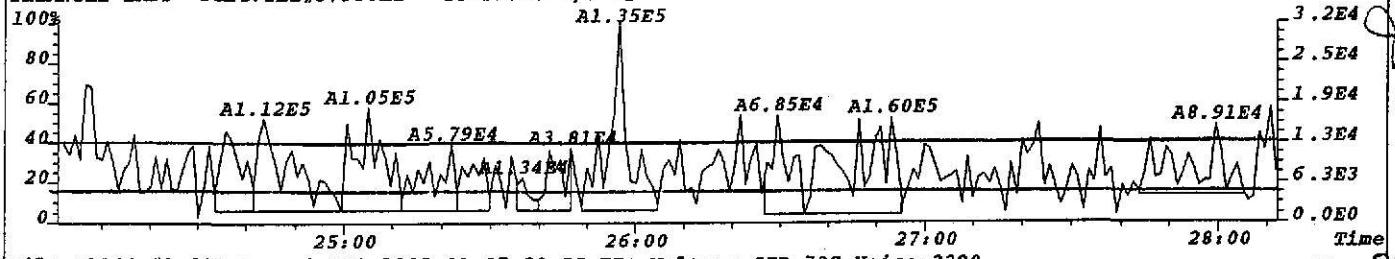


N = 0.80+0.81 = 1.61 OEM 8/1/02

ie. OEM 8/1/02

(.25)(3.2) = .8

File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2652
319.8965 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10608.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'

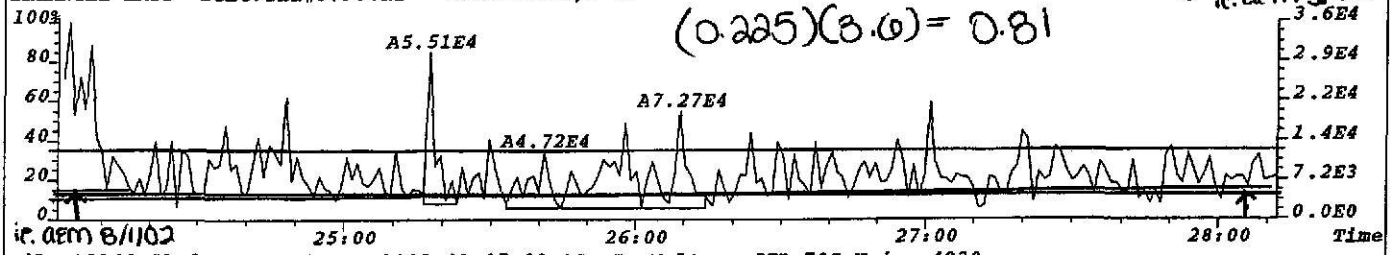


File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2390
321.8936 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9560.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'

(.20)(3.6) = .72

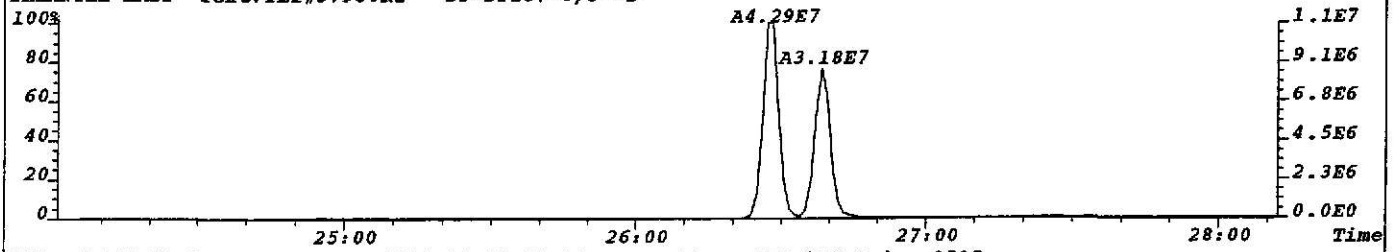
ie. OEM 8/1/02

(0.225)(3.6) = 0.81

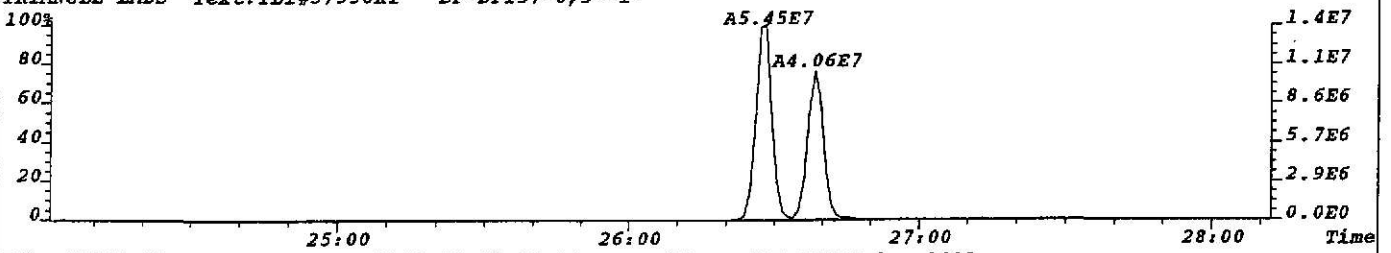


ie. OEM 8/1/02

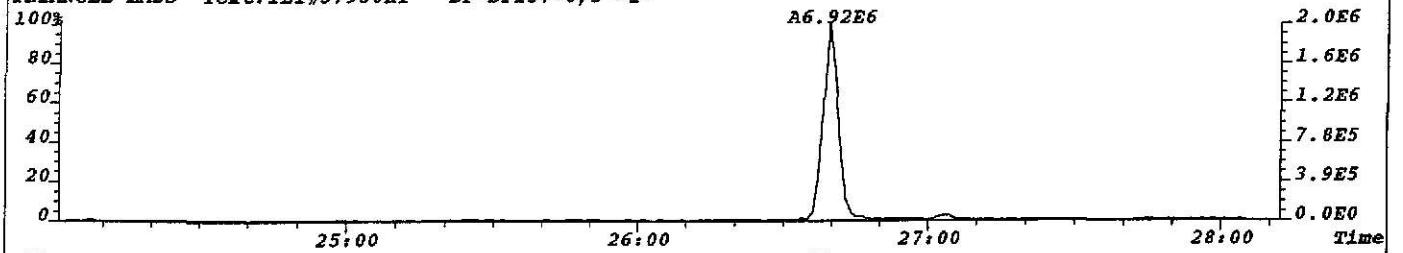
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:4930
331.9368 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,19720.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



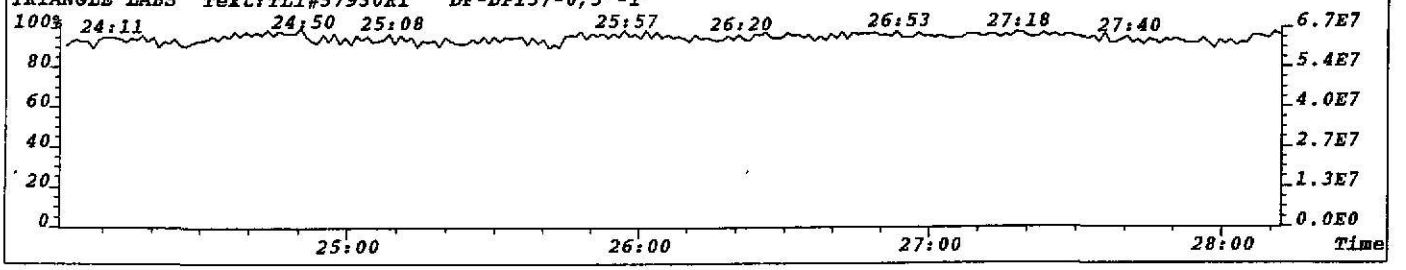
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2585
333.9338 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10340.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



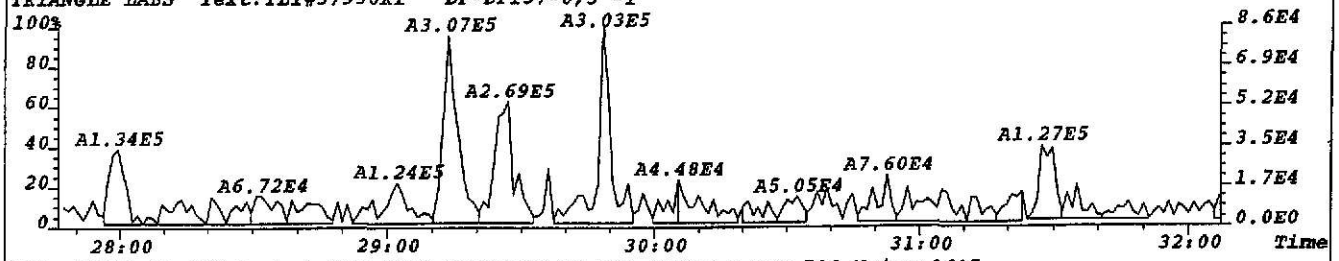
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2403
327.8847 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9612.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



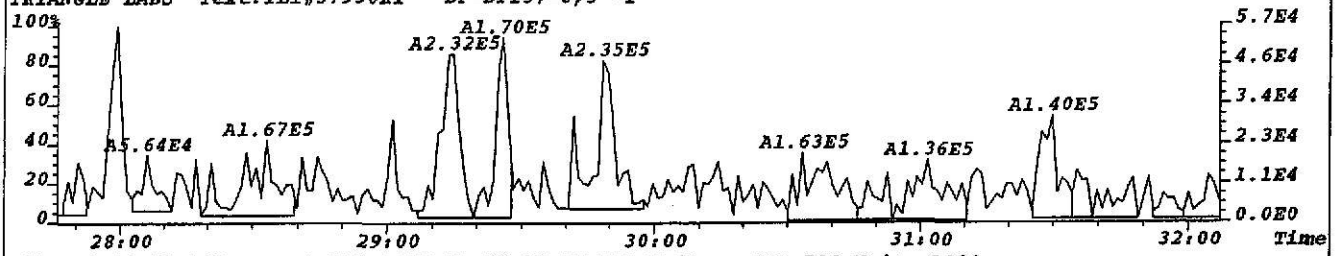
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
330.9792 S:4 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



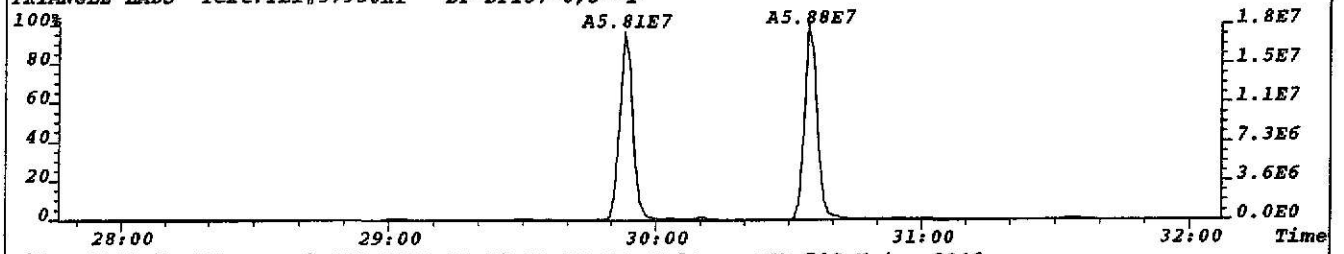
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2336
339.8597 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9344.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



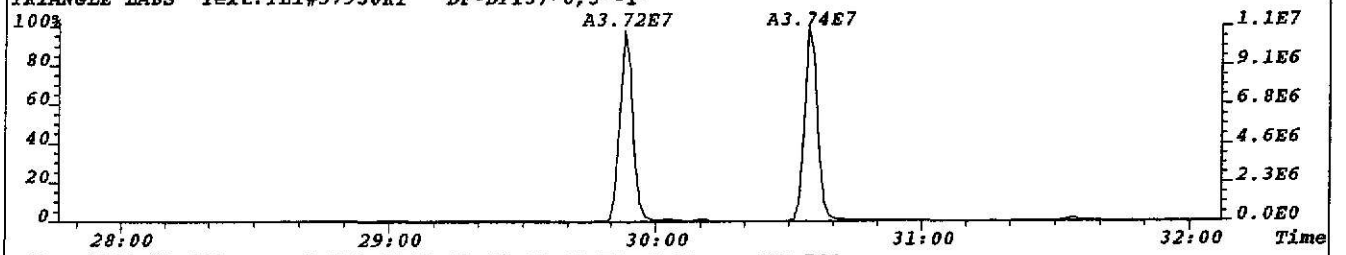
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2687
341.8567 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10748.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



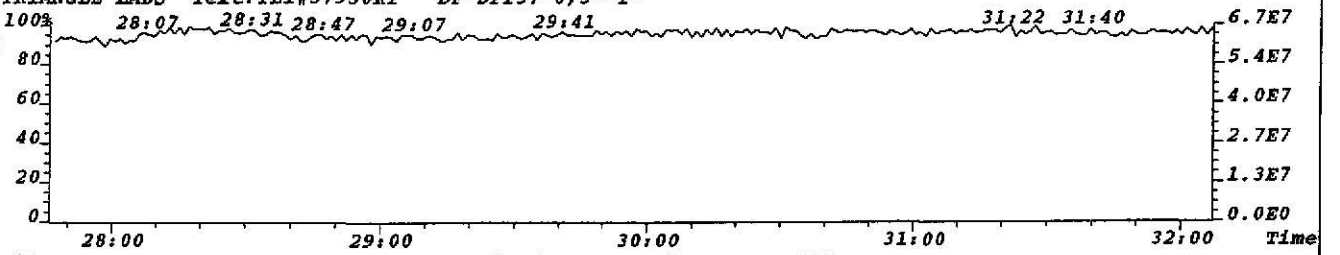
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:1988
351.9000 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7952.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



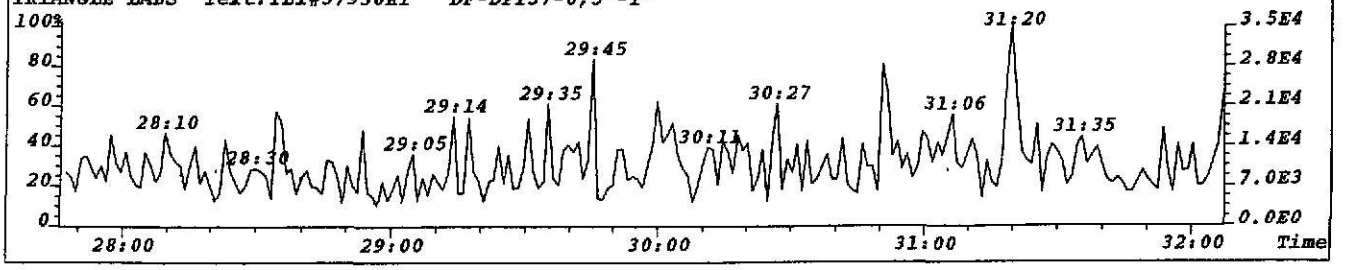
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2046
353.8970 S:4 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,8184.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



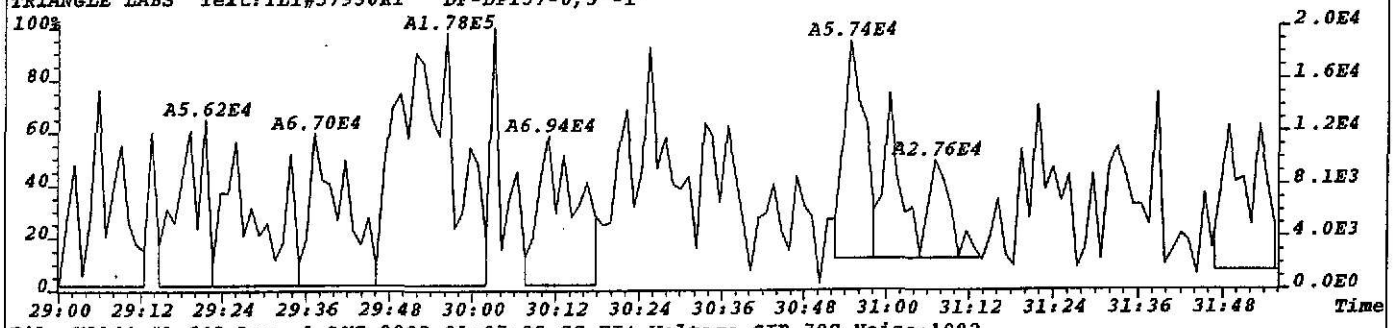
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
330.9792 S:4 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



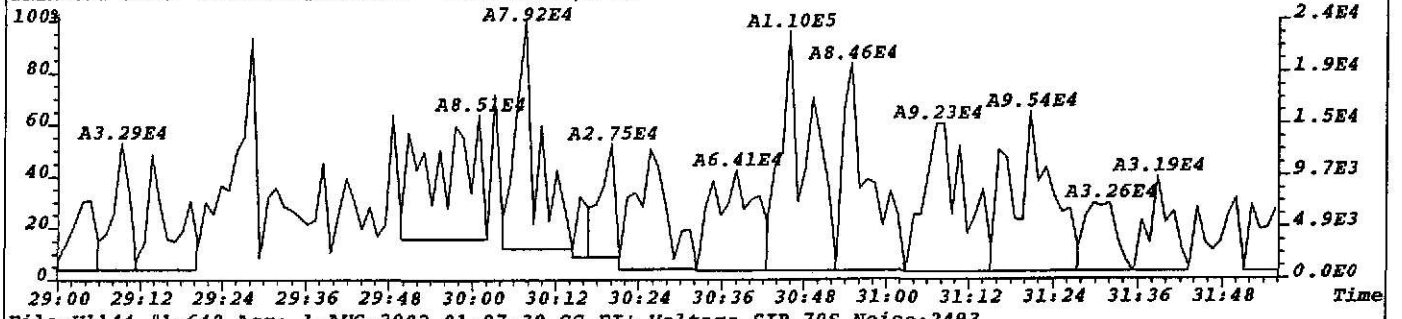
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
409.7974 S:4 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



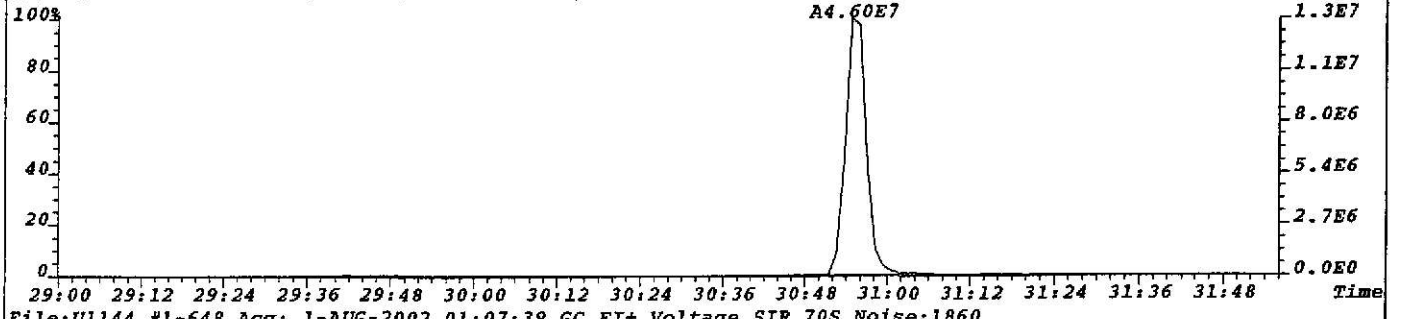
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2084
355.8546 S:4 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,8336.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



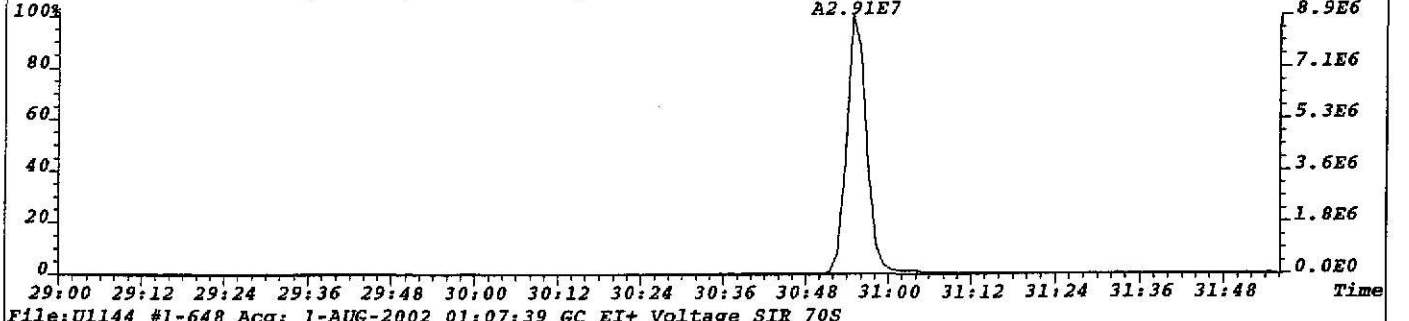
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:1982
357.8516 S:4 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,7928.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



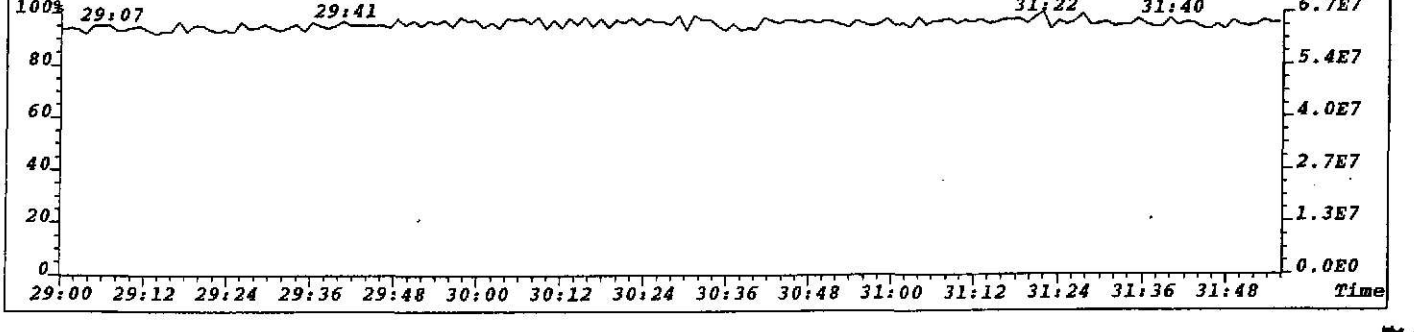
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2493
367.8949 S:4 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,9972.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



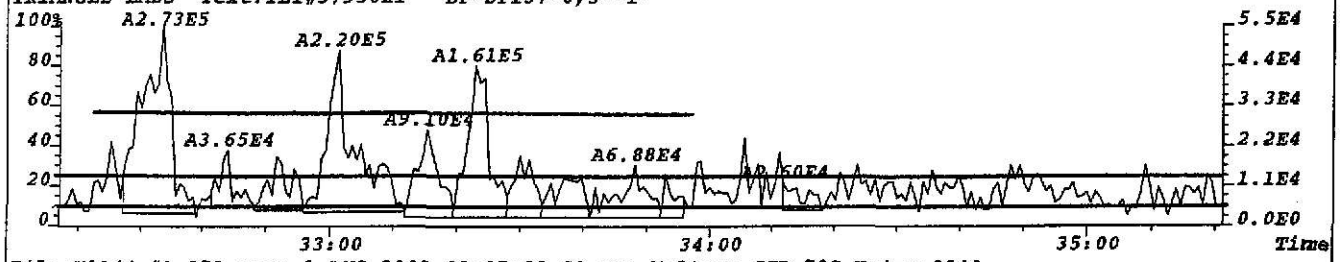
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:1860
369.8919 S:4 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,7440.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



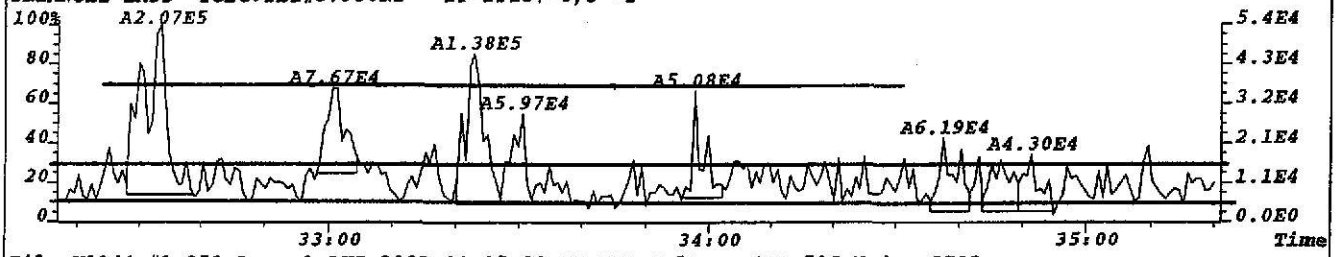
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
330.9792 S:4 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



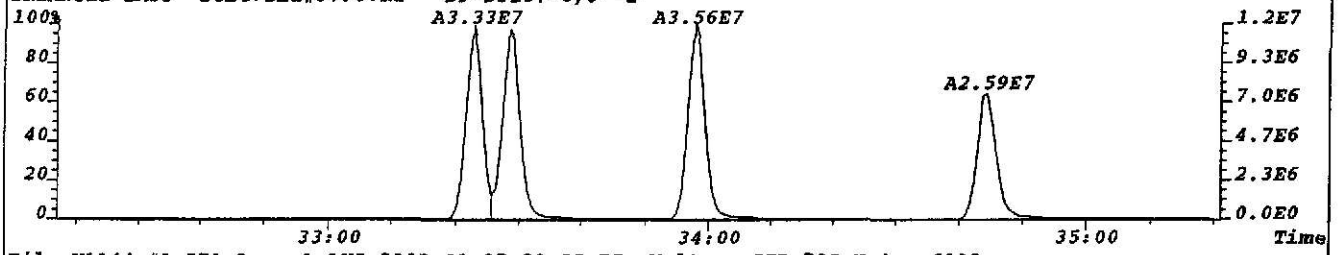
File:U1144 #1-271 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2934
373.8208 S:4 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11736.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



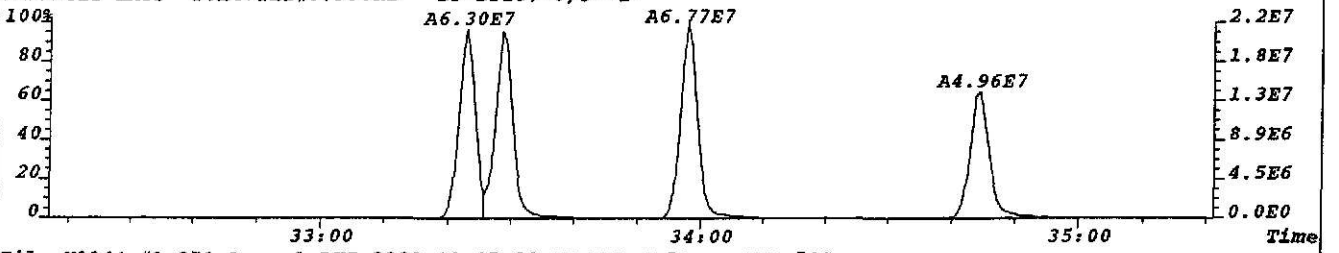
File:U1144 #1-271 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:3340
375.8178 S:4 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,13360.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



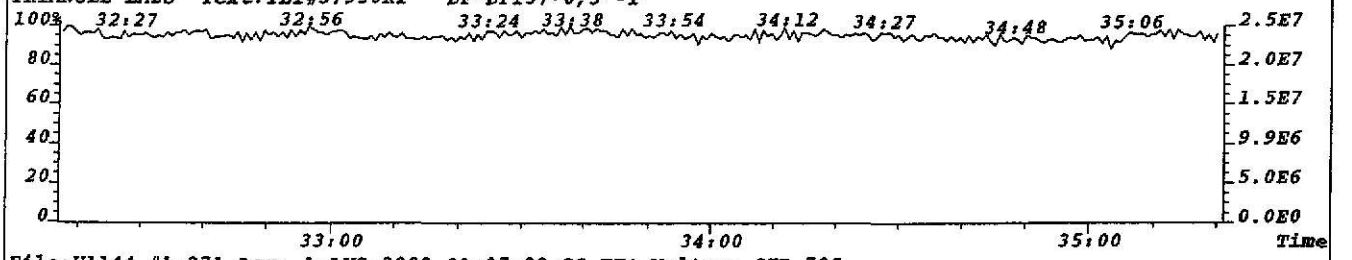
File:U1144 #1-271 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:3703
383.8639 S:4 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,14812.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



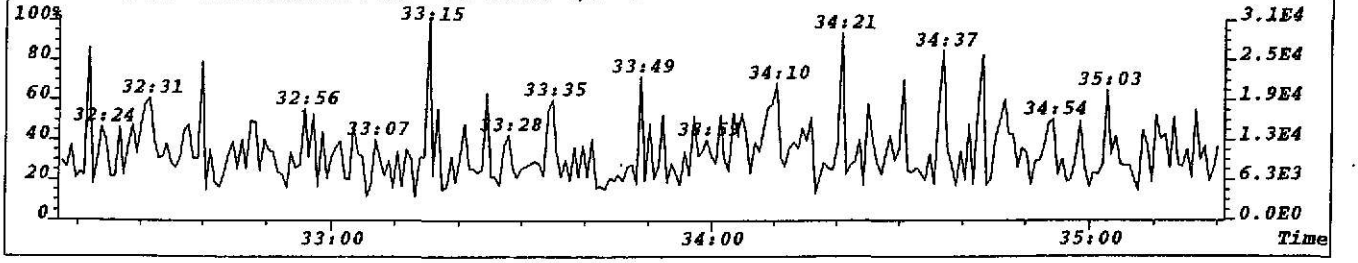
File:U1144 #1-271 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:6003
385.8610 S:4 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,24012.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



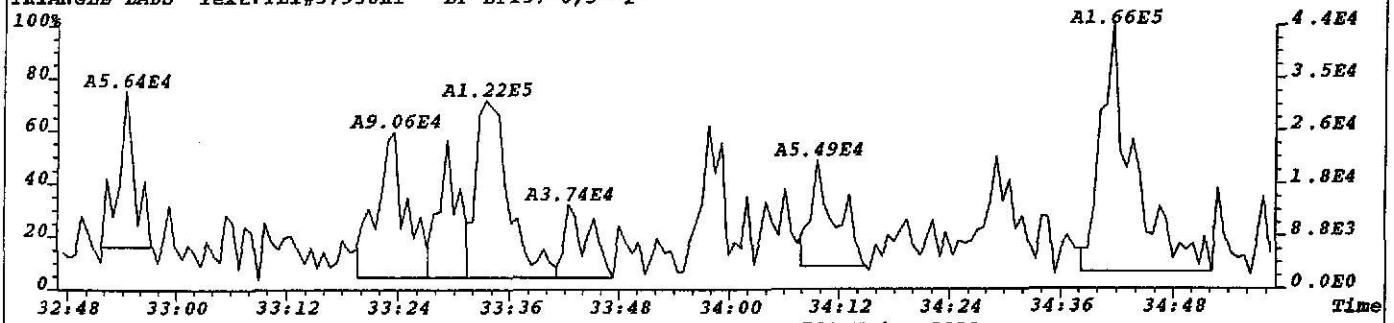
File:U1144 #1-271 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
392.9760 S:4 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



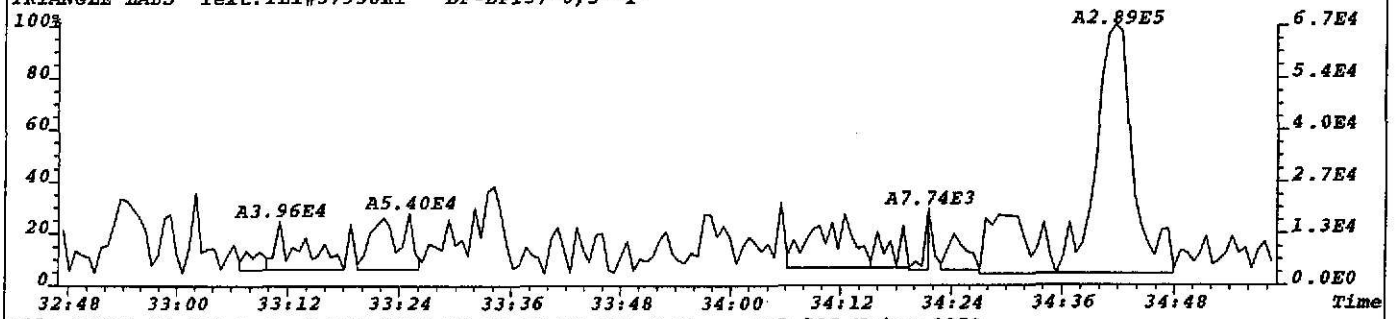
File:U1144 #1-271 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
445.7555 S:4 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



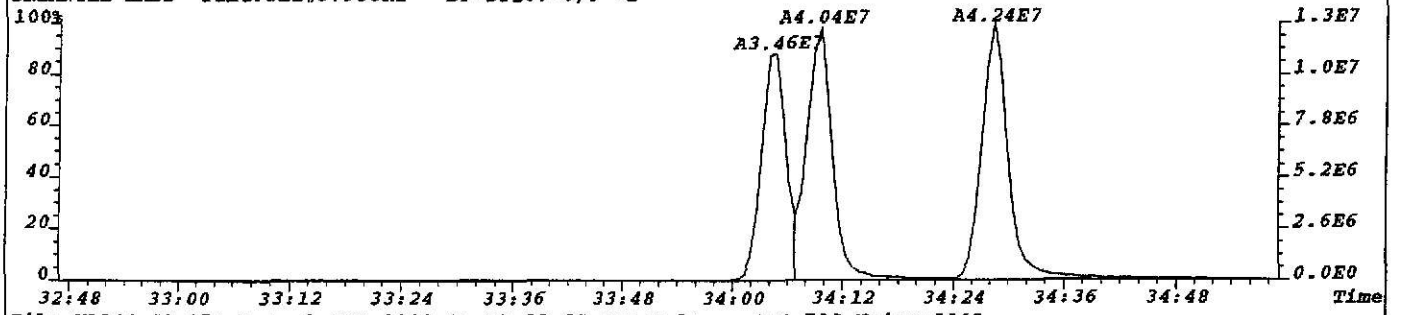
File:U1144 #1-271 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2237
389.8156 S:4 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,8948.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



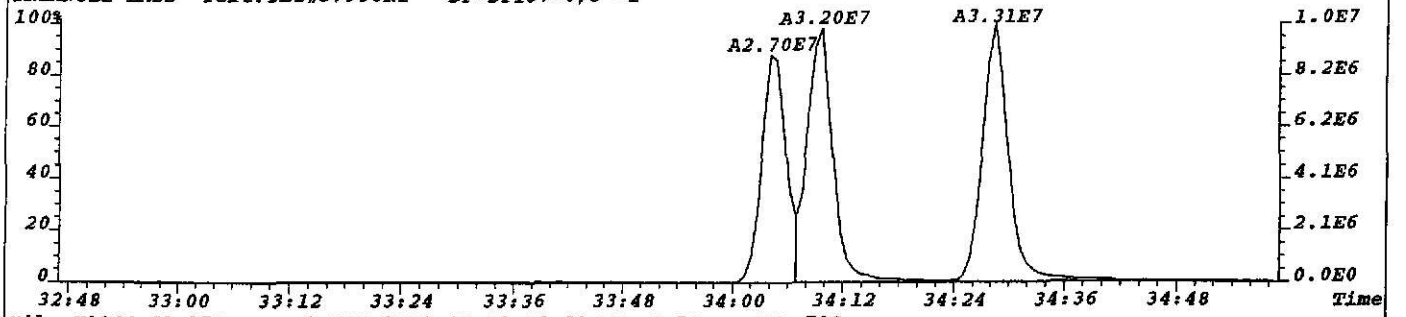
File:U1144 #1-271 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2889
391.8127 S:4 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11556.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



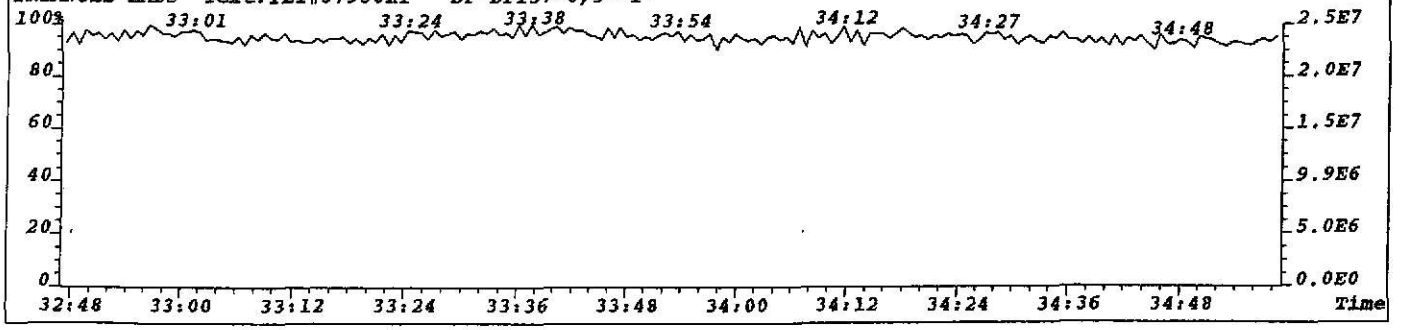
File:U1144 #1-271 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:3259
401.8558 S:4 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,13036.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



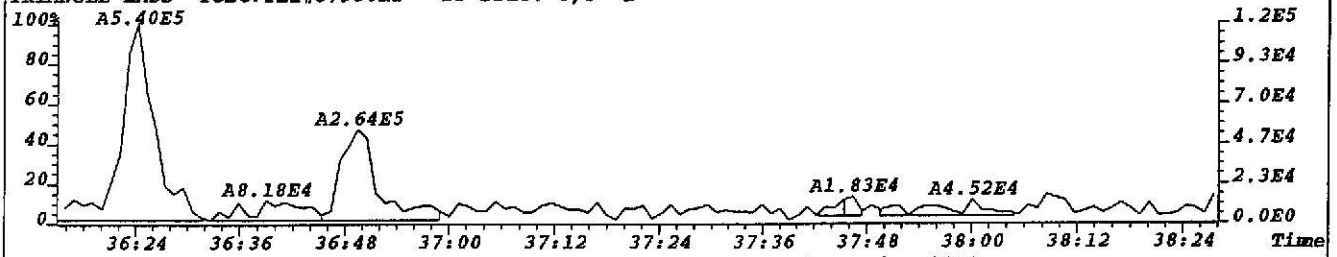
File:U1144 #1-271 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:3042
403.8529 S:4 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12168.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



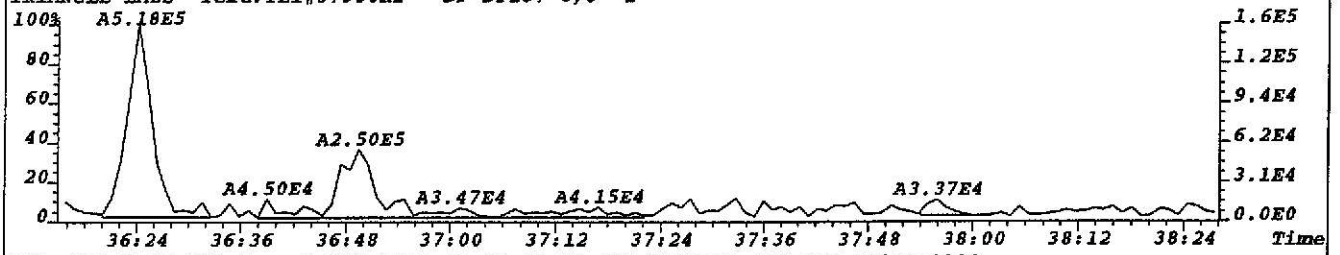
File:U1144 #1-271 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
392.9760 S:4 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



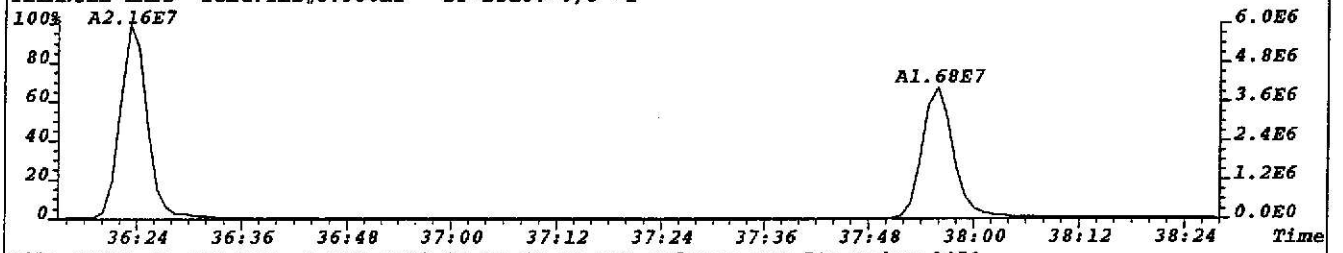
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2475
407.7818 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9900.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



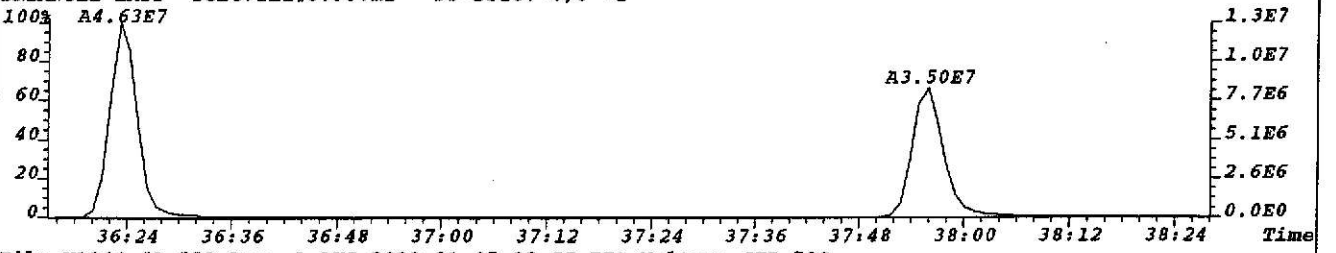
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2280
409.7789 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9120.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



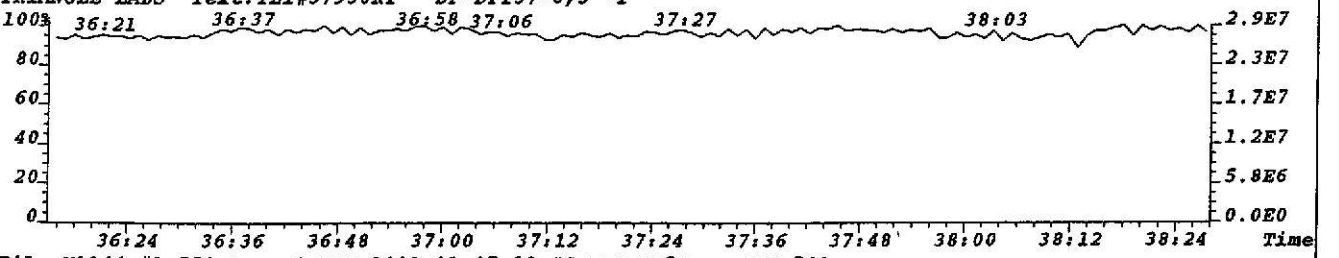
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:3130
417.8253 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12520.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



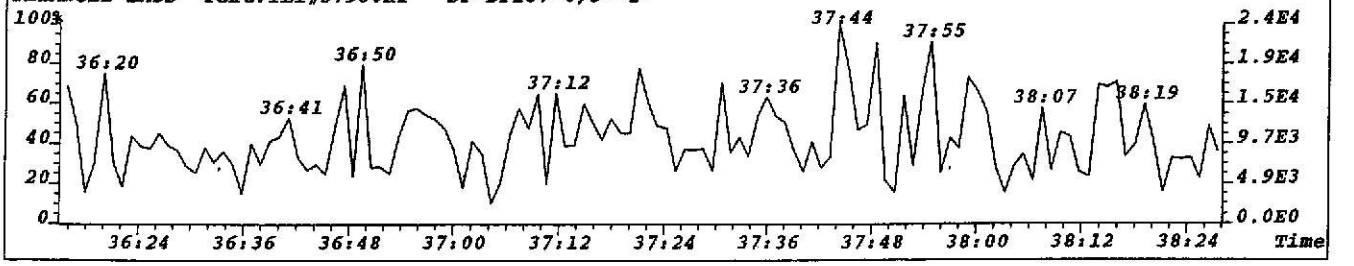
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2450
419.8220 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9800.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



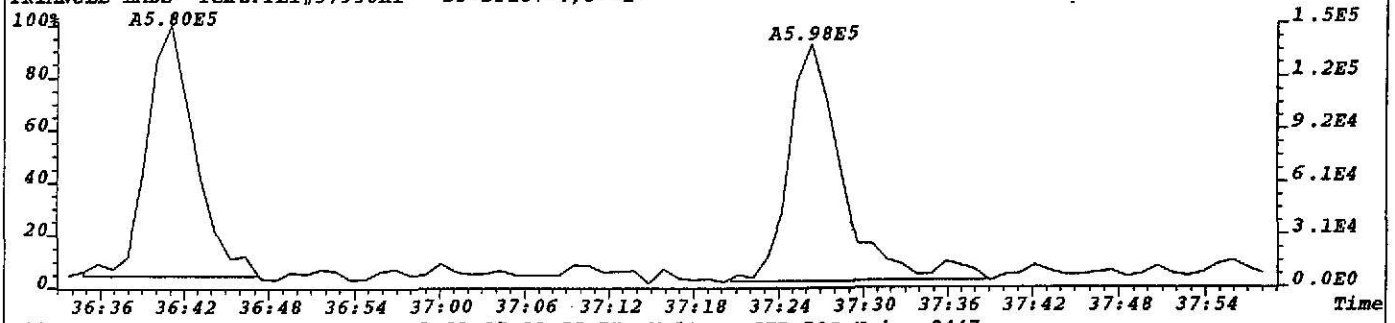
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
430.9729 S:4 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



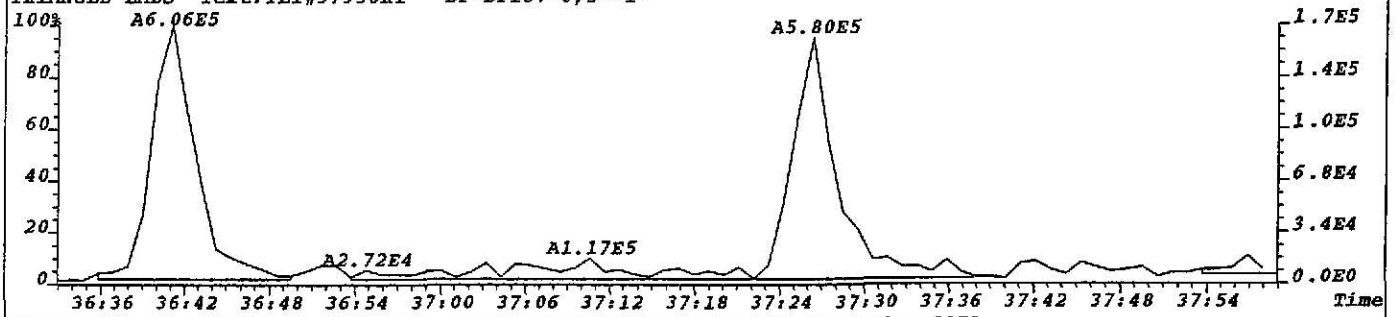
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
479.7165 S:4 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



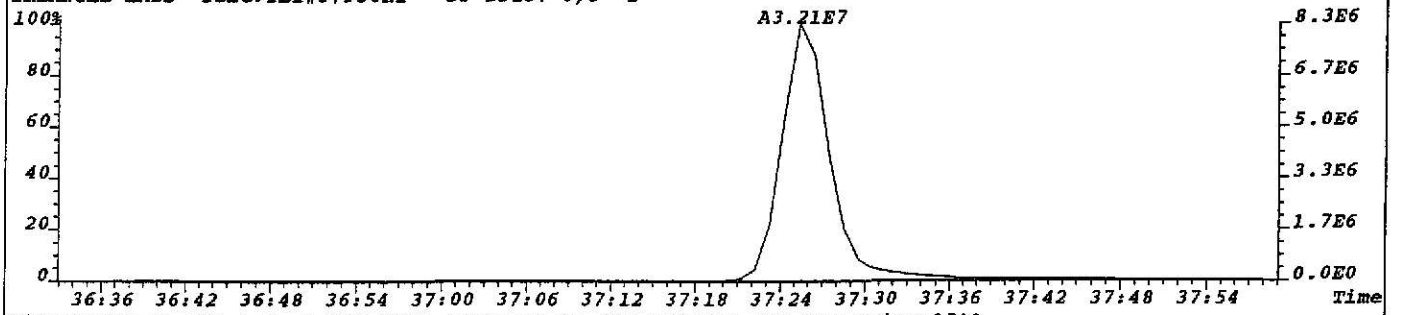
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2400
423.7766 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9600.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



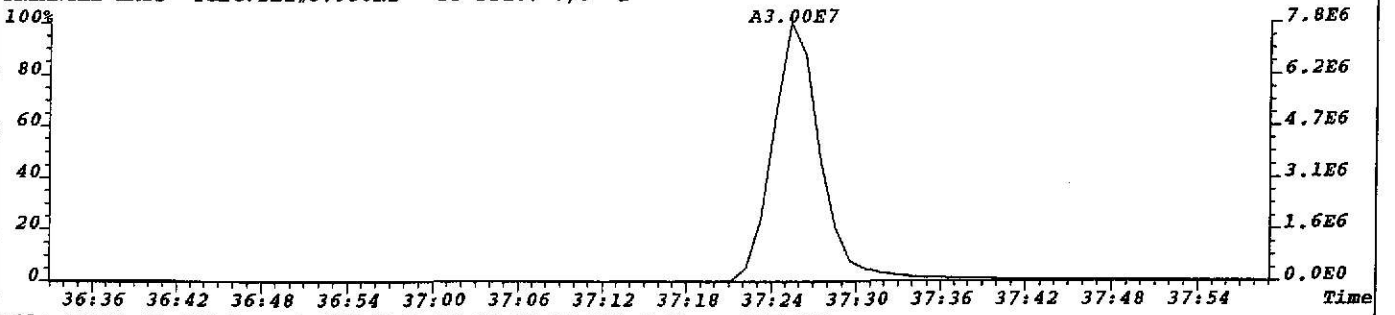
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2447
425.7737 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9788.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



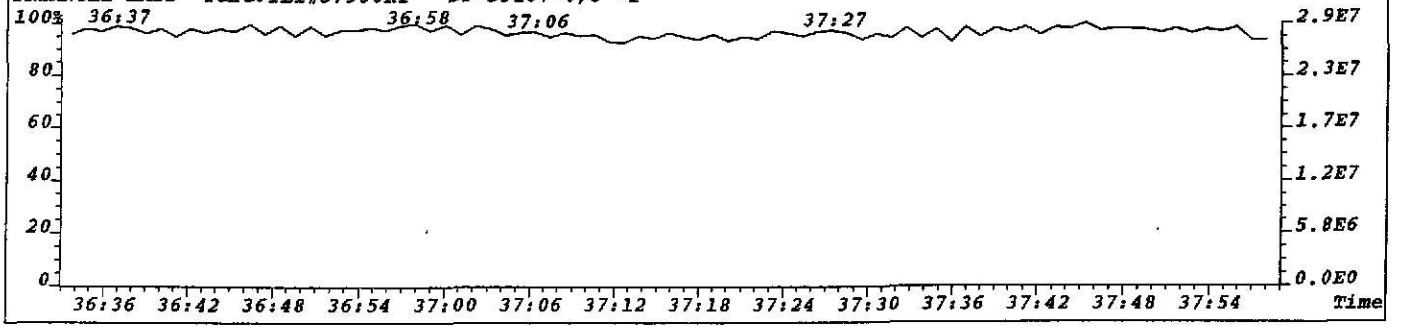
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2971
435.8169 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11884.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



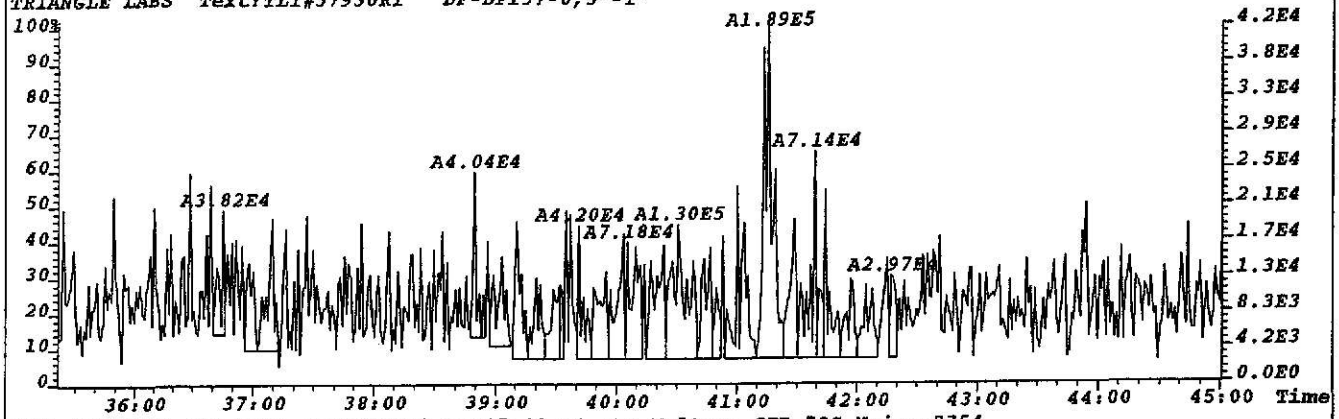
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:3508
437.8140 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,14032.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



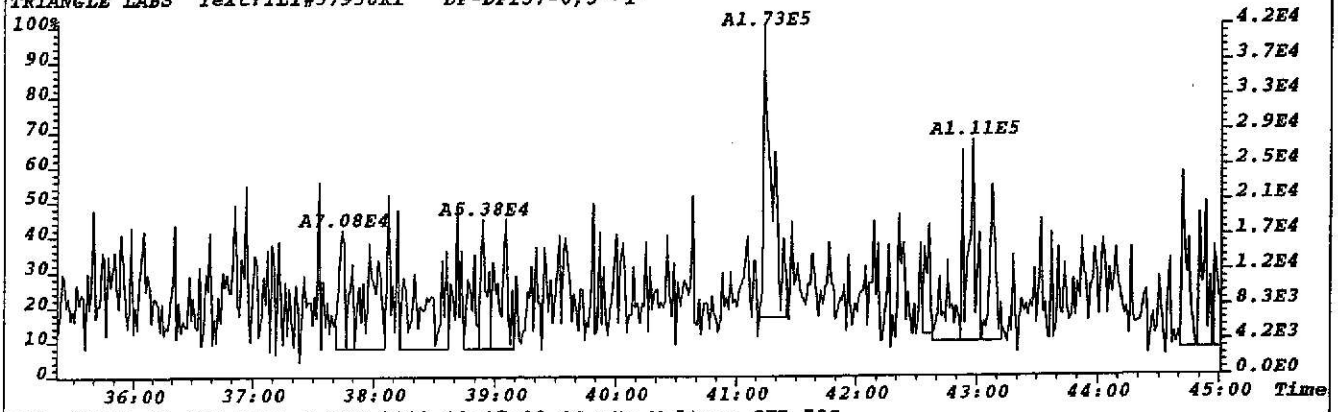
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
430.9729 S:4 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



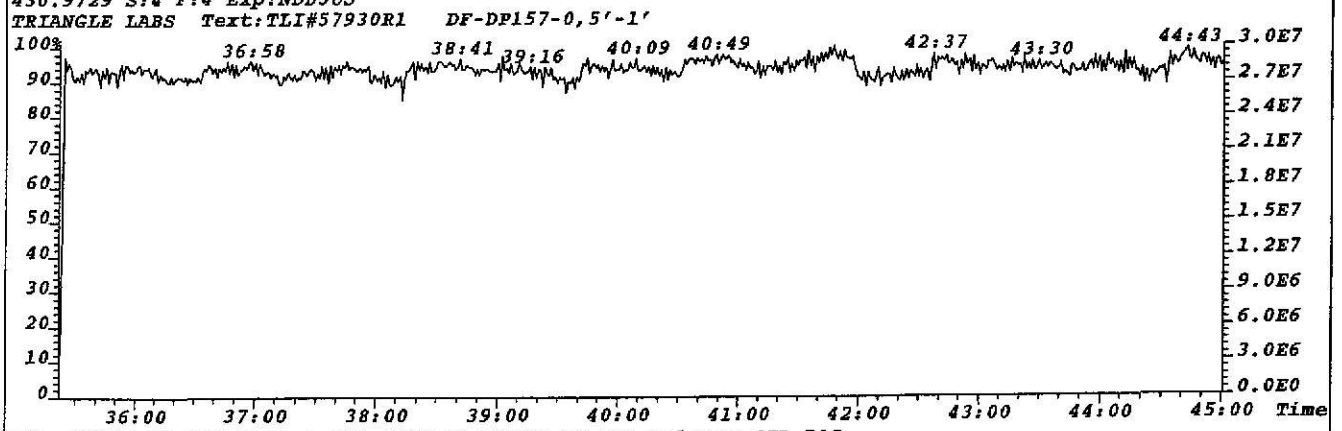
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2846
441.7428 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11384.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



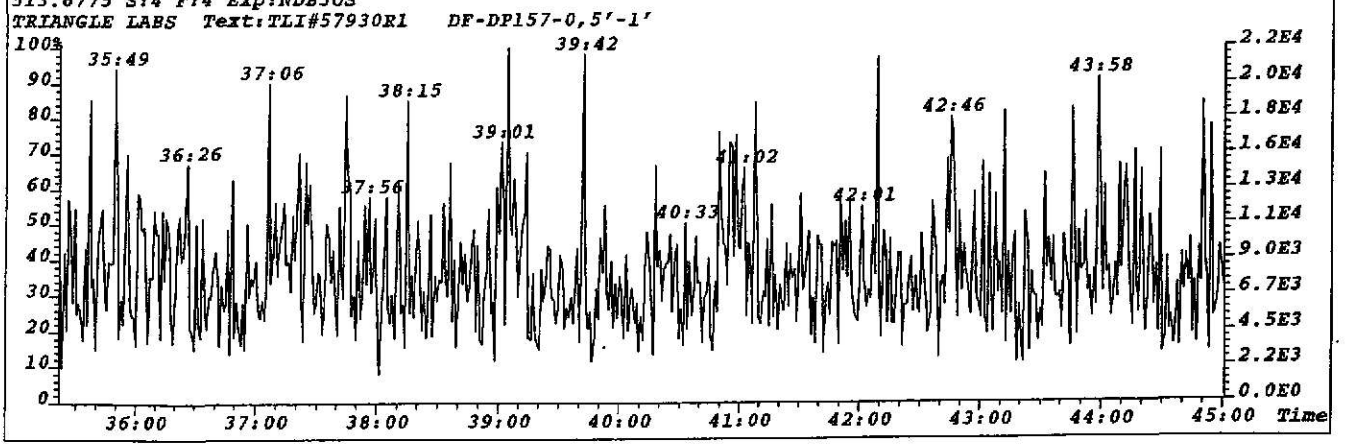
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2754
443.7399 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11016.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



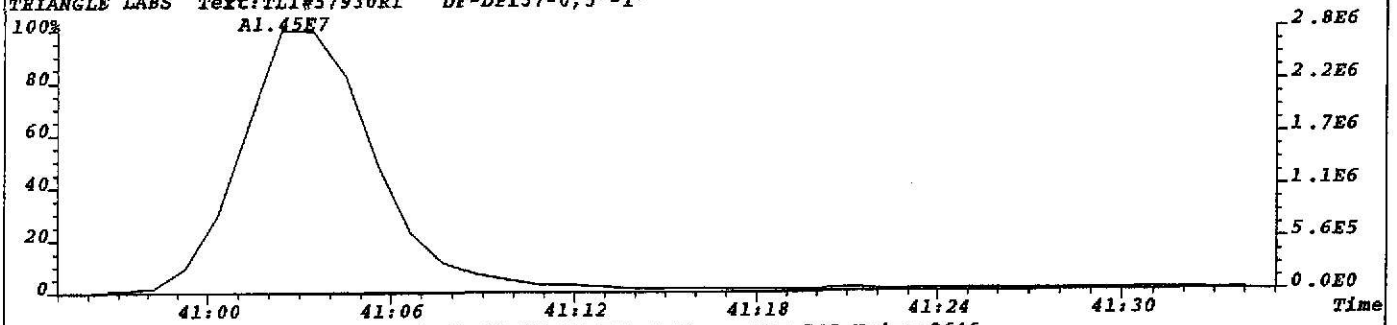
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
430.9729 S:4 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



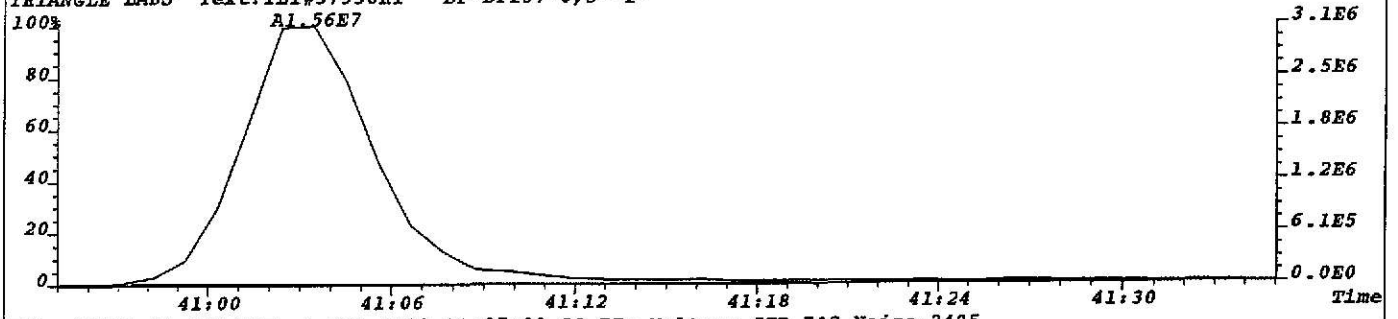
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
513.6775 S:4 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



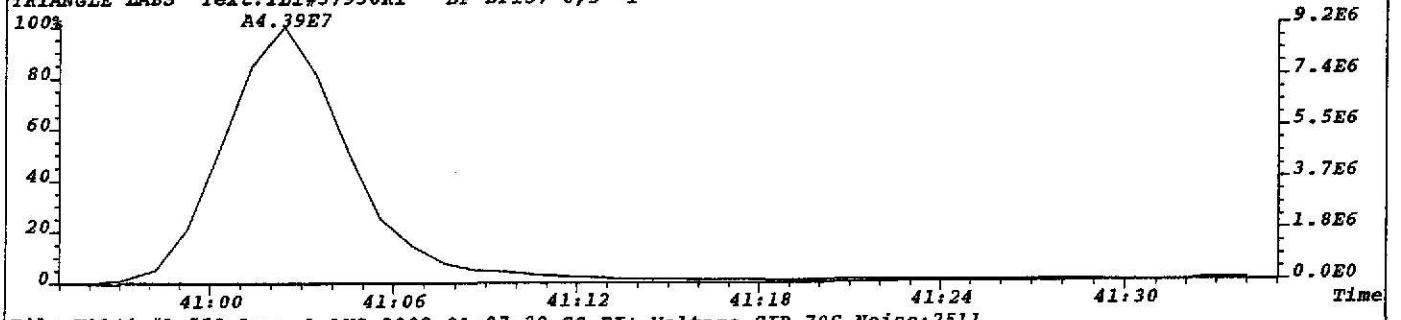
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:1819
457.7377 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,7276.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



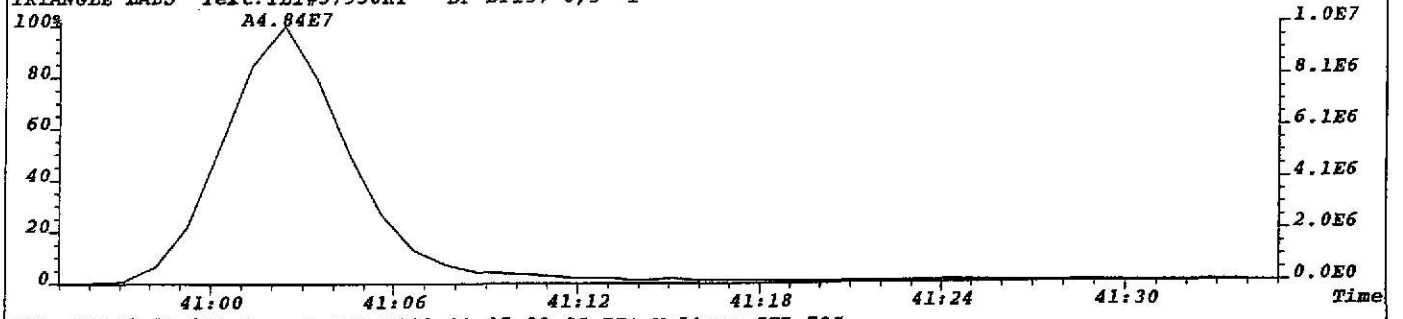
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2646
459.7348 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10584.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



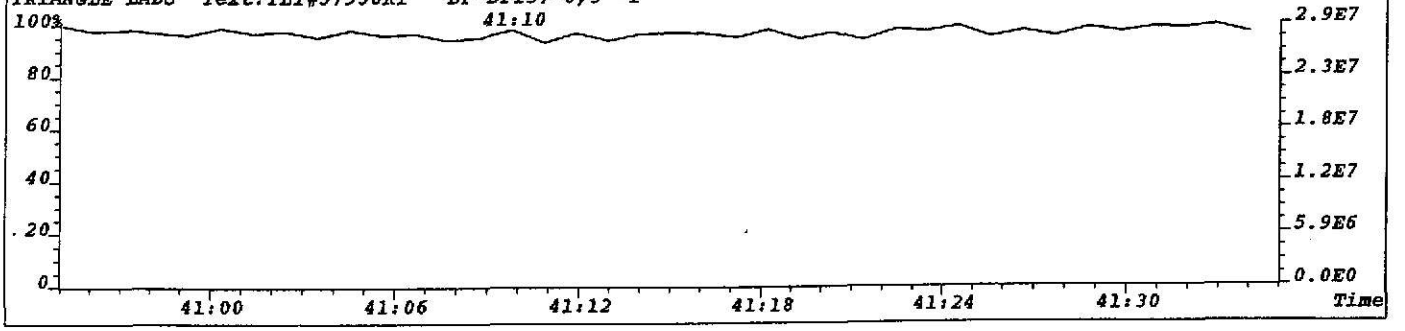
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2405
469.7779 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9620.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



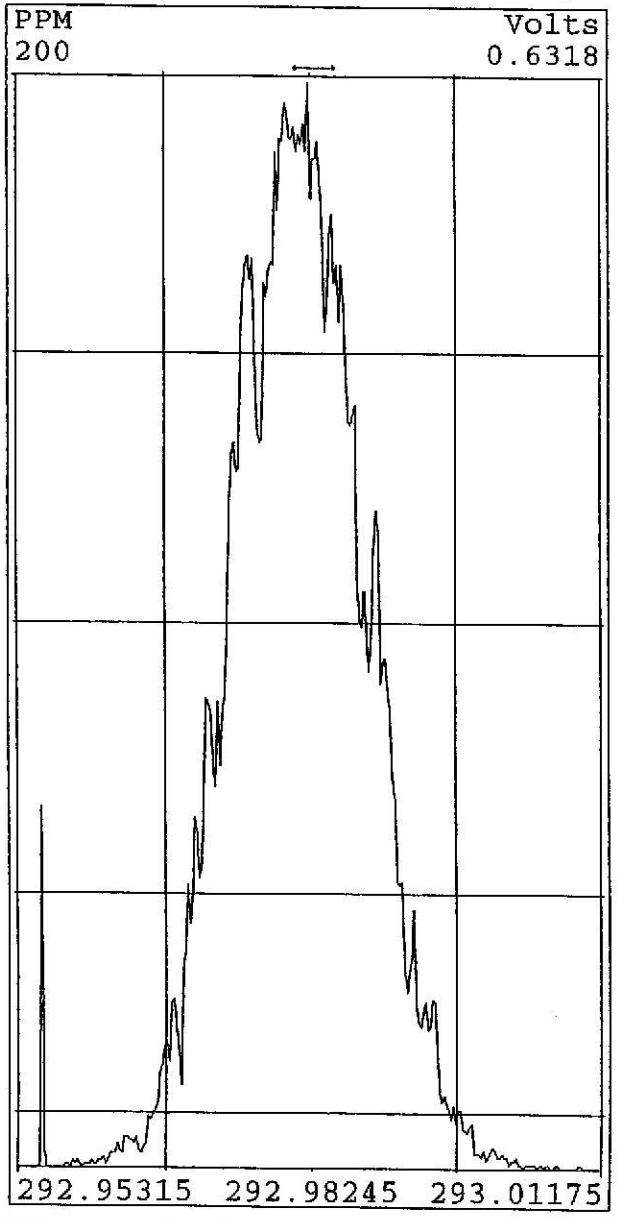
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S Noise:2511
471.7750 S:4 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10044.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'

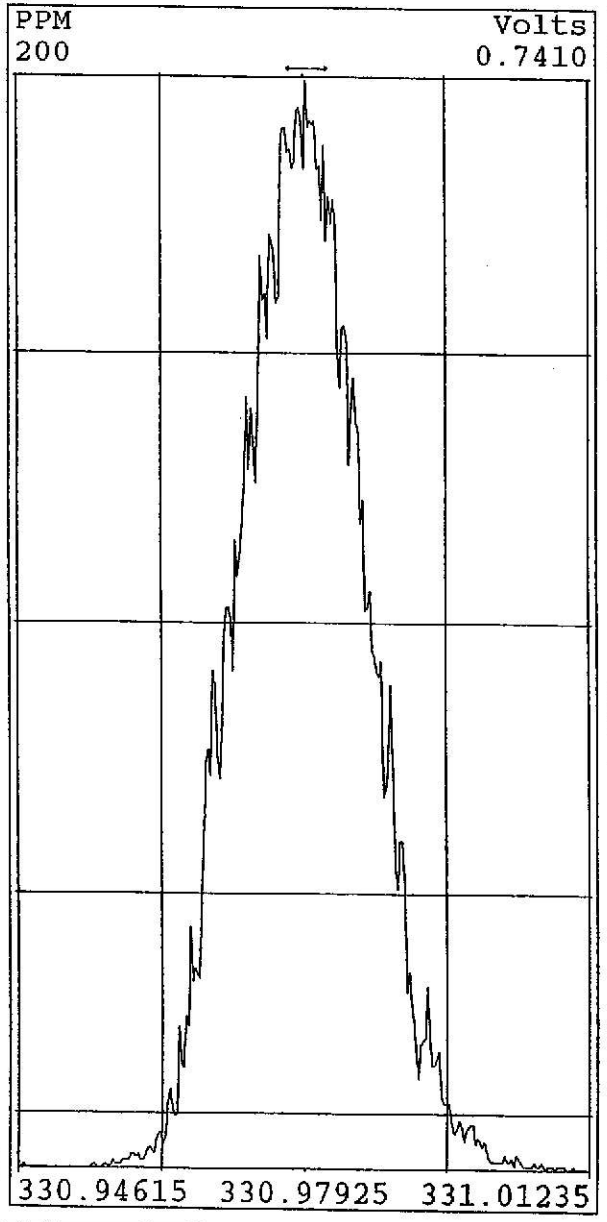


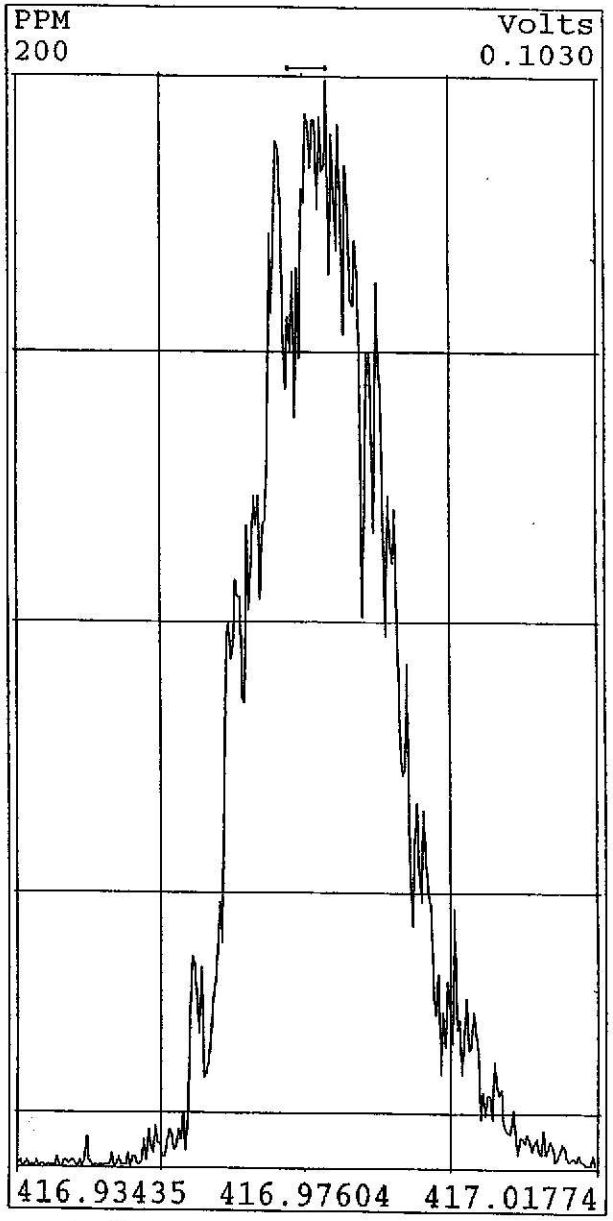
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
430.9729 S:4 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DF-DP157-0,5'-1'



Peak Locate Examination:31-JUL-2002:22:41 File:U1144
Experiment:NDB5US Function:2 Reference:PFK

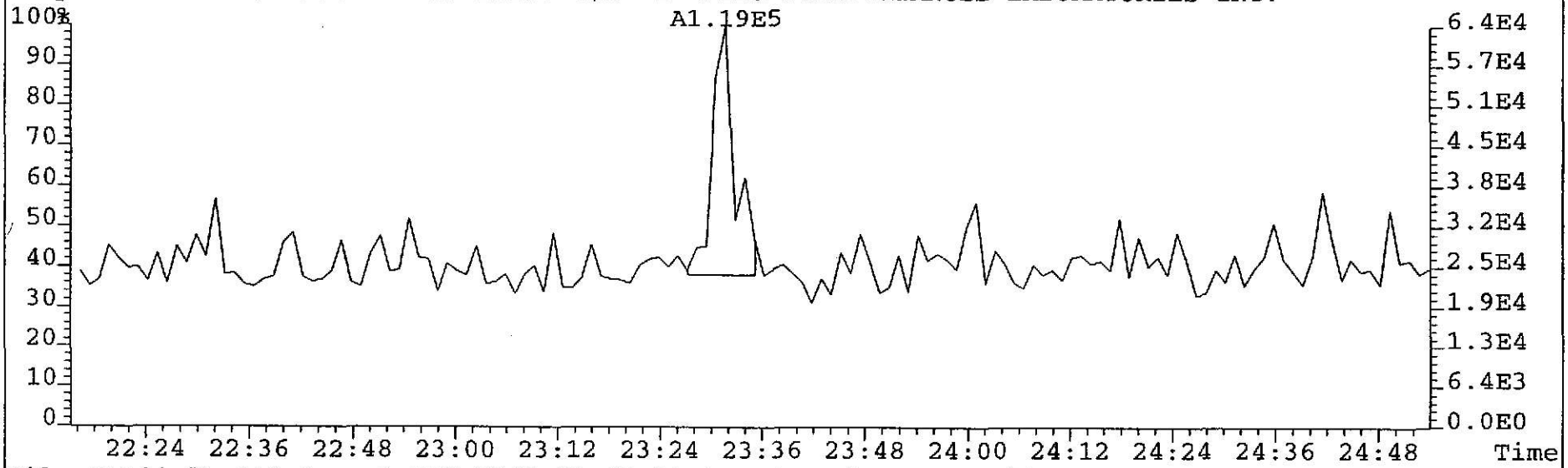




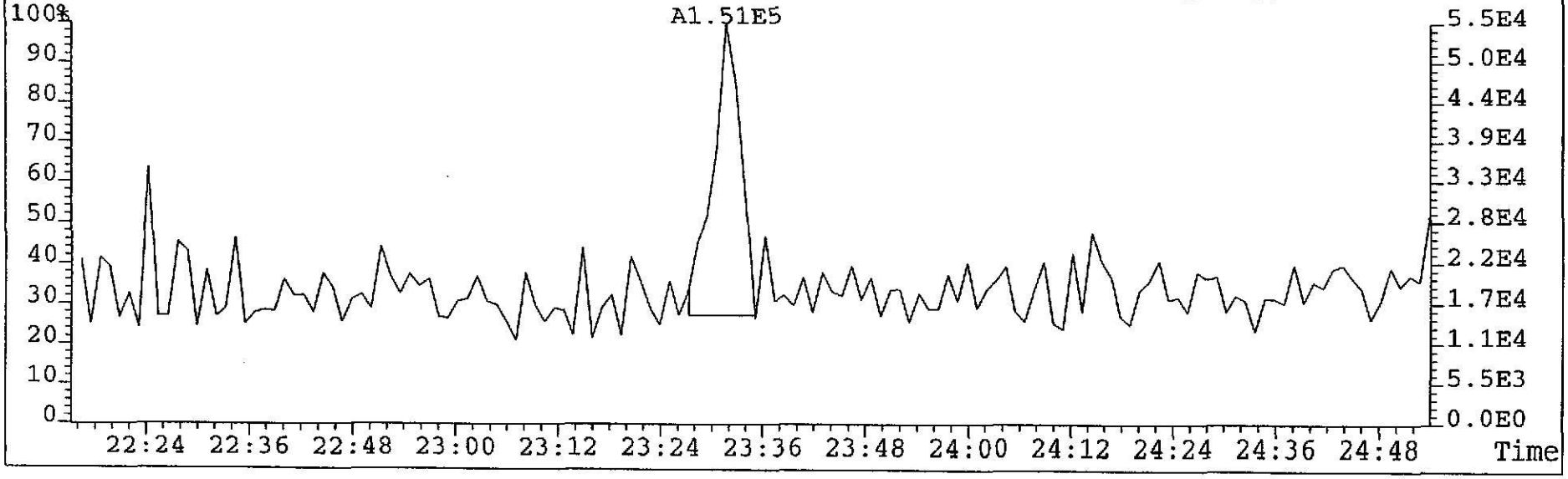


OAM 8/1/02

File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
303.9016 S:4 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DF-DP157-0,5'-1' File Text:TRIANGLE LABORATORIES INC.

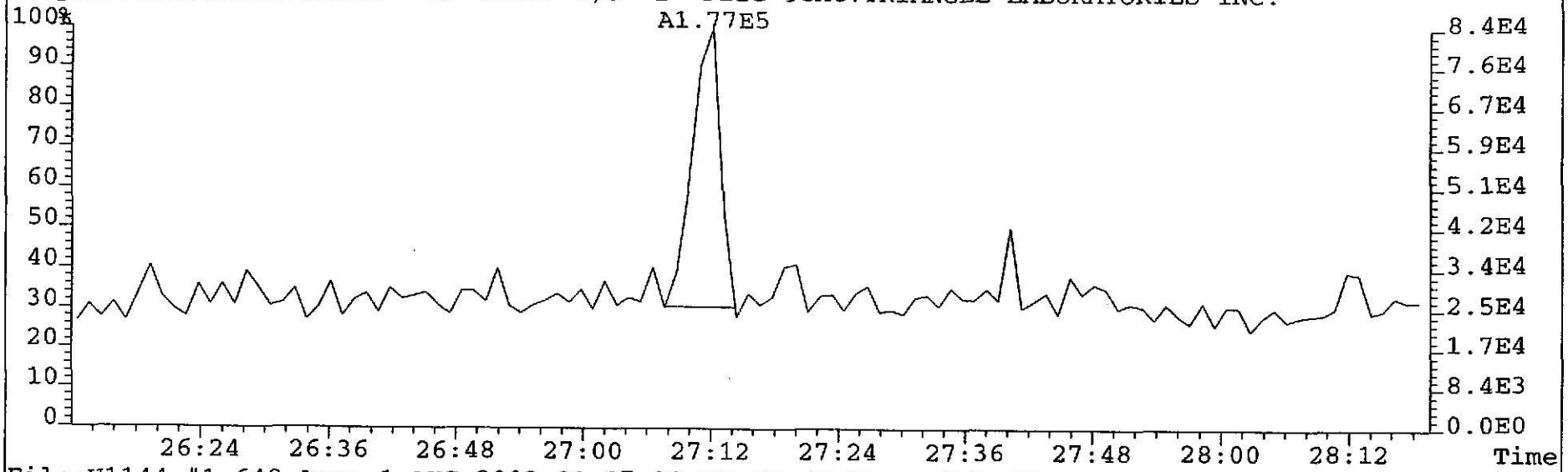


File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
305.8987 S:4 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DF-DP157-0,5'-1' File Text:TRIANGLE LABORATORIES INC.

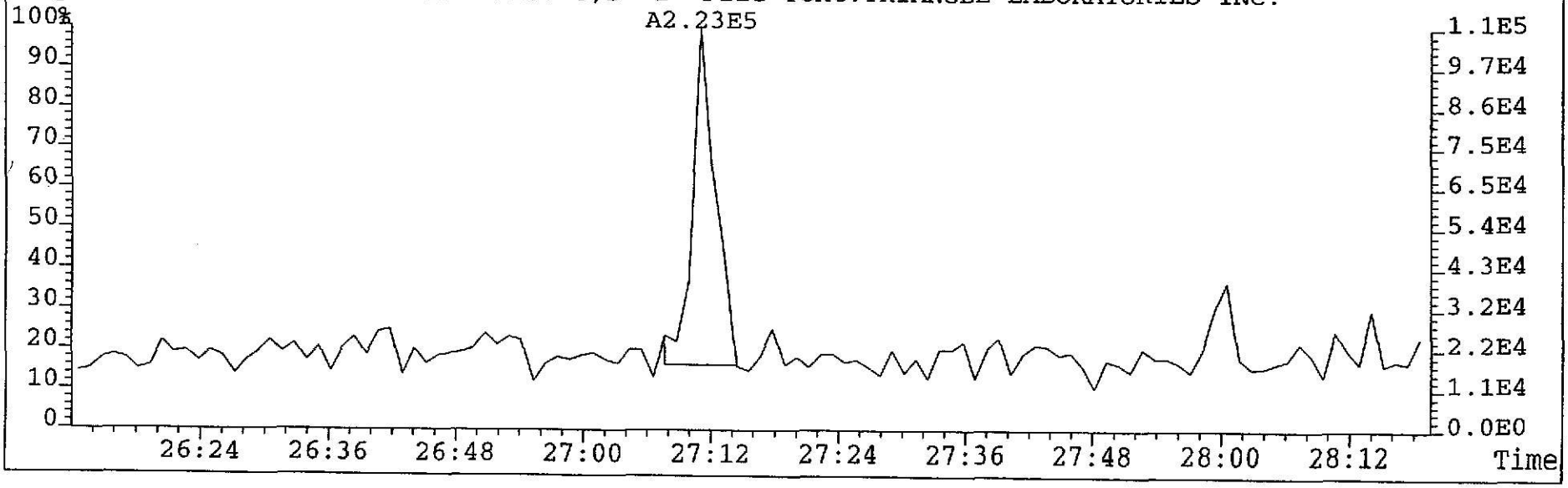


OEM 8/1/02

File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
303.9016 S:4 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DF-DP157-0,5'-1' File Text:TRIANGLE LABORATORIES INC.



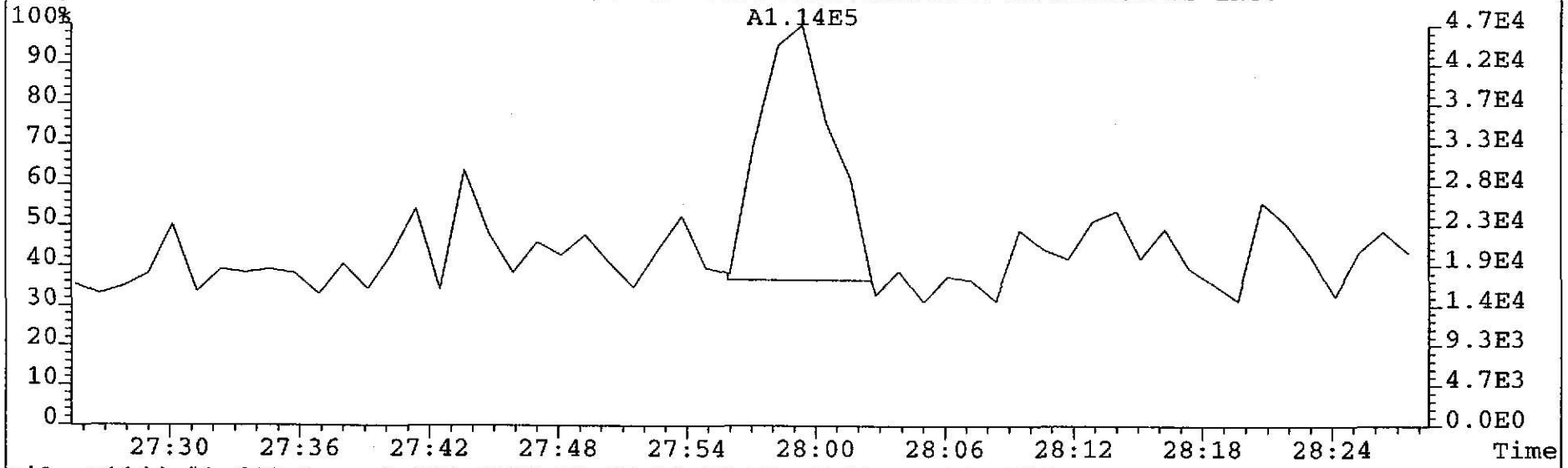
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
305.8987 S:4 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DF-DP157-0,5'-1' File Text:TRIANGLE LABORATORIES INC.



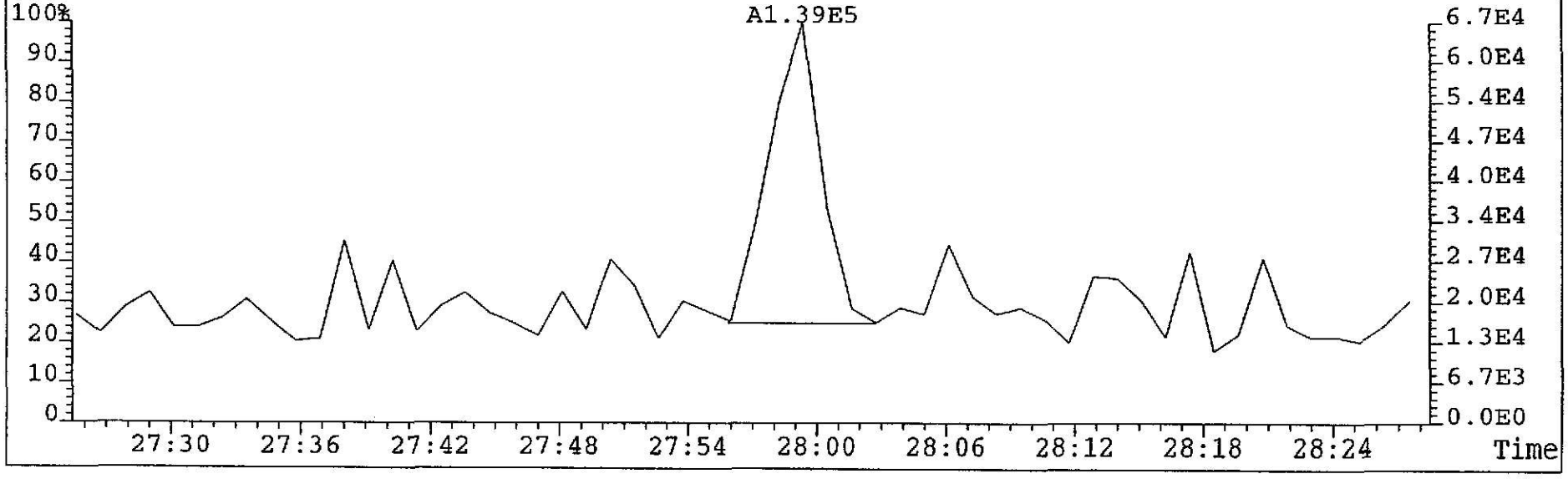
87

GEM 8/1/02

File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
339.8597 S:4 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DF-DP157-0,5'-1' File Text:TRIANGLE LABORATORIES INC.

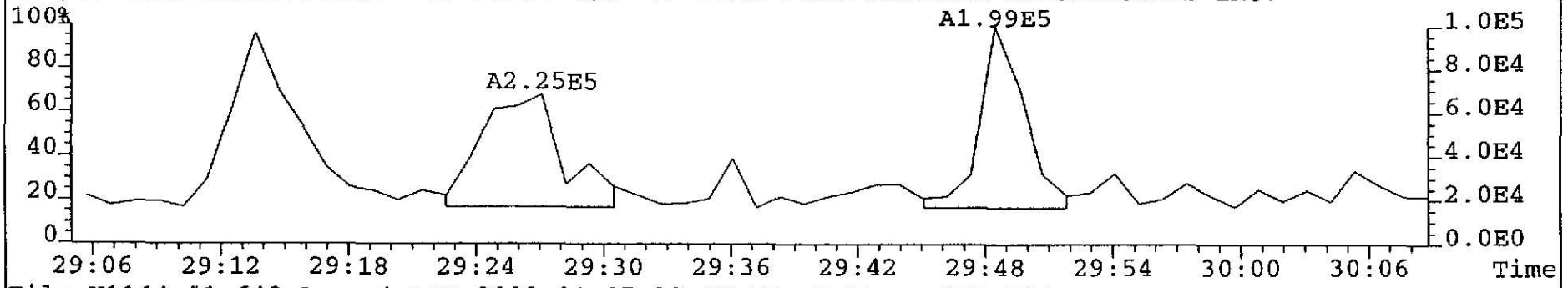


File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
341.8567 S:4 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DF-DP157-0,5'-1' File Text:TRIANGLE LABORATORIES INC.

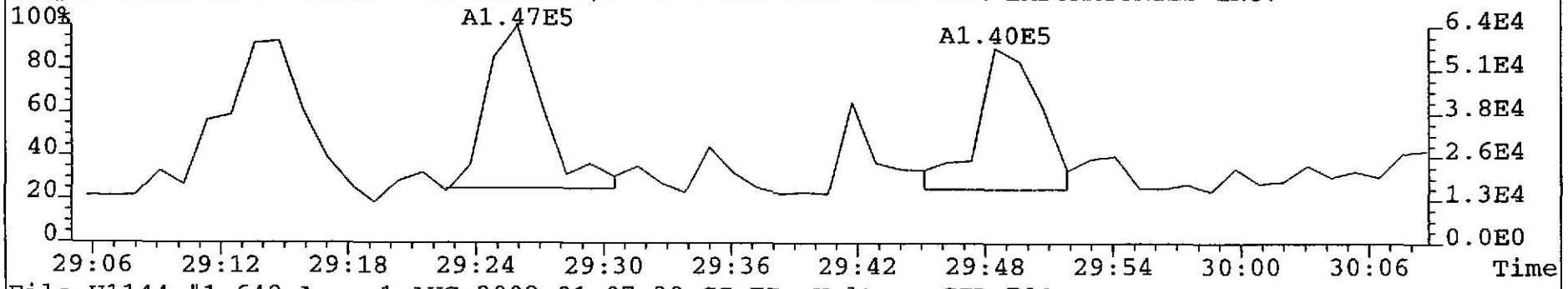


CEM 8/1/02

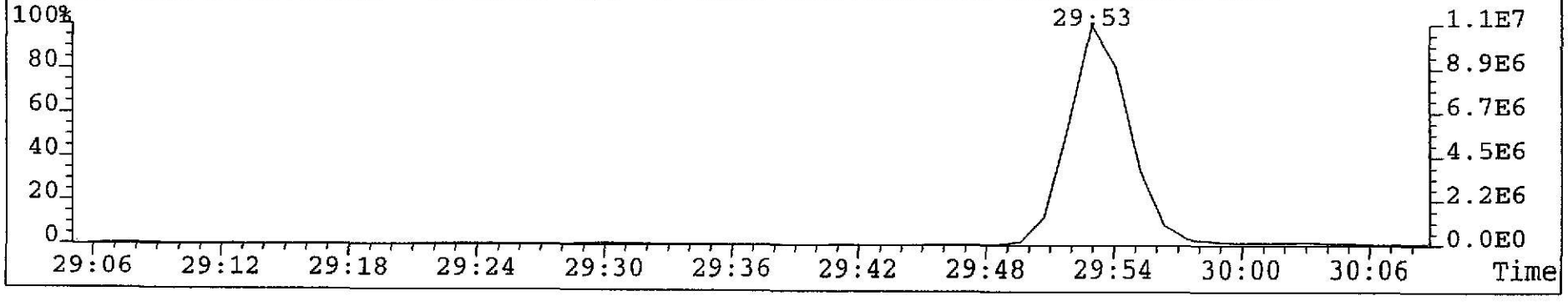
File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
339.8597 S:4 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DF-DP157-0,5'-1' File Text:TRIANGLE LABORATORIES INC.



File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
341.8567 S:4 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DF-DP157-0,5'-1' File Text:TRIANGLE LABORATORIES INC.

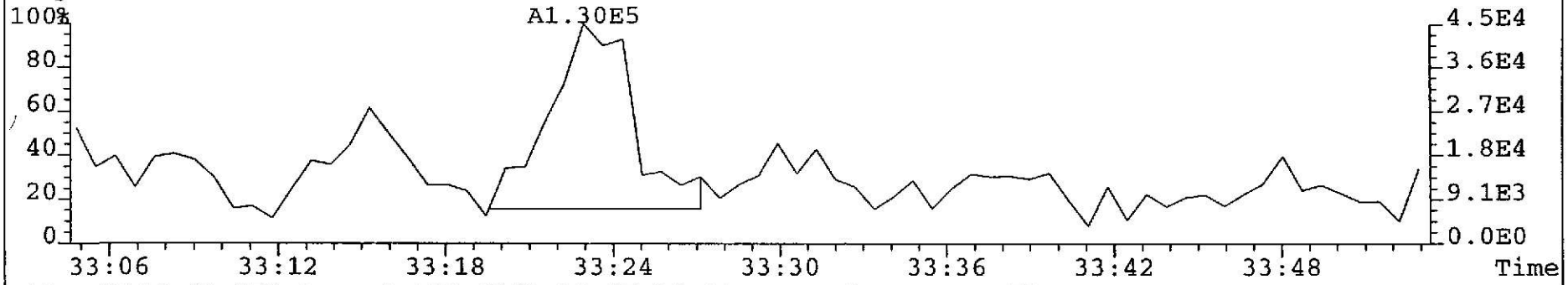


File:U1144 #1-648 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
353.8970 S:4 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DF-DP157-0,5'-1' File Text:TRIANGLE LABORATORIES INC.

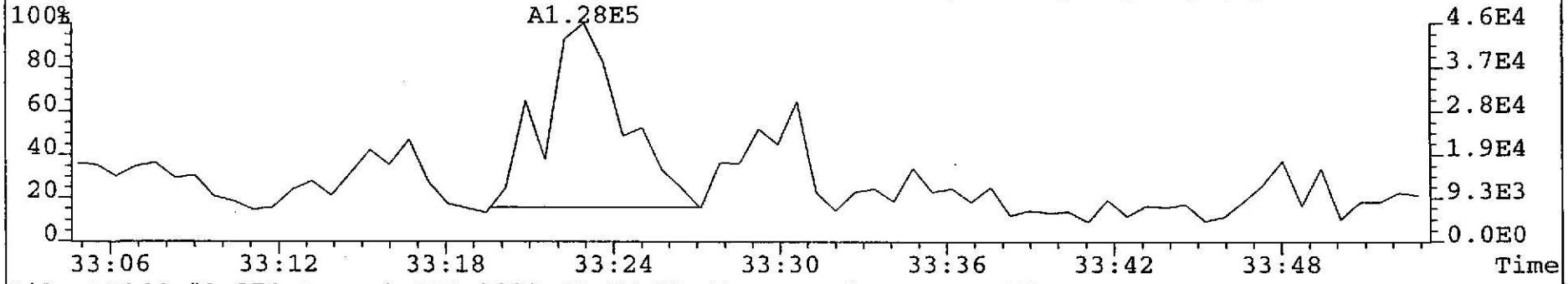


aem 8/1/02

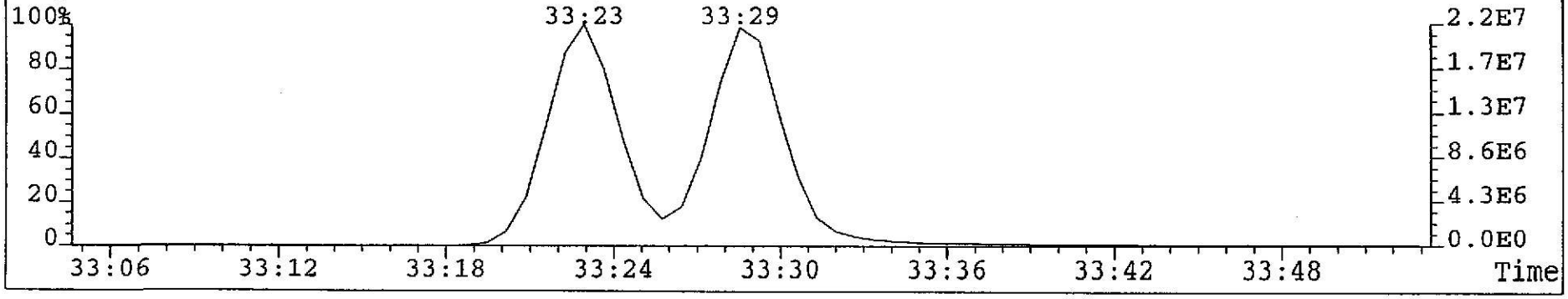
File:U1144 #1-271 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
373.8208 S:4 F:3 Exp:NDB5US
Sample Text:TLI#57930R1 DF-DP157-0,5'-1' File Text:TRIANGLE LABORATORIES INC.



File:U1144 #1-271 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
375.8178 S:4 F:3 Exp:NDB5US
Sample Text:TLI#57930R1 DF-DP157-0,5'-1' File Text:TRIANGLE LABORATORIES INC.

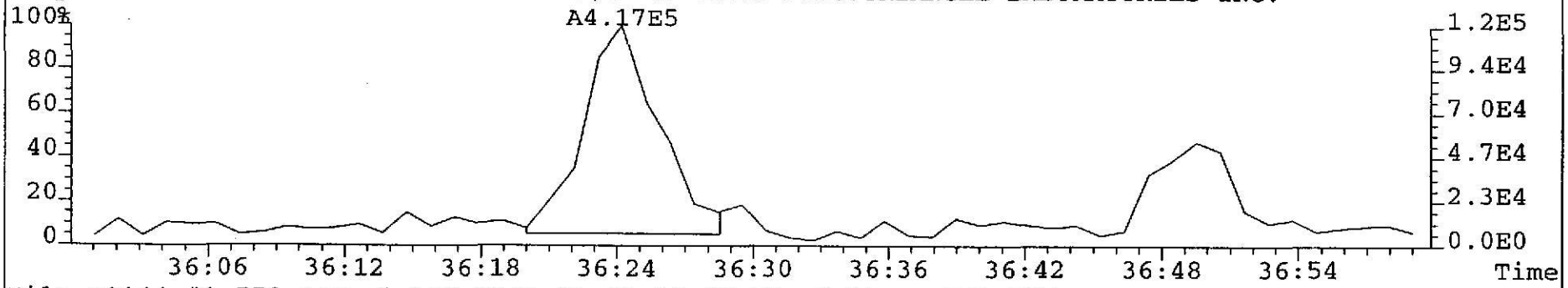


File:U1144 #1-271 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
385.8610 S:4 F:3 Exp:NDB5US
Sample Text:TLI#57930R1 DF-DP157-0,5'-1' File Text:TRIANGLE LABORATORIES INC.

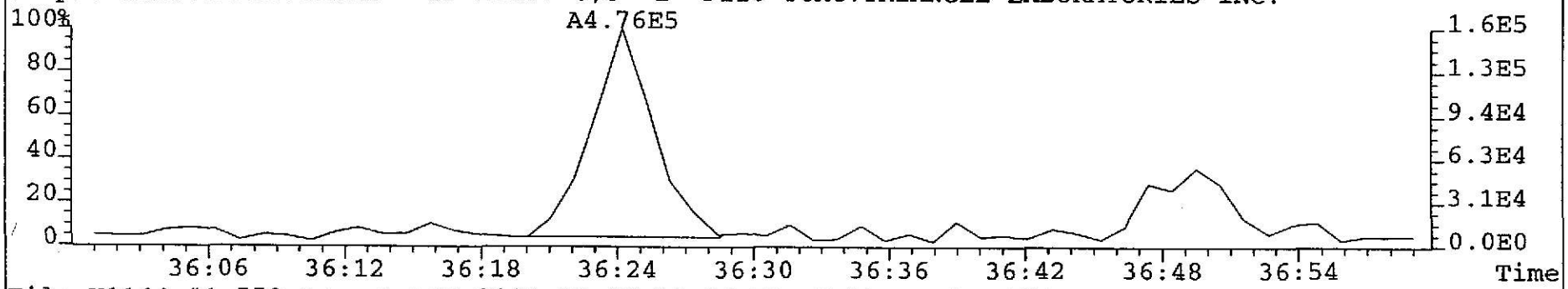


CBM 8/1/02

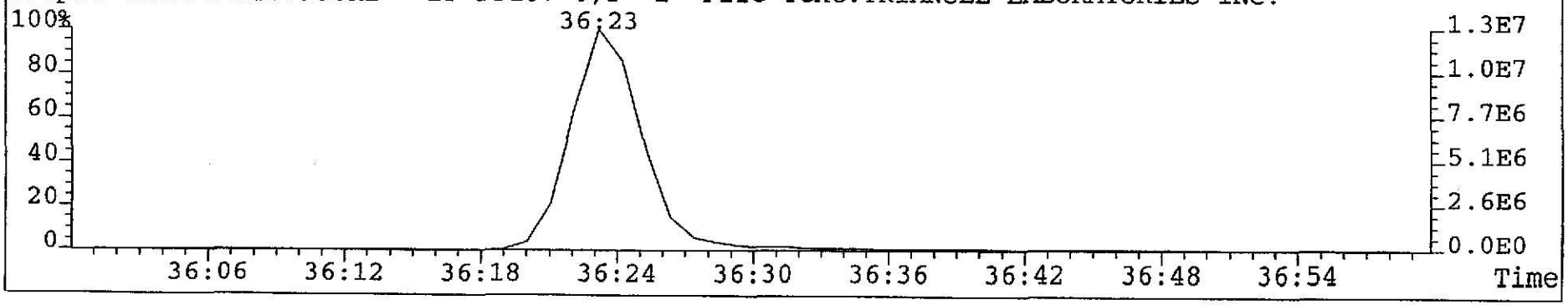
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
407.7818 S:4 F:4 Exp:NDB5US
Sample Text:TLI#57930R1 DF-DP157-0,5'-1' File Text:TRIANGLE LABORATORIES INC.



File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
409.7789 S:4 F:4 Exp:NDB5US
Sample Text:TLI#57930R1 DF-DP157-0,5'-1' File Text:TRIANGLE LABORATORIES INC.

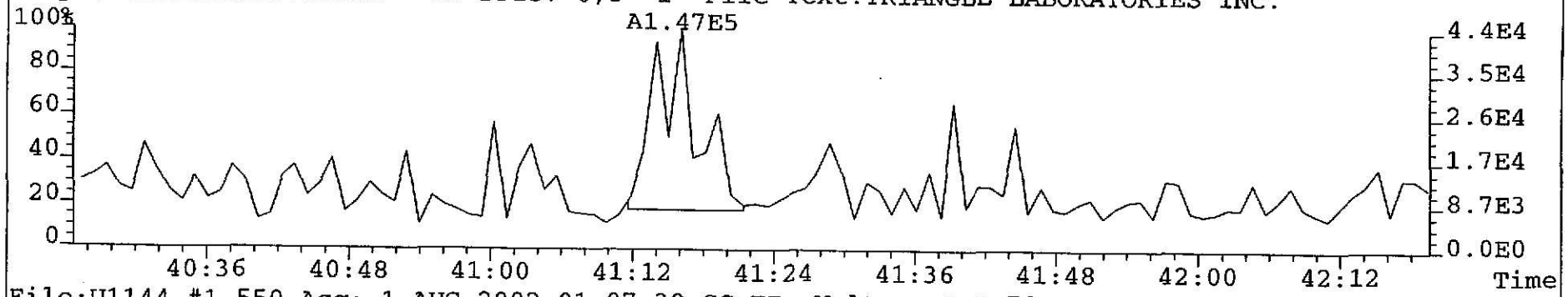


File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
419.8220 S:4 F:4 Exp:NDB5US
Sample Text:TLI#57930R1 DF-DP157-0,5'-1' File Text:TRIANGLE LABORATORIES INC.

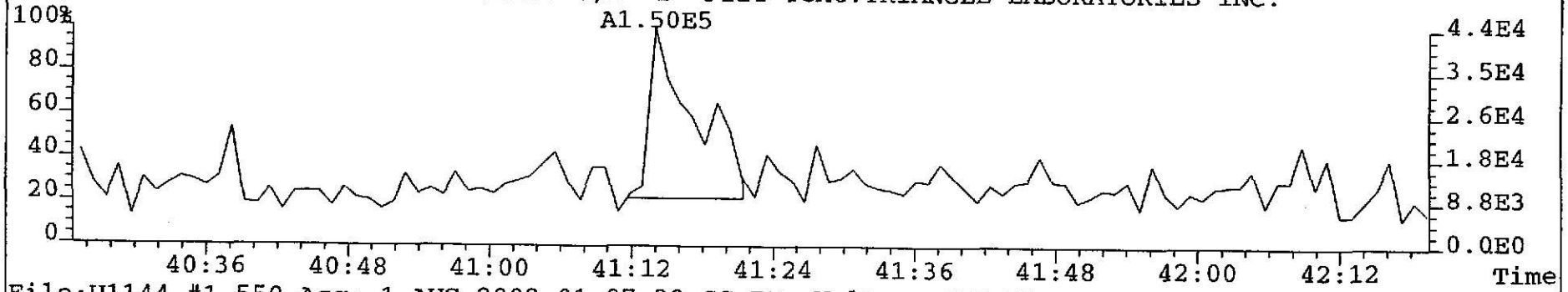


CEM 8/1/02

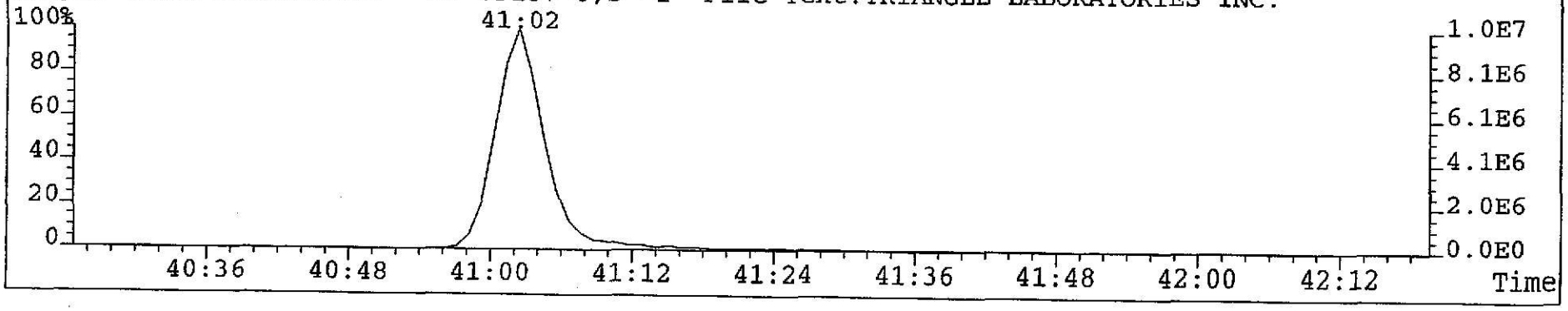
File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
441.7428 S:4 F:4 Exp:NDB5US
Sample Text:TLI#57930R1 DF-DP157-0,5'-1' File Text:TRIANGLE LABORATORIES INC.



File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
443.7399 S:4 F:4 Exp:NDB5US
Sample Text:TLI#57930R1 DF-DP157-0,5'-1' File Text:TRIANGLE LABORATORIES INC.



File:U1144 #1-550 Acq: 1-AUG-2002 01:07:39 GC EI+ Voltage SIR 70S
471.7750 S:4 F:4 Exp:NDB5US
Sample Text:TLI#57930R1 DF-DP157-0,5'-1' File Text:TRIANGLE LABORATORIES INC.



TLI Project: **57930r1** 1613, Revision B PCDD/PCDF Analysis (c)
Client Sample: **DUPLICATE** Analysis File: **U114405**

Client Project:	**Kuhlman Electric**				
Sample Matrix:	**SOLID**	Date Received:	**07/20/2002**	Spike File:	**SP161B22**
TLI ID:	**331-18-13**	Date Extracted:	**07/30/2002**	ICal:	**UF5709B**
		Date Analyzed:	**08/01/2002**	ConCal:	**UB21143**
Sample Size:	**12.300 g**	Dilution Factor:	**n/a**	% Moisture:	**18.3**
Dry Weight:	**10.049 g**	Blank File:	**U114403**	% Lipid:	**n/a**
GC Column:	**DB-5**	Analyst:	**CGK**	% Solids:	**81.7**

Analytes	Conc. (pg/g)	DL	Ratio	RT	RRT	Flags
2,3,7,8-TCDD	ND	0.4				—
1,2,3,7,8-PeCDD	ND	0.3				—
1,2,3,4,7,8-HxCDD	ND	0.3				—
1,2,3,6,7,8-HxCDD	ND	0.3				—
1,2,3,7,8,9-HxCDD	ND	0.7				—
1,2,3,4,6,7,8-HpCDD	6.2		1.10	37:26	1.000	—
1,2,3,4,6,7,8,9-OCDD	117		0.91	41:04	1.001	—
2,3,7,8-TCDF	ND	0.3				—
1,2,3,7,8-PeCDF	ND	0.3				—
2,3,4,7,8-PeCDF	ND	0.2				—
1,2,3,4,7,8-HxCDF	2.0		1.36	33:23	1.000	J
1,2,3,6,7,8-HxCDF	ND	0.2				—
2,3,4,6,7,8-HxCDF	ND	0.2				—
1,2,3,7,8,9-HxCDF	ND	0.3				—
1,2,3,4,6,7,8-HpCDF	12.6		1.03	36:24	1.000	—
1,2,3,4,7,8,9-HpCDF	ND	0.4				—
1,2,3,4,6,7,8,9-OCDF	3.4		0.82	41:16	1.006	J

Totals	Conc. (pg/g)	Number	DL	Flags
Total TCDD	ND		0.4	—
Total PeCDD	ND		0.3	—
Total HxCDD	2.4	2		—
Total HpCDD	16.5	2		—
Total TCDF	3.1	1		—
Total PeCDF	12.1	4		—
Total HxCDF	8.7	4		—
Total HpCDF	19.7	2		—

161B_PSR v2.04, LARS 6.25.05

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Printed: 12:08 08/01/2002

TLI Project: **57930r1** 1613, Revision B PCDD/PCDF Analysis (c)
Client Sample: **DUPLICATE** Analysis File: **U114405**

Internal Standards	Conc. (pg/g)	% Recovery	QC Limits	Ratio	RT	RRT	Flags
$^{13}C_{12}$-2,3,7,8-TCDD	135	67.7	25%-164%	0.80	26:38	1.006	—
$^{13}C_{12}$-1,2,3,7,8-PeCDD	239	120	25%-181%	1.56	30:56	1.169	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	181	90.8	32%-141%	1.27	34:05	0.988	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	194	97.4	28%-130%	1.26	34:10	0.991	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	209	105	23%-140%	1.07	37:25	1.085	—
$^{13}C_{12}$-1,2,3,4,6,7,8,9-OCDD	450	113	17%-157%	0.89	41:02	1.190	—
$^{13}C_{12}$-2,3,7,8-TCDF	139	69.8	24%-169%	0.79	25:55	0.979	—
$^{13}C_{12}$-1,2,3,7,8-PeCDF	177	88.8	24%-185%	1.55	29:54	1.130	—
$^{13}C_{12}$-2,3,4,7,8-PeCDF	182	91.7	21%-178%	1.58	30:35	1.156	—
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	175	88.1	26%-152%	0.53	33:23	0.968	—
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	186	93.3	26%-123%	0.52	33:29	0.971	—
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	206	103	28%-136%	0.52	33:58	0.985	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	193	97.2	29%-147%	0.53	34:45	1.008	—
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	176	88.4	28%-143%	0.48	36:23	1.055	—
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	197	99.0	26%-138%	0.47	37:56	1.100	—

Cleanup Standard	Conc. (pg/g)	% Recovery	QC Limits	RT	RRT	Flags
$^{37}Cl_4$-2,3,7,8-TCDD	11.6	58.2	35%-197%	26:39	1.007	—

Recovery Standards	Ratio	RT	Flags
$^{13}C_{12}$-1,2,3,4-TCDD	0.80	26:28	—
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.28	34:29	—

Data Reviewer: ABM 08/01/2002

161B_PSR v2.04, LARS 6.25.05

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Printed: 12:08 08/01/2002

Martin & Slagle

TLI Project: **57930r1**
Client Sample: **DUPLICATE**

Toxicity Equivalents Report
Analysis File: **U114405**

Client Project:	**Kuhlman Electric**				
Sample Matrix:	**SOLID**	Date Received:	**07/20/02**	Spike File:	**SP161B22**
TLI ID:	**331-18-13**	Date Extracted:	**07/30/02**	ICal:	**UF5709B**
		Date Analyzed:	**08/01/02**	ConCal:	**UB21143**
Sample Size:	**12.300 g**	Dilution Factor:	**1**	% Moisture:	**18.3**
Dry Weight:	**10.049 g**	Blank File:	**U114403**	% Lipid:	**n/a**
GC Column:	**DB-5**	Analyst:	**CGK**	% Solids:	**81.7**

Analytes	Conc. (pg/g)		TEF		Equivalent
2,3,7,8-TCDD	{0.4}	x	1.	=	0.4
1,2,3,7,8-PeCDD	{0.3}	x	0.5	=	0.2
1,2,3,4,7,8-HxCDD	{0.3}	x	0.1	=	0.03
1,2,3,6,7,8-HxCDD	{0.3}	x	0.1	=	0.03
1,2,3,7,8,9-HxCDD	{0.7}	x	0.1	=	0.07
1,2,3,4,6,7,8-HpCDD	6.2	x	0.01	=	0.062
1,2,3,4,6,7,8,9-OCDD	117	x	0.001	=	0.117
TOTAL PCDD					0.9
2,3,7,8-TCDF	{0.3}	x	0.1	=	0.03
1,2,3,7,8-PeCDF	{0.3}	x	0.05	=	0.02
2,3,4,7,8-PeCDF	{0.2}	x	0.5	=	0.1
1,2,3,4,7,8-HxCDF	2.0	x	0.1	=	0.20
1,2,3,6,7,8-HxCDF	{0.2}	x	0.1	=	0.02
2,3,4,6,7,8-HxCDF	{0.2}	x	0.1	=	0.02
1,2,3,7,8,9-HxCDF	{0.3}	x	0.1	=	0.03
1,2,3,4,6,7,8-HpCDF	12.6	x	0.01	=	0.126
1,2,3,4,7,8,9-HpCDF	{0.4}	x	0.01	=	0.004
1,2,3,4,6,7,8,9-OCDF	3.4	x	0.001	=	0.0034
TOTAL PCDF					0.6

Total EPA TEFs, 1989a: 1.5 pg/g

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

GRY_TEF v1.08, MILES 4.22.16

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Printed: 12:16 08/01/02

Initial ....Date...

Data Review By: CBM 8/1/02

Calculated Noise Height: 1.69

Page No. 1 Listing of U114405B.dbf
08/01/2002 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						0.872-1.073			
304-306	DC	NL				Height	4.43	2.11	2.32				
	DC	SN		22:42	RO	0.19	16.83			0.876			
	DC	SN		22:52	RO	0.94	5.12			0.882			
M				25:33	RO	1.05	31.50	16.10	15.40	0.986			
D	D	SN		25:46		0.86	29.80			0.994			
D	D	SN		25:54	RO	1.28	37.16			0.999	2378-TCDF		AN
				27:11		0.73	184.19	77.48	106.71	1.049			
304-306			2	Peaks			215.69						
13C12-TCDF				0.65-0.89						0.944-1.136			
316-318	DC	NL				Height	3.74	1.75	1.99				
				24:52		0.88	78.55	36.78	41.77	0.959			
				25:11	RO	1.07	31.83	16.45	15.38	0.972			
				25:32		0.73	92.97	39.18	53.79	0.985			
				25:55		0.79	10,478.44	4,633.32	5,845.12	1.000	13C12-2378-TCDF		ISO
						Height	2,722.09	1,206.82	1,515.27				
				26:18	RO	1.16	76.81	41.32	35.49	1.015			
	DC	SN		26:29		0.80	17.94			1.022			
316-318			5	Peaks			10,758.60						

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

TCDD				0.65-0.89						0.899-1.043			
320-322	DC	NL				Height	3.75	1.86	1.89				
	DC	SN		25:14	RO	2.75	15.12			0.947			
	DC	SN		25:55	RO	1.88	17.29			0.973			
320-322			0	Peaks			0.00						
37Cl-TCDD										0.925-1.075			
328	DC	NL				Height	1.67	1.67					
				25:17			27.79	27.79		0.949			
	DC	SN		25:34			3.11			0.960			
	DC	SN		25:44			9.14			0.966			
	DC	SN		25:54			6.19			0.972			
	DC	SN		26:00			5.14			0.976			
	DC	SN		26:08			2.22			0.981			
	DC	SN		26:19			5.78			0.988			
				26:39			653.95	653.95		1.001	37Cl-TCDD		CLS
				27:03			541.81	541.81		1.016			
				27:29			8.99	8.99		1.032			
	DC	SN		27:38			4.73			1.038			
	DC	SN		27:49			1.60			1.044			
	DC	SN		27:55			3.04			1.048			
	DC	SN		27:57			1.10			1.049			
	DC	SN		28:02			3.00			1.053			
328			4	Peaks			1,232.54						

```
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                                   0.918-1.068
332-334          DC  NL          Height        5.69         3.65         2.04
                         26:28     0.80     10,402.16     4,624.86     5,777.30  0.994 13C12-1234-TCDD RS1
                         26:38     0.80      7,151.68     3,182.55     3,969.13  1.000 13C12-2378-TCDD IS1
                                 Height      1,924.70       833.91     1,090.79
332-334                2 Peaks              17,553.84

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

PeCDF                           1.32-1.78                                   0.906-1.038
340-342          DC  NL          Height        3.86         1.82         2.04
        D        D   SN   27:49 RO  0.81       47.82                              0.910
                         27:59     1.55       59.19        36.00        23.19  0.915                        J
                         28:14 RO  2.25       48.39        33.51        14.88  0.923
        D        D   SN   28:26 RO  0.79       31.32                              0.930
        D        D   SN   28:37 RO  0.76       39.33                              0.936
                         29:01 RO  1.82       83.89        54.17        29.72  0.949
                         29:14     1.60      230.27       141.83        88.44  0.956                        J
                         29:26     1.49      132.11        79.13        52.98  0.962                        J
        N                29:49     1.36      295.00       169.99       125.01  0.997
                 DC  SN  30:13 RO  7.74       29.71                              0.988
        D        D   SN   30:58     1.46       26.01                              1.013
        D        D   SN   31:15 RO  1.27       31.77                              1.022
                         31:28 RO  1.05       68.84        35.34        33.50  1.029
340-342                7 Peaks               917.69

13C12-PeCDF                     1.32-1.78                                   0.801-1.127
352-354          DC  NL          Height        4.25         1.93         2.32
                         29:02 RO  1.04      101.80        51.91        49.89  0.949
                         29:30 RO  0.97      118.39        58.36        60.03  0.965
                         29:54     1.55    9,280.30     5,643.14     3,637.16  1.000 13C12-PeCDF 123 IS2
                                 Height    2,662.17     1,608.11     1,054.06
                         30:10 RO  1.22      138.72        76.11        62.61  0.986
                         30:35     1.58    9,610.88     5,879.65     3,731.23  1.000 13C12-PeCDF 234 IS3
                                 Height    3,056.25     1,885.12     1,171.13
                         31:34     1.51      122.77        73.89        48.88  1.032
352-354                6 Peaks              19,372.86

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

PeCDD                           1.32-1.78                                   0.936-1.020
356-358          DC  NL          Height        3.95         2.03         1.92
                 DC  SN   29:17 RO  1.18       11.27                              0.947
                 DC  SN   30:57 RO  0.70       10.12                              1.001 12378-PeCDD     AN
                 DC  SN   31:16 RO  0.69       14.16                              1.011
                 DC  SN   31:27 RO  1.17       14.89                              1.017
                 DC  WH   31:39 RO  1.14        7.27                              1.023
                 DC  WH   31:47 RO  3.49       15.16                              1.027
356-358                0 Peaks                 0.00

13C12-PeCDD                     1.32-1.78                                   0.728-1.051
368-370          DC  NL          Height        3.54         1.90         1.64
```

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.
				29:59		1.51	42.66	25.66	17.00	0.969			
	DC	SN		30:10		1.33	20.63			0.975			
				30:56		1.56	7,471.93	4,548.50	2,923.43	1.000	13C12-PeCDD 123	IS4	
						Height	2,326.97	1,400.87	926.10				
	DC	SN		31:34	RO	0.89	19.99			1.020			
368-370			2	Peaks			7,514.59						

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

HxCDF						1.05-1.43				0.928-1.007			
374-376		DC	NL			Height	6.58	2.82	3.76				
	D	D	SN	32:25	RO	1.73	23.15			0.933			
				32:34		1.19	141.26	76.89	64.37	0.937			J
				32:44		1.21	43.24	23.70	19.54	0.942			J
	D	D	SN	32:55	RO	0.97	28.36			0.947			
				33:01		1.37	180.66	104.42	76.24	0.950			J
				33:23		1.36	111.00	63.91	47.09	1.000	123478-HxCDF	AN	J
		DC	SN	33:29	RO	1.50	18.51			1.000	123678-HxCDF	AN	
	D	D	SN	33:59		1.40	17.30			1.000	234678-HxCDF	AN	
374-376				4	Peaks		476.16						
13C12-HxCDF						0.43-0.59				0.877-1.107			
384-386		DC	NL			Height	9.53	4.03	5.50				
				32:32	RO	0.70	49.59	20.48	29.11	0.936			
				33:23		0.53	9,495.63	3,284.63	6,211.00	1.000	13C12-HxCDF 478	IS5	
						Height	3,257.88	1,134.81	2,123.07				
				33:29		0.52	10,015.29	3,433.71	6,581.58	1.000	13C12-HxCDF 678	IS6	
						Height	3,191.12	1,081.97	2,109.15				
				33:58		0.52	10,203.77	3,499.28	6,704.49	1.000	13C12-HxCDF 234	IS7	
						Height	3,311.43	1,120.43	2,191.00				
				34:45		0.53	7,616.98	2,629.43	4,987.55	1.000	13C12-HxCDF 789	IS8	
						Height	2,304.31	808.16	1,496.15				
		DC	SN	35:06	RO	1.00	9.24			1.010			
384-386				5	Peaks		37,381.26						

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

HxCDD						1.05-1.43				0.959-1.013			
390-392		DC	NL			Height	4.44	2.04	2.40				
				32:54		1.25	46.28	25.71	20.57	0.963			J
		DC	SN	33:06	RO	0.77	4.17			0.969			
		DC	SN	33:10	RO	0.66	8.97			0.971			
	D	D	SN	33:22	RO	2.18	20.13			0.977			
	M			33:34		1.24	47.00	26.00	21.00	0.982			J
	D	D	SN	34:11	RO	0.78	24.15			1.000	123678-HxCDD	AN	
				34:29	RO	0.85	28.77	13.18	15.59	1.009	123789-HxCDD	AN	
390-392				3	Peaks		122.05						
13C12-HxCDD						1.05-1.43				0.983-1.042			
402-404		DC	NL			Height	6.97	3.22	3.75				
				33:33	RO	0.89	19.35	9.10	10.25	0.984			
				34:05		1.27	6,195.22	3,470.19	2,725.03	1.000	13C12-HxCDD 478	IS9	
						Height	2,073.17	1,154.61	918.56				

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

                        34:10     1.26      7,357.53      4,108.78      3,248.75  1.000 13C12-HxCDD 678 IS10
                                Height      2,307.81      1,301.22      1,006.59
                        34:29     1.28      8,076.53      4,538.43      3,538.10  1.012 13C12-HxCDD 789 RS2
402-404                4 Peaks             21,648.63

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

HpCDF                           0.88-1.20                                   0.955-1.004
408-410          DC  NL          Height          4.14          2.03          2.11
                        36:24     1.03        615.03        311.74        303.29  1.000 1234678-HpCDF   AN
                        36:50     1.18        316.06        171.10        144.96  0.971                       J
                 DC  SN 37:56 RO  1.89         15.94                              1.000 1234789-HpCDF   AN
408-410                2 Peaks                931.09

13C12-HpCDF                     0.37-0.51                                   0.856-1.146
418-420          DC  NL          Height          4.73          2.42          2.31
                        36:23     0.48      6,744.18      2,183.95      4,560.23  1.000 13C12-HpCDF 678 IS11
                                Height      1,778.64        571.67      1,206.97
                 DC  SN 36:55 RO  0.89         32.05                              0.973
                 DC  SN 37:34 RO  1.88         14.72                              0.990
                        37:56     0.47      5,295.67      1,685.54      3,610.13  1.000 13C12-HpCDF 789 IS12
                                Height      1,315.83        415.48        900.35
                 DC  SN 38:22 RO  0.85         37.92                              1.011
418-420                2 Peaks             12,039.85

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

HpCDD                           0.88-1.20                                   0.976-1.005
424-426          DC  NL          Height          4.29          1.80          2.49
                        36:41     1.09        325.34        169.69        155.65  0.980
                        37:26     1.10        193.06        101.04         92.02  1.000 1234678-HpCDD   AN
                 DC  WH 37:45 RO  2.77          8.15                              1.009
424-426                2 Peaks                518.40

13C12-HpCDD                     0.88-1.20                                   0.868-1.081
436-438          DC  NL          Height          5.75          3.19          2.56
                        36:41     1.13         30.07         15.95         14.12  0.980
                        37:25     1.07      6,185.74      3,193.79      2,991.95  1.000 13C12-HpCDD 678 IS13
                                Height      1,481.03        764.18        716.85
436-438                2 Peaks             6,215.81

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

OCDF                            0.76-1.02                                   0.951-1.049
442-444          DC  NL          Height          4.59          2.28          2.31
                 DC  SN 39:12 RO  0.64         10.31                              0.955
                        41:16     0.82        113.67         51.08         62.59  1.006 OCDF            AN   J
                 DC  WH 44:34     0.93          8.55                              1.086
442-444                1 Peak                 113.67

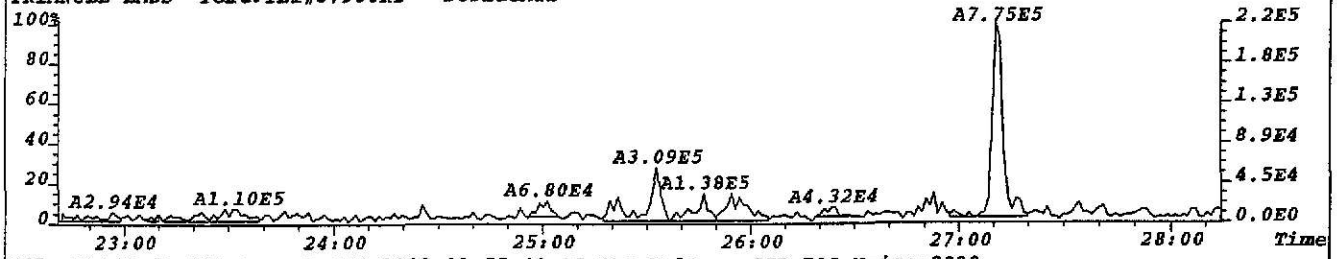
OCDD                            0.76-1.02                                   0.951-1.049
458-460          DC  NL          Height          4.16          2.06          2.10
```

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.
				41:04		0.91	2,928.25	1,391.96	1,536.29	1.001	OCDD	AN	
				41:30	RO	0.70	22.55	9.31	13.24	1.011			
458-460			2	Peaks			2,950.80						
13C12-OCDD						0.76-1.02				0.996-1.004			
470-472	DC	NL				Height	3.96	1.93	2.03				
				41:02		0.89	8,988.32	4,238.68	4,749.64	1.000	13C12-OCDD	IS14	
						Height	1,799.31	848.72	950.59				
470-472			1	Peak			8,988.32						

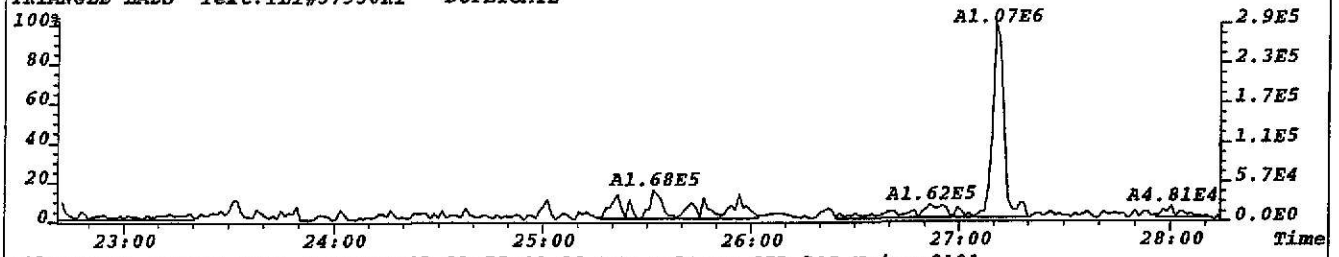
Column Description.....	"Why" Code Description.....	QC Log Desc.....
M_Z -Nominal Ion Mass(es)	WL-Below Retention Time Window	A-Peak Added
..RT. -Retention Time (mm:ss)	WH-Above Retention Time Window	K-Peak Kept
Rat.1 -Ratio of M/M+2 Ions	SN-Below Signal to Noise Level	D-Peak Deleted
OK -RO=Ratio Outside 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 ***

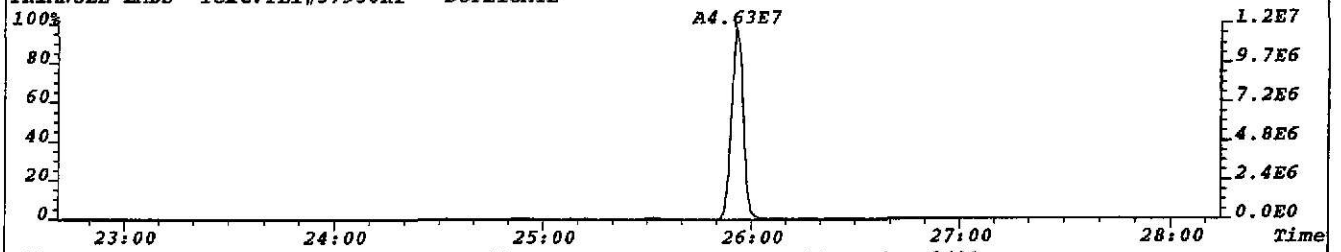
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2638
303.9016 S:5 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,10552.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



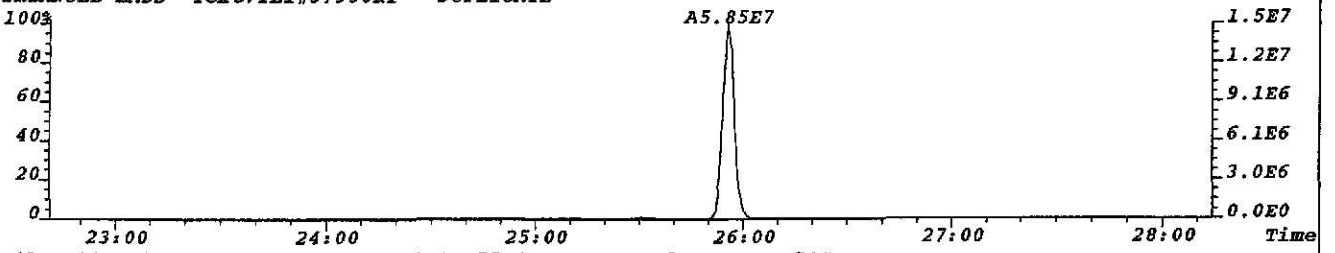
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2899
305.8987 S:5 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,11596.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



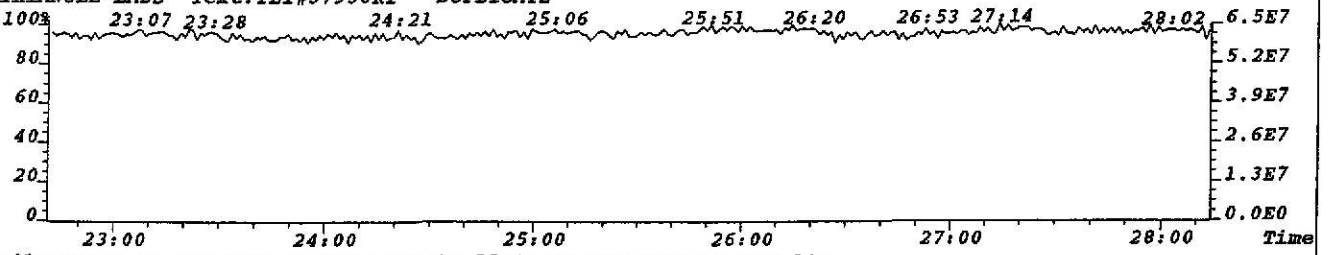
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2191
315.9419 S:5 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,8764.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



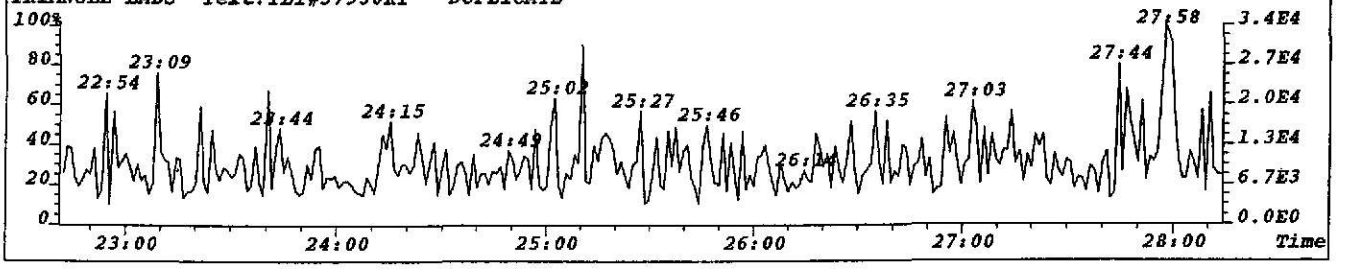
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2491
317.9389 S:5 F:2 BSUB(256,30,-3.0) PKD(9,5,3,0.10%,9964.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



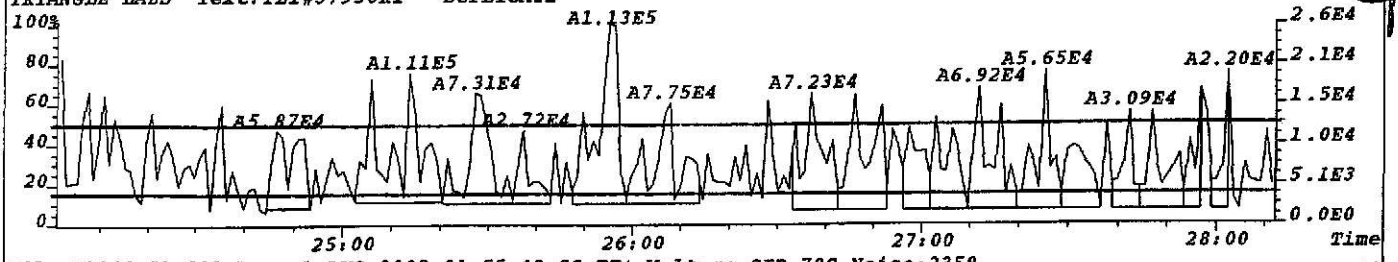
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
330.9792 S:5 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



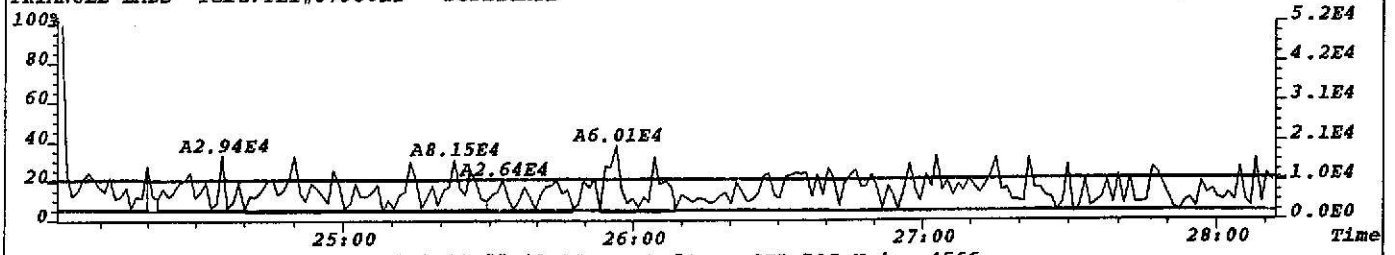
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
375.8364 S:5 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



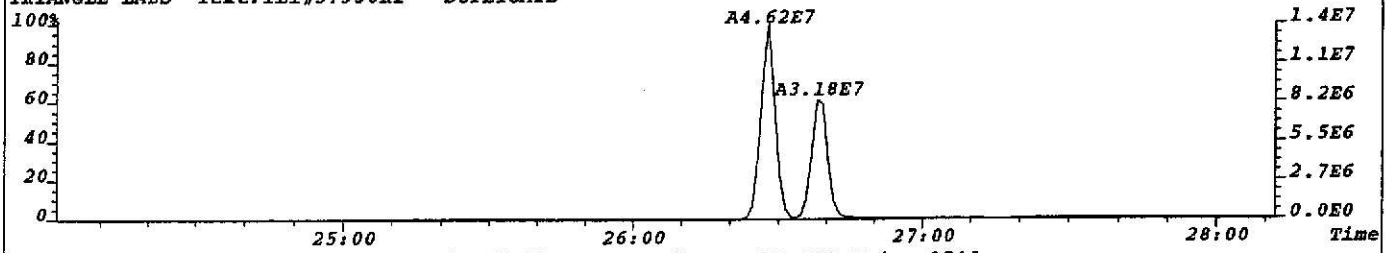
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2328
319.8965 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9312.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



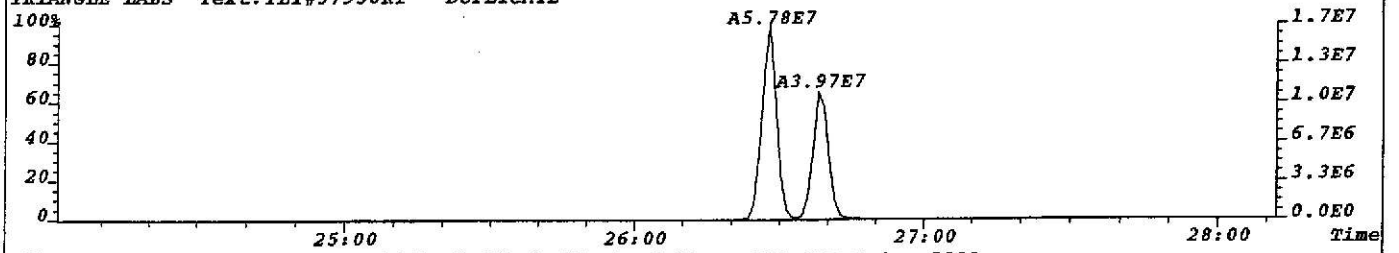
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2358
321.8936 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9432.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



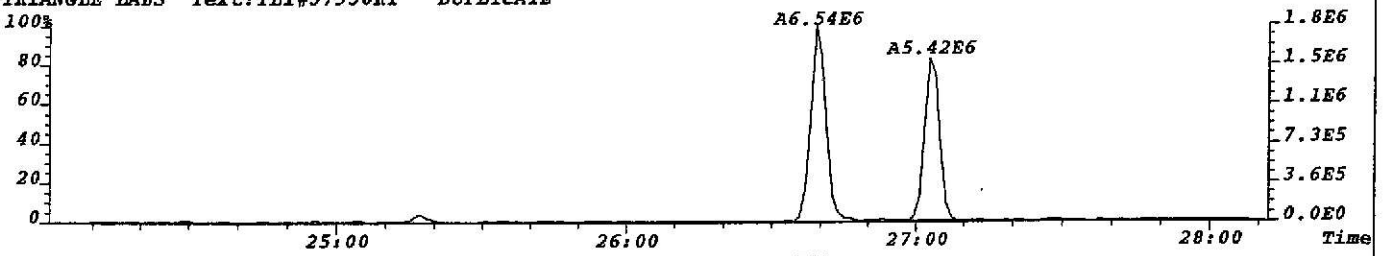
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:4566
331.9368 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,18264.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



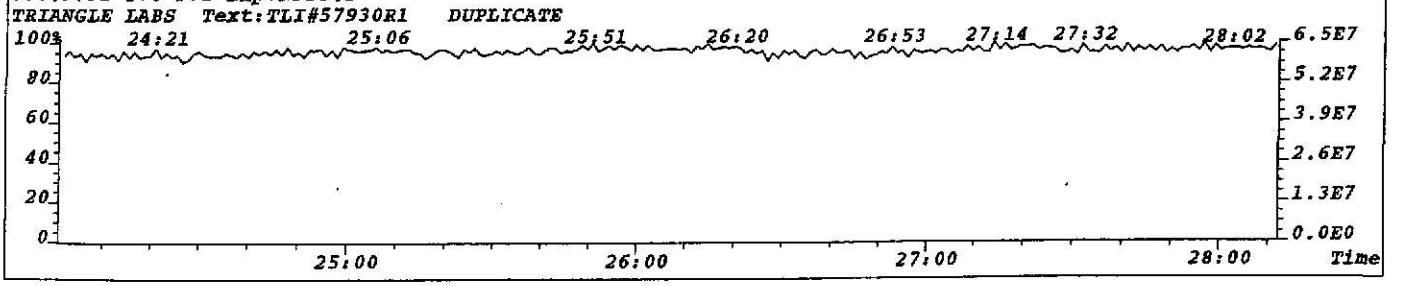
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2546
333.9338 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10184.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



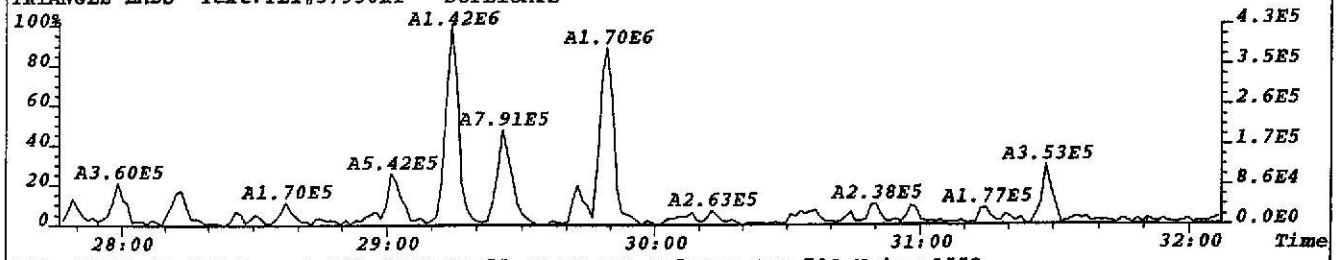
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2090
327.8847 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,8360.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



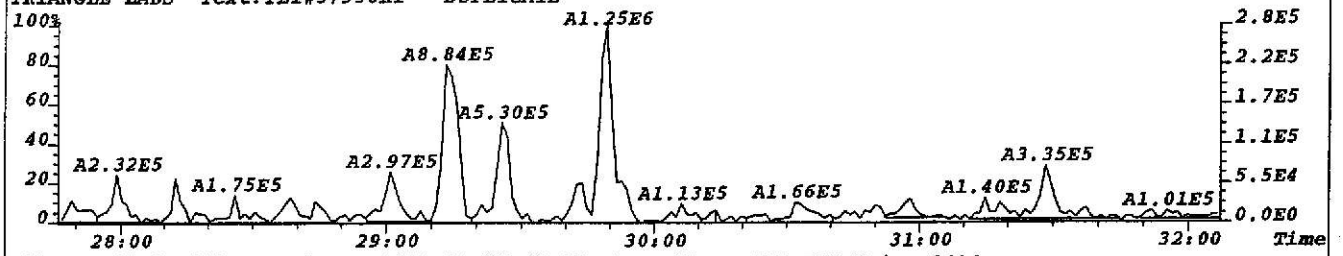
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
330.9792 S:5 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



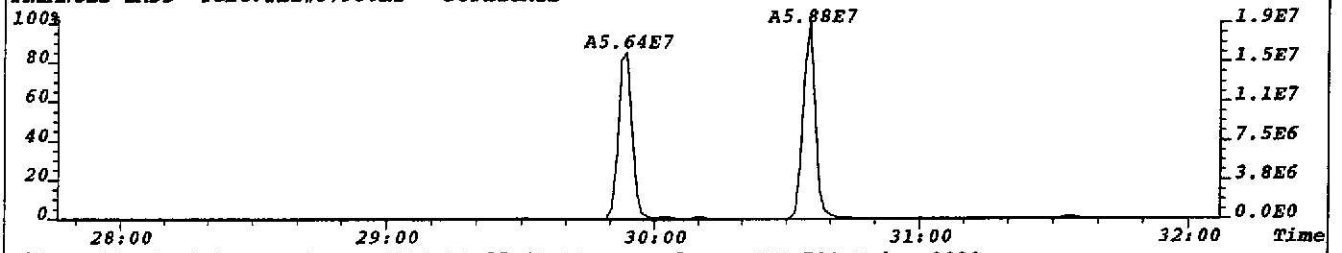
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2274
339.8597 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9096.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



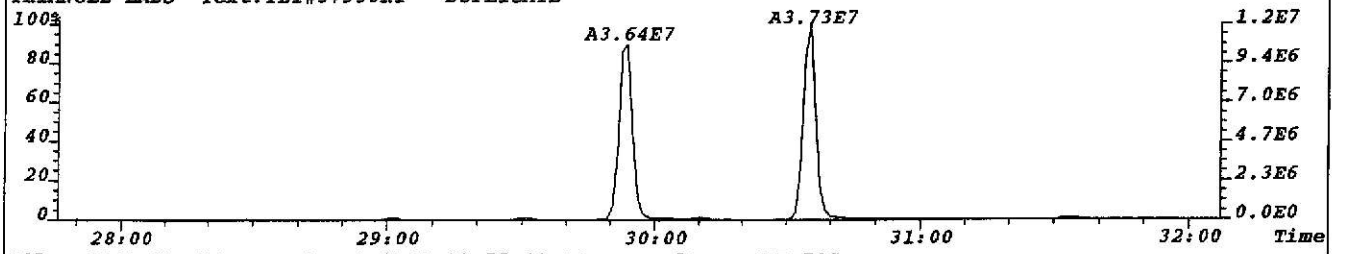
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2552
341.8567 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10208.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



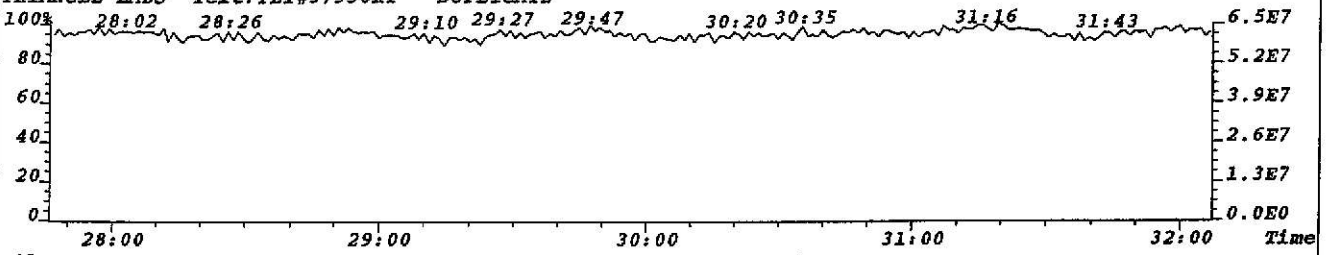
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2414
351.9000 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9656.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



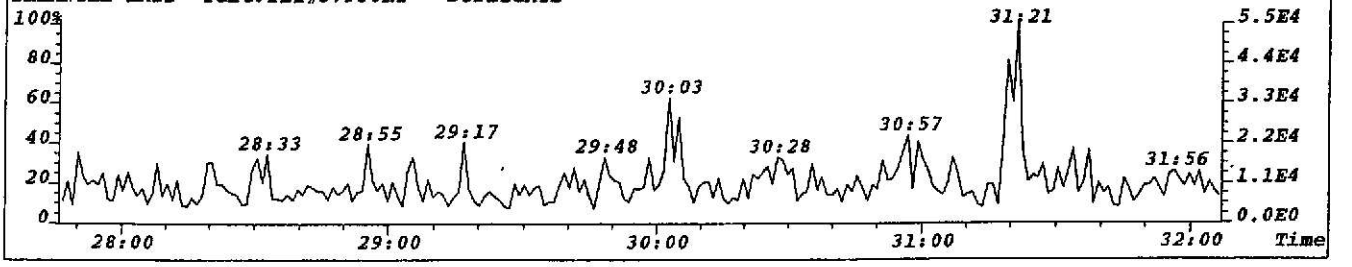
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2898
353.8970 S:5 F:2 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11592.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



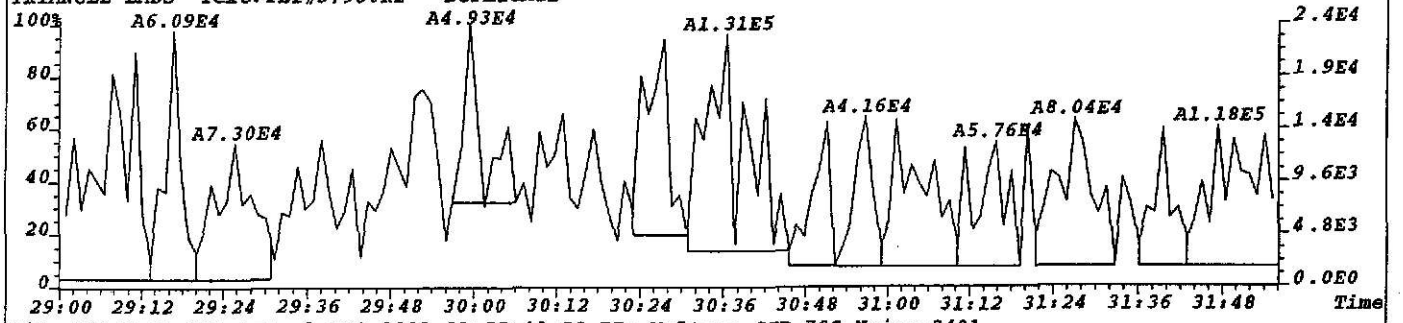
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
330.9792 S:5 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



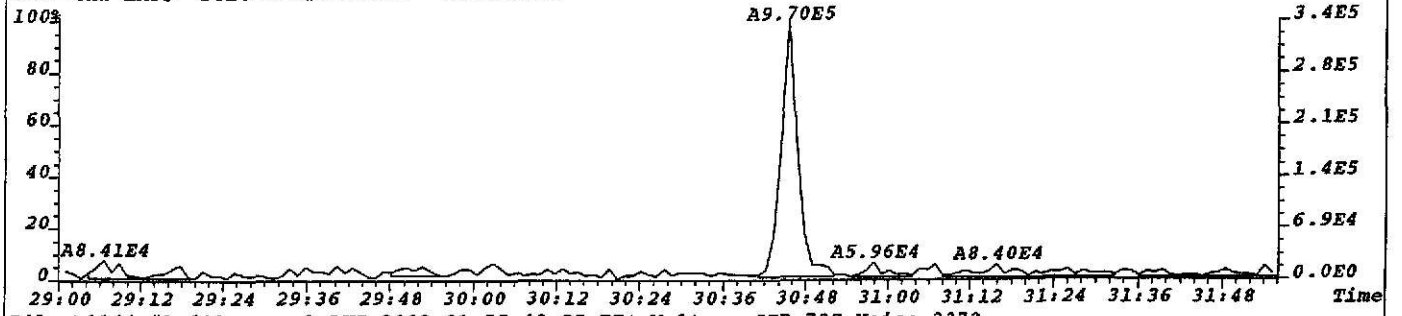
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
409.7974 S:5 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



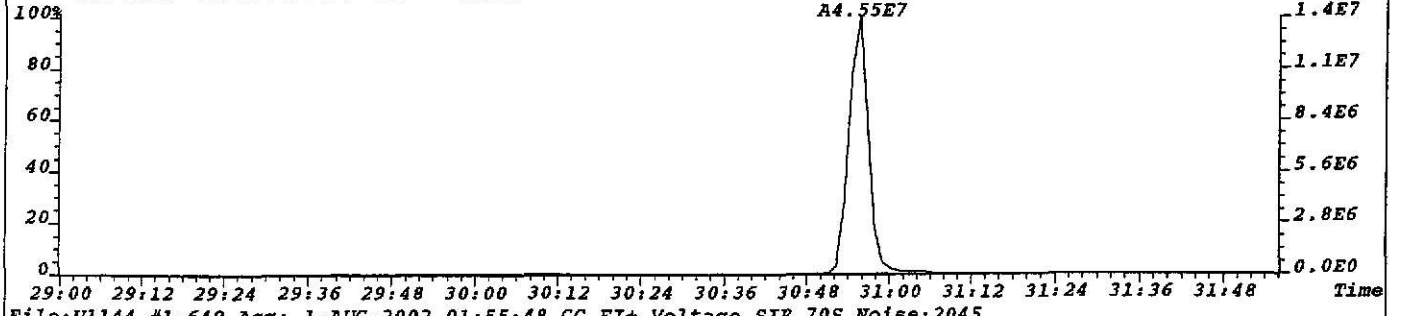
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2536
355.8546 S:5 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,10144.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



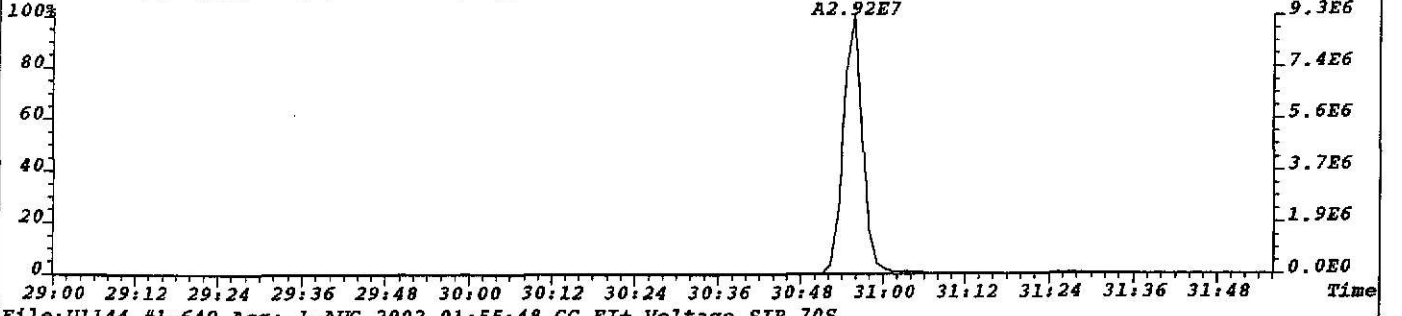
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2401
357.8516 S:5 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,9604.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



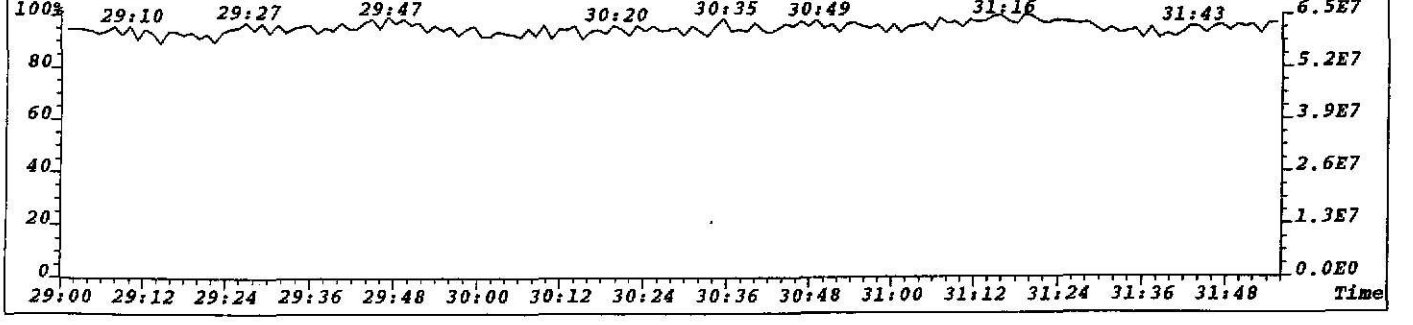
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2372
367.8949 S:5 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,9488.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



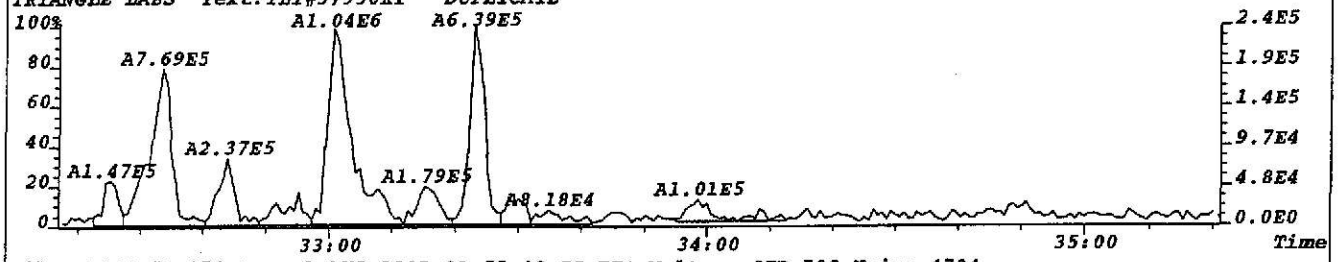
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2045
369.8919 S:5 F:2 BSUB(256,30,-3.0) PKD(5,5,3,0.05%,8180.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



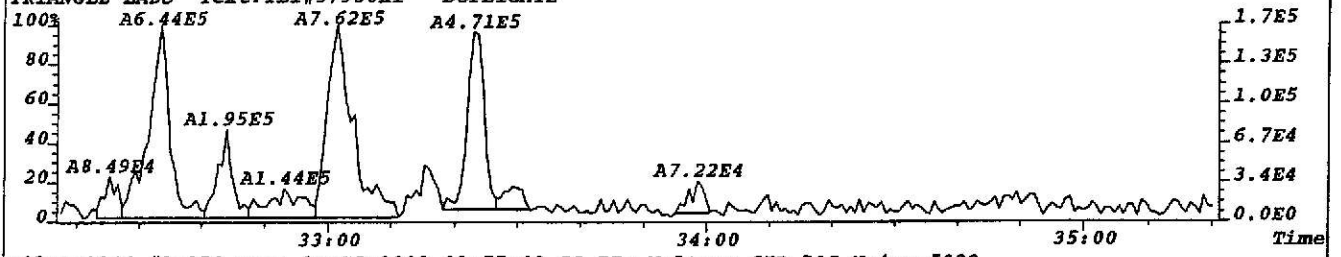
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
330.9792 S:5 F:2 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



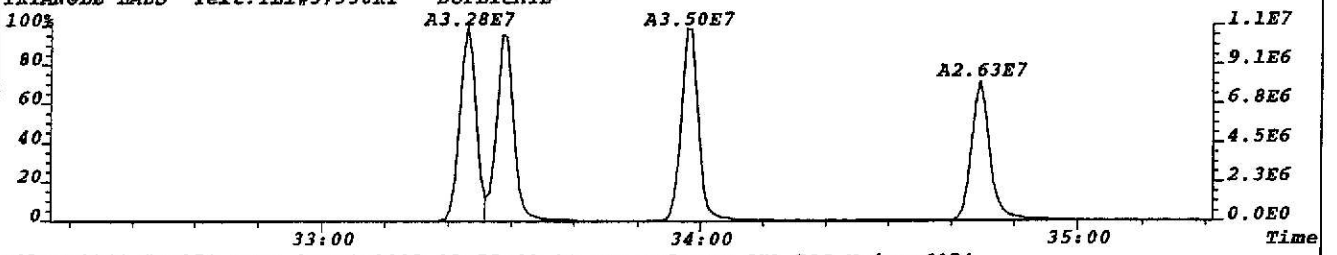
File:U1144 #1-270 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:3527
373.8208 S:5 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,14108.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



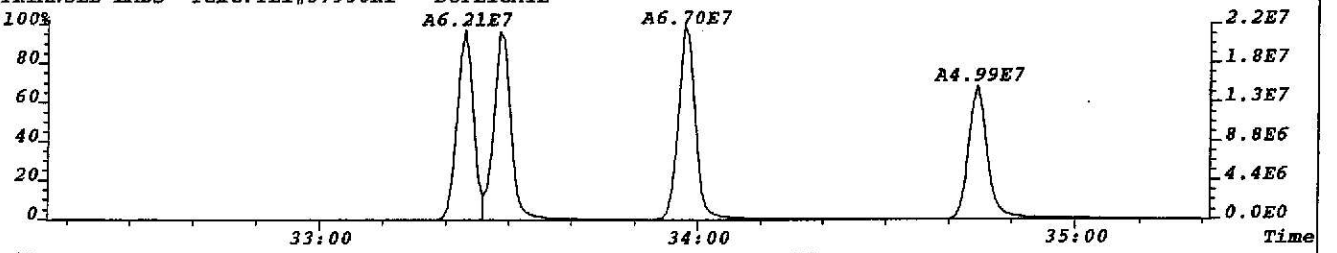
File:U1144 #1-270 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:4704
375.8178 S:5 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,18816.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



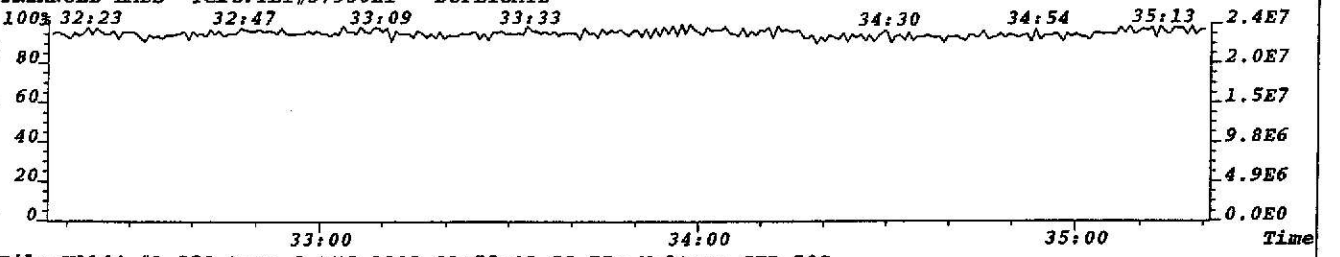
File:U1144 #1-270 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:5039
383.8639 S:5 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,20156.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



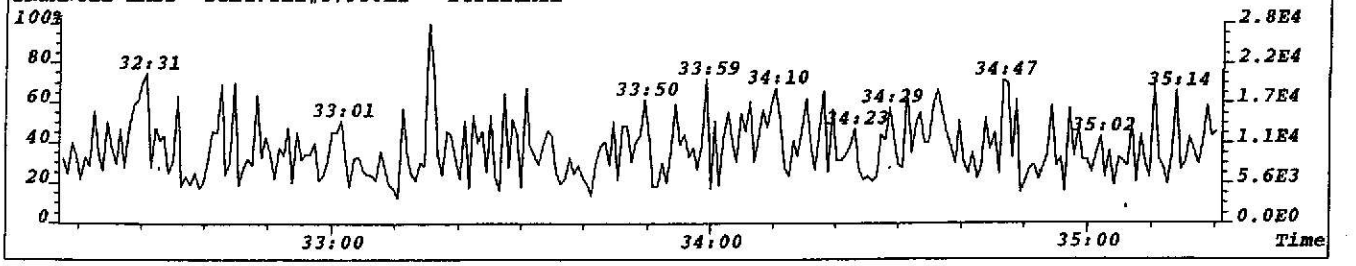
File:U1144 #1-270 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:6874
385.8610 S:5 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,27496.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



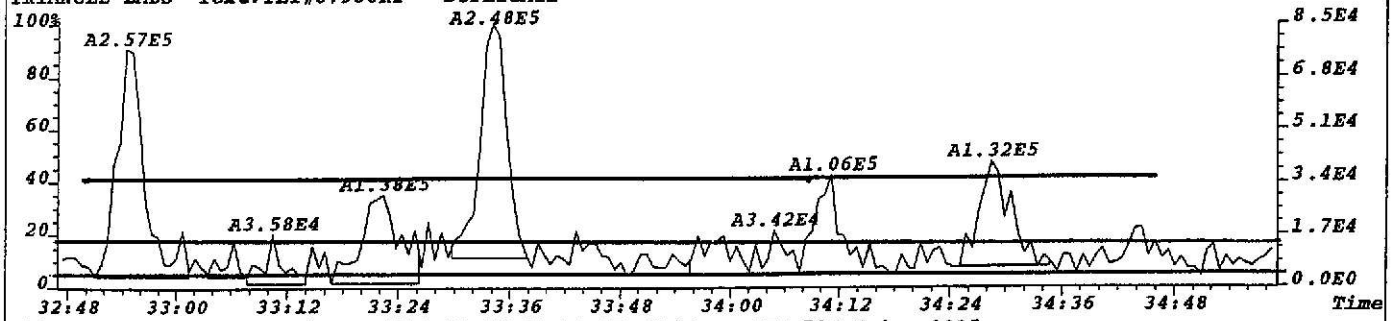
File:U1144 #1-270 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
392.9760 S:5 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



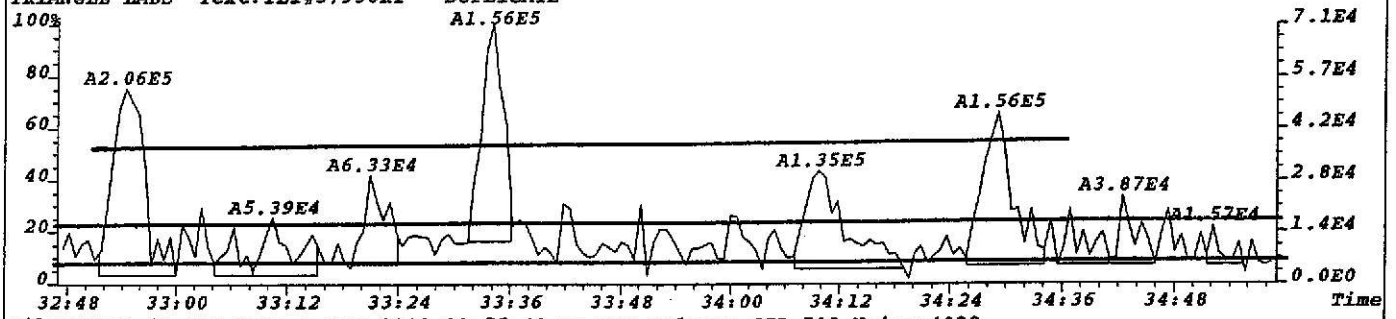
File:U1144 #1-270 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
445.7555 S:5 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



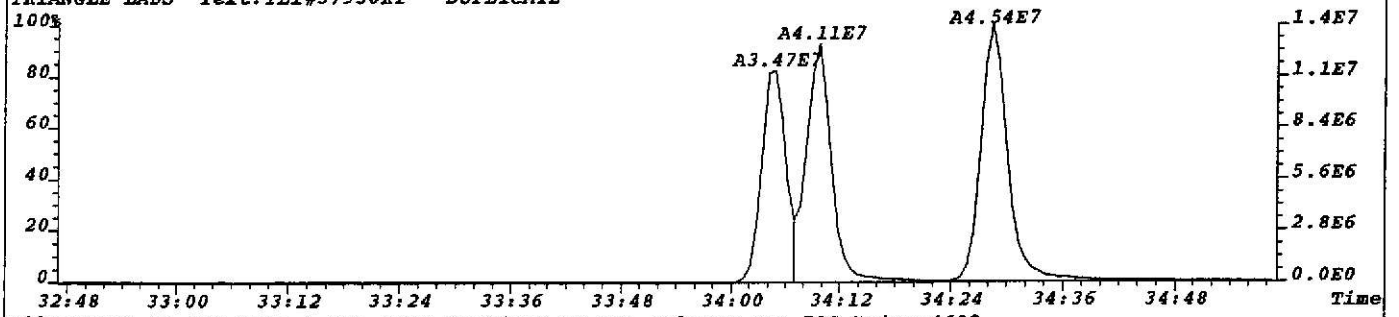
File:U1144 #1-270 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2556
389.8156 S:5 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10224.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



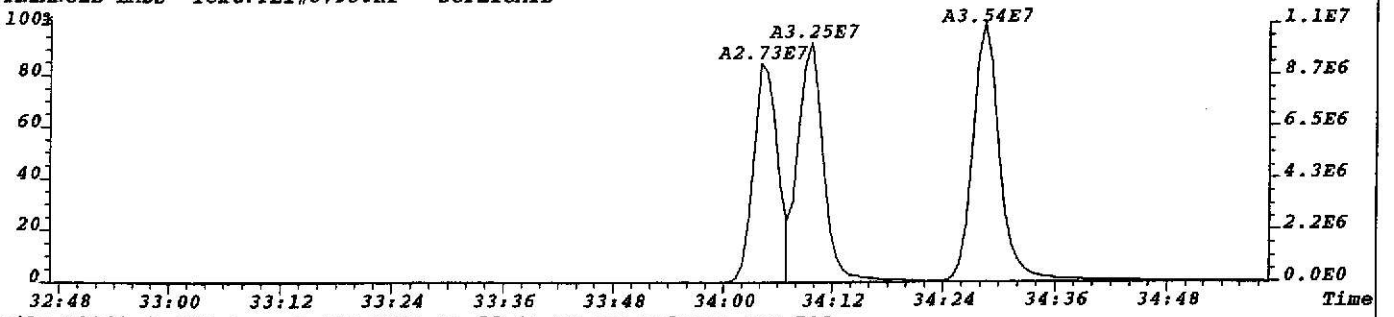
File:U1144 #1-270 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:3005
391.8127 S:5 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12020.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



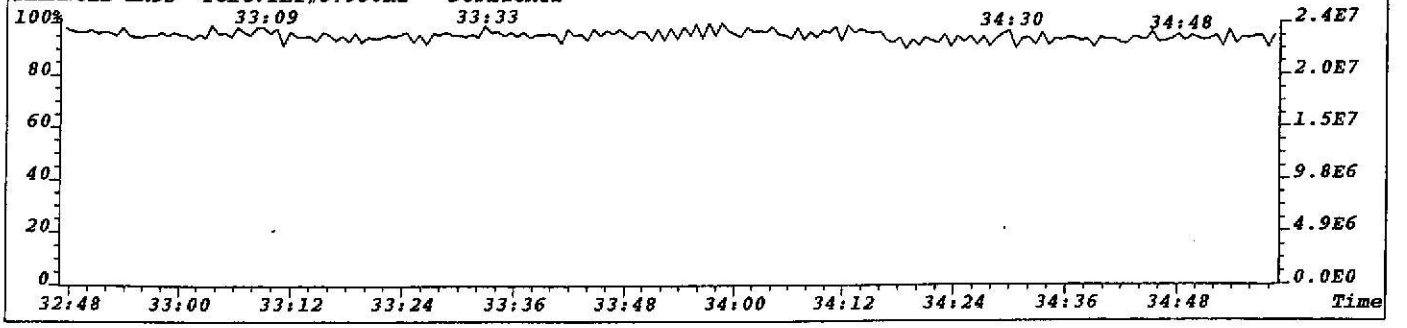
File:U1144 #1-270 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:4029
401.8558 S:5 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,16116.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



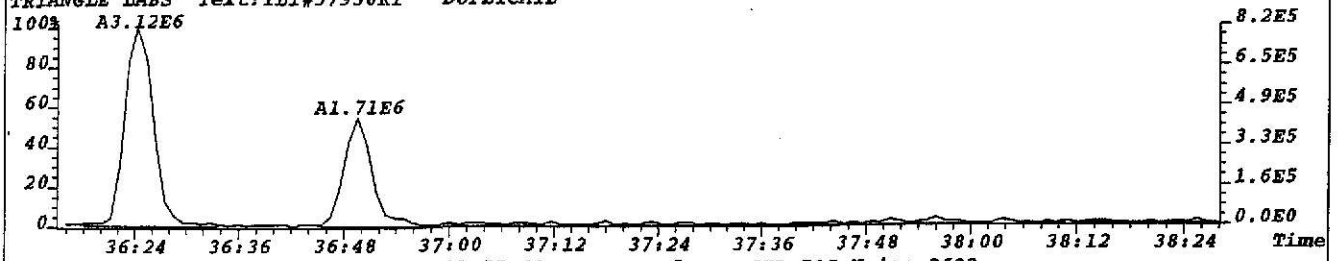
File:U1144 #1-270 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:4682
403.8529 S:5 F:3 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,18728.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



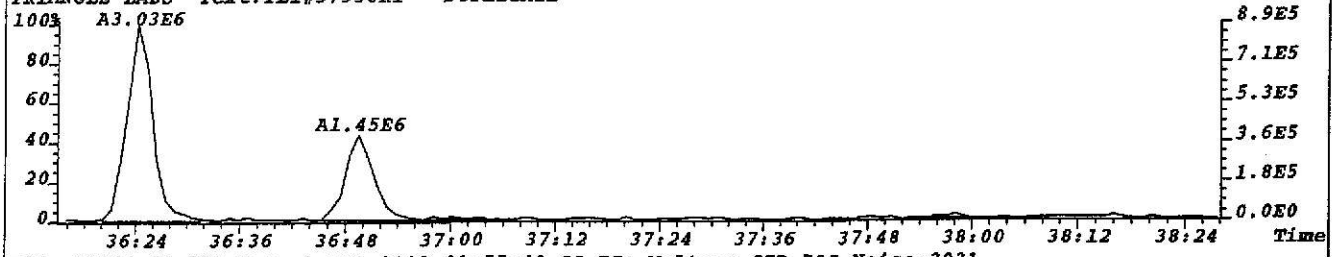
File:U1144 #1-270 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
392.9760 S:5 F:3 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



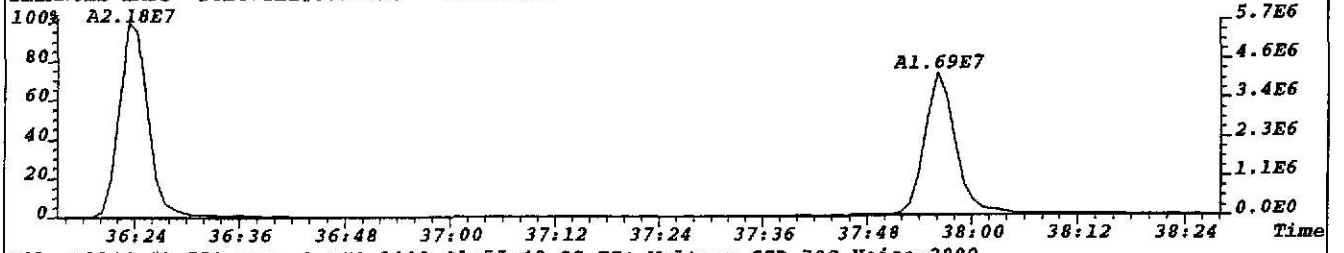
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2541
407.7818 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10164.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



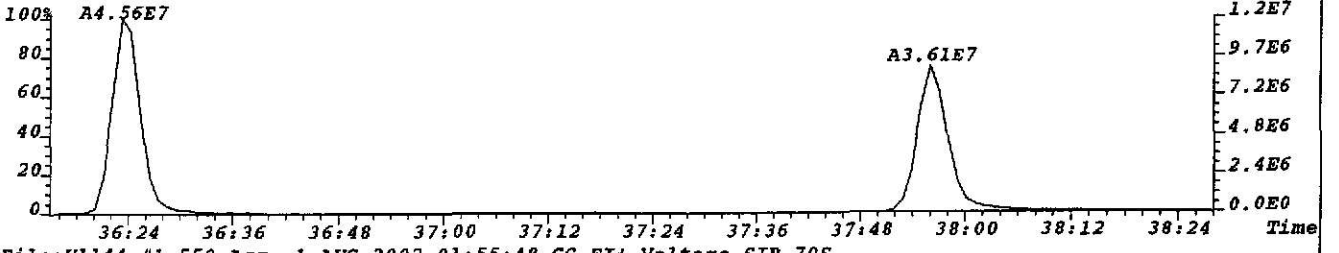
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2633
409.7789 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10532.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



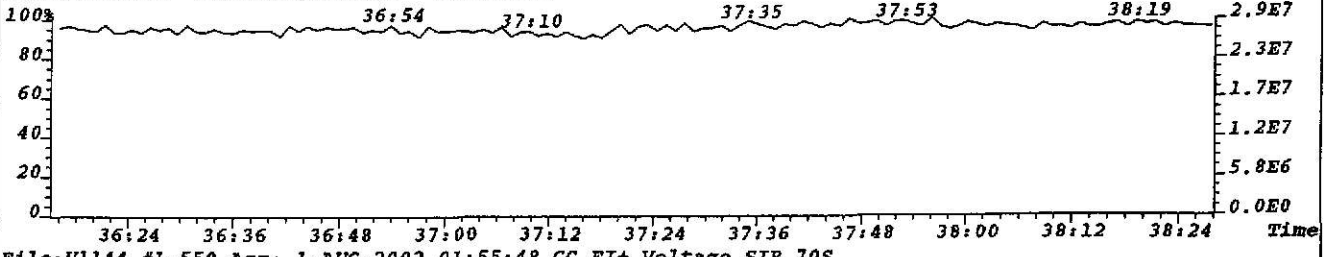
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:3031
417.8253 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12124.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



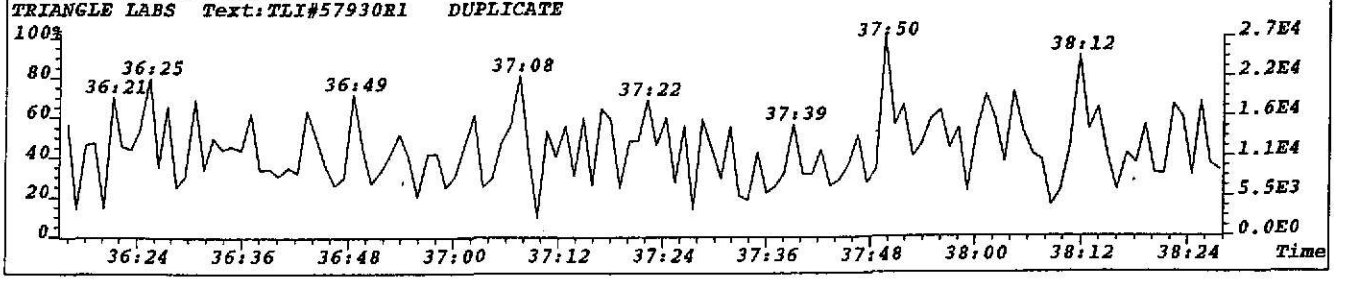
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2889
419.8220 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11556.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



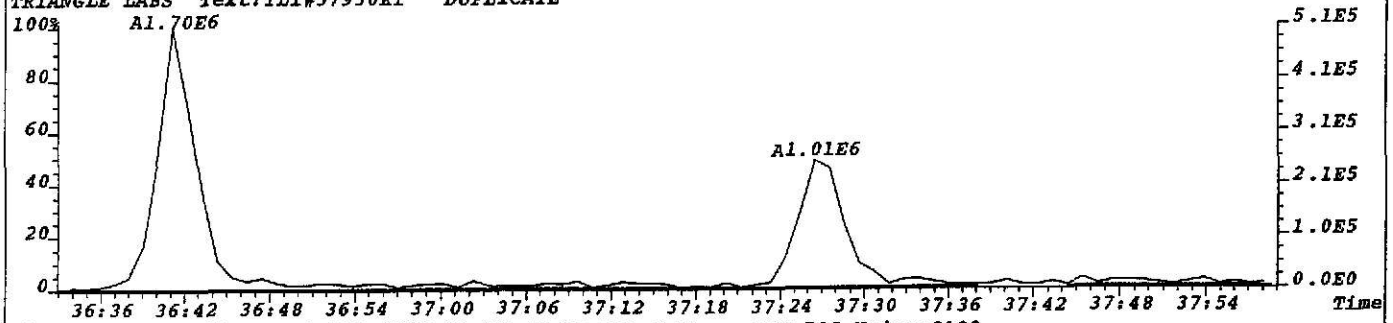
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
430.9729 S:5 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



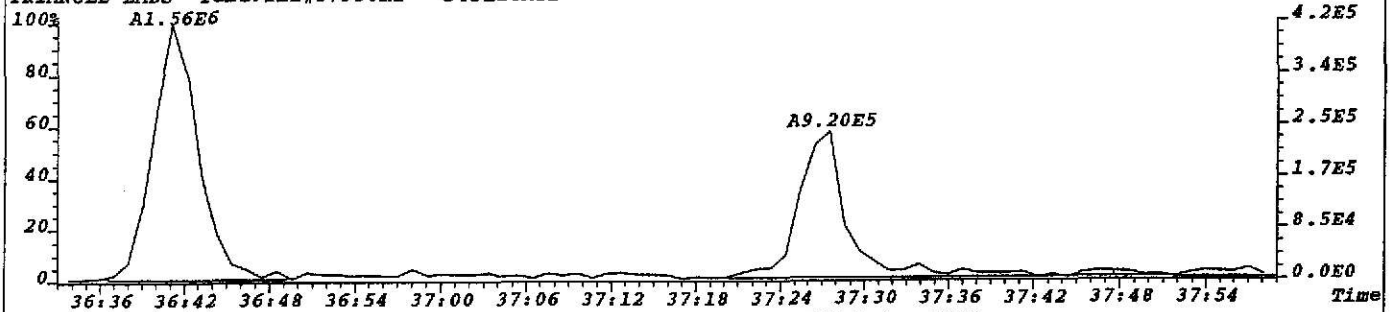
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
479.7165 S:5 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



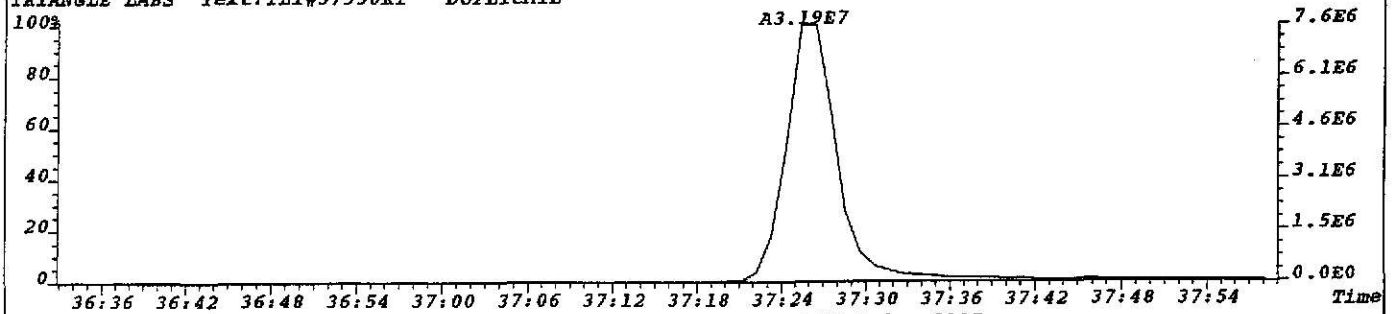
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2256
423.7766 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9024.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



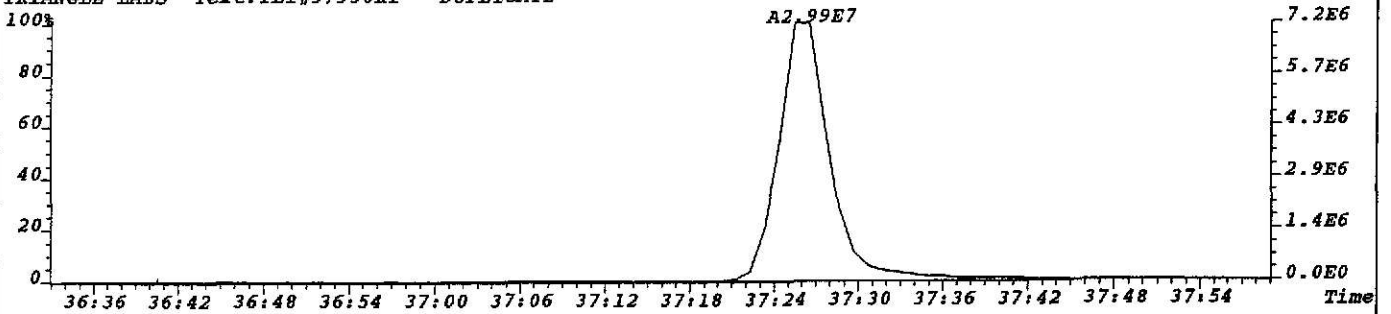
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:3109
425.7737 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12436.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



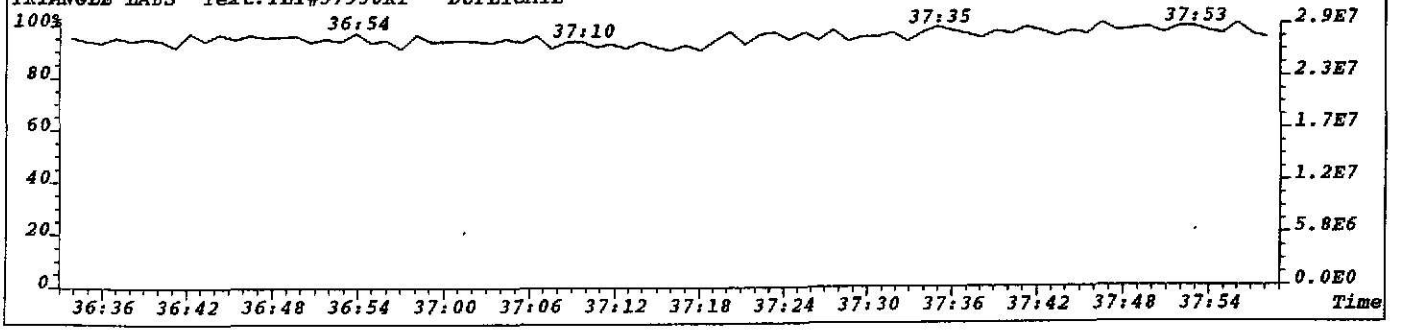
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:3982
435.8169 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,15928.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



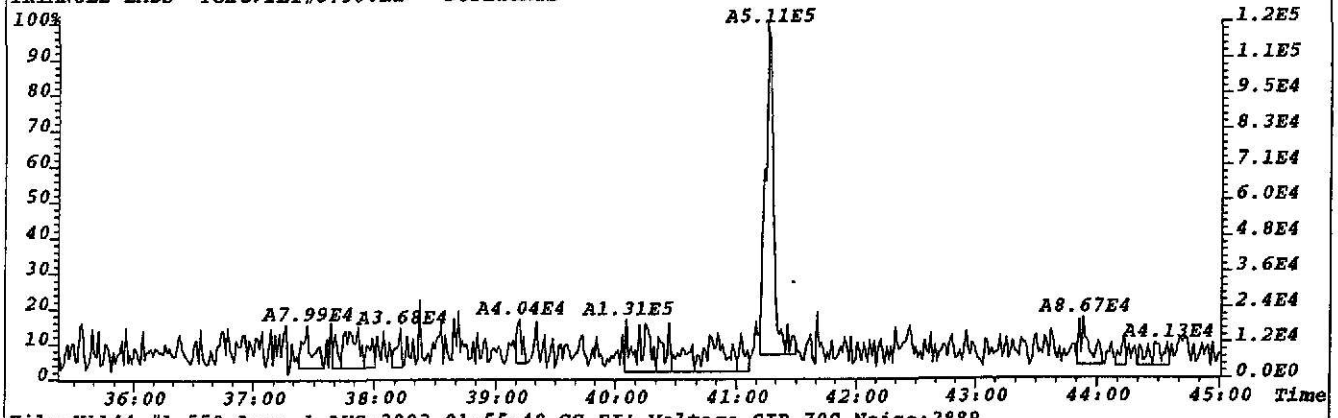
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:3195
437.8140 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,12780.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



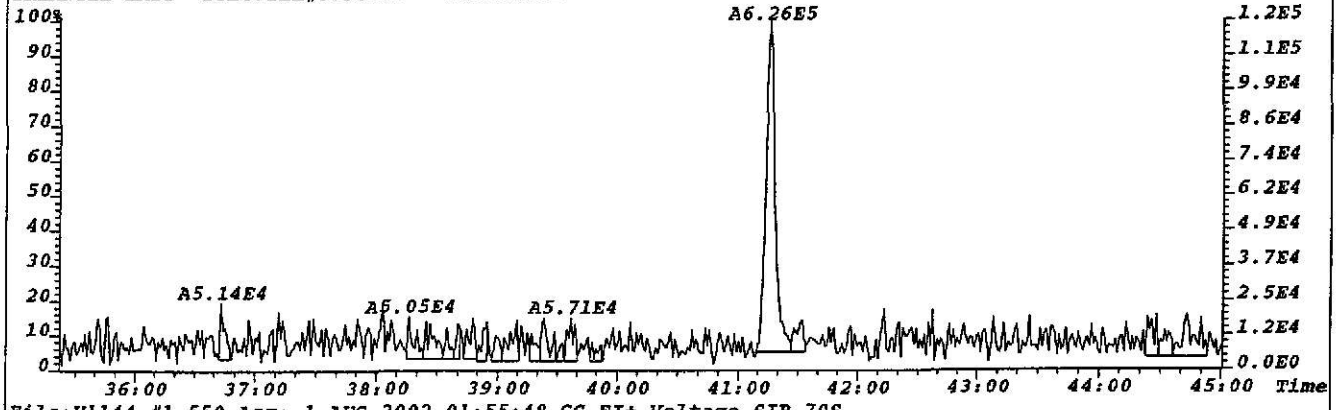
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
430.9729 S:5 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



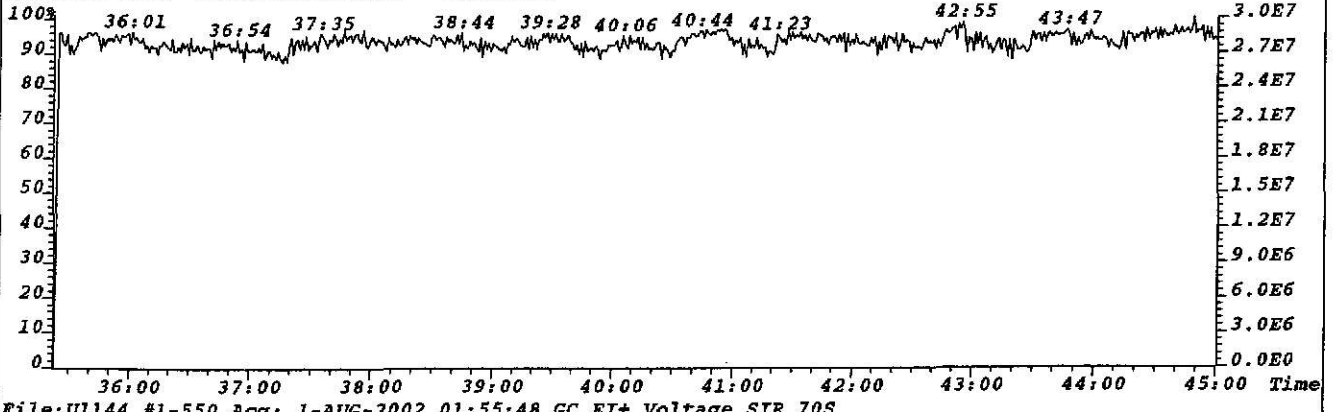
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2849
441.7428 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11396.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



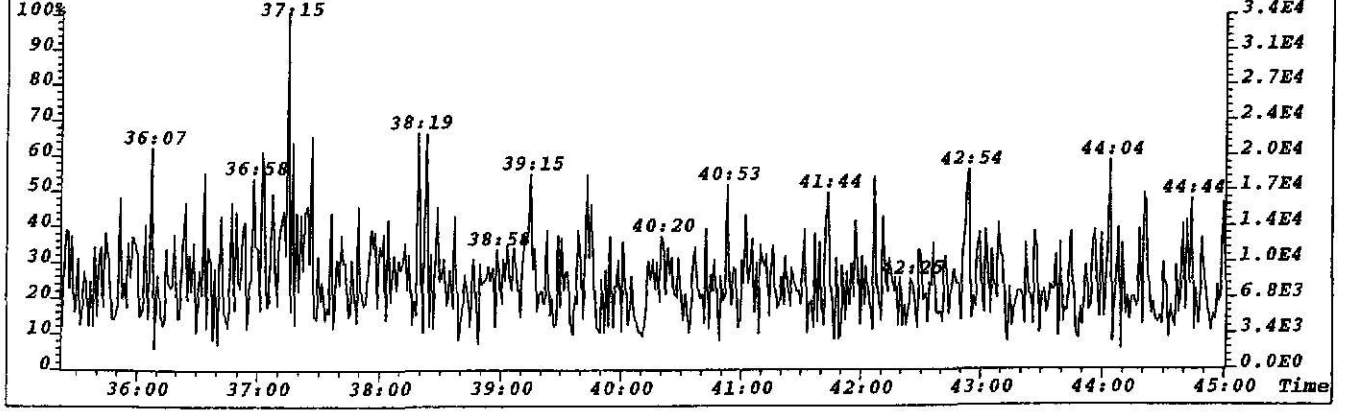
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2889
443.7399 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,11556.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



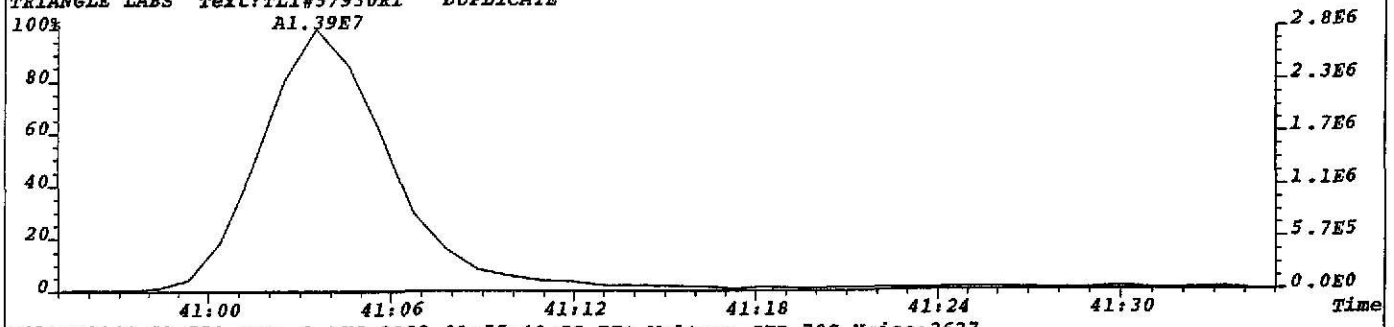
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
430.9729 S:5 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



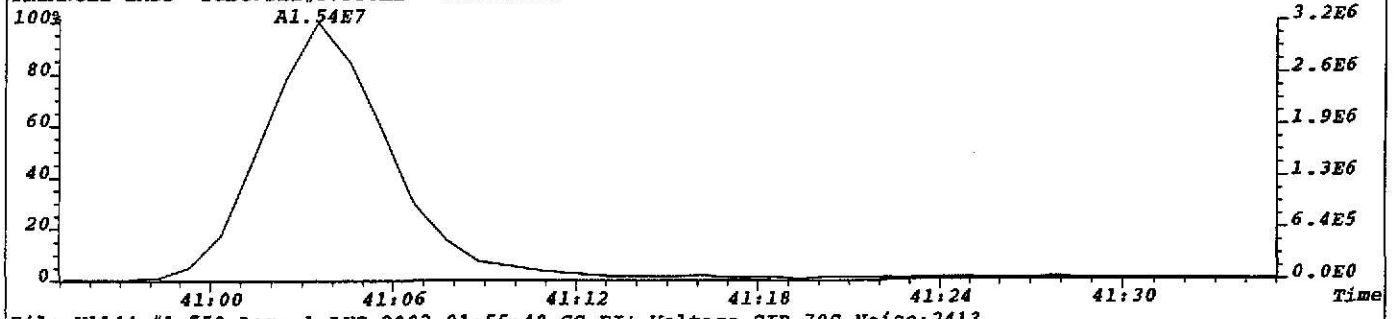
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
513.6775 S:5 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



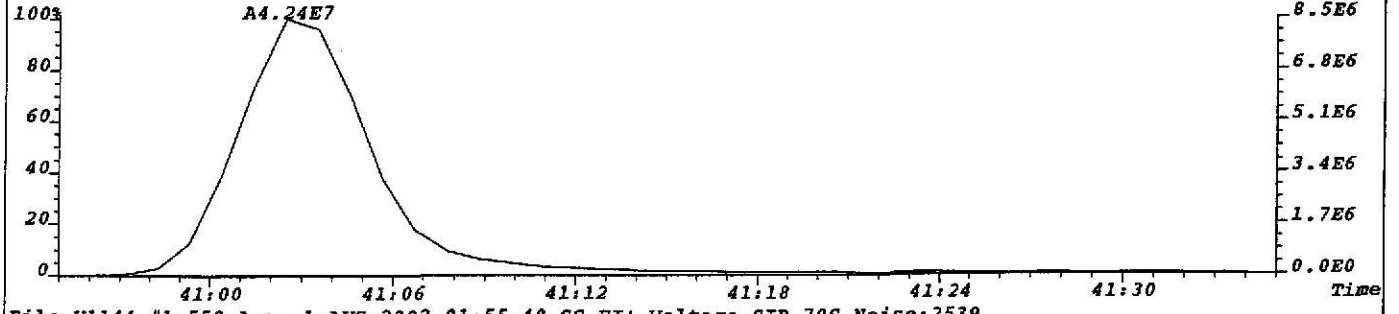
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2574
457.7377 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10296.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



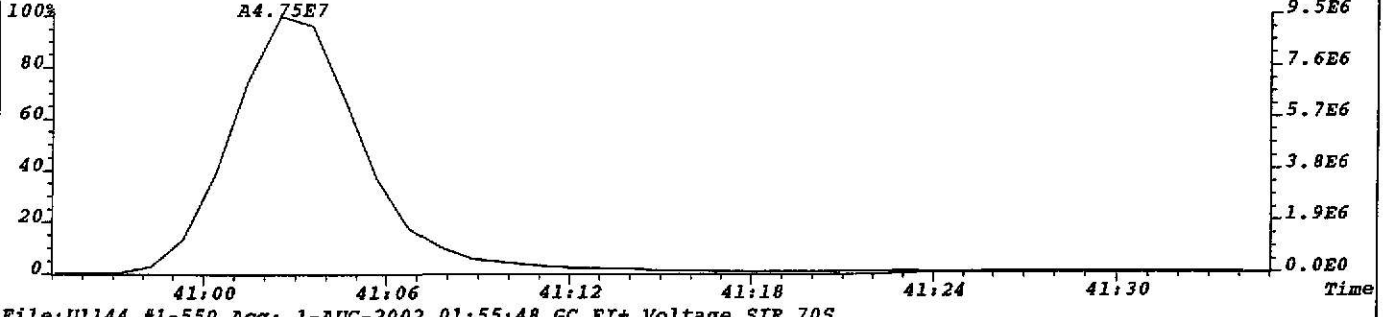
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2627
459.7348 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10508.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



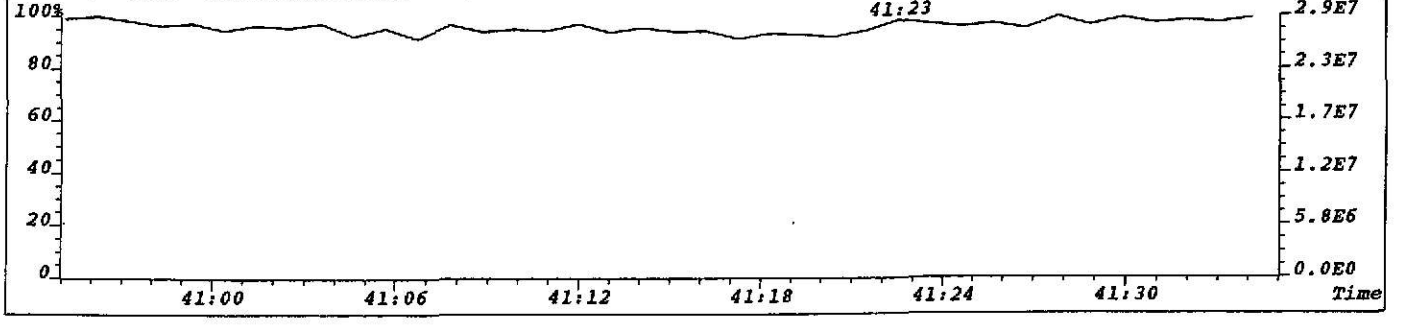
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2413
469.7779 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,9652.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



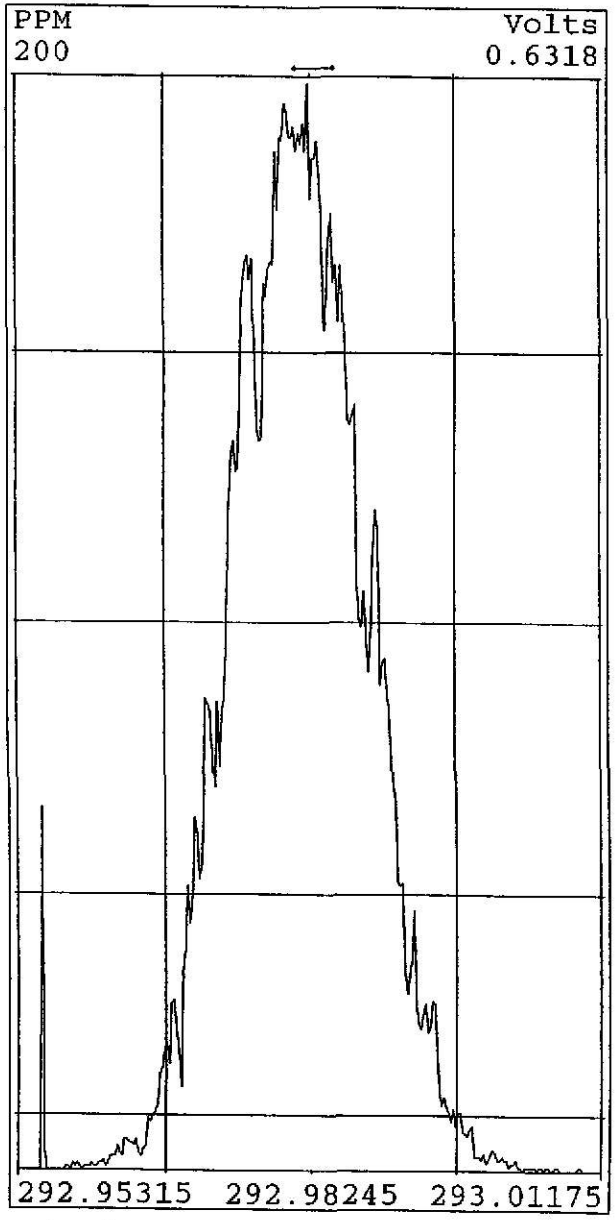
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S Noise:2539
471.7750 S:5 F:4 BSUB(256,30,-3.0) PKD(7,5,3,0.10%,10156.0,1.00%,F,T) Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE

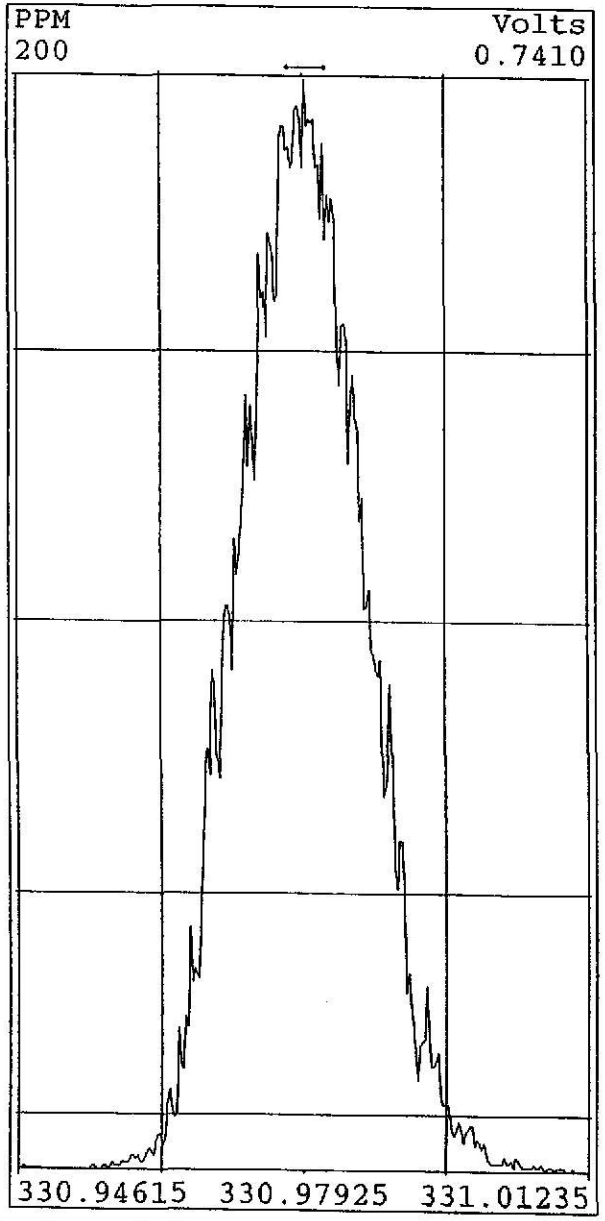


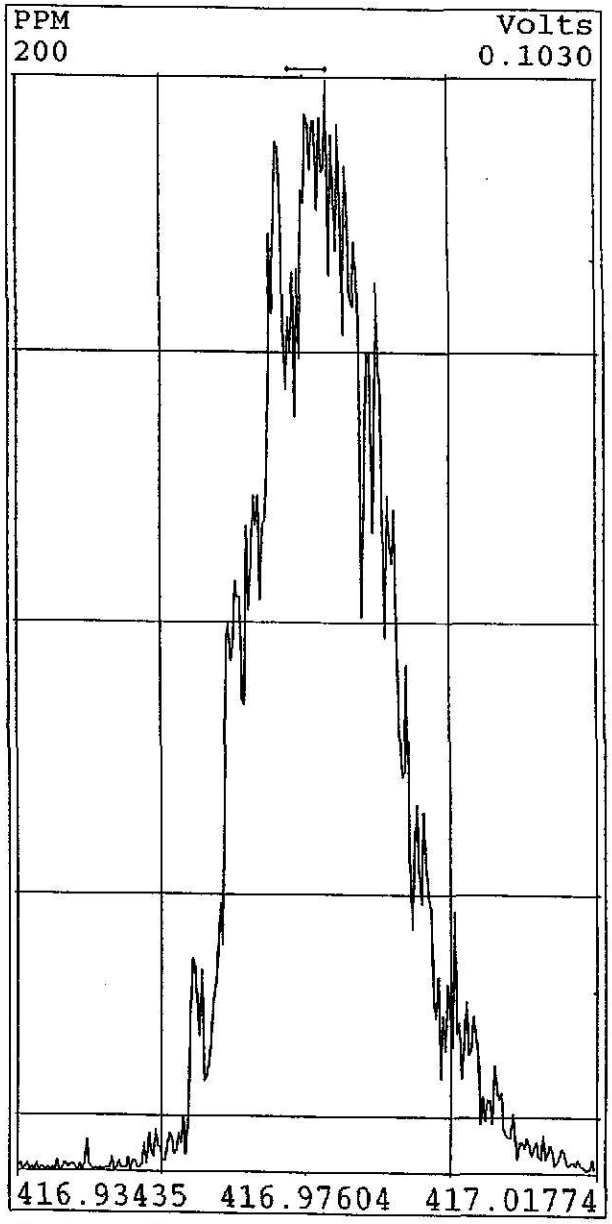
File:U1144 #1-550 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
430.9729 S:5 F:4 Exp:NDB5US
TRIANGLE LABS Text:TLI#57930R1 DUPLICATE



Peak Locate Examination:31-JUL-2002:22:41 File:U1144
Experiment:NDB5US Function:2 Reference:PFK

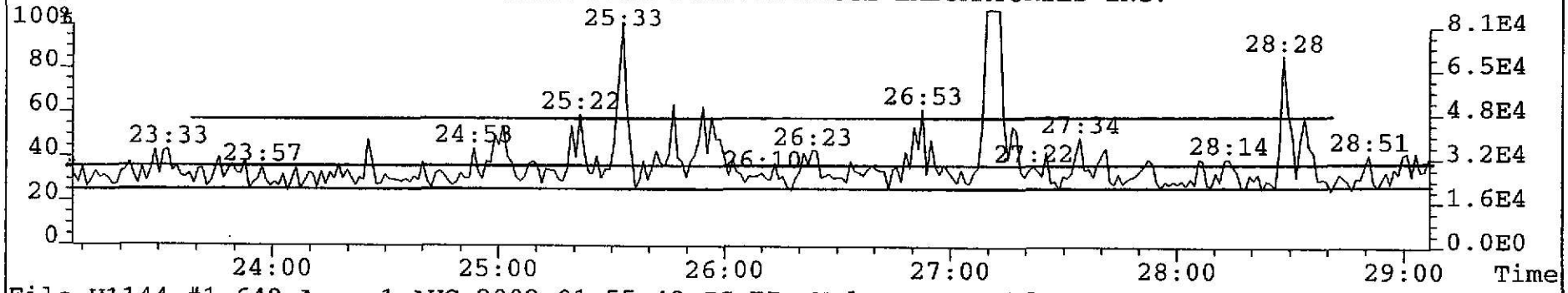




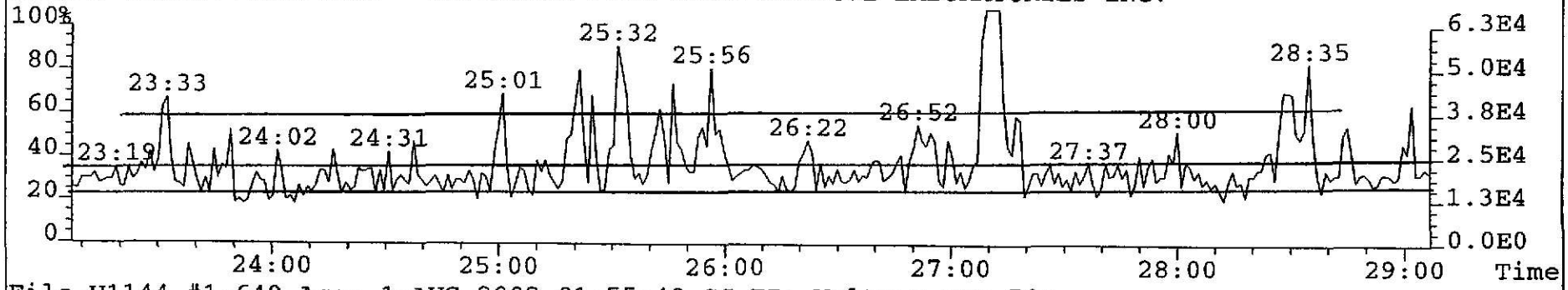


CEM 8/1102

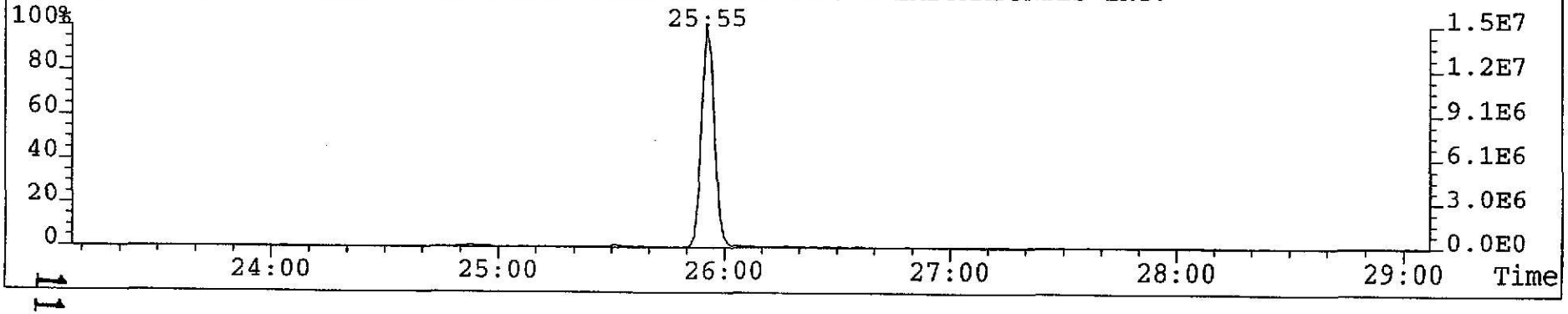
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
303.9016 S:5 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DUPLICATE File Text:TRIANGLE LABORATORIES INC.



File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
305.8987 S:5 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DUPLICATE File Text:TRIANGLE LABORATORIES INC.

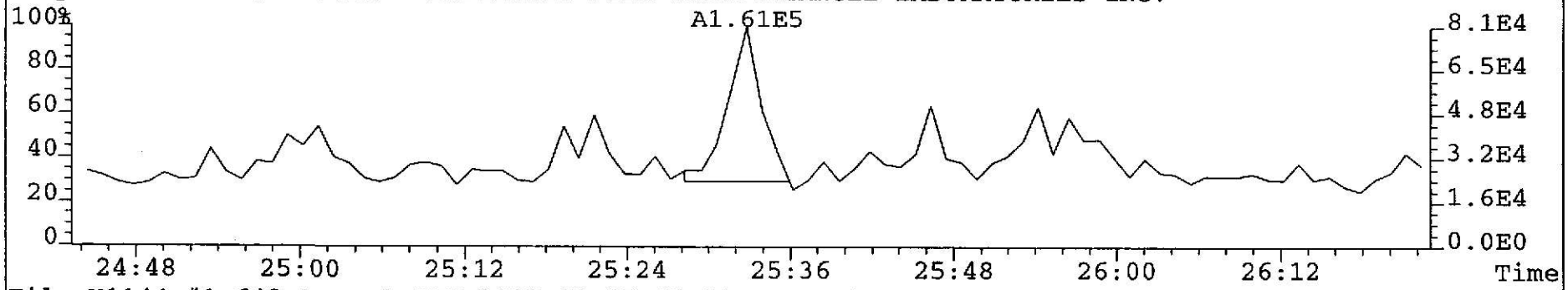


File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
317.9389 S:5 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DUPLICATE File Text:TRIANGLE LABORATORIES INC.

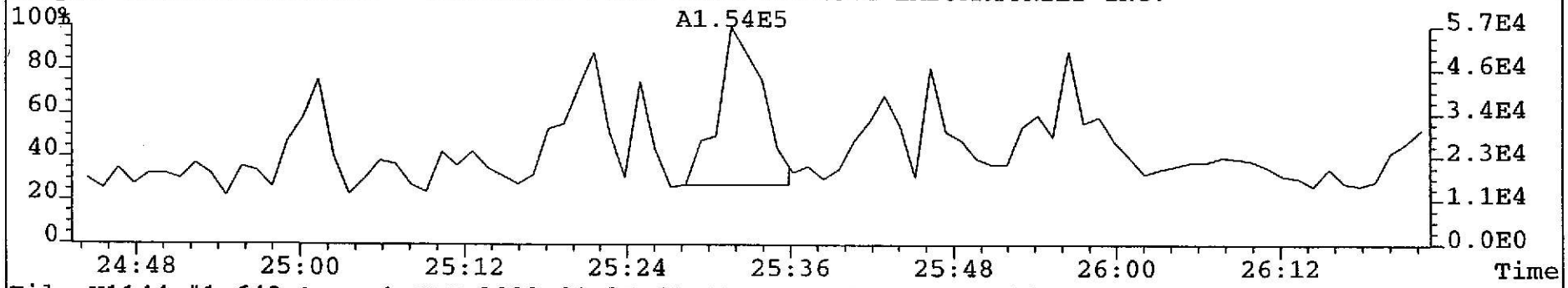


OBM 8/1/02

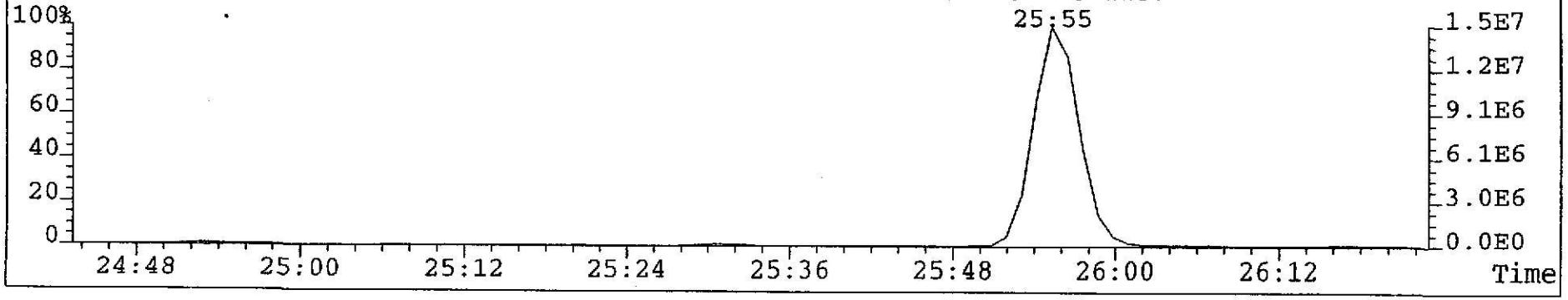
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
303.9016 S:5 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DUPLICATE File Text:TRIANGLE LABORATORIES INC.



File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
305.8987 S:5 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DUPLICATE File Text:TRIANGLE LABORATORIES INC.

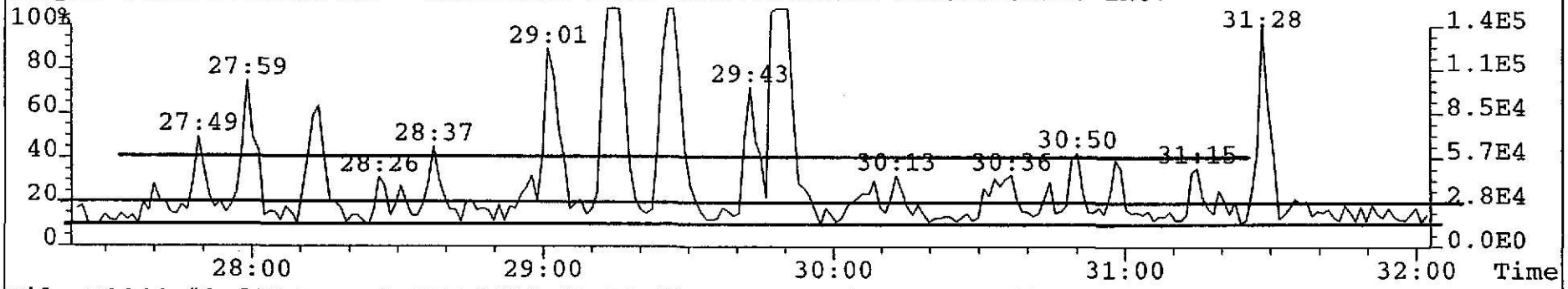


File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
317.9389 S:5 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DUPLICATE File Text:TRIANGLE LABORATORIES INC.

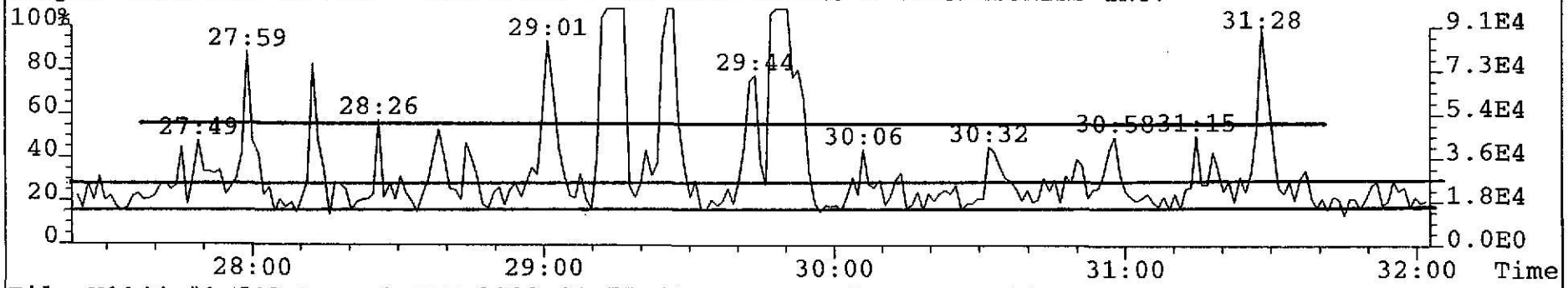


OEM 8/11/02

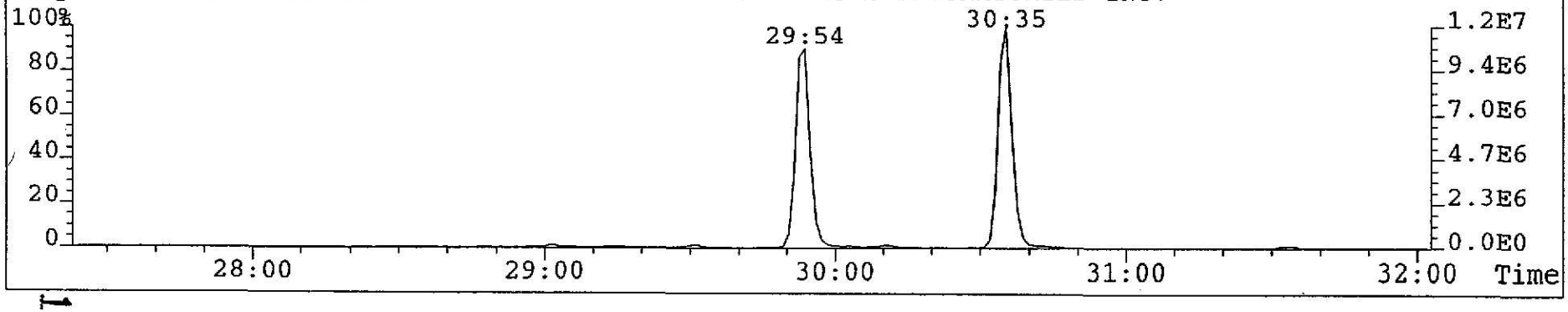
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
339.8597 S:5 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DUPLICATE File Text:TRIANGLE LABORATORIES INC.



File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
341.8567 S:5 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DUPLICATE File Text:TRIANGLE LABORATORIES INC.



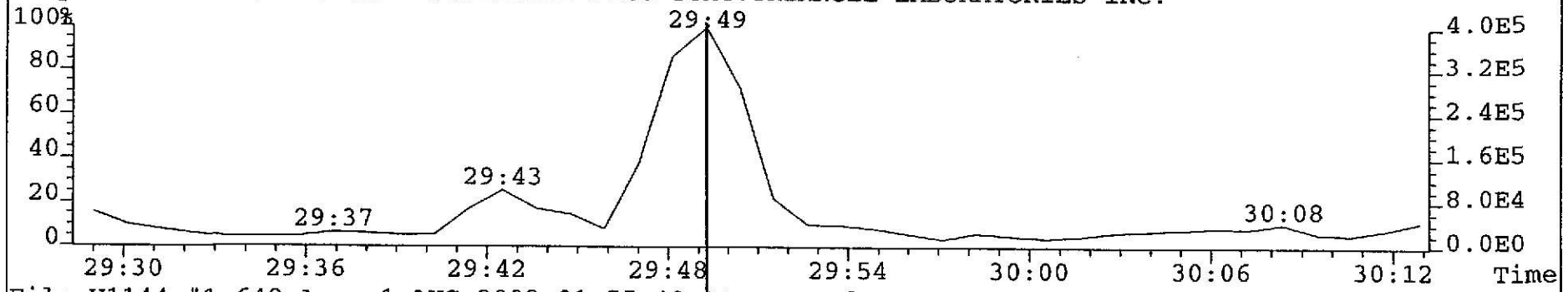
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
353.8970 S:5 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DUPLICATE File Text:TRIANGLE LABORATORIES INC.



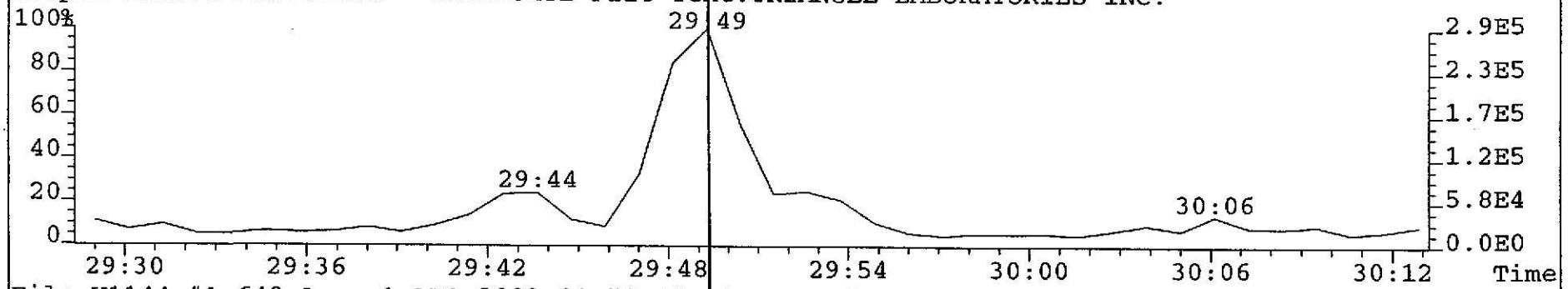
114

asm 8/1/02

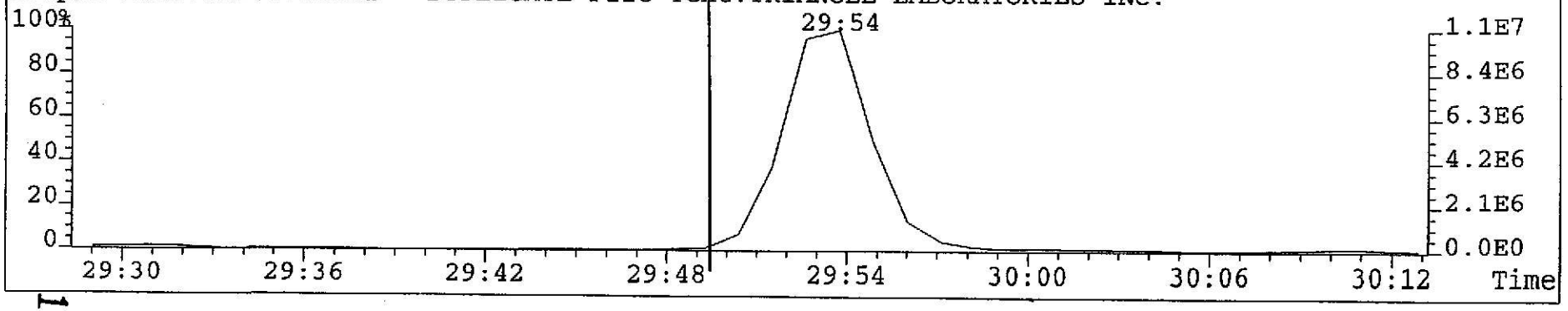
File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
339.8597 S:5 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DUPLICATE File Text:TRIANGLE LABORATORIES INC.



File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
341.8567 S:5 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DUPLICATE File Text:TRIANGLE LABORATORIES INC.

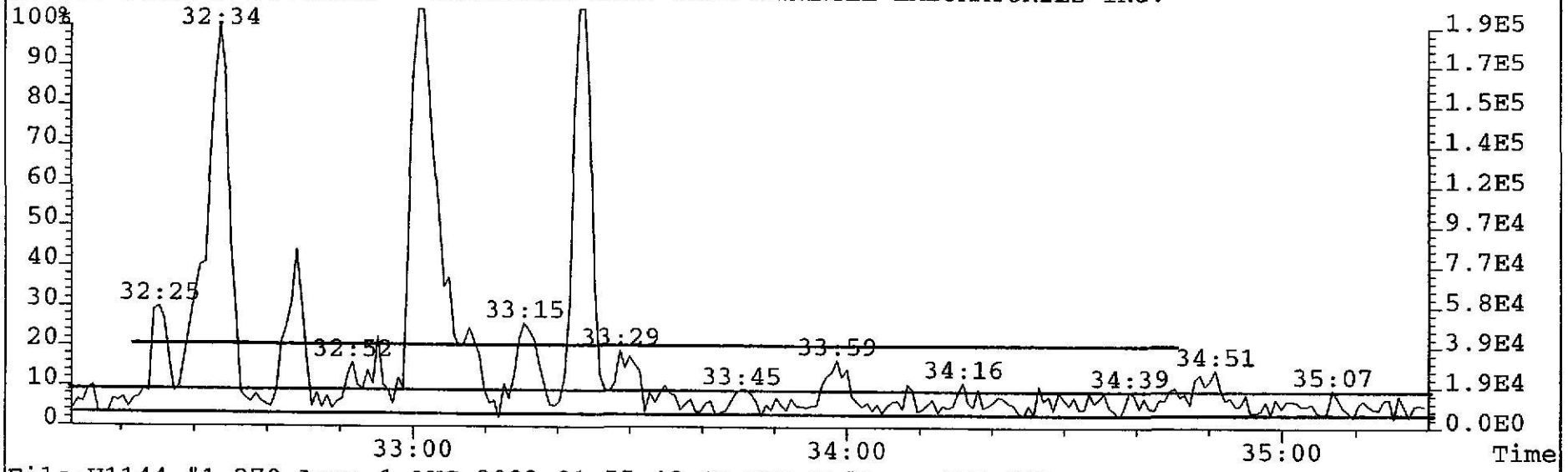


File:U1144 #1-649 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
353.8970 S:5 F:2 Exp:NDB5US
Sample Text:TLI#57930R1 DUPLICATE File Text:TRIANGLE LABORATORIES INC.

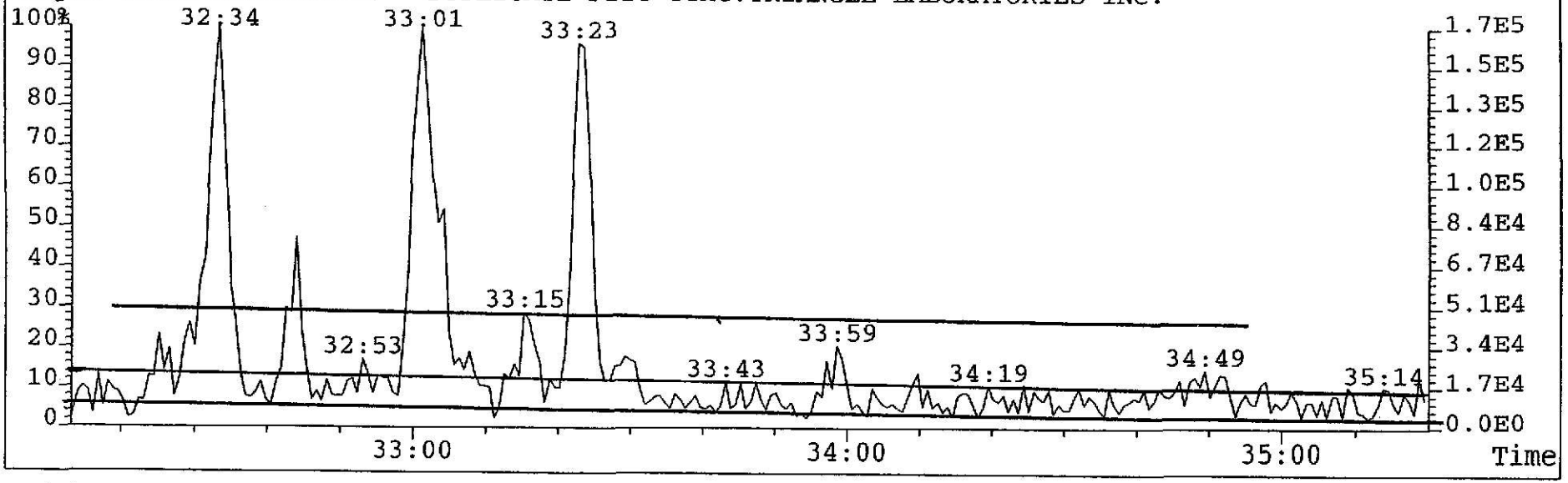


CEM 8/01/02

File:U1144 #1-270 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
373.8208 S:5 F:3 Exp:NDB5US
Sample Text:TLI#57930R1 DUPLICATE File Text:TRIANGLE LABORATORIES INC.

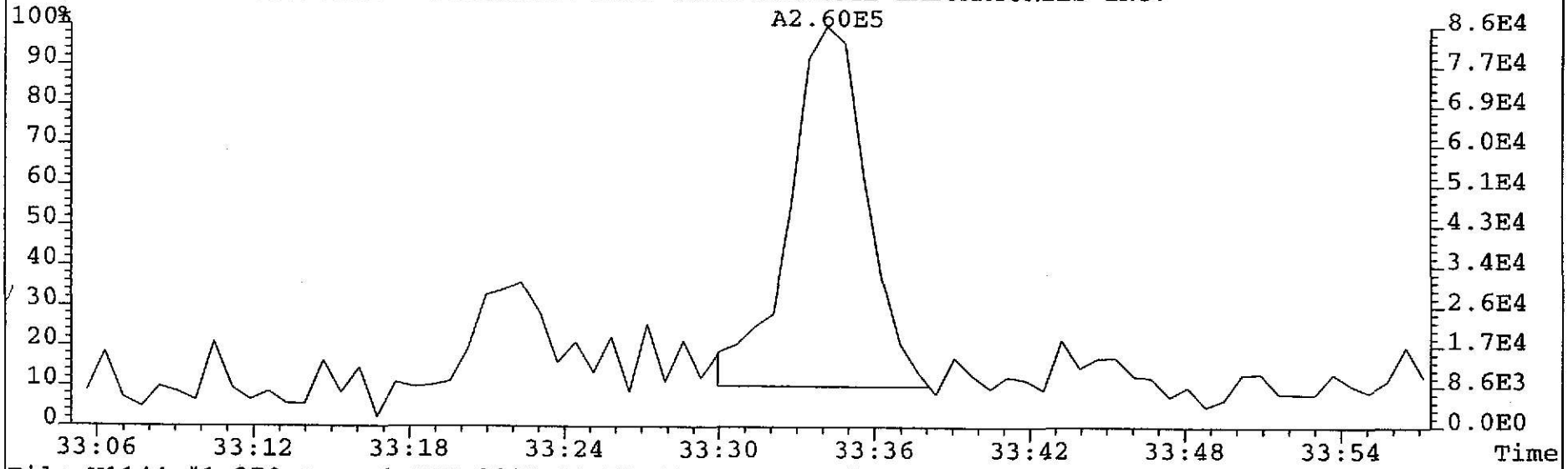


File:U1144 #1-270 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
375.8178 S:5 F:3 Exp:NDB5US
Sample Text:TLI#57930R1 DUPLICATE File Text:TRIANGLE LABORATORIES INC.

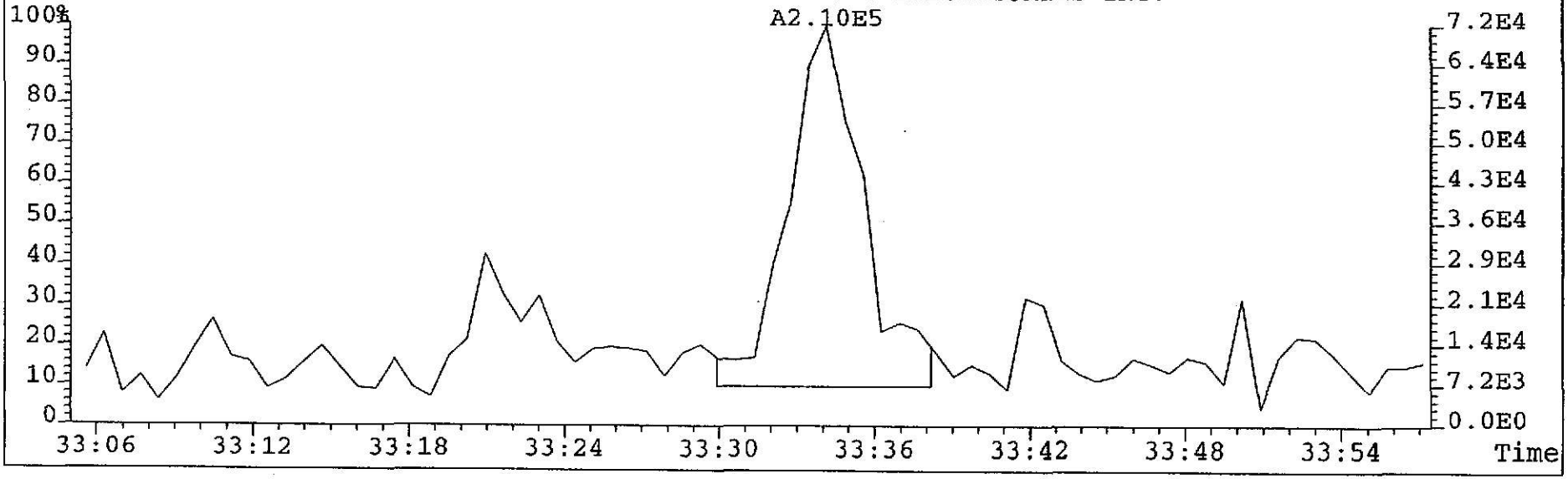


CBM 8/1/02

File:U1144 #1-270 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
389.8156 S:5 F:3 Exp:NDB5US
Sample Text:TLI#57930R1 DUPLICATE File Text:TRIANGLE LABORATORIES INC.



File:U1144 #1-270 Acq: 1-AUG-2002 01:55:48 GC EI+ Voltage SIR 70S
391.8127 S:5 F:3 Exp:NDB5US
Sample Text:TLI#57930R1 DUPLICATE File Text:TRIANGLE LABORATORIES INC.



CALIBRATION DATA

2445 S. Alston Ave. • Durham, NC 27713 • (919) 544-5729 • FAX (919) 544-5491
www.trianglelabs.com

TRIANGLE LABORATORIES, INC. Date: 07/10/2002

Initial Calibration Summary for UF5709B

Analysis Date....: 07/09/2002
Instrument.....: U

Method.....: 161B
GC Column...: DB-5
GC Column ID: 2111632

Analytes	RF	SD	%RSD	RT	RT/LO	RT/HI	Ratio1	Ratio2	N
Total TriCDF	0.000	0.000	100%		16:18	23:18			0
1368-TCDF	1.128	0.084	7%	22:02	21:18	28:18	0.769		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	1.181	0.112	9%	23:26	22:03	29:03	0.788		6
1379-TCDD	1.181	0.112	9%	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	1.231	0.132	11%	30:05			1.544		6
TOTAL PeCDF	1.244	0.115	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	1.138	0.050	4%	32:55	30:55	36:55	1.234		6
123678-HxCDF	1.200	0.079	7%	33:01			1.238		6
234678-HxCDF	1.136	0.094	8%	33:31			1.234		6
123789-HxCDF	1.181	0.096	8%	34:16			1.235		6
TOTAL HxCDF	1.164	0.080	7%				1.235		6
123478-HxCDD	1.198	0.074	6%	33:37	29:36	37:36	1.229		6
123678-HxCDD	1.106	0.091	8%	33:42			1.243		6
123789-HxCDD	1.127	0.077	7%	34:00			1.228		6
TOTAL HxCDD	1.143	0.074	6%				1.233		6
1234678-HpCDF	1.445	0.119	8%	35:52	33:52	38:52	1.053		6
1234789-HpCDF	1.465	0.157	11%	37:22			1.037		6
TOTAL HpCDF	1.455	0.138	9%				1.047		6
1234678-HpCDD	1.010	0.120	12%	36:53	34:52	39:52	1.060		6
TOTAL HpCDD	1.010	0.120	12%				1.060		6
OCDF	1.490	0.103	7%	40:34	38:22	42:22	0.911		6
OCDD	1.107	0.095	9%	40:23	38:22	42:22	0.900		6

Other Standards	RF	SD	%RSD	RT	RT/LO	RT/HI	Ratio1	Ratio2	N
37Cl-TCDD	1.200	0.062	5%	26:04	24:03	28:03			6

Internal Standards	RF	SD	%RSD	RT	RT/LO	RT/HI	Ratio1	Ratio2	N
13C12-2378-TCDF	1.603	0.066	4%	25:18	23:18	28:18	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	27:22	37:22	1.589		6
13C12-PeCDF 234	1.120	0.060	5%	30:04			1.595		6
13C12-PeCDD 123	0.665	0.048	7%	30:25	26:25	36:25	1.602		6
13C12-HxCDF 478	1.483	0.069	5%	32:55	28:55	36:55	0.518		6
13C12-HxCDF 678	1.477	0.043	3%	33:00			0.523		6
13C12-HxCDF 234	1.358	0.057	4%	33:30			0.517		6
13C12-HxCDF 789	1.078	0.036	3%	34:15			0.519		6
13C12-HxCDD 478	0.939	0.041	4%	33:36	32:36	34:36	1.284		6
13C12-HxCDD 678	1.039	0.038	4%	33:41			1.267		6

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Printed: 00:34 07/10/2002

TRIANGLE LABORATORIES, INC. Date: 07/10/2002

Initial Calibration Summary for UF5709B

13C12-HpCDF 678	1.050	0.046	4%	35:52	33:52	44:52	0.469		6
13C12-HpCDF 789	0.736	0.053	7%	37:21			0.466		6
13C12-HpCDD 678	0.809	0.020	2%	36:52	34:52	42:52	1.071		6
13C12-OCDD	0.547	0.048	9%	40:22	40:22	52:22	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 ***

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TRIANGLE LABORATORIES, INC. Date: 08/01/2002
VER UB21143

Analysis Date....: 07/31/2002
Operator.....: CGK
Init Calibration.: UF5709B
ICal Date.....: 07/09/2002

Method.....: 161B
Instrument..: U
Std.Conc....: 10.00
GC Column...: DB-5
GC Column ID:2213727

Analyte Summary

Name	Ratio 1&2	RT Lo/Hi	RT	Rel. RT	ICal RF	Conc	Conc Range
Total TriCDF		17:00 24:00			0.000		
1368-TCDF	0.741	22:41 27:54	22:53	0.8800	1.128		
2378-TCDF	0.776		26:02	1.0012	1.128	9.28	8.60 - 11.60
TOTAL TCDF	0.752				1.128		
1368-TCDD	0.782	24:01 27:52	24:12	0.9057	1.181		
1379-TCDD	0.789		24:36	0.9207	1.181		
2378-TCDD	0.763		26:44	1.0004	1.181	8.94	8.20 - 12.30
TOTAL TCDD	0.777				1.181		
12378-PeCDF	1.561	27:46 31:47	29:58	1.0007	1.257	48.45	41.00 - 60.00
23478-PeCDF	1.546		30:38	1.0000	1.231	47.39	41.00 - 61.00
TOTAL PeCDF	1.554				1.244		
12378-PeCDD	1.594	29:00 31:36	30:58	1.0000	1.128	42.09	39.00 - 65.00
TOTAL PeCDD	1.594				1.128		
123478-HxCDF	1.234	32:17 35:01	33:26	1.0003	1.138	51.32	45.00 - 56.00
123678-HxCDF	1.238		33:32	1.0003	1.200	50.83	44.00 - 57.00
234678-HxCDF	1.225		34:01	1.0006	1.136	49.73	44.00 - 57.00
123789-HxCDF	1.229		34:48	1.0006	1.181	49.44	45.00 - 56.00
TOTAL HxCDF	1.232				1.164		
123478-HxCDD	1.224	32:47 34:39	34:08	1.0009	1.198	47.39	39.00 - 64.00
123678-HxCDD	1.243		34:13	1.0006	1.106	49.79	39.00 - 64.00
123789-HxCDD	1.236		34:31	1.0094	1.127	51.37	41.00 - 61.00
TOTAL HxCDD	1.235				1.143		

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1234678-HpCDF	1.062	36:15 38:08	36:27	1.0005	1.445	49.98	45.00 - 55.00
1234789-HpCDF	1.029		37:59	1.0003	1.465	50.47	43.00 - 58.00
TOTAL HpCDF	1.047				1.455		
1234678-HpCDD	1.001	36:33 37:39	37:29	1.0003	1.010	47.87	43.00 - 58.00
TOTAL HpCDD	1.001				1.010		
OCDF	0.884	39:05 43:05	41:18	1.0054	1.490	85.77	63.00 -159.00
OCDD	0.897	39:05 43:05	41:06	1.0005	1.107	95.36	79.00 -126.00

Other Standard Summary

Name	Ratio 1&2	RT Lo/Hi	RT	Rel. RT	ICal RF	Conc	Conc Range
37Cl-TCDD		24:43 28:43	26:44	1.0004	1.200	9.23	8.30 - 12.10

Internal Standard Summary

Name	Ratio 1&2	RT Lo/Hi	RT	Rel. RT	ICal RF	Conc	Conc Range
13C12-2378-TCDF	0.780	24:32 29:32	26:00	0.9800	1.603	87.64	76.00 -131.00
13C12-2378-TCDD	0.792	24:32 28:32	26:43	1.0072	1.129	96.01	85.00 -117.00
13C12-PeCDF 123	1.581	24:32 34:32	29:57	1.1289	1.116	94.34	76.00 -130.00
13C12-PeCDF 234	1.602		30:38	1.1545	1.120	95.70	77.00 -130.00
13C12-PeCDD 123	1.565	22:32 32:32	30:58	1.1674	0.665	120.45	62.00 -160.00
13C12-HxCDF 478	0.527	30:31 38:31	33:25	0.9681	1.483	94.07	76.00 -131.00
13C12-HxCDF 678	0.527		33:31	0.9710	1.477	92.75	70.00 -143.00
13C12-HxCDF 234	0.517		34:00	0.9849	1.358	95.75	73.00 -137.00
13C12-HxCDF 789	0.520		34:47	1.0075	1.078	97.42	74.00 -135.00
13C12-HxCDD 478	1.283	33:31 35:31	34:06	0.9878	0.939	96.22	85.00 -117.00
13C12-HxCDD 678	1.290		34:12	0.9907	1.039	93.16	85.00 -118.00
13C12-HpCDF 678	0.464	32:31 43:31	36:26	1.0553	1.050	85.10	78.00 -129.00
13C12-HpCDF 789	0.470		37:58	1.0999	0.736	94.92	77.00 -129.00
13C12-HpCDD 678	1.093	32:31 40:31	37:28	1.0855	0.809	95.58	72.00 -138.00

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13C12-OCDD	0.880	40:55 41:15	41:05	1.1900	0.547	194.78	96.00	-415.00

Recovery Standard Summary

Name	Ratio 1&2	RT Lo/Hi	RT	Rel. RT	ICal RF	Conc	Conc	Range
13C12-1234-TCDD	0.799	24:32 28:32	26:32	0.9929	1.000			
13C12-HxCDD 789	1.294	33:31 35:31	34:31	1.0123	1.000			

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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	22:53	0.74	1,923.61	818.52	1,105.09	0.880	1368-TCDF	AN
	26:02	0.78	1,849.82	808.41	1,041.41	1.001	2378-TCDF	AN
304-306		2 Peaks						
13C12-TCDF		0.65-0.89						
316-318	26:00	0.78	17,677.87	7,744.19	9,933.68	0.980	13C12-2378-TCDF	IS0
316-318		1 Peak						
---------- Above: TCDF / TCDD Follows ----------								
TCDD		0.65-0.89						
320-322	24:12	0.78	1,341.50	588.67	752.83	0.906	1368-TCDD	AN
	24:36	0.79	1,184.86	522.69	662.17	0.921	1379-TCDD	AN
	26:44	0.76	1,439.94	623.41	816.53	1.000	2378-TCDD	AN
320		3 Peaks						
37Cl-TCDD								
328	26:44		1,394.01	1,394.01		1.000	37Cl-TCDD	CLS
328-330		1 Peak						
13C12-TCDD		0.65-0.89						
332-334	26:32	0.80	12,583.85	5,587.47	6,996.38	0.993	13C12-1234-TCDD	RS1
	26:43	0.79	13,640.80	6,026.70	7,614.10	1.007	13C12-2378-TCDD	IS1
332-334		2 Peaks						
---------- Above: TCDD / PeCDF Follows ----------								
PeCDF		1.32-1.78						
340-342	29:58	1.56	8,068.33	4,917.89	3,150.44	1.001	12378-PeCDF	AN
	30:38	1.55	7,869.14	4,778.78	3,090.36	1.000	23478-PeCDF	AN
340-342		2 Peaks						
13C12-PeCDF		1.32-1.78						
352-354	29:57	1.58	13,248.10	8,114.22	5,133.88	1.129	13C12-PeCDF 123	IS2
	30:38	1.60	13,488.32	8,304.34	5,183.98	1.155	13C12-PeCDF 234	IS3
352-354		2 Peaks						
---------- Above: PeCDF / PeCDD Follows ----------								
PeCDD		1.32-1.78						
356-358	30:58	1.59	4,785.37	2,940.45	1,844.92	1.000	12378-PeCDD	AN
356-358		1 Peak						
13C12-PeCDD		1.32-1.78						
368-370	30:58	1.56	10,079.83	6,150.03	3,929.80	1.167	13C12-PeCDD 123	IS4
368-370		1 Peak						
---------- Above: PeCDD / HxCDF Follows ----------								
HxCDF		1.05-1.43						
374-376	33:26	1.23	7,128.79	3,937.27	3,191.52	1.000	123478-HxCDF	AN

Compound/ M_Z....	..RT.	OK Ratio	Total.Area...	Area.Peak.1..	Area.Peak.2..	Rel.RT	Compound.Name..	ID..
	33:32	1.24	7,312.14	4,045.46	3,266.68	1.000	123678-HxCDF	AN
	34:01	1.23	6,428.07	3,539.27	2,888.80	1.001	234678-HxCDF	AN
	34:48	1.23	5,365.70	2,958.03	2,407.67	1.001	123789-HxCDF	AN
374-376		4 Peaks						
13C12-HxCDF		0.43-0.59						
384-386	33:25	0.53	12,207.39	4,213.59	7,993.80	0.968	13C12-HxCDF 478	IS5
	33:31	0.53	11,988.08	4,137.48	7,850.60	0.971	13C12-HxCDF 678	IS6
	34:00	0.52	11,377.90	3,875.81	7,502.09	0.985	13C12-HxCDF 234	IS7
	34:47	0.52	9,190.16	3,142.29	6,047.87	1.008	13C12-HxCDF 789	IS8
384-386		4 Peaks						

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

HxCDD		1.05-1.43						
390-392	34:08	1.22	4,488.86	2,470.53	2,018.33	1.001	123478-HxCDD	AN
	34:13	1.24	4,664.19	2,585.19	2,079.00	1.001	123678-HxCDD	AN
	34:31	1.24	4,739.96	2,620.36	2,119.60	1.009	123789-HxCDD	AN
390-392		3 Peaks						
13C12-HxCDD		1.05-1.43						
402-404	34:06	1.28	7,906.17	4,442.83	3,463.34	0.988	13C12-HxCDD 478	IS9
	34:12	1.29	8,469.63	4,771.47	3,698.16	0.991	13C12-HxCDD 678	IS10
	34:31	1.29	8,750.72	4,936.13	3,814.59	1.012	13C12-HxCDD 789	RS2
402-404		3 Peaks						

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

HpCDF		0.88-1.20						
408-410	36:27	1.06	5,647.71	2,908.52	2,739.19	1.001	1234678-HpCDF	AN
	37:59	1.03	4,520.01	2,291.93	2,228.08	1.000	1234789-HpCDF	AN
408-410		2 Peaks						
13C12-HpCDF		0.37-0.51						
418-420	36:26	0.46	7,819.52	2,477.78	5,341.74	1.055	13C12-HpCDF 678	IS11
	37:58	0.47	6,113.19	1,953.41	4,159.78	1.100	13C12-HpCDF 789	IS12
418-420		2 Peaks						

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

HpCDD		0.88-1.20						
424-426	37:29	1.00	3,271.47	1,636.86	1,634.61	1.000	1234678-HpCDD	AN
424-426		1 Peak						
13C12-HpCDD		0.88-1.20						
436-438	37:28	1.09	6,766.22	3,533.67	3,232.55	1.086	13C12-HpCDD 678	IS13
436-438		1 Peak						

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

OCDF		0.76-1.02						
442-444	41:18	0.88	5,957.52	2,794.53	3,162.99	1.005	OCDF	AN

Compound/ M_Z....	..RT.	OK	Ratio	Total.Area...	Area.Peak.1..	Area.Peak.2..	Rel.RT	Compound.Name..	ID..
442-444		1 Peak							
OCDD			0.76-1.02						
458-460	41:06		0.90	4,921.10	2,327.06	2,594.04	1.001	OCDD	AN
458-460		1 Peak							
13C12-OCDD			0.76-1.02						
470-472	41:05		0.88	9,323.51	4,365.51	4,958.00	1.190	13C12-OCDD	IS14
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 ***