136053

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: JUL 13 1989

SUBJECT: Review of Region 5 data for United Recovery

FROM: Curtis Ross, Director
Region 5 Central Regional Laboratory

To: Data User:

Attached are the results for:

CRL Data Set Numbers: SF 6232
Sample Numbers: 89FM22S01 – S05; D01; 89FM[redacted]R15
Parameter(s): PCB/Pesticides
Laboratory: CRL

Results Status:

(X) DATA ACCEPTABLE FOR USE*
( ) DATA QUALIFIED AS TO USE
( ) DATA UNACCEPTABLE FOR USE

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

If there are any questions regarding the data, refer them to Steve Parker, the Quality Control Coordinator, at 353-3805.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

TRANSMITTED BY
S. Griffin
JUL 13 1989

RECEIVED BY/DATE:

U.S. EPA CENTRAL REGIONAL LAB

Comments:

DATA SET	SITE	DU/ACT.
SF6232	United Recovery	TFA 302

SAMPLES	PARAMETER(S)
89FM22$01 – $05; D01 89FM11R15	PCB/Pesticides

SAMPLED	RECEIVED	DUE	LAB
6/20/89	6/21/89	7/12/89	CRL

SHIPPED	DATA RECEIVED	CONTRACT

TEAM LEADER	SECTION CHIEF	QC COORD.	DATA COORD.

Comments By Reviewer: Data is acceptable for use.

1. PCB Matrix spike recovery of 72% is within QC limits and is acceptable. No duplicate was done due to insufficient sample.
2. Pest. matrix spike recoveries range from 60 – 112% and are well within QC limits of 40 - 130%. Individual parameters are within their respective QC limits. No duplicate was done due to insufficient sample.
3. DBC surrogate spike recoveries range from 99 – 142% and are within acceptable limits of 24-154%. The recoveries are on the higher side, most likely due to a co-eluting compound, as indicated by the peak shapes in the chromatograms.
4. The method blank has a few contaminant peaks not matching any parameters of interest and do not affect the qualitative/quantitative analysis of the samples.
5. Instrument QC: % RSD for internal standard is 4%. PP-DDT degradation is <5% and Endrin degradation is <15% and are acceptable. RPD for continuing calibration is 0.3 – 6% & are acceptable.

DATA MANAGEMENT COORDINATOR RECEIVED	TRANSMITTED	CLERICAL SUPPORT RECEIVED	COMPLETED

(✓) REVIEWED	( ) UNREVIEWED	TEAM LEADER/DATE T Evangelista 7/12/89
( ) REVIEWED	(✓) UNREVIEWED	SECTION CHIEF/DATE CK Acting 7/12/89
( ) REVIEWED	( ) UNREVIEWED	QC COORDINATOR/DATE

REVIEWED BY CONTRACT COORDINATOR/DATE

RECEIVED	TRANSMITTED	DATA MANAGEMENT COORDINATOR
7/13/89	7/13/89	S Pfeffer

ENVIRONMENTAL PROTECTION AGENCY, REGION V BASIC FORM

DIVISION/BRANCH: Super Fund Sampling Date: 6/20/89 Arrival Date: 6/21/89 Analysis Due Date: 7/12/89

Sample#/ D.U. Number: TFA ~~Group#~~ D.S. 6232 Activity#: Study: United Recovery

ALL UNITS ARE MICROGRAMS PER LITER OR MILLIGRAMS PER KILOGRAM. Sample type: Water

Pesticide / Sample #	Y-BHC Lindane	Heptachlor	Aldrin	Heptachlor Epoxide	Endosulfan I	Dieldrin	Endrin	Endosulfan II	pp-DDE	Beta-BHC	Delta-BHC	Alpha-BHC	pp-DDD	pp-DDT	Methoxychlor	Endosulfan Sulfate	Endrin Aldehyde	Endrin Ketone	T-Chlordane	Toxaphene
1. 89FM22 S01	0.002 U	.03 U	.02 U	.01 U	.01 U	.01 U	.01 U	.01 U	.02 U	.02 U	.02 U	.02 U	.04 U	.02 U	.02 U	.13 U	.05 U	.03 U	0.2 U	1 U
2. S02	0.002 U	.03 U	.02 U	.01 U	.01 U	.01 U	.01 U	.01 U	.02 U	.02 U	.02 U	.02 U	.04 U	.02 U	.02 U	.13 U	.05 U	.03 U	.2 U	1 U
3. S03	0.002 U	.03 U	.02 U	.01 U	.01 U	.01 U	.01 U	.01 U	.02 U	.02 U	.02 U	.02 U	.04 U	.02 U	.02 U	.13 U	.05 U	.03 U	.2 U	1 U
4. S04	0.002 U	.03 U	.02 U	.01 U	.01 U	.01 U	.01 U	.01 U	.02 U	.02 U	.02 U	.02 U	.04 U	.02 U	.02 U	.13 U	.05 U	.03 U	.2 U	1 U
5. S05	0.002 U	.03 U	.02 U	.01 U	.01 U	.01 U	.01 U	.01 U	.02 U	.02 U	.02 U	.02 U	.04 U	.02 U	.02 U	.13 U	.05 U	.03 U	.2 U	1 U
6. D01	0.002 U	.03 U	.02 U	.01 U	.01 U	.01 U	.01 U	.01 U	.02 U	.02 U	.02 U	.02 U	.04 U	.02 U	.02 U	.13 U	.05 U	.03 U	.2 U	1 U
7. 89FM11 R15	0.002 U	0.03 U	.02 U	.01 U	.01 U	.01 U	.01 U	.01 U	.02 U	.02 U	.02 U	.02 U	.04 U	.02 U	.02 U	.13 U	.05 U	.03 U	.2 U	1 U
8.																				
9.																				
10.																				
11.																				
12.																				
13.																				

U - undetected; Below MDL

M Whitbeck 7/6/89

ENVIRONMENTAL PROTECTION AGENCY, REGION V BASIC DATA FORM: Form #1:

DIVISION/BRANCH: Sup Fund Sampling Date: 6/20/89 (Month Day Year) Arrival Date: 6/21/89 (Month Day Year) Analysis Due Date: 7/12/89 (Month Day Year)

D.U. Number: IFA Data Set #: 6282 Activity #: _____ Study: United Recovery

All units are micrograms per liter milligram per kilograms or micrograms Sample Type: Water, Sediment, Oil, Sludge, WIPE

#	Sample # 89FM22	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor	Aroclor	Aroclor	Dibuthyl phthalate	Diethyl Hexyl phthalate	
1	S01	0.2U	0.2U	0.2U	0.2U						
2	S02	0.2U	0.2U	0.2U	0.2U						
3	S03	0.2U	0.2U	0.2U	0.2U						
4	S04	0.2U	0.2U	0.2U	0.2U						
5	S05	0.2U	0.2U	0.2U	0.2U						
6	D01	0.2U	0.2U	0.2U	0.2U						
7	89FM11 R15	0.2U	0.2U	0.2U	0.2U						
8											
9											
10											
11											
12											
13											
14											
15											
16	U - Below Method Detection Limit; Not detected										

Not Reviewed 7/6/89

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: PESTICIDES AND PCB'S

TFA302

DIVISION/BRANCH SUPERFUND FIT SAMPLE DATE 6/20/89 LAB ARRIVAL DATE 6/21/89 DUE DATE 7/14/89

DU NUMBER TFA DATA SET NUMBER 6232 STUDY United Recovery PRIORITY — CONTRACTOR —

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER TRIHALOMETHANES UG/L PES17414	WATER POLYCHLORINATED BIPHENYLS UG/L PES 17144	WATER CHLORINATED PESTICIDES UG/L PES 17134	WATER HERBICIDES UG/L PES 17424	WATER OIL AND GREASE MG/L PES 17439
89FM22S01	5-188229 RW1		✓	✓		
S02	5-188245 5-188255-4 RW2/MSD		✓	✓		
S03	5-188243 RW3		✓	✓		
S04	5-188271 RW4		✓	✓		
S05	5-188279 RW5		✓	✓		
6/21/89 S06	RW6		✓	✓		
S07	RW7		✓	✓		
D01	5-188237 DUP		✓	✓		
89FM11R15	5-188287 BLK		✓	✓		

WORKLIST : PPNW0002
TEST : PPWS0

WL#	ID	REP	COMMENTS
1	LRB		
2	LF1		
3	LF2		
4	LF3		
5	LF4		
6	S9000272	01	89FM22S01
7	S9000273	01	D01
8	S9000274	01	S02
9	S9000275	01	S03
10	S9000276	01	S04
11	S9000277	01	S05
12	S9000278	01	89FM11R15

SUBJECT : Report narrative ; Data set 6232 for United Recovery

Date : July 6, 1989

To : I. Evangelista

From : Nadine Williams, Chemist Organic Section

Data set S.F. 6232 consisted of 7 water samples for pesticide and PCB analysis. Method 608 DNS, was used for the extraction and analysis. One liter of reagent water was used for the method blank. Dibutylchlorendate (DBC), was added to each sample and the method blank before extraction as the surrogate.

Due to insufficient sample quantity, only the pesticide MS and PCB MS were extracted. All spike recoveries were within acceptable limits.

DBC recoveries were within acceptable limits. Although recoveries are within acceptable limits, some chromatograms show the possibility of a contaminant co-eluting with DBC.

Peaks at 6.33 and 27.42 minutes in the quantitation column, occurred in the solvent blank, the method blank and samples. These peaks did not confirm and are labeled as interferants. There were several contaminant peaks observed from the confirmatory column which were not present in the quantitation chromatograms. These peaks were also present in chromatograms of the solvent and method blanks as well as in the samples. Due to identification inconsistencies, such peaks are attributed to column contaminants. To correct the problem for the future, the syringe and auto sampler waste vials were removed and cleaned. If the problem persists further actions will be decided at that time. Both primary and confirmatory chromatograms are included with this data package.

No pesticides or PCBs are reported for any of the samples or blanks.

PCB/PEST EXTRACTION

DATA SET(S) SF 6232 DATE EXTRACTED: 22 June 89
SAMPLE TYPE(S) water DATE CONCENTRATED: 23 June 89
EXTRACTION SYSTEM Sep. Funnel DATE COMPLETED: 7/5/89 [illegible]
SOLVENT SYSTEM CH_2Cl_2 VOLUMES USED

SAMPLE #	SAMPLE AMOUNT	CONC. EXTRACT	DILUTIONS 1ST	2ND	3RD	FINAL VOL	INSTDS MRX/OTHER	pH
89FM22$01	1	10 ml				10 ml		7.5
89FM22$02	1							7.5
Pesticide - MS 89FM22$02	1							7.5
PCB - MS 89FM22$02	890 ml							7.5
89FM22$03	1							7.5
* 89FM22$04	890 ml							7.5
89FM22$05	1							7.5
89FM22[illegible]01	1							7.5
89FM11R15	1							6.0
Method Blank for SF6232	1							7.0

* Sample was milky/cloudy
- It was confirmed with Linda E. of EPA that only 2 extra bottles for 89FM22$02 Pest/PCB quality control was recieved for QA/QC extractions. Therefore, only one each of Pest-MS and PCB-MS, will be extracted for QC/QA along with the original

#	PREPARATION DATE	VOLUME

MATRIX SPIKE SOLUTION: ~~1ml of Pesticide Matrix Spike solution was added to the Pest-MS sample~~ 1ml of PCB Matrix Spike solution was added to the PCB-MS sample.
SURROGATES: 1ml of 0.5 µg/ml Pesticide surrogate was added to all of the above samples.
PREP. CHEMIST Jason Holliday / Jason Fernandez ANALYST [illegible]

United Recovery

AQC DATA

DATE: 7/5/89
DATA SET: S.F. 6232

BLANK DATA:

	CONC. OF AROCLOR (PPB)				CONC. OF PEST (PPB)
	1242	1248	1254	1260	
	0.2U	0.2U	0.2U	0.2U	Below MDL

U - Below MDL; undetected.

SPIKE DATA:

	COMPOUND:	CONC. (ug) of PEST/PCB SPIKE ADDED	SPIKE RESULT	SPIKE DUP. RESULT		% RECOVERY SPIKE RECOVERY	SPIKE DUPLICATE RECOVERY
PESTICIDES:	LINDANE	.06	.04			67%	
	HEPTACHLOR	.06	.04			67	
	ALDRIN	.10	.06			60	
	ENDOSULFAN-1	.12	.10			83	
	DIELDRIN	.12	.12			100	
	ENDRIN	.22	.22			100	
	P,P'-DDT	.30	.29			97	
	P,P'-METHOXYCHLOR	.35	.39			112	
	DIBUTYL CHLORENDATE	.50	.71			142	
PCB:	AROCLOR 1242	3.00	2.42			~~81~~% MW 7/7/89	
						72% PCB Recovery	

COMMENTS: As indicated on the extraction bench sheet there was enough sample for matrix spikes but not enough for matrix spike duplicates.

11/86
JFP

SEQUENCE RECORDED IN P:SEQFM.SEQ

DS. SF6232

	SAMPLE NAME	METHOD NAME	DATA FILE	AMOUNT INJECTED	INT.STD. AMOUNT	DILUTION FACTOR	SAMPLE WEIGHT
1	HEXANE	ZERO	1520551	5.0000	1.0000	1.00	1.000
2	DDT DEG	ZERO	1694940	5.0000	1.0000	1.00	1.000
3	ENDRIN DEG	ZERO	1512655	5.0000	1.0000	1.00	1.000
4	METHOD BLK 6232	ZERO	1642869	5.0000	1.0000	10.00	1.000
5	89FM11R15	ZERO	1821634	5.0000	1.0000	10.00	1.000
6	PESTB 3	ZERO	1638165	5.0000	1.0000	1.00	1.000
7	PESTA 1	ZERO	1593514	5.0000	1.0000	1.00	1.000
8	PESTA 2	ZERO	1667375	5.0000	1.0000	1.00	1.000
9	PESTA 3	ZERO	1678597	5.0000	1.0000	1.00	1.000
10	~~PESTA 4~~	ZERO	—	5.0000	1.0000	1.00	1.000
11	~~PESTA 2~~ Not needed.	ZERO	—	5.0000	1.0000	1.00	1.000
12	PESTA 4	ZERO	1649641	5.0000	1.0000	1.00	1.000
13	PESTA 5	ZERO	1627200	5.0000	1.0000	1.00	1.000
14	89FM22S02	ZERO	1655618	5.0000	1.0000	10.00	1.000
15	89FM22D01	ZERO	1558727	5.0000	1.0000	10.00	1.000
16	89FM22S01	ZERO	1659006	5.0000	1.0000	10.00	1.000
17	PESTMS 89FM22S02	ZERO	1586599	5.0000	1.0000	10.00	1.000
18	89FM22S03	ZERO	1676190	5.0000	1.0000	10.00	1.000
19	89FM22S04	ZERO	1580958	5.0000	1.0000	10.00	0.890
20	89FM22S05	ZERO	1693613	5.0000	1.0000	10.00	0.890
21	PESTB 3	ZERO	1758183	5.0000	1.0000	1.00	1.000
22	PESTA 3	ZERO	1867373 *	5.0000	1.0000	1.00	1.000
23	PCBMS 89FM22S02	ZERO	1620418	5.0000	1.0000	10.00	0.890
24	1242 L2	ZERO	1614917	5.0000	1.0000	1.00	1.000
25	1242 L3	ZERO	1736006	5.0000	1.0000	1.00	1.000
26	1242 L4	ZERO	1567717	5.0000	1.0000	1.00	1.000
27	1242 L5	ZERO	1648648	5.0000	1.0000	1.00	1.000
28	1242 L6	ZERO	1615545	5.0000	1.0000	1.00	1.000
29	~~89FM11R15~~ not needed	ZERO		5.0000	1.0000	10.00	1.000
30	.	ZERO		5.0000	1.0000	1.00	1.000
31	END DEG	ZERO	1730832	5.0000	1.0000	1.00	1.000
32	DDT DEG	ZERO	1637919	5.0000	1.0000	1.00	1.000
33	.	ZERO		5.0000	1.0000	1.00	1.000
34	1248 L3	ZERO		5.0000	1.0000	1.00	1.000
35	1254 L3	ZERO		5.0000	1.0000	1.00	1.000
36	1260 L3	ZERO		5.0000	1.0000	1.00	1.000
37	1232 .5	ZERO		5.0000	1.0000	1.00	1.000
38	1221 .5	ZERO		5.0000	1.0000	1.00	1.000

* outside 2 standard deviations.

DS 6232

Internal STD

point	value
1	1520551
2	1694940
3	1512655
4	1642869
5	1821634
6	1638165
7	1593514
8	1667375
9	1678597
10	1649641
11	1627200
12	1655618
13	1558727
14	1659006
15	1586599
16	1676190
17	1580957
18	1673613
19	1758183
20	1867373
21	1620418
22	1614917
23	1736006
24	1567717
25	1648648
26	1615545
27	1730832
28	1637919

DATA POINT	DATA ENTERED	DEVIATION
1	1520551	-130713.6071428571
2	1694940	43675.39285714287
3	1512655	-138609.6071428571
4	1642869	-8395.60714285713
5	1821634	170369.3928571429
6	1638165	-13099.60714285713
7	1593514	-57750.60714285713
8	1667375	16110.39285714287
9	1678597	27332.39285714287
10	1649641	-1623.60714285713
11	1627200	-24064.60714285713
12	1655618	4353.39285714287
13	1558727	-92537.60714285713
14	1659006	7741.39285714287
15	1586599	-64665.60714285713
16	1676190	24925.39285714287
17	1580957	-70307.60714285713
18	1673613	22348.39285714287
19	1758183	106918.3928571429
20	1867373	216108.3928571429
21	1620418	-30846.60714285713
22	1614917	-36347.60714285713
23	1736006	84741.39285714287
24	1567717	-83547.60714285713

1648646	-2616.60714285713
1615545	-35719.60714285713
1730832	79567.39285714287
1637919	-13345.60714285713

****

The number of data points= 28

The sum of the data= 46235409

The mean= 1651264.607142857

The standard deviation is= 78750.34722886696

The coefficient of variation is= 4.769093147652863D-02

$+2s = 1808764$

$-2s = \cancel{1572514}\ 1493764$

Confirmation AS SF 6232

	SAMPLE NAME	METHOD NAME	DATA FILE	AMOUNT INJECTED	INT.STD. AMOUNT	DILUTION FACTOR	SAMPLE WEIGHT
1	HEXANE	ZERO		5.0000	1.0000	1.00	1.000
2	DDT DEG	ZERO		5.0000	1.0000	1.00	1.000
3	ENDRIN DEG	ZERO		5.0000	1.0000	1.00	1.000
4	METHOD BLK 6232	ZERO		5.0000	1.0000	1.00	1.000
5	89FM11R15	ZERO		5.0000	1.0000	10.00	1.000
6	PESTB 3	ZERO		5.0000	1.0000	1.00	1.000
7	PESTA 3	ZERO		5.0000	1.0000	1.00	1.000
8	PESTMS 89FM22S02	ZERO		5.0000	1.0000	10.00	1.000
9	89FM22D01	ZERO		5.0000	1.0000	1.00	1.000
10	89FM22S01	ZERO		5.0000	1.0000	1.00	1.000
11	89FM22S02	ZERO		5.0000	1.0000	1.00	1.000
12	89FM22S03	ZERO		5.0000	1.0000	1.00	1.000
13	89FM22S04	ZERO		5.0000	1.0000	1.00	0.890
14	89FM22S05	ZERO		5.0000	1.0000	1.00	0.890
15	1242 L4	ZERO		5.0000	1.0000	1.00	1.000
16	PCBMS 89FM22S02	ZERO		5.0000	1.0000	1.00	0.890
17	PESTB 3	ZERO		5.0000	1.0000	1.00	1.000
18	PESTA 3	ZERO		5.0000	1.0000	1.00	1.000
19	DDT DEG	ZERO		5.0000	1.0000	1.00	1.000
20	END DEG	ZERO		5.0000	1.0000	1.00	1.000
21	.	ZERO		5.0000	1.0000	1.00	1.000

D.S. 6232

DBC Recovery

	mg	
MB	.6022	120%
R15	.5943	119
DO1	.5911	118
SO1	.5403	108
SO2	.5389	108
SO3	.5231	105
SO4	.6915	124
SO5	.6962	139
PCBMS	.5544	99
PestMS	.7101	142

Although DBC Recoveries are within acceptable Range, there is a possibility of a co-eluting contaminant causing higher Recoveries.

DS. 6232

Level 3 STD	AREA		RPD
LINDANE	503137	532688	5.7 %
ENDO I	1307365	1319370	0.9 %
Methoxy	1970200	1988644	0.9 %
Delta BHC-1	837569	855155	2 %
END AldE	1575687	1570520	0.3 %
END KeT	1987019	1959281	1.4 %

Endrin and DDT Degradation

Primary Column

$$\frac{(\text{AREA DDD + DDE})}{(\text{AREA DDD + DDE + DDT})} \times 100\% \qquad \frac{(\text{AREA End. Alde + End Ketone})}{(\text{AREA End. Alde + End Ketone + Endrin})} \times 100\%$$

Initial

FM2 $\frac{(120290 + 93351)}{(120290 + 93351 + 8517461)} \times 100\% = 2.5\%$ DDT Deg.

FM3 $\frac{(523640 + 288021)}{(523640 + 288021 + 4685162)} \times 100\% = 14.8\%$ End. Deg

Final

FM32 $\frac{(131499 + 80521)}{(131499 + 80521 + 8942195)} \times 100\% = 2.3\%$ DDT Deg.

FM33 $\frac{(499574 + 343795)}{(499574 + 343795 + 5048826)} \times 100\% = 14.3\%$ End Deg.

confirmatory column

initial

conFM2 $\frac{(91937 + 60647)}{(91937 + 60647 + 6026567)} \times 100\% = 2.5\%$ DDT Deg.

conFM3 $\frac{(69282 + 0)}{(69282 + 0 + 3885667)} \times 100\% = 1.8\%$ Endrin Deg

Final

conFM19 $\frac{(45191 + 63715)}{(45191 + 63715 + 6203923)} \times 100\% = 1.7\%$ DDT Deg.

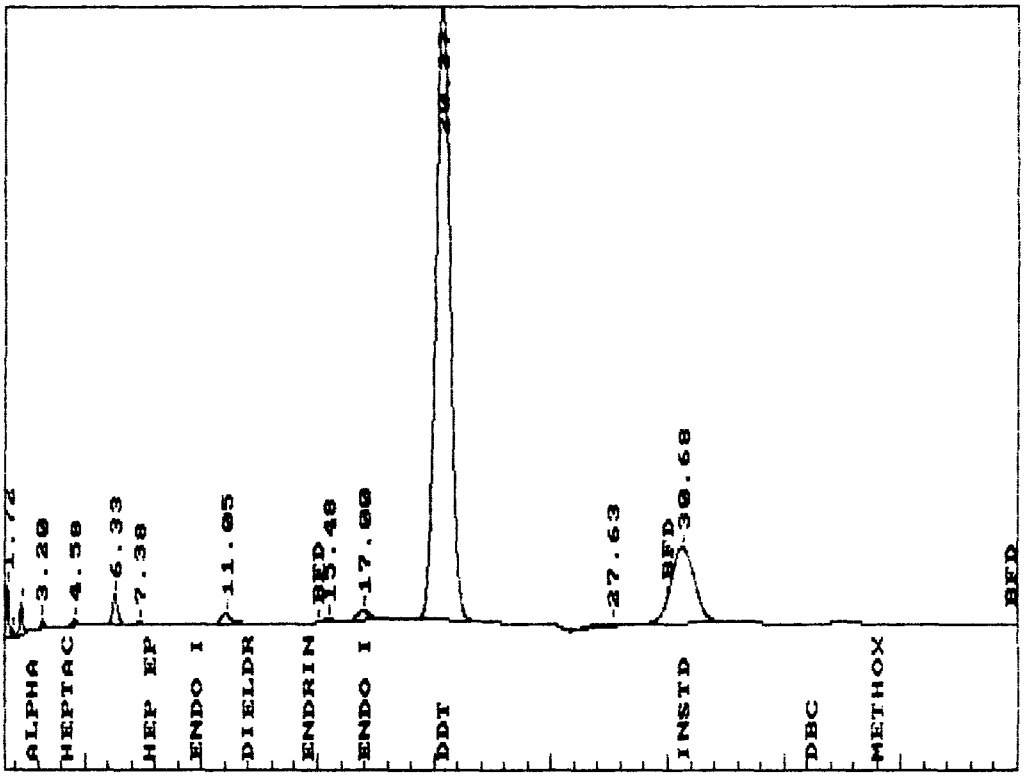
conFM20 $\frac{(59777 + 0)}{(59777 + 0 + 4972113)} \times 100\% = 1.1\%$ End Deg.

```
*****   INTERNAL STANDARD TABLE   *****
******************** 06-29-1989 10:37:12 Version 4.1 **********************
* Sample Name: DDT DEG                          Data File: P:FM2          *
* Date: 06-28-1989 10:14:15 Method: P:PESTA 06-29-1989 10:06:41  #  75    *
* Interface: 0   Cycle#:  2    Operator NW  Channel#: 0    Vial#: N.A.    *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000           *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:   45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
10	17.00	ENDO II	0.0029	2.8617%	120290	3253	37.0	1	10	13	0	2.3915E-08
11	20.37	DDT	0.0976	97.1383%	8517461	199350	42.7	1	11	13	0	1.1465E-08
13	30.68	INSTD	1.0000	0.0000%	1694940	24304	69.7	1	13	13	0	5.8999E-07

TOTAL AMOUNT = 0.1005

```
Data File = P:FM2.PTS  Printed on 06-29-1989 at 10:37:24
Start time:     1.50 min.  Stop time:    45.00 min.     Offset:    0 mv.
Low Value:    63556 uv   High Value: 268309 uv    Scale factor:    1.0
```



****** INTERNAL STANDARD TABLE ******

********** 06-29-1989 10:35:24 Version 4.1 **********

* Sample Name: DDT DEG Data File: P:FM2 *
* Date: 06-28-1989 10:14:15 Method: P:PESTB 06-29-1989 09:26:38 # 53 *
* Interface: 0 Cycle#: 2 Operator NW Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HEWLETT PACKARD Column Type: MIXED PHASE-PRIMARY *
* Solvent Description: ULTRA HIGH PURITY NITROGEN *
* Conditions: ISOTHERMAL AT 200 CELSIUS *
* Detector 0: ECD QUANT Detector 1: ECD CONF *
* Misc. Information: D.S. SF6232 *

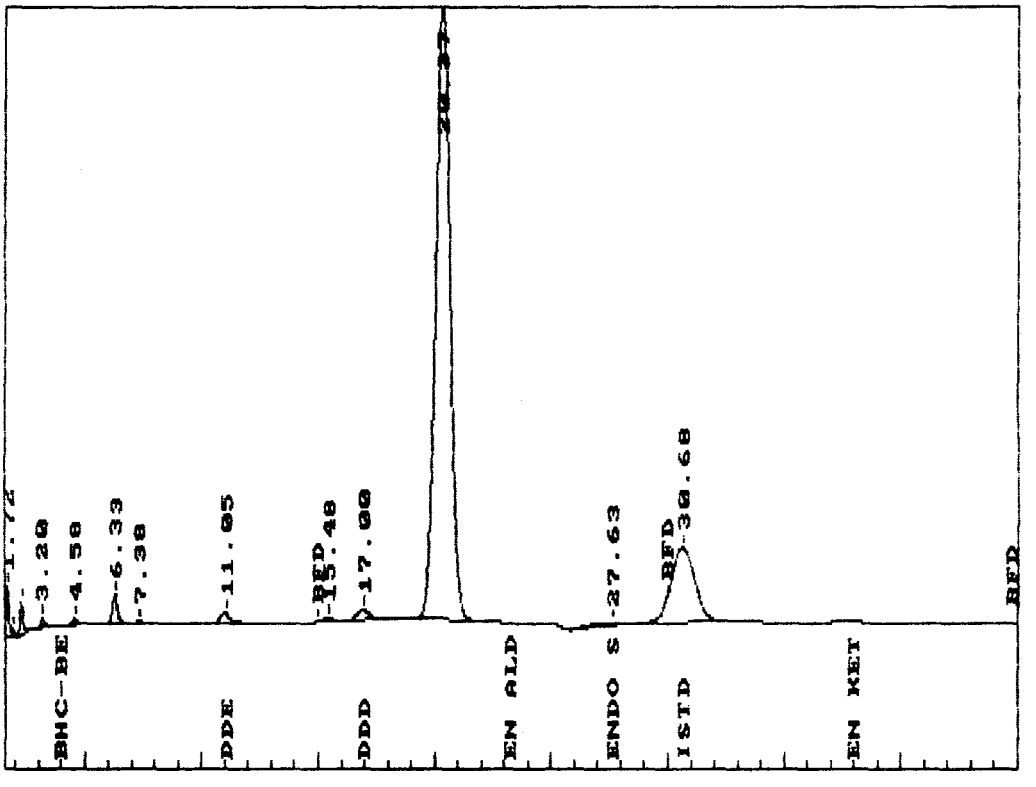
****

Starting Delay: 1.50 Ending retention time: 45.00
Area reject: 0 One sample per 1.000 sec.
Amount injected: 5.00 Dilution factor: 1.00
Internal Standard Amount: 1
Sample Weight: 1.000000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
5	4.58	BHC-DELTA	0.0003	5.1424%	22671	1770	12.8	1	5	13	0	1.1539E-08
8	11.05	DDE	0.0011	21.9643%	93351	3361	27.8	1	8	13	0	1.1970E-08
10	17.00	DDD	0.0015	30.0671%	120290	3253	37.0	1	10	13	0	1.2716E-08
12	27.63	ENDO SULFATE	0.0022	42.8262%	99411	854	116.4	1	12	13	0	2.1916E-08
13	30.68	ISTD	1.0000	0.0000%	1694940	24304	69.7	1	13	13	0	5.8999E-07

TOTAL AMOUNT = 0.0051

Data File = P:FM2.PTS Printed on 06-29-1989 at 10:35:39
Start time: 1.50 min. Stop time: 45.00 min. Offset: 0 mv.
Low Value: 63556 uv High Value: 268309 uv Scale factor: 1.0

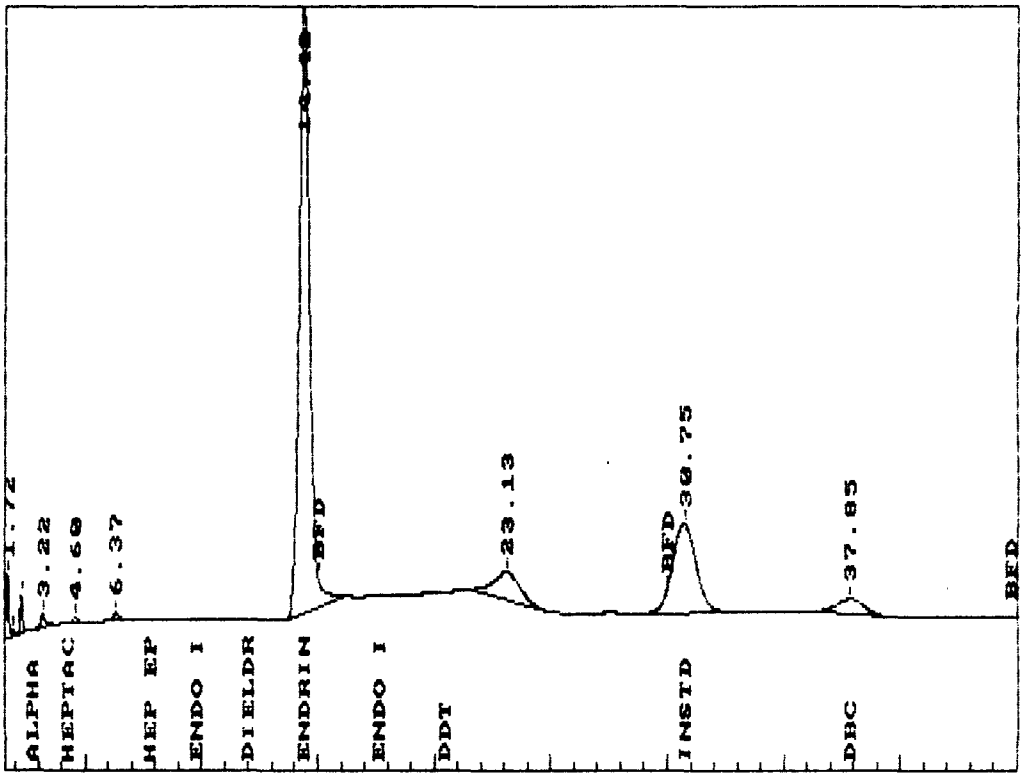


```
*****   INTERNAL STANDARD TABLE   *****
******************** 06-29-1989 10:45:25 Version 4.1 **********************
* Sample Name: ENDRIN DEG                          Data File: P:FM3          *
* Date: 06-28-1989 11:00:45 Method: P:PESTA 06-29-1989 10:06:41  #  75      *
* Interface: 0   Cycle#:  3    Operator NW  Channel#: 0    Vial#: N.A.      *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY   *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN             *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                    *
*             Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                           *
*************************************************************************
Starting Delay:    1.50                      Ending retention time:    45.00
Area reject:        0                        One sample per    1.000 sec.
Amount injected:        5.00                 Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	HEIGHT BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
7	14.42	ENDRIN	0.1219	96.2817%	4685162	149482	31.3	1	7	9	0	2.6025E-08
9	30.75	INSTD	1.0000	0.0000%	1512655	21767	69.5	1	9	9	0	6.6109E-07
10	37.85	DBC	0.0047	3.7183%	288021	3555	81.0	1	10	9	0	1.6349E-08

TOTAL AMOUNT = 0.1266

Data File = P:FM3.PTS Printed on 06-29-1989 at 10:45:37
Start time: 1.50 min. Stop time: 45.00 min. Offset: 0 mv.
Low Value: 63633 uv High Value: 219519 uv Scale factor: 1.0

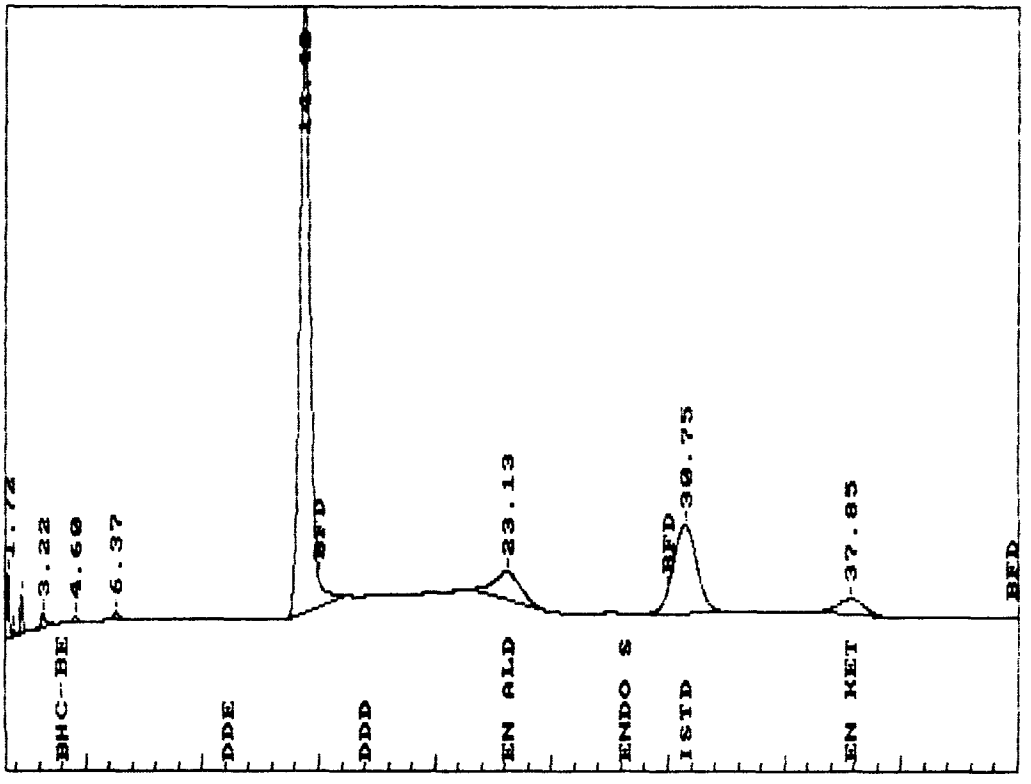


```
****** INTERNAL STANDARD TABLE ******
******************** 06-29-1989 10:43:30 Version 4.1 **********************
* Sample Name: ENDRIN DEG                          Data File: P:FM3          *
* Date: 06-28-1989 11:00:45 Method: P:PESTB 06-29-1989 09:26:38  #  53      *
* Interface: 0   Cycle#:  3    Operator NW  Channel#: 0    Vial#: N.A.      *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*****************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY    *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN              *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                     *
*             Detector 0: ECD QUANT            Detector 1: ECD CONF         *
* Misc. Information: D.S. SF6232                                            *
*****************************************************************************
Starting Delay:    1.50                      Ending retention time:    45.00
Area reject:         0                       One sample per    1.000 sec.
Amount injected:        5.00                 Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
5	4.60	BHC-DELTA	0.0002	1.3067%	15643	1271	12.3	1	5	9	0	1.2930E-08
8	23.13	EN ALDEHYDE	0.0090	58.1274%	523640	6784	77.2	1	8	9	0	1.7183E-08
9	30.75	ISTD	1.0000	0.0000%	1512655	21767	69.5	1	9	9	0	6.6109E-07
10	37.85	EN KETONE	0.0063	40.5658%	288021	3555	81.0	1	10	9	0	2.1801E-08

TOTAL AMOUNT = 0.0155

```
Data File = P:FM3.PTS  Printed on 06-29-1989 at 10:43:44
Start time:     1.50 min.  Stop time:    45.00 min.     Offset:    0 mv.
Low Value:    63633 uv   High Value: 219519 uv    Scale factor:    1.0
```



****** INTERNAL STANDARD TABLE ******

********** 06-29-1989 12:15:35 Version 4.1 **********

* Sample Name: DDT DEG Data File: P:FM32 *
* Date: 06-29-1989 09:42:24 Method: P:PESTA 06-29-1989 10:06:41 # 75 *
* Interface: 0 Cycle#: 32 Operator NW Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HEWLETT PACKARD Column Type: MIXED PHASE-PRIMARY *
* Solvent Description: ULTRA HIGH PURITY NITROGEN *
* Conditions: ISOTHERMAL AT 200 CELSIUS *
* Detector 0: ECD QUANT Detector 1: ECD CONF *
* Misc. Information: D.S. SF6232 D.S. SF6232 *

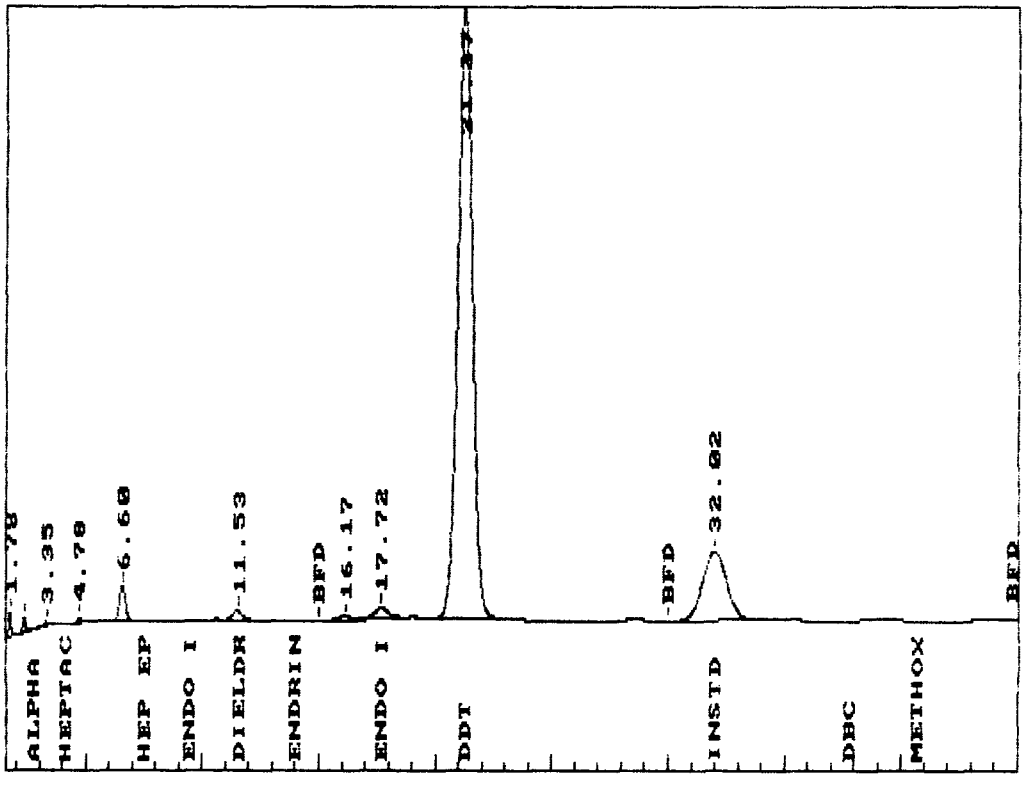
****

Starting Delay: 1.50 Ending retention time: 45.00
Area reject: 0 One sample per 1.000 sec.
Amount injected: 5.00 Dilution factor: 1.00
Internal Standard Amount: 1
Sample Weight: 1.000000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	3.35	LINDANE	0.0007	0.6018%	35094	1549	22.7	2	3	10	0	1.9287E-08
4	4.78	ALDRIN	0.0011	1.0209%	21165	1697	12.5	1	3	10	-3.423	5.4248E-08
6	11.53	DIELDRIN	0.0017	1.5421%	80521	3187	25.3	1	6	10	0	2.1540E-08
8	17.72	ENDO II	0.0030	2.7008%	131499	3352	39.2	2	8	10	0	2.3100E-08
9	21.27	DDT	0.1059	94.1344%	8942195	205067	43.6	1	9	10	0	1.1840E-08
10	32.02	INSTD	1.0000	0.0000%	1637919	23070	71.0	1	10	10	0	6.1053E-07

TOTAL AMOUNT = 0.1125

Data File = P:FM32.PTS Printed on 06-29-1989 at 12:15:52
Start time: 1.50 min. Stop time: 45.00 min. Offset: 0 mv.
Low Value: 64750 uv High Value: 276150 uv Scale factor: 1.0



***** INTERNAL STANDARD TABLE *****

********** 06-29-1989 12:17:18 Version 4.1 **********

* Sample Name: DDT DEG Data File: P:FM32 *
* Date: 06-29-1989 09:42:24 Method: P:PESTB 06-29-1989 09:26:38 # 53 *
* Interface: 0 Cycle#: 32 Operator NW Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HEWLETT PACKARD Column Type: MIXED PHASE-PRIMARY *
* Solvent Description: ULTRA HIGH PURITY NITROGEN *
* Conditions: ISOTHERMAL AT 200 CELSIUS *
* Detector 0: ECD QUANT Detector 1: ECD CONF *
* Misc. Information: D.S. SF6232 D.S. SF6232 *

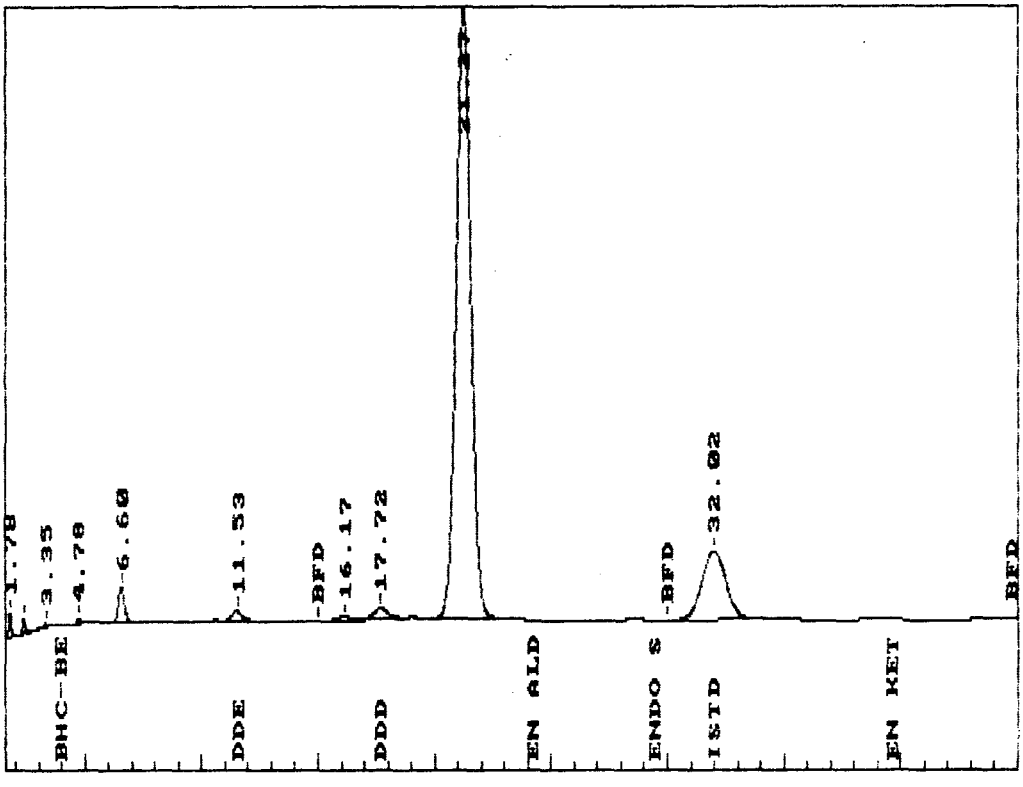
****

Starting Delay: 1.50 Ending retention time: 45.00
Area reject: 0 One sample per 1.000 sec.
Amount injected: 5.00 Dilution factor: 1.00
Internal Standard Amount: 1
Sample Weight: 1.000000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
4	4.78	BHC-DELTA	0.0003	8.4799%	21165	1697	12.5	1	4	10	0	1.1941E-08
6	11.53	DDE	0.0010	33.4636%	80521	3187	25.3	1	6	10	0	1.2386E-08
8	17.72	DDD	0.0017	58.0565%	131499	3352	39.2	2	8	10	0	1.3158E-08
10	32.02	ISTD	1.0000	0.0000%	1637919	23070	71.0	1	10	10	0	6.1053E-07

TOTAL AMOUNT = 0.0030

Data File = P:FM32.PTS Printed on 06-29-1989 at 12:17:31
Start time: 1.50 min. Stop time: 45.00 min. Offset: 0 mv.
Low Value: 64750 uv High Value: 276150 uv Scale factor: 1.0



***** INTERNAL STANDARD TABLE *****

********** 06-29-1989 12:12:09 Version 4.1 **********

* Sample Name: END DEG Data File: P:FM31 *
* Date: 06-29-1989 09:03:04 Method: P:PESTA 06-29-1989 10:06:41 # 75 *
* Interface: 0 Cycle#: 31 Operator NW Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

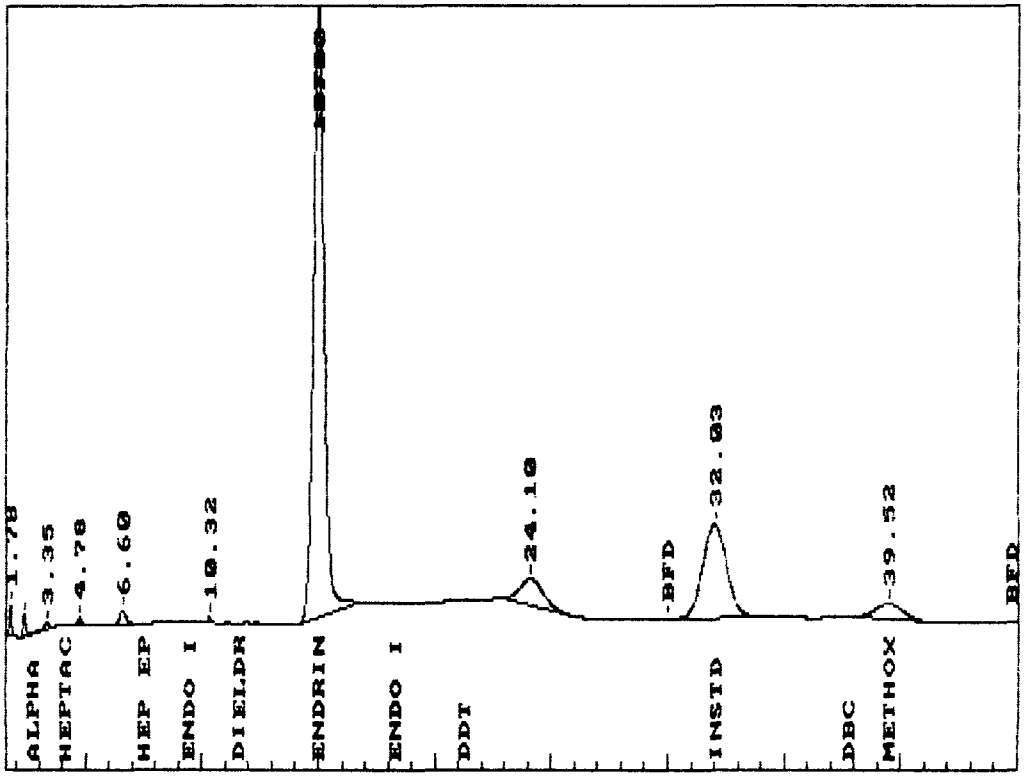
* Instrument Type: HEWLETT PACKARD Column Type: MIXED PHASE-PRIMARY *
* Solvent Description: ULTRA HIGH PURITY NITROGEN *
* Conditions: ISOTHERMAL AT 200 CELSIUS *
* Detector 0: ECD QUANT Detector 1: ECD CONF *
* Misc. Information: D.S. SF6232 *

Starting Delay: 1.50 Ending retention time: 45.00
Area reject: 0 One sample per 1.000 sec.
Amount injected: 5.00 Dilution factor: 1.00
Internal Standard Amount: 1
Sample Weight: 1.000000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	HEIGHT BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	3.35	LINDANE	0.0006	0.4688%	25316	1439	17.6	2	3	9	0	2.2862E-08
4	4.78	ALDRIN	0.0011	0.9238%	21451	1807	11.9	1	3	9	-3.423	5.3161E-08
7	15.00	ENDRIN	0.1149	93.0598%	5048826	158999	31.8	1	7	9	0	2.2753E-08
9	32.03	INSTD	1.0000	0.0000%	1730832	24233	71.4	1	9	9	0	5.7776E-07
10	39.52	METHOXYCHLOR	0.0068	5.5476%	343795	4084	84.2	1	10	9	0	1.9920E-08

TOTAL AMOUNT = 0.1234

Data File = P:FM31.PTS Printed on 06-29-1989 at 12:12:24
Start time: 1.50 min. Stop time: 45.00 min. Offset: 0 mv.
Low Value: 66375 uv High Value: 230757 uv Scale factor: 1.0



***** INTERNAL STANDARD TABLE *****

********** 06-29-1989 12:13:45 Version 4.1 **********

* Sample Name: END DEG Data File: P:FM31 *
* Date: 06-29-1989 09:03:04 Method: P:PESTB 06-29-1989 09:26:38 # 53 *
* Interface: 0 Cycle#: 31 Operator NW Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

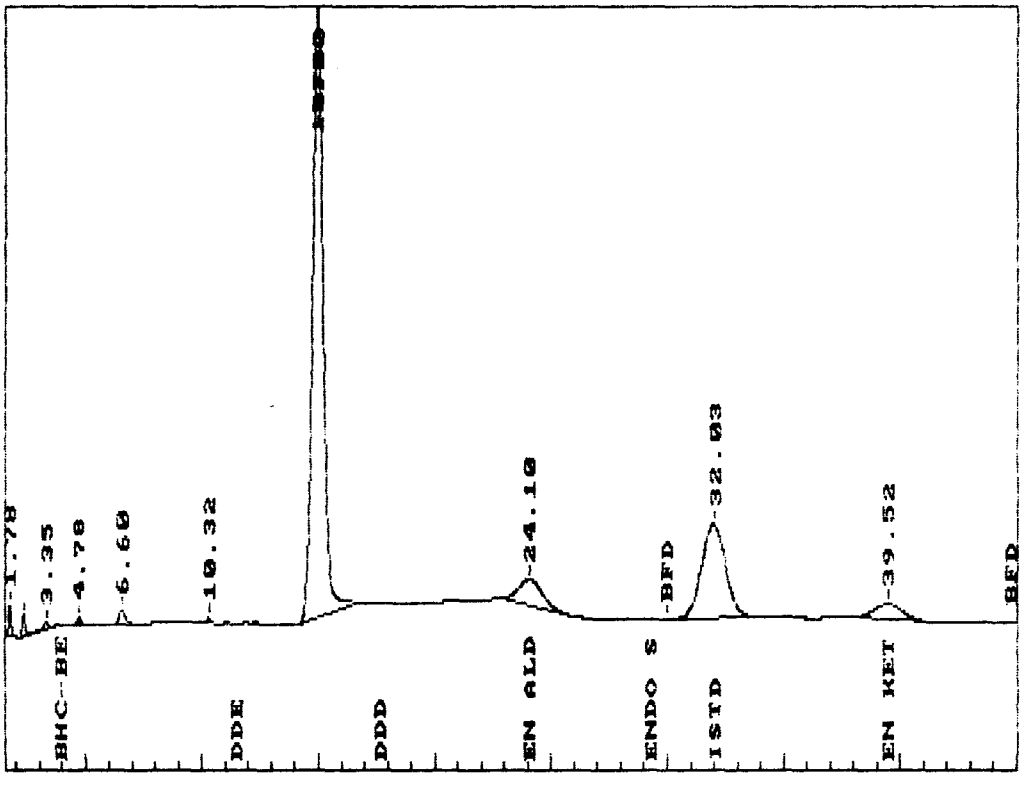
* Instrument Type: HEWLETT PACKARD Column Type: MIXED PHASE-PRIMARY *
* Solvent Description: ULTRA HIGH PURITY NITROGEN *
* Conditions: ISOTHERMAL AT 200 CELSIUS *
* Detector 0: ECD QUANT Detector 1: ECD CONF *
* Misc. Information: D.S. SF6232 *

Starting Delay: 1.50 Ending retention time: 45.00
Area reject: 0 One sample per 1.000 sec.
Amount injected: 5.00 Dilution factor: 1.00
Internal Standard Amount: 1
Sample Weight: 1.000000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
4	4.78	BHC-DELTA	0.0002	1.6957%	21451	1807	11.9	1	4	9	0	1.1300E-08
8	24.10	EN ALDEHYDE	0.0075	52.4808%	499574	6789	73.6	1	8	9	0	1.5017E-08
9	32.03	ISTD	1.0000	0.0000%	1730832	24233	71.4	1	9	9	0	5.7776E-07
10	39.52	EN KETONE	0.0066	45.8235%	343795	4084	84.2	1	10	9	0	1.9053E-08

TOTAL AMOUNT = 0.0143

Data File = P:FM31.PTS Printed on 06-29-1989 at 12:13:58
Start time: 1.50 min. Stop time: 45.00 min. Offset: 0 mv.
Low Value: 66375 uv High Value: 230757 uv Scale factor: 1.0



— Confirmatory —

INTERNAL STANDARD TABLE

********** 07-04-1989 08:14:49 Version 4.1 **********

* Sample Name: DDT DEG Data File: P:CONFM2 *
* Date: 06-30-1989 14:10:46 Method: P:PESTA2 07-04-1989 08:06:34 # 16 *
* Interface: 0 Cycle#: 2 Operator NW Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

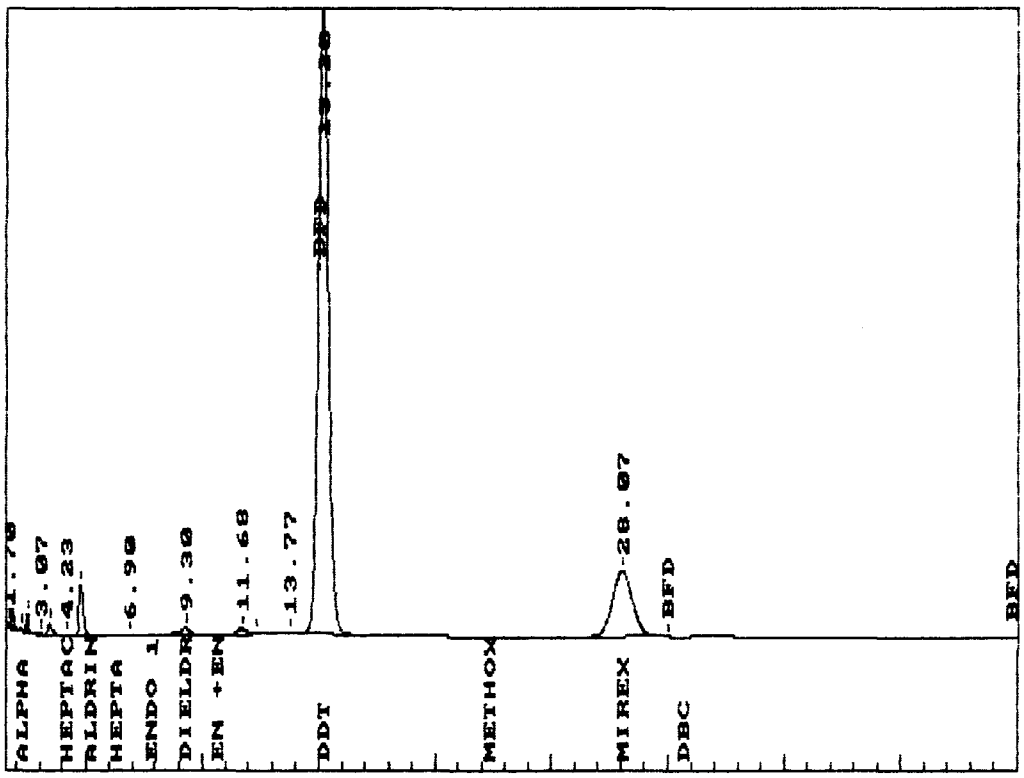
* Instrument Type: HEWLETT PACKARD Column Type: MIXED PHASE-PRIMARY *
* Solvent Description: ULTRA HIGH PURITY NITROGEN *
* Conditions: ISOTHERMAL AT 200 CELSIUS *
* Detector 0: ECD QUANT Detector 1: ECD CONF *
* Misc. Information: D.S. SF6232 *

Starting Delay: 1.50 Ending retention time: 45.00
Area reject: 0 One sample per 1.000 sec.
Amount injected: 5.00 Dilution factor: 1.00
Internal Standard Amount: 1
Sample Weight: 1.000000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.25	ALPHA BHC	0.0001	0.0919%	8500	1301	6.5	2	3	15	0	1.6059E-08
4	2.53	LINDANE	0.0009	0.6275%	50528	6415	7.9	2	3	15	-3.294	1.8447E-08
7	4.23	HEPTACHLOR	0.0001	0.0369%	3560	296	12.0	1	7	15	0	1.5410E-08
10	9.30	DIELDRIN	0.0017	1.1679%	91937	2453	37.5	1	10	15	0	1.8869E-08
14	15.20	DDT	0.1457	98.0757%	6026567	202529	29.8	1	14	15	0	2.4172E-08
15	28.07	MIREX	1.0000	0.0000%	1262278	21103	59.8	1	15	15	0	7.9222E-07

TOTAL AMOUNT = 0.1485

Plot of data file: P:CONFM2.PTS
Date: 07-04-1989 Time: 08:15:28
Sample Name: DDT DEG
Start Time= 1.52Stop Time = 45.00Min. Scale= 28381Max. Scale= 232523

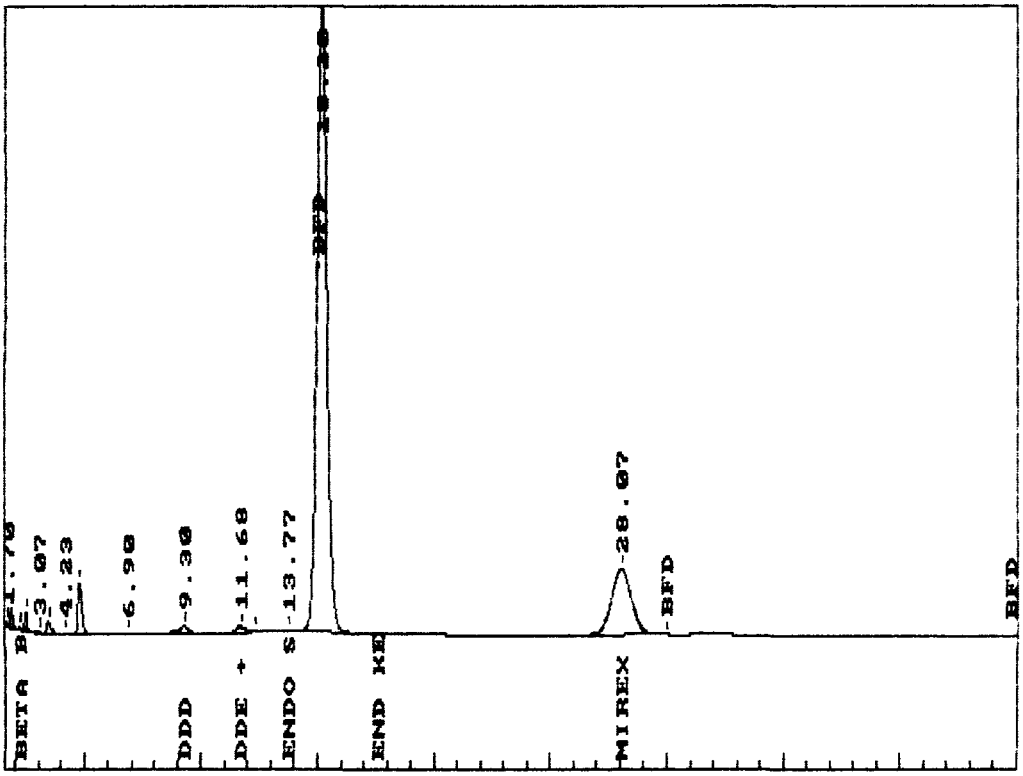


```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-04-1989 08:16:44 Version 4.1 **********************
* Sample Name: DDT DEG                          Data File: P:CONFM2       *
* Date: 06-30-1989 14:10:46 Method: P:PESTB2 07-04-1989 07:58:22  #  17   *
* Interface: 0   Cycle#:  2    Operator NW  Channel#: 0    Vial#: N.A.    *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000           *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*            Solvent Description: ULTRA HIGH PURITY NITROGEN              *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	HEIGHT BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.25	BETA BHC	0.0161	79.4414%	8500	1301	6.5	2	3	15	0	1.8906E-06
4	2.53	DELTA BHC	0.0008	3.8899%	50528	6415	7.9	2	4	15	0	1.5573E-08
10	9.30	DDD	0.0028	13.9152%	91937	2453	37.5	1	10	15	0	3.0618E-08
11	11.68	DDE + EA	0.0004	1.9247%	60647	2235	27.1	2	11	15	0	6.4198E-09
13	13.77	ENDO SO4	0.0002	0.8289%	6731	249	27.1	1	13	15	0	2.4911E-08
15	28.07	MIREX	1.0000	0.0000%	1262278	21103	59.8	1	15	15	0	7.9222E-07

TOTAL AMOUNT = 0.0202

Plot of data file: P:CONFM2.PTS
Date: 07-04-1989 Time: 08:17:18
Sample Name: DDT DEG
Start Time= 1.52Stop Time = 45.00Min. Scale= 28381Max. Scale= 232523



***** INTERNAL STANDARD TABLE *****

********** 07-04-1989 08:18:56 Version 4.1 **********

* Sample Name: ENDRIN DEG Data File: P:CONFM3 *
* Date: 06-30-1989 14:57:18 Method: P:PESTA2 07-04-1989 08:06:34 # 16 *
* Interface: 0 Cycle#: 3 Operator NW Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HEWLETT PACKARD Column Type: MIXED PHASE-PRIMARY *
* Solvent Description: ULTRA HIGH PURITY NITROGEN *
* Conditions: ISOTHERMAL AT 200 CELSIUS *
* Detector 0: ECD QUANT Detector 1: ECD CONF *
* Misc. Information: D.S. SF6232 *

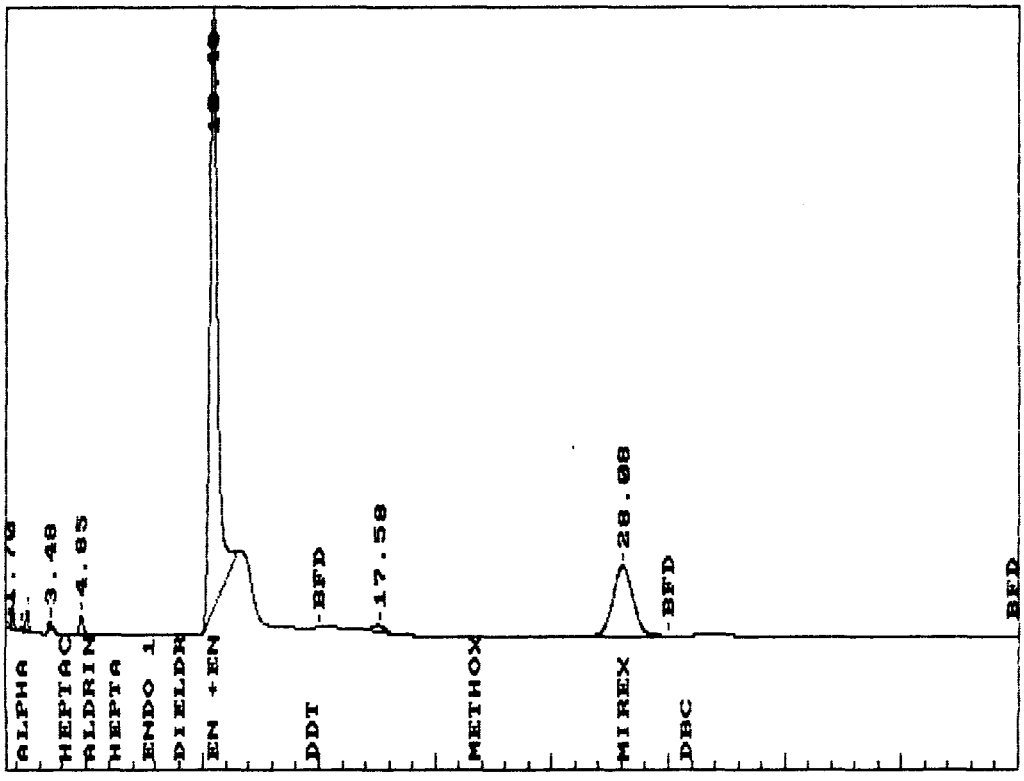
****

Starting Delay: 1.50 Ending retention time: 45.00
Area reject: 0 One sample per 1.000 sec.
Amount injected: 5.00 Dilution factor: 1.00
Internal Standard Amount: 1
Sample Weight: 1.000000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.25	ALPHA BHC	0.0001	0.1134%	8447	1279	6.6	2	3	9	0	1.7114E-08
4	2.53	LINDANE	0.0009	0.7319%	47470	6010	7.9	2	3	9	-3.294	1.9658E-08
7	10.48	EN +END 2	0.1264	99.1548%	3885667	170759	22.8	1	7	9	0	3.2537E-08
9	28.08	MIREX	1.0000	0.0000%	1184463	19764	59.9	1	9	9	0	8.4426E-07

TOTAL AMOUNT = 0.1275

Plot of data file: P:CONFM3.PTS
Date: 07-04-1989 Time: 08:19:29
Sample Name: ENDRIN DEG
Start Time= 1.52Stop Time = 45.00Min. Scale= 28223Max. Scale= 207456

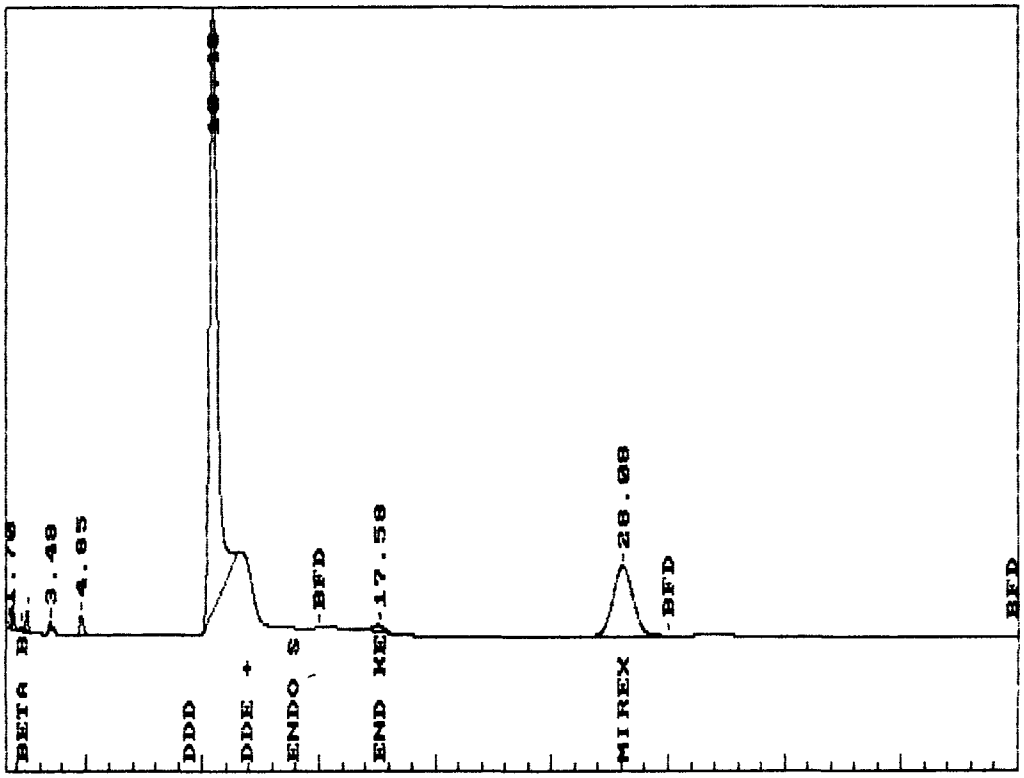


```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-04-1989 08:20:44 Version 4.1 **********************
* Sample Name: ENDRIN DEG                          Data File: P:CONFM3      *
* Date: 06-30-1989 14:57:18 Method: P:PESTB2 07-04-1989 07:58:22  #  17    *
* Interface: 0   Cycle#:  3    Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*             Detector 0: ECD QUANT            Detector 1: ECD CONF       *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                      Ending retention time:    45.00
Area reject:        0                        One sample per   1.000 sec.
Amount injected:        5.00                 Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.25	BETA BHC	0.0170	83.9994%	8447	1279	6.6	2	3	9	0	2.0148E-06
4	2.53	DELTA BHC	0.0008	3.8886%	47470	6010	7.9	2	4	9	0	1.6596E-08
8	17.58	END KETONE	0.0025	12.1120%	69282	1994	34.7	1	8	9	0	3.5419E-08
9	28.08	MIREX	1.0000	0.0000%	1184463	19764	59.9	1	9	9	0	8.4426E-07

TOTAL AMOUNT = 0.0203

Plot of data file: P:CONFM3.PTS
Date: 07-04-1989 Time: 08:21:09
Sample Name: ENDRIN DEG
Start Time= 1.52Stop Time = 45.00Min. Scale= 28223Max. Scale= 207456



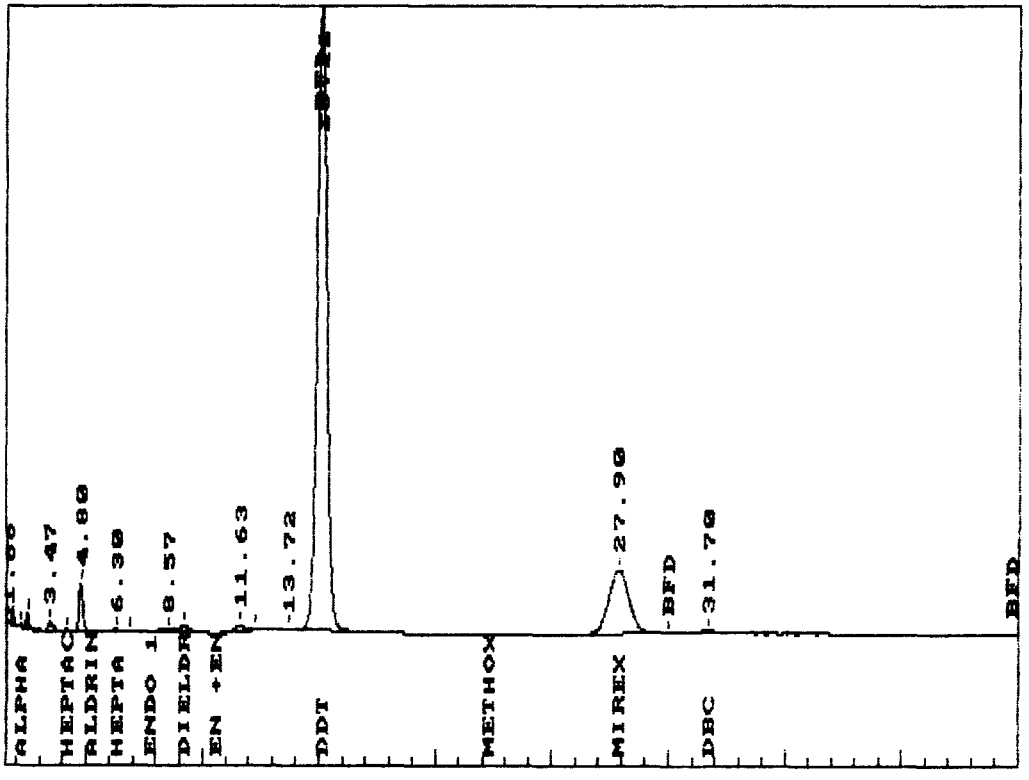
INTERNAL STANDARD TABLE

```
******************** 07-04-1989 08:26:19 Version 4.1 ********************
* Sample Name: DDT DEG                          Data File: P:CONFM19      *
* Date: 07-01-1989 03:21:43 Method: P:PESTA2 07-04-1989 08:06:34  #  16   *
* Interface: 0   Cycle#:  19   Operator NW  Channel#: 0    Vial#: N.A.    *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000           *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*            Solvent Description: ULTRA HIGH PURITY NITROGEN             *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                  *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF         *
* Misc. Information: D.S. SF6232                                         *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per    1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.23	ALPHA BHC	0.0001	0.0752%	7166	1083	6.6	2	3	16	0	1.6139E-08
4	2.52	LINDANE	0.0008	0.4999%	41494	5269	7.9	2	3	16	-3.213	1.8538E-08
6	4.22	HEPTACHLOR	0.0001	0.0895%	8891	840	10.6	1	6	16	0	1.5487E-08
8	6.30	HEPTA EPOX	0.0002	0.1139%	11390	860	13.2	1	8	16	0	1.5382E-08
11	9.23	DIELDRIN	0.0009	0.5570%	45191	1912	23.6	2	11	16	0	1.8963E-08
15	15.12	DDT	0.1507	97.9465%	6203923	208124	29.8	1	15	16	0	2.4292E-08
16	27.90	MIREX	1.0000	0.0000%	1256022	21119	59.5	1	16	16	0	7.9616E-07
17	31.70	DBC	0.0011	0.7181%	54109	845	64.0	1	17	16	0	2.0419E-08

TOTAL AMOUNT = 0.1539

Plot of data file: P:CONFM19.PTS
Date: 07-04-1989 Time: 08:26:51
Sample Name: DDT DEG
Start Time= 1.52Stop Time = 45.00Min. Scale= 29281Max. Scale= 238900

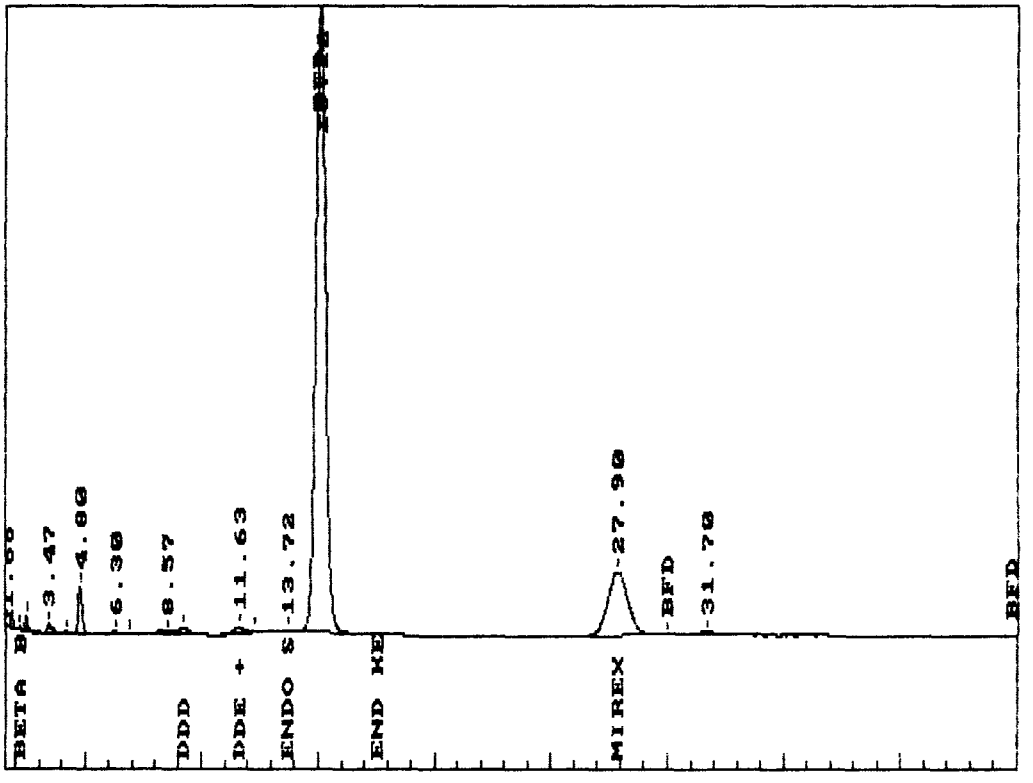


```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-04-1989 08:28:08 Version 4.1 **********************
* Sample Name: DDT DEG                          Data File: P:CONFM19      *
* Date: 07-01-1989 03:21:43 Method: P:PESTB2 07-04-1989 07:58:22  #  17   *
* Interface: 0   Cycle#:  19   Operator NW  Channel#: 0    Vial#: N.A.    *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000           *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.23	BETA BHC	0.0136	84.1335%	7166	1083	6.6	2	3	16	0	1.9000E-06
4	2.52	DELTA BHC	0.0006	4.0128%	41494	5269	7.9	2	4	16	0	1.5651E-08
11	9.23	DDD	0.0014	8.5925%	45191	1912	23.6	2	11	16	0	3.0771E-08
12	11.63	DDE + EA	0.0004	2.5401%	63715	2082	30.6	2	12	16	0	6.4518E-09
14	13.72	ENDO SO4	0.0001	0.7210%	4661	184	25.3	1	14	16	0	2.5035E-08
16	27.90	MIREX	1.0000	0.0000%	1256022	21119	59.5	1	16	16	0	7.9616E-07

TOTAL AMOUNT = 0.0162

Plot of data file: P:CONFM19.PTS
Date: 07-04-1989 Time: 08:28:43
Sample Name: DDT DEG
Start Time= 1.52Stop Time = 45.00Min. Scale= 29281Max. Scale= 238900

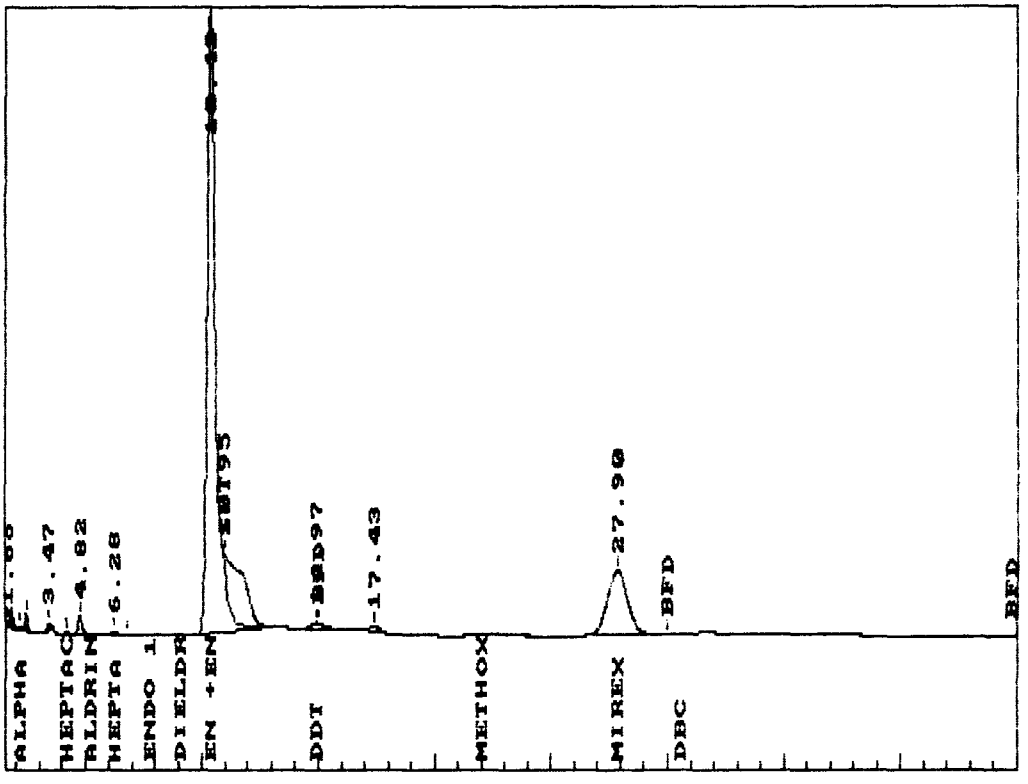


```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-04-1989 08:32:29 Version 4.1 **********************
* Sample Name: END DEG                          Data File: P:CONFM20      *
* Date: 07-01-1989 04:08:13 Method: P:PESTA2 07-04-1989 08:06:34  #  16   *
* Interface: 0   Cycle#:  20   Operator NW  Channel#: 0    Vial#: N.A.    *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000           *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF         *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per    1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.23	ALPHA BHC	0.0001	0.0780%	7527	1159	6.5	2	3	14	0	1.7128E-08
4	2.52	LINDANE	0.0008	0.5042%	42350	5366	7.9	2	3	14	-3.213	1.9674E-08
6	4.22	HEPTACHLOR	0.0001	0.0751%	7550	701	10.8	2	6	14	0	1.6436E-08
8	6.28	HEPTA EPOX	0.0003	0.1780%	18015	1266	14.2	2	8	14	0	1.6325E-08
10	10.42	EN +END 2	0.1619	97.9729%	4972113	194543	25.6	3	10	14	0	3.2563E-08
12	14.97	DDT	0.0020	1.1919%	76401	1967	38.8	1	12	14	0	2.5780E-08
14	27.90	MIREX	1.0000	0.0000%	1183519	19891	59.5	1	14	14	0	8.4494E-07

TOTAL AMOUNT = 0.1653

Plot of data file: P:CONFM20.PTS
Date: 07-04-1989 Time: 08:32:55
Sample Name: END DEG
Start Time= 1.52Stop Time = 45.00Min. Scale= 29137Max. Scale= 224765

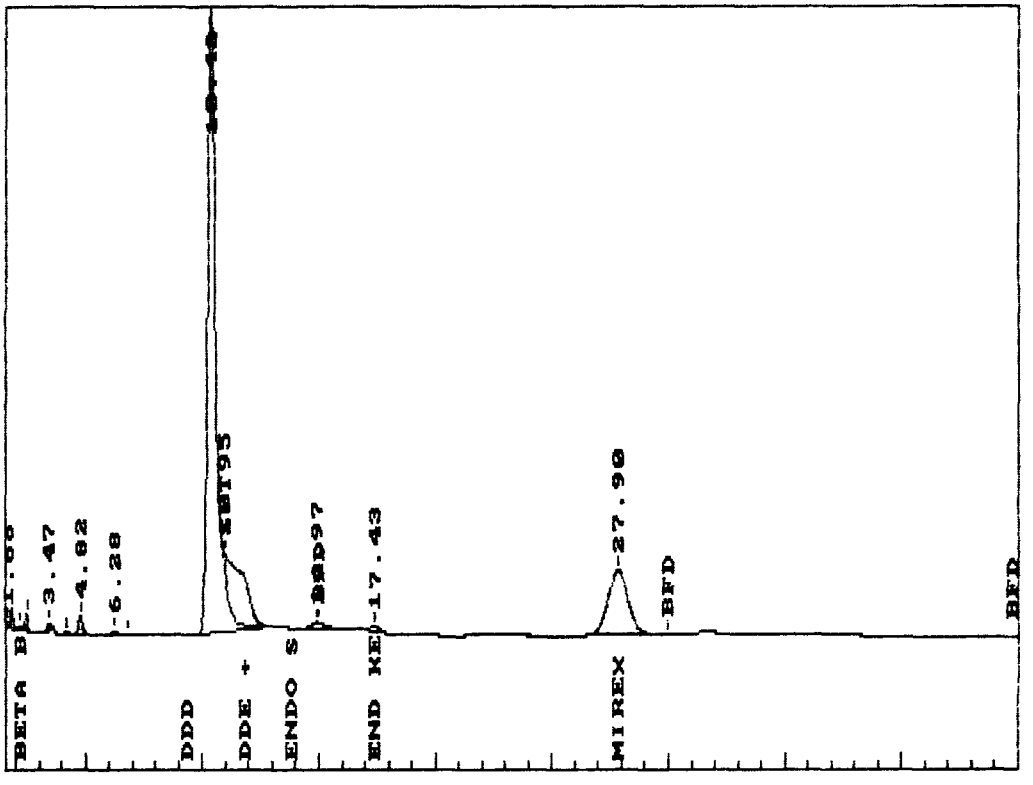


```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-04-1989 08:34:13 Version 4.1 **********************
* Sample Name: END DEG                          Data File: P:CONFM20      *
* Date: 07-01-1989 04:08:13 Method: P:PESTB2 07-04-1989 07:58:22  #  17   *
* Interface: 0   Cycle#:  20   Operator NW  Channel#: 0    Vial#: N.A.    *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000           *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT            Detector 1: ECD CONF        *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per    1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	HEIGHT BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.23	BETA BHC	0.0152	84.3205%	7527	1159	6.5	2	3	14	0	2.0164E-06
4	2.52	DELTA BHC	0.0007	3.9079%	42350	5366	7.9	2	4	14	0	1.6609E-08
13	17.43	END KETONE	0.0021	11.7716%	59777	1691	35.4	1	13	14	0	3.5447E-08
14	27.90	MIREX	1.0000	0.0000%	1183519	19891	59.5	1	14	14	0	8.4494E-07

TOTAL AMOUNT = 0.0180

Plot of data file: P:CONFM20.PTS
Date: 07-04-1989 Time: 08:34:49
Sample Name: END DEG
Start Time= 1.52Stop Time = 45.00Min. Scale= 29137Max. Scale= 224765



***** INTERNAL STANDARD TABLE *****

********** 07-03-1989 15:00:57 Version 4.1 **********

* Sample Name: HEXANE Data File: P:FM1 *
* Date: 06-28-1989 09:27:44 Method: P:MET42. 07-03-1989 08:23:04 # 36 *
* Interface: 0 Cycle#: 1 Operator NW Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

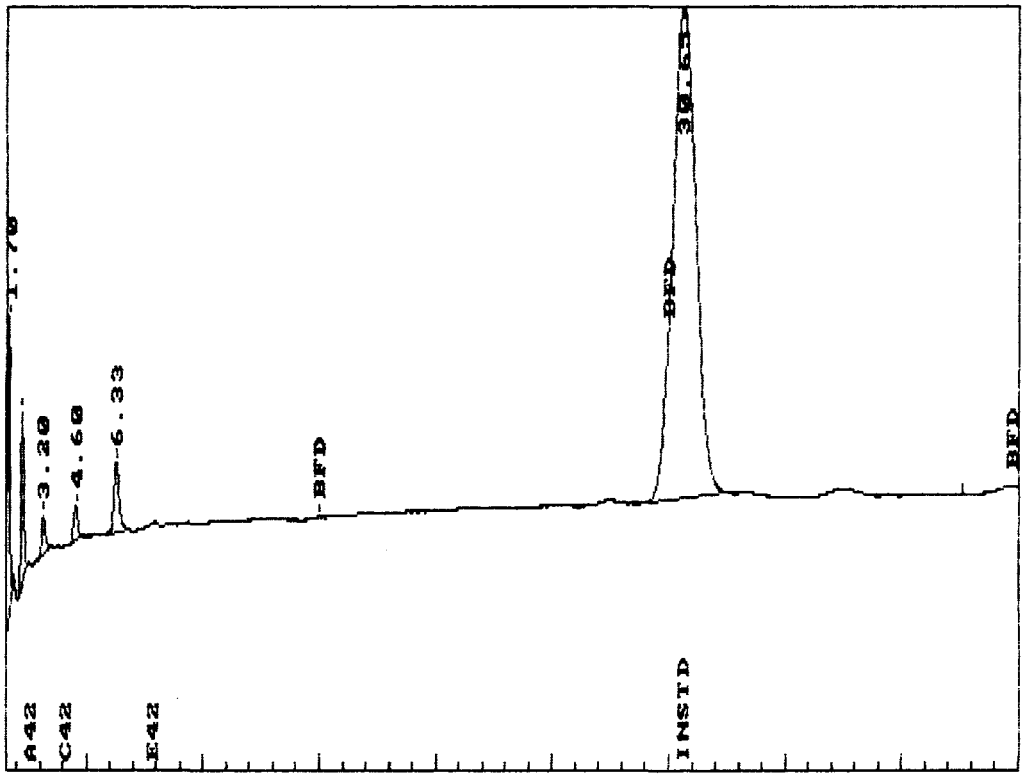
* Instrument Type: HEWLETT PACKARD Column Type: MIXED PHASE-PRIMARY *
* Solvent Description: ULTRA HIGH PURITY NITROGEN *
* Conditions: ISOTHERMAL AT 200 CELSIUS *
* Detector 0: ECD QUANT Detector 1: ECD CONF *
* Misc. Information: D.S. SF6232 GC # 2 *

Starting Delay: 1.50 Ending retention time: 45.00
Area reject: 0 One sample per 1.000 sec.
Amount injected: 5.00 Dilution factor: 1.00
Internal Standard Amount: 1
Sample Weight: 1.000000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ~~UG/KG~~ ug/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT STD PEAK	% DELTA RET TIME	CONC/AREA
3	3.20	B42	-0.0308	55.1972%	19526	1701	11.5	1	3	6	0	-1.5750E-06
4	4.60	D42	-0.0250	44.8028%	17725	1477	12.0	1	4	6	0	-1.4083E-06
6	30.65	INSTD MIREX	1.0000	0.0000%	1520551	21887	69.5	1	6	6	0	6.5766E-07

TOTAL AMOUNT = -0.0557

Plot of data file: P:FM1.PTS
Date: 07-03-1989 Time: 15:01:41
Sample Name: HEXANE
Start Time= 1.52Stop Time = 45.00Min. Scale= 61299Max. Scale= 89382

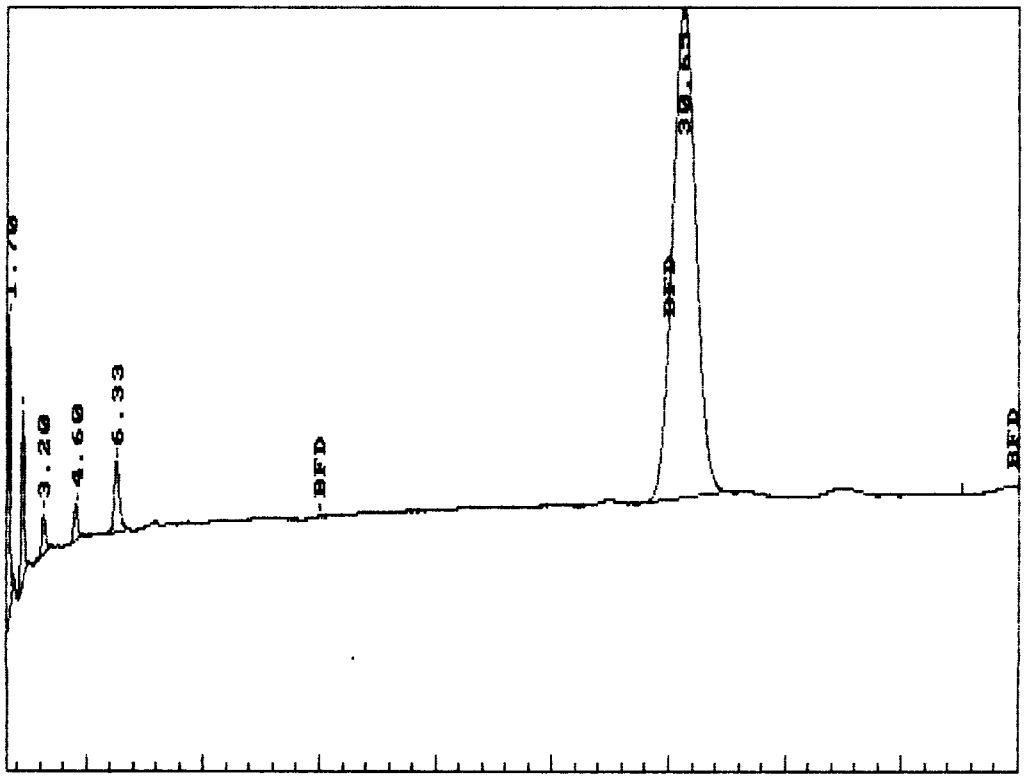


INTERNAL STANDARD TABLE

```
******************** 07-03-1989 14:59:11 Version 4.1 ********************
* Sample Name: HEXANE                          Data File: P:FM1          *
* Date: 06-28-1989 09:27:44 Method: ZERO 06-28-1989 08:27:23  #  39      *
* Interface: 0   Cycle#:  1    Operator NW  Channel#: 0    Vial#: N.A.   *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000          *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY *
*            Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                 *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF        *
* Misc. Information: D.S. SF6232                                        *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	HEIGHT BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
1	1.70		0.0000	0.0000%	77339	13218	5.9	1				0.0000E+00
2	2.30		0.0000	0.0000%	62683	7625	8.2	1				0.0000E+00
3	3.20		0.0000	0.0000%	19526	1701	11.5	1				0.0000E+00
4	4.60		0.0000	0.0000%	17725	1477	12.0	1				0.0000E+00
5	6.33		0.0000	0.0000%	48560	3070	15.8	1				0.0000E+00
6	30.65		0.0000	0.0000%	1520551	21887	69.5	1				0.0000E+00
		TOTAL AMOUNT =	0.0000									

Data File = P:FM1.PTS Printed on 07-03-1989 at 14:59:28
Start time: 1.50 min. Stop time: 45.00 min. Offset: 0 mv.
Low Value: 61299 uv High Value: 89382 uv Scale factor: 1.0



INTERNAL STANDARD TABLE

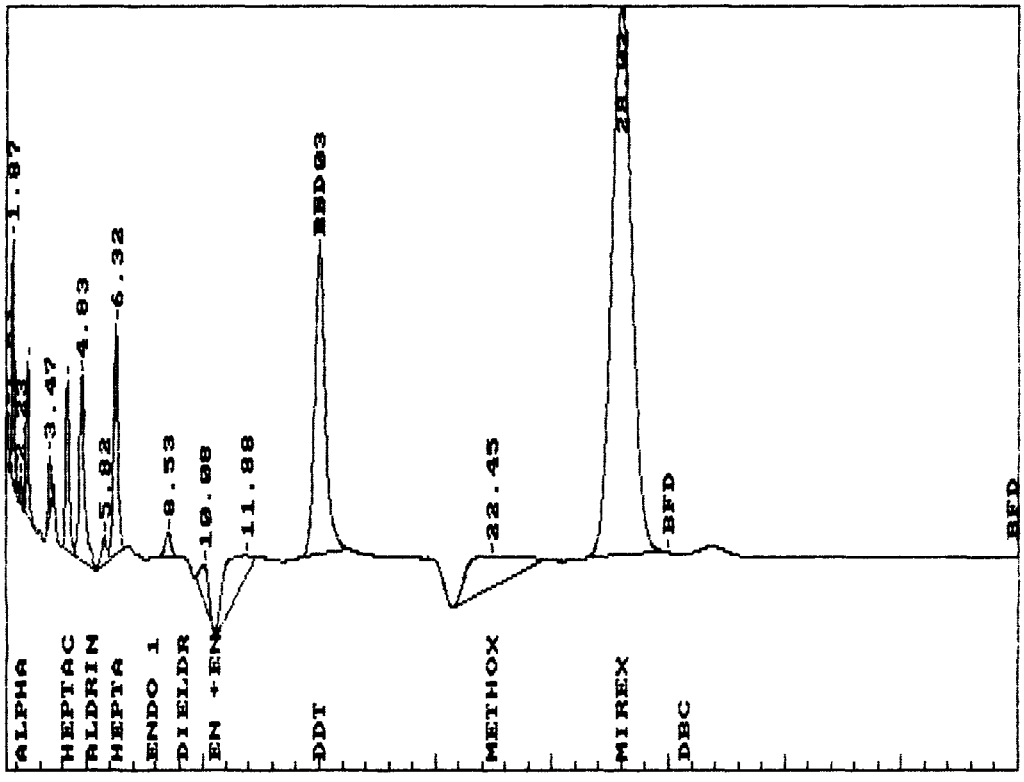
```
******************** 07-04-1989 08:12:30 Version 4.1 **********************
* Sample Name: HEXANE                              Data File: P:CONFM1      *
* Date: 06-30-1989 13:47:08 Method: P:PESTA2 07-04-1989 08:06:34  #  16    *
* Interface: 0   Cycle#:  1    Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*             Detector 0: ECD QUANT            Detector 1: ECD CONF       *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
```

Starting Delay: 1.50 — Ending retention time: 45.00
Area reject: 0 — One sample per 1.000 sec.
Amount injected: 5.00 — Dilution factor: 1.00
Internal Standard Amount: 1
Sample Weight: 1.000000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.23	ALPHA BHC	0.0001	0.5752%	7830	1145	6.8	1	3	15	0	1.5243E-08
4	2.52	LINDANE	0.0009	4.3734%	51832	6253	8.3	1	3	15	-3.213	1.7510E-08
6	4.23	HEPTACHLOR	0.0010	5.0313%	71378	6851	10.4	2	6	15	0	1.4628E-08
9	6.32	HEPTA EPOX	0.0019	9.0715%	129571	9195	14.1	2	9	15	0	1.4529E-08
11	10.08	EN +END 2	0.0014	6.5469%	46879	1660	28.2	1	9	15	-4.122	2.8981E-08
13	15.03	DDT	0.0093	44.7393%	404644	12157	33.3	1	13	15	0	2.2944E-08
14	22.45	METHOX	0.0062	29.6624%	190265	1210	157.2	1	14	15	0	3.2352E-08
15	28.02	MIREX	1.0000	0.0000%	1329819	22133	60.1	1	15	15	0	7.5198E-07

TOTAL AMOUNT = 0.0208

Plot of data file: P:CONFM1.PTS
Date: 07-04-1989 Time: 08:13:05
Sample Name: HEXANE
Start Time= 1.52Stop Time = 45.00Min. Scale= 25244Max. Scale= 50680

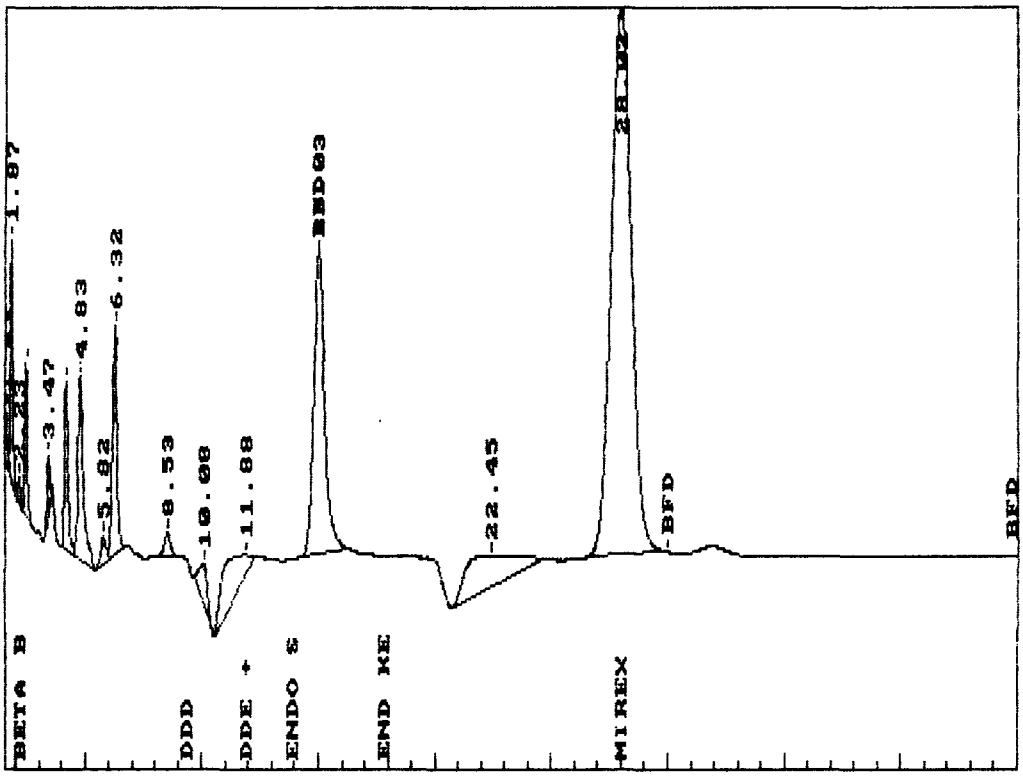


```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-04-1989 14:00:47 Version 4.1 **********************
* Sample Name: HEXANE                          Data File: P:CONFM1        *
* Date: 06-30-1989 13:47:08 Method: P:PESTB2 07-04-1989 07:58:22  #  17   *
* Interface: 0   Cycle#:  1    Operator NW  Channel#: 0    Vial#: N.A.    *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000           *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT            Detector 1: ECD CONF        *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.23	BETA BHC	0.0141	90.5255%	7830	1145	6.8	1	3	15	0	1.7946E-06
4	2.52	DELTA BHC	0.0008	4.9361%	51832	6253	8.3	1	4	15	0	1.4782E-08
12	11.88	DDE + EA	0.0007	4.5384%	115603	816	141.7	1	12	15	0	6.0938E-09
15	28.02	MIREX	1.0000	0.0000%	1329819	22133	60.1	1	15	15	0	7.5198E-07

TOTAL AMOUNT = 0.0155

Plot of data file: P:CONFM1.PTS
Date: 07-04-1989 Time: 14:01:12
Sample Name: HEXANE
Start Time= 1.52Stop Time = 45.00Min. Scale= 25244Max. Scale= 50680



++++++ INTERNAL STANDARD TABLE ++++++

********** 07-03-1989 09:49:59 Version 4.1 **********

* Sample Name: METHOD BLK 6232 Data File: P:FM4 *
* Date: 06-28-1989 11:47:15 Method: P:PESTA 06-29-1989 10:06:41 # 75 *
* Interface: 0 Cycle#: 4 Operator NW Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

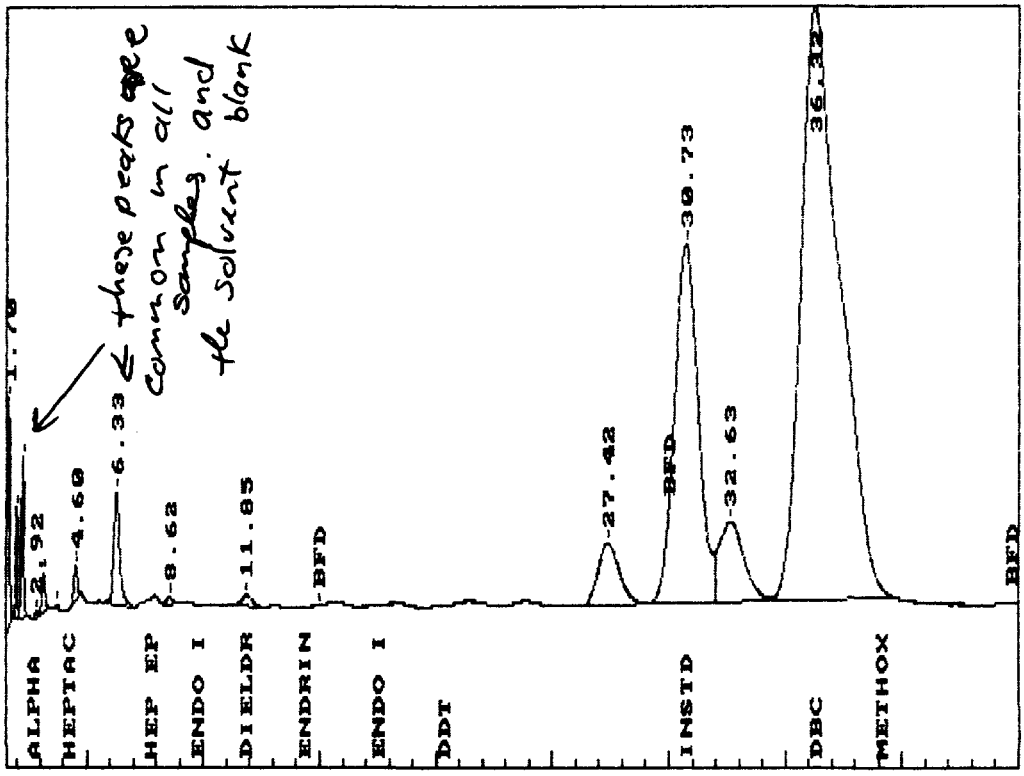
* Instrument Type: HEWLETT PACKARD Column Type: MIXED PHASE-PRIMARY *
* Solvent Description: ULTRA HIGH PURITY NITROGEN *
* Conditions: ISOTHERMAL AT 200 CELSIUS *
* Detector 0: ECD QUANT Detector 1: ECD CONF *
* Misc. Information: D.S. SF6232 *

Starting Delay: 1.50 Ending retention time: 45.00
Area reject: 0 One sample per 1.000 sec.
Amount injected: 5.00 Dilution factor: 10.00
Internal Standard Amount: 1
Sample Weight: 1.000000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
10	11.85	DIELDRIN	~~0.0103~~	1.6764%	18509	642	28.8	1	10	12	0	5.5472E-07
12	30.73	INSTD	1.0000	0.0000%	1642869	23293	70.5	2	12	12	0	6.0869E-07
14	36.32	DBC	0.6022	98.3236%	3928970	36847	106.6	1	14	12	0	1.5326E-07

TOTAL AMOUNT = 0.6124

Plot of data file: P:FM4.PTS
Date: 07-03-1989 Time: 09:50:42
Sample Name: METHOD BLK 6232
Start Time= 1.52Stop Time = 45.00Min. Scale= 67049Max. Scale= 107858



***** INTERNAL STANDARD TABLE *****

********** 07-03-1989 09:54:12 Version 4.1 **********

* Sample Name: METHOD BLK 6232 Data File: P:FM4 *
* Date: 06-28-1989 11:47:15 Method: P:PESTB 06-29-1989 09:26:38 # 53 *
* Interface: 0 Cycle#: 4 Operator NW Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

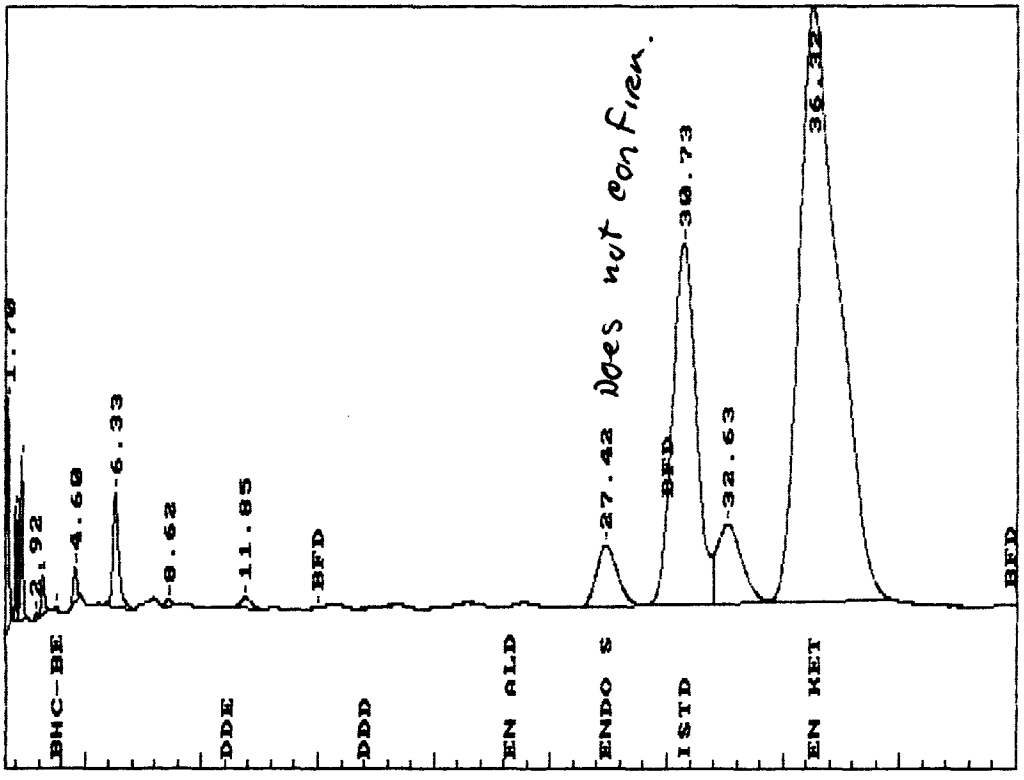
* Instrument Type: HEWLETT PACKARD Column Type: MIXED PHASE-PRIMARY *
* Solvent Description: ULTRA HIGH PURITY NITROGEN *
* Conditions: ISOTHERMAL AT 200 CELSIUS *
* Detector 0: ECD QUANT Detector 1: ECD CONF *
* Misc. Information: D.S. SF6232 *

Starting Delay: 1.50 Ending retention time: 45.00
Area reject: 0 One sample per 1.000 sec.
Amount injected: 5.00 Dilution factor: 10.00
Internal Standard Amount: 1
Sample Weight: 1.000000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
6	3.82	BHC-BETA	0.0005	0.0604%	3130	327	9.6	1	6	12	0	1.6347E-07
7	4.60	BHC-DELTA	0.0030	0.3540%	25187	2230	11.3	1	7	12	0	1.1905E-07
11	27.42	ENDO SULFATE	0.0550	6.4888%	243118	3919	62.0	1	11	12	0	2.2610E-07
12	30.73	ISTD	1.0000	0.0000%	1642869	23293	70.5	2	12	12	0	6.0869E-07
14	36.32	EN KETONE	0.7887	93.0969%	3928970	36847	106.6	1	14	12	0	2.0073E-07

TOTAL AMOUNT = 0.8471

Plot of data file: P:FM4.PTS
Date: 07-03-1989 Time: 09:54:49
Sample Name: METHOD BLK 6232
Start Time= 1.52Stop Time = 45.00Min. Scale= 67049Max. Scale= 107858



*see overlay and confirmation

DS. 6232
PRIMARY edom

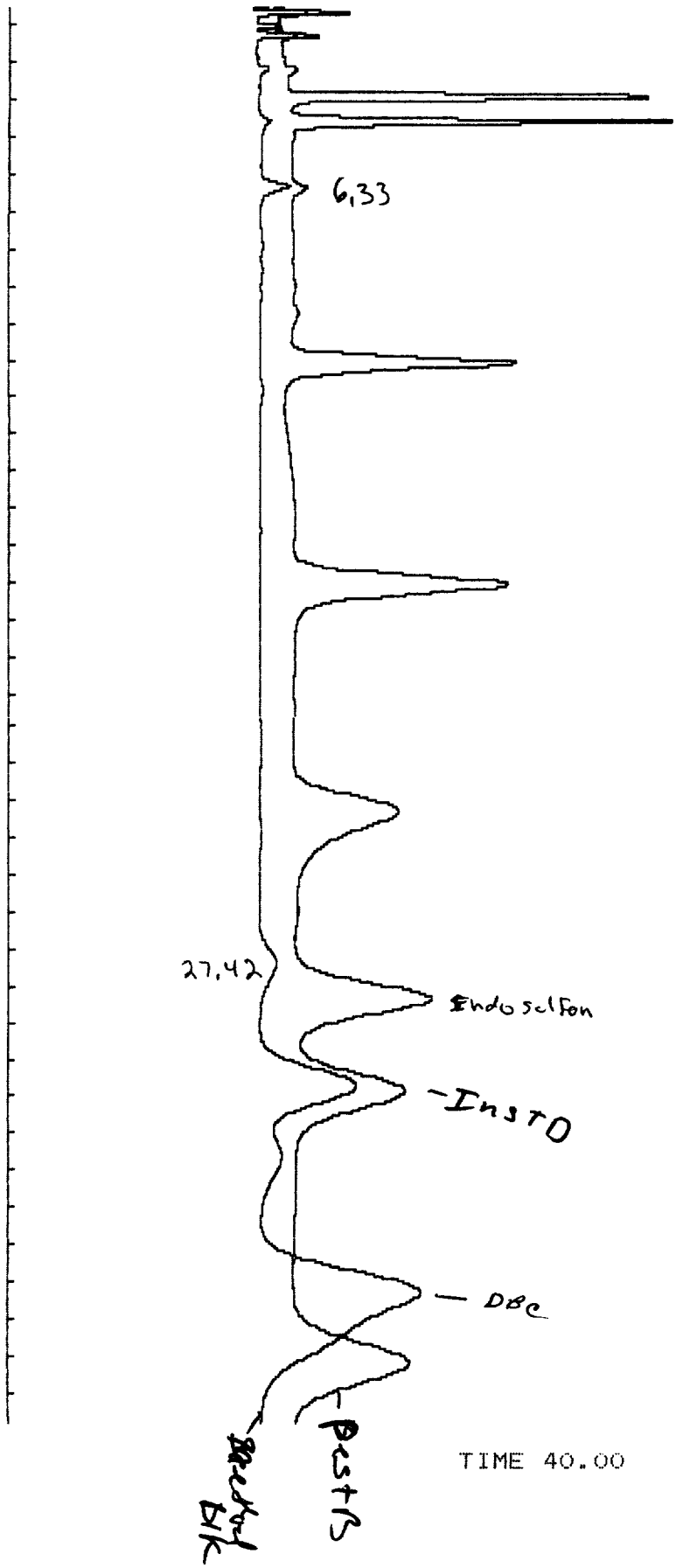
P:FM6
SCALE 200
OFFSET 10
pest B

P:FM4
SCALE 225
OFFSET 10

method B/K

TIME 1.50

TIME 1.50



TIME 40.00

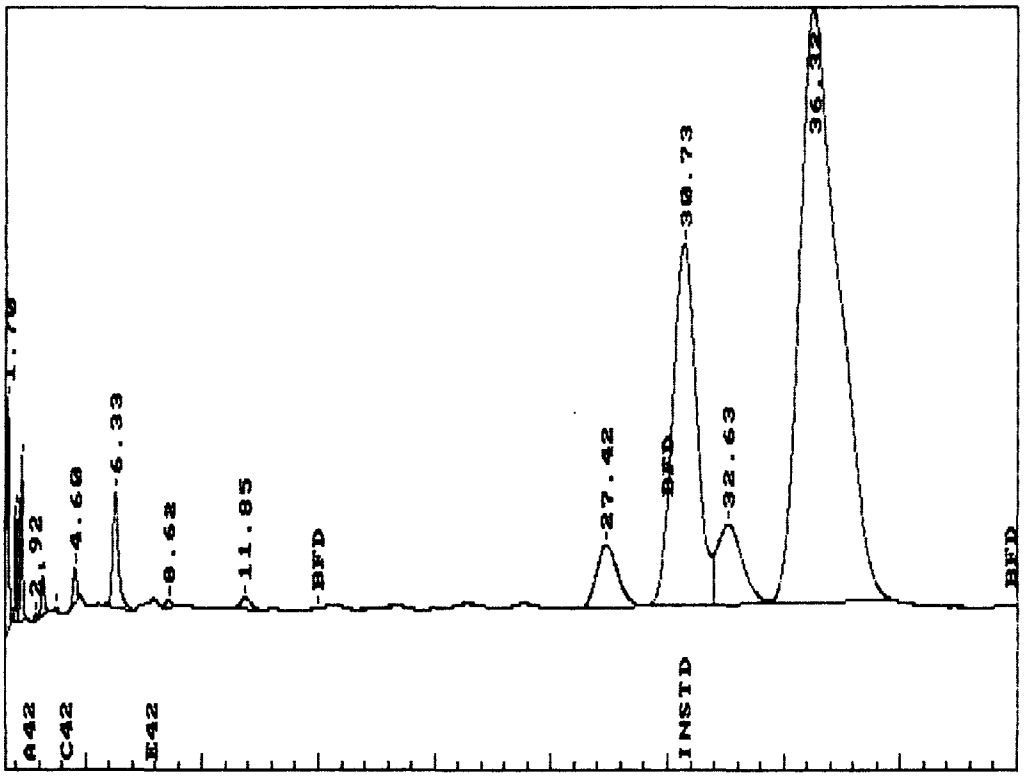
TIME 40.00

```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-03-1989 09:56:24 Version 4.1 **********************
* Sample Name: METHOD BLK 6232                    Data File: P:FM4          *
* Date: 06-28-1989 11:47:15 Method: P:MET42. 07-03-1989 08:23:04  #  36    *
* Interface: 0   Cycle#:  4    Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:       10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ~~UG/KG~~ ug/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
5	3.22	B42	-0.2910	55.8513%	27202	2554	10.7	2	5	12	0	-1.0698E-05
7	4.60	D42	-0.2300	44.1487%	25187	2230	11.3	1	7	12	0	-9.1334E-06
12	30.73	INSTD MIREX	1.0000	0.0000%	1642869	23293	70.5	2	12	12	0	6.0869E-07

TOTAL AMOUNT = -0.5211

Plot of data file: P:FM4.PTS
Date: 07-03-1989 Time: 09:56:59
Sample Name: METHOD BLK 6232
Start Time= 1.52Stop Time = 45.00Min. Scale= 67049Max. Scale= 107858

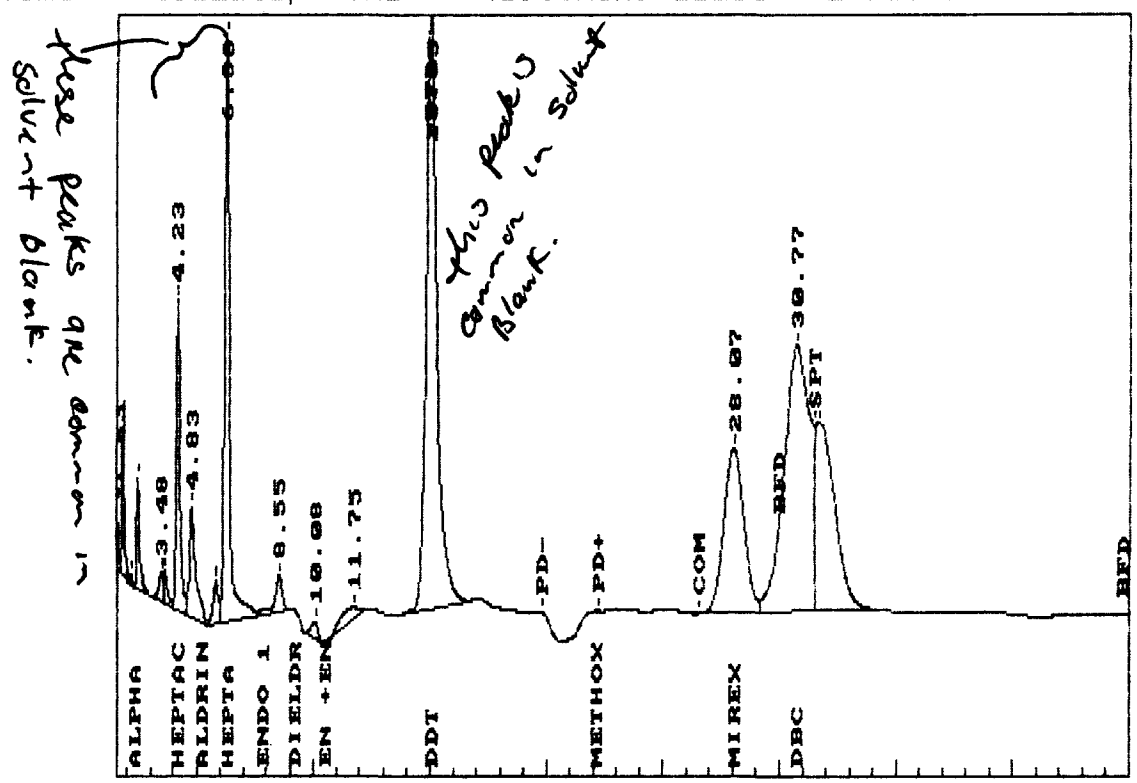


```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-04-1989 08:41:32 Version 4.1 ********************
* Sample Name: METHOD BLK 6232                    Data File: P:CONFM4      *
* Date: 06-30-1989 15:43:49 Method: P:PESTA2 07-04-1989 08:06:34  #  16   *
* Interface: 0   Cycle#:  4    Operator NW  Channel#: 0    Vial#: N.A.    *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000           *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*            Solvent Description: ULTRA HIGH PURITY NITROGEN              *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per    1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1                                        10.
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
7	4.23	HEPTACHLOR	0.0064	4.6539%	437797	41904	10.4	2	7	15	0	1.4703E-08
10	6.33	HEPTA EPOX	0.0181	13.1214%	1242721	78827	15.8	2	10	15	0	1.4603E-08
12	10.08	EN +END 2	0.0015	1.0845%	51491	2414	21.3	1	10	15	-4.375	2.9130E-08
14	15.05	DDT	0.0600	43.3455%	2599532	79976	32.5	1	14	15	0	2.3062E-08
15	28.07	MIREX	1.0000	0.0000%	1323020	22063	60.0	2	15	15	0	7.5585E-07
16	30.77	DBC	0.0523	37.7948%	2696618	35698	75.5	2	16	15	0	1.9385E-08

TOTAL AMOUNT = 0.1383

Plot of data file: P:CONFM4.PTS
Date: 07-04-1989 Time: 08:42:04
Sample Name: METHOD BLK 6232
Start Time= 1.52Stop Time = 45.00Min. Scale= 24750Max. Scale= 109466



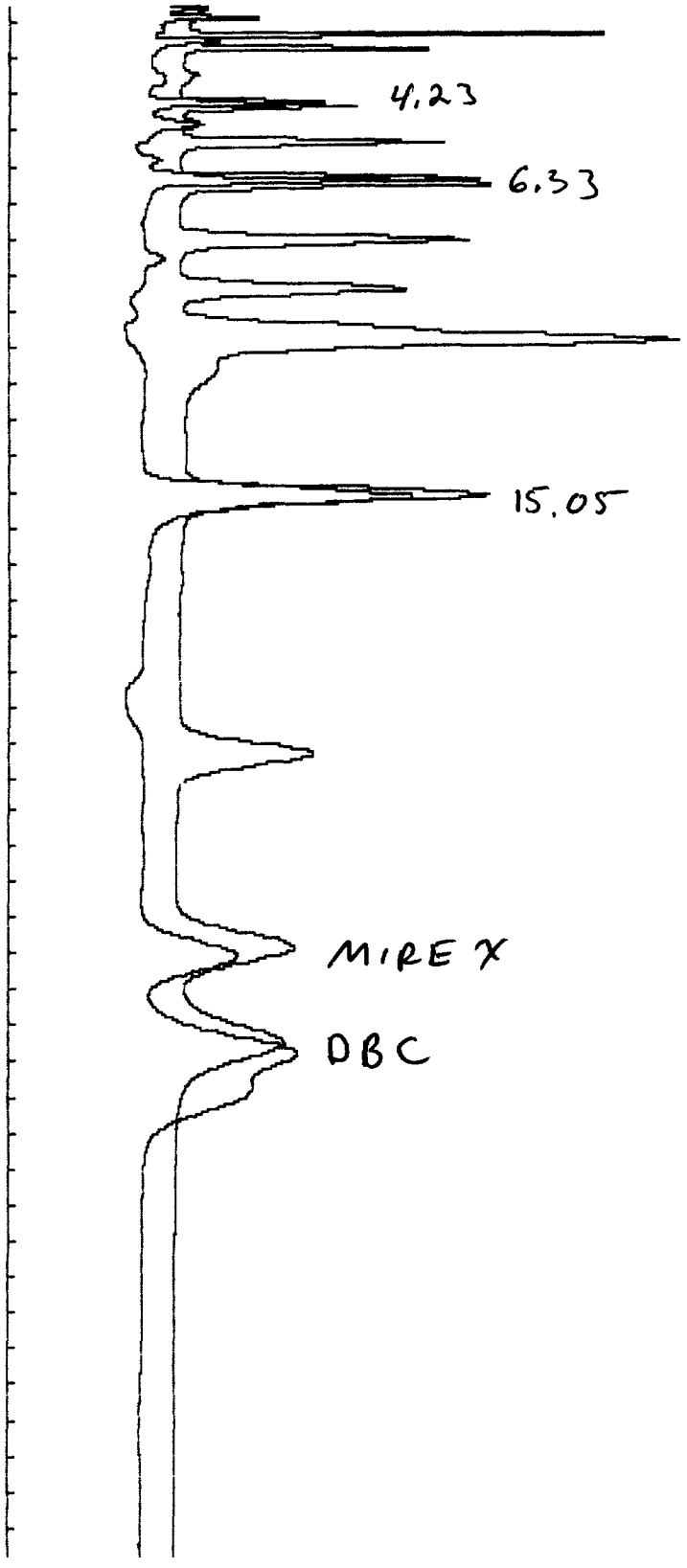
P:CONFM7
SCALE 175
OFFSET 0
Pest A

P:CONFM4
SCALE 225
OFFSET 0
Method Blk

confirmation
DS 6232

TIME 1.50

TIME 1.50



TIME 45.00

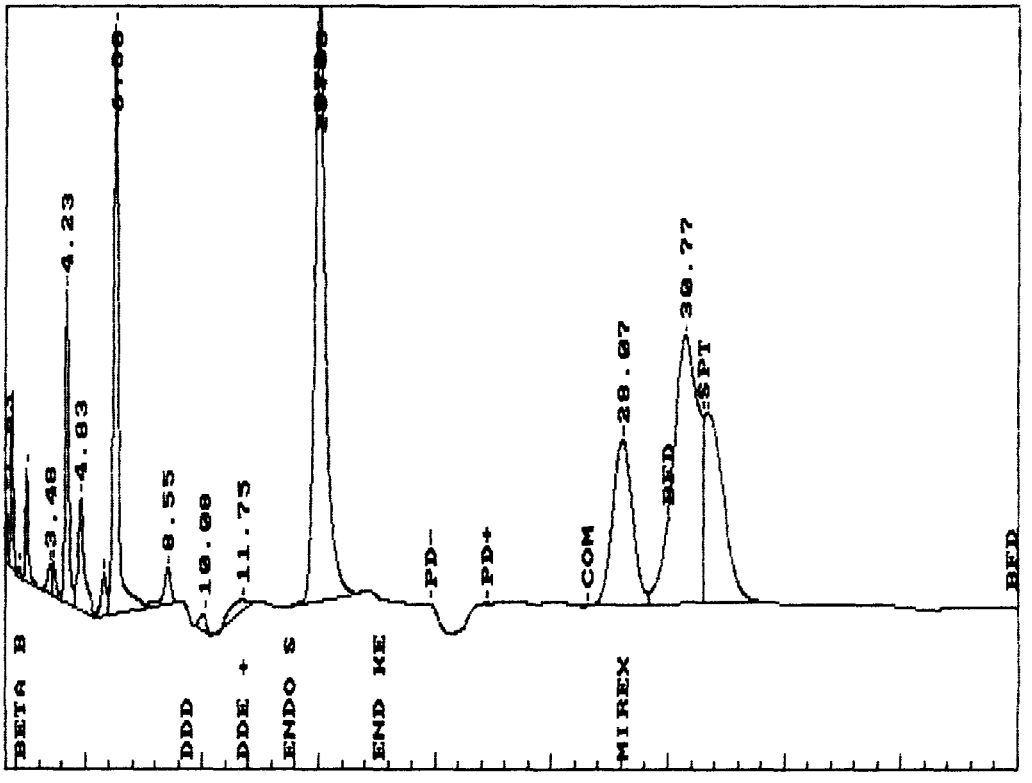
TIME 45.00

```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-04-1989 08:43:24 Version 4.1 **********************
* Sample Name: METHOD BLK 6232                    Data File: P:CONFM4      *
* Date: 06-30-1989 15:43:49 Method: P:PESTB2 07-04-1989 07:58:22  #  17   *
* Interface: 0   Cycle#:  4    Operator NW  Channel#: 0    Vial#: N.A.    *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000           *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*            Solvent Description: ULTRA HIGH PURITY NITROGEN              *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per    1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1                                        10
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.20	BETA BHC	0.0238	90.0647%	13059	1625	8.0	1	3	15	0	1.8038E-06
4	2.52	DELTA BHC	0.0021	7.9498%	139931	15437	9.1	2	4	15	0	1.4858E-08
13	11.75	DDE + EA	0.0005	1.9855%	84778	1383	61.3	1	13	15	0	6.1251E-09
15	28.07	MIREX	1.0000	0.0000%	1323020	22063	60.0	2	15	15	0	7.5585E-07

TOTAL AMOUNT = 0.0262

Plot of data file: P:CONFM4.PTS
Date: 07-04-1989 Time: 08:43:51
Sample Name: METHOD BLK 6232
Start Time= 1.52Stop Time = 45.00Min. Scale= 24750Max. Scale= 109466



Confirmation

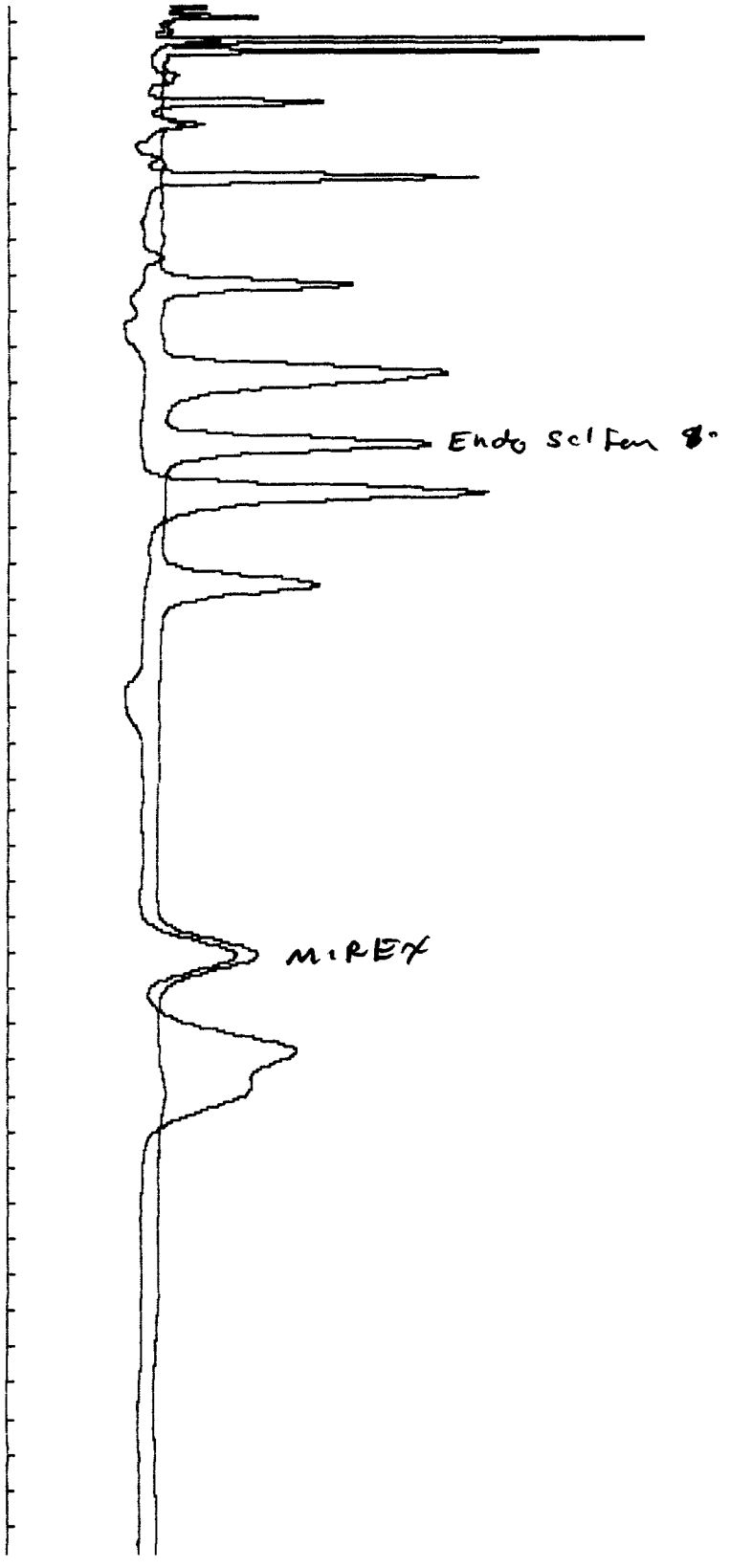
6232

P:CONFM6 Pest B
SCALE 200
OFFSET 0

TIME 1.50

P:CONFM4 Method Blk
SCALE 225
OFFSET 0

TIME 1.50



TIME 45.00

TIME 45.00

****** INTERNAL STANDARD TABLE ******

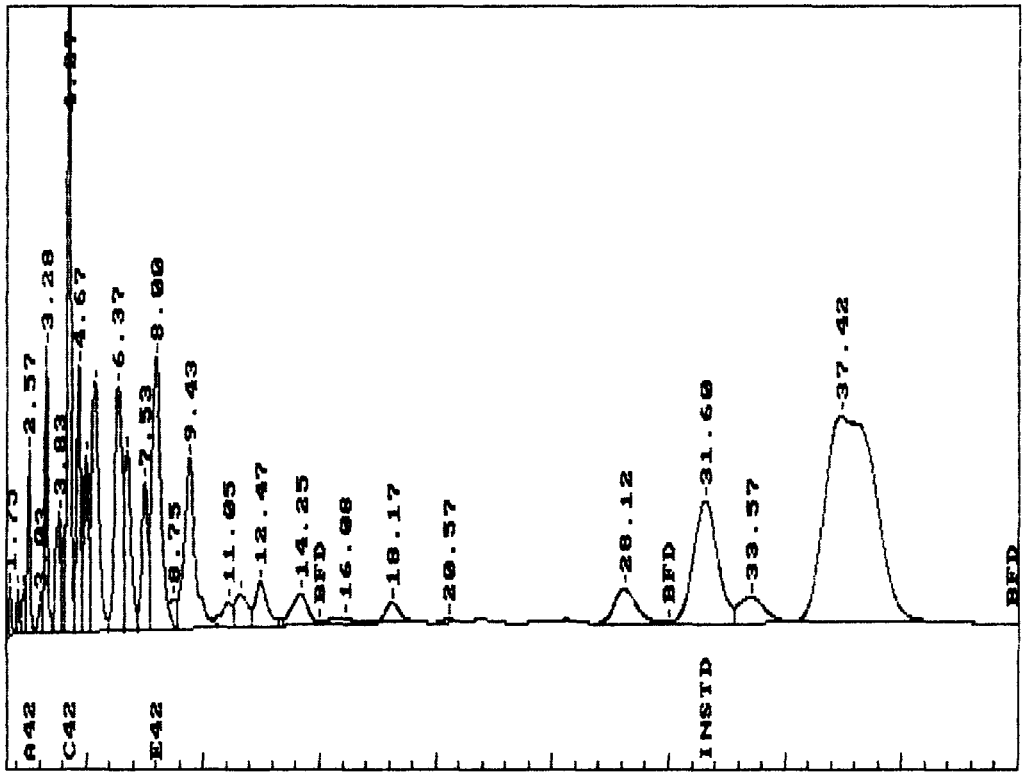
```
******************** 07-03-1989 09:32:39 Version 4.1 ********************
* Sample Name: PCBMS 89FM22S02                    Data File: P:FM23       *
* Date: 06-29-1989 02:30:51 Method: P:MET42. 07-03-1989 08:23:04  #  36  *
* Interface: 0   Cycle#:  23   Operator NW  Channel#: 0    Vial#: N.A.   *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000          *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN           *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                  *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF         *
* Misc. Information: D.S. SF6232                                         *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:   45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:       10.00
Internal Standard Amount:  1
Sample Weight:          0.890000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ~~UG/KG~~ ug/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
4	2.57	A42	1.1980	~~12.5846%~~	307890	34993	8.8	2	4	27	0	3.8911E-06
6	3.28	B42	1.0793	~~11.3380%~~	483273	55371	8.7	2	6	27	0	2.2334E-06
9	4.27	C42	1.9814	20.8140%	1324767	121984	10.9	2	9	27	0	1.4957E-06
10	4.67	D42	2.0661	21.7031%	653944	51765	12.6	2	10	27	0	3.1594E-06
16	8.00	E42	3.1948	33.5602%	1435751	52838	27.2	3	16	27	0	2.2252E-06
27	31.60	INSTD MIREX	1.0000	0.0000%	1620418	23589	68.7	2	27	27	0	6.1712E-07

TOTAL AMOUNT = 9.5197

average of 3 peaks. 2.4141

Plot of data file: P:FM23.PTS
Date: 07-03-1989 Time: 09:33:18
Sample Name: PCBMS 89FM22S02
Start Time= 1.52Stop Time = 45.00Min. Scale= 67684Max. Scale= 190544



****** INTERNAL STANDARD TABLE ******

********** 07-03-1989 09:21:10 Version 4.1 **********

* Sample Name: PCBMS 89FM22S02 Data File: P:FM23 *
* Date: 06-29-1989 02:30:51 Method: P:PESTA 06-29-1989 10:06:41 # 75 *
* Interface: 0 Cycle#: 23 Operator NW Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

* Instrument Type: HEWLETT PACKARD Column Type: MIXED PHASE-PRIMARY *
* Solvent Description: ULTRA HIGH PURITY NITROGEN *
* Conditions: ISOTHERMAL AT 200 CELSIUS *
* Detector 0: ECD QUANT Detector 1: ECD CONF *
* Misc. Information: D.S. SF6232 *

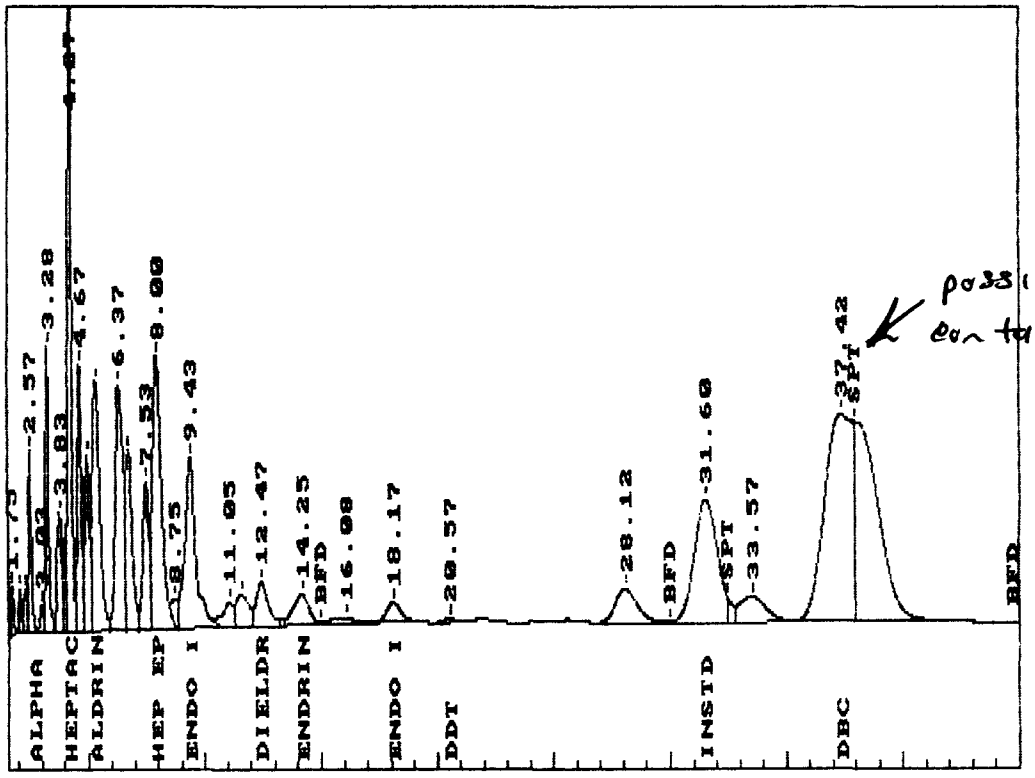
Starting Delay: 1.50 Ending retention time: 45.00
Area reject: 0 One sample per 1.000 sec.
Amount injected: 5.00 Dilution factor: 10.00
Internal Standard Amount: 1
Sample Weight: 0.890000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
9	4.27	HEPTACHLOR	0.1393	7.2300%	1324767	121984	10.9	2	9	27	0	1.0518E-07
12	5.37	ALDRIN	0.1235	6.4099%	1098816	48329	22.7	2	12	27	0	1.1243E-07
16	8.00	HEP EPOX	0.1643	8.5258%	1435751	52838	27.2	3	16	27	0	1.1445E-07
18	9.43	ENDO I	0.1388	7.2017%	1088216	32941	33.0	3	18	27	0	1.2755E-07
21	12.47	DIELDRIN	0.0531	2.7556%	339289	8687	39.1	2	21	27	0	1.5653E-07
22	14.25	ENDRIN	0.0912	4.7340%	302866	6185	49.0	2	22	27	0	3.0125E-07
24	18.17	ENDO II	0.0393	2.0415%	173639	3820	45.5	2	24	27	0	2.2660E-07
25	20.57	DDT	0.0308	1.5960%	21808	597	36.5	1	25	27	0	1.4105E-06
27	31.60	INSTD	1.0000	0.0000%	1620418	23589	68.7	2	27	27	0	6.1712E-07
30	37.42	DBC	0.5544	28.7635%	3176237	39898	79.6	2	30	27	0	1.7453E-07
31	37.95	METHOXYCHLOR	0.5925	30.7421%	2832416	38471	73.6	2	31	27	0	2.0918E-07

TOTAL AMOUNT = 1.9273

This was calculated against PestA method for the purpose of finding the conc. of DBC.

Data File = P:FM23.PTS Printed on 07-03-1989 at 09:21:32
Start time: 1.50 min. Stop time: 45.00 min. Offset: 0 mv.
Low Value: 67684 uv High Value: 190544 uv Scale factor: 1.0



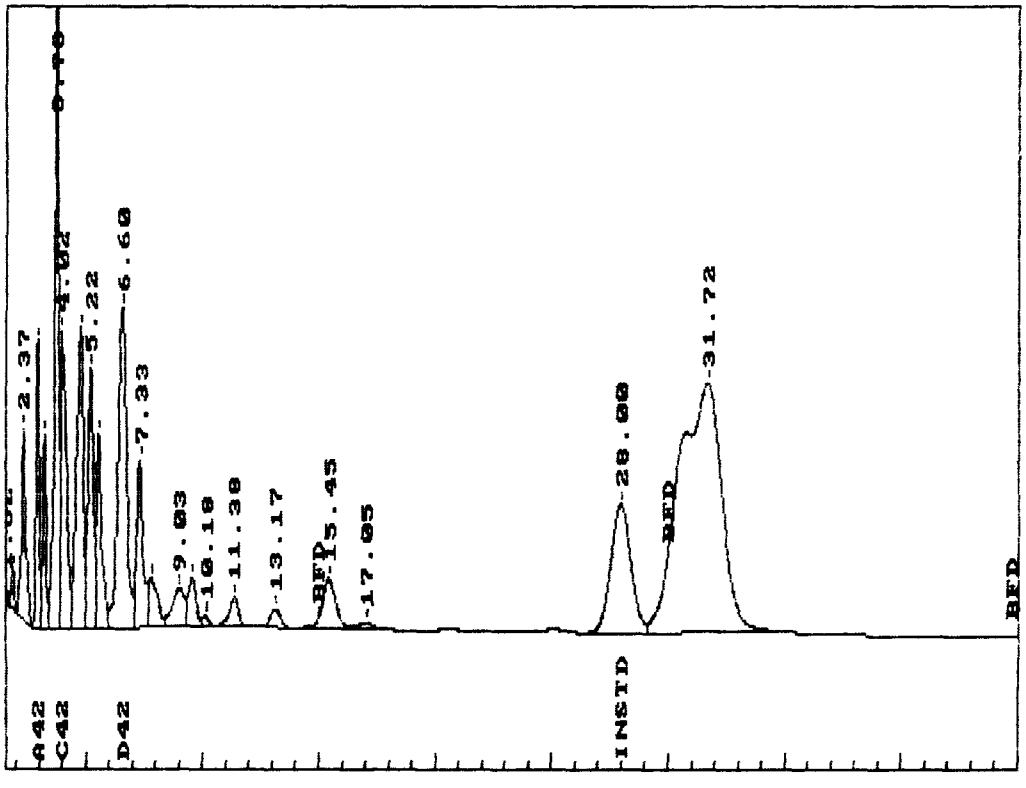
possible co-eluting contaminant.

```
******   INTERNAL STANDARD TABLE   ******
******************** 07-04-1989 12:17:08 Version 4.1 **********************
* Sample Name: PCBMS 89FM22S02                    Data File: P:CONFM16      *
* Date: 07-01-1989 01:02:12 Method: P:42CONF 07-04-1989 08:11:37  #  21    *
* Interface: 0   Cycle#:  16   Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*            Solvent Description: ULTRA HIGH PURITY NITROGEN              *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:       10.00
Internal Standard Amount:  1
Sample Weight:          0.890000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/KG	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
4	2.97	A42	1.3035	13.8318%	452486	51370	8.8	2	4	21	0	2.8807E-06
6	3.78	B42	1.7252	18.3072%	1289240	111274	11.6	2	6	21	0	1.3382E-06
7	4.02	C42	3.2223	34.1934%	951642	53130	17.9	2	7	21	0	3.3860E-06
11	6.60	D42	3.1727	33.6677%	1447919	57030	25.4	2	11	21	0	2.1912E-06
21	28.00	INSTD MIREX	1.0000	0.0000%	1366587	22771	60.0	2	21	21	0	7.3175E-07

TOTAL AMOUNT = 9.4236

Plot of data file: P:CONFM16.PTS
Date: 07-04-1989 Time: 12:17:33
Sample Name: PCBMS 89FM22S02
Start Time= 1.52Stop Time = 45.00Min. Scale= 29777Max. Scale= 142669



INTERNAL STANDARD TABLE

06-29-1989 14:10:41 Version 4.1

Sample Name: PESTMS 89FM22S02 Data File: P:FM17

Date: 06-28-1989 21:51:56 Method: P:PESTA 06-29-1989 10:06:41 # 75

Interface: 0 Cycle#: 17 Operator NW Channel#: 0 Vial#: N.A.

Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000

Instrument Type: HEWLETT PACKARD Column Type: MIXED PHASE-PRIMARY

Solvent Description: ULTRA HIGH PURITY NITROGEN

Conditions: ISOTHERMAL AT 200 CELSIUS

Detector 0: ECD QUANT Detector 1: ECD CONF

Misc. Information: D.S. SF6232 D.S. SF6232

Starting Delay: 1.50 Ending retention time: 45.00

Area reject: 0 One sample per 1.000 sec.

Amount injected: 5.00 Dilution factor: 10.00

Internal Standard Amount: 1

Sample Weight: 1.000000

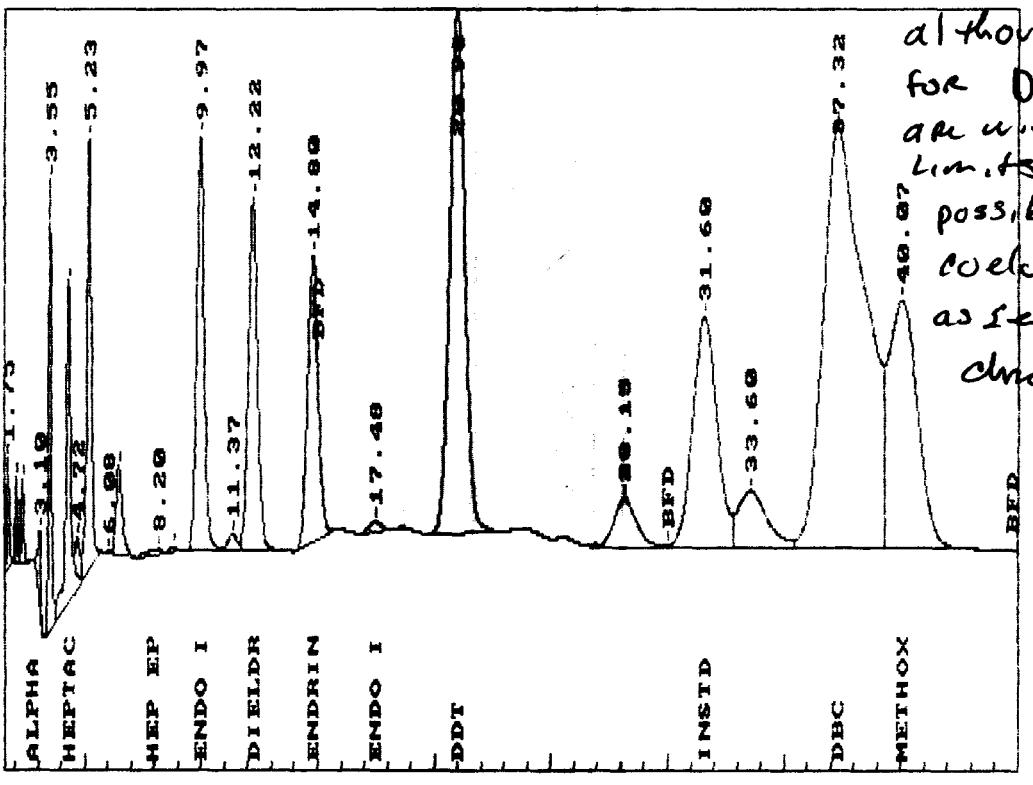
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
5	3.55	LINDANE	0.0356	1.7873%	351627	42755	8.2	2	5	20	0	1.0137E-07
6	4.33	HEPTACHLOR	0.0416	2.0866%	419996	30309	13.9	3	6	20	0	9.9081E-08
8	5.23	ALDRIN	0.0591	2.9610%	530365	40629	13.1	2	8	20	0	1.1134E-07
11	8.20	HEP EPOX	0.0117	0.5867%	22412	516	43.4	2	8	20	3.675	5.2203E-07
13	9.97	ENDO I	0.1039	5.2094%	881380	39308	22.4	2	13	20	0	1.1787E-07
15	12.22	DIELDRIN	0.1154	5.7876%	911255	33431	27.3	2	15	20	0	1.2666E-07
16	14.80	ENDRIN	0.2186	10.9586%	853816	27117	31.5	1	16	20	0	2.5597E-07
17	17.48	ENDO II	0.0200	1.0004%	31630	949	33.3	1	17	20	0	6.3077E-07
18	20.98	DDT	0.2905	14.5675%	2225992	49914	44.6	1	18	20	0	1.3051E-07
20	31.60	INSTD	1.0000	0.0000%	1586599	21881	72.5	2	20	20	0	6.3028E-07
22	37.32	DBC	0.7101	35.6073%	4473621	39996	111.9	2	22	20	0	1.5874E-07
24	40.07	METHOXYCHLOR	0.3879	19.4477%	2026132	23453	86.4	2	24	20	0	1.9142E-07

TOTAL AMOUNT = 1.9943

Data File = P:FM17.PTS Printed on 06-29-1989 at 14:11:27

Start time: 1.50 min. Stop time: 45.00 min. Offset: 0 mv.

Low Value: 61490 uv High Value: 121318 uv Scale factor: 1.0



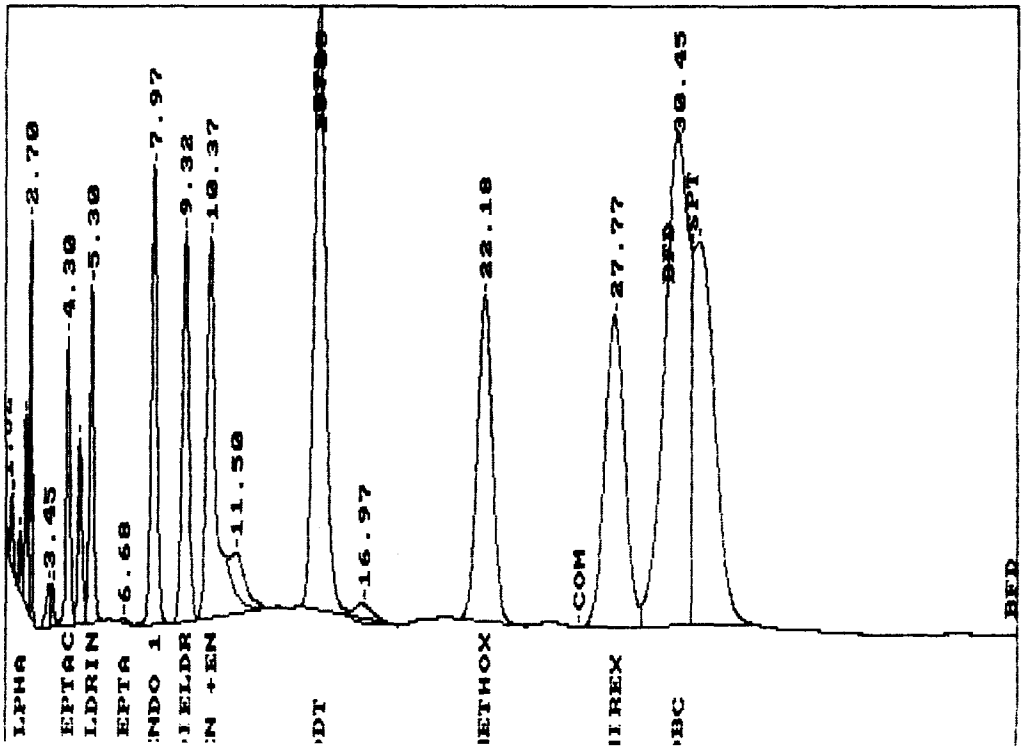
although recoveries for DBC and Mirex are within acceptable limits there is a possibility of a coeluting contaminant as seen in this chromatogram.

```
++++++   INTERNAL STANDARD TABLE   ++++++
******************** 07-04-1989 09:23:33 Version 4.1 ********************
* Sample Name: PESTMS 89FM22S02                    Data File: P:CONFM8      *
* Date: 06-30-1989 18:49:58 Method: P:PESTA2 07-04-1989 08:06:34  #  16    *
* Interface: 0   Cycle#:  8    Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*             Detector 0: ECD QUANT            Detector 1: ECD CONF       *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per    1.000 sec.
Amount injected:        5.00               Dilution factor:        10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.23	ALPHA BHC	0.0054	0.3143%	35744	4443	8.0	2	3	19	0	1.5173E-07
5	2.70	LINDANE	0.0313	1.8161%	179778	28554	6.3	2	5	19	0	1.7429E-07
8	4.30	HEPTACHLOR	0.0339	1.9665%	233028	20860	11.2	2	8	19	0	1.4560E-07
10	5.30	ALDRIN	0.0524	3.0353%	303977	24309	12.5	2	10	19	0	1.7228E-07
11	6.68	HEPTA EPOX	0.0010	0.0572%	6824	307	22.2	1	11	19	0	1.4462E-07
12	7.97	ENDO 1	0.0917	5.3177%	577315	32933	17.5	1	12	19	0	1.5892E-07
13	9.32	DIELDRIN	0.1018	5.9018%	571149	28047	20.4	2	13	19	0	1.7829E-07
14	10.37	EN +END 2	0.2464	14.2826%	854230	27400	31.2	3	14	19	0	2.8848E-07
16	15.05	DDT	0.3322	19.2554%	1454649	43614	33.4	3	16	19	0	2.2839E-07
18	22.18	METHOX	0.3450	19.9966%	1071346	23381	45.8	1	18	19	0	3.2204E-07
19	27.77	MIREX	1.0000	0.0000%	1335954	22424	59.6	2	19	19	0	7.4853E-07
20	30.45	DBC	0.4841	28.0565%	2521592	35537	71.0	2	20	19	0	1.9197E-07

TOTAL AMOUNT = 1.7254

Plot of data file: P:CONFM8.PTS
Date: 07-04-1989 Time: 09:24:17
Sample Name: PESTMS 89FM22S02
Start Time= 1.52Stop Time = 45.00Min. Scale= 29320Max. Scale= 74704



++++++ INTERNAL STANDARD TABLE ++++++

********** 07-03-1989 10:13:17 Version 4.1 **********

* Sample Name: 89FM11R15 Data File: P:FM5 *

* Date: 06-28-1989 12:34:02 Method: P:PESTA 06-29-1989 10:06:41 # 75 *

* Interface: 0 Cycle#: 5 Operator NW Channel#: 0 Vial#: N.A. *

* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HEWLETT PACKARD Column Type: MIXED PHASE-PRIMARY *

* Solvent Description: ULTRA HIGH PURITY NITROGEN *

* Conditions: ISOTHERMAL AT 200 CELSIUS *

* Detector 0: ECD QUANT Detector 1: ECD CONF *

* Misc. Information: D.S. SF6232 *

****

Starting Delay: 1.50 Ending retention time: 45.00

Area reject: 0 One sample per 1.000 sec.

Amount injected: 5.00 Dilution factor: 10.00

Internal Standard Amount: 1

Sample Weight: 1.000000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
5	2.75	ALPHA BHC	0.0100	1.4258%	59072	3672	16.1	2	5	17	0	1.6935E-07
9	5.12	ALDRIN	0.0140	1.9991%	54854	3527	15.6	2	9	17	0	2.5570E-07
13	7.83	HEP EPOX	0.0833	11.8698%	870766	46315	18.8	2	13	17	0	9.5641E-08
17	30.80	INSTD	1.0000	0.0000%	1821634	24433	74.6	3	17	17	0	5.4896E-07
19	36.42	DBC	0.5943	84.7053%	4299747	35112	122.5	1	19	17	0	1.3822E-07

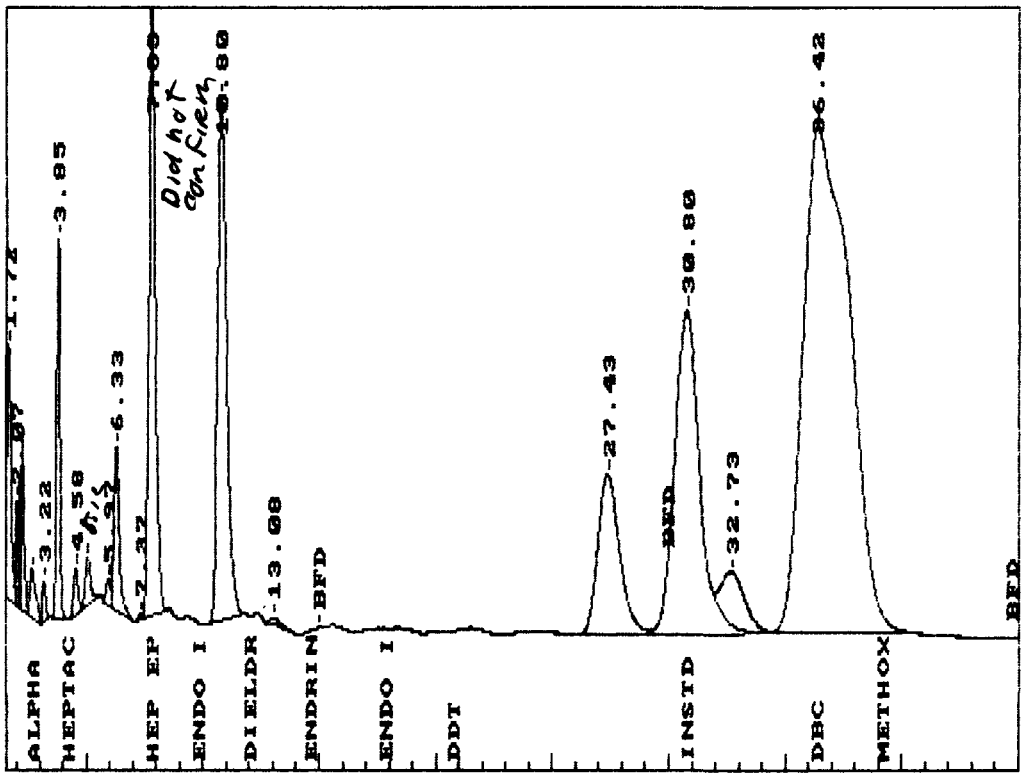
TOTAL AMOUNT = 0.7016

Plot of data file: P:FM5.PTS

Date: 07-03-1989 Time: 10:14:08

Sample Name: 89FM11R15

Start Time= 1.52Stop Time = 45.00Min. Scale= 69283Max. Scale= 117194



P:FM9
SCALE 200
OFFSET 0

pest A

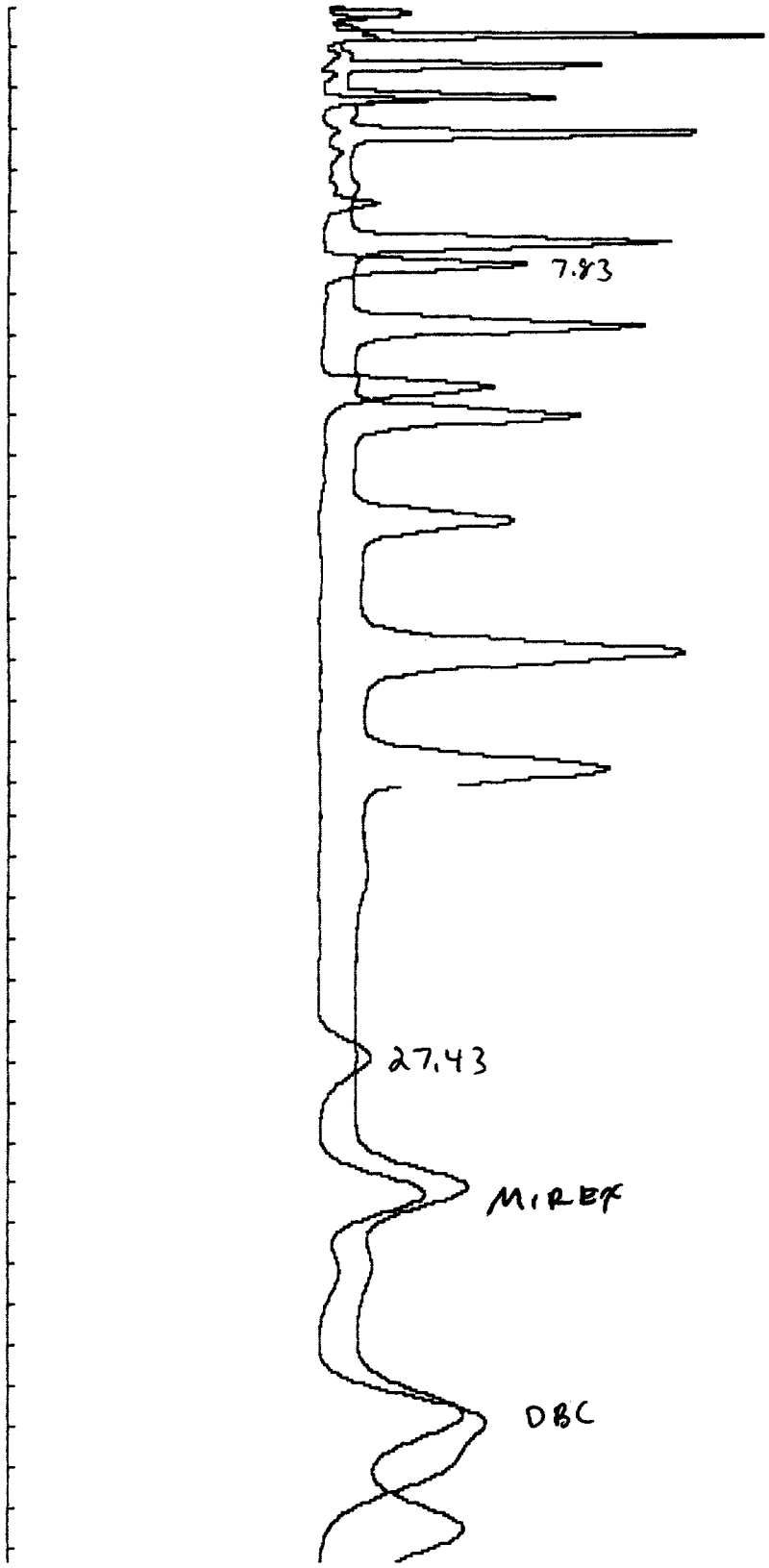
P:FM5
SCALE 225
OFFSET 0

R15

primary
SF 6232

TIME 2.00

TIME 1.50



TIME 40.50

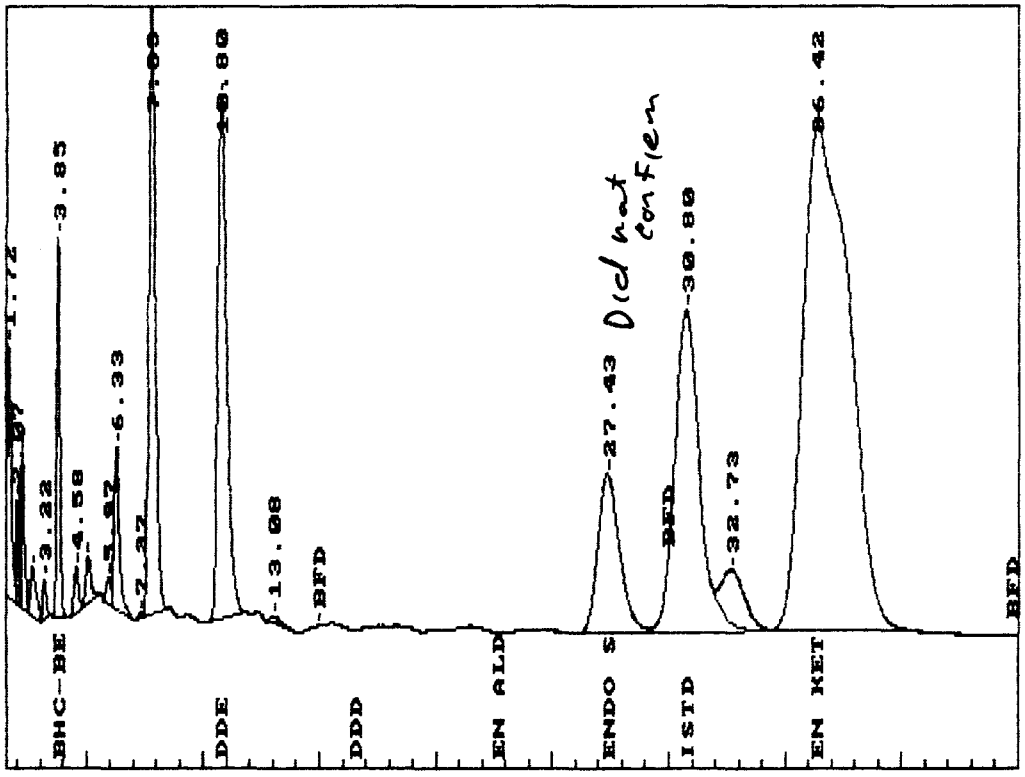
TIME 40.00

```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-03-1989 10:15:41 Version 4.1 **********************
* Sample Name: 89FM11R15                          Data File: P:FM5          *
* Date: 06-28-1989 12:34:02 Method: P:PESTB 06-29-1989 09:26:38  #  53     *
* Interface: 0   Cycle#:  5    Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                      Ending retention time:    45.00
Area reject:         0                       One sample per    1.000 sec.
Amount injected:        5.00                 Dilution factor:        10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
7	3.85	BHC-BETA	0.0396	3.5976%	268649	28830	9.3	1	7	17	0	1.4743E-07
8	4.58	BHC-DELTA	0.0048	0.4396%	45075	3525	12.8	2	8	17	0	1.0737E-07
14	10.80	DDE	0.1167	10.6028%	1048110	39675	26.4	1	14	17	0	1.1137E-07
16	27.43	ENDO SULFATE	0.1614	14.6568%	791322	12079	65.5	2	16	17	0	2.0391E-07
17	30.80	ISTD	1.0000	0.0000%	1821634	24433	74.6	3	17	17	0	5.4896E-07
19	36.42	EN KETONE	0.7784	70.7032%	4299747	35112	122.5	1	19	17	0	1.8103E-07

TOTAL AMOUNT = 1.1009

Plot of data file: P:FM5.PTS
Date: 07-03-1989 Time: 10:16:28
Sample Name: 89FM11R15
Start Time= 1.52Stop Time = 45.00Min. Scale= 69283Max. Scale= 117194



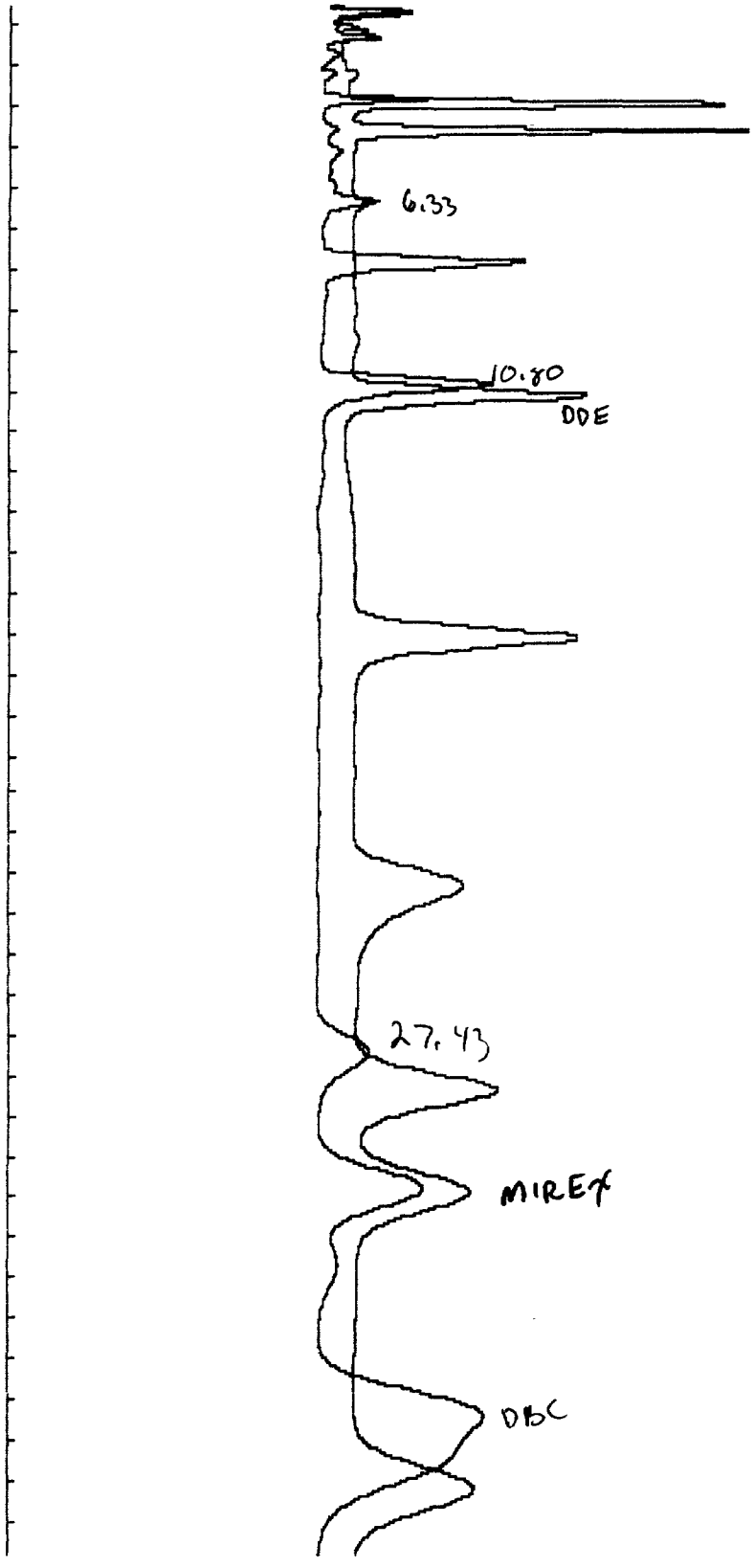
PRIMARY
SE 6232

P:FM6
SCALE 200 Pest B
OFFSET 0

P:FM5
SCALE 225 R15
OFFSET 0

TIME 1.50

TIME 1.50



TIME 40.00

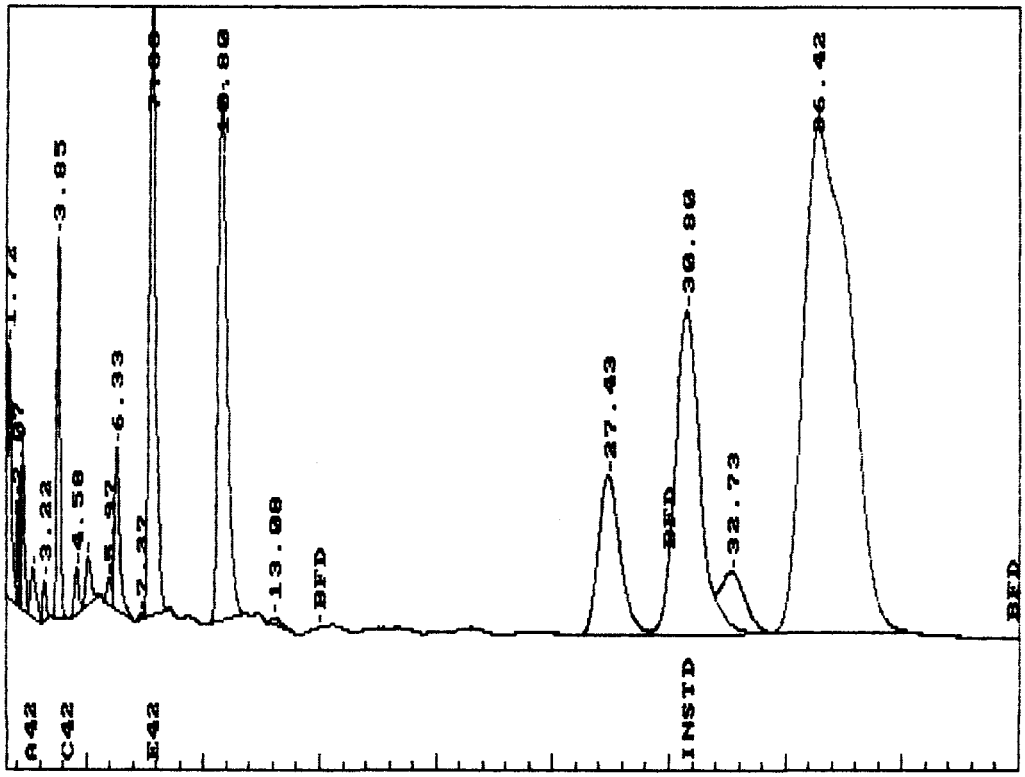
TIME 40.00

```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-03-1989 10:09:35 Version 4.1 **********************
* Sample Name: 89FM11R15                          Data File: P:FM5         *
* Date: 06-28-1989 12:34:02 Method: P:MET42. 07-03-1989 08:23:04  #  36    *
* Interface: 0   Cycle#:  5    Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*             Detector 0: ECD QUANT          Detector 1: ECD CONF         *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                      Ending retention time:   45.00
Area reject:        0                        One sample per   1.000 sec.
Amount injected:        5.00                 Dilution factor:       10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ~~UG/KG~~ ng/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
6	3.22	B42	-0.2899	-27.9828%	30627	3093	9.9	1	6	17	0	-9.4650E-06
8	4.58	D42	-0.1799	-17.3637%	45075	3525	12.8	2	8	17	0	-3.9905E-06
13	7.83	E42	1.5057	145.3465%	870766	46315	18.8	2	13	17	0	1.7291E-06
17	30.80	INSTD MIREX	1.0000	0.0000%	1821634	24433	74.6	3	17	17	0	5.4896E-07

TOTAL AMOUNT = 1.0359

Plot of data file: P:FM5.PTS
Date: 07-03-1989 Time: 10:10:12
Sample Name: 89FM11R15
Start Time= 1.52Stop Time = 45.00Min. Scale= 69283Max. Scale= 117194

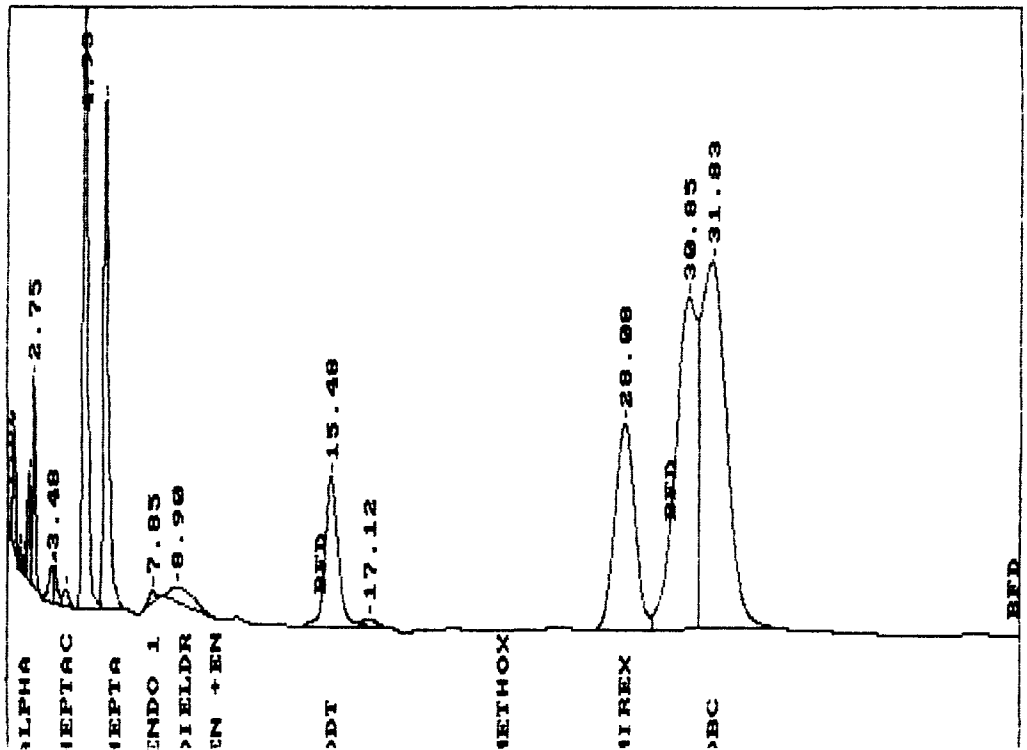


```
*****    INTERNAL STANDARD TABLE    *****
******************** 07-04-1989 09:06:16 Version 4.1 **********************
* Sample Name: 89FM11R15                          Data File: P:CONFM5      *
* Date: 06-30-1989 16:30:23 Method: P:PESTA2 07-04-1989 08:06:34  #  16    *
* Interface: 0   Cycle#:  5    Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT            Detector 1: ECD CONF        *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per    1.000 sec.
Amount injected:        5.00               Dilution factor:        10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
4	2.35	ALPHA BHC	0.0021	0.2151%	13233	2263	5.8	2	4	16	0	1.5555E-07
6	2.75	LINDANE	0.0302	3.1531%	168842	22101	7.6	2	6	16	0	1.7867E-07
9	4.15	HEPTACHLOR	0.0048	0.4990%	31986	1781	18.0	2	9	16	0	1.4926E-07
10	4.93	ALDRIN	0.1658	17.3308%	938861	63314	14.8	2	9	16	-3.785	1.7661E-07
12	7.85	ENDO 1	0.0035	0.3680%	21612	1197	18.1	1	12	16	0	1.6292E-07
13	8.90	DIELDRIN	0.0201	2.1028%	110080	1503	73.2	1	12	16	-3.137	1.8277E-07
14	15.48	DDT	0.1465	15.3119%	625716	15764	39.7	3	14	16	0	2.3413E-07
16	28.08	MIREX	1.0000	0.0000%	1303194	21747	59.9	2	16	16	0	7.6735E-07
18	31.83	DBC	0.5838	61.0192%	2966552	38617	76.8	2	18	16	0	1.9680E-07

TOTAL AMOUNT = 0.9568

Plot of data file: P:CONFM5.PTS
Date: 07-04-1989 Time: 09:06:46
Sample Name: 89FM11R15
Start Time= 1.52Stop Time = 45.00Min. Scale= 28953Max. Scale= 95052



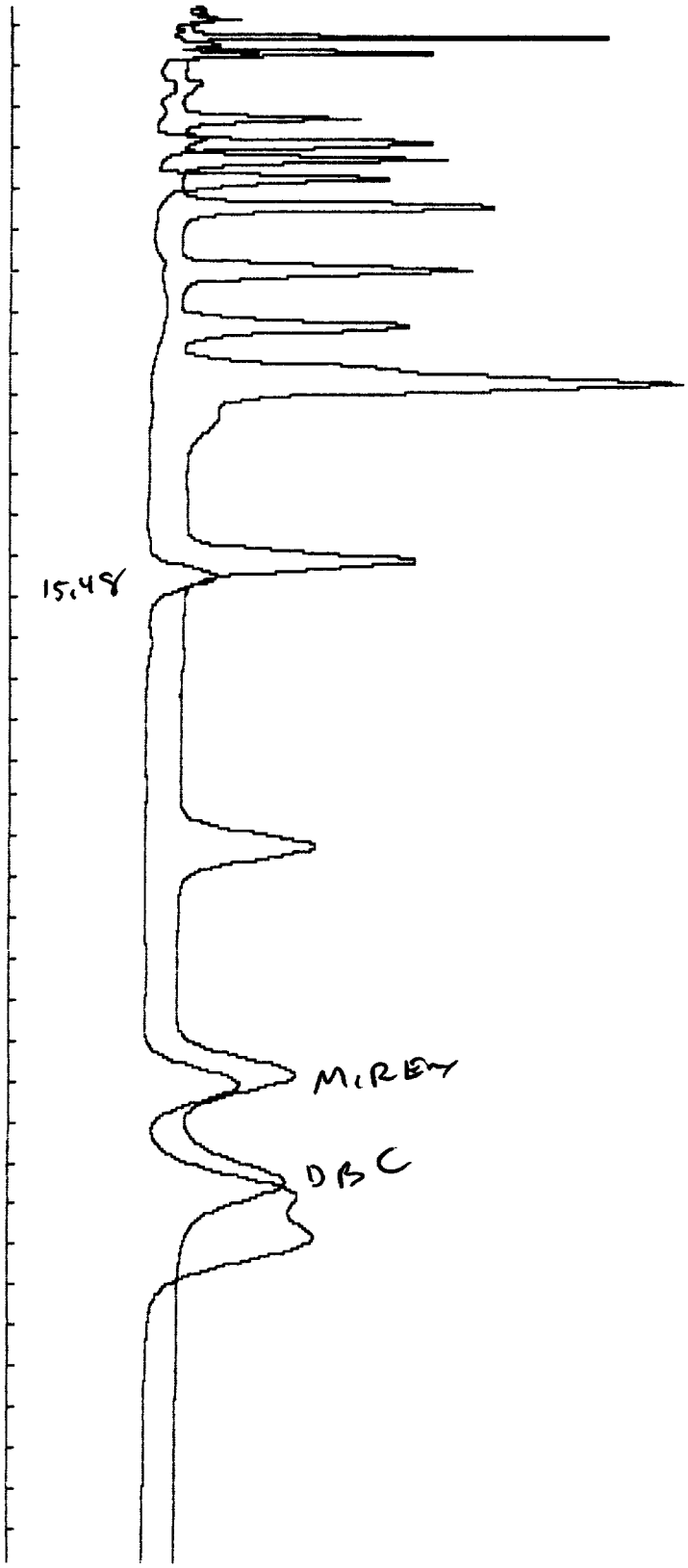
Confirmation
6232

P:CONFM7
SCALE 175
OFFSET 0
PESTA

P:CONFM5
SCALE 225
OFFSET 0
R15

TIME 1.50

TIME 1.50



TIME 40.00

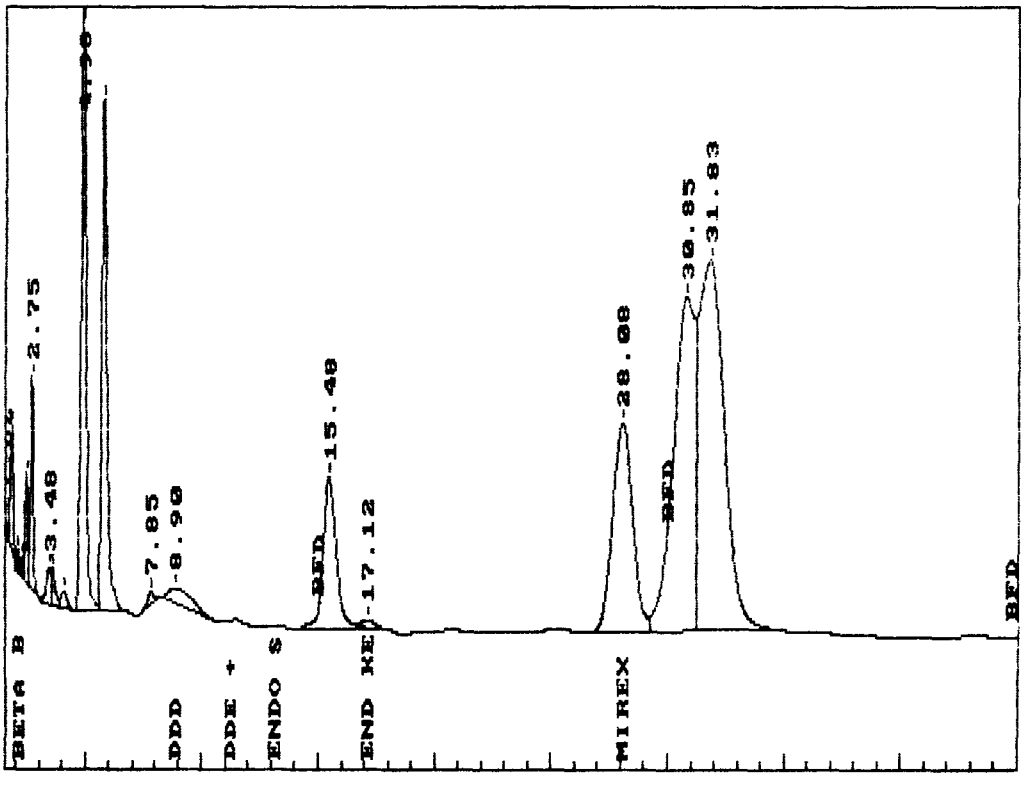
TIME 40.00

```
****** INTERNAL STANDARD TABLE ******
******************** 07-04-1989 09:08:02 Version 4.1 ********************
* Sample Name: 89FM11R15                          Data File: P:CONFM5      *
* Date: 06-30-1989 16:30:23 Method: P:PESTB2 07-04-1989 07:58:22  #  17    *
* Interface: 0   Cycle#:  5    Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*             Detector 0: ECD QUANT          Detector 1: ECD CONF         *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:       10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.17	BETA BHC	0.2929	83.3708%	15995	2358	6.8	2	3	16	0	1.8312E-05
5	2.52	DELTA BHC	0.0153	4.3635%	101630	11442	8.9	2	5	16	0	1.5084E-07
13	8.90	DDD	0.0326	9.2922%	110080	1503	73.2	1	13	16	0	2.9657E-07
15	17.12	END KETONE	0.0104	2.9735%	32451	828	39.2	4	15	16	0	3.2192E-07
16	28.08	MIREX	1.0000	0.0000%	1303194	21747	59.9	2	16	16	0	7.6735E-07

TOTAL AMOUNT = 0.3513

Plot of data file: P:CONFM5.PTS
Date: 07-04-1989 Time: 09:08:33
Sample Name: 89FM11R15
Start Time= 1.52Stop Time = 45.00Min. Scale= 28953Max. Scale= 95052



Confirmation

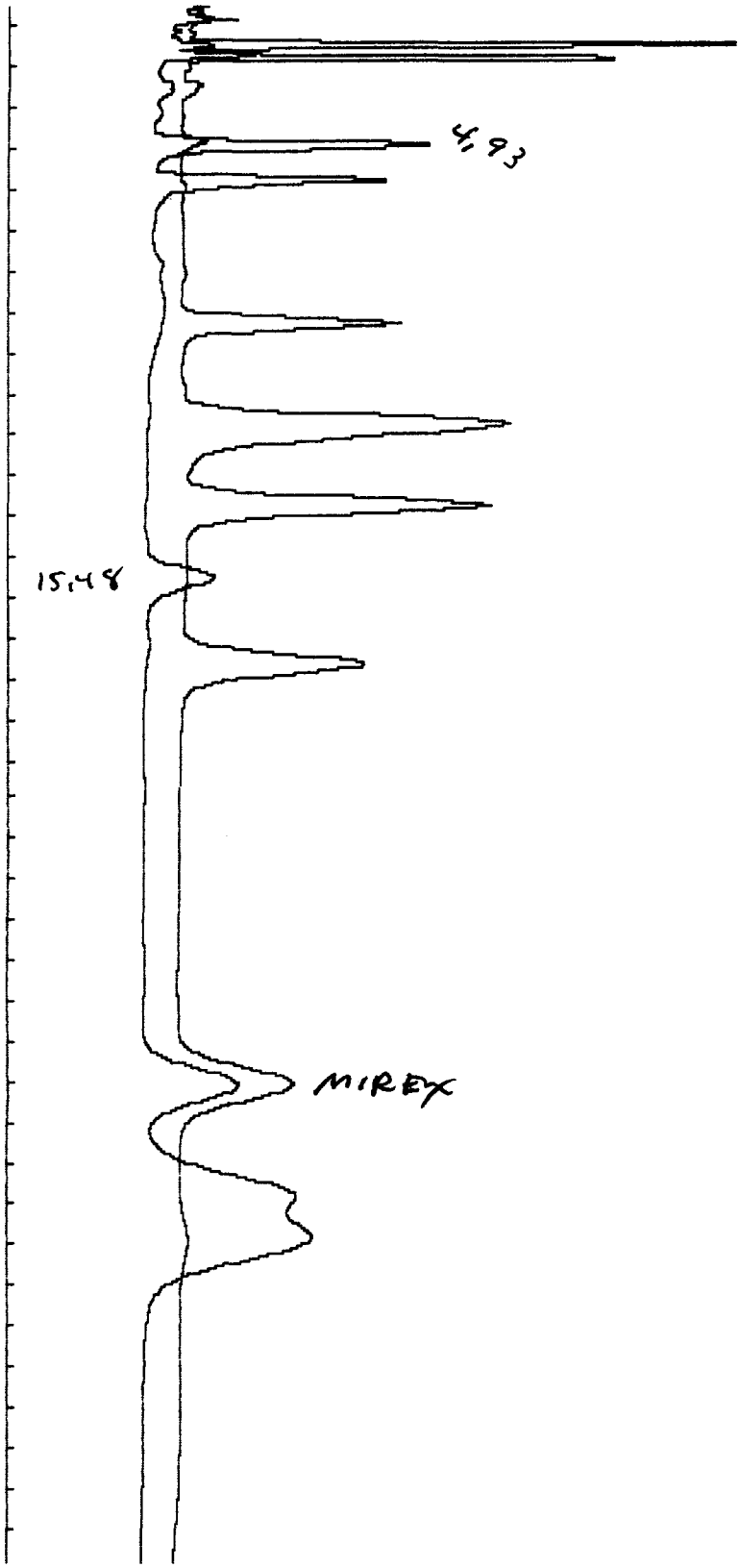
6232

P:CONFM6
SCALE 175
OFFSET 0 PesTB

P:CONFM5
SCALE 225
OFFSET 0 R15

TIME 1.50

TIME 1.50



TIME 40.00

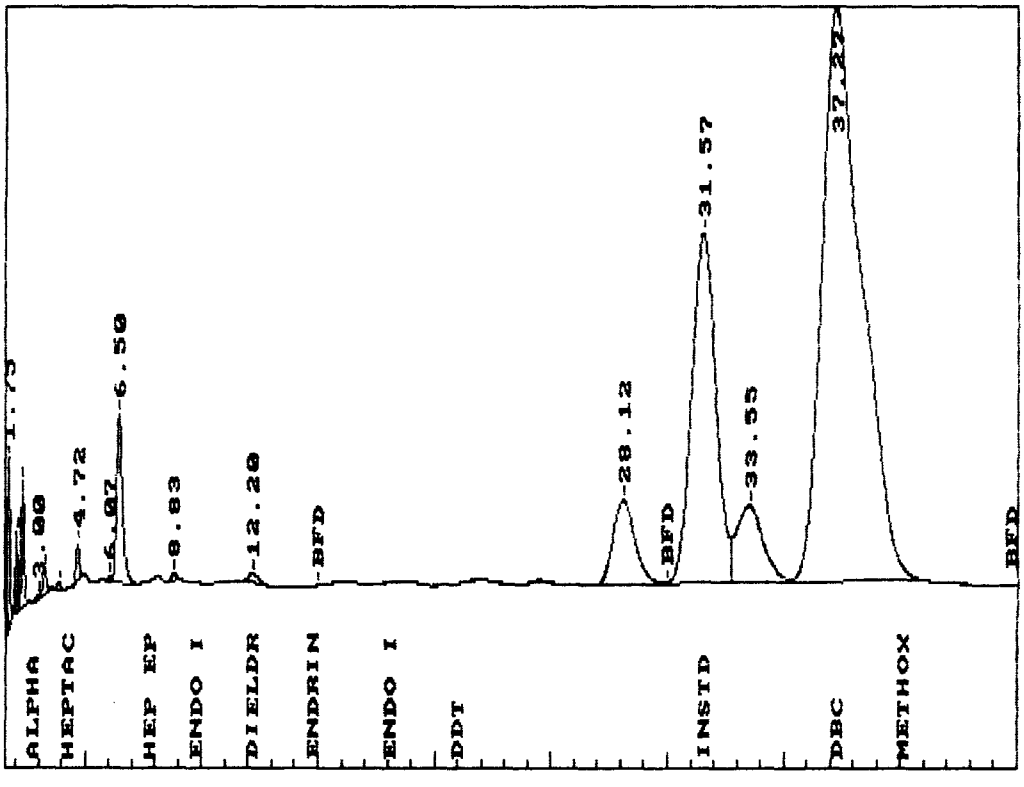
TIME 40.00

```
******   INTERNAL STANDARD TABLE   ******
******************** 07-03-1989 11:21:46 Version 4.1 **********************
* Sample Name: 89FM22S01                          Data File: P:FM16        *
* Date: 06-28-1989 21:05:25 Method: P:PESTA 06-29-1989 10:06:41  #  75     *
* Interface: 0   Cycle#:  16   Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per    1.000 sec.
Amount injected:        5.00               Dilution factor:        10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
11	12.20	DIELDRIN	0.0102	1.8447%	17693	606	29.2	1	11	13	0	5.7396E-07
13	31.57	INSTD	1.0000	0.0000%	1659006	23309	71.2	2	13	13	0	6.0277E-07
15	37.27	DBC	0.5403	98.1553%	3560690	35453	100.4	1	15	13	0	1.5175E-07

TOTAL AMOUNT = 0.5505

Plot of data file: P:FM16.PTS
Date: 07-03-1989 Time: 11:22:25
Sample Name: 89FM22S01
Start Time= 1.52Stop Time = 45.00Min. Scale= 66032Max. Scale= 108283

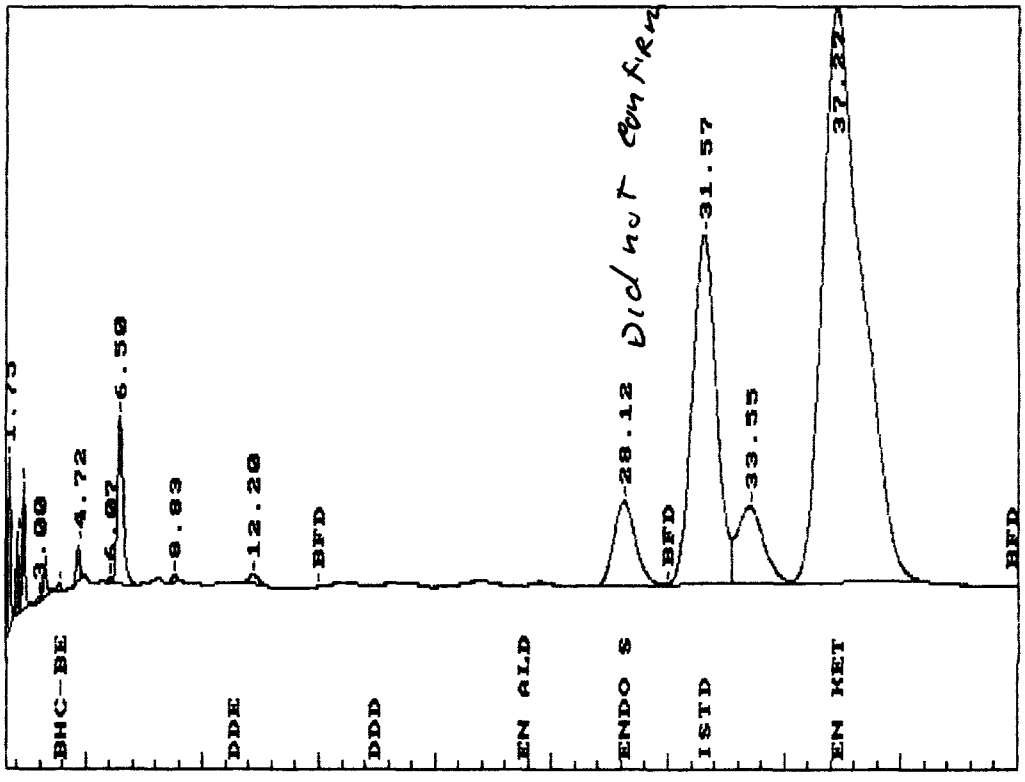


```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-03-1989 11:23:49 Version 4.1 **********************
* Sample Name: 89FM22S01                          Data File: P:FM16        *
* Date: 06-28-1989 21:05:25 Method: P:PESTB 06-29-1989 09:26:38  #  53     *
* Interface: 0   Cycle#:  16   Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*            Solvent Description: ULTRA HIGH PURITY NITROGEN              *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:       10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
6	3.92	BHC-BETA	0.0007	0.0887%	4341	439	9.9	1	6	13	0	1.6188E-07
7	4.72	BHC-DELTA	0.0028	0.3536%	23753	2355	10.1	1	7	13	0	1.1789E-07
12	28.12	ENDO SULFATE	0.0806	10.1825%	360146	5640	63.9	2	12	13	0	2.2390E-07
13	31.57	ISTD	1.0000	0.0000%	1659006	23309	71.2	2	13	13	0	6.0277E-07
15	37.27	EN KETONE	0.7078	89.3752%	3560690	35453	100.4	1	15	13	0	1.9878E-07

TOTAL AMOUNT = 0.7919

Plot of data file: P:FM16.PTS
Date: 07-03-1989 Time: 11:24:34
Sample Name: 89FM22S01
Start Time= 1.52Stop Time = 45.00Min. Scale= 66032Max. Scale= 108283



PRIMARY
SF 6232

P:FM6
SCALE 200
OFFSET 0

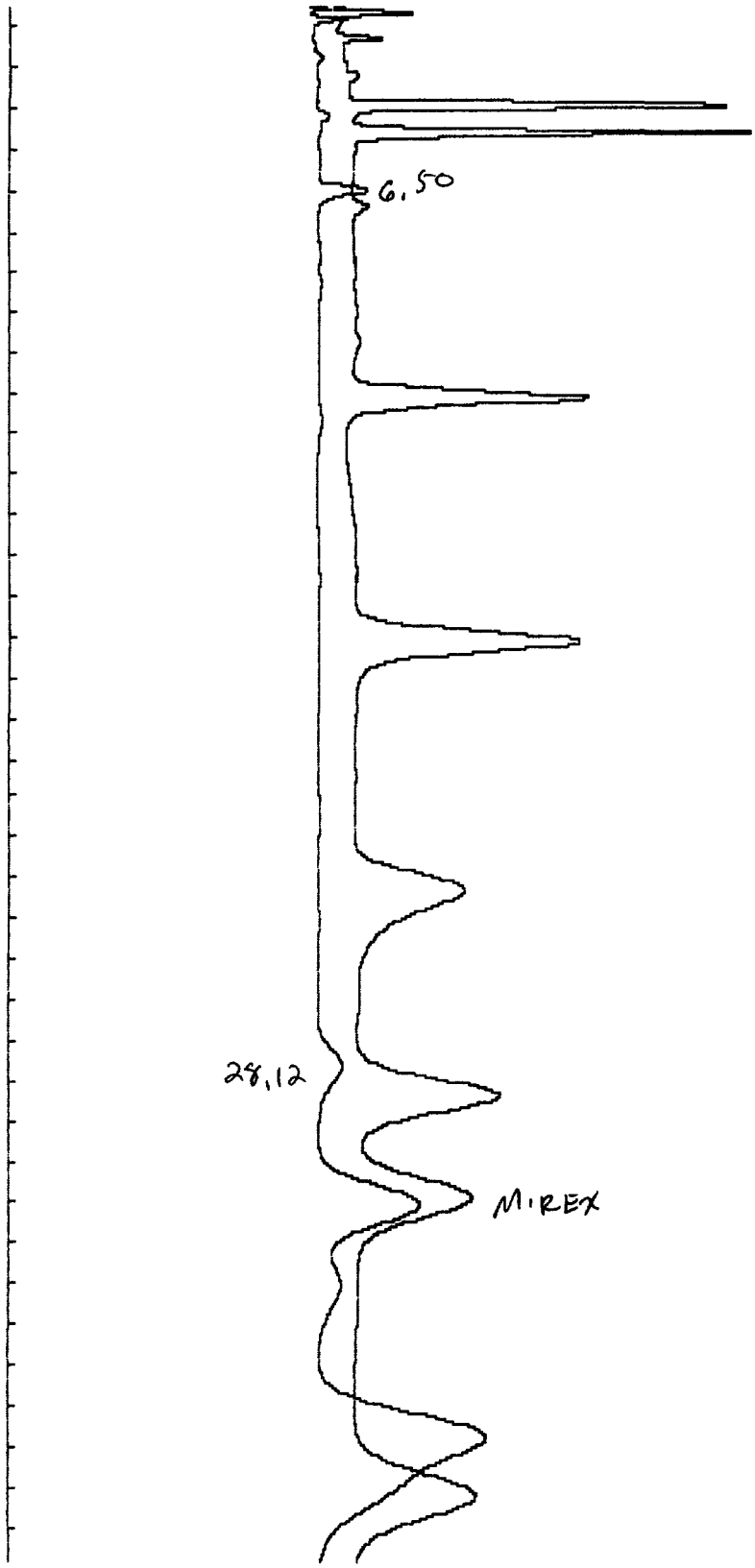
Pest B

P:FM16
SCALE 225
OFFSET 0

501

TIME 1.50

TIME 2.00



TIME 40.00

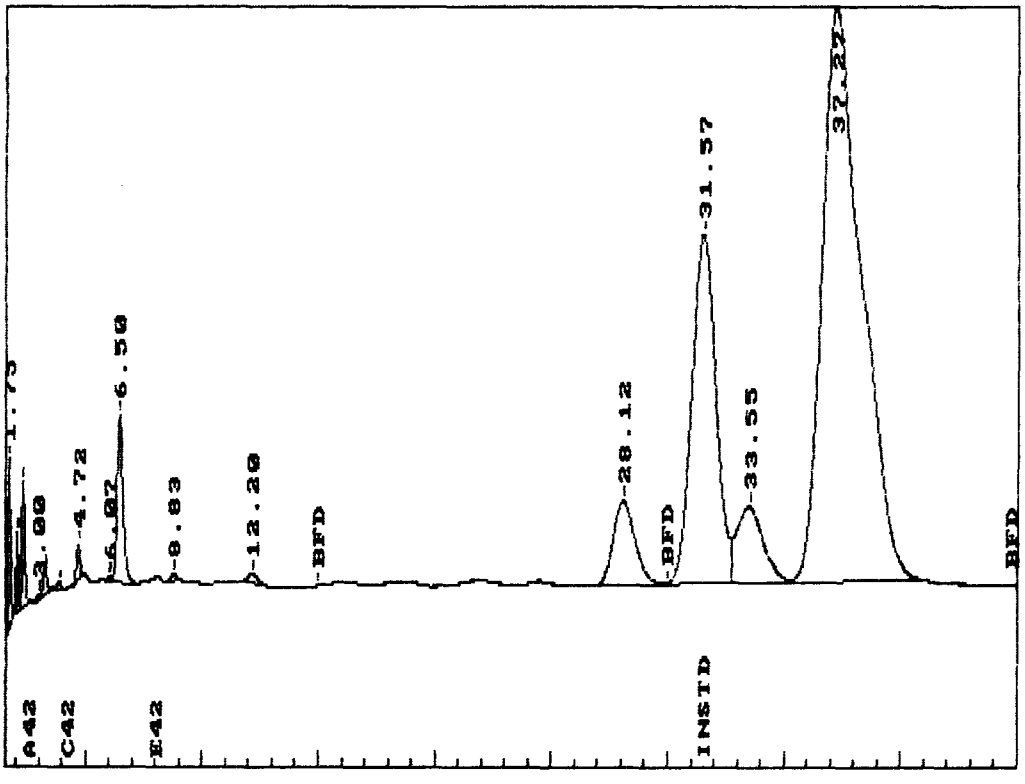
TIME 40.50

```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-03-1989 11:33:40 Version 4.1 **********************
* Sample Name: 89FM22S01                          Data File: P:FM16        *
* Date: 06-28-1989 21:05:25 Method: P:MET42. 07-03-1989 08:23:04  #  36    *
* Interface: 0   Cycle#:  16   Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*            Solvent Description: ULTRA HIGH PURITY NITROGEN              *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT            Detector 1: ECD CONF        *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                      Ending retention time:   45.00
Area reject:        0                        One sample per   1.000 sec.
Amount injected:        5.00                 Dilution factor:       10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ~~UG/KG~~ ug/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
5	3.30	B42	-0.3165	57.2953%	18058	1700	10.6	2	5	13	0	-1.7528E-05
7	4.72	D42	-0.2359	42.7047%	23753	2355	10.1	1	7	13	0	-9.9323E-06
13	31.57	INSTD MIREX	1.0000	0.0000%	1669606	23374	71.4	2	13	13	0	5.9894E-07

TOTAL AMOUNT = -0.5525

Plot of data file: P:FM16.PTS
Date: 07-03-1989 Time: 11:34:12
Sample Name: 89FM22S01
Start Time= 1.52Stop Time = 45.00Min. Scale= 66032Max. Scale= 108283

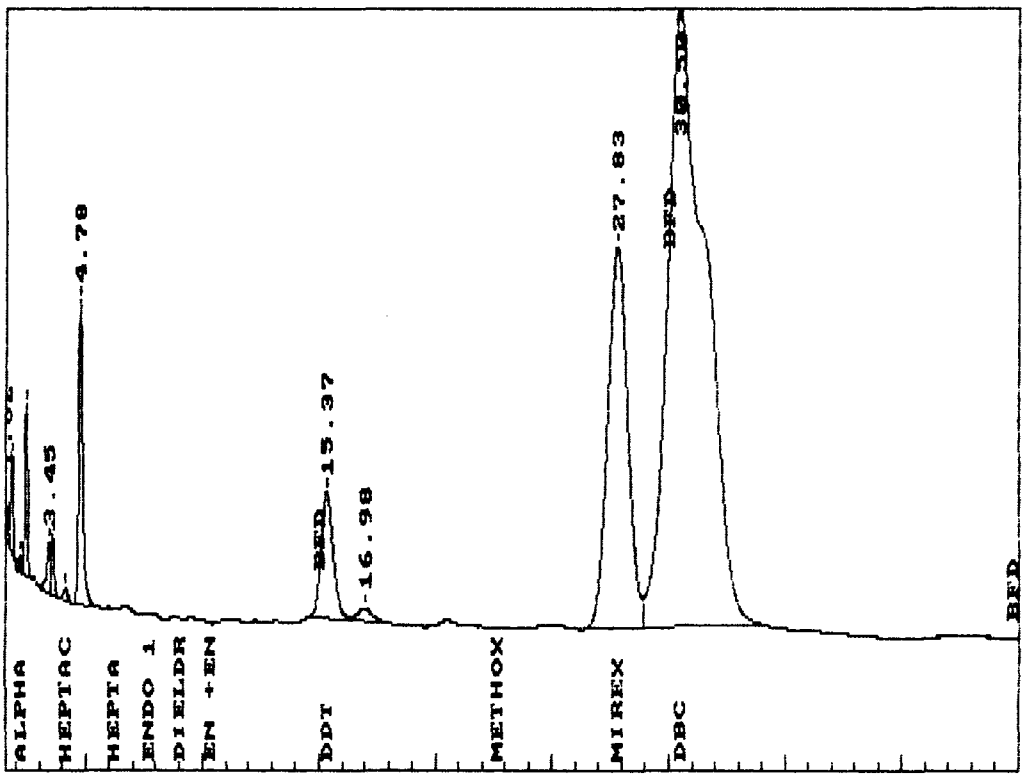


```
******   INTERNAL STANDARD TABLE   ******
******************** 07-04-1989 11:08:53 Version 4.1 **********************
* Sample Name: 89FM22S01                          Data File: P:CONFM10      *
* Date: 06-30-1989 20:23:02 Method: P:PESTA2 07-04-1989 08:06:34  #  16    *
* Interface: 0   Cycle#:  10   Operator NW  Channel#: 0    Vial#: N.A.      *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*****************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY    *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN              *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                     *
*             Detector 0: ECD QUANT           Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                            *
*****************************************************************************
Starting Delay:    1.50                      Ending retention time:    45.00
Area reject:        0                        One sample per    1.000 sec.
Amount injected:        5.00                 Dilution factor:        10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.23	ALPHA BHC	0.0010	0.1098%	6011	989	6.1	2	3	11	0	1.5843E-07
4	2.48	LINDANE	0.0135	1.5574%	74188	9611	7.7	2	3	11	-4.495	1.8198E-07
7	4.15	HEPTACHLOR	0.0014	0.1669%	9518	726	13.1	1	7	11	0	1.5203E-07
9	15.37	DDT	0.0612	7.0622%	256734	7069	36.3	2	9	11	0	2.3847E-07
11	27.83	MIREX	1.0000	0.0000%	1279495	21376	59.9	2	11	11	0	7.8156E-07
12	30.50	DBC	0.7898	91.1036%	3940151	34846	113.1	2	12	11	0	2.0044E-07

TOTAL AMOUNT = 0.8669

Plot of data file: P:CONFM10.PTS
Date: 07-04-1989 Time: 11:09:25
Sample Name: 89FM22S01
Start Time= 1.52Stop Time = 45.00Min. Scale= 28499Max. Scale= 64038



Confirmation
6232

P:CONFM7
SCALE 150
OFFSET 0

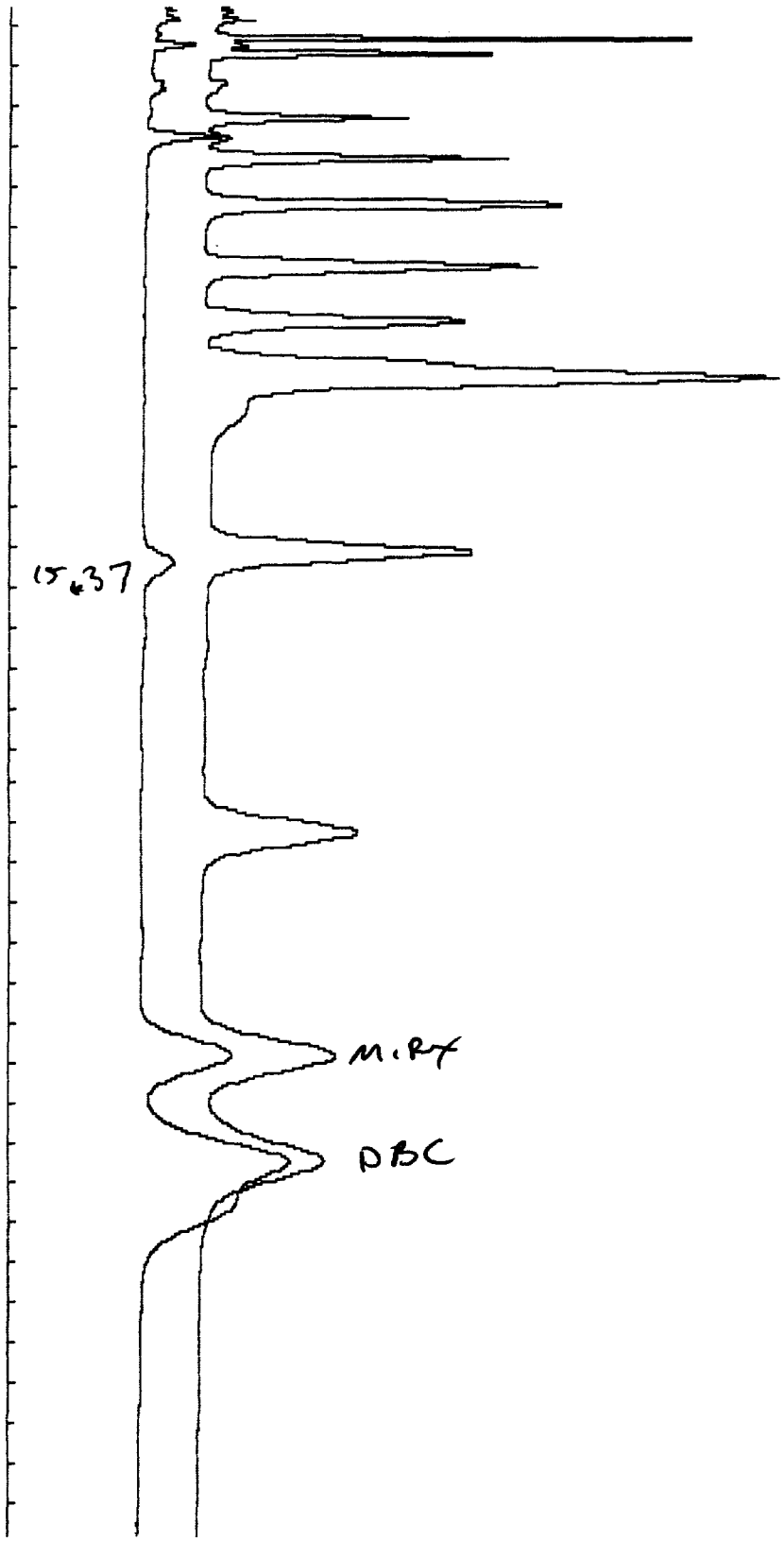
Pest A

P:CONFM10
SCALE 225
OFFSET 0

S01

TIME 1.50

TIME 1.50



TIME 40.00

TIME 40.00

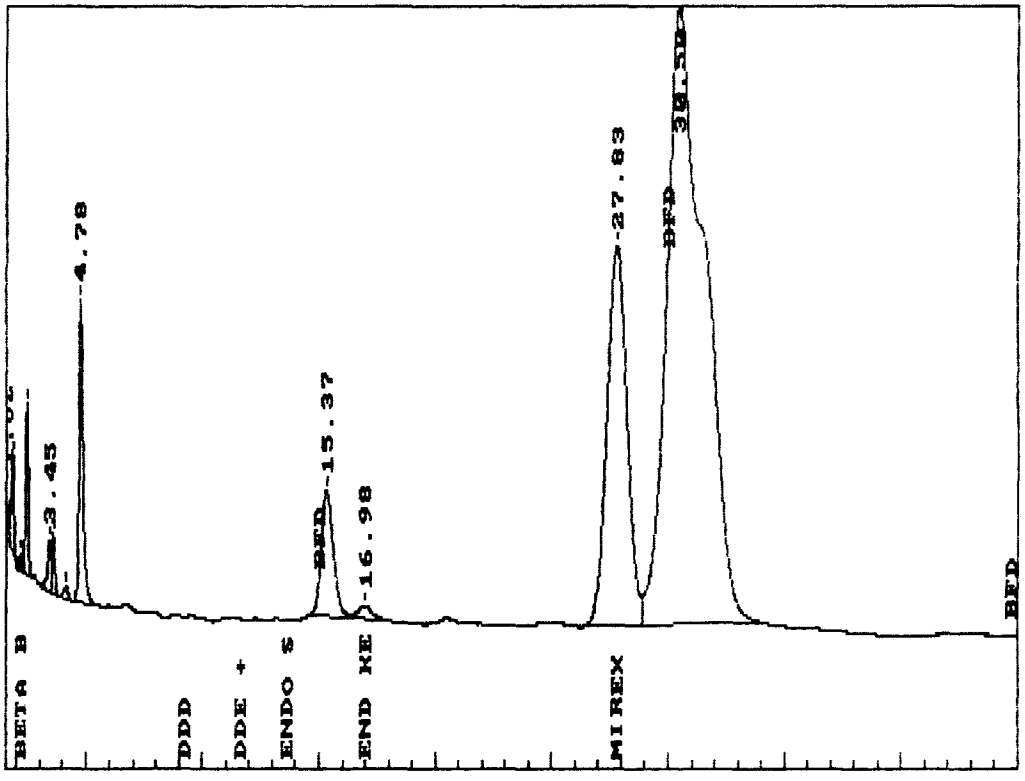
```
*****      INTERNAL STANDARD TABLE      *****
******************** 07-04-1989 11:11:03 Version 4.1 **********************
* Sample Name: 89FM22S01                          Data File: P:CONFM10      *
* Date: 06-30-1989 20:23:02 Method: P:PESTB2 07-04-1989 07:58:22  #  17    *
* Interface: 0   Cycle#:  10   Operator NW  Channel#: 0    Vial#: N.A.      *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*****************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY    *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN              *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                     *
*            Detector 0: ECD QUANT            Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                            *
*****************************************************************************
Starting Delay:    1.50                      Ending retention time:    45.00
Area reject:        0                        One sample per   1.000 sec.
Amount injected:        5.00                 Dilution factor:       10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.23	BETA BHC	0.1121	84.9465%	6011	989	6.1	2	3	11	0	1.8651E-05
4	2.48	DELTA BHC	0.0114	8.6364%	74188	9611	7.7	2	4	11	0	1.5364E-07
10	16.98	END KETONE	0.0085	6.4171%	25830	682	37.9	2	10	11	0	3.2788E-07
11	27.83	MIREX	1.0000	0.0000%	1279495	21376	59.9	2	11	11	0	7.8156E-07

3 present in solvent blk

TOTAL AMOUNT = 0.1320

Plot of data file: P:CONFM10.PTS
Date: 07-04-1989 Time: 11:11:36
Sample Name: 89FM22S01
Start Time= 1.52Stop Time = 45.00Min. Scale= 28499Max. Scale= 64038



P:CONFM6
SCALE 150
OFFSET 0

PESTB

TIME 1.50

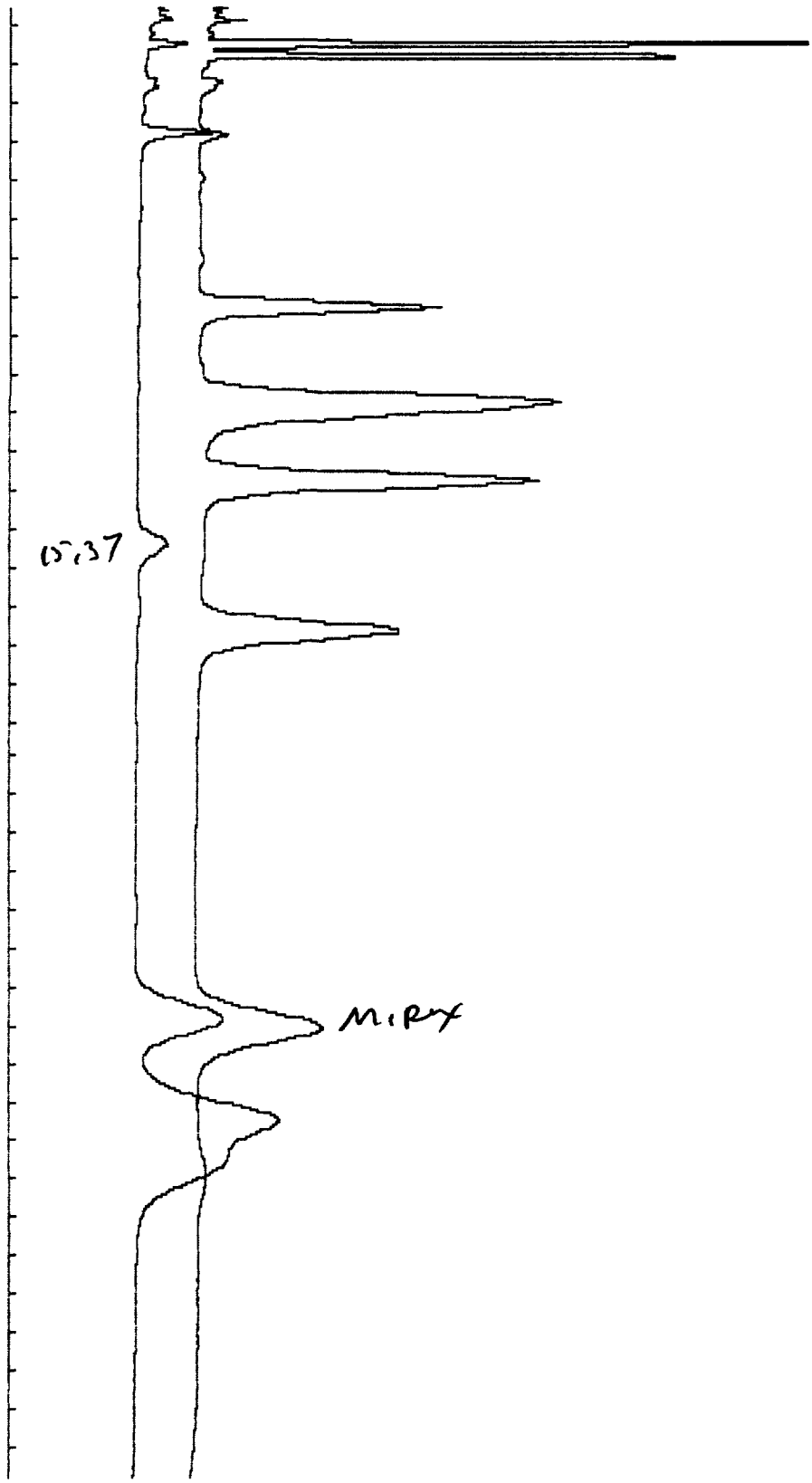
P:CONFM10
SCALE 225
OFFSET 0

TIME 1.50

Confirmation

6232

501



TIME 40.00

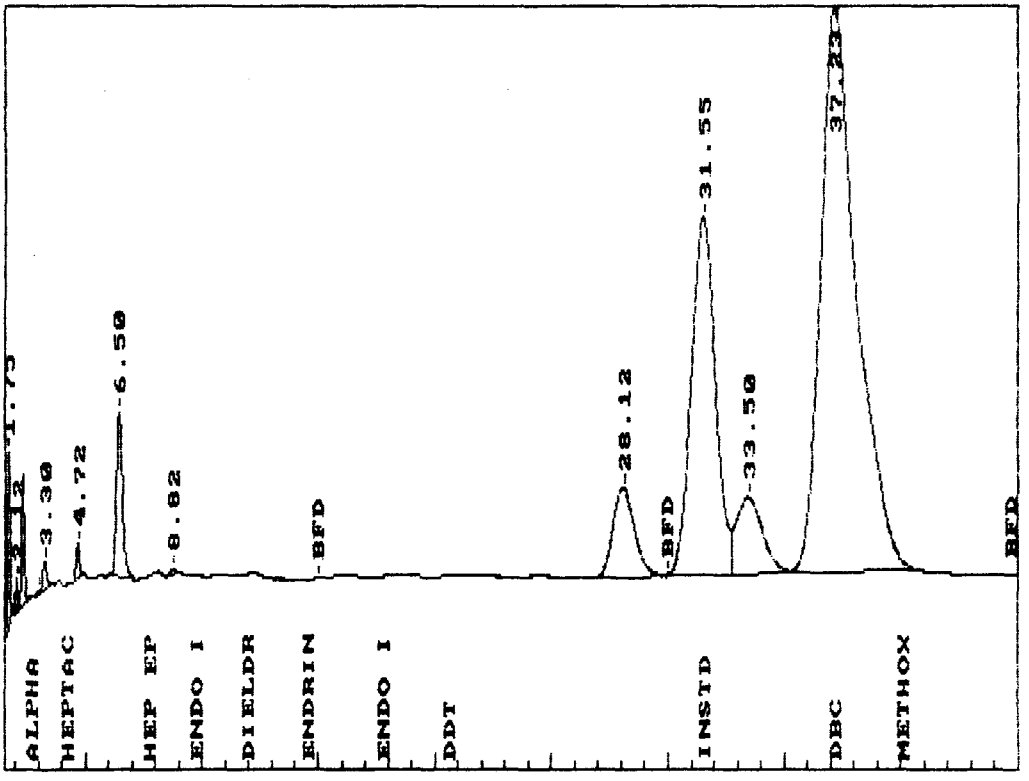
TIME 40.00

```
******   INTERNAL STANDARD TABLE   ******
******************** 06-29-1989 13:39:37 Version 4.1 **********************
* Sample Name: 89FM22D01                          Data File: P:FM15        *
* Date: 06-28-1989 20:18:55 Method: P:PESTA 06-29-1989 10:06:41  #  75     *
* Interface: 0   Cycle#:  15   Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:       10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
10	31.55	INSTD	1.0000	0.0000%	1558727	21727	71.7	2	10	10	0	6.4155E-07
12	37.23	DBC	0.5911	100.0000%	3659616	34484	106.1	2	12	10	0	1.6153E-07

TOTAL AMOUNT = 0.5911

Data File = P:FM15.PTS Printed on 06-29-1989 at 13:39:49
Start time: 1.50 min. Stop time: 45.00 min. Offset: 0 mv.
Low Value: 65728 uv High Value: 104093 uv Scale factor: 1.0



****** INTERNAL STANDARD TABLE ******

********** 06-29-1989 13:41:23 Version 4.1 **********

* Sample Name: 89FM22D01 Data File: P:FM15 *
* Date: 06-28-1989 20:18:55 Method: P:PESTB 06-29-1989 09:26:38 # 53 *
* Interface: 0 Cycle#: 15 Operator NW Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HEWLETT PACKARD Column Type: MIXED PHASE-PRIMARY *
* Solvent Description: ULTRA HIGH PURITY NITROGEN *
* Conditions: ISOTHERMAL AT 200 CELSIUS *
* Detector 0: ECD QUANT Detector 1: ECD CONF *
* Misc. Information: D.S. SF6232 *

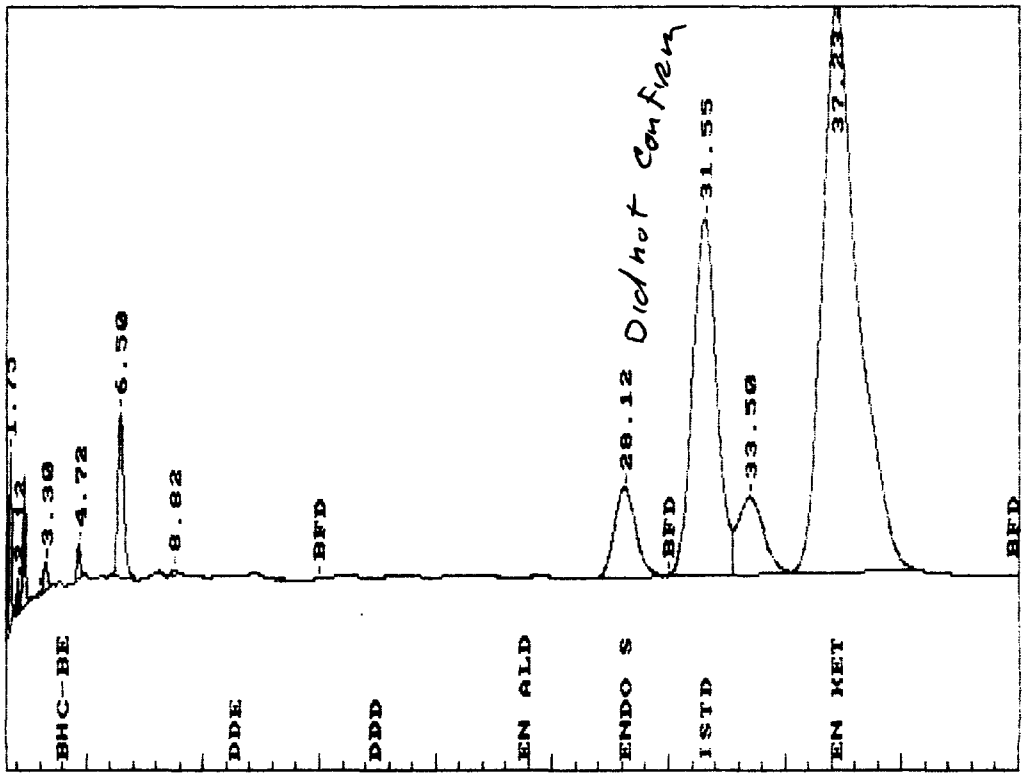
****

Starting Delay: 1.50 Ending retention time: 45.00
Area reject: 0 One sample per 1.000 sec.
Amount injected: 5.00 Dilution factor: 10.00
Internal Standard Amount: 1
Sample Weight: 1.000000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
6	4.72	BHC-DELTA	0.0029	0.3337%	22907	2058	11.1	1	6	10	0	1.2548E-07
9	28.12	ENDO SULFATE	0.0843	9.7887%	353850	5488	64.5	2	9	10	0	2.3831E-07
10	31.55	ISTD	1.0000	0.0000%	1558727	21727	71.7	2	10	10	0	6.4155E-07
12	37.23	EN KETONE	0.7742	89.8776%	3659616	34484	106.1	2	12	10	0	2.1157E-07

TOTAL AMOUNT = 0.8614

Data File = P:FM15.PTS Printed on 06-29-1989 at 13:41:37
Start time: 1.50 min. Stop time: 45.00 min. Offset: 0 mv.
Low Value: 65728 uv High Value: 104093 uv Scale factor: 1.0



PRIMARY
SF 6232

P:FM6
SCALE 200
OFFSET 0

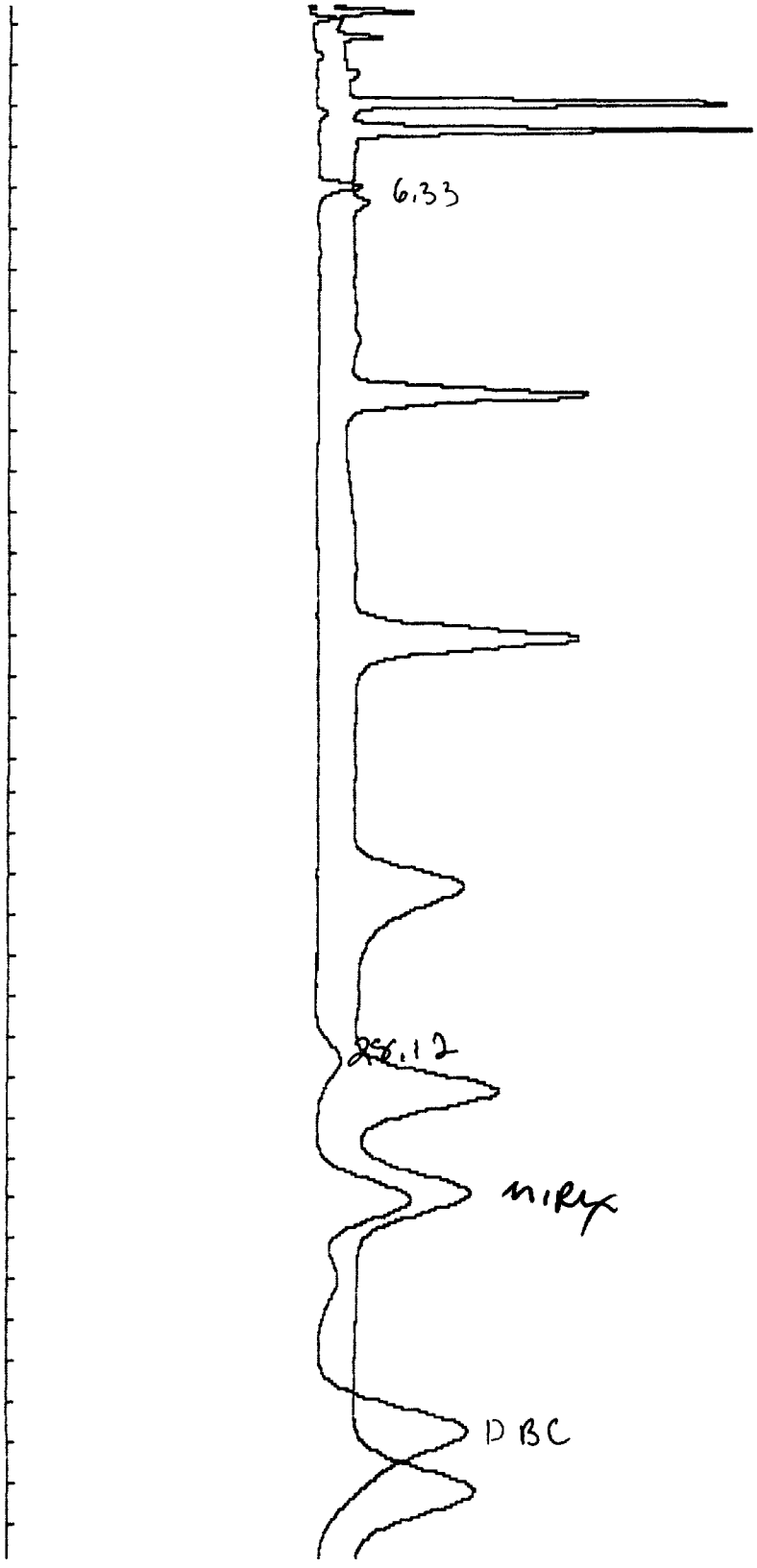
Pest B

P:FM15
SCALE 225
OFFSET 0

D01

TIME 1.50

TIME 2.00



TIME 40.00

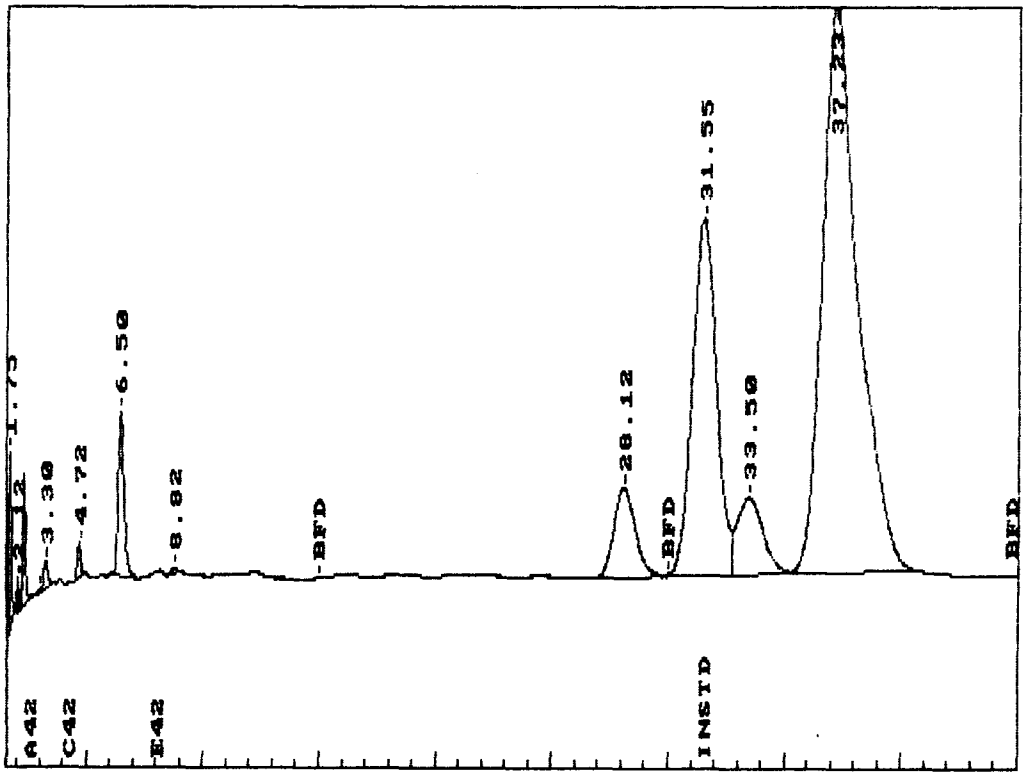
TIME 40.50

```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-03-1989 11:02:31 Version 4.1 **********************
* Sample Name: 89FM22D01                          Data File: P:FM15        *
* Date: 06-28-1989 20:18:55 Method: P:MET42. 07-03-1989 08:23:04  #  36    *
* Interface: 0   Cycle#:  15   Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT            Detector 1: ECD CONF        *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per    1.000 sec.
Amount injected:        5.00               Dilution factor:        10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ~~UG/KG~~ UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
5	3.30	B42	-0.3129	57.2750%	18127	1639	11.1	1	5	10	0	-1.7262E-05
6	4.72	D42	-0.2334	42.7250%	22907	2058	11.1	1	6	10	0	-1.0190E-05
10	31.55	INSTD MIREX	1.0000	0.0000%	1558727	21727	71.7	2	10	10	0	6.4155E-07

TOTAL AMOUNT = -0.5463

Plot of data file: P:FM15.PTS
Date: 07-03-1989 Time: 11:02:55
Sample Name: 89FM22D01
Start Time= 1.52Stop Time = 45.00Min. Scale= 65728Max. Scale= 104093

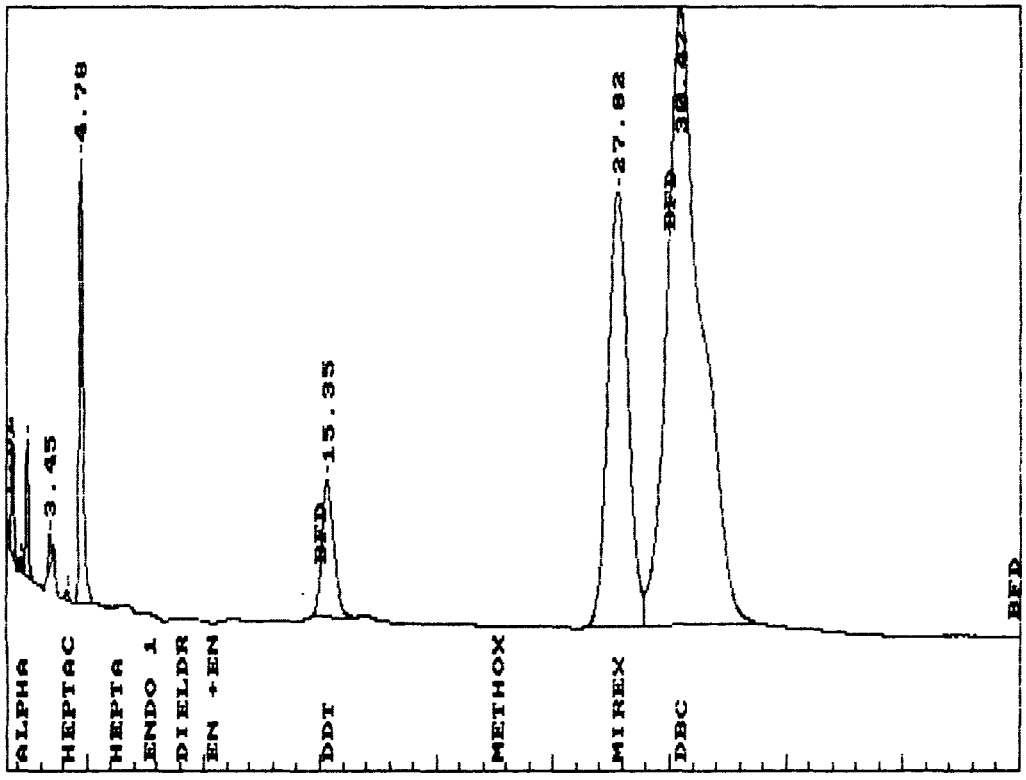


```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-04-1989 09:30:42 Version 4.1 **********************
* Sample Name: 89FM22D01                          Data File: P:CONFM9      *
* Date: 06-30-1989 19:36:30 Method: P:PESTA2 07-04-1989 08:06:34  #  16    *
* Interface: 0   Cycle#:  9    Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:       10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.22	ALPHA BHC	0.0008	0.1192%	5367	827	6.5	2	3	9	0	1.5244E-07
4	2.50	LINDANE	0.0098	1.4329%	56141	6985	8.0	2	3	9	-3.132	1.7510E-07
6	4.17	HEPTACHLOR	0.0009	0.1361%	6384	550	11.6	1	6	9	0	1.4628E-07
8	15.35	DDT	0.0582	8.4881%	253799	7014	36.2	1	8	9	0	2.2945E-07
9	27.82	MIREX	1.0000	0.0000%	1329797	22159	60.0	2	9	9	0	7.5199E-07
10	30.47	DBC	0.6162	89.8237%	3195256	31635	101.0	2	10	9	0	1.9286E-07

TOTAL AMOUNT = 0.6861

Plot of data file: P:CONFM9.PTS
Date: 07-04-1989 Time: 09:31:18
Sample Name: 89FM22D01
Start Time= 1.52Stop Time = 45.00Min. Scale= 28962Max. Scale= 61232



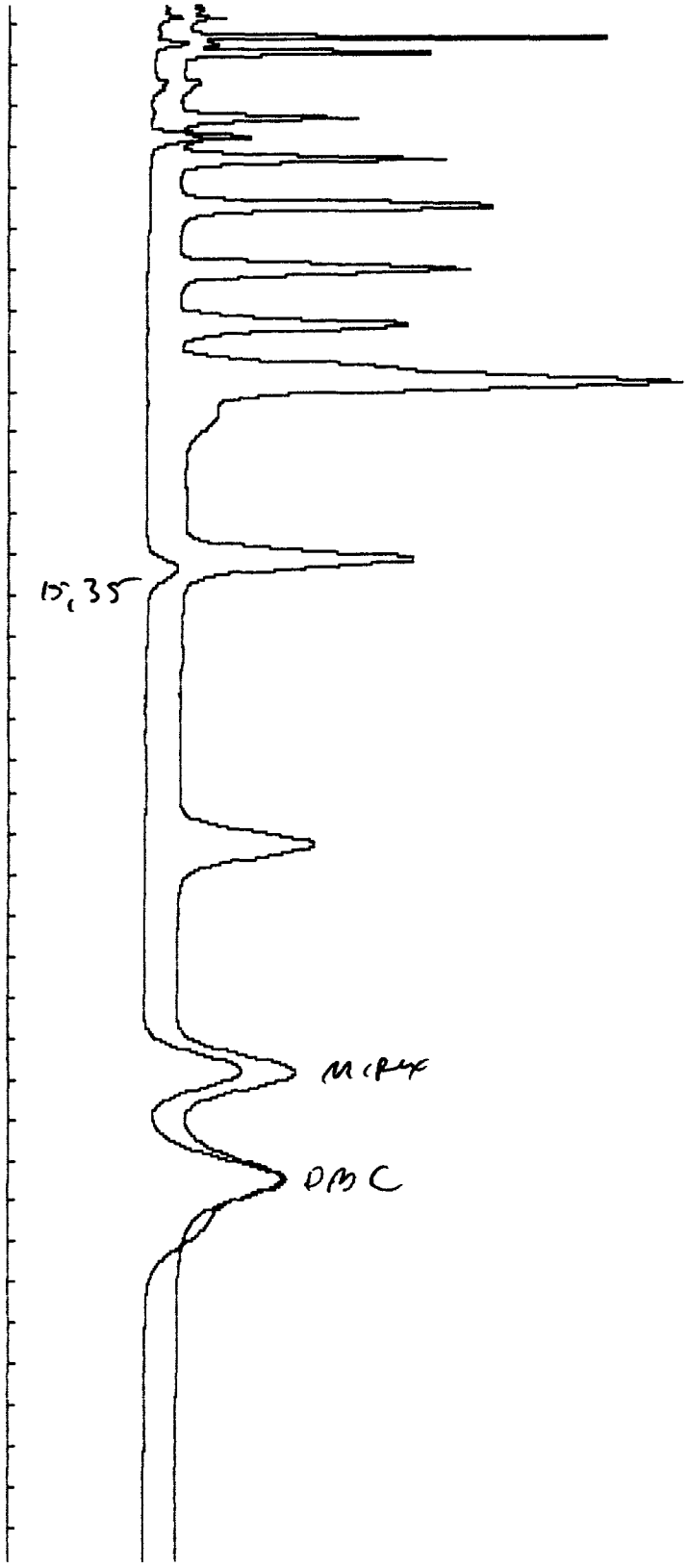
Confirmation
6232

F:CONFM7'
SCALE 175
OFFSET 0

F:CONFM9
SCALE 225
OFFSET 0

TIME 1.50

TIME 1.50



TIME 40.00

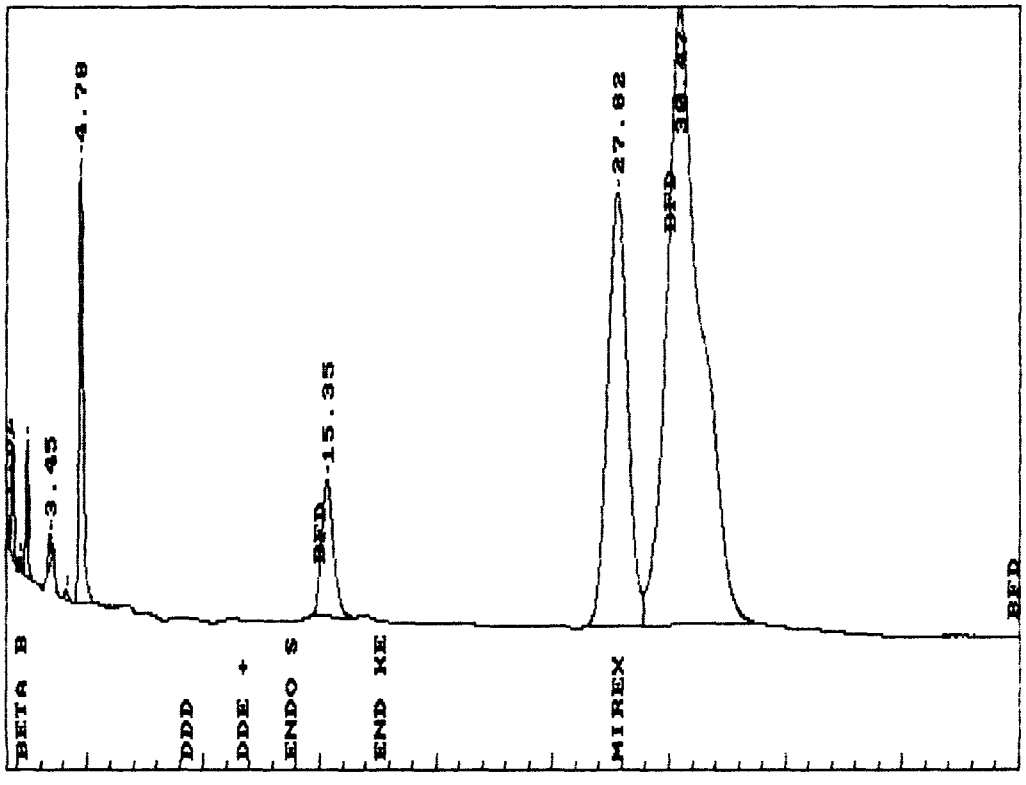
TIME 40.00

```
****** INTERNAL STANDARD TABLE ******
******************** 07-04-1989 09:32:38 Version 4.1 **********************
* Sample Name: 89FM22D01                          Data File: P:CONFM9       *
* Date: 06-30-1989 19:36:30 Method: P:PESTB2 07-04-1989 07:58:22  #  17     *
* Interface: 0   Cycle#:  9    Operator NW  Channel#: 0    Vial#: N.A.      *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*****************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY    *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN              *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                     *
*             Detector 0: ECD QUANT            Detector 1: ECD CONF         *
* Misc. Information: D.S. SF6232                                            *
*****************************************************************************
Starting Delay:    1.50                      Ending retention time:    45.00
Area reject:          0                      One sample per    1.000 sec.
Amount injected:          5.00               Dilution factor:        10.00
Internal Standard Amount:  1
Sample Weight:            1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.22	BETA BHC present in solvent Blk.	~~0.0963~~	92.0668%	5367	827	6.5	2	3	9	0	1.7946E-05
4	2.50	DELTA BHC	~~0.0083~~	7.9332%	56141	6985	8.0	2	4	9	0	1.4782E-07
9	27.82	MIREX	1.0000	0.0000%	1329797	22159	60.0	2	9	9	0	7.5199E-07

TOTAL AMOUNT = 0.1046

Plot of data file: P:CONFM9.PTS
Date: 07-04-1989 Time: 09:33:02
Sample Name: 89FM22D01
Start Time= 1.52Stop Time = 45.00Min. Scale= 28962Max. Scale= 61232



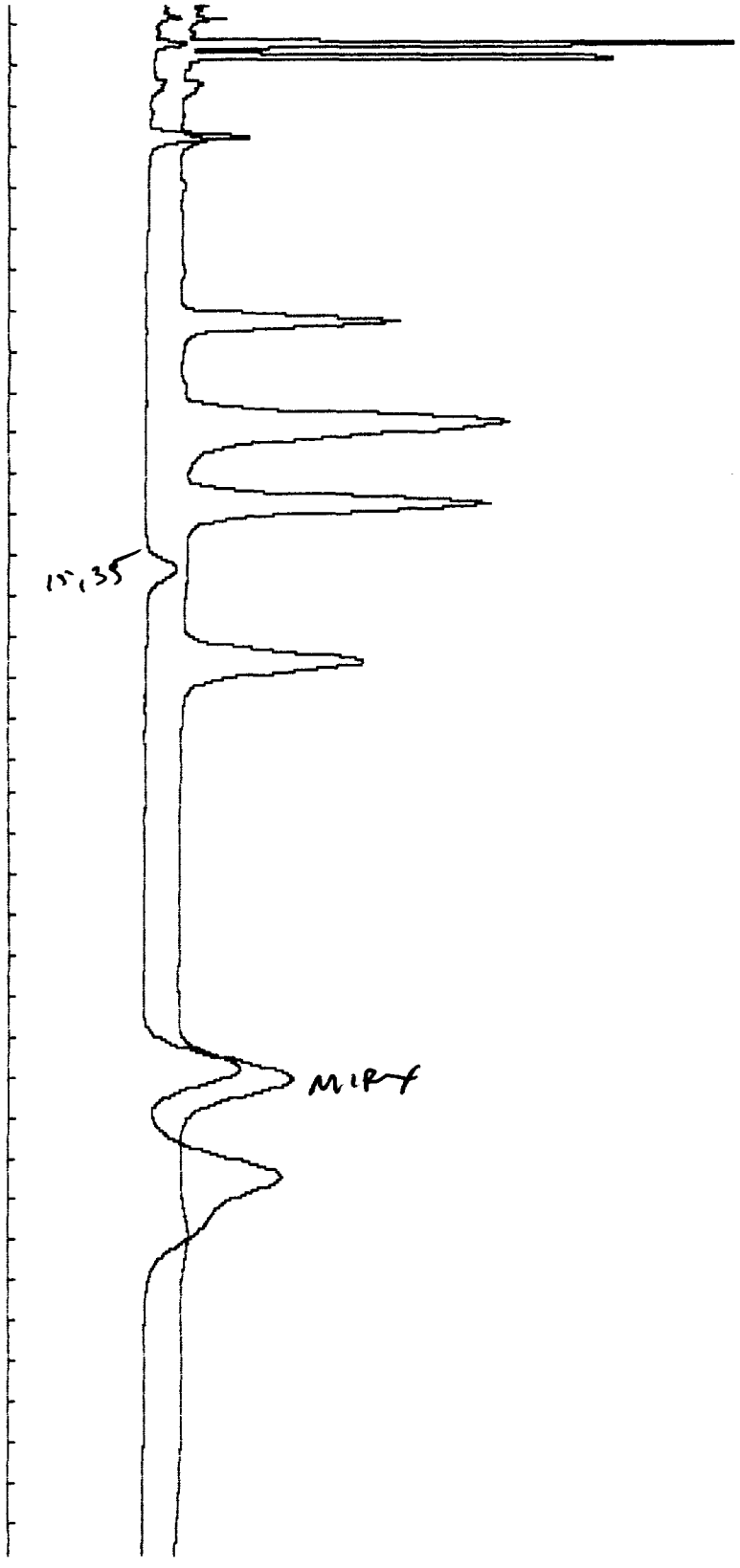
confirmation
6232

P:CONFM6
SCALE 175
OFFSET 0

P:CONFM9
SCALE 225
OFFSET 0

TIME 1.50

TIME 1.50



TIME 40.00

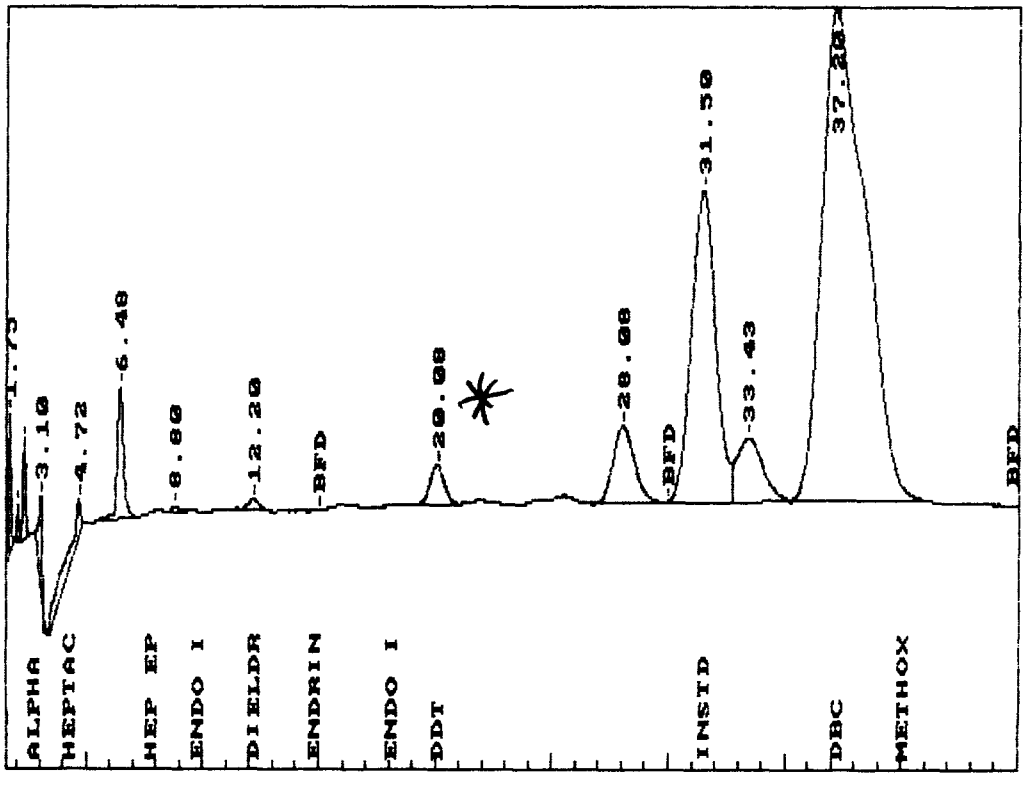
TIME 40.00

```
****** INTERNAL STANDARD TABLE ******
******************** 07-03-1989 10:44:28 Version 4.1 **********************
* Sample Name: 89FM22S02                          Data File: P:FM14        *
* Date: 06-28-1989 19:32:23 Method: P:PESTA 06-29-1989 10:06:41  #  75     *
* Interface: 0   Cycle#:  14   Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                          D.S. SF6232     *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per    1.000 sec.
Amount injected:        5.00               Dilution factor:        10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
8	12.20	DIELDRIN	0.0108	1.8329%	23300	722	32.3	1	8	11	0	4.6316E-07
9	20.08	DDT	0.0381	6.4746%	116221	2780	41.8	1	9	11	0	3.2800E-07
11	31.50	INSTD	1.0000	0.0000%	1655618	22241	74.4	3	11	11	0	6.0400E-07
13	37.20	DBC	0.5399	91.6925%	3550395	32207	110.2	1	13	11	0	1.5206E-07

TOTAL AMOUNT = 0.5888

Plot of data file: P:FM14.PTS
Date: 07-03-1989 Time: 10:45:03
Sample Name: 89FM22S02
Start Time= 1.52Stop Time = 45.00Min. Scale= 59871Max. Scale= 104824



* See overlay to follow

PRIMARY SF 6232

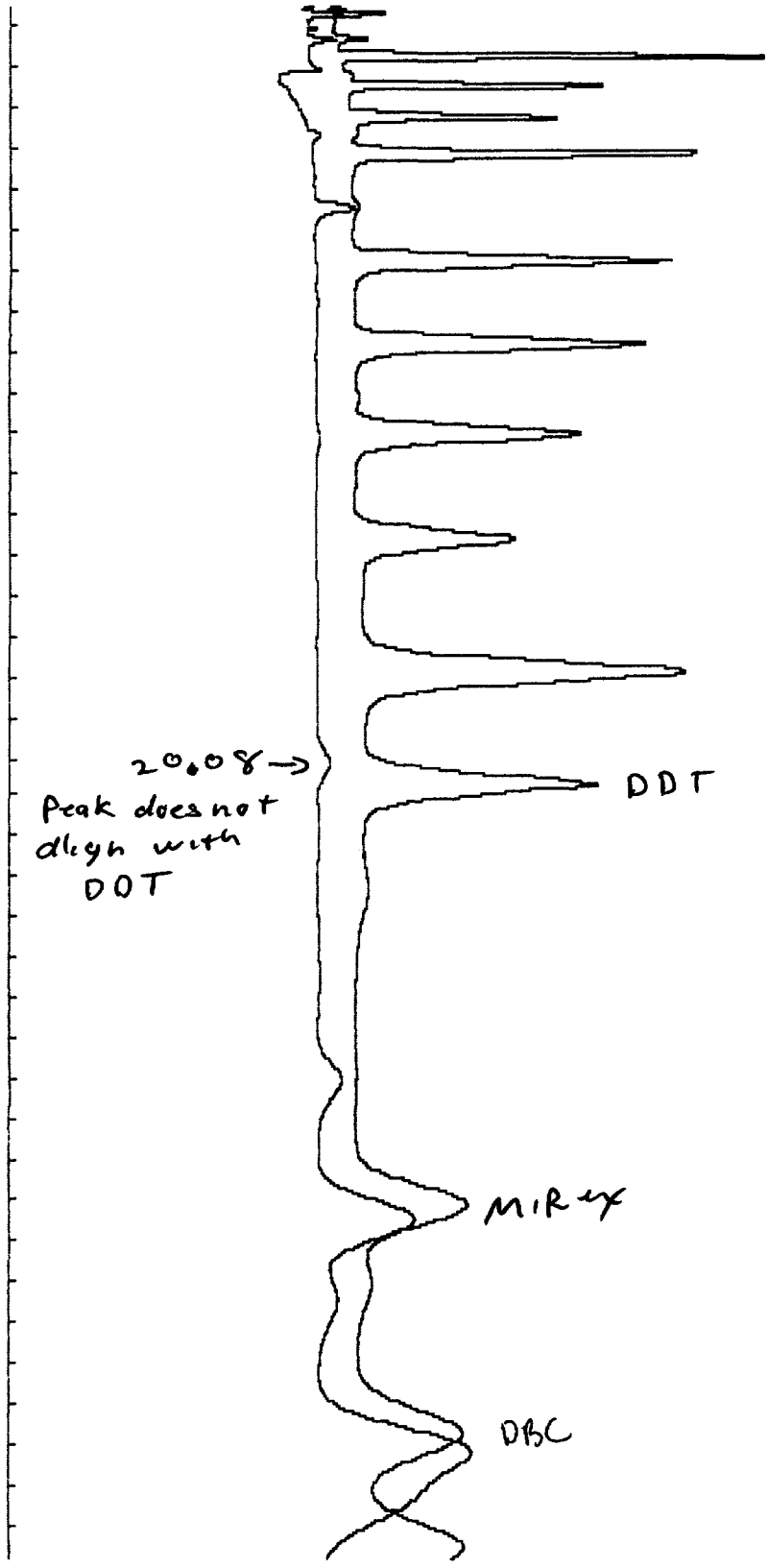
P:FM9
SCALE 200
OFFSET 0

Pest A

TIME 1.50

P:FM14
SCALE 225
OFFSET 0 SO2

TIME 1.50



TIME 40.00

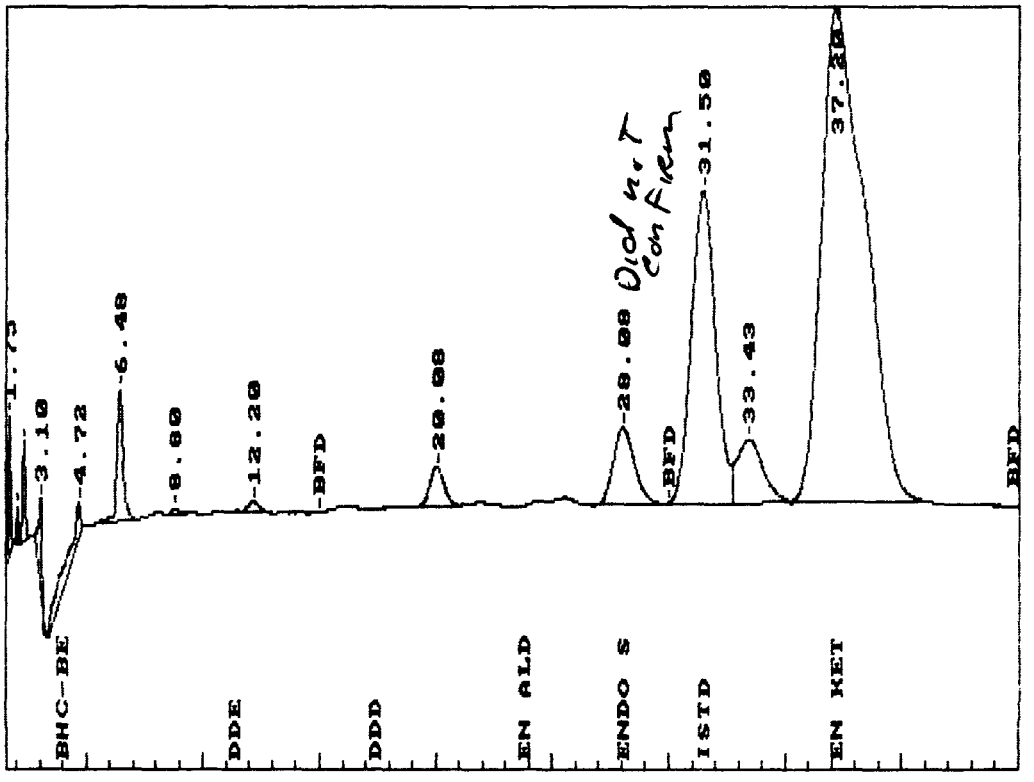
TIME 40.00

```
******   INTERNAL STANDARD TABLE   ******
******************** 07-03-1989 10:46:41 Version 4.1 **********************
* Sample Name: 89FM22S02                          Data File: P:FM14        *
* Date: 06-28-1989 19:32:23 Method: P:PESTB 06-29-1989 09:26:38  #  53     *
* Interface: 0   Cycle#:  14   Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT            Detector 1: ECD CONF        *
* Misc. Information: D.S. SF6232                          D.S. SF6232     *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per    1.000 sec.
Amount injected:        5.00               Dilution factor:        10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
5	4.72	BHC-DELTA	0.0138	1.7258%	116732	2727	42.8	1	5	11	0	1.1813E-07
10	28.08	ENDO SULFATE	0.0781	9.7716%	348014	5474	63.6	1	10	11	0	2.2436E-07
11	31.50	ISTD	1.0000	0.0000%	1655618	22241	74.4	3	11	11	0	6.0400E-07
13	37.20	EN KETONE	0.7072	88.5026%	3550395	32207	110.2	1	13	11	0	1.9918E-07

TOTAL AMOUNT = 0.7991

Plot of data file: P:FM14.PTS
Date: 07-03-1989 Time: 10:47:24
Sample Name: 89FM22S02
Start Time= 1.52Stop Time = 45.00Min. Scale= 59871Max. Scale= 104824



PRIMARY
SF 6232

P:FM6
SCALE 200
OFFSET 0

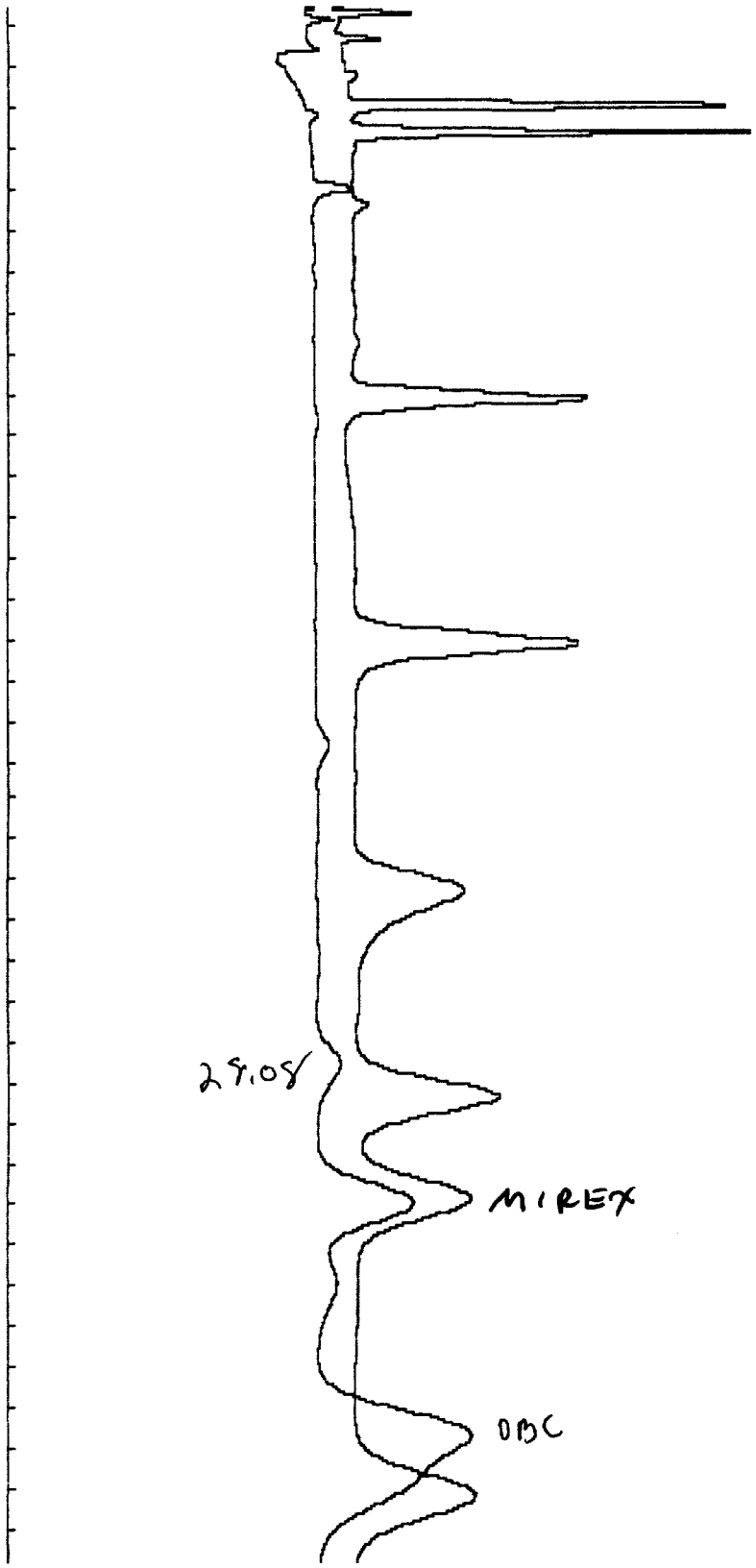
Pest B

P:FM14
SCALE 225
OFFSET 0

SO2

TIME 1.50

TIME 2.00



TIME 40.00

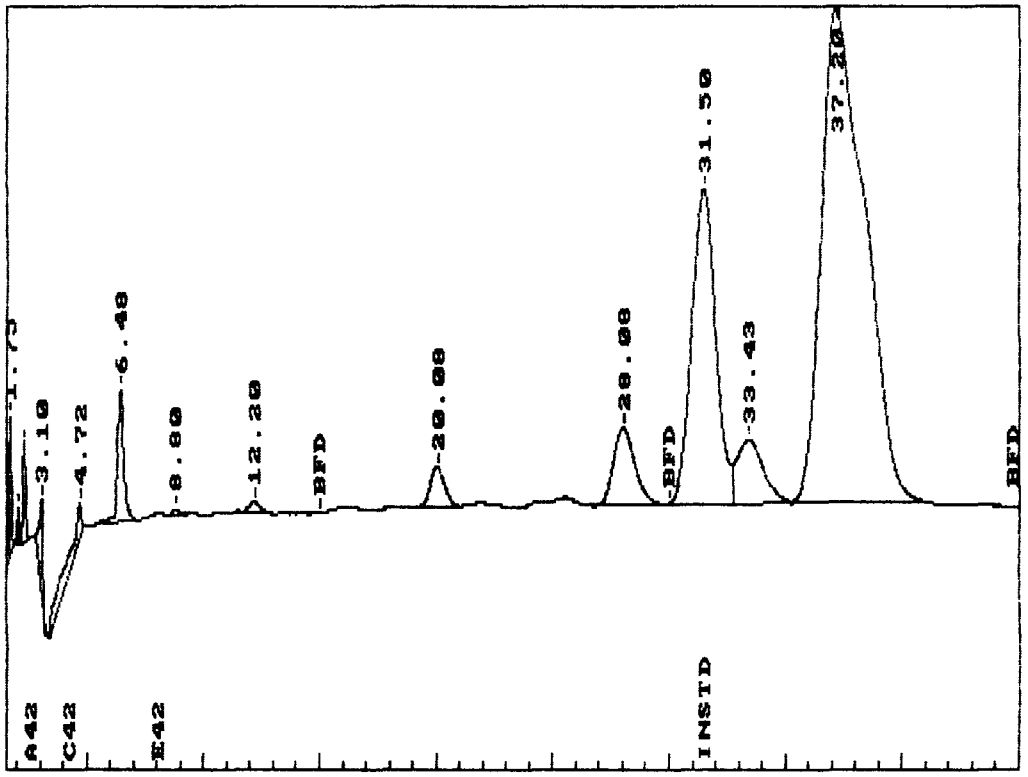
TIME 40.50

```
******   INTERNAL STANDARD TABLE   ******
******************** 07-03-1989 11:36:25 Version 4.1 *********************
* Sample Name: 89FM22S02                          Data File: P:FM14        *
* Date: 06-28-1989 19:32:23 Method: P:MET42. 07-03-1989 08:23:04  #  36    *
* Interface: 0   Cycle#:  14   Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*            Solvent Description: ULTRA HIGH PURITY NITROGEN              *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT            Detector 1: ECD CONF        *
* Misc. Information: D.S. SF6232                          D.S. SF6232     *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:       10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ~~UG/KG~~ ng/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
5	4.72	D42	0.0784	100.0000%	116732	2727	42.8	1	5	11	0	6.7152E-07
11	31.50	INSTD MIREX	1.0000	0.0000%	1594482	22314	71.5	2	11	11	0	6.2716E-07

TOTAL AMOUNT = 0.0784

Plot of data file: P:FM14.PTS
Date: 07-03-1989 Time: 11:36:48
Sample Name: 89FM22S02
Start Time= 1.52Stop Time = 45.00Min. Scale= 59871Max. Scale= 104824

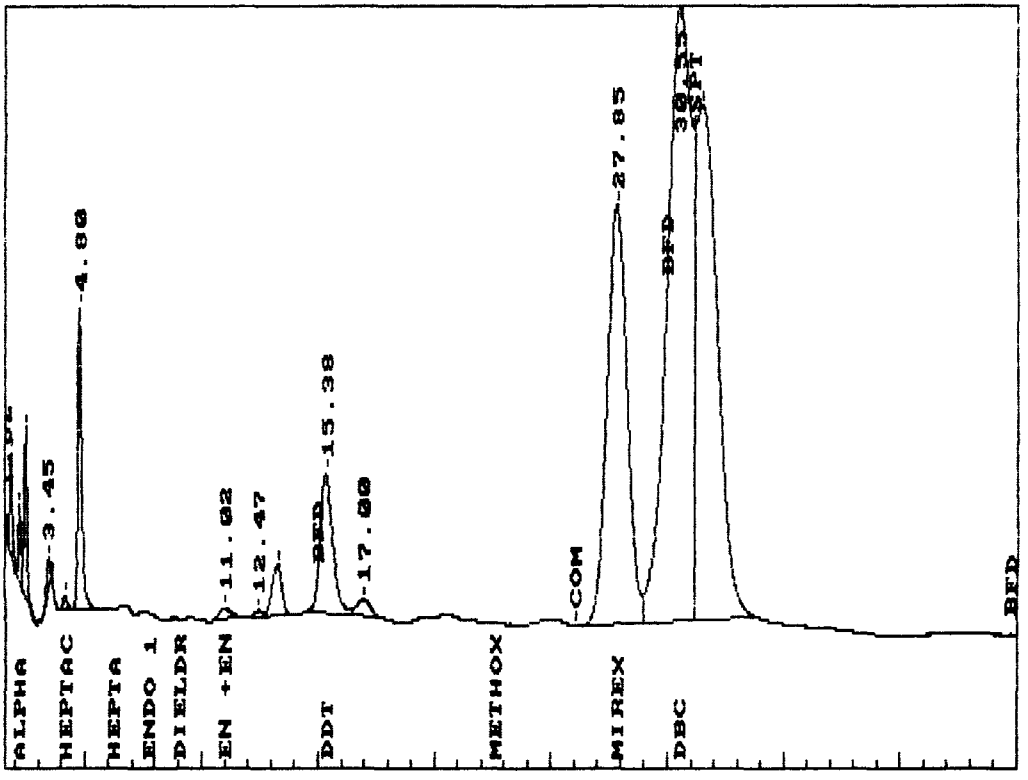


```
******   INTERNAL STANDARD TABLE   ******
******************** 07-04-1989 11:18:12 Version 4.1 **********************
* Sample Name: 89FM22S02                          Data File: P:CONFM11      *
* Date: 06-30-1989 21:09:36 Method: P:PESTA2 07-04-1989 08:06:34  #  16    *
* Interface: 0   Cycle#:  11   Operator NW  Channel#: 0    Vial#: N.A.      *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*****************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY    *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN              *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                     *
*            Detector 0: ECD QUANT            Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                            *
*****************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per    1.000 sec.
Amount injected:        5.00               Dilution factor:        10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.23	ALPHA BHC	0.0054	0.9229%	32811	4017	8.2	2	3	13	0	1.5652E-07
4	2.50	LINDANE	0.0145	2.5980%	80413	8875	9.1	2	3	13	-3.854	1.7979E-07
6	4.18	HEPTACHLOR	0.0015	0.2734%	10129	807	12.5	1	6	13	0	1.5020E-07
8	11.02	EN +END 2	0.0062	1.1078%	20717	607	34.1	1	8	13	0	2.9758E-07
11	15.38	DDT	0.0635	11.4022%	269327	7184	37.5	2	11	13	0	2.3559E-07
13	27.85	MIREX	1.0000	0.0000%	1295104	21638	59.9	2	13	13	0	7.7214E-07
14	30.55	DBC	0.4658	83.6957%	2351957	31906	73.7	2	14	13	0	1.9803E-07

TOTAL AMOUNT = 0.5565

Plot of data file: P:CONFM11.PTS
Date: 07-04-1989 Time: 11:18:39
Sample Name: 89FM22S02
Start Time= 1.52Stop Time = 45.00Min. Scale= 28893Max. Scale= 61531



P:CONFM7
SCALE 150
OFFSET 0

Pest A

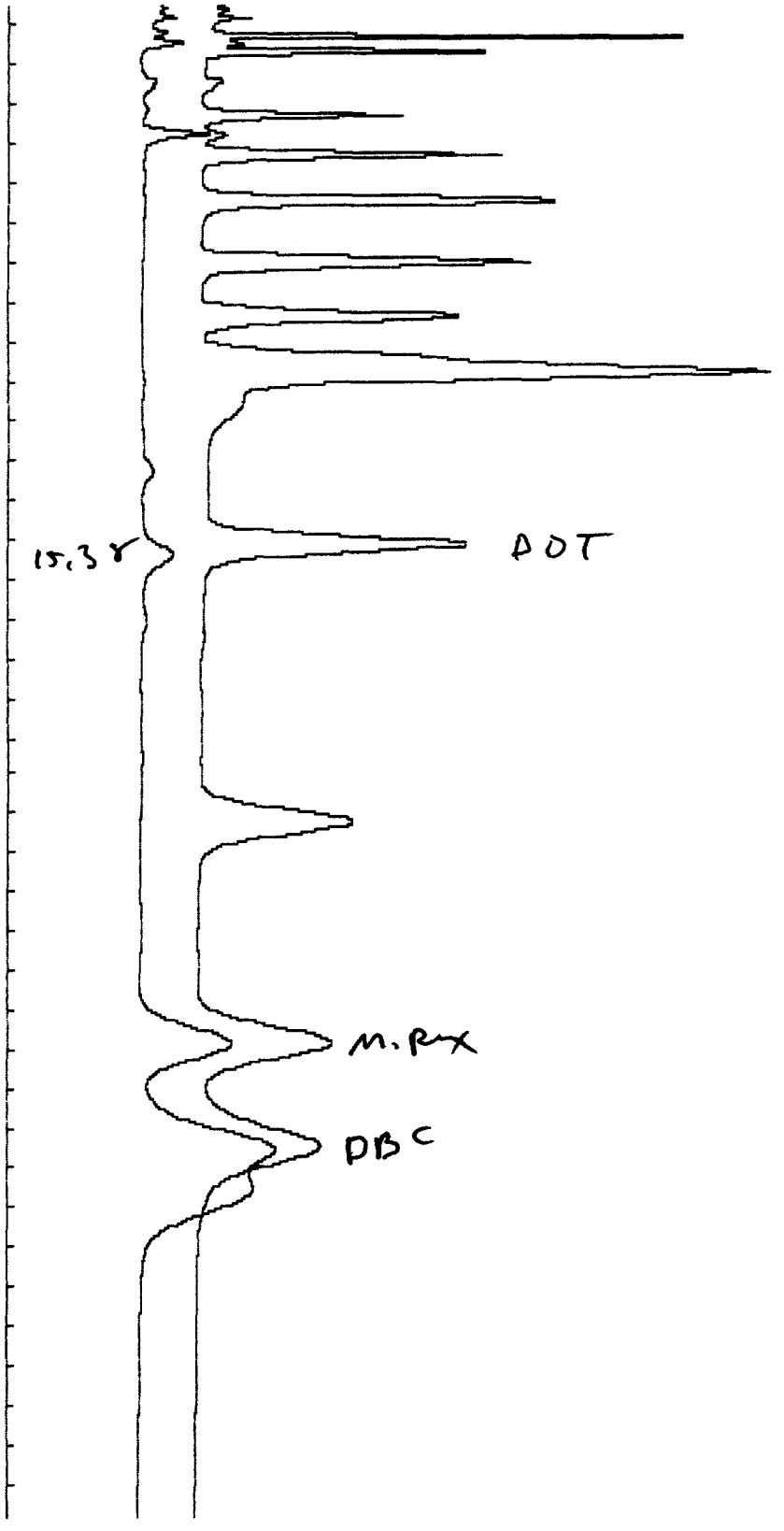
TIME 1.50

P:CONFM11
SCALE 225
OFFSET 0

SO2

TIME 1.50

Confirmation
6232



TIME 40.00

TIME 40.00

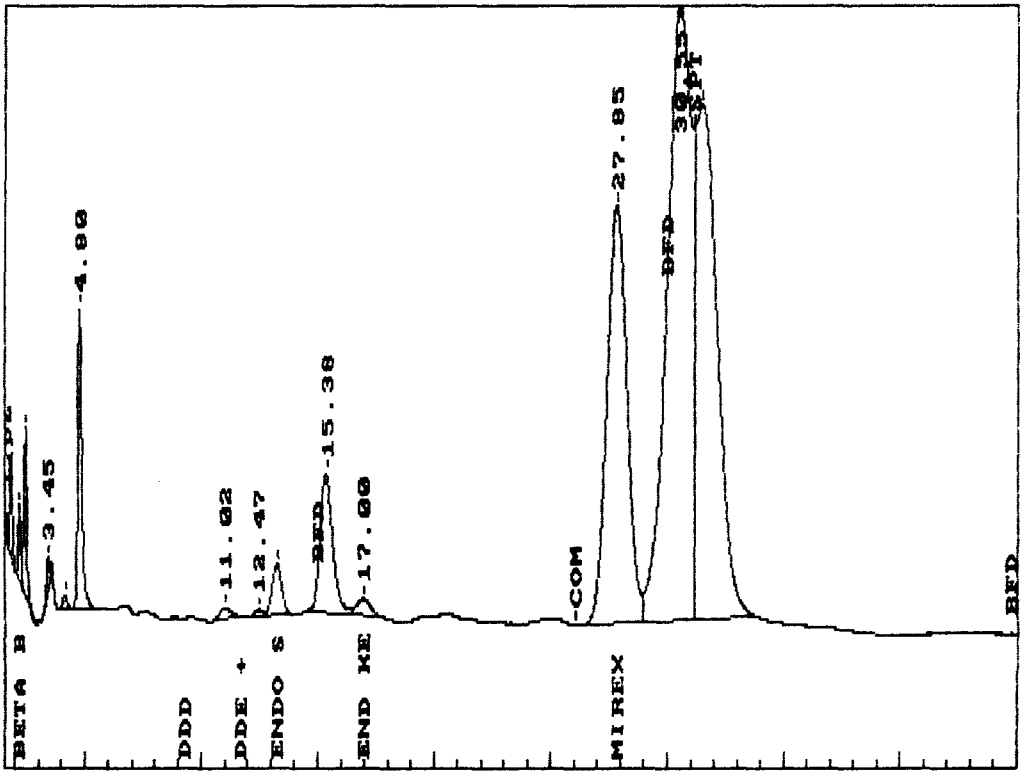
```
******      INTERNAL STANDARD TABLE      ******
******************** 07-04-1989 11:19:57 Version 4.1 **********************
* Sample Name: 89FM22S02                          Data File: P:CONFM11      *
* Date: 06-30-1989 21:09:36 Method: P:PESTB2 07-04-1989 07:58:22  #  17    *
* Interface: 0   Cycle#:  11   Operator NW  Channel#: 0    Vial#: N.A.      *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY   *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN             *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                    *
*            Detector 0: ECD QUANT            Detector 1: ECD CONF         *
* Misc. Information: D.S. SF6232                                           *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per    1.000 sec.
Amount injected:        5.00               Dilution factor:        10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.23	BETA BHC	0.6046	93.5931%	32811	4017	8.2	2	3	13	0	1.8427E-05
4	2.50	DELTA BHC	0.0122	1.8894%	80413	8875	9.1	2	4	13	0	1.5178E-07
10	13.27	ENDO SO4	0.0183	2.8290%	75269	2678	28.1	2	10	13	0	2.4280E-07
12	17.00	END KETONE	0.0109	1.6884%	33671	846	39.8	2	12	13	0	3.2393E-07
13	27.85	MIREX	1.0000	0.0000%	1295104	21638	59.9	2	13	13	0	7.7214E-07

3 present in solvent BLK

TOTAL AMOUNT = 0.6460

Plot of data file: P:CONFM11.PTS
Date: 07-04-1989 Time: 11:20:27
Sample Name: 89FM22S02
Start Time= 1.52Stop Time = 45.00Min. Scale= 28893Max. Scale= 61531



P:CONFM6
SCALE 150
OFFSET 0

pesT B

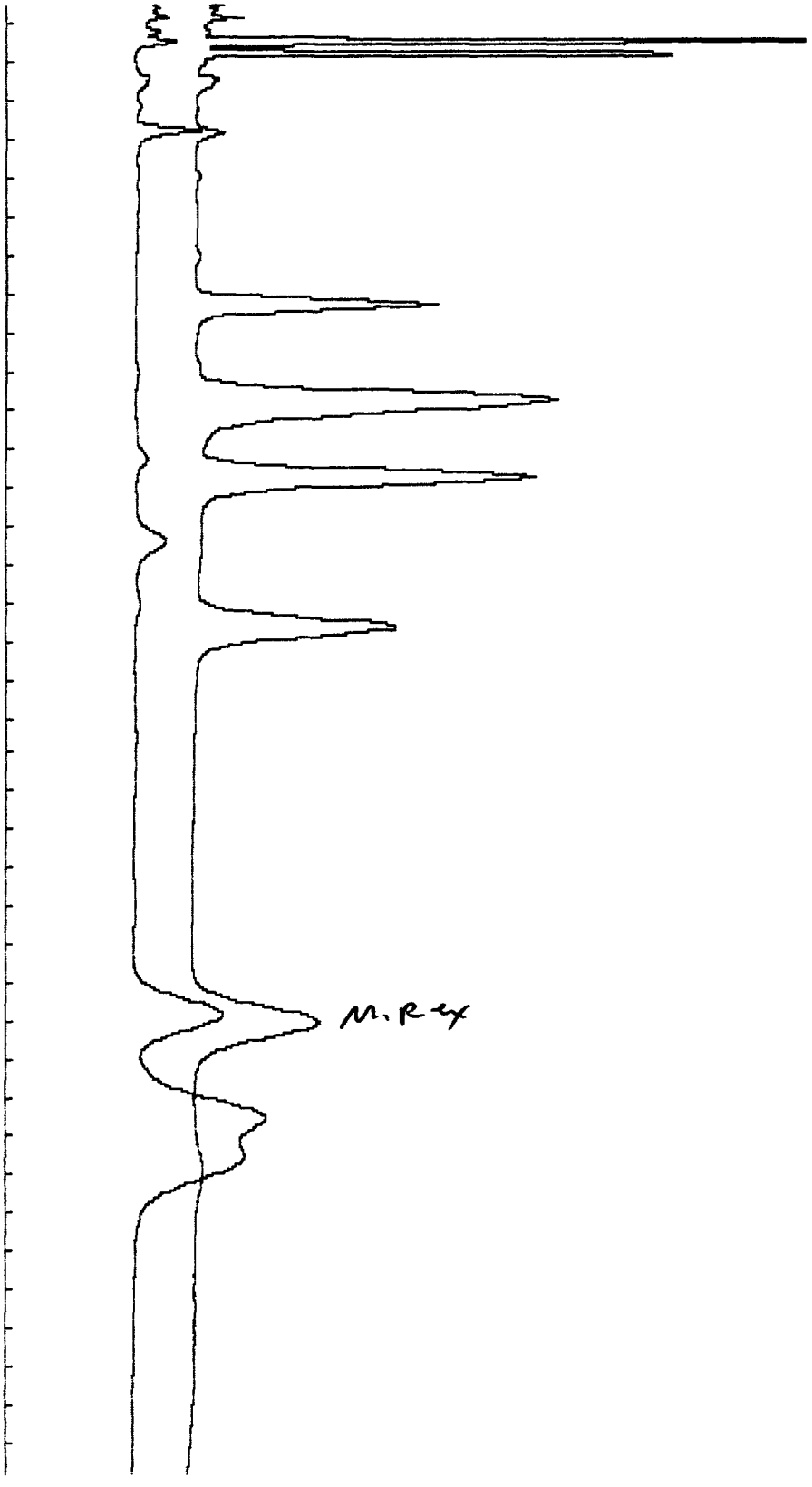
P:CONFM11
SCALE 225
OFFSET 0

SO2

Confirmation
6232

TIME 1.50

TIME 1.50



TIME 40.00

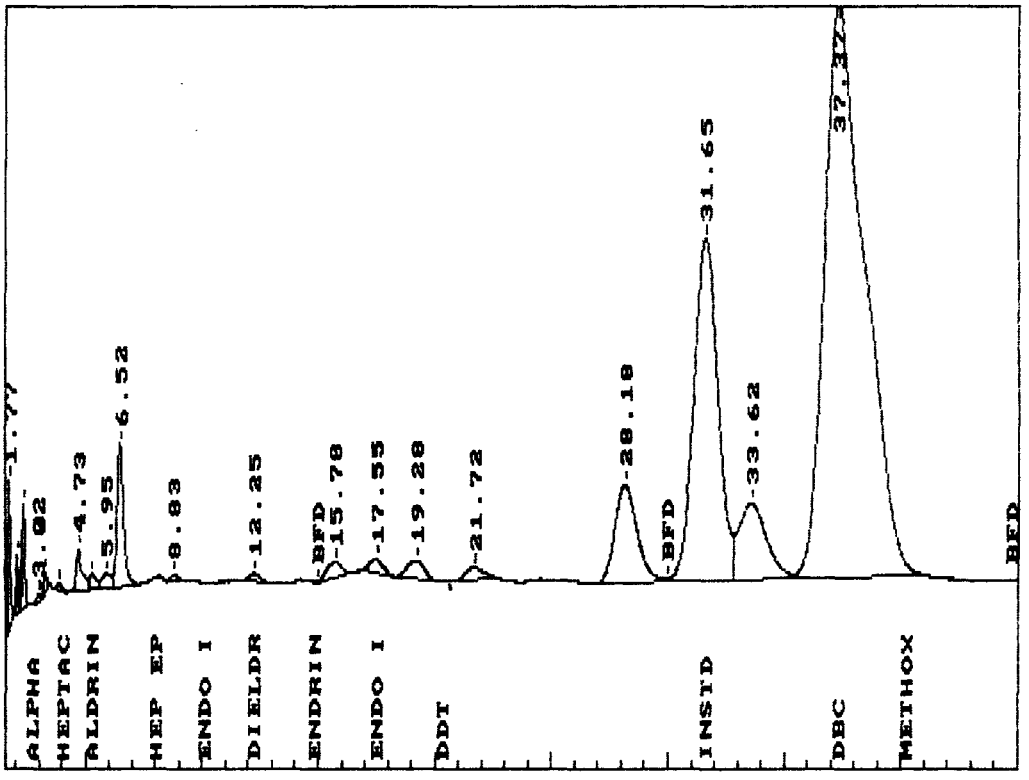
TIME 40.00

```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-03-1989 11:50:06 Version 4.1 ********************
* Sample Name: 89FM22S03                          Data File: P:FM18      *
* Date: 06-28-1989 22:38:24 Method: P:PESTA 06-29-1989 10:06:41  #  75   *
* Interface: 0   Cycle#:  18   Operator NW  Channel#: 0    Vial#: N.A.   *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000          *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN          *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                 *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF        *
* Misc. Information: D.S. SF6232                                        *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:   45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:       10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
5	3.32	LINDANE	0.0046	0.8119%	11262	1234	9.1	1	5	18	0	4.1264E-07
6	3.92	HEPTACHLOR	0.0027	0.4692%	5948	491	12.1	1	5	18	-3.590	4.5157E-07
8	5.32	ALDRIN	0.0115	2.0056%	21639	1061	20.4	2	8	18	0	5.3051E-07
12	12.25	DIELDRIN	0.0097	1.7028%	14212	481	29.6	1	12	18	0	6.8580E-07
14	17.55	ENDO II	0.0207	3.6111%	40380	991	40.7	1	14	18	0	5.1186E-07
18	31.65	INSTD	1.0000	0.0000%	1676190	23449	71.5	2	18	18	0	5.9659E-07
20	37.37	DBC	0.5231	91.3993%	3483446	35147	99.1	1	20	18	0	1.5018E-07

TOTAL AMOUNT = 0.5724

Plot of data file: P:FM18.PTS
Date: 07-03-1989 Time: 11:51:10
Sample Name: 89FM22S03
Start Time= 1.52Stop Time = 45.00Min. Scale= 66354Max. Scale= 109848



primary
6232

P:FM9
SCALE 200
OFFSET 0

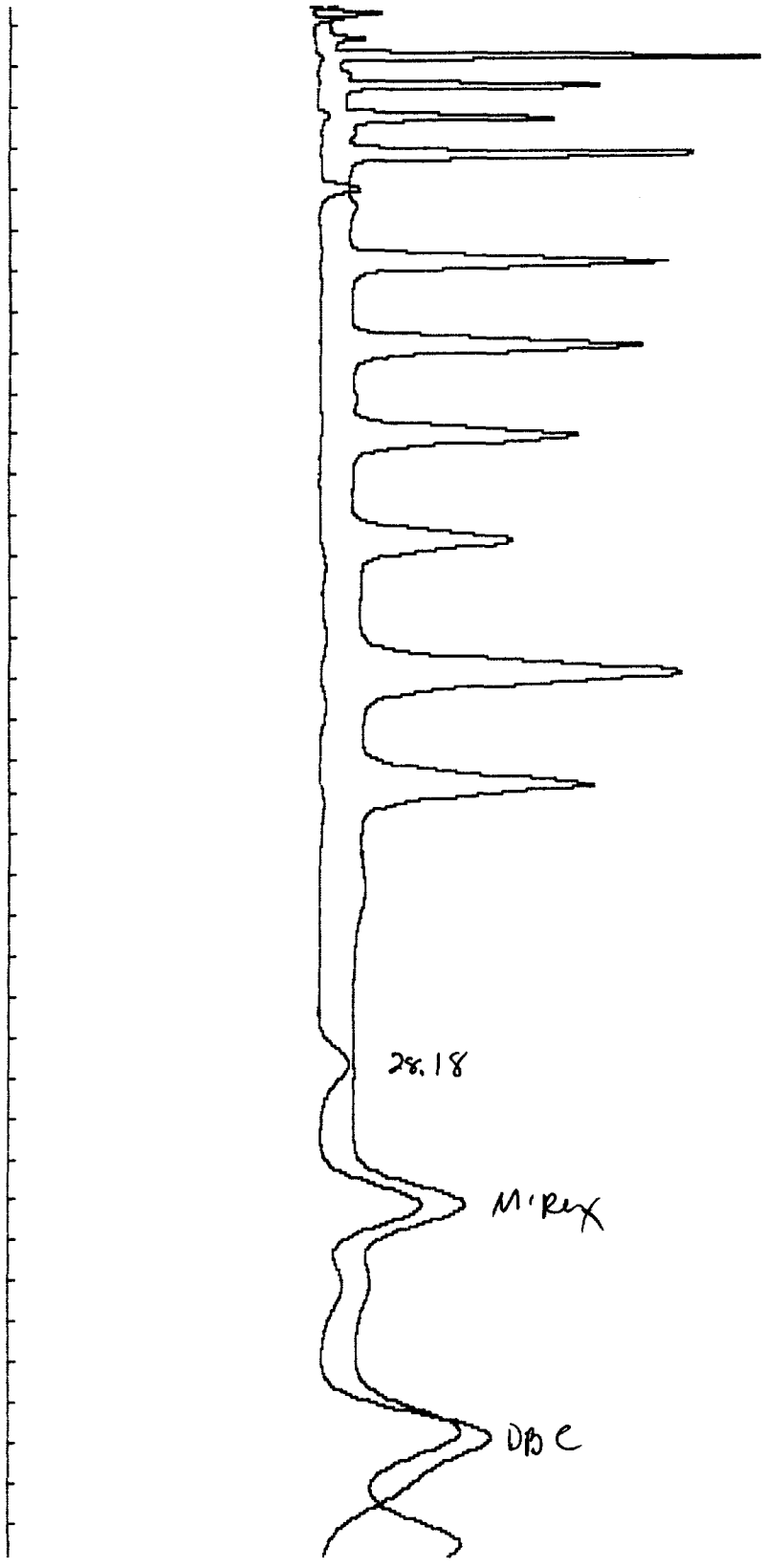
Pest A

P:FM18
SCALE 225
OFFSET 0

S03

TIME 1.50

TIME 2.00



TIME 40.00

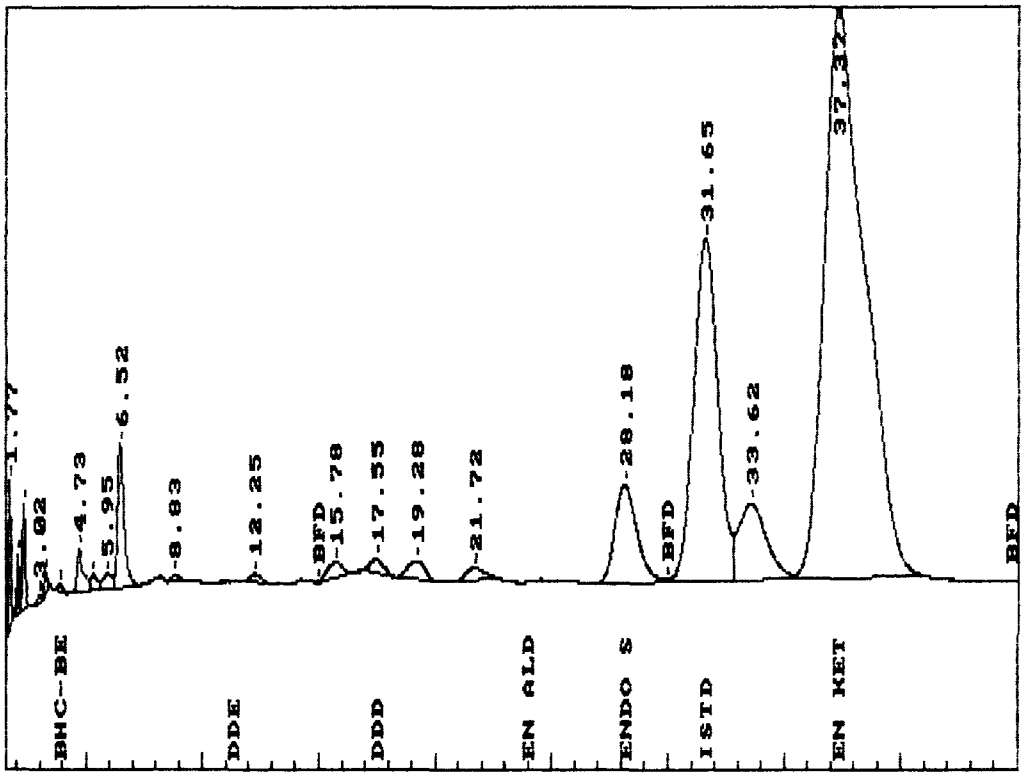
TIME 40.50

```
*****      INTERNAL STANDARD TABLE      *****
******************** 07-03-1989 11:45:38 Version 4.1 ********************
* Sample Name: 89FM22S03                          Data File: P:FM18       *
* Date: 06-28-1989 22:38:24 Method: P:PESTB 06-29-1989 09:26:38  #  53    *
* Interface: 0   Cycle#:  18   Operator NW  Channel#: 0    Vial#: N.A.    *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000           *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per    1.000 sec.
Amount injected:        5.00               Dilution factor:        10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
6	3.92	BHC-BETA	0.0010	0.1199%	5948	491	12.1	1	6	18	0	1.6022E-07
7	4.73	BHC-DELTA	0.0058	0.7330%	49922	2862	17.4	2	7	18	0	1.1668E-07
14	17.55	DDD	0.0052	0.6534%	40380	991	40.7	1	14	18	0	1.2858E-07
17	28.18	ENDO SULFATE	0.0973	12.2503%	439277	6751	65.1	2	17	18	0	2.2161E-07
18	31.65	ISTD	1.0000	0.0000%	1676190	23449	71.5	2	18	18	0	5.9659E-07
20	37.37	EN KETONE	0.6853	86.2434%	3483446	35147	99.1	1	20	18	0	1.9674E-07

TOTAL AMOUNT = 0.7946

Plot of data file: P:FM18.PTS
Date: 07-03-1989 Time: 11:46:38
Sample Name: 89FM22S03
Start Time= 1.52Stop Time = 45.00Min. Scale= 66354Max. Scale= 109848



primary
6232

P:FM6
SCALE 200
OFFSET 0

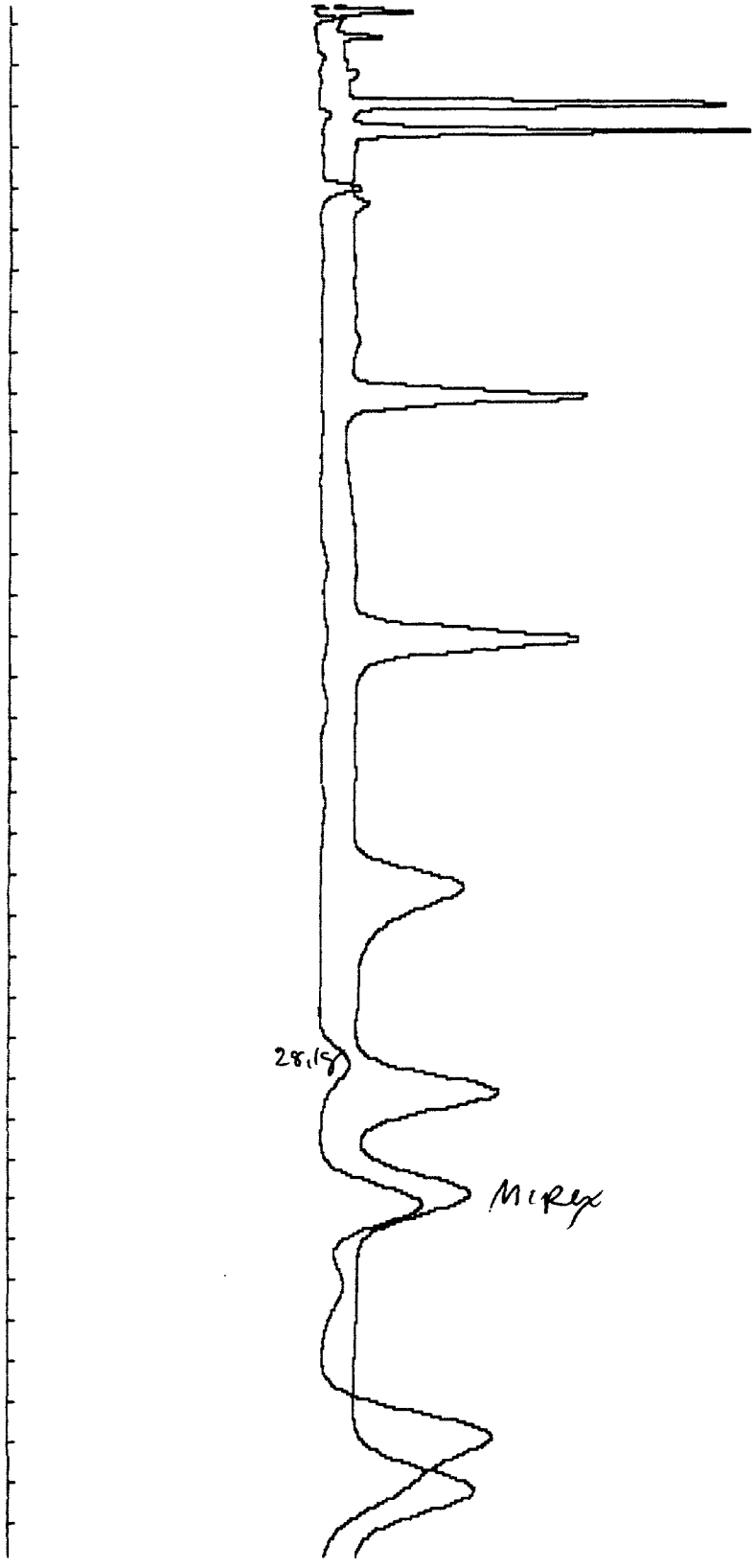
Pest B

P:FM18
SCALE 225
OFFSET 0

S03

TIME 1.50

TIME 2.00



TIME 40.00

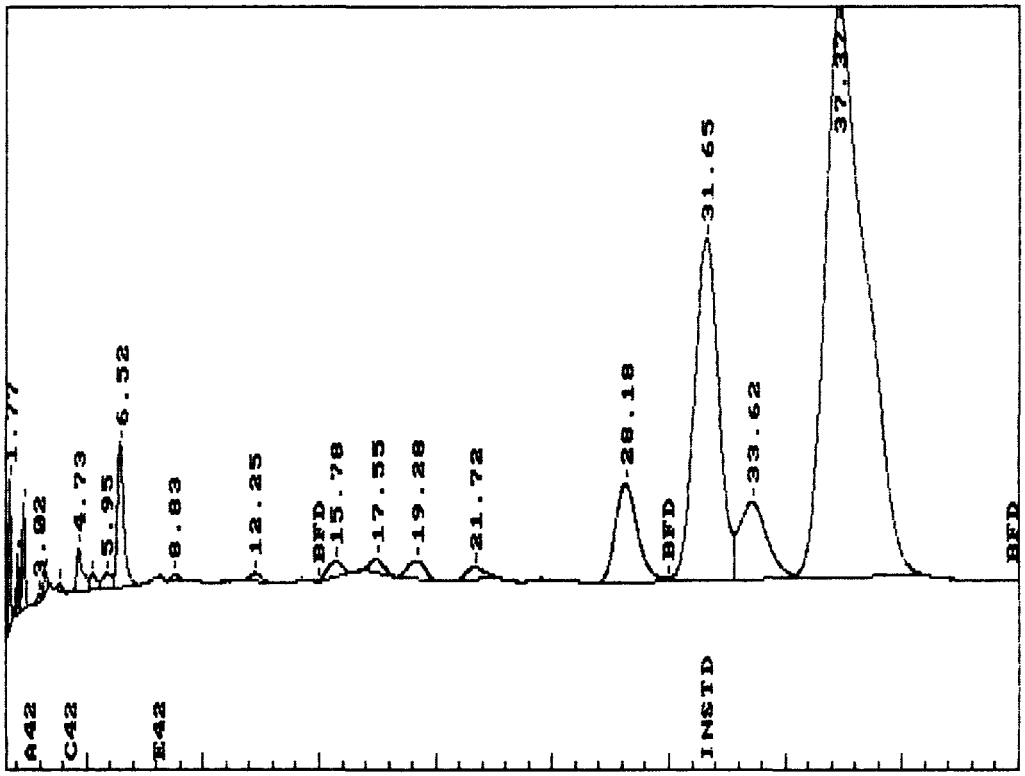
TIME 40.50

```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-03-1989 11:56:14 Version 4.1 **********************
* Sample Name: 89FM22S03                          Data File: P:FM18        *
* Date: 06-28-1989 22:38:24 Method: P:MET42. 07-03-1989 08:23:04  #  36    *
* Interface: 0   Cycle#:  18   Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT            Detector 1: ECD CONF        *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:       10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ~~UG/KG~~ ng/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
5	3.32	B42	-0.3347	68.6266%	11262	1234	9.1	1	5	18	0	-2.9722E-05
7	4.73	D42	-0.1530	31.3734%	49922	2862	17.4	2	7	18	0	-3.0653E-06
18	31.65	INSTD MIREX	1.0000	0.0000%	1676190	23449	71.5	2	18	18	0	5.9659E-07

TOTAL AMOUNT = -0.4878

Plot of data file: P:FM18.PTS
Date: 07-03-1989 Time: 11:57:49
Sample Name: 89FM22S03
Start Time= 1.52Stop Time = 45.00Min. Scale= 66354Max. Scale= 109848

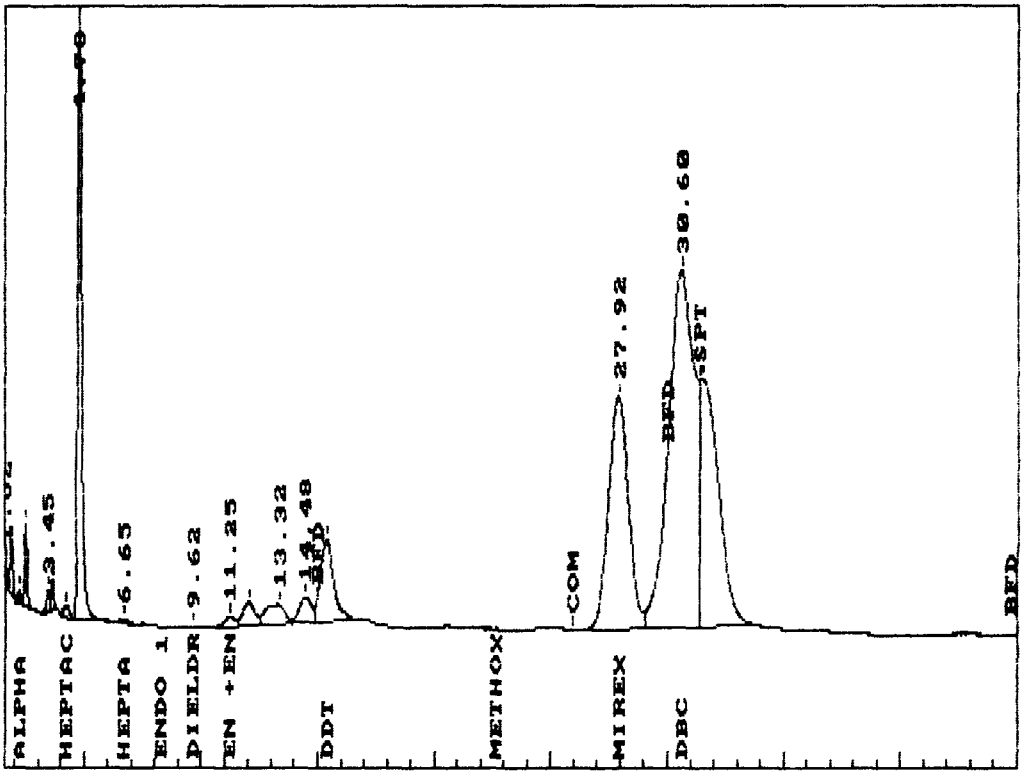


```
******   INTERNAL STANDARD TABLE   ******
******************** 07-04-1989 11:27:28 Version 4.1 **********************
* Sample Name: 89FM22S03                          Data File: P:CONFM12      *
* Date: 06-30-1989 21:56:07 Method: P:PESTA2 07-04-1989 08:06:34  #  16    *
* Interface: 0   Cycle#:  12   Operator NW  Channel#: 0    Vial#: N.A.      *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY   *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN             *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                    *
*            Detector 0: ECD QUANT            Detector 1: ECD CONF         *
* Misc. Information: D.S. SF6232                                           *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per    1.000 sec.
Amount injected:        5.00               Dilution factor:        10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	HEIGHT BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.23	ALPHA BHC	0.0016	0.2634%	10862	1488	7.3	2	3	16	0	1.4570E-07
4	2.50	LINDANE	0.0109	1.8153%	65169	8326	7.8	2	3	16	-3.854	1.6737E-07
7	4.20	HEPTACHLOR	0.0025	0.4216%	18118	1104	16.4	1	7	16	0	1.3982E-07
9	6.65	HEPTA EPOX	0.0014	0.2254%	9752	387	25.2	1	9	16	0	1.3887E-07
10	9.62	DIELDRIN	0.0005	0.0854%	2996	160	18.7	1	10	16	0	1.7120E-07
11	11.25	EN +END 2	0.0103	1.7092%	37074	1065	34.8	2	11	16	0	2.7701E-07
15	15.38	DDT	0.0733	12.2043%	334360	8344	40.1	2	15	16	0	2.1931E-07
16	27.92	MIREX	1.0000	0.0000%	1391248	23206	60.0	2	16	16	0	7.1878E-07
17	30.60	DBC	0.5004	83.2754%	2714271	35558	76.3	2	17	16	0	1.8434E-07

TOTAL AMOUNT = 0.6008

Plot of data file: P:CONFM12.PTS
Date: 07-04-1989 Time: 11:27:58
Sample Name: 89FM22S03
Start Time= 1.52Stop Time = 45.00Min. Scale= 29093Max. Scale= 92270



P:CONFM7
SCALE 150
OFFSET 0

Rest A

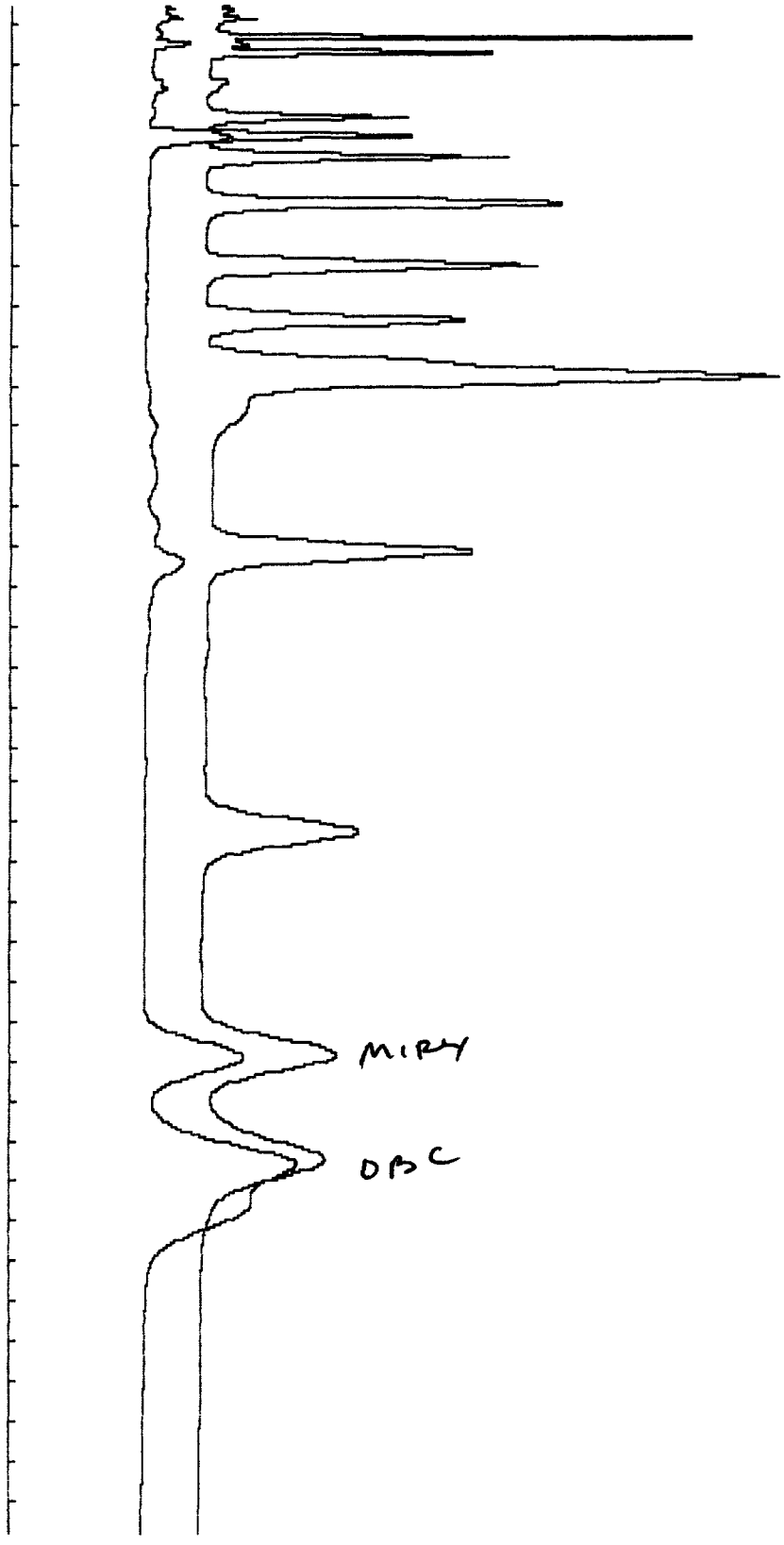
TIME 1.50

P:CONFM12
SCALE 225
OFFSET 0

Confirmation
623 L

S03

TIME 1.50



TIME 40.00

TIME 40.00

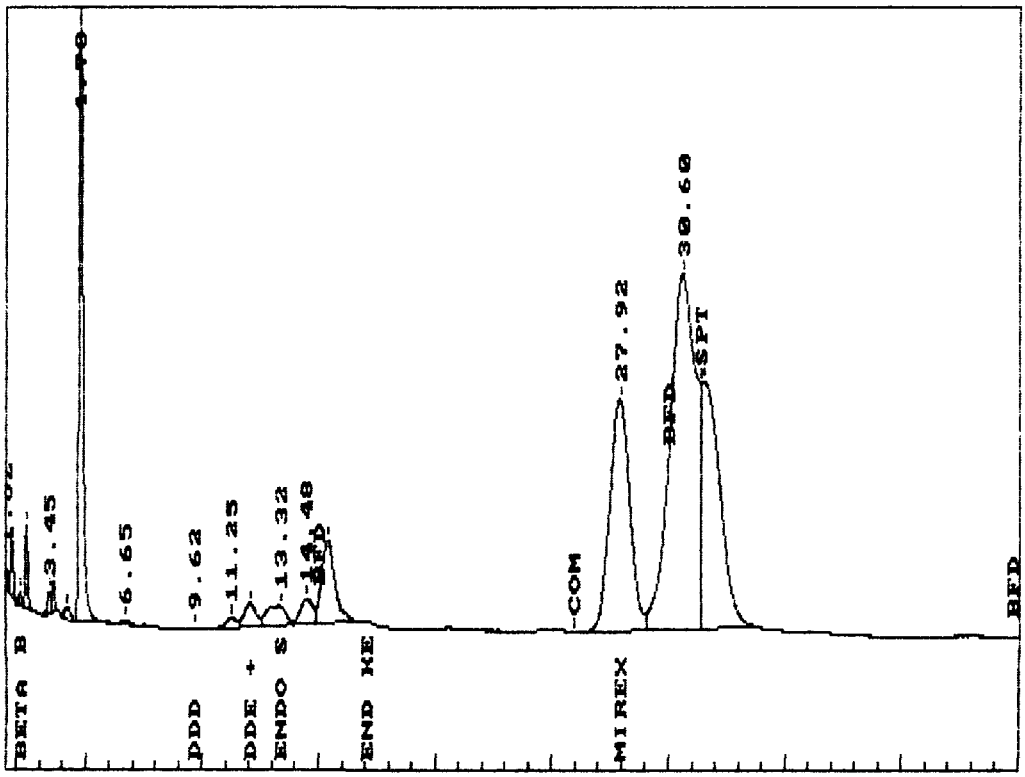
```
++++++   INTERNAL STANDARD TABLE   ++++++
******************** 07-04-1989 11:29:23 Version 4.1 **********************
* Sample Name: 89FM22S03                          Data File: P:CONFM12      *
* Date: 06-30-1989 21:56:07 Method: P:PESTB2 07-04-1989 07:58:22  #  17    *
* Interface: 0   Cycle#:  12   Operator NW  Channel#: 0    Vial#: N.A.      *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY   *
*            Solvent Description: ULTRA HIGH PURITY NITROGEN               *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                    *
*            Detector 0: ECD QUANT            Detector 1: ECD CONF         *
* Misc. Information: D.S. SF6232                                           *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:       10.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.23	BETA BHC	0.1863	81.3010%	10862	1488	7.3	2	3	16	0	1.7153E-05
4	2.50	DELTA BHC	0.0092	4.0179%	65169	8326	7.8	2	4	16	0	1.4129E-07
10	9.62	DDD	0.0008	0.3632%	2996	160	18.7	1	10	16	0	2.7780E-07
12	12.03	DDE + EA	0.0052	2.2821%	89790	2451	36.6	2	12	16	0	5.8247E-08
13	13.32	ENDO SO4	0.0276	12.0357%	122036	2008	60.8	2	13	16	0	2.2602E-07
16	27.92	MIREX	1.0000	0.0000%	1391248	23206	60.0	2	16	16	0	7.1878E-07

present in solvent blk

TOTAL AMOUNT = 0.2292

Plot of data file: P:CONFM12.PTS
Date: 07-04-1989 Time: 11:29:51
Sample Name: 89FM22S03
Start Time= 1.52Stop Time = 45.00Min. Scale= 29093Max. Scale= 92270



P:CONFM6
SCALE 150
OFFSET 0

Part B

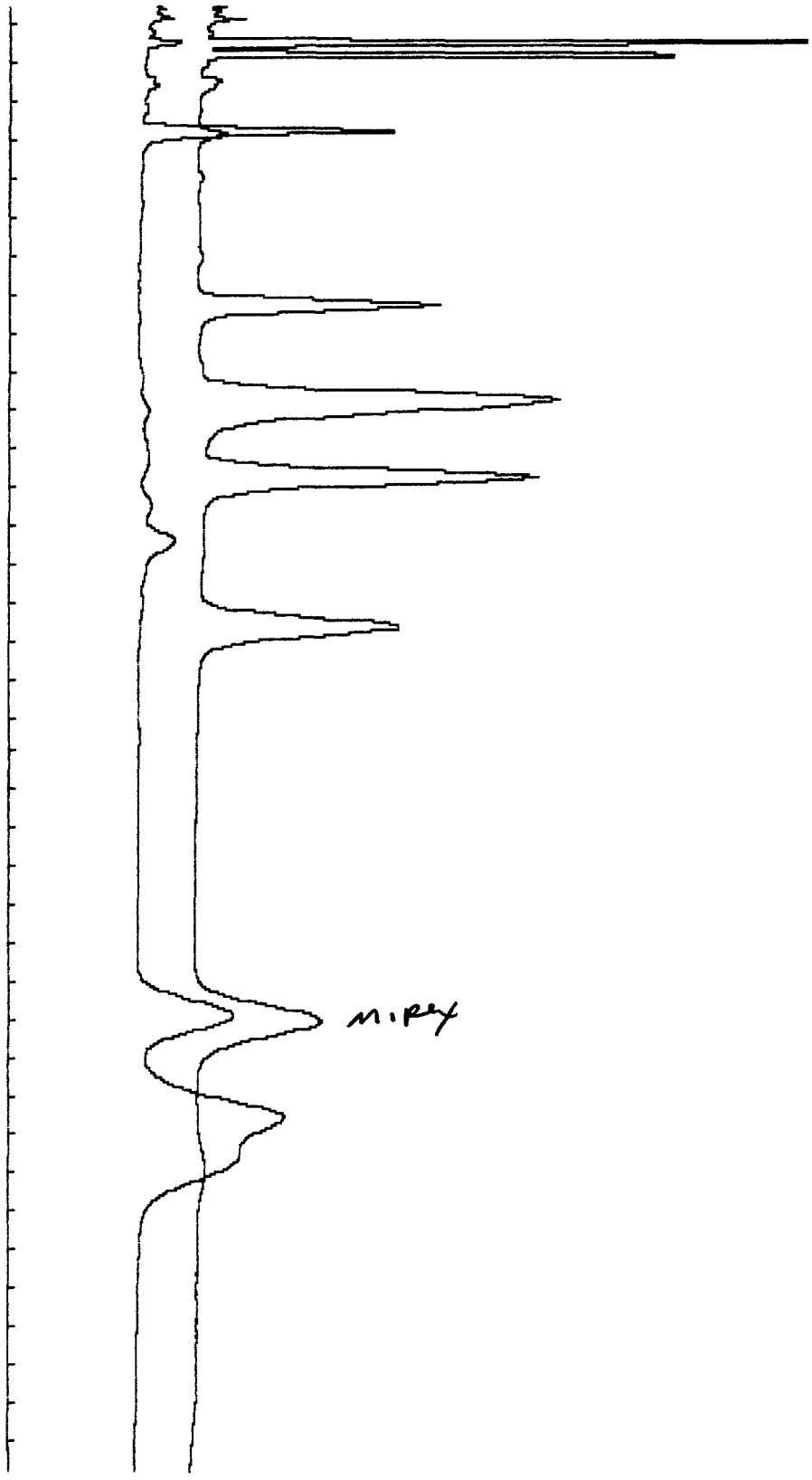
TIME 1.50

P:CONFM12
SCALE 225
OFFSET 0

TIME 1.50

Confirmation
6232

303



TIME 40.00

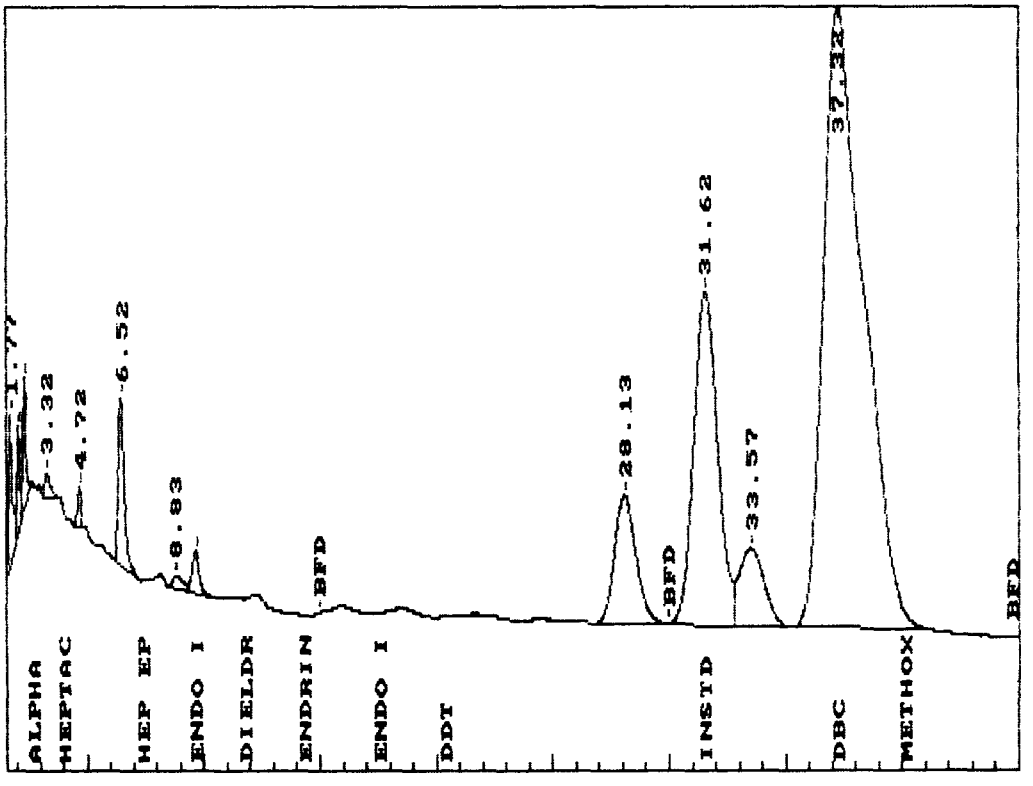
TIME 40.00

```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-04-1989 07:35:10 Version 4.1 **********************
* Sample Name: 89FM22S04                          Data File: P:FM19        *
* Date: 06-28-1989 23:24:53 Method: P:PESTA 06-29-1989 10:06:41  #  75     *
* Interface: 0   Cycle#:  19   Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*             Detector 0: ECD QUANT          Detector 1: ECD CONF         *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per    1.000 sec.
Amount injected:        5.00               Dilution factor:        10.00
Internal Standard Amount:  1
Sample Weight:          0.890000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
4	3.32	LINDANE	0.0068	0.9345%	26286	1654	15.9	1	4	10	0	2.5973E-07
5	4.72	ALDRIN	0.0138	1.8887%	28961	2695	10.7	1	4	10	-3.811	4.7645E-07
8	9.68	ENDO I	0.0185	2.5256%	61021	2864	21.3	2	8	10	0	3.0238E-07
10	31.62	INSTD	1.0000	0.0000%	1580957	22080	71.6	2	10	10	0	6.3253E-07
12	37.32	DBC	0.6915	94.6513%	3864117	37742	102.4	1	12	10	0	1.7896E-07

TOTAL AMOUNT = 0.7306

Plot of data file: P:FM19.PTS
Date: 07-04-1989 Time: 07:35:49
Sample Name: 89FM22S04
Start Time= 1.52Stop Time = 45.00Min. Scale= 72492Max. Scale= 114290



P:FM9
SCALE 200
OFFSET 0

pest A

P:FM19
SCALE 225
OFFSET 0

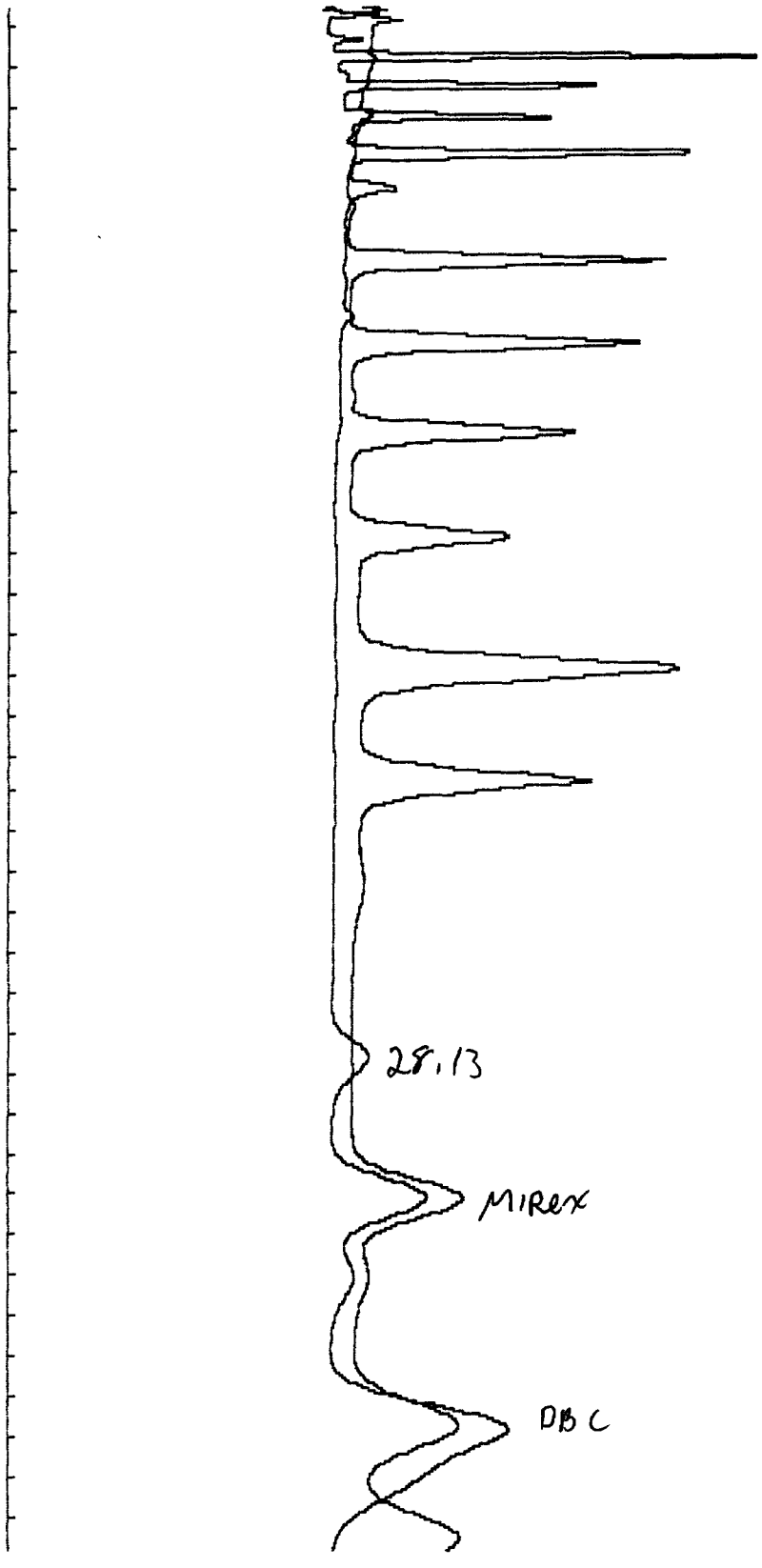
S04

Primary

SF 6232

TIME 1.50

TIME 2.00



TIME 40.00

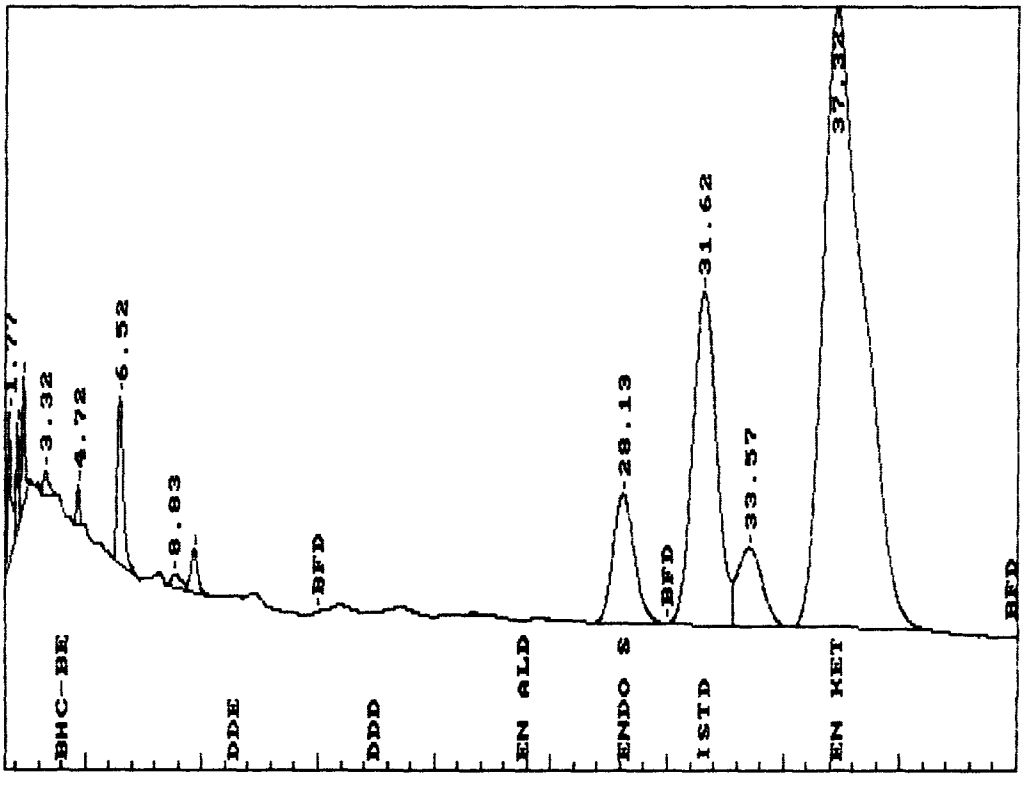
TIME 40.50

```
******   INTERNAL STANDARD TABLE   ******
******************** 07-03-1989 12:26:38 Version 4.1 **********************
* Sample Name: 89FM22S04                          Data File: P:FM19        *
* Date: 06-28-1989 23:24:53 Method: P:PESTB 06-29-1989 09:26:38  #  53     *
* Interface: 0   Cycle#:  19   Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:   45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          0.890000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
5	4.72	BHC-DELTA	0.0004	0.3548%	28961	2695	10.7	1	5	10	0	1.3900E-08
9	28.13	ENDO SULFATE	0.0144	12.7105%	546293	8519	64.1	2	9	10	0	2.6400E-08
10	31.62	ISTD	1.0000	0.0000%	1580957	22080	71.6	2	10	10	0	6.3253E-07
12	37.32	EN KETONE	0.0986	86.9347%	4208695	39064	107.7	1	12	10	0	2.3437E-08

TOTAL AMOUNT = 0.1135

Plot of data file: P:FM19.PTS
Date: 07-03-1989 Time: 12:27:24
Sample Name: 89FM22S04
Start Time= 1.52Stop Time = 45.00Min. Scale= 72492Max. Scale= 114290



PRIMARY
SK 6232

P:FM6
SCALE 200
OFFSET 0

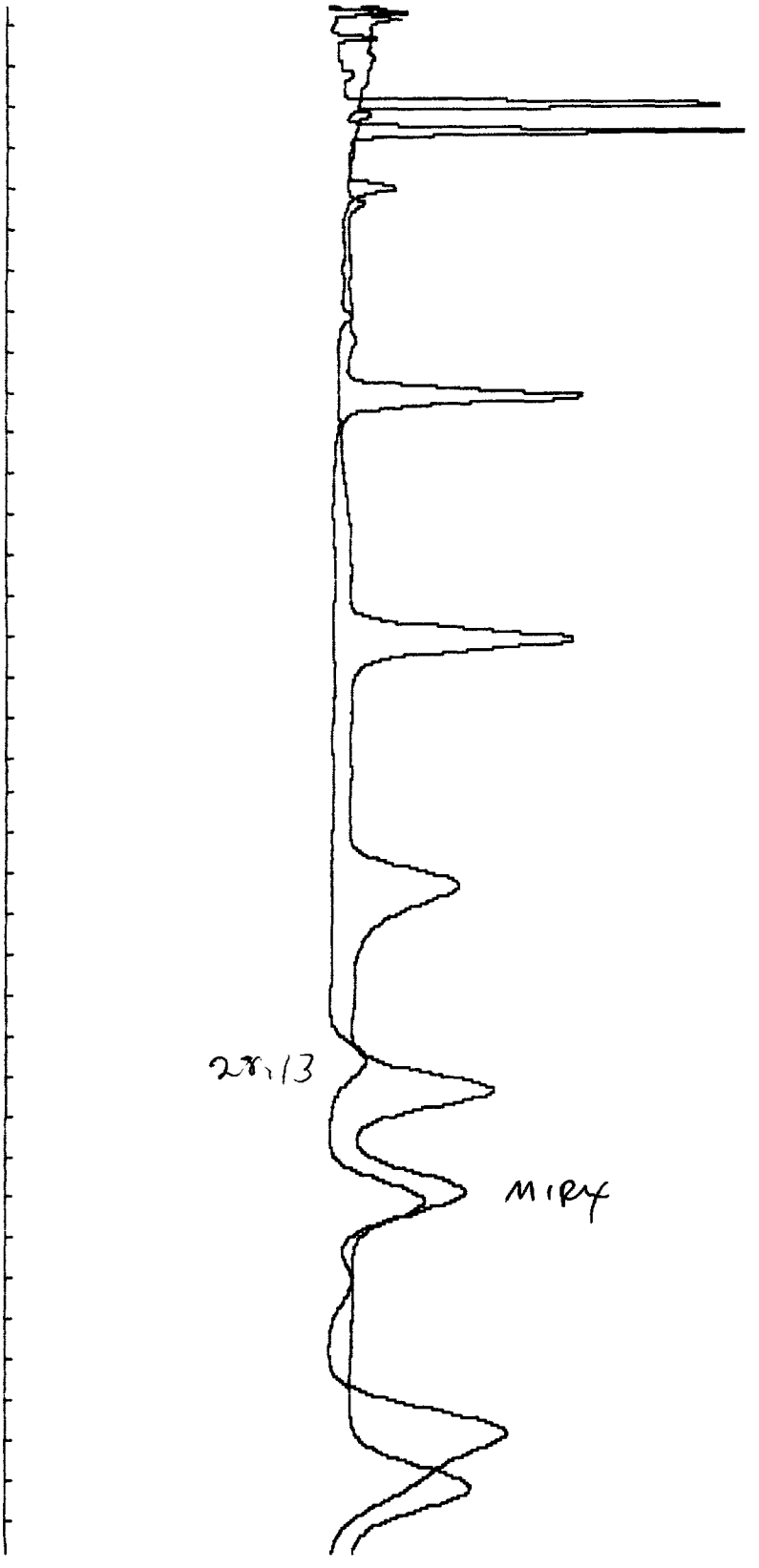
Pest B

P:FM19
SCALE 225
OFFSET 0

504

TIME 1.50

TIME 2.00



TIME 40.00

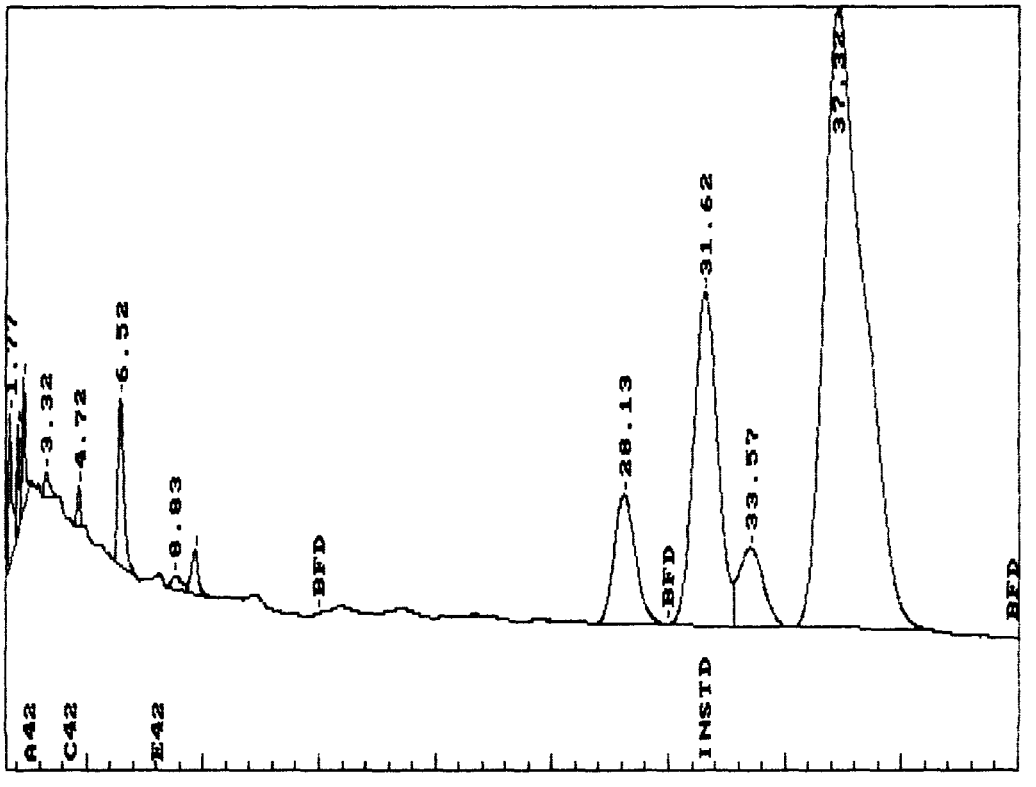
TIME 40.50

```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-03-1989 12:28:59 Version 4.1 **********************
* Sample Name: 89FM22S04                          Data File: P:FM19        *
* Date: 06-28-1989 23:24:53 Method: P:MET42. 07-03-1989 08:23:04  #  36    *
* Interface: 0   Cycle#:  19   Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                      Ending retention time:   45.00
Area reject:        0                        One sample per   1.000 sec.
Amount injected:        5.00                 Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          0.890000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/KG ug/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
4	3.32	B42	-0.0327	57.5857%	26286	1654	15.9	1	4	10	0	-1.2426E-06
5	4.72	D42	-0.0241	42.4143%	28961	2695	10.7	1	5	10	0	-8.3073E-07
10	31.62	INSTD MIREX	1.0000	0.0000%	1580957	22080	71.6	2	10	10	0	6.3253E-07

TOTAL AMOUNT = -0.0567

Plot of data file: P:FM19.PTS
Date: 07-03-1989 Time: 12:29:45
Sample Name: 89FM22S04
Start Time= 1.52Stop Time = 45.00Min. Scale= 72492Max. Scale= 114290



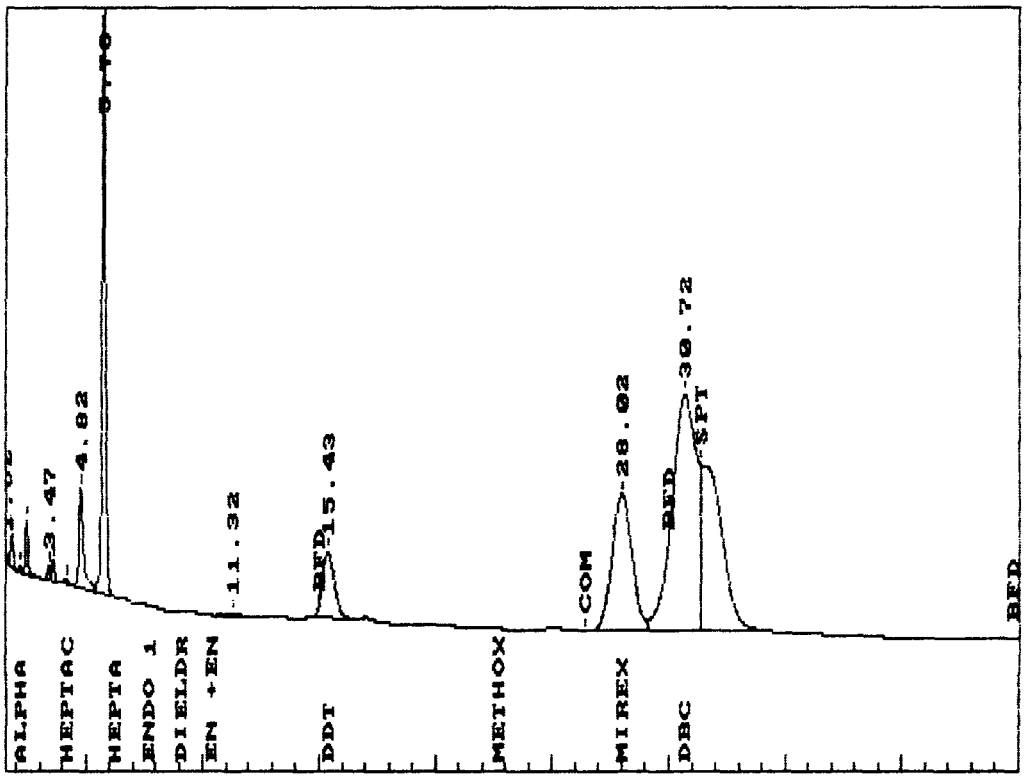
INTERNAL STANDARD TABLE

```
******************** 07-04-1989 11:36:02 Version 4.1 **********************
* Sample Name: 89FM22S04                          Data File: P:CONFM13      *
* Date: 06-30-1989 22:42:38 Method: P:PESTA2 07-04-1989 08:06:34  #  16    *
* Interface: 0   Cycle#:  13   Operator NW  Channel#: 0    Vial#: N.A.      *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY   *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN             *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                    *
*             Detector 0: ECD QUANT            Detector 1: ECD CONF        *
* Misc. Information: D.S. SF6232                                           *
*************************************************************************
Starting Delay:    1.50                      Ending retention time:    45.00
Area reject:        0                        One sample per    1.000 sec.
Amount injected:        5.00                 Dilution factor:        10.00
Internal Standard Amount:  1
Sample Weight:          0.890000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.23	ALPHA BHC	0.0016	0.1977%	7948	1213	6.6	1	3	12	0	1.7789E-07
4	2.50	LINDANE	0.0137	1.9108%	66887	8545	7.8	1	3	12	-3.854	2.0434E-07
7	4.17	HEPTACHLOR	0.0026	0.3624%	15185	846	18.0	2	7	12	0	1.7071E-07
11	15.43	DDT	0.1012	14.1472%	377921	10461	36.1	1	11	12	0	2.6777E-07
12	28.02	MIREX	1.0000	0.0000%	1280318	21311	60.1	2	12	12	0	7.8106E-07
13	30.72	DBC	0.5964	83.3819%	2649950	37063	71.5	2	13	12	0	2.2507E-07

TOTAL AMOUNT = 0.7153

Plot of data file: P:CONFM13.PTS
Date: 07-04-1989 Time: 11:36:39
Sample Name: 89FM22S04
Start Time= 1.52Stop Time = 45.00Min. Scale= 30677Max. Scale= 130355



P:CONFM7
SCALE 150
OFFSET 0

Pest A

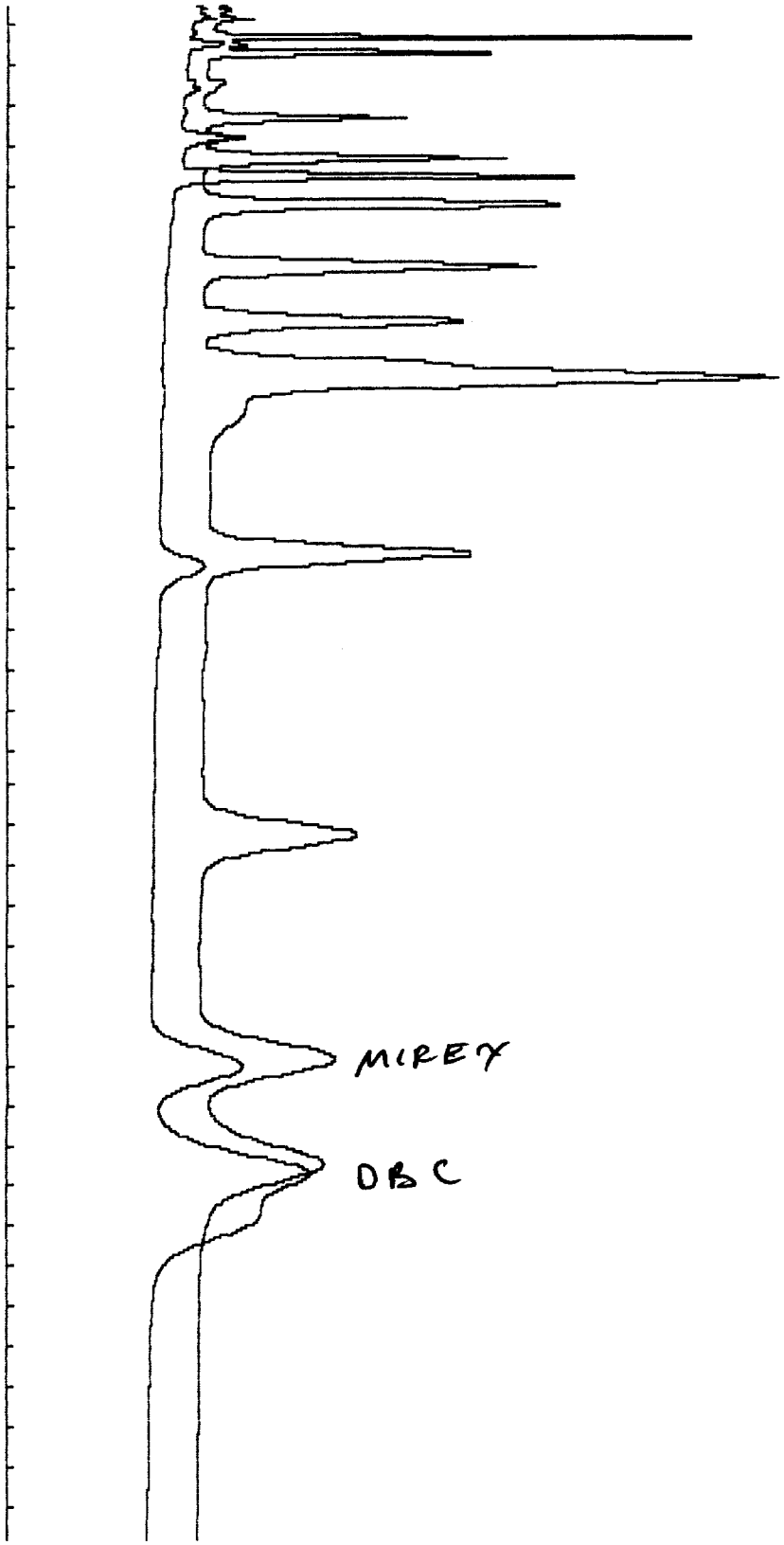
P:CONFM13
SCALE 225
OFFSET 0

504

COM Fermentation
6232

TIME 1.50

TIME 1.50



TIME 40.00

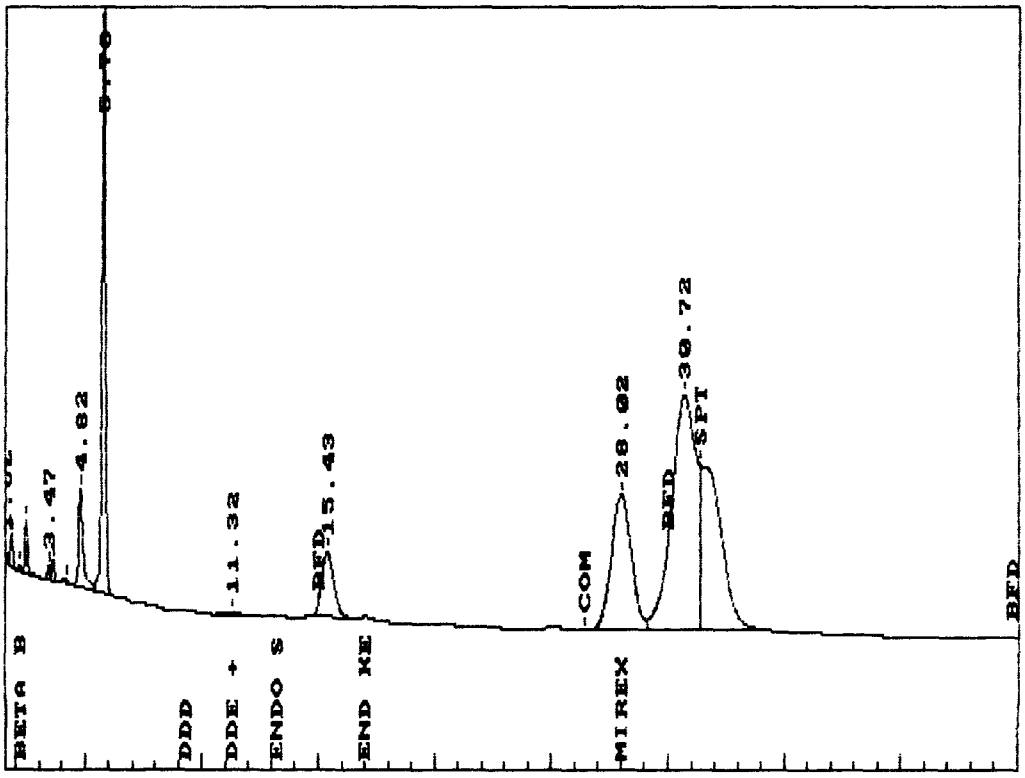
TIME 40.00

```
******   INTERNAL STANDARD TABLE   ******
******************** 07-04-1989 11:37:59 Version 4.1 **********************
* Sample Name: 89FM22S04                          Data File: P:CONFM13      *
* Date: 06-30-1989 22:42:38 Method: P:PESTB2 07-04-1989 07:58:22  #  17    *
* Interface: 0   Cycle#:  13   Operator NW  Channel#: 0    Vial#: N.A.      *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY   *
*            Solvent Description: ULTRA HIGH PURITY NITROGEN               *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                    *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF           *
* Misc. Information: D.S. SF6232                                           *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:       10.00
Internal Standard Amount:  1
Sample Weight:          0.890000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.23	BETA BHC	3 present in 0.1665	92.8256%	7948	1213	6.6	1	3	12	0	2.0943E-05
4	2.50	DELTA BHC	3 solvent blk 0.0115	6.4348%	66887	8545	7.8	1	4	12	0	1.7251E-07
10	11.32	DDE + EA	0.0013	0.7396%	18650	435	42.9	1	10	12	0	7.1116E-08
12	28.02	MIREX	1.0000	0.0000%	1280318	21311	60.1	2	12	12	0	7.8106E-07

TOTAL AMOUNT = 0.1793

Plot of data file: P:CONFM13.PTS
Date: 07-04-1989 Time: 11:38:23
Sample Name: 89FM22S04
Start Time= 1.52Stop Time = 45.00Min. Scale= 30677Max. Scale= 130355



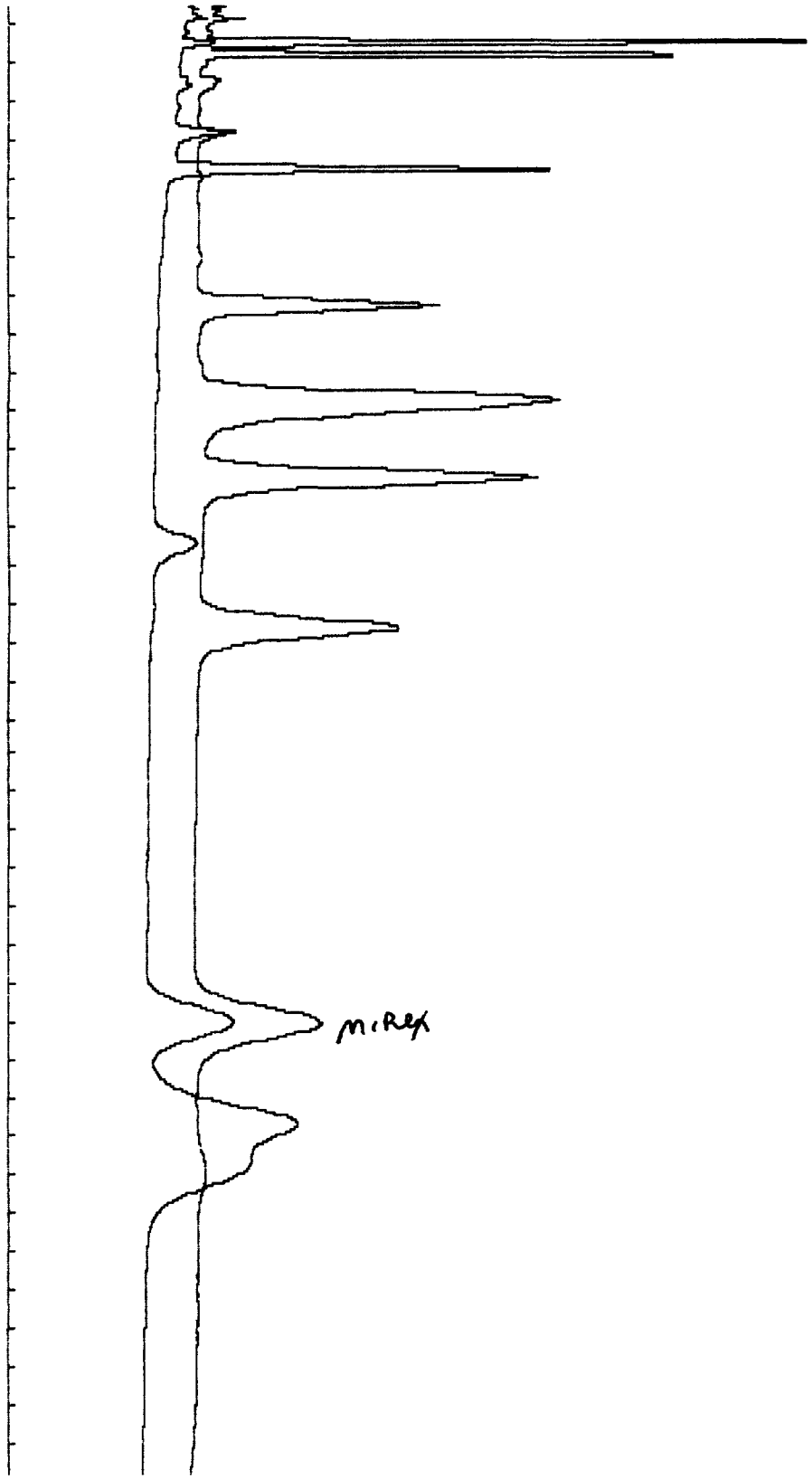
P:CONFM6
SCALE 150
OFFSET 0

P:CONFM13
SCALE 225
OFFSET 0

Confirmation
6232

TIME 1.50

TIME 1.50



TIME 40.00

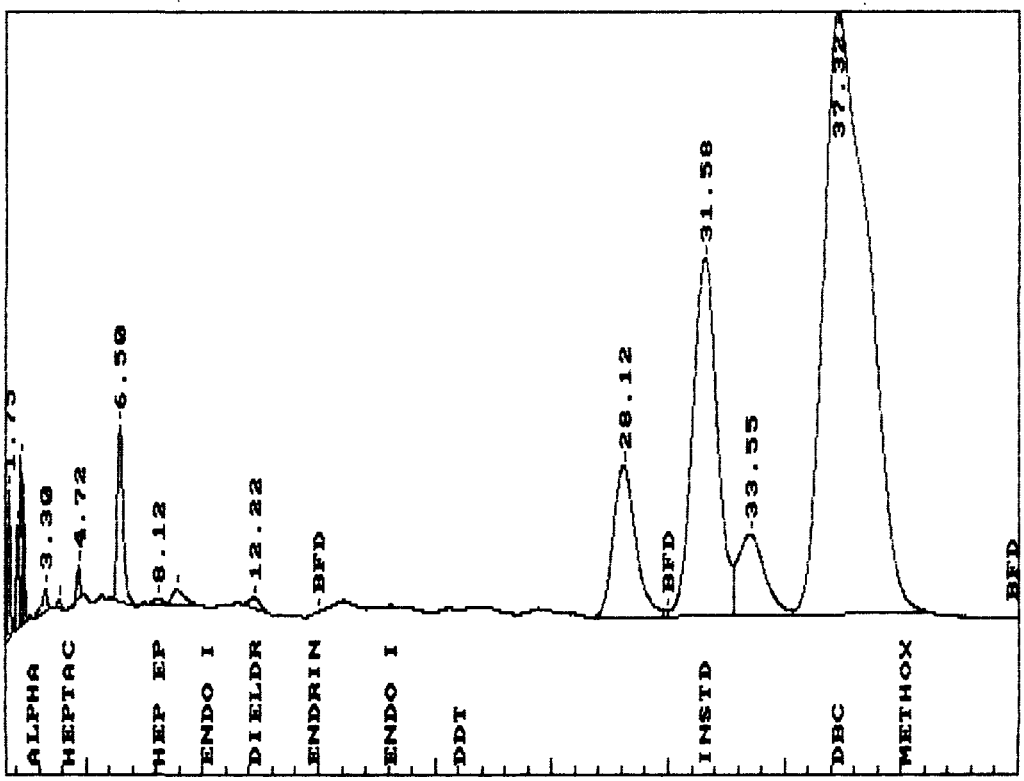
TIME 40.00

```
*****    INTERNAL STANDARD TABLE    *****
******************** 07-03-1989 12:44:52 Version 4.1 **********************
* Sample Name: 89FM22S05                          Data File: P:FM20        *
* Date: 06-29-1989 00:11:22 Method: P:PESTA 06-29-1989 10:06:41  #  75     *
* Interface: 0   Cycle#:  20   Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*            Solvent Description: ULTRA HIGH PURITY NITROGEN              *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:       10.00
Internal Standard Amount:  1
Sample Weight:          0.890000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
9	8.12	HEP EPOX	0.0117	1.6230%	9571	370	25.9	2	9	13	0	1.2200E-06
11	12.22	DIELDRIN	0.0116	1.6099%	19454	624	31.2	1	11	13	0	5.9539E-07
13	31.58	INSTD	1.0000	0.0000%	1693613	23488	72.1	2	13	13	0	5.9045E-07
15	37.32	DBC	0.6962	96.7671%	4167449	36477	114.2	1	15	13	0	1.6705E-07

TOTAL AMOUNT = 0.7194

Plot of data file: P:FM20.PTS
Date: 07-03-1989 Time: 12:45:43
Sample Name: 89FM22S05
Start Time= 1.52Stop Time = 45.00Min. Scale= 69874Max. Scale= 111793

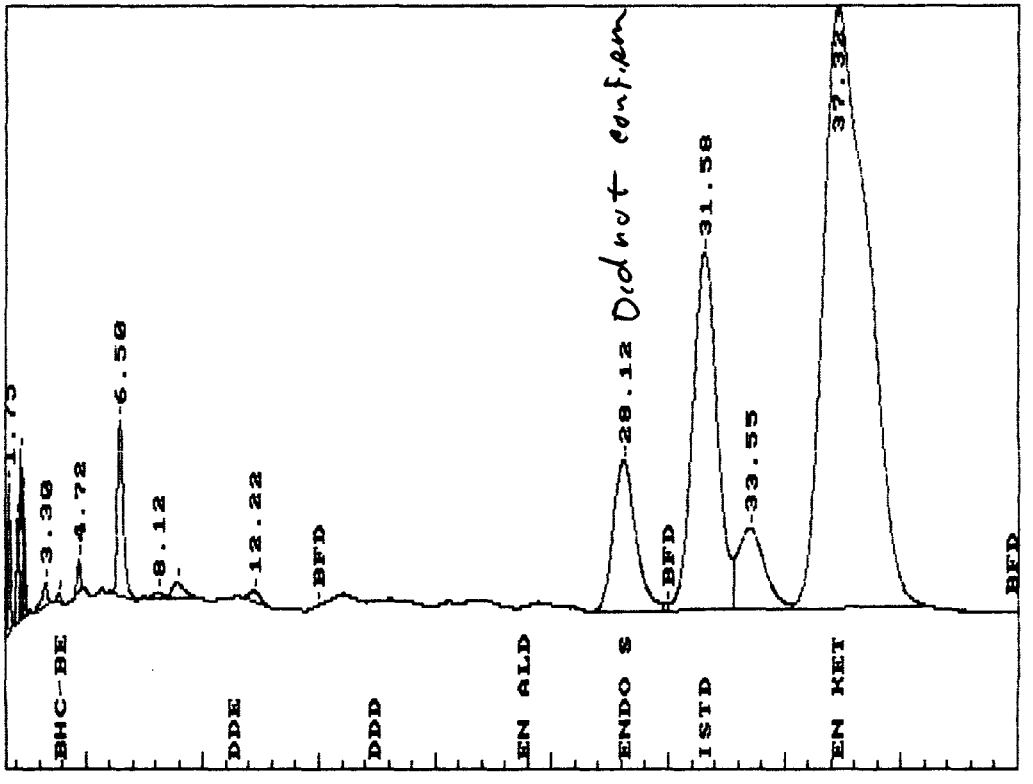


```
****** INTERNAL STANDARD TABLE ******
******************** 07-03-1989 12:47:16 Version 4.1 **********************
* Sample Name: 89FM22S05                          Data File: P:FM20        *
* Date: 06-29-1989 00:11:22 Method: P:PESTB 06-29-1989 09:26:38  #  53     *
* Interface: 0   Cycle#:  20   Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per    1.000 sec.
Amount injected:        5.00               Dilution factor:        10.00
Internal Standard Amount:  1
Sample Weight:          0.890000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
6	3.92	BHC-BETA	0.0012	0.1127%	6817	604	11.3	1	6	13	0	1.7818E-07
7	4.72	BHC-DELTA	0.0030	0.2806%	23305	2301	10.1	1	7	13	0	1.2976E-07
12	28.12	ENDO SULFATE	0.1618	15.0140%	656662	9903	66.3	2	12	13	0	2.4643E-07
13	31.58	ISTD	1.0000	0.0000%	1693613	23488	72.1	2	13	13	0	5.9045E-07
15	37.32	EN KETONE	0.9118	84.5928%	4167449	36477	114.2	1	15	13	0	2.1878E-07

TOTAL AMOUNT = 1.0778

Plot of data file: P:FM20.PTS
Date: 07-03-1989 Time: 12:48:04
Sample Name: 89FM22S05
Start Time= 1.52Stop Time = 45.00Min. Scale= 69874Max. Scale= 111793



P:FM6
SCALE 200
OFFSET 0

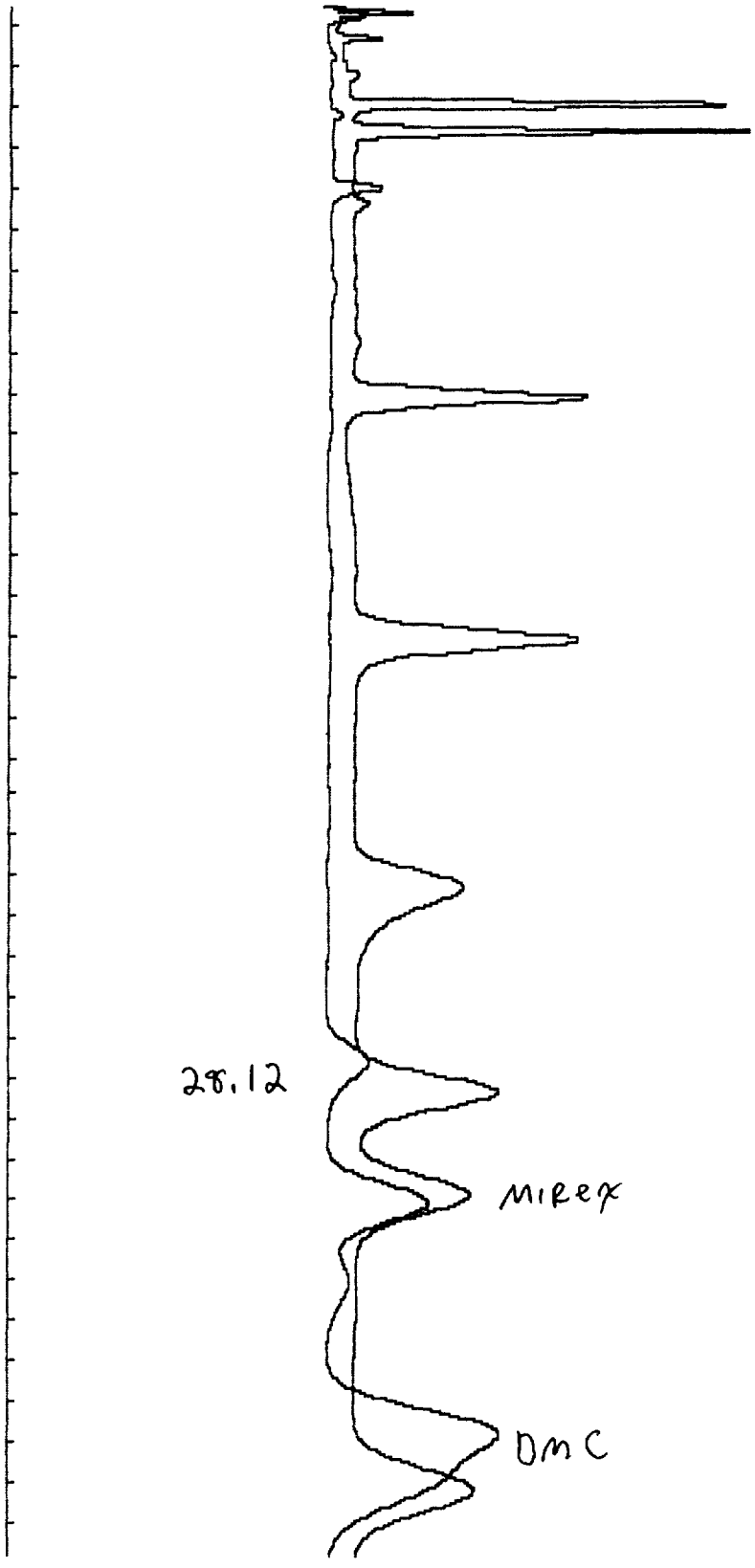
Pest B

P:FM20 505
SCALE 225
OFFSET 0

primary
SF 6232

TIME 1.50

TIME 2.00



TIME 40.00

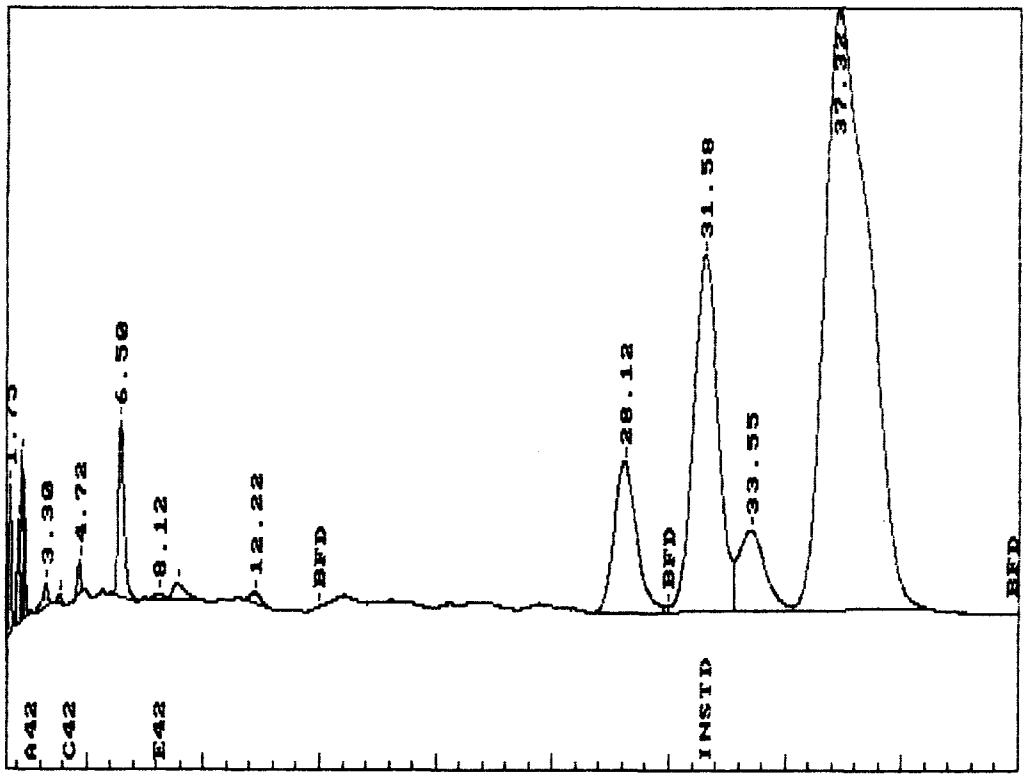
TIME 40.50

```
******    INTERNAL STANDARD TABLE    ******
******************** 07-03-1989 12:39:37 Version 4.1 **********************
* Sample Name: 89FM22S05                          Data File: P:FM20        *
* Date: 06-29-1989 00:11:22 Method: P:MET42. 07-03-1989 08:23:04  #  36   *
* Interface: 0   Cycle#:  20   Operator NW  Channel#: 0    Vial#: N.A.    *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000           *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT            Detector 1: ECD CONF        *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                      Ending retention time:    45.00
Area reject:        0                        One sample per   1.000 sec.
Amount injected:        5.00                 Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          0.890000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ~~UG/KG~~ ug/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
5	3.30	B42	-0.0343	52.0587%	22508	1552	14.5	1	5	13	0	-1.5252E-06
7	4.72	D42	-0.0268	40.6211%	23305	2301	10.1	1	7	13	0	-1.1494E-06
9	8.12	E42	-0.0048	7.3202%	9571	370	25.9	2	9	13	0	-5.0435E-07
13	31.58	INSTD MIREX	1.0000	0.0000%	1693613	23488	72.1	2	13	13	0	5.9045E-07

TOTAL AMOUNT = -0.0659

Plot of data file: P:FM20.PTS
Date: 07-03-1989 Time: 12:40:27
Sample Name: 89FM22S05
Start Time= 1.52Stop Time = 45.00Min. Scale= 69874Max. Scale= 111793

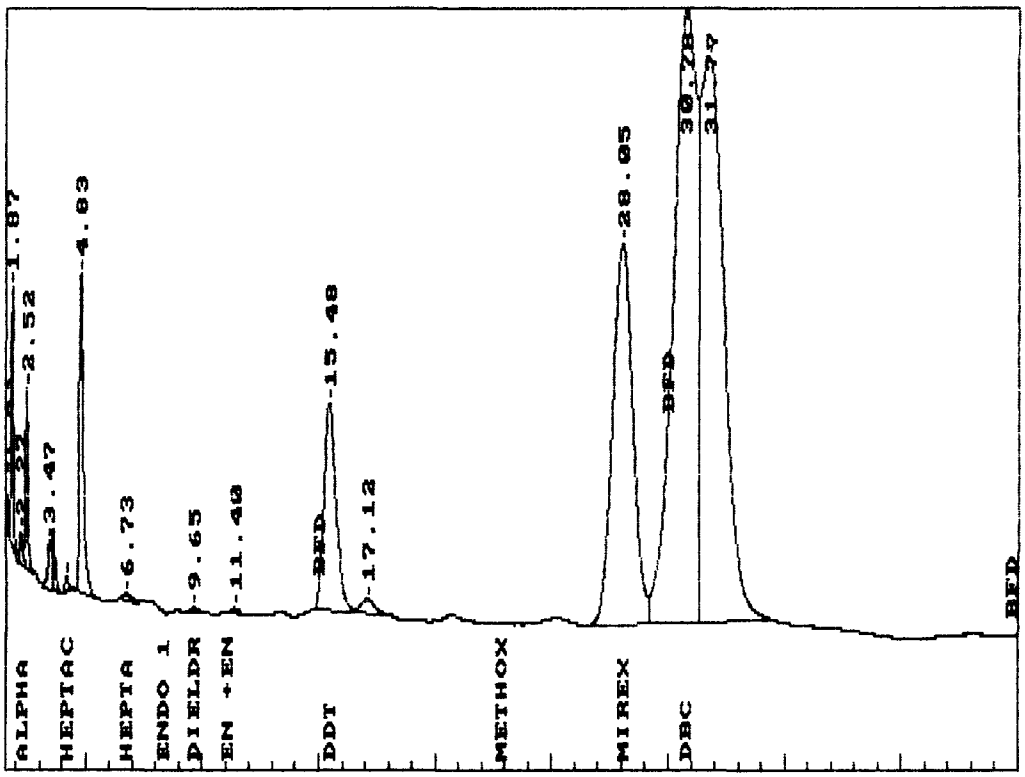


```
*****     INTERNAL STANDARD TABLE     *****
******************* 07-04-1989 11:44:20 Version 4.1 *********************
* Sample Name: 89FM22S05                          Data File: P:CONFM14      *
* Date: 06-30-1989 23:29:08 Method: P:PESTA2 07-04-1989 08:06:34  #  16     *
* Interface: 0   Cycle#:  14   Operator NW  Channel#: 0    Vial#: N.A.      *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*****************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY    *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN              *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                     *
*            Detector 0: ECD QUANT            Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                            *
*****************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:       10.00
Internal Standard Amount:  1
Sample Weight:          0.890000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.27	ALPHA BHC	0.0025	0.3670%	14804	2011	7.4	2	3	14	0	1.7015E-07
4	2.52	LINDANE	0.0162	2.3590%	82836	10682	7.8	2	3	14	-4.637	1.9545E-07
7	4.20	HEPTACHLOR	0.0012	0.1813%	7621	807	9.4	1	7	14	0	1.6328E-07
9	6.73	HEPTA EPOX	0.0016	0.2362%	9996	390	25.6	1	9	14	0	1.6218E-07
10	9.65	DIELDRIN	0.0009	0.1374%	4717	242	19.5	1	10	14	0	1.9993E-07
11	11.40	EN +END 2	0.0023	0.3375%	7159	332	21.5	1	10	14	2.956	3.2350E-07
12	15.48	DDT	0.1142	16.6447%	446041	12164	36.7	2	12	14	0	2.5611E-07
14	28.05	MIREX	1.0000	0.0000%	1338575	22297	60.0	2	14	14	0	7.4706E-07
15	30.78	DBC	0.5473	79.7369%	2542105	36234	70.2	2	15	14	0	2.1528E-07

TOTAL AMOUNT = 0.6863

Plot of data file: P:CONFM14.PTS
Date: 07-04-1989 Time: 11:45:02
Sample Name: 89FM22S05
Start Time= 1.52Stop Time = 45.00Min. Scale= 29723Max. Scale= 66947



P:CONFM7
SCALE 150
OFFSET 0

PesTA

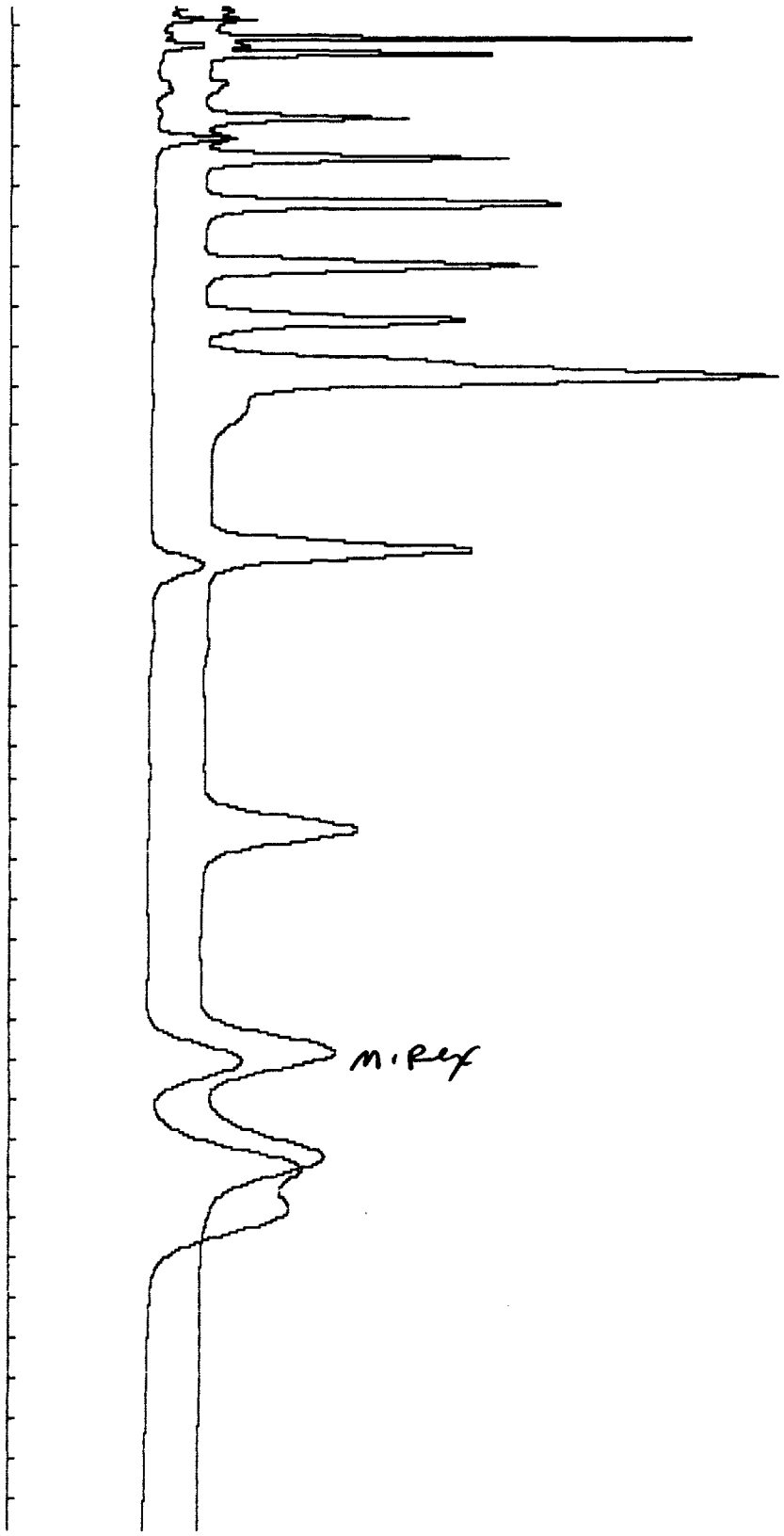
TIME 1.50

P:CONFM14
SCALE 225
OFFSET 0

505

TIME 1.50

confirmation
6232



TIME 40.00

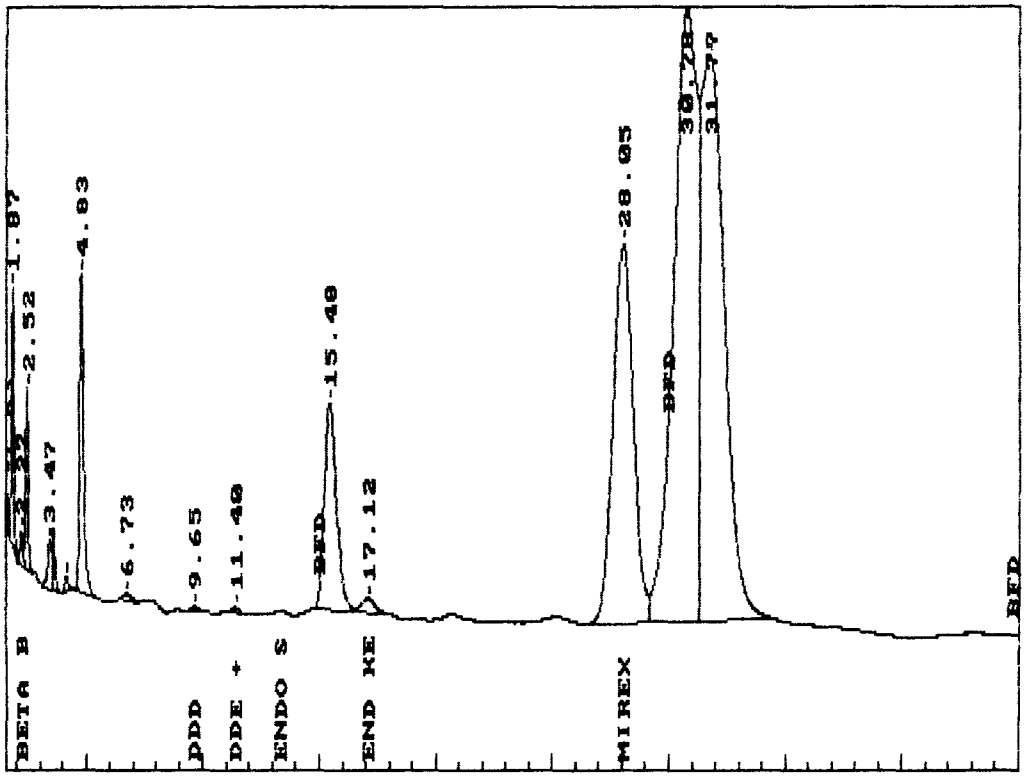
TIME 40.00

```
****** INTERNAL STANDARD TABLE ******
******************** 07-04-1989 11:46:21 Version 4.1 ********************
* Sample Name: 89FM22S05                          Data File: P:CONFM14      *
* Date: 06-30-1989 23:29:08 Method: P:PESTB2 07-04-1989 07:58:22  #  17     *
* Interface: 0   Cycle#:  14   Operator NW  Channel#: 0    Vial#: N.A.      *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000             *
*****************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY    *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN              *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                     *
*             Detector 0: ECD QUANT          Detector 1: ECD CONF           *
* Misc. Information: D.S. SF6232                                            *
*****************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:       10.00
Internal Standard Amount:  1
Sample Weight:          0.890000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.27	BETA BHC } present in solvent BLK	0.2965	91.8299%	14804	2011	7.4	2	3	14	0	2.0032E-05
4	2.52	DELTA BHC }	0.0137	4.2326%	82836	10682	7.8	2	4	14	0	1.6501E-07
10	9.65	DDD	0.0015	0.4739%	4717	242	19.5	1	10	14	0	3.2441E-07
11	11.40	DDE + EA	0.0005	0.1508%	7159	332	21.5	1	11	14	0	6.8021E-08
13	17.12	END KETONE	0.0107	3.3128%	30380	777	39.1	2	13	14	0	3.5214E-07
14	28.05	MIREX	1.0000	0.0000%	1338575	22297	60.0	2	14	14	0	7.4706E-07

TOTAL AMOUNT = 0.3229

Plot of data file: P:CONFM14.PTS
Date: 07-04-1989 Time: 11:46:49
Sample Name: 89FM22S05
Start Time= 1.52Stop Time = 45.00Min. Scale= 29723Max. Scale= 66947



Confirmation
G232

P:CONFM6
SCALE 150
OFFSET 0

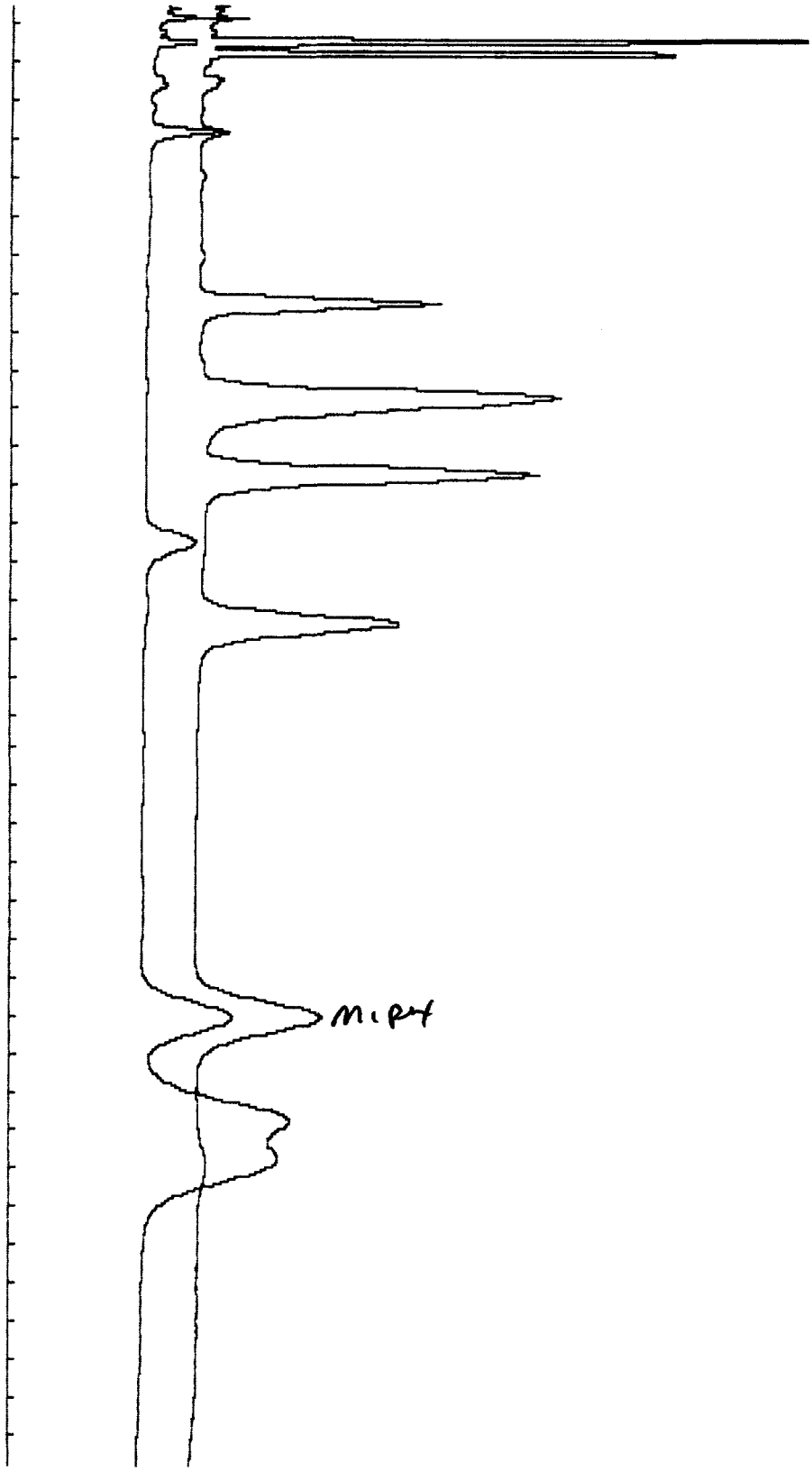
Pest B

P:CONFM14
SCALE 225
OFFSET 0

305

TIME 1.50

TIME 1.50



TIME 40.00

TIME 40.00

NEW TIMED EVENTS FROM P:FM.

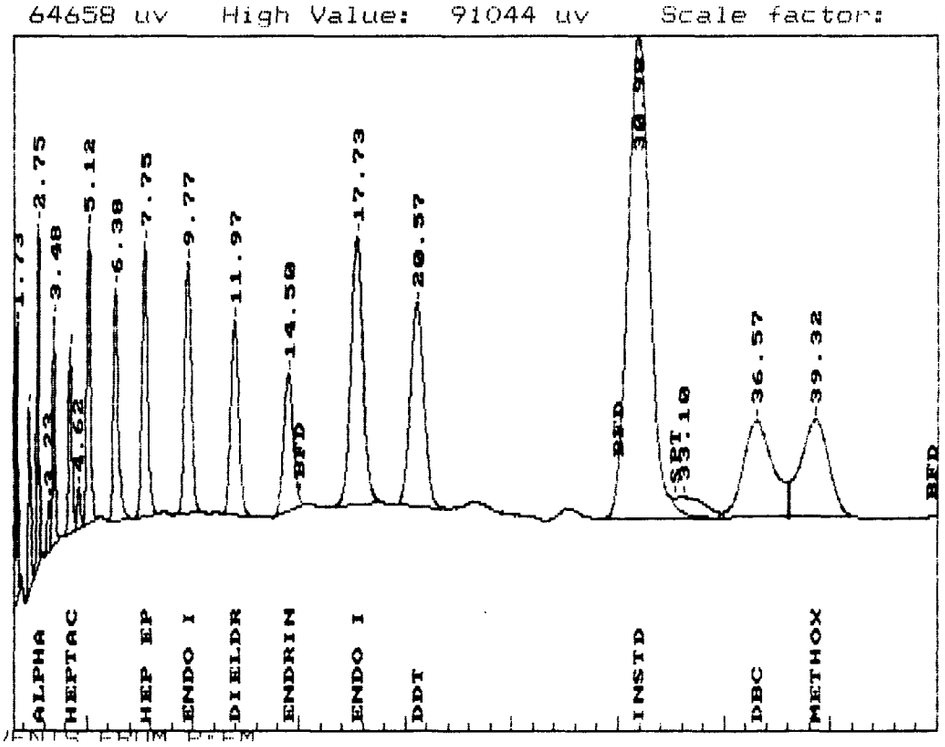
INTERNAL STANDARD TABLE

```
******************** 06-29-1989 10:11:54 Version 4.1 ********************
* Sample Name: PESTA 1                          Data File: P:FM7          *
* Date: 06-28-1989 14:06:52 Method: P:PESTA 06-29-1989 10:06:41  #  75   *
* Interface: 0   Cycle#:  7    Operator NW  Channel#: 0    Vial#: N.A.   *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000          *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN          *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                 *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF        *
* Misc. Information: D.S. SF6232                                        *
*************************************************************************
```

Starting Delay: 1.50 — Ending retention time: 45.00
Area reject: 0 — One sample per 1.000 sec.
Amount injected: 5.00 — Dilution factor: 1.00
Internal Standard Amount: 1
Sample Weight: 1.000000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	HEIGHT BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.75	ALPHA BHC	0.0014	2.7869%	100469	15577	6.4	2	3	16	0	1.4397E-08
5	3.48	LINDANE	0.0012	2.2771%	89933	10436	8.6	2	5	16	0	1.3141E-08
6	4.25	HEPTACHLOR	0.0011	2.0389%	90072	8527	10.6	2	6	16	0	1.1748E-08
8	5.12	ALDRIN	0.0025	4.7700%	163501	13487	12.1	2	8	16	0	1.5142E-08
10	7.75	HEP EPOX	0.0031	6.0501%	225965	12524	18.0	1	10	16	0	1.3897E-08
11	9.77	ENDO I	0.0037	7.0752%	252672	11478	22.0	1	11	16	0	1.4533E-08
12	11.97	DIELDRIN	0.0036	6.9068%	236225	8930	26.5	1	12	16	0	1.5175E-08
13	14.50	ENDRIN	0.0057	10.9240%	197979	6315	31.4	1	13	16	0	2.8638E-08
14	17.73	ENDO II	0.0070	13.4014%	489349	12246	40.0	1	14	16	0	1.4214E-08
15	20.57	DDT	0.0073	14.1265%	408035	9227	44.2	1	15	16	0	1.7969E-08
16	30.98	INSTD	1.0000	0.0000%	1593514	22151	71.9	3	16	16	0	6.2754E-07
18	36.57	DBC	0.0066	12.8060%	425864	4455	95.6	2	18	16	0	1.5607E-08
19	39.32	METHOXYCHLOR	0.0087	16.8371%	418243	4496	93.0	2	19	16	0	2.0894E-08
		TOTAL AMOUNT =	0.0519									

Data File = P:FM7.PTS Printed on 06-29-1989 at 10:12:18
Start time: 1.50 min. Stop time: 45.00 min. Offset: 0 mv.
Low Value: 64658 uv High Value: 91044 uv Scale factor: 1.0



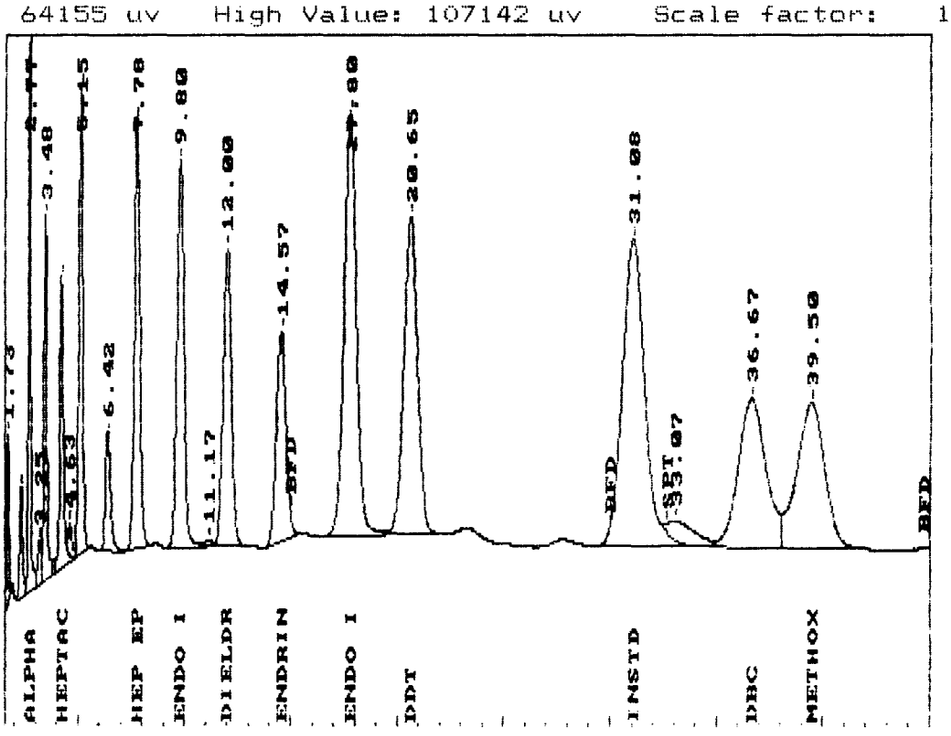
NEW TIMED EVENTS FROM P:FM

```
******     INTERNAL STANDARD TABLE     ******
******************** 06-29-1989 10:14:01 Version 4.1 **********************
* Sample Name: PESTA 2                          Data File: P:FM8          *
* Date: 06-28-1989 14:53:21 Method: P:PESTA 06-29-1989 10:06:41  #  75    *
* Interface: 0   Cycle#:  8    Operator NW  Channel#: 0    Vial#: N.A.    *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000           *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*             Detector 0: ECD QUANT          Detector 1: ECD CONF         *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                      Ending retention time:    45.00
Area reject:         0                       One sample per    1.000 sec.
Amount injected:        5.00                 Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.77	ALPHA BHC	0.0031	2.8355%	292415	41543	7.0	2	3	17	0	1.0543E-08
5	3.48	LINDANE	0.0025	2.3027%	246885	27050	9.1	2	5	17	0	1.0140E-08
6	4.27	HEPTACHLOR	0.0025	2.2630%	251105	21593	11.6	3	6	17	0	9.7984E-09
8	5.15	ALDRIN	0.0047	4.3130%	420400	34711	12.1	2	8	17	0	1.1154E-08
10	7.78	HEP EPOX	0.0062	5.6975%	566471	31809	17.8	1	10	17	0	1.0935E-08
11	9.80	ENDO I	0.0075	6.9051%	642292	28762	22.3	3	11	17	0	1.1688E-08
13	12.00	DIELDRIN	0.0074	6.8436%	591423	22146	26.7	2	13	17	0	1.2581E-08
14	14.57	ENDRIN	0.0124	11.3744%	492702	15634	31.5	1	14	17	0	2.5099E-08
15	17.80	ENDO II	0.0148	13.5790%	1265658	31527	40.1	2	15	17	0	1.1665E-08
16	20.65	DDT	0.0144	13.2584%	1050564	23558	44.6	2	16	17	0	1.3721E-08
17	31.08	INSTD	1.0000	0.0000%	1667375	22763	73.2	3	17	17	0	5.9974E-07
19	36.67	DBC	0.0150	13.7752%	996380	11046	90.2	2	19	17	0	1.5031E-08
20	39.50	METHOXYCHLOR	0.0183	16.8527%	977216	10785	90.6	2	20	17	0	1.8750E-08

TOTAL AMOUNT = 0.1087

Data File = P:FM8.PTS Printed on 06-29-1989 at 10:14:24
Start time: 1.50 min. Stop time: 45.00 min. Offset: 0 mv.
Low Value: 64155 uv High Value: 107142 uv Scale factor: 1.0



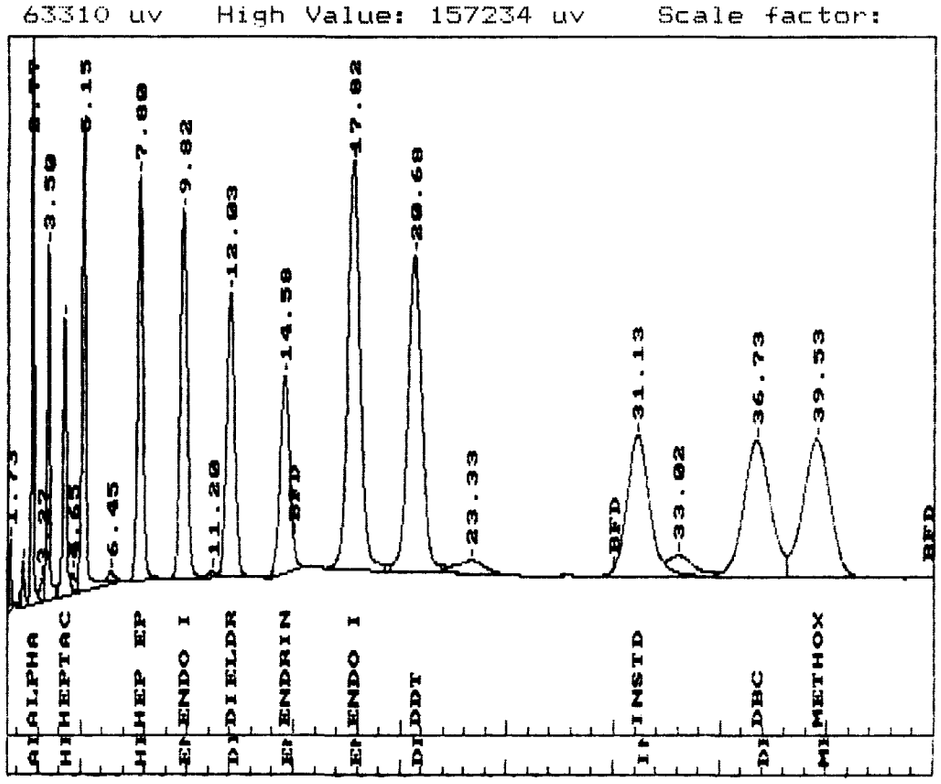
INTERNAL STANDARD TABLE

```
******************** 06-29-1989 10:16:18 Version 4.1 ********************
* Sample Name: PESTA 3                          Data File: P:FM9          *
* Date: 06-28-1989 15:39:52 Method: P:PESTA 06-29-1989 10:06:41  #  75   *
* Interface: 0   Cycle#:  9    Operator NW  Channel#: 0    Vial#: N.A.   *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000          *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN           *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                  *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF         *
* Misc. Information: D.S. SF6232                                         *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
4	2.77	ALPHA BHC	0.0059	2.7959%	620152	92541	6.7	3	4	19	0	9.5302E-09
6	3.50	LINDANE	0.0047	2.2192%	503137	57464	8.8	2	6	19	0	9.3237E-09
7	4.27	HEPTACHLOR	0.0049	2.3345%	531471	44950	11.8	3	7	19	0	9.2855E-09
9	5.15	ALDRIN	0.0096	4.5446%	980880	75130	13.1	3	9	19	0	9.7941E-09
11	7.80	HEP EPOX	0.0116	5.4956%	1160184	65677	17.7	1	11	19	0	1.0013E-08
12	9.82	ENDO I	0.0142	6.7024%	1307365	59727	21.9	2	12	19	0	1.0837E-08
14	12.03	DIELDRIN	0.0143	6.7530%	1209724	45998	26.3	2	14	19	0	1.1800E-08
15	14.58	ENDRIN	0.0241	11.3797%	997785	31787	31.4	1	15	19	0	2.4109E-08
16	17.82	ENDO II	0.0289	13.6635%	2646238	66178	40.0	2	16	19	0	1.0915E-08
17	20.68	DDT	0.0287	13.5932%	2326916	51153	45.5	3	17	19	0	1.2349E-08
19	31.13	INSTD	1.0000	0.0000%	1678597	22752	73.8	3	19	19	0	5.9574E-07
21	36.73	DBC	0.0288	13.6181%	1922362	22043	87.2	2	21	19	0	1.4975E-08
22	39.53	METHOXYCHLOR	0.0357	16.9003%	1970200	22328	88.2	2	22	19	0	1.8133E-08

TOTAL AMOUNT = 0.2114

Data File = P:FM9.PTS Printed on 06-29-1989 at 10:16:42
Start time: 1.50 min. Stop time: 45.00 min. Offset: 0 mv.
Low Value: 63310 uv High Value: 157234 uv Scale factor: 1.0



Primary column — Continuing Calibration

INTERNAL STANDARD TABLE

********** 06-29-1989 10:28:53 Version 4.1 **********

* Sample Name: PESTA 3 Data File: P:FM22 *
* Date: 06-29-1989 01:44:23 Method: P:PESTA 06-29-1989 10:06:41 # 75 *
* Interface: 0 Cycle#: 22 Operator NW Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

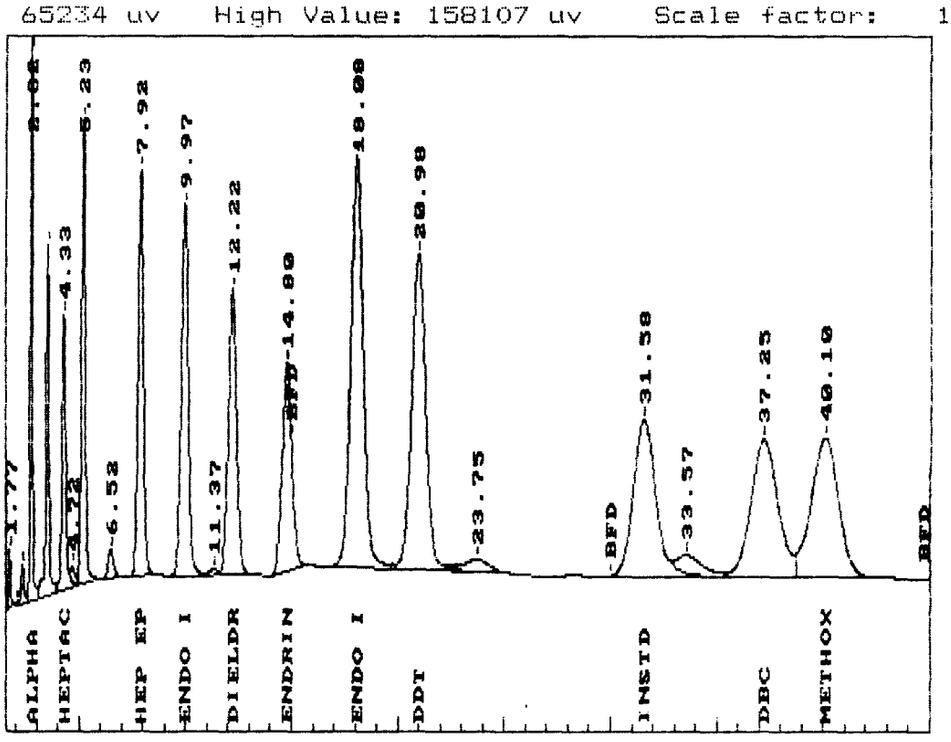
* Instrument Type: HEWLETT PACKARD Column Type: MIXED PHASE-PRIMARY *
* Solvent Description: ULTRA HIGH PURITY NITROGEN *
* Conditions: ISOTHERMAL AT 200 CELSIUS *
* Detector 0: ECD QUANT Detector 1: ECD CONF *
* Misc. Information: D.S. SF6232 D.S. SF6232 *

Starting Delay: 1.50 Ending retention time: 45.00
Area reject: 0 One sample per 1.000 sec.
Amount injected: 5.00 Dilution factor: 1.00
Internal Standard Amount: 1
Sample Weight: 1.000000

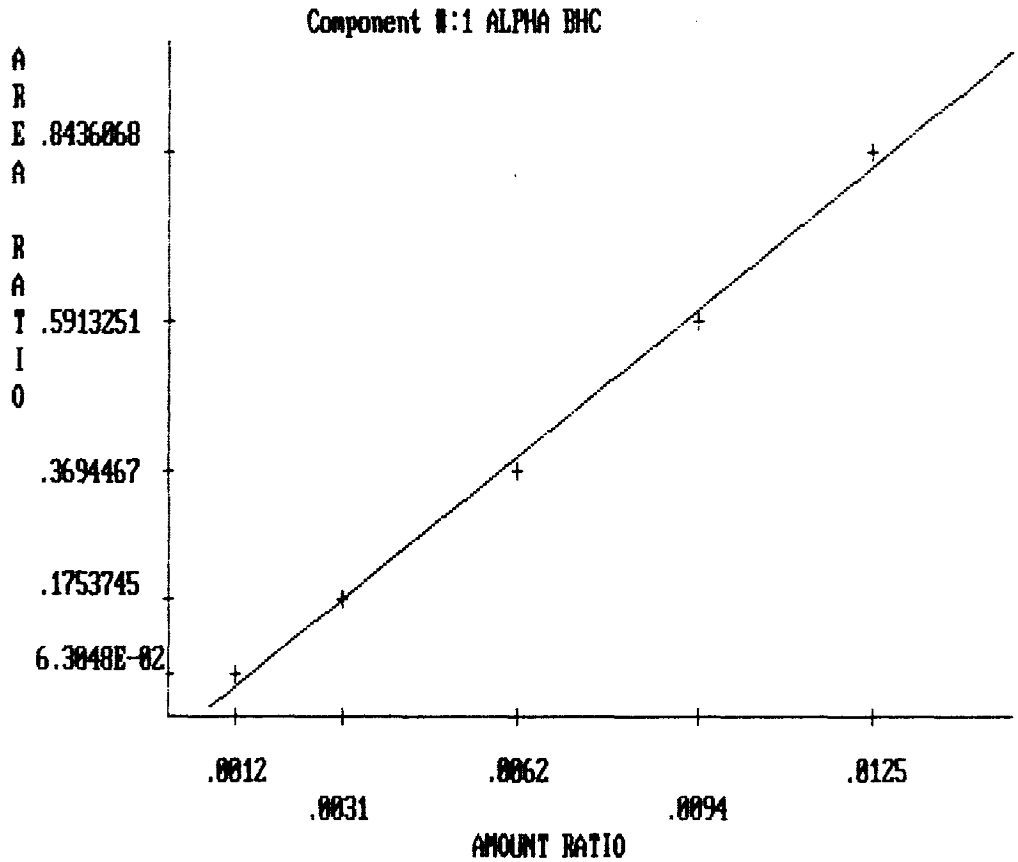
PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
4	2.82	ALPHA BHC	0.0053	2.7687%	615565	91306	6.7	2	4	18	0	8.6592E-09
5	3.55	LINDANE	0.0045	2.3283%	532688	56611	9.4	2	5	18	0	8.4145E-09
6	4.33	HEPTACHLOR	0.0043	2.2174%	507801	44183	11.5	3	6	18	0	8.4068E-09
8	5.23	ALDRIN	0.0082	4.2381%	908560	74375	12.2	2	8	18	0	8.9803E-09
10	7.92	HEP EPOX	0.0105	5.4772%	1160866	65580	17.7	1	10	18	0	9.0834E-09
11	9.97	ENDO I	0.0129	6.7239%	1319370	59750	22.1	2	11	18	0	9.8113E-09
13	12.22	DIELDRIN	0.0130	6.7773%	1223008	46005	26.6	2	13	18	0	1.0668E-08
14	14.80	ENDRIN	0.0229	11.8777%	1053220	33359	31.6	1	14	18	0	2.1711E-08
15	18.08	ENDO II	0.0263	13.6523%	2662752	66337	40.1	2	15	18	0	9.8706E-09
16	20.98	DDT	0.0259	13.4507%	2308579	50821	45.4	3	16	18	0	1.1217E-08
18	31.58	INSTD	1.0000	0.0000%	1867373	25219	74.0	3	18	18	0	5.3551E-07
20	37.25	DBC	0.0262	13.6046%	1946316	22105	88.0	2	20	18	0	1.3457E-08
21	40.10	METHOXYCHLOR	0.0325	16.8837%	1988644	22390	88.8	2	21	18	0	1.6345E-08

TOTAL AMOUNT = 0.1925

Data File = P:FM22.PTS Printed on 06-29-1989 at 10:29:17
Start time: 1.50 min. Stop time: 45.00 min. Offset: 0 mv.
Low Value: 65234 uv High Value: 158107 uv Scale factor: 1.0



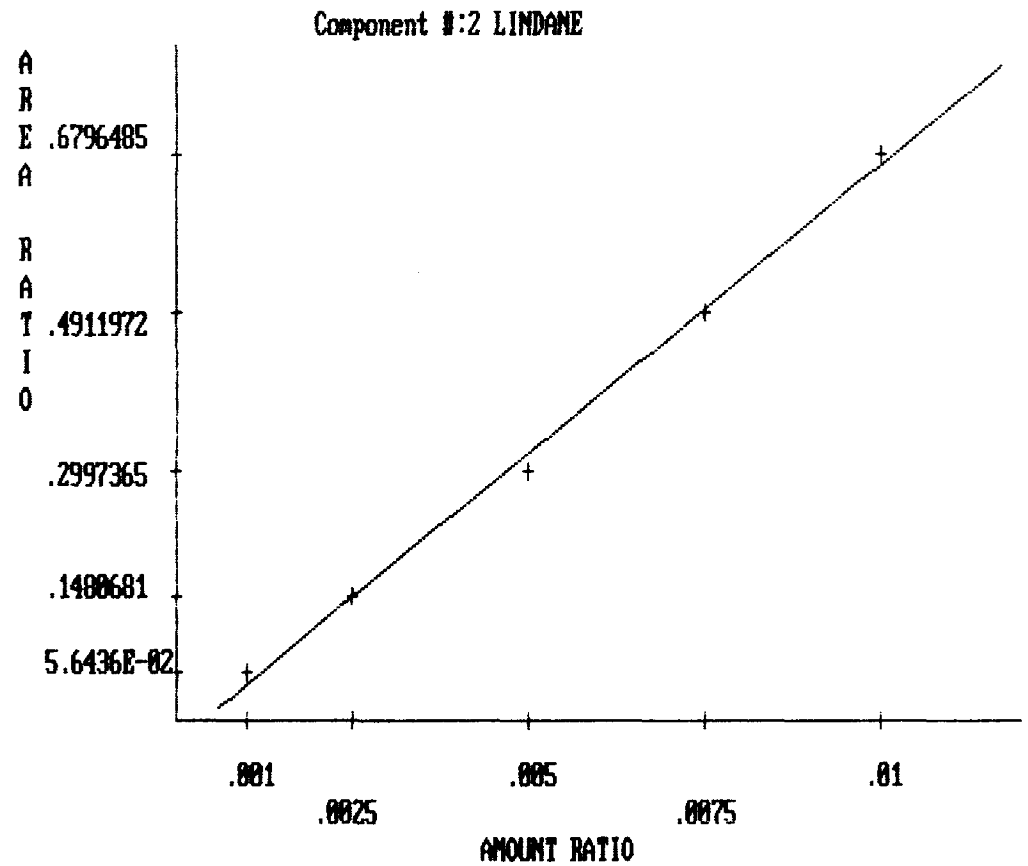
Method F:PESTA
Sample PESTICIDES
Operator NW
Run date 06-29-1989 10:06:41 version: 75
Printed on 06-29-1989 AT 10:52:10
Straight Line fit



Component 1 = ALPHA BHC
INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0012	100469	0.0012	0.0630
2	0.0031	292415	0.0031	0.1754
3	0.0062	620152	0.0062	0.3694
4	0.0094	975474	0.0094	0.5913
5	0.0125	1372717	0.0125	0.8436

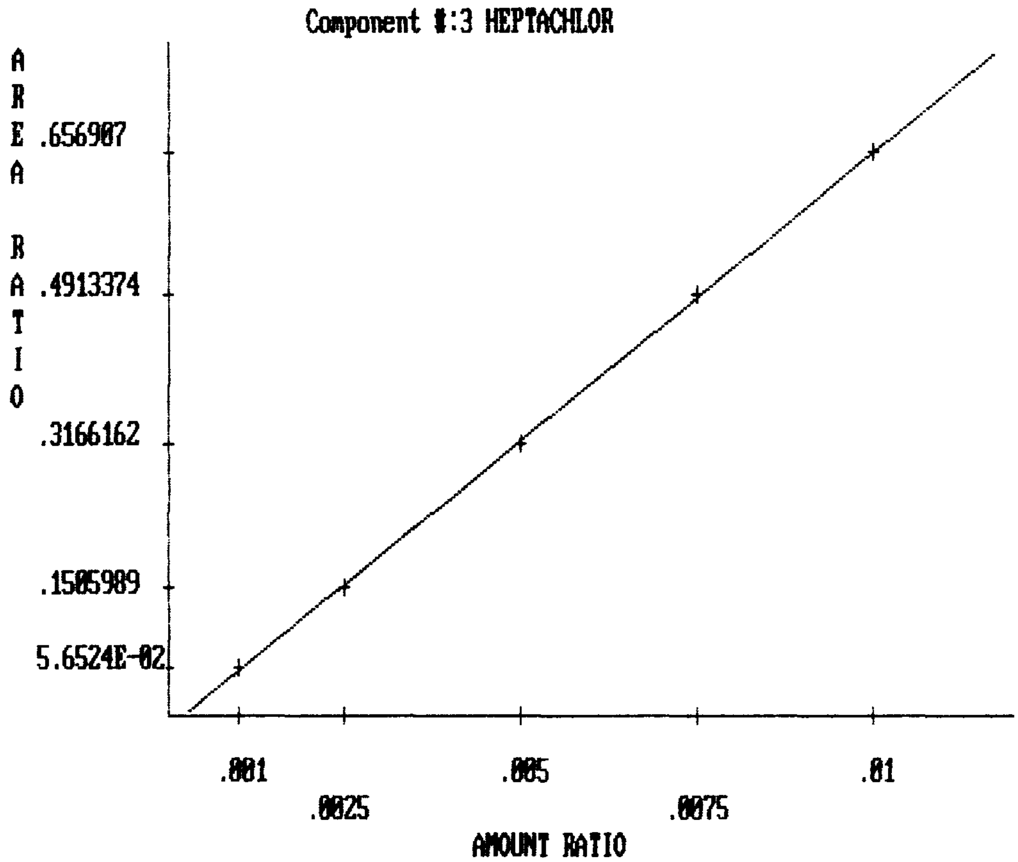
Y = SLOPE * X + INTERCEPT
DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD
Area ratio = 6.8642E+01 * Amt ratio + -3.6239E-02
Amt ratio = 1.4568E-02 * Area ratio + 5.2794E-04
Correlation Coefficient = 0.9963



Component 2 = LINDANE
INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0010	89933	0.0010	0.0564
2	0.0025	246885	0.0025	0.1481
3	0.0050	503137	0.0050	0.2997
4	0.0075	810299	0.0075	0.4912
5	0.0100	1105924	0.0100	0.6796

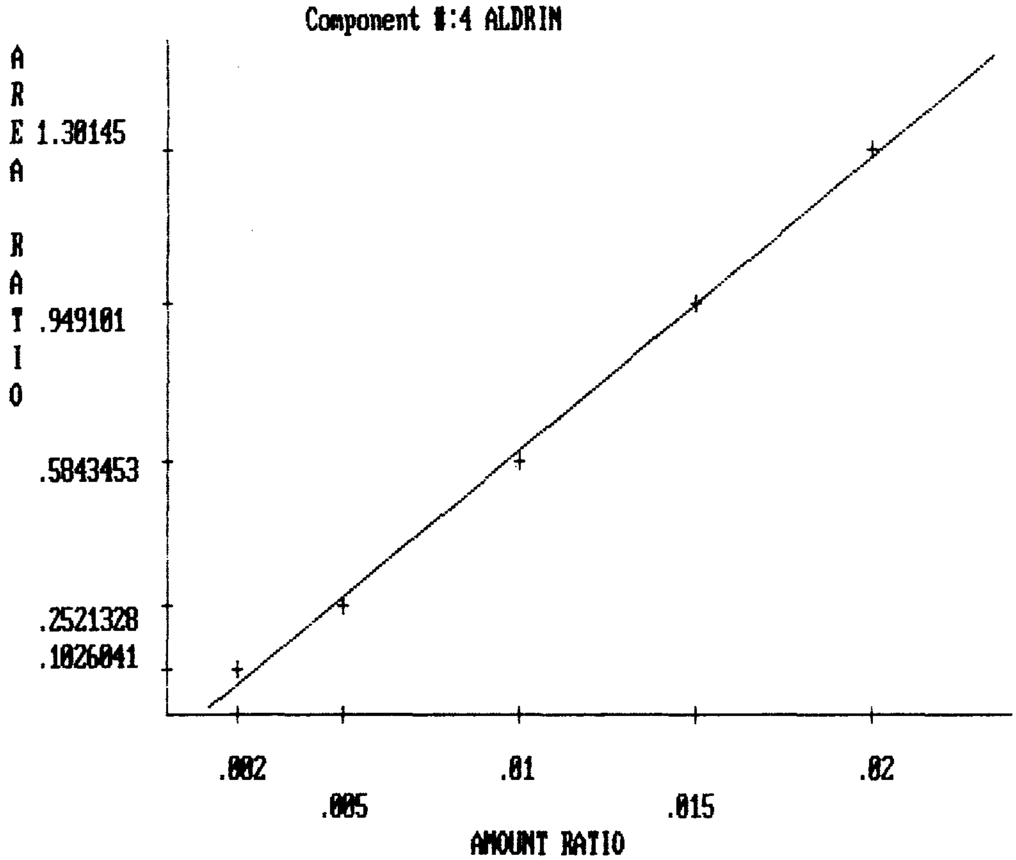
Y = SLOPE * X + INTERCEPT
DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD
Area ratio = 6.9330E+01 * Amt ratio + -2.5500E-02
Amt ratio = 1.4424E-02 * Area ratio + 3.6780E-04
Correlation Coefficient = 0.9970



Component 3 = HEPTACHLOR
INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0010	90072	0.0010	0.0565
2	0.0025	251105	0.0025	0.1506
3	0.0050	531471	0.0050	0.3166
4	0.0075	810530	0.0075	0.4913
5	0.0100	1068919	0.0100	0.6569

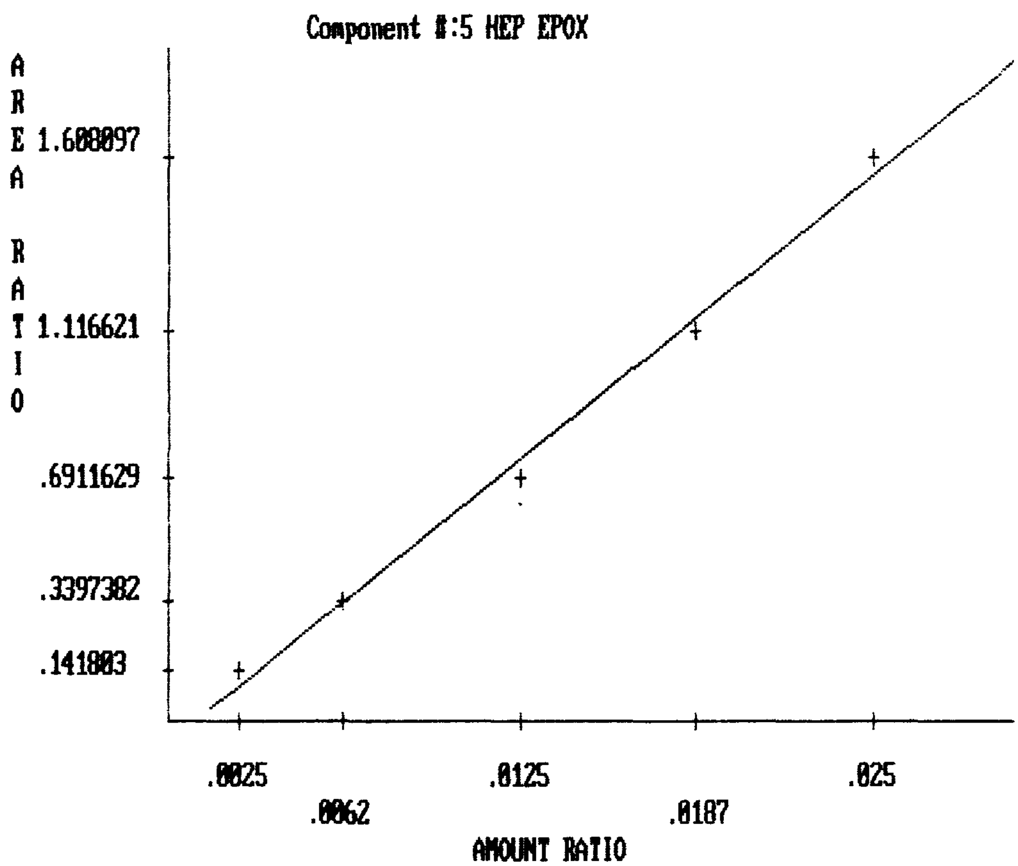
Y = SLOPE * X + INTERCEPT
DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD
Area ratio = 6.7090E+01 * Amt ratio + -1.4470E-02
Amt ratio = 1.4905E-02 * Area ratio + 2.1569E-04
Correlation Coefficient = 0.9998



Component 4 = ALDRIN
INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0020	163501	0.0020	0.1026
2	0.0050	420400	0.0050	0.2521
3	0.0100	980880	0.0100	0.5843
4	0.0150	1565676	0.0150	0.9491
5	0.0200	2117720	0.0200	1.3015

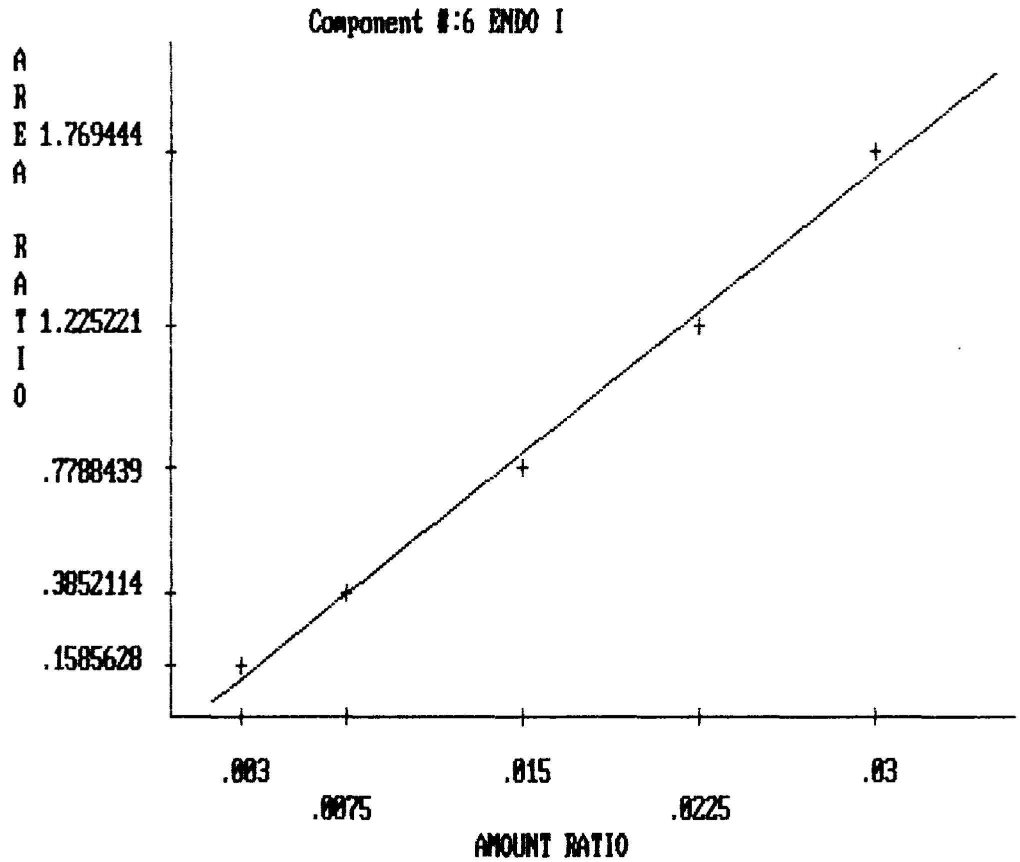
Y = SLOPE * X + INTERCEPT
DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD
Area ratio = 6.7555E+01 * Amt ratio + -6.4642E-02
Amt ratio = 1.4803E-02 * Area ratio + 9.5688E-04
Correlation Coefficient = 0.9975



Component 5 = HEP EPOX
INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0025	225965	0.0025	0.1418
2	0.0062	566471	0.0062	0.3397
3	0.0125	1160184	0.0125	0.6912
4	0.0187	1842023	0.0187	1.1166
5	0.0250	2616696	0.0250	1.6081

Y = SLOPE * X + INTERCEPT
DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD
Area ratio = 6.4806E+01 * Amt ratio + -6.1695E-02
Amt ratio = 1.5431E-02 * Area ratio + 9.5200E-04
Correlation Coefficient = 0.9939



Component 6 = ENDO I

INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0030	252672	0.0030	0.1586
2	0.0075	642292	0.0075	0.3852
3	0.0150	1307365	0.0150	0.7788
4	0.0225	2021174	0.0225	1.2252
5	0.0300	2879239	0.0300	1.7694

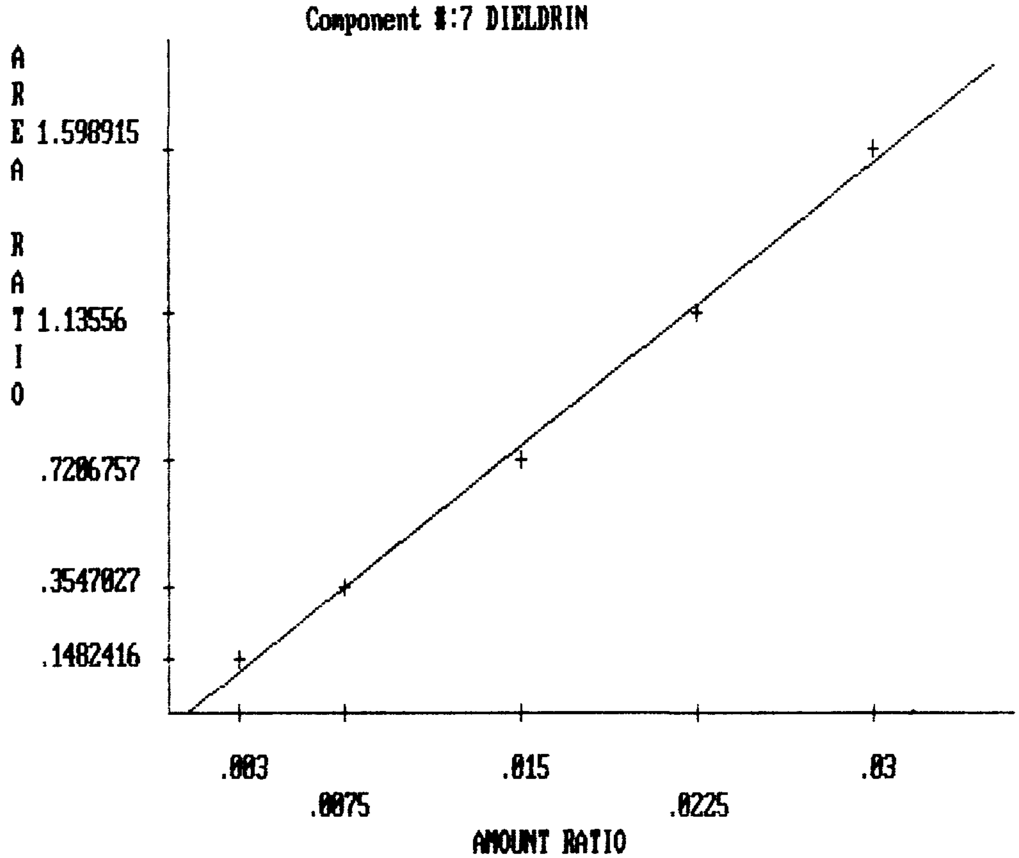
Y = SLOPE * X + INTERCEPT

DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD

Area ratio = 5.9097E+01 * Amt ratio + -5.8449E-02

Amt ratio = 1.6921E-02 * Area ratio + 9.8905E-04

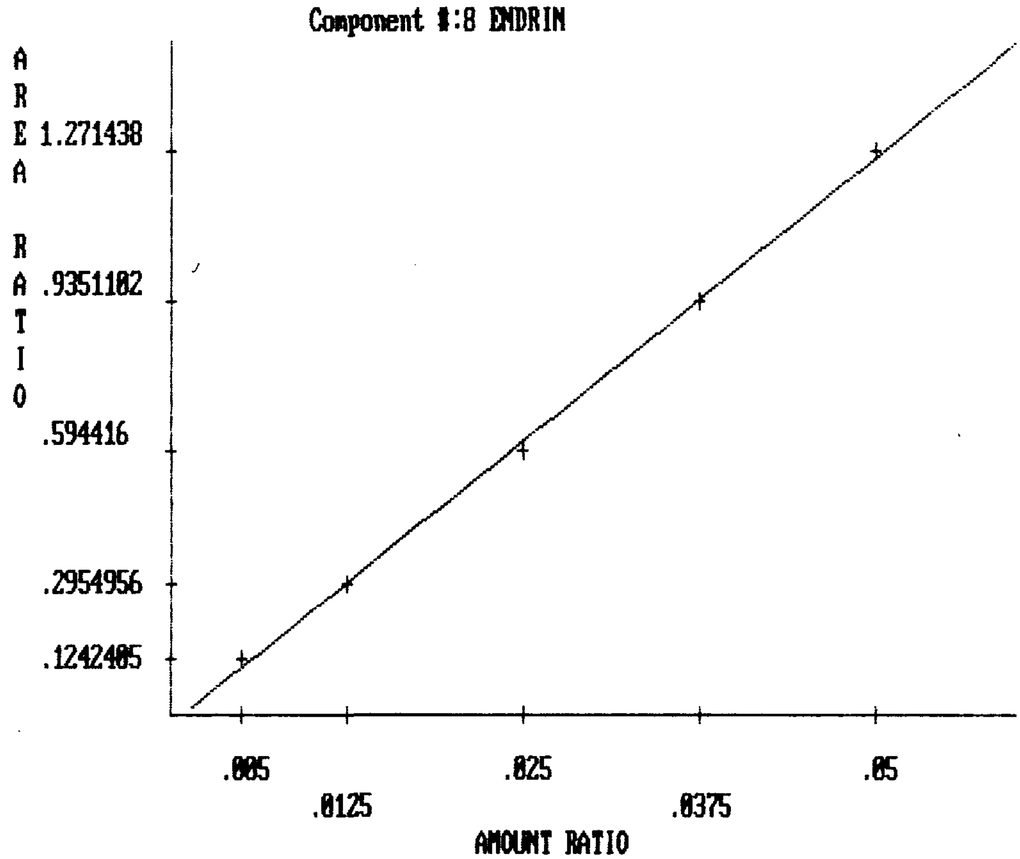
Correlation Coefficient = 0.9946



Component 7 = DIELDRIN
INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0030	236225	0.0030	0.1482
2	0.0075	591423	0.0075	0.3547
3	0.0150	1209724	0.0150	0.7207
4	0.0225	1873266	0.0225	1.1356
5	0.0300	2601755	0.0300	1.5989

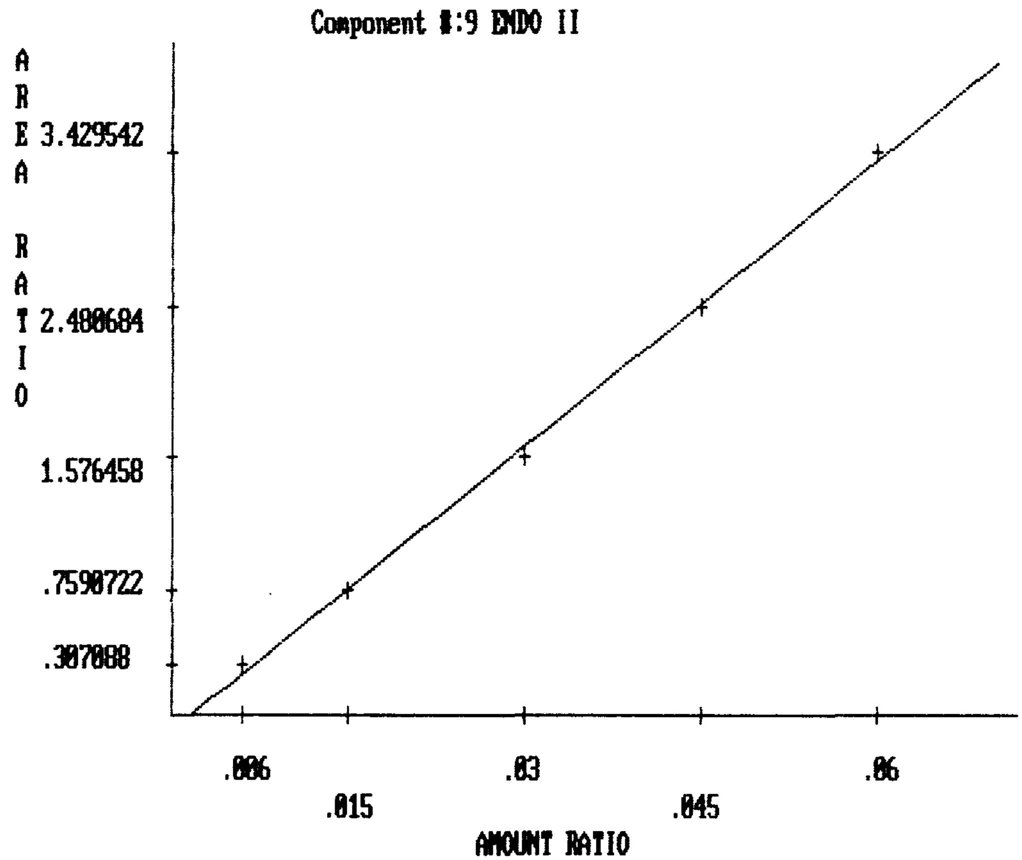
Y = SLOPE * X + INTERCEPT
DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD
Area ratio = 5.3547E+01 * Amt ratio + -4.3711E-02
Amt ratio = 1.8675E-02 * Area ratio + 8.1632E-04
Correlation Coefficient = 0.9968



Component 8 = ENDRIN
INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0050	197979	0.0050	0.1242
2	0.0125	492702	0.0125	0.2955
3	0.0250	997785	0.0250	0.5944
4	0.0375	1542596	0.0375	0.9351
5	0.0500	2068884	0.0500	1.2714

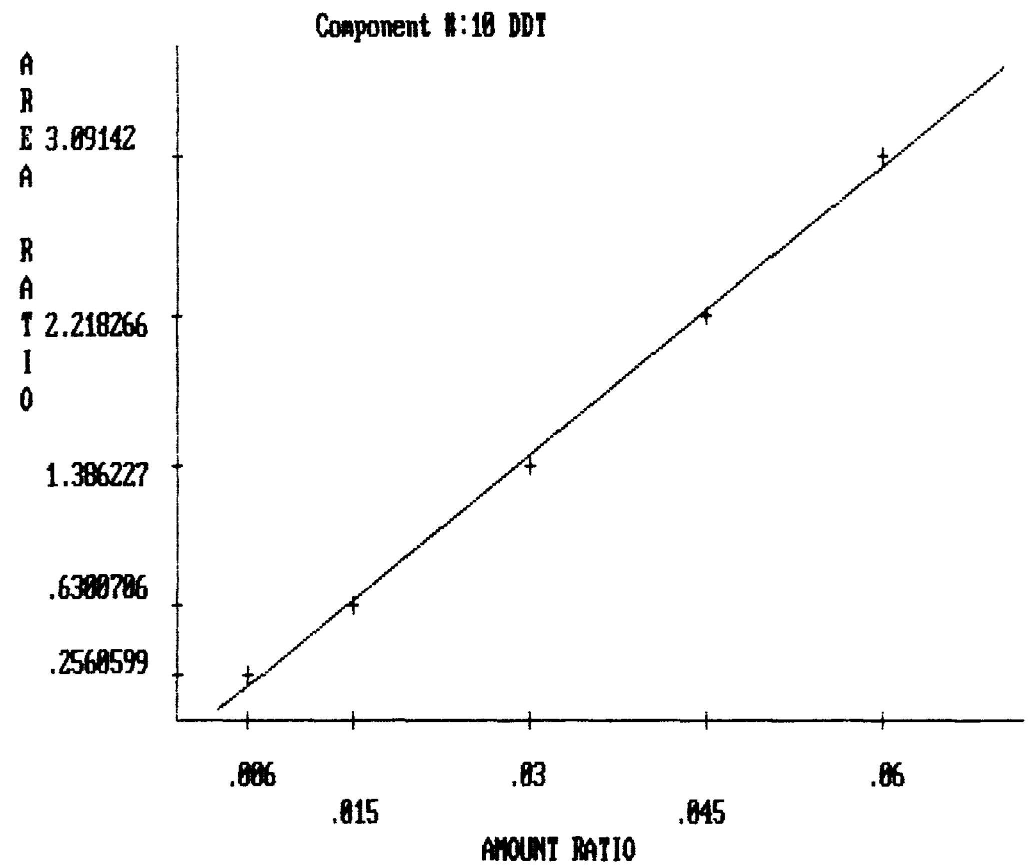
Y = SLOPE * X + INTERCEPT
DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD
Area ratio = 2.5573E+01 * Amt ratio + -2.0750E-02
Amt ratio = 3.9104E-02 * Area ratio + 8.1142E-04
Correlation Coefficient = 0.9988



Component 9 = ENDO II
INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0060	489349	0.0060	0.3071
2	0.0150	1265658	0.0150	0.7591
3	0.0300	2646238	0.0300	1.5765
4	0.0450	4092238	0.0450	2.4807
5	0.0600	5580551	0.0600	3.4295

Y = SLOPE * X + INTERCEPT
DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD
Area ratio = 5.7889E+01 * Amt ratio + -9.5560E-02
Amt ratio = 1.7275E-02 * Area ratio + 1.6508E-03
Correlation Coefficient = 0.9983



Component 10 = DDT

INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0060	408035	0.0060	0.2561
2	0.0150	1050564	0.0150	0.6301
3	0.0300	2326916	0.0300	1.3862
4	0.0450	3659342	0.0450	2.2183
5	0.0600	5030359	0.0600	3.0914

Y = SLOPE * X + INTERCEPT

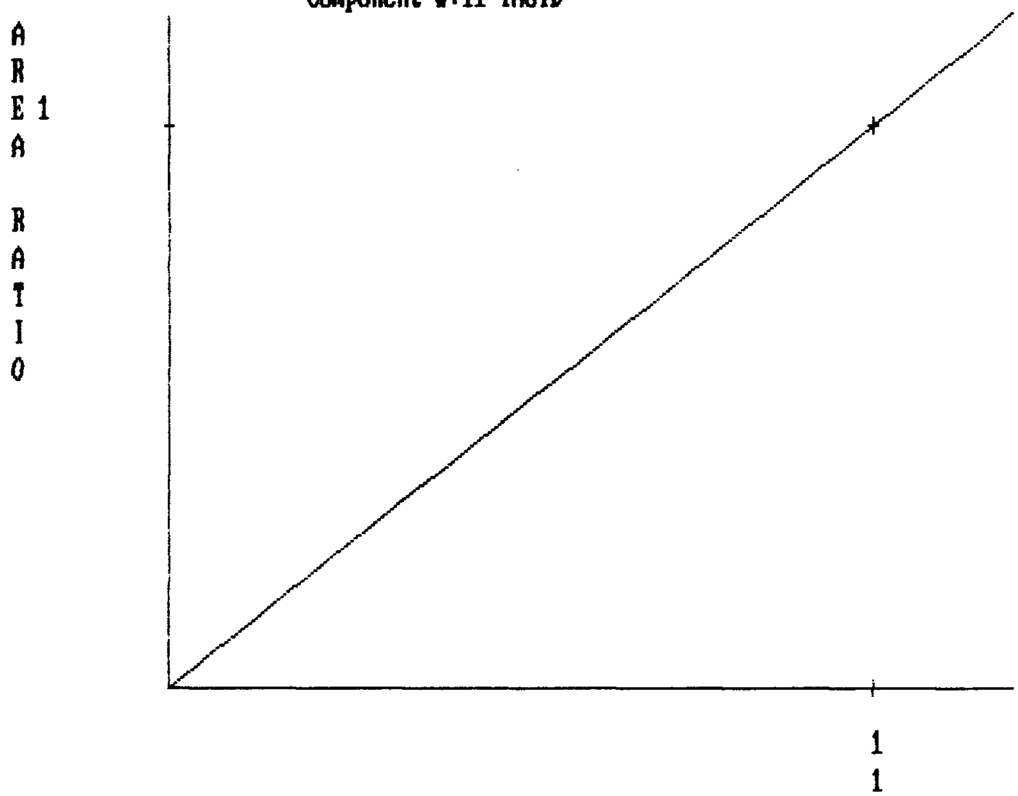
DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD

Area ratio = 5.2805E+01 * Amt ratio + -1.3110E-01

Amt ratio = 1.8938E-02 * Area ratio + 2.4827E-03

Correlation Coefficient = 0.9974

Component #:11 INSTD



Component 11 = INSTD

INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	1.0000	1593514	1.0000	1.0000
2	1.0000	1667375	1.0000	1.0000
3	1.0000	1678597	1.0000	1.0000
4	1.0000	1649641	1.0000	1.0000
5	1.0000	1627200	1.0000	1.0000

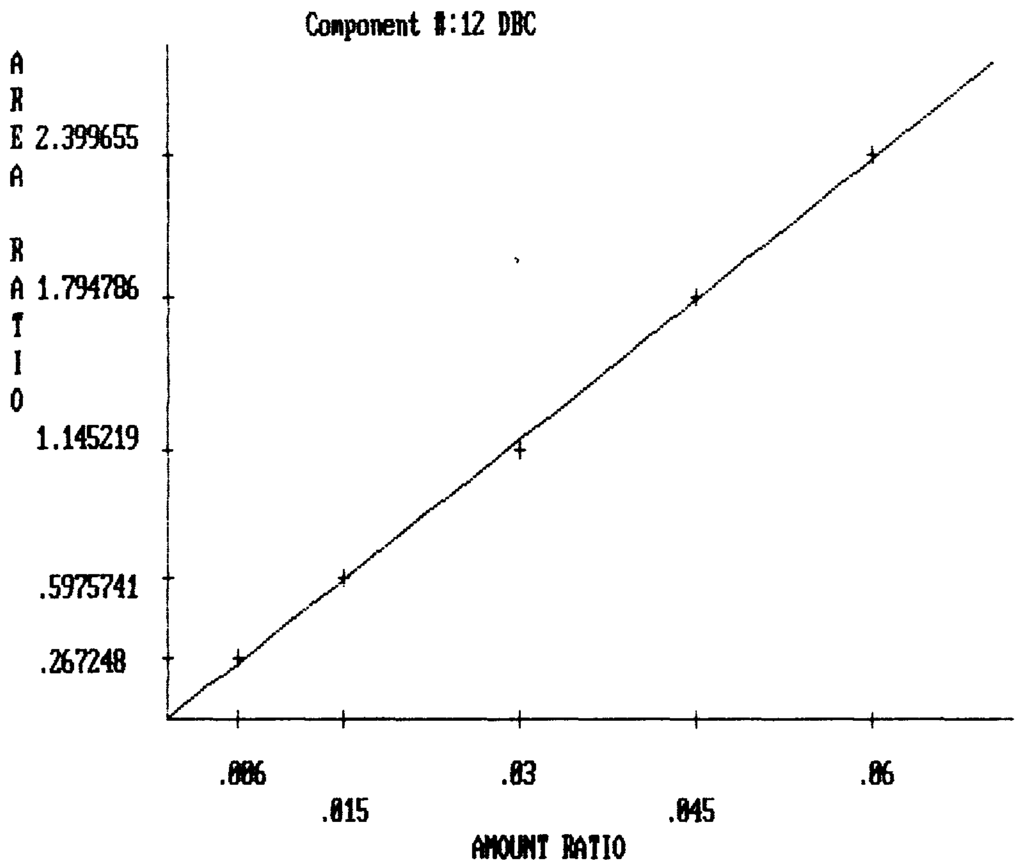
Y = SLOPE * X + INTERCEPT

DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD

Area ratio = 1.0000E+00 * Amt ratio + 0.0000E+00

Amt ratio = 1.0000E+00 * Area ratio + 0.0000E+00

Correlation Coefficient = 0.0000



Component 12 = DBC

INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0060	425864	0.0060	0.2672
2	0.0150	996380	0.0150	0.5976
3	0.0300	1922362	0.0300	1.1452
4	0.0450	2960752	0.0450	1.7948
5	0.0600	3904718	0.0600	2.3997

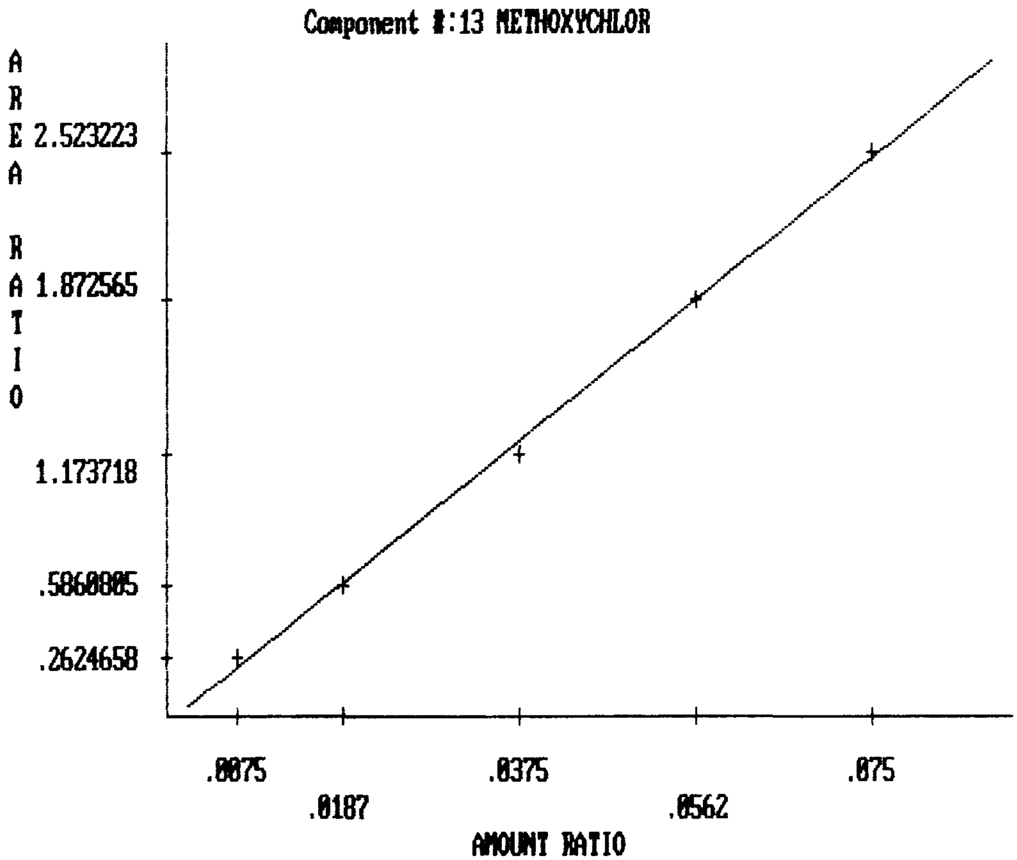
Y = SLOPE * X + INTERCEPT

DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD

Area ratio = 3.9654E+01 * Amt ratio + 3.6853E-03

Amt ratio = 2.5218E-02 * Area ratio + -9.2935E-05

Correlation Coefficient = 0.9989



Component 13 = METHOXYCHLOR
INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0075	418243	0.0075	0.2625
2	0.0187	977216	0.0187	0.5861
3	0.0375	1970200	0.0375	1.1737
4	0.0562	3089060	0.0562	1.8726
5	0.0750	4105789	0.0750	2.5232

Y = SLOPE * X + INTERCEPT
DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD
Area ratio = 3.3767E+01 * Amt ratio + -3.2613E-02
Amt ratio = 2.9615E-02 * Area ratio + 9.6583E-04
Correlation Coefficient = 0.9982

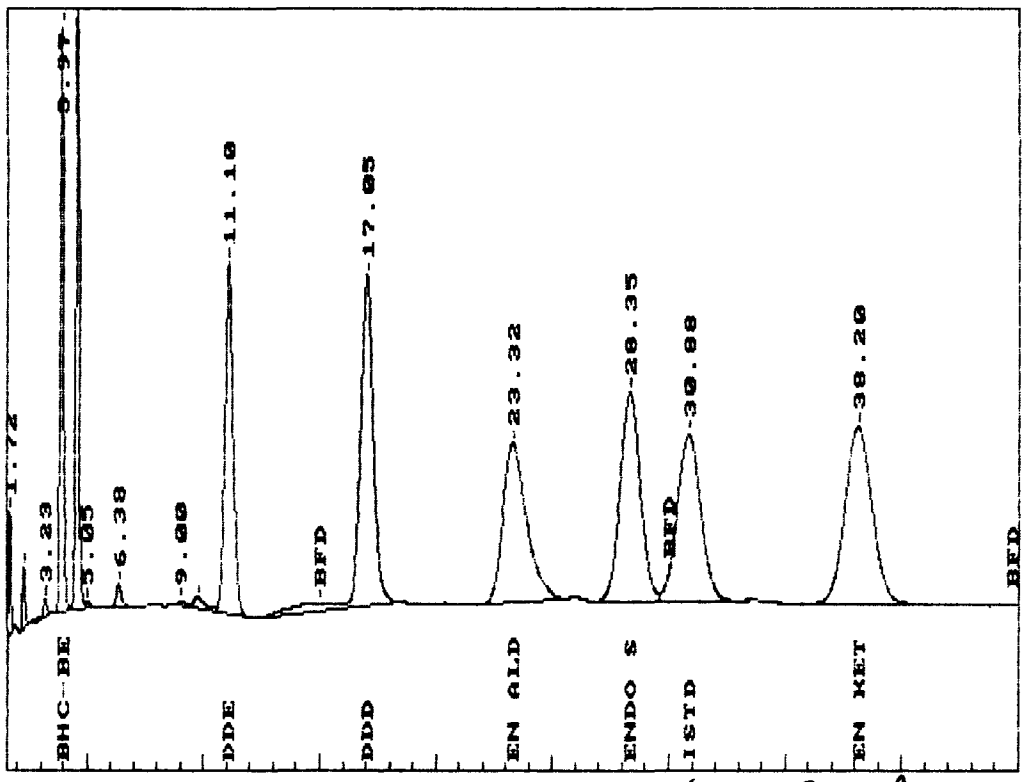
INTERNAL STANDARD TABLE

```
******************** 06-29-1989 10:09:31 Version 4.1 **********************
* Sample Name: PESTB 3                          Data File: P:FM6            *
* Date: 06-28-1989 13:20:19 Method: P:PESTB 06-29-1989 09:26:38  #  53     *
* Interface: 0   Cycle#:  6    Operator NW  Channel#: 0    Vial#: N.A.     *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
4	3.97	BHC-BETA	0.0125	7.4627%	762459	81575	9.3	2	4	14	0	1.6394E-08
5	4.62	BHC-DELTA	0.0100	5.9702%	837569	84170	10.0	3	5	14	0	1.1939E-08
10	11.10	DDE	0.0150	8.9552%	1211205	49136	24.7	2	10	14	0	1.2384E-08
11	17.05	DDD	0.0250	14.9254%	1900218	46071	41.2	1	11	14	0	1.3156E-08
12	23.32	EN ALDEHYDE	0.0250	14.9254%	1575687	22151	71.1	1	12	14	0	1.5866E-08
13	28.35	ENDO SULFATE	0.0400	23.8806%	1764051	29157	60.5	2	13	14	0	2.2675E-08
14	30.88	ISTD	1.0000	0.0000%	1638165	23323	70.2	2	14	14	0	6.1044E-07
15	38.20	EN KETONE	0.0400	23.8806%	1987019	24692	80.5	1	15	14	0	2.0131E-08

TOTAL AMOUNT = 0.1675

```
Data File = P:FM6.PTS  Printed on 06-29-1989 at 10:09:50
Start time:     1.50 min.  Stop time:    45.00 min.     Offset:    0 mv.
Low Value:    64472 uv   High Value: 152692 uv    Scale factor:    1.0
```



since none of the samples were positive for Pest B a one point calibration curve was used.

primary continuing cal.

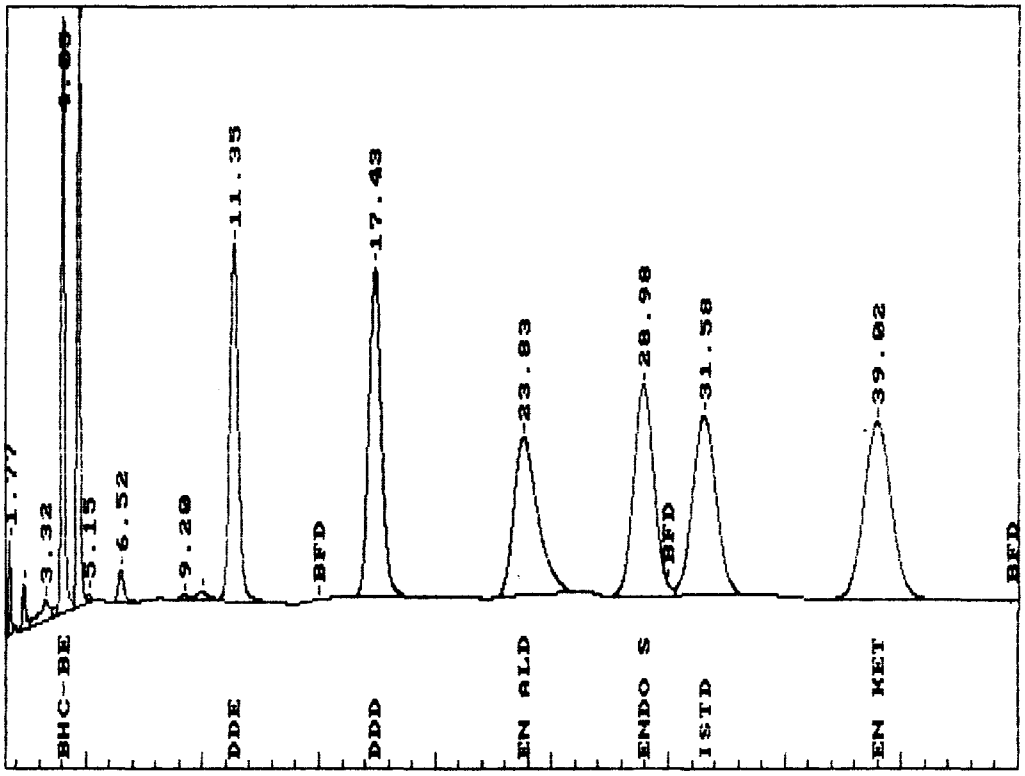
INTERNAL STANDARD TABLE

```
******************** 06-29-1989 10:31:00 Version 4.1 ********************
* Sample Name: PESTB 3                          Data File: P:FM21        *
* Date: 06-29-1989 00:57:54 Method: P:PESTB 06-29-1989 09:26:38  #  53   *
* Interface: 0   Cycle#:  21   Operator NW  Channel#: 0    Vial#: N.A.   *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000          *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN          *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                 *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF        *
* Misc. Information: D.S. SF6232                          D.S. SF6232   *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per    1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
4	4.05	BHC-BETA	0.0124	8.0063%	809608	81781	9.9	2	4	14	0	1.5275E-08
5	4.72	BHC-DELTA	0.0095	6.1586%	855155	82601	10.4	3	5	14	0	1.1124E-08
10	11.35	DDE	0.0144	9.3364%	1249807	49066	25.5	2	10	14	0	1.1539E-08
11	17.43	DDD	0.0209	13.5098%	1702366	45285	37.6	1	11	14	0	1.2258E-08
12	23.83	EN ALDEHYDE	0.0232	15.0305%	1570520	21794	72.1	1	12	14	0	1.4783E-08
13	28.98	ENDO SULFATE	0.0373	24.1672%	1766921	28923	61.1	2	13	14	0	2.1127E-08
14	31.58	ISTD	1.0000	0.0000%	1758183	24707	71.2	2	14	14	0	5.6877E-07
15	39.02	EN KETONE	0.0367	23.7912%	1959281	24219	80.9	1	15	14	0	1.8756E-08

TOTAL AMOUNT = 0.1545

Data File = P:FM21.PTS Printed on 06-29-1989 at 10:31:19
Start time: 1.50 min. Stop time: 45.00 min. Offset: 0 mv.
Low Value: 65885 uv High Value: 152611 uv Scale factor: 1.0



++++++ INTERNAL STANDARD TABLE ++++++

********** 07-03-1989 12:56:49 Version 4.1 **********

* Sample Name: 1242 L2 Data File: P:FM24 *
* Date: 06-29-1989 03:17:18 Method: P:MET42. 07-03-1989 08:23:04 # 36 *
* Interface: 0 Cycle#: 24 Operator NW Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

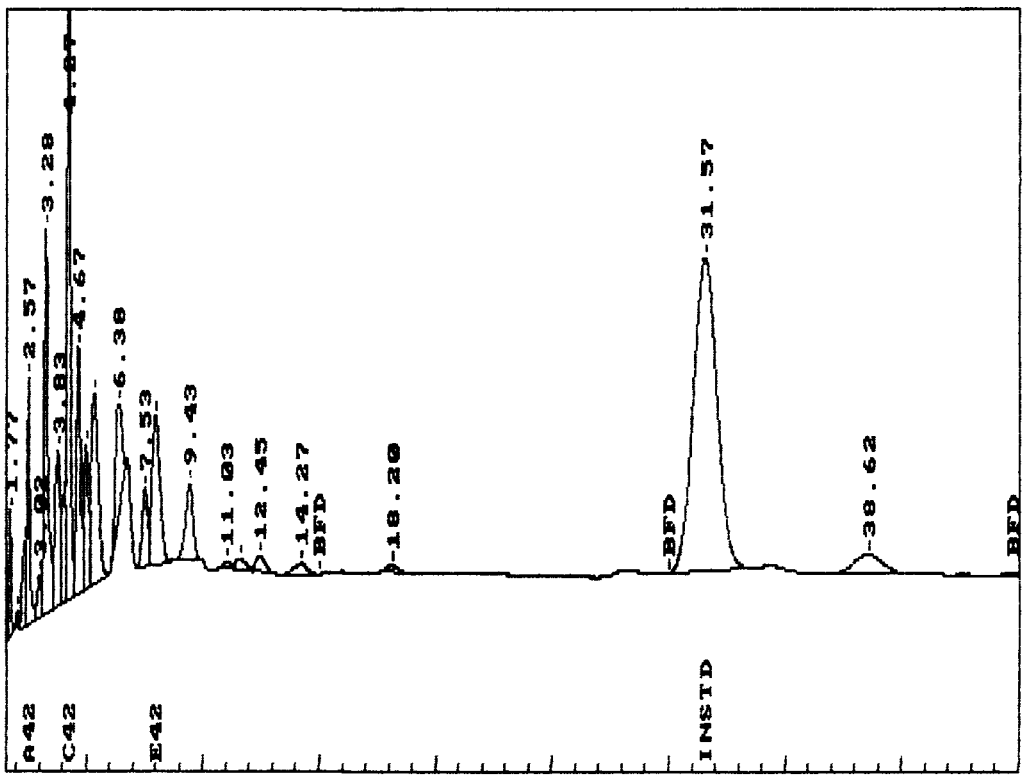
* Instrument Type: HEWLETT PACKARD Column Type: MIXED PHASE-PRIMARY *
* Solvent Description: ULTRA HIGH PURITY NITROGEN *
* Conditions: ISOTHERMAL AT 200 CELSIUS *
* Detector 0: ECD QUANT Detector 1: ECD CONF *
* Misc. Information: D.S. SF6232 *

Starting Delay: 1.50 Ending retention time: 45.00
Area reject: 0 One sample per 1.000 sec.
Amount injected: 5.00 Dilution factor: 1.00
Internal Standard Amount: 1
Sample Weight: 1.000000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ~~UG/KG~~ ng/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
4	2.57	A42	0.0393	17.3325%	164420	18051	9.1	2	4	22	0	2.3909E-07
6	3.28	B42	0.0474	20.9023%	304802	28169	10.8	2	6	22	0	1.5553E-07
9	4.27	C42	0.0481	21.2066%	470182	43388	10.8	2	9	22	0	1.0230E-07
10	4.67	D42	0.0457	20.1479%	232956	17956	13.0	2	10	22	0	1.9616E-07
15	7.98	E42	0.0463	20.4107%	258314	10843	23.8	2	15	22	0	1.7921E-07
22	31.57	INSTD MIREX	1.0000	0.0000%	1614917	22889	70.6	1	22	22	0	6.1923E-07

TOTAL AMOUNT = 0.2268

Plot of data file: P:FM24.PTS
Date: 07-03-1989 Time: 12:57:20
Sample Name: 1242 L2
Start Time= 1.52Stop Time = 45.00Min. Scale= 65354Max. Scale= 111679

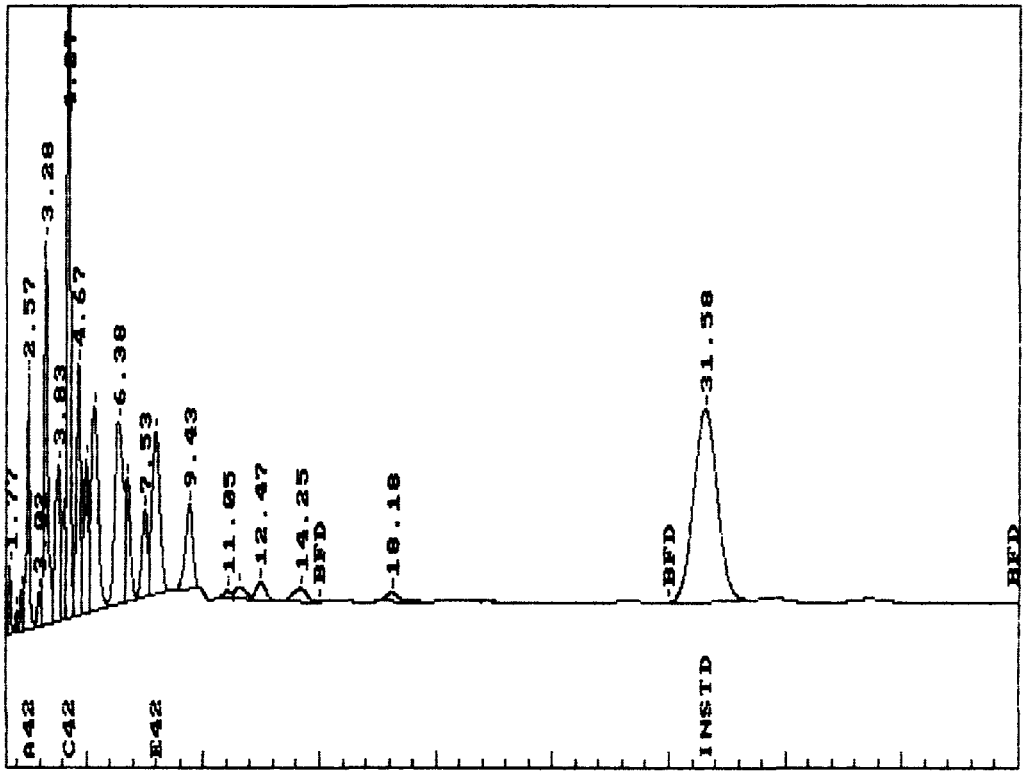


```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-03-1989 12:59:05 Version 4.1 ********************
* Sample Name: 1242 L3                          Data File: P:FM25        *
* Date: 06-29-1989 04:03:48 Method: P:MET42. 07-03-1989 08:23:04  #  36  *
* Interface: 0   Cycle#:  25   Operator NW  Channel#: 0    Vial#: N.A.   *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000          *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY *
*            Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                 *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF        *
* Misc. Information: D.S. SF6232                                        *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:   45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ~~UG/KG~~ ug/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
4	2.57	A42	0.0990	21.1272%	312541	32595	9.6	2	4	23	0	3.1680E-07
6	3.28	B42	0.0925	19.7401%	503878	49126	10.3	2	6	23	0	1.8360E-07
9	4.27	C42	0.0960	20.4758%	846475	78760	10.7	2	9	23	0	1.1336E-07
10	4.67	D42	0.0931	19.8714%	404943	32170	12.6	2	10	23	0	2.2998E-07
16	7.98	E42	0.0880	18.7856%	498735	20708	24.1	2	16	23	0	1.7652E-07
23	31.58	INSTD MIREX	1.0000	0.0000%	1736006	24613	70.5	1	23	23	0	5.7603E-07

TOTAL AMOUNT = 0.4687

Plot of data file: P:FM25.PTS
Date: 07-03-1989 Time: 12:59:31
Sample Name: 1242 L3
Start Time= 1.52Stop Time = 45.00Min. Scale= 65866Max. Scale= 146744

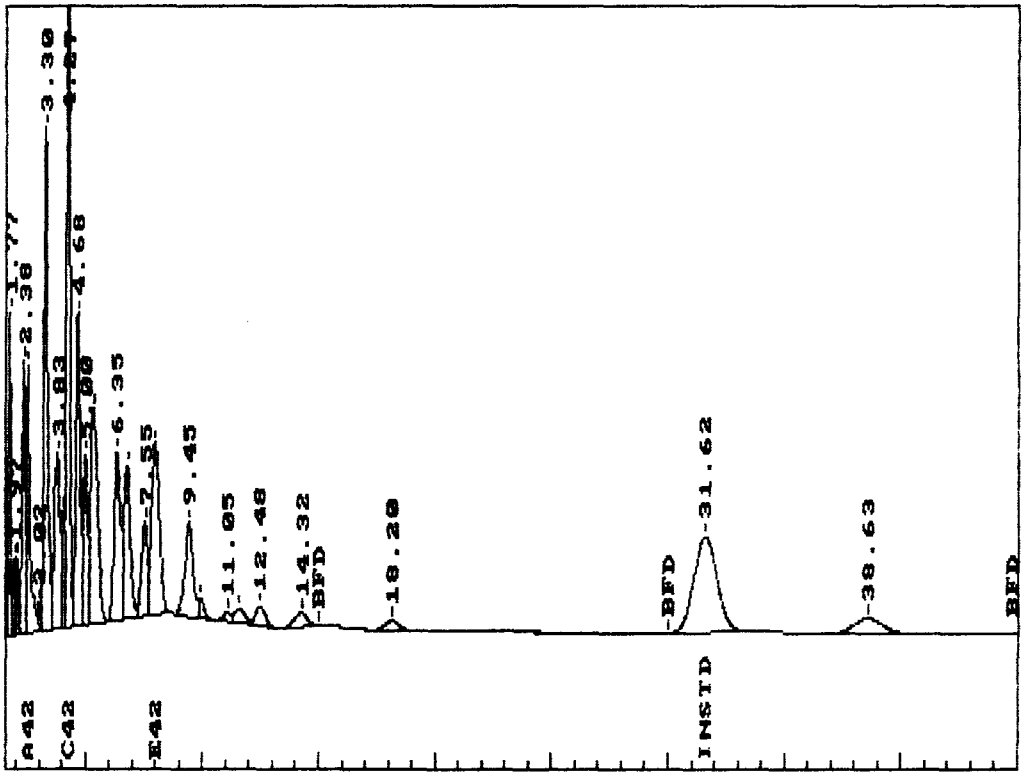


```
******   INTERNAL STANDARD TABLE   ******
******************** 07-03-1989 13:00:57 Version 4.1 **********************
* Sample Name: 1242 L4                          Data File: P:FM26          *
* Date: 06-29-1989 04:50:17 Method: P:MET42. 07-03-1989 08:23:04  #  36   *
* Interface: 0   Cycle#:  26   Operator NW  Channel#: 0    Vial#: N.A.    *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000           *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*            Solvent Description: ULTRA HIGH PURITY NITROGEN             *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                  *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF         *
* Misc. Information: D.S. SF6232                                         *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per    1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ~~UG/KG~~ ng/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
5	2.57	A42	0.2894	21.9598%	673250	62169	10.8	3	5	25	0	4.2982E-07
7	3.30	B42	0.3209	24.3539%	1260902	116717	10.8	2	7	25	0	2.5452E-07
10	4.27	C42	0.2179	16.5349%	1548976	144500	10.7	2	10	25	0	1.4067E-07
11	4.68	D42	0.2938	22.2989%	956181	72552	13.2	2	11	25	0	3.0731E-07
17	8.00	E42	0.1957	14.8525%	965285	39665	24.3	2	17	25	0	2.0276E-07
25	31.62	INSTD MIREX	1.0000	0.0000%	1567717	22222	70.5	1	25	25	0	6.3787E-07

TOTAL AMOUNT = 1.3177

Plot of data file: P:FM26.PTS
Date: 07-03-1989 Time: 13:06:22
Sample Name: 1242 L4
Start Time= 1.52Stop Time = 45.00Min. Scale= 70086Max. Scale= 216668

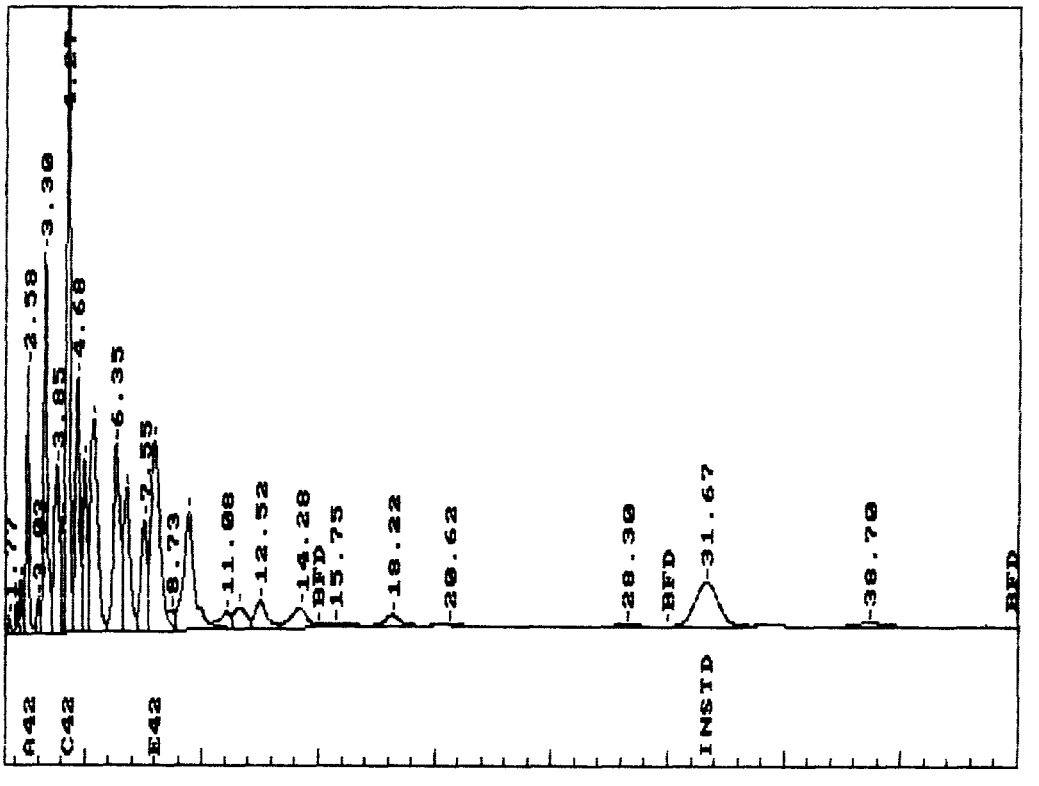


```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-03-1989 14:14:03 Version 4.1 **********************
* Sample Name: 1242 L5                          Data File: P:FM27          *
* Date: 06-29-1989 05:36:47 Method: P:MET42. 07-03-1989 08:23:04  #  36   *
* Interface: 0   Cycle#:  27   Operator NW  Channel#: 0    Vial#: N.A.    *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000            *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*            Solvent Description: ULTRA HIGH PURITY NITROGEN              *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ~~UG/KG~~ ng/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
4	2.58	A42	0.5325	20.1211%	1233168	141460	8.7	2	4	27	0	4.3181E-07
6	3.30	B42	0.5267	19.9032%	2089604	202494	10.3	2	6	27	0	2.5207E-07
9	4.27	C42	0.5158	19.4914%	3645081	334063	10.9	2	9	27	0	1.4151E-07
10	4.68	D42	0.5299	20.0237%	1735926	136231	12.7	2	10	27	0	3.0527E-07
16	8.02	E42	0.5415	20.4606%	2753837	101123	27.2	3	16	27	0	1.9663E-07
27	31.67	INSTD MIREX	1.0000	0.0000%	1648648	23389	70.5	1	27	27	0	6.0656E-07

TOTAL AMOUNT = 2.6465

Plot of data file: P:FM27.PTS
Date: 07-03-1989 Time: 14:14:34
Sample Name: 1242 L5
Start Time= 1.52Stop Time = 45.00Min. Scale= 65643Max. Scale= 400534

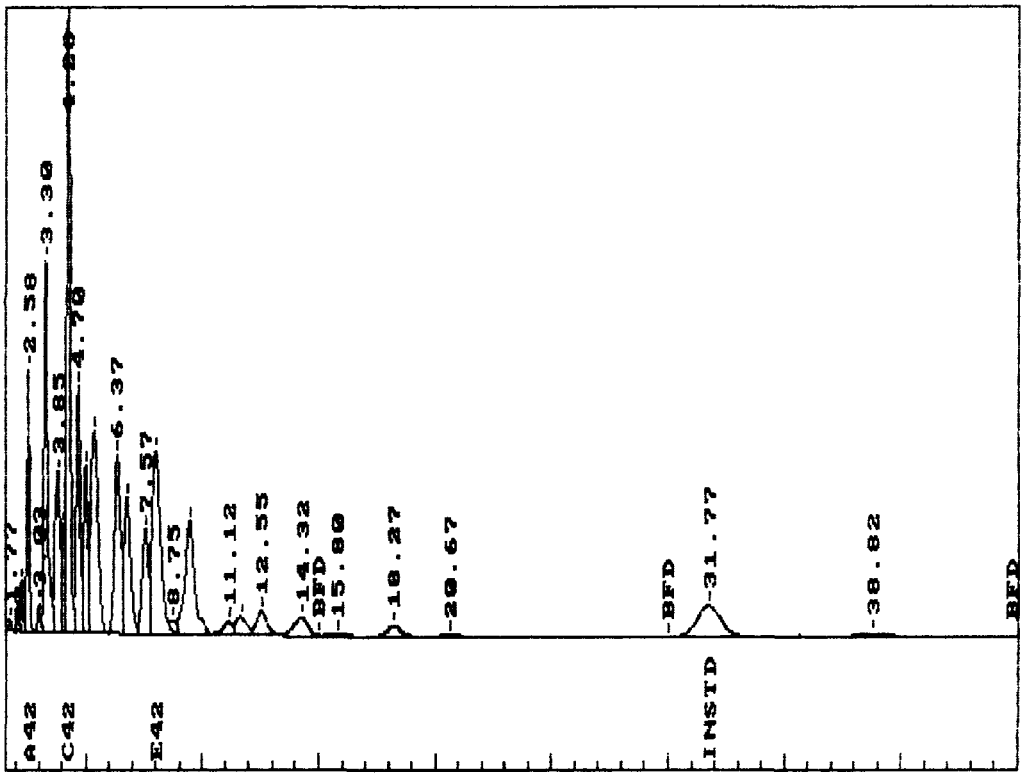


```
******   INTERNAL STANDARD TABLE   ******
******************** 07-03-1989 14:16:02 Version 4.1 **********************
* Sample Name: 1242 L6                          Data File: P:FM28          *
* Date: 06-29-1989 06:23:13 Method: P:MET42. 07-03-1989 08:23:04  #  36   *
* Interface: 0   Cycle#:  28   Operator NW  Channel#: 0    Vial#: N.A.    *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000           *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF          *
* Misc. Information: D.S. SF6232                          D.S. SF6232     *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ~~UG/KG~~ ng/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	HEIGHT BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
4	2.58	A42	0.7292	19.9334%	1624723	196234	8.3	2	4	26	0	4.4880E-07
6	3.30	B42	0.7334	20.0474%	2798891	277934	10.1	2	6	26	0	2.6202E-07
9	4.28	C42	0.7401	20.2322%	5059076	467275	10.8	2	9	26	0	1.4629E-07
10	4.70	D42	0.7313	19.9901%	2311467	184843	12.5	2	10	26	0	3.1636E-07
16	8.03	E42	0.7242	19.7969%	3598868	136302	26.4	3	16	26	0	2.0123E-07
26	31.77	INSTD MIREX	1.0000	0.0000%	1615545	22947	70.4	1	26	26	0	6.1899E-07

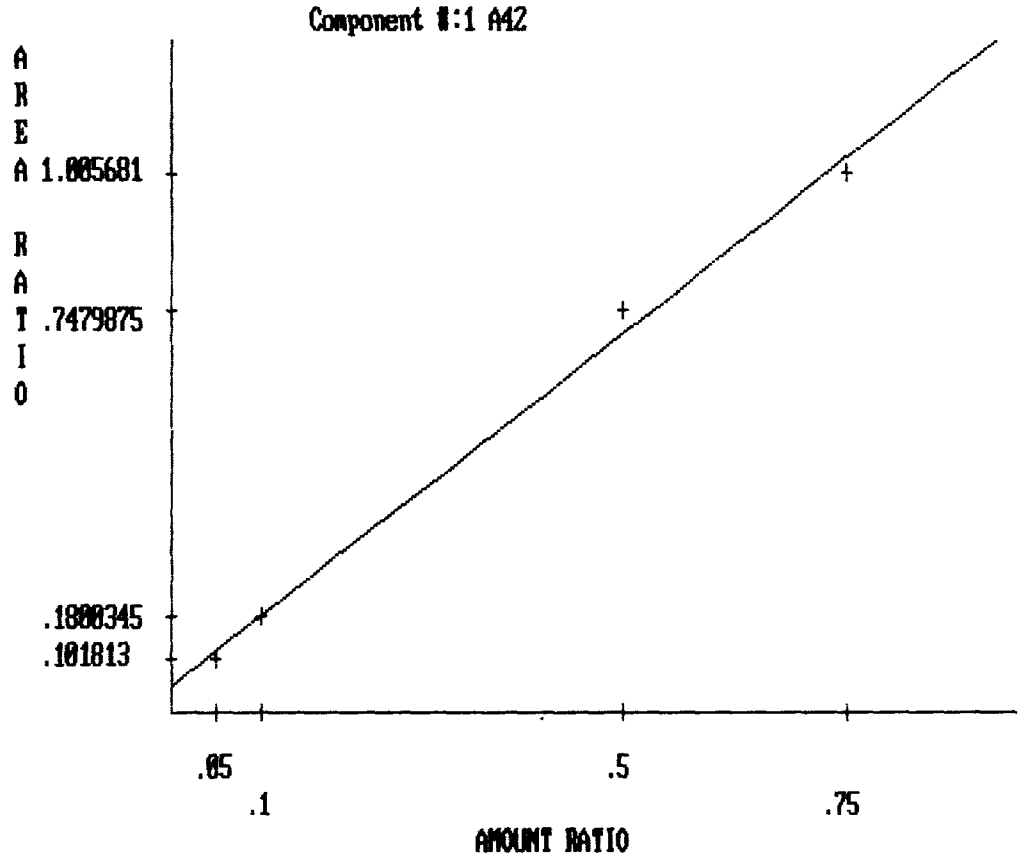
TOTAL AMOUNT = 3.6581

Plot of data file: P:FM28.PTS
Date: 07-03-1989 Time: 14:16:27
Sample Name: 1242 L6
Start Time= 1.52Stop Time = 45.00Min. Scale= 69952Max. Scale= 540551



(working curve)

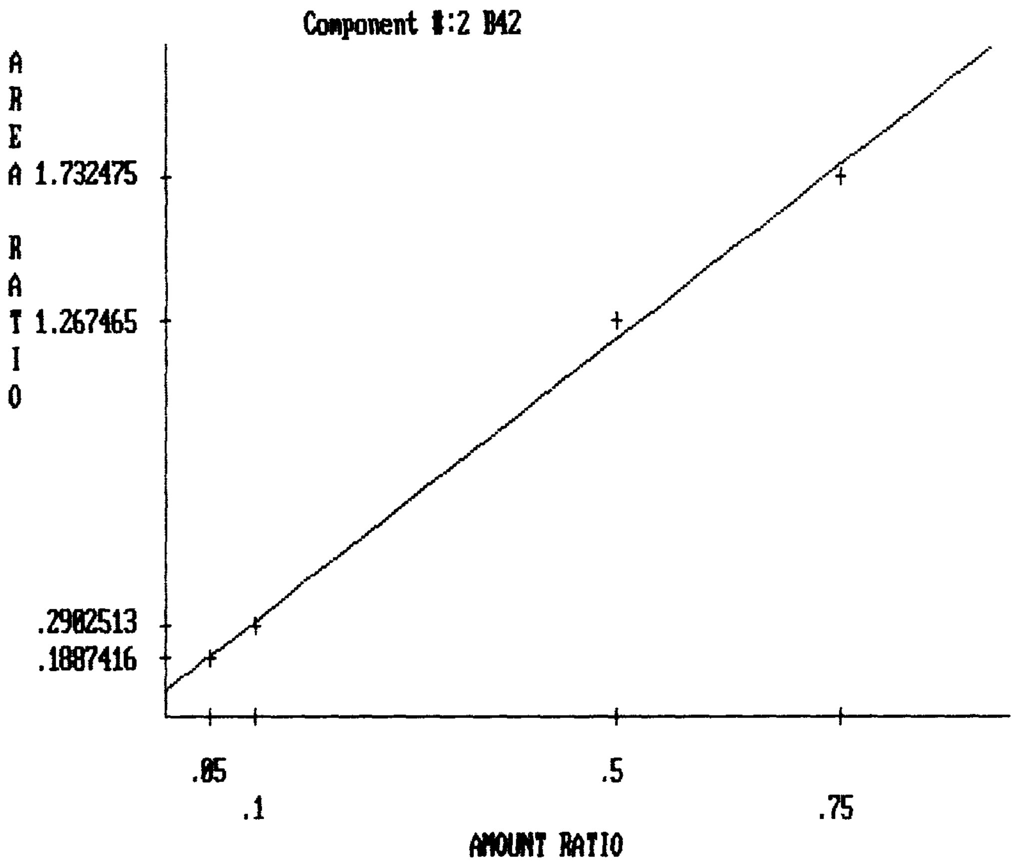
Method P:MET42.
Sample PCB 1242
Operator NW
Run date 07-03-1989 08:23:04 version: 36
Printed on 07-03-1989 AT 11:04:42
Straight Line fit



Component 1 = A42
INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0500	164420	0.0500	0.1018
2	0.1000	312541	0.1000	0.1800
3	0.5000	1233168	0.5000	0.7480
4	0.7500	1624723	0.7500	1.0057

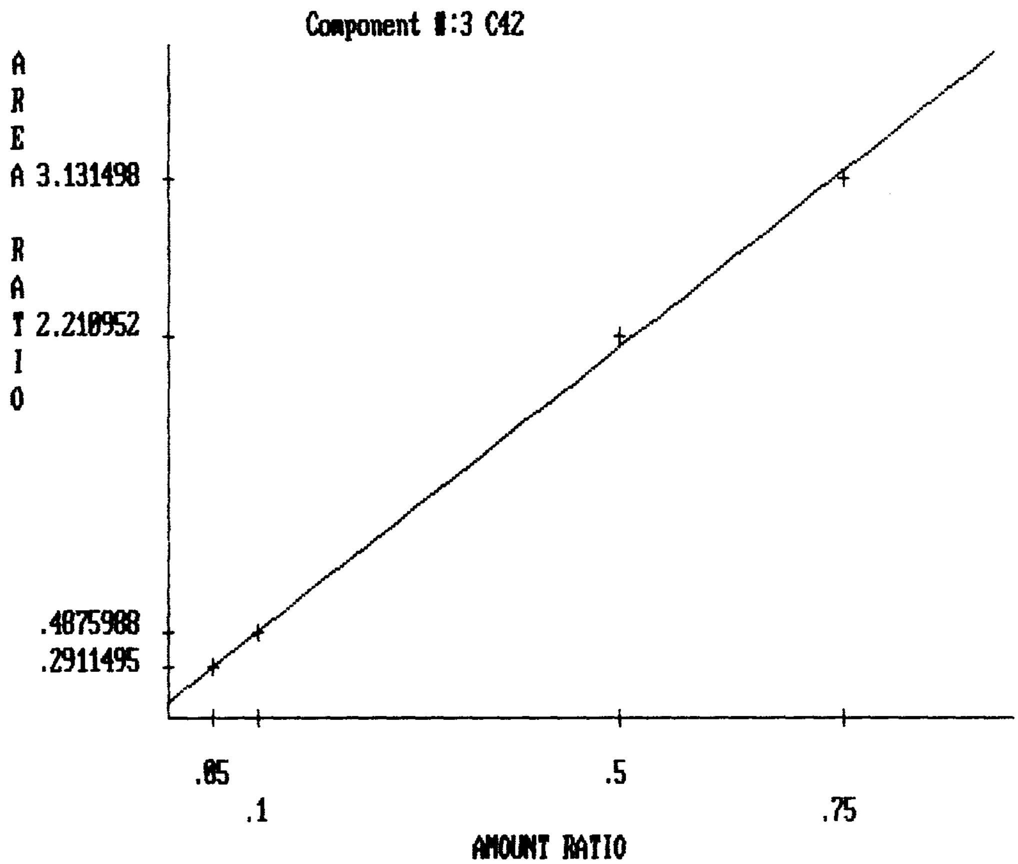
Y = SLOPE * X + INTERCEPT
DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD
Area ratio = 1.3102E+00 * Amt ratio + 5.0308E-02
Amt ratio = 7.6324E-01 * Area ratio + -3.8397E-02
Correlation Coefficient = 0.9952



Component 2 = B42
INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0500	304802	0.0500	0.1887
2	0.1000	503878	0.1000	0.2903
3	0.5000	2089604	0.5000	1.2675
4	0.7500	2798891	0.7500	1.7325

Y = SLOPE * X + INTERCEPT
DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD
Area ratio = 2.2505E+00 * Amt ratio + 8.2051E-02
Amt ratio = 4.4434E-01 * Area ratio + -3.6459E-02
Correlation Coefficient = 0.9969



Component 3 = C42

INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0500	470182	0.0500	0.2911
2	0.1000	846475	0.1000	0.4876
3	0.5000	3645081	0.5000	2.2110
4	0.7500	5059076	0.7500	3.1315

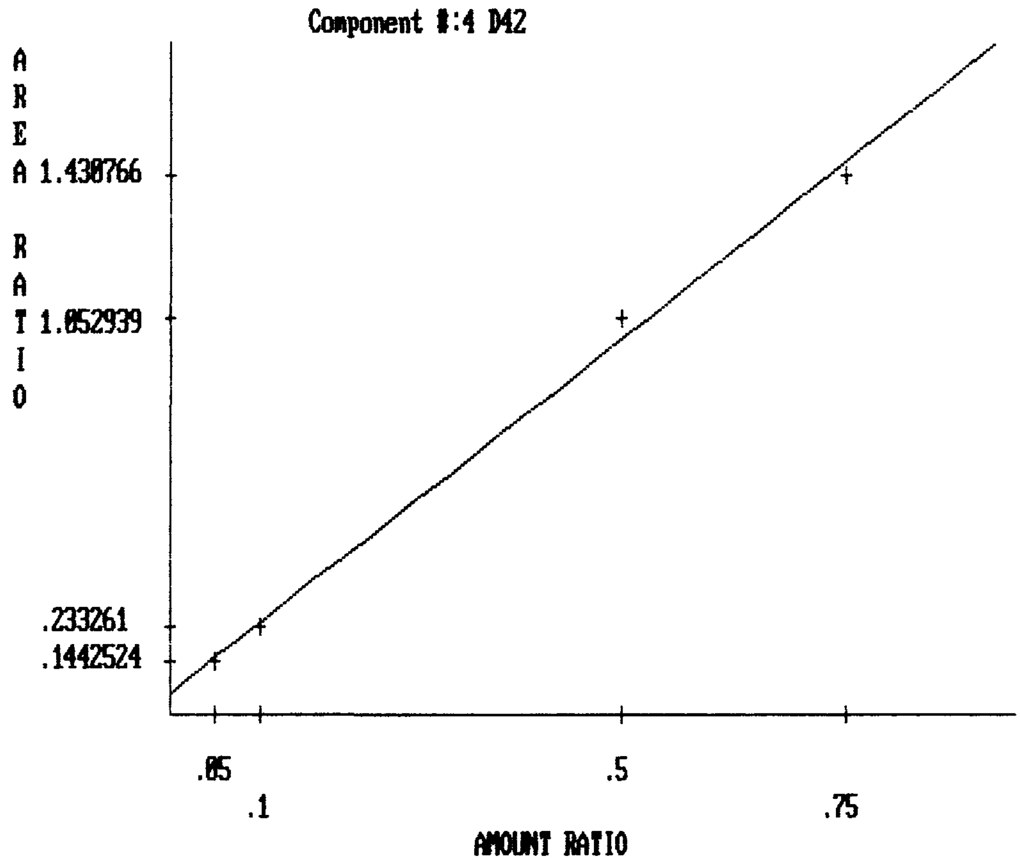
Y = SLOPE * X + INTERCEPT

DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD

Area ratio = 4.1045E+00 * Amt ratio + 9.3735E-02

Amt ratio = 2.4364E-01 * Area ratio + -2.2837E-02

Correlation Coefficient = 0.9989



Component 4 = D42

INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0500	232956	0.0500	0.1443
2	0.1000	404943	0.1000	0.2333
3	0.5000	1735926	0.5000	1.0529
4	0.7500	2311467	0.7500	1.4308

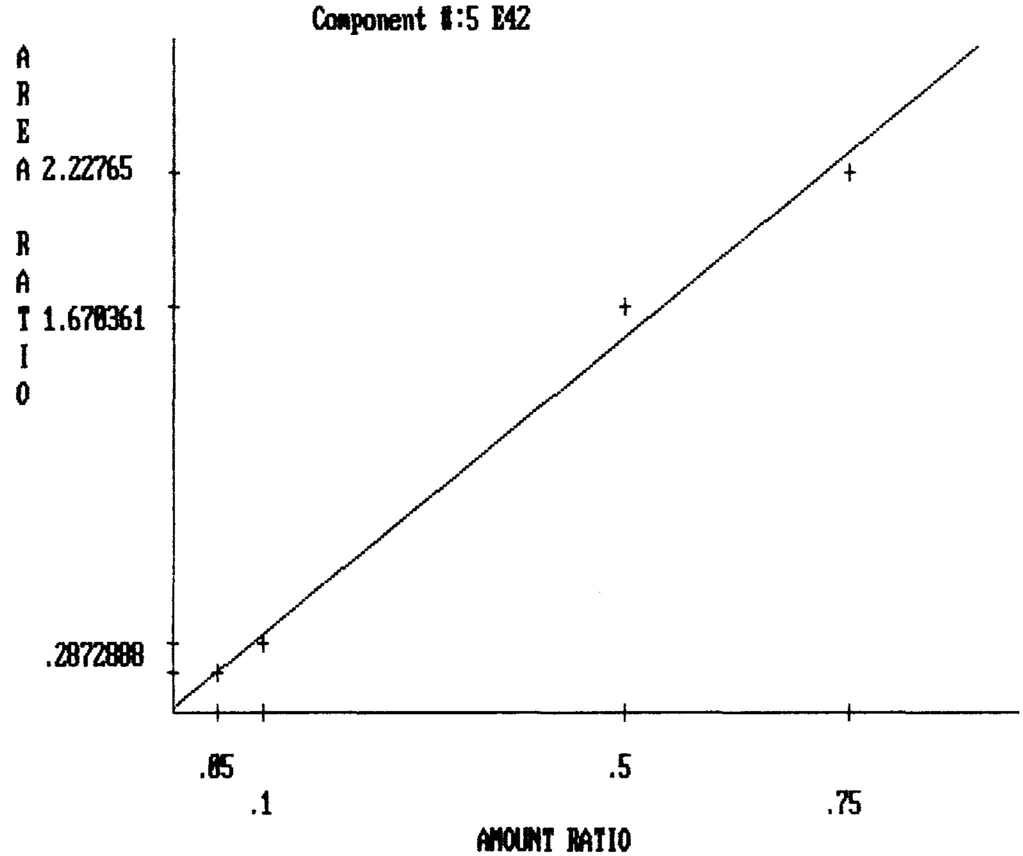
Y = SLOPE * X + INTERCEPT

DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD

Area ratio = 1.8766E+00 * Amt ratio + 5.8500E-02

Amt ratio = 5.3288E-01 * Area ratio + -3.1173E-02

Correlation Coefficient = 0.9961



Component 5 = E42

INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0500	258314	0.0500	0.1600
2	0.1000	498735	0.1000	0.2873
3	0.5000	2753837	0.5000	1.6704
4	0.7500	3598868	0.7500	2.2276

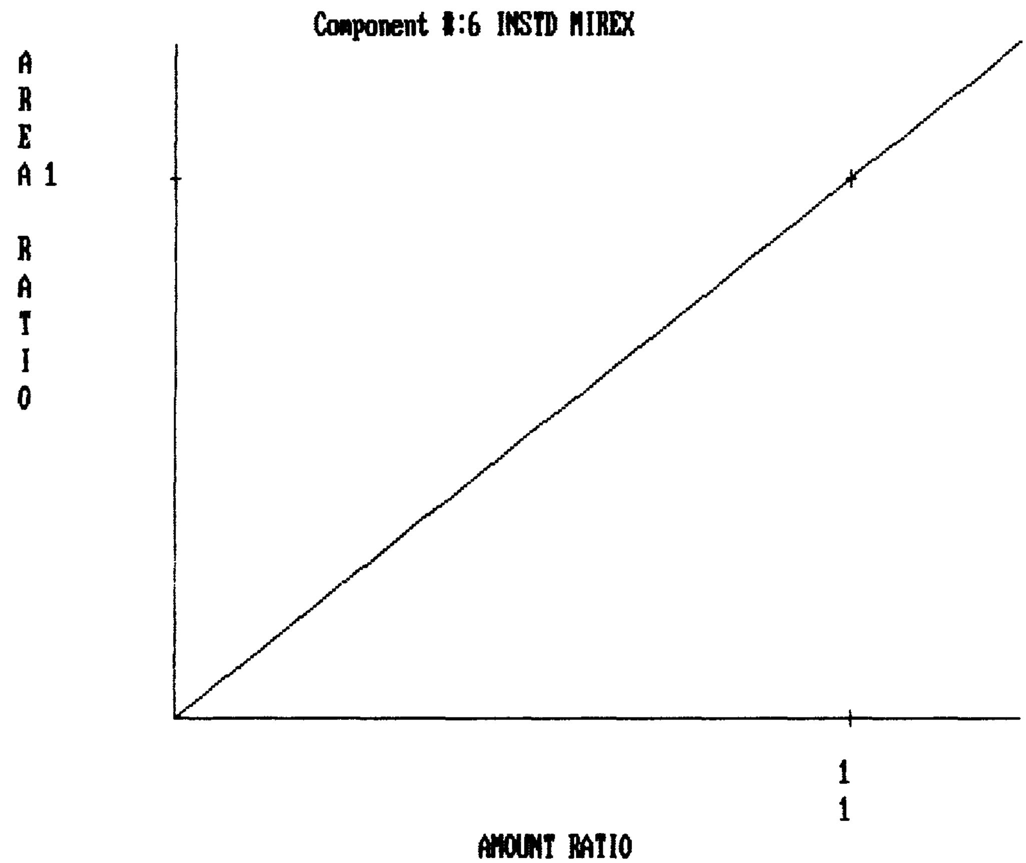
Y = SLOPE * X + INTERCEPT

DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD

Area ratio = 3.0502E+00 * Amt ratio + 1.8756E-02

Amt ratio = 3.2785E-01 * Area ratio + -6.1491E-03

Correlation Coefficient = 0.9925



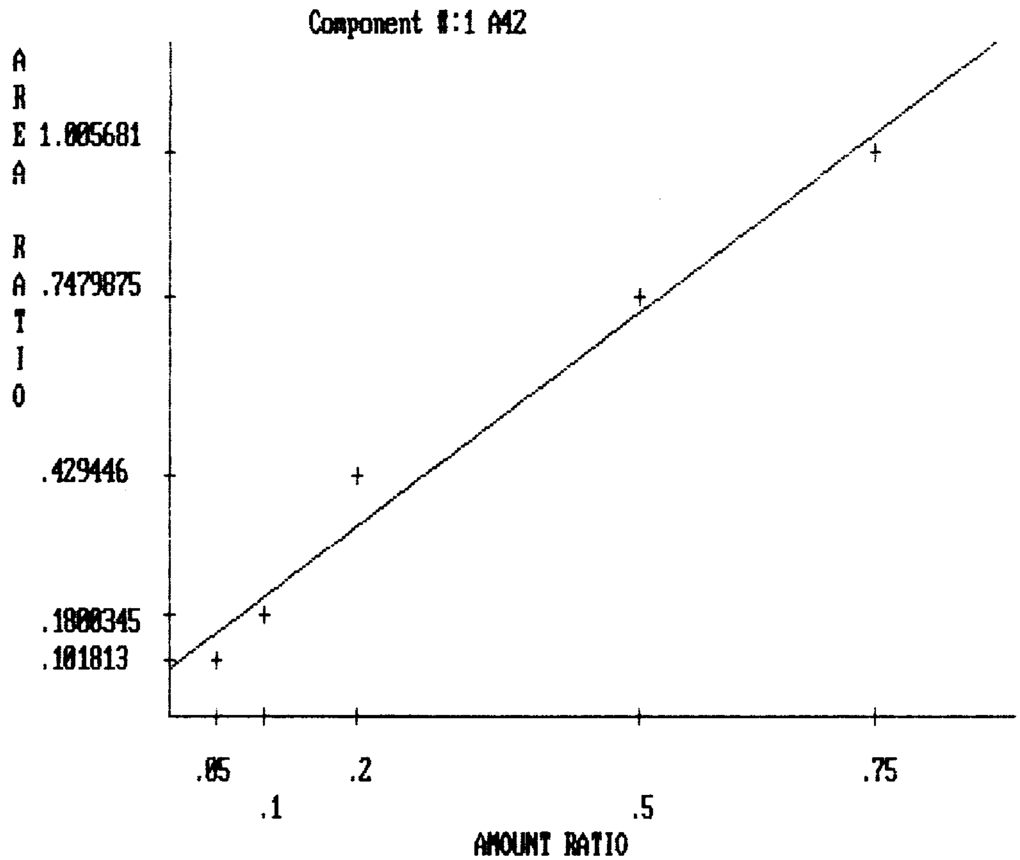
Component 6 = INSTD MIREX
INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	1.0000	1614917	1.0000	1.0000
2	1.0000	1736006	1.0000	1.0000
3	1.0000	1648648	1.0000	1.0000
4	1.0000	1615545	1.0000	1.0000

Y = SLOPE * X + INTERCEPT
DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD
Area ratio = 1.0000E+00 * Amt ratio + 0.0000E+00
Amt ratio = 1.0000E+00 * Area ratio + 0.0000E+00
Correlation Coefficient = 0.0000

(Initial curve)

Method P:MET42
Sample PCB 1242
Operator NW
Run date 06-29-1989 13:17:07 version: 35
Printed on 06-30-1989 AT 12:59:14
Straight Line fit

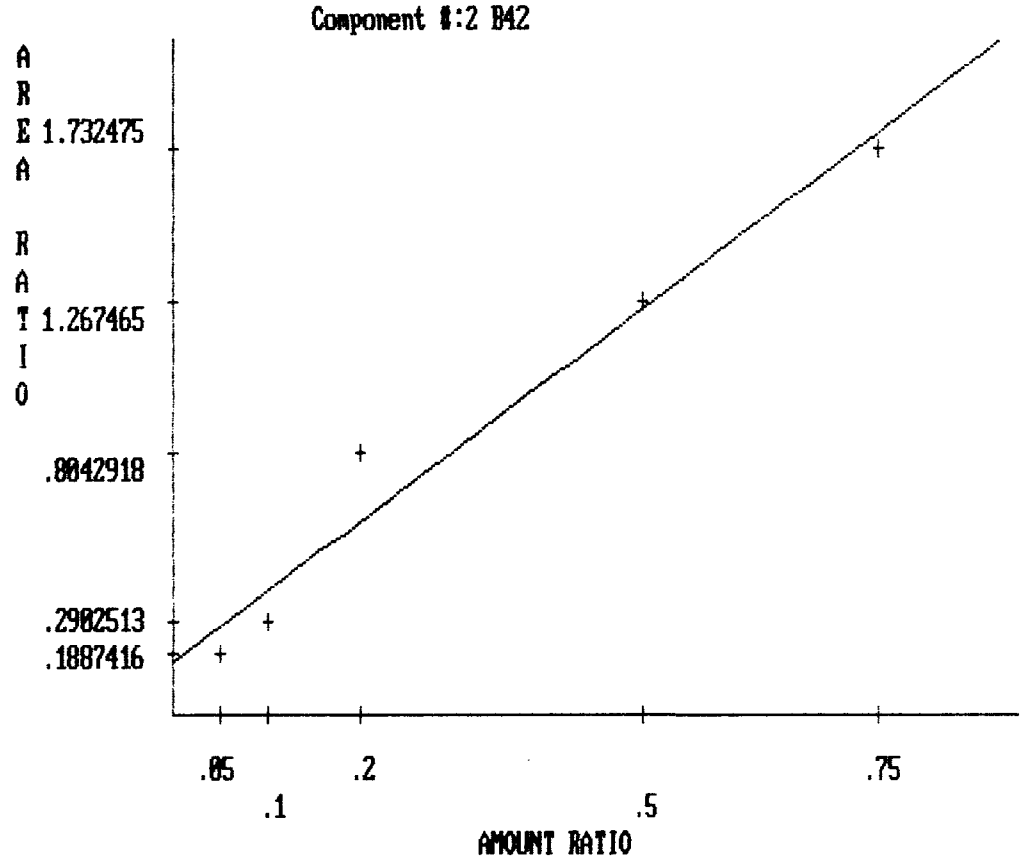


Component 1 = A42
INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0500	164420	0.0500	0.1018
2	0.1000	312541	0.1000	0.1800
*3	0.2000	673250	0.2000	0.4294
4	0.5000	1233168	0.5000	0.7480
5	0.7500	1624723	0.7500	1.0057

Y = SLOPE * X + INTERCEPT
DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD
Area ratio = 1.2704E+00 * Amt ratio + 8.6466E-02
Amt ratio = 7.8716E-01 * Area ratio + -6.8062E-02
Correlation Coefficient = 0.9774

* See note on last page regarding Level 3 STD.



Component 2 = B42
INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0500	304802	0.0500	0.1887
2	0.1000	503878	0.1000	0.2903
3	0.2000	1260902	0.2000	0.8043
4	0.5000	2089604	0.5000	1.2675
5	0.7500	2798891	0.7500	1.7325

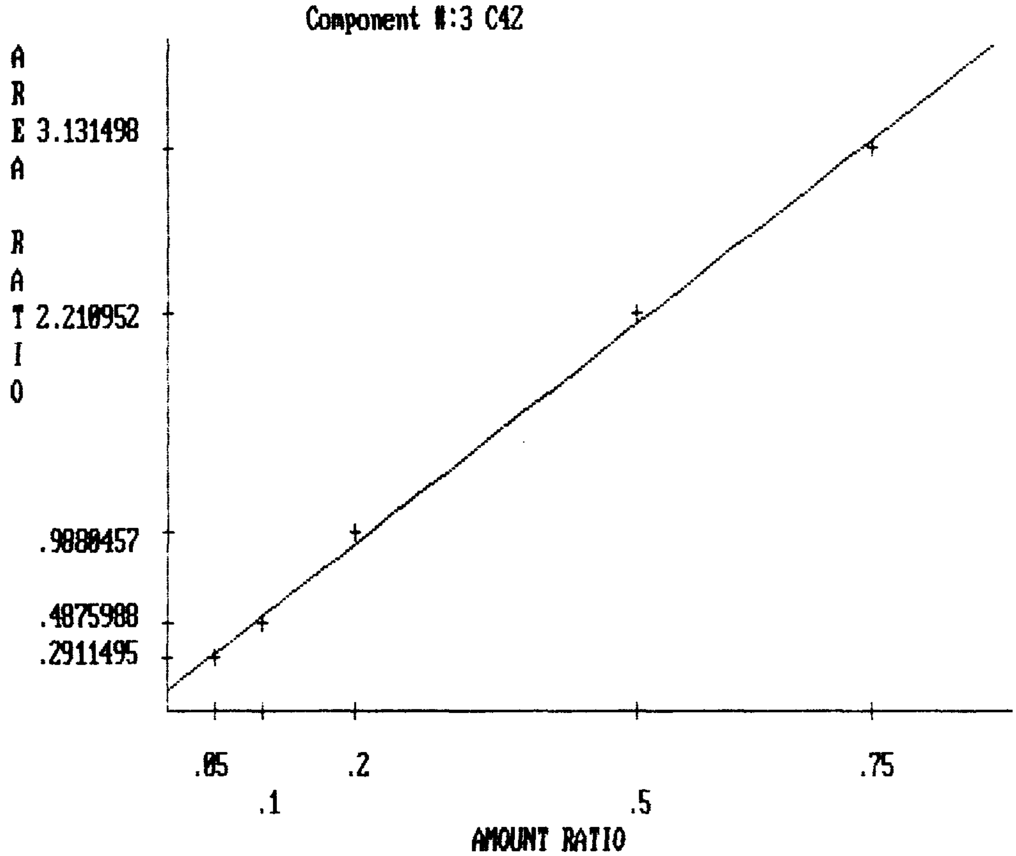
Y = SLOPE * X + INTERCEPT

DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD

Area ratio = 2.1580E+00 * Amt ratio + 1.6608E-01

Amt ratio = 4.6339E-01 * Area ratio + -7.6961E-02

Correlation Coefficient = 0.9639



Component 3 = C42

INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0500	470182	0.0500	0.2911
2	0.1000	846475	0.1000	0.4876
3	0.2000	1548976	0.2000	0.9880
4	0.5000	3645081	0.5000	2.2110
5	0.7500	5059076	0.7500	3.1315

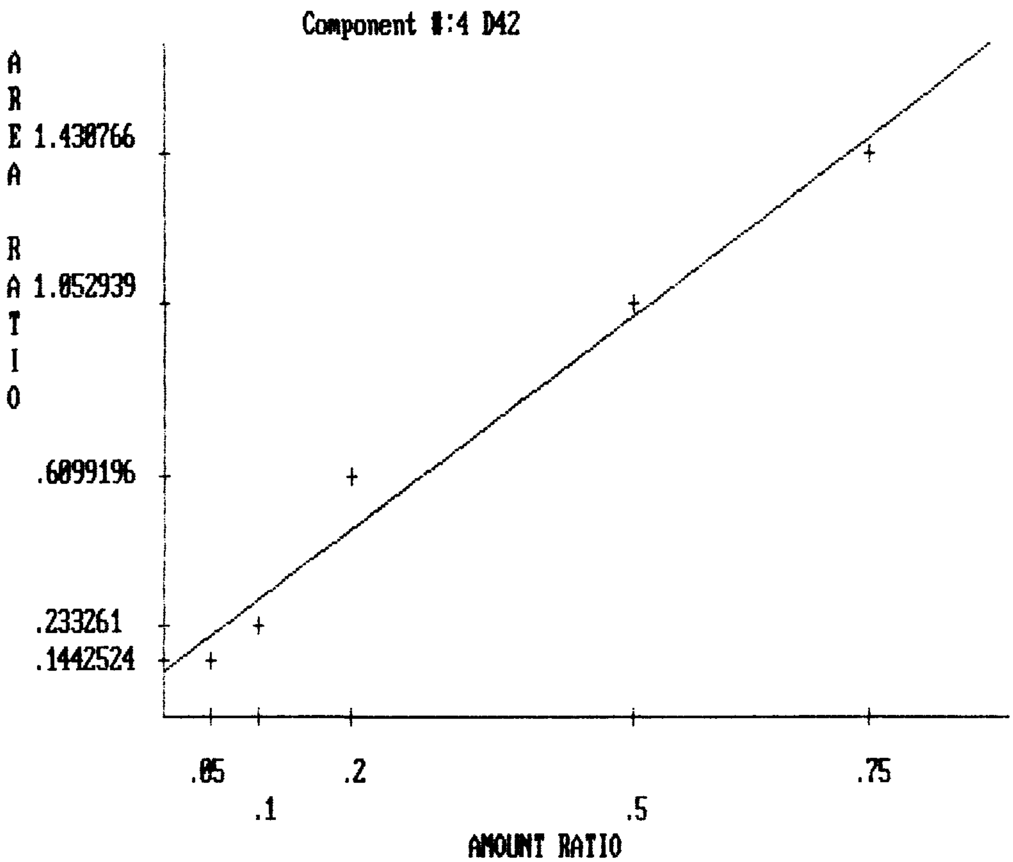
Y = SLOPE * X + INTERCEPT

DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD

Area ratio = 4.0795E+00 * Amt ratio + 1.1640E-01

Amt ratio = 2.4513E-01 * Area ratio + -2.8534E-02

Correlation Coefficient = 0.9983



Component 4 = D42

INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0500	232956	0.0500	0.1443
2	0.1000	404943	0.1000	0.2333
3	0.2000	956181	0.2000	0.6099
4	0.5000	1735926	0.5000	1.0529
5	0.7500	2311467	0.7500	1.4308

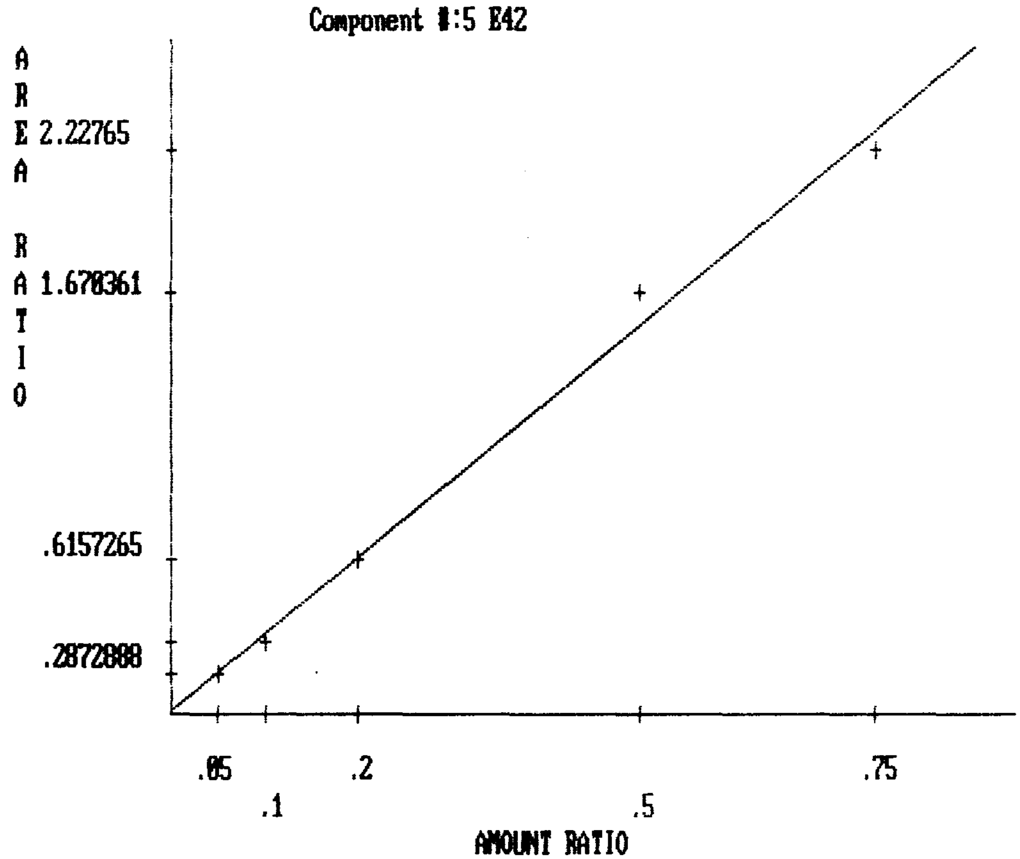
Y = SLOPE * X + INTERCEPT

DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD

Area ratio = 1.8167E+00 * Amt ratio + 1.1288E-01

Amt ratio = 5.5044E-01 * Area ratio + -6.2132E-02

Correlation Coefficient = 0.9764



Component 5 = E42

INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	0.0500	258314	0.0500	0.1600
2	0.1000	498735	0.1000	0.2873
3	0.2000	965285	0.2000	0.6157
4	0.5000	2753837	0.5000	1.6704
5	0.7500	3598868	0.7500	2.2276

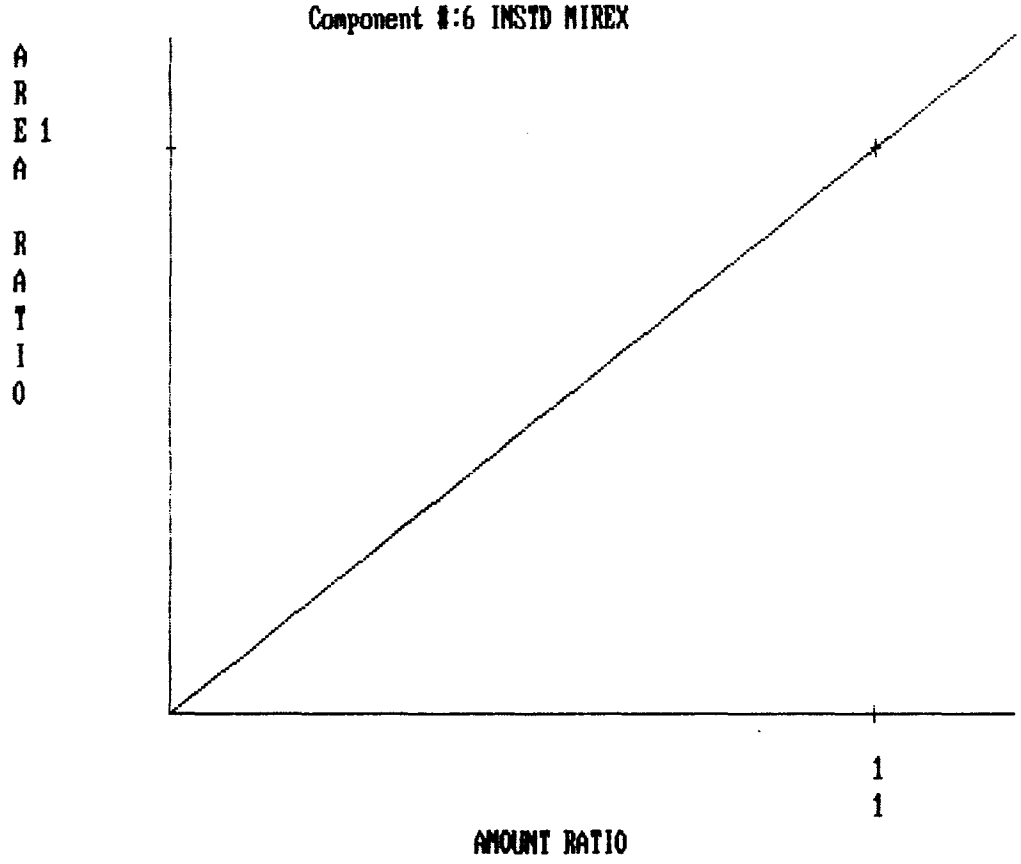
Y = SLOPE * X + INTERCEPT

DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD

Area ratio = 3.0546E+00 * Amt ratio + 1.4722E-02

Amt ratio = 3.2737E-01 * Area ratio + -4.8197E-03

Correlation Coefficient = 0.9928



Component 6 = INSTD MIREX
INTERNAL STANDARD CALIBRATION

LEVEL	AMOUNT	AREA	AMOUNT Ratio	AREA Ratio
1	1.0000	1614917	1.0000	1.0000
2	1.0000	1736006	1.0000	1.0000
3	1.0000	1567717	1.0000	1.0000
4	1.0000	1648648	1.0000	1.0000
5	1.0000	1615545	1.0000	1.0000

Y = SLOPE * X + INTERCEPT
DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD
Area ratio = 1.0000E+00 * Amt ratio + 0.0000E+00
Amt ratio = 1.0000E+00 * Area ratio + 0.0000E+00
Correlation Coefficient = 0.0000

Internal STD area is lower for 1242 level 3. this gives rise to the deviation of this ~~peak~~ standard from linearity. This point was eliminated from the working curved used through out this Data set. 1242 was not detected in any of the samples.

Confirmatory Standards

***** INTERNAL STANDARD TABLE *****

********** 07-04-1989 09:19:49 Version 4.1 **********

* Sample Name: PESTA 3 Data File: P:CONFM7 *
* Date: 06-30-1989 18:03:28 Method: P:PESTA2 07-04-1989 08:06:34 # 16 *
* Interface: 0 Cycle#: 7 Operator NW Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HEWLETT PACKARD Column Type: MIXED PHASE-PRIMARY *
* Solvent Description: ULTRA HIGH PURITY NITROGEN *
* Conditions: ISOTHERMAL AT 200 CELSIUS *
* Detector 0: ECD QUANT Detector 1: ECD CONF *
* Misc. Information: D.S. SF6232 *

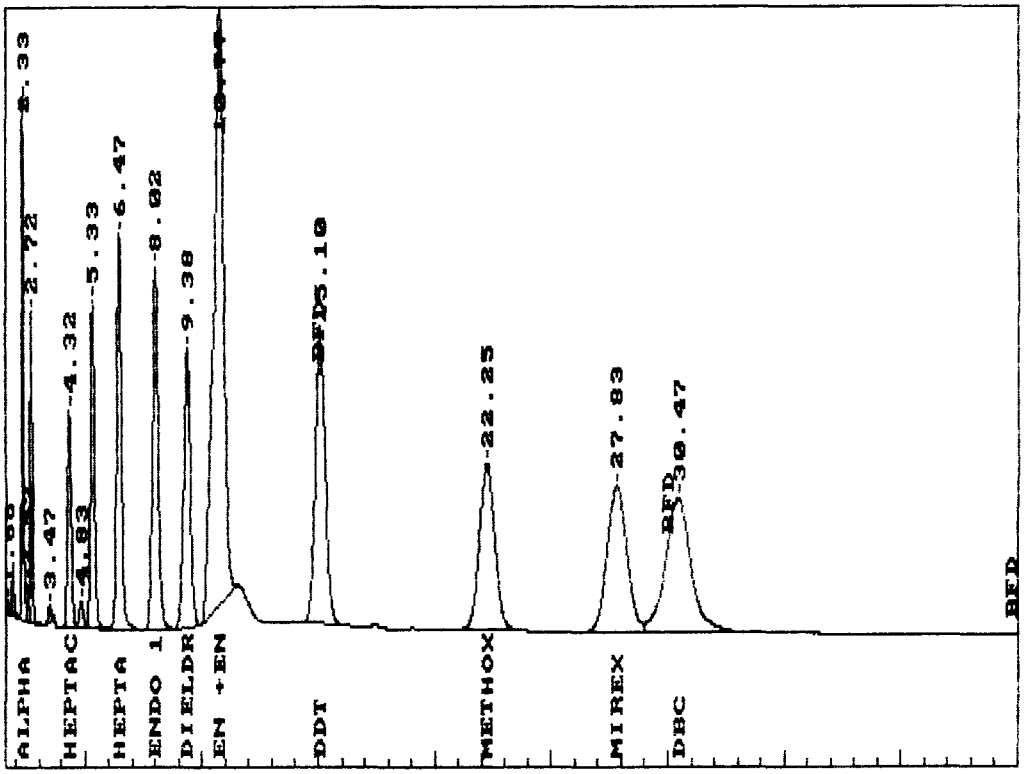
****

Starting Delay: 1.50 Ending retention time: 45.00
Area reject: 0 One sample per 1.000 sec.
Amount injected: 5.00 Dilution factor: 1.00
Internal Standard Amount: 1
Sample Weight: 1.000000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.33	ALPHA BHC	0.0062	2.5183%	385736	74606	5.2	3	3	16	0	1.6073E-08
5	2.72	LINDANE	0.0050	2.0309%	270812	44827	6.0	2	5	16	0	1.8463E-08
7	4.32	HEPTACHLOR	0.0050	2.0309%	324172	31684	10.2	2	7	16	0	1.5424E-08
9	5.33	ALDRIN	0.0100	4.0617%	547943	47364	11.6	2	9	16	0	1.8250E-08
10	6.47	HEPTA EPOX	0.0125	5.0772%	815935	56859	14.4	2	10	16	0	1.5320E-08
11	8.02	ENDO 1	0.0150	6.0926%	891003	52189	17.1	1	11	16	0	1.6835E-08
12	9.38	DIELDRIN	0.0150	6.0926%	794240	40222	19.7	1	12	16	0	1.8886E-08
13	10.77	EN +END 2	0.0800	32.4939%	2617907	86119	30.4	1	13	16	0	3.0559E-08
14	15.10	DDT	0.0300	12.1852%	1240007	41127	30.2	1	14	16	0	2.4193E-08
15	22.25	METHOX	0.0375	15.2315%	1099263	24065	45.7	1	15	16	0	3.4114E-08
16	27.83	MIREX	1.0000	0.0000%	1261154	21137	59.7	2	16	16	0	7.9292E-07
17	30.47	DBC	0.0300	12.1852%	1475231	19368	76.2	2	17	16	0	2.0336E-08

TOTAL AMOUNT = 0.2462

Plot of data file: P:CONFM7.PTS
Date: 07-04-1989 Time: 09:20:24
Sample Name: PESTA 3
Start Time= 1.52Stop Time = 45.00Min. Scale= 28306Max. Scale= 119023



continuing

****** INTERNAL STANDARD TABLE ******

********** 07-04-1989 12:25:51 Version 4.1 **********

* Sample Name: PESTA 3 Data File: P:CONFM18 *
* Date: 07-01-1989 02:35:13 Method: P:PESTA2 07-04-1989 08:06:34 # 16 *
* Interface: 0 Cycle#: 18 Operator NW Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

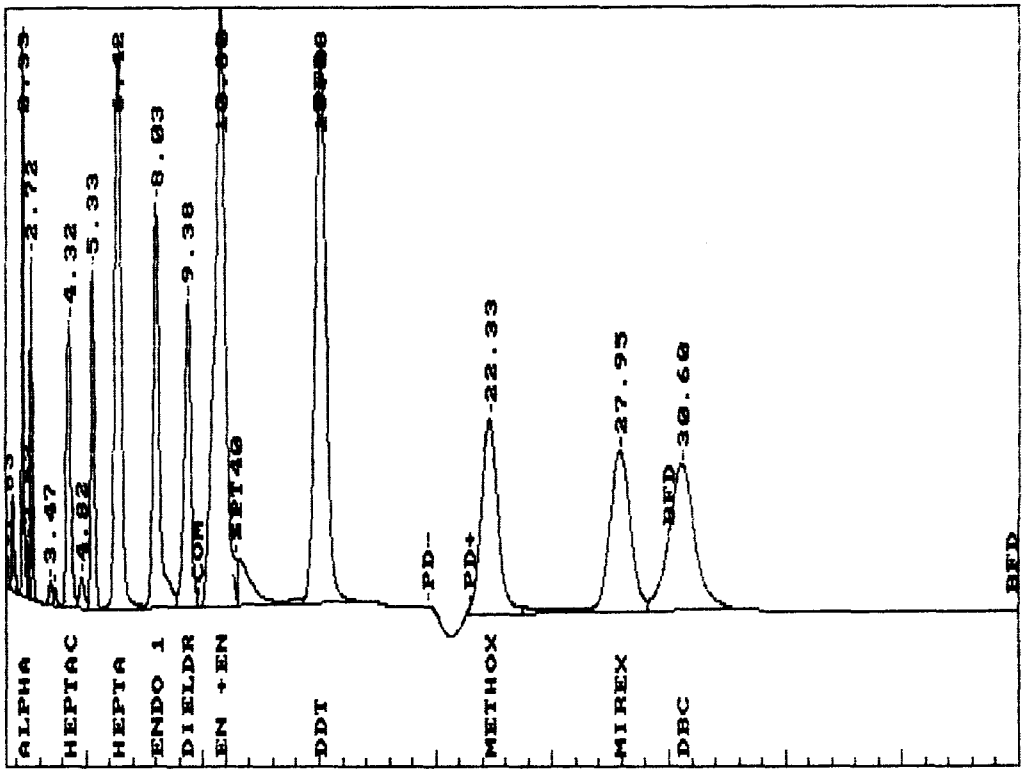
* Instrument Type: HEWLETT PACKARD Column Type: MIXED PHASE-PRIMARY *
* Solvent Description: ULTRA HIGH PURITY NITROGEN *
* Conditions: ISOTHERMAL AT 200 CELSIUS *
* Detector 0: ECD QUANT Detector 1: ECD CONF *
* Misc. Information: D.S. SF6232 *

Starting Delay: 1.50 Ending retention time: 45.00
Area reject: 0 One sample per 1.000 sec.
Amount injected: 5.00 Dilution factor: 1.00
Internal Standard Amount: 1
Sample Weight: 1.000000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.33	ALPHA BHC	0.0060	2.1087%	387355	74502	5.2	3	3	18	0	1.5460E-08
5	2.72	LINDANE	0.0050	1.7675%	282656	45918	6.2	2	5	18	0	1.7759E-08
8	4.32	HEPTACHLOR	0.0072	2.5464%	487441	38289	12.7	2	8	18	0	1.4836E-08
10	5.33	ALDRIN	0.0090	3.1545%	510347	45392	11.2	2	10	18	0	1.7554E-08
11	6.42	HEPTA EPOX	0.0228	8.0126%	1544252	73945	20.9	2	11	18	0	1.4735E-08
12	8.03	ENDO 1	0.0170	5.9990%	1052120	54117	19.4	2	12	18	0	1.6193E-08
13	9.38	DIELDRIN	0.0150	5.2733%	824400	41065	20.1	2	13	18	0	1.8166E-08
14	10.80	EN +END 2	0.0750	26.4022%	2550949	80326	31.8	3	14	18	0	2.9393E-08
16	15.08	DDT	0.0555	19.5383%	2384439	73103	32.6	2	16	18	0	2.3271E-08
17	22.33	METHOX	0.0416	14.6387%	1266978	26104	48.5	2	17	18	0	3.2812E-08
18	27.95	MIREX	1.0000	0.0000%	1311172	21529	60.9	2	18	18	0	7.6268E-07
19	30.60	DBC	0.0300	10.5588%	1533029	19685	77.9	2	19	18	0	1.9560E-08

TOTAL AMOUNT = 0.2840

Plot of data file: P:CONFM18.PTS
Date: 07-04-1989 Time: 12:26:31
Sample Name: PESTA 3
Start Time= 1.52Stop Time = 45.00Min. Scale= 26276Max. Scale= 110552

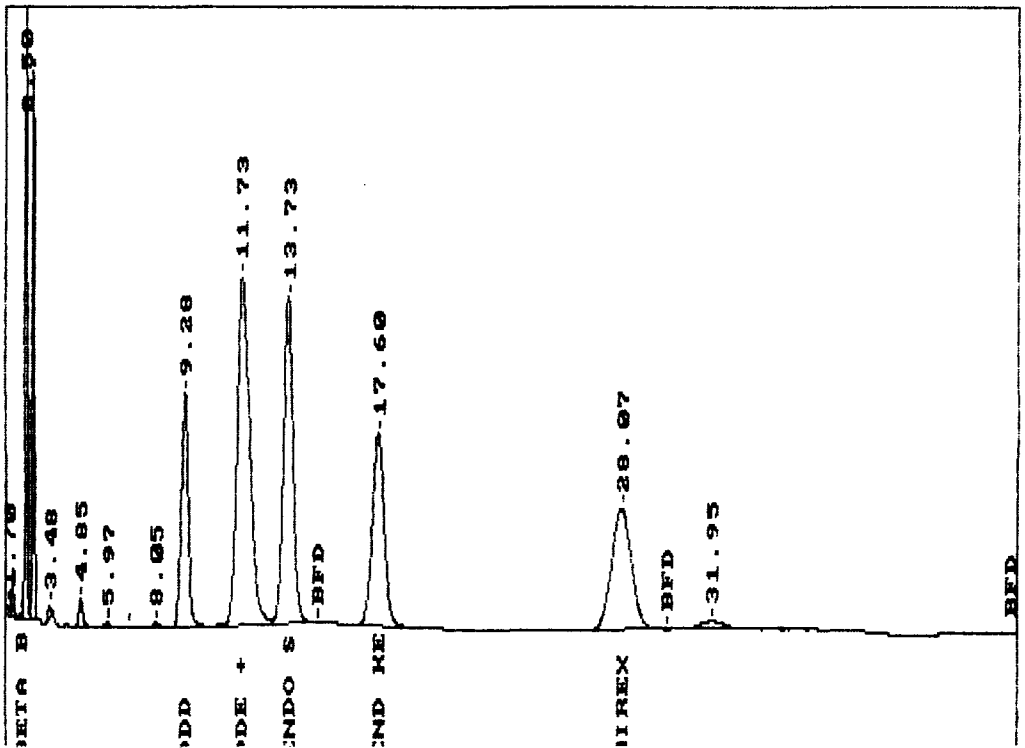


```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-04-1989 09:17:43 Version 4.1 **********************
* Sample Name: PESTB 3                          Data File: P:CONFM6       *
* Date: 06-30-1989 17:16:55 Method: P:PESTB2 07-04-1989 07:58:22  #  17   *
* Interface: 0   Cycle#:  6    Operator NW  Channel#: 0    Vial#: N.A.    *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000           *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*              Solvent Description: ULTRA HIGH PURITY NITROGEN            *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                   *
*             Detector 0: ECD QUANT          Detector 1: ECD CONF         *
* Misc. Information: D.S. SF6232                                          *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.25	BETA BHC	0.0125	8.7719%	6403	1080	5.9	2	3	15	0	1.9521E-06
4	2.50	DELTA BHC	0.0100	7.0175%	621886	103196	6.0	2	4	15	0	1.6080E-08
11	9.28	DDD	0.0250	17.5439%	790768	39529	20.0	1	11	15	0	3.1615E-08
12	11.73	DDE + EA	0.0150	10.5263%	2262850	58753	38.5	2	12	15	0	6.6288E-09
13	13.73	ENDO SO4	0.0400	28.0702%	1555080	54785	28.4	2	13	15	0	2.5722E-08
14	17.60	END KETONE	0.0400	28.0702%	1165600	32450	35.9	1	14	15	0	3.4317E-08
15	28.07	MIREX	1.0000	0.0000%	1222480	20496	59.6	1	15	15	0	8.1801E-07

TOTAL AMOUNT = 0.1425

```
Plot of data file:  P:CONFM6.PTS
Date:  07-04-1989    Time:  09:18:10
Sample Name:  PESTB 3
Start Time=   1.52Stop Time =  45.00Min. Scale=  28293Max. Scale= 134168
```



continuing

***** INTERNAL STANDARD TABLE *****

********** 07-04-1989 12:20:29 Version 4.1 **********

* Sample Name: PESTB 3 Data File: P:CONFM17 *
* Date: 07-01-1989 01:48:44 Method: P:PESTB2 07-04-1989 07:58:22 # 17 *
* Interface: 0 Cycle#: 17 Operator NW Channel#: 0 Vial#: N.A. *
* Starting Peak Width: 10 Threshold: 1 Area Threshold: 1000 *

****

* Instrument Type: HEWLETT PACKARD Column Type: MIXED PHASE-PRIMARY *
* Solvent Description: ULTRA HIGH PURITY NITROGEN *
* Conditions: ISOTHERMAL AT 200 CELSIUS *
* Detector 0: ECD QUANT Detector 1: ECD CONF *
* Misc. Information: D.S. SF6232 *

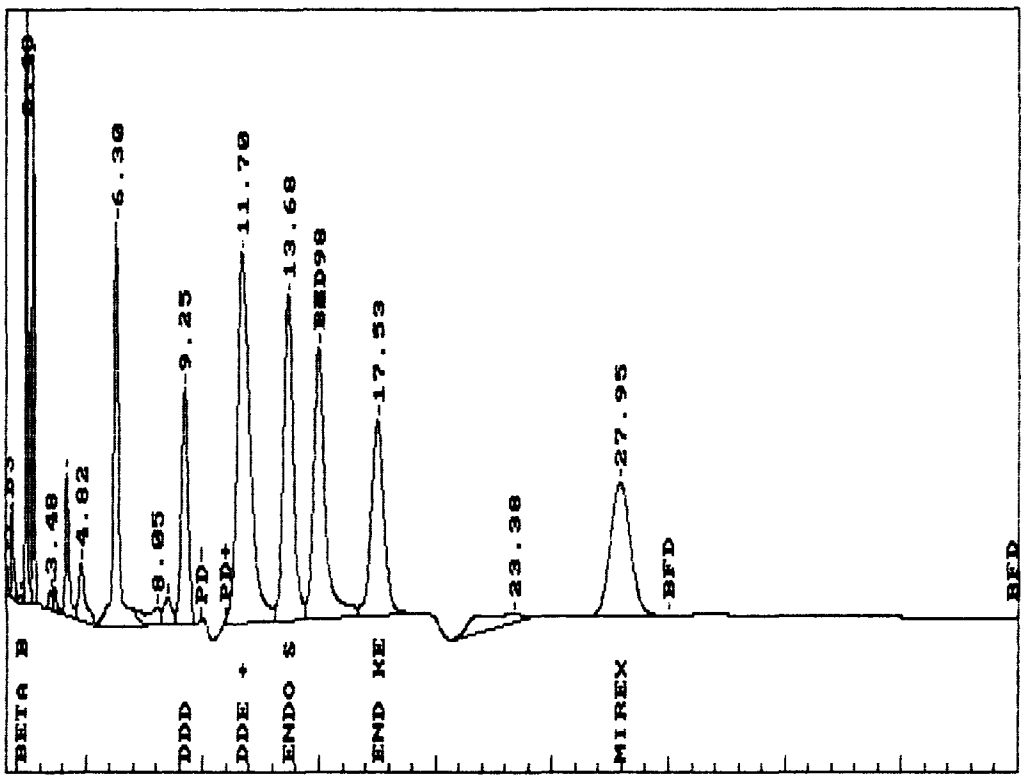
****

Starting Delay: 1.50 Ending retention time: 45.00
Area reject: 0 One sample per 1.000 sec.
Amount injected: 5.00 Dilution factor: 1.00
Internal Standard Amount: 1
Sample Weight: 1.000000

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in UG/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
3	2.23	BETA BHC	0.0210	14.4102%	12098	1472	8.2	2	3	19	0	1.7348E-06
4	2.48	DELTA BHC	0.0091	6.2439%	636386	103229	6.2	2	4	19	0	1.4290E-08
13	9.25	DDD	0.0229	15.7573%	816855	41188	19.8	2	13	19	0	2.8095E-08
14	11.70	DDE + EA	0.0150	10.3054%	2547897	64213	39.7	2	14	19	0	5.8908E-09
15	13.68	ENDO SO4	0.0385	26.4657%	1686277	56385	29.9	2	15	19	0	2.2858E-08
17	17.53	END KETONE	0.0391	26.8175%	1280739	33874	37.8	2	17	19	0	3.0496E-08
19	27.95	MIREX	1.0000	0.0000%	1375632	23126	59.5	1	19	19	0	7.2694E-07

TOTAL AMOUNT = 0.1456

Plot of data file: P:CONFM17.PTS
Date: 07-04-1989 Time: 12:21:03
Sample Name: PESTB 3
Start Time= 1.52Stop Time = 45.00Min. Scale= 25653Max. Scale= 135379

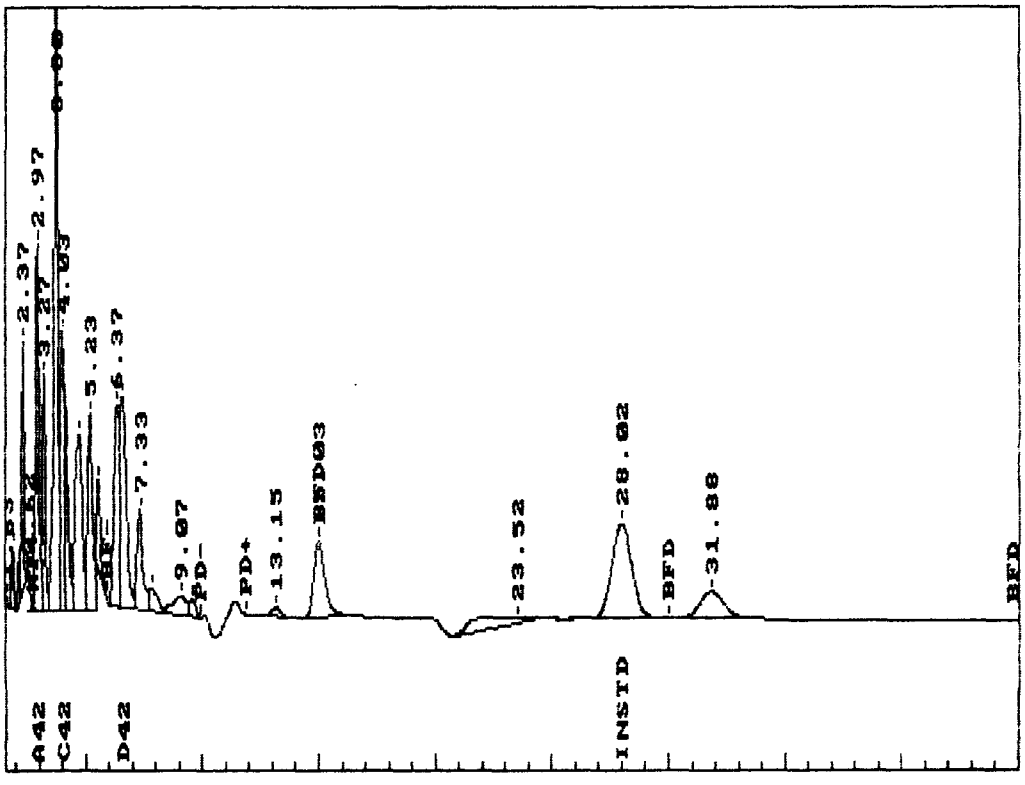


```
*****   INTERNAL STANDARD TABLE   *****
******************** 07-04-1989 12:14:46 Version 4.1 **********************
* Sample Name: 1242 L4                          Data File: P:CONFM15      *
* Date: 07-01-1989 00:15:40 Method: P:42CONF 07-04-1989 08:11:37  #  21   *
* Interface: 0   Cycle#:  15   Operator NW  Channel#: 0    Vial#: N.A.    *
* Starting Peak Width:  10   Threshold: 1  Area Threshold: 1000           *
*************************************************************************
* Instrument Type: HEWLETT PACKARD      Column Type: MIXED PHASE-PRIMARY  *
*            Solvent Description: ULTRA HIGH PURITY NITROGEN             *
* Conditions: ISOTHERMAL AT 200 CELSIUS                                  *
*            Detector 0: ECD QUANT          Detector 1: ECD CONF         *
* Misc. Information: D.S. SF6232                                         *
*************************************************************************
Starting Delay:    1.50                    Ending retention time:    45.00
Area reject:        0                      One sample per   1.000 sec.
Amount injected:        5.00               Dilution factor:        1.00
Internal Standard Amount:  1
Sample Weight:          1.000000
```

PEAK NUM	RET TIME	PEAK NAME	CONCENTRATION in ~~UG/KG~~ ug/L	NORMALIZED CONC	AREA	HEIGHT	AREA/ HEIGHT	BL	REF PEAK	INT.STD PEAK	% DELTA RET TIME	CONC/AREA
6	2.97	A42	0.2000	25.0000%	718876	81010	8.9	2	6	22	0	2.7821E-07
8	3.80	B42	0.2000	25.0000%	1547531	134199	11.5	2	8	22	0	1.2924E-07
9	4.03	C42	0.2000	25.0000%	611586	61376	10.0	2	9	22	0	3.2702E-07
14	6.60	D42	0.2000	25.0000%	945057	46504	20.3	2	14	22	0	2.1163E-07
22	28.02	INSTD MIREX	1.0000	0.0000%	1259339	21073	59.8	1	22	22	0	7.9407E-07

TOTAL AMOUNT = 0.8000

Plot of data file: P:CONFM15.PTS
Date: 07-04-1989 Time: 12:15:18
Sample Name: 1242 L4
Start Time= 1.52Stop Time = 45.00Min. Scale= 25911Max. Scale= 166314



UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: JUL 20 1989

SUBJECT: **Review of Region 5 data for** United Recovery

FROM: **Curtis Ross, Director** JVM for CR
Region 5 Central Regional Laboratory

To: **Data User:**

Attached are the results for:

CRL Data Set Numbers: SF6232
Sample Numbers: 89 FM22501 - 505/DCL/R15
Parameter(s): CN
Laboratory: CRL/ESAT

Results Status:

- [x] **DATA ACCEPTABLE FOR USE***
- ( ) **DATA QUALIFIED AS TO USE**
- ( ) **DATA UNACCEPTABLE FOR USE**

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

S Griffin
JUL 20 1989

U.S. EPA CENTRAL
REGIONAL LAB

If there are any questions regarding the data, refer them to David Payne, the Quality Control Coordinator, at 353-3805.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

AUG 01 1989

RECEIVED BY/DATE: [signature] 7/20/89

Comments:

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: JUL 13 1989

SUBJECT: Review of Region 5 data for United Recovery

FROM: Curtis Ross, Director
Region 5 Central Regional Laboratory

To: Data User:

Attached are the results for:

CRL Data Set Numbers: SE 6232
Sample Numbers: 89FM22 S01 – S05, DC1; 89FM21 R15
Parameter(s): PCB / Pesticides
Laboratory: URL

Results Status:

(X) DATA ACCEPTABLE FOR USE*
( ) DATA QUALIFIED AS TO USE
( ) DATA UNACCEPTABLE FOR USE

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

AUG 01 1989
US EPA CENTRAL REGIONAL LAB
535 S. CLARK STREET
CHICAGO, ILLINOIS 60605

If there are any questions regarding the data, refer them to Steve Parker, the Quality Control Coordinator, at 353-3805.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

S. Griffin
JUL 13 1989

RECEIVED BY/DATE: 7/14/89

U.S. EPA CENTRAL
REGIONAL LAB

Comments:

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: JUL 20 1989

SUBJECT: Review of Region 5 data for United Refining

FROM: Curtis Ross, Director
Region 5 Central Regional Laboratory

To: Data User:

Attached are the results for:

CRL Data Set Numbers: SF6232
Sample Numbers: SG FM22501 - 505/D01/R1B
Parameter(s): CN
Laboratory: CRL/ESAT

Results Status:

(X) DATA ACCEPTABLE FOR USE*
( ) DATA QUALIFIED AS TO USE
( ) DATA UNACCEPTABLE FOR USE

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

S Griffin
JUL 20 1989

U.S. EPA CENTRAL
REGIONAL LAB

If there are any questions regarding the data, refer them to David Payne, the Quality Control Coordinator, at 353-3805.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

RECEIVED BY/DATE:

Comments:

DATA SET	SITE	DU/ACT.
SF6232	United recovery	TPA

SAMPLES	PARAMETER(S)
89FM 22501-505/P01/RUS	CN

SAMPLED	RECEIVED	DUE	LAB
6/20/89	6/21/89	7/12/89	CRL/ESAT

SHIPPED	DATA RECEIVED	CONTRACT
—	N/A	—

Comments By Reviewer:

(X) REVIEWED ( ) UNREVIEWED TEAM LEADER/DATE 88 7/18/89

( ) REVIEWED (X) UNREVIEWED SECTION CHIEF/DATE JVM for CMT 14 July 89

( ) REVIEWED ( ) UNREVIEWED QC COORDINATOR/DATE

REVIEWED BY CONTRACT COORDINATOR/DATE

RECEIVED	TRANSMITTED	DATA MANAGEMENT COORDINATOR
7/20/89	7/20/89	Sylvia Duffy

ESAT CONTRACT

TID NO: 06-06
TASK NO: 3093

DATASET CUSTODY TRANSFER FORM

Analytical testing was completed on 6-27 & 29, 1989 for:

DATASET NO: SF6232 SITE NAME: United Recovery

PARAMETER : CN

MATRIX : Water SF DU/ACT NO: TFA302 Y____ /C____

SAMPLE NUMBERS: 89FM22S01-S05; 89FM22D01; 89FM11R15

NUMBER OF SAMPLES: 7

ESAT APPROVALS:

(ANALYST 6/29/89 DATE) (TEAM LEADER 7/10/89 DATE)

(QC COORDINATOR 7/11/89 DATE) (ESAT TEAM MANAGER 7/12/89 DATE)

COMMENTS: 89FM22S04 WAS run by METHOD 335.2MS *
the rest of the samples were run by METHOD 335.3MS

The subject dataset was transferred to the custody of the U.S. EPA Region V Central Regional Laboratory in its entirety on the date indicated below.

(DELIVERED BY 7/12/89 DATE) (RECEIVED BY 7/12/89 DATE)

EPA APPROVALS:

(EPA TASK MONITOR 7/18/89 DATE)

[X] Reviewed
[ ] Unreviewed
[X] Accepted
[ ] Rejected
[ ] Returned/_____ (Date)

COMMENTS:

(SECTION CHIEF 19 July 89 DATE) [ ] Reviewed [X] Unreviewed

(ESAT DPO DATE) (DATA COORD'R REC'D 7-20-89 TRANSMTD 7-20-89)

DOC.NO.: ESAT-05-0003-FORM
REVISION NO.: 05 (04/05/89) FILE LOCATION NUMBER: 5.6.1

* Particulate was in 89FM22S04

OK-PP 7/18/89

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: MINERALS - NUTRIENTS

TFA302

DIVISION/BRANCH SUPERFUND FIT SAMPLE DATE 6/20/89 LAB ARRIVAL DATE 6/21/89 DUE DATE 7/31/89

DU NUMBER TFA DATA SET NUMBER 6232 STUDY United Recovery PRIORITY — CONTRACTOR —

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER PHENOLICS UG PHENOL/L MIN 74818	WATER CYANIDE UG CN/L MIN 74919	WATER GROSS ALPHA P CI/L MIN 76020	WATER Cr^{+6} UG CR^{+6}/L MIN 74816	WATER MERCURY UG HG/L MIN 74717
89FM22S01	RW1 5188236		✓ 5u			
S02	RW2 5188252		✓ 5u			
S03	RW3 5188270		✓ 5u			
S04	RW4 5188278		✓ 8u +			
S05	RW5 5188[illegible]		✓ 5u			
6/21/89 WA ~~S06~~	~~RW6~~		✓			
~~S07~~	~~RW7~~		✓			
✓ D01	Dup 5188244		✓ 5u			
89FM11R15	Blk 5188244		✓ 5u			
			M. Fletcher 6/28/89			
			Method # 335.3ns			
			(Auto UV Screen)			
			+ Method # 335.2ns			
			Manual Distillation			

SF 923

M. Fletcher
4/25/89

* REGRESSION ANALYSIS * CSC VERSION 2.00 *

NAME OF ANALYST ---: M. FLETCHER
PARAMETER NAME ----: CN
DATE OF ANALYSIS --: 06-28-1989

DATA SET NUMBER ---: SF6231, SF6232
DU NUMBER ---------: Y905

DEGREE OF FIT : 1

EQUATION : CONCENTRATION = -3.87543E-01
+5.96998E-01 * SIGNAL

COEFFICIENT OF DETERMINATION : .9998794

T-A-B-L-E O-F S-T-A-N-D-A-R-D-S

STANDARD	SIGNAL	CONCENTRATION	CALCULATED
1	+0.200	+0.000	-0.269
2	+9.600	+5.000	+5.343
3	+17.400	+10.000	+10.000
4	+42.400	+25.000	+24.925
5	+84.400	+50.000	+49.999

T-A-B-L-E O-F S-A-M-P-L-E-S

SAMPLE I.D.	SIGNAL	CONCENTRATION	
BLK	+0.500	-0.090	LIMIT = 0 ± 5ug/l
BLK	+0.400	-0.149	LIMIT = 0 ± 5ug/l
BLK	+1.000	+0.209	LIMIT = 0 ± 5 ug/l
BLK	+0.500	-0.090	LIMIT = 0 ± 5 ug/l
LOW AQC 5	+8.900	+4.925	positive result req
HIGH AQC 20	+37.300	+21.880	LIMIT = 20 ± 5 ug/l
BLK	+0.500	-0.090	LIMIT = 0 ± 5 ug/l
89FS22S11 SF6231	+0.600	-0.030	5u
89FS22S12	+0.600	-0.030	5u
89FS22D12	+0.500	-0.090	5u
89FS11R17	+0.500	-0.090	5u
89FM22S01 SF6232	+0.000	-0.388	5u
89FM22S02	+0.500	-0.090	5u
89FM22S03	+0.200	-0.269	5u
89FM22S05	+0.500	-0.090	5u
89FM22D01	+0.500	-0.090	5u
89FM11R15	+0.600	-0.030	5u
89FM22S03 LABDU	+0.500	-0.090	5u
89FM22S03 LABSP	+41.600	+24.447	LIMIT = 20 ug/l ± 5ug/l ; RPC = 24
BLK	+1.500	+0.507	LIMIT = 0 ± 5ug/l
BLK	+1.000	+0.209	LIMIT = 0 ± 5 ug/l
LOW AQC 5	+10.100	+5.642	LIMIT = 0 ± 5 ug/l
HIGH AQC 20	+35.800	+20.984	LIMIT = 20 ± 5ug/l
BLK	+2.000	+0.806	LIMIT = 0 ± 5ug/l

SF 6232

M. Fletcher 6/30/89

M. Fletcher 7/6/89

* REGRESSION ANALYSIS * CSC VERSION 2.00 *

NAME OF ANALYST ---: M. FLETCHER DATA SET NUMBER ---: SF6232
PARAMETER NAME ----: CN Method 335.2 ns DU NUMBER ----------: Y905
DATE OF ANALYSIS --: 06-29-1989

DEGREE OF FIT : 1

EQUATION : CONCENTRATION = -2.54759E+00
+2.27412E+00 * SIGNAL

COEFFICIENT OF DETERMINATION : .997203

T-A-B-L-E O-F S-T-A-N-D-A-R-D-S

STANDARD	SIGNAL	CONCENTRATION	CALCULATED
1	+0.100	+0.000	-2.321
2	+11.400	+25.000	+23.377
3	+23.500	+50.000	+50.894
4	+48.100	+100.000	+106.837
5	+87.400	+200.000	+196.210

T-A-B-L-E O-F S-A-M-P-L-E-S

SAMPLE I.D.	SIGNAL	CONCENTRATION	
BLK UND (wash)	+0.200	-2.093	LIMIT = 0 ± 8 ug/l
BLK UND (wash)	+0.100	-2.321	LIMIT = 0 ± 8 ug/l
BLK UND	+0.400	-1.638	LIMIT = 0 ± 8 ug/l
BLK UND	+0.300	-1.866	LIMIT = 0 ± 8 ug/l
BLK DIS	+0.200	-2.093	LIMIT = 0 ± 8 ug/l
AQC UND 100=TV	+48.300	+107.292	LIMIT = 85-115 ug/l
AQC DIS 100=TV	+45.600	+101.152	LIMIT = 85-115 ug/l
BLK UND	+0.400	-1.638	LIMIT = 0 ± 8 ug/l
89FM22S04 SF6232	+0.600	-1.184	8u > Duplicate Difference = .45
89FM22S04 LAB D	+0.400	-1.638	8u > LIMIT = < 15 ug/l for difference
89FM22S04 LAB S	+45.000	+99.787	REC = 100 ; LIMIT = 100 ± 20 ug/l
BLK UND	+0.300	-1.866	LIMIT = 0 ± 8 ug/l
BLK DIS	+0.200	-2.093	LIMIT = 0 ± 8 ug/l
AQC UND 100=TV	+48.300	+107.292	LIMIT = 85-115 ug/l
AQC DIS 100=TV	+45.500	+100.925	LIMIT = 85-115 ug/l
BLK UND	+0.400	-1.638	LIMIT = 0 ± 8 ug/l

COMPUTATION SHEET SF 6232

M. Fletcher 7/6/89

OFFICE		FILE NO.
SUBJECT	CN⁻ Manual Distillation; Auto	
COMPUTATION		
COMPUTED BY M. Fletcher	CHECKED BY	DATE 6/29/87 PAGE 1 OF 1 PAGES

(1)	(2)	(3)	(4)	(5) Reading	(6) Conc (ug/l CN⁻)	(7)	(8) Limits QC	(9) Cl2 screen starch iodide paper	(10) S2- screen Pb acetate paper
BlK	(undis)			.20	-2.09		0 ± 8 ug/l		
BlK	(undis)			.10	-2.32		0 ± 8 ug/l		
Standards	0			0.10	-2.32				
	25			11.40	23.38				
	50			23.50	50.84				
	100			48.10	106.84				
	200			87.40	196.21				
BlK	(undis)			0.40	-1.64		0 ± 8 ug/l		
BlK	(undis)			0.30	-1.87		0 ± 8 ug/l		
BlK	(dis)			0.20	-2.09		0 ± 8 ug/l		
AQC	(undis)	100=TV		48.30	107.29		85-115 ug/l		
AQC	(dis)	100=TV		45.60	101.15		85-115 ug/l		
BlK	(undis)			0.40	-1.64		0 ± 8 ug/l		
SE6232	89EM22504			0.60	-1.18	duplicate difference		neg.	neg.
	SO4 lab duplicate			0.40	-1.64	= .46	Difference < 15 ug/l		
	SO4 lab spike			45.00	99.79	rec=100	100 ± 20 ug/l		
BlK	(undis)			0.30	-1.87		0 ± 8 ug/l		
BlK	(dis)			0.20	-2.09		0 ± 8 ug/l		
AQC	(undis)	100=TV		48.30	107.29		85-115 ug/l		
AQC	(dis)	100=TV		45.50	100.93		85-115 ug/l		
BlK	(undis)			0.40	-1.64		0 ± 8 ug/l		

COMPUTATION SHEET SF 6232

M. Fletcher 7/6/89

OFFICE	FILE NO.
SUBJECT Distillation log CN-	
COMPUTATION	
COMPUTED BY M. Fletcher	CHECKED BY
DATE 6/29/89	PAGE 1 OF 1 PAGES

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1.	Blank								
2.	AQC								
3.	SF6232	89FM22	S04						
4.	SF6232	89FM22	S04	lab dup					
5.	SF6232	89FM22	S04	lab spike					

M. Fletcher 7/6/89

SF 6232

~~AAS~~ CN- Run Log

Element CN-

Initials MF

Date 6/29/89

Data Set SF6232

	ID	Spike	Comment
1	primer (200 ug/l CN-)		
2	primer (200 ug/l CN-)		
3	Blank		
4	Blank		
5	Std 0 } Standards		
6	25		
7	50		
8	100		
9	200		
10	Blank (undis)		
11	Blank (undis)		
12	Blank (dis)		
13	AQC (dis) 100 = TV		
14	AQC (undis) 100 = TV		
15	Blank (undis)		
16	SF6232 89FM22S04		
17	S04 duplicate IAB		
18	S04 spike IAB	(100 ug/l)	
19	Blank (undis)		
20	Blank (dis)		
21	AQC (dis) 100 = TV		
22	AQC (undis) 100 = TV		
23	Blank (undis)		
24			
25			
26			

U.S. Environmental Protection Agency Region V

Superfund Document Management System (SDMS)

Lab Data Reference Sheet

Please contact the Superfund Records Manager for further information.

I. Unscannable item due to format

___ Graph

___ Mail receipts

✓ Sample tags

II. Image Quality (Pages follow / No. of pages ____)

___ Resolution / Contrast

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: JUL 28 1989

SUBJECT: Review of Region 5 data for United Recovery

FROM: Curtis Ross, Director A. Alwan for.
Region 5 Central Regional Laboratory

To: Data User:

Attached are the results for:

CRL Data Set Numbers: SF-6232
Sample Numbers: 89FM22501-505, D01, 89FM11R15 (7)
Parameter(s): VOA - WATER
Laboratory: CRL (ESAT/Weston)

Results Status:

( ) DATA ACCEPTABLE FOR USE*
(X) DATA QUALIFIED AS TO USE
( ) DATA UNACCEPTABLE FOR USE

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

If there are any questions regarding the data, refer them to Steve Parker, the Quality Control Coordinator, at 353-3805.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

S. Griffin
JUL 28 1989

RECEIVED BY/DATE:

U.S. EPA CENTRAL REGIONAL LAB

Comments:

DATA SET	SITE	OU/ACT.
SF-6232	United Recovery	TFA 302

SAMPLES	PARAMETER(S)
89EM11R15 89FM22S01-S05, D01, (7)	VOA - WATER

SAMPLED	RECEIVED	DUE	LAB
6/20/89	6/21/89	7/12/89	CRL (WESTON/ESAT)

SHIPPED	DATA RECEIVED	CONTRACT

TEAM LEADER	SECTION CHIEF	QC COORD.	DATA COORD.
A. Alwan		R. Johnson	

Comments By Reviewer:

The data is qualified. The results are estimated because the holding time was exceeded (9 - 17 days) from sampling for the initial and reanalyses.

A. Alwan
7/20/89

DATA MANAGEMENT COORDINATOR

RECEIVED **TRANSMITTED**

CLERICAL SUPPORT

RECEIVED **COMPLETED**

(X) REVIEWED ( ) UNREVIEWED **TEAM LEADER/DATE** A. Alwan

( ) REVIEWED ( ) UNREVIEWED **SECTION CHIEF/DATE**

(X) REVIEWED ( ) UNREVIEWED **QC COORDINATOR/DATE** Richard [illegible] 7/18/89

REVIEWED BY CONTRACT COORDINATOR/DATE

RECEIVED 7/28/89 **TRANSMITTED** 7/28/89 **DATA MANAGEMENT COORDINATOR** [illegible]

CC: QUALITY CONTROL COORDINATOR

U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

METHOD BLANK ~~BLK~~

Study Name: UNITED RECOVERY
Data Set: SF-6232
Lab File ID: >CJ669
Dilution Factor: 1.00000

Matrix: water
Date Received: 06/21/89
Date Analyzed: 6/29/89

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	U
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	1.	U
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	1.	U
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	1.	U
71-43-2	Benzene	1.	U
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	U
75-25-2	Bromoform	1.	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	1.	U
108-90-7	Chlorobenzene	1.	U
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water.
J = Estimated. D = DILUTED OUT
X = Result rejected for failing mass spectral confirmation.
E = Concentration exceeded calibration range.
B = Contaminant found in blank.

U.S. EPA - REGION V

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

METHODBLANK

Study Name: UNITED RECOVERY

Data Set: SF-6232

Matrix: WATER

Lab File ID: >CJ669

Date Received: 06/21/89

Dilution Factor: 1.00000

Date Analyzed: 06/29/89

CONCENTRATION UNITS:
ug/L or ug/Kg
ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

METHOD BLK

Study Name: UNITED RECOVERY
Data Set: SF-6232
Lab File ID: >CF535
Dilution Factor: 1.00000

Matrix: water
Date Received: 06/21/89
Date Analyzed: 7/07/89

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	U
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	1.	U
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	1.	U
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	1.	U
71-43-2	Benzene	1.	U
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	U
75-25-2	Bromoform	1.	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	1.	U
108-90-7	Chlorobenzene	1.	U
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water.
J = Estimated. D = DILUTED OUT
X = Result rejected for failing mass spectral confirmation.
E = Concentration exceeded calibration range.
B = Contaminant found in blank.

U.S. EPA - REGION V

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

METHOD BLK

Study Name: UNITED RECOVERY

Data Set: SF-6232

Matrix: WATER

Lab File ID: >CF535

Date Received: 06/21/89

Dilution Factor: 1.00000

Date Analyzed: 07/07/89

CONCENTRATION UNITS:
ug/L or ug/Kg
ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FM11R15

Study Name: UNITED RECOVERY
Data Set: SF-6232
Lab File ID: >CJ670
Dilution Factor: 1.00000

Matrix: water
Date Received: 06/21/89
Date Analyzed: 6/29/89

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	
74-87-3	Chloromethane	3.	U	
74-83-9	Bromomethane	3.	U	
75-01-4	Vinyl Chloride	3.	U	
75-00-3	Chloroethane	3.	U	
75-09-2	Methylene Chloride	1.	U	
107-02-8	Acrolein	75.	U	X
67-64-1	Acetone	50.	U	
107-13-1	Acrylonitrile	50.	U	
75-15-0	Carbon Disulfide	2.	U	
75-35-4	1,1-Dichloroethene	1.	U	
75-34-3	1,1-Dichloroethane	1.	U	
156-60-5	1,2-Dichloroethene (total)	1.	U	
67-66-3	Chloroform	2.		
107-02-2	1,2-Dichloroethane	1.	U	
78-93-3	2-Butanone	20.	U	
71-55-6	1,1,1-Trichloroethane	1.	U	
56-23-5	Carbon Tetrachloride	1.	U	
108-05-4	Vinyl Acetate	10.	U	
75-27-4	Bromodichloromethane	1.	J	
78-87-5	1,2-Dichloropropane	1.	U	
10061-01-5	cis-1,3-Dichloropropene	1.	U	
79-01-6	Trichloroethene	1.	U	
71-43-2	Benzene	1.	U	
124-48-1	Dibromochloromethane	1.	U	
10061-02-6	trans-1,3-Dichloropropene	1.	U	
79-00-5	1,1,2-Trichloroethane	1.	U	
110-75-8	2-Chloroethyl Vinylether	1.	U	
75-25-2	Bromoform	1.	U	
108-10-1	4-Methyl-2-pentanone	4.	U	
591-78-6	2-Hexanone	4.	U	
127-18-4	Tetrachloroethene	1.	U	
79-34-5	1,1,2,2-Tetrachloroethane	1.	U	
108-88-3	Toluene	1.	J	
108-90-7	Chlorobenzene	1.	U	
100-41-4	Ethylbenzene	1.	U	
100-42-5	Styrene	2.	U	
108-38-3	Meta Xylene	2.	U	
95-47-6	O-&/or P-Xylene	2.	U	

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water.
J = Estimated. D = DILUTED OUT
X = Result rejected for failing mass spectral confirmation.
E = Concentration exceeded calibration range.
B = Contaminant found in blank.

U.S. EPA - REGION V

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

89FM11R15

Study Name: UNITED RECOVERY

Data Set: SF-6232

Matrix: WATER

Lab File ID: >CJ670

Date Received: 06/21/89

Dilution Factor: 1.00000

Date Analyzed: 07/07/89

CONCENTRATION UNITS:
ug/L or ug/Kg
ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FM22S01

Study Name: UNITED RECOVERY
Data Set: SF-6232
Lab File ID: >CJ672
Dilution Factor: 1.00000

Matrix: water
Date Received: 06/21/89
Date Analyzed: 6/29/89

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	U
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	1.	U
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	1.	U
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	1.	U
71-43-2	Benzene	1.	U
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	U
75-25-2	Bromoform	1.	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	1.	U
108-90-7	Chlorobenzene	1.	U
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water.
J = Estimated. D = DILUTED OUT
X = Result rejected for failing mass spectral confirmation.
E = Concentration exceeded calibration range.
B = Contaminant found in blank.

U.S. EPA - REGION V

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

89FM22S01

Study Name: UNITED RECOVERY

Data Set: SF-6232

Matrix: WATER

Lab File ID: >CJ672

Date Received: 06/21/89

Dilution Factor: 1.00000

Date Analyzed: 06/29/89

CONCENTRATION UNITS:
ug/L or ug/Kg
ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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3.				
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U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FM22D01

Study Name: UNITED RECOVERY
Data Set: SF-6232
Lab File ID: >CJ673
Dilution Factor: 1.00000

Matrix: water
Date Received: 06/21/89
Date Analyzed: 6/29/89

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	U
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	1.	U
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	1.	U
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	1.	U
71-43-2	Benzene	1.	U
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	U
75-25-2	Bromoform	1.	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	1.	U
108-90-7	Chlorobenzene	1.	U
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water.
J = Estimated. D = DILUTED OUT
X = Result rejected for failing mass spectral confirmation.
E = Concentration exceeded calibration range.
B = Contaminant found in blank.

U.S. EPA - REGION V

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

89FM22D01

Study Name: UNITED RECOVERY

Data Set: SF-6232

Matrix: WATER

Lab File ID: >CJ673

Date Received: 06/21/89

Dilution Factor: 1.00000

Date Analyzed: 06/29/89

CONCENTRATION UNITS:
ug/L or ug/Kg
ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
89FM22S02

Study Name: UNITED RECOVERY
Data Set: SF-6232
Lab File ID: >CJ674
Dilution Factor: 1.00000

Matrix: water
Date Received: 06/21/89
Date Analyzed: 6/29/89

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
74-87-3	Chloromethane	3.	IU
74-83-9	Bromomethane	3.	IU
75-01-4	Vinyl Chloride	3.	IU
75-00-3	Chloroethane	3.	IU
75-09-2	Methylene Chloride	1.	IU
107-02-8	Acrolein	75.	IU
67-64-1	Acetone	50.	IU
107-13-1	Acrylonitrile	50.	IU
75-15-0	Carbon Disulfide	2.	IU
75-35-4	1,1-Dichloroethene	1.	IJ *
75-34-3	1,1-Dichloroethane	1.	IU
156-60-5	1,2-Dichloroethene (total)	1.	IU
67-66-3	Chloroform	1.	IU
107-02-2	1,2-Dichloroethane	1.	IU
78-93-3	2-Butanone	20.	IU
71-55-6	1,1,1-Trichloroethane	9.	*
56-23-5	Carbon Tetrachloride	1.	IU
108-05-4	Vinyl Acetate	10.	IU
75-27-4	Bromodichloromethane	1.	IU
78-87-5	1,2-Dichloropropane	1.	IU
10061-01-5	cis-1,3-Dichloropropene	1.	IU
79-01-6	Trichloroethene	1.	IU
71-43-2	Benzene	1.	IU
124-48-1	Dibromochloromethane	1.	IU
10061-02-6	trans-1,3-Dichloropropene	1.	IU
79-00-5	1,1,2-Trichloroethane	1.	IU
110-75-8	2-Chloroethyl Vinylether	1.	IU
75-25-2	Bromoform	1.	IU
108-10-1	4-Methyl-2-pentanone	4.	IU
591-78-6	2-Hexanone	4.	IU
127-18-4	Tetrachloroethene	61.	IE
79-34-5	1,1,2,2-Tetrachloroethane	1.	IU
108-88-3	Toluene	1.	IU
108-90-7	Chlorobenzene	1.	IU
100-41-4	Ethylbenzene	1.	IU
100-42-5	Styrene	2.	IU
108-38-3	Meta Xylene	2.	IU
95-47-6	O-&/or P-Xylene	2.	IU

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water.
J = Estimated. D = DILUTED OUT
X = Result rejected for failing mass spectral confirmation.
E = Concentration exceeded calibration range.
B = Contaminant found in blank.

* Use results 9/20/89 DF

U.S. EPA - REGION V

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

89FM22S02

Study Name: UNITED RECOVERY

Data Set: SF-6232

Matrix: WATER

Lab File ID: >CJ674

Date Received: 06/21/89

Dilution Factor: 1.00000

Date Analyzed: 06/29/89

CONCENTRATION UNITS:
ug/L or ug/Kg
ug/L

Number TICs found: 0

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FM22S02REDL

Study Name: UNITED RECOVERY
Data Set: SF-6232
Lab File ID: >CF536
Dilution Factor: ~~1.00000~~ 10.0 12/13/89

Matrix: water
Date Received: 06/21/89
Date Analyzed: 7/07/89

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q
74-87-3	Chloromethane	30.	U
74-83-9	Bromomethane	30.	U
75-01-4	Vinyl Chloride	30.	U
75-00-3	Chloroethane	30.	U
75-09-2	Methylene Chloride	10.	U
107-02-8	Acrolein	750.	U
67-64-1	Acetone	500.	U
107-13-1	Acrylonitrile	500.	U
75-15-0	Carbon Disulfide	20.	U
75-35-4	1,1-Dichloroethene	10.	U
75-34-3	1,1-Dichloroethane	10.	U
156-60-5	1,2-Dichloroethene (total)	10.	U
67-66-3	Chloroform	10.	U
107-02-2	1,2-Dichloroethane	10.	U
78-93-3	2-Butanone	200.	U
71-55-6	1,1,1-Trichloroethane	11.	
56-23-5	Carbon Tetrachloride	10.	U
108-05-4	Vinyl Acetate	100.	U
75-27-4	Bromodichloromethane	10.	U
78-87-5	1,2-Dichloropropane	10.	U
10061-01-5	cis-1,3-Dichloropropene	10.	U
79-01-6	Trichloroethene	10.	U
71-43-2	Benzene	10.	U
124-48-1	Dibromochloromethane	10.	U
10061-02-6	trans-1,3-Dichloropropene	10.	U
79-00-5	1,1,2-Trichloroethane	10.	U
110-75-8	2-Chloroethyl Vinylether	10.	U
75-25-2	Bromoform	10.	U
108-10-1	4-Methyl-2-pentanone	40.	U
591-78-6	2-Hexanone	40.	U
127-18-4	Tetrachloroethene	90.	*
79-34-5	1,1,2,2-Tetrachloroethane	10.	U
108-88-3	Toluene	10.	U
108-90-7	Chlorobenzene	10.	U
100-41-4	Ethylbenzene	10.	U
100-42-5	Styrene	20.	U
108-38-3	Meta Xylene	20.	U
95-47-6	O-&/or P-Xylene	20.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water.
J = Estimated. D = DILUTED OUT
X = Result rejected for failing mass spectral confirmation.
E = Concentration exceeded calibration range.
B = Contaminant found in blank.

* Use result of re-analysis 7/20/89 CLP

U.S. EPA - REGION V

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

89FM22S02~~RED~~ L

Study Name: UNITED RECOVERY

Data Set: SF-6232

Matrix: WATER

Lab File ID: >CF536

Date Received: 06/21/89

Dilution Factor: ~~1.00000~~ 10.0 12/13/89

Date Analyzed: 07/07/89

CONCENTRATION UNITS: ug/L or ug/Kg ug/L

Number TICs found: 0

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FM22S02M

Study Name: UNITED RECOVERY
Data Set: SF-6232
Lab File ID: >CJ675
Dilution Factor: 1.00000

Matrix: water
Date Received: 06/21/89
Date Analyzed: 6/29/89

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	U
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	6.	
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	8.	
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	6.	
71-43-2	Benzene	8.	
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	U
75-25-2	Bromoform	1.	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	53.	E
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	7.	
108-90-7	Chlorobenzene	7.	
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water.
J = Estimated. D = DILUTED OUT
X = Result rejected for failing mass spectral confirmation.
E = Concentration exceeded calibration range.
B = Contaminant found in blank.

U.S. EPA - REGION V

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

89FM22S02M

Study Name: UNITED RECOVERY

Data Set: SF-6232

Matrix: WATER

Lab File ID: >CJ675

Date Received: 06/21/89

Dilution Factor: 1.00000

Date Analyzed: 06/29/89

CONCENTRATION UNITS:
ug/L or ug/Kg
ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
89FM22S02MRE

Study Name: UNITED RECOVERY
Data Set: SF-6232
Lab File ID: >CF537
Dilution Factor: 1.00000

Matrix: water
Date Received: 06/21/89
Date Analyzed: 7/07/89

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	U
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	7.	*
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	11.	*
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	9.	*
71-43-2	Benzene	9.	*
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	U
75-25-2	Bromoform	1.	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	84.	E
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	10.	*
108-90-7	Chlorobenzene	10.	*
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water.
J = Estimated. D = DILUTED OUT
X = Result rejected for failing mass spectral confirmation.
E = Concentration exceeded calibration range.
B = Contaminant found in blank.

* Use results of re-analysis 7/20/89 DF

U.S. EPA - REGION V

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

89FM22S02MRE

Study Name: UNITED RECOVERY

Data Set: SF-6232

Matrix: WATER

Lab File ID: >CF537

Date Received: 06/21/89

Dilution Factor: 1.00000

Date Analyzed: 07/07/89

CONCENTRATION UNITS:
ug/L or ug/Kg
ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FM22S02D

Study Name: UNITED RECOVERY
Data Set: SF-6232
Lab File ID: >CJ676
Dilution Factor: 1.00000

Matrix: water
Date Received: 06/21/89
Date Analyzed: 6/30/89

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene_Chloride	1.	U
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	6.	
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene_(total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	8.	
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	6.	
71-43-2	Benzene	8.	
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl_Vinylether	1.	U
75-25-2	Bromoform	1.	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	55.	E
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	7.	
108-90-7	Chlorobenzene	7.	
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water.
J = Estimated. D = DILUTED OUT
X = Result rejected for failing mass spectral confirmation.
E = Concentration exceeded calibration range.
B = Contaminant found in blank.

U.S. EPA - REGION V

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

89FM22S02D

Study Name: UNITED RECOVERY

Data Set: SF-6232

Matrix: WATER

Lab File ID: >CJ676

Date Received: 06/21/89

Dilution Factor: 1.00000

Date Analyzed: 06/30/89

CONCENTRATION UNITS:
ug/L or ug/Kg
ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FM22S02DRE

Study Name: UNITED RECOVERY
Data Set: SF-6232
Lab File ID: >CF538
Dilution Factor: 1.00000

Matrix: water
Date Received: 06/21/89
Date Analyzed: 7/07/89

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	U
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	7.	*
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	11.	*
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	9.	*
71-43-2	Benzene	10.	*
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	U
75-25-2	Bromoform	1.	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	82.	E
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	10.	*
108-90-7	Chlorobenzene	10.	*
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water.
J = Estimated. D = DILUTED OUT
X = Result rejected for failing mass spectral confirmation.
E = Concentration exceeded calibration range.
B = Contaminant found in blank.

* Use results of reanalysis 7/20/89 dlf

QUANT REPORT

U.S. EPA - REGION V

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

89FM22S02DRE

Study Name: UNITED RECOVERY

Data Set: SF-6232

Matrix: WATER

Lab File ID: >CF538

Date Received: 06/21/89

Dilution Factor: 1.00000

Date Analyzed: 07/07/89

CONCENTRATION UNITS:
ug/L or ug/Kg
ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FM22S03

Study Name: UNITED RECOVERY
Data Set: SF-6232
Lab File ID: >CJ677
Dilution Factor: 1.00000

Matrix: water
Date Received: 06/21/89
Date Analyzed: 6/30/89

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
74-87-3	Chloromethane	3.	IU
74-83-9	Bromomethane	3.	IU
75-01-4	Vinyl Chloride	3.	IU
75-00-3	Chloroethane	3.	IU
75-09-2	Methylene Chloride	1.	IU
107-02-8	Acrolein	75.	IU
67-64-1	Acetone	50.	IU
107-13-1	Acrylonitrile	50.	IU
75-15-0	Carbon Disulfide	2.	IU
75-35-4	1,1-Dichloroethene	1.	IU
75-34-3	1,1-Dichloroethane	1.	IU
156-60-5	1,2-Dichloroethene (total)	1.	IU
67-66-3	Chloroform	1.	IU
107-02-2	1,2-Dichloroethane	1.	IU
78-93-3	2-Butanone	20.	IU
71-55-6	1,1,1-Trichloroethane	1.	IU
56-23-5	Carbon Tetrachloride	1.	IU
108-05-4	Vinyl Acetate	10.	IU
75-27-4	Bromodichloromethane	1.	IU
78-87-5	1,2-Dichloropropane	1.	IU
10061-01-5	cis-1,3-Dichloropropene	1.	IU
79-01-6	Trichloroethene	1.	IU
71-43-2	Benzene	1.	IU
124-48-1	Dibromochloromethane	1.	IU
10061-02-6	trans-1,3-Dichloropropene	1.	IU
79-00-5	1,1,2-Trichloroethane	1.	IU
110-75-8	2-Chloroethyl Vinylether	1.	IU
75-25-2	Bromoform	1.	IU
108-10-1	4-Methyl-2-pentanone	4.	IU
591-78-6	2-Hexanone	4.	IU
127-18-4	Tetrachloroethene	1.	IU
79-34-5	1,1,2,2-Tetrachloroethane	1.	IU
108-88-3	Toluene	1.	IU
108-90-7	Chlorobenzene	1.	IU
100-41-4	Ethylbenzene	1.	IU
100-42-5	Styrene	2.	IU
108-38-3	Meta Xylene	2.	IU
95-47-6	O-&/or P-Xylene	2.	IU

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water.
J = Estimated. D = DILUTED OUT
X = Result rejected for failing mass spectral confirmation.
E = Concentration exceeded calibration range.
B = Contaminant found in blank.

U.S. EPA - REGION V

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

89FM22S03

Study Name: UNITED RECOVERY

Data Set: SF-6232

Matrix: WATER

Lab File ID: >CJ677

Date Received: 06/21/89

Dilution Factor: 1.00000

Date Analyzed: 06/30/89

CONCENTRATION UNITS:
ug/L or ug/Kg
ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FM22S03RE

Study Name: UNITED RECOVERY
Data Set: SF-6232
Lab File ID: >CF539
Dilution Factor: 1.00000

Matrix: water
Date Received: 06/21/89
Date Analyzed: 7/07/89

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	U
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	1.	U
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	1.	U
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	1.	U
71-43-2	Benzene	1.	U
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	U
75-25-2	Bromoform	1.	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	1.	U
108-90-7	Chlorobenzene	1.	U
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water.
J = Estimated. D = DILUTED OUT
X = Result rejected for failing mass spectral confirmation.
E = Concentration exceeded calibration range.
B = Contaminant found in blank.

U.S. EPA - REGION V

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

89FM22S03RE

Study Name: UNITED RECOVERY

Data Set: SF-6232

Matrix: WATER

Lab File ID: >CF539

Date Received: 06/21/89

Dilution Factor: 1.00000

Date Analyzed: 07/07/89

CONCENTRATION UNITS:
ug/L or ug/Kg
ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
89FM22S04

Study Name: UNITED RECOVERY
Data Set: SF-6232
Lab File ID: >CJ678
Dilution Factor: 1.00000

Matrix: water
Date Received: 06/21/89
Date Analyzed: 6/30/89

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
74-87-3	Chloromethane	3.	IU
74-83-9	Bromomethane	3.	IU
75-01-4	Vinyl Chloride	3.	IU
75-00-3	Chloroethane	3.	IU
75-09-2	Methylene Chloride	1.	IU
107-02-8	Acrolein	75.	IU
67-64-1	Acetone	50.	IU
107-13-1	Acrylonitrile	50.	IU
75-15-0	Carbon Disulfide	2.	IU
75-35-4	1,1-Dichloroethene	1.	IU
75-34-3	1,1-Dichloroethane	1.	IU
156-60-5	1,2-Dichloroethene (total)	1.	IU
67-66-3	Chloroform	1.	IU
107-02-2	1,2-Dichloroethane	1.	IU
78-93-3	2-Butanone	20.	IU
71-55-6	1,1,1-Trichloroethane	1.	IU
56-23-5	Carbon Tetrachloride	1.	IU
108-05-4	Vinyl Acetate	10.	IU
75-27-4	Bromodichloromethane	1.	IU
78-87-5	1,2-Dichloropropane	1.	IU
10061-01-5	cis-1,3-Dichloropropene	1.	IU
79-01-6	Trichloroethene	1.	IU
71-43-2	Benzene	1.	IU
124-48-1	Dibromochloromethane	1.	IU
10061-02-6	trans-1,3-Dichloropropene	1.	IU
79-00-5	1,1,2-Trichloroethane	1.	IU
110-75-8	2-Chloroethyl Vinylether	1.	IU
75-25-2	Bromoform	1.	IU
108-10-1	4-Methyl-2-pentanone	4.	IU
591-78-6	2-Hexanone	4.	IU
127-18-4	Tetrachloroethene	1.	IU
79-34-5	1,1,2,2-Tetrachloroethane	1.	IU
108-88-3	Toluene	1.	IU
108-90-7	Chlorobenzene	1.	IU
100-41-4	Ethylbenzene	1.	IU
100-42-5	Styrene	2.	IU
108-38-3	Meta Xylene	2.	IU
95-47-6	O-&/or P-Xylene	2.	IU

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water.
J = Estimated. D = DILUTED OUT
X = Result rejected for failing mass spectral confirmation.
E = Concentration exceeded calibration range.
B = Contaminant found in blank.

U.S. EPA - REGION V

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

89FM22S04

Study Name: UNITED RECOVERY

Data Set: SF-6232

Matrix: WATER

Lab File ID: >CJ678

Date Received: 06/21/89

Dilution Factor: 1.00000

Date Analyzed: 06/30/89

CONCENTRATION UNITS:
ug/L or ug/Kg
ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FM22S04RE

Study Name: UNITED RECOVERY
Data Set: SF-6232
Lab File ID: >CF540
Dilution Factor: 1.00000

Matrix: water
Date Received: 06/21/89
Date Analyzed: 7/07/89

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
74-87-3	Chloromethane	3.	IU
74-83-9	Bromomethane	3.	IU
75-01-4	Vinyl Chloride	3.	IU
75-00-3	Chloroethane	3.	IU
75-09-2	Methylene Chloride	1.	IU
107-02-8	Acrolein	75.	IU
67-64-1	Acetone	50.	IU
107-13-1	Acrylonitrile	50.	IU
75-15-0	Carbon Disulfide	2.	IU
75-35-4	1,1-Dichloroethene	1.	IU
75-34-3	1,1-Dichloroethane	1.	IU
156-60-5	1,2-Dichloroethene (total)	1.	IU
67-66-3	Chloroform	1.	IU
107-02-2	1,2-Dichloroethane	1.	IU
78-93-3	2-Butanone	20.	IU
71-55-6	1,1,1-Trichloroethane	1.	IU
56-23-5	Carbon Tetrachloride	1.	IU
108-05-4	Vinyl Acetate	10.	IU
75-27-4	Bromodichloromethane	1.	IU
78-87-5	1,2-Dichloropropane	1.	IU
10061-01-5	cis-1,3-Dichloropropene	1.	IU
79-01-6	Trichloroethene	1.	IU
71-43-2	Benzene	1.	IU
124-48-1	Dibromochloromethane	1.	IU
10061-02-6	trans-1,3-Dichloropropene	1.	IU
79-00-5	1,1,2-Trichloroethane	1.	IU
110-75-8	2-Chloroethyl Vinylether	1.	IU
75-25-2	Bromoform	1.	IU
108-10-1	4-Methyl-2-pentanone	4.	IU
591-78-6	2-Hexanone	4.	IU
127-18-4	Tetrachloroethene	1.	IU
79-34-5	1,1,2,2-Tetrachloroethane	1.	IU
108-88-3	Toluene	1.	IU
108-90-7	Chlorobenzene	1.	IU
100-41-4	Ethylbenzene	1.	IU
100-42-5	Styrene	2.	IU
108-38-3	Meta Xylene	2.	IU
95-47-6	O-&/or P-Xylene	2.	IU

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water.
J = Estimated. D = DILUTED OUT
X = Result rejected for failing mass spectral confirmation.
E = Concentration exceeded calibration range.
B = Contaminant found in blank.

U.S. EPA - REGION V

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

89FM22S04RE

Study Name: UNITED RECOVERY

Data Set: SF-6232

Matrix: WATER

Lab File ID: >CF540

Date Received: 06/21/89

Dilution Factor: 1.00000

Date Analyzed: 07/07/89

CONCENTRATION UNITS:
ug/L or ug/Kg
ug/L

Number TICs found: 0

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FM22S05

Study Name: UNITED RECOVERY
Data Set: SF-6232
Lab File ID: >CJ679
Dilution Factor: 1.00000

Matrix: water
Date Received: 06/21/89
Date Analyzed: 6/30/89

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	U
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	1.	U
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	1.	U
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	1.	U
71-43-2	Benzene	1.	U
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	U
75-25-2	Bromoform	1.	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	1.	U
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	1.	U
108-90-7	Chlorobenzene	1.	U
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water.
J = Estimated. D = DILUTED OUT
X = Result rejected for failing mass spectral confirmation.
E = Concentration exceeded calibration range.
B = Contaminant found in blank.

U.S. EPA - REGION V

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

89FM22S05

Study Name: UNITED RECOVERY

Data Set: SF-6232

Matrix: WATER

Lab File ID: >CJ679

Date Received: 06/21/89

Dilution Factor: 1.00000

Date Analyzed: 06/30/89

CONCENTRATION UNITS:
ug/L or ug/Kg
ug/L

Number TICs found: 0

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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U.S. EPA - REGION V
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FM22S05RE

Study Name: UNITED RECOVERY
Data Set: SF-6232
Lab File ID: >CF541
Dilution Factor: 1.00000

Matrix: water
Date Received: 06/21/89
Date Analyzed: 7/07/89

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
74-87-3	Chloromethane	3.	U
74-83-9	Bromomethane	3.	U
75-01-4	Vinyl Chloride	3.	U
75-00-3	Chloroethane	3.	U
75-09-2	Methylene Chloride	1.	U
107-02-8	Acrolein	75.	U
67-64-1	Acetone	50.	U
107-13-1	Acrylonitrile	50.	U
75-15-0	Carbon Disulfide	2.	U
75-35-4	1,1-Dichloroethene	1.	U
75-34-3	1,1-Dichloroethane	1.	U
156-60-5	1,2-Dichloroethene (total)	1.	U
67-66-3	Chloroform	1.	U
107-02-2	1,2-Dichloroethane	1.	U
78-93-3	2-Butanone	20.	U
71-55-6	1,1,1-Trichloroethane	1.	U
56-23-5	Carbon Tetrachloride	1.	U
108-05-4	Vinyl Acetate	10.	U
75-27-4	Bromodichloromethane	1.	U
78-87-5	1,2-Dichloropropane	1.	U
10061-01-5	cis-1,3-Dichloropropene	1.	U
79-01-6	Trichloroethene	1.	U
71-43-2	Benzene	1.	U
124-48-1	Dibromochloromethane	1.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
110-75-8	2-Chloroethyl Vinylether	1.	U
75-25-2	Bromoform	1.	U
108-10-1	4-Methyl-2-pentanone	4.	U
591-78-6	2-Hexanone	4.	U
127-18-4	Tetrachloroethene	1.	~~J~~U 7/13/89
79-34-5	1,1,2,2-Tetrachloroethane	1.	U
108-88-3	Toluene	1.	U
108-90-7	Chlorobenzene	1.	U
100-41-4	Ethylbenzene	1.	U
100-42-5	Styrene	2.	U
108-38-3	Meta Xylene	2.	U
95-47-6	O-&/or P-Xylene	2.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water.
J = Estimated. D = DILUTED OUT
X = Result rejected for failing mass spectral confirmation.
E = Concentration exceeded calibration range.
B = Contaminant found in blank.

U.S. EPA - REGION V

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

89FM22S05RE

Study Name: UNITED RECOVERY

Data Set: SF-6232

Matrix: WATER

Lab File ID: >CF541

Date Received: 06/21/89

Dilution Factor: 1.00000

Date Analyzed: 07/07/89

CONCENTRATION UNITS:
ug/L or ug/Kg
ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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NARRATIVE

TO: Alwan Alwan

FROM: Carsten Falkenberg

DATE: 13 July 1989

RE: Data Set SF-6232 United Recovery

Data Set SF-6232 consisted of seven (7) low level water samples submitted for volatile organic analysis (VOA) by GC/MS utilizing EPA method 624 NS.

All samples were initially analyzed within nine days of sampling. Reanalysis occurred eight days after the initial analysis. The holding time was exceeded by two days due to physical plant limitations. All results should be considered estimated.

All tunings were acceptable with BFB meeting all QC requirements (Form 5).

There were two initial calibrations associated with this data set. All compounds had % RSD's less than 35% (Form 6). The continuing calibrations were acceptable with all compounds having % Ds less than 35% except acrylonitrile (100.4%D /RF 0.221), carbon disulfide (35.7%D /RF 2.305), vinyl acetate (85.4%D /RF 0.055), trichloroethene (40.9%D /RF 1.258) and 1,1,2-trichloroethane (36.3%D /RF 0.393) on 6/29/89. On 7/7/89, the continuing calibration was acceptable with all compounds having %Ds less than 35%,except vinyl acetate (205%D /RF 0.328).

All internal standard areas and retention times were within QC limits (Form 8).

The initial analysis reported surrogate S-1 (toluene-d8) out of QC limits for samples 89FM22S02M, S02D, S03, S04 and S05. All surrogates were within limits upon reanalysis.

Sample 89FM22S02 was used for the matrix spike and the matrix spike duplicate. The reanalysis of the matrix spike and the matrix, spike duplicate demonstrated that % recoveries and % RPDs for all compounds were within QC limits (Form 3). There were two Method Blanks associated with the samples; no target compounds or TICs were identified in either one.

There was one Field Blank (89FM11R15) associated with the samples. Chloroform (above but near the MDL), and toluene (below the MDL) were identified. No TICs were detected.

89FM22S01 and 89FM22D01 are duplicate samples. No target compounds or TICs were identified in either sample.

89FM22S02 contained 1,1-dichloroethene (below the MDL), 1,1,1-trichloroethane (above the MDL), tetrachloroethene (far above the calibration range). Reanalysis of a diluted sample (1:10) brought this compound within the calibration range.

Samples 89FM22S01, S03, S03RE, S04, S04RE, S05, and S05RE did not report any target compounds or TICs.

All results are summarized on their respective Forms 1A.

USEPA REGION V CRL 07/24/89 14:37:15
D890000062 SF-6232 UNITED RECOVER 71389 PAGE 01

WORKLIST : VOCF0004
TEST : VOWSO

#293 ~~306~~

WL#	ID	REP	COMMENTS
1	LRB		
2	LF1		
3	LF2		
4	S9000272	01	89FM22501
5	S9000273	01	D01
6	S9000274	01	S02
7	S9000275	01	S03
8	S9000276	01	S04
9	S9000277	01	S05
10	S9000278	01	11R15

TFA302

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: TOXIC SUBSTANCES

DIVISION/BRANCH SUPERFUND FIT SAMPLE DATE 6/20/89 LAB ARRIVAL DATE 6/21/89 DUE DATE 7/17/89

DU NUMBER TFA DATA SET NUMBER 6232 STUDY United Recovery PRIORITY — CONTRACTOR —

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER VOLATILE ORGANICS SCAN UG/L TOX 17564	WATER ABN ORGANICS SCAN UG/L TOX 17574	SEDIMENTS SOLIDS VOLATILE ORGANICS SCAN MG/KG (DRY) TOX 215622	SEDIMENTS SOLIDS ABN ORGANICS SCAN MG/KG (DRY) TOX 215722
89Fm22S01	5-188230-32 RW1	✓			
S02	5-188246-48 5-188255-59 RW2 (MS1)	✓			
S03	5-188245-47 RW3	✓			
S04	5-188272-74 RW4	✓			
S05	5-188280-82 RW5	✓			
6/21/89 S06	RW6	✓			
S07	RW7	✓			
D01	5-188238-40 Dup	✓			
89Fm11R15	5-188288-90 Blk	✓			

ROY F. WESTON, INC.
C/O ESAT Project
Room 962
536 South Clark Street
Chicago IL 60605
(312)-353-2895

RAW DATA ARCHIVING AND DATASET RECONSTRUCTION FORM

DISK OR TAPE NUMBERS: HP #4/Tape 3

RUN DATE(S): 7/7/89, 6/30/89

INST.NO.: H.D. #3

ANALYST(S): TCJ/CF/JK

SAMPLE SUMMARY MATRIX

DATASET NUMBER:	6232				
TASK NUMBER:	3089				
DU/ACTIVITY NO:	TFA302				
PARAMETER:	VOA				
MATRIX:	WATER				
NUMBER SAMPLES:	7				
DATE RECEIVED:	6/21/89				
DATE EXTRACTED:	7/7 ; 6/30				
NOTBK NO/PG NO:					
DATE ASSAYED:	7/7/89 ; 6/30				

FILE IDENTIFICATION SUMMARY

TUNING FILE: MTBFD3

BLANK FILE: >CJ669, >CF535

RUN SEQUENCE FILE: Serial - See case

PRIMARY COLUMN

INITIAL CALIBRATION FILE: >SA706 → >SE706 ; >CJ643 → CJ647

CONTINUING CALIBRATION FILES: >CC707 ; >CJ671

STANDARDS FILES:

SAMPLE FILES: >CJ669 → >CJ679 ; >CF535 → >CF541

ID/METHOD FILES: IDVOA1, IDRCJ6

CONFIRMATORY COLUMN

INITIAL CALIBRATION FILE:

CONTINUING CALIBRATION FILES:

STANDARDS FILES:

SAMPLE FILES:

ID/METHOD FILES:

DOC.NO.: ESAT-05-15-FORM
REVISION NO.: NEW
CENTRAL FILE NO.: 5.5.1

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name:5SCRL US EPA Contract:TFA 302

Lab Code: CHICAGOIL Case No.: SF-6263 SAS No.: N.A. SDG No.: N.A.

Lab File ID: >CJ642 BFB Injection Date: 6/28/89

Instrument ID: 87 3 BFB Injection Time: 9:09

Matrix:(soil/water) water Level:(low/med) low Column:(pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	17.8
75	30.0 - 60.0% OF MASS 95	42.2
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	8.4
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	82.9
175	5.0 - 9.0% of mass 174	5.5(6.7)1
176	Greater than 95.0%, but less than 101.0% of mass 174	81.0(97.6)1
177	5.0 - 9.0% of mass 176	5.9(7.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VOASTD15PPB	VOASTD15PPB	>CJ643	6/28/89	10:04
02	VOASTD05PPB	VOASTD05PPB	>CJ644	6/28/89	11:29
03	VOASTD10PPB	VOASTD10PPB	>CJ645	6/28/89	12:23
04	VOASTD20PPB	VOASTD20PPB	>CJ646	6/28/89	13:40
05	VOASTD25PPB	VOASTD25PPB	>CJ647	6/28/89	14:34
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name:5SCRL US EPA Contract:TFA 302

Lab Code: CHICAGOIL Case No.: SF-6232 SAS No.: N.A. SDG No.: N.A.

Lab File ID: >CJ669 BFB Injection Date: 6/29/89

Instrument ID: 87 3 BFB Injection Time: 17:59

Matrix:(soil/water) water Level:(low/med) low Column:(pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	21.9
75	30.0 - 60.0% OF MASS 95	43.1
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	8.3
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	93.4
175	5.0 - 9.0% of mass 174	5.3(5.7)1
176	Greater than 95.0%, but less than 101.0% of mass 174	91.4(97.9)1
177	5.0 - 9.0% of mass 176	8.1(8.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	METHOD ~~BLK~~ BLANK	METHOD ~~BLK~~ BLANK 7/13/89	>CJ669	6/29/89	17:59
02	89FM11R15	89FM11R15	>CJ670	6/29/89	18:53
03	CONT CALIB	CONT CALIB 15	>CJ671	6/29/89	19:47
04	89FM22S01	89FM22S01	>CJ672	6/29/89	20:41
05	89FM22D01	89FM22D01	>CJ673	6/29/89	21:35
06	89FM22S02	89FM22S02	>CJ674	6/29/89	22:30
07	89FM22S02M	89FM22S02M	>CJ675	6/29/89	23:24
08	89FM22S02D	89FM22S02D	>CJ676	6/30/89	0:18
09	89FM22S03	89FM22S03	>CJ677	6/30/89	1:12
10	89FM22S04	89FM22S04	>CJ678	6/30/89	2:07
11	89FM22S05	89FM22S05	>CJ679	6/30/89	3:01
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA 1/87 Rev.

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: 5SCRL US EPA Contract: TFA 302

Lab Code: CHICAGOIL Case No.: SF-6232 SAS No.: NA SDG No.: NA

Lab File ID: >SA706 BFB Injection Date: 7/06/89

Instrument ID: 87 3 BFB Injection Time: 17:02

Matrix: (soil/water) water Level: (low/med) low Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	20.0
75	30.0 - 60.0% OF MASS 95	43.2
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	87.8
175	5.0 - 9.0% of mass 174	5.4(6.1)1
176	Greater than 95.0%, but less than 101.0% of mass 174	85.1(96.9)1
177	5.0 - 9.0% of mass 176	5.6(6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	5 PPB STD	5 PPB STD	>SA706	7/06/89	17:02
02	10 PPB STD	10 PPB STD	>SB706	7/06/89	17:56
03	15 PPB STD	15 PPB STD	>SC706	7/06/89	18:51
04	20 PPB STD	20 PPB STD	>SD706	7/06/89	19:45
05	25 PPB STD	25 PPB STD	>SE706	7/06/89	20:39
06					
07					
08					
09					
10					
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17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: 5SCRL US EPA Contract: TFA 302

Lab Code: CHICAGOIL Case No.: SF-6232 SAS No.: N.A. SDG No.: N.A.

Lab File ID: >CF535 BFB Injection Date: 7/07/89

Instrument ID: 87 3 BFB Injection Time: 10:52

Matrix: (soil/water) water Level: (low/med) low Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	19.3
75	30.0 - 60.0% OF MASS 95	45.8
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.1
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	96.5
175	5.0 - 9.0% of mass 174	6.7(7.0)1
176	Greater than 95.0%, but less than 101.0% of mass 174	94.8(98.2)1
177	5.0 - 9.0% of mass 176	6.4(6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	METHOD BLK	METHOD BLK	>CF535	7/07/89	10:52
02	CONT CALIB	CONT CALIB 15	>CC707	7/07/89	11:47
03	89FM22S02RE	89FM22S02RE	>CF536	7/07/89	13:22
04	89FM22S02MR	89FM22S02MRE	>CF537	7/07/89	14:16
05	89FM22S02DR	89FM22S02DRE	>CF538	7/07/89	15:10
06	89FM22S03RE	89FM22S03RE	>CF539	7/07/89	16:05
07	89FM22S04RE	89FM22S04RE	>CF540	7/07/89	16:59
08	89FM22S05RE	89FM22S05RE	>CF541	7/07/89	17:54
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

Sequence File: BA3629::XX

Tune File: MTBFD3

CR List: A5,E1
CR Cut-off: 1500 blocks.

Number of samples: 14

	Samp No.	Data File / Method File	Sample Name / Misc Data	Sample Size / Bottle	Report / Quant	Data / ID	Archive / Output	Archive	Quant / Quant	ID / Output
3	001)	>CJ666	89ZC60 S11 20ML	00	3	N	N	N	N	N
		#3VOA1	062989 SF6263 177/178		Dil=1.00000					
4	002)	>CJ667	89ZC60 S12 20ML	00	3	N	N	N	N	N
		#3VOA1	062989 SF6263 177/178		Dil=1.00000					
5	003)	>CJ668	89ZC60 S13 20ML	00	3	N	N	N	N	N
		#3VOA1	062989 SF6263 177/178		Dil=1.00000					
6	004)	>CJ669	METHODBLANK 20ML	00	3	N	N	N	N	N
		#3VOA1	062989 SF6232		Dil=1.00000					
7	005)	>CJ670	89FM11 R15 20ML	00	3	N	N	N	N	N
		#3VOA1	062989 SF6232		Dil=1.00000					
8	006)	>CJ671	VOASTD15PPB 20ML	00	3	N	N	N	N	N
		#3VOA1	062989 SF6232		Dil=1.00000					
9	007)	>CJ672	89FM22 S01 20ML	00	3	N	N	N	N	N
		#3VOA1	062989 SF6232		Dil=1.00000					
10	008)	>CJ673	89FM22 D01 20ML	00	3	N	N	N	N	N
		#3VOA1	062989 SF6232		Dil=1.00000					
11	009)	>CJ674	89FM22 S02 20ML	00	3	N	N	N	N	N
		#3VOA1	062989 SF6232		Dil=1.00000					
12	010)	>CJ675	89FM22S02M 20ML	00	3	N	N	N	N	N
		#3VOA1	062989 SF6232		Dil=1.00000					
13	011)	>CJ676	89FM22S02D 20ML	00	3	N	N	N	N	N
		#3VOA1	062989 SF6232		Dil=1.00000					
14	012)	>CJ677	89FM22 S03 20ML	00	3	N	N	N	N	N
		#3VOA1	062989 SF6232		Dil=1.00000					
15	013)	>CJ678	89FM22 S04 20ML	00	3	N	N	N	N	N
		#3VOA1	062989 SF6232		Dil=1.00000					
16	014)	>CJ679	89FM22 S05 20ML	00	3	N	N	N	N	N
		#3VOA1	062989 SF6232		Dil=1.00000					

End of sequence file.

```
Sequence File: BA3IC::XX
----------------------------------------

Tune File: MTBFD3

CR List: A9,A4,A3,A2,A0,E1,S1
CR Cut-off:   750 blocks.
                                                  Report Data Archive
                                                 Quant | | ID Archive
Number of samples:   6                 Sample Size | | | | Output Archive
                                          Bottle | | | | | | |
Samp Data File     Sample Name                  | | | | | | |     Quant ID
 No. Method File   Misc Data                    | | | | | | |     Quant Output
---- ------------ ------------------------ ----------------  ------------
001) >CF534        TUNE BLANK                 00 3 Y M N N N     IDVOA1::XX
     #3VOA1        07/06/89   CRF SF-6232       Dil=1.00000     ^CF534::E1
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 5.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
002) >SA706        1 STD   5 PPB              00 3 Y M N N N     IDVOA1::XX
     #3VOA1        07/06/89   CRF               Dil=1.00000     ^SA706::E1
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 5.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
003) >SB706        2 STD  10 PPB              00 3 Y M N N N     IDVOA1::XX
     #3VOA1        07/06/89   CRF               Dil=1.00000     ^SB706::E1
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 5.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
004) >SC706        3 STD  15 PPB              00 3 Y M N N N     IDVOA1::XX
     #3VOA1        07/06/89   CRF               Dil=1.00000     ^SC706::E1
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 5.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
005) >SD706        4 STD  20 PPB              00 3 Y M N N N     IDVOA1::XX
     #3VOA1        07/06/89   CRF               Dil=1.00000     ^SD706::E1
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 5.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
006) >SE706        5 STD  25 PPB              00 3 Y M N N N     IDVOA1::XX
     #3VOA1        07/06/89   CRF               Dil=1.00000     ^SE706::E1
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 5.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS

End of sequence file.
```

Sequence File: BA3CC::XX

Tune File: MTBFD3

CR List: A9,A4,A3,A2,A0,E1,S1
CR Cut-off: 750 blocks.

Number of samples: 2

```
                                                  Report Data Archive
                                                 Quant | | ID Archive
                                        Sample Size | | | | Output Archive
                                           Bottle | | | | | | |
Samp Data File     Sample Name                  | | | | | | |     Quant ID
 No. Method File   Misc Data                    | | | | | | |     Quant Output
---- ------------ ------------------------ ----------------  ------------
001) >CF535        METHOD BLK                 00 3 Y M N N N     IDVOA1::XX
     #3VOA1        07/07/89 CRF SF-6232          Dil=1.00000     ^CF535::E1
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 5.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
002) >CC707        CONT CALIB 15 PPB          00 3 Y M N N N     IDVOA1::XX
     #3VOA1        07/07/89 CRF SF-6232          Dil=1.00000     ^CC706::E1
     REPRT OPTIONS: Label Meth:5, BG Sub, Scale time: 5.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
```

End of sequence file.

Sequence File: BA3707::XX

Tune File: MTBFD3

CR List: A9,A4,A3,A8,A0,E1,S1
CR Cut-off: 750 blocks.

Number of samples: 6

```
                                                   Report Data Archive
                                                  Quant | | ID Archive
                                        Sample Size | | | | Output Archive
                                           Bottle | | | | | | |
Samp Data File     Sample Name                  | | | | | | |     Quant ID
 No. Method File   Misc Data                    | | | | | | |     Quant Output
---- ------------ ---------------------------- ----------------  ------------
001) >CF536       89FM22S02RE 1:10            00 3 Y F N N N     IDVOA1::XX
     #3VOA1       07/07/89 CF SF-6232            Dil=1.00000     ^CF536::E1
     REPRT OPTIONS: Aux:R2PRT, Label Meth:5, BG Sub, Scale time: 5.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
002) >CF537       89FM22S02MRE                00 3 Y F N N N     IDVOA1::XX
     #3VOA1       07/07/89 CF SF-6232            Dil=1.00000     ^CF537::E1
     REPRT OPTIONS: Aux:R2PRT, Label Meth:5, BG Sub, Scale time: 5.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
003) >CF538       89FM22S02DRE                00 3 Y F N N N     IDVOA1::XX
     #3VOA1       07/07/89 CF SF-6232            Dil=1.00000     ^CF538::E1
     REPRT OPTIONS: Aux:R2PRT, Label Meth:5, BG Sub, Scale time: 5.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
004) >CF539       89FM22S03RE                 00 3 Y F N N N     IDVOA1::XX
     #3VOA1       07/07/89 CF SF-6232            Dil=1.00000     ^CF539::E1
     REPRT OPTIONS: Aux:R2PRT, Label Meth:5, BG Sub, Scale time: 5.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
005) >CF540       09FM22S04RE                 00 3 Y F N N N     IDVOA1::XX
     #3VOA1       07/07/89 CF SF-6232            Dil=1.00000     ^CF540::E1
     REPRT OPTIONS: Aux:R2PRT, Label Meth:5, BG Sub, Scale time: 5.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
006) >CF541       09FM22S05RE                 00 3 Y F N N N     IDVOA1::XX
     #3VOA1       07/07/89 CF SF-6232            Dil=1.00000     ^CF541::E1
     REPRT OPTIONS: Aux:R2PRT, Label Meth:5, BG Sub, Scale time: 5.000
     REPRT OPTIONS: Qion replaces Scan#, Omit types:IS
```

End of sequence file.

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: 5SCRL US EPA Contract: TFA 302

Lab Code: CHICAGOIL Case No.: SF-6232 SAS No.: N.A. SDG No.: N.A.

Lab File ID (Standard): >CJ671 Date Analyzed: 6/29/89

Instrument ID: 87 3 Time Analyzed: 19:47

Matrix: (soil/water) water Level: (low/med) low Column: (pack/cap) pack

		IS1(BCM) AREA #	RT	IS2(BCP) AREA #	RT	IS3(DCB) AREA #	RT
	12 HOUR STD	33549.	11.07	150315.	20.21	76665.	24.17
	UPPER LIMIT	67098.	11.57	300630.	20.71	153330.	24.67
	LOWER LIMIT	16774.	10.57	75158.	19.71	38333.	23.67
	EPA SAMPLE NO.						
01	METHOD BLK	37654.	11.07	167628.	20.21	82337.	24.19
02	89FM22S01	34504.	11.10	171548.	20.21	79148.	24.16
03	89FM22D01	41297.	11.07	182194.	20.24	91987.	24.22
04	89FM22S02	46447.	11.07	201639.	20.24	109691.	24.19
05	89FM22S02M	49679.	11.04	209212.	20.21	119891.	24.20
06	89FM22S02D	50572.	11.01	212312.	20.21	122529.	24.20
07	89FM22S03	52703.	11.01	218938.	20.21	127487.	24.19
08	89FM22S04	50621.	11.01	214316.	20.21	126039.	24.19
09	89FM22S05	49263.	11.01	208300.	20.21	122635.	24.16
10	89FM811R15	34091	11.07	157634	20.21	~~78635~~ 78635	24.19
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (BCP) = 2-Bromo-1-chloropropane
IS3 (DCB) = 1,4-Dichlorobutane

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

* Value outside QC limit.
\# Column used to flag internal standard area values with an asterisk

FORM VIII VOA 1/87 Rev.

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: SSCRL US EPA Contract: TFA 302

Lab Code: CHICAGOIL Case No.: SF-6232 SAS No.: N.A. SDG No.: N.A.

Lab File ID (Standard): >CC707 Date Analyzed: 7/07/89

Instrument ID: 87 3 Time Analyzed: 11:47

Matrix: (soil/water) water Level: (low/med) low Column: (pack/cap) pack

		IS1(BCM) AREA #	RT	IS2(BCP) AREA #	RT	IS3(DCB) AREA #	RT
	12 HOUR STD	59331.	11.11	265366.	20.22	126880.	24.18
	UPPER LIMIT	118662.	11.61	530732.	20.72	253760.	24.68
	LOWER LIMIT	29666.	10.61	132683.	19.72	63440.	23.68
	EPA SAMPLE NO.						
01	METHOD BLK	61805.	11.10	282134.	20.21	126212.	24.20
02	89FM22S02RED4	63375.	11.11	289006.	20.22	129234.	24.17
03	89FM22S02MRE	62160.	11.11	275157.	20.22	129512.	24.21
04	89FM22S02DRE	61290.	11.10	272922.	20.21	126893.	24.20
05	89FM22S03RE	61496.	11.10	270299.	20.24	125229.	24.19
06	89FM22S04RE	62754.	11.10	278574.	20.24	127956.	24.19
07	89FM22S05RE	61791.	11.10	271386.	20.21	125114.	24.19
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IS1 (BCM) = Bromochloromethane
IS2 (BCP) = 2-Bromo-1-chloropropane
IS3 (DCB) = 1,4-Dichlorobutane

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

* Value outside QC limit.
\# Column used to flag internal standard area values with an asterisk

FORM VIII VOA 1/87 Rev.

2A

WATER VOLATILE SURROGATE RECOVERY

Lab Name:5SCRL US EPA Contract:TFA 302

Lab Code: CHICAGOILCase No.: SF-6232 SAS No.: N.A. SDG No.: N.A.

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BEN)#	S3 (DCE)#	OTHER	TOT OUT
01	METHOD ~~BLK~~ BLANK 10/26	107	102	87		0
02	89FM11R15	103	100	90		0
03	89FM22S01	110	97	93		0
04	89FM22D01	100	96	86		0
05	89FM22S02	83	85	86		0
06	89FM22S02M	78 *	85	86		1
07	89FM22S02D	76 *	85	86		1
08	89FM22S03	49 *	64 *	85		2
09	89FM22S04	61 *	74 *	87		2
10	89FM22S05	72 *	82	86		1
11	METHOD BLK	106	100	85		0
12	89FM22S02RXL	106	97	85		0
13	89FM22S02M	104	102	89		0
14	89FM22S02D	105	100	88		0
15	89FM22S03RE	104	100	88		0
16	89FM22S04RE	104	101	87		0
17	89FM22S05RE	105	101	88		0
18						
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30						

	QC LIMITS
S1 (TOL) = Toluene-d8	(80-120)
S2 (BEN) = Benzene-d6	(80-120)
S3 (DCE) = 1,2-Dichloroethane-d4	(80-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:5SCRL US EPA Contract:TFA 302

Lab Code: CHICAGOIL Case No.: SF-6232 SAS No.: N.A. SDG No.: N.A.

Instrument ID: 87 3 Calibration Date: 6/29/89 Time: 19:47

Lab File ID: >CJ671 Init. Calib. Date(s):06/28/89 06/30/89

Matrix:(soil/water) water Level:(low/med) low Column:(pack/cap) pack

Min RRF50 for SPCC(#) = 0.300 (0.250 for Bromoform) Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF15	%D	
Chloromethane	# 1.982	1.355	31.6	#
Bromomethane	3.636	3.833	5.4	
Vinyl Chloride	* 3.352	3.087	7.9	*
Chloroethane	2.308	2.363	2.4	
Methylene_Chloride	2.908	2.923	.5	
Acrolein	.039	.041	6.1	
Acetone	.088	.119	35.0	
Acrylonitrile	.110	.221	100.4	
Carbon_Disulfide	3.587	2.305	35.7	
1,1-Dichloroethene	* 3.457	3.702	7.1	*
1,1-Dichloroethane	# 6.189	6.961	12.5	#
1,2-Dichloroethene_(total)	4.007	3.685	8.1	
Chloroform	* 4.936	5.865	18.8	*
1,2-Dichloroethane	1.425	1.548	8.6	
2-Butanone	.012	.015	21.6	
1,1,1-Trichloroethane	.948	.988	4.2	
Carbon_Tetrachloride	.785	.933	18.8	
Vinyl Acetate	.380	.055	85.4	
Bromodichloromethane	.761	.849	11.6	
1,2-Dichloropropane	* .766	.955	24.7	*
cis-1,3-Dichloropropene	.777	.855	10.1	
Trichloroethene	.893	1.258	40.9	
Dibromochloromethane	.427	.566	32.7	
1,1,2-Trichloroethane	.288	.393	36.3	
Benzene	2.496	2.536	1.6	
trans-1,3-Dichloropropene	.653	.730	11.8	
2-Chloroethyl_vinylether	.185	.221	19.3	
Bromoform	# .247	.292	18.3	#
4-Methyl-2-pentanone	.353	.398	12.7	
2-Hexanone	.308	.344	11.8	
Tetrachloroethene	1.704	1.947	14.3	
1,1,2,2-Tetrachloroethane	.756	.653	13.7	
Toluene	* 3.481	3.434	1.3	*
Chlorobenzene	# 3.299	3.954	19.8	#
Ethylbenzene	* 2.044	2.063	.9	*
Styrene	4.211	4.063	3.5	
Meta Xylene	3.233	2.490	23.0	
O-&/or_P-Xylene	3.220	2.448	24.0	
1,2-Dichloroethane-d4	1.252	1.303	4.1	
Benzene-d6	2.314	2.315	.0	
Toluene-d8	2.728	4.121	51.1	

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:5SCRL US EPA Contract:TFA 302

Lab Code: CHICAGOIL Case No.: SF-6232 SAS No.: N.A. SDG No.: N.A.

Instrument ID: 87 3 Calibration Date: 7/07/89 Time: 11:47

Lab File ID: >CC707 Init. Calib. Date(s):06/28/89 07/07/89

Matrix:(soil/water) water Level:(low/med) low Column:(pack/cap) pack

Min RRF50 for SPCC(#) = 0.300 (0.250 for Bromoform) Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF15	%D
Chloromethane #	3.381	3.206	5.2 #
Bromomethane	4.521	4.089	9.6
Vinyl Chloride *	4.908	4.474	8.9 *
Chloroethane	2.913	2.614	10.3
Methylene_Chloride	3.409	2.975	12.7
Acrolein	.039	.035	10.7
Acetone	.122	.101	17.0
Acrylonitrile	.233	.194	16.7
Carbon_Disulfide	2.514	1.685	33.0
1,1-Dichloroethene *	4.479	3.951	11.8 *
1,1-Dichloroethane #	8.290	7.366	11.1 #
1,2-Dichloroethene_(total)	4.477	3.951	11.7
Chloroform *	6.840	6.019	12.0 *
1,2-Dichloroethane	1.713	1.494	12.8
2-Butanone	.014	.013	7.5
1,1,1-Trichloroethane	1.175	1.104	6.0
Carbon_Tetrachloride	1.114	1.059	5.0
Vinyl Acetate	.108	.328	205.0
Bromodichloromethane	.909	.834	8.3
1,2-Dichloropropane *	1.028	.932	9.3 *
cis-1,3-Dichloropropene	.908	.826	9.1
Trichloroethene	1.337	1.161	13.2
Dibromochloromethane	.585	.542	7.3
1,1,2-Trichloroethane	.393	.360	8.4
Benzene	2.853	2.663	6.6
trans-1,3-Dichloropropene	.757	.698	7.8
2-Chloroethyl_vinylether	.215	.197	8.4
Bromoform #	.299	.282	5.7 #
4-Methyl-2-pentanone	.417	.364	12.6
2-Hexanone	.349	.296	15.2
Tetrachloroethene	2.463	2.274	7.7
1,1,2,2-Tetrachloroethane	.790	.827	4.8
Toluene *	4.231	3.907	7.7 *
Chlorobenzene #	4.684	4.252	9.2 #
Ethylbenzene *	2.556	2.356	7.9 *
Styrene	4.905	4.399	10.3
Meta Xylene	3.195	2.939	8.0
O-&/or_P-Xylene	3.102	2.853	8.0
1,2-Dichloroethane-d4	1.343	1.291	3.9
Benzene-d6	2.420	2.503	3.4
Toluene-d8	4.705	4.780	1.6

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name:5SCRL US EPA Contract:TFA 302
Lab Code: CHICAGOIL Case No.: SF-6232 SAS No.: N.A. SDG No.: N.A.
Instrument ID: 87 3 Calibration Date(s):07/06/89
Matrix:(soil/water) water Level:(low/med) low Column:(pack/cap) pack

Min $\overline{RRF}$ for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF5.0=>SA706 RRF10.0=>SB706
RRF15.0=>SC706 RRF20.0=>SD706 RRF25.0=>SE706

COMPOUND	RRF5	RRF10	RRF15	RRF20	RRF25	$\overline{RRF}$	% RSD
Chloromethane #	3.022	3.499	3.253	3.808	3.322	3.381	8.7#
Bromomethane	4.067	4.721	4.471	4.670	4.677	4.521	6.0
Vinyl_Chloride *	4.358	5.031	4.905	5.155	5.093	4.908	6.6*
Chloroethane	2.631	3.005	2.877	3.023	3.030	2.913	5.8
Methylene_Chloride	3.304	3.669	3.293	3.377	3.402	3.409	4.5
Acrolein	.035	.042	.037	.039	.044	.039	9.3
Acetone	.111	.129	.120	.122	.127	.122	5.7
Acrylonitrile	.213	.250	.227	.237	.241	.233	6.2
Carbon_Disulfide	2.253	2.581	2.475	2.599	2.663	2.514	6.4
1,1-Dichloroethene *	4.384	4.772	4.313	4.401	4.523	4.479	4.0*
1,1-Dichloroethane #	8.091	8.898	7.995	8.157	8.307	8.290	4.3#
1,2-Dichloroethene_(total)	4.338	4.796	4.328	4.433	4.492	4.477	4.3
Chloroform *	6.686	7.295	6.588	6.803	6.830	6.840	4.0*
1,2-Dichloroethane	1.639	1.816	1.659	1.718	1.731	1.713	4.1
2-Butanone	.013	.014	.014	.014	.014	.014	3.0
1,1,1-Trichloroethane	1.160	1.263	1.178	1.116	1.157	1.175	4.6
Carbon_Tetrachloride	1.078	1.186	1.132	1.063	1.113	1.114	4.4
Vinyl_Acetate	.148	.136	.091	.088	.075	.108	29.9
Bromodichloromethane	.882	.961	.914	.882	.904	.909	3.6
1,2-Dichloropropane *	1.018	1.104	1.023	.979	1.015	1.028	4.5*
cis-1,3-Dichloropropene	.890	.970	.910	.875	.896	.908	4.0
Trichloroethene	1.271	1.404	1.342	1.303	1.367	1.337	3.9
Dibromochloromethane	.567	.622	.596	.565	.576	.585	4.1
1,1,2-Trichloroethane	.376	.423	.393	.382	.394	.393	4.6
Benzene	2.823	3.052	2.840	2.732	2.817	2.853	4.2
trans-1,3-Dichloropropene	.738	.805	.765	.728	.747	.757	4.0
2-Chloroethyl_vinylether	.215	.229	.217	.205	.211	.215	4.1
Bromoform #	.284	.317	.304	.292	.297	.299	4.2#
4-Methyl-2-pentanone	.384	.435	.424	.422	.420	.417	4.6
2-Hexanone	.303	.359	.360	.359	.366	.349	7.5
Tetrachloroethene	2.386	2.618	2.481	2.403	2.426	2.463	3.8
1,1,2,2-Tetrachloroethane	.787	.874	.783	.755	.750	.790	6.3
Toluene *	4.090	4.454	4.220	4.155	4.235	4.231	3.2*
Chlorobenzene #	4.486	4.982	4.658	4.625	4.669	4.684	3.9#
Ethylbenzene *	2.411	2.725	2.571	2.515	2.561	2.556	4.4*
Styrene	4.358	4.991	4.954	5.155	5.065	4.905	6.4
Meta Xylene	2.796	3.394	3.271	3.321	3.192	3.195	7.4
O-&/or_P-Xylene	2.757	3.274	3.165	3.217	3.098	3.102	6.6
1,2-Dichloroethane-d4	1.238	1.304	1.297	1.398	1.479	1.343	7.1
Benzene-d6	2.428	2.413	2.447	2.355	2.459	2.420	1.7
Toluene-d8	4.648	4.629	4.741	4.743	4.764	4.705	1.3

FORM 6A

Calibration Report

Title: CB FILE FOR VOLATILES--HP5985B DM 1/20/89 (20 ML PURGE)
Calibrated: 890628 16:22

Compound	Files: >CJ644 RF 5.00	>CJ645 RF 10.00	>CJ643 RF 15.00	>CJ646 RF 20.00	>CJ647 RF 25.00	$\overline{RRT}$	$\overline{RF}$	% RSD	
CHLOROMETHANE	2.21078	2.08631	1.56456	2.22317	1.82342	.202	1.98165	14.291	(Conc=10.0,15.0,20.0,25.0,30.0)
BROMOMETHANE	3.78153	3.59904	3.38845	3.72782	3.68285	.315	3.63594	4.226	(Conc=10.0,15.0,20.0,25.0,30.0)
VINYL CHLORIDE	3.73295	3.44202	2.78957	3.61278	3.18244	.403	3.35195	11.225	(Conc=10.0,15.0,20.0,25.0,30.0)
CHLOROETHANE	2.45222	2.24455	2.10978	2.38134	2.35090	.502	2.30776	5.787	(Conc=10.0,15.0,20.0,25.0,30.0)
METHYLENE CHLORIDE	3.09315	2.87404	2.89539	2.88732	2.79017	.705	2.90802	3.841	(Conc=5.0,10.0,15.0,20.0,25.0)
ACROLEIN	.03576	.03994	.04178	.03916	.03649	.771	.03863	6.430	(Conc=225.5,300.0,375.0,450.0,525.
ACETONE	.08148	.09345	.09730	.08698	.08087	.770	.08802	8.243	(Conc=225.0,300.0,375.0,450.0,525.
ACRYLONITRILE	.10398	.11392	.11879	.11264	.10294	.832	.11045	6.152	(Conc=225.0,300.0,375.0,450.0,525.
CARBON DISULFIDE	4.02354	3.46727	3.52193	3.80887	3.11187	.848	3.58670	9.699	(Conc=7.5,10.0,12.5,15.0,17.5)
1,1-DICHLOROETHENE	3.30101	3.36189	3.34354	3.79332	3.48710	.962	3.45737	5.790	(Conc=5.0,10.0,15.0,20.0,25.0)
1,1-DICHLOROETHANE	6.00167	5.97818	6.08504	6.64047	6.23789	1.076	6.18865	4.400	(Conc=5.0,10.0,15.0,20.0,25.0)
1,2-DICHLOROETHENE (TOTAL)	3.89746	3.87187	3.89220	4.33126	4.04467	1.141	4.00749	4.832	(Conc=5.0,10.0,15.0,20.0,25.0)
CHLOROFORM	4.79258	4.72313	4.94400	5.22332	4.99635	1.190	4.93588	3.951	(Conc=5.0,10.0,15.0,20.0,25.0)
1,2-DICHLOROETHANE-D4	1.12056	1.21117	1.31365	1.26791	1.34512	1.247	1.25168	7.108	(Conc=10.0,10.0,10.0,10.0,10.0)
1,2-DICHLOROETHANE	1.34990	1.36610	1.48738	1.47523	1.44718	1.257	1.42516	4.440	(Conc=5.0,10.0,15.0,20.0,25.0)
2-BUTANONE	.01129	.01221	.01320	.01187	.01236	.686	.01219	5.734	(Conc=75.0,100.0,125.0,150.0,175.0
1,1,1-TRICHLOROETHANE	.94264	.90795	.91112	1.01400	.96490	.753	.94812	4.608	(Conc=5.0,10.0,15.0,20.0,25.0)
CARBON TETRACHLORIDE	.77578	.74293	.75498	.84846	.80443	.772	.78532	5.388	(Conc=5.0,10.0,15.0,20.0,25.0)
VINYL ACETATE	.45657	.30269	.38873	.44138	.31021	.779	.37992	18.868	(Conc=22.5,30.0,37.5,45.0,52.5)
BROMODICHLOROMETHANE	.73847	.72454	.76911	.78387	.78973	.796	.76114	3.745	(Conc=5.0,10.0,15.0,20.0,25.0)
1,2-DICHLOROPROPANE	.73488	.73561	.76596	.80284	.78963	.864	.76579	4.029	(Conc=5.0,10.0,15.0,20.0,25.0)
CIS-1,3-DICHLOROPROPENE	.74858	.74044	.79248	.79829	.80319	.876	.77659	3.821	(Conc=7.0,14.0,21.0,28.0,35.0)
TRICHLOROETHENE	.87491	.85992	.86348	.94809	.91741	.904	.89276	4.311	(Conc=5.0,10.0,15.0,20.0,25.0)
BENZENE-D6	2.40778	2.28845	2.24833	2.31979	2.30524	.923	2.31392	2.545	(Conc=10.0,10.0,10.0,10.0,10.0)
BENZENE	2.50149	2.38369	2.43585	2.64060	2.52058	.930	2.49644	3.893	(Conc=5.0,10.0,15.0,20.0,25.0)
DIBROMOCHLOROMETHANE	.39202	.41222	.44078	.43627	.45314	.933	.42689	5.739	(Conc=5.0,10.0,15.0,20.0,25.0)
TRANS-1,3-DICHLOROPROPENE	.62834	.62689	.66291	.66760	.67919	.940	.65299	3.662	(Conc=3.0,6.0,9.0,12.0,15.0)
1,1,2-TRICHLOROETHANE	.26236	.28413	.30046	.29345	.30139	.939	.28836	5.581	(Conc=5.0,10.0,15.0,20.0,25.0)
2-CHLOROETHYL VINYLETHER	.17740	.18259	.19070	.18250	.19254	.993	.18514	3.405	(Conc=5.0,10.0,15.0,20.0,25.0)
BROMOFORM	.21646	.24123	.26132	.24797	.26743	1.066	.24688	8.074	(Conc=5.0,10.0,15.0,20.0,25.0)
4-METHYL-2-PENTANONE	.35826	.34542	.36370	.36320	.33377	.912	.35287	3.677	(Conc=15.0,20.0,25.0,30.0,35.0)
2-HEXANONE	.30414	.30320	.32277	.31363	.29617	.976	.30798	3.359	(Conc=15.0,20.0,25.0,30.0,35.0)
TETRACHLOROETHENE	1.70832	1.63532	1.55112	1.92686	1.69582	.989	1.70349	8.189	(Conc=5.0,10.0,15.0,20.0,25.0)
1,1,2,2-TETRACHLOROETHANE	.72956	.71602	.76464	.80350	.76792	.986	.75633	4.566	(Conc=5.0,10.0,15.0,20.0,25.0)
TOLUENE-D8	2.83551	2.67319	2.54116	2.92174	2.66927	1.036	2.72817	5.512	(Conc=10.0,10.0,10.0,10.0,10.0)
TOLUENE	3.51787	3.28970	3.23222	3.89876	3.46423	1.044	3.48056	7.529	(Conc=5.0,10.0,15.0,20.0,25.0)
CHLOROBENZENE	3.26559	3.13033	3.12741	3.64399	3.32979	1.092	3.29942	6.411	(Conc=5.0,10.0,15.0,20.0,25.0)
ETHYLBENZENE	2.01694	1.95410	1.88181	2.30911	2.05782	1.187	2.04395	7.949	(Conc=5.0,10.0,15.0,20.0,25.0)
STYRENE	4.32720	4.07393	3.94418	4.68977	4.01865	1.387	4.21075	7.220	(Conc=7.5,10.0,12.5,15.0,17.5)

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

FORM 6A
(CONT)

Calibration Report

Title: CB FILE FOR VOLATILES--HP5985B DM 1/20/89 (20 ML PURGE)
Calibrated: 890628 16:22

Compound	Files: >CJ644 RF 5.00	>CJ645 RF 10.00	>CJ643 RF 15.00	>CJ646 RF 20.00	>CJ647 RF 25.00	$\overline{RRT}$	$\overline{RF}$	% RSD	
META XYLENE	3.47373	3.03437	2.89397	3.43313	3.32743	1.405	3.23253	7.907	(Conc=10.0,20.0,30.0,40.0,50.0)
O-&/OR P-XYLENE	3.44292	3.01675	2.88617	3.43481	3.32206	1.455	3.22054	7.901	(Conc=12.5,25.1,37.6,50.1,62.7)

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: 5SCRL US EPA Contract: TFA 302

Lab Code: CHICAGOIL Case No.: SF-6232 SAS No.: N.A. SDG No.: N.A.

Matrix Spike - EPA Sample No.: 89FM22S02~~R~~DL 7/13/89

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	10.00	0.00	6.80	67	61-145
Trichloroethene	10.00	0.00	9.00	90	71-120
Benzene	10.00	0.00	9.50	94	76-127
Toluene	10.00	0.00	10.00	99	76-125
Chlorobenzene	10.00	0.00	9.70	96	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	10.00	6.70	67	0	14	61-145
Trichloroethene	10.00	9.20	91	1	14	71-120
Benzene	10.00	9.60	96	2	11	76-127
Toluene	10.00	10.00	103	3	13	76-125
Chlorobenzene	10.00	10.00	99	3	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of qc limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name:5SCRL US EPA Contract:TFA 302

Lab Code: CHICAGOIL Case No.: SF-6232 SAS No.: N.A. SDG No.: N.A.

Matrix Spike - EPA Sample No.: 89FM22S02

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	10.00	.60	5.90	53 *	61-145
Trichloroethene	10.00	0.00	5.90	59 *	71-120
Benzene	10.00	0.00	7.90	78	76-127
Toluene	10.00	0.00	6.90	68 *	76-125
Chlorobenzene	10.00	0.00	7.00	70 *	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	10.00	5.90	53 *	0	14	61-145
Trichloroethene	10.00	6.10	60 *	1	14	71-120
Benzene	10.00	7.90	79	1	11	76-127
Toluene	10.00	6.80	68 *	0	13	76-125
Chlorobenzene	10.00	7.00	70 *	0	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of qc limits

RPD: 0 out of 5 outside limits
Spike Recovery: 8 out of 10 outside limits

COMMENTS: _____

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: 5SCRL US EPA Contract: TFA 302

Lab Code: CHICAGOIL Case No.: SF-6232 SAS No.: N.A. SDG No.: N.A.

Lab File ID: >CJ669 Lab Sample ID: METHOD ~~BLK~~ BLANK 7/13/89

Date Analyzed: 6/29/89 Time Analyzed: 17:59

Matrix: (soil/water) water Level: (low/med) low

Instrument ID: 87 3

THIS METHOD BLANK APPLIES TO THE FOLLOWING:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	89FM11R15	89FM11R15	>CJ670	18:53
02	89FM22S01	89FM22S01	>CJ672	20:41
03	89FM22D01	89FM22D01	>CJ673	21:35
04	89FM22S02	89FM22S02	>CJ674	22:30
05	89FM22S02M	89FM22S02M	>CJ675	23:24
06	89FM22S02D	89FM22S02D	>CJ676	0:18
07	89FM22S03	89FM22S03	>CJ677	1:12
08	89FM22S04	89FM22S04	>CJ678	2:07
09	89FM22S05	89FM22S05	>CJ679	3:01
10				
11				
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COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: 5SCRL US EPA Contract: TFA 302

Lab Code: CHICAGOIL Case No.: SF-6232 SAS No.: N.A. SDG No.: N.A.

Lab File ID: >CF535 Lab Sample ID: METHOD BLK

Date Analyzed: 7/07/89 Time Analyzed: 10:52

Matrix: (soil/water) water Level: (low/med) low

Instrument ID: 87 3

THIS METHOD BLANK APPLIES TO THE FOLLOWING:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	89FM22S02~~RE~~ D2	89FM22S02RE 1	>CF536	13:22
02	89FM22S02MR	89FM22S02MRE	>CF537	14:16
03	89FM22S02DR	89FM22S02DRE	>CF538	15:10
04	89FM22S03RE	89FM22S03RE	>CF539	16:05
05	89FM22S04RE	89FM22S04RE	>CF540	16:59
06	89FM22S05RE	89FM22S05RE	>CF541	17:54
07				
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COMMENTS: _____

FORM IV VOA 1/87 Rev.

Calibration Check Report

Title: CB FILE FOR VOLATILES--HP5985B DM 1/20/89 (20 ML PURGE)
Calibrated: 890707 08:05

Check Standard Data File: >CC707
Injection Time: 890707 11:47

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
CHLOROMETHANE	3.38081	3.20614	5.17	Average	(Conc=20.00)
BROMOMETHANE	4.52135	4.08938	9.55	Average	(Conc=20.00)
VINYL CHLORIDE	4.90834	4.47390	8.85	Average	(Conc=20.00)
CHLOROETHANE	2.91321	2.61347	10.29	Average	(Conc=20.00)
METHYLENE CHLORIDE	3.40884	2.97488	12.73	Average	(Conc=15.00)
ACROLEIN	.03912	.03493	10.71	Average	(Conc=375.00)
ACETONE	.12202	.10128	17.00	Average	(Conc=375.00)
ACRYLONITRILE	.23341	.19433	16.74	Average	(Conc=375.00)
CARBON DISULFIDE	2.51408	1.68474	32.99	Average	(Conc=12.50)
1,1-DICHLOROETHENE	4.47861	3.95153	11.77	Average	(Conc=15.00)
1,1-DICHLOROETHANE	8.28974	7.36591	11.14	Average	(Conc=15.00)
1,2-DICHLOROETHENE (TOTAL)	4.47723	3.95153	11.74	Average	(Conc=15.00)
CHLOROFORM	6.84052	6.01946	12.00	Average	(Conc=15.00)
1,2-DICHLOROETHANE-D4	1.34306	1.29066	3.90	Average	(Conc=10.00)
1,2-DICHLOROETHANE	1.71279	1.49383	12.78	Average	(Conc=15.00)
2-BUTANONE	.01376	.01276	7.28	Average	(Conc=125.00)
1,1,1-TRICHLOROETHANE	1.17466	1.10407	6.01	Average	(Conc=15.00)
CARBON TETRACHLORIDE	1.11430	1.05864	5.00	Average	(Conc=15.00)
VINYL ACETATE	.10756	.32821	205.14	Average	(Conc=37.50)
BROMODICHLOROMETHANE	.90863	.83354	8.26	Average	(Conc=15.00)
1,2-DICHLOROPROPANE	1.02795	.93209	9.33	Average	(Conc=15.00)
CIS-1,3-DICHLOROPROPENE	.90814	.82585	9.06	Average	(Conc=21.00)
TRICHLOROETHENE	1.33727	1.16123	13.16	Average	(Conc=15.00)
BENZENE-D6	2.42037	2.50312	3.42	Average	(Conc=10.00)
BENZENE	2.85267	2.66331	6.64	Average	(Conc=15.00)
DIBROMOCHLOROMETHANE	.58485	.54222	7.29	Average	(Conc=15.00)
TRANS-1,3-DICHLOROPROPENE	.75661	.69793	7.76	Average	(Conc=9.00)
1,1,2-TRICHLOROETHANE	.39343	.36018	8.45	Average	(Conc=15.00)
2-CHLOROETHYL VINYLETHER	.21547	.19750	8.34	Average	(Conc=15.00)
BROMOFORM	.29891	.28172	5.75	Average	(Conc=15.00)
4-METHYL-2-PENTANONE	.41694	.36427	12.63	Average	(Conc=25.00)
2-HEXANONE	.34932	.29609	15.24	Average	(Conc=25.00)
TETRACHLOROETHENE	2.46280	2.27406	7.66	Average	(Conc=15.00)
1,1,2,2-TETRACHLOROETHANE	.78966	.82730	4.77	Average	(Conc=15.00)
TOLUENE-D8	4.70507	4.78010	1.59	Average	(Conc=10.00)
TOLUENE	4.23077	3.90691	7.66	Average	(Conc=15.00)
CHLOROBENZENE	4.68428	4.25222	9.22	Average	(Conc=15.00)
ETHYLBENZENE	2.55650	2.35570	7.85	Average	(Conc=15.00)
STYRENE	4.90446	4.39846	10.32	Average	(Conc=12.50)
META XYLENE	3.19497	2.93915	8.01	Average	(Conc=30.00)

RF - Response Factor from daily standard file at 15.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration

%Diff - % Difference from original average or curve

Calibration Check Report

Title: CB FILE FOR VOLATILES--HP5985B DM 1/20/89 (20 ML PURGE)
Calibrated: 890707 08:05

Check Standard Data File: >CC707
Injection Time: 890707 11:47

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
O-&/OR P-XYLENE	3.10220	2.85346	8.02	Average	(Conc=37.60)

RF - Response Factor from daily standard file at 15.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration

%Diff - % Difference from original average or curve

Calibration Check Report

Title: CB FILE FOR VOLATILES--HP5985B DM 1/20/89 (20 ML PURGE)
Calibrated: 890628 16:22

Check Standard Data File: >CJ671
Injection Time: 890629 19:47

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
CHLOROMETHANE	1.9[illegible]	1.[illegible]	31.6[illegible]	Average	(Conc=[illegible]0.00)
BROMOMETHANE	3.6[illegible]	3.[illegible]	5.43	Average	(Conc=[illegible]0.00)
VINYL CHLORIDE	3.35195	3.08654	7.92	Average	(Conc=20.00)
CHLOROETHANE	2.30776	2.36310	2.40	Average	(Conc=20.[illegible])
METHYLENE CHLORIDE	2.90[illegible]	2.92267	.59	Average	(Conc=15.00)
ACROLEIN	.05963	.04097	6.07	Average	(Conc=375.00)
ACETONE	.08802	.11878	34.95	Average	(Conc=375.00)
ACRYLONITRILE	.11045	.22144	100.49	Average*	(Conc=375.00)
CARBON DISULFIDE	3.58[illegible]	2.30[illegible]	35.75	Average*	(Conc=12.50)
1,1-DICHLOROETHENE	3.46[illegible]	3.20219	7.38	Average	(Conc=15.00)
1,1-DICHLOROETHANE	6.18965	6.94112	12.48	Average	(Conc=15.00)
1,2-DICHLOROETHENE (TOTAL)	4.00[illegible]	3.6245[illegible]	8.06	Average	(Conc=15.00)
CHLOROFORM	4.93528	5.86[illegible]	18.81	Average	(Conc=15.00)
1,2-DICHLOROETHANE-D4	1.25166	1.30261	4.08	Average	(Conc=10.00)
1,2-DICHLOROETHANE	1.42516	1.54794	8.62	Average	(Conc=15.00)
2-BUTANONE	.01219	.01483	21.69	Average	(Conc=125.00)
1,1,1-TRICHLOROETHANE	.94812	.98778	4.18	Average	(Conc=15.00)
CARBON TETRACHLORIDE	.78532	.93302	18.81	Average	(Conc=15.00)
VINYL ACETATE	.37992	.05536	85.43	Average*	(Conc=37.50)
BROMODICHLOROMETHANE	.76114	.84943	11.60	Average	(Conc=15.00)
1,2-DICHLOROPROPANE	.76579	.95475	24.68	Average	(Conc=15.00)
CIS-1,3-DICHLOROPROPENE	.77659	.85533	10.14	Average	(Conc=21.00)
TRICHLOROETHENE	.89276	1.25826	40.94	Average*	(Conc=15.00)
BENZENE-D6	2.31392	2.31457	.03	Average	(Conc=10.00)
BENZENE	2.49644	2.53548	1.56	Average	(Conc=15.00)
DIBROMOCHLOROMETHANE	.42689	.56638	32.68	Average	(Conc=15.00)
TRANS-1,3-DICHLOROPROPENE	.65299	.72979	11.76	Average	(Conc=9.00)
1,1,2-TRICHLOROETHANE	.28836	.39301	36.29	Average*	(Conc=15.00)
2-CHLOROETHYL VINYLETHER	.18514	.22086	19.29	Average	(Conc=15.00)
BROMOFORM	.24688	.29220	18.36	Average	(Conc=15.00)
4-METHYL-2-PENTANONE	.35287	.39773	12.71	Average	(Conc=25.00)
2-HEXANONE	.30798	.34444	11.84	Average	(Conc=25.00)
TETRACHLOROETHENE	1.70349	1.94709	14.30	Average	(Conc=15.00)
1,1,2,2-TETRACHLOROETHANE	.75633	.65263	13.71	Average	(Conc=15.00)
TOLUENE-D8	2.72817	4.12142	51.07	Average*	(Conc=10.00)
TOLUENE	3.48056	3.43418	1.33	Average	(Conc=15.00)
CHLOROBENZENE	3.29942	3.95413	19.84	Average	(Conc=15.00)
ETHYLBENZENE	2.04395	2.06331	.95	Average	(Conc=15.00)
STYRENE	4.21075	4.06285	3.51	Average	(Conc=12.50)
META XYLENE	3.23253	2.48987	22.97	Average	(Conc=30.00)

RF - Response Factor from daily standard file at 15.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration

%Diff - % Difference from original average or curve

Calibration Check Report

Title: CB FILE FOR VOLATILES--HP5985B DM 1/20/89 (20 ML PURGE)
Calibrated: 890628 16:22

Check Standard Data File: >CJ671
Injection Time: 890629 19:47

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
O-&/OR P-XYLENE	3.22054	2.44778	23.99	Average	(Conc=37.60)

RF - Response Factor from daily standard file at 15.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration

%Diff - % Difference from original average or curve

Calibration Report

Title: CB FILE FOR VOLATILES--HP5985B DM 1/20/89 (20 ML PURGE)
Calibrated: 890707 08:05

Compound	Files: >SA706 RF 5.00	>SB706 RF 10.00	>SC706 RF 15.00	>SD706 RF 20.00	>SE706 RF 25.00	$\overline{RRT}$	$\overline{RF}$	% RSD	
CHLOROMETHANE	3.02148	3.49907	3.25309	3.80820	3.32218	.202	3.38081	8.693	(Conc=10.0,15.0,20.0,25.0,30.0)
BROMOMETHANE	4.06692	4.72093	4.47142	4.67028	4.67720	.314	4.52135	6.009	(Conc=10.0,15.0,20.0,25.0,30.0)
VINYL CHLORIDE	4.35754	5.03148	4.90456	5.15520	5.09293	.400	4.90834	6.551	(Conc=10.0,15.0,20.0,25.0,30.0)
CHLOROETHANE	2.63064	3.00472	2.87676	3.02355	3.03040	.501	2.91321	5.832	(Conc=10.0,15.0,20.0,25.0,30.0)
METHYLENE CHLORIDE	3.30439	3.66864	3.29271	3.37674	3.40173	.705	3.40884	4.472	(Conc=5.0,10.0,15.0,20.0,25.0)
ACROLEIN	.03496	.04183	.03655	.03854	.04370	.771	.03912	9.267	(Conc=225.5,300.0,375.0,450.0,525.
ACETONE	.11128	.12938	.12041	.12211	.12694	.767	.12202	5.741	(Conc=225.0,300.0,375.0,450.0,525.
ACRYLONITRILE	.21247	.24984	.22673	.23686	.24113	.831	.23341	6.152	(Conc=225.0,300.0,375.0,450.0,525.
CARBON DISULFIDE	2.25252	2.58103	2.47472	2.59908	2.66305	.850	2.51408	6.409	(Conc=7.5,10.0,12.5,15.0,17.5)
1,1-DICHLOROETHENE	4.38382	4.77164	4.31325	4.40098	4.52335	.962	4.47861	4.029	(Conc=5.0,10.0,15.0,20.0,25.0)
1,1-DICHLOROETHANE	8.09142	8.89785	7.99504	8.15699	8.30740	1.076	8.28974	4.324	(Conc=5.0,10.0,15.0,20.0,25.0)
1,2-DICHLOROETHENE (TOTAL)	4.33766	4.79583	4.32817	4.43286	4.49165	1.141	4.47723	4.258	(Conc=5.0,10.0,15.0,20.0,25.0)
CHLOROFORM	6.68562	7.29551	6.58796	6.80324	6.83029	1.190	6.84052	3.979	(Conc=5.0,10.0,15.0,20.0,25.0)
1,2-DICHLOROETHANE-D4	1.23827	1.30393	1.29677	1.39764	1.47870	1.247	1.34306	7.067	(Conc=10.0,10.0,10.0,10.0,10.0)
1,2-DICHLOROETHANE	1.63930	1.81620	1.65923	1.71794	1.73126	1.256	1.71279	4.059	(Conc=5.0,10.0,15.0,20.0,25.0)
2-BUTANONE	.01310	.01371	.01414	.01379	.01406	.686	.01376	2.991	(Conc=75.0,100.0,125.0,150.0,175.0
1,1,1-TRICHLOROETHANE	1.16029	1.26316	1.17763	1.11564	1.15657	.753	1.17466	4.635	(Conc=5.0,10.0,15.0,20.0,25.0)
CARBON TETRACHLORIDE	1.07782	1.18574	1.13218	1.06281	1.11294	.772	1.11430	4.352	(Conc=5.0,10.0,15.0,20.0,25.0)
VINYL ACETATE	.14751	.13636	.09065	.08846	.07482	.780	.10756	29.941	(Conc=22.5,30.0,37.5,45.0,52.5)
BROMODICHLOROMETHANE	.88215	.96137	.91397	.88176	.90388	.796	.90863	3.590	(Conc=5.0,10.0,15.0,20.0,25.0)
1,2-DICHLOROPROPANE	1.01818	1.10436	1.02320	.97935	1.01466	.865	1.02795	4.483	(Conc=5.0,10.0,15.0,20.0,25.0)
CIS-1,3-DICHLOROPROPENE	.88999	.96981	.90996	.87472	.89623	.877	.90814	4.044	(Conc=7.0,14.0,21.0,28.0,35.0)
TRICHLOROETHENE	1.27067	1.40440	1.34159	1.30255	1.36713	.905	1.33727	3.932	(Conc=5.0,10.0,15.0,20.0,25.0)
BENZENE-D6	2.42791	2.41296	2.44729	2.35489	2.45880	.923	2.42037	1.678	(Conc=10.0,10.0,10.0,10.0,10.0)
BENZENE	2.82261	3.05179	2.84052	2.73187	2.81656	.931	2.85267	4.170	(Conc=5.0,10.0,15.0,20.0,25.0)
DIBROMOCHLOROMETHANE	.56675	.62152	.59572	.56465	.57562	.933	.58485	4.086	(Conc=5.0,10.0,15.0,20.0,25.0)
TRANS-1,3-DICHLOROPROPENE	.73843	.80513	.76467	.72769	.74713	.939	.75661	4.006	(Conc=3.0,6.0,9.0,12.0,15.0)
1,1,2-TRICHLOROETHANE	.37551	.42304	.39308	.38157	.39396	.939	.39343	4.650	(Conc=5.0,10.0,15.0,20.0,25.0)
2-CHLOROETHYL VINYLETHER	.21526	.22903	.21652	.20507	.21147	.993	.21547	4.081	(Conc=5.0,10.0,15.0,20.0,25.0)
BROMOFORM	.28421	.31754	.30393	.29181	.29707	1.065	.29891	4.240	(Conc=5.0,10.0,15.0,20.0,25.0)
4-METHYL-2-PENTANONE	.38402	.43498	.42391	.42198	.41980	.913	.41694	4.631	(Conc=15.0,20.0,25.0,30.0,35.0)
2-HEXANONE	.30275	.35854	.36016	.35925	.36592	.976	.34932	7.500	(Conc=15.0,20.0,25.0,30.0,35.0)
TETRACHLOROETHENE	2.38581	2.61841	2.48141	2.40270	2.42568	.989	2.46280	3.824	(Conc=5.0,10.0,15.0,20.0,25.0)
1,1,2,2-TETRACHLOROETHANE	.78741	.87369	.78253	.75504	.74963	.986	.78966	6.306	(Conc=5.0,10.0,15.0,20.0,25.0)
TOLUENE-D8	4.64818	4.62926	4.74135	4.74250	4.76406	1.036	4.70507	1.309	(Conc=10.0,10.0,10.0,10.0,10.0)
TOLUENE	4.08991	4.45388	4.21982	4.15531	4.23496	1.045	4.23077	3.246	(Conc=5.0,10.0,15.0,20.0,25.0)
CHLOROBENZENE	4.48621	4.98241	4.65828	4.62528	4.66922	1.092	4.68428	3.885	(Conc=5.0,10.0,15.0,20.0,25.0)
ETHYLBENZENE	2.41090	2.72516	2.57076	2.51500	2.56068	1.187	2.55650	4.442	(Conc=5.0,10.0,15.0,20.0,25.0)
STYRENE	4.35761	4.99117	4.95388	5.15485	5.06480	1.389	4.90446	6.427	(Conc=7.5,10.0,12.5,15.0,17.5)

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

Calibration Report

Title: CB FILE FOR VOLATILES--HP5985B DM 1/20/89 (20 ML PURGE)
Calibrated: 890707 08:05

Compound	Files: >SA706 RF 5.00	>SB706 RF 10.00	>SC706 RF 15.00	>SD706 RF 20.00	>SE706 RF 25.00	$\overline{RRT}$	$\overline{RF}$	% RSD	
META XYLENE	2.79574	3.39451	3.27136	3.32088	3.19236	1.406	3.19497	7.355	(Conc=10.0,20.0,30.0,40.0,50.0)
O-&/OR P-XYLENE	2.75725	3.27374	3.16527	3.21724	3.09788	1.457	3.10228	6.560	(Conc=12.5,25.1,37.6,50.1,62.7)

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

:BAMON

QUANT REPORT

Operator ID: CARSTEN Quant Rev: 6 Quant Time: 890706 17:50
Output File: ^SA706::E1 Injected at: 890706 17:02
Data File: >SA706::A9 Dilution Factor: 1.00000
Name: 1 STD 5 PPB
Misc: 07/06/89 CRF

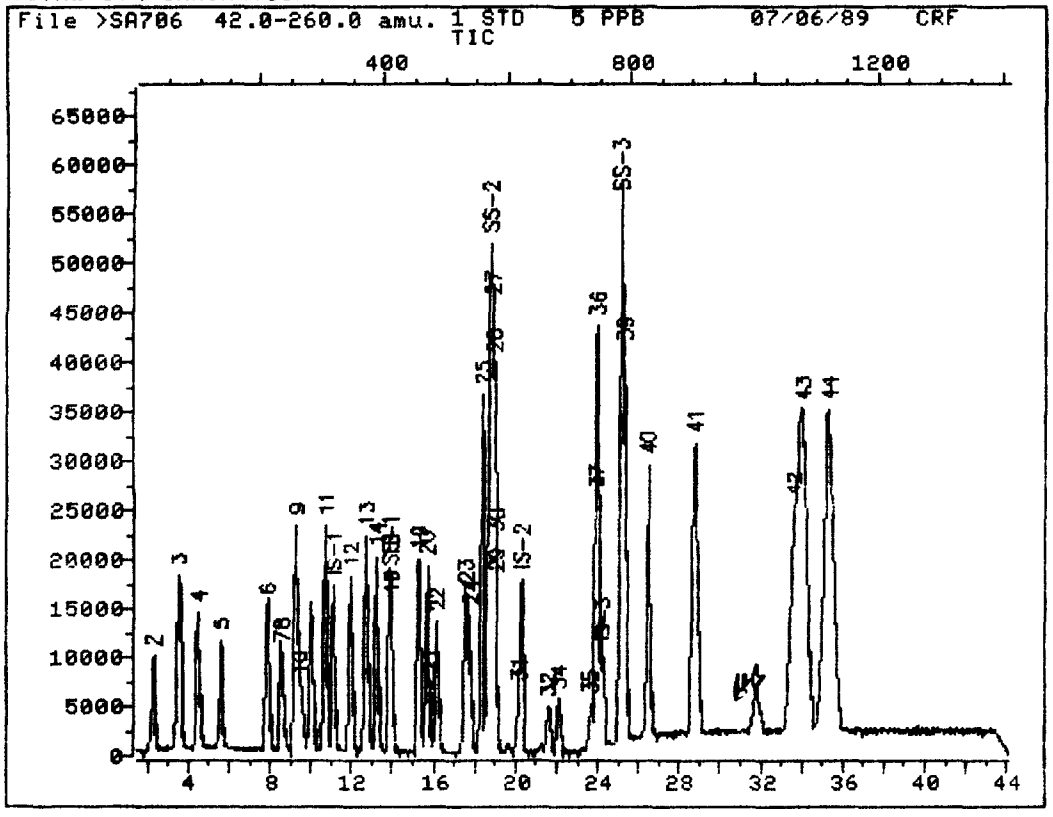
ID File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890615 14:07

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.10	128.0	26210	10.00	UG/L	97
2)	CHLOROMETHANE	2.24	50.0	79193	7.54	UG/L	100
3)	BROMOMETHANE	3.47	94.0	106594	9.82	UG/L	96
4)	VINYL CHLORIDE	4.44	62.0	114211	9.53	UG/L	96
5)	CHLOROETHANE	5.55	64.0	68949	9.87	UG/L	98
6)	METHYLENE CHLORIDE	7.81	84.0	43304	5.36	UG/L	91
7)	ACROLEIN	8.57	56.0	20664	227.69	UG/L	99
8)	ACETONE	8.54	43.0	65624	263.53	UG/L	96
9)	ACRYLONITRILE	9.23	53.0	125298	261.02	UG/L	98
10)	CARBON DISULFIDE	9.44	76.0	44279	6.34	UG/L	100
11)	1,1-DICHLOROETHENE	10.68	96.0	57450	5.06	UG/L	96
12)	1,1-DICHLOROETHANE	11.95	63.0	106038	5.52	UG/L	96
13)	1,2-DICHLOROETHENE (TOTAL)	12.67	96.0	56845	5.14	UG/L	97
14)	CHLOROFORM	13.21	83.0	87615	5.81	UG/L	99
15)	1,2-DICHLOROETHANE-D4	13.85	65.0	32455	10.82	UG/L	92
16)	1,2-DICHLOROETHANE	13.94	62.0	21483	6.35	UG/L	93
17)	*2-Bromo-1-chloropropane	20.24	77.0	122707	10.00	UG/L	99
18)	2-BUTANONE	13.88	72.0	12052	81.98	UG/L	95
19)	1,1,1-TRICHLOROETHANE	15.26	97.0	71188	5.67	UG/L	97
20)	CARBON TETRACHLORIDE	15.63	117.0	66128	5.53	UG/L	98
21)	VINYL ACETATE	15.78	43.0	40727	19.31	UG/L	96
22)	BROMODICHLOROMETHANE	16.11	83.0	54123	5.88	UG/L	97
23)	1,2-DICHLOROPROPANE	17.53	63.0	62469	5.78	UG/L	99
24)	CIS-1,3-DICHLOROPROPENE	17.74	75.0	76446	8.25	UG/L	94
25)	TRICHLOROETHENE	18.31	130.0	77960	5.20	UG/L	99
26)	BENZENE-D6	18.70	84.0	297922	9.83	UG/L	97
27)	BENZENE	18.82	78.0	173177	5.46	UG/L	95
28)	DIBROMOCHLOROMETHANE	18.88	129.0	34772	5.94	UG/L	94
29)	TRANS-1,3-DICHLOROPROPENE	19.03	75.0	27183M	3.58	UG/L	
30)	1,1,2-TRICHLOROETHANE	19.00	97.0	23039	5.65	UG/L	98
31)	2-CHLOROETHYL VINYLETHER	20.12	63.0	13207	5.92	UG/L	96
32)	BROMOFORM	21.57	173.0	17437	5.77	UG/L	97
33)	*1,4-Dichlorobutane	24.19	55.0	58925	10.00	UG/L	98
34)	4-METHYL-2-PENTANONE	22.08	43.0	33943	15.62	UG/L	96
35)	2-HEXANONE	23.62	43.0	26759	14.13	UG/L	85
36)	TETRACHLOROETHENE	23.95	164.0	70292	5.02	UG/L	98
37)	1,1,2,2-TETRACHLOROETHANE	23.86	83.0	23199	5.51	UG/L	95
38)	TOLUENE-D8	25.07	98.0	273894	15.21	UG/L	97
39)	TOLUENE	25.28	92.0	120499	5.20	UG/L	97
40)	CHLOROBENZENE	26.42	112.0	132175	5.34	UG/L	97
41)	ETHYLBENZENE	28.75	106.0	71031	5.07	UG/L	98
42)	STYRENE	33.61	104.0	192579	7.45	UG/L	88
43)	META XYLENE	34.00	106.0	164739	9.48	UG/L	97

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	O-&/OR P-XYLENE	35.30	106.0	203089	12.08	UG/L	94

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >SA706::A9 Quant Output File: ^SA706::E1
Name: 1 STD 5 PPB
Misc: 07/06/89 CRF

Id File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890615 14:07

Operator ID: CARSTEN
Quant Time: 890706 17:50
Injected at: 890706 17:02

QUANT REPORT

Operator ID: CARSTEN Quant Rev: 6 Quant Time: 890706 18:44
Output File: ^SB706::E1 Injected at: 890706 17:56
Data File: >SB706::A9 Dilution Factor: 1.00000
Name: 2 STD 10 PPB
Misc: 07/06/89 CRF

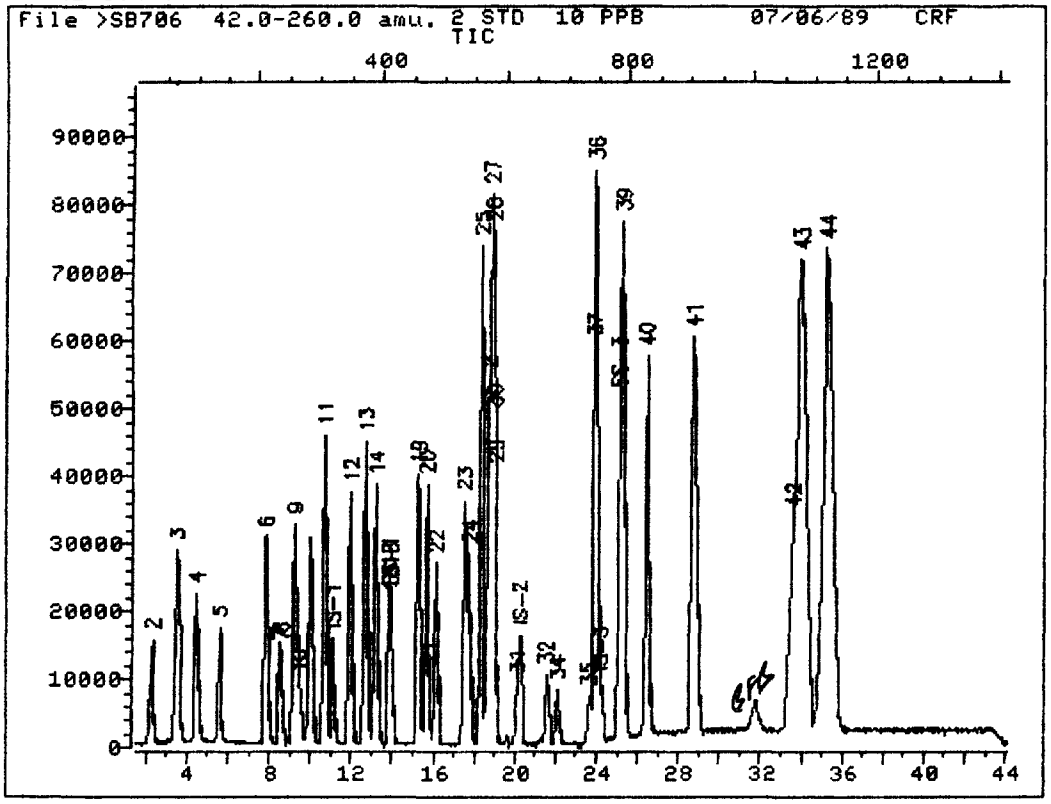
ID File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890615 14:07

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.10	128.0	23515	10.00	UG/L	95
2)	CHLOROMETHANE	2.24	50.0	123421	13.10	UG/L	100
3)	BROMOMETHANE	3.47	94.0	166519	17.10	UG/L	98
4)	VINYL CHLORIDE	4.44	62.0	177473	16.51	UG/L	96
5)	CHLOROETHANE	5.55	64.0	105984	16.91	UG/L	99
6)	METHYLENE CHLORIDE	7.81	84.0	86268	11.89	UG/L	92
7)	ACROLEIN	8.57	56.0	29507	362.39	UG/L	90
8)	ACETONE	8.51	43.0	91269	408.52	UG/L	92
9)	ACRYLONITRILE	9.23	53.0	176249	409.24	UG/L	98
10)	CARBON DISULFIDE	9.44	76.0	60693	9.68	UG/L	100
11)	1,1-DICHLOROETHENE	10.68	96.0	112205	11.01	UG/L	96
12)	1,1-DICHLOROETHANE	11.95	63.0	209233	12.15	UG/L	97
13)	1,2-DICHLOROETHENE (TOTAL)	12.67	96.0	112774	11.37	UG/L	95
14)	CHLOROFORM	13.18	83.0	171554	12.68	UG/L	98
15)	1,2-DICHLOROETHANE-D4	13.85	65.0	30662	11.40	UG/L	90
16)	1,2-DICHLOROETHANE	13.94	62.0	42708	14.08	UG/L	96
17)	*2-Bromo-1-chloropropane	20.21	77.0	111465	10.00	UG/L	99
18)	2-BUTANONE	13.88	72.0	15280	114.42	UG/L	99
19)	1,1,1-TRICHLOROETHANE	15.23	97.0	140798	12.34	UG/L	99
20)	CARBON TETRACHLORIDE	15.63	117.0	132169	12.17	UG/L	98
21)	VINYL ACETATE	15.78	43.0	45599	23.80	UG/L	97
22)	BROMODICHLOROMETHANE	16.11	83.0	107159	12.82	UG/L	97
23)	1,2-DICHLOROPROPANE	17.50	63.0	123097	12.55	UG/L	99
24)	CIS-1,3-DICHLOROPROPENE	17.74	75.0	151340	17.99	UG/L	97
25)	TRICHLOROETHENE	18.31	130.0	156541	11.50	UG/L	98
26)	BENZENE-D6	18.67	84.0	268961	9.77	UG/L	98
27)	BENZENE	18.82	78.0	340168	11.80	UG/L	96
28)	DIBROMOCHLOROMETHANE	18.88	129.0	69278	13.04	UG/L	94
29)	TRANS-1,3-DICHLOROPROPENE	19.01	75.0	53846M	7.81	UG/L	
30)	1,1,2-TRICHLOROETHANE	18.98	97.0	47154	12.72	UG/L	92
31)	2-CHLOROETHYL VINYLETHER	20.09	63.0	25529	12.60	UG/L	96
32)	BROMOFORM	21.54	173.0	35395	12.90	UG/L	97
33)	*1,4-Dichlorobutane	24.19	55.0	53107	10.00	UG/L	98
34)	4-METHYL-2-PENTANONE	22.08	43.0	46201	23.59	UG/L	95
35)	2-HEXANONE	23.62	43.0	38082	22.32	UG/L	93
36)	TETRACHLOROETHENE	23.92	164.0	139056	11.01	UG/L	98
37)	1,1,2,2-TETRACHLOROETHANE	23.86	83.0	46399	12.24	UG/L	97
38)	TOLUENE-D8	25.07	98.0	245846	15.15	UG/L	97
39)	TOLUENE	25.25	92.0	236532	11.32	UG/L	92
40)	CHLOROBENZENE	26.43	112.0	264601	11.87	UG/L	98
41)	ETHYLBENZENE	28.72	106.0	144725	11.46	UG/L	95
42)	STYRENE	33.58	104.0	265066	11.37	UG/L	84
43)	META XYLENE	34.00	106.0	360544	23.03	UG/L	98

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	O-&/OR P-XYLENE	35.24	106.0	436385	28.81	UG/L	95

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >SB706::A9 Quant Output File: ^SB706::E1
Name: 2 STD 10 PPB
Misc: 07/06/89 CRF

Id File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890615 14:07

Operator ID: CARSTEN
Quant Time: 890706 18:44
Injected at: 890706 17:56

QUANT REPORT

Operator ID: CARSTEN Quant Rev: 6 Quant Time: 890706 19:38
Output File: ^SC706::E1 Injected at: 890706 18:51
Data File: >SC706::A9 Dilution Factor: 1.00000
Name: 3 STD 15 PPB
Misc: 07/06/89 CRF

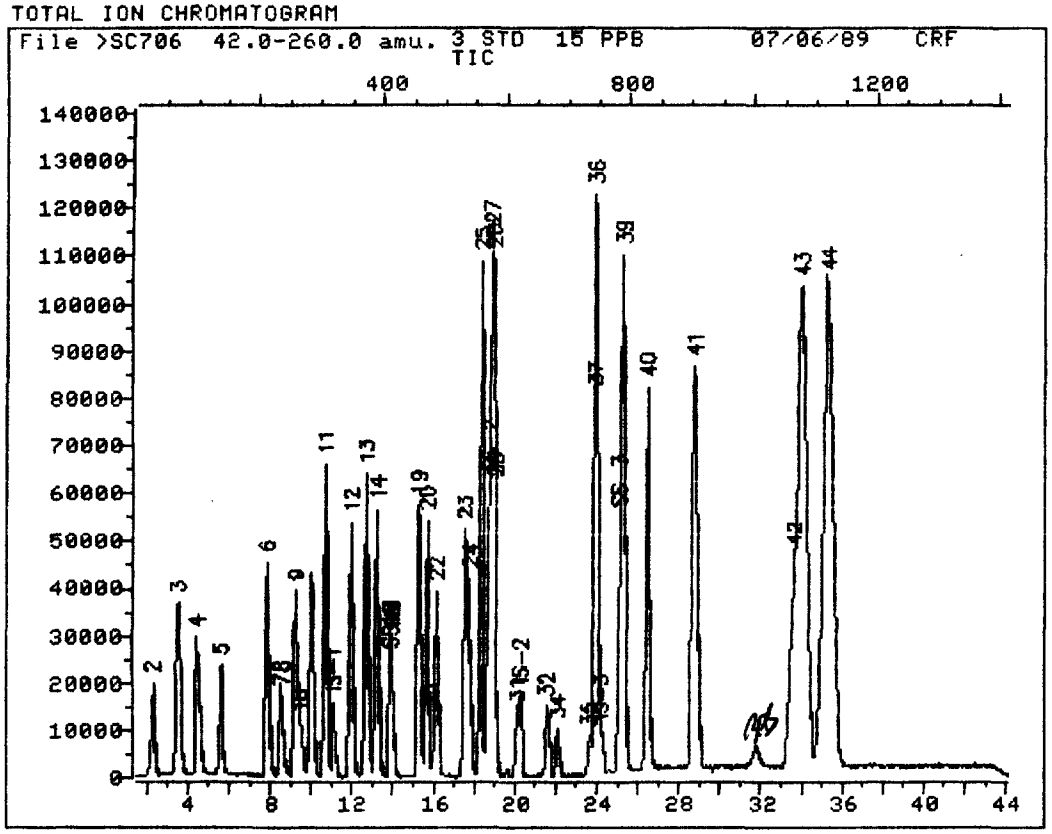
ID File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890615 14:07

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.10	128.0	24979	10.00	UG/L	97
2)	CHLOROMETHANE	2.24	50.0	162518	16.24	UG/L	100
3)	BROMOMETHANE	3.50	94.0	223383	21.60	UG/L	98
4)	VINYL CHLORIDE	4.44	62.0	245022	21.46	UG/L	99
5)	CHLOROETHANE	5.58	64.0	143717	21.59	UG/L	98
6)	METHYLENE CHLORIDE	7.84	84.0	123373	16.01	UG/L	93
7)	ACROLEIN	8.57	56.0	34239	395.86	UG/L	95
8)	ACETONE	8.54	43.0	112794	475.28	UG/L	96
9)	ACRYLONITRILE	9.23	53.0	212383	464.24	UG/L	98
10)	CARBON DISULFIDE	9.44	76.0	77270	11.60	UG/L	100
11)	1,1-DICHLOROETHENE	10.68	96.0	161611	14.93	UG/L	97
12)	1,1-DICHLOROETHANE	11.95	63.0	299562	16.37	UG/L	99
13)	1,2-DICHLOROETHENE (TOTAL)	12.67	96.0	162170	15.39	UG/L	93
14)	CHLOROFORM	13.21	83.0	246841	17.17	UG/L	98
15)	1,2-DICHLOROETHANE-D4	13.85	65.0	32392	11.34	UG/L	91
16)	1,2-DICHLOROETHANE	13.94	62.0	62169	19.29	UG/L	98
17)	*2-Bromo-1-chloropropane	20.24	77.0	113980	10.00	UG/L	99
18)	2-BUTANONE	13.88	72.0	20141	147.50	UG/L	96
19)	1,1,1-TRICHLOROETHANE	15.23	97.0	201339	17.26	UG/L	99
20)	CARBON TETRACHLORIDE	15.63	117.0	193568	17.42	UG/L	97
21)	VINYL ACETATE	15.78	43.0	38746	19.78	UG/L	94
22)	BROMODICHLOROMETHANE	16.11	83.0	156262	18.28	UG/L	98
23)	1,2-DICHLOROPROPANE	17.50	63.0	174937	17.44	UG/L	97
24)	CIS-1,3-DICHLOROPROPENE	17.74	75.0	217806	25.32	UG/L	96
25)	TRICHLOROETHENE	18.31	130.0	229372	16.47	UG/L	97
26)	BENZENE-D6	18.70	84.0	278942	9.91	UG/L	96
27)	BENZENE	18.83	78.0	485643	16.47	UG/L	98
28)	DIBROMOCHLOROMETHANE	18.89	129.0	101851	18.74	UG/L	99
29)	TRANS-1,3-DICHLOROPROPENE	19.01	75.0	78441M	11.13	UG/L	
30)	1,1,2-TRICHLOROETHANE	19.01	97.0	67205	17.73	UG/L	97
31)	2-CHLOROETHYL VINYLETHER	20.09	63.0	37019	17.86	UG/L	98
32)	BROMOFORM	21.54	173.0	51963	18.51	UG/L	97
33)	*1,4-Dichlorobutane	24.19	55.0	53726	10.00	UG/L	98
34)	4-METHYL-2-PENTANONE	22.08	43.0	56937	28.74	UG/L	99
35)	2-HEXANONE	23.62	43.0	48375	28.02	UG/L	87
36)	TETRACHLOROETHENE	23.92	164.0	199974	15.66	UG/L	96
37)	1,1,2,2-TETRACHLOROETHANE	23.86	83.0	63063	16.44	UG/L	99
38)	TOLUENE-D8	25.07	98.0	254734	15.52	UG/L	97
39)	TOLUENE	25.28	92.0	340071	16.09	UG/L	94
40)	CHLOROBENZENE	26.43	112.0	375406	16.65	UG/L	97
41)	ETHYLBENZENE	28.72	106.0	207175	16.22	UG/L	98
42)	STYRENE	33.61	104.0	332690	14.11	UG/L	85
43)	META XYLENE	34.00	106.0	527272	33.29	UG/L	98

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	O-&/OR P-XYLENE	35.27	106.0	639415	41.72	UG/L	95

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >SC706::A9 Quant Output File: ^SC706::E1
Name: 3 STD 15 PPB
Misc: 07/06/89 CRF

Id File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890615 14:07

Operator ID: CARSTEN
Quant Time: 890706 19:38
Injected at: 890706 18:51

QUANT REPORT

Operator ID: CARSTEN Quant Rev: 6 Quant Time: 890706 20:33
Output File: ^SD706::E1 Injected at: 890706 19:45
Data File: >SD706::A9 Dilution Factor: 1.00000
Name: 4 STD 20 PPB
Misc: 07/06/89 CRF

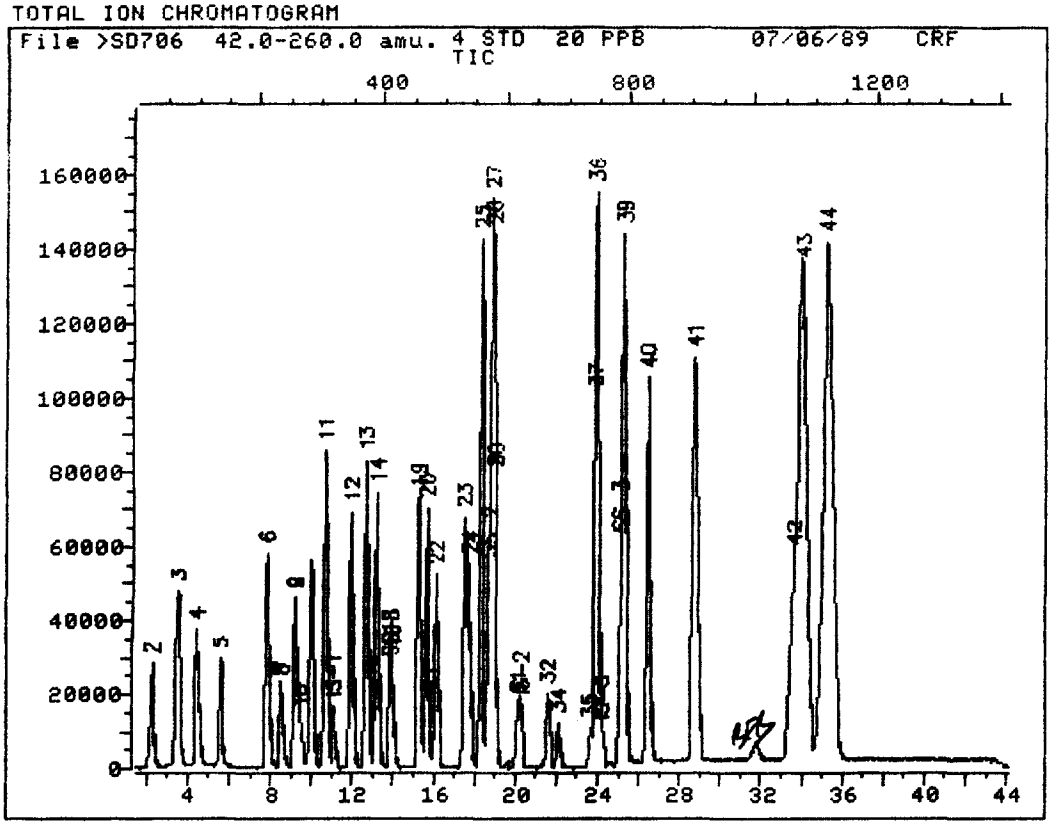
ID File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890615 14:07

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.10	128.0	23823	10.00	UG/L	98
2)	CHLOROMETHANE	2.24	50.0	226807	23.77	UG/L	100
3)	BROMOMETHANE	3.47	94.0	278150	28.20	UG/L	97
4)	VINYL CHLORIDE	4.44	62.0	307031	28.20	UG/L	96
5)	CHLOROETHANE	5.55	64.0	180075	28.36	UG/L	97
6)	METHYLENE CHLORIDE	7.84	84.0	160888	21.90	UG/L	94
7)	ACROLEIN	8.54	56.0	41314	500.84	UG/L	97
8)	ACETONE	8.51	43.0	130907	578.37	UG/L	91
9)	ACRYLONITRILE	9.20	53.0	253923	581.97	UG/L	99
10)	CARBON DISULFIDE	9.44	76.0	92877	14.62	UG/L	100
11)	1,1-DICHLOROETHENE	10.68	96.0	209689	20.31	UG/L	93
12)	1,1-DICHLOROETHANE	11.95	63.0	388648	22.27	UG/L	96
13)	1,2-DICHLOROETHENE (TOTAL)	12.67	96.0	211208	21.01	UG/L	95
14)	CHLOROFORM	13.21	83.0	324147	23.64	UG/L	98
15)	1,2-DICHLOROETHANE-D4	13.85	65.0	33296	12.22	UG/L	91
16)	1,2-DICHLOROETHANE	13.97	62.0	81853	26.63	UG/L	96
17)	*2-Bromo-1-chloropropane	20.24	77.0	116378	10.00	UG/L	99
18)	2-BUTANONE	13.88	72.0	24081	172.72	UG/L	95
19)	1,1,1-TRICHLOROETHANE	15.24	97.0	259672	21.81	UG/L	97
20)	CARBON TETRACHLORIDE	15.63	117.0	247376	21.81	UG/L	99
21)	VINYL ACETATE	15.78	43.0	46328M	23.16	UG/L	
22)	BROMODICHLOROMETHANE	16.11	83.0	205234	23.51	UG/L	94
23)	1,2-DICHLOROPROPANE	17.50	63.0	227950	22.25	UG/L	98
24)	CIS-1,3-DICHLOROPROPENE	17.74	75.0	285035	32.45	UG/L	97
25)	TRICHLOROETHENE	18.31	130.0	303176	21.33	UG/L	99
26)	BENZENE-D6	18.67	84.0	274057	9.54	UG/L	97
27)	BENZENE	18.86	78.0	635859	21.13	UG/L	96
28)	DIBROMOCHLOROMETHANE	18.89	129.0	131425	23.69	UG/L	94
29)	TRANS-1,3-DICHLOROPROPENE	19.01	75.0	101625M	14.12	UG/L	
30)	1,1,2-TRICHLOROETHANE	19.01	97.0	88813	22.95	UG/L	99
31)	2-CHLOROETHYL VINYLETHER	20.09	63.0	47731	22.56	UG/L	97
32)	BROMOFORM	21.57	173.0	67920	23.70	UG/L	98
33)	*1,4-Dichlorobutane	24.20	55.0	53208	10.00	UG/L	92
34)	4-METHYL-2-PENTANONE	22.08	43.0	67358	34.33	UG/L	97
35)	2-HEXANONE	23.62	43.0	57345	33.54	UG/L	91
36)	TETRACHLOROETHENE	23.95	164.0	255686	20.21	UG/L	97
37)	1,1,2,2-TETRACHLOROETHANE	23.86	83.0	80348	21.15	UG/L	99
38)	TOLUENE-D8	25.10	98.0	252339	15.52	UG/L	97
39)	TOLUENE	25.28	92.0	442191	21.13	UG/L	98
40)	CHLOROBENZENE	26.43	112.0	492204	22.04	UG/L	98
41)	ETHYLBENZENE	28.72	106.0	267636	21.15	UG/L	97
42)	STYRENE	33.61	104.0	411419	17.62	UG/L	85
43)	META XYLENE	34.03	106.0	706789	45.06	UG/L	99

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	O-&/OR P-XYLENE	35.24	106.0	857627	56.51	UG/L	95

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >SD706::A9 Quant Output File: ^SD706::E1
Name: 4 STD 20 PPB
Misc: 07/06/89 CRF

Id File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890615 14:07

Operator ID: CARSTEN
Quant Time: 890706 20:33
Injected at: 890706 19:45

QUANT REPORT

Operator ID: CARSTEN Quant Rev: 6 Quant Time: 890706 21:27
Output File: ^SE706::E1 Injected at: 890706 20:39
Data File: >SE706::A9 Dilution Factor: 1.00000
Name: 5 STD 25 PPB
Misc: 07/06/89 CRF

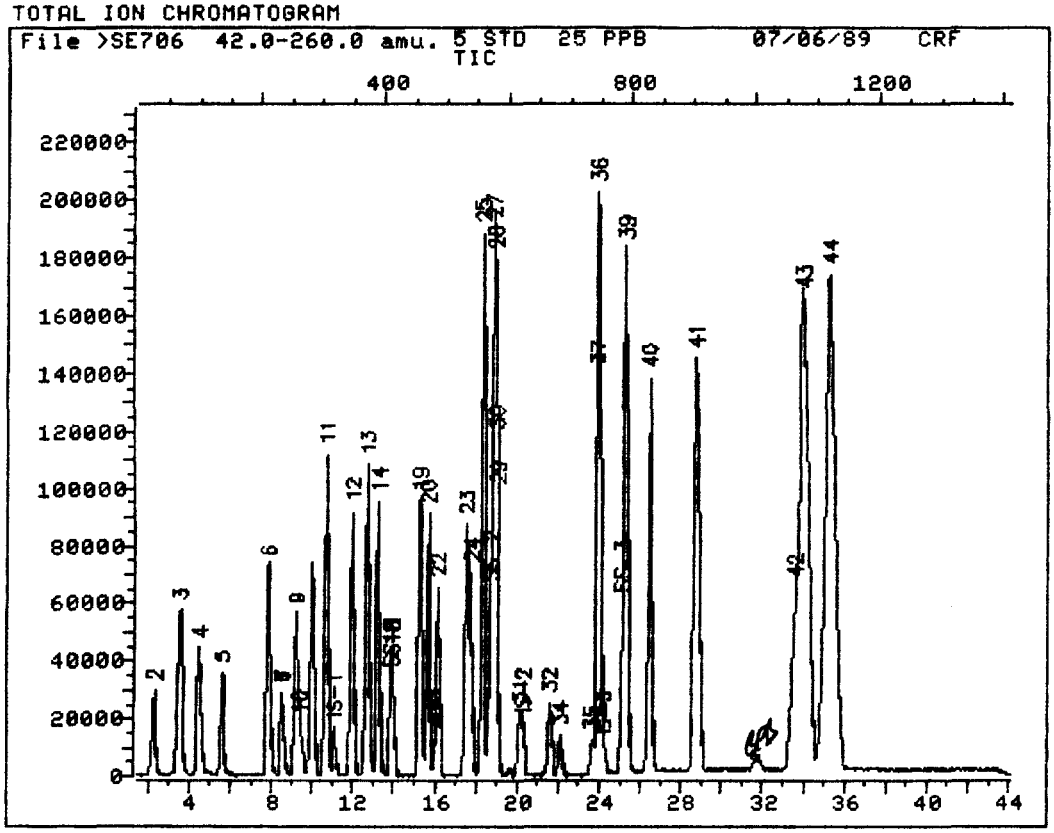
ID File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890615 14:07

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.10	128.0	24324	10.00	UG/L	99
2)	CHLOROMETHANE	2.27	50.0	242426	24.88	UG/L	100
3)	BROMOMETHANE	3.50	94.0	341305	33.89	UG/L	95
4)	VINYL CHLORIDE	4.47	62.0	371641	33.43	UG/L	97
5)	CHLOROETHANE	5.55	64.0	221134	34.11	UG/L	96
6)	METHYLENE CHLORIDE	7.82	84.0	206859	27.57	UG/L	92
7)	ACROLEIN	8.54	56.0	55811	662.64	UG/L	96
8)	ACETONE	8.51	43.0	162102	701.44	UG/L	93
9)	ACRYLONITRILE	9.23	53.0	307931	691.21	UG/L	98
10)	CARBON DISULFIDE	9.41	76.0	113358	17.48	UG/L	100
11)	1,1-DICHLOROETHENE	10.68	96.0	275065	26.09	UG/L	94
12)	1,1-DICHLOROETHANE	11.95	63.0	505173	28.35	UG/L	98
13)	1,2-DICHLOROETHENE (TOTAL)	12.67	96.0	273137	26.61	UG/L	93
14)	CHLOROFORM	13.22	83.0	415350	29.67	UG/L	98
15)	1,2-DICHLOROETHANE-D4	13.85	65.0	35968	12.93	UG/L	91
16)	1,2-DICHLOROETHANE	13.94	62.0	105278	33.55	UG/L	97
17)	*2-Bromo-1-chloropropane	20.25	77.0	117004	10.00	UG/L	97
18)	2-BUTANONE	13.88	72.0	28790	205.39	UG/L	95
19)	1,1,1-TRICHLOROETHANE	15.24	97.0	338309	28.26	UG/L	99
20)	CARBON TETRACHLORIDE	15.63	117.0	325545	28.55	UG/L	99
21)	VINYL ACETATE	15.78	43.0	45957M	22.85	UG/L	
22)	BROMODICHLOROMETHANE	16.11	83.0	264393	30.12	UG/L	96
23)	1,2-DICHLOROPROPANE	17.50	63.0	296798	28.82	UG/L	99
24)	CIS-1,3-DICHLOROPROPENE	17.74	75.0	367017	41.56	UG/L	97
25)	TRICHLOROETHENE	18.28	130.0	399900	27.98	UG/L	99
26)	BENZENE-D6	18.68	84.0	287690	9.96	UG/L	96
27)	BENZENE	18.83	78.0	823871	27.23	UG/L	94
28)	DIBROMOCHLOROMETHANE	18.89	129.0	168375	30.19	UG/L	97
29)	TRANS-1,3-DICHLOROPROPENE	19.01	75.0	131126M	18.12	UG/L	
30)	1,1,2-TRICHLOROETHANE	18.98	97.0	115237	29.62	UG/L	99
31)	2-CHLOROETHYL VINYLETHER	20.09	63.0	61856	29.08	UG/L	98
32)	BROMOFORM	21.57	173.0	86897	30.16	UG/L	97
33)	*1,4-Dichlorobutane	24.20	55.0	54612	10.00	UG/L	98
34)	4-METHYL-2-PENTANONE	22.09	43.0	80241	39.85	UG/L	97
35)	2-HEXANONE	23.62	43.0	69943	39.86	UG/L	90
36)	TETRACHLOROETHENE	23.92	164.0	331178	25.51	UG/L	98
37)	1,1,2,2-TETRACHLOROETHANE	23.86	83.0	102347	26.25	UG/L	99
38)	TOLUENE-D8	25.07	98.0	260175	15.59	UG/L	96
39)	TOLUENE	25.28	92.0	578199	26.92	UG/L	94
40)	CHLOROBENZENE	26.43	112.0	637488	27.81	UG/L	97
41)	ETHYLBENZENE	28.72	106.0	349609	26.92	UG/L	99
42)	STYRENE	33.58	104.0	484048	20.19	UG/L	84
43)	META XYLENE	34.00	106.0	871705	54.15	UG/L	98

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	O-&/OR P-XYLENE	35.27	106.0	1060766	68.09	UG/L	96

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >SE706::A9 Quant Output File: ^SE706::E1
Name: 5 STD 25 PPB
Misc: 07/06/89 CRF

Id File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890615 14:07

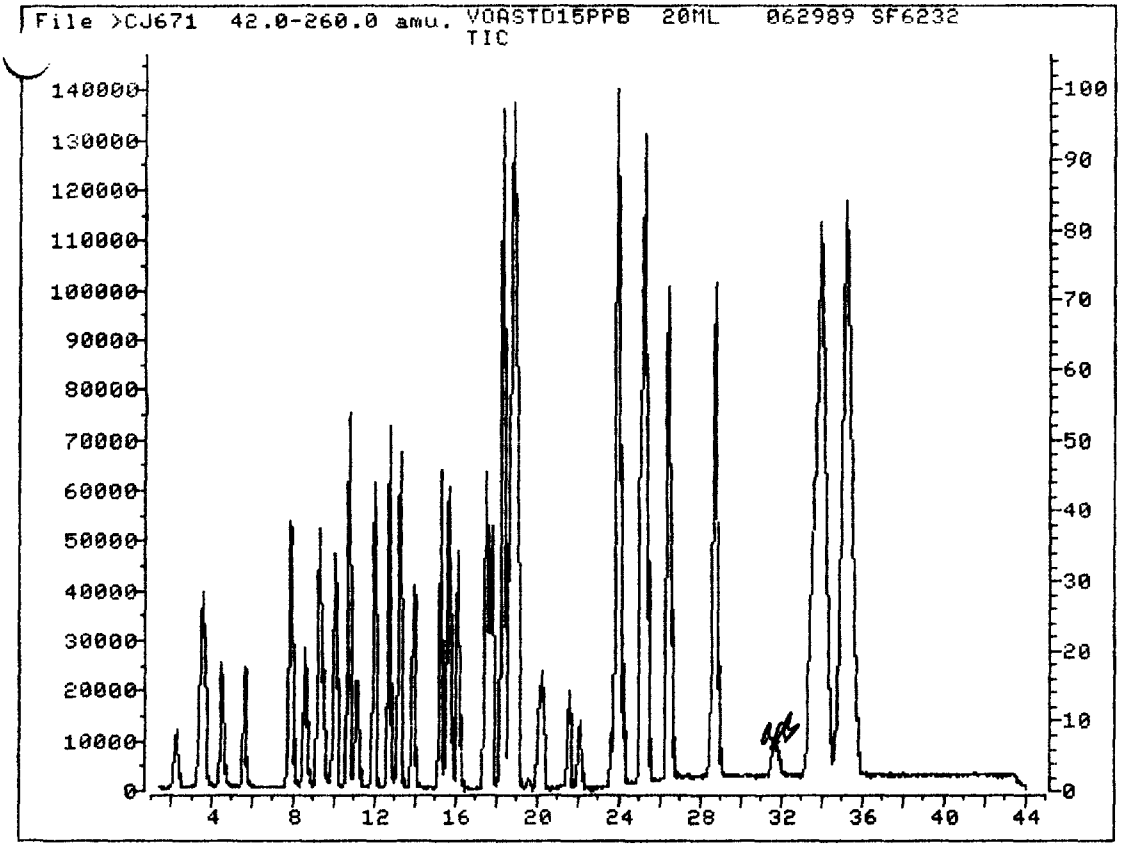
Operator ID: CARSTEN
Quant Time: 890706 21:27
Injected at: 890706 20:39

QUANT REPORT

Operator ID: CHACKO Quant Rev: 6 Quant Time: 890630 09:48
Output File: ^CJ671::E1 Injected at: 890629 19:47
Data File: >CJ671::A5 Dilution Factor: 1.00000
Name: VOASTD15PPB 20ML
Misc: 062989 SF6232

ID File: ID3CJ6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890628 16:24

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.07	128.0	33549	10.00	UG/L	93
2)	CHLOROMETHANE	2.24	50.0	90882	13.67	UG/L	100
3)	BROMOMETHANE	3.53	94.0	257209	21.09	UG/L	96
4)	VINYL CHLORIDE	4.47	62.0	207101	18.42	UG/L	97
5)	CHLOROETHANE	5.58	64.0	158559	20.48	UG/L	99
6)	METHYLENE CHLORIDE	7.81	84.0	147079	15.08	UG/L	95
7)	ACROLEIN	8.57	56.0	51547	397.77	UG/L	94
8)	ACETONE	8.54	43.0	149434	506.07	UG/L	93
9)	ACRYLONITRILE	9.20	53.0	278597	751.83	UG/L	95
10)	CARBON DISULFIDE	9.41	76.0	96644	8.03	UG/L	100
11)	1,1-DICHLOROETHENE	10.65	96.0	186307	16.06	UG/L	98
12)	1,1-DICHLOROETHANE	11.92	63.0	350308	16.87	UG/L	96
13)	1,2-DICHLOROETHENE (TOTAL)	12.64	96.0	185419	13.79	UG/L	98
14)	CHLOROFORM	13.18	83.0	295123	17.82	UG/L	98
15)	1,2-DICHLOROETHANE-D4	13.82	65.0	43708	10.41	UG/L	91
16)	1,2-DICHLOROETHANE	13.94	62.0	77898	16.29	UG/L	97
17)	*2-Bromo-1-chloropropane	20.21	77.0	150315	10.00	UG/L	98
18)	2-BUTANONE	13.85	72.0	27866	152.12	UG/L	93
19)	1,1,1-TRICHLOROETHANE	15.24	97.0	222717	15.63	UG/L	98
20)	CARBON TETRACHLORIDE	15.63	117.0	210371	17.82	UG/L	99
21)	VINYL ACETATE	15.75	43.0	31205M	5.46	UG/L	
22)	BROMODICHLOROMETHANE	16.11	83.0	191524	16.74	UG/L	95
23)	1,2-DICHLOROPROPANE	17.47	63.0	215270	18.70	UG/L	98
24)	CIS-1,3-DICHLOROPROPENE	17.71	75.0	269995	23.13	UG/L	97
25)	TRICHLOROETHENE	18.28	130.0	283703	21.14	UG/L	99
26)	BENZENE-D6	18.67	84.0	347915	10.00	UG/L	98
27)	BENZENE	18.80	78.0	571681	15.23	UG/L	96
28)	DIBROMOCHLOROMETHANE	18.86	129.0	127702	19.90	UG/L	97
29)	TRANS-1,3-DICHLOROPROPENE	18.98	75.0	98729M	10.06	UG/L	
30)	1,1,2-TRICHLOROETHANE	18.98	97.0	88612	20.44	UG/L	98
31)	2-CHLOROETHYL VINYLETHER	20.06	63.0	49798	17.89	UG/L	96
32)	BROMOFORM	21.54	173.0	65882	17.75	UG/L	97
33)	*1,4-Dichlorobutane	24.17	55.0	76665	10.00	UG/L	98
34)	4-METHYL-2-PENTANONE	22.05	43.0	76229	28.18	UG/L	96
35)	2-HEXANONE	23.59	43.0	66016	27.96	UG/L	87
36)	TETRACHLOROETHENE	23.92	164.0	223910	17.14	UG/L	98
37)	1,1,2,2-TETRACHLOROETHANE	23.83	83.0	75051	12.94	UG/L	99
38)	TOLUENE-D8	25.07	98.0	315969	15.11	UG/L	97
39)	TOLUENE	25.22	92.0	394922	14.80	UG/L	95
40)	CHLOROBENZENE	26.40	112.0	454715	17.98	UG/L	98
41)	ETHYLBENZENE	28.69	106.0	237276	15.14	UG/L	98
42)	STYRENE	33.55	104.0	389348	12.06	UG/L	85
43)	META XYLENE	33.97	106.0	572658	23.11	UG/L	96
44)	O-&/OR P-XYLENE	35.18	106.0	705597	28.58	UG/L	95



MS data file header from : >CJ671

Sample: VOASTD15PPB 20ML Operator: CHACKO MS 6/29/89 19:47
Misc : 062989 SF6232
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: #3VOA1 Tuning file: MTBFD3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

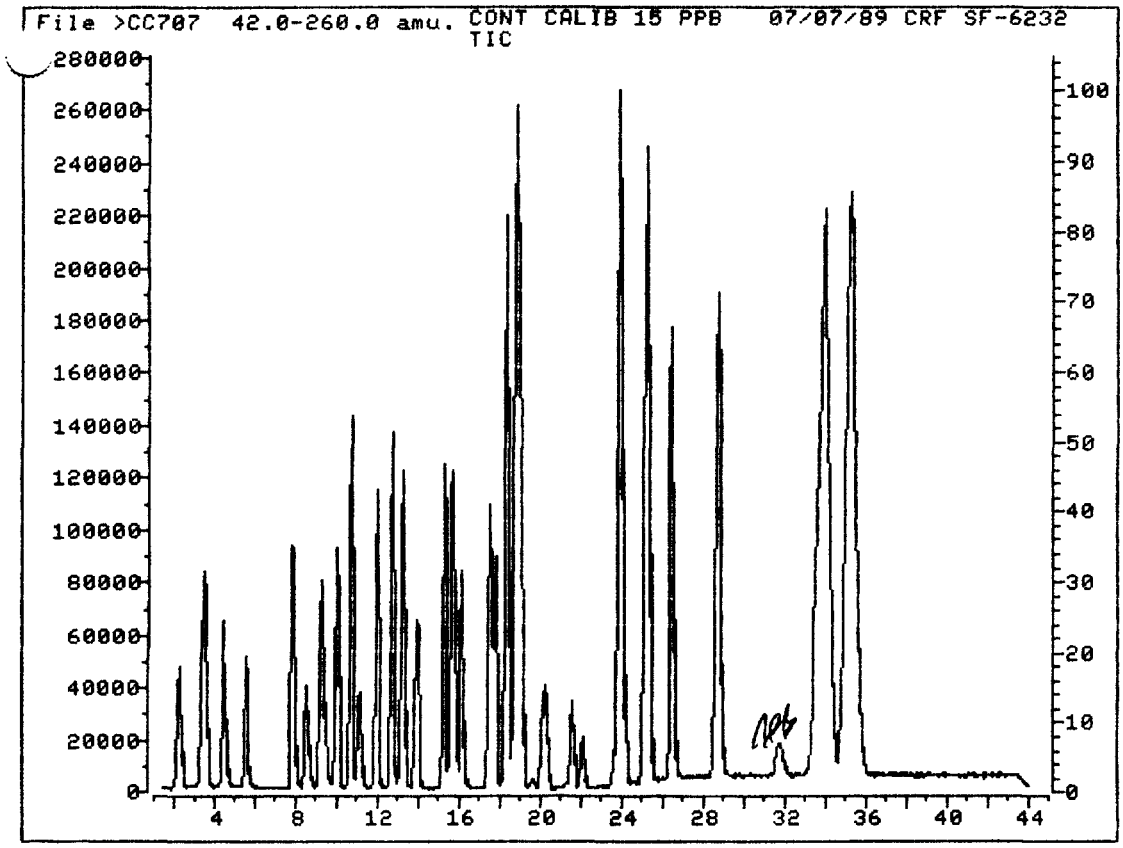
* Compound is ISTD

QUANT REPORT

Operator ID: CARSTEN Quant Rev: 6 Quant Time: 890712 13:59
Output File: ^CC707::E1 Injected at: 890707 11:47
Data File: >CC707::A9 Dilution Factor: 1.00000
Name: CONT CALIB 15 PPB
Misc: 07/07/89 CRF SF-6232

ID File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890707 12:51

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.11	128.0	59331	10.00	UG/L	97
2)	CHLOROMETHANE	2.24	50.0	380447	20.00	UG/L	100
3)	BROMOMETHANE	3.48	94.0	485254	20.00	UG/L	98
4)	VINYL CHLORIDE	4.44	62.0	530882	20.00	UG/L	97
5)	CHLOROETHANE	5.56	64.0	310119	20.00	UG/L	98
6)	METHYLENE CHLORIDE	7.82	84.0	264754	15.00	UG/L	95
7)	ACROLEIN	8.54	56.0	77713	375.00	UG/L	95
8)	ACETONE	8.51	43.0	225339	375.00	UG/L	94
9)	ACRYLONITRILE	9.21	53.0	432375	375.00	UG/L	96
10)	CARBON DISULFIDE	9.45	76.0	124947	12.50	UG/L	100
11)	1,1-DICHLOROETHENE	10.69	96.0	351672	15.00	UG/L	93
12)	1,1-DICHLOROETHANE	11.95	63.0	655540	15.00	UG/L	95
13)	1,2-DICHLOROETHENE (TOTAL)	12.65	96.0	351672	15.00	UG/L	97
14)	CHLOROFORM	13.19	83.0	535711	15.00	UG/L	99
15)	1,2-DICHLOROETHANE-D4	13.83	65.0	76576	10.00	UG/L	88
16)	1,2-DICHLOROETHANE	13.95	62.0	132946	15.00	UG/L	96
17)	*2-Bromo-1-chloropropane	20.22	77.0	265366	10.00	UG/L	97
18)	2-BUTANONE	13.86	72.0	42317	125.00	UG/L	92
19)	1,1,1-TRICHLOROETHANE	15.24	97.0	439476	15.00	UG/L	98
20)	CARBON TETRACHLORIDE	15.64	117.0	421389	15.00	UG/L	99
21)	VINYL ACETATE	15.76	43.0	326610	37.50	UG/L	96
22)	BROMODICHLOROMETHANE	16.09	83.0	331791	15.00	UG/L	95
23)	1,2-DICHLOROPROPANE	17.48	63.0	371016	15.00	UG/L	99
24)	CIS-1,3-DICHLOROPROPENE	17.72	75.0	460222	21.00	UG/L	97
25)	TRICHLOROETHENE	18.29	130.0	462228	15.00	UG/L	98
26)	BENZENE-D6	18.68	84.0	664244	10.00	UG/L	97
27)	BENZENE	18.84	78.0	1060126	15.00	UG/L	98
28)	DIBROMOCHLOROMETHANE	18.87	129.0	215829	15.00	UG/L	96
29)	TRANS-1,3-DICHLOROPROPENE	19.56	75.0	8290	.45	UG/L	42
30)	1,1,2-TRICHLOROETHANE	18.99	97.0	143371	15.00	UG/L	99
31)	2-CHLOROETHYL VINYLETHER	20.07	63.0	78616	15.00	UG/L	97
32)	BROMOFORM	21.55	173.0	112138	15.00	UG/L	99
33)	*1,4-Dichlorobutane	24.18	55.0	126880	10.00	UG/L	95
34)	4-METHYL-2-PENTANONE	22.07	43.0	115547	25.00	UG/L	92
35)	2-HEXANONE	23.60	43.0	93920	25.00	UG/L	83
36)	TETRACHLOROETHENE	23.94	164.0	432800	15.00	UG/L	99
37)	1,1,2,2-TETRACHLOROETHANE	23.85	83.0	157451	15.00	UG/L	93
38)	TOLUENE-D8	25.05	98.0	606499	10.00	UG/L	96
39)	TOLUENE	25.26	92.0	743563	15.00	UG/L	93
40)	CHLOROBENZENE	26.41	112.0	809283	15.00	UG/L	96
41)	ETHYLBENZENE	28.71	106.0	448336	15.00	UG/L	98
42)	STYRENE	33.60	104.0	697596	12.50	UG/L	86
43)	META XYLENE	33.96	106.0	1118760	30.00	UG/L	97
44)	O-&/OR P-XYLENE	35.23	106.0	1361296	37.60	UG/L	96



MS data file header from : >CC707

Sample: CONT CALIB 15 PPB Operator: CARSTEN MS 7/07/89 11:47
Misc : 07/07/89 CRF SF-6232
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: #3VOA1 Tuning file: MTBFD3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

QUANT REPORT

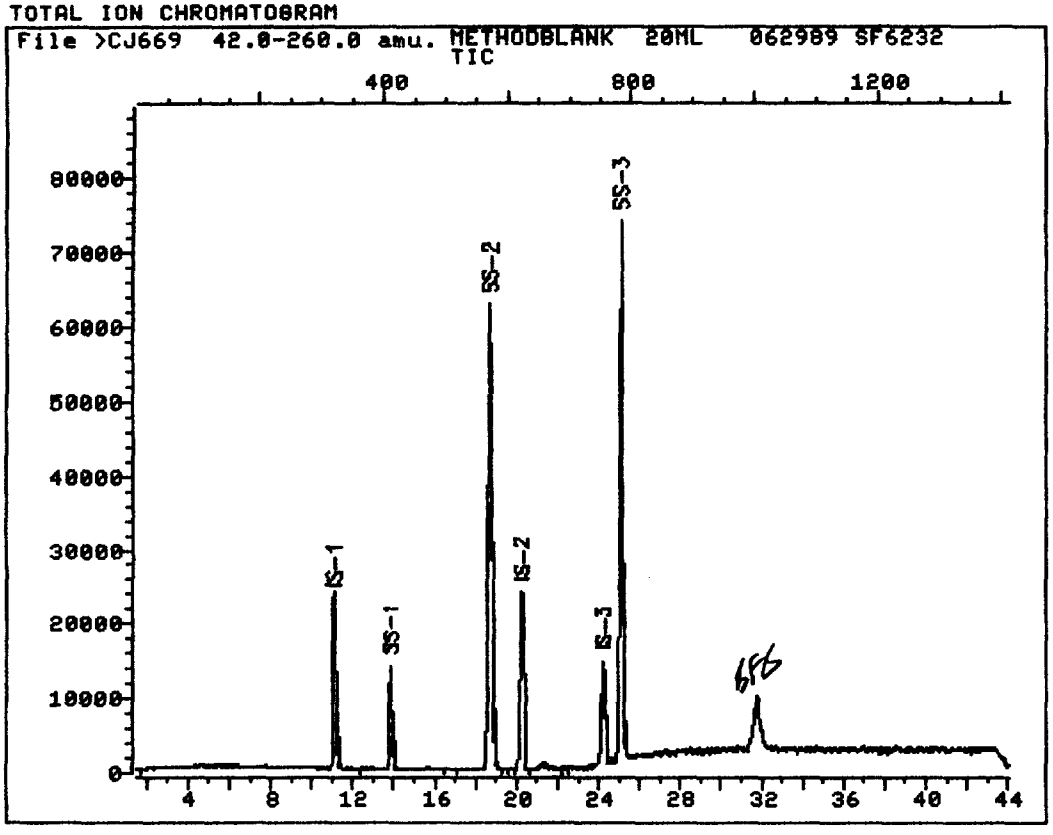
Operator ID: CHACKO Quant Rev: 6 Quant Time: 890630 10:36
Output File: ^CJ669::E1 Injected at: 890629 17:59
Data File: >CJ669::A5 Dilution Factor: 1.00000
Name: METHODBLANK 20ML
Misc: 062989 SF6232

ID File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.07	128.0	37654	10.00	UG/L	96
15)	1,2-DICHLOROETHANE-D4	13.81	65.0	42485	8.66	UG/L	87
17)	*2-Bromo-1-chloropropane	20.21	77.0	167628	10.00	UG/L	99
26)	BENZENE-D6	18.67	84.0	396554	10.22	UG/L	96
33)	*1,4-Dichlorobutane	24.19	55.0	82337	10.00	UG/L	97
38)	TOLUENE-D8	25.06	98.0	364509	10.74	UG/L	99

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CJ669::A5 Quant Output File: ^CJ669::E1
Name: METHODBLANK 20ML
Misc: 062989 SF6232

Id File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

Operator ID: CHACKO
Quant Time: 890630 10:36
Injected at: 890629 17:59

QUANT REPORT

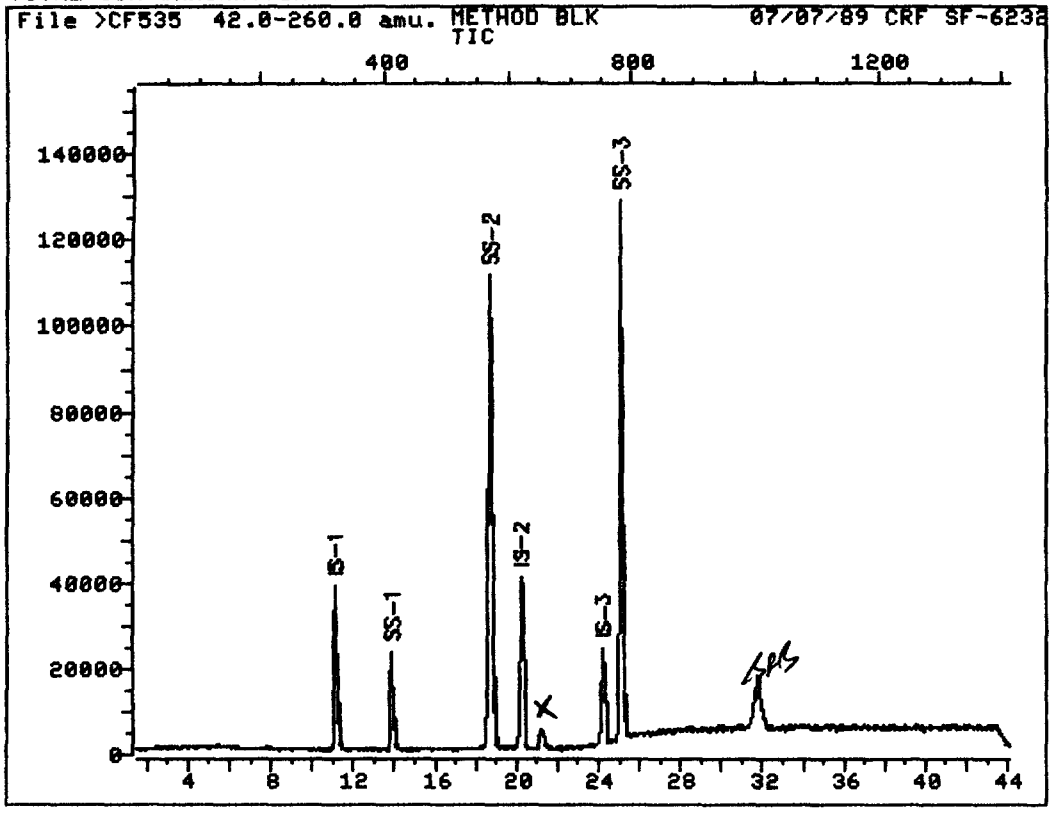
Operator ID: CARSTEN Quant Rev: 6 Quant Time: 890707 11:40
Output File: ^CF535::E1 Injected at: 890707 10:52
Data File: >CF535::A9 Dilution Factor: 1.00000
Name: METHOD BLK
Misc: 07/07/89 CRF SF-6232

ID File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890707 08:10

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.10	128.0	61805	10.00	UG/L	94
15)	1,2-DICHLOROETHANE-D4	13.85	65.0	70461	8.49	UG/L	87
17)	*2-Bromo-1-chloropropane	20.21	77.0	282134	10.00	UG/L	98
26)	BENZENE-D6	18.67	84.0	681189	9.98	UG/L	97
33)	*1,4-Dichlorobutane	24.20	55.0	126212	10.00	UG/L	98
38)	TOLUENE-D8	25.07	98.0	629326	10.60	UG/L	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CF535::A9 Quant Output File: ^CF535::E1
Name: METHOD BLK
Misc: 07/07/89 CRF SF-6232

Id File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890707 08:10

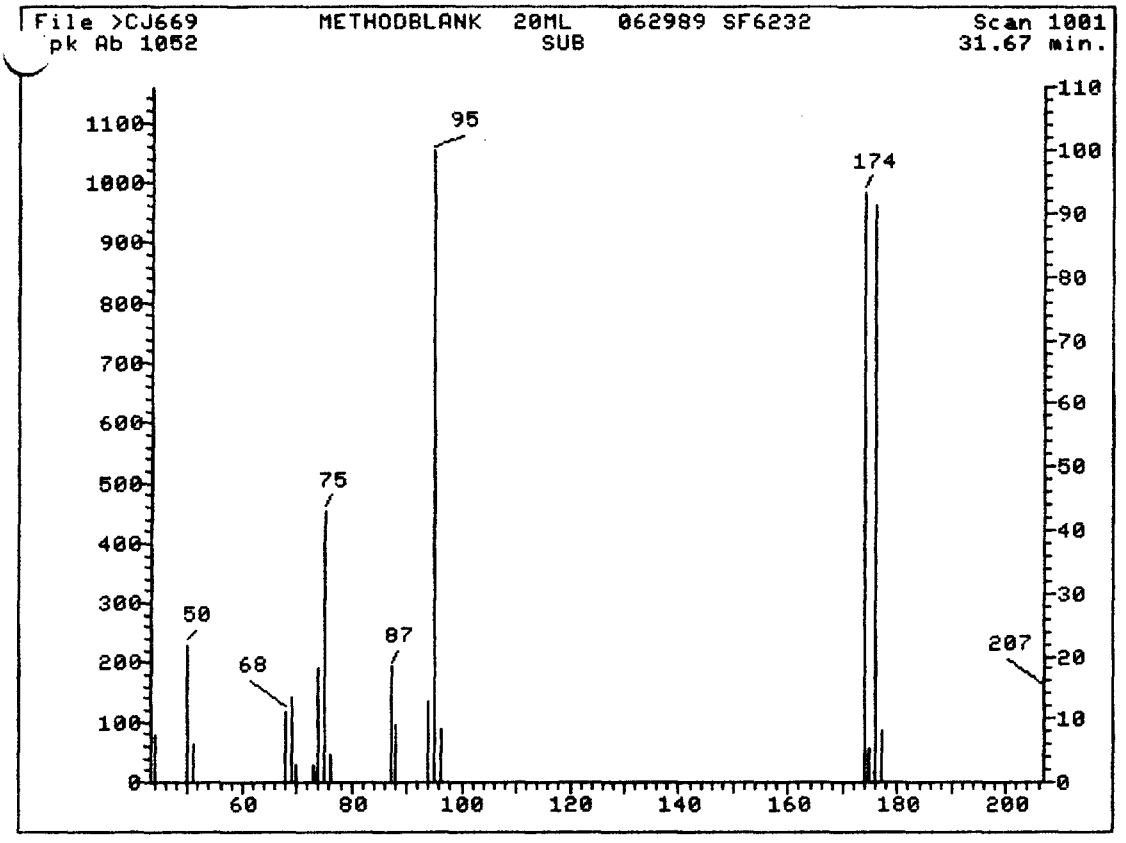
Operator ID: CARSTEN
Quant Time: 890707 11:40
Injected at: 890707 10:52

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	21.86	21.86	Ok
75	30-60% of mass 95	43.06	43.06	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	8.27	8.27	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	93.44	93.44	Ok
175	5-9% of mass 174	5.32	5.70	Ok
176	95-101% of mass 174	91.44	97.86	Ok
177	5-9% of mass 176	8.08	8.84	Ok

Injection Date: 06/29/89
Injection Time: 17:59
Data File: >CJ669
Scan: 1001



MS data file header from : >CJ669

Sample: METHODBLANK 20ML Operator: CHACKO MS 6/29/89 17:59
Misc : 062989 SF6232
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: #3VOA1 Tuning file: MTBFD3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

>CJ669 METHODBLANK 20ML 062989 SF6232
1001 SUB NRM

File: >CJ669 Scan #: 1001 Retn. time: 31.67

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
43.05	1.331	69.00	13.593	75.00	43.061	93.95	12.738	174.95	5.323
43.95	7.510	70.00	2.567	76.15	4.468	95.05	100.000	175.95	91.445
50.05	21.863	73.00	2.757	87.05	18.346	96.05	8.270	176.95	8.080
51.05	6.179	74.00	18.061	88.05	8.935	173.95	93.441	207.00	14.639
68.00	11.217								

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

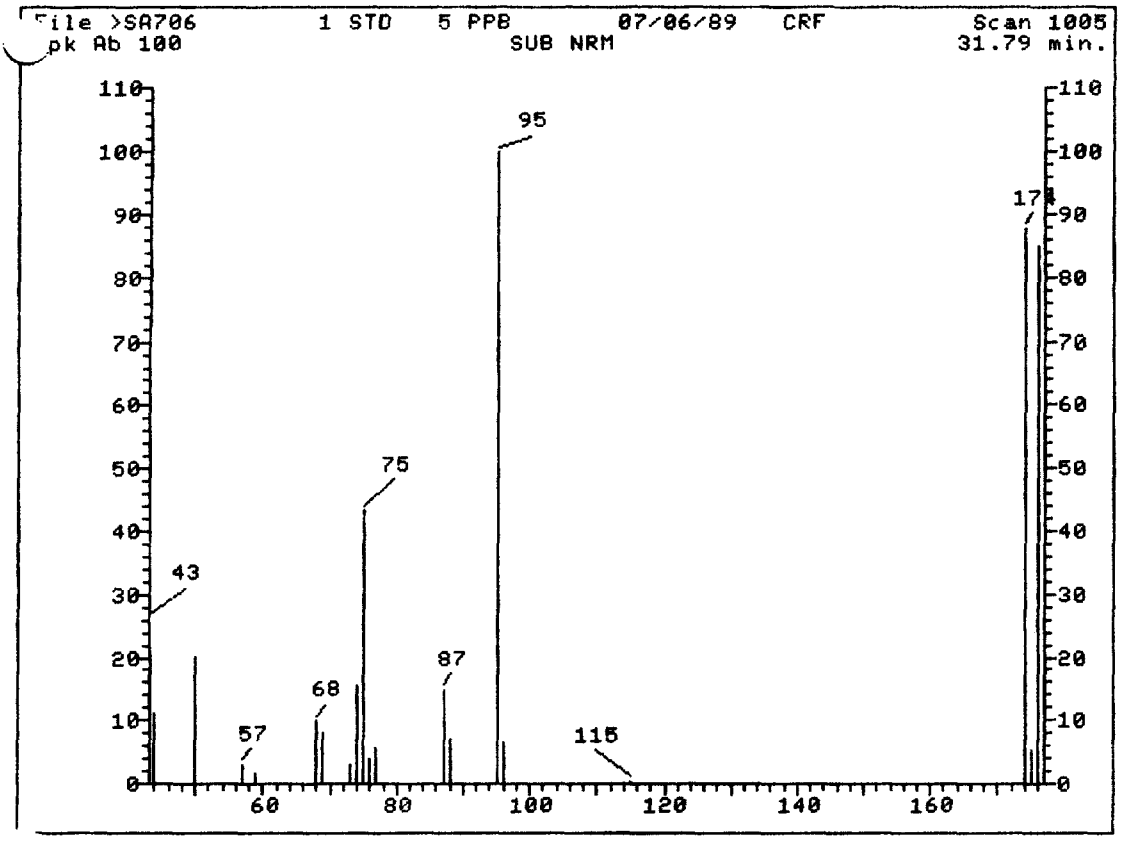
m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	Appropriate Peak	Status
50	15-40% of mass 95	20.05	20.05	Ok
75	30-60% of mass 95	43.21	43.21	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	6.60	6.60	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	87.80	87.80	Ok
175	5-9% of mass 174	5.35	6.10	Ok
176	95-101% of mass 174	85.06	96.88	Ok
177	5-9% of mass 176	5.60	6.59	Ok

Injection Date: 07/06/89
Injection Time: 17:02
Data File: >SA706
Scan: 1005

>SA706 1 STD 5 PPB 07/06/89 CRF
1005 SUB NRM

File: >SA706 Scan #: 1005 Retn. time: 31.79

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
43.05	26.027	68.00	10.087	75.00	43.213	88.05	6.974	173.95	87.796
43.95	11.208	69.00	8.219	76.00	3.985	95.05	100.000	174.95	5.355
50.05	20.050	73.00	3.113	77.00	5.853	96.05	6.600	175.95	85.056
57.05	3.113	74.00	15.318	87.05	14.819	115.00	.374	176.95	5.604
59.00	1.868								



MS data file header from : >SA706

Sample: 1 STD 5 PPB Operator: CARSTEN MS 7/06/89 17:02
Misc : 07/06/89 CRF
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: #3VOA1 Tuning file: MTBFD3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

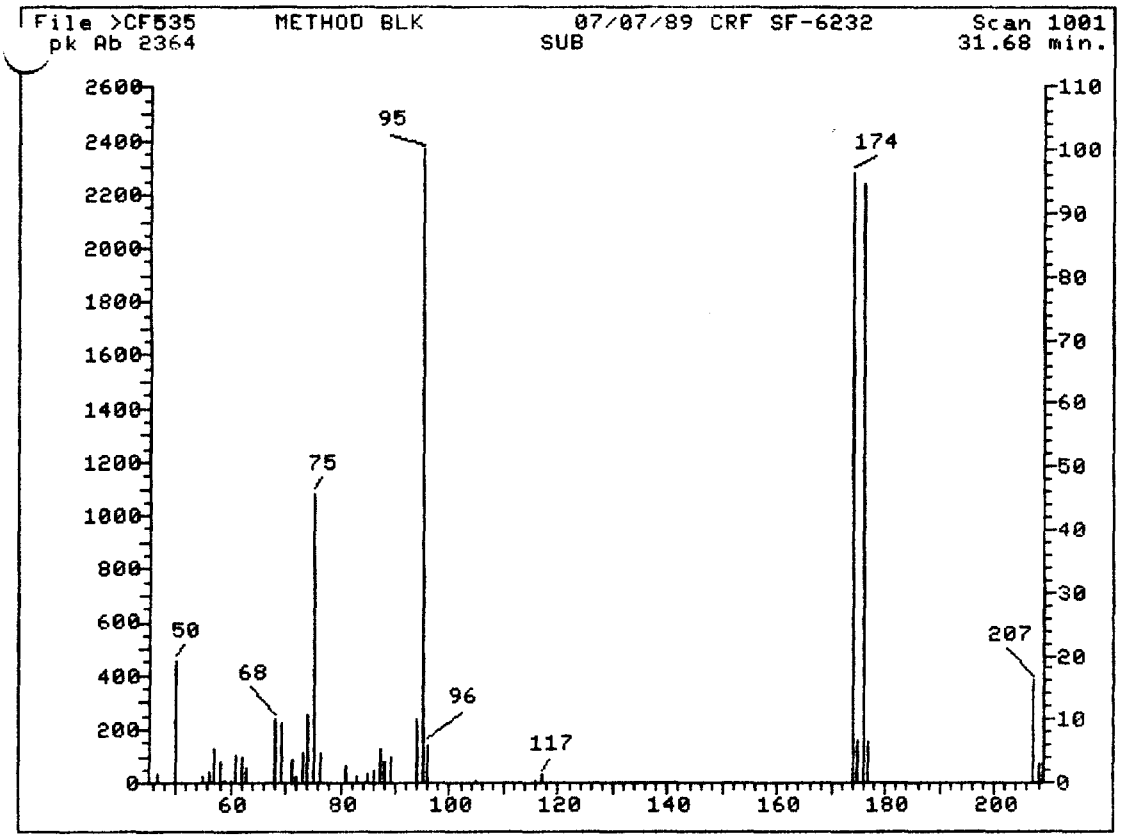
Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	19.29	19.29	Ok
75	30-60% of mass 95	45.81	45.81	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	6.13	6.13	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	96.53	96.53	Ok
175	5-9% of mass 174	6.73	6.97	Ok
176	95-101% of mass 174	94.80	98.20	Ok
177	5-9% of mass 176	6.43	6.78	Ok

Injection Date: 07/07/89
Injection Time: 10:52
Data File: >CF535
Scan: 1001



MS data file header from : >CF535

Sample: METHOD BLK Operator: CARSTEN MS 7/07/89 10:52
Misc : 07/07/89 CRF SF-6232
Sys. #: 3 MS model: 87 SW/HW rev.: IA ALS # : 0
Method file: #3VOA1 Tuning file: MTBFD3 No. of extra records: 2
Source temp.: 200 Analyzer temp.: 0 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

>CF535 METHOD BLK 07/07/89 CRF SF-6232
1001 SUB NRM

File: >CF535 Scan #: 1001 Retn. time: 31.68

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
45.05	8.460	60.00	.508	73.00	4.822	87.05	5.499	117.00	1.227
46.95	1.354	61.00	4.526	74.00	10.745	87.95	3.469	173.95	96.531
50.05	19.289	62.00	4.146	75.00	45.812	89.05	4.103	174.95	6.726
55.05	1.142	63.00	2.327	76.15	4.865	94.05	10.110	175.95	94.797
56.05	1.777	68.00	10.068	81.00	2.792	95.05	100.000	176.95	6.430
57.05	5.245	69.00	9.433	83.05	1.100	96.05	6.134	207.00	16.074
58.05	3.384	71.00	3.596	85.05	1.227	105.00	.381	208.00	3.046
59.00	.423	72.00	.931	85.95	2.073	116.00	.465	209.00	.846

QUANT REPORT

Operator ID: CHACKO
Output File: ^CJ642::D3
Data File: >CJ642::A5
Name: MB
Misc: 062889

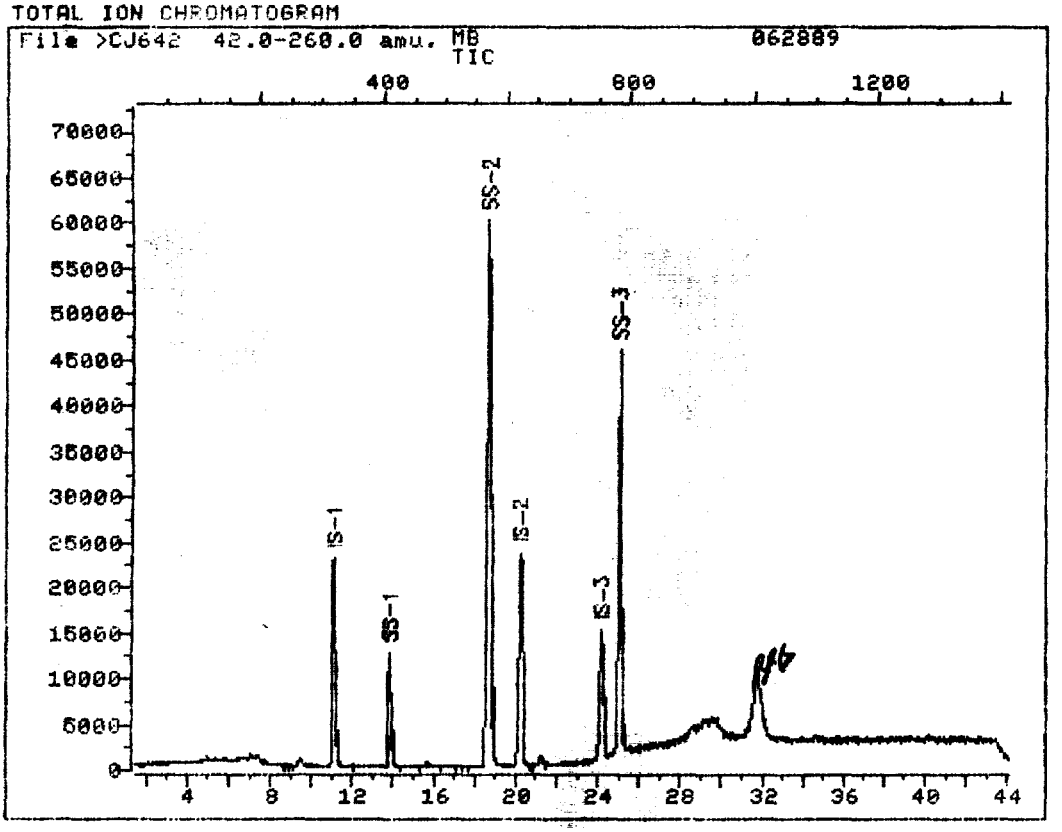
Quant Rev: 6
Quant Time: 890629 08:12
Injected at: 890628 09:09
Dilution Factor: 1.00000

ID File: ID3CJ6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890628 16:24

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.10	128.0	35325	10.00	UG/L	93
15)	1,2-DICHLOROETHANE-D4	13.82	65.0	39557	8.95	UG/L	85
17)	*2-Bromo-1-chloropropane	20.21	77.0	164955	10.00	UG/L	98
26)	BENZENE-D6	18.67	84.0	378807	9.92	UG/L	97
33)	*1,4-Dichlorobutane	24.19	55.0	84101	10.00	UG/L	96
38)	TOLUENE-D8	25.06	98.0	217753	9.49	UG/L	98

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CJ642::A5 Quant Output File: ^CJ642::D3
Name: MB
Misc: 062889

Id File: ID3CJ6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890628 16:24

Operator ID: CHACKO
Quant Time: 890629 08:12
Injected at: 890628 09:09

QUANT REPORT

Operator ID: CHACKO
Output File: ^CJ643::QT
Data File: >CJ643::A5
Name: VOASTD15PPB
Misc: 062889

Quant Rev: 6
Quant Time: 890628 10:54
Injected at: 890628 10:04
Dilution Factor: 1.00000

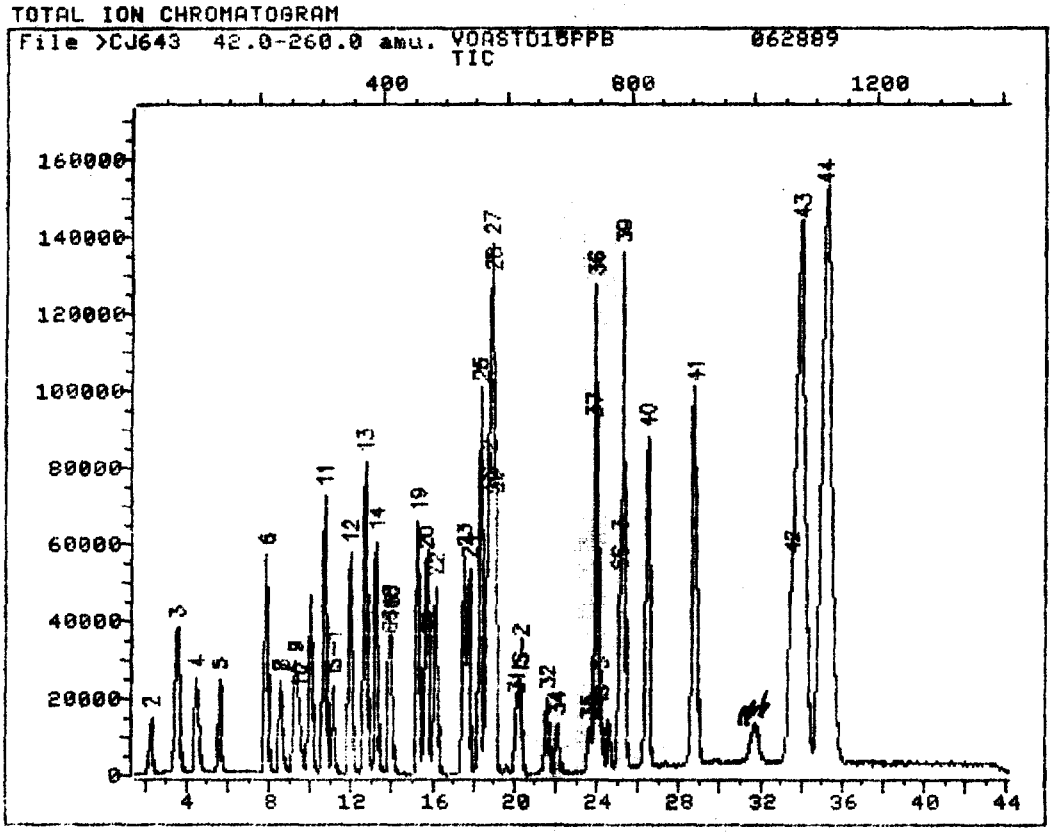
ID File: ID3CJ5::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890616 09:56

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.07	128.0	34743	10.00	UG/L	99
2)	CHLOROMETHANE	2.24	50.0	108715	8.51	UG/L	100
3)	BROMOMETHANE	3.50	94.0	235450	14.51	UG/L	95
4)	VINYL CHLORIDE	4.47	62.0	193836	11.09	UG/L	98
5)	CHLOROETHANE	5.55	64.0	146600	14.25	UG/L	97
6)	METHYLENE CHLORIDE	7.82	84.0	150892	11.65	UG/L	97
7)	ACROLEIN	8.54	56.0	54430	361.49	UG/L	98
8)	ACETONE	8.54	43.0	126766	332.25	UG/L	95
9)	ACRYLONITRILE	9.20	53.0	154766	317.83	UG/L	99
10)	CARBON DISULFIDE	9.38	76.0	152953	7.57	UG/L	100
11)	1,1-DICHLOROETHENE	10.65	96.0	174247	11.11	UG/L	95
12)	1,1-DICHLOROETHANE	11.92	63.0	317119	11.83	UG/L	96
13)	1,2-DICHLOROETHENE (TOTAL)	12.64	96.0	202840	11.30	UG/L	97
14)	CHLOROFORM	13.19	83.0	257654	11.77	UG/L	98
15)	1,2-DICHLOROETHANE-D4	13.82	65.0	45640	10.57	UG/L	88
16)	1,2-DICHLOROETHANE	13.91	62.0	77514	12.92	UG/L	95
17)	*2-Bromo-1-chloropropane	20.22	77.0	165636	10.00	UG/L	99
18)	2-BUTANONE	13.85	72.0	27325	109.68	UG/L	96
19)	1,1,1-TRICHLOROETHANE	15.21	97.0	226371	11.71	UG/L	99
20)	CARBON TETRACHLORIDE	15.60	117.0	187577	11.56	UG/L	98
21)	VINYL ACETATE	15.75	43.0	241455	196.71	UG/L	97
22)	BROMODICHLOROMETHANE	16.08	83.0	191088	12.35	UG/L	94
23)	1,2-DICHLOROPROPANE	17.47	63.0	190306	12.11	UG/L	99
24)	CIS-1,3-DICHLOROPROPENE	17.71	75.0	275652	17.81	UG/L	95
25)	TRICHLOROETHENE	18.26	130.0	214535	9.51	UG/L	99
26)	BENZENE-D6	18.65	84.0	372404	9.66	UG/L	98
27)	BENZENE	18.80	78.0	605197	11.67	UG/L	97
28)	DIBROMOCHLOROMETHANE	18.86	129.0	109514	12.55	UG/L	98
29)	TRANS-1,3-DICHLOROPROPENE	18.98	75.0	98822M	7.73	UG/L	
30)	1,1,2-TRICHLOROETHANE	18.98	97.0	74651	12.41	UG/L	99
31)	2-CHLOROETHYL VINYLETHER	20.07	63.0	47379	12.82	UG/L	98
32)	BROMOFORM	21.54	173.0	64925	13.14	UG/L	97
33)	*1,4-Dichlorobutane	24.17	55.0	83879	10.00	UG/L	94
34)	4-METHYL-2-PENTANONE	22.06	43.0	76267	20.50	UG/L	99
35)	2-HEXANONE	23.60	43.0	67685	20.23	UG/L	90
36)	TETRACHLOROETHENE	23.90	164.0	195159	10.34	UG/L	99
37)	1,1,2,2-TETRACHLOROETHANE	23.84	83.0	96206	15.12	UG/L	97
38)	TOLUENE-D8	25.04	98.0	213150	8.90	UG/L	96
39)	TOLUENE	25.23	92.0	406673	10.81	UG/L	96
40)	CHLOROBENZENE	26.40	112.0	393486	11.03	UG/L	96
41)	ETHYLBENZENE	28.70	106.0	236766	10.68	UG/L	96
42)	STYRENE	33.50	104.0	413542	8.99	UG/L	86
43)	META XYLENE	33.95	106.0	728231	20.74	UG/L	99

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	O-&/OR P-XYLENE	35.13	106.0	910255	26.20	UG/L	94

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CJ643::A5 Quant Output File: ^CJ643::QT
Name: VOASTD15PPB
Misc: 062889

Id File: ID3CJ5::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890616 09:56

Operator ID: CHACKO
Quant Time: 890628 10:54
Injected at: 890628 10:04

QUANT REPORT

Operator ID: CHACKO Quant Rev: 6 Quant Time: 890628 12:28
Output File: ^CJ644::QT Injected at: 890628 11:29
Data File: >CJ644::A5 Dilution Factor: 1.00000
Name: VOASTD05PPB
Misc: 062889

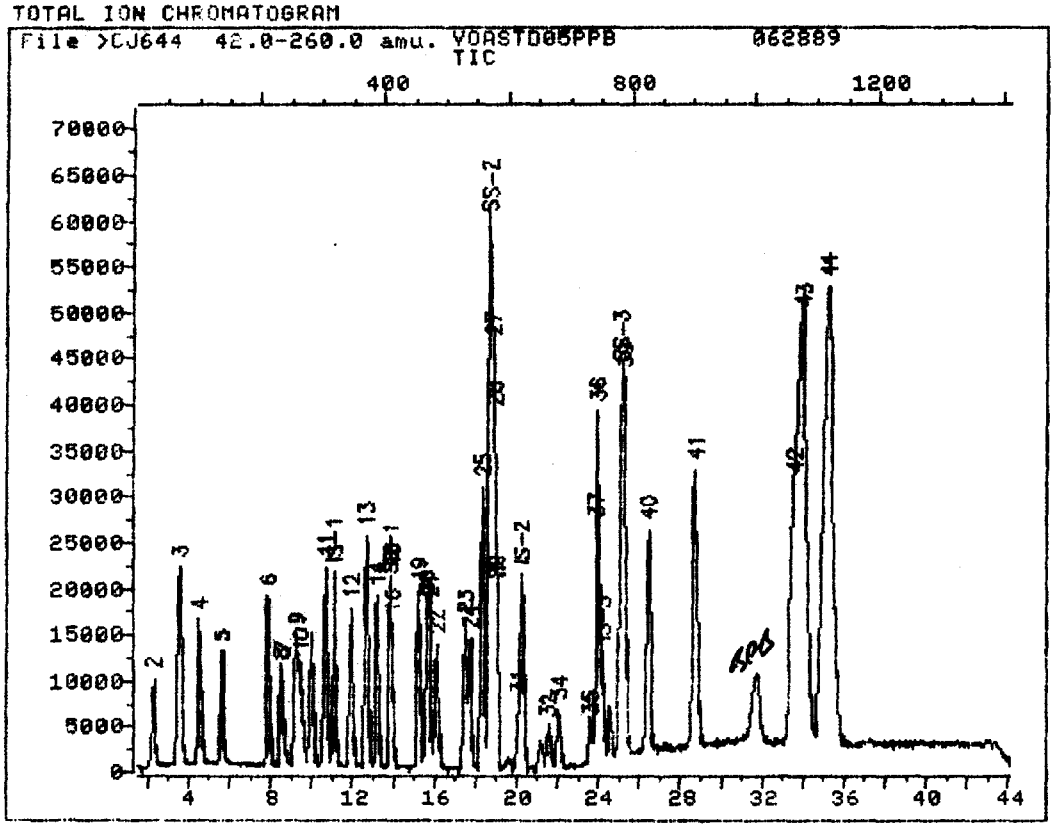
ID File: ID3CJ5::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890616 09:56

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.07	128.0	32398	10.00	UG/L	98
2)	CHLOROMETHANE	2.24	50.0	71625	6.01	UG/L	100
3)	BROMOMETHANE	3.50	94.0	122514	8.10	UG/L	97
4)	VINYL CHLORIDE	4.47	62.0	120940	7.42	UG/L	96
5)	CHLOROETHANE	5.55	64.0	79447	8.28	UG/L	97
6)	METHYLENE CHLORIDE	7.82	84.0	50106	4.15	UG/L	97
7)	ACROLEIN	8.54	56.0	26129	186.09	UG/L	99
8)	ACETONE	8.51	43.0	59396	166.94	UG/L	91
9)	ACRYLONITRILE	9.23	53.0	75799	166.93	UG/L	98
10)	CARBON DISULFIDE	9.41	76.0	97766	5.19	UG/L	100
11)	1,1-DICHLOROETHENE	10.65	96.0	53473	3.66	UG/L	90
12)	1,1-DICHLOROETHANE	11.92	63.0	97221	3.89	UG/L	97
13)	1,2-DICHLOROETHENE (TOTAL)	12.64	96.0	63135	3.77	UG/L	93
14)	CHLOROFORM	13.18	83.0	77635	3.80	UG/L	98
15)	1,2-DICHLOROETHANE-D4	13.82	65.0	36304	9.01	UG/L	86
16)	1,2-DICHLOROETHANE	13.91	62.0	21867	3.91	UG/L	96
17)	*2-Bromo-1-chloropropane	20.18	77.0	148445	10.00	UG/L	99
18)	2-BUTANONE	13.85	72.0	12574	56.31	UG/L	99
19)	1,1,1-TRICHLOROETHANE	15.20	97.0	69965	4.04	UG/L	97
20)	CARBON TETRACHLORIDE	15.60	117.0	57580	3.96	UG/L	97
21)	VINYL ACETATE	15.75	43.0	152494	138.62	UG/L	97
22)	BROMODICHLOROMETHANE	16.08	83.0	54811	3.95	UG/L	95
23)	1,2-DICHLOROPROPANE	17.47	63.0	54545	3.87	UG/L	97
24)	CIS-1,3-DICHLOROPROPENE	17.71	75.0	77786	5.61	UG/L	96
25)	TRICHLOROETHENE	18.28	130.0	64938	3.21	UG/L	96
26)	BENZENE-D6	18.64	84.0	357423	10.34	UG/L	95
27)	BENZENE	18.79	78.0	185667	3.99	UG/L	97
28)	DIBROMOCHLOROMETHANE	18.86	129.0	29097	3.72	UG/L	97
29)	TRANS-1,3-DICHLOROPROPENE	18.98	75.0	27982M	2.44	UG/L	
30)	1,1,2-TRICHLOROETHANE	18.98	97.0	19473	3.61	UG/L	91
31)	2-CHLOROETHYL VINYLETHER	20.06	63.0	13167	3.97	UG/L	99
32)	BROMOFORM	21.51	173.0	16066	3.63	UG/L	95
33)	*1,4-Dichlorobutane	24.16	55.0	70969	10.00	UG/L	98
34)	4-METHYL-2-PENTANONE	22.02	43.0	38138	12.12	UG/L	99
35)	2-HEXANONE	23.59	43.0	32377	11.44	UG/L	94
36)	TETRACHLOROETHENE	23.89	164.0	60619	3.80	UG/L	99
37)	1,1,2,2-TETRACHLOROETHANE	23.83	83.0	25888	4.81	UG/L	99
38)	TOLUENE-D8	25.04	98.0	201233	9.93	UG/L	96
39)	TOLUENE	25.22	92.0	124830	3.92	UG/L	94
40)	CHLOROBENZENE	26.40	112.0	115878	3.84	UG/L	96
41)	ETHYLBENZENE	28.69	106.0	71570	3.82	UG/L	98
42)	STYRENE	33.52	104.0	230323	5.92	UG/L	81
43)	META XYLENE	33.97	106.0	246527	8.30	UG/L	98

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	O-&/OR P-XYLENE	35.18	106.0	305426	10.39	UG/L	94

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CJ644::A5 Quant Output File: ^CJ644::QT
Name: VOASTD05PPB
Misc: 062889

Id File: ID3CJ5::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890616 09:56

Operator ID: CHACKO
Quant Time: 890628 12:28
Injected at: 890628 11:29

QUANT REPORT

Operator ID: CHACKO Quant Rev: 6 Quant Time: 890628 15:42
Output File: ^CJ645::D3 Injected at: 890628 12:23
Data File: >CJ645::A5 Dilution Factor: 1.00000
Name: VOASTD10PPB
Misc: 062889

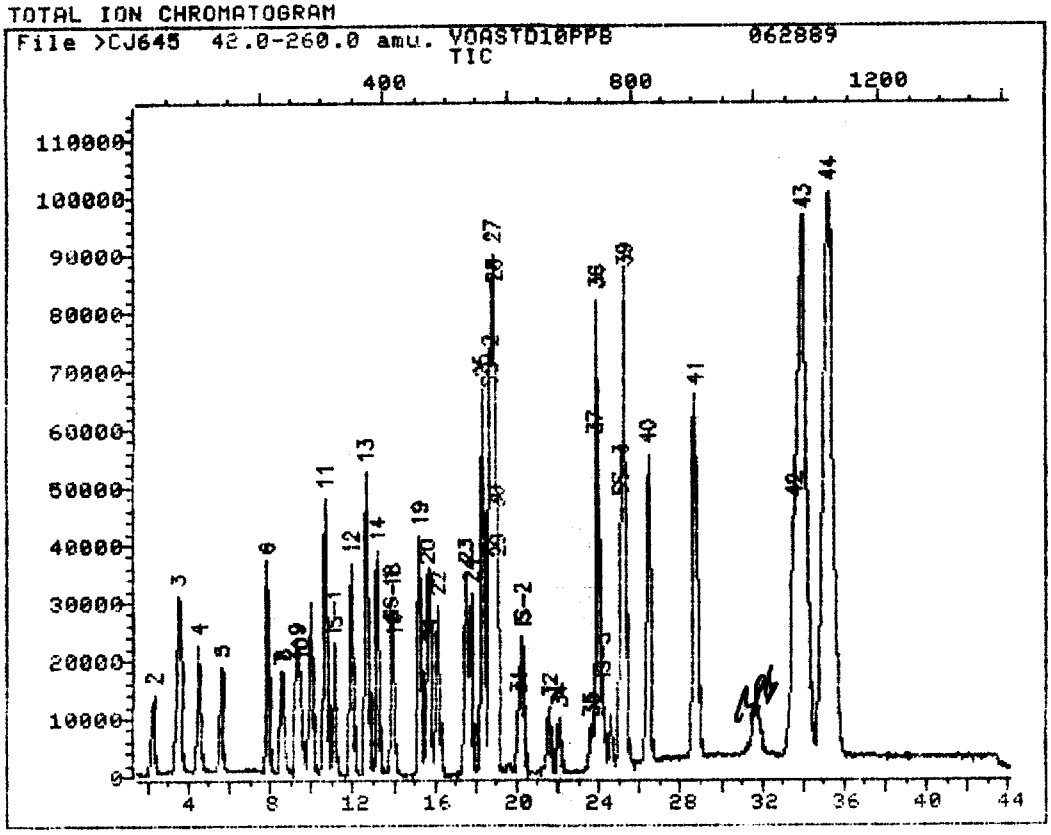
ID File: ID3CJ5::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890616 09:56

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.07	128.0	34417	10.00	UG/L	96
2)	CHLOROMETHANE	2.24	50.0	107707	8.51	UG/L	100
3)	BROMOMETHANE	3.47	94.0	185802	11.56	UG/L	95
4)	VINYL CHLORIDE	4.44	62.0	177696	10.26	UG/L	97
5)	CHLOROETHANE	5.55	64.0	115876	11.37	UG/L	98
6)	METHYLENE CHLORIDE	7.79	84.0	98916	7.71	UG/L	96
7)	ACROLEIN	8.57	56.0	41239	276.48	UG/L	97
8)	ACETONE	8.54	43.0	96487	255.29	UG/L	91
9)	ACRYLONITRILE	9.23	53.0	117624	243.84	UG/L	97
10)	CARBON DISULFIDE	9.38	76.0	119333	5.96	UG/L	100
11)	1,1-DICHLOROETHENE	10.65	96.0	115706	7.45	UG/L	93
12)	1,1-DICHLOROETHANE	11.92	63.0	205751	7.75	UG/L	97
13)	1,2-DICHLOROETHENE (TOTAL)	12.64	96.0	133258	7.49	UG/L	96
14)	CHLOROFORM	13.19	83.0	162556	7.50	UG/L	99
15)	1,2-DICHLOROETHANE-D4	13.82	65.0	41685	9.74	UG/L	90
16)	1,2-DICHLOROETHANE	13.94	62.0	47017	7.91	UG/L	97
17)	*2-Bromo-1-chloropropane	20.21	77.0	162118	10.00	UG/L	98
18)	2-BUTANONE	13.88	72.0	19799	81.19	UG/L	95
19)	1,1,1-TRICHLOROETHANE	15.24	97.0	147195	7.78	UG/L	99
20)	CARBON TETRACHLORIDE	15.60	117.0	120443	7.58	UG/L	99
21)	VINYL ACETATE	15.75	43.0	147214	122.53	UG/L	98
22)	BROMODICHLOROMETHANE	16.08	83.0	117461	7.76	UG/L	96
23)	1,2-DICHLOROPROPANE	17.47	63.0	119255	7.76	UG/L	99
24)	CIS-1,3-DICHLOROPROPENE	17.71	75.0	168053	11.09	UG/L	94
25)	TRICHLOROETHENE	18.28	130.0	139408	6.32	UG/L	98
26)	BENZENE-D6	18.65	84.0	370999	9.83	UG/L	98
27)	BENZENE	18.80	78.0	386439	7.61	UG/L	97
28)	DIBROMOCHLOROMETHANE	18.86	129.0	66828	7.83	UG/L	95
29)	TRANS-1,3-DICHLOROPROPENE	19.01	75.0	60978M	4.87	UG/L	
30)	1,1,2-TRICHLOROETHANE	18.98	97.0	46062	7.82	UG/L	97
31)	2-CHLOROETHYL VINYLETHER	20.06	63.0	29601	8.18	UG/L	98
32)	BROMOFORM	21.54	173.0	39108	8.09	UG/L	97
33)	*1,4-Dichlorobutane	24.17	55.0	79368	10.00	UG/L	96
34)	4-METHYL-2-PENTANONE	22.06	43.0	54830	15.57	UG/L	99
35)	2-HEXANONE	23.59	43.0	48129	15.21	UG/L	94
36)	TETRACHLOROETHENE	23.90	164.0	129792	7.27	UG/L	98
37)	1,1,2,2-TETRACHLOROETHANE	23.83	83.0	56829	9.44	UG/L	95
38)	TOLUENE-D8	25.04	98.0	212166	9.36	UG/L	99
39)	TOLUENE	25.25	92.0	261097	7.34	UG/L	96
40)	CHLOROBENZENE	26.40	112.0	248448	7.36	UG/L	95
41)	ETHYLBENZENE	28.69	106.0	155093	7.39	UG/L	96
42)	STYRENE	33.55	104.0	323340	7.43	UG/L	85
43)	META XYLENE	33.94	106.0	481664	14.50	UG/L	97

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	O-&/OR P-XYLENE	35.21	106.0	600978	18.28	UG/L	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CJ645::A5 Quant Output File: ^CJ645::D3
Name: VOASTD10PPB
Misc: 062889

Id File: ID3CJ5::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890616 09:56

Operator ID: CHACKO
Quant Time: 890628 15:42
Injected at: 890628 12:23

QUANT REPORT

Operator ID: CHACKO
Output File: ^CJ646::D3
Data File: >CJ646::A5
Name: VOASTD20PPB 20ML
Misc: 062889 SF6263 177/178

Quant Rev: 6
Quant Time: 890628 15:44
Injected at: 890628 13:40
Dilution Factor: 1.00000

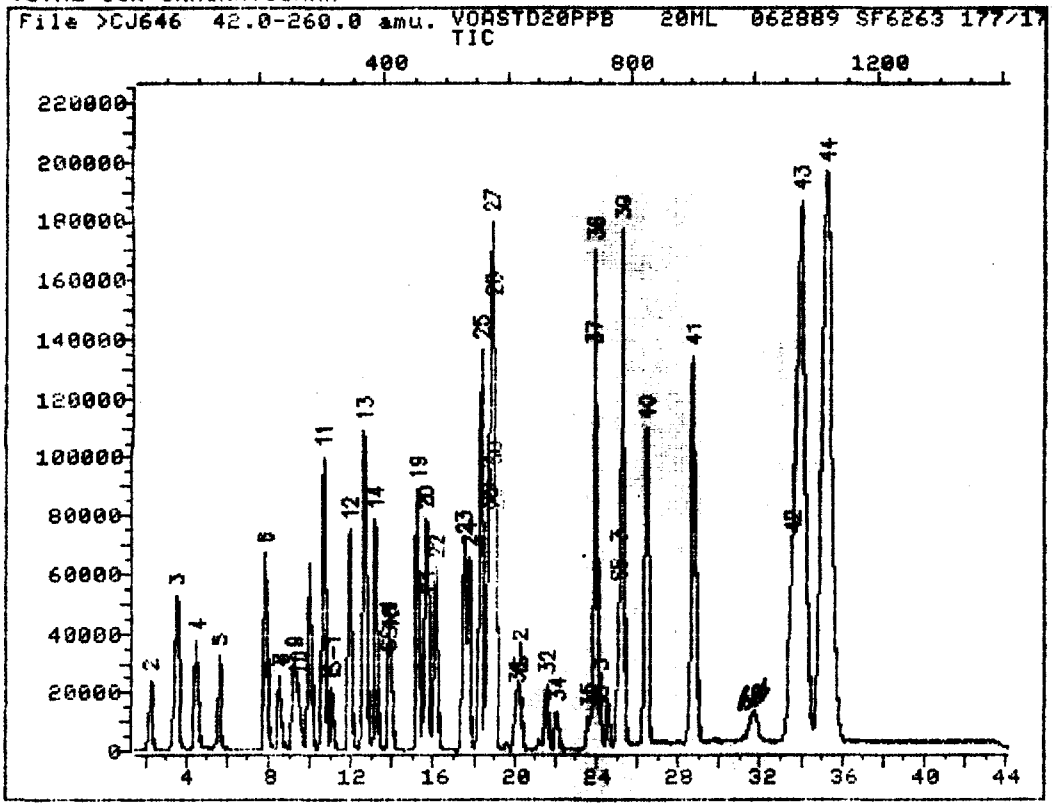
ID File: ID3CJ5::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890616 09:56

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.09	128.0	31999	10.00	UG/L	98
2)	CHLOROMETHANE	2.22	50.0	177848	15.11	UG/L	100
3)	BROMOMETHANE	3.49	94.0	298216	19.96	UG/L	95
4)	VINYL CHLORIDE	4.48	62.0	289013	17.95	UG/L	96
5)	CHLOROETHANE	5.57	64.0	190501	20.10	UG/L	98
6)	METHYLENE CHLORIDE	7.80	84.0	184783	15.48	UG/L	95
7)	ACROLEIN	8.52	56.0	56390	406.62	UG/L	99
8)	ACETONE	8.52	43.0	125248	356.42	UG/L	91
9)	ACRYLONITRILE	9.22	53.0	162195	361.64	UG/L	98
10)	CARBON DISULFIDE	9.40	76.0	182820	9.83	UG/L	100
11)	1,1-DICHLOROETHENE	10.67	96.0	242765	16.81	UG/L	96
12)	1,1-DICHLOROETHANE	11.93	63.0	424977	17.21	UG/L	96
13)	1,2-DICHLOROETHENE (TOTAL)	12.63	96.0	277192	16.77	UG/L	94
14)	CHLOROFORM	13.17	83.0	334282	16.58	UG/L	99
15)	1,2-DICHLOROETHANE-D4	13.80	65.0	40572	10.20	UG/L	90
16)	1,2-DICHLOROETHANE	13.92	62.0	94412	17.08	UG/L	97
17)	*2-Bromo-1-chloropropane	20.20	77.0	151680	10.00	UG/L	99
18)	2-BUTANONE	13.83	72.0	26999	118.34	UG/L	95
19)	1,1,1-TRICHLOROETHANE	15.22	97.0	307608	17.37	UG/L	98
20)	CARBON TETRACHLORIDE	15.61	117.0	257389	17.32	UG/L	99
21)	VINYL ACETATE	15.74	43.0	301267	268.01	UG/L	95
22)	BROMODICHLOROMETHANE	16.10	83.0	237795	16.78	UG/L	97
23)	1,2-DICHLOROPROPANE	17.45	63.0	243550	16.93	UG/L	99
24)	CIS-1,3-DICHLOROPROPENE	17.70	75.0	339037	23.91	UG/L	95
25)	TRICHLOROETHENE	18.27	130.0	287612	13.93	UG/L	97
26)	BENZENE-D6	18.66	84.0	351866	9.97	UG/L	97
27)	BENZENE	18.81	78.0	801051	16.86	UG/L	96
28)	DIBROMOCHLOROMETHANE	18.87	129.0	132346	16.57	UG/L	95
29)	TRANS-1,3-DICHLOROPROPENE	18.99	75.0	121513M	10.38	UG/L	
30)	1,1,2-TRICHLOROETHANE	18.96	97.0	89022	16.16	UG/L	98
31)	2-CHLOROETHYL VINYLETHER	20.05	63.0	55362	16.36	UG/L	98
32)	BROMOFORM	21.53	173.0	75223	16.63	UG/L	98
33)	*1,4-Dichlorobutane	24.18	55.0	69413	10.00	UG/L	99
34)	4-METHYL-2-PENTANONE	22.04	43.0	75633	24.57	UG/L	95
35)	2-HEXANONE	23.58	43.0	65311	23.59	UG/L	92
36)	TETRACHLOROETHENE	23.91	164.0	267498	17.12	UG/L	98
37)	1,1,2,2-TETRACHLOROETHANE	23.85	83.0	111546	21.19	UG/L	98
38)	TOLUENE-D8	25.06	98.0	202807	10.23	UG/L	99
39)	TOLUENE	25.24	92.0	541249	17.39	UG/L	97
40)	CHLOROBENZENE	26.42	112.0	505880	17.14	UG/L	96
41)	ETHYLBENZENE	28.68	106.0	320564	17.47	UG/L	97
42)	STYRENE	33.54	104.0	488297	12.83	UG/L	83
43)	META XYLENE	33.93	106.0	953216	32.81	UG/L	99

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	O-&/OR P-XYLENE	35.20	106.0	1194486	41.55	UG/L	95

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CJ646::A5 Quant Output File: ^CJ646::D3
Name: VOASTD20PPB 20ML
Misc: 062889 SF6263 177/178

Id File: ID3CJ5::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890616 09:56

Operator ID: CHACKO
Quant Time: 890628 15:44
Injected at: 890628 13:40

QUANT REPORT

Operator ID: CHACKO Quant Rev: 6 Quant Time: 890628 15:45
Output File: ^CJ647::D3 Injected at: 890628 14:34
Data File: >CJ647::A5 Dilution Factor: 1.00000
Name: VOASTD25PPB 20ML
Misc: 062889 SF6263 177/178

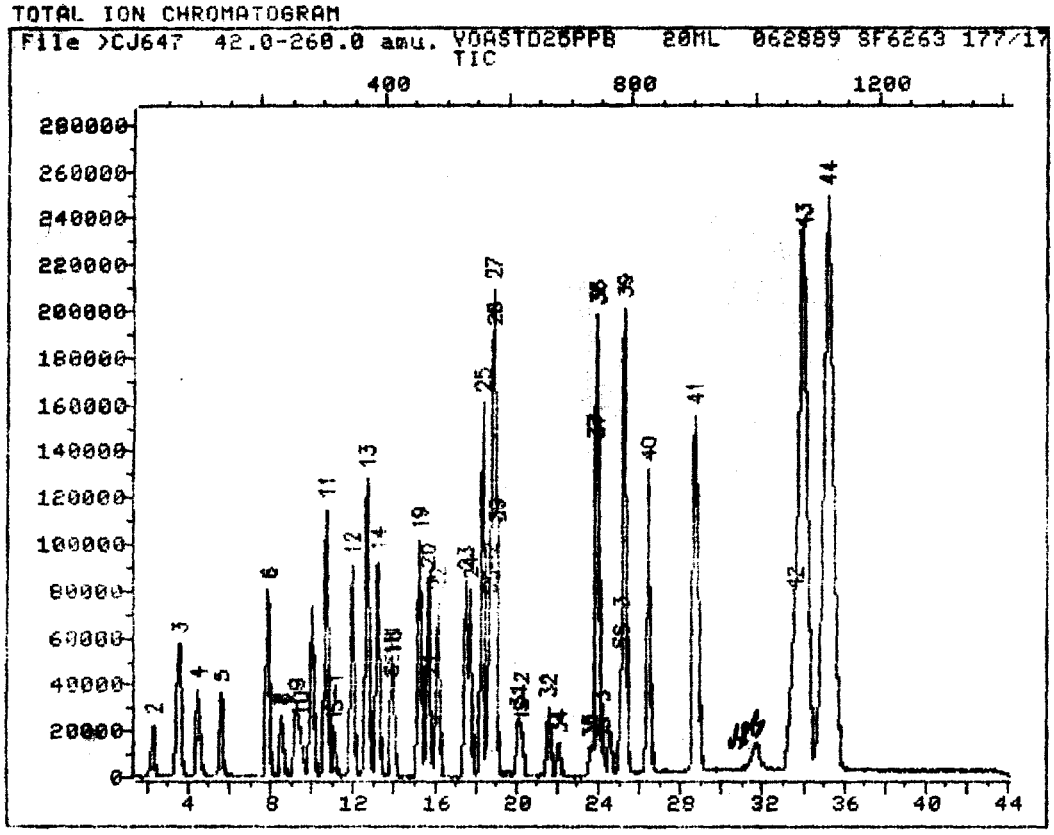
ID File: ID3CJ5::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890616 09:56

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.07	128.0	31879	10.00	UG/L	95
2)	CHLOROMETHANE	2.24	50.0	174386	14.87	UG/L	100
3)	BROMOMETHANE	3.50	94.0	352217	23.66	UG/L	96
4)	VINYL CHLORIDE	4.44	62.0	304359	18.98	UG/L	97
5)	CHLOROETHANE	5.55	64.0	224833	23.81	UG/L	98
6)	METHYLENE CHLORIDE	7.82	84.0	222370	18.70	UG/L	96
7)	ACROLEIN	8.54	56.0	61078	442.09	UG/L	97
8)	ACETONE	8.51	43.0	135342	386.60	UG/L	93
9)	ACRYLONITRILE	9.20	53.0	172277	385.57	UG/L	97
10)	CARBON DISULFIDE	9.38	76.0	173606	9.36	UG/L	100
11)	1,1-DICHLOROETHENE	10.65	96.0	277913	19.32	UG/L	96
12)	1,1-DICHLOROETHANE	11.92	63.0	497144	20.21	UG/L	98
13)	1,2-DICHLOROETHENE (TOTAL)	12.64	96.0	322350	19.57	UG/L	92
14)	CHLOROFORM	13.19	83.0	398197	19.82	UG/L	98
15)	1,2-DICHLOROETHANE-D4	13.82	65.0	42881	10.82	UG/L	91
16)	1,2-DICHLOROETHANE	13.91	62.0	115337	20.94	UG/L	97
17)	*2-Bromo-1-chloropropane	20.22	77.0	147646	10.00	UG/L	97
18)	2-BUTANONE	13.85	72.0	31944	143.84	UG/L	95
19)	1,1,1-TRICHLOROETHANE	15.21	97.0	356160	20.67	UG/L	97
20)	CARBON TETRACHLORIDE	15.60	117.0	296928	20.53	UG/L	98
21)	VINYL ACETATE	15.75	43.0	240459	219.76	UG/L	98
22)	BROMODICHLOROMETHANE	16.08	83.0	291500	21.14	UG/L	94
23)	1,2-DICHLOROPROPANE	17.47	63.0	291466	20.81	UG/L	99
24)	CIS-1,3-DICHLOROPROPENE	17.71	75.0	415055	30.08	UG/L	95
25)	TRICHLOROETHENE	18.28	130.0	338631	16.85	UG/L	98
26)	BENZENE-D6	18.65	84.0	340359	9.90	UG/L	98
27)	BENZENE	18.80	78.0	930385	20.12	UG/L	97
28)	DIBROMOCHLOROMETHANE	18.86	129.0	167260	21.51	UG/L	96
29)	TRANS-1,3-DICHLOROPROPENE	18.98	75.0	150420M	13.20	UG/L	
30)	1,1,2-TRICHLOROETHANE	18.98	97.0	111246	20.74	UG/L	99
31)	2-CHLOROETHYL VINYLETHER	20.07	63.0	71068	21.57	UG/L	99
32)	BROMOFORM	21.54	173.0	98712	22.41	UG/L	98
33)	*1,4-Dichlorobutane	24.17	55.0	72608	10.00	UG/L	96
34)	4-METHYL-2-PENTANONE	22.06	43.0	84820	26.34	UG/L	97
35)	2-HEXANONE	23.56	43.0	75264	25.99	UG/L	91
36)	TETRACHLOROETHENE	23.90	164.0	307826	18.84	UG/L	98
37)	1,1,2,2-TETRACHLOROETHANE	23.84	83.0	139392	25.32	UG/L	97
38)	TOLUENE-D8	25.04	98.0	193810	9.35	UG/L	98
39)	TOLUENE	25.22	92.0	628827	19.32	UG/L	96
40)	CHLOROBENZENE	26.40	112.0	604423	19.57	UG/L	97
41)	ETHYLBENZENE	28.66	106.0	373536	19.46	UG/L	97
42)	STYRENE	33.52	104.0	510626	12.83	UG/L	83
43)	META XYLENE	33.95	106.0	1207991	39.75	UG/L	99

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	O-&/OR P-XYLENE	35.15	106.0	1512373	50.30	UG/L	96

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CJ647::A5 Quant Output File: ^CJ647::D3
Name: VOASTD25PPB 20ML
Misc: 062889 SF6263 177/178

Id File: ID3CJ5::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890616 09:56

Operator ID: CHACKO
Quant Time: 890628 15:45
Injected at: 890628 14:34

QUANT REPORT

Operator ID: CHACKO
Output File: ^CJ670::E1
Data File: >CJ670::A5
Name: 89FM11 R15 20ML
Misc: 062989 SF6232

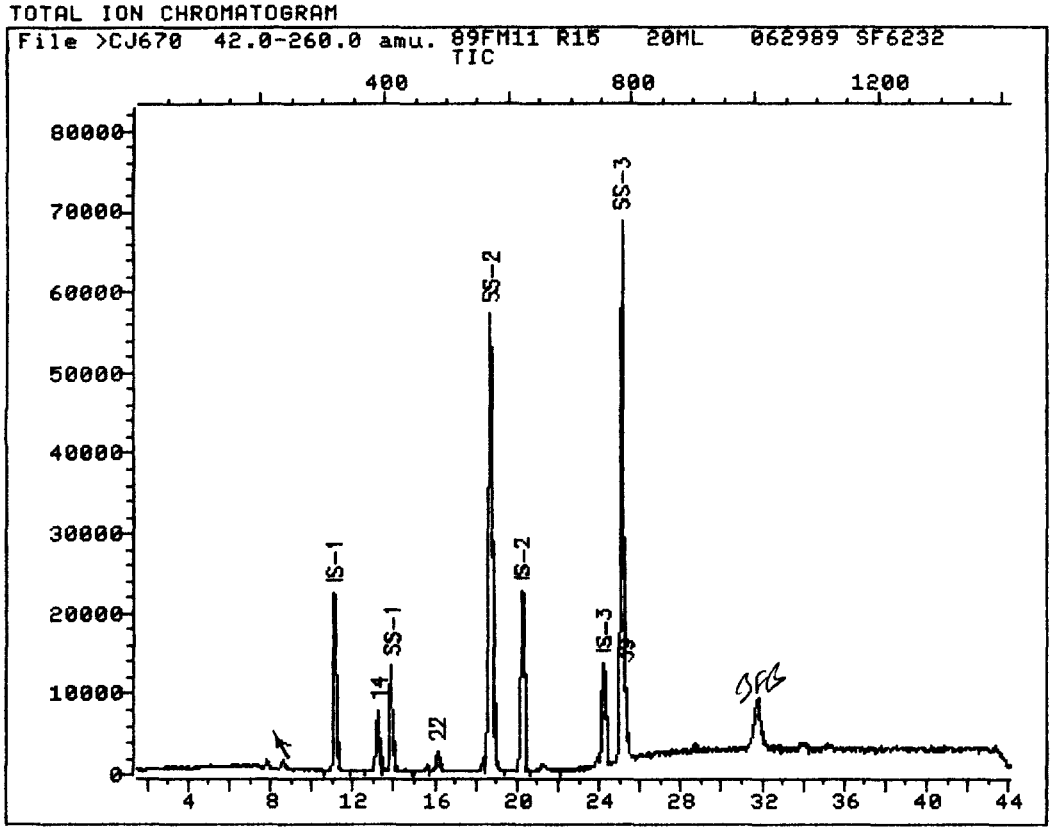
Quant Rev: 6
Quant Time: 890630 10:38
Injected at: 890629 18:53
Dilution Factor: 1.00000

ID File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.07	128.0	34091	10.00	UG/L	97
14)	CHLOROFORM	13.21	83.0	34747	1.74	UG/L	95
15)	1,2-DICHLOROETHANE-D4	13.84	65.0	39950	8.99	UG/L	85
17)	*2-Bromo-1-chloropropane	20.21	77.0	157636	10.00	UG/L	98
22)	BROMODICHLOROMETHANE	16.08	83.0	11090	.83	UG/L	99
26)	BENZENE-D6	18.67	84.0	363343	9.96	UG/L	97
33)	*1,4-Dichlorobutane	24.19	55.0	78635	10.00	UG/L	94
38)	TOLUENE-D8	25.06	98.0	333382	10.29	UG/L	98
39)	TOLUENE	25.24	92.0	24122	.89	UG/L	99

* Compound is ISTD

TOTAL ION CHROMATOGRAM

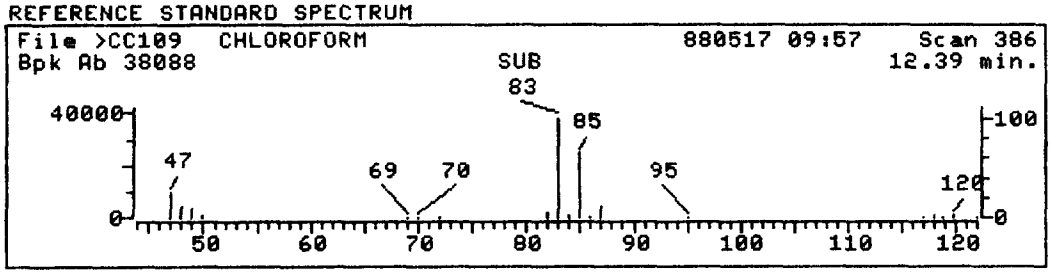


Data File: >CJ670::A5 Quant Output File: ^CJ670::E1
Name: 89FM11 R15 20ML
Misc: 062989 SF6232

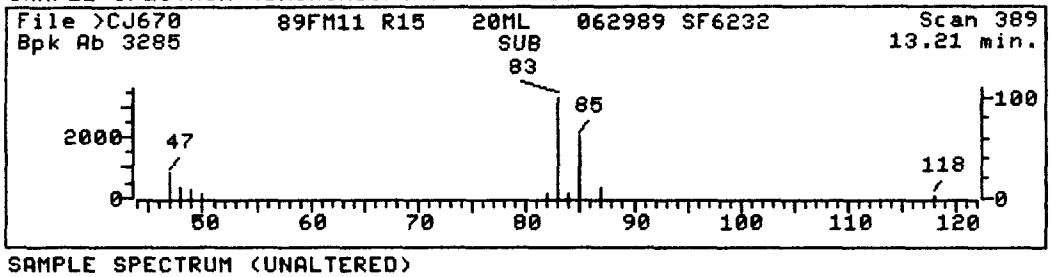
Id File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

Operator ID: CHACKO
Quant Time: 890630 10:38
Injected at: 890629 18:53

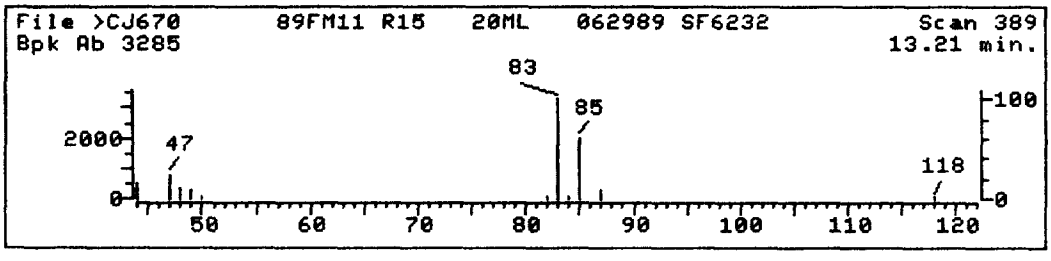
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



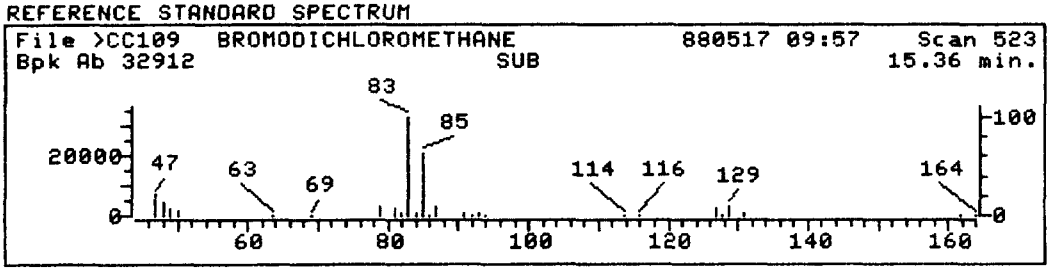
Data File: >CJ670::A5
Name: 89FM11 R15 20ML
Misc: 062989 SF6232
Quant Time: 890630 10:38
Injected at: 890629 18:53

Quant Output File: ^CJ670::E1

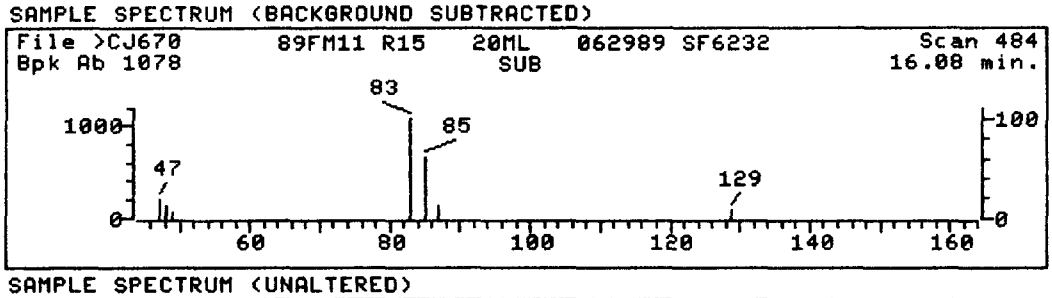
Quant ID File: ID3CF6::XX
Last Calibration: 890630 10:35

Compound No: 14
Compound Name: CHLOROFORM
Scan Number: 389
Retention Time: 13.21 min.
Quant Ion: 83.0
Area: 34747
Concentration: 1.74 UG/L
q-value: 95

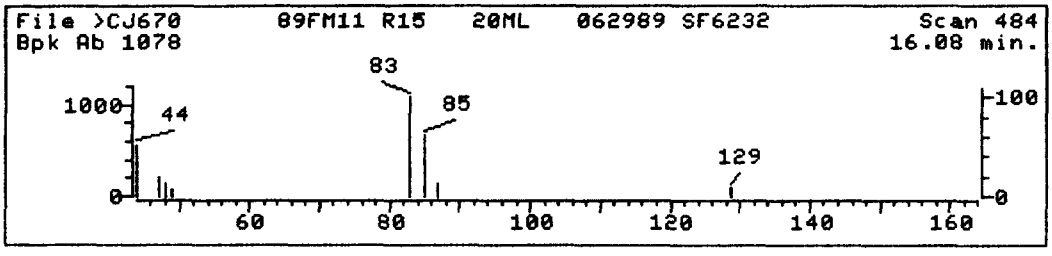
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



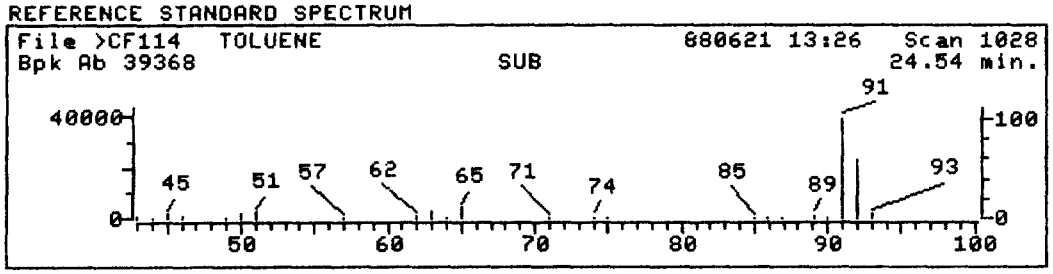
SAMPLE SPECTRUM (UNALTERED)



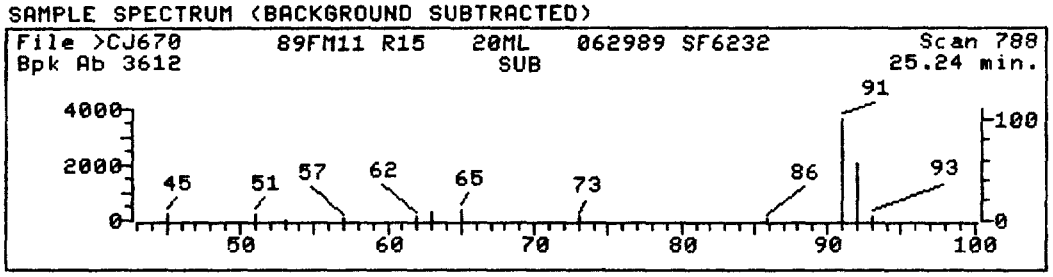
Data File: >CJ670::A5 Quant Output File: ^CJ670::E1
Name: 89FM11 R15 20ML
Misc: 062989 SF6232
Quant Time: 890630 10:38 Quant ID File: ID3CF6::XX
Injected at: 890629 18:53 Last Calibration: 890630 10:35

Compound No: 22
Compound Name: BROMODICHLOROMETHANE
Scan Number: 484
Retention Time: 16.08 min.
Quant Ion: 83.0
Area: 11090
Concentration: .83 UG/L
q-value: 99

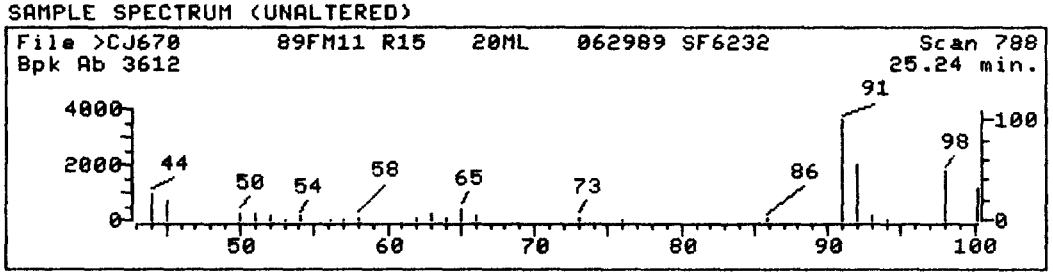
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >CJ670::A5
Name: 89FM11 R15 20ML
Misc: 062989 SF6232
Quant Time: 890630 10:38
Injected at: 890629 18:53

Quant Output File: ^CJ670::E1
Quant ID File: ID3CF6::XX
Last Calibration: 890630 10:35

Compound No: 39
Compound Name: TOLUENE
Scan Number: 788
Retention Time: 25.24 min.
Quant Ion: 92.0
Area: 24122
Concentration: .89 UG/L
q-value: 99

QUANT REPORT

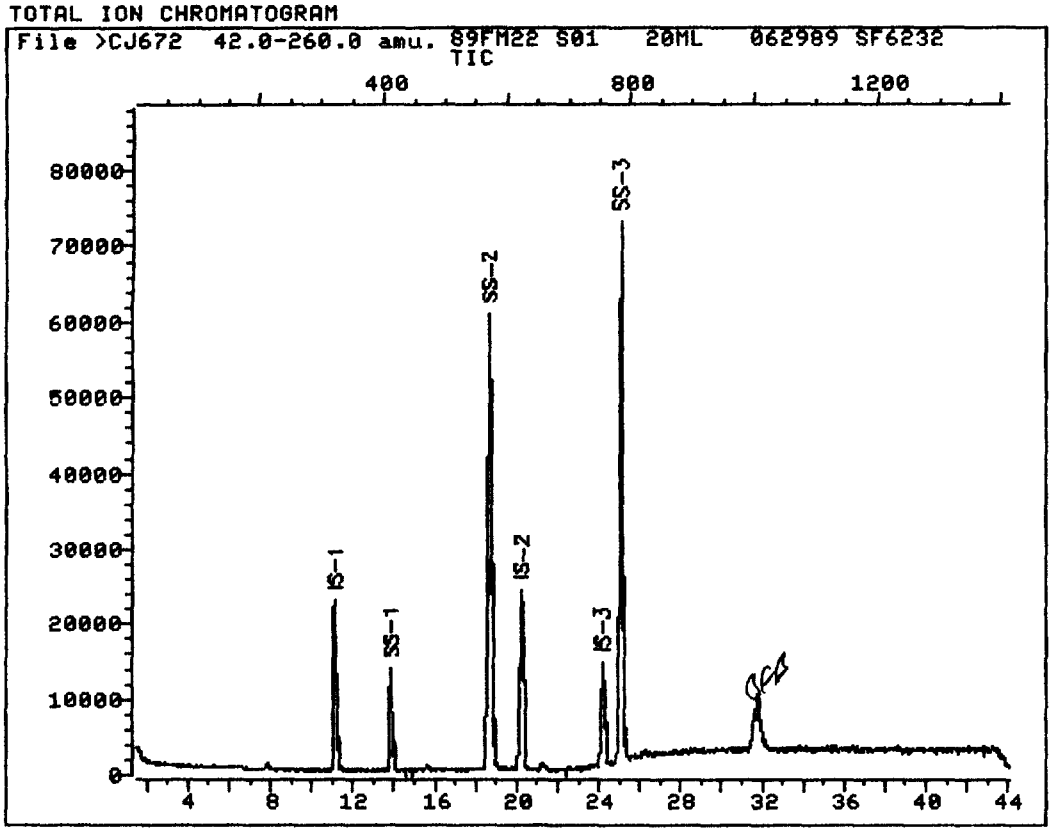
Operator ID: CHACKO Quant Rev: 6 Quant Time: 890630 10:39
Output File: ^CJ672::E1 Injected at: 890629 20:41
Data File: >CJ672::A5 Dilution Factor: 1.00000
Name: 89FM22 S01 20ML
Misc: 062989 SF6232

ID File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.10	128.0	34504	10.00	UG/L	98
15)	1,2-DICHLOROETHANE-D4	13.81	65.0	41930	9.33	UG/L	88
17)	*2-Bromo-1-chloropropane	20.21	77.0	171548	10.00	UG/L	98
26)	BENZENE-D6	18.64	84.0	384725	9.69	UG/L	97
33)	*1,4-Dichlorobutane	24.16	55.0	79148	10.00	UG/L	94
38)	TOLUENE-D8	25.06	98.0	360315	11.05	UG/L	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CJ672::A5 Quant Output File: ^CJ672::E1
Name: 89FM22 S01 20ML
Misc: 062989 SF6232

Id File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

Operator ID: CHACKO
Quant Time: 890630 10:39
Injected at: 890629 20:41

QUANT REPORT

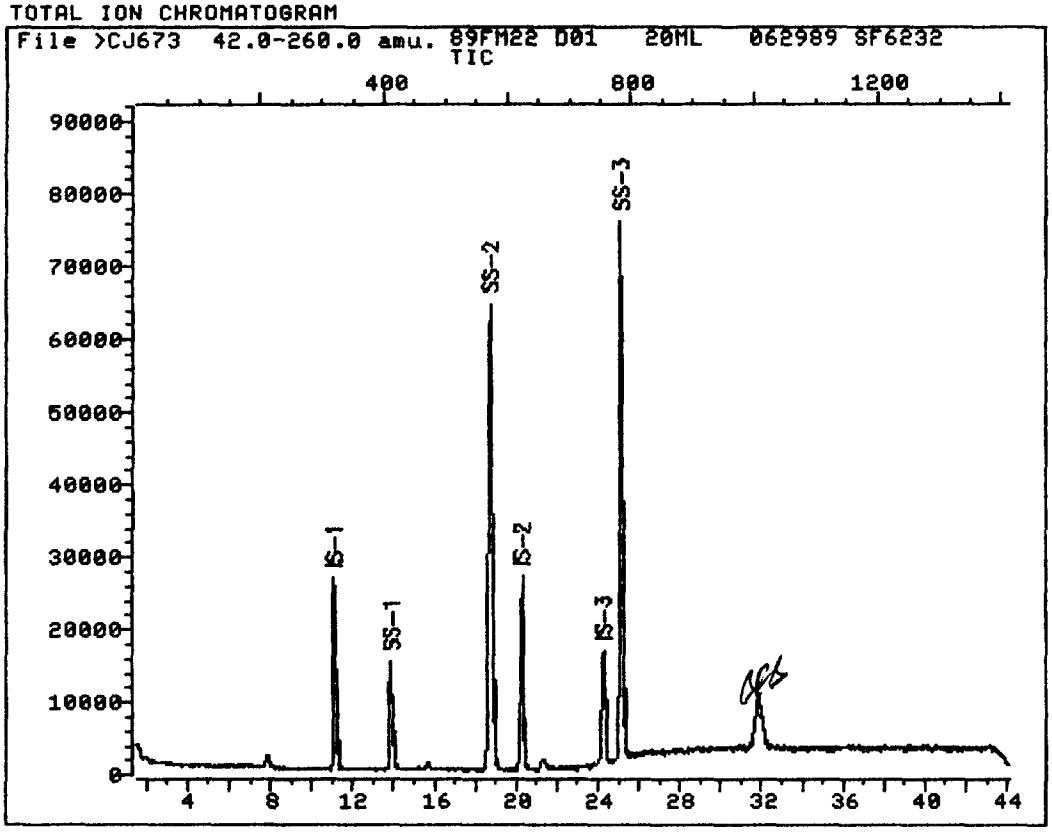
Operator ID: CHACKO Quant Rev: 6 Quant Time: 890630 10:40
Output File: ^CJ673::E1 Injected at: 890629 21:35
Data File: >CJ673::A5 Dilution Factor: 1.00000
Name: 89FM22 D01 20ML
Misc: 062989 SF6232

ID File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.07	128.0	41297	10.00	UG/L	98
15)	1,2-DICHLOROETHANE-D4	13.85	65.0	46166	8.58	UG/L	88
17)	*2-Bromo-1-chloropropane	20.24	77.0	182194	10.00	UG/L	96
26)	BENZENE-D6	18.70	84.0	405032	9.60	UG/L	96
33)	*1,4-Dichlorobutane	24.22	55.0	91987	10.00	UG/L	98
38)	TOLUENE-D8	25.09	98.0	377364	9.95	UG/L	99

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CJ673::A5 Quant Output File: ^CJ673::E1
Name: 89FM22 D01 20ML
Misc: 062989 SF6232

Id File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

Operator ID: CHACKO
Quant Time: 890630 10:40
Injected at: 890629 21:35

QUANT REPORT

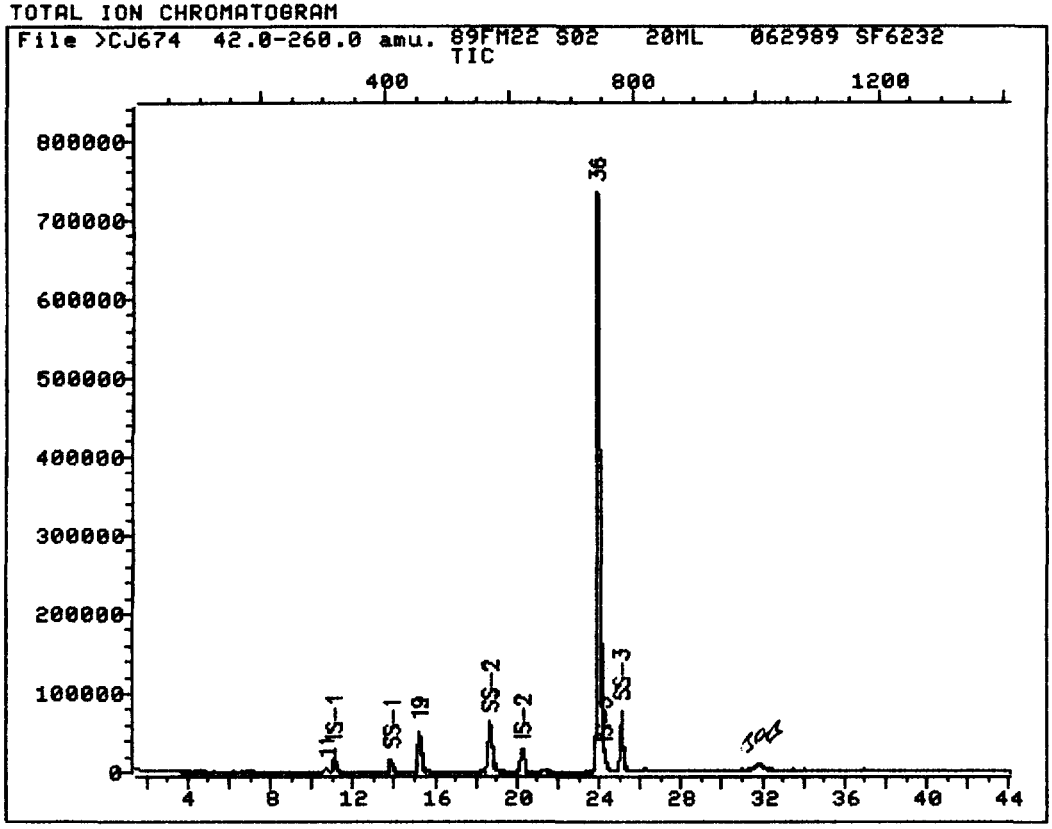
Operator ID: CHACKO Quant Rev: 6 Quant Time: 890630 10:42
Output File: ^CJ674::E1 Injected at: 890629 22:30
Data File: >CJ674::A5 Dilution Factor: 1.00000
Name: 89FM22 S02 20ML
Misc: 062989 SF6232

ID File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.07	128.0	46447	10.00	UG/L	99
11)	1,1-DICHLOROETHENE	10.68	96.0	9987	.58	UG/L	96
15)	1,2-DICHLOROETHANE-D4	13.85	65.0	51884	8.57	UG/L	90
17)	*2-Bromo-1-chloropropane	20.24	77.0	201639	10.00	UG/L	98
19)	1,1,1-TRICHLOROETHANE	15.23	97.0	181524	9.11	UG/L	99
26)	BENZENE-D6	18.67	84.0	396151	8.49	UG/L	98
33)	*1,4-Dichlorobutane	24.19	55.0	109691	10.00	UG/L	95
36)	TETRACHLOROETHENE	23.92	164.0	1306409	61.17	UG/L	98
38)	TOLUENE-D8	25.07	98.0	377029	8.34	UG/L	99

* Compound is ISTD

TOTAL ION CHROMATOGRAM

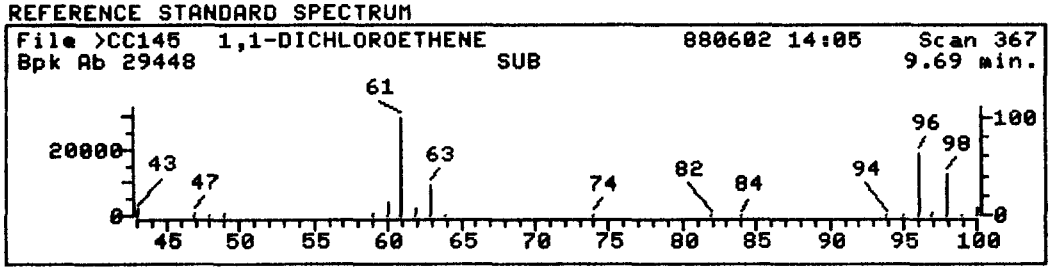


Data File: >CJ674::A5 Quant Output File: ^CJ674::E1
Name: 89FM22 S02 20ML
Misc: 062989 SF6232

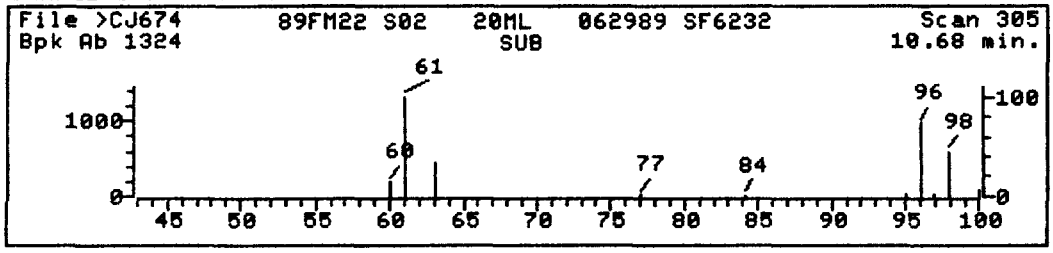
Id File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

Operator ID: CHACKO
Quant Time: 890630 10:42
Injected at: 890629 22:30

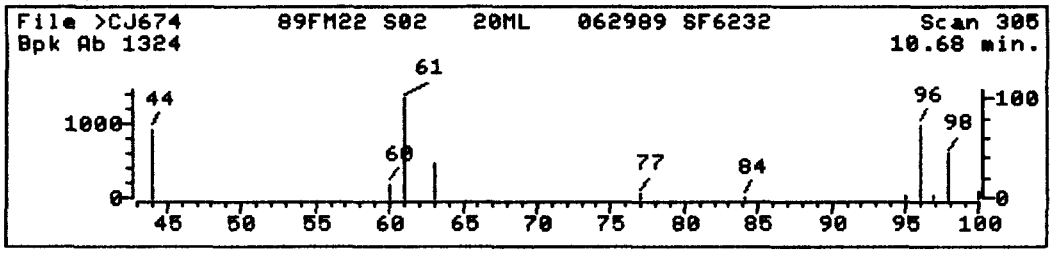
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



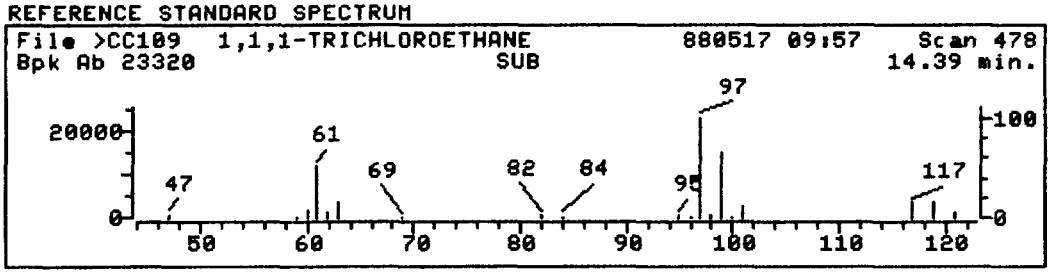
SAMPLE SPECTRUM (UNALTERED)



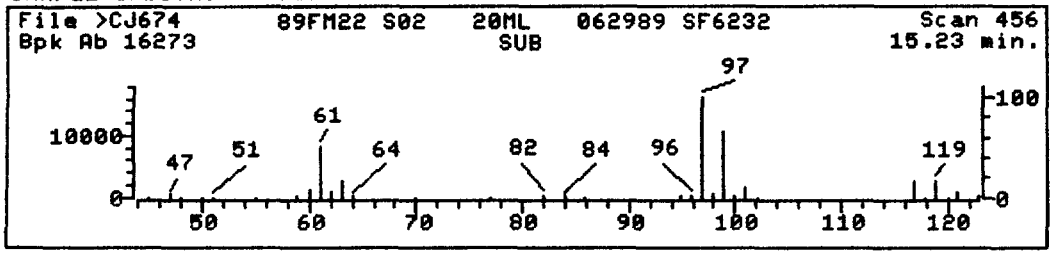
Data File: >CJ674::A5 Quant Output File: ^CJ674::E1
Name: 89FM22 S02 20ML
Misc: 062989 SF6232
Quant Time: 890630 10:42 Quant ID File: ID3CF6::XX
Injected at: 890629 22:30 Last Calibration: 890630 10:35

Compound No: 11
Compound Name: 1,1-DICHLOROETHENE
Scan Number: 305
Retention Time: 10.68 min.
Quant Ion: 96.0
Area: 9987
Concentration: .58 UG/L
q-value: 96

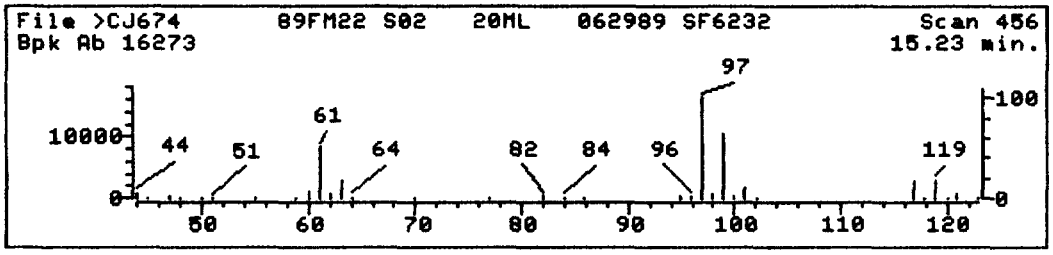
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



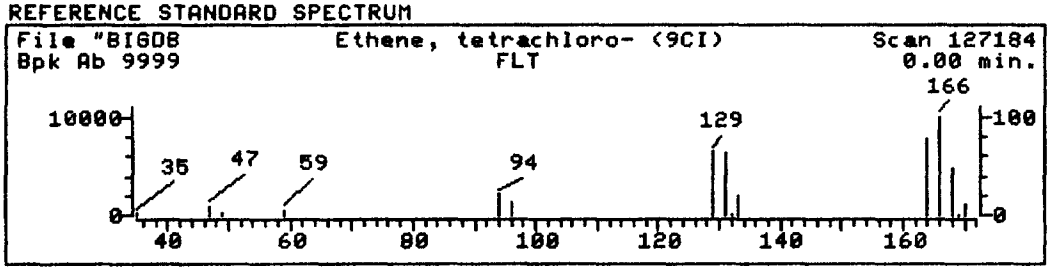
SAMPLE SPECTRUM (UNALTERED)



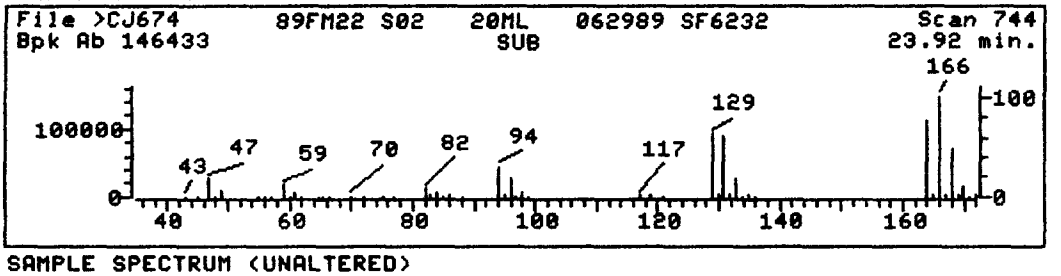
Data File: >CJ674::A5 Quant Output File: ^CJ674::E1
Name: 89FM22 S02 20ML
Misc: 062989 SF6232
Quant Time: 890630 10:42 Quant ID File: ID3CF6::XX
Injected at: 890629 22:30 Last Calibration: 890630 10:35

Compound No: 19
Compound Name: 1,1,1-TRICHLOROETHANE
Scan Number: 456
Retention Time: 15.23 min.
Quant Ion: 97.0
Area: 181524
Concentration: 9.11 UG/L
q-value: 99

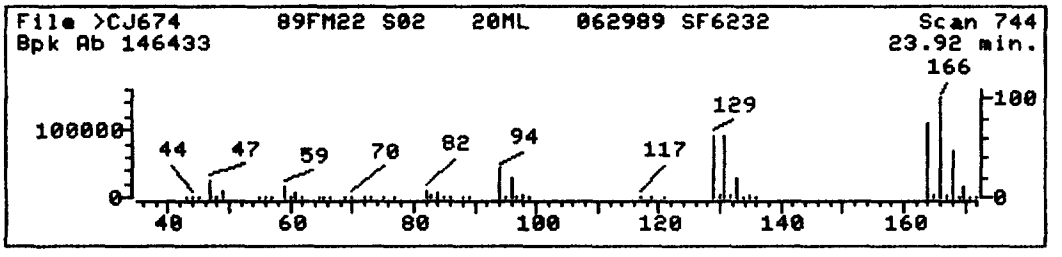
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >CJ674::A5
Name: 89FM22 S02 20ML
Misc: 062989 SF6232
Quant Time: 890630 10:42
Injected at: 890629 22:30

Quant Output File: ^CJ674::E1

Quant ID File: ID3CF6::XX
Last Calibration: 890630 10:35

Compound No: 36
Compound Name: TETRACHLOROETHENE
Scan Number: 744
Retention Time: 23.92 min.
Quant Ion: 164.0
Area: 1306409
Concentration: 61.17 UG/L
q-value: 98

QUANT REPORT

Operator ID: CARSTEN
Output File: ^CF536::E1
Data File: >CF536::A9
Name: 89FM22S02 1:10 7/17/89
Misc: 07/07/89 CF SF-6232

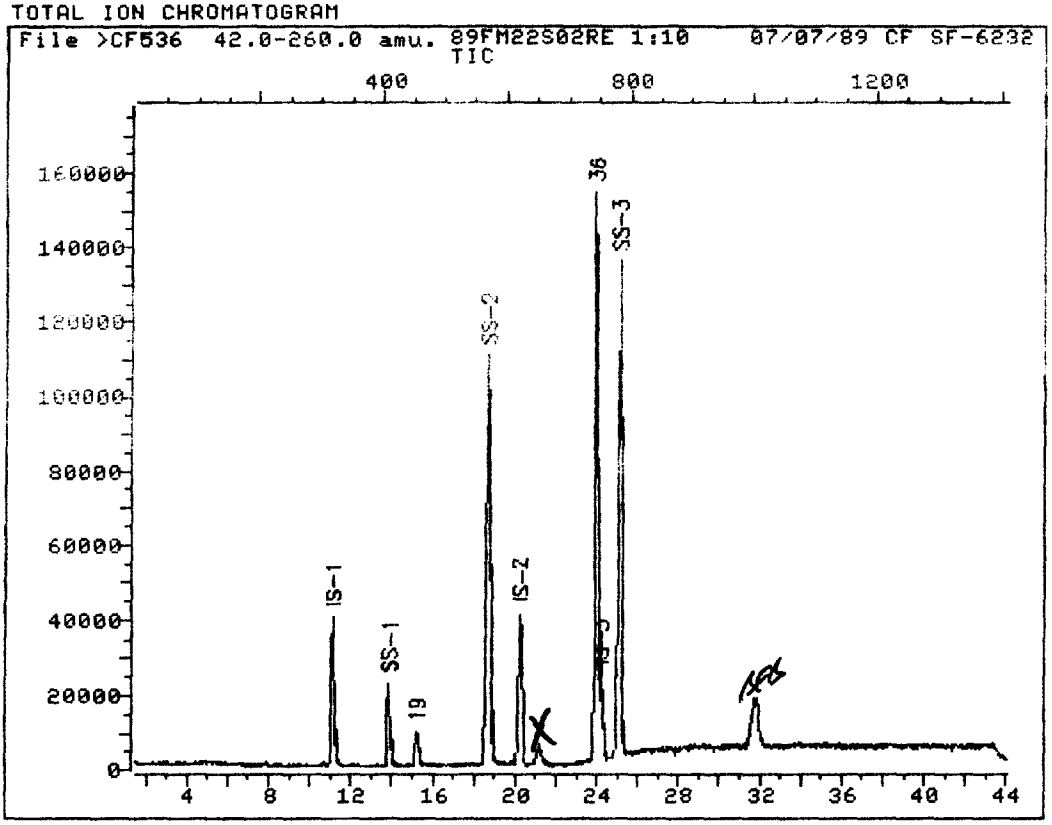
Quant Rev: 6
Quant Time: 890707 14:09
Injected at: 890707 13:22
Dilution Factor: 1.00000

ID File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890707 12:51

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.11	128.0	63375	10.00	UG/L	97
15)	1,2-DICHLOROETHANE-D4	13.85	65.0	69851	8.54	UG/L	90
17)	*2-Bromo-1-chloropropane	20.22	77.0	289006	10.00	UG/L	96
19)	1,1,1-TRICHLOROETHANE	15.24	97.0	33669	1.06	UG/L	98
26)	BENZENE-D6	18.68	84.0	699142	9.66	UG/L	97
33)	*1,4-Dichlorobutane	24.17	55.0	129234	10.00	UG/L	91
36)	TETRACHLOROETHENE	23.93	164.0	264197	8.99	UG/L	96
38)	TOLUENE-D8	25.08	98.0	653620	10.58	UG/L	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM

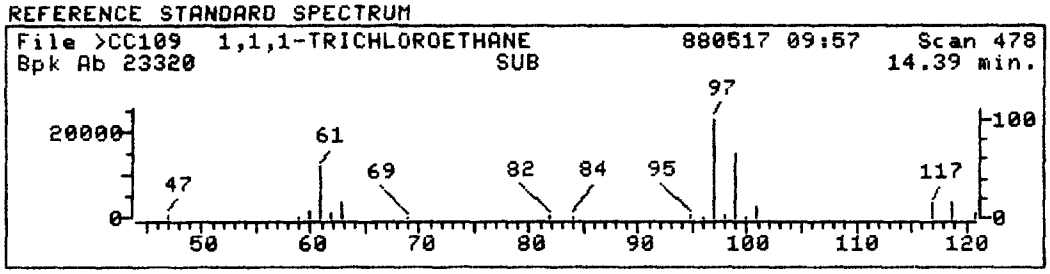


Data File: >CF536::A9 Quant Output File: ^CF536::E1
Name: 89FM22S02RE 1:10
Misc: 07/07/89 CF SF-6232

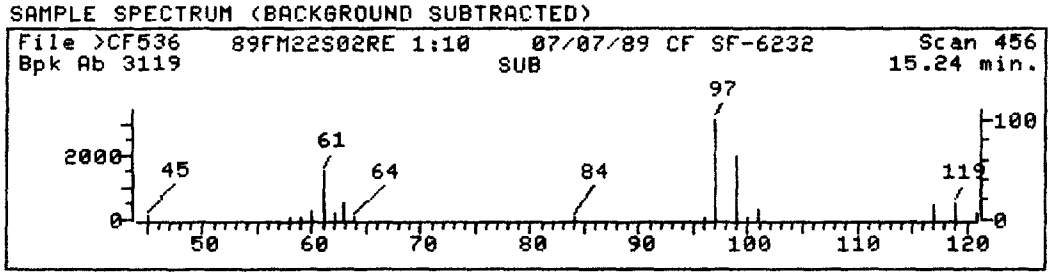
Id File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890707 12:51

Operator ID: CARSTEN
Quant Time: 890707 14:09
Injected at: 890707 13:22

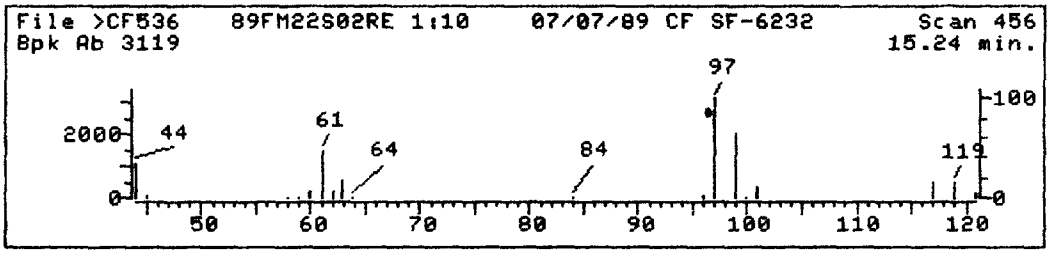
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



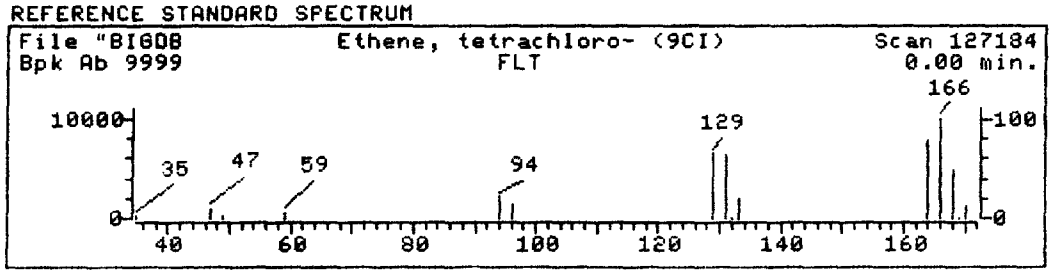
SAMPLE SPECTRUM (UNALTERED)



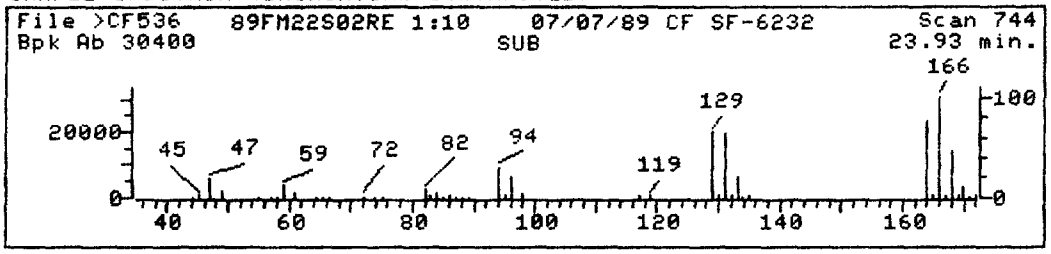
Data File: >CF536::A9 Quant Output File: ^CF536::E1
Name: 89FM22S02RE 1:10
Misc: 07/07/89 CF SF-6232
Quant Time: 890707 14:09 Quant ID File: IDVOA1::XX
Injected at: 890707 13:22 Last Calibration: 890707 12:51

Compound No: 19
Compound Name: 1,1,1-TRICHLOROETHANE
Scan Number: 456
Retention Time: 15.24 min.
Quant Ion: 97.0
Area: 33669
Concentration: 1.06 UG/L
q-value: 98

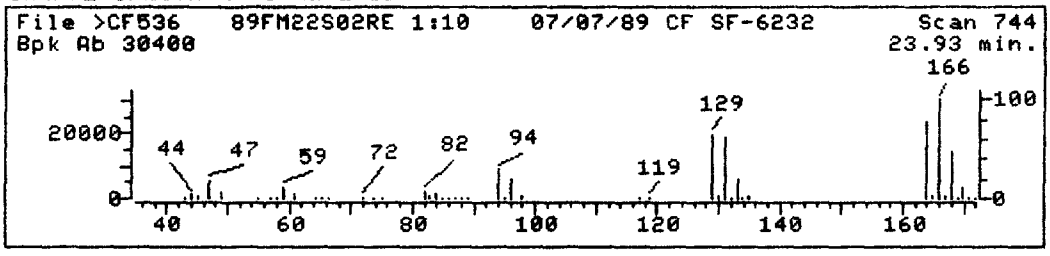
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >CF536::A9 9/13/89
Name: 89FM22S02RE 1:10
Misc: 07/07/89 CF SF-6232
Quant Time: 890707 14:09
Injected at: 890707 13:22

Quant Output File: ^CF536::E1
Quant ID File: IDVOA1::XX
Last Calibration: 890707 12:51

Compound No: 36
Compound Name: TETRACHLOROETHENE
Scan Number: 744
Retention Time: 23.93 min.
Quant Ion: 164.0
Area: 264197
Concentration: 8.99 UG/L
q-value: 96

QUANT REPORT

Operator ID: CHACKO
Output File: ^CJ675::E1
Data File: >CJ675::A5
Name: 89FM22S02M 20ML
Misc: 062989 SF6232

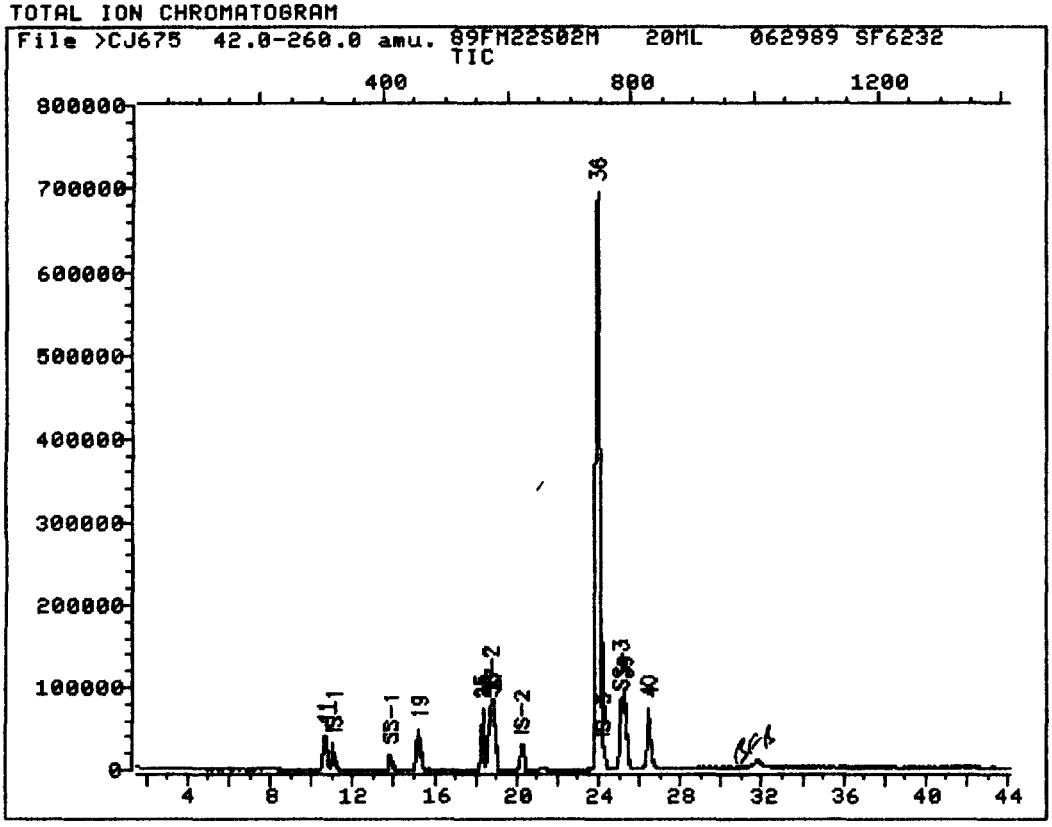
Quant Rev: 6
Quant Time: 890630 10:43
Injected at: 890629 23:24
Dilution Factor: 1.00000

ID File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.04	128.0	49679	10.00	UG/L	98
11)	1,1-DICHLOROETHENE	10.65	96.0	108635	5.91	UG/L	94
15)	1,2-DICHLOROETHANE-D4	13.82	65.0	55733	8.61	UG/L	87
17)	*2-Bromo-1-chloropropane	20.21	77.0	209212	10.00	UG/L	99
19)	1,1,1-TRICHLOROETHANE	15.21	97.0	170347	8.24	UG/L	98
25)	TRICHLOROETHENE	18.28	130.0	156522	5.95	UG/L	99
26)	BENZENE-D6	18.67	84.0	412895	8.53	UG/L	97
27)	BENZENE	18.83	78.0	419018	7.90	UG/L	96
33)	*1,4-Dichlorobutane	24.20	55.0	119891	10.00	UG/L	96
36)	TETRACHLOROETHENE	23.95	164.0	1246767	53.41	UG/L	97
38)	TOLUENE-D8	25.07	98.0	386396	7.82	UG/L	97
39)	TOLUENE	25.25	92.0	283244	6.88	UG/L	95
40)	CHLOROBENZENE	26.43	112.0	333287	7.03	UG/L	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CJ675::A5 Quant Output File: ^CJ675::E1
Name: 89FM22S02M 20ML
Misc: 062989 SF6232

Id File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

Operator ID: CHACKO
Quant Time: 890630 10:43
Injected at: 890629 23:24

QUANT REPORT

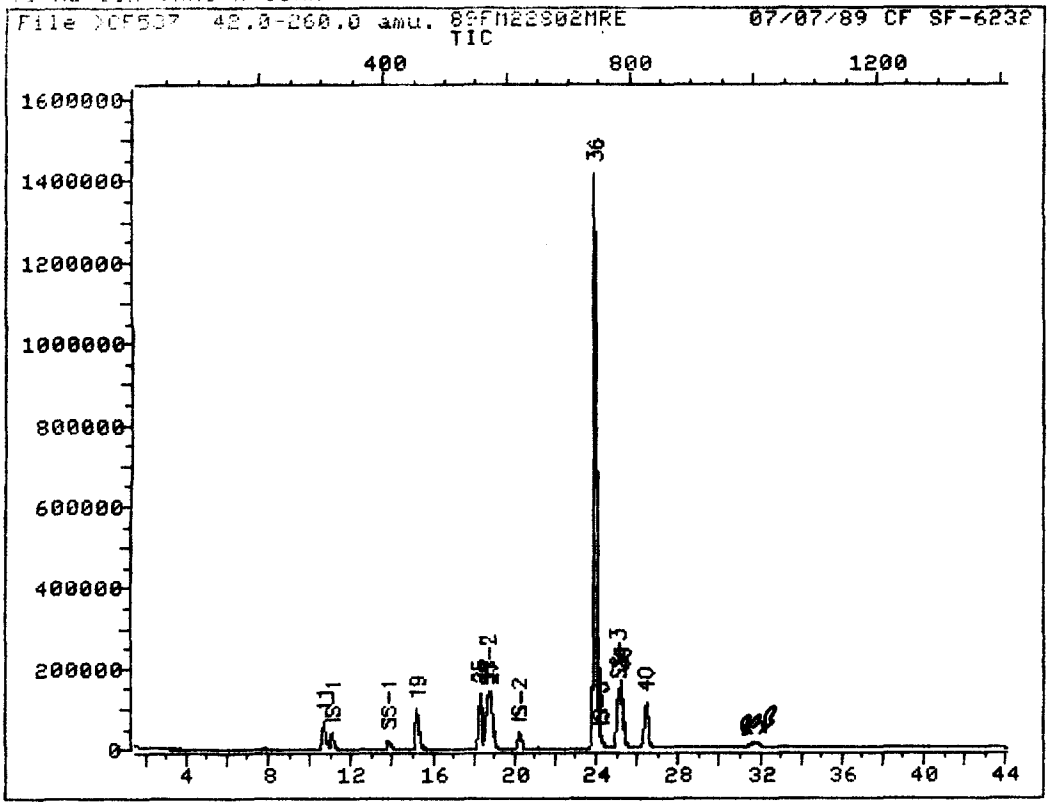
Operator ID: CARSTEN Quant Rev: 6 Quant Time: 890707 15:04
Output File: ^CF537::E1 Injected at: 890707 14:16
Data File: >CF537::A9 Dilution Factor: 1.00000
Name: 89FM22S02MRE
Misc: 07/07/89 CF SF-6232

ID File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890707 12:51

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.11	128.0	62160	10.00	UG/L	98
11)	1,1-DICHLOROETHENE	10.69	96.0	166593	6.78	UG/L	94
15)	1,2-DICHLOROETHANE-D4	13.83	65.0	71491	8.91	UG/L	86
17)	*2-Bromo-1-chloropropane	20.22	77.0	275157	10.00	UG/L	98
19)	1,1,1-TRICHLOROETHANE	15.24	97.0	343910	11.32	UG/L	95
25)	TRICHLOROETHENE	18.29	130.0	287839	9.01	UG/L	99
26)	BENZENE-D6	18.68	84.0	701485	10.13	UG/L	96
27)	BENZENE	18.84	78.0	697365	9.46	UG/L	96
33)	*1,4-Dichlorobutane	24.21	55.0	129512	10.00	UG/L	98
36)	TETRACHLOROETHENE	23.93	164.0	2477709	84.13	UG/L	97
38)	TOLUENE-D8	25.08	98.0	642584	10.38	UG/L	97
39)	TOLUENE	25.26	92.0	503969	9.96	UG/L	98
40)	CHLOROBENZENE	26.41	112.0	533696	9.69	UG/L	96

* Compound is ISTD

TOTAL ION CHROMATOGRAM

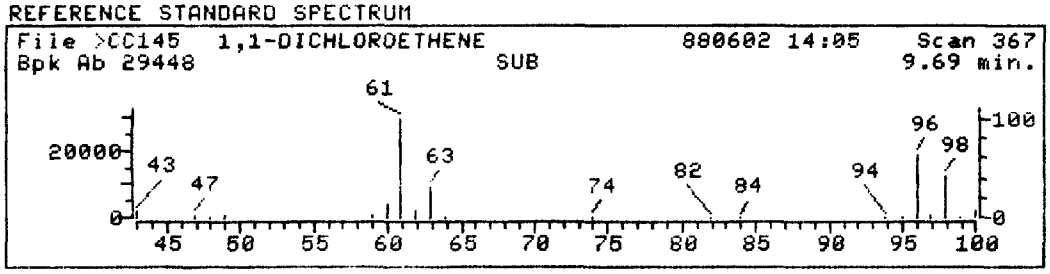


Data File: >CF537::A9 Quant Output File: ^CF537::E1
Name: 89FM22S02MRE
Misc: 07/07/89 CF SF-6232

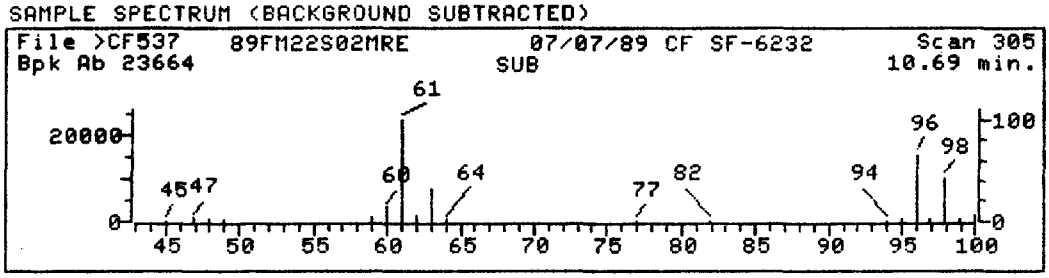
Id File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890707 12:51

Operator ID: CARSTEN
Quant Time: 890707 15:04
Injected at: 890707 14:16

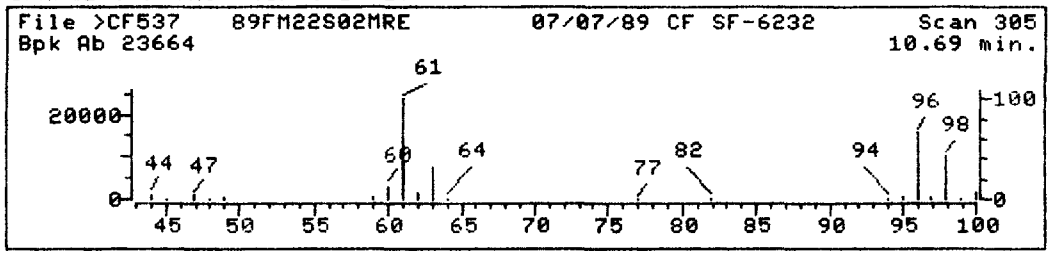
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



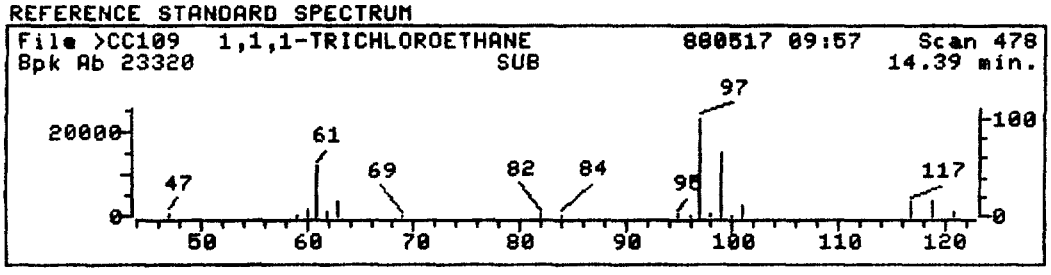
SAMPLE SPECTRUM (UNALTERED)



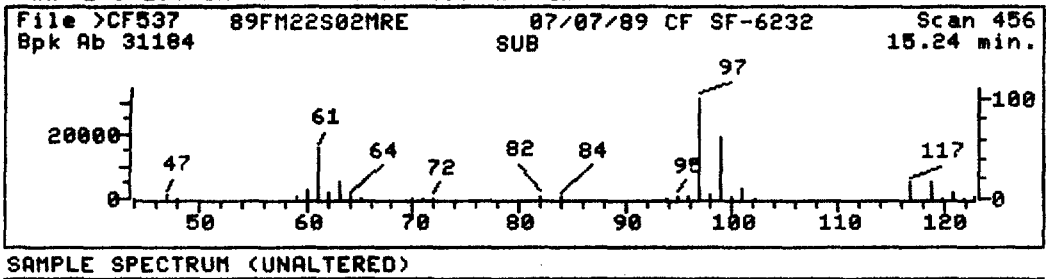
Data File: >CF537::A9 Quant Output File: ^CF537::E1
Name: 89FM22S02MRE
Misc: 07/07/89 CF SF-6232
Quant Time: 890707 15:04 Quant ID File: IDVOA1::XX
Injected at: 890707 14:16 Last Calibration: 890707 12:51

Compound No: 11
Compound Name: 1,1-DICHLOROETHENE
Scan Number: 305
Retention Time: 10.69 min.
Quant Ion: 96.0
Area: 166593
Concentration: 6.78 UG/L
q-value: 94

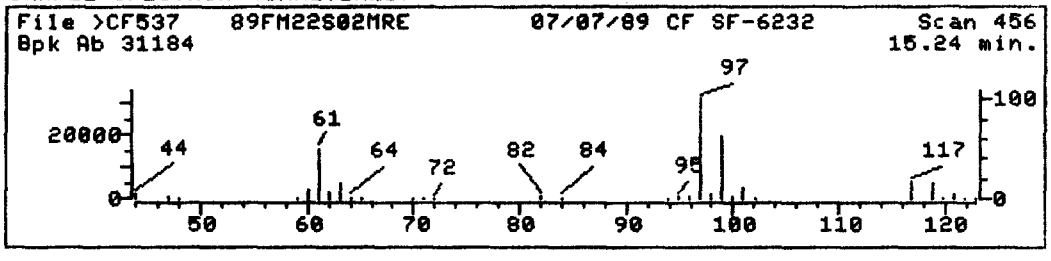
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



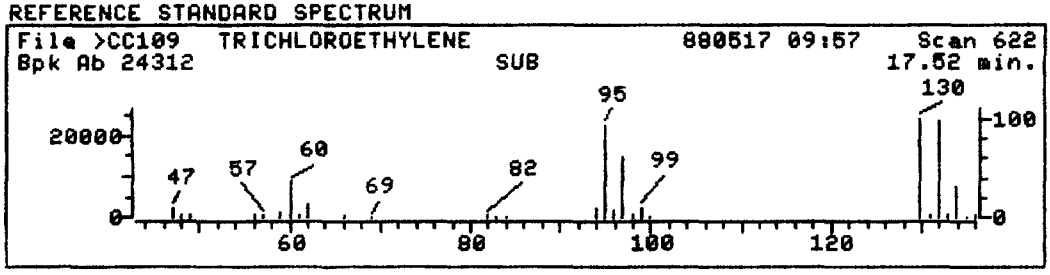
SAMPLE SPECTRUM (UNALTERED)



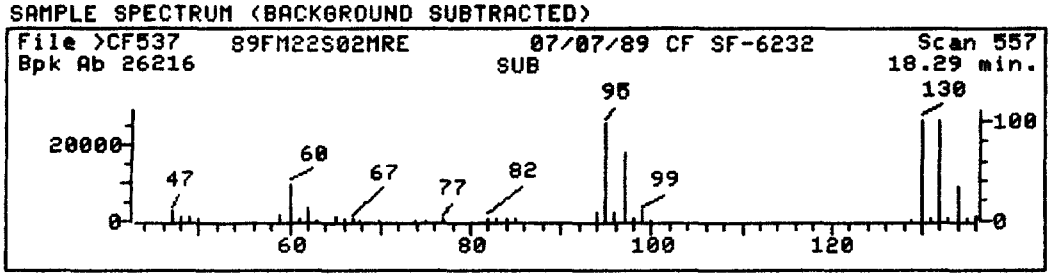
Data File: >CF537::A9 Quant Output File: ^CF537::E1
Name: 89FM22S02MRE
Misc: 07/07/89 CF SF-6232
Quant Time: 890707 15:04 Quant ID File: IDVOA1::XX
Injected at: 890707 14:16 Last Calibration: 890707 12:51

Compound No: 19
Compound Name: 1,1,1-TRICHLOROETHANE
Scan Number: 456
Retention Time: 15.24 min.
Quant Ion: 97.0
Area: 343910
Concentration: 11.32 UG/L
q-value: 96

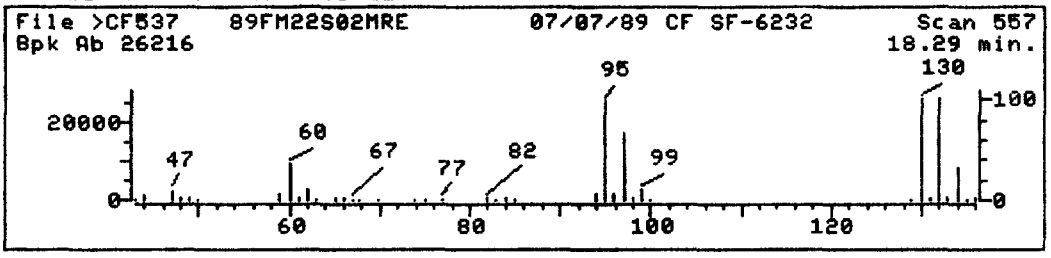
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



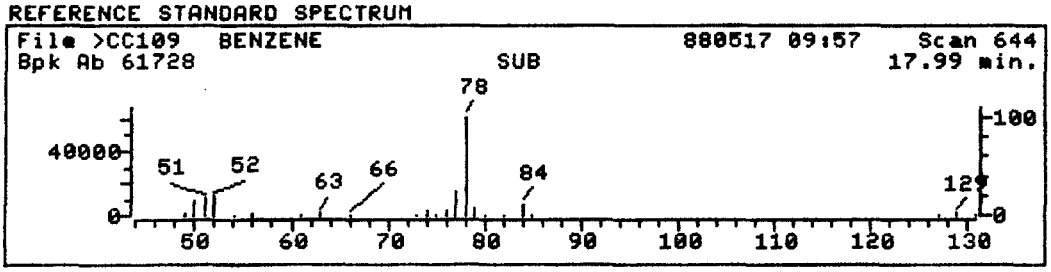
Data File: >CF537::A9
Name: 89FM22S02MRE
Misc: 07/07/89 CF SF-6232
Quant Time: 890707 15:04
Injected at: 890707 14:16

Quant Output File: ^CF537::E1

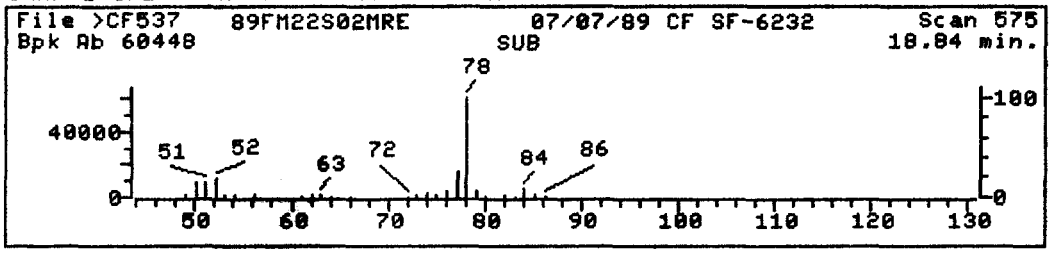
Quant ID File: IDVOA1::XX
Last Calibration: 890707 12:51

Compound No: 25
Compound Name: TRICHLOROETHENE
Scan Number: 557
Retention Time: 18.29 min.
Quant Ion: 130.0
Area: 287839
Concentration: 9.01 UG/L
q-value: 98

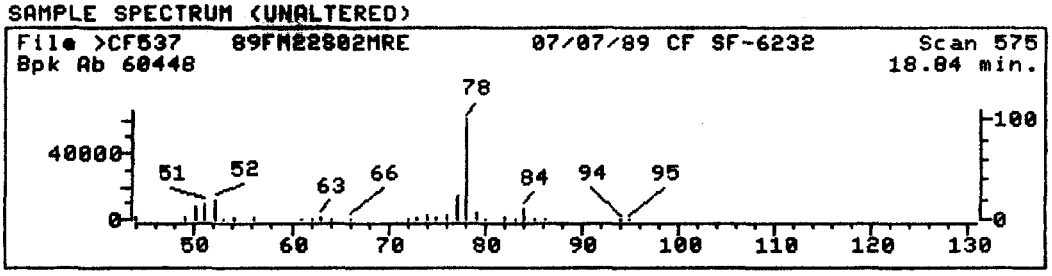
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



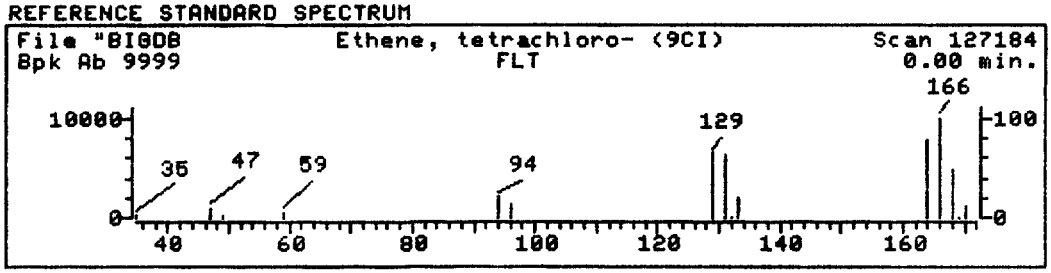
Data File: >CF537::A9
Name: 89FM22S02MRE
Misc: 07/07/89 CF SF-6232
Quant Time: 890707 15:04
Injected at: 890707 14:16

Quant Output File: ^CF537::E1

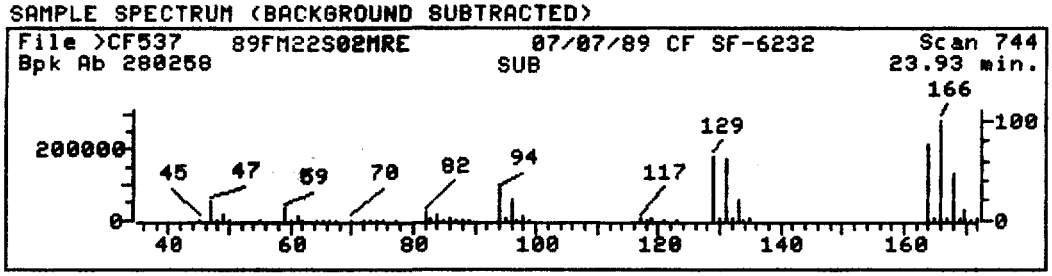
Quant ID File: IDVOA1::XX
Last Calibration: 890707 12:51

Compound No: 27
Compound Name: BENZENE
Scan Number: 575
Retention Time: 18.84 min.
Quant Ion: 78.0
Area: 693365
Concentration: 9.46 UG/L
q-value: 96

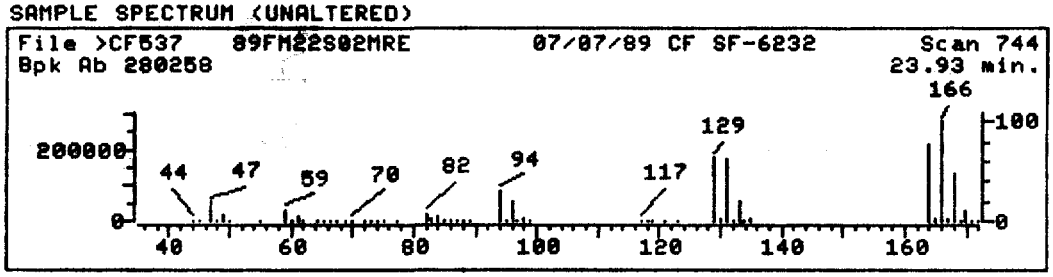
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

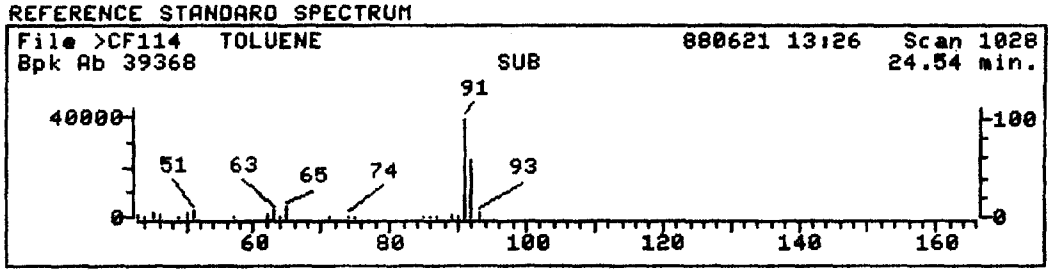


Data File: >CF537::A9
Name: 89FM22S02MRE
Misc: 07/07/89 CF SF-6232
Quant Time: 890707 15:04
Injected at: 890707 14:16

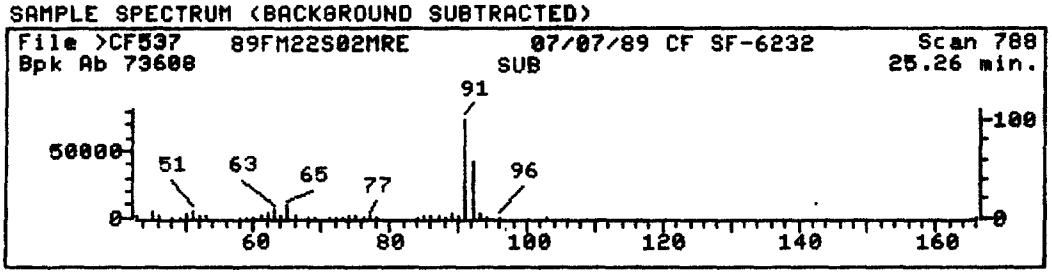
Quant Output File: ^CF537::E1
Quant ID File: IDVOA1::XX
Last Calibration: 890707 12:51

Compound No: 36
Compound Name: TETRACHLOROETHENE
Scan Number: 744
Retention Time: 23.93 min.
Quant Ion: 164.0
Area: 2477709
Concentration: 84.13 UG/L
q-value: 97

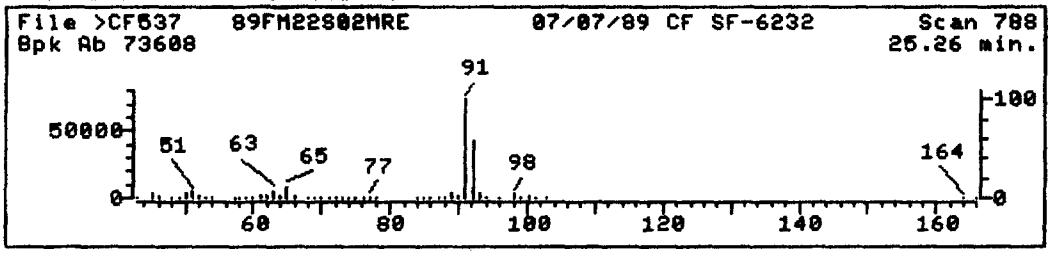
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

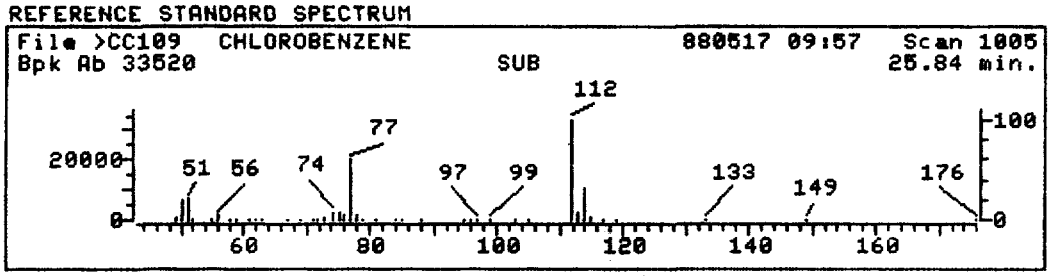


Data File: >CF537::A9
Name: 89FM22S02MRE
Misc: 07/07/89 CF SF-6232
Quant Time: 890707 15:04
Injected at: 890707 14:16

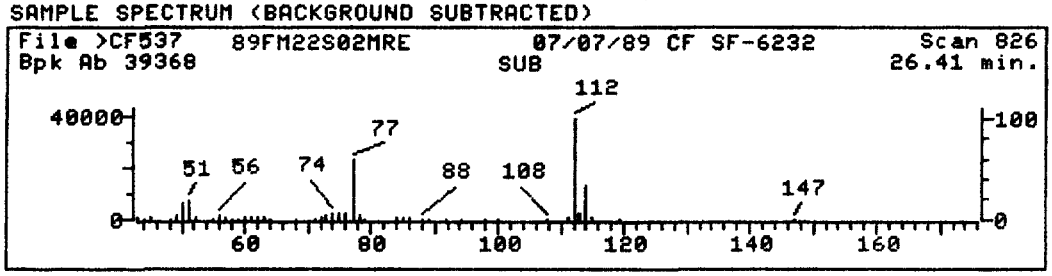
Quant Output File: ^CF537::E1
Quant ID File: IDVOA1::XX
Last Calibration: 890707 12:51

Compound No: 39
Compound Name: TOLUENE
Scan Number: 788
Retention Time: 25.26 min.
Quant Ion: 92.0
Area: 503969
Concentration: 9.96 UG/L
q-value: 98

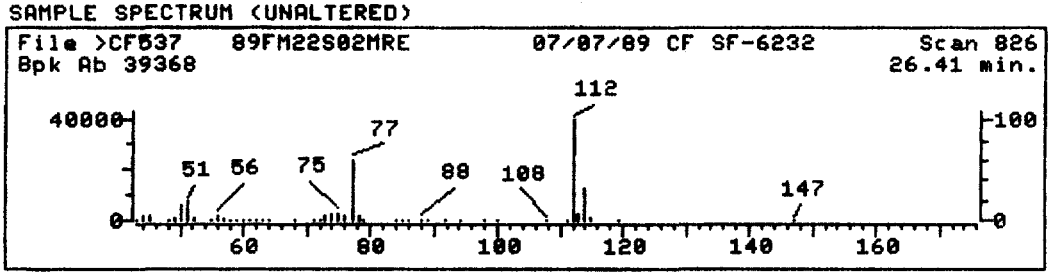
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >CF537::A9
Name: 89FM22S02MRE
Misc: 07/07/89 CF SF-6232
Quant Time: 890707 15:04
Injected at: 890707 14:16

Quant Output File: ^CF537::E1

Quant ID File: IDVOA1::XX
Last Calibration: 890707 12:51

Compound No: 40
Compound Name: CHLOROBENZENE
Scan Number: 826
Retention Time: 26.41 min.
Quant Ion: 112.0
Area: 533696
Concentration: 9.69 UG/L
q-value: 96

QUANT REPORT

Operator ID: CHACKO
Output File: ^CJ676::E1
Data File: >CJ676::A5
Name: 89FM22S02D 20ML
Misc: 062989 SF6232

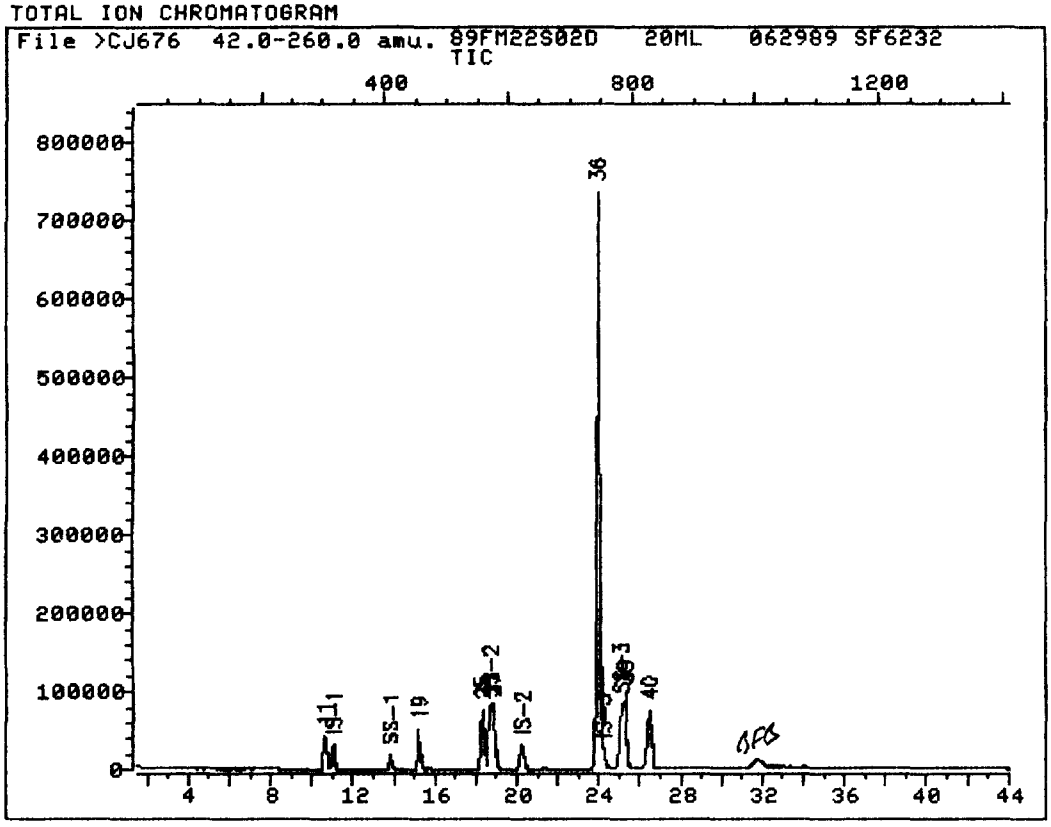
Quant Rev: 6
Quant Time: 890630 10:44
Injected at: 890630 00:18
Dilution Factor: 1.00000

ID File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.01	128.0	50572	10.00	UG/L	99
11)	1,1-DICHLOROETHENE	10.62	96.0	111381	5.95	UG/L	97
15)	1,2-DICHLOROETHANE-D4	13.82	65.0	56715	8.61	UG/L	86
17)	*2-Bromo-1-chloropropane	20.21	77.0	212312	10.00	UG/L	99
19)	1,1,1-TRICHLOROETHANE	15.21	97.0	177481	8.46	UG/L	99
25)	TRICHLOROETHENE	18.28	130.0	161889	6.06	UG/L	98
26)	BENZENE-D6	18.67	84.0	416927	8.48	UG/L	97
27)	BENZENE	18.83	78.0	425979	7.91	UG/L	96
33)	*1,4-Dichlorobutane	24.20	55.0	122529	10.00	UG/L	95
36)	TETRACHLOROETHENE	23.92	164.0	1310676	54.94	UG/L	97
38)	TOLUENE-D8	25.07	98.0	384872	7.62	UG/L	99
39)	TOLUENE	25.25	92.0	286477	6.81	UG/L	96
40)	CHLOROBENZENE	26.43	112.0	340075	7.02	UG/L	96

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CJ676::A5 Quant Output File: ^CJ676::E1
Name: 89FM22S02D 20ML
Misc: 062989 SF6232

Id File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

Operator ID: CHACKO
Quant Time: 890630 10:44
Injected at: 890630 00:18

QUANT REPORT

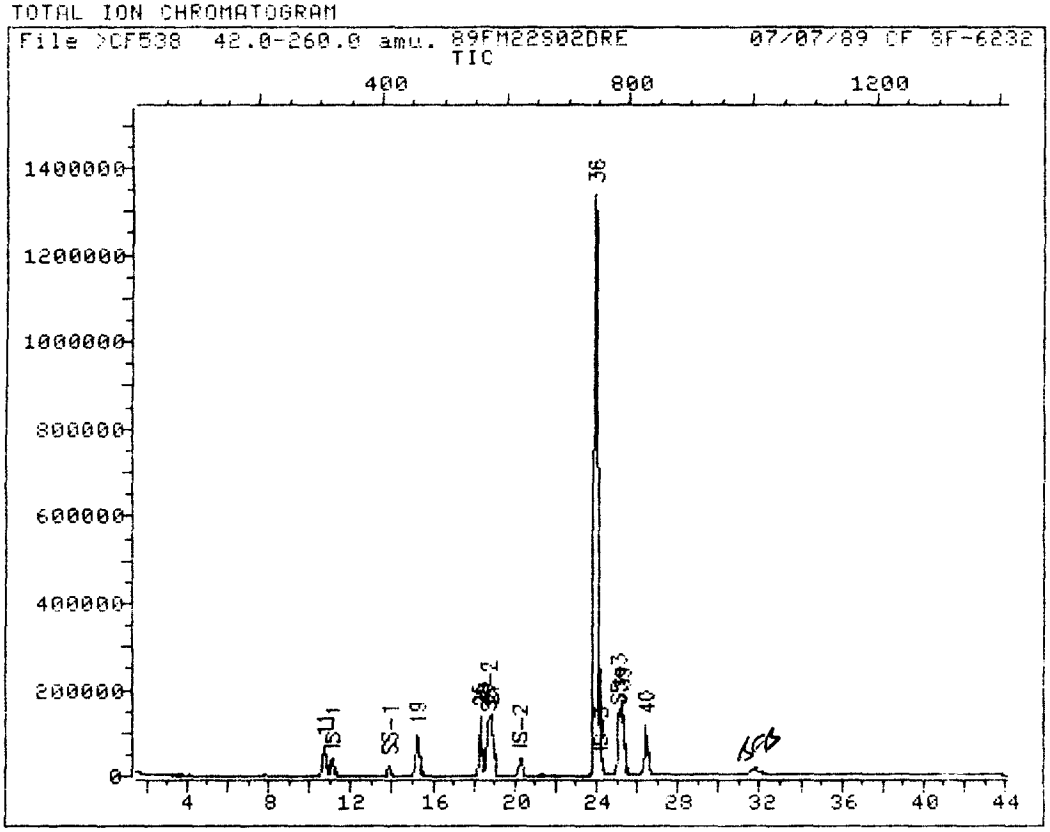
Operator ID: CARSTEN Quant Rev: 6 Quant Time: 890707 15:59
Output File: ^CF538::E1 Injected at: 890707 15:10
Data File: >CF538::#9 Dilution Factor: 1.00000
Name: 89FM22S02DRE
Misc: 07/07/89 CF SF-6232

ID File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890707 12:51

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.10	128.0	61290	10.00	UG/L	97
11)	1,1-DICHLOROETHENE	10.68	96.0	162976	6.73	UG/L	93
15)	1,2-DICHLOROETHANE-D4	13.85	65.0	69829	8.83	UG/L	88
17)	*2-Bromo-1-chloropropane	20.21	77.0	272922	10.00	UG/L	97
19)	1,1,1-TRICHLOROETHANE	15.24	97.0	328363	10.90	UG/L	98
25)	TRICHLOROETHENE	18.28	130.0	290866	9.18	UG/L	97
26)	BENZENE-D6	18.68	84.0	683570	10.01	UG/L	98
27)	BENZENE	18.83	78.0	701138	9.65	UG/L	97
33)	*1,4-Dichlorobutane	24.20	55.0	126893	10.00	UG/L	96
36)	TETRACHLOROETHENE	23.93	164.0	2362873	81.88	UG/L	97
38)	TOLUENE-D8	25.07	98.0	636381	10.49	UG/L	99
39)	TOLUENE	25.25	92.0	511126	10.31	UG/L	94
40)	CHLOROBENZENE	26.43	112.0	537162	9.96	UG/L	97

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CF538::A9 Quant Output File: ^CF538::E1
Name: 89FM22S02DRE
Misc: 07/07/89 CF SF-6232

Id File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890707 12:51

Operator ID: CARSTEN
Quant Time: 890707 15:58
Injected at: 890707 15:10

QUANT REPORT

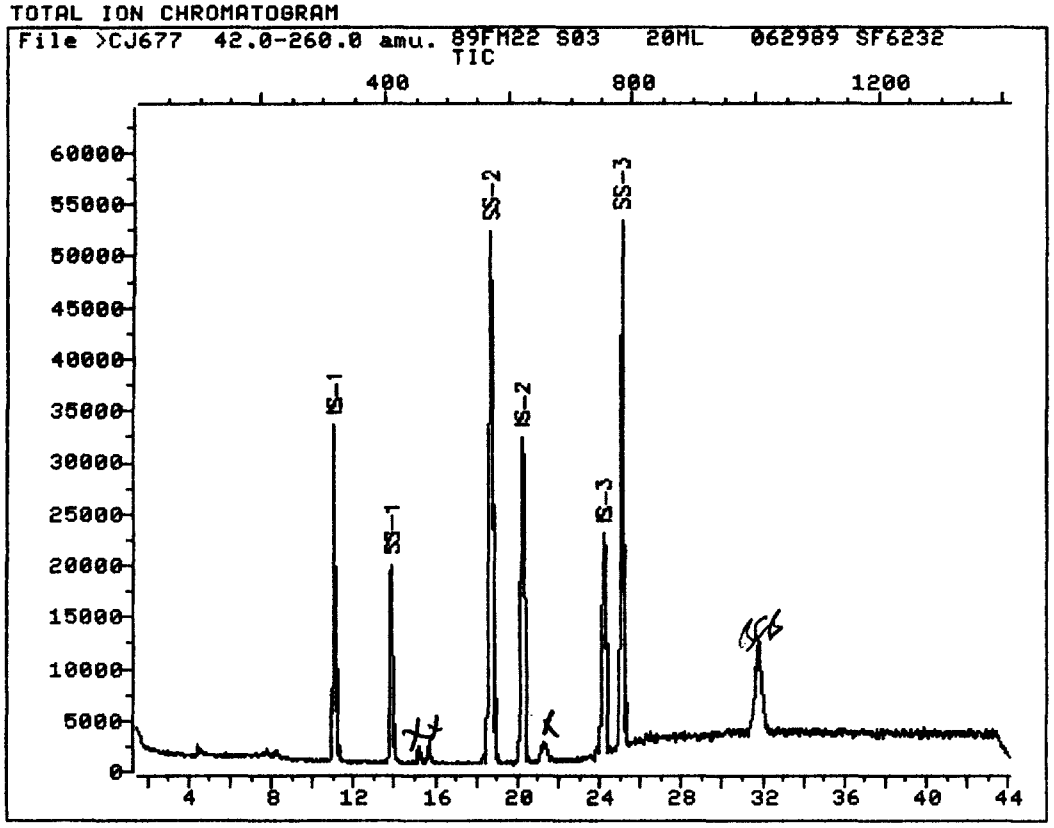
Operator ID: CHACKO Quant Rev: 6 Quant Time: 890630 10:46
Output File: ^CJ677::E1 Injected at: 890630 01:12
Data File: >CJ677::A5 Dilution Factor: 1.00000
Name: 89FM22 S03 20ML
Misc: 062989 SF6232

ID File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.01	128.0	52703	10.00	UG/L	97
15)	1,2-DICHLOROETHANE-D4	13.82	65.0	58691	8.55	UG/L	85
17)	*2-Bromo-1-chloropropane	20.21	77.0	218938	10.00	UG/L	98
26)	BENZENE-D6	18.67	84.0	322772	6.37	UG/L	98
33)	*1,4-Dichlorobutane	24.19	55.0	127487	10.00	UG/L	95
38)	TOLUENE-D8	25.07	98.0	255318	4.86	UG/L	98

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CJ677::A5 Quant Output File: ^CJ677::E1
Name: 89FM22 S03 20ML
Misc: 062989 SF6232

Id File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

Operator ID: CHACKO
Quant Time: 890630 10:46
Injected at: 890630 01:12

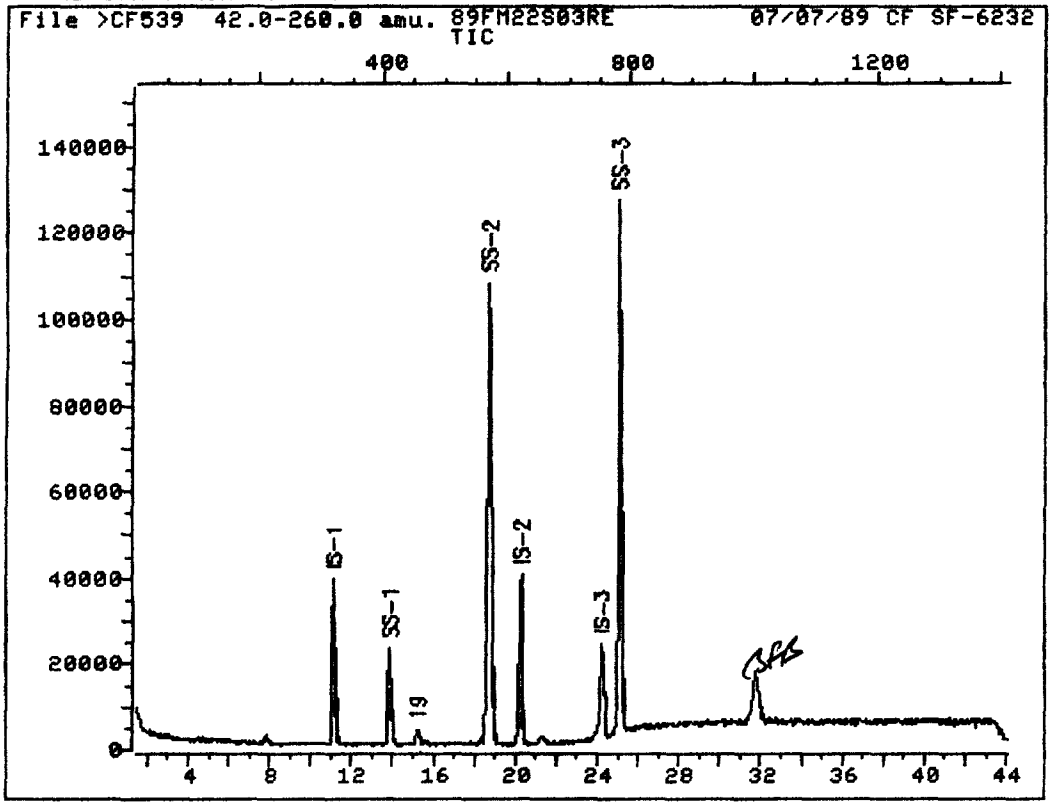
Operator ID: CARSTEN Quant Rev: 6 Quant Time: 890707 16:53
Output File: ^CF539::E1 Injected at: 890707 16:05
Data File: >CF539::A9 Dilution Factor: 1.00000
Name: 89FM22S03RE
Misc: 07/07/89 CF SF-6232

ID File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890707 12:51

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.10	128.0	61496	10.00	UG/L	95
15)	1,2-DICHLOROETHANE-D4	13.84	65.0	69808	8.80	UG/L	89
17)	*2-Bromo-1-chloropropane	20.24	77.0	270299	10.00	UG/L	97
26)	BENZENE-D6	18.67	84.0	678322	10.03	UG/L	96
33)	*1,4-Dichlorobutane	24.19	55.0	125229	10.00	UG/L	90
38)	TOLUENE-D8	25.06	98.0	621307	10.38	UG/L	99

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CF539::A9 Quant Output File: ^CF539::E1
Name: 89FM22S03RE
Misc: 07/07/89 CF SF-6232

Id File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890707 12:51

Operator ID: CARSTEN
Quant Time: 890707 16:53
Injected at: 890707 16:05

QUANT REPORT

Operator ID: CHACKO
Output File: ^CJ678::E1
Data File: >CJ678::A5
Name: 89FM22 S04 20ML
Misc: 062989 SF6232

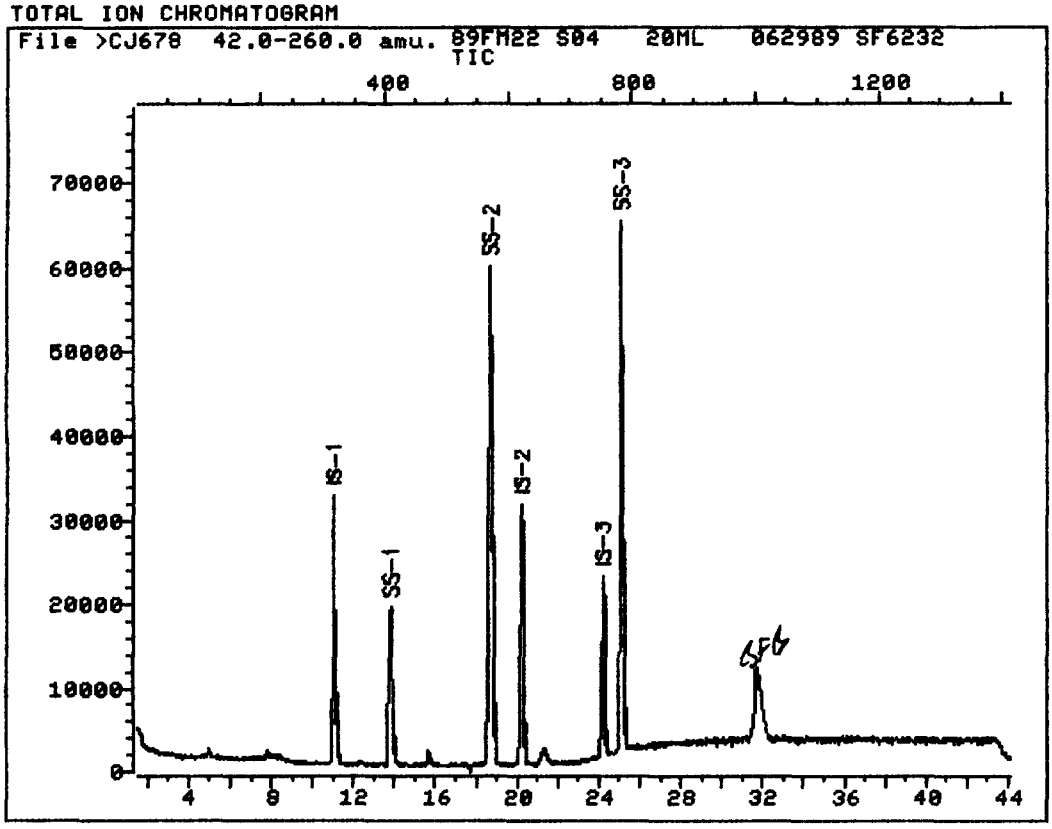
Quant Rev: 6
Quant Time: 890630 10:47
Injected at: 890630 02:07
Dilution Factor: 1.00000

ID File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.01	128.0	50621	10.00	UG/L	98
15)	1,2-DICHLOROETHANE-D4	13.82	65.0	57563	8.73	UG/L	86
17)	*2-Bromo-1-chloropropane	20.21	77.0	214316	10.00	UG/L	98
26)	BENZENE-D6	18.67	84.0	368300	7.42	UG/L	99
33)	*1,4-Dichlorobutane	24.19	55.0	126039	10.00	UG/L	95
38)	TOLUENE-D8	25.06	98.0	318278	6.13	UG/L	99

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CJ678::A5 Quant Output File: ^CJ678::E1
Name: 89FM22 S04 20ML
Misc: 062989 SF6232

Id File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

Operator ID: CHACKO
Quant Time: 890630 10:47
Injected at: 890630 02:07

QUANT REPORT

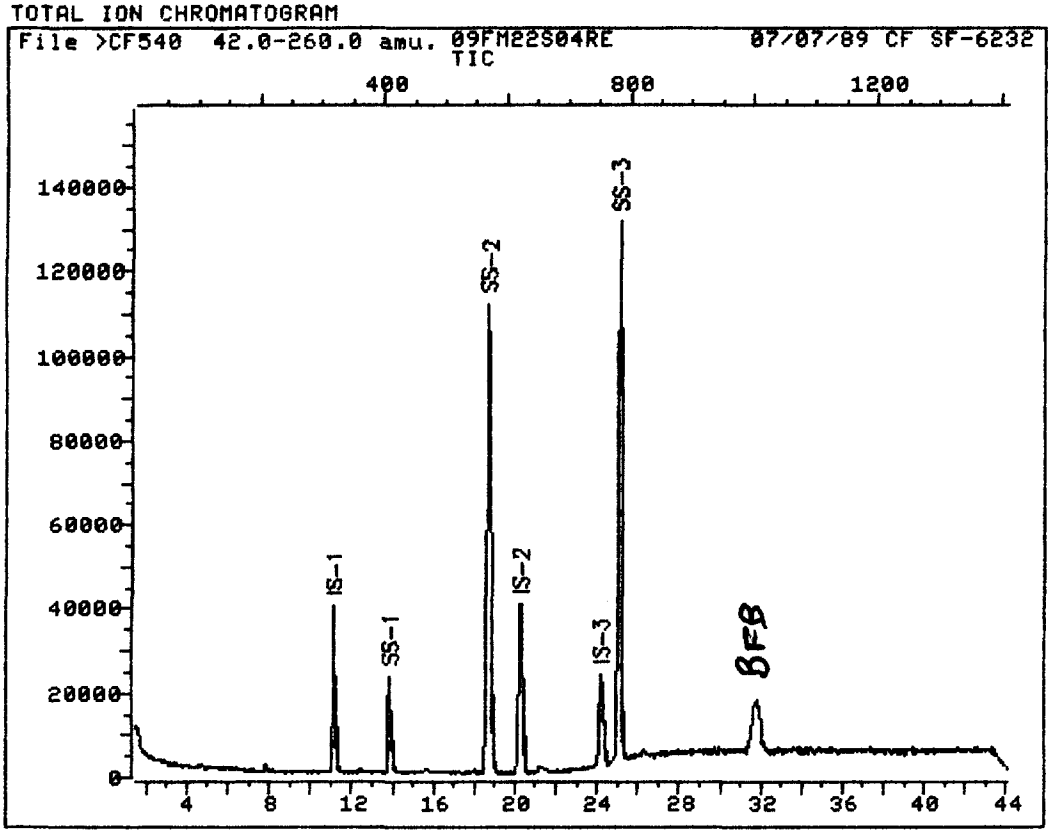
Operator ID: CARSTEN Quant Rev: 6 Quant Time: 890707 17:47
Output File: ^CF540::E1 Injected at: 890707 16:59
Data File: >CF540::A9 Dilution Factor: 1.00000
Name: 09FM22S04RE
Misc: 07/07/89 CF SF-6232

ID File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890707 12:51

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.10	128.0	62754	10.00	UG/L	94
15)	1,2-DICHLOROETHANE-D4	13.85	65.0	70532	8.71	UG/L	85
17)	*2-Bromo-1-chloropropane	20.24	77.0	278574	10.00	UG/L	98
26)	BENZENE-D6	18.67	84.0	701027	10.05	UG/L	98
33)	*1,4-Dichlorobutane	24.19	55.0	127956	10.00	UG/L	92
38)	TOLUENE-D8	25.07	98.0	639063	10.45	UG/L	95

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CF540::A9 Quant Output File: ^CF540::E1
Name: 09FM22S04RE
Misc: 07/07/89 CF SF-6232

Id File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890707 12:51

Operator ID: CARSTEN
Quant Time: 890707 17:47
Injected at: 890707 16:59

QUANT REPORT

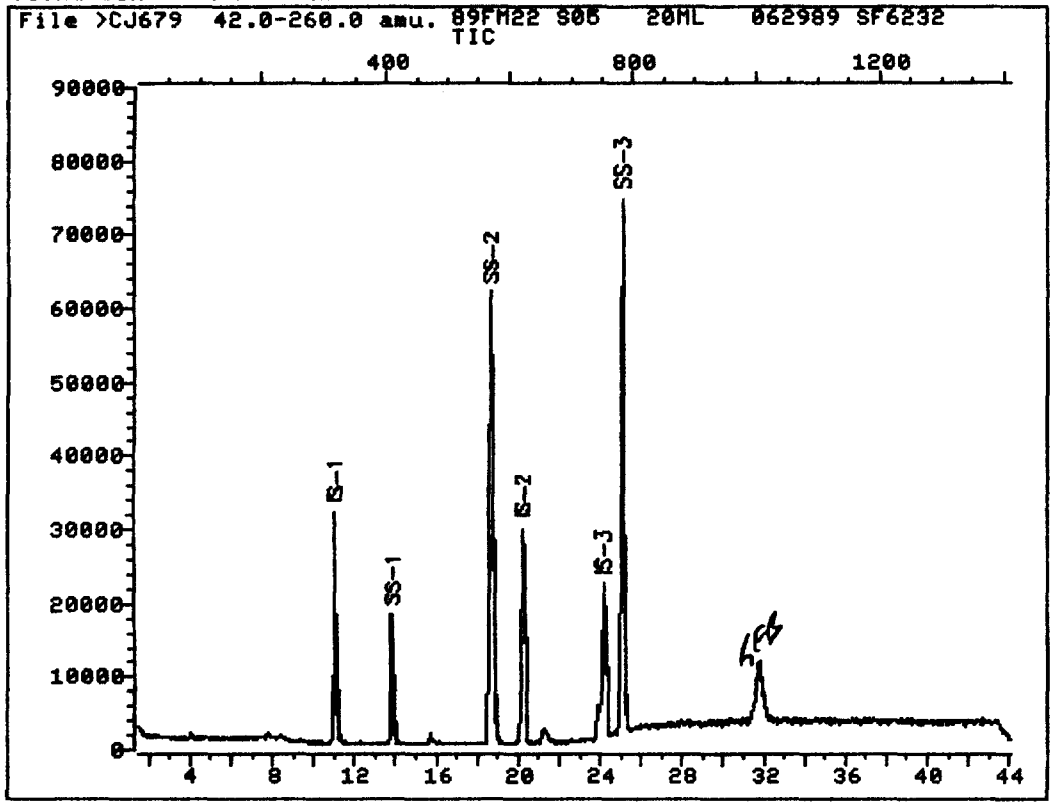
Operator ID: CHACKO Quant Rev: 6 Quant Time: 890630 10:49
Output File: ^CJ679::E1 Injected at: 890630 03:01
Data File: >CJ679::A5 Dilution Factor: 1.00000
Name: 89FM22 S05 20ML
Misc: 062989 SF6232

ID File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.01	128.0	49263	10.00	UG/L	98
15)	1,2-DICHLOROETHANE-D4	13.82	65.0	55498	8.65	UG/L	86
17)	*2-Bromo-1-chloropropane	20.21	77.0	208300	10.00	UG/L	99
26)	BENZENE-D6	18.64	84.0	393995	8.17	UG/L	96
33)	*1,4-Dichlorobutane	24.16	55.0	122635	10.00	UG/L	95
38)	TOLUENE-D8	25.07	98.0	364329	7.21	UG/L	98

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CJ679::A5 Quant Output File: ^CJ679::E1
Name: 89FM22 S05 20ML
Misc: 062989 SF6232

Id File: ID3CF6::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890630 10:35

Operator ID: CHACKO
Quant Time: 890630 10:49
Injected at: 890630 03:01

QUANT REPORT

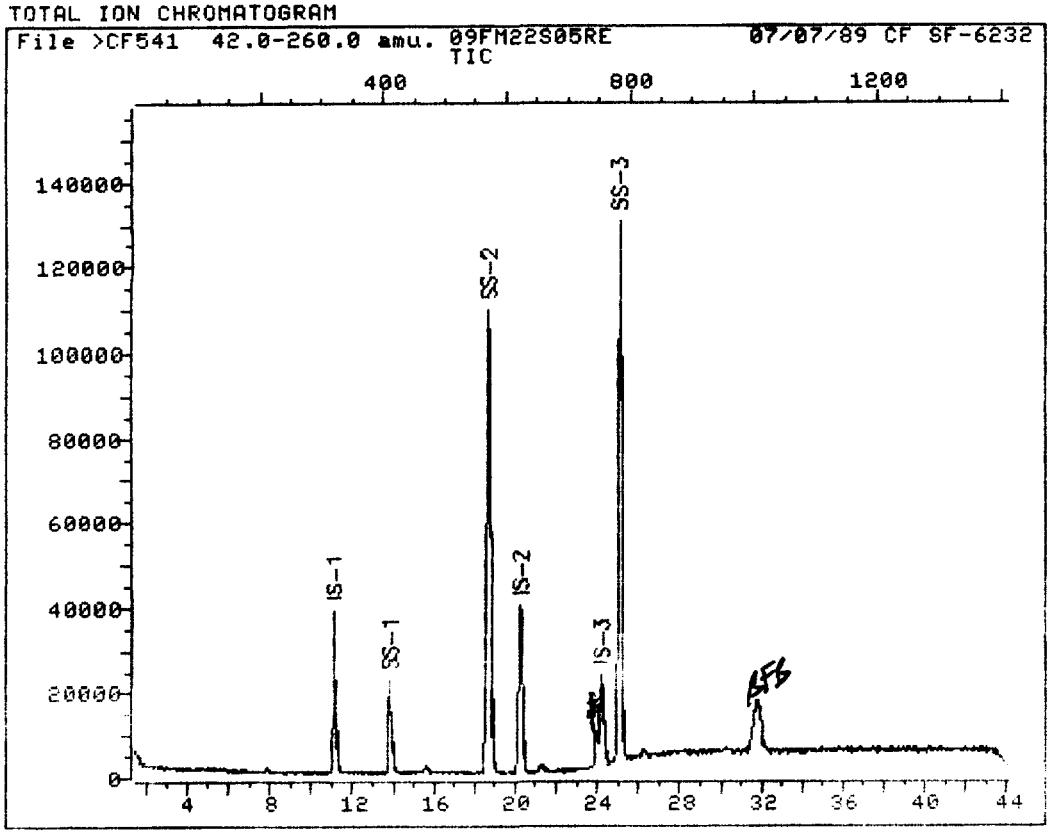
Operator ID: CARSTEN Quant Rev: 6 Quant Time: 890707 18:41
Output File: ^CF541::E1 Injected at: 890707 17:54
Data File: >CF541::A9 Dilution Factor: 1.00000
Name: 09FM22S05RE
Misc: 07/07/89 CF SF-6232

ID File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890707 12:51

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*Bromochloromethane	11.10	128.0	61791	10.00	UG/L	96
15)	1,2-DICHLOROETHANE-D4	13.85	65.0	69947	8.77	UG/L	84
17)	*2-Bromo-1-chloropropane	20.21	77.0	271386	10.00	UG/L	98
26)	BENZENE-D6	18.67	84.0	688267	10.13	UG/L	96
33)	*1,4-Dichlorobutane	24.19	55.0	125114	10.00	UG/L	95
~~36)~~	~~TETRACHLOROETHENE~~	~~23.92~~	~~164.0~~	~~14215~~	~~.50~~	~~UG/L~~	~~93~~
38)	TOLUENE-D8	25.07	98.0	627017	10.48	UG/L	99

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CF541::A9 Quant Output File: >CF541::E1
Name: 09FM22S05RE
Misc: 07/07/89 CF SF-6232

Id File: IDVOA1::XX
Title: ID FILE FOR VOLATILES--HP5985B CF 5/19/89 (20 ML PURGE)
Last Calibration: 890707 12:51

Operator ID: CARSTEN
Quant Time: 890707 18:41
Injected at: 890707 17:54

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: AUG 22 1989

SUBJECT: **Review of Region 5 data for** United Recovery

FROM: **Curtis Ross, Director** Chi Fang for
Region 5 Central Regional Laboratory

To: **Data User:**

Attached are the results for:

CRL Data Set Numbers: 89FM22S01205, 89FM22D01, 89FM11RL5
Sample Numbers: SF6232
Parameter(s): As, Sb, Se, Cd, TL, Pb
Laboratory: CRL/ESAT

Results Status:

(✓) **DATA ACCEPTABLE FOR USE***
( ) **DATA QUALIFIED AS TO USE**
( ) **DATA UNACCEPTABLE FOR USE**

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

If there are any questions regarding the data, refer them to David Payne, the Quality Control Coordinator, at 353-3805.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

Sylvia Griffin 22 1989

U.S. EPA CENTRAL REGIONAL LAB

RECEIVED BY/DATE: .....

Comments:

DATA SET	SITE	DU/ACT.
SF 6232	United Recovery	TFA302, S1/22

SAMPLES	PARAMETER(S)
89FM11R15 89FM50/2505, D01,	As, Sb, Se, Pb, TL, Cd

SAMPLED	RECEIVED	DUE	LAB
6/20/89	6/21/89	7/12/89	CRL/ESAT

SHIPPED	DATA RECEIVED	CONTRACT

Comments By Reviewer: TL results are reported for only 2 samples (89FM22501 & 89FM11R15). Other five samples were not reported for TL because of problem with instruments. Notified this to Tom Clyne of E&E and agreed to report survey results without TL results.

Chi Fang

( ) REVIEWED ( ) UNREVIEWED TEAM LEADER/DATE

Chi Fang 8/21/89

(✓) REVIEWED ( ) UNREVIEWED SECTION CHIEF/DATE

( ) REVIEWED ( ) UNREVIEWED QC COORDINATOR/DATE

REVIEWED BY CONTRACT COORDINATOR/DATE

RECEIVED 8/22/89 TRANSMITTED 8/22/89 DATA MANAGEMENT COORDINATOR Sylvia Griffin

CC: QUALITY CONTROL COORDINATOR

058906-06

ESAT CONTRACT TID NO: 058908-06
TASK NO: 3093,1053

DATASET CUSTODY TRANSFER FORM

Analytical testing was completed on August 10, 1989 for:

DATASET NO: SF6232 SITE NAME: United Recovery

PARAMETER : GFAA Metals

MATRIX : Water SF DU/ACT NO: TFA 302 Y____ /C____

SAMPLE NUMBERS: 89FM22S01-05, 89FM22D01, 89FM11R15

NUMBER OF SAMPLES: 7

ESAT APPROVALS:

John W. Kamp 8/10/89 (ANALYST DATE)
D Kane 8/10/89 (TEAM LEADER DATE)
Richard [illegible] 8/14/89 (QC COORDINATOR DATE)
Vern C Allen 8/14/89 (ESAT TEAM MANAGER DATE)

COMMENTS: Chi Tang authorized completion of this case without T/ due to continuing instrument problems. T/ data for 89FM22S02-S05 and 89FM22D01 were not obtained.

The subject dataset was transferred to the custody of the U.S. EPA Region V Central Regional Laboratory in its entirety on the date indicated below.

D Kane 8/14/89 (DELIVERED BY DATE)
Chi Tang 8/14/89 (RECEIVED BY DATE)

EPA APPROVALS:

Chi Tang 8/21/89 (EPA TASK MONITOR DATE)

[✓] Reviewed
[ ] Unreviewed
[✓] Accepted
[ ] Rejected
[ ] Returned/ 8/21/89 (Date)

COMMENTS:

Chi Tang 8/21/89 (SECTION CHIEF DATE) [✓] Reviewed [ ] Unreviewed
Jay Thompson 8-22-89 (ESAT DPO DATE)
Sylvia Griffin 8-22-89 8-22-89 (DATA COORD'R REC'D TRANSMTD)

DOC.NO.: ESAT-05-0003-FORM
REVISION NO.: 05 (04/05/89) FILE LOCATION NUMBER: 5.6.1

9

ENVIRONMENTAL PROTECTION AGENCY TFA302
FOR THE TEAM: METALS

DIVISION/BRANCH SUPERFUND (FIT) SAMPLING DATE 6/20/89 LAB ARRIVAL DATE 6/21/89 DUE DATE 7/12/89

DU NUMBER TFA DATASET NUMBER 6232 STUDY UNITED RECOVERY PRIORITY N CONTRACTOR N

CRL LOG NUMBER	SAMPLE DESCRIPTION	MATRIX WATER TEST CD UNITS ug/L PL1235826
89FM22		
S01	RW1 5-188235	0.2u
S02	RW2 5-188251	0.2u
S03	RW3 5-188269	0.2u
S04	RW4 5-188277	0.2u
S05	RW5 5-188285	0.3
D01	DUPLICATE 5-188243	0.2u
89FM11R15	BLANK 5-188293	0.2u

J Gaing
8/8/89

CRL V.2: 3/89

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: METALS

TFA302

DIVISION/BRANCH Superfund FIT SAMPLE DATE 6/29/89 LAB ARRIVAL DATE 6/30/89 DUE DATE 7/12/89

DU NUMBER TFA DATA SET NUMBER 6232 STUDY United Recovery PRIORITY — CONTRACTOR —

CRL LOG NUMBER	SAMPLE DESCRIPTION	TOTAL METALS WATER TOTAL ICAP UG/L MET111	TOTAL METALS WATER AS UG/L MET101	TOTAL METALS WATER PB UG/L MET1101	TOTAL METALS WATER SB UG/L MET1201	TOTAL METALS WATER SE UG/L MET1211	TOTAL METALS WATER TL UG/L MET1221
89FM22S01	RW1 5188235	✓	✓ 2u gwk 6/27/89	✓ 2u	✓ 2u	✓ 2u	✓ 2u gwk 8/10/89
S02	RW2 5188251	✓	✓ 2u WJK 7/25/89	✓ 2u	✓ 2u	✓ 2u	✓
S03	RW3 5188269	✓	✓ 2u WJK 7/25/89	✓ 2u	✓ 2u	✓ 2u	✓
S04	RW4 5188277	✓	✓ 3 WJK 7/25/89	✓ 2u	✓ 2u	✓ 2u	✓
S05	RW5 5188285	✓	✓ 2u WJK 7/25/89	✓ 2u	✓ 2u	✓ 2u	✓
21/89 WK S06	RW6	✓	✓	✓	✓	✓	✓
S07	RW7	✓	✓	✓	✓	✓	✓
D01	Dup 5188243	✓	✓ 2u gwk 6/27/89	✓ 2u	✓ 2u	✓ 2u	✓
89FM11R15	BLK 5188293	✓	✓ 2u gwk 6/27/89	✓ 2u	✓ 2u gwk 8/7/89	✓ 2u	✓ 2u gwk 8/10/89
				DK 7/7/89	J Barry 8/10/89	J Barry 6/30/89	

* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: GANZ
DATE OF ANALYSIS --: 07-03-1989
PARAMETER NAME ----: SE
DATA SET # --------: SF 6232

J Ganz 7/3/89

SAMPLE NO.	CONC.	R VALUE	SLOPE	
BLANK	-.5465724	.9993092	.01299	Limit = ±2 ug/L
AQC TV=19.6 UG/L				%R=98.5 Limit=100±10%
	19.30751	.9999761	.01343	
89FS11R10	-.1059485	.9976154	.01227	
89FS21S46	-.2794419	.999919	.01503	
89FS21S47	-2.146935E-02	.9982609	.01397	
89FS21S48	-.4432529	.9987992	.01489	
89FS21S49	-.692865	.9997042	.01501	
AQC TV=19.6 UG/L				%R=99.1 Limit=100±10%
	19.4186	.9994657	.0129	
89FS21S50	-.1459372	.9993695	.01439	
89FS21D47	-.7237733	.999629	.01506	SF6203
~~89FS11R08~~	~~-.2225884~~	~~.9996332~~	~~1.102727E-02~~	SF6204
89FS11R08	-.8677662	.9982222	.0121	
89FS21S37	-.2617071	.9999203	.01452	
89FS21S38	.4201733	.9991115	.0119	
89FS21S39	-.1654779	.9994251	.01269	
89FS21S40	-.4199086	.9997389	.01286	
AQC TV=19.6 UG/L				%R=99.8 Limit=100±10%
	19.56418	.9993968	.01239	
89FS21S41	-.2666667	.9999723	.01125	
89FS21S42	-.2874424	.9999382	.01322	
89FS21D38	-.2083308	.9992716	.012	SF6204
89FS11R09	-.154129	.9991273	.01103	SF6213
89FS21S43	-.6140998	.9983218	.01319	
89FS21S44	-8.511155E-02	.9995113	.01175	
89FS21S45	-.4378402	.9999102	.01279	
AQC TV=19.6 UG/L				%R=106.4 Limit=100±10%
	20.85613	.9992506	.01133	
89FS21D44	-.4458021	.9992962	.01144	SF6213
89FK11R13	-.5603448	.9982138	.0116	SF6214
89FK21S58	-1.23348	.9978991	.01135	
89FK21S59	-.5386436	.9984757	.01281	
~~89FK21D58~~	~~3.214282~~	~~.466142~~	~~4.581019E-03~~	
89FK21D58	-.3792462	.9994146	.01002	SF6215
89FS11R17	-.6804499	.9977323	.01161	SF6231
89FS22S11	-.2146577	.9996788	.01351	
AQC TV=19.6 UG/L				%R=102.0 Limit=100±10%
	19.98227	.9978162	.01127	
BLANK	.1459854	.9987025	.0137	Limit = ±2 ug/L
AQC TV=19.6 UG/L				%R=106.8 Limit=100±10%
	20.9306	.9993398	1.353999E-02	
89FS22S12	.1345315	.9998249	.01561	
89FS22D12	.3783423	.9999731	.01533	SF6231
89FM11R15	-.175304	.9997108	.01312	SF6232
89FM22S01	.3282088	.9983567	.01432	
89FM22S02	.5886183	.9988298	.01546	
AQC TV=19.6 UG/L				%R=107.6 Limit=100±10%
	21.08188	.9995784	.01331	
89FM22S03	.5994543	.9999779	.01468	

89FM22S04	.1577789	.9992067	.01331
89FM22S05	4.707136E-02	.9996099	.01487
89FM22D01	.1974561	.9998568	.01418
AQC TV=19.6 UG/L			
	21.38892	.9996164	1.259999E-02

%R = 109.1 Limit = 100±10%

J Gary 7/3/89

SF 6232

BLANK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.006	-7.099976E-03	-1.099975E-03	15.49266 %
10	.117	.1228	5.800016E-03	4.72314 %
20	.261	.2527	-8.300006E-03	-3.28453 %
30	.379	.3826	3.600001E-03	.9409308 %

AQC TV=19.6 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.26	.2592999	-7.000566E-04	-.2699795 %
10	.392	.3936	1.599997E-03	.4065034 %
20	.529	.5279	-1.100004E-03	-.2083735 %
30	.662	.6622001	2.000928E-04	3.021637E-02 %

89FS11R10

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.007	-1.299988E-03	-8.299988E-03	638.4666 %
10	.115	.1214	6.400012E-03	5.271838 %
20	.232	.2441	1.210003E-02	4.956996 %
30	.377	.3668	-1.019999E-02	-2.780805 %

89FS21S46

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.003	-4.200013E-03	-1.200012E-03	28.57164 %
10	.143	.1461	3.100008E-03	2.12184 %
20	.299	.2964001	-2.599955E-03	-.8771776 %
30	.446	.4467001	7.000566E-04	.1567174 %

89FS21S47

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.002	-2.999268E-04	-2.299927E-03	766.8295 %
10	.129	.1394	1.040004E-02	7.460574 %
20	.293	.2791	-1.390001E-02	-4.980298 %
30	.413	.4188	5.799979E-03	1.384904 %

89FS21S48

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.002	-6.600037E-03	-8.600037E-03	130.3029 %
10	.129	.1423	1.329999E-02	9.346443 %
20	.292	.2912	-8.000136E-04	-.2747299 %
30	.444	.4401	[illegible]	[illegible] %

20	.292	.2912	-8.000136E-04	-.2747299 %
30	.444	.4401	-3.899992E-03	-.8861602 %

J Gary 7/3/89

SF 6232

89FS21S49

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.007	-.0103999	-3.399902E-03	32.69167 %
10	.133	.1397001	6.700069E-03	4.796038 %
20	.293	.2898001	-3.199965E-03	-1.104198 %
30	.44	.4399001	-9.995699E-05	-2.272266E-02 %

AQC TV=19.6 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.25	.2504999	4.99934E-04	.1995745 %
10	.384	.3795	-4.500062E-03	-1.185787 %
20	.501	.5085	7.499993E-03	1.474925 %
30	.641	.6375	-3.500044E-03	-.5490266 %

89FS21S50

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.002	-2.100037E-03	-1.000364E-04	4.763555 %
10	.137	.1418	4.799962E-03	3.385024 %
20	.295	.2856999	-9.300053E-03	-3.255182 %
30	.425	.4296	4.599929E-03	1.070747 %

89FS21D47

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.006	-1.090002E-02	-4.900025E-03	44.95425 %
10	.134	.1397	5.699963E-03	4.080146 %
20	.287	.2903	3.299952E-03	1.136739 %
30	.445	.4409	-4.100025E-03	-.9299218 %

89FS11R08

Not used gwk 7/3/89

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.003	-2.454543E-03	5.454575E-04	-22.22237 %
10	.104	.1078182	3.818184E-03	3.541318 %
20	.22	.2180909	-1.909092E-03	-.8753652 %
0	0	-2.454543E-03	-2.454543E-03	100 %

89FS11R08

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.003	-1.049997E-02	-7.499969E-03	71.42848 %
10	.104	.1105	6.500006E-03	5.882358 %
20	.222	.2315	9.499982E-03	4.103665 %
30	.361	.3525	-8.500039E-03	-2.411359 %

89FS21S37

SPIKE	MEASURED	CALC.	ERROR	PER CENT

0	-.004	-3.799988E-03	2.000125E-04	-5.263503 %
10	.14	.1414	1.400024E-03	.9901156 %
20	.29	.2866001	-3.399938E-03	-1.186301 %
30	.43	.4318	1.800001E-03	.4168598 %

J Gary 7/3/89

SF 6232

89FS21S38

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	8.000001E-03	5.000061E-03	-2.99994E-03	-59.99806 %
10	.116	.124	8.000039E-03	6.451643 %
20	.25	.243	-.007	-2.880658 %
30	.36	.362	1.999974E-03	.5524791 %

89FS21S39

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.004	-2.099915E-03	1.900086E-03	-90.48396 %
10	.131	.1248001	-6.199926E-03	-4.967887 %
20	.245	.2517001	6.700039E-03	2.661914 %
30	.381	.3786001	-2.399951E-03	-.6339015 %

89FS21S40

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.003	-5.400025E-03	-2.400024E-03	44.4447 %
10	.118	.1232	5.199977E-03	4.220761 %
20	.255	.2518	-3.200024E-03	-1.27086 %
30	.38	.3804	3.99977E-04	.1051464 %

AQC TV=19.6 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.238	.2424002	4.400134E-03	1.815236 %
10	.37	.3663001	-3.699899E-03	-1.010073 %
20	.496	.4902001	-5.799949E-03	-1.18318 %
30	.609	.6141	5.099952E-03	.8304759 %

89FS21S41

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.002	-.003	-9.999999E-04	33.33333 %
10	.108	.1095	1.500003E-03	1.369866 %
20	.222	.222	0	0 %
30	.335	.3345	-4.999936E-04	-.1494749 %

89FS21S42

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.004	-3.799988E-03	2.000125E-04	-5.263503 %
10	.13	.1284	-1.600012E-03	-1.246116 %
20	.258	.2606	2.599985E-03	.9976918 %
30	.394	.3927999	-1.20008E-03	-.3055194 %

89FS21D38

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.002	-2.49997E-03	-4.49997E-03	180.001 %
10	.114	.1175	3.500015E-03	2.978736 %
20	.231	.2375	6.499991E-03	2.736838 %
30	.363	.3575	-5.500019E-03	-1.538467 %

J Harry 7/3/89 SF 6232

89FS11R09

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.003	-1.700043E-03	-4.700043E-03	276.4661 %
10	.1	.1086	8.599959E-03	7.918935 %
20	.222	.2189	-3.100038E-03	-1.416189 %
30	.33	.3292	-8.000434E-04	-.2430266 %

89FS21S43

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.001	-8.099975E-03	-9.099975E-03	112.3457 %
10	.11	.1238	1.380001E-02	11.14702 %
20	.256	.2557	-3.0002E-04	-.1173328 %
30	.392	.3876	-4.400015E-03	-1.135195 %

89FS21S44

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.002	-1.000061E-03	-3.000061E-03	299.9878 %
10	.11	.1165	6.499976E-03	5.57938 %
20	.238	.234	-3.999993E-03	-1.709399 %
30	.351	.3515	5.000234E-04	.1422542 %

89FS21S45

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.005	-5.599976E-03	-5.999757E-04	10.7139 %
10	.123	.1223	-6.999895E-04	-.5723544 %
20	.247	.2502	3.20001E-03	1.278981 %
30	.38	.3781	-1.899988E-03	-.5025093 %

AQC TV=19.6 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.236	.2363	2.999902E-04	.1269531 %
10	.354	.3496	-4.399985E-03	-1.258577 %
20	.455	.4629001	7.90003E-03	1.706638 %
30	.58	.5762	-3.799975E-03	-.6594889 %

89FS21D44

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.004	-5.099976E-03	-1.099975E-03	21.56825 %
10	.104	.1093	5.30003E-03	4.849066 %

20	.231	.2237	-7.299975E-03	-3.263287 %
30	.335	.3381001	3.100038E-03	.9168995 %

J Gary 7/3/89 SF 6232

89FK11R13

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.002	-.0065	-8.500001E-03	130.7692 %
10	.098	.1095	1.150002E-02	10.5023 %
20	.223	.2255	2.500013E-03	1.108653 %
30	.347	.3415	-5.499989E-03	-1.610538 %

89FK21S58

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.005	-.014	-9.000001E-03	64.28571 %
10	.088	.0995	.0115	11.55779 %
20	.209	.213	3.999993E-03	1.877931 %
30	.333	.3265	-6.500006E-03	-1.990813 %

89FK21S59

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.001	-6.900025E-03	-7.900025E-03	114.4927 %
10	.108	.1212	1.319998E-02	10.89107 %
20	.252	.2493	-2.700016E-03	-1.083039 %
30	.38	.3774	-2.600014E-03	-.688928 %

89FK21D58 Not used gmk 7/3/89

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	0	1.472726E-02	1.472726E-02	100 %
10	9.000001E-02	6.054545E-02	-2.945456E-02	-48.64868 %
20	.198	.1063636	-9.163637E-02	-86.15386 %
20	0	.1063636	.1063636	100 %

89FK21D58

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	0	-3.800049E-03	-3.800049E-03	100 %
10	9.000001E-02	9.639999E-02	6.399989E-03	6.638994 %
20	.198	.1966	-1.399964E-03	-.7120874 %
30	.298	.2968001	-1.199931E-03	-.4042893 %

89FS11R17

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.001	-7.900024E-03	-8.900024E-03	112.6582 %
10	.099	.1082	9.199984E-03	8.502759 %
20	.216	.2243	8.299977E-03	3.700391 %
30	.349	.3404	-8.600026E-03	-2.526447 %

89FS22S11

0	-.007	-2.900025E-03	4.099976E-03	-141.3773 %
10	.137	.1321999	-4.800052E-03	-3.630903 %
20	.27	.2672999	-2.700091E-03	-1.010135 %
30	.399	.4023999	3.399909E-03	.8449079 %

J Gary 7/3/89 SF 6232

AQC TV=19.6 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.234	.2252001	-8.799926E-03	-3.907603 %
10	.328	.3379001	9.900034E-03	2.92987 %
20	.444	.4506001	6.600023E-03	1.464719 %
30	.571	.5633	-7.700026E-03	-1.36695 %

BLANK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	8.999999E-03	.002	-.007	-350 %
10	.126	.139	1.299997E-02	9.352495 %
20	.281	.2759999	-5.000055E-03	-1.811615 %
30	.414	.4129999	-1.000077E-03	-.2421493 %

AQC TV=19.6 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.278	.2834002	5.400151E-03	1.905486 %
10	.424	.4188001	-5.199909E-03	-1.241621 %
20	.56	.5542001	-5.799949E-03	-1.046544 %
30	.684	.6896	5.599916E-03	.8120529 %

89FS22S12

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.002	2.100037E-03	1.000364E-04	4.763555 %
10	.161	.1582	-2.799988E-03	-1.769904 %
20	.309	.3143	5.300015E-03	1.686292 %
30	.473	.4704	-2.599985E-03	-.5527178 %

89FS22D12

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.007	5.799988E-03	-1.200012E-03	-20.68991 %
10	.157	.1591	2.099991E-03	1.319919 %
20	.313	.3124	-6.000102E-04	-.1920647 %
30	.466	.4657	-3.0002E-04	-6.442345E-02 %

89FM11R15

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.001	-2.299988E-03	-3.299988E-03	143.4785 %
10	.126	.1289	2.89999E-03	2.249798 %
20	.256	.2601	4.099965E-03	1.576304 %
30	.395	.3913	-3.700018E-03	-.9455706 %

89FM22S01

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.005	4.699951E-03	-3.000489E-04	-6.384085 %
10	.14	.1479	7.89997E-03	5.341428 %
20	.306	.2911	-.0149	-5.118516 %
30	.427	.4343	7.30002E-03	1.68087 %

J Gary 7/3/89 SF 6232

89FM22S02

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	8.999999E-03	9.100037E-03	1.000371E-04	1.099304 %
10	.157	.1637	6.700009E-03	4.092858 %
20	.332	.3183	-1.369998E-02	-4.304109 %
30	.466	.4729	6.899983E-03	1.459079 %

AQC TV=19.6 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.28	.2805999	5.998612E-04	.2137782 %
10	.411	.4136999	2.699852E-03	.6526113 %
20	.554	.5467999	-7.200122E-03	-1.316775 %
30	.676	.6799	3.899932E-03	.5736038 %

89FM22S03

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.01	8.799988E-03	-1.200012E-03	-13.63652 %
10	.154	.1556	1.599982E-03	1.028266 %
20	.302	.3024	4.000068E-04	.1322774 %
30	.45	.4492	-7.999838E-04	-.1780908 %

89FM22S04

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.005	2.100037E-03	-2.899964E-03	-138.0911 %
10	.127	.1352	8.200005E-03	6.065092 %
20	.276	.2683	-7.699996E-03	-2.86992 %
30	.399	.4014	2.399981E-03	.5979026 %

89FM22S05

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.002	6.999512E-04	-1.300049E-03	-185.7342 %
10	.144	.1494	5.399987E-03	3.61445 %
20	.305	.2981	-6.900013E-03	-2.314664 %
30	.444	.4468	2.800018E-03	.6266825 %

89FM22D01

SPIKE	MEASURED	CALC.	ERROR	PER CENT

0	.004	2.799927E-03	-1.200073E-03	-42.86088 %
10	.141	.1445999	3.599927E-03	2.489577 %
20	.29	.2863999	-3.600061E-03	-1.257005 %
30	.427	.4281999	1.199931E-03	.2802268 %

ADC TV=19.6 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.266	.2695001	3.500134E-03	1.29875 %
10	.402	.3955001	-6.499946E-03	-1.643475 %
20	.519	.5215	2.499998E-03	.479386 %
30	.647	.6474999	4.998446E-04	7.719608E-02 %

J Harry 7/3/89

SF 6232

SF 6232

¿BEGIN DATA FILE: SE630.DF

Begin Element - SE

J Hany
6/30/89

SF 6232

Begin Element - SE

0.003		
0.000	AZ	
-0.006	+0	Blank
0.117	+10	
0.261	+20	
0.379	+30	
0.260	+0	
0.392	+10	AQC TV=19.6 ug/L
0.529	+20	
0.662	+30	
0.007	+0	
0.115	+10	89FS11R10
0.232	+20	
0.377	+30	
-0.003	+0	
0.143	+10	89FS21S46
0.299	+20	
0.446	+30	
0.002	+0	
0.129	+10	89FS21S47
0.293	+20	
0.413	+30	
0.002	+0	
0.129	+10	89FS21S48
0.292	+20	
0.444	+30	
-0.007	+0	
0.133	+10	89FS21S49
0.293	+20	
0.440	+30	
0.250	+0	
0.384	+10	AQC TV=19.6 ug/L
0.501	+20	
0.641	+30	
0.004		Blank
-0.002	+0	
0.137	+10	89FS21S50
0.295	+20	
0.425	+30	
-0.006	+0	
0.134	+10	89FS21D47
0.287	+20	
0.445	+30	SF6203
-0.003	+0	SF6204
0.104	+10	89FS11R08
0.222	+20	
0.361	+30	
-0.004	+0	
0.140	+10	89FS21S37
0.290	+20	
0.430	+30	
0.008	+0	
0.116	+10	89FS21S38
0.250	+20	
0.360	+30	
-0.004	+0	89FS21S39

0.131	+10	89FS21S39
0.245	+20	
0.381	+30	
-0.003	+0	89FS21S40
0.118	+10	
0.255	+20	
0.380	+30	
0.238	+0	AQC TV= 19.6 ug/L
0.370	+10	
0.496	+20	
0.609	+30	
-0.005		Blank
0.002	+0	89FS21S41
0.108	+10	
0.222	+20	
0.335	+30	
-0.004	+0	89FS21S42
0.130	+10	
0.258	+20	
0.394	+30	
0.002	+0	89FS21D38
0.114	+10	
0.231	+20	
0.363	+30	
0.003	+0	89FS11R09
0.100	+10	
0.222	+20	
0.330	+30	
0.001	+0	89FS21S43
0.110	+10	
0.256	+20	
0.392	+30	
0.002	+0	89FS21S44
0.110	+10	
0.238	+20	
0.351	+30	
-0.005	+0	89FS21S45
0.123	+10	
0.247	+20	
0.380	+30	
0.236	+0	AQC TV= 19.6 ug/L
0.354	+10	
0.455	+20	
0.580	+30	
0.000		Blank
-0.004	+0	89FS21D44
0.104	+10	
0.231	+20	
0.335	+30	
0.002	+0	89FK11R13
0.098	+10	
0.223	+20	
0.347	+30	
-0.005	+0	89FK21S58
0.088	+10	
0.209	+20	
0.333	+30	
0.001	+0	89FK21S59
0.108	+10	
0.252	+20	
0.380	+30	
0.000	+0	89FK21D58
0.090	+10	

J Gary
10/30/89

SF 6230

SF6204
SF6213

SF6213
SF6214

0.198	+20	89FK21D58
0.298	+30	
0.001	+0	
0.099	+10	89FS11R17
0.216	+20	
0.349	+30	
-0.007	+0	
0.137	+10	89FS22S11
0.270	+20	
0.399	+30	
0.234	+0	
0.328	+10	ARC TV= 19.6 ug/L
0.444	+20	
0.571	+30	
0.001		Blank

SF6214

SF6231

J Gary

6/30/89

SF 6232

Begin Element - SE

-0.008		
0.000	AZ	
0.009	+0	Blank
0.126	+10	
0.281	+20	
0.414	+30	
0.278	+0	
0.424	+10	AQC TV= 19.6 ug/L
0.560	+20	
0.684	+30	
0.002	+0	
0.161	+10	89FS22S12
0.309	+20	
0.473	+30	
0.007	+0	
0.157	+10	89FS22D12
0.313	+20	
0.466	+30	
0.001	+0	
0.126	+10	89FM11R15
0.256	+20	
0.395	+30	
0.005	+0	
0.140	+10	89FM22S01
0.306	+20	
0.427	+30	
0.009	+0	
0.157	+10	89FM22S02
0.332	+20	
0.466	+30	
0.280	+0	
0.411	+10	AQC TV= 19.6 ug/L
0.554	+20	
0.676	+30	
0.007		Blank
0.010	+0	
0.154	+10	89FM22S03
0.302	+20	
0.450	+30	
0.005	+0	
0.127	+10	89FM22S04
0.276	+20	
0.399	+30	
0.002	+0	
0.144	+10	89FM22S05
0.305	+20	
0.444	+30	
0.004	+0	
0.141	+10	89FM22D01
0.290	+20	
0.427	+30	
0.266	+0	
0.402	+10	AQC TV= 25.0 ug/L
0.519	+20	
0.647	+30	
-0.003		Blank

J Gary
6/30/89

SF6231
SF6232

SF 623

AAS Run Log

Element Se

Date 6/30/89

J Barry 6/30/89

Initials JWG

Data Set SF 6232

	ID	Spike	Comment
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC TV = 19.6 µg/L	0	
6		10	
7		20	
8		30	
9	89FS11R10	0	
10		10	
11		20	
12		30	
13	89FS21546	0	
14		10	
15		20	
16		30	
17	89FS21547	0	
18		10	
19		20	
20		30	
21	89FS21548	0	
22		10	
23		20	
24		30	
25	89FS21549	0	
26		10	

AAS Run Log

Element Se

Date 6/30/89

J Barry 6/30/89

Initials JW6

Data Set SF 6232

	ID	Spike	Comment
27	89FS21549	20	
28		30	
29	AQC	0	
30		10	
31		20	
32		30	
33	Blank		
34			
35			
	Wheel 2		
1	89FS21550	0	
2		10	
3		20	
4		30	
5	89FS21D47	0	
6		10	
7		20	
8		30	
9	89FS11R08	0	
10		10	
11		20	
12		30	
13	89FS21537	0	
14		10	
15		20	
16		30	

AAS Run Log

Element Se

Date 6/30/89

J Barry 6/30/89

Initials JWG

Data Set SF 6232

	ID	Spike	Comment
17	89FS21538	0	
18		10	
19		20	
20		30	
21	89FS21539	0	
22		10	
23		20	
24		30	
25	89FS21540	0	
26		10	
27		20	
28		30	
29	AQC	0	
30		10	
31		20	
32		30	
33	Blank		
34			
35			
	Wheel 3		
1			
2			
3			
4			
5			
6			

AAS Run Log
J Barry 6/30/89

Element Se
Date 6/30/89
Wheel #3
Initials JWG
Data Set SF 6232

	ID	Spike	Comment
1	89FS21541	0	
2		10	
3		20	
4		30	
5	89FS21542	0	
6		10	
7		20	
8		30	
9	89FS21D38	0	
10		10	
11		20	
12		30	
13	89FS11R09	0	
14		10	
15		20	
16		30	
17	89FS21543	0	
18		10	
19		20	
20		30	
21	89FS21544	0	
22		10	
23		20	
24		30	
25	89FS21545	0	
26		10	

AAS Run Log

Element Se

Date 6/30/89

J Barry 6/30/89

Initials JWG

Data Set SF 6232

	ID	Spike	Comment
27	89FS21545	20	
28		30	
29	AQC	0	
30		10	
31		20	
32		30	
33	Blank		
34			
35			
	Wheel ~~X~~ 4 quals 6/5		
1	89FS21D44	0	
2		10	
3		20	
4		30	
5	89FK11R13	0	
6		10	
7		20	
8		30	
9	89FK21558	0	
10		10	
11		20	
12		30	
13	89FK21559	0	
14		10	
15		20	
16		30	

AAS Run Log

Element Se

Date 6/30/89

J Gary 6/30/89

Initials JWG

Data Set SF 6232

	ID	Spike	Comment
17	89FK21P58	0	
18		10	
19		20	
20		30	
21	89FS11R17	0	
22		10	
23		20	
24		30	
25	89FS22S11	0	
26		10	
27		20	
28		30	
29	AQC	0	
30		10	
31		20	
32		30	
33	Blank		
34			
35			
	Wheel 3		
1			
2			
3			
4			
5			
6			

AAS Run Log

Element Se

Date 6/30/89

J Gary 6/30/89

Initials JWG

Data Set SF 6232

	ID	Spike	Comment
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC TV=19.6 ug/L	0	
6		10	
7		20	
8		30	
9	89FS22S12	0	
10		10	
11		20	
12		30	
13	89FS22P12	0	
14		10	
15		20	
16		30	
17	89FM11R15	0	
18		10	
19		20	
20		30	
21	89FM22S01	0	
22		10	
23		20	
24		30	
25	89FM22S02	0	
26		10	

AAS Run Log

Element Se

Date 6/30/89

J Gary 6/30/89

Initials JWG

Data Set SF 6232

	ID	Spike	Comment
27	89FM22S02	20	
28		30	
29	AQC	0	
30		10	
31		20	
32		30	
33	Blank		
34			
35			
	Wheel 2		
1	89FM22S03	0	
2		10	
3		20	
4		30	
5	89FM22S04	0	
6		10	
7		20	
8		30	
9	89FM22S05	0	
10		10	
11		20	
12		30	
13	89FM22D01	0	
14		10	
15		20	
16		30	

AAS Run Log

Element Se

Date 6/30/89

J Gary 6/30/89

Initials JWG

Data Set SF 6232

	ID	Spike	Comment
17	AQC	0	
18		10	
19		20	
20		30	
21	Blank		
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
	Wheel 3		
1			
2			
3			
4			
5			
6			

J Gary 4/30/89

SF 6232

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☐ WP 284 TM I #2	Analyst JWG
☐ As	☐ 4000	☐ WP 1183 TM II #1	Date 6/30/89
☐ Cd	☒ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 4453
☐ Cr	☐ 5000 ZW	☒ ICV 2	Energy 54
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-44-MD
☒ Se		☐	☐ platform ☐ MSC
☐ Tl		☐	☒ wall ☒ MSA

Blank	Slope	AQC	Digestion QC
-.546	.01299	19.31	
.146	.0137	19.42	
		19.56	
		20.86	
		19.98	
		20.93	
		21.08	
		21.39	

Blank cup absorbance
.007
-.003
.004
-.005
.000
.001

* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: GANZ
DATE OF ANALYSIS --: 06-28-1989
PARAMETER NAME ----: AS
DATA SET # --------: SF6232

J Ganz 6/28/89

SAMPLE NO.	CONC.	R VALUE	SLOPE	
BLANK	-.1219512	.9997291	2.460001E-02	Limit = ±2 ug/L
AQC TV=19.76 UG/L				%R=104.4 Limit=100±10%
	20.63875	.9998638	.02364	
89FS21D44	.2407136	.9991558	.01911	SF6213
89FK11R13	.2396488	.9998833	.02295	SF6214
89FK21S58	18.76	.9215421	.0125	Rerun
89FK21S59	2.470585	.9998372	2.125001E-02	
89FK21D58	2.625007	.9997779	1.999999E-02	
AQC TV=19.76 UG/L				%R=98.8 Limit=100±10%
	19.52179	.9998488	.02342	SF6214
89FS11R17	-8.477923E-02	.9993143	.02241	SF6231
89FS22S11	-9.064711E-02	.999954	.02096	
89FS22S12	-1.736693E-02	.9997379	.01727	SF6231
89FM22D01	-.0156081	.9998761	.01922	SF6232
89FS22D12	8.240286E-02	.9998659	.01699	SF6231
89FM11R15	7.731959E-02	.9996256	.0194	SF6232
89FM22S01	-.2910085	.9999413	.0189	
AQC TV=19.76 UG/L				%R=107.7 Limit=100±10%
	21.2773	.9996121	.02106	
AQC TV=19.76 UG/L				
	17.47767	.9997428	.0224	%R=88.4 -Restandardize

BLANK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.004	-.003	-.007	233.3334 %
10	.234	.2430001	9.000063E-03	3.703729 %
20	.486	.4890002	3.00014E-03	.6135254 %
30	.74	.7350002	-4.999817E-03	-.680247 %

AQC TV=19.76 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.487	.4879	9.000301E-04	.1844702 %
10	.722	.7243	2.300024E-03	.3175513 %
20	.968	.9607001	-7.29996E-03	-.7598584 %
30	1.193	1.1971	4.099965E-03	.3424915 %

89FS21D44

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.005	4.600037E-03	-3.999635E-04	-8.69479 %
10	.188	.1957	7.700041E-03	3.934614 %
20	.401	.3868001	-1.419994E-02	-3.671133 %
30	.571	.5779001	6.900072E-03	1.193991 %

89FK11R13

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.004	5.499939E-03	1.499939E-03	27.27192 %
10	.234	.235	9.999573E-04	.4255139 %
20	.471	.4645	-6.500036E-03	-1.399362 %
30	.69	.694	4.000008E-03	.5763701 %

J Stary 6/28/89 SF6230

89FK21S58

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.299	.2345	-6.450001E-02	-27.50533 %
10	.274	.3595	.0855	23.78303 %
20	.462	.4845	2.249998E-02	4.643959 %
30	.653	.6095	-4.350001E-02	-7.136998 %

89FK21S59

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.048	5.249994E-02	4.499939E-03	8.571321 %
10	.27	.265	-5.000025E-03	-1.886802 %
20	.481	.4775	-3.499985E-03	-.7329811 %
30	.686	.6900001	4.000068E-03	.5797199 %

89FK21D58

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.056	5.250012E-02	-3.499881E-03	-6.666424 %
10	.245	.2525001	7.500053E-03	2.970317 %
20	.457	.4525	-4.500002E-03	-.9944756 %
30	.652	.6525	4.999042E-04	7.661368E-02 %

AQC TV=19.76 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.455	.4572002	2.200186E-03	.4812304 %
10	.691	.6914002	4.001856E-04	5.788046E-02 %
20	.933	.9256002	-7.399857E-03	-.7994658 %
30	1.155	1.1598	4.800201E-03	.4138817 %

89FS11R17

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.007	-1.899902E-03	-8.899903E-03	468.44 %
10	.214	.2222001	8.200065E-03	3.690397 %
20	.436	.4463001	1.030004E-02	2.307874 %
30	.68	.6704	-9.600043E-03	-1.431987 %

89FS22S11

SPIKE	MEASURED	CALC.	ERROR	PER CENT

0	-.002	-1.899963E-03	1.000367E-04	-5.265193 %
10	.206	.2077001	1.700044E-03	.8185091 %
20	.421	.4173001	-3.699958E-03	-.8866422 %
30	.625	.6269	1.900017E-03	.3030814 %

89FS22S12

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.003	-2.999268E-04	2.700073E-03	-900.2441 %
10	.179	.1724	-6.599963E-03	-3.828284 %
20	.34	.3451	5.100012E-03	1.477836 %
30	.519	.5178	-1.20002E-03	-.2317537 %

J Gary 6/28/89 SF6232

89FM22D01

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.002	-2.999878E-04	-2.299988E-03	766.6939 %
10	.191	.1919	9.000301E-04	.4690099 %
20	.379	.3841001	5.100042E-03	1.32779 %
30	.58	.5763001	-3.699899E-03	-.642009 %

89FS22D12

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.002	1.400024E-03	-5.999757E-04	-42.85466 %
10	.168	.1713	3.300011E-03	1.926451 %
20	.346	.3412	-4.799992E-03	-1.406797 %
30	.509	.5111	2.099991E-03	.4108767 %

89FM11R15

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.003	.0015	.0045	300 %
10	.198	.1955	-2.499998E-03	-1.278771 %
20	.398	.3895	-8.49998E-03	-2.18228 %
30	.577	.5835	6.500006E-03	1.113968 %

89FM22S01

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.004	-5.500061E-03	-1.500061E-03	27.27353 %
10	.18	.1835	3.49994E-03	1.907325 %
20	.375	.3725	-2.500057E-03	-.6711565 %
30	.561	.5615	4.999638E-04	8.904075E-02 %

AQC TV=19.76 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.455	.4481	-6.900043E-03	-1.539844 %
10	.651	.6587	7.699907E-03	1.168955 %
20	.864	.8692999	5.299866E-03	.6096706 %
30	1.086	1.0799	-6.100059E-03	-.5648726 %

AQC TV=19.76 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.39	.3914999	1.499891E-03	.3831141 %
10	.622	.6154999	-6.500125E-03	-1.056073 %
20	.831	.8394999	8.499921E-03	1.012498 %
30	1.067	1.0635	-3.500104E-03	-.3291118 %

J Gary 6/28/89

SF6232

J. Gary 6/28/89

SF 6232

Begin Element - AS

-0.001		
0.000	AZ	Not used gwa 6/27/89
-0.004		
0.251		
0.487		
0.664		

Begin Element - AS

-0.014			
0.000	AZ		
0.004	+0		
0.234	+10	Blank	
0.486	+20		
0.740	+30		
0.487	+0		
0.722	+10	AQC TV= 19.76 ug/L	
0.968	+20		
1.193	+30		
0.005	+0		
0.188	+10	89FS21D44	
0.401	+20		
0.571	+30		SF6213
0.004	+0		SF6214
0.234	+10	89FK11R13	
0.471	+20		
0.690	+30		
0.299	+0		
0.274	+10	89FK21S58	
0.462	+20		
0.653	+30		
0.048	+0		
0.270	+10	89FK21S59	
0.481	+20		
0.686	+30		
0.056	+0		
0.245	+10	89FK21D58	
0.457	+20		
0.652	+30		
0.455	+0		
0.691	+10	AQC TV= 19.76 ug/L	
0.933	+20		
1.155	+30		
0.001		Blank	SF6214
0.007	+0		SF6231
0.214	+10	89FS11R17	
0.436	+20		
0.680	+30	89FS11R17	
-0.002	+0		
0.206	+10	89FS22S11	
0.421	+20		
0.625	+30		
-0.003	+0		
0.179	+10	89FS22S12	
0.340	+20		
0.519	+30		SF6231
0.002	+0		SF6232
0.191	+10	89FM22D01	

0.214	+10	89FS11R17	SF6231
0.436	+20		
0.680	+30	89FS11R17	
-0.002	+0		
0.206	+10		
0.421	+20	89FS22S11	
0.625	+30		
-0.003	+0		
0.179	+10		
0.340	+20	89FS22S12	
0.519	+30		
0.002	+0		SF6231
0.191	+10	89FM22D01	SF6232
0.379	+20		
0.580	+30	89FM22D01	
			SF6232
			SF6231
0.002	+0		
0.168	+10	89FS22D12	
0.346	+20		
0.509	+30		
-0.003	+0		SF6231
0.198	+10	89FM11R15	SF6232
0.398	+20		
0.577	+30		
-0.004	+0		
0.180	+10	89FM22S01	
0.375	+20		
0.561	+30		
0.455	+0		
0.651	+10	AQC TV= 19.76 ug/L	
0.864	+20		
1.086	+30		
-0.002		Blank	
0.005			
0.195			
0.400			
0.594			
-0.001			
0.172			
0.385			
0.567			
0.081			
0.282			
0.491			
0.706			
-0.002			
0.173			
0.363			
0.538			
0.344			
0.577			
0.782			
1.003			
0.057			
0.233			
0.424			
0.625			
0.390	+0		
0.622	+10	AQC TV=19.76 ug/L	
0.831	+20		
1.067	+30		

Not used
AQC out of control

J Gary
6/28/89
SF6232

AAS Run Log

Element As

Date 6/27/89

J Gary 6/27/89

Initials JWG

Data Set SF6232

	ID	Spike	Comment
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC TV= 19.76 ug/L	0	
6		10	
7		20	
8		30	
9	89FS21D44	0	
10		10	
11		20	
12		30	
13	89FK11R13	0	
14		10	
15		20	
16		30	
17	89FK21S58	0	
18		10	
19		20	
20		30	
21	89FK21S59	0	
22		10	
23		20	
24		30	
25	89FK21D58	0	
26		10	

AAS Run Log

Element As

Date 6/27/89

J Barry 6/27/89

Initials JWG

Data Set SF6232

	ID	Spike	Comment
27	89FK21D58	20	
28		30	
29	AQC	0	
30		10	
31		20	
32		30	
33	Blank		
34			
35			
	Wheel 2		
1	89FS11R17	0	
2		10	
3		20	
4		30	
5	89FS22S11	0	
6		10	
7		20	
8		30	
9	89FS22S12	0	
10		10	
11		20	
12		30	
13	89FM22D01	0	
14		10	
15		20	
16		30	

AAS Run Log

Element As

Date 6/27/89

J Barry 6/27/89

Initials JWG

Data Set SF6232

	ID	Spike	Comment
17	89FS22D13	0	
18		10	
19		20	
20		30	
21	89FM11R15	0	
22		10	
23		20	
24		30	
25	89FM22501	0	
26		10	
27		20	
28		30	
29	A&C	0	
30		10	
31		20	
32		30	
33	Blank		
34			
35			
	Wheel 3		
1			
2			
3			
4			
5			
6			

J Gary 6/27/89 SF6232

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☐ WP 284 TM I #2	Analyst JWG
☒ As	☐ 4000	☐ WP 1183 TM II #1	Date 6/27/89
☐ Cd	☒ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 8316
☐ Cr	☐ 5000 ZW	☒ ICV 2	Energy 51
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 0187MD
☐ Se		☐	☐ platform ☐ MSC
☐ Tl		☐	☒ wall ☒ MSA

Blank	Slope	AQC	Digestion QC
-.122	.0246	20.64	
-.0508	.02363	19.52	
		21.28	
		21.11	
		19.29	
		17.96	
		20.19	

Blank cup absorbance
.001
-.002
.008
-.001
.005

* FLAMELESS * CSC VERSION 1.00 *

SF 6232

NAME OF ANALYST ---: L KOROBKA
DATE OF ANALYSIS --: 07-25-1989
PARAMETER NAME ----: AS
DATA SET # --------: SF 6203; 6214; 6232

~~SF 6232~~ LKorobka 7/25/89

SAMPLE NO.	CONC.	R VALUE	SLOPE		
BLK	-.1193881	.999946	.01759	Limit = ± 2 µg/L	
AQCTV=19.76	21.64308	.9998903	1.838001E-02	109.5% Rec Limit=90-110%	
89FS21S46	35.66876	.9991	.01757	not used*	SF 6203
89FK21S58	3.492938	.9998389	.01629	3 µg/L	SF 6214
89FM22S02	-.2857108	.9996867	.0175	2u	SF 6232
89FM22S03	8.464478E-02	.9998422	.01654	2u	
89FM22S04	2.954812	.999598	.01682	3 µg/L	
AQCTV=19.76	20.7207	.9998644	1.665001E-02	104.9% Rec. Limit=90-110%	

*over calibration limit

BLK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.002	-2.100037E-03	-1.000364E-04	4.763555 %
10	.172	.1738	1.799971E-03	1.035657 %
20	.353	.3497	-3.300011E-03	-.9436692 %
30	.524	.5256	1.600027E-03	.3044192 %

AQCTV=19.76

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.395	.3977998	2.799779E-03	.7038162 %
10	.584	.5815998	-2.40016E-03	-.4126824 %
20	.769	.7653999	-3.600121E-03	-.4703582 %
30	.946	.9491999	3.199935E-03	.3371192 %

89FS21S46

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.619	.6267001	7.700026E-03	1.228662 %
10	.809	.8024001	-6.599963E-03	-.8225277 %
20	.988	.9781001	-9.899914E-03	-1.012158 %
30	1.145	1.1538	8.80003E-03	.7626998 %

89FK21S58

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.057	5.689997E-02	-1.000352E-04	-.1758089 %
10	.217	.2198	2.799988E-03	1.27388 %
20	.388	.3827	-5.300015E-03	-1.384901 %
30	.543	.5456	2.600014E-03	.4765422 %

89FM22S02

89FM22S02

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.005	-4.999939E-03	6.100163E-08	-1.220048E-03 %
10	.166	.1700001	4.000053E-03	2.352972 %
20	.353	.345	-7.999957E-03	-2.318828 %
30	.516	.5200001	4.000068E-03	.7692437 %

89FM22S03

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.001	1.400024E-03	2.400024E-03	171.4273 %
10	.168	.1668	-1.199991E-03	-.7194188 %
20	.337	.3322	-4.800022E-03	-1.444919 %
30	.494	.4976	3.600001E-03	.723473 %

89FM22S04

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.048	4.969995E-02	1.699951E-03	3.420427 %
10	.216	.2179	1.899958E-03	.8719403 %
20	.395	.3861	-8.900016E-03	-2.305107 %
30	.549	.5543	5.299986E-03	.9561582 %

AQCTV=19.76

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.345	.3449999	-1.192093E-07	-3.455343E-05 %
10	.509	.5115	2.499998E-03	.4887581 %
20	.683	.6780001	-4.999936E-03	-.7374535 %
30	.842	.8445002	2.500177E-03	.296054 %

SF 6232

L. Korolka
7/25/89

```
   0.000 AZ


  -0.004
   0.000 AZ
   0.003
BEGIN DATA FILE:  AS22.DF


Begin Element - AS
   0.005
   0.000 AZ
  -0.002
   0.172   BLKS
   0.353
   0.524
   0.395   AOC TV=19.76
   0.584
   0.769
   0.946
   0.619
   0.809   89FS21   SF 6203
   0.988     S46
   1.145
   0.057
   0.217   89FK21   SF 6214
   0.388     S58
   0.543
  -0.005
   0.166   89FM22 S02   SF 6232
   0.353
   0.516
  -0.001
   0.168   89FM22 S03
   0.337
   0.494
   0.048
   0.216   89FM22 S04
   0.395
   0.549
   0.345   AOC N=19.76
   0.509
   0.683
   0.842
  -0.006   BLK
```

KK
7/24/89

X. Korobka

SF 6232
X Korobka
7/25/89

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☐ WP 284 TM I #2	Analyst WK
☑ As	☐ 4000	☐ WP 1183 TM II #1	Date 7/24/89
☐ Cd	☑ 5000 ZE	☐ WP 1183 TM II #2	Lamp # M-2228 Ser # 8327
☐ Cr	☐ 5000 ZW	☑ ICV 2	Energy 49
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5X
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 0187 MD
☐ Se		☐	☐ platform ☐ MSC
☐ Tl		☐	☑ wall ☑ MSA

Blank	Slope	AQC	Digestion QC
	7/25/89 L. Korobka ~~-.1194~~		SF 6232
BLK con = -.1194	.01759		L. Korobka 7/25/89
	.01838	TV = 19.76 21.64	
	.01665	TV = 19.76 20.72	

Blank cup absorbance
-.006

AA Sequence Log

Date 7/25/89

Initials LJK

Element As

SF 6232

L. Korobka 7/25/89

Data File N.A.

Data Set SF 6203; 6214; 6232

DU Number TFA

	Sample ID				Sample ID	
1	BLANKS	0		25	89FM22 S04	0
2		10		26		10
3		20		27		20
4		30		28		30
5	AQC TV=19.76	0		29	AQC TV=19.76	0
6		10		30		10
7		20		31		20
8		30		32		30
9	89FS21S46	0	SF 6203	33	BLANK	
10		10		34		
11		20		35		
12		30		36		
13	89FK21S58	0	SF 6214	37		
14		10		38		
15		20		39		
16		30		40		
17	89FM22S02	0	SF 6232	41		
18		10		42		
19		20		43		
20		30		44		
21	89FM22 S03	0		45		
22		10		46		
23		20		47		
24		30		48		

* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: L KOROBKA
DATE OF ANALYSIS --: 07-25-1989
PARAMETER NAME ----: AS
DATA SET # --------: SF 6203 6232

SF 6232 L. Korobka 7/25/89

SAMPLE NO.	CONC.	R VALUE	SLOPE	
BLK	-.2372344	.9999661	.01939	Limit = ±2 µg/L
AQCTV=19.76	20.35696	.9998716	.01989	103% Rec. Limit = ±10% of 100
89FS21S461/5	5.266864	.999794	.01986	26.3 µg/L SF 6203
89FM22S05	-.0917425	.999785	.01962	2u SF 6232
AQCTV=19.76	20.82688	.9996858	.01935	105.4% Rec. Limit = 90-110%

BLK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.003	-4.599976E-03	-1.599975E-03	34.78226 %
10	.188	.1893	1.300037E-03	.68676 %
20	.381	.3832	2.200008E-03	.5741146 %
30	.579	.5771	-1.900017E-03	-.3292354 %

AQCTV=19.76

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.401	.4049	3.900021E-03	.963206 %
10	.609	.6038	-5.200029E-03	-.861217 %
20	.804	.8027	-1.300037E-03	-.161958 %
30	.999	1.0016	2.600014E-03	.2595861 %

89FS21S461/5

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.1	.1045999	4.599914E-03	4.397627 %
10	.308	.3031999	-4.800082E-03	-1.583141 %
20	.506	.5018	-4.200042E-03	-.8369952 %
30	.696	.7004	4.399956E-03	.6282061 %

89FM22S05

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.001	-1.799988E-03	-7.999877E-04	44.44406 %
10	.197	.1944	-2.599985E-03	-1.337441 %
20	.383	.3906	7.60001E-03	1.945727 %
30	.591	.5868	-4.200042E-03	-.7157535 %

AQCTV=19.76

SPIKE	MEASURED	CALC.	ERROR	PER CENT

AQCTY=19.76

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.401	.403	2.000004E-03	.4962789 %
10	.595	.5965	1.499951E-03	.2514587 %
20	.799	.79	-9.000063E-03	-1.139249 %
30	.978	.9834999	5.499959E-03	.5592231 %

SF 6232

L. Korobka
7/25/89

BEGIN DATA FILE: AS2.DF

Linda Korobka
7/25/89

Begin Element - AS

	0.008	
	0.000	AZ
2	-0.003	
3	-0.188	BLK
4	0.381	
5	0.579	
6	0.401	AOC
7	0.609	TV=19.76
8	0.804	
9	0.999	
10	0.100	89FS21546
11	0.308	SF 6203
12	0.506	1:5
13	0.696	
14	-0.001	
15	0.197	89FM22505 SF 6232
16	0.383	
17	0.591	
18	0.401	AOC
19	0.595	TV=19.76
20	0.799	
21	0.978	
22	-0.003	BLK

SF 6232

X. Korobka
7/25/89

L. Korobka 7/25/89

AA Sequence Log

SF_6232

Date 7/25/89

Initials LJK

Element AS

Data File N.A.

Data Set SF 6203 : 6232

DU Number TFA

	Sample ID		Sample ID
1	BLANKS 0	25	
2	10	26	
3	20	27	
4	30	28	
5	AQC TV=19.76 0	29	
6	10	30	
7	20	31	
8	30	32	
9	89FS21S46 1:5 0	33	
10	10	34	
11	20	35	
12	30	36	
13	89FM22 S05 0	37	
14	10	38	
15	20	39	
16	30	40	
17	AQC TV=19.76 0	41	
18	10	42	
19	20	43	
20	30	44	
21	BLK	45	
22		46	
23		47	
24		48	

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☐ WP 284 TM I #2	Analyst WJK
☑ As	☐ 4000	☐ WP 1183 TM II #1	Date 7/25/89
☐ Cd	☐ 5000 ZE	☐ WP 1183 TM II #2	Lamp # M-2228 Ser # 8327
☐ Cr	☑ 5000 ZW	☑ ICV 2	Energy 49
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5X
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 0187 mD
☐ Se		☐	☐ platform ☐ MSC
☐ Tl		☐	☑ wall ☑ MSA

SF 6232

Blank	Slope	AQC	Digestion QC
BLK CONC = -.2372	.01939		L. Korobka 7/25/89
	.01989	N=19.76 20.357	
	.01935	N=19.76 20.827	

Blank cup absorbance

-.003

* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: GANZ
DATE OF ANALYSIS --: 08-10-1989
PARAMETER NAME ----: TL
DATA SET # --------: SF6232

J Ganz 8/10/89

SAMPLE NO.	CONC.	R VALUE	SLOPE		
BLANK	-.968321	.9998488	.01673	Limit = ± 2 ug/L	
AQC TV=12.5 UG/L				%R = 109.1 Limit = 100 ± 10%	
	13.64059	.9991569	.01291		
89FK21S58	-4.372469	.9713951	.00247	Rerun	SF6214
89FS22S12	-3.400577	.9781248	.00347	Rerun	SF6231
89FS22D12 *	-1.526476	.9962654	.00321		SF6231
89FM11R15 *	-.9452709	.9994312	.01005		SF6232
89FM22S01 *	-1.134161	.9988484	7.229999E-03		
AQC TV=12.5 UG/L					
	15.68182	.9978671	.01232	%R = 125.5 - Restandardize	

* These results are < IDL and therefore acceptable despite the AQC high bias

BLANK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.015	-1.620001E-02	-1.200012E-03	7.407476 %
10	.147	.1511	4.10001E-03	2.713441 %
20	.323	.3184	-4.599989E-03	-1.44472 %
30	.484	.4857	1.700014E-03	.3500131 %

AQC TV=12.5 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.17	.1761	6.099969E-03	3.463924 %
10	.315	.3052	-9.800017E-03	-3.211015 %
20	.433	.4343	1.299948E-03	.2993202 %
30	.561	.5634	2.399981E-03	.4259818 %

89FK21S58

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.004	-.0108	-6.799996E-03	62.96295 %
10	.007	.0139	6.900002E-03	49.64029 %
20	.032	.0386	6.599996E-03	17.09844 %
30	.07	.0633	-6.700009E-03	-10.58453 %

89FS22S12

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.006	-.0118	-5.800003E-03	49.15256 %
10	.01	.0229	.0129	56.33188 %
20	.066	5.760001E-02	-8.399997E-03	-14.58333 %
30	.091	9.230001E-02	1.300007E-03	1.408458 %

89FS22D12

SPIKE	MEASURED	CALC.	ERROR	PER CENT

20	.066	5.760001E-02	-8.399997E-03	-14.58333 %
30	.091	9.230001E-02	1.300007E-03	1.408458 %

89FS22D12

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.007	-4.899986E-03	2.100014E-03	-42.85755 %
10	.028	2.720001E-02	-7.999912E-04	-2.941143 %
20	.064	5.930001E-02	-4.699998E-03	-7.925796 %
30	.088	.0914	3.399998E-03	3.719911 %

89FM11R15

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.013	-9.49997E-03	3.500031E-03	-36.84254 %
10	9.399999E-02	9.100001E-02	-2.999991E-03	-3.296693 %
20	.196	.1915	-4.500017E-03	-2.349878 %
30	.288	.2919999	3.999949E-03	1.369846 %

89FM22S01

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-8.000001E-03	-8.199981E-03	-1.99981E-04	2.438799 %
10	.067	6.410001E-02	-2.899997E-03	-4.524176 %
20	.13	.1364	6.399989E-03	4.692075 %
30	.212	.2087	-3.300026E-03	-1.58123 %

AQC TV=12.5 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.184	.1932	9.200007E-03	4.761908 %
10	.326	.3164	-9.600014E-03	-3.034139 %
20	.448	.4396	-8.400023E-03	-1.910833 %
30	.554	.5628	8.79997E-03	1.563605 %

J Gary 8/10/89

SF6232

BEGIN DATA FILE: TL810.DF

J Gary 8/10/89

SF6232

Begin Element - TL

-0.012		
0.000	AZ	
0.012		quit 8/10/89 not used
0.162		
0.349		
0.527		
0.185		
0.348		
0.465		
0.588		

Begin Element - TL

0.022			
0.000	AZ		
-0.015	+0	Blank	
0.147	+10		
0.323	+20		
0.484	+30		
0.170	+0	AQC TV=12.5 µg/L	
0.315	+10		
0.433	+20		
0.561	+30		
-0.004	+0	89FK21558	
0.007	+10		
0.032	+20		
0.070	+30		SF6214
-0.006	+0	89FS22512	SF6231
0.010	+10		
0.066	+20		
0.091	+30		
-0.007	+0	89FS22D12	
0.028	+10		
0.064	+20		
0.088	+30		SF6231
-0.013	+0	89FM11R15	SF6232
0.094	+10		
0.196	+20		
0.288	+30		
-0.008	+0	89FM22S01	
0.067	+10		
0.130	+20		
0.212	+30		
0.184	+0	AQC TV= 12.5 µg/L	
0.326	+10		
0.448	+20		
0.554	+30		
-0.005		Blank	

AAS Run Log

Element T|

Date 8/10/89

J Gary 8/10/89

Initials JWG

Data Set SF6232

	ID	Spike	Comment
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC TV=12.5 µg/L	0	
6		10	
7		20	
8		30	
9	89FK21S58	0	
10		10	
11		20	
12	gwb 8/10/89	30	
13	89FS22~~D~~S12	0	
14		10	
15		20	
16		30	
17	89FS22D12	0	
18		10	
19		20	
20		30	
21	89FM11R15	0	
22		10	
23		20	
24		30	
25	89FM22S01	0	
26		10	

AAS Run Log

Element TI

Date 8/10/89

J Gary 8/10/89

Initials JWG

Data Set SF6232

	ID	Spike	Comment
27	89FM22501	20	
28		30	
29	AQC	0	
30		10	
31		20	
32		30	
33	Blank		
34			
35			
	Wheel 2		
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			

J Gary 8/10/89 SF6232

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☐ WP 284 TM I #2	Analyst JWG
☐ As	☐ 4000	☐ WP 1183 TM II #1	Date 8/10/89
☐ Cd	☐ 5000 ZE	☒ WP 1183 TM II #2	Lamp # 1819
☐ Cr	☒ 5000 ZW	☐ ICV 2	Energy 42
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-51-MD
☐ Se		☐	☐ platform ☐ MSC
☒ Tl		☐	☒ wall ☒ MSA

Blank	Slope	AQC	Digestion QC
-.968	.01673	13.64	
		15.68	

Blank cup absorbance
-.005

* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: GANZ
DATE OF ANALYSIS --: 08-10-1989
PARAMETER NAME ----: SB
DATA SET # --------: SF6232

J Ganz 8/10/89

SAMPLE NO.	CONC.	R VALUE	SLOPE	
BLANK	-.3489421	.9989467	2.091999E-02	Limit = ±2 µg/L
AQC TV=20.0 UG/L				%R = 102.7 Limit = 100±10%
	20.53295	.9982741	1.988999E-02	
89FM22S01	-5.014677E-02	.9999192	.02393	
89FM22S02	2.563164E-02	.9999477	.02341	
89FM22S03	-.1150968	.9980684	.02259	
89FM22S04	.7083186	.9998287	.02513	
89FM22S05	-.5370273	.9985157	2.458001E-02	
AQC TV=20.0 UG/L				%R = 104.1 Limit = 100±10%
	20.81559	.9979319	1.974001E-02	
89FM22D01	-.0337263	.9994801	.02372	
AQC TV=20.0 UG/L				
	19.66798	.9996838	.02048	%R = 98.3 Limit = 100±10%

BLANK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.002	-7.299866E-03	-5.299866E-03	72.60223 %
10	.187	.2019001	1.490006E-02	7.379918 %
20	.425	.4111	-1.390001E-02	-3.381175 %
30	.616	.6203	4.299939E-03	.6932031 %

AQC TV=20.0 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.404	.4084002	4.400134E-03	1.077408 %
10	.603	.6073001	4.300058E-03	.7080615 %
20	.828	.8062	-2.179998E-02	-2.704041 %
30	.992	1.0051	1.309991E-02	1.303344 %

89FM22S01

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.004	-1.200012E-03	2.799988E-03	-233.33 %
10	.24	.2381	-1.900002E-03	-.7979851 %
20	.482	.4774	-4.600019E-03	-.9635564 %
30	.713	.7167	3.699958E-03	.5162493 %

89FM22S02

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.001	6.000367E-04	-3.999634E-04	-66.6565 %
10	.232	.2347	2.700001E-03	1.150405 %
20	.473	.4688	-4.200042E-03	-.8959134 %
30	.701	.7029	1.899958E-03	.2703027 %

B9FM22S03

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.003	-2.600037E-03	3.999635E-04	-15.383 %
10	.211	.2233	1.229996E-02	5.508266 %
20	.475	.4492	-2.580005E-02	-5.743556 %
30	.662	.6751	1.309997E-02	1.940449 %

B9FM22S04

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.014	1.780005E-02	3.800048E-03	21.34853 %
10	.271	.2691001	-1.899928E-03	-.7060303 %
20	.528	.5204001	-7.59995E-03	-1.460405 %
30	.766	.7717001	5.700112E-03	.7386434 %

B9FM22S05

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.003	-1.320013E-02	-1.620014E-02	122.7271 %
10	.213	.2326	1.959996E-02	8.426468 %
20	.469	.4784001	9.40004E-03	1.964891 %
30	.737	.7242001	-1.279986E-02	-1.767448 %

AQC TV=20.0 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.398	.4108998	1.289979E-02	3.1394 %
10	.619	.6082999	-1.070017E-02	-1.759028 %
20	.823	.8057	-1.730007E-02	-2.14721 %
30	.988	1.0031	1.509994E-02	1.505328 %

B9FM22D01

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.002	-7.999878E-04	-2.799988E-03	350.0038 %
10	.226	.2364001	1.040004E-02	4.399341 %
20	.486	.4736001	-1.239994E-02	-2.618231 %
30	.706	.7108001	4.800082E-03	.6753068 %

AQC TV=20.0 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.408	.4028002	-5.19982E-03	-1.290918 %
10	.598	.6076001	9.600103E-03	1.580004 %
20	.816	.8124001	-3.599882E-03	-.4431169 %
30	1.018	1.0172	-8.000136E-04	-.0786486 %

J Gang 8/10/89

SF6232

BEGIN DATA FILE: SB810.DF

Begin Element - SB

Begin Element - SB

0.009		
0.000	AZ	
-0.002	+0	
0.187	+10	~~AQC TV=~~ Blank
0.425	+20	
0.616	+30	
0.404	+0	
0.603	+10	AQC TV= 20.0 ug/L
0.828	+20	
0.992	+30	
-0.004	+0	
0.240	+10	89FM22S01
0.482	+20	
0.713	+30	
0.001	+0	
0.232	+10	89FM22S02
0.473	+20	
0.701	+30	
-0.003	+0	
0.211	+10	89FM22S03
0.475	+20	
0.662	+30	
0.014	+0	
0.271	+10	89FM22S04
0.528	+20	
0.766	+30	
0.003	+0	
0.213	+10	89FM22S05
0.469	+20	
0.737	+30	
0.398	+0	
0.619	+10	AQC TV= 20.0 ug/L
0.823	+20	
0.988	+30	
0.002		Blank
0.002	+0	
0.226	+10	89FM22D01
0.486	+20	
0.706	+30	
0.408	+0	
0.598	+10	AQC TV= 20.0 ug/L
0.816	+20	
1.018	+30	
0.006		Blank

J Hamy 8/10/89

SF6232

AAS Run Log

Element Sb

Date 8/10/89

J Gamy 8/10/89

Initials JWG

Data Set SF6232

	ID	Spike	Comment
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC TV = 20.0 µg/L	0	
6		10	
7		20	
8		30	
9	89FM22S01	0	
10		10	
11		20	
12		30	
13	89FM22S02	0	
14		10	
15		20	
16		30	
17	89FM22S03	0	
18		10	
19		20	
20		30	
21	89FM22S04	0	
22		10	
23		20	
24		30	
25	89FM22S05	0	
26		10	

AAS Run Log

Element Sb

Date 8/10/89

J Gary 8/10/89

Initials JWG

Data Set SF6232

	ID	Spike	Comment
27	89FM22S05	20	
28		30	
29	AQC	0	
30		10	
31		20	
32		30	
33	Blank		
34			
35			
	Wheel 2		
1	89FM22D01	0	
2		10	
3		20	
4		30	
5	AQC	0	
6		10	
7		20	
8		30	
9	Blank		
10			
11			
12			
13			
14			
15			
16			

J Gary 8/10/89

SF6232

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☐ WP 284 TM I #2	Analyst JWG
☐ As	☐ 4000	☐ WP 1183 TM II #1	Date 8/10/89
☐ Cd	☐ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 2237
☐ Cr	☒ 5000 ZW	☐ ICV 2	Energy 49
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☒ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 1-110-MD
☐ Se		☒ WP186 (II)	☐ platform ☐ MSC
☐ Tl		☐	☒ wall ☒ MSA

Blank	Slope	AQC	Digestion QC
-.349	.02092	20.53	
		20.82	
		19.67	

Blank cup absorbance
.002
.006

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* FLAMELESS * CSC VERSION 1.00 *

NAME OF ANALYST ---: GANZ
DATE OF ANALYSIS --: 08-07-1989
PARAMETER NAME ----: SB
DATA SET # --------: SF6232

J Ganz 8/7/89

SAMPLE NO.	CONC.	R VALUE	SLOPE	
BLANK	-.4349571	.9996497	.02506	Limit = ±2 ug/L
AQC TV=20.0 UG/L				%R = 92.7 Limit = 100±10%
	18.54786	.9992301	.02486	
89FK21S58	-1.340802	.9980324	.02588	SF6214
89FS21S45	-.3573924	.9979859	.02882	SF6213
89FS22S12	-.1181439	.9992975	2.624001E-02	SF6231
89FS22D12	-.5397931	.9995069	.02538	
89FM11R15	-.4547513	.9967478	2.243001E-02	SF6232
AQC TV=20.0 UG/L				%R = 101.0 Limit = 100±10%
	20.19608	.9962739	.02295	
AQC TV=20.0 UG/L				
	17.87446	.9996584	2.597002E-02	%R = 89.4 Limit = 100±10% Restandardize

---

BLANK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.005	-1.090002E-02	-5.900025E-03	54.12854 %
10	.236	.2397	3.699958E-03	1.543579 %
20	.48	.4903	1.029995E-02	2.100745 %
30	.749	.7409	-8.100093E-03	-1.093278 %

AQC TV=20.0 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.454	.4610999	7.099867E-03	1.539768 %
10	.712	.7096999	-2.300143E-03	-.3241009 %
20	.975	.9582999	-1.670015E-02	-1.742685 %
30	1.195	1.2069	1.189983E-02	.9859831 %

89FK21S58

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.015	-3.469995E-02	-1.969995E-02	56.77227 %
10	.2	.2241001	2.410008E-02	10.75416 %
20	.472	.4829001	1.090011E-02	2.257218 %
30	.757	.7417001	-1.529998E-02	-2.062825 %

89FS21S45

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.012	-1.030005E-02	-2.230005E-02	216.5043 %

0	.012	-1.030005E-02	-2.230005E-02	216.5043 %
10	.25	.2779	2.789998E-02	10.03958 %
20	.555	.5661	1.109999E-02	1.960783 %
30	.871	.8542999	-1.670003E-02	-1.95482 %

89FS22S12

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.007	-3.100098E-03	3.899903E-03	-125.7994 %
10	.256	.2593	3.299952E-03	1.272639 %
20	.54	.5217001	-.0183	-3.507763 %
30	.773	.7841001	1.110011E-02	1.41565 %

89FS22D12

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.004	-1.369995E-02	-9.69995E-03	70.80281 %
10	.228	.2401001	1.210006E-02	5.039589 %
20	.489	.4939001	4.900068E-03	.9921173 %
30	.755	.7477001	-7.29996E-03	-.9763219 %

89FM11R15

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.012	-1.020007E-02	-2.220008E-02	217.6462 %
10	.185	.2141	2.909997E-02	13.59177 %
20	.43	.4384	8.399993E-03	1.916057 %
30	.678	.6627001	-1.529992E-02	-2.308724 %

AQC TV=20.0 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.469	.4635	-5.500019E-03	-1.186628 %
10	.668	.693	2.499998E-02	3.6075 %
20	.956	.9224999	-3.350008E-02	-3.631445 %
30	1.138	1.152	1.399994E-02	1.215273 %

AQC TV=20.0 UG/L

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.467	.4641999	-2.800167E-03	-.6032244 %
10	.726	.7239	-2.100051E-03	-.2901023 %
20	.971	.9836001	1.260012E-02	1.281021 %
30	1.251	1.2433	-7.699728E-03	-.6192975 %

J Gary 8/7/89

SF6232

Begin Element - SB
0.026
0.000 AZ
-0.017
0.106
0.197
0.318
0.255
0.353
0.521
0.587

Not used gwk 8/7/89

J Barry 8/7/89

SF6232

Begin Element - SB
-0.007
0.000 AZ
-0.043
0.117
0.353
0.542

Begin Element - SB
-0.005
0.000 AZ
-0.015
0.129
0.337
0.503

Begin Element - SB
-0.001
0.000 AZ
-0.011
0.047
0.156
0.292

Begin Element - SB
-0.018
0.000 AZ
-0.005 +0
0.236 +10
0.480 +20
0.749 +30

Blank

0.454 +0
0.712 +10
0.975 +20
1.195 +30

AQC TV=20.0 49/L

-0.015 +0
0.200 +10
0.472 +20
0.757 +30

89FK21558

SF6214

0.012 +0
0.250 +10
0.555 +20
0.871 +30

89FS21545

SF6213

SF6213

-0.007 +0
0.256 +10

89FS22512

SF6231

0.540	+20	89FS22S12
0.773	+30	
-0.004	+0	
0.228	+10	89FS22D12
0.489	+20	
0.755	+30	
0.012	+0	
0.185	+10	89FM11R15
0.430	+20	
0.678	+30	
0.469	+0	
0.668	+10	AQC TV=20.0 µg/L
0.956	+20	
1.138	+30	
0.006		Blank
0.011		
0.230		
0.485		
0.779		
0.005		
0.240		
0.506		
0.781		
0.002		
0.219		
0.503		
0.786		
0.003		
0.274		
0.609		
0.922		
-0.014		
0.234		
0.519		
0.775		
0.000		
0.262		
0.520		
0.776		
0.467	+0	
0.726	+10	AQC TV=20.0 µg/L
0.971	+20	
1.251	+30	

SF6231

SF6232

Not used

AQC out of control

J Gary 8/7/89

SF6232

AAS Run Log

Element Sb

Date 8/7/89

J Gamy 8/7/89

Initials JWG

Data Set SF6232

	ID	Spike	Comment
1	Blank	0	
2		10	
3		20	
4		30	
5	AQC TV= 20.0 ug/L	0	
6		10	
7		20	
8		30	
9	89FK21558	0	
10		10	
11		20	
12		30	
13	89FS21S45	0	
14		10	
15		20	
16		30	
17	89FS22S12	0	
18		10	
19		20	
20		30	
21	89FS22D12	0	
22		10	
23		20	
24		30	
25	89FM11R15	0	
26		10	

J Garry 8/7/89 SF6232

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☐ WP 284 TM I #2	Analyst JWG
☐ As	☐ 4000	☐ WP 1183 TM II #1	Date 8/7/89
☐ Cd	☐ 5000 ZE	☐ WP 1183 TM II #2	Lamp # 2237
☐ Cr	☒ 5000 ZW	☐ ICV 2	Energy 40
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☒ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 1-110-MD
☐ Se		☒ WP 186(II)	☐ platform ☐ MSC
☐ Tl		☐	☒ wall ☒ MSA

Blank	Slope	AQC	Digestion QC
-.435	.02506	18.55	
		20.20	

Blank cup absorbance
.006

J Ganz 8/8/89

* REGRESSION ANALYSIS * CSC VERSION 2.00 *

NAME OF ANALYST ---: GANZ
PARAMETER NAME ----: CD
DATE OF ANALYSIS --: 08-08-1989

DATA SET NUMBER ---: SF6232
DU NUMBER ---------: TFA

DEGREE OF FIT : 1

EQUATION : CONCENTRATION = +6.28352E-03
+2.91071E+00 * SIGNAL

COEFFICIENT OF DETERMINATION : .9995392

T-A-B-L-E O-F S-T-A-N-D-A-R-D-S

STANDARD	SIGNAL	CONCENTRATION	CALCULATED
1	+0.003	+0.000	+0.015
2	+0.160	+0.500	+0.471
3	+0.345	+1.000	+1.010
4	+0.515	+1.500	+1.505
5	+0.684	+2.000	+1.997

T-A-B-L-E O-F S-A-M-P-L-E-S

SAMPLE I.D.	SIGNAL	CONCENTRATION		
AQC TV=0.975	+0.342	+1.001	%R=102.7 Limit = 100±10%	
BLANK	-0.001	+0.003	Limit = ±0.2 ng/L	
89FS11R17 +0	+0.014	+0.047	> %R = 98.9	
+1	+0.354	+1.036		
89FS22S11 +0	+0.019	+0.061	> %R = 103.6	
+1	+0.375	+1.097		
89FS22S12 +0	+0.006	+0.023	> %R = 106.0	
+1	+0.370	+1.083		
89FS22D12 +0	+0.011	+0.038	> %R = 100.7	
+1	+0.357	+1.045		SF6231
89FM11R15 +0	+0.026	+0.081	> %R = 94.9	SF6232
+1	+0.352	+1.030		
AQC TV=0.975	+0.342	+1.001	%R=102.7 Limit = 100±10%	
BLANK	+0.017	+0.055	Limit = ±0.2 ng/L	
89FM22S01 +0	+0.011	+0.038	> 94.0 = %R	
+1	+0.334	+0.978		
89FM22S02 +0	+0.039	+0.119	> %R = 102.5	
+1	+0.391	+1.144		
89FM22S03 +0	+0.015	+0.049	> %R = 101.3	
+1	+0.363	+1.062		
89FM22S04 +0	+0.020	+0.064	> %R = 99.0	
+1	+0.360	+1.054		
89FM22S05 +0	+0.089	+0.265	> %R = 101.6	
+1	+0.438	+1.281		
89FM22D01 +0	+0.007	+0.026	> %R = 98.7	
+1	+0.346	+1.013		
AQC TV=0.975	+0.353	+1.033	%R=105.9 Limit = 100±10%	
BLANK	+0.014	+0.047	Limit = ±0.2 ng/L	

J Gary 8/8/89

SF6232

Begin Element - CD
-0.324
0.000 AZ gwk 8/8
-0.008 not used
0.112
0.246
0.345
0.487

Begin Element - CD
-0.315
0.000 AZ
0.003 Std 0 ppb
0.160 0.5 ppb
0.345 1.0 ppb
0.515 1.5 ppb
0.684 2.0 ppb
0.342 AQC TV= 0.975 mg/L
-0.001 Blank
0.014 +0 89FS11R17
0.354 +1
0.019 +0 89FS22S11
0.375 +1
0.006 +0 89FS22S12
0.370 +1
0.011 +0 89FS22D12
0.357 +1 SF6231
0.026 +0 89FM11R15 SF6232
0.352 +1
0.342 AQC TV=0.975 mg/L
0.017 Blank
0.011 +0 89FM22S01
0.384 +1
0.039 +0 89FM22S02
0.391 +1
0.015 +0 89FM22S03
0.363 +1
0.020 +0 89FM22S04
0.360 +1
0.089 +0 89FM22S05
0.438 +1
0.007 +0 89FM22D01
0.346 +1
0.353 AQC TV=0.975 mg/L
0.014 Blank
~~0.000~~ gwk no cups
~~0.004~~ 8/8/89

AAS Run Log

Element Cd

Date 8/8/89

J Kamy 8/8/89

Initials JWG

Data Set SF6232

	ID	Spike	Comment
1	0 ppb Standard		
2	0.5 ppb		
3	1.0 ppb		
4	1.5 ppb		
5	2.0 ppb		
6	AQC TV= 0.975 µg/L		
7	Blank		
8	89FS11R17	0	
9		1	
10	89FS22S11	0	
11		1	
12	89FS22S12	0	
13		1	
14	89FS22D12	0	
15		1	
16	89FM11R15	0	
17		1	
18	AQC		
19	Blank		
20	89FM22S01	0	
21		1	
22	89FM22S02	0	
23		1	
24	89FM22S03	0	
25		1	
26	89FM22S04	0	

AAS Run Log

Element Cd J Harry 8/8/89 Initials JWG

Date 8/8/89 Data Set SF6232

	ID	Spike	Comment
27	89FM22S04	1	
28	89FM22S05	0	
29		1	
30	89FM22D01	0	
31		1	
32	AQC		
33	Blank		
34			
35			
	Wheel 2		
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			

J Gary 8/8/89 SF6232

Element	Instrument	QC Source	
☐ Ag	☐ 5000	☒ WP 284 TM I #2	Analyst JWG
☐ As	☐ 4000	☐ WP 1183 TM II #1	Date 8/8/89
☒ Cd	☐ 5000 ZE	☐ WP 1183 TM II #2	Lamp # WL36016
☐ Cr	☒ 5000 ZW	☐ ICV 2	Energy 43
☐ Pb	☐ 5100	☐ SPEX II	Expansion 5
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b	Stock 2-126-MD
☐ Se		☐	☒ platform ☒ MSC
☐ Tl		☐	☐ wall ☐ MSA

Blank	Slope	AQC	Digestion QC
.003	2.91071	1.001	
.055		1.001	
.047		1.033	

Blank cup absorbance

AAS Run Log

Element Pb

Date 7/6/89

SF 6232

Initials BK

Data Set SF 6232

	ID	Spike	Comment
1	Stds 0 ppb		
2	40		
3	30		
4	20		
5	10		
6	CCB1		AQC at position 37
7	89FS21S39	0	SF6204
8	SpK	20	
9	S40	0	
10	SpK	20	
11	S41	0	
12	SpK	20	
13	S42	0	
14	SpK	20	
15	89FS11R09	0	SF6213
16	SpK	20	
17	89FS21S43	0	
18	SpK	20	
19	S44	0	
20	SpK	20	
21	D44	0	
22	SpK	20	
23	CCB2		
24	S45	0	
25	SpK	20	
26	89FK11 R13	0	SF0214

AAS Run Log

Element Pb

Date 7/6/89

D Kruse 7/7/89

Initials DK

Data Set SF 6232

	ID	Spike	Comment
27	89 FK 11 R 13 SpK	20	
28	89FK 21 S58	0	
29	SpK	20	
30	D58	0	
31	SpK	20	
32	S59	0	
33	SpK	20	
34	CCB3	0	
35			
	Wheel 2		
1	89 FS 11 R17	0	SF 6231
2	SpK	20	
3	89FS22S11	0	
4	SpK	20	
5	S12	0	
6	SpK	20	
7	D12	0	
8	SpK	20	
9	89 FM 11 R15	0	SF 6232
10	SpK	20	
11	89 FM 22 S01	0	
12	SpK	20	
13	D01	0	
14	SpK	20	
15	S02	0	
16	SpK	20	

AAS Run Log

Element pb

Date 7/6/89

DK use 7/7/89

Initials DR

Data Set SF 6232

	ID	Spike	Comment
17	89FM22S03	0	
18	SpK	20	
19	S04	0	
20	SpK	20	
21	CCB4	0	A&C
22	S04	0	
23	SpK	20	
24	CCB5		A&C
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
	Wheel 3		
1			
2			
3			
4			
5			
6			

Element File: PBCON.GEL   Element: Pb
Date: 07/06/89   Time: 12:33
Data Storage File: PB6204.DAT   ID/Weight File: SF6204.A60
Technique: HGA ,   Calibration Type: Linear

~~~~~~

ID: Blank   Seq. No.: 00001   A/S Pos.: 1   Date: 07/06/89

uL dispensed: 5 from 36, 15 from 1
Replicate 1 (Peak Stored)   Time: 12:36
Peak Area (A-s): 0.007   Peak Height (A): 0.014
Background Pk Area (A-s): 0.027   Background Pk Height (A): 0.011
Blank Corrected Pk Area (A-s): -0.009
Concentration (ug/L): -2.2

Auto-zero performed.

~~~~~~

ID: Standard 1   Seq. No.: 00002   A/S Pos.: 2   Date: 07/06/89

uL dispensed: 5 from 36, 15 from 2
Replicate 1 (Peak Stored)   Time: 12:39
Peak Area (A-s): 0.091   Peak Height (A): 0.177
Background Pk Area (A-s): 0.047   Background Pk Height (A): 0.061
Blank Corrected Pk Area (A-s): 0.083
Concentration (ug/L): 42.9

Standard number 1 applied. [40.0]
Correlation~coefficient:~1.00000~~~~~~~Slope:~0.0021~~~~~~~~~~~Int:~0.000~~~~~~

ID: Standard 2   Seq. No.: 00003   A/S Pos.: 3   Date: 07/06/89

uL dispensed: 5 from 36, 15 from 3

SF 6232

DKruse 7/7/89

Replicate 1 (Peak Stored)
Peak Area (A-s): 0.070
Background Pk Area (A-s): 0.049
Blank Corrected Pk Area (A-s): 0.063
Concentration (ug/L): 30.2

Time: 12:42
Peak Height (A): 0.137
Background Pk Height (A): 0.049

Standard number 2 applied. [30.0]
Correlation coefficient: 0.99999 Slope: 0.0021 Int: 0.000

~~~~~~

ID: Standard 3 Seq. No.: 00004 A/S Pos.: 4 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 4
Replicate 1 (Peak Stored)
Peak Area (A-s): 0.051
Background Pk Area (A-s): 0.042
Blank Corrected Pk Area (A-s): 0.044
Concentration (ug/L): 21.0

Time: 12:45
Peak Height (A): 0.096
Background Pk Height (A): 0.033

Standard number 3 applied. [20.0]
Correlation coefficient: 0.99952 Slope: 0.0021 Int: 0.001

~~~~~~

ID: Standard 4 Seq. No.: 00005 A/S Pos.: 5 Date: 07/06/89

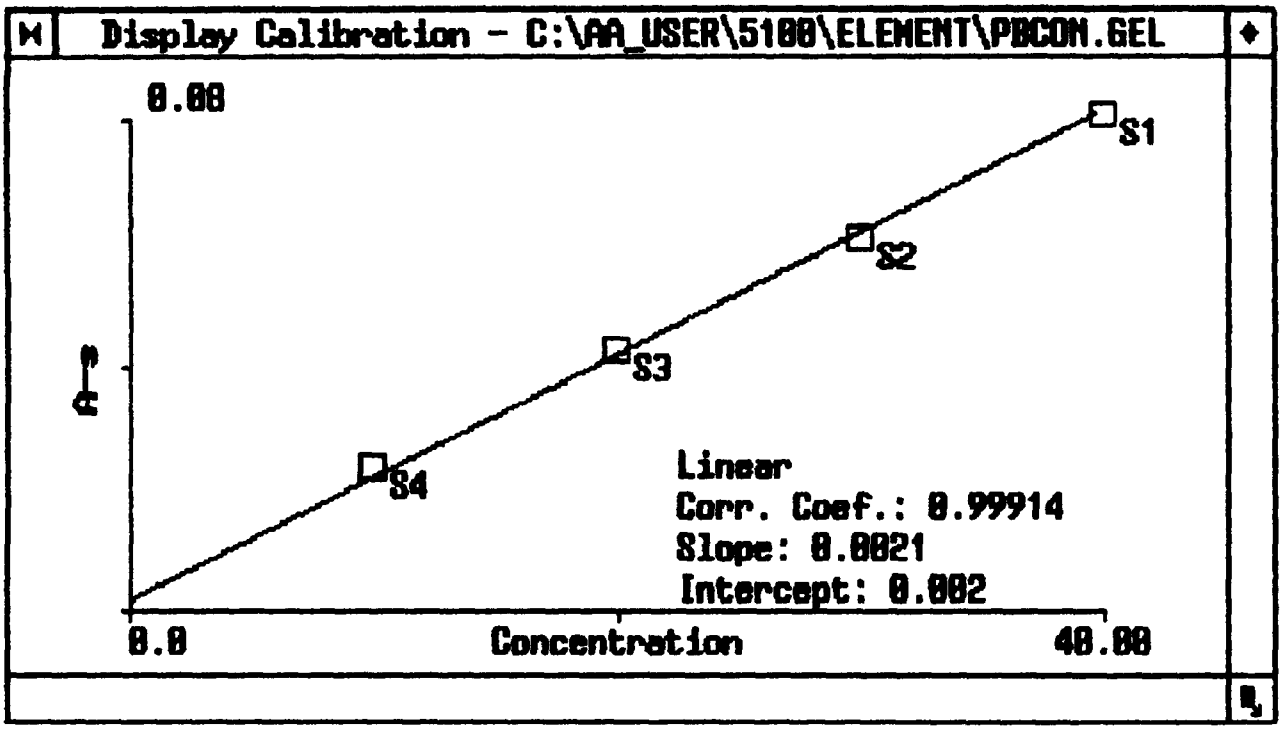
uL dispensed: 5 from 36, 15 from 5
Replicate 1 (Peak Stored)
Peak Area (A-s): 0.031
Background Pk Area (A-s): 0.038
Blank Corrected Pk Area (A-s): 0.024
Concentration (ug/L): 11.1

Time: 12:48
Peak Height (A): 0.053
Background Pk Height (A): 0.020

Standard number 4 applied. [10.0]
Correlation coefficient: 0.99914 Slope: 0.0021 Int: 0.002

DKruse
7/7/89

SF 6232



SF 6232

DKrue 7/7/89

ID: AQC 22.4 UG/L   Seq. No.: 00006   A/S Pos.: 37   Date: 07/06/

SF 6232

uL dispensed: 5 from 36, 15 from 37
Replicate 1 (Peak Stored)   Time: 12:52
Peak Area (A-s): 0.055   Peak Height (A): 0.104
Background Pk Area (A-s): 0.038   Background Pk Height (A): 0.035
Blank Corrected Pk Area (A-s): 0.047
Concentration (ug/L):   22.1   98.7%, R   Limit = 100 ± 10%

Check sample is within range 20.16 - 24.64   DKase 7/7/89

~~~~~~

ID: CCB1   Seq. No.: 00007   A/S Pos.: 6   Date: 07/06/

uL dispensed: 5 from 36, 15 from 6
Replicate 1 (Peak Stored)   Time: 12:55
Peak Area (A-s): 0.013   Peak Height (A): 0.014
Background Pk Area (A-s): 0.025   Background Pk Height (A): 0.011
Blank Corrected Pk Area (A-s): 0.005
Concentration (ug/L):   1.7   Limit = ± 2 µg/L

~~~~~~

ID: 89FS21S39   Seq. No.: 00008   A/S Pos.: 7   Date: 07/06.

uL dispensed: 5 from 36, 15 from 7
Replicate 1 (Peak Stored)   Time: 12:59
Peak Area (A-s): 0.009   Peak Height (A): 0.016
Background Pk Area (A-s): 0.190   Background Pk Height (A): 0.073
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L):   0.0   2u

ID: SPK / uL dispensed: 5 from 36, Seq. No.: 00009 from 8   A/S Pos.: 8   Date: 07/06/89

Spike for S39
printer failure - value from screen   20.0 µg/L   100% R

~~~~~~

ID: 89FS21S40   Seq. No.: 00010   A/S Pos.: 9   Date: 07/06/89

uL dispensed: 5 from 36, 15 from 9
Replicate 1 (Peak Stored)   Time: 13:06
Peak Area (A-s): 0.007   Peak Height (A): 0.017
Background Pk Area (A-s): 0.147   Background Pk Height (A): 0.057
Blank Corrected Pk Area (A-s): -0.000
Concentration (ug/L):   -1.0   2u

~~~~~~

ID: SPK   Seq. No.: 00011   A/S Pos.: 10   Date: 07/06/89

uL dispensed: 5 from 36, 15 from 10
Replicate 1 (Peak Stored)   Time: 13:09
Peak Area (A-s): 0.064   Peak Height (A): 0.120
Background Pk Area (A-s): 0.178   Background Pk Height (A): 0.063
Blank Corrected Pk Area (A-s): 0.057
Concentration (ug/L):   26.7   128.5%   result is < IDL therefore acceptable.

~~~~~~

ID: 89FS21S41   Seq. No.: 00012   A/S Pos.: 11   Date: 07/06/89
~~~~~~

Replicate 1 (Peak Stored) Time: 13:13
Peak Area (A-s): 0.011 Peak Height (A): 0.017
Background Pk Area (A-s): 0.078 Background Pk Height (A): 0.030
Blank Corrected Pk Area (A-s): 0.003
Concentration (ug/L): 0.9 2u

~~~~~~

ID: SPK Seq. No.: 00013 A/S Pos.: 12 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 12
Replicate 1 (Peak Stored) Time: 13:16
Peak Area (A-s): 0.049 Peak Height (A): 0.100
Background Pk Area (A-s): 0.098 Background Pk Height (A): 0.042
Blank Corrected Pk Area (A-s): 0.042
Concentration (ug/L): 19.5 93.0 % R

~~~~~~

ID: 89FS21S42 Seq. No.: 00014 A/S Pos.: 13 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 13
Replicate 1 (Peak Stored) Time: 13:19
Peak Area (A-s): 0.008 Peak Height (A): 0.018
Background Pk Area (A-s): 0.193 Background Pk Height (A): 0.074
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): -0.5 2u

~~~~~~

ID: SPK Seq. No.: 00015 A/S Pos.: 14 Date: 07/06/89
uL dispensed: 5 from 36, 15 from 14
Replicate 1 (Peak Stored) Time: 13:22
Peak Area (A-s): 0.053 Peak Height (A): 0.100
Background Pk Area (A-s): 0.211 Background Pk Height (A): 0.076
Blank Corrected Pk Area (A-s): 0.046
Concentration (ug/L): 21.4 109.5 % R

~~~~~~

ID: 89FS11R09 Seq. No.: 00016 A/S Pos.: 15 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 15

[signature] 7/7/89
SF 6232

Replicate 1 (Peak Stored) Time: 13:26
Peak Area (A-s): 0.011 Peak Height (A): 0.013
Background Pk Area (A-s): 0.033 Background Pk Height (A): 0.013
Blank Corrected Pk Area (A-s): 0.003
Concentration (ug/L): 0.8 2u

~~~~~~

ID: SPK Seq. No.: 00017 A/S Pos.: 16 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 16
Replicate 1 (Peak Stored) Time: 13:29
Peak Area (A-s): 0.050 Peak Height (A): 0.100
Background Pk Area (A-s): 0.042 Background Pk Height (A): 0.034
Blank Corrected Pk Area (A-s): 0.042
Concentration (ug/L): 19.8 95.0 % R

~~~~~~

ID: AQC 22.4 UG/L Seq. No.: 00018 A/S Pos.: 37 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 37
Replicate 1 (Peak Stored) Time: 13:32
Peak Area (A-s): 0.055 Peak Height (A): 0.108
Background Pk Area (A-s): 0.044 Background Pk Height (A): 0.038
Blank Corrected Pk Area (A-s): 0.047
Concentration (ug/L): 22.1 98.79%R Limit = 100 ± 10% R

Check sample is within range 20.16 - 24.64 Extra AQC due to programming error

~~~~~~

ID: 89FS21S43 Seq. No.: 00019 A/S Pos.: 17 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 17
Replicate 1 (Peak Stored) Time: 13:35
Peak Area (A-s): 0.010 Peak Height (A): 0.017
Background Pk Area (A-s): 0.153 Background Pk Height (A): 0.058
Blank Corrected Pk Area (A-s): 0.003
Concentration (ug/L): 0.7 2u

D Kruse 7/7/89

SF 6232

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ID: AQC 22.4 UG/L Seq. No.: 00020 A/S Pos.: 37 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 37
Replicate 1 (Peak Stored) Time: 13:42
Peak Area (A-s): 0.056 Peak Height (A): 0.106
Background Pk Area (A-s): 0.040 Background Pk Height (A): 0.036
Blank Corrected Pk Area (A-s): 0.049
Concentration (ug/L): 22.9 102.2% R Limit = 100 ± 10% R

Check sample is within range 20.16 - 24.64 Extra AQC due to programming error.

~~~~~~

ID: SPK Seq. No.: 00021 A/S Pos.: 18 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 18
Replicate 1 (Peak Stored) Time: 13:45
Peak Area (A-s): 0.054 Peak Height (A): 0.106
Background Pk Area (A-s): 0.165 Background Pk Height (A): 0.059
Blank Corrected Pk Area (A-s): 0.047
Concentration (ug/L): 22.1 107.0% R

~~~~~~

ID: 89FS21S44 Seq. No.: 00022 A/S Pos.: 19 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 19
Replicate 1 (Peak Stored) Time: 13:48
Peak Area (A-s): 0.006 Peak Height (A): 0.014
Background Pk Area (A-s): 0.198 Background Pk Height (A): 0.076
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -1.4 2u

~~~~~~

ID: SPK Seq. No.: 00023 A/S Pos.: 20 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 20
Replicate 1 (Peak Stored) Time: 13:52
Peak Area (A-s): 0.053 Peak Height (A): 0.099
~~~~~~

Background Pk Area (A-s): 0.227 Background Pk Height (A): 0.084
Blank Corrected Pk Area (A-s): 0.045
Concentration (ug/L): 21.2 113.0 % R Result is acceptable because it is < IDL

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ID: 89FS21D44 Seq. No.: 00024 A/S Pos.: 21 Date: 07/06/89

SF 6232

uL dispensed: 5 from 36, 15 from 21
Replicate 1 (Peak Stored) Time: 13:55
Peak Area (A-s): 0.004 Peak Height (A): 0.013
Background Pk Area (A-s): 0.220 Background Pk Height (A): 0.085
Blank Corrected Pk Area (A-s): -0.003
Concentration (ug/L): -2.3 run by MSA [illegible] 7/7/89

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ID: SPK Seq. No.: 00025 A/S Pos.: 22 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 22
Replicate 1 (Peak Stored) Time: 13:58
Peak Area (A-s): 0.051 Peak Height (A): 0.100
Background Pk Area (A-s): 0.224 Background Pk Height (A): 0.082
Blank Corrected Pk Area (A-s): 0.044
Concentration (ug/L): 20.6 114.5 % R

~~~~~~

ID: AQC 22.4 UG/L Seq. No.: 00026 A/S Pos.: 37 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 37
Replicate 1 (Peak Stored) Time: 14:01
Peak Area (A-s): 0.051 Peak Height (A): 0.106
Background Pk Area (A-s): 0.054 Background Pk Height (A): 0.037
Blank Corrected Pk Area (A-s): 0.044
Concentration (ug/L): 20.4 91.2 % R Limit = 100 ± 10 % R

Check sample is within range 20.16 - 24.64

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ID: CCB2 Seq. No.: 00027 A/S Pos.: 23 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 23
Replicate 1 (Peak Stored) Time: 14:04
Peak Area (A-s): 0.005 Peak Height (A): 0.013
Background Pk Area (A-s): 0.036 Background Pk Height (A): 0.014
Blank Corrected Pk Area (A-s): -0.002
Concentration (ug/L): -1.8 Limit = ± 2 μg/l

~~~~~~

ID: 89FS21S45 Seq. No.: 00028 A/S Pos.: 24 Date: 07/06/8

uL dispensed: 5 from 36, 15 from 24
Replicate 1 (Peak Stored) Time: 14:07
Peak Area (A-s): 0.012 Peak Height (A): 0.029
Background Pk Area (A-s): 0.234 Background Pk Height (A): 0.089
Blank Corrected Pk Area (A-s): 0.005
Concentration (ug/L): 1.5 2u

~~~~~~

ID: SPK Seq. No.: 00029 A/S Pos.: 25 Date: 07/06/8

uL dispensed: 5 from 36, 15 from 25
Replicate 1 (Peak Stored) Time: 14:10
Peak Area (A-s): 0.058 Peak Height (A): 0.113
Background Pk Area (A-s): 0.250 Background Pk Height (A): 0.089
Blank Corrected Pk Area (A-s): 0.051
Concentration (ug/L): 23.9 112.0 %R result is < IDL and acceptable

~~~~~~

ID: 89FK11R13 Seq. No.: 00030 A/S Pos.: 26 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 26
Replicate 1 (Peak Stored) Time: 14:14 SF 6232
Peak Area (A-s): 0.008 Peak Height (A): 0.013
Background Pk Area (A-s): 0.030 Background Pk Height (A): 0.013
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): -0.3 2u

EDKurz 7/7/89

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ID: SPK Seq. No.: 00031 A/S Pos.: 27 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 27
Replicate 1 (Peak Stored) Time: 14:17
Peak Area (A-s): 0.051 Peak Height (A): 0.102
Background Pk Area (A-s): 0.046 Background Pk Height (A): 0.035
Blank Corrected Pk Area (A-s): 0.044
Concentration (ug/L): 20.4 103.5 %R

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ID: 89FK21S58 Seq. No.: 00032 A/S Pos.: 28 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 28
Replicate 1 (Peak Stored) Time: 14:20
Peak Area (A-s): 0.010 Peak Height (A): 0.014
Background Pk Area (A-s): 0.202 Background Pk Height (A): 0.080
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.3 2u

~~~~~~

ID: SPK Seq. No.: 00033 A/S Pos.: 29 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 29
Replicate 1 (Peak Stored) Time: 14:24
Peak Area (A-s): 0.052 Peak Height (A): 0.102
Background Pk Area (A-s): 0.226 Background Pk Height (A): 0.085
Blank Corrected Pk Area (A-s): 0.044
Concentration (ug/L): 20.7 102 %R

~~~~~~

ID: 89FK21D58 Seq. No.: 00034 A/S Pos.: 30 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 30
Replicate 1 (Peak Stored) Time: 14:27
Peak Area (A-s): 0.010 Peak Height (A): 0.015
Background Pk Area (A-s): 0.213 Background Pk Height (A): 0.084
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.4 2u

~~~~~~

ID: SPK Seq. No.: 00035 A/S Pos.: 31 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 31
Replicate 1 (Peak Stored) Time: 14:30
Peak Area (A-s): 0.054 Peak Height (A): 0.100
Background Pk Area (A-s): 0.220 Background Pk Height (A): 0.081
Blank Corrected Pk Area (A-s): 0.046
Concentration (ug/L ,): 21.6 106%R

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ID: 89FK21S59 Seq. No.: 00036 A/S Pos.: 32 Date: 07/06/89

SF 6232

uL dispensed: 5 from 36, 15 from 32
Replicate 1 (Peak Stored) Time: 14:33
Peak Area (A-s): 0.009 Peak Height (A): 0.014
Background Pk Area (A-s): 0.204 Background Pk Height (A): 0.080
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): -0.2 2u

D Knyz 7/7/89

~~~~~~

ID: SPK Seq. No.: 00037 A/S Pos.: 33 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 33
Replicate 1 (Peak Stored) Time: 14:36
Peak Area (A-s): 0.053 Peak Height (A): 0.103
Background Pk Area (A-s): 0.211 Background Pk Height (A): 0.077
Blank Corrected Pk Area (A-s): 0.046
Concentration (ug/L): 21.3 108.0%R

~~~~~~

ID: AQC 22.4 UG/L Seq. No.: 00038 A/S Pos.: 37 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 37
Replicate 1 (Peak Stored) Time: 14:40
Peak Area (A-s): 0.053 Peak Height (A): 0.108
Background Pk Area (A-s): 0.048 Background Pk Height (A): 0.036
Blank Corrected Pk Area (A-s): 0.045
Concentration (ug/L): 21.3 95.1%R Limit = 100 ± 10%R

Check sample is within range 20.16 - 24.64

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ID: CCB3 Seq. No.: 00039 A/S Pos.: 34 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 34
Replicate 1 (Peak Stored) Time: 14:43
Peak Area (A-s): 0.009 Peak Height (A): 0.013
Background Pk Area (A-s): 0.038 Background Pk Height (A): 0.016
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): -0.1 Limit = ± 2µg/l

~~~~~~

ID: 89FS11R17 Seq. No.: 00040 A/S Pos.: 1 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 1
Replicate 1 (Peak Stored) Time: 15:11
Peak Area (A-s): 0.011 Peak Height (A): 0.023
Background Pk Area (A-s): 0.020 Background Pk Height (A): 0.009
Blank Corrected Pk Area (A-s): 0.004
Concentration (ug/L): 1.1 2u
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ID: SPK Seq. No.: 00041 A/S Pos.: 2 Date: 07/06/89

SF 6232

uL dispensed: 5 from 36, 15 from 2
Replicate 1 (Peak Stored) Time: 15:14
Peak Area (A-s): 0.056 Peak Height (A): 0.112
Background Pk Area (A-s): 0.043 Background Pk Height (A): 0.039
Blank Corrected Pk Area (A-s): 0.049
Concentration (ug/L): 23.0 109.5% R DKrue 7/7/89

~~~~~~

ID: 89FS22S11 Seq. No.: 00042 A/S Pos.: 3 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 3
Replicate 1 (Peak Stored) Time: 15:17
Peak Area (A-s): 0.015 Peak Height (A): 0.026
Background Pk Area (A-s): 0.117 Background Pk Height (A): 0.044
Blank Corrected Pk Area (A-s): 0.007
Concentration (ug/L): 2.8 3µg/L

~~~~~~

ID: SPK Seq. No.: 00043 A/S Pos.: 4 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 4
Replicate 1 (Peak Stored) Time: 15:20
Peak Area (A-s): 0.059 Peak Height (A): 0.112
Background Pk Area (A-s): 0.153 Background Pk Height (A): 0.053
Blank Corrected Pk Area (A-s): 0.052
Concentration (ug/L): 24.3 107.5% R

~~~~~~

ID: 89FS22S12 Seq. No.: 00044 A/S Pos.: 5 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 5
Replicate 1 (Peak Stored) Time: 15:23
Peak Area (A-s): 0.010 Peak Height (A): 0.014
Background Pk Area (A-s): 0.154 Background Pk Height (A): 0.059
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.3 2u

~~~~~~

ID: SPK Seq. No.: 00045 A/S Pos.: 6 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 6
Replicate 1 (Peak Stored) Time: 15:27
Peak Area (A-s): 0.053 Peak Height (A): 0.103
Background Pk Area (A-s): 0.180 Background Pk Height (A): 0.065
Blank Corrected Pk Area (A-s): 0.046
Concentration (ug/L): 21.6 106.5% R

~~~~~~

ID: 89FS22D12 Seq. No.: 00046 A/S Pos.: 7 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 7
Replicate 1 (Peak Stored) Time: 15:30
Peak Area (A-s): 0.008 Peak Height (A): 0.017
Background Pk Area (A-s): 0.170 Background Pk Height (A): 0.065
Blank Corrected Pk Area (A-s): 0.001

Concentration (ug/L): -0.3 2u

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ID: SPK Seq. No.: 00047 A/S Pos.: 8 Date: 07/06/89

D. Krusel 7/7/89 SF 6232

uL dispensed: 5 from 36, 15 from 8
Replicate 1 (Peak Stored) Time: 15:33
Peak Area (A-s): 0.055 Peak Height (A): 0.102
Background Pk Area (A-s): 0.164 Background Pk Height (A): 0.060
Blank Corrected Pk Area (A-s): 0.047
Concentration (ug/L): 22.1 112 %R results is <IDL and acceptable

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ID: 89FM11R15 Seq. No.: 00048 A/S Pos.: 9 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 9
Replicate 1 (Peak Stored) Time: 15:36
Peak Area (A-s): 0.009 Peak Height (A): 0.013
Background Pk Area (A-s): 0.032 Background Pk Height (A): 0.013
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): -0.0 2u

~~~~~~

ID: SPK Seq. No.: 00049 A/S Pos.: 10 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 10
Replicate 1 (Peak Stored) Time: 15:40
Peak Area (A-s): 0.051 Peak Height (A): 0.101
Background Pk Area (A-s): 0.048 Background Pk Height (A): 0.035
Blank Corrected Pk Area (A-s): 0.044
Concentration (ug/L): 20.4 91.1 %R

~~~~~~

ID: 89FM22S01 Seq. No.: 00050 A/S Pos.: 11 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 11
Replicate 1 (Peak Stored) Time: 15:43
Peak Area (A-s): 0.008 Peak Height (A): 0.014
Background Pk Area (A-s): 0.101 Background Pk Height (A): 0.041
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): -0.4 2u

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ID: SPK Seq. No.: 00051 A/S Pos.: 12 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 12
Replicate 1 (Peak Stored) Time: 15:46
Peak Area (A-s): 0.052 Peak Height (A): 0.102
Background Pk Area (A-s): 0.119 Background Pk Height (A): 0.042
Blank Corrected Pk Area (A-s): 0.045
Concentration (ug/L): 21.0 107.0 %R

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ID: 89FM22D01 Seq. No.: 00052 A/S Pos.: 13 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 13
Replicate 1 (Peak Stored) Time: 15:49
Peak Area (A-s): 0.009 Peak Height (A): 0.012
Background Pk Area (A-s): 0.100 Background Pk Height (A): 0.041

Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): -0.2 2u

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ID: SPK Seq. No.: 00053 A/S Pos.: 14 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 14
Replicate 1 (Peak Stored) Time: 15:53
Peak Area (A-s): 0.052 Peak Height (A): 0.103
Background Pk Area (A-s): 0.114 Background Pk Height (A): 0.039
Blank Corrected Pk Area (A-s): 0.045
Concentration (ug/L): 21.0 106.0% R

SF 6232

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ID: 89FM22S02 Seq. No.: 00054 A/S Pos.: 15 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 15
Replicate 1 (Peak Stored) Time: 15:56
Peak Area (A-s): 0.007 Peak Height (A): 0.015
Background Pk Area (A-s): 0.175 Background Pk Height (A): 0.070
Blank Corrected Pk Area (A-s): -0.000
Concentration (ug/L): -0.8 2u

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ID: SPK Seq. No.: 00055 A/S Pos.: 16 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 16
Replicate 1 (Peak Stored) Time: 15:59
Peak Area (A-s): 0.053 Peak Height (A): 0.099
Background Pk Area (A-s): 0.187 Background Pk Height (A): 0.066
Blank Corrected Pk Area (A-s): 0.045
Concentration (ug/L): 21.2 110.0% R

~~~~~~

ID: 89FM22S03 Seq. No.: 00056 A/S Pos.: 17 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 17
Replicate 1 (Peak Stored) Time: 16:02
Peak Area (A-s): 0.008 Peak Height (A): 0.016
Background Pk Area (A-s): 0.136 Background Pk Height (A): 0.054
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): -0.5 2u

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ID: SPK Seq. No.: 00057 A/S Pos.: 18 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 18
Replicate 1 (Peak Stored) Time: 16:05
Peak Area (A-s): 0.055 Peak Height (A): 0.105
Background Pk Area (A-s): 0.157 Background Pk Height (A): 0.057
Blank Corrected Pk Area (A-s): 0.048
Concentration (ug/L): 22.4 114.5% R result < IDL therefore acceptable

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ID: 89FM22S04 Seq. No.: 00058 A/S Pos.: 19 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 19
Replicate 1 (Peak Stored) Time: 16:09
Peak Area (A-s): 0.012 Peak Height (A): 0.023

Background Pk Area (A-s): 0.186 Background Pk Height (A): 0.072
Blank Corrected Pk Area (A-s): 0.005
Concentration (ug/L): 1.6 2u

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ID: SPK , Seq. No.: 00059 A/S Pos.: 20 Date: 07/06/89

DKruse 7/7/89
SF 6232

uL dispensed: 5 from 36, 15 from 20
Replicate 1 (Peak Stored) Time: 16:12
Peak Area (A-s): 0.055 Peak Height (A): 0.112
Background Pk Area (A-s): 0.196 Background Pk Height (A): 0.071
Blank Corrected Pk Area (A-s): 0.048
Concentration (ug/L): 22.4 104.0%R

~~~~~~

ID: AQC 22.4 UG/L Seq. No.: 00060 A/S Pos.: 37 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 37
Replicate 1 (Peak Stored) Time: 16:15
Peak Area (A-s): 0.057 Peak Height (A): 0.108
Background Pk Area (A-s): 0.051 Background Pk Height (A): 0.037
Blank Corrected Pk Area (A-s): 0.050
Concentration (ug/L): 23.4 104.5%R Limit = 100±10%R

Check sample is within range 20.16 - 24.64

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ID: CCB4 Seq. No.: 00061 A/S Pos.: 21 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 21
Replicate 1 (Peak Stored) Time: 16:18
Peak Area (A-s): 0.009 Peak Height (A): 0.014
Background Pk Area (A-s): 0.035 Background Pk Height (A): 0.014
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.1 limit = ±2 µg/l

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ID: 89FM22S05 Seq. No.: 00062 A/S Pos.: 22 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 22
Replicate 1 (Peak Stored) Time: 16:21
Peak Area (A-s): 0.010 Peak Height (A): 0.017
Background Pk Area (A-s): 0.105 Background Pk Height (A): 0.043
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.3 2u

~~~~~~

ID: SPK Seq. No.: 00063 A/S Pos.: 23 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 23
Replicate 1 (Peak Stored) Time: 16:24
Peak Area (A-s): 0.049 Peak Height (A): 0.102
Background Pk Area (A-s): 0.118 Background Pk Height (A): 0.043
Blank Corrected Pk Area (A-s): 0.041
Concentration (ug/L): 19.3 95.0%R

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ID: AQC 22.4 UG/L Seq. No.: 00064 A/S Pos.: 37 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 37
Replicate 1 (Peak Stored) Time: 16:28
Peak Area (A-s): 0.057 Peak Height (A): 0.112
Background Pk Area (A-s): 0.052 Background Pk Height (A): 0.038
Blank Corrected Pk Area (A-s): 0.050
Concentration (ug/L): 23.3 104.0 %R Limit = 100 ± 10% R

Check sample is within range 20.16 - 24.64

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ID: CCB5 Seq. No.: 00065 A/S Pos.: 24 Date: 07/06/89

uL dispensed: 5 from 36, 15 from 24
Replicate 1 (Peak Stored) Time: 16:31
Peak Area (A-s): 0.008 Peak Height (A): 0.012
Background Pk Area (A-s): 0.034 Background Pk Height (A): 0.015
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): -0.3 Limit = ± 2 µg/l

SF 6232

DKruse 7/7/89
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Element	Instrument	QC Source
☐ Ag	☐ 5000	☒ WP 284 TM I #2
☐ As	☐ 4000	☐ WP 1183 TM II #1
☐ Cd	☐ 5000 ZE	☐ WP 1183 TM II #2
☐ Cr	☐ 5000 ZW	☐ ICV 2
☒ Pb	☒ 5100	☐ SPEX II
☐ Sb	☐ Varian 30	☐ NBS SRM 1643b
☐ Se		☐
☐ Tl		☐

Analyst DK
Date 7/6/89
Lamp # 382152
Energy 51
Expansion 4.19
Stock 1-139-JA

☒ platform ☒ MSC
☐ wall ☐ MSA

Blank	Slope	AQC	Digestion QC
1.7	.0020	22.1	
-1.8		22.1	
-0.1		22.9	
0.1		20.4	
-0.3		21.3	
		23.4	
		23.3	

SF 6232

DK 7/7/89

Blank cup absorbance

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: AUG 2 2 198[redacted]

SUBJECT: **Review of Region 5 data for** United Recovery

FROM: **Curtis Ross, Director** Chi Yang for
Region 5 Central Regional Laboratory

To: **Data User:**

Attached are the results for:

CRL Data Set Numbers: SF 6232
Sample Numbers: 89FM22S01-S05, D01, 89FM11R15
Parameter(s): ICP metals
Laboratory: ESAT

Results Status:

(✓) **DATA ACCEPTABLE FOR USE***
( ) **DATA QUALIFIED AS TO USE**
( ) **DATA UNACCEPTABLE FOR USE**

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

If there are any questions regarding the data, refer them to David Payne, the Quality Control Coordinator, at 353-3805.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

Sylvia Griffin

U.S. EPA CENTRAL
REGIONAL LAB

RECEIVED BY/DATE:
Comments:

DATA SET	SITE	DU/ACT.
SF 6232	United Recovery	TFA 302

SAMPLES 89FM11R15	PARAMETER(S)
89FM2250-2505, D01	ICP metals

SAMPLED	RECEIVED	DUE	LAB
6/20/89	6/21/89	7/12/89	ESAT

SHIPPED	DATA RECEIVED	CONTRACT

Comments By Reviewer:

( ) REVIEWED ( ) UNREVIEWED TEAM LEADER/DATE

✓ REVIEWED ( ) UNREVIEWED SECTION CHIEF/DATE Chi Tang 8/11/89

( ) REVIEWED ( ) UNREVIEWED QC COORDINATOR/DATE

REVIEWED BY CONTRACT COORDINATOR/DATE

RECEIVED 8/22/89 TRANSMITTED 8/22/89 DATA MANAGEMENT COORDINATOR Sylvia Griffin

ESAT CONTRACT

TID NO: 05-89-06-06
TASK NO: 3093

DATASET CUSTODY TRANSFER FORM

Analytical testing was completed on 7/10, 1989 for:

DATASET NO: SF6232 SITE NAME: UNITED RECOVERY

PARAMETER : ICAP

MATRIX : WATER SF DU/ACT NO: TFA302 Y____ /C____

SAMPLE NUMBERS: 89FM22S01-S05, D01, 89FM11R15

NUMBER OF SAMPLES: 7

ESAT APPROVALS:

(ANALYST 7/11/89 DATE) (TEAM LEADER 7/12/89 DATE)

(QC COORDINATOR 7/14/89 DATE) (ESAT TEAM MANAGER 7/17/89 DATE)

COMMENTS: Released on approved EPA deviation - Mg results not reported for ICS + AGC High

The subject dataset was transferred to the custody of the U.S. EPA Region V Central Regional Laboratory in its entirety on the date indicated below.

(DELIVERED BY 7/19/89 DATE) (RECEIVED BY 19 Jul 89 DATE)

EPA APPROVALS:

(EPA TASK MONITOR 8/11/89 DATE)

[✓] Reviewed
[ ] Unreviewed
[✓] Accepted
[ ] Rejected
[ ] Returned 8/11/89 (Date)

COMMENTS:

(SECTION CHIEF 8/11/89 DATE) [✓] Reviewed [ ] Unreviewed

(ESAT DPO 8-14-89 DATE) (DATA COORD'R REC'D 8/22/89 TRANSMTD 8/22/89)

DOC.NO.: ESAT-05-0003-FORM
REVISION NO.: 05 (04/05/89) FILE LOCATION NUMBER: 5.6.1

SF 6232
R. Dilg
7-11-89

DIGESTION RECORD

Prepared by R. DILG Date 7-6-89 Run Number 696

Vessel Number	Data Set	Sample Number	Notes	Vessel Number	Data Set	Sample Number	Notes
8	SF6232	89FM22S01					
9		D01					
10		S02					
11		S03					
12		S04					
13		S05					
14		89FM11 RIS					
15		89FM22S02 DUP					
16		S02 SPK	+Sol A,B,C				
17		DIGEST BLANK					

COMMENTS:

SF 6232
R. Dilg
7-11-89

Samples analyzed by SED5 on 07/10/89 stored in file RUN696 .

Data set	Sample id	Lab id	Ins QC	Correction factor
	INSTR BLANK 1		B	1.00000
	AQC 1		Q	1.00000
	HIGH AQC 1		Q	1.00000
	AG AQC 1		Q	1.00000
SF6232	89FM22S01		S	1.22000
SF6232	89FM22D01		S	1.22000
SF6232	89FM22S02	SMP1	S	1.22000
SF6232	89FM22S03		S	1.22000
SF6232	89FM22S04		S	1.22000
SF6232	89FM22S05		S	1.22000
SF6232	89FM11R15		S	1.22000
SF6232	89FM22S02 DUP	DUP1	S	1.22000
SF6232	89FM22S02 SPK	SPK1	S	1.52000
SF6232	DIGESTION BLANK		B	1.00000
	INSTR BLANK 2		B	1.00000
	AQC 2		Q	1.00000
	HIGH AQC 2		Q	1.00000
	AG AQC 2		Q	1.00000
EPA 1287	ICS		S	1.00000
SF6232 1/2	89FM22S02 dil	SMP2	S	2.44000 Mg
SF6232 1/2	89FM22S02 SPK dil	SPK2	S	3.04000 ONLY
	INSTR BLANK 3		B	1.00000
	AQC 3		Q	1.00000
	HIGH AQC 3		Q	1.00000
	AG AQC 3		Q	1.00000

SF 6232
R. Dily
7-11-89

BLANK REPORT

Blank name INSTR BLANK 1 Operator

Date analyzed 07/10/89 File name RUN696

Element	Blank Value	Detection Limit	
Ag	0.121	6	ug/L
Alhigh	-18.430	20000	ug/L
Allow	10.986	80	ug/L
Ba	-0.108	6	ug/L
Be	-0.160	1	ug/L
Cahigh	-4.360	20000	ug/L
Calow	8.350	500	ug/L
Co	-1.047	6	ug/L
Cr	0.000	8	ug/L
Cu	1.587	6	ug/L
Mg	-3.400	100	ug/L
Felow	-0.396	80	ug/L
Fehigh	-47.010	20000	ug/L
K	1274.070	5000	ug/L
Mn	-0.413	5	ug/L
Na	-22.170	1000	ug/L
Ni	5.033	15	ug/L
V	-0.003	5	ug/L
Znlow	0.741	40	ug/L
Znhigh	-202.930	20000	ug/L

All values within ± detect. limits.

SF 6232
Q. Dilg
7-11-89

BLANK REPORT

Blank name INSTR BLANK 2 Operator

Date analyzed 07/10/89 File name RUN696

Element	Blank Value	Detection Limit	
Ag	-1.996	6	ug/L
Alhigh	-11.920	20000	ug/L
Allow	-1.702	80	ug/L
Ba	-0.566	6	ug/L
Be	-0.187	1	ug/L
Cahigh	3.390	20000	ug/L
Calow	15.540	500	ug/L
Co	-2.726	6	ug/L
Cr	-0.472	8	ug/L
Cu	-0.171	6	ug/L
Mg	0.550	100	ug/L
Felow	-0.792	80	ug/L
Fehigh	-13.870	20000	ug/L
K	193.040	5000	ug/L
Mn	-0.184	5	ug/L
Na	-22.170	1000	ug/L
Ni	4.328	15	ug/L
V	-1.155	5	ug/L
Znlow	0.208	40	ug/L
Znhigh	-161.560	20000	ug/L

All values within ± detect. limits.

SF 6232
R. Dily
7-11-89

BLANK REPORT

Blank name INSTR BLANK 3 Operator

Date analyzed 07/10/89 File name RUN696

Element	Blank Value	Detection Limit	
Ag	1.908	6	ug/L
Alhigh	7.590	20000	ug/L
Allow	13.771	80	ug/L
Ba	0.216	6	ug/L
Be	0.061	1	ug/L
Cahigh	4.720	20000	ug/L
Calow	12.400	500	ug/L
Co	-0.810	6	ug/L
Cr	1.215	8	ug/L
Cu	1.426	6	ug/L
Mg	2.680	100	ug/L
Felow	0.396	80	ug/L
Fehigh	-16.180	20000	ug/L
K	1231.170	5000	ug/L
Mn	-0.169	5	ug/L
Na	-23.160	1000	ug/L
Ni	5.536	15	ug/L
V	0.198	5	ug/L
Znlow	0.046	40	ug/L
Znhigh	-116.240	20000	ug/L

All values within ± detect. limits.

SF 6232

R. Dily
7-11-89

BLANK REPORT

Blank name DIGESTION BLANK

Operator

Date analyzed 07/10/89

File name RUN696

Element	Blank Value	Detection Limit	
Ag	0.145	6	ug/L
Alhigh	-18.430	20000	ug/L
Allow	6.035	80	ug/L
Ba	0.108	6	ug/L
Be	-0.143	1	ug/L
Cahigh	68.960	20000	ug/L
Calow	82.810	500	ug/L
Co	-1.699	6	ug/L
Cr	2.767	8	ug/L
Cu	3.020	6	ug/L
Mg	13.970	100	ug/L
Felow	10.196	80	ug/L
Fehigh	-38.530	20000	ug/L
K	960.910	5000	ug/L
Mn	-0.337	5	ug/L
Na	73.460	1000	ug/L
Ni	5.234	15	ug/L
V	-0.673	5	ug/L
Znlow	2.219	40	ug/L
Znhigh	-204.900	20000	ug/L

All values within ± detect. limits.

SF 6232
R. Dilg
7-11-89

QUALITY CONTROL SAMPLE REPORT

QC ID AQC 1 Operator

Date analyzed 07/10/89 File name RUN696

Element	Units	Found Value	True Value	Percent Deviation
Allow	ug/L	5131	5000	2.6 %
Ba	ug/L	5089	5000	1.8 %
Be	ug/L	5040	5000	0.8 %
Calow	ug/L	5063	5000	1.3 %
Co	ug/L	5187	5000	3.7 %
Cr	ug/L	5097	5000	1.9 %
Cu	ug/L	5158	5000	3.2 %
Mg	ug/L	5052	5000	1.0 %
Felow	ug/L	5025	5000	0.5 %
Mn	ug/L	5146	5000	2.9 %
Ni	ug/L	5174	5000	3.5 %
V	ug/L	5015	5000	0.3 %
Znlow	ug/L	5108	5000	2.2 %

Results within 5%.

SF 6232

L. Dilg
7-11-89

QUALITY CONTROL SAMPLE REPORT

QC ID AQC 2 Operator

Date analyzed 07/10/89 File name RUN696

Element	Units	Found Value	True Value	Percent Deviation
Allow	ug/L	5173	5000	3.5 %
Ba	ug/L	5116	5000	2.3 %
Be	ug/L	5082	5000	1.6 %
Calow	ug/L	5102	5000	2.0 %
Co	ug/L	5247	5000	4.9 %
Cr	ug/L	5175	5000	3.5 %
Cu	ug/L	5177	5000	3.5 %
Mg	ug/L	5129	5000	2.6 %
Felow	ug/L	5075	5000	1.5 %
Mn	ug/L	5194	5000	3.9 %
Ni	ug/L	5241	5000	4.8 %
V	ug/L	5059	5000	1.2 %
Znlow	ug/L	5163	5000	3.3 %

Results within 5%.

SF 6232

R. Dilg
7-11-89

QUALITY CONTROL SAMPLE REPORT

QC ID AQC 3 Operator

Date analyzed 07/10/89 File name RUN696

Element	Units	Found Value	True Value	Percent Deviation
Allow	ug/L	5156	5000	3.1 %
Ba	ug/L	5104	5000	2.1 %
Be	ug/L	5068	5000	1.4 %
Calow	ug/L	5089	5000	1.8 %
Co	ug/L	5230	5000	4.6 %
Cr	ug/L	5191	5000	3.8 %
Cu	ug/L	5162	5000	3.2 %
Mg	ug/L	5117	5000	2.3 %
Felow	ug/L	5075	5000	1.5 %
Mn	ug/L	5175	5000	3.5 %
Ni	ug/L	5255	5000	5.1 % *
V	ug/L	5047	5000	0.9 %
Znlow	ug/L	5150	5000	3.0 %

Results within 5% except for Ni.

SF 6232

R. Dilg
7-11-89

QUALITY CONTROL SAMPLE REPORT

QC ID HIGH AQC 1 Operator

Date analyzed 07/10/89 File name RUN696

Element	Units	Found Value	True Value	Percent Deviation
Alhigh	ug/L	98928	100000	1.1 %
Cahigh	ug/L	100189	100000	0.2 %
Fehigh	ug/L	97407	100000	2.6 %
K	ug/L	97405	100000	2.6 %
Na	ug/L	105397	100000	5.4 %
Znhigh	ug/L	98038	100000	2.0 %

Results within 10%.

SF 6232
L. Dilg
7-11-89

QUALITY CONTROL SAMPLE REPORT

QC ID HIGH AQC 2 Operator

Date analyzed 07/10/89 File name RUN696

Element	Units	Found Value	True Value	Percent Deviation
Alhigh	ug/L	100506	100000	0.5 %
Cahigh	ug/L	102126	100000	2.1 %
Fehigh	ug/L	99083	100000	0.9 %
K	ug/L	98387	100000	1.6 %
Na	ug/L	106714	100000	6.7 %
Znhigh	ug/L	99504	100000	0.5 %

Results within 10%.

SF 6232
R. Daly
7-11-89

QUALITY CONTROL SAMPLE REPORT

QC ID HIGH AQC 3 Operator

Date analyzed 07/10/89 File name RUN696

Element	Units	Found Value	True Value	Percent Deviation
Alhigh	ug/L	98850	100000	1.1 %
Cahigh	ug/L	100361	100000	0.4 %
Fehigh	ug/L	97569	100000	2.4 %
K	ug/L	96324	100000	3.7 %
Na	ug/L	104982	100000	5.0 %
Znhigh	ug/L	98076	100000	1.9 %

Results within 10%.

SF 6232
R. Dily
7-11-89

QUALITY CONTROL SAMPLE REPORT

QC ID AG AQC 1 Operator

Date analyzed 07/10/89 File name RUN696

Element	Units	Found Value	True Value	Percent Deviation
Ag	ug/L	51.5	50	3.1 %

Result within 10%.

SF 6232
R. Dily
7-11-89

QUALITY CONTROL SAMPLE REPORT

QC ID AG AQC 2 Operator

Date analyzed 07/10/89 File name RUN696

Element	Units	Found Value	True Value	Percent Deviation
Ag	ug/L	53.1	50	6.3 %

Result within 10%.

SF 6232
R. Dilg
7-11-89

QUALITY CONTROL SAMPLE REPORT

QC ID AG AQC 3 Operator

Date analyzed 07/10/89 File name RUN696

Element	Units	Found Value	True Value	Percent Deviation
Ag	ug/L	54.0	50	8.0 %

Result within 10%.

SF 6232
R. Dilg
7-11-89

DUPLICATE

Sample SF6232 89FM22S02 Operator

Date Analyzed 07/10/89 Factor 1.22 File RUN696

Element	Units	Sample	Duplicate	Difference	Limit	RPD
Ag	ug/L	0.0	-1.2	-1.2	6.0	199% U
Alhigh	ug/L	0.0	0.0	0.0	20000.0	-200% U
Allow	ug/L	4.0	-7.9	-11.9	80.0	603% U
Ba	ug/L	13.4	13.0	-0.4	6.0	-3%
Be	ug/L	-0.2	-0.3	-0.1	1.0	52% U
Cahigh	ug/L	91200.0	91200.0	0.0	20000.0	0%
Calow	ug/L	95100.0	95200.0	100.0	500.0	0%
Co	ug/L	-1.0	-1.5	-0.5	6.0	37% U
Cr	ug/L	-0.8	1.8	2.6	8.0	536% U
Cu	ug/L	8.6	4.1	-4.5	6.0	-71% U
Mg	ug/L	45000.0	44900.0	-100.0	100.0	0%
Felow	ug/L	135.5	144.2	8.7	80.0	6%
Fehigh	ug/L	300.0	400.0	100.0	20000.0	22% U
K	ug/L	1600.0	1600.0	0.0	5000.0	-1%
Mn	ug/L	0.6	0.5	-0.1	5.0	-11% U
Na	ug/L	10300.0	10200.0	-100.0	1000.0	-1%
Ni	ug/L	8.6	1.6	-7.0	15.0	-137% U
V	ug/L	0.2	1.0	0.8	5.0	120% U
Znlow	ug/L	60.8	58.6	-2.2	40.0	-4%
Znhigh	ug/L	-300.0	-300.0	0.0	20000.0	-6%

Results meet 10% RPD or detection limit criteria.

SF 6232
R. Dilg
7-11-89

SPIKE COMPARISON

Sample SF6232 89FM22S02 Analyzed by

Date Analyzed 07/10/89 File RUN696 SMP1

Element	Units	Sample	Spike	Spike Added	Recovery
Ag	ug/L	0.0	54.6	50	109%
Alhigh	ug/L	0.0	800.0	1000	100%
Allow	ug/L	4.0	772.9	800	96%
Ba	ug/L	13.4	217.0	200	102%
Be	ug/L	-0.2	9.8	10	100%
Cahigh	ug/L	91200.0	143000.0	50000	104%
Calow	ug/L	95100.0	0.0	50000	0%*
Co	ug/L	-1.0	100.3	100	101%
Cr	ug/L	-0.8	97.8	100	99%
Cu	ug/L	8.6	57.5	50	98%
Mg	ug/L	45000.0	70500.0	25000	102%
Felow	ug/L	135.5	926.6	800	99%
Fehigh	ug/L	300.0	1300.0	1000	122%*
K	ug/L	1600.0	22400.0	20000	104%
Mn	ug/L	0.6	104.9	100	104%
Na	ug/L	10300.0	62300.0	50000	104%
Ni	ug/L	8.6	160.8	150	101%
V	ug/L	0.2	51.1	50	102%
Znlow	ug/L	60.8	455.5	400	99%
Znhigh	ug/L	-300.0	0.0	0	80%*

* Not used.

All values within 85% to 115% recovery.

SF 6232
R. Dilg
7-11-89

SPIKE COMPARISON

Sample SF6232 1/2 89FM22S02 dil Analyzed by

Date Analyzed 07/10/89 File RUN696 SMP2

Element	Units	Sample	Spike	Spike Added	Recovery
Ag	ug/L	0.3	50.4	50	100%
Alhigh	ug/L	0.0	800.0	1000	102%
Allow	ug/L	52.1	828.8	800	97%
Ba	ug/L	13.4	220.0	200	103%
Be	ug/L	0.0	9.9	10	99%
Cahigh	ug/L	94200.0	147100.0	50000	106%
Calow	ug/L	97900.0	157700.0	50000	120%*
Co	ug/L	-0.9	98.2	100	99%
Cr	ug/L	1.0	112.0	100	111%
Cu	ug/L	10.3	58.6	50	97%
Mg	ug/L	46200.0	71700.0	25000	102%
Felow	ug/L	164.7	972.9	800	101%
Fehigh	ug/L	200.0	1300.0	1000	134%*
K	ug/L	3400.0	23800.0	20000	102%
Mn	ug/L	0.0	107.1	100	107%
Na	ug/L	10500.0	63100.0	50000	105%
Ni	ug/L	6.9	165.9	150	106%
V	ug/L	0.6	49.4	50	98%
Znlow	ug/L	69.4	482.0	400	103%
Znhigh	ug/L	-600.0	-200.0	0	110% *

* Not used.

Mg only; values within 85% to 115% recovery.

SF 6232
Q. Dily
7-11-89

SAMPLE REPORT

Sample EPA 1287 ICS Operator

Date analyzed 07/10/89 Factor 1.00000 File name RUN696

Element	Concentration	Units
Silver	6.0U	micrograms/Liter
Aluminum	495000.	micrograms/Liter
Barium	6.0U	micrograms/Liter
Beryllium	1.0U	micrograms/Liter
Calcium	488000.	micrograms/Liter
Cobalt	8.1	micrograms/Liter
Chromium	42.9	micrograms/Liter
Copper	8.1	micrograms/Liter
Magnesium *	100. U	micrograms/Liter
Iron	214000.	micrograms/Liter
Potassium	5000. U	micrograms/Liter
Manganese	55.1	micrograms/Liter
Sodium	1000. U	micrograms/Liter
Nickel	15.0U	micrograms/Liter
Vanadium	5.5	micrograms/Liter
Zinc	43.2	micrograms/Liter

* Not used.

Currently, limits not established.

SF 6232
R. Dilg
7-11-89

SAMPLE REPORT

Sample SF6232 89FM22S01 Operator

Date analyzed 07/10/89 Factor 1.22000 File name RUN696

Element	Concentration	Units
Silver	6.0U	micrograms/Liter
Aluminum	80.0U	micrograms/Liter
Barium	16.9	micrograms/Liter
Beryllium	1.0U	micrograms/Liter
Calcium	59100.	micrograms/Liter
Cobalt	6.0U	micrograms/Liter
Chromium	8.0U	micrograms/Liter
Copper	12.0	micrograms/Liter
Magnesium	32700.	micrograms/Liter
Iron	80.0U	micrograms/Liter
Potassium	5000. U	micrograms/Liter
Manganese	5.0U	micrograms/Liter
Sodium	2200.	micrograms/Liter
Nickel	15.0U	micrograms/Liter
Vanadium	5.0U	micrograms/Liter
Zinc	40.0U	micrograms/Liter

SF 6232
R. Dils
7-11-89

SAMPLE REPORT

Sample SF6232 89FM22D01 Operator

Date analyzed 07/10/89 Factor 1.22000 File name RUN696

Element	Concentration	Units
Silver	6.0U	micrograms/Liter
Aluminum	80.0U	micrograms/Liter
Barium	17.0	micrograms/Liter
Beryllium	1.0U	micrograms/Liter
Calcium	59500.	micrograms/Liter
Cobalt	6.0U	micrograms/Liter
Chromium	8.0U	micrograms/Liter
Copper	11.0	micrograms/Liter
Magnesium	33000.	micrograms/Liter
Iron	80.0U	micrograms/Liter
Potassium	5000. U	micrograms/Liter
Manganese	5.0U	micrograms/Liter
Sodium	2100.	micrograms/Liter
Nickel	15.0U	micrograms/Liter
Vanadium	5.0U	micrograms/Liter
Zinc	40.0U	micrograms/Liter

SF 6232
R. Dilg
7-11-89

SAMPLE REPORT

Sample SF6232 89FM22S02 Operator

Date analyzed 07/10/89 Factor 1.22000 File name RUN696

Element	Concentration	Units
Silver	6.0U	micrograms/Liter
Aluminum	80.0U	micrograms/Liter
Barium	13.4	micrograms/Liter
Beryllium	1.0U	micrograms/Liter
Calcium	91200.	micrograms/Liter
Cobalt	6.0U	micrograms/Liter
Chromium	8.0U	micrograms/Liter
Copper	8.6	micrograms/Liter
Magnesium	45000.	micrograms/Liter
Iron	136.	micrograms/Liter
Potassium	5000. U	micrograms/Liter
Manganese	5.0U	micrograms/Liter
Sodium	10300.	micrograms/Liter
Nickel	15.0U	micrograms/Liter
Vanadium	5.0U	micrograms/Liter
Zinc	60.8	micrograms/Liter

SF 6232
R. Dilg
7-11-89

SAMPLE REPORT

Sample SF6232 89FM22S03 Operator

Date analyzed 07/10/89 Factor 1.22000 File name RUN696

Element	Concentration	Units
Silver	6.0U	micrograms/Liter
Aluminum	80.0U	micrograms/Liter
Barium	11.5	micrograms/Liter
Beryllium	1.0U	micrograms/Liter
Calcium	74300.	micrograms/Liter
Cobalt	6.0U	micrograms/Liter
Chromium	8.0U	micrograms/Liter
Copper	7.5	micrograms/Liter
Magnesium	34500.	micrograms/Liter
Iron	80.0U	micrograms/Liter
Potassium	5000. U	micrograms/Liter
Manganese	5.0U	micrograms/Liter
Sodium	8600.	micrograms/Liter
Nickel	15.0U	micrograms/Liter
Vanadium	5.0U	micrograms/Liter
Zinc	40.0U	micrograms/Liter

SF 6232
R. Dilg
7-11-89

SAMPLE REPORT

Sample SF6232 89FM22S04 Operator

Date analyzed 07/10/89 Factor 1.22000 File name RUN696

Element	Concentration	Units
Silver	6.0U	micrograms/Liter
Aluminum	80.0U	micrograms/Liter
Barium	42.5	micrograms/Liter
Beryllium	1.0U	micrograms/Liter
Calcium	103000.	micrograms/Liter
Cobalt	6.0U	micrograms/Liter
Chromium	8.0U	micrograms/Liter
Copper	9.0	micrograms/Liter
Magnesium	35300.	micrograms/Liter
Iron	5360.	micrograms/Liter
Potassium	5000. U	micrograms/Liter
Manganese	631.	micrograms/Liter
Sodium	18400.	micrograms/Liter
Nickel	15.0U	micrograms/Liter
Vanadium	5.0U	micrograms/Liter
Zinc	40.0U	micrograms/Liter

SF 6232
Q. Dily
7-11-89

SAMPLE REPORT

Sample SF6232 89FM22S05 Operator

Date analyzed 07/10/89 Factor 1.22000 File name RUN696

Element	Concentration	Units
Silver	6.0U	micrograms/Liter
Aluminum	80.0U	micrograms/Liter
Barium	14.9	micrograms/Liter
Beryllium	1.0U	micrograms/Liter
Calcium	62500.	micrograms/Liter
Cobalt	6.0U	micrograms/Liter
Chromium	8.0U	micrograms/Liter
Copper	6.0U	micrograms/Liter
Magnesium	28600.	micrograms/Liter
Iron	80.0U	micrograms/Liter
Potassium	5000. U	micrograms/Liter
Manganese	5.0U	micrograms/Liter
Sodium	3500.	micrograms/Liter
Nickel	15.0U	micrograms/Liter
Vanadium	5.0U	micrograms/Liter
Zinc	149.	micrograms/Liter

SF 6232
R. Dilg
7-11-89

SAMPLE REPORT

Sample SF6232 89FM11R15 Operator

Date analyzed 07/10/89 Factor 1.22000 File name RUN696

Element	Concentration	Units
Silver	6.0U	micrograms/Liter
Aluminum	80.0U	micrograms/Liter
Barium	6.0U	micrograms/Liter
Beryllium	1.0U	micrograms/Liter
Calcium	500. U	micrograms/Liter
Cobalt	6.0U	micrograms/Liter
Chromium	8.0U	micrograms/Liter
Copper	6.0U	micrograms/Liter
Magnesium	100. U	micrograms/Liter
Iron	80.0U	micrograms/Liter
Potassium	5000. U	micrograms/Liter
Manganese	5.0U	micrograms/Liter
Sodium	1000. U	micrograms/Liter
Nickel	15.0U	micrograms/Liter
Vanadium	5.0U	micrograms/Liter
Zinc	40.0U	micrograms/Liter

SF 6232
R. Dilg
7-11-89

SAMPLE REPORT

Sample SF6232 89FM22S01 Operator

Date analyzed 07/10/89 Factor 1.22000 File name RUN696

Element	Concentration	Units
Silver	6.0U	micrograms/Liter
Aluminum	80.0U	micrograms/Liter
Barium	16.9	micrograms/Liter
Beryllium	1.0U	micrograms/Liter
Calcium	59100.	micrograms/Liter
Cobalt	6.0U	micrograms/Liter
Chromium	8.0U	micrograms/Liter
Copper	12.0	micrograms/Liter
Magnesium	32700.	micrograms/Liter
Iron	80.0U	micrograms/Liter
Potassium	5000. U	micrograms/Liter
Manganese	5.0U	micrograms/Liter
Sodium	2200.	micrograms/Liter
Nickel	15.0U	micrograms/Liter
Vanadium	5.0U	micrograms/Liter
Zinc	40.0U	micrograms/Liter

SF 6232
R. Dils
7-11-89

SAMPLE REPORT

Sample SF6232 89FM22D01 Operator

Date analyzed 07/10/89 Factor 1.22000 File name RUN696

Element	Concentration	Units
Silver	6.0U	micrograms/Liter
Aluminum	80.0U	micrograms/Liter
Barium	17.0	micrograms/Liter
Beryllium	1.0U	micrograms/Liter
Calcium	59500.	micrograms/Liter
Cobalt	6.0U	micrograms/Liter
Chromium	8.0U	micrograms/Liter
Copper	11.0	micrograms/Liter
Magnesium	33000.	micrograms/Liter
Iron	80.0U	micrograms/Liter
Potassium	5000. U	micrograms/Liter
Manganese	5.0U	micrograms/Liter
Sodium	2100.	micrograms/Liter
Nickel	15.0U	micrograms/Liter
Vanadium	5.0U	micrograms/Liter
Zinc	40.0U	micrograms/Liter

SF 6232
R. Dilg
7-11-89

SAMPLE REPORT

Sample SF6232 89FM22S02 Operator

Date analyzed 07/10/89 Factor 1.22000 File name RUN696

Element	Concentration	Units
Silver	6.0U	micrograms/Liter
Aluminum	80.0U	micrograms/Liter
Barium	13.4	micrograms/Liter
Beryllium	1.0U	micrograms/Liter
Calcium	91200.	micrograms/Liter
Cobalt	6.0U	micrograms/Liter
Chromium	8.0U	micrograms/Liter
Copper	8.6	micrograms/Liter
Magnesium	45000.	micrograms/Liter
Iron	136.	micrograms/Liter
Potassium	5000. U	micrograms/Liter
Manganese	5.0U	micrograms/Liter
Sodium	10300.	micrograms/Liter
Nickel	15.0U	micrograms/Liter
Vanadium	5.0U	micrograms/Liter
Zinc	60.8	micrograms/Liter

SF 6232
R. Dilg
7-11-89

SAMPLE REPORT

Sample SF6232 89FM22S03 Operator

Date analyzed 07/10/89 Factor 1.22000 File name RUN696

Element	Concentration	Units
Silver	6.0U	micrograms/Liter
Aluminum	80.0U	micrograms/Liter
Barium	11.5	micrograms/Liter
Beryllium	1.0U	micrograms/Liter
Calcium	74300.	micrograms/Liter
Cobalt	6.0U	micrograms/Liter
Chromium	8.0U	micrograms/Liter
Copper	7.5	micrograms/Liter
Magnesium	34500.	micrograms/Liter
Iron	80.0U	micrograms/Liter
Potassium	5000. U	micrograms/Liter
Manganese	5.0U	micrograms/Liter
Sodium	8600.	micrograms/Liter
Nickel	15.0U	micrograms/Liter
Vanadium	5.0U	micrograms/Liter
Zinc	40.0U	micrograms/Liter

SF 6232
R. Dilg
7-11-89

SAMPLE REPORT

Sample SF6232 89FM22S04 Operator

Date analyzed 07/10/89 Factor 1.22000 File name RUN696

Element	Concentration	Units
Silver	6.0U	micrograms/Liter
Aluminum	80.0U	micrograms/Liter
Barium	42.5	micrograms/Liter
Beryllium	1.0U	micrograms/Liter
Calcium	103000.	micrograms/Liter
Cobalt	6.0U	micrograms/Liter
Chromium	8.0U	micrograms/Liter
Copper	9.0	micrograms/Liter
Magnesium	35300.	micrograms/Liter
Iron	5360.	micrograms/Liter
Potassium	5000. U	micrograms/Liter
Manganese	631.	micrograms/Liter
Sodium	18400.	micrograms/Liter
Nickel	15.0U	micrograms/Liter
Vanadium	5.0U	micrograms/Liter
Zinc	40.0U	micrograms/Liter

SF 6232

R. Dilg
7-11-89

SAMPLE REPORT

Sample SF6232 89FM22S05 Operator

Date analyzed 07/10/89 Factor 1.22000 File name RUN696

Element	Concentration	Units
Silver	6.0U	micrograms/Liter
Aluminum	80.0U	micrograms/Liter
Barium	14.9	micrograms/Liter
Beryllium	1.0U	micrograms/Liter
Calcium	62500.	micrograms/Liter
Cobalt	6.0U	micrograms/Liter
Chromium	8.0U	micrograms/Liter
Copper	6.0U	micrograms/Liter
Magnesium	28600.	micrograms/Liter
Iron	80.0U	micrograms/Liter
Potassium	5000. U	micrograms/Liter
Manganese	5.0U	micrograms/Liter
Sodium	3500.	micrograms/Liter
Nickel	15.0U	micrograms/Liter
Vanadium	5.0U	micrograms/Liter
Zinc	149.	micrograms/Liter

SF 6232
R. Dily
7-11-89

SAMPLE REPORT

Sample SF6232 89FM11R15 Operator

Date analyzed 07/10/89 Factor 1.22000 File name RUN696

Element	Concentration	Units
Silver	6.0U	micrograms/Liter
Aluminum	80.0U	micrograms/Liter
Barium	6.0U	micrograms/Liter
Beryllium	1.0U	micrograms/Liter
Calcium	500. U	micrograms/Liter
Cobalt	6.0U	micrograms/Liter
Chromium	8.0U	micrograms/Liter
Copper	6.0U	micrograms/Liter
Magnesium	100. U	micrograms/Liter
Iron	80.0U	micrograms/Liter
Potassium	5000. U	micrograms/Liter
Manganese	5.0U	micrograms/Liter
Sodium	1000. U	micrograms/Liter
Nickel	15.0U	micrograms/Liter
Vanadium	5.0U	micrograms/Liter
Zinc	40.0U	micrograms/Liter

SF 6232
R. Dilg
7-11-89

DIGESTION RECORD

Prepared by R. DILG Date 7-6-89 Run Number 696

Vessel Number	Data Set	Sample Number	Notes	Vessel Number	Data Set	Sample Number	Notes
8	SF6232	89FM22S01					
9		D01					
10		S02					
11		S03					
12		S04					
13		S05					
14		89FM11 R15					
15		89FM22S02	DUP				
16		S02	SPK +5ml A,B,C				
17		DIGEST BLANK					

COMMENTS:

SF 6232
R. Dilg
7-11-89

Samples analyzed by SED5 on 07/10/89 stored in file RUN696 .

Data set	Sample id	Lab id	Ins QC	Correction factor
	INSTR BLANK 1		B	1.00000
	AQC 1		Q	1.00000
	HIGH AQC 1		Q	1.00000
	AG AQC 1		Q	1.00000
SF6232	89FM22S01		S	1.22000
SF6232	89FM22D01		S	1.22000
SF6232	89FM22S02	SMP1	S	1.22000
SF6232	89FM22S03		S	1.22000
SF6232	89FM22S04		S	1.22000
SF6232	89FM22S05		S	1.22000
SF6232	89FM11R15		S	1.22000
SF6232	89FM22S02 DUP	DUP1	S	1.22000
SF6232	89FM22S02 SPK	SPK1	S	1.52000
SF6232	DIGESTION BLANK		B	1.00000
	INSTR BLANK 2		B	1.00000
	AQC 2		Q	1.00000
	HIGH AQC 2		Q	1.00000
	AG AQC 2		Q	1.00000
EPA 1287	ICS		S	1.00000
SF6232 1/2	89FM22S02 dil	SMP2	S	2.44000 Mg
SF6232 1/2	89FM22S02 SPK dil	SPK2	S	3.04000 ONLY
	INSTR BLANK 3		B	1.00000
	AQC 3		Q	1.00000
	HIGH AQC 3		Q	1.00000
	AG AQC 3		Q	1.00000

SF 6232
R. Dilg
7-11-89

BLANK REPORT

Blank name INSTR BLANK 1 Operator

Date analyzed 07/10/89 File name RUN696

Element	Blank Value	Detection Limit	
Ag	0.121	6	ug/L
Alhigh	-18.430	20000	ug/L
Allow	10.986	80	ug/L
Ba	-0.108	6	ug/L
Be	-0.160	1	ug/L
Cahigh	-4.360	20000	ug/L
Calow	8.350	500	ug/L
Co	-1.047	6	ug/L
Cr	0.000	8	ug/L
Cu	1.587	6	ug/L
Mg	-3.400	100	ug/L
Felow	-0.396	80	ug/L
Fehigh	-47.010	20000	ug/L
K	1274.070	5000	ug/L
Mn	-0.413	5	ug/L
Na	-22.170	1000	ug/L
Ni	5.033	15	ug/L
V	-0.003	5	ug/L
Znlow	0.741	40	ug/L
Znhigh	-202.930	20000	ug/L

All values within ± detect. limits.

SF 6232
R. Dilg
7-11-89

BLANK REPORT

Blank name INSTR BLANK 2 Operator

Date analyzed 07/10/89 File name RUN696

Element	Blank Value	Detection Limit	
Ag	-1.996	6	ug/L
Alhigh	-11.920	20000	ug/L
Allow	-1.702	80	ug/L
Ba	-0.566	6	ug/L
Be	-0.187	1	ug/L
Cahigh	3.390	20000	ug/L
Calow	15.540	500	ug/L
Co	-2.726	6	ug/L
Cr	-0.472	8	ug/L
Cu	-0.171	6	ug/L
Mg	0.550	100	ug/L
Felow	-0.792	80	ug/L
Fehigh	-13.870	20000	ug/L
K	193.040	5000	ug/L
Mn	-0.184	5	ug/L
Na	-22.170	1000	ug/L
Ni	4.328	15	ug/L
V	-1.155	5	ug/L
Znlow	0.208	40	ug/L
Znhigh	-161.560	20000	ug/L

All values within ± detect. limits.

SF 6232

Q. Dilg
7-11-89

BLANK REPORT

Blank name INSTR BLANK 3 Operator

Date analyzed 07/10/89 File name RUN696

Element	Blank Value	Detection Limit	
Ag	1.908	6	ug/L
Alhigh	7.590	20000	ug/L
Allow	13.771	80	ug/L
Ba	0.216	6	ug/L
Be	0.061	1	ug/L
Cahigh	4.720	20000	ug/L
Calow	12.400	500	ug/L
Co	-0.810	6	ug/L
Cr	1.215	8	ug/L
Cu	1.426	6	ug/L
Mg	2.680	100	ug/L
Felow	0.396	80	ug/L
Fehigh	-16.180	20000	ug/L
K	1231.170	5000	ug/L
Mn	-0.169	5	ug/L
Na	-23.160	1000	ug/L
Ni	5.536	15	ug/L
V	0.198	5	ug/L
Znlow	0.046	40	ug/L
Znhigh	-116.240	20000	ug/L

All values within ± detect. limits.

SF 6232

R. Dilg
7-11-89

BLANK REPORT

Blank name DIGESTION BLANK Operator

Date analyzed 07/10/89 File name RUN696

Element	Blank Value	Detection Limit	
Ag	0.145	6	ug/L
Alhigh	-18.430	20000	ug/L
Allow	6.035	80	ug/L
Ba	0.108	6	ug/L
Be	-0.143	1	ug/L
Cahigh	68.960	20000	ug/L
Calow	82.810	500	ug/L
Co	-1.699	6	ug/L
Cr	2.767	8	ug/L
Cu	3.020	6	ug/L
Mg	13.970	100	ug/L
Felow	10.196	80	ug/L
Fehigh	-38.530	20000	ug/L
K	960.910	5000	ug/L
Mn	-0.337	5	ug/L
Na	73.460	1000	ug/L
Ni	5.234	15	ug/L
V	-0.673	5	ug/L
Znlow	2.219	40	ug/L
Znhigh	-204.900	20000	ug/L

All values within ± detect. limits.

SF 6232
R. Dily
7-11-89

QUALITY CONTROL SAMPLE REPORT

QC ID AQC 1 Operator

Date analyzed 07/10/89 File name RUN696

Element	Units	Found Value	True Value	Percent Deviation
Allow	ug/L	5131	5000	2.6 %
Ba	ug/L	5089	5000	1.8 %
Be	ug/L	5040	5000	0.8 %
Calow	ug/L	5063	5000	1.3 %
Co	ug/L	5187	5000	3.7 %
Cr	ug/L	5097	5000	1.9 %
Cu	ug/L	5158	5000	3.2 %
Mg	ug/L	5052	5000	1.0 %
Felow	ug/L	5025	5000	0.5 %
Mn	ug/L	5146	5000	2.9 %
Ni	ug/L	5174	5000	3.5 %
V	ug/L	5015	5000	0.3 %
Znlow	ug/L	5108	5000	2.2 %

Results within 5%.

SF 6232

Q. Dilg
7-11-89

QUALITY CONTROL SAMPLE REPORT

QC ID AQC 2 Operator

Date analyzed 07/10/89 File name RUN696

Element	Units	Found Value	True Value	Percent Deviation
Allow	ug/L	5173	5000	3.5 %
Ba	ug/L	5116	5000	2.3 %
Be	ug/L	5082	5000	1.6 %
Calow	ug/L	5102	5000	2.0 %
Co	ug/L	5247	5000	4.9 %
Cr	ug/L	5175	5000	3.5 %
Cu	ug/L	5177	5000	3.5 %
Mg	ug/L	5129	5000	2.6 %
Felow	ug/L	5075	5000	1.5 %
Mn	ug/L	5194	5000	3.9 %
Ni	ug/L	5241	5000	4.8 %
V	ug/L	5059	5000	1.2 %
Znlow	ug/L	5163	5000	3.3 %

Results within 5%.

SF 6232

Q. Dilg
7-11-89

QUALITY CONTROL SAMPLE REPORT

QC ID AQC 3 Operator

Date analyzed 07/10/89 File name RUN696

Element	Units	Found Value	True Value	Percent Deviation
Allow	ug/L	5156	5000	3.1 %
Ba	ug/L	5104	5000	2.1 %
Be	ug/L	5068	5000	1.4 %
Calow	ug/L	5089	5000	1.8 %
Co	ug/L	5230	5000	4.6 %
Cr	ug/L	5191	5000	3.8 %
Cu	ug/L	5162	5000	3.2 %
Mg	ug/L	5117	5000	2.3 %
Felow	ug/L	5075	5000	1.5 %
Mn	ug/L	5175	5000	3.5 %
Ni	ug/L	5255	5000	5.1 % *
V	ug/L	5047	5000	0.9 %
Znlow	ug/L	5150	5000	3.0 %

Results within 5% except for Ni.

SF 6232
R. Dily
7-11-89

QUALITY CONTROL SAMPLE REPORT

QC ID HIGH AQC 1 Operator

Date analyzed 07/10/89 File name RUN696

Element	Units	Found Value	True Value	Percent Deviation
Alhigh	ug/L	98928	100000	1.1 %
Cahigh	ug/L	100189	100000	0.2 %
Fehigh	ug/L	97407	100000	2.6 %
K	ug/L	97405	100000	2.6 %
Na	ug/L	105397	100000	5.4 %
Znhigh	ug/L	98038	100000	2.0 %

Results within 10%.

SF 6232
R. Dilg
7-11-89

QUALITY CONTROL SAMPLE REPORT

QC ID HIGH AQC 2 Operator

Date analyzed 07/10/89 File name RUN696

Element	Units	Found Value	True Value	Percent Deviation
Alhigh	ug/L	100506	100000	0.5 %
Cahigh	ug/L	102126	100000	2.1 %
Fehigh	ug/L	99083	100000	0.9 %
K	ug/L	98387	100000	1.6 %
Na	ug/L	106714	100000	6.7 %
Znhigh	ug/L	99504	100000	0.5 %

Results within 10%.

SF 6232

R. Dilg
7-11-89

QUALITY CONTROL SAMPLE REPORT

QC ID HIGH AQC 3 Operator

Date analyzed 07/10/89 File name RUN696

Element	Units	Found Value	True Value	Percent Deviation
Alhigh	ug/L	98850	100000	1.1 %
Cahigh	ug/L	100361	100000	0.4 %
Fehigh	ug/L	97569	100000	2.4 %
K	ug/L	96324	100000	3.7 %
Na	ug/L	104982	100000	5.0 %
Znhigh	ug/L	98076	100000	1.9 %

Results within 10%.

SF 6232
R. Dilg
7-11-89

QUALITY CONTROL SAMPLE REPORT

QC ID AG AQC 1 Operator

Date analyzed 07/10/89 File name RUN696

Element	Units	Found Value	True Value	Percent Deviation
Ag	ug/L	51.5	50	3.1 %

Result within 10%.

SF 6232

L. Dilg
7-11-89

QUALITY CONTROL SAMPLE REPORT

QC ID AG AQC 2 Operator

Date analyzed 07/10/89 File name RUN696

Element	Units	Found Value	True Value	Percent Deviation
Ag	ug/L	53.1	50	6.3 %

Result within 10%.

SF 6232
R. Dilg
7-11-89

QUALITY CONTROL SAMPLE REPORT

QC ID AG AQC 3 Operator

Date analyzed 07/10/89 File name RUN696

Element	Units	Found Value	True Value	Percent Deviation
Ag	ug/L	54.0	50	8.0 %

Result within 10%.

SF 6232
L. Dilg
7-11-89

DUPLICATE

Sample SF6232 89FM22S02 Operator

Date Analyzed 07/10/89 Factor 1.22 File RUN696

Element	Units	Sample	Duplicate	Difference	Limit	RPD
Ag	ug/L	0.0	-1.2	-1.2	6.0	199% U
Alhigh	ug/L	0.0	0.0	0.0	20000.0	-200% U
Allow	ug/L	4.0	-7.9	-11.9	80.0	603% U
Ba	ug/L	13.4	13.0	-0.4	6.0	-3%
Be	ug/L	-0.2	-0.3	-0.1	1.0	52% U
Cahigh	ug/L	91200.0	91200.0	0.0	20000.0	0%
Calow	ug/L	95100.0	95200.0	100.0	500.0	0%
Co	ug/L	-1.0	-1.5	-0.5	6.0	37% U
Cr	ug/L	-0.8	1.8	2.6	8.0	536% U
Cu	ug/L	8.6	4.1	-4.5	6.0	-71% U
Mg	ug/L	45000.0	44900.0	-100.0	100.0	0%
Felow	ug/L	135.5	144.2	8.7	80.0	6%
Fehigh	ug/L	300.0	400.0	100.0	20000.0	22% U
K	ug/L	1600.0	1600.0	0.0	5000.0	-1%
Mn	ug/L	0.6	0.5	-0.1	5.0	-11% U
Na	ug/L	10300.0	10200.0	-100.0	1000.0	-1%
Ni	ug/L	8.6	1.6	-7.0	15.0	-137% U
V	ug/L	0.2	1.0	0.8	5.0	120% U
Znlow	ug/L	60.8	58.6	-2.2	40.0	-4%
Znhigh	ug/L	-300.0	-300.0	0.0	20000.0	-6%

Results meet 10% RPD or detection limit criteria.

SF 6232

R. Dilg
7-11-89

SPIKE COMPARISON

Sample SF6232 89FM22S02 Analyzed by

Date Analyzed 07/10/89 File RUN696 SMP1

Element	Units	Sample	Spike	Spike Added	Recovery
Ag	ug/L	0.0	54.6	50	109%
Alhigh	ug/L	0.0	800.0	1000	100%
Allow	ug/L	4.0	772.9	800	96%
Ba	ug/L	13.4	217.0	200	102%
Be	ug/L	-0.2	9.8	10	100%
Cahigh	ug/L	91200.0	143000.0	50000	104%
Calow	ug/L	95100.0	0.0	50000	0%*
Co	ug/L	-1.0	100.3	100	101%
Cr	ug/L	-0.8	97.8	100	99%
Cu	ug/L	8.6	57.5	50	98%
Mg	ug/L	45000.0	70500.0	25000	102%
Felow	ug/L	135.5	926.6	800	99%
Fehigh	ug/L	300.0	1300.0	1000	122%*
K	ug/L	1600.0	22400.0	20000	104%
Mn	ug/L	0.6	104.9	100	104%
Na	ug/L	10300.0	62300.0	50000	104%
Ni	ug/L	8.6	160.8	150	101%
V	ug/L	0.2	51.1	50	102%
Znlow	ug/L	60.8	455.5	400	99%
Znhigh	ug/L	-300.0	0.0	0	80%*

* Not used.

All values within 85% to 115% recovery.

SF 6232

Q. Dilg
7-11-89

SPIKE COMPARISON

Sample SF6232 1/2 89FM22S02 dil Analyzed by

Date Analyzed 07/10/89 File RUN696 SMP2

Element	Units	Sample	Spike	Spike Added	Recovery
Ag	ug/L	0.3	50.4	50	100%
Alhigh	ug/L	0.0	800.0	1000	102%
Allow	ug/L	52.1	828.8	800	97%
Ba	ug/L	13.4	220.0	200	103%
Be	ug/L	0.0	9.9	10	99%
Cahigh	ug/L	94200.0	147100.0	50000	106%
Calow	ug/L	97900.0	157700.0	50000	120%*
Co	ug/L	-0.9	98.2	100	99%
Cr	ug/L	1.0	112.0	100	111%
Cu	ug/L	10.3	58.6	50	97%
Mg	ug/L	46200.0	71700.0	25000	102%
Felow	ug/L	164.7	972.9	800	101%
Fehigh	ug/L	200.0	1300.0	1000	134%*
K	ug/L	3400.0	23800.0	20000	102%
Mn	ug/L	0.0	107.1	100	107%
Na	ug/L	10500.0	63100.0	50000	105%
Ni	ug/L	6.9	165.9	150	106%
V	ug/L	0.6	49.4	50	98%
Znlow	ug/L	69.4	482.0	400	103%
Znhigh	ug/L	-600.0	-200.0	0	110% *

* Not used.

Mg only; values within 85% to 115% recovery.

SF 6232

R. Dilg
7-11-89

SAMPLE REPORT

Sample EPA 1287 ICS Operator

Date analyzed 07/10/89 Factor 1.00000 File name RUN696

Element	Concentration	Units
Silver	6.0U	micrograms/Liter
Aluminum	495000.	micrograms/Liter
Barium	6.0U	micrograms/Liter
Beryllium	1.0U	micrograms/Liter
Calcium	488000.	micrograms/Liter
Cobalt	8.1	micrograms/Liter
Chromium	42.9	micrograms/Liter
Copper	8.1	micrograms/Liter
Magnesium *	100. U	micrograms/Liter
Iron	214000.	micrograms/Liter
Potassium	5000. U	micrograms/Liter
Manganese	55.1	micrograms/Liter
Sodium	1000. U	micrograms/Liter
Nickel	15.0U	micrograms/Liter
Vanadium	5.5	micrograms/Liter
Zinc	43.2	micrograms/Liter

* Not used.

Currently, limits not established.

SF 6232
Q. Dilg
7-11-89

Method: SED5 Sample Name: INSTR BLANK 1 Operator:
Run Time: 07/10/89 13:40:10
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.12105	L-.01843	L10.986	L-17.544	L1.8632	L-.10790	L-.15964
#1	L-.77013	L-.02494	L2.4757	L-17.113	L.36982	L-.40461	L-.12125
#2	L2.4105	L-.01843	L21.044	L-22.433	L3.8576	L.24277	L-.23522
#3	L-1.2772	L-.01193	L9.4388	L-13.085	L1.3622	L-.16184	L-.12245

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	L-.00436	L.00835	L-.20099	L-1.0469	L-.00016	L1.5875	L-.00340
#1	L-.00776	L.00826	L-.57979	L-1.3432	L.20231	L.91435	L-.00352
#2	L-.00630	L.00840	L.32690	L-1.4617	L.40477	L3.4375	L-.00334
#3	L.00097	L.00840	L-.35008	L-.33581	L-.60756	L.41069	L-.00334

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	L-.39597	L-.04702	L1.2741	L-.34642	L-.41330	L-1.8164	L-.02217
#1	L.79191	L-.04779	L1.3942	L-.34642	L-.47509	L-.32168	L-.02647
#2	L.19798	L-.05010	L1.5486	L-.34642	L-.52128	L-2.6118	L-.02151
#3	L-2.1778	L-.04316	L.87941	L-.34642	L-.24353	L-2.5158	L-.01853

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L5.0331	L5.8633	L27.473	L.11972	L-1.0900	L-.00283	L-.34646
#1	L.20133	L7.8423	L24.449	L.05986	L-1.1581	L-.16627	L-.66404
#2	L5.9391	L7.8191	41.804	L.05986	L-1.1581	L1.2329	L-.23097
#3	L8.9590	L1.9284	L16.166	L.23943	L-.95376	L-1.0751	L-.14436

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	L.74103	L-.20294	-13.671	4.1051
#1	L1.4363	L-.22067	-33.037	-3.5629
#2	L.04049	L-.24431	4.5568	10.844
#3	L.74632	L-.14383	-12.531	5.0346

Method: SED5 Sample Name: AQC 1 Operator:
Run Time: 07/10/89 13:43:03
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q504.81	5.7239	5131.0	5017.5	5126.7	5089.0	5039.7
#1	Q504.11	5.7109	5132.8	5001.5	5101.9	5078.8	5021.1
#2	Q503.58	5.7109	5118.4	5005.1	5127.1	5080.4	5043.8

SF 6232
R. Dilg
7-11-89

#3	Q506.74	5.7500	5141.7	5045.8	5151.2	5107.6	5054.3

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	5.3795	5.0635	5105.9	5187.0	5097.3	5157.6	5.0521
#1	5.3812	5.0492	5102.6	5172.3	5080.4	5143.1	5.0393
#2	5.3601	5.0564	5100.6	5172.6	5097.2	5148.1	5.0470
#3	5.3972	5.0848	5114.4	5216.0	5114.4	5181.7	5.0700

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	5024.7	6.4468	.64776	5113.8	5146.3	5175.3	-.02680
#1	5016.3	6.4245	3.3117	5100.3	5134.1	5178.7	-.00960
#2	5019.0	6.4591	-.70353	5112.8	5141.8	5163.3	-.03044
#3	5038.9	6.4568	-.66492	5128.3	5163.0	5183.9	-.04037

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	5173.9	5196.1	5059.5	5187.5	5093.7	5014.9	4960.3
#1	5156.9	5172.9	5073.3	5173.2	5080.8	5000.2	4948.7
#2	5210.7	5221.8	5070.2	5180.7	5081.5	5003.9	4949.8
#3	5154.2	5193.8	5035.0	5208.6	5118.7	5040.4	4982.3

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	5107.6	4.8015	4906.6	5123.0
#1	5092.9	4.8626	4867.9	5116.4
#2	5099.2	4.7858	4915.7	5113.6
#3	5130.6	4.7562	4936.2	5139.1

Method: SED5 Sample Name: HIGH AQC 1 Operator:
Run Time: 07/10/89 13:47:00
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q-.88564	98.928	Q98520.	Q2.1221	Q-7.3894	Q1.6994	Q.04251
#1	Q.68760	98.401	Q97945.	Q-43.152	Q-7.5780	Q1.7803	Q-.06888
#2	Q-.65274	98.789	Q98113.	Q36.514	Q-6.5197	Q1.6994	Q-.09723
#3	Q-2.6918	99.595	Q99500.	Q13.004	Q-8.0703	Q1.6184	Q.29365

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	100.19	Q.00000	Q.81717	Q1.3827	Q2.2180	Q2.9581	Q83.527
#1	99.488	Q.00000	Q1.1719	Q1.7383	Q1.3386	Q2.9883	Q83.367
#2	100.10	Q.00000	Q2.6240	Q1.0272	Q4.5800	Q3.6195	Q83.518
#3	100.98	Q.00000	Q-1.3444	Q1.3827	Q.73540	Q2.2664	Q83.695

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	Q94352.	97.407	97.405	Q7.9676	Q10.194	Q9.4871	105.40
#1	Q93675.	96.807	96.860	Q7.9676	Q10.016	Q6.8494	104.82
#2	Q94308.	97.357	97.079	Q7.9676	Q10.245	Q11.280	104.99
#3	Q95073.	98.058	98.275	Q7.9676	Q10.321	Q10.332	106.38

Elem	Ni	Pb	Sn	Sr	Ti	V	Y

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#1	Q.68760	98.401	Q97945.	Q-43.152	Q-7.5780	Q1.7803	Q-.06888
#2	Q-.65274	98.789	Q98113.	Q36.514	Q-6.5197	Q1.6994	Q-.09723
#3	Q-2.6918	99.595	Q99500.	Q13.004	Q-8.0703	Q1.6184	Q.29365

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	100.19	Q.00000	Q.81717	Q1.3827	Q2.2180	Q2.9581	Q83.527
#1	99.488	Q.00000	Q1.1719	Q1.7383	Q1.3386	Q2.9883	Q83.367
#2	100.10	Q.00000	Q2.6240	Q1.0272	Q4.5800	Q3.6195	Q83.518
#3	100.98	Q.00000	Q-1.3444	Q1.3827	Q.73540	Q2.2664	Q83.695

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	Q94352.	97.407	97.405	Q7.9676	Q10.194	Q9.4871	105.40
#1	Q93675.	96.807	96.860	Q7.9676	Q10.016	Q6.8494	104.82
#2	Q94308.	97.357	97.079	Q7.9676	Q10.245	Q11.280	104.99
#3	Q95073.	98.058	98.275	Q7.9676	Q10.321	Q10.332	106.38

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q1.8119	Q9.0954	Q4.2774	Q3.0528	Q1.0900	Q2.7213	Q1.0971
#1	Q6.8450	Q11.638	Q-2.7592	Q2.9331	Q.68125	Q2.5433	Q1.2415
#2	Q3.8252	Q22.853	Q7.9583	Q3.1126	Q1.4988	Q3.5810	Q1.2415
#3	Q-5.2344	Q-7.2054	Q7.6330	Q3.1126	Q1.0900	Q2.0396	Q.80840

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	Q90924.	98.038	98063.	98404.
#1	Q90461.	97.585	97523.	97843.
#2	Q90822.	97.733	97899.	97972.
#3	Q91489.	98.797	98767.	99397.

Method: SED5 Sample Name: AG AQC 1 Operator:
Run Time: 07/10/89 13:50:26
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	51.538	.01193	Q28.007	Q-.60933	Q4.0065	Q.10790	Q.08378
#1	50.749	.00759	Q30.328	Q.29412	Q1.8565	Q.00000	Q.10548
#2	50.746	.03362	Q22.901	Q-6.5667	Q8.7918	Q.16184	Q.09347
#3	53.118	-.00542	Q30.792	Q4.4446	Q1.3713	Q.16184	Q.05240

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	.00279	Q.01650	Q-.36053	Q-1.0074	Q2.0246	Q.91878	Q.01191
#1	.00606	Q.02291	Q-.63689	Q-3.9507	Q3.0371	Q-.09298	Q.01829
#2	.00715	Q.01467	Q1.3558	Q-.33581	Q1.6198	Q-.08235	Q.01031
#3	-.00485	Q.01193	Q-1.8005	Q1.2642	Q1.4171	Q2.9317	Q.00712

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	Q16.234	-.02852	.29600	Q2.4249	Q-.18300	Q1.1905	-.01985
#1	Q22.768	-.03854	-.34319	Q1.7321	Q-.24395	Q2.8754	-.02846
#2	Q15.640	.00771	-.56197	Q3.8106	Q.03023	Q-3.6569	-.00066
#3	Q10.295	-.05473	1.7931	Q1.7321	Q-.33528	Q4.3530	-.03044

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q5.0331	Q17.558	Q7.0950	Q.23943	Q-.74938	Q-.84060	Q-.14436
#1	Q5.9391	Q10.386	Q-3.9510	Q.23943	Q-1.3625	Q-.64381	Q-.31759
#2	Q1.7113	Q5.7174	Q15.778	Q.41901	Q.27250	Q-1.4712	Q.02887
#3	Q7.4490	Q36.571	Q9.4583	Q.05986	Q-1.1581	Q-.40683	Q-.14436

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Elem	Znlow	Znhigh	2Al308	2Al396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	Q16.937	-.16944	17.088	25.173
#1	Q23.503	-.13792	14.810	27.574
#2	Q15.273	-.09063	28.480	21.997
#3	Q12.036	-.27978	7.9745	25.947

Method: SED5 Sample Name: 89FM22S01 Operator:
Run Time: 07/10/89 13:53:22
Comment: SF6232
Mode: CONC Corr. Factor: 1.22

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L2.5898	L-.01455	L16.423	L14.020	15.977	16.948	L.12253
#1	L1.0352	L-.03043	L13.781	L6.9613	16.114	17.178	L.01777
#2	L3.5001	L.01720	L12.082	L9.3662	19.071	16.684	L.27094
#3	L3.2343	L-.03043	L23.408	L25.732	12.745	16.981	L.07887

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	59.063	H63.192	L-.00997	L.53018	L.90624	12.043	32.698
#1	58.844	H63.164	L-1.0326	L-.48198	L1.7295	11.007	32.602
#2	58.561	H62.057	L.57916	L3.8558	L.24773	13.493	32.327
#3	59.783	H64.354	L.42352	L-1.7833	L.74153	11.630	33.164

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	L33.090	L.15610	L1.9678	10.143	L.28775	L2.6310	2.2168
#1	L33.574	L.11096	L1.5125	L9.7204	L.36731	L3.9856	2.1877
#2	L35.023	L.21252	L2.1562	13.524	L.47132	L-2.2343	2.2168
#3	L30.675	L.14481	L2.2347	L7.1847	L.02463	L6.1416	2.2459

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L6.0176	L17.236	L32.428	54.843	L3.7817	L1.6197	L.35223
#1	L4.2983	L22.531	45.254	54.843	L3.3245	L.41741	L-.17612
#2	L4.6667	L21.235	L19.282	54.186	L4.8206	L2.5226	L.98625
#3	L9.0878	L7.9411	L32.748	55.501	L3.1999	L1.9192	L.24656

Elem	Znlow	Znhigh	2Al308	2Al396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	L26.120	L-.27883	12.509	-72.100
#1	L26.631	L-.33412	-15.288	-70.966
#2	L26.044	L-.13942	26.407	-74.084
#3	L25.686	L-.36296	26.407	-71.249

Method: SED5 Sample Name: 89FM22D01 Operator:

Run Time: 07/10/89 13:56:27
Comment: SF6232
Mode: CONC Corr. Factor: 1.22

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L

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Method: SED5 Sample Name: 89FM22S02 SPK dil Operator:
Run Time: 07/10/89 14:47:32
Comment: SF6232 1/2
Mode: CONC Corr. Factor: 3.04

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	50.394	L.77466	828.83	L-10.340	999.43	220.01	9.8840
#1	37.098	L.73510	838.71	L11.303	1005.3	222.14	9.7330
#2	62.542	L.83399	793.55	L-14.761	1000.6	219.93	10.045
#3	51.542	L.75488	854.23	L-27.561	992.33	217.96	9.8743

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	147.08	H157.73	21.411	98.182	112.02	58.600	H71.739
#1	147.96	H159.83	21.910	98.062	107.71	56.022	H72.342
#2	146.96	H156.83	22.484	104.01	120.64	67.563	H71.566
#3	146.32	H156.53	19.838	92.477	107.71	52.216	H71.309

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	972.91	L1.2794	23.813	76.877	107.07	112.74	63.059
#1	975.62	L1.1903	22.039	81.089	107.46	108.18	63.724
#2	977.42	L1.3309	28.182	81.089	107.16	118.20	62.835
#3	965.69	L1.3169	21.218	68.452	106.60	111.82	62.618

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	165.86	831.99	399.87	1100.4	104.69	49.439	48.010
#1	162.19	745.86	405.45	1112.5	103.97	44.910	45.377
#2	186.06	953.20	367.10	1095.8	104.90	57.740	50.116
#3	149.33	796.92	427.06	1092.8	105.21	45.668	48.536

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	482.00	L-.22760	758.44	593.60
#1	481.86	L-.63489	606.06	598.78
#2	483.43	L.04792	896.97	574.06
#3	480.70	L-.09583	772.29	607.97

Method: SED5 Sample Name: INSTR BLANK 3 Operator:
Run Time: 07/10/89 14:51:33
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L1.9078	L.00759	L13.771	L-4.3600	L4.4948	L.21579	L.06149
#1	L.20818	L.01410	L7.1178	L-3.1041	L3.8412	L.32369	L.10308
#2	L1.8845	L.00108	L10.367	L-6.6565	L4.8225	L.32369	L.09827
#3	L3.6308	L.00759	L23.829	L-3.3194	L4.8207	L.00000	L-.01689

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	L.00473	L.01240	L-.18217	L-.80989	L1.2148	L1.4263	L.00269
#1	L.00206	L.01376	L-.97938	L-.39507	L4.0494	L.16151	L.00357
#2	L.00679	L.01258	L.23217	L-1.3432	L-2.2272	L-.59133	L.00286
#3	L.00533	L.01088	L.20071	L-.69137	L1.8222	L4.7088	L.00162

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Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	L.39595	L-.01619	L1.2312	L.34641	L-.16865	L2.0502	L-.02316
#1	L.79191	L-.02929	L-.30458	L-.34642	L-.19839	L2.4944	L-.03839
#2	L-.39597	L-.01079	L1.9476	L1.7321	L-.15367	L.92151	L-.02250
#3	L.79191	L-.00848	L2.0505	L-.34642	L-.15388	L2.7345	L-.00860

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L5.5364	L19.127	L15.775	L.17958	L-.61313	L.19752	L.08661
#1	L2.3152	L-8.7178	L24.450	L.05986	L-.74938	L-.96674	L.02887
#2	L7.4490	L22.328	L7.0982	L.23943	L-.54501	L-1.3286	L.37533
#3	L6.8450	L43.769	L15.776	L.23943	L-.54501	L2.8879	L-.14436

Elem	Znlow	Znhigh	2Al308	2Al396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	L.04624	L-.11625	12.531	10.302
#1	L.05399	L-.14974	21.645	5.2669
#2	L-.55956	L-.16156	7.9745	11.541
#3	L.64428	L-.03744	7.9745	14.097

Method: SED5 Sample Name: AQC 3 Operator:
Run Time: 07/10/89 14:54:34
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q508.77	5.7554	5156.0	5069.2	5155.8	5104.0	5067.9
#1	Q510.29	5.7174	5145.8	5072.7	5131.1	5088.7	5043.0
#2	Q509.70	5.7825	5174.2	5085.3	5172.5	5111.8	5085.2
#3	Q506.33	5.7662	5148.2	5049.6	5163.8	5111.5	5075.4

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	5.4222	5.0893	5148.0	5229.8	5191.3	5161.8	5.1168
#1	5.3986	5.0732	5137.3	5206.7	5179.6	5140.8	5.0898
#2	5.4470	5.1013	5169.1	5249.4	5204.1	5180.4	5.1381
#3	5.4208	5.0935	5137.7	5233.3	5190.3	5164.0	5.1225

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	5075.3	6.5424	1.7374	5122.1	5174.5	5226.7	-.02118
#1	5034.7	6.4406	1.5229	5108.6	5145.1	5184.2	-.02846
#2	5096.2	6.5979	2.5653	5127.3	5196.2	Q5253.5	-.00860
#3	5095.0	6.5886	1.1239	5130.4	5182.2	5242.4	-.02647

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q5255.2	Q5313.8	5128.1	5212.1	5124.7	5047.1	4992.0
#1	5218.5	Q5275.7	5117.1	5192.5	5102.1	5015.9	4969.3
#2	Q5272.9	Q5311.1	5123.8	5224.4	5142.1	5069.4	5008.6
#3	Q5274.1	Q5354.4	5143.5	5219.3	5129.7	5056.0	4998.0

Elem	Znlow	Znhigh	2Al308	2Al396
Units	ug/L	Mg/L	ug/L	ug/L

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Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	5075.3	6.5424	1.7374	5122.1	5174.5	5226.7	-.02118
#1	5034.7	6.4406	1.5229	5108.6	5145.1	5184.2	-.02846
#2	5096.2	6.5979	2.5653	5127.3	5196.2	Q5253.5	-.00860
#3	5095.0	6.5886	1.1239	5130.4	5182.2	5242.4	-.02647

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q5255.2	Q5313.8	5128.1	5212.1	5124.7	5047.1	4992.0
#1	5218.5	Q5275.7	5117.1	5192.5	5102.1	5015.9	4969.3
#2	Q5272.9	Q5311.1	5123.8	5224.4	5142.1	5069.4	5008.6
#3	Q5274.1	Q5354.4	5143.5	5219.3	5129.7	5056.0	4998.0

Elem	Znlow	Znhigh	2Al308	2Al396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	5149.7	4.9394	4926.0	5148.1
#1	5137.0	4.8744	4895.2	5136.4
#2	5164.7	5.0695	4929.4	5163.5
#3	5147.4	4.8744	4953.3	5144.3

Method: SED5 Sample Name: HIGH AQC 3 Operator:
Run Time: 07/10/89 14:57:49
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q-.51688	98.850	Q98382.	Q-27.059	Q-2.7029	Q1.8612	Q.42075
#1	Q2.2850	98.500	Q98360.	Q.01749	Q-1.2047	Q2.5895	Q.53672
#2	Q-1.7092	99.186	Q98755.	Q-36.055	Q-3.7990	Q1.5375	Q.38792
#3	Q-2.1265	98.865	Q98033.	Q-45.139	Q-3.1051	Q1.4566	Q.33761

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	100.36	Q.00000	Q1.0864	Q2.3902	Q.80124	Q1.6492	Q84.256
#1	100.35	Q.00000	Q1.8479	Q4.1680	Q1.7461	Q3.6668	Q84.229
#2	100.41	Q.00000	Q-.40569	Q-.86915	Q-1.4930	Q.66876	Q84.282
#3	100.32	Q.00000	Q1.8172	Q3.8717	Q2.1506	Q.61188	Q84.256

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	Q94476.	97.569	96.324	Q10.392	Q10.566	Q8.6884	104.98
#1	Q94271.	97.563	97.387	Q11.085	Q10.783	Q2.7087	104.87
#2	Q94716.	97.695	96.564	Q10.046	Q10.493	Q11.640	105.39
#3	Q94440.	97.448	95.020	Q10.046	Q10.422	Q11.716	104.69

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q11.777	Q11.624	Q-12.260	Q3.4718	Q1.6691	Q2.9426	Q1.2415
#1	Q11.073	Q12.162	Q-10.138	Q3.8309	Q2.3163	Q5.3874	Q1.9344
#2	Q8.6570	Q15.013	Q9.5690	Q3.2922	Q1.0900	Q.68977	Q.72179
#3	Q15.603	Q7.6983	Q-36.209	Q3.2922	Q1.6010	Q2.7508	Q1.0682

Elem	Znlow	Znhigh	2Al308	2Al396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	Q90994.	98.076	97979.	98265.
#1	Q91172.	98.141	97605.	98254.
#2	Q91110.	98.300	98344.	98618.
#3	Q90701.	97.786	97988.	97922.

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Method: SED5 Sample Name: AG AQC 3 Operator:
Run Time: 07/10/89 15:00:58
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	53.996	.19410	Q195.12	Q12.084	Q11.023	Q1.9421	Q1.8579
#1	Q55.060	.26133	Q240.61	Q28.917	Q12.113	Q2.9132	Q2.6745
#2	54.640	.20277	Q204.87	Q8.7566	Q11.681	Q2.4277	Q1.8941
#3	52.287	.11820	Q139.88	Q-1.4214	Q9.2752	Q.48553	Q1.0052

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	.12459	Q.12733	Q2.0561	Q4.5038	Q6.1416	Q4.9919	Q.12336
#1	.16750	Q.16519	Q4.1828	Q9.2050	Q8.3013	Q7.5364	Q.16216
#2	.14605	Q.14640	Q.73148	Q2.9235	Q5.4667	Q4.4889	Q.14264
#3	.06024	Q.07038	Q1.2540	Q1.3827	Q4.6568	Q2.9503	Q.06529

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	Q127.50	.12487	2.3851	Q3.8106	Q1.8600	Q3.9532	.10126
#1	Q165.91	.21582	2.9385	Q5.8891	Q2.8879	Q10.242	.14627
#2	Q148.09	.13257	2.7841	Q3.8106	Q1.8283	Q.21681	.12443
#3	Q68.501	.02621	1.4328	Q1.7321	Q.86366	Q1.4014	.03309

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q6.2411	Q28.204	Q24.992	Q2.0950	Q1.7031	Q4.6191	Q1.8478
#1	Q2.0132	Q37.607	Q29.999	Q3.1126	Q3.3382	Q6.1441	Q3.0604
#2	Q12.885	Q36.220	Q21.311	Q2.0352	Q1.2944	Q5.7125	Q1.5879
#3	Q3.8252	Q10.785	Q23.667	Q1.1373	Q.47688	Q2.0007	Q.89501

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	Q130.08	.06502	190.25	189.30
#1	Q170.73	.20491	254.04	231.59
#2	Q148.38	.03349	199.36	201.38
#3	Q71.143	-.04335	117.34	134.93

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Standard: blnk

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.00923	.17953	.00613	-.00240	.11453	.00020	-.00053
#1	-.01040	.17860	.00280	-.00280	.11360	.00000	-.00080
#2	-.01010	.17880	.00400	.01180	.11440	.00000	-.00040
#3	-.00720	.18120	.01160	-.01620	.11560	.00060	-.00040

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Avge	.41507	.04107	.00167	.01813	-.00180	.00327	.01680
#1	.41280	.04120	.00180	.01440	-.00320	.00220	.01680
#2	.41440	.04120	.00040	.01560	-.00100	.00320	.01680
#3	.41800	.04080	.00280	.02440	-.00120	.00440	.01680

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Avge	.14027	.38333	.03953	.03767	.12187	.01653	.28853
#1	.13920	.38080	.03040	.03740	.12080	.02120	.28440
#2	.13960	.38240	.02440	.03760	.12200	.00260	.28840
#3	.14200	.38680	.06380	.03800	.12280	.02580	.29280

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Avge	-.00227	.00233	-.00840	.04507	.17267	.00120	-.00067
#1	-.00240	.00140	-.00720	.04480	.17120	-.00240	-.00120
#2	-.00240	.00220	-.00480	.04480	.17240	.00120	-.00080
#3	-.00200	.00340	-.01320	.04560	.17440	.00480	.00000

Elem	Znlow	Znhigh	2A1308	2A1396
Avge	.16587	.39507	.01033	.00513
#1	.16440	.39200	.00860	.00080
#2	.16800	.39440	.01040	.00380
#3	.16520	.39880	.01200	.01080

Standard: tenl

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	1.0039	.19553	.14993	7.9990	.19653	.00053	-.00093
#1	.99930	.19600	.14960	7.9602	.19680	.00040	-.00080
#2	1.0074	.19560	.14960	8.0112	.19640	.00020	-.00120
#3	1.0049	.19500	.15060	8.0256	.19640	.00100	-.00080

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Avge	.47613	.05933	.24640	33.768	9.8762	-.00640	21.869
#1	.47420	.05880	.24220	33.693	9.8152	-.00560	21.787
#2	.47720	.05920	.25380	33.875	9.9098	-.00720	21.968
#3	.47700	.06000	.24320	33.735	9.9036	-.00640	21.852

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Avge	.15093	.49387	.04180	1.9621	.12760	41.939	20.435

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#1	.15080	.49440	.03360	1.9516	.12800	41.809	20.339
#2	.15160	.49280	.04260	1.9742	.12680	42.070	20.560
#3	.15040	.49440	.04920	1.9606	.12800	41.939	20.406

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Avge	-.00217	.83887	5.0620	22.320	.17973	-.66220	21.920
#1	-.00120	.83580	5.0382	22.215	.18000	-.66840	21.826
#2	-.00040	.84400	5.0946	22.445	.17880	-.65860	22.036
#3	-.00490	.83680	5.0532	22.300	.18040	-.65960	21.898

Elem	Znlow	Znhigh	2A1308	2A1396
Avge	.17893	.39087	.01300	.15030
#1	.17760	.39080	.01320	.14890
#2	.18000	.38920	.01280	.14920
#3	.17920	.39260	.01300	.15280

Standard: ten2

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.16147	.20427	.01340	.08867	8.1467	.00033	33.655
#1	-.16410	.20520	.01300	.05000	8.1110	.00020	33.575
#2	-.15830	.20440	.01100	.15420	8.1240	.00020	33.544
#3	-.16200	.20320	.01620	.06180	8.2052	.00060	33.846

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Avge	6.0924	29.431	35.934	.11967	-.10967	7.9283	.06800
#1	6.0870	29.328	35.925	.06180	-.13380	7.8902	.02960
#2	6.0688	29.315	35.696	.23640	-.07200	7.8984	.14800
#3	6.1214	29.650	36.182	.06080	-.12320	7.9964	.02640

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Avge	.19700	.49573	1.5936	.04133	43.230	.10587	.33280
#1	.19680	.49960	1.5624	.03840	43.116	.02960	.30200
#2	.19640	.49400	1.5922	.04840	43.085	.26340	.40120
#3	.19780	.49360	1.6262	.03720	43.489	.02460	.29520

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Avge	3.3091	.01993	.01040	.09013	.17267	24.319	.04353
#1	3.3002	.01840	.01000	.05160	.17280	24.249	.00440
#2	3.2856	.02240	.02400	.17040	.17240	24.241	.12480
#3	3.3416	.01900	-.00280	.04840	.17280	24.466	.00140

Elem	Znlow	Znhigh	2A1308	2A1396
Avge	26.182	.72320	.00053	.00327
#1	26.124	.72640	.00000	.00320
#2	26.032	.72040	.00120	.00230
#3	26.390	.72280	.00040	.00430

Standard: ten3

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.01587	.84367	4.3146	.03347	.39847	12.358	.03573
#1	-.01620	.84560	4.3186	.03200	.40820	12.382	.07560

#2	3.2856	.02240	.02400	.17040	.17240	24.241	.12480
#3	3.3416	.01900	-.00280	.04840	.17280	24.466	.00140

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Elem	Znlow	Znhigh	2A1308	2A1396
Avge	26.182	.72320	.00053	.00327
#1	26.124	.72640	.00000	.00320
#2	26.032	.72040	.00120	.00230
#3	26.390	.72280	.00040	.00430

Standard: ten3

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.01587	.84367	4.3146	.03347	.39847	12.358	.03573
#1	-.01620	.84560	4.3186	.03200	.40820	12.382	.07560
#2	-.01420	.83460	4.2334	.02400	.39100	12.098	.01640
#3	-.01720	.85080	4.3918	.04440	.39620	12.594	.01520

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Avge	.45333	.06547	.03203	.09893	.00193	.01267	.01920
#1	.46140	.10040	.07160	.10000	.00400	.02440	.01920
#2	.45500	.04800	.01450	.10280	.00140	.00840	.01920
#3	.44360	.04800	.01000	.09400	.00040	.00520	.01920

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Avge	6.8749	1.2729	.05193	.03833	.16307	.00833	.33827
#1	6.8934	1.2728	.08000	.03820	.21560	.00380	.34120
#2	6.7706	1.2628	.06280	.03880	.13920	.01560	.34120
#3	6.9608	1.2832	.01300	.03800	.13440	.00560	.33240

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Avge	.00340	-.00007	.01787	.04700	19.744	.02627	.00153
#1	.00640	.00020	.01920	.04720	19.768	.06140	.00040
#2	.00280	.00040	.01800	.04760	19.385	.01380	.00220
#3	.00100	-.00080	.01640	.04620	20.079	.00360	.00200

Elem	Znlow	Znhigh	2A1308	2A1396
Avge	.19973	.39740	.59553	4.3087
#1	.23120	.39860	.59680	4.3069
#2	.18640	.40280	.58580	4.2276
#3	.18160	.39080	.60400	4.3916

Standard: cazn

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.01010	.18080	-.03007	-.00753	.26573	.00407	.00140
#1	-.01120	.18040	-.02020	-.00540	.26960	.00460	.00200
#2	-.00820	.18040	-.04120	-.01400	.26520	.00440	.00100
#3	-.01090	.18160	-.02880	-.00320	.26240	.00320	.00120

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Avge	220.44	252.21	.00773	.01987	-.00080	.00747	.02320
#1	219.27	252.20	.00720	.01000	.00360	.00480	.02320
#2	221.70	252.21	.01060	.02960	-.00560	.00920	.02320
#3	220.34	252.23	.00540	.02000	-.00040	.00840	.02320

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Avge	.15680	.38280	.04700	.04360	.12733	.20393	.32760
#1	.15640	.38320	.03240	.04320	.12720	.16060	.32660
#2	.15720	.38280	.05360	.04360	.12680	.21840	.32820

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#3	.15680	.38240	.05500	.04400	.12800	.23280	.32800

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Avge	-.00043	.00130	.00200	.06960	.20667	.00633	.00307
#1	-.00010	-.00120	.00360	.06920	.20680	-.00060	.00480
#2	-.00080	.00120	.00360	.07000	.20600	.01080	.00240
#3	-.00040	.00390	-.00120	.06960	.20720	.00880	.00200

Elem	Znlow	Znhigh	2A1308	2A1396
Avge	479.84	13.930	.01347	-.21040
#1	479.84	13.876	.01520	-.21840
#2	479.84	13.994	.01280	-.21580
#3	479.84	13.919	.01240	-.19700

Standard: alfe

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.09993	24.771	147.76	1.5155	.67740	.00500	.34373
#1	-.09760	24.312	147.19	1.4920	.66200	.00500	.34040
#2	-.10210	24.925	147.91	1.4732	.68360	.00480	.34680
#3	-.10010	25.077	148.18	1.5814	.68660	.00520	.34400

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Avge	.47027	.28253	-.02757	.03973	.00733	-.07027	.02707
#1	.47920	.30960	-.02790	.04420	.00920	-.06960	.02680
#2	.46720	.27320	-.02120	.04640	.00920	-.07000	.02700
#3	.46440	.26480	-.03360	.02860	.00360	-.07120	.02740

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Avge	255.17	34.980	.03913	.03827	.36400	-.11560	.42473
#1	251.31	34.436	.03760	.03840	.36040	-.10660	.42700
#2	256.30	35.148	.04200	.03880	.36560	-.13820	.42120
#3	257.89	35.357	.03780	.03760	.36600	-.10200	.42600

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Avge	.00003	-.13917	-.03867	.04647	.17687	-.05627	.00127
#1	-.00080	-.14100	-.03160	.04720	.17880	-.05680	.00100
#2	-.00110	-.14020	-.04520	.04620	.17600	-.05920	.00160
#3	.00200	-.13630	-.03920	.04600	.17580	-.05280	.00120

Elem	Znlow	Znhigh	2A1308	2A1396
Avge	.52793	.38987	23.016	147.61
#1	.55400	.39800	22.587	147.04
#2	.52180	.38680	23.157	147.76
#3	.50800	.38480	23.306	148.02

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Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
Ag	328.000	ten1	blnk	987.069	9.11394	07/10/89 10:01:07
Alhigh	308.200	alfe	blnk	16.2656	-2.92021	07/10/89 10:14:17
Allow	396.100	ten3	blnk	2321.01	-14.2355	07/10/89 10:07:14

Elem	Znlow	Znhigh	2Al308	2Al396
Avge	.52793	.38987	23.016	147.61
#1	.55400	.39800	22.587	147.04
#2	.52180	.38680	23.157	147.76
#3	.50800	.38480	23.306	148.02

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Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
Ag	328.000	ten1	blnk	987.069	9.11394	07/10/89 10:01:07
Alhigh	308.200	alfe	blnk	16.2656	-2.92021	07/10/89 10:14:17
Allow	396.100	ten3	blnk	2321.01	-14.2355	07/10/89 10:07:14
As	193.600	ten1	blnk	1249.78	2.99947	07/10/89 10:01:07
B	249.600	ten2	blnk	1244.99	-142.593	07/10/89 10:04:05
Ba	493.400	ten3	blnk	809.219	-.161844	07/10/89 10:07:14
Be	234.800	ten2	blnk	297.129	.158469	07/10/89 10:04:05
Cahigh	315.800	cazn	blnk	1.81801	-.754595	07/10/89 10:11:11
Calow	393.300	ten2	blnk	.934311	.025161	07/10/89 10:04:05
Cd	228.800	ten2	blnk	278.300	-.463833	07/10/89 10:04:05
Co	228.600	ten1	blnk	296.300	-5.37290	07/10/89 10:01:07
Cr	205.500	ten1	blnk	1012.35	1.82223	07/10/89 10:01:07
Cu	324.700	ten2	blnk	1261.82	-4.12194	07/10/89 10:04:05
Mg	297.500	ten1	blnk	.555051	.113475	07/10/89 10:01:07
Felow	259.900	ten3	blnk	1484.85	-208.276	07/10/89 10:07:14
Fehigh	271.400	alfe	blnk	11.5617	-4.43199	07/10/89 10:14:17
K	766.400	ten2	blnk	64.3473	-2.54386	07/10/89 10:04:05
Li	670.700	ten1	blnk	5196.25	-195.725	07/10/89 10:01:07
Mn	257.600	ten2	blnk	231.974	-28.2699	07/10/89 10:04:05
Mo	202.000	ten1	blnk	238.533	-3.94375	07/10/89 10:01:07
Na	589.000	ten1	blnk	4.96370	-1.43219	07/10/89 10:01:07
Ni	231.600	ten2	blnk	3019.87	6.84504	07/10/89 10:04:05
Pb	220.300	ten1	blnk	11954.1	-27.8929	07/10/89 10:01:07
Sn	189.900	ten1	blnk	1972.23	16.5667	07/10/89 10:01:07
Sr	421.500	ten1	blnk	448.936	-20.2321	07/10/89 10:01:07
Ti	334.900	ten3	blnk	510.943	-88.2228	07/10/89 10:07:14
V	292.400	ten2	blnk	411.224	-.493468	07/10/89 10:04:05
Y	371.000	ten1	blnk	456.186	.304124	07/10/89 10:01:07
Znlow	213.800	ten2	blnk	384.376	-63.7551	07/10/89 10:04:05
Znhigh	481.000	cazn	blnk	29.5539	-11.6758	07/10/89 10:11:11
2Al308	308.200	ten3	blnk	17088.2	-176.578	07/10/89 10:07:14
2Al396	396.100	ten3	blnk	2323.65	-11.9281	07/10/89 10:07:14

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Method: SED5 Sample Name: CU IEC Operator:
Run Time: 07/10/89 10:17:41
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.38909	L.10518	108.47	L-19.747	258.46	L.26974	L.03962
#1	L.45420	L.12470	125.95	L-.49991	260.29	L.00000	L.03962
#2	L-1.5438	L.08566	99.030	L-38.493	258.29	L.32369	L-.01981
#3	L-.07772	L.10518	100.42	L-20.246	256.80	L.48553	L.09904

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	L.01467	L.01912	L2.3655	L-.65186	L-1.6873	10228.	L-.00405
#1	L.02060	L.02395	L2.9871	L-.21729	L-2.2272	10219.	L-.00405
#2	L.01115	L.01585	L2.4583	L-1.4025	L-3.4420	10222.	L-.00405
#3	L.01224	L.01755	L1.6512	L-.33581	L.60741	10244.	L-.00405

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	L50.881	L.05935	L.09009	L1.3857	L.06186	L.46116	L.16447
#1	L69.095	L.09789	L.53194	L-.34642	L.21651	L3.4508	L.16613
#2	L37.022	L.01696	L.86654	L2.7713	L-.06186	L1.4948	L.16911
#3	L46.525	L.06320	L-1.1282	L1.7321	L.03093	L-3.5621	L.15818

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L3.3219	194.45	L25.376	L.17958	L1.2944	L.35639	L-.24330
#1	L-.40265	237.49	L7.1000	L.23943	L1.4988	L1.6449	L.12165
#2	L6.2411	182.50	L33.133	L.05986	L.88564	L.16449	L-.42577
#3	L4.1272	163.37	L35.895	L.23943	L1.4988	L-.74020	L-.42577

Elem	Znlow	Znhigh	2A130B	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	48.841	L.01773	86.580	103.63
#1	54.171	L.00394	100.25	122.61
#2	44.946	L.02758	76.327	92.172
#3	47.406	L.02167	83.162	96.122

Method: SED5 Sample Name: AL IEC Operator:
Run Time: 07/10/89 10:24:52
Comment:
Mode: CONC Corr. Factor: .0025

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.00274	L.96428	857.74	L4.5205	L.18177	L.00101	L-.00005
#1	L.00060	L.97066	858.21	L4.4505	L.17513	L.00121	L-.00005
#2	L-.00186	L.96720	858.01	L4.6542	L.18011	L.00061	L-.00020
#3	L.00949	L.95498	856.99	L4.4567	L.19007	L.00121	L.00010

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	L.00006	L.00006	L.00019	L-.00311	L.04522	L.01157	L-.00001

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Method: SED5 Sample Name: AL IEC Operator:
Run Time: 07/10/89 10:24:52
Comment:
Mode: CONC Corr. Factor: .0025

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.00274	L.96428	857.74	L4.5205	L.18177	L.00101	L-.00005
#1	L.00060	L.97066	858.21	L4.4505	L.17513	L.00121	L-.00005
#2	L-.00186	L.96720	858.01	L4.6542	L.18011	L.00061	L-.00020
#3	L.00949	L.95498	856.99	L4.4567	L.19007	L.00121	L.00010

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	L.00006	L.00006	L.00019	L-.00311	L.04522	L.01157	L-.00001
#1	L.00004	L.00005	L.00413	L-.00054	L.03695	L.01115	L-.00001
#2	L.00008	L.00008	L-.00172	L-.00217	L.04606	L.01367	L-.00001
#3	L.00007	L.00005	L-.00186	L-.00662	L.05264	L.00988	L-.00001

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	L.11186	L.00012	L.00131	L.00173	L.04957	L-.00334	L.00055
#1	L.10295	L.00002	L.00207	L-.00087	L.04902	L-.00688	L.00052
#2	L.12522	L.00012	L.00085	L.00433	L.04949	L-.00819	L.00055
#3	L.10740	L.00023	L.00101	L.00173	L.05018	L.00505	L.00057

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.00981	L-4.0405	L.05292	L.00007	L.00324	L.00178	L-.00015
#1	L.00126	L-3.9907	L.10551	L-.00030	L.00119	L.00123	L-.00015
#2	L.01862	L-4.1042	L.01972	L.00015	L.00273	L.00226	L-.00106
#3	L.00956	L-4.0265	L.03353	L.00037	L.00579	L.00185	L.00076

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	L.12306	L-.00021	977.53	857.88
#1	L.11506	L-.00040	984.40	858.37
#2	L.14561	L-.00034	980.86	858.15
#3	L.10852	L.00011	967.33	857.12

Method: SED5 Sample Name: FE IEC Operator:
Run Time: 07/10/89 10:27:50
Comment:
Mode: CONC Corr. Factor: .0025

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.22454	L.00084	L.37832	L.20163	L.79161	L.00776	L.25969
#1	L-.22040	L.00080	L.30328	L.23683	L.78019	L.00769	L.25325
#2	L-.23295	L.00098	L.55859	L.19622	L.79576	L.00728	L.26425
#3	L-.22027	L.00075	L.27311	L.17184	L.79887	L.00829	L.26157

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	L.00008	L.00002	L-.01693	L.01462	L-.00337	L-.22986	L.00000
#1	L.00010	L.00002	L-.01285	L.01620	L-.00202	L-.22481	L.00000
#2	L.00005	L.00002	L-.02148	L.00672	L.00354	L-.23365	L.00000
#3	L.00009	L.00002	L-.01647	L.02094	L-.01164	L-.23112	L.00000

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L

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Avge	951.31	L1.0060	L.00139	L.00260	L.09047	L-.07601	L.00045
#1	944.43	L.99905	L.00419	L.00953	L.09032	L-.06436	L.00049
#2	961.85	L1.0165	L-.00189	L-.00606	L.09032	L-.10026	L.00036
#3	947.64	L1.0025	L.00188	L.00433	L.09078	L-.06341	L.00049

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.01208	L-.17931	L-.15975	L.00112	L.00068	L-.06018	L.00251
#1	L.01560	L-.14146	L-.11242	L.00127	L.00221	L-.05325	L.00190
#2	L.01711	L-.20720	L-.19525	L.00060	L-.00238	L-.06682	L.00122
#3	L.00352	L-.18927	L-.17158	L.00150	L.00221	L-.06045	L.00441

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	L.12031	L-.00030	.31044	.39909
#1	L.12159	L-.00033	.24208	.30885
#2	L.11890	L-.00067	.48132	.59524
#3	L.12044	L.00010	.20791	.29317

Method: SED5 Sample Name: AS IEC Operator:
Run Time: 07/10/89 10:33:24
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.26145	L-.00108	L31.720	10122.	45.982	L-.05395	L-.07923
#1	L-1.1516	L-.02494	L28.471	10218.	45.650	L-.08092	L-.07923
#2	L-.25792	L-.01193	L33.113	10087.	44.156	L-.08092	L-.07923
#3	L.62514	L.03362	L33.577	10061.	48.140	L.00000	L-.07923

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	L-.01685	L-.00228	94.399	L.98767	L-.26996	L2.3554	L-.00453
#1	L-.02666	L-.00233	96.607	L-.51359	L.20247	L1.6824	L-.00458
#2	L-.01830	L-.00233	95.717	L1.0272	L-2.2272	L2.9442	L-.00458
#3	L-.00558	L-.00219	90.874	L2.4494	L1.2148	L2.4395	L-.00441

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	L22.471	L-.03623	L.33032	L-2.7713	L-.40209	L-.36575	L.03905
#1	L25.440	L-.07554	L1.2784	L-5.5427	L-.80418	L4.4526	L.02515
#2	L16.234	L-.04548	L.17159	L-2.4249	L-.34023	L-3.3713	L.03309
#3	L25.737	L.01233	L-.45901	L-.34642	L-.06186	L-2.1786	L.05890

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L6.8450	L-6.3755	L21.037	L-.23943	L-1.0219	L.10966	L-.33454
#1	L1.7113	L-3.9847	L21.300	L-.47886	L-2.1800	L.00000	L-.60825
#2	L11.677	L-1.5939	L14.200	L-.29929	L-1.1581	L.32898	L-.33454
#3	L7.1470	L-13.548	L27.611	L.05986	L.27250	L.00000	L-.06082

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	L.69188	L-.17338	10.253	25.560
#1	[illegible]	[illegible]	[illegible]	[illegible]

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Elem	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	L22.471	L-.03623	L.33032	L-2.7713	L-.40209	L-.36575	L.03905
#1	L25.440	L-.07554	L1.2784	L-5.5427	L-.80418	L4.4526	L.02515
#2	L16.234	L-.04548	L.17159	L-2.4249	L-.34023	L-3.3713	L.03309
#3	L25.737	L.01233	L-.45901	L-.34642	L-.06186	L-2.1786	L.05890

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L6.8450	L-6.3755	L21.037	L-.23943	L-1.0219	L.10966	L-.33454
#1	L1.7113	L-3.9847	L21.300	L-.47886	L-2.1800	L.00000	L-.60825
#2	L11.677	L-1.5939	L14.200	L-.29929	L-1.1581	L.32898	L-.33454
#3	L7.1470	L-13.548	L27.611	L.05986	L.27250	L.00000	L-.06082

Elem	Znlow	Znhigh	2Al308	2Al396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	L.69188	L-.17338	10.253	25.560
#1	L.12813	L-.35071	14.810	20.138
#2	L.97376	L-.20885	1.1392	23.391
#3	L.97376	L.03941	14.810	33.151

Method: SED5 Sample Name: CR IEC Operator:
Run Time: 07/10/89 10:37:03
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.31187	L.11820	131.83	L1.8330	283.19	L-.16184	L.01981
#1	L-.24306	L.10518	135.70	L3.4994	281.70	L.00000	L.09904
#2	L1.5808	L.08566	124.56	L-.49991	286.68	L-.48553	L.03962
#3	L-.40209	L.16374	135.24	L2.4996	281.20	L.00000	L-.07923

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	L.00679	L-.00019	L.01855	L3.1803	10375.	L1.0936	L-.00358
#1	L.00461	L-.00010	L1.0946	L3.1605	10380.	L1.4301	L-.00370
#2	L-.00267	L-.00036	L.92767	L.55309	10469.	L-1.5983	L-.00370
#3	L.01842	L-.00010	L-1.9667	L5.8272	10277.	L3.4490	L-.00334

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	L14.651	L.18961	L.67350	L.69283	L.03093	L1.6220	L.19260
#1	L15.640	L.19732	L.37750	L-.34642	L-.06186	L-1.3676	L.17804
#2	L12.671	L.12333	L-.63918	L-2.4249	L-.34023	L2.8306	L.18003
#3	L15.640	L.24819	L2.2822	L4.8498	L.49488	L3.4031	L.21974

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L1.6106	L-8.3679	L36.552	L.11972	L3.3722	L-54.227	L-.03041
#1	L2.6172	L-2.7893	47.334	L.05986	L3.2360	L-53.953	L.48660
#2	L1.4093	L-30.284	L22.089	L-.11972	L2.3163	L-57.160	L.12165
#3	L.80530	L7.9694	40.234	L.41901	L4.5644	L-51.567	L-.69949

Elem	Znlow	Znhigh	2Al308	2Al396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	L2.4088	L-.07881	112.78	124.47
#1	L2.0500	L-.09063	131.01	130.98
#2	L2.0500	L-.23249	117.34	124.24
#3	L3.1263	L.08669	89.998	118.20

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Method: SED5 Element Information Mon 07-10-89 10:46:23 AM page 1

Element:	Ag	Al	Al	As	B
Wavelength:	328.000	308.200	396.100	193.600	249.600
Use IECs:	YES	NO	YES	YES	YES
Number of IECs:	2	0	1	2	1
Affecting Element:	Fehigh	--n/a--	Cahigh	Alhigh	Fehigh
k1 factor:	-.22454	--n/a--	0	4.5205	.79161
k2 factor:	0	--n/a--	0	0	0
use?:	YES	--n/a--	NO	YES	YES
Affecting Element:	V	--n/a--	--n/a--	Fehigh	--n/a--
k1 factor:	-.01609	--n/a--	--n/a--	.20163	--n/a--
k2 factor:	0	--n/a--	--n/a--	0	--n/a--
use?:	YES	--n/a--	--n/a--	YES	--n/a--

Element:	Ba	Be	Ca	Ca	Cd
Wavelength:	493.400	234.800	315.800	393.300	228.800
Use IECs:	NO	YES	YES	NO	YES
Number of IECs:	0	1	0	0	3
Affecting Element:	--n/a--	Fehigh	--n/a--	--n/a--	As
k1 factor:	--n/a--	.25969	--n/a--	--n/a--	.00944
k2 factor:	--n/a--	0	--n/a--	--n/a--	0
use?:	--n/a--	YES	--n/a--	--n/a--	YES
Affecting Element:	--n/a--	--n/a--	--n/a--	--n/a--	Fehigh
k1 factor:	--n/a--	--n/a--	--n/a--	--n/a--	-.01693
k2 factor:	--n/a--	--n/a--	--n/a--	--n/a--	0
use?:	--n/a--	--n/a--	--n/a--	--n/a--	YES
Affecting Element:	--n/a--	--n/a--	--n/a--	--n/a--	Ni
k1 factor:	--n/a--	--n/a--	--n/a--	--n/a--	0
k2 factor:	--n/a--	--n/a--	--n/a--	--n/a--	0
use?:	--n/a--	--n/a--	--n/a--	--n/a--	NO

Element:	Co	Cr	Cu	Mg	Fe
Wavelength:	228.600	205.500	324.700	297.500	259.900
Use IECs:	YES	YES	YES	NO	YES
Number of IECs:	1	1	1	0	0
Affecting Element:	Ni	Fehigh	Fehigh	--n/a--	--n/a--
k1 factor:	0	-.00337	-.22986	--n/a--	--n/a--
k2 factor:	0	0	0	--n/a--	--n/a--

Method: SED5 Element Information Mon 07-10-89 10:46:23 AM page 2

use?:	NO	YES	YES	--n/a--	--n/a--

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Element:	Co	Cr	Cu	Mg	Fe
Wavelength:	228.600	205.500	324.700	297.500	259.900
Use IECs:	YES	YES	YES	NO	YES
Number of IECs:	1	1	1	0	0
Affecting Element:	Ni	Fehigh	Fehigh	--n/a--	--n/a--
k1 factor:	0	-.00337	-.22986	--n/a--	--n/a--
k2 factor:	0	0	0	--n/a--	--n/a--

use?:	NO	YES	YES	--n/a--	--n/a--

Element:	Fe	K	Li	Mn	Mo
Wavelength:	271.400	766.400	670.700	257.600	202.000
Use IECs:	NO	YES	YES	YES	YES
Number of IECs:	0	0	0	1	1
Affecting Element:	--n/a--	--n/a--	--n/a--	Fehigh	Fehigh
k1 factor:	--n/a--	--n/a--	--n/a--	.09047	-.07601
k2 factor:	--n/a--	--n/a--	--n/a--	0	0
use?:	--n/a--	--n/a--	--n/a--	YES	YES

Element:	Na	Ni	Pb	Sn	Sr
Wavelength:	589.000	231.600	220.300	189.900	421.500
Use IECs:	YES	YES	YES	YES	YES
Number of IECs:	0	0	3	2	0
Affecting Element:	--n/a--	--n/a--	Alhigh	Alhigh	--n/a--
k1 factor:	--n/a--	--n/a--	-4.0405	.05292	--n/a--
k2 factor:	--n/a--	--n/a--	0	0	--n/a--
use?:	--n/a--	--n/a--	YES	YES	--n/a--
Affecting Element:	--n/a--	--n/a--	Cu	Fehigh	--n/a--
k1 factor:	--n/a--	--n/a--	.019445	-.15975	--n/a--
k2 factor:	--n/a--	--n/a--	0	0	--n/a--
use?:	--n/a--	--n/a--	YES	YES	--n/a--
Affecting Element:	--n/a--	--n/a--	Fehigh	--n/a--	--n/a--
k1 factor:	--n/a--	--n/a--	-.17931	--n/a--	--n/a--
k2 factor:	--n/a--	--n/a--	0	--n/a--	--n/a--
use?:	--n/a--	--n/a--	YES	--n/a--	--n/a--

Element:	Ti	V	Y	Zn	Zn
Wavelength:	334.900	292.400	371.000	213.800	481.000
Use IECs:	YES	YES	YES	YES	YES
Number of IECs:	0	2	0	3	0
Affecting Element:	--n/a--	Cr	--n/a--	Cu	--n/a--
k1 factor:	--n/a--	-.00542	--n/a--	.004884	--n/a--
k2 factor:	--n/a--	0	--n/a--	0	--n/a--
use?:	--n/a--	YES	--n/a--	YES	--n/a--

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Affecting Element:	--n/a--	Fehigh	--n/a--	Fehigh	--n/a--
k1 factor:	--n/a--	-.06018	--n/a--	.12031	--n/a--
k2 factor:	--n/a--	0	--n/a--	0	--n/a--
use?:	--n/a--	YES	--n/a--	YES	--n/a--

Affecting Element:	--n/a--	--n/a--	--n/a--	Ni	--n/a--
k1 factor:	--n/a--	--n/a--	--n/a--	0	--n/a--
k2 factor:	--n/a--	--n/a--	--n/a--	0	--n/a--
use?:	--n/a--	--n/a--	--n/a--	NO	--n/a--

Element:	2Al	2Al
Wavelength:	308.200	396.100
Use IECs:	YES	YES
Number of IECs:	0	0

Method: SED5 Sample Name: INSTR BLANK 1 Operator:
Run Time: 07/10/89 10:49:38
Comment:
Mode: CONC Corr. Factor: 1

#1	Q71.066	.01576	62.657	84.271
#2	Q20.181	-.04335	62.657	39.192
#3	Q13.731	-.14974	35.316	26.412

SF 6232
R. Dilg
7-11-89

Standard: blnk

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.00860	.17620	.01133	-.01667	.11680	.00040	-.00033
#1	-.00920	.17680	.01080	-.00600	.11600	.00060	-.00020
#2	-.00680	.17680	.01240	-.01360	.11560	.00020	-.00040
#3	-.00980	.17500	.01080	-.03040	.11880	.00040	-.00040

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Avge	.40493	.05587	.00637	.01187	-.00013	.00453	.02253
#1	.40580	.05680	.00350	.01980	-.00040	.00440	.02360
#2	.40720	.05400	.00780	.01060	.00120	.00520	.02160
#3	.40180	.05680	.00780	.00520	-.00120	.00400	.02240

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Avge	.13813	.37533	.05040	.03747	.11913	.01040	.27860
#1	.13920	.37760	.03320	.03760	.11960	.01520	.27980
#2	.13760	.37640	.06000	.03800	.11980	-.00280	.28080
#3	.13760	.37200	.05800	.03680	.11800	.01880	.27520

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Avge	-.00093	.00267	.00220	.04467	.16927	.00373	-.00047
#1	-.00200	.00240	.00920	.04520	.17000	.00280	.00120
#2	.00100	.00400	-.00040	.04480	.17000	.00400	-.00100
#3	-.00180	.00160	-.00220	.04400	.16780	.00440	-.00160

Elem	Znlow	Znhigh	2A1308	2A1396
Avge	.17107	.38560	.00913	.00810
#1	.17240	.38560	.00960	.00940
#2	.17080	.39080	.00920	.00800
#3	.17000	.38040	.00860	.00690

Standard: ten1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	1.0514	.19213	.16040	8.2995	.20113	.00053	-.00073
#1	1.0524	.19120	.15900	8.3298	.20120	.00040	-.00020
#2	1.0422	.19320	.16100	8.2354	.20080	.00080	-.00080
#3	1.0596	.19200	.16120	8.3332	.20140	.00040	-.00120

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Avge	.46360	.06227	.26107	35.248	10.366	-.00660	22.672
#1	.46440	.06280	.26270	35.357	10.369	-.00840	22.727
#2	.46560	.06160	.25440	34.902	10.265	-.00620	22.455
#3	.46080	.06240	.26610	35.486	10.466	-.00520	22.835

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Avge	.14760	.48607	.04980	2.0647	.12487	43.931	21.164
#1	.14840	.48480	.01840	2.0772	.12440	44.043	21.279
#2	.14840	.48980	.07380	2.0344	.12620	43.508	20.893
#3	.14600	.48360	.05720	2.0826	.12400	44.243	21.319

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Avge	-.00123	.87380	5.0481	23.483	.17533	-.70340	23.090
#1	-.00270	.86860	5.0364	23.571	.17520	-.71920	23.142
#2	-.00100	.87260	5.0130	23.168	.17680	-.69620	22.815
#3	.00000	.88020	5.0948	23.710	.17400	-.69480	23.314

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R. Dilg 7-11-89

Elem	Znlow	Znhigh	2A130B	2A1396
Avge	.17560	.37993	.01253	.15940
#1	.17720	.37940	.01160	.15980
#2	.17560	.38400	.01320	.16020
#3	.17400	.37640	.01280	.15820

Standard: ten2

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Avge	-.16893	.20347	.01467	.08540	8.4242	.00033	34.914
#1	-.16840	.20320	.01320	.09440	8.3910	.00010	34.837
#2	-.16720	.20520	.01720	.07540	8.3450	.00060	34.615
#3	-.17120	.20200	.01360	.08640	8.5366	.00030	35.290

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Avge	6.2474	30.535	37.367	.06413	-.13007	8.2619	.03000
#1	6.2324	30.444	37.279	.05980	-.13100	8.2456	.03080
#2	6.2216	30.219	37.198	.06740	-.12720	8.1724	.02920
#3	6.2882	30.944	37.625	.06520	-.13200	8.3678	.03000

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Avge	.19600	.49313	1.6208	.03787	44.726	.02867	.28680
#1	.19600	.49040	1.6012	.03760	44.570	.02980	.28760
#2	.19720	.49560	1.6296	.03840	44.397	.03620	.29040
#3	.19480	.49340	1.6316	.03760	45.211	.02000	.28240

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Avge	3.4619	.01877	-.00080	.04953	.16913	25.278	.00387
#1	3.4588	.01860	-.01000	.05040	.16920	25.204	.00560
#2	3.4382	.01840	-.00160	.04940	.17100	25.054	.00360
#3	3.4887	.01930	.00920	.04880	.16720	25.576	.00240

Elem	Znlow	Znhigh	2A130B	2A1396
Avge	26.827	.72867	.00013	.00363
#1	26.779	.72960	.00040	.00440
#2	26.686	.73040	.00040	.00570
#3	27.017	.72600	-.00040	.00080

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Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
Cd	228.800	ten2	blnk	267.660	-1.70410	07/10/89 12:08:51
Be	234.800	ten2	blnk	286.416	.095472	07/10/89 12:08:51
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	07/10/89 12:05:53

SF 6232

R. Dilg
7-11-89

Standardization Report Mon 07-10-89 12:11:03 PM page 1

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
Cd	228.800	ten2	blnk	267.660	-1.70410	07/10/89 12:08:51
Be	234.800	ten2	blnk	286.416	.095472	07/10/89 12:08:51
Y	371.000	ten1	blnk	433.072	.202100	07/10/89 12:05:53
As	193.600	ten1	blnk	1202.48	20.0414	07/10/89 12:05:53

SF 6232
R. Dilg
7-11-89

Method: SED5 Sample Name: INSTR BLANK 1 Operator:
Run Time: 07/10/89 13:40:10
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.12105	L-.01843	L10.986	L-17.544	L1.8632	L-.10790	L-.15964
#1	L-.77013	L-.02494	L2.4757	L-17.113	L.36982	L-.40461	L-.12125
#2	L2.4105	L-.01843	L21.044	L-22.433	L3.8576	L.24277	L-.23522
#3	L-1.2772	L-.01193	L9.4388	L-13.085	L1.3622	L-.16184	L-.12245

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	L-.00436	L.00835	L-.20099	L-1.0469	L-.00016	L1.5875	L-.00340
#1	L-.00776	L.00826	L-.57979	L-1.3432	L.20231	L.91435	L-.00352
#2	L-.00630	L.00840	L.32690	L-1.4617	L.40477	L3.4375	L-.00334
#3	L.00097	L.00840	L-.35008	L-.33581	L-.60756	L.41069	L-.00334

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	L-.39597	L-.04702	L1.2741	L-.34642	L-.41330	L-1.8164	L-.02217
#1	L.79191	L-.04779	L1.3942	L-.34642	L-.47509	L-.32168	L-.02647
#2	L.19798	L-.05010	L1.5486	L-.34642	L-.52128	L-2.6118	L-.02151
#3	L-2.1778	L-.04316	L.87941	L-.34642	L-.24353	L-2.5158	L-.01853

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L5.0331	L5.8633	L27.473	L.11972	L-1.0900	L-.00283	L-.34646
#1	L.20133	L7.8423	L24.449	L.05986	L-1.1581	L-.16627	L-.66404
#2	L5.9391	L7.8191	41.804	L.05986	L-1.1581	L1.2329	L-.23097
#3	L8.9590	L1.9284	L16.166	L.23943	L-.95376	L-1.0751	L-.14436

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	L.74103	L-.20294	-13.671	4.1051
#1	L1.4363	L-.22067	-33.037	-3.5629
#2	L.04049	L-.24431	4.5568	10.844
#3	L.74632	L-.14383	-12.531	5.0346

Method: SED5 Sample Name: AQC 1 Operator:
Run Time: 07/10/89 13:43:03
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q504.81	5.7239	5131.0	5017.5	5126.7	5089.0	5039.7
#1	Q504.11	5.7109	5132.8	5001.5	5101.9	5078.8	5021.1
#2	Q503.58	5.7109	5118.4	5005.1	5127.1	5080.4	5043.8

#3	Q506.74	5.7500	5141.7	5045.8	5151.2	5107.6	5054.3

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	5.3795	5.0635	5105.9	5187.0	5097.3	5157.6	5.0521
#1	5.3812	5.0492	5102.6	5172.3	5080.4	5143.1	5.0393
#2	5.3601	5.0564	5100.6	5172.6	5097.2	5148.1	5.0470
#3	5.3972	5.0848	5114.4	5216.0	5114.4	5181.7	5.0700

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	5024.7	6.4468	.64776	5113.8	5146.3	5175.3	-.02680
#1	5016.3	6.4245	3.3117	5100.3	5134.1	5178.7	-.00960
#2	5019.0	6.4591	-.70353	5112.8	5141.8	5163.3	-.03044
#3	5038.9	6.4568	-.66492	5128.3	5163.0	5183.9	-.04037

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	5173.9	5196.1	5059.5	5187.5	5093.7	5014.9	4960.3
#1	5156.9	5172.9	5073.3	5173.2	5080.8	5000.2	4948.7
#2	5210.7	5221.8	5070.2	5180.7	5081.5	5003.9	4949.8
#3	5154.2	5193.8	5035.0	5208.6	5118.7	5040.4	4982.3

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	5107.6	4.8015	4906.6	5123.0
#1	5092.9	4.8626	4867.9	5116.4
#2	5099.2	4.7858	4915.7	5113.6
#3	5130.6	4.7562	4936.2	5139.1

Method: SED5 Sample Name: HIGH AQC 1 Operator:
Run Time: 07/10/89 13:47:00
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q-.88564	98.928	Q98520.	Q2.1221	Q-7.3894	Q1.6994	Q.04251
#1	Q.68760	98.401	Q97945.	Q-43.152	Q-7.5780	Q1.7803	Q-.06888
#2	Q-.65274	98.789	Q98113.	Q36.514	Q-6.5197	Q1.6994	Q-.09723
#3	Q-2.6918	99.595	Q99500.	Q13.004	Q-8.0703	Q1.6184	Q.29365

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	100.19	Q.00000	Q.81717	Q1.3827	Q2.2180	Q2.9581	Q83.527
#1	99.488	Q.00000	Q1.1719	Q1.7383	Q1.3386	Q2.9883	Q83.367
#2	100.10	Q.00000	Q2.6240	Q1.0272	Q4.5800	Q3.6195	Q83.518
#3	100.98	Q.00000	Q-1.3444	Q1.3827	Q.73540	Q2.2664	Q83.695

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L

Avge	Q94352.	97.407	97.405	Q7.9676	Q10.194	Q9.4871	105.40
#1	Q93675.	96.807	96.860	Q7.9676	Q10.016	Q6.8494	104.82
#2	Q94308.	97.357	97.079	Q7.9676	Q10.245	Q11.280	104.99
#3	Q95073.	98.058	98.275	Q7.9676	Q10.321	Q10.332	106.38

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q1.8119	Q9.0954	Q4.2774	Q3.0528	Q1.0900	Q2.7213	Q1.0971
#1	Q6.8450	Q11.638	Q-2.7592	Q2.9331	Q.68125	Q2.5433	Q1.2415
#2	Q3.8252	Q22.853	Q7.9583	Q3.1126	Q1.4988	Q3.5810	Q1.2415
#3	Q-5.2344	Q-7.2054	Q7.6330	Q3.1126	Q1.0900	Q2.0396	Q.80840

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	Q90924.	98.038	98063.	98404.
#1	Q90461.	97.585	97523.	97843.
#2	Q90822.	97.733	97899.	97972.
#3	Q91489.	98.797	98767.	99397.

Method: SED5 Sample Name: AG AQC 1 Operator:
Run Time: 07/10/89 13:50:26
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	51.538	.01193	Q28.007	Q-.60933	Q4.0065	Q.10790	Q.08378
#1	50.749	.00759	Q30.328	Q.29412	Q1.8565	Q.00000	Q.10548
#2	50.746	.03362	Q22.901	Q-6.5667	Q8.7918	Q.16184	Q.09347
#3	53.118	-.00542	Q30.792	Q4.4446	Q1.3713	Q.16184	Q.05240

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	.00279	Q.01650	Q-.36053	Q-1.0074	Q2.0246	Q.91878	Q.01191
#1	.00606	Q.02291	Q-.63689	Q-3.9507	Q3.0371	Q-.09298	Q.01829
#2	.00715	Q.01467	Q1.3558	Q-.33581	Q1.6198	Q-.08235	Q.01031
#3	-.00485	Q.01193	Q-1.8005	Q1.2642	Q1.4171	Q2.9317	Q.00712

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	Q16.234	-.02852	.29600	Q2.4249	Q-.18300	Q1.1905	-.01985
#1	Q22.768	-.03854	-.34319	Q1.7321	Q-.24395	Q2.8754	-.02846
#2	Q15.640	.00771	-.56197	Q3.8106	Q.03023	Q-3.6569	-.00066
#3	Q10.295	-.05473	1.7931	Q1.7321	Q-.33528	Q4.3530	-.03044

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q5.0331	Q17.558	Q7.0950	Q.23943	Q-.74938	Q-.84060	Q-.14436
#1	Q5.9391	Q10.386	Q-3.9510	Q.23943	Q-1.3625	Q-.64381	Q-.31759
#2	Q1.7113	Q5.7174	Q15.778	Q.41901	Q.27250	Q-1.4712	Q.02887
#3	Q7.4490	Q36.571	Q9.4583	Q.05986	Q-1.1581	Q-.40683	Q-.14436

Elem	Znlow	Znhigh	2Al308	2Al396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	Q16.937	-.16944	17.088	25.173
#1	Q23.503	-.13792	14.810	27.574
#2	Q15.273	-.09063	28.480	21.997
#3	Q12.036	-.27978	7.9745	25.947

Method: SED5 Sample Name: 89FM22S01 Operator:
Run Time: 07/10/89 13:53:22
Comment: SF6232
Mode: CONC Corr. Factor: 1.22

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L2.5898	L-.01455	L16.423	L14.020	15.977	16.948	L.12253
#1	L1.0352	L-.03043	L13.781	L6.9613	16.114	17.178	L.01777
#2	L3.5001	L.01720	L12.082	L9.3662	19.071	16.684	L.27094
#3	L3.2343	L-.03043	L23.408	L25.732	12.745	16.981	L.07887

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	59.063	H63.192	L-.00997	L.53018	L.90624	12.043	32.698
#1	58.844	H63.164	L-1.0326	L-.48198	L1.7295	11.007	32.602
#2	58.561	H62.057	L.57916	L3.8558	L.24773	13.493	32.327
#3	59.783	H64.354	L.42352	L-1.7833	L.74153	11.630	33.164

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	L33.090	L.15610	L1.9678	10.143	L.28775	L2.6310	2.2168
#1	L33.574	L.11096	L1.5125	L9.7204	L.36731	L3.9856	2.1877
#2	L35.023	L.21252	L2.1562	13.524	L.47132	L-2.2343	2.2168
#3	L30.675	L.14481	L2.2347	L7.1847	L.02463	L6.1416	2.2459

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L6.0176	L17.236	L32.428	54.843	L3.7817	L1.6197	L.35223
#1	L4.2983	L22.531	45.254	54.843	L3.3245	L.41741	L-.17612
#2	L4.6667	L21.235	L19.282	54.186	L4.8206	L2.5226	L.98625
#3	L9.0878	L7.9411	L32.748	55.501	L3.1999	L1.9192	L.24656

Elem	Znlow	Znhigh	2Al308	2Al396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	L26.120	L-.27883	12.509	-72.100
#1	L26.631	L-.33412	-15.288	-70.966
#2	L26.044	L-.13942	26.407	-74.084
#3	L25.686	L-.36296	26.407	-71.249

Method: SED5 Sample Name: 89FM22D01 Operator:

Run Time: 07/10/89 13:56:27
Comment: SF6232
Mode: CONC Corr. Factor: 1.22

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L3.5626	L-.01984	L3.7755	L16.198	13.456	17.046	L-.03687
#1	L.78486	L-.00661	L-2.0765	L25.334	14.881	16.487	L-.12786
#2	L5.6889	L-.01455	L9.2500	L15.096	11.217	17.474	L.07594
#3	L4.2141	L-.03837	L4.1531	L8.1657	14.271	17.178	L-.05870

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	59.499	H64.001	L-.70563	L.60248	L3.3763	11.014	33.010
#1	59.051	H63.175	L-1.3363	L-.04820	L1.7295	8.5488	32.707
#2	59.636	H64.170	L.72004	L1.3254	L4.1998	13.480	33.117
#3	59.810	H64.659	L-1.5007	L.53018	L4.1997	11.013	33.208

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	L30.917	L.14199	L2.4598	L7.1847	L.06262	L3.9879	2.1412
#1	L32.849	L.13353	L1.2927	L7.1847	L.02565	L4.2783	2.1307
#2	L30.675	L.15610	L3.5379	L9.7204	L.13682	L2.5922	2.1489
#3	L29.226	L.13635	L2.5488	L4.6489	L.02540	L5.0934	2.1440

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L4.1755	L1.6757	L6.1192	55.208	L3.4908	L2.4015	L.17612
#1	L-4.9123	L9.5537	L-.94077	54.843	L4.0725	L-.48428	L-.17612
#2	L9.0878	L-8.0711	L21.200	55.281	L3.3245	L4.6477	L.66924
#3	L8.3510	L3.5444	L-1.9011	55.501	L3.0752	L3.0411	L.03522

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	L19.750	L-.38219	18.068	-79.943
#1	L19.513	L-.34133	1.3898	-82.305
#2	L19.861	L-.40623	51.424	-80.604
#3	L19.875	L-.39902	1.3898	-76.919

Method: SED5 Sample Name: 89FM22S02 Operator:
Run Time: 07/10/89 13:59:16
Comment: SF6232
Mode: CONC Corr. Factor: 1.22

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.00424	L-.00397	L3.9643	L19.122	118.93	13.394	L-.17645
#1	L-1.3607	L-.03837	L-6.0408	L19.286	116.22	13.427	L-.30646
#2	L1.3293	L.00926	L12.648	L4.9782	122.27	13.229	L-.10779
#3	L.01876	L.01720	L5.2857	L33.104	118.29	13.525	L-.11511

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg

Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	91.188	H95.114	L-1.0568	L-1.0363	L-.82230	8.5918	H44.983
#1	91.538	H95.938	L-.36230	L.45788	L-4.1983	6.7359	H45.209
#2	91.171	H94.844	L-1.1409	L-1.2050	L2.4712	9.2087	H44.984
#3	90.854	H94.560	L-1.6671	L-2.3617	L-.73985	9.8309	H44.758

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	135.50	L.32066	L1.6224	12.256	L.55587	L-.26664	10.301
#1	133.57	L.28305	L1.3555	L9.7204	L.29514	L-2.5782	10.368
#2	134.29	L.32536	L1.4340	L9.7204	L.57432	L1.3828	10.296
#3	138.64	L.35357	L2.0777	17.328	L.79817	L.39549	10.240

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L8.5966	L17.861	L18.017	58.750	L4.3219	L.24896	L.03522
#1	L5.4036	L13.863	L23.146	59.006	L3.8232	L-1.2098	L-.07045
#2	L9.8246	L15.473	L25.075	58.787	L4.0725	L.73535	L.03522
#3	L10.561	L24.248	L5.8303	58.458	L5.0699	L1.2213	L.14089

Elem	Znlow	Znhigh	2Al308	2Al396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	60.756	L-.31969	6.9492	-125.49
#1	59.645	L-.42065	-6.9492	-129.36
#2	60.753	L-.32691	18.068	-125.40
#3	61.872	L-.21153	9.7289	-121.71

Method: SED5 Sample Name: 89FM22S03 Operator:
Run Time: 07/10/89 14:02:07
Comment: SF6232
Mode: CONC Corr. Factor: 1.22

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.03476	L.00926	L10.949	L-14.363	41.959	11.452	L-.14715
#1	L1.8240	L-.00661	L10.383	L-8.4137	38.553	11.650	L-.06530
#2	L2.2914	L.02514	L5.2857	L-3.8758	42.147	11.847	L-.01226
#3	L-4.0111	L.00926	L17.179	L-30.799	45.178	10.860	L-.36389

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	74.347	H83.526	L-.12213	L-.53018	L1.8945	7.5396	34.459
#1	74.523	H84.139	L.68083	L1.6869	L1.4826	8.5553	34.564
#2	74.247	H83.259	L-.99364	L-1.7833	L2.9649	9.1860	34.388
#3	74.270	H83.180	L-.05359	L-1.4941	L1.2359	L4.8776	34.426

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	L55.553	L.20782	L1.8370	13.101	L1.5283	L-.46922	8.6060
#1	L53.863	L.16174	L2.0620	L9.7204	L1.3815	L-.60853	8.6190

#2	L56.761	L.22663	L3.2082	19.864	L1.6021	L1.6663	8.6068
#3	L56.036	L.23509	L.24074	L9.7204	L1.6013	L-2.4654	8.5922

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L7.9825	L3.3310	L27.944	47.833	L4.4881	L1.7620	L-.38745
#1	L5.0351	L-15.234	46.224	48.052	L4.0725	L3.8306	L-.07045
#2	L6.1404	L18.437	L4.8471	47.833	L4.8206	L2.0365	L.14089
#3	L12.772	L6.7906	L32.760	47.614	L4.5712	L-.58118	L-1.2328

Elem	Znlow	Znhigh	2Al308	2Al396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	L31.513	L-.25479	20.848	-96.952
#1	L31.889	L-.25479	43.085	-98.181
#2	L31.128	L-.24037	34.746	-101.30
#3	L31.523	L-.26922	-15.288	-91.377

Method: SED5 Sample Name: 89FM22S04 Operator:
Run Time: 07/10/89 14:04:59
Comment: SF6232
Mode: CONC Corr. Factor: 1.22

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L1.3310	L-.00397	L-6.0408	L3.1840	44.848	42.485	L-.09030
#1	L-.61856	L-.05424	L11.515	L-2.8413	44.268	43.044	L-.22128
#2	L.34422	L-.00661	L-33.791	L-15.667	41.556	41.958	L-.07418
#3	L4.2674	L.04895	L4.1531	L28.061	48.721	42.452	L.02456

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	102.82	0.00000	L-1.2516	L1.5423	L1.5834	8.9936	35.261
#1	103.52	0.00000	L-.71640	L.67477	L6.1942	8.5753	35.617
#2	102.22	0.00000	L-1.2489	L1.1086	L-1.7103	9.8003	35.084
#3	102.72	0.00000	L-1.7896	L2.8437	L.26634	8.6051	35.082

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	5362.8	L5.6402	L3.0459	12.256	631.41	L2.6986	18.386
#1	5408.7	L5.6064	L1.7794	L9.7204	637.37	L-.13648	18.713
#2	5337.7	L5.5782	L4.6213	L9.7204	628.15	L3.4117	18.263
#3	5342.1	L5.7362	L2.7372	17.328	628.70	L4.8206	18.183

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L1.5965	L13.946	L30.416	111.22	L4.6128	L1.5186	L-.07045
#1	L-1.9649	L26.384	41.321	112.90	L3.3245	L.57166	L-.28179
#2	L2.8246	L-21.579	L28.802	110.49	L4.4466	L.92845	L-.81013
#3	L3.9299	L37.033	L21.125	110.27	L6.0673	L3.0558	L.88058

Elem	Znlow	Znhigh	2Al308	2Al396
Units	ug/L	Mg/L	ug/L	ug/L

Avge	L19.473	L-.32931	8.3390	-133.43
#1	L18.291	L-.55766	-11.119	-119.16
#2	L19.602	L-.35575	-23.627	-152.89
#3	L20.526	L-.07451	59.763	-128.23

Method: SED5 Sample Name: 89FM22S05 Operator:
Run Time: 07/10/89 14:11:05
Comment: SF6232
Mode: CONC Corr. Factor: 1.22

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-.27540	L-.00661	L-10.005	L-18.290	33.091	14.940	L-.08664
#1	L1.1900	L-.01058	L-28.128	L-28.932	33.701	15.204	L-.06237
#2	L-1.8624	L.00132	L17.745	L-24.587	31.262	14.611	L-.13518
#3	L-.15379	L-.01058	L-19.633	L-1.3517	34.309	15.006	L-.06237

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	62.520	H67.601	L-.30366	L-1.1568	L1.7294	L3.3195	28.626
#1	62.395	H67.321	L-.98698	L.67477	L-2.7166	L3.6266	28.545
#2	62.239	H67.151	L-.60330	L-3.0847	L7.1634	L1.7819	28.491
#3	62.925	H68.332	L.67928	L-1.0604	L.74155	L4.5502	28.842

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	L42.510	L.15422	L1.9050	L8.8752	L1.0049	L.67135	3.5061
#1	L42.993	L.15046	L2.4231	L9.7204	L.92975	L1.1367	3.4854
#2	L42.993	L.16174	L.58616	L9.7204	L1.1551	L-1.4234	3.4988
#3	L41.544	L.15046	L2.7058	L7.1847	L.92975	L2.3007	3.5340

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L5.8948	L.42261	L7.4038	35.455	L4.2388	L.68758	L-.10567
#1	L1.7193	L16.928	L9.6491	35.345	L4.3219	L2.0011	L-.17612
#2	L7.6141	L-22.362	L12.538	35.345	L3.9479	L-.75413	L-.17612
#3	L8.3510	L6.7016	L.02460	35.674	L4.4466	L.81578	L.03522

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	149.09	L-.17066	-4.1695	-96.858
#1	146.15	L-.16826	-2.7797	-111.79
#2	150.28	L-.13942	-15.288	-79.754
#3	150.83	L-.20432	5.5593	-99.031

Method: SED5 Sample Name: 89FM11R15 Operator:
Run Time: 07/10/89 14:14:45
Comment: SF6232
Mode: CONC Corr. Factor: 1.22

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.98606	L-.03837	L19.444	L13.193	191.83	L2.6656	L-.10060
#1	L1.6896	L-.05424	L22.276	L23.533	194.26	L2.7643	L-.14939
#2	L.76909	L-.00661	L11.515	L14.220	191.82	L2.7643	L-.15159
#3	L.49954	L-.05424	L24.541	L1.8275	189.42	L2.4681	L-.00083

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	L.11785	L.13396	L.47309	L-2.0725	L1.0704	L3.9884	L.01510
#1	L.12628	L.13998	L1.5838	L-1.0604	L-4.6933	L4.1956	L.01820
#2	L.11785	L.13024	L.92085	L-3.0847	L2.7171	L2.9661	L.01388
#3	L.10942	L.13168	L-1.0854	L-2.0725	L5.1873	L4.8036	L.01323

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	L17.632	L-.06112	L1.1200	L-.84526	L-.52275	L-.15985	L.34763
#1	L18.357	L-.05266	L1.4968	L-1.6905	L-.29711	L-4.9318	L.35530
#2	L18.357	L-.04420	L.17794	L-.42263	L-.41108	L-1.2062	L.34924
#3	L16.183	L-.08651	L1.6852	L-.42263	L-.86007	L5.6584	L.33834

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L4.9123	L4.1317	L13.787	L.29211	L2.7843	L-.23200	L-.21134
#1	L4.6667	L22.538	L-.00554	L.29211	L3.0752	L-1.5337	L-.49312
#2	L2.4562	L-13.704	L34.641	L.51119	L3.3245	L1.0155	L.03522
#3	L7.6141	L3.5610	L6.7262	L.07303	L1.9532	L-.17775	L-.17612

Elem	Znlow	Znhigh	2Al308	2Al396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	L5.0524	L-.31008	5.5593	13.607
#1	L4.7378	L-.29806	-40.305	12.095
#2	L6.0558	L-.20432	51.424	14.363
#3	L4.3637	L-.42786	5.5593	14.363

Method: SED5 Sample Name: 89FM22S02 DUP Operator:
Run Time: 07/10/89 14:17:54
Comment: SF6232
Mode: CONC Corr. Factor: 1.22

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-1.2263	L.00397	L-7.9286	L-8.6001	117.37	13.032	L-.28087
#1	L.19687	L.01720	L-41.153	L-15.906	118.56	13.229	L-.40858
#2	L-2.5235	L-.01455	L9.8163	L-13.988	117.40	12.834	L-.25049
#3	L-1.3522	L.00926	L7.5510	L4.0935	116.17	13.032	L-.18353

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	91.159	H95.150	L.60982	L-1.4700	L1.8127	L4.0861	H44.922

#1	90.769	H94.632	L1.8007	L.81937	L3.7066	6.7644	H44.689
#2	91.445	H95.430	L.93234	L-1.9279	L.49516	L3.0536	H45.079
#3	91.263	H95.390	L-.90354	L-3.3016	L1.2362	L2.4404	H45.000

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	144.20	L.36392	L1.5701	12.256	L.45762	L.16347	10.194
#1	144.44	L.40717	L2.8471	17.328	L.79332	L3.7753	10.118
#2	141.54	L.33665	L1.5596	12.256	L.23369	L-4.5530	10.223
#3	146.61	L.34793	L.30355	L7.1847	L.34587	L1.2681	10.241

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L1.5965	L17.503	L-.58371	58.276	L4.0726	L1.0351	L-.24656
#1	L.61404	L18.484	L-24.960	57.910	L4.8206	L4.0581	L-.17612
#2	L6.8773	L5.2897	L6.7917	58.568	L3.5739	L.62498	L-1.2328
#3	L-2.7018	L28.734	L16.417	58.349	L3.8232	L-1.5778	L.66924

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	58.647	L-.27883	4.1695	-136.36
#1	59.442	L-.16826	9.7289	-152.33
#2	57.780	L-.34133	-40.305	-130.21
#3	58.720	L-.32691	43.085	-126.53

Method: SED5 Sample Name: 89FM22S02 SPK Operator:
Run Time: 07/10/89 14:21:02
Comment: SF6232
Mode: CONC Corr. Factor: 1.52

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	54.575	L.80925	772.85	L-.62904	971.91	216.97	9.7643
#1	52.416	L.84222	761.56	L-20.036	957.76	213.28	9.7286
#2	53.080	L.75322	793.32	L-19.968	993.08	223.62	9.8558
#3	58.228	L.83233	763.68	L38.116	964.89	214.02	9.7085

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	142.95	Q.00000	24.303	100.25	97.763	57.453	H70.460
#1	141.93	Q.00000	24.961	97.762	99.405	55.029	H69.896
#2	145.12	Q.00000	24.510	99.023	93.865	58.830	H71.767
#3	141.81	Q.00000	23.437	103.98	100.02	58.499	H69.715

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	926.57	L1.2934	22.365	68.978	104.93	106.28	62.320
#1	917.54	L1.3192	21.387	68.978	104.44	110.56	61.560
#2	942.36	L1.1646	23.793	65.819	106.43	102.43	64.066
#3	919.79	L1.3965	21.915	72.138	103.94	105.86	61.334

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	160.81	807.93	417.46	1076.1	104.28	51.071	48.492
#1	162.80	796.00	416.26	1062.4	103.55	47.123	47.703
#2	160.05	773.74	437.82	1106.8	103.86	53.209	48.492
#3	159.59	854.05	398.29	1059.0	105.41	52.881	49.282

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	455.51	L-.03294	808.66	583.36
#1	452.33	L.07787	843.29	558.64
#2	460.98	L-.41628	770.56	624.68
#3	453.24	L.23958	812.12	566.76

Method: SED5 Sample Name: DIGESTION BLANK Operator:
Run Time: 07/10/89 14:24:05
Comment: SF6232
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.14505	L-.01843	L6.0346	L6.5043	L3.0185	L.10790	L-.14275
#1	L-.18838	L-.03145	L9.9030	L28.857	L3.3816	L.00000	L-.11344
#2	L.00757	L-.01193	L-.77367	L-19.106	L1.3255	L.16184	L-.24903
#3	L.61597	L-.01193	L8.9746	L9.7622	L4.3483	L.16184	L-.06577

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	L.06896	L.08281	L.23237	L-1.6988	L2.7670	L3.0195	L.01397
#1	L.07660	L.09184	L1.7159	L-2.8840	L3.4420	L3.1787	L.01829
#2	L.07296	L.08019	L-1.3631	L-1.1062	L5.0618	L1.9355	L.01297
#3	L.05733	L.07640	L.34433	L-1.1062	L-.20261	L3.9443	L.01066

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	L10.196	L-.03854	L.96092	L-.00001	L-.33674	L-.78222	L.07346
#1	L10.889	L-.07785	L1.2912	L-1.3857	L-.51877	L2.2045	L.06685
#2	L10.889	L.00308	L.01716	L1.7321	L-.15493	L-2.8465	L.09464
#3	L8.8101	L-.04085	L1.5744	L-.34642	L-.33653	L-1.7046	L.05890

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L5.2344	L12.611	L17.482	L.29929	L2.4866	L-.67269	L-.49081
#1	L.50331	L34.066	44.167	L.23943	L2.4185	L-.39724	L-.31759
#2	L5.6371	L-8.8516	L-20.117	L.41901	L2.7250	L-1.6173	L-.66404
#3	L9.5629	L12.619	L28.394	L.23943	L2.3163	L-.00356	L-.49081

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	L2.2193	L-.20491	-10.253	-.30982
#1	L1.7363	L-.26795	1.1392	4.3375

#2	L2.0402	L-.13792	-26.202	-5.4219
#3	L2.8813	L-.20885	-5.6961	.15491

Method: SED5 Sample Name: INSTR BLANK 2 Operator:
Run Time: 07/10/89 14:27:55
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-1.9959	L-.01193	L-1.7021	L-.50444	L3.1650	L-.56645	L-.18734
#1	L-1.3662	L-.00542	L9.4388	L-3.0159	L4.8371	L-.48553	L-.24062
#2	L-2.8585	L-.02494	L-6.3441	L-3.6529	L3.8265	L-.89014	L-.18814
#3	L-1.7630	L-.00542	L-8.2009	L5.1554	L.83121	L-.32369	L-.13326

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	L.00339	L.01554	L-.78953	L-2.7260	L-.47246	L-.17143	L.00056
#1	L.00242	L.01559	L-.65902	L-.75063	L.20237	L.66624	L.00056
#2	L.00097	L.01559	L-.33150	L-3.4766	L2.2272	L-.08660	L.00056
#3	L.00679	L.01546	L-1.3781	L-3.9507	L-3.8469	L-1.0939	L.00056

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	L-.79193	L-.01387	L.19304	L-.69284	L-.18432	L-1.8775	L-.02217
#1	L-2.1778	L-.02929	L1.2784	L.69283	L-.15200	L1.3972	L-.01655
#2	L-.39597	L-.01079	L-.09867	L-2.4249	L-.15367	L-4.8987	L-.02747
#3	L.19798	L-.00154	L-.60057	L-.34642	L-.24730	L-2.1309	L-.02250

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L4.3285	L-25.948	L25.638	L.23943	L-.88564	L-1.1548	L-.69291
#1	L5.3351	L-10.002	L18.929	L.23943	L-.95376	L-.65862	L-.66404
#2	L2.0132	L-51.902	44.178	L.23943	L-1.1581	L-1.6335	L-.92389
#3	L5.6371	L-15.939	L13.806	L.23943	L-.54501	L-1.1724	L-.49081

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	L.20751	L-.16156	-35.316	-7.2033
#1	L-.10223	L-.06699	-33.037	-2.1687
#2	L.05297	L-.26795	-60.378	-10.766
#3	L.67179	L-.14974	-12.531	-8.6750

Method: SED5 Sample Name: AQC 2 Operator:
Run Time: 07/10/89 14:30:48
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q507.91	5.7911	5173.2	5090.8	5157.7	5115.5	5081.9

#1	Q503.51	5.7630	5124.9	5051.3	5126.2	5055.6	5050.4
#2	Q504.35	5.7695	5131.4	5053.2	5114.3	5075.7	5064.2
#3	Q515.88	5.8410	Q5263.3	5168.0	5232.5	5215.3	5131.1

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	5.4425	5.1023	5149.1	5246.9	5175.1	5177.3	5.1291
#1	5.4092	5.0521	5100.7	5210.0	5149.4	5126.9	5.0919
#2	5.4325	5.0605	5140.9	5226.5	5135.9	5143.3	5.1050
#3	5.4859	5.1944	5205.6	Q5304.3	5239.9	Q5261.7	5.1905

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	5075.1	6.5902	1.0767	5139.4	5194.2	5239.3	-.01919
#1	5038.9	6.5701	1.0853	5084.7	5158.4	5206.9	-.00860
#2	5050.2	6.5956	.26168	5112.8	5167.7	5224.8	-.00662
#3	5136.3	6.6048	1.8832	5220.8	Q5256.6	Q5286.2	-.04236

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	5241.3	Q5340.3	5049.5	5225.4	5134.0	5058.6	5000.5
#1	5213.1	5249.9	5031.1	5171.4	5088.3	5016.5	4952.7
#2	5239.1	Q5375.2	5052.8	5183.2	5099.7	5031.2	4963.0
#3	Q5271.7	Q5395.9	5064.6	Q5321.7	5214.0	5128.1	5085.8

Elem	Znlow	Znhigh	2Al308	2Al396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	5163.1	4.9513	4943.0	5160.7
#1	5133.4	4.9985	4902.0	5112.2
#2	5144.3	4.9926	4929.4	5123.3
#3	5211.8	4.8626	4997.7	5246.5

Method: SED5 Sample Name: HIGH AQC 2 Operator:
Run Time: 07/10/89 14:34:04
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q.66887	100.51	Q100140.	Q-21.300	Q-2.6569	Q2.0230	Q.37113
#1	Q.68814	100.65	Q100440.	Q-9.0159	Q-4.8039	Q2.1040	Q.74566
#2	Q2.8120	101.01	Q100720.	Q-3.6051	Q-1.5393	Q2.7513	Q.28053
#3	Q-1.4935	99.861	Q99254.	Q-51.279	Q-1.6274	Q1.2138	Q.08721

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	102.13	Q.00000	Q1.2094	Q4.3655	Q1.1438	Q3.6797	Q84.279
#1	102.00	Q.00000	Q1.1806	Q4.5235	Q-2.9060	Q3.4842	Q84.256
#2	102.88	Q.00000	Q2.0015	Q3.8717	Q9.8527	Q5.2073	Q84.409
#3	101.50	Q.00000	Q.44608	Q4.7013	Q-3.5153	Q2.3477	Q84.172

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	Q95907.	99.083	98.387	Q9.6997	Q10.707	Q12.604	106.71
#1	Q95883.	98.964	98.559	Q7.9676	Q10.842	Q17.700	107.08
#2	Q96596.	99.873	99.537	Q11.085	Q10.852	Q16.004	107.32
#3	Q95241.	98.412	97.066	Q10.046	Q10.428	Q4.1090	105.74

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q3.2212	Q5.7940	Q5.1190	Q3.5316	Q1.7713	Q4.3790	Q1.0971
#1	Q7.4490	Q33.052	Q37.700	Q3.6514	Q1.4988	Q3.1436	Q.89501
#2	Q.80530	Q4.7449	Q1.1427	Q3.6514	Q2.5206	Q5.8993	Q1.9344
#3	Q1.4093	Q-20.415	Q-23.486	Q3.2922	Q1.2944	Q4.0940	Q.46194

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	Q92383.	99.504	99643.	100020.
#1	Q92351.	99.772	99817.	100340.
#2	Q93144.	100.16	100140.	100590.
#3	Q91655.	98.578	98969.	99140.

Method: SED5 Sample Name: AG AQC 2 Operator:
Run Time: 07/10/89 14:37:01
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	53.133	.07591	Q65.607	Q5.3477	Q7.4663	Q.13487	Q.38069
#1	52.550	.07916	Q76.284	Q-8.9380	Q7.7922	Q.56645	Q.43597
#2	52.940	.07916	Q66.536	Q16.799	Q8.8028	Q-.16184	Q.32621
#3	53.907	.06940	Q54.002	Q8.1823	Q5.8038	Q.00000	Q.37989

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	.00909	Q.02069	Q-.29130	Q-.77038	Q.40494	Q.25343	Q.01468
#1	.01806	Q.03089	Q.41470	Q1.7976	Q-1.8222	Q-.08129	Q.02467
#2	.00679	Q.01676	Q-1.1133	Q-2.6469	Q-1.6198	Q.92392	Q.01084
#3	.00242	Q.01441	Q-.17525	Q-1.4617	Q4.6568	Q-.08235	Q.00854

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	Q21.382	.00463	.93089	Q1.7321	Q.21609	Q4.7233	-.00563
#1	Q29.301	.01233	1.2526	Q-.34642	Q.26179	Q5.0260	.00529
#2	Q18.610	-.00617	1.4199	Q3.8106	Q.26346	Q4.3090	-.00960
#3	Q16.234	.00771	.12012	Q1.7321	Q.12302	Q4.8349	-.01257

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q1.4093	Q1.8965	Q20.246	Q.56865	Q-.13625	Q-.27167	Q.05774

#1	Q3.2212	Q5.9022	Q27.611	Q.77816	Q-.13625	Q.15535	Q.20210
#2	Q2.6172	Q5.8793	Q25.239	Q.50880	Q.06813	Q.31982	Q-.05774
#3	Q-1.6106	Q-6.0921	Q7.8865	Q.41901	Q-.34063	Q-1.2902	Q.02887

Elem	Znlow	Znhigh	2Al308	2Al396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	Q19.371	-.05517	70.631	65.527
#1	Q30.033	-.01970	69.492	77.300
#2	Q15.115	-.04335	62.657	63.823
#3	Q12.966	-.10245	79.745	55.458

Method: SED5 Sample Name: ICS Operator:
Run Time: 07/10/89 14:39:57
Comment: EPA 1287
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L-1.2346	H495.42	H487110.	L-10.644	47.465	L2.6974	L-.23250
#1	L-2.8259	H495.51	H487560.	L-45.626	48.821	L2.7513	L-.28322
#2	L.71622	H494.57	H486480.	L2.7678	46.454	L2.9132	L.05195
#3	L-1.5941	H496.18	H487300.	L10.926	47.119	L2.4277	L-.46624

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	H488.40	Q.00000	L.34937	8.0989	42.902	8.1170	Q.00000
#1	H487.08	Q.00000	L.79142	7.4272	37.772	7.3875	Q.00000
#2	H489.18	Q.00000	L1.0118	11.338	41.013	9.2630	Q.00000
#3	H488.94	Q.00000	L-.75506	L5.5309	49.921	7.7005	Q.00000

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	H205680.	213.90	L1.3899	49.538	55.096	L6.4790	L.27236
#1	H205470.	213.66	L.18446	49.538	55.118	L4.2818	L.25946
#2	H205880.	214.13	L1.9090	51.616	54.936	L2.3141	L.28527
#3	H205680.	213.92	L2.0763	47.459	55.234	L12.841	L.27236

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L13.287	L2.9796	L-22.287	143.54	L8.6520	5.5115	L2.0499
#1	L11.073	L-22.195	L-16.546	143.72	L8.4476	6.1543	L2.1076
#2	21.944	L29.055	L-44.821	143.18	L9.2651	L4.9667	L2.2808
#3	L6.8450	L2.0793	L-5.4951	143.72	L8.2432	5.4136	L1.7612

Elem	Znlow	Znhigh	2Al308	2Al396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	43.157	L-.59699	506220.	486710.
#1	44.420	L-.64624	506290.	487110.
#2	43.278	L-.53394	505230.	486080.
#3	41.773	L-.61078	507140.	486930.

Method: SED5 Sample Name: 89FM22S02 dil Operator:
Run Time: 07/10/89 14:44:37
Comment: SF6232 1/2
Mode: CONC Corr. Factor: 2.44

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L.30151	L-.01323	L52.102	L-5.8538	116.88	13.361	L.03457
#1	L-1.3883	L.00265	L71.735	L3.0775	114.87	12.834	L.04141
#2	L.60490	L-.06085	L62.673	L20.384	119.74	13.427	L.18411
#3	L1.6879	L.01852	L21.898	L-41.023	116.02	13.821	L-.12180

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	94.211	H97.863	L1.2564	L-.86756	L.98859	10.315	H46.165
#1	93.827	H97.494	L-3.5306	L-4.1450	L-7.4104	L5.3825	H45.991
#2	94.631	H98.579	L3.0980	L-5.3018	L5.9290	8.4587	H46.405
#3	94.174	H97.516	L4.2019	6.8441	L4.4472	17.103	H46.098

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	164.73	L.22569	L3.4332	L8.4526	L-.02042	L.87079	10.512
#1	175.84	L.19936	L2.7110	L9.2978	L-.16897	L-4.1366	10.445
#2	162.80	L.18807	L2.3656	L4.2263	L-.16795	L.86793	10.556
#3	155.55	L.28963	5.2231	11.834	L.27567	L5.8810	10.534

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L6.8773	L21.176	L29.873	60.393	L2.3272	L.62097	L-.35223
#1	L-.98246	L19.387	L19.281	60.174	L3.1583	L-4.2424	L-.77491
#2	16.702	L65.737	45.268	60.831	L1.6623	L.04347	L.07045
#3	L4.9123	L-21.596	L25.069	60.174	L2.1609	6.0619	L-.35223

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	69.388	L-.63939	63.933	-89.393
#1	69.290	L-.79803	69.492	-65.958
#2	69.089	L-.66823	36.136	-80.699
#3	69.785	L-.45190	86.170	-121.52

Method: SED5 Sample Name: 89FM22S02 SPK dil Operator:
Run Time: 07/10/89 14:47:32
Comment: SF6232 1/2
Mode: CONC Corr. Factor: 3.04

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	50.394	L.77466	828.83	L-10.340	999.43	220.01	9.8840

#1	37.098	L.73510	838.71	L11.303	1005.3	222.14	9.7330
#2	62.542	L.83399	793.55	L-14.761	1000.6	219.93	10.045
#3	51.542	L.75488	854.23	L-27.561	992.33	217.96	9.8743

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	147.08	H157.73	21.411	98.182	112.02	58.600	H71.739
#1	147.96	H159.83	21.910	98.062	107.71	56.022	H72.342
#2	146.96	H156.83	22.484	104.01	120.64	67.563	H71.566
#3	146.32	H156.53	19.838	92.477	107.71	52.216	H71.309

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	972.91	L1.2794	23.813	76.877	107.07	112.74	63.059
#1	975.62	L1.1903	22.039	81.089	107.46	108.18	63.724
#2	977.42	L1.3309	28.182	81.089	107.16	118.20	62.835
#3	965.69	L1.3169	21.218	68.452	106.60	111.82	62.618

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	165.86	831.99	399.87	1100.4	104.69	49.439	48.010
#1	162.19	745.86	405.45	1112.5	103.97	44.910	45.377
#2	186.06	953.20	367.10	1095.8	104.90	57.740	50.116
#3	149.33	796.92	427.06	1092.8	105.21	45.668	48.536

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	482.00	L-.22760	758.44	593.60
#1	481.86	L-.63489	606.06	598.78
#2	483.43	L.04792	896.97	574.06
#3	480.70	L-.09583	772.29	607.97

Method: SED5 Sample Name: INSTR BLANK 3 Operator:
Run Time: 07/10/89 14:51:33
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L1.9078	L.00759	L13.771	L-4.3600	L4.4948	L.21579	L.06149
#1	L.20818	L.01410	L7.1178	L-3.1041	L3.8412	L.32369	L.10308
#2	L1.8845	L.00108	L10.367	L-6.6565	L4.8225	L.32369	L.09827
#3	L3.6308	L.00759	L23.829	L-3.3194	L4.8207	L.00000	L-.01689

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	L.00473	L.01240	L-.18217	L-.80989	L1.2148	L1.4263	L.00269
#1	L.00206	L.01376	L-.97938	L-.39507	L4.0494	L.16151	L.00357
#2	L.00679	L.01258	L.23217	L-1.3432	L-2.2272	L-.59133	L.00286
#3	L.00533	L.01088	L.20071	L-.69137	L1.8222	L4.7088	L.00162

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	L.39595	L-.01619	L1.2312	L.34641	L-.16865	L2.0502	L-.02316
#1	L.79191	L-.02929	L-.30458	L-.34642	L-.19839	L2.4944	L-.03839
#2	L-.39597	L-.01079	L1.9476	L1.7321	L-.15367	L.92151	L-.02250
#3	L.79191	L-.00848	L2.0505	L-.34642	L-.15388	L2.7345	L-.00860

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	L5.5364	L19.127	L15.775	L.17958	L-.61313	L.19752	L.08661
#1	L2.3152	L-8.7178	L24.450	L.05986	L-.74938	L-.96674	L.02887
#2	L7.4490	L22.328	L7.0982	L.23943	L-.54501	L-1.3286	L.37533
#3	L6.8450	L43.769	L15.776	L.23943	L-.54501	L2.8879	L-.14436

Elem	Znlow	Znhigh	2Al308	2Al396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	L.04624	L-.11625	12.531	10.302
#1	L.05399	L-.14974	21.645	5.2669
#2	L-.55956	L-.16156	7.9745	11.541
#3	L.64428	L-.03744	7.9745	14.097

Method: SED5 Sample Name: AQC 3 Operator:
Run Time: 07/10/89 14:54:34
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q508.77	5.7554	5156.0	5069.2	5155.8	5104.0	5067.9
#1	Q510.29	5.7174	5145.8	5072.7	5131.1	5088.7	5043.0
#2	Q509.70	5.7825	5174.2	5085.3	5172.5	5111.8	5085.2
#3	Q506.33	5.7662	5148.2	5049.6	5163.8	5111.5	5075.4

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	5.4222	5.0893	5148.0	5229.8	5191.3	5161.8	5.1168
#1	5.3986	5.0732	5137.3	5206.7	5179.6	5140.8	5.0898
#2	5.4470	5.1013	5169.1	5249.4	5204.1	5180.4	5.1381
#3	5.4208	5.0935	5137.7	5233.3	5190.3	5164.0	5.1225

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	5075.3	6.5424	1.7374	5122.1	5174.5	5226.7	-.02118
#1	5034.7	6.4406	1.5229	5108.6	5145.1	5184.2	-.02846
#2	5096.2	6.5979	2.5653	5127.3	5196.2	Q5253.5	-.00860
#3	5095.0	6.5886	1.1239	5130.4	5182.2	5242.4	-.02647

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q5255.2	Q5313.8	5128.1	5212.1	5124.7	5047.1	4992.0
#1	5218.5	Q5275.7	5117.1	5192.5	5102.1	5015.9	4969.3

#2	Q5272.9	Q5311.1	5123.8	5224.4	5142.1	5069.4	5008.6
#3	Q5274.1	Q5354.4	5143.5	5219.3	5129.7	5056.0	4998.0

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	5149.7	4.9394	4926.0	5148.1
#1	5137.0	4.8744	4895.2	5136.4
#2	5164.7	5.0695	4929.4	5163.5
#3	5147.4	4.8744	4953.3	5144.3

Method: SED5 Sample Name: HIGH AQC 3 Operator:
Run Time: 07/10/89 14:57:49
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q-.51688	98.850	Q98382.	Q-27.059	Q-2.7029	Q1.8612	Q.42075
#1	Q2.2850	98.500	Q98360.	Q.01749	Q-1.2047	Q2.5895	Q.53672
#2	Q-1.7092	99.186	Q98755.	Q-36.055	Q-3.7990	Q1.5375	Q.38792
#3	Q-2.1265	98.865	Q98033.	Q-45.139	Q-3.1051	Q1.4566	Q.33761

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	100.36	Q.00000	Q1.0864	Q2.3902	Q.80124	Q1.6492	Q84.256
#1	100.35	Q.00000	Q1.8479	Q4.1680	Q1.7461	Q3.6668	Q84.229
#2	100.41	Q.00000	Q-.40569	Q-.86915	Q-1.4930	Q.66876	Q84.282
#3	100.32	Q.00000	Q1.8172	Q3.8717	Q2.1506	Q.61188	Q84.256

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	Q94476.	97.569	96.324	Q10.392	Q10.566	Q8.6884	104.98
#1	Q94271.	97.563	97.387	Q11.085	Q10.783	Q2.7087	104.87
#2	Q94716.	97.695	96.564	Q10.046	Q10.493	Q11.640	105.39
#3	Q94440.	97.448	95.020	Q10.046	Q10.422	Q11.716	104.69

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q11.777	Q11.624	Q-12.260	Q3.4718	Q1.6691	Q2.9426	Q1.2415
#1	Q11.073	Q12.162	Q-10.138	Q3.8309	Q2.3163	Q5.3874	Q1.9344
#2	Q8.6570	Q15.013	Q9.5690	Q3.2922	Q1.0900	Q.68977	Q.72179
#3	Q15.603	Q7.6983	Q-36.209	Q3.2922	Q1.6010	Q2.7508	Q1.0682

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	Q90994.	98.076	97979.	98265.
#1	Q91172.	98.141	97605.	98254.
#2	Q91110.	98.300	98344.	98618.
#3	Q90701.	97.786	97988.	97922.

Method: SED5 Sample Name: AG AQC 3 Operator:
Run Time: 07/10/89 15:00:58
Comment:
Mode: CONC Corr. Factor: 1

Elem	Ag	Alhigh	Allow	As	B	Ba	Be
Units	ug/L	Mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	53.996	.19410	Q195.12	Q12.084	Q11.023	Q1.9421	Q1.8579
#1	Q55.060	.26133	Q240.61	Q28.917	Q12.113	Q2.9132	Q2.6745
#2	54.640	.20277	Q204.87	Q8.7566	Q11.681	Q2.4277	Q1.8941
#3	52.287	.11820	Q139.88	Q-1.4214	Q9.2752	Q.48553	Q1.0052

Elem	Cahigh	Calow	Cd	Co	Cr	Cu	Mg
Units	Mg/L	Mg/L	ug/L	ug/L	ug/L	ug/L	Mg/L
Avge	.12459	Q.12733	Q2.0561	Q4.5038	Q6.1416	Q4.9919	Q.12336
#1	.16750	Q.16519	Q4.1828	Q9.2050	Q8.3013	Q7.5364	Q.16216
#2	.14605	Q.14640	Q.73148	Q2.9235	Q5.4667	Q4.4889	Q.14264
#3	.06024	Q.07038	Q1.2540	Q1.3827	Q4.6568	Q2.9503	Q.06529

Elem	Felow	Fehigh	K	Li	Mn	Mo	Na
Units	ug/L	Mg/L	Mg/L	ug/L	ug/L	ug/L	Mg/L
Avge	Q127.50	.12487	2.3851	Q3.8106	Q1.8600	Q3.9532	.10126
#1	Q165.91	.21582	2.9385	Q5.8891	Q2.8879	Q10.242	.14627
#2	Q148.09	.13257	2.7841	Q3.8106	Q1.8283	Q.21681	.12443
#3	Q68.501	.02621	1.4328	Q1.7321	Q.86366	Q1.4014	.03309

Elem	Ni	Pb	Sn	Sr	Ti	V	Y
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Avge	Q6.2411	Q28.204	Q24.992	Q2.0950	Q1.7031	Q4.6191	Q1.8478
#1	Q2.0132	Q37.607	Q29.999	Q3.1126	Q3.3382	Q6.1441	Q3.0604
#2	Q12.885	Q36.220	Q21.311	Q2.0352	Q1.2944	Q5.7125	Q1.5879
#3	Q3.8252	Q10.785	Q23.667	Q1.1373	Q.47688	Q2.0007	Q.89501

Elem	Znlow	Znhigh	2A1308	2A1396
Units	ug/L	Mg/L	ug/L	ug/L
Avge	Q130.08	.06502	190.25	189.30
#1	Q170.73	.20491	254.04	231.59
#2	Q148.38	.03349	199.36	201.38
#3	Q71.143	-.04335	117.34	134.93

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: AUG 22 1989

SUBJECT: Review of Region 5 data for United Recovery

FROM: Curtis Ross, Director Chi Yang for
Region 5 Central Regional Laboratory

To: Data User: FIT

Attached are the results for:

CRL Data Set Numbers: SF 6232
Sample Numbers: 89FM2250/~S05, D01, 89FM11R15
Parameter(s): ICP metals
Laboratory: ESAT

Results Status:

(✓) DATA ACCEPTABLE FOR USE*
( ) DATA QUALIFIED AS TO USE
( ) DATA UNACCEPTABLE FOR USE

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

RECEIVED
AUG 29 1989
US EPA CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

If there are any questions regarding the data, refer them to David Payne, the Quality Control Coordinator, at 353-3805.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

TRANSMITTED BY: Sylvia Griffin AUG 22 1989
U.S. EPA CENTRAL REGIONAL LAB

RECEIVED BY/DATE: 8/22/89

Comments:

Griffin

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: AUG 22 1989

SUBJECT: Review of Region 5 data for United Recovery

FROM: Curtis Ross, Director Chi Fang for
Region 5 Central Regional Laboratory

To: Data User: FIT

Attached are the results for:

CRL Data Set Numbers: 89FM22S01205, 89FM22D01, 89FM11RL5
Sample Numbers: SF6232
Parameter(s): As, Sb, Se, Cd, TL, Pb
Laboratory: CRL/ESAT

Results Status:

(✓) DATA ACCEPTABLE FOR USE*
( ) DATA QUALIFIED AS TO USE
( ) DATA UNACCEPTABLE FOR USE

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

RECEIVED
AUG 29 1989
US EPA CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

If there are any questions regarding the data, refer them to David Payne, the Quality Control Coordinator, at 353-3805.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

TRANSMITTED BY
Sylvia Griffin
AUG 22 1989

RECEIVED BY/DATE: 8/22/89

U.S. EPA CENTRAL
REGIONAL LAB

Comments:

Griffin

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: JUL 28 1989

SUBJECT: Review of Region 5 data for United Recovery

FROM: Curtis Ross, Director A. Alwan for.
Region 5 Central Regional Laboratory

To: Data User:

Attached are the results for:

CRL Data Set Numbers: SF-6232
Sample Numbers: 89FM22S01-S05, D01, 89FM11R15 (7)
Parameter(s): VOA - WATER
Laboratory: CRL (ESAT/Weston)

Results Status:

( ) DATA ACCEPTABLE FOR USE*
(X) DATA QUALIFIED AS TO USE
( ) DATA UNACCEPTABLE FOR USE

* For data acceptability requirements, refer to the method capability statement for the methods referenced.

Comments by the Quality Control Coordinator:

RECEIVED
AUG 29 1989
US EPA CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

If there are any questions regarding the data, refer them to Steve Parker, the Quality Control Coordinator, at 353-3805.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
(5SCRL)

S. Griffin
JUL 28 1989
U.S. EPA CENTRAL
REGIONAL LAB

RECEIVED BY/DATE: 8/11/89

Comments:

Griffin

U.S. Environmental Protection Agency Region V

Superfund Document Management System (SDMS)

Lab Data Reference Sheet

Please contact the Superfund Records Manager for further information.

I. Unscannable item due to format

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II. Image Quality (Pages follow / No. of pages ____)

___ Resolution / Contrast

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

Cedar ID # EE133

CHAIN OF CUSTODY RECORD

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

PROJ. NO.: FL04455A
PROJECT NAME: FOS-8911-004
CASE #: 12196
SAMPLERS: (Signature)

Surveyed 6232

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1 liter plastic metals (HNO3)	1 liter plastic CN- (NaOH)					REMARKS TAG #s	Low Conc. Matrix
22501	6/20/89	1000		X	RW1	2	1	1					metals: S-188235, CN 36	Water
22501	6/20/89	1000		X	DUP.	2	1	1					metals: S-188243, CN 44	
22502	6/20/89	1045		X	RW2	2	1	1					metals: S-188251, CN 52	
22503	6/20/89	1115		X	RW3	2	1	1					metals: S-188269, CN 70	
22504	6/20/89	1200		X	RW4	2	1	1					metals: S-188277, CN 78	
22505	6/20/89	1335		X	RW5	2	1	1					metals: S-188285, CN 86	
11R15	6/20/89	1030		X	BLANK	2	1	1					metals: S-188293, CN 94	

1 of #s.
all metals, CN ; C9065084

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	6/20/89 1700				

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks
			6/21/89 4:05pm	Shipped FED Ex to CRL Airbill # 9071156791 C.O.C. #'s - 93909, 93910

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

05-00965

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

Cooler ID # EE125

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: F1L04455A
PROJECT NAME: FOS-8811-004 CASE # 12190
SAMPLERS: (Signature)

Shipped 6232

	STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	40ml VOA	1 liter (amber) Pest/PCB						REMARKS (TAG #s) Low Conc Matrix Water
m	22501	6/20/89	1000		X	RW1	4	3	1						Pest/PCB: S-188229 VOA's S-188230-32
m	22501	6/20/89	1000		X	DUP	4	3	1						Pest/PCB: S-188237 VOA's S-188238-40
m	22502	6/20/89	1045		X	RW2 + MSD	11	8	3						Pest/PCB RW2: S-188245 VOA's S-188246-48 Pest/PCB MSD S-188253-54 VOA's S-188255-57
m	22503	6/20/89	1115		X	RW3	4	3	1						Pest/PCB: S-188263, VOA S-188264-66
m	22504	6/20/89	1200		X	RW4	4	3	1						Pest/PCB S-188271, VOA S-188272-74
m	22505	6/20/89	1335		X	RW5	4	3	1						Pest/PCB S-188279, VOA S-188280-82
m	11R15	6/20/89	1030		X	BLANK	4	3	1						Pest/PCB S-188287, VOA S-188288-90

lot #s
all VOA B9109594
RW1: H9060054, DUP: H9060054, RW2: H9060054
MSD: H9060054, H9060054, RW3: H9136014
RW4: H9136014, RW5: H9061044 RW5: H9061044

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6/20/89 1700	[signature]			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
		[signature]	6/21/89 4:05pm	Shipped FED EX to CRL Airbill # - 9071156791 C.O.C. #'s - 93911, 939R	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

05-00964

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: MINERALS - NUTRIENTS

TFA 302

DIVISION/BRANCH SUPERFUND FIT SAMPLE DATE 6/20/89 LAB ARRIVAL DATE 6/21/89 DUE DATE 7/17/89

DU NUMBER TFA DATA SET NUMBER 6232 STUDY United Recovery PRIORITY — CONTRACTOR —

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER PHENOLICS UG PHENOL/L MIN 74818	WATER CYANIDE UG CN/L MIN 74919	WATER GROSS ALPHA P CI/L MIN 75020	WATER CR^{+6} UG CR^{+6}/L MIN 74616	WATER MERCURY UG HG/L MIN 74717
89FM22S01	RW1 5-188236		✓			
S02	RW2 5-188252		✓			
S03	RW3 5-188270		✓			
S04	RW4 5-188278		✓			
S05	RW5 5-188286		✓			
6/21/89 WB ~~S06~~	~~RW6~~		~~✓~~			
~~S07~~	~~RW7~~		~~✓~~			
✓ D01	Dup 5-188244		✓			
89FM11R15	BLK 5-188294		✓			

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: METALS

TFA302

DIVISION/BRANCH SUPERFUND FIT SAMPLE DATE 6/20/89 LAB ARRIVAL DATE 6/21/89 DUE DATE 7/12/89

DU NUMBER TFA DATA SET NUMBER 6232 STUDY United Recovery PRIORITY — CONTRACTOR —

CRL LOG NUMBER	SAMPLE DESCRIPTION	TOTAL METALS WATER TOTAL ICAP UG/L MET111	TOTAL METALS WATER AS UG/L MET161	TOTAL METALS WATER PB UG/L MET1191	TOTAL METALS WATER SB UG/L MET1201	TOTAL METALS WATER SE UG/L MET1211	TOTAL METALS WATER TL UG/L MET1221
89FM22S01	RW1 5-188235	✓	✓	✓	✓	✓	✓
S02	RW2 5-188251	✓	✓	✓	✓	✓	✓
S03	RW3 5-188269	✓	✓	✓	✓	✓	✓
S04	RW4 5-188277	✓	✓	✓	✓	✓	✓
S05	RW5 5-188285	✓	✓	✓	✓	✓	✓
6/21/89 WL ~~S06~~	~~RW6~~	✓	✓	✓	✓	✓	✓
~~S07~~	~~RW7~~	✓	✓	✓	✓	✓	✓
D01	Dup 5-188243	✓	✓	✓	✓	✓	✓
89FM11R15	BLK 5-188293	✓	✓	✓	✓	✓	✓

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ENVIRONMENTAL PROTECTION AGENCY TFA302
FOR THE TEAM: METALS

DIVISION/BRANCH SUPERFUND (FIT) SAMPLING DATE 6/20/89 LAB ARRIVAL DATE 6/21/89 DUE DATE 7/12/89

DU NUMBER TFA DATASET NUMBER 6232 STUDY UNITED RECOVERY PRIORITY N CONTRACTOR N

CRL LOG NUMBER	SAMPLE DESCRIPTION	MATRIX WATER TEST CD UNITS UG/L PE1235826
89FM22		
S01	RW1 5-188235	X
S02	RW2 5-188251	X
S03	RW3 5-188269	X
S04	RW4 5-188277	X
S05	RW5 5-188285	X
D01	DUPLICATE 5-188243	X
89FM11R15	BLANK 5-188293	X

CRL V.2: 3/89

TFA302

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: TOXIC SUBSTANCES

DIVISION/BRANCH SUPERFUND FIT SAMPLE DATE 6/20/89 LAB ARRIVAL DATE 6/21/89 DUE DATE 7/12/89

DU NUMBER TFA DATA SET NUMBER 6232 STUDY United Recovery PRIORITY — CONTRACTOR —

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER VOLATILE ORGANICS SCAN UG/L TOX 17564	WATER ABN ORGANICS SCAN UG/L TOX 17574	SEDIMENTS SOLIDS VOLATILE ORGANICS SCAN MG/KG (DRY) TOX 215622	SEDIMENTS SOLIDS ABN ORGANICS SCAN MG/KG (DRY) TOX 215722
89Fm22S01	5-188230-32 RW1	✓			
S02	5-188246-48 5-188255-59 RW2/MSD	✓			
S03	5-188265-67 RW3	✓			
S04	5-188272-74 RW4	✓			
S05	5-188280-82 RW5	✓			
6/21/89 ~~S06~~	~~RW6~~	~~✓~~			
~~S07~~	~~RW7~~	~~✓~~			
D01	5-188238-40 Dup	✓			
89Fm11R15	5-188288-90 Blk	✓			

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: PESTICIDES AND PCB'S

TFA302

DIVISION/BRANCH SUPERFUND FIT SAMPLE DATE 6/20/89 LAB ARRIVAL DATE 6/21/89 DUE DATE 7/~~14~~ 12/89

DU NUMBER TFA DATA SET NUMBER 6232 STUDY United Recovery PRIORITY — CONTRACTOR —

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER TRIHALOMETHANES UG/L PES17414	WATER POLYCHLORINATED BIPHENYLS UG/L PES 17144	WATER CHLORINATED PESTICIDES UG/L PES 17134	WATER HERBICIDES UG/L PES 17424	WATER OIL AND GREASE MG/L PES 17439
89FMA2S01	5-188229 RW1		✓	✓		
S02	5-188245 5-188253-4 RW2/MSD		✓	✓		
S03	5-188243 RW3		✓	✓		
S04	5-188271 RW4		✓	✓		
S05	5-188279 RW5		✓	✓		
6/21/89 QW S06	~~RW6~~		✓	✓		
S07	~~RW7~~		✓	✓		
D01	5-188237 DUP		✓	✓		
89FM11R15	5-188287 BLK		✓	✓		