U.S. Environmental Protection Agency Region V

Superfund Document Management System (SDMS)

Lab Data Reference Sheet

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ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

Cooler #: 3

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: F05-8810-015
PROJECT NAME: IL0291 / Case # 11785/4476-E
SAMPLERS: (Signature) Karen M Spangler

Sampled 6050

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1L amber N/B/N	40 ml VOA						REMARKS OTR	ITR	Low Conc Matrix
RW3	4/19/89	1130		✓	RW3	4	2	2						89FN15515	MEC281	Water
RW4	4/19/89	1200		✓	RW4	4	2	2						89FN15516	MEC282	Water
Blank	4/19/89	1030		✓	Blank	4	2	2						89FN10848	MEC283	Water

Lot #:
40 ml: B8175204
1L: H9019104 - RW3, RW4
H9013014 - Blank

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Karen M Spangler	4/19/89 1500	William Sanger Jr			
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) William Sanger Jr	Date / Time 4/20/89 1:04pm	Remarks Shipped Fed.Ex. to: CRL Airbill #: 3940625301 Custody Seals: 19630, 19631	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

05- 01556

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

Cooler #: E&E-V 07

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: F05-8810-015
PROJECT NAME: ILO291/Case # 11785/4476-E
SAMPLERS: (Signature) Karen M Spangler

Supervisor 6050

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1 L amber A/B/N	40 ml VOA					REMARKS OTR	ITR	Low Conc Matrix
RW1	4/19/89	1030		✓	RW1	4	2	2					89FN15513	MEC778	Water
DUP	4/19/89	1030		✓	DUPLICATE	4	2	2					89FN15D13	MEC779	Water
RW2	4/19/89	1105		✓	RW2 + MSD	13	5	8					89FN15514	MEC780	Water
													Lot #: 40ml: B8175204		
													IL: H9019104		
													traffic report in cooler # 3		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Karen M Spangler	4/19/89 1500	William Sampson Jr.			
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	
		William Sampson Jr.	4/20/89 1:04pm	Shipped Fed. Ex. to CRL Airbill #: 3940625301 Custody Seals: 19628, 19629	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

05-02031

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: TOXIC SUBSTANCES

TFA302

DIVISION/BRANCH FIT SUPERFUND SAMPLE DATE 4/19/89 LAB ARRIVAL DATE 4/20/89 DUE DATE 5/11/89

DU NUMBER ~~TFOS~~ TFA DATA SET NUMBER 6050 STUDY Banner Western Disposal Service Co. PRIORITY — CONTRACTOR —

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER VOLATILE ORGANICS SCAN UG/L TOX 17584	WATER ABN ORGANICS SCAN UG/L TOX 17574	SEDIMENTS SOLIDS VOLATILE ORGANICS SCAN MG/KG (DRY) TOX 215822	SEDIMENTS SOLIDS ABN ORGANICS SCAN MG/KG (DRY) TOX 215722
89FN15S13	RW1 5-036546 5-036547	✓			
89FN15S14	5-036562-63, 5-036569-70-71-72 MSD RW2 5-036594-95	✓			
89FN15S15	5-036578 5-036579 RW3	✓			
89FN15S16	5-036585 5-036586 RW4	✓			
89FN10R48	5-036590 5-036591 Blk	✓			
89FN15D13	5-036555 5-036556 Dup	✓			
89FN15S13	RW1 5-036541-542		✓		
89FN15D13	DUPLICATE 5-036548 5-036550		✓		
89FN15S14	RW2 MSD 5-036557-558 5-036564-65-66		✓		
89FN15S15	RW3 5-036573-574		✓		
89FN15S16	RW4 5-036580-581		✓		
89FN10R48	BLANK 5-036587-588		✓		

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: MAY 17 1989

SUBJECT: Review of Region 5 data for BANNER WESTERN DISPOSAL SERVICE CO.

FROM: Curtis Ross, Director
Region 5 Central Regional Laboratory

To: Data User:

Sylvia
Add Symbol Notations

Attached are the results for:

CRL Data Set Numbers: SF 6050
Sample Numbers: 89FN15 S13-16, D13 & FN10R48
Parameter(s): ORGANICS - AEN2
Laboratory: 5SCRL - ESD - USEPA

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~~ David A. 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
S. Griffin
MAY 17 1989
U.S. EPA CENTRAL REGIONAL LAB

RECEIVED BY/DATE:
Comments:

DATA SET	SITE	DU/ACT.
SF6050	BANIVER WESTERN DISP. Co.	TFA302

SAMPLES	PARAMETER(S)
89 FN 15 S13-16, D13 & FN AD R48	ORGANICS - ABNs

SAMPLED	RECEIVED	DUE	LAB
4/19/89	4/20/89	5/11/89	SSCR2-USEPA

SHIPPED	DATA RECEIVED	CONTRACT

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

Comments By Reviewer:

The data is acceptable for use.

A. Alwan
5/16/89

DATA MANAGEMENT COORDINATOR

RECEIVED	TRANSMITTED		CLERICAL SUPPORT RECEIVED	COMPLETED
(X) REVIEWED	( ) UNREVIEWED	TEAM LEADER/DATE A. Alwan		
( ) REVIEWED	( ) UNREVIEWED	SECTION CHIEF/DATE		
( ) REVIEWED	( ) UNREVIEWED	QC COORDINATOR/DATE		

REVIEWED BY CONTRACT COORDINATOR/DATE

RECEIVED	TRANSMITTED	DATA MANAGEMENT COORDINATOR

: Subject: SF6050 (Banner Western Disp. Serv.Co)-Semivolatile Organic Analysis

To : Files
From : Babu Paruchuri
Date : 05/15/89

Six water samples (89FN15S13-16, D13 & 89FN10R48) were analyzed for semi-volatile organics (ABNs) by the Region V laboratory using the test procedure number 625 NS. The laboratory produced data of acceptable quality for all samples.

The following comments apply to the quality control (QC) requirements as specified by the Central Regional Laboratory (CRL) test method:

- The site samples were extracted within seven days of sample receipt. The sample extracts were analyzed within 21 days of sample collection. 89FN15R48 had to be reanalyzed because of unacceptable surrogate spike recoveries. Because of instrument malfunction and because of the weekend, the GC/MS analysis could not be completed within the due date- 05/11/89. GC/MS team regrets the inconvenience caused due to the late submittal of the site data.

- Prior to the sample analysis, the GC/MS instrument was checked to determine if : 1) acceptable performance criteria (see Table 5, SOP) were achieved for DFTPP and 2) the tailing factor of PCP was <5.

- The surrogate spike recovery data were evaluated to determine the method accuracy of each sample. The surrogate spike recoveries were acceptable for all samples, except 89FN10R48. Reanalysis of this sample confirmed the initial data - i.e., the surrogate recoveries for four of the compounds were not acceptable.

- The matrix spike / matrix spike duplicate (MS/MSD) recovery data were evaluated for the accuracy and precision of the test method. The ~~spike recovery~~ Spike recovery data were unacceptable; the precision data were acceptable for all compounds except for 2,4-dinitrotoluene. The GC/MS team would evaluate the accuracy of the in-house standard (MS/MSD) ASAP and take a corrective action. Since this bias was high + no compounds in the range of 2,4-dinitrotoluene were found, this bias has no effect on the data
- The initial calibration data were valid (i. e., %RSD: <35%) for the target compounds detected at the site. No problems were observed.

The following comments apply to the sample analysis results and overall quality of the data:1) the samples were practically free from organic pollutants, except for 89FN15S16 which had an unknown compound at 5.1 ppb and 2) the overall quality of the data was acceptable.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

METHODBLANK

Lab Name: SCRL US EPA 312/353-9065 Contract: DU # B304

Lab Code: CHICAGOIL Case No.: SF 6050 SAS No.: BNRWDSR SDG No.: TFA 302

Matrix: (soil/water) WATER Lab Sample ID: METHODBLANK

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >BP274

Level: (low/med) LOW Date Received: 04/20/89

% Moisture: not dec.____ dec. ____ Date Extracted: 04/25/89

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 5/05/89

GPC Cleanup: (Y/N) N pH: 1 your Dilution Factor: 1.00000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L		Q
108-95-2	Phenol	2.	U	
111-44-4	bis(2-Chloroethyl)Ether	2.	U	
95-57-8	2-Chlorophenol	2.	U	
541-73-1	1,3-Dichlorobenzene	2.	U	
106-46-7	1,4-Dichlorobenzene	2.	U	
100-51-6	Benzyl alcohol	2.	U	
95-50-1	1,2-Dichlorobenzene	3.	U	
95-48-7	2-Methylphenol	1.	U	
39638-32-9	bis(2-chloroisopropyl)ether	3.	U	X
106-44-5	4-Methylphenol	1.	U	
621-64-7	N-Nitroso-Di-n-propylamine	2.	U	
67-72-1	Hexachloroethane	2.	U	
98-95-3	Nitrobenzene	3.	U	
78-59-1	Isophorone	3.	U	
88-75-5	2-Nitrophenol	2.	U	
105-67-9	2,4-Dimethylphenol	2.	U	
65-85-0	Benzoic acid	30.	U	
111-91-1	bis(2-Chloroethoxy)methane	3.	U	
120-83-2	2,4-Dichlorophenol	2.	U	
120-82-1	1,2,4-Trichlorobenzene	2.	U	
91-20-3	Naphthalene	2.	U	
106-47-8	4-Chloroaniline	2.	U	
87-68-3	Hexachlorobutadiene	3.	U	
59-50-7	4-Chloro-3-methylphenol	2.	U	
91-57-6	2-Methylnaphthalene	2.	U	
77-47-4	Hexachlorocyclopentadiene	2.	U	
88-06-2	2,4,6-Trichlorophenol	2.	U	
95-95-4	2,4,5-Trichlorophenol	2.	U	
91-58-7	2-Chloronaphthalene	2.	U	
88-74-4	2-Nitroaniline	3.	U	
131-11-3	Dimethylphthalate	2.	U	
208-96-8	Acenaphthylene	2.	U	
606-20-2	2,6-Dinitrotoluene	1.	U	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

METHODBLANK

Lab Name: 5SCRL US EPA 312/353-9065 Contract: DU # B304

Lab Code: CHICAGOIL Case No.: SF 6050 SAS No.: BNRWDSR SDG No.: TFA 302

Matrix: (soil/water) WATER Lab Sample ID: METHODBLANK

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >BP274

Level: (low/med) LOW Date Received: 04/20/89

% Moisture: not dec.____ dec. ____ Date Extracted: 04/25/89

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 5/05/89

GPC Cleanup: (Y/N) N pH: | your Dilution Factor: 1.00000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
99-09-2	3-Nitroaniline	3.	U
83-32-9	Acenaphthene	2.	U
51-28-5	2,4-Dinitrophenol	15.	U
100-02-7	4-Nitrophenol	2.	U
132-64-9	Dibenzofuran	1.	U
121-14-2	2,4-Dinitrotoluene	1.	U
84-66-2	Diethylphthalate	1.	U
7005-72-3	4-Chlorophenyl-phenylether	1.	U
86-73-7	Fluorene	1.	U
100-01-6	4-Nitroaniline	3.	U
534-52-1	4,6-Dinitro-2-methylphenol	15.	U
86-30-6	N-Nitrosodiphenylamine (1)	2.	U
101-55-3	4-Bromophenyl-phenylether	2.	U
118-74-1	Hexachlorobenzene	2.	U
87-86-5	Pentachlorophenol	2.	U
85-01-8	Phenanthrene	1.	U
120-12-7	Anthracene	3.	U
84-74-2	Di-n-butylphthalate	2.	U
206-44-0	Fluoranthene	2.	U
129-00-0	Pyrene	2.	U
85-68-7	Butylbenzylphthalate	4.	U
56-55-3	Benzo(a)anthracene	2.	U
218-01-9	Chrysene	2.	U
117-81-7	bis(2-Ethylhexyl)phthalate	1.	U
117-84-0	Di-n-octylphthalate	2.	U
205-99-2	Benzo(b)fluoranthene	2.	U
207-08-9	Benzo(k)fluoranthene	2.	U
50-32-8	Benzo(a)pyrene	2.	U
193-39-5	Indeno(1,2,3-cd)pyrene	4.	U
53-70-3	Dibenzo(a,h)anthracene	3.	U
191-24-2	Benzo(g,h,i)perylene	4.	U

(1) - Cannot be separated from Diphenylamine

TENTATIVELY IDENTIFIED COMPOUNDS YES [ ] NO [X]

FORM I SV-2 1/87 Rev.

BB 5/15/89

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FN15R48

Lab Name: SCRL US EPA 312/353-9065 Contract: DU # B304

Lab Code: CHICAGOIL Case No.: SF 6050 SAS No.: BNRWDSR SDG No.: TFA 302

Matrix: (soil/water) WATER Lab Sample ID: 89FN15R48

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >BP282

Level: (low/med) LOW Date Received: 04/20/89

% Moisture: not dec.____ dec. ____ Date Extracted: 04/25/89

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 5/06/89

GPC Cleanup: (Y/N) N pH: I your Dilution Factor: 1.00000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	2.	U
111-44-4	bis(2-Chloroethyl)Ether	2.	U
95-57-8	2-Chlorophenol	2.	U
541-73-1	1,3-Dichlorobenzene	2.	U
106-46-7	1,4-Dichlorobenzene	2.	U
100-51-6	Benzyl alcohol	2.	U
95-50-1	1,2-Dichlorobenzene	3.	U
95-48-7	2-Methylphenol	1.	U
39638-32-9	bis(2-chloroisopropyl)ether	3.	U
106-44-5	4-Methylphenol	1.	U
621-64-7	N-Nitroso-Di-n-propylamine	2.	U
67-72-1	Hexachloroethane	2.	U
98-95-3	Nitrobenzene	3.	U
78-59-1	Isophorone	3.	U
88-75-5	2-Nitrophenol	2.	U
105-67-9	2,4-Dimethylphenol	2.	U
65-85-0	Benzoic acid	30.	U
111-91-1	bis(2-Chloroethoxy)methane	3.	U
120-83-2	2,4-Dichlorophenol	2.	U
120-82-1	1,2,4-Trichlorobenzene	2.	U
91-20-3	Naphthalene	2.	U
106-47-8	4-Chloroaniline	2.	U
87-68-3	Hexachlorobutadiene	3.	U
59-50-7	4-Chloro-3-methylphenol	2.	U
91-57-6	2-Methylnaphthalene	2.	U
77-47-4	Hexachlorocyclopentadiene	2.	U
88-06-2	2,4,6-Trichlorophenol	2.	U
95-95-4	2,4,5-Trichlorophenol	2.	U
91-58-7	2-Chloronaphthalene	2.	U
88-74-4	2-Nitroaniline	3.	U
131-11-3	Dimethylphthalate	2.	U
208-96-8	Acenaphthylene	2.	U
606-20-2	2,6-Dinitrotoluene	1.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FN15R48

Lab Name:5SCRL US EPA 312/353-9065 Contract:DU # B304

Lab Code: CHICAGOIL Case No.: SF 6050 SAS No.: BNRWDSR SDG No.: TFA 302

Matrix: (soil/water) WATER Lab Sample ID: 89FN15R48

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >BP282

Level: (low/med) LOW Date Received: 04/20/89

% Moisture: not dec.____ dec. ____ Date Extracted:04/25/89

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 5/06/89

GPC Cleanup: (Y/N) N pH: 1 your Dilution Factor: 1.00000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
99-09-2	3-Nitroaniline	3.	U
83-32-9	Acenaphthene	2.	U
51-28-5	2,4-Dinitrophenol	15.	U
100-02-7	4-Nitrophenol	2.	U
132-64-9	Dibenzofuran	1.	U
121-14-2	2,4-Dinitrotoluene	1.	U
84-66-2	Diethylphthalate	1.	U
7005-72-3	4-Chlorophenyl-phenylether	1.	U
86-73-7	Fluorene	1.	U
100-01-6	4-Nitroaniline	3.	U
534-52-1	4,6-Dinitro-2-methylphenol	15.	U
86-30-6	N-Nitrosodiphenylamine (1)	2.	U
101-55-3	4-Bromophenyl-phenylether	2.	U
118-74-1	Hexachlorobenzene	2.	U
87-86-5	Pentachlorophenol	2.	U
85-01-8	Phenanthrene	1.	U
120-12-7	Anthracene	3.	U
84-74-2	Di-n-butylphthalate	2.	U
206-44-0	Fluoranthene	2.	U
129-00-0	Pyrene	2.	U
85-68-7	Butylbenzylphthalate	4.	U
56-55-3	Benzo(a)anthracene	2.	U
218-01-9	Chrysene	2.	U
117-81-7	bis(2-Ethylhexyl)phthalate	1.	U
117-84-0	Di-n-octylphthalate	2.	U
205-99-2	Benzo(b)fluoranthene	2.	U
207-08-9	Benzo(k)fluoranthene	2.	U
50-32-8	Benzo(a)pyrene	2.	U
193-39-5	Indeno(1,2,3-cd)pyrene	4.	U
53-70-3	Dibenzo(a,h)anthracene	3.	U
191-24-2	Benzo(g,h,i)perylene	4.	U

(1) - Cannot be separated from Diphenylamine

TENTATIVELY IDENTIFIED COMPOUNDS YES [ ] NO [X]

FORM I SV-2 1/87 Rev.

Bales 5/15/89

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FN15S13

Lab Name: SSCRL US EPA 312/353-9065 Contract: DU # B304

Lab Code: CHICAGOIL Case No.: SF 6050 SAS No.: BNRWDSR SDG No.: TFA 302

Matrix: (soil/water) WATER Lab Sample ID: 89FN15S13

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >BP278

Level: (low/med) LOW Date Received: 04/20/89

% Moisture: not dec.____ dec. ____ Date Extracted: 04/25/89

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 5/06/89

GPC Cleanup: (Y/N) N pH: I your Dilution Factor: 1.00000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L		Q
108-95-2	Phenol	2.	U	X
111-44-4	bis(2-Chloroethyl)Ether	2.	U	
95-57-8	2-Chlorophenol	2.	U	
541-73-1	1,3-Dichlorobenzene	2.	U	
106-46-7	1,4-Dichlorobenzene	2.	U	
100-51-6	Benzyl alcohol	2.	U	
95-50-1	1,2-Dichlorobenzene	3.	U	
95-48-7	2-Methylphenol	1.	U	
39638-32-9	bis(2-chloroisopropyl)ether	3.	U	
106-44-5	4-Methylphenol	1.	U	
621-64-7	N-Nitroso-Di-n-propylamine	2.	U	X
67-72-1	Hexachloroethane	2.	U	
98-95-3	Nitrobenzene	3.	U	
78-59-1	Isophorone	3.	U	
88-75-5	2-Nitrophenol	2.	U	
105-67-9	2,4-Dimethylphenol	2.	U	
65-85-0	Benzoic acid	30.	U	
111-91-1	bis(2-Chloroethoxy)methane	3.	U	
120-83-2	2,4-Dichlorophenol	2.	U	
120-82-1	1,2,4-Trichlorobenzene	2.	U	
91-20-3	Naphthalene	2.	U	
106-47-8	4-Chloroaniline	2.	U	
87-68-3	Hexachlorobutadiene	3.	U	
59-50-7	4-Chloro-3-methylphenol	2.	U	
91-57-6	2-Methylnaphthalene	2.	U	
77-47-4	Hexachlorocyclopentadiene	2.	U	
88-06-2	2,4,6-Trichlorophenol	2.	U	
95-95-4	2,4,5-Trichlorophenol	2.	U	
91-58-7	2-Chloronaphthalene	2.	U	
88-74-4	2-Nitroaniline	3.	U	
131-11-3	Dimethylphthalate	2.	U	
208-96-8	Acenaphthylene	2.	U	
606-20-2	2,6-Dinitrotoluene	1.	U	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FN15S13

Lab Name: 5SCRL US EPA 312/353-9065 Contract: DU # B304

Lab Code: CHICAGOIL Case No.: SF 6050 SAS No.: BNRWDSR SDG No.: TFA 302

Matrix: (soil/water) WATER Lab Sample ID: 89FN15S13

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >BP278

Level: (low/med) LOW Date Received: 04/20/89

% Moisture: not dec.____ dec. ____ Date Extracted: 04/25/89

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 5/06/89

GPC Cleanup: (Y/N) N pH: 1 your Dilution Factor: 1.00000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
99-09-2	3-Nitroaniline	3.	U
83-32-9	Acenaphthene	2.	U
51-28-5	2,4-Dinitrophenol	15.	U
100-02-7	4-Nitrophenol	2.	U
132-64-9	Dibenzofuran	1.	U
121-14-2	2,4-Dinitrotoluene	1.	U
84-66-2	Diethylphthalate	1.	U
7005-72-3	4-Chlorophenyl-phenylether	1.	U
86-73-7	Fluorene	1.	U
100-01-6	4-Nitroaniline	3.	U
534-52-1	4,6-Dinitro-2-methylphenol	15.	U
86-30-6	N-Nitrosodiphenylamine (1)	2.	U
101-55-3	4-Bromophenyl-phenylether	2.	U
118-74-1	Hexachlorobenzene	2.	U
87-86-5	Pentachlorophenol	2.	U
85-01-8	Phenanthrene	1.	U
120-12-7	Anthracene	3.	U
84-74-2	Di-n-butylphthalate	2.	U
206-44-0	Fluoranthene	2.	U
129-00-0	Pyrene	2.	U
85-68-7	Butylbenzylphthalate	4.	U
56-55-3	Benzo(a)anthracene	2.	U
218-01-9	Chrysene	2.	U
117-81-7	bis(2-Ethylhexyl)phthalate	1.	U
117-84-0	Di-n-octylphthalate	2.	U
205-99-2	Benzo(b)fluoranthene	2.	U
207-08-9	Benzo(k)fluoranthene	2.	U
50-32-8	Benzo(a)pyrene	2.	U
193-39-5	Indeno(1,2,3-cd)pyrene	4.	U
53-70-3	Dibenzo(a,h)anthracene	3.	U
191-24-2	Benzo(g,h,i)perylene	4.	U

(1) - Cannot be separated from Diphenylamine

TENTATIVELY IDENTIFIED COMPOUNDS YES [ ] NO [X]

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5/19/89

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FN15D13

Lab Name: 5SCRL US EPA 312/353-9065 Contract: DU # B304

Lab Code: CHICAGOIL Case No.: SF 6050 SAS No.: BNRWDSR SDG No.: TFA 302

Matrix: (soil/water) WATER Lab Sample ID: 89FN15D13

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >BP279

Level: (low/med) LOW Date Received: 04/20/89

% Moisture: not dec.____ dec. ____ Date Extracted: 04/25/89

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 5/06/89

GPC Cleanup: (Y/N) N pH: 1 your Dilution Factor: 1.00000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	2.	U
111-44-4	bis(2-Chloroethyl)Ether	2.	U
95-57-8	2-Chlorophenol	2.	U
541-73-1	1,3-Dichlorobenzene	2.	U
106-46-7	1,4-Dichlorobenzene	2.	U
100-51-6	Benzyl alcohol	2.	U
95-50-1	1,2-Dichlorobenzene	3.	U
95-48-7	2-Methylphenol	1.	U
39638-32-9	bis(2-chloroisopropyl)ether	3.	U
106-44-5	4-Methylphenol	1.	U
621-64-7	N-Nitroso-Di-n-propylamine	2.	U
67-72-1	Hexachloroethane	2.	U
98-95-3	Nitrobenzene	3.	U
78-59-1	Isophorone	3.	U
88-75-5	2-Nitrophenol	2.	U
105-67-9	2,4-Dimethylphenol	2.	U
65-85-0	Benzoic acid	30.	U
111-91-1	bis(2-Chloroethoxy)methane	3.	U
120-83-2	2,4-Dichlorophenol	2.	U
120-82-1	1,2,4-Trichlorobenzene	2.	U
91-20-3	Naphthalene	2.	U
106-47-8	4-Chloroaniline	2.	U
87-68-3	Hexachlorobutadiene	3.	U
59-50-7	4-Chloro-3-methylphenol	2.	U
91-57-6	2-Methylnaphthalene	2.	U
77-47-4	Hexachlorocyclopentadiene	2.	U
88-06-2	2,4,6-Trichlorophenol	2.	U
95-95-4	2,4,5-Trichlorophenol	2.	U
91-58-7	2-Chloronaphthalene	2.	U
88-74-4	2-Nitroaniline	3.	U
131-11-3	Dimethylphthalate	2.	U
208-96-8	Acenaphthylene	2.	U
606-20-2	2,6-Dinitrotoluene	1.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FN15D13

Lab Name:5SCRL US EPA 312/353-9065 Contract:DU # B304

Lab Code: CHICAGOIL Case No.: SF 6050 SAS No.: BNRWDSR SDG No.: TFA 302

Matrix: (soil/water) WATER Lab Sample ID: 89FN15D13

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >BP279

Level: (low/med) LOW Date Received: 04/20/89

% Moisture: not dec.____ dec. ____ Date Extracted:04/25/89

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 5/06/89

GPC Cleanup: (Y/N) N pH:I your Dilution Factor: 1.00000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
99-09-2	3-Nitroaniline	3.	IU
83-32-9	Acenaphthene	2.	IU
51-28-5	2,4-Dinitrophenol	15.	IU
100-02-7	4-Nitrophenol	2.	IU
132-64-9	Dibenzofuran	1.	IU
121-14-2	2,4-Dinitrotoluene	1.	IU
84-66-2	Diethylphthalate	1.	IU
7005-72-3	4-Chlorophenyl-phenylether	1.	IU
86-73-7	Fluorene	1.	IU
100-01-6	4-Nitroaniline	3.	IU
534-52-1	4,6-Dinitro-2-methylphenol	15.	IU
86-30-6	N-Nitrosodiphenylamine (1)	2.	IU
101-55-3	4-Bromophenyl-phenylether	2.	IU
118-74-1	Hexachlorobenzene	2.	IU
87-86-5	Pentachlorophenol	2.	IU
85-01-8	Phenanthrene	1.	IU
120-12-7	Anthracene	3.	IU
84-74-2	Di-n-butylphthalate	2.	IU
206-44-0	Fluoranthene	2.	IU
129-00-0	Pyrene	2.	IU
85-68-7	Butylbenzylphthalate	4.	IU
56-55-3	Benzo(a)anthracene	2.	IU
218-01-9	Chrysene	2.	IU
117-81-7	bis(2-Ethylhexyl)phthalate	1.	IU
117-84-0	Di-n-octylphthalate	2.	IU
205-99-2	Benzo(b)fluoranthene	2.	IU
207-08-9	Benzo(k)fluoranthene	2.	IU
50-32-8	Benzo(a)pyrene	2.	IU
193-39-5	Indeno(1,2,3-cd)pyrene	4.	IU
53-70-3	Dibenzo(a,h)anthracene	3.	IU
191-24-2	Benzo(g,h,i)perylene	4.	IU

(1) - Cannot be separated from Diphenylamine

TENTATIVELY IDENTIFIED COMPOUNDS YES [ ] NO [X]

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Baker 5/15/89

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FN15S14

Lab Name: SSCRL US EPA 312/353-9065 Contract: DU # B304

Lab Code: CHICAGOIL Case No.: SF 6050 SAS No.: BNRWDSR SDG No.: TFA 302

Matrix: (soil/water) WATER Lab Sample ID: 89FN15S14

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >BP277

Level: (low/med) LOW Date Received: 04/20/89

% Moisture: not dec.____ dec. ____ Date Extracted: 04/25/89

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 5/06/89

GPC Cleanup: (Y/N) N pH: 1 your Dilution Factor: 1.00000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	2.	IU
111-44-4	bis(2-Chloroethyl)Ether	2.	IU
95-57-8	2-Chlorophenol	2.	IU
541-73-1	1,3-Dichlorobenzene	2.	IU
106-46-7	1,4-Dichlorobenzene	2.	IU
100-51-6	Benzyl alcohol	2.	IU
95-50-1	1,2-Dichlorobenzene	3.	IU
95-48-7	2-Methylphenol	1.	IU
39638-32-9	bis(2-chloroisopropyl)ether	3.	IU
106-44-5	4-Methylphenol	1.	IU
621-64-7	N-Nitroso-Di-n-propylamine	2.	IU X
67-72-1	Hexachloroethane	2.	IU
98-95-3	Nitrobenzene	3.	IU
78-59-1	Isophorone	3.	IU
88-75-5	2-Nitrophenol	2.	IU
105-67-9	2,4-Dimethylphenol	2.	IU
65-85-0	Benzoic acid	30.	IU
111-91-1	bis(2-Chloroethoxy)methane	3.	IU
120-83-2	2,4-Dichlorophenol	2.	IU
120-82-1	1,2,4-Trichlorobenzene	2.	IU
91-20-3	Naphthalene	2.	IU
106-47-8	4-Chloroaniline	2.	IU
87-68-3	Hexachlorobutadiene	3.	IU
59-50-7	4-Chloro-3-methylphenol	2.	IU
91-57-6	2-Methylnaphthalene	2.	IU
77-47-4	Hexachlorocyclopentadiene	2.	IU
88-06-2	2,4,6-Trichlorophenol	2.	IU
95-95-4	2,4,5-Trichlorophenol	2.	IU
91-58-7	2-Chloronaphthalene	2.	IU
88-74-4	2-Nitroaniline	3.	IU
131-11-3	Dimethylphthalate	2.	IU
208-96-8	Acenaphthylene	2.	IU
606-20-2	2,6-Dinitrotoluene	1.	IU

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FN15S14

Lab Name: 5SCRL US EPA 312/353-9065 Contract: DU # B304

Lab Code: CHICAGOIL Case No.: SF 6050 SAS No.: BNRWDSR SDG No.: TFA 302

Matrix: (soil/water) WATER Lab Sample ID: 89FN15S14

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >BP277

Level: (low/med) LOW Date Received: 04/20/89

% Moisture: not dec.____ dec. ____ Date Extracted: 04/25/89

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 5/06/89

GPC Cleanup: (Y/N) N pH: 1 your Dilution Factor: 1.00000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
99-09-2	3-Nitroaniline	3.	U
83-32-9	Acenaphthene	2.	U
51-28-5	2,4-Dinitrophenol	15.	U
100-02-7	4-Nitrophenol	2.	U
132-64-9	Dibenzofuran	1.	U
121-14-2	2,4-Dinitrotoluene	1.	U
84-66-2	Diethylphthalate	1.	U
7005-72-3	4-Chlorophenyl-phenylether	1.	U
86-73-7	Fluorene	1.	U
100-01-6	4-Nitroaniline	3.	U
534-52-1	4,6-Dinitro-2-methylphenol	15.	U
86-30-6	N-Nitrosodiphenylamine (1)	2.	U
101-55-3	4-Bromophenyl-phenylether	2.	U
118-74-1	Hexachlorobenzene	2.	U
87-86-5	Pentachlorophenol	2.	U
85-01-8	Phenanthrene	1.	U
120-12-7	Anthracene	3.	U
84-74-2	Di-n-butylphthalate	2.	U
206-44-0	Fluoranthene	2.	U
129-00-0	Pyrene	2.	U
85-68-7	Butylbenzylphthalate	4.	U
56-55-3	Benzo(a)anthracene	2.	U
218-01-9	Chrysene	2.	U
117-81-7	bis(2-Ethylhexyl)phthalate	1.	U
117-84-0	Di-n-octylphthalate	2.	U
205-99-2	Benzo(b)fluoranthene	2.	U
207-08-9	Benzo(k)fluoranthene	2.	U
50-32-8	Benzo(a)pyrene	2.	U
193-39-5	Indeno(1,2,3-cd)pyrene	4.	U
53-70-3	Dibenzo(a,h)anthracene	3.	U
191-24-2	Benzo(g,h,i)perylene	4.	U

(1) - Cannot be separated from Diphenylamine

TENTATIVELY IDENTIFIED COMPOUNDS YES [ ] NO [X]

FORM I SV-2

Robert 5/15/89

1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FN15S15

Lab Name: SSCRL US EPA 312/353-9065 Contract: DU # B304

Lab Code: CHICAGOIL Case No.: SF 6050 SAS No.: BNRWDSR SDG No.: TFA 302

Matrix: (soil/water) WATER Lab Sample ID: 89FN15S15

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >BP280

Level: (low/med) LOW Date Received: 04/20/89

% Moisture: not dec.____ dec. ____ Date Extracted: 04/25/89

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 5/06/89

GPC Cleanup: (Y/N) N pH: | your Dilution Factor: 1.00000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	2.	U
111-44-4	bis(2-Chloroethyl)Ether	2.	U
95-57-8	2-Chlorophenol	2.	U
541-73-1	1,3-Dichlorobenzene	2.	U
106-46-7	1,4-Dichlorobenzene	2.	U
100-51-6	Benzyl alcohol	2.	U
95-50-1	1,2-Dichlorobenzene	3.	U
95-48-7	2-Methylphenol	1.	U
39638-32-9	bis(2-chloroisopropyl)ether	3.	U
106-44-5	4-Methylphenol	1.	U
621-64-7	N-Nitroso-Di-n-propylamine	2.	U
67-72-1	Hexachloroethane	2.	U
98-95-3	Nitrobenzene	3.	U
78-59-1	Isophorone	3.	U
88-75-5	2-Nitrophenol	2.	U
105-67-9	2,4-Dimethylphenol	2.	U
65-85-0	Benzoic acid	30.	U
111-91-1	bis(2-Chloroethoxy)methane	3.	U
120-83-2	2,4-Dichlorophenol	2.	U
120-82-1	1,2,4-Trichlorobenzene	2.	U
91-20-3	Naphthalene	2.	U
106-47-8	4-Chloroaniline	2.	U
87-68-3	Hexachlorobutadiene	3.	U
59-50-7	4-Chloro-3-methylphenol	2.	U
91-57-6	2-Methylnaphthalene	2.	U
77-47-4	Hexachlorocyclopentadiene	2.	U
88-06-2	2,4,6-Trichlorophenol	2.	U
95-95-4	2,4,5-Trichlorophenol	2.	U
91-58-7	2-Chloronaphthalene	2.	U
88-74-4	2-Nitroaniline	3.	U
131-11-3	Dimethylphthalate	2.	U
208-96-8	Acenaphthylene	2.	U
606-20-2	2,6-Dinitrotoluene	1.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FN15S15

Lab Name: SCRL US EPA 312/353-9065 Contract: DU # B304

Lab Code: CHICAGOIL Case No.: SF 6050 SAS No.: BNRWDSR SDG No.: TFA 302

Matrix: (soil/water) WATER Lab Sample ID: 89FN15S15

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >BP280

Level: (low/med) LOW Date Received: 04/20/89

% Moisture: not dec.____ dec. ____ Date Extracted: 04/25/89

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 5/06/89

GPC Cleanup: (Y/N) N pH: I your Dilution Factor: 1.00000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q	
99-09-2	3-Nitroaniline	3.	U	
83-32-9	Acenaphthene	2.	U	
51-28-5	2,4-Dinitrophenol	15.	U	
100-02-7	4-Nitrophenol	2.	U	X
132-64-9	Dibenzofuran	1.	U	
121-14-2	2,4-Dinitrotoluene	1.	U	
84-66-2	Diethylphthalate	1.	U	
7005-72-3	4-Chlorophenyl-phenylether	1.	U	
86-73-7	Fluorene	1.	U	
100-01-6	4-Nitroaniline	3.	U	
534-52-1	4,6-Dinitro-2-methylphenol	15.	U	
86-30-6	N-Nitrosodiphenylamine (1)	2.	U	
101-55-3	4-Bromophenyl-phenylether	2.	U	
118-74-1	Hexachlorobenzene	2.	U	
87-86-5	Pentachlorophenol	2.	U	
85-01-8	Phenanthrene	1.	U	
120-12-7	Anthracene	3.	U	
84-74-2	Di-n-butylphthalate	2.	U	
206-44-0	Fluoranthene	2.	U	
129-00-0	Pyrene	2.	U	
85-68-7	Butylbenzylphthalate	4.	U	
56-55-3	Benzo(a)anthracene	2.	U	
218-01-9	Chrysene	2.	U	
117-81-7	bis(2-Ethylhexyl)phthalate	1.	U	
117-84-0	Di-n-octylphthalate	2.	U	
205-99-2	Benzo(b)fluoranthene	2.	U	
207-08-9	Benzo(k)fluoranthene	2.	U	
50-32-8	Benzo(a)pyrene	2.	U	
193-39-5	Indeno(1,2,3-cd)pyrene	4.	U	
53-70-3	Dibenzo(a,h)anthracene	3.	U	
191-24-2	Benzo(g,h,i)perylene	4.	U	

(1) - Cannot be separated from Diphenylamine

TENTATIVELY IDENTIFIED COMPOUNDS YES [ ] NO [X]

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Bolz 5/15/89

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FN15S16

Lab Name: SCRL US EPA 312/353-9065 Contract: DU # B304

Lab Code: CHICAGOIL Case No.: SF 6050 SAS No.: BNRWDSR SDG No.: TFA 302

Matrix: (soil/water) WATER Lab Sample ID: 89FN15S16

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >BP281

Level: (low/med) LOW Date Received: 04/20/89

% Moisture: not dec.____ dec. ____ Date Extracted: 04/25/89

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 5/06/89

GPC Cleanup: (Y/N) N pH: 1 your Dilution Factor: 1.00000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L		Q
108-95-2	Phenol	2.	U	
111-44-4	bis(2-Chloroethyl)Ether	2.	U	
95-57-8	2-Chlorophenol	2.	U	
541-73-1	1,3-Dichlorobenzene	2.	U	
106-46-7	1,4-Dichlorobenzene	2.	U	
100-51-6	Benzyl alcohol	2.	U	
95-50-1	1,2-Dichlorobenzene	3.	U	
95-48-7	2-Methylphenol	1.	U	
39638-32-9	bis(2-chloroisopropyl)ether	3.	U	
106-44-5	4-Methylphenol	1.	U	
621-64-7	N-Nitroso-Di-n-propylamine	2.	U	X
67-72-1	Hexachloroethane	2.	U	
98-95-3	Nitrobenzene	3.	U	
78-59-1	Isophorone	3.	U	
88-75-5	2-Nitrophenol	2.	U	
105-67-9	2,4-Dimethylphenol	2.	U	
65-85-0	Benzoic acid	30.	U	
111-91-1	bis(2-Chloroethoxy)methane	3.	U	
120-83-2	2,4-Dichlorophenol	2.	U	
120-82-1	1,2,4-Trichlorobenzene	2.	U	
91-20-3	Naphthalene	2.	U	
106-47-8	4-Chloroaniline	2.	U	
87-68-3	Hexachlorobutadiene	3.	U	
59-50-7	4-Chloro-3-methylphenol	2.	U	
91-57-6	2-Methylnaphthalene	2.	U	
77-47-4	Hexachlorocyclopentadiene	2.	U	
88-06-2	2,4,6-Trichlorophenol	2.	U	
95-95-4	2,4,5-Trichlorophenol	2.	U	
91-58-7	2-Chloronaphthalene	2.	U	
88-74-4	2-Nitroaniline	3.	U	
131-11-3	Dimethylphthalate	2.	U	
208-96-8	Acenaphthylene	2.	U	
606-20-2	2,6-Dinitrotoluene	1.	U	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

89FN15S16

Lab Name: 5SCRL US EPA 312/353-9065 Contract: DU # B304

Lab Code: CHICAGOIL Case No.: SF 6050 SAS No.: BNRWDSR SDG No.: TFA 302

Matrix: (soil/water) WATER Lab Sample ID: 89FN15S16

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >BP281

Level: (low/med) LOW Date Received: 04/20/89

% Moisture: not dec.____ dec. ____ Date Extracted: 04/25/89

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 5/06/89

GPC Cleanup: (Y/N) N pH: 1 your Dilution Factor: 1.00000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
99-09-2	3-Nitroaniline	3.	U
83-32-9	Acenaphthene	2.	U
51-28-5	2,4-Dinitrophenol	15.	U
100-02-7	4-Nitrophenol	2.	U
132-64-9	Dibenzofuran	1.	U
121-14-2	2,4-Dinitrotoluene	1.	U
84-66-2	Diethylphthalate	1.	U
7005-72-3	4-Chlorophenyl-phenylether	1.	U
86-73-7	Fluorene	1.	U
100-01-6	4-Nitroaniline	3.	U
534-52-1	4,6-Dinitro-2-methylphenol	15.	U
86-30-6	N-Nitrosodiphenylamine (1)	2.	U
101-55-3	4-Bromophenyl-phenylether	2.	U
118-74-1	Hexachlorobenzene	2.	U
87-86-5	Pentachlorophenol	2.	U
85-01-8	Phenanthrene	1.	U
120-12-7	Anthracene	3.	U
84-74-2	Di-n-butylphthalate	2.	U
206-44-0	Fluoranthene	2.	U
129-00-0	Pyrene	2.	U
85-68-7	Butylbenzylphthalate	4.	U
56-55-3	Benzo(a)anthracene	2.	U
218-01-9	Chrysene	2.	U
117-81-7	bis(2-Ethylhexyl)phthalate	2.	
117-84-0	Di-n-octylphthalate	2.	U
205-99-2	Benzo(b)fluoranthene	2.	U
207-08-9	Benzo(k)fluoranthene	2.	U
50-32-8	Benzo(a)pyrene	2.	U
193-39-5	Indeno(1,2,3-cd)pyrene	4.	U
53-70-3	Dibenzo(a,h)anthracene	3.	U
191-24-2	Benzo(g,h,i)perylene	4.	U

(1) - Cannot be separated from Diphenylamine

TENTATIVELY IDENTIFIED COMPOUNDS YES [✓] NO [ ]

5/15/89

1D

SEMIVOLATILE ORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

/ 89FN15S16 \

Lab Name:5SCRL US EPA 312/353-9065 Contract : TFA 302

Lab Code: CHICAGOIL Case Name:BNRWDSR DSN #: SF6050 SDG No.: TFA302

Matrix: WATER Lab Sample ID: 89FN15S16 Lab File ID: >BP281

Date Received:04/20/89 Date Extracted:04/25/89 Date Analyzed:05/06/89

TENTATIVELY IDENTIFIED COMPOUNDS		ESTIMATED CONCENTRATION(UG/L)
UNKNOWN	(R. T. 10.69 min.)	5.1

FORM I SV-3

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name:5SCRL US EPA 312/353-9065 Contract:DU # B304

Lab Code: CHICAGOILCase No.: SF 6050 SAS No.: BNRWDSR SDG No.: TFA 302

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	OTHER	TOT OUT
01	METHODBLAN	76	66	84	37	53	91		0
02	89FN15S14M	75	71	77	29	47	92		0
03	89FN15S14M	83	82	81	39	63	92		0
04	89FN15S14	75	69	72	34	50	76		0
05	89FN15S13	75	76	83	37	54	79		0
06	89FN15D13	60	55	60	36	52	84		0
07	89FN15S15	87	79	75	48	60	87		0
08	89FN15S16	69	66	86	44	61	93		0
09	89FN15R48	6 *	36 *	81	3 *	0 *	79		4
REPEAT 10	89FN15R48	4*	35*	87*	2*	0*	82		
11									
12									
13									
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NOTE: 89FN15R48 reanalysis confirmed the initial results - i.e., four surrogates are outside of acceptance limits.

5/17/89

		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(35-114)
S2 (FBP)	= 2-Fluorobiphenyl	(43-116)
S3 (TPH)	= Terphenyl-d14	(33-141)
S4 (PHL)	= Phenol-d5	(10-94)
S5 (2FP)	= 2-Fluorophenol	(21-100)
S6 (TBP)	= 2,4,6-Tribromophenol	(10-123)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out

FORM II SV-1 1/87 Rev.

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name:5SCRL US EPA 312/353-9065 Contract:DU # B304

Lab Code: CHICAGOIL Case No.: SF 6050 SAS No.: BNRWDSR SDG No.: TFA 302

Matrix Spike - EPA Sample No.: 89FN15S14

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
Phenol	95.00	0.00	35.00	36	12-110
2-Chlorophenol	110.00	0.00	76.00	72	27-123
1,4-Dichlorobenzene	99.00	0.00	62.00	62	36- 97
N-Nitroso-Di-n-prop.(1)	95.00	0.00	74.00	77	41-116
1,2,4-Trichlorobenzene	130.00	0.00	91.00	69	39- 98
4-Chloro-3-methylphenol	100.00	0.00	87.00	84	23-110
Acenaphthene	110.00	0.00	96.00	84	46-118
4-Nitrophenol	89.00	0.00	25.00	27	10-110
2,4-Dinitrotoluene	88.00	0.00	88.00	100 *	24- 96
Pentachlorophenol	130.00	0.00	50.00	38	9-103
Pyrene	110.00	0.00	98.00	89	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	95.00	49.00	51	34	42	12-110
2-Chlorophenol	110.00	91.00	86	17	40	27-123
1,4-Dichlorobenzene	99.00	77.00	78	22	28	36- 97
N-Nitroso-Di-n-prop.(1)	95.00	84.00	88	13	38	41-116
1,2,4-Trichlorobenzene	130.00	110.00	83	18	28	39- 98
4-Chloro-3-methylphenol	100.00	98.00	95	12	42	23-110
Acenaphthene	110.00	100.00	92	9	31	46-118
4-Nitrophenol	89.00	29.00	32	16	50	10-110
2,4-Dinitrotoluene	88.00	95.00	108 *	7	38	24- 96
Pentachlorophenol	130.00	53.00	40	5	50	9-103
Pyrene	110.00	100.00	92	3	31	26-127

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of qc limits

RPD: 0 out of 11 outside limits
Spike Recovery: 2 out of 22 outside limits

COMMENTS: MS/MSD & the new toxic Std. Solns. will be analyzed ASAP to determine the actual conc. of the ~~[illegible]~~ MS/MSD Std.

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name:5SCRL US EPA 312/353-9065 Contract:DU # B304

Lab Code: CHICAGOIL Case No.: SF 6049 SAS No.: SF 6050 SDG No.: TFA 302

Lab File ID: >BP251 DFTPP Injection Date: 5/05/89

Instrument ID: 96 2 DFTPP Injection Time: 10:12

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	58.7
68	Less than 2.0% of mass 69	0.0(0.0)1
69	Mass 69 relative abundance	65.
70	Less than 2.0% of mass 69	.2(.3)1
127	40.0 - 60.0% of mass 198	41.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	24.4
365	Greater than 1.00% of mass 198	4.28
441	Present, but less than mass 443	10.5
442	Greater than 40.0% of mass 198	72.1
443	17.0 - 23.0% of mass 442	13.1(18.1)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	TOXSTD100PM	TOXSTD100PPM	>BP271	5/05/89	19:56
02	TOXSTD50PPM	TOXSTD 50PPM	>BP272	5/05/89	20:49
03	TOXSTD25PPM	TOXSTD 25PPM	>BP273	5/05/89	21:42
04	METHODBLANK	METHODBLANK	>BP274	5/05/89	22:35
05	89FN15S14MS	89FN15S14MS	>BP275	5/05/89	23:28
06	89FN15S14MD	89FN15S14MD	>BP276	5/06/89	0:21
07	89FN15S14	89FN15S14	>BP277	5/06/89	1:14
08	89FN15S13	89FN15S13	>BP278	5/06/89	2:07
09	89FN15D13	89FN15D13	>BP279	5/06/89	3:00
10	89FN15S15	89FN15S15	>BP280	5/06/89	3:53
11	89FN15S16	89FN15S16	>BP281	5/06/89	4:46
12	89FN15R48	89FN15R48	>BP282	5/06/89	5:39
13					
14					
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17					
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19					
20					
21					
22					

ok

5/15/8

FORM V SV 1/87 Rev.

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name:SSCRL US EPA 312/353-9065 Contract:DU # B304

Lab Code: CHICAGOIL Case No.: SF 6049 SAS No.: SF 6050 SDG No.: TFA 302

Instrument ID: 96 2 Calibration Date(s):05/10/89 05/10/89

Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = ~~30~~ 35.0%

LAB FILE ID: RRF25 =>BP273 RRF50 =>BP272
RRF100=>BP271

COMPOUND	RRF25	RRF50	RRF100			RRF	% RSD
Phenol *	1.608	1.764	2.070	0.000	0.000	1.814	13.0*
bis(2-Chloroethyl)ether	1.368	1.439	1.567	0.000	0.000	1.458	6.9
2-Chlorophenol	1.196	1.241	1.366	0.000	0.000	1.268	7.0
1,3-Dichlorobenzene	1.261	1.317	1.477	0.000	0.000	1.352	8.3
1,4-Dichlorobenzene *	1.293	1.508	1.508	0.000	0.000	1.437	8.6*
Benzyl alcohol	.664	.749	.848	0.000	0.000	.753	12.2
1,2-Dichlorobenzene	1.290	1.483	1.546	0.000	0.000	1.440	9.3
2-Methylphenol	1.071	1.126	1.324	0.000	0.000	1.174	11.3
bis(2-chloroisopropyl)ether	.283	.363	.378	0.000	0.000	.341	14.9
4-Methylphenol	1.053	1.252	1.329	0.000	0.000	1.211	11.7
N-Nitroso-di-n-propylamine #	1.248	1.436	1.523	0.000	0.000	1.402	10.0#
Hexachloroethane	.533	.602	.673	0.000	0.000	.602	11.6
Nitrobenzene	.616	.707	.736	0.000	0.000	.686	9.1
Isophorone	3.077	3.256	3.532	0.000	0.000	3.288	7.0
2-Nitrophenol *	.625	.743	.826	0.000	0.000	.731	13.8*
2,4-Dimethylphenol	.840	1.016	1.120	0.000	0.000	.992	14.2
Benzoic acid	.445	.703	.828	0.000	0.000	.659	29.7
bis(2-Chloroethoxy)methane	1.859	2.061	2.166	0.000	0.000	2.029	7.7
2,4-Dichlorophenol *	1.002	1.186	1.317	0.000	0.000	1.168	13.6*
1,2,4-Trichlorobenzene	1.239	1.321	1.429	0.000	0.000	1.330	7.2
Naphthalene	3.568	3.865	4.060	0.000	0.000	3.831	6.5
4-Chloroaniline	.476	.529	.574	0.000	0.000	.526	9.4
Hexachlorobutadiene *	.860	.919	.985	0.000	0.000	.921	6.8*
4-Chloro-3-methylphenol *	1.236	1.299	1.386	0.000	0.000	1.307	5.7*
2-Methylnaphthalene	2.272	2.486	2.586	0.000	0.000	2.448	6.6
Hexachlorocyclopentadiene #	.632	.765	.876	0.000	0.000	.758	16.1#
2,4,6-Trichlorophenol *	.898	.962	.945	0.000	0.000	.935	3.5*
2,4,5-Trichlorophenol	.875	.976	.984	0.000	0.000	.945	6.4
2-Chloronaphthalene	2.712	2.637	2.634	0.000	0.000	2.661	1.7
2-Nitroaniline	.649	.748	.819	0.000	0.000	.739	11.5
Dimethylphthalate	2.854	2.668	2.670	0.000	0.000	2.730	3.9
Acenaphthylene	1.207	1.264	1.254	0.000	0.000	1.242	2.4
2,6-Dinitrotoluene	.149	.187	.199	0.000	0.000	.178	14.7
3-Nitroaniline	.139	.177	.193	0.000	0.000	.170	16.3
Acenaphthene *	.829	.853	.841	0.000	0.000	.841	1.4*
2,4-Dinitrophenol #	.025	.053	.080	0.000	0.000	.053	52.0#
4-Nitrophenol #	.072	.080	.131	0.000	0.000	.094	34.1#

FORM VI SV-2 1/87 Rev.

note: none of the targets compounds detected at the site samples had %RSD > 35.0% - 5/15/89

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name:5SCRL US EPA 312/353-9065 Contract:DU # B304

Lab Code: CHICAGOIL Case No.: SF 6049 SAS No.: SF 6050 SDG No.: TFA 302

Instrument ID: 96 2 Calibration Date(s):05/10/89 05/10/89

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = ~~30~~ 35.0% 8/25/8

LAB FILE ID: RRF25 =>BP273 RRF50 =>BP272
RRF100=>BP271

COMPOUND	RRF25	RRF50	RRF100			$\overline{RRF}$	% RSD
Dibenzofuran	1.102	1.138	1.138	0.000	0.000	1.126	1.8
2,4-Dinitrotoluene	.177	.231	.275	0.000	0.000	.228	21.5
Diethylphthalate	.839	.875	.917	0.000	0.000	.877	4.5
4-Chlorophenyl-phenylether	.378	.428	.415	0.000	0.000	.407	6.4
Fluorene	.848	.847	.857	0.000	0.000	.850	.6
4-Nitroaniline	.111	.151	.203	0.000	0.000	.155	29.9
4,6-Dinitro-2-methylphenol	.043	.086	.103	0.000	0.000	.077	40.0 ←
N-Nitrosodiphenylamine (1) *	.215	.138	.130	0.000	0.000	.161	29.1*
4-Bromophenyl-phenylether	.206	.228	.233	0.000	0.000	.222	6.4
Hexachlorobenzene	.277	.305	.320	0.000	0.000	.301	7.3
Pentachlorophenol *	.083	.143	.164	0.000	0.000	.130	32.1*
Phenanthrene	1.001	1.095	1.217	0.000	0.000	1.105	9.8
Anthracene	.903	1.032	1.176	0.000	0.000	1.037	13.2
Di-n-butylphthalate	1.084	1.187	1.286	0.000	0.000	1.186	8.5
Fluoranthene *	.867	.987	1.071	0.000	0.000	.975	10.6*
Pyrene	.856	1.040	1.133	0.000	0.000	1.010	14.0
Butylbenzylphthalate	.439	.497	.581	0.000	0.000	.506	14.1
Benzo(a)anthracene	.888	.953	1.040	0.000	0.000	.960	7.9
Chrysene	.691	.770	.707	0.000	0.000	.722	5.7
bis(2-Ethylhexyl)phthalate	.593	.730	.793	0.000	0.000	.705	14.5
Di-n-octylphthalate *	3.787	6.247	8.633	0.000	0.000	6.223	38.9*
Benzo(b)fluoranthene	2.349	2.653	1.770	0.000	0.000	2.258	19.9
Benzo(k)fluoranthene	2.333	1.299	1.631	0.000	0.000	1.754	30.1
Benzo(a)pyrene *	1.343	1.155	1.262	0.000	0.000	1.253	7.5*
Indeno(1,2,3-cd)pyrene	.285	.348	.535	0.000	0.000	.390	33.3
Dibenzo(a,h)anthracene	.153	.325	.624	0.000	0.000	.367	65.0
Benzo(g,h,i)perylene	.105	.281	.399	0.000	0.000	.262	56.6 ←
Nitrobenzene-d5	1.699	1.977	2.051	0.000	0.000	1.909	9.7
2-Fluorobiphenyl	3.377	3.324	3.347	0.000	0.000	3.349	.8
Terphenyl-d14	.582	.651	.687	0.000	0.000	.640	8.3
Phenol-d5	1.247	1.591	1.654	0.000	0.000	1.497	14.6
2-Fluorophenol	1.064	1.232	1.354	0.000	0.000	1.217	12.0
2,4,6-Tribromophenol	.138	.167	.178	0.000	0.000	.161	12.9

(1) Cannot be separated from Diphenylamine

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name:5SCRL US EPA 312/353-9065 Contract:DU # B304

Lab Code: CHICAGOIL Case No.: SF 6049 SAS No.: SF 6050 SDG No.: TFA 302

Lab File ID (Standard): >BP272 Date Analyzed: 5/05/89

Instrument ID: 96 2 Time Analyzed: 20:49

		IS1(DCB) AREA #	RT	IS2(PHN) AREA #	RT	IS3(PRY) AREA #	RT
	12 HOUR STD	17838.	4.06	55363.	22.16	9891.	34.85
	UPPER LIMIT	35676.		110726.		19782.	
	LOWER LIMIT	8919.		27681.		4946.	
	EPA SAMPLE NO.						
01	TOXSTD100PM	16015.	4.08	50256.	22.16	6000.	34.86
02	TOXSTD25PPM	17083.	4.01	56540.	22.16	15081.	34.83
03	METHODBLANK	17454.	4.05	51666.	22.15	7971.	34.86
04	89FN15S14MS	17677.	4.01	54965.	22.15	7455.	34.84
05	89FN15S14MD	17515.	4.01	55364.	22.15	10219.	34.82
06	89FN15S14	17484.	4.06	54780.	22.17	6954.	34.88
07	89FN15S13	16220.	4.03	50919.	22.15	9253.	34.86
08	89FN15D13	17100.	4.01	50827.	22.15	7949.	34.86
09	89FN15S15	16494.	4.06	53601.	22.15	24586.*	34.85
10	89FN15S16	17811.	4.06	52338.	22.15	26966.*	34.85
11	89FN15R48	15989.	4.01	49932.	22.15	7822.	34.86
12							
13							
14							
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18							
19							
20							
21							
22							

IS1 (DCB) = d4-1,4-Dichlorobenzene
IS2 (PHN) = d-10-Phenanthrene
IS3 (PRY) = d12-Perylene

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

ABN's

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: TOXIC SUBSTANCES

TFA302

IVISION/BRANCH FIT SUPERFUND SAMPLE DATE 4/15/89 LAB ARRIVAL DATE 4/20/89 DUE DATE 5/11/89

U NUMBER ~~TFAS~~ TFA DATA SET NUMBER 6050 STUDY Banner Western Disposal Service Co. PRIORITY — CONTRACTOR —

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER VOLATILE ORGANICS SCAN UG/L TOX 17584	WATER ABN ORGANICS SCAN UG/L TOX 17674	SEDIMENTS SOLIDS VOLATILE ORGANICS SCAN MG/KG (DRY) TOX 215622	SEDIMENTS SOLIDS ABN ORGANICS SCAN MG/KG (DRY) TOX 215722
9FN15S13	RW1 5-036546 5-036547	✓	✓		
9FN15S14	5-036562-63, 5-036569-70-71-72 MSD/RW2 5-036594-95	✓	✓		
9FN15S15	5-036578 5-036579 RW3	✓	✓		
9FN15S16	5-036585 5-036586 RW4	✓	✓		
9FN10R48	5-036590 5-036591 BLK	✓	✓		
9FN15D13	5-036555 5-036556 Dup	✓	✓		
9FN15S13	RW1 5-036541-542		✓		
9FN15D13	DUPLICATE 5-036548 5-036550		✓		
9FN15S14	RW2/MSD 5-036557-558 5-036564-65-66		✓		
9FN15S15	RW3 5-036573-574		✓		
9FN15S16	RW4 5-036580-581		✓		
9FN10R48	BLANK 5-036587-588		✓		

RAW DATA

SE-6050

QUANT REPORT

Operator ID: SUKWHA Quant Rev: 6 Quant Time: 890511 10:16
Output File: ^BP274::SK Injected at: 890505 22:35
Data File: >BP274::C2 Dilution Factor: 1.00000
Name: SF6050 METHOD BLANK
Misc: 050689 1L/1ML 110/115 BTL#14

ID File: IDBP96::KS
Title: HP BNA STD REV E BABU 03\10\89
Last Calibration: 890511 08:57

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	4.05	150	17454	50.00	NG/UL	96
2)	2-Fluorophenol	2.04	36	24239	57.08	NG/UL	95
3)	Phenol-d5	3.62	126	20377	38.99	NG/UL	91
16)	d8-Naphthalene	7.90	369	63194	47.65	NG/UL	94
17)	Nitrobenzene-d5	5.65	241	49437	74.18	NG/UL	75
31)	d10-Acenaphthene	15.45	798	37458	52.99	NG/UL	96
36)	2-Fluorobiphenyl	12.77	646	76831	65.72	NG/UL	96
39)	*d-10-Phenanthrene	22.15	1179	51666	50.00	NG/UL	99
54)	2,4,6-Tribromophenol	19.20	1011	14665	88.07	NG/UL	94
62)	d12-Chrysene	32.48	1766	38704	60.95	NG/UL	91
64)	Terphenyl-d14	30.22	1637	65673	99.30	NG/UL	96
69)	*d12-Perylene	34.86	1901	7971	50.00	NG/UL	96

* Compound is ISTD

QUANT REPORT

Operator ID: SUKWHA Quant Rev: 6 Quant Time: 890511 10:23
Output File: ^BP275::SK Injected at: 890505 23:28
Data File: >BP275::C2 Dilution Factor: 1.00000
Name: SF6050 89FN15S14MS
Misc: 050689 1L/1ML 110/115 BTL#15

ID File: IDBP96::KS
Title: HP BNA STD REV E BABU 03\10\89
Last Calibration: 890511 08:57

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	4.01	148	17677	50.00	NG/UL	96
2)	2-Fluorophenol	2.00	34	21696	50.45	NG/UL	95
3)	Phenol-d5	3.57	123	16100	30.42	NG/UL	89
4)	Phenol	3.59	124	22202	34.62	NG/UL	86
6)	2-Chlorophenol	3.66	128	34177	76.26	NG/UL	98
8)	1,4-Dichlorobenzene	4.05	150	31478	61.98	NG/UL	97
14)	N-Nitroso-Di-n-propylamine	5.42	228	36578	73.79	NG/UL	87
16)	d8-Naphthalene	7.88	368	66658	49.62	NG/UL	90
17)	Nitrobenzene-d5	5.61	239	48858	72.39	NG/UL	87
25)	1,2,4-Trichlorobenzene	7.79	363	42744	90.93	NG/UL	92
29)	4-Chloro-3-methylphenol	11.05	548	40330	87.27	NG/UL	87
31)	d10-Acenaphthene	15.45	798	39383	55.01	NG/UL	96
36)	2-Fluorobiphenyl	12.77	646	84435	71.31	NG/UL	97
39)	*d-10-Phenanthrene	22.15	1179	54965	50.00	NG/UL	99
42)	Acenaphthene	15.59	806	88982	96.23	NG/UL	97
44)	4-Nitrophenol	17.40	909	2546M	24.53	NG/UL	74
46)	2,4-Dinitrotoluene	17.03	888	22094	88.21	NG/UL	84
54)	2,4,6-Tribromophenol	19.20	1011	15796	89.17	NG/UL	96
57)	Pentachlorophenol	21.89	1164	7166	50.13	NG/UL	92
62)	d12-Chrysene	32.47	1765	39687	58.75	NG/UL	96
63)	Pyrene	28.81	1557	[illegible]	[illegible]	[illegible]	

64) Terphenyl-d14	30.22	1637	64031	91.01	NG/UL	95
69) *d12-Perylene	34.84	1900	7455	50.00	NG/UL	97

* Compound is ISTD

57)	Pentachlorophenol	21.89	1164	7166	50.13	NG/UL	92
62)	d12-Chrysene	32.47	1765	39687	58.75	NG/UL	96
63)	*Pyrene	28.81	1557	109220	98.41	NG/UL	96
64)	Terphenyl-d14	30.22	1637	64031	91.01	NG/UL	95
69)	*d12-Perylene	34.84	1900	7455	50.00	NG/UL	97

* Compound is ISTD → BP 275

:QREP,^BP276

QUANT REPORT

Operator ID: SUKWHA Quant Rev: 6 Quant Time: 890511 10:26
Output File: ^BP276::SK Injected at: 890506 00:21
Data File: >BP276::C2 Dilution Factor: 1.00000
Name: SF6050 89FN15S14MD
Misc: 050689 1L/1ML 110/115 BTL#16

ID File: IDBP96::KS
Title: HP BNA STD REV E BABU 03\10\89
Last Calibration: 890511 08:57

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	4.01	148	17515	50.00	NG/UL	99
2)	2-Fluorophenol	2.00	34	28529	66.95	NG/UL	95
3)	Phenol-d5	3.57	123	21566	41.12	NG/UL	91
4)	Phenol	3.61	125	31397	49.41	NG/UL	92
6)	2-Chlorophenol	3.66	128	40495	91.20	NG/UL	98
8)	1,4-Dichlorobenzene	4.05	150	38795	77.09	NG/UL	93
14)	N-Nitroso-Di-n-propylamine	5.42	228	41345	84.17	NG/UL	85
16)	d8-Naphthalene	7.88	368	66530	49.99	NG/UL	91
17)	Nitrobenzene-d5	5.61	239	54136	80.95	NG/UL	84
25)	1,2,4-Trichlorobenzene	7.81	364	51123	109.77	NG/UL	93
29)	4-Chloro-3-methylphenol	11.05	548	44873	97.99	NG/UL	89
31)	d10-Acenaphthene	15.45	798	39895	56.25	NG/UL	96
36)	2-Fluorobiphenyl	12.77	646	96159	81.97	NG/UL	94
39)	*d-10-Phenanthrene	22.15	1171	55364	50.00	NG/UL	98
42)	Acenaphthene	15.59	806	97329	104.50	NG/UL	97
44)	4-Nitrophenol	17.38	908	3019M	28.88	NG/UL	
46)	2,4-Dinitrotoluene	17.03	888	24025	95.23	NG/UL	76
54)	2,4,6-Tribromophenol	19.19	1003	15895	89.08	NG/UL	97
57)	Pentachlorophenol	21.90	1157	7599	52.78	NG/UL	94
62)	d12-Chrysene	32.45	1756	39209	57.63	NG/UL	93
63)	Pyrene	28.81	1549	113393	101.43	NG/UL	93
64)	Terphenyl-d14	30.20	1628	67973	95.91	NG/UL	94
69)	*d12-Perylene	34.82	1891	10219	50.00	NG/UL	98

* Compound is ISTD

:QREP,^BP277

QUANT REPORT

Operator ID: SUKWHA Quant Rev: 6 Quant Time: 890511 10:30
Output File: ^BP277::SK Injected at: 890506 01:14
Data File: >BP277::C2 Dilution Factor: 1.00000
Name: SF6050 89FN15S14
Misc: 050689 1L/1ML 110/115 BTL#17

ID File: IDBP96::KS
Title: HP BNA STD REV E BABU 03\10\89
Last Calibration: 890511 08:57

	Compound	R.T.	Scan#	Area	Conc	Units	q

1)	*d4-1,4-Dichlorobenzene	4.06	151	17484	50.00	NG/UL	98
2)	2-Fluorophenol	2.04	36	22966	53.99	NG/UL	97
3)	Phenol-d5	3.64	127	18787	35.89	NG/UL	84
16)	d8-Naphthalene	7.90	369	65197	49.07	NG/UL	92
17)	Nitrobenzene-d5	5.66	242	48831	73.15	NG/UL	79
31)	d10-Acenaphthene	15.47	799	38379	54.20	NG/UL	98
36)	2-Fluorobiphenyl	12.79	647	81015	69.18	NG/UL	93
39)	*d-10-Phenanthrene	22.17	1180	54780	50.00	NG/UL	99
54)	2,4,6-Tribromophenol	19.21	1012	13089	74.14	NG/UL	89
62)	d12-Chrysene	32.48	1766	37955	56.38	NG/UL	91
64)	Terphenyl-d14	30.23	1638	59497	84.89	NG/UL	97
69)	*d12-Perylene	34.88	1902	6954	50.00	NG/UL	95

* Compound is ISTD

>BP277

:QREP,^BP278

QUANT REPORT

Operator ID: SUKWHA Quant Rev: 6 Quant Time: 890511 10:35
Output File: ^BP278::SK Injected at: 890506 02:07
Data File: >BP278::C2 Dilution Factor: 1.00000
Name: SF6050 89FN15S13
Misc: 050689 1L/1ML 110/115 BTL#18

ID File: IDBP96::KS
Title: HP BNA STD REV E BABU 03\10\89
Last Calibration: 890511 08:57

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	4.03	149	16220	50.00	NG/UL	96
2)	2-Fluorophenol	2.00	34	22979	58.23	NG/UL	99
3)	Phenol-d5	3.59	124	19062	39.25	NG/UL	95
16)	d8-Naphthalene	7.88	368	59693	48.43	NG/UL	91
17)	Nitrobenzene-d5	5.63	240	45211	73.00	NG/UL	80
31)	d10-Acenaphthene	15.45	798	34922	53.16	NG/UL	96
36)	2-Fluorobiphenyl	12.77	646	83027	76.42	NG/UL	95
39)	*d-10-Phenanthrene	22.15	1179	50919	50.00	NG/UL	98
54)	2,4,6-Tribromophenol	19.21	1012	12624	76.93	NG/UL	95
62)	d12-Chrysene	32.49	1766	39800	63.60	NG/UL	93
64)	Terphenyl-d14	30.23	1638	64036	98.24	NG/UL	96
69)	*d12-Perylene	34.86	1901	9253	50.00	NG/UL	95

* Compound is ISTD

:QREP,^BP279

QUANT REPORT

Operator ID: SUKWHA Quant Rev: 6 Quant Time: 890511 10:40
Output File: ^BP279::SK Injected at: 890506 03:00
Data File: >BP279::C2 Dilution Factor: 1.00000
Name: SF6050 89FN15D13
Misc: 050689 1L/1ML 110/115 BTL#19

ID File: IDBP96::KS
Title: HP BNA STD REV E BABU 03\10\89
Last Calibration: 890511 08:57

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	4.01	148	17100	50.00	NG/UL	94
2)	2-Fluorophenol	2.00	34	23154	55.65	NG/UL	97
3)	Phenol-d5	3.57	123	19086	37.28	NG/UL	98
16)	d8-Naphthalene	7.88	368	[illegible]	[illegible]		

17) Nitrobenzene-d5	5.61	239	38018	58.23	NG/UL	84
31) d10-Acenaphthene	15.45	798	36727	53.04	NG/UL	96
36) 2-Fluorobiphenyl	12.76	645	62495	54.56	NG/UL	95
39) *d-10-Phenanthrene	22.15	1179	50827	50.00	NG/UL	99
54) 2,4,6-Tribromophenol	19.21	1012	13400	81.80	NG/UL	92
62) d12-Chrysene	32.48	1766	39998	64.03	NG/UL	96
64) Terphenyl-d14	30.22	1637	45772	70.35	NG/UL	99
69) *d12-Perylene	34.86	1901	7949	50.00	NG/UL	98

* Compound is ISTD >BP279

:QREP,^BP280

QUANT REPORT

Operator ID: SUKWHA Quant Rev: 6 Quant Time: 890511 10:47
Output File: ^BP280::SK Injected at: 890506 03:53
Data File: >BP280::C2 Dilution Factor: 1.00000
Name: SF6050 89FN15S15
Misc: 050689 1L/1ML 110/115 BTL#20

ID File: IDBP96::KS
Title: HP BNA STD REV E BABU 03\10\89
Last Calibration: 890511 08:57

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *d4-1,4-Dichlorobenzene	4.06	151	16494	50.00	NG/UL	97
2) 2-Fluorophenol	2.06	37	25797	64.28	NG/UL	92
3) Phenol-d5	3.64	127	24869	50.36	NG/UL	89
16) d8-Naphthalene	7.90	369	64444	51.42	NG/UL	90
17) Nitrobenzene-d5	5.65	241	53003	84.16	NG/UL	82
31) d10-Acenaphthene	15.47	799	36387	54.47	NG/UL	92
36) 2-Fluorobiphenyl	12.77	646	86955	78.71	NG/UL	94
39) *d-10-Phenanthrene	22.15	1179	53601	50.00	NG/UL	98
54) 2,4,6-Tribromophenol	19.21	1012	14630	84.69	NG/UL	99
62) d12-Chrysene	32.49	1766	35220	53.47	NG/UL	98
64) Terphenyl-d14	30.22	1637	60874	88.72	NG/UL	99
69) *d12-Perylene	34.85	1900	24586	50.00	NG/UL	95

* Compound is ISTD

:QREP,^BP281

QUANT REPORT

Operator ID: SUKWHA Quant Rev: 6 Quant Time: 890511 10:51
Output File: ^BP281::SK Injected at: 890506 04:46
Data File: >BP281::C2 Dilution Factor: 1.00000
Name: SF6050 89FN15S16
Misc: 050689 1L/1ML 110/115 BTL#21

ID File: IDBP96::KS
Title: HP BNA STD REV E BABU 03\10\89
Last Calibration: 890511 08:57

Compound	R.T.	Scan#	Area	Conc	Units	q
1) *d4-1,4-Dichlorobenzene	4.06	151	17811	50.00	NG/UL	94
2) 2-Fluorophenol	2.04	36	28255	65.20	NG/UL	99
3) Phenol-d5	3.62	126	24520	45.98	NG/UL	90
16) d8-Naphthalene	7.90	369	63494	46.91	NG/UL	91
17) Nitrobenzene-d5	5.65	241	45569	67.01	NG/UL	86
31) d10-Acenaphthene	15.45	798	35166	48.75	NG/UL	94
36) 2-Fluorobiphenyl	12.77	646	78457	65.77	NG/UL	94
39) *d-10-Phenanthrene	22.15	1179	52338	[illegible]	[illegible]	[illegible]

[illegible]	2,4,6-Tribromophenol	19.20	1011	15184	90.02	NG/UL	94
62)	d12-Chrysene	32.49	1766	41367	64.31	NG/UL	93
64)	Terphenyl-d14	30.22	1637	67714	101.07	NG/UL	95
67)	Bis(2-Ethylhexyl)Phthalate	33.03	1797	1710	2.32	NG/UL	92
69)	*d12-Perylene	34.85	1900	26966	50.00	NG/UL	97

* Compound is ISTD

> BP281

:QREP,^BP282

QUANT REPORT

Operator ID: SUKWHA Quant Rev: 6 Quant Time: 890511 10:56
Output File: ^BP282::SK Injected at: 890506 05:39
Data File: >BP282::C2 Dilution Factor: 1.00000
Name: SF6050 89FN15R48
Misc: 050689 1L/1ML 110/115 BTL#22

ID File: IDBP96::KS
Title: HP BNA STD REV E BABU 03\10\89
Last Calibration: 890511 08:57

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	4.01	148	15989	50.00	NG/UL	95
3)	Phenol-d5	3.59	124	1466	3.06	NG/UL	79
16)	d8-Naphthalene	7.86	367	59925	49.32	NG/UL	90
17)	Nitrobenzene-d5	5.63	240	3417	5.60	NG/UL	62
31)	d10-Acenaphthene	15.45	798	34665	53.54	NG/UL	92
36)	2-Fluorobiphenyl	12.76	645	38145	35.62	NG/UL	94
39)	*d-10-Phenanthrene	22.15	1179	49932	50.00	NG/UL	99
54)	2,4,6-Tribromophenol	19.19	1011	12337	76.67	NG/UL	96
62)	d12-Chrysene	32.48	1766	37303	60.79	NG/UL	95
64)	Terphenyl-d14	30.21	1637	61024	95.47	NG/UL	98
69)	*d12-Perylene	34.86	1901	7822	50.00	NG/UL	95

* Compound is ISTD

:QREP,^BP283

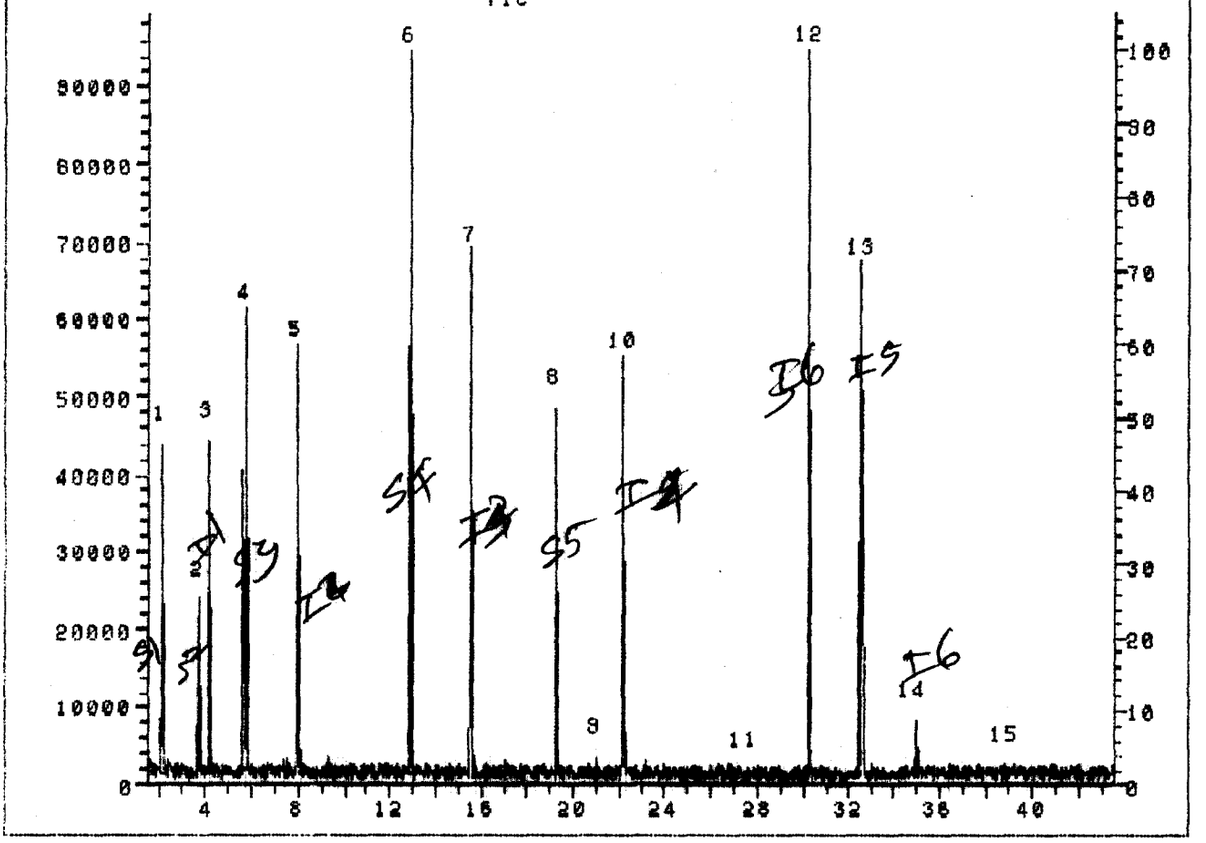
QUANT REPORT

Operator ID: SUKWHA Quant Rev: 6 Quant Time: 890511 11:03
Output File: ^BP283::SK Injected at: 890506 06:31
Data File: >BP283::C2 Dilution Factor: 1.00000
Name: SF6049 50 SURSTD
Misc: 050689 100PPM 110/115 BTL#23

ID File: IDBP96::KS
Title: HP BNA STD REV E BABU 03\10\89
Last Calibration: 890511 08:57

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	4.06	151	16289	50.00	NG/UL	92
2)	2-Fluorophenol	2.06	37	42499	107.24	NG/UL	95
3)	Phenol-d5	3.64	127	51279	105.14	NG/UL	85
16)	d8-Naphthalene	7.90	369	59443	48.02	NG/UL	93
17)	Nitrobenzene-d5	5.67	242	60153	96.72	NG/UL	78
31)	d10-Acenaphthene	15.45	798	34625	52.49	NG/UL	98
36)	2-Fluorobiphenyl	12.77	646	109021	99.92	NG/UL	94
39)	*d-10-Phenanthrene	22.15	1179	50508	50.00	NG/UL	99
54)	2,4,6-Tribromophenol	19.21	1012	15765	96.85	NG/UL	98
62)	d12-Chrysene	32.49	1766	40101	64.60	NG/UL	94
64)	Terphenyl-d14	30.22	1637	76329	118.06	NG/UL	96
69)	*d12-Perylene end of list	34.86	1901	[illegible]	[illegible]		

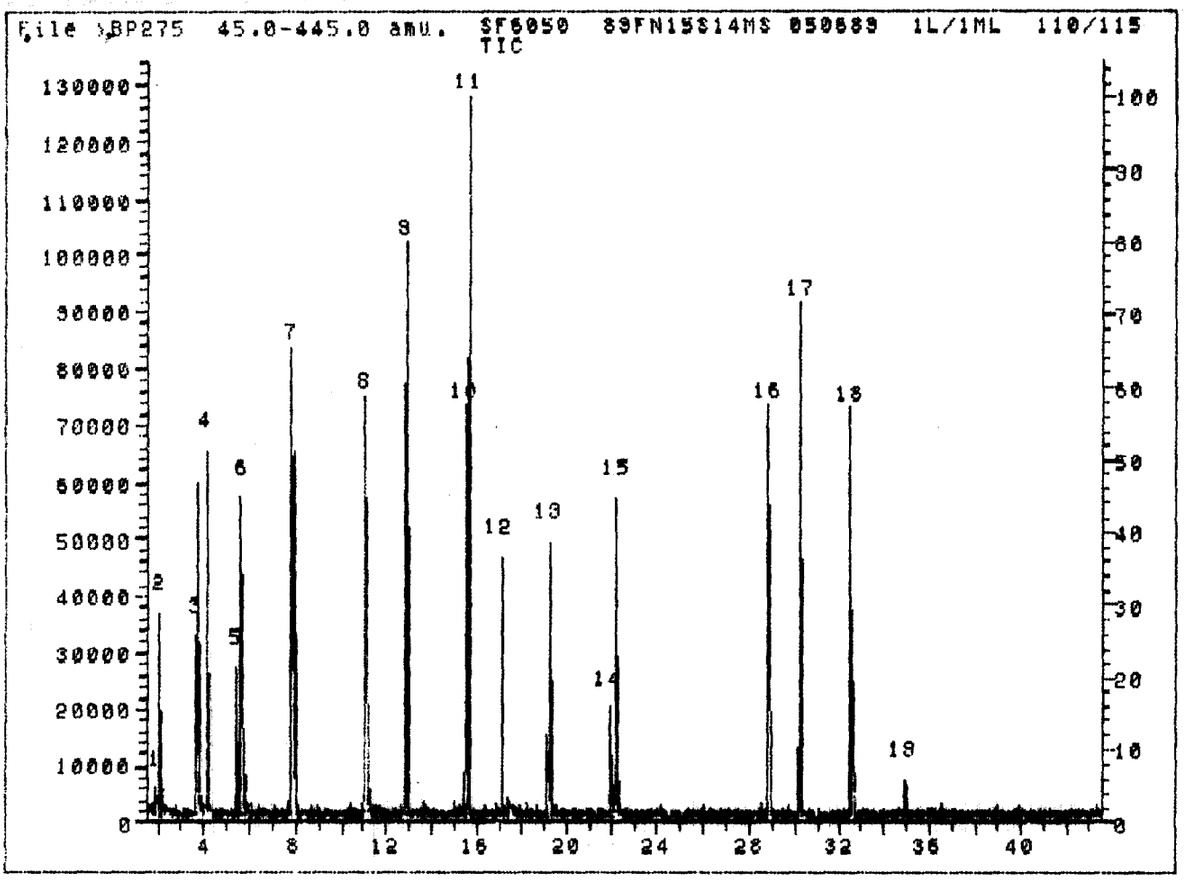
File >BP274 45.0-445.0 amu. SF6050 METHOD BLANK050689 1L/1ML 110/115
TIC



$BP274 SF6050 METHOD BLANK050689 1L/1ML 110/115
45.0| 445.0 TIC
Upslope: 2.00 Area Reject: 2.00 % Max Peaks: 15 Bunching: 1
Dnslope: 0.00 Results File VDIR74 Sorted by Area/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	12.77	642	646	653	92787	271233	253073	100.00	14.702
2	15.45	794	798	804	67708	224650	210837	83.31	12.248
3	30.22	1634	1637	1645	92836	227288	209431	82.76	12.167
4	22.15	1175	1179	1185	52871	182285	158843	62.77	9.228
5	7.90	365	369	376	55281	172582	155174	61.32	9.015
6	5.65	238	241	249	59512	172230	149534	59.09	8.687
7	19.21	1008	1012	1019	46904	156029	138544	54.74	8.049
8	4.06	148	151	159	42795	145457	129798	51.29	7.540
9	32.48	1763	1766	1771	65902	137664	126113	49.83	7.326
10	2.04	34	36	43	42501	119400	104892	41.45	6.094
11	3.62	124	126	130	22010	64023	50700	20.03	2.945
12	34.86	1899	1901	1906	6417	30352	17305	6.84	1.005
13	38.78	2121	2124	2129	1796	14154	6674	2.64	.388
14	20.95	1109	1111	1113	2634	8607	5275	2.08	.306
15	27.38	1473	1476	1480	1152	9986	5171	2.04	.300

Sum of corrected areas: 1721364.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80000
70000
60000
50000
40000
30000
20000
10000
0
100
90
80
70
60
50
40
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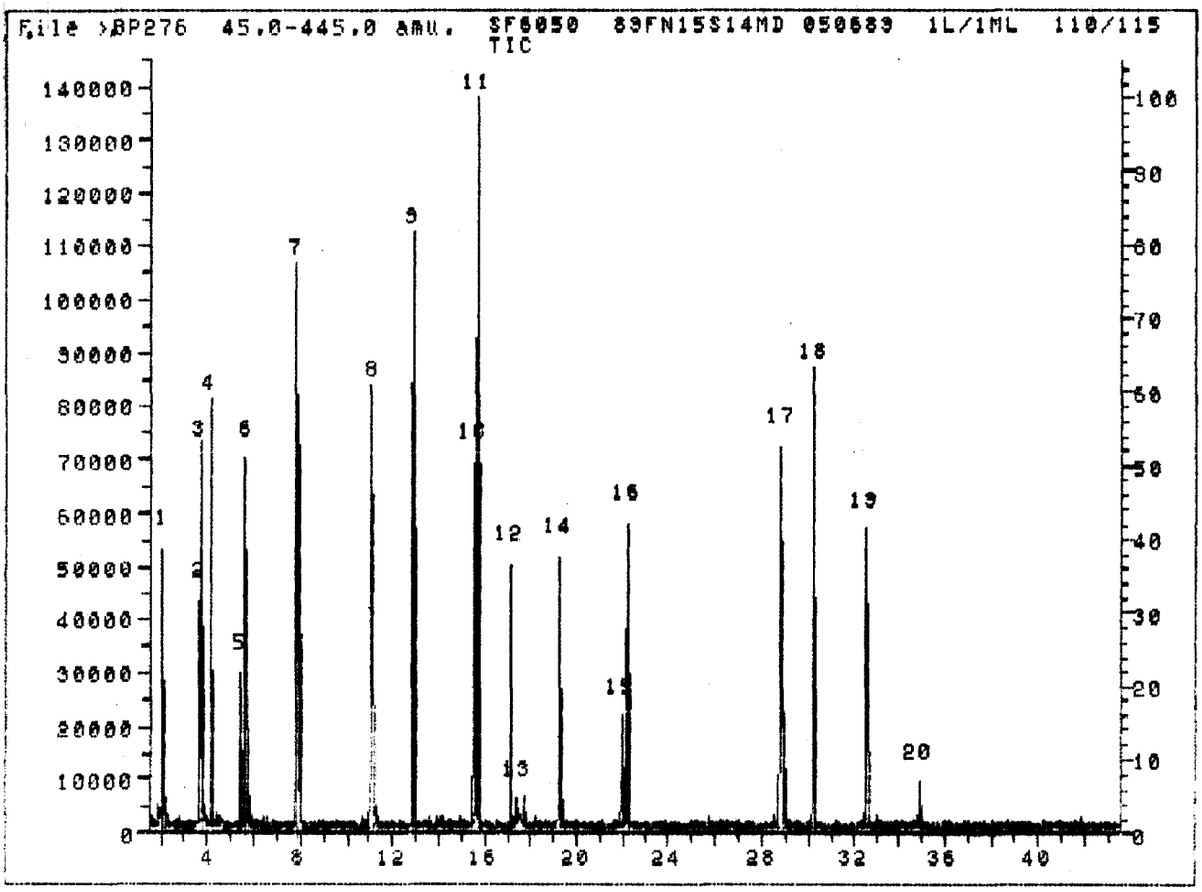
$8P275 SF6050 89FN15S14MS 050689 1L/1ML 110/115
45.0| 445.0 TIC
Upslope: 2.00 Area Reject: 2.00 % Max Peaks: 19 Bunching: 1
Dnslope: 0.00 Results File VDIR74 Sorted by Area/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	15.59	802	806	810	125524	392530	371414	100.00	11.723
2	12.77	642	646	651	100879	294532	278575	75.00	8.793
3	28.81	1552	1557	1564	71683	298885	277394	74.69	8.756
4	4.05	145	150	162	63943	304635	270663	72.87	8.543
5	7.81	360	364	366	82076	260087	250616	67.48	7.910
6	15.45	794	798	802	72238	234206	222398	59.88	7.020
7	30.22	1634	1637	1640	89581	212209	200316	53.93	6.323
8	11.05	545	548	560	72905	231949	198414	53.42	6.263
9	22.15	1175	1179	1183	54997	184971	167886	45.20	5.299
10	5.61	237	239	247	55630	171011	153376	41.30	4.841
11	19.21	1008	1012	1019	48005	168470	152499	41.06	4.813
12	32.47	1763	1765	1770	71586	143114	130571	35.16	4.121
13	17.05	885	889	894	44684	140277	124075	33.41	3.916
14	3.59	121	124	126	31083	106728	97379	26.22	3.074
15	2.00	31	34	40	35579	108194	95546	25.72	3.016
16	5.42	224	228	232	26035	85286	74318	20.01	2.346
17	21.89	1161	1164	1173	19027	90279	72896	19.63	2.301
18	34.84	1898	1900	1905	5956	30572	20134	5.42	.636
19	1.85	23	25	27	4257	16300	9698	2.61	.306

Sum of corrected areas: 3168168.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110000
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90000
80000
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50000
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10000
0
100
90
80
70
60
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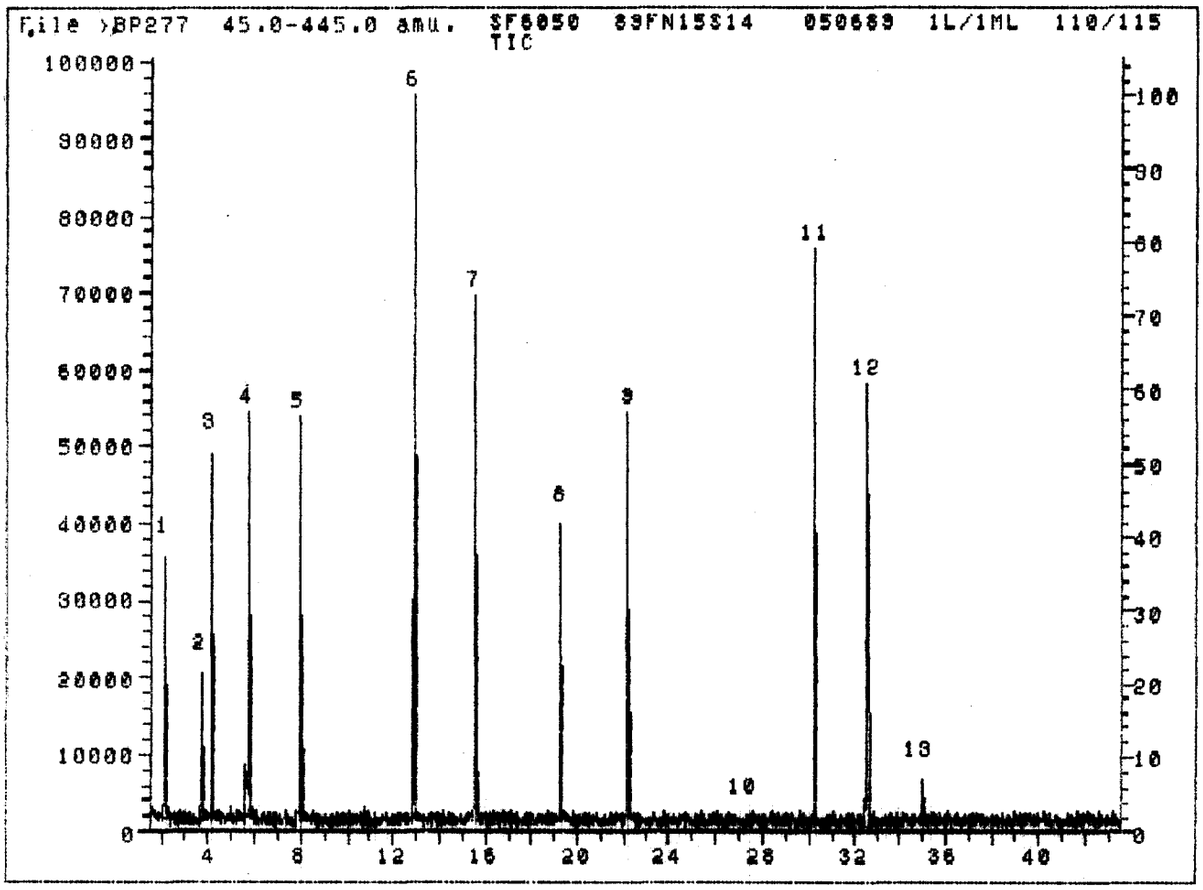
BP276 SF6050 89FN15S14MD 050689 1L/1ML 110/115
45.0\ 445.0 TIC

Upslope: 2.00 Area Reject: 2.00 % Max Peaks: 20 Bunching: 1
Dnslope: 0.00 Results File VDIR74 Sorted by Area/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	15.59	802	806	810	135497	427660	406472	100.00	11.059
2	12.77	642	646	649	110828	331374	317769	78.18	8.645
3	4.05	146	150	162	79689	341811	314249	77.31	8.550
4	28.81	1543	1549	1558	71077	312836	293963	72.32	7.998
5	7.81	360	364	366	104965	299095	288485	70.97	7.849
6	11.05	545	548	556	82599	250171	235131	57.85	6.397
7	15.45	794	798	802	67218	233745	216563	53.28	5.892
8	30.20	1625	1628	1636	85942	227025	212979	52.40	5.794
9	3.66	126	128	137	70441	208230	179790	44.23	4.891
10	22.15	1167	1171	1175	55960	190971	172803	42.51	4.701
11	5.61	236	239	245	68015	184349	165101	40.62	4.492
12	19.21	1000	1004	1012	50625	179584	161399	39.71	4.391
13	17.05	885	889	892	49315	146629	139832	34.40	3.804
14	3.59	121	124	126	41094	142437	130196	32.03	3.542
15	32.45	1754	1756	1762	55269	143454	127952	31.48	3.481
16	2.00	32	34	41	52027	136972	124033	30.51	3.374
17	5.42	224	228	233	28884	93548	83380	20.51	2.268
18	21.90	1154	1157	1162	20254	81571	67651	16.64	1.841
19	34.82	1889	1891	1895	7866	35023	24258	5.97	.660
20	17.38	905	908	910	4269	24015	13596	3.34	.370

Sum of corrected areas: 3675602.

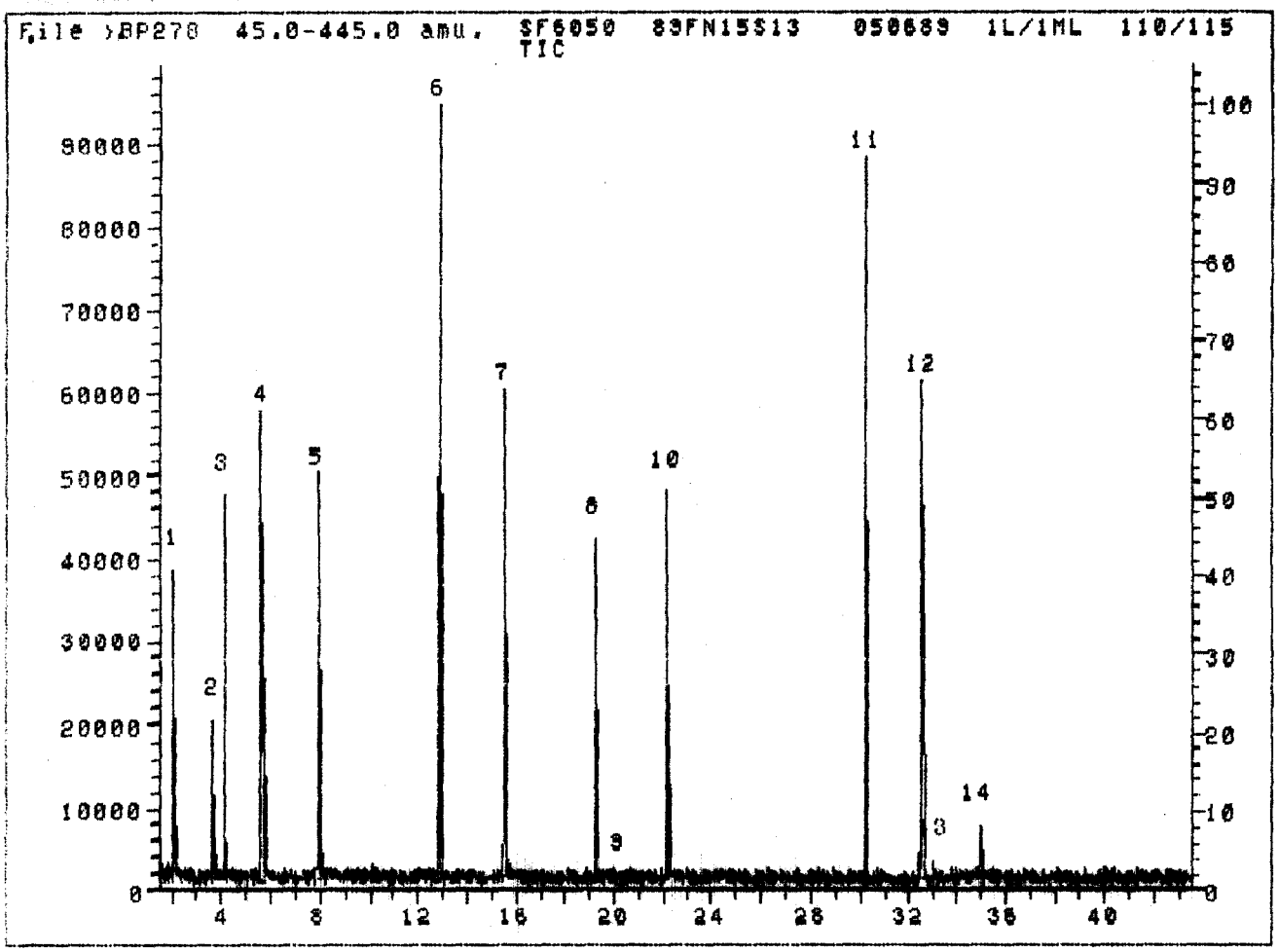


NO TICS
NO Targets

BP277 SF6050 89FN15S14 050689 1L/1ML 110/115
45.0| 445.0 TIC
Upslope: 2.00 Area Reject: 2.00 % Max Peaks: 13 Bunching: 1
Dnslope: 0.00 Results File VDIR74 Sorted by Area/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	12.79	643	647	651	93826	282306	267439	100.00	15.716
2	15.47	795	799	806	68399	228419	212562	79.48	12.491
3	30.23	1634	1638	1641	74315	195084	184139	68.85	10.821
4	22.17	1176	1180	1186	52379	186153	163753	61.23	9.623
5	7.92	366	370	379	52756	180258	161863	60.52	9.512
6	5.66	239	242	247	52344	162384	143889	53.80	8.456
7	32.48	1764	1766	1776	57519	144868	134612	50.33	7.911
8	19.23	1009	1013	1021	38349	148948	131145	49.04	7.707
9	4.06	148	151	157	47240	139867	121570	45.46	7.144
10	2.06	35	37	44	34063	116078	100014	37.40	5.877
11	3.64	125	127	135	19047	72655	56289	21.05	3.308
12	34.88	1899	1902	1909	5535	32814	18857	7.05	1.108
13	27.22	1463	1467	1469	1247	10891	5552	2.08	.326

Sum of corrected areas: 1701684.

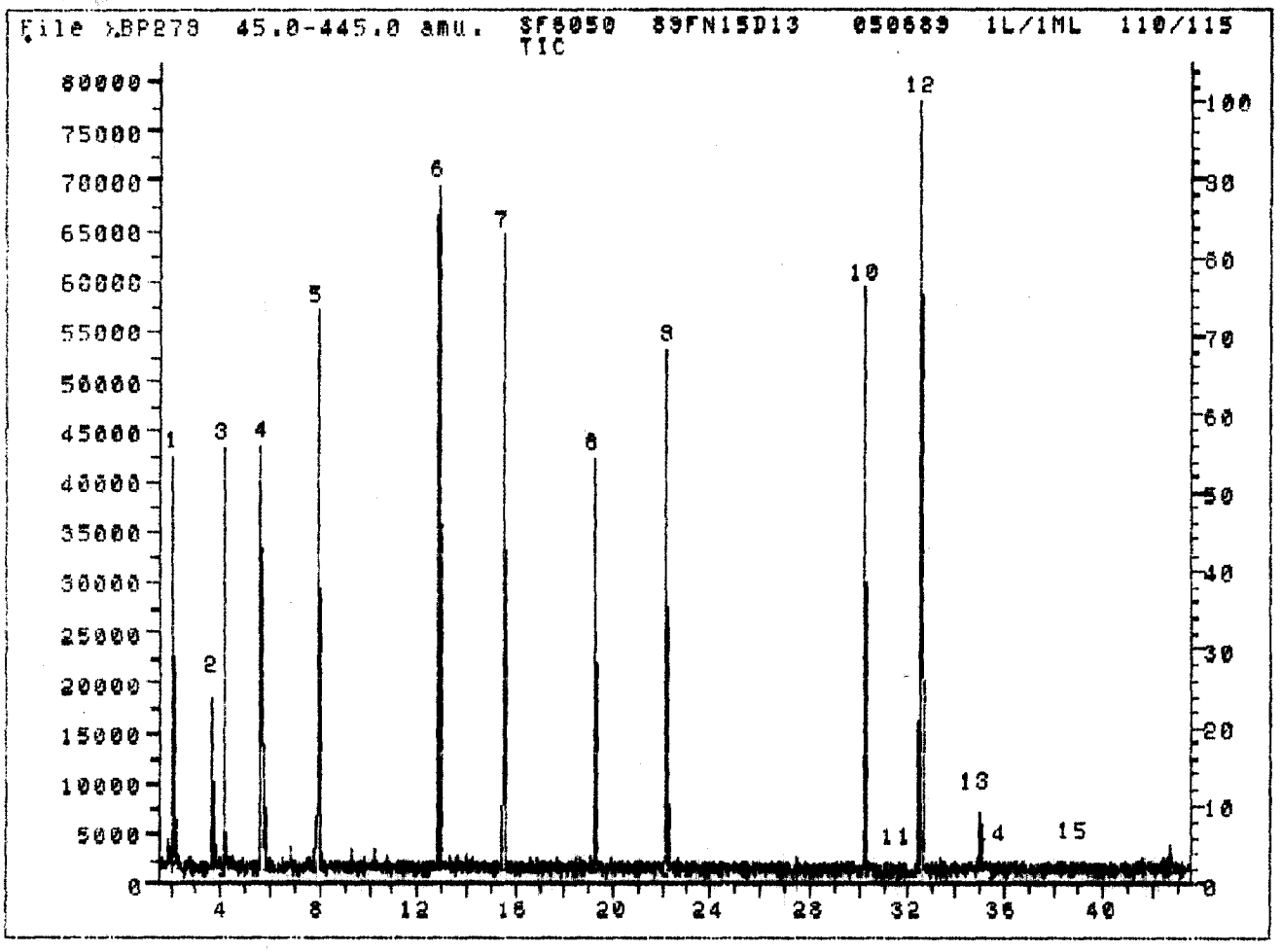


NO TICs
NO Targets

>BP278 SF6050 89FN15S13 050689 1L/1ML 110/115
45.01 445.0 TIC
Upslope: 2.00 Area Reject: 2.00 % Max Peaks: 14 Bunching: 1
Dnslope: 0.00 Results File VDIR74 Sorted by Area/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	12.77	642	646	650	93531	285269	275666	100.00	16.450
2	30.23	1634	1638	1641	87412	215661	208450	75.62	12.439
3	15.45	794	798	804	58462	213001	194789	70.66	11.624
4	22.17	1176	1180	1186	46610	174430	157856	57.26	9.420
5	7.90	365	369	375	49122	167234	152367	55.27	9.092
6	5.63	237	240	246	56616	153952	142223	51.59	8.487
7	32.49	1764	1766	1773	60013	149711	135224	49.05	8.069
8	19.21	1009	1012	1018	41179	139039	128417	46.58	7.663
9	4.03	146	149	154	46329	127779	115488	41.89	6.891
10	2.00	32	34	39	36237	106493	88974	32.28	5.309
11	3.59	122	124	129	18359	58763	41355	15.00	2.468
12	34.88	1899	1902	1909	6085	39703	21235	7.70	1.267
13	33.05	1796	1798	1801	2994	11122	7829	2.84	.467
14	20.20	1066	1068	1074	1184	13448	5942	2.16	.355

Sum of corrected areas: 1675815.



NO TICS
NO Targets

>BP279 SF6050 89FN15D13 050689 1L/1ML 110/115
45.01 445.0 TIC
Upslope: 2.00 Area Reject: 2.00 % Max Peaks: 15 Bunching: 1
Dnslope: 0.00 Results File VDIR74 Sorted by Area/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	12.77	642	646	650	67892	219036	205972	100.00	13.336
2	15.45	795	798	803	63155	208107	196276	95.29	12.708
3	22.15	1173	1179	1184	52200	175082	164168	79.70	10.629
4	7.88	364	368	376	55616	172904	153183	74.37	9.918
5	30.22	1634	1637	1641	57733	154394	141915	68.90	9.188
6	32.48	1764	1766	1772	76761	142762	133037	64.59	8.613
7	19.21	1008	1012	1020	40992	146485	130779	63.49	8.467
8	4.03	146	149	154	42432	132222	123896	60.15	8.022
9	5.61	236	239	249	42182	143321	121764	59.12	7.884
10	2.00	31	34	40	40559	112678	94741	46.00	6.134
11	3.59	121	124	127	16773	56754	45344	22.01	2.936
12	34.88	1899	1902	1907	5761	31205	19581	9.51	1.268
13	38.76	2121	2123	2126	1322	9655	5122	2.49	.332
14	35.44	1932	1934	1938	1118	9249	4564	2.22	.295
15	31.59	1713	1715	1718	1040	7698	4195	2.04	.272

Sum of corrected areas: 1544537.

QUANT REPORT

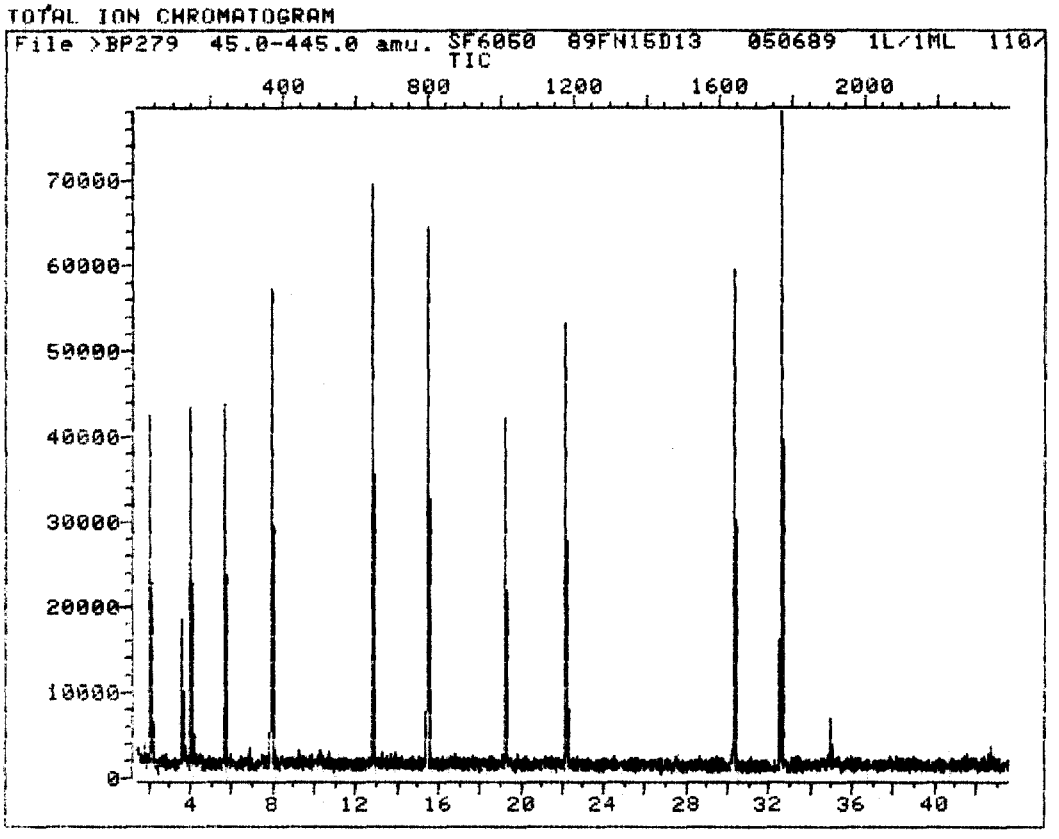
Operator ID: SUKWHA Quant Rev: 6 Quant Time: 890511 10:40
Output File: ^BP279::SK Injected at: 890506 03:00
Data File: >BP279::C2 Dilution Factor: 1.00000
Name: SF6050 89FN15D13
Misc: 050689 1L/1ML 110/115 BTL#19

ID File: IDBP96::KS
Title: HP BNA STD REV E BABU 03\10\89
Last Calibration: 890511 08:57

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	4.01	148	17100	50.00	NG/UL	94
2)	2-Fluorophenol	2.00	34	23154	55.65	NG/UL	97
3)	Phenol-d5	3.57	123	19086	37.28	NG/UL	98
16)	d8-Naphthalene	7.88	368	62036	47.74	NG/UL	92
17)	Nitrobenzene-d5	5.61	239	38018	58.23	NG/UL	84
31)	d10-Acenaphthene	15.45	798	36727	53.04	NG/UL	96
36)	2-Fluorobiphenyl	12.76	645	62495	54.56	NG/UL	95
39)	*d-10-Phenanthrene	22.15	1179	50827	50.00	NG/UL	99
54)	2,4,6-Tribromophenol	19.21	1012	13400	81.80	NG/UL	92
62)	d12-Chrysene	32.48	1766	39998	64.03	NG/UL	96
64)	Terphenyl-d14	30.22	1637	45772	70.35	NG/UL	99
69)	*d12-Perylene	34.86	1901	7949	50.00	NG/UL	98

* Compound is ISTD

TOTAL ION CHROMATOGRAM

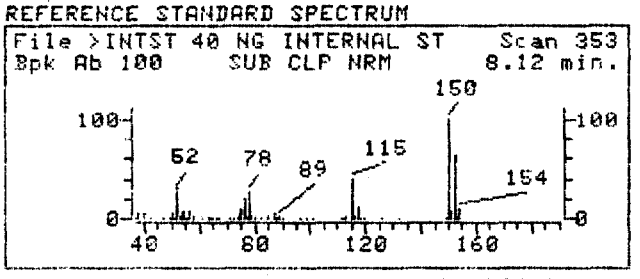


Data File: >BP279::C2 Quant Output File: ^BP279::SK
Name: SF6050 89FN15D13
Misc: 050689 1L/1ML 110/115 BTL#19

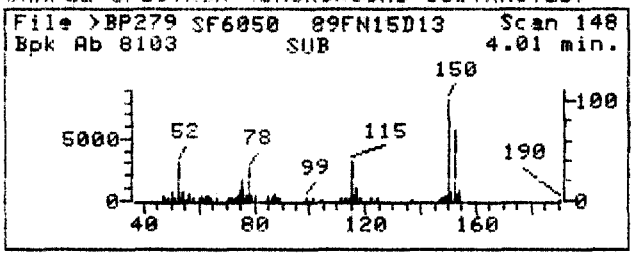
Id File: IDBP96::KS
Title: HP BNA STD REV E BABU 03\10\89
Last Calibration: 890511 08:57

Operator ID: SUKWHA
Quant Time: 890511 10:40
Injected at: 890506 03:00

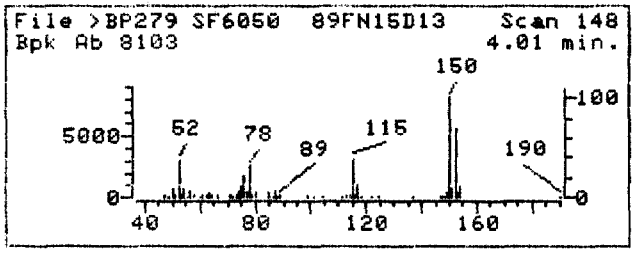
REFERENCE STANDARD SPECTRUM

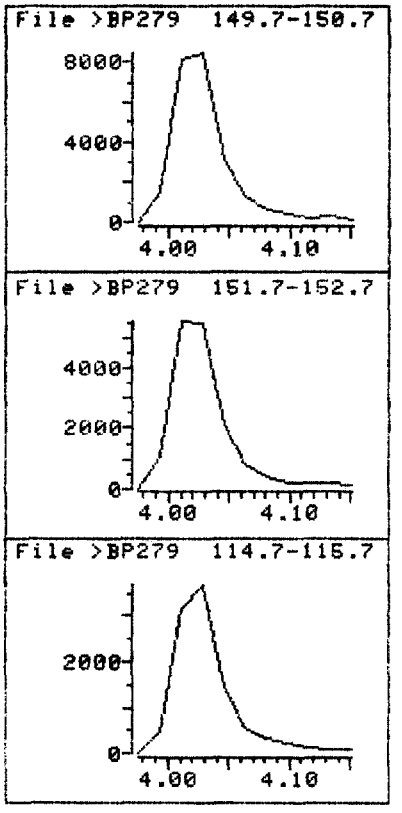


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



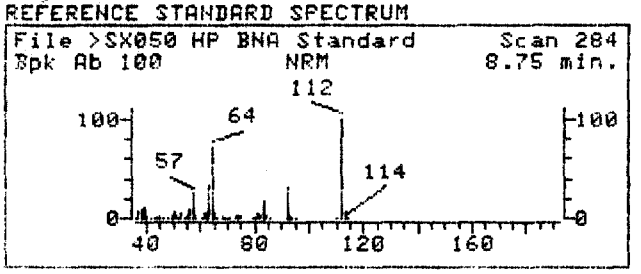


Data File: >BP279::C2
Name: SF6050 89FN15D13
Misc: 050689 1L/1ML 110/115
Quant Time: 890511 10:40
Injected at: 890506 03:00

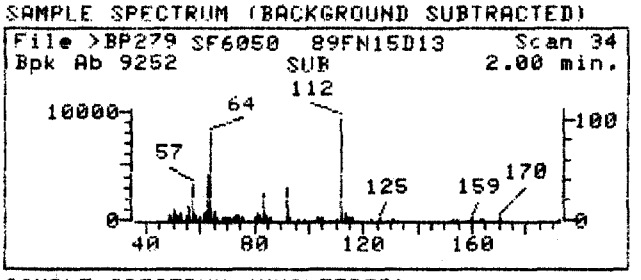
Quant Output File: ^BP279::SK
BTL#19
Quant ID File: IDBP96::KS
Last Calibration: 890511 08:57

Compound No: 1 (ISTD)
Compound Name: d4-1,4-Dichlorobenzene
Scan Number: 148
Retention Time: 4.01 min.
Quant Ion: 152.0
Area: 17100
Concentration: 50.00 NG/UL
q-value: 94

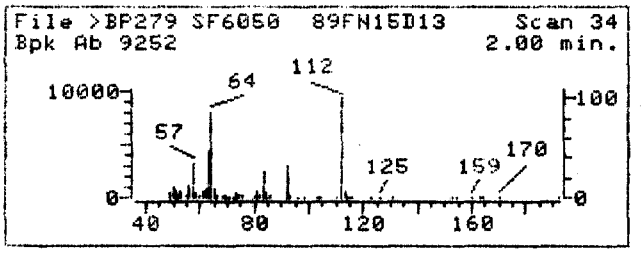
REFERENCE STANDARD SPECTRUM

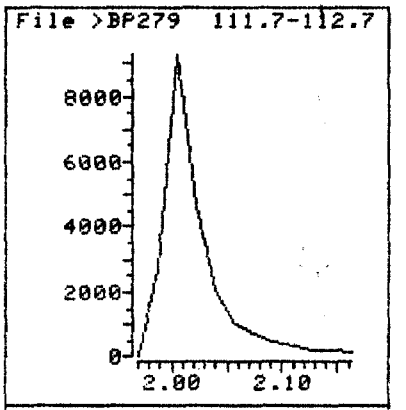


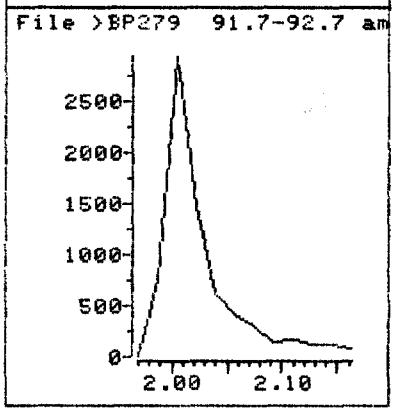
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







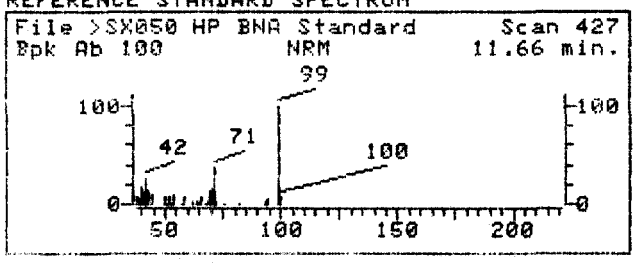
Data File: >BP279::C2
Name: SF6050 89FN15D13
Misc: 050689 1L/1ML 110/115
Quant Time: 890511 10:40
Injected at: 890506 03:00

Quant Output File: ^BP279::SK

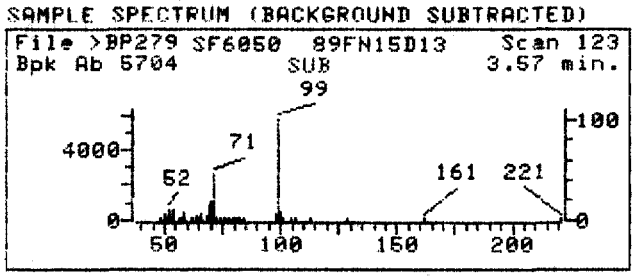
BTL#19
Quant ID File: IDBP96::KS
Last Calibration: 890511 08:57

Compound No: 2
Compound Name: 2-Fluorophenol
Scan Number: 34
Retention Time: 2.00 min.
Quant Ion: 112.0
Area: 23154
Concentration: 55.65 NG/UL
q-value: 97

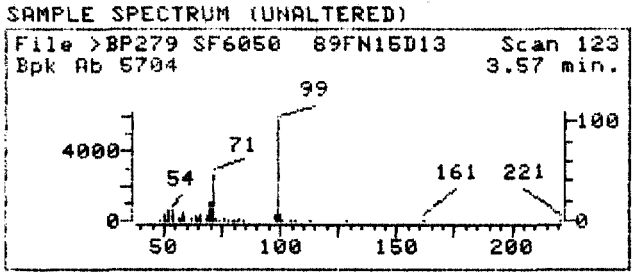
REFERENCE STANDARD SPECTRUM

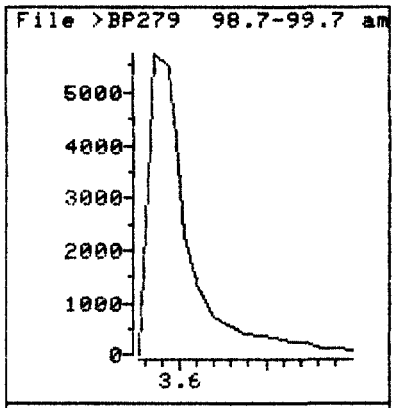


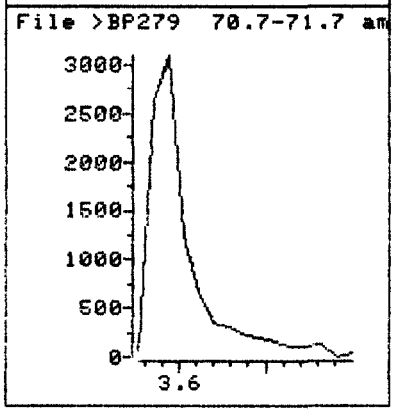
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







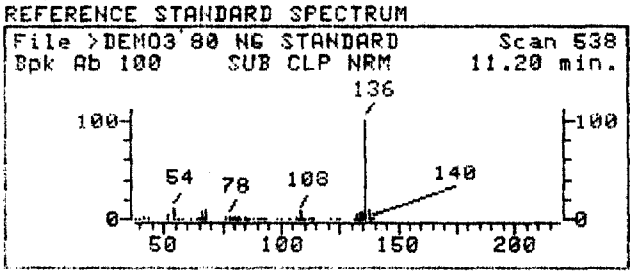
Data File: >BP279::C2
Name: SF6050 89FN15D13
Misc: 050689 1L/1ML 110/115
Quant Time: 890511 10:40
Injected at: 890506 03:00

Quant Output File: ^BP279::SK

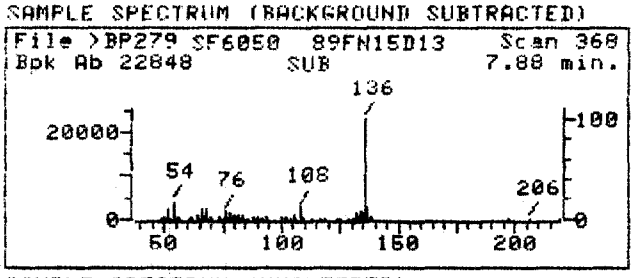
BTL#19
Quant ID File: IDBP96::KS
Last Calibration: 890511 08:57

Compound No: 3
Compound Name: Phenol-d5
Scan Number: 123
Retention Time: 3.57 min.
Quant Ion: 99.0
Area: 19086
Concentration: 37.28 NG/UL
q-value: 98

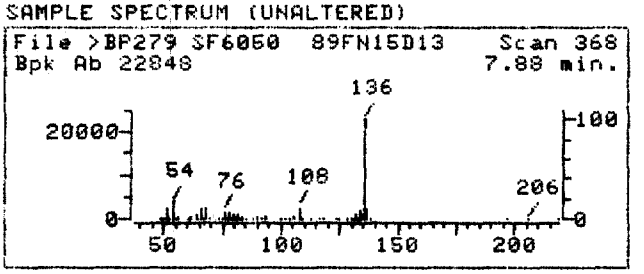
REFERENCE STANDARD SPECTRUM

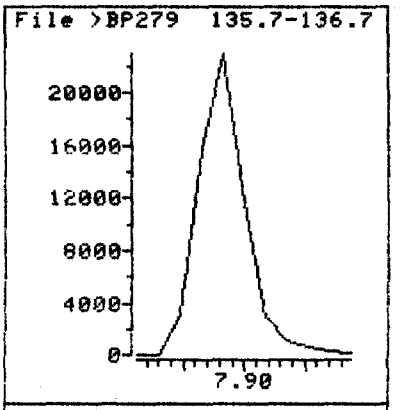


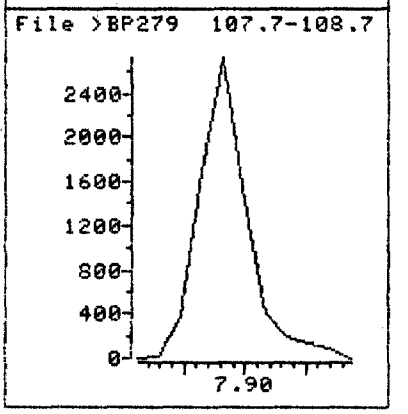
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







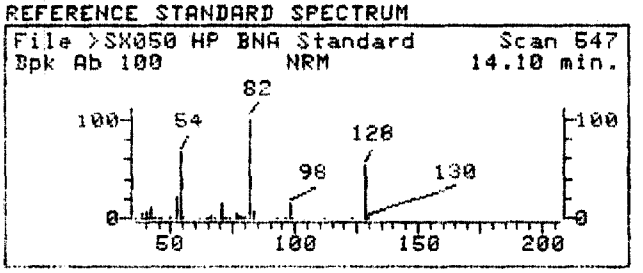
Data File: >BP279::C2
Name: SF6050 89FN15D13
Misc: 050689 1L/1ML 110/115
Quant Time: 890511 10:40
Injected at: 890506 03:00

Quant Output File: ^BP279::SK

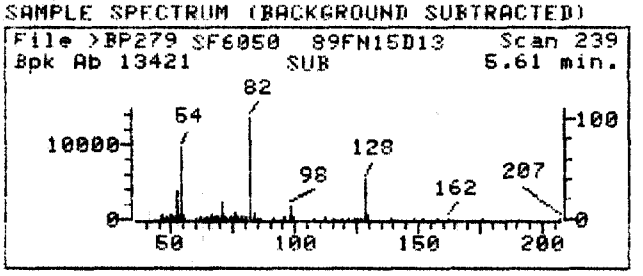
BTL#19
Quant ID File: IDBP96::KS
Last Calibration: 890511 08:57

Compound No: 16
Compound Name: d8-Naphthalene
Scan Number: 368
Retention Time: 7.88 min.
Quant Ion: 136.0
Area: 62036
Concentration: 47.74 NG/UL
q-value: 92

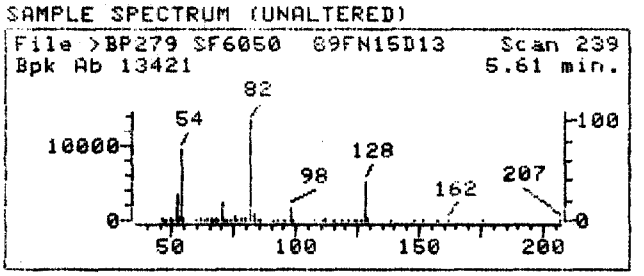
REFERENCE STANDARD SPECTRUM

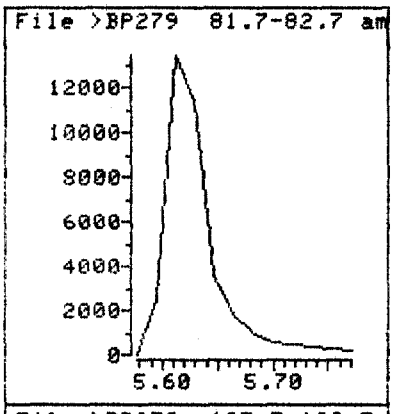


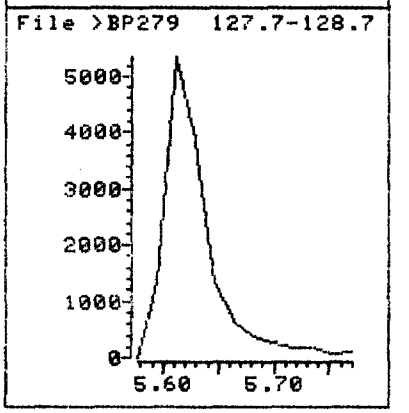
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







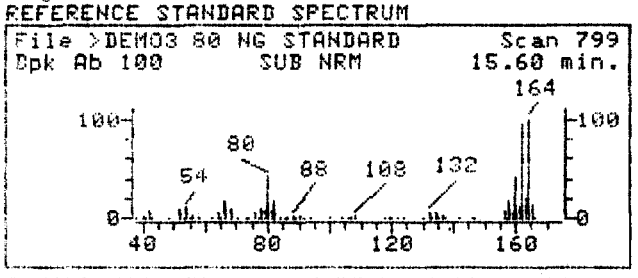
Data File: >BP279::C2
Name: SF6050 89FN15D13
Misc: 050689 1L/1ML 110/115
Quant Time: 890511 10:40
Injected at: 890506 03:00

Quant Output File: ^BP279::SK

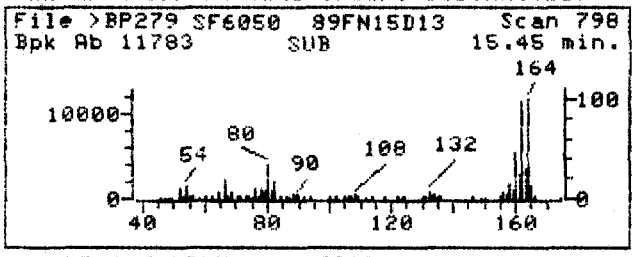
BTL#19
Quant ID File: IDBP96::KS
Last Calibration: 890511 08:57

Compound No: 17
Compound Name: Nitrobenzene-d5
Scan Number: 239
Retention Time: 5.61 min.
Quant Ion: 82.0
Area: 38018
Concentration: 58.23 NG/UL
q-value: 84

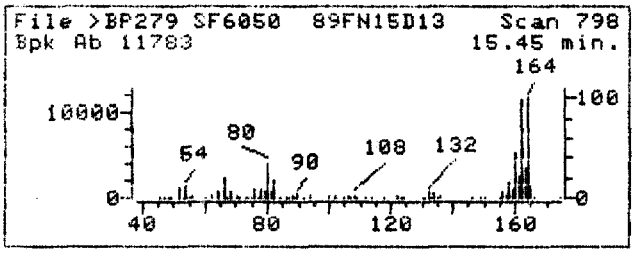
REFERENCE STANDARD SPECTRUM

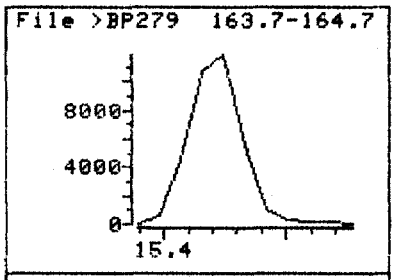


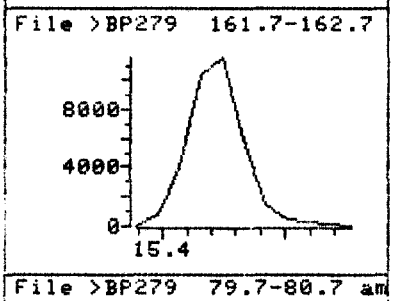
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

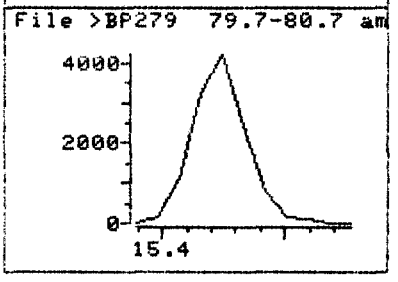


SAMPLE SPECTRUM (UNALTERED)









Data File: >BP279::C2
Name: SF6050 89FN15D13
Misc: 050689 1L/1ML 110/115
Quant Time: 890511 10:40
Injected at: 890506 03:00

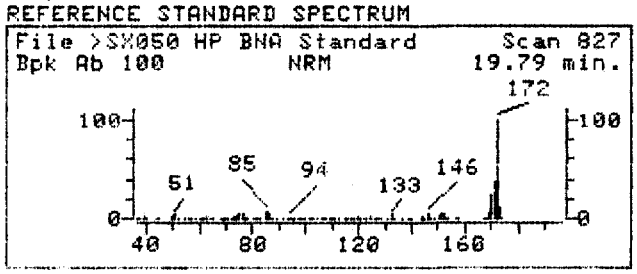
Quant Output File: ^BP279::SK

BTL#19

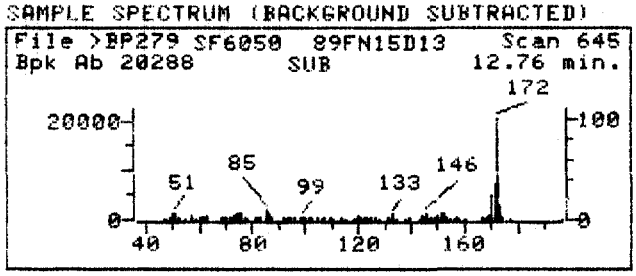
Quant ID File: IDBP96::KS
Last Calibration: 890511 08:57

Compound No: 31
Compound Name: d10-Acenaphthene
Scan Number: 798
Retention Time: 15.45 min.
Quant Ion: 164.0
Area: 36727
Concentration: 53.04 NG/UL
q-value: 96

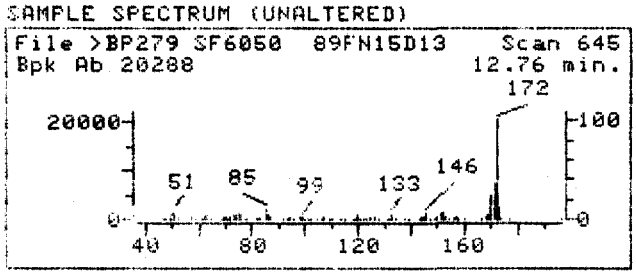
REFERENCE STANDARD SPECTRUM

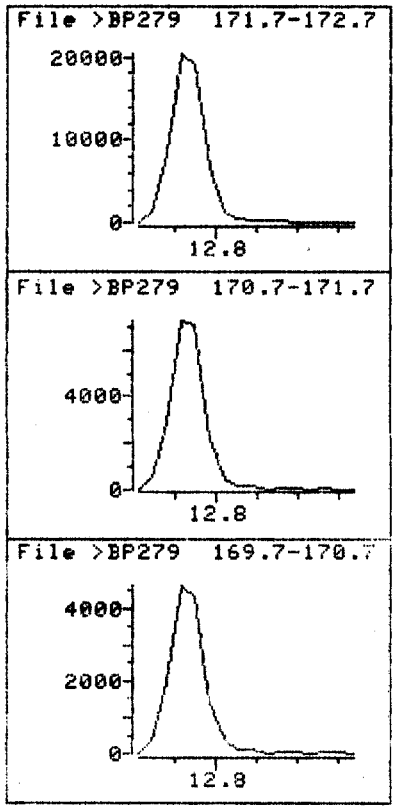


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)





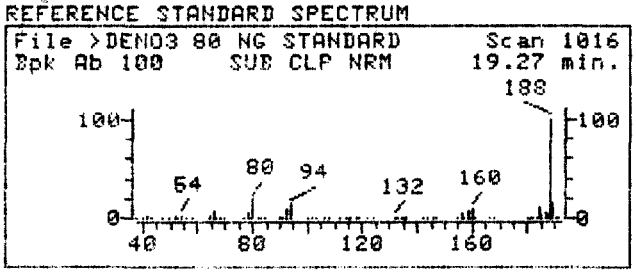
Data File: >BP279::C2
Name: SF6050 89FN15D13
Misc: 050689 1L/1ML 110/115
Quant Time: 890511 10:40
Injected at: 890506 03:00

Quant Output File: ^BP279::SK

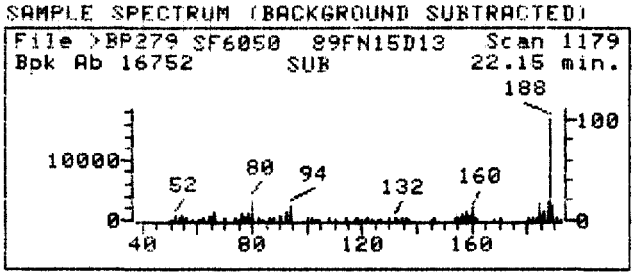
BTL#19
Quant ID File: IDBP96::KS
Last Calibration: 890511 08:57

Compound No: 36
Compound Name: 2-Fluorobiphenyl
Scan Number: 645
Retention Time: 12.76 min.
Quant Ion: 172.0
Area: 62495
Concentration: 54.56 NG/UL
q-value: 95

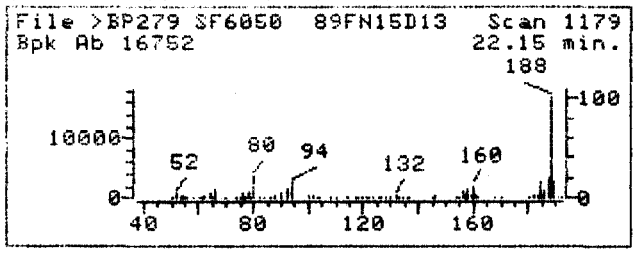
REFERENCE STANDARD SPECTRUM

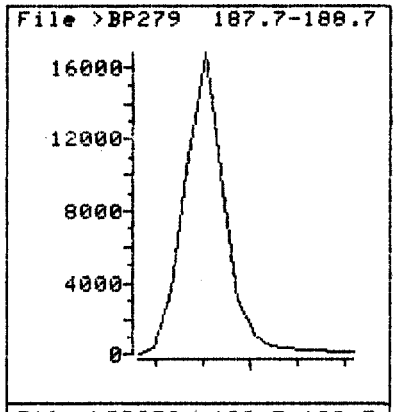


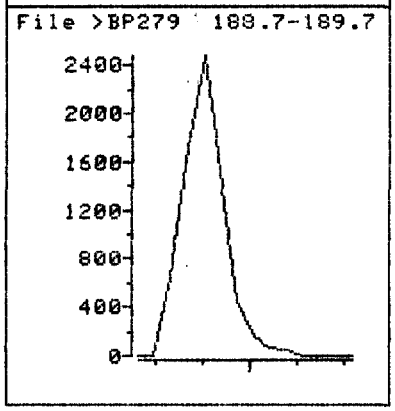
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)





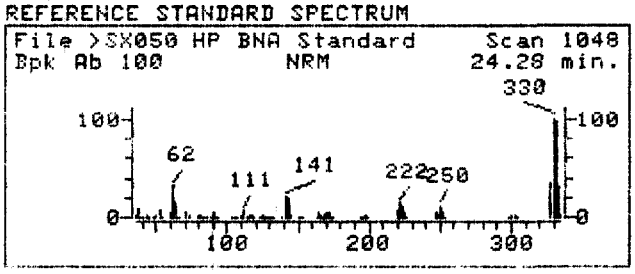


Data File: >BP279::C2
Name: SF6050 89FN15D13
Misc: 050689 1L/1ML 110/115
Quant Time: 890511 10:40
Injected at: 890506 03:00

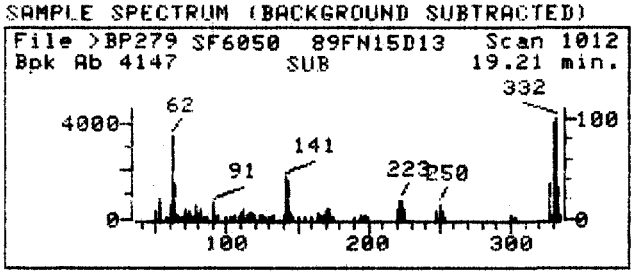
Quant Output File: ^BP279::SK
BTL#19
Quant ID File: IDBP96::KS
Last Calibration: 890511 08:57

Compound No: 39 (ISTD)
Compound Name: d-10-Phenanthrene
Scan Number: 1179
Retention Time: 22.15 min.
Quant Ion: 188.0
Area: 50827
Concentration: 50.00 NG/UL
q-value: 99

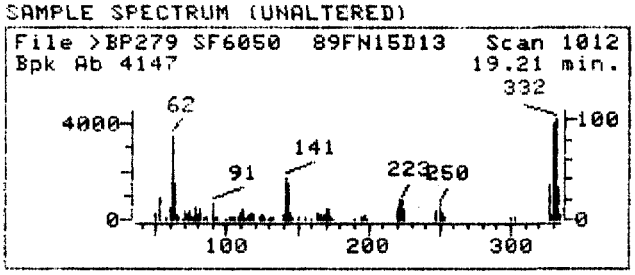
REFERENCE STANDARD SPECTRUM

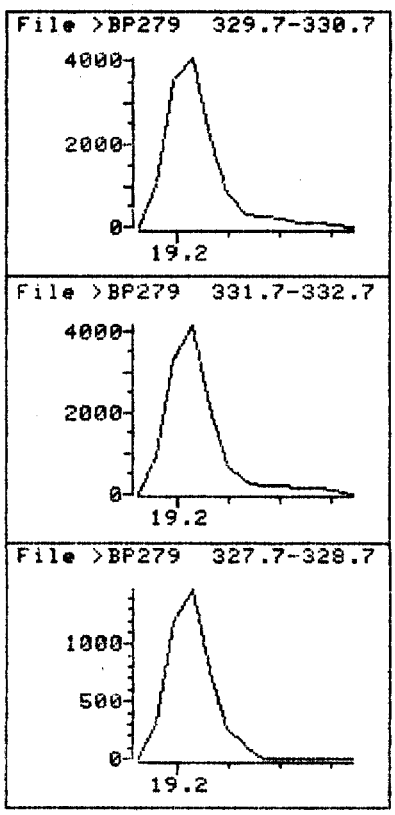


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



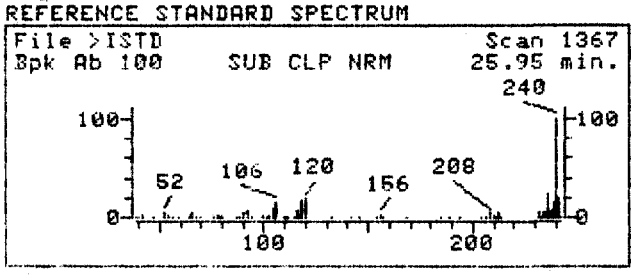


Data File: >BP279::C2
Name: SF6050 89FN15D13
Misc: 050689 1L/1ML 110/115
Quant Time: 890511 10:40
Injected at: 890506 03:00

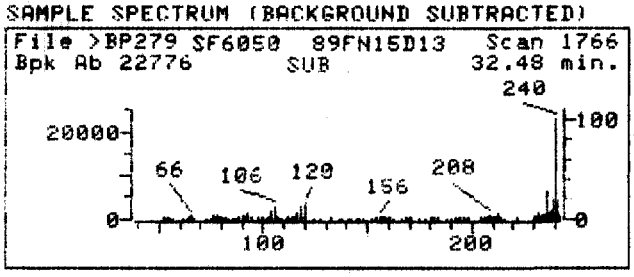
Quant Output File: ^BP279::SK
BTL#19
Quant ID File: IDBP96::KS
Last Calibration: 890511 08:57

Compound No: 54
Compound Name: 2,4,6-Tribromophenol
Scan Number: 1012
Retention Time: 19.21 min.
Quant Ion: 330.0
Area: 13400
Concentration: 81.80 NG/UL
q-value: 92

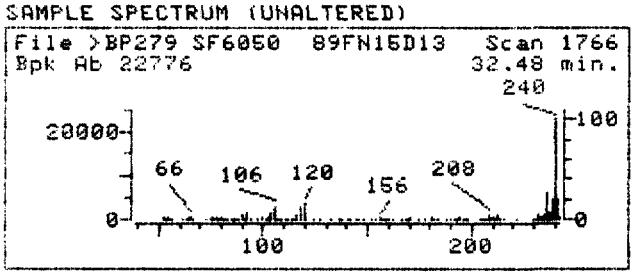
REFERENCE STANDARD SPECTRUM

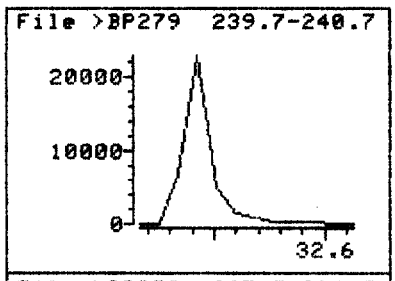


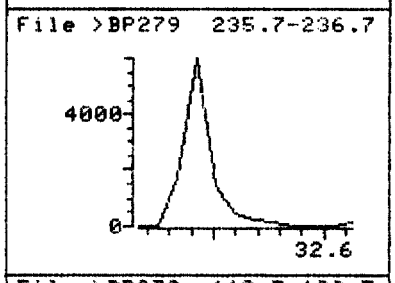
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

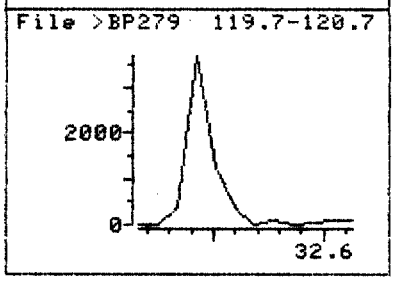


SAMPLE SPECTRUM (UNALTERED)









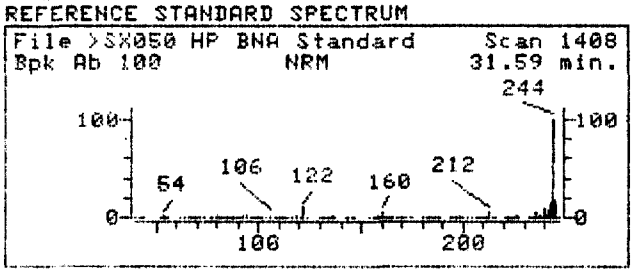
Data File: >BP279::C2
Name: SF6050 89FN15D13
Misc: 050689 1L/1ML 110/115
Quant Time: 890511 10:40
Injected at: 890506 03:00

Quant Output File: ^BP279::SK

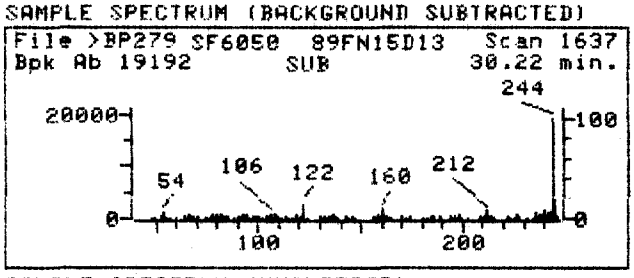
BTL#19
Quant ID File: IDBP96::KS
Last Calibration: 890511 08:57

Compound No: 62
Compound Name: d12-Chrysene
Scan Number: 1766
Retention Time: 32.48 min.
Quant Ion: 240.0
Area: 39998
Concentration: 64.03 NG/UL
q-value: 96

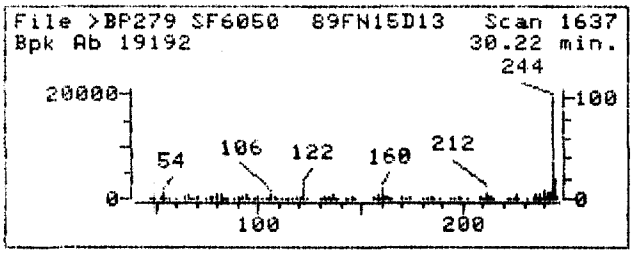
REFERENCE STANDARD SPECTRUM

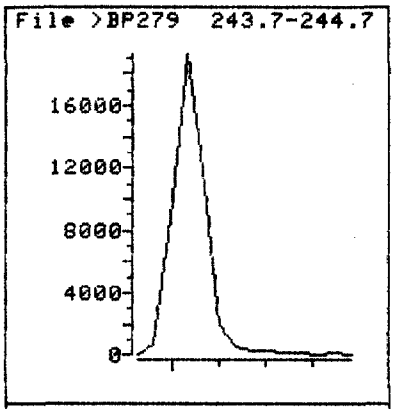


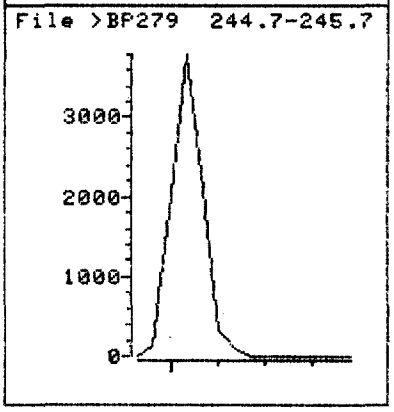
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







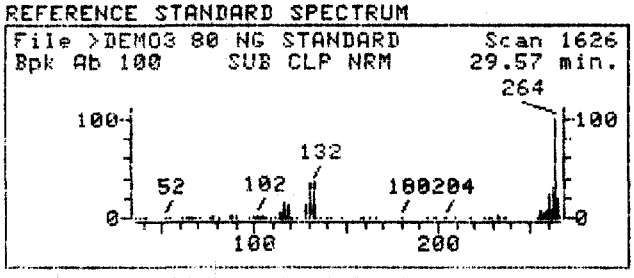
Data File: >BP279::C2
Name: SF6050 89FN15D13
Misc: 050689 1L/1ML 110/115
Quant Time: 890511 10:40
Injected at: 890506 03:00

Quant Output File: ^BP279::SK

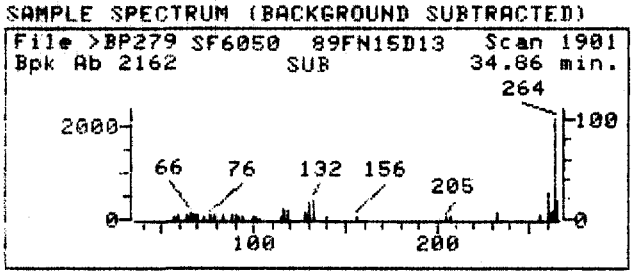
BTL#19
Quant ID File: IDBP96::KS
Last Calibration: 890511 08:57

Compound No: 64
Compound Name: Terphenyl-d14
Scan Number: 1637
Retention Time: 30.22 min.
Quant Ion: 244.0
Area: 45772
Concentration: 70.35 NG/UL
q-value: 99

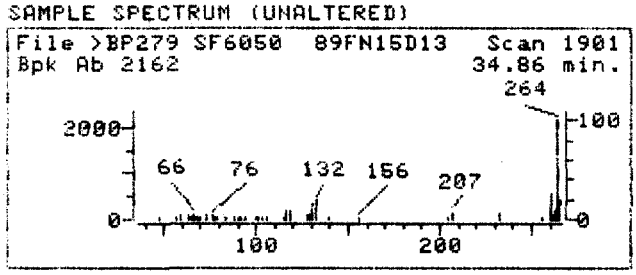
REFERENCE STANDARD SPECTRUM

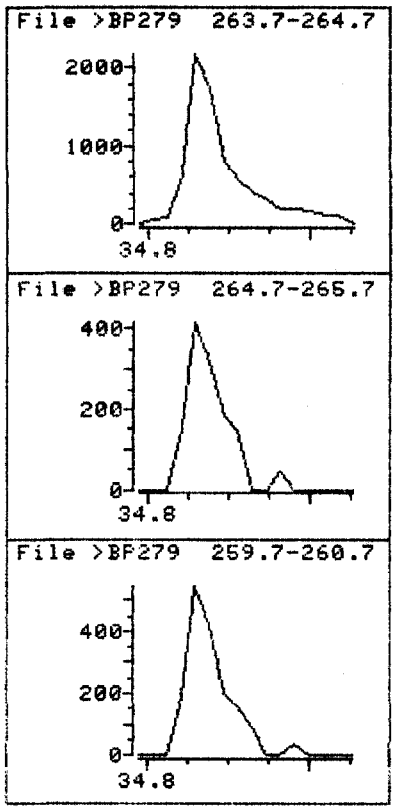


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



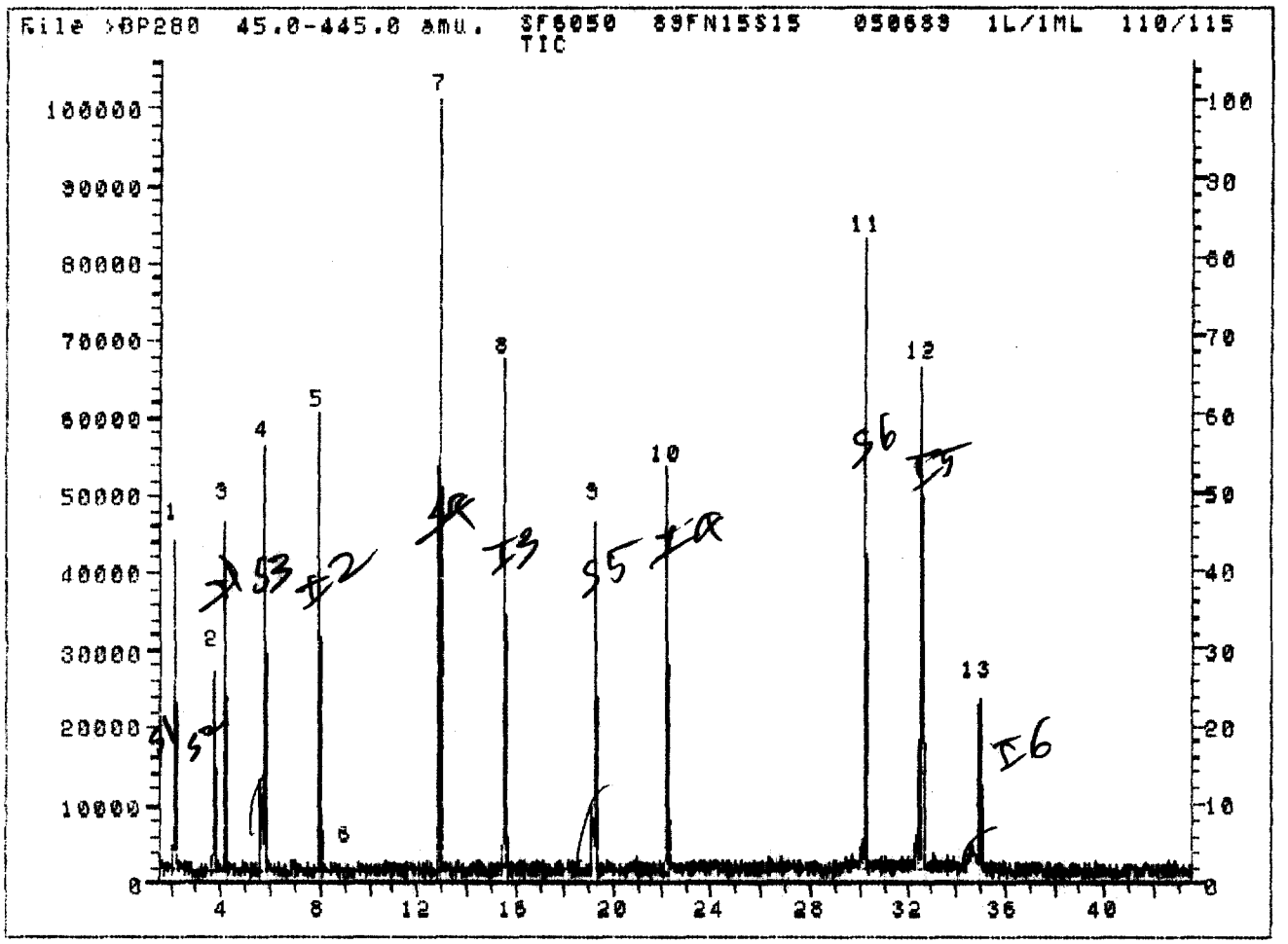


Data File: >BP279::C2
Name: SF6050 89FN15D13
Misc: 050689 1L/1ML 110/115
Quant Time: 890511 10:40
Injected at: 890506 03:00

Quant Output File: ^BP279::SK

BTL#19
Quant ID File: IDBP96::KS
Last Calibration: 890511 08:57

Compound No: 69 (ISTD)
Compound Name: d12-Perylene
Scan Number: 1901
Retention Time: 34.86 min.
Quant Ion: 264.0
Area: 7949
Concentration: 50.00 NG/UL
q-value: 98

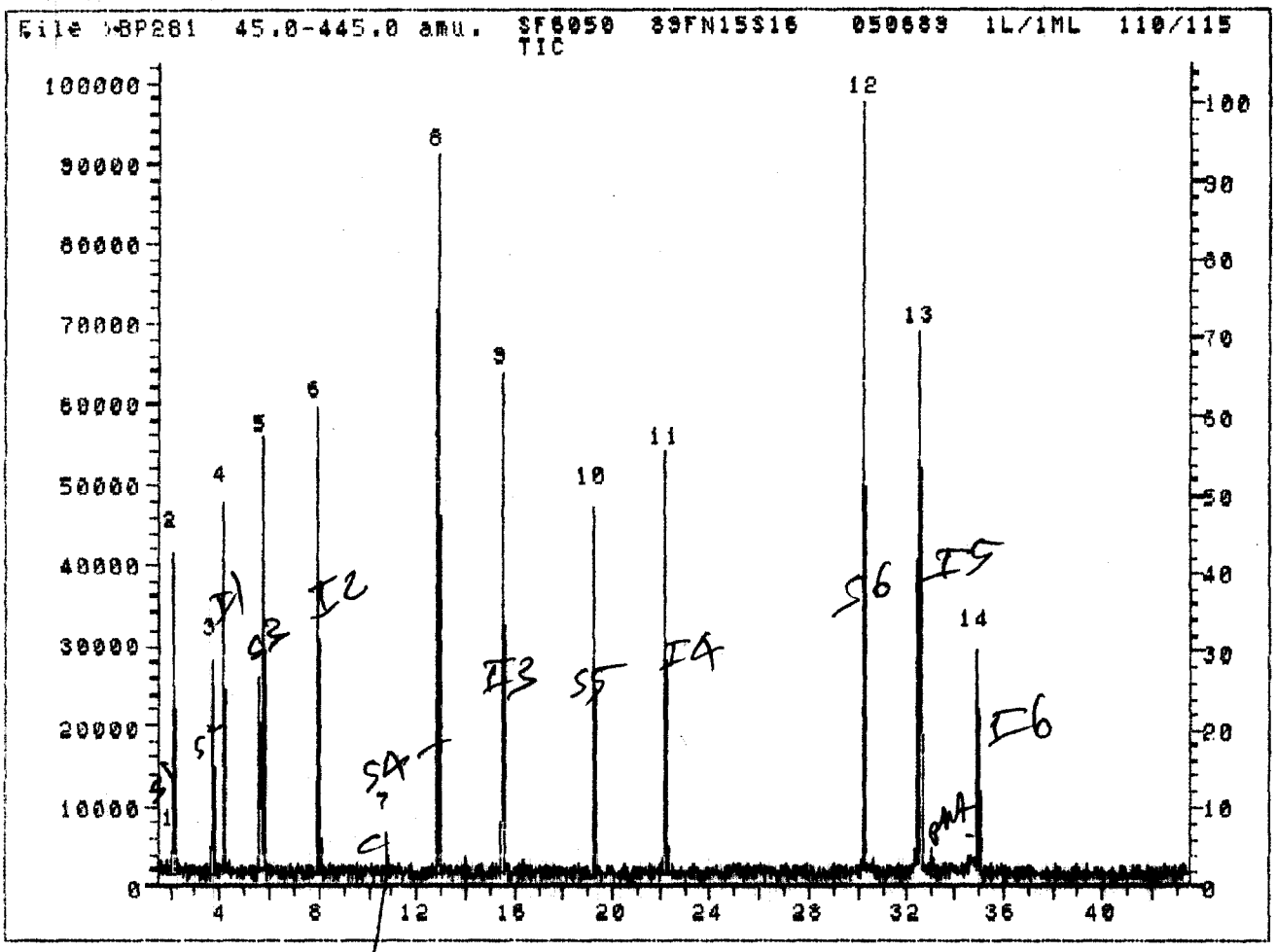


NOTICE
No Targets

>BP280 SF6050 89FN15S15 050689 1L/1ML 110/115
45.0| 445.0 TIC
Upslope: 2.00 Area Reject: 2.00 % Max Peaks: 13 Bunching: 1
Dnslope: 0.00 Results File VDIR74 Sorted by Area/Area INT

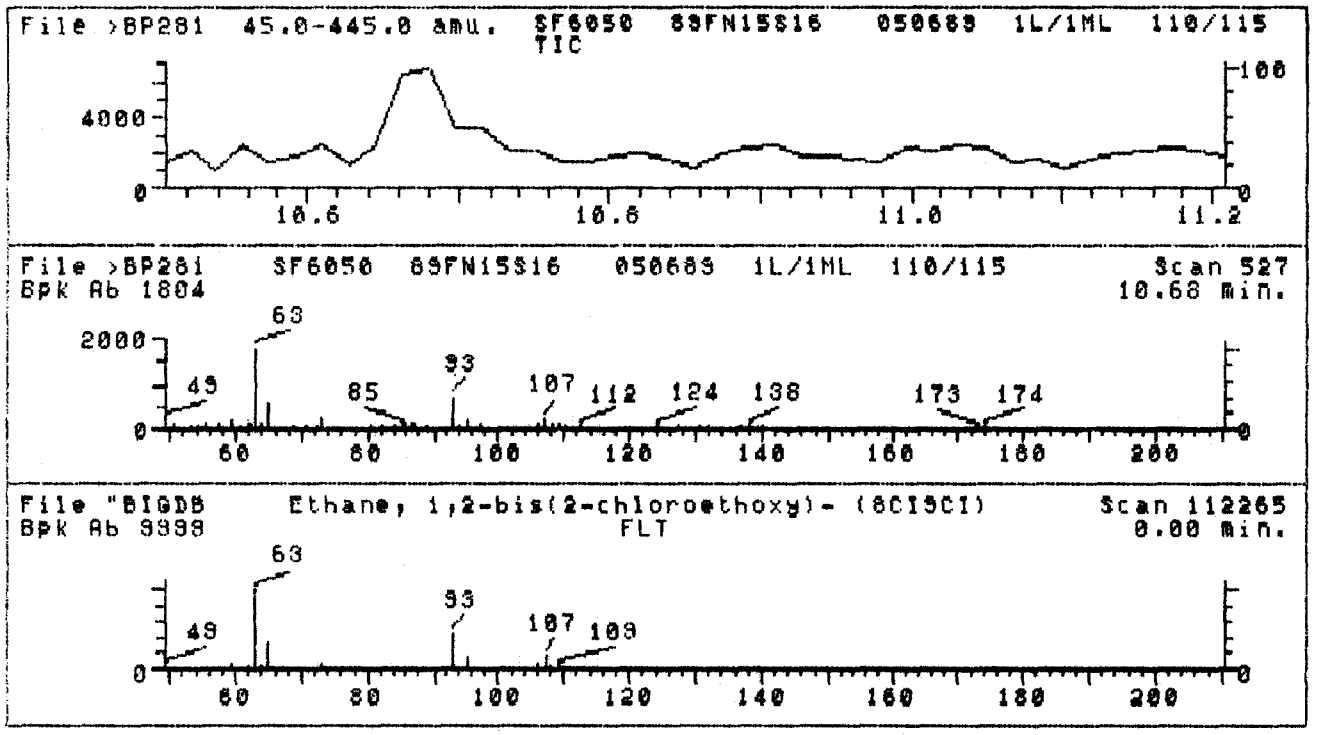
Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	12.77	642	646	651	99203	304672	288643	100.00	15.872
2	30.22	1634	1637	1644	81161	227960	208027	72.07	11.439
3	15.47	795	799	803	65176	220084	201149	69.69	11.061
4	22.15	1175	1179	1184	51971	181584	168215	58.28	9.250
5	5.66	238	242	249	54926	182487	163109	56.51	8.969
6	7.90	366	369	374	59027	172570	160351	55.55	8.818
7	19.21	1009	1012	1019	44613	161414	142187	49.26	7.819
8	4.06	149	151	160	44786	143673	126226	43.73	6.941
9	32.49	1764	1766	1772	64466	130519	113546	39.34	6.244
10	2.06	35	37	43	42084	123380	107680	37.31	5.921
11	3.64	125	127	135	25880	90383	74941	25.96	4.121
12	34.87	1898	1901	1906	20921	79578	57855	20.04	3.181
13	9.06	430	435	438	1122	13624	6614	2.29	.364

Sum of corrected areas: 1818543.



~~Ethane, 1,2-bis(2-chloroethoxy)~~ - 5.1 ppb

Unknown.

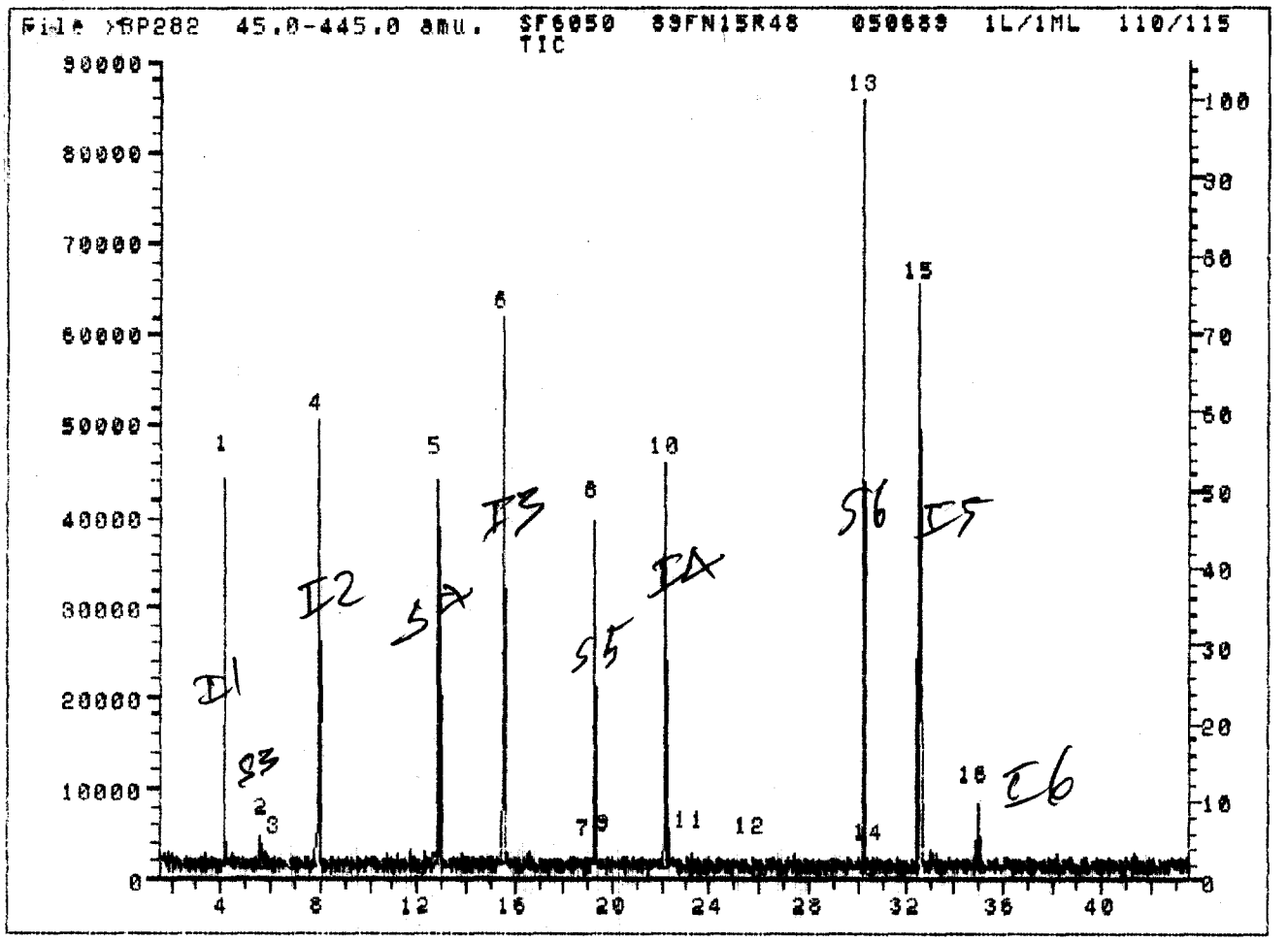

File >BP281 45.0-445.0 amu. SF6050 89FN15S16 050689 1L/1ML 110/115
TIC
4000
0
100
0
10.6
10.8
11.0
11.2
File >BP281 SF6050 89FN15S16 050689 1L/1ML 110/115 Scan 527
Bpk Ab 1804 10.68 min.
2000
0
63
45
85
93
107
112
124
138
173
174
60
80
100
120
140
160
180
200
File "BIGDB Ethane, 1,2-bis(2-chloroethoxy)- (8CI5CI) Scan 112265
Bpk Ab 9999 FLT 0.00 min.
63
49
93
107
109
0
60
80
100
120
140
160
180
200

>BP281 SF6050 89FN15S16 050689 1L/1ML 110/115
45.01 445.0 TIC
Upslope: 2.00 Area Reject: 2.00 % Max Peaks: 14 Bunching: 1
Dnslope: 0.00 Results File VDIR74 Sorted by Area/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	12.77	642	646	653	89304	277739	259176	100.00	14.480
2	30.22	1634	1637	1640	94277	220724	200430	77.33	11.198
3	15.45	794	798	802	61967	204594	187989	72.53	10.503
4	22.15	1175	1179	1185	52738	178962	164196	63.35	9.174
5	7.90	366	369	375	58233	168631	153694	59.30	8.587
6	19.21	1008	1012	1019	45895	168729	153077	59.06	8.552
7	5.65	238	241	247	53612	158045	137981	53.24	7.709
8	32.49	1763	1766	1771	66278	155594	133099	51.35	7.436
9	2.04	34	36	44	39874	137408	120678	46.56	6.742
10	4.06	148	151	157	45217	139399	118458	45.71	6.618
11	3.62	124	126	133	26699	86189	71986	27.77	4.022
12	34.85	1898	1900	1905	26941	81709	64758	24.99	3.618
13	10.68	524	527	532	5256	29353	16843	6.50	.941
14	1.88	25	27	30	2846	14959	7523	2.90	.420

Sum of corrected areas: 1789888.

$\frac{16843(50)}{14} = 5.1$



Repeat to confirm S1, S2 & S3 recoveries are low.

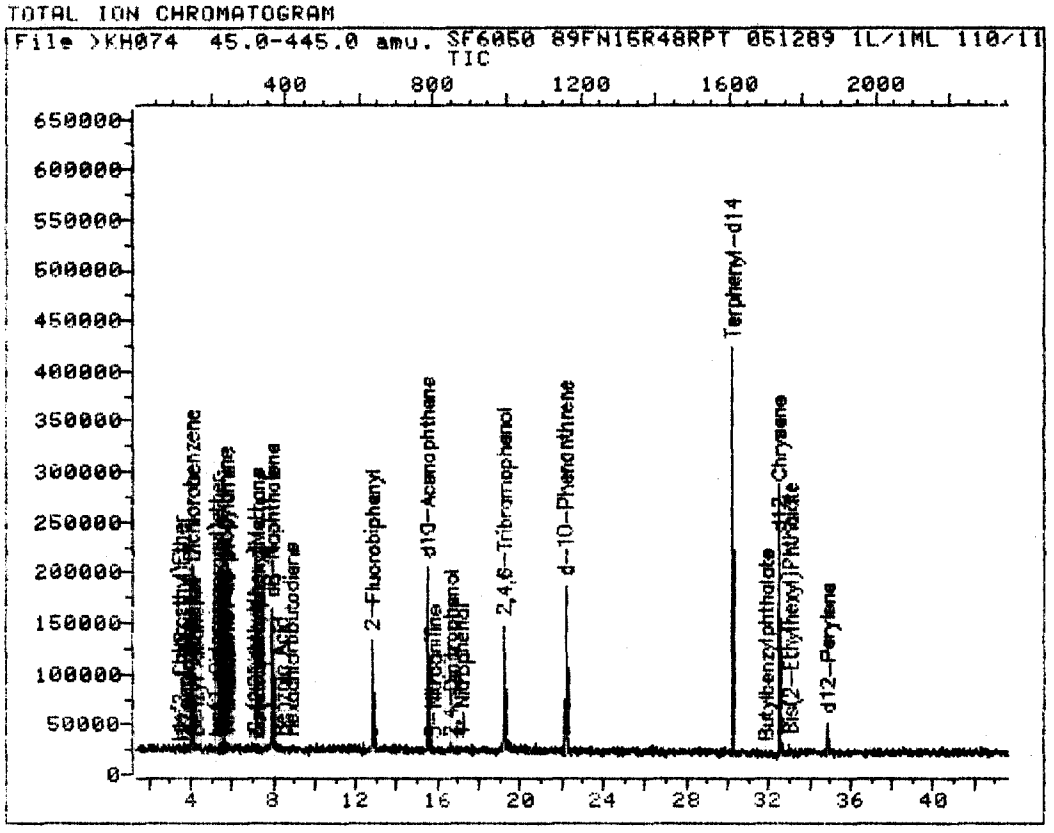
JR 7KH074

>BP282 SF6050 89FN15R48 050689 1L/1ML 110/115
45.01 445.0 TIC
Upslope: 2.00 Area Reject: 2.00 % Max Peaks: 16 Bunching: 1
Dnslope: 0.00 Results File VDIR74 Sorted by Area/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	30.21	1634	1637	1644	84623	216391	205063	100.00	16.889
2	15.45	794	798	804	60121	206014	187645	91.51	15.454
3	22.15	1175	1179	1184	44492	163397	149557	72.93	12.317
4	7.88	364	368	375	49025	165833	146080	71.24	12.031
5	32.48	1764	1766	1772	64117	131553	120810	58.91	9.950
6	12.76	642	645	649	41297	136463	115676	56.41	9.527
7	19.21	1008	1012	1018	37492	134897	115134	56.15	9.482
8	4.01	145	148	154	42628	128803	112438	54.83	9.260
9	34.86	1899	1901	1907	6631	32117	20180	9.84	1.662
10	5.63	237	240	245	3199	22243	10224	4.99	.842
11	23.19	1236	1238	1242	2053	11870	7037	3.43	.580
12	25.65	1377	1378	1382	1496	10239	6047	2.95	.498
13	19.72	1039	1041	1044	1895	9181	5179	2.53	.427
14	6.17	268	271	275	1402	12505	4554	2.22	.375
15	30.50	1651	1653	1656	1115	8115	4444	2.17	.366
16	18.86	989	992	993	1388	7297	4143	2.02	.341

Sum of corrected areas: 1214211.

TOTAL ION CHROMATOGRAM



Data File: >KH074::C1 Quant Output File: ^KH074::SK
Name: SF6050 89FN15R48RPT
Misc: 051289 1L/1ML 110/115 BTL# 3

Id File: IDBP96::KS
Title: HP BNA STD REV E BABU 03\10\89
Last Calibration: 890515 13:09

Operator ID: KELLY
Quant Time: 890515 14:25
Injected at: 890515 13:06

FOR INFO

QUANT REPORT

Operator ID: KELLY Quant Rev: 6 Quant Time: 890515 14:25
Output File: ^KH074::SK Injected at: 890515 13:06
Data File: >KH074::C1 Dilution Factor: 1.00000
Name: SF6050 89FN15R48RPT
Misc: 051289 1L/1ML 110/115 BTL# 3

ID File: IDBP96::KS
Title: HP BNA STD REV E BABU 03\10\89
Last Calibration: 890515 13:09

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	4.04	152.0	42079	50.00	NG/UL	98
3)	Phenol-d5	3.65	99.0	2638	1.95	NG/UL	81
4)	Phenol	4.06	94.0	834	.62	NG/UL	83
5)	bis(2-Chloroethyl)Ether	3.49	93.0	501	.48	NG/UL	56
6)	2-Chlorophenol	3.88	128.0	523	.53	NG/UL	51
9)	Benzyl Alcohol	4.24	108.0	1066	1.79	NG/UL	76
12)	bis(2-Chloroisopropyl)ether	5.24	121.0	647	2.11	NG/UL	83
13)	4-Methylphenol	5.48	108.0	348	.33	NG/UL	82
14)	N-Nitroso-Di-n-propylamine	5.66	70.0	1428	1.29	NG/UL	78
15)	Hexachloroethane	5.48	201.0	893	1.72	NG/UL	84
16)	d8-Naphthalene	7.90	136.0	169070	49.57	NG/UL	93
17)	Nitrobenzene-d5	5.66	82.0	5145	3.67	NG/UL	91
20)	2-Nitrophenol	7.18	139.0	669	1.06	NG/UL	98
21)	2,4-Dimethylphenol	7.13	122.0	518	.59	NG/UL	75
22)	Benzoic Acid	8.35	105.0	501	.89	NG/UL	80
23)	bis(2-Chloroethoxy)Methane	7.16	93.0	624	.42	NG/UL	71
28)	Hexachlorobutadiene	8.83	225.0	312	.34	NG/UL	67
31)	d10-Acenaphthene	15.47	164.0	111724	50.29	NG/UL	99
36)	2-Fluorobiphenyl	12.78	172.0	117139	34.72	NG/UL	93
39)	*d-10-Phenanthrene	22.15	188.0	199041	50.00	NG/UL	99
41)	3-Nitroaniline	15.77	138.0	268	.42	NG/UL	71
43)	2,4-Dinitrophenol	16.61	184.0	269	1.33	NG/UL	77
44)	4-Nitrophenol	17.15	109.0	130	.43	NG/UL	86
54)	2,4,6-Tribromophenol	19.21	330.0	56021	79.05	NG/UL	98
62)	d12-Chrysene	32.46	240.0	212989	66.94	NG/UL	93
64)	Terphenyl-d14	30.21	244.0	342952	115.08	NG/UL	97
65)	Butylbenzylphthalate	31.84	149.0	824	.36	NG/UL	71
67)	Bis(2-Ethylhexyl)Phthalate	33.03	149.0	5630	1.64	NG/UL	82
69)	*d12-Perylene	34.86	264.0	40975	50.00	NG/UL	95

* Compound is ISTD

FOR INFO ONLY

A/BN BENCH SHEET

DATA SET: SF6050 SAMPLE TYPE: Water EXTRACTION METHOD: SepF

	SAMPLE #	SAMPLE AMOUNT	FINAL VOL.	SOLVENT EXTRACT.	DILUTION W/HEXANE 1st	2nd	3rd	EXTR VOL.
274	Method Blank	1000ml	1mL					
5	89FN15 $14 Matrix Spike							
6	89FN15 $14 Matrix Spk Dup							
82	89FN15 A48							
9	D13							
8	$13							
7	$14							
80	$15							
81	$16							
	Sample Date: 4/19/89							

DATE EXTRACTED: 4-25-89 PREP. CHEM.: W. Freeman
DATE CONCENTRATED: 4/27/89 PREP. CHEM.: S. Pace Pierpaoli
DATE RECEIVED: 5/5/89 3:45PM GC/MS CHEM.: Bela

REMARKS: 1mL of Acid spike added to the Matrix spike and Matrix Spike duplicate. 1mL of Base/Neutral spike added to the Matrix spike and Matrix Spike dup. 1mL of new ABN Surrogate added to every sample

20ML of New Internal Standard Added to each sample on 5/15/89

Sample prep was completed on time; extracts were stored in Refrig. until the new int. std. soln. was ready. J. Jasinko 5/4/89

35

SF 6049
6050

Sequence File: BABP21::KS

Tune File: MTKH96

CR List: C2,C6,C8,C1
CR Cut-off: 5000 blocks.

Number of samples: 26

Samp No.	Data File / Method File	Sample Name / Misc Data	Bottle	Sample Size	Quant	Report	Data Archive	ID Archive	Output Archive	Quant ID / Quant Output
001)	>BP261	SF6049 METHOD BLANK	01	3	N	N	N	N	N	
	TOXIC6::C4	050689 1L/1ML 110/117		Dil=1.00000						
002)	>BP262	SF6049 89FM15S05MS	02	3	N	N	N	N	N	
	TOXIC6::C4	050689 1L/1ML 110/117		Dil=1.00000						
003)	>BP263	SF6049 89FM15S05MD	03	3	N	N	N	N	N	
	TOXIC6::C4	050689 1L/1ML 110/117		Dil=1.00000						
004)	>BP264	SF6049 89FM15S05	04	3	N	N	N	N	N	
	TOXIC6::C4	050689 1L/1ML 110/117		Dil=1.00000						
005)	>BP265	SF6049 89FM14S98	05	3	N	N	N	N	N	
	TOXIC6::C4	050689 1L/1ML 110/117		Dil=1.00000						
006)	>BP266	SF6049 89FM14D98	06	3	N	N	N	N	N	
	TOXIC6::C4	050689 1L/1ML 110/117		Dil=1.00000						
007)	>BP267	SF6049 89FM15S01	07	3	N	N	N	N	N	
	TOXIC6::C4	050689 1L/1ML 110/117		Dil=1.00000						
008)	>BP268	SF6049 89FM15S02	08	3	N	N	N	N	N	
	TOXIC6::C4	050689 1L/1ML 110/117		Dil=1.00000						
009)	>BP269	SF6049 89FM15S03	09	3	N	N	N	N	N	
	TOXIC6::C4	050689 1L/1ML 110/117		Dil=1.00000						
010)	>BP270	SF6049 89FM15R04	10	3	N	N	N	N	N	
	TOXIC6::C4	050689 1L/1ML 110/117		Dil=1.00000						
011)	>BP271	SF6049 50 57 TOXSTD	11	3	Y	N	N	N	N	IDBP96::KS
	TOXIC6::C4	050689 100PPM 110/117		Dil=1.00000						^BP271::SK
012)	>BP272	SF6049 50 57 TOXSTD	12	3	Y	N	N	N	N	IDBP96::KS
	TOXIC6::C4	050689 50PPM 110/117		Dil=1.00000						^BP272::SK
013)	>BP273	SF6049 50 57 TOXSTD	13	3	Y	N	N	N	N	IDBP96::KS
	TOXIC6::C4	050689 25PPM 110/117		Dil=1.00000						^BP273::SK
014)	>BP274	SF6050 METHOD BLANK	14	3	N	N	N	N	N	
	TOXIC6::C4	050689 1L/1ML 110/115		Dil=1.00000						
015)	>BP275	SF6050 89FN15S14MS	15	3	N	N	N	N	N	
	TOXIC6::C4	050689 1L/1ML 110/115		Dil=1.00000						
016)	>BP276	SF6050 89FN15S14MD	16	3	N	N	N	N	N	
	TOXIC6::C4	050689 1L/1ML 110/115		Dil=1.00000						
017)	>BP277	SF6050 89FN15S14	17	3	N	N	N	N	N	
	TOXIC6::C4	050689 1L/1ML 110/115		Dil=1.00000						
018)	>BP278	SF6050 89FN15S13	18	3	N	N	N	N	N	
	TOXIC6::C4	050689 1L/1ML 110/115		Dil=1.00000						
019)	>BP279	SF6050 89FN15D13	19	3	N	N	N	N	N	
	TOXIC6::C4	050689 1L/1ML 110/115		Dil=1.00000						
020)	>BP280	SF6050 89FN15S15	20	3	N	N	N	N	N	
	TOXIC6::C4	050689 1L/1ML 110/115		Dil=1.00000						
021)	>BP281	SF6050 89FN15S16	21	3	N	N	N	N	N	
	TOXIC6::C4	050689 1L/1ML 110/115		Dil=1.00000						
022)	>BP282	SF6050 89FN15R48	22	3	N	N	N	N	N	
	TOXIC6::C4	050689 1L/1ML 110/115		Dil=1.00000						
023)	>BP283	SF6049 50 SURSTD	23	3	N	N	N	N	N	
	TOXIC6::C4	050689 100PPM 110/115		Dil=1.00000						
024)	>BP284	SF6049 50 TOXSTD	24	3	N	N	N	N	N	

```
      TOXIC6::C4    050689     1PPM  110/115      Dil=1.00000
025) >BP285         SF6049  50  TOXSTD         25 3 N N N N N
     TOXIC6::C4     050689     1PPM  110/115      Dil=1.00000
026) >BP286         SF6049  50  MS/MSD         26 3 N N N N N
     TOXIC6::C4     050689    50PPM  110/115      Dil=1.00000

End of sequence file.

:AL,,3      Move cursor; then press carriage return :
```

35
SF 6049
SF 6050
SF

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: MAY 17 1989

SUBJECT: Review of Region 5 data for BANNER WESTERN DISPOSAL SERVICE CO.

FROM: Curtis Ross, Director
Region 5 Central Regional Laboratory

To: Data User: FIT

Attached are the results for:

CRL Data Set Numbers: SF 6050
Sample Numbers: 89FN15 S13-16, D13 & FN10B46
Parameter(s): ORGANICS - AEN2
Laboratory: 5SCRL - ESD - USEPA

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~~ David A. 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
S. Griffin
MAY 17 1989

RECEIVED BY/DATE: Mary Griffin 5/18/89

U.S. EPA CENTRAL REGIONAL LAB

Comments:

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: MAY 15 1989

SUBJECT: Review of Region 5 data for Banner Western Disposal Service

FROM: Curtis Ross, Director
Region 5 Central Regional Laboratory

To: Data User: F I T

Attached are the results for:

CRL Data Set Numbers: SF- 6050
Sample Numbers: 89FN15 S13 - S16
Parameter(s): VOA
Laboratory: 5SCRL

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,~~ DAVE 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: Mary Gryzen 5/16/89
Comments:

Elly
Sanders
Alwan
Ross
Sylvia

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 5/12/89

SUBJECT: DATA SET (S) MISSING DUE DATES

FROM: ELLY _____ ALWAN AA _____ TANG _____

TO: Curtis Ross, Director CR
CENTRAL REGIONAL LABORATORY

DATA SET NO: SF6049 / SF6050

DATA SET NAME: APPLETON'S GARAGE / BANNER WESTERN DISPOSAL SERVICE CO.

LABORATORY SECTION: INORGANIC _____ ORGANIC ✓

TEAM: M/N _____ METALS _____ TOXICS ✓ (GC/MS)

GENERAL ORGANIC _____ BIOLOGY _____

DUE DATE: 5/11/89

PROJECTED DUE DATE: 5/16/89

REASONS FOR DELAY:

1. BECAUSE OF THE INSTRUMENT (GC/MS) FAILURE DURING DATA ACQUISITION, THE SITE SAMPLES HAD TO BE REINJECTED.
2. SOME OF THE SAMPLES HAD TO BE REANALYZED BECAUSE OF UNACCEPTABLE QC DATA
3. LIMS TRAINING/UTILIZATION

ASSUMPTIONS:

NONE

cc: QC COORDINATOR
AFFECTED TEAM LEADER
DATA COORDINATOR

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CHICAGO, ILLINOIS

DATE: MAY 15 1989

SUBJECT: Review of Region 5 data for Banner Western Disposal Service

FROM: Curtis Ross, Director
Region 5 Central Regional Laboratory

To: Data User: FIT

Attached are the results for:

CRL Data Set Numbers: SF- 6050
Sample Numbers: 89FN15 S13 - S16
Parameter(s): VOA
Laboratory: 5SCRL

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,~~ DAVE 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
Sylvia Griffin
MAY 15 1989
U.S. EPA CENTRAL REGIONAL LAB

RECEIVED BY/DATE:
Comments:

DATA SET	SITE	DU/ACT.
SF-6050	Banner Werlin	TF A 302

SAMPLES	PARAMETER(S)
89 FN15 S13 - S16	VOA

SAMPLED	RECEIVED	DUE	LAB
4/19/89	4/20/89	5/11/89	SSCRL

SHIPPED	DATA RECEIVED	CONTRACT

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

Comments By Reviewer:

The data is acceptable for use.

A. Alwan
5/11/89

DATA MANAGEMENT COORDINATOR

RECEIVED	TRANSMITTED	
(X) REVIEWED	( ) UNREVIEWED	TEAM LEADER/DATE A. Alwan
( ) REVIEWED	( ) UNREVIEWED	SECTION CHIEF/DATE
( ) REVIEWED	( ) UNREVIEWED	QC COORDINATOR/DATE

CLERICAL SUPPORT

RECEIVED	COMPLETED

REVIEWED BY CONTRACT COORDINATOR/DATE

RECEIVED	TRANSMITTED	DATA MANAGEMENT COORDINATOR
5/15/89	5/15/89	Sylvia Griffin

CC: QUALITY CONTROL COORDINATOR

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

EPA SAMPLE NO.

METHODBLANK

Study Name: BANNER
Data Set: SF-6050
Lab File ID: >T4650
Dilution Factor: 1.00000

Matrix: water
Date Received: 04/20/89
Date Analyzed: 4/21/89

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	3.	B
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.

No TICs

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

EPA SAMPLE NO.

89FN10 R48

Study Name: BANNER
Data Set: SF-6050
Lab File ID: >T4657
Dilution Factor: 1.00000

Matrix: water
Date Received: 04/20/89
Date Analyzed: 4/21/89

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	7.	J	←
107-13-1	Acrylonitrile	50.	U	
75-15-0	Carbon Disulfide	2.	U	X
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	X
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	X
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	X
95-47-6	O-&/or P-Xylene	2.	U	X

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.

CENTRAL REGIONAL LABORATORY
U.S. ENVIRONMENTAL PROTECTION AGENCY
536 SOUTH CLARK
CHICAGO, ILLINOIS 60605 312/353-8370

VOLATILE ORGANICS ANALYSIS DATA SHEET

STUDY NAME: BANNER MATRIX: WATER DATA SET #: SF-6050

LAB SAMPLE I.D. NO: 89FN10 R48 LAB FILE ID: >T4657 ACTIVITY CODE: TFA302

TENTATIVELY IDENTIFIED COMPOUNDS	SCAN #	ESTIMATED CONCENTRATION(UG/L)
UNKNOWN 1	492	2.2

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

EPA SAMPLE NO.
89FN15 S13

Study Name: BANNER
Data Set: SF-6050
Lab File ID: >T4658
Dilution Factor: 1.00000

Matrix: water
Date Received: 04/20/89
Date Analyzed: 4/21/89

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	X
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.

No TICs

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

EPA SAMPLE NO.
89FN15 D13

Study Name: BANNER
Data Set: SF-6050
Lab File ID: >T4659
Dilution Factor: 1.00000

Matrix: water
Date Received: 04/20/89
Date Analyzed: 4/21/89

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	X
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.

No TICs

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

EPA SAMPLE NO.

89FN15 S14

Study Name: BANNER
Data Set: SF-6050
Lab File ID: >T4653
Dilution Factor: 1.00000

Matrix: water
Date Received: 04/20/89
Date Analyzed: 4/21/89

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	.9	JB ←
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.

No TICS

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

EPA SAMPLE NO.

89FN15 S15

Study Name: BANNER
Data Set: SF-6050
Lab File ID: >T4660
Dilution Factor: 1.00000

Matrix: water
Date Received: 04/20/89
Date Analyzed: 4/21/89

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	30.		← TCJ
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	X
75-35-4	1,1-Dichloroethene	1.	U	
75-34-3	1,1-Dichloroethane	.4	J	←
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.

CENTRAL REGIONAL LABORATORY
U.S. ENVIRONMENTAL PROTECTION AGENCY
536 SOUTH CLARK
CHICAGO, ILLINOIS 60605 312/353-8370

VOLATILE ORGANICS ANALYSIS DATA SHEET

STUDY NAME: BANNER MATRIX: WATER DATA SET #: SF-6050

LAB SAMPLE I.D. NO: 89FN15 S15 LAB FILE ID:>T4660 ACTIVITY CODE: TFA302

TENTATIVELY IDENTIFIED COMPOUNDS	SCAN #	ESTIMATED CONCENTRATION(UG/L)
ETHYL ETHER	439	3
DIISOPROPYL ETHER	647	6

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

EPA SAMPLE NO.

89FN15 S16

Study Name: BANNER
Data Set: SF-6050
Lab File ID: >T4661
Dilution Factor: 1.00000

Matrix: water
Date Received: 04/20/89
Date Analyzed: 4/21/89

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	.4	J	←
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	.3	JB	←
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.		←
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	2.		←
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.
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CENTRAL REGIONAL LABORATORY
U.S. ENVIRONMENTAL PROTECTION AGENCY
536 SOUTH CLARK
CHICAGO,ILLINOIS 60605 312/353-8370

VOLATILE ORGANICS ANALYSIS DATA SHEET

STUDY NAME: BANNER MATRIX: WATER DATA SET #: SF-6050

LAB SAMPLE I.D. NO: 89FN15 S16 LAB FILE ID:>T4661 ACTIVITY CODE: TFA302

TENTATIVELY IDENTIFIED COMPOUNDS	SCAN #	ESTIMATED CONCENTRATION(UG/L)
DIISOPROPYL ETHER	647	38

Subject: SF-6050, Banner Western Disposal Service Co.

To : File Case

From : C. Joseph

Date : May 5, 1989

The data set consists of six (6) samples analysed for volatiles (VOA) by GC/MS utilising EPA, CRL Method 624NS. Sample numbers are 89FN15 S13 to 89FN15 S16, -D13. All samples were analysed within seven (7) days of receipt.

All tuning were acceptable with BFB meeting all QC requirements. The initial calibration is acceptable with the exception of Carbon disulfide (CS2, %RSD 91%) and Vinylacetate (%RSD 88%). Continuing calibration is acceptable with two outliers (CS2, %RSD 74%, Vinylacetate, %RSD, 40%). Tekmar 2000 is contaminated with CS2 and all samples showed CS2 at low level. CS2 in the sample is flagged with B in Form 1.

All internal standards areas and retention times are within QC limits. All surrogates are within QC limits for all samples. 89FN15 S14 was used for matrix spike (MS) and matrix spike duplicate (MSD). Spike recovery is satisfactory and %RPD are within QC limits.

89FN15 S15 showed the presence of Chloromethane (30 ppb) and -S16 showed Benzene (1 ppb) and Chlorobenzene (2 ppb). No other sample in this study showed any target compounds above MDL.

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: TOXIC SUBSTANCES

TFA302

DIVISION/BRANCH FIT SUPERFUND SAMPLE DATE 4/19/89 LAB ARRIVAL DATE 4/20/89 DUE DATE 5/11/89

DU NUMBER ~~TFA~~ TFA DATA SET NUMBER 6050 STUDY Banner Western Disposal Service Co. PRIORITY — CONTRACTOR —

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER VOLATILE ORGANICS SCAN UG/L TOX 17584	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
89FN15S13	RW1 5-036546 5-036547	✓			
89FN15S14	5-036562-63, 5-036569-70-71-72 MSD/RW2 5-036594-95	✓			
89FN15S15	5-036578 5-036579 RW3	✓			
89FN15S16	5-036585 5-036586 RW4	✓			
89FN10R48	5-036590 5-036591 BLK	✓			
89FN15D13	5-036555 5-036556 Dup	✓			
89FN15S13	RW1 5-036541-542		✓		
89FN15D13	DUPLICATE 5-036548 5-036550		✓		
89FN15S14	RW2/MSD 5-036557-558 5-036564-65-66		✓		
89FN15S15	RW3 5-036573-574		✓		
89FN15S16	RW4 5-036580-581		✓		
89FN10R48	BLANK 5-036587-588		✓		

TC 5-5-89

2A
WATER VOLATILE SURROGATE RECOVERY

Lab Name:5SCRL US EPA Contract:TFA 302

Lab Code: CHICAGOILCase No.: SF-6050 SAS No.: N.A. SDG No.: N.A.

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BEN)#	S3 (DCE)#	OTHER	TOT OUT
01	METHODBLAN	115	103	88		0
02	89FN15 S14	104	102	88		0
03	89FN10 R48	100	99	85		0
04	89FN15 S13	95	99	87		0
05	89FN15 D13	98	99	86		0
06	89FN15 S15	96	97	86		0
07	89FN15 S16	95	96	88		0
08	89FN15S14M	101	100	86		0
09	89FN15S14D	100	98	88		0
10						
11						
12						
13						
14						
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16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
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

FORM II VOA-1 1/87 Rev.

3A
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name:5SCRL US EPA Contract:TFA 302

Lab Code: CHICAGOIL Case No.: SF-6050 SAS No.: N.A. SDG No.: N.A.

Matrix Spike - EPA Sample No.: 89FN15 S14

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	9.00	89	61-145
Trichloroethene	10.00	0.00	9.90	98	71-120
Benzene	10.00	0.00	11.00	107	76-127
Toluene	10.00	0.00	11.00	109	76-125
Chlorobenzene	10.00	0.00	13.00	125	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	9.00	90	1	14	61-145
Trichloroethene	10.00	9.80	98	0	14	71-120
Benzene	10.00	11.00	108	0	11	76-127
Toluene	10.00	11.00	112	2	13	76-125
Chlorobenzene	10.00	13.00	127	1	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: _____

5A
VOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: SSCRL US EPA Contract: TFA 302

Lab Code: CHICAGOIL Case No.: SF-6050 SAS No.: N.A. SDG No.: N.A.

Lab File ID: >T4650 BFB Injection Date: 4/21/89

Instrument ID: 87 4 BFB Injection Time: 9:48

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	18.0
75	30.0 - 60.0% OF MASS 95	45.2
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.4
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	68.3
175	5.0 - 9.0% of mass 174	5.3(7.7)1
176	Greater than 95.0%, but less than 101.0% of mass 174	66.2(96.9)1
177	5.0 - 9.0% of mass 176	5.6(8.5)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	89FN15 S14	89FN15 S14	>T4653	4/21/89	12:47
02	VOASTD15PPB	VOASTD15PPB	>T4656	4/21/89	16:58
03	89FN10 R48	89FN10 R48	>T4657	4/21/89	17:57
04	89FN15 S13	89FN15 S13	>T4658	4/21/89	18:56
05	89FN15 D13	89FN15 D13	>T4659	4/21/89	19:55
06	89FN15 S15	89FN15 S15	>T4660	4/21/89	20:54
07	89FN15 S16	89FN15 S16	>T4661	4/21/89	21:54
08	89FN15S14M	89FN15S14M	>T4663	4/21/89	23:52
09	89FN15S14D	89FN15S14D	>T4664	4/22/89	0:51
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA 1/87 Rev.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:5SCRL US EPA Contract:TFA 302

Lab Code: CHICAGOIL Case No.: SF-6050 SAS No.: N.A. SDG No.: N.A.

Instrument ID: 87 4 Calibration Date: 4/21/89 Time: 16:58

Lab File ID: >T4656 Init. Calib. Date(s):04/20/89 04/21/89

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		$\overline{RRF}$	RRF15	%D	
Chloromethane	#	1.517	1.522	.3	#
Bromomethane		1.438	1.384	3.8	
Vinyl Chloride	*	1.228	1.186	3.4	*
Chloroethane		.573	.574	.1	
Methylene Chloride		2.544	2.127	16.4	
Acrolein		.048	.044	8.7	
Acetone		.127	.110	13.4	
Acrylonitrile		.132	.118	11.0	
Carbon Disulfide		14.744	3.817	74.1	←
1,1-Dichloroethene	*	2.316	2.028	12.4	*
1,1-Dichloroethane	#	4.445	3.905	12.2	#
1,2-Dichloroethene (total)		2.703	2.343	13.3	
Chloroform	*	4.160	3.622	12.9	*
1,2-Dichloroethane		1.631	1.395	14.5	
2-Butanone		.021	.018	12.9	
1,1,1-Trichloroethane		.944	.840	11.0	
Carbon Tetrachloride		.753	.683	9.3	
Vinyl Acetate		.118	.071	39.9	←
Bromodichloromethane		1.003	.866	13.7	
1,2-Dichloropropane	*	.847	.733	13.5	*
cis-1,3-Dichloropropene		1.112	.962	13.4	
Trichloroethene		.936	.840	10.3	
Dibromochloromethane		.620	.542	12.6	
1,1,2-Trichloroethane		.427	.367	14.0	
Benzene		2.369	2.096	11.5	
trans-1,3-Dichloropropene		.664	.569	14.3	
2-Chloroethyl vinylether		.277	.230	16.9	
Bromoform	#	.291	.255	12.5	#
4-Methyl-2-pentanone		.512	.468	8.5	
2-Hexanone		.370	.381	3.1	
Tetrachloroethene		1.089	.999	8.3	
1,1,2,2-Tetrachloroethane		.324	.305	5.8	
Toluene	*	2.576	2.312	10.3	*
Chlorobenzene	#	2.808	2.548	9.3	#
Ethylbenzene	*	1.461	1.339	8.3	*
Styrene		3.403	3.231	5.1	
Meta Xylene		2.272	2.211	2.7	
O-&/or P-Xylene		2.327	2.263	2.7	
1,2-Dichloroethane-d4		.930	.920	1.1	
Benzene-d6		1.977	2.041	3.3	
Toluene-d8		1.882	1.974	4.9	

2 outlies

Calibration Report

Title: 10 FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Calibrated: 890421 11:12

Compound	Files: >T4636 RF 5.00	>T4637 RF 10.00	>T4638 RF 15.00	>T4639 RF 20.00	>T4640 RF 25.00	$\overline{RRT}$	$\overline{RF}$	% RSD	
CHLOROMETHANE	1.56466	1.67650	1.36337	1.58783	1.39292	.222	1.51706	8.827	(Conc=10.0,15.0,20.0,25.0,30.0)
BROMOMETHANE	1.55440	1.61948	1.28908	1.50128	1.22528	.358	1.43791	11.940	(Conc=10.0,15.0,20.0,25.0,30.0)
VINYL CHLORIDE	1.28348	1.35012	1.08119	1.31813	1.10629	.449	1.22784	10.179	(Conc=10.0,15.0,20.0,25.0,30.0)
CHLOROETHANE	.58912	.62765	.49975	.62667	.52405	.554	.57345	10.275	(Conc=10.0,15.0,20.0,25.0,30.0)
METHYLENE CHLORIDE	2.63636	2.96693	2.29418	2.56794	2.25285	.743	2.54365	11.380	
ACROLEIN	.04163	.05612	.04889	.05347	.04120	.803	.04826	14.015	(Conc=225.0,300.0,375.0,450.0,525.
ACETONE	.10841	.13814	.12236	.14252	.12371	.800	.12703	10.728	(Conc=225.0,300.0,375.0,450.0,525.
ACRYLONITRILE	.11159	.14251	.12720	.15036	.12824	.855	.13198	11.372	(Conc=225.0,300.0,375.0,450.0,525.
CARBON DISULFIDE	38.3690	12.1192	6.74067	7.21221	9.27803	.877	14.7438	90.724	(Conc=7.5,10.0,12.5,15.0,17.5)
1,1-DICHLOROETHENE	2.38517	2.70347	2.08607	2.38183	2.02228	.973	2.31577	11.794	
1,1-DICHLOROETHANE	4.82594	5.07324	3.89489	4.51861	3.91222	1.078	4.44498	11.966	
1,2-DICHLOROETHENE (TOTAL)	2.92304	3.09444	2.38353	2.73702	2.37772	1.141	2.70315	11.853	
CHLOROFORM	4.40559	4.80362	3.68866	4.23501	3.66718	1.179	4.16001	11.685	
1,2-DICHLOROETHANE-D4	.87683	.89218	.91207	.98120	.98775	1.236	.93001	5.519	(Conc=10.0,10.0,10.0,10.0,10.0)
1,2-DICHLOROETHANE	1.64488	1.88107	1.45574	1.69222	1.48290	1.244	1.63136	10.578	
2-BUTANONE	.01686	.02288	.02095	.02342	.02060	.696	.02094	12.320	(Conc=75.0,100.0,125.0,150.0,175.0
1,1,1-TRICHLOROETHANE	.94295	1.11352	.86387	.95106	.84947	.761	.94417	11.126	
CARBON TETRACHLORIDE	.72946	.87239	.69461	.78294	.68438	.779	.75276	10.252	
VINYL ACETATE	.27501	.17620	.06549	.04332	.03116	.784	.11823	88.621	(Conc=22.5,30.0,37.5,45.0,52.5)
BROMODICHLOROMETHANE	.93130	1.16577	.92366	1.05557	.94096	.797	1.00345	10.516	
1,2-DICHLOROPROPANE	.81149	.99035	.78398	.88165	.77015	.868	.84753	10.699	
CIS-1,3-DICHLOROPROPENE	1.05001	1.28835	1.03374	1.16757	1.01822	.878	1.11158	10.351	(Conc=6.0,12.0,18.0,24.0,30.0)
TRICHLOROETHENE	.76773	1.00748	.89208	1.05991	.95426	.905	.93629	12.065	
BENZENE-D6	2.06442	2.01361	1.98572	1.90877	1.91007	.927	1.97652	3.412	(Conc=10.0,10.0,10.0,10.0,10.0)
BENZENE	2.36238	2.76898	2.19046	2.39816	2.12572	.934	2.36914	10.593	
DIBROMOCHLOROMETHANE	.53660	.70076	.58652	.67446	.60157	.931	.61998	10.791	
TRANS-1,3-DICHLOROPROPENE	.61338	.77563	.62232	.69740	.61294	.939	.66433	10.771	(Conc=4.0,8.0,12.0,16.0,20.0)
1,1,2-TRICHLOROETHANE	.38380	.49255	.39983	.45662	.40267	.938	.42710	10.711	
2-CHLOROETHYL VINYLETHER	.25159	.32077	.25809	.29479	.25824	.992	.27670	10.824	
BROMOFORM	.23100	.32624	.27800	.32623	.29558	1.061	.29141	13.589	
4-METHYL-2-PENTANONE	.44806	.55847	.49307	.56682	.49218	.914	.51172	9.772	(Conc=15.0,20.0,25.0,30.0,35.0)
2-HEXANONE	.32431	.34356	.41885	.40647	.35541	.977	.36972	11.083	(Conc=15.0,20.0,25.0,30.0,35.0)
TETRACHLOROETHENE	1.15870	1.25054	.97411	1.10048	.96251	.989	1.08927	11.270	
1,1,2,2-TETRACHLOROETHANE	.42341	.39957	.23368	.28589	.27588	.985	.32369	25.624	
TOLUENE-D8	2.14063	1.89340	1.86069	1.74297	1.77129	1.041	1.88180	8.363	(Conc=10.0,10.0,10.0,10.0,10.0)
TOLUENE	2.78544	2.95812	2.29829	2.57442	2.26509	1.050	2.57627	11.704	
CHLOROBENZENE	2.98159	3.20598	2.50725	2.85498	2.49074	1.106	2.80811	11.003	
ETHYLBENZENE	1.57607	1.68674	1.30088	1.46742	1.27389	1.225	1.46100	12.094	
STYRENE	3.42046	3.73839	3.19881	3.56831	3.08974	1.486	3.40314	7.774	(Conc=7.5,10.0,12.5,15.0,17.5)

2 outliers

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: 1D FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Calibrated: 890421 11:12

Compound	Files: >T4636 RF 5.00	>T4637 RF 10.00	>T4638 RF 15.00	>T4639 RF 20.00	>T4640 RF 25.00	$\overline{RRT}$	$\overline{RF}$	% RSD	
META XYLENE	2.55053	2.38566	2.10472	2.28620	2.03163	1.508	2.27175	9.246	(Conc=10.0,20.0,30.0,40.0,50.0)
O-&/OR P-XYLENE	2.54984	2.44363	2.16757	2.36517	2.10741	1.575	2.32672	7.993	(Conc=12.5,25.0,37.6,50.1,62.6)

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

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name:5SCRL US EPA Contract:TFA 302

Lab Code: CHICAGOIL Case No.: SF-6050 SAS No.: N.A. SDG No.: N.A.

Lab File ID (Standard): >T4656 Date Analyzed: 4/21/89

Instrument ID: 87 4 Time Analyzed: 16:58

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	114103.	11.90	383868.	21.24	217052.	25.37
	UPPER LIMIT	228206.		767736.		434104.	
	LOWER LIMIT	57051.		191934.		108526.	
	EPA SAMPLE NO.						
01	METHODBLANK	109771.	11.87	382501.	21.21	203926.	25.34
02	89FN15 S14	120995.	11.88	407694.	21.22	235968.	25.34
03	89FN10 R48	125517.	11.90	415459.	21.26	239038.	25.35
04	89FN15 S13	114901.	11.90	385630.	21.26	231854.	25.38
05	89FN15 D13	115173.	11.90	383810.	21.26	224378.	25.35
06	89FN15 S15	111318.	11.90	376952.	21.26	222411.	25.35
07	89FN15 S16	112613.	11.90	382481.	21.23	225758.	25.35
08	89FN15S14M	105901.	11.90	356120.	21.26	207029.	25.35
09	89FN15S14D	105576.	11.90	357196.	21.26	206461.	25.35
10							
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.

QUALITY CONTROL SHEET
TOXIC ORGANIC SECTION: VOLATILES

STUDY NAME Banner Westin ACTIVITY NUMBER _____ ANALYST TCJ

STUDY NUMBER SF - 6057D

SUMMARY: BLANKS DATA

#	FRN	DATE	BLANK TYPE	COMPOUNDS DETECTED	ESTIMATED CONCENTRATION (PPB)	STD USED
1.	>T4650	4/21/89	Method Blank	Carbon disulfide	2.8	
2.	>T4657	4/21	89FN15 R48 (Field Blank)	Acetone	7	
				Toluene	.42	
				m - xylene	.4	
				o/p - xylene	.20	
3.						

5D MB

:QREP,^T4652

QUANT REPORT

Operator ID: CHACKO Quant Rev: 6 Quant Time: 890421 13:51
Output File: ^T4652::QT Injected at: 890421 11:47
Data File: >T4652::E2 Dilution Factor: 1.00000
Name: 89FN15S14(4X)
Misc: 04/21/89

X

ID File: ID4CJ2::XX
Title: 1D FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Last Calibration: 890421 11:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.89	346	112802	10.00	UG/L	97
10)	CARBON DISULFIDE	10.44	298	276391	1.66	UG/L	99
15)	1,2-DICHLOROETHANE-D4	14.72	440	92818	8.85	UG/L	91
17)	*2-Bromo-1-chloropropane	21.22	656	394320	10.00	UG/L	99
26)	BENZENE-D6	19.69	605	798421	10.24	UG/L	98
33)	*1,4-Dichlorobutane	25.35	793	216424	10.00	UG/L	96
38)	TOLUENE-D8	26.38	827	445723	10.94	UG/L	99

* Compound is ISTD

:QREP,^T4653

QUANT REPORT

Operator ID: CHACKO Quant Rev: 6 Quant Time: 890421 13:53
Output File: ^T4653::QT Injected at: 890421 12:47
Data File: >T4653::E2 Dilution Factor: 1.00000
Name: 89FN15S14
Misc: 04/21/89

ID File: ID4CJ2::XX
Title: 1D FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Last Calibration: 890421 11:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.88	344	120995	10.00	UG/L	97
10)	CARBON DISULFIDE	10.44	296	166597	.93	UG/L	99
15)	1,2-DICHLOROETHANE-D4	14.68	437	98922	8.79	UG/L	92
17)	*2-Bromo-1-chloropropane	21.22	654	407694	10.00	UG/L	99
26)	BENZENE-D6	19.68	603	823896	10.22	UG/L	97
33)	*1,4-Dichlorobutane	25.34	791	235968	10.00	UG/L	94
38)	TOLUENE-D8	26.37	825	461513	10.39	UG/L	99

* Compound is ISTD

: BEDIT

: BEDIT
:QREP,^T4650

QUANT REPORT

Operator ID: CHACKO Quant Rev: 6 Quant Time: 890424 09:23
Output File: ^T4650::QT Injected at: 890421 09:48
Data File: >T4650::E2 Dilution Factor: 1.00000
Name: MB
Misc: 04/21/89

ID File: ID4CJ2::XX
Title: 1D FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Last Calibration: 890421 11:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.87	345	109771	10.00	UG/L	96
10)	CARBON DISULFIDE	10.40	296	447827	2.77	UG/L	99
15)	1,2-DICHLOROETHANE-D4	14.68	438	89437	8.76	UG/L	91
17)	*2-Bromo-1-chloropropane	21.21	655	382501	10.00	UG/L	98
26)	BENZENE-D6	19.65	603	780366	10.32	UG/L	97
33)	*1,4-Dichlorobutane	25.34	792	203926	10.00	UG/L	95
38)	TOLUENE-D8	26.34	825	441037	11.49	UG/L	99

* Compound is ISTD

:QREP,^T4653

QUANT REPORT

Operator ID: CHACKO Quant Rev: 6 Quant Time: 890421 13:53
Output File: ^T4653::QT Injected at: 890421 12:47
Data File: >T4653::E2 Dilution Factor: 1.00000
Name: 89FN15S14
Misc: 04/21/89

ID File: ID4CJ2::XX
Title: 1D FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Last Calibration: 890421 11:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.88	344	120995	10.00	UG/L	97
10)	CARBON DISULFIDE	10.44	296	166597	.93	UG/L	99
15)	1,2-DICHLOROETHANE-D4	14.68	437	98922	8.79	UG/L	92
17)	*2-Bromo-1-chloropropane	21.22	654	407694	10.00	UG/L	99
26)	BENZENE-D6	19.68	603	823896	10.22	UG/L	97
33)	*1,4-Dichlorobutane	25.34	791	235968	10.00	UG/L	94
38)	TOLUENE-D8	26.37	825	461513	10.39	UG/L	99

* Compound is ISTD

:QREP,^T4656

QUANT REPORT

Operator ID: CHACKO Quant Rev: 6 Quant Time: 890424 07:55
Output File: ^T4656::QT Injected at: 890421 16:58
Data File: >T4656::E2 Dilution Factor: 1.00000
Name: VOASTD 15PPB 20ML
Misc: 042189 SF6050 109/110

ID File: ID4CJ2::XX
Title: ID FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Last Calibration: 890421 11:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.90	346	114103	10.00	UG/L	94
2)	CHLOROMETHANE	2.63	38	347361	20.07	UG/L	97
3)	BROMOMETHANE	4.22	91	315793	19.25	UG/L	97
4)	VINYL CHLORIDE	5.31	127	270611	19.32	UG/L	97
5)	CHLOROETHANE	6.57	169	131041	20.03	UG/L	88
6)	METHYLENE CHLORIDE	8.83	244	364052	12.54	UG/L	85
7)	ACROLEIN	9.55	268	188795	342.85	UG/L	95
8)	ACETONE	9.49	266	470804	324.82	UG/L	96
9)	ACRYLONITRILE	10.15	288	502835	333.90	UG/L	96
10)	CARBON DISULFIDE	10.45	298	544394	3.24	UG/L	99
11)	1,1-DICHLOROETHENE	11.60	336	347168	13.14	UG/L	90
12)	1,1-DICHLOROETHANE	12.83	377	668318	13.18	UG/L	97
13)	1,2-DICHLOROETHENE (TOTAL)	13.59	402	401021	13.00	UG/L	93
14)	CHLOROFORM	14.04	417	619917	13.06	UG/L	98
15)	1,2-DICHLOROETHANE-D4	14.73	440	104951	9.89	UG/L	92
16)	1,2-DICHLOROETHANE	14.82	443	238674	12.82	UG/L	98
17)	*2-Bromo-1-chloropropane	21.24	656	383868	10.00	UG/L	98
18)	2-BUTANONE	14.79	442	87312	108.62	UG/L	98
19)	1,1,1-TRICHLOROETHANE	16.15	487	483730	13.35	UG/L	99
20)	CARBON TETRACHLORIDE	16.54	500	393118	13.60	UG/L	99
21)	VINYL ACETATE	16.66	504	102231	22.52	UG/L	100
22)	BROMODICHLOROMETHANE	16.93	513	498825	12.95	UG/L	99
23)	1,2-DICHLOROPROPANE	18.43	563	421913	12.97	UG/L	97
24)	CIS-1,3-DICHLOROPROPENE	18.65	570	664908	15.58	UG/L	98
25)	TRICHLOROETHENE	19.22	589	483721	13.46	UG/L	99
26)	BENZENE-D6	19.70	605	783412	10.33	UG/L	97
27)	BENZENE	19.85	610	1206977	13.27	UG/L	93
28)	DIBROMOCHLOROMETHANE	19.76	607	312166	13.12	UG/L	96
30)	1,1,2-TRICHLOROETHANE	19.91	612	211409	12.89	UG/L	97
31)	2-CHLOROETHYL VINYLETHER	21.09	651	132445	12.47	UG/L	95
32)	BROMOFORM	22.56	700	146874	13.13	UG/L	97
33)	*1,4-Dichlorobutane	25.36	793	217052	10.00	UG/L	95
34)	4-METHYL-2-PENTANONE	23.20	721	253971	22.87	UG/L	97
35)	2-HEXANONE	24.79	774	206893	25.78	UG/L	94
36)	TETRACHLOROETHENE	25.06	783	325208	13.76	UG/L	96
37)	1,1,2,2-TETRACHLOROETHANE	24.97	780	99292	14.13	UG/L	97
38)	TOLUENE-D8	26.39	827	428567	10.49	UG/L	98
39)	TOLUENE	26.60	834	752651	13.46	UG/L	97
40)	CHLOROBENZENE	28.02	881	829492	13.61	UG/L	97
41)	ETHYLBENZENE	31.03	981	436029	13.75	UG/L	98
42)	STYRENE	37.57	1198	876642	11.87	UG/L	93
43)	META XYLENE	38.11	1216	1439567	29.19	UG/L	98
44)	O-&/OR P-XYLENE	39.80	1272	1847217	36.58	UG/L	97

* Compound is ISTD

:QREP,^T4657

QUANT REPORT

Operator ID: CHACKO Quant Rev: 6 Quant Time: 890424 07:57
Output File: ^T4657::QT Injected at: 890421 17:57
Data File: >T4657::E2 Dilution Factor: 1.00000
Name: 89FN15 R48 20ML
Misc: 042189 SF6050 109/110

ID File: ID4CJ2::XX
Title: 1D FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Last Calibration: 890421 11:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.90	346	125517	10.00	UG/L	95
8)	ACETONE	9.52	267	11202	7.03	UG/L	95
10)	CARBON DISULFIDE	10.48	299	26933	.15	UG/L	96
15)	1,2-DICHLOROETHANE-D4	14.73	440	99028	8.48	UG/L	89
17)	*2-Bromo-1-chloropropane	21.26	657	415459	10.00	UG/L	98
26)	BENZENE-D6	19.69	605	813490	9.91	UG/L	97
27)	BENZENE	19.84	610	12249	.12	UG/L	91
33)	*1,4-Dichlorobutane	25.35	793	239038	10.00	UG/L	95
38)	TOLUENE-D8	26.41	828	451499	10.04	UG/L	99
39)	TOLUENE	26.62	835	25683	.42	UG/L	96
43)	META XYLENE	38.19	1219	20705	.38	UG/L	98
44)	O-&/OR P-XYLENE	39.75	1271	10913	.20	UG/L	89

* Compound is ISTD

:QREP,^T4658

QUANT REPORT

Operator ID: CHACKO Quant Rev: 6 Quant Time: 890424 07:59
Output File: ^T4658::QT Injected at: 890421 18:56
Data File: >T4658::E2 Dilution Factor: 1.00000
Name: 89FN15 S13 20ML
Misc: 042189 SF6050 109/110

ID File: ID4CJ2::XX
Title: 1D FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Last Calibration: 890421 11:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.90	346	114901	10.00	UG/L	93
10)	CARBON DISULFIDE	10.48	299	26281	.16	UG/L	99
15)	1,2-DICHLOROETHANE-D4	14.73	440	92811	8.69	UG/L	92
17)	*2-Bromo-1-chloropropane	21.26	657	385630	10.00	UG/L	99
26)	BENZENE-D6	19.69	605	751326	9.86	UG/L	98
33)	*1,4-Dichlorobutane	25.38	794	231854	10.00	UG/L	95
38)	TOLUENE-D8	26.41	828	416344	9.54	UG/L	99

* Compound is ISTD

:QREP,^T4659

QUANT REPORT

Operator ID: CHACKO Quant Rev: 6 Quant Time: 890424 08:01
Output File: ^T4659::QT Injected at: 890421 19:55
Data File: >T4659::E2 Dilution Factor: 1.00000
Name: 89FN15 D13 20ML
Misc: 042189 SF6050 109/110

ID File: ID4CJ2::XX
Title: 1D FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Last Calibration: 890421 11:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.90	346	115173	10.00	UG/L	94
10)	CARBON DISULFIDE	10.48	299	24157	.14	UG/L	99
15)	1,2-DICHLOROETHANE-D4	14.73	440	91645	8.56	UG/L	92
17)	*2-Bromo-1-chloropropane	21.26	657	383810	10.00	UG/L	99
26)	BENZENE-D6	19.69	605	748317	9.86	UG/L	97
33)	*1,4-Dichlorobutane	25.35	793	224378	10.00	UG/L	96
38)	TOLUENE-D8	26.41	828	415002	9.83	UG/L	99

* Compound is ISTD

:QREP,^T4660

QUANT REPORT

Operator ID: CHACKO Quant Rev: 6 Quant Time: 890424 08:02
Output File: ^T4660::QT Injected at: 890421 20:54
Data File: >T4660::E2 Dilution Factor: 1.00000
Name: 89FN15 S15 20ML
Misc: 042189 SF6050 109/110

ID File: ID4CJ2::XX
Title: 1D FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Last Calibration: 890421 11:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.90	346	111318	10.00	UG/L	95
✓5)	CHLOROETHANE	6.57	169	190874	29.90	UG/L	86
10)	CARBON DISULFIDE	10.51	300	32944	.20	UG/L	98
12)	1,1-DICHLOROETHANE	12.83	377	21010	.42	UG/L	99
15)	1,2-DICHLOROETHANE-D4	14.70	439	89256	8.62	UG/L	89
17)	*2-Bromo-1-chloropropane	21.26	657	376952	10.00	UG/L	98
26)	BENZENE-D6	19.69	605	721295	9.68	UG/L	98
33)	*1,4-Dichlorobutane	25.35	793	222411	10.00	UG/L	95
38)	TOLUENE-D8	26.41	828	402196	9.61	UG/L	99

* Compound is ISTD

:QREP,^T4661

QUANT REPORT

Operator ID: CHACKO Quant Rev: 6 Quant Time: 890424 08:04
Output File: ^T4661::QT Injected at: 890421 21:54
Data File: >T4661::E2 Dilution Factor: 1.00000
Name: 89FN15 S16 20ML
Misc: 042189 SF6050 109/110

ID File: ID4CJ2::XX
Title: 1D FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Last Calibration: 890421 11:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.90	346	112613	10.00	UG/L	94
4)	VINYL CHLORIDE	5.33	128	5751	.42	UG/L	93
10)	CARBON DISULFIDE	10.48	299	48370	.29	UG/L	96
15)	1,2-DICHLOROETHANE-D4	14.72	440	92056	8.79	UG/L	91
17)	*2-Bromo-1-chloropropane	21.23	656	382481	10.00	UG/L	98
26)	BENZENE-D6	19.69	605	723813	9.57	UG/L	98
27)	BENZENE	19.84	610	117231	1.29	UG/L	99
33)	*1,4-Dichlorobutane	25.35	793	225758	10.00	UG/L	96
38)	TOLUENE-D8	26.41	828	405547	9.55	UG/L	98
40)	CHLOROBENZENE	28.03	882	152209	2.40	UG/L	95

* Compound is ISTD

:QREP,^T4662

QUANT REPORT

Operator ID: CHACKO Quant Rev: 6 Quant Time: 890424 08:06
Output File: ^T4662::QT Injected at: 890421 22:53
Data File: >T4662::E2 Dilution Factor: 1.00000
Name: 89FN15S14M 20ML
Misc: 042189 SF6050 109/110

ID File: ID4CJ2::XX
Title: 1D FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Last Calibration: 890421 11:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.90	346	103357	10.00	UG/L	96
10)	CARBON DISULFIDE	10.48	299	42971	.28	UG/L	97
11)	1,1-DICHLOROETHENE	11.57	335	225184	9.41	UG/L	92
15)	1,2-DICHLOROETHANE-D4	14.73	440	84270	8.77	UG/L	90
17)	*2-Bromo-1-chloropropane	21.26	657	346722	10.00	UG/L	99
25)	TRICHLOROETHENE	19.21	589	340399	10.49	UG/L	99
26)	BENZENE-D6	19.69	605	688954	10.05	UG/L	98
27)	BENZENE	19.84	610	943750	11.49	UG/L	97
33)	*1,4-Dichlorobutane	25.35	793	201925	10.00	UG/L	94
38)	TOLUENE-D8	26.38	827	380260	10.01	UG/L	99
39)	TOLUENE	26.62	835	611865	11.76	UG/L	97
40)	CHLOROBENZENE	28.03	882	745936	13.16	UG/L	97

* Compound is ISTD

:QREP,^T4663

QUANT REPORT

Operator ID: CHACKO Quant Rev: 6 Quant Time: 890424 08:08
Output File: ^T4663::QT Injected at: 890421 23:52
Data File: >T4663::E2 Dilution Factor: 1.00000
Name: 89FN15S14M 20ML
Misc: 042189 SF6050 109/110

ID File: ID4CJ2::XX
Title: 1D FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Last Calibration: 890421 11:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.90	346	105901	10.00	UG/L	94
10)	CARBON DISULFIDE	10.48	299	189006	1.21	UG/L	98
11)	1,1-DICHLOROETHENE	11.59	336	219675	8.96	UG/L	90
15)	1,2-DICHLOROETHANE-D4	14.73	440	85145	8.65	UG/L	91
17)	*2-Bromo-1-chloropropane	21.26	657	356120	10.00	UG/L	98
25)	TRICHLOROETHENE	19.21	589	328458	9.85	UG/L	99
26)	BENZENE-D6	19.69	605	701605	9.97	UG/L	97
27)	BENZENE	19.84	610	906317	10.74	UG/L	97
33)	*1,4-Dichlorobutane	25.35	793	207029	10.00	UG/L	95
38)	TOLUENE-D8	26.41	828	391890	10.06	UG/L	99
39)	TOLUENE	26.62	835	584821	10.96	UG/L	98
40)	CHLOROBENZENE	28.03	882	729517	12.55	UG/L	97

* Compound is ISTD

:QREP,^T4664

QUANT REPORT

Operator ID: CHACKO Quant Rev: 6 Quant Time: 890424 08:09
Output File: ^T4664::QT Injected at: 890422 00:51
Data File: >T4664::E2 Dilution Factor: 1.00000
Name: 89FN15S14D 20ML
Misc: 042189 SF6050 109/110

ID File: ID4CJ2::XX
Title: 1D FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Last Calibration: 890421 11:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.90	346	105576	10.00	UG/L	93
10)	CARBON DISULFIDE	10.48	299	59501	.38	UG/L	99
11)	1,1-DICHLOROETHENE	11.59	336	221199	9.05	UG/L	92
15)	1,2-DICHLOROETHANE-D4	14.73	440	86010	8.76	UG/L	89
17)	*2-Bromo-1-chloropropane	21.26	657	357196	10.00	UG/L	99
25)	TRICHLOROETHENE	19.21	589	329077	9.84	UG/L	99
26)	BENZENE-D6	19.69	605	692051	9.80	UG/L	98
27)	BENZENE	19.84	610	919763	10.87	UG/L	97
33)	*1,4-Dichlorobutane	25.35	793	206461	10.00	UG/L	96
38)	TOLUENE-D8	26.38	827	387995	9.99	UG/L	99
39)	TOLUENE	26.62	835	599740	11.28	UG/L	97
40)	CHLOROBENZENE	28.03	882	740512	12.77	UG/L	96

* Compound is ISTD

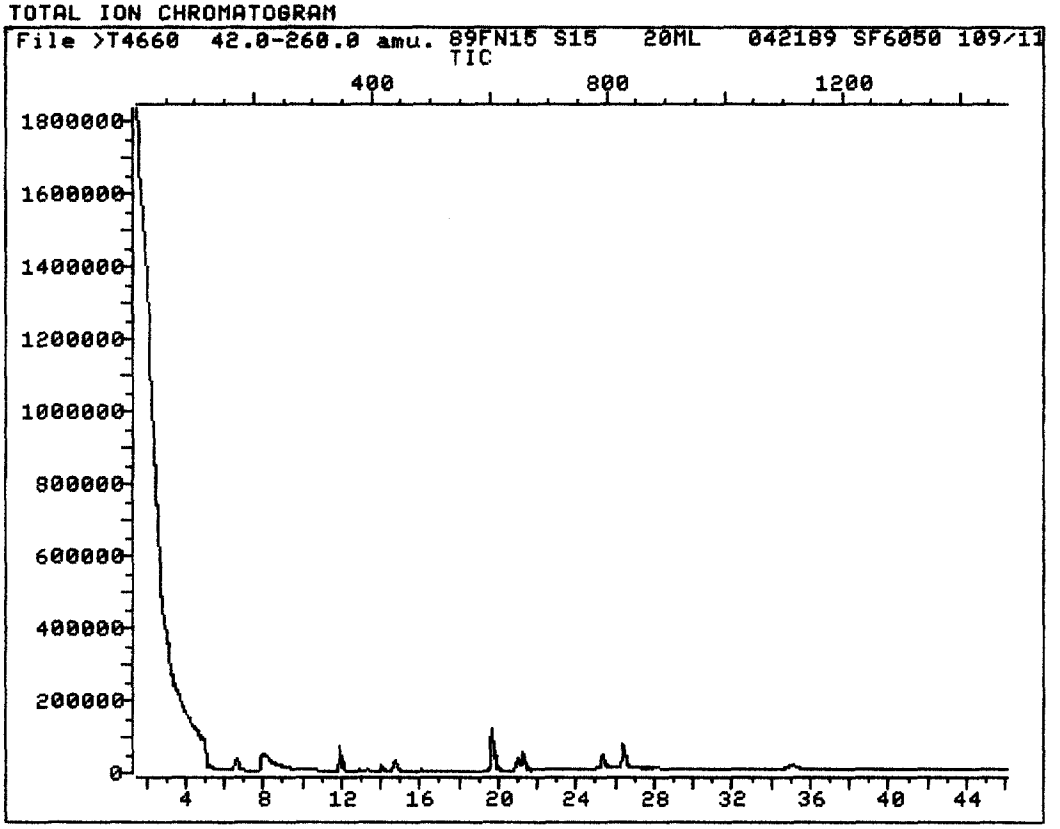
Data File: 214660::E2 Dilution Factor: 1.00000
Name: 89FN15 S15 20ML
Misc: 042189 SF6050 109/110 >T4660

ID File: ID4CJ2::XX
Title: 1D FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Last Calibration: 890421 11:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.90	346	111318	10.00	UG/L	95
5)	CHLOROETHANE	6.57	169	190874	29.90	UG/L	86
12)	1,1-DICHLOROETHANE	12.83	377	21010	.42	UG/L	99
15)	1,2-DICHLOROETHANE-D4	14.70	439	89256	8.62	UG/L	89
17)	*2-Bromo-1-chloropropane	21.26	657	376952	10.00	UG/L	98
26)	BENZENE-D6	19.69	605	721295	9.68	UG/L	98
33)	*1,4-Dichlorobutane	25.35	793	222411	10.00	UG/L	95
38)	TOLUENE-D8	26.41	828	402196	9.61	UG/L	99

* Compound is ISTD

TOTAL ION CHROMATOGRAM

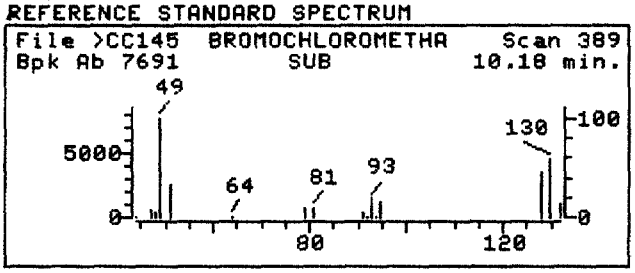


Data File: >T4660::E2 Quant Output File: ^T4660::QT
Name: 89FN15 S15 20ML
Misc: 042189 SF6050 109/110

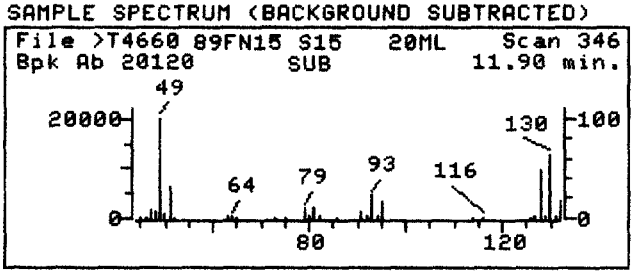
Id File: ID4CJ2::XX
Title: 1D FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Last Calibration: 890421 11:16

Operator ID: CHACKO
Quant Time: 890424 08:02
Injected at: 890421 20:54

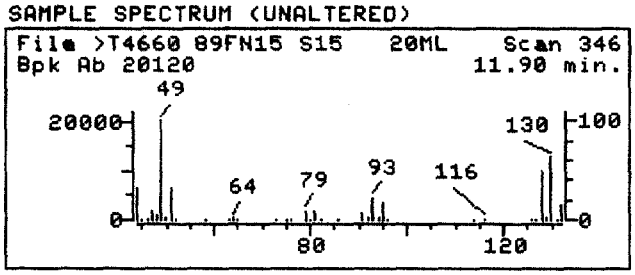
REFERENCE STANDARD SPECTRUM

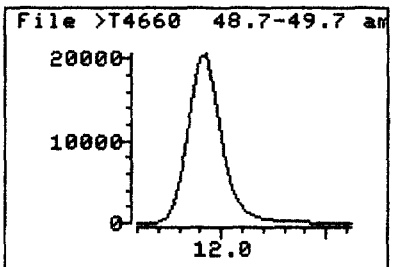


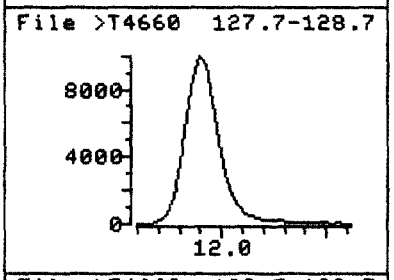
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

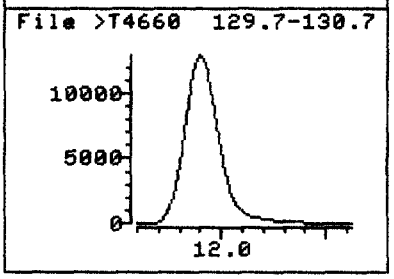


SAMPLE SPECTRUM (UNALTERED)









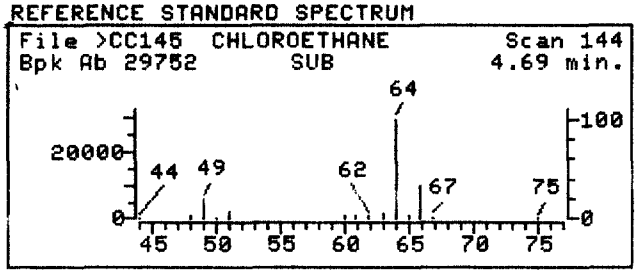
Data File: >T4660::E2
Name: 89FN15 S15 20ML
Misc: 042189 SF6050 109/110
Quant Time: 890424 08:02
Injected at: 890421 20:54

Quant Output File: ^T4660::QT

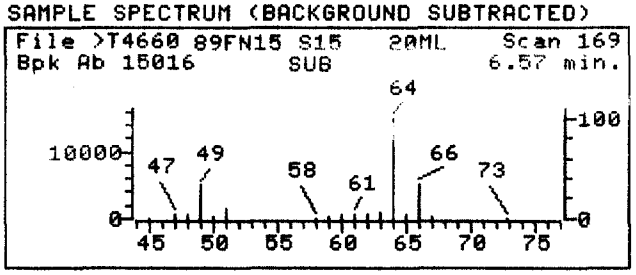
Quant ID File: ID4CJ2::XX
Last Calibration: 890421 11:16

Compound No: 1 (ISTD)
Compound Name: Bromochloromethane
Scan Number: 346
Retention Time: 11.90 min.
Quant Ion: 128.0
Area: 111318
Concentration: 10.00 UG/L
q-value: 95

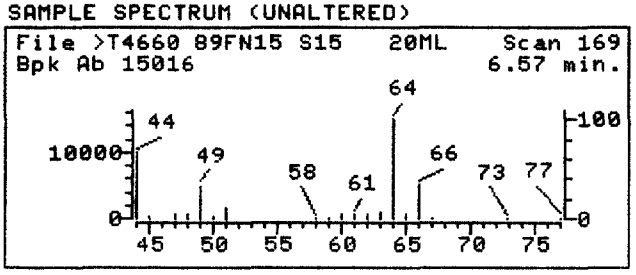
REFERENCE STANDARD SPECTRUM

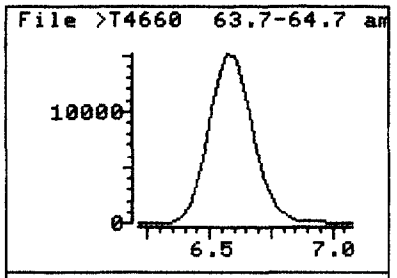


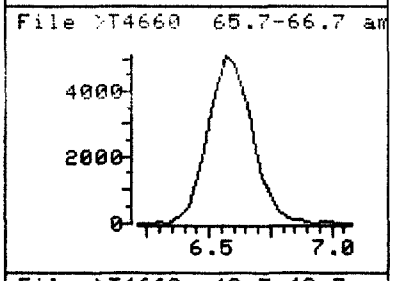
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

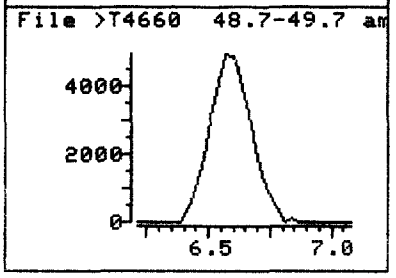


SAMPLE SPECTRUM (UNALTERED)









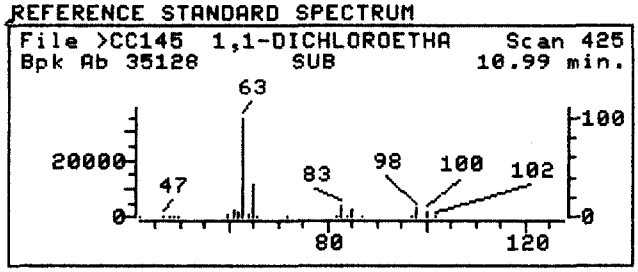
Data File: >T4660::E2
Name: 89FN15 S15 20ML
Misc: 042189 SF6050 109/110
Quant Time: 890424 08:02
Injected at: 890421 20:54

Quant Output File: ^T4660::QT

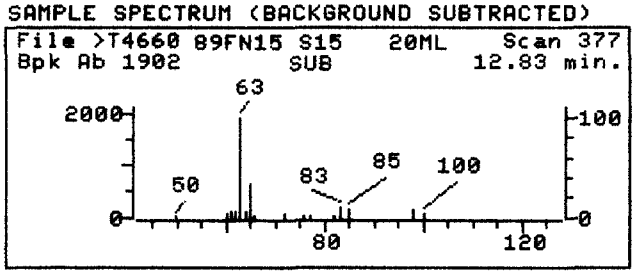
Quant ID File: ID4CJ2::XX
Last Calibration: 890421 11:16

Compound No: 5
Compound Name: CHLOROETHANE
Scan Number: 169
Retention Time: 6.57 min.
Quant Ion: 64.0
Area: 190874
Concentration: 29.90 UG/L
q-value: 86

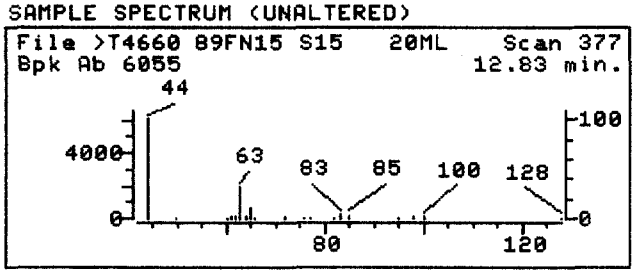
REFERENCE STANDARD SPECTRUM

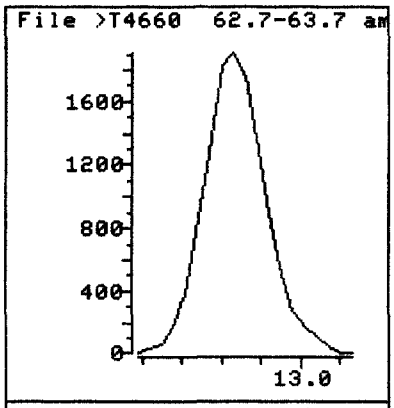


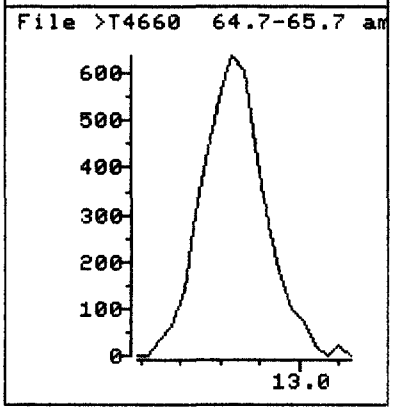
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)





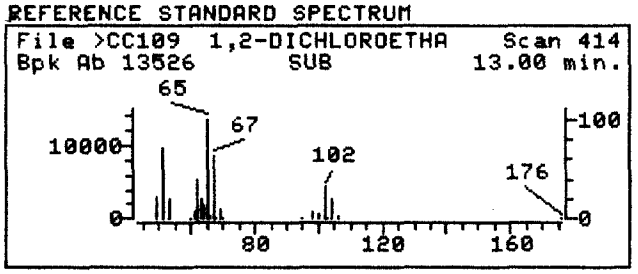


Data File: >T4660::E2
Name: 89FN15 S15 20ML
Misc: 042189 SF6050 109/110
Quant Time: 890424 08:02
Injected at: 890421 20:54

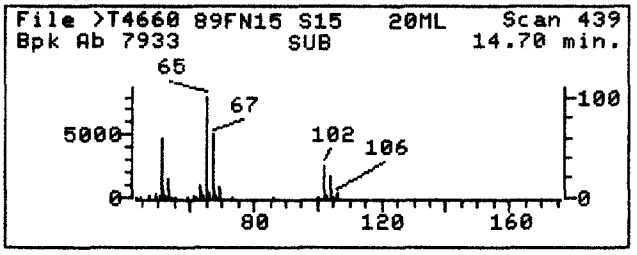
Quant Output File: ^T4660::QT
Quant ID File: ID4CJ2::XX
Last Calibration: 890421 11:16

Compound No: 12
Compound Name: 1,1-DICHLOROETHANE
Scan Number: 377
Retention Time: 12.83 min.
Quant Ion: 63.0
Area: 21010
Concentration: .42 UG/L
q-value: 99

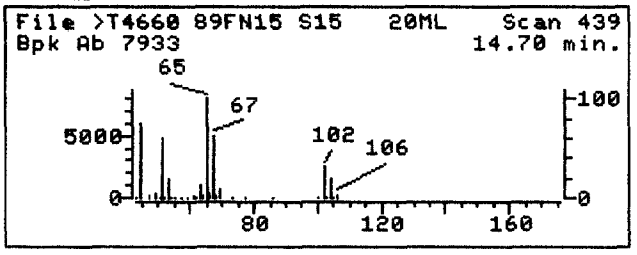
REFERENCE STANDARD SPECTRUM

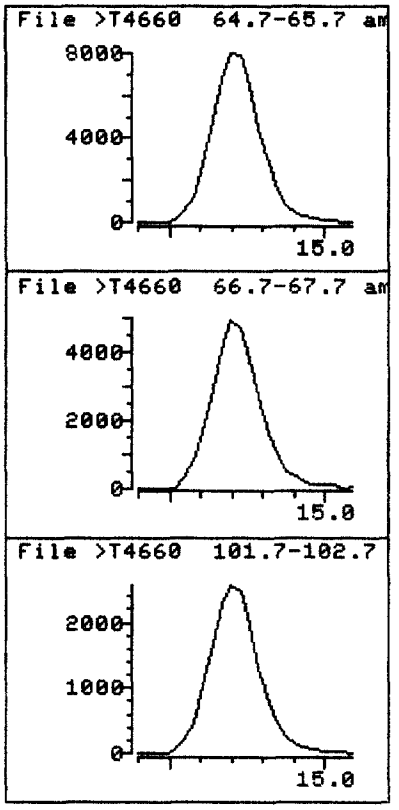


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)





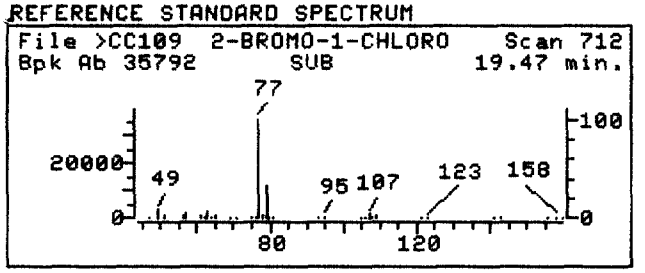
Data File: >T4660::E2
Name: 89FN15 S15 20ML
Misc: 042189 SF6050 109/110
Quant Time: 890424 08:02
Injected at: 890421 20:54

Quant Output File: ^T4660::QT

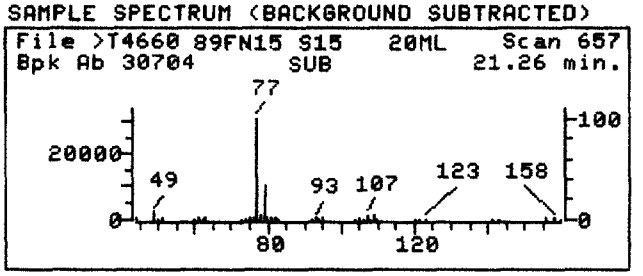
Quant ID File: ID4CJ2::XX
Last Calibration: 890421 11:16

Compound No: 15
Compound Name: 1,2-DICHLOROETHANE-D4
Scan Number: 439
Retention Time: 14.70 min.
Quant Ion: 65.0
Area: 89256
Concentration: 8.62 UG/L
q-value: 89

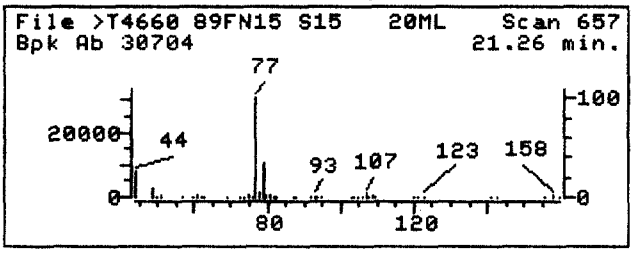
REFERENCE STANDARD SPECTRUM

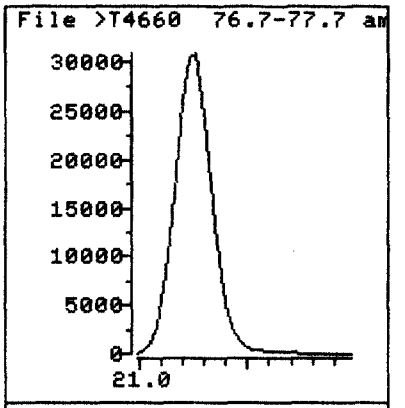


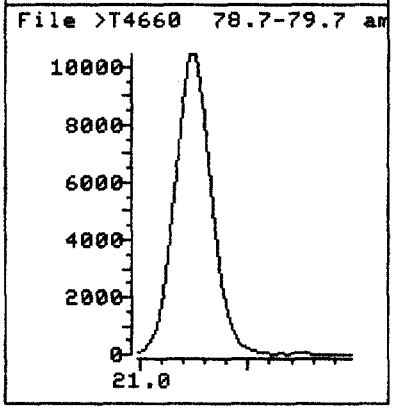
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



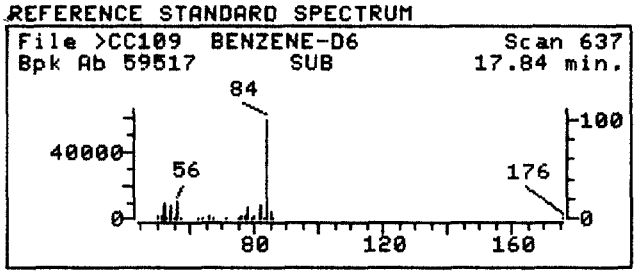




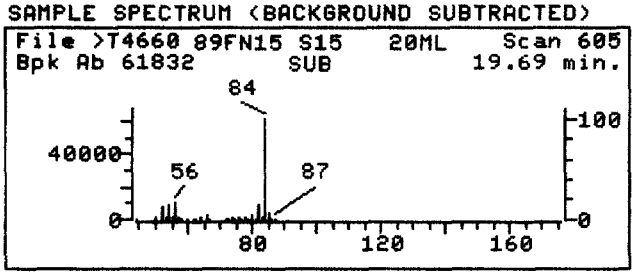
Data File: >T4660::E2 Quant Output File: ^T4660::QT
Name: 89FN15 S15 20ML
Misc: 042189 SF6050 109/110
Quant Time: 890424 08:02 Quant ID File: ID4CJ2::XX
Injected at: 890421 20:54 Last Calibration: 890421 11:16

Compound No: 17 (ISTD)
Compound Name: 2-Bromo-1-chloropropane
Scan Number: 657
Retention Time: 21.26 min.
Quant Ion: 77.0
Area: 376952
Concentration: 10.00 UG/L
q-value: 98

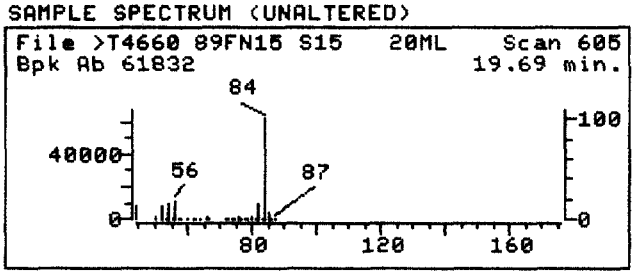
REFERENCE STANDARD SPECTRUM

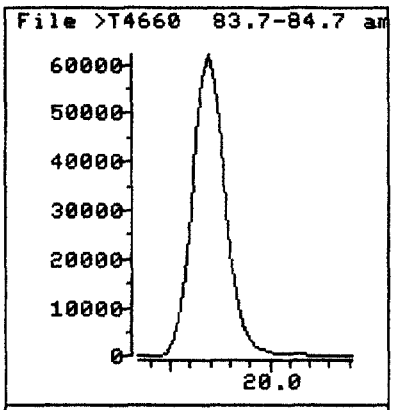


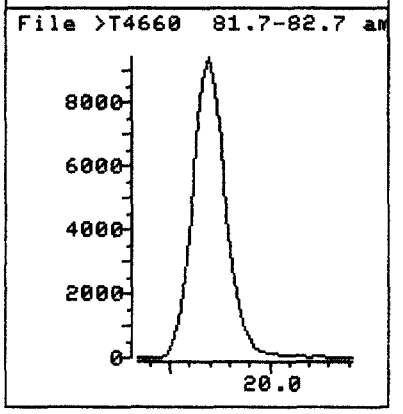
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







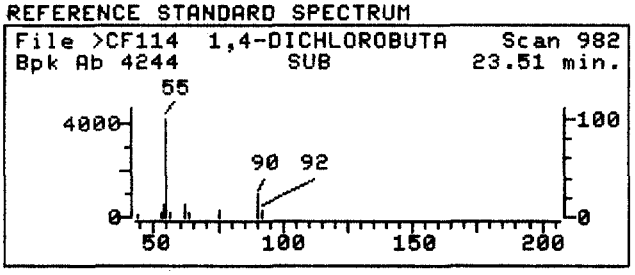
Data File: >T4660::E2
Name: 89FN15 S15 20ML
Misc: 042189 SF6050 109/110
Quant Time: 890424 08:02
Injected at: 890421 20:54

Quant Output File: ^T4660::QT

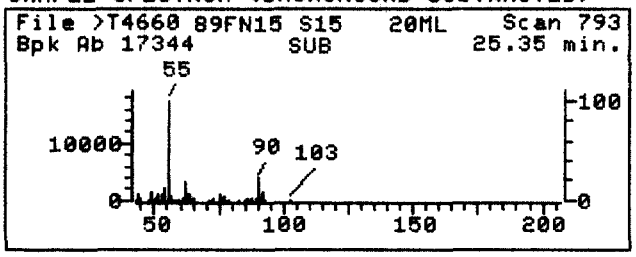
Quant ID File: ID4CJ2::XX
Last Calibration: 890421 11:16

Compound No: 26
Compound Name: BENZENE-D6
Scan Number: 605
Retention Time: 19.69 min.
Quant Ion: 84.0
Area: 721295
Concentration: 9.68 UG/L
q-value: 98

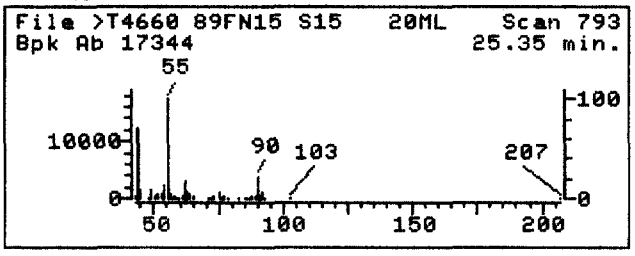
REFERENCE STANDARD SPECTRUM

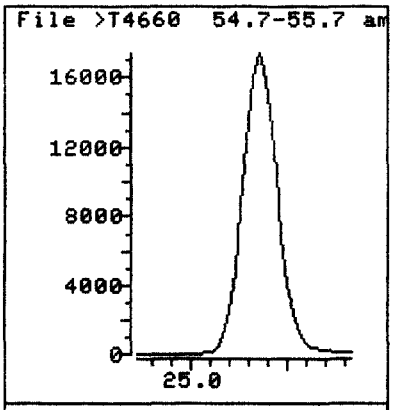


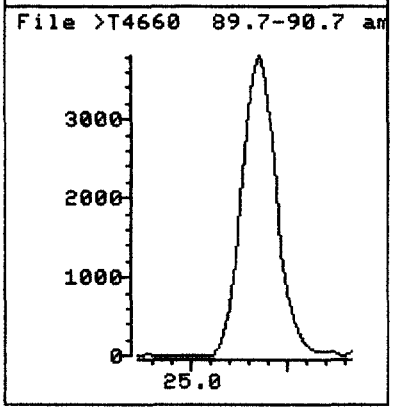
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







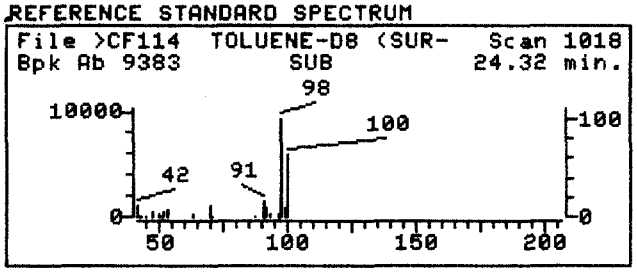
Data File: >T4660::E2
Name: 89FN15 S15 20ML
Misc: 042189 SF6050 109/110
Quant Time: 890424 08:02
Injected at: 890421 20:54

Quant Output File: ^T4660::QT

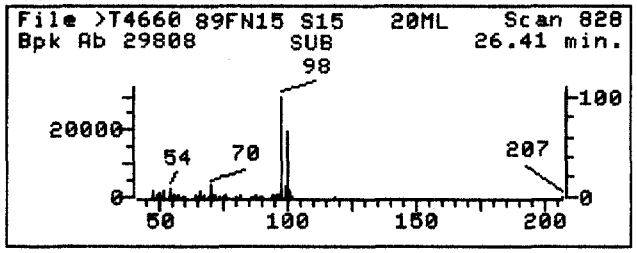
Quant ID File: ID4CJ2::XX
Last Calibration: 890421 11:16

Compound No: 33 (ISTD)
Compound Name: 1,4-Dichlorobutane
Scan Number: 793
Retention Time: 25.35 min.
Quant Ion: 55.0
Area: 222411
Concentration: 10.00 UG/L
q-value: 95

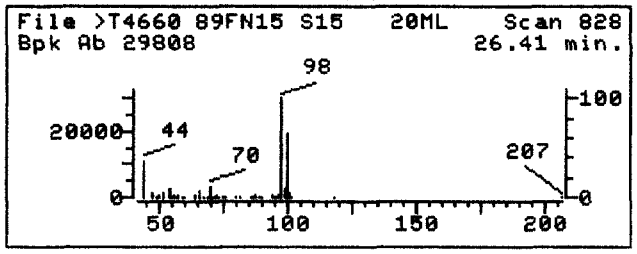
REFERENCE STANDARD SPECTRUM

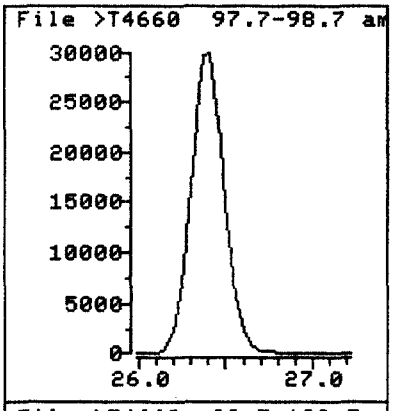


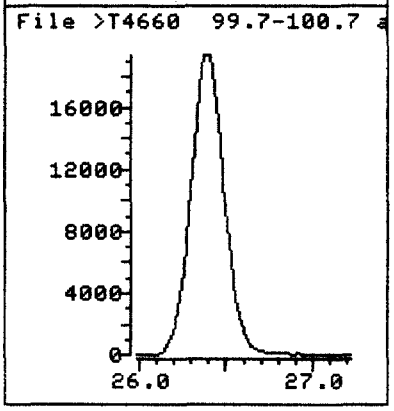
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







Data File: >T4660::E2
Name: 89FN15 S15 20ML
Misc: 042189 SF6050 109/110
Quant Time: 890424 08:02
Injected at: 890421 20:54

Quant Output File: ^T4660::QT

Quant ID File: ID4CJ2::XX
Last Calibration: 890421 11:16

Compound No: 38
Compound Name: TOLUENE-D8
Scan Number: 828
Retention Time: 26.41 min.
Quant Ion: 98.0
Area: 402196
Concentration: 9.61 UG/L
q-value: 99

QUANT REPORT

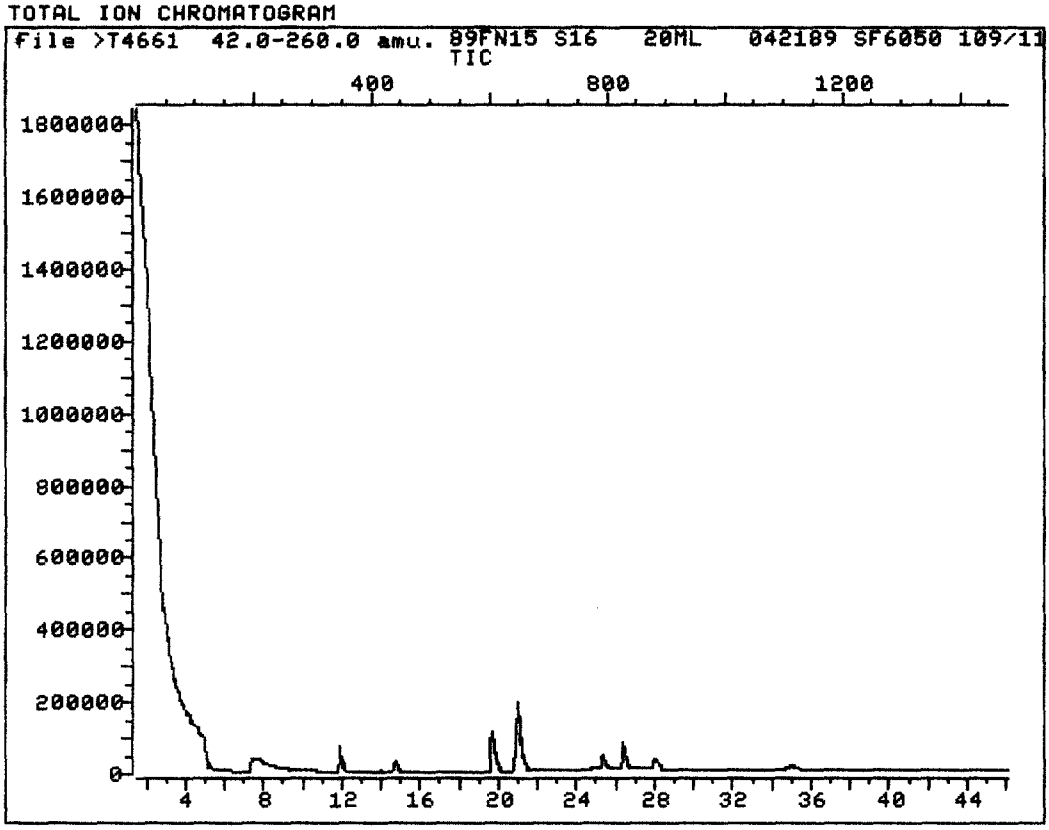
Operator ID: CHACKO Quant Rev: 6 Quant Time: 890424 08:04
Output File: ^T4661::QT Injected at: 890421 21:54
Data File: >T4661::E2 Dilution Factor: 1.00000
Name: 89FN15 S16 20ML
Misc: 042189 SF6050 109/110

ID File: ID4CJ2::XX
Title: 1D FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Last Calibration: 890421 11:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.90	346	112613	10.00	UG/L	94
4)	VINYL CHLORIDE	5.33	128	5751	.42	UG/L	93
10)	CARBON DISULFIDE	10.48	299	48370	.29	UG/L	96
15)	1,2-DICHLOROETHANE-D4	14.72	440	92056	8.79	UG/L	91
17)	*2-Bromo-1-chloropropane	21.23	656	382481	10.00	UG/L	98
26)	BENZENE-D6	19.69	605	723813	9.57	UG/L	98
27)	BENZENE	19.84	610	117231	1.29	UG/L	99
33)	*1,4-Dichlorobutane	25.35	793	225758	10.00	UG/L	96
38)	TOLUENE-D8	26.41	828	405547	9.55	UG/L	98
40)	CHLOROBENZENE	28.03	882	152209	2.40	UG/L	95

* Compound is ISTD

TOTAL ION CHROMATOGRAM

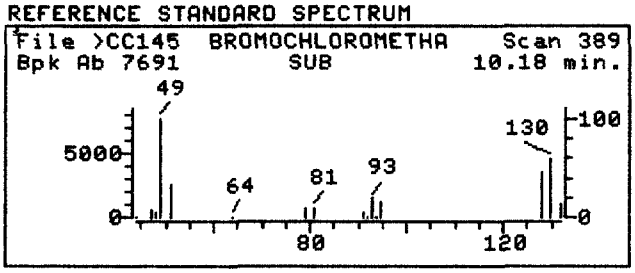


Data File: >T4661::E2 Quant Output File: ^T4661::QT
Name: 89FN15 S16 20ML
Misc: 042189 SF6050 109/110

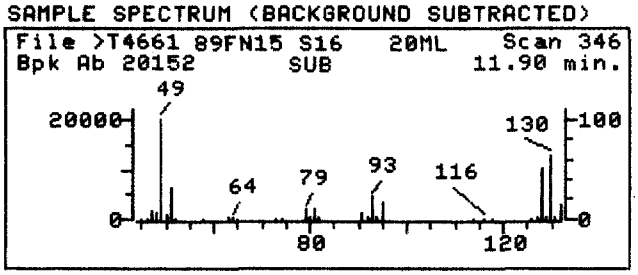
Id File: ID4CJ2::XX
Title: 1D FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Last Calibration: 890421 11:16

Operator ID: CHACKO
Quant Time: 890424 08:04
Injected at: 890421 21:54

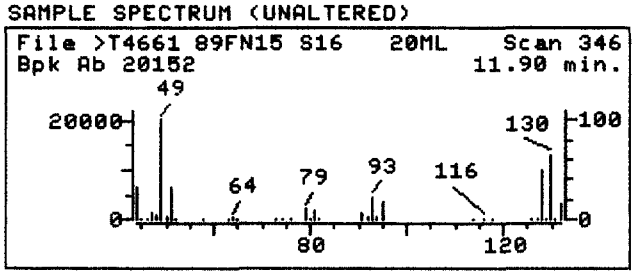
REFERENCE STANDARD SPECTRUM

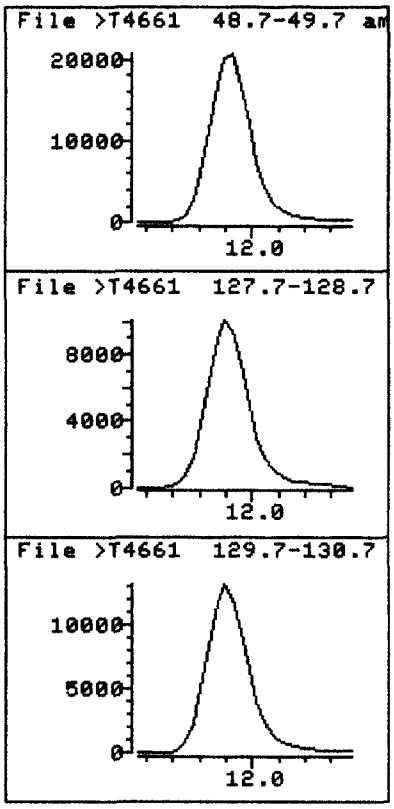


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)





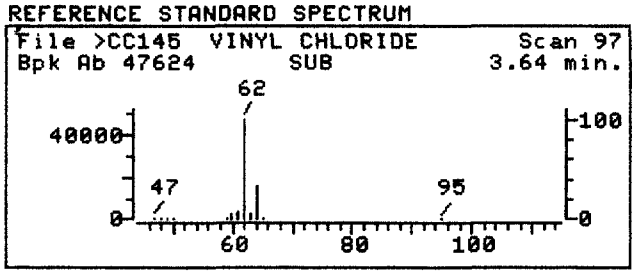
Data File: >T4661::E2
Name: 89FN15 S16 20ML
Misc: 042189 SF6050 109/110
Quant Time: 890424 08:04
Injected at: 890421 21:54

Quant Output File: ^T4661::QT

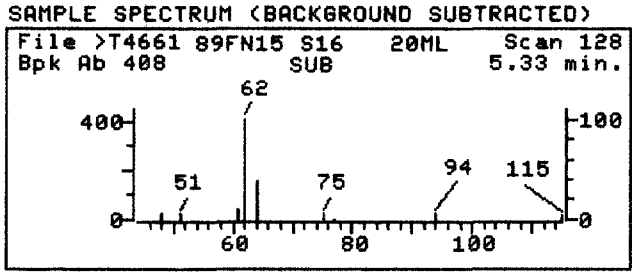
Quant ID File: ID4CJ2::XX
Last Calibration: 890421 11:16

Compound No: 1 (ISTD)
Compound Name: Bromochloromethane
Scan Number: 346
Retention Time: 11.90 min.
Quant Ion: 128.0
Area: 112613
Concentration: 10.00 UG/L
q-value: 94

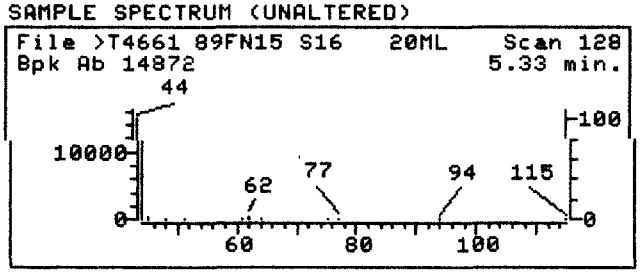
REFERENCE STANDARD SPECTRUM

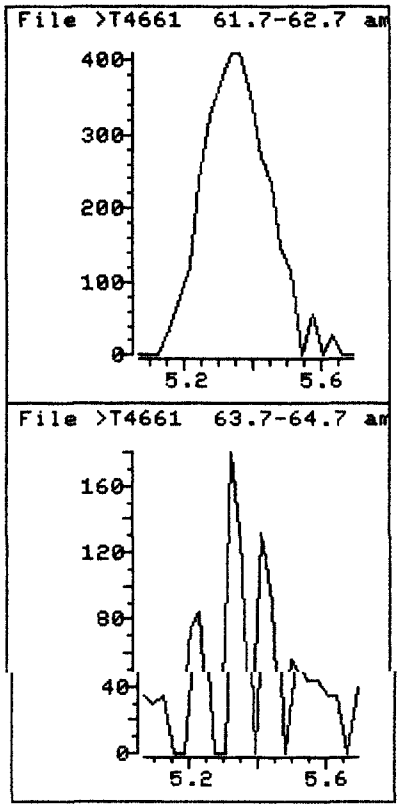


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)





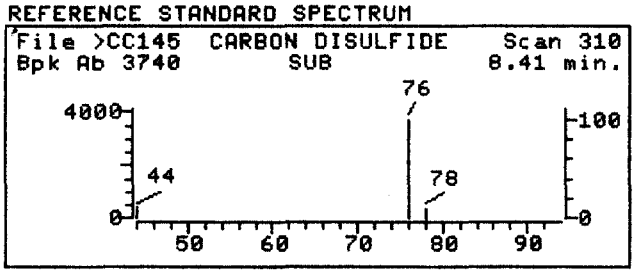
Data File: >T4661::E2
Name: 89FN15 S16 20ML
Misc: 042189 SF6050 109/110
Quant Time: 890424 08:04
Injected at: 890421 21:54

Quant Output File: ^T4661::QT

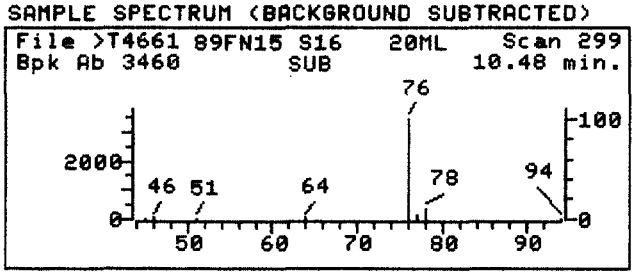
Quant ID File: ID4CJ2::XX
Last Calibration: 890421 11:16

Compound No: 4
Compound Name: VINYL CHLORIDE
Scan Number: 128
Retention Time: 5.33 min.
Quant Ion: 62.0
Area: 5751
Concentration: .42 UG/L
q-value: 93

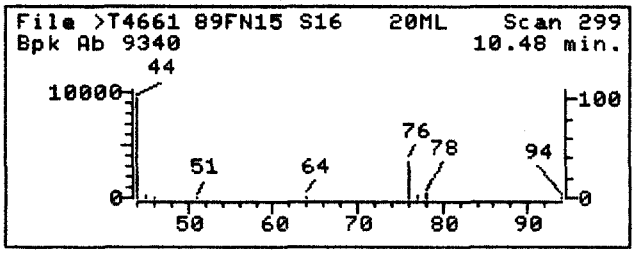
REFERENCE STANDARD SPECTRUM

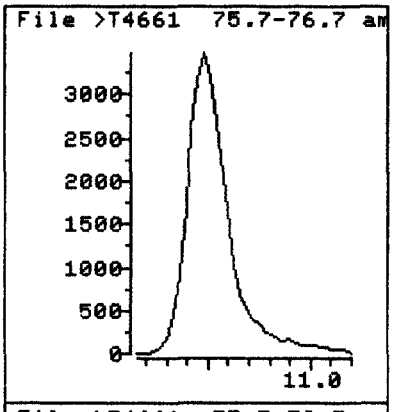


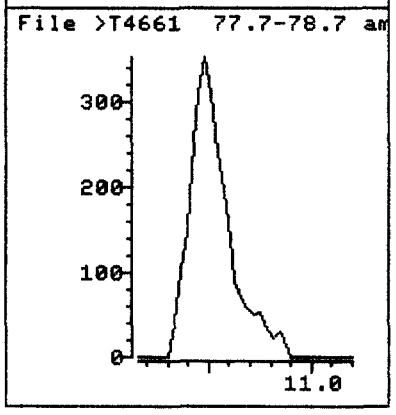
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







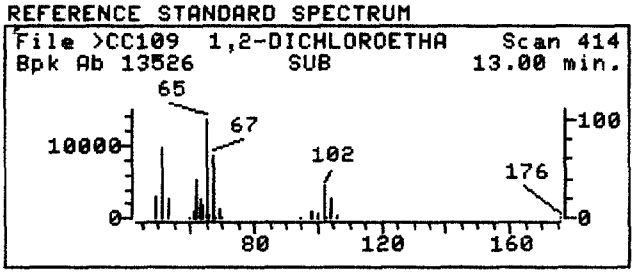
Data File: >T4661::E2
Name: 89FN15 S16 20ML
Misc: 042189 SF6050 109/110
Quant Time: 890424 08:04
Injected at: 890421 21:54

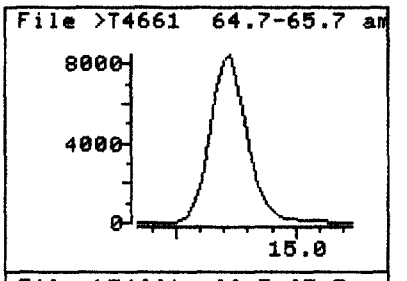
Quant Output File: ^T4661::QT

Quant ID File: ID4CJ2::XX
Last Calibration: 890421 11:16

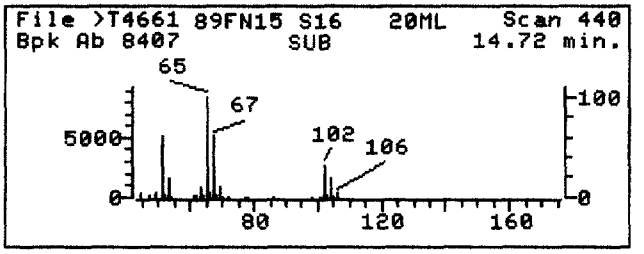
Compound No: 10
Compound Name: CARBON DISULFIDE
Scan Number: 299
Retention Time: 10.48 min.
Quant Ion: 76.0
Area: 48370
Concentration: .29 UG/L
q-value: 96

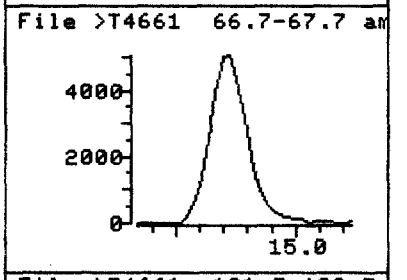
REFERENCE STANDARD SPECTRUM



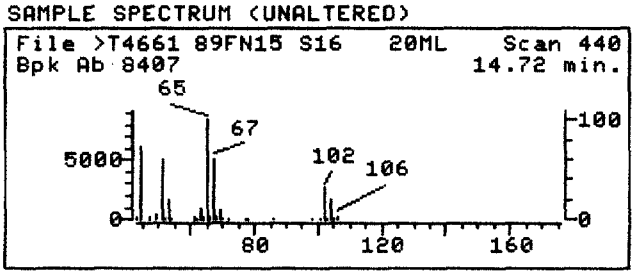


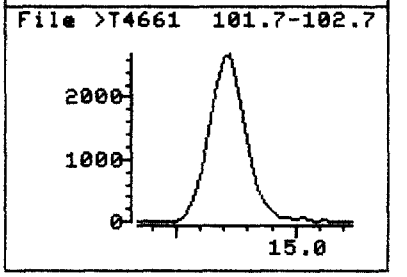
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)





SAMPLE SPECTRUM (UNALTERED)

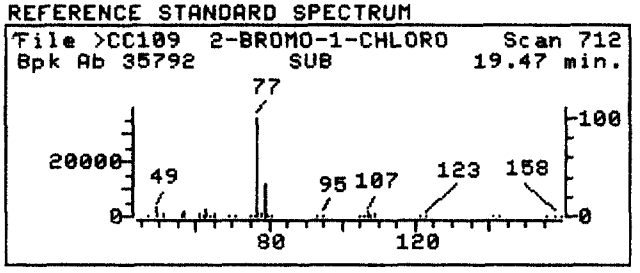




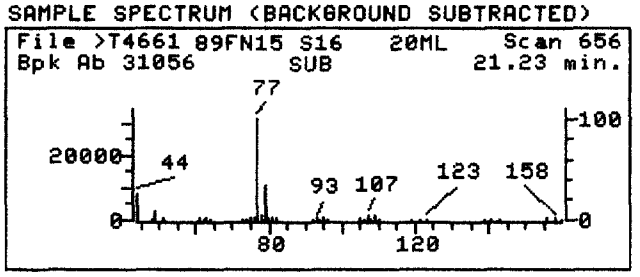
Data File: >T4661::E2 Quant Output File: ^T4661::QT
Name: 89FN15 S16 20ML
Misc: 042189 SF6050 109/110
Quant Time: 890424 08:04 Quant ID File: ID4CJ2::XX
Injected at: 890421 21:54 Last Calibration: 890421 11:16

Compound No: 15
Compound Name: 1,2-DICHLOROETHANE-D4
Scan Number: 440
Retention Time: 14.72 min.
Quant Ion: 65.0
Area: 92056
Concentration: 8.79 UG/L
q-value: 91

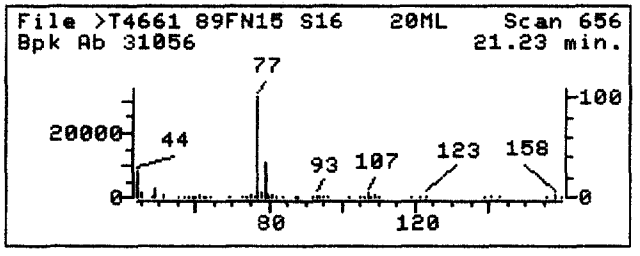
REFERENCE STANDARD SPECTRUM

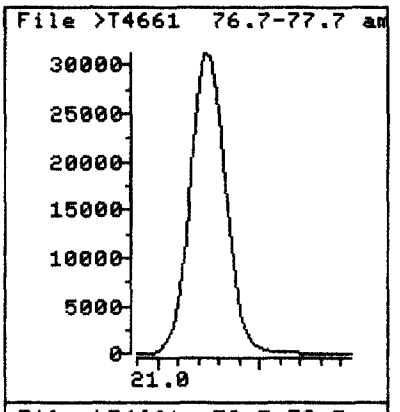


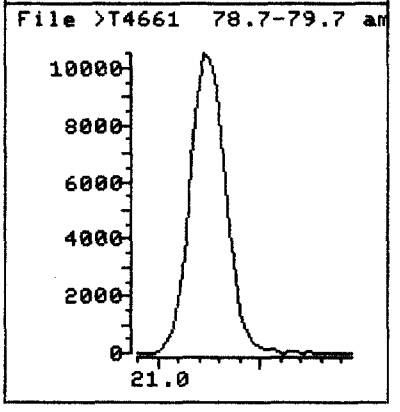
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







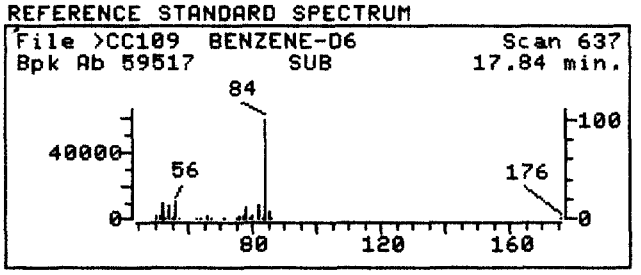
Data File: >T4661::E2
Name: 89FN15 S16 20ML
Misc: 042189 SF6050 109/110
Quant Time: 890424 08:04
Injected at: 890421 21:54

Quant Output File: ^T4661::QT

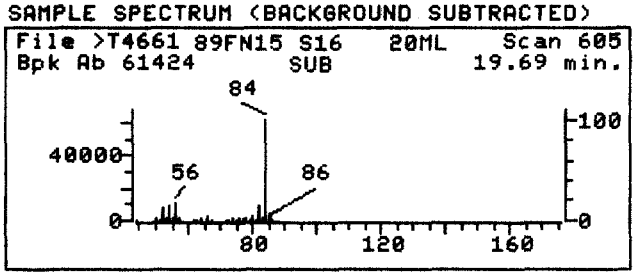
Quant ID File: ID4CJ2::XX
Last Calibration: 890421 11:16

Compound No: 17 (ISTD)
Compound Name: 2-Bromo-1-chloropropane
Scan Number: 656
Retention Time: 21.23 min.
Quant Ion: 77.0
Area: 382481
Concentration: 10.00 UG/L
q-value: 98

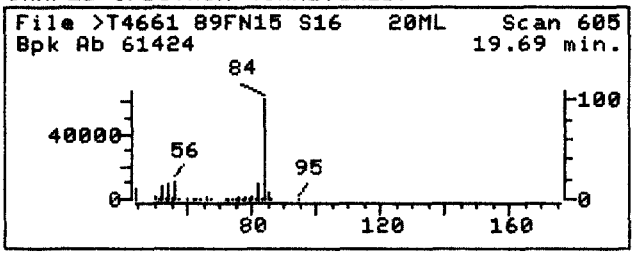
REFERENCE STANDARD SPECTRUM

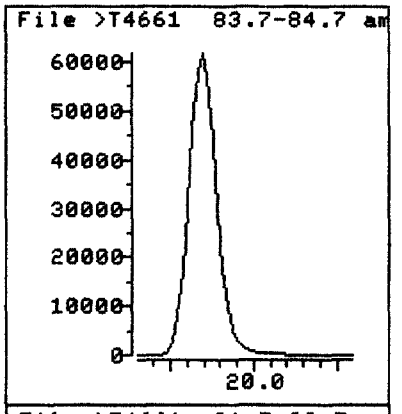


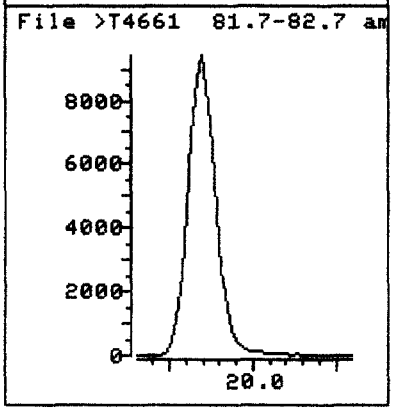
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







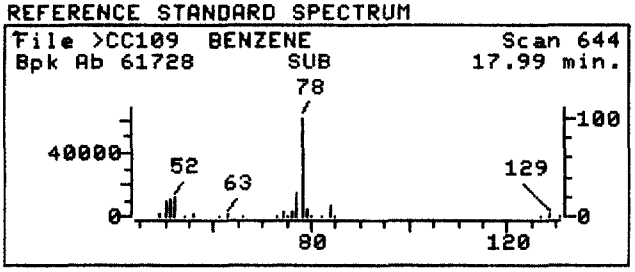
Data File: >T4661::E2
Name: 89FN15 S16 20ML
Misc: 042189 SF6050 109/110
Quant Time: 890424 08:04
Injected at: 890421 21:54

Quant Output File: ^T4661::QT

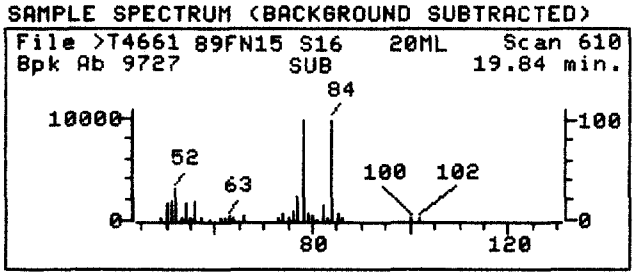
Quant ID File: ID4CJ2::XX
Last Calibration: 890421 11:16

Compound No: 26
Compound Name: BENZENE-D6
Scan Number: 605
Retention Time: 19.69 min.
Quant Ion: 84.0
Area: 723813
Concentration: 9.57 UG/L
q-value: 98

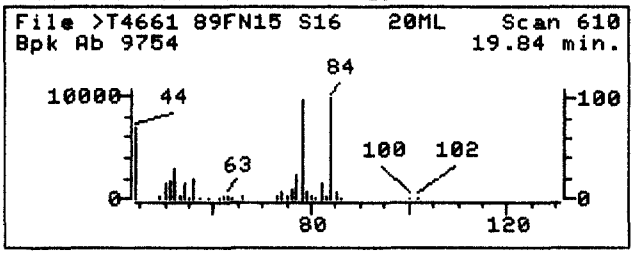
REFERENCE STANDARD SPECTRUM

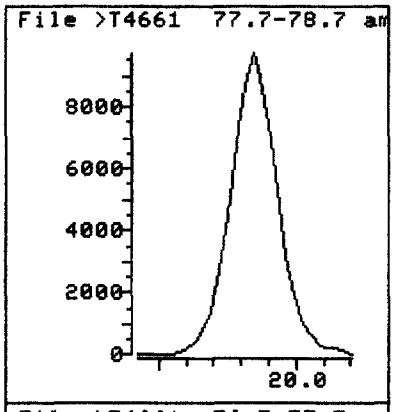


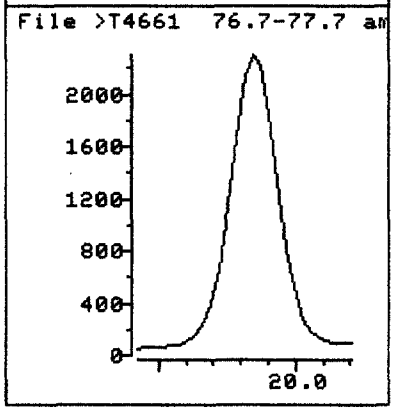
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







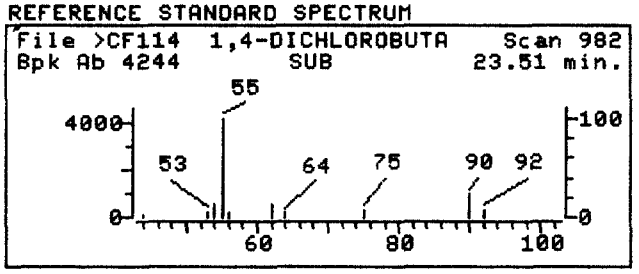
Data File: >T4661::E2
Name: 89FN15 S16 20ML
Misc: 042189 SF6050 109/110
Quant Time: 890424 08:04
Injected at: 890421 21:54

Quant Output File: ^T4661::QT

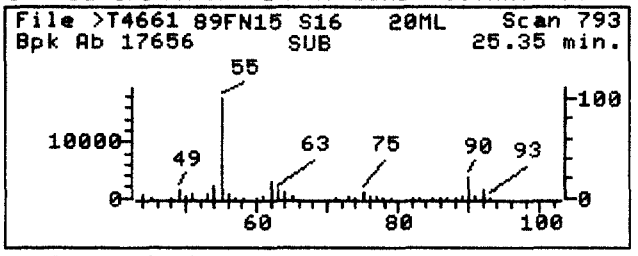
Quant ID File: ID4CJ2::XX
Last Calibration: 890421 11:16

Compound No: 27
Compound Name: BENZENE
Scan Number: 610
Retention Time: 19.84 min.
Quant Ion: 78.0
Area: 117231
Concentration: 1.29 UG/L
q-value: 99

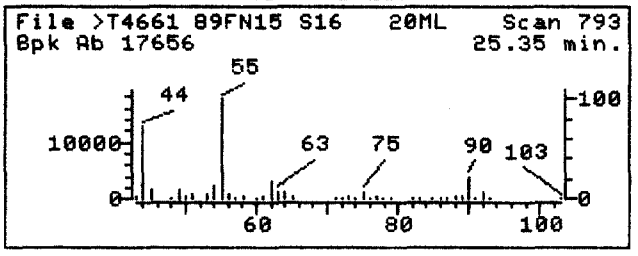
REFERENCE STANDARD SPECTRUM

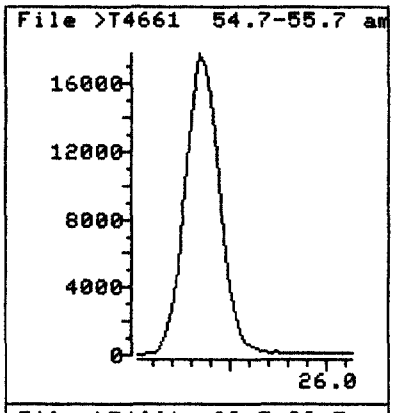


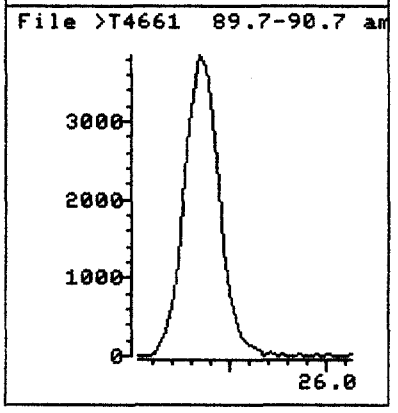
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







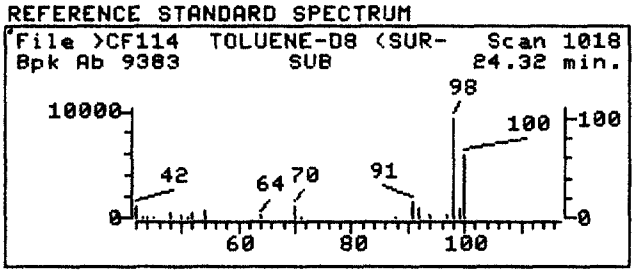
Data File: >T4661::E2
Name: 89FN15 S16 20ML
Misc: 042189 SF6050 109/110
Quant Time: 890424 08:04
Injected at: 890421 21:54

Quant Output File: ^T4661::QT

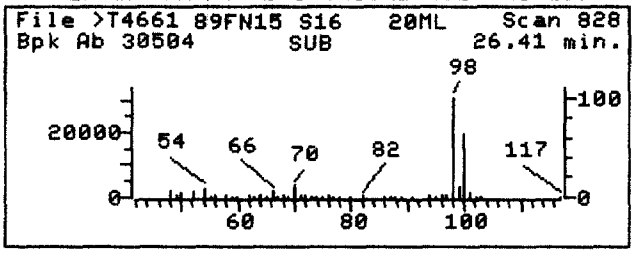
Quant ID File: ID4CJ2::XX
Last Calibration: 890421 11:16

Compound No: 33 (ISTD)
Compound Name: 1,4-Dichlorobutane
Scan Number: 793
Retention Time: 25.35 min.
Quant Ion: 55.0
Area: 225758
Concentration: 10.00 UG/L
q-value: 96

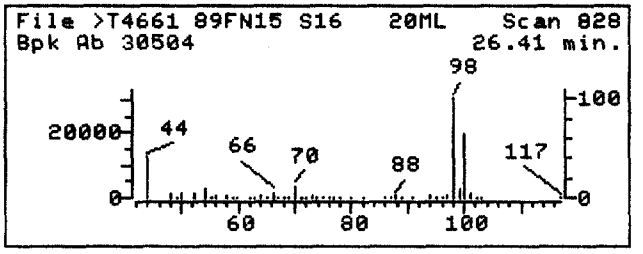
REFERENCE STANDARD SPECTRUM

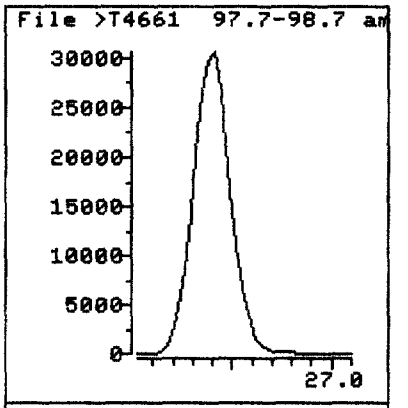


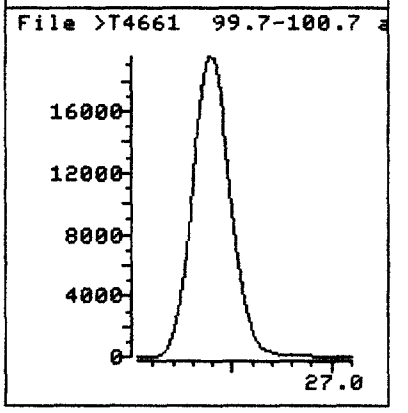
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







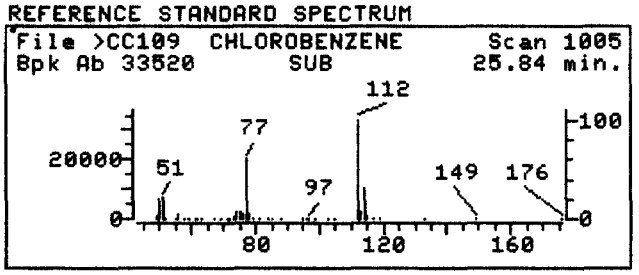
Data File: >T4661::E2
Name: 89FN15 S16 20ML
Misc: 042189 SF6050 109/110
Quant Time: 890424 08:04
Injected at: 890421 21:54

Quant Output File: ^T4661::QT

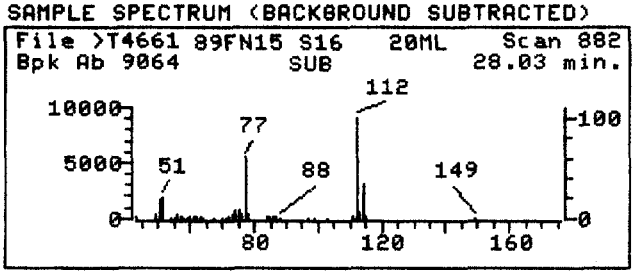
Quant ID File: ID4CJ2::XX
Last Calibration: 890421 11:16

Compound No: 38
Compound Name: TOLUENE-D8
Scan Number: 828
Retention Time: 26.41 min.
Quant Ion: 98.0
Area: 405547
Concentration: 9.55 UG/L
q-value: 98

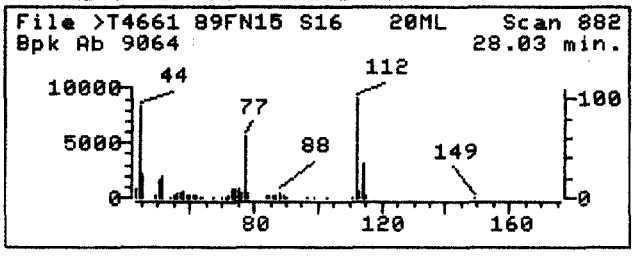
REFERENCE STANDARD SPECTRUM

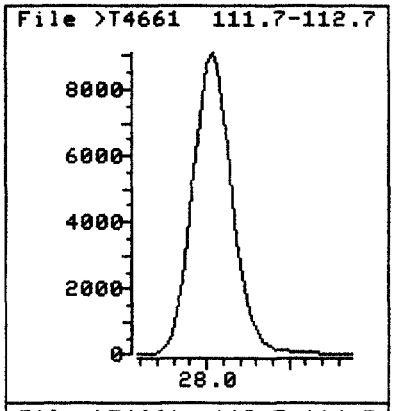


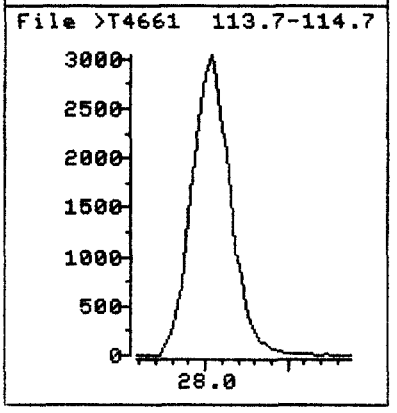
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)







Data File: >T4661::E2
Name: 89FN15 S16 20ML
Misc: 042189 SF6050 109/110
Quant Time: 890424 08:04
Injected at: 890421 21:54

Quant Output File: ^T4661::QT

Quant ID File: ID4CJ2::XX
Last Calibration: 890421 11:16

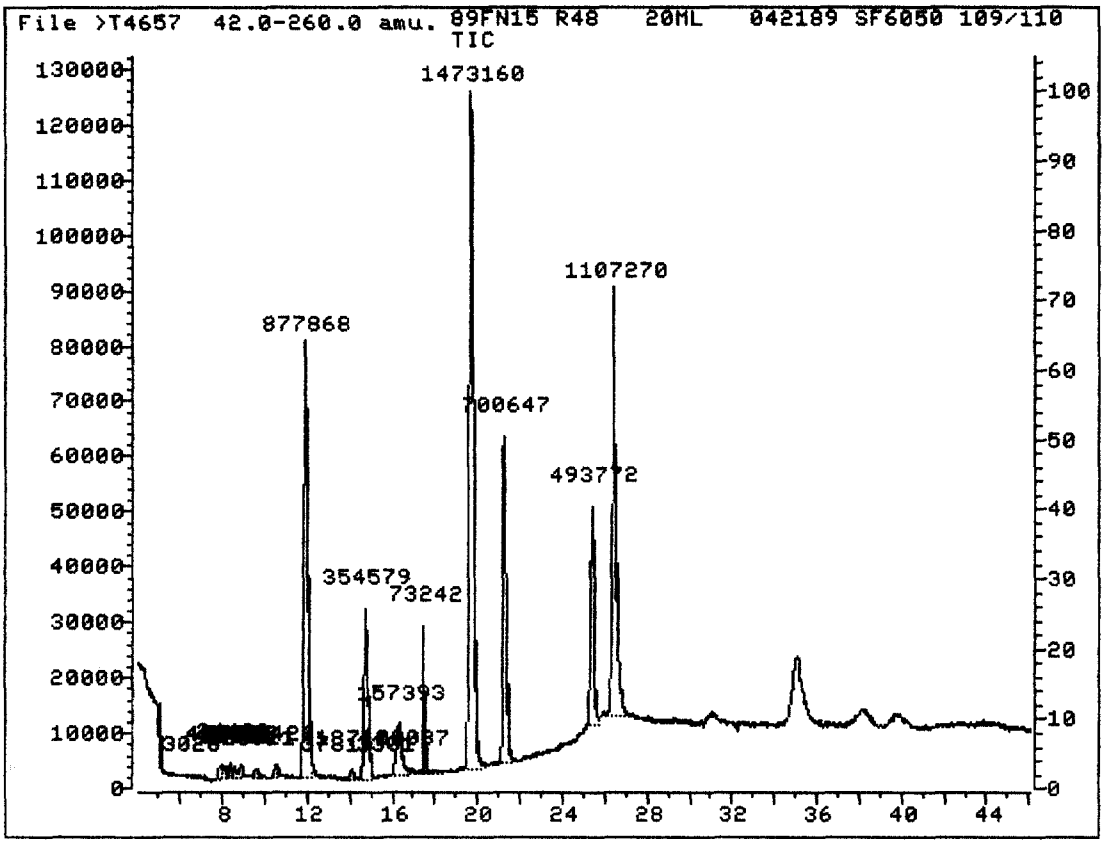
Compound No: 40
Compound Name: CHLOROBENZENE
Scan Number: 882
Retention Time: 28.03 min.
Quant Ion: 112.0
Area: 152209
Concentration: 2.40 UG/L
q-value: 95

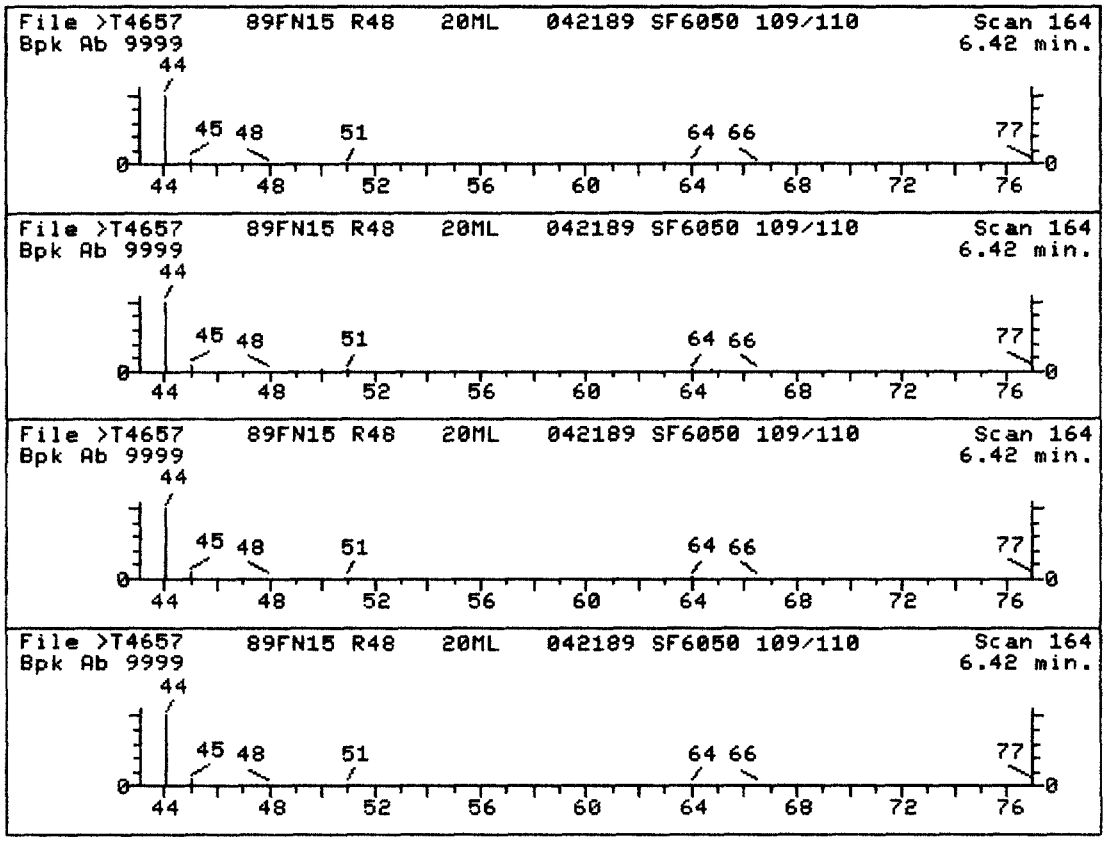
>T4657 89FN15 R48 20ML 042189 SF6050 109/110
42.01 260.0 TIC
Upslope: .20 Area Reject: .20 % Max Peaks: 20 Bunching: 1
Dnslope: 0.00 Results File VDIR92 Sorted by Area/Area INT

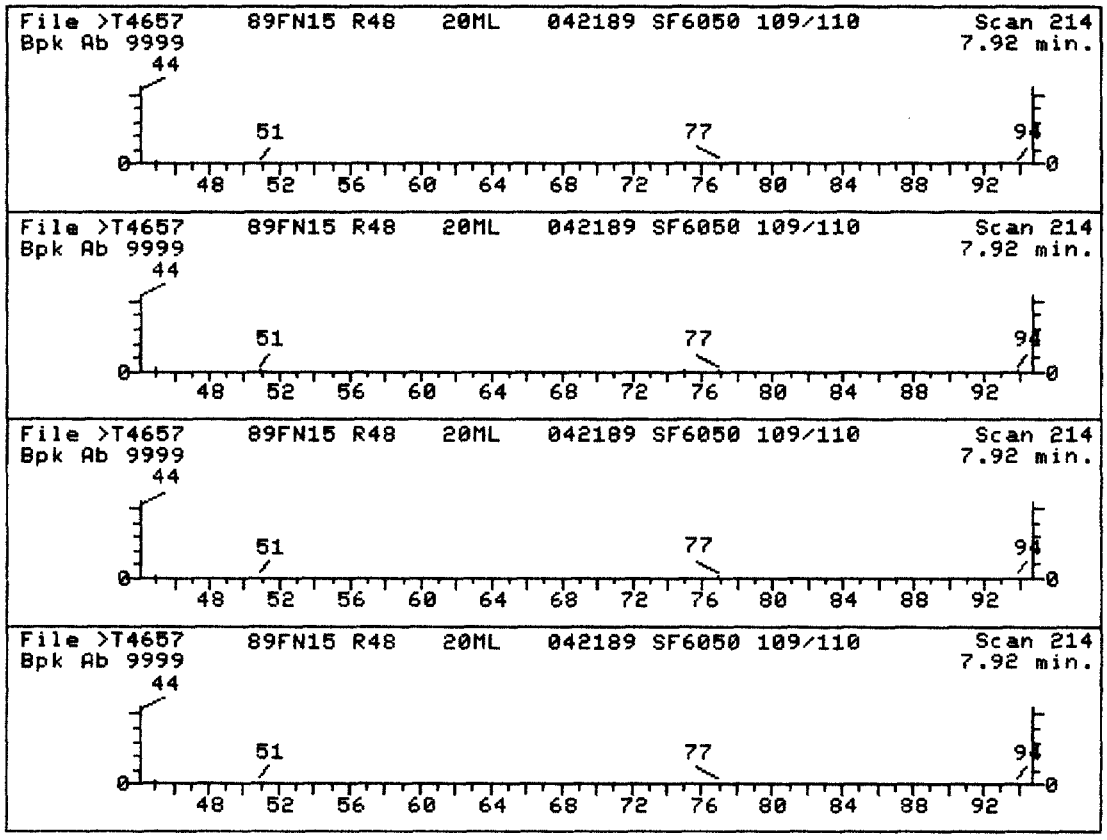
	Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
	1	19.69	596	605	621	122413	1634515	1473164	100.00	27.073
	2	26.41	819	828	850	77405	1850558	1107275	75.16	20.349
	3	11.90	338	346	358	78984	954357	877868	59.59	16.133
	4	21.26	648	657	667	58946	862835	700647	47.56	12.876
	5	25.38	786	794	805	39418	887824	493772	33.52	9.074
	6	14.73	431	440	454	30681	424384	354579	24.07	6.516
unknown 1	7	16.29	481	492	509	9536	272003	157393	10.68	2.892
	8	17.44	528	530	538	26461	123857	73242	4.97	1.346
	9	7.92	205	214	216	2703	69596	40215	2.73	.739
	10	8.83	239	244	250	2470	67809	29528	2.00	.543
	11	10.48	291	299	304	2336	74701	28426	1.93	.522
	12	8.38	225	229	233	2829	50412	24408	1.66	.449
	13	9.58	264	269	277	1599	68572	20911	1.42	.384
	14	14.06	411	418	423	1893	56441	18710	1.27	.344
	15	8.53	233	234	239	2045	34345	13988	.95	.257
	16	16.89	509	512	519	978	58086	10037	.68	.184
	17	8.22	222	224	225	2123	16919	7168	.49	.132
	18	13.04	380	384	387	510	27118	3781	.26	.069
	19	15.63	466	470	473	380	30191	3301	.22	.061
	20	6.42	162	164	167	443	20535	3026	.21	.056

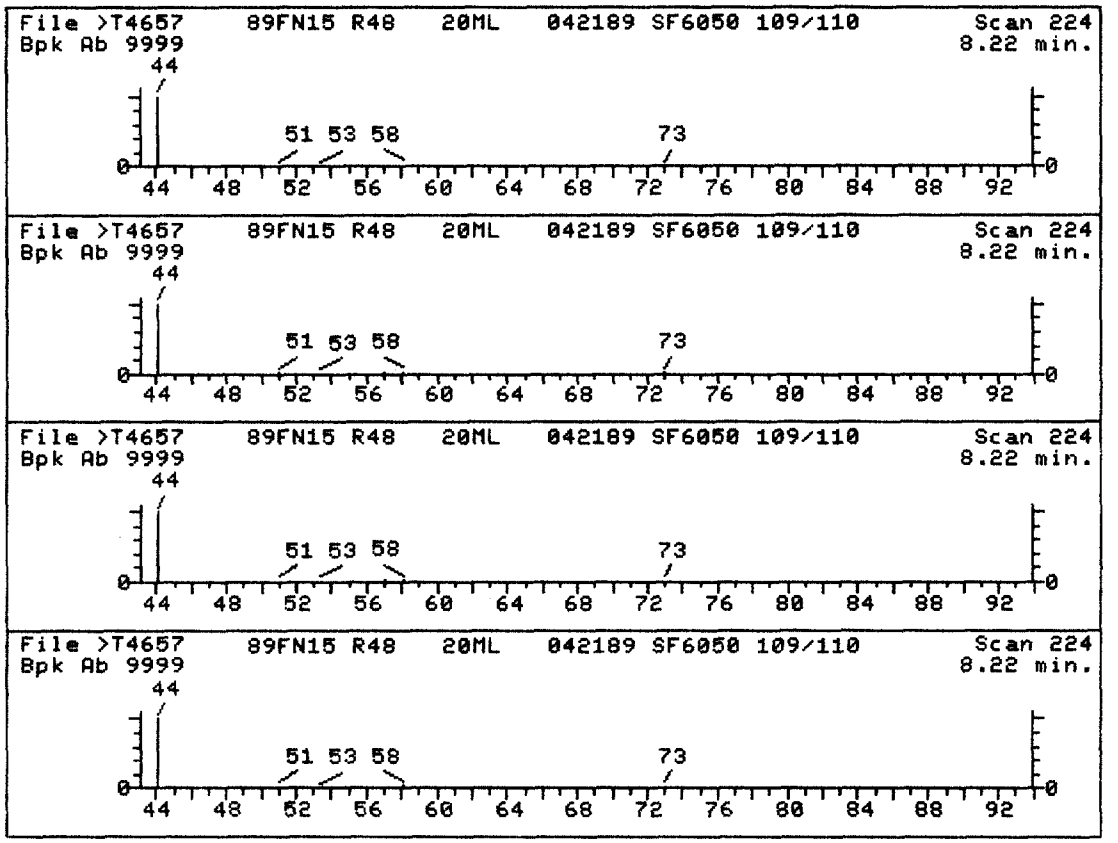
Sum of corrected areas: 5441439.

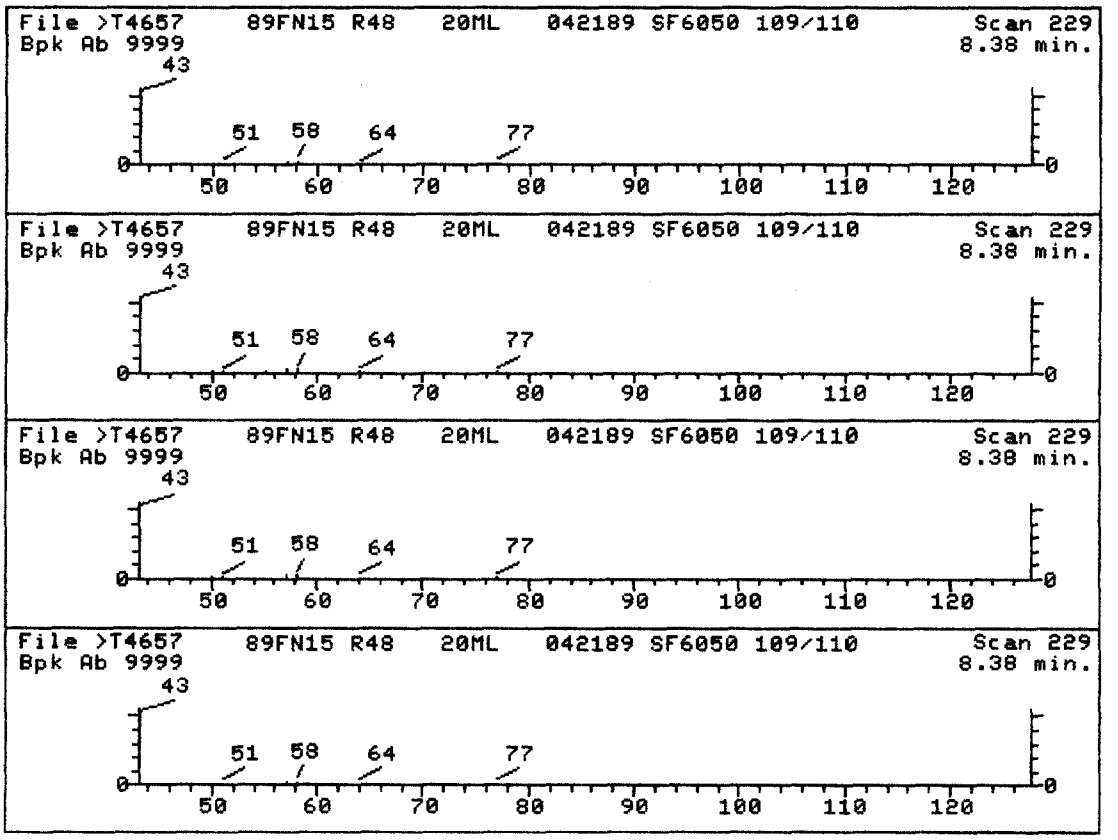
	RT.	Scan #	Conc.
unknown 1	16.29	492	2.2

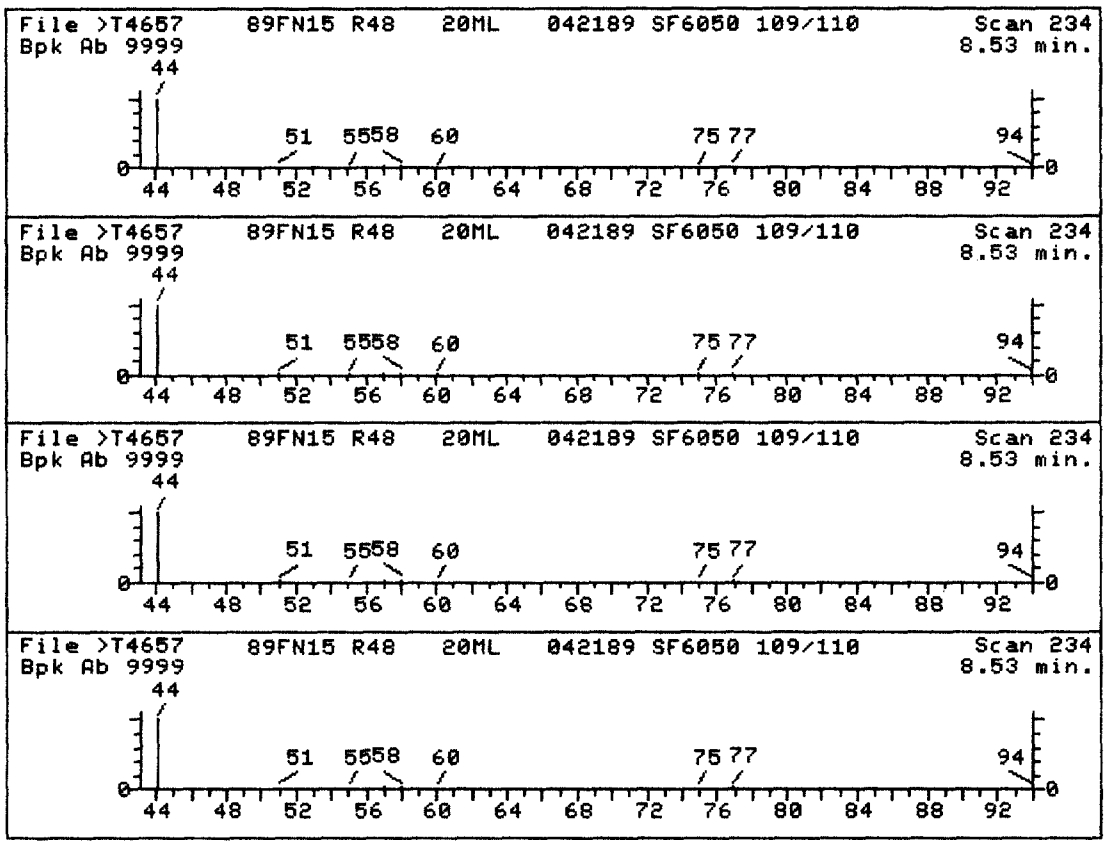

File >T4657 42.0-260.0 amu. 89FN15 R48 20ML 042189 SF6050 109/110
TIC
1473160
1107270
877868
700647
493772
354579
73242
157393
130000
120000
110000
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
100
90
80
70
60
50
40
30
20
10
0
8
12
16
20
24
28
32
36
40
44

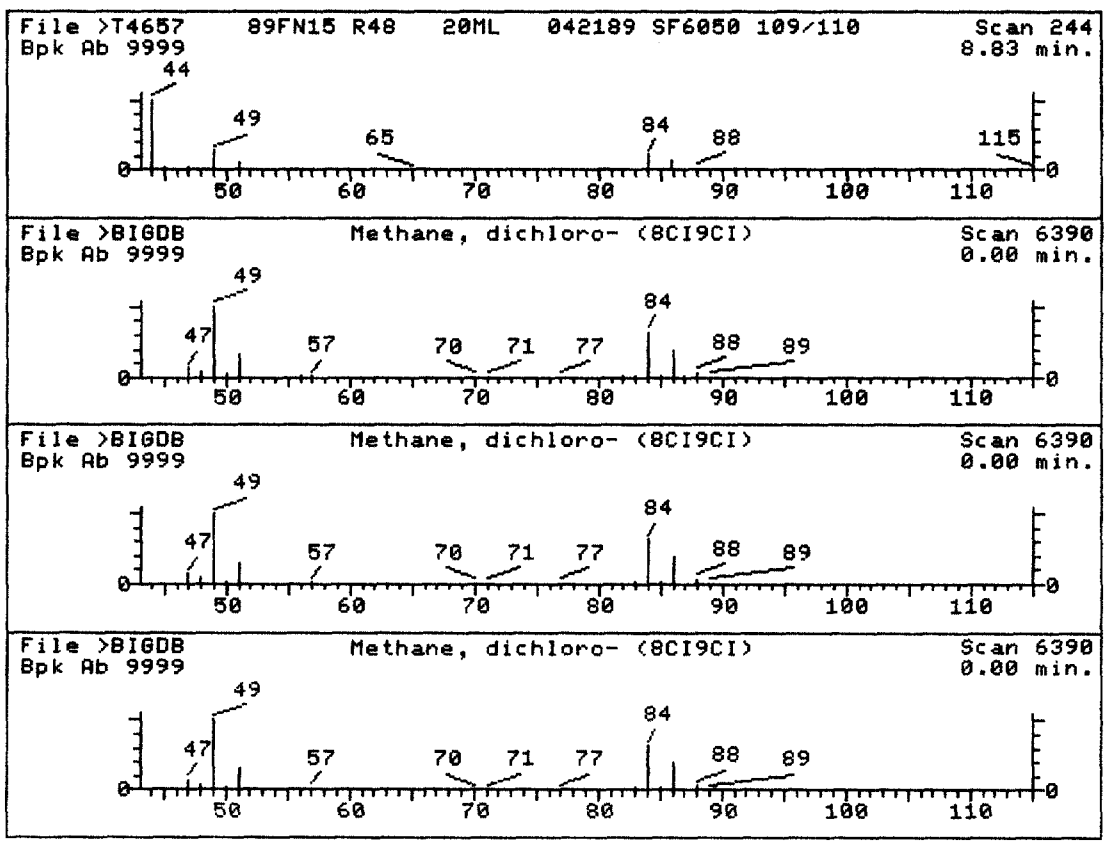

File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 164
Bpk Ab 9999 6.42 min.
44
45 48 51 64 66 77
0 44 48 52 56 60 64 68 72 76 0
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 164
Bpk Ab 9999 6.42 min.
44
45 48 51 64 66 77
0 44 48 52 56 60 64 68 72 76 0
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 164
Bpk Ab 9999 6.42 min.
44
45 48 51 64 66 77
0 44 48 52 56 60 64 68 72 76 0
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 164
Bpk Ab 9999 6.42 min.
44
45 48 51 64 66 77
0 44 48 52 56 60 64 68 72 76 0

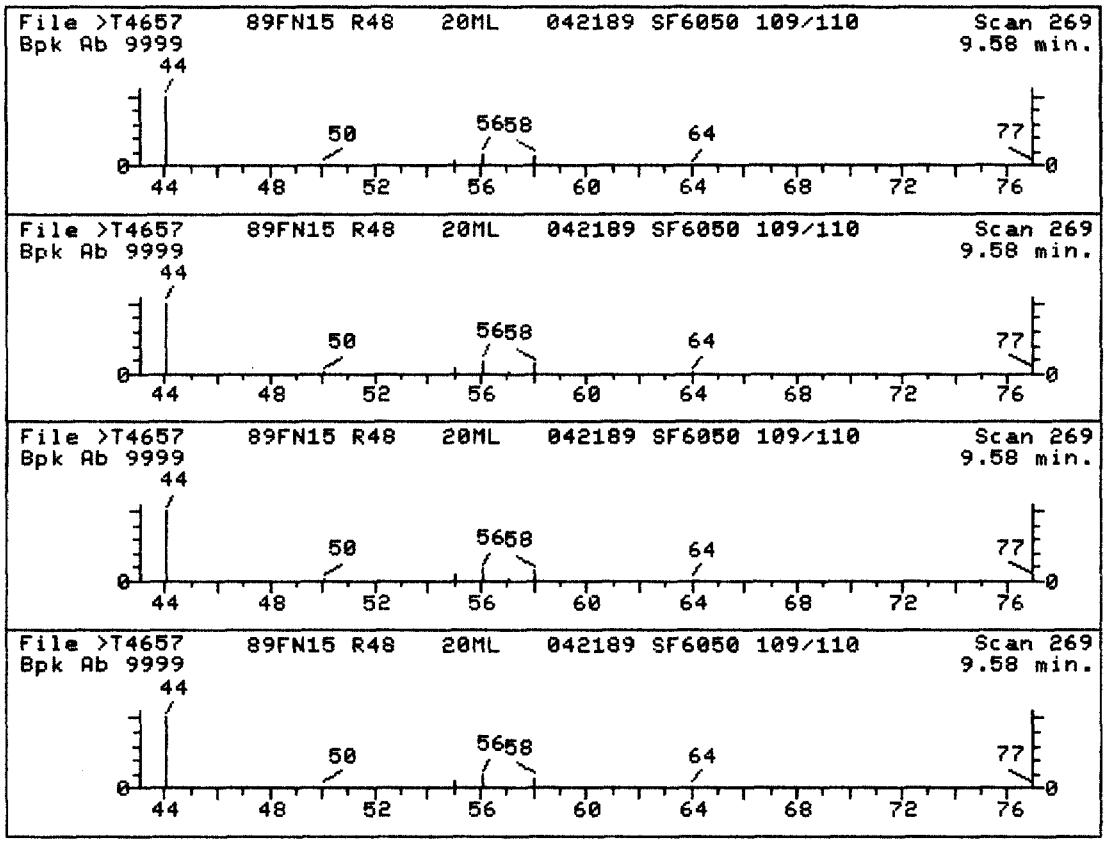

File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 214
Bpk Ab 9999 7.92 min.
44
51 77 94
0 48 52 56 60 64 68 72 76 80 84 88 92 0
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 214
Bpk Ab 9999 7.92 min.
44
51 77 94
0 48 52 56 60 64 68 72 76 80 84 88 92 0
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 214
Bpk Ab 9999 7.92 min.
44
51 77 94
0 48 52 56 60 64 68 72 76 80 84 88 92 0
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 214
Bpk Ab 9999 7.92 min.
44
51 77 94
0 48 52 56 60 64 68 72 76 80 84 88 92 0

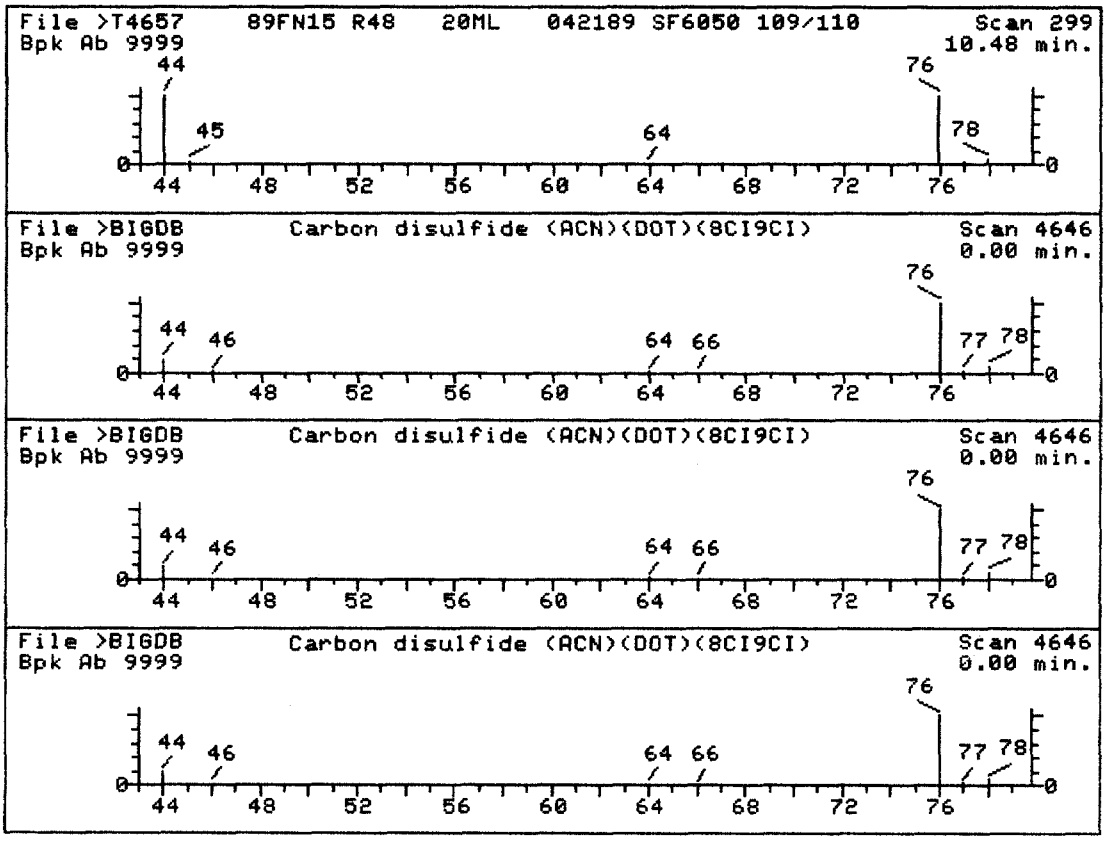

File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 224
Bpk Ab 9999 8.22 min.
44
51 53 58
73
0
44 48 52 56 60 64 68 72 76 80 84 88 92
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 224
Bpk Ab 9999 8.22 min.
44
51 53 58
73
0
44 48 52 56 60 64 68 72 76 80 84 88 92
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 224
Bpk Ab 9999 8.22 min.
44
51 53 58
73
0
44 48 52 56 60 64 68 72 76 80 84 88 92
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 224
Bpk Ab 9999 8.22 min.
44
51 53 58
73
0
44 48 52 56 60 64 68 72 76 80 84 88 92

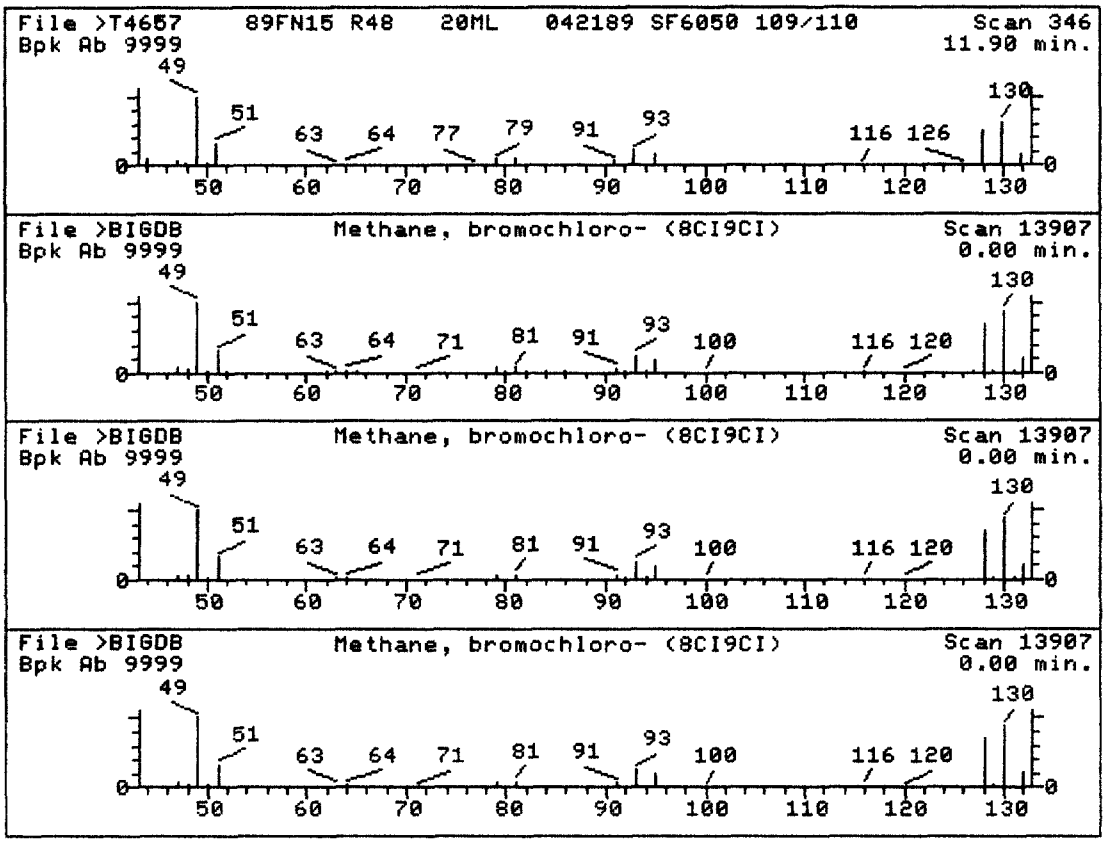

File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 229
Bpk Ab 9999 8.38 min.
43
51 58 64 77
0
50 60 70 80 90 100 110 120
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 229
Bpk Ab 9999 8.38 min.
43
51 58 64 77
0
50 60 70 80 90 100 110 120
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 229
Bpk Ab 9999 8.38 min.
43
51 58 64 77
0
50 60 70 80 90 100 110 120
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 229
Bpk Ab 9999 8.38 min.
43
51 58 64 77
0
50 60 70 80 90 100 110 120

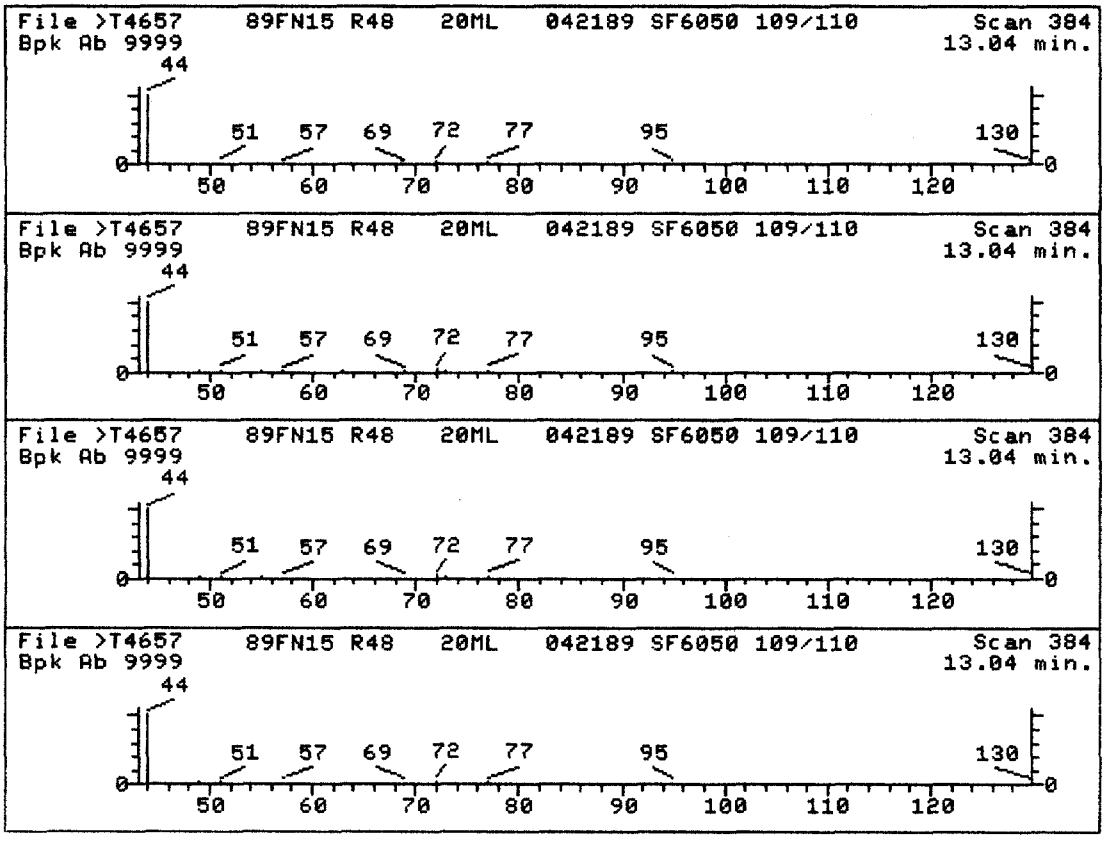

File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 234
Bpk Ab 9999 8.53 min.
44 51 5558 60 75 77 94
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 234
Bpk Ab 9999 8.53 min.
44 51 5558 60 75 77 94
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 234
Bpk Ab 9999 8.53 min.
44 51 5558 60 75 77 94
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 234
Bpk Ab 9999 8.53 min.
44 51 5558 60 75 77 94

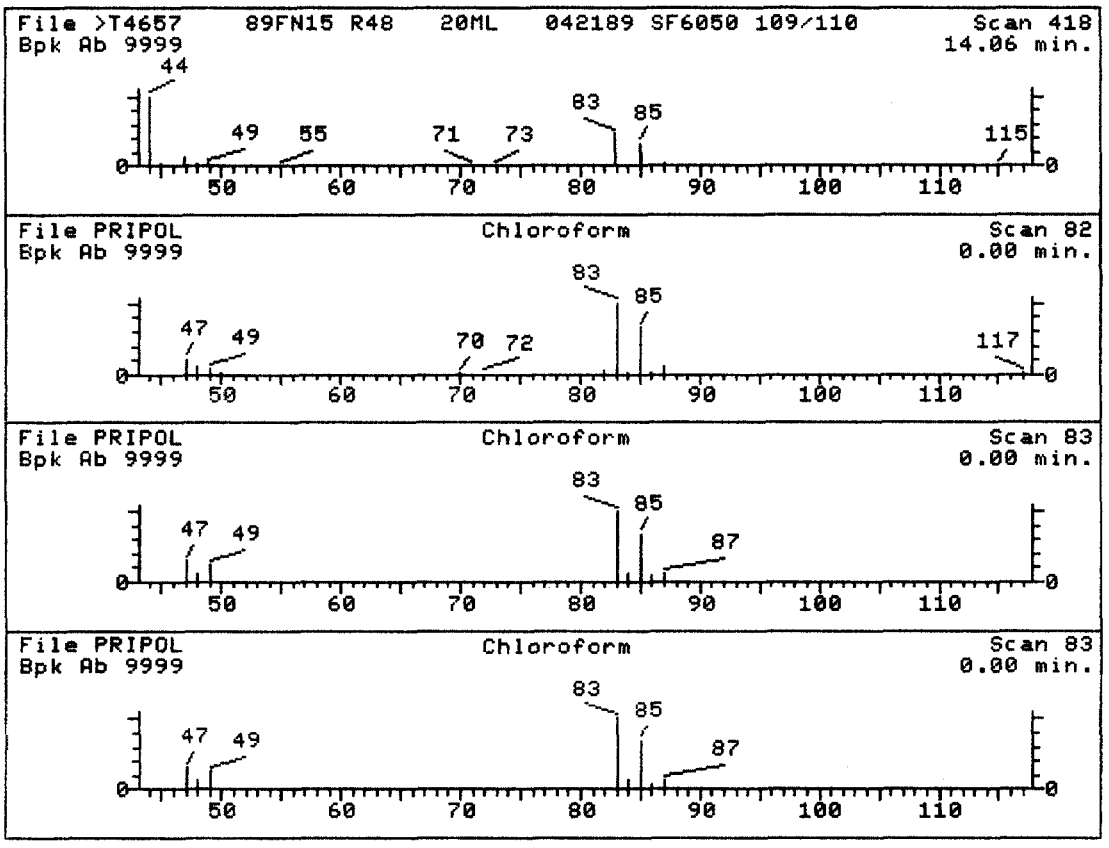

File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 244
Bpk Ab 9999 8.83 min.
44 49 65 84 88 115
File >BIGDB Methane, dichloro- (8CI9CI) Scan 6390
Bpk Ab 9999 0.00 min.
49 47 57 70 71 77 84 88 89
File >BIGDB Methane, dichloro- (8CI9CI) Scan 6390
Bpk Ab 9999 0.00 min.
49 47 57 70 71 77 84 88 89
File >BIGDB Methane, dichloro- (8CI9CI) Scan 6390
Bpk Ab 9999 0.00 min.
49 47 57 70 71 77 84 88 89

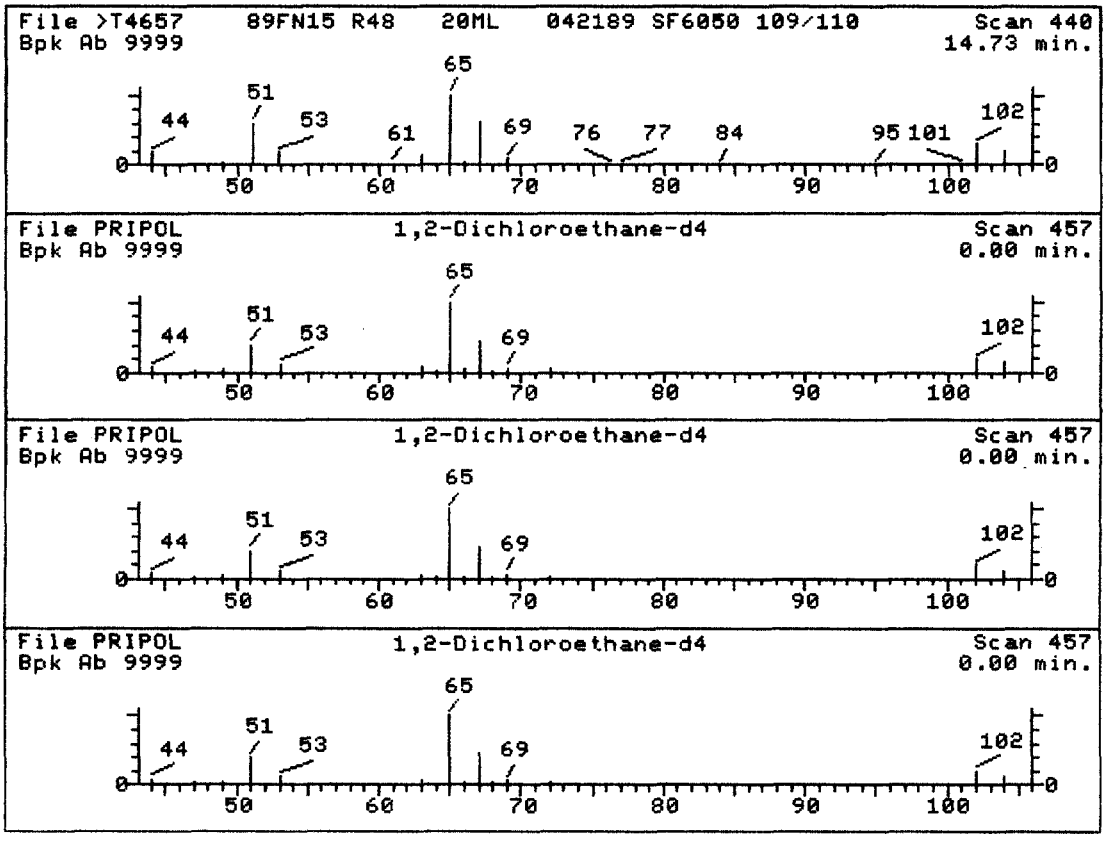

File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 269
Bpk Ab 9999 9.58 min.
44 50 5658 64 77
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 269
Bpk Ab 9999 9.58 min.
44 50 5658 64 77
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 269
Bpk Ab 9999 9.58 min.
44 50 5658 64 77
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 269
Bpk Ab 9999 9.58 min.
44 50 5658 64 77
0 44 48 52 56 60 64 68 72 76

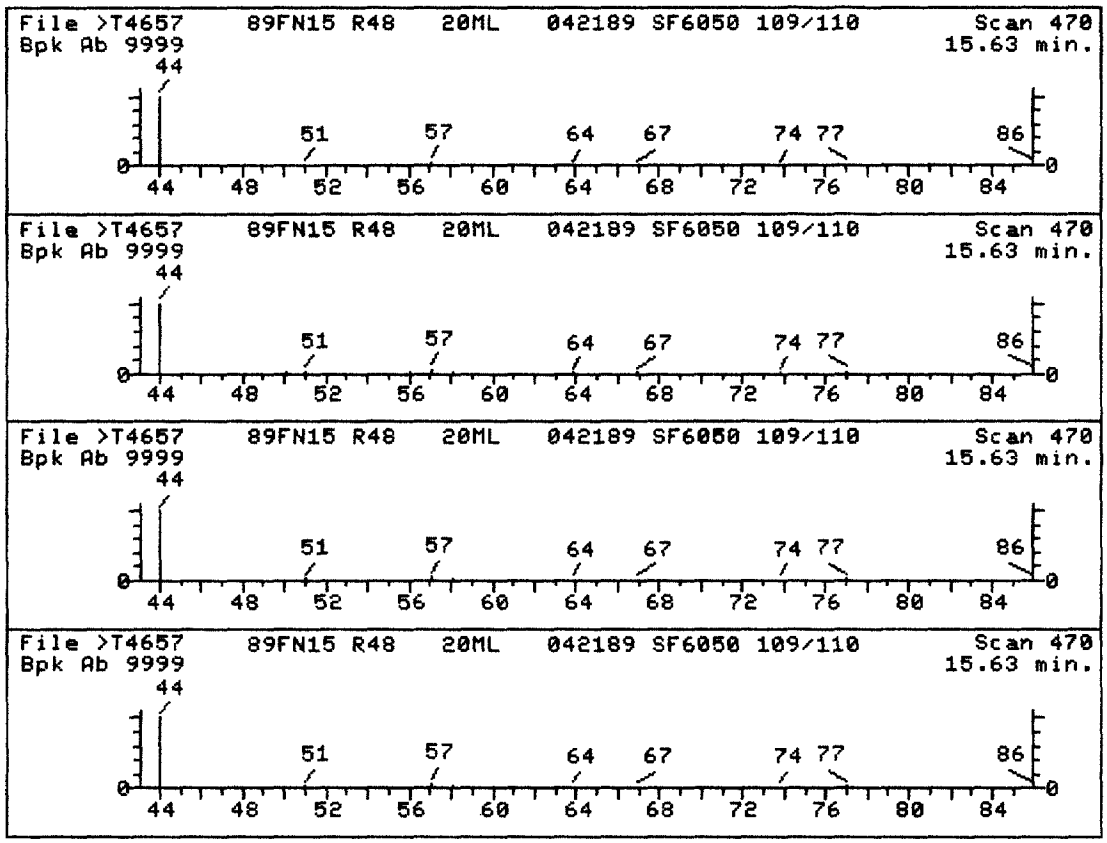

File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 299
Bpk Ab 9999 10.48 min.
44 45 64 76 78
File >BIGDB Carbon disulfide (ACN)(DOT)(8CI9CI) Scan 4646
Bpk Ab 9999 0.00 min.
44 46 64 66 76 77 78
File >BIGDB Carbon disulfide (ACN)(DOT)(8CI9CI) Scan 4646
Bpk Ab 9999 0.00 min.
44 46 64 66 76 77 78
File >BIGDB Carbon disulfide (ACN)(DOT)(8CI9CI) Scan 4646
Bpk Ab 9999 0.00 min.
44 46 64 66 76 77 78
0 44 48 52 56 60 64 68 72 76

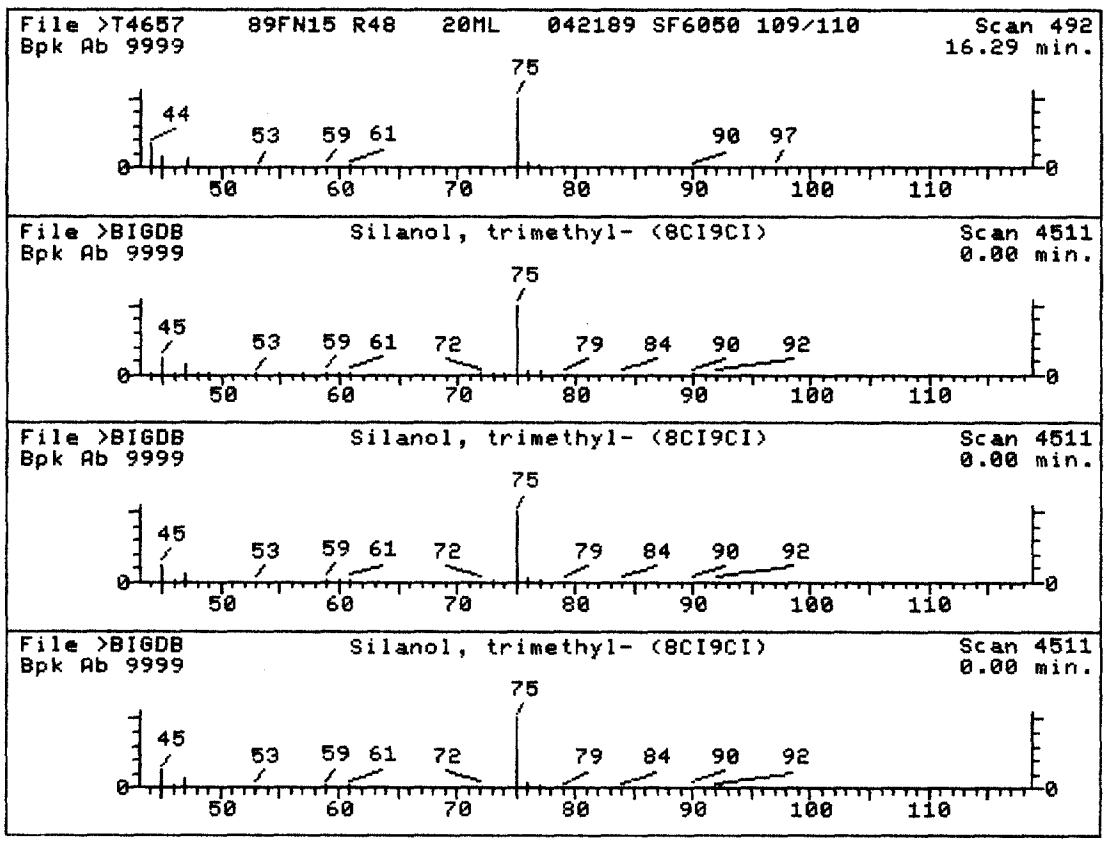

File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 346
Bpk Ab 9999 11.90 min.
49 51 63 64 77 79 91 93 116 126 130
File >BIGDB Methane, bromochloro- (8CI9CI) Scan 13907
Bpk Ab 9999 0.00 min.
49 51 63 64 71 81 91 93 100 116 120 130
File >BIGDB Methane, bromochloro- (8CI9CI) Scan 13907
Bpk Ab 9999 0.00 min.
49 51 63 64 71 81 91 93 100 116 120 130
File >BIGDB Methane, bromochloro- (8CI9CI) Scan 13907
Bpk Ab 9999 0.00 min.
49 51 63 64 71 81 91 93 100 116 120 130
0 50 60 70 80 90 100 110 120 130

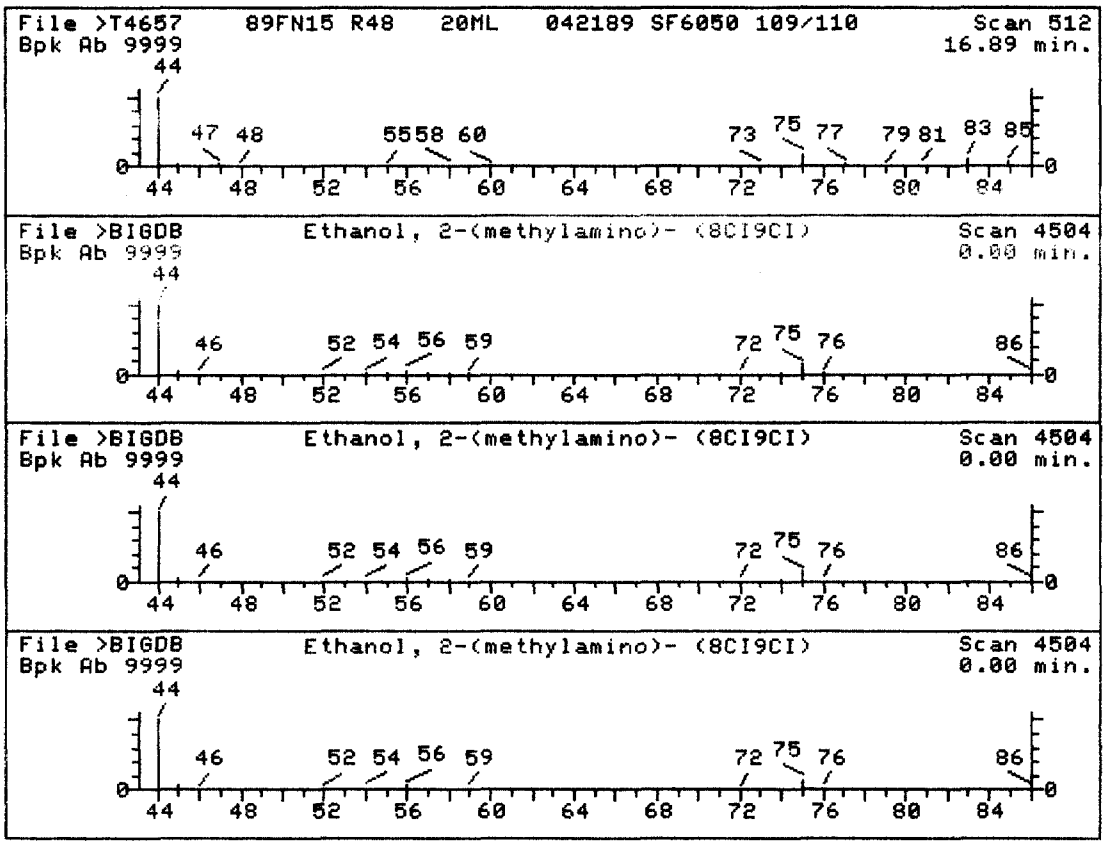

File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 384
Bpk Ab 9999 13.04 min.
44 51 57 69 72 77 95 130
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 384
Bpk Ab 9999 13.04 min.
44 51 57 69 72 77 95 130
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 384
Bpk Ab 9999 13.04 min.
44 51 57 69 72 77 95 130
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 384
Bpk Ab 9999 13.04 min.
44 51 57 69 72 77 95 130
0 50 60 70 80 90 100 110 120

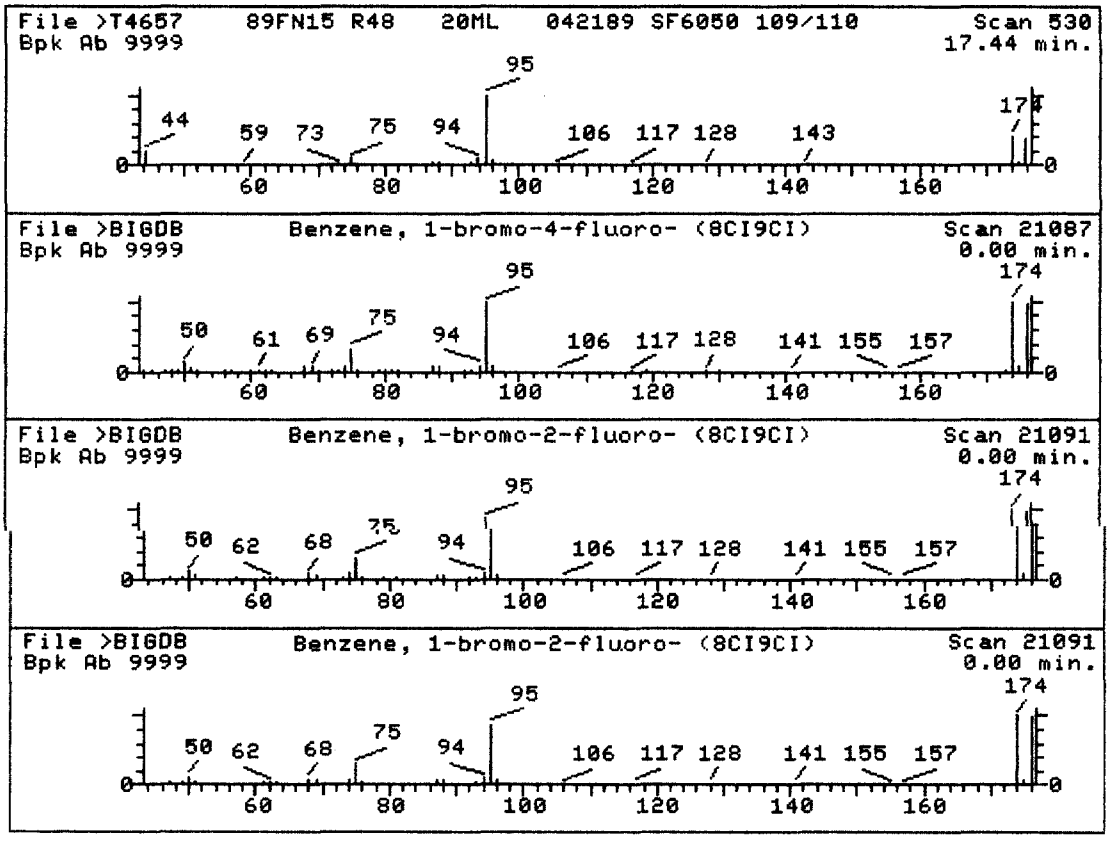

File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 418
Bpk Ab 9999 14.06 min.
44 49 55 71 73 83 85 115
File PRIPOL Chloroform Scan 82
Bpk Ab 9999 0.00 min.
47 49 70 72 83 85 117
File PRIPOL Chloroform Scan 83
Bpk Ab 9999 0.00 min.
47 49 83 85 87
File PRIPOL Chloroform Scan 83
Bpk Ab 9999 0.00 min.
47 49 83 85 87

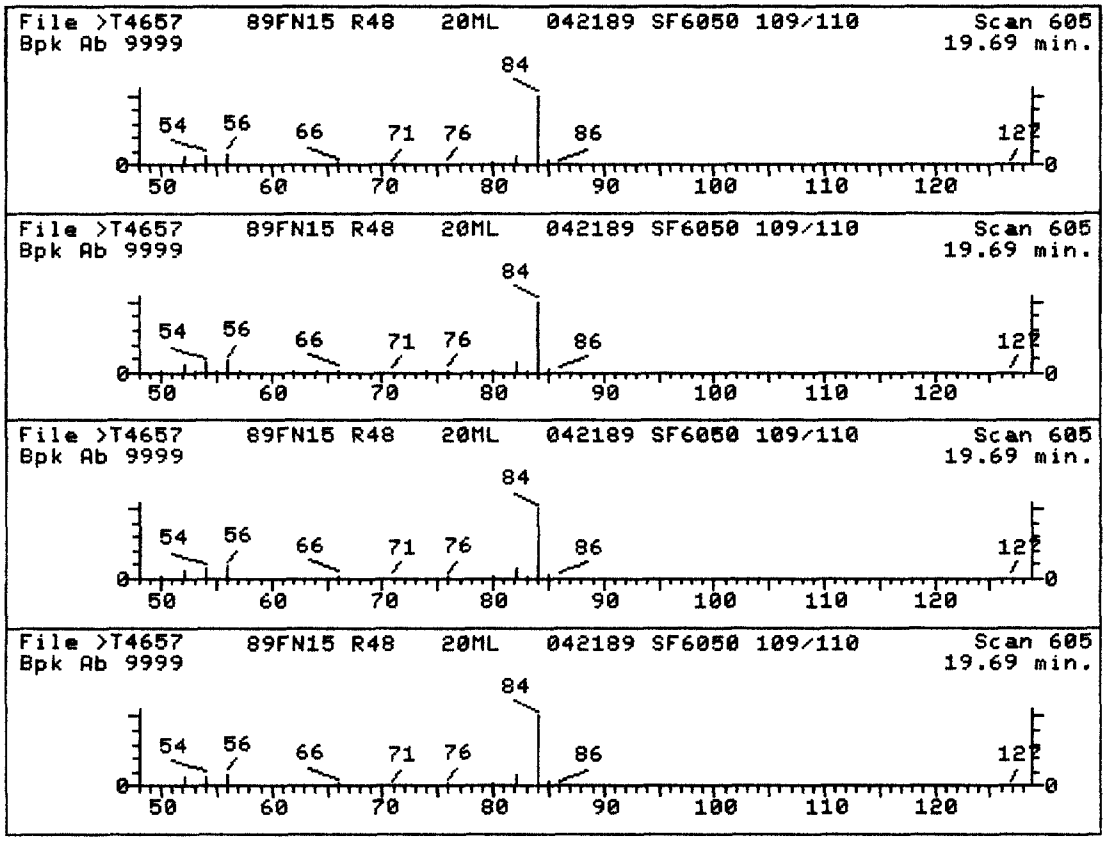

File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 440
Bpk Ab 9999 14.73 min.
44 51 53 61 65 69 76 77 84 95 101 102
File PRIPOL 1,2-Dichloroethane-d4 Scan 457
Bpk Ab 9999 0.00 min.
44 51 53 65 69 102
File PRIPOL 1,2-Dichloroethane-d4 Scan 457
Bpk Ab 9999 0.00 min.
44 51 53 65 69 102
File PRIPOL 1,2-Dichloroethane-d4 Scan 457
Bpk Ab 9999 0.00 min.
44 51 53 65 69 102

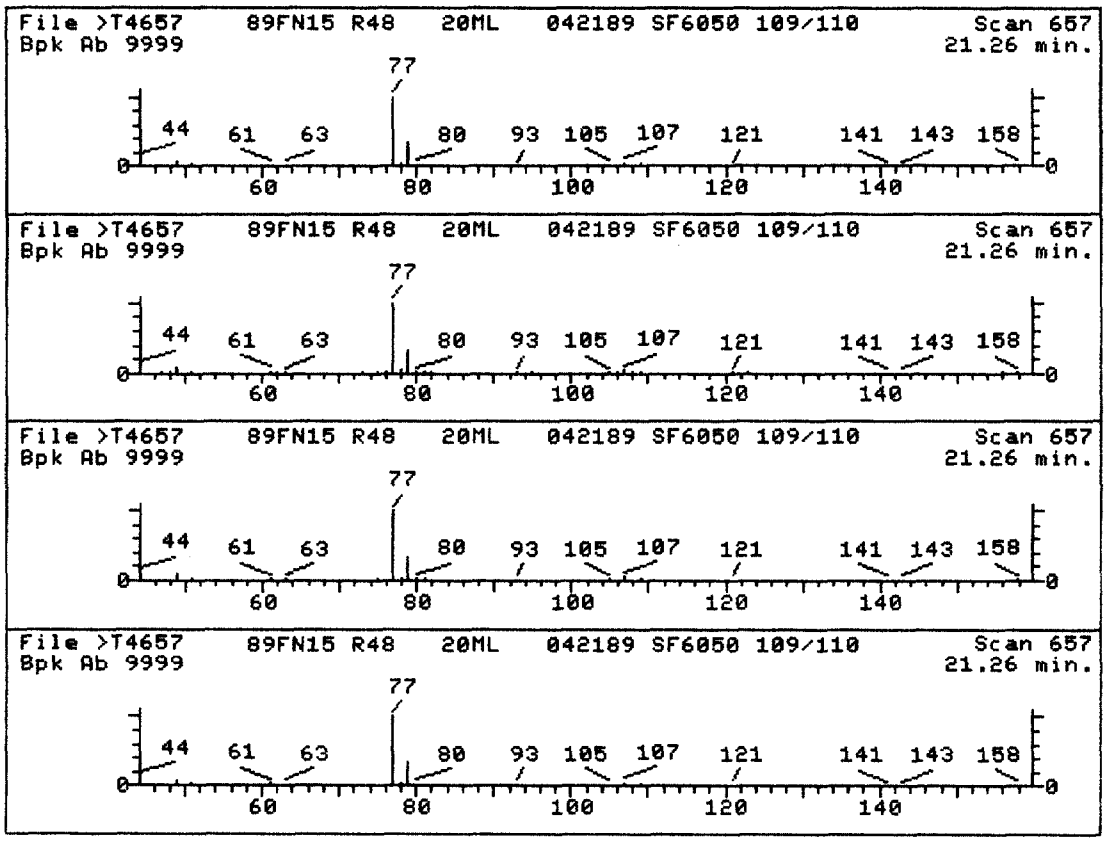

File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 470
Bpk Ab 9999 15.63 min.
44 51 57 64 67 74 77 86
0 44 48 52 56 60 64 68 72 76 80 84 0
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 470
Bpk Ab 9999 15.63 min.
44 51 57 64 67 74 77 86
0 44 48 52 56 60 64 68 72 76 80 84 0
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 470
Bpk Ab 9999 15.63 min.
44 51 57 64 67 74 77 86
0 44 48 52 56 60 64 68 72 76 80 84 0
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 470
Bpk Ab 9999 15.63 min.
44 51 57 64 67 74 77 86
0 44 48 52 56 60 64 68 72 76 80 84 0

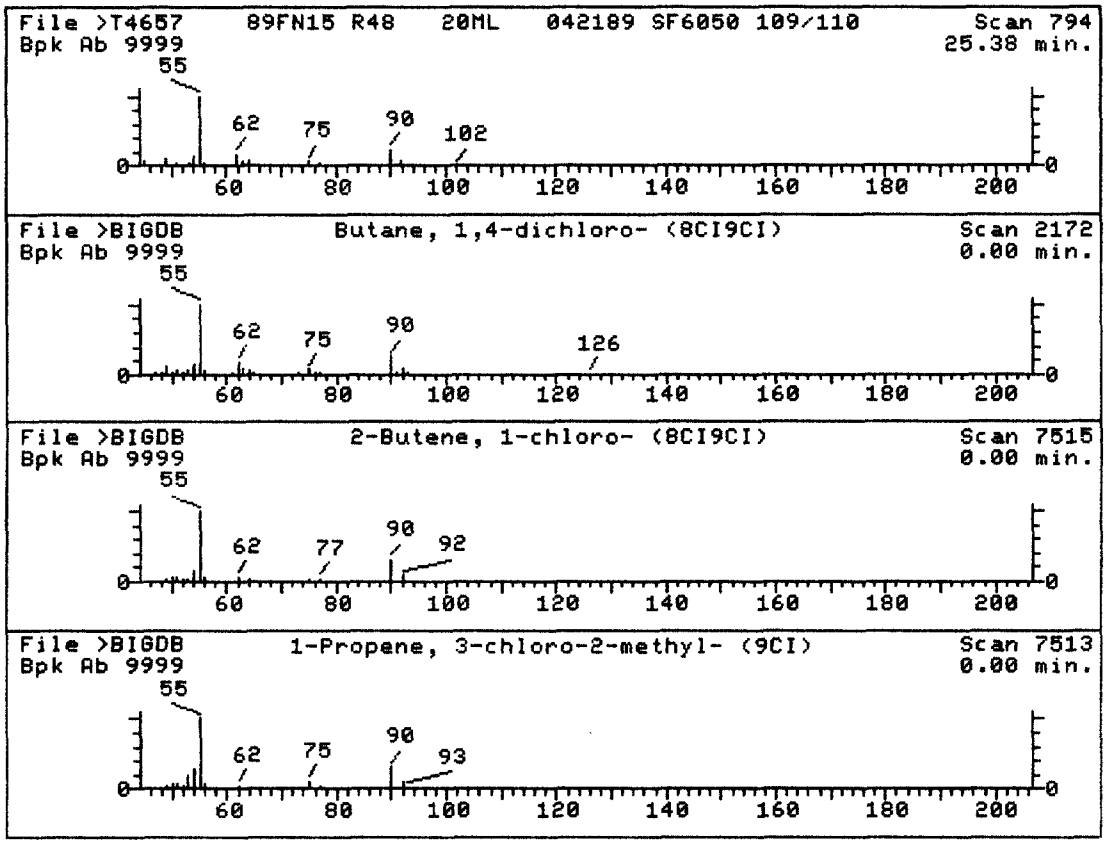

File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 492
Bpk Ab 9999 16.29 min.
75
44 53 59 61 90 97
0 50 60 70 80 90 100 110 0
File >BIGDB Silanol, trimethyl- (8CI9CI) Scan 4511
Bpk Ab 9999 0.00 min.
75
45 53 59 61 72 79 84 90 92
0 50 60 70 80 90 100 110 0
File >BIGDB Silanol, trimethyl- (8CI9CI) Scan 4511
Bpk Ab 9999 0.00 min.
75
45 53 59 61 72 79 84 90 92
0 50 60 70 80 90 100 110 0
File >BIGDB Silanol, trimethyl- (8CI9CI) Scan 4511
Bpk Ab 9999 0.00 min.
75
45 53 59 61 72 79 84 90 92
0 50 60 70 80 90 100 110 0

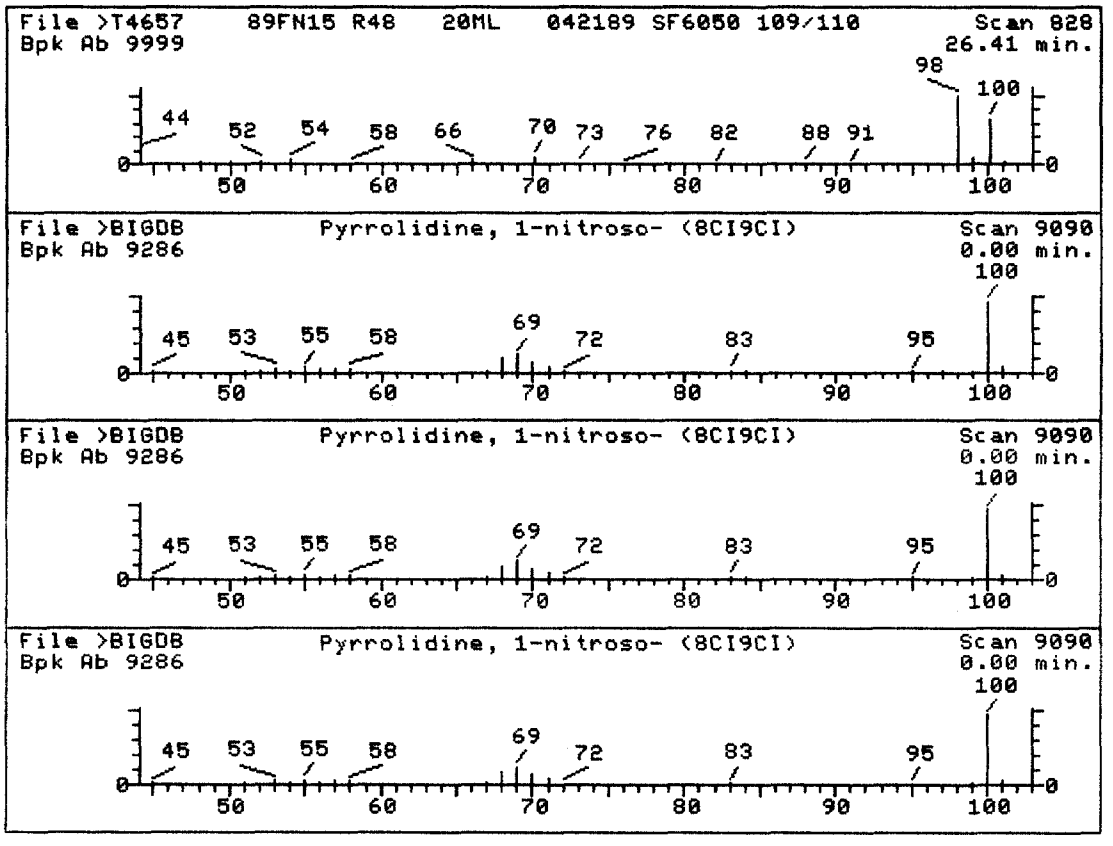

File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 512
Bpk Ab 9999 16.89 min.
File >BIGDB Ethanol, 2-(methylamino)- (8CI9CI) Scan 4504
Bpk Ab 9999 0.00 min.
File >BIGDB Ethanol, 2-(methylamino)- (8CI9CI) Scan 4504
Bpk Ab 9999 0.00 min.
File >BIGDB Ethanol, 2-(methylamino)- (8CI9CI) Scan 4504
Bpk Ab 9999 0.00 min.


File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 530
Bpk Ab 9999 17.44 min.
File >BIGDB Benzene, 1-bromo-4-fluoro- (8CI9CI) Scan 21087
Bpk Ab 9999 0.00 min.
File >BIGDB Benzene, 1-bromo-2-fluoro- (8CI9CI) Scan 21091
Bpk Ab 9999 0.00 min.
File >BIGDB Benzene, 1-bromo-2-fluoro- (8CI9CI) Scan 21091
Bpk Ab 9999 0.00 min.


File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 605
Bpk Ab 9999 19.69 min.
84
54 56 66 71 76 86 122
0 50 60 70 80 90 100 110 120 0
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 605
Bpk Ab 9999 19.69 min.
84
54 56 66 71 76 86 122
0 50 60 70 80 90 100 110 120 0
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 605
Bpk Ab 9999 19.69 min.
84
54 56 66 71 76 86 122
0 50 60 70 80 90 100 110 120 0
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 605
Bpk Ab 9999 19.69 min.
84
54 56 66 71 76 86 122
0 50 60 70 80 90 100 110 120 0


File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 657
Bpk Ab 9999 21.26 min.
77
44 61 63 80 93 105 107 121 141 143 158
0 60 80 100 120 140 0
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 657
Bpk Ab 9999 21.26 min.
77
44 61 63 80 93 105 107 121 141 143 158
0 60 80 100 120 140 0
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 657
Bpk Ab 9999 21.26 min.
77
44 61 63 80 93 105 107 121 141 143 158
0 60 80 100 120 140 0
File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 657
Bpk Ab 9999 21.26 min.
77
44 61 63 80 93 105 107 121 141 143 158
0 60 80 100 120 140 0


File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 794
Bpk Ab 9999 25.38 min.
55 62 75 90 102
File >BIGDB Butane, 1,4-dichloro- (8CI9CI) Scan 2172
Bpk Ab 9999 0.00 min.
55 62 75 90 126
File >BIGDB 2-Butene, 1-chloro- (8CI9CI) Scan 7515
Bpk Ab 9999 0.00 min.
55 62 77 90 92
File >BIGDB 1-Propene, 3-chloro-2-methyl- (9CI) Scan 7513
Bpk Ab 9999 0.00 min.
55 62 75 90 93
0 60 80 100 120 140 160 180 200

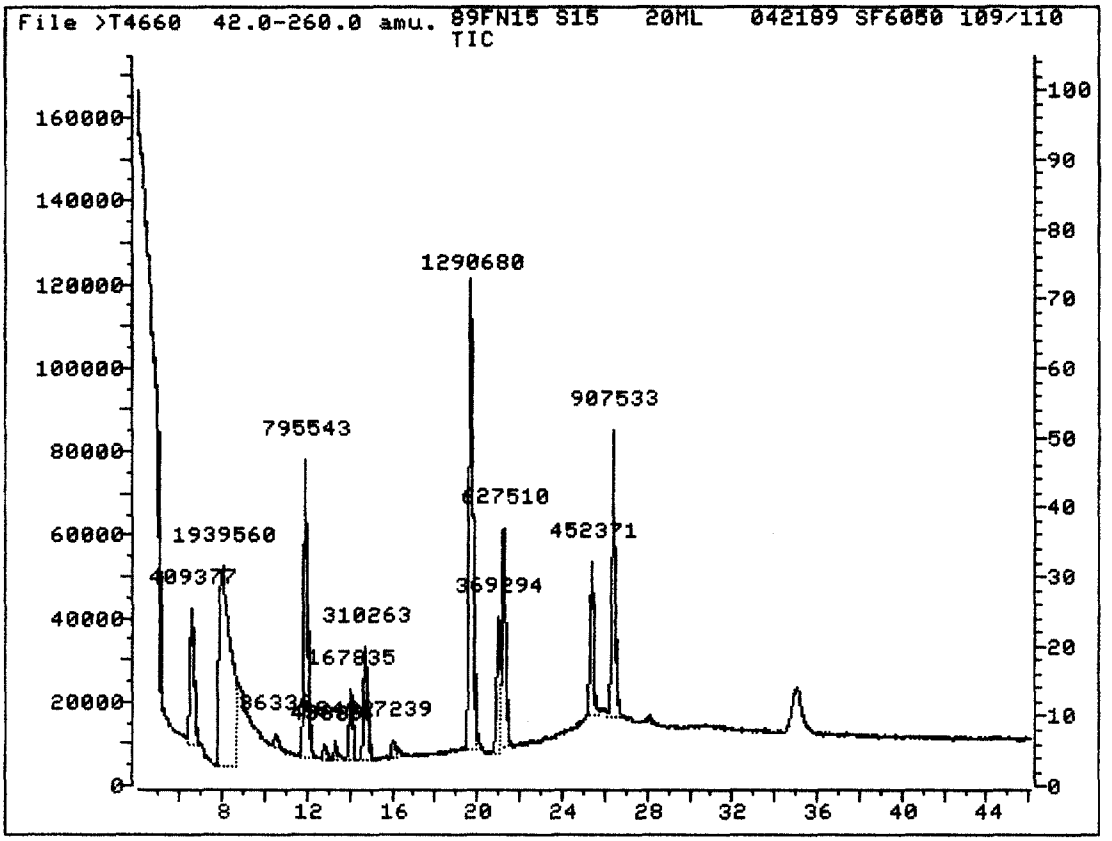

File >T4657 89FN15 R48 20ML 042189 SF6050 109/110 Scan 828
Bpk Ab 9999 26.41 min.
44 52 54 58 66 70 73 76 82 88 91 98 100
File >BIGDB Pyrrolidine, 1-nitroso- (8CI9CI) Scan 9090
Bpk Ab 9286 0.00 min.
45 53 55 58 69 72 83 95 100
File >BIGDB Pyrrolidine, 1-nitroso- (8CI9CI) Scan 9090
Bpk Ab 9286 0.00 min.
45 53 55 58 69 72 83 95 100
File >BIGDB Pyrrolidine, 1-nitroso- (8CI9CI) Scan 9090
Bpk Ab 9286 0.00 min.
45 53 55 58 69 72 83 95 100
0 50 60 70 80 90 100

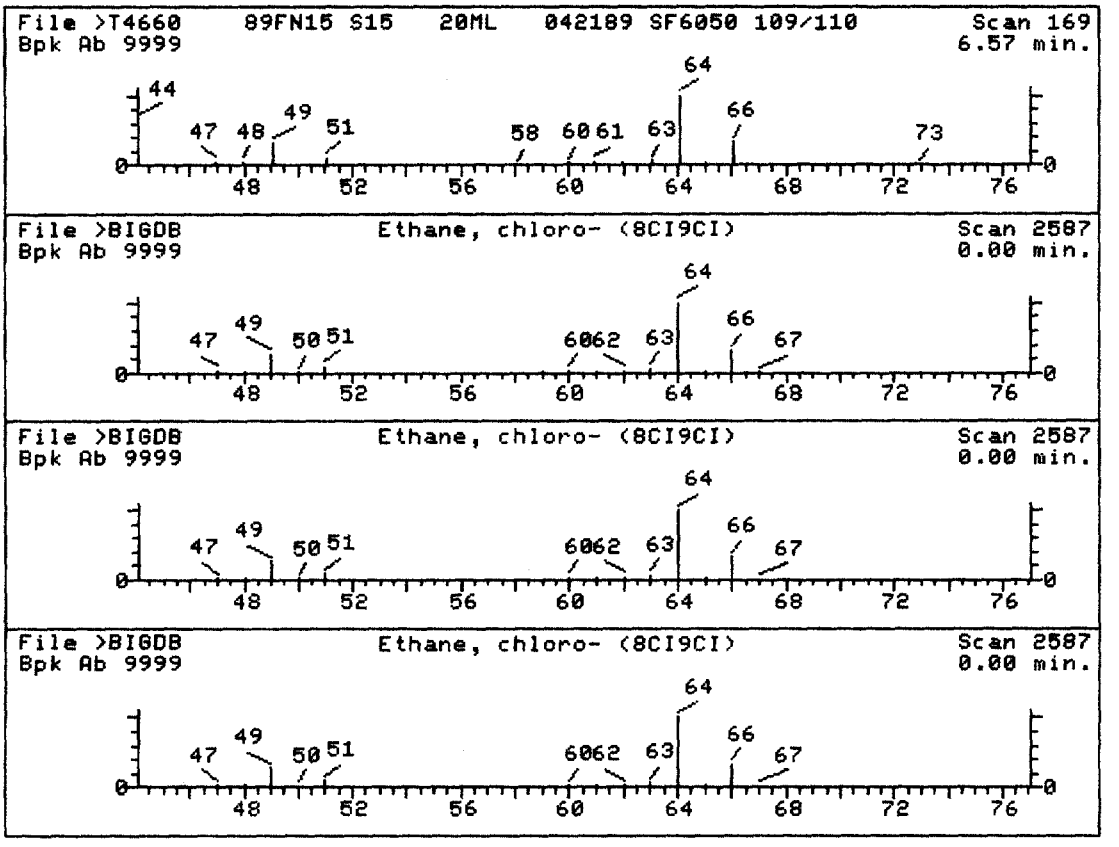
>T4660 89FN15 S15 20ML 042189 SF6050 109/110
42.01 260.0 TIC
Upslope: .20 Area Reject: .20 % Max Peaks: 14 Bunching: 1
Dnslope: 0.00 Results File VDIR92 Sorted by Area/Area INT

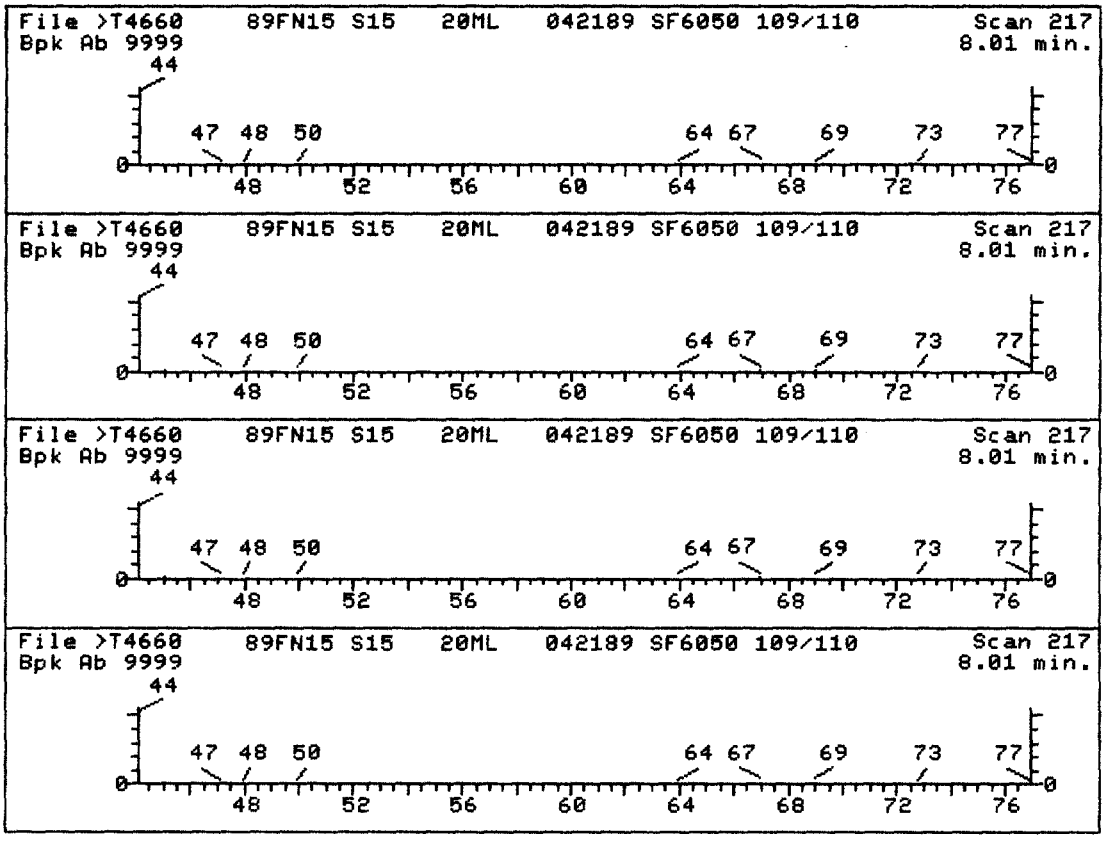
Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	8.01	207	217	240	47636	2220914	1939566	100.00	26.049
2	19.69	595	605	615	112739	1606231	1290684	66.54	17.334
3	26.41	819	828	840	68308	1537906	907533	46.79	12.188
4	11.90	338	346	364	71573	1105921	795543	41.02	10.684
5	21.26	651	657	667	53179	891213	627510	32.35	8.428
6	25.35	786	793	804	36711	996681	452371	23.32	6.075
7	6.57	162	169	179	32509	708444	409377	21.11	5.498
8	20.96	638	647	651	32517	555820	369294	19.04	4.960
9	14.70	431	439	451	26882	535148	310263	16.00	4.167
10	14.00	409	416	424	16578	337311	167835	8.65	2.254
11	13.31	385	393	398	4577	190135	48492	2.50	.651
12	16.08	478	485	489	4193	181960	47239	2.44	.634
13	12.83	371	377	385	3822	196440	43889	2.26	.589
14	10.45	296	298	308	3097	231146	36336	1.87	.488

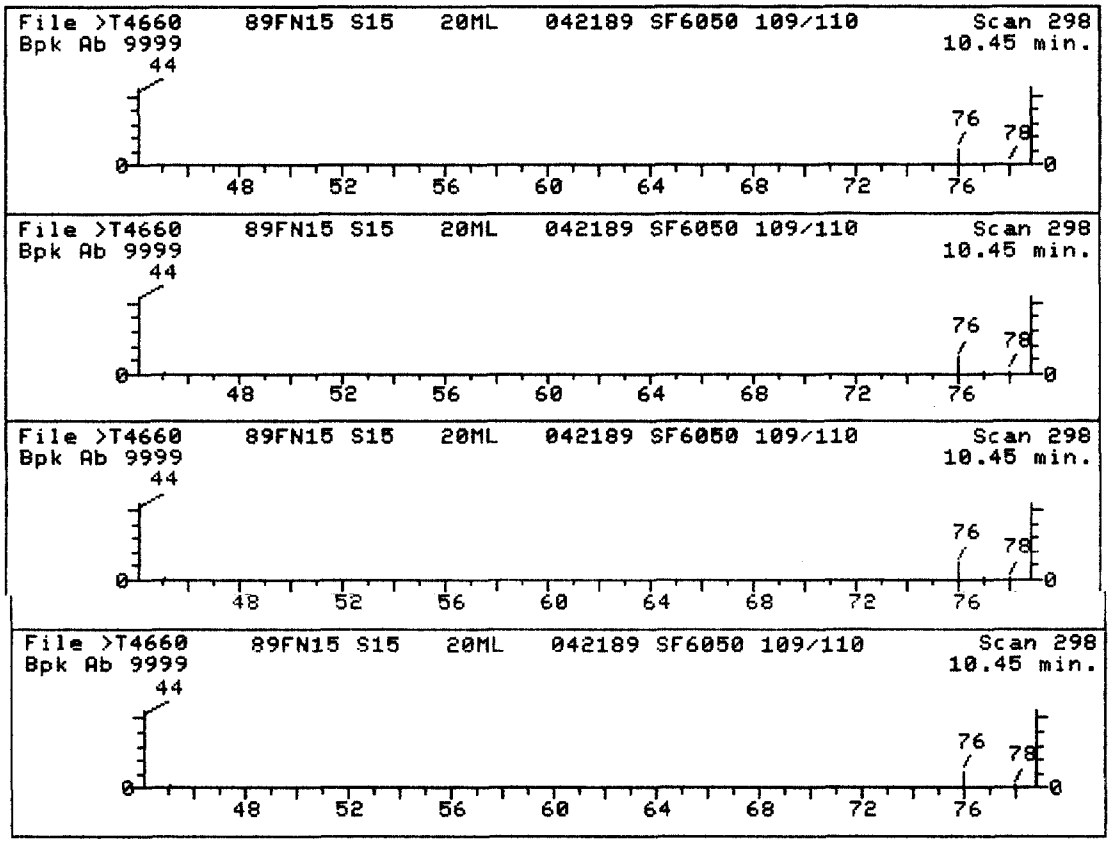
Sum of corrected areas: 7445932.

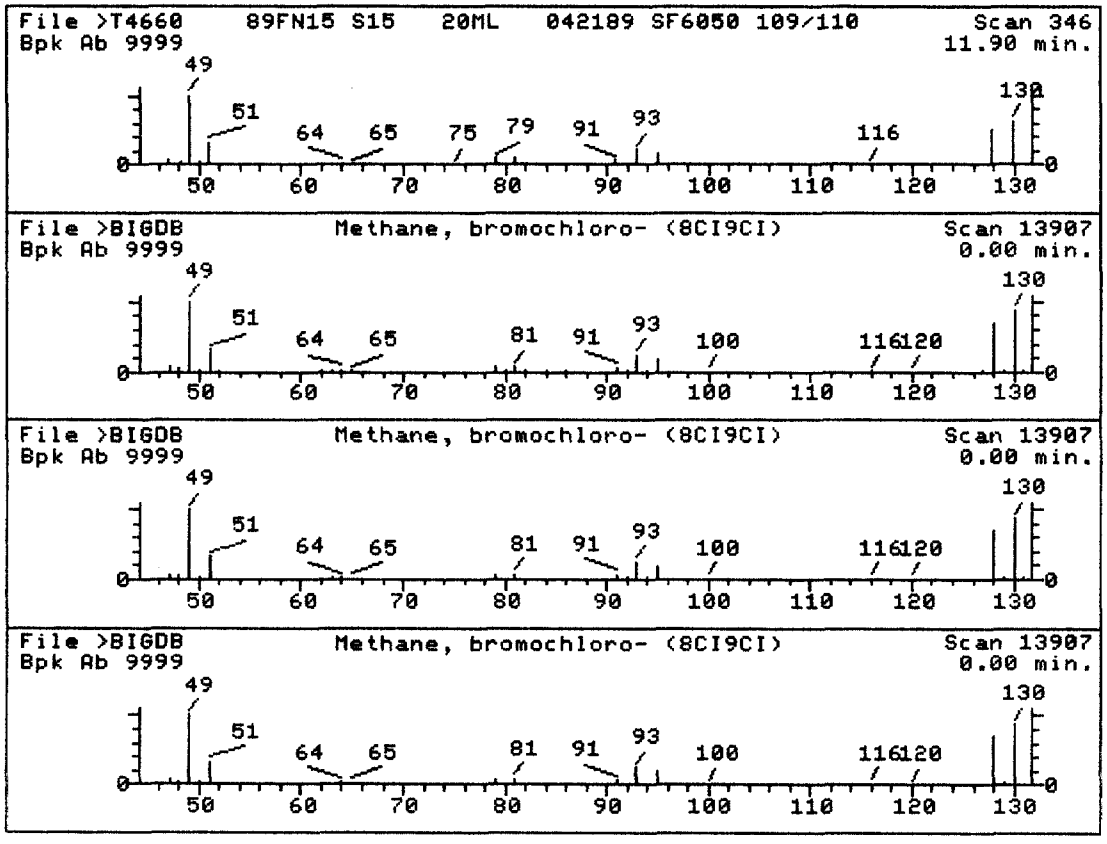
	RT.	Scan #	CONC
1) UNKNOWN 1 ETHYL ETHER	14.70	439	$\frac{310263}{627510} \times 10 = 2.7$ PPB
2) Diisopropyl eth	20.96	647	$\frac{369294 \times 10}{627510} = 5.9$ PPB.

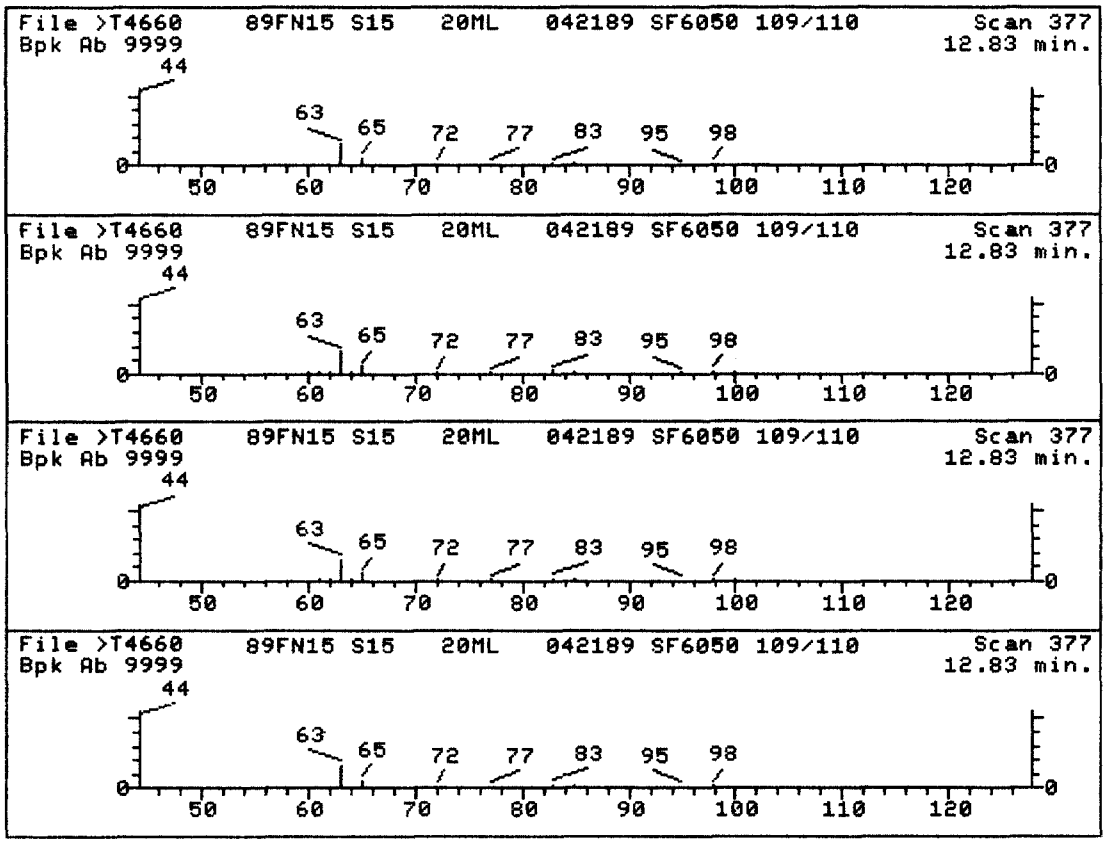

File >T4660 42.0-260.0 amu. 89FN15 S15 20ML 042189 SF6050 109/110
TIC
160000
140000
120000
100000
80000
60000
40000
20000
0
100
90
80
70
60
50
40
30
20
10
0
8
12
16
20
24
28
32
36
40
44
1290680
907533
795543
627510
452371
1939560
409377
369294
310263
167835
8633
7239

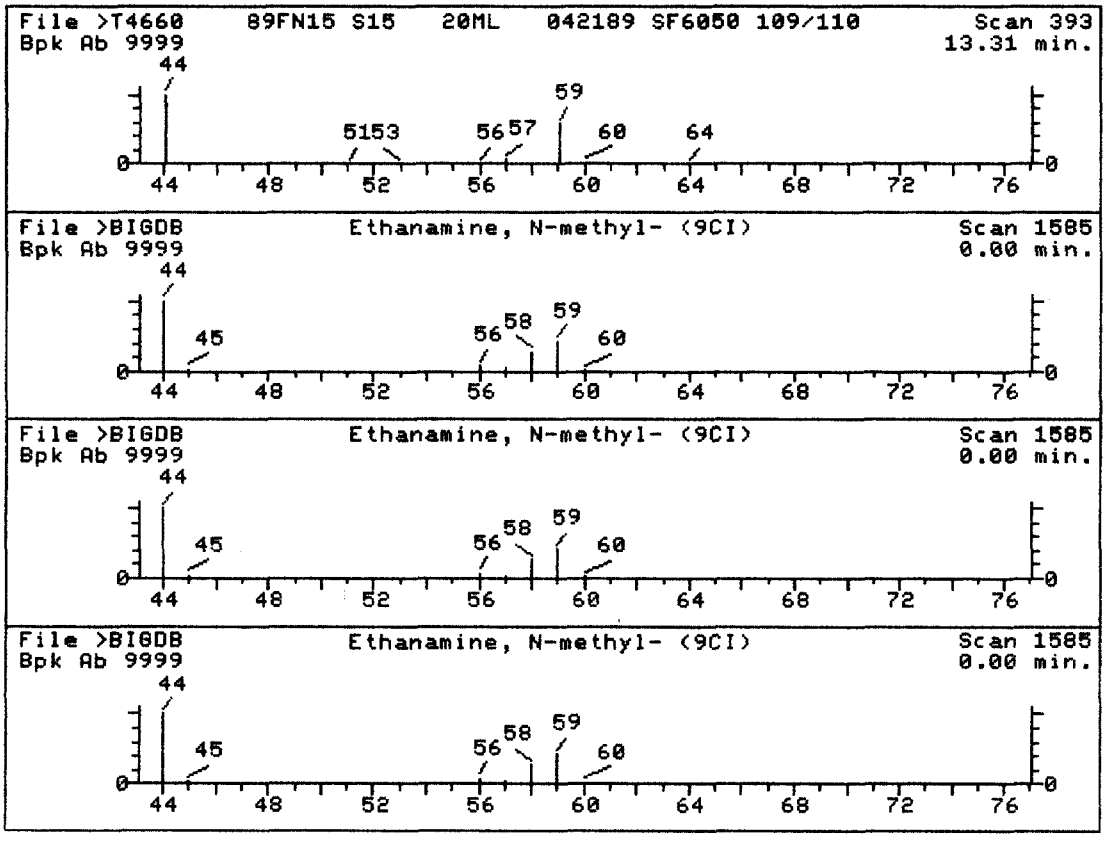

File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 169
Bpk Ab 9999 6.57 min.
44 47 48 49 51 58 60 61 63 64 66 73
File >BIGDB Ethane, chloro- (8CI9CI) Scan 2587
Bpk Ab 9999 0.00 min.
47 49 50 51 60 62 63 64 66 67
File >BIGDB Ethane, chloro- (8CI9CI) Scan 2587
Bpk Ab 9999 0.00 min.
47 49 50 51 60 62 63 64 66 67
File >BIGDB Ethane, chloro- (8CI9CI) Scan 2587
Bpk Ab 9999 0.00 min.
47 49 50 51 60 62 63 64 66 67
0 48 52 56 60 64 68 72 76

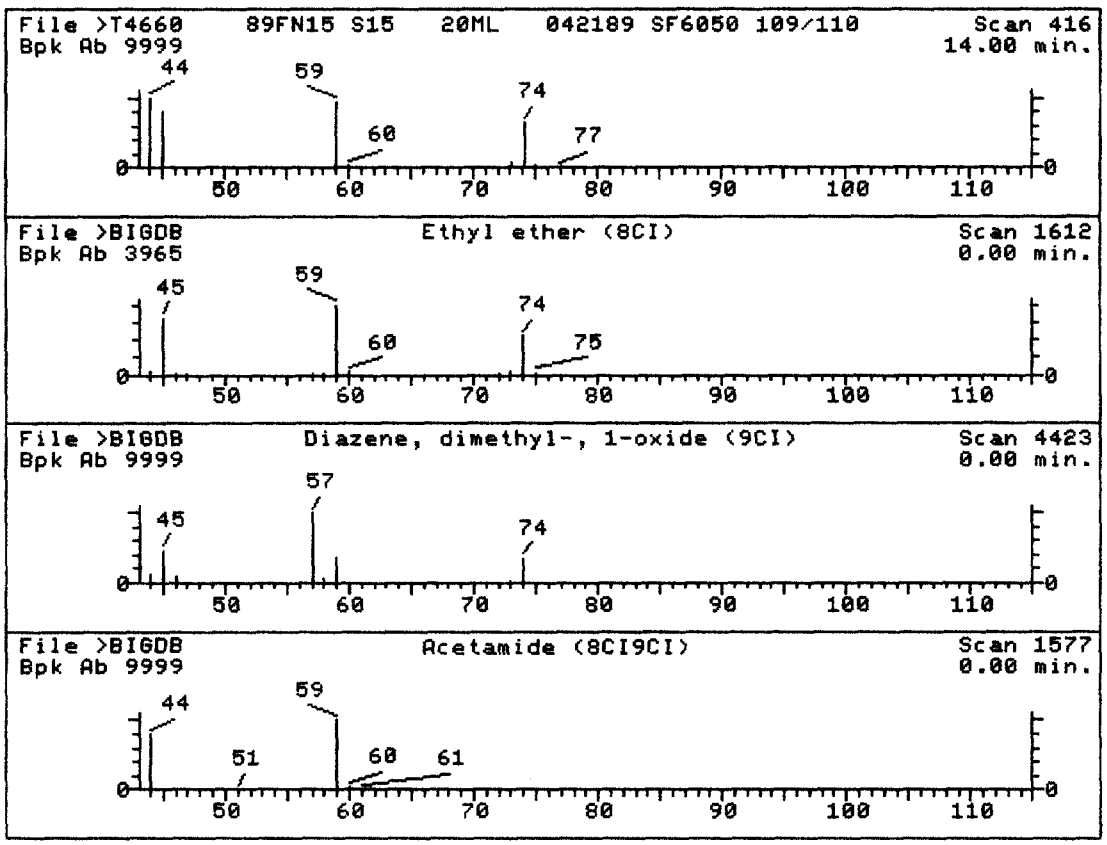

File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 217
Bpk Ab 9999 8.01 min.
44 47 48 50 64 67 69 73 77
File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 217
Bpk Ab 9999 8.01 min.
44 47 48 50 64 67 69 73 77
File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 217
Bpk Ab 9999 8.01 min.
44 47 48 50 64 67 69 73 77
File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 217
Bpk Ab 9999 8.01 min.
44 47 48 50 64 67 69 73 77
0 48 52 56 60 64 68 72 76

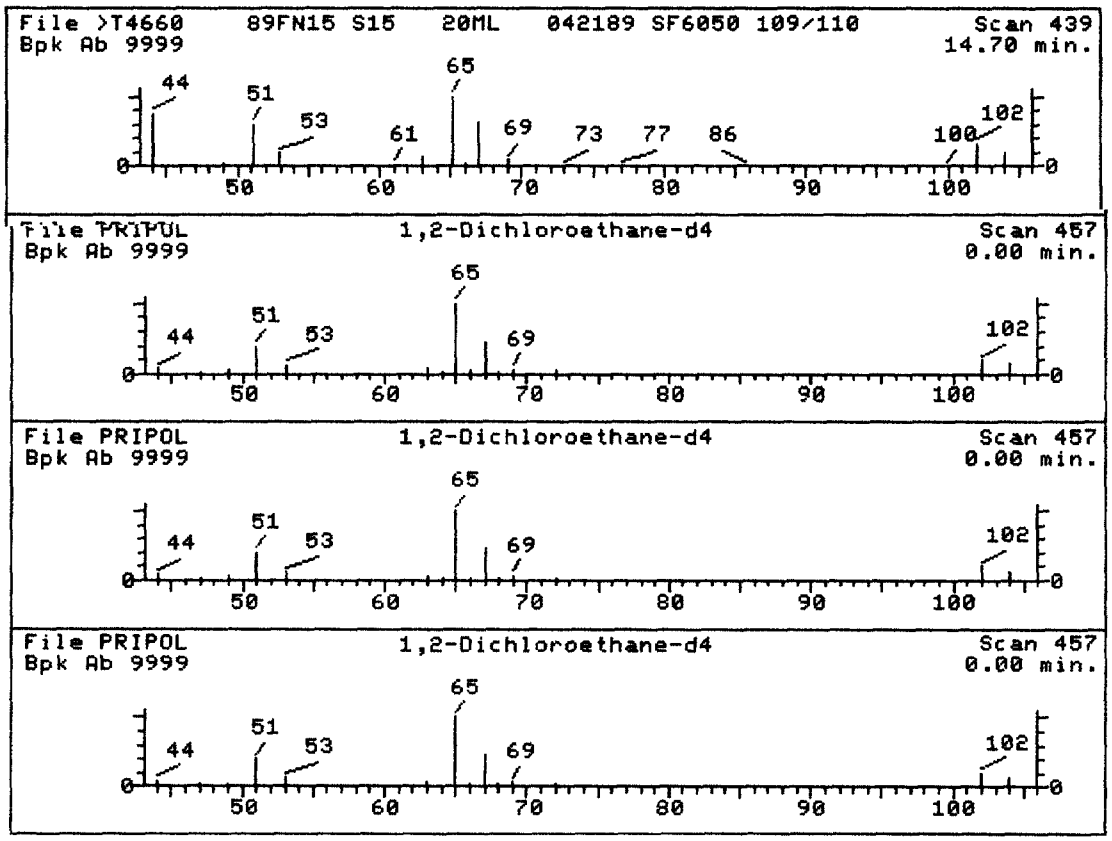

File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 298
Bpk Ab 9999 10.45 min.
44
76
78
0
48 52 56 60 64 68 72 76
File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 298
Bpk Ab 9999 10.45 min.
44
76
78
0
48 52 56 60 64 68 72 76
File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 298
Bpk Ab 9999 10.45 min.
44
76
78
0
48 52 56 60 64 68 72 76
File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 298
Bpk Ab 9999 10.45 min.
44
76
78
0
48 52 56 60 64 68 72 76

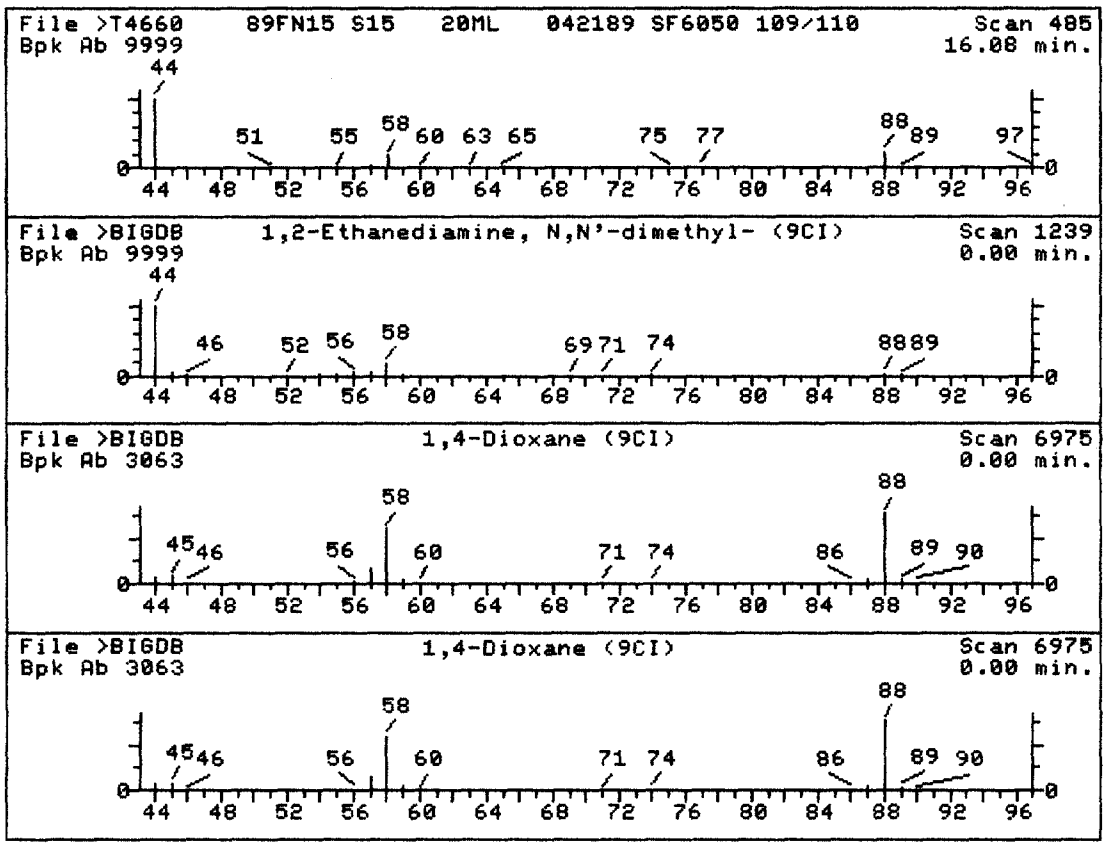

File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 346
Bpk Ab 9999 11.90 min.
49
51
64 65 75 79 91 93 116
130
0
50 60 70 80 90 100 110 120 130
File >BIGDB Methane, bromochloro- (8CI9CI) Scan 13907
Bpk Ab 9999 0.00 min.
49
51
64 65 81 91 93 100 116 120
130
0
50 60 70 80 90 100 110 120 130
File >BIGDB Methane, bromochloro- (8CI9CI) Scan 13907
Bpk Ab 9999 0.00 min.
49
51
64 65 81 91 93 100 116 120
130
0
50 60 70 80 90 100 110 120 130
File >BIGDB Methane, bromochloro- (8CI9CI) Scan 13907
Bpk Ab 9999 0.00 min.
49
51
64 65 81 91 93 100 116 120
130
0
50 60 70 80 90 100 110 120 130

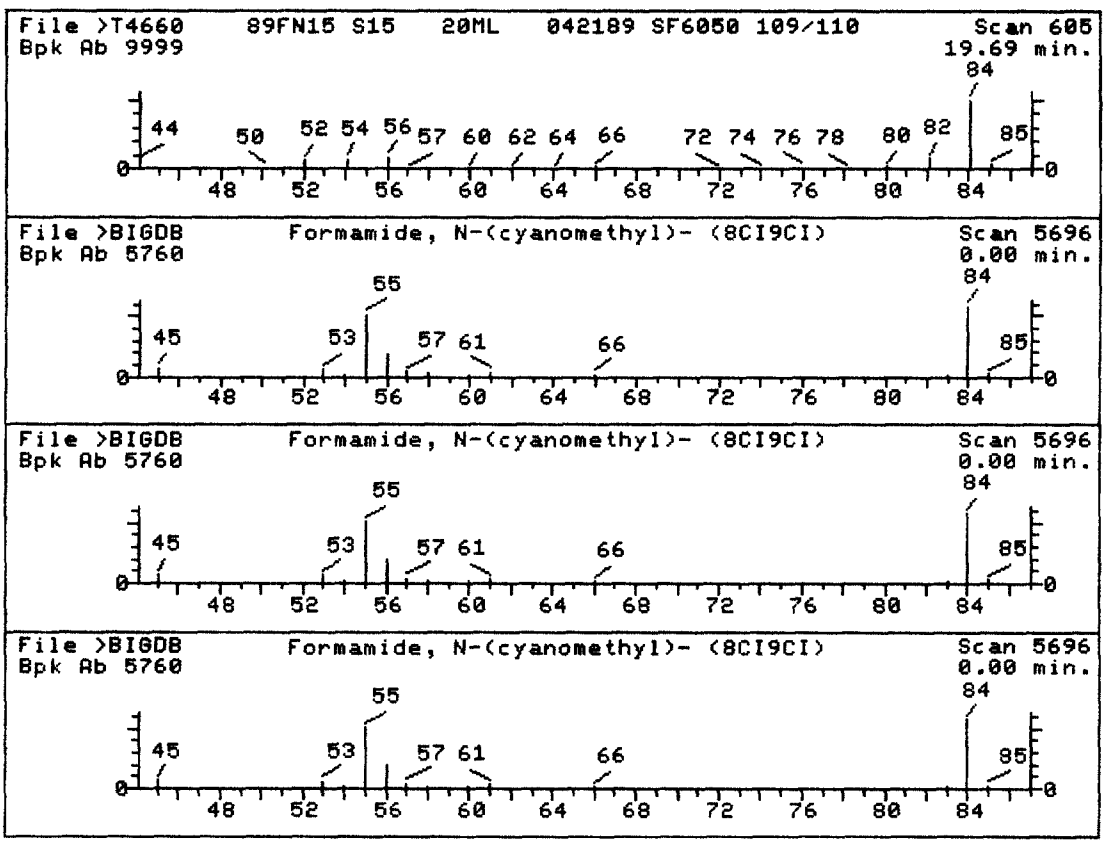

File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 377
Bpk Ab 9999 12.83 min.
44
63
65
72
77
83
95
98
0
50 60 70 80 90 100 110 120
File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 377
Bpk Ab 9999 12.83 min.
44
63
65
72
77
83
95
98
0
50 60 70 80 90 100 110 120
File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 377
Bpk Ab 9999 12.83 min.
44
63
65
72
77
83
95
98
0
50 60 70 80 90 100 110 120
File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 377
Bpk Ab 9999 12.83 min.
44
63
65
72
77
83
95
98
0
50 60 70 80 90 100 110 120


File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 393
Bpk Ab 9999 13.31 min.
44
59
5153
56
57
60
64
0
44 48 52 56 60 64 68 72 76
File >BIGDB Ethanamine, N-methyl- (9CI) Scan 1585
Bpk Ab 9999 0.00 min.
44
45
56
58
59
60
0
44 48 52 56 60 64 68 72 76
File >BIGDB Ethanamine, N-methyl- (9CI) Scan 1585
Bpk Ab 9999 0.00 min.
44
45
56
58
59
60
0
44 48 52 56 60 64 68 72 76
File >BIGDB Ethanamine, N-methyl- (9CI) Scan 1585
Bpk Ab 9999 0.00 min.
44
45
56
58
59
60
0
44 48 52 56 60 64 68 72 76

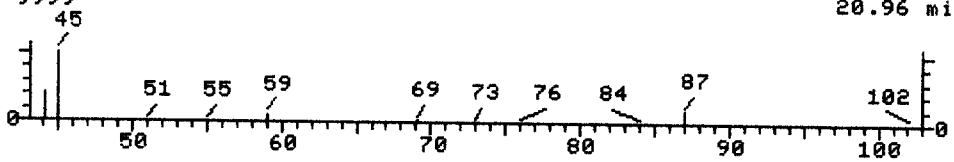

File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 416
Bpk Ab 9999 14.00 min.
44 59 60 74 77
File >BIGDB Ethyl ether (8CI) Scan 1612
Bpk Ab 3965 0.00 min.
45 59 60 74 75
File >BIGDB Diazene, dimethyl-, 1-oxide (9CI) Scan 4423
Bpk Ab 9999 0.00 min.
45 57 74
File >BIGDB Acetamide (8CI9CI) Scan 1577
Bpk Ab 9999 0.00 min.
44 51 59 60 61
50 60 70 80 90 100 110


File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 439
Bpk Ab 9999 14.70 min.
44 51 53 61 65 69 73 77 86 100 102
File PRIPOL 1,2-Dichloroethane-d4 Scan 457
Bpk Ab 9999 0.00 min.
44 51 53 65 69 102
File PRIPOL 1,2-Dichloroethane-d4 Scan 457
Bpk Ab 9999 0.00 min.
44 51 53 65 69 102
File PRIPOL 1,2-Dichloroethane-d4 Scan 457
Bpk Ab 9999 0.00 min.
44 51 53 65 69 102
50 60 70 80 90 100

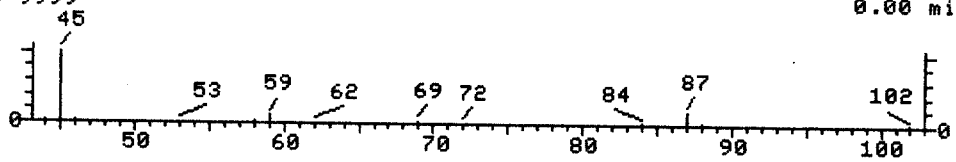

File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 485
Bpk Ab 9999 16.08 min.
File >BIGDB 1,2-Ethanediamine, N,N'-dimethyl- (9CI) Scan 1239
Bpk Ab 9999 0.00 min.
File >BIGDB 1,4-Dioxane (9CI) Scan 6975
Bpk Ab 3063 0.00 min.
File >BIGDB 1,4-Dioxane (9CI) Scan 6975
Bpk Ab 3063 0.00 min.


File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 605
Bpk Ab 9999 19.69 min.
File >BIGDB Formamide, N-(cyanomethyl)- (8CI9CI) Scan 5696
Bpk Ab 5760 0.00 min.
File >BIGDB Formamide, N-(cyanomethyl)- (8CI9CI) Scan 5696
Bpk Ab 5760 0.00 min.
File >BIGDB Formamide, N-(cyanomethyl)- (8CI9CI) Scan 5696
Bpk Ab 5760 0.00 min.

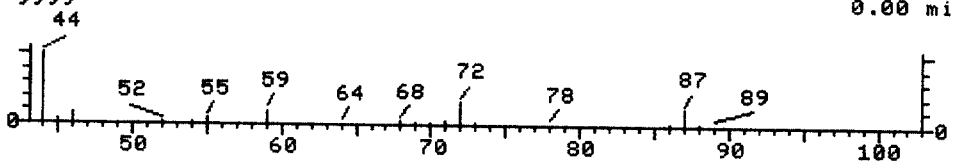
File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 647
Bpk Ab 9999 20.96 min.



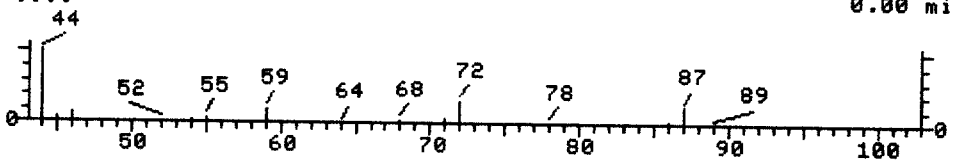
File >BIGDB Diisopropyl ether (2CI) Scan 6567
Bpk Ab 9999 0.00 min.



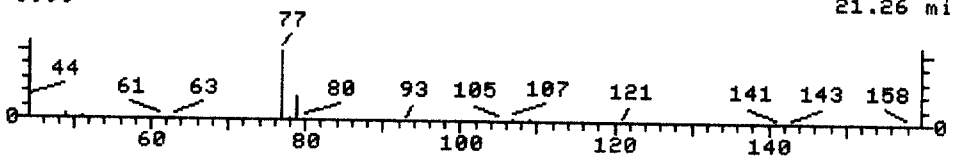
File >BIGDB Propanamide, 2-methyl- (9CI) Scan 6578
Bpk Ab 9999 0.00 min.



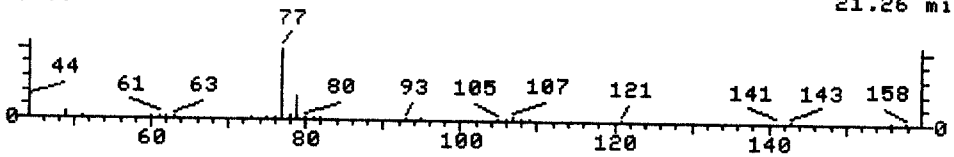
File >BIGDB Propanamide, 2-methyl- (9CI) Scan 6578
Bpk Ab 9999 0.00 min.



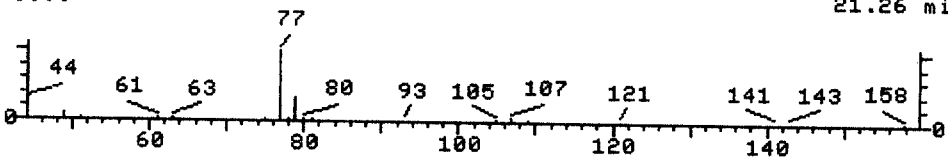
File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 657
Bpk Ab 9999 21.26 min.



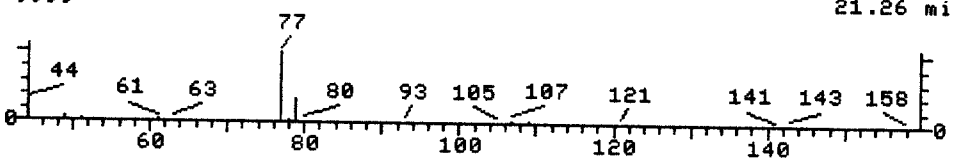
File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 657
Bpk Ab 9999 21.26 min.



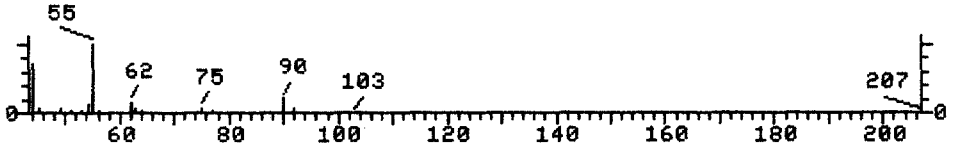
File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 657
Bpk Ab 9999 21.26 min.



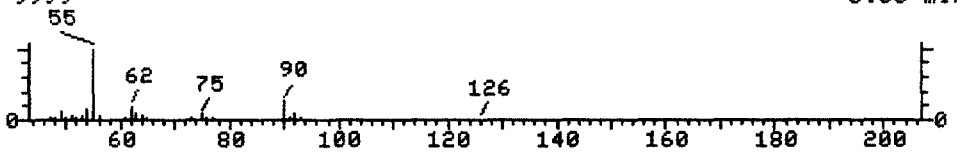
File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 657
Bpk Ab 9999 21.26 min.



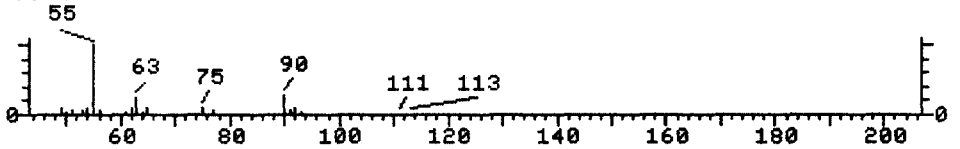
File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 793
Bpk Ab 9999 25.35 min.



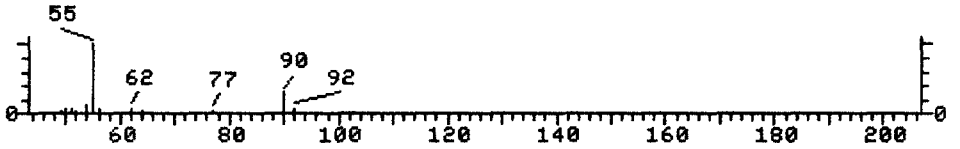
File >BIGDB Butane, 1,4-dichloro- (8CI9CI) Scan 2172
Bpk Ab 9999 0.00 min.



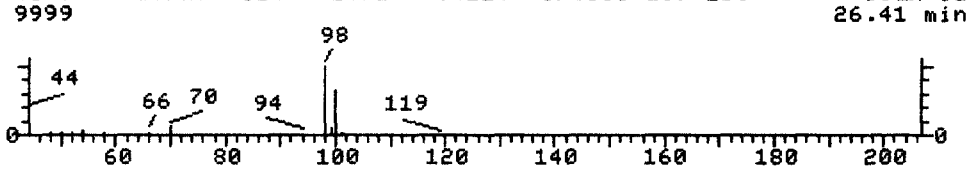
File >BIGDB Butane, 1,3-dichloro- (8CI9CI) Scan 7517
Bpk Ab 9999 0.00 min.



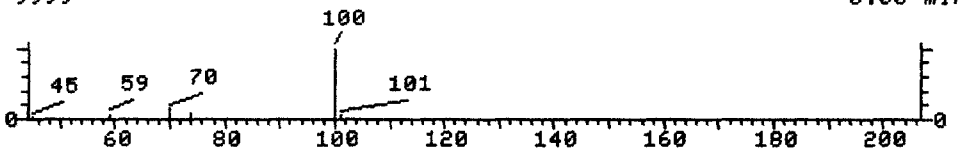
File >BIGDB 2-Butene, 1-chloro- (8CI9CI) Scan 7515
Bpk Ab 9999 0.00 min.



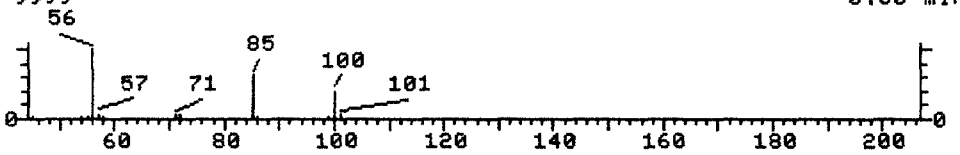
File >T4660 89FN15 S15 20ML 042189 SF6050 109/110 Scan 828
Bpk Ab 9999 26.41 min.



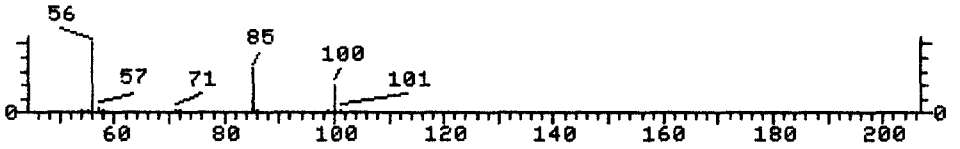
File >BIGDB Sydnone, 3-methyl- (8CI9CI) Scan 9097
Bpk Ab 9999 0.00 min.



File >BIGDB 2-Propanone, ethylhydrazone (9CI) Scan 9102
Bpk Ab 9999 0.00 min.



File >BIGDB 2-Propanone, ethylhydrazone (9CI) Scan 9102
Bpk Ab 9999 0.00 min.



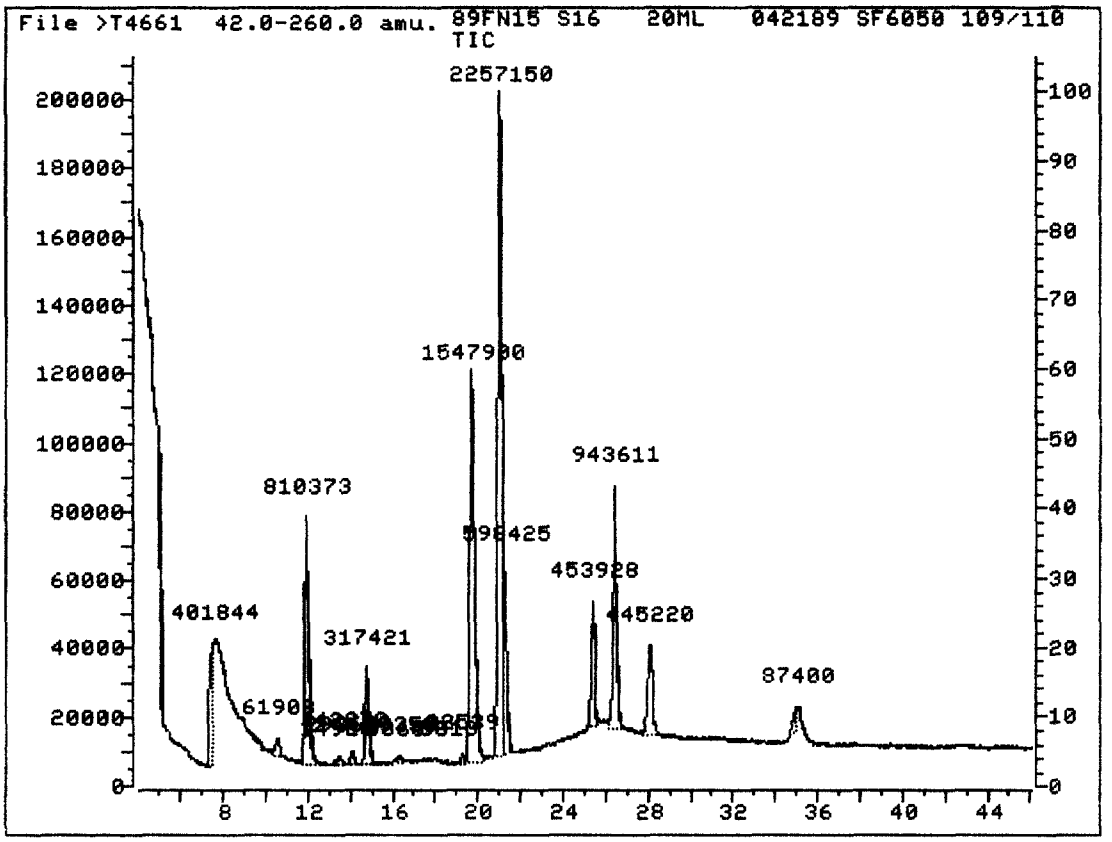
>T4661 89FN15 S16 20ML 042189 SF6050 109/110
42.01 260.0 TIC
Upslope: .20 Area Reject: .20 % Max Peaks: 18 Bunching: 1
Dnslope: 0.00 Results File VDIR92 Sorted by Area/Area INT

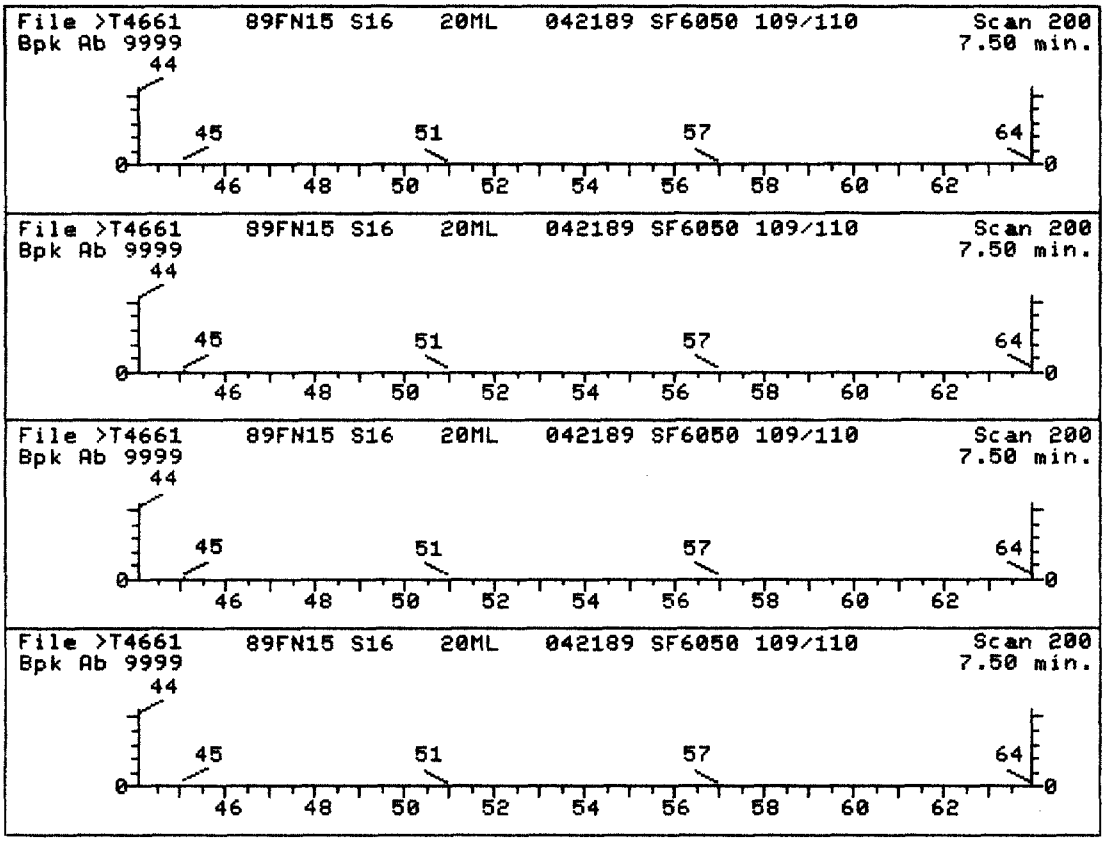
	Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
unknown	1	20.96	638	647	653	193680	2491011	2257158	100.00	27.94
	2	19.69	596	605	623	114070	1895490	1547905	68.58	19.16
	3	26.41	819	828	843	70579	1664093	943611	41.81	11.68
	4	11.90	338	346	366	71875	1139403	810373	35.90	10.03
	5	21.23	653	656	670	55206	887805	598425	26.51	7.41
	6	25.35	786	793	802	36751	957559	453928	20.11	5.62
	7	28.03	873	882	897	26504	1083341	445220	19.72	5.51
	8	7.50	191	200	200	35606	496008	401844	17.80	4.97
	9	14.72	433	440	453	28380	536302	317421	14.06	3.93
	10	34.96	1103	1112	1113	7659	367923	87400	3.87	1.08
	11	10.48	294	299	309	4828	299515	61908	2.74	.76
	12	14.00	410	416	424	3910	195099	42870	1.90	.53
	13	19.21	581	589	594	2718	183005	32539	1.44	.40
	14	13.49	394	399	406	2757	162820	29363	1.30	.36
	15	16.29	488	492	497	2067	133461	19358	.86	.24
	16	13.25	386	391	394	1585	102164	14928	.66	.18
	17	16.05	480	484	485	935	66303	5865	.26	.07
	18	18.52	564	566	572	878	98583	5813	.26	.07

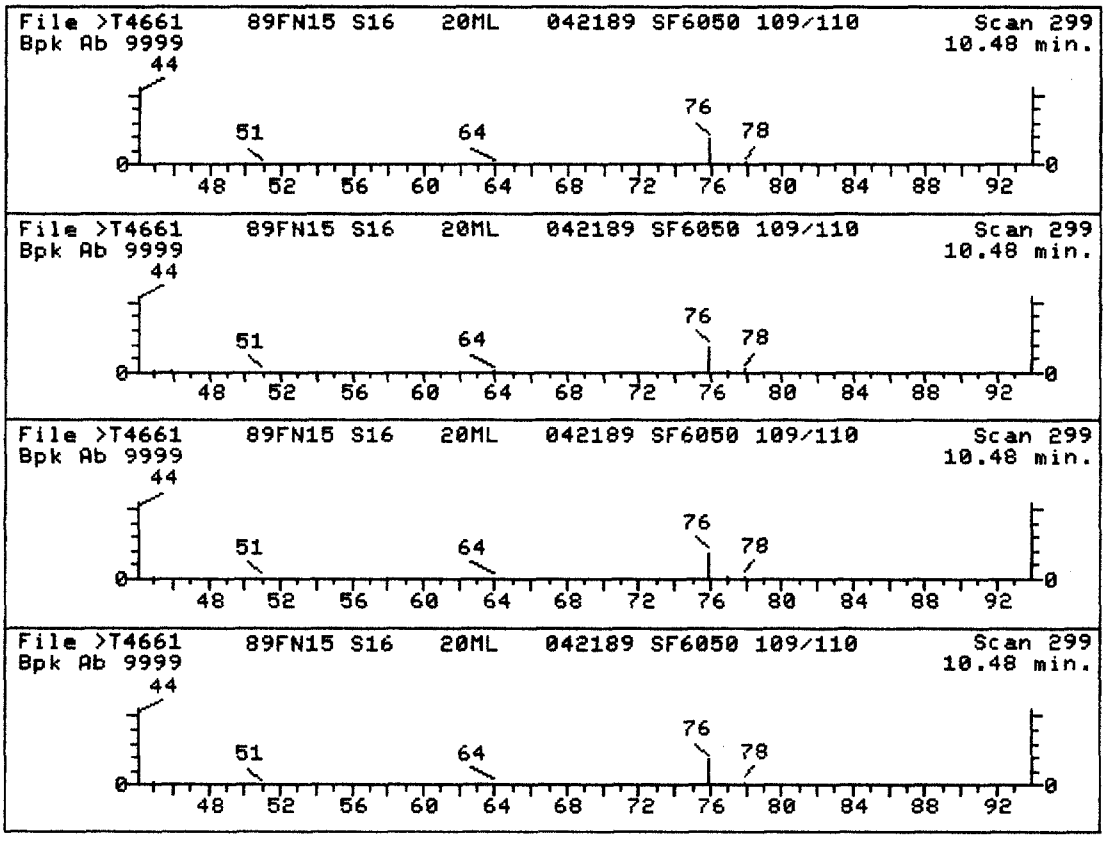
Sum of corrected areas: 8075929.

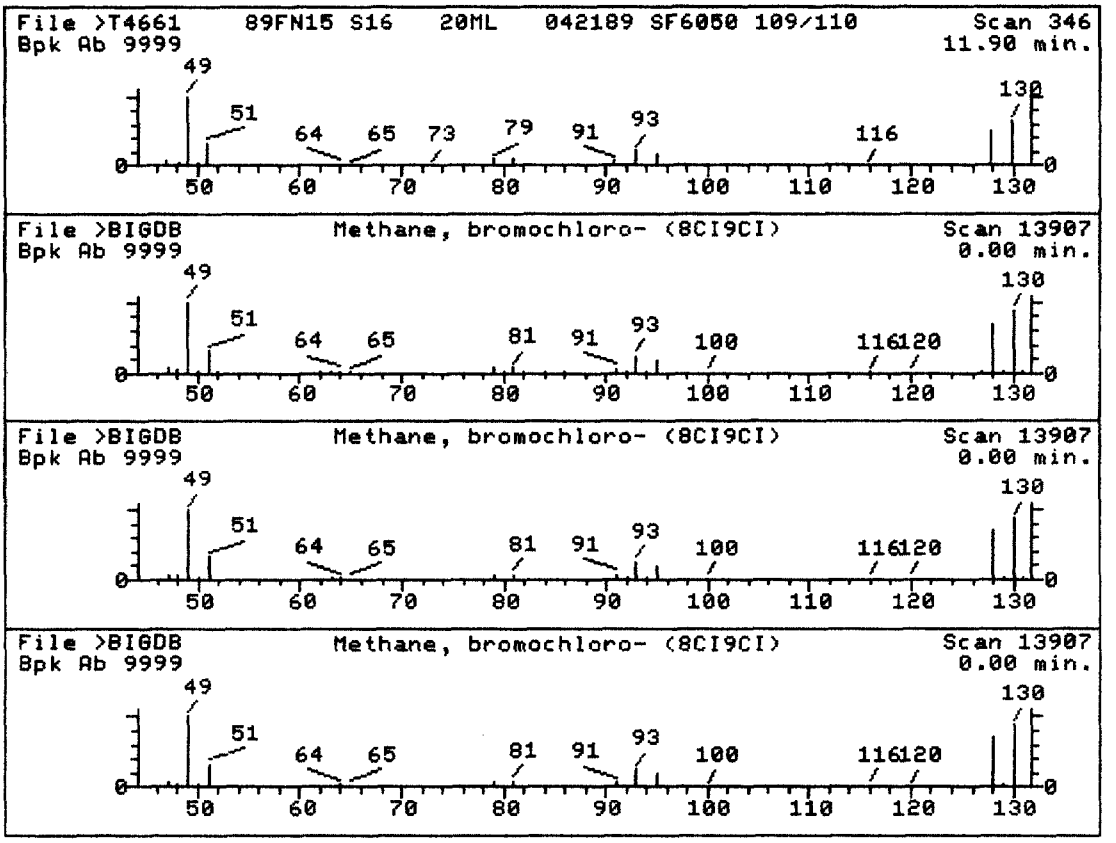
unknown 1. (Diisopropylether) RT. 20.96 Scan # 647. CONC

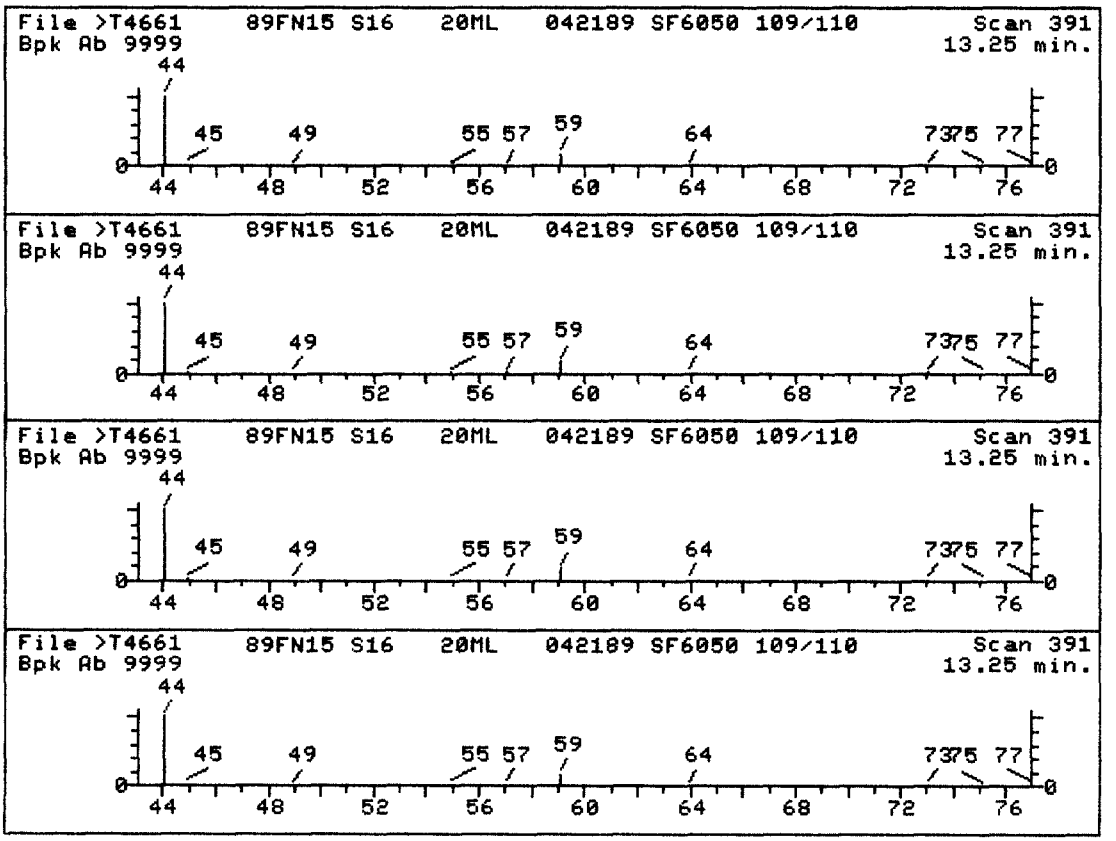
$\frac{2257158}{598425} \times 10 = 37.7$ PPB (38

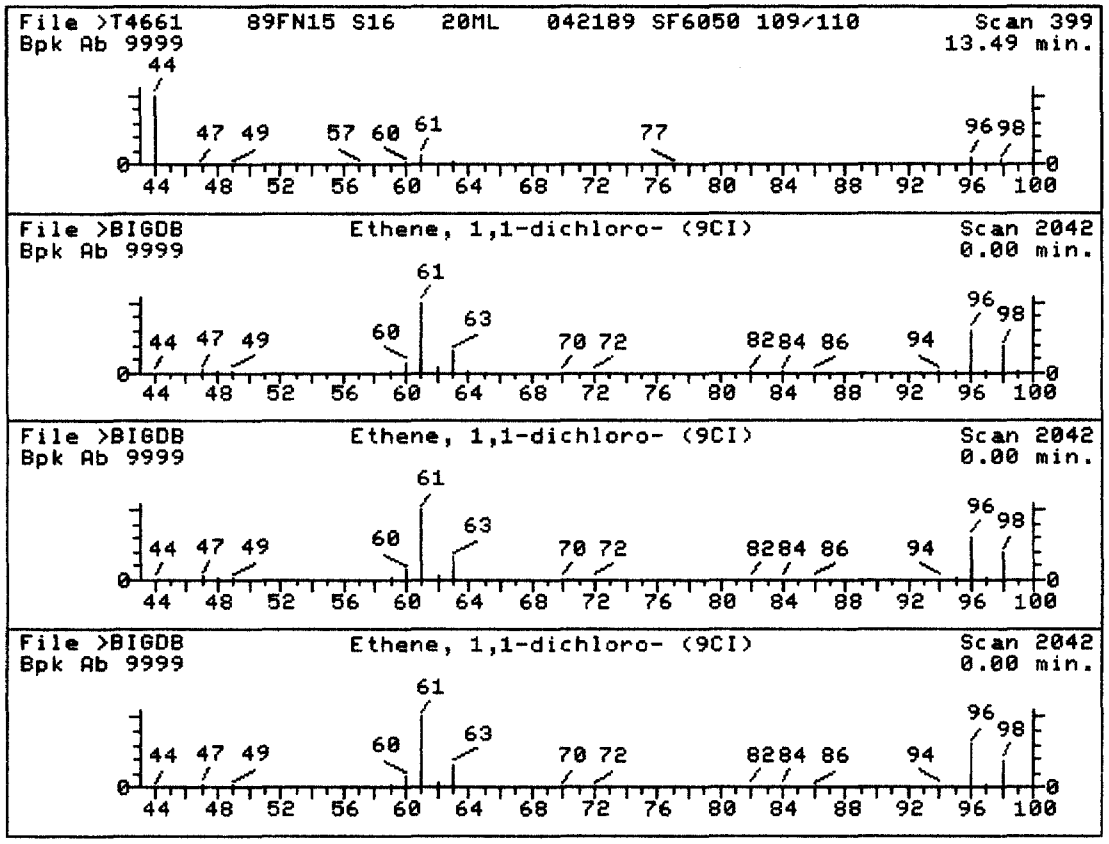

File >T4661 42.0-260.0 amu. 89FN15 S16 20ML 042189 SF6050 109/110
TIC
2257150
1547900
943611
810373
598425
453928
445220
401844
317421
87400
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
100
90
80
70
60
50
40
30
20
10
0
8
12
16
20
24
28
32
36
40
44

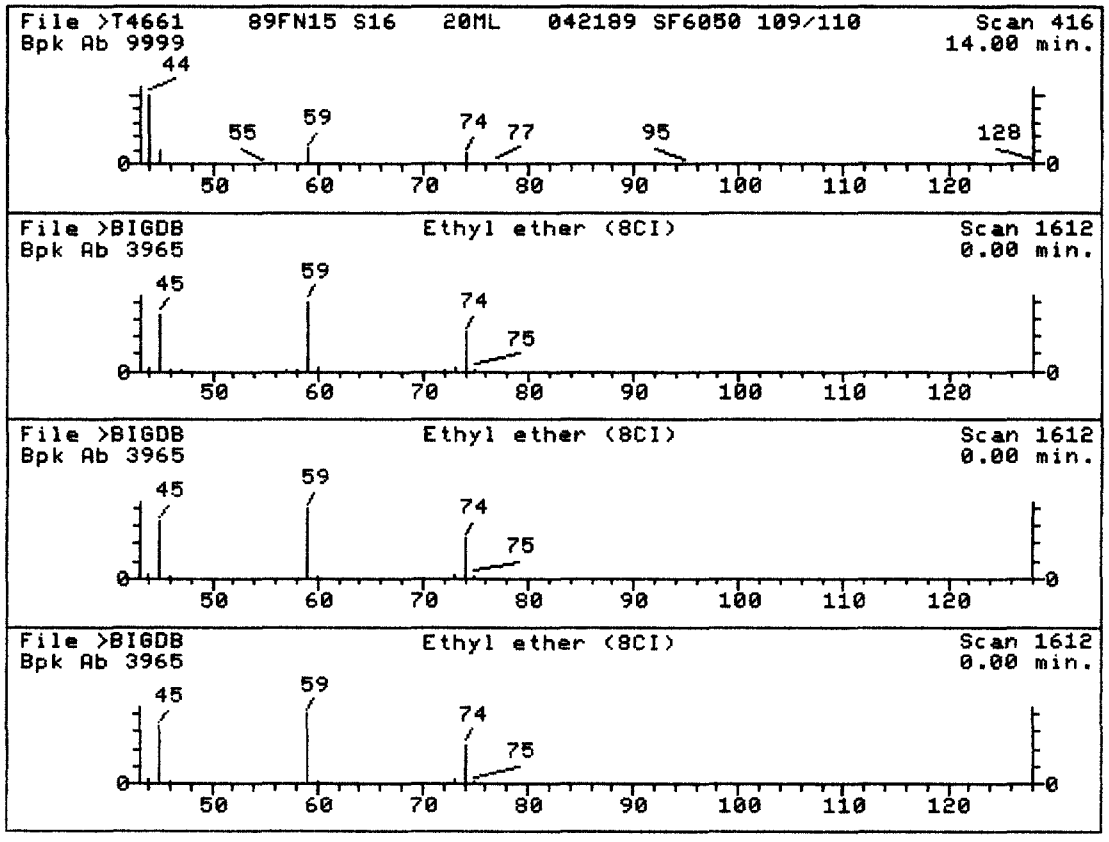

File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 200
Bpk Ab 9999 7.50 min.
44
45
51
57
64
0
46 48 50 52 54 56 58 60 62
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 200
Bpk Ab 9999 7.50 min.
44
45
51
57
64
0
46 48 50 52 54 56 58 60 62
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 200
Bpk Ab 9999 7.50 min.
44
45
51
57
64
0
46 48 50 52 54 56 58 60 62
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 200
Bpk Ab 9999 7.50 min.
44
45
51
57
64
0
46 48 50 52 54 56 58 60 62

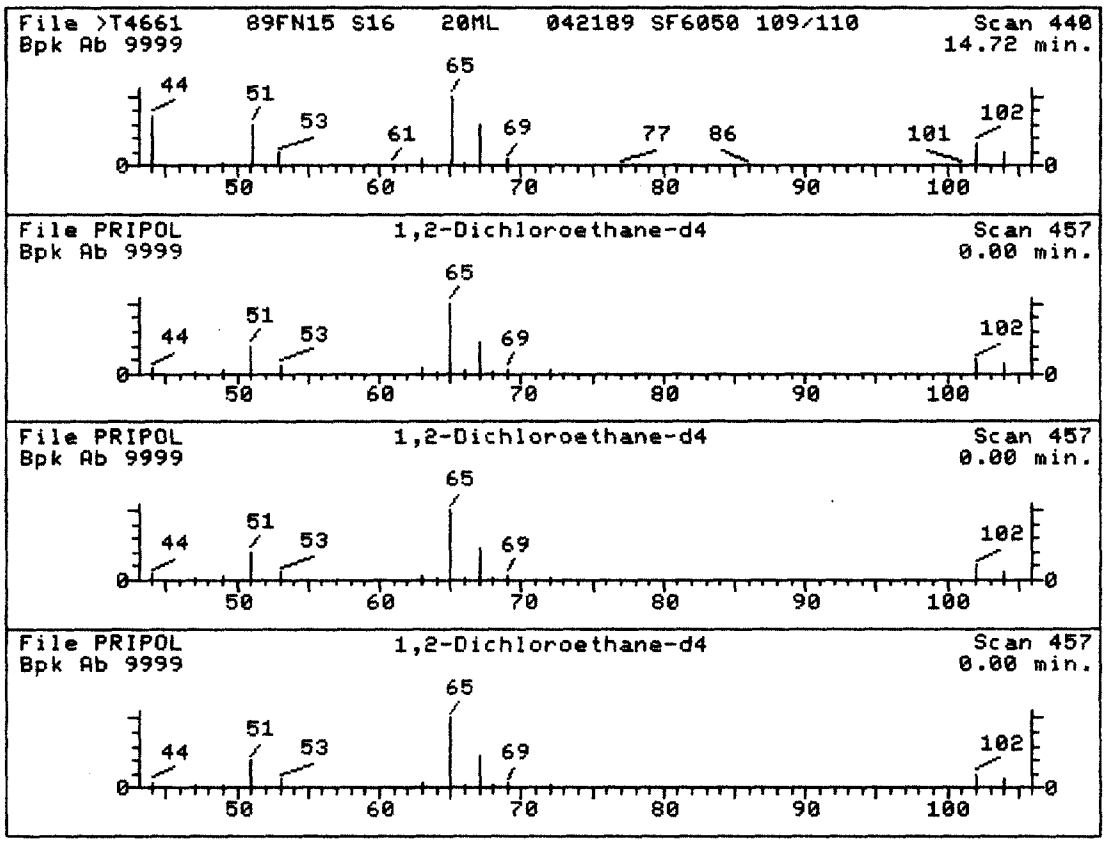

File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 299
Bpk Ab 9999 10.48 min.
44
51
64
76
78
0
48 52 56 60 64 68 72 76 80 84 88 92
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 299
Bpk Ab 9999 10.48 min.
44
51
64
76
78
0
48 52 56 60 64 68 72 76 80 84 88 92
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 299
Bpk Ab 9999 10.48 min.
44
51
64
76
78
0
48 52 56 60 64 68 72 76 80 84 88 92
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 299
Bpk Ab 9999 10.48 min.
44
51
64
76
78
0
48 52 56 60 64 68 72 76 80 84 88 92

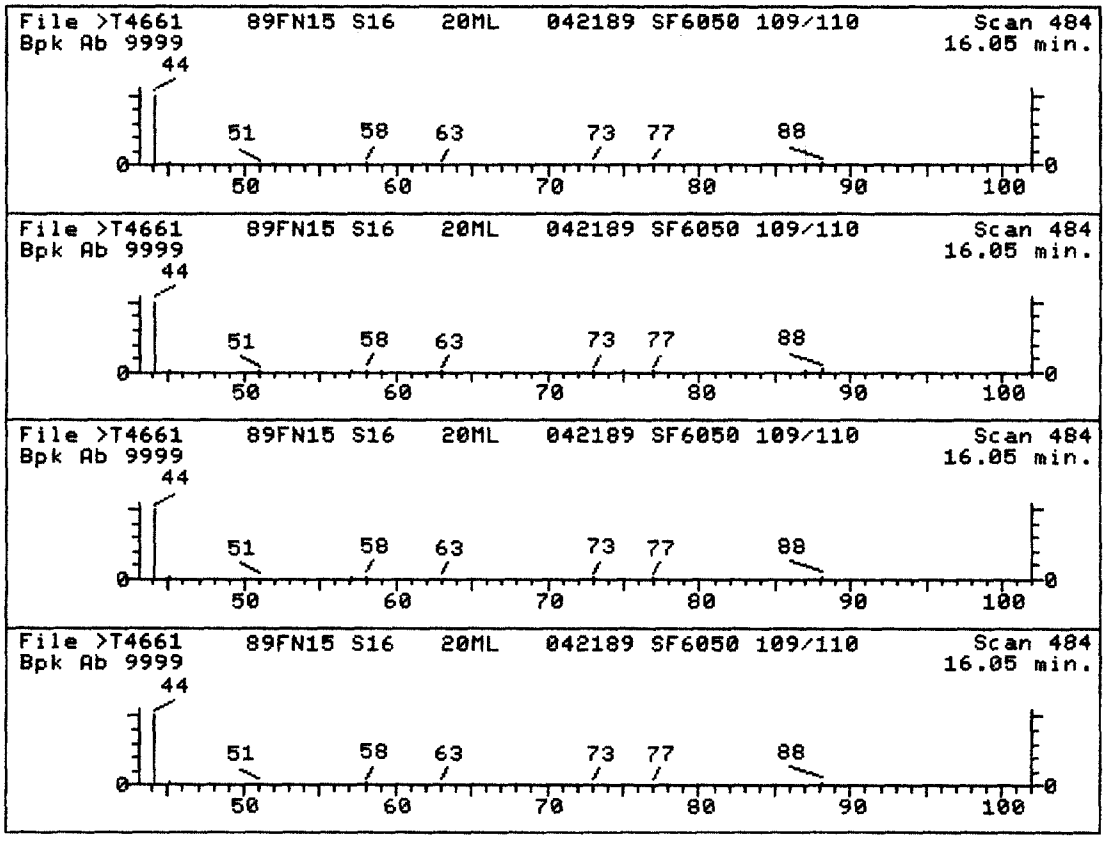

File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 346
Bpk Ab 9999 11.90 min.
File >BIGDB Methane, bromochloro- (8CI9CI) Scan 13907
Bpk Ab 9999 0.00 min.
File >BIGDB Methane, bromochloro- (8CI9CI) Scan 13907
Bpk Ab 9999 0.00 min.
File >BIGDB Methane, bromochloro- (8CI9CI) Scan 13907
Bpk Ab 9999 0.00 min.

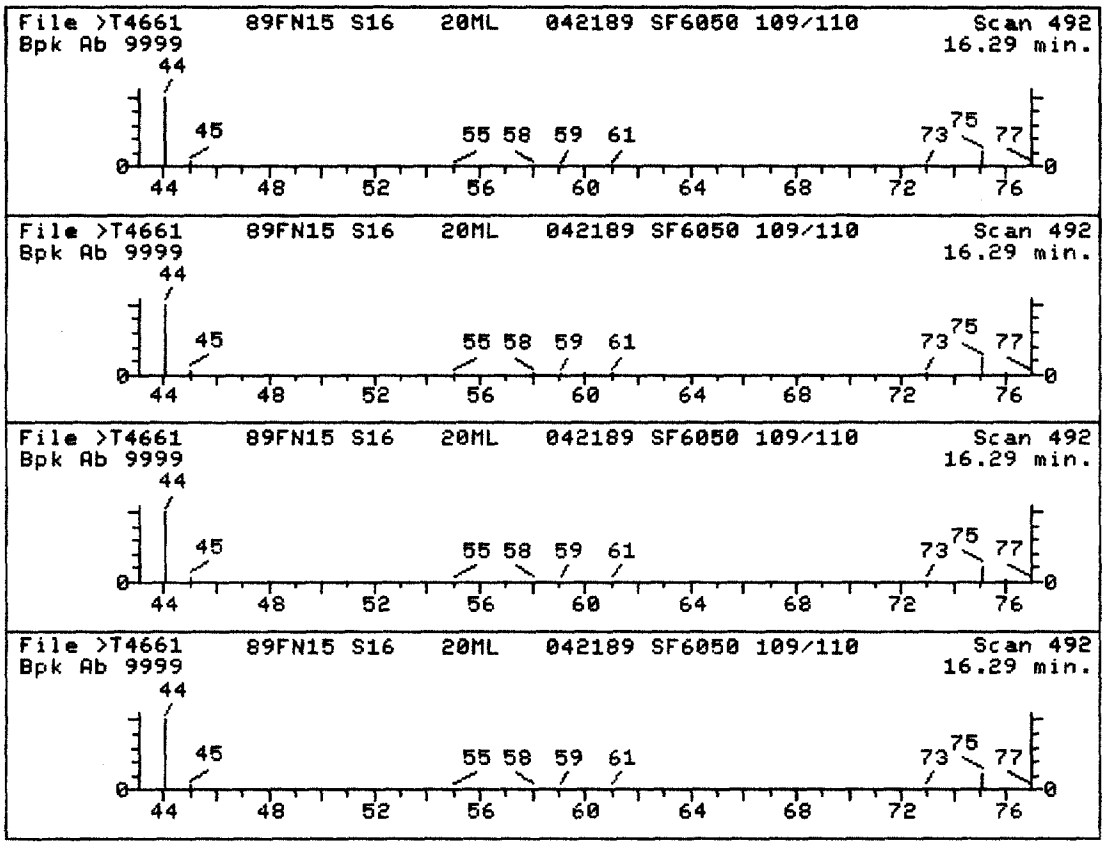

File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 391
Bpk Ab 9999 13.25 min.
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 391
Bpk Ab 9999 13.25 min.
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 391
Bpk Ab 9999 13.25 min.
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 391
Bpk Ab 9999 13.25 min.

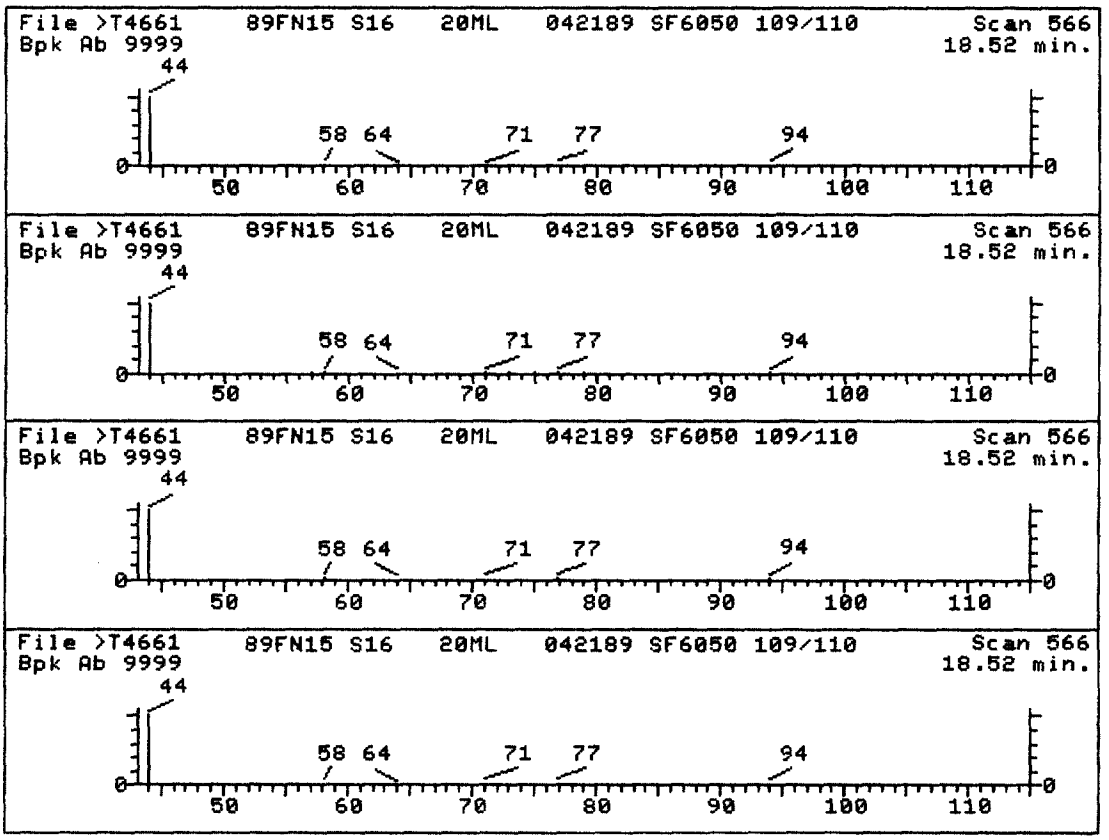

File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 399
Bpk Ab 9999 13.49 min.
44 47 49 57 60 61 77 96 98
File >BIGDB Ethene, 1,1-dichloro- (9CI) Scan 2042
Bpk Ab 9999 0.00 min.
61 44 47 49 60 63 70 72 82 84 86 94 96 98
File >BIGDB Ethene, 1,1-dichloro- (9CI) Scan 2042
Bpk Ab 9999 0.00 min.
61 44 47 49 60 63 70 72 82 84 86 94 96 98
File >BIGDB Ethene, 1,1-dichloro- (9CI) Scan 2042
Bpk Ab 9999 0.00 min.
61 44 47 49 60 63 70 72 82 84 86 94 96 98

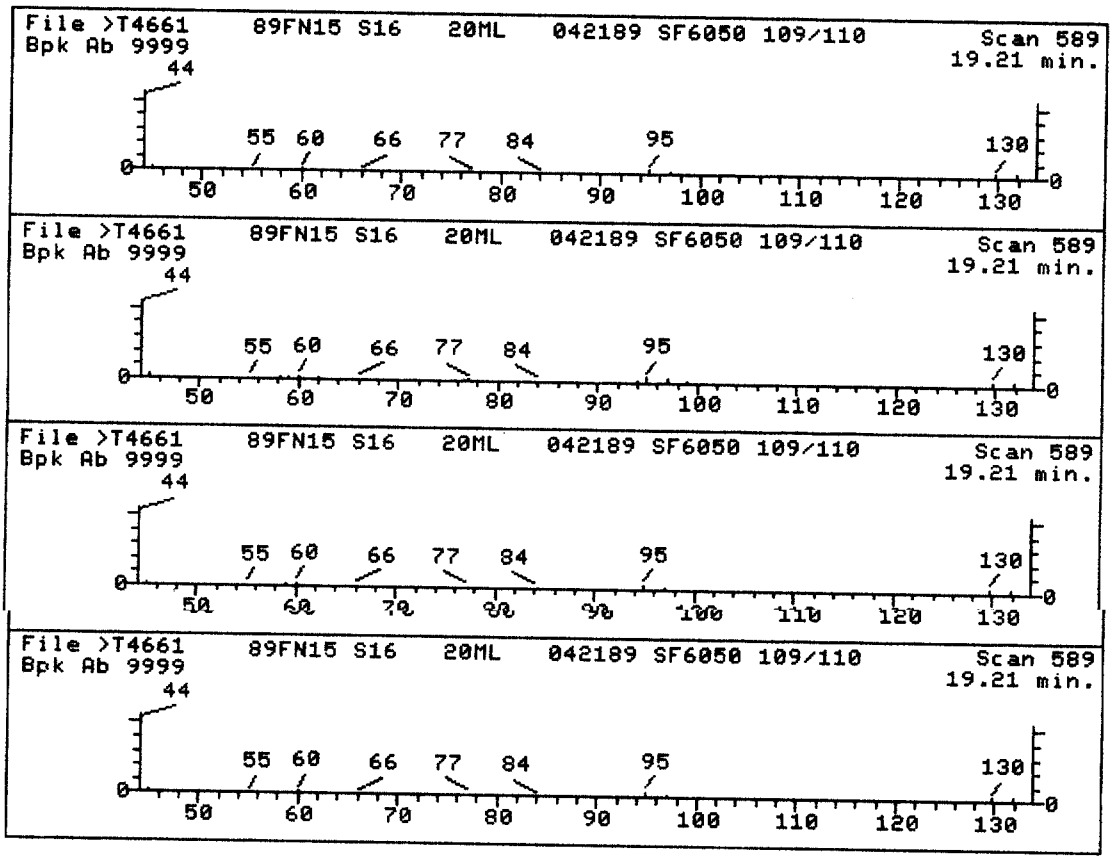

File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 416
Bpk Ab 9999 14.00 min.
44 55 59 74 77 95 128
File >BIGDB Ethyl ether (8CI) Scan 1612
Bpk Ab 3965 0.00 min.
45 59 74 75
File >BIGDB Ethyl ether (8CI) Scan 1612
Bpk Ab 3965 0.00 min.
45 59 74 75
File >BIGDB Ethyl ether (8CI) Scan 1612
Bpk Ab 3965 0.00 min.
45 59 74 75

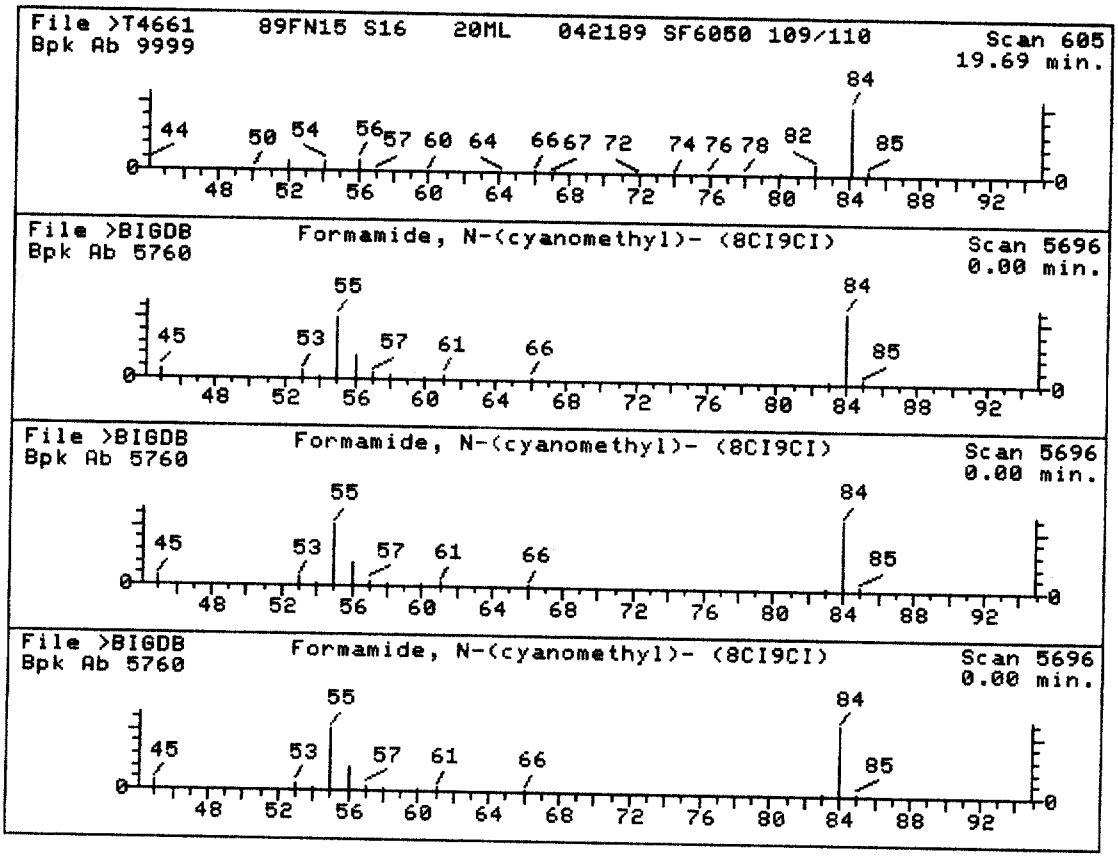

File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 440
Bpk Ab 9999 14.72 min.
44 51 53 61 65 69 77 86 101 102
File PRIPOL 1,2-Dichloroethane-d4 Scan 457
Bpk Ab 9999 0.00 min.
44 51 53 65 69 102
File PRIPOL 1,2-Dichloroethane-d4 Scan 457
Bpk Ab 9999 0.00 min.
44 51 53 65 69 102
File PRIPOL 1,2-Dichloroethane-d4 Scan 457
Bpk Ab 9999 0.00 min.
44 51 53 65 69 102
0 50 60 70 80 90 100


File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 484
Bpk Ab 9999 16.05 min.
44 51 58 63 73 77 88
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 484
Bpk Ab 9999 16.05 min.
44 51 58 63 73 77 88
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 484
Bpk Ab 9999 16.05 min.
44 51 58 63 73 77 88
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 484
Bpk Ab 9999 16.05 min.
44 51 58 63 73 77 88
0 50 60 70 80 90 100

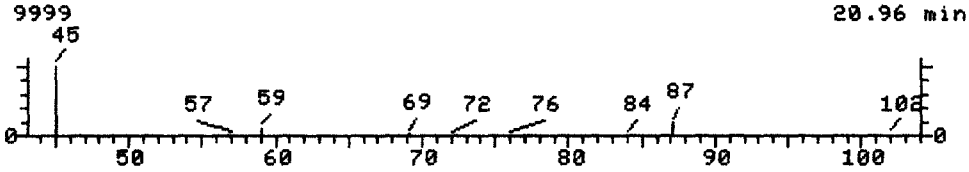

File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 492
Bpk Ab 9999 16.29 min.
44 45 55 58 59 61 73 75 77
0 44 48 52 56 60 64 68 72 76 0
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 492
Bpk Ab 9999 16.29 min.
44 45 55 58 59 61 73 75 77
0 44 48 52 56 60 64 68 72 76 0
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 492
Bpk Ab 9999 16.29 min.
44 45 55 58 59 61 73 75 77
0 44 48 52 56 60 64 68 72 76 0
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 492
Bpk Ab 9999 16.29 min.
44 45 55 58 59 61 73 75 77
0 44 48 52 56 60 64 68 72 76 0


File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 566
Bpk Ab 9999 18.52 min.
44 58 64 71 77 94
0 50 60 70 80 90 100 110 0
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 566
Bpk Ab 9999 18.52 min.
44 58 64 71 77 94
0 50 60 70 80 90 100 110 0
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 566
Bpk Ab 9999 18.52 min.
44 58 64 71 77 94
0 50 60 70 80 90 100 110 0
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 566
Bpk Ab 9999 18.52 min.
44 58 64 71 77 94
0 50 60 70 80 90 100 110 0

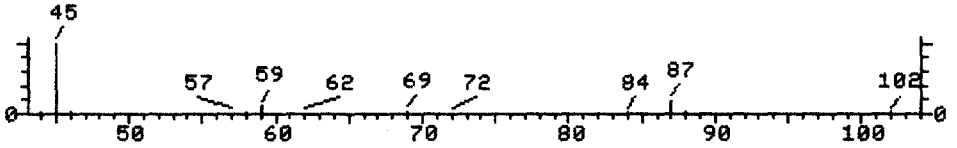

File >T4661 89FN15 S16 20ML 042189 SF6050 109/110
Bpk Ab 9999
Scan 589
19.21 min.
44
55 60 66 77 84 95 130
0 50 60 70 80 90 100 110 120 130
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110
Bpk Ab 9999
Scan 589
19.21 min.
44
55 60 66 77 84 95 130
0 50 60 70 80 90 100 110 120 130
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110
Bpk Ab 9999
Scan 589
19.21 min.
44
55 60 66 77 84 95 130
0 50 60 70 80 90 100 110 120 130
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110
Bpk Ab 9999
Scan 589
19.21 min.
44
55 60 66 77 84 95 130
0 50 60 70 80 90 100 110 120 130


File >T4661 89FN15 S16 20ML 042189 SF6050 109/110
Bpk Ab 9999
Scan 605
19.69 min.
84
44 50 54 56 57 60 64 66 67 72 74 76 78 82 85
0 48 52 56 60 64 68 72 76 80 84 88 92
File >BIGDB Formamide, N-(cyanomethyl)- (8CI9CI)
Bpk Ab 5760
Scan 5696
0.00 min.
55 84
45 53 57 61 66 85
0 48 52 56 60 64 68 72 76 80 84 88 92
File >BIGDB Formamide, N-(cyanomethyl)- (8CI9CI)
Bpk Ab 5760
Scan 5696
0.00 min.
55 84
45 53 57 61 66 85
0 48 52 56 60 64 68 72 76 80 84 88 92
File >BIGDB Formamide, N-(cyanomethyl)- (8CI9CI)
Bpk Ab 5760
Scan 5696
0.00 min.
55 84
45 53 57 61 66 85
0 48 52 56 60 64 68 72 76 80 84 88 92

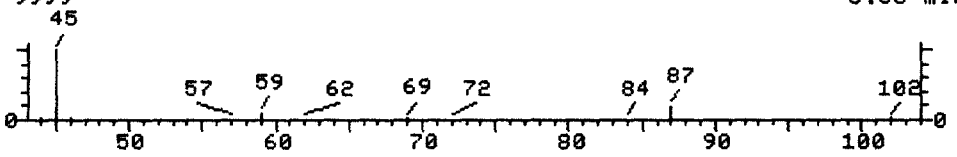
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 647
Bpk Ab 9999 20.96 min.



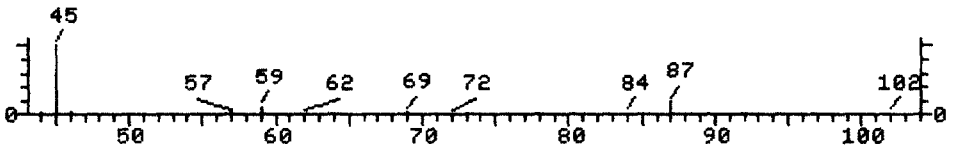
File >BIGDB Diisopropyl ether (DOT) Scan 6567
Bpk Ab 9999 0.00 min.



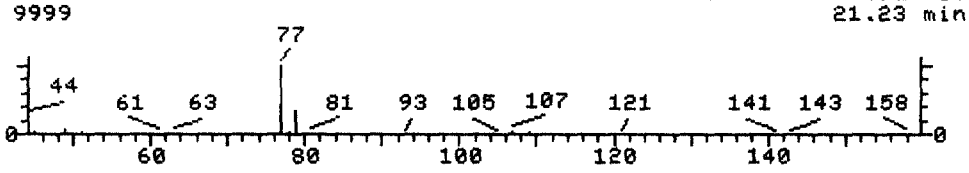
File >BIGDB Diisopropyl ether (DOT) Scan 6567
Bpk Ab 9999 0.00 min.



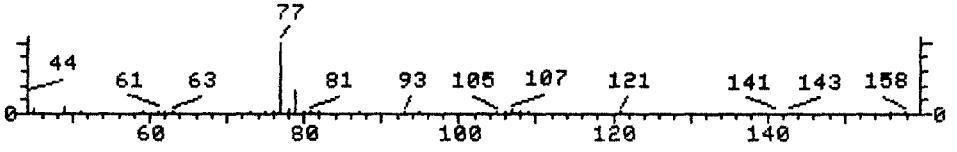
File >BIGDB Diisopropyl ether (DOT) Scan 6567
Bpk Ab 9999 0.00 min.



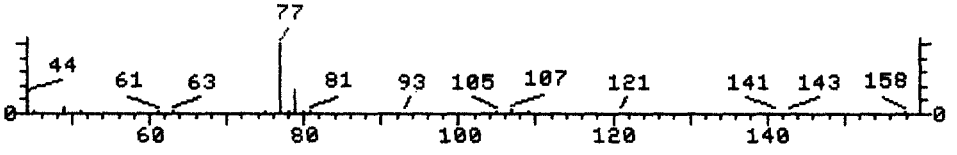
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 656
Bpk Ab 9999 21.23 min.



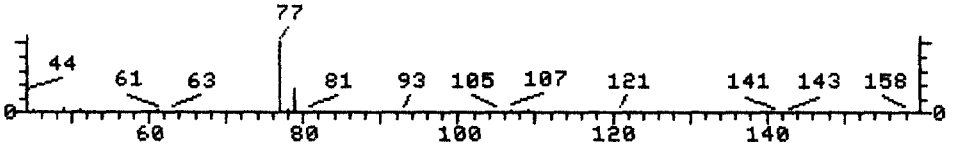
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 656
Bpk Ab 9999 21.23 min.



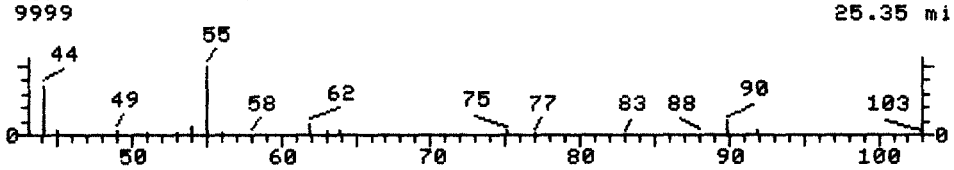
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 656
Bpk Ab 9999 21.23 min.



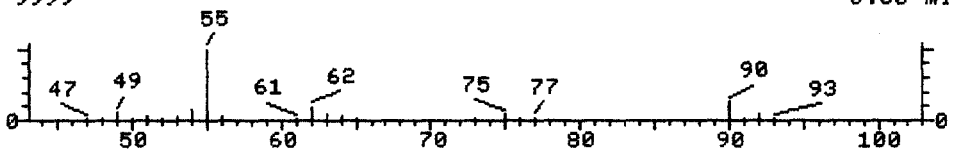
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 656
Bpk Ab 9999 21.23 min.



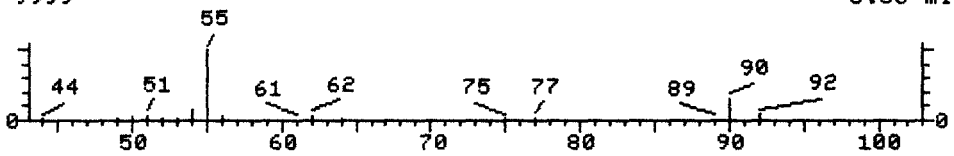
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 793
Bpk Ab 9999 25.35 min.



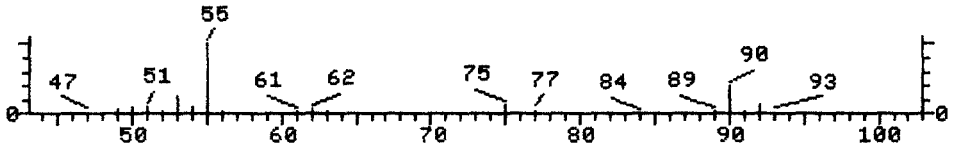
File >BIGDB Butane, 1,4-dichloro- (8CI9CI) Scan 2172
Bpk Ab 9999 0.00 min.



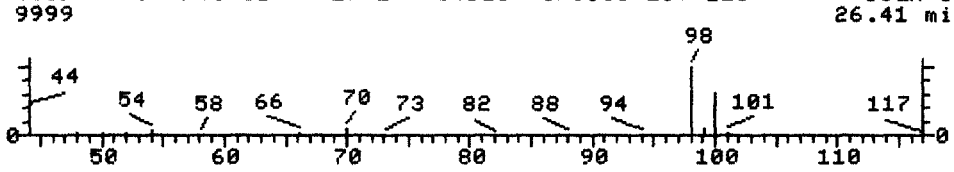
File >BIGDB 2-Butene, 1-chloro- (8CI9CI) Scan 7515
Bpk Ab 9999 0.00 min.



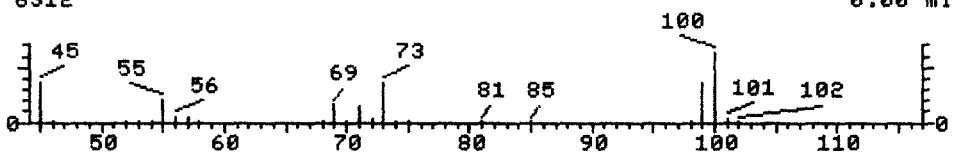
File >BIGDB 2-Butene, 2-chloro- (8CI9CI) Scan 7520
Bpk Ab 9999 0.00 min.



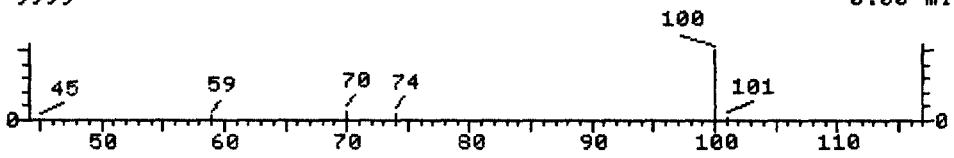
File >T4661 89FN15 S16 20ML 042189 SF6050 109/110 Scan 828
Bpk Ab 9999 26.41 min.



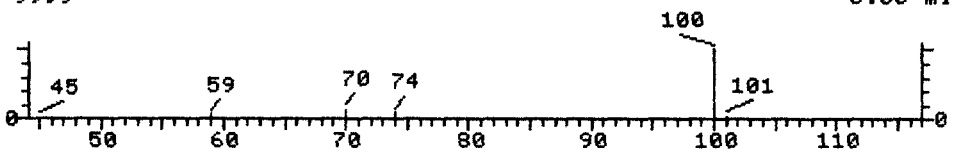
File >BIGDB 5H-1,4-Dioxepin, 2,3-dihydro- (8CI) Scan 9094
Bpk Ab 6312 0.00 min.

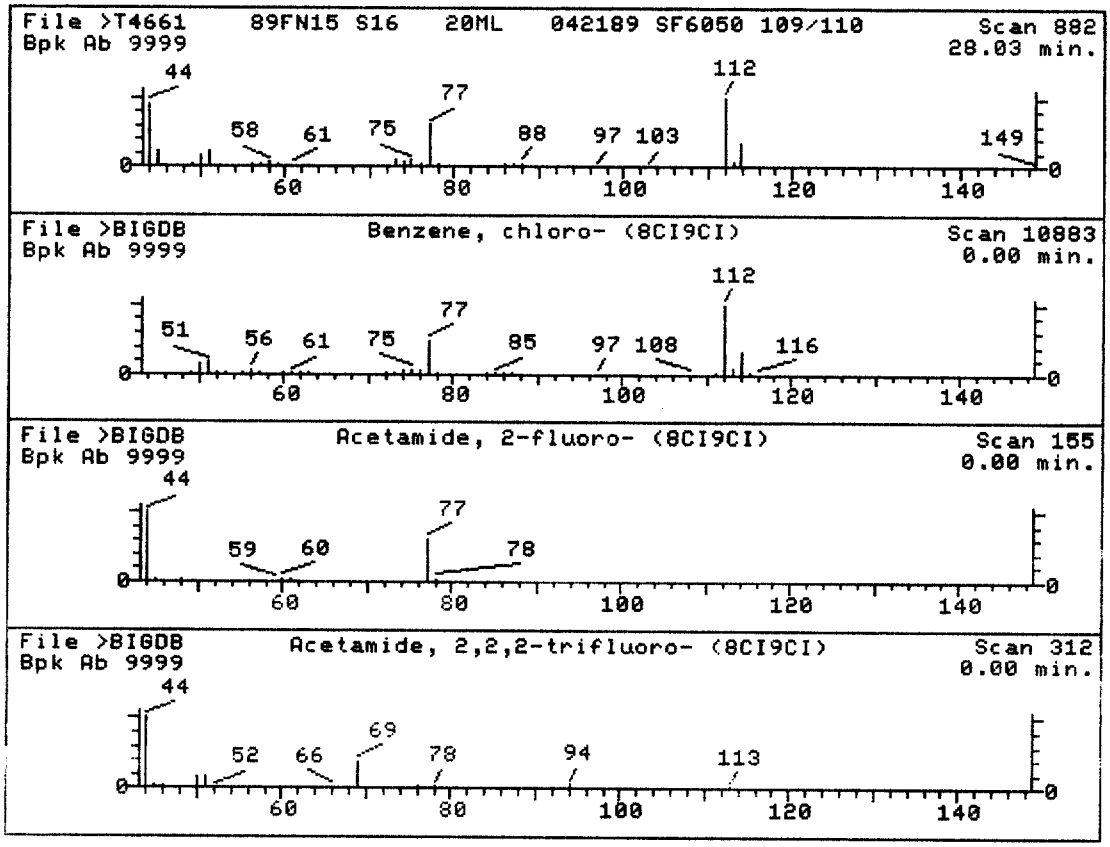


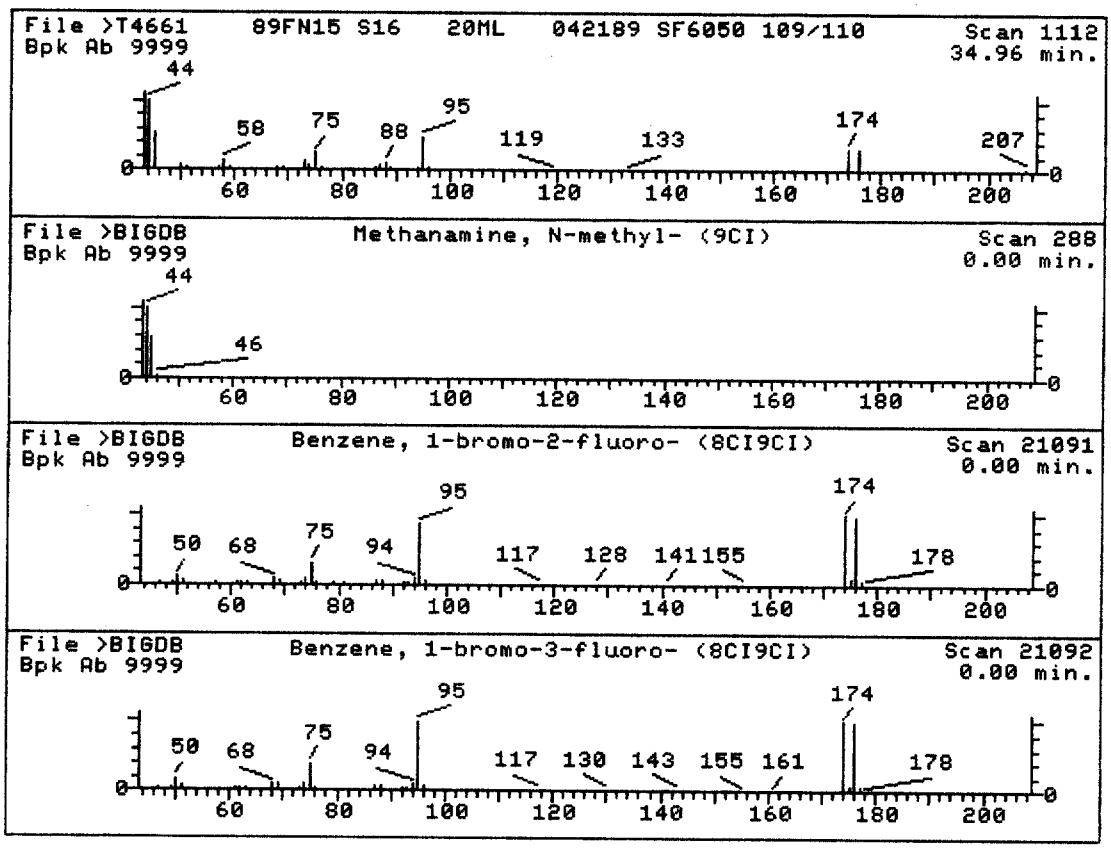
File >BIGDB Sydnone, 3-methyl- (8CI9CI) Scan 9097
Bpk Ab 9999 0.00 min.



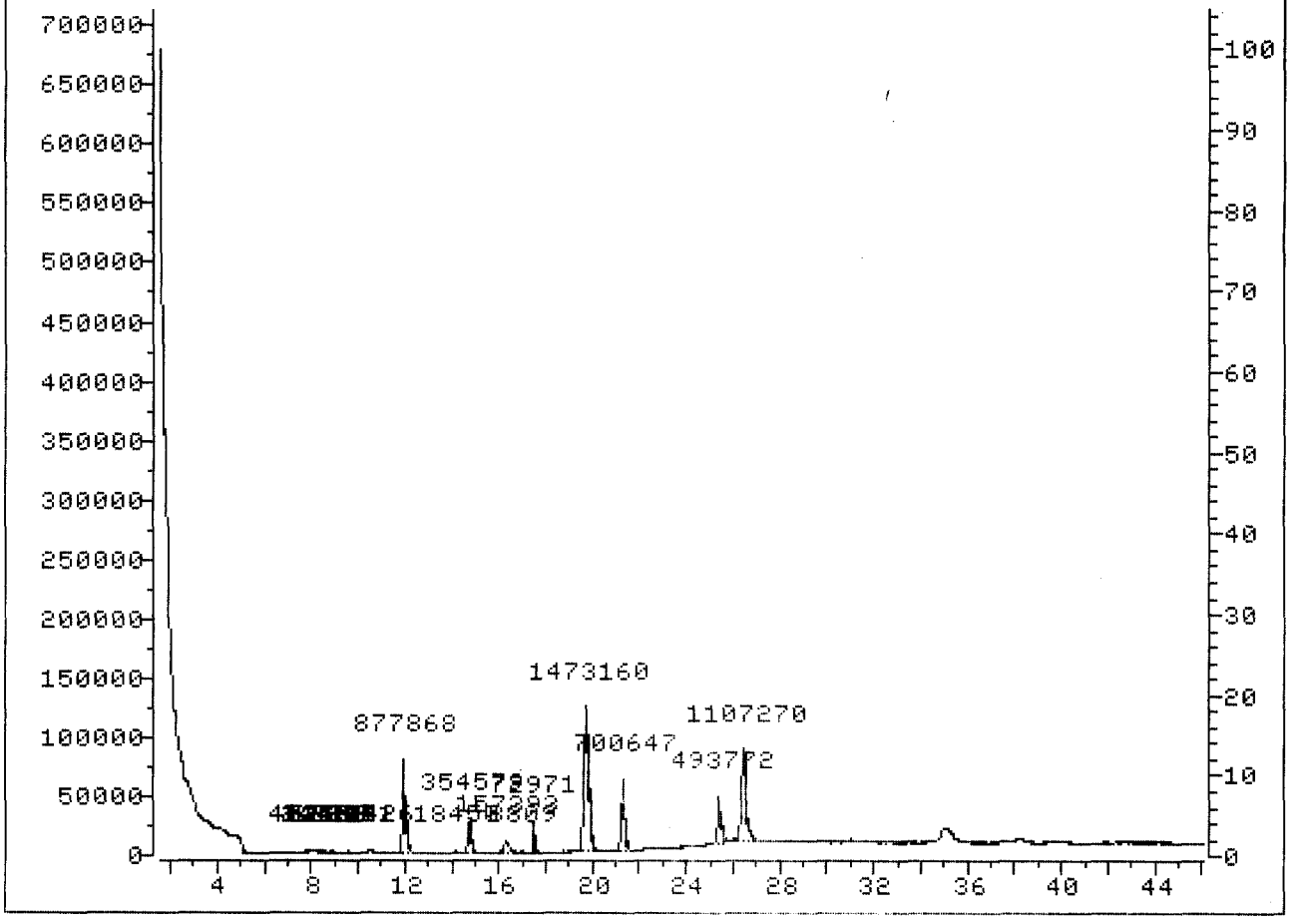
File >BIGDB Sydnone, 3-methyl- (8CI9CI) Scan 9097
Bpk Ab 9999 0.00 min.




File >T4661 89FN15 S16 20ML 042189 SF6050 109/110
Bpk Ab 9999
Scan 882
28.03 min.
44 58 61 75 77 88 97 103 112 149
File >BIGDB Benzene, chloro- (8CI9CI)
Bpk Ab 9999
Scan 10883
0.00 min.
51 56 61 75 77 85 97 108 112 116
File >BIGDB Acetamide, 2-fluoro- (8CI9CI)
Bpk Ab 9999
Scan 155
0.00 min.
44 59 60 77 78
File >BIGDB Acetamide, 2,2,2-trifluoro- (8CI9CI)
Bpk Ab 9999
Scan 312
0.00 min.
44 52 66 69 78 94 113


File >T4661 89FN15 S16 20ML 042189 SF6050 109/110
Bpk Ab 9999
Scan 1112
34.96 min.
44 58 75 88 95 119 133 174 207
File >BIGDB Methanamine, N-methyl- (9CI)
Bpk Ab 9999
Scan 288
0.00 min.
44 46
File >BIGDB Benzene, 1-bromo-2-fluoro- (8CI9CI)
Bpk Ab 9999
Scan 21091
0.00 min.
50 68 75 94 95 117 128 141155 174 178
File >BIGDB Benzene, 1-bromo-3-fluoro- (8CI9CI)
Bpk Ab 9999
Scan 21092
0.00 min.
50 68 75 94 95 117 130 143 155 161 174 178

File >T4657 42.0-260.0 amu. 89FN15 R48 20ML 042189 SF6050 109/110
TIC

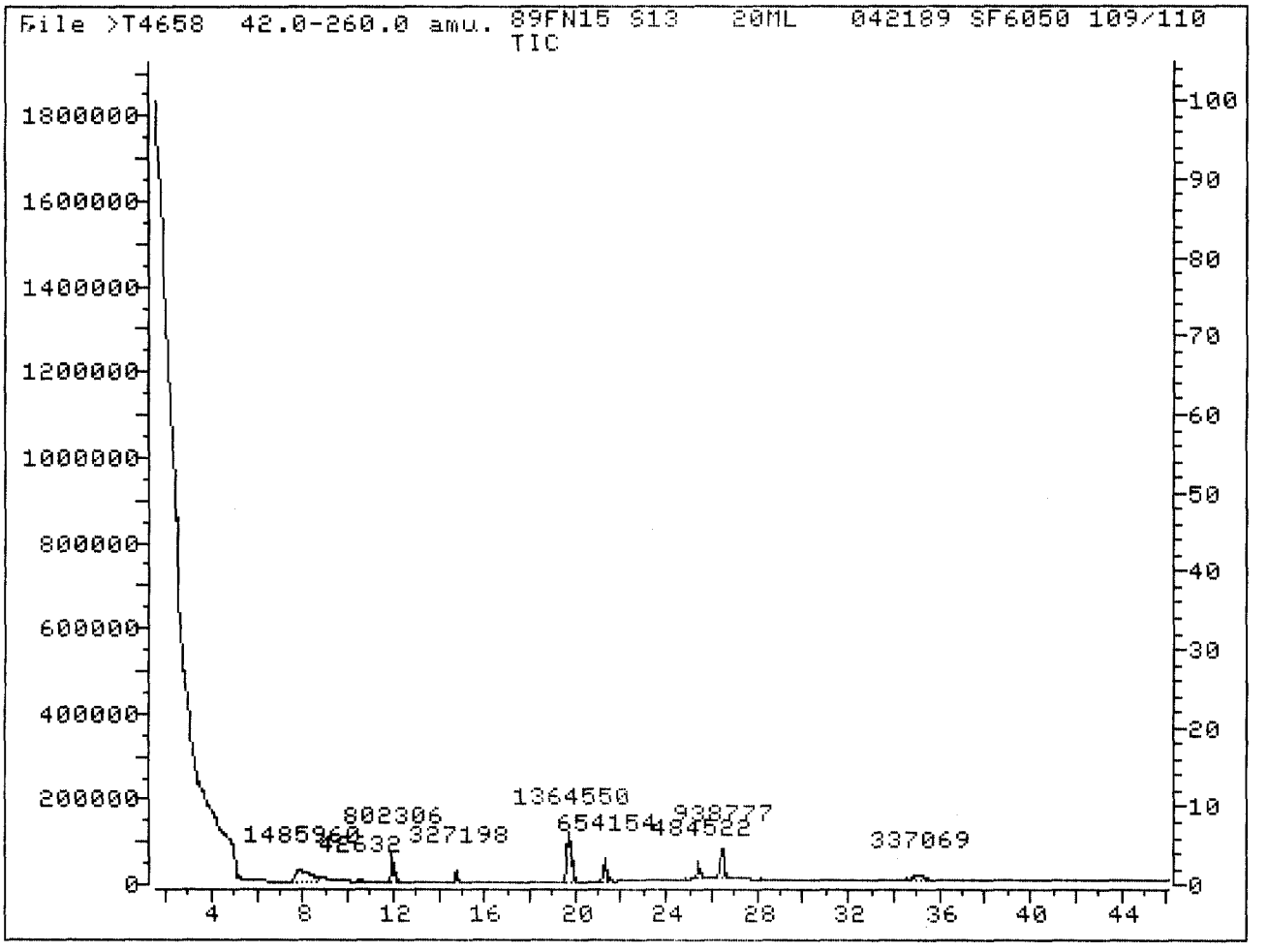


>T4657 89FN15 R48 20ML 042189 SF6050 109/110
42.0| 260.0 TIC
Upslope: .20 Area Reject: .50 % Max Peaks: 16 Bunching: 1
Dnslope: 0.00 Results File VDIR92 Sorted by Area/Area INT

	Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
	1	19.69 SUR1	596	605	621	122413	1634515	1473164	100.00	27.204
	2	26.41 SUR3	819	828	850	77405	1850558	1107275	75.16	20.447
	3	11.90 IS2	338	346	358	78984	954357	877868	59.59	16.211
BEP	4	21.26 IS2	648	657	667	58946	862835	700647	47.56	12.938
	5	25.38 IS3	786	794	805	39418	887824	493772	33.52	9.118
	6	14.73 SUR	431	440	454	30681	424384	354579	24.07	6.548
unknown	7	16.29	481	492	509	9536	272003	157393	10.68	2.906
	8	17.44 BF B	528	530	538	26431	123857	72971	4.95	1.348
	9	7.92	205	214	216	2703	69596	40215	2.73	.743
	10	10.48	291	299	304	2336	74701	28426	1.93	.525
	11	8.38	225	229	233	2829	50412	24408	1.66	.451
	12	8.83	239	244	250	2216	67809	22842	1.55	.422
	13	9.58	264	269	277	1599	68572	20911	1.42	.386
	14	14.06	411	418	423	1869	56441	18450	1.25	.341
	15	8.53	233	234	239	1985	34345	13522	.92	.250
	16	16.89	509	512	519	935	58086	8809	.60	.163

Sum of corrected areas: 5415252.

		Scan #	Conc
unknown 1	16.29 M.	492	$\frac{157393 \times 10}{700647} = 2.25$ ppb

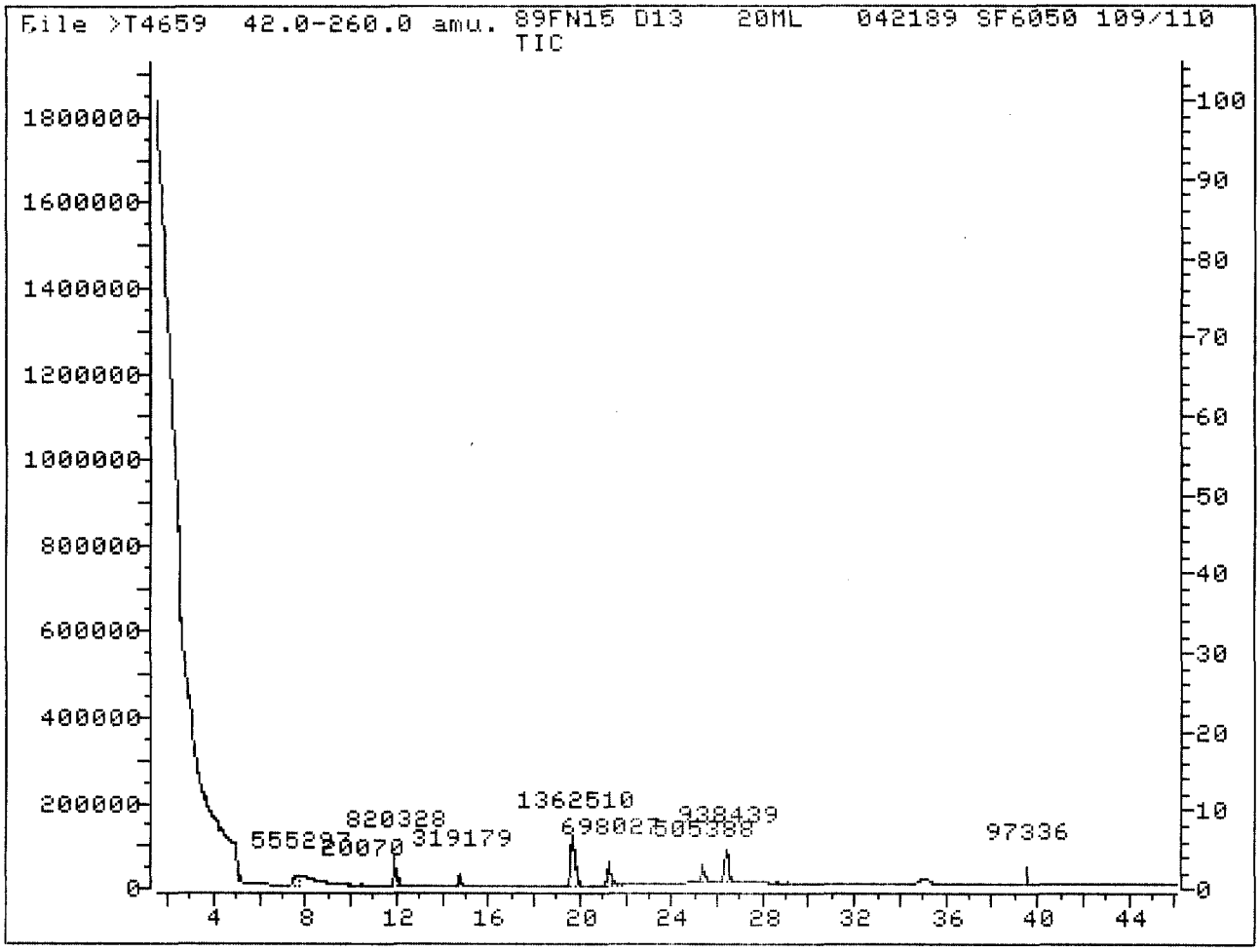

File >T4658 42.0-260.0 amu. 89FN15 S13 20ML 042189 SF6050 109/110
TIC
1800000
1600000
1400000
1200000
1000000
800000
600000
400000
200000
0
100
90
80
70
60
50
40
30
20
10
0
4
8
12
16
20
24
28
32
36
40
44
1485960
42632
802306
327198
1364550
654154
484522
938777
337069

ŚT4658 89FN15 S13 20ML 042189 SF6050 109/110
42.0| 260.0 TIC
Upslope: .20 Area Reject: .50 % Max Peaks: 9 Bunching: 1
Dnslope: 0.00 Results File VDIR92 Sorted by Area/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	7.83	200	211	241	27938	1835625	1485968	100.00	23.084
2	19.69	596	605	623	116561	1697163	1364553	91.83	21.198
3	26.41	820	828	840	71169	1512642	938777	63.18	14.584
4	11.93	339	347	359	73118	1024494	802306	53.99	12.464
Bup 5	21.26	649	657	672	55446	1004363	654154	44.02	10.162
6	25.38	786	794	803	38598	959667	484522	32.61	7.527
7	35.05	1099	1115	1136	10795	1191765	337069	22.68	5.236
8	14.73	432	440	452	29442	515668	327198	22.02	5.083
9	10.48	295	299	314	3013	285259	42632	2.87	.662

Sum of corrected areas: 6437179.

No TIG


File >T4659 42.0-260.0 amu. 89FN15 D13 20ML 042189 SF6050 109/110
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1200000
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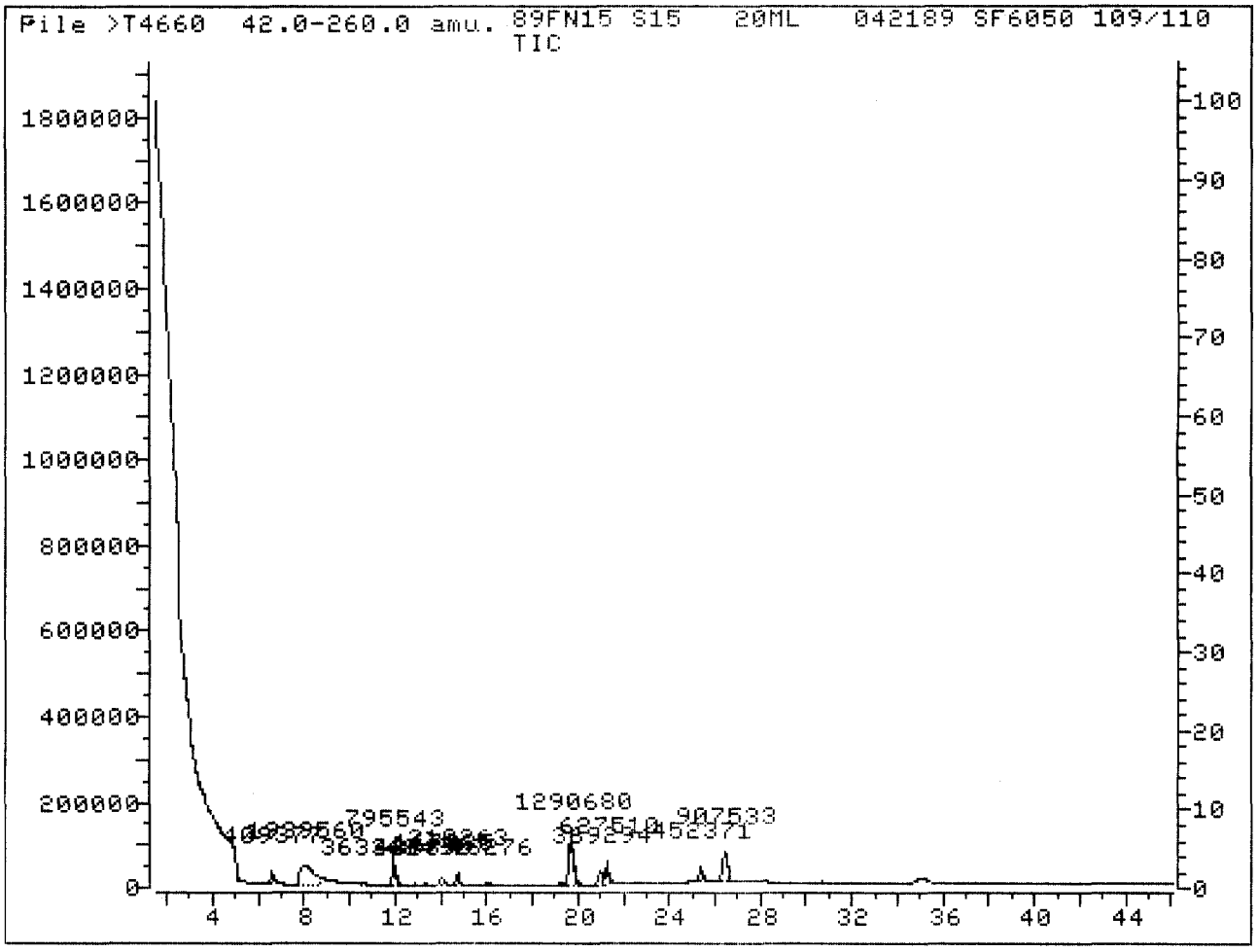
600000
400000
200000
0
100
90
80
70
60
50
40
30
20
10
0
4
8
12
16
20
24
28
32
36
40
44
555297
20070
820328
319179
1362510
698027
605388
938439
97336

>T4659 89FN15 D13 20ML 042189 SF6050 109/110
42.0| 260.0 TIC
Upslope: .20 Area Reject: .50 % Max Peaks: 9 Bunching: 1
Dnslope: 0.00 Results File VDIR92 Sorted by Area/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	19.69	596	605	621	117472	1661673	1362514	100.00	25.628
2	26.41	820	828	842	71085	1609088	938439	68.88	17.651
3	11.90	336	346	364	73580	1104683	820328	60.21	15.430
4	21.26	647	657	671	55255	1029982	698027	51.23	13.129
~~5~~	7.71	194	207	209	26267	683007	555297	40.76	10.445
6	25.35	785	793	805	38481	1083557	505388	37.09	9.506
7	14.73	432	440	451	28899	502195	319179	23.43	6.003
8	39.45	BPB 1259	1261	1267	39568	264268	97336	7.14	1.831
9	10.45	294	298	304	2073	160848	20070	1.47	.377

Sum of corrected areas: 5316578.

No TIC


Pile >T4660 42.0-260.0 amu. 89FN15 S15 20ML 042189 SF6050 109/110
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1000000
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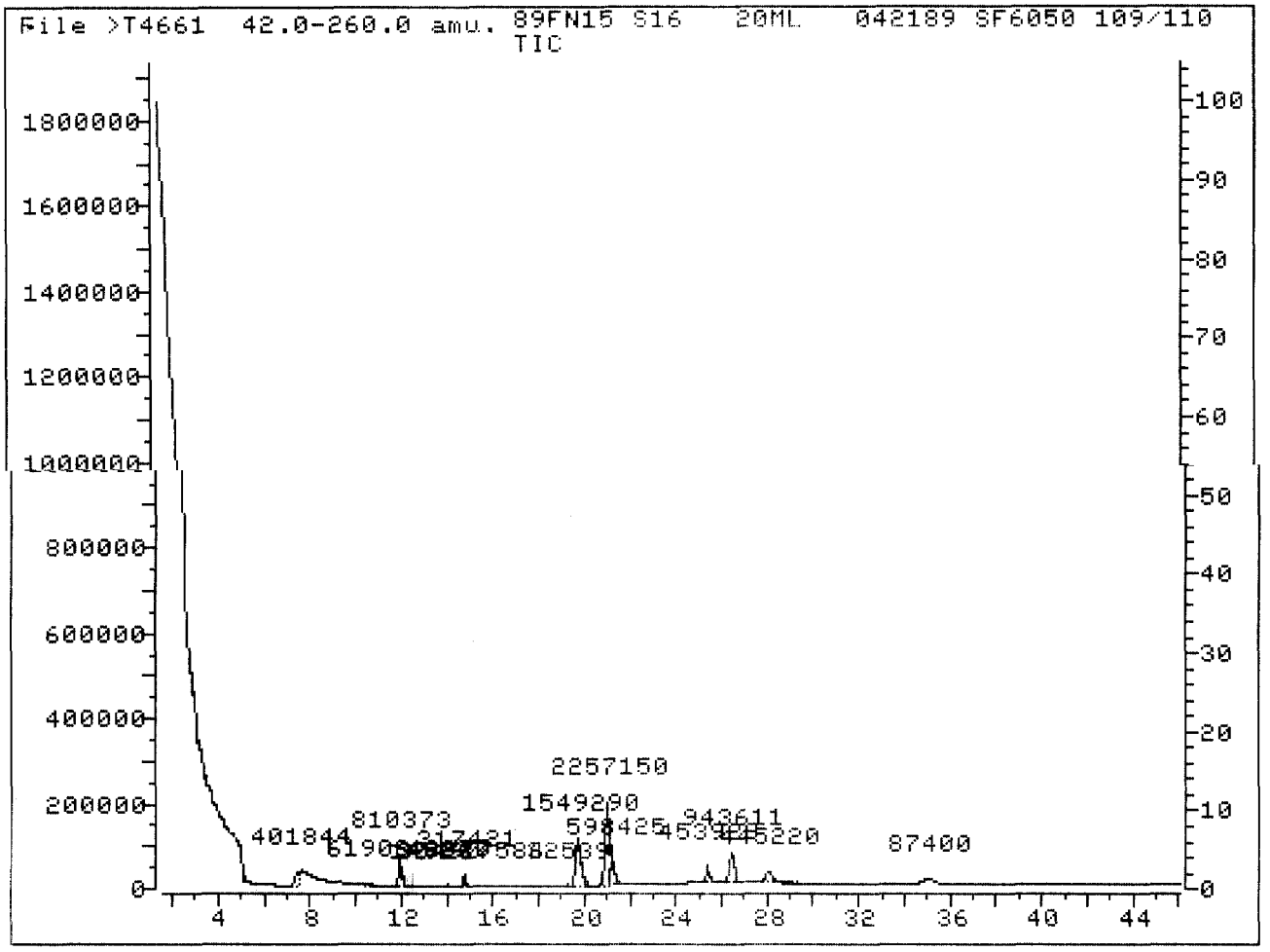
600000
400000
200000
0
100
90
80
70
60
50
40
30
20
10
0
4
8
12
16
20
24
28
32
36
40
44
795543
1290680
907533
452371

>T4660 89FN15 S15 20ML 042189 SF6050 109/110
42.0| 260.0 TIC
Upslope: .20 Area Reject: .50 % Max Peaks: 14 Bunching: 1
Dnslope: 0.00 Results File VDIR92 Sorted by Area/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	8.01	207	217	240	47636	2220914	1939566	100.00	26.052
2	19.69 SUR2	595	605	615	112739	1606231	1290684	66.54	17.336
3	26.41 SUR1	819	828	840	68308	1537906	907533	46.79	12.190
4	11.90 ISI	338	346	364	71573	1105921	795543	41.02	10.686
5	21.26 IS	651	657	667	53179	891213	627510	32.35	8.429
6	25.35 ISJ	786	793	804	36711	996681	452371	23.32	6.076
C57	6.57	162	169	179	32509	708444	409377	21.11	5.499
unknown 2 — 8	20.96	638	647	651	32517	555820	369294	19.04	4.960
9	14.70 SUR1	431	439	451	26882	535148	310263	16.00	4.167
unknown # 10	14.00	409	416	424	16578	337311	167835	8.65	2.254
11	13.31	385	393	398	4577	190135	48492	2.50	.651
12	16.08	478	485	489	4096	181960	46276	2.39	.622
13	12.83	371	377	385	3822	196440	43889	2.26	.590
14	10.45	296	298	308	3097	231146	36336	1.87	.488

Sum of corrected areas: 7444969.

	RT	Area	Conc
UNKNOWN 2 —	20.96	369294	5.9 PPB
7 —	14.00	167835	$\frac{167835 \times 10}{627510}$ = 2.7 PPB


File >T4661 42.0-260.0 amu. 89FN15 S16 20ML 042189 SF6050 109/110
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1200000
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600000
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200000
0
100
90
80
70
60
50
40
30
20
10
0
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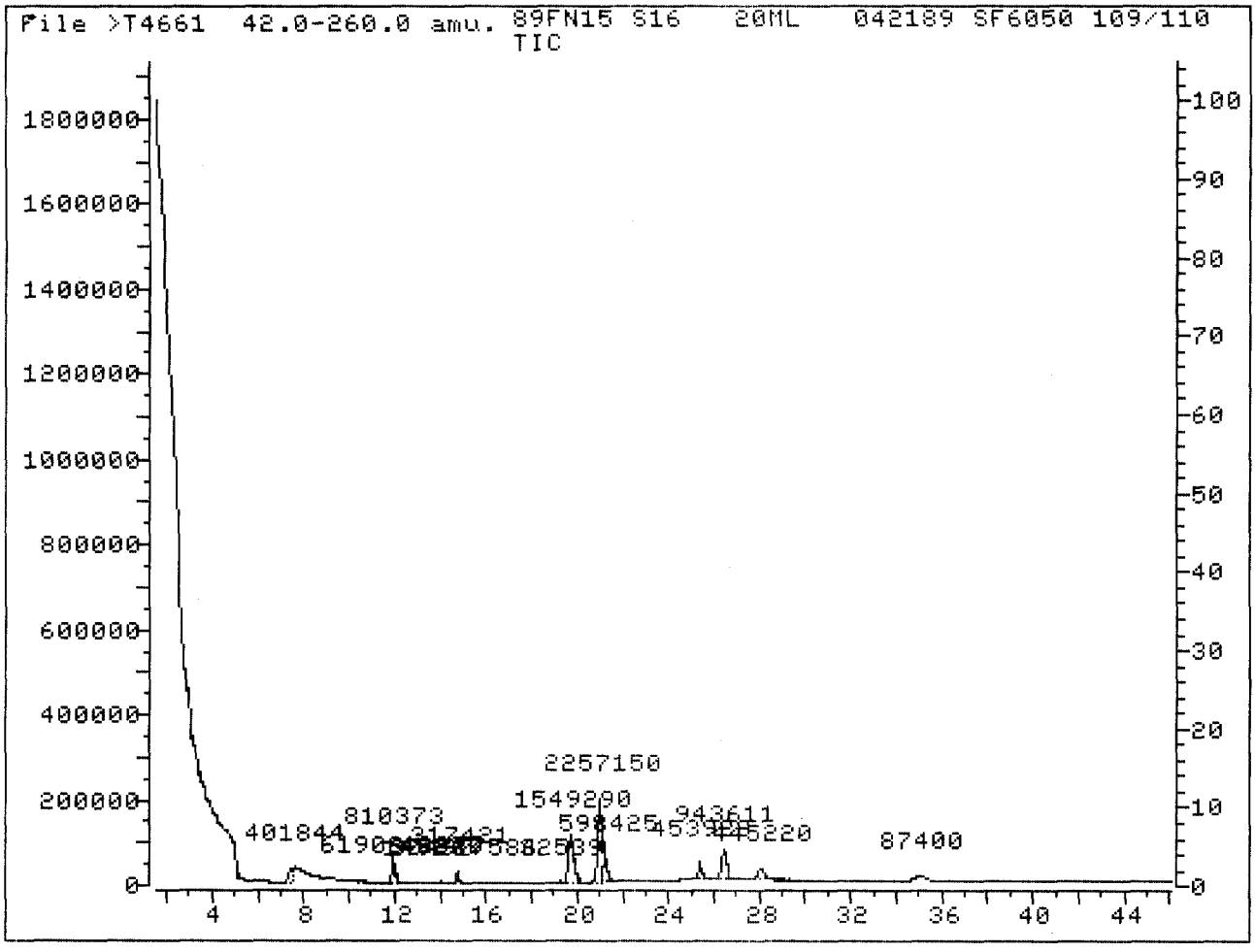
1549290
810373
401844
943611
87400
4
8
12
16
20
24
28
32
36
40
44

>T4661 89FN15 S16 20ML 042189 SF6050 109/110
42.0| 260.0 TIC
Upslope: .20 Area Reject: .50 % Max Peaks: 16 Bunching: 1
Dnslope: 0.00 Results File VDIR92 Sorted by Area/Area INT

	Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
	1	20.96	638	647	653	193680	2491011	2257158	100.00	27.987
	2	19.69 SUR2	596	605	623	114127	1895490	1549294	68.64	19.210
	3	26.41 SUR3	819	828	843	70579	1664093	943611	41.81	11.700
	4	11.90 IS1	338	346	366	71875	1139403	810373	35.90	10.048
BCP	5	21.23 IS2	653	656	670	55206	887805	598425	26.51	7.420
	6	25.35 IS3	786	793	802	36751	957559	453928	20.11	5.628
C40	7	28.03 ✓	873	882	897	26504	1083341	445220	19.72	5.520
X	8	7.50	191	200	200	35606	496008	401844	17.80	4.983
	9	14.72 SUR1	433	440	453	28380	536302	317421	14.06	3.936
	10	34.96 BFB	1103	1112	1113	7659	367923	87400	3.87	1.084
	11	10.48 CS2	294	299	309	4828	299515	61908	2.74	.768
	12	14.00	410	416	424	3910	195099	42870	1.90	.532
	13	19.21	581	589	594	2718	183005	32539	1.44	.403
	14	13.49	394	399	406	2838	162820	30490	1.35	.378
	15	16.29	488	492	497	1849	133461	17586	.78	.218
	16	13.25	386	391	394	1585	102164	14928	.66	.185

Sum of corrected areas: 8064995.

	RT	Scan #	CON
unknown 1	20.96	647	$\frac{2257158 \times 10}{598425} = 38$ ppb


File >T4661 42.0-260.0 amu. 89FN15 S16 20ML 042189 SF6050 109/110
TIC
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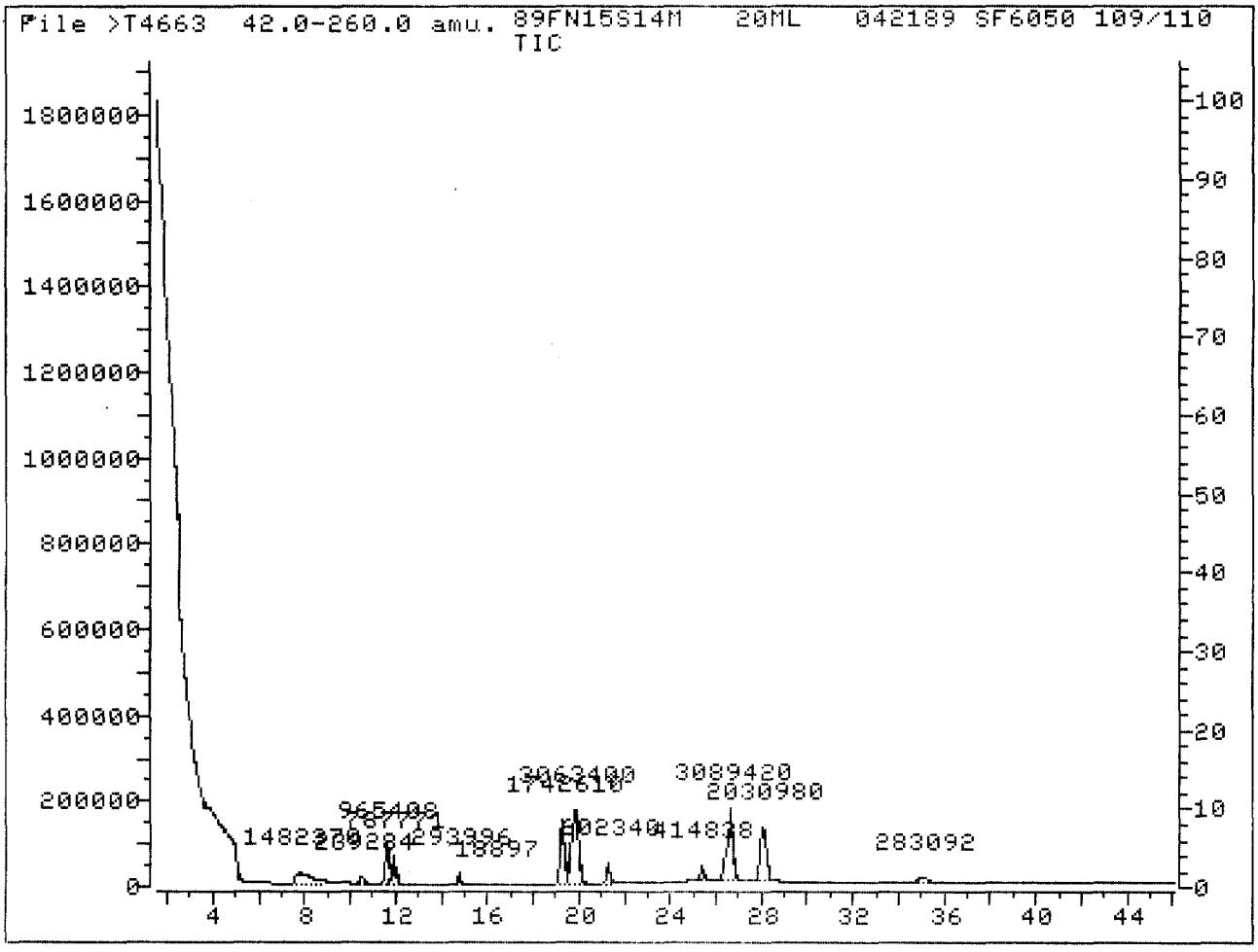
1200000
1000000
800000
600000
400000
200000
0
100
90
80
70
60
50
40
30
20
10
0
4
8
12
16
20
24
28
32
36
40
44
2257150
1549200
810373
401844
943611
87400

>T4661 89FN15 S16 20ML 042189 SF6050 109/110
42.0| 260.0 TIC
Upslope: .20 Area Reject: .50 % Max Peaks: 16 Bunching: 1
Dnslope: 0.00 Results File VDIR92 Sorted by Area/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	20.96	638	647	653	193680	2491011	2257158	100.00	27.987
2	19.69 SUB2	596	605	623	114127	1895490	1549294	68.64	19.210
3	26.41 SUB3	819	828	843	70579	1664093	943611	41.81	11.700
4	11.90 IS1	338	346	366	71875	1139403	810373	35.90	10.048
BCP5	21.23 IS2	653	656	670	55206	887805	598425	26.51	7.420
6	25.35 IS3	786	793	802	36751	957559	453928	20.11	5.628
C407	28.03 ✓	873	882	897	26504	1083341	445220	19.72	5.520
X8	7.50	191	200	200	35606	496008	401844	17.80	4.983
9	14.72 SUR1	433	440	453	28380	536302	317421	14.06	3.936
10	34.96 BFA	1103	1112	1113	7659	367923	87400	3.87	1.084
11	10.48 CS2	294	299	309	4828	299515	61908	2.74	.768
12	14.00	410	416	424	3910	195099	42870	1.90	.532
13	19.21	581	589	594	2718	183005	32539	1.44	.403
14	13.49	394	399	406	2838	162820	30490	1.35	.378
15	16.29	488	492	497	1849	133461	17586	.78	.218
16	13.25	386	391	394	1585	102164	14928	.66	.185

Sum of corrected areas: 8064995.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TIC
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1200000
1000000
800000
600000
400000
200000
0
100
90
80
70
60
50
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30
20
10
0
4
8
12
16
20
24
28
32
36
40
44
3063400
1742610
3089420
2030980
965409
1482370
293396
18897
283092

>T4663 89FN15S14M 20ML 042189 SF6050 109/110
42.0| 260.0 TIC
Upslope: .20 Area Reject: .50 % Max Peaks: 13 Bunching: 1
Dnslope: 0.00 Results File VDIR92 Sorted by Area/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	26.62	819	835	849	168265	4008537	3089421	100.00	20.576
2	19.84	598	610	626	172679	3477538	3063403	99.16	20.403
3	28.03	871	882	896	125425	2757271	2030989	65.74	13.527
4	19.24	579	590	598	153057	1962057	1742611	56.41	11.606
5	7.77	198	209	239	28319	1834071	1482373	47.98	9.873
6	11.59	328	336	341	92456	1115973	965408	31.25	6.430
7	11.90	341	346	364	68960	1034062	787771	25.50	5.247
8	21.26	648	657	666	49713	887808	602340	19.50	4.012
9	25.35	786	793	803	33299	936090	414838	13.43	2.763
10	14.73	432	440	454	26739	524375	293996	9.52	1.958
11	34.99	1103	1113	1133	9560	982375	283092	9.16	1.885
12	10.48	291	299	317	17474	568995	239284	7.75	1.594
13	16.29	485	492	499	1466	140462	18897	.61	.126

Sum of corrected areas: 15014426.

Calibration Check Report

Title: 1D FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Calibrated: 890421 11:12

Check Standard Data File: >T4656
Injection Time: 890421 16:58

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
CHLOROMETHANE	1.51706	1.52214	.33	Average	(Conc=20.00)
BROMOMETHANE	1.43791	1.38381	3.76	Average	(Conc=20.00)
VINYL CHLORIDE	1.22784	1.18582	3.42	Average	(Conc=20.00)
CHLOROETHANE	.57345	.57422	.14	Average	(Conc=20.00)
METHYLENE CHLORIDE	2.54365	2.12704	16.38	Average	
ACROLEIN	.04826	.04412	8.57	Average	(Conc=375.00)
ACETONE	.12703	.11003	13.38	Average	(Conc=375.00)
ACRYLONITRILE	.13198	.11752	10.96	Average	(Conc=375.00)
CARBON DISULFIDE	14.7438	3.81686	74.11	Average	(Conc=12.50)
1,1-DICHLOROETHENE	2.31577	2.02839	12.41	Average	
1,1-DICHLOROETHANE	4.44498	3.90476	12.15	Average	
1,2-DICHLOROETHENE (TOTAL)	2.70315	2.34303	13.32	Average	
CHLOROFORM	4.16001	3.62197	12.93	Average	
1,2-DICHLOROETHANE-D4	.93001	.91979	1.10	Average	(Conc=10.00)
1,2-DICHLOROETHANE	1.63136	1.39449	14.52	Average	
2-BUTANONE	.02094	.01820	13.10	Average	(Conc=125.00)
1,1,1-TRICHLOROETHANE	.94417	.84010	11.02	Average	
CARBON TETRACHLORIDE	.75276	.68273	9.30	Average	
VINYL ACETATE	.11823	.07102	39.93	Average	(Conc=37.50)
BROMODICHLOROMETHANE	1.00345	.86631	13.67	Average	
1,2-DICHLOROPROPANE	.84753	.73274	13.54	Average	
CIS-1,3-DICHLOROPROPENE	1.11158	.96229	13.43	Average	(Conc=18.00)
TRICHLOROETHENE	.93629	.84008	10.28	Average	
BENZENE-D6	1.97652	2.04084	3.25	Average	(Conc=10.00)
BENZENE	2.36914	2.09617	11.52	Average	
DIBROMOCHLOROMETHANE	.61998	.54214	12.56	Average	
TRANS-1,3-DICHLOROPROPENE	.66433	.56942	14.29	Average	(Conc=12.00)
1,1,2-TRICHLOROETHANE	.42710	.36716	14.03	Average	
2-CHLOROETHYL VINYLETHER	.27670	.23002	16.87	Average	
BROMOFORM	.29141	.25508	12.47	Average	
4-METHYL-2-PENTANONE	.51172	.46804	8.54	Average	(Conc=25.00)
2-HEXANONE	.36972	.38128	3.13	Average	(Conc=25.00)
TETRACHLOROETHENE	1.08927	.99886	8.30	Average	
1,1,2,2-TETRACHLOROETHANE	.32369	.30497	5.78	Average	
TOLUENE-D8	1.88180	1.97449	4.93	Average	(Conc=10.00)
TOLUENE	2.57627	2.31174	10.27	Average	
CHLOROBENZENE	2.80811	2.54775	9.27	Average	
ETHYLBENZENE	1.46100	1.33925	8.33	Average	
STYRENE	3.40314	3.23109	5.06	Average	(Conc=12.50)
META XYLENE	2.27175	2.21079	2.68	Average	(Conc=30.00)

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

2 outlier

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

%Diff - % Difference from original average or curve

Calibration Check Report

Title: 1D FILE FOR VOLATILES--HP5985A TC01/13/89 (20 ML PURGE)
Calibrated: 890421 11:12

Check Standard Data File: >T4656
Injection Time: 890421 16:58

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
O-&/OR P-XYLENE	2.32672	2.26343	2.72	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

50
53

FRI
DAY. 2

BAMON

BAMON - Batch Monitor Control Program (c) Copyright 1983 ETC Corp.
Enter ? for help.

Sequence File: BACJ44::XX

Tune File: MTBFB4

CR List: E2,A8
CR Cut-off: 2500 blocks.

Number of samples: 14

Samp No.	Data File / Method File	Sample Name / Misc Data	Bottle	Sample Size	Quant	Report	Data	Archive	ID	Archive	Output	Archive	Quant ID / Quant Output
001)	>T4654	VOASTD 05PPB 20ML	00	3	N	N	N	N	N				
	AUTOC4::XX	042189 SF6050 109/110		Dil=1.00000									
002)	>T4655	VOASTD 10PPB 20ML	00	3	N	N	N	N	N				
	AUTOC4::XX	042189 SF6050 109/110		Dil=1.00000									
003)	>T4656	VOASTD 15PPB 20ML	00	3	N	N	N	N	N				
	AUTOC4::XX	042189 SF6050 109/110		Dil=1.00000									
004)	>T4657	89FN16 R48 20ML	00	3	N	N	N	N	N				
	AUTOC4::XX	042189 SF6050 109/110		Dil=1.00000									
005)	>T4658	89FN15 S13 20ML	00	3	N	N	N	N	N				
	AUTOC4::XX	042189 SF6050 109/110		Dil=1.00000									
006)	>T4659	89FN15 D13 20ML	00	3	N	N	N	N	N				
	AUTOC4::XX	042189 SF6050 109/110		Dil=1.00000									
007)	>T4660	89FN15 S15 20ML	00	3	N	N	N	N	N				
	AUTOC4::XX	042189 SF6050 109/110		Dil=1.00000									
008)	>T4661	89FN15 S16 20ML	00	3	N	N	N	N	N				
	AUTOC4::XX	042189 SF6050 109/110		Dil=1.00000									
009)	>T4662	89FN15S14M 20ML	00	3	N	N	N	N	N				
	AUTOC4::XX	042189 SF6050 109/110		Dil=1.00000									
010)	>T4663	89FN15S14M 20ML	00	3	N	N	N	N	N				
	AUTOC4::XX	042189 SF6050 109/110		Dil=1.00000									
011)	>T4664	89FN15S14D 20ML	00	3	N	N	N	N	N				
END	AUTOC4::XX	042189 SF6050 109/110		Dil=1.00000									
012)	>T4665	89SI01S08(4X) 20ML	00	3	N	N	N	N	N				
	AUTOC4::XX	042189 SF6056 108/110		Dil=1.00000									
013)	>T4666	89SI01S08 20ML	00	3	N	N	N	N	N				
	AUTOC4::XX	042189 SF6056 108/110		Dil=1.00000									
014)	>T4667	89SI01S09 20ML	00	3	N	N	N	N	N				
	AUTOC4::XX	042189 SF6056 108/110		Dil=1.00000									

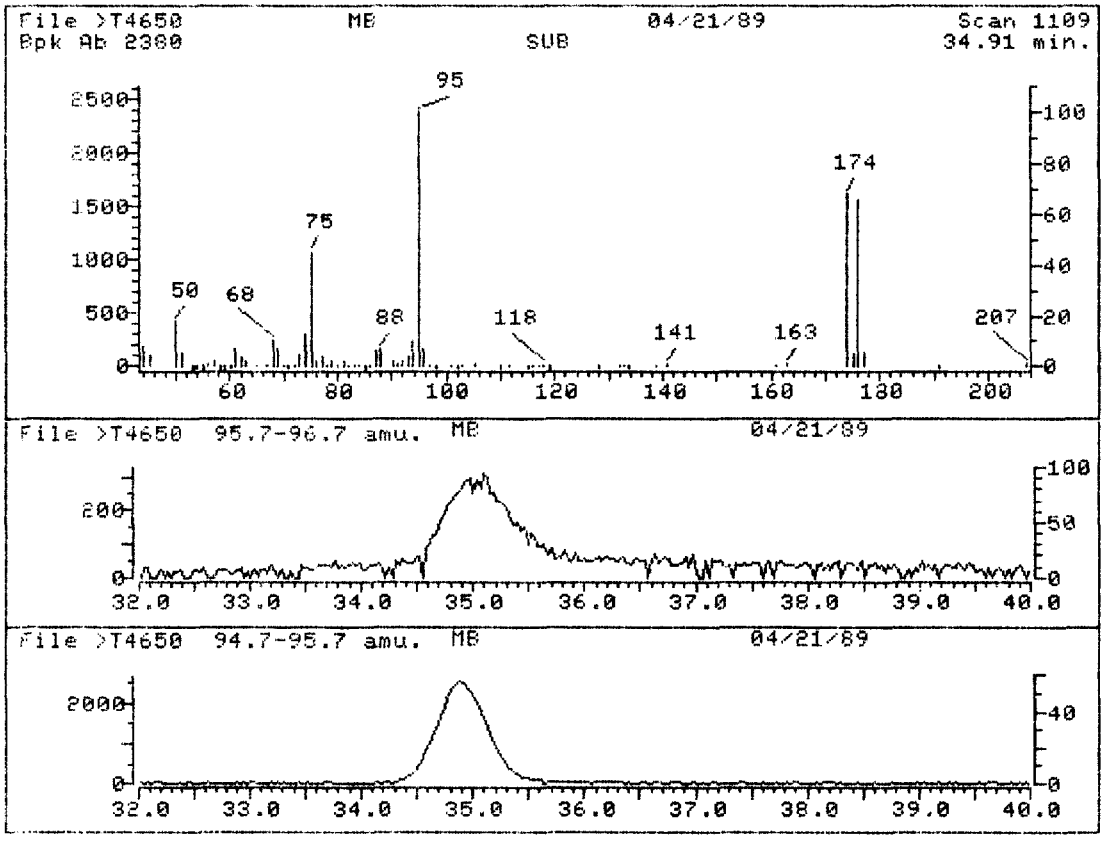
GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	17.98	17.98	Ok
75	30-60% of mass 95	45.21	45.21	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.35	7.35	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	68.32	68.32	Ok
175	5-9% of mass 174	5.25	7.69	Ok
176	95-101% of mass 174	66.18	96.86	Ok
177	5-9% of mass 176	5.63	8.51	Ok

Injection Date: 04/21/89
Injection Time: 09:48
Data File: >T4650
Scan: 1109-1128

DAY 2



T4665
1112

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.

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___ Mail receipts

✓ Sample tags

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

___ Resolution / Contrast