EPA Region 5 Records Ctr.

374312

SCREENING SITE INSPECTION REPORT
FOR
B.J. CARNEY POLE YARD
HENNEPIN COUNTY, MINNESOTA

U.S. EPA ID#: MND981195167

VOLUME II

Prepared by: Elizabeth S. Cody Date: 12/21/89
Elizabeth S. Cody
Project Manager - Site Assessment Unit
Program Development Section
Ground Water and Solid Waste Division
Minnesota Pollution Control Agency

Prepared by: Bradley D. Nordberg Date: 12/21/89
Bradley D. Nordberg
Hydrologist - Site Assessment Unit
Program Development Section
Ground Water and Solid Waste Division
Minnesota Pollution Control Agency

Reviewed by: Ronald R. Swenson Date: 12/28/89
Ronald R. Swenson
Supervisor - Site Assessment Unit
Program Development Section
Ground Water and Solid Waste Division
Minnesota Pollution Control Agency

Approved by: John N. Holck Date: 12/28/89
John N. Holck, Chief
Program Development Section
Ground Water and Solid Waste Division
Minnesota Pollution Control Agency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

SUBJECT: Review of Region V CLP Data Received for Review on July 17 1989

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory

TO: Data User: MPCA

We have reviewed the data for the following case(s).

SITE NAME: BJ Carney SMO Case No. 12035

EPA Data Set No. SF 6240 No. of Samples: 8 D.U./Activity Numbers TFA/TFA 102

CRL No. 89 YC 24 501 - 508

SMO Traffic No. EDH 42-49

CLP Laboratory: S-Cubed Hrs. Required for Review: 8

Following are our findings: The following review covers the analyses of low level RAS organics (medium level for semi-volatiles EPH 45) on soil. Please see review narrative and calibration outlier forms for further qualifications.

Wayne Matthews
MPCA
10/19/89

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications referenced above. See Data Qualifier sheets and Calibration Outlier forms for flags and additional comments.
( ) Data are preliminary - pending verification by Contractor Laboratory. See Case Summary above.
( ) Data are unacceptable.

cc: Carla Dempsey, CLP Quality Assurance Officer, Analytical Operations Branch
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

DATA QUALIFIERS

Contractor: S-Cubed

Case 10235

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

① Holding Times: Holding times were met (for all fractions).

② GC/MS tuning and Instrument Performance: GC/MS tuning and mass calibrations were within QC limits. Pesticide GC performance was within QC limits (20% maximum breakdown of DDT/Endrin).

③ Calibration: Calibration outliers are noted on the outlier form.

④ Method Blanks: Volatiles method blank VBlk02 contained methylene chloride at an estimated concentration of 3 µg/kg. VBlk 01 was not identified as having methylene chloride present, yet a small peak at the approximate retention time of methylene chloride was observed in the chromatogram. Methylene chloride was qualified as "U" (non detected) in associated samples.

The Semi volatiles method blank SBlk 11 contained bis-2 ethylhexyl phthalate at 740 µg/kg and was qualified as "U" in

Reviewed by: Wm - MPCA

Phone: (612) 296-8707

Date: 10/19/89

DATA QUALIFIERS

Contractor: S cubed

Case 10235

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

associated investigative samples. SBLK 11 also contained numerous TICs - possible alkanes, ketones and phenolics, as well as furan and pyrazine-like compounds with low identification probabilities. The laboratory has qualified some investigative sample TICs as "B" (possible blank contaminant) based upon similar retention times even if the mass spectral matches were not good.

Pesticide/PCB method blank PBLK 11 was free of contaminants.

(5) Surrogate Recovery: Volatiles and Pest./PCB surrogates were within QC limits.

Surrogate recoveries for 2-Fluorobiphenyl, Phenol d-5 and 2,4,6-Tribromophenol were slightly to well above QC limits for Sample EDH 48; although the narrative from the laboratory indicates that a EDH 48 MSD was re-injected, (due to low spike compound recovery) no EDH 48 MSD was present in the Data Package. 2-FBP and Phenol-d5 were 3 and 1% above the QC limit respectively, while 2,4,6-TBP was 27% above the acceptable limit. EDH 45 MS and EDH 45 MSD also had recoveries of

Reviewed by: WM

Phone:

Date: 10/19/89

DATA QUALIFIERS

Contractor: S. cubed

Case 10235

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

2,4,5-TBP 21% above the acceptable QC limit. Given the slightly high recoveries of two of three surrogates in EDH 48, no action will be taken in qualifying the data from this sample.

(VI) Matrix Spike/matrix Spike Duplicates: Volatiles MS/MSD was within QC limits for % Recovery and RPD.

Semi volatiles MS/MSD EDH 42 was significantly (low) outside for all RPDs - MSD % recoveries were low for 9 of 11 surrogate spikes; however 5 of 9 were within 3% of acceptable limits, and none were greater than 20% below QC limits. EDH 45 MS/MSD (medium) was within acceptable limits.

Pesticide/PCB MSD % recovery for γ-BHC was above QC limits.

(I) Field Duplicate: Samples EDH 43 and EDH 44 appear to be field duplicates, however there is a significant difference in the identity and numbers of compounds detected in these two samples.

Reviewed by: _____

Phone: _____

Date: _____

DATA QUALIFIERS

Contractor: S cubed

Case 10235

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

(8) Internal Standards: Internal standards area and RT were within QC limits for the volatiles and semi-volatiles fractions.

(9) TCL Compound Identification: The compounds identified appear to be confirmed by the mass spectra.

(10) Compound Quantitation and Reported Detection Limits: No list is included in this case

(11) Tentatively Identified Compounds: There were many TICs for the semi-volatiles fraction of this case; of these many had poor mass spectral matches and could not be identified or classified by chemical group.

(12) System Performance: Except for the apparent failure to re-analyze EPH 48 (due to high surrogate recoveries of these compounds) performance was adequate.

Reviewed by:

Phone:

Date:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/SAS # 10235 CONTRACTOR S-cubed

Instrument # HP 2	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	6/3/89 1450			6/8/89 1353			6/12/89 1135								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone															
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone															
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether															
Bromoform															
4-Methyl-2-Pentanone															
2-Hexanone				.189	29.6	J									
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

VBlk 01	EDH 42
EDH 48	EDH 43
EDH 48 ms	EDH 44
EDH 48 msD	EDH 45
	EDH 46
	EDH 47
	EDH 49
	VBlk 02

Reviewer's Initials/Date: WM 10/19/89

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

CASE/SAS # 10235 CONTRACTOR S-cubed

Instrument # HP 3	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	6/20/89 1128			6/22/89 1445			6/28/89 1224								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether															
2-Chlorophenol															
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol															
1,2-Dichlorobenzene															
2-Methylphenol															
bis(2-chloroisopropyl)Ether															
4-Methylphenol															
N-Nitroso-Di-n-Propylamine															
Hexachloroethane															
Nitrobenzene															
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid							.227	28.0	J						
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline															
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene				.231	29.9	J	.217	38.8	J						
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline															
Acenaphthene															
2,4-Dinitrophenol															
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

SBLK12	EDH 42	EDH 42 MSD
EDH 44	EDH 42 MS	EDH 48
EDH 45		EDH 49
EDH 46		EDH 45 MS
EDH 47		EDH 45 MSD

Reviewer Initials/Date: WL 10/19/89

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE/SAS # 10235 CONTRACTOR S-cubed

Instrument #	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	6/20			6/22			6/23								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline				.285	37.1	J	.330	27.2	J						
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene	.964	36.1	J												
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															
3,3' Dichlorobenzidine				.199	42.4	J	.251	27.2	J						

SEE PAGE 1 FOR AFFECTED SAMPLES.

* These flags should be applied to the analytes on the sample data sheets.

Reviewer's Initials/Date: WM 10/19/89

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

CASE/SAS # 10235 CONTRACTOR S-cubed

Instrument # HP-3	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	5/23/89 853			6/19/89 1225											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether															
2-Chlorophenol				1.625	27.6	J									
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol															
1,2-Dichlorobenzene															
2-Methylphenol				1.738	29.6	J									
bis(2-chloroisopropyl)Ether															
4-Methylphenol															
N-Nitroso-Di-n-Propylamine															
Hexachloroethane															
Nitrobenzene															
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid				1.207	34.2	J									
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline															
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene				1.189	30.5	J									
Hexachlorocyclopentadiene															
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline															
Acenaphthene															
2,4-Dinitrophenol				1.137	45.9	J									
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

SBLK 11
EDH 43

Reviewer Initials/Date: WW 10/19/89

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE/SAS # 10235 CONTRACTOR S-cubed

Instrument #	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	5/23			16/19											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline				.246	39.8										
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

* These flags should be applied to the analytes on the sample data sheets.

Reviewer's Initials/Date: WM 10/19/88

Case: 10235

Contractor: S-cubed

TENTATIVELY IDENTIFIED COMPOUNDS WATCH ASSESSMENT

NOTE: Reviewer should note directly on Organic Analysis Data Sheet (OADS) those matches that in his opinion (based on contract criteria) are unreasonable.

CRITERIA

(1) Relative intensities of major ions (>10%) reference spectrum should be present in the sample spectrum.

(2) Relative intensities of major ions in sample spectrum should agree to within ± 20% of reference spectrum intensities.

(3) Molecular ions present in reference spectrum should be present in sample spectrum.

(4) Ions present in sample spectrum, but not in reference spectrum should be reviewed for possible background contamination or presence of coeluting interferences.

(5) Ions present in reference spectrum, but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting interferences.

(6) If, in the reviewer's opinion, no valid identification can be made the compound should be labelled as "unknown" and the initials and date of the reviewer placed on the OADS.

Reviewer's Initials/Date: Wh 10/19/89

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

SUBJECT: Review of Region V CLP Data
Received for Review on 7-12-89

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory

TO: Data User: MPCA

We have reviewed the data for the following case(s).

SITE NAME: B.J Carney SMO Case No. 12035

EPA Data Set No. SF6210 No. of Samples: 8 D.U./Activity Numbers TM 1TFA1C2

CRL No. 89Y0245C1-S08

SMO Traffic No. EDH42-49

CLP Laboratory: S-Cubed Hrs. Required for Review: ___

Following are our findings:

Unreviewed Data as per Federal Agreement

( ) Data are acceptable for use.
( ) Data are acceptable for use with qualifications referenced above. See Data Qualifier sheets and Calibration Outlier forms for flags and additional comments.
( ) Data are preliminary - pending verification by Contractor Laboratory. See Case Summary above.
( ) Data are unacceptable.

cc: Carla Dempsey, CLP Quality Assurance Officer, Analytical Operations Branch
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD/Central Regional Laboratory
DATA TRACKING FORM FOR CONTRACT SAMPLES

CRL Data Set No. SF 6240 CERCLIS No. —

SMO Case No. 12035 Site Name and Location: BJ Carney

Name of Contractor or EPA Laboratory: S-cubed Data User: MDCH

No. of Samples: 8 Date Samples or Data Received: 7-11-89

1. Have chain-of-custody records been received? YES ✓ NO ___
2. Have Traffic Reports or packing lists been received? YES ✓ NO ___
3. If no, are Traffic Report or packing list numbers written on the chain-of-custody record? YES ___ NO ___
4. If no, which Traffic report or packing list numbers are missing?

Are basic data forms in? YES ✓ NO ___

Number of samples claimed: 8 Number of samples received: 8

Checked by: Q Harris Date: 7-12-89

Received by Contract Project Management Section: ___ Date: ___

Review Started: ___ Reviewer Signature: ___

Total time spent on review: ___ Date review completed: ___

Copied (xeroxed) by: ___ Date: ___

Mailed to Data User by: Q Harris Date: 7-12-89

DATA USERS:

Please fill in the blanks below and return this form to: Sylvia Griffin, Data Management Coordinator, Region V, SSCRL

Data received by: ___ Date: ___

Q.A. review received by: ___ Date: ___

Inorganic Date Complete [ ], Suitable for Intended Purposes [ ] ✓ [ ] if acceptable.
Organic Data Complete [ ], Suitable for Intended Purposes [ ] List problems below.
Dioxin Data Complete [ ], Suitable for Intended Purposes [ ]
SAS Data Complete [ ], Suitable for Intended Purposes [ ]

See Attached "Missing Data Request Form" [ ]
PROBLEMS: Please indicate reasons (if any) why data are not suitable for your uses. Other problems.

Received by Data Management Coordinator, CRL for File: Date: ___

Signature:

SUPERFUND 6240

CENTRAL REGIONAL LABORATORY SAMPLE DATA REPORT
ORGANICS/INORGANICS
THIS FORM IS TO BE USED FOR SAMPLES SENT TO CONTRACT ONLY

LOG IN DATE: 6/23/89
DUE DATE: 7/7/89

CASE NUMBER/SAS No. 12035 SITE NAME B.J. Carney LABORATORY Enseco Inorganic DATE SHIPPED 6/2/89

SUPERFUND DU NUMBER TFA102 EPA RPM or OSC (S.M.S.)/(CES) S-Cubed - Organic PAGE 1 OF 1

ACTIVITY NUMBER ZZ

CRL LOG NUMBER	ORGANIC TRAFFIC REPORT NUMBER or SAS Packing List No.	INORGANIC TRAFFIC REPORT NUMBER or SAS Packing List No.	WATER OR LIQUIDS: ACID BASE NEUTRAL CPDS ORGANIC SCAN UG/L TOX17574	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN UG/L TOX17564	WATER POLYCHLORINATED BIPHENYLS UG/L PES 17144	WATER CHLORINATED PESTICIDES UG/L PES17134	TOTAL METALS IN WATER UG/L MET111	WATER CYANIDE UG/L MIN74919	NITRATE NITRITE MG/L MIN7284	AMMONIA MG/L MIN7294	RESIDUE, FILTERABLE TDS MG/L MIN7362	RESIDUE, NON-FILT TSS MG/L MIN7372			SEDIMENTS or SOILS: ACID-BASE NEUTRAL CPDS ORGANIC SCAN MG/KG TOX215722	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN MG/KG TOX215622	SEDIMENTS POLYCHLORINATED BIPHENYLS MG/KG PES211422	SEDIMENT CHLORINATED PESTICIDES MG/KG 211322	TOTAL METALS MG/KG MET413	CYANIDE MG/KG MIN44930	EP TOXICITY METALS MG/KG	AMMONIA MG/KG MIN42925				
89YC24501	EDH42	MECS39													X	X	X	X	X	X						
89YC24502	EDH43	MECS40													X	X	X	X	X	X						
89YC24503	EDH44	MECS41													X	X	X	X	X	X						
89YC24504	EDH45	MECS42													X	X	X	X	X	X						
89YC24505	EDH46	MECS43													X	X	X	X	X	X						
89YC24506	EDH47	MECS44													X	X	X	X	X	X						
89YC24507	EDH48	MECS45													X	X	X	X	X	X						
89YC24508	EDH49	MECS46													X	X	X	X	X	X						

S-CUBED
A Division of Maxwell Laboratories, Inc.

July 7, 1989

Volume 1 of 3

RECEIVED
JUL 11 1989
US EPA Service Regional Lab.
536 S. Clark St.
Chicago, Illinois 60605

NARRATIVE CASE 12035
S-CUBED CONTRACT NO. 68D90027

This case consists of the following samples reported under SDG:EDH42

EDH42, EDH43, EDH44, EDH45, EDH46, EDH47, EDH48, EDH49

Matrix: EDH48 (Low Level VOA, BNA)
EDH45 (Medium Level BNA)
EDH42 (Pesticide/PCB)

No problems were encountered with the volatile analyses. QC analyses yielded compliant results. Few target compounds were detected.

BNA analysis of EDH45 was carried out with medium level techniques due to high levels of polynuclear aromatic hydrocarbons (PNAs) and TICs. Numerous PNAs were also detected in many of the low level samples. A low recovery of spiked target compounds was obtained for EDH48MSD. This sample was reinjected with similar results, thus the nonreproducible data are probably due to the complexity and inhomogeneity of the sample.

Pesticide analyses also yielded reasonable QC results. DDD and endrin were detected in the matrix spiked samples, but not in the unspiked sample. This is probably due to breakdown of the spiked compounds. Several of these samples were quite complex causing interferences in several standard analyses. The run sequence was stopped and restarted after EVAL B C2 and EVAL B C5 thus accounting for the gaps in time on Form 8E.

I certify that this data packed is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer readable data submitted on floppy diskette has been authorized by the laboratory manager or his designee, as verified by the the following signature.

Date: 7-7-89

JoAnn Wilkinson, Project Manager

P.O. Box 1620, La Jolla, California 92038-1620 3398 Carmel Mountain Road, San Diego, California 92121-1095
Tel: (619) 453-0060 TWX: 910-337-1253 Telecopier: (619) 755-0474

USEPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA, VA 22313
703/557-2490 FTS-557-2490

CASE NO: 12035

SAS NO: (IF APPLICABLE)

ORGANIC TRAFFIC REPORT

(FOR CLP USE ONLY)

TYPE OF ACTIVITY (CIRCLE ONE) ①
SUPERFUND—PA (SI) ESI RIFS RD RA ER NPLD O&M OTHER _____
NON-SUPERFUND—_____ PROGRAM

SAMPLE DESCRIPTION (ENTER IN BOX A)
1. SURFACE WATER 4. SOIL
2. GROUND WATER 5. SEDIMENT
3. LEACHATE 6. OIL (SAS) 7. WASTE (SAS)

REGION NO: V
SAMPLING COMPANY ② MPCA
SAMPLER: (NAME) Elizabeth Cody

SHIP TO: ③
S-Cubed
3398 Carmel Mountain Rd
San Diego, CA 92121
(619) 453-0060
ATTN: Elaine Waters

SAMPLING DATE: ④
BEGIN: 5/30/89 END: 6/2/89
DATE SHIPPED: 6/2/89 CARRIER: Fed EX ⑤
AIRBILL NO: 3302879042

DATE REC'D: 6-3-89 SDG NO: EDH42 ⑥
REC'D BY: [signature]
LABORATORY CONTRACT NO. 68D90027 UNIT PRICE

TRANSFER TO: DATE REC'D: ⑦
REC'D BY: CONTRACT NO./PRICE:

CLP SAMPLE NUMBER (FROM LABELS)	A SAMPLE DESCRIPTION (FROM BOX 1) 1 2 3 4 5 6 7	B CONCENTRATION L = LOW/MED, H = HIGH (SAS)	C RAS ANALYSIS VOLATILE	BASE/NEUT /ACID	PESTICIDE /PCB's		D SPECIAL HANDLING	E STATION LOCATION	F SAMPLE CONDITION ON RECEIPT	G HIGH CONC. PHASES (CHECK) SOLID	WATER—MIS LIQUID	NON WATER—MIS LIQUID
EDH42/89YC24501	4	L	X	X	X			SB-1				
EDH43/89YC24502	4	L	X	X	X			SB-2				
EDH44/89YC24503	4	L	X	X	X			SB-2				
EDH45/89YC24504	4	L	X	X	X			SB-5				
EDH46/89YC24505	4	L	X	X	X			SB-20				
EDH47/89YC24506	4	L	X	X	X			SB-11				
EDH48/89YC24507	4	L	X	X	X			SB-12				
* EDH49/89YC24508	4	L	X	X	X			SB-16				
Lost sample recieved												

EPA Form 2075-7 (8-87)

WHITE — SMO COPY PINK — CLIENT COPY WHITE — LAB COPY FOR RETURN TO SMO YELLOW — LAB COPY

2B
SOIL VOLATILE SURROGATE RECOVERY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No. 12035 SAS No.: SDG No.: EDH42

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
01	EDH42	97	96	99		0
02	EDH43	104	94	103		0
03	EDH44	104	97	105		0
04	EDH45	104	92	101		0
05	EDH46	90	86	106		0
06	EDH47	96	89	102		0
07	EDH48	104	95	103		0
08	EDH48MS	101	94	100		0
09	EDH48MSD	101	105	105		0
10	EDH49	90	86	101		0
11	VBLK01	102	95	97		0
12	VBLK02	99	95	96		0
13						
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30						

	QC LIMITS
S1 (TOL) = Toluene-d8	(81-117)
S2 (BFB) = Bromofluorobenzene	(74-121)
S3 (DCE) = 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix Spike - EPA Sample No.: EDH48 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	52.960	0.000	59.729	113	59-172
Trichloroethene	52.960	0.000	52.346	99	62-137
Benzene	52.960	0.000	54.147	102	66-142
Toluene	52.960	3.510	47.294	83	59-139
Chlorobenzene	52.960	0.000	59.707	113	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	53.203	62.823	118	4	22	59-172
Trichloroethene	53.203	52.448	99	0	24	62-137
Benzene	53.203	55.598	105	3	21	66-142
Toluene	53.203	47.734	83	0	21	59-139
Chlorobenzene	53.203	59.662	112	1	21	60-133

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: _____

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID: LBU08 Lab Sample ID: LBU08

Date Analyzed: 06/08/89 Time Analyzed: 1436

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

Instrument ID: HP2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EDH48	EDH48	EDH48	1934
02	EDH48MS	MSE48	MSE48	2018
03	EDH48MSD	MDE48	MDE48	2103
04				
05				
06				
07				
08				
09				
10				
11				
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30				

COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID: LBU12 Lab Sample ID: LBU12

Date Analyzed: 06/12/89 Time Analyzed: 1235

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

Instrument ID: HP2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EDH42	EDH42	EDH42	1400
02	EDH43	EDH43	EDH43	1444
03	EDH44	EDH44	EDH44	1529
04	EDH45	EDH45	EDH45	1613
05	EDH46	EDH46	EDH46	1658
06	EDH47	EDH47	EDH47	1742
07	EDH49	EDH49	EDH49	1827
08				
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COMMENTS:

5A

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

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID: TJU03 BFB Injection Date: 06/03/89

Instrument ID: HP2 BFB Injection Time: 0959

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	16.4
75	30.0 - 60.0% OF MASS 95	43.6
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	92.9
175	5.0 - 9.0% of mass 174	6.6(7.1)1
176	Greater than 95.0%, but less than 101.0% of mass 174	92.0(99.0)1
177	5.0 - 9.0% of mass 176	6.2(6.7)2

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

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	VSTD20	JUC20	JUC20	06/03/89	1411
02	VSTD50	JUC50	JUC50	06/03/89	1505
03	VSTD100	JU100	JU100	06/03/89	1549
04	VSTD150	JU150	JU150	06/03/89	1634
05	VSTD200	JU200	JU200	06/03/89	1718
06					

FORM V VOA 1/87 Rev.

5A

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

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID: TJU08 BFB Injection Date: 06/08/89

Instrument ID: HP2 BFB Injection Time: 1257

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	16.0
75	30.0 - 60.0% OF MASS 95	43.8
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	95.9
175	5.0 - 9.0% of mass 174	7.3(7.6)1
176	Greater than 95.0%, but less than 101.0% of mass 174	95.1(99.2)1
177	5.0 - 9.0% of mass 176	6.2(6.5)2

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

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	VSTD50	DCU08	DCU08	06/08/89	1333
02	VBLK01	LBU08	LBU08	06/08/89	1436
03	EDH48	EDH48	EDH48	06/08/89	1934
04	EDH48MS	MSE48	MSE48	06/08/89	2018
05	EDH48MSD	MDE48	MDE48	06/08/89	2103
06					

FORM V VOA 1/87 Rev.

5A

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

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID: TJU12 BFB Injection Date: 06/12/89

Instrument ID: HP2 BFB Injection Time: 1050

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	16.9
75	30.0 - 60.0% OF MASS 95	45.0
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	94.5
175	5.0 - 9.0% of mass 174	6.8(7.2)1
176	Greater than 95.0%, but less than 101.0% of mass 174	94.1(99.6)1
177	5.0 - 9.0% of mass 176	6.3(6.7)2

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

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	VSTD50	DCU12	DCU12	06/12/89	1135
02	VBLK02	LBU12	LBU12	06/12/89	1235
03	EDH42	EDH42	EDH42	06/12/89	1400
04	EDH43	EDH43	EDH43	06/12/89	1444
05	EDH44	EDH44	EDH44	06/12/89	1529
06	EDH45	EDH45	EDH45	06/12/89	1613
07	EDH46	EDH46	EDH46	06/12/89	1658
08	EDH47	EDH47	EDH47	06/12/89	1742
09	EDH49	EDH49	EDH49	06/12/89	1827
10					

page 1 of 1

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8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID (Standard): DCU08 Date Analyzed: 06/08/89

Instrument ID: HP2 Time Analyzed: 1333

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

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	17575.	8.37	66194.	18.64	56632.	23.45
	UPPER LIMIT	35150.		132388.		113264.	
	LOWER LIMIT	8788.		33097.		28316.	
	EPA SAMPLE NO.						
01	VBLK01	17875.	8.37	71585.	18.64	59961.	23.45
02	EDH48	14493.	8.46	57034.	18.72	48618.	23.49
03	EDH48MS	14795.	8.45	57082.	18.68	48232.	23.49
04	EDH48MSD	13988.	8.42	54679.	18.68	46909.	23.49
05							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

Column used to flag internal standard area values with an asterisk

FORM VIII VOA 1/87 Rev.

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID (Standard): DCU12 Date Analyzed: 06/12/89

Instrument ID: HP2 Time Analyzed: 1135

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

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	19083.	8.45	75782.	18.72	63683.	23.53
	UPPER LIMIT	38166.		151564.		127366.	
	LOWER LIMIT	9542.		37891.		31841.	
	EPA SAMPLE NO.						
01	VBLK02	18689.	8.45	74134.	18.72	62880.	23.52
02	EDH42	15903.	8.38	62081.	18.69	53339.	23.45
03	EDH43	14721.	8.41	55350.	18.64	45266.	23.45
04	EDH44	13956.	8.42	56275.	18.65	46480.	23.45
05	EDH45	13625.	8.46	50005.	18.68	39090.	23.53
06	EDH46	14784.	8.41	57139.	18.64	54366.	23.48
07	EDH47	15170.	8.41	58728.	18.64	70312.	23.49
08	EDH49	13834.	8.45	51530.	18.68	48440.	23.48
09							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

Column used to flag internal standard area values with an asterisk

FORM VIII VOA 1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SDWM

Lab Name: [illegible] Contract: [illegible]

Lab Code: [illegible] Case No.: [illegible] SAS No.: [illegible] SDG No.: [illegible]

Matrix: (soil/water) SOIL Lab Sample ID: [illegible]

Sample wt/vol: 5.0 (g/ml) G Lab File ID: [illegible]

Level: (low/med) LOW Date Received: [illegible]

% Moisture: not dec. 16 Date Analyzed: [illegible]

Column: (pack/cap) PAC Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	6	U
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
156-60-5	trans-1,2-Dichloroethene	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	12	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
591-78-6	2-Hexanone	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
133-02-7	Xylene (total)	6	U

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDH42

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: ST Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH42

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH42

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 16 Date Analyzed: 06/12/89

Column: (pack/cap) PACK Dilution Factor: 1.010

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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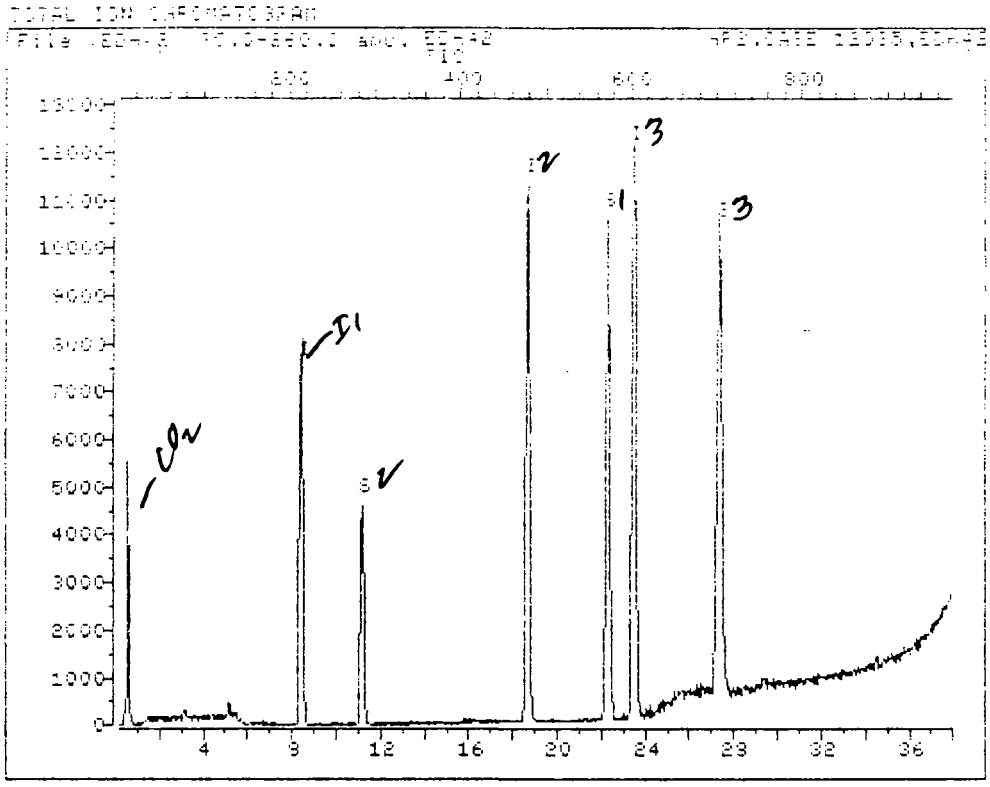


Data File: >EDH42::D1 Quant Output File: ^EDH42::SC
Name: EDH42
Misc: HP2,CASE 12035,EDH42,5.0G,5.0ML,,,%M=15.7$

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890612 12:23

Operator ID: JOHN
Quant Time: 890612 14:39
Injected at: 890612 14:00

% Moist.: 15.73 Wet: 4.9524 g Dry: 4.1734 g

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890612 14:39
Output File: ^EDH42::SC Injected at: 890612 14:00
Data File: >EDH42::D1 Dilution Factor: 1.00000
Name: EDH42
Misc: HP2,CASE 12035,EDH42,5.0G,5.0ML,,,%M=15.7$

% Sur Rec = Amt x 2

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890612 12:23

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.38	213	15903	50.00	ug/L	100
2)	Chloromethane	0.00	0	0	0.00	ug/L	
3)	Bromomethane	0.00	0	0	0.00	ug/L	
4)	Vinyl Chloride	0.00	0	0	0.00	ug/L	
5)	Chloroethane	0.00	0	0	0.00	ug/L	
6)	Methylene Chloride	0.00	130	0	0.00	ug/L	
7)	Acetone	0.00	0	0	0.00	ug/L	
8)	Carbon Disulfide	0.00	0	0	0.00	ug/L	
9)	1,1-Dichloroethene	0.00	0	0	0.00	ug/L	
10)	1,1-Dichloroethane	0.00	0	0	0.00	ug/L	
11)	1,2-Dichloroethene (total)	0.00	0	0	0.00	ug/L	
12)	Chloroform	0.00	0	0	0.00	ug/L	
13)	1,2-Dichloroethane-d4	11.17	285	19309	49.42	ug/L	89
14)	1,2-Dichloroethane	0.00	0	0	0.00	ug/L	
15)	2-Butanone	0.00	0	0	0.00	ug/L	
16)	*1,4-Difluorobenzene	18.68	479	62081	50.00	ug/L	68
17)	1,1,1-Trichloroethane	0.00	0	0	0.00	ug/L	
18)	Carbon Tetrachloride	0.00	0	0	0.00	ug/L	
19)	Vinyl Acetate	0.00	0	0	0.00	ug/L	
20)	Bromodichloromethane	0.00	0	0	0.00	ug/L	
21)	1,2-Dichloropropane	0.00	0	0	0.00	ug/L	
22)	cis-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
23)	Trichloroethene	0.00	0	0	0.00	ug/L	
24)	Dibromochloromethane	0.00	0	0	0.00	ug/L	
25)	1,1,2-Trichloroethane	0.00	0	0	0.00	ug/L	
26)	Benzene	0.00	0	0	0.00	ug/L	
27)	trans-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
28)	Bromoform	0.00	0	0	0.00	ug/L	
29)	*Chlorobenzene-d5	23.45	602	53339	50.00	ug/L	97
30)	4-Methyl-2-pentanone	0.00	0	0	0.00	ug/L	
31)	2-Hexanone	0.00	0	0	0.00	ug/L	
32)	Tetrachloroethene	0.00	0	0	0.00	ug/L	
33)	1,1,2,2-Tetrachloroethane	0.00	0	0	0.00	ug/L	
34)	Toluene	0.00	576	0	0.00	ug/L	
35)	Toluene-d8	22.29	572	51086	48.38	ug/L	91
36)	Chlorobenzene	0.00	0	0	0.00	ug/L	
37)	Ethylbenzene	0.00	0	0	0.00	ug/L	
38)	Styrene	0.00	0	0	0.00	ug/L	
39)	Xylene (total)	0.00	0	0	0.00	ug/L	
40)	Bromofluorobenzene	27.36	703	37653	48.06	ug/L	89

* Compound is ISTD

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH47

Lab Name: B-CLHED Contract: 68-D9-0077

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH43

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH43

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 7 Date Analyzed: 06/10/89

Column: (pack/cap) PACK Dilution Factor: 1.004

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	2	~~B~~ U 10/11/89
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	J
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
591-78-6	2-Hexanone	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	6	
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
133-02-7	Xylene (total)	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDH43

Lab Name: S-CUBED Contract: 68-D9-0007

Lab Code: SS Case No.: 12935 SAS No.: SDG No.: ED-41

Matrix: (soil/water) SOIL Lab Sample ID: EDH43

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH43

Level: (low/med) LOW Date Received: 06/07/89

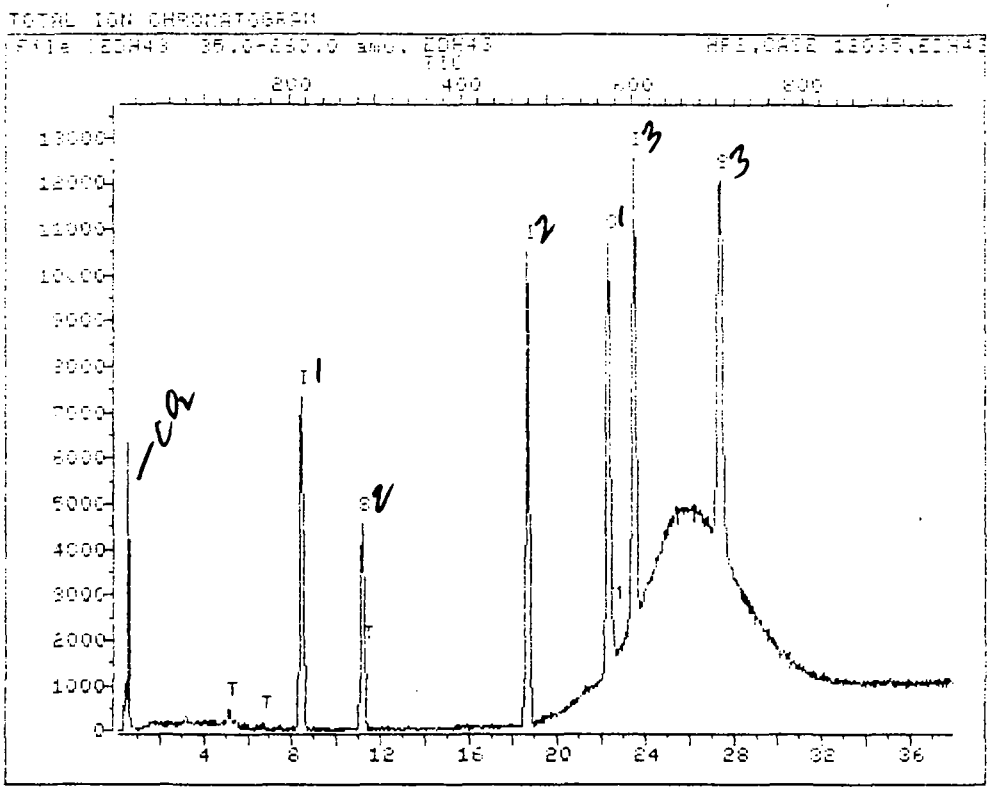
% Moisture: not dec. 7 Date Analyzed: 06/12/89

Column: (pack/cap) PACK Dilution Factor: 1.0/4

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN (Dodecane)	25.73	23	J
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					



Data File: >EDH43::D1 Quant Output File: ^EDH43::SC
Name: EDH43
Misc: HP2,CASE 12035,EDH43,5.0G,5.0ML,,,%M=44 $

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890612 12:23

Operator ID: JOHN
Quant Time: 890612 15:23
Injected at: 890612 14:44

% Moist.: 7.37 Wet: 4.9787 g Dry: 4.6118 g

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890612 15:23
Output File: ^EDH43::SC Injected at: 890612 14:44
Data File: >EDH43::D1 Dilution Factor: 1.00000
Name: EDH43
Misc: HP2,CASE 12035,EDH43,5.0G,5.0ML,,,%M= 7.4 $

% Sur Rec = Amt x 2

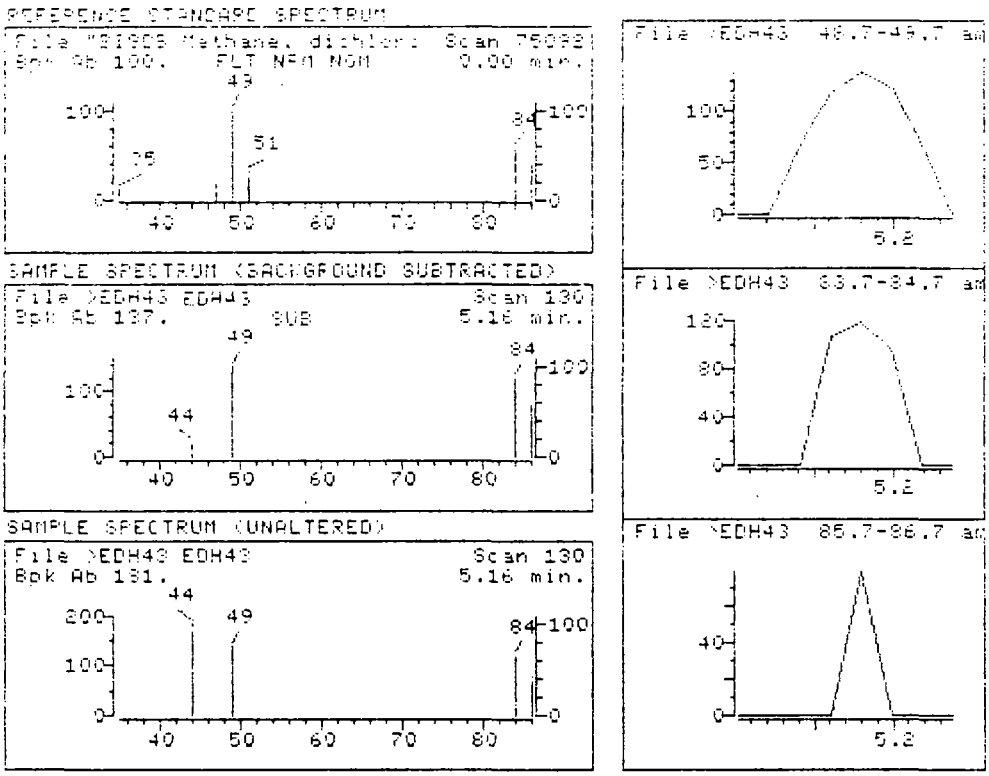
CMPD. FD = AMT x 5/Tw

4.6118

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890612 12:23

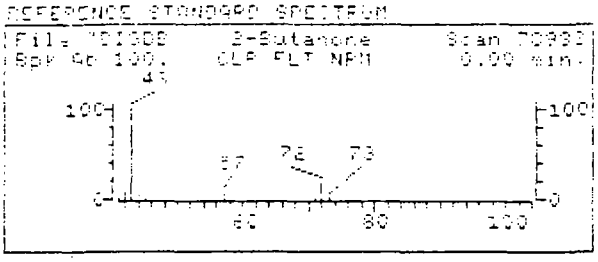
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.41	214	14721	50.00	ug/L	100
2)	Chloromethane	0.00	0	0	0.00	ug/L	
3)	Bromomethane	0.00	0	0	0.00	ug/L	
4)	Vinyl Chloride	0.00	0	0	0.00	ug/L	
5)	Chloroethane	0.00	0	0	0.00	ug/L	
6)	Methylene Chloride	5.16	130	746	2.19	ug/L → 2	76
7)	Acetone	0.00	149	0	0.00	ug/L	
8)	Carbon Disulfide	6.71	170	404	~~.50~~	ug/L → 1	100
9)	1,1-Dichloroethene	0.00	0	0	0.00	ug/L	
10)	1,1-Dichloroethane	0.00	0	0	0.00	ug/L	
11)	1,2-Dichloroethene (total)	0.00	0	0	0.00	ug/L	
12)	Chloroform	0.00	0	0	0.00	ug/L	
13)	1,2-Dichloroethane-d4	11.16	285	18631	51.52	ug/L	89
14)	1,2-Dichloroethane	0.00	0	0	0.00	ug/L	
15)	2-Butanone	11.28	288	283	9.27	ug/L → 10	100
16)	*1,4-Difluorobenzene	18.64	478	55350	50.00	ug/L	69
17)	1,1,1-Trichloroethane	0.00	0	0	0.00	ug/L	
18)	Carbon Tetrachloride	0.00	0	0	0.00	ug/L	
19)	Vinyl Acetate	0.00	0	0	0.00	ug/L	
20)	Bromodichloromethane	0.00	0	0	0.00	ug/L	
21)	1,2-Dichloropropane	0.00	0	0	0.00	ug/L	
22)	cis-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
23)	Trichloroethene	0.00	0	0	0.00	ug/L	
24)	Dibromochloromethane	0.00	0	0	0.00	ug/L	
25)	1,1,2-Trichloroethane	0.00	0	0	0.00	ug/L	
26)	Benzene	0.00	0	0	0.00	ug/L	
27)	trans-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
28)	Bromoform	0.00	0	0	0.00	ug/L	
29)	*Chlorobenzene-d5	23.45	602	45266	50.00	ug/L	99
30)	4-Methyl-2-pentanone	0.00	500	0	0.00	ug/L	
31)	2-Hexanone	0.00	519	0	0.00	ug/L	
32)	Tetrachloroethene	0.00	0	0	0.00	ug/L	
33)	1,1,2,2-Tetrachloroethane	0.00	0	0	0.00	ug/L	
34)	Toluene	22.48	577	2902	5.17	ug/L → 4	97
35)	Toluene-d8	22.29	572	46474	51.87	ug/L	94
36)	Chlorobenzene	0.00	0	0	0.00	ug/L	
37)	Ethylbenzene	0.00	0	0	0.00	ug/L	
38)	Styrene	0.00	0	0	0.00	ug/L	
39)	Xylene (total)	0.00	0	0	0.00	ug/L	
40)	Bromofluorobenzene	27.36	703	31126	46.82	ug/L	84

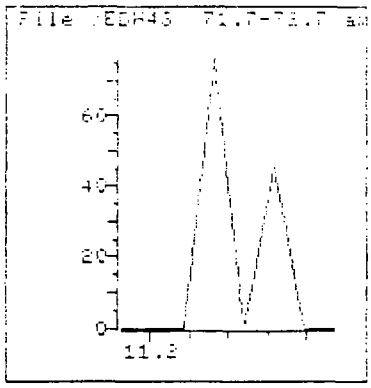
* Compound is ISTD

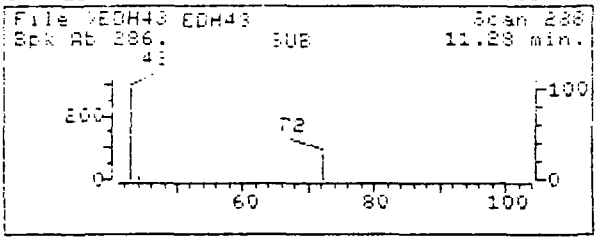


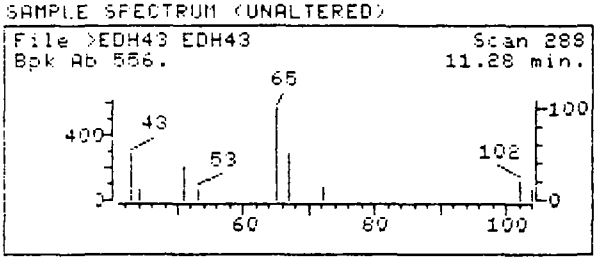
Data File: >EDH43::D1 Quant Output File: ^EDH43::SC
Name: EDH43
Misc: HP2,CASE 12035,EDH43,5.0G,5.0ML,,,%M=7.4 $
Quant Time: 890612 15:23 Quant ID File: IDVDD::SC
Injected at: 890612 14:44 Last Calibration: 890612 12:23

Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 130
Retention Time: 5.16 min.
Quant Ion: 84.0
Area: 746
Concentration: 2.19 ug/L
q-value: 76



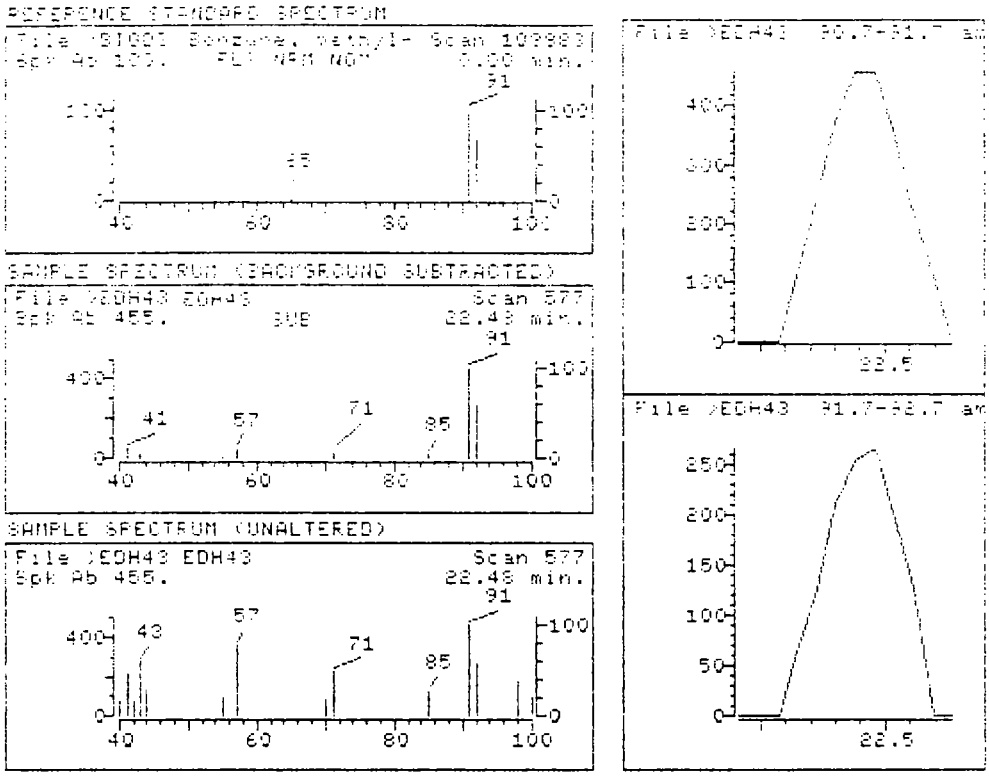






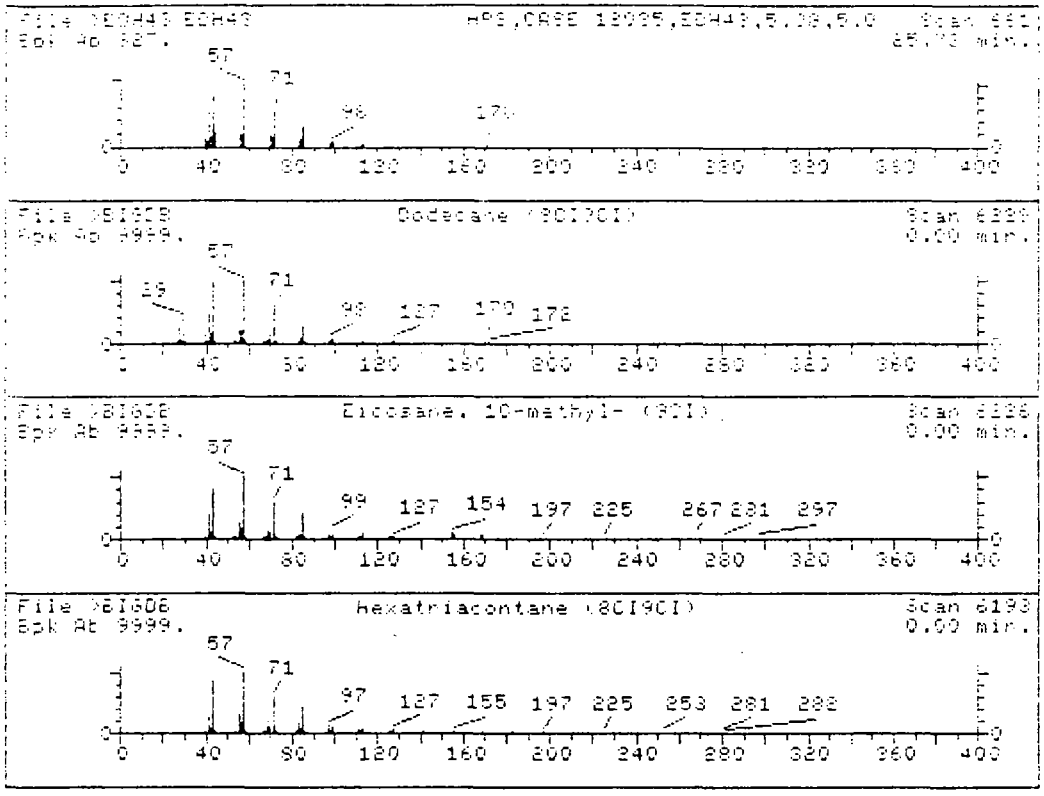
Data File: >EDH43::D1 Quant Output File: ^EDH43::SC
Name: EDH43
Misc: HP2,CASE 12035,EDH43,5.0G,5.0ML,,,%M=7.4 $
Quant Time: 890612 15:23 Quant ID File: IDVDD::SC
Injected at: 890612 14:44 Last Calibration: 890612 12:23

Compound No: 15
Compound Name: 2-Butanone
Scan Number: 288
Retention Time: 11.28 min.
Quant Ion: 72.0
Area: 283
Concentration: 9.27 ug/L
q-value: 100



Data File: >EDH43::D1 Quant Output File: ^EDH43::SC
Name: EDH43
Misc: HP2,CASE 12035,EDH43,5.0G,5.0ML,,,%M= 7.4$
Quant Time: 890612 15:23 Quant ID File: IDVDD::SC
Injected at: 890612 14:44 Last Calibration: 890612 12:23

Compound No: 34
Compound Name: Toluene
Scan Number: 577
Retention Time: 22.48 min.
Quant Ion: 92.0
Area: 2902
Concentration: 5.17 ug/L
q-value: 97



UNKNOWN

Date and Time of analysis: 6/12/89 14:44

Sample datafile name: >EDH43::D1

VOA TIC CALCULATIONS

SAMPLE EDH43 (EDH43)

% Moist.: 7.37 Wet: 4.9787 g Dry: 4.6018 g

$$\text{TIC Multiplier} = \frac{50\ \mu g}{L} \times \frac{0.005\ L}{\text{ALIQUOT (L or kg)*}} \approx 54.20$$

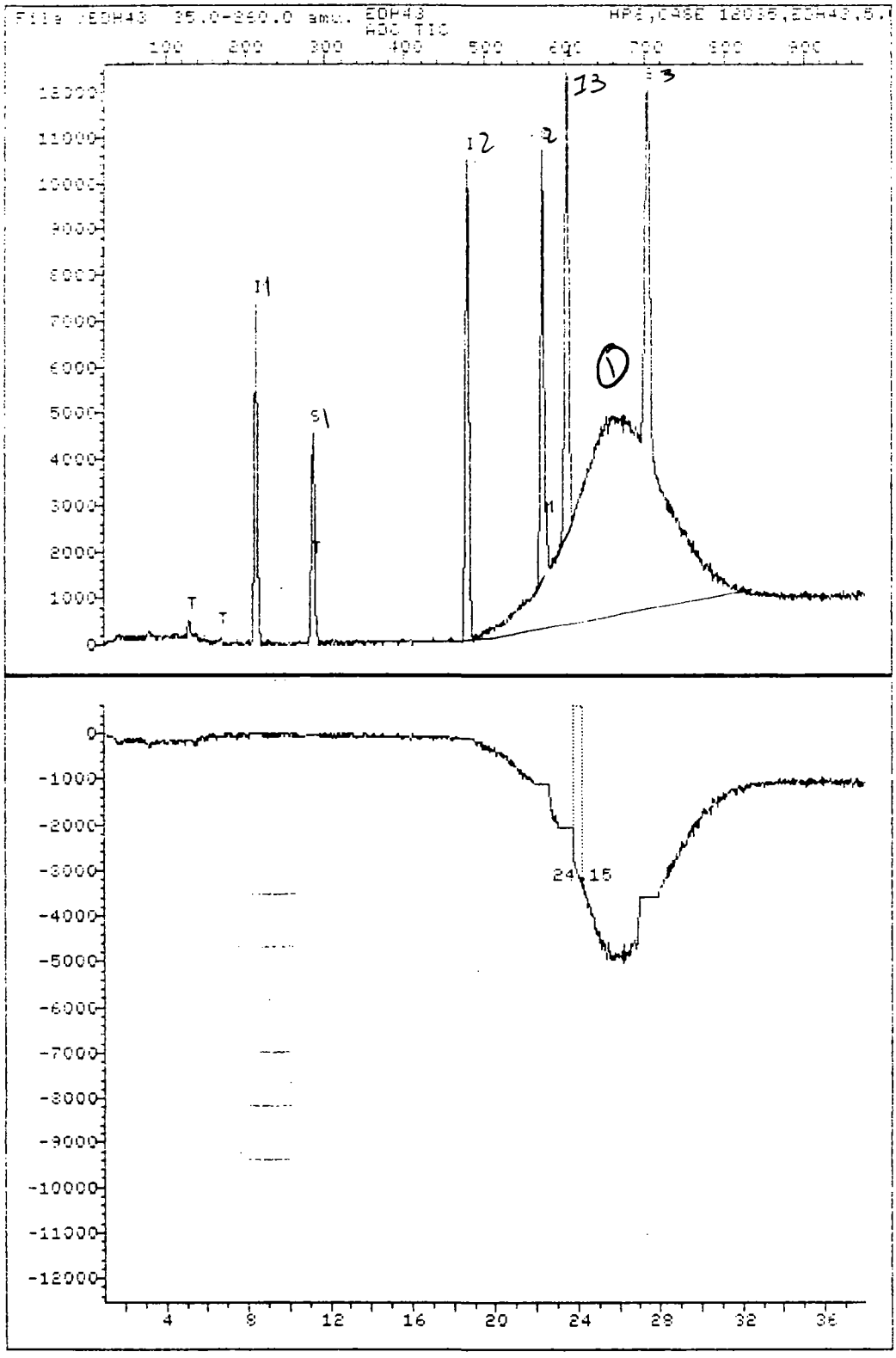
$$\text{TIC Amount} = \frac{\text{ht TIC}}{\text{ht IS}} \times \text{Multiplier}$$

ht IS 1 _____ 2 _____ 3 77

	SCAN	IS	Height	Amount
1	661	77	32	23
2				
3				
4				
5				
6				
7				
8				
9				
10				

*Usually 0.005 L or 0.005 kg (Dry)

NOTE : _____


File :EDH43 35.0-260.0 amu. EDH43
HDC TIC
HP6,CASE 12035,EDH43,5.
100
200
300
400
500
600
700
800
900
13000
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
T
T
I1
S1
T
I2
2
I3
3
1
-1000
-2000
-3000
-4000
-5000
-6000
-7000
-8000
-9000
-10000
-11000
-12000
24.15
4
8
12
16
20
24
28
32
36

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ED-44

Lab Name: G-CUBED Contract: 68-D9-0027

Lab Code: GI Case No.: 12035 SAS No.: SDG No.: ED447

Matrix: (soil/water) SOIL Lab Sample ID: ED-44

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ED44

Level: (low/med) LOW Date Received: 06/07/89

% Moisture: not dec. 4 Date Analyzed: 06/10/89

Column: (pack/cap) PACK Dilution Factor: 1.010

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	13	~~B~~ U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
591-78-6	2-Hexanone	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
133-02-7	Xylene (total)	5	U

10/11/89

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ED-44

Lab Name: S-CURED Contract: 68-D9-0027

Lab Code: SC Case No.: 12035 SAS No.: SDG No.: ED442

Matrix: (soil/water) SOIL Lab Sample ID: ED-44

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ED44

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 4 Date Analyzed: 06/12/89

Column: (pack/cap) PACK Dilution Factor: 1.010

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
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13.				
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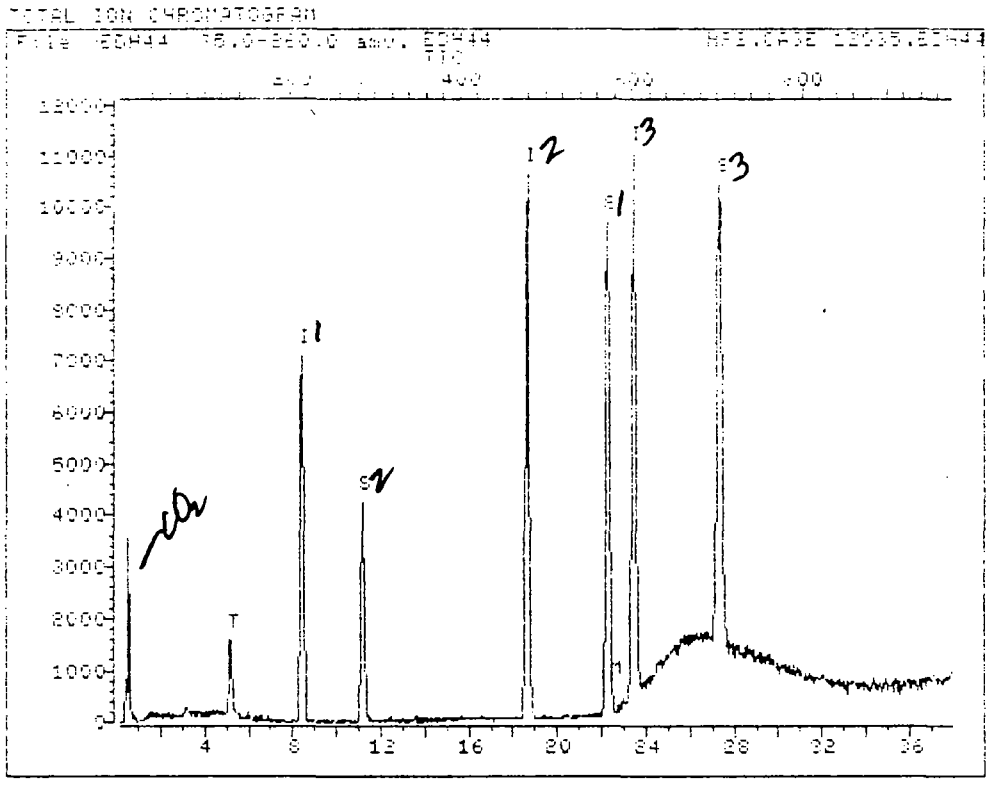
27.				
28.				
29.				
30.				



Data File: >EDH44::D1 Quant Output File: ^EDH44::SC
Name: EDH44
Misc: HP2,CASE 12035,EDH44,5.0G,5.0ML,,,%M=3.7 $

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890612 12:23

Operator ID: JOHN
Quant Time: 890612 16:08
Injected at: 890612 15:29

% Moist.: 3.69 Wet: 4.9520 g Dry: 4.7693 g

QUANT REPORT

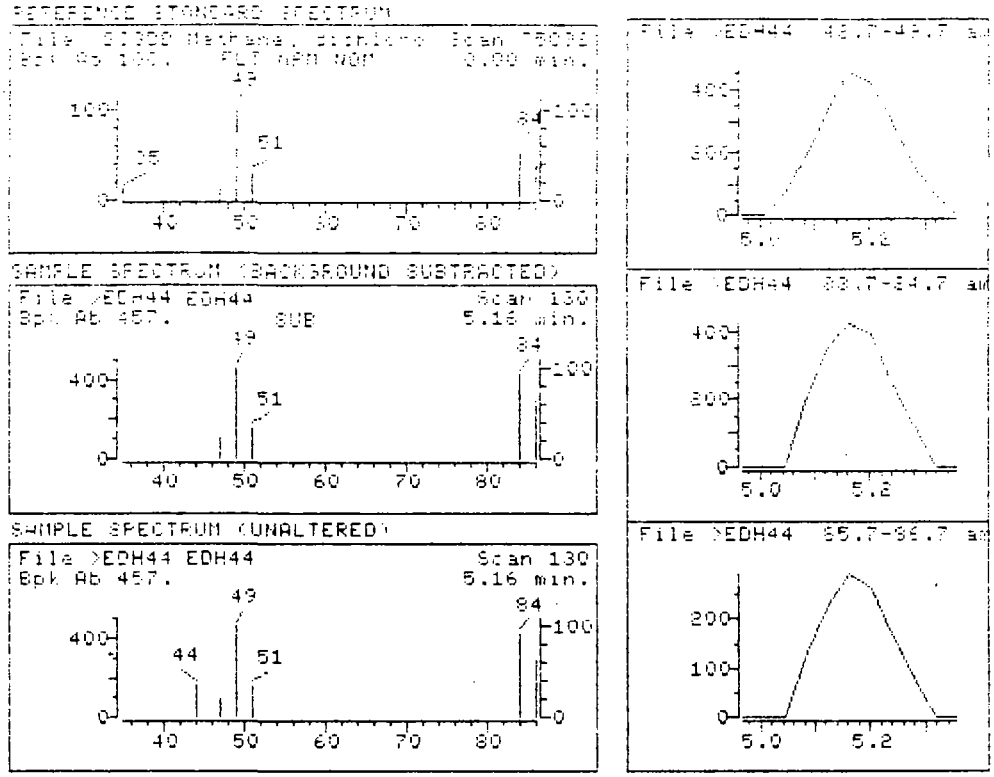
Operator ID: JOHN Quant Rev: 6 Quant Time: 890612 16:08
Output File: ^EDH44::SC Injected at: 890612 15:29
Data File: >EDH44::D1 Dilution Factor: 1.00000
Name: EDH44
Misc: HP2,CASE 12035,EDH44,5.0G,5.0ML,,,%M=3.9 $

% Sur Rec = Amt x 2
CMPS.PD = AMT x 5 / IW

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890612 12:23

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.42	214	13956	50.00	ug/L	100
2)	Chloromethane	0.00	0	0	0.00	ug/L	
3)	Bromomethane	0.00	0	0	0.00	ug/L	
4)	Vinyl Chloride	0.00	0	0	0.00	ug/L	
5)	Chloroethane	0.00	0	0	0.00	ug/L	
6)	Methylene Chloride	5.16	130	4094	12.67	ug/L → 13	68
7)	Acetone	0.00	150	0	0.00	ug/L	
8)	Carbon Disulfide	0.00	0	0	0.00	ug/L	
9)	1,1-Dichloroethene	0.00	0	0	0.00	ug/L	
10)	1,1-Dichloroethane	0.00	0	0	0.00	ug/L	
11)	1,2-Dichloroethene (total)	0.00	0	0	0.00	ug/L	
12)	Chloroform	0.00	0	0	0.00	ug/L	
13)	1,2-Dichloroethane-d4	11.17	285	18026	52.58	ug/L	92
14)	1,2-Dichloroethane	0.00	0	0	0.00	ug/L	
15)	2-Butanone	0.00	0	0	0.00	ug/L	
16)	*1,4-Difluorobenzene	18.65	478	56275	50.00	ug/L	69
17)	1,1,1-Trichloroethane	0.00	0	0	0.00	ug/L	
18)	Carbon Tetrachloride	0.00	0	0	0.00	ug/L	
19)	Vinyl Acetate	0.00	0	0	0.00	ug/L	
20)	Bromodichloromethane	0.00	0	0	0.00	ug/L	
21)	1,2-Dichloropropane	0.00	0	0	0.00	ug/L	
22)	cis-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
23)	Trichloroethene	0.00	0	0	0.00	ug/L	
24)	Dibromochloromethane	0.00	0	0	0.00	ug/L	
25)	1,1,2-Trichloroethane	0.00	0	0	0.00	ug/L	
26)	Benzene	0.00	0	0	0.00	ug/L	
27)	trans-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
28)	Bromoform	0.00	0	0	0.00	ug/L	
29)	*Chlorobenzene-d5	23.45	602	46480	50.00	ug/L	98
30)	4-Methyl-2-pentanone	0.00	0	0	0.00	ug/L	
31)	2-Hexanone	0.00	0	0	0.00	ug/L	
32)	Tetrachloroethene	0.00	0	0	0.00	ug/L	
33)	1,1,2,2-Tetrachloroethane	0.00	0	0	0.00	ug/L	
34)	Toluene	22.48	577	192	.33	ug/L	96
35)	Toluene-d8	22.25	571	47815	51.97	ug/L	98
36)	Chlorobenzene	0.00	0	0	0.00	ug/L	
37)	Ethylbenzene	0.00	0	0	0.00	ug/L	
38)	Styrene	0.00	0	0	0.00	ug/L	
39)	Xylene (total)	0.00	0	0	0.00	ug/L	
40)	Bromofluorobenzene	27.33	702	33012	48.36	ug/L	88

* Compound is ISTD



Data File: >EDH44::D1 Quant Output File: ^EDH44::SC
Name: EDH44
Misc: HP2,CASE 12035,EDH44,5.0G,5.0ML,,,%M=3.7 $
Quant Time: 890612 16:08 Quant ID File: IDVDD::SC
Injected at: 890612 15:29 Last Calibration: 890612 12:23

Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 130
Retention Time: 5.16 min.
Quant Ion: 84.0
Area: 4094
Concentration: 12.67 ug/L
q-value: 68

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH45

Lab Name: S-CURED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH45

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH45

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 12 Date Analyzed: 06/12/89

Column: (pack/cap) PACK Dilution Factor: 0.994

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	9	~~B~~ U 10/11/89
67-64-1	Acetone	120	
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
156-60-5	trans-1,2-Dichloroethene	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	45	
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
591-78-6	2-Hexanone	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	11	
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
133-02-7	Xylene (total)	6	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDH49

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH43

Matrix: (soil/water) SOIL Lab Sample ID: EDH49

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH49

Level: (low/med) LOW Date Received: 06/07/89

% Moisture: not dec. 12 Date Analyzed: 06/12/89

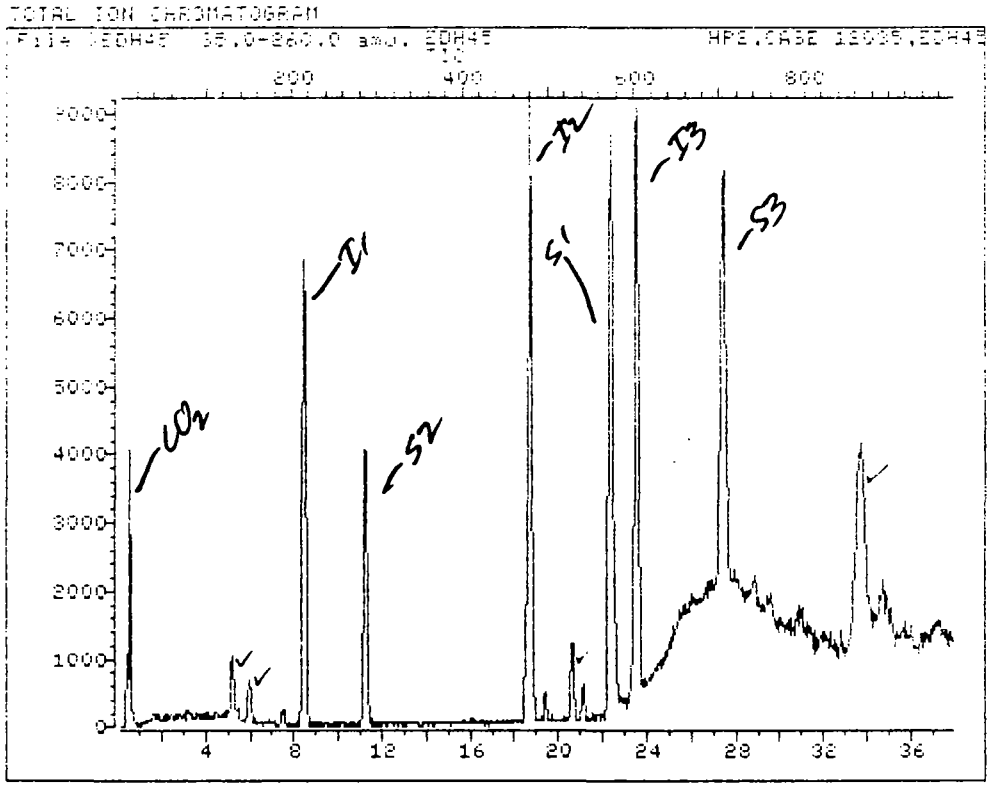
Column: (pack/cap) PACK Dilution Factor: 0.994

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN (Hydroxylamine)	20.62	5	J
2.		UNKNOWN	33.68	29	J
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

FORM I VOA-TIC 1/87 Rev.



Data File: >EDH45::D1 Quant Output File: ^EDH45::SC
Name: EDH45
Misc: HP2,CASE 12035,EDH45,5.0G,5.0ML,,,%M=11.6 $

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890616 09:59

Operator ID: JOHN
Quant Time: 890616 10:00
Injected at: 890612 16:13

% Moist.: 11.60 Wet: 5.0280 g Dry: 4.4453 g

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890616 10:00
Output File: ^EDH45::SC Injected at: 890612 16:13
Data File: >EDH45::D1 Dilution Factor: 1.00000
Name: EDH45
Misc: HP2,CASE 12035,EDH45,5.0G,5.0ML,,,%M=11.4 $

% Sur Rec = Amt x 2

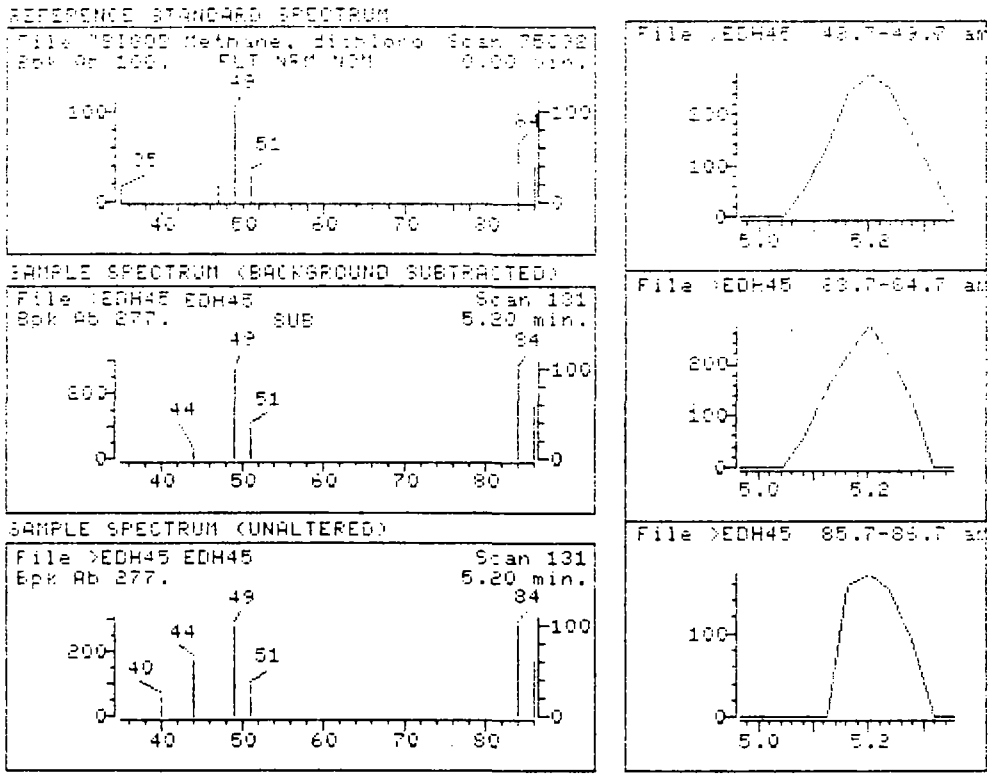
CMPD. FD = AMT x 5 / IW

4.4453

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890616 09:59

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.46	215	13625	50.00	ug/L	100
2)	Chloromethane	0.00	0	0	0.00	ug/L	
3)	Bromomethane	0.00	0	0	0.00	ug/L	
4)	Vinyl Chloride	0.00	0	0	0.00	ug/L	
5)	Chloroethane	0.00	0	0	0.00	ug/L	
6)	Methylene Chloride	5.20	131	2450	7.77	ug/L → 9	63
7)	Acetone	5.98	151	4842	106.70	ug/L → 120	82
8)	Carbon Disulfide	0.00	0	0	0.00	ug/L	
9)	1,1-Dichloroethene	0.00	0	0	0.00	ug/L	
10)	1,1-Dichloroethane	0.00	0	0	0.00	ug/L	
11)	1,2-Dichloroethene (total)	0.00	0	0	0.00	ug/L	
12)	Chloroform	0.00	0	0	0.00	ug/L	
13)	1,2-Dichloroethane-d4	11.21	286	16839	50.31	ug/L	95
14)	1,2-Dichloroethane	0.00	0	0	0.00	ug/L	
15)	2-Butanone	11.32	289	1129	39.95	ug/L → 45	100
16)	*1,4-Difluorobenzene	18.68	479	50005	50.00	ug/L	69
17)	1,1,1-Trichloroethane	0.00	0	0	0.00	ug/L	
18)	Carbon Tetrachloride	0.00	0	0	0.00	ug/L	
19)	Vinyl Acetate	0.00	0	0	0.00	ug/L	
20)	Bromodichloromethane	0.00	0	0	0.00	ug/L	
21)	1,2-Dichloropropane	0.00	0	0	0.00	ug/L	
22)	cis-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
23)	Trichloroethene	0.00	0	0	0.00	ug/L	
24)	Dibromochloromethane	0.00	0	0	0.00	ug/L	
25)	1,1,2-Trichloroethane	0.00	0	0	0.00	ug/L	
26)	Benzene	0.00	0	0	0.00	ug/L	
27)	trans-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
28)	Bromoform	0.00	0	0	0.00	ug/L	
29)	*Chlorobenzene-d5	23.53	604	39090	50.00	ug/L	94
30)	4-Methyl-2-pentanone	0.00	497	0	0.00	ug/L	
31)	2-Hexanone	0.00	530	0	0.00	ug/L	
32)	Tetrachloroethene	0.00	0	0	0.00	ug/L	
33)	1,1,2,2-Tetrachloroethane	0.00	0	0	0.00	ug/L	
34)	Toluene	22.52	578	4829	9.95	ug/L → 11	97
35)	Toluene-d8	22.33	573	40282	52.06	ug/L	95
36)	Chlorobenzene	0.00	0	0	0.00	ug/L	
37)	Ethylbenzene	0.00	0	0	0.00	ug/L	
38)	Styrene	0.00	0	0	0.00	ug/L	
39)	Xylene (total)	0.00	761	0	0.00	ug/L	
40)	Bromofluorobenzene	27.44	705	26299	45.81	ug/L	91

* Compound is ISTD



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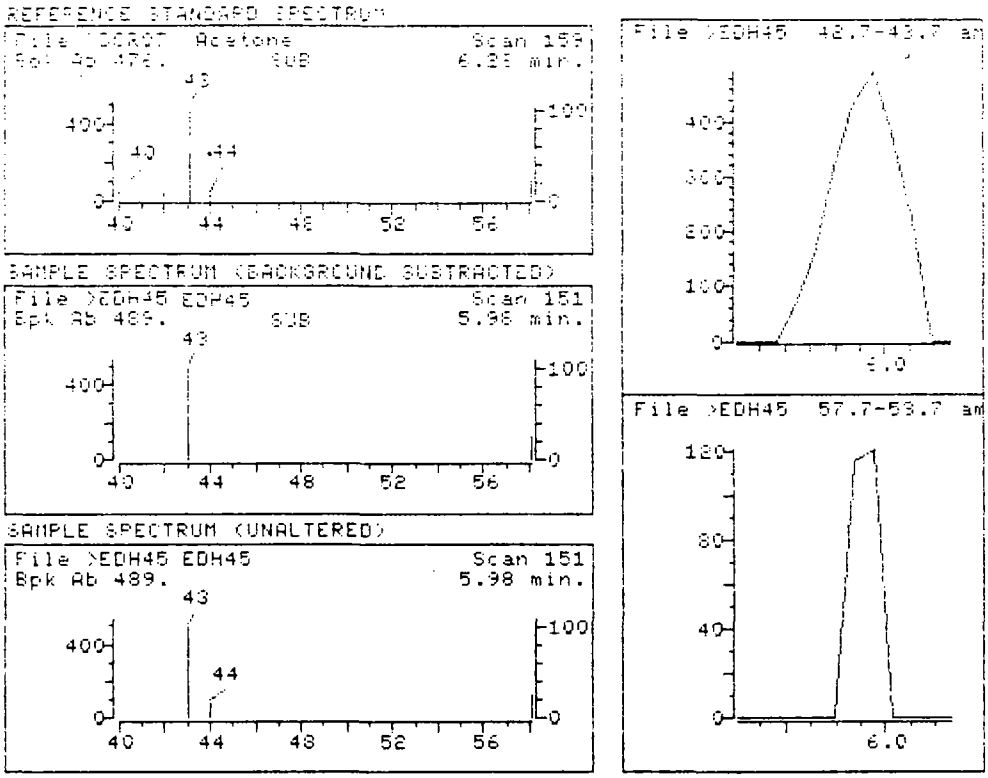
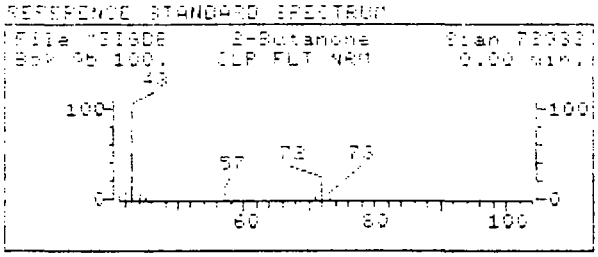
Name: EDH45
Misc: HP2,CASE 12035,EDH45,5.0G,5.0ML,,,%M= N.6 $
Quant Time: 890616 10:00 Quant ID File: IDVDD::SC
Injected at: 890612 16:13 Last Calibration: 890616 09:59

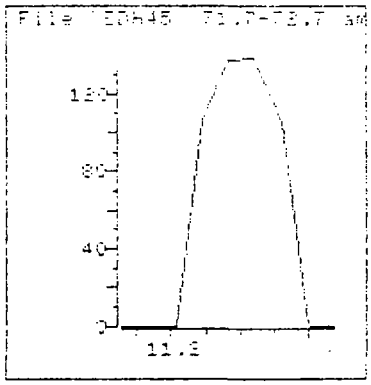
Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 131
Retention Time: 5.20 min.
Quant Ion: 84.0
Area: 2450
Concentration: 7.77 ug/L
q-value: 63

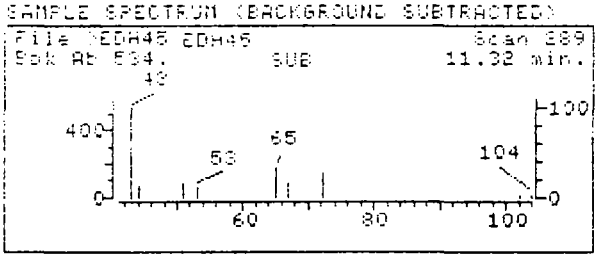


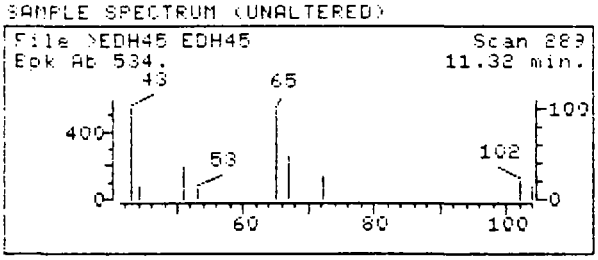
Data File: >EDH45::D1 Quant Output File: ^EDH45::SC
Name: EDH45
Misc: HP2,CASE 12035,EDH45,5.0G,5.0ML,,,%M=11.6 $
Quant Time: 890616 10:00 Quant ID File: IDVDD::SC
Injected at: 890612 16:13 Last Calibration: 890616 09:59

Compound No: 7
Compound Name: Acetone
Scan Number: 151
Retention Time: 5.98 min.
Quant Ion: 43.0
Area: 4842
Concentration: 106.70 ug/L
q-value: 82



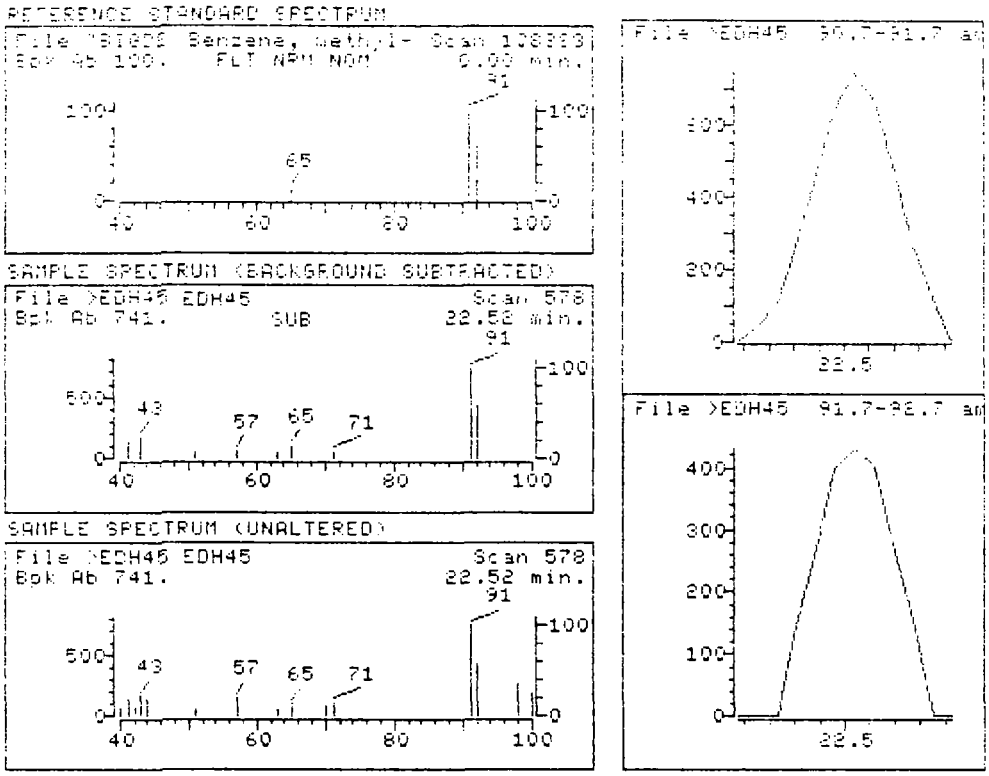






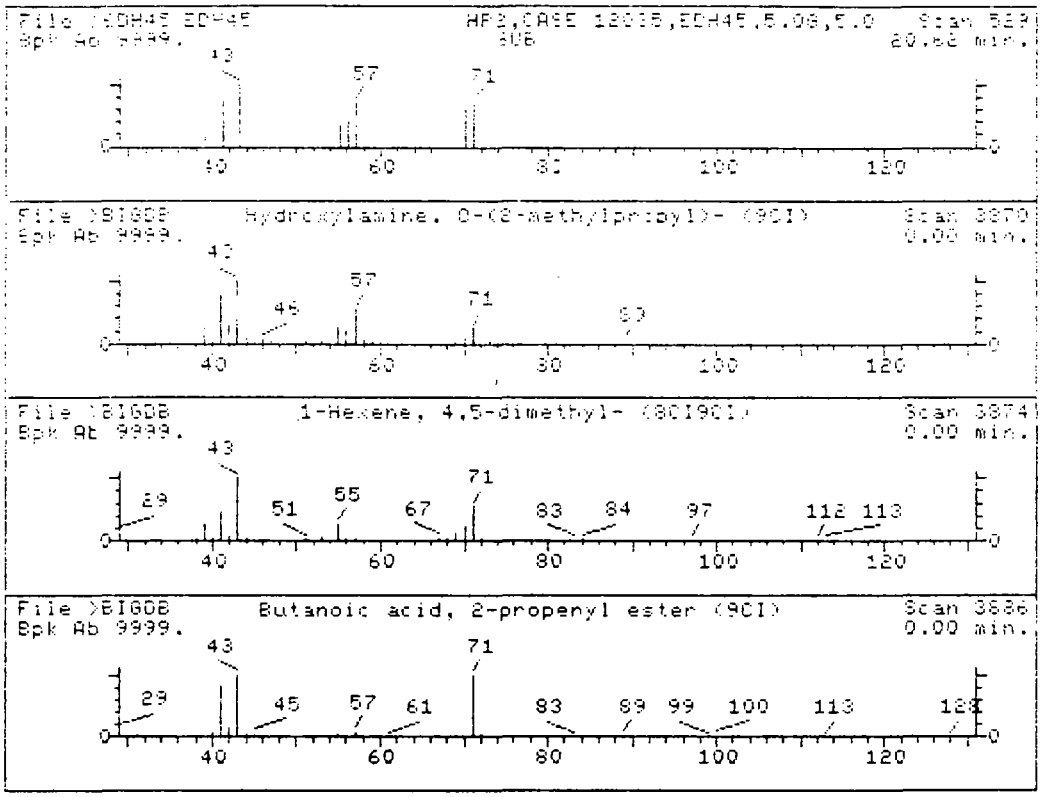
Data File: >EDH45::D1 Quant Output File: ^EDH45::SC
Name: EDH45
Misc: HP2,CASE 12035,EDH45,5.0G,5.0ML,,,%M=11.6 $
Quant Time: 890616 10:00 Quant ID File: IDVDD::SC
Injected at: 890612 16:13 Last Calibration: 890616 09:59

Compound No: 15
Compound Name: 2-Butanone
Scan Number: 289
Retention Time: 11.32 min.
Quant Ion: 72.0
Area: 1129
Concentration: 39.95 ug/L
q-value: 100



Data File: >EDH45::D1 Quant Output File: ^EDH45::SC
Name: EDH45
Misc: HP2,CASE 12035,EDH45,5.0G,5.0ML,,,%M=11.6 $
Quant Time: 890616 10:00 Quant ID File: IDVDD::SC
Injected at: 890612 16:13 Last Calibration: 890616 09:59

Compound No: 34
Compound Name: Toluene
Scan Number: 578
Retention Time: 22.52 min.
Quant Ion: 92.0
Area: 4829
Concentration: 9.95 ug/L
q-value: 97



UNKNOWN

6/12/89 16:13

UNKNOWN #,1
AREA = 12071.00 TENTATIVE CONCENTRATION IS 5.00

1.	Hydroxylamine, O-(2-methylpropyl)- (9CI)	89	C4H11NO
2.	1-Hexene, 4,5-dimethyl- (8CI9CI)	112	C8H16
3.	Butanoic acid, 2-propenyl ester (9CI)	128	C7H12O2
4.	2(3H)-Furanone, dihydro-3,5-dimethyl- (8CI9CI)	114	C6H10O2
5.	2-Furanmethanol, tetrahydro-, acetate (9CI)	144	C7H12O3
6.	Decane, 2,2,3-trimethyl- (9CI)	184	C13H28

Sample file: >EDH45 Spectrum #: 529
Search speed: 1 Tilting option: S No. of ion ranges searched: 49

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	34*	5618622	3870	"BIGDB	38	53	1	0	93	38	14	21

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

SUBJECT: Review of Region V CLP Data Received for Review on July 17 1989

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory

TO: Data User: MPCA

We have reviewed the data for the following case(s).

SITE NAME: BJ Carney SMO Case No. 12035

EPA Data Set No. SF 6240 No. of Samples: 8 D.U./Activity Numbers TFA/TFA 102

CRL No. 89 VC24 501 - 508

SMO Traffic No. EDH 42-49

CLP Laboratory: S-Cubed Hrs. Required for Review: 8

Following are our findings: The following review covers the analyses of low level RAS organics (medium level for semi-volatiles EPH 45) on soil. Please see review narrative and calibration outlier forms for further qualifications.

Wayne Matthews
MPCA
10/19/89

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications referenced above. See Data Qualifier sheets and Calibration Outlier forms for flags and additional comments.
( ) Data are preliminary - pending verification by Contractor Laboratory. See Case Summary above.
( ) Data are unacceptable.

cc: Carla Dempsey, CLP Quality Assurance Officer, Analytical Operations Branch
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

DATA QUALIFIERS

Contractor: S Cubed

Case 10235

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

① Holding Times: Holding times were met (for all fractions).

② GC/MS tuning and Instrument Performance: GC/MS tuning and mass calibrations were within QC limits. Pesticide GC performance was within QC limits (20% maximum breakdown of DDT/Endrin).

③ Calibration: Calibration outliers are noted on the outlier form.

④ Method Blanks: Volatiles method blank VBlk02 contained methylene chloride at an estimated concentration of 3 µg/kg. VBlk 01 was not identified as having methylene chloride present, yet a small peak at the approximate retention time of methylene chloride was observed in the chromatogram. Methylene chloride was qualified as "U" (non detected) in associated samples.

The Semi volatiles method blank SBlk 11 contained bis-2 ethylhexyl phthalate at 740 µg/kg and was qualified as "U" in

Reviewed by: Wm - MPCA

Phone: (612) 296-8707

Date: 10/19/89

DATA QUALIFIERS

Contractor: S cubed

Case 10235

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

associated investigative samples. SBLK 11 also contained numerous TICs - possible alkanes, ketones and phenolics, as well as furan and pyrazine-like compounds with low identification probabilities. The laboratory has qualified some investigative sample TICs as "B" (possible blank contaminant) based upon similar retention times even if the mass spectral matches were not good.

Pesticide/PCB method blank PBLK 11 was free of contaminants.

(5) Surrogate Recovery: Volatiles and Pest./PCB surrogates were within QC limits.

Surrogate recoveries for 2-Fluorobiphenyl, Phenol d-5 and 2,4,6-Tribromophenol were slightly to well above QC limits for sample EDH 48; although the narrative from the laboratory indicates that a EDH 48 MSD was re-injected, (due to low spike compound recovery) no EDH 48 MSD was present in the data package. 2-FBP and Phenol-d5 were 3 and 1% above the QC limit respectively, while 2,4,6-TBP was 27% above the acceptable limit. EDH 45 MS and EDH 45 MSD also had recoveries of

Reviewed by: WM

Phone:

Date: 10/19/89

DATA QUALIFIERS

Contractor: S. cubed

Case 10235

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

2,4,5-TBP 21% above the acceptable QC limit. Given the slightly high recoveries of two of three surrogates in EDH 48, no action will be taken in qualifying the data from this sample.

(VI) Matrix Spike/Matrix Spike Duplicates: Volatiles MS/MSD was within QC limits for % Recovery and RPD.

Semi volatiles MS/MSD EDH 42 was significantly outside for all RPDs - MSD % recoveries were low (low) for 9 of 11 surrogate spikes; however 5 of 9 were within 3% of acceptable limits, and none were greater than 20% below QC limits. EDH 45 MS/MSD (medium) was within acceptable limits.

Pesticide/PCB MSD % recovery for γ-BHC was above QC limits.

(I) Field Duplicate: Samples EDH 43 and EDH 44 appear to be field duplicates, however there is a significant difference in the identity and number of compounds detected in these two samples.

Reviewed by: _____

Phone: _____

Date: _____

DATA QUALIFIERS

Contractor: S-cubed

Case 10235

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

(8) Internal Standards: Internal standards area and RT were within QC limits for the volatiles and semi-volatiles fractions.

(9) TCL Compound Identification: The compounds identified appear to be confirmed by the mass spectra.

(10) Compound Quantitation and Reported Detection Limits: No list is included in this case

(11) Tentatively Identified Compounds: There were many TICs for the semi-volatiles fraction of this case; of these many had poor mass spectral matches and could not be identified or classified by chemical group.

(12) System Performance: Except for the apparent failure to re-analyze EPH 48 (due to high surrogate recoveries of three compounds) performance was adequate.

Reviewed by:

Phone:

Date:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/SAS # 10235 CONTRACTOR S-cubed

Instrument # HP 2	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	6/3/89 1450			6/8/89 1333			6/12/89 1135								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone															
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone															
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether															
Bromoform															
2-Methyl-2-Pentanone															
2-Hexanone				.189	29.6	J									
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

VBlk 01	EDH 42
EDH 48	EDH 43
EDH 48 ms	EDH 44
EDH 48 msD	EDH 45
	EDH 46
	EDH 47
	EDH 49
	VBlk 02

Reviewer's Initials/Date: WM 10/19/89

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

CASE/SAS # 10235 CONTRACTOR S-cubed

Instrument # HP 3	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	6/20/89 1528			6/22/89 1148			6/28/89 1224								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether															
2-Chlorophenol															
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol															
1,2-Dichlorobenzene															
2-Methylphenol															
bis(2-chloroisopropyl)Ether															
4-Methylphenol															
N-Nitroso-Di-n-Propylamine															
Hexachloroethane															
Nitrobenzene															
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid							.227	28.9	J						
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline															
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene				.231	29.9	J	.217	38.8	J						
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline															
Acenaphthene															
2,4-Dinitrophenol															
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

SBLK 12	EDH 42	EDH 42 MSD
EDH 44	EDH 42 MS	EDH 48
EDH 45		EDH 49
EDH 46		EDH 45 MS
EDH 47		EDH 45 MSD

Reviewer Initials/Date: WL 10/19/89

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE/SAS # 10235 CONTRACTOR S-cubed

Instrument #	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	6/20			6/22			6/23								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline				.285	37.1	J	.330	27.2	J						
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene	.964	36.1	J												
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															
3,3' Dichlorobenzidine				.199	42.4	J	.251	27.2	J						

SEE PAGE 1 FOR AFFECTED SAMPLES.

* These flags should be applied to the analytes on the sample data sheets.

Reviewer's Initials/Date: WM 10/19/89

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

CASE/SAS # 10235 CONTRACTOR S-cubed

Instrument # HP-3	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	5/23/89 853			6/19/89 1225											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether															
2-Chlorophenol				1.625	27.6	J									
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol															
1,2-Dichlorobenzene															
2-Methylphenol				1.738	29.6	J									
bis(2-chloroisopropyl)Ether															
4-Methylphenol															
N-Nitroso-Di-n-Propylamine															
Hexachloroethane															
Nitrobenzene															
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid				1.207	34.2	J									
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline															
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene				1.189	30.5	J									
Hexachlorocyclopentadiene															
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline															
Acenaphthene															
2,4-Dinitrophenol				1.137	45.9	J									
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

SBLK 11
EDH 43

Reviewer Initials/Date: WM 10/19/89

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE/SAS # 10235 CONTRACTOR S. cubed

Instrument #	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	5/23			16/19											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline				.246	39.8										
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

* These flags should be applied to the analytes on the sample data sheets.

Reviewer's Initials/Date: WM 10/19/88

Case: 10235

Contractor: S-cubed

TENTATIVELY IDENTIFIED COMPOUNDS
WATCH ASSESSMENT

NOTE: Reviewer should note directly on Organic Analysis Data Sheet (OADS) those matches that in his opinion (based on contract criteria) are unreasonable.

CRITERIA

(1) Relative intensities of major ions (>10%) reference spectrum should be present in the sample spectrum.

(2) Relative intensities of major ions in sample spectrum should agree to within ± 20% of reference spectrum intensities.

(3) Molecular ions present in reference spectrum should be present in sample spectrum.

(4) Ions present in sample spectrum, but not in reference spectrum should be reviewed for possible background contamination or presence of coeluting interferences.

(5) Ions present in reference spectrum, but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting interferences.

(6) If, in the reviewer's opinion, no valid identification can be made the compound should be labelled as "unknown" and the initials and date of the reviewer placed on the OADS.

Reviewer's Initials/Date: WL 10/19/89

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

SUBJECT: Review of Region V CLP Data
Received for Review on 7-12-89

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory

TO: Data User: MPCA

We have reviewed the data for the following case(s).

SITE NAME: B.J Carney SMO Case No. 12085

EPA Data Set No. SF6210 No. of Samples: 8 D.U./Activity Numbers TM / TRAN

CRL No. 89YC04SC1-808

SMO Traffic No. EDH42-49

CLP Laboratory: S-Cubed Hrs. Required for Review: ___

Following are our findings:

Unreviewed Data as per Federal Agreement

( ) Data are acceptable for use.
( ) Data are acceptable for use with qualifications referenced above. See Data Qualifier sheets and Calibration Outlier forms for flags and additional comments.
( ) Data are preliminary - pending verification by Contractor Laboratory. See Case Summary above.
( ) Data are unacceptable.

cc: Carla Dempsey, CLP Quality Assurance Officer, Analytical Operations Branch
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD/Central Regional Laboratory
DATA TRACKING FORM FOR CONTRACT SAMPLES

CRL Data Set No. SF 6240 CERCLIS No. —

SMO Case No. 12035 Site Name and Location: BJ Carney

Name of Contractor or EPA Laboratory: S-Cubed Data User: MDCH

No. of Samples: 8 Date Samples or Data Received: 7-11-89

1. Have chain-of-custody records been received? YES ✓ NO___
2. Have Traffic Reports or packing lists been received? YES ✓ NO___
3. If no, are Traffic Report or packing list numbers written on the chain-of-custody record? YES___ NO___
4. If no, which Traffic report or packing list numbers are missing?

Are basic data forms in? YES ✓ NO___

Number of samples claimed: 8 Number of samples received: 8

Checked by: Q Harris Date: 7-12-89

Received by Contract Project Management Section: _____ Date: _____

Review Started: _____ Reviewer Signature: _____

Total time spent on review: _____ Date review completed: _____

Copied (xeroxed) by: _____ Date: _____

Mailed to Data User by: Q Harris Date: 7-12-89

DATA USERS:

Please fill in the blanks below and return this form to: Sylvia Griffin, Data Management Coordinator, Region V, SSCRL

Data received by: _____ Date: _____

Q.A. review received by: _____ Date: _____

Inorganic Date Complete [ ]. Suitable for Intended Purposes [ ] ✓ [ ] if acceptable.
Organic Data Complete [ ]. Suitable for Intended Purposes [ ] List problems below.
Dioxin Data Complete [ ]. Suitable for Intended Purposes [ ]
SAS Data Complete [ ]. Suitable for Intended Purposes [ ]

See Attached "Missing Data Request Form" [ ]
PROBLEMS: Please indicate reasons (if any) why data are not suitable for your uses. Other problems.

Received by Data Management Coordinator, CRL for File: Date: _____

Signature:

SUPERFUND 6240

CENTRAL REGIONAL LABORATORY SAMPLE DATA REPORT
ORGANICS/INORGANICS
THIS FORM IS TO BE USED FOR SAMPLES SENT TO CONTRACT ONLY

LOG IN DATE: 6/23/89
DUE DATE: 7/7/89

CASE NUMBER/SAS No. 12035 SITE NAME B.J. Carney LABORATORY Enseco Inorganic DATE SHIPPED 6/2/89

SUPERFUND DU NUMBER TFA102 EPA RPM or OSC (S.M.S.)/(CES) S Cubed - Organic PAGE 1 OF 1

ACTIVITY NUMBER ZZ

CRL LOG NUMBER	ORGANIC TRAFFIC REPORT NUMBER	INORGANIC TRAFFIC REPORT NUMBER or SAS Packing List No.	WATER OR LIQUIDS: ACID BASE NEUTRAL CPDS ORGANIC SCAN UG/L TOX17574	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN UG/L TOX17564	WATER POLYCHLORINATED BIPHENYLS UG/L PES17144	WATER CHLORINATED PESTICIDES UG/L PES17134	TOTAL METALS IN WATER UG/L MET111	WATER CYANIDE UG/L MIN74919	NITRATE NITRITE MG/L MIN7284	AMMONIA MG/L MIN7294	RESIDUE FILTERABLE TDS MG/L MIN7362	RESIDUE NON-FILT TSS MG/L MIN7372			SEDIMENTS or SOILS: ACID BASE NEUTRAL CPDS ORGANIC SCAN MG/KG TOX215722	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN MG/KG TOX215622	SEDIMENTS POLYCHLORINATED BIPHENYLS MG/KG PES211422	SEDIMENT CHLORINATED PESTICIDES MG/KG 211322	TOTAL METALS MG/KG MET413	CYANIDE MG/KG MIN44930	EP TOXICITY METALS MG/KG	AMMONIA MG/KG MIN42925				
89YC24501	EDH42	MECS39													X	X	X	X	X	X						
89YC24502	EDH43	MECS40													X	X	X	X	X	X						
89YC24503	EDH44	MECS41													X	X	X	X	X	X						
89YC24504	EDH45	MECS42													X	X	X	X	X	X						
89YC24505	EDH46	MECS43													X	X	X	X	X	X						
89YC24506	EDH47	MECS44													X	X	X	X	X	X						
89YC24507	EDH48	MECS45													X	X	X	X	X	X						
89YC24508	EDH49	MECS46													X	X	X	X	X	X						

S-CUBED
A Division of Maxwell Laboratories, Inc.

July 7, 1989

Volume 1 of 3

RECEIVED
JUL 11 1989
US EPA CONTROL PROGRAM
230 S. DEARBORN ST.
CHICAGO, ILLINOIS 60604

NARRATIVE CASE 12035
S-CUBED CONTRACT NO. 68D90027

This case consists of the following samples reported under SDG:EDH42

EDH42, EDH43, EDH44, EDH45, EDH46, EDH47, EDH48, EDH49

Matrix: EDH48 (Low Level VOA, BNA)
EDH45 (Medium Level BNA)
EDH42 (Pesticide/PCB)

No problems were encountered with the volatile analyses. QC analyses yielded compliant results. Few target compounds were detected.

BNA analysis of EDH45 was carried out with medium level techniques due to high levels of polynuclear aromatic hydrocarbons (PNAs) and TICs. Numerous PNAs were also detected in many of the low level samples. A low recovery of spiked target compounds was obtained for EDH48MSD. This sample was reinjected with similar results, thus the nonreproducible data are probably due to the complexity and inhomogeneity of the sample.

Pesticide analyses also yielded reasonable QC results. DDD and endrin were detected in the matrix spiked samples, but not in the unspiked sample. This is probably due to breakdown of the spiked compounds. Several of these samples were quite complex causing interferences in several standard analyses. The run sequence was stopped and restarted after EVAL B C2 and EVAL B C5 thus accounting for the gaps in time on Form 8E.

I certify that this data packed is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer readable data submitted on floppy diskette has been authorized by the laboratory manager or his designee, as verified by the the following signature.

Date: 7-7-89

JoAnn Wilkinson, Project Manager

P.O. Box 1620, La Jolla, California 92038-1620 3398 Carmel Mountain Road, San Diego, California 92121-1095
Tel: (619) 453-0060 TWX: 910-337-1253 Telecopier: (619) 755-0474

USEPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA, VA 22313
703-557-2490 FTS-557-2490

CASE NO: 12035

SAS NO: (IF APPLICABLE)

ORGANIC TRAFFIC REPORT

(FOR CLP USE ONLY)

TYPE OF ACTIVITY (CIRCLE ONE) ①
SUPERFUND—PA (SI) ESI RI/FS RD RA ER
NPLD O&M OTHER _____
NON-SUPERFUND— _____ PROGRAM

SAMPLE DESCRIPTION
(ENTER IN BOX A)
1. SURFACE WATER 4. SOIL
2. GROUND WATER 5. SEDIMENT
3. LEACHATE 6. OIL (SAS)
7. WASTE (SAS)

REGION NO: V
SAMPLING COMPANY ② MPCA
SAMPLER: (NAME) Elizabeth Cody

SHIP TO: ③
S-Cubed
3398 Carmel Mountain Rd
San Diego, CA 92121
(619) 453-0060
ATTN: Elaine Waters

SAMPLING DATE: ④
BEGIN: 5/30/89 END: 6/2/89

DATE SHIPPED: 6/2/89 CARRIER: Fed Ex ⑤
AIRBILL NO: 3302879042

DATE REC'D: 6-3-89
SDG NO: ⑥ EDH42
REC'D BY: [signature]
LABORATORY CONTRACT NO. 68D90027
UNIT PRICE

TRANSFER TO:
DATE REC'D: ⑦
REC'D BY:
CONTRACT NO./PRICE:

CLP SAMPLE NUMBER (FROM LABELS)	A SAMPLE DESCRIPTION (FROM BOX 1) 2 3 4 5 6 7	B CONCENTRATION (L = LOW/MED, H = HIGH (SAS))	C RAS ANALYSIS: VOLATILE	BASE/NEUT/ACID	PESTICIDE/PCB's		D SPECIAL HANDLING	E STATION LOCATION	F SAMPLE CONDITION ON RECEIPT	G HIGH CONC PHASES (CHECK): SOLID	WATER—MIS LIQUID	NON WATER—MIS LIQUID
EDH42/89YC24501	4	L	X	X	X			SB-1				
EDH43/89YC24502	4	L	X	X	X			SB-2				
EDH44/89YC24503	4	L	X	X	X			SB-2				
EDH45/89YC24504	4	L	X	X	X			SB-5				
EDH46/89YC24505	4	L	X	X	X			SB-20				
EDH47/89YC24506	4	L	X	X	X			SB-11				
EDH48/89YC24507	4	L	X	X	X			SB-12				
* EDH49/89YC24508	4	L	X	X	X			SB-16				
Lost sample	recovered											

EPA Form 2075-7 (9-87)

WHITE — SMO COPY PINK — CLIENT COPY WHITE — LAB COPY FOR RETURN TO SMO YELLOW — LAB COPY

2B
SOIL VOLATILE SURROGATE RECOVERY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No. 12035 SAS No.: SDG No.: EDH42

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
01	EDH42	97	96	99		0
02	EDH43	104	94	103		0
03	EDH44	104	97	105		0
04	EDH45	104	92	101		0
05	EDH46	90	86	106		0
06	EDH47	96	89	102		0
07	EDH48	104	95	103		0
08	EDH48MS	101	94	100		0
09	EDH48MSD	101	105	105		0
10	EDH49	90	86	101		0
11	VBLK01	102	95	97		0
12	VBLK02	99	95	96		0
13						
14						
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27						
28						
29						
30						

	QC LIMITS
S1 (TOL) = Toluene-d8	(81-117)
S2 (BFB) = Bromofluorobenzene	(74-121)
S3 (DCE) = 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix Spike - EPA Sample No.: EDH48 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	52.960	0.000	59.729	113	59-172
Trichloroethene	52.960	0.000	52.346	99	62-137
Benzene	52.960	0.000	54.147	102	66-142
Toluene	52.960	3.510	47.294	83	59-139
Chlorobenzene	52.960	0.000	59.707	113	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	53.203	62.823	118	4	22	59-172
Trichloroethene	53.203	52.448	99	0	24	62-137
Benzene	53.203	55.598	105	3	21	66-142
Toluene	53.203	47.734	83	0	21	59-139
Chlorobenzene	53.203	59.662	112	1	21	60-133

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: _____

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID: LBU08 Lab Sample ID: LBU08

Date Analyzed: 06/08/89 Time Analyzed: 1436

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

Instrument ID: HP2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EDH48	EDH48	EDH48	1934
02	EDH48MS	MSE48	MSE48	2018
03	EDH48MSD	MDE48	MDE48	2103
04				
05				
06				
07				
08				
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30				

COMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID: LBU12 Lab Sample ID: LBU12

Date Analyzed: 06/12/89 Time Analyzed: 1235

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

Instrument ID: HP2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EDH42	EDH42	EDH42	1400
02	EDH43	EDH43	EDH43	1444
03	EDH44	EDH44	EDH44	1529
04	EDH45	EDH45	EDH45	1613
05	EDH46	EDH46	EDH46	1658
06	EDH47	EDH47	EDH47	1742
07	EDH49	EDH49	EDH49	1827
08				
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COMMENTS:

5A

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

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID: TJU03 BFB Injection Date: 06/03/89

Instrument ID: HP2 BFB Injection Time: 0959

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	16.4
75	30.0 - 60.0% OF MASS 95	43.6
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	92.9
175	5.0 - 9.0% of mass 174	6.6(7.1)1
176	Greater than 95.0%, but less than 101.0% of mass 174	92.0(99.0)1
177	5.0 - 9.0% of mass 176	6.2(6.7)2

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

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	VSTD20	JUC20	JUC20	06/03/89	1411
02	VSTD50	JUC50	JUC50	06/03/89	1505
03	VSTD100	JU100	JU100	06/03/89	1549
04	VSTD150	JU150	JU150	06/03/89	1634
05	VSTD200	JU200	JU200	06/03/89	1718
06					

FORM V VOA 1/87 Rev.

5A

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

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID: TJU08 BFB Injection Date: 06/08/89

Instrument ID: HP2 BFB Injection Time: 1257

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	16.0
75	30.0 - 60.0% OF MASS 95	43.8
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	95.9
175	5.0 - 9.0% of mass 174	7.3(7.6)1
176	Greater than 95.0%, but less than 101.0% of mass 174	95.1(99.2)1
177	5.0 - 9.0% of mass 176	6.2(6.5)2

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

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	VSTD50	DCU08	DCU08	06/08/89	1333
02	VBLK01	LBU08	LBU08	06/08/89	1436
03	EDH48	EDH48	EDH48	06/08/89	1934
04	EDH48MS	MSE48	MSE48	06/08/89	2018
05	EDH48MSD	MDE48	MDE48	06/08/89	2103
06					

page 1 of 1

FORM V VOA 1/87 Rev.

5A

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

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID: TJU12 BFB Injection Date: 06/12/89

Instrument ID: HP2 BFB Injection Time: 1050

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	16.9
75	30.0 - 60.0% OF MASS 95	45.0
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	94.5
175	5.0 - 9.0% of mass 174	6.8(7.2)1
176	Greater than 95.0%, but less than 101.0% of mass 174	94.1(99.6)1
177	5.0 - 9.0% of mass 176	6.3(6.7)2

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

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	VSTD50	DCU12	DCU12	06/12/89	1135
02	VBLK02	LBU12	LBU12	06/12/89	1235
03	EDH42	EDH42	EDH42	06/12/89	1400
04	EDH43	EDH43	EDH43	06/12/89	1444
05	EDH44	EDH44	EDH44	06/12/89	1529
06	EDH45	EDH45	EDH45	06/12/89	1613
07	EDH46	EDH46	EDH46	06/12/89	1658
08	EDH47	EDH47	EDH47	06/12/89	1742
09	EDH49	EDH49	EDH49	06/12/89	1827
10					

FORM V VOA 1/87 Rev.

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name:S-CUBED Contract:68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID (Standard): DCU08 Date Analyzed:06/08/89

Instrument ID: HP2 Time Analyzed: 1333

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

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	17575.	8.37	66194.	18.64	56632.	23.45
	UPPER LIMIT	35150.		132388.		113264.	
	LOWER LIMIT	8788.		33097.		28316.	
	EPA SAMPLE NO.						
01	VBLK01	17875.	8.37	71585.	18.64	59961.	23.45
02	EDH48	14493.	8.46	57034.	18.72	48618.	23.49
03	EDH48MS	14795.	8.45	57082.	18.68	48232.	23.49
04	EDH48MSD	13988.	8.42	54679.	18.68	46909.	23.49
05							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

Column used to flag internal standard area values with an asterisk

page 1 of 1

FORM VIII VOA 1/87 Rev.

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID (Standard): DCU12 Date Analyzed: 06/12/89

Instrument ID: HP2 Time Analyzed: 1135

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

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	19083.	8.45	75782.	18.72	63683.	23.53
	UPPER LIMIT	38166.		151564.		127366.	
	LOWER LIMIT	9542.		37891.		31841.	
	EPA SAMPLE NO.						
01	VBLK02	18689.	8.45	74134.	18.72	62880.	23.52
02	EDH42	15903.	8.38	62081.	18.69	53339.	23.45
03	EDH43	14721.	8.41	55350.	18.64	45266.	23.45
04	EDH44	13956.	8.42	56275.	18.65	46480.	23.45
05	EDH45	13625.	8.46	50005.	18.68	39090.	23.53
06	EDH46	14784.	8.41	57139.	18.64	54366.	23.48
07	EDH47	15170.	8.41	58728.	18.64	70312.	23.49
08	EDH49	13834.	8.45	51530.	18.68	48440.	23.48
09							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

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

Column used to flag internal standard area values with an asterisk

FORM VIII VOA 1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

[illegible]

Lab Name: [illegible] Contract: [illegible]

Lab Code: [illegible] Case No.: [illegible] SAS No.: [illegible] SDG No.: [illegible]

Matrix: (soil/water) SOIL Lab Sample ID: [illegible]

Sample wt/vol: 5.0 (g/ml) G Lab File ID: [illegible]

Level: (low/med) LOW Date Received: [illegible]

% Moisture: not dec. 16 Date Analyzed: [illegible]

Column: (packed/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	6	U
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
156-60-5	trans-1,2-Dichloroethene	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	12	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
591-78-6	2-Hexanone	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
133-02-7	Xylene (total)	6	U

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDH42

Lab Name: SHOBED Contract: 68-D9-0027

Lab Code: ST Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH42

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH42

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 16 Date Analyzed: 06/12/89

Column: (pack/cap) PACK Dilution Factor: 1.010

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
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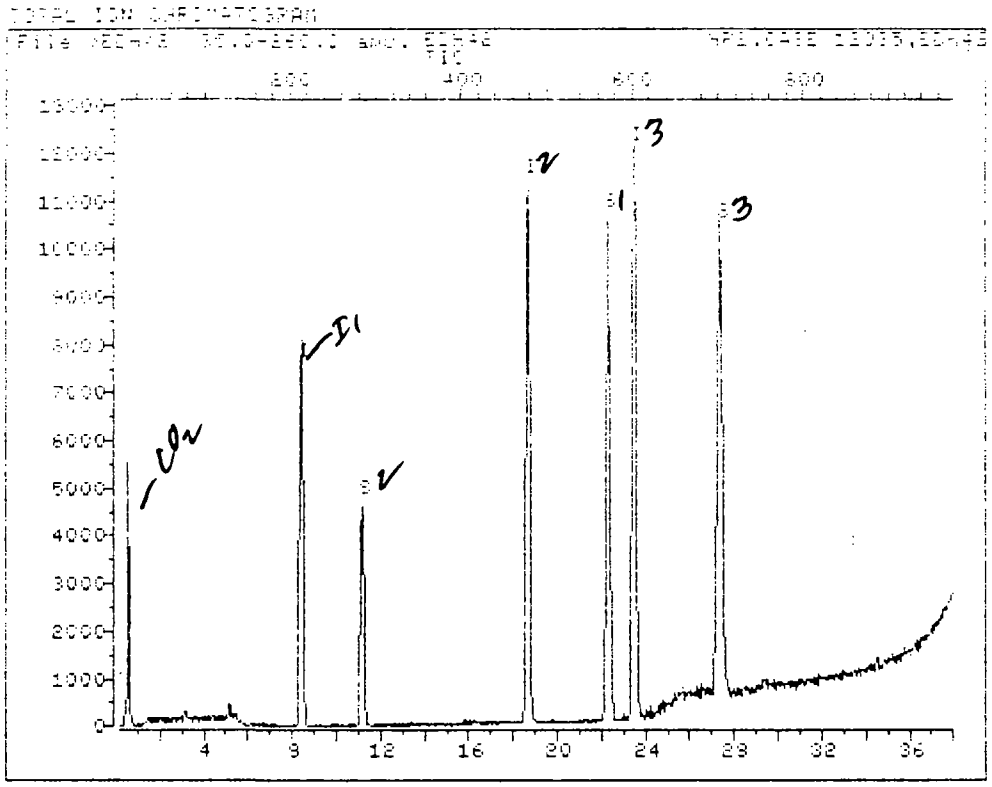
29.				
30.				



Data File: >EDH42::D1 Quant Output File: ^EDH42::SC
Name: EDH42
Misc: HP2,CASE 12035,EDH42,5.0G,5.0ML,,,%M=15.7$

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890612 12:23

Operator ID: JOHN
Quant Time: 890612 14:39
Injected at: 890612 14:00

% Moist.: 15.73 Wet: 4.9524 g Dry: 4.1734 g

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890612 14:39
Output File: ^EDH42::SC Injected at: 890612 14:00
Data File: >EDH42::D1 Dilution Factor: 1.00000
Name: EDH42
Misc: HP2,CASE 12035,EDH42,5.0G,5.0ML,,,%M=15.7$

% Sur Rec = Amt x 2

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890612 12:23

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.38	213	15903	50.00	ug/L	100
2)	Chloromethane	0.00	0	0	0.00	ug/L	
3)	Bromomethane	0.00	0	0	0.00	ug/L	
4)	Vinyl Chloride	0.00	0	0	0.00	ug/L	
5)	Chloroethane	0.00	0	0	0.00	ug/L	
6)	Methylene Chloride	0.00	130	0	0.00	ug/L	
7)	Acetone	0.00	0	0	0.00	ug/L	
8)	Carbon Disulfide	0.00	0	0	0.00	ug/L	
9)	1,1-Dichloroethene	0.00	0	0	0.00	ug/L	
10)	1,1-Dichloroethane	0.00	0	0	0.00	ug/L	
11)	1,2-Dichloroethene (total)	0.00	0	0	0.00	ug/L	
12)	Chloroform	0.00	0	0	0.00	ug/L	
13)	1,2-Dichloroethane-d4	11.17	285	19309	49.42	ug/L	89
14)	1,2-Dichloroethane	0.00	0	0	0.00	ug/L	
15)	2-Butanone	0.00	0	0	0.00	ug/L	
16)	*1,4-Difluorobenzene	18.68	479	62081	50.00	ug/L	68
17)	1,1,1-Trichloroethane	0.00	0	0	0.00	ug/L	
18)	Carbon Tetrachloride	0.00	0	0	0.00	ug/L	
19)	Vinyl Acetate	0.00	0	0	0.00	ug/L	
20)	Bromodichloromethane	0.00	0	0	0.00	ug/L	
21)	1,2-Dichloropropane	0.00	0	0	0.00	ug/L	
22)	cis-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
23)	Trichloroethene	0.00	0	0	0.00	ug/L	
24)	Dibromochloromethane	0.00	0	0	0.00	ug/L	
25)	1,1,2-Trichloroethane	0.00	0	0	0.00	ug/L	
26)	Benzene	0.00	0	0	0.00	ug/L	
27)	trans-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
28)	Bromoform	0.00	0	0	0.00	ug/L	
29)	*Chlorobenzene-d5	23.45	602	53339	50.00	ug/L	97
30)	4-Methyl-2-pentanone	0.00	0	0	0.00	ug/L	
31)	2-Hexanone	0.00	0	0	0.00	ug/L	
32)	Tetrachloroethene	0.00	0	0	0.00	ug/L	
33)	1,1,2,2-Tetrachloroethane	0.00	0	0	0.00	ug/L	
34)	Toluene	0.00	576	0	0.00	ug/L	
35)	Toluene-d8	22.29	572	51086	48.38	ug/L	91
36)	Chlorobenzene	0.00	0	0	0.00	ug/L	
37)	Ethylbenzene	0.00	0	0	0.00	ug/L	
38)	Styrene	0.00	0	0	0.00	ug/L	
39)	Xylene (total)	0.00	0	0	0.00	ug/L	
40)	Bromofluorobenzene	27.36	703	37653	48.06	ug/L	89

* Compound is ISTD

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH43

Lab Name: S-CLASS Contract: 68-D9-0007

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH43

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH43

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 7 Date Analyzed: 06/12/89

Column: (pack/cap) PACK Dilution Factor: 1.004

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	2	~~BJ~~ U 10/11/89
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	J
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
591-78-6	2-Hexanone	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	6	
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
133-02-7	Xylene (total)	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

[illegible]

Lab Name: S-CUBED Contract: 68-D9-0097

Lab Code: 03 Case No.: 12035 SAS No.: SDG No.: ED-41

Matrix: (soil/water) SOIL Lab Sample ID: EDH43

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH47

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 7 Date Analyzed: 06/12/89

Column: (pack/cap) PACK Dilution Factor: 1.004

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN (Dodecane)	25.73	23	J
2.				
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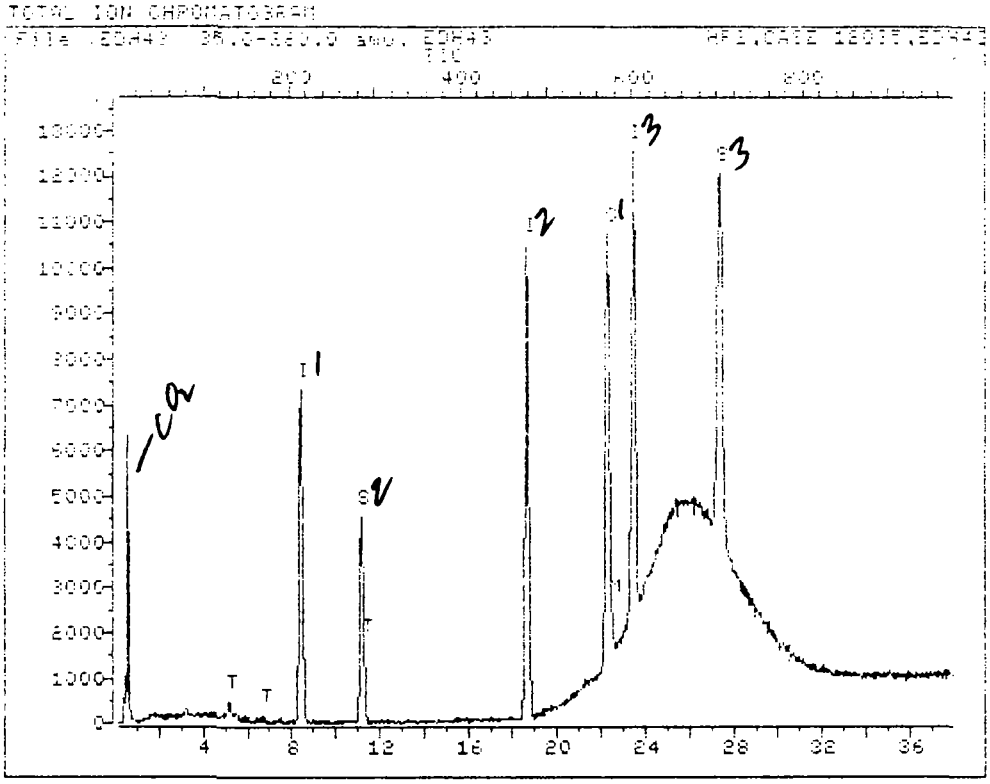
30.				



Data File: >EDH43::D1 Quant Output File: ^EDH43::SC
Name: EDH43
Misc: HP2,CASE 12035,EDH43,5.0G,5.0ML,,,%M=74 $

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890612 12:23

Operator ID: JOHN
Quant Time: 890612 15:23
Injected at: 890612 14:44

% Moist.: 7.37 Wet: 4.9787 g Dry: 4.6118 g

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890612 15:23
Output File: ^EDH43::SC Injected at: 890612 14:44
Data File: >EDH43::D1 Dilution Factor: 1.00000
Name: EDH43
Misc: HP2,CASE 12035,EDH43,5.0G,5.0ML,,,%M= 7.4 $

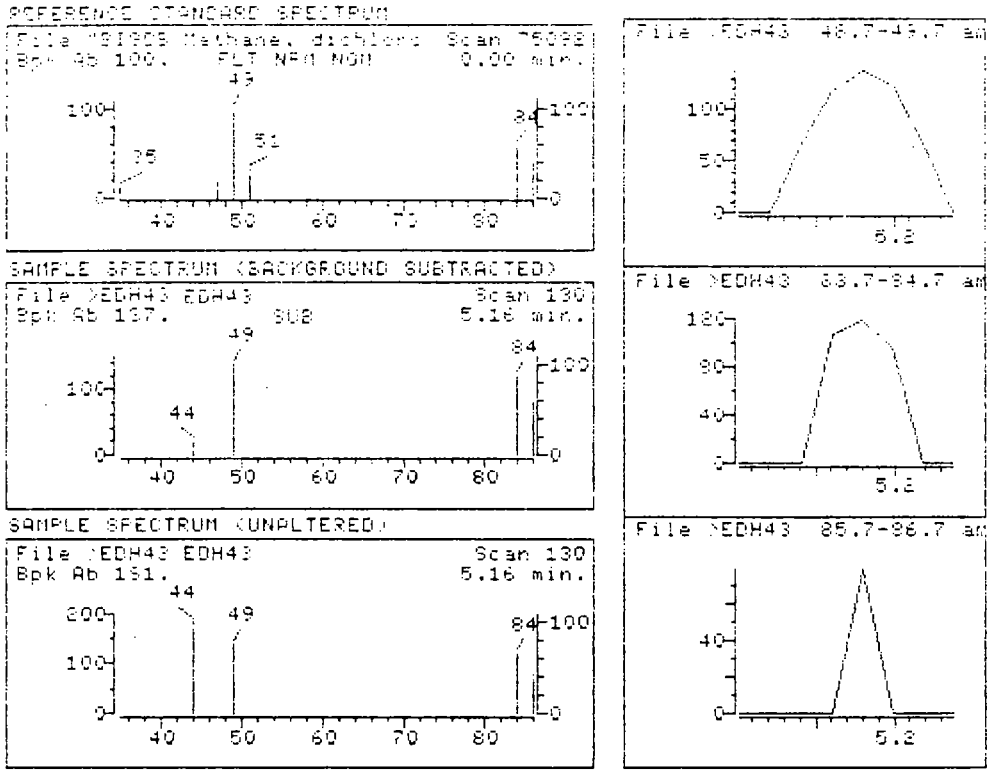
% Sur Rec = Amt x 2

CMPD. FD = AMT x 5/Iw → 4.6118

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890612 12:23

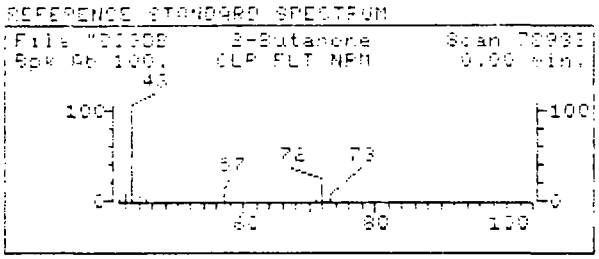
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.41	214	14721	50.00	ug/L	100
2)	Chloromethane	0.00	0	0	0.00	ug/L	
3)	Bromomethane	0.00	0	0	0.00	ug/L	
4)	Vinyl Chloride	0.00	0	0	0.00	ug/L	
5)	Chloroethane	0.00	0	0	0.00	ug/L	
6)	Methylene Chloride	5.16	130	746	2.19	ug/L → 2	76
7)	Acetone	0.00	149	0	0.00	ug/L	
8)	Carbon Disulfide	6.71	170	404	~~.50~~ mdl	ug/L → 1	100
9)	1,1-Dichloroethene	0.00	0	0	0.00	ug/L	
10)	1,1-Dichloroethane	0.00	0	0	0.00	ug/L	
11)	1,2-Dichloroethene (total)	0.00	0	0	0.00	ug/L	
12)	Chloroform	0.00	0	0	0.00	ug/L	
13)	1,2-Dichloroethane-d4	11.16	285	18631	51.52	ug/L	89
14)	1,2-Dichloroethane	0.00	0	0	0.00	ug/L	
15)	2-Butanone	11.28	288	283	9.27	ug/L → 10	100
16)	*1,4-Difluorobenzene	18.64	478	55350	50.00	ug/L	69
17)	1,1,1-Trichloroethane	0.00	0	0	0.00	ug/L	
18)	Carbon Tetrachloride	0.00	0	0	0.00	ug/L	
19)	Vinyl Acetate	0.00	0	0	0.00	ug/L	
20)	Bromodichloromethane	0.00	0	0	0.00	ug/L	
21)	1,2-Dichloropropane	0.00	0	0	0.00	ug/L	
22)	cis-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
23)	Trichloroethene	0.00	0	0	0.00	ug/L	
24)	Dibromochloromethane	0.00	0	0	0.00	ug/L	
25)	1,1,2-Trichloroethane	0.00	0	0	0.00	ug/L	
26)	Benzene	0.00	0	0	0.00	ug/L	
27)	trans-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
28)	Bromoform	0.00	0	0	0.00	ug/L	
29)	*Chlorobenzene-d5	23.45	602	45266	50.00	ug/L	99
30)	4-Methyl-2-pentanone	0.00	500	0	0.00	ug/L	
31)	2-Hexanone	0.00	519	0	0.00	ug/L	
32)	Tetrachloroethene	0.00	0	0	0.00	ug/L	
33)	1,1,2,2-Tetrachloroethane	0.00	0	0	0.00	ug/L	
34)	Toluene	22.48	577	2902	5.17	ug/L → 4	97
35)	Toluene-d8	22.29	572	46474	51.87	ug/L	94
36)	Chlorobenzene	0.00	0	0	0.00	ug/L	
37)	Ethylbenzene	0.00	0	0	0.00	ug/L	
38)	Styrene	0.00	0	0	0.00	ug/L	
39)	Xylene (total)	0.00	0	0	0.00	ug/L	
40)	Bromofluorobenzene	27.36	703	31126	46.82	ug/L	84

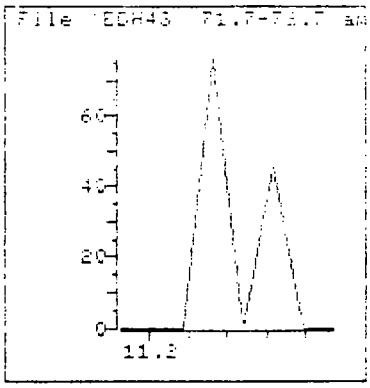
* Compound is ISTD

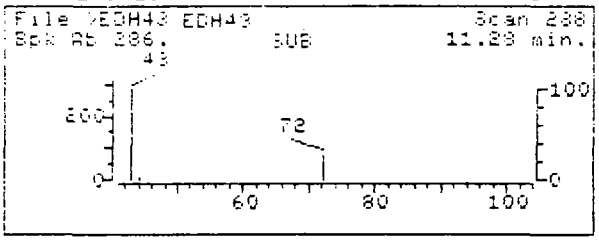


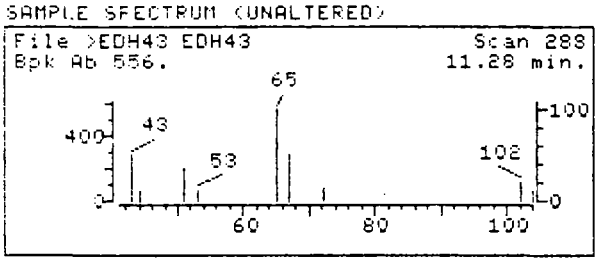
Data File: >EDH43::D1 Quant Output File: ^EDH43::SC
Name: EDH43
Misc: HP2,CASE 12035,EDH43,5.0G,5.0ML,,,%M=2.4 $
Quant Time: 890612 15:23 Quant ID File: IDVDD::SC
Injected at: 890612 14:44 Last Calibration: 890612 12:23

Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 130
Retention Time: 5.16 min.
Quant Ion: 84.0
Area: 746
Concentration: 2.19 ug/L
q-value: 76



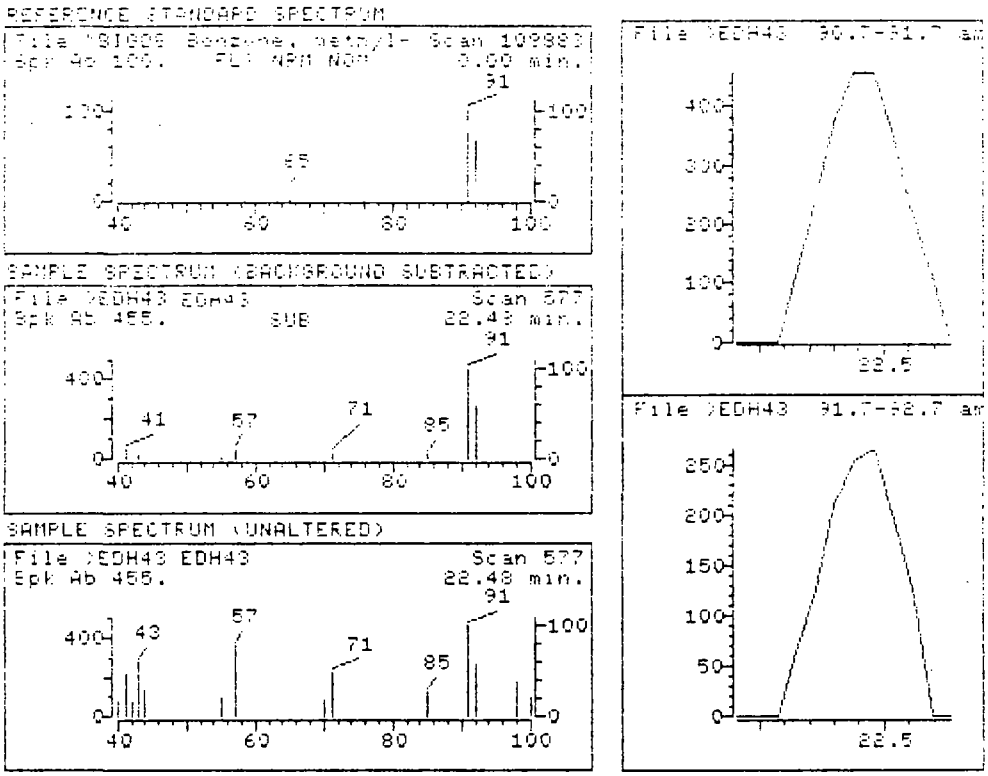






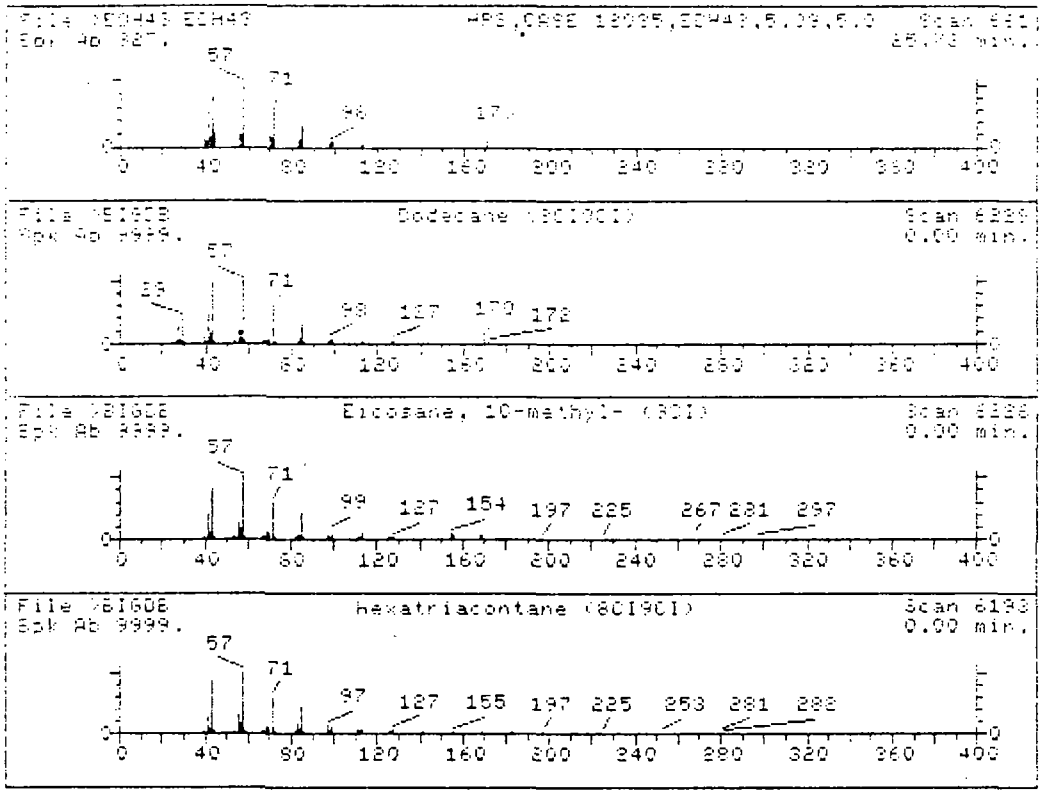
Data File: >EDH43::D1 Quant Output File: ^EDH43::SC
Name: EDH43
Misc: HP2,CASE 12035,EDH43,5.0G,5.0ML,,,%M=7.4 $
Quant Time: 890612 15:23 Quant ID File: IDVDD::SC
Injected at: 890612 14:44 Last Calibration: 890612 12:23

Compound No: 15
Compound Name: 2-Butanone
Scan Number: 288
Retention Time: 11.28 min.
Quant Ion: 72.0
Area: 283
Concentration: 9.27 ug/L
q-value: 100



Data File: >EDH43::D1 Quant Output File: ^EDH43::SC
Name: EDH43
Misc: HP2,CASE 12035,EDH43,5.0G,5.0ML,,,%M= 7.4$
Quant Time: 890612 15:23 Quant ID File: IDVDD::SC
Injected at: 890612 14:44 Last Calibration: 890612 12:23

Compound No: 34
Compound Name: Toluene
Scan Number: 577
Retention Time: 22.48 min.
Quant Ion: 92.0
Area: 2902
Concentration: 5.17 ug/L
q-value: 97



UNKNOWN

Date and Time of analysis: 6/12/89 14:44

Sample datafile name: >EDH43::D1

VOA TIC CALCULATIONS

SAMPLE EDH43 (EDH43)

% Moist.: 7.37 Wet: 4.9787 g Dry: 4.6018 g

$$\text{TIC Multiplier} = \frac{50\ \mu g}{L} \times \frac{0.005\ L}{\text{ALIQUOT (L or kg)}^*} \approx 54.20$$

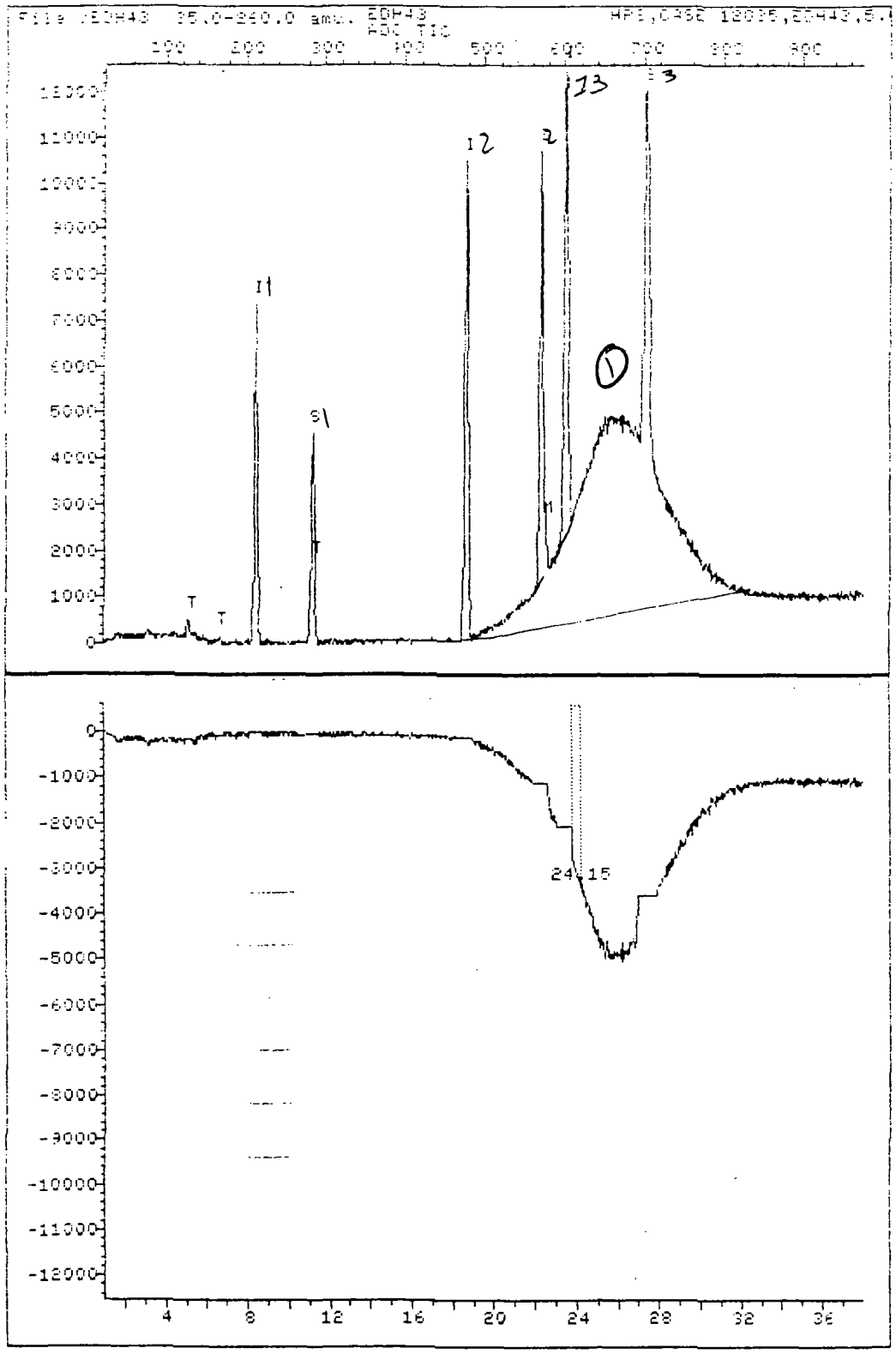
$$\text{TIC Amount} = \frac{\text{ht TIC}}{\text{ht IS}} \times \text{Multiplier}$$

ht IS 1 _____ 2 _____ 3 77

	SCAN	IS	Height	Amount
1	661	77	32	23
2				
3				
4				
5				
6				
7				
8				
9				
10				

*Usually 0.005 L or 0.005 kg (Dry)

NOTE: _____


File :EDH43 35.0-260.0 amu. EDH43
RDC TIC
HP1,0456 12035,EDH43,5.
100 200 300 400 500 600 700 800 900
13000
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
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I1
I3
I3
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-1000
-2000
-3000
-4000
-5000
-6000
-7000
-8000
-9000
-10000
-11000
-12000
24
15
4 8 12 16 20 24 28 32 36

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SDH44

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: ED-42

Matrix: (soil/water) SOIL Lab Sample ID: ED-44

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH44

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 4 Date Analyzed: 06/10/89

Column: (pack/cap) PACK Dilution Factor: 1.010

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	13	~~B~~ U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
591-78-6	2-Hexanone	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
133-02-7	Xylene (total)	5	U

10/11/89

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

ED-44

Lab Name: S-CURED Contract: 68-D9-0027

Lab Code: SC Case No.: 12035 SAS No.: SDG No.: ED-42

Matrix: (soil/water) SOIL Lab Sample ID: ED-44

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH44

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 4 Date Analyzed: 06/12/89

Column: (pack/cap) PACK Dilution Factor: 1.010

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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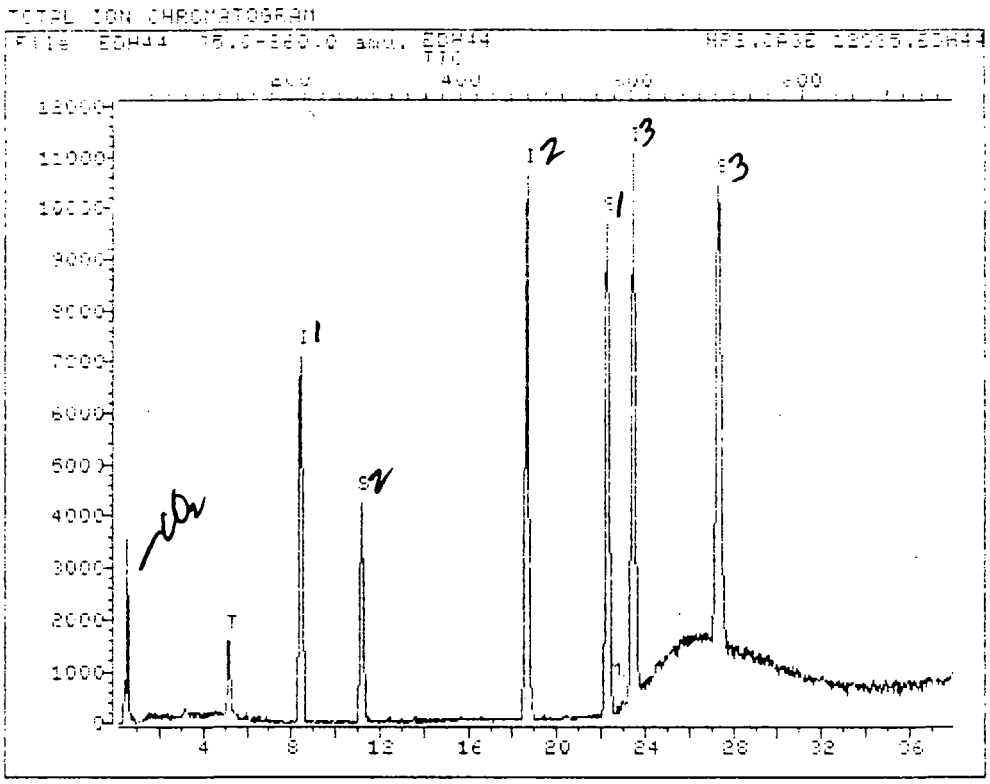
30.				



Data File: >EDH44::D1 Quant Output File: ^EDH44::SC
Name: EDH44
Misc: HP2,CASE 12035,EDH44,5.0G,5.0ML,,,%M=3.7 $

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890612 12:23

Operator ID: JOHN
Quant Time: 890612 16:08
Injected at: 890612 15:29

% Moist.: 3.69 Wet: 4.9520 g Dry: 4.7693 g

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890612 16:08
Output File: ^EDH44::SC Injected at: 890612 15:29
Data File: >EDH44::D1 Dilution Factor: 1.00000
Name: EDH44
Misc: HP2,CASE 12035,EDH44,5.0G,5.0ML,,,%M=3.9 $

% Sur Rec = Amt x 2

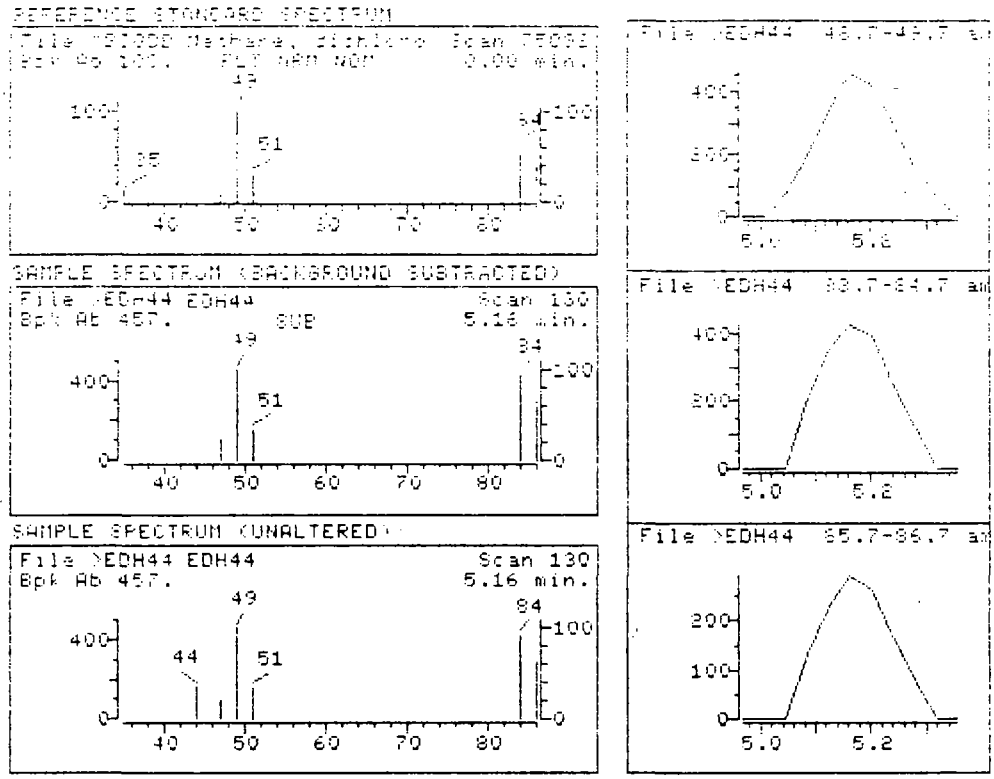
CMPD.PD = AMT x 5/IW

4.7693

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890612 12:23

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.42	214	13956	50.00	ug/L	100
2)	Chloromethane	0.00	0	0	0.00	ug/L	
3)	Bromomethane	0.00	0	0	0.00	ug/L	
4)	Vinyl Chloride	0.00	0	0	0.00	ug/L	
5)	Chloroethane	0.00	0	0	0.00	ug/L	
6)	Methylene Chloride	5.16	130	4094	12.67	ug/L → 13	68
7)	Acetone	0.00	150	0	0.00	ug/L	
8)	Carbon Disulfide	0.00	0	0	0.00	ug/L	
9)	1,1-Dichloroethene	0.00	0	0	0.00	ug/L	
10)	1,1-Dichloroethane	0.00	0	0	0.00	ug/L	
11)	1,2-Dichloroethene (total)	0.00	0	0	0.00	ug/L	
12)	Chloroform	0.00	0	0	0.00	ug/L	
13)	1,2-Dichloroethane-d4	11.17	285	18026	52.58	ug/L	92
14)	1,2-Dichloroethane	0.00	0	0	0.00	ug/L	
15)	2-Butanone	0.00	0	0	0.00	ug/L	
16)	*1,4-Difluorobenzene	18.65	478	56275	50.00	ug/L	69
17)	1,1,1-Trichloroethane	0.00	0	0	0.00	ug/L	
18)	Carbon Tetrachloride	0.00	0	0	0.00	ug/L	
19)	Vinyl Acetate	0.00	0	0	0.00	ug/L	
20)	Bromodichloromethane	0.00	0	0	0.00	ug/L	
21)	1,2-Dichloropropane	0.00	0	0	0.00	ug/L	
22)	cis-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
23)	Trichloroethene	0.00	0	0	0.00	ug/L	
24)	Dibromochloromethane	0.00	0	0	0.00	ug/L	
25)	1,1,2-Trichloroethane	0.00	0	0	0.00	ug/L	
26)	Benzene	0.00	0	0	0.00	ug/L	
27)	trans-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
28)	Bromoform	0.00	0	0	0.00	ug/L	
29)	*Chlorobenzene-d5	23.45	602	46480	50.00	ug/L	98
30)	4-Methyl-2-pentanone	0.00	0	0	0.00	ug/L	
31)	2-Hexanone	0.00	0	0	0.00	ug/L	
32)	Tetrachloroethene	0.00	0	0	0.00	ug/L	
33)	1,1,2,2-Tetrachloroethane	0.00	0	0	0.00	ug/L	
34)	Toluene	22.48	577	192	~~.33~~	ug/L	96
35)	Toluene-d8	22.25	571	47815	51.97	ug/L	98
36)	Chlorobenzene	0.00	0	0	0.00	ug/L	
37)	Ethylbenzene	0.00	0	0	0.00	ug/L	
38)	Styrene	0.00	0	0	0.00	ug/L	
39)	Xylene (total)	0.00	0	0	0.00	ug/L	
40)	Bromofluorobenzene	27.33	702	33012	48.36	ug/L	88

* Compound is ISTD



Data File: >EDH44::D1 Quant Output File: ^EDH44::SC
Name: EDH44
Misc: HP2,CASE 12035,EDH44,5.0G,5.0ML,,,%M=3.7 $
Quant Time: 890612 16:08 Quant ID File: IDVDD::SC
Injected at: 890612 15:29 Last Calibration: 890612 12:23

Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 130
Retention Time: 5.16 min.
Quant Ion: 84.0
Area: 4094
Concentration: 12.67 ug/L
q-value: 68

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH45

Lab Name: S-CURED Contract: 68-D9-0007

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH45

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH45

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 12 Date Analyzed: 06/12/89

Column: (pack/cap) PACK Dilution Factor: 0.994

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	9	~~B~~ U 10/11/89
67-64-1	Acetone	120	
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
156-60-5	trans-1,2-Dichloroethene	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	45	
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
591-78-6	2-Hexanone	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	11	
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
133-02-7	Xylene (total)	6	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDH45

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH45

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH48

Level: (low/med) LOW Date Received: 06/07/89

% Moisture: not dec. 12 Date Analyzed: 06/12/89

Column: (pack/cap) PACK Dilution Factor: 0.994

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN (Hydroxylamine)	20.62	5	J
2.	UNKNOWN	33.68	29	J
3.				
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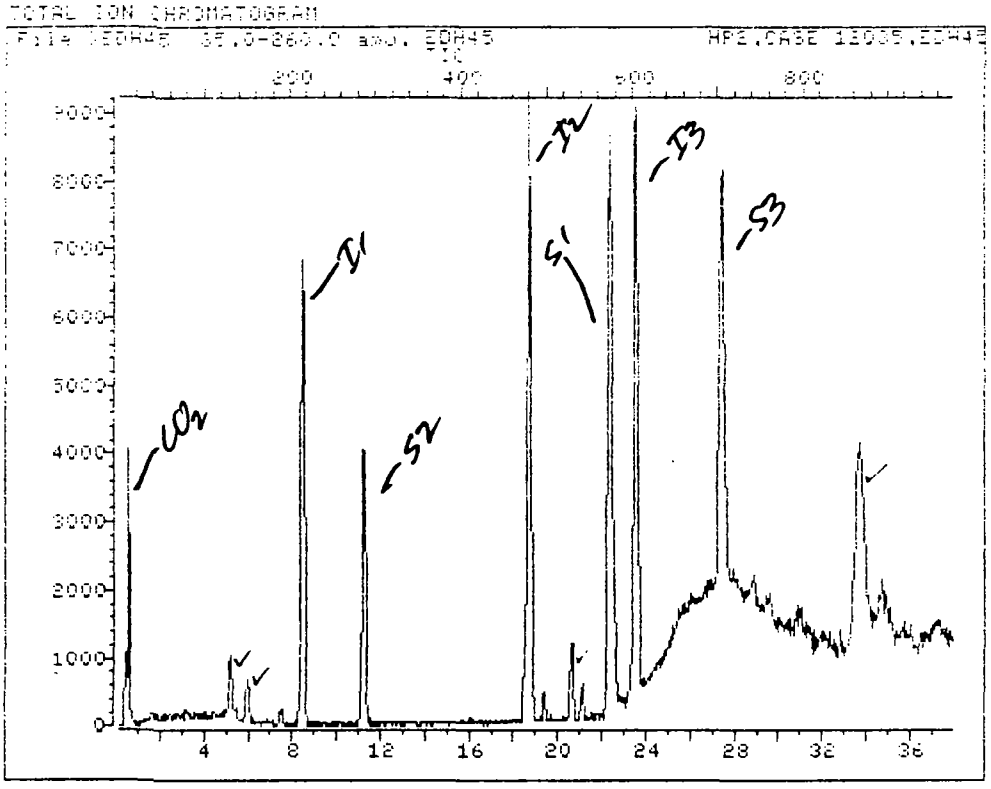


Data File: >EDH45::D1 Quant Output File: ^EDH45::SC
Name: EDH45
Misc: HP2,CASE 12035,EDH45,5.0G,5.0ML,,,%M=11.6 $

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890616 09:59

Operator ID: JOHN
Quant Time: 890616 10:00
Injected at: 890612 16:13

% Moist.: 11.60 Wet: 5.0280 g Dry: 4.4453 g

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890616 10:00
Output File: ^EDH45::SC Injected at: 890612 16:13
Data File: >EDH45::D1 Dilution Factor: 1.00000
Name: EDH45
Misc: HP2,CASE 12035,EDH45,5.0G,5.0ML,,,%M=11.6 $

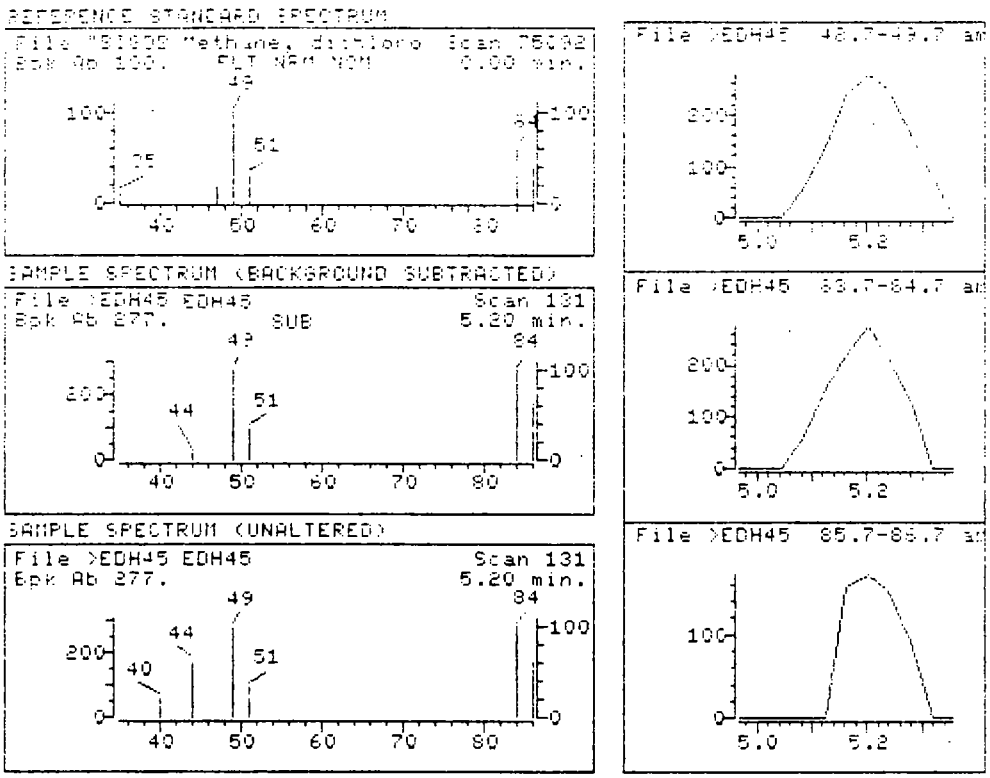
% Sur Rec = Amt x 2

CMPD. FD = AMT x 5 / Int → 4.4453

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890616 09:59

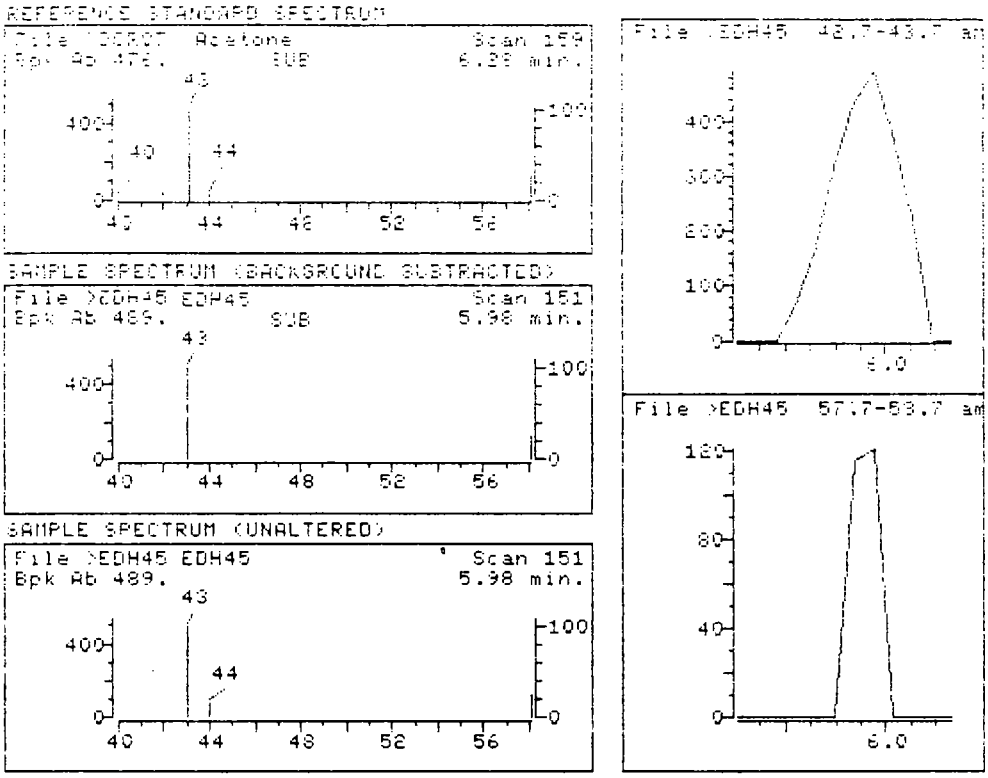
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.46	215	13625	50.00	ug/L	100
2)	Chloromethane	0.00	0	0	0.00	ug/L	
3)	Bromomethane	0.00	0	0	0.00	ug/L	
4)	Vinyl Chloride	0.00	0	0	0.00	ug/L	
5)	Chloroethane	0.00	0	0	0.00	ug/L	
6)	Methylene Chloride	5.20	131	2450	7.77	ug/L → 9	63
7)	Acetone	5.98	151	4842	106.70	ug/L → 120	82
8)	Carbon Disulfide	0.00	0	0	0.00	ug/L	
9)	1,1-Dichloroethene	0.00	0	0	0.00	ug/L	
10)	1,1-Dichloroethane	0.00	0	0	0.00	ug/L	
11)	1,2-Dichloroethene (total)	0.00	0	0	0.00	ug/L	
12)	Chloroform	0.00	0	0	0.00	ug/L	
13)	1,2-Dichloroethane-d4	11.21	286	16839	50.31	ug/L	95
14)	1,2-Dichloroethane	0.00	0	0	0.00	ug/L	
15)	2-Butanone	11.32	289	1129	39.95	ug/L → 45	100
16)	*1,4-Difluorobenzene	18.68	479	50005	50.00	ug/L	69
17)	1,1,1-Trichloroethane	0.00	0	0	0.00	ug/L	
18)	Carbon Tetrachloride	0.00	0	0	0.00	ug/L	
19)	Vinyl Acetate	0.00	0	0	0.00	ug/L	
20)	Bromodichloromethane	0.00	0	0	0.00	ug/L	
21)	1,2-Dichloropropane	0.00	0	0	0.00	ug/L	
22)	cis-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
23)	Trichloroethene	0.00	0	0	0.00	ug/L	
24)	Dibromochloromethane	0.00	0	0	0.00	ug/L	
25)	1,1,2-Trichloroethane	0.00	0	0	0.00	ug/L	
26)	Benzene	0.00	0	0	0.00	ug/L	
27)	trans-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
28)	Bromoform	0.00	0	0	0.00	ug/L	
29)	*Chlorobenzene-d5	23.53	604	39090	50.00	ug/L	94
30)	4-Methyl-2-pentanone	0.00	497	0	0.00	ug/L	
31)	2-Hexanone	0.00	530	0	0.00	ug/L	
32)	Tetrachloroethene	0.00	0	0	0.00	ug/L	
33)	1,1,2,2-Tetrachloroethane	0.00	0	0	0.00	ug/L	
34)	Toluene	22.52	578	4829	9.95	ug/L → 11	97
35)	Toluene-d8	22.33	573	40282	52.06	ug/L	95
36)	Chlorobenzene	0.00	0	0	0.00	ug/L	
37)	Ethylbenzene	0.00	0	0	0.00	ug/L	
38)	Styrene	0.00	0	0	0.00	ug/L	
39)	Xylene (total)	0.00	761	0	0.00	ug/L	
40)	Bromofluorobenzene	27.44	705	26299	45.81	ug/L	91

* Compound is ISTD



Data File: >EDH45::D1 Quant Output File: ^EDH45::SC
Name: EDH45
Misc: HP2,CASE 12035,EDH45,5.0G,5.0ML,,,%M= 11.6 $
Quant Time: 890616 10:00 Quant ID File: IDVDD::SC
Injected at: 890612 16:13 Last Calibration: 890616 09:59

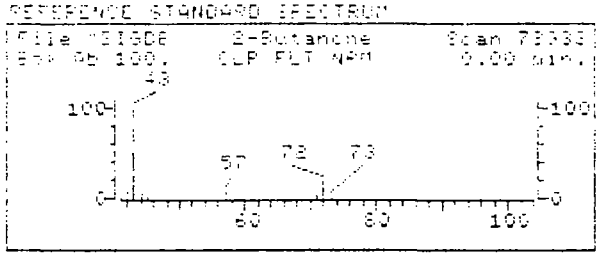
Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 131
Retention Time: 5.20 min.
Quant Ion: 84.0
Area: 2450
Concentration: 7.77 ug/L
q-value: 63

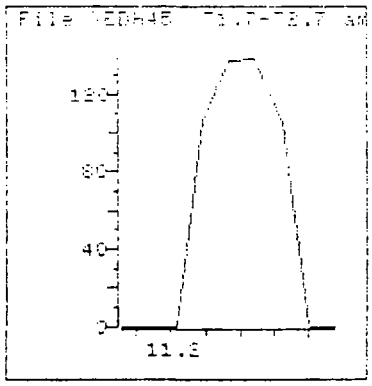


Data File: >EDH45::D1 Quant Output File: ^EDH45::SC
Name: EDH45
Misc: HP2,CASE 12035,EDH45,5.0G,5.0ML,,,%M=11.6 $
Quant Time: 890616 10:00 Quant ID File: IDVDD::SC
Injected at: 890612 16:13 Last Calibration: 890616 09:59

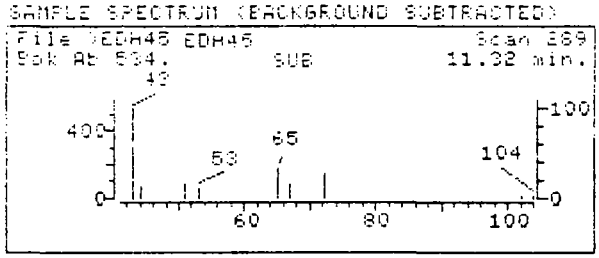
Compound No: 7
Compound Name: Acetone
Scan Number: 151
Retention Time: 5.98 min.
Quant Ion: 43.0
Area: 4842
Concentration: 106.70 ug/L
q-value: 82

REFERENCE STANDARD SPECTRUM

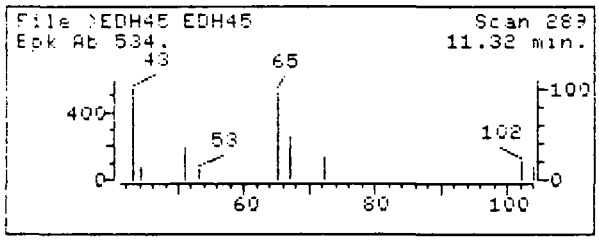




SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

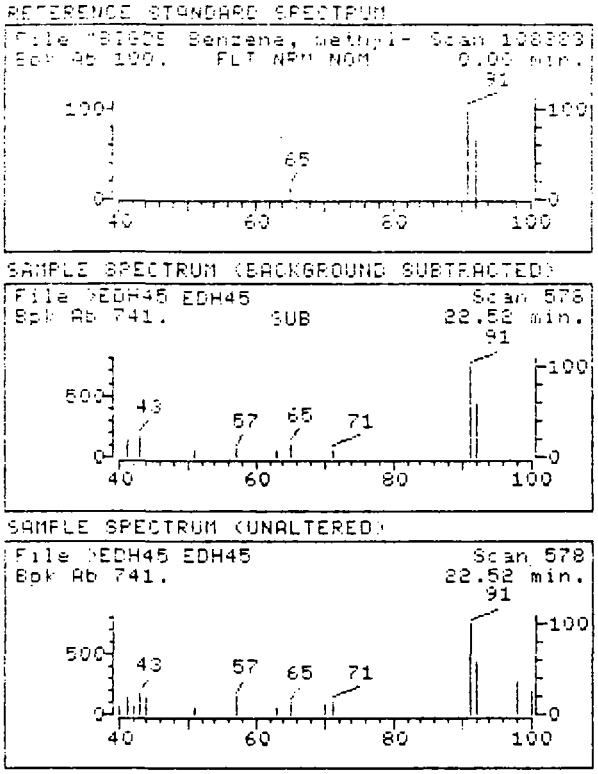


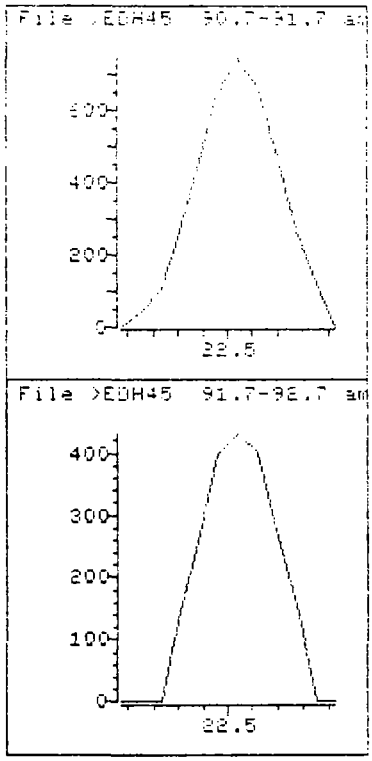
SAMPLE SPECTRUM (UNALTERED)



Data File: >EDH45::D1 Quant Output File: ^EDH45::SC
Name: EDH45
Misc: HP2,CASE 12035,EDH45,5.0G,5.0ML,,,%M=11.6 $
Quant Time: 890616 10:00 Quant ID File: IDVDD::SC
Injected at: 890612 16:13 Last Calibration: 890616 09:59

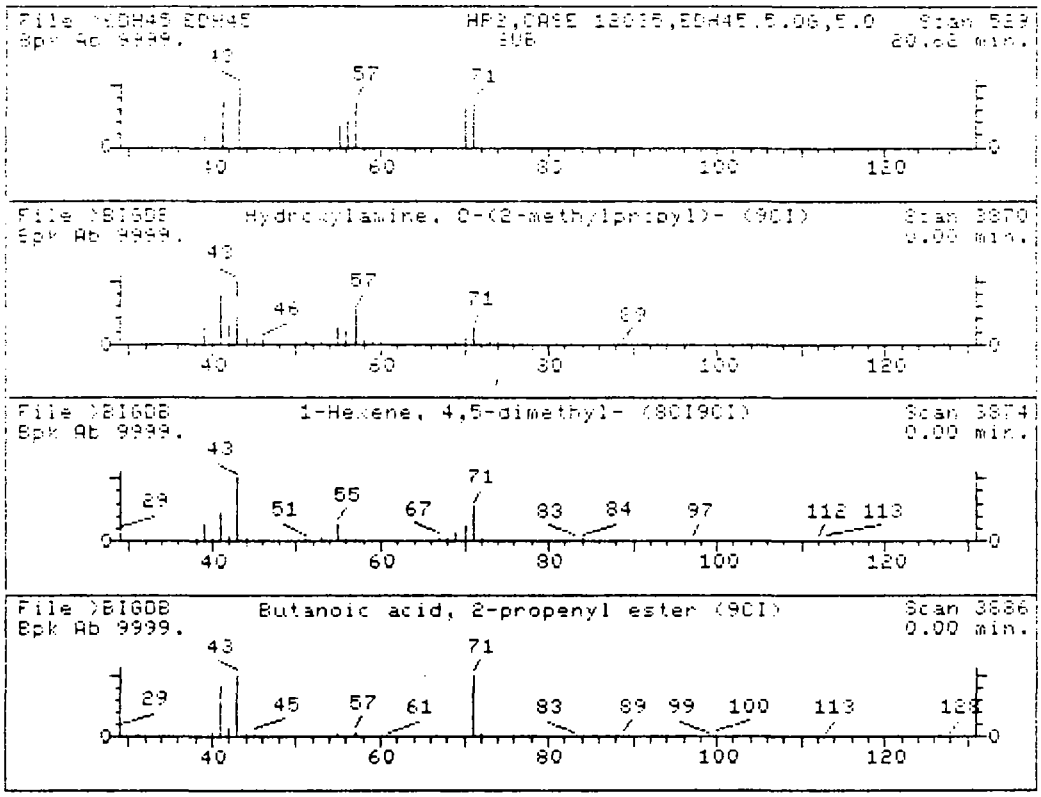
Compound No: 15
Compound Name: 2-Butanone
Scan Number: 289
Retention Time: 11.32 min.
Quant Ion: 72.0
Area: 1129
Concentration: 39.95 ug/L
q-value: 100





Data File: >EDH45::D1 Quant Output File: ^EDH45::SC
Name: EDH45
Misc: HP2,CASE 12035,EDH45,5.0G,5.0ML,,,%M=11.6 $
Quant Time: 890616 10:00 Quant ID File: IDVDD::SC
Injected at: 890612 16:13 Last Calibration: 890616 09:59

Compound No: 34
Compound Name: Toluene
Scan Number: 578
Retention Time: 22.52 min.
Quant Ion: 92.0
Area: 4829
Concentration: 9.95 ug/L
q-value: 97



UNKNOWN

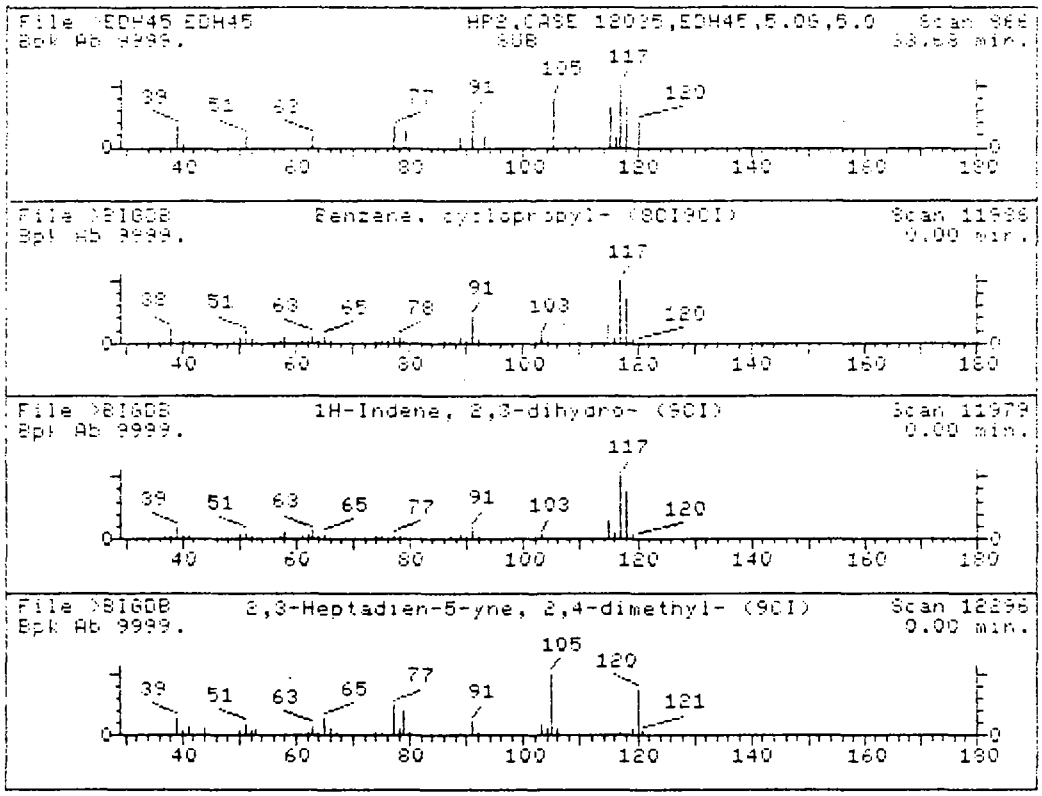
6/12/89 16:13

. UNKNOWN #,1
AREA = 12071.00 TENTATIVE CONCENTRATION IS 5.00

1.	Hydroxylamine, O-(2-methylpropyl)- (9CI)	89	C4H11NO
2.	1-Hexene, 4,5-dimethyl- (8CI9CI)	112	C8H16
3.	Butanoic acid, 2-propenyl ester (9CI)	128	C7H12O2
4.	2(3H)-Furanone, dihydro-3,5-dimethyl- (8CI9CI)	114	C6H10O2
5.	2-Furanmethanol, tetrahydro-, acetate (9CI)	144	C7H12O3
6.	Decane, 2,2,3-trimethyl- (9CI)	184	C13H28

Sample file: >EDH45 Spectrum #: 529
Search speed: 1 Tilting option: S No. of ion ranges searched: 49

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	34*	5618622	3870	"BIGDB	38	53	1	0	93	38	14	21



UNKNOWN

6/12/89 16:13

. UNKNOWN #,2
AREA = 72482.00 TENTATIVE CONCENTRATION IS 29.00

1.	Benzene, cyclopropyl- (8CI9CI)	118	C9H10
2.	1H-Indene, 2,3-dihydro- (9CI)	118	C9H10
3.	2,3-Heptadien-5-yne, 2,4-dimethyl- (9CI)	120	C9H12
4.	Benzene, 2-propenyl- (9CI)	118	C9H10
5.	Cyclohexane, 1,2,4-tris(methylene)- (8CI9CI)	120	C9H12
6.	1,3-Cyclopentadiene, 5-(1-methylpropylidene)- (9CI)	120	C9H12

Sample file: >EDH45 Spectrum #: 866
Search speed: 1 Tilting option: S No. of ion ranges searched: 49

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	20*	873494	11986	"BIGDB	32	78	2	0	90	55	5	14

MS data file header from : >EDH45

Sample: EDH45 Operator: JOHN SUPER GRP. 6/12/89 16:13
Misc : HP2,CASE 12035,EDH45,5.0G,5.0ML,,,%M= $
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CLPVOA Tuning file: RIP No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	45.	220.	0.	0.	0.
Chromatographic times, min. :	3.0	13.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	.3	0.0

>EDH45 EDH45 HP2,CASE 12035,EDH45,5.0G,5.0ML,,,%M=
35.0| 260.0 CLP TIC
Upslope: .20 Area Reject: 7383. Max Peaks: 2 Bunching: 1
Dnslope: 0.00 Results File IEDH45 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	20.62	525	529	535	1121	14256	12071	16.65	14.276
2	33.68	856	866	876	2724	139653	72482	100.00	85.724

Sum of corrected areas: 84553.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	73827.	8.46	1.02 - 13.57
2	50.0	109067.	18.68	13.57 - 21.11
3	50.0	109451.	23.53	21.11 - 37.94

'^' Dilution Factor = 1.00 U dilf = 1.00
Method called for 5.000000 g or mL This sample was 5.000000 g or mL

Correction Factor = .88

$$\text{Unknown Concentration} = \frac{\text{Conc Int Std}}{\text{Area Int Std}} * \text{Area Unknown} * \text{Correction Factor}$$

5:36 PM TUE., 13 JUNE, 1989

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH46

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH46

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH46

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 7 Date Analyzed: 06/12/89

Column: (pack/cap) PACK Dilution Factor: 1.004

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	6	~~B~~ U 10/11/89
67-64-1	Acetone	130	
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	38	
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
591-78-6	2-Hexanone	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	1	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
133-02-7	Xylene (total)	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDH46

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH46

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH46

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 7 Date Analyzed: 06/12/89

Column: (pack/cap) PACK Dilution Factor: 1.004

Number TICs found: 4

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	24.45	5	J
2.	UNKNOWN ETHYLMETHYL BENZENE	30.31	18	J
3.	UNKNOWN	32.05	5	J
4.	UNKNOWN ETHYLDIMETHYL BENZEN	37.25	7	J
5.				
6.				
7.				
8.				
9.				
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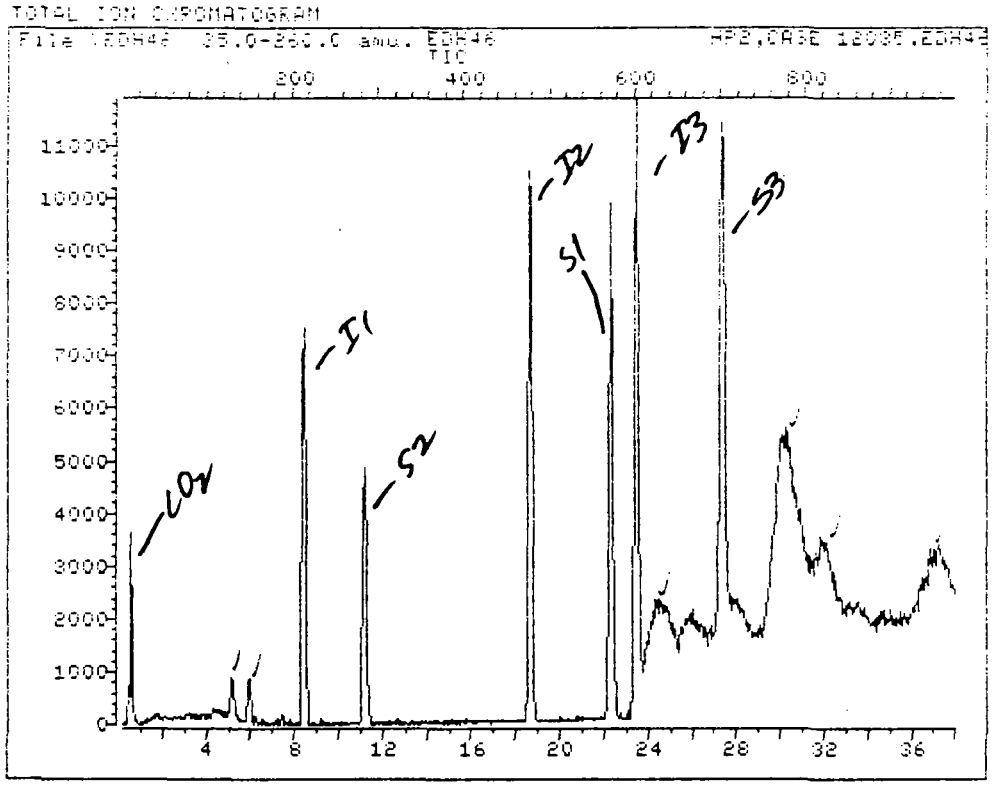


Data File: >EDH46::D1 Quant Output File: ^EDH46::SC
Name: EDH46
Misc: HP2,CASE 12035,EDH46,5.0G,5.0ML,,,%M=7.2$

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890616 09:59

Operator ID: JOHN
Quant Time: 890616 10:01
Injected at: 890612 16:58

% Moist.: 7.17 Wet: 4.9818 g Dry: 4.6246 g

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890616 10:01
Output File: ^EDH46::SC Injected at: 890612 16:58
Data File: >EDH46::D1 Dilution Factor: 1.00000
Name: EDH46
Misc: HP2,CASE 12035,EDH46,5.0G,5.0ML,,,%M=7.2 $

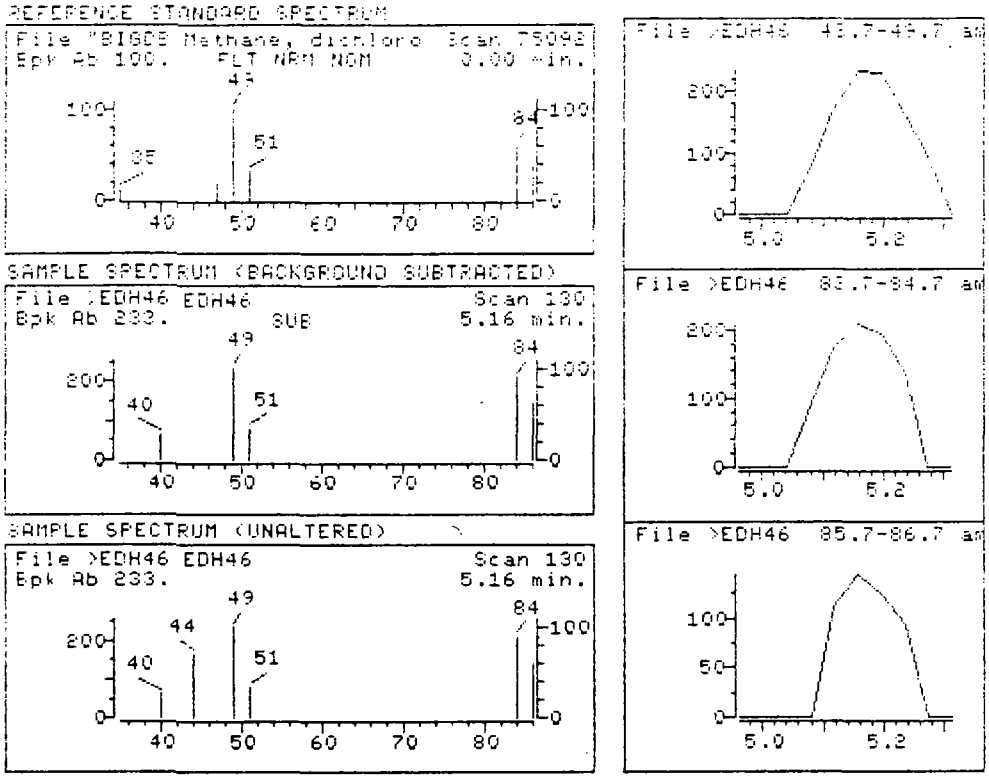
% Sur Rec = Amt x 2

CMPD FD. = AMT x 5/DW → 4.624

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890616 09:59

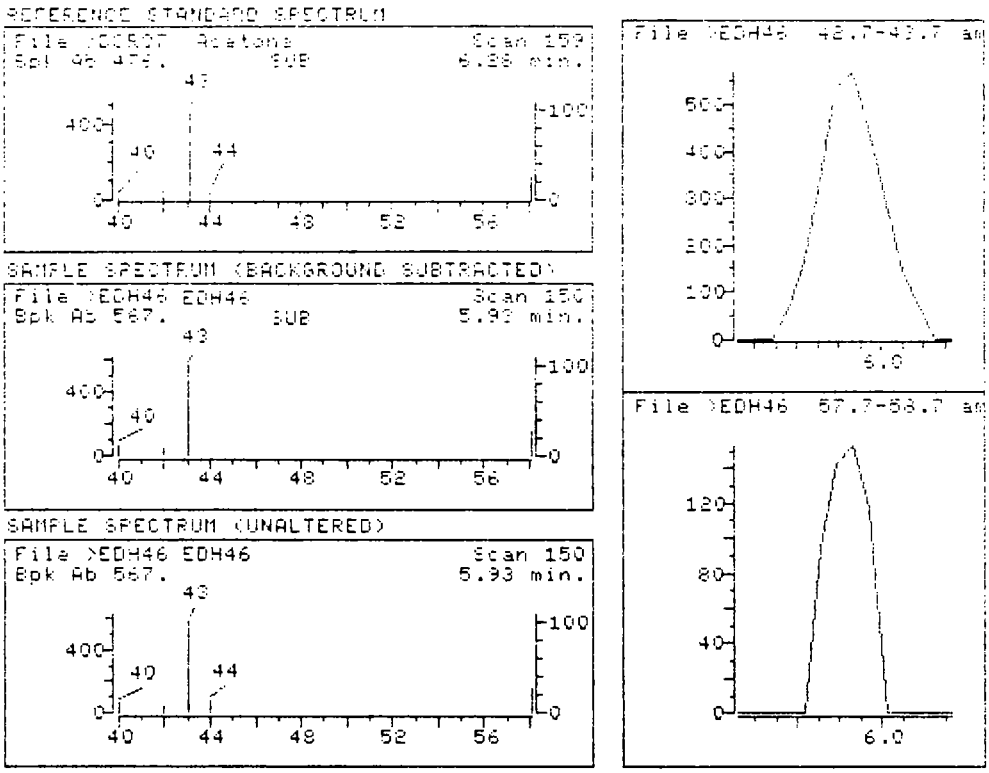
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.41	214	14784	50.00	ug/L	100
2)	Chloromethane	0.00	0	0	0.00	ug/L	
3)	Bromomethane	0.00	0	0	0.00	ug/L	
4)	Vinyl Chloride	0.00	0	0	0.00	ug/L	
5)	Chloroethane	0.00	0	0	0.00	ug/L	
6)	Methylene Chloride	5.16	130	1871	5.47	ug/L → 6	71
7)	Acetone	5.93	150	6084	123.55	ug/L → 130	86
8)	Carbon Disulfide	0.00	0	0	0.00	ug/L	
9)	1,1-Dichloroethene	0.00	0	0	0.00	ug/L	
10)	1,1-Dichloroethane	0.00	0	0	0.00	ug/L	
11)	1,2-Dichloroethene (total)	0.00	0	0	0.00	ug/L	
12)	Chloroform	0.00	0	0	0.00	ug/L	
13)	1,2-Dichloroethane-d4	11.16	285	19252	53.01	ug/L	95
14)	1,2-Dichloroethane	0.00	0	0	0.00	ug/L	
15)	2-Butanone	11.24	287	1650	53.81	ug/L → 58	100
16)	*1,4-Difluorobenzene	18.64	478	57139	50.00	ug/L	68
17)	1,1,1-Trichloroethane	0.00	0	0	0.00	ug/L	
18)	Carbon Tetrachloride	0.00	0	0	0.00	ug/L	
19)	Vinyl Acetate	0.00	0	0	0.00	ug/L	
20)	Bromodichloromethane	0.00	0	0	0.00	ug/L	
21)	1,2-Dichloropropane	0.00	0	0	0.00	ug/L	
22)	cis-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
23)	Trichloroethene	0.00	0	0	0.00	ug/L	
24)	Dibromochloromethane	0.00	0	0	0.00	ug/L	
25)	1,1,2-Trichloroethane	0.00	0	0	0.00	ug/L	
26)	Benzene	0.00	0	0	0.00	ug/L	
27)	trans-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
28)	Bromoform	0.00	0	0	0.00	ug/L	
29)	*Chlorobenzene-d5	23.48	603	54366	50.00	ug/L	94
30)	4-Methyl-2-pentanone	0.00	0	0	0.00	ug/L	
31)	2-Hexanone	0.00	0	0	0.00	ug/L	
32)	Tetrachloroethene	0.00	0	0	0.00	ug/L	
33)	1,1,2,2-Tetrachloroethane	0.00	0	0	0.00	ug/L	
34)	Toluene	22.48	577	795	1.18	ug/L → 1	98
35)	Toluene-d8	22.28	572	48168	44.76	ug/L	95
36)	Chlorobenzene	0.00	0	0	0.00	ug/L	
37)	Ethylbenzene	0.00	0	0	0.00	ug/L	
38)	Styrene	0.00	0	0	0.00	ug/L	
~~39)~~	Xylene (total)	29.92	769	3216	~~8.27~~	ug/L → 9	34
40)	Bromofluorobenzene	27.36	703	34322	42.99	ug/L	87

* Compound is ISTD



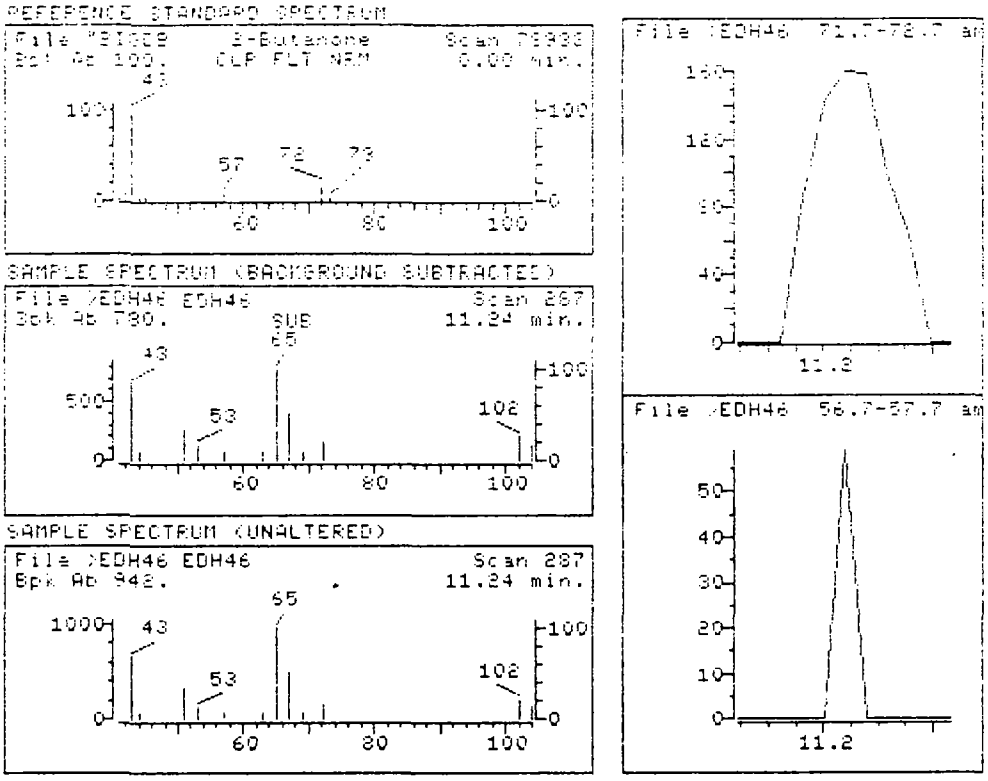
Data File: >EDH46::D1 Quant Output File: ^EDH46::SC
Name: EDH46
Misc: HP2,CASE 12035,EDH46,5.0G,5.0ML,,,%M=7.2$
Quant Time: 890616 10:01 Quant ID File: IDVDD::SC
Injected at: 890612 16:58 Last Calibration: 890616 09:59

Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 130
Retention Time: 5.16 min.
Quant Ion: 84.0
Area: 1871
Concentration: 5.47 ug/L
q-value: 71



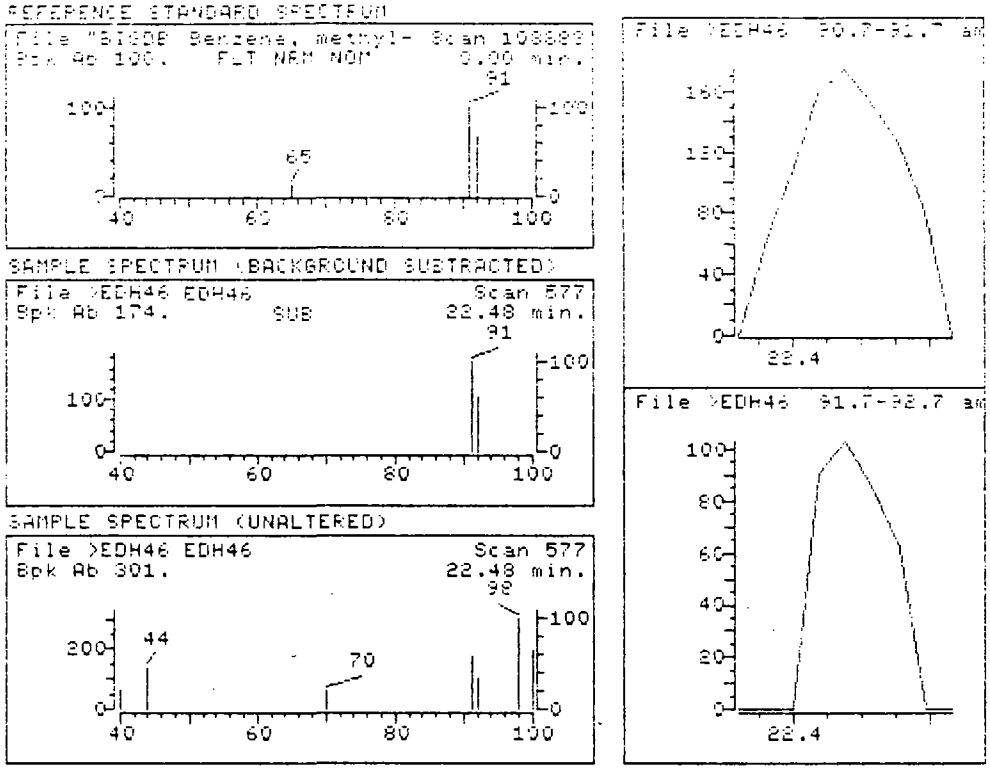
Data File: >EDH46::D1 Quant Output File: ^EDH46::SC
Name: EDH46
Misc: HP2,CASE 12035,EDH46,5.0G,5.0ML,,,%M=7.1 $
Quant Time: 890616 10:01 Quant ID File: IDVDD::SC
Injected at: 890612 16:58 Last Calibration: 890616 09:59

Compound No: 7
Compound Name: Acetone
Scan Number: 150
Retention Time: 5.93 min.
Quant Ion: 43.0
Area: 6084
Concentration: 123.55 ug/L
q-value: 86



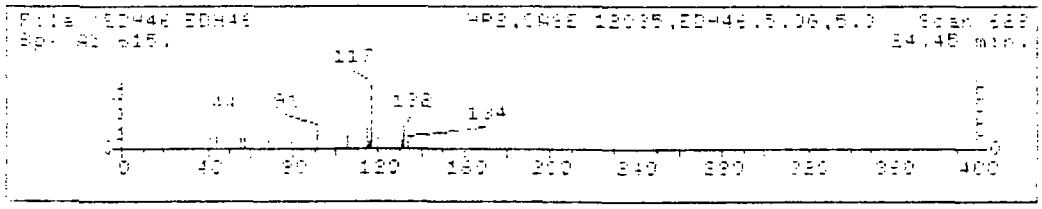
Data File: >EDH46::D1 Quant Output File: ^EDH46::SC
Name: EDH46
Misc: HP2,CASE 12035,EDH46,5.0G,5.0ML,,,%M=71 $
Quant Time: 890616 10:01 Quant ID File: IDVDD::SC
Injected at: 890612 16:58 Last Calibration: 890616 09:59

Compound No: 15
Compound Name: 2-Butanone
Scan Number: 287
Retention Time: 11.24 min.
Quant Ion: 72.0
Area: 1650
Concentration: 53.81 ug/L
q-value: 100



Data File: >EDH46::D1 Quant Output File: ^EDH46::SC
Name: EDH46
Misc: HP2,CASE 12035,EDH46,5.0G,5.0ML,,,%M=7.2$
Quant Time: 890616 10:01 Quant ID File: IDVDD::SC
Injected at: 890612 16:58 Last Calibration: 890616 09:59

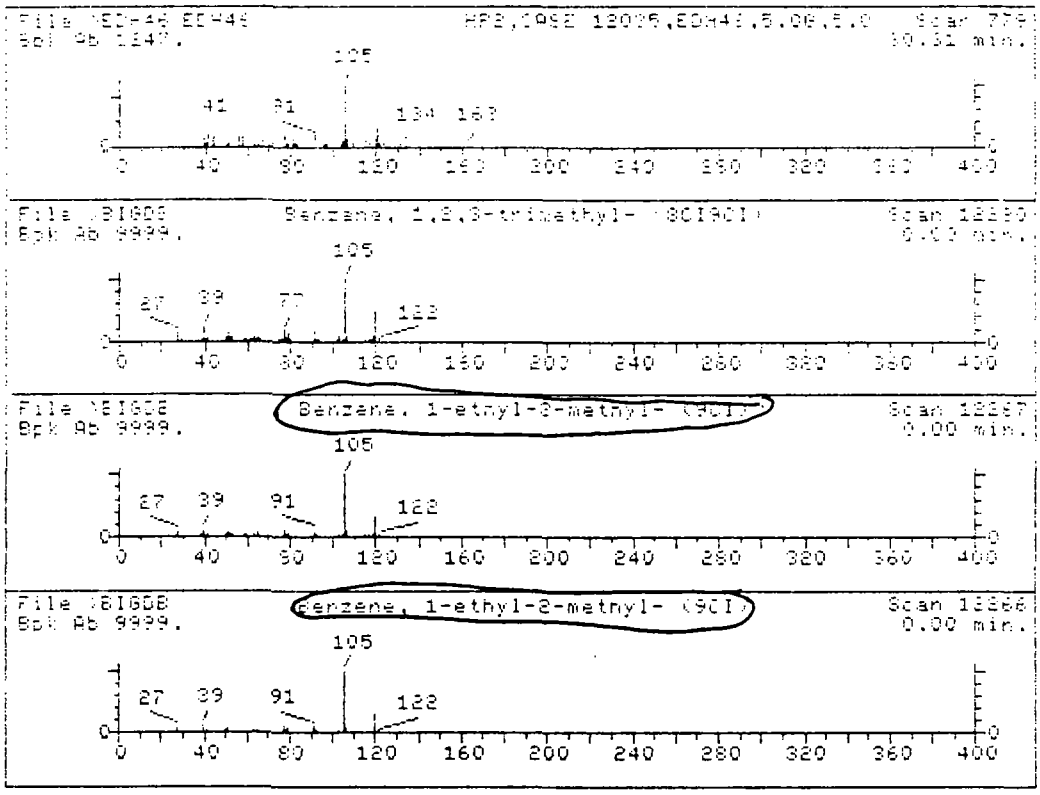
Compound No: 34
Compound Name: Toluene
Scan Number: 577
Retention Time: 22.48 min.
Quant Ion: 92.0
Area: 795
Concentration: 1.18 ug/L
q-value: 98



UNKNOWN

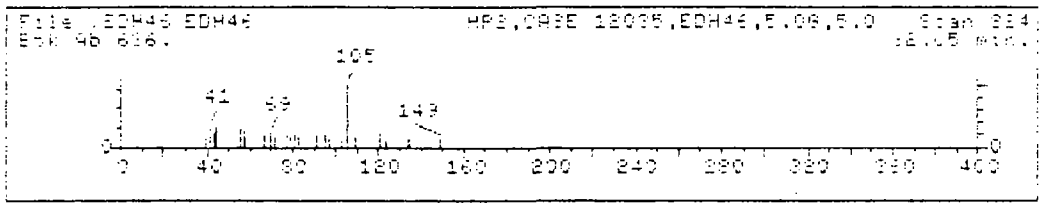
Date and Time of analysis: 6/12/89 16:58

Sample datafile name: >EDH46::D1



Date and Time of analysis: 6/12/89 16:58

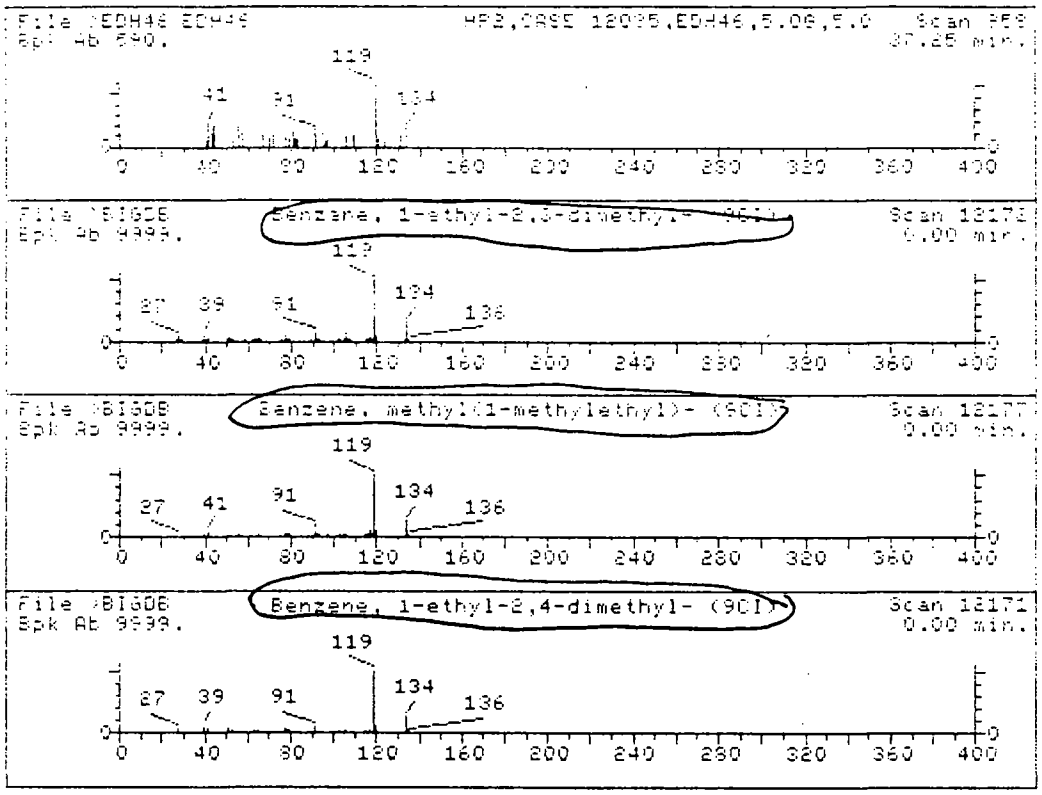
Sample datafile name: >EDH46::D1



UNKNOWN

Date and Time of analysis: 6/12/89 16:58

Sample datafile name: >EDH46::D1



Date and Time of analysis: 6/12/89 16:58

Sample datafile name: >EDH46::D1

VOA TIC CALCULATIONS

SAMPLE ED H46 (ED H46)

% Moist: 7.17 Wet: 4.9818 g Dry: 4.6246 g

$$\text{TIC Multiplier} = \frac{50\ \mu g}{L} \times \frac{0.005\ L}{\text{ALIQUOT (L or kg)}^*} \approx 54.06$$

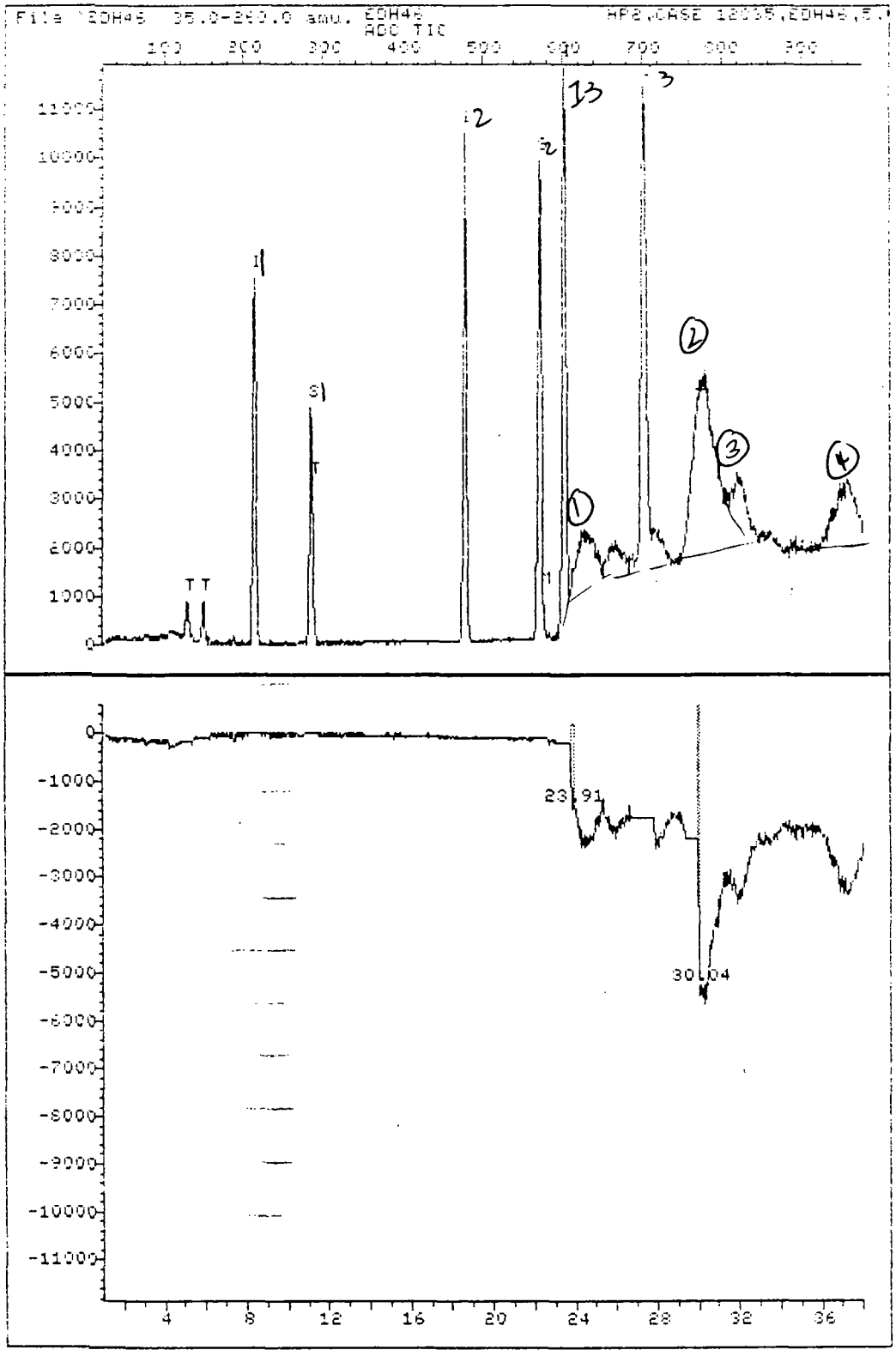
$$\text{TIC Amount} = \frac{\text{ht TIC}}{\text{ht IS}} \times \text{Multiplier}$$

ht IS 1 _____ 2 _____ 3 90

	SCAN	IS	Height	Amount
1	628	90	9	5
2	779		30	18
3	824	↓	9	5
4	958	↓	11	7
5				
6				
7				
8				
9				
10				

*Usually 0.005 L or 0.005 kg (Dry)

NOTE: _____


File 'EOH46 35.0-260.0 amu. EOH46
ADC TIC
HP2,CASE 12035,EOH46,5.
100 200 300 400 500 600 700 800 900
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
T T
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S
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2
2
T
3
1
2
3
4
0
-1000
-2000
-3000
-4000
-5000
-6000
-7000
-8000
-9000
-10000
-11000
23.91
30.04
4 8 12 16 20 24 28 32 36

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH47

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH47

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH47

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 5 Date Analyzed: 06/12/89

Column: (pack/cap) PACK Dilution Factor: 1.009

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	4	~~BJ~~ U
67-64-1	Acetone	81	
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	58	
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
591-78-6	2-Hexanone	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
133-02-7	Xylene (total)	5	U

10/11/89
WM

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDH47

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH47

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH47

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 5 Date Analyzed: 06/12/89

Column: (pack/cap) PACK Dilution Factor: 1.0w9

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 00767-58-8	1H-INDENE, 2,3-DIHYDRO-1-MET	24.22	8	J
2.	UNKNOWN DIHYDROMETHYL 1H-IND	29.22	21	J
3.	UNKNOWN	34.38	8	J
4.				
5.				
6.				
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9.				
10.				
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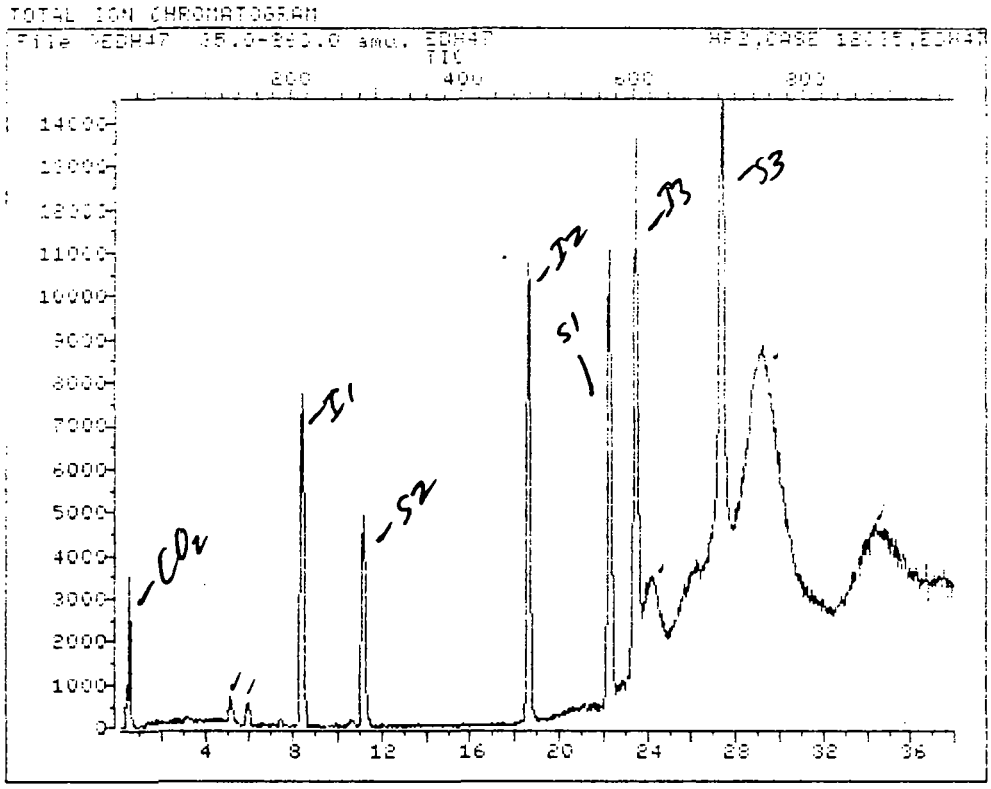
30.				



Data File: >EDH47::D1 Quant Output File: ^EDH47::SC
Name: EDH47
Misc: HP2,CASE 12035,EDH47,5.0G,5.0ML,,,%M=4.7$

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890612 12:23

Operator ID: JOHN
Quant Time: 890612 18:21
Injected at: 890612 17:42

% Moist.: 4.67 Wet: 4.9566 g Dry: 4.7251 g

QUANT REPORT

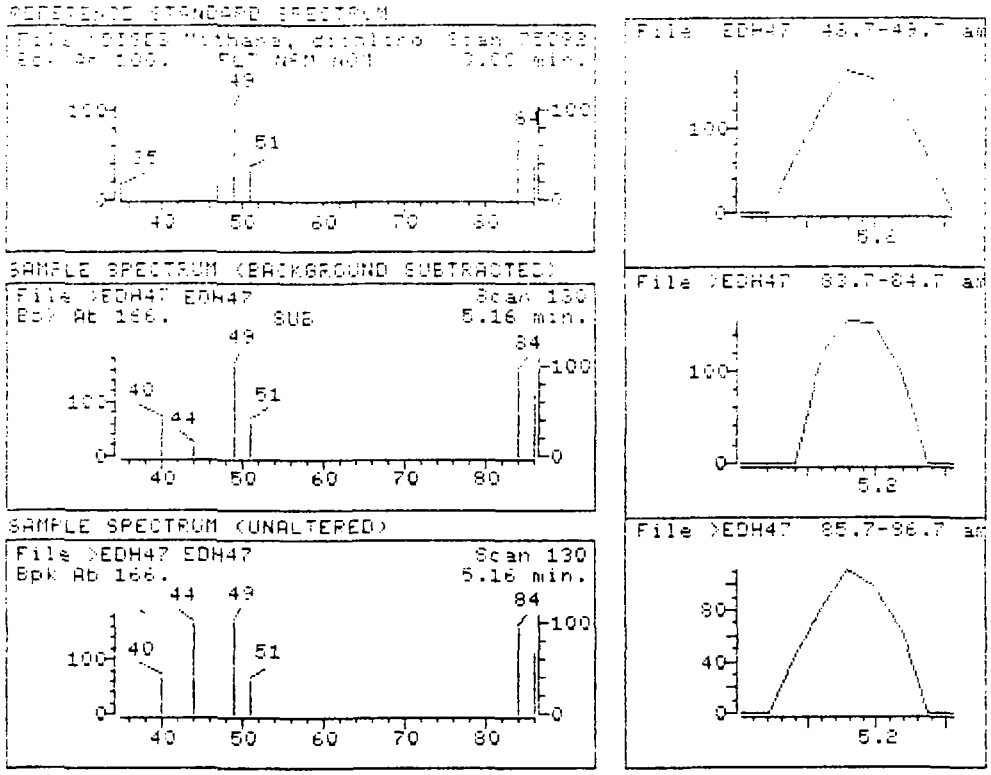
Operator ID: JOHN Quant Rev: 6 Quant Time: 890612 18:21
Output File: ^EDH47::SC Injected at: 890612 17:42
Data File: >EDH47::D1 Dilution Factor: 1.00000
Name: EDH47
Misc: HP2,CASE 12035,EDH47,5.0G,5.0ML,,,%M= 4.7 $

% Sur Rec = Amt x 2
CMPD. FD. = AMT x 5 IW

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890612 12:23

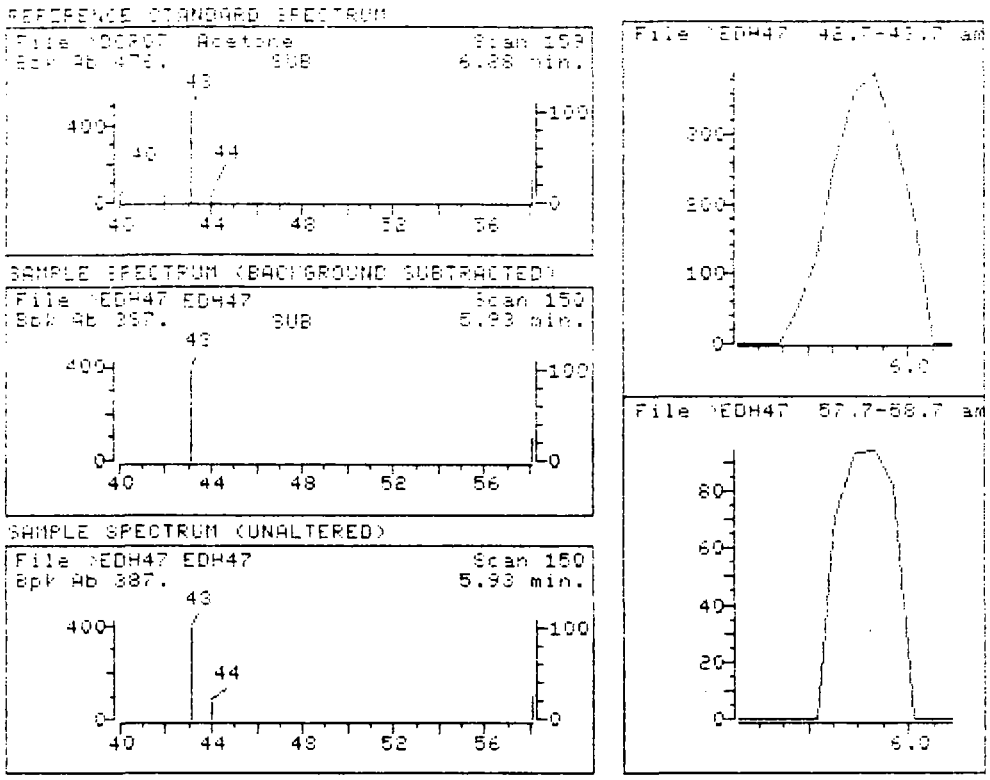
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.41	214	15170	50.00	ug/L	100
2)	Chloromethane	0.00	0	0	0.00	ug/L	
3)	Bromomethane	0.00	0	0	0.00	ug/L	
4)	Vinyl Chloride	0.00	0	0	0.00	ug/L	
5)	Chloroethane	0.00	0	0	0.00	ug/L	
6)	Methylene Chloride	5.16	130	1220	3.47	ug/L → 4	66
7)	Acetone	5.93	150	3884	76.87	ug/L → 81	81
8)	Carbon Disulfide	0.00	0	0	0.00	ug/L	
9)	1,1-Dichloroethene	0.00	0	0	0.00	ug/L	
10)	1,1-Dichloroethane	0.00	0	0	0.00	ug/L	
11)	1,2-Dichloroethene (total)	0.00	0	0	0.00	ug/L	
12)	Chloroform	0.00	0	0	0.00	ug/L	
13)	1,2-Dichloroethane-d4	11.16	285	19016	51.03	ug/L	92
14)	1,2-Dichloroethane	0.00	0	0	0.00	ug/L	
15)	2-Butanone	11.24	287	1732	55.05	ug/L → 58	100
16)	*1,4-Difluorobenzene	18.64	478	58728	50.00	ug/L	69
17)	1,1,1-Trichloroethane	0.00	0	0	0.00	ug/L	
18)	Carbon Tetrachloride	0.00	0	0	0.00	ug/L	
19)	Vinyl Acetate	0.00	0	0	0.00	ug/L	
20)	Bromodichloromethane	0.00	0	0	0.00	ug/L	
21)	1,2-Dichloropropane	0.00	0	0	0.00	ug/L	
22)	cis-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
23)	Trichloroethene	0.00	0	0	0.00	ug/L	
24)	Dibromochloromethane	0.00	0	0	0.00	ug/L	
25)	1,1,2-Trichloroethane	0.00	0	0	0.00	ug/L	
26)	Benzene	0.00	0	0	0.00	ug/L	
27)	trans-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
28)	Bromoform	0.00	0	0	0.00	ug/L	
29)	*Chlorobenzene-d5	23.48	603	51306M	50.00	ug/L	90
30)	4-Methyl-2-pentanone	0.00	0	0	0.00	ug/L	
31)	2-Hexanone	0.00	0	0	0.00	ug/L	
32)	Tetrachloroethene	0.00	0	0	0.00	ug/L	
33)	1,1,2,2-Tetrachloroethane	0.00	0	0	0.00	ug/L	
34)	Toluene	22.48	577	209	M ~~.33~~	ug/L →	87
35)	Toluene-d8	22.28	572	48772	48.02	ug/L	92
36)	Chlorobenzene	0.00	0	0	0.00	ug/L	
37)	Ethylbenzene	0.00	0	0	0.00	ug/L	
38)	Styrene	0.00	0	0	0.00	ug/L	
39)	Xylene (total)	0.00	0	0	0.00	ug/L	
40)	Bromofluorobenzene	27.36	703	33430	44.37	ug/L	84

* Compound is ISTD



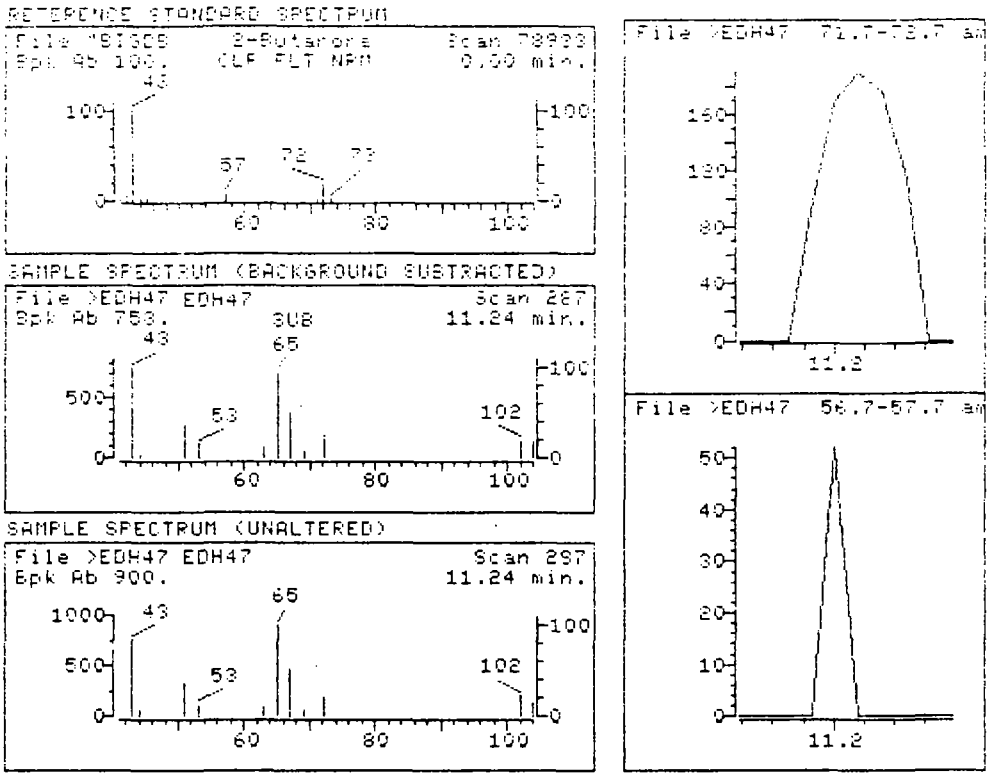
Data File: >EDH47::D1 Quant Output File: ^EDH47::SC
Name: EDH47
Misc: HP2,CASE 12035,EDH47,5.0G,5.0ML,,,%M=4.7 $
Quant Time: 890612 18:21 Quant ID File: IDVDD::SC
Injected at: 890612 17:42 Last Calibration: 890612 12:23

Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 130
Retention Time: 5.16 min.
Quant Ion: 84.0
Area: 1220
Concentration: 3.47 ug/L
q-value: 66



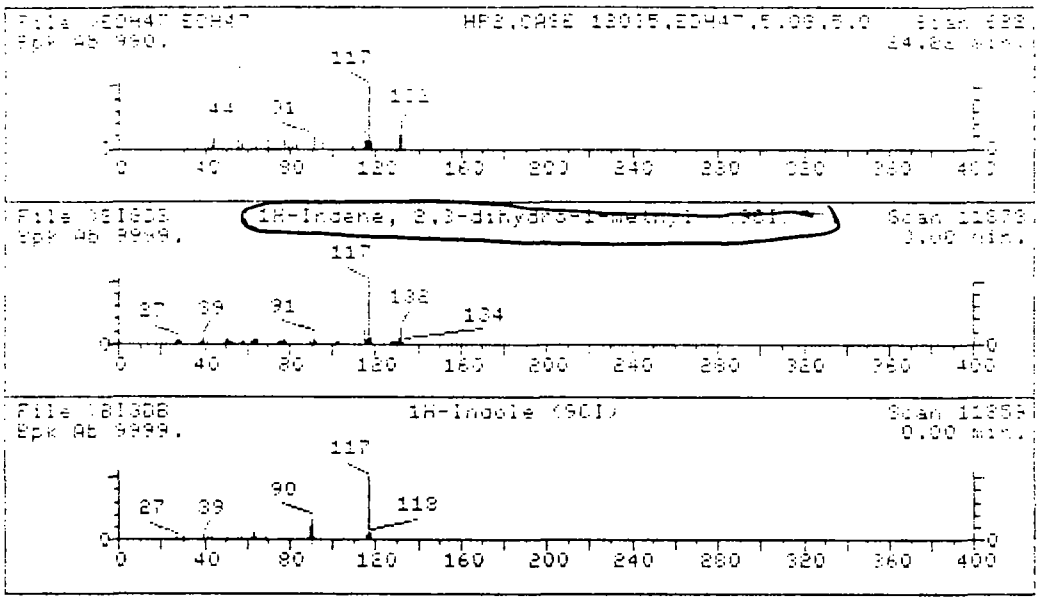
Data File: >EDH47::D1 Quant Output File: ^EDH47::SC
Name: EDH47
Misc: HP2,CASE 12035,EDH47,5.0G,5.0ML,,,%M=4.7$
Quant Time: 890612 18:21 Quant ID File: IDVDD::SC
Injected at: 890612 17:42 Last Calibration: 890612 12:23

Compound No: 7
Compound Name: Acetone
Scan Number: 150
Retention Time: 5.93 min.
Quant Ion: 43.0
Area: 3884
Concentration: 76.87 ug/L
q-value: 81



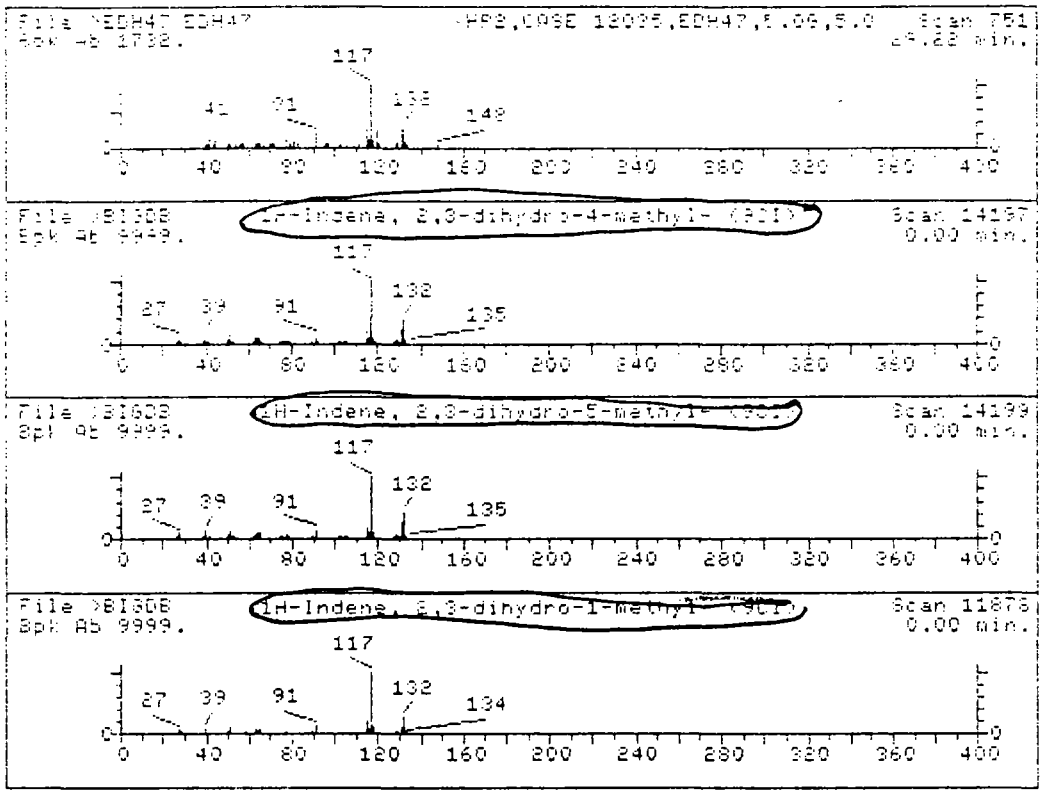
Data File: >EDH47::D1 Quant Output File: ^EDH47::SC
Name: EDH47
Misc: HP2,CASE 12035,EDH47,5.0G,5.0ML,,,%M=47 $
Quant Time: 890612 18:21 Quant ID File: IDVDD::SC
Injected at: 890612 17:42 Last Calibration: 890612 12:23

Compound No: 15
Compound Name: 2-Butanone
Scan Number: 287
Retention Time: 11.24 min.
Quant Ion: 72.0
Area: 1732
Concentration: 55.05 ug/L
q-value: 100



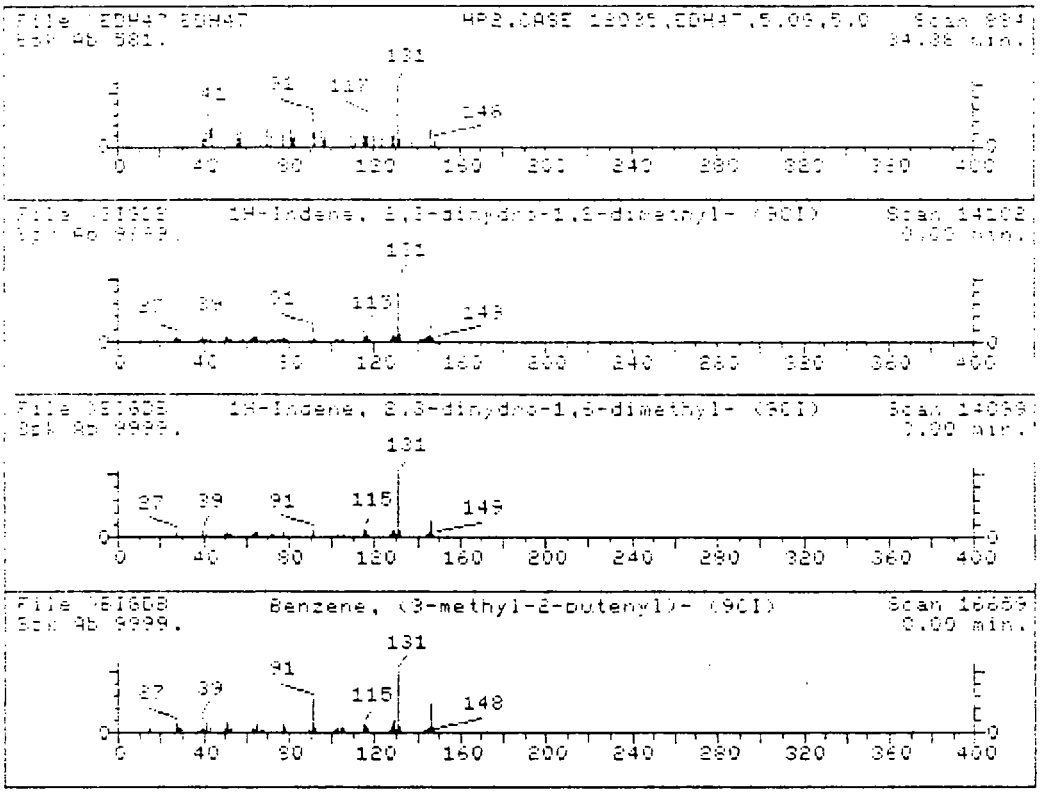
Date and Time of analysis: 6/12/89 17:42

Sample datafile name: >EDH47::D1



Date and Time of analysis: 6/12/89 17:42

Sample datafile name: >EDH47::D1



UNKNOWN

Date and Time of analysis: 6/12/89 17:42

Sample datafile name: >EDH47::D1

VOA TIC CALCULATIONS

SAMPLE EDH47 (EDH47)

% Moist: 4.67 Wet: 4.9566 g Dry: 4.7257 g

$$\text{TIC Multiplier} = \frac{80\ \mu g}{L} \times \frac{0.005\ L}{\text{ALIQUOT (L or kg)}^*} \approx 5291$$

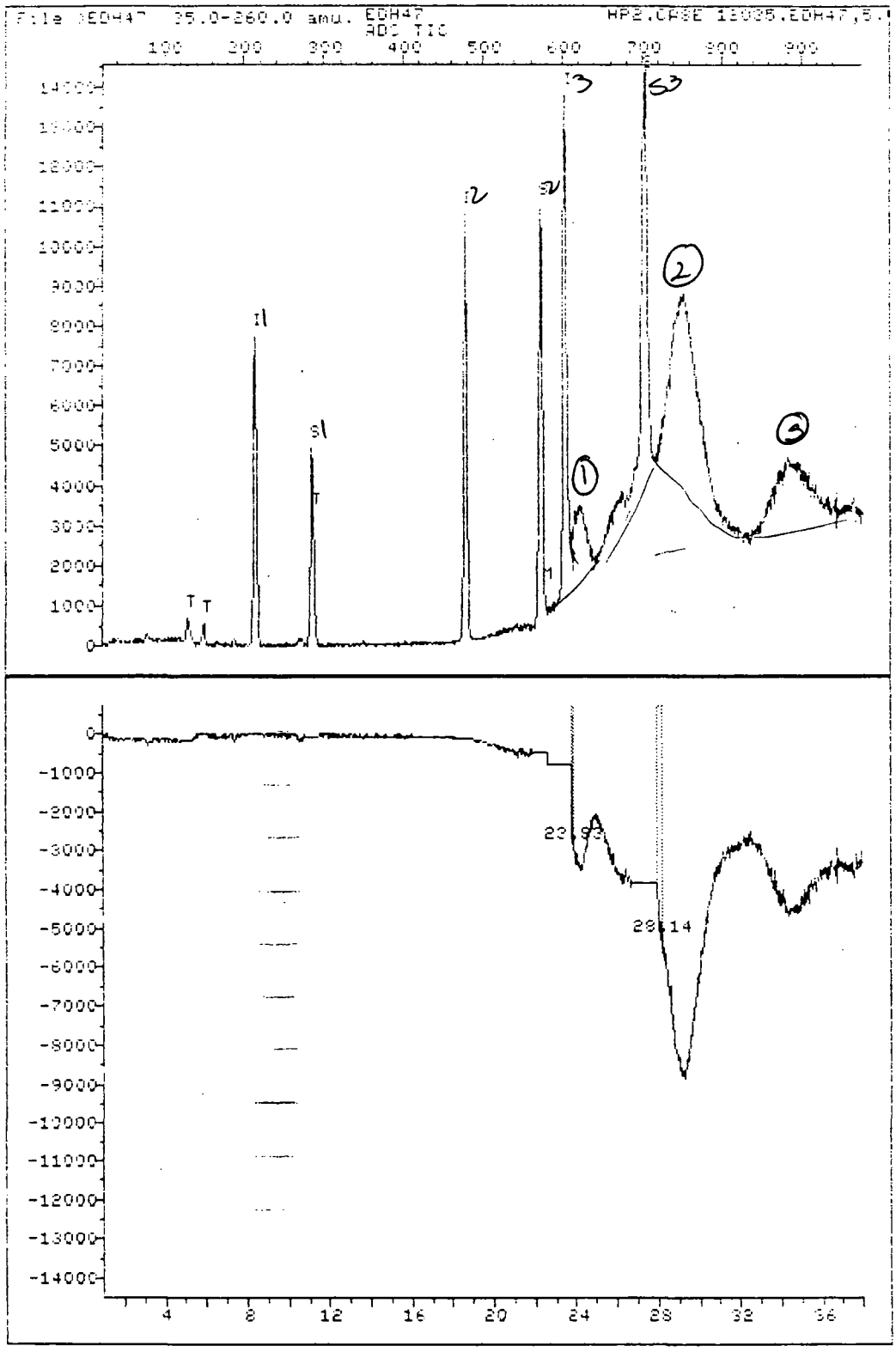
$$\text{TIC Amount} = \frac{\text{ht TIC}}{\text{ht IS}} \times \text{Multiplier}$$

ht IS 1 _____ 2 _____ 3 82

	SCAN	IS	Height	Amount
1	622	82	13	8
2	751	↓	33	21
3	884		12	8
4				
5				
6				
7				
8				
9				
10				

*Usually 0.005 L or 0.005 kg (Dry)

NOTE: _____


File EDH47 35.0-260.0 amu. EDH47
ADC TIC
HP2.CASE 13035.EDH47,5.
100 200 300 400 500 600 700 800 900
14000 13000 12000 11000 10000 9000 8000 7000 6000 5000 4000 3000 2000 1000 0
T T
I1
S1
T
I2
S2
T3
S3
1
2
3
0 -1000 -2000 -3000 -4000 -5000 -6000 -7000 -8000 -9000 -10000 -11000 -12000 -13000 -14000
28.14
4 8 12 16 20 24 28 32 36

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH48

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH48

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH48

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 6 Date Analyzed: 06/08/89

Column: (pack/cap) PACK Dilution Factor: 1.004

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	20	
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
591-78-6	2-Hexanone	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	4	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
133-02-7	Xylene (total)	5	U

10/11/89

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDH48

Lab Name: S-CUBED Contract: 68-D9-0007

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH48

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH48

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 6 Date Analyzed: 06/08/89

Column: (pack/cap) PACK Dilution Factor: 1.004

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	36.52	16	J
2.				
3.				
4.				
5.				
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7.				
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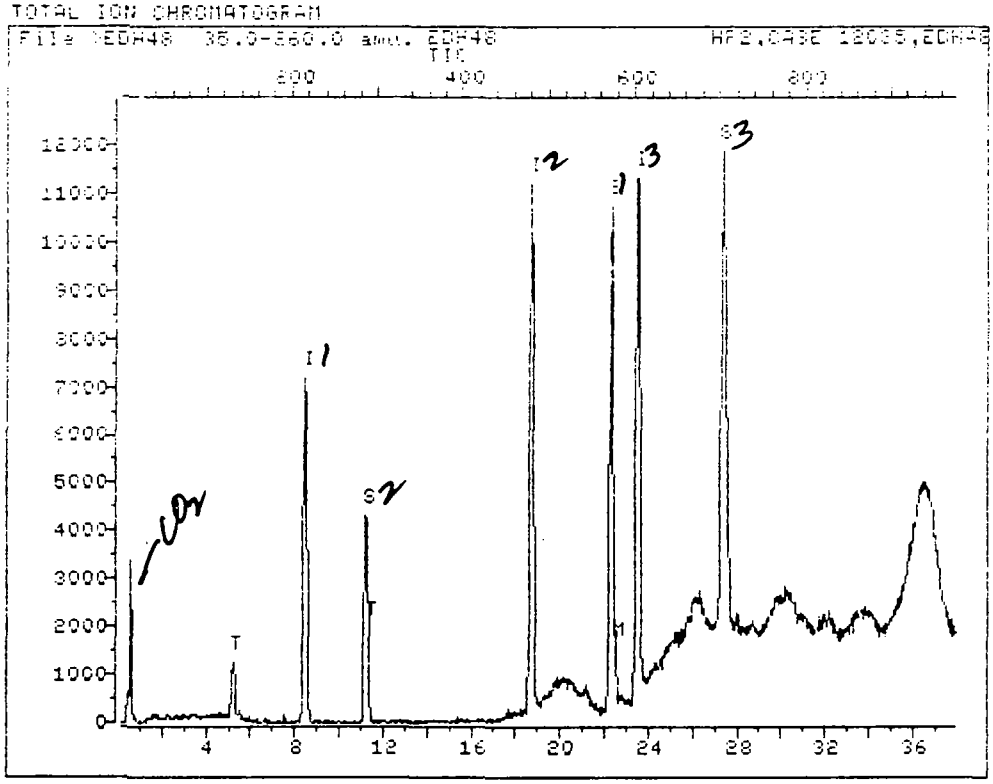
27.				
28.				
29.				
30.				

TOTAL ION CHROMATOGRAM



Data File: >EDH48::D1 Quant Output File: ^EDH48::D2
Name: EDH48
Misc: HP2,CASE 12035,EDH48,5.0G,5.0ML,,,%M=6.2$

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890608 15:21

Operator ID: JOHN
Quant Time: 890608 20:12
Injected at: 890608 19:34

% Moist.: 6.19 Wet: 4.9795 g Dry: 4.6713 g

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890608 20:12
Output File: ^EDH48::D2 Injected at: 890608 19:34
Data File: >EDH48::D1 Dilution Factor: 1.00000
Name: EDH48
Misc: HP2,CASE 12035,EDH48,5.0G,5.0ML,,,%M= 6.2 $

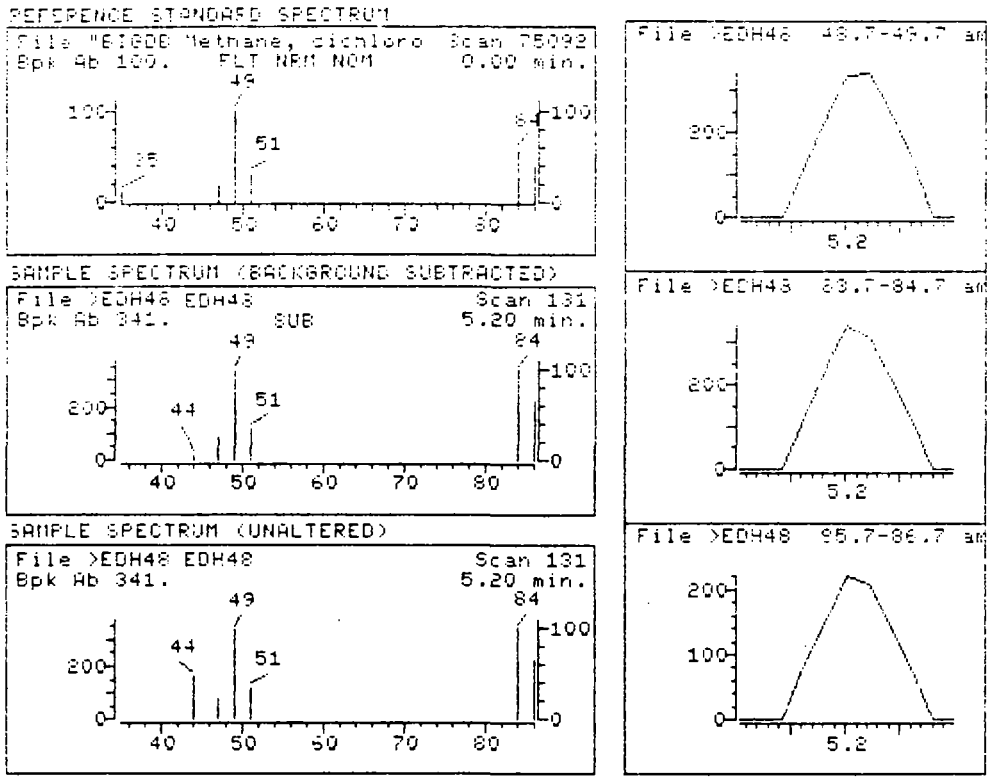
% Sur Rec = Amt x 2

CMPD. PD = AMT x 5/2.4.6713

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890608 15:21

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.46	215	14493	50.00	ug/L	100
2)	Chloromethane	0.00	0	0	0.00	ug/L	
3)	Bromomethane	0.00	0	0	0.00	ug/L	
4)	Vinyl Chloride	0.00	0	0	0.00	ug/L	
5)	Chloroethane	0.00	0	0	0.00	ug/L	
6)	Methylene Chloride	5.20	131	3174	9.27	ug/L → 10	60
7)	Acetone	0.00	150	0	0.00	ug/L	
8)	Carbon Disulfide	0.00	0	0	0.00	ug/L	
9)	1,1-Dichloroethene	0.00	0	0	0.00	ug/L	
10)	1,1-Dichloroethane	0.00	0	0	0.00	ug/L	
11)	1,2-Dichloroethene (total)	0.00	0	0	0.00	ug/L	
12)	Chloroform	0.00	0	0	0.00	ug/L	
13)	1,2-Dichloroethane-d4	11.21	286	18480	51.33	ug/L	90
14)	1,2-Dichloroethane	0.00	0	0	0.00	ug/L	
15)	2-Butanone	11.33	289	569	18.30	ug/L → 10	100
16)	*1,4-Difluorobenzene	18.73	480	57034	50.00	ug/L	68
17)	1,1,1-Trichloroethane	0.00	0	0	0.00	ug/L	
18)	Carbon Tetrachloride	0.00	0	0	0.00	ug/L	
19)	Vinyl Acetate	0.00	0	0	0.00	ug/L	
20)	Bromodichloromethane	0.00	0	0	0.00	ug/L	
21)	1,2-Dichloropropane	0.00	0	0	0.00	ug/L	
22)	cis-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
23)	Trichloroethene	0.00	0	0	0.00	ug/L	
24)	Dibromochloromethane	0.00	0	0	0.00	ug/L	
25)	1,1,2-Trichloroethane	0.00	0	0	0.00	ug/L	
26)	Benzene	0.00	0	0	0.00	ug/L	
27)	trans-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
28)	Bromoform	0.00	0	0	0.00	ug/L	
29)	*Chlorobenzene-d5	23.49	603	48618	50.00	ug/L	99
30)	4-Methyl-2-pentanone	0.00	507	0	0.00	ug/L	
31)	2-Hexanone	0.00	518	0	0.00	ug/L	
32)	Tetrachloroethene	0.00	0	0	0.00	ug/L	
33)	1,1,2,2-Tetrachloroethane	0.00	540	0	0.00	ug/L	
34)	Toluene	22.52	578	2367	3.28	ug/L → 4	97
35)	Toluene-d8	22.33	573	49739	51.94	ug/L	94
36)	Chlorobenzene	0.00	0	0	0.00	ug/L	
37)	Ethylbenzene	0.00	0	0	0.00	ug/L	
38)	Styrene	0.00	0	0	0.00	ug/L	
39)	Xylene (total)	0.00	0	0	0.00	ug/L	
40)	Bromofluorobenzene	27.41	704	33883	47.73	ug/L	89

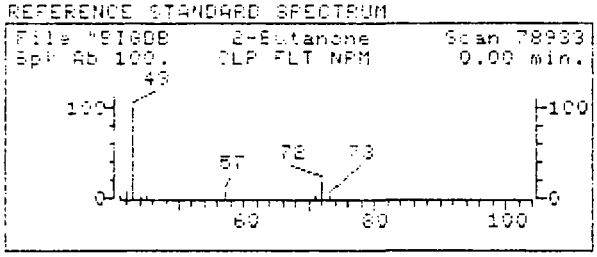
* Compound is ISTD

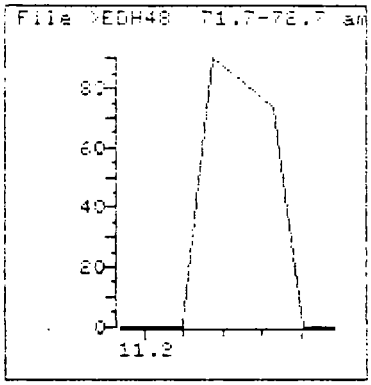


Data File: >EDH48::D1 Quant Output File: ^EDH48::D2
Name: EDH48
Misc: HP2,CASE 12035,EDH48,5.0G,5.0ML,,,%M= 6.2 $
Quant Time: 890608 20:12 Quant ID File: IDVDD::SC
Injected at: 890608 19:34 Last Calibration: 890608 15:21

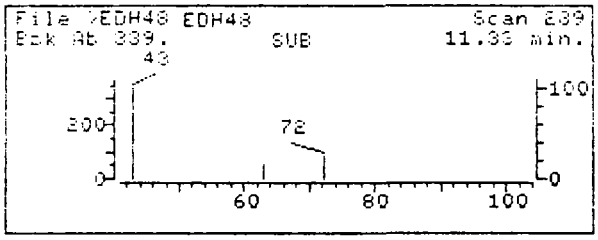
Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 131
Retention Time: 5.20 min.
Quant Ion: 84.0
Area: 3174
Concentration: 9.27 ug/L
q-value: 60

REFERENCE STANDARD SPECTRUM

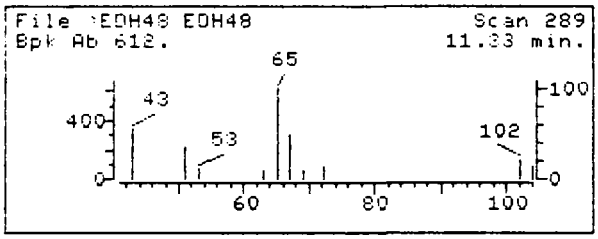




SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



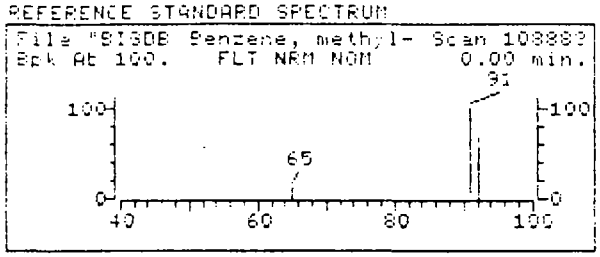
SAMPLE SPECTRUM (UNALTERED)



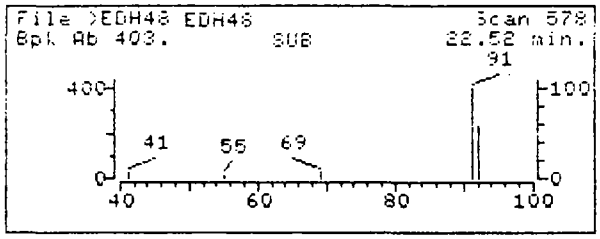
Data File: >EDH48::D1 Quant Output File: ^EDH48::D2
Name: EDH48
Misc: HP2,CASE 12035,EDH48,5.0G,5.0ML,,,%M=6.2 $
Quant Time: 890608 20:12 Quant ID File: IDVDD::SC
Injected at: 890608 19:34 Last Calibration: 890608 15:21

Compound No: 15
Compound Name: 2-Butanone
Scan Number: 289
Retention Time: 11.33 min.
Quant Ion: 72.0
Area: 569
Concentration: 18.30 ug/L
q-value: 100

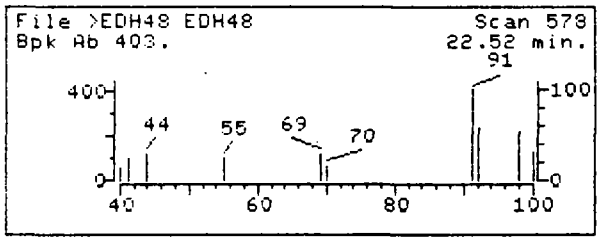
REFERENCE STANDARD SPECTRUM

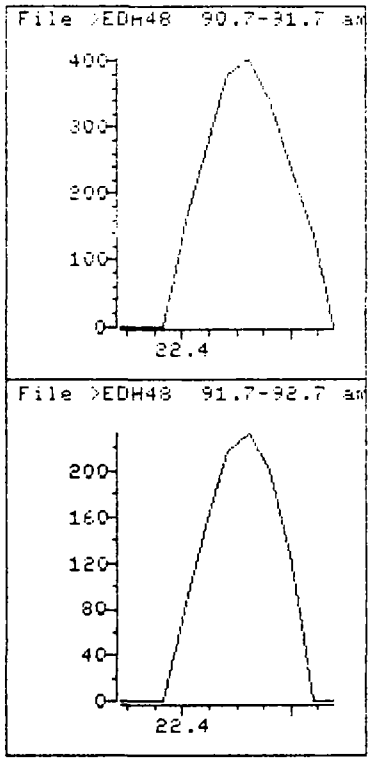


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



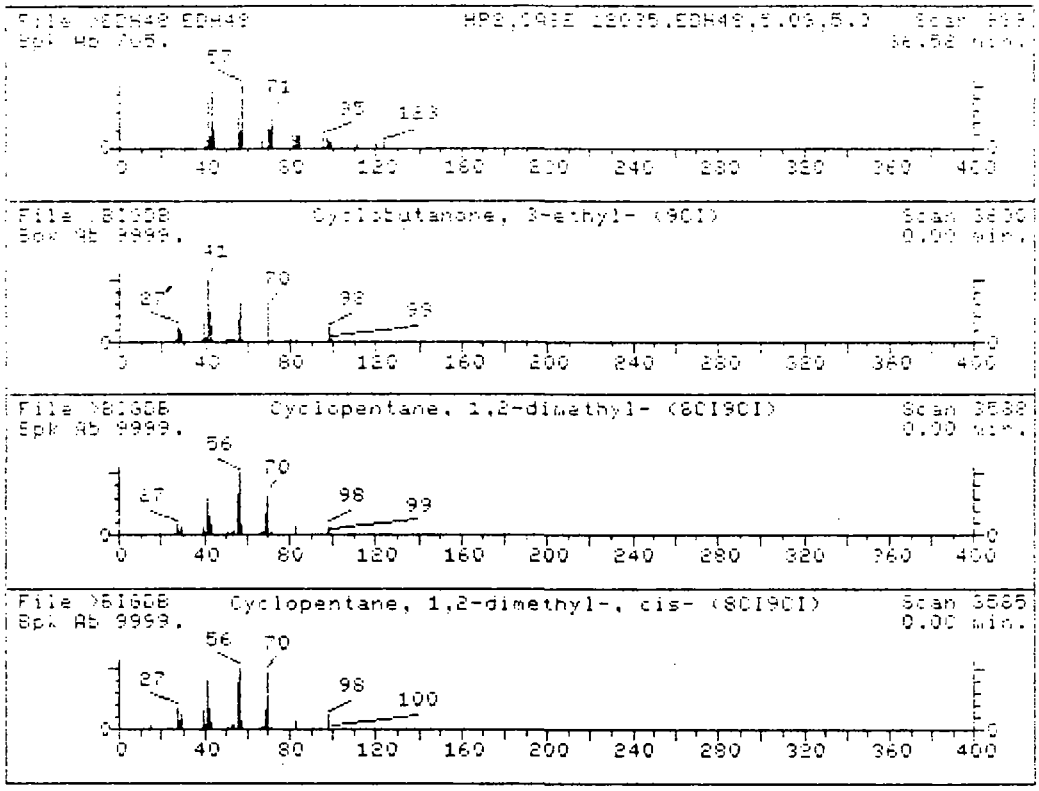
SAMPLE SPECTRUM (UNALTERED)





Data File: >EDH48::D1 Quant Output File: ^EDH48::D2
Name: EDH48
Misc: HP2,CASE 12035,EDH48,5.0G,5.0ML,,,%M=6.2 $
Quant Time: 890608 20:12 Quant ID File: IDVDD::SC
Injected at: 890608 19:34 Last Calibration: 890608 15:21

Compound No: 34
Compound Name: Toluene
Scan Number: 578
Retention Time: 22.52 min.
Quant Ion: 92.0
Area: 2367
Concentration: 3.28 ug/L
q-value: 97



UNKNOWN

Date and Time of analysis: 6/08/89 19:34

Sample datafile name: >EDH48::D1

VOA TIC CALCULATIONS

SAMPLE EDH48 (EDH48)

% Moist: 6.19 Wet: 4.9795 g Dry: 4.6713 g

$$\text{TIC Multiplier} = \frac{50\ \mu g}{L} \times \frac{0.005\ L}{\text{ALIQUOT (L or kg)}^*} \approx 53.52$$

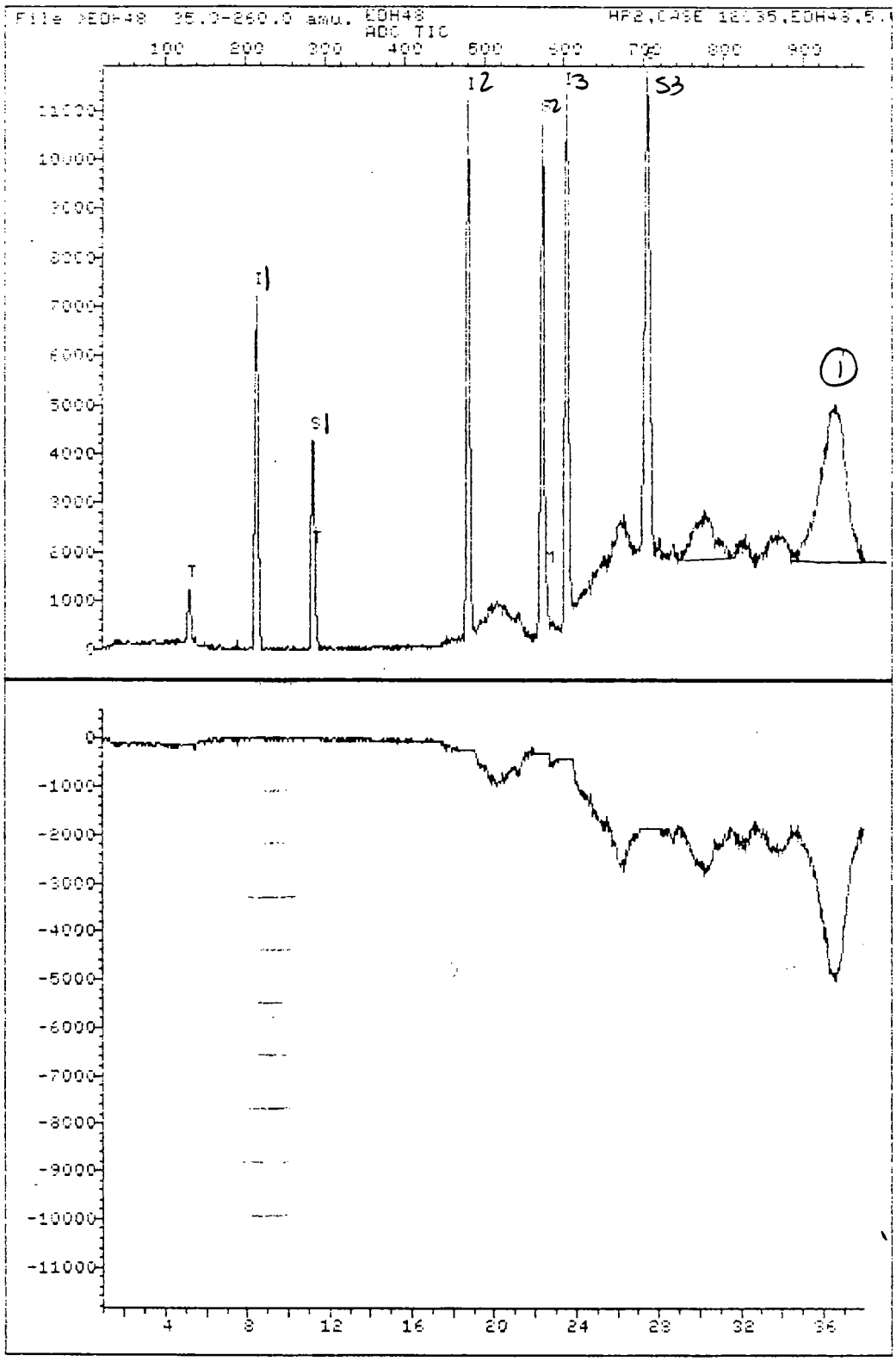
$$\text{TIC Amount} = \frac{\text{ht TIC}}{\text{ht IS}} \times \text{Multiplier}$$

ht IS 1 _____ 2 _____ 3 87

	SCAN	IS	Height	Amount
1	939	87	26	16
2				
3				
4				
5				
6				
7				
8				
9				
10				

*Usually 0.005 L or 0.005 kg (Dry)

NOTE: _____


File >EDH48 35.0-260.0 amu. EDH48
ADC TIC
HP2,CASE 12135,EDH48,5.
100
200
300
400
500
600
700
800
900
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
T
I1
S1
I2
S2
I3
S3
1
-1000
-2000
-3000
-4000
-5000
-6000
-7000
-8000
-9000
-10000
-11000
4
8
12
16
20
24
28
32
36

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH49

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH41

Matrix: (soil/water) SOIL Lab Sample ID: EDH49

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH49

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 4 Date Analyzed: 06/10/89

Column: (pack/cap) PACK Dilution Factor: 1.001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	11	~~B~~ U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	23	
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
591-78-6	2-Hexanone	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
133-02-7	Xylene (total)	5	U

10/11/89

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDH49

Lab Name: S-CUBED Contract: 68-D9-0627

Lab Code: SI Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH49

Sample wt/vol: 5.0 (g/mL) G Lab File ID: EDH49

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 4 Date Analyzed: 06/12/89

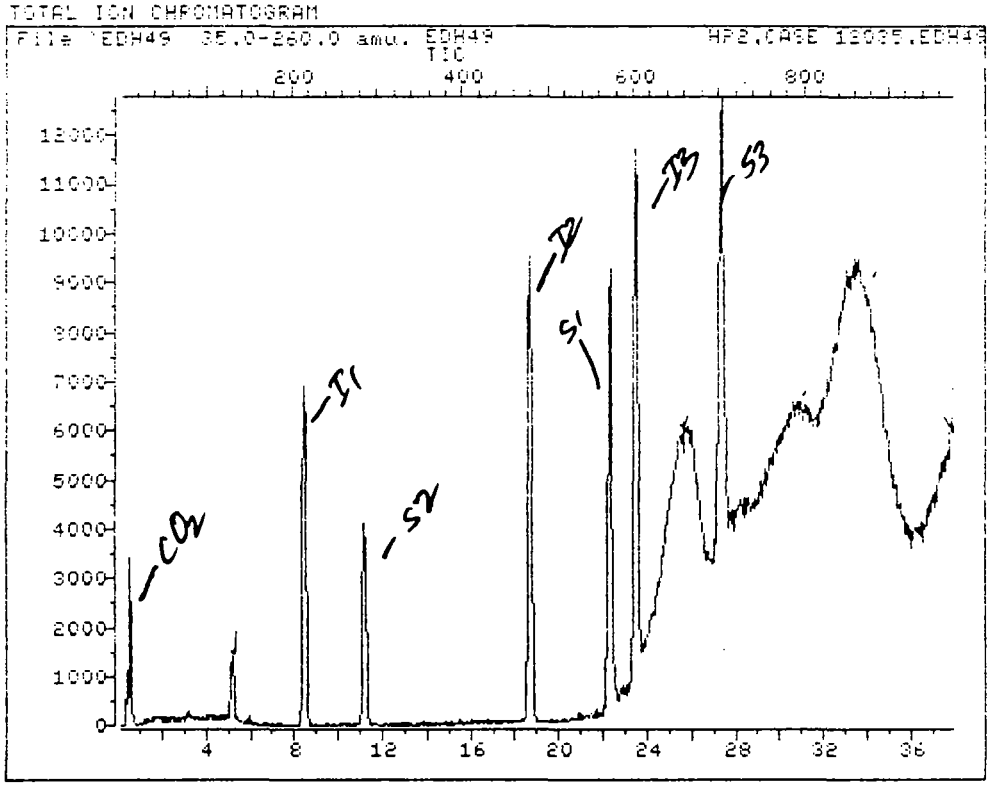
Column: (pack/cap) PACK Dilution Factor: 1.001

Number TICs found: 4

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	25.69	18	J
2.		UNKNOWN	30.73	9	J
3.		UNKNOWN	33.57	28	J
4.		UNKNOWN	37.87	13	J
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

TOTAL ION CHROMATOGRAM



Data File: >EDH49::D1 Quant Output File: ^EDH49::SC
Name: EDH49
Misc: HP2,CASE 12035,EDH49,5.0G,5.0ML,,,%M=3.8 $

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890616 09:59

Operator ID: JOHN
Quant Time: 890616 10:02
Injected at: 890612 18:27

% Moist.: 3.82 Wet: 4.9950 g Dry: 4.8044 g

QUANT REPORT

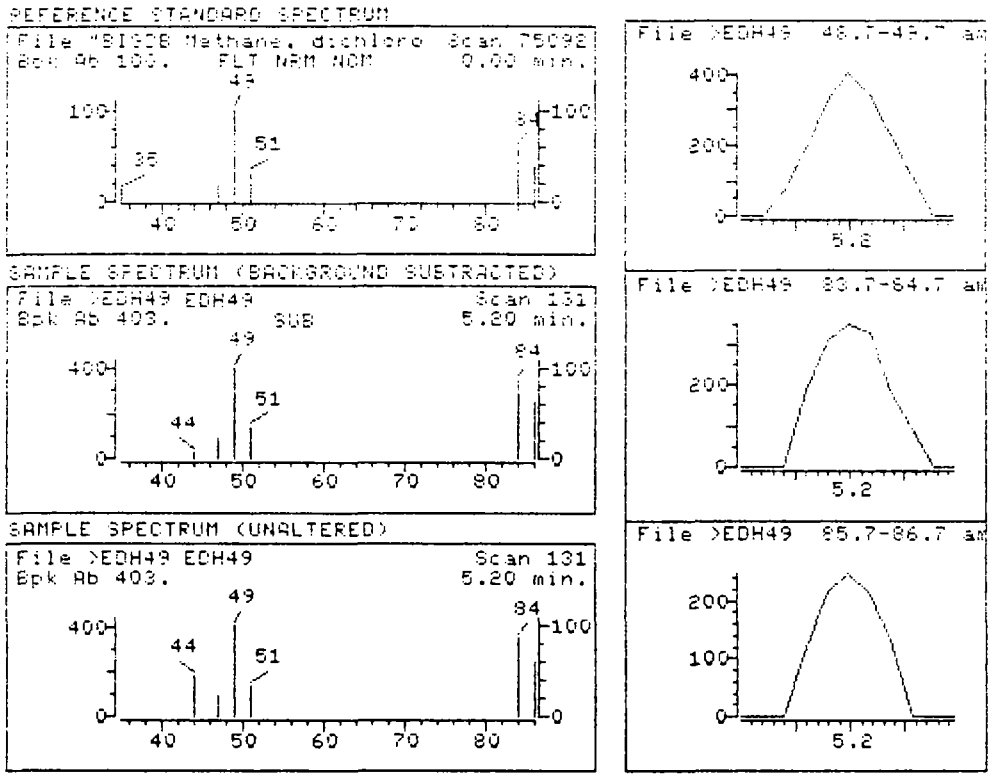
Operator ID: JOHN Quant Rev: 6 Quant Time: 890616 10:02
Output File: ^EDH49::SC Injected at: 890612 18:27
Data File: >EDH49::D1 Dilution Factor: 1.00000
Name: EDH49
Misc: HP2,CASE 12035,EDH49,5.0G,5.0ML,,,%M=3.8 $

% Sur Rec = Amt x 2
CMPD. RD = AMT x 5/IW → 4.804

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890616 09:59

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.45	215	13834	50.00	ug/L	100
2)	Chloromethane	0.00	0	0	0.00	ug/L	
3)	Bromomethane	0.00	0	0	0.00	ug/L	
4)	Vinyl Chloride	0.00	0	0	0.00	ug/L	
5)	Chloroethane	0.00	0	0	0.00	ug/L	
6)	Methylene Chloride	5.20	131	3392	10.59	ug/L → 11	74
7)	Acetone	0.00	150	0	0.00	ug/L	
8)	Carbon Disulfide	0.00	0	0	0.00	ug/L	
9)	1,1-Dichloroethene	0.00	0	0	0.00	ug/L	
10)	1,1-Dichloroethane	0.00	0	0	0.00	ug/L	
11)	1,2-Dichloroethene (total)	0.00	0	0	0.00	ug/L	
12)	Chloroform	0.00	0	0	0.00	ug/L	
13)	1,2-Dichloroethane-d4	11.20	286	17211	50.64	ug/L	94
14)	1,2-Dichloroethane	0.00	0	0	0.00	ug/L	
15)	2-Butanone	11.28	288	632	22.03	ug/L → 13	100
16)	*1,4-Difluorobenzene	18.68	479	51530	50.00	ug/L	69
17)	1,1,1-Trichloroethane	0.00	0	0	0.00	ug/L	
18)	Carbon Tetrachloride	0.00	0	0	0.00	ug/L	
19)	Vinyl Acetate	0.00	0	0	0.00	ug/L	
20)	Bromodichloromethane	0.00	0	0	0.00	ug/L	
21)	1,2-Dichloropropane	0.00	0	0	0.00	ug/L	
22)	cis-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
23)	Trichloroethene	0.00	0	0	0.00	ug/L	
24)	Dibromochloromethane	0.00	0	0	0.00	ug/L	
25)	1,1,2-Trichloroethane	0.00	0	0	0.00	ug/L	
26)	Benzene	0.00	0	0	0.00	ug/L	
27)	trans-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
28)	Bromoform	0.00	0	0	0.00	ug/L	
29)	*Chlorobenzene-d5	23.48	603	48440	50.00	ug/L	94
30)	4-Methyl-2-pentanone	0.00	0	0	0.00	ug/L	
31)	2-Hexanone	0.00	546	0	0.00	ug/L	
32)	Tetrachloroethene	0.00	0	0	0.00	ug/L	
33)	1,1,2,2-Tetrachloroethane	0.00	0	0	0.00	ug/L	
~~34)~~	Toluene	22.48	577	213	Mu ~~.35~~	ug/L →	93
35)	Toluene-d8	22.32	573	43057	44.90	ug/L	95
36)	Chlorobenzene	0.00	0	0	0.00	ug/L	
37)	Ethylbenzene	0.00	648	0	0.00	ug/L	
38)	Styrene	0.00	0	0	0.00	ug/L	
39)	Xylene (total)	0.00	0	0	0.00	ug/L	
40)	Bromofluorobenzene	27.36	703	30440	42.79	ug/L	95

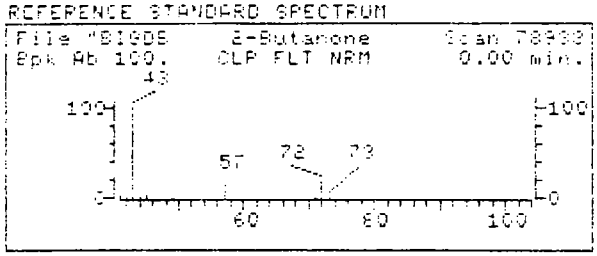
* Compound is ISTD



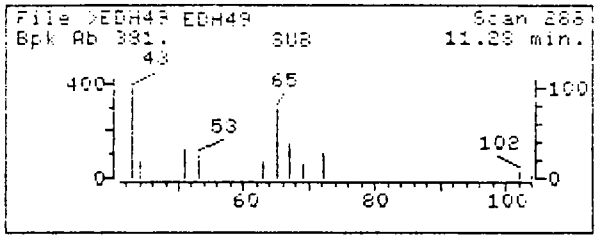
Data File: >EDH49::D1 Quant Output File: ^EDH49::SC
Name: EDH49
Misc: HP2,CASE 12035,EDH49,5.0G,5.0ML,,,%M=3.8 $
Quant Time: 890616 10:02 Quant ID File: IDVDD::SC
Injected at: 890612 18:27 Last Calibration: 890616 09:59

Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 131
Retention Time: 5.20 min.
Quant Ion: 84.0
Area: 3392
Concentration: 10.59 ug/L
q-value: 74

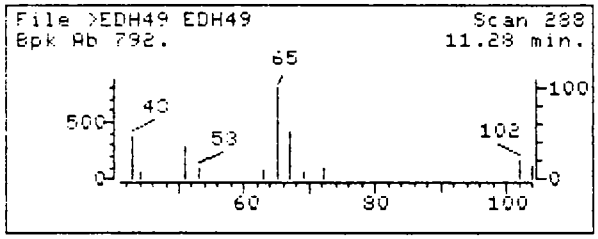
REFERENCE STANDARD SPECTRUM

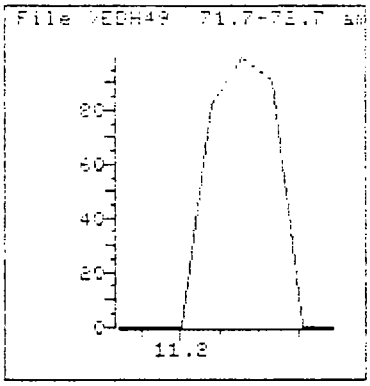


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



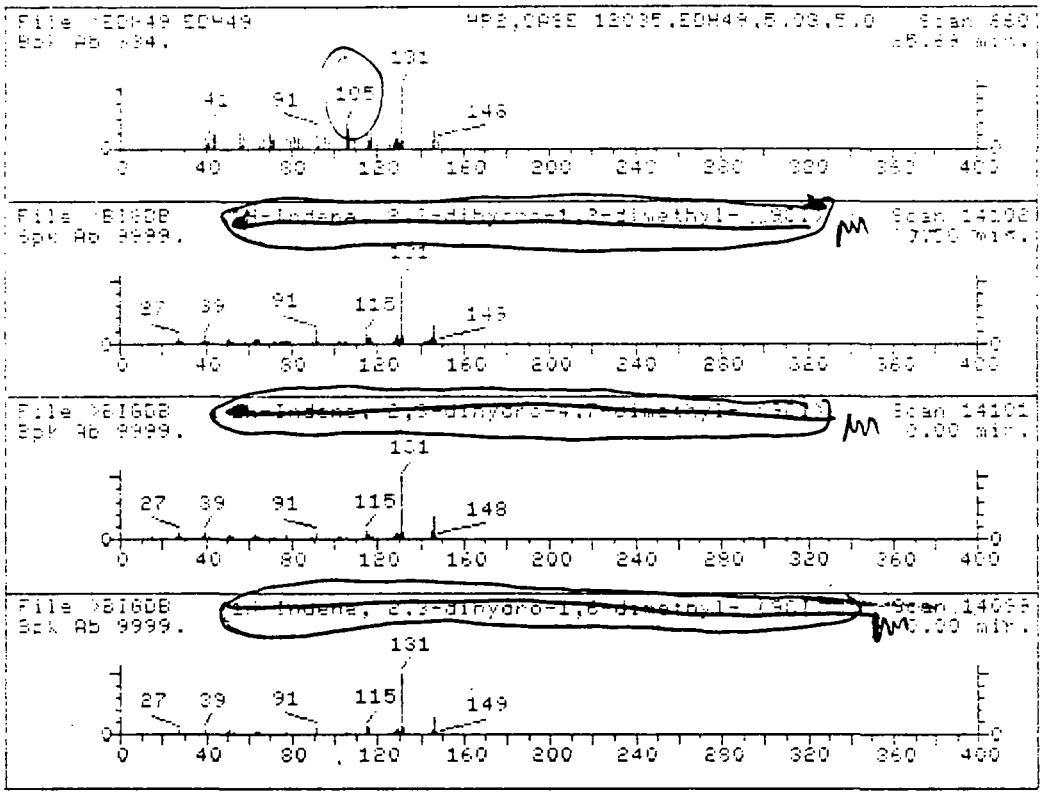
SAMPLE SPECTRUM (UNALTERED)





Data File: >EDH49::D1 Quant Output File: ^EDH49::SC
Name: EDH49
Misc: HP2,CASE 12035,EDH49,5.0G,5.0ML,,,%M=3.8 $
Quant Time: 890616 10:02 Quant ID File: IDVDD::SC
Injected at: 890612 18:27 Last Calibration: 890616 09:59

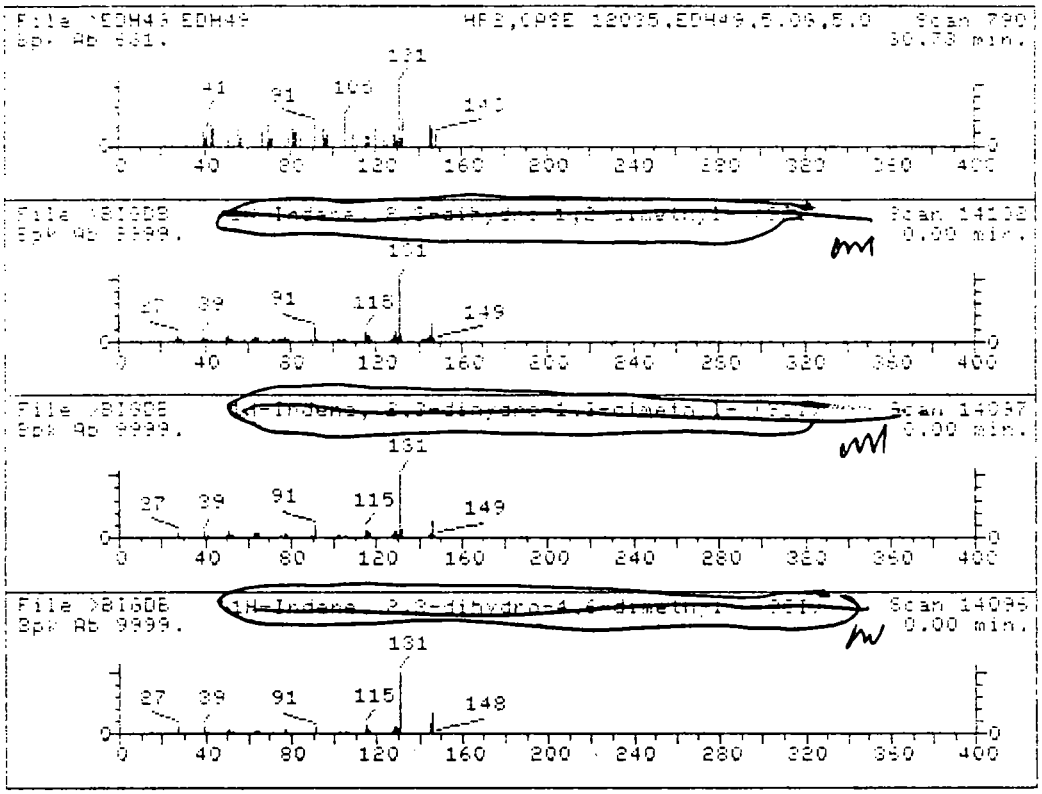
Compound No: 15
Compound Name: 2-Butanone
Scan Number: 288
Retention Time: 11.28 min.
Quant Ion: 72.0
Area: 632
Concentration: 22.03 ug/L
q-value: 100



UNKNOWN

Date and Time of analysis: 6/12/89 18:27

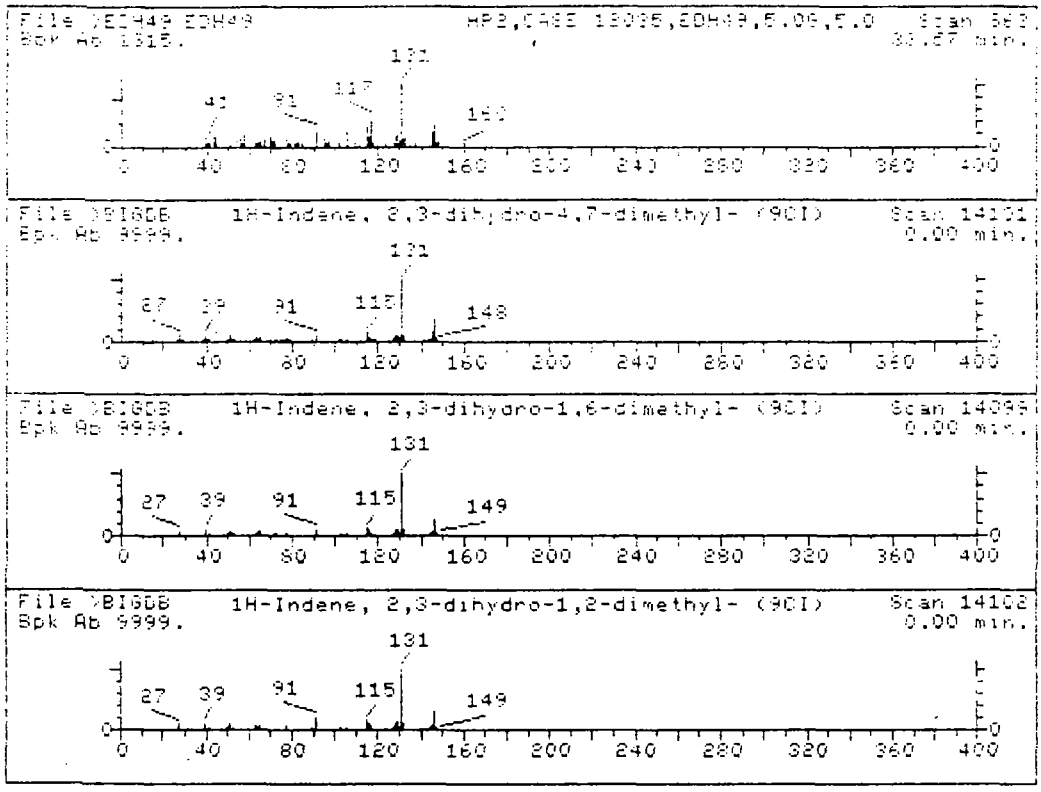
Sample datafile name: >EDH49::D1



UNKNOWN

Date and Time of analysis: 6/12/89 18:27

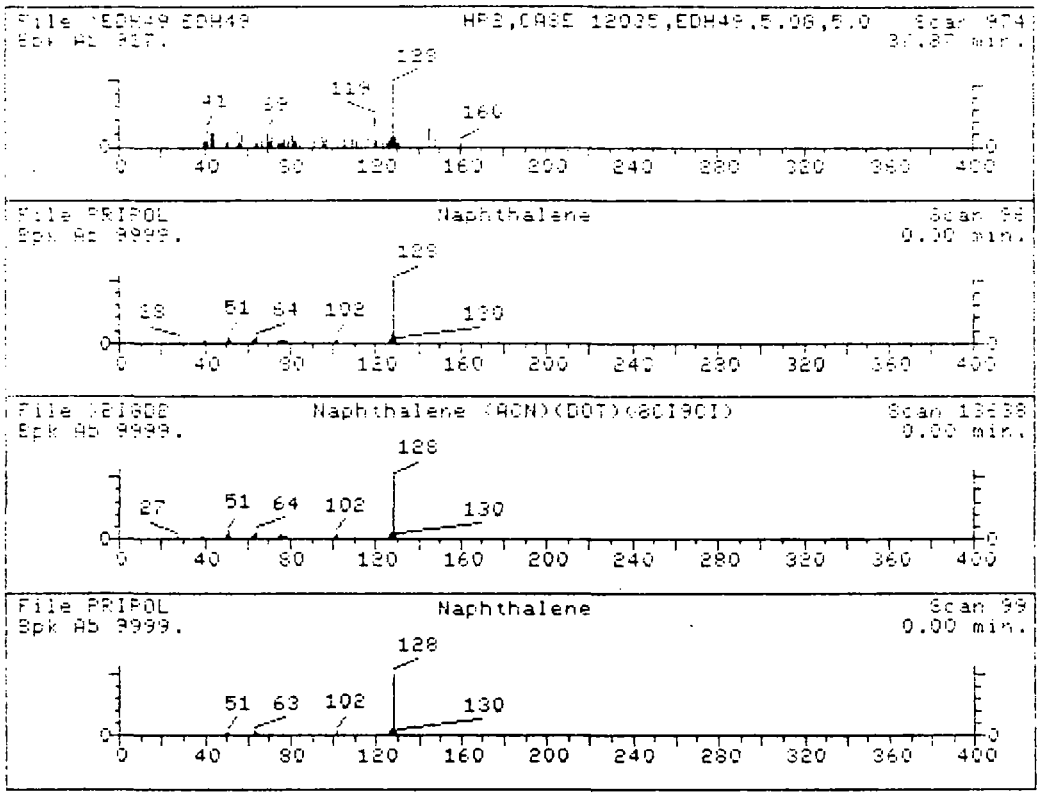
Sample datafile name: >EDH49::D1



UNKNOWN

Date and Time of analysis: 6/12/89 18:27

Sample datafile name: >EDH49::D1



UNKNOWN

Date and Time of analysis: 6/12/89 18:27

Sample datafile name: >EDH49::D1

VOA TIC CALCULATIONS

SAMPLE EDH49 (EDH49)

% Moist: 3.82 Wet: 4.9950 g Dry: 4.8042 g

$$\text{TIC Multiplier} = \frac{50\ \mu g}{L} \times \frac{0.005\ L}{\text{ALIQUOT (L or kg)}^*} \approx 52.04$$

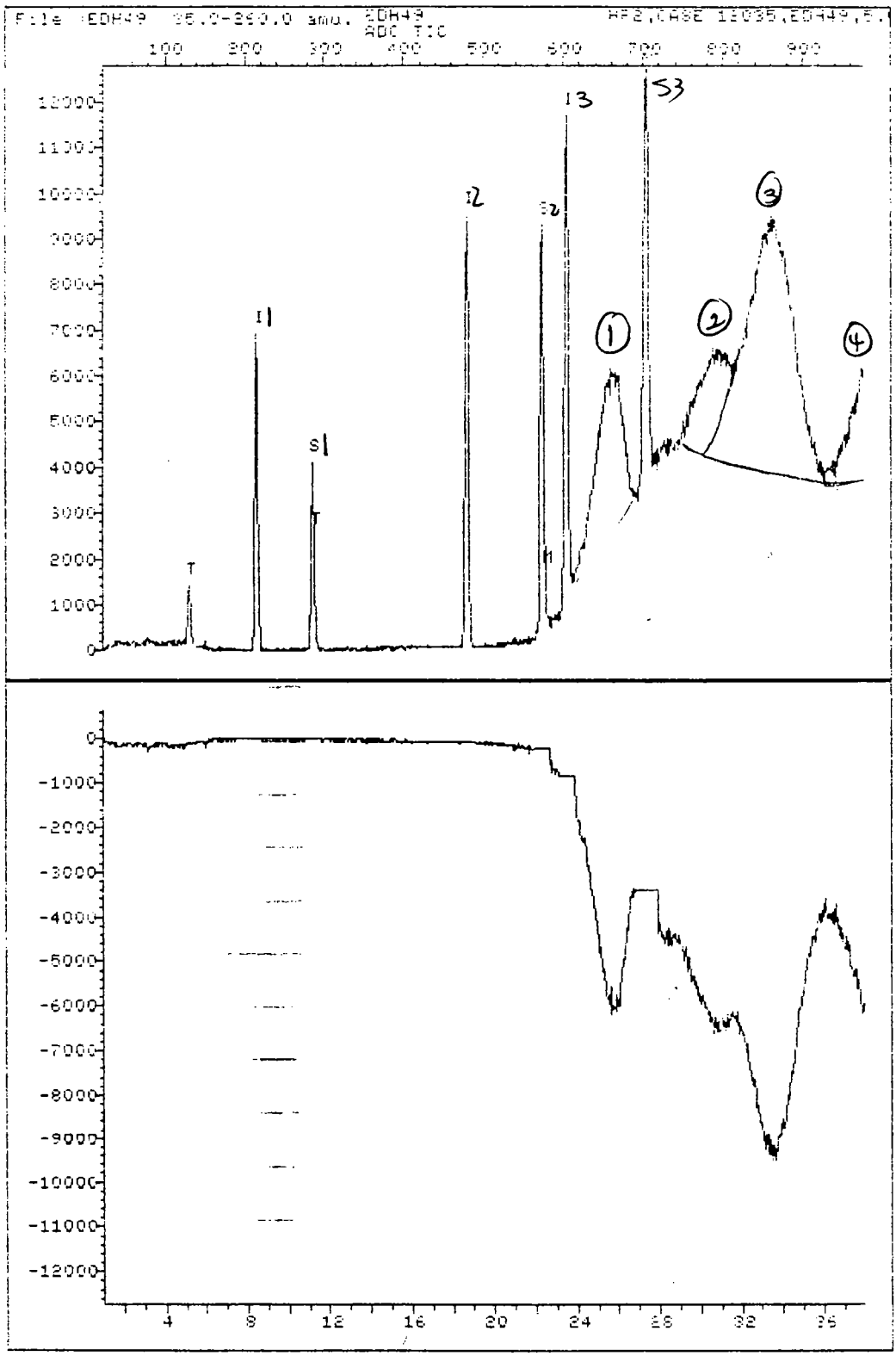
$$\text{TIC Amount} = \frac{\text{ht TIC}}{\text{ht IS}} \times \text{Multiplier}$$

ht IS 1 _____ 2 _____ 3 77

	SCAN	IS	Height	Amount
1	660	77	26	18
2	790	↓	14	9
3	863	↓	42	28
4	974	↓	19	13
5				
6				
7				
8				
9				
10				

*Usually 0.005 L or 0.005 kg (Dry)

NOTE: _____


File EDH49 35.0-360.0 amu. EDH49
RDC TIC
HP2,CASE 11035,EDH49,5.
T
I1
S1
T
I2
S2
I3
S3
1
2
3
4

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

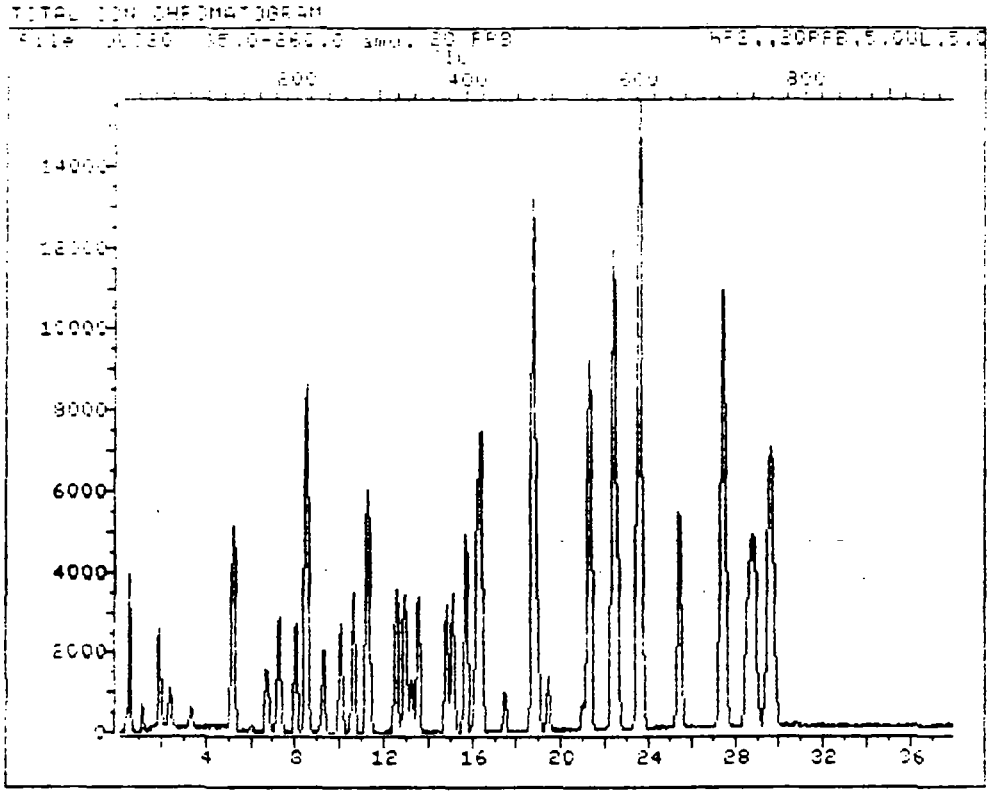
Instrument ID: HP2 Calibration Date(s): 06/03/89

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

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

LAB FILE ID: RRF20 =>JUC20 RRF50 =>JUC50
RRF100=>JU100 RRF150=>JU150 RRF200=>JU200

COMPOUND	RRF20	RRF50	RRF100	RRF150	RRF200	$\overline{RRF}$	% RSD
Chloromethane #	.503	.519	.530	.505	.521	.516	2.2#
Bromomethane	.965	.995	.982	.965	.989	.979	1.4
Vinyl_Chloride *	.684	.703	.714	.683	.719	.701	2.4*
Chloroethane	.509	.535	.536	.523	.537	.528	2.3
Methylene_Chloride	2.025	1.373	1.205	1.124	1.105	1.367	28.0
Acetone	.226	.156	.151	.167	.164	.173	17.6
Carbon_Disulfide	2.150	2.519	2.756	2.690	2.818	2.587	10.4
1,1-Dichloroethene *	1.020	1.058	1.040	1.017	1.038	1.035	1.6*
1,1-Dichloroethane #	1.784	1.840	1.857	1.838	1.869	1.838	1.8#
1,2-Dichloroethene_(total)	1.130	1.141	1.157	1.123	1.147	1.140	1.2
Chloroform *	2.372	2.395	2.424	2.440	2.477	2.422	1.7*
1,2-Dichloroethane	1.489	1.478	1.491	1.550	1.560	1.513	2.5
2-Butanone	.105	.091	.083	.084	.078	.088	12.0
1,1,1-Trichloroethane	.499	.526	.532	.552	.559	.534	4.5
Carbon_Tetrachloride	.473	.507	.522	.537	.550	.518	5.8
Vinyl_Acetate	.381	.393	.404	.438	.441	.411	6.5
Bromodichloromethane	.507	.544	.567	.617	.617	.571	8.4
1,2-Dichloropropane *	.282	.287	.292	.307	.301	.294	3.5*
cis-1,3-Dichloropropene	.370	.404	.413	.444	.448	.416	7.7
Trichloroethene	.419	.432	.424	.433	.433	.428	1.5
Dibromochloromethane	.373	.405	.425	.464	.466	.427	9.3
1,1,2-Trichloroethane	.313	.297	.291	.313	.309	.304	3.3
Benzene	.715	.723	.720	.742	.742	.728	1.7
trans-1,3-Dichloropropene	.435	.471	.482	.528	.529	.489	8.2
Bromoform #	.385	.419	.447	.511	.520	.456	12.8#
4-Methyl-2-pentanone	.260	.221	.222	.235	.231	.234	6.7
2-Hexanone	.149	.148	.139	.148	.146	.146	2.8
Tetrachloroethene	.497	.504	.486	.492	.481	.492	1.8
1,1,2,2-Tetrachloroethane #	.585	.525	.516	.550	.539	.543	4.9#
Toluene *	.634	.627	.619	.624	.615	.624	1.2*
Chlorobenzene #	.931	.918	.902	.930	.911	.918	1.4#
Ethylbenzene *	.399	.412	.398	.415	.405	.406	1.9*
Styrene	.901	.909	.894	.927	.917	.910	1.4
Xylene_(total)	.364	.362	.356	.364	.358	.361	1.0
Toluene-d8	.964	.981	1.003	.974	.974	.979	1.5
Bromofluorobenzene	.669	.683	.693	.694	.689	.686	1.5
1,2-Dichloroethane-d4	1.180	1.239	1.330	1.389	1.451	1.318	8.3



Data File: >JUC20::D1 Quant Output File: ^JUC20::SC
Name: 20 PPB
Misc: HP2,,20PPB,5.0UL,5.0ML,,,$

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890602 14:49

Operator ID: JOHN
Quant Time: 890603 14:50
Injected at: 890603 14:11

QUANT REPORT

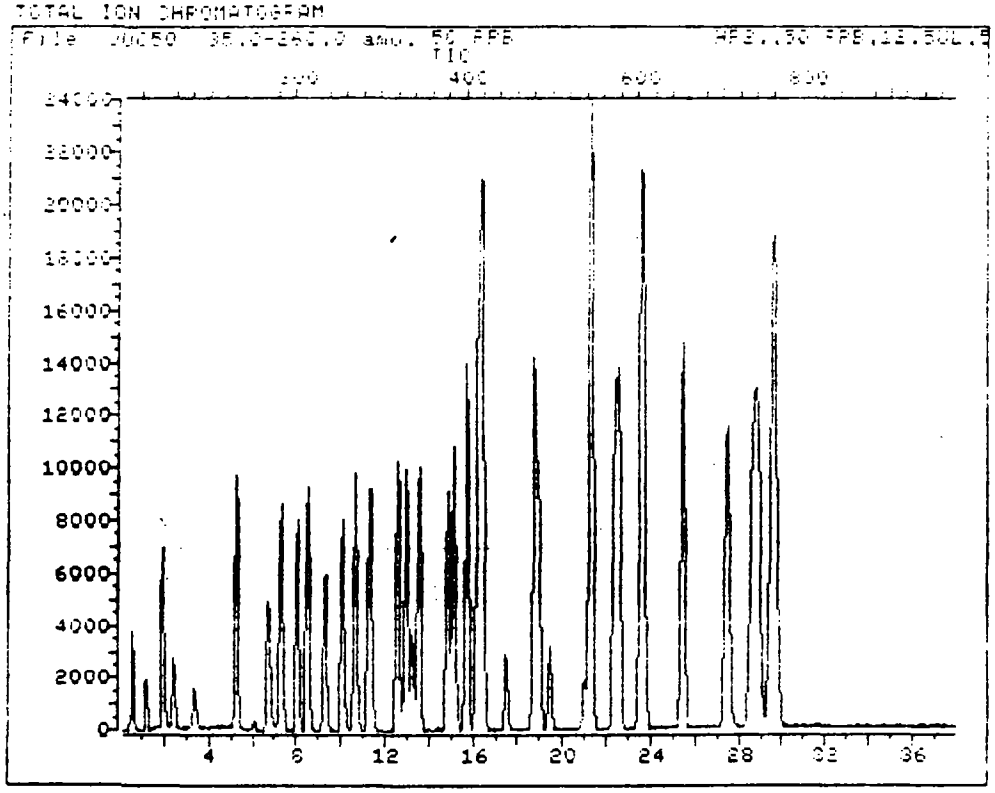
Operator ID: JOHN Quant Rev: 6 Quant Time: 890603 14:50
Output File: >JUC20::SC Injected at: 890603 14:11
Data File: >JUC20::D1 Dilution Factor: 1.00000
Name: 20 PPB
Misc: HP2,,20PPB,5.0UL,5.0ML,,,$

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890602 14:49

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.49	216	17376	50.00	ug/L	100
2)	Chloromethane	1.13	26	3498	18.52	ug/L	93
3)	Bromomethane	1.90	46	6707	19.00	ug/L	78
4)	Vinyl Chloride	2.41	59	4754	18.53	ug/L	97
5)	Chloroethane	3.34	83	3535	17.53	ug/L	99
6)	Methylene Chloride	5.24	132	14077	35.43	ug/L	72
7)	Acetone	6.05	153	1571M	22.67	ug/L	
8)	Carbon Disulfide	6.71	170	14946	14.51	ug/L	100
9)	1,1-Dichloroethene	8.02	204	7090	18.77	ug/L	81
10)	1,1-Dichloroethane	9.26	236	12402	19.06	ug/L	97
11)	1,2-Dichloroethene (total)	10.04	256	7852	18.71	ug/L	86
12)	Chloroform	10.62	271	16490	19.59	ug/L	95
13)	1,2-Dichloroethane-d4	11.24	287	20497	49.69	ug/L	87
14)	1,2-Dichloroethane	11.36	290	10346	19.84	ug/L	99
15)	2-Butanone	11.36	290	730	20.66	ug/L	100
16)	*1,4-Difluorobenzene	18.72	480	69638	50.00	ug/L	69
17)	1,1,1-Trichloroethane	12.56	321	13897	18.22	ug/L	76
18)	Carbon Tetrachloride	12.95	331	13170	18.00	ug/L	79
19)	Vinyl Acetate	13.22	338	10615	18.19	ug/L	79
20)	Bromodichloromethane	13.53	346	14132	17.85	ug/L	91
21)	1,2-Dichloropropane	14.84	380	7848	19.28	ug/L	94
22)	cis-1,3-Dichloropropene	15.11	387	14430	24.15	ug/L	95
23)	Trichloroethene	15.70	402	11663	18.42	ug/L	96
24)	Dibromochloromethane	16.28	417	10387	17.25	ug/L	97
25)	1,1,2-Trichloroethane	16.39	420	8708	20.20	ug/L	90
26)	Benzene	16.16	414	19930	19.09	ug/L	91
27)	trans-1,3-Dichloropropene	16.39	420	7263	10.42	ug/L	97
28)	Bromoform	18.91	485	10722	16.74	ug/L	95
29)	*Chlorobenzene-d5	23.52	604	60007	50.00	ug/L	99
30)	4-Methyl-2-pentanone	19.42	498	6230	22.66	ug/L	91
31)	2-Hexanone	20.97	538	3578M	19.98	ug/L	
32)	Tetrachloroethene	21.28	546	11923	18.26	ug/L	90
33)	1,1,2,2-Tetrachloroethane	21.20	544	14035	22.34	ug/L	89
34)	Toluene	22.52	578	15219	19.43	ug/L	95
35)	Toluene-d8	22.36	574	57824	49.24	ug/L	93
36)	Chlorobenzene	23.64	607	22342	19.28	ug/L	91
37)	Ethylbenzene	25.46	654	9565	18.80	ug/L	93
38)	Styrene	28.60	735	21627	19.22	ug/L	92
39)	Xylene (total)	29.61	761	26218	58.14	ug/L	98
40)	Bromofluorobenzene	27.48	706	40147	48.74	ug/L	91

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >JUC50::D1 **Quant Output File: ^JUC50::SC**
Name: 50 PPB
Misc: HP2,,50 PPB,12.5UL,5.0ML,,,$

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890602 14:49

Operator ID: JOHN
Quant Time: 890603 15:44
Injected at: 890603 15:05

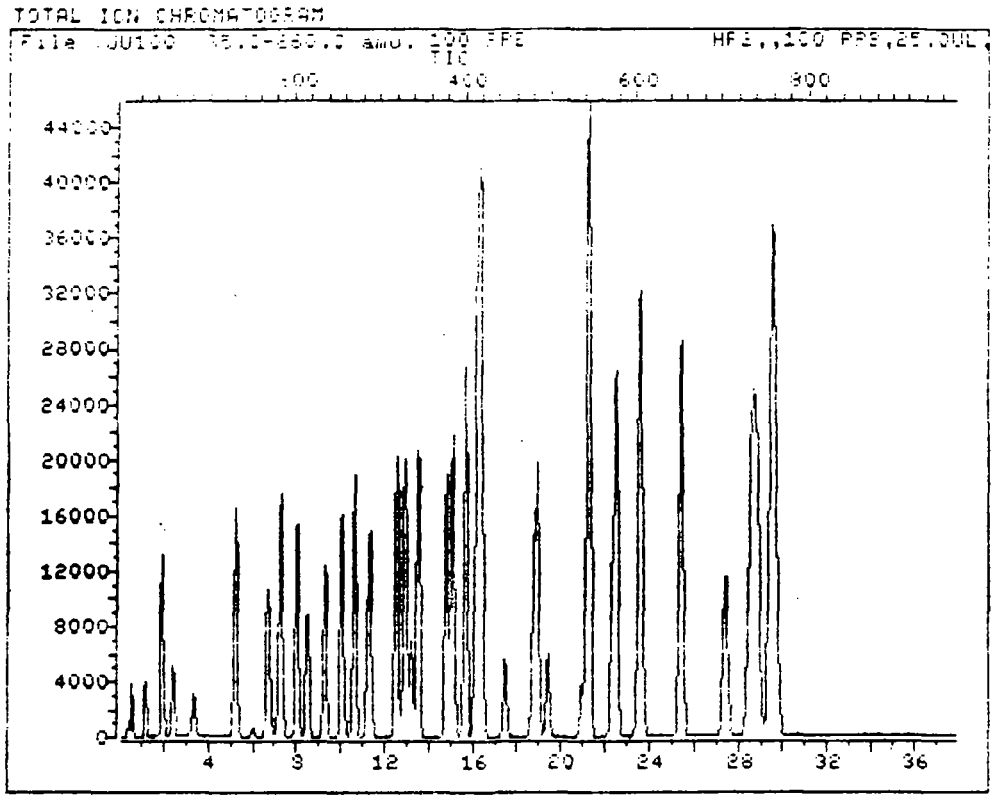
QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890603 15:44
Output File: ^JUC50::SC Injected at: 890603 15:05
Data File: >JUC50::D1 Dilution Factor: 1.00000
Name: 50 PPB
Misc: HP2,,50 PPB,12.5UL,5.0ML,,,$

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890602 14:49

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.49	216	18583	50.00	ug/L	100
2)	Chloromethane	1.17	27	9651	47.79	ug/L	91
3)	Bromomethane	1.91	46	18495	48.99	ug/L	86
4)	Vinyl Chloride	2.41	59	13065	47.61	ug/L	97
5)	Chloroethane	3.34	83	9936	46.07	ug/L	98
6)	Methylene Chloride	5.24	132	25522	60.07	ug/L	73
7)	Acetone	6.09	154	2896M	39.07	ug/L	
8)	Carbon Disulfide	6.71	170	46812	42.50	ug/L	100
9)	1,1-Dichloroethene	8.03	204	19658	48.66	ug/L	84
10)	1,1-Dichloroethane	9.31	237	34194	49.13	ug/L	96
11)	1,2-Dichloroethene (total)	10.04	256	21204	47.25	ug/L	92
12)	Chloroform	10.62	271	44514	49.44	ug/L	94
13)	1,2-Dichloroethane-d4	11.24	287	23028	52.20	ug/L	88
14)	1,2-Dichloroethane	11.36	290	27469	49.27	ug/L	97
15)	2-Butanone	11.36	290	1697	44.90	ug/L	100
16)	*1,4-Difluorobenzene	18.72	480	74068	50.00	ug/L	69
17)	1,1,1-Trichloroethane	12.56	321	38945	48.01	ug/L	78
18)	Carbon Tetrachloride	12.95	331	37516	48.20	ug/L	85
19)	Vinyl Acetate	13.22	338	29144	46.95	ug/L	79
20)	Bromodichloromethane	13.53	346	40309	47.86	ug/L	95
21)	1,2-Dichloropropane	14.85	380	21254	49.10	ug/L	95
22)	cis-1,3-Dichloropropene	15.12	387	41856	65.87	ug/L	94
23)	Trichloroethene	15.70	402	31990	47.51	ug/L	95
24)	Dibromochloromethane	16.28	417	29977	46.80	ug/L	99
25)	1,1,2-Trichloroethane	16.40	420	21986	47.95	ug/L	93
26)	Benzene	16.16	414	53537	48.22	ug/L	91
27)	trans-1,3-Dichloropropene	16.40	420	20948	28.26	ug/L	95
28)	Bromoform	18.92	485	31009	45.51	ug/L	99
29)	*Chlorobenzene-d5	23.53	604	62501	50.00	ug/L	99
30)	4-Methyl-2-pentanone	19.42	498	13802	48.20	ug/L	92
31)	2-Hexanone	20.97	538	9250	49.59	ug/L	92
32)	Tetrachloroethene	21.28	546	31492	46.31	ug/L	92
33)	1,1,2,2-Tetrachloroethane	21.20	544	32830	50.16	ug/L	93
34)	Toluene	22.52	578	39187	48.02	ug/L	98
35)	Toluene-d8	22.33	573	61332	50.15	ug/L	98
36)	Chlorobenzene	23.64	607	57387	47.53	ug/L	92
37)	Ethylbenzene	25.43	653	25761	48.60	ug/L	93
38)	Styrene	28.56	734	56829	48.50	ug/L	95
39)	Xylene (total)	29.61	761	67837	144.42	ug/L	99
40)	Bromofluorobenzene	27.44	705	42691	49.76	ug/L	78

* Compound is ISTD



Data File: >JU100::D1 Quant Output File: ^JU100::SC
Name: 100 PPB
Misc: HP2,,100 PPB,25.0UL,5.0ML,,,$

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890602 14:49

Operator ID: JOHN
Quant Time: 890603 16:28
Injected at: 890603 15:49

QUANT REPORT

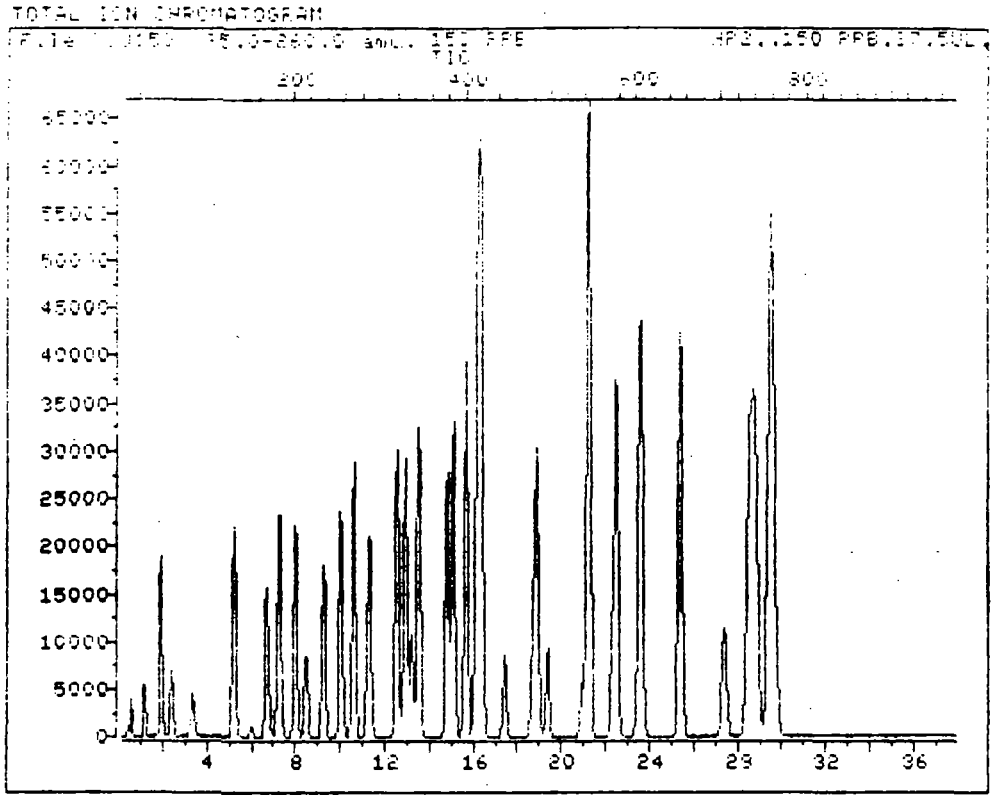
Operator ID: JOHN
Output File: ^JU100::SC
Data File: >JU100::D1
Name: 100 PPB
Misc: HP2,,100 PPB,25.0UL,5.0ML,,,$

Quant Rev: 6
Quant Time: 890603 16:28
Injected at: 890603 15:49
Dilution Factor: 1.00000

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890602 14:49

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.49	216	18002	50.00	ug/L	100
2)	Chloromethane	1.17	27	19088	97.57	ug/L	89
3)	Bromomethane	1.90	46	35346	96.65	ug/L	90
4)	Vinyl Chloride	2.41	59	25716	96.75	ug/L	97
5)	Chloroethane	3.34	83	19292	92.34	ug/L	98
6)	Methylene Chloride	5.24	132	43393	105.43	ug/L	72
7)	Acetone	6.01	152	5439	75.74	ug/L	83
8)	Carbon Disulfide	6.67	169	99233	93.01	ug/L	100
9)	1,1-Dichloroethene	7.99	203	37456	95.70	ug/L	81
10)	1,1-Dichloroethane	9.27	236	66859	99.17	ug/L	95
11)	1,2-Dichloroethene (total)	10.04	256	41670	95.85	ug/L	93
12)	Chloroform	10.62	271	87266	100.06	ug/L	92
13)	1,2-Dichloroethane-d4	11.24	287	23951	56.04	ug/L	92
14)	1,2-Dichloroethane	11.32	289	53674	99.37	ug/L	96
15)	2-Butanone	11.32	289	2974	81.23	ug/L	100
16)	*1,4-Difluorobenzene	18.68	479	71790	50.00	ug/L	68
17)	1,1,1-Trichloroethane	12.52	320	76405	97.17	ug/L	79
18)	Carbon Tetrachloride	12.91	330	74941	99.33	ug/L	82
19)	Vinyl Acetate	13.18	337	58018	96.44	ug/L	79
20)	Bromodichloromethane	13.49	345	81358	99.67	ug/L	94
21)	1,2-Dichloropropane	14.81	379	41877	99.81	ug/L	94
22)	cis-1,3-Dichloropropene	15.08	386	83065	134.87	ug/L	95
23)	Trichloroethene	15.66	401	60806	93.17	ug/L	94
24)	Dibromochloromethane	16.24	416	61060	98.35	ug/L	99
25)	1,1,2-Trichloroethane	16.36	419	41737	93.92	ug/L	92
26)	Benzene	16.12	413	103315	96.01	ug/L	91
27)	trans-1,3-Dichloropropene	16.36	419	41493	57.75	ug/L	95
28)	Bromoform	18.88	484	64150	97.15	ug/L	99
29)	*Chlorobenzene-d5	23.49	603	60884	50.00	ug/L	96
30)	4-Methyl-2-pentanone	19.38	497	26989	96.77	ug/L	92
31)	2-Hexanone	20.93	537	16895	92.98	ug/L	90
32)	Tetrachloroethene	21.24	545	59132	89.26	ug/L	95
33)	1,1,2,2-Tetrachloroethane	21.20	544	62898	98.66	ug/L	94
34)	Toluene	22.52	578	75350	94.79	ug/L	97
35)	Toluene-d8	22.32	573	61097	51.28	ug/L	96
36)	Chlorobenzene	23.60	606	109810	93.37	ug/L	92
37)	Ethylbenzene	25.39	652	48507	93.95	ug/L	94
38)	Styrene	28.52	733	108850	95.37	ug/L	97
39)	Xylene (total)	29.53	759	130018	284.15	ug/L	99
40)	Bromofluorobenzene	27.44	705	42184	50.48	ug/L	87

* Compound is ISTD



Data File: >JU150::D1 Quant Output File: ^JU150::SC
Name: 150 PPB
Misc: HP2,,150 PPB,37.5UL,5.0ML,,,$

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890602 14:49

Operator ID: JOHN
Quant Time: 890603 17:13
Injected at: 890603 16:34

QUANT REPORT

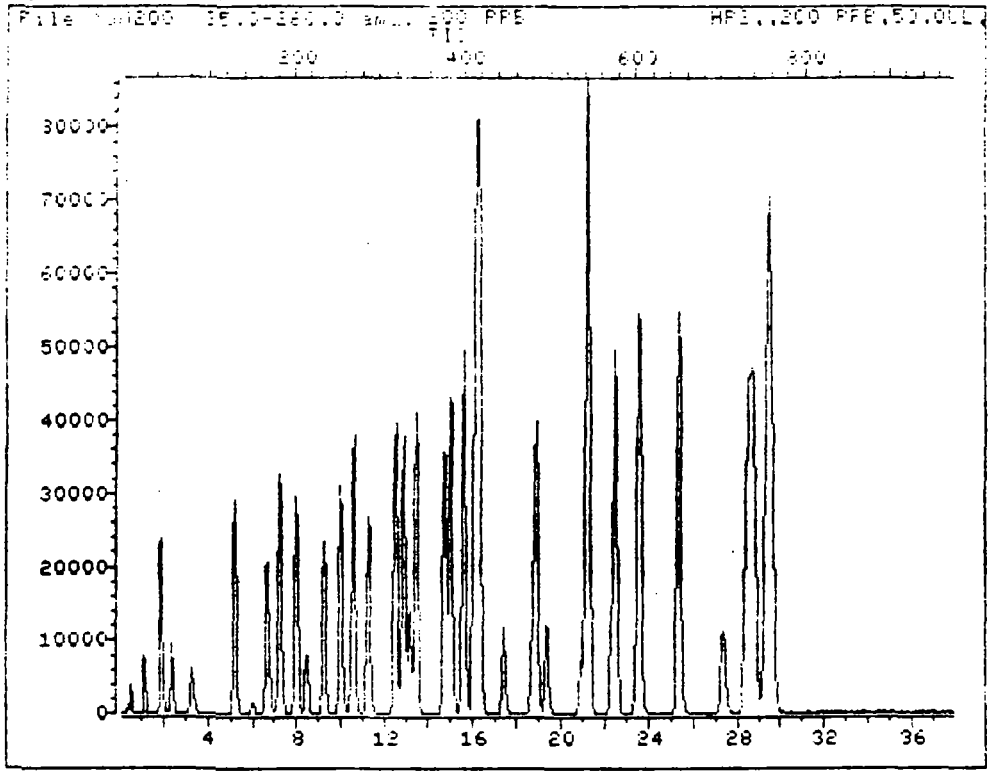
Operator ID: JOHN Quant Rev: 6 Quant Time: 890603 17:13
Output File: ^JU150::SC Injected at: 890603 16:34
Data File: >JU150::D1 Dilution Factor: 1.00000
Name: 150 PPB
Misc: HP2,,150 PPB,37.5UL,5.0ML,,,$

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890602 14:49

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.45	215	17561	50.00	ug/L	100
2)	Chloromethane	1.13	26	26592	139.34	ug/L	90
3)	Bromomethane	1.90	46	50862	142.57	ug/L	84
4)	Vinyl Chloride	2.41	59	35997	138.82	ug/L	95
5)	Chloroethane	3.30	82	27551	135.18	ug/L	98
6)	Methylene Chloride	5.20	131	59231	147.52	ug/L	72
7)	Acetone	6.01	152	8773	125.24	ug/L	86
8)	Carbon Disulfide	6.67	169	141743	136.19	ug/L	100
9)	1,1-Dichloroethene	7.99	203	53571	140.31	ug/L	84
10)	1,1-Dichloroethane	9.27	236	96808	147.19	ug/L	95
11)	1,2-Dichloroethene (total)	10.00	255	59156	139.49	ug/L	94
12)	Chloroform	10.58	270	128547	151.10	ug/L	92
13)	1,2-Dichloroethane-d4	11.20	286	24394	58.51	ug/L	92
14)	1,2-Dichloroethane	11.32	289	81635	154.93	ug/L	96
15)	2-Butanone	11.28	288	4402	123.25	ug/L	100
16)	*1,4-Difluorobenzene	18.68	479	67396	50.00	ug/L	68
17)	1,1,1-Trichloroethane	12.52	320	111616	151.21	ug/L	79
18)	Carbon Tetrachloride	12.91	330	108601	153.34	ug/L	84
19)	Vinyl Acetate	13.18	337	88521	156.74	ug/L	78
20)	Bromodichloromethane	13.49	345	124783	162.83	ug/L	91
21)	1,2-Dichloropropane	14.81	379	62033	157.49	ug/L	93
22)	cis-1,3-Dichloropropene	15.08	386	125587	217.21	ug/L	94
23)	Trichloroethene	15.66	401	87495	142.81	ug/L	96
24)	Dibromochloromethane	16.24	416	93906	161.12	ug/L	98
25)	1,1,2-Trichloroethane	16.32	418	63362	151.88	ug/L	95
26)	Benzene	16.12	413	150017	148.50	ug/L	92
27)	trans-1,3-Dichloropropene	16.36	419	64118	95.06	ug/L	94
28)	Bromoform	18.88	484	103391	166.78	ug/L	99
29)	*Chlorobenzene-d5	23.49	603	58165	50.00	ug/L	98
30)	4-Methyl-2-pentanone	19.38	497	41024	153.96	ug/L	92
31)	2-Hexanone	20.93	537	25766	148.43	ug/L	89
32)	Tetrachloroethene	21.24	545	85789	135.56	ug/L	93
33)	1,1,2,2-Tetrachloroethane	21.16	543	96012	157.64	ug/L	91
34)	Toluene	22.48	577	108887	143.38	ug/L	99
35)	Toluene-d8	22.33	573	56642	49.76	ug/L	93
36)	Chlorobenzene	23.60	606	162325	144.48	ug/L	92
37)	Ethylbenzene	25.39	652	72430	146.83	ug/L	95
38)	Styrene	28.53	733	161695	148.29	ug/L	96
39)	Xylene (total)	29.49	758	190625	436.08	ug/L	98
40)	Bromofluorobenzene	27.40	704	40356	50.55	ug/L	81

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >JU200::D1 Quant Output File: ^JU200::SC
Name: 200 PPB
Misc: HP2,,200 PPB,50.0UL,5.0ML,,,$

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890602 14:49

Operator ID: JOHN
Quant Time: 890603 17:57
Injected at: 890603 17:18

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890603 17:57
Output File: ^JU200::SC Injected at: 890603 17:18
Data File: >JU200::D1 Dilution Factor: 1.00000
Name: 200 PPB
Misc: HP2,,200 PPB,50.0UL,5.0ML,,,$

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890602 14:49

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.45	215	16933	50.00	ug/L	100
2)	Chloromethane	1.13	26	35309	191.87	ug/L	91
3)	Bromomethane	1.91	46	66978	194.70	ug/L	87
4)	Vinyl Chloride	2.37	58	48680	194.70	ug/L	98
5)	Chloroethane	3.30	82	36392	185.18	ug/L	97
6)	Methylene Chloride	5.20	131	74880	193.41	ug/L	70
7)	Acetone	6.01	152	11137	164.88	ug/L	84
8)	Carbon Disulfide	6.67	169	190848	190.17	ug/L	100
9)	1,1-Dichloroethene	7.99	203	70282	190.91	ug/L	87
10)	1,1-Dichloroethane	9.27	236	126592	199.62	ug/L	96
11)	1,2-Dichloroethene (total)	10.00	255	77689	189.99	ug/L	94
12)	Chloroform	10.59	270	167784	204.53	ug/L	91
13)	1,2-Dichloroethane-d4	11.21	286	24575	61.13	ug/L	92
14)	1,2-Dichloroethane	11.28	288	105682	208.01	ug/L	97
15)	2-Butanone	11.28	288	5292	153.66	ug/L	100
16)	*1,4-Difluorobenzene	18.69	479	65553	50.00	ug/L	68
17)	1,1,1-Trichloroethane	12.52	320	146674	204.29	ug/L	74
18)	Carbon Tetrachloride	12.91	330	144172	209.28	ug/L	88
19)	Vinyl Acetate	13.18	337	115543	210.34	ug/L	78
20)	Bromodichloromethane	13.49	345	161914	217.23	ug/L	91
21)	1,2-Dichloropropane	14.77	378	78942	206.05	ug/L	95
22)	cis-1,3-Dichloropropene	15.04	385	164377	292.29	ug/L	93
23)	Trichloroethene	15.62	400	113470	190.41	ug/L	93
24)	Dibromochloromethane	16.20	415	122224	215.61	ug/L	98
25)	1,1,2-Trichloroethane	16.32	418	81049	199.73	ug/L	93
26)	Benzene	16.09	412	194602	198.05	ug/L	91
27)	trans-1,3-Dichloropropene	16.32	418	83221	126.85	ug/L	95
28)	Bromoform	18.84	483	136385	226.19	ug/L	96
29)	*Chlorobenzene-d5	23.49	603	57429	50.00	ug/L	96
30)	4-Methyl-2-pentanone	19.34	496	53115	201.89	ug/L	92
31)	2-Hexanone	20.89	536	33569	195.86	ug/L	90
32)	Tetrachloroethene	21.24	545	110540	176.90	ug/L	94
33)	1,1,2,2-Tetrachloroethane	21.17	543	123785	205.84	ug/L	93
34)	Toluene	22.48	577	141163	188.27	ug/L	98
35)	Toluene-d8	22.29	572	55959	49.79	ug/L	98
36)	Chlorobenzene	23.61	606	209167	188.56	ug/L	90
37)	Ethylbenzene	25.39	652	92991	190.93	ug/L	98
38)	Styrene	28.49	732	210681	195.69	ug/L	96
39)	Xylene (total)	29.50	758	246612	571.39	ug/L	97
40)	Bromofluorobenzene	27.37	703	39592	50.23	ug/L	81

* Compound is ISTD

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Instrument ID: HP2 Calibration Date: 06/08/89 Time: 1333

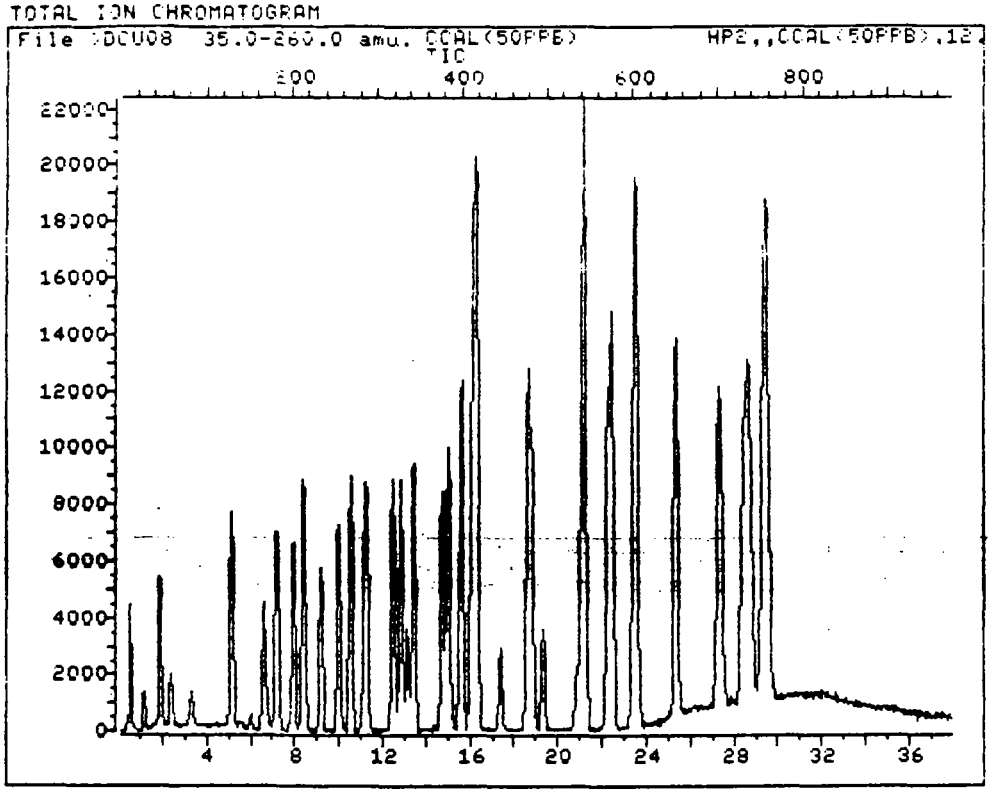
Lab File ID: DCU08 Init. Calib. Date(s): 06/03/89

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

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

COMPOUND	RRF	RRF50	%D
Chloromethane #	.516	.450	12.7 #
Bromomethane	.979	.916	6.4
Vinyl Chloride *	.701	.629	10.3 *
Chloroethane	.528	.496	6.0
Methylene Chloride	1.367	1.181	13.6
Acetone	.173	.200	16.0
Carbon Disulfide	2.587	2.413	6.7
1,1-Dichloroethene *	1.035	.965	6.7 *
1,1-Dichloroethane #	1.838	1.746	5.0 #
1,2-Dichloroethene (total)	1.140	1.080	5.2
Chloroform *	2.422	2.333	3.6 *
1,2-Dichloroethane	1.513	1.464	3.3
2-Butanone	.088	.107	21.7
1,1,1-Trichloroethane	.534	.519	2.8
Carbon Tetrachloride	.518	.496	4.3
Vinyl Acetate	.411	.448	8.9
Bromodichloromethane	.571	.579	1.4
1,2-Dichloropropane *	.294	.290	1.1 *
cis-1,3-Dichloropropene	.416	.428	2.9
Trichloroethene	.428	.432	1.0
Dibromochloromethane	.427	.438	2.6
1,1,2-Trichloroethane	.304	.320	5.2
Benzene	.728	.739	1.4
trans-1,3-Dichloropropene	.489	.510	4.3
Bromoform #	.456	.498	9.2 #
4-Methyl-2-pentanone	.234	.285	22.0
2-Hexanone	.146	.189	29.6
Tetrachloroethene	.492	.491	0.1
1,1,2,2-Tetrachloroethane #	.543	.599	10.2 #
Toluene *	.624	.742	19.0 *
Chlorobenzene #	.918	.909	1.0 #
Ethylbenzene *	.406	.405	0.2 *
Styrene	.910	.914	0.5
Xylene (total)	.361	.359	0.6
Toluene-d8	.979	.985	0.6
Bromofluorobenzene	.686	.730	6.5
1,2-Dichloroethane-d4	1.318	1.242	5.7

TOTAL ION CHROMATOGRAM



Data File: >DCU08::D1 Quant Output File: ^DCU08::SC
Name: CCAL(50PPB)
Misc: HP2,,CCAL(50PPB),12.5UL,5.0ML,,,%M= $

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890607 14:51

Operator ID: JOHN
Quant Time: 890608 14:12
Injected at: 890608 13:33

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890608 14:12
Output File: ^DCU08::SC Injected at: 890608 13:33
Data File: >DCU08::D1 Dilution Factor: 1.00000
Name: CCAL(50PPB)
Misc: HP2,,CCAL(50PPB),12.5UL,5.0ML,,,%M= $

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890607 14:51

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.37	213	17575	50.00	ug/L	100
2)	Chloromethane	1.17	27	7910	48.43	ug/L	93
3)	Bromomethane	1.90	46	16102	48.76	ug/L	90
4)	Vinyl Chloride	2.37	58	11048	46.45	ug/L	96
5)	Chloroethane	3.30	82	8725	47.82	ug/L	97
6)	Methylene Chloride	5.12	129	20754	51.23	ug/L	65
7)	Acetone	6.05	153	3522	52.94	ug/L	81
8)	Carbon Disulfide	6.59	167	42408	48.58	ug/L	100
9)	1,1-Dichloroethene	7.91	201	16962	47.61	ug/L	84
10)	1,1-Dichloroethane	9.19	234	30680	49.06	ug/L	94
11)	1,2-Dichloroethene (total)	9.96	254	18980	47.86	ug/L	92
12)	Chloroform	10.51	268	41011	49.97	ug/L	97
13)	1,2-Dichloroethane-d4	11.16	285	21831	49.83	ug/L	91
14)	1,2-Dichloroethane	11.24	287	25721	49.32	ug/L	98
15)	2-Butanone	11.24	287	1885	53.80	ug/L	100
16)	*1,4-Difluorobenzene	18.64	478	66194	50.00	ug/L	69
17)	1,1,1-Trichloroethane	12.44	318	34356	48.04	ug/L	77
18)	Carbon Tetrachloride	12.83	328	32805	47.75	ug/L	84
19)	Vinyl Acetate	13.14	336	29659	53.35	ug/L	79
20)	Bromodichloromethane	13.45	344	38301	51.45	ug/L	89
21)	1,2-Dichloropropane	14.73	377	19224	50.32	ug/L	93
22)	cis-1,3-Dichloropropene	15.00	384	39644	71.64	ug/L	94
23)	Trichloroethene	15.62	400	28608	49.29	ug/L	94
24)	Dibromochloromethane	16.16	414	28992	51.25	ug/L	98
25)	1,1,2-Trichloroethane	16.28	417	21198	52.15	ug/L	94
26)	Benzene	16.09	412	48911	51.28	ug/L	91
27)	trans-1,3-Dichloropropene	16.32	418	20256	30.27	ug/L	94
28)	Bromoform	18.80	482	32998	55.29	ug/L	97
29)	*Chlorobenzene-d5	23.45	602	56632	50.00	ug/L	95
30)	4-Methyl-2-pentanone	19.34	496	16145	58.35	ug/L	92
31)	2-Hexanone	20.85	535	10707	59.36	ug/L	92
32)	Tetrachloroethene	21.20	544	27833	48.68	ug/L	95
33)	1,1,2,2-Tetrachloroethane	21.12	542	33894	57.57	ug/L	94
34)	Toluene	22.44	576	42040	59.95	ug/L	97
35)	Toluene-d8	22.25	571	55769	50.35	ug/L	96
36)	Chlorobenzene	23.56	605	51472	50.68	ug/L	90
37)	Ethylbenzene	25.31	650	22929	50.44	ug/L	94
38)	Styrene	28.45	731	51777	50.99	ug/L	98
39)	Xylene (total)	29.42	756	60953	151.89	ug/L	98
40)	Bromofluorobenzene	27.32	702	41345	49.33	ug/L	80

* Compound is ISTD

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Instrument ID: HP2 Calibration Date: 06/12/89 Time: 1135

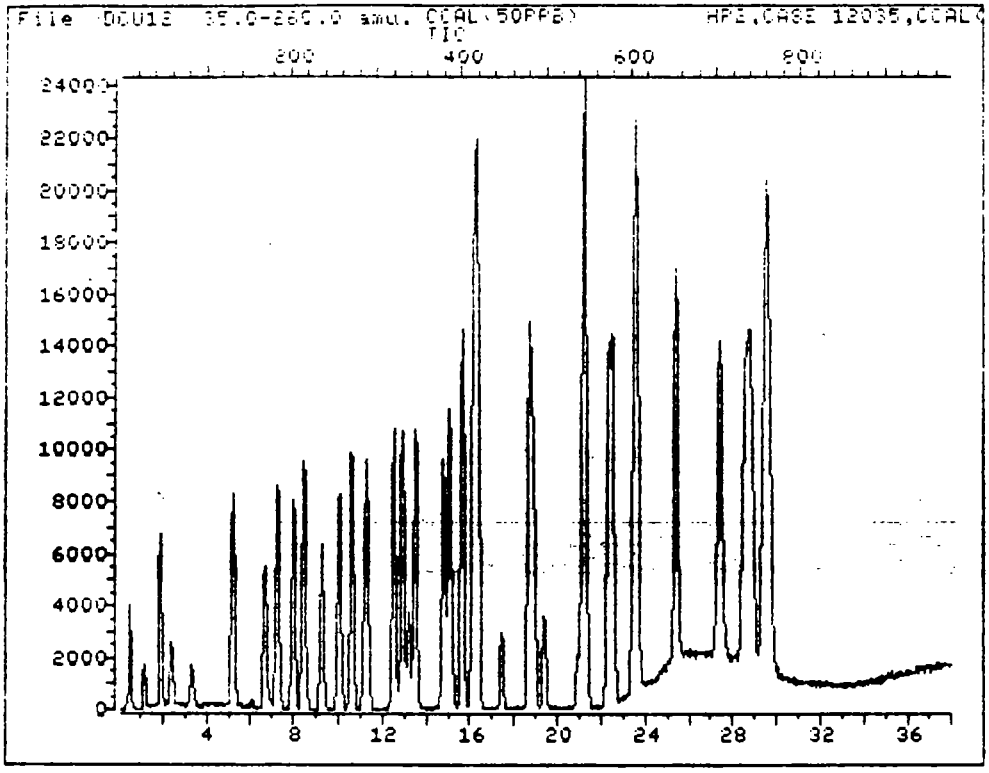
Lab File ID: DCU12 Init. Calib. Date(s): 06/03/89

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

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

COMPOUND	RRF	RRF50	%D
Chloromethane #	.516	.490	5.1 #
Bromomethane	.979	.952	2.7
Vinyl Chloride *	.701	.726	3.6 *
Chloroethane	.528	.535	1.3
Methylene Chloride	1.367	1.157	15.3
Acetone	.173	.167	3.6
Carbon Disulfide	2.587	2.720	5.1
1,1-Dichloroethene *	1.035	1.033	0.2 *
1,1-Dichloroethane #	1.838	1.825	0.7 #
1,2-Dichloroethene (total)	1.140	1.159	1.7
Chloroform *	2.422	2.378	1.8 *
1,2-Dichloroethane	1.513	1.479	2.3
2-Butanone	.088	.104	17.7
1,1,1-Trichloroethane	.534	.536	0.5
Carbon Tetrachloride	.518	.527	1.8
Vinyl Acetate	.411	.421	2.4
Bromodichloromethane	.571	.556	2.6
1,2-Dichloropropane *	.294	.286	2.6 *
cis-1,3-Dichloropropene	.416	.413	0.7
Trichloroethene	.428	.439	2.6
Dibromochloromethane	.427	.422	1.1
1,1,2-Trichloroethane	.304	.303	0.5
Benzene	.728	.720	1.2
trans-1,3-Dichloropropene	.489	.489	0.1
Bromoform #	.456	.450	1.4 #
4-Methyl-2-pentanone	.234	.247	5.7
2-Hexanone	.146	.166	14.1
Tetrachloroethene	.492	.516	4.9
1,1,2,2-Tetrachloroethane #	.543	.543	0.1 #
Toluene *	.624	.621	0.5 *
Chlorobenzene #	.918	.907	1.2 #
Ethylbenzene *	.406	.406	0.0 *
Styrene	.910	.896	1.5
Xylene (total)	.361	.358	0.8
Toluene-d8	.979	.990	1.1
Bromofluorobenzene	.686	.734	7.1
1,2-Dichloroethane-d4	1.318	1.228	6.8

TOTAL ION CHROMATOGRAM



Data File: >DCU12::D1 Quant Output File: ^DCU12::SC
Name: CCAL(50PPB)
Misc: HP2,CASE 12035,CCAL(50PPB),12.5UL,5.0ML,,,%M= $

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890612 09:35

Operator ID: JOHN
Quant Time: 890612 12:16
Injected at: 890612 11:35

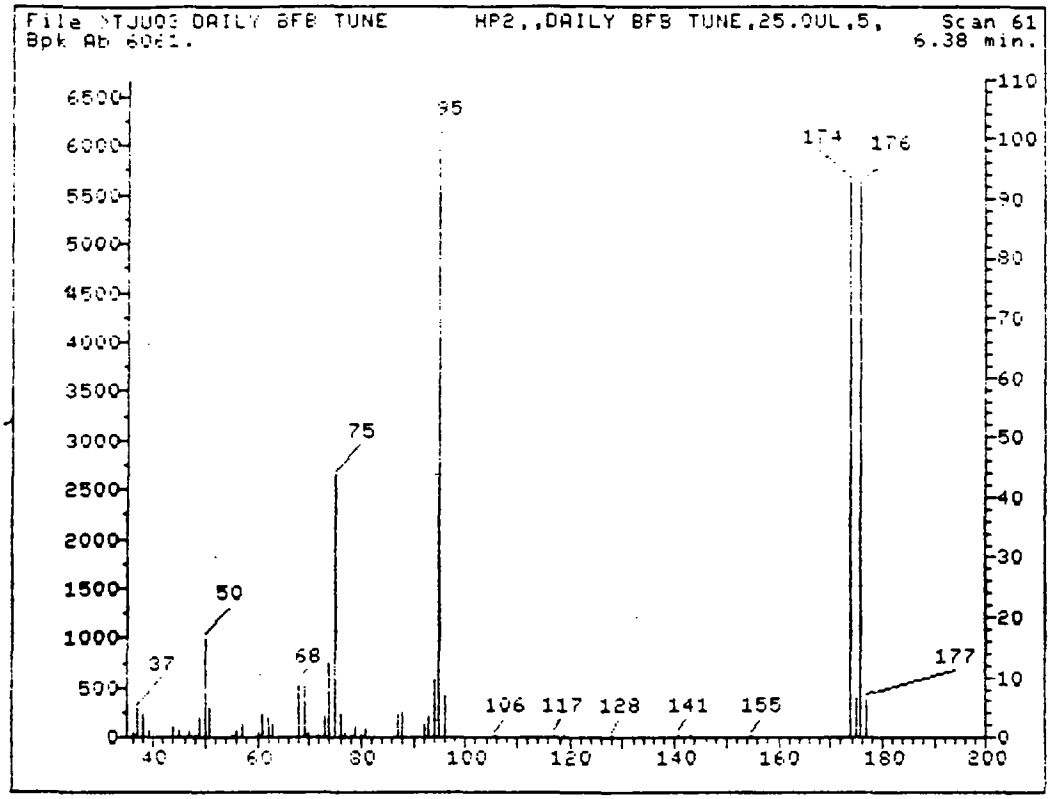
QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890612 12:16
Output File: ^DCU12::SC Injected at: 890612 11:35
Data File: >DCU12::D1 Dilution Factor: 1.00000
Name: CCAL(50PPB)
Misc: HP2,CASE 12035,CCAL(50PPB),12.5UL,5.0ML,,,%M= $

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890612 09:35

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.45	215	19083	50.00	ug/L	100
2)	Chloromethane	1.17	27	9343	70.05	ug/L	90
3)	Bromomethane	1.90	46	18174	47.53	ug/L	84
4)	Vinyl Chloride	2.41	59	13856	71.26	ug/L	98
5)	Chloroethane	3.34	83	10201	46.52	ug/L	98
6)	Methylene Chloride	5.20	131	22084	54.15	ug/L	69
7)	Acetone	6.05	153	3178M	59.92	ug/L	
8)	Carbon Disulfide	6.67	169	51903	64.41	ug/L	100
9)	1,1-Dichloroethene	7.99	203	19706	46.13	ug/L	84
10)	1,1-Dichloroethane	9.27	236	34829	49.32	ug/L	96
11)	1,2-Dichloroethene (total)	10.00	255	22122	48.25	ug/L	87
12)	Chloroform	10.58	270	45375	49.57	ug/L	98
13)	1,2-Dichloroethane-d4	11.20	286	23440	53.38	ug/L	87
14)	1,2-Dichloroethane	11.32	289	28216	52.47	ug/L	97
15)	2-Butanone	11.32	289	1979	63.64	ug/L	100
16)	*1,4-Difluorobenzene	18.72	480	75782	50.00	ug/L	68
17)	1,1,1-Trichloroethane	12.52	320	40653	53.33	ug/L	74
18)	Carbon Tetrachloride	12.91	330	39938	52.96	ug/L	84
19)	Vinyl Acetate	13.22	338	31938	55.16	ug/L	77
20)	Bromodichloromethane	13.49	345	42116	51.55	ug/L	93
21)	1,2-Dichloropropane	14.81	379	21682	50.31	ug/L	91
22)	cis-1,3-Dichloropropene	15.08	386	43813	71.01	ug/L	94
23)	Trichloroethene	15.66	401	33278	49.85	ug/L	93
24)	Dibromochloromethane	16.24	416	31966	54.02	ug/L	98
25)	1,1,2-Trichloroethane	16.36	419	22967	53.15	ug/L	94
26)	Benzene	16.12	413	54526	48.49	ug/L	92
27)	trans-1,3-Dichloropropene	16.36	419	22249	31.59	ug/L	94
28)	Bromoform	18.88	484	34117	56.72	ug/L	99
29)	*Chlorobenzene-d5	23.53	604	63683	50.00	ug/L	97
30)	4-Methyl-2-pentanone	19.38	497	15737	61.00	ug/L	94
31)	2-Hexanone	20.93	537	10597	66.09	ug/L	91
32)	Tetrachloroethene	21.28	546	32864	50.42	ug/L	99
33)	1,1,2,2-Tetrachloroethane	21.20	544	34608	57.95	ug/L	95
34)	Toluene	22.52	578	39520	48.63	ug/L	95
35)	Toluene-d8	22.32	573	63031	50.01	ug/L	96
36)	Chlorobenzene	23.64	607	57775	49.22	ug/L	89
37)	Ethylbenzene	25.42	653	25837	49.29	ug/L	93
38)	Styrene	28.56	734	57045	49.45	ug/L	98
39)	Xylene (total)	29.57	760	68349	148.96	ug/L	99
40)	Bromofluorobenzene	27.40	704	46765	53.18	ug/L	82

* Compound is ISTD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Scan 61
6.38 min.
Bpk Ab 6061.
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174
176
75
50
37
68
177
106
117
128
141
155

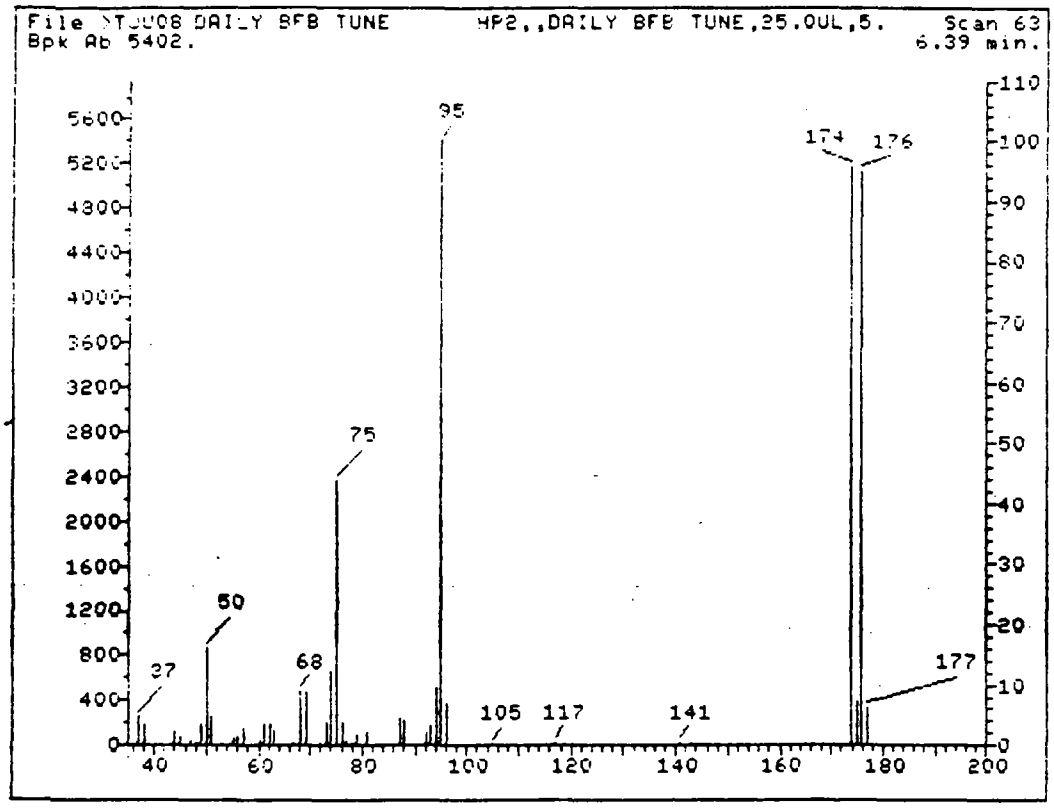
6/3/89
0959

>TJU03 DAILY BFB TUNE HP2,,DAILY BFB TUNE,25.0UL,5,0ML,,,$
61 NRM

File: >TJU03 Scan #: 61 Retn. time: 6.38

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	.858	51.00	4.768	70.00	.660	80.90	1.815	118.90	.412
37.00	4.686	55.00	.528	72.00	.495	87.00	3.943	127.90	.330
38.00	3.646	56.00	1.122	73.00	3.481	87.90	4.290	140.90	.511
39.00	1.237	57.00	2.095	74.00	12.407	92.00	2.161	142.90	.495
44.00	1.716	60.00	.808	75.00	43.607	93.00	3.349	154.90	.297
45.00	1.237	61.00	3.646	76.00	3.729	94.00	9.437	173.90	92.889
47.00	.940	62.00	3.283	77.00	.676	95.00	100.000	174.90	6.583
48.00	.544	63.00	2.244	77.90	.412	96.00	6.732	175.90	91.998
49.00	3.597	68.00	8.612	78.90	1.683	105.90	.346	176.90	6.187
50.00	16.383	69.00	8.414	79.90	.478	116.90	.462		

6/3/89
0959


File NTJ008 DAILY BFB TUNE
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Scan 63
Bpk Ab 5402.
6.39 min.
95
174
176
75
50
68
27
177
105
117
141

6/8/89
12:57

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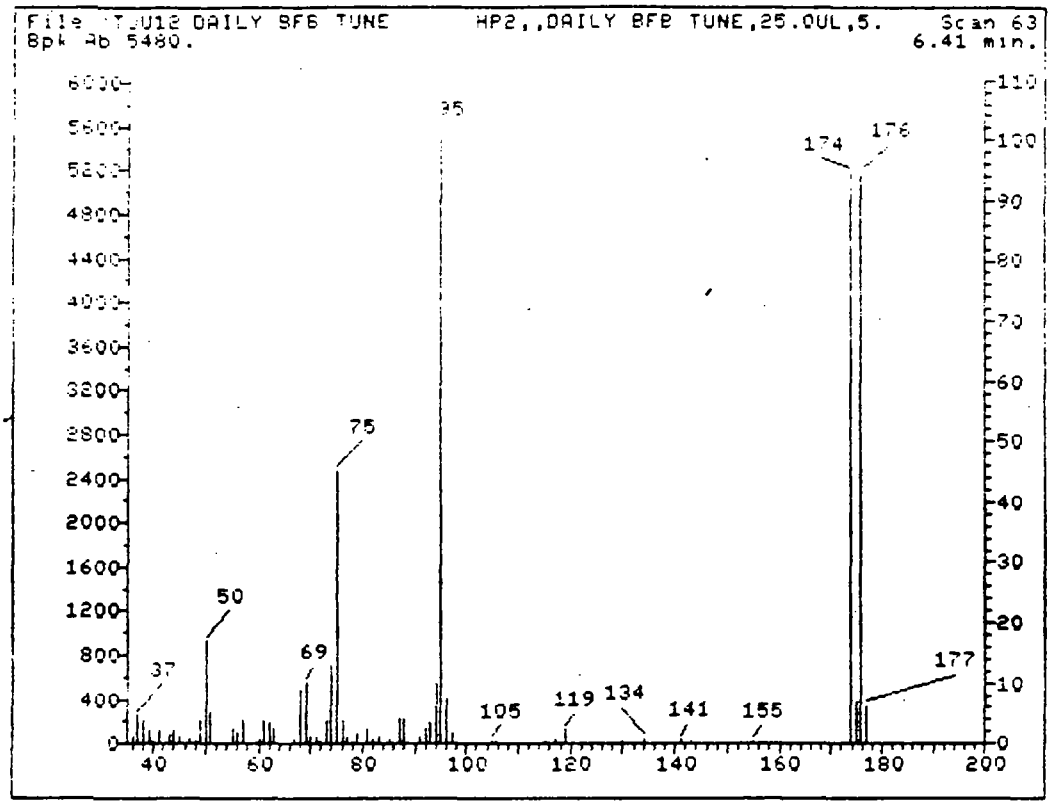
63 NRM

File: >TJU08 Scan #: 63 Retn. time: 6.39

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.00	4.702	55.10	.944	69.00	8.849	81.00	1.981	105.00	.389
38.00	3.462	56.00	1.370	72.00	.574	87.00	4.424	116.90	.481
44.00	2.073	57.10	2.684	73.00	3.758	88.00	4.239	140.90	.537
45.00	1.296	60.00	.833	74.00	12.403	92.00	2.092	142.90	.518
47.00	.926	61.00	3.554	75.00	43.836	93.00	3.258	173.90	95.872
48.00	.537	62.00	3.388	76.00	3.702	94.00	9.626	174.90	7.294
49.00	3.480	63.00	2.295	77.00	.815	95.00	100.000	175.90	95.094
50.00	16.031	67.00	.574	78.00	.426	96.00	6.849	176.90	6.238
51.00	4.943	68.00	9.015	78.90	1.629				

6/6/89
1257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Scan 63
6.41 min.
Bpk Ab 5480.
95
174
176
75
50
69
37
105
119
134
141
155
177

6/12/89

10:50

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63 NRM

File: >TJU12 Scan #: 63 Retn. time: 6.41

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	.931	51.00	5.073	71.10	1.113	85.10	.657	115.00	.401
37.00	4.726	55.10	2.318	72.00	.529	87.00	4.161	117.00	.730
38.00	3.759	56.00	1.715	73.00	3.704	87.90	4.069	119.00	2.336
39.10	2.062	57.10	3.741	74.00	12.938	91.00	.931	129.90	.365
40.00	.566	60.00	.894	75.00	45.036	92.00	2.391	134.10	.876
41.10	1.953	61.00	3.650	76.00	3.850	93.00	3.485	141.00	.712
43.10	1.588	62.00	3.485	77.00	1.077	94.00	9.872	142.90	.511
44.00	2.062	63.00	2.445	78.00	.493	95.00	100.000	154.90	.328
45.00	1.186	67.00	.894	78.90	1.880	96.00	7.354	173.90	94.489
47.00	.876	68.00	8.996	81.00	2.445	97.10	1.825	174.90	6.770
48.00	.529	69.00	10.146	82.00	.639	105.00	.547	175.90	94.069
49.00	3.741	70.00	1.168	83.10	1.022	105.90	.401	176.90	6.314
50.00	16.916								

6/12/89
10:50

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: FDH42

Matrix: (soil/water) SOIL Lab Sample ID: LBU08

Sample wt/vol: 5.0 (g/mL) G Lab File ID: LBU08

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Date Analyzed: 06/08/89

Column: (pack/cap) PACK Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
591-78-6	2-Hexanone	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
133-02-7	Xylene (total)	5	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK01

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: SC Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: LBU08

Sample wt/vol: 5.0 (g/mL) G Lab File ID: LBU08

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Date Analyzed: 06/08/89

Column: (pack/cap) PACK Dilution Factor: 1.000

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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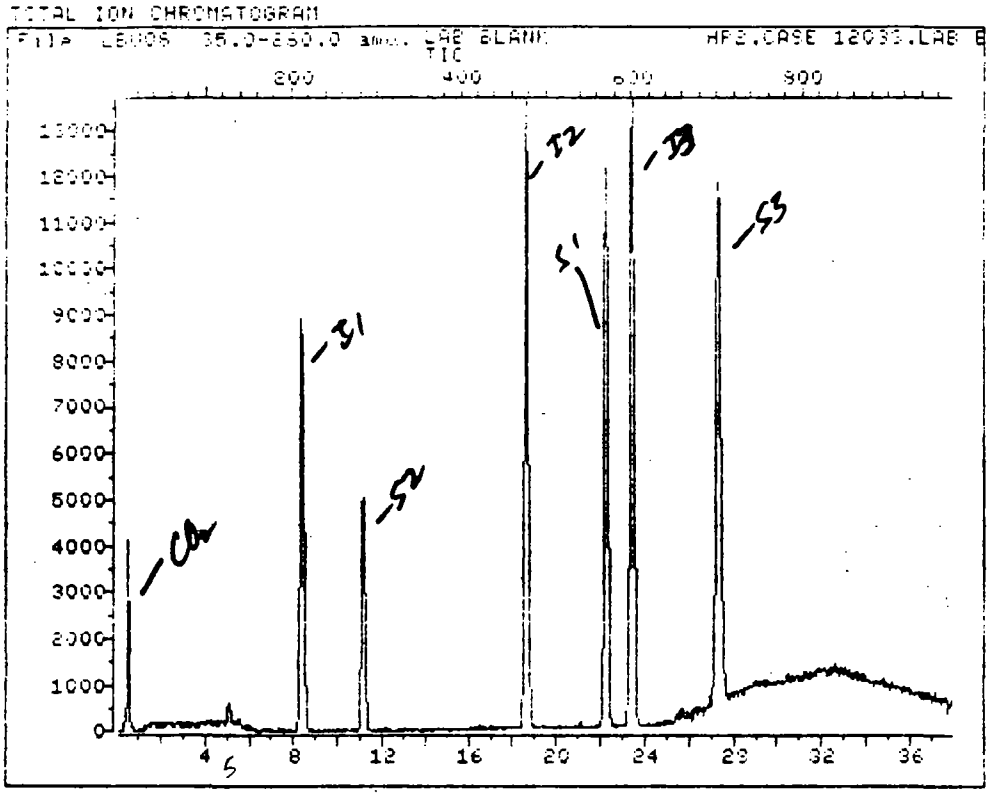

Data File: >LBU08::D1 Quant Output File: ^LBU08::SC
Name: LAB BLANK
Misc: HP2,CASE 12033,LAB BLANK,5000UL,5.0ML,,,%M= $

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890616 09:52

Operator ID: JOHN
Quant Time: 890616 09:53
Injected at: 890608 14:36

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890616 09:53
Output File: ^LBU08::SC Injected at: 890608 14:36
Data File: >LBU08::D1 Dilution Factor: 1.00000
Name: LAB BLANK
Misc: HP2,CASE 12033,LAB BLANK,5000UL,5.0ML,,,%M= $

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION % Sur Rec = Amt x 2
Last Calibration: 890616 09:52

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.37	213	17875	50.00	ug/L	100
2)	Chloromethane	0.00	0	0	0.00	ug/L	
3)	Bromomethane	0.00	0	0	0.00	ug/L	
4)	Vinyl Chloride	0.00	0	0	0.00	ug/L	
5)	Chloroethane	0.00	0	0	0.00	ug/L	
6)	Methylene Chloride	0.00	130	0	0.00	ug/L	
7)	Acetone	0.00	0	0	0.00	ug/L	
8)	Carbon Disulfide	0.00	0	0	0.00	ug/L	
9)	1,1-Dichloroethene	0.00	0	0	0.00	ug/L	
10)	1,1-Dichloroethane	0.00	0	0	0.00	ug/L	
11)	1,2-Dichloroethene (total)	0.00	0	0	0.00	ug/L	
12)	Chloroform	0.00	0	0	0.00	ug/L	
13)	1,2-Dichloroethane-d4	11.12	284	21584	48.60	ug/L	90
14)	1,2-Dichloroethane	0.00	0	0	0.00	ug/L	
15)	2-Butanone	0.00	0	0	0.00	ug/L	
16)	*1,4-Difluorobenzene	18.64	478	71585	50.00	ug/L	69
17)	1,1,1-Trichloroethane	0.00	0	0	0.00	ug/L	
18)	Carbon Tetrachloride	0.00	0	0	0.00	ug/L	
19)	Vinyl Acetate	0.00	0	0	0.00	ug/L	
20)	Bromodichloromethane	0.00	0	0	0.00	ug/L	
21)	1,2-Dichloropropane	0.00	0	0	0.00	ug/L	
22)	cis-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
23)	Trichloroethene	0.00	0	0	0.00	ug/L	
24)	Dibromochloromethane	0.00	0	0	0.00	ug/L	
25)	1,1,2-Trichloroethane	0.00	0	0	0.00	ug/L	
26)	Benzene	0.00	0	0	0.00	ug/L	
27)	trans-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
28)	Bromoform	0.00	0	0	0.00	ug/L	
29)	*Chlorobenzene-d5	23.45	602	59961	50.00	ug/L	97
30)	4-Methyl-2-pentanone	0.00	496	0	0.00	ug/L	
31)	2-Hexanone	0.00	0	0	0.00	ug/L	
32)	Tetrachloroethene	0.00	0	0	0.00	ug/L	
33)	1,1,2,2-Tetrachloroethane	0.00	542	0	0.00	ug/L	
34)	Toluene	0.00	0	0	0.00	ug/L	
35)	Toluene-d8	22.28	572	60170	50.95	ug/L	98
36)	Chlorobenzene	0.00	0	0	0.00	ug/L	
37)	Ethylbenzene	0.00	0	0	0.00	ug/L	
38)	Styrene	0.00	0	0	0.00	ug/L	
39)	Xylene (total)	0.00	0	0	0.00	ug/L	
40)	Bromofluorobenzene	27.32	702	41666	47.59	ug/L	83

* Compound is ISTD

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK02

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: ED442

Matrix: (soil/water) SOIL Lab Sample ID: LB012

Sample wt/vol: 5.0 (g/mL) G Lab File ID: LB012

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Date Analyzed: 06/12/89

Column: (pack/cap) PACK Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
591-78-6	2-Hexanone	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
133-02-7	Xylene (total)	5	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK02

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: SDG02

Matrix: (soil/water) SOIL Lab Sample ID: LB012

Sample wt/vol: 5.0 (g/mL) G Lab File ID: LB012

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Date Analyzed: 06/12/89

Column: (pack/cap) PACK Dilution Factor: 1.000

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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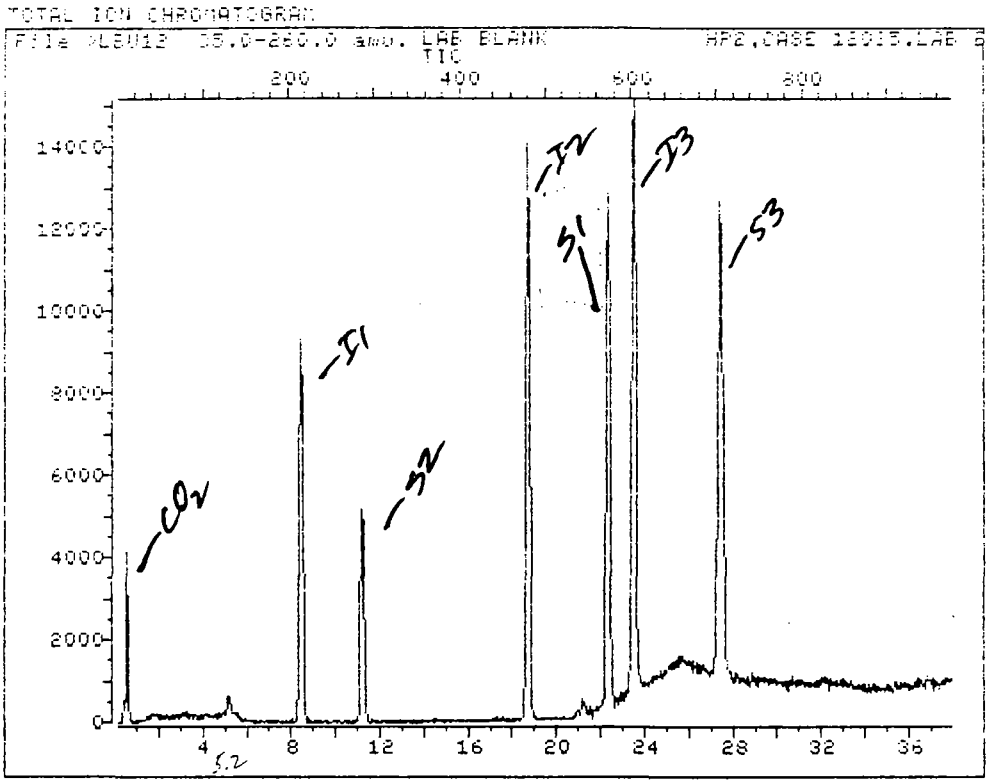


Data File: >LBU12::D1 Quant Output File: ^LBU12::SC
Name: LAB BLANK
Misc: HP2,CASE 12035,LAB BLANK,5000UL,5.0ML,,,%M= $

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890612 12:23

Operator ID: JOHN
Quant Time: 890612 13:14
Injected at: 890612 12:35

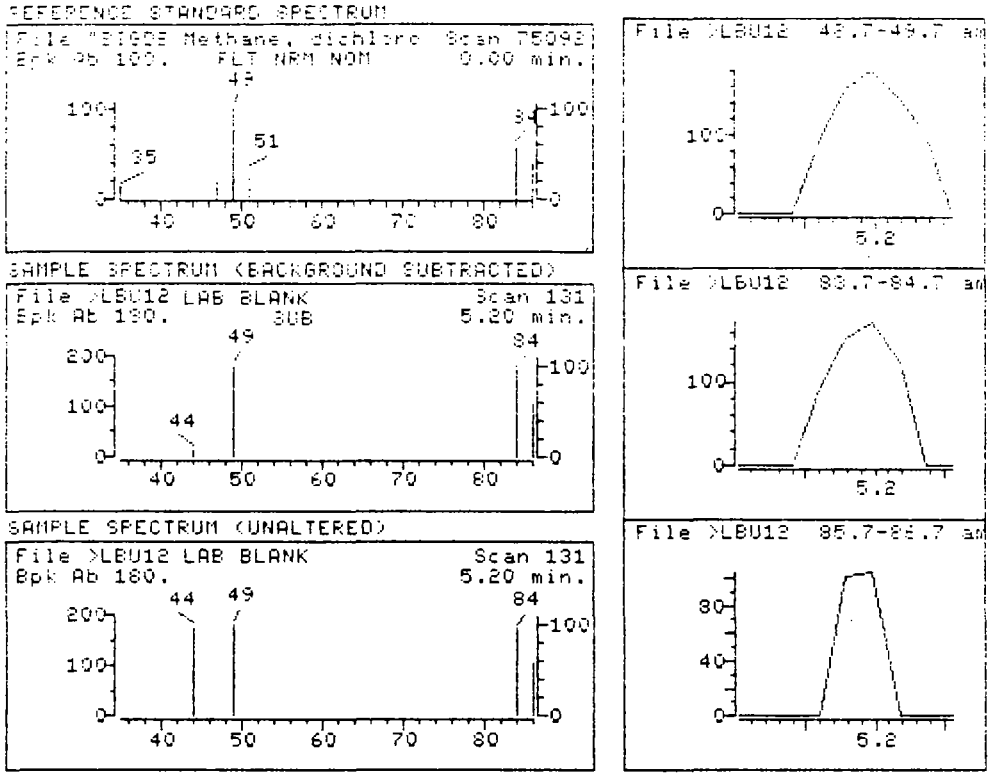
QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890612 13:14
Output File: ^LBU12::SC Injected at: 890612 12:35
Data File: >LBU12::D1 Dilution Factor: 1.00000
Name: LAB BLANK
Misc: HP2,CASE 12035,LAB BLANK,5000UL,5.0ML,,,%M= $

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION % Sur Rec = Amt x 2
Last Calibration: 890612 12:23

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.45	215	18689	50.00	ug/L	100
2)	Chloromethane	0.00	0	0	0.00	ug/L	
3)	Bromomethane	0.00	0	0	0.00	ug/L	
4)	Vinyl Chloride	0.00	0	0	0.00	ug/L	
5)	Chloroethane	0.00	0	0	0.00	ug/L	
6)	Methylene Chloride	5.20	131	1255	2.90	ug/L → 3	69
7)	Acetone	0.00	0	0	0.00	ug/L	
8)	Carbon Disulfide	0.00	0	0	0.00	ug/L	
9)	1,1-Dichloroethene	0.00	0	0	0.00	ug/L	
10)	1,1-Dichloroethane	0.00	0	0	0.00	ug/L	
11)	1,2-Dichloroethene (total)	0.00	0	0	0.00	ug/L	
12)	Chloroform	0.00	0	0	0.00	ug/L	
13)	1,2-Dichloroethane-d4	11.20	286	22004	47.93	ug/L	88
14)	1,2-Dichloroethane	0.00	0	0	0.00	ug/L	
15)	2-Butanone	0.00	0	0	0.00	ug/L	
16)	*1,4-Difluorobenzene	18.72	480	74134	50.00	ug/L	69
17)	1,1,1-Trichloroethane	0.00	0	0	0.00	ug/L	
18)	Carbon Tetrachloride	0.00	0	0	0.00	ug/L	
19)	Vinyl Acetate	0.00	0	0	0.00	ug/L	
20)	Bromodichloromethane	0.00	0	0	0.00	ug/L	
21)	1,2-Dichloropropane	0.00	0	0	0.00	ug/L	
22)	cis-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
23)	Trichloroethene	0.00	0	0	0.00	ug/L	
24)	Dibromochloromethane	0.00	0	0	0.00	ug/L	
25)	1,1,2-Trichloroethane	0.00	0	0	0.00	ug/L	
26)	Benzene	0.00	0	0	0.00	ug/L	
27)	trans-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
28)	Bromoform	0.00	0	0	0.00	ug/L	
29)	*Chlorobenzene-d5	23.52	604	62880	50.00	ug/L	95
30)	4-Methyl-2-pentanone	0.00	0	0	0.00	ug/L	
31)	2-Hexanone	0.00	546	0	0.00	ug/L	
32)	Tetrachloroethene	0.00	0	0	0.00	ug/L	
~~33)~~	1,1,2,2-Tetrachloroethane	21.20	544	1134	~~1.66~~	ug/L → 2	61
34)	Toluene	0.00	0	0	0.00	ug/L	
35)	Toluene-d8	22.32	573	61381	49.31	ug/L	95
36)	Chlorobenzene	0.00	0	0	0.00	ug/L	
37)	Ethylbenzene	0.00	0	0	0.00	ug/L	
38)	Styrene	0.00	0	0	0.00	ug/L	
39)	Xylene (total)	0.00	0	0	0.00	ug/L	
40)	Bromofluorobenzene	27.44	705	43741	47.36	ug/L	82

* Compound is ISTD



Data File: >LBU12::D1 Quant Output File: ^LBU12::SC
Name: LAB BLANK
Misc: HP2,CASE 12035,LAB BLANK,5000UL,5.0ML,,,%M= $
Quant Time: 890612 13:14 Quant ID File: IDVDD::SC
Injected at: 890612 12:35 Last Calibration: 890612 12:23

Compound No: 6
Compound Name: Methylene Chloride
Scan Number: 131
Retention Time: 5.20 min.
Quant Ion: 84.0
Area: 1255
Concentration: 2.90 ug/L
q-value: 69

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH48MS

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: MSE48

Sample wt/vol: 5.0 (g/mL) G Lab File ID: MSE48

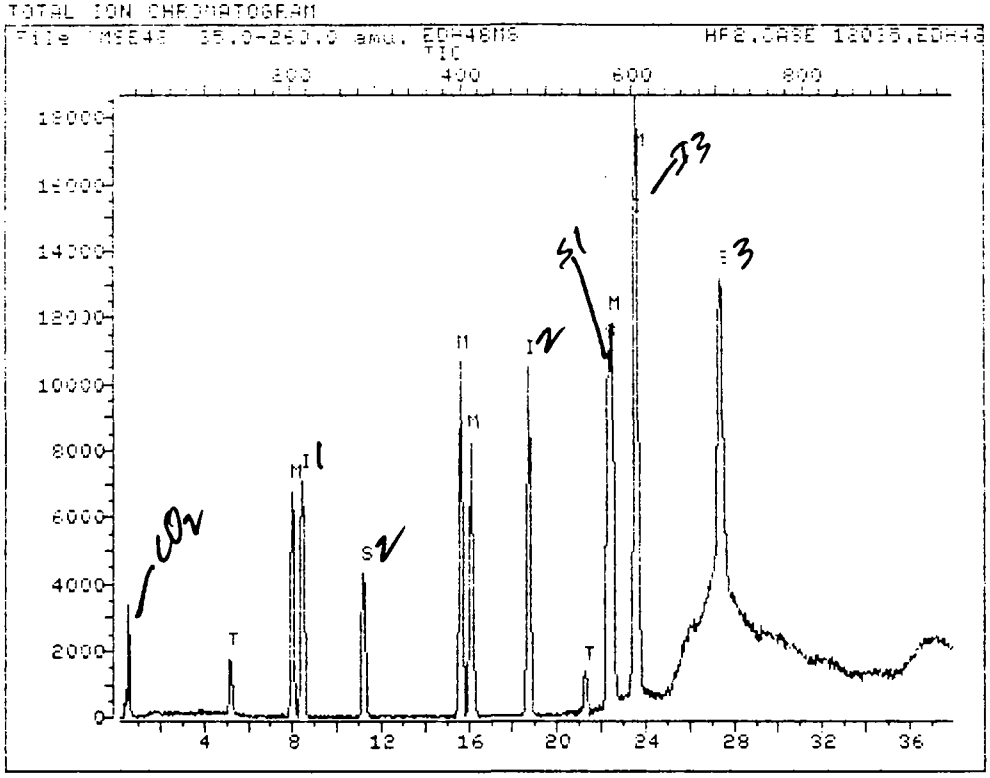
Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 6 Date Analyzed: 06/08/89

Column: (pack/cap) PACK Dilution Factor: 0.994

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	15	
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	60	
75-34-3	1,1-Dichloroethane	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	52	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	54	
10061-01-5	cis-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
591-78-6	2-Hexanone	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	47	
108-90-7	Chlorobenzene	60	
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
133-02-7	Xylene (total)	5	U

TOTAL ION CHROMATOGRAM



Data File: >MSE48::D1 Quant Output File: ^MSE48::D2
Name: EDH48MS
Misc: HP2,CASE 12035,EDH48MS,5.0G,5.0ML,,,%M=6.2 $

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890608 15:21

Operator ID: JOHN
Quant Time: 890608 20:57
Injected at: 890608 20:18

% Moist.: 6.19 Wet: 5.0316 g Dry: 4.7201 g

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890608 20:57
Output File: ^MSE48::D2 Injected at: 890608 20:18
Data File: >MSE48::D1 Dilution Factor: 1.00000
Name: EDH48MS
Misc: HP2,CASE 12035,EDH48MS,5.0G,5.0ML,,,%M=6.2 $

% Sur Rec = Amt x 2
CMPD. PO = AMT x 5 Dw

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890608 15:21

4.7201

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.45	215	14795	50.00	ug/L	100
2)	Chloromethane	0.00	0	0	0.00	ug/L	
3)	Bromomethane	0.00	0	0	0.00	ug/L	
4)	Vinyl Chloride	0.00	0	0	0.00	ug/L	
5)	Chloroethane	0.00	0	0	0.00	ug/L	
6)	Methylene Chloride	5.16	130	4824	13.81	ug/L →14	62
7)	Acetone	0.00	0	0	0.00	ug/L	
8)	Carbon Disulfide	0.00	0	0	0.00	ug/L	
9)	1,1-Dichloroethene	7.99	203	16103	56.39	ug/L →56	89
10)	1,1-Dichloroethane	0.00	0	0	0.00	ug/L	
11)	1,2-Dichloroethene (total)	0.00	0	0	0.00	ug/L	
12)	Chloroform	0.00	0	0	0.00	ug/L	
13)	1,2-Dichloroethane-d4	11.20	286	18457	50.22	ug/L	94
14)	1,2-Dichloroethane	0.00	0	0	0.00	ug/L	
15)	2-Butanone	0.00	0	0	0.00	ug/L	
16)	*1,4-Difluorobenzene	18.68	479	57082	50.00	ug/L	69
17)	1,1,1-Trichloroethane	0.00	0	0	0.00	ug/L	
18)	Carbon Tetrachloride	0.00	0	0	0.00	ug/L	
19)	Vinyl Acetate	0.00	0	0	0.00	ug/L	
20)	Bromodichloromethane	0.00	0	0	0.00	ug/L	
21)	1,2-Dichloropropane	0.00	0	0	0.00	ug/L	
22)	cis-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
23)	Trichloroethene	15.66	401	24385	49.42	ug/L →49	95
24)	Dibromochloromethane	0.00	0	0	0.00	ug/L	
25)	1,1,2-Trichloroethane	0.00	0	0	0.00	ug/L	
26)	Benzene	16.12	413	43120	51.12	ug/L →51	91
27)	trans-1,3-Dichloropropene	0.00	413	0	0.00	ug/L	
28)	Bromoform	0.00	0	0	0.00	ug/L	
29)	*Chlorobenzene-d5	23.49	603	48232	50.00	ug/L	95
30)	4-Methyl-2-pentanone	0.00	0	0	0.00	ug/L	
31)	2-Hexanone	0.00	0	0	0.00	ug/L	
32)	Tetrachloroethene	21.28	546	2015	ml ~~4.25~~	ug/L A	99
33)	1,1,2,2-Tetrachloroethane	0.00	0	0	0.00	ug/L →	
34)	Toluene	22.52	578	31976	44.65	ug/L →44	95
35)	Toluene-d8	22.32	573	47959	50.49	ug/L	98
36)	Chlorobenzene	23.60	606	49419	56.37	ug/L →56	91
37)	Ethylbenzene	0.00	0	0	0.00	ug/L	
38)	Styrene	0.00	0	0	0.00	ug/L	
39)	Xylene (total)	0.00	0	0	0.00	ug/L	
40)	Bromofluorobenzene	27.40	704	33078	46.97	ug/L	85

* Compound is ISTD

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH48MSD

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: MDE48

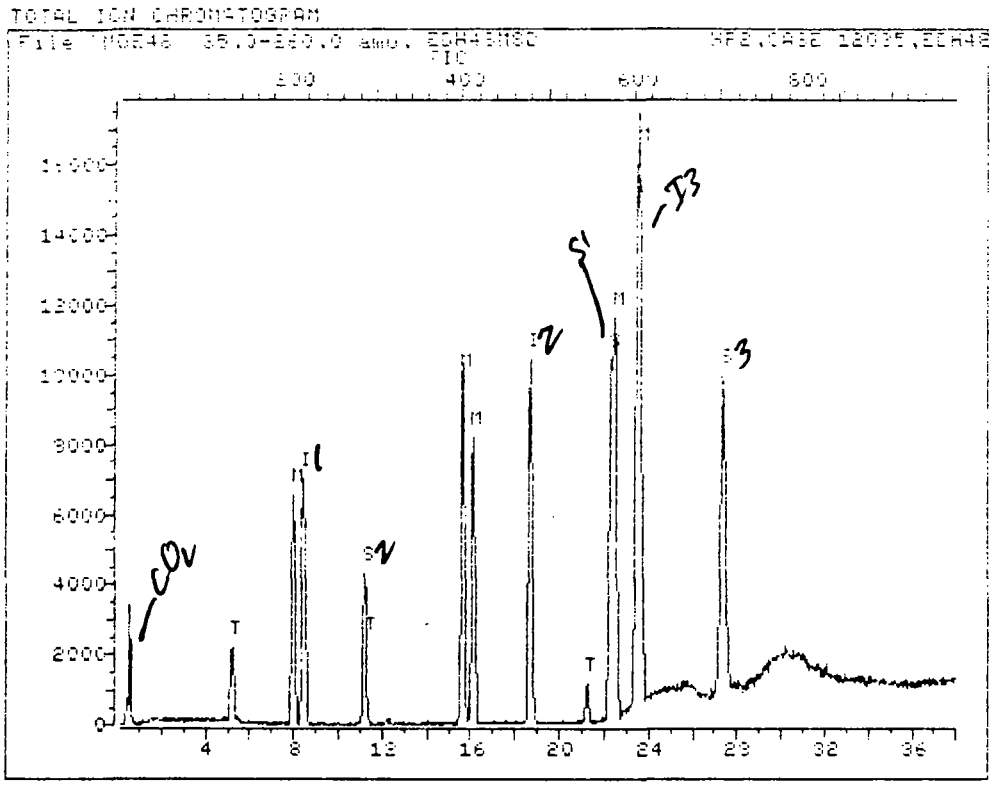
Sample wt/vol: 5.0 (g/mL) G Lab File ID: MDE48

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 6 Date Analyzed: 06/08/89

Column: (pack/cap) PACK Dilution Factor: 0.998

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	19	
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	63	
75-34-3	1,1-Dichloroethane	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	9	J
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	52	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	56	
10061-01-5	cis-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
591-78-6	2-Hexanone	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	48	
108-90-7	Chlorobenzene	60	
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
133-02-7	Xylene (total)	5	U



Data File: >MDE48::D1 Quant Output File: ^MDE48::D2
Name: EDH48MSD
Misc: HP2,CASE 12035,EDH48MSD,5.0G,5.0ML,,,%M=6.2 $

Id File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890608 15:21

Operator ID: JOHN
Quant Time: 890608 21:41
Injected at: 890608 21:03

% Moist.: 6.19 Wet: 5.0081 g Dry: 4.6981 g

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890608 21:41
Output File: ^MDE48::D2 Injected at: 890608 21:03
Data File: >MDE48::D1 Dilution Factor: 1.00000
Name: EDH48MSD
Misc: HP2,CASE 12035,EDH48MSD,5.0G,5.0ML,,,%M= 6.7 $

% Sur Rec = Amt x 2

OMPD.RO = AMT x 5/IW → 4.6981

ID File: IDVDD::SC
Title: 5LP DAILY CALIBRATION
Last Calibration: 890608 15:21

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	8.42	214	13988	50.00	ug/L	100
2)	Chloromethane	0.00	0	0	0.00	ug/L	
3)	Bromomethane	0.00	0	0	0.00	ug/L	
4)	Vinyl Chloride	0.00	0	0	0.00	ug/L	
5)	Chloroethane	0.00	0	0	0.00	ug/L	
6)	Methylene Chloride	5.20	131	5822	17.62	ug/L → 18	69
7)	Acetone	0.00	151	0	0.00	ug/L	
8)	Carbon Disulfide	0.00	0	0	0.00	ug/L	
9)	1,1-Dichloroethene	7.99	203	15942	59.04	ug/L → 59	90
10)	1,1-Dichloroethane	0.00	0	0	0.00	ug/L	
11)	1,2-Dichloroethene (total)	0.00	0	0	0.00	ug/L	
12)	Chloroform	0.00	0	0	0.00	ug/L	
13)	1,2-Dichloroethane-d4	11.21	286	18257	52.54	ug/L	94
14)	1,2-Dichloroethane	0.00	0	0	0.00	ug/L	
15)	2-Butanone	11.28	288	248	8.27	ug/L → 8	100
16)	*1,4-Difluorobenzene	18.68	479	54679	50.00	ug/L	69
17)	1,1,1-Trichloroethane	0.00	0	0	0.00	ug/L	
18)	Carbon Tetrachloride	0.00	0	0	0.00	ug/L	
19)	Vinyl Acetate	0.00	0	0	0.00	ug/L	
20)	Bromodichloromethane	0.00	0	0	0.00	ug/L	
21)	1,2-Dichloropropane	0.00	0	0	0.00	ug/L	
22)	cis-1,3-Dichloropropene	0.00	0	0	0.00	ug/L	
23)	Trichloroethene	15.62	400	23294	49.29	ug/L → 49	95
24)	Dibromochloromethane	0.00	0	0	0.00	ug/L	
25)	1,1,2-Trichloroethane	0.00	0	0	0.00	ug/L	
26)	Benzene	16.13	413	42224	52.25	ug/L → 52	90
27)	trans-1,3-Dichloropropene	0.00	413	0	0.00	ug/L	
28)	Bromoform	0.00	0	0	0.00	ug/L	
29)	*Chlorobenzene-d5	23.49	603	46909	50.00	ug/L	98
30)	4-Methyl-2-pentanone	0.00	0	0	0.00	ug/L	
31)	2-Hexanone	0.00	0	0	0.00	ug/L	
32)	Tetrachloroethene	21.24	545	1715	~~3.72~~	ug/L → 4	91
33)	1,1,2,2-Tetrachloroethane	0.00	0	0	0.00	ug/L	
34)	Toluene	22.48	577	31245	44.86	ug/L → 45	98
35)	Toluene-d8	22.33	573	46793	50.65	ug/L	92
36)	Chlorobenzene	23.61	606	47812	56.07	ug/L → 56	91
37)	Ethylbenzene	0.00	0	0	0.00	ug/L	
38)	Styrene	0.00	0	0	0.00	ug/L	
39)	Xylene (total)	0.00	0	0	0.00	ug/L	
40)	Bromofluorobenzene	27.36	703	36051	52.63	ug/L	88

* Compound is ISTD

S-CUBED

A Division of Maxwell Laboratories, Inc.

July 7, 1989

Volume 2 of 3

NARRATIVE CASE 12035
S-CUBED CONTRACT NO. 68D90027

RECEIVED
JUL 11 1989
US EPA
CHICAGO, ILLINOIS 60604

P.O. Box 1620, La Jolla, California 92038-1620 *3398 Carmel Mountain Road, San Diego, California 92121-1095*
Tel: (619) 453-0060 TWX: 910-337-1253 Telecopier: (619) 755-0474

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No. 12035 SAS No.: SDG No.: EDH42

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (FP2)#	S6 (TBP)#	OTHER	TOT OUT
01	EDH42	76	92	76	86	80	84		0
02	EDH42MS	84	99	89	98	86	107		0
03	EDH42MSD	37	46	40	41	38	46		0
04	EDH43	59	75	58	71	62	50		0
05	EDH44	85	106	82	102	86	94		0
06	EDH46	68	95	69	78	66	83		0
07	EDH47	54	78	61	71	56	73		0
08	EDH48	98	118 *	112	114 *	102	149 *		3
09	EDH49	66	88	81	75	69	115		0
10	SBLK11	68	80	59	74	68	75		0
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	QC LIMITS
S1 (S1) = Nitrobenzene-d5	(23-120)
S2 (S2) = 2-Fluorobiphenyl	(30-115)
S3 (S3) = Terphenyl-d14	(18-137)
S4 (S4) = Phenol-d5	(24-113)
S5 (S5) = 2-Fluorophenol	(25-121)
S6 (S6) = 2,4,6-Tribromophenol	(19-122)

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

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No. 12035 SAS No.: SDG No.: EDH42

Level:(low/med) MED

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (FP2)#	S6 (TBP)#	OTHER	TOT OUT
01	EDH45	96	103	90	99	89	108		0
02	EDH45MS	85	80	87	105	107	143 *		1
03	EDH45MSD	87	81	79	102	98	143 *		1
04	SBLK12	103	98	92	108	95	127 *		1
05									
06									
07									
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		QC LIMITS
S1 (S1)	= Nitrobenzene-d5	(23-120)
S2 (S2)	= 2-Fluorobiphenyl	(30-115)
S3 (S3)	= Terphenyl-d14	(18-137)
S4 (S4)	= Phenol-d5	(24-113)
S5 (S5)	= 2-Fluorophenol	(25-121)
S6 (S6)	= 2,4,6-Tribromophenol	(19-122)

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

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix Spike - EPA Sample No.: EDH42 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
Phenol	15822.159	0.000	9201.377	58	26- 90
2-Chlorophenol	15822.159	0.000	8153.950	52	25-102
1,4-Dichlorobenzene	7911.079	0.000	4498.240	57	28-104
N-Nitroso-di-n-prop.(1)	7911.079	0.000	4571.022	58	41-126
1,2,4-Trichlorobenzene	7911.079	0.000	4213.441	53	38-107
4-Chloro-3-methylphenol	15822.159	0.000	9461.651	60	26-103
Acenaphthene	7911.079	0.000	5033.820	64	31-137
4-Nitrophenol	15822.159	0.000	11545.429	73	11-114
2,4-Dinitrotoluene	7911.079	0.000	4232.428	54	28- 89
Pentachlorophenol	15822.159	0.000	11200.506	71	17-109
Pyrene	7911.079	0.000	4251.414	54	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.	
Phenol	15822.159	4006.171	25 *	80 *	35	26- 90	
2-Chlorophenol	15822.159	3589.257	23 *	77 *	50	25-102	
1,4-Dichlorobenzene	7911.079	1981.725	25 *	78 *	27	28-104	
N-Nitroso-di-n-prop.(1)	7911.079	1855.939	23 *	86 *	38	41-126	18
1,2,4-Trichlorobenzene	7911.079	2150.231	27 *	65 *	23	38-107	"
4-Chloro-3-methylphenol	15822.159	3766.465	24 *	86 *	33	26-103	
Acenaphthene	7911.079	2232.507	28 *	78 *	19	31-137	
4-Nitrophenol	15822.159	3363.000	21	111 *	50	11-114	
2,4-Dinitrotoluene	7911.079	1357.541	17 *	104 *	47	28- 89	"
Pentachlorophenol	15822.159	5006.922	32	76 *	47	17-109	
Pyrene	7911.079	1912.899	24 *	77 *	36	35-142	

(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: 11 out of 11 outside limits
Spike Recovery: 9 out of 22 outside limits

Comments: _____

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix Spike - EPA Sample No.: EDH45 Level:(low/med) MED

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
Phenol	226244.34	0.000	147432.127	65	26- 90
2-Chlorophenol	226244.34	0.000	140746.606	62	25-102
1,4-Dichlorobenzene	113122.17	0.000	68303.167	60	28-104
N-Nitroso-di-n-prop.(1)	113122.17	0.000	105124.434	93	41-126
1,2,4-Trichlorobenzene	113122.17	0.000	72024.887	64	38-107
4-Chloro-3-methylphenol	226244.34	0.000	133223.982	59	26-103
Acenaphthene	113122.17	4988.688	70339.367	58	31-137
4-Nitrophenol	226244.34	0.000	123427.602	55	11-114
2,4-Dinitrotoluene	113122.17	0.000	49049.774	43	28- 89
Pentachlorophenol	226244.34	0.000	160033.937	71	17-109
Pyrene	113122.17	9615.385	67635.747	51	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	226244.34	144208.145	64	2	35	26- 90
2-Chlorophenol	226244.34	143574.661	63	2	50	25-102
1,4-Dichlorobenzene	113122.17	65667.421	58	3	27	28-104
N-Nitroso-di-n-prop.(1)	113122.17	100542.986	89	4	38	41-126
1,2,4-Trichlorobenzene	113122.17	74988.688	66	3	23	38-107
4-Chloro-3-methylphenol	226244.34	138947.964	61	3	33	26-103
Acenaphthene	113122.17	67975.113	56	4	19	31-137
4-Nitrophenol	226244.34	133393.665	59	7	50	11-114
2,4-Dinitrotoluene	113122.17	54434.389	48	11	47	28- 89
Pentachlorophenol	226244.34	164049.774	73	3	47	17-109
Pyrene	113122.17	65588.235	49	4	36	35-142

(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: 0 out of 22 outside limits

Comments: _____

4B
SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID: LBB06 Lab Sample ID: LBB06

Date Extracted: 06/06/89 Extraction:(SepF/Cont/Sonc) SONC

Date Analyzed: 06/19/89 Time Analyzed: 2053

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

Instrument ID: HP3

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	EDH42	EDH42	EDH42	06/22/89
02	EDH43	EDH43	EDH43	06/19/89
03	EDH44	EDH44	EDH44	06/20/89
04	EDH46	EDH46	EDH46	06/20/89
05	EDH47	EDH47	EDH47	06/20/89
06	EDH48	EDH48	RRH48	06/23/89
07	EDH49	EDH49	RRH49	06/23/89
08	EDH42MS	MSH42	MSH42	06/22/89
09	EDH42MSD	MSDR2	MSDR2	06/23/89
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COMMENTS:

4B
SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID: LB608 Lab Sample ID: LB608

Date Extracted: 06/08/89 Extraction:(SepF/Cont/Sonc) SONC

Date Analyzed: 06/20/89 Time Analyzed: 1559

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

Instrument ID: HP3

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	EDH45	EDH45	EDH45	06/20/89
02	EDH45MS	MSR45	MSR45	06/23/89
03	EDH45MSD	MSDR5	MSDR5	06/23/89
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COMMENTS:

5B

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

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID: T525A DFTPP Injection Date: 05/23/89

Instrument ID: HP3 DFTPP Injection Time: 1414

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	51.1
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	57.
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	48.1
197	Less than 1.0% of mass 198	0.8
198	Base Peak, 100% relative abundance	100.
199	5.0 - 9.0% of mass 198	7.4
275	10.0 - 30.0% of mass 198	18.6
365	Greater than 1.00% of mass 198	1.78
441	Present, but less than mass 443	6.6
442	Greater than 40.0% of mass 198	51.5
443	17.0 - 23.0% of mass 442	9.7 (18.8)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	SSTD160	CE205	CE205	05/23/89	1440
02	SSTD120	CE204	CE204	05/23/89	1541
03	SSTD080	CE203	CE203	05/23/89	1653
04	SSTD050	CE202	CE202	05/23/89	1752
05	SSTD020	CE201	CE201	05/23/89	1850
06					

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5B

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

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID: TJ19A DFTPP Injection Date: 06/19/89

Instrument ID: HP3 DFTPP Injection Time: 1201 ✓

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	39.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	40.
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	47.7
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	7.2
275	10.0 - 30.0% of mass 198	17.2
365	Greater than 1.00% of mass 198	1.86
441	Present, but less than mass 443	11.7
442	Greater than 40.0% of mass 198	83.1
443	17.0 - 23.0% of mass 442	15.4 (18.5)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	SSTD050	DCJ19	DCJ19	06/19/89	1225
02	SBLK11	LBB06	LBB06	06/19/89	2053 ✓
03	EDH43	EDH43	EDH43	06/19/89	2348 ✓
04					

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5B

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

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID: TJ20A DFTPP Injection Date: 06/20/89

Instrument ID: HP3 DFTPP Injection Time: 0828 ✓

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	50.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	62.
70	Less than 2.0% of mass 69	0.8 (1.2)1
127	40.0 - 60.0% of mass 198	51.7
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	7.3
275	10.0 - 30.0% of mass 198	17.4
365	Greater than 1.00% of mass 198	2.08
441	Present, but less than mass 443	7.7
442	Greater than 40.0% of mass 198	56.4
443	17.0 - 23.0% of mass 442	11.2 (19.8)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	SSTD050	DCJ20	DCJ20	06/20/89	1030
02	SSTD160	CE305	CE305	06/20/89	1135
03	SSTD120	CE304	CE304	06/20/89	1233
04	SSTD80	CE303	CE303	06/20/89	1343
05	SSTD20	CE301	CE301	06/20/89	1441
06	SBLK12	LB608	LB608	06/20/89	1559 ✓
07	EDH44	EDH44	EDH44	06/20/89	1657 ✓
08	EDH45	EDH45	EDH45	06/20/89	1755 ✓
09	EDH46	EDH46	EDH46	06/20/89	1852 ✓
10	EDH47	EDH47	EDH47	06/20/89	1951 ✓
11					

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

Lab Name: S-CUBED Contract: 68-D9-0022

Lab Code: S3 Case No : 12035 SAS No.: SDG No.: EDH42

Lab File ID: TJ22A DFTPP Injection Date: 06/22/89

Instrument ID: HP3 DFTPP Injection Time: 1405 ✓

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	56.
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	53.6
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	7.3
275	10.0 - 30.0% of mass 198	20.3
365	Greater than 1.00% of mass 198	1.53
441	Present, but less than mass 443	9.9
442	Greater than 40.0% of mass 198	61.0
443	17.0 - 23.0% of mass 442	11.9 (19.6)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	SSTD050	DCJ22	DCJ22	06/22/89	1445 ✓
02	EDH42	EDH42	EDH42	06/22/89	1722 ✓
03	EDH42MS	MSH42	MSH42	06/22/89	1820 ✓
04					

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5B

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

Lab Name: S-CUBED Contract: 68-09-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH4

Lab File ID: T-238 DFTPP Injection Date: 06/23/89

Instrument ID: HP3 DFTPP Injection Time: 1202 ✓

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	57.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	60.
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	50.2
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	7.4
275	10.0 - 30.0% of mass 198	18.9
365	Greater than 1.00% of mass 198	2.10
441	Present, but less than mass 443	9.2
442	Greater than 40.0% of mass 198	61.2
443	17.0 - 23.0% of mass 442	11.9 (19.5)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	SSTD050	DCJ23	DCJ23	06/23/89	1226 ✓
02	EDH42MSD	MSDR2	MSDR2	06/23/89	1347 ✓
03	EDH48	RRH48	RRH48	06/23/89	1445 ✓
04	EDH49	RRH49	RRH49	06/23/89	1600 ✓
05	EDH45MS	MSR45	MSR45	06/23/89	1658 ✓
06	EDH45MSD	MSDR5	MSDR5	06/23/89	1756 ✓
07					

FORM V SV 1/87 Rev.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID (Standard): DCJ19 Date Analyzed: 06/19/89

Instrument ID: HP3 Time Analyzed: 1225

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	10326.	9.79	43399.	13.56	29395.	18.97
	UPPER LIMIT	20652.		86798.		58790.	
	LOWER LIMIT	5163.		21699.		14698.	
	EPA SAMPLE NO.						
01	SBLK11	16539.	9.77	75568.	13.56	41385.	18.97
02	EDH43	14260.	9.79	61996.	13.56	33206.	18.98
03							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d8

UPPER LIMIT = + 100% of internal standard 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.

8C
SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID (Standard): DCJ19 Date Analyzed: 06/19/89

Instrument ID: HP3 Time Analyzed: 1225

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	58956.	23.47	46953.	31.72	46787.	35.82
	UPPER LIMIT	117912.		93906.		93574.	
	LOWER LIMIT	29478.		23476.		23394.	
	EPA SAMPLE NO.						
01	SBLK11	69637.	23.50	73796.	31.73	82898.	35.82
02	EDH43	55444.	23.51	50032.	31.73	52275.	35.81
03							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID (Standard): DCJ20 Date Analyzed: 06/20/89

Instrument ID: HP3 Time Analyzed: 1030

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	11262.	9.68	44221.	13.45	27448.	18.83
	UPPER LIMIT	22524.		88442.		54896.	
	LOWER LIMIT	5631.		22111.		13724.	
	EPA SAMPLE NO.						
01	SBLK12	10183.	9.67	45468.	13.42	27845.	18.83
02	EDH44	10218.	9.66	47214.	13.43	23516.	18.84
03	EDH45	9543.	9.66	45293.	13.43	24407.	18.84
04	EDH46	9248.	9.65	43637.	13.42	23292.	18.83
05	EDH47	8093.	9.65	37470.	13.42	20590.	18.83
06							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d8

UPPER LIMIT = + 100% of internal standard 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.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID (Standard): DCJ20 Date Analyzed: 06/20/89

Instrument ID: HP3 Time Analyzed: 1030

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	49948.	23.34	36038.	31.55	38342.	35.65
	UPPER LIMIT	99896.		72076.		76684.	
	LOWER LIMIT	24974.		18019.		19171.	
	EPA SAMPLE NO.						
01	SBLK12	50388.	23.31	43037.	31.52	43559.	35.62
02	EDH44	38381.	23.38	36211.	31.55	37749.	35.63
03	EDH45	43361.	23.33	35968.	31.52	38396.	35.62
04	EDH46	38592.	23.33	37843.	31.54	38249.	35.62
05	EDH47	36691.	23.33	35585.	31.51	38172.	35.61
06							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

8B

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID (Standard): DC322 Date Analyzed: 06/22/89

Instrument ID: HP3 Time Analyzed: 1445

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	10010.	9.68	40955.	13.45	25506.	18.84
	UPPER LIMIT	20020.		81910.		51012.	
	LOWER LIMIT	5005.		20478.		12753.	
	EPA SAMPLE NO.						
01	EDH42	9678.	9.67	42443.	13.42	22367.	18.83
02	EDH42MS	8390.	9.67	39313.	13.42	23320.	18.83
03							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d8

UPPER LIMIT = + 100% of internal standard 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.

BC

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID (Standard): DC322 Date Analyzed: 06/22/89

Instrument ID: HP3 Time Analyzed: 1445

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	47582.	23.33	34597.	31.56	37570.	35.64
	UPPER LIMIT	95164.		69194.		75140.	
	LOWER LIMIT	23791.		17298.		18785.	
	EPA SAMPLE NO.						
01	EDH42	35903.	23.33	36543.	31.52	37879.	35.62
02	EDH42MS	37493.	23.36	38644.	31.52	41044.	35.62
03							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-2 1/87 Rev.

8B
SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: S-CUBED Contract: 68-D9-0022

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID (Standard): DC023 Date Analyzed: 06/23/89

Instrument ID: HP3 Time Analyzed: 1226

		IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
	12 HOUR STD	9761.	9.66	40569.	13.45	25384.	18.84
	UPPER LIMIT	19522.		81138.		50768.	
	LOWER LIMIT	4881.		20284.		12692.	
	EPA SAMPLE NO.						
01	EDH42MSD	11604.	9.65	47619.	13.43	28056.	18.83
02	EDH48	9660.	9.65	44097.	13.40	26317.	18.83
03	EDH49	10719.	9.66	47035.	13.43	27858.	18.84
04	EDH45MS	7192.	9.66	36762.	13.43	24992.	18.82
05	EDH45MSD	7772.	9.67	37545.	13.42	26556.	18.83
06							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d8

UPPER LIMIT = + 100% of internal standard 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.

8C

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Lab File ID (Standard): DCJ23 Date Analyzed: 06/23/89

Instrument ID: HP3 Time Analyzed: 1226

		IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
	12 HOUR STD	49003.	23.33	42719.	31.56	44571.	35.66
	UPPER LIMIT	98006.		85438.		89142.	
	LOWER LIMIT	24501.		21359.		22286.	
	EPA SAMPLE NO.						
01	EDH42MSD	48887.	23.34	56342.	31.55	62211.	35.63
02	EDH48	45051.	23.34	50256.	31.53	60472.	35.61
03	EDH49	47136.	23.35	55504.	31.53	65237.	35.62
04	EDH45MS	50200.	23.33	53588.	31.51	57956.	35.61
05	EDH45MSD	54039.	23.33	61963.	31.51	70104.	35.61
06							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

page 1 of 1

FORM VIII SV-2 1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH42

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH42

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EDH42

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 16 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/22/89

GPC Cleanup: (Y/N) Y pH: 8.1 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	780	U
111-44-4	bis(2-Chloroethyl)ether	780	U
95-57-8	2-Chlorophenol	780	U
541-73-1	1,3-Dichlorobenzene	780	U
106-46-7	1,4-Dichlorobenzene	780	U
100-51-6	Benzyl alcohol	780	U
95-50-1	1,2-Dichlorobenzene	780	U
95-48-7	2-Methylphenol	780	U
108-60-1	bis(2-Chloroisopropyl)ether	780	U
106-44-5	4-Methylphenol	780	U
621-64-7	N-Nitroso-di-n-propylamine	780	U
67-72-1	Hexachloroethane	780	U
98-95-3	Nitrobenzene	780	U
78-59-1	Isophorone	780	U
88-75-5	2-Nitrophenol	780	U
105-67-9	2,4-Dimethylphenol	780	U
65-85-0	Benzoic acid	3800	U
111-91-1	bis(2-Chloroethoxy)methane	780	U
120-83-2	2,4-Dichlorophenol	780	U
120-82-1	1,2,4-Trichlorobenzene	780	U
91-20-3	Naphthalene	780	U
106-47-8	4-Chloroaniline	780	U
87-68-3	Hexachlorobutadiene	780	U
59-50-7	4-Chloro-3-methylphenol	780	U
91-57-6	2-Methylnaphthalene	780	U
77-47-4	Hexachlorocyclopentadiene	780	U
88-06-2	2,4,6-Trichlorophenol	780	U
95-95-4	2,4,5-Trichlorophenol	3800	U
91-58-7	2-Chloronaphthalene	780	U
88-74-4	2-Nitroaniline	3800	U
131-11-3	Dimethylphthalate	780	U
208-96-8	Acenaphthylene	780	U
606-20-2	2,6-Dinitrotoluene	780	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH42

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH42

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EDH42

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 16 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/22/89

GPC Cleanup: (Y/N) Y pH: 8.1 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3800	U
83-32-9	Acenapthene	780	U
51-28-5	2,4-Dinitrophenol	3800	U
100-02-7	4-Nitrophenol	3800	U
132-64-9	Dibenzofuran	780	U
121-14-2	2,4-Dinitrotoluene	780	U
84-66-2	Diethylphthalate	780	U
7005-72-3	4-Chlorophenyl-phenylether	780	U
86-73-7	Fluorene	780	U
100-01-6	4-Nitroaniline	3800	U
534-52-1	4,6-Dinitro-2-methylphenol	3800	U
86-30-6	N-Nitrosodiphenylamine (1)	780	U
101-55-3	4-Bromophenyl-phenylether	780	U
118-74-1	Hexachlorobenzene	780	U
87-86-5	Pentachlorophenol	3800	U
85-01-8	Phenanthrene	780	U
120-12-7	Anthracene	780	U
84-74-2	Di-n-butylphthalate	780	U
206-44-0	Fluoranthene	780	U
129-00-0	Pyrene	780	U
85-68-7	Butylbenzylphthalate	780	U
91-94-1	3,3'-Dichlorobenzidine	1600	U
56-55-3	Benzo(a)anthracene	780	U
218-01-9	Chrysene	780	U
117-81-7	bis(2-Ethylhexyl)phthalate	1200	~~B~~ U
117-84-0	Di-n-octylphthalate	780	U
205-99-2	Benzo(b)fluoranthene	780	U
207-08-9	Benzo(k)fluoranthene	780	U
50-32-8	Benzo(a)pyrene	780	U
193-39-5	Indeno(1,2,3-cd)pyrene	780	U
53-70-3	Dibenz(a,h)anthracene	780	U
191-24-2	Benzo(g,h,i)perylene	780	U

10/11/89 WM

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDH42

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH42

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EDH42

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 16 dec._____ Date Extracted: 06/06/89

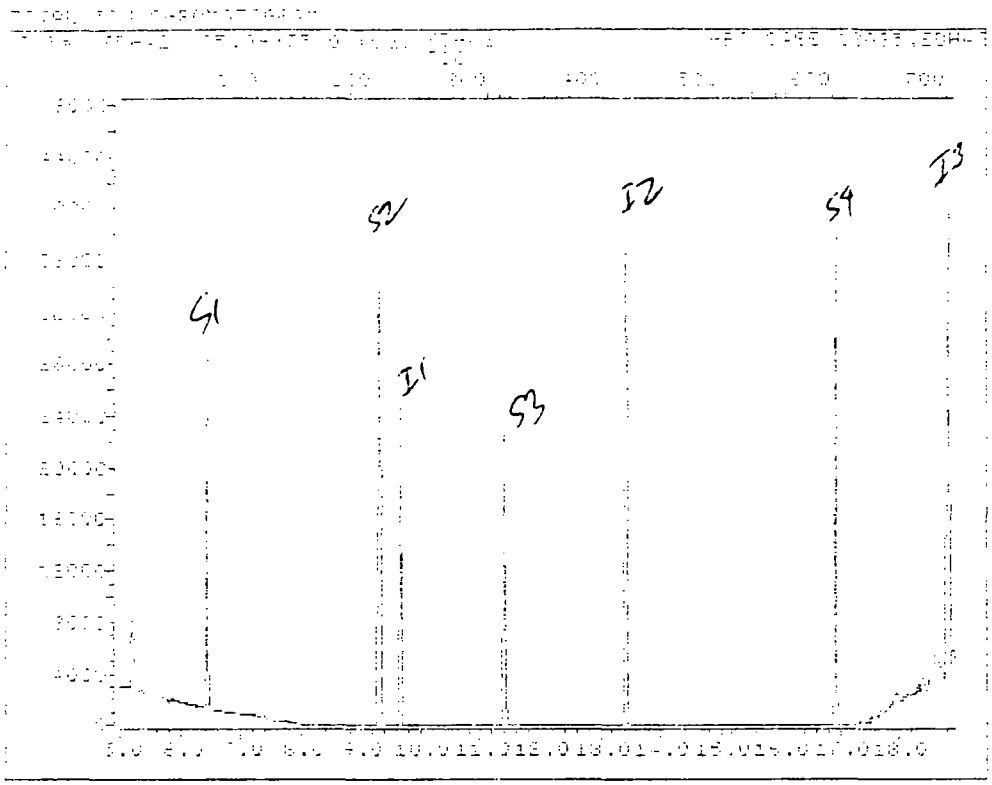
Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/22/89

GPC Cleanup : (Y/N) Y pH: 8.1 Dilution Factor: 1.000

Number TICs found: 9

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	5.19	680	JB
2.	UNKNOWN	22.06	380	J
3.	UNKNOWN	22.76	350	J
4.	UNKNOWN	23.58	640	J
5.	UNKNOWN	23.80	300	J
6.	UNKNOWN	24.26	320	J
7.	UNKNOWN HYDROCARBON	25.88	390	J
8.	UNKNOWN HYDROCARBON	26.36	440	J
9.	UNKNOWN HYDROCARBON	27.50	1300	JB
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

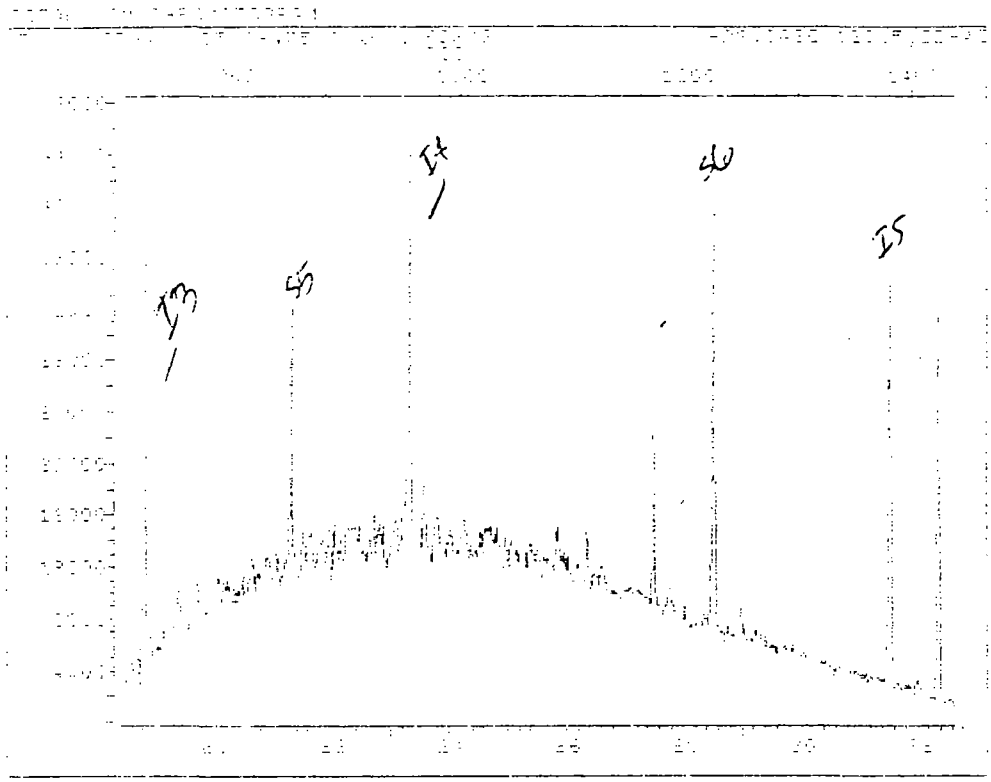


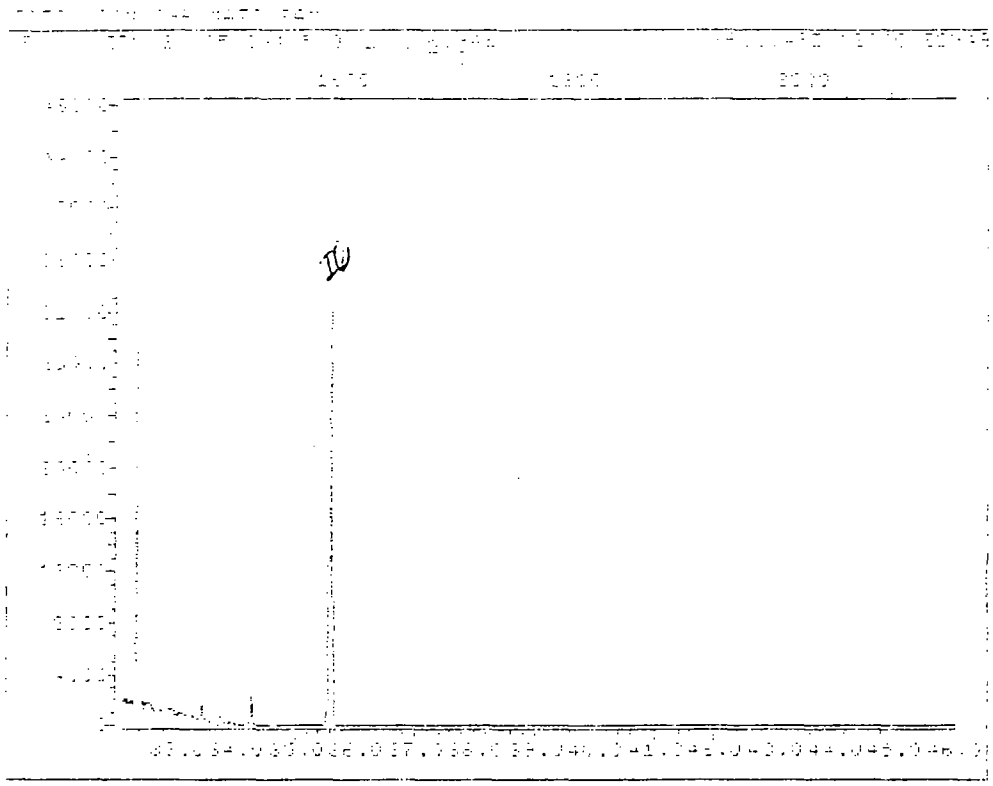
Data File: >EDH42::DI Quant Output File: 'EDH42::QC
Name: EDH42
Misc: HPS,CASE 10039,EDH42,IW 50g,FVC 2ml,06/06/89,pb8,BM18,STLW 6

Id File: ID_BCH::BC
Title: HP BMW Standards
Last Calibration: 890622 16:24

Operator ID: VERNIS
Acquire Time: 890622 18:05
Injected at: 890622 17:22

TIC page 1 of 3


Tm
Ex
Ex
IS



Data File: [illegible] Quant Output File: [illegible]
Name: [illegible]
Mode: [illegible]

[illegible]
Title: 4ºC Std Standards
Last Calibration: 890c21 16:24

Operator ID: DENNIS
Start Time: 890c22 18:09
Injected at: 890522 17:22

[illegible] page 2 of 3

Wet: 32 g
% Moist.: 15.73
Dry: 25.281

QUANT REPORT

Operator ID: DENNIS Quant Rev: 6 Quant Time: 890622 18:09
Output File: ^EDH42::SC Injected at: 890622 17:22
Data File: >EDH42::D3 Dilution Factor: 1.00000
Name: EDH42
Misc: HP3,CASE 12035,EDH42,IW 30g,FVC 2ml,06/06/89,pH8,%M16,BTL# 3

ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890622 16:24

% Sur Rec = Amtx FV (ml) / Amt spiked

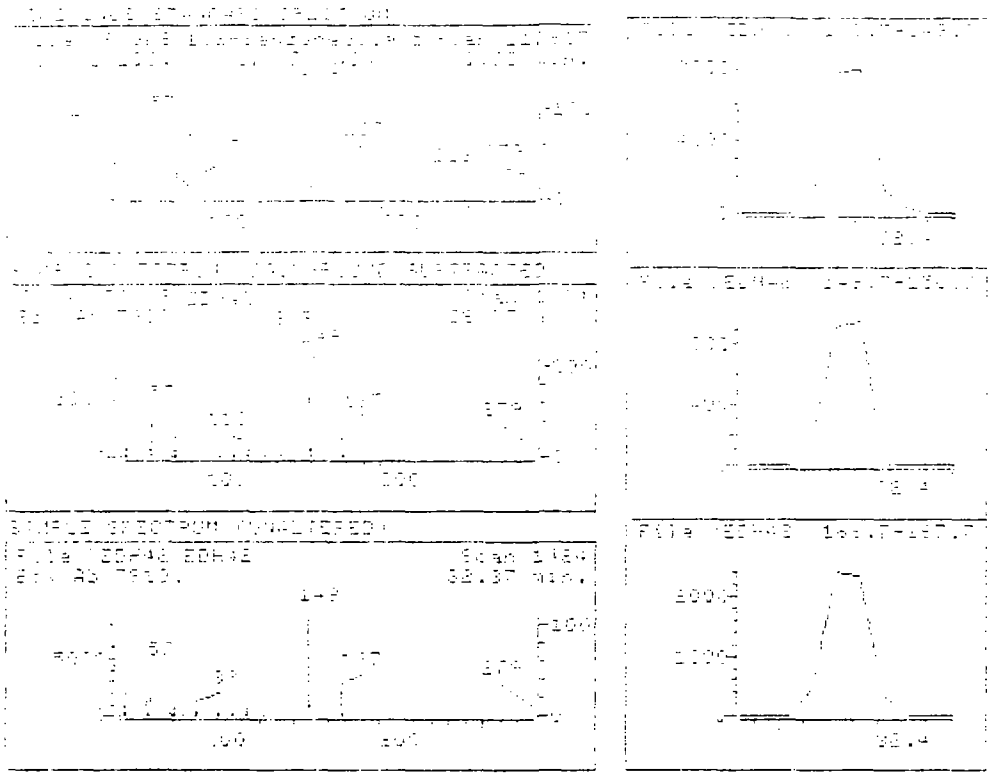
A = 200 BN = 100

Cmpd Fd = Amt (ppm) X FV/IW

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.67	152.0	9678	40.00	ng/uL	96
2)	2-Fluorophenol	6.44	112.0	18306	79.97	ng/uL	93
3)	Phenol-d5	9.33	99.0	39519	85.89	ng/uL	85
4)	Phenol	0.00	94.0	0	0.00	ng/uL	
5)	bis(-2-Chloroethyl)Ether	0.00	93.0	0	0.00	ng/uL	
6)	2-Chlorophenol	0.00	128.0	0	0.00	ng/uL	
7)	1,3-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
8)	1,4-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
9)	Benzyl Alcohol	0.00	108.0	0	0.00	ng/uL	
10)	1,2-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
11)	2-Methylphenol	0.00	108.0	0	0.00	ng/uL	
12)	bis(2-Chloroisopropyl)ether	0.00	45.0	0	0.00	ng/uL	
13)	4-Methylphenol	0.00	108.0	0	0.00	ng/uL	
14)	N-Nitroso-Di-n-propylamine	0.00	70.0	0	0.00	ng/uL	
15)	Hexachloroethane	0.00	117.0	0	0.00	ng/uL	
16)	*d8-Naphthalene	13.42	136.0	42443	40.00	ng/uL	87
17)	Nitrobenzene-d5	11.40	82.0	16794	37.96	ng/uL	82
18)	Nitrobenzene	0.00	77.0	0	0.00	ng/uL	
19)	Isophorone	0.00	82.0	0	0.00	ng/uL	
20)	2-Nitrophenol	0.00	139.0	0	0.00	ng/uL	
21)	2,4-Dimethylphenol	0.00	107.0	0	0.00	ng/uL	
22)	Benzoic Acid	0.00	105.0	0	0.00	ng/uL	
23)	bis(-2-Chloroethoxy)Methane	0.00	93.0	0	0.00	ng/uL	
24)	2,4-Dichlorophenol	0.00	162.0	0	0.00	ng/uL	
25)	1,2,4-Trichlorobenzene	0.00	180.0	0	0.00	ng/uL	
26)	Naphthalene	0.00	128.0	0	0.00	ng/uL	
27)	4-Chloroaniline	0.00	127.0	0	0.00	ng/uL	
28)	Hexachlorobutadiene	0.00	225.0	0	0.00	ng/uL	
29)	4-Chloro-3-methylphenol	0.00	107.0	0	0.00	ng/uL	
30)	2-Methylnaphthalene	0.00	142.0	0	0.00	ng/uL	
31)	*d10-Acenaphthene	18.83	164.0	22367	40.00	ng/uL	92
32)	Hexachlorocyclopentadiene	0.00	237.0	0	0.00	ng/uL	
33)	2,4,6-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
34)	2,4,5-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
35)	2-Chloronaphthalene	0.00	162.0	0	0.00	ng/uL	
36)	2-Fluorobiphenyl	16.94	172.0	30229	45.87	ng/uL	92
37)	2-Nitroaniline	0.00	65.0	0	0.00	ng/uL	
38)	Dimethyl Phthalate	0.00	163.0	0	0.00	ng/uL	
39)	Acenaphthylene	0.00	152.0	0	0.00	ng/uL	
40)	2,6-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
41)	3-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
42)	Acenaphthene	0.00	153.0	0	0.00	ng/uL	
43)	2,4-Dinitrophenol	0.00	184.0	0	0.00	ng/uL	
44)	4-Nitrophenol	0.00	109.0	0	0.00	ng/uL	
45)	Dibenzofuran	0.00	168.0	0	0.00	ng/uL	
46)	2,4-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
47)	Diethylphthalate	0.00	149.0	0	0.00	ng/uL	
48)	4-Chlorophenyl-phenylether	0.00	204.0	0	0.00	ng/uL	
49)	Fluorene	0.00	166.0	0	0.00	ng/uL	
50)	4-Nitroaniline	0.00	138.0	0	0.00	ng/uL	

50)	4-Nitroaniline	0.00	138.0	0	0.00	ng/uL
51)	2,4,6-Tribromophenol	21.31	330.0	5115	84.08	ng/uL 96
52)	*d10-Phenanthrene	23.33	188.0	35903	40.00	ng/uL 99
53)	4,6-Dinitro-2-methylphenol	0.00	198.0	0	0.00	ng/uL
54)	N-Nitrosodiphenylamine	0.00	169.0	0	0.00	ng/uL
55)	4-Bromophenyl-phenylether	0.00	248.0	0	0.00	ng/uL
56)	Hexachlorobenzene	0.00	284.0	0	0.00	ng/uL
57)	Pentachlorophenol	0.00	266.0	0	0.00	ng/uL
58)	Phenanthrene	0.00	178.0	0	0.00	ng/uL
59)	Anthracene	0.00	178.0	0	0.00	ng/uL
60)	Di-n-Butylphthalate	0.00	149.0	0	0.00	ng/uL
61)	Fluoranthene	0.00	202.0	0	0.00	ng/uL
62)	*d12-Chrysene	31.52	240.0	36543	40.00	ng/uL 88
63)	Pyrene	0.00	202.0	0	0.00	ng/uL
64)	Terphenyl-d14	28.52	244.0	33918	37.87	ng/uL 98
65)	Butylbenzylphthalate	0.00	149.0	0	0.00	ng/uL
66)	3,3'-Dichlorobenzidine	0.00	252.0	0	0.00	ng/uL
67)	Benzo(a)Anthracene	0.00	228.0	0	0.00	ng/uL
68)	Chrysene	0.00	228.0	0	0.00	ng/uL
69)	Bis(2-Ethylhexyl)Phthalate	32.37	149.0	21733	14.73	ng/uL 94
70)	*d12-Perylene	35.62	264.0	37879	40.00	ng/uL 96
71)	Di-n-octyl phthalate	0.00	149.0	0	0.00	ng/uL
72)	Benzo(b)fluoranthene	0.00	252.0	0	0.00	ng/uL
73)	Benzo(k)Fluoranthene	0.00	252.0	0	0.00	ng/uL
74)	Benzo(a)Pyrene	0.00	252.0	0	0.00	ng/uL
75)	Indeno(1,2,3-cd)Pyrene	0.00	276.0	0	0.00	ng/uL
76)	Dibenz(a,h)Anthracene	0.00	278.0	0	0.00	ng/uL
77)	Benzo(g,h,i)Perylene	0.00	276.0	0	0.00	ng/uL

* Compound is ISTD



Quant Compit File:

Mass Spec:

Date: HP5.C96 [illegible]

Quant Time: [illegible] Quant ID File:

Injected at: 89:22 17:22 Last Calibration:

Compound No. 10

Compound Name: Di-(2-Ethylhexyl)Phthalate

Scan Number: [illegible]

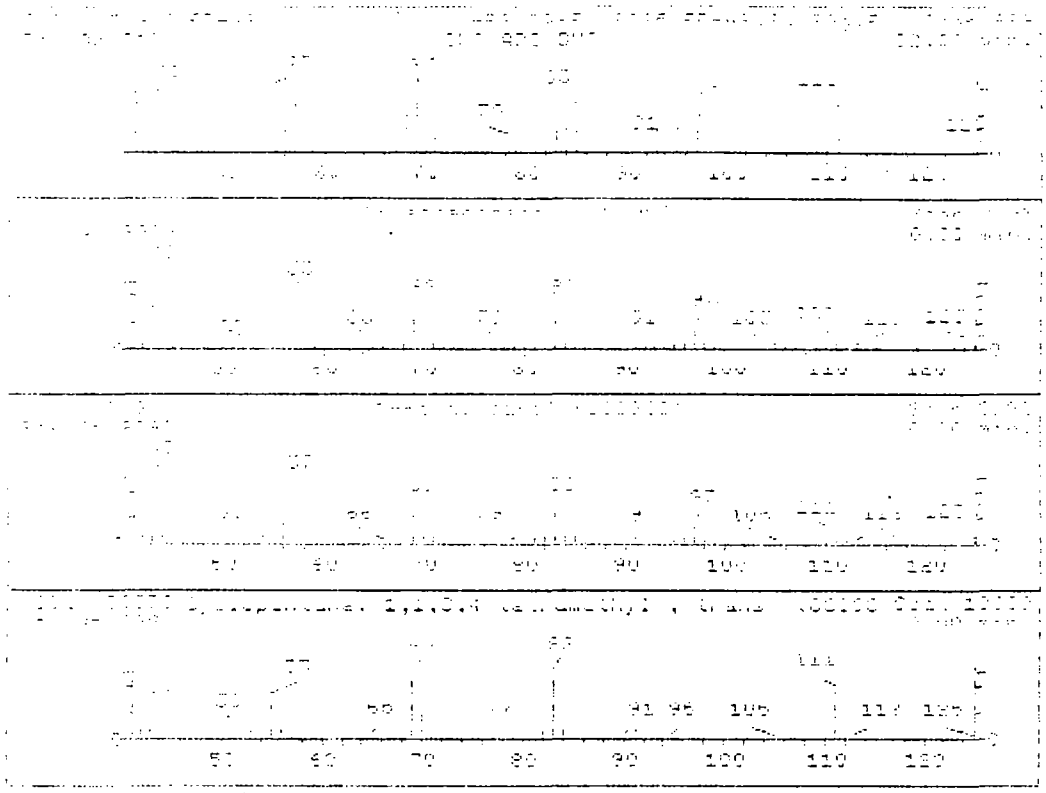
Retention Time: 32.37 min

Quant Ion: [illegible]

Area: [illegible]

Concentration: 14.79 ng/ml

Qualifier: %



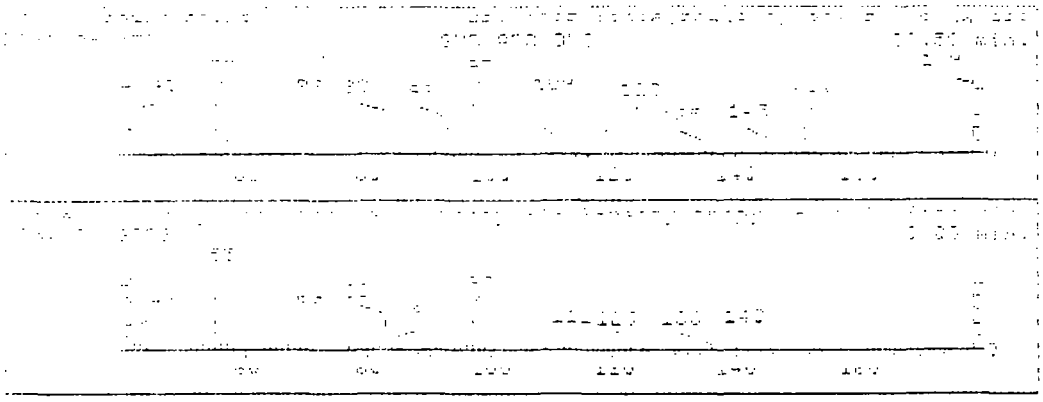
UNKNOWN

Unknown #.5
Quant Time: 890622 18:09
Created at: 890622 17:22
Pk Ht= 4507.00 Tentative Concentration is 280.00

1. 1-Tetracosanol (SCIPOI)	344	$C_{24}H_{50}O$
2. 1-Heptacosanol (SCIPOI)	382	$C_{27}H_{56}O$
3. Cyclopentane, 1,1,3,4-tetramethyl-, trans- (SCIPOI)	126	C_9H_{18}
4. Cyclopentanemethanamine, 2-amino- (PCI)	114	$C_6H_{14}N_2$

Sample title: 4PTIPI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 1

	Prob.	CAS #	CON #	RQOF	K	OK	#PLG	TILT	%	CON	C	I	P	T
1.	05	506514	8241	"BIGOB	70	94	2	0	71	48				1s



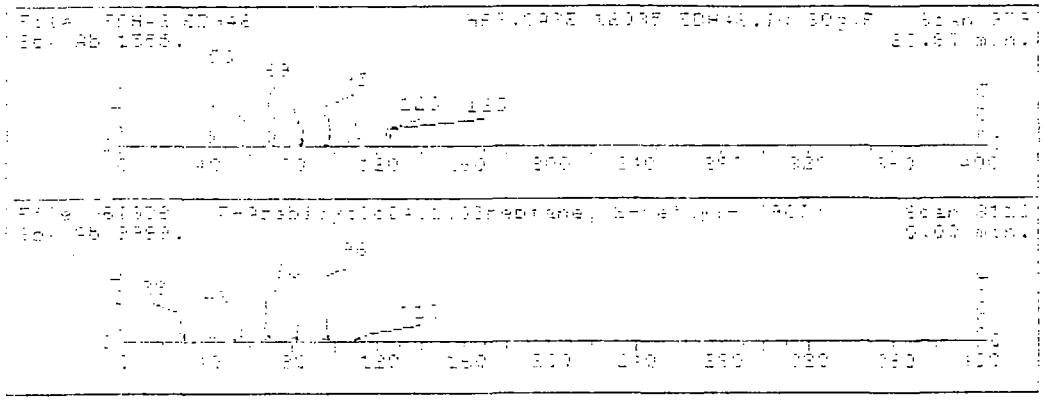
UNKNOWN

Unknown #.6
Count Time: 890622 18:09
Injected at: 890622 17:22
Pk Ht= 2203.00 Tentative Concentration is 640.00

1. Urea(benzene, 2-methyl-4-(2-methylbenzyl)- (PCI) 154 C16H18O

Sample File: ART141 Spectrum #: -1
Mass range: 1 Tilting option: S No. of ion ranges scanned: 57

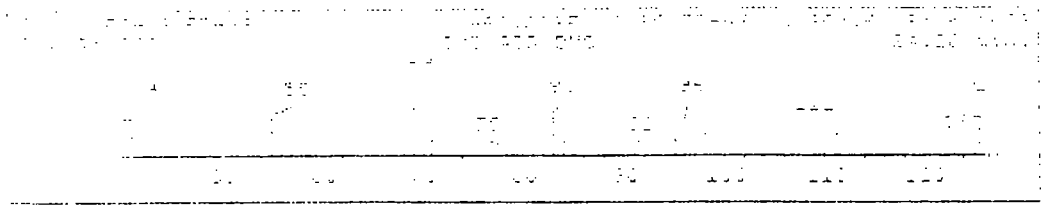
	Prob.	CAS #	CON #	FORMT	M	MK	#FLG	TILT	%	CON	C	I	R	IV
1.	19	8070944	8080	"81608	61	40	2	0	80	69	3	10		



UNKNOWN

Date and Time of injection: 6/22/89 17:22

Sample datafile name: >EDH42::03

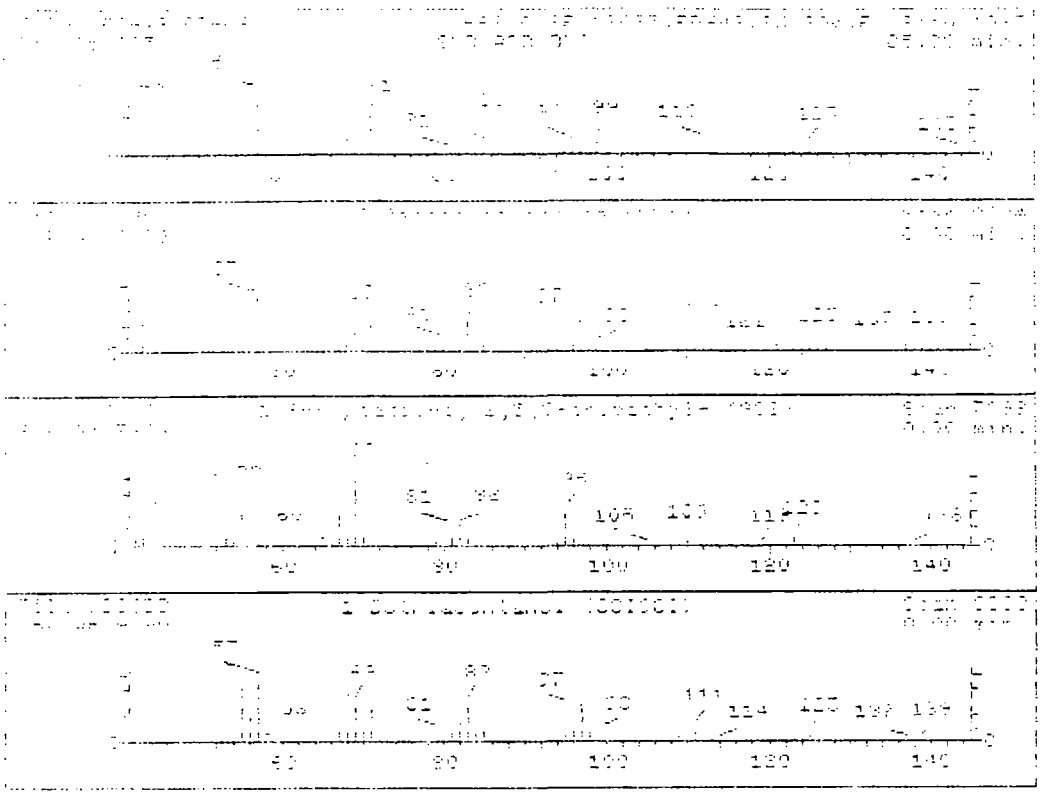


UNKNOWN

Unknown #1
Quant Time: 890622 18:07
Injected at: 890622 17:22
Mw Wt= 2-05.00 Tentative Concentration is 220.00

Sample File: AP1!F1 Spectrum #: -1

No data base entries were retrieved.



UNKNOWN HYDROCARBON

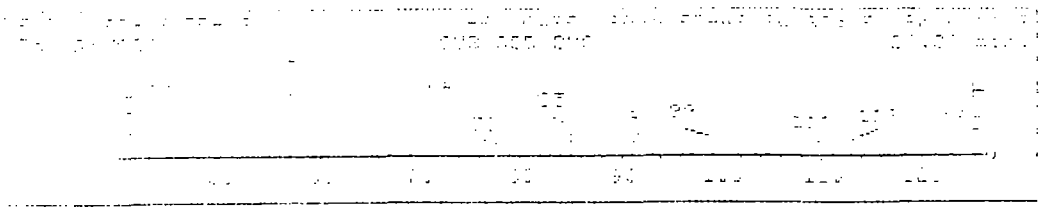
UNKNOWN HYDROCARBON

Unknown #.9
Quant Time: 990622 18:09
Initiated at: 890620 17:22
Pk Ht= 4267.00 Tentative Concentration is 748.00

1. 1-Pentatriacontene (8CI)	490	C35H70
2. 1,6-Heptadiene, 2,5,5-trimethyl- (9CI)	138	C10H18
3. 1-Octtriacontanol (8CI9CI)	466	C38H78O
4. 11-Tricosene (9CI)	322	C23H46
5. Cyclopentane, 1,1,3-trimethyl- (8CI9CI)	112	C8H16

Sample File: 4HTIF1 Spectrum #: -1
Search cmpd: 1 Filtering option: S No. of ion masses searched: 5.

	Prob.	CAS #	CON #	MOOT	K	UK	#FLG	TILT	%	CON	C	I	R	IU
1.	39	8971480	8334	"81GDB	76	96	1	0	81	43	12	09		
2.	16*	62039292	7949	"81GDB	65	38	2	-2	68	48	11	50		
3.	27	6624799	8333	"81GDB	63	113	2	0	69	37	10	17		
4.	20	50879646	8319	"81GDB	60	92	1	0	76	42	9	18		

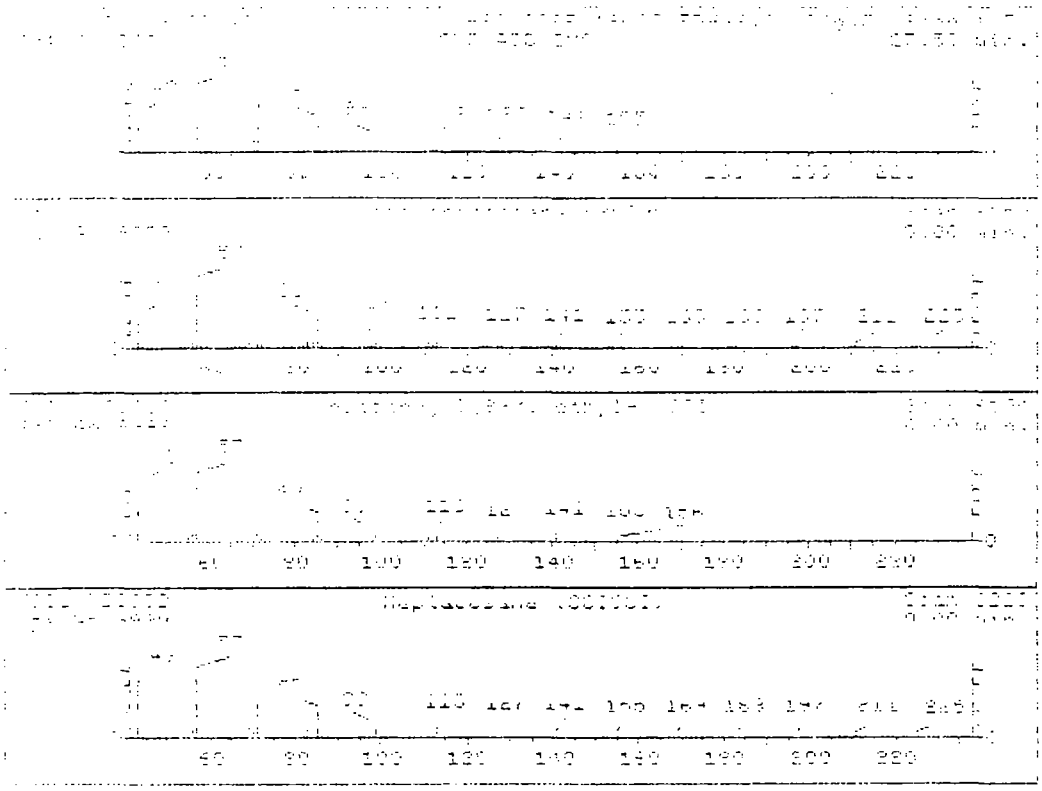


UNKNOWN HYDROCARBON

Unknown #:9
Start Time: [illegible] 18:04
Finished at: [illegible] 17:22
[illegible] Tentative Concentration is [illegible]

Search Filt: [illegible] Spectrum #: -1

No data base entries were retrieved.



Unknown #.1?
Current Time: [illegible] 18:04
Initial Time: [illegible] 17:22
PK Ht= 11164.00 Tentative Concentration is 1700.00

1.	Tritetracontane (8C19C1)	604 C47H96
2.	Undecane, 2,8-dimethyl- (8C1)	144 C13H28
3.	Heptadecane (8C19C1)	380 C17H36
4.	Decane (8C19C1)	310 C10H22
5.	Hexatriacontane (8C19C1)	506 C36H74
6.	Tetratriacontane (8C19C1)	478 C34H70
7.	Tetratetracontane (8C19C1)	618 C44H90

Sample file: MRT1?1 Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 60

	Prob.	CAS #	CON #	MOOT	K	UK	#FLG	FILT	%	CON	C	I	P	[illegible]
1.	75	2048017	6159	"81C09	87	95	1	-2	76	10	45	29		
2.	70	17301-03	6164	"81C03	76	75	1	-2	76	9	42	24		
3.	67	593497	6200	"81C05	77	87	1	0	100	15	73	27		
4.	67	629970	6201	"81C19	79	89	1	3	78	18	70	37		
5.	60	630028	6197	"81C04	74	83	2	0	100	17	30	19		
6.	49	14167-99	6203	"81C08	64	49	2	3	44	19	40	12		
7.	63	7498020	6406	"81C02	69	93	1	0	100	19	77	16		

BNA TIC CALCULATIONS

SAMPLE EDH42 (EDH42)

% Moist: 16 Wet: 30 g Dry: 25.2 g

FV/FVC = 2mL IV/W =

$$\text{TIC Multiplier} = \frac{40\ \mu g}{mL} \times \frac{FV\ (mL)}{IV/W\ (kg\ or\ L)} \approx 3174.60$$

$$\boxed{\text{TIC Amount} = \frac{ht\ TIC}{ht\ IS} \times \text{Multiplier}}$$

ht IS 1 _____ 3 _____ 5 _____

2 _____ 4 63 6 _____

	SCAN	IS	Height	Amount
1	12			680
2	889			380
3	925	63	7	350
4	962			640
5	979	63	6	300
6	1003			320
7	1087			390
8	1112			440
9	1171			1300
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

NOTE : _____

[illegible]

[illegible]

[illegible]

Chromatographic temperatures : [illegible]
Chromatographic times, min. : [illegible]
Chromatographic rate, [illegible]/min: [illegible]

[illegible]

[illegible]

Threshold: [illegible] Min Peak Height: [illegible] Max Peaks: 11 Sunshine: 1
Unknown: 0.00 Results File [illegible] Sorted by Ht/Wht INT

Peak #	R.T. min.	First scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	27.[illegible]	1[illegible]48	11[illegible]	11[illegible]	15134	98296	[illegible]	[illegible]	[illegible]
2	27.[illegible]	[illegible]	[illegible]	[illegible]	7203	148542	26124	[illegible]	[illegible]
3	5.19	10	12	1[illegible]	6490	37261	[illegible]	[illegible]	[illegible]
4	24.[illegible]	1109	1110	1116	4923	98229	[illegible]	[illegible]	10.744
5	25.[illegible]	1094	1097	1099	4767	79520	[illegible]	[illegible]	7.[illegible]
6	21.[illegible]	896	899	893	4[illegible]7	109415	20468	[illegible]	11.3[illegible]
7	24.[illegible]	1001	1003	1007	3605	100430	12865	[illegible]	7.1[illegible]
8	[illegible]	[illegible]	[illegible]	[illegible]	3410	71197	[illegible]	[illegible]	7.[illegible]
9	[illegible]	[illegible]	[illegible]	[illegible]	2[illegible]15	[illegible]	[illegible]	[illegible]	[illegible]
10	[illegible]	[illegible]	[illegible]	[illegible]	2613	52030	[illegible]	[illegible]	[illegible]
11	[illegible]	[illegible]	[illegible]	[illegible]	2510	47[illegible]	[illegible]	[illegible]	[illegible]

Sum of corrected areas: 179782.

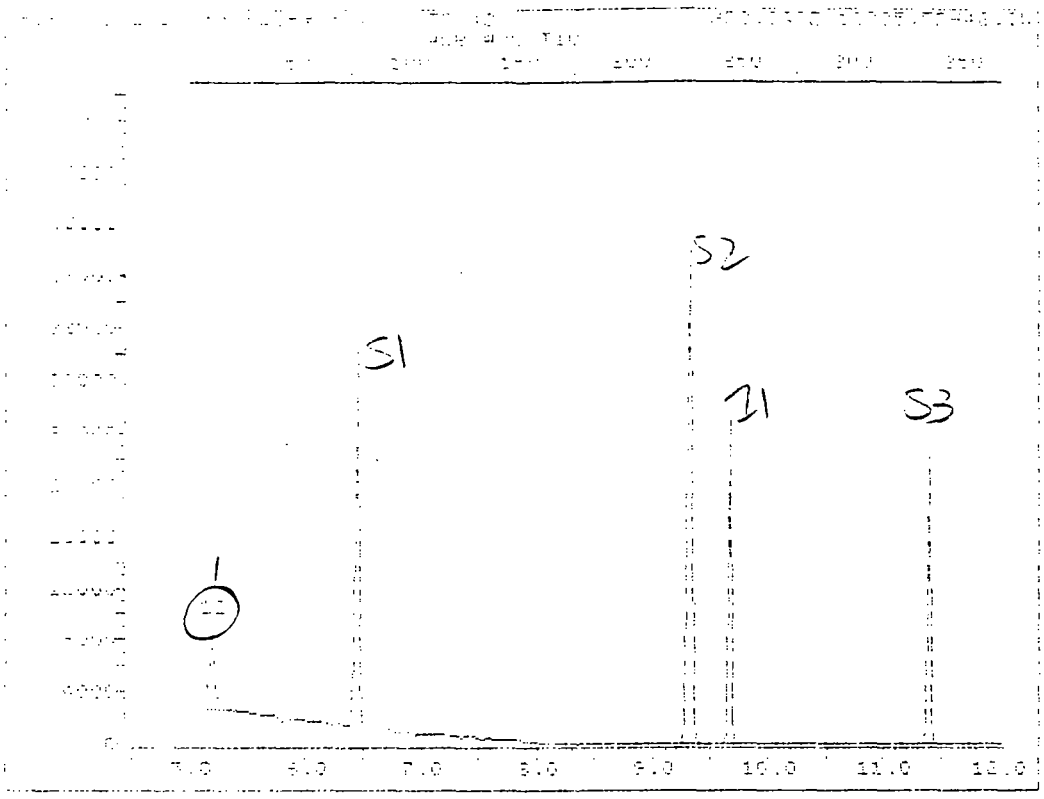
Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Peak Ht.	Retention Time	Unknown Window
1	40.0	24916.	9.[illegible]7	4.9[illegible] - 11.55
2	40.0	39083.	13.42	11.[illegible] - 1[illegible].1[illegible]
3	40.0	3[illegible]321.	1[illegible].83	16.13 - 21.09
4	40.0	34729.	23.3[illegible]	21.09 - 27.43
5	40.0	30252.	31.52	27.43 - 33.5[illegible]
6	40.0	33343.	35.62	3[illegible].57 - 4[illegible].0[illegible]

Dilution Factor = ********

Unknown Concentration = $\frac{\text{Conc Int Std}}{\text{Pk.Ht.Int.Std.}}$ * Dil Factor * Pk.Ht.Unknown

2:31 PM WED., 28 JUNE, 1989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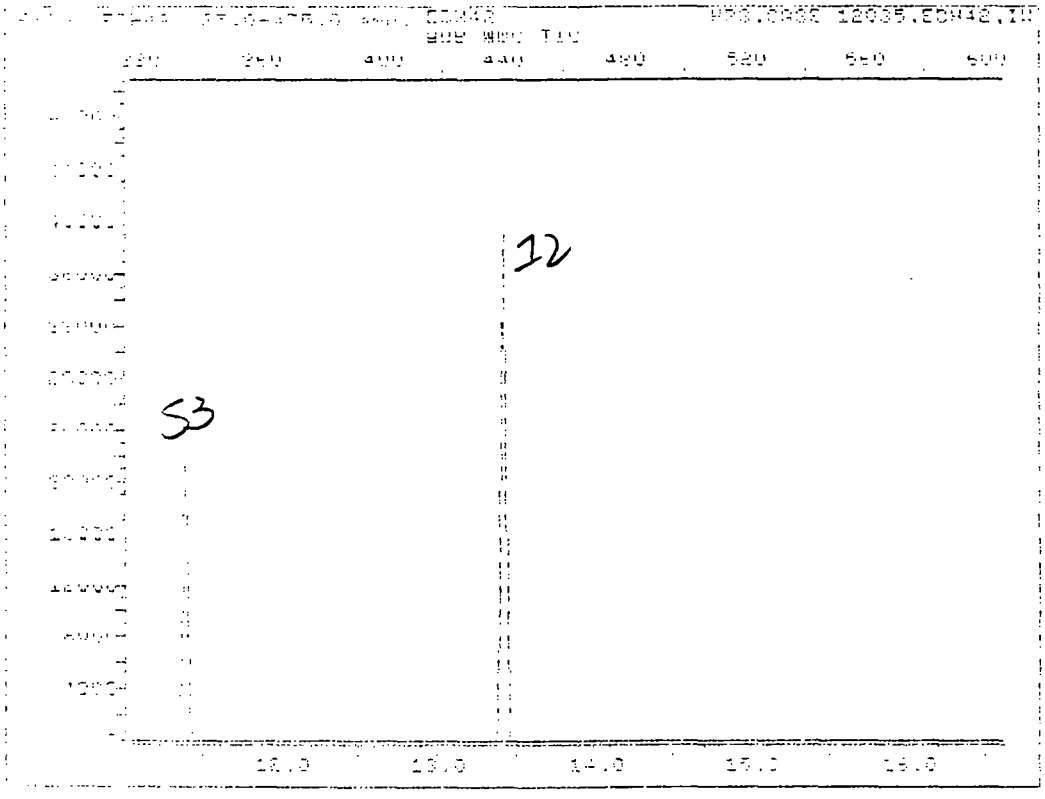
S3
1
11
7.0
8.0
9.0
10.0
11.0
12.0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S3
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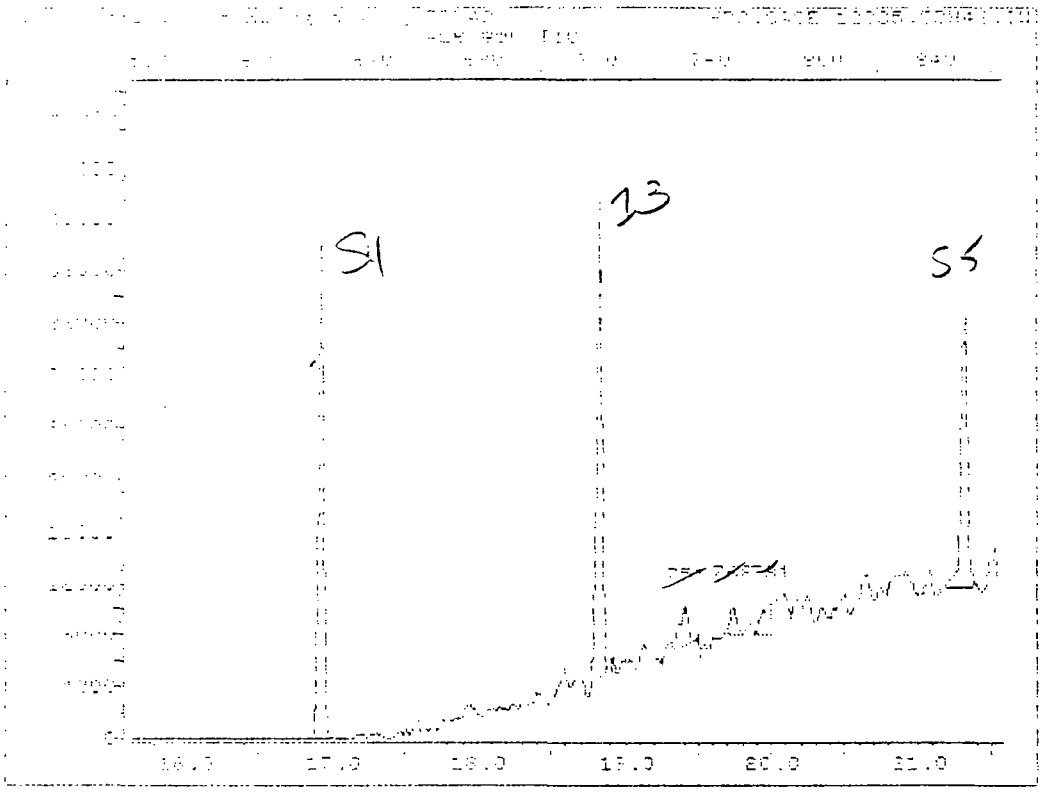
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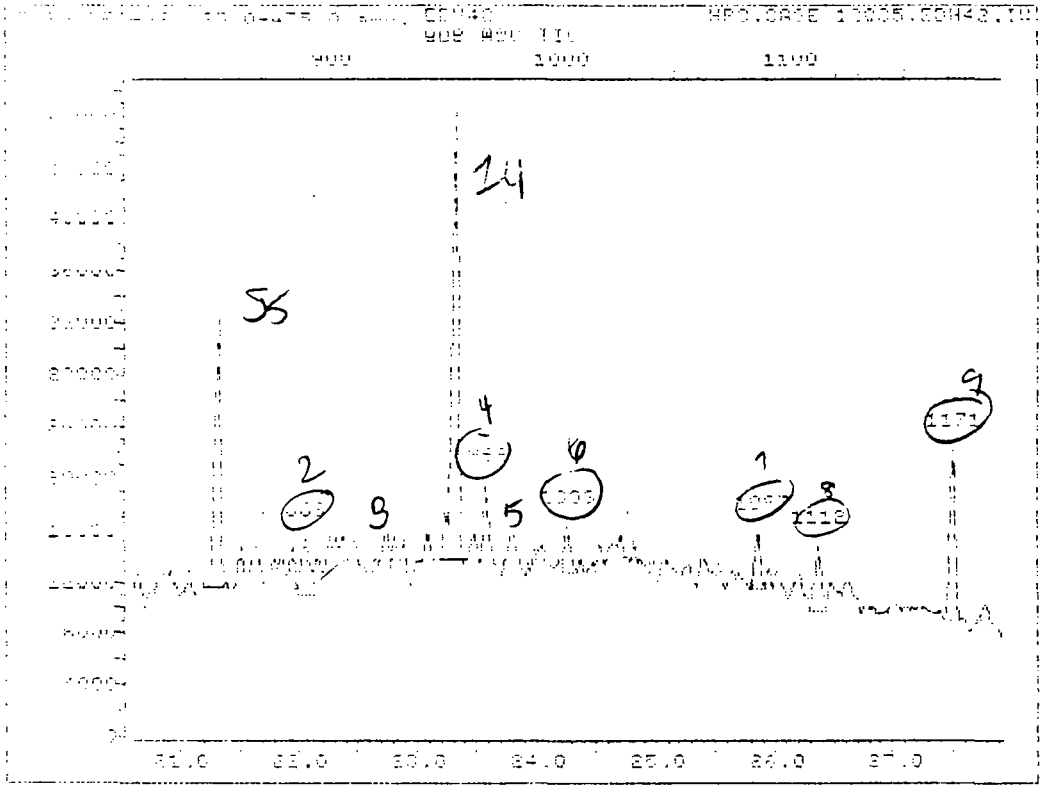
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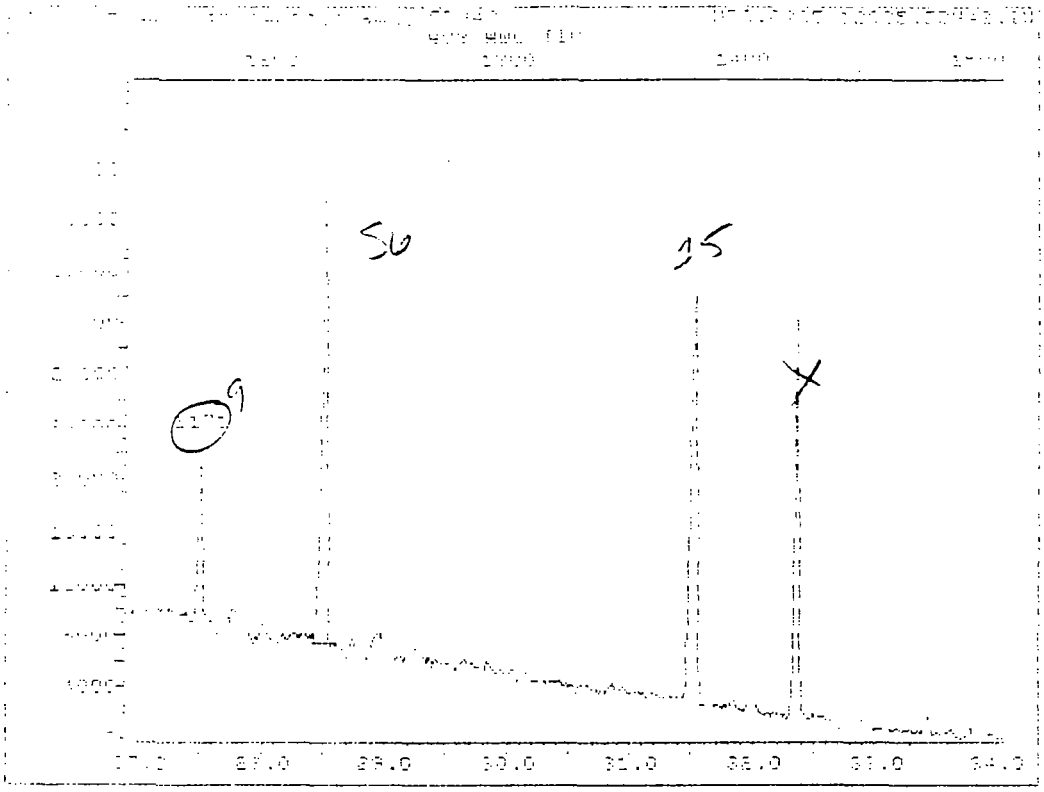
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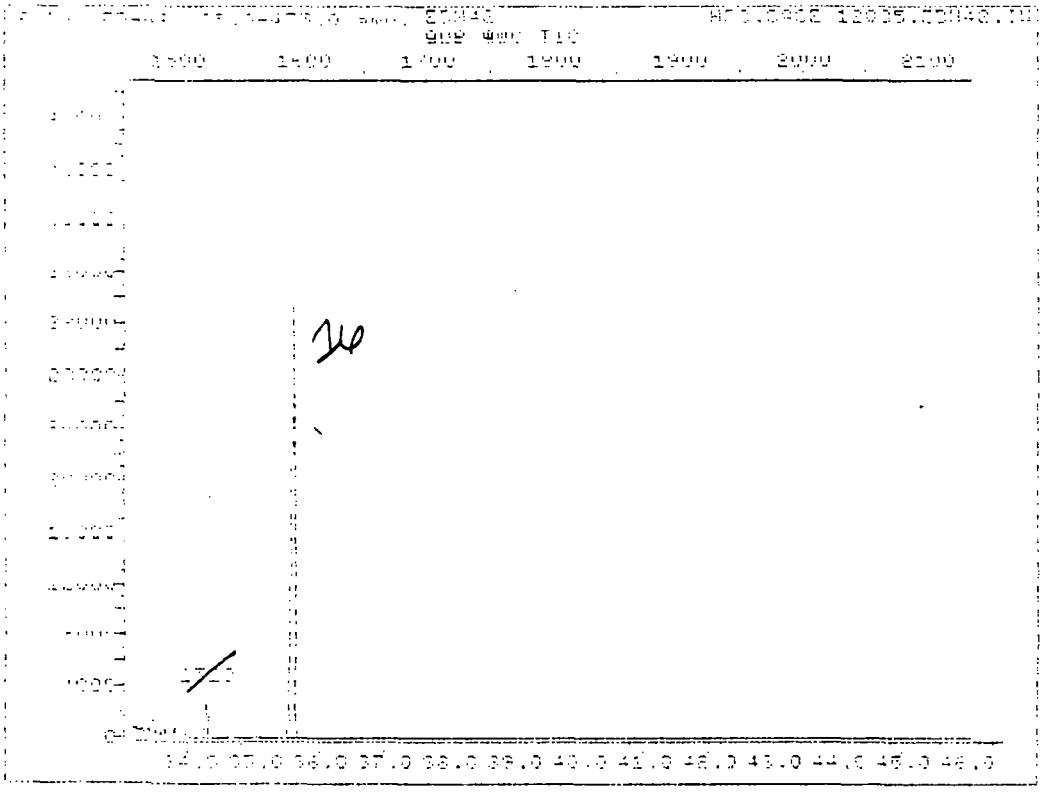
26

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH43

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH43

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EDH43

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 7 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/19/89

GPC Cleanup: (Y/N) Y pH: 8.2 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	710	U
111-44-4	bis(2-Chloroethyl)ether	710	U
95-57-8	2-Chlorophenol	710	U
541-73-1	1,3-Dichlorobenzene	710	U
106-46-7	1,4-Dichlorobenzene	710	U
100-51-6	Benzyl alcohol	710	U
95-50-1	1,2-Dichlorobenzene	710	U
95-48-7	2-Methylphenol	710	U
108-60-1	bis(2-Chloroisopropyl)ether	710	U
106-44-5	4-Methylphenol	710	U
621-64-7	N-Nitroso-di-n-propylamine	710	U
67-72-1	Hexachloroethane	710	U
98-95-3	Nitrobenzene	710	U
78-59-1	Isophorone	710	U
88-75-5	2-Nitrophenol	710	U
105-67-9	2,4-Dimethylphenol	710	U
65-85-0	Benzoic acid	3500	U
111-91-1	bis(2-Chloroethoxy)methane	710	U
120-83-2	2,4-Dichlorophenol	710	U
120-82-1	1,2,4-Trichlorobenzene	710	U
91-20-3	Naphthalene	710	U
106-47-8	4-Chloroaniline	710	U
87-68-3	Hexachlorobutadiene	710	U
59-50-7	4-Chloro-3-methylphenol	710	U
91-57-6	2-Methylnaphthalene	710	U
77-47-4	Hexachlorocyclopentadiene	710	U
88-06-2	2,4,6-Trichlorophenol	710	U
95-95-4	2,4,5-Trichlorophenol	3500	U
91-58-7	2-Chloronaphthalene	710	U
88-74-4	2-Nitroaniline	3500	U
131-11-3	Dimethylphthalate	710	U
208-96-8	Acenaphthylene	710	U
606-20-2	2,6-Dinitrotoluene	710	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH43

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH43

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EDH43

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 7 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/19/89

GPC Cleanup: (Y/N) Y pH: 8.2 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3500	U
83-32-9	Acenapthene	710	U
51-28-5	2,4-Dinitrophenol	3500	U
100-02-7	4-Nitrophenol	3500	U
132-64-9	Dibenzofuran	710	U
121-14-2	2,4-Dinitrotoluene	710	U
84-66-2	Diethylphthalate	710	U
7005-72-3	4-Chlorophenyl-phenylether	710	U
86-73-7	Fluorene	710	U
100-01-6	4-Nitroaniline	3500	U
534-52-1	4,6-Dinitro-2-methylphenol	3500	U
86-30-6	N-Nitrosodiphenylamine (1)	710	U
101-55-3	4-Bromophenyl-phenylether	710	U
118-74-1	Hexachlorobenzene	710	U
87-86-5	Pentachlorophenol	510	J
85-01-8	Phenanthrene	710	U
120-12-7	Anthracene	710	U
84-74-2	Di-n-butylphthalate	710	U
206-44-0	Fluoranthene	710	U
129-00-0	Pyrene	710	U
85-68-7	Butylbenzylphthalate	710	U
91-94-1	3,3'-Dichlorobenzidine	1400	U
56-55-3	Benzo(a)anthracene	710	U
218-01-9	Chrysene	710	U
117-81-7	bis(2-Ethylhexyl)phthalate	890	~~B~~ U 10/11/87
117-84-0	Di-n-octylphthalate	710	U
205-99-2	Benzo(b)fluoranthene	710	U
207-08-9	Benzo(k)fluoranthene	710	U
50-32-8	Benzo(a)pyrene	710	U
193-39-5	Indeno(1,2,3-cd)pyrene	710	U
53-70-3	Dibenz(a,h)anthracene	710	U
191-24-2	Benzo(g,h,i)perylene	710	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDH43

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH43

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EDH43

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 7 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/19/89

GPC Cleanup : (Y/N) Y pH: 8.2 Dilution Factor: 1.000

Number TICs found: 7

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	5.30	840	JB
2.	UNKNOWN	23.74	500	J
3.	UNKNOWN HYDROCARBON	23.93	290	J
4.	UNKNOWN HYDROCARBON	26.01	340	J
5.	UNKNOWN HYDROCARBON	26.51	320	J
6.	UNKNOWN HYDROCARBON	27.65	1100	JB
7.	UNKNOWN	38.93	660	J
8.				
9.				
10.				
11.				
12.				
13.				
14.				
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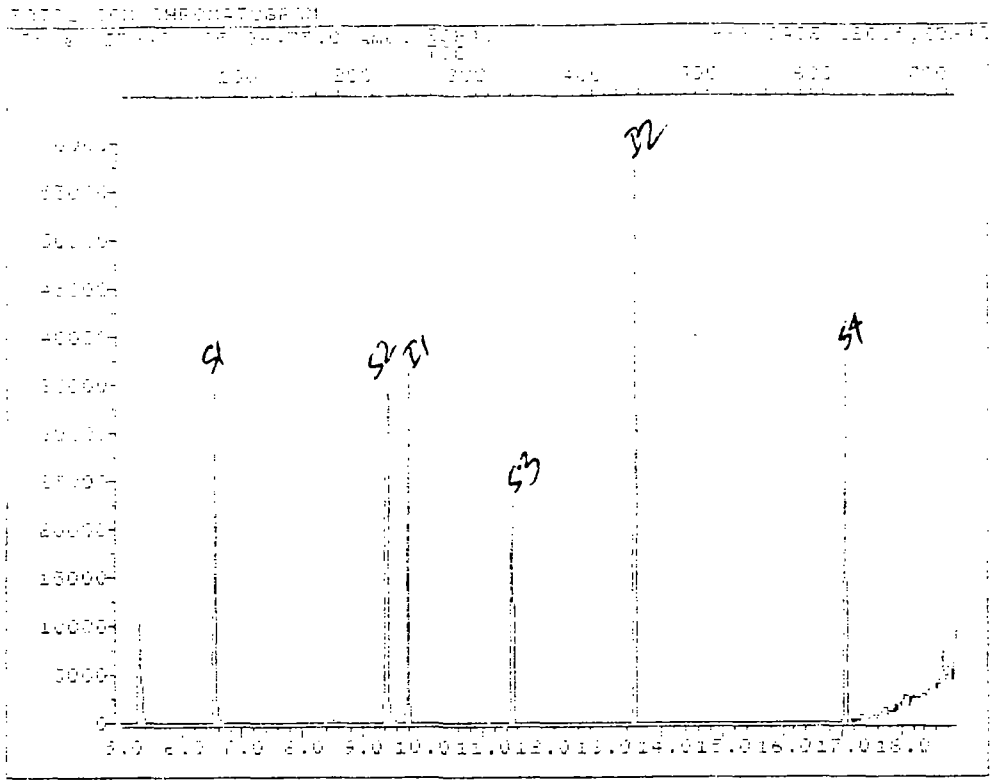


Data File: [illegible]D3 Quant Output File: [illegible]

Name: [illegible]

Mass: PRF.CRSE 12035,50447.14 50g.FUE 2x1.0x/m/09.gM 6 SRT.STL410

Id File: ID BFA[illegible]

Title: GP GHA Standards

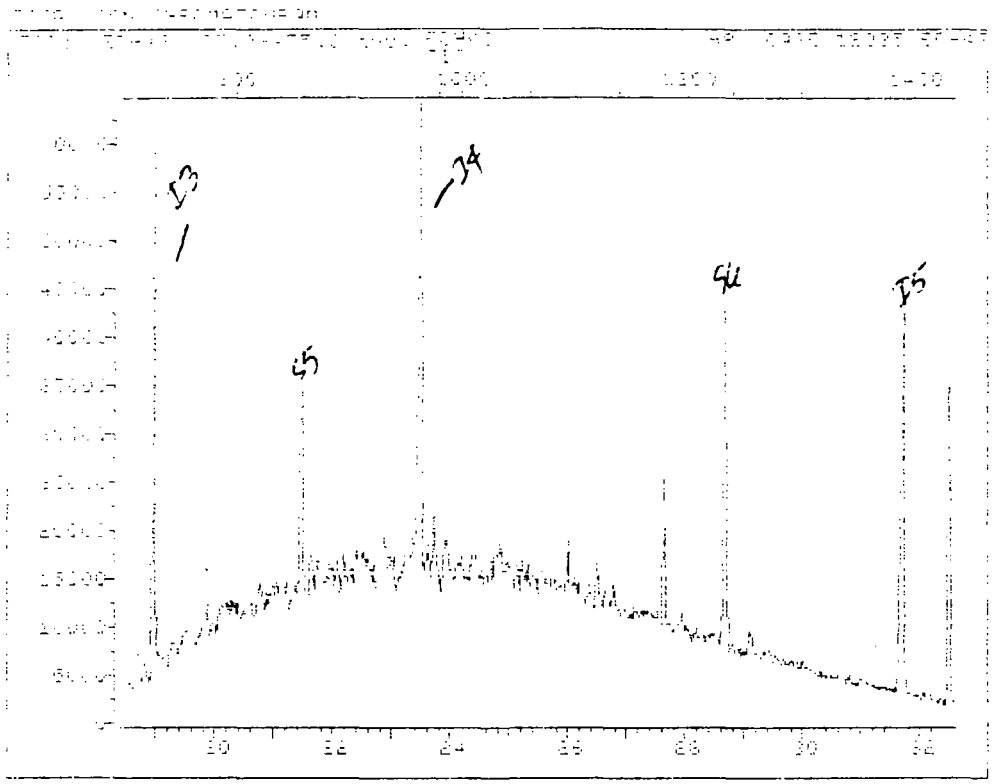
Last Calibration: 890A19 16:[illegible]

Operator ID: DEN[illegible]

Quant Time: 890[illegible] 09:[illegible]

Injected at: 890619 2[illegible]:4[illegible]

Page 1 of 5

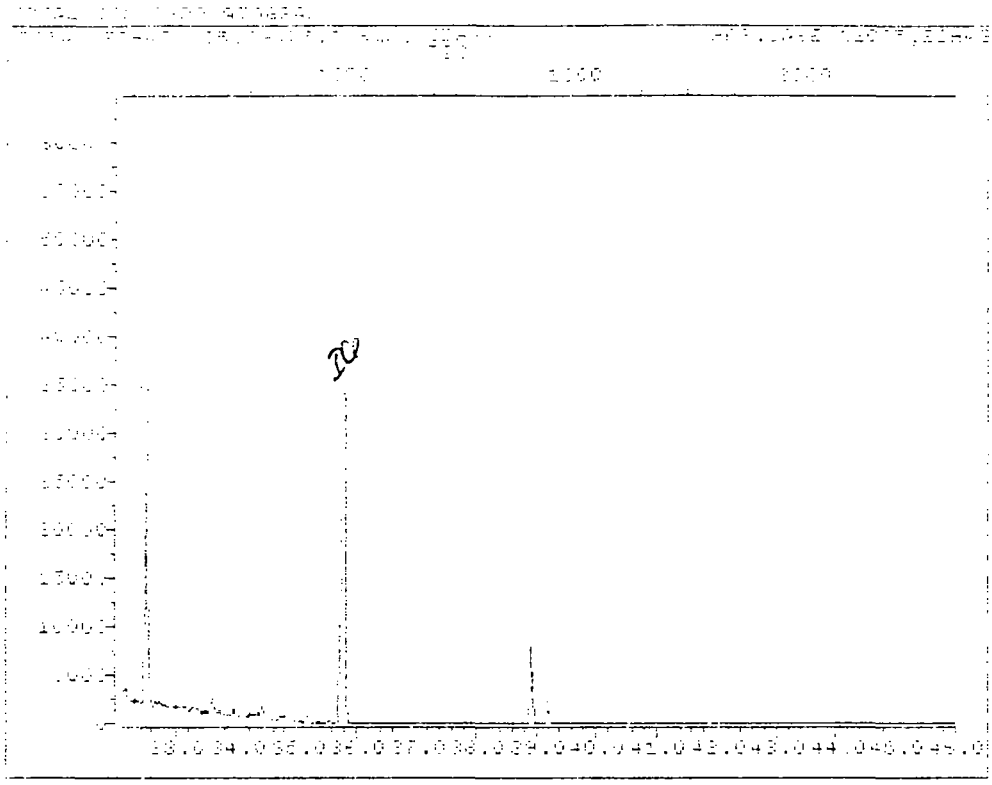


Data File: >ED#45:03 Quant Output File: >ED#45:SC
Method: SUM40
Misc: 425,CASE 12055,ED#45,IW 5ug,FVC 2ml,06/06/89,pH 8,CMT,BT 415

Lo File: LO_BLH:SL
Files: HP DNA Standards
Last Calibration: 890619 Ls:34

Operator ID: DENNIS
Quant Time: 890620 08:00
Injected at: 890619 23:48

(1) page 2 of 3



Data File: [illegible] Quant Output File: [illegible]
Power [illegible]
Mode: [illegible] 30g,FUC 2ml,0s/0s/60,p[illegible]

[illegible] File: [illegible]
Title: HP 8MA Standards
Last Calibration: 890619 16:[illegible]

Operator ID: DENNIS
Quant Time: 890620 0[illegible]
Inserted at: 890619 21:48

TIC page 1 of 1

QUANT REPORT

% Moist.: 2.32 Wet: 30 g Dry: 29.259

Operator ID: DENNIS Quant Rev: 6 Quant Time: 890620 08:26
Output File: ^EDH43::SC Injected at: 890619 23:48
Data File: >EDH43::D3 Dilution Factor: 1.00000
Name: EDH43
Misc: HP3,CASE 12035,EDH43,IW 30g,FVC 2ml,06/06/89,pH 8,%M7,BTL#13

ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890619 16:34

% Sur Rec = Amtx FV x 100 / Amt spiked

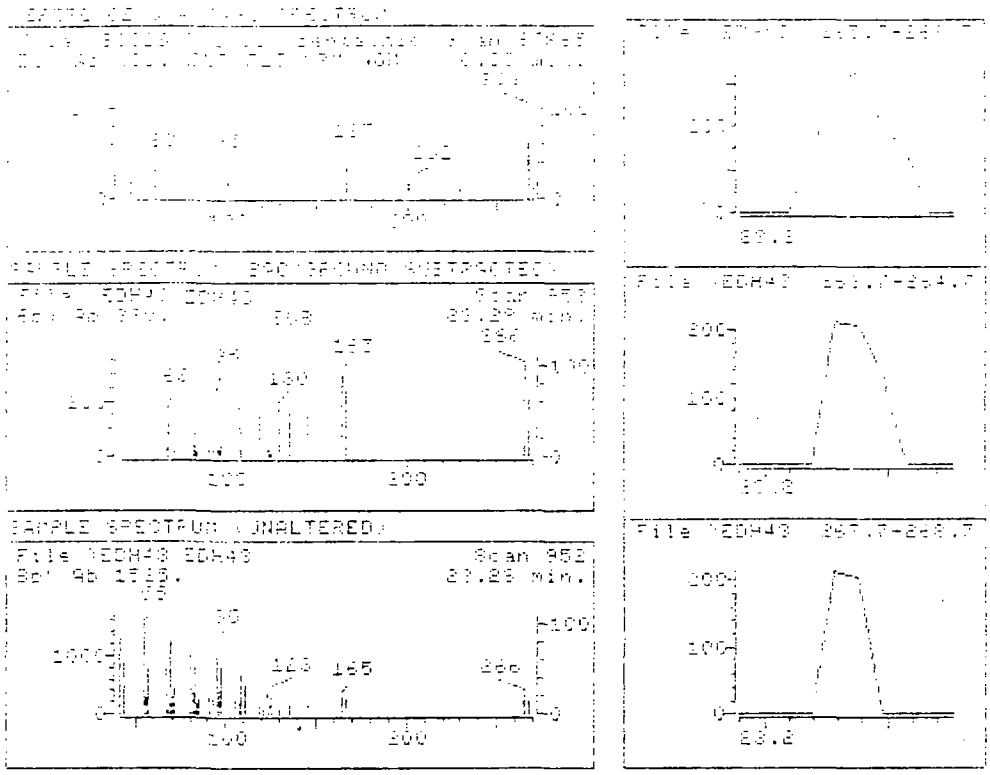
A = 200 BN = 100

Cmpd Fd = Amt (ppm) x FV / IW

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.79	152.0	14260	40.00	ng/uL	95
2)	2-Fluorophenol	6.55	112.0	25648	61.65	ng/uL	96
3)	Phenol-d5	9.42	99.0	45131	70.52	ng/uL	81
4)	Phenol	0.00	94.0	0	0.00	ng/uL	
5)	bis(-2-Chloroethyl)Ether	0.00	93.0	0	0.00	ng/uL	
6)	2-Chlorophenol	0.00	128.0	0	0.00	ng/uL	
7)	1,3-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
8)	1,4-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
9)	Benzyl Alcohol	0.00	108.0	0	0.00	ng/uL	
10)	1,2-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
11)	2-Methylphenol	0.00	108.0	0	0.00	ng/uL	
12)	bis(2-Chloroisopropyl)ether	0.00	45.0	0	0.00	ng/uL	
13)	4-Methylphenol	0.00	108.0	0	0.00	ng/uL	
14)	N-Nitroso-Di-n-propylamine	0.00	70.0	0	0.00	ng/uL	
15)	Hexachloroethane	0.00	117.0	0	0.00	ng/uL	
16)	*d8-Naphthalene	13.56	136.0	61996	40.00	ng/uL	89
17)	Nitrobenzene-d5	11.52	82.0	17374	29.38	ng/uL	84
18)	Nitrobenzene	0.00	77.0	0	0.00	ng/uL	
19)	Isophorone	0.00	82.0	0	0.00	ng/uL	
20)	2-Nitrophenol	0.00	139.0	0	0.00	ng/uL	
21)	2,4-Dimethylphenol	0.00	107.0	0	0.00	ng/uL	
22)	Benzoic Acid	0.00	105.0	0	0.00	ng/uL	
23)	bis(-2-Chloroethoxy)Methane	0.00	93.0	0	0.00	ng/uL	
24)	2,4-Dichlorophenol	0.00	162.0	0	0.00	ng/uL	
25)	1,2,4-Trichlorobenzene	0.00	180.0	0	0.00	ng/uL	
26)	Naphthalene	0.00	128.0	0	0.00	ng/uL	
27)	4-Chloroaniline	0.00	127.0	0	0.00	ng/uL	
28)	Hexachlorobutadiene	0.00	225.0	0	0.00	ng/uL	
29)	4-Chloro-3-methylphenol	0.00	107.0	0	0.00	ng/uL	
30)	2-Methylnaphthalene	0.00	142.0	0	0.00	ng/uL	
31)	*d10-Acenaphthene	18.98	164.0	33206	40.00	ng/uL	94
32)	Hexachlorocyclopentadiene	0.00	237.0	0	0.00	ng/uL	
33)	2,4,6-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
34)	2,4,5-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
35)	2-Chloronaphthalene	0.00	162.0	0	0.00	ng/uL	
36)	2-Fluorobiphenyl	17.06	172.0	32713	37.42	ng/uL	94
37)	2-Nitroaniline	0.00	65.0	0	0.00	ng/uL	
38)	Dimethyl Phthalate	0.00	163.0	0	0.00	ng/uL	
39)	Acenaphthylene	0.00	152.0	0	0.00	ng/uL	
40)	2,6-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
41)	3-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
42)	Acenaphthene	0.00	153.0	0	0.00	ng/uL	
43)	2,4-Dinitrophenol	0.00	184.0	0	0.00	ng/uL	
44)	4-Nitrophenol	0.00	109.0	0	0.00	ng/uL	
45)	Dibenzofuran	0.00	168.0	0	0.00	ng/uL	
46)	2,4-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
47)	Diethylphthalate	0.00	149.0	0	0.00	ng/uL	
48)	4-Chlorophenyl-phenylether	0.00	204.0	0	0.00	ng/uL	
49)	Fluorene	0.00	166.0	0	0.00	ng/uL	
50)	4-Nitroaniline	0.00	138.0	0	0.00	ng/uL	

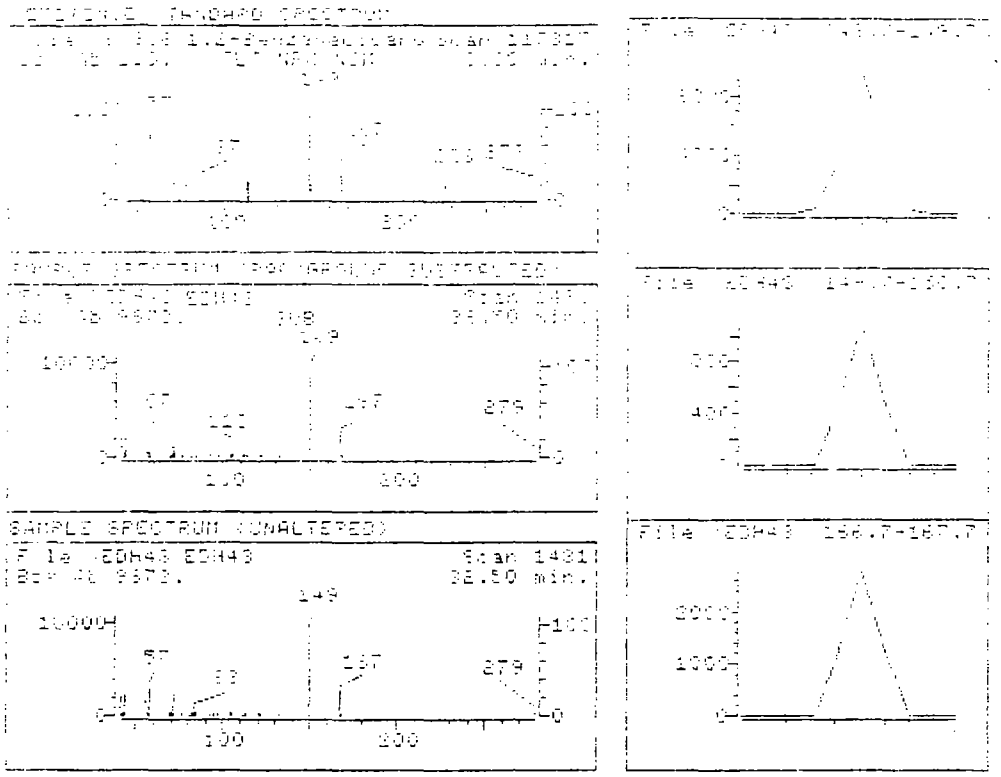
50)	4-Nitroaniline	0.00	198.0	0	0.00 ng/uL	
51)	2,4,6-Tribromophenol	21.47	330.0	5217	49.53 ng/uL	91
52)	*d10-Phenanthrene	23.51	188.0	55444	40.00 ng/uL	99
53)	4,6-Dinitro-2-methylphenol	0.00	198.0	0	0.00 ng/uL	
54)	N-Nitrosodiphenylamine	0.00	169.0	0	0.00 ng/uL	
55)	4-Bromophenyl-phenylether	0.00	248.0	0	0.00 ng/uL	
56)	Hexachlorobenzene	0.00	284.0	0	0.00 ng/uL	
57)	Pentachlorophenol	23.28	266.0	1282	7.11 ng/uL	99
58)	Phenanthrene	0.00	178.0	0	0.00 ng/uL	
59)	Anthracene	0.00	178.0	0	0.00 ng/uL	
60)	Di-n-Butylphthalate	0.00	149.0	0	0.00 ng/uL	
61)	Fluoranthene	0.00	202.0	0	0.00 ng/uL	
62)	*d12-Chrysene	31.73	240.0	50032	40.00 ng/uL	85
63)	Pyrene	0.00	202.0	0	0.00 ng/uL	
64)	Terphenyl-d14	28.69	244.0	34267	28.90 ng/uL	96
65)	Butylbenzylphthalate	0.00	149.0	0	0.00 ng/uL	
66)	3,3'-Dichlorobenzidine	0.00	252.0	0	0.00 ng/uL	
67)	Benzo(a)Anthracene	0.00	228.0	0	0.00 ng/uL	
68)	Chrysene	0.00	228.0	0	0.00 ng/uL	
69)	Bis(2-Ethylhexyl)Phthalate	32.50	149.0	21082	12.42 ng/uL	96
70)	*d12-Perylene	35.81	264.0	52275	40.00 ng/uL	90
71)	Di-n-octyl phthalate	0.00	149.0	0	0.00 ng/uL	
72)	Benzo(b)fluoranthene	0.00	252.0	0	0.00 ng/uL	
73)	Benzo(k)Fluoranthene	0.00	252.0	0	0.00 ng/uL	
74)	Benzo(a)Pyrene	0.00	252.0	0	0.00 ng/uL	
75)	Indeno(1,2,3-cd)Pyrene	0.00	276.0	0	0.00 ng/uL	
76)	Dibenz(a,h)Anthracene	0.00	278.0	0	0.00 ng/uL	
77)	Benzo(g,h,i)Perylene	0.00	276.0	0	0.00 ng/uL	

* Compound is ISTD



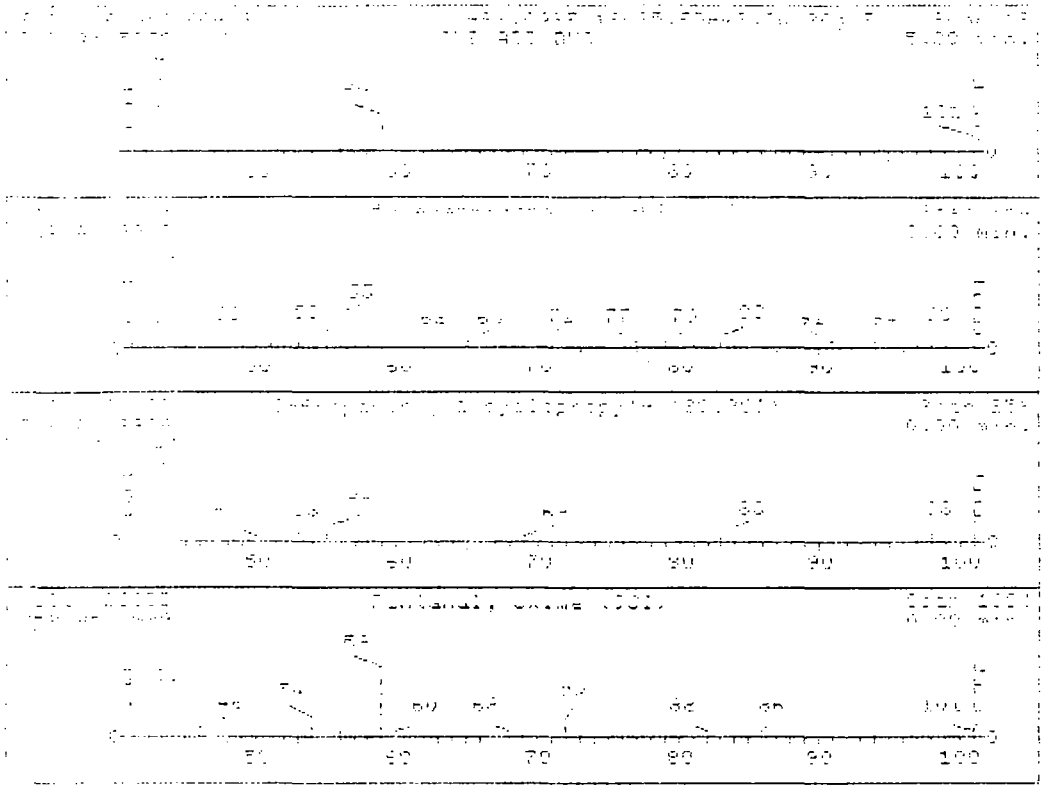
Data File: EDH43::D3 Quant Output File: EDH4F::SC
Name: EDH43
Misc: KP3,CASE 12035,EDH43,IW 30g,FVC 2ml,06/06/89,pH 8,SMP.BTL#13
Quant Time: 890630 08:26 Quant ID File: ID_BCM::SC
Injected at: 890619 23:46 Last Calibration: 890619 18:34

Compound No: 57
Compound Name: Pentachlorophenol
Scan Number: 952
Retention Time: 23.28 min.
Quant Ion: 266.0
Area: 1282
Concentration: 7.11 ng/ul
Qvalue: 99



Name: EDH43
Disc: HP3,EASE 10035,EDH47,IW 50g,FUC 2ml,06/06 99,oH 8,SM7,27L#13
Start Time: 1996/20 08:26 User ID File: ID_BOB:57
Injected at: 1996/19 23:48 Last Calibration: 1996/19 16:54

Compound No: 4
Compound Name: Bis(2-Ethylhexyl)Phthalate
Scan Number: 1481
Retention Time: 38.50 min.
Quant Ion: 149.0
Area: 21082
Concentration: 13.42 ng/uL
Qvalue: 96



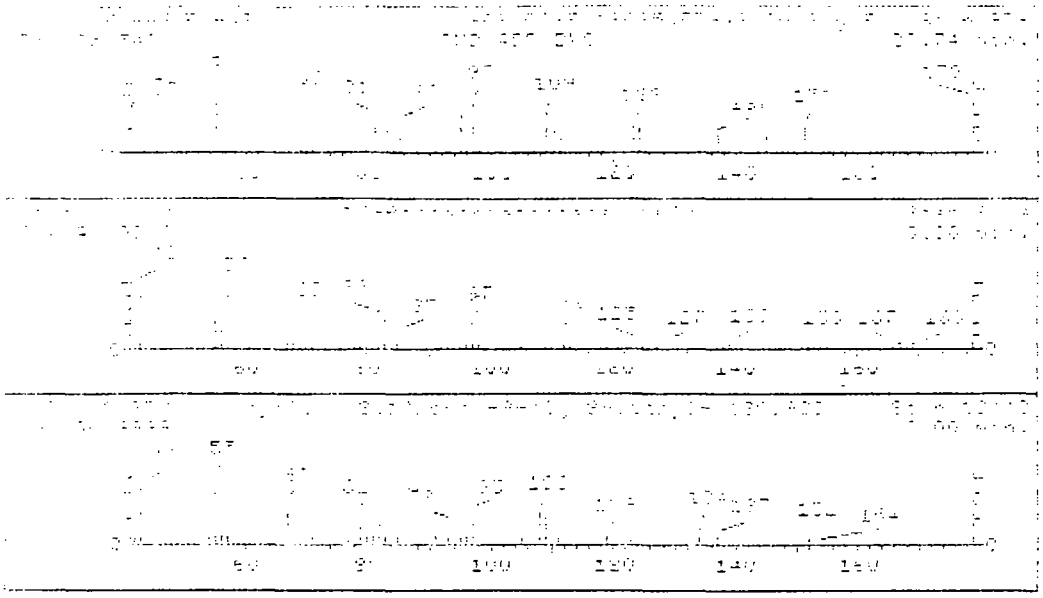
UNKNOWN B

Unknown #1
Start Time: 890620 08:26
Initial Sf: 890619 23:48
Pk Ht= 10624.00 Tentative Concentration is 940.0L

1. 4-Hexen-2-one (9CI)(CI) 99 C6H10O
2. 2-Propanone, 1-cyclopropyl- (9CI)(CI) 98 C6H10O
3. Pentanal, oxime (9CI) 101 C5H11NO

Sample file: APTIFI Spectrum #: -1
Search based: 1 Filtering option: S No. of ion ranges searched: 40

	Prob.	CAS #	COM #	FORM	M	PK	#FLG	TILT	%	CUM	C	I	P	IN
1.	25*	109499	254	"B1GO2	20	41	1	0	99	41		9		14
2.	19*	4160762	246	"B1LU8	24	41	1	0	99	46		7		14



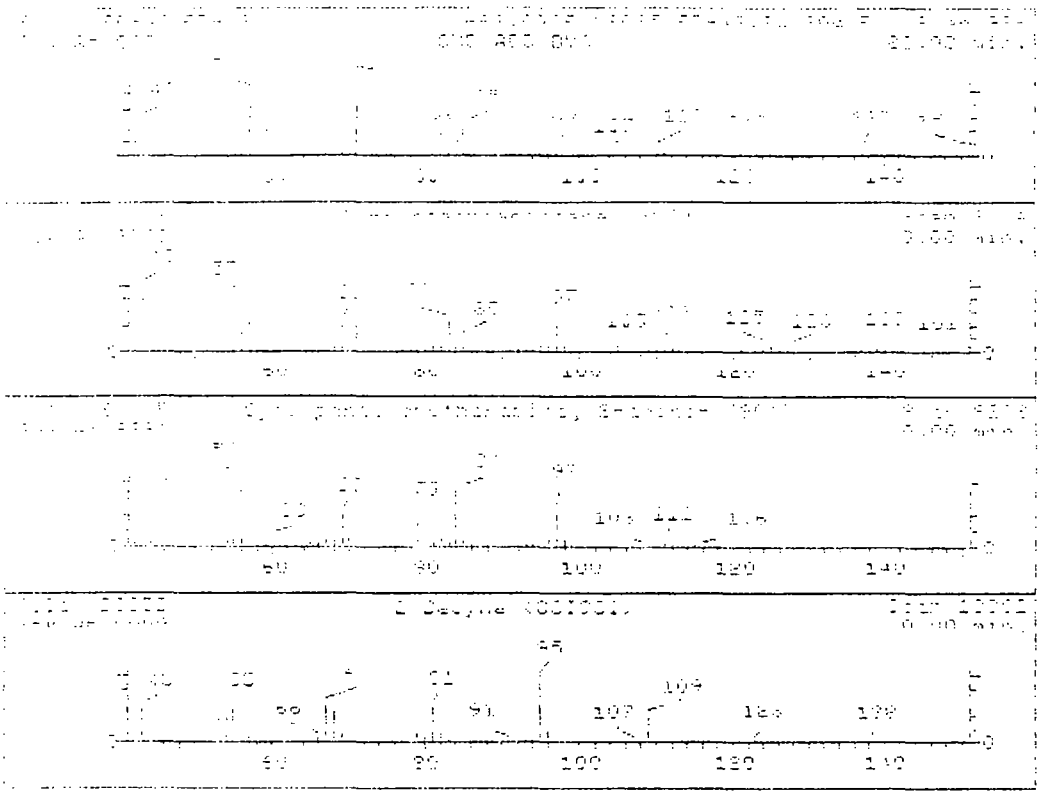
UNKNOWN

Unknown #.6
Quant Time: 890620 08:06
Initiated at: 890619 23:40
PK Ht= 9456.00 Tentative Concentration is 500.00

1. 1,4-Pentatriacontene (SCI) 490 C35H70
2. Bicyclo[3.3.1]nonan-9-ol, 9-methyl- (SCI,PCI) 154 C10H18O

Sample File: AFTIF1 Spectrum #: -1
Search speed: 1 Tilting action: S No. of ion ranges searched: 54

	Prob.	CAS #	CON #	FWGT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	40	6971400	8174	"SICUB	102	59	1	-7	66	47	17			F1



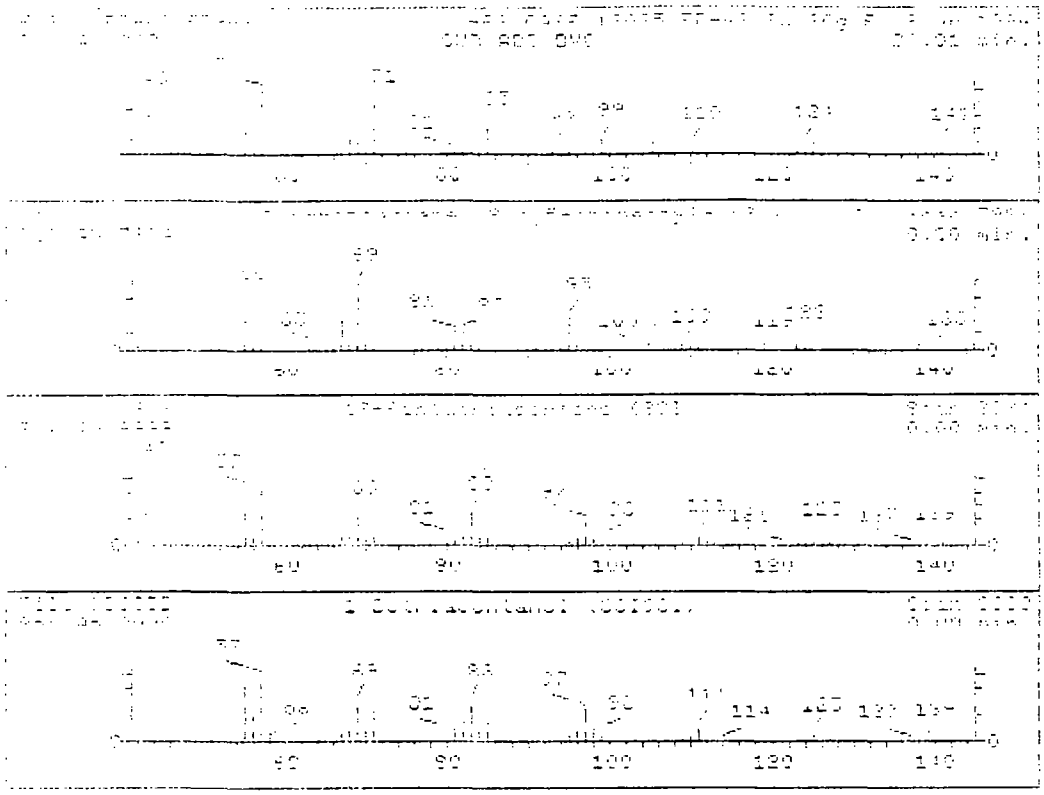
UNKNOWN HYDROCARBON

Unknown #.2
Count Time: 890420 08:26
Injected at: 840819 02:48
Pk Ht= 4896.00 Tentative Concentration is 290.00

1. 1,7-Pentatriacontene (BCI) 490 C35H70
2. Cyclopentanemethanamine, 2-amino- (PCI) 114 C6H14N2
3. 2-Octene (BCIPCI) 112 C8H16

Source file: PBTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 54

	Prob.	CAS #	COM #	ROOT	%	UK	#FLG	TILT	%	CON	C	I	R	[illegible]
1.	24	8471400	8334	"81608	75	96	1	-1	79	49		8		10



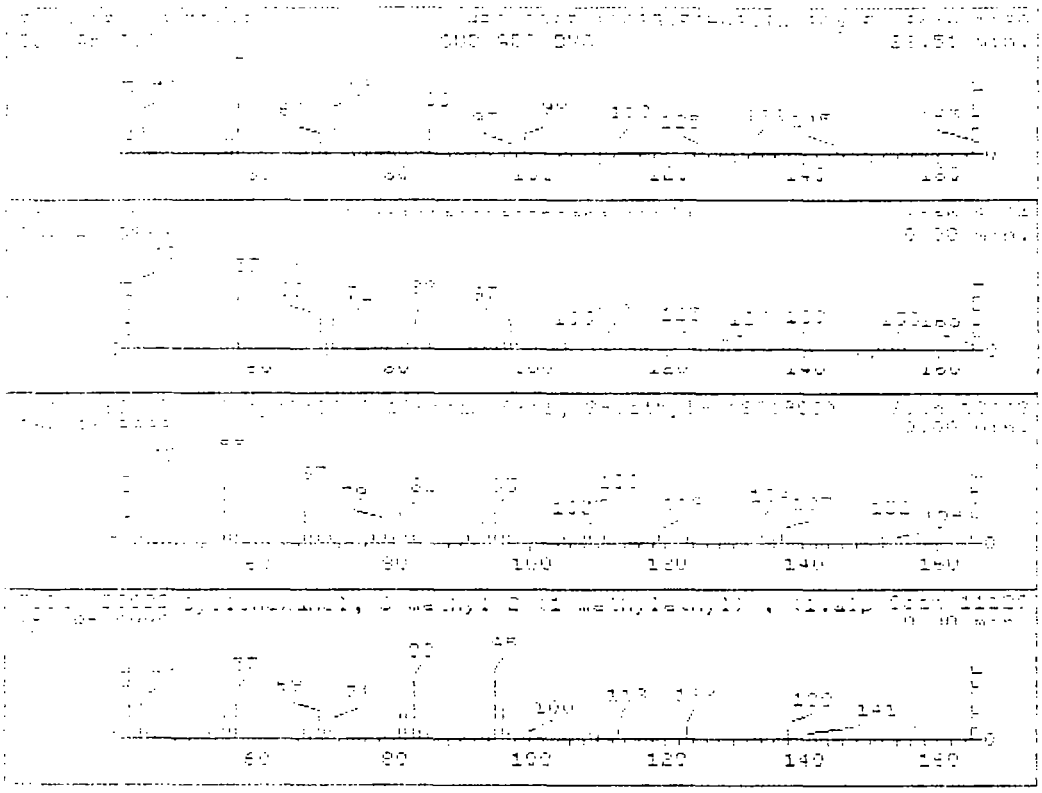
UNKNOWN HYDROCARBON

Unknown #,P
Quant Time: 890620 08:26
Injected at: 890619 23:48
Pk Ht= F699.00 Tentative Concentration is 240.00

1. 1,6 Heptadiene, 2,5,5-trimethyl- (9CI)	138	C10H18
2. 17-Pentatriacontene (8CI)	490	C35H70
3. 1-Dotriacontanol (8CI9CI)	466	C32H66O
4. 11-Tricosene (9CI)	322	C23H46
5. Pistamide, N-(2-ethoxy-3,6-dihydro-6-methyl-2H-pyran -6-yl)- (9CI)	199	C10H17NO3
6. 3-Octyne, 2-methyl- (9CI)	124	C9H16

Sample File: 89TIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 43

	Prob.	CAS #	CON #	ROOT	TK	DK	#FLS	TILT	%	CON	C	I	P	IN
1.	41*	62039202	7948	"BIGDB	65	39	2	-2	65	44	1[illegible]			30
2.	40	6971400	9334	"BIGDB	74	97	1	0	87	47	10			29
3.	24	6624700	9333	"BIGDB	64	117	2	0	88	42	7			14



UNKNOWN HYDROCARBON

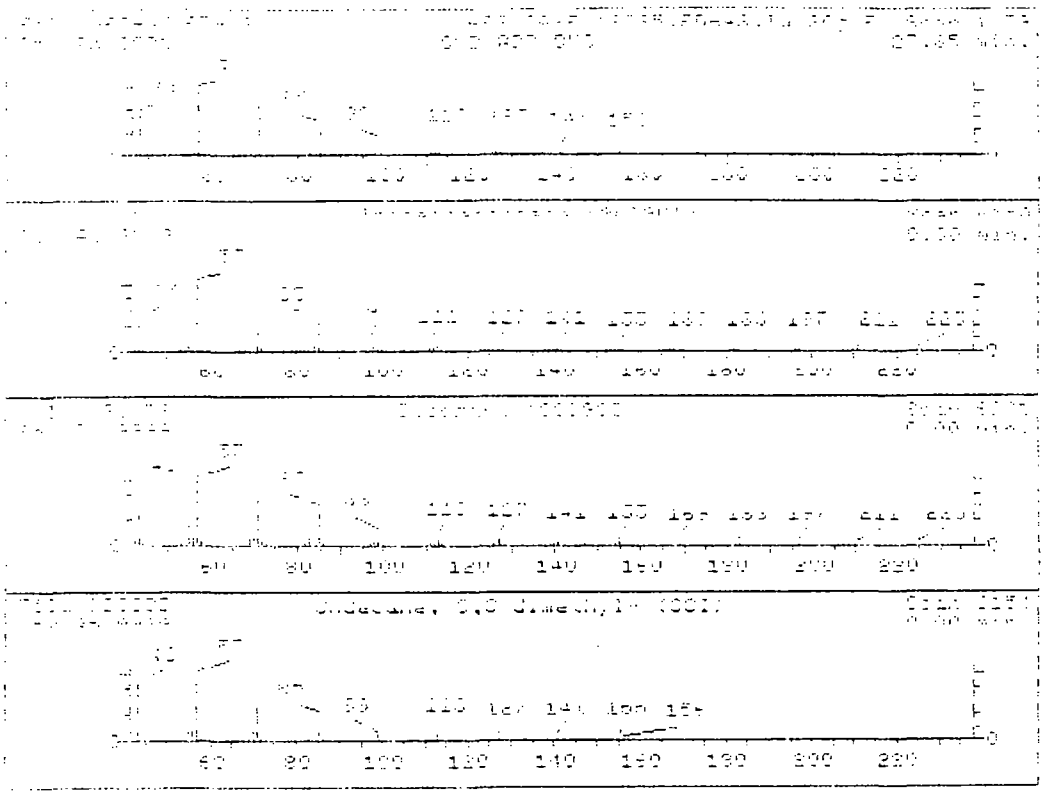
Unknown #.10
Quant Time: 890620 08:06
Injected at: 890619 23:49
Pk Ht= 6722.00 Tentative Concentration is 320.00

1. 1?-Pentatriacontene (8CI) 490 C35H70
2. Bicyclo[3.3.1]nonan-9-ol, 9-methyl- (8CI9CI) 154 C10H18O
3. Cyclohexanol, 3-methyl-2-(1-methylethyl)-, (1.alpha., .2.alpha.,.3.alpha.)- (9CI) 156 C10H20O

Sample File: APTIFI Spectrum #: -1
Search scred: 1 Tilting option: S No. of ion ranges searched: 91

	Prob.	CAS #	CON #	FORMT	K	DK	#PLG	TILT	%	CON	C	I	R	M
1.	50	6971400	8754	"BIGDB	67	104	1	0	79	58	10			24
2.	24*	37812256	10443	"BIGDB	38	66	3	0	90	45	8			17
3.	20	31104617	11129	"BIGDB	50	54	1	0	37	55	6			13

UNKNOWN FRACTION 6

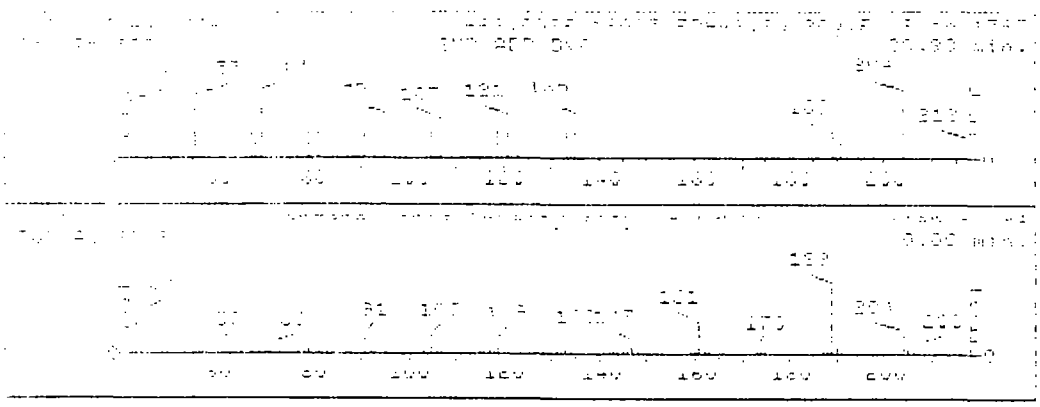


Unknown #.11
Count Time: 890620 08:24
Injected at: 890619 23:48
Pk Ht= 15154.00 Tentative Concentration is 1100.00

1. Tritetracontane (8CI9CI)	604	C43H88
2. Docosane (8CI9CI)	310	C22H46
3. Undecane, 3,8-dimethyl- (8CI)	184	C13H28
4. Pentadecane, 2-methyl- (8CI9CI)	226	C16H34
5. Heptacosane (8CI9CI)	380	C27H56
6. Hexatriacontane (8CI9CI)	506	C36H74
7. Tetratetracontane (8CI9CI)	618	C44H90

Sample File: PTIFI Spectrum #: -1
Search speed: 1 Filtering option: 9 No. of ion ranges searched: 50

	Prob.	CAS #	LIBN #	FORMT	K	'K	#PLS	TILT	%	LIBN	C	I	P	IN
1.	70	7048217	6190	"81GDB	99	79	1	-2	79	8	46	[illegible]	[illegible]	[illegible]
2.	71	6299 70	6221	"81GDB	77	70	1	0	74	14	38	[illegible]	[illegible]	[illegible]
3.	70	17301103	6194	"81GDB	73	38	1	-2	77	6	40	[illegible]	[illegible]	[illegible]
4.	70*	1560436	6162	"81GLB	75	89	2	0	97	19	72	[illegible]	[illegible]	[illegible]
5.	69	99749	6200	"81GDB	70	93	1	0	100	12	34	[illegible]	[illegible]	[illegible]
6.	69	6700-9	6193	"81GDB	74	88	1	0	80	19	14	[illegible]	[illegible]	[illegible]
7.	69	7098229	6406	"81GDB	64	90	1	0	100	10	34	[illegible]	[illegible]	[illegible]



UNKNOWN

Unknown #.12
Quant Time: 890620 08:26
Initiated at: 890619 23:48
Pk Ht= 7411.00 Tentative Concentration is 660.00

1. Benzene, tris(1-methylethyl)- (9CI) 204 C15H24

Sample file: APT1F1 Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 61

	Prob.	CAS #	CON #	FORT	K	DK	#FLG	TILT	%	CON	C	I	R	M
1.	204	2732234F	21794	"81GD8	22	100	3	0	278	F4	F			10

[illegible]

[illegible]

Concentration temperature : [illegible] [illegible] 0. [illegible] 0.
Concentration time, min. : 4.0 [illegible] 0.0 0.0 0.0
Concentration rate, deg/min: 0.0 0.0 0.0 1.0 0.0

[illegible]

[illegible]
Input: .00 Peak Height: 2410. Max Peaks: 10 Boxcar: 1
Area: 0.00 Results File [illegible] Sorted by Pkht/Pkht INT

	Ret. min.	First scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
	27.46	1178	1179	1181	19164	[illegible]	[illegible]	100.0	[illegible]
	[illegible]	19	18	27	10624	[illegible]	[illegible]	[illegible]	[illegible]
	23.74	973	976	981	9484	162894	[illegible]	48.76	17.415
3	[illegible]	1780	1786	1787	7911	[illegible]	19166	45.68	7.146
4	26.71	1091	1094	1097	6699	[illegible]	16048	40.05	6.027
5	24.91	1117	1120	1124	5620	113167	17804	44.79	7.019
7	23.97	993	996	993	4896	143768	25689	66.97	10.193
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Sum of corrected areas: 253799.

Summary of Unknowns PEM Library Search and Quantitation

Standard	Concentration	Peak Ht.	Retention Time	Unknown Window
1	40.0	34264.	9.79	4.99 - 11.67
2	40.0	57791.	13.96	11.67 - 16.27
3	40.0	99683.	19.96	16.27 - 21.24
4	40.0	47976.	23.91	21.24 - 27.02
5	40.0	39290.	31.77	27.02 - 34.77
6	40.0	74169.	35.91	34.77 - 46.02

Dilution Factor = ********

$$\text{Unknown Concentration} = \frac{\text{Conc Int Std}}{\text{Ph.Ht.Int.Std.}} * \text{Dil Factor} * \text{Ph.Ht.Unknown}$$

3:07 PM WED., 29 JUNE, 1988

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH44

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH44

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EDH44

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 4 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/89

GPC Cleanup: (Y/N) Y pH: 8.2 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	690	U
111-44-4	bis(2-Chloroethyl)ether	690	U
95-57-8	2-Chlorophenol	690	U
541-73-1	1,3-Dichlorobenzene	690	U
106-46-7	1,4-Dichlorobenzene	690	U
100-51-6	Benzyl alcohol	690	U
95-50-1	1,2-Dichlorobenzene	690	U
95-48-7	2-Methylphenol	690	U
108-60-1	bis(2-Chloroisopropyl)ether	690	U
106-44-5	4-Methylphenol	690	U
621-64-7	N-Nitroso-di-n-propylamine	690	U
67-72-1	Hexachloroethane	690	U
98-95-3	Nitrobenzene	690	U
78-59-1	Isophorone	690	U
88-75-5	2-Nitrophenol	690	U
105-67-9	2,4-Dimethylphenol	690	U
65-85-0	Benzoic acid	3300	U
111-91-1	bis(2-Chloroethoxy)methane	690	U
120-83-2	2,4-Dichlorophenol	690	U
120-82-1	1,2,4-Trichlorobenzene	690	U
91-20-3	Naphthalene	690	U
106-47-8	4-Chloroaniline	690	U
87-68-3	Hexachlorobutadiene	690	U
59-50-7	4-Chloro-3-methylphenol	690	U
91-57-6	2-Methylnaphthalene	96	J
77-47-4	Hexachlorocyclopentadiene	690	U
88-06-2	2,4,6-Trichlorophenol	690	U
95-95-4	2,4,5-Trichlorophenol	3300	U
91-58-7	2-Chloronaphthalene	690	U
88-74-4	2-Nitroaniline	3300	U
131-11-3	Dimethylphthalate	690	U
208-96-8	Acenaphthylene	690	U
606-20-2	2,6-Dinitrotoluene	690	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH44

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH44

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EDH44

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 4 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/89

GPC Cleanup: (Y/N) Y pH: 8.2 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3300	U
83-32-9	Acenapthene	93	J
51-28-5	2,4-Dinitrophenol	3300	U
100-02-7	4-Nitrophenol	3300	U
132-64-9	Dibenzofuran	690	U
121-14-2	2,4-Dinitrotoluene	690	U
84-66-2	Diethylphthalate	690	U
7005-72-3	4-Chlorophenyl-phenylether	690	U
86-73-7	Fluorene	690	U
100-01-6	4-Nitroaniline	3300	U
534-52-1	4,6-Dinitro-2-methylphenol	3300	U
86-30-6	N-Nitrosodiphenylamine (1)	690	U
101-55-3	4-Bromophenyl-phenylether	690	U
118-74-1	Hexachlorobenzene	690	U
87-86-5	Pentachlorophenol	460	J
85-01-8	Phenanthrene	72	J
120-12-7	Anthracene	690	U
84-74-2	Di-n-butylphthalate	690	U
206-44-0	Fluoranthene	110	J
129-00-0	Pyrene	180	J
85-68-7	Butylbenzylphthalate	690	U
91-94-1	3,3'-Dichlorobenzidine	1400	U
56-55-3	Benzo(a)anthracene	690	U
218-01-9	Chrysene	690	U
117-81-7	bis(2-Ethylhexyl)phthalate	1200	~~B~~ U
117-84-0	Di-n-octylphthalate	690	U
205-99-2	Benzo(b)fluoranthene	690	U
207-08-9	Benzo(k)fluoranthene	690	U
50-32-8	Benzo(a)pyrene	690	U
193-39-5	Indeno(1,2,3-cd)pyrene	690	U
53-70-3	Dibenz(a,h)anthracene	690	U
191-24-2	Benzo(g,h,i)perylene	690	U

(1) - Cannot be separated from Diphenylamine

10/11/89

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDH44

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH44

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EDH44

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 4 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/89

GPC Cleanup : (Y/N) Y pH: 8.2 Dilution Factor: 1.000

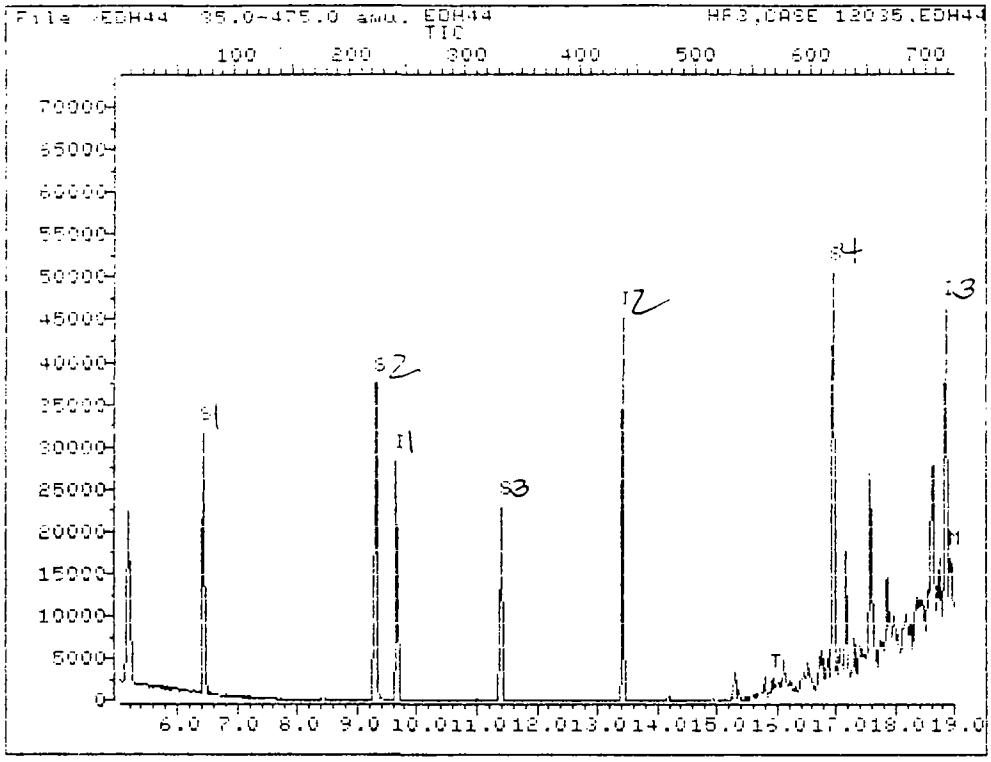
Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	5.20	2000	JB
2.		UNKNOWN HYDROCARBON	17.17	1100	J
3.		UNKNOWN HYDROCARBON	17.57	1700	J
4.		UNKNOWN HYDROCARBON	18.63	1500	JB
5.		UNKNOWN HYDROCARBON	19.25	3600	J
6.		UNKNOWN TRIMETHYL NAPHTHALEN	19.71	800	J
7.		UNKNOWN TRIMETHYL NAPHTHALEN	19.96	1300	J
8.		UNKNOWN TRIMETHYL NAPHTHALEN	20.25	930	J
9.		UNKNOWN HYDROCARBON	20.83	3700	J
10.		UNKNOWN HYDROCARBON	21.54	2100	J
11.		UNKNOWN	21.87	860	J
12.		UNKNOWN	22.10	990	J
13.		UNKNOWN HYDROCARBON	22.30	3900	J
14.		UNKNOWN HYDROCARBON	22.39	2200	J
15.		UNKNOWN HYDROCARBON	23.03	830	J
16.		UNKNOWN HYDROCARBON	23.70	4100	J
17.		UNKNOWN HYDROCARBON	23.84	2000	J
18.		UNKNOWN HYDROCARBON	25.04	3700	J
19.		UNKNOWN HYDROCARBON	26.29	2000	J
20.		UNKNOWN HYDROCARBON	27.52	1900	JB
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

FORM I SV-TIC 1/87 Rev.

TOTAL ION CHROMATOGRAM



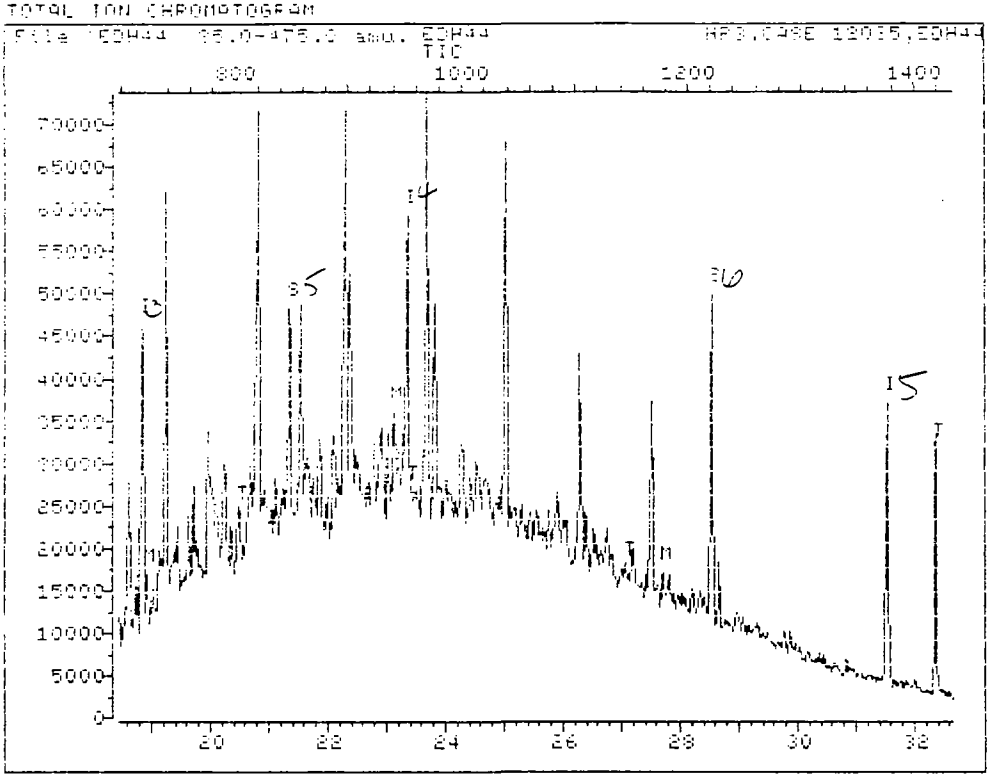
Data File: >EDH44::D5 Quant Output File: ^EDH44::SC
Name: EDH44
Misc: HP3,CASE 12035,EDH44,IW 30g,FVC 2ml,06/06/89,pH 8,%M4,BTL# 8

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

Operator ID: JOHN
Quant Time: 890620 17:44
Injected at: 890620 16:57

TIC page 1 of 3

TOTAL ION CHROMOTOGRAM



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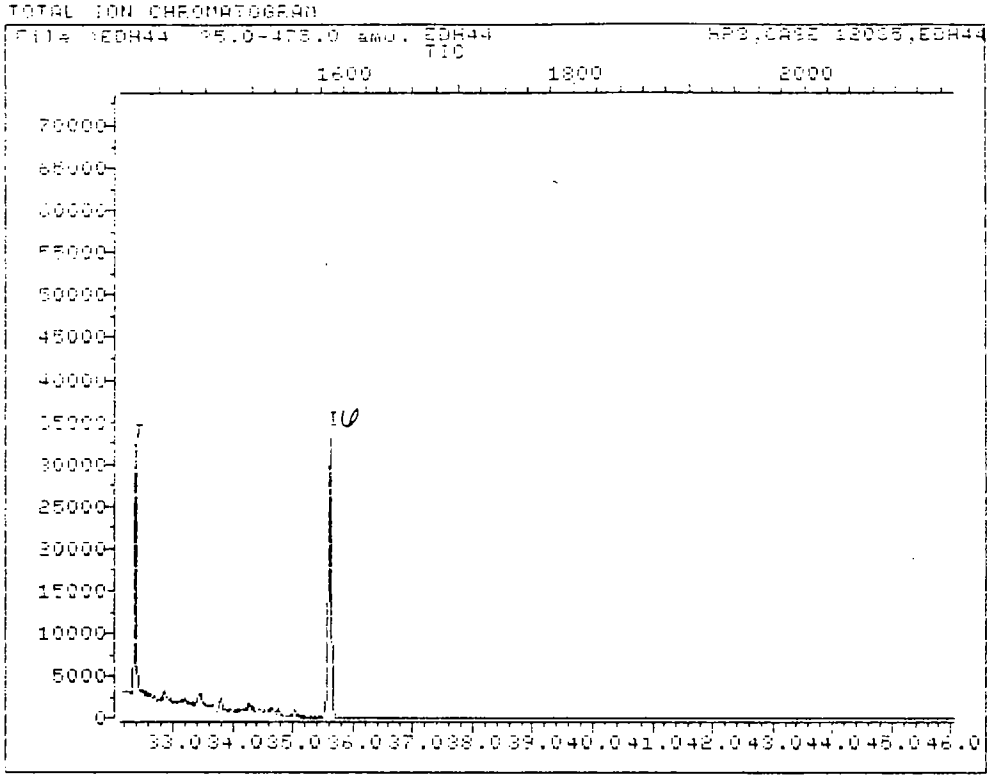
Name: EDH44
Misc: HP3,CASE 12035,EDH44,IW 30g,FVC 2ml,06/06/89,pH 8,XM4,BTL# 8

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

Operator ID: JOHN
Quant Time: 890620 17:44
Injected at: 890620 16:57

TIC page 2 of 3

TOTAL ION CHROMATOGRAM



Data File: >EDH44::D3 Quant Output File: ^EDH44::SC
Name: EDH44
Misc: HP3,CASE 12035,EDH44,IW 30g,FVC 2ml,06/06/89,pH 8.3M4,BTL# 8

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

Operator ID: JOHN
Quant Time: 890620 17:44
Injected at: 890620 16:57

TIC page 3 of 3

QUANT REPORT

% Moist.: 3.69 Wet: 30 g Dry: 28.873 g

Operator ID: JOHN Quant Rev: 6 Quant Time: 890620 17:44
Output File: ^EDH44::SC Injected at: 890620 16:57
Data File: >EDH44::D3 Dilution Factor: 1.00000
Name: EDH44
Misc: HP3,CASE 12035,EDH44,IW 30g,FVC 2ml,06/06/89,pH 8,%M4,BTL# 8

ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

% Sur Rec = Amtx FV x100 / Amt spiked

Cmpd Fd = Amt (ppm) x FV / IW

A = 100 BN = 100

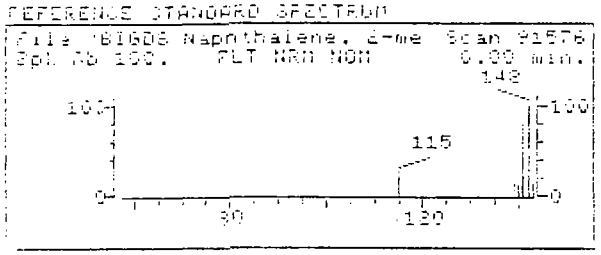
	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.66	152.0	10218	40.00	ng/uL	97
2)	2-Fluorophenol	6.43	112.0	23770	86.18	ng/uL	88
3)	Phenol-d5	9.31	99.0	49820	101.92	ng/uL	83
4)	Phenol	0.00	94.0	0	0.00	ng/uL	
5)	bis(-2-Chloroethyl)Ether	0.00	93.0	0	0.00	ng/uL	
6)	2-Chlorophenol	0.00	128.0	0	0.00	ng/uL	
7)	1,3-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
8)	1,4-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
9)	Benzyl Alcohol	0.00	108.0	0	0.00	ng/uL	
10)	1,2-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
11)	2-Methylphenol	0.00	108.0	0	0.00	ng/uL	
12)	bis(2-Chloroisopropyl)ether	0.00	45.0	0	0.00	ng/uL	
13)	4-Methylphenol	0.00	108.0	0	0.00	ng/uL	
14)	N-Nitroso-Di-n-propylamine	0.00	70.0	0	0.00	ng/uL	
15)	Hexachloroethane	0.00	117.0	0	0.00	ng/uL	
16)	*d8-Naphthalene	13.43	136.0	47214	40.00	ng/uL	88
17)	Nitrobenzene-d5	11.41	82.0	21351	42.62	ng/uL	84
18)	Nitrobenzene	0.00	77.0	0	0.00	ng/uL	
19)	Isophorone	0.00	82.0	0	0.00	ng/uL	
20)	2-Nitrophenol	0.00	139.0	0	0.00	ng/uL	
21)	2,4-Dimethylphenol	0.00	107.0	0	0.00	ng/uL	
22)	Benzoic Acid	0.00	105.0	0	0.00	ng/uL	
23)	bis(-2-Chloroethoxy)Methane	0.00	93.0	0	0.00	ng/uL	
24)	2,4-Dichlorophenol	0.00	162.0	0	0.00	ng/uL	
25)	1,2,4-Trichlorobenzene	0.00	180.0	0	0.00	ng/uL	
26)	Naphthalene	0.00	128.0	0	0.00	ng/uL	
27)	4-Chloroaniline	0.00	127.0	0	0.00	ng/uL	
28)	Hexachlorobutadiene	0.00	225.0	0	0.00	ng/uL	
29)	4-Chloro-3-methylphenol	0.00	107.0	0	0.00	ng/uL	
30)	2-Methylnaphthalene	15.91	142.0	1907	1.39	ng/uL	93
31)	*d10-Acenaphthene	18.84	164.0	23516	40.00	ng/uL	90
32)	Hexachlorocyclopentadiene	0.00	237.0	0	0.00	ng/uL	
33)	2,4,6-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
34)	2,4,5-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
35)	2-Chloronaphthalene	0.00	162.0	0	0.00	ng/uL	
36)	2-Fluorobiphenyl	16.95	172.0	34767	53.14	ng/uL	93
37)	2-Nitroaniline	0.00	65.0	0	0.00	ng/uL	
38)	Dimethyl Phthalate	0.00	163.0	0	0.00	ng/uL	
39)	Acenaphthylene	0.00	152.0	0	0.00	ng/uL	
40)	2,6-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
41)	3-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
42)	Acenaphthene	18.92	153.0	930	1.35	ng/uL	96
43)	2,4-Dinitrophenol	0.00	184.0	0	0.00	ng/uL	
44)	4-Nitrophenol	0.00	109.0	0	0.00	ng/uL	
45)	Dibenzofuran	0.00	168.0	0	0.00	ng/uL	
46)	2,4-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
47)	Diethylphthalate	0.00	149.0	0	0.00	ng/uL	
48)	4-Chlorophenyl-phenylether	0.00	204.0	0	0.00	ng/uL	
49)	Fluorene	20.50	166.0	691	.84	ng/uL	60

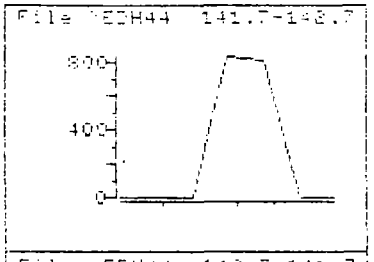
67

50)	4-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
51)	2,4,6-Tribromophenol	21.35	330.0	5948	94.07	ng/uL	92
52)	*d10-Phenanthrene	23.38	188.0	38381	40.00	ng/uL	99
53)	4,6-Dinitro-2-methylphenol	0.00	198.0	0	0.00	ng/uL	
54)	N-Nitrosodiphenylamine	0.00	169.0	0	0.00	ng/uL	
55)	4-Bromophenyl-phenylether	0.00	248.0	0	0.00	ng/uL	
56)	Hexachlorobenzene	0.00	284.0	0	0.00	ng/uL	
57)	Pentachlorophenol	23.13	266.0	874	6.64	ng/uL→460	98
58)	Phenanthrene	23.41	178.0	1031	1.04	ng/uL→72	87
~~59)~~	Anthracene	23.41	178.0	1031	~~1.04~~	ng/uL→	87
60)	Di-n-Butylphthalate	0.00	149.0	0	0.00	ng/uL	
61)	Fluoranthene	27.08	202.0	1839	1.53	ng/uL→110	93
62)	*d12-Chrysene	31.55	240.0	36211	40.00	ng/uL	85
63)	Pyrene	27.72	202.0	3943	2.54	ng/uL→150	82
64)	Terphenyl-d14	28.54	244.0	38306	40.87	ng/uL	98
65)	Butylbenzylphthalate	0.00	149.0	0	0.00	ng/uL	
66)	3,3'-Dichlorobenzidine	0.00	252.0	0	0.00	ng/uL	
67)	Benzo(a)Anthracene	0.00	228.0	0	0.00	ng/uL	
68)	Chrysene	0.00	228.0	0	0.00	ng/uL	
69)	Bis(2-Ethylhexyl)Phthalate	32.36	149.0	24112	16.76	ng/uL→1200	95
70)	*d12-Perylene	35.63	264.0	37749	40.00	ng/uL	97
71)	Di-n-octyl phthalate	0.00	149.0	0	0.00	ng/uL	
72)	Benzo(b)fluoranthene	0.00	252.0	0	0.00	ng/uL	
73)	Benzo(k)Fluoranthene	0.00	252.0	0	0.00	ng/uL	
74)	Benzo(a)Pyrene	0.00	252.0	0	0.00	ng/uL	
75)	Indeno(1,2,3-cd)Pyrene	0.00	276.0	0	0.00	ng/uL	
76)	Dibenz(a,h)Anthracene	0.00	278.0	0	0.00	ng/uL	
77)	Benzo(g,h,i)Perylene	0.00	276.0	0	0.00	ng/uL	

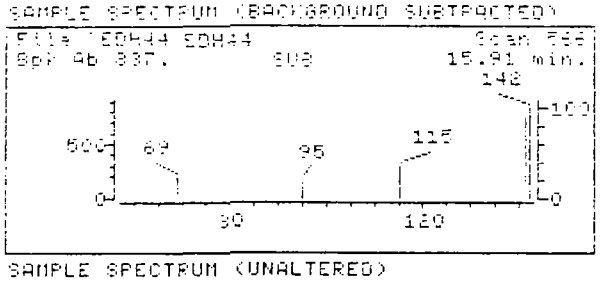
* Compound is ISTD

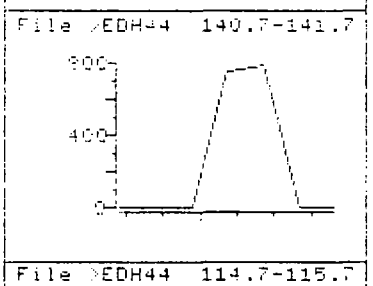
REFERENCE STANDARD SPECTRUM



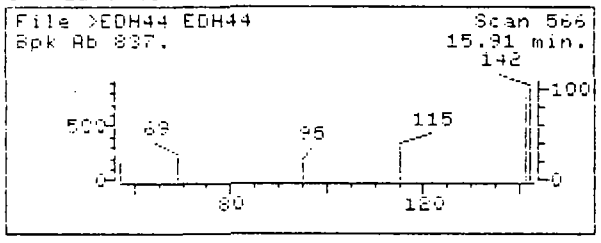


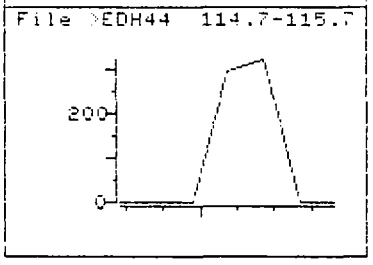
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)





SAMPLE SPECTRUM (UNALTERED)

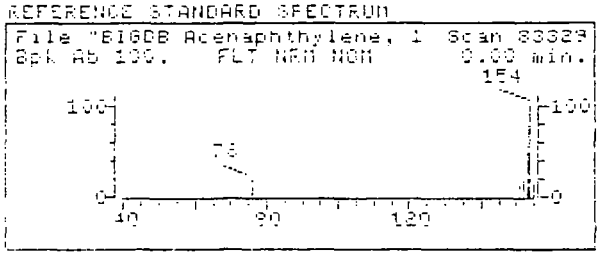




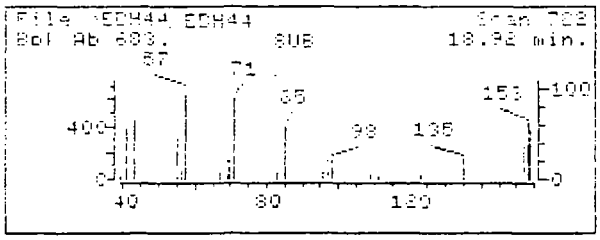
Data File: >EDH44::D3 Quant Output File: ^EDH44::SC
Name: EDH44
Misc: HP3,CASE 12035,EDH44,IW 30g.FVC 2ml,06/06/89,pH 8,%M4,BTL# 8
Quant Time: 890620 17:44 Quant ID File: ID_BCA::SC
Injected at: 890620 16:57 Last Calibration: 890620 16:42

Compound No: 30
Compound Name: 2-Methylnaphthalene
Scan Number: 566
Retention Time: 15.91 min.
Quant Ion: 142.0
Area: 1907
Concentration: 1.59 ng/uL
q-value: 95

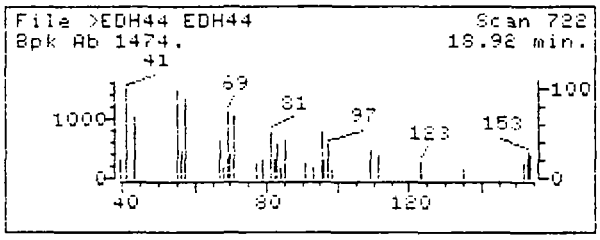
REFERENCE STANDARD SPECTRUM

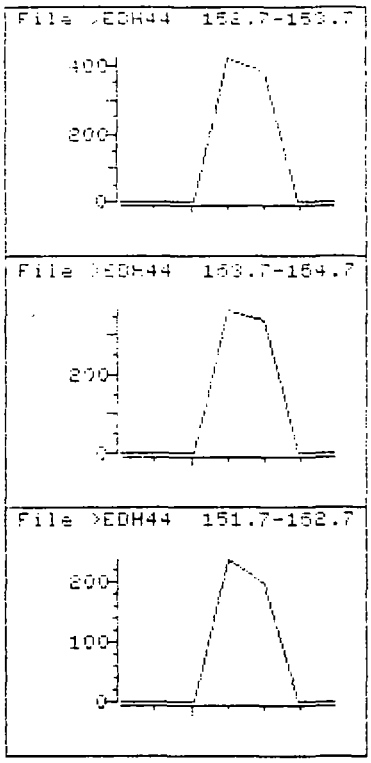


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

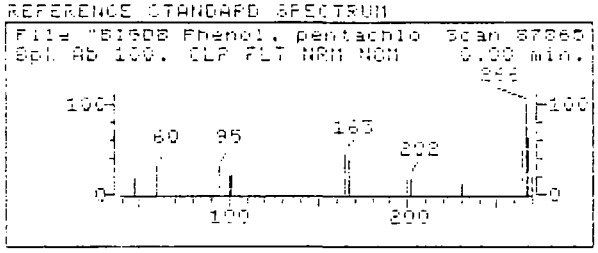


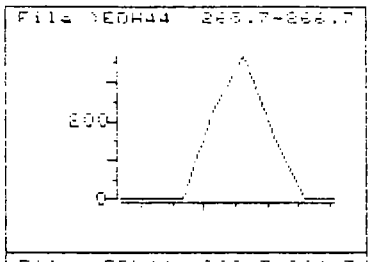


Data File: >EDH44::D3 Quant Output File: ^EDH44::SC
Name: EDH44
Misc: HP3,CASE 12035,EDH44,IW 30g,FVC 2ml,06/06/89,pH 8,%M4,BTL# 3
Quant Time: 890620 17:44 Quant ID File: ID_BCA::SC
Injected at: 890620 16:57 Last Calibration: 890620 16:42

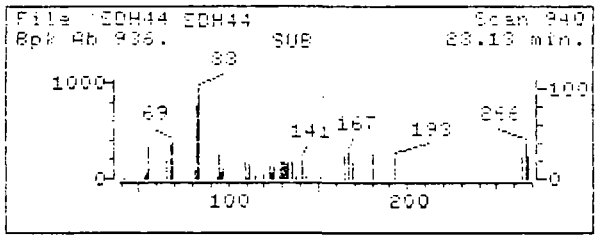
Compound No: 42
Compound Name: Acenaphthene
Scan Number: 722
Retention Time: 18.92 min.
Quant Ion: 153.0
Area: 930
Concentration: 1.55 ng/uL
q-value: 96

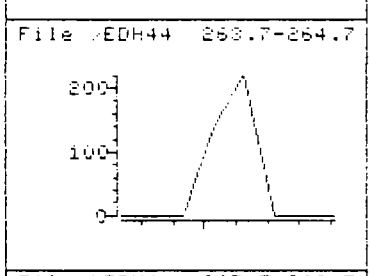
REFERENCE STANDARD SPECTRUM



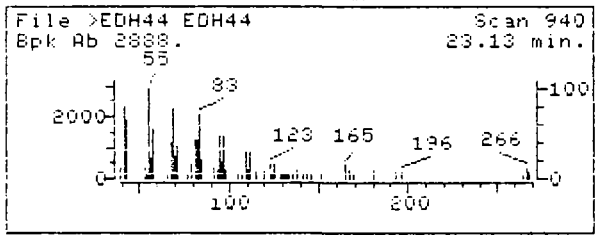


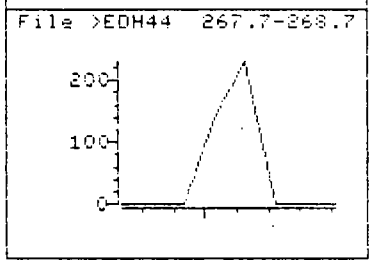
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)





SAMPLE SPECTRUM (UNALTERED)

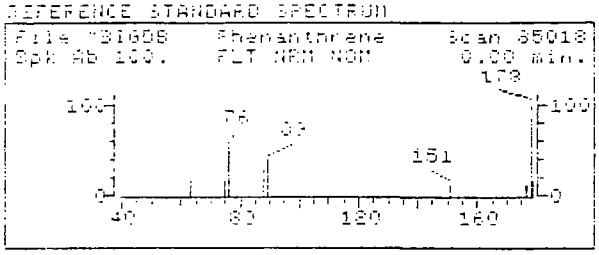




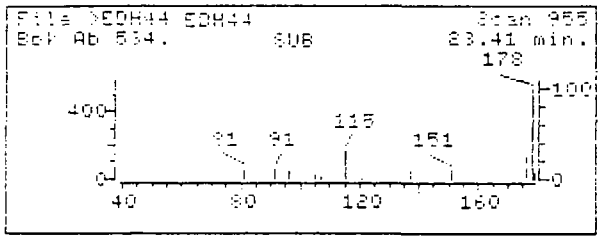
Data File: >EDH44::D3 Quant Output File: ^EDH44::SC
Name: EDH44
Misc: HP5,CASE 12035,EDH44,IW 30g,FVC 2ml,06/06/89,pH 8,XM4,BTL# 9
Quant Time: 890620 17:44 Quant ID File: ID_BCA::SC
Injected at: 890620 16:57 Last Calibration: 890620 16:42

Compound No: 57
Compound Name: Pentachlorophenol
Scan Number: 940
Retention Time: 23.13 min.
Quant Ion: 266.0
Area: 874
Concentration: 6.64 ng/ul
q-value: 98

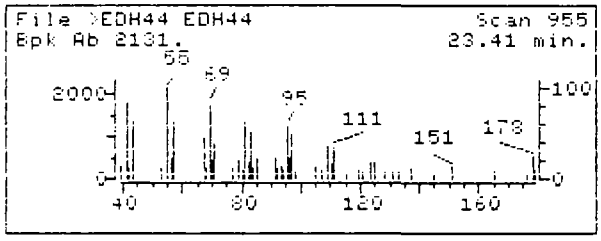
DIFFERENCE STANDARD SPECTRUM

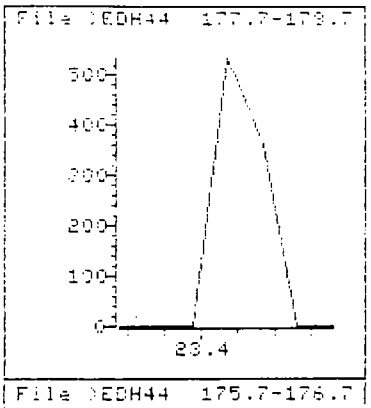


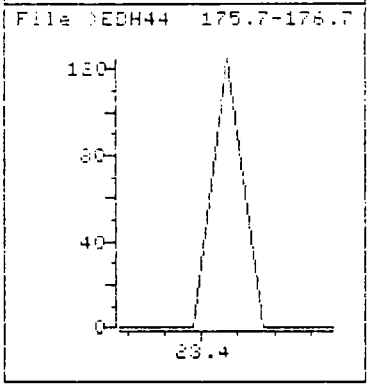
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



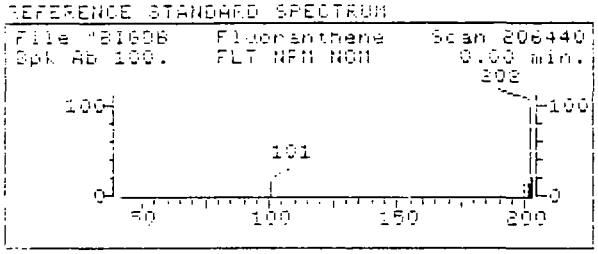




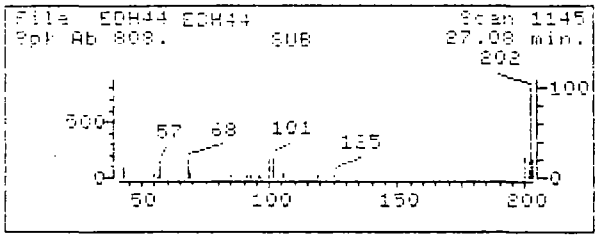
Data File: >EDH44::D3 Quant Output File: ^EDH44::SC
Name: EDH44
Misc: HP3,CASE 12035,EDH44,IW 30g,FVC 2ml,06/06/89,pH 8,%M4,BTL# 8
Quant Time: 890620 17:44 Quant ID File: ID_BCA::SC
Injected at: 890620 16:57 Last Calibration: 890620 16:42

Compound No: 58
Compound Name: Phenanthrene
Scan Number: 955
Retention Time: 23.41 min.
Quant Ion: 178.0
Area: 1031
Concentration: 1.04 ng/uL
q-value: 87

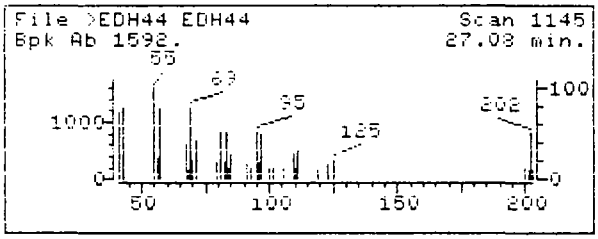
REFERENCE STANDARD SPECTRUM

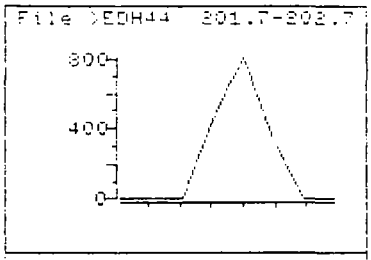


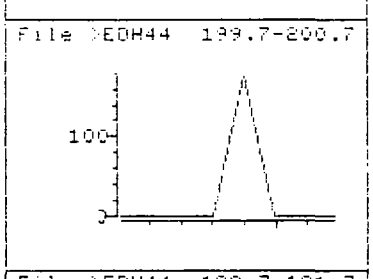
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

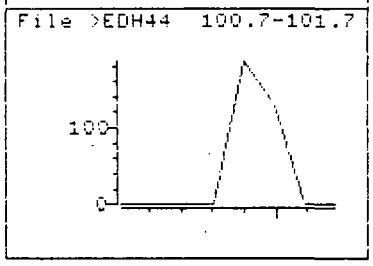


SAMPLE SPECTRUM (UNALTERED)





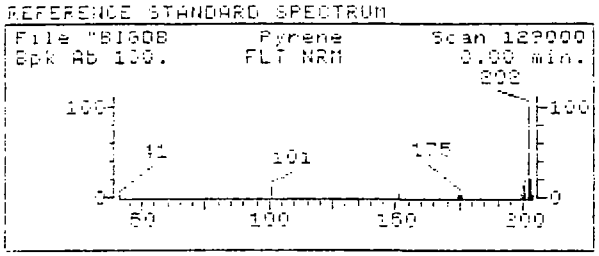


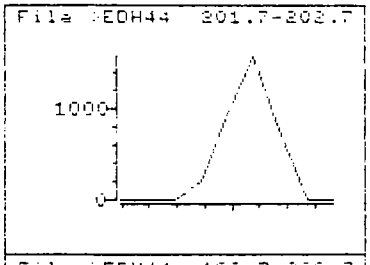


Data File: >EDH44::D3 Quant Output File: ^EDH44::SC
Name: EDH44
Misc: HP3,CASE 12035,EDH44,IW 30g,FVC 2ml,06/06/89,pH 8,%M4,BTL# 8
Quant Time: 890620 17:44 Quant ID File: ID_BCA::SC
Injected at: 890620 16:57 Last Calibration: 890620 16:42

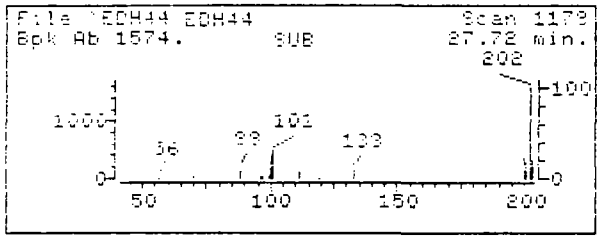
Compound No: 61
Compound Name: Fluoranthene
Scan Number: 1145
Retention Time: 27.08 min.
Quant Ion: 202.0
Area: 1839
Concentration: 1.53 ng/uL
q-value: 93

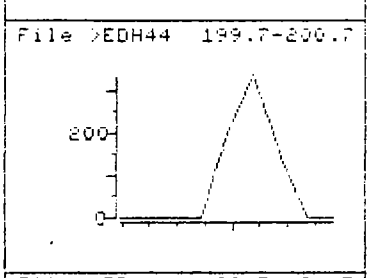
REFERENCE STANDARD SPECTRUM



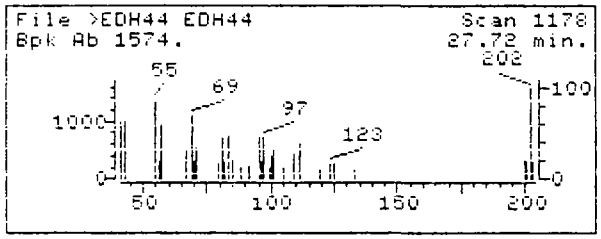


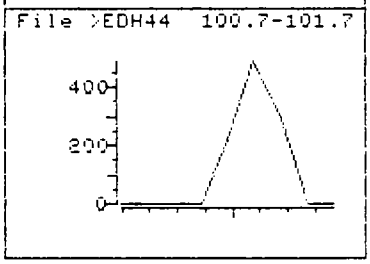
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)





SAMPLE SPECTRUM (UNALTERED)

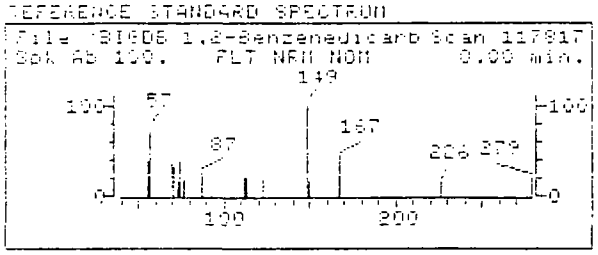




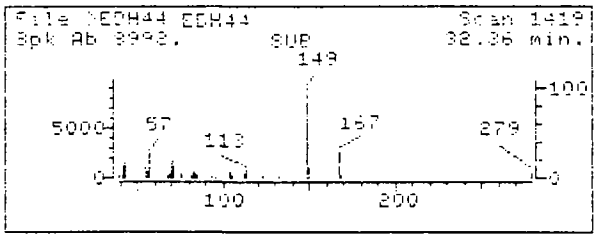
Data File: >EDH44::D3 Quant Output File: ^EDH44::SC
Name: EDH44
Misc: HP3,CASE 12035,EDH44,IW 30g,FVC 2ml,06/06/89,pH 8,%M4,BTL# 8
Quant Time: 890620 17:44 Quant ID File: ID_BCA::SC
Injected at: 890620 16:57 Last Calibration: 890620 16:42

Compound No: 63
Compound Name: Pyrene
Scan Number: 1178
Retention Time: 27.72 min.
Quant Ion: 202.0
Area: 3943
Concentration: 2.54 ng/uL
q-value: 82

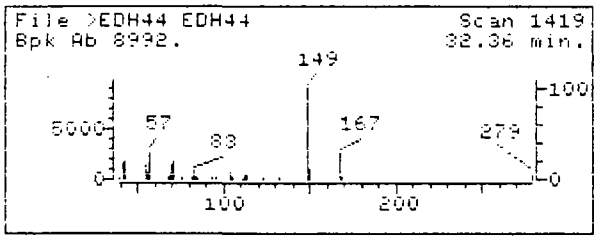
REFERENCE STANDARD SPECTRUM

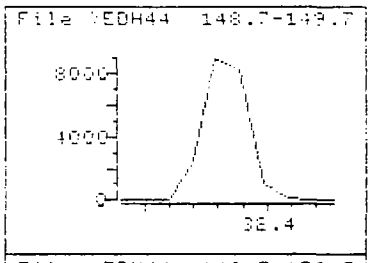


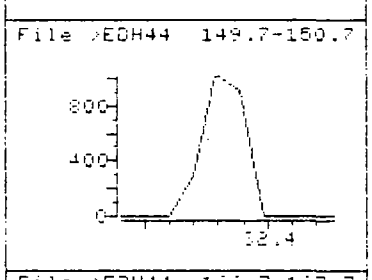
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

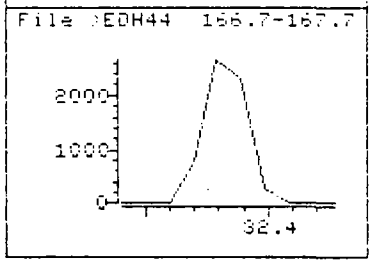


SAMPLE SPECTRUM (UNALTERED)



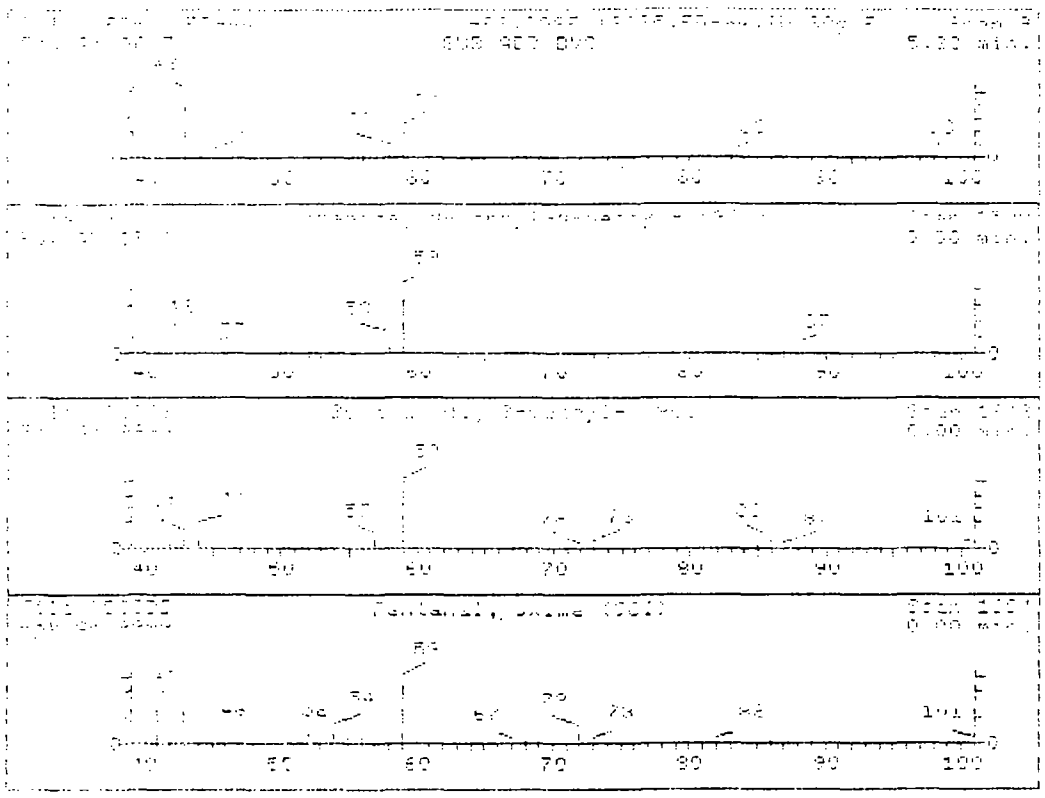






Data File: >EDH44::D3 Quant Output File: ^EDH44::SC
Name: EDH44
Misc: HP5,CASE 12035,EDH44,IW 30g,FVC 2ml,06/06/89,pH 8,%M4,BTL# 8
Quant Time: 890620 17:44 Quant ID File: ID_BCA::SC
Injected at: 890620 16:57 Last Calibration: 890620 16:42

Compound No: 69
Compound Name: Bis(2-Ethylhexyl)Phthalate
Scan Number: 1419
Retention Time: 32.3o min.
Quant Ion: 149.0
Area: 24112
Concentration: 16.76 ng/uL
q-value: 95



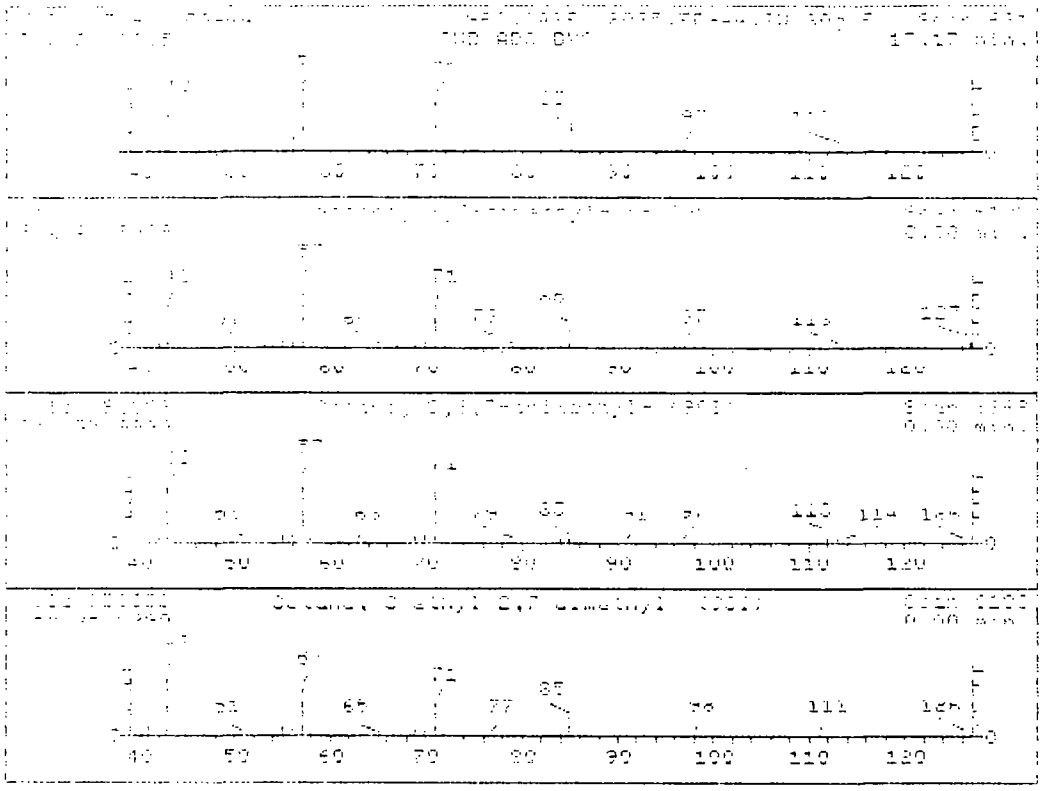
UNKNOWN B

Unknown #.1
Quant Time: 890620 17:44
Injected at: 890620 16:57
Pk Ht= 20406.00 Tentative Concentration is 2000.00

1. Formamide, N-formyl-N-methyl- (9CI) 87 C3H5NO2
2. Butanamide, 3-methyl- (9CI) 101 C5H11NO
3. Pentanal, oxime (9CI) 101 C5H11NO

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 49

	Prob.	LAS #	LIN #	PLOT	K	OK	#FLG	TILT	%	CUM	D_I	R_I
1.	25*	1919/245	1799	"91GD9	21	48	1	0	53	46	7	14
2.	29*	541468	1642	"91GD9	22	45	2	0	47	53	6	11
3.	20*	628795	1604	"91GD9	27	52	3	0	47	53	6	13



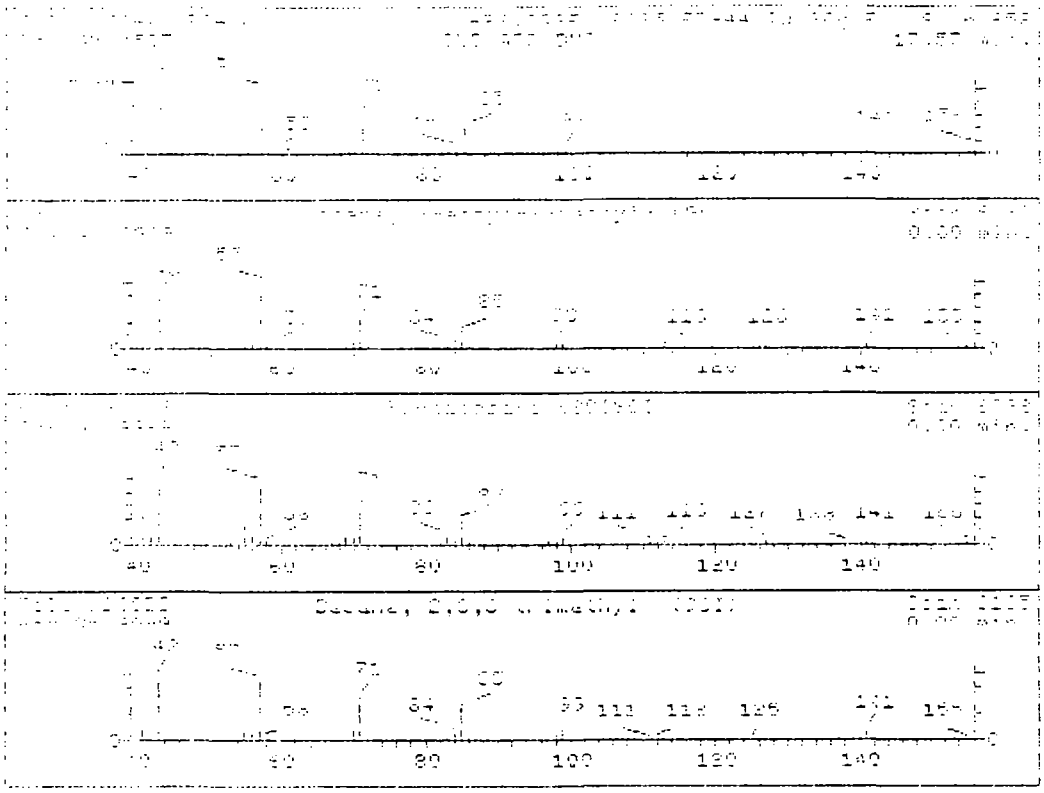
UNKNOWN HYDROCARBON

Unknown #2
Quant Time: 890620 17:44
Injected at: 890620 16:57
Pk Ht= 14804.00 Tentative Concentration is 1100.00

1. Nonane, 3,7-dimethyl- (BCL9CI)	156	C11H24
2. Octane, 2,3,7-trimethyl- (9CI)	156	C11H24
3. Octane, 3-ethyl-2,7-dimethyl- (9CI)	170	C12H26
4. Octane, 2,3,6-trimethyl- (9CI)	156	C11H24
5. Heptane, 3-ethyl-5-methyl- (9CI)	142	C10H22
6. Octane, 3,6-dimethyl- (BCL9CI)	142	C10H22
7. Dodecane, 4,6-dimethyl- (9CI)	198	C14H30

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 49

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	M	IN
1.	76	17302729	6100	"BIGDB	53	36	1	0	84	7	49			21
2.	60	62016346	3942	"BIGDB	51	42	2	0	100	15	30			16
3.	60	60193555	6109	"BIGDB	47	44	2	0	121	12	30			14
4.	58	62016335	3961	"BIGDB	58	34	1	0	76	19	25			25
5.	50	40894909	3969	"BIGDB	49	49	2	0	99	19	20			19
6.	52	15869940	11043	"BIGDB	40	49	2	0	100	18	21			12
7.	50	61141208	3960	"BIGDB	61	49	1	0	68	17	20			14



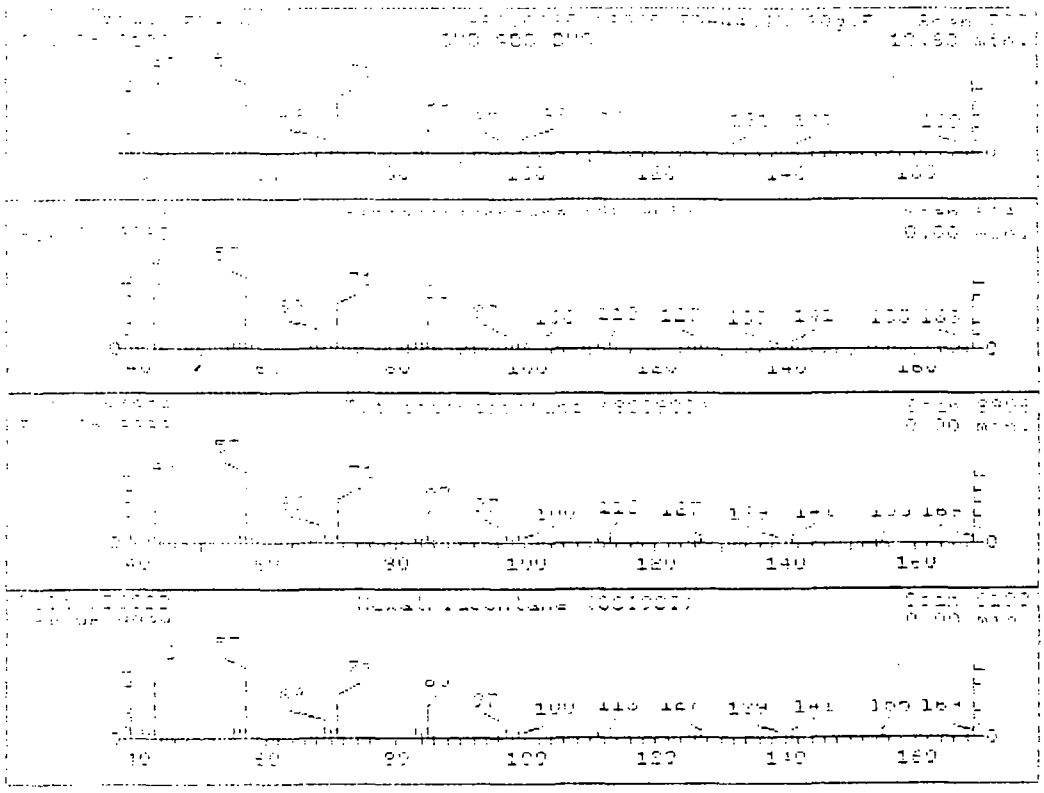
UNKNOWN HYDROCARBON

Unknown #,?
Quant Time: 990620 17:44
Integrated at: 990620 16:57
Pk Ht= 20696.00 Tentative Concentration is 1700.00

1. Octane, 6-ethyl-2-methyl- (9CI)	184	C13H28
2. Pentacosane (9CI9CI)	352	C25H52
3. Octane, 2,3,6-trimethyl- (9CI)	184	C13H28
4. Hexadecane (8CI9CI)	226	C16H34
5. Octane, 2,3,7-trimethyl- (9CI)	184	C13H28
6. Nonacosane (8CI9CI)	408	C29H60
7. Nonadecane (8CI9CI)	268	C19H40

Sample File: APTIFI Spectrum #: -1
Search speed: 1 Tilting option: 5 No. of ion ranges searched: 49

	Prob.	CAS #	CON #	MOOT	K	UK	#FLG	TILT	%	CON	C	I	P	W
1.	60	62108218	6163	"BIGDB	52	47	2	0	106	14	30	13		
2.	59	629992	6092	"BIGDB	78	62	1	0	90	25	27	30		
3.	58	62279124	6165	"BIGDB	74	34	1	0	77	19	25	28		
4.	58	544763	6146	"BIGDB	74	46	1	0	89	19	16	22		
5.	58	62238139	6166	"BIGDB	62	41	1	0	67	19	25	26		
6.	57	630835	8905	"BIGDB	76	69	1	0	80	24	22	29		
7.	56	629929	6091	"BIGDB	74	60	1	0	79	24	22	22		



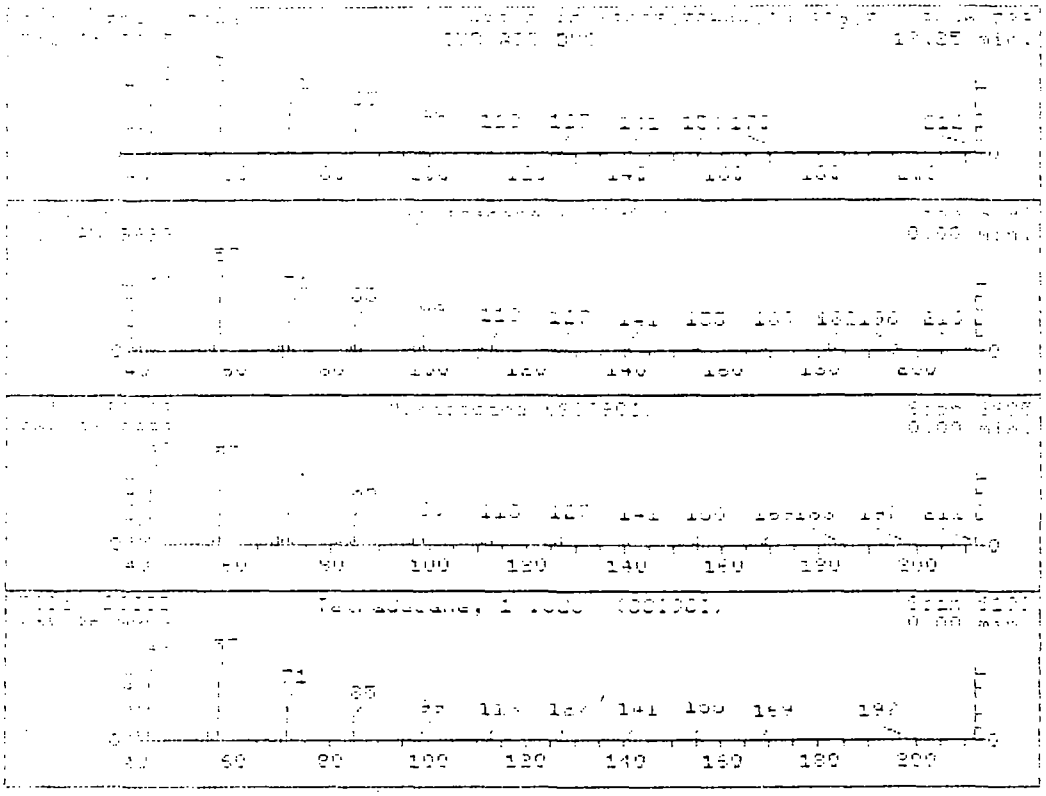
UNKNOWN HYDROCARBON

Unknown #.4
Quant Time: 890620 17:44
Injected at: 890620 16:57
Pk Ht= 19399.00 Tentative Concentration is 1500.00

1. Pentatriacontane (8CI9CI)	492	C35H72
2. Tetratetracontane (8CI9CI)	618	C44H90
3. Hexatriacontane (8CI9CI)	506	C36H74
4. Tritetracontane (8CI9CI)	604	C43H88
5. Tetratriacontane (8CI9CI)	498	C34H70
6. Heptacosane (8CI9CI)	380	C27H56
7. Undecane, 5,8-dimethyl- (8CI)	184	C13H28

Simple File: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 49

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CUN	C	I	R	IV
1.	67	630079	6147	"BIGDB	75	76	1	0	97	12	34		29	
2.	67	7098208	8906	"BIGDB	67	89	1	0	100	12	34		21	
3.	67	630069	6193	"BIGDB	70	92	1	0	98	14	34		27	
4.	67	7099217	6158	"BIGDB	72	96	1	0	95	14	34		27	
5.	67	14167999	6223	"BIGDB	77	96	2	0	81	16	30		19	
6.	60	593497	6220	"BIGDB	67	96	1	0	92	15	30		16	
7.	60	17301707	6154	"BIGDB	62	46	1	0	82	11	30		19	



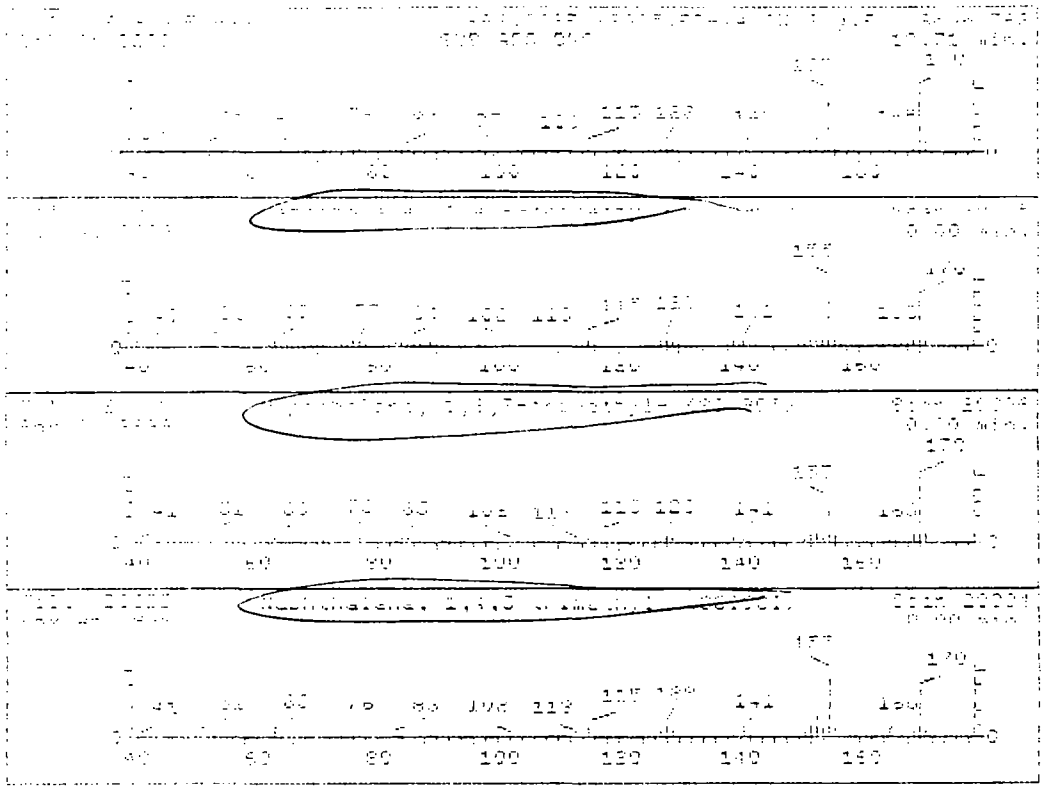
UNKNOWN HYDROCARBON

Unknown #.5
Weight Time: 890620 17:44
Injected at: 890620 16:57
Pk Ht= 49607.00 Tentative Concentration is 3600.00

1. Heptadecane (8CI9CI)	240	C17H36
2. Nonadecane (8CI9CI)	408	C19H40
3. Tetradecane, 1-iodo- (8CI9CI)	324	C14H29I
4. Pentadecane (8CI9CI)	212	C15H32
5. Tridecane (8CI9CI)	184	C13H28
6. Octadecane (8CI9CI)	394	C18H38
7. Hexatriacontane (8CI9CI)	506	C36H74

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion masses searched: 49

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C I	P I
1.	81	629787	6090	"91C08	107	14	0	0	74	19	45	74
2.	81	630045	8908	"91C08	106	39	0	0	79	19	45	76
3.	81	1[illegible]118941	6199	"91C08	93	39	1	-1	84	10	53	40
4.	81*	629429	6245	"91C08	97	33	1	0	78	16	45	72
5.	76	629409	6250	"91C08	97	29	1	0	83	14	40	60
6.	76	630024	6093	"91C08	100	37	1	0	79	16	35	60
7.	76	630060	6193	"91C08	89	74	1	0	65	12	79	44



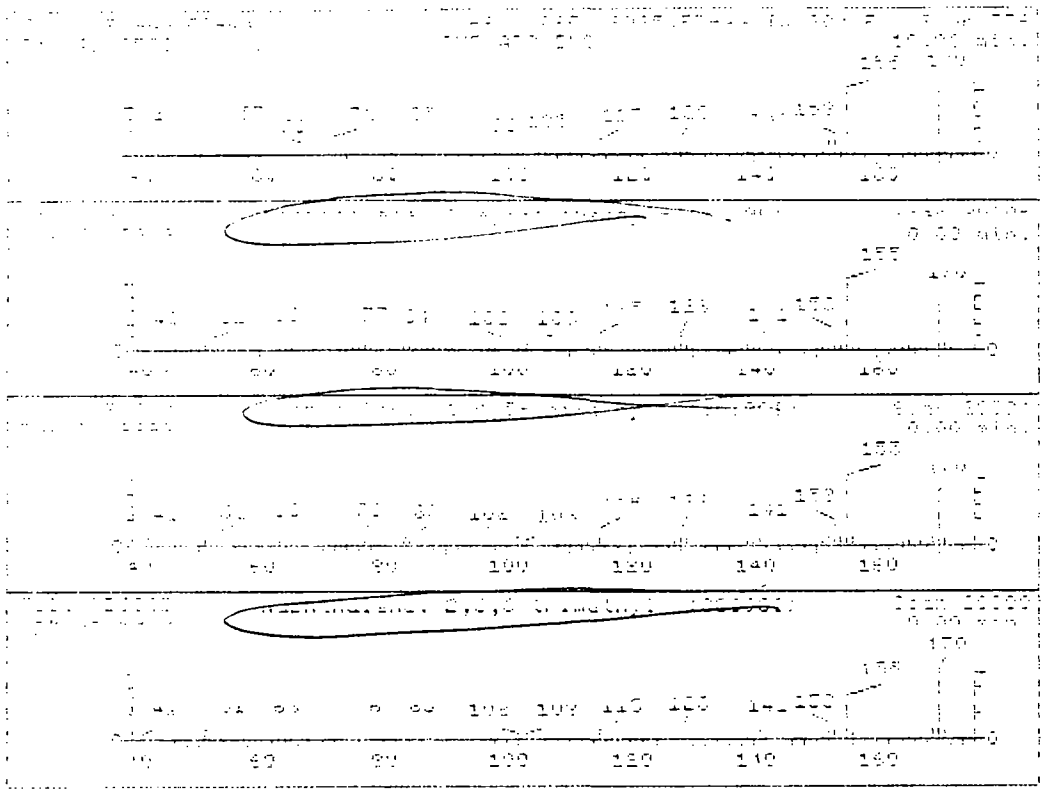
~~UNKNOWN~~

Spectrum #:6
Quant Time: 890620 17:44
Integrated at: 890620 16:57
Pk Ht= 10498.00 Tentative Concentration is 800.00

1. Naphthalene, 1,4,6-trimethyl- (8019CI) 170 C13H14
2. Naphthalene, 1,6,7-trimethyl- (8019CI) 170 C13H14
3. Naphthalene, 1,4,5-trimethyl- (8019CI) 170 C13H14
4. Naphthalene, 2-(1-methylethyl)- (9CI) 170 C13H14
5. Naphthalene, 2,3,6-trimethyl- (8019CI) 170 C13H14
6. 1H,3H-Thieno[3,4-c]thiophene, 4,6-dimethyl- (8019CI) 170 C8H10S2
7. Naphthalene, 1,3,6-trimethyl- (8019CI) 170 C13H14

Sample file: ARTIFI Spectrum #: -1
Spectrum used: 1 Tilting option: S No. of ion ranges searched: 49

	Pres.	CAS #	CON #	POOI	K	CK	#PLG	TILT	%	CON	C_1	9	D
1.	99*	2131401	20306	"81608	104	15	1	0	97	3	72	96	
2.	99*	2245387	20306	"81608	90	19	1	4	96	1	66	73	
3.	99*	2131411	20304	"81608	91	27	1	0	87	19	60	69	
4.	98*	2027170	18106	"81618	60	40	0	0	90	40	34	73	
5.	94*	919256	20300	"81608	60	51	1	2	84	23	39	42	
6.	82*	15441540	20341	"81618	46	46	3	0	100	29	17	13	
7.	94*	7021081	20272	"81608	38	33	0	-1	69	39	10	14	

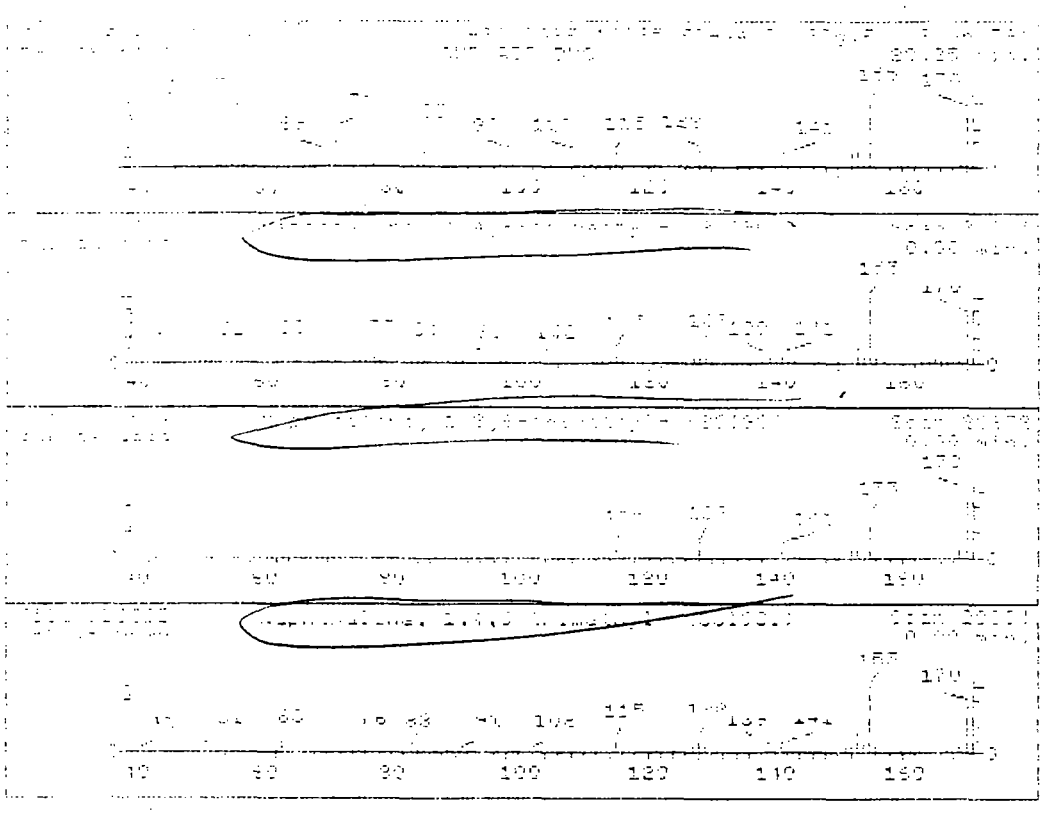


Unknown #.7
Count Time: 840620 17:44
Injected at: 840620 16:57
Wt Wt= 16459.00 Tentative Concentration is 1500.00

1.	Naphthalene, 1,4,6-trimethyl- (8CI9CI)	170 C13H14
2.	Naphthalene, 1,4,5-trimethyl- (8CI9CI)	170 C13H14
3.	Naphthalene, 2,3,6-trimethyl- (8CI9CI)	170 C13H14
4.	Naphthalene, 2-(1-methylethyl)- (9CI)	170 C13H14
5.	Naphthalene, 1,6,7-trimethyl- (8CI9CI)	170 C13H14
6.	1H,5H-Thieno[3,4-c]thiophene, 4,6-dimethyl- (9CI9CI)	170 C8H10S2
7.	Naphthalene, 1,3,6-trimethyl- (8CI9CI)	170 C13H14

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: 5 No. of ion ranges searched: 49

	Prob.	CAS #	CON #	FOOT	M	OK	#FLG	TILT	%	CON	C I	R IU
1.	99*	2131422	20796	"81GC8	110	9	0	0	94	8	72	99
2.	99*	2131411	20794	"81GC8	90	29	1	0	96	21	47	99
3.	87*	829265	20780	"81GC8	64	45	1	2	81	29	27	54
4.	66*	2027170	18193	"81GC8	60	40	0	0	96	43	24	73
5.	61*	2048797	20795	"81GC8	60	59	1	0	91	29	14	72
6.	42*	15441540	20741	"81GC8	37	96	3	0	96	17	10	13
7.	41*	7811091	20272	"81GC8	42	26	0	0	70	45	17	56

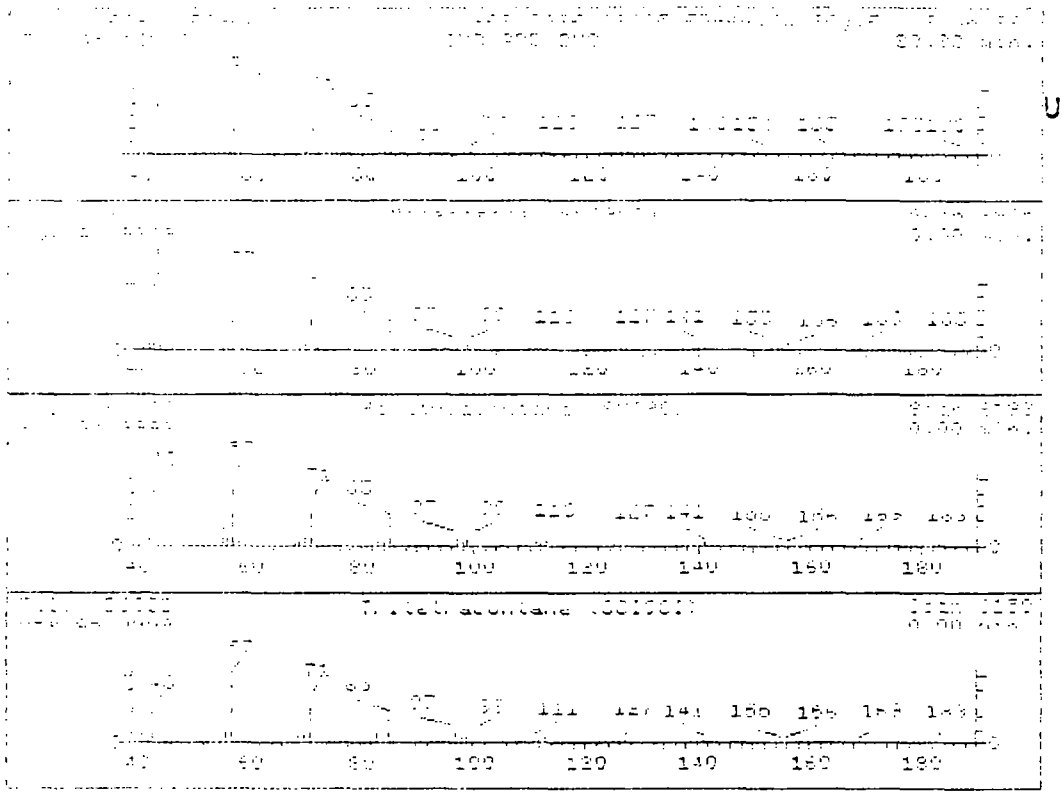


Spectrum #.8
Current Time: 890620 17:44
Injection at: 890620 16:67
PK Ht= 12142.10 Tentative Concentration is 930.00

1. Naphthalene, 1,4,6-trimethyl- (8C19C1) 170 C13H14
2. Naphthalene, 1,3,6-trimethyl- (8C19C1) 170 C13H14
3. Naphthalene, 1,4,5-trimethyl- (8C19C1) 170 C13H14
4. Undecane (8C19C1) 170 C12H26
5. 1H,3H-Pyrano[3,4-c]thiopyrane, 4,6-dimethyl- (8C19C1) 170 C8H10O2
6. Silane, 1,2-ethanediylbis[trimethyl- (9C1) 170 C8H18Si2
7. Naphthalene, 1,6,7-trimethyl- (8C19C1) 170 C13H14

Sample File: ART:FI Spectrum #: -1
Search speed: 1 Tilting option: 9 No. of ion ranges searched: 49

	Prob.	DBS #	CON #	ROOT	%	DK	#PLS	TILT	%	CON	C I	P IV
1.	[illegible]*	2131422	20305	"BIGDB	97	36	1	0	60	40	37	80
2.	[illegible]*	3031081	20272	"BIGDB	48	20	0	0	60	64	11	40
3.	[illegible]*	2171411	20304	"BIGDB	61	67	1	0	51	47	13	47
4.	60*	112403	6229	"BIGDB	66	46	1	-2	97	79	14	27
5.	[illegible]*	1642[illegible]40	20341	"BIGDB	37	66	3	0	51	60	7	13
6.	70*	14630401	18099	"BIGDB	10	61	7	0	610	64	5	13
7.	[illegible]*	2046391	20304	"BIGDB	71	77	1	0	50	66	6	13



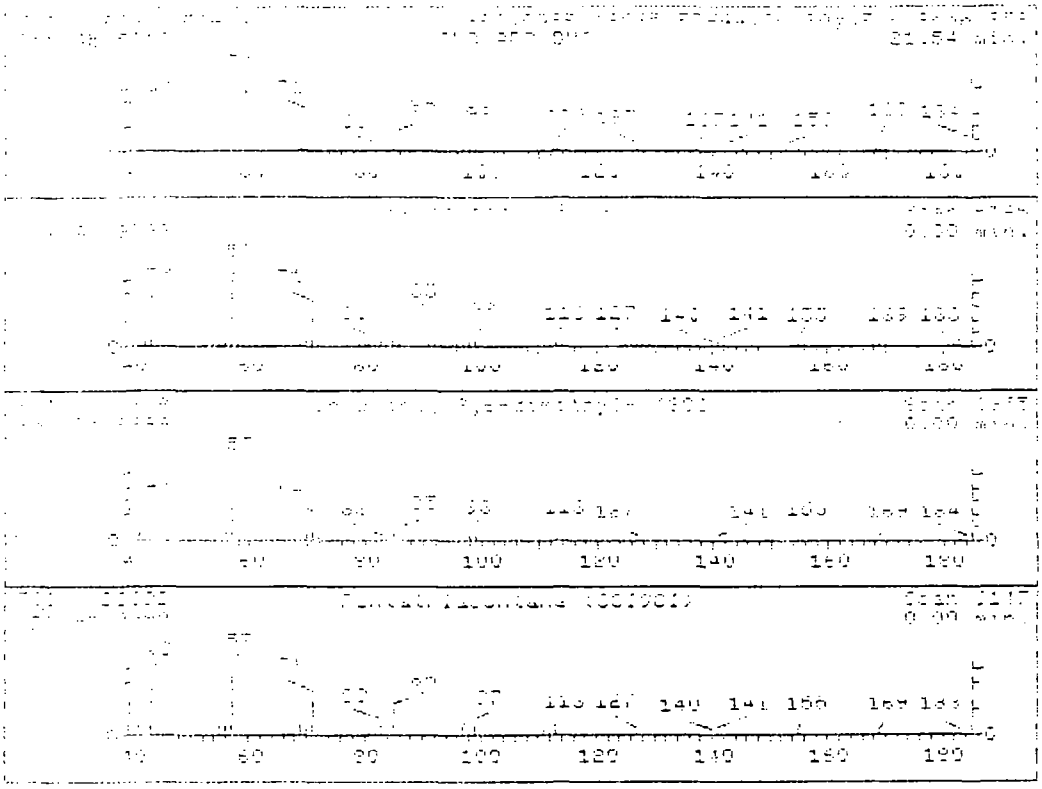
UNKNOWN HYDROCARBON

Unknown #.9
Quant Time: 890620 17:44
Injected at: 890620 16:57
Pk Ht= 49041.00 Tentative Concentration is 3700.00

1. Nonadecane (8L19CI)	408	C29H60
2. Hexatriacontane (8C19CI)	506	C36H74
3. Tritetracontane (8C19CI)	604	C43H88
4. Heptacosane (8C19CI)	392	C29H60
5. Hexadecane (8C19CI)	226	C16H34
6. Pentatriacontane (8C19CI)	492	C35H72
7. Tridecane (8L19CI)	184	C13H28

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 98

	Prob.	CAS #	CON #	RDUF	K	DK	#FLG	TILT	%	CON	C	I	R	M
1.	91	630076	8906	"8ICUB	99	46	0	0	83	20	49		72	
2.	75	630068	6193	"8ICUB	89	73	0	0	66	20	75		66	
3.	75	7999017	6150	"8ICUB	94	94	0	0	63	20	75		51	
4.	73	629992	6092	"8ICUB	89	91	0	0	83	25	70		66	
5.	70	544763	6146	"8ICUB	92	89	1	0	80	20	70		60	
6.	70	630079	6147	"8ICUB	99	82	1	0	70	17	72		59	
7.	69	629505	6050	"8ICUB	91	20	1	0	87	25	70		62	



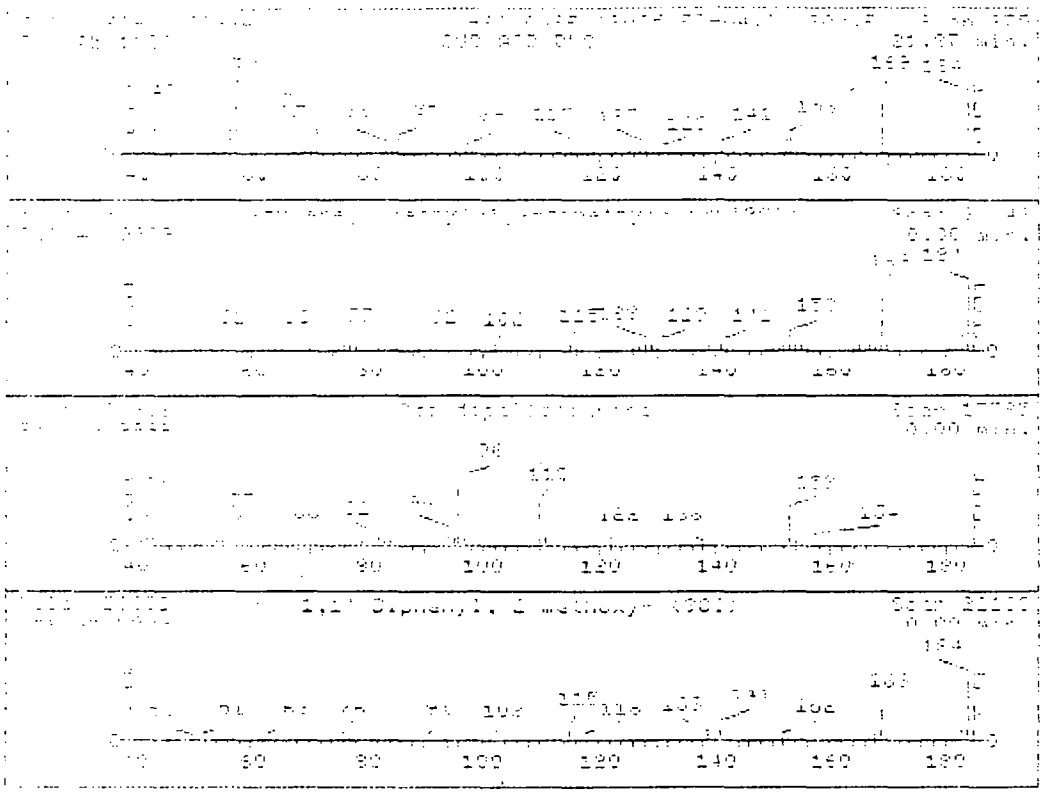
UNKNOWN HYDROCARBON

Unknown #.10
Report Time: 890620 17:44
Injected at: 890620 16:57
Pk Ht= 26056.00 Tentative Concentration is 2100.00

1. Hexadecane (8C19C1)	226	C16H34
2. Undecane, 3,6-dimethyl- (8C1)	184	C13H28
3. Pentatriacontane (8C19C1)	490	C35H72
4. Heptacosane (8C19C1)	380	C27H56
5. Tritetracontane (8C19C1)	604	C43H88
6. Undecane, 3,6-dimethyl- (8C19C1)	170	C13H28
7. Pentadecane (8C19C1)	240	C15H32

Sample file: ART1P1 Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 29

	Prob.	CAS #	CON #	ROOT	K	OK	#PLS	TILT	%	CON	C	I	R	P
1.	54	544763	6146	"81C09	80	40	0	0	70	34	26		50	
2.	54*	17301299	3954	"81C09	68	39	0	0	100	44	24		21	
3.	54	630079	6147	"81C09	67	94	0	0	68	34	20		79	
4.	53	593397	6070	"81C09	49	84	0	0	67	56	19		44	
5.	51	7099217	6150	"81C09	64	99	0	0	67	79	19		14	
6.	53*	17312537	11149	"81C09	60	39	1	0	68	42	17		56	
7.	50	629787	6090	"81C09	66	53	0	0	74	36	19		11	



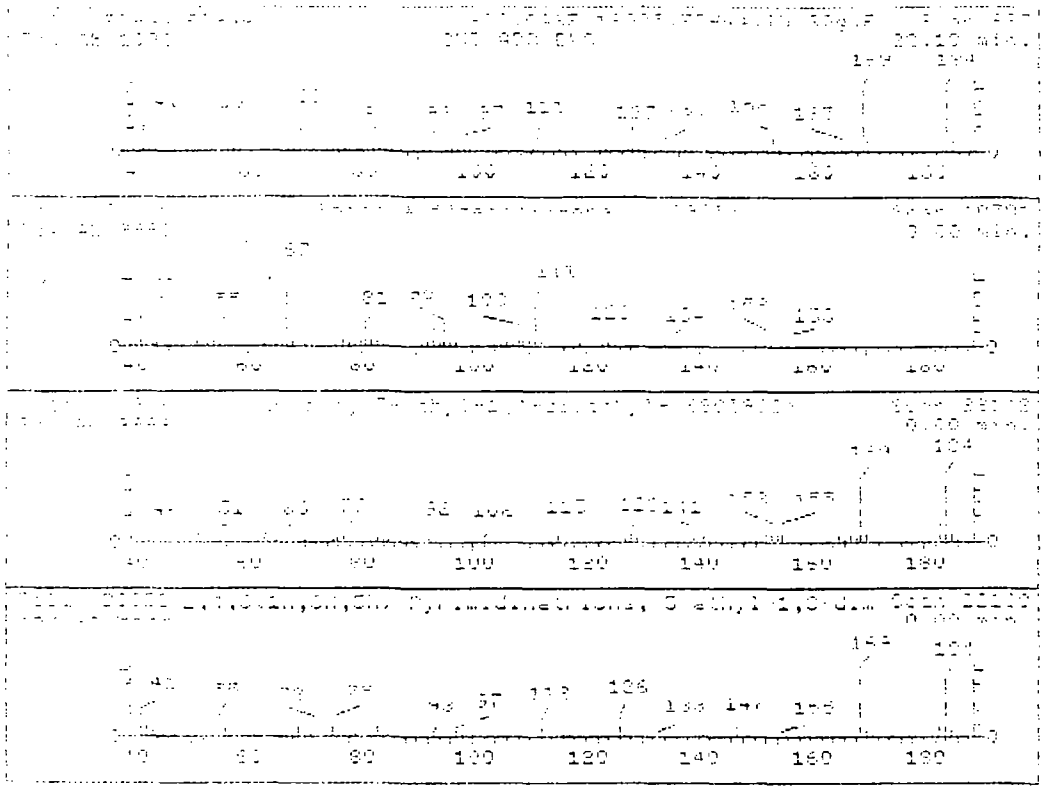
UNKNOWN

Unknown #.11
Quant Time: 840620 17:44
Injection at: 840620 16:52
Pk Ht= 10592.00 Tentative Concentration is 960.00

1. Azulene, 7-ethyl-1,4-dimethyl- (8CI,9CI) 184 C14H16
2. Pseudopelletierine 143 C9H15NO
3. 1,1'-Biphenyl, 2-methoxy- (9CI) 184 C13H12O
4. 1,1'-Biphenyl, 4-methoxy- (9CI) 184 C13H12O
5. 2,4 (1H,3H,5H)-Pyrimidinetrione, 5-ethyl-1,3-dimethyl- (9CI) 184 C8H12N2O3
6. 4-Piperidinone, 2,2,6,6-tetramethyl-1-nitroso- (9CI) 184 C9H16N2O2
7. Naphthalene, 1-(1,1-dimethylethyl)- (9CI) 184 C14H16

Sample File: ARTIFI Spectrum #: -1
Search based: 1 Tilting option: S No. of ion ranges searched: 49

	Prob.	CAS #	CON #	ROOT	K	DK	#PLG	TILT	%	CON	C	I	P	IV
1.	99*	529865	22142	"BIGDB	56	64	2	0	44	51	20		33	
2.	27*	562706	17796	"BIGDB	39	42	0	-2	13	47	10		27	
3.	09*	56260	22150	"BIGDB	53	48	1	0	44	51	9		33	
4.	07*	613774	22144	"BIGDB	29	93	3	0	44	40	10		13	
5.	05*	7391619	22140	"BIGDB	40	74	3	0	49	48	7		17	
6.	00*	640017	22110	"BIGDB	40	77	3	0	300	54	5		13	



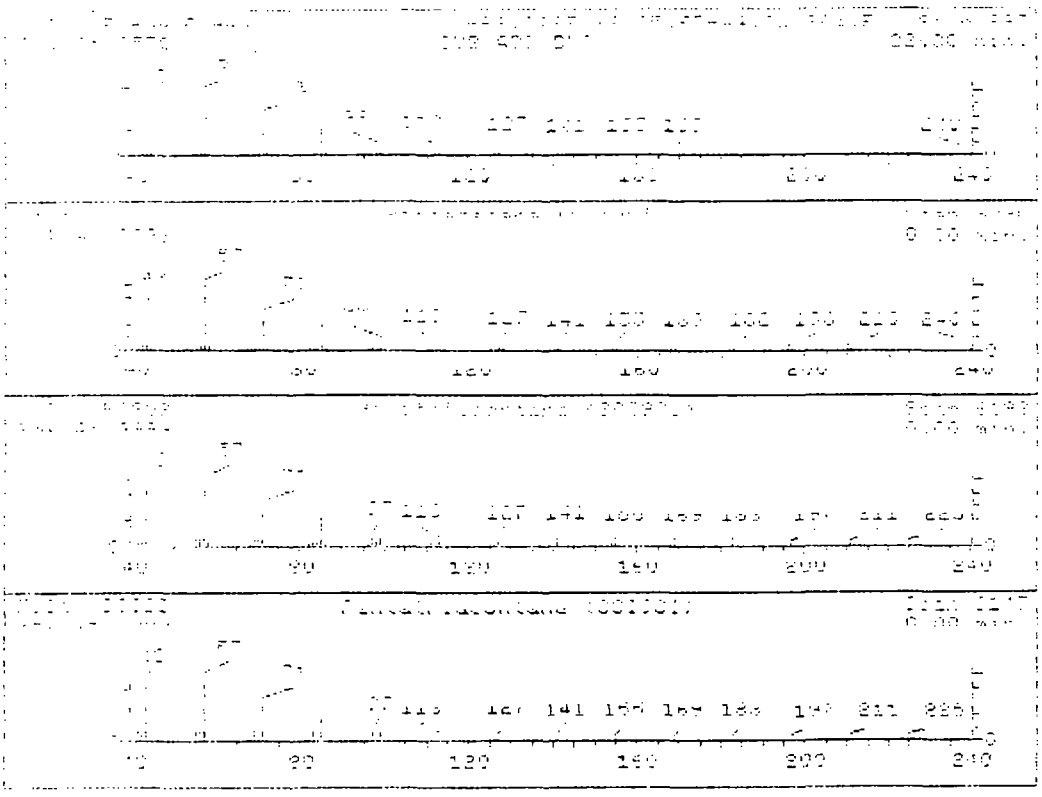
UNKNOWN

Unknown #.12
Quant Time: 890620 17:44
Printed at: 890620 16:57
Mw Wt= 12110.00 Tentative Concentration is 990.00

1.	Spirochi4.9]decan-6-one (8CI9CI)	192 C10H16O
2.	Azulene, 7-ethyl-1,4-dimethyl- (8CI9CI)	184 C14H16
3.	2,4,5(1H,3H,6H)-Pyrimidinethione, 6-ethyl-1,3-dimeth yl- (9CI)	184 C8H12N2O2S
4.	1,1'-Biphenyl, 4-methoxy- (9CI)	184 C13H12O
5.	Dibenzo[b,e][1,4]dioxin (9CI)	184 C12H8O2
6.	2-Dibenzofuranol (8CI9CI)	184 C12H8O2
7.	1,1'-Biphenyl, 2-methoxy- (9CI)	184 C13H12O

Sample File: 89TIFI Spectrum #: -1
Search Scrad: 1 Tilting option: S No. of ion ranges searched: 49

	Prob.	CAS #	CON #	RUOT	K	DK	#-LO	TILT	%	CON	C	I	S	W
1.	22*	13588448	10791	"81GL8	53	49	2	-2	34	39	10		17	
2.	09*	820069	22142	"81GD9	66	66	2	1	74	52	8		79	
3.	05*	7391619	22160	"81GL9	46	95	3	0	53	50	7		17	
4.	03*	613376	22144	"81GD9	26	92	3	0	47	52	8		13	
5.	03*	262124	22148	"81GL8	50	42	2	-1	30	54	9		14	
6.	19*	94771	22131	"81GD9	47	47	1	-1	30	53	5		15	



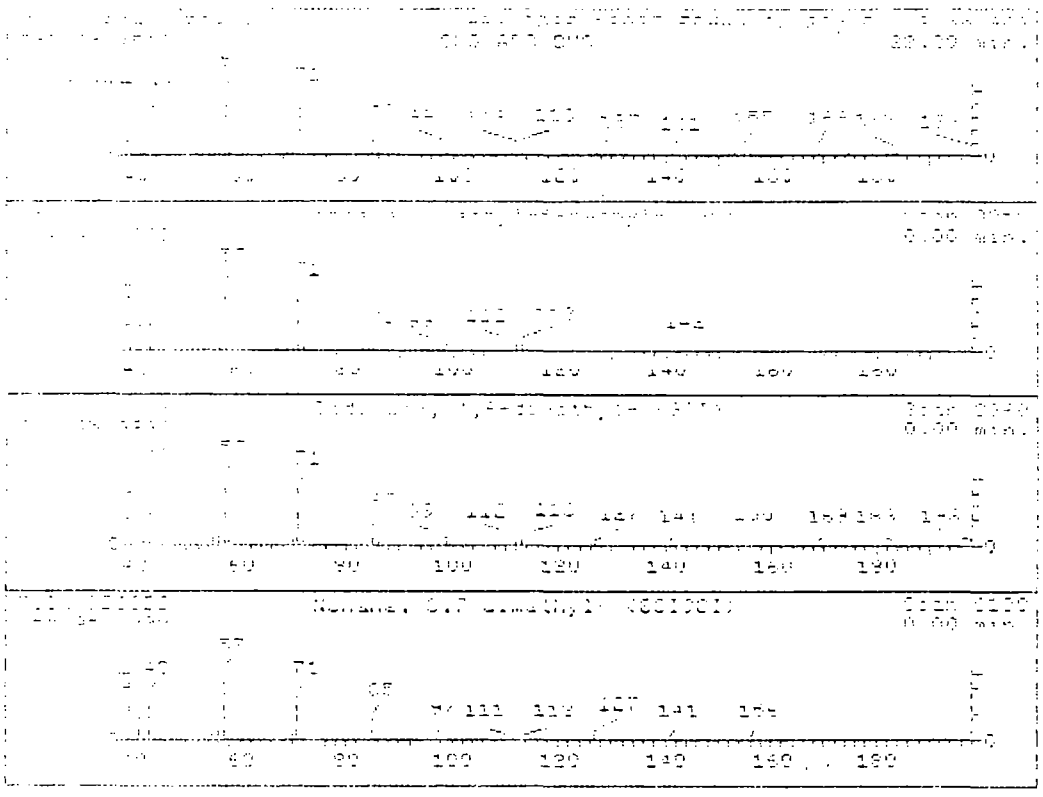
UNKNOWN HYDROCARBON

Unknown #.13
Count Time: 890620 17:44
Inserted at: 890620 16:57
PK Hts 47726.00 Tentative Concentration is 3900.00

1. Heptacosane (8019CI)	380	C17H36
2. Hexatriacontane (8019CI)	506	C36H74
3. Pentatriacontane (8019CI)	490	C35H72
4. Heptacosane (8019CI)	380	C27H56
5. Heptadecane (8019CI)	226	C15H34
6. Tetratetracontane (8019CI)	618	C44H90
7. Tritetracontane (8019CI)	604	C43H88

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion masses searched: 47

	Prob.	CAS #	CON #	ROOT	K	DK	#PLS	TILT	%	CON	C	I	F	IV
1.	94*	629799	6090	"91GD9	101	20	0	0	90	16	60			97
2.	92	630368	6143	"91GD8	131	31	0	0	79	14	64			91
3.	96	630079	6147	"91GD9	114	37	1	0	94	13	60			71
4.	96	593497	6220	"91GD9	112	41	0	0	69	10	57			78
5.	86*	544761	6146	"91GD9	99	31	0	2	94	15	60			80
6.	94	7098228	8906	"91GD8	103	53	1	0	87	13	59			67
7.	93	7099217	6150	"91GD9	101	67	0	0	72	14	61			73



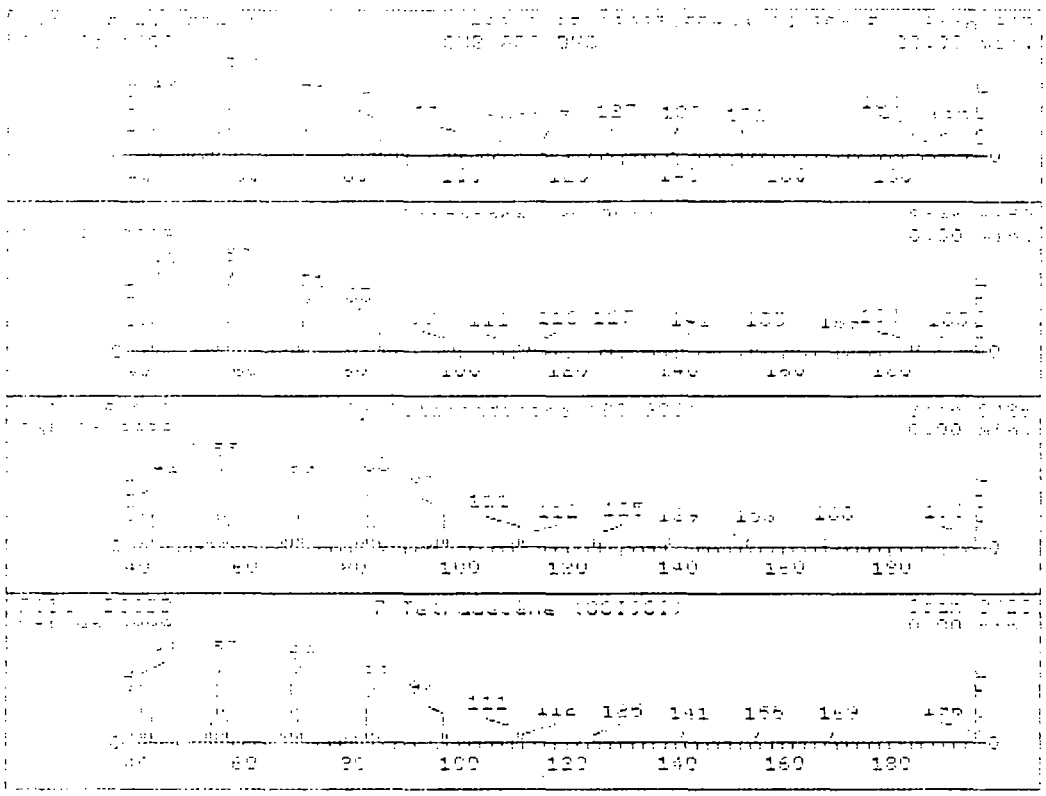
UNKNOWN HYDROCARBON

Unknown #.14
Quant time: 990620 17:44
Injected at: 990620 16:50
Pk Ht= 2483.00 Tentative Concentration is 2200.00

1. Heptane, 3-ethyl-5-methyl- (9CI)	142	C10H22
2. Undecane, 4,6-dimethyl- (9CI)	198	C14H30
3. Nonane, 3,7-dimethyl- (8CI,9CI)	156	C11H24
4. Hexadecane, 2,6,11,15-tetramethyl- (8CI,9CI)	282	C20H42
5. Undecane, 4,6-dimethyl- (9CI)	194	C13H28
6. Undecane, 2,6,10-trimethyl- (8CI,9CI)	212	C14H30
7. Hexadecane (8CI,9CI)	226	C16H34

Sample File: ARTIFI Spectrum #: -1
Search speed: 1 Tilting action: S No. of ion ranges searched: 50

	Prob.	CAS #	LIB #	RUDI	K	DK	#FLG	TILT	%	CON	C I	R I
1.	77*	41099409	3969	"81GDB	65	29	0	0	90	23	32	79
2.	76*	61141728	3940	"81GDB	53	52	0	0	92	25	32	46
3.	71*	17302329	6100	"81GDB	63	23	0	0	97	42	24	79
4.	71	504449	4040	"81GDB	77	60	1	0	96	15	39	37
5.	49*	17312922	3987	"81GDB	54	44	0	0	100	37	06	46
6.	64	3991983	4076	"81GDB	95	34	1	0	98	29	09	40
7.	64	544756	6144	"81GDB	97	33	1	0	97	37	20	44



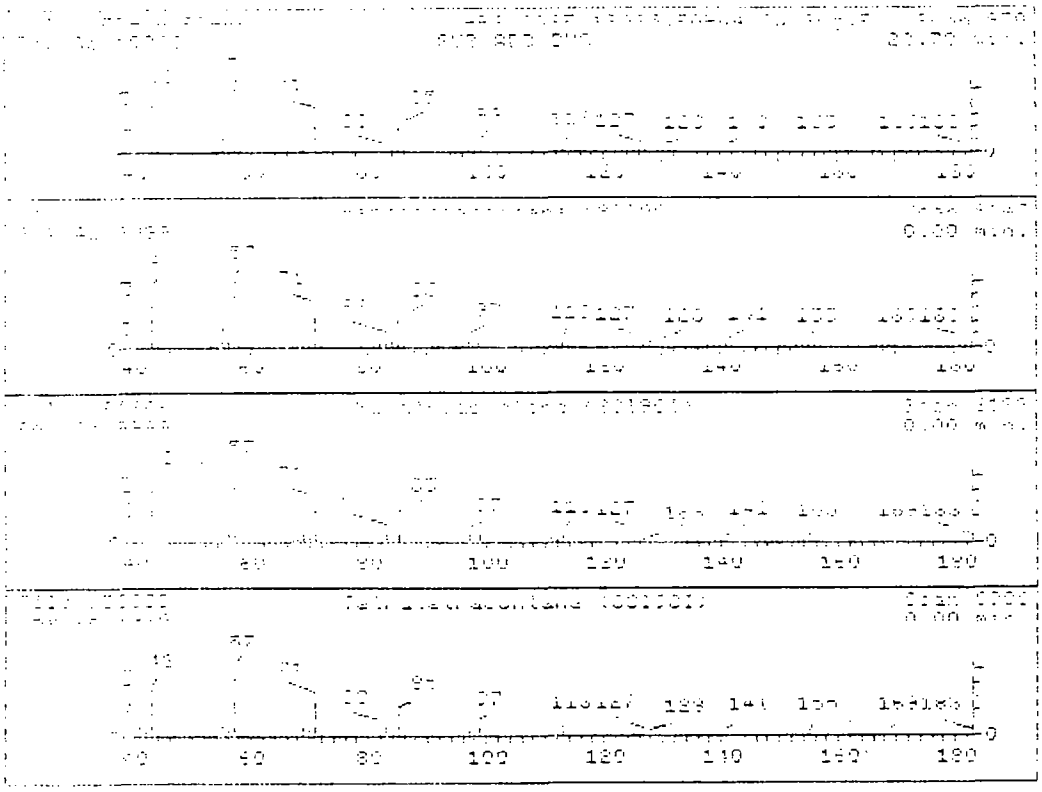
UNKNOWN HYDROCARBON.

Unknown #.19
Quant Time: 890620 17:44
Injected at: 890620 16:52
Pk Ht= 10212.00 Tentative Concentration is 930.00

1. Tricosane (80190I)	164	C17H28
2. Cyclotetradecane (80190I)	196	C14H28
3. Cyclotetradecane (80190I)	196	C14H28
4. 1-Buten-2-one, 4-(1-aziridinyl)- (80190I)	111	C6H9NO
5. 1,6-Heptadiene, 2,5,5-trimethyl- (90I)	138	C10H18
6. 9-Undecen-2-one, 6,10-dimethyl- (80190I)	196	C13H24O
7. Hexahydrocoumarin (80190I)	162	C10H16O

Sample File: ART1F1 Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	FILT	%	CUN	C	I	P	IV
1.	60*	609905	6250	"81G09	69	44	1	-2	84	35	20			49
2.	60*	299170	8406	"81G09	59	61	1	-2	36	37	20			45
3.	49*	10798740	8428	"81G09	63	62	1	-2	44	39	19			40
4.	40*	18277571	10622	"81G09	47	37	0	-2	14	46	12			42
5.	30*	42036282	7998	"81G09	71	32	1	-1	61	64	9			49
6.	28*	4433367	23741	"81G09	50	109	3	0	78	39	23			14
7.	25*	13588948	10701	"81G09	46	64	1	-1	29	47	7			12



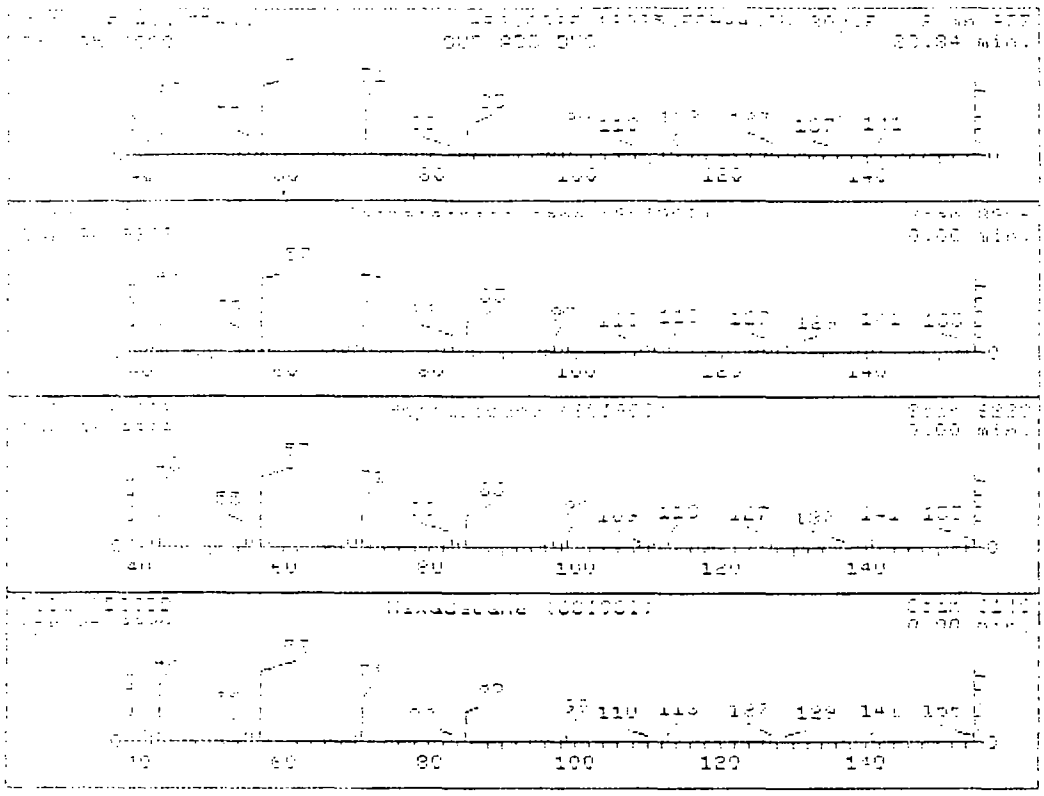
UNKNOWN HYDROCARBON

Unknown #.1a
Client Time: 890620 17:44
Injected at: 890600 16:57
Pk Ht= 4[illegible]20.00 Tentative Concentration is 4100.00

1. Pentatriacontane (8C19C1)	492	C35H72
2. Hexatriacontane (8C19C1)	506	C36H74
3. Tetratetracontane (8C19C1)	618	C44H90
4. Tritetracontane (8C19C1)	604	C43H88
5. Ditriacontane (8C19C1)	594	C32H66
6. Nonacosane (8C19C1)	408	C29H60
7. Heptacosane (8C19C1)	390	C27H56

Sample File: 4RT15I Spectrum #: -1
Bkgd Subtracted: 1 Filtering option: 9 No. of ion ranges searched: 4[illegible]

	Prob.	CAS #	CON #	ROOT	K	UK	#FLS	TILT	%	CON	C	I	R	IV
1.	97	630079	6147	"81GD8	106	25	0	0	89	11	55		95	
2.	96	630068	6143	"81GD8	108	54	0	0	79	7	54		76	
3.	93	7049229	8906	"81GD8	103	53	0	0	89	11	51		74	
4.	83	7098217	6150	"81GD8	95	73	1	0	69	7	54		55	
5.	79	630024	6093	"81GD8	109	28	1	0	104	14	47		67	
6.	79	630035	8906	"81GD8	108	37	1	0	101	11	45		66	
7.	74	593447	6220	"81GD8	94	59	1	0	69	11	40		54	



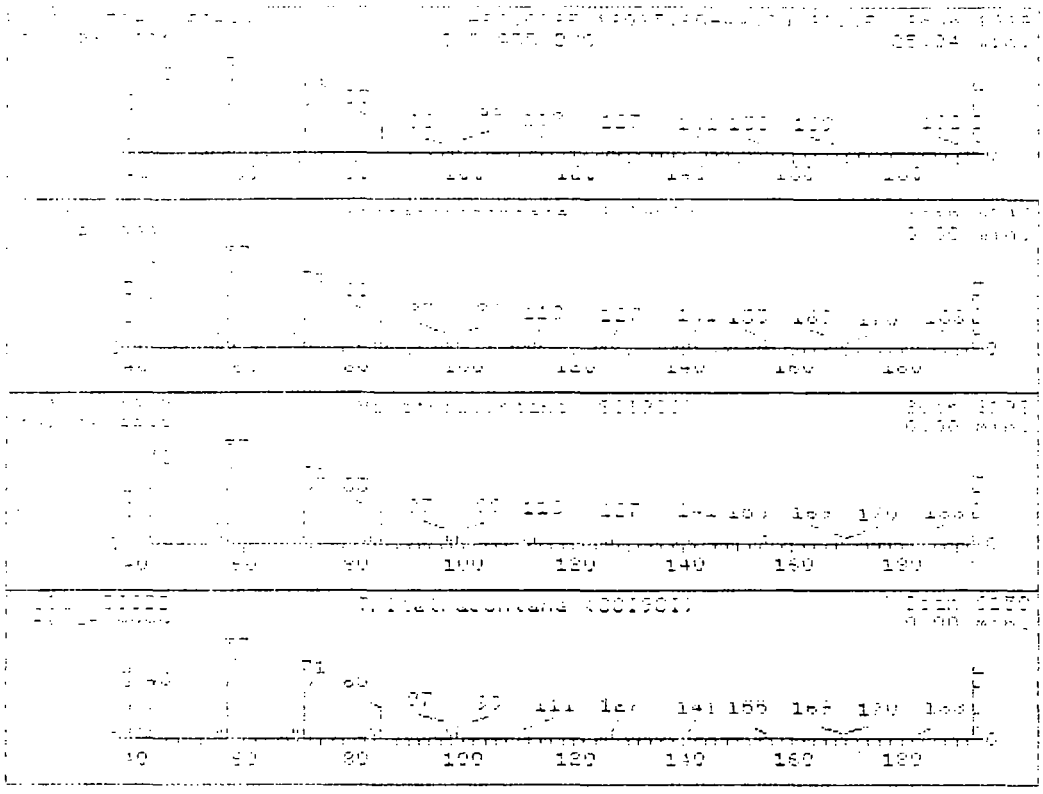
UNKNOWN HYDROCARBON

Unknown #.17
Quant Time: 890620 17:44
Injected at: 890620 16:57
Pk Hts 24659.00 Tentative Concentration is 2000.00

1. Tritetratacontane (8019CI)	618	C44H90
2. Heptacosane (8019CI)	380	C27H56
3. Hexadecane (9019CI)	226	C16H34
4. Benzene, 3,7-dimethyl- (8019CI)	156	C11H24
5. Tritetratacontane (8019CI)	604	C43H88
6. Iron, tricarbonyl[N-(phenyl-2-pyridinylmethylene)benzenamine-N,N']- (9CI)	398	C21H14FeN2O3
7. Heptadecane (8019CI)	240	C17H36

Sample file: AP01F1 Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 44

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	93	7098228	8906	"81G08	73	93	0	0	100	10	54		62	
2.	94	693497	6220	"81G09	81	72	0	0	81	13	43		50	
3.	13	544763	6146	"81G09	80	40	0	0	87	22	70		60	
4.	74	17302928	6100	"81G09	58	29	0	0	54	23	12		71	
5.	71	7098217	6160	"81G08	100	69	1	0	99	22	24		50	
6.	67	24564117	6168	"81G08	73	64	1	0	90	13	34		29	



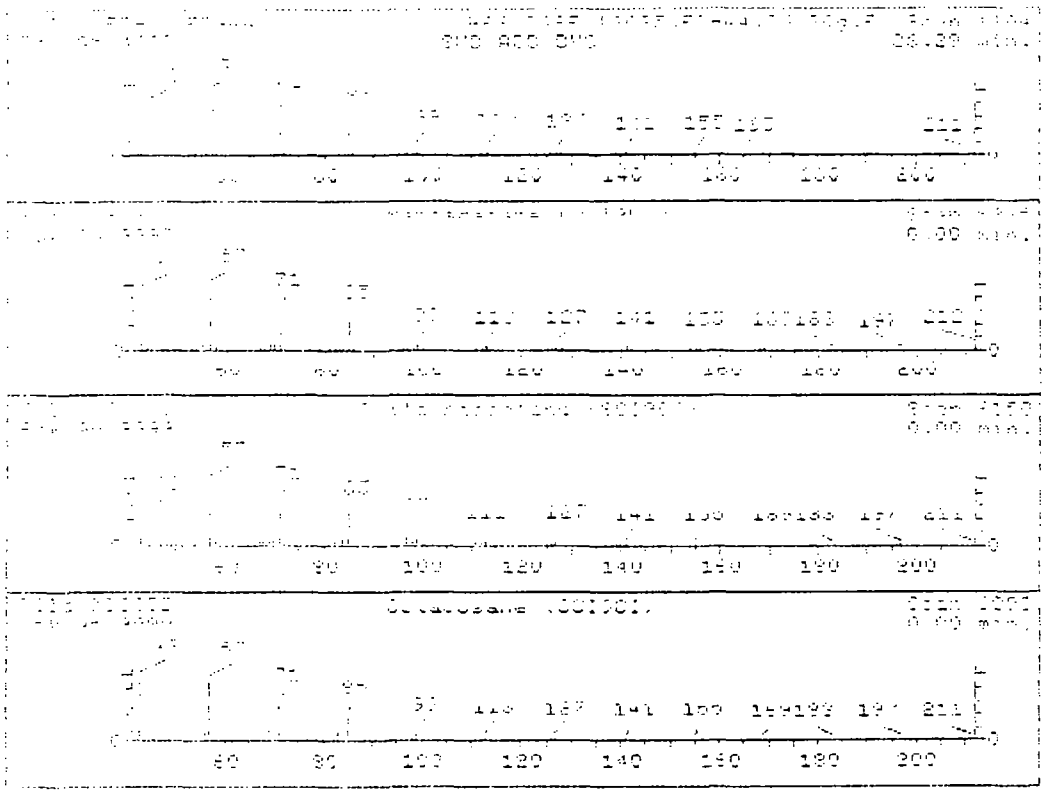
UNKNOWN HYDROCARBON

Unknown #.18
Current Time: 890620 17:44
Injected at: 890620 16:57
Peak Ht= 4650.00 Tentative Concentration is 3700.00

1. Pentatriacontane (8C19C1)	490	C35H72
2. Hexatriacontane (8C19C1)	506	C36H74
3. Tritetracontane (8C19C1)	604	C43H88
4. Nonacosane (8C19C1)	408	C29H60
5. Octacosane (8C19C1)	310	C28H58
6. Heptacosane (8C19C1)	380	C27H56
7. Hexacosane (8C19C1)	249	C26H54

Sample File: ART1F1 Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 49

	Prob.	CAS #	CON #	NOUT	K	OK	#FLG	TILT	%	CON	C I	P IV
1.	91	630079	6147	"81C08	121	38	1	0	90	18	85	74
2.	61	630048	6193	"81C08	108	54	0	0	77	18	84	76
3.	61	7099217	6150	"81C08	109	60	0	0	76	18	84	77
4.	75	630035	8905	"81C08	86	59	0	0	60	18	36	67
5.	75	629970	6021	"81C08	85	64	0	0	57	18	36	69
6.	75	593497	6000	"81C08	85	68	0	0	59	18	34	61
7.	73	629787	6040	"81C08	80	41	0	0	93	22	70	80



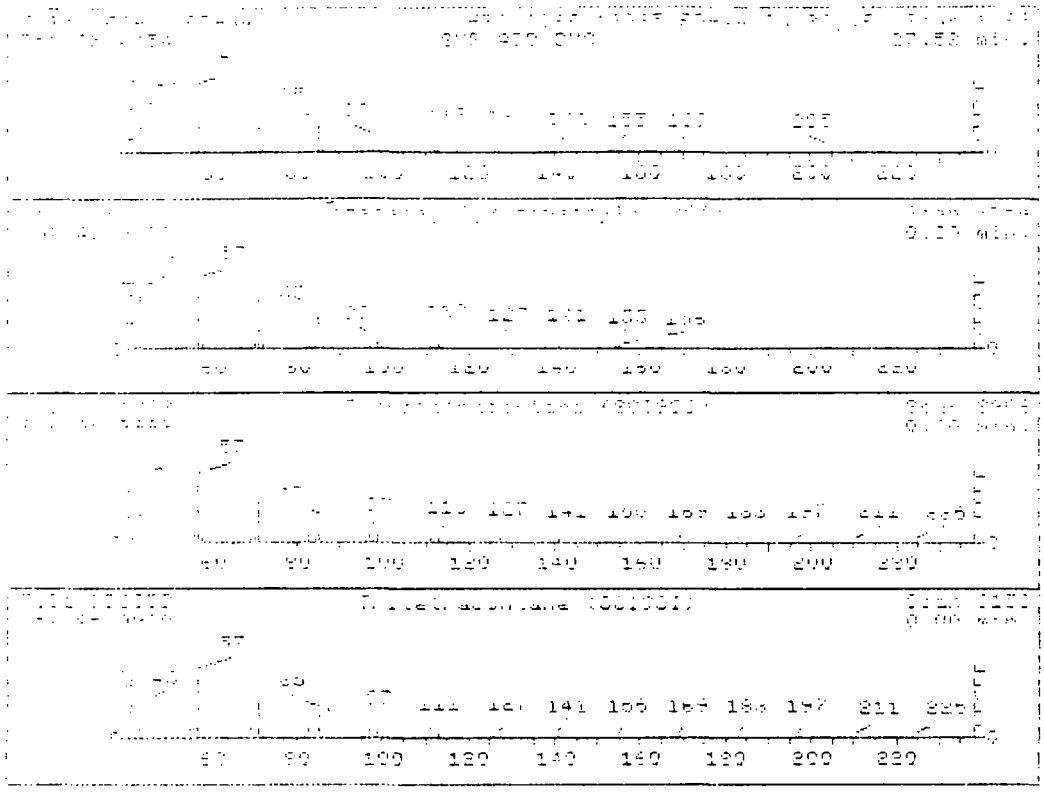
UNKNOWN HYDROCARBON

Unknown #.17
Count Time: 990620 17:44
Injected at: 990620 15:52
Pk Hte 23514.00 Tentative Concentration is 2000.00

1. Pentadecane (8C19CI)	212	C15H32
2. Tritetracontane (8C19CI)	604	C43H88
3. Octacosane (8C19CI)	394	C28H58
4. Heptadecane (8C19CI)	240	C17H36
5. Hexatriacontane (8C19CI)	506	C36H74
6. Tetratetracontane (8C19CI)	618	C44H90
7. Hexadecane (8C19CI)	226	C16H34

Sample File: ART:F1 Spectrum #: -1
Fraction added: 1 Tilting option: 9 No. of ion ranges searched: 50

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C I	R I
1.	94*	629629	6265	"81GD8	100	20	0	0	94	16	60	97
2.	98	7098217	6150	"81GD8	116	52	0	0	90	20	50	99
3.	79	630024	6097	"81GD8	90	47	1	-2	84	10	49	39
4.	96	629787	6090	"81GD8	97	24	0	0	99	22	41	71
5.	96	630058	6195	"81GD8	108	64	1	0	97	16	38	66
6.	74	7098208	8946	"81GD8	96	70	1	0	100	14	29	40
7.	90	544763	6146	"81GD8	93	27	1	0	100	20	32	62



UNKNOWN HYDROCARBON

Unknown #.20
Quant Time: 890620 17:44
Printed at: 890620 16:57
Pk Ht= 02749.00 Tentative Concentration is 1900.00

1. Undecane, 3,8-dimethyl- (8CI)	154	C13H28
2. Tetratetracontane (8CI,9CI)	618	C44H90
3. Tritetracontane (8CI,9CI)	604	C43H88
4. Heptadecane (8CI,9CI)	240	C17H36
5. Eicosane (8CI,9CI)	310	C20H42
6. Heptacosane (8CI,9CI)	380	C27H56
7. Pentadecane, 2-methyl- (8CI,9CI)	226	C16H34

Library file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 91

	Prob.	CAS #	CON #	ROOT	K	UK	#FLG	TILT	%	CON	C I	R I
1.	91	17301505	6164	"81GL8	87	25	0	-2	67	10	55	29
2.	91	2099228	8906	"81GL8	92	64	1	-1	100	9	53	41
3.	79	2099217	6160	"81GD9	95	73	0	0	93	19	43	49
4.	73	629-97	6049	"81GL8	95	26	0	0	99	24	32	59
5.	73	629979	6021	"81GL8	96	52	0	0	79	21	30	59
6.	73	593497	6020	"81GL8	97	60	0	0	99	21	31	67
7.	71*	1560996	6162	"81GD9	79	63	2	0	94	27	29	50

[illegible] : [illegible]

[illegible] Operator: [illegible] [illegible]
[illegible] : [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] Aux # : [illegible]
Method File: [illegible] Running File: [illegible] No. of extra records: [illegible]
Start time: [illegible] Analysis time: [illegible] Transfer line time: [illegible]

Chromatographic temperatures :	35.	205.	0.	0.	0.
Chromatographic times, min. :	4.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	1.0	0.0

[illegible] ED44 [illegible] 10:35 ED44.IW [illegible] [illegible]

[illegible] 479.0 ULP MDC [illegible]
[illegible] .20 Pkht Reject: 2821. Max Peaks: 20 Burning: 1
Reject: 0.30 Results File ED44 Sorted by Pkht/Pkht INT

Peak #	R.T. min.	First scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	23.70	967	970	972	49982	255459	114357	75.79	7.439
2	20.83	918	921	923	49041	340284	150781	100.00	10.0[illegible]
3	22.10	893	897	899	47725	326671	153032	97.[illegible]	9.[illegible]
4	19.25	736	739	742	47607	222064	119161	79.67	7.[illegible]
5	25.04	1035	1039	1041	45307	262193	105571	67.0[illegible]	6.[illegible]
6	20.39	899	902	905	26583	269736	89298	52.94	5.[illegible]
7	21.94	853	858	861	26056	305892	99577	56.88	5.[illegible]
8	23.84	973	977	979	24559	251792	79381	50.41	5.[illegible]
9	26.29	1101	1104	1106	24314	163934	55694	35.[illegible]	3.[illegible]
10	27.50	1164	1168	1171	22749	188429	70200	44.58	4.[illegible]
11	17.57	649	652	658	22596	122507	78996	50.14	5.[illegible]
12	5.20	5	9	14	20406	93155	72944	46.32	4.[illegible]
13	18.63	700	707	710	19799	179737	82412	52.33	5.[illegible]
14	19.[illegible]	774	776	780	16459	192075	72559	46.07	4.644
15	17.17	628	631	635	14804	55822	32540	20.66	2.[illegible]
16	20.29	787	791	795	12160	222982	56317	35.76	3.[illegible]
17	22.10	884	887	889	12110	162455	39848	25.30	2.[illegible]
18	21.87	872	875	878	10592	196935	41622	27.06	2.[illegible]
19	19.71	760	763	765	10498	123810	26125	16.59	1.[illegible]
20	21.03	932	935	936	10212	106589	25423	16.14	1.[illegible]

Sum of corrected areas: 1562518.

Summary of Unknowns PEM Library Search and Quantitation

Standard	Concentration	Peak Ht.	Retention Time	Unknown Window
1	40.0	29213.	9.66	5.04 - 11.55
2	40.0	45017.	13.43	11.55 - 16.14
3	40.0	36345.	18.84	16.14 - 21.11
4	40.0	34099.	23.38	21.11 - 27.46
5	40.0	32862.	31.55	27.46 - 33.59
6	40.0	32901.	35.63	33.59 - 46.05

Dilution Factor = ********

$$\text{Uranium Concentration} = \frac{\text{Conc Int Std}}{\text{Pk.Ht.Int.Std.}} * \text{Dil Factor} * \text{Pk.Ht.Unknown}$$

1:11 PM FRI., 23 JUNE, 1989

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH45

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH45

Sample wt/vol: 1.0 (g/mL) G Lab File ID: EDH45

Level: (low/med) MED Date Received: 06/03/89

% Moisture: not dec. 12 dec._____ Date Extracted: 06/08/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/89

GPC Cleanup: (Y/N) N pH: 9.1 Dilution Factor: 0.500

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	11000	U
111-44-4	bis(2-Chloroethyl)ether	11000	U
95-57-8	2-Chlorophenol	11000	U
541-73-1	1,3-Dichlorobenzene	11000	U
106-46-7	1,4-Dichlorobenzene	11000	U
100-51-6	Benzyl alcohol	11000	U
95-50-1	1,2-Dichlorobenzene	11000	U
95-48-7	2-Methylphenol	11000	U
108-60-1	bis(2-Chloroisopropyl)ether	11000	U
106-44-5	4-Methylphenol	11000	U
621-64-7	N-Nitroso-di-n-propylamine	11000	U
67-72-1	Hexachloroethane	11000	U
98-95-3	Nitrobenzene	11000	U
78-59-1	Isophorone	11000	U
88-75-5	2-Nitrophenol	11000	U
105-67-9	2,4-Dimethylphenol	11000	U
65-85-0	Benzoic acid	54000	U
111-91-1	bis(2-Chloroethoxy)methane	11000	U
120-83-2	2,4-Dichlorophenol	11000	U
120-82-1	1,2,4-Trichlorobenzene	11000	U
91-20-3	Naphthalene	11000	U
106-47-8	4-Chloroaniline	11000	U
87-68-3	Hexachlorobutadiene	11000	U
59-50-7	4-Chloro-3-methylphenol	11000	U
91-57-6	2-Methylnaphthalene	2100	J
77-47-4	Hexachlorocyclopentadiene	11000	U
88-06-2	2,4,6-Trichlorophenol	11000	U
95-95-4	2,4,5-Trichlorophenol	54000	U
91-58-7	2-Chloronaphthalene	11000	U
88-74-4	2-Nitroaniline	54000	U
131-11-3	Dimethylphthalate	11000	U
208-96-8	Acenaphthylene	11000	U
606-20-2	2,6-Dinitrotoluene	11000	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH45

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH45

Sample wt/vol: 1.0 (g/mL) G Lab File ID: EDH45

Level: (low/med) MED Date Received: 06/03/89

% Moisture: not dec. 12 dec._____ Date Extracted: 06/08/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/89

GPC Cleanup: (Y/N) N pH: 9.1 Dilution Factor: 0.500

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	54000	U
83-32-9	Acenapthene	5000	J
51-28-5	2,4-Dinitrophenol	54000	U
100-02-7	4-Nitrophenol	54000	U
132-64-9	Dibenzofuran	3700	J
121-14-2	2,4-Dinitrotoluene	11000	U
84-66-2	Diethylphthalate	11000	U
7005-72-3	4-Chlorophenyl-phenylether	11000	U
86-73-7	Fluorene	5900	J
100-01-6	4-Nitroaniline	54000	U
534-52-1	4,6-Dinitro-2-methylphenol	54000	U
86-30-6	N-Nitrosodiphenylamine (1)	11000	U
101-55-3	4-Bromophenyl-phenylether	11000	U
118-74-1	Hexachlorobenzene	11000	U
87-86-5	Pentachlorophenol	54000	U
85-01-8	Phenanthrene	19000	
120-12-7	Anthracene	4300	J
84-74-2	Di-n-butylphthalate	11000	U
206-44-0	Fluoranthene	13000	
129-00-0	Pyrene	9600	J
85-68-7	Butylbenzylphthalate	11000	U
91-94-1	3,3'-Dichlorobenzidine	22000	U
56-55-3	Benzo(a)anthracene	3600	J
218-01-9	Chrysene	4500	J
117-81-7	bis(2-Ethylhexyl)phthalate	11000	U
117-84-0	Di-n-octylphthalate	11000	U
205-99-2	Benzo(b)fluoranthene	4700	J
207-08-9	Benzo(k)fluoranthene	6800	J
50-32-8	Benzo(a)pyrene	2600	J
193-39-5	Indeno(1,2,3-cd)pyrene	11000	U
53-70-3	Dibenz(a,h)anthracene	11000	U
191-24-2	Benzo(g,h,i)perylene	11000	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDH45

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH45

Sample wt/vol: 1.0 (g/mL) G Lab File ID: EDH45

Level: (low/med) MED Date Received: 06/03/89

% Moisture: not dec. 12 dec._____ Date Extracted: 06/08/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/89

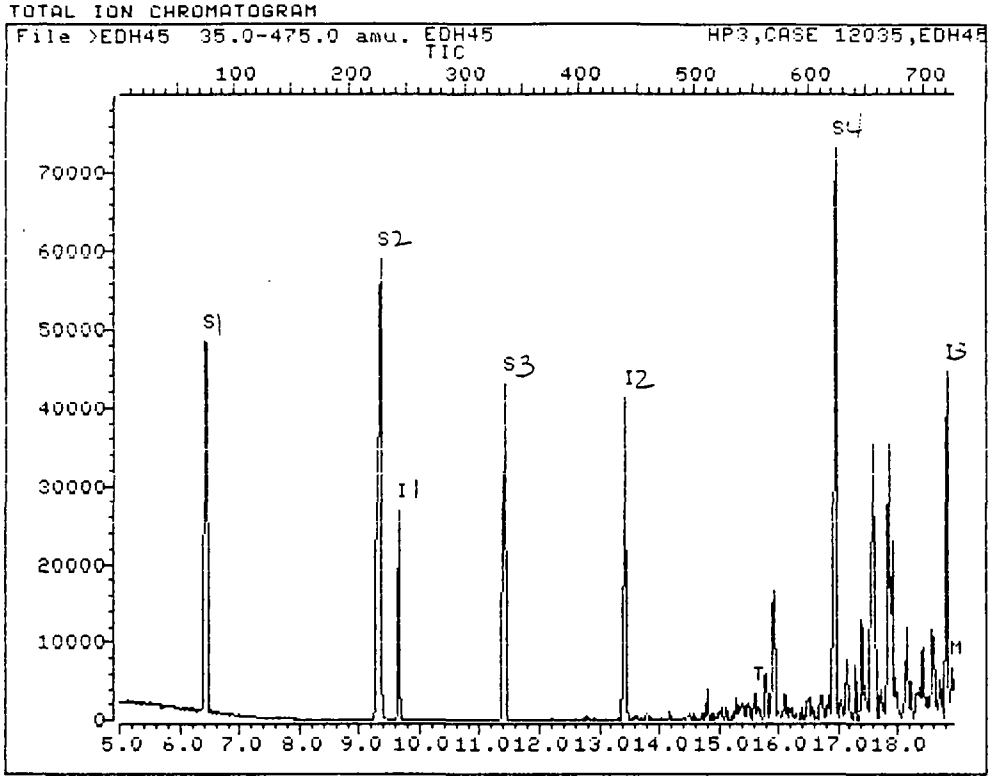
GPC Cleanup : (Y/N) N pH: 9.1 Dilution Factor: 0.500

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 00090-12-0	NAPHTHALENE, 1-METHYL-(8CI9C	15.93	36000	J
2.	UNKNOWN NAPHTHALENE, ETHYL	17.39	26000	J
3.	UNKNOWN DIMETHYL NAPHTHALENE	17.61	72000	J
4.	UNKNOWN DIMETHYL NAPHTHALENE	17.86	70000	J
5.	UNKNOWN DIMETHYL NAPHTHALENE	17.91	43000	J
6.	UNKNOWN DIMETHYL NAPHTHALENE	18.16	24000	J
7.	UNKNOWN HYDROCARBON	19.20	61000	J
8.	UNKNOWN TRIMETHYL NAPHTHALEN	19.26	26000	J
9.	UNKNOWN TRIMETHYL NAPHTHALEN	19.61	29000	J
10.	UNKNOWN TRIMETHYL NAPHTHALEN	19.94	34000	J
11.	UNKNOWN TRIMETHYL NAPHTHALEN	20.23	24000	J
12.	UNKNOWN HYDROCARBON	20.76	67000	J
13.	UNKNOWN HYDROCARBON	21.50	28000	J
14.	UNKNOWN HYDROCARBON	22.25	76000	J
15.	UNKNOWN HYDROCARBON	22.32	44000	J
16.	UNKNOWN HYDROCARBON	23.63	59000	J
17.	UNKNOWN HYDROCARBON	23.77	34000	J
18.	UNKNOWN HYDROCARBON	24.98	56000	J
19.	UNKNOWN HYDROCARBON	26.25	37000	J
20.	UNKNOWN TRIMETHYL NAPHTHALEN	19.69	37000	J
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ION CHROMATOGRAM



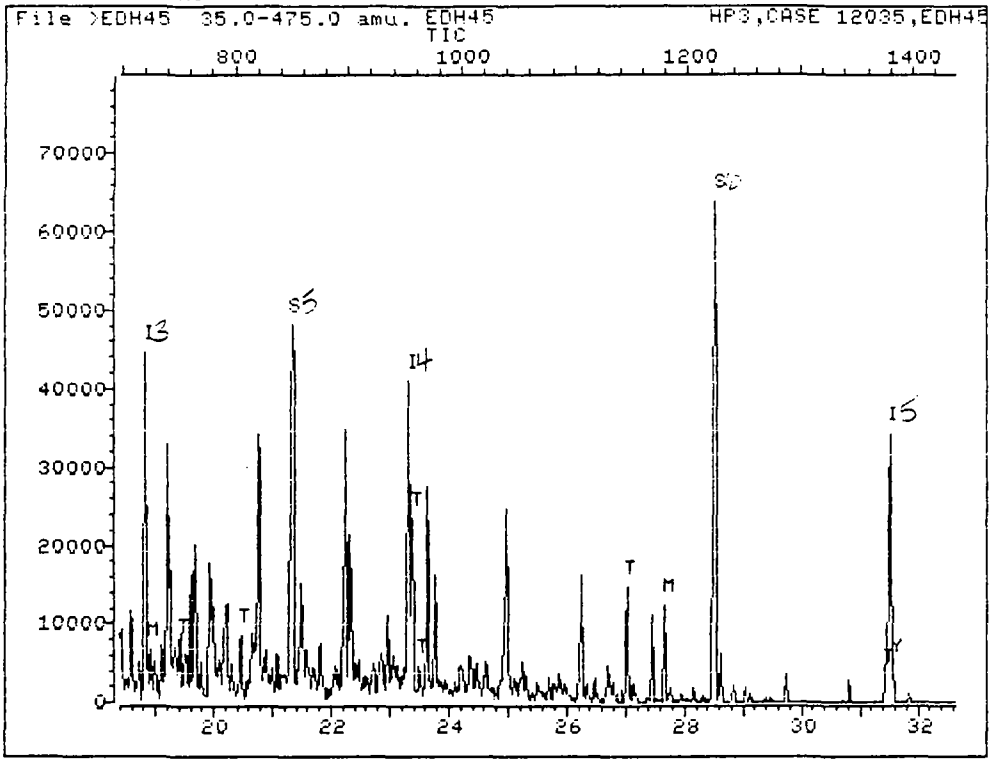
Data File: >EDH45::D3 Quant Output File: ^EDH45::SC
Name: EDH45
Misc: HP3,CASE 12035,EDH45,IW ~~30~~ 1g ml g,FVC 2ml,06/06/89,pH 9,%M12BTL# 9

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

Operator ID: JOHN
Quant Time: 890620 18:42
Injected at: 890620 17:55

TIC page 1 of 3

TOTAL ION CHROMATOGRAM



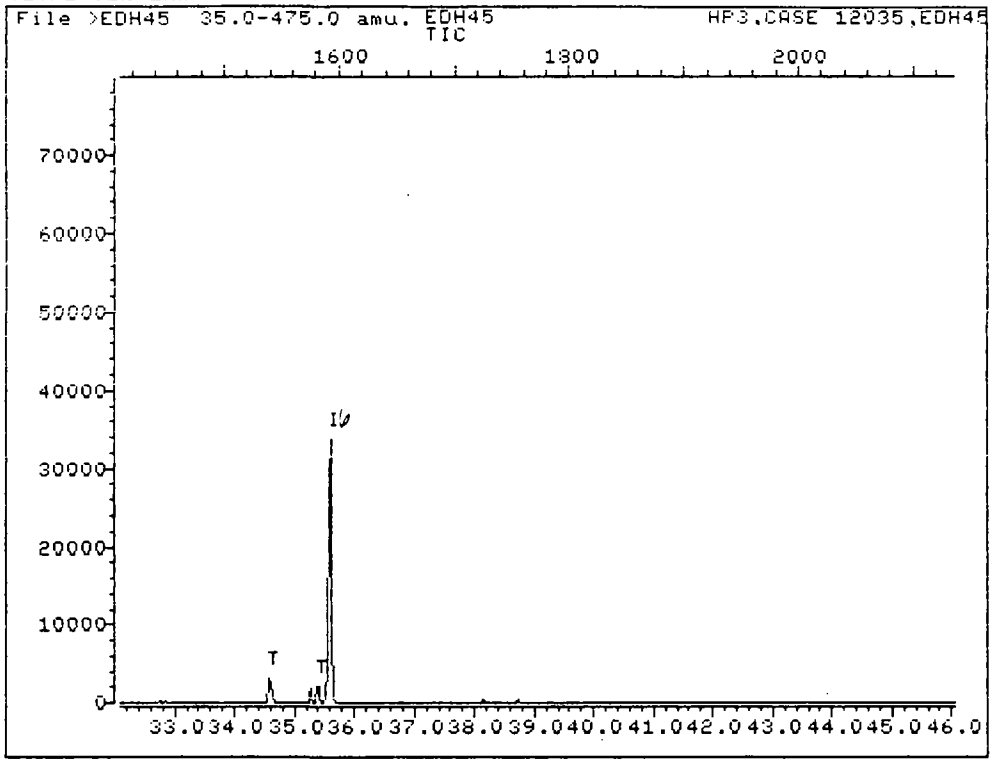
Data File: >EDH45::D3 Quant Output File: ^EDH45::SC
Name: EDH45
Misc: HP3,CASE 12035,EDH45,IW ~~30~~ 1 ml g,FVC 2ml,06/06/89,pH 9,%M12BTL# 9

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

Operator ID: JOHN
Quant Time: 890620 18:42
Injected at: 890620 17:55

TIC page 2 of 3

TOTAL ION CHROMATOGRAM



Data File: >EDH45::D3 Quant Output File: ^EDH45::SC
Name: EDH45
Misc: HP3,CASE 12035,EDH45,IW 30g,FVC 2ml,06/06/89,pH 9,%M12BTL# 9

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

Operator ID: JOHN
Quant Time: 890620 18:42
Injected at: 890620 17:55

TIC page 3 of 3

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890620 18:42
Output File: `EDH45::SC Injected at: 890620 17:55
Data File: >EDH45::D3 Dilution Factor: 1.00000
Name: EDH45
Misc: HP3,CASE 12055,EDH45,IW ~~50~~ 1 mg,FVC 2ml,06/06/89,pH 9,XM12BTL# 9

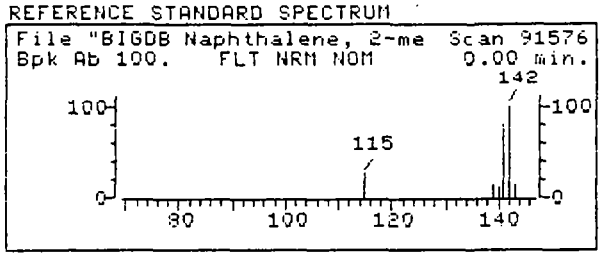
ID File: ID_ECA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.66	152.0	9543	40.00	ng/uL	96
2)	2-Fluorophenol	6.43	112.0	45874	178.09	ng/uL	94
3)	Phenol-d5	9.35	99.0	90533	198.32	ng/uL	85
4)	Phenol	0.00	94.0	0	0.00	ng/uL	
5)	bis(-2-Chloroethyl)Ether	0.00	93.0	0	0.00	ng/uL	
6)	2-Chlorophenol	0.00	128.0	0	0.00	ng/uL	
7)	1,3-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
8)	1,4-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
9)	Benzyl Alcohol	0.00	108.0	0	0.00	ng/uL	
10)	1,2-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
11)	2-Methylphenol	0.00	108.0	0	0.00	ng/uL	
12)	bis(2-Chloroisopropyl)ether	0.00	45.0	0	0.00	ng/uL	
13)	4-Methylphenol	0.00	108.0	0	0.00	ng/uL	
14)	N-Nitroso-Di-n-propylamine	0.00	70.0	0	0.00	ng/uL	
15)	Hexachloroethane	0.00	117.0	0	0.00	ng/uL	
16)	*d8-Naphthalene	13.43	136.0	45293	40.00	ng/uL	89
17)	Nitrobenzene-d5	11.43	82.0	46169	96.07	ng/uL	85
18)	Nitrobenzene	0.00	77.0	0	0.00	ng/uL	
19)	Isophorone	0.00	82.0	0	0.00	ng/uL	
20)	2-Nitrophenol	0.00	139.0	0	0.00	ng/uL	
21)	2,4-Dimethylphenol	0.00	107.0	0	0.00	ng/uL	
22)	Benzoic Acid	0.00	105.0	0	0.00	ng/uL	
23)	bis(-2-Chloroethoxy)Methane	0.00	93.0	0	0.00	ng/uL	
24)	2,4-Dichlorophenol	0.00	162.0	0	0.00	ng/uL	
25)	1,2,4-Trichlorobenzene	0.00	180.0	0	0.00	ng/uL	
26)	Naphthalene	0.00	128.0	0	0.00	ng/uL	
27)	4-Chloroaniline	0.00	127.0	0	0.00	ng/uL	
28)	Hexachlorobutadiene	0.00	225.0	0	0.00	ng/uL	
29)	4-Chloro-3-methylphenol	0.00	107.0	0	0.00	ng/uL	
30)	2-Methylnaphthalene	15.60	142.0	2435	1.86	ng/uL → 2100	97
31)	*d10-Acenaphthene	18.84	164.0	24407	40.00	ng/uL	91
32)	Hexachlorocyclopentadiene	0.00	237.0	0	0.00	ng/uL	
33)	2,4,6-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
34)	2,4,5-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
35)	2-Chloronaphthalene	0.00	162.0	0	0.00	ng/uL	
36)	2-Fluorobiphenyl	16.97	172.0	70248	103.45	ng/uL	94
37)	2-Nitroaniline	0.00	65.0	0	0.00	ng/uL	
38)	Dimethyl Phthalate	0.00	163.0	0	0.00	ng/uL	
39)	Acenaphthylene	0.00	152.0	0	0.00	ng/uL	
40)	2,6-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
41)	3-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
42)	Acenaphthene	18.92	153.0	3142	4.41	ng/uL → 5900	97
43)	2,4-Dinitrophenol	0.00	184.0	0	0.00	ng/uL	
44)	4-Nitrophenol	0.00	109.0	0	0.00	ng/uL	
45)	Dibenzofuran	19.42	168.0	3419	3.24	ng/uL → 3700	99
46)	2,4-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	104
47)	Diethylphthalate	0.00	149.0	0	0.00	ng/uL	
48)	4-Chlorophenyl-phenylether	0.00	204.0	0	0.00	ng/uL	
49)	Fluorene	20.48	166.0	4433	5.18	ng/uL → 5900	99

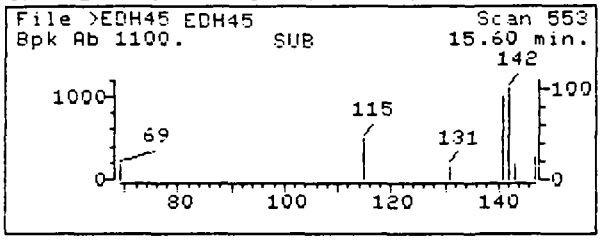
50)	4-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
51)	2,4,6-Tribromophenol	21.34	330.0	14181	216.10	ng/uL	96
52)	*d10-Phenanthrene	23.32	188.0	43361	40.00	ng/uL	99
53)	4,6-Dinitro-2-methylphenol	0.00	198.0	0	0.00	ng/uL	
54)	N-Nitrosodiphenylamine	0.00	169.0	0	0.00	ng/uL	
55)	4-Bromophenyl-phenylether	0.00	248.0	0	0.00	ng/uL	
56)	Hexachlorobenzene	0.00	284.0	0	0.00	ng/uL	
57)	Pentachlorophenol	0.00	266.0	0	0.00	ng/uL	
58)	Phenanthrene	23.38	178.0	18796	16.78	ng/uL → 1400	96
59)	Anthracene	23.50	178.0	4253	3.79	ng/uL → 4300	78
60)	Di-n-Butylphthalate	0.00	149.0	0	0.00	ng/uL	
61)	Fluoranthene	27.04	202.0	15122	11.15	ng/uL → 1300	96
62)	*d12-Chrysene	31.52	240.0	35968	40.00	ng/uL	76
63)	Pyrene	27.67	202.0	13104	8.50	ng/uL → 9600	84
64)	Terphenyl-d14	28.54	244.0	84193	90.43	ng/uL	97
65)	Butylbenzylphthalate	0.00	149.0	0	0.00	ng/uL	
66)	3,3'-Dichlorobenzidine	0.00	252.0	0	0.00	ng/uL	
67)	Benzo(a)Anthracene	31.44	228.0	4401	3.19	ng/uL → 3200	89
68)	Chrysene	31.58	228.0	4085	4.02	ng/uL → 4500	90
69)	Bis(2-Ethylhexyl)Phthalate	0.00	149.0	0	0.00	ng/uL	
70)	*d12-Perylene	35.62	264.0	38396	40.00	ng/uL	96
71)	Di-n-octyl phthalate	0.00	149.0	0	0.00	ng/uL	
72)	Benzo(b)fluoranthene	34.58	252.0	3561M	2.66	ng/uL → 4700	81
73)	Benzo(k)Fluoranthene	34.60	252.0	2029M	2.17	ng/uL → 6800	81
74)	Benzo(a)Pyrene	35.39	252.0	2486	2.27	ng/uL → 2100	84
75)	Indeno(1,2,3-cd)Pyrene	0.00	276.0	0	0.00	ng/uL	
76)	Dibenz(a,h)Anthracene	0.00	278.0	0	0.00	ng/uL	
77)	Benzo(g,h,i)Perylene	0.00	276.0	0	0.00	ng/uL	

* Compound is ISTD

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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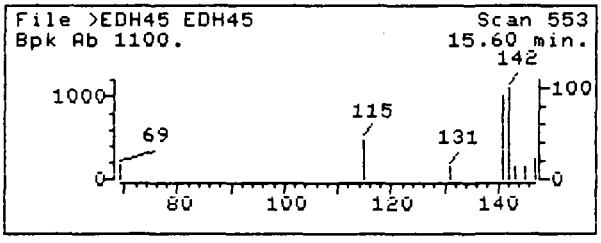
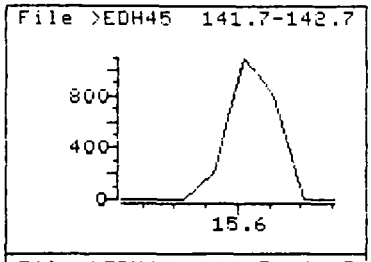
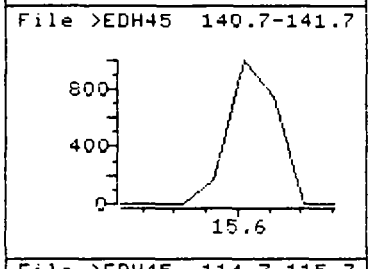
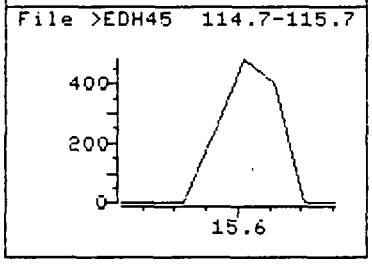




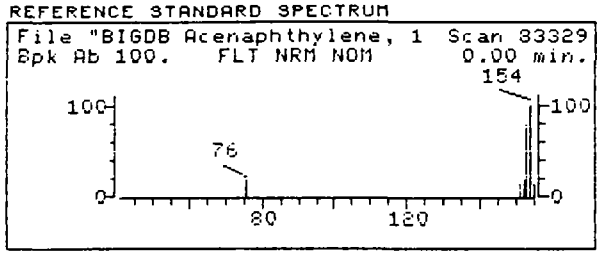




Data File: >EDH45::D3 Quant Output File: ^EDH45::SC
Name: EDH45
Misc: HP3,CASE 12035,EDH45,IW 30g,FVC 2ml,06/06/89,pH 9,%M12BTL# 9
Quant Time: 890620 18:42 Quant ID File: ID_BCA::SC
Injected at: 890620 17:55 Last Calibration: 890620 16:42

Compound No: 30
Compound Name: 2-Methylnaphthalene
Scan Number: 553
Retention Time: 15.60 min.
Quant Ion: 142.0
Area: 2435
Concentration: 1.86 ng/uL
q-value: 97

REFERENCE STANDARD SPECTRUM



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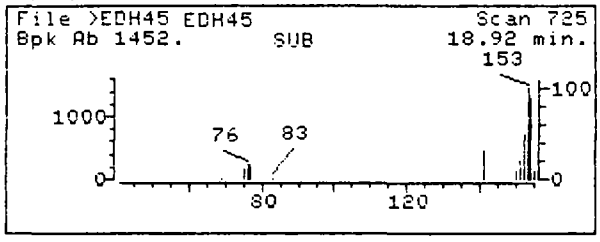

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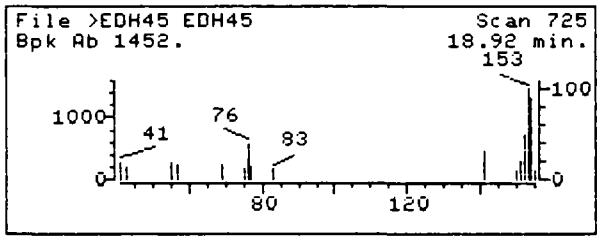
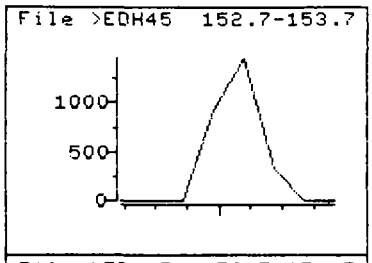
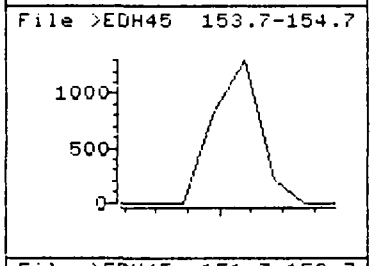
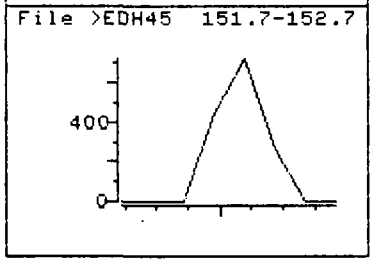






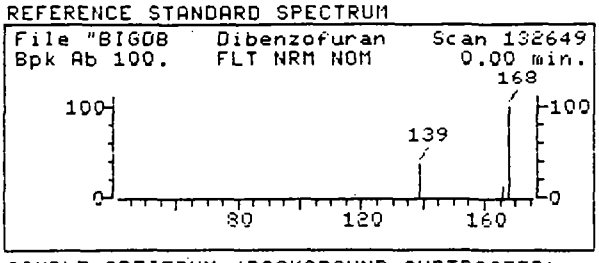


Data File: >EDH45::D3
Name: EDH45
Misc: HP3,CASE 12035,EDH45,IW 30g,FVC 2ml,06/06/89,pH 9,%M12BTL# 9
Quant Time: 890620 18:42
Injected at: 890620 17:55

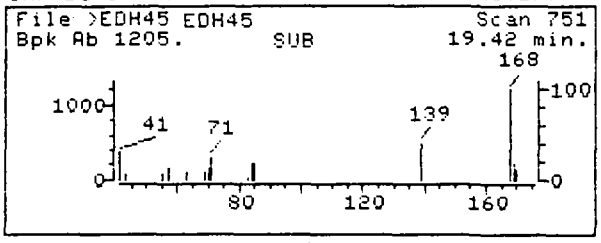
Quant Output File: ^EDH45::SC
Quant ID File: ID_BCA::SC
Last Calibration: 890620 16:42

Compound No: 42
Compound Name: Acenaphthene
Scan Number: 725
Retention Time: 18.92 min.
Quant Ion: 153.0
Area: 3142
Concentration: 4.41 ng/uL
q-value: 97

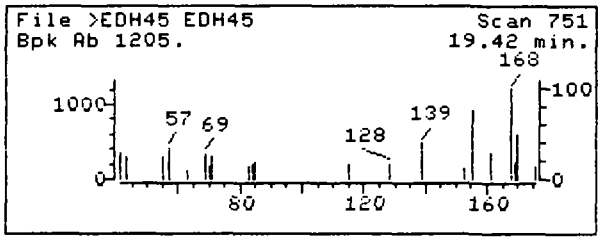
REFERENCE STANDARD SPECTRUM

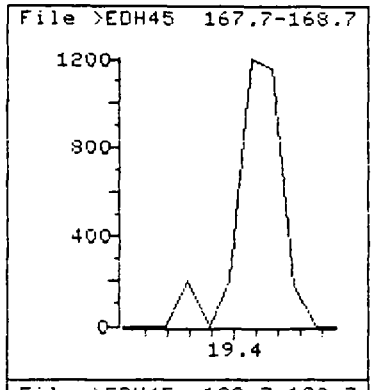


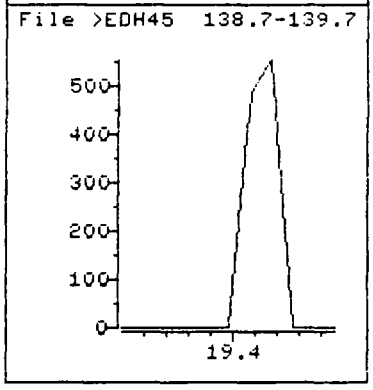
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)





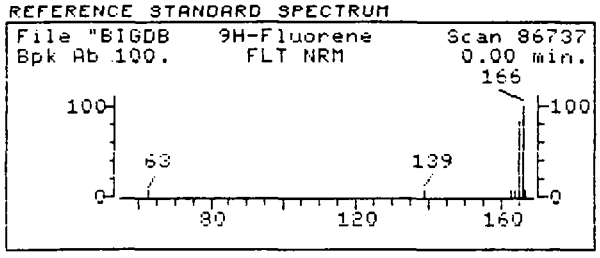


Data File: >EDH45::D3
Name: EDH45
Misc: HP3,CASE 12035,EDH45,IW 30g,FVC 2ml,06/06/89,pH 9,%M12BTL# 9
Quant Time: 890620 18:42
Injected at: 890620 17:55

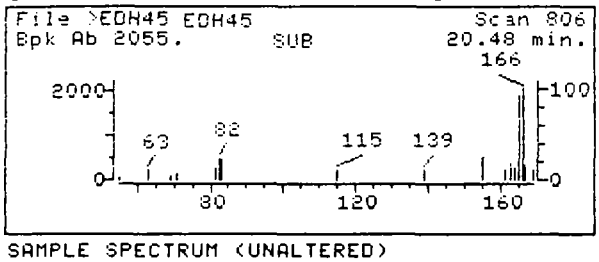
Quant Output File: ^EDH45::SC
Quant ID File: ID_BCA::SC
Last Calibration: 890620 16:42

Compound No: 45
Compound Name: Dibenzofuran
Scan Number: 751
Retention Time: 19.42 min.
Quant Ion: 168.0
Area: 3419
Concentration: 3.24 ng/uL
q-value: 99

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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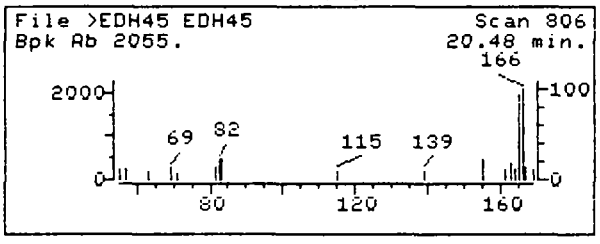
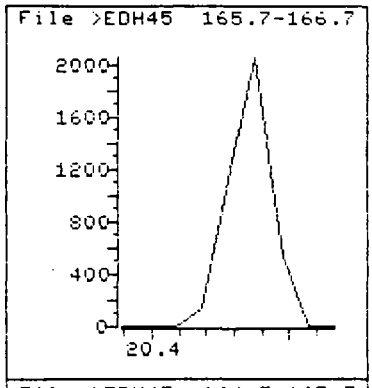
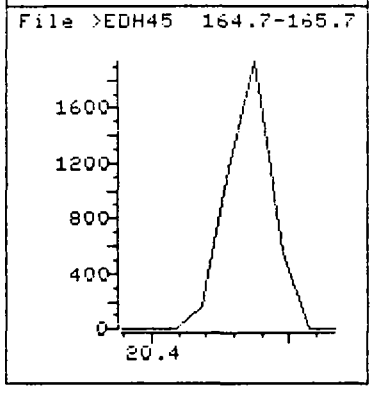




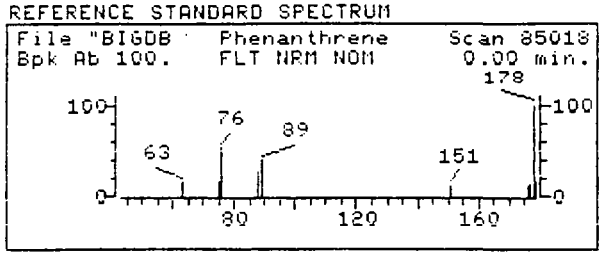


Data File: >EDH45::D3
Name: EDH45
Misc: HP3,CASE 12035,EDH45,IW 30g,FVC 2ml,06/06/89,pH 9,%M12BTL# 9
Quant Time: 890620 18:42
Injected at: 890620 17:55

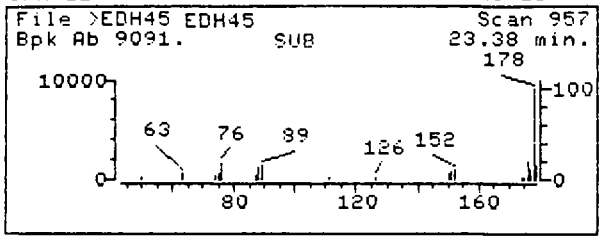
Quant Output File: ^EDH45::SC
1 mM
Quant ID File: ID_BCA::SC
Last Calibration: 890620 16:42

Compound No: 49
Compound Name: Fluorene
Scan Number: 806
Retention Time: 20.48 min.
Quant Ion: 166.0
Area: 4433
Concentration: 5.18 ng/uL
q-value: 99

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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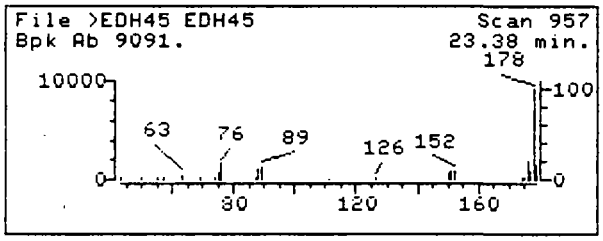

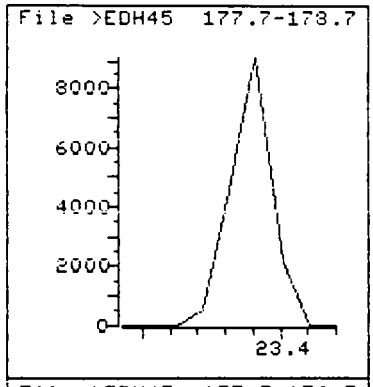

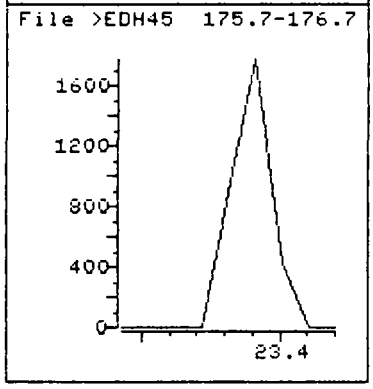

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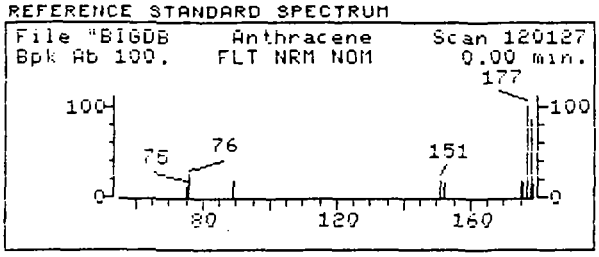
Name: EDH45
Misc: HP3,CASE 12035,EDH45,IW 30g,FVC 2ml,06/06/89,pH 9,%M12BTL# 9
Quant Time: 890620 18:42
Injected at: 890620 17:55

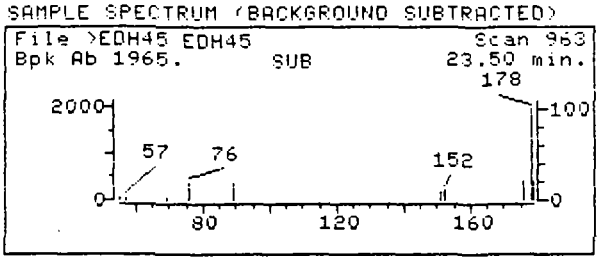
Quant Output File: ^EDH45::SC
Quant ID File: ID_BCA::SC
Last Calibration: 890620 16:42

Compound No: 58
Compound Name: Phenanthrene
Scan Number: 957
Retention Time: 23.38 min.
Quant Ion: 178.0
Area: 18796
Concentration: 16.78 ng/uL
q-value: 96

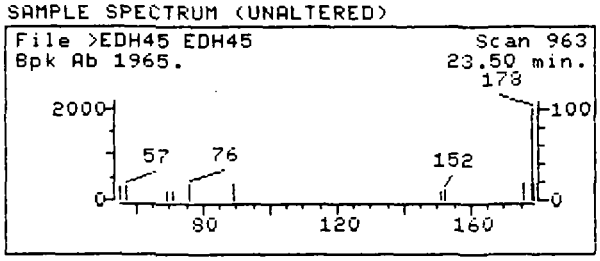
REFERENCE STANDARD SPECTRUM

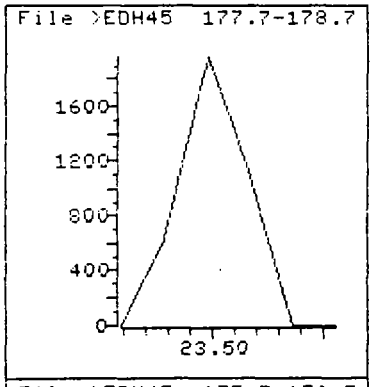


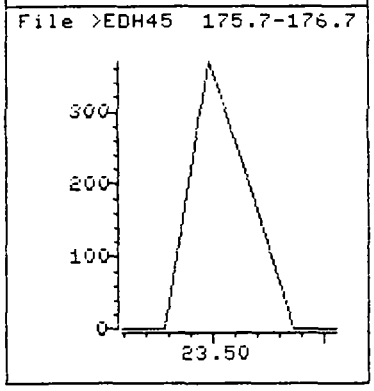
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)





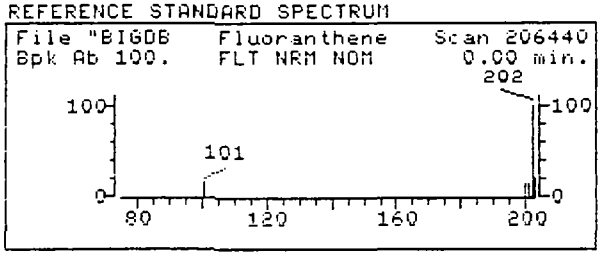


Data File: >EDH45::D3
Name: EDH45
Misc: HP3,CASE 12035,EDH45,IW 3~~0~~g,FVC 2ml,06/06/89,pH 9,%M12BTL# 9
Quant Time: 890620 18:42
Injected at: 890620 17:55

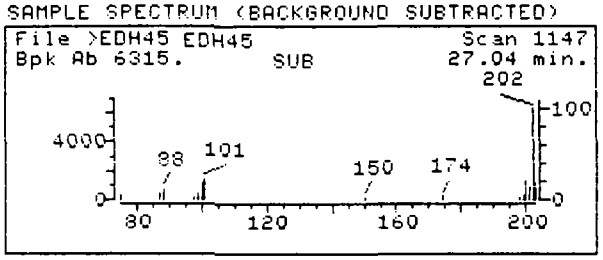
Quant Output File: ^EDH45::SC
Quant ID File: ID_BCA::SC
Last Calibration: 890620 16:42

Compound No: 59
Compound Name: Anthracene
Scan Number: 963
Retention Time: 23.50 min.
Quant Ion: 178.0
Area: 4233
Concentration: 3.79 ng/uL
q-value: 98

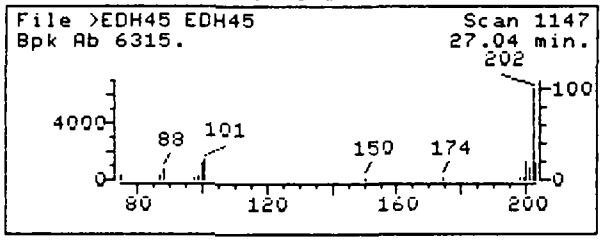
REFERENCE STANDARD SPECTRUM

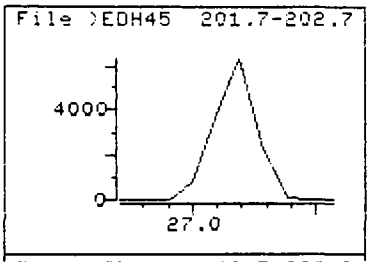


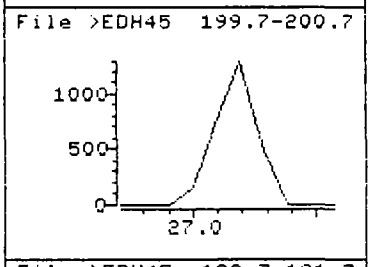
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)

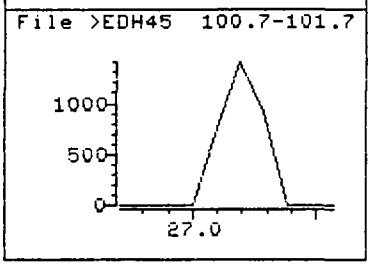


SAMPLE SPECTRUM (UNALTERED)







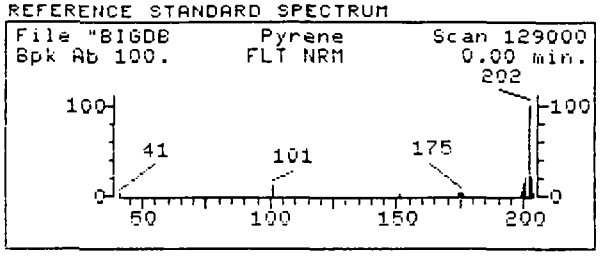


Data File: >EDH45::D3
Name: EDH45
Misc: HP3,CASE 12035,EDH45,IW 30g,FVC 2ml,06/06/89,pH 9,%M12BTL# 9
Quant Time: 890620 18:42
Injected at: 890620 17:55

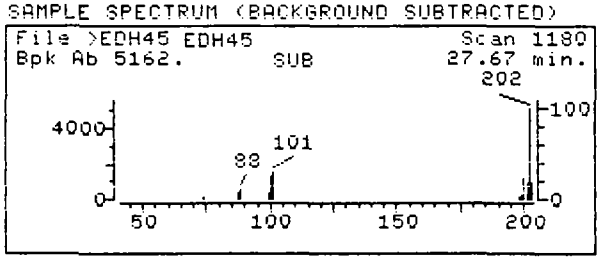
Quant Output File: ^EDH45::SC
Quant ID File: ID_BCA::SC
Last Calibration: 890620 16:42

Compound No: 61
Compound Name: Fluoranthene
Scan Number: 1147
Retention Time: 27.04 min.
Quant Ion: 202.0
Area: 15122
Concentration: 11.15 ng/uL
q-value: 96

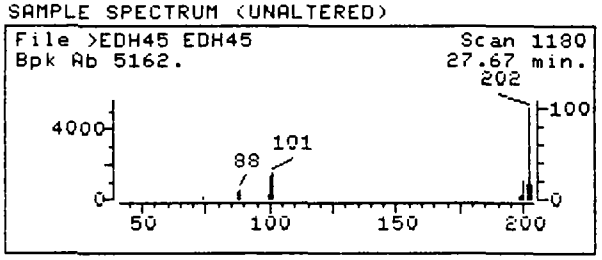
REFERENCE STANDARD SPECTRUM

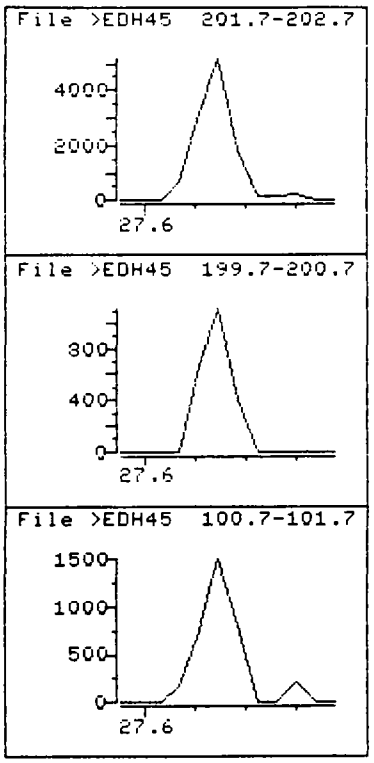


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



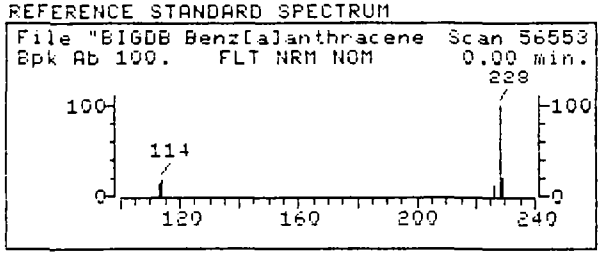


Data File: >EDH45::D3
Name: EDH45
Misc: HP3,CASE 12035,EDH45,IW 30g,FVC 2ml,06/06/89,pH 9,%M12BTL# 9
Quant Time: 890620 18:42
Injected at: 890620 17:55

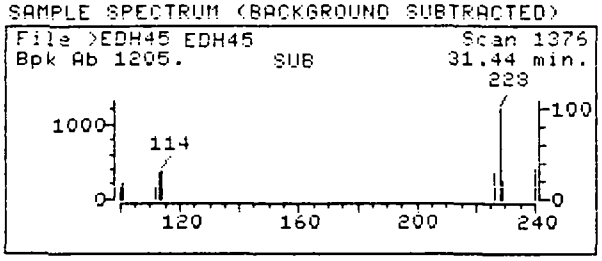
Quant Output File: ^EDH45::SC
Quant ID File: ID_BCA::SC
Last Calibration: 890620 16:42

Compound No: 63
Compound Name: Pyrene
Scan Number: 1180
Retention Time: 27.67 min.
Quant Ion: 202.0
Area: 13104
Concentration: 8.50 ng/uL
q-value: 84

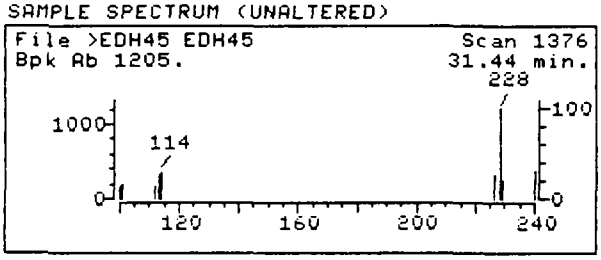
REFERENCE STANDARD SPECTRUM

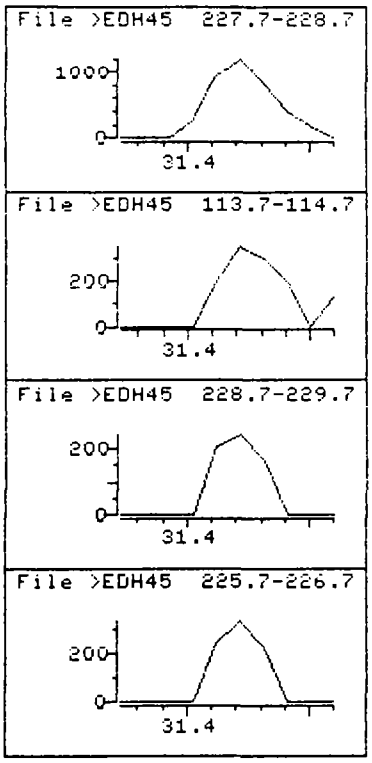


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

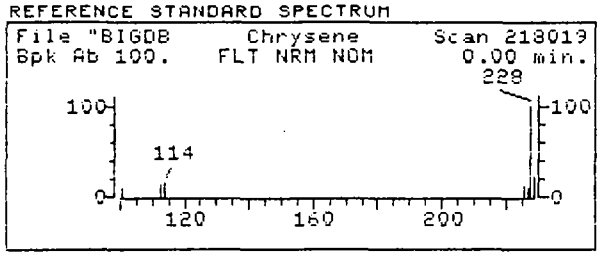




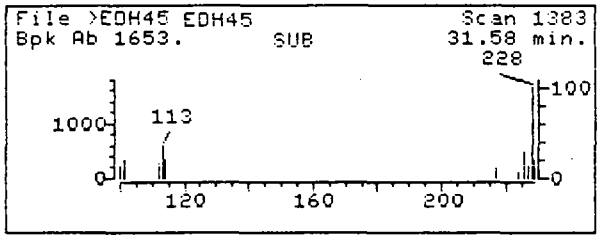
Data File: >EDH45::D3 Quant Output File: ^EDH45::SC
Name: EDH45
Misc: HP3,CASE 12035,EDH45,IW 30g,FVC 2ml,06/06/89,pH 9,%M12BTL# 9
Quant Time: 890620 18:42 Quant ID File: ID_BCA::SC
Injected at: 890620 17:55 Last Calibration: 890620 16:42

Compound No: 67
Compound Name: Benzo(a)Anthracene
Scan Number: 1376
Retention Time: 31.44 min.
Quant Ion: 228.0
Area: 4401
Concentration: 3.19 ng/uL
q-value: 89

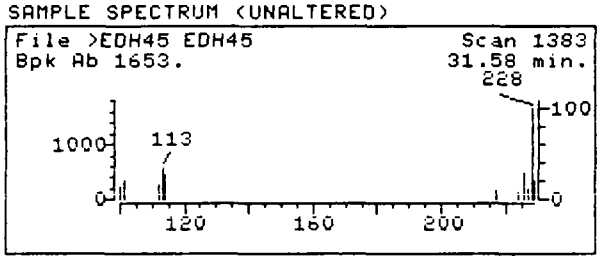
REFERENCE STANDARD SPECTRUM

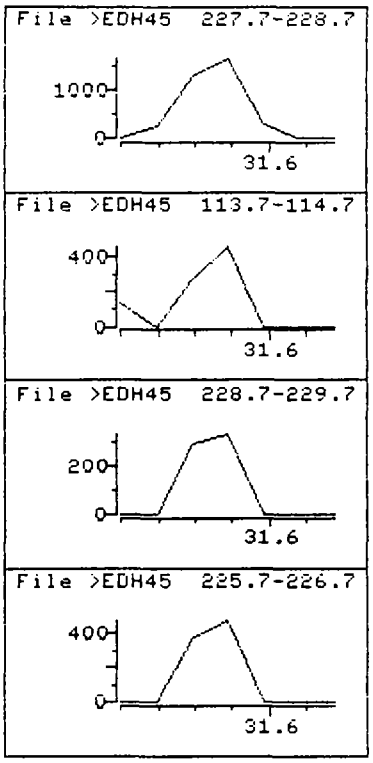


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

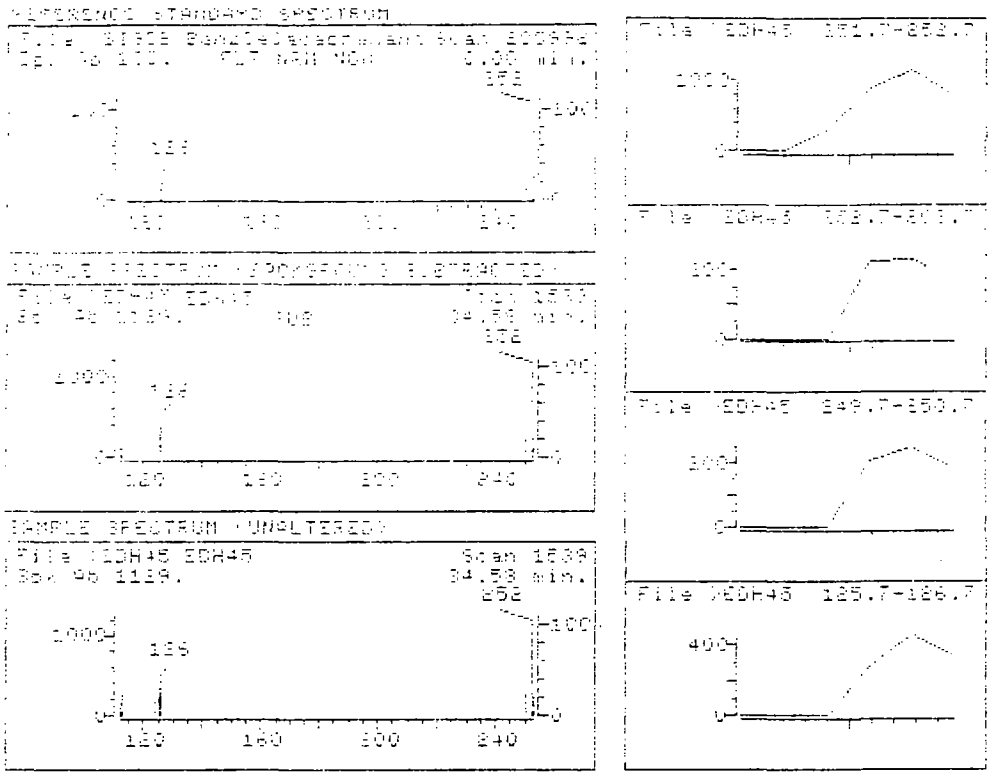




Data File: >EDH45::D3
Name: EDH45
Misc: HP3,CASE 12035,EDH45,IW 30g,FVC 2ml,06/06/89,pH 9,%M12BTL# 9
Quant Time: 890620 18:42
Injected at: 890620 17:55

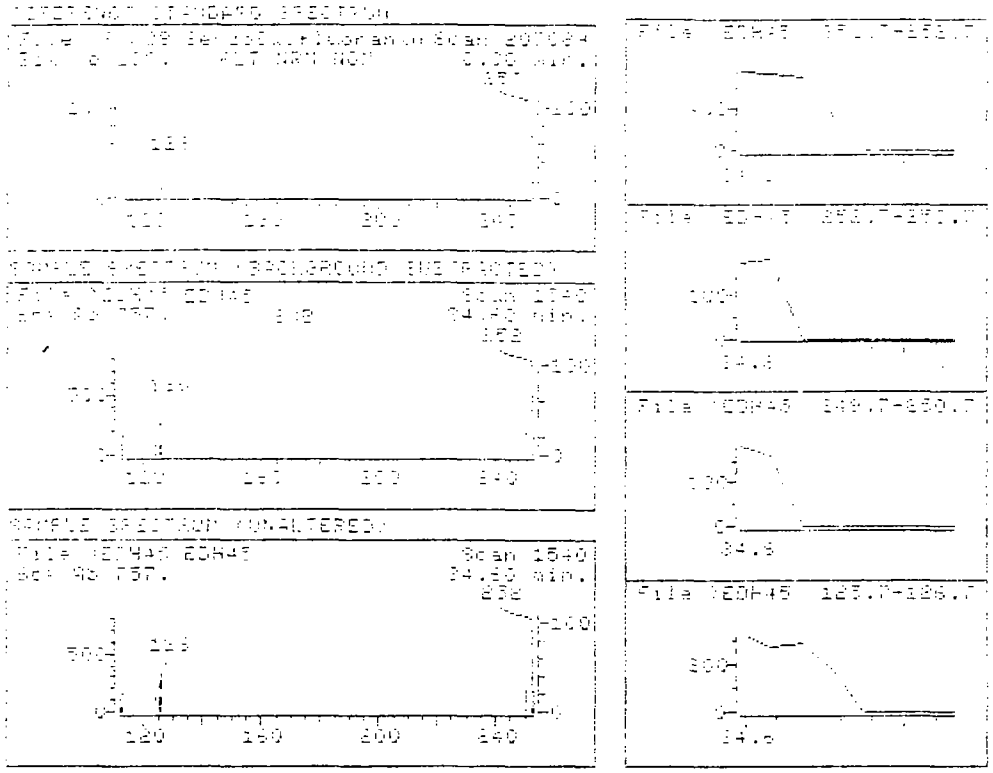
Quant Output File: ^EDH45::SC
Quant ID File: ID_BCA::SC
Last Calibration: 890620 16:42

Compound No: 68
Compound Name: Chrysene
Scan Number: 1383
Retention Time: 31.58 min.
Quant Ion: 228.0
Area: 4085
Concentration: 4.02 ng/uL
q-value: 90



Data File: EDH45::03 Quant Output File: EDH45::40
Name: EDH45
Misc: HP5.CASE 12055,EDH45,IW 20g,FUC 2ml,06/06/89,pH 9.8M12B LA 9
Quant Time: 890620 18:42 Quant IS File: IS_SC4::SC
Injected at: 890620 17:55 Last Calibration: 890620 16:47

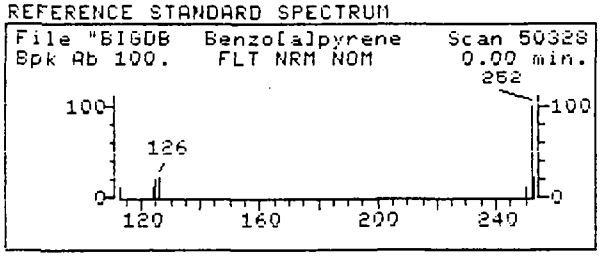
Compound No: 72
Compound Name: Benzo(b)fluoranthene
Scan Number: 1 3
Retention Time: 34.58 min.
Quant Ion: 252.0
Area: 29618
Concentration: 2.66 ng/uL
q-value: 81



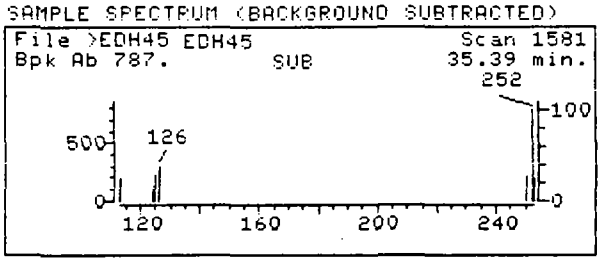
Data File: >EDH45::03 Quant Output File: ^EDH45::0C
Name: EDH45
Misc: HP5,CASE 12055,EDH45,IW 5g,FVC 2ml,06/06/89,pH 9,XM12BTLA 0
Quant Time: 890620 18:42 Quant ID File: ID_BCA::6C
Injected at: 890620 17:55 Last Calibration: 890620 16:42

Compound No: 73
Compound Name: Benzo(k)Fluoranthene
Scan Number: 1540
Retention Time: 34.60 min.
Quant ion: 252.0
Area: 2029M
Concentration: 2.17 ng/uL
q-value: 81

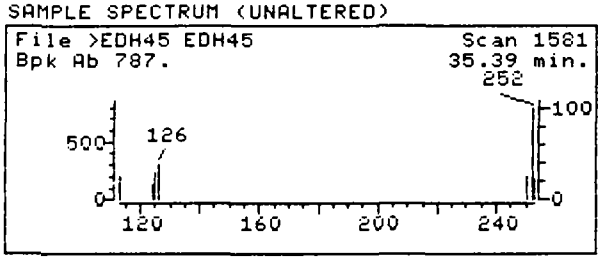
REFERENCE STANDARD SPECTRUM

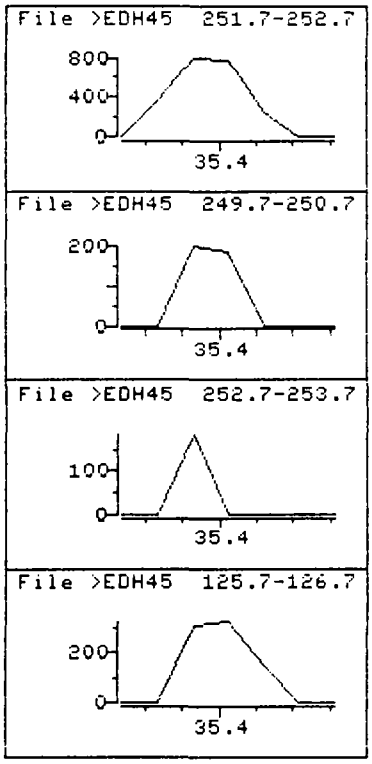


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

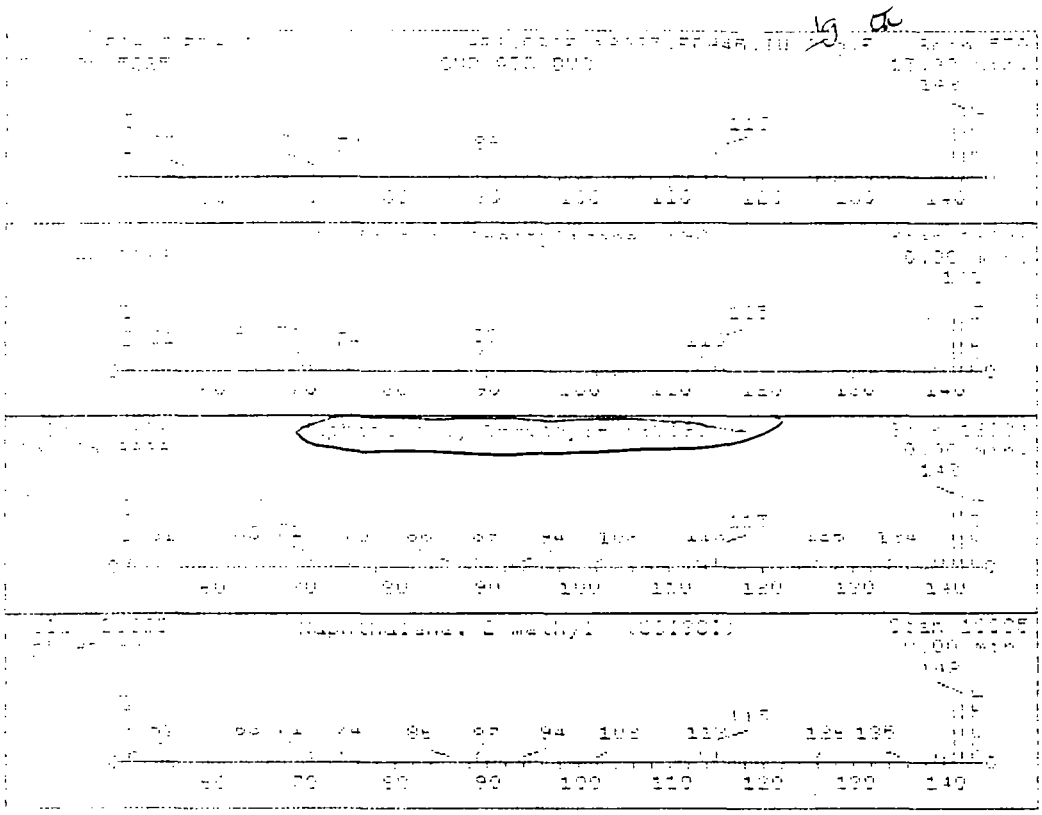




Data File: >EDH45::D3
Name: EDH45
Misc: HP3,CASE 12035,EDH45,IW 30g,FVC 2ml,06/06/89,pH 9,%M12BTL# 9
Quant Time: 890620 18:42
Injected at: 890620 17:55

Quant Output File: ^EDH45::SC
Quant ID File: ID_BCA::SC
Last Calibration: 890620 16:42

Compound No: 74
Compound Name: Benzo(a)Pyrene
Scan Number: 1581
Retention Time: 35.39 min.
Quant Ion: 252.0
Area: 2486
Concentration: 2.27 ng/uL
q-value: 84

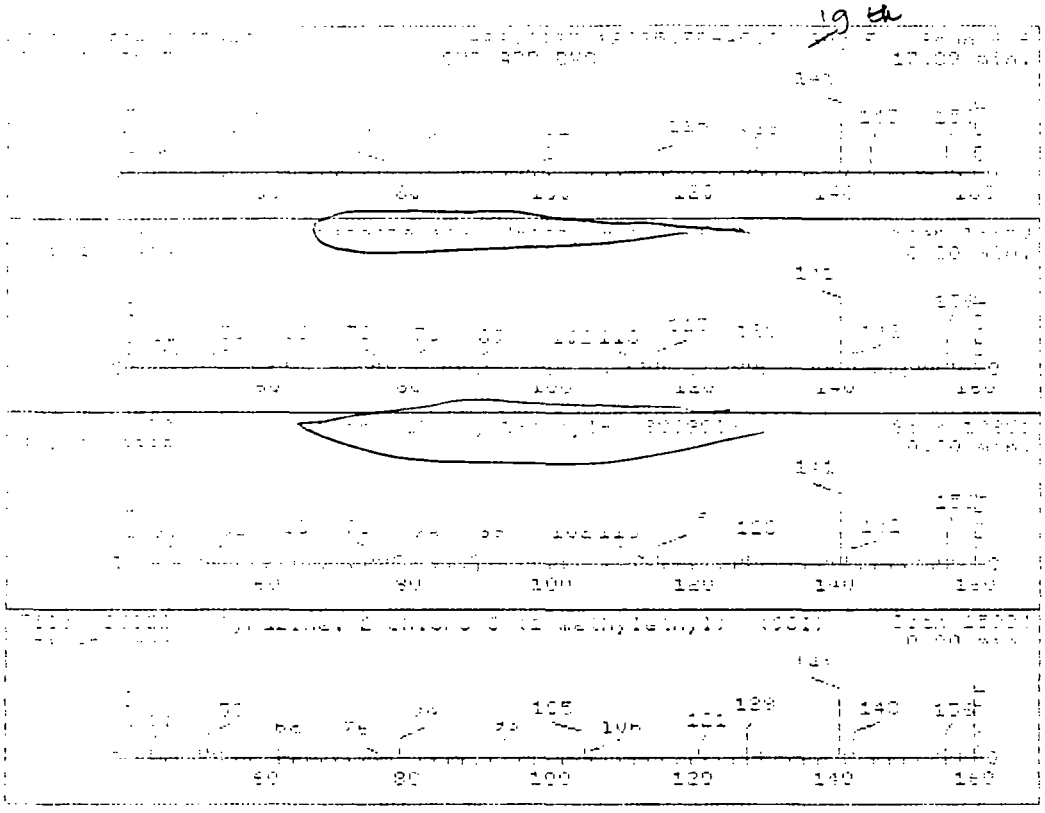


Unknown #.1
Event Time: 890620 18:40
Initiated at: 8906[illegible] 17:66
% Rt= 16523.00 Tentative Concentration is 36000.00

1. 1H-Indene, 1-ethylidene- (9CI)	142	C11H10
2. Naphthalene, 1-methyl- (8CI9CI)	142	C11H10
3. Naphthalene, 2-methyl- (8CI9CI)	142	C11H10
4. 1,4-Methanonaphthalene, 1,4-dihydro- (8CI9CI)	142	C11H10
5. 1-Pentanamine (9CI)	87	C5H13N
6. Benzeneacetonitrile, 4-cyano- (9CI)	142	C9H6N2
7. Benzeneacetonitrile, 2-cyano- (9CI)	142	C9H6N2

Sample File: ARTIF1 Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 60

	Prob.	CAS #	CON #	FORM	K	DK	#FLS	TILT	%	CUM	C	I	P	M
1.	91*	2471930	16096	"81C08	71	29	1	0	80	16	45		71	
2.	91*	90120	16094	"81C08	61	39	1	1	100	8	53		40	
3.	90*	91576	16095	"81C08	54	44	1	1	100	9	40		37	
4.	67*	4457491	16098	"81C08	40	60	1	0	70	24	17		14	
5.	67*	110997	100	"81C08	60	33	1	-1	54	36	14		24	
6.	55*	876313	16090	"81C08	46	53	1	0	70	41	12		26	
7.	20*	3999290	16097	"81C08	30	79	3	0	46	62	6		17	

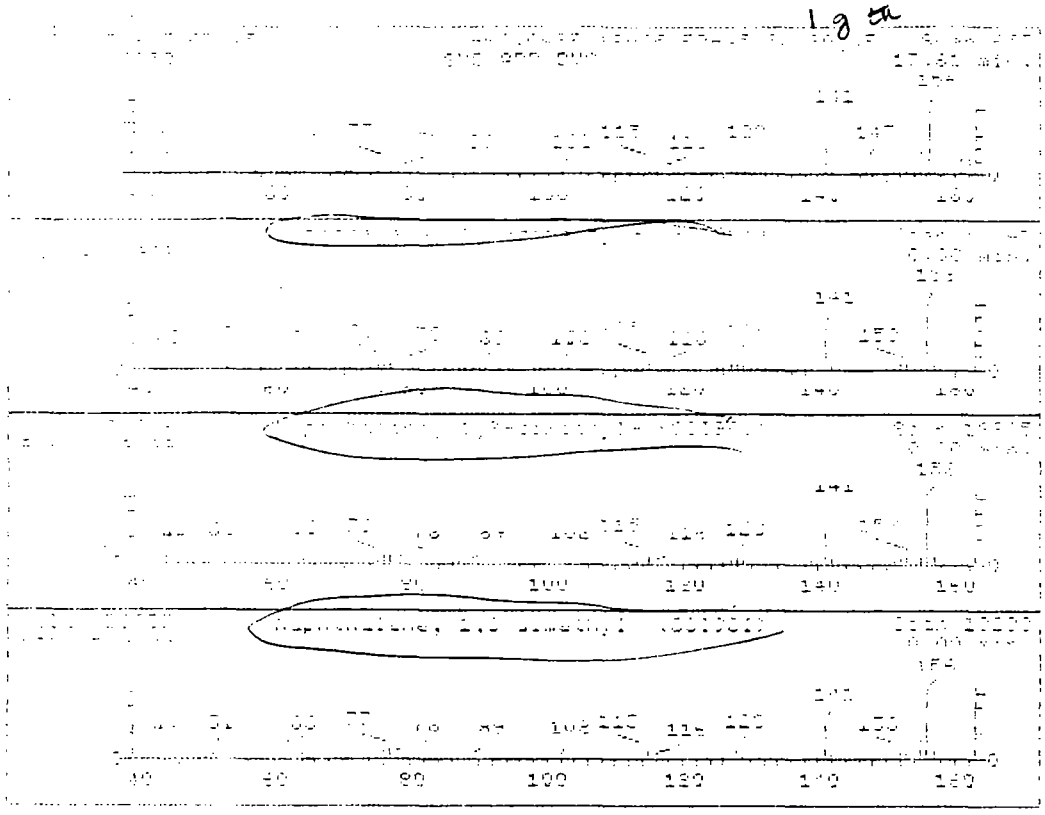


Unknown #.2
Count Time: 990620 18:42
Inserted at: 840620 17:44
Pk Ht= 10943.00 Tentative Concentration is 26000.00

1. Naphthalene, 2-ethyl- (8C19C1)	156	C12H12
2. Naphthalene, 1-ethyl- (8C19C1)	156	C12H12
3. Purazine, 2-chloro-3-(1-methylethyl)- (9C1)	156	C7H9ClN2
4. Benzenemethanol, 4-chloro-.alpha.-methyl- (9C1)	156	C8H9ClO
5. Naphthalene, 1,2-dimethyl- (8C19C1)	156	C12H12
6. Benzene, 1-fluoro-3-nitro- (8C19C1)	141	C6H4FNO2
7. Hexylamine, 1-heptyl- (8C1)	241	C13H29N

Sample File: WRT(F1 Spectrum #: -1
Search speed: 1 Filtering option: S No. of ion masses searched: 99

	Prob.	DAS #	CON #	RODI	K	OK	#FLG	TILT	%	CON	C	S	M
1.	74*	9790278	19050	"81G08	71	76	1	0	74	28	52	71	
2.	71*	11277760	19251	"81G08	64	76	1	0	97	27	29	63	
3.	70*	5276742201	19484	"81G08	30	87	3	0	100	36	12	13	
4.	26*	3391104	19490	"81G08	15	87	3	0	100	48	7	12	
5.	29*	6710000	19239	"81G08	26	72	1	0	42	52	5	14	

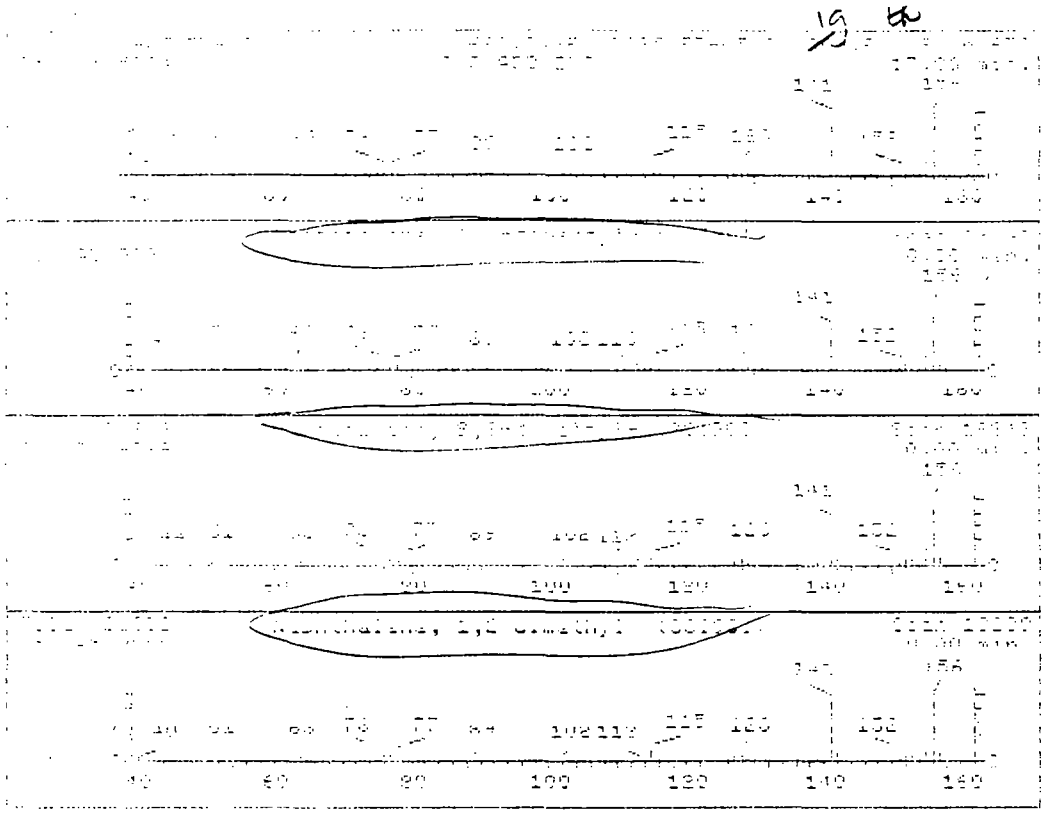


Quant Time: 890620 18:40
Injected at: 890620 17:55
Pk Ht= 25209.00 Tentative Concentration is 72000.00

1. Naphthalene, 1,3-dimethyl- (80190)	156	C12H12
2. Naphthalene, 1,8-dimethyl- (80190)	156	C12H12
3. Naphthalene, 1,5-dimethyl- (80190)	156	C12H12
4. Naphthalene, 2,6-dimethyl- (80190)	156	C12H12
5. Naphthalene, 2,3-dimethyl- (80190)	156	C12H12
6. Naphthalene, 1,7-dimethyl- (80190)	156	C12H12
7. Naphthalene, 1,6-dimethyl- (80190)	156	C12H12

Sample File: AP1181 Spectrum #: -1
Sig if added: 1 Tilting action: S No. of ion masses searched:

	Prob.	CAS #	CON #	ROOT	K	DK	*FLG	TILT	%	CON	C I
1.	99*	575417	18241	"81GDB	107	0	0	0	99	14	50
2.	99*	569415	18235	"81GDB	102	0	0	0	96	17	50
3.	99*	571619	18239	"81GDB	94	15	0	0	100	17	50
4.	98*	581429	18244	"81GDB	99	6	0	1	100	16	50
5.	98*	991409	18243	"81GDB	95	21	0	0	94	19	50
6.	98*	575371	18240	"81GDB	96	22	0	0	100	17	50
7.	97*	575379	18242	"81GDB	90	29	0	0	100	14	50

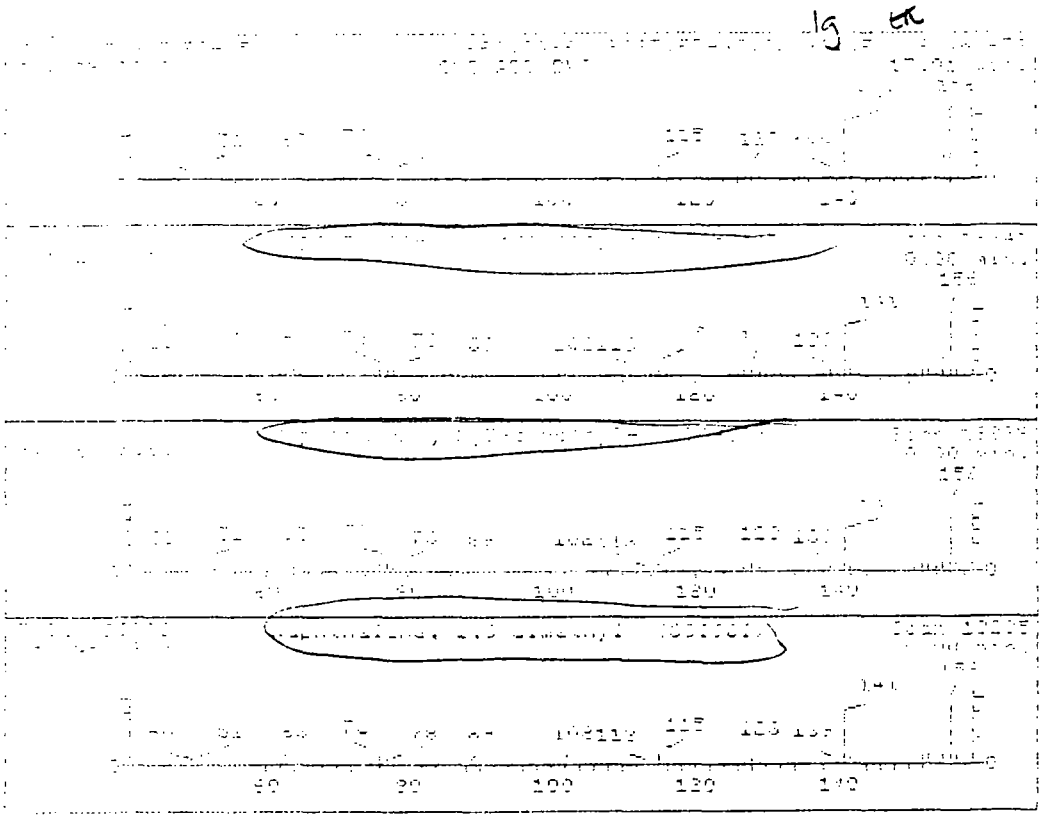


Unknown #.4
Quant Time: 940620 18:40
Created at: 940620 17:44
Pk Ht= 24550.00 Tentative Concentration is 7000.00

1. Naphthalene, 1,2-dimethyl- (9019C1) 156 C12H12
2. Naphthalene, 2,7-dimethyl- (9019C1) 156 C12H12
3. Naphthalene, 1,3-dimethyl- (9019C1) 156 C12H12
4. Naphthalene, 1,8-dimethyl- (9019C1) 156 C12H12
5. Naphthalene, 1,7-dimethyl- (9019C1) 156 C12H12
6. Naphthalene, 1,4-dimethyl- (9019C1) 156 C12H12
7. Naphthalene, 1,5-dimethyl- (9019C1) 156 C12H12

Sample File: 4RT.FI Spectrum #: -1
% Prior Search: 1 Tilting option: 0 No. of ion masses searched: 24

	Prob.	Cns #	CON #	RDOT	K	UK	#FLS	TILT	%	CON	C	I	H	P
1.	97*	676417	19241	"81608	101	6	0	0	99	2	72			97
2.	94*	691408	19243	"81078	99	16	0	0	99	2	72			94
3.	91*	670000	19239	"81008	90	21	0	0	99	2	72			91
4.	91*	584615	18275	"81078	99	21	0	0	100	2	72			91
5.	91*	6[illegible]	19240	"81008	90	22	0	0	100	2	72			91
6.	91*	571994	19247	"81078	79	24	0	0	100	2	72			91
7.	91*	671619	19239	"81008	79	39	0	0	99	18	69			90

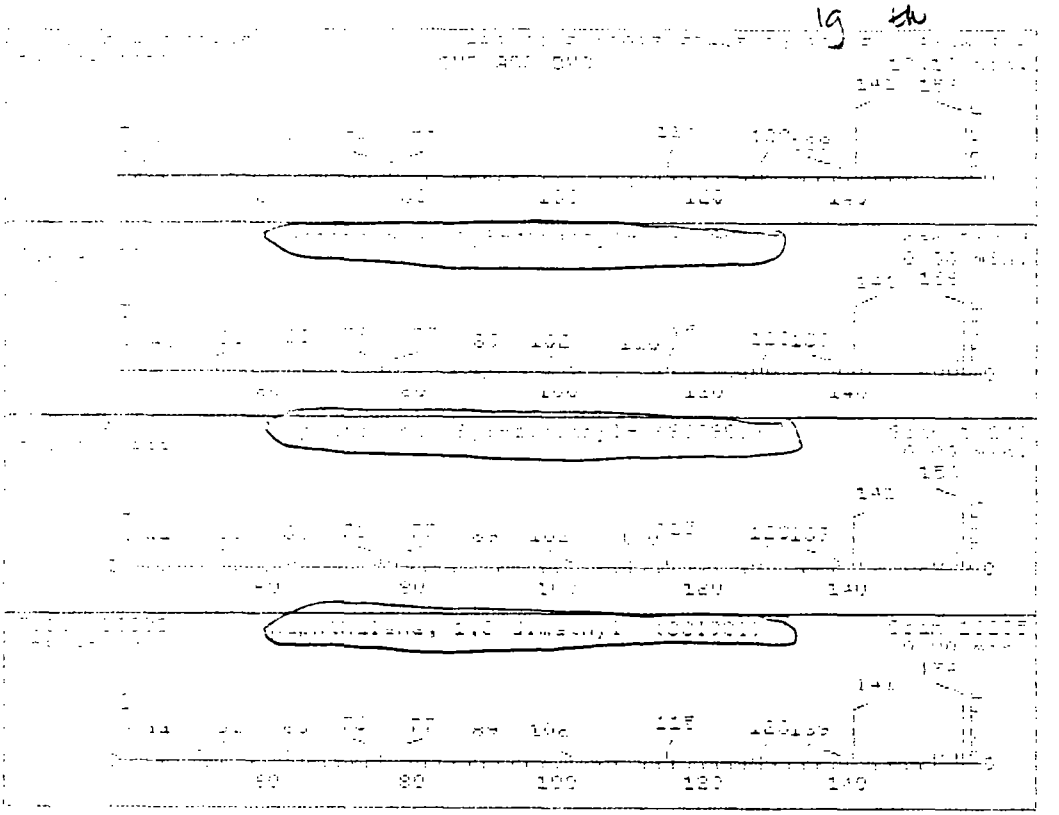


Unknown #.5
Quant Time: 8906220 18:42
Injection at: 8906220 17:55
Pk Ht= 21219.00 Tentative Concentration is 47000.00

1. Naphthalene, 1,5-dimethyl- (80190)	156	C12H12
2. Naphthalene, 1,6-dimethyl- (80190)	156	C12H12
3. Naphthalene, 1,8-dimethyl- (80190)	156	C12H12
4. Naphthalene, 1,7-dimethyl- (80190)	156	C12H12
5. Naphthalene, 1,6-dimethyl- (80190)	156	C12H12
6. Naphthalene, 2,3-dimethyl- (80190)	156	C12H12
7. Naphthalene, 1,2-dimethyl- (80190)	156	C12H12

Sample file: ART.FI Spectrum #: -1
Search used: 1 Tilting option: S No. of ion ranges searched: 50

	Prob.	CAS #	CON #	RCUT	K	OK	#PLS	TILT	%	CON	C	I	P	I
1.	94*	575417	18041	"81600	93	14	0	0	99	5	70		95	
2.	96*	571619	18219	"81600	90	24	0	0	100	5	72		92	
3.	94*	569415	19076	"81600	81	20	0	0	100	9	69		94	
4.	92*	574371	18240	"81600	74	24	0	0	100	11	64		92	
5.	94*	575419	18040	"81600	97	21	0	0	100	1	55		78	
6.	94*	581408	18173	"81600	84	22	0	0	92	1	56		78	
7.	94*	575966	18279	"81600	87	24	0	3	77	5	55		78	



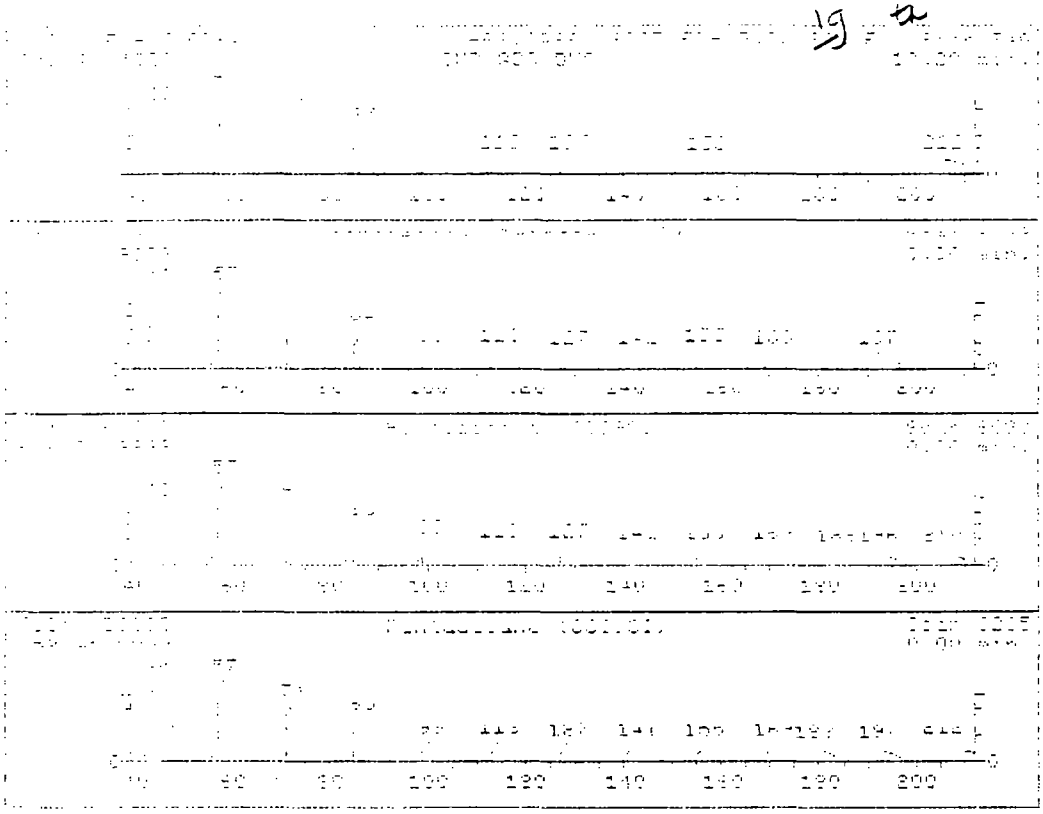
Spectrum #:8
Quant Time: 990820 19:42
Integrated at: 8-0820 17:55
Pk Ht= 11752.00 Tentative Concentration is 24000.00

1. Naphthalene, 1,2-dimethyl- (8CI,9CI)	156	C12H12
2. Naphthalene, 2,3-dimethyl- (9CI,9CI)	156	C12H12
3. Naphthalene, 1,8-dimethyl- (8CI,9CI)	156	C12H12
4. Naphthalene, 1,4-dimethyl- (8CI,9CI)	156	C12H12
5. Naphthalene, 1,3-dimethyl- (9CI,9CI)	156	C12H12
6. Naphthalene, 2-ethyl- (8CI,9CI)	156	C12H12
7. Naphthalene, 1,7-dimethyl- (8CI,9CI)	156	C12H12

Source file: ART!4I Spectrum #: -1
Search order: 1 Tilting option: S No. of ion ranges searched: 40

	Prob.	CAS #	CON #	FOUT	M	OK	HLS	TILT	%	CON	C	P	I
1.	99*	573988	18279	"81CDB	99	14	1	0	95	0	72	96	
2.	99*	581408	18247	"81CDB	97	19	1	0	94	3	69	94	
3.	99*	569415	18235	"81CDB	93	27	1	0	94	3	68	90	
4.	99*	571-84	18237	"81CDB	90	29	1	0	96	3	65	77	
5.	99*	575415	18241	"81CDB	91	16	1	0	95	18	66	80	
6.	99*	939-75	18250	"81CDB	71	55	1	0	100	05	37	71	
7.	99*	575-71	18240	"81CDB	70	33	1	0	97	27	30	69	

UNKNOWN HYDROCARBON

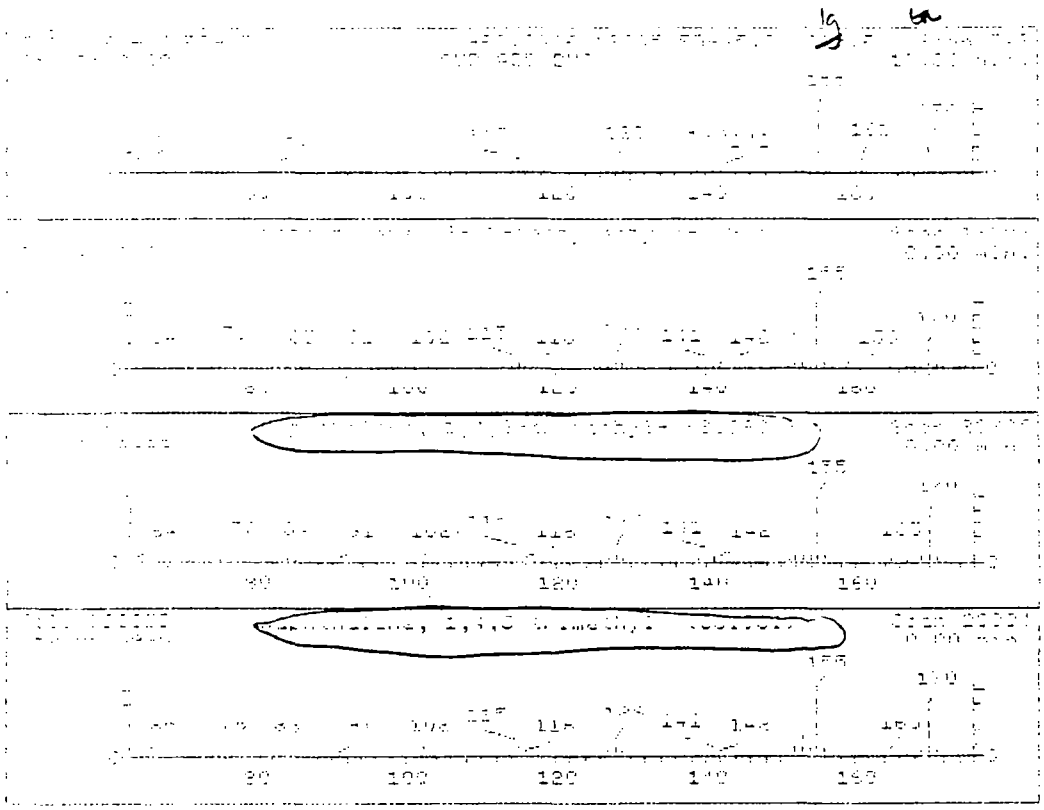


Unknown #:
Start Time: 99/6/20 18:40
Finished at: 89/6/20 17:55
Pk Ht= 10201.00 Tentative Concentration is 61000.00

1. Tetradecane, 1-iodo- (8C19CI)	378	C14H29I
2. Heptadecane (8C19CI)	240	C17H36
3. Pentadecane (8C19CI)	211	C15H32
4. Dodecane, 1-iodo- (8C19CI)	296	C12H25I
5. Tridecane (8C19CI)	184	C13H28
6. Octadecane (8C19CI)	794	C18H38
7. Hexadecane, 2,6,10,15-tetramethyl- (9CI)	245	C21H44

Sample file: 9PT1FI Spectrum #: -1
Station added: 1 Tilting option: 5 No. of ion masses searched: 44

	Prob.	CAS #	CON #	FORM	K	DK	#FLG	TILT	%	CUM	C	I	S	M
1.	99	19219941	6199	"81C09	97	31	1	-2	77	5	67		48	
2.	5	629797	6099	"81C18	104	17	0	0	74	21	41		74	
3.	99+	629609	6156	"81C09	93	27	1	2	77	26	41		74	
4.	46	4292197	6200	"81C08	100	29	1	1	93	11	40		50	
5.	76	629706	6150	"81C09	98	15	1	0	90	17	76		41	
6.	5	630 24	6093	"81C08	106	31	1	0	79	19	76		46	
	71	54971498	6161	"81C08	97	40	1	1	70	16	70		44	

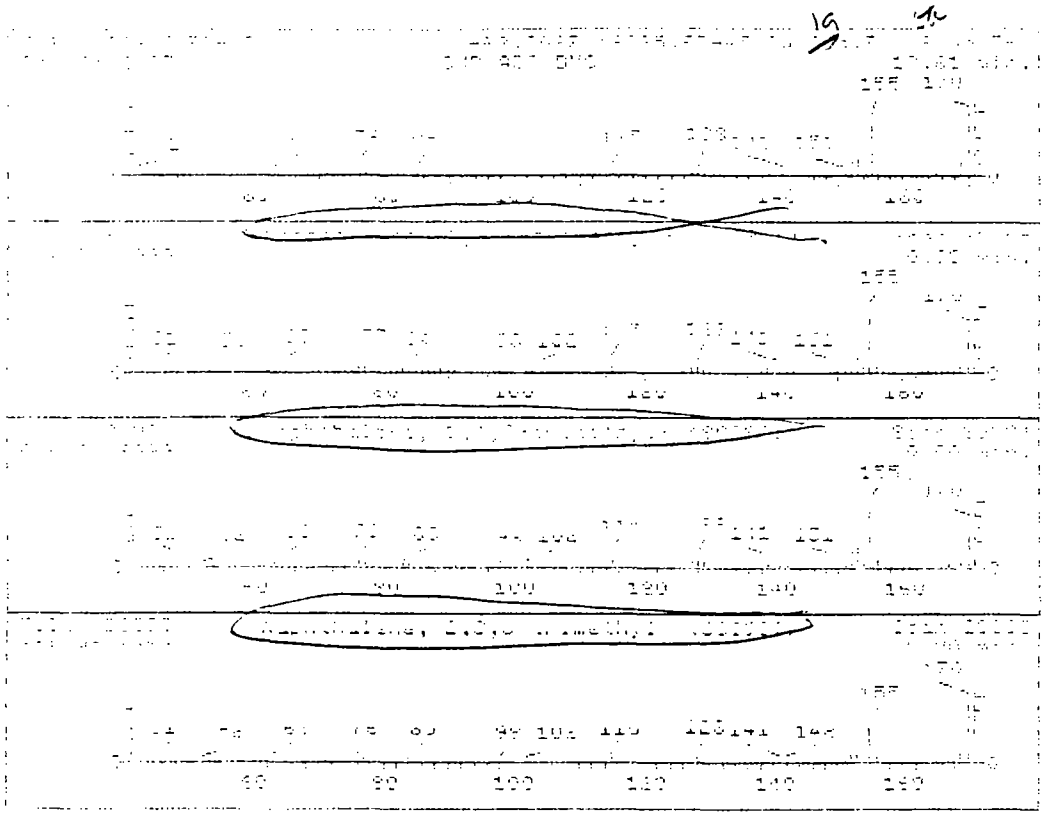


Unknown 8.8
Injection Time: 8Feb20 18:42
Injected at: 8Feb20 17:56
Pk Ht: 10581.00 Tentative Concentration is 26000.00

1. Naphthalene, 2-(1-methylethyl)- (9CI)	170	C13H14
2. Naphthalene, 1,4,6-trimethyl- (8CI,9CI)	170	C13H14
3. Naphthalene, 1,4,5-trimethyl- (8CI,9CI)	170	C13H14
4. Ethanone, 1-(2-naphthalenyl)- (9CI)	170	C12H10O
5. Ethanone, 1-(1-naphthalenyl)- (9CI)	170	C12H10O
6. [1,1'-Biphenyl]-3-ol (9CI)	170	C12H10O
7. Naphthalene, 1,6,7-trimethyl- (9CI,9CI)	170	C13H14

Single File: APTIF1 Spectrum #: -1
Search speed: 1 Tilting option: 0 No. of ion ranges searched: 99

	Prob.	CAS #	CON #	FUDI	%	DK	#FLG	TILT	%	LCN	C	I	P	M
1.	99*	2027170	18103	"01000	99	11	0	0	87	31	60	95		
2.	99*	2131420	20306	"01000	99	29	1	0	85	40	37	89		
3.	99*	2131411	20304	"01000	97	41	1	0	82	40	29	74		
4.	99*	9[illegible]33	00296	"01000	95	54	2	0	98	39	20	32		
5.	99*	6[illegible]900	00301	"01000	98	54	2	0	94	35	17	32		
6.	99*	980-18	00299	"01000	90	40	1	4	89	44	14	34		
7.	97	2148297	20301	"01000	89	39	2	0	110	40	19	19		

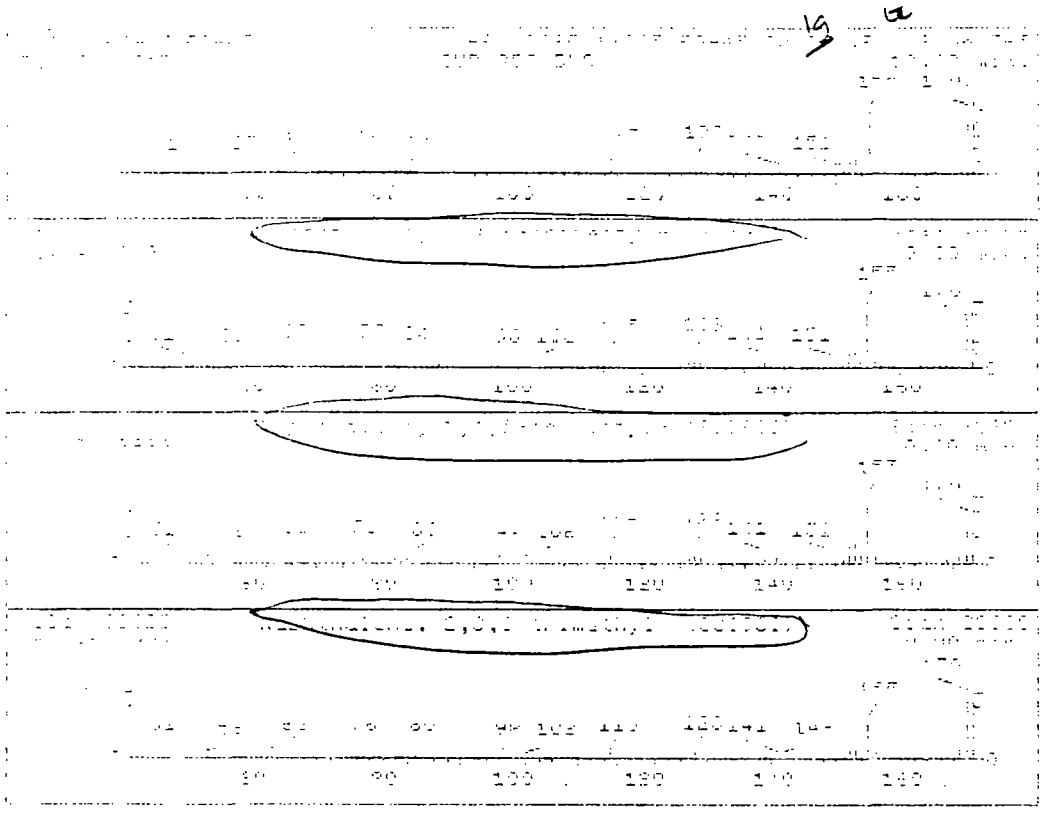


Unknown #.0
Data file: 990620 10:40
Created at: 990620 17:06
Qk area 19038.00 Tentative Concentration is 29000.00

1.	Naphthalene, 1,4,6-trimethyl- (8C19C1)	170 C13H16
2.	Naphthalene, 1,4,5-trimethyl- (8C19C1)	170 C13H16
3.	Naphthalene, 2,3,6-trimethyl- (8C19C1)	170 C13H16
4.	Naphthalene, 1,6,7-trimethyl- (8C19C1)	170 C13H16
5.	Naphthalene, 2-(1-methylethyl)- (9C1)	170 C13H16
6.	Naphthalene, 1,7,8-trimethyl- (8C19C1)	170 C13H16
7.	Ethanone, 1-(2-naphthalenyl)- (9C1)	170 C12H10O

Search file: ARIF1 Spectrum #: -1
Search area: 1 Hitting option: S No. of ion ranges searched: 99

	Prob.	CAS #	CON #	MOOT	K	UK	#FLG	TILT	%	CUN	C	I	P	U
1.	99*	2131402	20304	"81608	105	14	0	0	82	19	40	97		
2.	99*	2131-11	20304	"81608	92	21	1	0	80	19	50	67		
3.	91*	829066	20300	"81608	70	30	1	0	99	26	29	21		
4.	1*	2245197	20306	"81608	63	40	1	0	97	16	29	66		
5.	99*	2027170	18102	"81608	60	40	0	0	84	27	20	73		
6.	1*	3031-31	20272	"81608	34	74	1	0	70	40	17	19		
7.	1*	95087	20296	"81608	39	71	0	0	100	74	10	14		

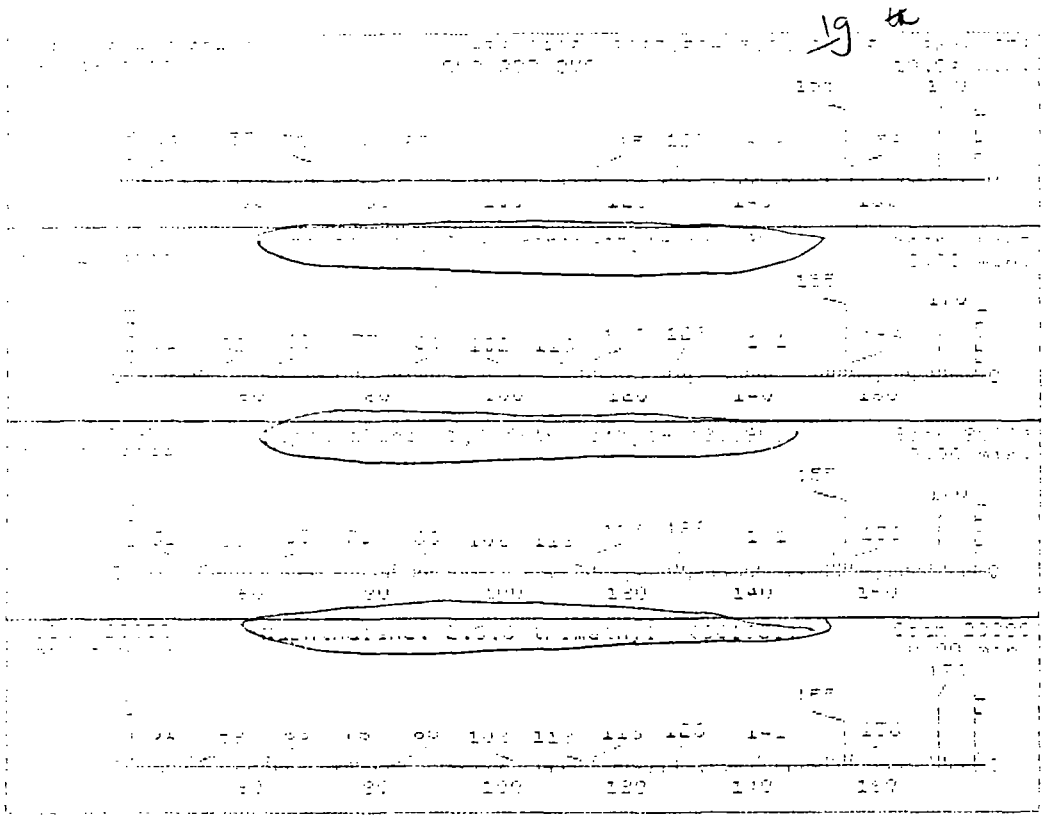


Spectrum #.10
Count time: 890820 18:40
Injection #: 890820 17:99
Mw ### .00E0.00 Relative Concentration is 37000.0

1. Naphthalene, 1,4,6-trimethyl- (90190)	190	C13H14
2. Naphthalene, 1,4,6-trimethyl- (90190)	190	C13H14
3. Naphthalene, 2,3,6-trimethyl- (90190)	190	C13H14
4. Naphthalene, 1,6,7-trimethyl- (90190)	190	C13H14
5. Naphthalene, 2-(1-methylethyl)- (90)	190	C13H14
6. Naphthalene, 1,3,6-trimethyl- (90190)	190	C13H14
7. Naphthalene, (1-methylethyl)- (90)	190	C13H14

Sample File: [illegible] Spectrum #: [illegible]
Search Index: 1 Filtering Option: 5 No. of Ion Peaks Searched: [illegible]

	Prob.	DRS #	LUN #	MW	%	DK	#FLG	TILT	%	LUN	C	I	H	[illegible]
1.	[illegible]	[illegible]	[illegible]	[illegible]	100	13	0	0	97	19	[illegible]	[illegible]	[illegible]	[illegible]
2.	[illegible]	[illegible]	[illegible]	[illegible]	97	21	1	0	70	19	[illegible]	[illegible]	[illegible]	[illegible]
3.	[illegible]	[illegible]	[illegible]	[illegible]	70	39	1	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4.	[illegible]	[illegible]	[illegible]	[illegible]	60	40	1	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5.	[illegible]	[illegible]	[illegible]	[illegible]	40	40	0	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6.	[illegible]	[illegible]	[illegible]	[illegible]	34	34	1	0	[illegible]	40	[illegible]	[illegible]	[illegible]	[illegible]
7.	[illegible]	[illegible]	[illegible]	[illegible]	21	60	0	0	100	40	[illegible]	[illegible]	[illegible]	[illegible]

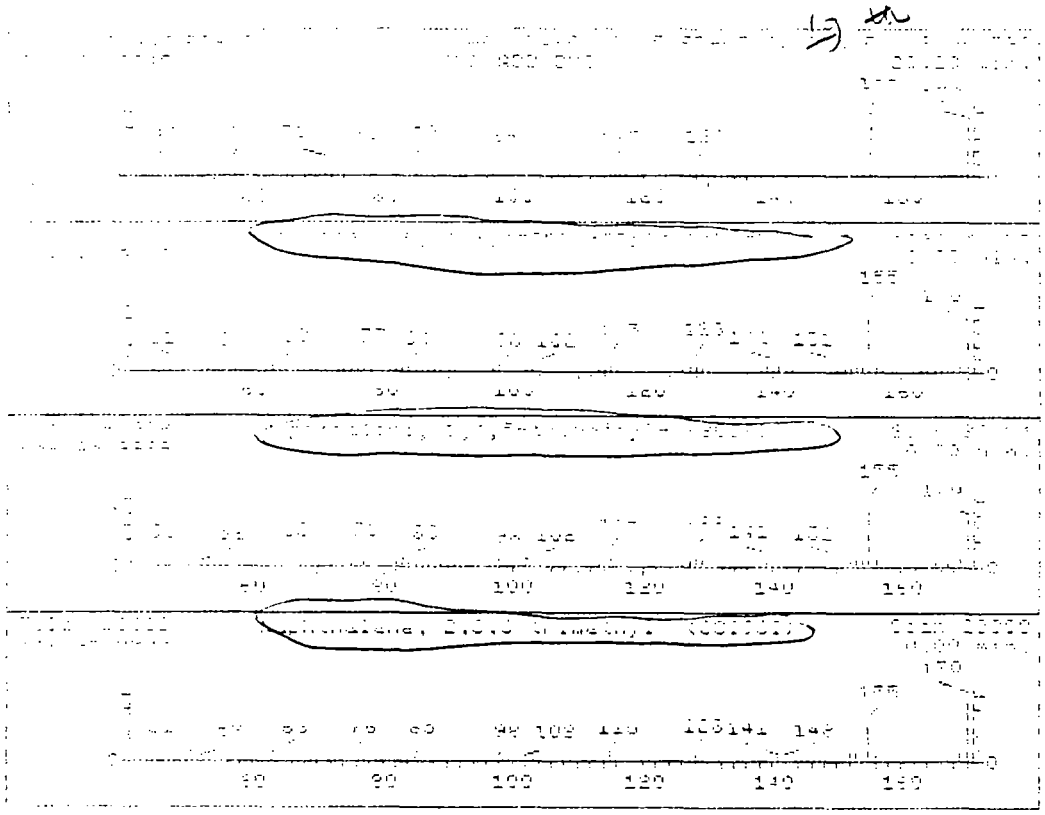


Unknown #.11
Count Time: 990620 18:42
Injection at: 840620 17:54
Peak Area 16959.00 Tentative Concentration is 74000.00

1. Naphthalene, 1,4,6-trimethyl- (9CI)(9CI) 170 C13H14
2. Naphthalene, 1,4,5-trimethyl- (9CI)(9CI) 170 C13H14
3. Naphthalene, 2,7,6-trimethyl- (9CI)(9CI) 170 C13H14
4. Naphthalene, 1,6,7-trimethyl- (9CI)(9CI) 170 C13H14
5. Naphthalene, 2-(1-methylethyl)- (9CI) 170 C13H14
6. Naphthalene, 1,3,6-trimethyl- (9CI)(9CI) 170 C13H14
7. Naphthalene, (1-methylethyl)- (9CI) 170 C13H14

Single File: APTIN1 Spectrum #: 11
Search speed: 1 Tilting option: S No. of ion masses searched: 40

	Prob.	CAS #	COM #	ROOT	K	OK	#PLS	TILT	%	CON	C I	# IN
1.	94*	2131422	20596	"91C09	105	14	0	0	94	17	41	91
2.	94*	2131411	20594	"91C09	97	21	1	0	87	17	49	87
3.	94*	9040158	20300	"91C09	70	34	1	0	97	24	32	14
4.	94*	2246197	20116	"91C09	69	40	1	0	97	25	42	55
5.	94*	2027170	18107	"91C09	67	40	0	0	90	40	03	77
6.	94*	2031081	202 2	"91C09	54	34	1	0	71	34	13	19
7.	94*	2026969	19101	"91C09	41	50	2	0	100	48	8	14



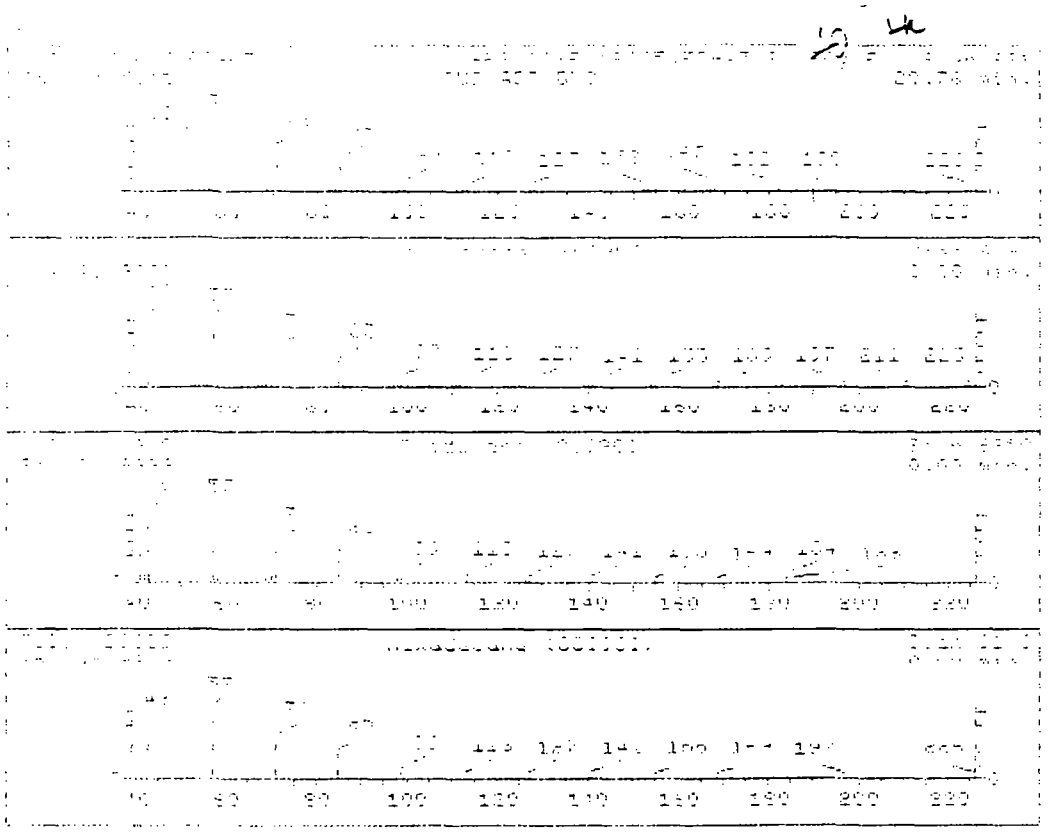
Spectrum #.10
Start Time: 940620 19:42
Finished at: 940620 19:66
Mw ttt 119.79.00 Tentative Concentration is 24000.00

1. Naphthalene, 1,4,6-trimethyl- (8C190C!)	170	C13H14
2. Naphthalene, 1,4,5-trimethyl- (8C190C!)	170	C13H14
3. Naphthalene, 2,3,6-trimethyl- (8C190C!)	170	C13H14
4. Naphthalene, 2-(1-methylethyl)- (9C!)	170	C13H14
5. Naphthalene, 1,6,7-trimethyl- (8C190C!)	170	C13H14
6. Naphthalene, 1,3,6-trimethyl- (8C190C!)	170	C13H14
7. Naphthalene, (1-methylethyl)- (9C!)	170	C13H14

Sample file: ARTIFI Spectrum #: -1
Start scan: 1 Filtering option: 9 No. of ion masses examined: 4

	Prob.	CAS #	CON #	ROOT	%	DK	#FLD	TILT	%	CON	U	I	R	P
1.	99*	2171402	20300	"81C08	99	21	1	0	87	0	72		67	
2.	99*	2131411	20274	"81C08	94	74	1	0	76	2	18		80	
3.	99*	829064	20300	"81C08	69	60	1	4	90	20	22		44	
4.	99*	2027170	18107	"81C08	66	45	1	0	99	33	20		40	
5.	99*	2244387	20306	"81C08	74	69	1	0	81	0	17		21	
6.	99*	4031781	20272	"81C08	71	27	1	0	71	25	14		21	
7.	99*	14064169	18101	"81C08	40	60	1	0	100	40	14		21	

UNKNOWN HYDROCARBON



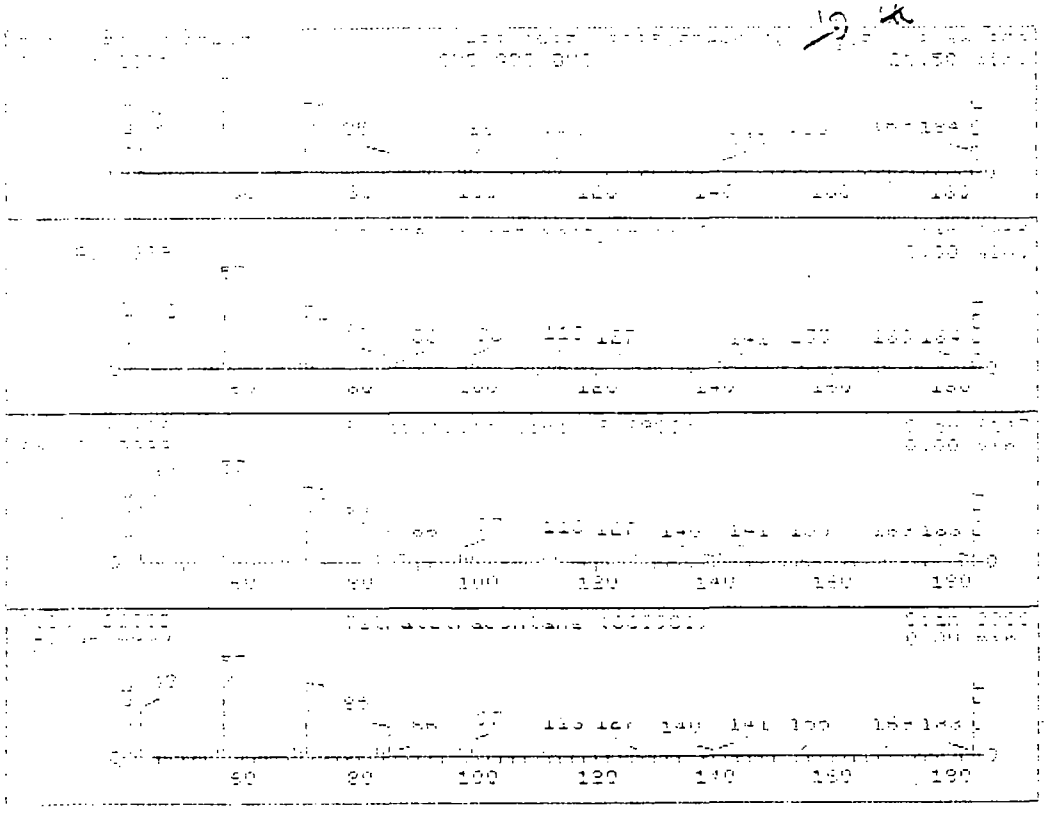
Unknown #.1:
Event Time: [illegible] 18:40
Injected at: [illegible] 17:56
Pk Ht= [illegible] Tentative Concentration is [illegible]

1. Octatriacontane (9C1HCI)	394	$C_{29}H_{60}$
2. Tridecane (9C1HCI)	184	$C_{13}H_{28}$
3. Hexadecane (9C1HCI)	226	$C_{16}H_{34}$
4. Hydroxylamine, O-decyl- (9C1HCI)	173	$C_{10}H_{23}NO$
5. Tridecane, 6-propyl- (HCI)	226	$C_{16}H_{34}$
6. Undecane, 2-methyl-6-propyl- (HCI)	226	$C_{16}H_{34}$
7. Octane, 2,6,2-trimethyl- (HCI)	184	$C_{11}H_{26}$

Sample File: ARTIF1 Spectrum #: -1
Search speed: 1 Filtering option: 5 No. of ion ranges searched: [illegible]

	Prob.	CAS #	CON #	NOOT	%	DK	#FLG	TILT	%	CON	C I	P IN
1.	[illegible]	[illegible]	[illegible]	"91GCB	104	[illegible]	1	-2	[illegible]	31	[illegible]	[illegible]
2.	[illegible]*	[illegible]	[illegible]	"91GCB	99	14	0	0	[illegible]	59	[illegible]	[illegible]
3.	[illegible]*	[illegible]	[illegible]	"91GCB	98	22	1	0	89	59	[illegible]	[illegible]
4.	[illegible]*	[illegible]	[illegible]	"91GCB	61	44	1	-2	70	51	[illegible]	[illegible]
5.	[illegible]*	[illegible]	[illegible]	"91GCB	74	66	1	0	70	94	16	[illegible]
6.	[illegible]*	[illegible]	[illegible]	"91GCB	95	34	1	0	71	56	18	97
7.	[illegible]*	[illegible]	[illegible]	"91GCB	47	44	0	-2	100	4[illegible]	14	[illegible]

UNKNOWN HYDROCARBON



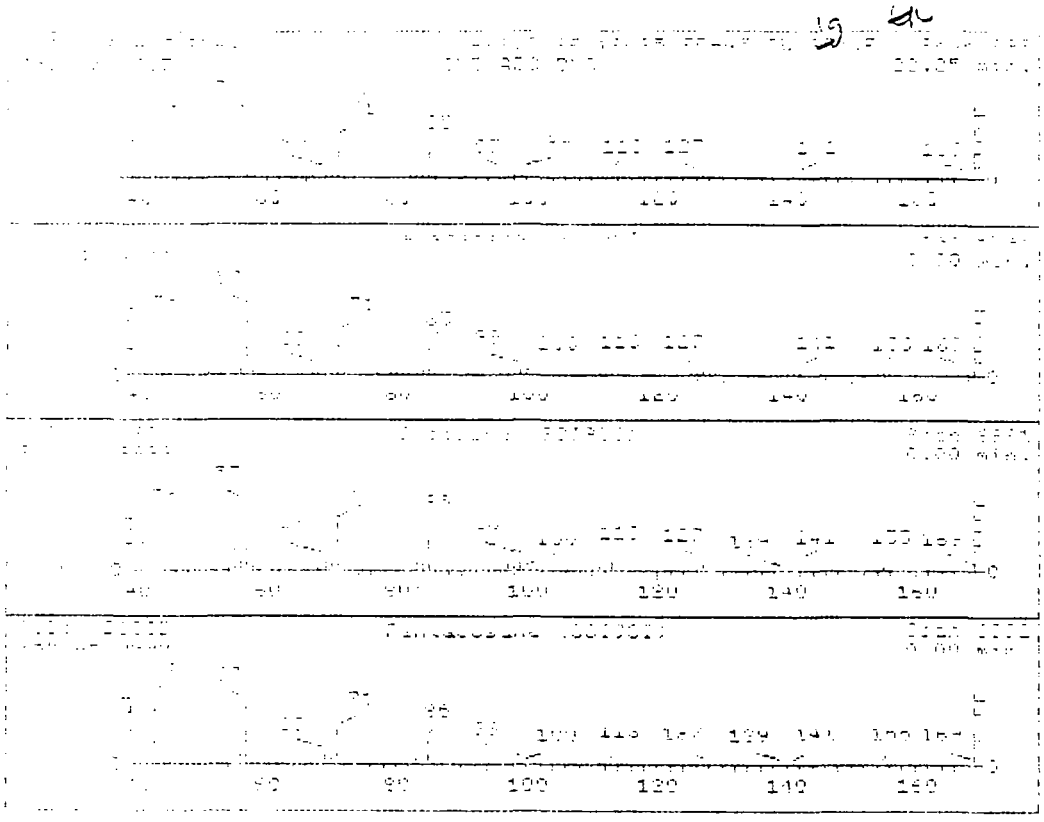
Unknown #.14
Quant Time: 940620 18:42
Created at: 940620 17:59
Pk Ht= 12136.00 Tentative Concentration is 28000.00

1. Undecane, 3,6-dimethyl- (8CI)	194	C13H28
2. Pentatriacontane (8CI,9CI)	492	C35H72
3. Tetratriacontane (8CI,9CI)	618	C34H70
4. Heptacosane (8CI,9CI)	380	C27H56
5. Hentriacontane (8CI,9CI)	240	C31H64
6. Hexadecane (9CI,9CI)	226	C16H34
7. Hexadecane, 7,9-dimethyl- (8CI,9CI)	254	C18H38

Sample file: ARTIFI Spectrum #: -1
Search speed: [illegible] filtering option: 5 No. of ion ranges searched: 40

	Prob.	CAS #	CON #	FOOT	K	OK	#FLG	TILT	%	CON	C	I	P	D
1.	61*	1[illegible]01[illegible]	7466	"81G08	67	44	1	-2	92	26	19		09	
2.	57	6300[illegible]9	614[illegible]	"81G08	67	84	1	0	89	39	14		24	
3.	57	[illegible]998[illegible]	8904	"81G08	62	94	1	0	86	37	10		19	
4.	51	595497	6020	"81G08	61	92	1	0	43	41	8		19	
5.	71	604787	6090	"81G08	61	60	1	0	87	41	8		19	
6.	26	544757	6146	"81G08	56	64	1	0	57	42	8		14	
7.	26	1111[illegible]964	6024	"81G08	56	79	1	0	99	44	8		14	

UNKNOWN HYDROCARBON

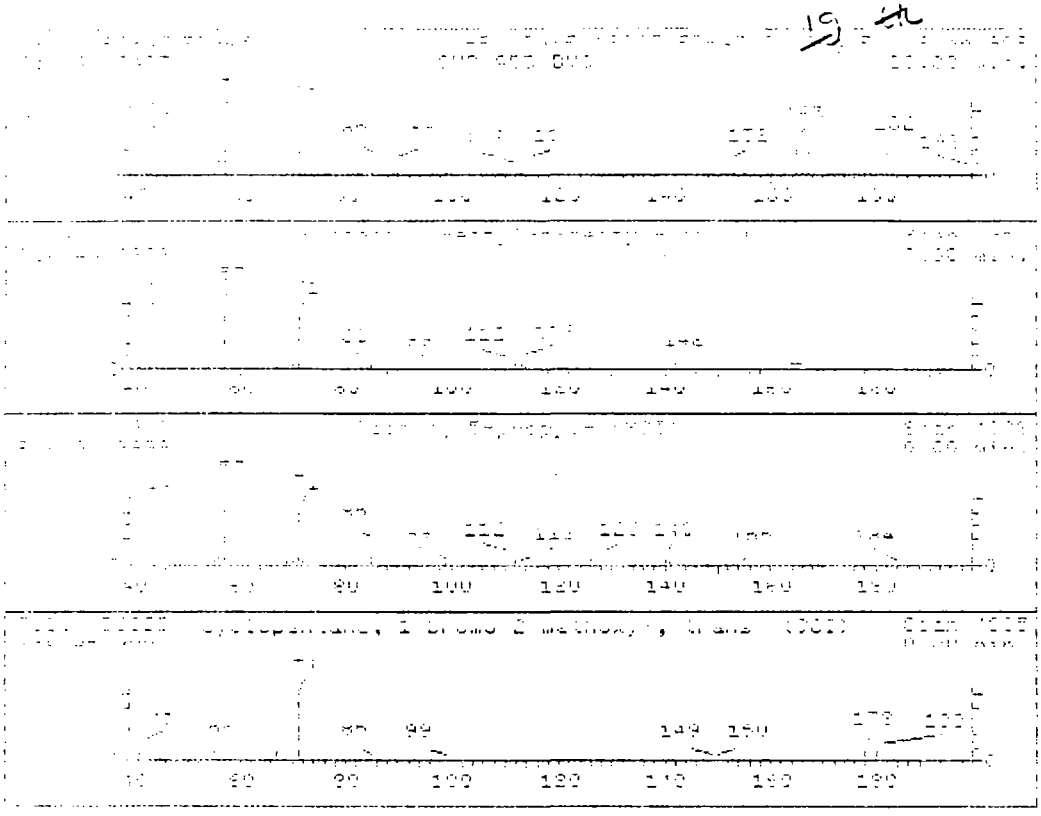


Unknown #.15
Count Time: 890620 19:42
Injection: 890620 17:55
BL Ht= 16054.00 Tentative Concentration is 76000.00

1. Hexadecane (8CI,9CI)	226	$C_{16}H_{34}$
2. Dodecane (8CI,9CI)	310	$C_{12}H_{26}$
3. Pentadecane (8CI,9CI)	392	$C_{15}H_{32}$
4. Tetradecane (8CI,9CI)	240	$C_{14}H_{30}$
5. Hexadecane, 2,6,10,14-tetramethyl- (9CI)	245	$C_{20}H_{42}$
6. Eicosane, 10-methyl- (9CI)	246	$C_{21}H_{44}$
7. Dodecane, 1-iodo- (8CI,9CI)	248	$C_{12}H_{25}I$

Spectra File: 8P1.FI Spectrum #: 41
Sigma Point: 1 Tilting Option: S No. of ion ranges searched: 49

	Prob.	CAS #	CON #	FOOT	K	DK	#PLS	TILT	%	CON	C	I	H	W
1.	55	544-76-3	6146	"81GCB	92	28	0	0	90	7	66	44		
2.	45	629-70-9	6221	"81GCB	100	47	2	1	68	3	57	27		
3.	74	629-62-9	6092	"81GCB	96	45	0	0	78	16	43	59		
4.	79	629-97	6090	"81GCB	91	40	0	0	92	16	47	50		
5.	6	5583-48-6	6161	"81GCB	93	60	1	0	79	7	49	16		
6.	6	5483-97-3	6216	"81GCB	101	72	1	1	94	16	40	50		
7.	16	4292-19-7	6222	"81GCB	94	36	1	0	87	11	40	54		



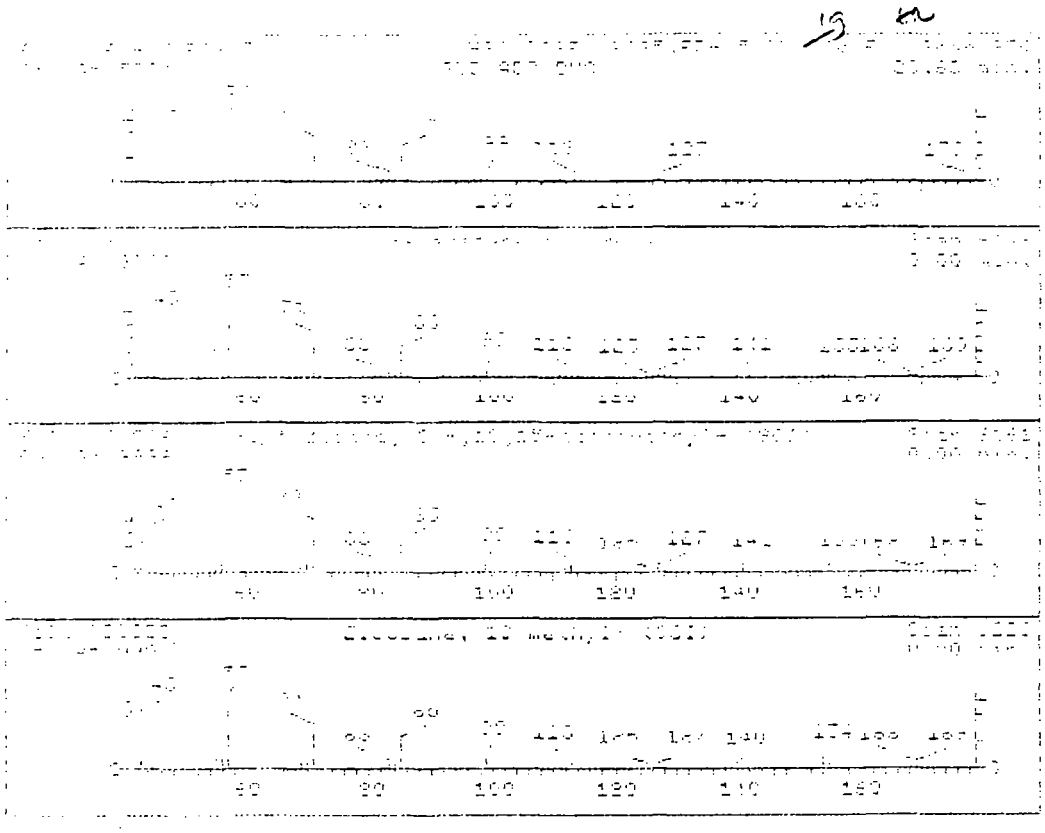
UNKNOWN HYDROCARBON

Unknown #.16
Current Time: 990620 18:42
Injected at: 990620 17:56
Pk --- 19994.00 Tentative Concentration is 44000.00

1. Heptane, 2-ethyl-6-methyl- (9CI)	140	C10H22
2. Undecane, 6-propyl- (8CI)	184	C14H30
3. Cyclopentane, 1-bromo-2-methoxy-, trans- (9CI)	178	C6H11BrO
4. Propane, 1-iodo-2,2-dimethyl- (8CI,9CI)	198	C5H11I
5. Cadinene, 2-methyl-8-propyl- (9CI)	206	C16H24
6. Tridecane, 4,6-dimethyl- (9CI)	198	C14H30
Undecane, 3,6-dimethyl- (8CI)	184	C13H28

Sample file: 9811FI Spectrum #: -1
Stepper speed: 1 Filting option: S No. of ion ranges searched: 29

	Prob.	LAS #	L IN #	PUOT	%	OK	#FLG	TILT	%	CON	C	1	P	IV
1.	1**	99999999	3969	"01009	64	40	1	-1	74	47	11		1	
2.	14*	17312428	4003	"01009	66	46	1	-1	94	48	11		0*	
3.	14*	91422766	4036	"01009	38	41	1	0	65	44	7		01	



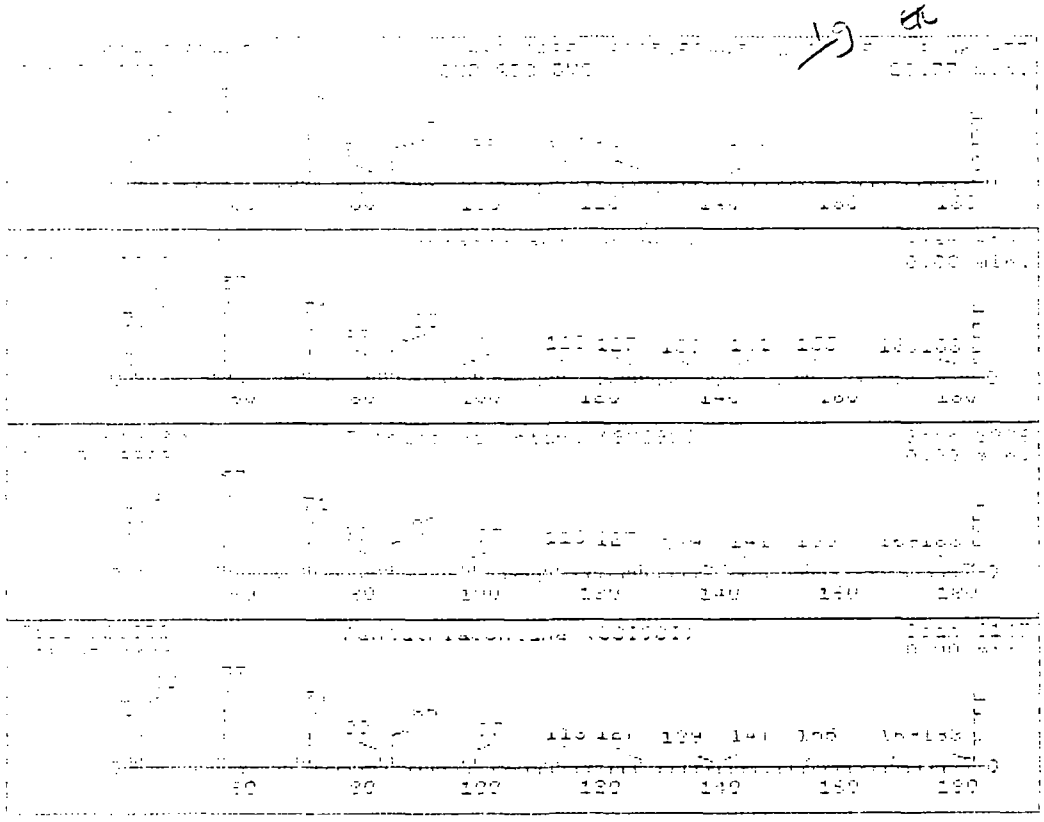
UNKNOWN HYDROCARBON

Unknown #.1?
Weight Time: 890620 19:42
Injected at: 890620 17:55
Mr Hte 25744.00 Tentative Concentration is 54000.00

1. Hexadecane (9CI9CI)	226	$C_{16}H_{34}$
2. Heptadecane, 2,6,10,15-tetramethyl- (9CI)	296	$C_{21}H_{44}$
3. Eicosane, 10-methyl- (9CI)	296	$C_{21}H_{44}$
4. Heptadecane (9CI9CI)	240	$C_{17}H_{36}$
5. Pentadecane (9CI9CI)	360	$C_{15}H_{32}$
6. Nonadecane (9CI9CI)	268	$C_{19}H_{40}$
7. Undecane, 1-iodo- (9CI9CI)	296	$C_{11}H_{23}I$

Sample File: ARTIFI Spectrum #: -1
Search Field: 1 Tilting Option: S No. of ion masses searched: 50

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	P	IV
1.	93	544763	6146	"81C09	93	27	1	0	93	4	67		52	
2.	47	54833486	6167	"81C09	85	48	1	0	85	4	63		41	
3.	93	54977217	6226	"81C09	102	31	1	0	97	7	53		41	
4.	94	629787	6090	"81C09	93	37	0	0	93	7	55		56	
5.	91	629092	6093	"81C09	97	43	1	0	91	7	53		57	
6.	97	629025	6091	"81C09	92	42	1	0	97	7	54		50	
7.	91	4040197	6022	"81C09	90	30	1	0	93	7	53		38	



UNKNOWN HYDROCARBON

Unknown #.12
Ucent Time: 890620 18:40
Injected at: 890620 17:66
Sw -t= 14944.00 Tentative Concentration is 34000.00

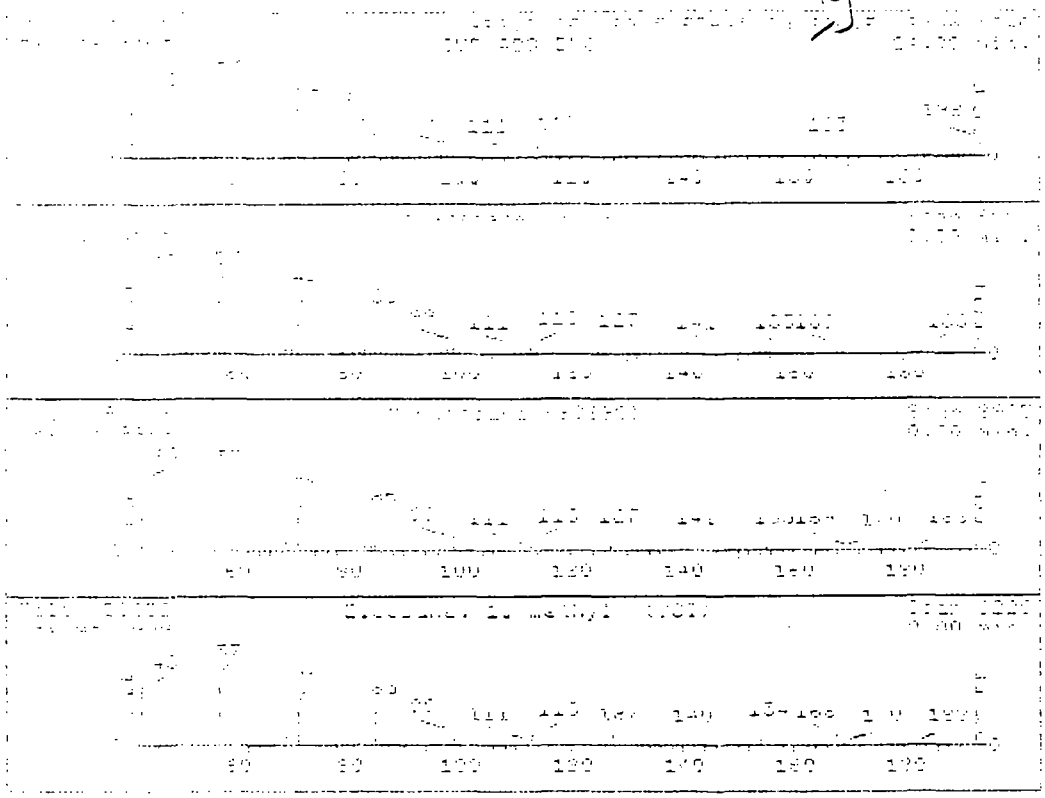
1. Pentatriacontane (9019CI) 506 C35H72
2. Tetratetracontane (9019CI) 618 C44H90
3. Pentatriacontane (9019CI) 490 C35H72
4. Heptadecane, 2,6,10,15-tetramethyl- (9CI) 296 C21H44
5. Pentadecane (9019CI) 240 C15H32
6. Tritetracontane (9019CI) 604 C43H88
7. Decane, 3,6-dimethyl- (9CI9CI) 170 C12H26

Sample File: ARTIFI Spectrum #: -1
Search based: 1 Filtering option: 9 No. of ion ranges searched: 40

	Prob.	CAS #	CON #	ROOT	%	OK	#PLS	TILT	%	CON	C	I	P	M
1.	79	570068	6197	"81GCB	78	94	3	0	100	2	96		14	
2.	9	7099228	9906	"81GCB	64	92	2	0	100	4	96		12	
3.	7%	640079	6147	"81GCB	77	74	3	0	100	2	96		14	
4.	76	44833486	6161	"81GCB	67	66	1	0	49	6	47		10	
5.	70	629797	6090	"81GCB	65	69	1	0	67	0	42		14	
6.	70	7096017	6180	"81GCB	77	99	1	0	100	8	42		12	
7.	48*	17312477	11149	"81GCB	61	72	2	1	100	21	99		14	

19 a

UNKNOWN HYDROCARBON



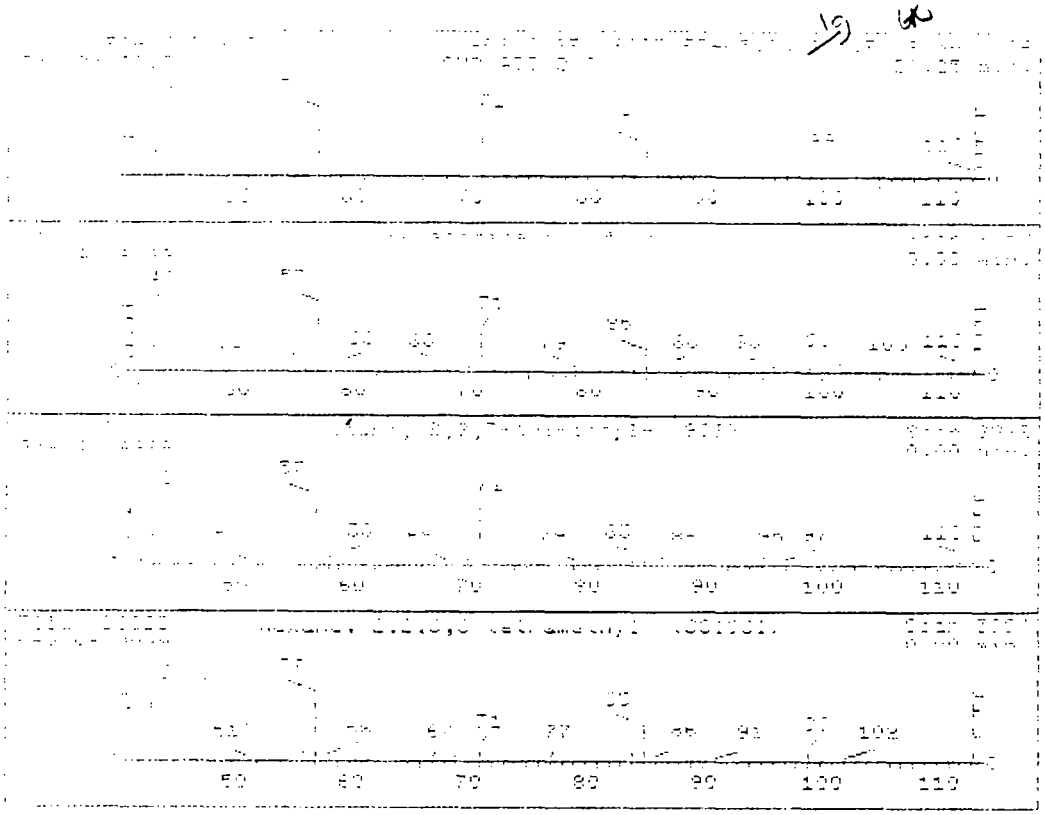
Scan # [illegible]
Start Time: 840620 18:42
End Time: 840620 19:06
Area: 24185.00 Tentative Concentration is 56000.00

1. Tetracosane (8019CI)	338	0[illegible]
2. Nonacosane (8019CI)	408	0[illegible]
3. Eicosane, 10-methyl- (9CI)	296	0[illegible]
4. Octacosane (8019CI)	394	0[illegible]
5. Heptacosane (8019CI)	380	0[illegible]
6. Hexacosane (8019CI)	366	0[illegible]
7. Heptadecane (8019CI)	226	0[illegible]

Sample File: 8[illegible]FI Spectrum #: -1
Search Index: 1 Filtering Option: 5 No. of ion masses searched: 50

	Prob.	CAS #	CON #	RUD	%	UM	#PLS	TILT	%	CON	D	I	F	M
1.	5[illegible]	6[illegible]	6[illegible]	"81[illegible]	93	41	1	0	79	34	0[illegible]		42	
2.	64	630[illegible]	9[illegible]	"81[illegible]	91	54	1	0	75	34	0[illegible]		49	
3.	[illegible]	[illegible]	6[illegible]	"81[illegible]	90	49	1	0	74	34	0[illegible]		44	
4.	49	630[illegible]	6[illegible]	"81[illegible]	88	49	1	0	75	34	0[illegible]		41	
5.	[illegible]	6[illegible]	6[illegible]	"81[illegible]	93	62	1	0	75	34	0[illegible]		44	
6.	74	6[illegible]	6[illegible]	"81[illegible]	94	69	1	0	70	34	0[illegible]		39	
7.	64	6[illegible]	6146	"81[illegible]	81	39	1	0	[illegible]	34	0[illegible]		[illegible]	

UNKNOWN HYDROCARBON



Unknown #.2r
Count Time: 990620 18:42
Injection at: 840600 17:66
Pk Ht= 18084.00 Tentative Concentration is 37000.00

1. Propanone (9C19C1)	3-6	C14H61
2. Butane, 2,3,3-trimethyl- (9C1)	1F6	C11H24
3. Pentane, 2,2,3,3-tetramethyl- (9C19C1)	142	C10H22
4. Butane, 2,4,6-trimethyl- (9C1)	156	C11H24
5. Pentane, 2,5-dimethyl- (9C19C1)	156	C11H24
6. 1H-Tetrazol-5-amine (9C1)	99	CH5N5
7. Butane, 2,3-dimethyl- (9C19C1)	142	C10H22

Sample File: APTIP1 Spectrum #: -1
Filter Cross: 1 Filtering Option: 5 No. of ion ranges searched: 90

	Prob.	CAS #	DUN #	FORT	%	DV	#FLG	FILT	%	DUN	C	I	P	P
1.	63	630014	6069	"91G09	65	75	0	0	75	13	30			22
2.	40	62016748	3462	"91G09	43	48	1	0	89	09	14			17
3.	34	17479916	5944	"91G09	67	42	2	0	79	30	14			16
4.	25	62016799	6004	"91G09	34	51	1	0	100	20	14			12
5.	14	1750021	5 90	"91G09	30	56	1	0	91	34	10			10
6.	1*	4415616	6	"91G09	22	103	2	0	70	40	10			17
7.	06	[illegible]	9460	"91G09	30	62	1	0	100	44	9			11

[illegible]

[illegible] 19 µH FV=1ml OH [illegible]

[illegible]

[illegible]

Chromatographic temperatures : [illegible]

Chromatographic times, min. : [illegible]

Chromatographic mins. sis/min: [illegible]

[illegible]

[illegible]

Peak Height: [illegible] Max Peaks: [illegible] Summary: 1

Unselect: 0.00 Results File [illegible] Sorted by Peak Height INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	17.61	652	657	660	35228	141816	139946	100.00	11.740
2	17.66	666	670	672	34638	113327	108168	77.36	9.069
3	22.05	893	898	900	33084	98149	86321	61.71	7.167
4	17.76	817	821	824	32890	127206	109051	77.99	9.194
5	19.20	737	740	741	30201	76825	67479	48.26	5.626
6	17.63	968	970	973	26744	68939	58629	41.89	4.913
7	24.98	1032	1040	1044	24196	103156	93972	67.17	7.880
8	17.91	672	673	674	21219	30318	25974	18.57	2.180
9	22.32	900	902	905	18994	63096	48198	34.45	4.042
10	19.69	762	765	767	18250	48447	37427	26.75	3.140
11	19.94	775	778	785	16938	98381	94637	64.10	7.936
12	17.93	565	570	572	16623	46950	46178	33.02	3.872
13	26.25	1101	1106	1109	16064	43590	41891	29.95	3.512
14	21.37	973	977	980	14544	51122	36943	24.39	3.098
15	19.61	759	761	762	14238	35040	28047	20.06	2.351
16	17.59	644	646	648	12943	34532	34532	24.69	2.899
17	19.26	741	743	744	12581	43175	26996	19.30	2.266
18	21.40	857	859	862	12136	48990	30129	21.61	2.528
19	18.16	686	686	688	11732	56115	34016	24.32	2.852
20	24.03	788	793	796	11579	62512	53036	37.92	4.450

Sum of corrected areas: 1191215.

Summary of Unknowns PYM Library Search and Quantitation

Standard	Concentration	Peak Ht.	Retention Time	Unknown Window
1	40.0	26766.	9.66	4.98 - 11.54
2	40.0	41172.	13.43	11.54 - 16.19
3	40.0	44200.	19.84	16.17 - 21.08
4	40.0	38958.	23.37	21.08 - 27.42
5	40.0	34359.	31.52	27.42 - 33.87

[illegible]

[illegible] = ********

[illegible] = [illegible] + [illegible]

[illegible]

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH46

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH46

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EDH46

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 7 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/89

GPC Cleanup: (Y/N) Y pH: 9.6 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	710	U
111-44-4	bis(2-Chloroethyl)ether	710	U
95-57-8	2-Chlorophenol	710	U
541-73-1	1,3-Dichlorobenzene	710	U
106-46-7	1,4-Dichlorobenzene	710	U
100-51-6	Benzyl alcohol	710	U
95-50-1	1,2-Dichlorobenzene	710	U
95-48-7	2-Methylphenol	710	U
108-60-1	bis(2-Chloroisopropyl)ether	710	U
106-44-5	4-Methylphenol	710	U
621-64-7	N-Nitroso-di-n-propylamine	710	U
67-72-1	Hexachloroethane	710	U
98-95-3	Nitrobenzene	710	U
78-59-1	Isophorone	710	U
88-75-5	2-Nitrophenol	710	U
105-67-9	2,4-Dimethylphenol	710	U
65-85-0	Benzoic acid	3400	U
111-91-1	bis(2-Chloroethoxy)methane	710	U
120-83-2	2,4-Dichlorophenol	710	U
120-82-1	1,2,4-Trichlorobenzene	710	U
91-20-3	Naphthalene	710	U
106-47-8	4-Chloroaniline	710	U
87-68-3	Hexachlorobutadiene	710	U
59-50-7	4-Chloro-3-methylphenol	710	U
91-57-6	2-Methylnaphthalene	710	U
77-47-4	Hexachlorocyclopentadiene	710	U
88-06-2	2,4,6-Trichlorophenol	710	U
95-95-4	2,4,5-Trichlorophenol	3400	U
91-58-7	2-Chloronaphthalene	710	U
88-74-4	2-Nitroaniline	3400	U
131-11-3	Dimethylphthalate	710	U
208-96-8	Acenaphthylene	710	U
606-20-2	2,6-Dinitrotoluene	710	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH46

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH46

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EDH46

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 7 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/89

GPC Cleanup: (Y/N) Y pH: 9.6 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3400	U
83-32-9	Acenapthene	260	J
51-28-5	2,4-Dinitrophenol	3400	U
100-02-7	4-Nitrophenol	3400	U
132-64-9	Dibenzofuran	710	U
121-14-2	2,4-Dinitrotoluene	710	U
84-66-2	Diethylphthalate	710	U
7005-72-3	4-Chlorophenyl-phenylether	710	U
86-73-7	Fluorene	140	J
100-01-6	4-Nitroaniline	3400	U
534-52-1	4,6-Dinitro-2-methylphenol	3400	U
86-30-6	N-Nitrosodiphenylamine (1)	710	U
101-55-3	4-Bromophenyl-phenylether	710	U
118-74-1	Hexachlorobenzene	710	U
87-86-5	Pentachlorophenol	430	J
85-01-8	Phenanthrene	640	J
120-12-7	Anthracene	180	J
84-74-2	Di-n-butylphthalate	710	U
206-44-0	Fluoranthene	340	J
129-00-0	Pyrene	220	J
85-68-7	Butylbenzylphthalate	710	U
91-94-1	3,3'-Dichlorobenzidine	1400	U
56-55-3	Benzo(a)anthracene	710	U
218-01-9	Chrysene	710	U
117-81-7	bis(2-Ethylhexyl)phthalate	1300	~~B~~ U
117-84-0	Di-n-octylphthalate	710	U
205-99-2	Benzo(b)fluoranthene	710	U
207-08-9	Benzo(k)fluoranthene	710	U
50-32-8	Benzo(a)pyrene	710	U
193-39-5	Indeno(1,2,3-cd)pyrene	710	U
53-70-3	Dibenz(a,h)anthracene	710	U
191-24-2	Benzo(g,h,i)perylene	710	U

10/11/89 WM

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDH46

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH46

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EDH46

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 7 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/89

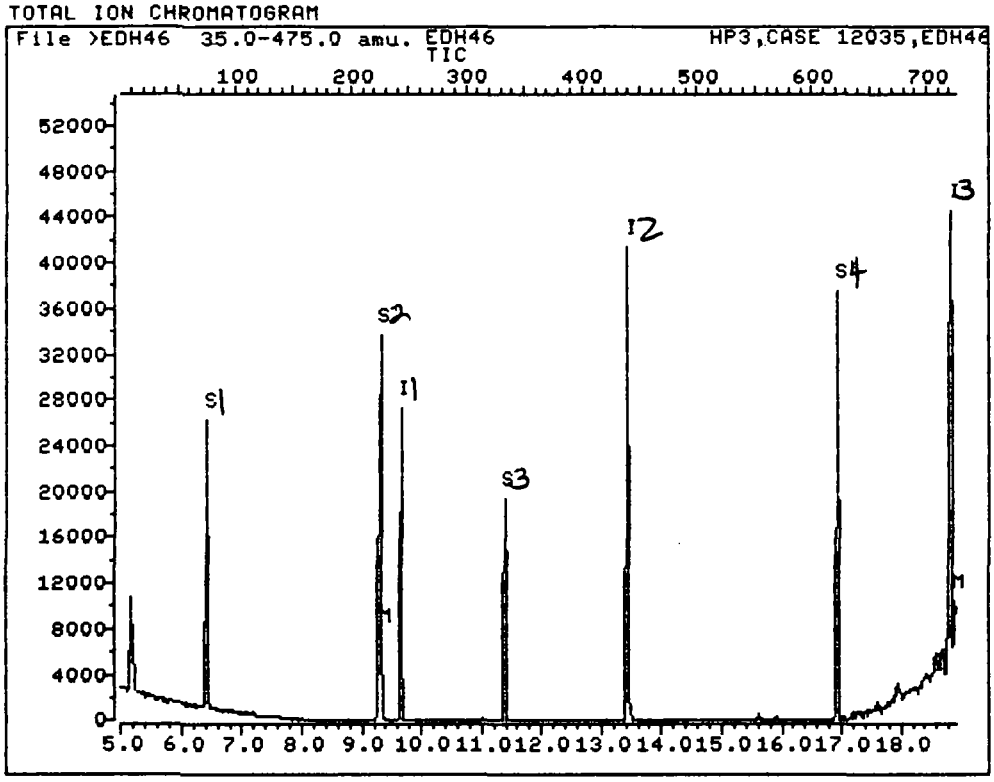
GPC Cleanup : (Y/N) Y pH: 9.6 Dilution Factor: 1.000

Number TICs found: 9

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	5.17	910	JB
2.		UNKNOWN	22.06	400	J
3.		UNKNOWN	22.76	320	J
4.		UNKNOWN	23.60	570	J
5.		UNKNOWN	23.80	420	J
6.		UNKNOWN	24.26	320	J
7.		UNKNOWN HYDROCARBON	25.88	390	J
8.		UNKNOWN HYDROCARBON	26.36	370	J
9.		UNKNOWN HYDROCARBON	27.50	1200	JB
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

TOTAL ION CHROMATOGRAM



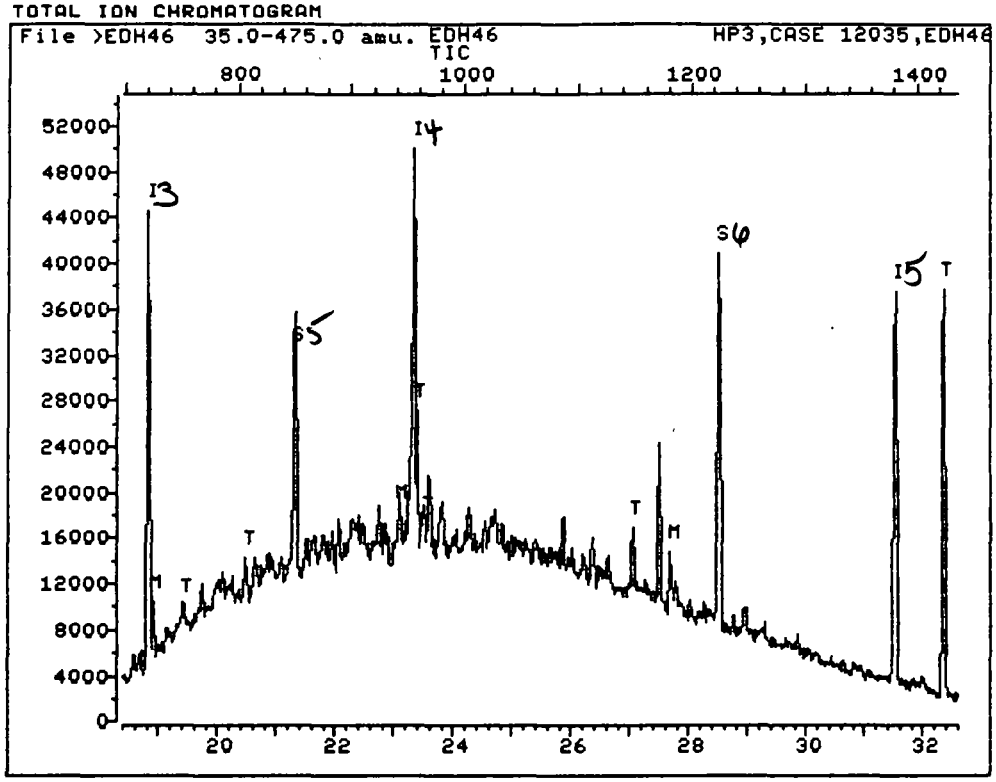
Data File: >EDH46::D3 Quant Output File: ^EDH46::SC
Name: EDH46
Misc: HP3,CASE 12035,EDH46,IW 30g,FVC 2ml,06/06/89,pH 7,%M7,BTL#10

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

Operator ID: JOHN
Quant Time: 890620 19:39
Injected at: 890620 18:52

TIC page 1 of 3

TOTAL ION CHROMATOGRAM



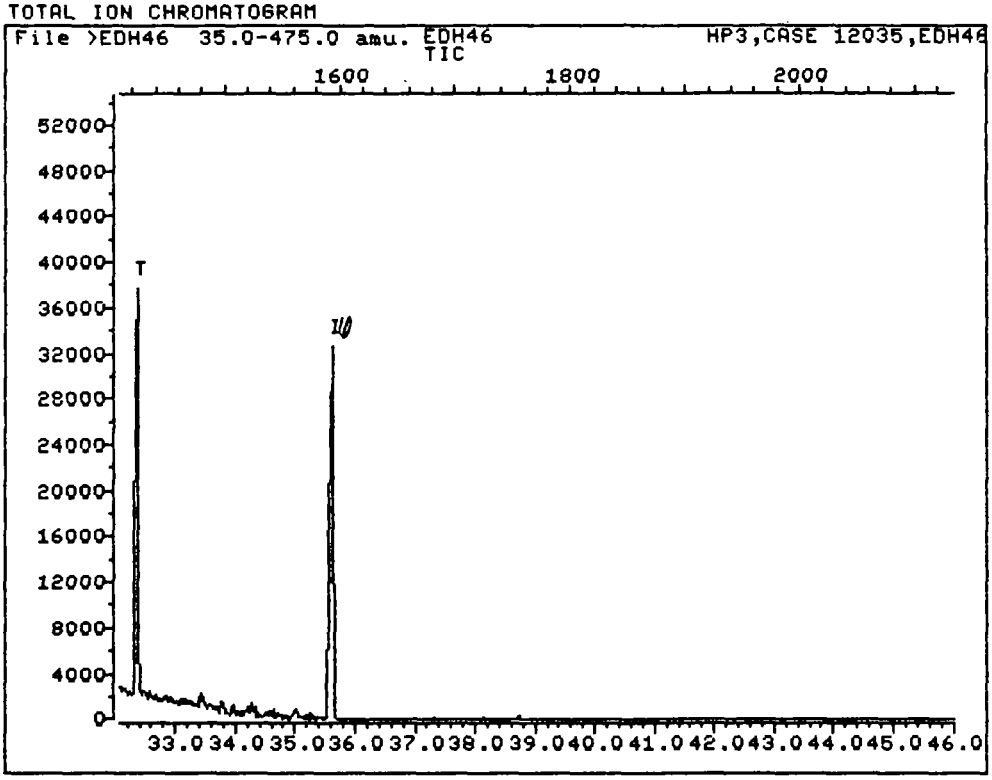
Data File: >EDH46::D3 Quant Output File: ^EDH46::SC
Name: EDH46
Misc: HP3,CASE 12035,EDH46,IW 30g,FVC 2ml,06/06/89,pH 7,%M7,BTL#10

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

Operator ID: JOHN
Quant Time: 890620 19:39
Injected at: 890620 18:52

TIC page 2 of 3

TOTAL ION CHROMATOGRAM



Data File: >EDH46::D3 Quant Output File: ^EDH46::SC
Name: EDH46
Misc: HP3,CASE 12035,EDH46,IW 30g,FVC 2ml,06/06/89,pH 7,%M7,BTL#10

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

Operator ID: JOHN
Quant Time: 890620 19:39
Injected at: 890620 18:52

TIC page 3 of 3

% Moist: 7.17 Wet: 30 g Dry: 27.849 g

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890620 19:39
Output File: ^EDH46::SC Injected at: 890620 18:52
Data File: >EDH46::D3 Dilution Factor: 1.00000
Name: EDH46
Misc: HP3,CASE 12035,EDH46,IW 30g,FVC 2ml,06/06/89,pH 7,%M7,BTL#10

ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

% Sur Rec = Amtx FV x100 / Amt spiked

A = 200 BN = 100

Cmpd Fd = Amt (ppm) X FV/IW

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.65	152.0	9248	40.00	ng/uL	97
2)	2-Fluorophenol	6.42	112.0	16385	65.64	ng/uL	94
3)	Phenol-d5	9.31	99.0	34438	77.84	ng/uL	85
~~4)~~	Phenol	9.32	94.0	621	~~1.27~~	ng/uL	99
5)	bis(-2-Chloroethyl)Ether	0.00	93.0	0	0.00	ng/uL	
6)	2-Chlorophenol	0.00	128.0	0	0.00	ng/uL	
7)	1,3-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
8)	1,4-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
9)	Benzyl Alcohol	0.00	108.0	0	0.00	ng/uL	
10)	1,2-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
11)	2-Methylphenol	0.00	108.0	0	0.00	ng/uL	
12)	bis(2-Chloroisopropyl)ether	0.00	45.0	0	0.00	ng/uL	
13)	4-Methylphenol	0.00	108.0	0	0.00	ng/uL	
14)	N-Nitroso-Di-n-propylamine	0.00	70.0	0	0.00	ng/uL	
15)	Hexachloroethane	0.00	117.0	0	0.00	ng/uL	
16)	*d8-Naphthalene	13.42	136.0	43637	40.00	ng/uL	89
17)	Nitrobenzene-d5	11.38	82.0	15652	33.81	ng/uL	76
18)	Nitrobenzene	0.00	77.0	0	0.00	ng/uL	
19)	Isophorone	0.00	82.0	0	0.00	ng/uL	
20)	2-Nitrophenol	0.00	139.0	0	0.00	ng/uL	
21)	2,4-Dimethylphenol	0.00	107.0	0	0.00	ng/uL	
22)	Benzoic Acid	0.00	105.0	0	0.00	ng/uL	
23)	bis(-2-Chloroethoxy)Methane	0.00	93.0	0	0.00	ng/uL	
24)	2,4-Dichlorophenol	0.00	162.0	0	0.00	ng/uL	
25)	1,2,4-Trichlorobenzene	0.00	180.0	0	0.00	ng/uL	
26)	Naphthalene	0.00	128.0	0	0.00	ng/uL	
27)	4-Chloroaniline	0.00	127.0	0	0.00	ng/uL	
28)	Hexachlorobutadiene	0.00	225.0	0	0.00	ng/uL	
29)	4-Chloro-3-methylphenol	0.00	107.0	0	0.00	ng/uL	
30)	2-Methylnaphthalene	0.00	142.0	0	0.00	ng/uL	
31)	*d10-Acenaphthene	18.83	164.0	23292	40.00	ng/uL	91
32)	Hexachlorocyclopentadiene	0.00	237.0	0	0.00	ng/uL	
33)	2,4,6-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
34)	2,4,5-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
35)	2-Chloronaphthalene	0.00	162.0	0	0.00	ng/uL	
36)	2-Fluorobiphenyl	16.94	172.0	30624	47.26	ng/uL	93
37)	2-Nitroaniline	0.00	65.0	0	0.00	ng/uL	
38)	Dimethyl Phthalate	0.00	163.0	0	0.00	ng/uL	
39)	Acenaphthylene	0.00	152.0	0	0.00	ng/uL	
40)	2,6-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
41)	3-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
42)	Acenaphthene	18.90	153.0	2496	3.67	ng/uL → 260	97
43)	2,4-Dinitrophenol	0.00	184.0	0	0.00	ng/uL	
44)	4-Nitrophenol	0.00	109.0	0	0.00	ng/uL	
~~45)~~	Dibenzofuran	19.42	168.0	1364	~~1.36~~	ng/uL →	91
46)	2,4-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
47)	Diethylphthalate	0.00	149.0	0	0.00	ng/uL	
48)	4-Chlorophenyl-phenylether	0.00	204.0	0	0.00	ng/uL	
49)	Fluorene	20.48	166.0	1638	2.00	ng/uL → 140	89
50)	4-Nitroaniline	0.00	138.0	0	0.00	ng/uL	

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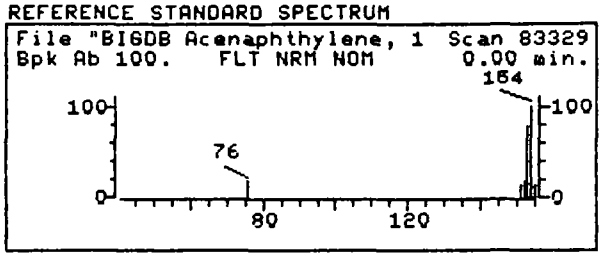
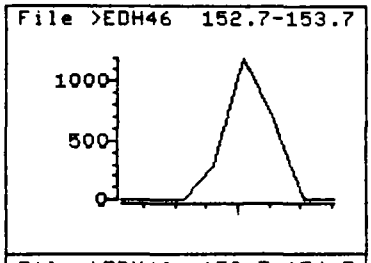
50)	4-Nitroaniline	0.00	198.0	0	0.00	ng/uL	
51)	2,4,6-Tribromophenol	21.31	330.0	5226	83.45	ng/uL	96
52)	*d10-Phenanthrene	23.33	188.0	38592	40.00	ng/uL	98
53)	4,6-Dinitro-2-methylphenol	0.00	198.0	0	0.00	ng/uL	
54)	N-Nitrosodiphenylamine	0.00	169.0	0	0.00	ng/uL	
55)	4-Bromophenyl-phenylether	0.00	248.0	0	0.00	ng/uL	
56)	Hexachlorobenzene	0.00	284.0	0	0.00	ng/uL	
57)	Pentachlorophenol	23.08	266.0	785	5.93	ng/uL → 430	95
58)	Phenanthrene	23.39	178.0	8822	8.85	ng/uL → 640	96
59)	Anthracene	23.53	178.0	2544	2.56	ng/uL → 180	93
60)	Di-n-Butylphthalate	0.00	149.0	0	0.00	ng/uL	
61)	Fluoranthene	27.05	202.0	5737	4.75	ng/uL → 340	96
62)	*d12-Chrysene	31.54	240.0	37843	40.00	ng/uL	86
63)	Pyrene	27.69	202.0	4954	3.05	ng/uL → 220	90
64)	Terphenyl-d14	28.52	244.0	33880	34.59	ng/uL	99
65)	Butylbenzylphthalate	0.00	149.0	0	0.00	ng/uL	
66)	3,3'-Dichlorobenzidine	0.00	252.0	0	0.00	ng/uL	
67)	Benzo(a)Anthracene	0.00	228.0	0	0.00	ng/uL	
68)	Chrysene	0.00	228.0	0	0.00	ng/uL	
69)	Bis(2-Ethylhexyl)Phthalate	32.37	149.0	26686	17.75	ng/uL → 1300	98
70)	*d12-Perylene	35.62	264.0	38249	40.00	ng/uL	93
71)	Di-n-octyl phthalate	0.00	149.0	0	0.00	ng/uL	
72)	Benzo(b)fluoranthene	0.00	252.0	0	0.00	ng/uL	
73)	Benzo(k)Fluoranthene	0.00	252.0	0	0.00	ng/uL	
74)	Benzo(a)Pyrene	0.00	252.0	0	0.00	ng/uL	
75)	Indeno(1,2,3-cd)Pyrene	0.00	276.0	0	0.00	ng/uL	
76)	Dibenz(a,h)Anthracene	0.00	278.0	0	0.00	ng/uL	
77)	Benzo(g,h,i)Perylene	0.00	276.0	0	0.00	ng/uL	

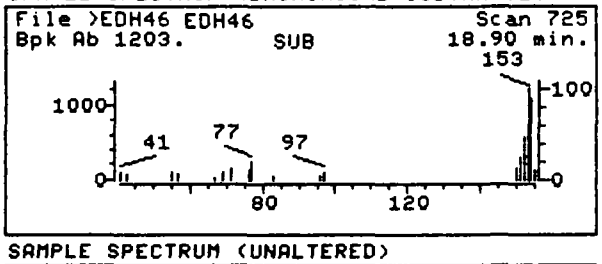
* Compound is ISTD

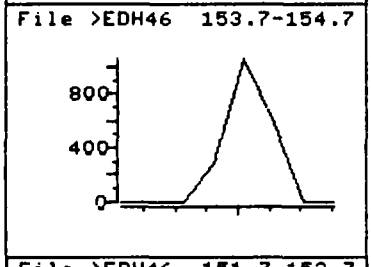
REFERENCE STANDARD SPECTRUM



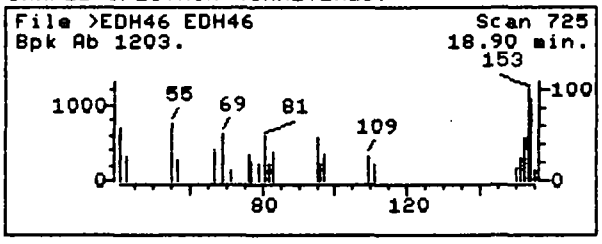


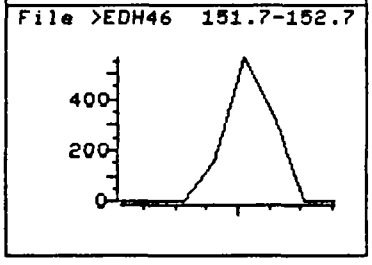
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)





SAMPLE SPECTRUM (UNALTERED)

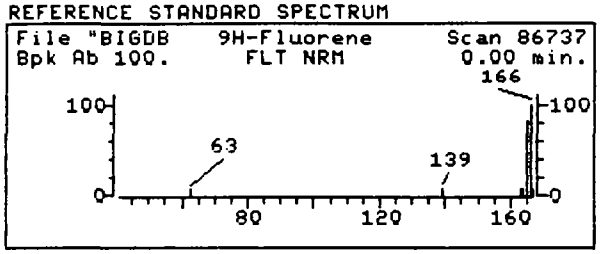




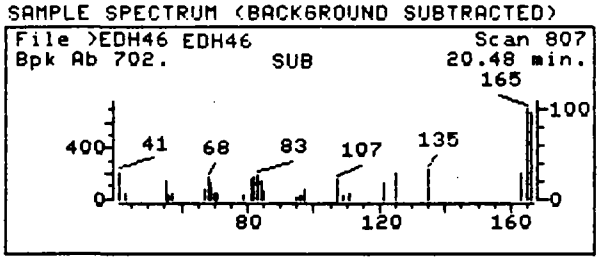
Data File: >EDH46::D3 Quant Output File: ^EDH46::SC
Name: EDH46
Misc: HP3,CASE 12035,EDH46,IW 30g,FVC 2ml,06/06/89,pH 7,%M7,BTL#10
Quant Time: 890620 19:39 Quant ID File: ID_BCA::SC
Injected at: 890620 18:52 Last Calibration: 890620 16:42

Compound No: 42
Compound Name: Acenaphthene
Scan Number: 725
Retention Time: 18.90 min.
Quant Ion: 153.0
Area: 2496
Concentration: 3.67 ng/uL
q-value: 97

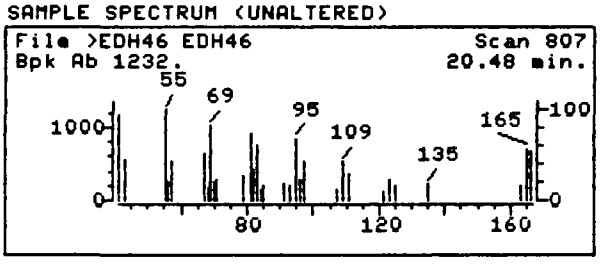
REFERENCE STANDARD SPECTRUM

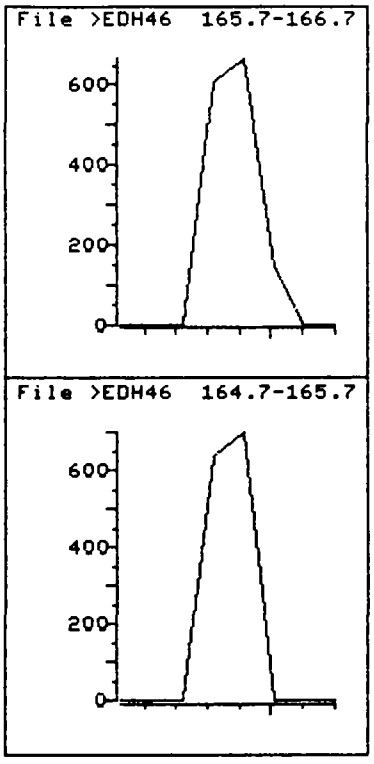


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

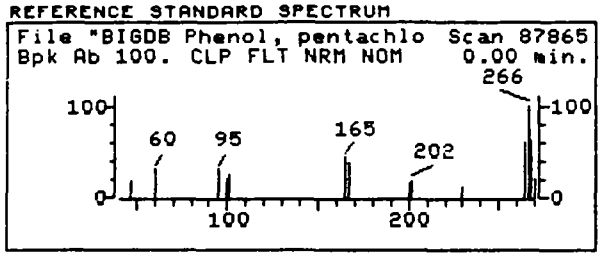




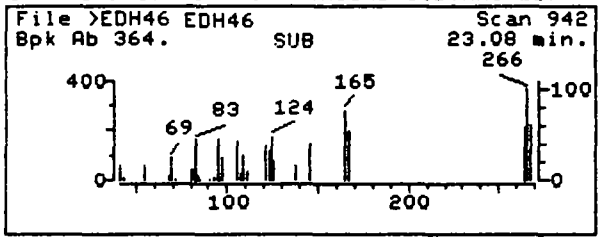
Data File: >EDH46::D3 Quant Output File: ^EDH46::SC
Name: EDH46
Misc: HP3,CASE 12035,EDH46,IW 30g,FVC 2ml,06/06/89,pH 7,%M7,BTL#10
Quant Time: 890620 19:39 Quant ID File: ID_BCA::SC
Injected at: 890620 18:52 Last Calibration: 890620 16:42

Compound No: 49
Compound Name: Fluorene
Scan Number: 807
Retention Time: 20.48 min.
Quant Ion: 166.0
Area: 1638
Concentration: 2.00 ng/uL
q-value: 89

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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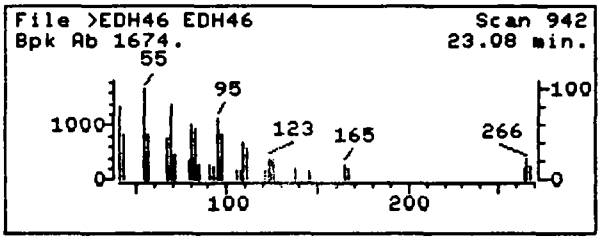
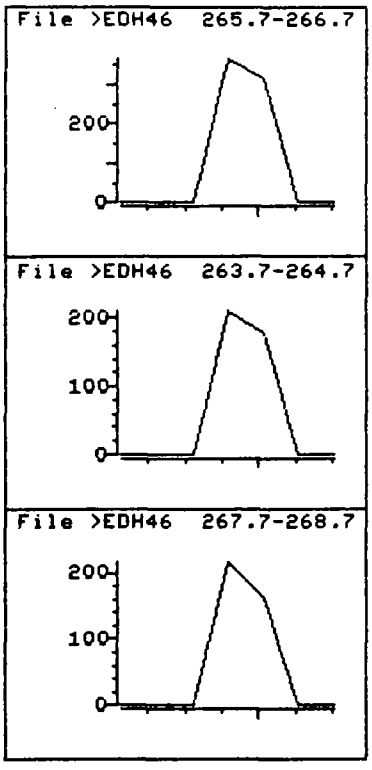
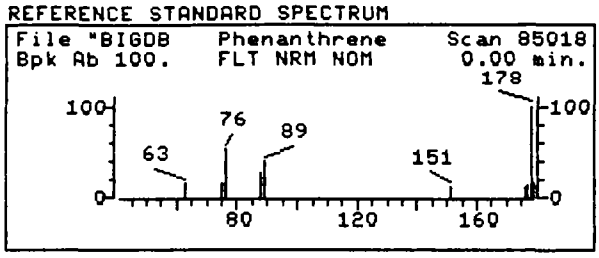




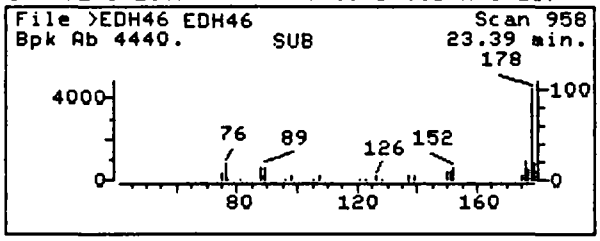
Data File: >EDH46::D3 Quant Output File: ^EDH46::SC
Name: EDH46
Misc: HP3,CASE 12035,EDH46,IW 30g,FVC 2ml,06/06/89,pH 7,%M7,BTL#10
Quant Time: 890620 19:39 Quant ID File: ID_BCA::SC
Injected at: 890620 18:52 Last Calibration: 890620 16:42

Compound No: 57
Compound Name: Pentachlorophenol
Scan Number: 942
Retention Time: 23.08 min.
Quant Ion: 266.0
Area: 785
Concentration: 5.93 ng/uL
q-value: 95

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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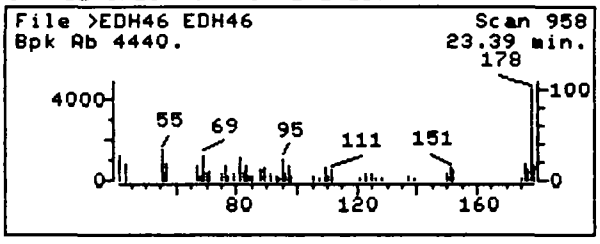
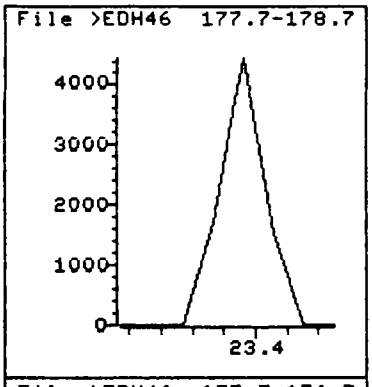
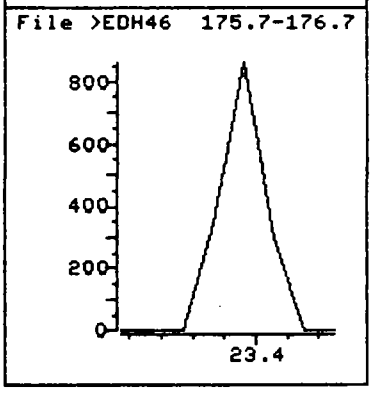


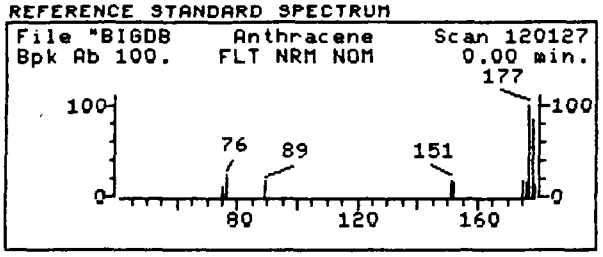




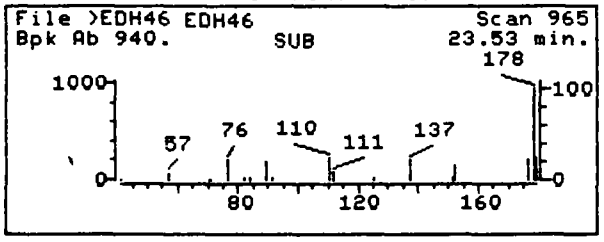
Data File: >EDH46::D3 Quant Output File: ^EDH46::SC
Name: EDH46
Misc: HP3,CASE 12035,EDH46,IW 30g,FVC 2ml,06/06/89,pH 7,%M7,BTL#10
Quant Time: 890620 19:39 Quant ID File: ID_BCA::SC
Injected at: 890620 18:52 Last Calibration: 890620 16:42

Compound No: 58
Compound Name: Phenanthrene
Scan Number: 958
Retention Time: 23.39 min.
Quant Ion: 178.0
Area: 8822
Concentration: 8.85 ng/uL
q-value: 96

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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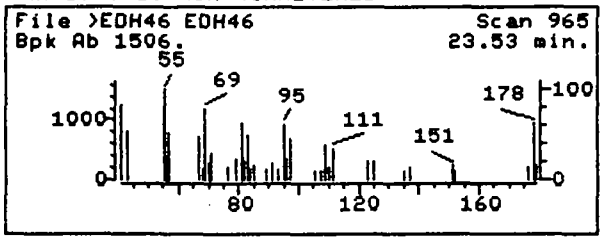
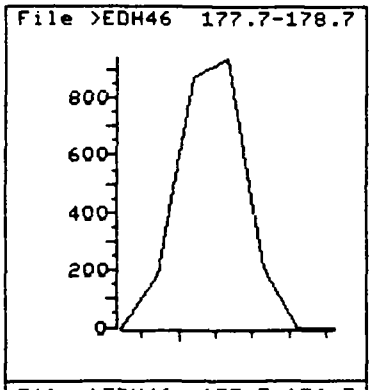
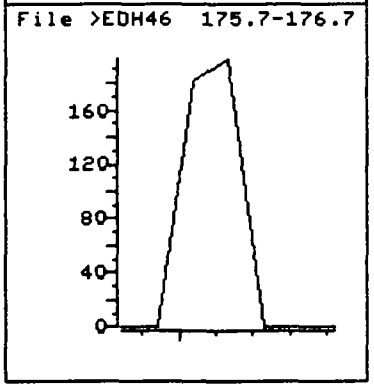


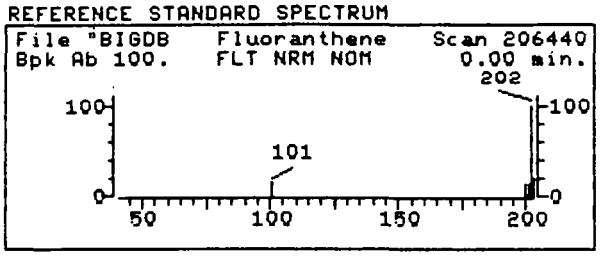




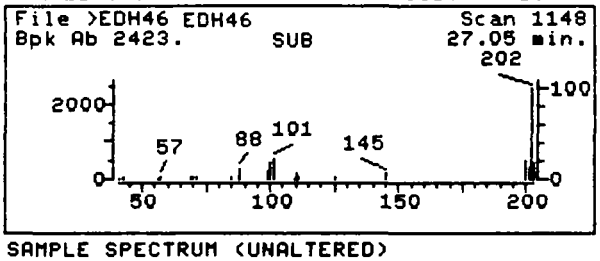
Data File: >EDH46::D3 Quant Output File: ^EDH46::SC
Name: EDH46
Misc: HP3,CASE 12035,EDH46,IW 30g,FVC 2ml,06/06/89,pH 7,%M7,BTL#10
Quant Time: 890620 19:39 Quant ID File: ID_BCA::SC
Injected at: 890620 18:52 Last Calibration: 890620 16:42

Compound No: 59
Compound Name: Anthracene
Scan Number: 965
Retention Time: 23.53 min.
Quant Ion: 178.0
Area: 2544
Concentration: 2.56 ng/uL
q-value: 93

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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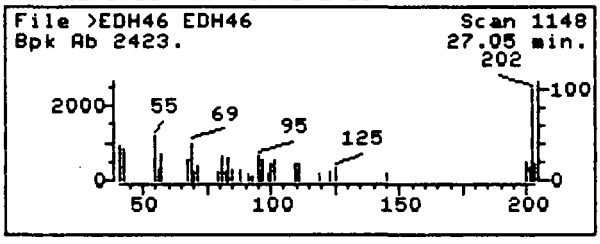
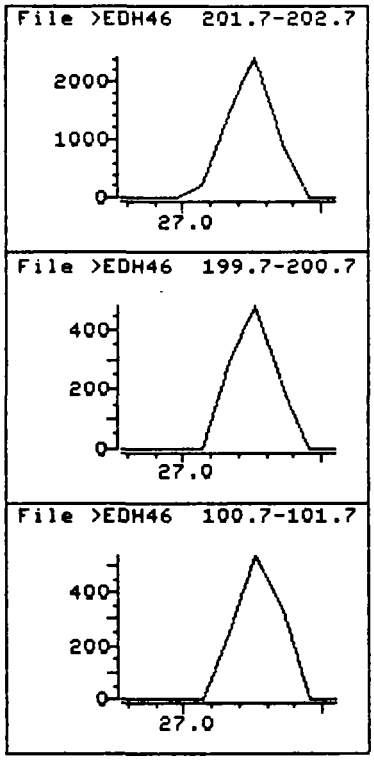
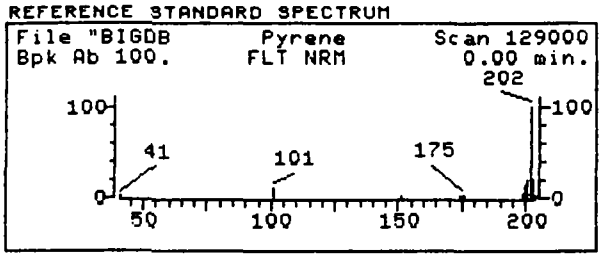


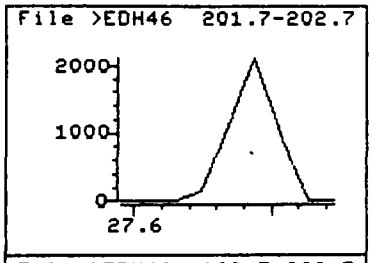


Data File: >EDH46::D3 Quant Output File: ^EDH46::SC
Name: EDH46
Misc: HP3,CASE 12035,EDH46,IW 30g,FVC 2ml,06/06/89,pH 7,%M7,BTL#10
Quant Time: 890620 19:39 Quant ID File: ID_BCA::SC
Injected at: 890620 18:52 Last Calibration: 890620 16:42

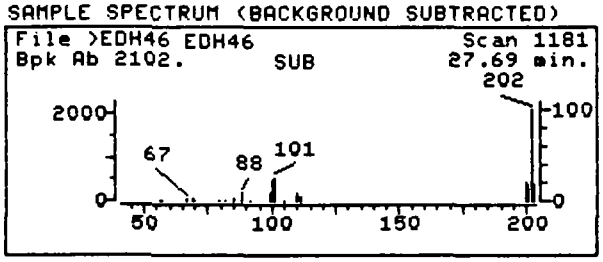
Compound No: 61
Compound Name: Fluoranthene
Scan Number: 1148
Retention Time: 27.05 min.
Quant Ion: 202.0
Area: 5737
Concentration: 4.75 ng/uL
q-value: 96

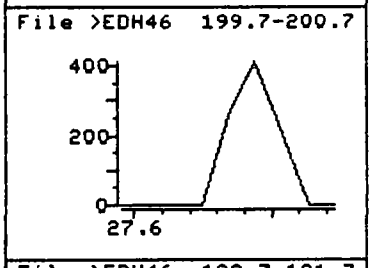
REFERENCE STANDARD SPECTRUM



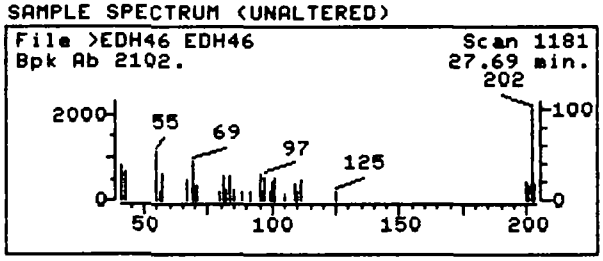


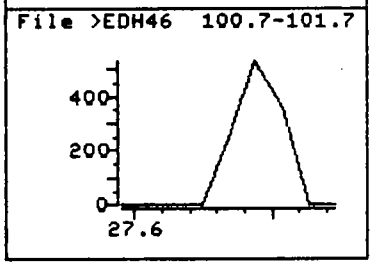
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)





SAMPLE SPECTRUM (UNALTERED)

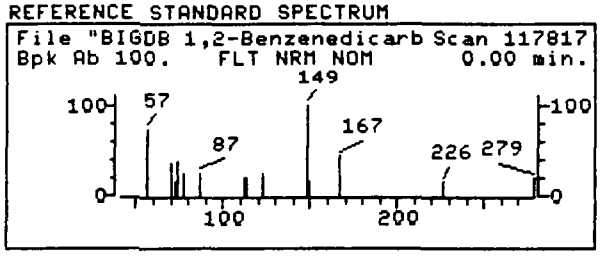




Data File: >EDH46::D3 Quant Output File: ^EDH46::SC
Name: EDH46
Misc: HP3,CASE 12035,EDH46,IW 30g,FVC 2ml,06/06/89,pH 7,%M7,BTL#10
Quant Time: 890620 19:39 Quant ID File: ID_BCA::SC
Injected at: 890620 18:52 Last Calibration: 890620 16:42

Compound No: 63
Compound Name: Pyrene
Scan Number: 1181
Retention Time: 27.69 min.
Quant Ion: 202.0
Area: 4954
Concentration: 3.05 ng/uL
q-value: 90

REFERENCE STANDARD SPECTRUM



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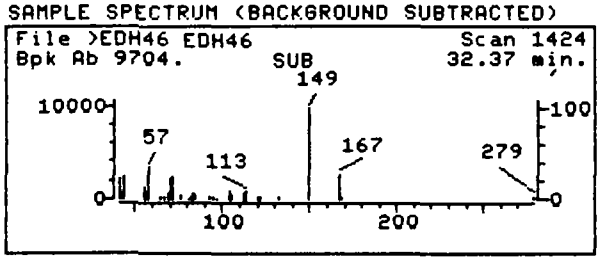
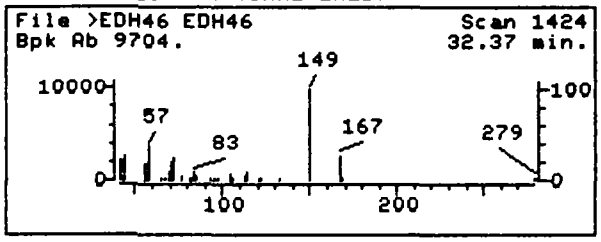
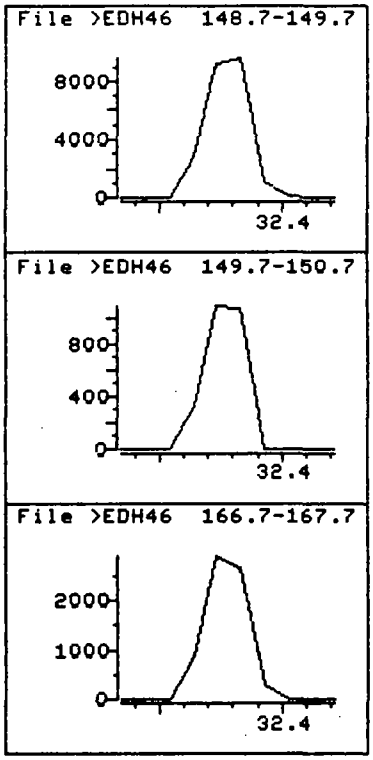


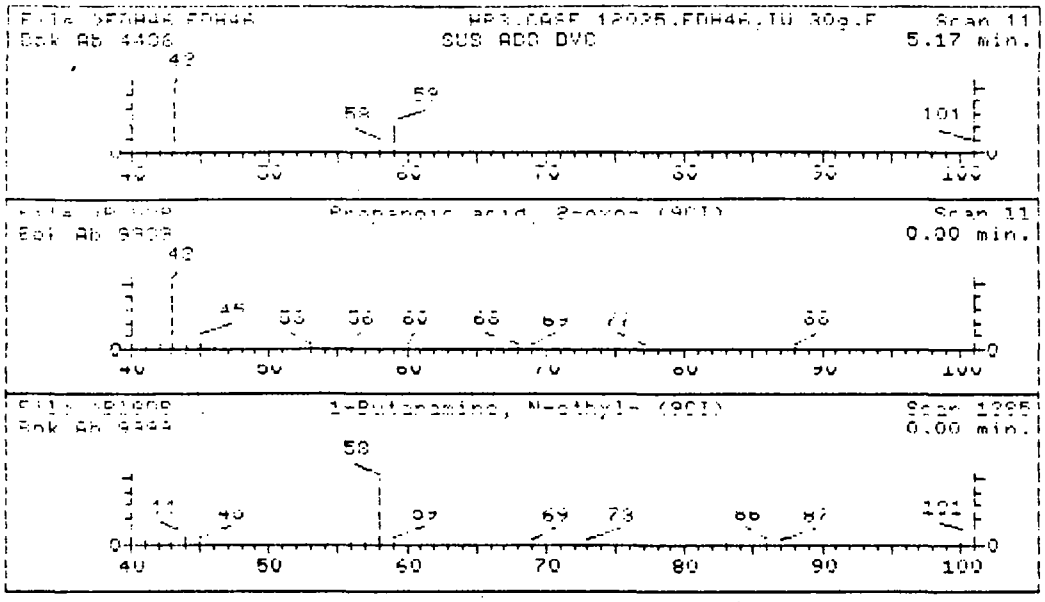
SAMPLE SPECTRUM (UNALTERED)





Data File: >EDH46::D3 Quant Output File: ^EDH46::SC
Name: EDH46
Misc: HP3,CASE 12035,EDH46,IW 30g,FVC 2ml,06/06/89,pH 7,%M7,BTL#10
Quant Time: 890620 19:39 Quant ID File: ID_BCA::SC
Injected at: 890620 18:52 Last Calibration: 890620 16:42

Compound No: 69
Compound Name: Bis(2-Ethylhexyl)Phthalate
Scan Number: 1424
Retention Time: 32.37 min.
Quant Ion: 149.0
Area: 26686
Concentration: 17.75 ng/uL
q-value: 98



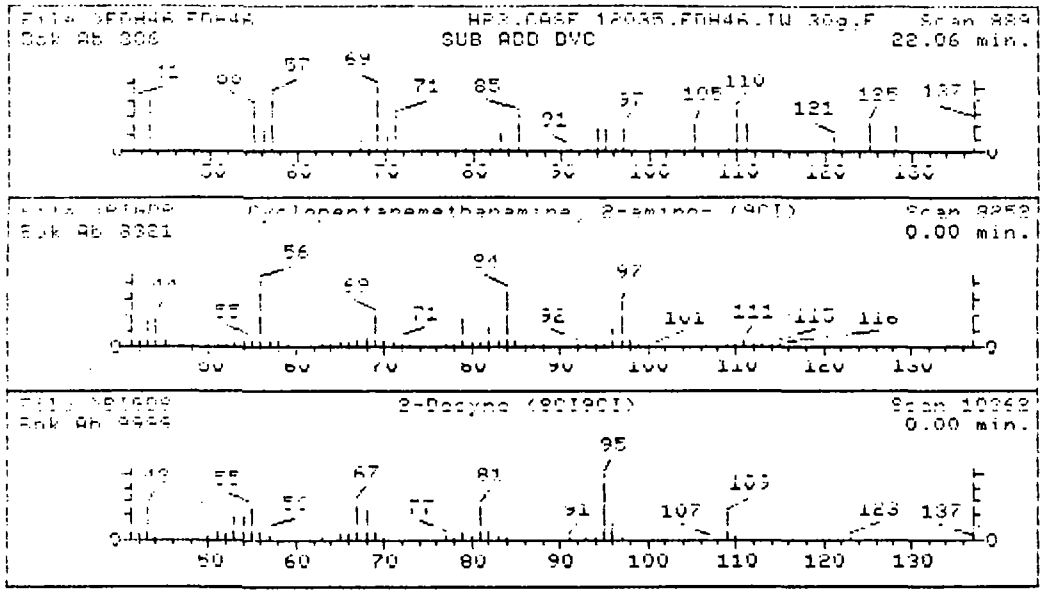
UNKNOWN B

Unknown #.1
Quant Time: 890620 19:39
Injected at: 890620 18:52
Pk Ht= 8368.00 Tentative Concentration is 910.00

1. Propanoic acid, 2-oxo- (9CI) 88 C3H4O3
2. 1-Butanamine, N-ethyl- (9CI) 101 C6H15N

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 50

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	20*	127173	11	"BIGDB	28	49	1	0	76	55		5		15



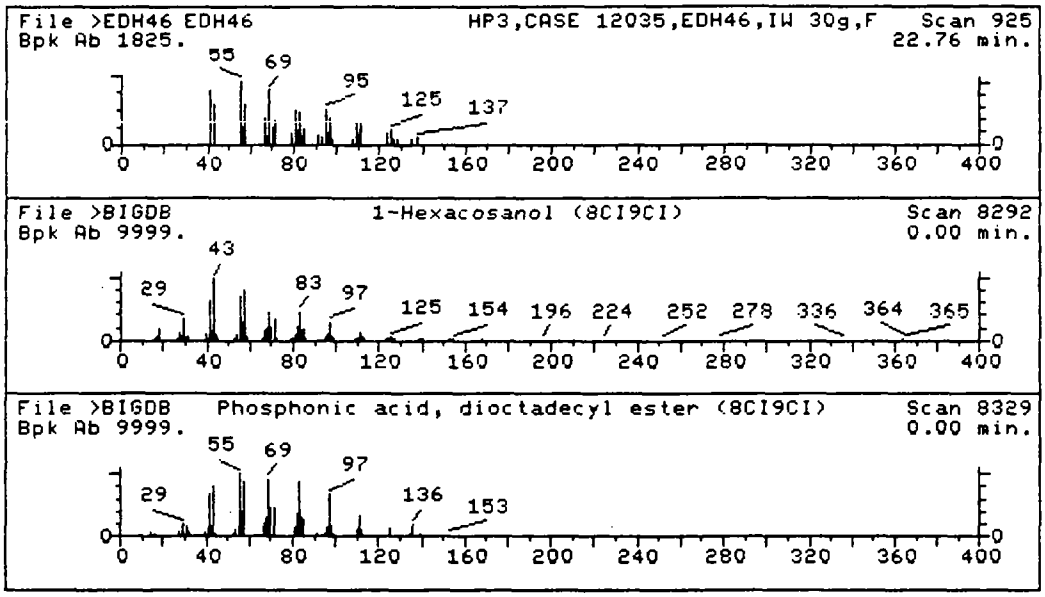
UNKNOWN

Unknown #.3
Quant Time: 890620 19:39
Injected at: 890620 18:52
Pk Ht= 4728.00 Tentative Concentration is 400.00

1. Cyclopentanemethanamine, 2-amino- (9CI) 114 C6H14N2
2. 2-Decyne (8CI9CI) 138 C10H18

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 53

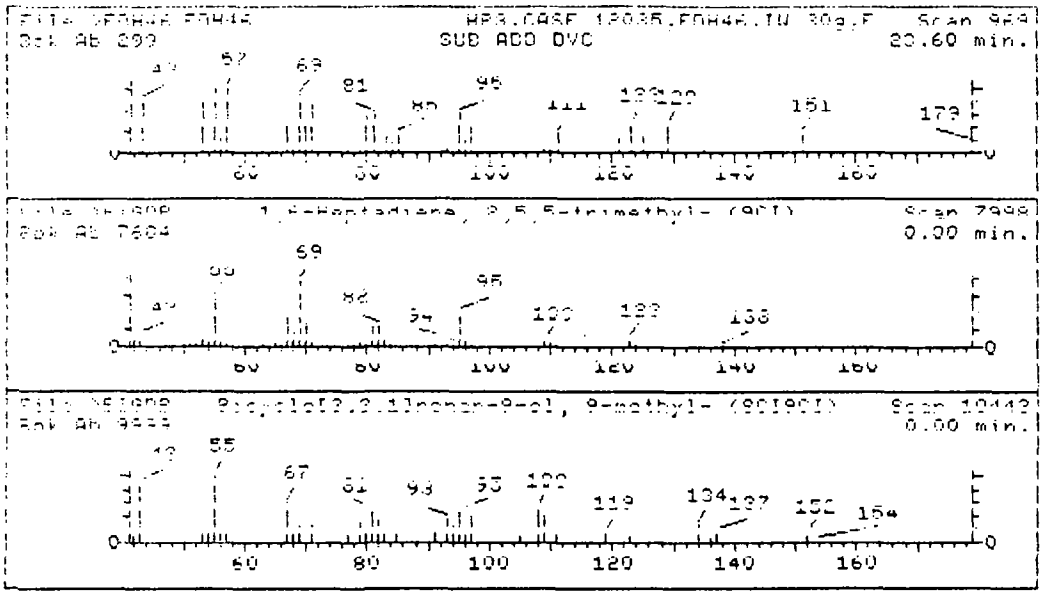
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	15*	21544025	8252	"BIGDB	31	83	3	0	82	57		3		13



UNKNOWN

Date and Time of injection: 6/20/89 18:52

Sample datafile name: >EDH46::D3



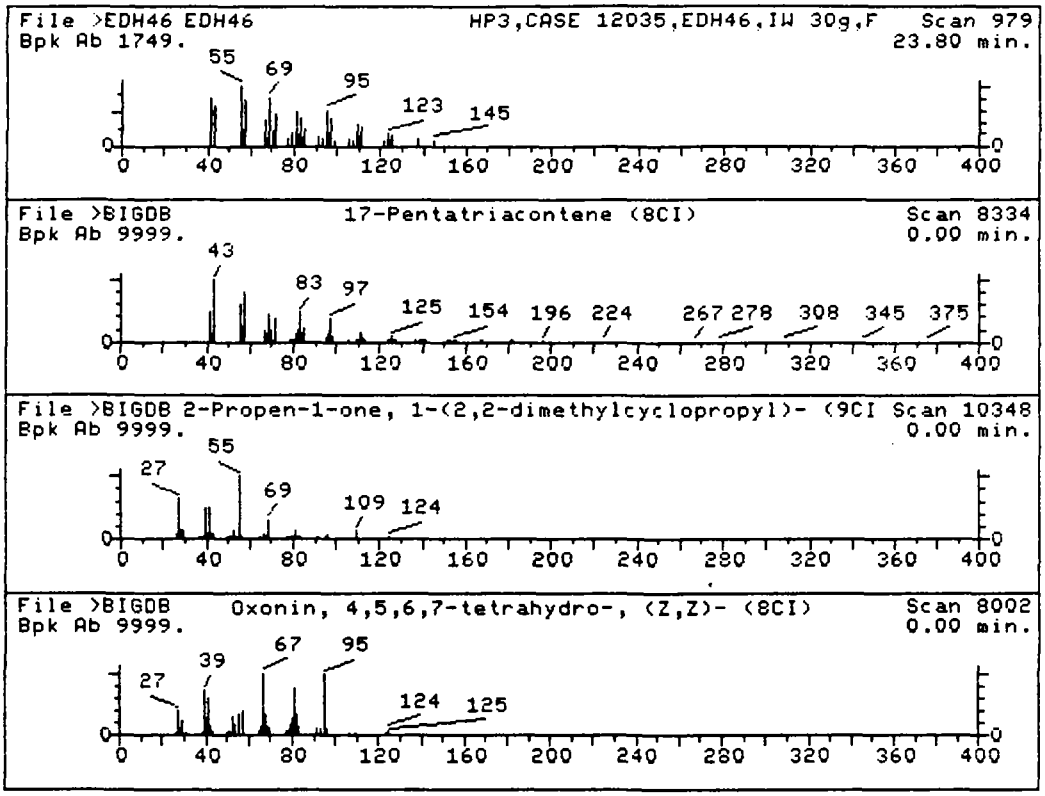
UNKNOWN

Unknown #.4
Quant Time: 890620 19:39
Injected at: 890620 18:52
Pk Ht= 6714.00 Tentative Concentration is 570.00

1. 1,6-Heptadiene, 2,5,5-trimethyl- (9CI) 138 C10H18
2. Bicyclo[3.3.1]nonan-9-ol, 9-methyl- (8CI9CI) 154 C10H18O

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 54

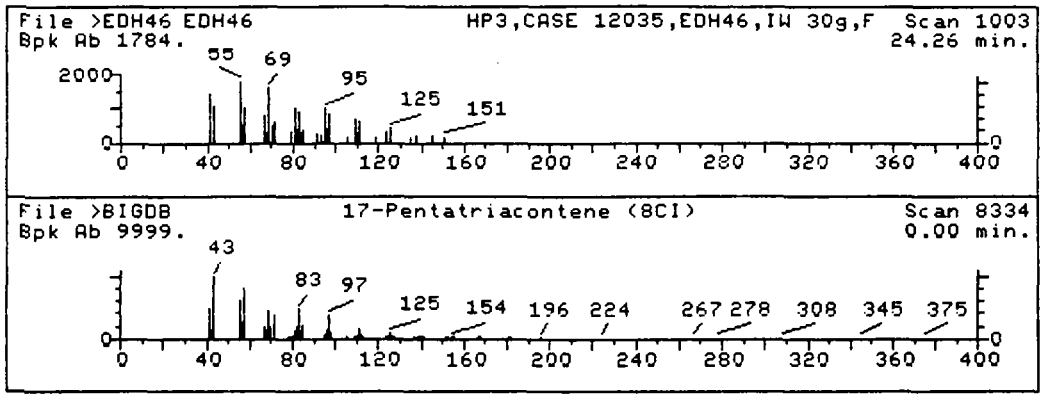
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	20*	62238282	7998	"BIGDB	47	56	1	-2	66	51		5		15
2.	20*	33832256	10443	"BIGDB	29	95	3	0	76	52		5		13



UNKNOWN

Date and Time of injection: 6/20/89 18:52

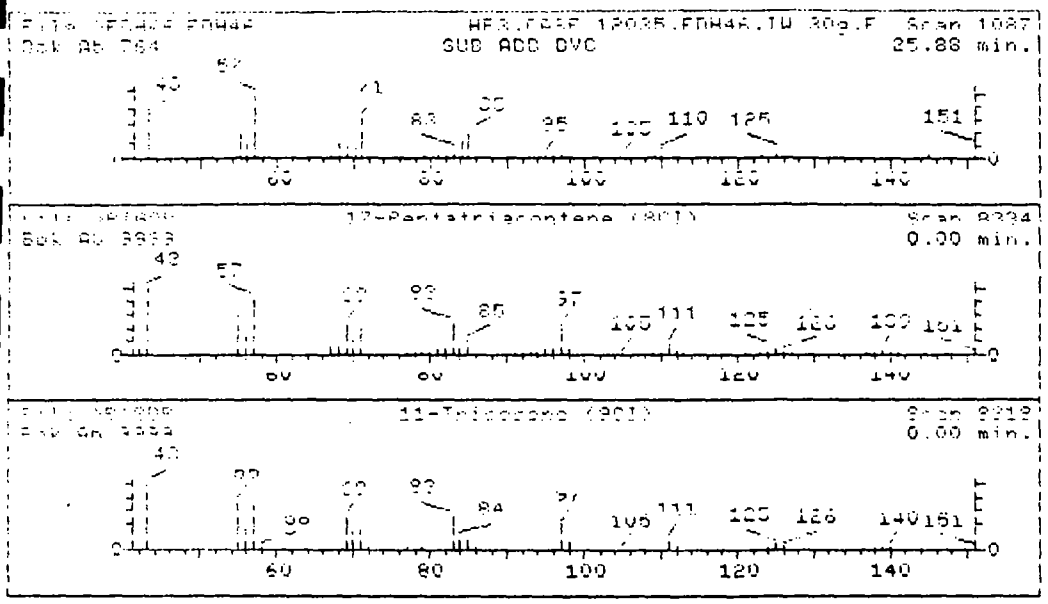
Sample datafile name: >EDH46::D3



UNKNOWN

Date and Time of injection: 6/20/89 18:52

Sample datafile name: >EDH46::D3



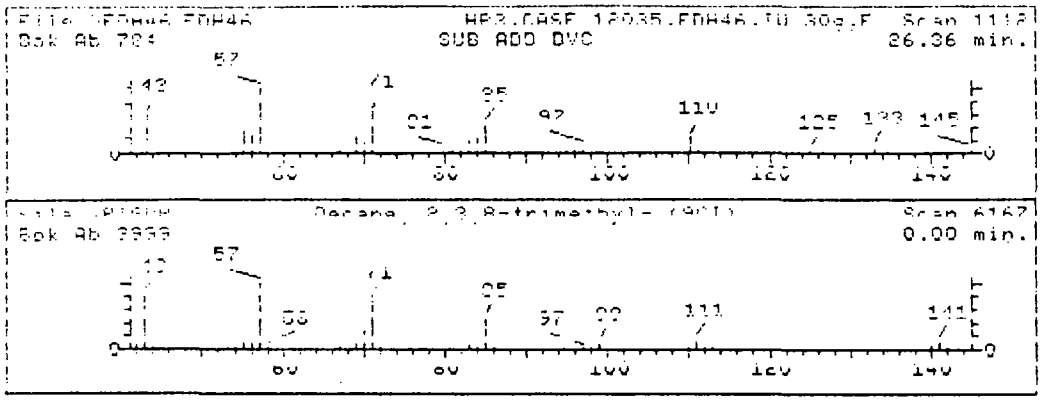
UNKNOWN HYDROCARBON

Unknown #.5
Quant Time: 890620 19:39
Injected at: 890620 18:52
Pk Ht= 4609.00 Tentative Concentration is 390.00

1. 17-Pentatriacontene (8CI) 490 C35H70
2. 11-Tricosene (9CI) 322 C23H46

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 52

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C I	R IV
1.	34	6971400	8334	"BIGDB	68	103	1	0	83	44	12	25
2.	20	52078565	8318	"BIGDB	54	98	1	0	77	53	5	13



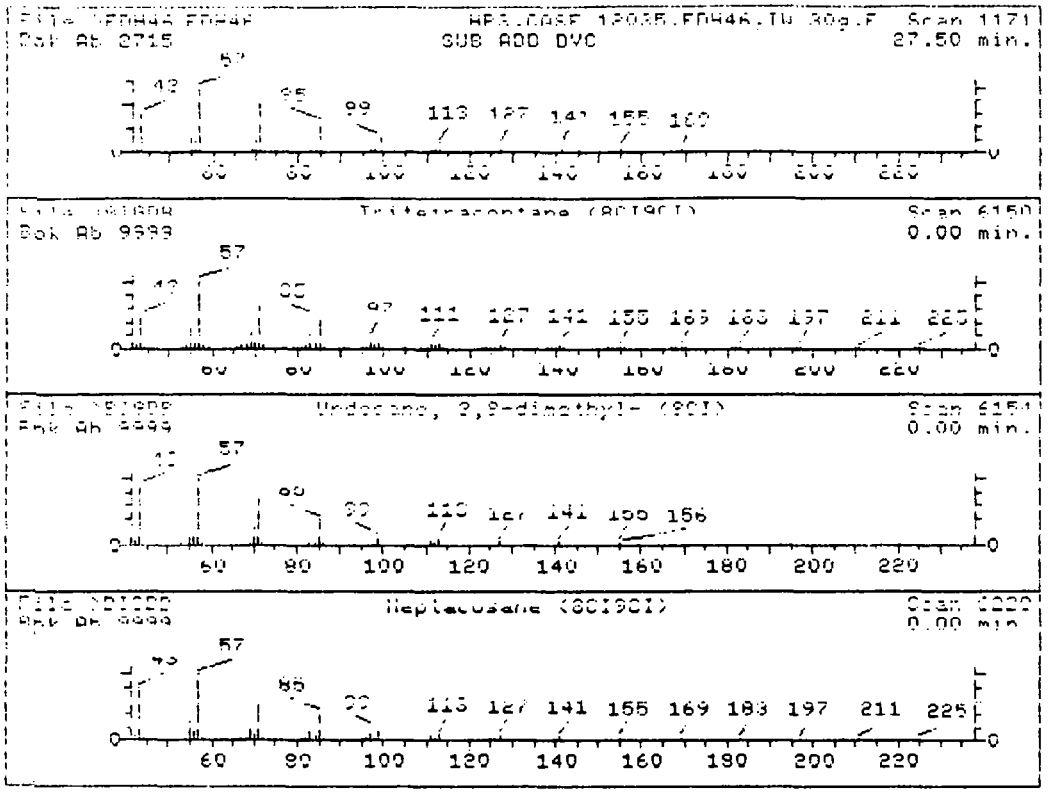
UNKNOWN HYDROCARBON

Unknown #,6
Quant Time: 890620 19:39
Injected at: 890620 18:52
Pk Ht= 4389.00 Tentative Concentration is 370.00

1. Decane, 2,3,8-trimethyl- (9CI) 184 C13H28

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 51

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	11	62238146	6167	"BIGDB	53	55	1	0	80	65		2		12



UNKNOWN HYDROCARBON β

Unknown #.7
Quant Time: 890620 19:39
Injected at: 890620 18:52
Pk Ht= 13844.00 Tentative Concentration is 1200.00

1. Tritetracontane (8CI9CI)	604	C43H88
2. Undecane, 3,8-dimethyl- (8CI)	184	C13H28
3. Heptacosane (8CI9CI)	380	C27H56
4. Docosane (8CI9CI)	310	C22H46
5. Tetratriacontane (8CI9CI)	478	C34H70
6. Pentatriacontane (8CI9CI)	492	C35H72
7. Dotriacontane (8CI9CI)	450	C32H66

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 50

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C I	R IV
1.	67	7098217	6150	"BIGDB	83	85	1	-2	82	15	34	28
2.	60	17301303	6154	"BIGDB	73	35	1	-2	76	13	30	19
3.	46	593497	6220	"BIGDB	76	77	1	0	100	31	16	29
4.	46	629970	6221	"BIGDB	76	71	1	0	76	32	16	29
5.	42	14167590	6223	"BIGDB	76	87	2	0	96	27	14	19
6.	42	630079	6147	"BIGDB	81	70	2	-1	97	24	17	13
7.	36	544854	6261	"BIGDB	70	95	1	0	98	44	12	27

BNA TIC CALCULATIONS

SAMPLE EDH46 (EDH46)

% Moist: 7 Wet: 30 g Dry: 27.9 g

FV/FVC = 2mL IV/W =

$$\text{TIC Multiplier} = \frac{40\ \mu g}{mL} \times \frac{FV\ (mL)}{IV/W\ (kg\ or\ L)} \cong 2867.38$$

$$\boxed{\text{TIC Amount} = \frac{\text{ht TIC}}{\text{ht IS}} \times \text{Multiplier}}$$

ht IS 1 _____ 3 _____ 5 _____
2 _____ 4 62 6 _____

	SCAN	IS	Height	Amount
1	11			910
2	889			400
3	925	62	7	320
4	969			570
5	979	62	9	420
6	1003	↓	7	320
7	1087			390
8	1112			370
9	1171			1200
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

NOTE : _____

Ms data file header from : >EDH46

Sample: EDH46 Operator: JOHN SUPER GRP. 6/20/89 18:52
Misc : HP3,CASE 12035,EDH46,IW 30g,FVC 2ml,06/06/89,pH 7,%M7,BTL#10
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: RBNA Tuning file: MTDH01 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 280 Transfer line temp. : 0

Chromatographic temperatures :	35.	305.	0.	0.	0.
Chromatographic times, min. :	4.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	1.0	0.0

>EDH46 EDH46 HP3,CASE 12035,EDH46,IW 30g,FVC 2ml,06/0

35.01 475.0 CLP ADC TIC
Upslope: .20 Pkht Reject: 2727. Max Peaks: 7 Bunching: 1
Dnslope: 0.00 Results File IEDH46 Sorted by Pkht/Pkht INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	27.50	1168	1171	1174	13844	114281	41333	100.00	30.336
2	5.17	9	11	16	8368	43523	23505	56.87	17.251
3	23.60	968	969	974	6714	113354	14661	35.47	10.760
4	22.06	886	889	892	4728	107767	17557	42.48	12.886
5	25.88	1084	1087	1089	4609	90804	14667	35.48	10.765
6	26.36	1110	1112	1116	4389	98201	16682	40.36	12.243
~~7~~	~~19.73~~	~~766~~	~~768~~	~~771~~	~~2820~~	~~61249~~	~~7847~~	~~18.98~~	~~5.759~~

Sum of corrected areas: 136252.

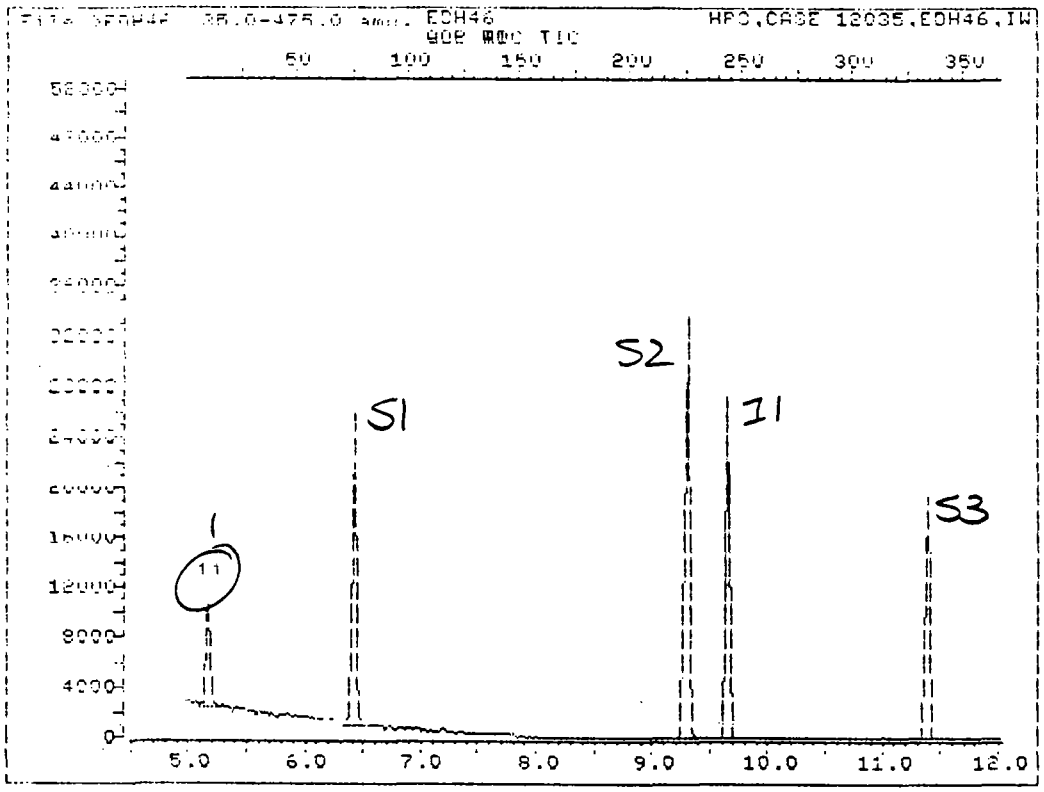
Summary of Unknowns PBM Library Search and Quantitation

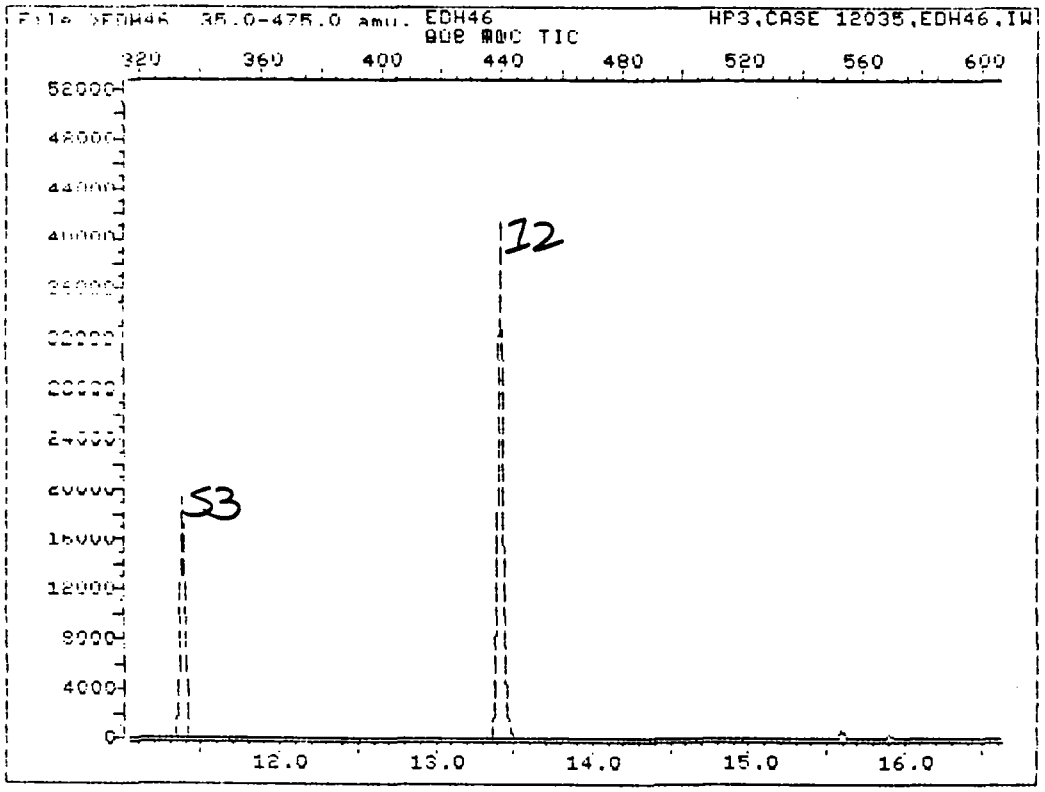
Standard	Concentration	Peak Ht.	Retention Time	Unknown Window
1	40.0	27271.	9.65	4.98 - 11.54
2	40.0	41400.	13.42	11.54 - 16.12
3	40.0	40392.	18.83	16.12 - 21.08
4	40.0	35095.	23.33	21.08 - 27.44
5	40.0	34252.	31.54	27.44 - 33.58
6	40.0	32543.	35.62	33.58 - 46.02

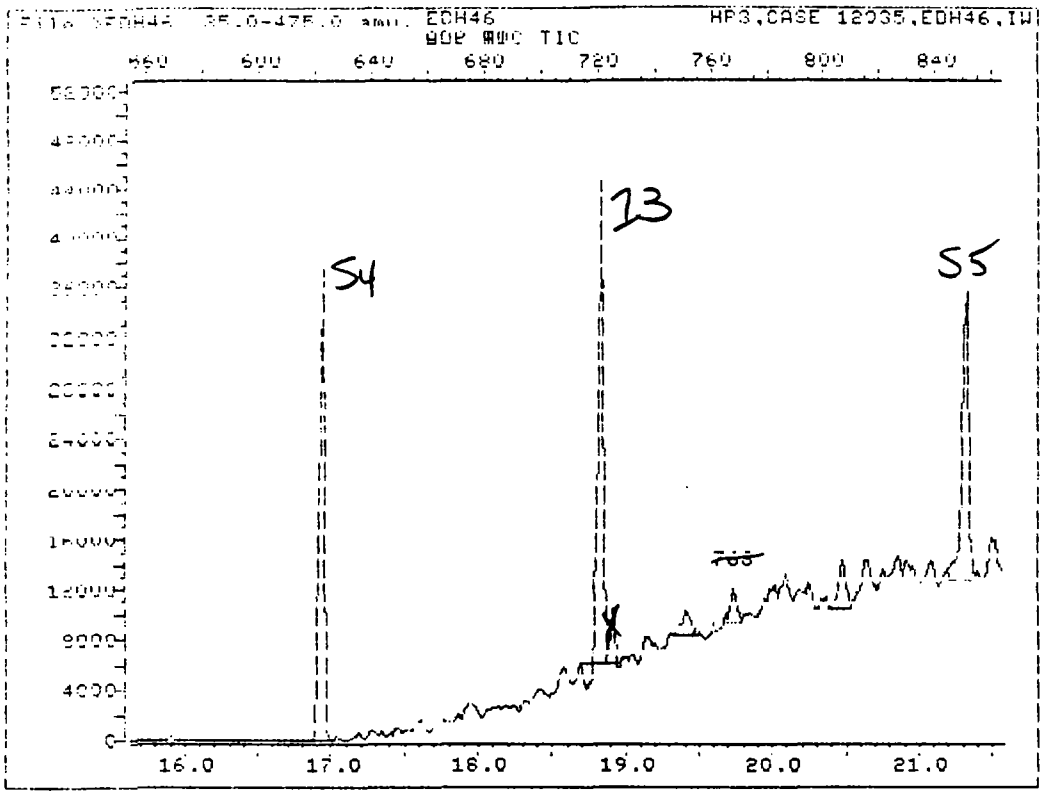
Dilution Factor = ********

$$\text{Unknown Concentration} = \frac{\text{Conc Int Std}}{\text{Pk.Ht.Int.Std.}} * \text{Dil Factor} * \text{Pk.Ht.Unknown}$$

11:27 AM TUE., 27 JUNE, 1989


File DFDH46 35.0-475.0 amu. EDH46
HP3,CASE 12035,EDH46,IW
QUE MOC TIC
50
100
150
200
250
300
350
52000
48000
44000
40000
36000
32000
28000
24000
20000
16000
12000
8000
4000
0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
S1
S2
I1
S3
1
11


File DFDH46 35.0-475.0 amu. EDH46
HP3,CASE 12035,EDH46,IW
QUE MOC TIC
320
360
400
440
480
520
560
600
52000
48000
44000
40000
36000
32000
28000
24000
20000
16000
12000
8000
4000
0
12.0
13.0
14.0
15.0
16.0
S3
I2


EDH46
HP3,CASE 12035,EDH46,IW
TIC
560
600
640
680
720
760
800
840
54
13
55
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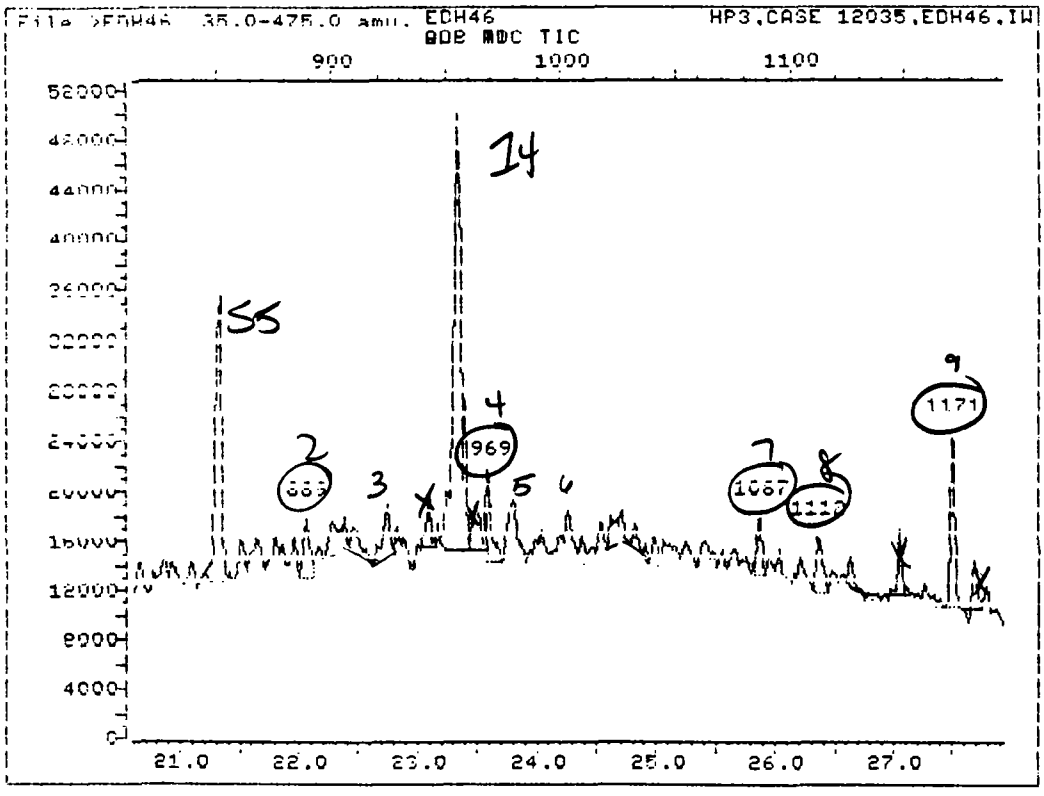
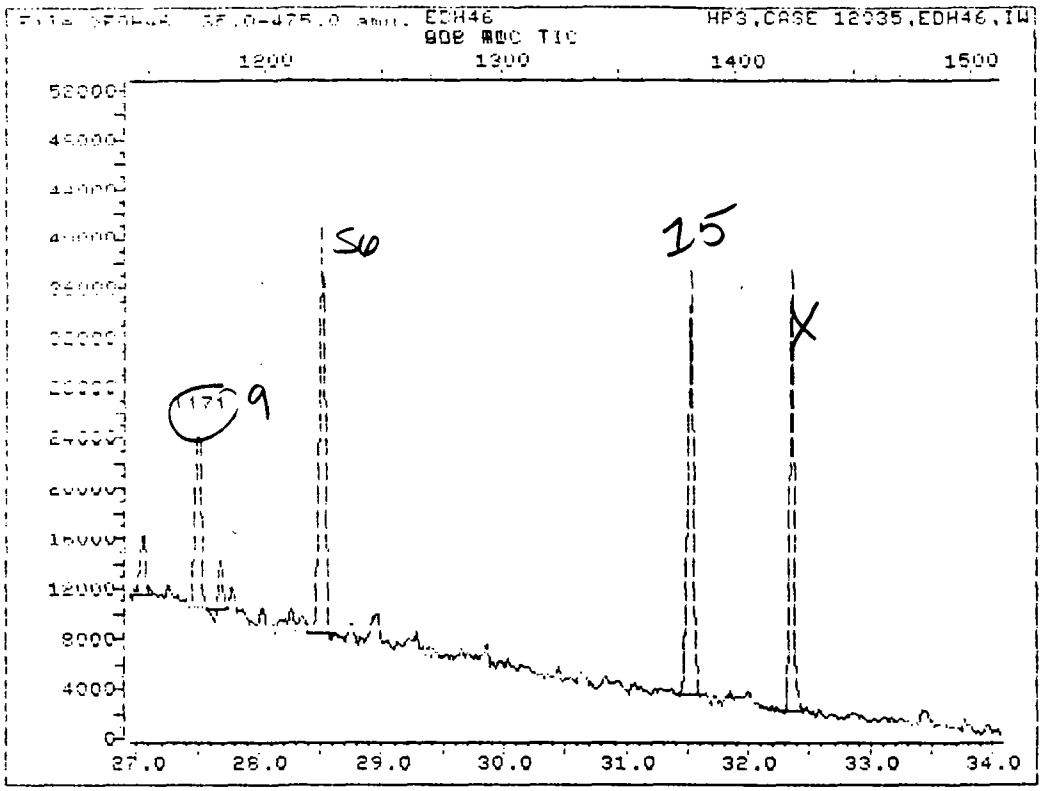
18.0
19.0
20.0
21.0


EDH46
HP3,CASE 12035,EDH46,IW
TIC
900
1000
1100
55
14
2
3
4
1969
5
6
7
1067
8
9
1171
21.0
22.0
23.0
24.0
25.0
26.0
27.0


File >EDH46 35.0-475.0 amu. EDH46
HP3,CASE 12035,EDH46,IW
908 MOC TIC
1200
1300
1400
1500
52000
48000
44000
40000
36000
32000
28000
24000
20000
16000
12000
8000
4000
0
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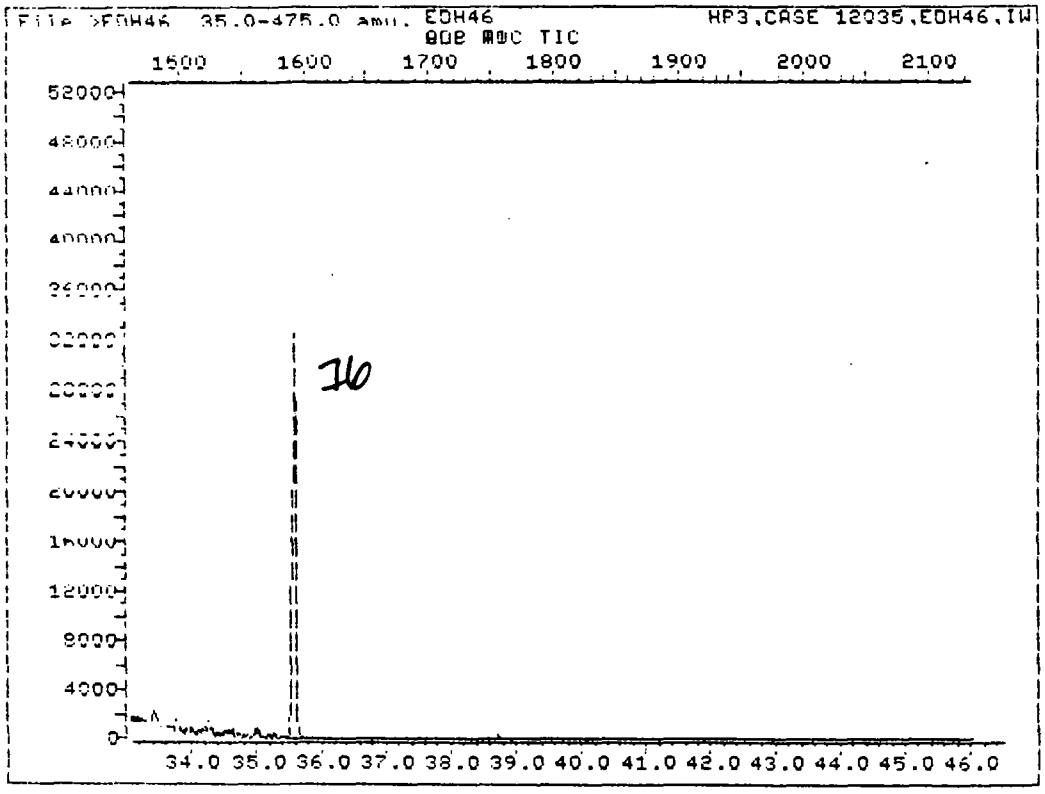
29.0
30.0
31.0
32.0
33.0
34.0
S6
15
X
171
9


File >EDH46 35.0-475.0 amu. EDH46
HP3,CASE 12035,EDH46,IW
908 MOC TIC
1500
1600
1700
1800
1900
2000
2100
52000
48000
44000
40000
36000
32000
28000
24000
20000
16000
12000
8000
4000
0
34.0
35.0
36.0
37.0
38.0
39.0
40.0
41.0
42.0
43.0
44.0
45.0
46.0
16

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH47

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH47

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EDH47

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 5 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/89

GPC Cleanup: (Y/N) Y pH: 9.5 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	690	U
111-44-4	bis(2-Chloroethyl)ether	690	U
95-57-8	2-Chlorophenol	690	U
541-73-1	1,3-Dichlorobenzene	690	U
106-46-7	1,4-Dichlorobenzene	690	U
100-51-6	Benzyl alcohol	690	U
95-50-1	1,2-Dichlorobenzene	690	U
95-48-7	2-Methylphenol	690	U
108-60-1	bis(2-Chloroisopropyl)ether	690	U
106-44-5	4-Methylphenol	690	U
621-64-7	N-Nitroso-di-n-propylamine	690	U
67-72-1	Hexachloroethane	690	U
98-95-3	Nitrobenzene	690	U
78-59-1	Isophorone	690	U
88-75-5	2-Nitrophenol	690	U
105-67-9	2,4-Dimethylphenol	690	U
65-85-0	Benzoic acid	3400	U
111-91-1	bis(2-Chloroethoxy)methane	690	U
120-83-2	2,4-Dichlorophenol	690	U
120-82-1	1,2,4-Trichlorobenzene	690	U
91-20-3	Naphthalene	690	U
106-47-8	4-Chloroaniline	690	U
87-68-3	Hexachlorobutadiene	690	U
59-50-7	4-Chloro-3-methylphenol	690	U
91-57-6	2-Methylnaphthalene	690	U
77-47-4	Hexachlorocyclopentadiene	690	U
88-06-2	2,4,6-Trichlorophenol	690	U
95-95-4	2,4,5-Trichlorophenol	3400	U
91-58-7	2-Chloronaphthalene	690	U
88-74-4	2-Nitroaniline	3400	U
131-11-3	Dimethylphthalate	690	U
208-96-8	Acenaphthylene	690	U
606-20-2	2,6-Dinitrotoluene	690	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH47

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH47

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EDH47

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 5 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/89

GPC Cleanup: (Y/N) Y pH: 9.5 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3400	U
83-32-9	Acenapthene	690	U
51-28-5	2,4-Dinitrophenol	3400	U
100-02-7	4-Nitrophenol	3400	U
132-64-9	Dibenzofuran	690	U
121-14-2	2,4-Dinitrotoluene	690	U
84-66-2	Diethylphthalate	690	U
7005-72-3	4-Chlorophenyl-phenylether	690	U
86-73-7	Fluorene	690	U
100-01-6	4-Nitroaniline	3400	U
534-52-1	4,6-Dinitro-2-methylphenol	3400	U
86-30-6	N-Nitrosodiphenylamine (1)	690	U
101-55-3	4-Bromophenyl-phenylether	690	U
118-74-1	Hexachlorobenzene	690	U
87-86-5	Pentachlorophenol	3400	U
85-01-8	Phenanthrene	690	U
120-12-7	Anthracene	690	U
84-74-2	Di-n-butylphthalate	690	U
206-44-0	Fluoranthene	690	U
129-00-0	Pyrene	690	U
85-68-7	Butylbenzylphthalate	690	U
91-94-1	3,3'-Dichlorobenzidine	1400	U
56-55-3	Benzo(a)anthracene	690	U
218-01-9	Chrysene	690	U
117-81-7	bis(2-Ethylhexyl)phthalate	780	~~B~~ U 10/11/89
117-84-0	Di-n-octylphthalate	690	U
205-99-2	Benzo(b)fluoranthene	690	U
207-08-9	Benzo(k)fluoranthene	690	U
50-32-8	Benzo(a)pyrene	690	U
193-39-5	Indeno(1,2,3-cd)pyrene	690	U
53-70-3	Dibenz(a,h)anthracene	690	U
191-24-2	Benzo(g,h,i)perylene	690	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDH47

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH47

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EDH47

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 5 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/89

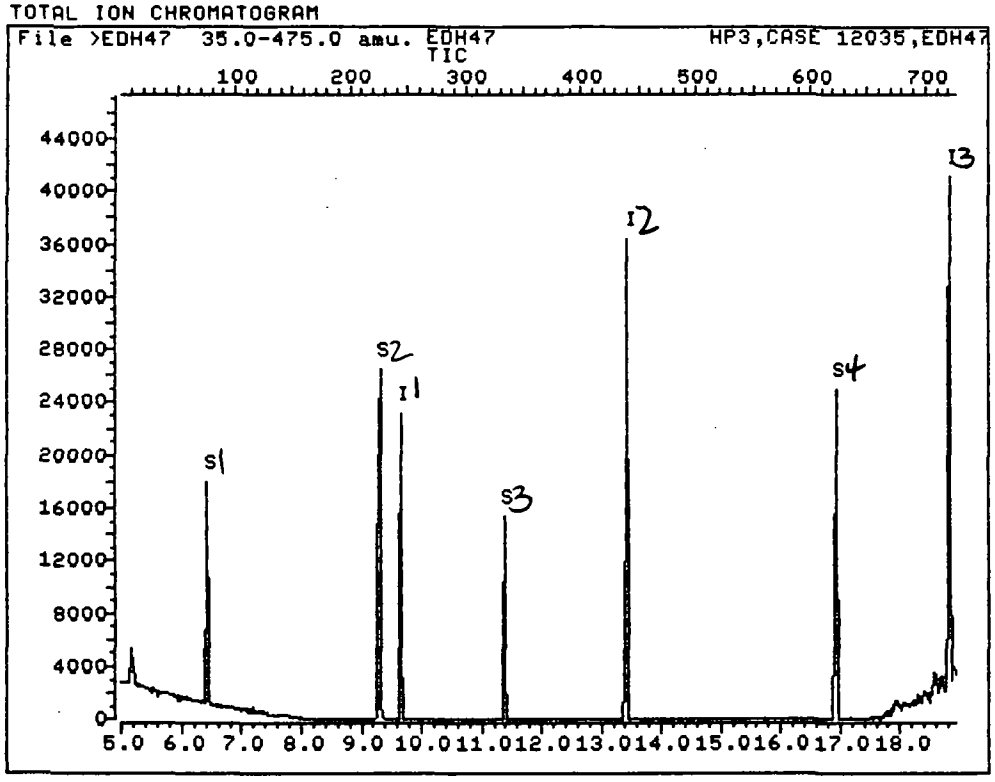
GPC Cleanup : (Y/N) Y pH: 9.5 Dilution Factor: 1.000

Number TICs found: 6

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	5.17	370	JB
2.		UNKNOWN	23.58	500	J
3.		UNKNOWN HYDROCARBON	23.78	280	J
4.		UNKNOWN HYDROCARBON	25.85	310	J
5.		UNKNOWN HYDROCARBON	26.35	290	J
6.		UNKNOWN HYDROCARBON	27.49	940	JB
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

TOTAL ION CHROMATOGRAM



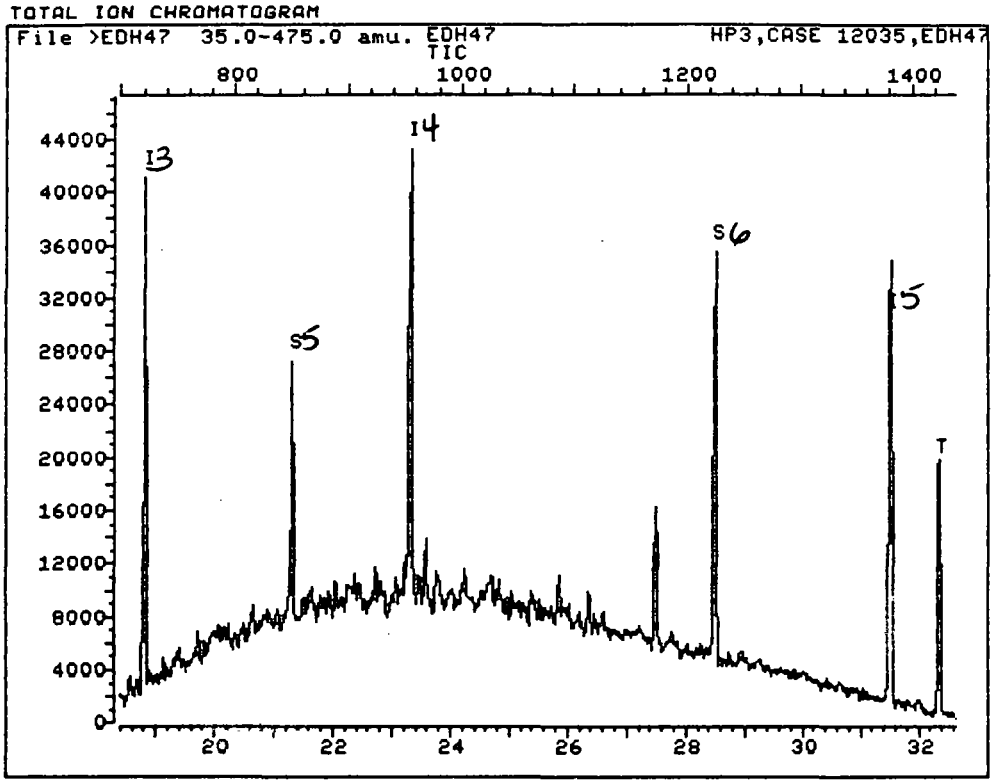
Data File: >EDH47::D3 Quant Output File: ^EDH47::SC
Name: EDH47
Misc: HP3,CASE 12035,EDH47,IW 30g,FVC 2ml,06/06/89,pH10,%M10BTL#11

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

Operator ID: JOHN
Quant Time: 890620 20:38
Injected at: 890620 19:51

TIC page 1 of 3

TOTAL ION CHROMATOGRAM



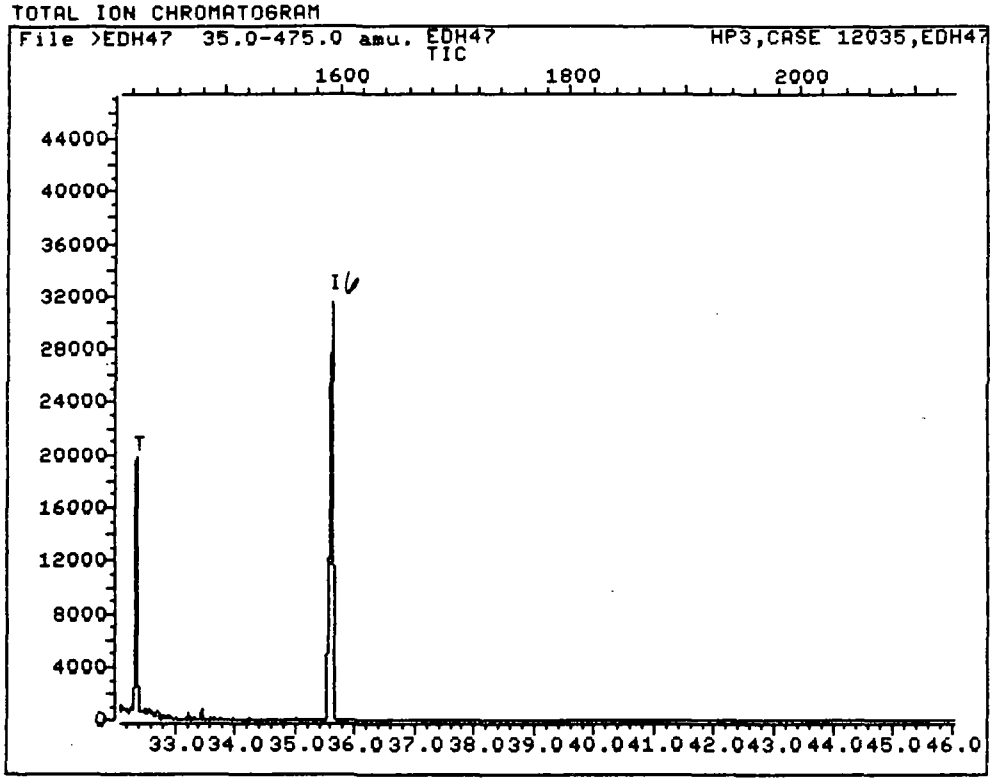
Data File: >EDH47::D3 Quant Output File: ^EDH47::SC
Name: EDH47
Misc: HP3,CASE 12035,EDH47,IW 30g,FVC 2ml,06/06/89,pH10,%M10BTL#11

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

Operator ID: JOHN
Quant Time: 890620 20:38
Injected at: 890620 19:51

TIC page 2 of 3

TOTAL ION CHROMATOGRAM



Data File: >EDH47::D3 Quant Output File: ^EDH47::SC
Name: EDH47
Misc: HP3,CASE 12035,EDH47,IW 30g,FVC 2ml,06/06/89,pH10,%M10BTL#11

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

Operator ID: JOHN
Quant Time: 890620 20:38
Injected at: 890620 19:51

TIC page 3 of 3

QUANT REPORT

% Moist.: 4.67 Wet: 30 g Dry: 28.599 g

Operator ID: JOHN Quant Rev: 6 Quant Time: 890620 20:38
Output File: ^EDH47::SC Injected at: 890620 19:51
Data File: >EDH47::D3 Dilution Factor: 1.00000
Name: EDH47
Misc: HP3,CASE 12035,EDH47,IW 30g,FVC 2ml,06/06/89,pH10,%M10BTL#11

ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

% Sur Rec = Amtx FV x100 / Amt spiked

A = 200 BN = 100

Cmpd Fd = Amt (ppm) X FV/IW

2

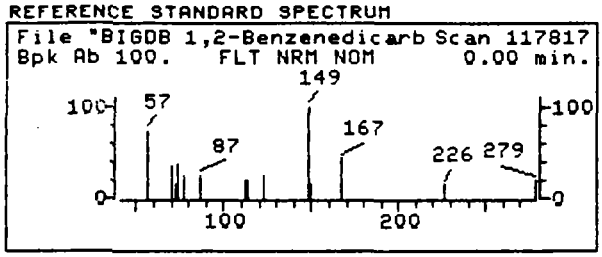
28.599

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.65	152.0	8093	40.00	ng/uL	99
2)	2-Fluorophenol	6.42	112.0	12270	56.17	ng/uL	93
3)	Phenol-d5	9.31	99.0	27343	70.63	ng/uL	87
4)	Phenol	0.00	94.0	0	0.00	ng/uL	
5)	bis(-2-Chloroethyl)Ether	0.00	93.0	0	0.00	ng/uL	
6)	2-Chlorophenol	0.00	128.0	0	0.00	ng/uL	
7)	1,3-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
8)	1,4-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
9)	Benzyl Alcohol	0.00	108.0	0	0.00	ng/uL	
10)	1,2-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
11)	2-Methylphenol	0.00	108.0	0	0.00	ng/uL	
12)	bis(2-Chloroisopropyl)ether	0.00	45.0	0	0.00	ng/uL	
13)	4-Methylphenol	0.00	108.0	0	0.00	ng/uL	
14)	N-Nitroso-Di-n-propylamine	0.00	70.0	0	0.00	ng/uL	
15)	Hexachloroethane	0.00	117.0	0	0.00	ng/uL	
16)	*d8-Naphthalene	13.42	136.0	37470	40.00	ng/uL	88
17)	Nitrobenzene-d5	11.38	82.0	10782	27.12	ng/uL	79
18)	Nitrobenzene	0.00	77.0	0	0.00	ng/uL	
19)	Isophorone	0.00	82.0	0	0.00	ng/uL	
20)	2-Nitrophenol	0.00	139.0	0	0.00	ng/uL	
21)	2,4-Dimethylphenol	0.00	107.0	0	0.00	ng/uL	
22)	Benzoic Acid	0.00	105.0	0	0.00	ng/uL	
23)	bis(-2-Chloroethoxy)Methane	0.00	93.0	0	0.00	ng/uL	
24)	2,4-Dichlorophenol	0.00	162.0	0	0.00	ng/uL	
25)	1,2,4-Trichlorobenzene	0.00	180.0	0	0.00	ng/uL	
26)	Naphthalene	0.00	128.0	0	0.00	ng/uL	
27)	4-Chloroaniline	0.00	127.0	0	0.00	ng/uL	
28)	Hexachlorobutadiene	0.00	225.0	0	0.00	ng/uL	
29)	4-Chloro-3-methylphenol	0.00	107.0	0	0.00	ng/uL	
30)	2-Methylnaphthalene	0.00	142.0	0	0.00	ng/uL	
31)	*d10-Acenaphthene	18.83	164.0	20590	40.00	ng/uL	96
32)	Hexachlorocyclopentadiene	0.00	237.0	0	0.00	ng/uL	
33)	2,4,6-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
34)	2,4,5-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
35)	2-Chloronaphthalene	0.00	162.0	0	0.00	ng/uL	
36)	2-Fluorobiphenyl	16.92	172.0	22439	39.17	ng/uL	94
37)	2-Nitroaniline	0.00	65.0	0	0.00	ng/uL	
38)	Dimethyl Phthalate	0.00	163.0	0	0.00	ng/uL	
39)	Acenaphthylene	0.00	152.0	0	0.00	ng/uL	
40)	2,6-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
41)	3-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
42)	Acenaphthene	0.00	153.0	0	0.00	ng/uL	
43)	2,4-Dinitrophenol	0.00	184.0	0	0.00	ng/uL	
44)	4-Nitrophenol	0.00	109.0	0	0.00	ng/uL	
45)	Dibenzofuran	0.00	168.0	0	0.00	ng/uL	
46)	2,4-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
47)	Diethylphthalate	0.00	149.0	0	0.00	ng/uL	
48)	4-Chlorophenyl-phenylether	0.00	204.0	0	0.00	ng/uL	
49)	Fluorene	0.00	166.0	0	0.00	ng/uL	
50)	4-Nitroaniline	0.00	138.0	0	0.00	ng/uL	

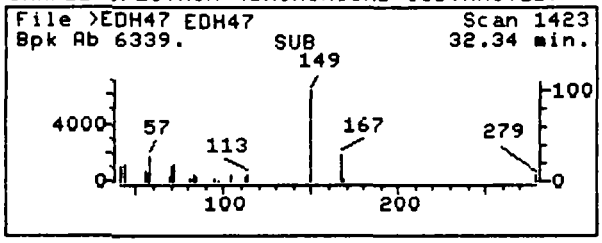
50)	4-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
51)	2,4,6-Tribromophenol	21.31	330.0	4054	73.23	ng/uL	96
52)	*d10-Phenanthrene	23.33	188.0	36691	40.00	ng/uL	99
53)	4,6-Dinitro-2-methylphenol	0.00	198.0	0	0.00	ng/uL	
54)	N-Nitrosodiphenylamine	0.00	169.0	0	0.00	ng/uL	
55)	4-Bromophenyl-phenylether	0.00	248.0	0	0.00	ng/uL	
56)	Hexachlorobenzene	0.00	284.0	0	0.00	ng/uL	
57)	Pentachlorophenol	0.00	266.0	0	0.00	ng/uL	
58)	Phenanthrene	0.00	178.0	0	0.00	ng/uL	
59)	Anthracene	0.00	178.0	0	0.00	ng/uL	
60)	Di-n-Butylphthalate	0.00	149.0	0	0.00	ng/uL	
61)	Fluoranthene	0.00	202.0	0	0.00	ng/uL	
62)	*d12-Chrysene	31.51	240.0	35585	40.00	ng/uL	89
63)	Pyrene	0.00	202.0	0	0.00	ng/uL	
64)	Terphenyl-d14	28.51	244.0	27929	30.32	ng/uL	97
65)	Butylbenzylphthalate	0.00	149.0	0	0.00	ng/uL	
66)	3,3'-Dichlorobenzidine	0.00	252.0	0	0.00	ng/uL	
67)	Benzo(a)Anthracene	0.00	228.0	0	0.00	ng/uL	
68)	Chrysene	0.00	228.0	0	0.00	ng/uL	
69)	Bis(2-Ethylhexyl)Phthalate	32.34	149.0	15709	11.11	ng/uL	96
70)	*d12-Perylene	35.61	264.0	38172	40.00	ng/uL	94
71)	Di-n-octyl phthalate	0.00	149.0	0	0.00	ng/uL	
72)	Benzo(b)fluoranthene	0.00	252.0	0	0.00	ng/uL	
73)	Benzo(k)Fluoranthene	0.00	252.0	0	0.00	ng/uL	
74)	Benzo(a)Pyrene	0.00	252.0	0	0.00	ng/uL	
75)	Indeno(1,2,3-cd)Pyrene	0.00	276.0	0	0.00	ng/uL	
76)	Dibenz(a,h)Anthracene	0.00	278.0	0	0.00	ng/uL	
77)	Benzo(g,h,i)Perylene	0.00	276.0	0	0.00	ng/uL	

* Compound is ISTD

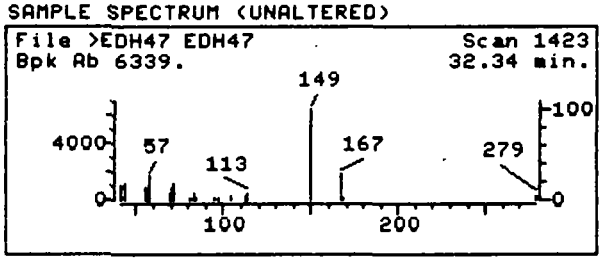
REFERENCE STANDARD SPECTRUM

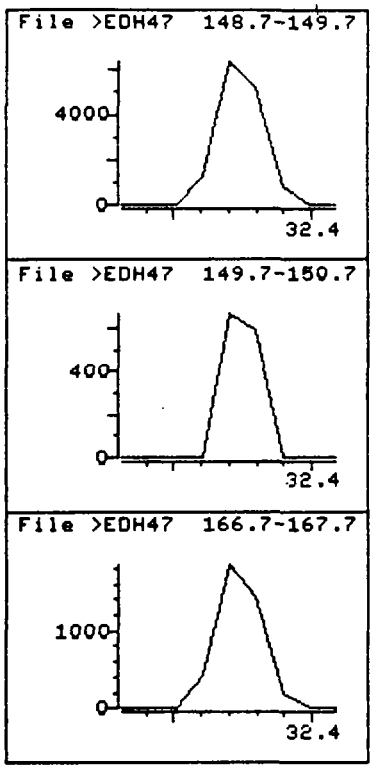


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



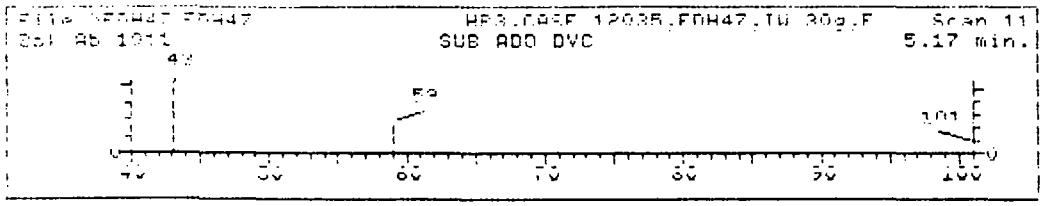
SAMPLE SPECTRUM (UNALTERED)





Data File: >EDH47::D3 Quant Output File: ^EDH47::SC
Name: EDH47
Misc: HP3,CASE 12035,EDH47,IW 30g,FVC 2ml,06/06/89,pH10,%M10BTL#11
Quant Time: 890620 20:38 Quant ID File: ID_BCA::SC
Injected at: 890620 19:51 Last Calibration: 890620 16:42

Compound No: 69
Compound Name: Bis(2-Ethylhexyl)Phthalate
Scan Number: 1423
Retention Time: 32.34 min.
Quant Ion: 149.0
Area: 15709
Concentration: 11.11 ng/uL
q-value: 96

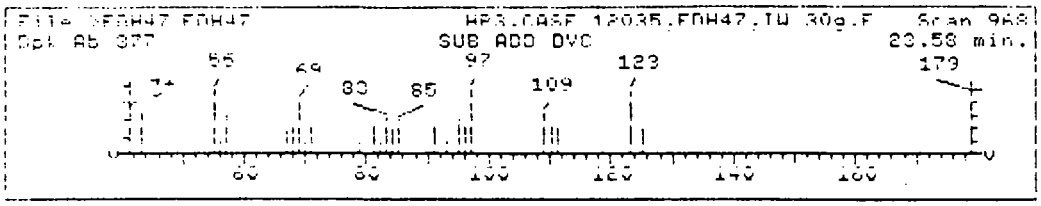


UNKNOWN B

Unknown #.1
Quant Time: 890620 20:38
Injected at: 890620 19:51
Pk Ht= 2878.00 Tentative Concentration is 370.00

Sample file: ARTIFI Spectrum #: -1

No data base entries were retrieved.

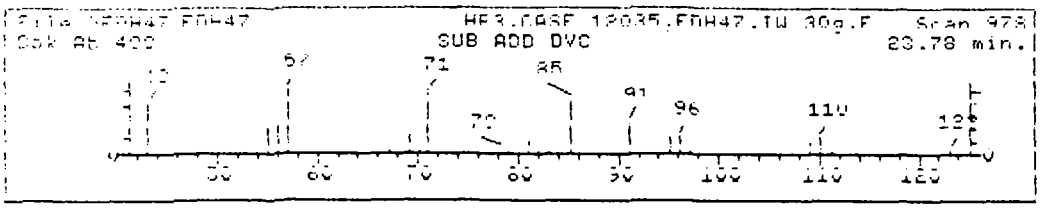


UNKNOWN

Unknown #.6
Quant Time: 890620 20:38
Injected at: 890620 19:51
Pk Ht= 5706.00 Tentative Concentration is 500.00

Sample file: ARTIFI Spectrum #: -1

No data base entries were retrieved.

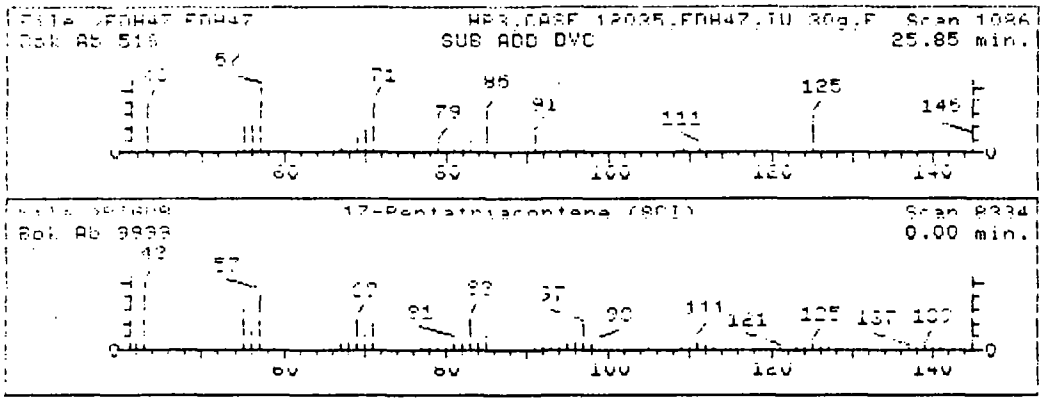


UNKNOWN HYDROCARBON

Unknown #.7
Quant Time: 890620 20:38
Injected at: 890620 19:51
Pk Ht= 3171.00 Tentative Concentration is 280.00

Sample file: ARTIFI Spectrum #: -1

No data base entries were retrieved.



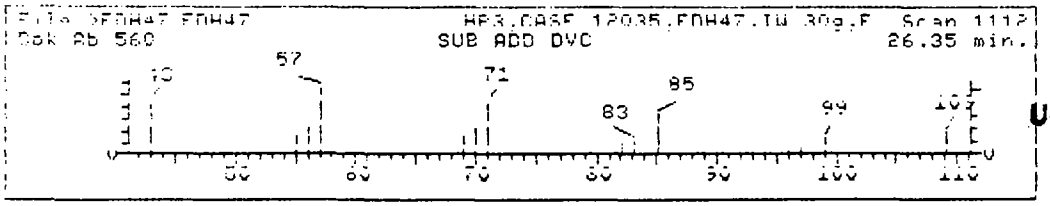
UNKNOWN HYDROCARBON

. Unknown #.9
Quant Time: 890620 20:38
Injected at: 890620 19:51
Pk Ht= 3578.00 Tentative Concentration is 310.00

1. 17-Pentatriacontene (SCI) 490 C35H70

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 51

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	26	6971400	8334	"BIGDB	60	111	2	0	80	39	10		12	

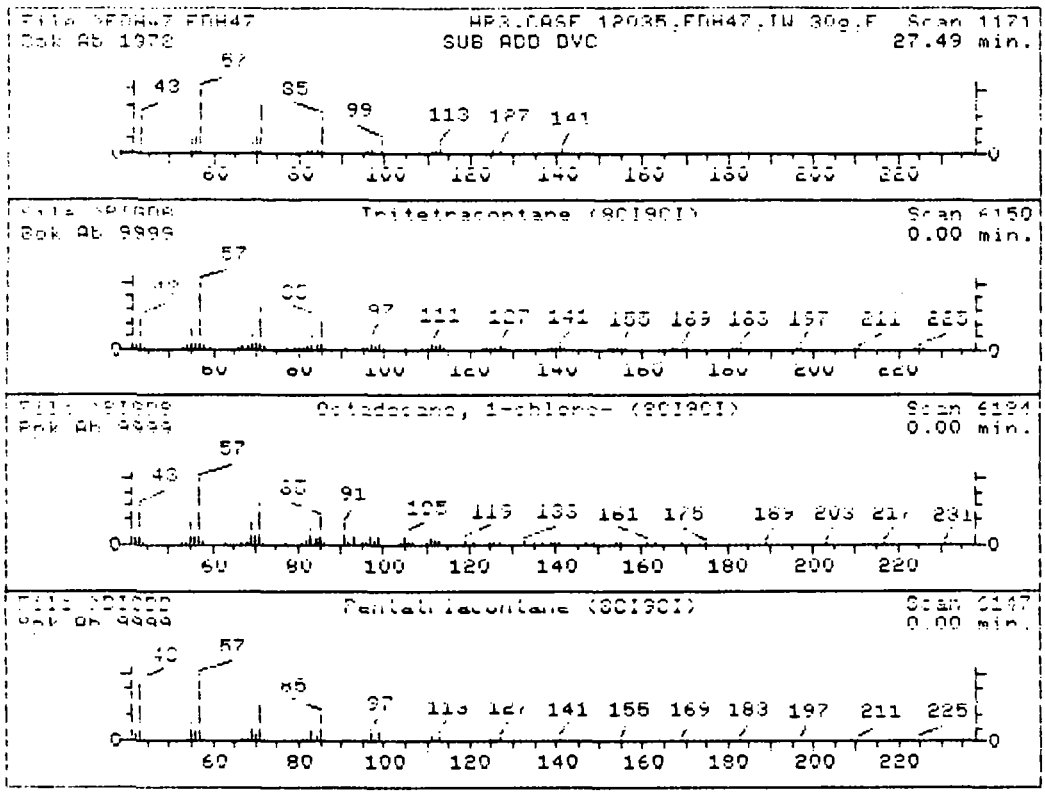


UNKNOWN HYDROCARBON

. Unknown #.10
Quant Time: 890620 20:38
Injected at: 890620 19:51
Pk Ht= 3367.00 Tentative Concentration is 290.00

Sample file: ARTIFI Spectrum #: -1

No data base entries were retrieved.



UNKNOWN HYDROCARBON

B

Unknown #,11
Quant Time: 890620 20:38
Injected at: 890620 19:51
Pk Ht= 10816.00 Tentative Concentration is 940.00

1.	Tritetracontane (8CI9CI)	604	C43H88
2.	Octadecane, 1-chloro- (8CI9CI)	288	C18H37Cl
3.	Pentatriacontane (8CI9CI)	492	C35H72
4.	Tetratetracontane (8CI9CI)	618	C44H90
5.	Tetratriacontane (8CI9CI)	478	C34H70
6.	Heptacosane (8CI9CI)	380	C27H56
7.	Hexatriacontane (8CI9CI)	506	C36H74

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 50

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	67	7098217	6150	"BIGDB	71	97	1	0	100	11	34	27
2.	58	3386332	6184	"BIGDB	66	74	1	0	100	20	25	23
3.	52	630079	6147	"BIGDB	62	89	2	0	100	20	20	13
4.	52	7098228	8906	"BIGDB	62	94	2	0	121	20	20	13
5.	52	14167590	6223	"BIGDB	65	98	2	0	100	20	20	14
6.	52	593497	6220	"BIGDB	58	95	1	0	100	20	20	16
7.	52	630068	6193	"BIGDB	62	100	2	0	100	16	20	13

MS data file header from : >EDH47

Sample: EDH47 Operator: JOHN SUPER GRP. 6/20/89 19:51
Misc : HP3,CASE 12035,EDH47,IW 30g,FVC 2ml,06/06/89,pH10,%M10BTL#11
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: RBNA Tuning file: MTDH01 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 280 Transfer line temp. : 0

Chromatographic temperatures : 35. 305. 0. 0. 0.
Chromatographic times, min. : 4.0 10.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 8.0 0.0 0.0 1.0 0.0

>EDH47 EDH47 HP3,CASE 12035,EDH47,IW 30g,FVC 2ml,06/0

35.01 475.0 CLP ADC TIC
Upslope: .20 Pkht Reject: 2318. Max Peaks: 11 Bunching: 1
Dnslope: 0.00 Results File IEDH47 Sorted by Pkht/Pkht INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	27.49	1168	1171	1174	10816	68623	30288	100.00	20.440
2	23.58	965	968	974	5706	106375	20640	68.15	13.929
3	25.85	1083	1086	1089	3578	66002	13645	45.05	9.208
4	26.35	1109	1112	1115	3367	57939	12486	41.22	8.426
5	23.78	974	978	984	3171	114222	18965	62.62	12.799
6	5.17	9	11	16	2878	28707	8132	26.85	5.488
~~7~~	~~22.74~~	~~922~~	~~924~~	~~926~~	~~2675~~	~~49023~~	~~6764~~	~~22.33~~	~~4.565~~
~~8~~	~~22.04~~	~~886~~	~~888~~	~~892~~	~~2636~~	~~66090~~	~~10635~~	~~35.11~~	~~7.177~~
~~9~~	~~25.39~~	~~1059~~	~~1062~~	~~1065~~	~~2490~~	~~63829~~	~~12734~~	~~42.04~~	~~8.594~~
~~10~~	~~19.73~~	~~766~~	~~768~~	~~771~~	~~2481~~	~~32281~~	~~6854~~	~~22.63~~	~~4.625~~
~~11~~	~~20.64~~	~~813~~	~~815~~	~~818~~	~~2453~~	~~44799~~	~~7037~~	~~23.23~~	~~4.749~~

Sum of corrected areas: 148180.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Peak Ht.	Retention Time	Unknown Window
1	40.0	23176.	9.65	4.98 - 11.54
2	40.0	36355.	13.42	11.54 - 16.12
3	40.0	39010.	18.83	16.12 - 21.08
4	40.0	33863.	23.33	21.08 - 27.42
5	40.0	33885.	31.51	27.42 - 33.56
6	40.0	31468.	35.61	33.56 - 46.05

Dilution Factor = ********

$$\text{Unknown Concentration} = \frac{\text{Conc Int Std}}{\text{Pk.Ht.Int.Std.}} * \text{Dil Factor} * \text{Pk.Ht.Unknown}$$

11:52 AM TUE., 27 JUNE, 1989

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH48

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH48

Sample wt/vol: 30.0 (g/mL) G Lab File ID: RRH48

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 6 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/23/89

GPC Cleanup: (Y/N) Y pH: 9.4 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	700	U
111-44-4	bis(2-Chloroethyl)ether	700	U
95-57-8	2-Chlorophenol	700	U
541-73-1	1,3-Dichlorobenzene	700	U
106-46-7	1,4-Dichlorobenzene	700	U
100-51-6	Benzyl alcohol	700	U
95-50-1	1,2-Dichlorobenzene	700	U
95-48-7	2-Methylphenol	700	U
108-60-1	bis(2-Chloroisopropyl)ether	700	U
106-44-5	4-Methylphenol	700	U
621-64-7	N-Nitroso-di-n-propylamine	700	U
67-72-1	Hexachloroethane	700	U
98-95-3	Nitrobenzene	700	U
78-59-1	Isophorone	700	U
88-75-5	2-Nitrophenol	700	U
105-67-9	2,4-Dimethylphenol	700	U
65-85-0	Benzoic acid	3400	U
111-91-1	bis(2-Chloroethoxy)methane	700	U
120-83-2	2,4-Dichlorophenol	700	U
120-82-1	1,2,4-Trichlorobenzene	700	U
91-20-3	Naphthalene	700	U
106-47-8	4-Chloroaniline	700	U
87-68-3	Hexachlorobutadiene	700	U
59-50-7	4-Chloro-3-methylphenol	700	U
91-57-6	2-Methylnaphthalene	700	U
77-47-4	Hexachlorocyclopentadiene	700	U
88-06-2	2,4,6-Trichlorophenol	700	U
95-95-4	2,4,5-Trichlorophenol	3400	U
91-58-7	2-Chloronaphthalene	700	U
88-74-4	2-Nitroaniline	3400	U
131-11-3	Dimethylphthalate	700	U
208-96-8	Acenaphthylene	700	U
606-20-2	2,6-Dinitrotoluene	700	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH48

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH48

Sample wt/vol: 30.0 (g/mL) G Lab File ID: RRH48

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 6 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/23/89

GPC Cleanup: (Y/N) Y pH: 9.4 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3400	U
83-32-9	Acenapthene	700	U
51-28-5	2,4-Dinitrophenol	3400	U
100-02-7	4-Nitrophenol	3400	U
132-64-9	Dibenzofuran	700	U
121-14-2	2,4-Dinitrotoluene	700	U
84-66-2	Diethylphthalate	700	U
7005-72-3	4-Chlorophenyl-phenylether	700	U
86-73-7	Fluorene	700	U
100-01-6	4-Nitroaniline	3400	U
534-52-1	4,6-Dinitro-2-methylphenol	3400	U
86-30-6	N-Nitrosodiphenylamine (1)	700	U
101-55-3	4-Bromophenyl-phenylether	700	U
118-74-1	Hexachlorobenzene	700	U
87-86-5	Pentachlorophenol	430	J
85-01-8	Phenanthrene	700	U
120-12-7	Anthracene	700	U
84-74-2	Di-n-butylphthalate	700	U
206-44-0	Fluoranthene	700	U
129-00-0	Pyrene	700	U
85-68-7	Butylbenzylphthalate	700	U
91-94-1	3,3'-Dichlorobenzidine	1400	U
56-55-3	Benzo(a)anthracene	700	U
218-01-9	Chrysene	700	U
117-81-7	bis(2-Ethylhexyl)phthalate	1100	~~B~~ U 10/11/89
117-84-0	Di-n-octylphthalate	700	U
205-99-2	Benzo(b)fluoranthene	700	U
207-08-9	Benzo(k)fluoranthene	700	U
50-32-8	Benzo(a)pyrene	700	U
193-39-5	Indeno(1,2,3-cd)pyrene	700	U
53-70-3	Dibenz(a,h)anthracene	700	U
191-24-2	Benzo(g,h,i)perylene	700	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDH48

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH48

Sample wt/vol: 30.0 (g/mL) G Lab File ID: RRH48

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 6 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/23/89

GPC Cleanup : (Y/N) Y pH: 9.4 Dilution Factor: 1.000

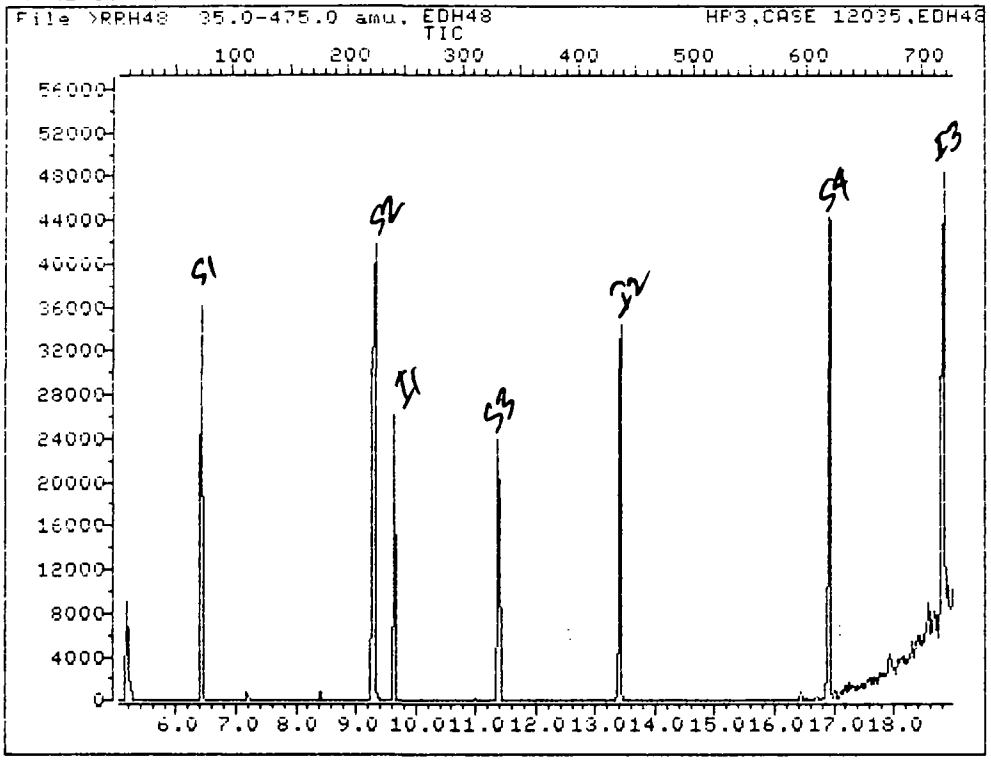
Number TICs found: 17

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	5.18	980	JB
2.	UNKNOWN	19.73	270	J
3.	UNKNOWN	20.46	250	J
4.	UNKNOWN	20.66	270	J
5.	UNKNOWN HYDROCARBON	21.50	390	J
6.	UNKNOWN	21.62	370	J
7.	UNKNOWN	21.79	280	J
8.	UNKNOWN	22.04	530	J
9.	UNKNOWN	22.26	320	J
10.	UNKNOWN	22.64	260	J
11.	UNKNOWN	22.82	290	J
12.	UNKNOWN	23.59	710	J
13.	UNKNOWN	23.78	530	J
14.	UNKNOWN	24.26	370	J
15.	UNKNOWN HYDROCARBON	25.86	570	J
16.	UNKNOWN HYDROCARBON	26.36	440	J
17.	UNKNOWN HYDROCARBON	27.50	1400	JB
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I SV-TIC 1/87 Rev.

TOTAL ION CHROMATOGRAM



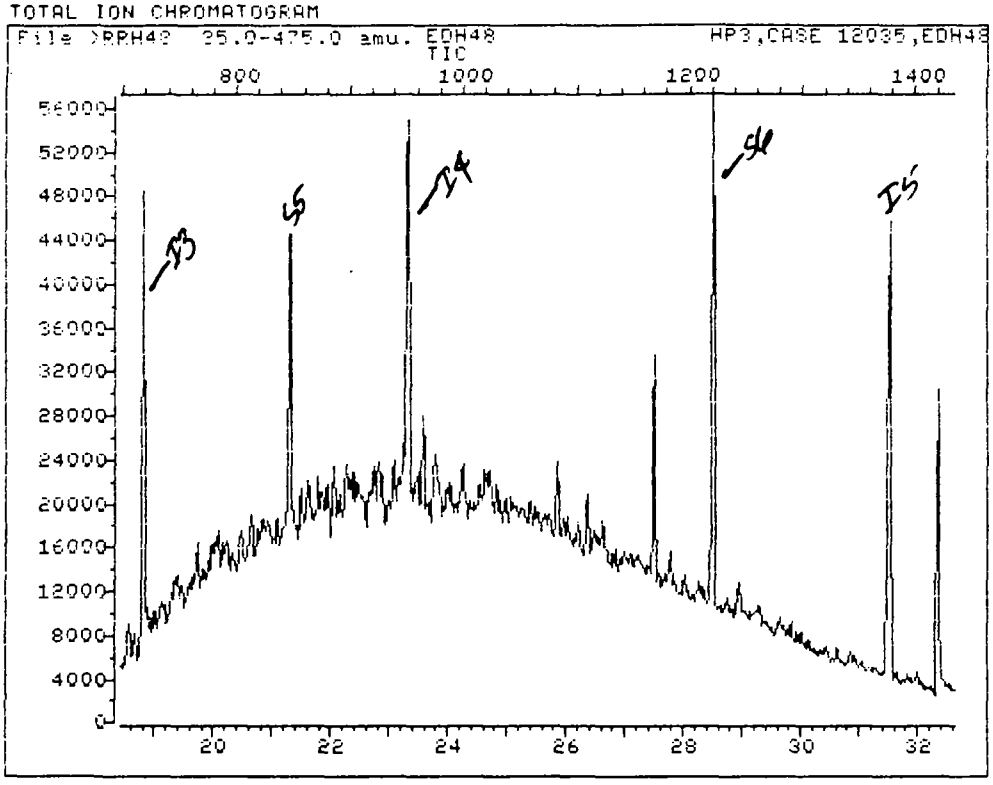
Data File: >RRH48::D3 Quant Output File: ^RRH48::SC
Name: EDH48
Misc: HP3,CASE 12035,EDH48,IW 30g,FVC 2ml,06/06/89,pH 9,%M6,BTL# 4

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890623 13:58

Operator ID: DENNIS
Quant Time: 890623 15:56
Injected at: 890623 14:45

TIC page 1 of 3

TOTAL ION CHROMATOGRAM



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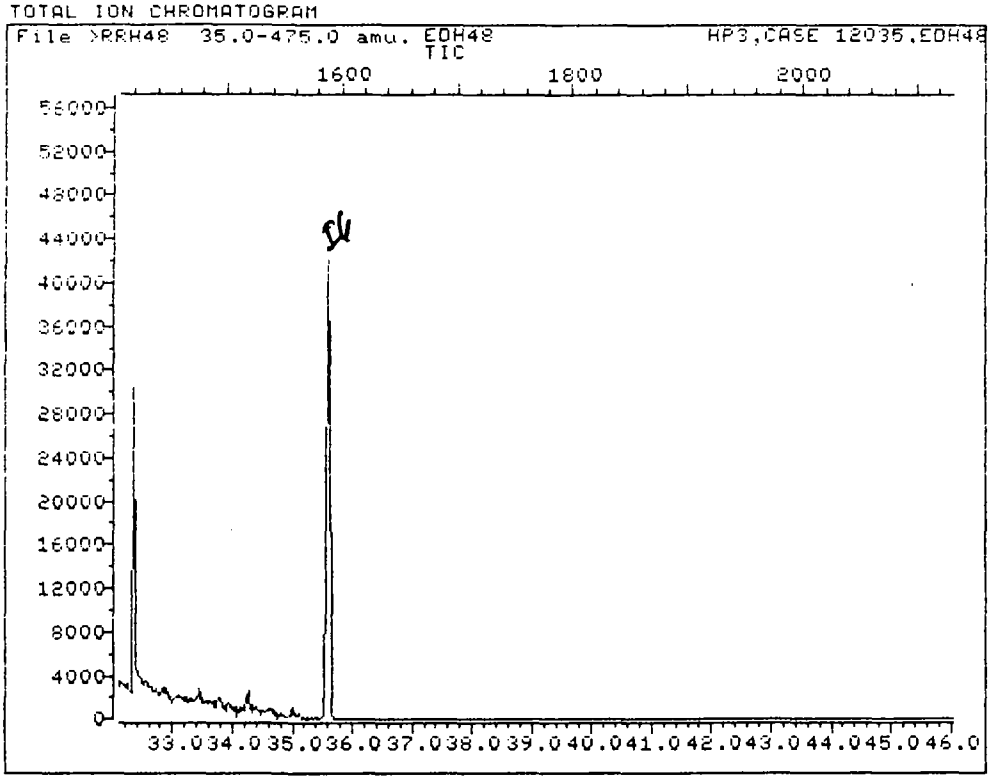
Name: EDH48
Misc: HP3,CASE 12035,EDH48,IW 30g,FVC 2ml,06/06/89,pH 9,%M6,BTL# 4

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890623 13:58

Operator ID: DENNIS
Quant Time: 890623 15:56
Injected at: 890623 14:45

TIC page 2 of 3

TOTAL ION CHROMATOGRAM



Data File: >RRH48::D3 Quant Output File: ^RRH48::SC
Name: EDH48
Misc: HP3,CASE 12035,EDH48,IW 30g,FVC 2ml,06/06/89,pH 9,%M6,BTL# 4

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890623 13:58

Operator ID: DENNIS
Quant Time: 890623 15:56
Injected at: 890623 14:45

TIC page 3 of 3

QUANT REPORT

Operator ID: DENNIS Quant Rev: 6 Quant Time: 890623 15:56
Output File: ^RRH48::SC Injected at: 890623 14:45
Data File: >RRH48::D3 Dilution Factor: 1.00000
Name: EDH48
Misc: HP3,CASE 12035,EDH48,IW 30g,FVC 2ml,06/06/89,pH 9,%M6,BTL# 4

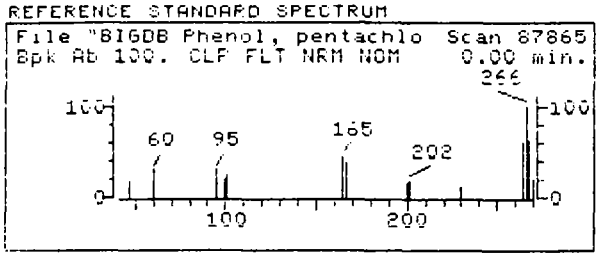
ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890623 13:58

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.65	152.0	9660	40.00	ng/uL	98
2)	2-Fluorophenol	6.41	112.0	29344	102.29	ng/uL	97
3)	Phenol-d5	9.32	99.0	47911M	105.50	ng/uL	84
4)	Phenol	0.00	94.0	0	0.00	ng/uL	
5)	bis(-2-Chloroethyl)Ether	0.00	93.0	0	0.00	ng/uL	
6)	2-Chlorophenol	0.00	128.0	0	0.00	ng/uL	
7)	1,3-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
8)	1,4-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
9)	Benzyl Alcohol	0.00	108.0	0	0.00	ng/uL	
10)	1,2-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
11)	2-Methylphenol	0.00	108.0	0	0.00	ng/uL	
12)	bis(2-Chloroisopropyl)ether	0.00	45.0	0	0.00	ng/uL	
13)	4-Methylphenol	0.00	108.0	0	0.00	ng/uL	
14)	N-Nitroso-Di-n-propylamine	0.00	70.0	0	0.00	ng/uL	
15)	Hexachloroethane	0.00	117.0	0	0.00	ng/uL	
16)	*d8-Naphthalene	13.40	136.0	44097	40.00	ng/uL	84
17)	Nitrobenzene-d5	11.38	82.0	20864	49.06	ng/uL	79
18)	Nitrobenzene	0.00	77.0	0	0.00	ng/uL	
19)	Isophorone	0.00	82.0	0	0.00	ng/uL	
20)	2-Nitrophenol	0.00	139.0	0	0.00	ng/uL	
21)	2,4-Dimethylphenol	0.00	107.0	0	0.00	ng/uL	
22)	Benzoic Acid	0.00	105.0	0	0.00	ng/uL	
23)	bis(-2-Chloroethoxy)Methane	0.00	93.0	0	0.00	ng/uL	
24)	2,4-Dichlorophenol	0.00	162.0	0	0.00	ng/uL	
25)	1,2,4-Trichlorobenzene	0.00	180.0	0	0.00	ng/uL	
26)	Naphthalene	0.00	128.0	0	0.00	ng/uL	
27)	4-Chloroaniline	0.00	127.0	0	0.00	ng/uL	
28)	Hexachlorobutadiene	0.00	225.0	0	0.00	ng/uL	
29)	4-Chloro-3-methylphenol	0.00	107.0	0	0.00	ng/uL	
30)	2-Methylnaphthalene	0.00	142.0	0	0.00	ng/uL	
31)	*d10-Acenaphthene	18.83	164.0	26317	40.00	ng/uL	94
32)	Hexachlorocyclopentadiene	0.00	237.0	0	0.00	ng/uL	
33)	2,4,6-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
34)	2,4,5-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
35)	2-Chloronaphthalene	0.00	162.0	0	0.00	ng/uL	
36)	2-Fluorobiphenyl	16.92	172.0	44416M	56.26	ng/uL	95
37)	2-Nitroaniline	0.00	65.0	0	0.00	ng/uL	
38)	Dimethyl Phthalate	0.00	163.0	0	0.00	ng/uL	
39)	Acenaphthylene	0.00	152.0	0	0.00	ng/uL	
40)	2,6-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
41)	3-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
~~42)~~	Acenaphthene	18.90	153.0	635	~~78~~	ng/uL	96
43)	2,4-Dinitrophenol	0.00	184.0	0	0.00	ng/uL	
44)	4-Nitrophenol	0.00	109.0	0	0.00	ng/uL	
45)	Dibenzofuran	0.00	168.0	0	0.00	ng/uL	
46)	2,4-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
47)	Diethylphthalate	0.00	149.0	0	0.00	ng/uL	
48)	4-Chlorophenyl-phenylether	0.00	204.0	0	0.00	ng/uL	
49)	Fluorene	0.00	166.0	0	0.00	ng/uL	
50)	4-Nitroaniline	0.00	138.0	0	0.00	ng/uL	

50)	4-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
51)	2,4,6-Tribromophenol	21.31	330.0	13418	149.33	ng/uL	99
52)	*d10-Phenanthrene	23.34	188.0	45051	40.00	ng/uL	99
53)	4,6-Dinitro-2-methylphenol	0.00	198.0	0	0.00	ng/uL	
54)	N-Nitrosodiphenylamine	0.00	169.0	0	0.00	ng/uL	
55)	4-Bromophenyl-phenylether	0.00	248.0	0	0.00	ng/uL	
56)	Hexachlorobenzene	0.00	284.0	0	0.00	ng/uL	
57)	Pentachlorophenol	23.09	266.0	904	6.12	ng/uL → 430	91
58)	Phenanthrene	0.00	178.0	0	0.00	ng/uL	
59)	Anthracene	0.00	178.0	0	0.00	ng/uL	
60)	Di-n-Butylphthalate	0.00	149.0	0	0.00	ng/uL	
61)	Fluoranthene	0.00	202.0	0	0.00	ng/uL	
62)	*d12-Chrysene	31.53	240.0	50256	40.00	ng/uL	93
63)	Pyrene	0.00	202.0	0	0.00	ng/uL	
64)	Terphenyl-d14	28.52	244.0	62961	56.19	ng/uL	91
65)	Butylbenzylphthalate	0.00	149.0	0	0.00	ng/uL	
66)	3,3'-Dichlorobenzidine	0.00	252.0	0	0.00	ng/uL	
67)	Benzo(a)Anthracene	0.00	228.0	0	0.00	ng/uL	
68)	Chrysene	0.00	228.0	0	0.00	ng/uL	
69)	Bis(2-Ethylhexyl)Phthalate	32.35	149.0	23437	15.65	ng/uL → 1100	93
70)	*d12-Perylene	35.61	264.0	60472	40.00	ng/uL	91
71)	Di-n-octyl phthalate	0.00	149.0	0	0.00	ng/uL	
72)	Benzo(b)fluoranthene	0.00	252.0	0	0.00	ng/uL	
73)	Benzo(k)Fluoranthene	0.00	252.0	0	0.00	ng/uL	
74)	Benzo(a)Pyrene	0.00	252.0	0	0.00	ng/uL	
75)	Indeno(1,2,3-cd)Pyrene	0.00	276.0	0	0.00	ng/uL	
76)	Dibenz(a,h)Anthracene	0.00	278.0	0	0.00	ng/uL	
77)	Benzo(g,h,i)Perylene	0.00	276.0	0	0.00	ng/uL	

* Compound is ISTD

REFERENCE STANDARD SPECTRUM



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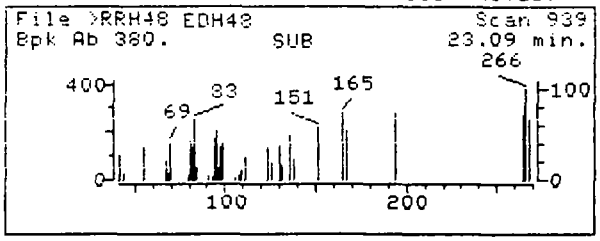

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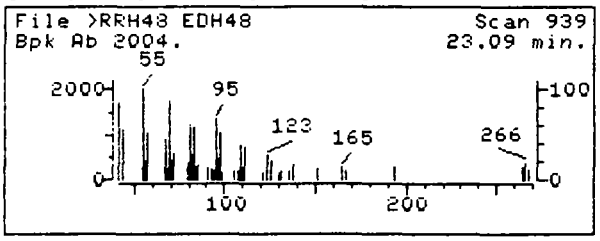
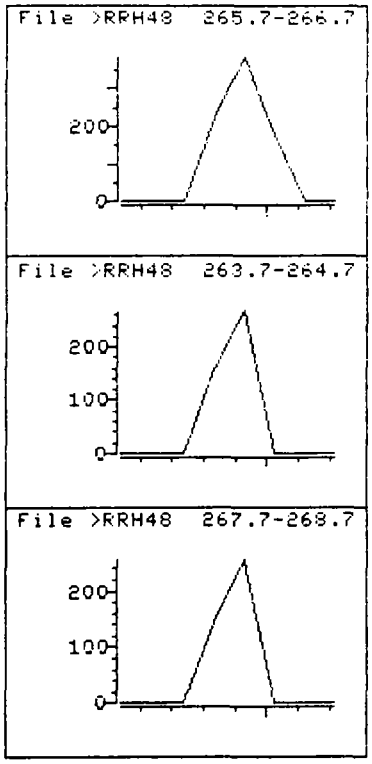
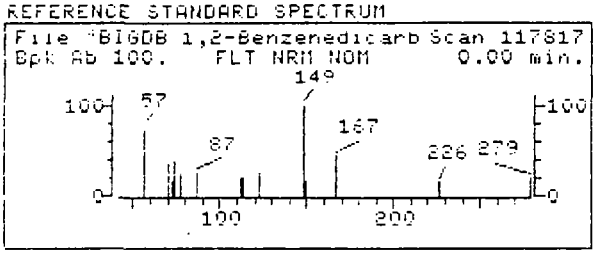




Data File: >RRH48::D3 Quant Output File: ^RRH48::SC
Name: EDH48
Misc: HP3,CASE 12035,EDH48,IW 30g,FVC 2ml,06/06/89,pH 9,%M6,BTL# 4
Quant Time: 890623 15:56 Quant ID File: ID_BCA::SC
Injected at: 890623 14:45 Last Calibration: 890623 13:58

Compound No: 57
Compound Name: Pentachlorophenol
Scan Number: 939
Retention Time: 23.09 min.
Quant Ion: 266.0
Area: 904
Concentration: 6.12 ng/uL
q-value: 91

REFERENCE STANDARD SPECTRUM



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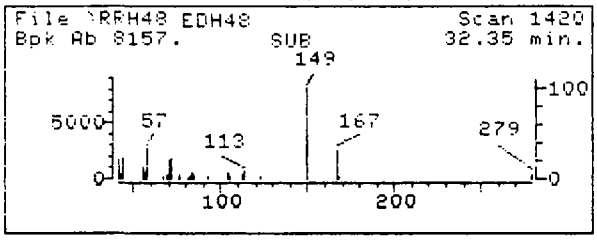
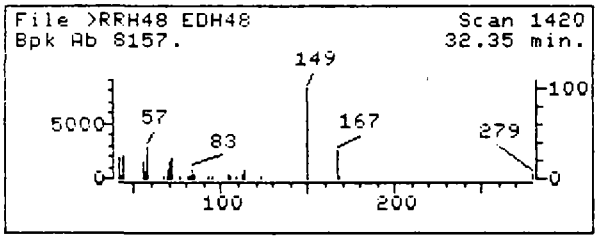
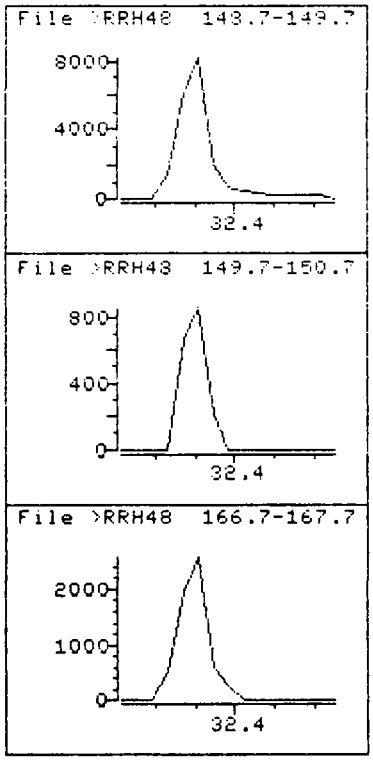


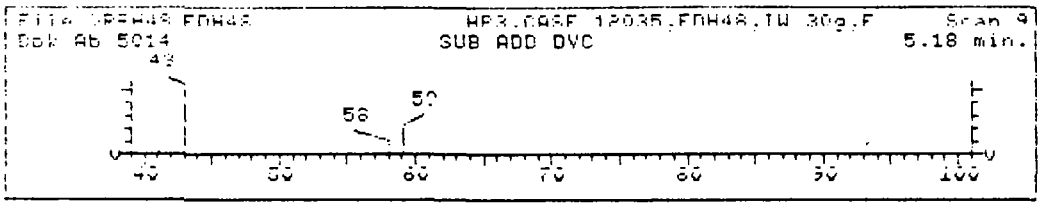
SAMPLE SPECTRUM (UNALTERED)





Data File: >RRH48::D3 Quant Output File: ^RRH48::SC
Name: EDH48
Misc: HP3,CASE 12035,EDH48,IW 30g,FVC 2ml,06/06/89,pH 9,%M6,BTL# 4
Quant Time: 890623 15:56 Quant ID File: ID_BCA::SC
Injected at: 890623 14:45 Last Calibration: 890623 13:58

Compound No: 69
Compound Name: Bis(2-Ethylhexyl)Phthalate
Scan Number: 1420
Retention Time: 32.35 min.
Quant Ion: 149.0
Area: 23437
Concentration: 15.65 ng/uL
q-value: 93

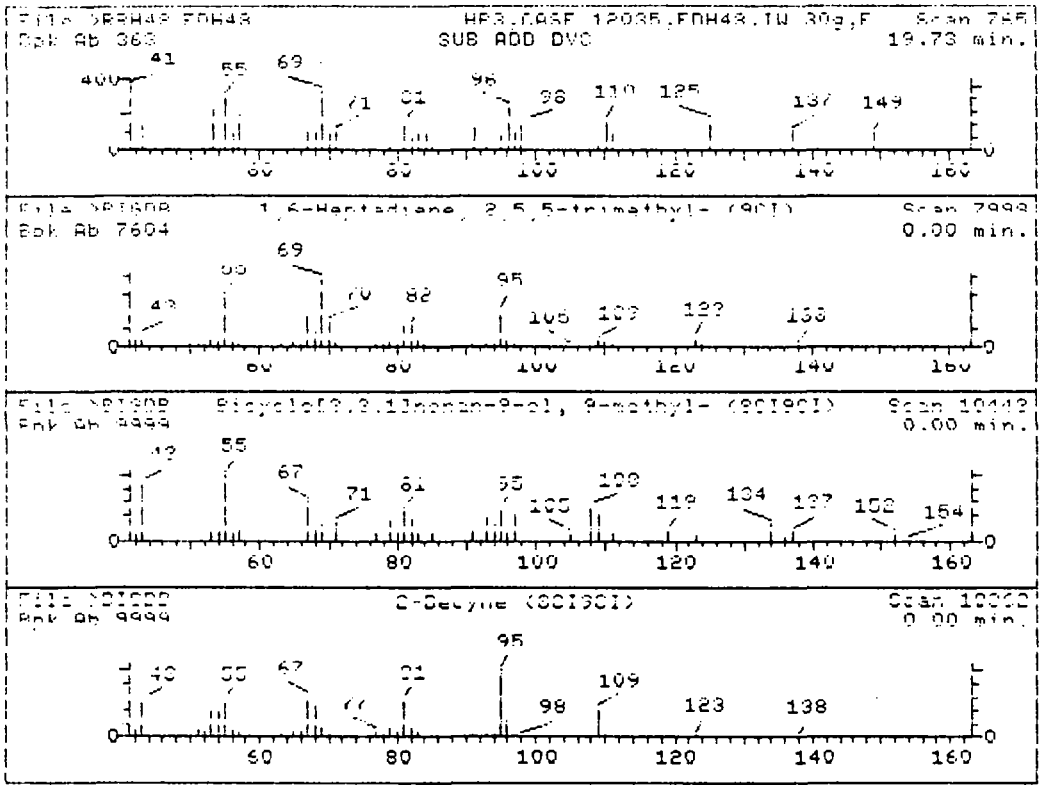


UNKNOWN B

. Unknown #.1
Quant Time: 890623 15:56
Injected at: 890623 14:45
Pk Ht= 9060.00 Tentative Concentration is 980.00

Sample file: ARTIFI Spectrum #: -1

No data base entries were retrieved.



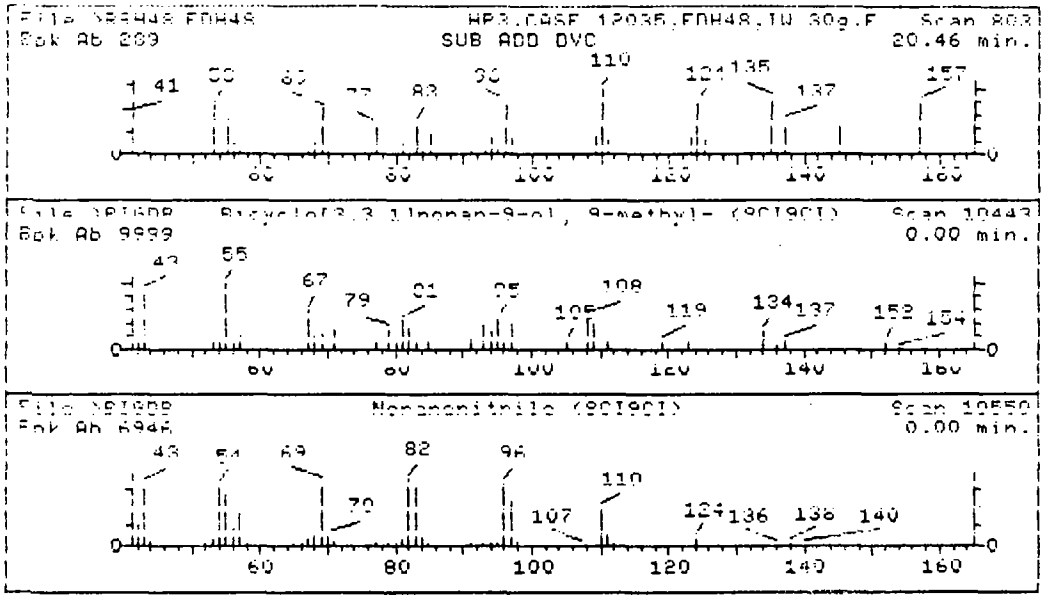
UNKNOWN

Unknown #.4
Quant Time: 890623 15:56
Injected at: 890623 14:45
Pk Ht= 4114.00 Tentative Concentration is 270.00

1. 1,6-Heptadiene, 2,5,5-trimethyl- (9CI) 138 C10H18
2. Bicyclo[3.3.1]nonan-9-ol, 9-methyl- (8CI9CI) 154 C10H18O
3. 2-Decyne (8CI9CI) 138 C10H18

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 53

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C I	R IV
1.	36*	62238282	7998	"BIGDB	53	50	1	-2	73	39	14	23
2.	30*	33832256	10443	"BIGDB	47	77	3	0	77	32	12	13



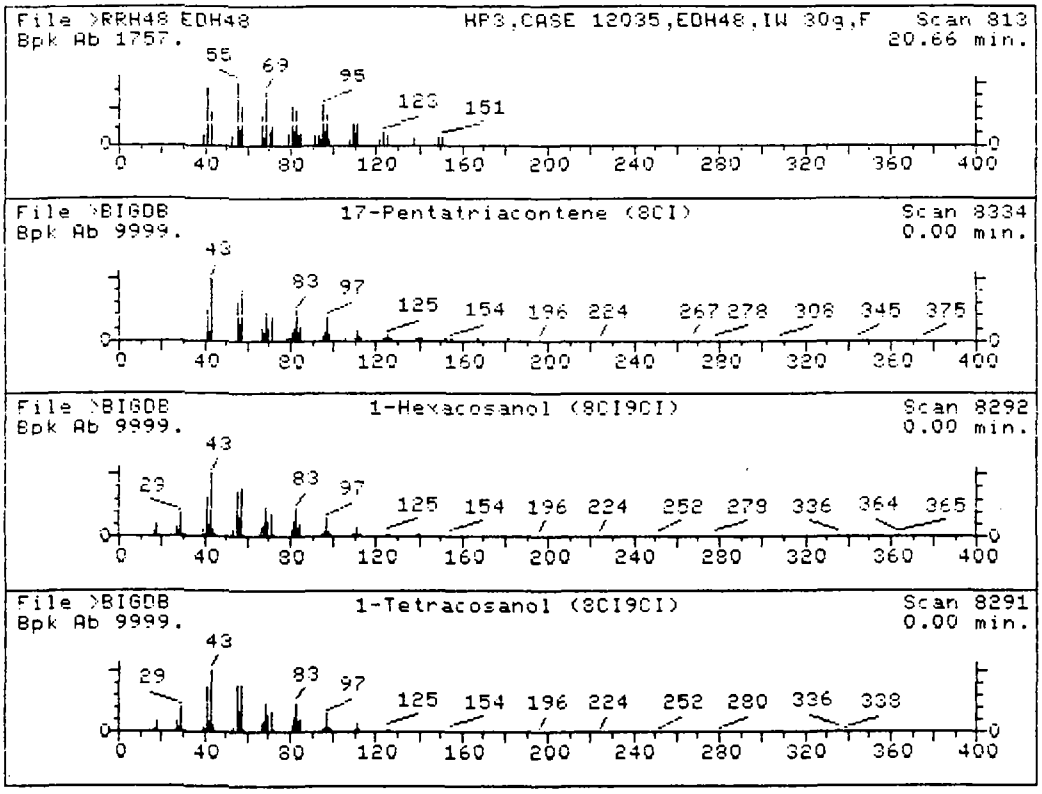
UNKNOWN

Unknown #.5
Quant Time: 890623 15:56
Injected at: 890623 14:45
Pk Ht= 3776.00 Tentative Concentration is 250.00

1. Bicyclo[3.3.1]nonan-9-ol, 9-methyl- (8CI9CI) 154 C10H18O
2. Nonanenitrile (8CI9CI) 139 C9H17N

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 56

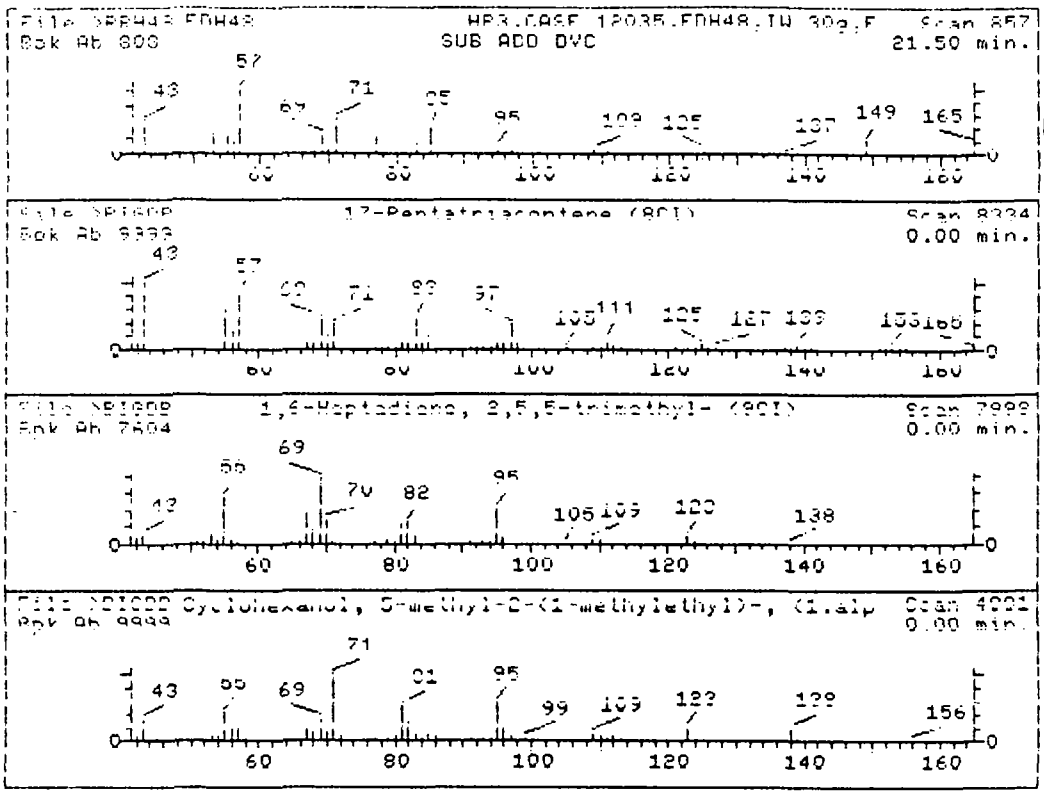
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	15*	33832256	10443	"BIGDB	45	79	3	0	79	57		3		13



UNKNOWN

Date and Time of injection: 6/23/89 14:45

Sample datafile name: >RRH48::D3



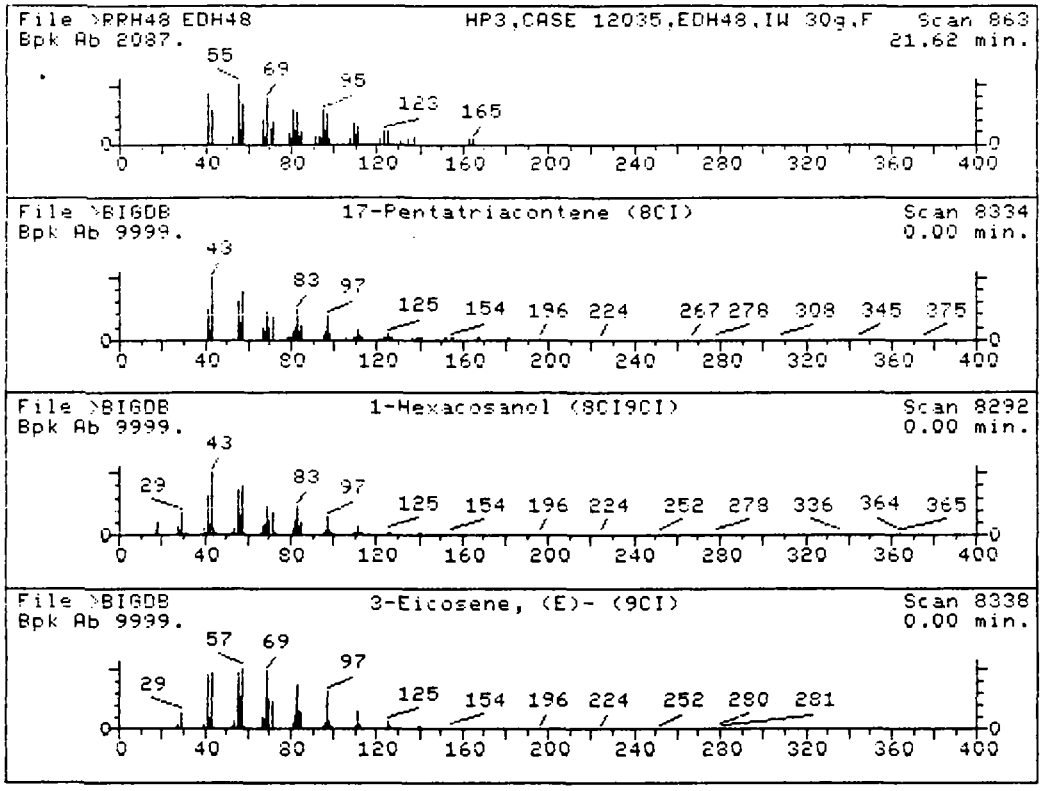
UNKNOWN HYDROCARBON

. Unknown #.6
Quant Time: 890623 15:56
Injected at: 890623 14:45
Pk Ht= 4632.00 Tentative Concentration is 390.00

1. 17-Pentatriacontene (8CI) 490 C35H70
2. 1,6-Heptadiene, 2,5,5-trimethyl- (9CI) 138 C10H18
3. Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1.alpha. ,2.alpha.,5.alpha.)- (9CI) 156 C10H20O
4. Bicyclo[3.3.1]nonan-9-ol, 9-methyl- (8CI9CI) 154 C10H18O

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 54

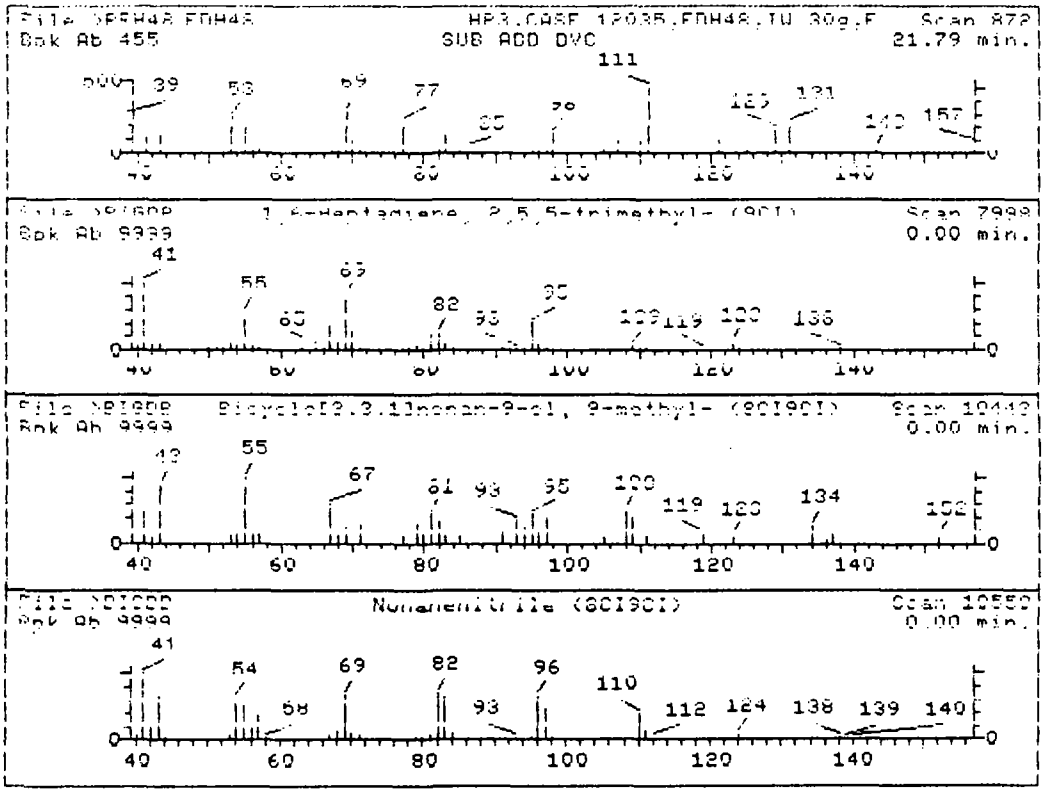
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C I	R IV
1.	28	6971400	8334	"BIGDB	70	101	2	0	95	45	8	16
2.	21*	62238282	7998	"BIGDB	63	40	2	-2	73	56	5	30



UNKNOWN

Date and Time of injection: 6/23/89 14:45

Sample datafile name: >RRH48::D3



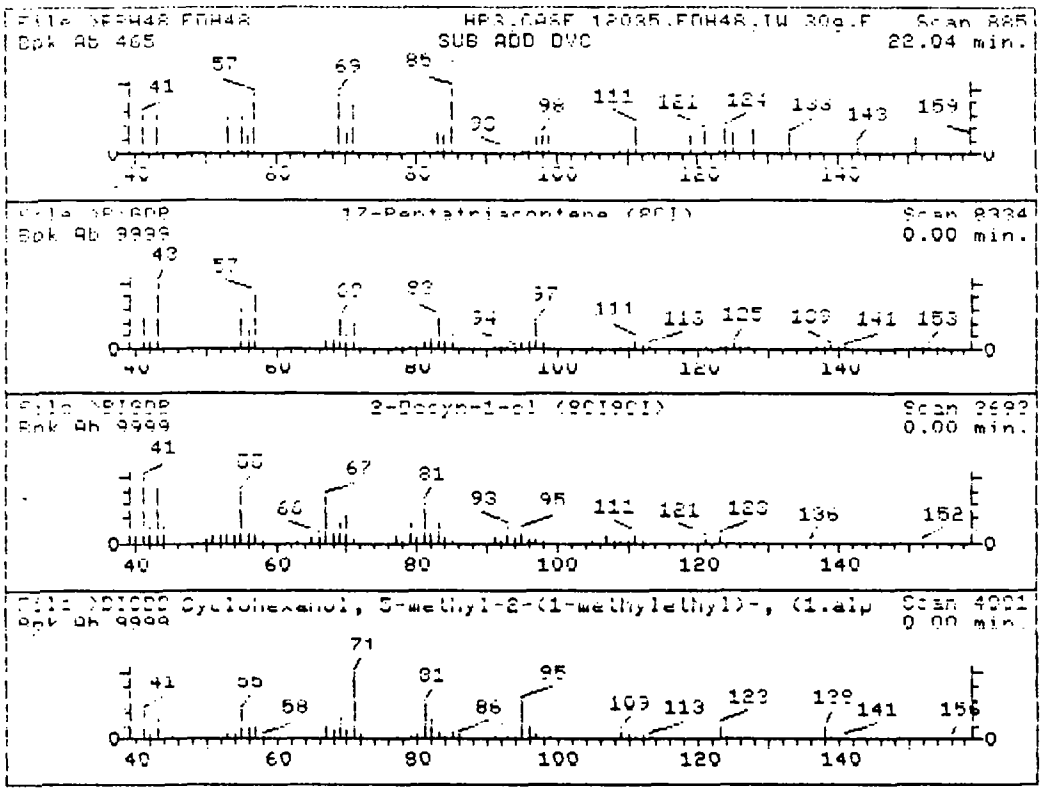
UNKNOWN

Unknown #,7
Quant Time: 890623 15:56
Injected at: 890623 14:45
Pk Ht= 3364.00 Tentative Concentration is 280.00

1. 1,6-Heptadiene, 2,5,5-trimethyl- (9CI) 138 C10H18
2. Bicyclo[3.3.1]nonan-9-ol, 9-methyl- (8CI9CI) 154 C10H18O
3. Nonanenitrile (8CI9CI) 139 C9H17N
4. 2-Decyne (8CI9CI) 138 C10H18

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 53

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C I	R IV
1.	41*	62238282	7998	"BIGDB	63	40	2	-2	76	42	14	30



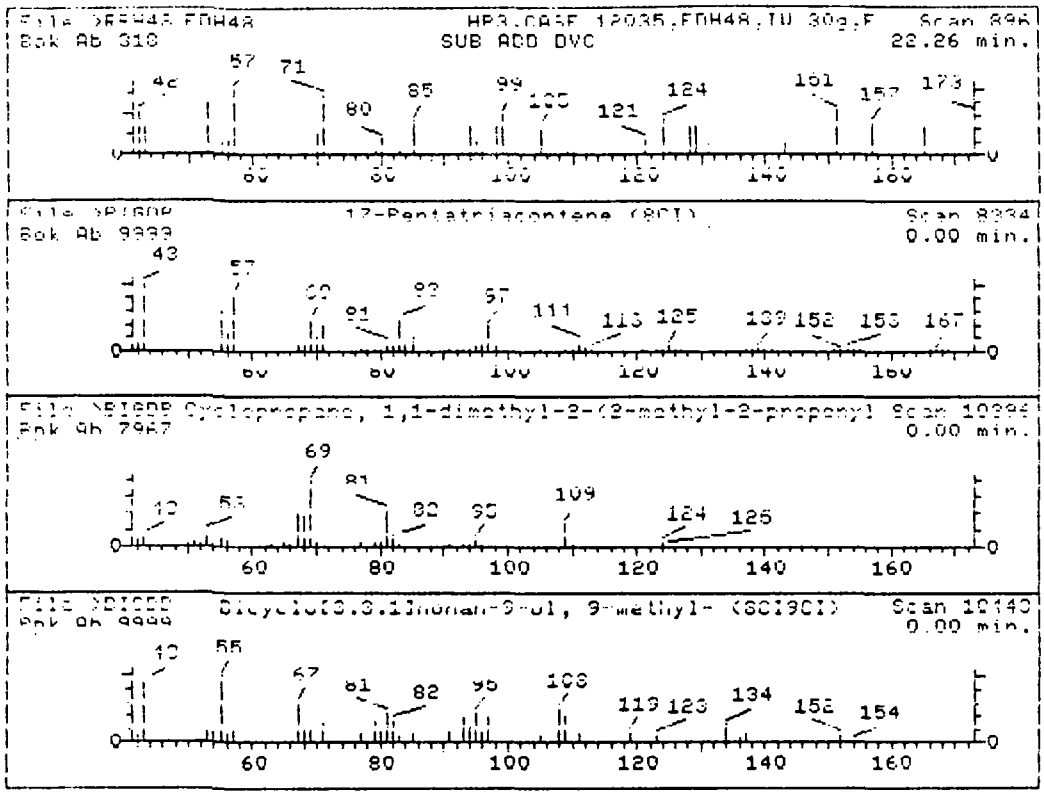
UNKNOWN

Unknown #.8
Quant Time: 890623 15:56
Injected at: 890623 14:45
Pk Ht= 6375.00 Tentative Concentration is 530.00

1.	17-Pentatriacontene (8CI)	490	C35H70
2.	2-Decyn-1-ol (8CI9CI)	154	C10H18O
3.	Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1.alpha. ,2.alpha.,5.alpha.)- (9CI)	156	C10H20O
4.	Bicyclo[3.3.1]nonan-9-ol, 9-methyl- (8CI9CI)	154	C10H18O

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 56

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	47	6971400	8334	"BIGDB	94	77	1	-3	65	45	16	44



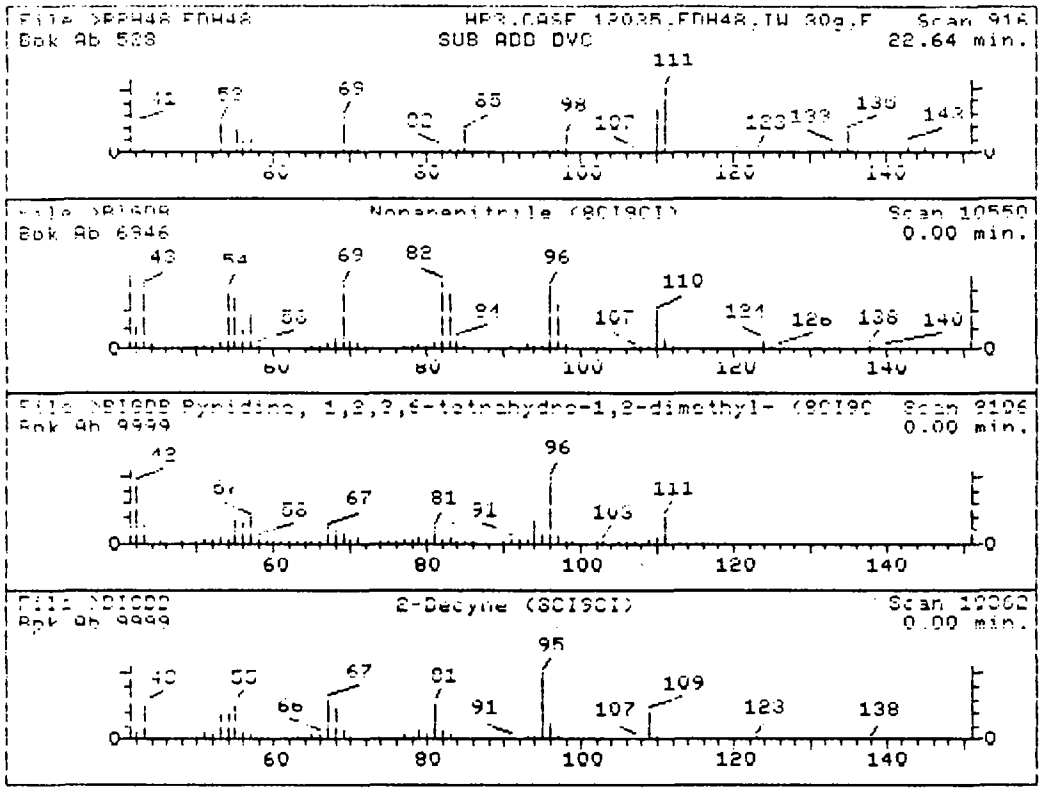
UNKNOWN

Unknown #.9
Quant Time: 890623 15:56
Injected at: 890623 14:45
Pk Ht= 3772.00 Tentative Concentration is 320.00

1.	17-Pentatriacontene (8CI)	490	C35H70
2.	Cyclopropane, 1,1-dimethyl-2-(2-methyl-2-propenyl)- (9CI)	124	C9H16
3.	Bicyclo[3.3.1]nonan-9-ol, 9-methyl- (8CI9CI)	154	C10H18O
4.	Cyclopropane, 1-ethyl-2-heptyl- (9CI)	168	C12H24
5.	2-Decyn-1-ol (8CI9CI)	154	C10H18O
6.	1,6-Heptadiene, 2,5,5-trimethyl- (9CI)	138	C10H18

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 59

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	59	6971400	8334	"BIGDB	94	77	1	-3	69	34	22	44
2.	48*	69147031	10396	"BIGDB	64	38	2	-3	72	34	20	32
3.	20*	33832256	10443	"BIGDB	37	87	3	0	70	55	5	13



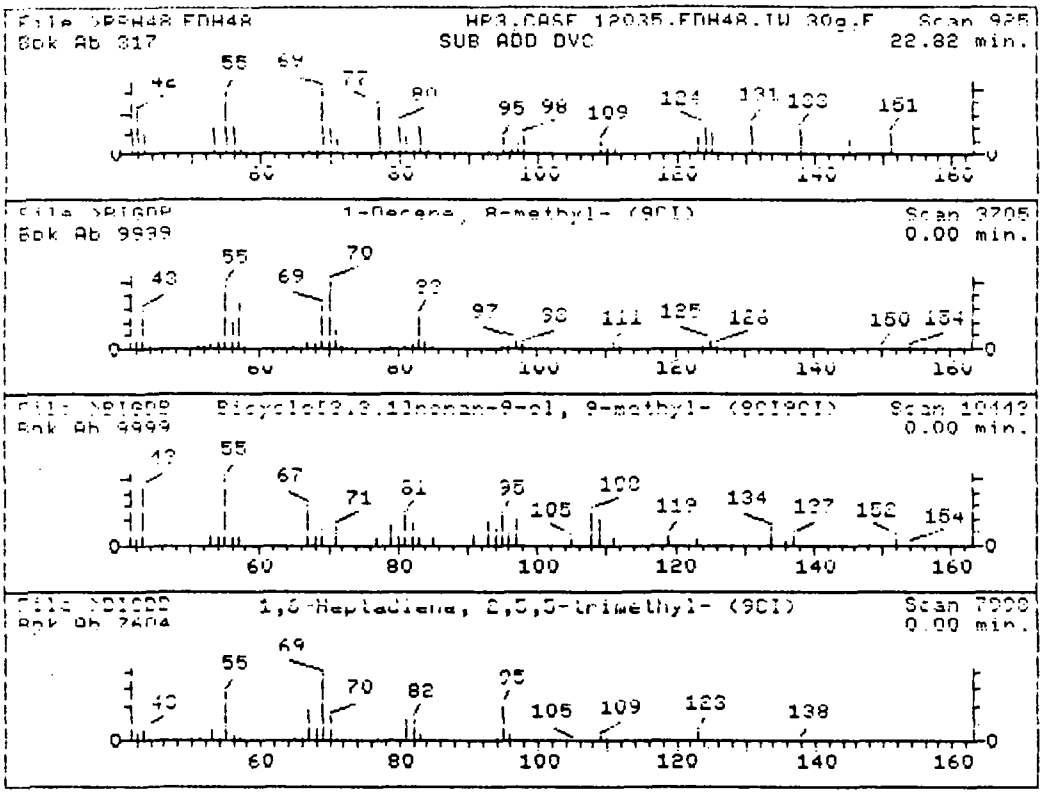
UNKNOWN

Unknown #.10
Quant Time: 890623 15:56
Injected at: 890623 14:45
Pk Ht= 3170.00 Tentative Concentration is 260.00

1. Nonanenitrile (8CI9CI) 139 C9H17N
2. Pyridine, 1,2,3,6-tetrahydro-1,2-dimethyl- (8CI9CI) 111 C7H13N
3. 2-Decyne (8CI9CI) 138 C10H18

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 54

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R	IV
1.	15*	2243278	10550	"BIGDB	29	84	3	0	77	60	3		13



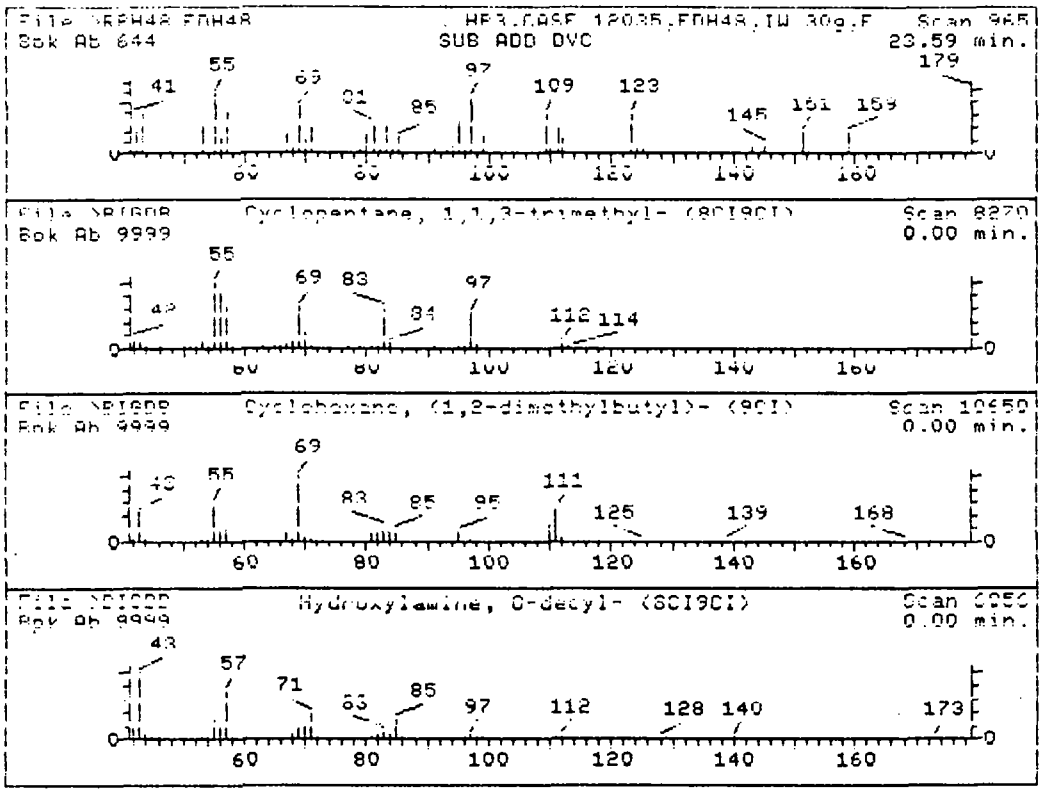
UNKNOWN

Unknown #.11
Quant Time: 890623 15:56
Injected at: 890623 14:45
Pk Ht= 3428.00 Tentative Concentration is 290.00

1.	1-Decene, 8-methyl- (9CI)	154	C11H22
2.	Bicyclo[3.3.1]nonan-9-ol, 9-methyl- (8CI9CI)	154	C10H18O
3.	1,6-Heptadiene, 2,5,5-trimethyl- (9CI)	138	C10H18
4.	3-Octyne, 2,2,7-trimethyl- (9CI)	152	C11H20
5.	3,8-Nonadien-2-one, (E)- (9CI)	138	C9H14O
6.	Benzenemethanamine, 4-fluoro- (9CI)	125	C7H8FN
7.	4-Decyne (8CI9CI)	138	C10H18

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 55

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R IV
1.	20*	61142798	3705	"BIGDB	54	56	2	-2	70	52	5	14
2.	20*	33832256	10443	"BIGDB	29	95	3	0	66	54	5	13



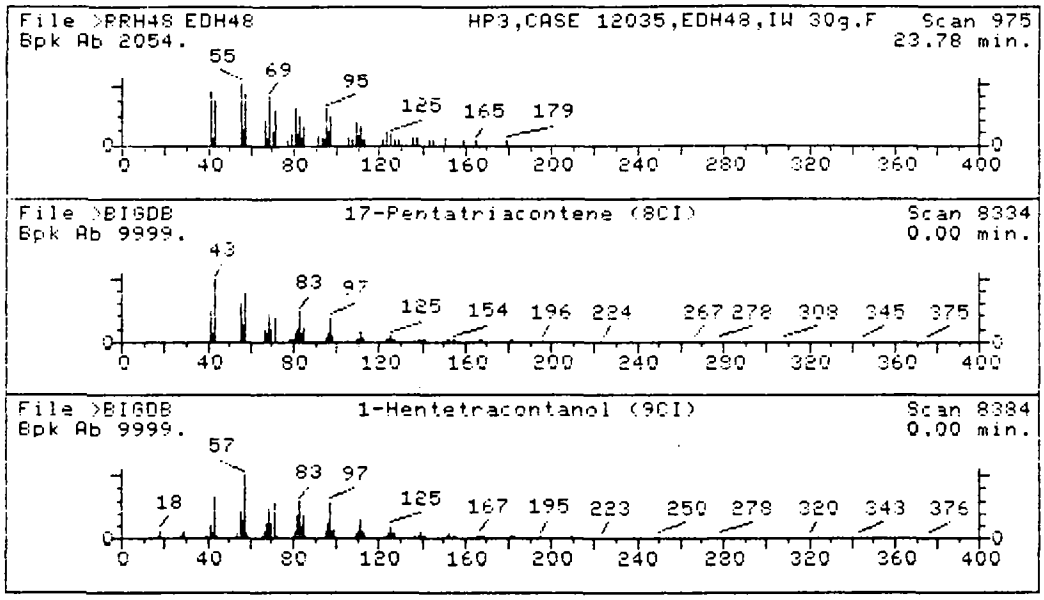
UNKNOWN

Unknown #.12
Quant Time: 890623 15:56
Injected at: 890623 14:45
Pk Ht= 8444.00 Tentative Concentration is 710.00

1. Cyclopentane, 1,1,3-trimethyl- (8CI9CI) 112 C8H16
2. Cyclohexane, (1,2-dimethylbutyl)- (9CI) 168 C12H24
3. Hydroxylamine, O-decyl- (8CI9CI) 173 C10H23NO

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 56

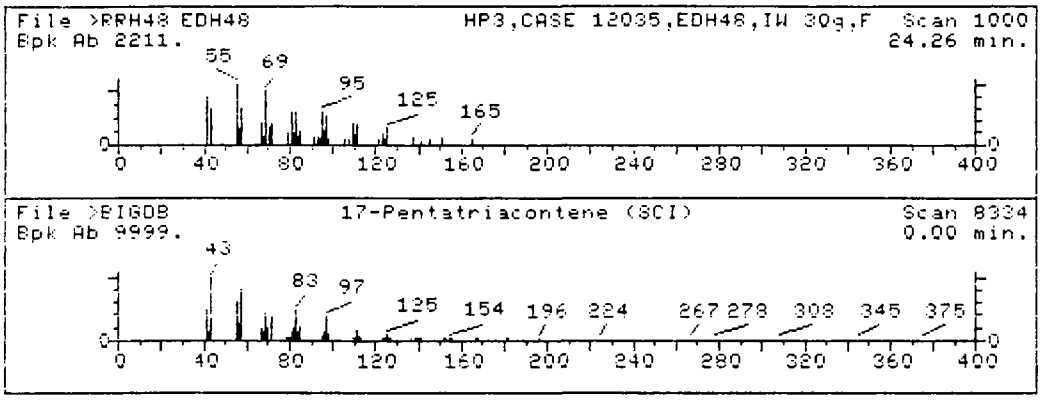
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	28*	4516692	8270	"BIGDB	70	40	2	-2	72	52	8	32



UNKNOWN

Date and Time of injection: 6/23/89 14:45

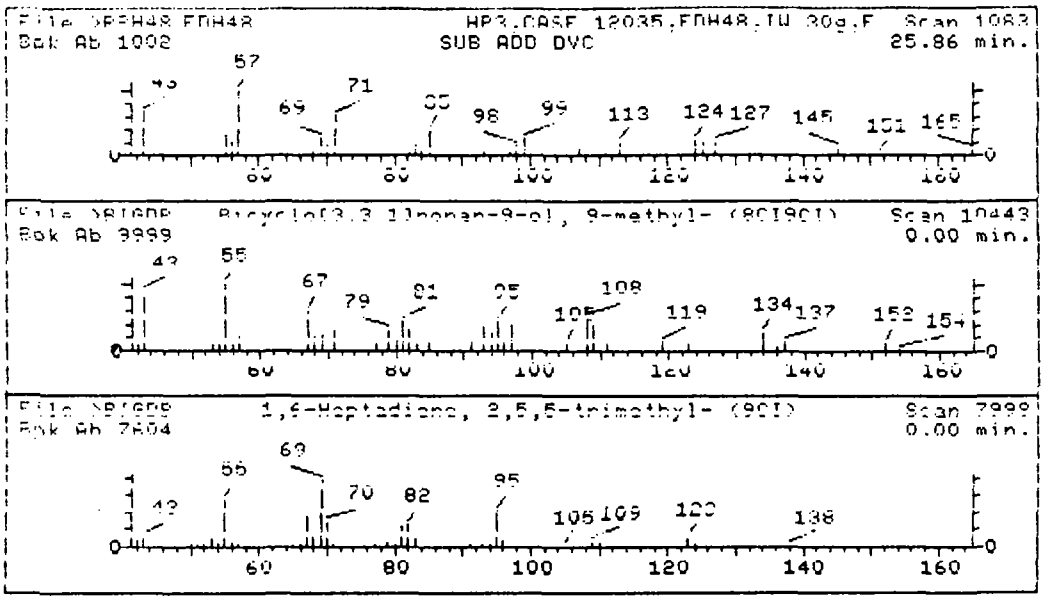
Sample datafile name: >RRH48::D3



UNKNOWN

Date and Time of injection: 6/23/89 14:45

Sample datafile name: >RRH48::D3



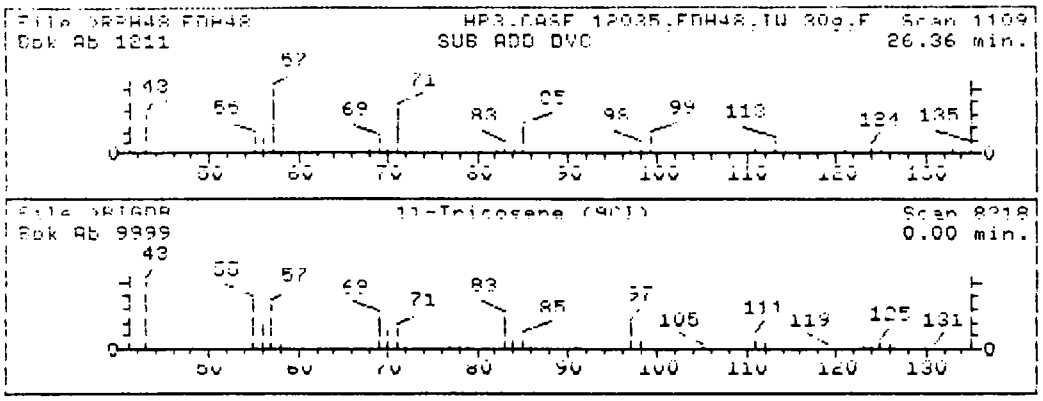
UNKNOWN HYDROCARBON

Unknown #.13
Quant Time: 890623 15:56
Injected at: 890623 14:45
Pk Ht= 6838.00 Tentative Concentration is 570.00

1. Bicyclo[3.3.1]nonan-9-ol, 9-methyl- (8CI9CI) 154 C10H18O
2. 1,6-Heptadiene, 2,5,5-trimethyl- (9CI) 138 C10H18

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 54

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R	IV
1.	25*	33832256	10443	"BIGDB	38	86	3	0	90	42	8		13
2.	24*	62238282	7998	"BIGDB	59	44	2	-1	66	51	7		24



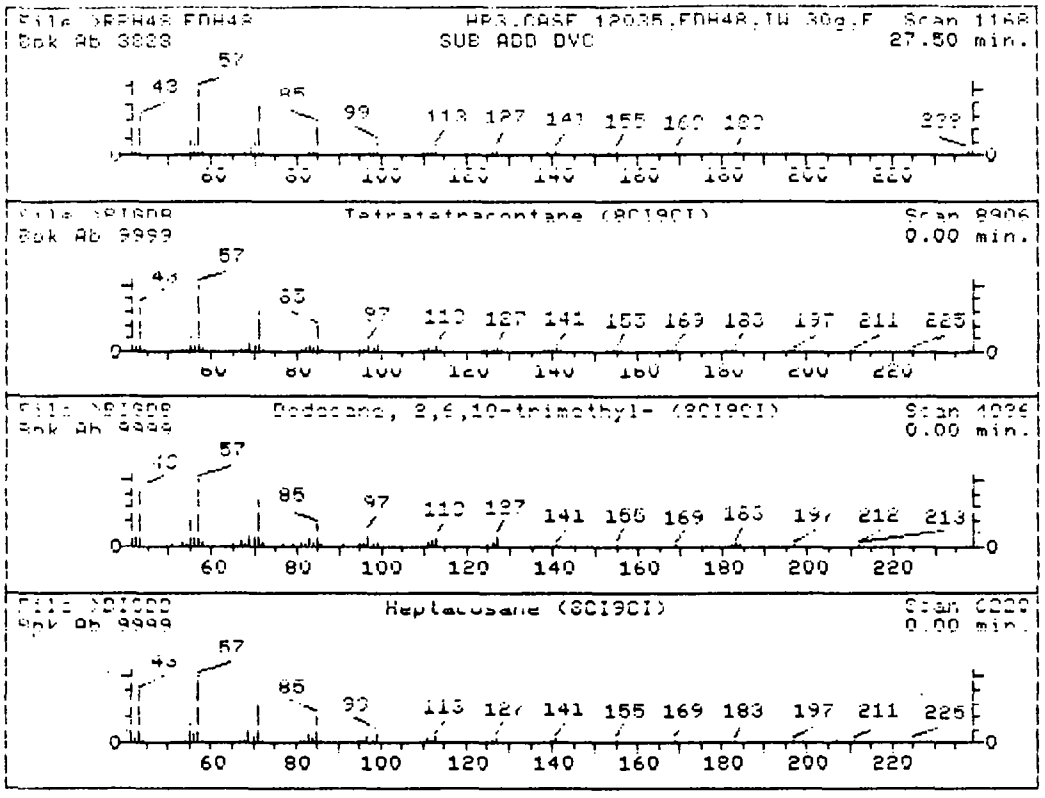
UNKNOWN HYDROCARBON

. Unknown #.14
Quant Time: 890623 15:56
Injected at: 890623 14:45
Pk Ht= 5305.00 Tentative Concentration is 440.00

1. 11-Tricosene (9CI) 322 C23H46

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 52

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	20	52078565	8318	"BIGDB	61	91	1	0	68	54		5		19



UNKNOWN HYDROCARBON

B

. Unknown #.15
Quant Time: 890623 15:56
Injected at: 890623 14:45
Pk Ht= 20638.00 Tentative Concentration is 1400.00

1.	Tetratetracontane (8CI9CI)	618	C44H90
2.	Dodecane, 2,6,10-trimethyl- (8CI9CI)	212	C15H32
3.	Heptacosane (8CI9CI)	380	C27H56
4.	Undecane, 3,8-dimethyl- (8CI)	184	C13H28
5.	Tritetracontane (8CI9CI)	604	C43H88
6.	Tridecane, 6-propyl- (9CI)	226	C16H34
7.	Docosane (8CI9CI)	310	C22H46

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 50

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	79	7098228	8906	"BIGDB	89	67	1	-1	100	9	48	37		
2.	73*	3891983	4036	"BIGDB	90	34	0	1	90	42	33	80		
3.	73	593497	6220	"BIGDB	93	60	0	0	90	24	32	67		
4.	71	17301303	6154	"BIGDB	77	31	0	-2	71	13	38	38		
5.	70	7098217	6150	"BIGDB	77	91	0	0	90	18	32	56		
6.	67*	55045108	6247	"BIGDB	66	63	2	-2	72	15	34	28		
7.	64	629970	6221	"BIGDB	89	58	1	0	73	24	28	46		

BNA TIC CALCULATIONS

SAMPLE EDH48 (RRH48)

% Moist: 6 Wet: 30g Dry: 28.2g

FV/FVC = 2mL IV/W =

$$\text{TIC Multiplier} = \frac{40\ \mu g}{mL} \times \frac{FV\ (mL)}{IV/W\ (kg\ or\ L)} = 2836.88$$

$$\boxed{\text{TIC Amount} = \frac{\text{hi TIC}}{\text{hi IS}} \times \text{Multiplier}}$$

hi IS 1 ____ 3 641 5 ____
2 ____ 4 54 6 ____

	SCAN	IS	Height	Amount
1	9			980
2	765			270
3	803			250
4	813	64	6	270
5	857			390
6	863	54	7	370
7	872			280
8	885			530
9	896			320
10	916			260
11	925			290
12	965			710
13	975	54	10	530
14	1000	54	7	370
15	1083			570
16	1109			440
17	1168			1400
18				
19				
20				

NOTE : ____

MS data file header from : >RRH48

Sample: EDH48 Operator: DENNIS SUPER GRP. 6/23/89 14:45
Misc : HP3,CASE 12035,EDH48,IW 30g,FVC 2ml,06/06/89,pH 9,%M6,BTL# 4
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: RBNA Tuning file: MTDH01 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 280 Transfer line temp. : 0

Chromatographic temperatures : 35. 305. 0. 0. 0.
Chromatographic times, min. : 4.0 10.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 8.0, 0.0 0.0 1.0 0.0

>RRH48 EDH48 HP3,CASE 12035,EDH48,IW 30g,FVC 2ml,06/0

35.01 475.0 CLP ADC TIC
Upslope: .20 Pkht Reject: 2614. Max Peaks: 17 Bunching: 1
Dnslope: 0.00 Results File IRRH48 Sorted by Pkht/Pkht INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	27.50	1165	1168	1171	20638	144181	54950	100.00	18.694
2	5.18	7	9	14	9060	29601	29601	53.87	10.070
3	23.59	962	965	967	8444	138725	25432	46.28	8.652
4	25.86	1081	1083	1086	6838	115509	16964	30.87	5.771
5	22.04	883	885	888	6375	122415	23886	43.47	8.126
6	26.36	1106	1109	1112	5305	125738	17862	32.51	6.077
7	21.50	854	857	859	4632	113579	16553	30.12	5.631
8	19.73	763	765	768	4114	80851	9747	17.74	3.316
9	20.46	800	803	807	3776	130484	19034	34.64	6.475
10	22.26	894	896	901	3772	178282	17356	31.59	5.905
~~11~~	~~18.57~~	~~702~~	~~7054~~	~~707~~	~~3582~~	~~43110~~	~~11624~~	~~21.15~~	3.955
12	22.82	923	925	927	3428	102531	8105	14.75	2.757
13	21.79	870	872	873	3364	71615	5413	9.85	1.842
14	22.64	914	916	917	3170	70406	8135	14.80	2.768
~~15~~	~~28.96~~	~~1239~~	~~1244~~	~~1247~~	~~3184~~	~~103899~~	~~15425~~	~~28.07~~	~~5.248~~
~~16~~	~~27.77~~	~~1180~~	~~1182~~	~~1184~~	~~3034~~	~~66081~~	~~7598~~	~~13.83~~	2.585
~~17~~	~~18.98~~	~~724~~	~~726~~	~~727~~	~~2682~~	~~31941~~	~~6258~~	~~11.39~~	2.129

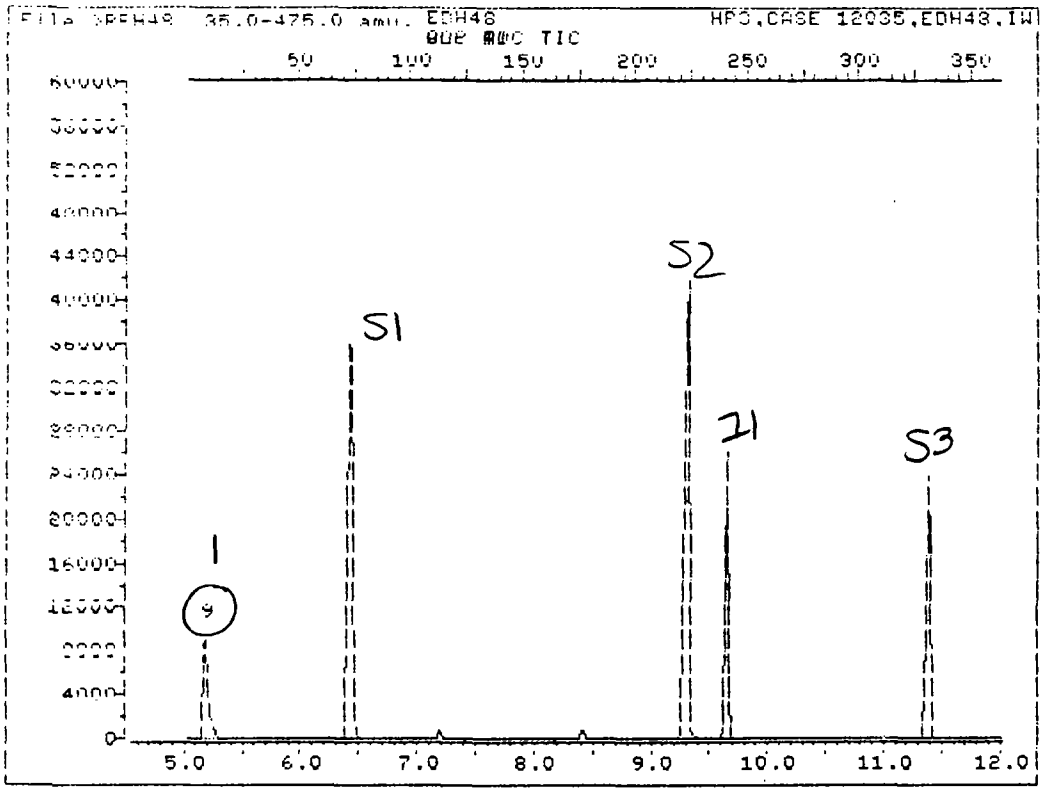
Sum of corrected areas: 293943.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Peak Ht.	Retention Time	Unknown Window
1	40.0	26143.	9.65	5.03 - 11.52
2	40.0	34457.	13.40	11.52 - 16.11
3	40.0	42681.	18.83	16.11 - 21.08
4	40.0	33918.	23.34	21.08 - 27.43
5	40.0	41620.	31.53	27.43 - 33.57
6	40.0	42030.	35.61	33.57 - 46.05

Dilution Factor = ********

Conc Int Std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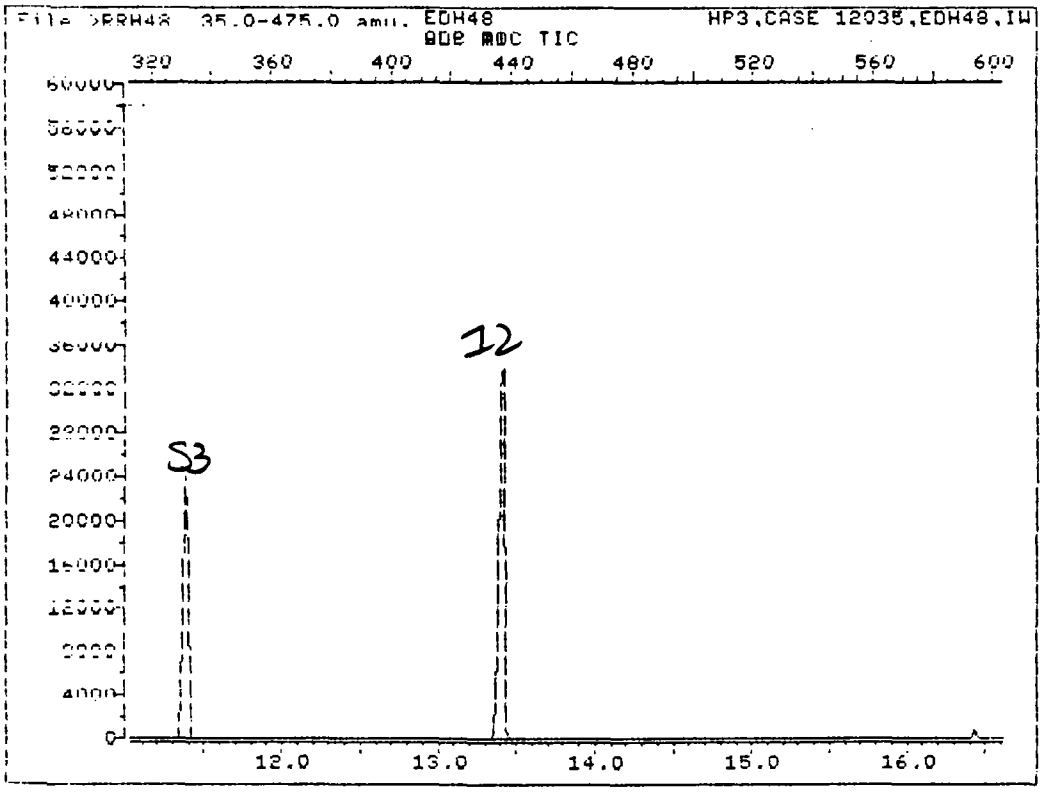
HP3,CASE 12035,EDH48,IW
QDP MDC TIC
S1
S2
21
S3
1
9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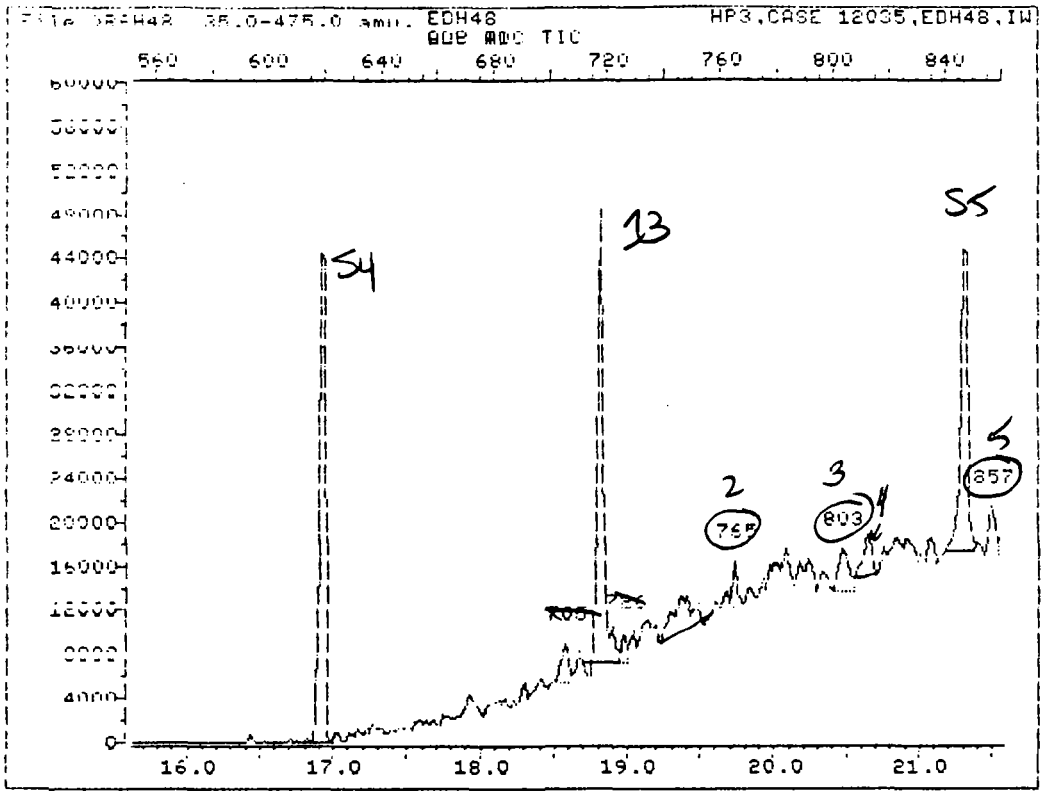
HP3,CASE 12035,EDH48,IW
QDP MDC TIC
S3
22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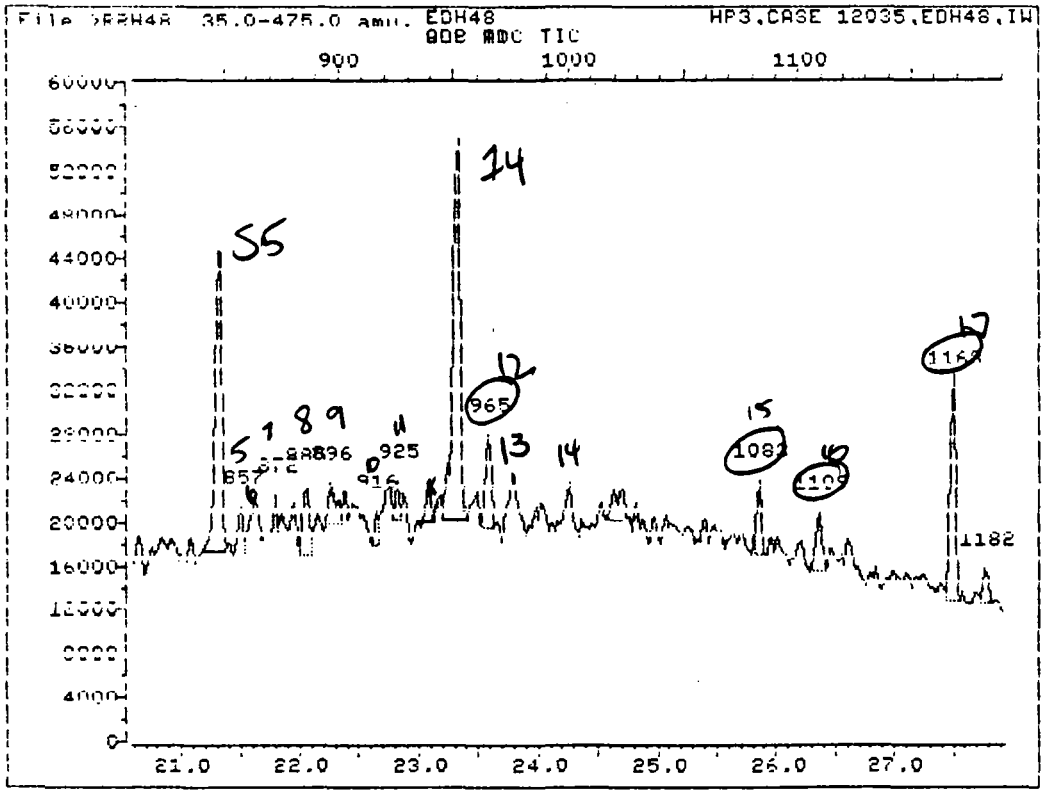
HP3,CASE 12035,EDH48,IW
QQP MDC TIC
560 600 640 680 720 760 800 840
60000 56000 52000 48000 44000 40000 36000 32000 28000 24000 20000 16000 12000 8000 4000 0
16.0 17.0 18.0 19.0 20.0 21.0
S4
13
S5
2
3
5
857
765
803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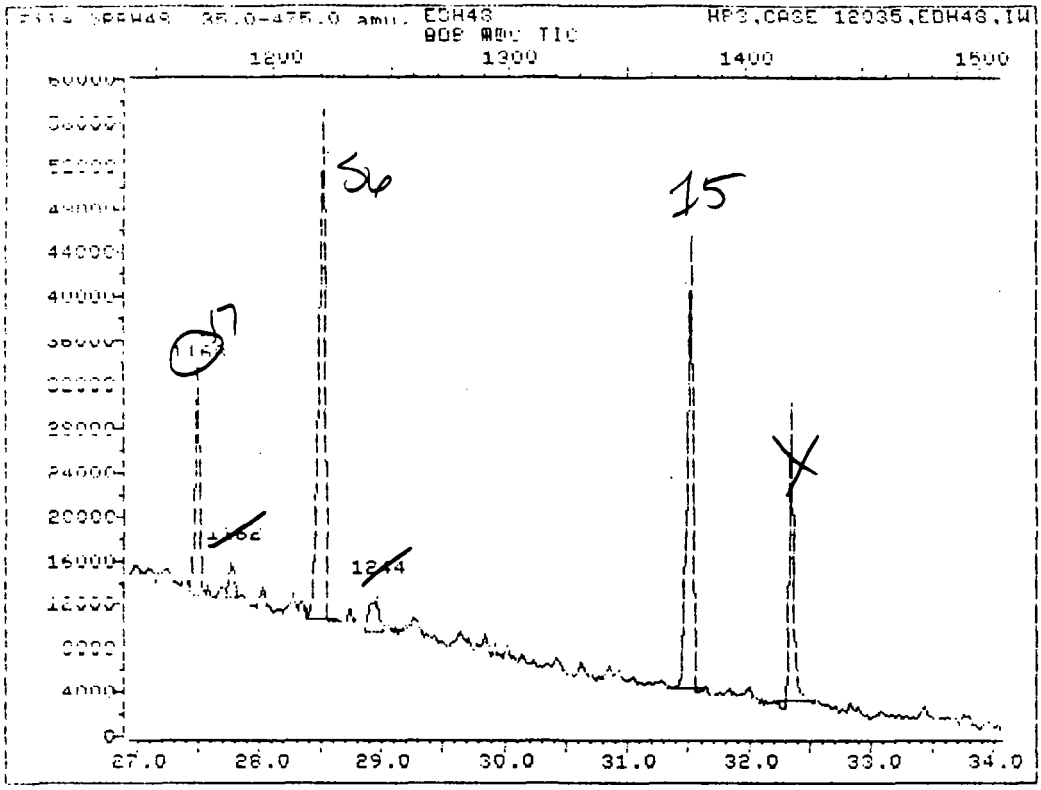
HP3,CASE 12035,EDH48,IW
QQP MDC TIC
900 1000 1100
60000 56000 52000 48000 44000 40000 36000 32000 28000 24000 20000 16000 12000 8000 4000 0
21.0 22.0 23.0 24.0 25.0 26.0 27.0
S5
14
12
965
13
14
15
17
1182
1
8
9
11
925
896
857


File >EDH48 35.0-475.0 amu. EDH48
HP3,CASE 12035,EDH48,IW
BOB MDC TIC
1200
1300
1400
1500
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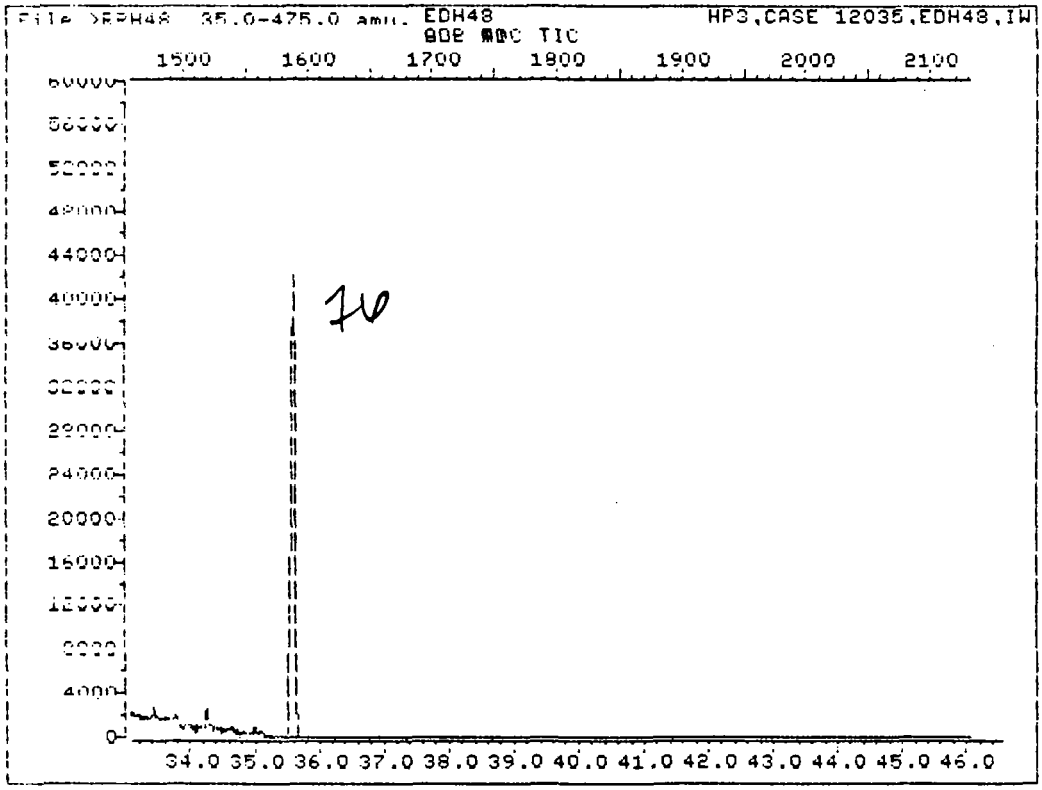
31.0
32.0
33.0
34.0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HP3,CASE 12035,EDH48,IW
BOB MDC TIC
1500
1600
1700
1800
1900
2000
2100
70
34.0 35.0 36.0 37.0 38.0 39.0 40.0 41.0 42.0 43.0 44.0 45.0 46.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH49

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH49

Sample wt/vol: 30.0 (g/mL) G Lab File ID: RRH49

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 4 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/23/89

GPC Cleanup: (Y/N) Y pH: 9.3 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	690	U
111-44-4	bis(2-Chloroethyl)ether	690	U
95-57-8	2-Chlorophenol	690	U
541-73-1	1,3-Dichlorobenzene	690	U
106-46-7	1,4-Dichlorobenzene	690	U
100-51-6	Benzyl alcohol	690	U
95-50-1	1,2-Dichlorobenzene	690	U
95-48-7	2-Methylphenol	690	U
108-60-1	bis(2-Chloroisopropyl)ether	690	U
106-44-5	4-Methylphenol	690	U
621-64-7	N-Nitroso-di-n-propylamine	690	U
67-72-1	Hexachloroethane	690	U
98-95-3	Nitrobenzene	690	U
78-59-1	Isophorone	690	U
88-75-5	2-Nitrophenol	690	U
105-67-9	2,4-Dimethylphenol	690	U
65-85-0	Benzoic acid	3300	U
111-91-1	bis(2-Chloroethoxy)methane	690	U
120-83-2	2,4-Dichlorophenol	690	U
120-82-1	1,2,4-Trichlorobenzene	690	U
91-20-3	Naphthalene	690	U
106-47-8	4-Chloroaniline	690	U
87-68-3	Hexachlorobutadiene	690	U
59-50-7	4-Chloro-3-methylphenol	690	U
91-57-6	2-Methylnaphthalene	690	U
77-47-4	Hexachlorocyclopentadiene	690	U
88-06-2	2,4,6-Trichlorophenol	690	U
95-95-4	2,4,5-Trichlorophenol	3300	U
91-58-7	2-Chloronaphthalene	690	U
88-74-4	2-Nitroaniline	3300	U
131-11-3	Dimethylphthalate	690	U
208-96-8	Acenaphthylene	690	U
606-20-2	2,6-Dinitrotoluene	690	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH49

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH49

Sample wt/vol: 30.0 (g/mL) G Lab File ID: RRH49

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 4 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/23/89

GPC Cleanup: (Y/N) Y pH: 9.3 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3300	U
83-32-9	Acenapthene	690	U
51-28-5	2,4-Dinitrophenol	3300	U
100-02-7	4-Nitrophenol	3300	U
132-64-9	Dibenzofuran	690	U
121-14-2	2,4-Dinitrotoluene	690	U
84-66-2	Diethylphthalate	690	U
7005-72-3	4-Chlorophenyl-phenylether	690	U
86-73-7	Fluorene	690	U
100-01-6	4-Nitroaniline	3300	U
534-52-1	4,6-Dinitro-2-methylphenol	3300	U
86-30-6	N-Nitrosodiphenylamine (1)	690	U
101-55-3	4-Bromophenyl-phenylether	690	U
118-74-1	Hexachlorobenzene	690	U
87-86-5	Pentachlorophenol	310	J
85-01-8	Phenanthrene	690	U
120-12-7	Anthracene	690	U
84-74-2	Di-n-butylphthalate	690	U
206-44-0	Fluoranthene	690	U
129-00-0	Pyrene	690	U
85-68-7	Butylbenzylphthalate	690	U
91-94-1	3,3'-Dichlorobenzidine	1400	U
56-55-3	Benzo(a)anthracene	690	U
218-01-9	Chrysene	690	U
117-81-7	bis(2-Ethylhexyl)phthalate	970	~~B~~ U 10/11/89
117-84-0	Di-n-octylphthalate	690	U
205-99-2	Benzo(b)fluoranthene	690	U
207-08-9	Benzo(k)fluoranthene	690	U
50-32-8	Benzo(a)pyrene	690	U
193-39-5	Indeno(1,2,3-cd)pyrene	690	U
53-70-3	Dibenz(a,h)anthracene	690	U
191-24-2	Benzo(g,h,i)perylene	690	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EDH49

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: EDH49

Sample wt/vol: 30.0 (g/mL) G Lab File ID: RRH49

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 4 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/23/89

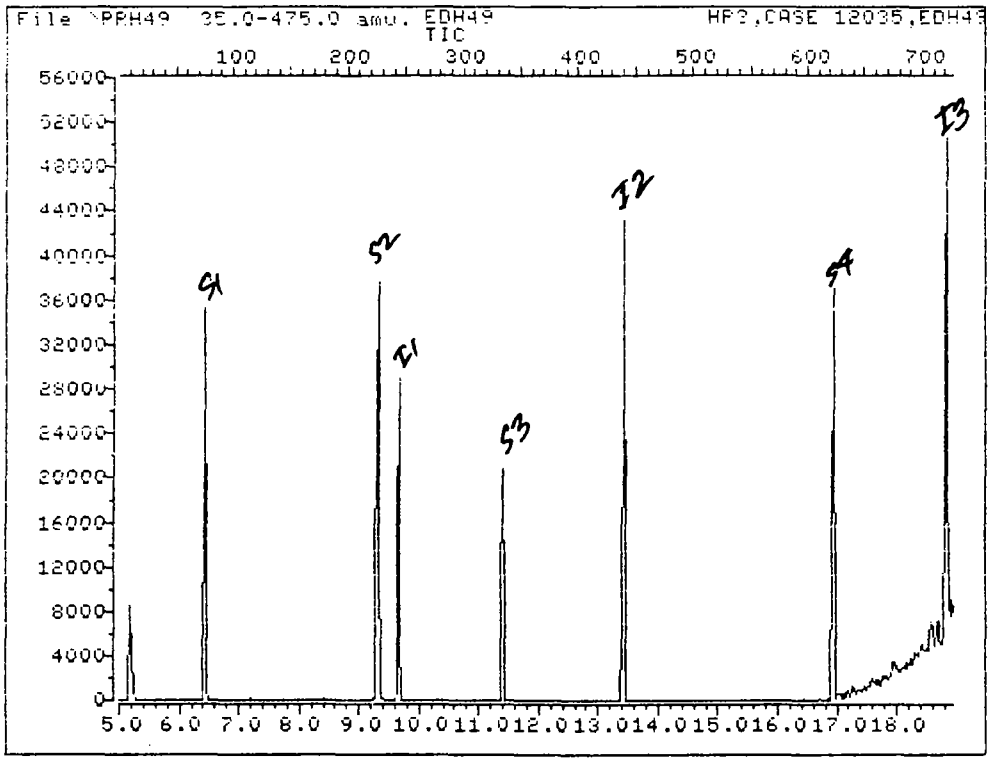
GPC Cleanup : (Y/N) Y pH: 9.3 Dilution Factor: 1.000

Number TICs found: 11

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	5.18	820	JB
2.	UNKNOWN HYDROCARBON	21.52	310	J
3.	UNKNOWN	22.07	330	J
4. - -	UNKNOWN	22.27	280	J
5.	UNKNOWN	22.83	240	J
6.	UNKNOWN	23.60	590	J
7.	UNKNOWN	23.81	320	J
8.	UNKNOWN	24.27	370	J
9.	UNKNOWN HYDROCARBON	25.87	460	J
10.	UNKNOWN HYDROCARBON	26.37	420	J
11.	UNKNOWN HYDROCARBON	27.51	1300	JB
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ION CHROMATOGRAM



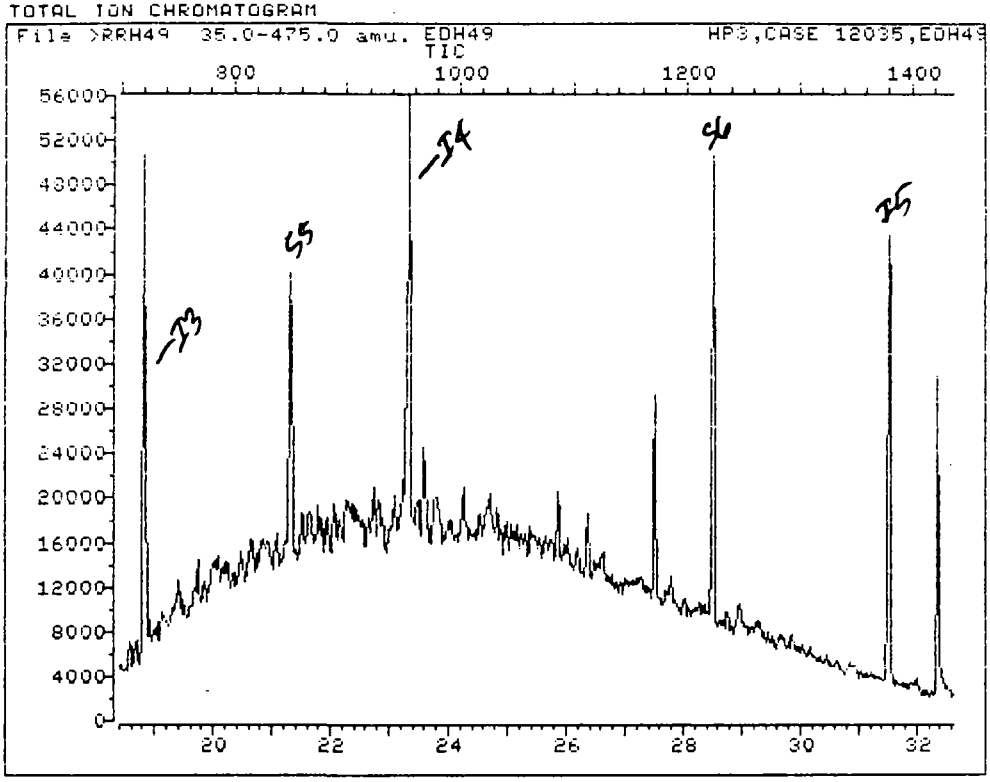
Data File: >RRH49::D3 Quant Output File: ^RRH49::SC
Name: EDH49
Misc: HP3,CASE 12035,EDH49,IW 30g,FVC 2ml,06/06/89,pH 4,%M9,BTL# 5

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890623 13:58

Operator ID: JOHN
Quant Time: 890623 16:47
Injected at: 890623 16:00

TIC page 1 of 3

TOTAL ION CHROMATOGRAM



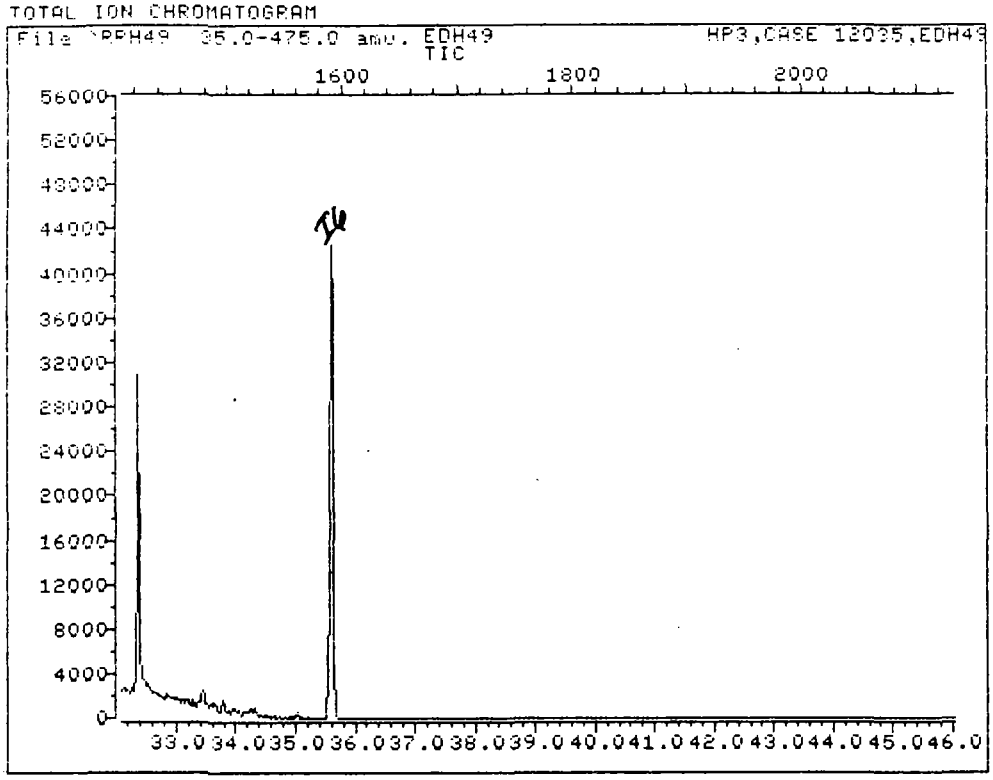
Data File: >RRH49::D3 Quant Output File: ^RRH49::SC
Name: EDH49
Misc: HP3,CASE 12035,EDH49,IW 30g,FVC 2ml,06/06/89,pH 4,%M9,BTL# 5

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890623 13:58

Operator ID: JOHN
Quant Time: 890623 16:47
Injected at: 890623 16:00

TIC page 2 of 3

TOTAL ION CHROMATOGRAM



Data File: >RRH49::D3 Quant Output File: ^RRH49::SC
Name: EDH49
Misc: HP3,CASE 12035,EDH49,IW 30g,FVC 2ml,06/06/89,pH 4,%M9,BTL# 5

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890623 13:58

Operator ID: JOHN
Quant Time: 890623 16:47
Injected at: 890623 16:00

TIC page 3 of 3

QUANT REPORT

% Moist.: 3.82 Wet: 30 g Dry: 28.85 g

Operator ID: JOHN Quant Rev: 6 Quant Time: 890623 16:47
Output File: ^RRH49::SC Injected at: 890623 16:00
Data File: >RRH49::D3 Dilution Factor: 1.00000
Name: EDH49
Misc: HP3,CASE 12035,EDH49,IW 30g,FVC 2ml,06/06/89,pH 4,%M9,BTL# 5

ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890623 13:58

% Sur Rec = Amtx FV x100 / Amt spiked

A = BN =

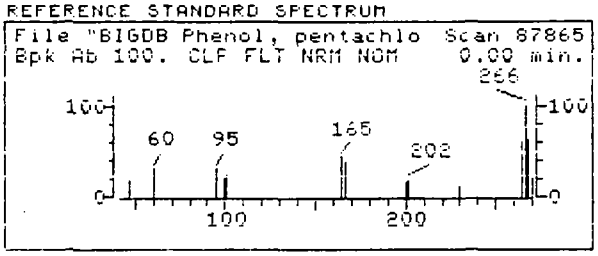
Cmpd Fd = Amt (ppm) X FV/IW

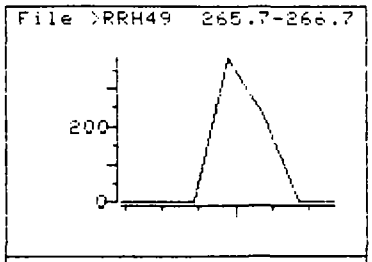
	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.66	152.0	10719	40.00	ng/uL	95
2)	2-Fluorophenol	6.43	112.0	22114	69.47	ng/uL	97
3)	Phenol-d5	9.32	99.0	37608	74.63	ng/uL	82
4)	Phenol	9.34	94.0	479	~~95~~	ng/uL	72
5)	bis(-2-Chloroethyl)Ether	0.00	93.0	0	0.00	ng/uL	
6)	2-Chlorophenol	0.00	128.0	0	0.00	ng/uL	
7)	1,3-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
8)	1,4-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
9)	Benzyl Alcohol	0.00	108.0	0	0.00	ng/uL	
10)	1,2-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
11)	2-Methylphenol	0.00	108.0	0	0.00	ng/uL	
12)	bis(2-Chloroisopropyl)ether	0.00	45.0	0	0.00	ng/uL	
13)	4-Methylphenol	0.00	108.0	0	0.00	ng/uL	
14)	N-Nitroso-Di-n-propylamine	0.00	70.0	0	0.00	ng/uL	
15)	Hexachloroethane	0.00	117.0	0	0.00	ng/uL	
16)	*d8-Naphthalene	13.43	136.0	47035	40.00	ng/uL	86
17)	Nitrobenzene-d5	11.39	82.0	14943	32.95	ng/uL	81
18)	Nitrobenzene	0.00	77.0	0	0.00	ng/uL	
19)	Isophorone	0.00	82.0	0	0.00	ng/uL	
20)	2-Nitrophenol	0.00	139.0	0	0.00	ng/uL	
21)	2,4-Dimethylphenol	0.00	107.0	0	0.00	ng/uL	
22)	Benzoic Acid	0.00	105.0	0	0.00	ng/uL	
23)	bis(-2-Chloroethoxy)Methane	0.00	93.0	0	0.00	ng/uL	
24)	2,4-Dichlorophenol	0.00	162.0	0	0.00	ng/uL	
25)	1,2,4-Trichlorobenzene	0.00	180.0	0	0.00	ng/uL	
26)	Naphthalene	0.00	128.0	0	0.00	ng/uL	
27)	4-Chloroaniline	0.00	127.0	0	0.00	ng/uL	
28)	Hexachlorobutadiene	0.00	225.0	0	0.00	ng/uL	
29)	4-Chloro-3-methylphenol	0.00	107.0	0	0.00	ng/uL	
30)	2-Methylnaphthalene	0.00	142.0	0	0.00	ng/uL	
31)	*d10-Acenaphthene	18.84	164.0	27858	40.00	ng/uL	93
32)	Hexachlorocyclopentadiene	0.00	237.0	0	0.00	ng/uL	
33)	2,4,6-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
34)	2,4,5-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
35)	2-Chloronaphthalene	0.00	162.0	0	0.00	ng/uL	
36)	2-Fluorobiphenyl	16.93	172.0	36571	43.76	ng/uL	93
37)	2-Nitroaniline	0.00	65.0	0	0.00	ng/uL	
38)	Dimethyl Phthalate	0.00	163.0	0	0.00	ng/uL	
39)	Acenaphthylene	0.00	152.0	0	0.00	ng/uL	
40)	2,6-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
41)	3-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
42)	Acenaphthene	18.92	153.0	390	~~45~~	ng/uL	97
43)	2,4-Dinitrophenol	0.00	184.0	0	0.00	ng/uL	
44)	4-Nitrophenol	0.00	109.0	0	0.00	ng/uL	
45)	Dibenzofuran	0.00	168.0	0	0.00	ng/uL	
46)	2,4-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
47)	Diethylphthalate	0.00	149.0	0	0.00	ng/uL	
48)	4-Chlorophenyl-phenylether	0.00	204.0	0	0.00	ng/uL	
49)	Fluorene	0.00	166.0	0	0.00	ng/uL	

50)	4-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
51)	2,4,6-Tribromophenol	21.32	330.0	10898	114.57	ng/uL	99
52)	*d10-Phenanthrene	23.35	188.0	47136	40.00	ng/uL	98
53)	4,6-Dinitro-2-methylphenol	0.00	198.0	0	0.00	ng/uL	
54)	N-Nitrosodiphenylamine	0.00	169.0	0	0.00	ng/uL	
55)	4-Bromophenyl-phenylether	0.00	248.0	0	0.00	ng/uL	
56)	Hexachlorobenzene	0.00	284.0	0	0.00	ng/uL	
57)	Pentachlorophenol	23.10	266.0	694	4.49	ng/uL → 36	95
58)	Phenanthrene	0.00	178.0	0	0.00	ng/uL	
59)	Anthracene	0.00	178.0	0	0.00	ng/uL	
60)	Di-n-Butylphthalate	0.00	149.0	0	0.00	ng/uL	
61)	Fluoranthene	0.00	202.0	0	0.00	ng/uL	
62)	*d12-Chrysene	31.54	240.0	55504	40.00	ng/uL	93
63)	Pyrene	0.00	202.0	0	0.00	ng/uL	
64)	Terphenyl-d14	28.53	244.0	50375	40.70	ng/uL	91
65)	Butylbenzylphthalate	0.00	149.0	0	0.00	ng/uL	
66)	3,3'-Dichlorobenzidine	0.00	252.0	0	0.00	ng/uL	
67)	Benzo(a)Anthracene	0.00	228.0	0	0.00	ng/uL	
68)	Chrysene	0.00	228.0	0	0.00	ng/uL	
69)	Bis(2-Ethylhexyl)Phthalate	32.36	149.0	23206	14.03	ng/uL → 970	89
70)	*d12-Perylene	35.62	264.0	65237	40.00	ng/uL	93
71)	Di-n-octyl phthalate	0.00	149.0	0	0.00	ng/uL	
72)	Benzo(b)fluoranthene	0.00	252.0	0	0.00	ng/uL	
73)	Benzo(k)Fluoranthene	0.00	252.0	0	0.00	ng/uL	
74)	Benzo(a)Pyrene	0.00	252.0	0	0.00	ng/uL	
75)	Indeno(1,2,3-cd)Pyrene	0.00	276.0	0	0.00	ng/uL	
76)	Dibenz(a,h)Anthracene	0.00	278.0	0	0.00	ng/uL	
77)	Benzo(g,h,i)Perylene	0.00	276.0	0	0.00	ng/uL	

* Compound is ISTD

REFERENCE STANDARD SPECTRUM





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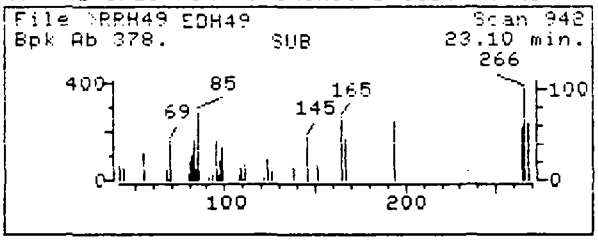

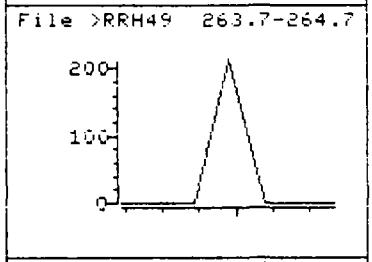

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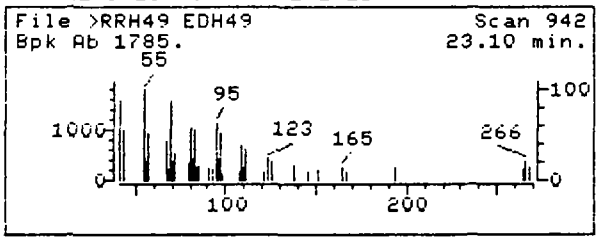
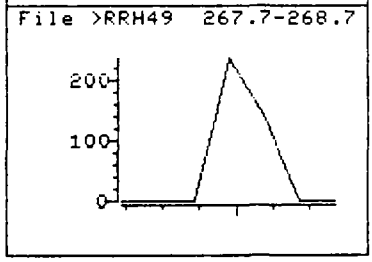
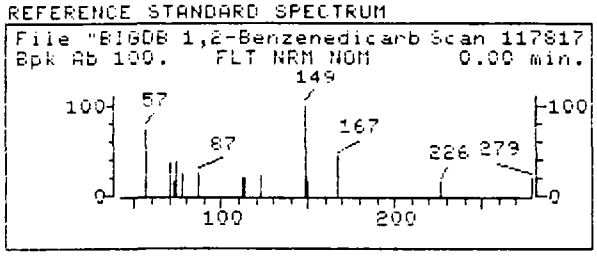




Data File: >RRH49::D3 Quant Output File: ^RRH49::SC
Name: EDH49
Misc: HP3,CASE 12035,EDH49,IW 30g,FVC 2ml,06/06/89,pH 4,%M9,BTL# 5
Quant Time: 890623 16:47 Quant ID File: ID_BCA::SC
Injected at: 890623 16:00 Last Calibration: 890623 13:58

Compound No: 57
Compound Name: Pentachlorophenol
Scan Number: 942
Retention Time: 23.10 min.
Quant Ion: 266.0
Area: 694
Concentration: 4.49 ng/uL
q-value: 95

REFERENCE STANDARD SPECTRUM



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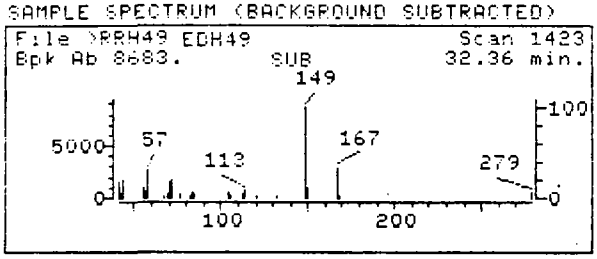

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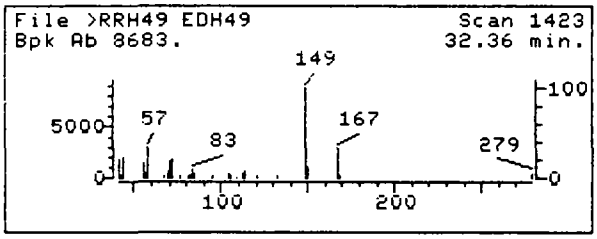
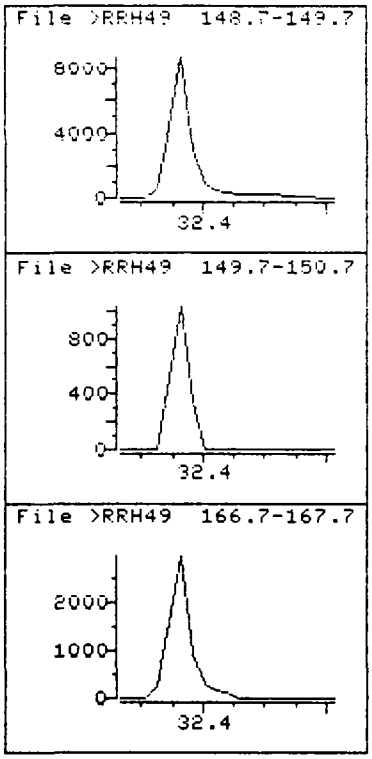
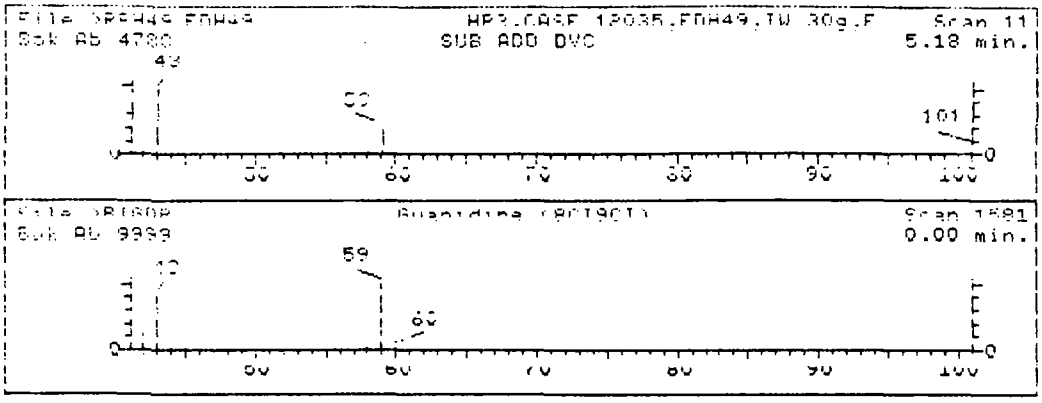




Data File: >RRH49::D3 Quant Output File: ^RRH49::SC
Name: EDH49
Misc: HP3,CASE 12035,EDH49,IW 30g,FVC 2ml,06/06/89,pH 4,%M9,BTL# 5
Quant Time: 890623 16:47 Quant ID File: ID_BCA::SC
Injected at: 890623 16:00 Last Calibration: 890623 13:58

Compound No: 69
Compound Name: Bis(2-Ethylhexyl)Phthalate
Scan Number: 1423
Retention Time: 32.36 min.
Quant Ion: 149.0
Area: 23206
Concentration: 14.03 ng/uL
q-value: 89



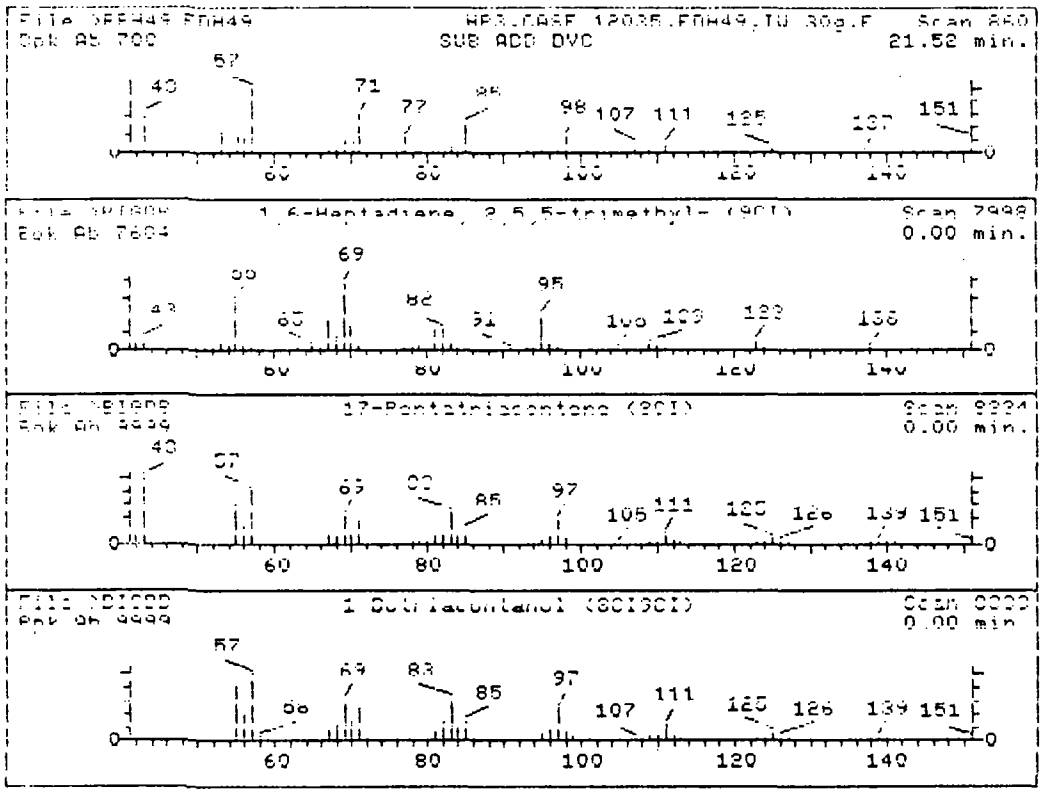
UNKNOWN B

Unknown #.1
Quant Time: 890623 16:47
Injected at: 890623 16:00
Pk Ht= 9560.00 Tentative Concentration is 820.00

1. Guanidine (8CI9CI) 59 CH5N3

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 50

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C I	R_IV
1.	15*	113008	1581	"BIGDB	23	31	0	0	26	59	3	16



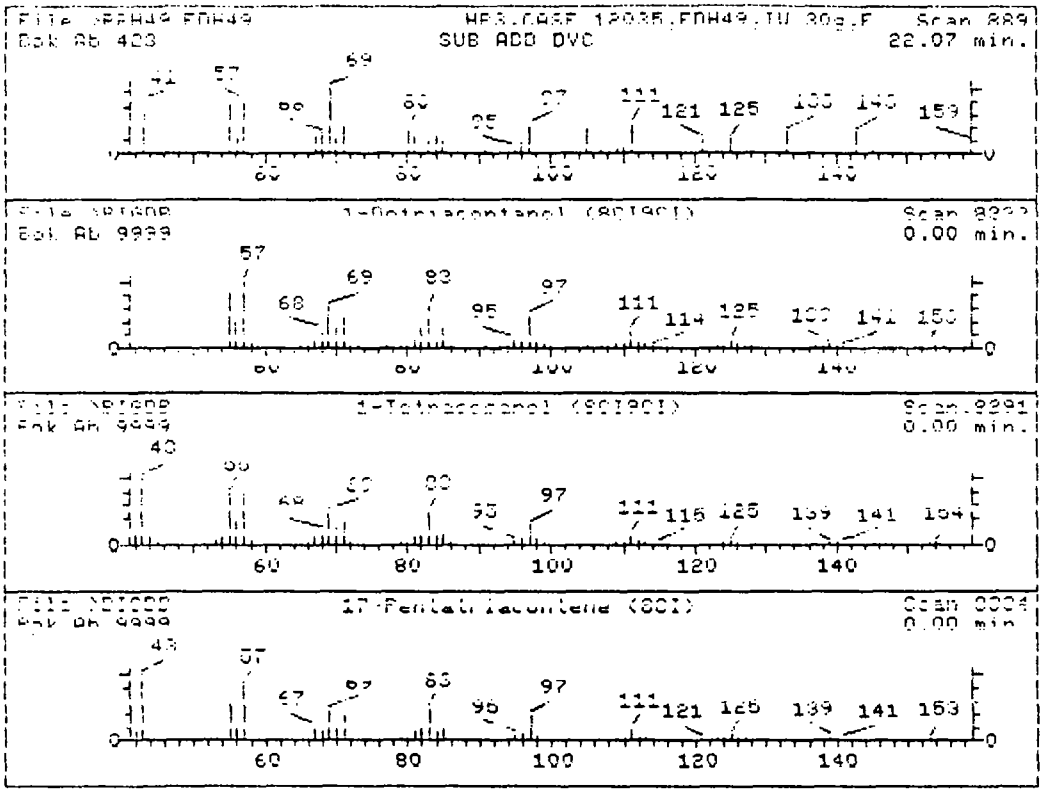
UNKNOWN HYDROCARBON

Unknown #.3
Quant Time: 890623 16:47
Injected at: 890623 16:00
Pk Ht= 4229.00 Tentative Concentration is 310.00

1.	1,6-Heptadiene, 2,5,5-trimethyl- (9CI)	138 C10H18
2.	17-Pentatriacontene (8CI)	490 C35H70
3.	1-Dotriacontanol (8CI9CI)	466 C32H66O
4.	2-Decyne (8CI9CI)	138 C10H18

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 54

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	31*	62238282	7998	"BIGDB	55	48	2	-2	71	43		8		19
2.	20	6971400	8334	"BIGDB	76	95	2	0	96	52		5		19
3.	20	6624799	8333	"BIGDB	65	116	2	0	66	52		5		14



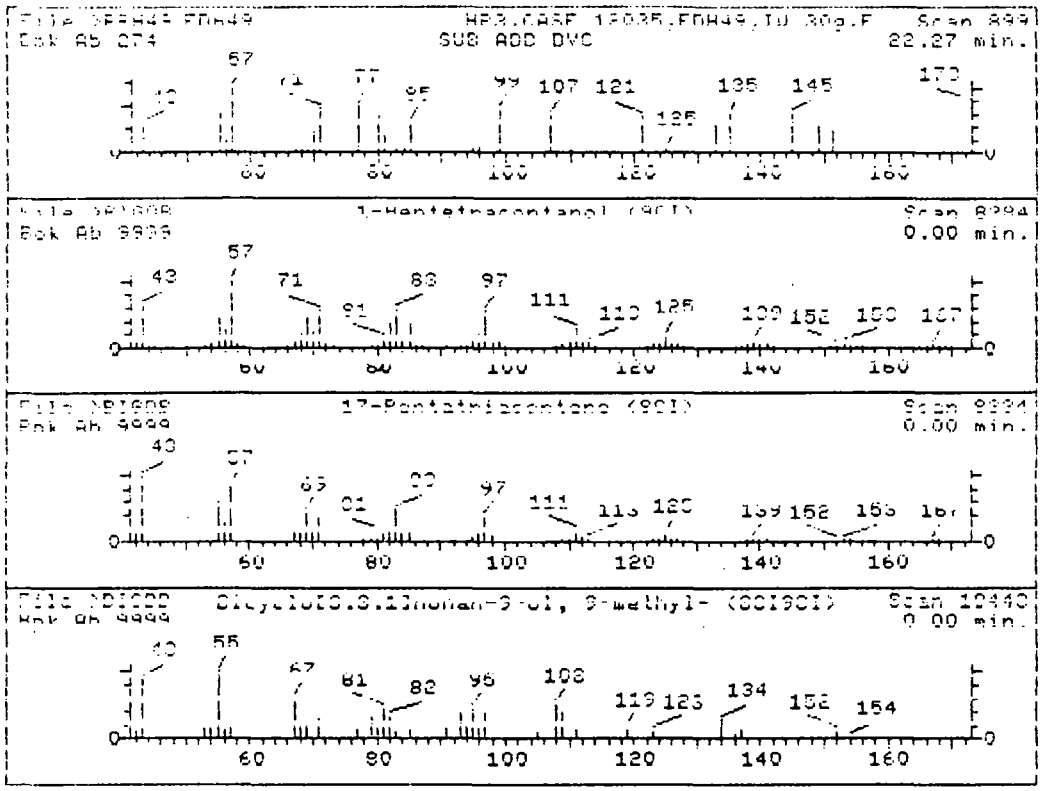
UNKNOWN

Unknown #.4
Quant Time: 890623 16:47
Injected at: 890623 16:00
Pk Ht= 4425.00 Tentative Concentration is 330.00

1. 1-Dotriacontanol (8CI9CI) 466 C32H66O
2. 1-Tetracosanol (8CI9CI) 354 C24H50O
3. 17-Pentatriacontene (8CI) 490 C35H70
4. Cyclopentane, 1,1,3,4-tetramethyl-, trans- (8CI9CI) 126 C9H18

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 51

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	12	6624799	8333	"BIGDB	73	108	1	0	53	61		2		28



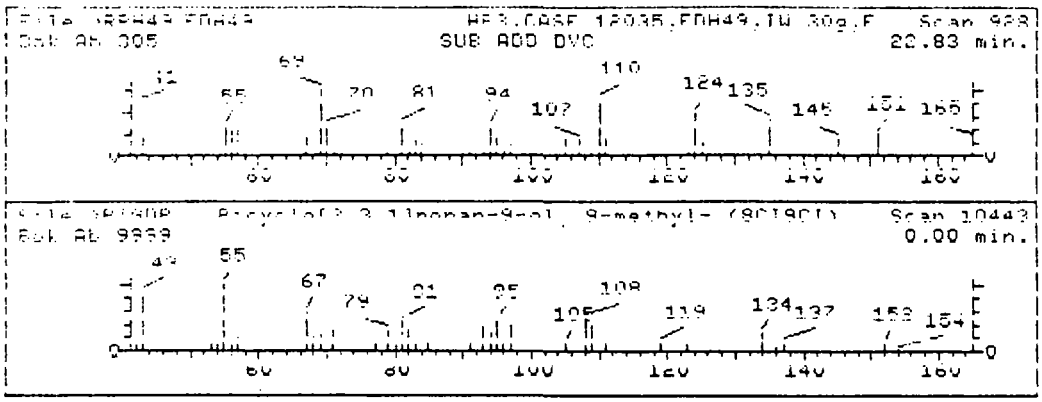
UNKNOWN

Unknown #.5
Quant Time: 890623 16:47
Injected at: 890623 16:00
Pk Ht= 3772.00 Tentative Concentration is 280.00

1.	1-Hentetracontanol (9CI)	592	C41H84O
2.	17-Pentatriacontene (8CI)	490	C35H70
3.	Bicyclo[3.3.1]nonan-9-ol, 9-methyl- (8CI9CI)	154	C10H18O
4.	1-Azabicyclo[2.2.2]octan-3-one (9CI)	125	C7H11NO
5.	Cyclopentanemethanamine, 2-amino- (9CI)	114	C6H14N2
6.	Phosphonic acid, methyl-, bis(1-methylethyl) ester (9CI)	180	C7H17O3P

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 57

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	31	40710427	8384	"BIGDB	91	104	3	0	76	41		8		19
2.	26	6971400	8334	"BIGDB	84	87	2	-1	92	44		8		14
3.	20*	33832256	10443	"BIGDB	37	87	3	0	71	55		5		13



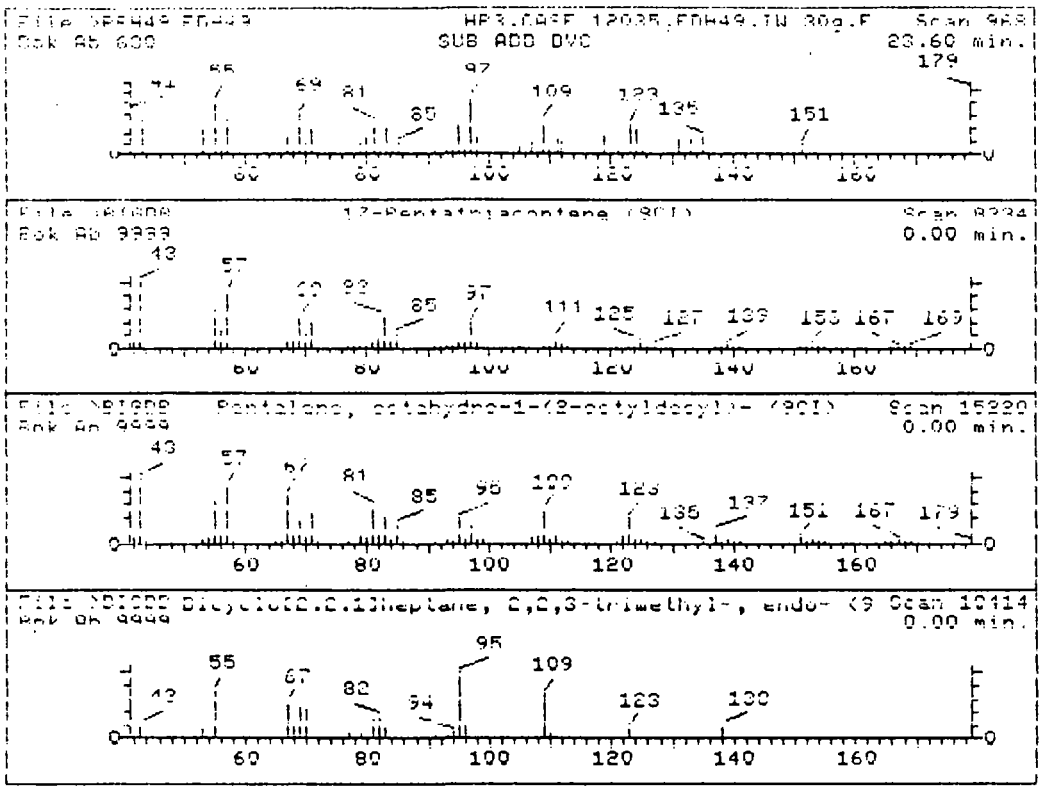
UNKNOWN

. Unknown #.6
Quant Time: 890623 16:47
Injected at: 890623 16:00
Pk Ht= 3299.00 Tentative Concentration is 240.00

1. Bicyclo[3.3.1]nonan-9-ol, 9-methyl- (8CI9CI) 154 C10H18O

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 55

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	15*	33832256	10443	"BIGDB	52	72	3	0	69	57	3		15	



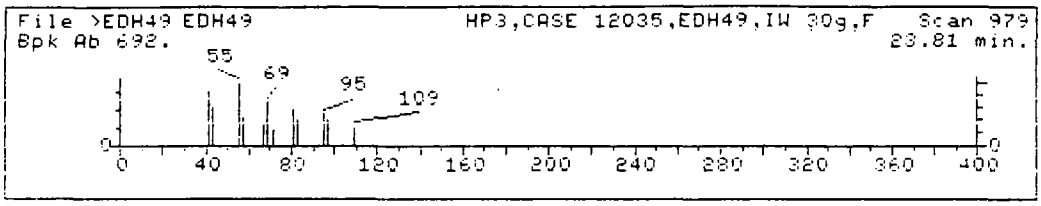
UNKNOWN

. Unknown #.7
Quant Time: 890623 16:47
Injected at: 890623 16:00
Pk Ht= 7986.00 Tentative Concentration is 590.00

1.	17-Pentatriacontene (8CI)	490	C35H70
2.	Pentalene, octahydro-1-(2-octyldecyl)- (9CI)	362	C26H50
3.	Bicyclo[2.2.1]heptane, 2,2,3-trimethyl-, endo- (9CI)	138	C10H18
4.	Cyclohexane, (2-ethyl-1-methylbutylidene)- (9CI)	180	C13H24
5.	1,6-Heptadiene, 2,5,5-trimethyl- (9CI)	138	C10H18
6.	Bicyclo[3.3.1]nonan-9-ol, 9-methyl- (8CI9CI)	154	C10H18O

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 55

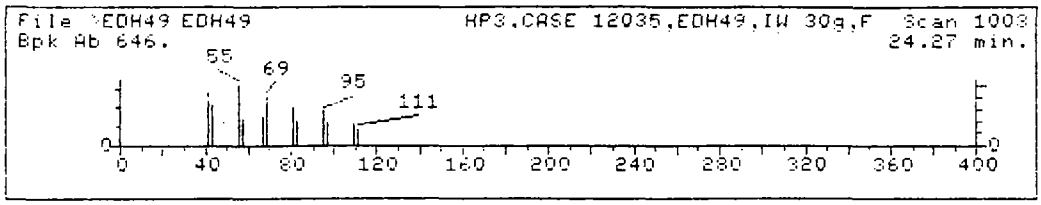
	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	32	6971400	8334	"BIGDB	99	72	1	-3	64	54		9		48



UNKNOWN

Date and Time of injection: 6/22/89 21:12

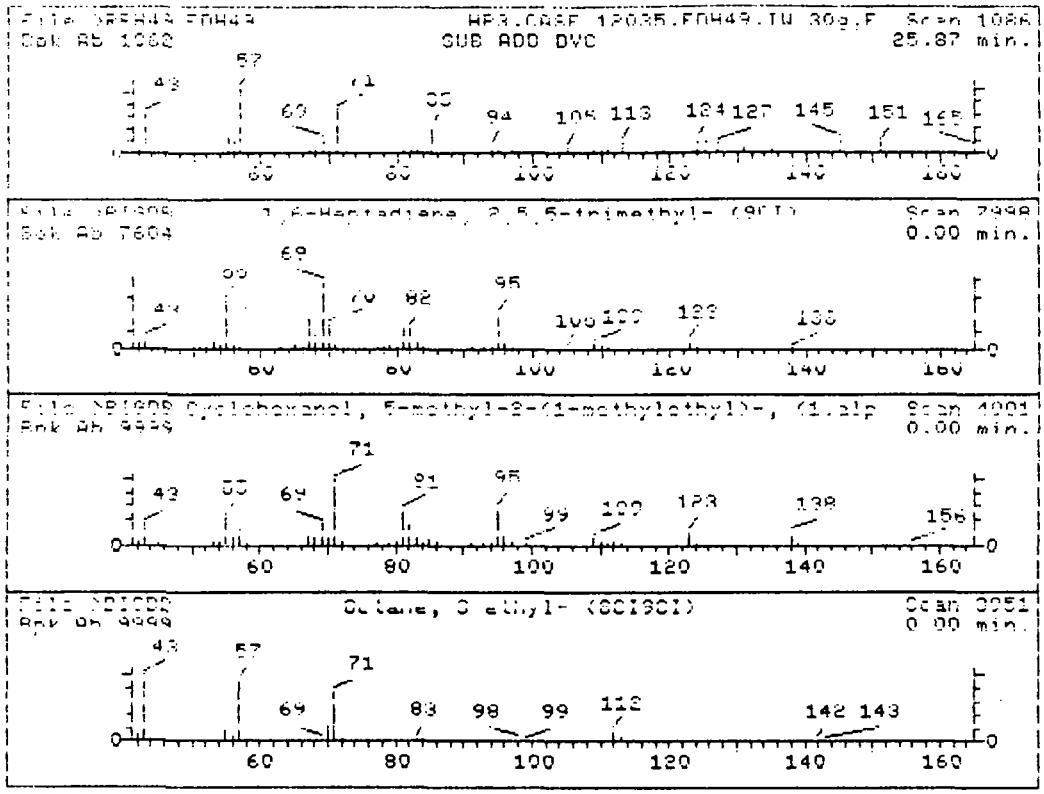
Sample datafile/name: >EDH49::D3



UNKNOWN

Date and Time of injection: 6/22/89 21:12

Sample datafile name: >EDH49::D3



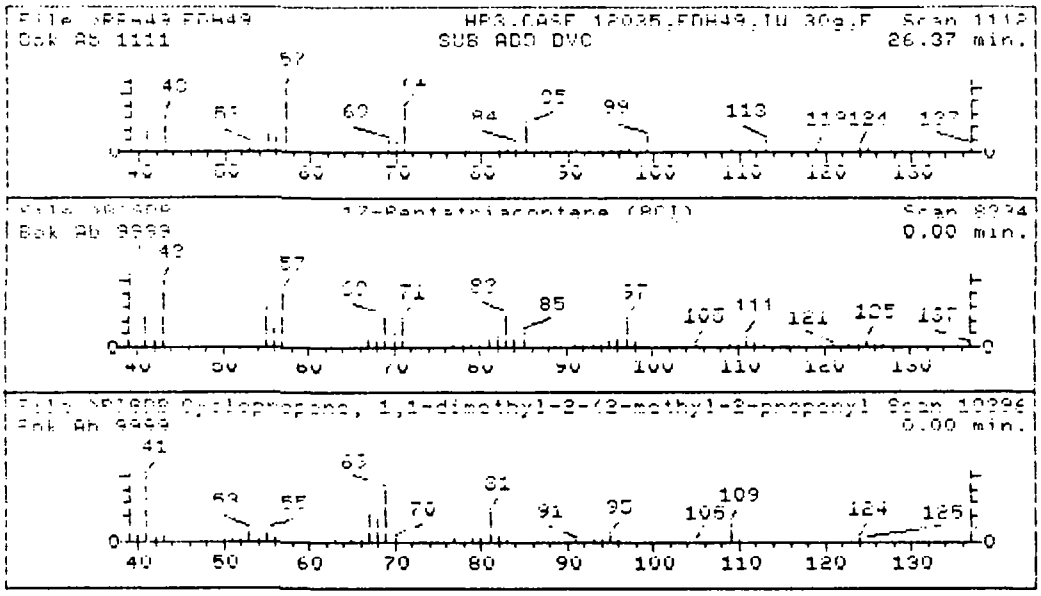
UNKNOWN HYDROCARBON

Unknown #.9
Quant Time: 890623 16:47
Injected at: 890623 16:00
Pk Ht= 6279.00 Tentative Concentration is 460.00

1.	1,6-Heptadiene, 2,5,5-trimethyl- (9CI)	138	C10H18
2.	Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1.alpha.,2.alpha.,5.alpha.)- (9CI)	156	C10H20O
3.	Octane, 3-ethyl- (8CI9CI)	142	C10H22
4.	1-Azabicyclo[2.2.2]octan-3-one (9CI)	125	C7H11NO
5.	Ethanol, 2-bromo- (8CI9CI)	124	C2H5BrO
6.	Bicyclo[3.3.1]nonan-9-ol, 9-methyl- (8CI9CI)	154	C10H18O
7.	17-Pentatriacontene (8CI)	490	C35H70

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 54

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C I	R IV
1.	21*	62238282	7998	"BIGDB	65	38	2	-2	62	60	5	32



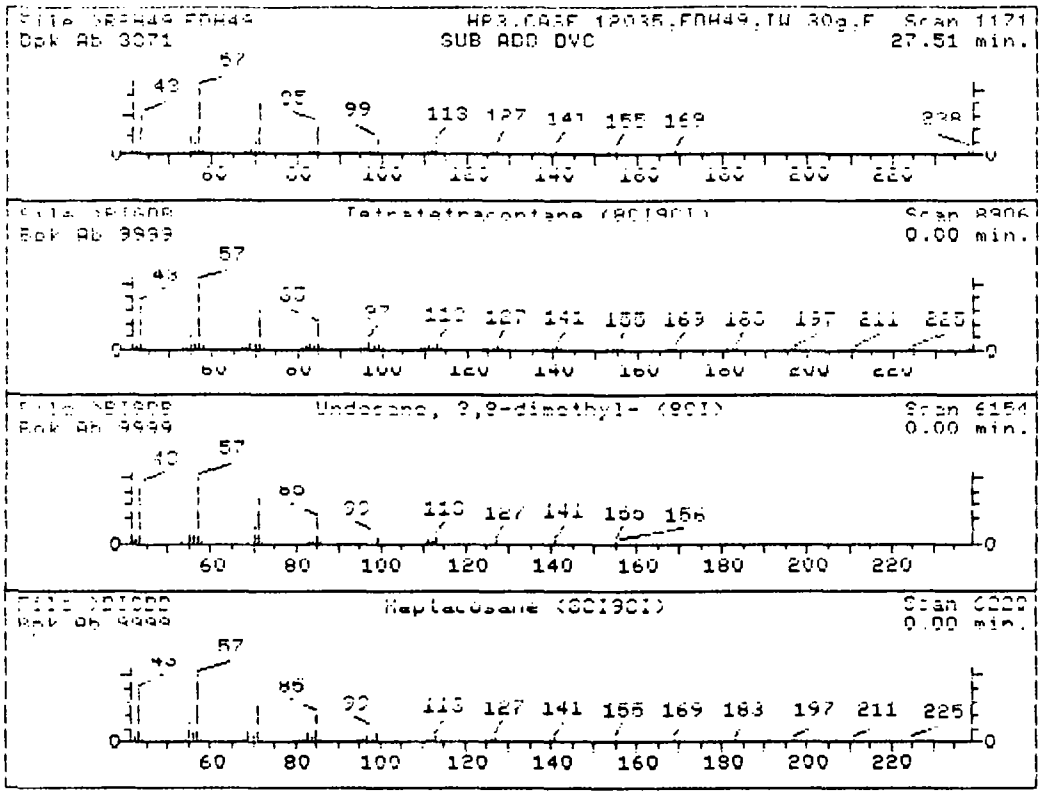
UNKNOWN HYDROCARBON

Unknown #.10
Quant Time: 890623 16:47
Injected at: 890623 16:00
Pk Ht= 5736.00 Tentative Concentration is 420.00

1. 17-Pentatriacontene (8CI) 490 C35H70
2. Cyclopropane, 1,1-dimethyl-2-(2-methyl-2-propenyl)- (9CI) 124 C9H16

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 50

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C	I	R	IV
1.	25	6971400	8334	"BIGDB	60	111	1	0	76	50	7		18	
2.	24*	69147031	10396	"BIGDB	56	46	2	-2	67	52	7		21	



UNKNOWN HYDROCARBON

B

Unknown #.11
Quant Time: 890623 16:47
Injected at: 890623 16:00
Pk Ht= 18201.00 Tentative Concentration is 1300.00

1. Tetratetracontane (8CI9CI)	618	C44H90
2. Undecane, 3,8-dimethyl- (8CI)	184	C13H28
3. Heptacosane (8CI9CI)	380	C27H56
4. Tetratriacontane (8CI9CI)	478	C34H70
5. Tritetracontane (8CI9CI)	604	C43H88
6. Docosane (8CI9CI)	310	C22H46
7. Hexadecane, 2,6,10,14-tetramethyl- (8CI9CI)	282	C20H42

Sample file: ARTIFI Spectrum #: -1
Search speed: 1 Tilting option: S No. of ion ranges searched: 50

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R IV
1.	81	7098228	8906	"BIGDB	97	59	1	-2	89	8	53	46
2.	79	17301303	6154	"BIGDB	77	31	0	-2	71	9	48	38
3.	75	593497	6220	"BIGDB	93	60	0	0	90	16	35	67
4.	67	14167590	6223	"BIGDB	83	80	2	0	90	14	34	23
5.	66	7098217	6150	"BIGDB	71	97	0	0	90	16	31	48
6.	66	629970	6221	"BIGDB	89	58	1	0	71	19	31	46
7.	64	638368	11255	"BIGDB	86	56	1	0	73	23	28	42

BNA TIC CALCULATIONS

SAMPLE ~~ED~~H49 (RRH49)

% Moist: 4 Wet: 30 g Dry: 28.8 g

FV/FVC = 2mL IV/W =

$$\text{TIC Multiplier} = \frac{40\ \mu g}{mL} \times \frac{FV\ (mL)}{IV/W\ (kg\ or\ L)} \cong 2777.78$$

$$\boxed{\text{TIC Amount} = \frac{ht\ TIC}{ht\ IS} \times \text{Multiplier}}$$

ht IS 1 ____ 3 ____ 5 ____
2 ____ 4 60 6 ____

	SCAN	IS	Height	Amount
1	11			820
2	860			310
3	889			330
4	899			280
5	929			240
6	968			590
7	979	60	7	320
8	1003	↓	8	370
9	1086			460
10	1112			420
11	1171			1300
12				
13				
14				
15				
16				
17				
18				
19				
20				

NOTE : ____

MS data file header from : >RRH49

Sample: EDH49 Operator: JOHN SUPER GRP. 6/23/89 16:00
Misc : HP3,CASE 12035,EDH49,IW 30g,FVC 2ml,06/06/89,pH 4.%M9,BTL# 5
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: RBNA Tuning file: MTDH01 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 280 Transfer line temp. : 0

Chromatographic temperatures :	35.	305.	0.	0.	0.
Chromatographic times, min. :	4.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	1.0	0.0

>RRH49 EDH49 HP3,CASE 12035,EDH49,IW 30g,FVC 2ml,06/0

35.01 475.0 CLP ADC TIC
Upslope: .20 Pkht Reject: 2893. Max Peaks: 11 Bunching: 1
Dnslope: 0.00 Results File IRRH49 Sorted by Pkht/Pkht INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	27.51	1168	1171	1174	18201	124286	47084	100.00	21.158
2	5.18	9	11	15	8560	25362	25362	53.87	11.397
3	23.60	965	968	971	7986	140587	25163	53.44	11.308
4	25.87	1082	1086	1089	6279	135737	19105	40.58	8.585
5	26.37	1109	1112	1116	5736	123955	19448	41.30	8.739
6	22.07	886	889	892	4425	122288	17106	36.33	7.687
7	21.52	857	860	863	4229	118336	17836	37.88	8.015
~~8~~	~~19.74~~	~~766~~	~~768~~	~~770~~	~~3789~~	~~57627~~	~~8466~~	~~17.98~~	~~3.804~~
9	22.27	897	899	904	3772	154214	23454	49.81	10.540
10	22.83	926	928	930	3299	86719	9727	20.66	4.371
~~11~~	~~24.99~~	~~1038~~	~~1040~~	~~1043~~	~~2984~~	~~96669~~	~~9782~~	~~20.78~~	~~4.396~~

Sum of corrected areas: 222533.

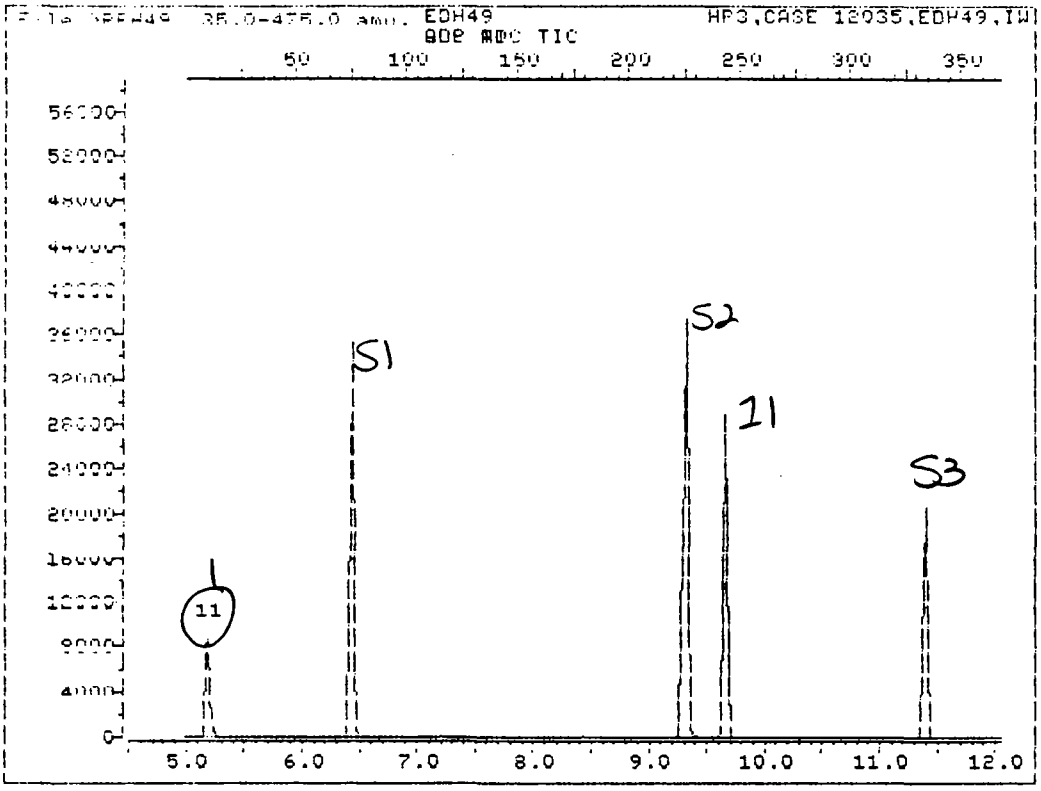
Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Peak Ht.	Retention Time	Unknown Window
1	40.0	28930.	9.66	4.99 - 11.55
2	40.0	43147.	13.43	11.55 - 16.14
3	40.0	45530.	18.84	16.14 - 21.09
4	40.0	37709.	23.35	21.09 - 27.44
5	40.0	40065.	31.53	27.44 - 33.58
6	40.0	42572.	35.62	33.58 - 46.04

Dilution Factor = ********

$$\text{Unknown Concentration} = \frac{\text{Conc Int Std}}{\text{Pk.Ht.Int.Std.}} * \text{Dil Factor} * \text{Pk.Ht.Unknown}$$

5:07 PM WED., 28 JUNE, 1989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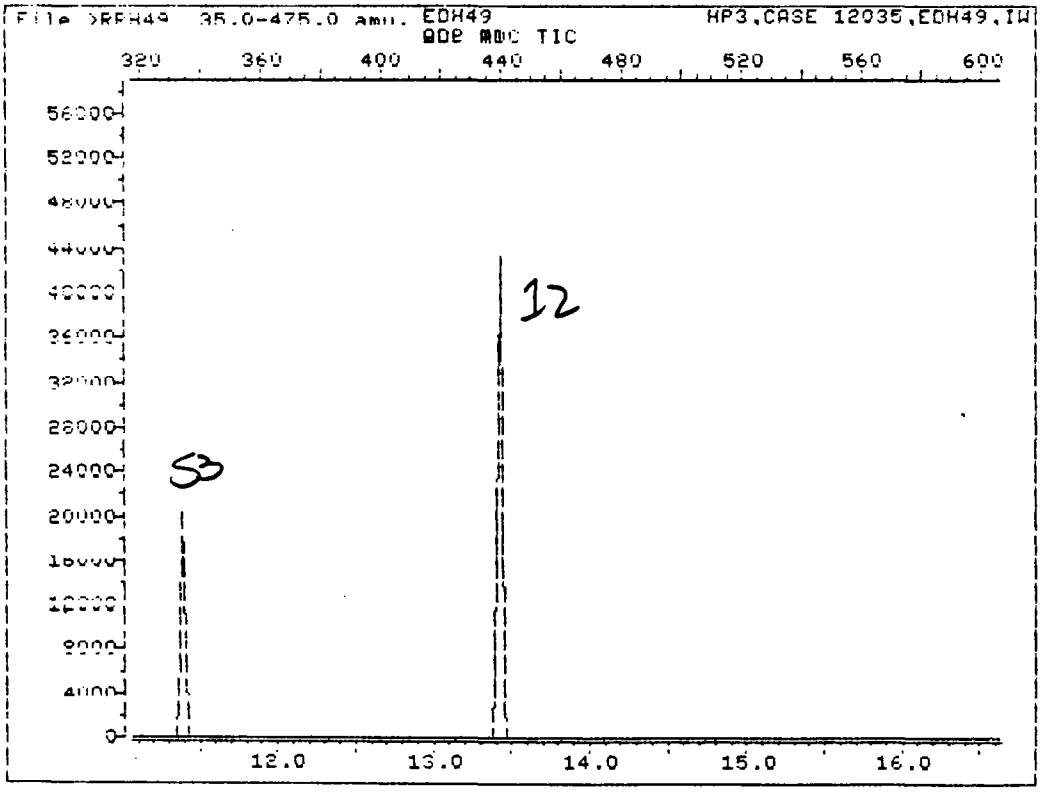
56000
52000
48000
44000
40000
36000
32000
28000
24000
20000
16000
12000
8000
4000
0
S1
S2
I1
S3
11
5.0 6.0 7.0 8.0 9.0 10.0 11.0 12.0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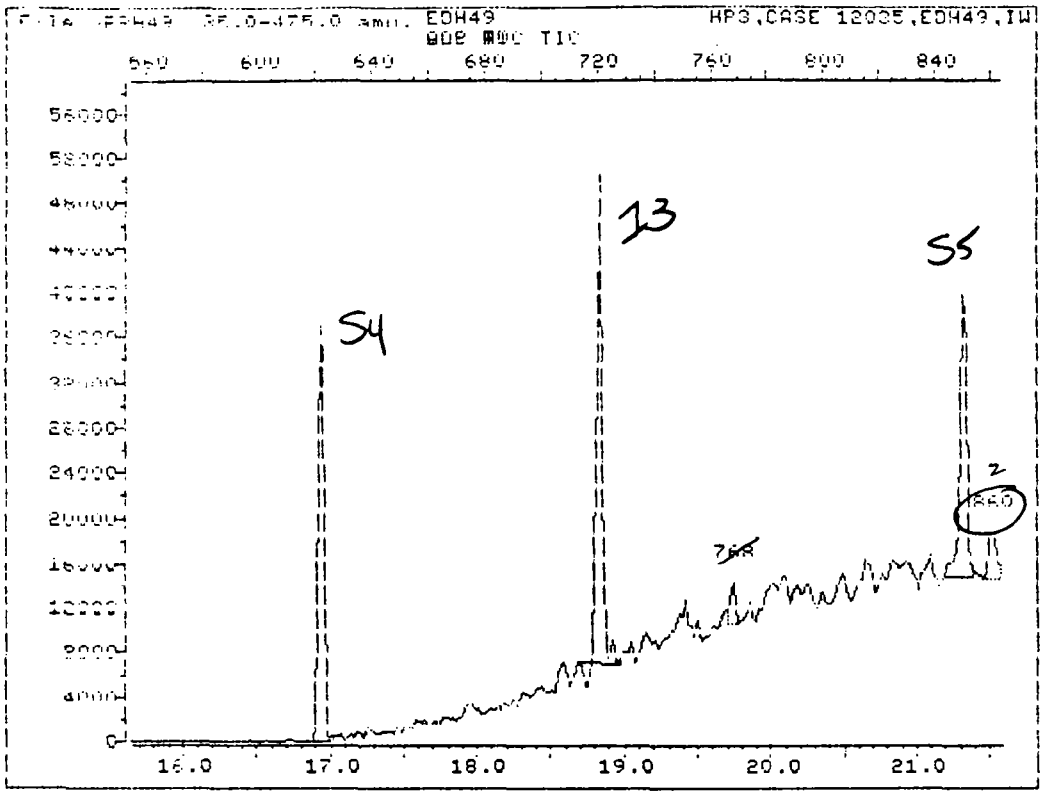
HP3,CASE 12035,EDH49,IW
QDP MDC TIC
320 360 400 440 480 520 560 600
56000
52000
48000
44000
40000
36000
32000
28000
24000
20000
16000
12000
8000
4000
0
S3
I2
12.0 13.0 14.0 15.0 16.0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QQP MQC TIC
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56000
52000
48000
44000
40000
36000
32000
28000
24000
20000
16000
12000
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13
S5
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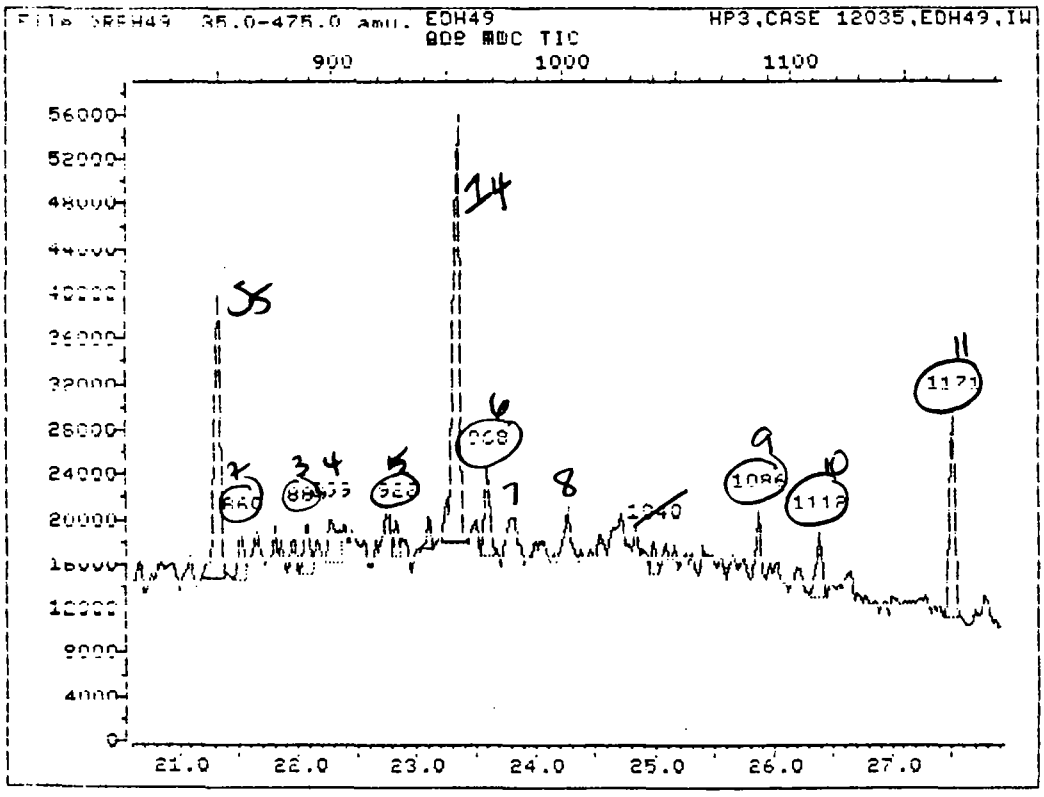
860
768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QQP MQC TIC
900 1000 1100
56000
52000
48000
44000
40000
36000
32000
28000
24000
20000
16000
12000
8000
4000
0
21.0 22.0 23.0 24.0 25.0 26.0 27.0
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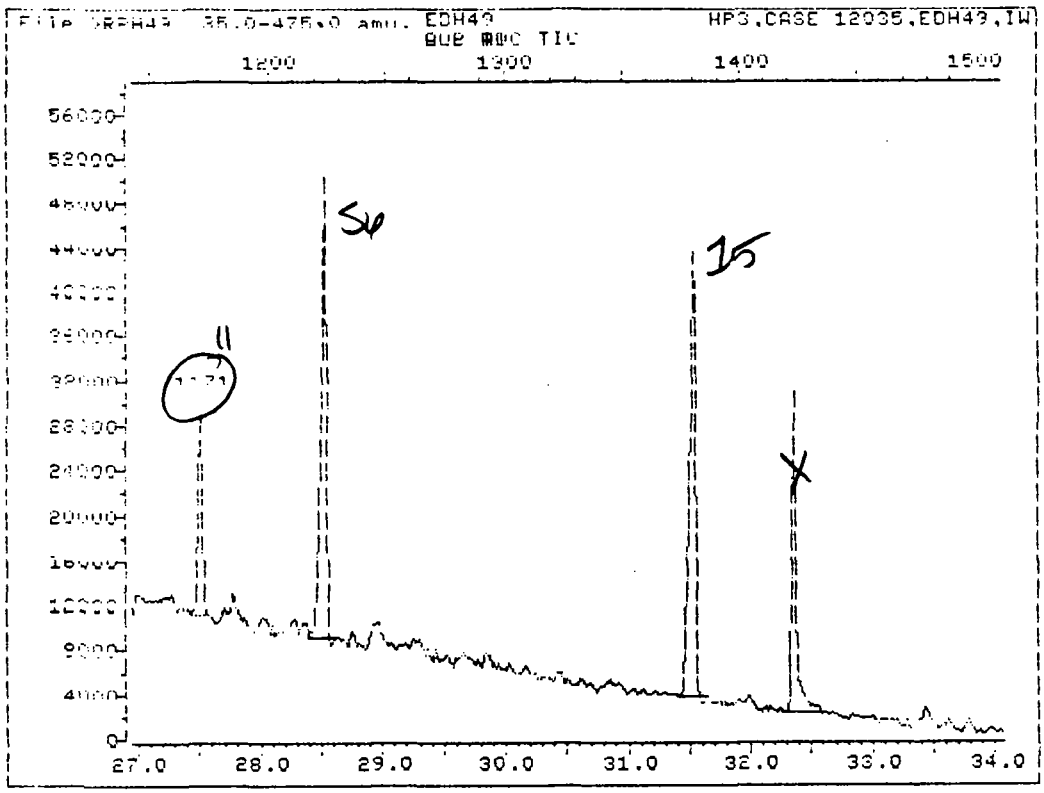
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TIC
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52000
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40000
36000
32000
28000
24000
20000
16000
12000
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33.0
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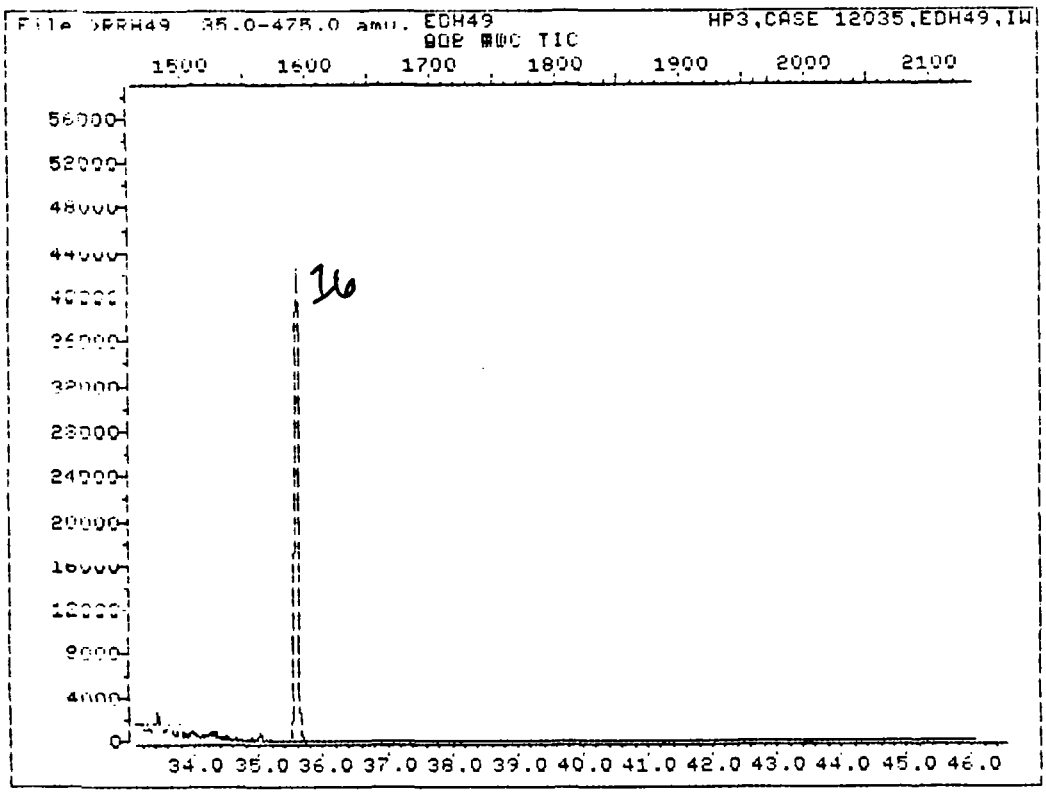
11
36
35
X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HP3,CASE 12035,EDH49,IW
TIC
1500
1600
1700
1800
1900
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56000
52000
48000
44000
40000
36000
32000
28000
24000
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8000
4000
0
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40.0
41.0
42.0
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44.0
45.0
46.0
36

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Instrument ID: HP3 Calibration Date(s): 05/23/89

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>CE201 RRF50 =>CE202
RRF80 =>CE203 RRF120=>CE204 RRF160=>CE205

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Phenol *	2.332	1.897	1.643	1.805	1.601	1.856	15.7*
bis(-2-Chloroethyl)Ether	2.107	1.737	1.478	1.333	1.215	1.574	22.6
2-Chlorophenol	1.577	1.364	1.175	1.117	1.138	1.274	15.3
1,3-Dichlorobenzene	1.805	1.506	1.357	1.275	1.261	1.441	15.7
1,4-Dichlorobenzene *	1.798	1.537	1.379	1.253	1.195	1.433	16.9*
Benzyl_Alcohol	1.106	.998	.969	.954	1.017	1.009	5.9
1,2-Dichlorobenzene	1.819	1.584	1.417	1.301	1.279	1.480	15.2
2-Methylphenol	1.648	1.432	1.240	1.189	1.195	1.341	14.8
bis(2-chloroisopropyl)ether	3.585	3.176	2.875	2.744	2.709	3.018	12.1
4-Methylphenol	1.847	1.490	1.379	1.245	1.136	1.419	19.3
N-Nitroso-Di-n-propylamine #	1.789	1.607	1.420	1.344	1.398	1.512	12.2#
Hexachloroethane	.784	.698	.589	.566	.538	.635	16.3
Nitrobenzene	.515	.470	.413	.547	.532	.495	11.0
Isophorone	.940	.879	.827	.802	.771	.844	7.9
2-Nitrophenol *	.270	.247	.243	.241	.237	.247	5.2*
2,4-Dimethylphenol	.458	.411	.376	.385	.388	.404	8.1
Benzoic_Acid	0.000	.332	.344	.293	.293	.315	8.5
bis(-2-Chloroethoxy)Methane	.630	.559	.510	.496	.495	.538	10.7
2,4-Dichlorophenol *	.379	.332	.304	.307	.292	.323	10.7*
1,2,4-Trichlorobenzene	.416	.355	.324	.315	.300	.342	13.5
Naphthalene	1.226	1.024	.848	.843	.804	.949	18.6
4-Chloroaniline	.487	.465	.437	.418	.404	.442	7.7
Hexachlorobutadiene *	.198	.180	.156	.159	.148	.168	12.2*
4-Chloro-3-methylphenol *	.465	.392	.331	.305	.297	.358	19.7*
2-Methylnaphthalene	1.217	1.001	.804	.784	.749	.911	21.6
Hexachlorocyclopentadiene #	.161	.184	.174	.173	.163	.171	5.5#
2,4,6-Trichlorophenol *	.470	.417	.379	.362	.382	.402	10.7*
2,4,5-Trichlorophenol	0.000	.418	.361	.349	.336	.366	9.9
2-Chloronaphthalene	1.297	1.119	.927	.918	.897	1.032	16.8
2-Nitroaniline	0.000	.541	.511	.519	.518	.523	2.5
Dimethyl_Phthalate	1.676	1.460	1.304	1.280	1.247	1.394	12.8
Acenaphthylene	2.301	1.863	1.585	1.584	1.521	1.771	18.3
2,6-Dinitrotoluene	.427	.372	.347	.327	.327	.360	11.6
3-Nitroaniline	0.000	.357	.332	.344	.339	.343	3.1
Acenaphthene *	1.329	1.085	.934	.877	.867	1.018	19.1*
2,4-Dinitrophenol #	0.000	.226	.253	.253	.285	.254	9.5#
4-Nitrophenol #	0.000	.160	.162	.155	.159	.159	1.7#

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Instrument ID: HP3 Calibration Date(s): 05/23/89

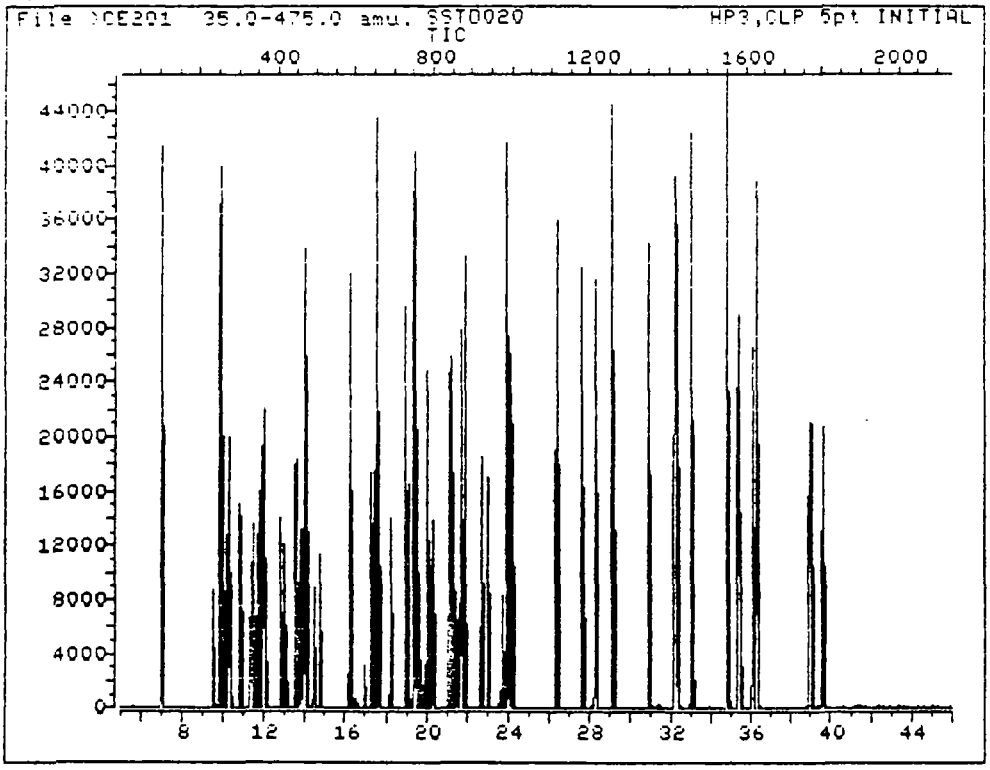
Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>CE201 RRF50 =>CE202
RRF80 =>CE203 RRF120=>CE204 RRF160=>CE205

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Dibenzofuran	2.077	1.622	1.446	1.350	1.382	1.576	19.0
2,4-Dinitrotoluene	.586	.538	.498	.467	.481	.514	9.4
Diethylphthalate	1.781	1.470	1.251	1.142	1.094	1.347	21.0
4-Chlorophenyl-phenylether	.750	.605	.510	.491	.470	.565	20.5
Fluorene	1.708	1.361	1.181	1.132	1.109	1.298	19.2
4-Nitroaniline	0.000	.428	.430	.398	.377	.408	6.2
4,6-Dinitro-2-methylphenol	0.000	.164	.153	.148	.149	.154	4.8
N-Nitrosodiphenylamine (1) *	.563	.439	.328	.297	.310	.387	29.2*
4-Bromophenyl-phenylether	.208	.178	.163	.159	.158	.173	12.1
Hexachlorobenzene	.250	.202	.179	.188	.188	.201	14.1
Pentachlorophenol *	0.000	.148	.143	.144	.155	.147	3.6*
Phenanthrene	1.158	.916	.854	.832	.899	.932	14.1
Anthracene	1.166	.920	.788	.810	.705	.878	20.3
Di-n-Butylphthalate	1.817	1.419	1.275	1.195	1.167	1.375	19.3
Fluoranthene *	1.424	1.158	1.008	1.035	.983	1.122	16.2*
Pyrene	1.562	1.391	1.360	1.373	1.450	1.427	5.8
Butylbenzylphthalate	.971	.877	.840	.871	.926	.897	5.8
3,3'-Dichlorobenzidine	.304	.321	.336	.337	.360	.332	6.3
Benzo(a)Anthracene	1.432	1.319	1.332	1.382	1.557	1.405	6.8
Chrysene	1.146	.985	.903	.879	.885	.960	11.7
bis(2-Ethylhexyl)Phthalate	1.320	1.195	1.061	1.101	1.154	1.166	8.5
Di-n-octyl phthalate *	2.273	1.883	1.585	1.568	1.608	1.783	17.0*
Benzo(b)fluoranthene	1.436	1.383	.996	1.303	1.063	1.236	15.8
Benzo(k)Fluoranthene	1.247	.892	.995	.799	.691	.925	23.0
Benzo(a)Pyrene *	1.190	1.055	.944	.962	.993	1.029	9.6*
Indeno(1,2,3-cd)Pyrene	1.470	1.340	1.133	1.124	1.143	1.242	12.6
Dibenz(a,h)Anthracene	1.084	.970	.808	.782	.850	.899	14.0
Benzo(g,h,i)Perylene	1.184	1.030	.904	.907	.943	.994	11.9
Nitrobenzene-d5	.384	.356	.350	.336	.332	.351	5.8
2-Fluorobiphenyl	1.134	1.076	1.060	1.066	1.162	1.100	4.2
Terphenyl-d14	.858	.889	1.006	1.014	1.252	1.003	15.5
Phenol-d5	1.795	1.637	1.583	1.466	1.510	1.598	8.0
2-Fluorophenol	1.116	1.078	1.148	1.141	1.336	1.164	8.6
2,4,6-Tribromophenol	.165	.150	.152	.150	.157	.155	4.1

(1) Cannot be separated from Diphenylamine

TOTAL ION CHROMATOGRAM



Data File: >CE201::D4 Quant Output File: ^CE201::SC
Name: SSTD020
Misc: HP3,CLP 5pt INITIAL CALIBRATION BTL# 7

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890524 08:49

Operator ID: DENNIS
Quant Time: 890524 08:53
Injected at: 890523 18:50

QUANT REPORT

Operator ID: DENNIS Quant Rev: 6 Quant Time: 890524 08:53
Output File: `CE201::SC Injected at: 890523 18:50
Data File: :CE201::D4 Dilution Factor: 1.00000
Name: SSTD020
Misc: HP3,CLP 5pt INITIAL CALIBRATION BTL# 7

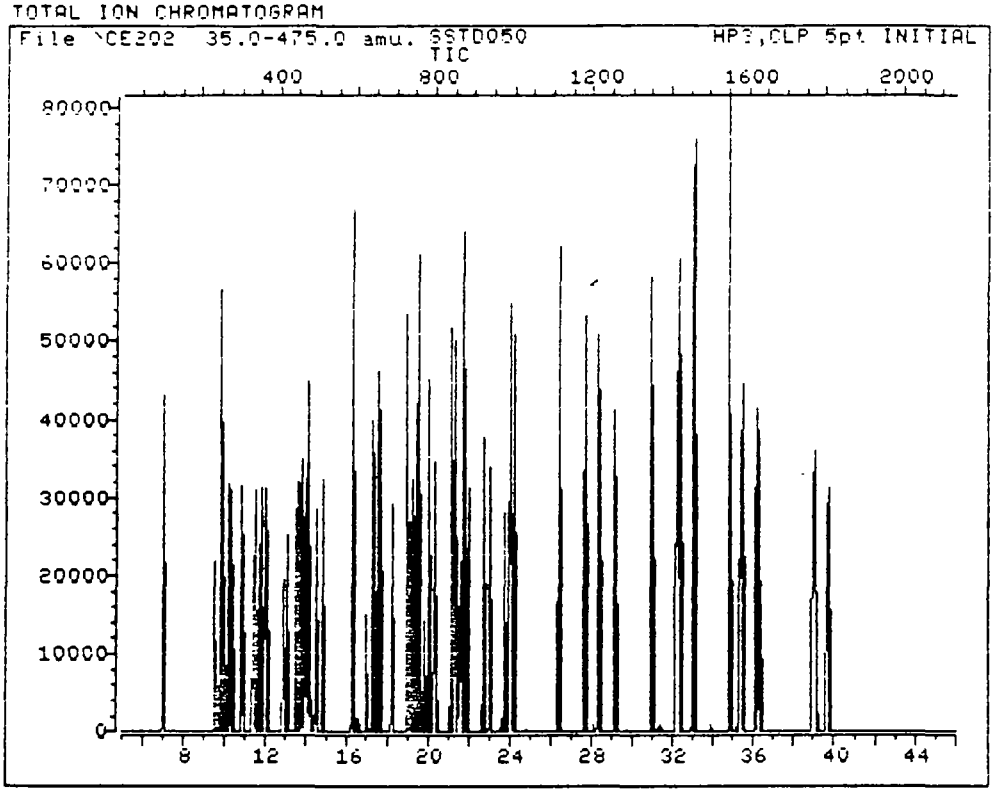
ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890524 08:49

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	10.19	272	9112	40.00	ng/uL	95
2)	2-Fluorophenol	6.94	103	25424	103.55	ng/uL	90
3)	Phenol-d5	9.79	251	40900	109.67	ng/uL	84
4)	Phenol	9.80	252	10624	24.59	ng/uL	71
5)	bis(-2-Chloroethyl)Ether	9.73	248	9600	24.26	ng/uL	71
6)	2-Chlorophenol	9.75	249	7183	23.12	ng/uL	99
7)	1,3-Dichlorobenzene	10.07	266	8225	23.97	ng/uL	96
8)	1,4-Dichlorobenzene	10.25	275	8193	23.40	ng/uL	97
9)	Benzyl Alcohol	10.86	307	5037	22.14	ng/uL	85
10)	1,2-Dichlorobenzene	10.77	302	8286	22.96	ng/uL	97
11)	2-Methylphenol	11.42	336	7509	23.01	ng/uL	89
12)	bis(2-Chloroisopropyl)ether	11.32	331	16335	22.58	ng/uL	98
13)	4-Methylphenol	11.88	360	8415	24.79	ng/uL	98
14)	N-Nitroso-Di-n-propylamine	11.75	353	8152	22.27	ng/uL	99
15)	Hexachloroethane	11.65	348	3572	22.46	ng/uL	85
16)	*d8-Naphthalene	13.98	469	39116	40.00	ng/uL	89
17)	Nitrobenzene-d5	11.94	363	18763	53.95	ng/uL	86
18)	Nitrobenzene	11.98	365	10066	21.93	ng/uL	83
19)	Isophorone	12.73	404	18388	21.40	ng/uL	88
20)	2-Nitrophenol	12.94	415	5271	21.84	ng/uL	96
21)	2,4-Dimethylphenol	13.40	439	8951	22.27	ng/uL	94
22)	Benzoic Acid	14.00	470	5719	17.63	ng/uL	88
23)	bis(-2-Chloroethoxy)Methane	13.59	449	12327	22.56	ng/uL	91
24)	2,4-Dichlorophenol	13.73	456	7407	22.79	ng/uL	91
25)	1,2,4-Trichlorobenzene	13.88	464	8146	23.45	ng/uL	96
26)	Naphthalene	14.02	471	23968	23.92	ng/uL	97
27)	4-Chloroaniline	14.40	491	9525	20.94	ng/uL	90
28)	Hexachlorobutadiene	14.71	507	3877	22.04	ng/uL	95
29)	4-Chloro-3-methylphenol	16.13	581	9103	23.77	ng/uL	55
30)	2-Methylnaphthalene	16.15	582	23798	24.32	ng/uL	74
31)	*d10-Acenaphthene	19.38	750	25489	40.00	ng/uL	93
32)	Hexachlorocyclopentadiene	16.92	622	2048	17.44	ng/uL	98
33)	2,4,6-Trichlorophenol	17.23	638	5990	22.55	ng/uL	90
34)	2,4,5-Trichlorophenol	17.34	644	6000	22.52	ng/uL	90
35)	2-Chloronaphthalene	17.61	658	16533	23.18	ng/uL	97
36)	2-Fluorobiphenyl	17.48	651	36137	52.71	ng/uL	93
37)	2-Nitroaniline	18.17	687	7150	20.72	ng/uL	93
38)	Dimethyl Phthalate	18.98	729	21363	22.97	ng/uL	77
39)	Acenaphthylene	18.88	724	29330	24.71	ng/uL	93
40)	2,6-Dinitrotoluene	19.09	735	5439	22.93	ng/uL	89
41)	3-Nitroaniline	19.48	755	5277	23.18	ng/uL	95
42)	Acenaphthene	19.48	755	16936	24.49	ng/uL	95
43)	2,4-Dinitrophenol	19.75	769	1876	13.03	ng/uL	88

	Compound	R.T.	Scan#	Area	Conc	Units	q
44)	4-Nitrophenol	20.31	798	2155	21.12	ng/uL	81
45)	Dibenzofuran	20.00	782	26471	25.60	ng/uL	96
46)	2,4-Dinitrotoluene	20.25	795	7469	21.77	ng/uL	94
47)	Diethylphthalate	21.25	847	22695	24.23	ng/uL	91
48)	4-Chlorophenyl-phenylether	21.19	844	9562	24.82	ng/uL	96
49)	Fluorene	21.04	836	21770	25.10	ng/uL	92
50)	4-Nitroaniline	21.40	855	3758	13.77	ng/uL	80
51)	2,4,6-Tribromophenol	21.88	880	10503	110.07	ng/uL	99
52)	*d10-Phenanthrene	23.90	985	50801	40.00	ng/uL	97
53)	4,6-Dinitro-2-methylphenol	21.50	860	3986	19.08	ng/uL	91
54)	N-Nitrosodiphenylamine	21.63	867	14294M	25.64	ng/uL	95
55)	4-Bromophenyl-phenylether	22.67	921	5277	23.39	ng/uL	79
56)	Hexachlorobenzene	23.00	938	6352	24.74	ng/uL	97
57)	Pentachlorophenol	23.63	971	3979	21.21	ng/uL	98
58)	Phenanthrene	23.96	988	29427	25.28	ng/uL	95
59)	Anthracene	24.10	995	29606	25.33	ng/uL	99
60)	Di-n-Butylphthalate	26.33	1111	46149	25.60	ng/uL	96
61)	Fluoranthene	27.65	1180	36173	24.59	ng/uL	95
62)	*d12-Chrysene	32.17	1415	46696	40.00	ng/uL	88
63)	Pyrene	28.31	1214	36470	22.46	ng/uL	85
64)	Terphenyl-d14	29.10	1255	50058	48.26	ng/uL	95
65)	Butylbenzylphthalate	30.90	1349	22674	22.14	ng/uL	95
66)	3,3'-Dichlorobenzidine	32.23	1418	7100	18.96	ng/uL	99
67)	Benzo(a)Anthracene	32.10	1411	33444	21.71	ng/uL	94
68)	Chrysene	32.23	1418	26759	23.26	ng/uL	95
69)	Bis(2-Ethylhexyl)Phthalate	32.92	1454	30812	22.09	ng/uL	92
70)	*d12-Perylene	36.29	1629	49619	40.00	ng/uL	94
71)	Di-n-octyl phthalate	34.75	1549	56381	24.14	ng/uL	86
72)	Benzo(b)fluoranthene	35.25	1575	35622	20.76	ng/uL	89
73)	Benzo(k)Fluoranthene	35.35	1580	30932	27.96	ng/uL	86
74)	Benzo(a)Pyrene	36.10	1619	29510	22.55	ng/uL	91
75)	Indeno(1,2,3-cd)Pyrene	38.92	1766	36481	21.95	ng/uL	67
76)	Dibenz(a,h)Anthracene	39.02	1771	26898	22.35	ng/uL	79
77)	Benzo(g,h,i)Perylene	39.62	1802	29370	22.99	ng/uL	70

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CE202::D4 Quant Output File: ^CE202::SC
Name: SSTD050
Misc: HP3,CLP 5pt INITIAL CALIBRATION BTL# 6

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890524 08:42

Operator ID: DENNIS
Quant Time: 890524 08:43
Injected at: 890523 17:52

QUANT REPORT

Operator ID: DENNIS Quant Rev: 6 Quant Time: 890524 08:43
Output File: ^CE202::SC Injected at: 890523 17:52
Data File: >CE202::D4 Dilution Factor: 1.00000
Name: SSTD050
Misc: HP3,CLP 5pt INITIAL CALIBRATION BTL# 6

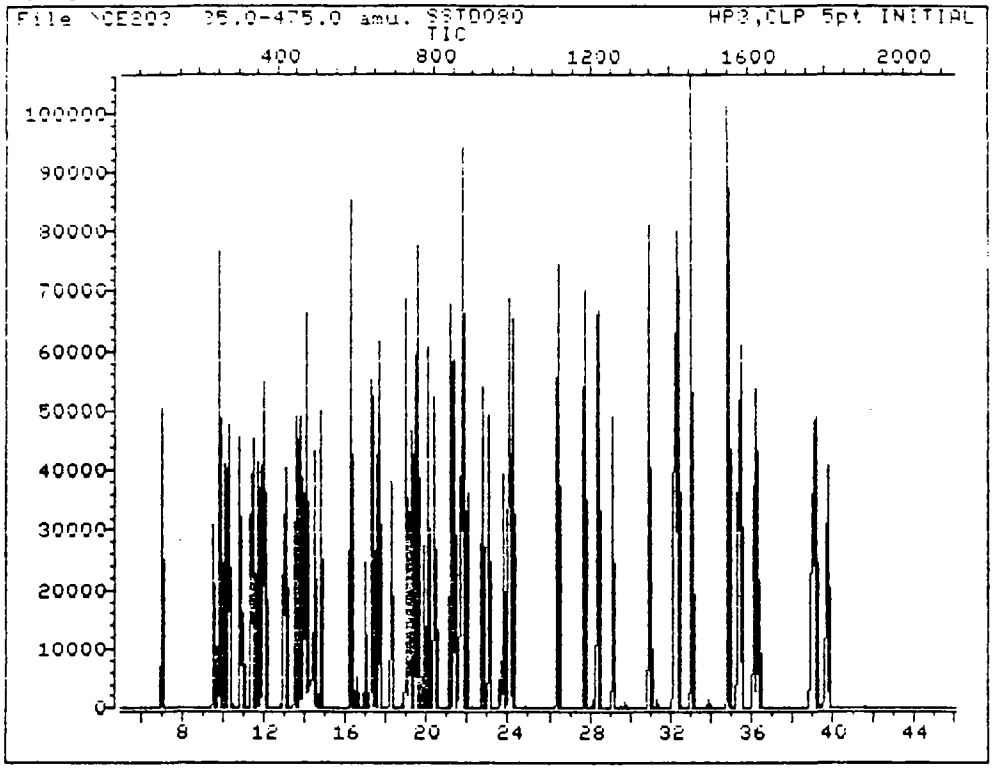
ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890524 08:42

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	10.21	273	9362	40.00	ng/uL	97
2)	2-Fluorophenol	6.94	103	25225	100.00	ng/uL	98
3)	Phenol-d5	9.79	251	38317	100.00	ng/uL	81
4)	Phenol	9.82	253	22198	50.00	ng/uL	68
5)	bis(-2-Chloroethyl)Ether	9.75	249	20328	50.00	ng/uL	85
6)	2-Chlorophenol	9.77	250	15960	50.00	ng/uL	95
7)	1,3-Dichlorobenzene	10.07	266	17625	50.00	ng/uL	98
8)	1,4-Dichlorobenzene	10.25	275	17984	50.00	ng/uL	94
9)	Benzyl Alcohol	10.90	309	11685	50.00	ng/uL	89
10)	1,2-Dichlorobenzene	10.77	302	18540	50.00	ng/uL	95
11)	2-Methylphenol	11.44	337	16763	50.00	ng/uL	86
12)	bis(2-Chloroisopropyl)ether	11.34	332	37167	50.00	ng/uL	98
13)	4-Methylphenol	11.90	361	17437	50.00	ng/uL	97
14)	N-Nitroso-Di-n-propylamine	11.79	355	18805	50.00	ng/uL	95
15)	Hexachloroethane	11.65	348	8169	50.00	ng/uL	93
16)	*d8-Naphthalene	13.98	469	39247	40.00	ng/uL	87
17)	Nitrobenzene-d5	11.94	363	17448	50.00	ng/uL	83
18)	Nitrobenzene	12.02	367	23032	50.00	ng/uL	89
19)	Isophorone	12.79	407	43105	50.00	ng/uL	87
20)	2-Nitrophenol	12.96	416	12109	50.00	ng/uL	96
21)	2,4-Dimethylphenol	13.44	441	20168	50.00	ng/uL	91
22)	Benzoic Acid	14.21	481	16271	50.00	ng/uL	98
23)	bis(-2-Chloroethoxy)Methane	13.63	451	27411	50.00	ng/uL	96
24)	2,4-Dichlorophenol	13.77	458	16307	50.00	ng/uL	92
25)	1,2,4-Trichlorobenzene	13.90	465	17430	50.00	ng/uL	97
26)	Naphthalene	14.04	472	50261	50.00	ng/uL	98
27)	4-Chloroaniline	14.44	493	22815	50.00	ng/uL	98
28)	Hexachlorobutadiene	14.73	508	8823	50.00	ng/uL	94
29)	4-Chloro-3-methylphenol	16.15	582	19216M	50.00	ng/uL	
30)	2-Methylnaphthalene	16.17	583	49088	50.00	ng/uL	74
31)	*d10-Acenaphthene	19.40	751	26193	40.00	ng/uL	92
32)	Hexachlorocyclopentadiene	16.94	623	6033	50.00	ng/uL	97
33)	2,4,6-Trichlorophenol	17.25	639	13646	50.00	ng/uL	94
34)	2,4,5-Trichlorophenol	17.36	645	13692	50.00	ng/uL	93
35)	2-Chloronaphthalene	17.63	659	36647	50.00	ng/uL	97
36)	2-Fluorobiphenyl	17.50	652	35225	50.00	ng/uL	94
37)	2-Nitroaniline	18.21	689	17728	50.00	ng/uL	90
38)	Dimethyl Phthalate	19.02	731	47796	50.00	ng/uL	77
39)	Acenaphthylene	18.90	725	60988	50.00	ng/uL	95
40)	2,6-Dinitrotoluene	19.13	737	12188	50.00	ng/uL	92
41)	3-Nitroaniline	19.52	757	11696	50.00	ng/uL	97
42)	Acenaphthene	19.50	756	35538	50.00	ng/uL	94
43)	2,4-Dinitrophenol	19.79	771	7399	50.00	ng/uL	89

	Compound	R.T.	Scan#	Area	Conc	Units	q
44)	4-Nitrophenol	20.35	800	5242	50.00	ng/uL	86
45)	Dibenzofuran	20.02	783	53124	50.00	ng/uL	94
46)	2,4-Dinitrotoluene	20.31	798	17625	50.00	ng/uL	67
47)	Diethylphthalate	21.27	848	48128	50.00	ng/uL	92
48)	4-Chlorophenyl-phenylether	21.21	845	19795	50.00	ng/uL	94
49)	Fluorene	21.08	838	44567	50.00	ng/uL	96
50)	4-Nitroaniline	21.50	860	14018	50.00	ng/uL	78
51)	2,4,6-Tribromophenol	21.90	881	9806	100.00	ng/uL	93
52)	*d10-Phenanthrene	23.92	986	52438	40.00	ng/uL	99
53)	4,6-Dinitro-2-methylphenol	21.58	864	10783	50.00	ng/uL	88
54)	N-Nitrosodiphenylamine	21.67	869	28775	50.00	ng/uL	96
55)	4-Bromophenyl-phenylether	22.69	922	11645	50.00	ng/uL	79
56)	Hexachlorobenzene	23.02	939	13253	50.00	ng/uL	89
57)	Pentachlorophenol	23.67	973	9683	50.00	ng/uL	93
58)	Phenanthrene	24.00	990	60070	50.00	ng/uL	96
59)	Anthracene	24.14	997	60314	50.00	ng/uL	93
60)	Di-n-Butylphthalate	26.35	1112	93031	50.00	ng/uL	98
61)	Fluoranthene	27.69	1182	75928	50.00	ng/uL	93
62)	*d12-Chrysene	32.19	1416	44023	40.00	ng/uL	89
63)	Pyrene	28.33	1215	76555	50.00	ng/uL	88
64)	Terphenyl-d14	29.10	1255	48896	50.00	ng/uL	94
65)	Butylbenzylphthalate	30.92	1350	48268	50.00	ng/uL	97
66)	3,3'-Dichlorobenzidine	32.25	1419	17650	50.00	ng/uL	98
67)	Benzo(a)Anthracene	32.12	1412	72606	50.00	ng/uL	95
68)	Chrysene	32.29	1421	54219	50.00	ng/uL	95
69)	Bis(2-Ethylhexyl)Phthalate	32.94	1455	65747	50.00	ng/uL	92
70)	*d12-Perylene	36.31	1630	47570	40.00	ng/uL	95
71)	Di-n-octyl phthalate	34.77	1550	111954	50.00	ng/uL	89
72)	Benzo(b)fluoranthene	35.31	1578	82239	50.00	ng/uL	89
73)	Benzo(k)Fluoranthene	35.39	1582	53027	50.00	ng/uL	88
74)	Benzo(a)Pyrene	36.16	1622	62722	50.00	ng/uL	90
75)	Indeno(1,2,3-cd)Pyrene	38.98	1769	79675	50.00	ng/uL	68
76)	Dibenz(a,h)Anthracene	39.08	1774	57682	50.00	ng/uL	85
77)	Benzo(g,h,i)Perylene	39.70	1806	61246	50.00	ng/uL	73

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CE203::D4 Quant Output File: ^CE203::SC
Name: SSTD080
Misc: HP3,CLP 5pt INITIAL CALIBRATION BTL# 5

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890524 08:49

Operator ID: DENNIS
Quant Time: 890524 08:55
Injected at: 890523 16:53

QUANT REPORT

Operator ID: DENNIS Quant Rev: 6 Quant Time: 890524 08:55
Output File: ^CE203::SC Injected at: 890523 16:53
Data File: >CE203::D4 Dilution Factor: 1.00000
Name: SSTD080
Misc: HP3,CLP 5pt INITIAL CALIBRATION BTL# 5

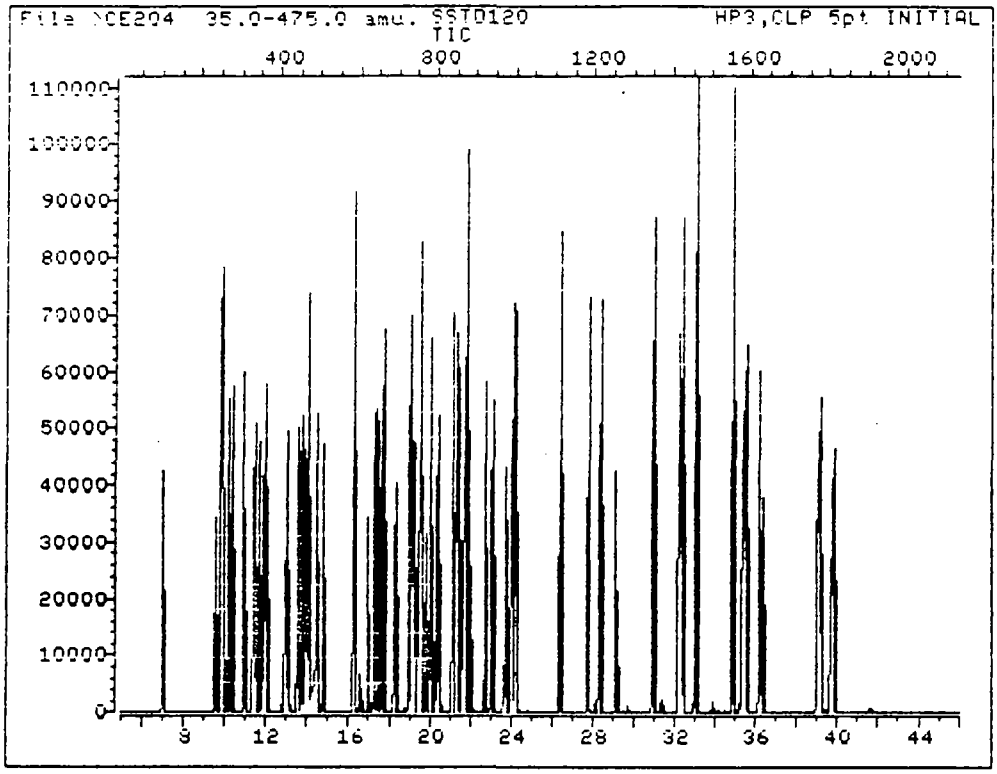
ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890524 08:49

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	10.22	272	11176	40.00	ng/uL	97
2)	2-Fluorophenol	6.95	102	32085	106.55	ng/uL	93
3)	Phenol-d5	9.82	251	44226	96.69	ng/uL	85
4)	Phenol	9.86	253	36729	69.30	ng/uL	68
5)	bis(-2-Chloroethyl)Ether	9.76	248	33031	68.06	ng/uL	78
6)	2-Chlorophenol	9.78	249	26263	68.92	ng/uL	95
7)	1,3-Dichlorobenzene	10.09	265	30325	72.06	ng/uL	97
8)	1,4-Dichlorobenzene	10.26	274	30828	71.80	ng/uL	95
9)	Benzyl Alcohol	10.95	310	21670	77.68	ng/uL	87
10)	1,2-Dichlorobenzene	10.78	301	31661	71.53	ng/uL	97
11)	2-Methylphenol	11.47	337	27710	69.24	ng/uL	88
12)	bis(2-Chloroisopropyl)ether	11.36	331	64270	72.43	ng/uL	97
13)	4-Methylphenol	11.95	362	30816	74.02	ng/uL	98
14)	N-Nitroso-Di-n-propylamine	11.84	356	31730	70.67	ng/uL	98
15)	Hexachloroethane	11.67	347	13177	67.56	ng/uL	93
16)	*d8-Naphthalene	14.01	469	45381	40.00	ng/uL	89
17)	Nitrobenzene-d5	11.97	363	19835	49.16	ng/uL	86
18)	Nitrobenzene	12.05	367	37516	70.43	ng/uL	89
19)	Isophorone	12.86	409	75078	75.32	ng/uL	87
20)	2-Nitrophenol	12.99	416	22059	78.77	ng/uL	96
21)	2,4-Dimethylphenol	13.47	441	34105	73.12	ng/uL	92
22)	Benzoic Acid	14.40	489	31254	83.06	ng/uL	97
23)	bis(-2-Chloroethoxy)Methane	13.67	451	46333	73.09	ng/uL	96
24)	2,4-Dichlorophenol	13.80	458	27553	73.06	ng/uL	94
25)	1,2,4-Trichlorobenzene	13.92	464	29423	72.99	ng/uL	95
26)	Naphthalene	14.07	472	76995	66.24	ng/uL	98
27)	4-Chloroaniline	14.45	492	39653	75.16	ng/uL	95
28)	Hexachlorobutadiene	14.74	507	14192	69.56	ng/uL	94
29)	4-Chloro-3-methylphenol	16.19	582	30061M	67.65	ng/uL	
30)	2-Methylnaphthalene	16.21	583	72943	64.26	ng/uL	84
31)	*d10-Acenaphthene	19.42	750	31800	40.00	ng/uL	89
32)	Hexachlorocyclopentadiene	16.94	621	11050	75.43	ng/uL	95
33)	2,4,6-Trichlorophenol	17.28	639	24113	72.77	ng/uL	91
34)	2,4,5-Trichlorophenol	17.40	645	22939	69.00	ng/uL	91
35)	2-Chloronaphthalene	17.67	659	58953	66.25	ng/uL	95
36)	2-Fluorobiphenyl	17.51	651	42128	49.25	ng/uL	94
37)	2-Nitroaniline	18.24	689	32521	75.55	ng/uL	95
38)	Dimethyl Phthalate	19.07	732	82962	71.49	ng/uL	81
39)	Acenaphthylene	18.94	725	100778	68.05	ng/uL	97
40)	2,6-Dinitrotoluene	19.19	738	22062	74.55	ng/uL	93
41)	3-Nitroaniline	19.57	758	21091	74.27	ng/uL	94
42)	Acenaphthene	19.53	756	59370	68.80	ng/uL	94
43)	2,4-Dinitrophenol	19.84	772	16065	89.42	ng/uL	89

	Compound	R.T.	Scan#	Area	Conc	Units	q
44)	4-Nitrophenol	20.40	801	10275	80.73	ng/uL	85
45)	Dibenzofuran	20.05	783	91955	71.29	ng/uL	92
46)	2,4-Dinitrotoluene	20.36	799	31660	73.98	ng/uL	73
47)	Diethylphthalate	21.32	849	79557	68.08	ng/uL	94
48)	4-Chlorophenyl-phenylether	21.25	845	32453	67.52	ng/uL	92
49)	Fluorene	21.11	838	75145	69.44	ng/uL	97
50)	4-Nitroaniline	21.61	864	27322	80.27	ng/uL	82
51)	2,4,6-Tribromophenol	21.94	881	12080	101.47	ng/uL	95
52)	*d10-Phenanthrene	23.94	985	64403	40.00	ng/uL	99
53)	4,6-Dinitro-2-methylphenol	21.65	866	19691	74.34	ng/uL	91
54)	N-Nitrosodiphenylamine	21.73	870	42287	59.83	ng/uL	96
55)	4-Bromophenyl-phenylether	22.71	921	20955	73.26	ng/uL	80
56)	Hexachlorobenzene	23.05	939	23016	70.70	ng/uL	93
57)	Pentachlorophenol	23.71	973	18406	77.39	ng/uL	91
58)	Phenanthrene	24.04	990	109967	74.53	ng/uL	97
59)	Anthracene	24.17	997	101508	68.52	ng/uL	97
60)	Di-n-Butylphthalate	26.36	1111	164181	71.85	ng/uL	99
61)	Fluoranthene	27.73	1182	129803	69.60	ng/uL	95
62)	*d12-Chrysene	32.23	1416	48132	40.00	ng/uL	92
63)	Pyrene	28.36	1215	130939	78.22	ng/uL	89
64)	Terphenyl-d14	29.11	1254	60528	56.61	ng/uL	93
65)	Butylbenzylphthalate	30.96	1350	80822	76.57	ng/uL	97
66)	3,3'-Dichlorobenzidine	32.31	1420	32396	83.94	ng/uL	97
67)	Benzo(a)Anthracene	32.17	1413	128248	80.78	ng/uL	95
68)	Chrysene	32.35	1422	86917	73.31	ng/uL	94
69)	Bis(2-Ethylhexyl)Phthalate	32.98	1455	102161	71.06	ng/uL	89
70)	*d12-Perylene	36.35	1630	57813	40.00	ng/uL	95
71)	Di-n-octyl phthalate	34.81	1550	183241	67.34	ng/uL	89
72)	Benzo(b)fluoranthene	35.36	1579	115201M	57.63	ng/uL	91
73)	Benzo(k)Fluoranthene	35.46	1584	115104M	89.30	ng/uL	91
74)	Benzo(a)Pyrene	36.19	1622	109179	71.61	ng/uL	91
75)	Indeno(1,2,3-cd)Pyrene	39.02	1769	131015	67.65	ng/uL	71
76)	Dibenz(a,h)Anthracene	39.15	1776	93455	66.66	ng/uL	85
77)	Benzo(g,h,i)Perylene	39.77	1808	104556	70.23	ng/uL	76

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CE204::D4 Quant Output File: ^CE204::SC
Name: SSTD120
Misc: HP3,CLP 5pt INITIAL CALIBRATION BTL# 4

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890524 08:49

Operator ID: DENNIS
Quant Time: 890524 08:57
Injected at: 890523 15:41

QUANT REPORT

Operator ID: DENNIS Quant Rev: 6 Quant Time: 890524 08:57
Output File: ^CE204::SC Injected at: 890523 15:41
Data File: .CE204::D4 Dilution Factor: 1.00000
Name: SSTD120
Misc: HP3,CLP 5pt INITIAL CALIBRATION BTL# 4

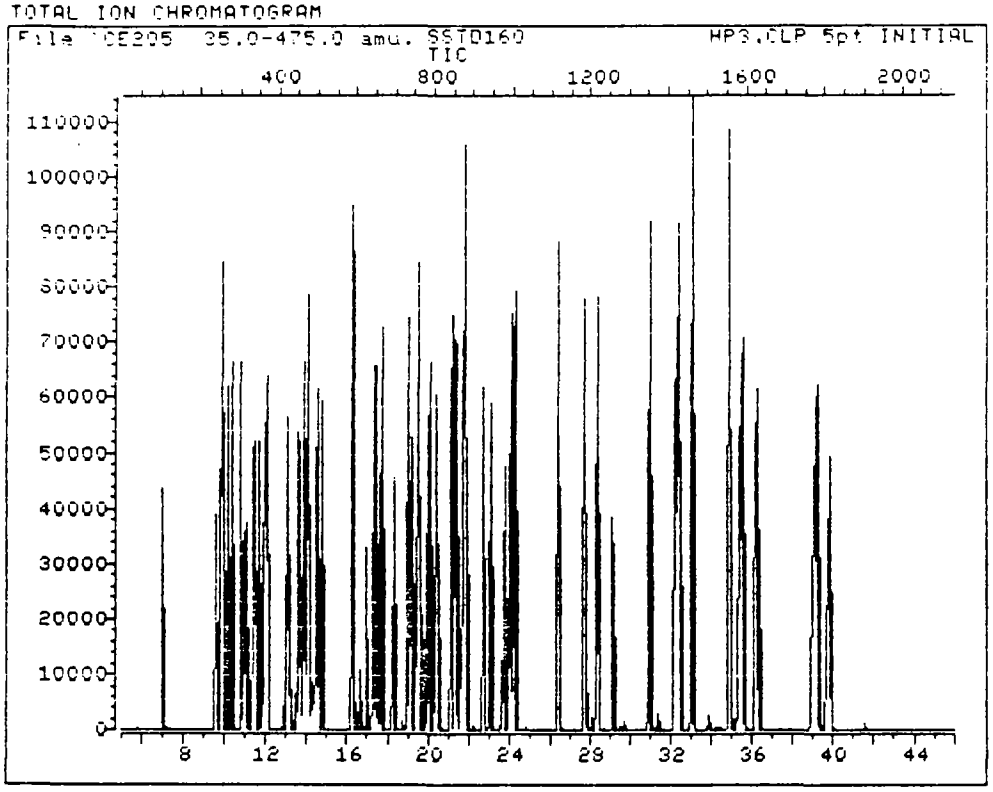
ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890524 08:49

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	10.22	273	9325	40.00	ng/uL	97
2)	2-Fluorophenol	6.95	103	26607	105.90	ng/uL	95
3)	Phenol-d5	9.83	253	34183	89.57	ng/uL	86
4)	Phenol	9.87	255	50496	114.19	ng/uL	68
5)	bis(-2-Chloroethyl)Ether	9.77	250	37291	92.09	ng/uL	87
6)	2-Chlorophenol	9.79	251	31259	98.32	ng/uL	95
7)	1,3-Dichlorobenzene	10.10	267	35667	101.58	ng/uL	98
8)	1,4-Dichlorobenzene	10.27	276	35064	97.87	ng/uL	96
9)	Benzyl Alcohol	10.98	313	26680	114.62	ng/uL	89
10)	1,2-Dichlorobenzene	10.79	303	36406	98.57	ng/uL	98
11)	2-Methylphenol	11.48	339	33257	99.59	ng/uL	90
12)	bis(2-Chloroisopropyl)ether	11.35	332	76770	103.69	ng/uL	95
13)	4-Methylphenol	11.97	364	34817	100.23	ng/uL	95
14)	N-Nitroso-Di-n-propylamine	11.85	358	37597	100.36	ng/uL	98
15)	Hexachloroethane	11.68	349	15821	97.22	ng/uL	85
16)	*d8-Naphthalene	14.01	470	36500	40.00	ng/uL	88
17)	Nitrobenzene-d5	11.99	365	15322	47.21	ng/uL	89
18)	Nitrobenzene	12.04	368	59892	139.80	ng/uL	85
19)	Isophorone	12.89	412	87782M	109.49	ng/uL	88
20)	2-Nitrophenol	13.00	418	26351	117.00	ng/uL	96
21)	2,4-Dimethylphenol	13.49	443	42185	112.46	ng/uL	95
22)	Benzoic Acid	14.43	492	32061	105.94	ng/uL	94
23)	bis(-2-Chloroethoxy)Methane	13.68	453	54346	106.59	ng/uL	95
24)	2,4-Dichlorophenol	13.81	460	33606	110.80	ng/uL	91
25)	1,2,4-Trichlorobenzene	13.93	466	34464	106.30	ng/uL	96
26)	Naphthalene	14.08	474	92315	98.75	ng/uL	99
27)	4-Chloroaniline	14.47	494	45728	107.76	ng/uL	98
28)	Hexachlorobutadiene	14.74	508	17387	105.95	ng/uL	96
29)	4-Chloro-3-methylphenol	16.20	584	33444M	93.57	ng/uL	
30)	2-Methylnaphthalene	16.20	584	85882M	94.06	ng/uL	87
31)	*d10-Acenaphthene	19.41	751	25680	40.00	ng/uL	92
32)	Hexachlorocyclopentadiene	16.95	623	13329	112.67	ng/uL	99
33)	2,4,6-Trichlorophenol	17.28	640	27889	104.23	ng/uL	94
34)	2,4,5-Trichlorophenol	17.39	646	26907	100.22	ng/uL	97
35)	2-Chloronaphthalene	17.68	661	70752	98.46	ng/uL	99
36)	2-Fluorobiphenyl	17.53	653	34226	49.55	ng/uL	92
37)	2-Nitroaniline	18.26	691	40017	115.12	ng/uL	92
38)	Dimethyl Phthalate	19.08	734	98621	105.23	ng/uL	81
39)	Acenaphthylene	18.93	726	122039	102.05	ng/uL	95
40)	2,6-Dinitrotoluene	19.20	740	25173	105.33	ng/uL	93
41)	3-Nitroaniline	19.60	761	26533	115.69	ng/uL	99
42)	Acenaphthene	19.55	758	67540	96.92	ng/uL	96
43)	2,4-Dinitrophenol	19.87	775	19487	134.32	ng/uL	90

	Compound	R.T.	Scan#	Area	Conc	Units	q
44)	4-Nitrophenol	20.43	804	11947	116.23	ng/uL	87
45)	Dibenzofuran	20.07	785	104031	99.87	ng/uL	96
46)	2,4-Dinitrotoluene	20.37	801	35981	104.11	ng/uL	76
47)	Diethylphthalate	21.34	851	87947	93.19	ng/uL	95
48)	4-Chlorophenyl-phenylether	21.26	847	37806	97.40	ng/uL	90
49)	Fluorene	21.12	840	87245	99.84	ng/uL	95
50)	4-Nitroaniline	21.64	867	30670	111.58	ng/uL	87
51)	2,4,6-Tribromophenol	21.93	882	9639	100.26	ng/uL	99
52)	*d10-Phenanthrene	23.93	986	50998	40.00	ng/uL	99
53)	4,6-Dinitro-2-methylphenol	21.68	869	22713	108.29	ng/uL	77
54)	N-Nitrosodiphenylamine	21.74	872	45367	81.06	ng/uL	93
55)	4-Bromophenyl-phenylether	22.72	923	24305	107.30	ng/uL	86
56)	Hexachlorobenzene	23.07	941	28709	111.37	ng/uL	95
57)	Pentachlorophenol	23.72	975	21947	116.53	ng/uL	97
58)	Phenanthrene	24.05	992	127256	108.91	ng/uL	96
59)	Anthracene	24.18	999	123909	105.62	ng/uL	97
60)	Di-n-Butylphthalate	26.38	1113	182832	101.04	ng/uL	99
61)	Fluoranthene	27.72	1183	158416	107.27	ng/uL	97
62)	*d12-Chrysene	32.22	1417	37394	40.00	ng/uL	92
63)	Pyrene	28.38	1217	153976	118.39	ng/uL	89
64)	Terphenyl-d14	29.11	1255	47378	57.04	ng/uL	96
65)	Butylbenzylphthalate	30.97	1352	97751	119.21	ng/uL	96
66)	3,3'-Dichlorobenzidine	32.32	1422	37860	126.27	ng/uL	97
67)	Benzo(a)Anthracene	32.19	1415	154994	125.66	ng/uL	95
68)	Chrysene	32.36	1424	98608	107.06	ng/uL	95
69)	Bis(2-Ethylhexyl)Phthalate	32.99	1457	123542	110.61	ng/uL	88
70)	*d12-Perylene	36.34	1631	45819	40.00	ng/uL	95
71)	Di-n-octyl phthalate	34.84	1553	215551	99.95	ng/uL	88
72)	Benzo(b)fluoranthene	35.42	1583	179109M	113.06	ng/uL	90
73)	Benzo(k)Fluoranthene	35.48	1586	109797M	107.49	ng/uL	90
74)	Benzo(a)Pyrene	36.23	1625	132244	109.45	ng/uL	94
75)	Indeno(1,2,3-cd)Pyrene	39.13	1776	154561M	100.70	ng/uL	
76)	Dibenz(a,h)Anthracene	39.19	1779	107468	96.72	ng/uL	87
77)	Benzo(g,h,i)Perylene	39.76	1809	124719	105.71	ng/uL	78

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CE205::D4 Quant Output File: ^CE205::SC
Name: SSTD160
Misc: HP3,CLP 5pt INITIAL CALIBRATION BTL# 3

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890524 08:49

Operator ID: DENNIS
Quant Time: 890524 08:59
Injected at: 890523 14:40

QUANT REPORT

Operator ID: DENNIS Quant Rev: 6 Quant Time: 890524 08:59
Output File: ^CE205::SC Injected at: 890523 14:40
Data File: ^CE205::D4 Dilution Factor: 1.00000
Name: SSTD160
Misc: HP3,CLP 5pt INITIAL CALIBRATION BTL# 3

ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890524 08:49

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	10.23	274	8965	40.00	ng/uL	97
2)	2-Fluorophenol	6.96	104	29946	123.97	ng/uL	96
3)	Phenol-d5	9.84	254	33836	92.22	ng/uL	83
4)	Phenol	9.88	256	57426	135.08	ng/uL	70
5)	bis(-2-Chloroethyl)Ether	9.81	252	43583	111.95	ng/uL	88
6)	2-Chlorophenol	9.81	252	40804	133.49	ng/uL	96
7)	1,3-Dichlorobenzene	10.11	268	45227	133.99	ng/uL	97
8)	1,4-Dichlorobenzene	10.29	277	42869	124.46	ng/uL	95
9)	Benzyl Alcohol	11.02	315	36483	163.02	ng/uL	86
10)	1,2-Dichlorobenzene	10.81	304	45853	129.14	ng/uL	97
11)	2-Methylphenol	11.50	340	42845	133.46	ng/uL	86
12)	bis(2-Chloroisopropyl)ether	11.36	333	97140	136.47	ng/uL	95
13)	4-Methylphenol	12.00	366	40751	122.03	ng/uL	81
14)	N-Nitroso-Di-n-propylamine	11.90	361	50147	139.24	ng/uL	96
15)	Hexachloroethane	11.67	349	19273	123.19	ng/uL	95
16)	*d8-Naphthalene	14.02	471	34693	40.00	ng/uL	86
17)	Nitrobenzene-d5	12.00	366	14403	46.69	ng/uL	82
18)	Nitrobenzene	12.08	370	73817	181.28	ng/uL	89
19)	Isophorone	12.94	415	107048M	140.47	ng/uL	86
20)	2-Nitrophenol	13.02	419	32855	153.47	ng/uL	96
21)	2,4-Dimethylphenol	13.52	445	53904	151.18	ng/uL	94
22)	Benzoic Acid	14.42	492	40588	141.10	ng/uL	97
23)	bis(-2-Chloroethoxy)Methane	13.69	454	68743	141.85	ng/uL	96
24)	2,4-Dichlorophenol	13.85	462	40581	140.76	ng/uL	92
25)	1,2,4-Trichlorobenzene	13.94	467	41608	135.02	ng/uL	96
26)	Naphthalene	14.10	475	111576	125.57	ng/uL	98
27)	4-Chloroaniline	14.50	496	55995	138.82	ng/uL	99
28)	Hexachlorobutadiene	14.75	509	20538	131.67	ng/uL	96
29)	4-Chloro-3-methylphenol	16.21	585	41154M	121.14	ng/uL	
30)	2-Methylnaphthalene	16.21	585	103984M	119.82	ng/uL	91
31)	*d10-Acenaphthene	19.43	752	24423	40.00	ng/uL	95
32)	Hexachlorocyclopentadiene	16.94	623	15955	141.81	ng/uL	93
33)	2,4,6-Trichlorophenol	17.31	642	37298	146.57	ng/uL	93
34)	2,4,5-Trichlorophenol	17.42	648	32849	128.65	ng/uL	96
35)	2-Chloronaphthalene	17.69	662	87627	128.22	ng/uL	97
36)	2-Fluorobiphenyl	17.54	654	35487	54.02	ng/uL	93
37)	2-Nitroaniline	18.29	693	50614	153.10	ng/uL	87
38)	Dimethyl Phthalate	19.08	734	121842	136.70	ng/uL	83
39)	Acenaphthylene	18.94	727	148626	130.68	ng/uL	97
40)	2,6-Dinitrotoluene	19.23	742	31906M	140.38	ng/uL	90
41)	3-Nitroaniline	19.64	763	33145	151.96	ng/uL	93
42)	Acenaphthene	19.56	759	84704	127.81	ng/uL	95
43)	2,4-Dinitrophenol	19.93	778	27813	201.57	ng/uL	89

	Compound	R.T.	Scan#	Area	Conc	Units	q
44)	4-Nitrophenol	20.46	806	15501	158.57	ng/uL	89
45)	Dibenzofuran	20.08	786	134993	136.26	ng/uL	93
46)	2,4-Dinitrotoluene	20.41	803	47005	143.01	ng/uL	79
47)	Diethylphthalate	21.37	853	106851	119.05	ng/uL	95
48)	4-Chlorophenyl-phenylether	21.27	848	45884	124.30	ng/uL	93
49)	Fluorene	21.14	841	108322	130.33	ng/uL	99
50)	4-Nitroaniline	21.70	870	36839M	140.92	ng/uL	79
51)	2,4,6-Tribromophenol	21.95	883	9600	104.99	ng/uL	99
52)	*d10-Phenanthrene	23.97	988	47450	40.00	ng/uL	98
53)	4,6-Dinitro-2-methylphenol	21.74	872	28320M	145.12	ng/uL	80
54)	N-Nitrosodiphenylamine	21.77	874	58777M	112.87	ng/uL	95
55)	4-Bromophenyl-phenylether	22.74	924	29972	142.22	ng/uL	85
56)	Hexachlorobenzene	23.08	942	35766	149.12	ng/uL	97
57)	Pentachlorophenol	23.74	976	29320	167.31	ng/uL	92
58)	Phenanthrene	24.06	993	170694	157.01	ng/uL	94
59)	Anthracene	24.22	1001	133752	122.54	ng/uL	92
60)	Di-n-Butylphthalate	26.39	1114	221525	131.58	ng/uL	99
61)	Fluoranthene	27.74	1184	186563	135.77	ng/uL	95
62)	*d12-Chrysene	32.26	1419	32426	40.00	ng/uL	92
63)	Pyrene	28.39	1218	188073	166.77	ng/uL	88
64)	Terphenyl-d14	29.10	1255	50735	70.44	ng/uL	93
65)	Butylbenzylphthalate	30.97	1352	120050	168.83	ng/uL	99
66)	3,3'-Dichlorobenzidine	32.35	1424	46657	179.44	ng/uL	98
67)	Benzo(a)Anthracene	32.22	1417	201891	188.76	ng/uL	96
68)	Chrysene	32.37	1425	114745M	143.66	ng/uL	98
69)	Bis(2-Ethylhexyl)Phthalate	32.99	1457	149656	154.52	ng/uL	87
70)	*d12-Perylene	36.36	1632	42016	40.00	ng/uL	93
71)	Di-n-octyl phthalate	34.85	1554	270308	136.68	ng/uL	90
72)	Benzo(b)fluoranthene	35.41	1583	178699M	123.01	ng/uL	92
73)	Benzo(k)Fluoranthene	35.51	1588	116125M	123.97	ng/uL	93
74)	Benzo(a)Pyrene	36.24	1626	166976	150.70	ng/uL	91
75)	Indeno(1,2,3-cd)Pyrene	39.18	1779	192094	136.48	ng/uL	71
76)	Dibenz(a,h)Anthracene	39.22	1781	142865	140.21	ng/uL	92
77)	Benzo(g,h,i)Perylene	39.84	1813	158469	146.47	ng/uL	80

* Compound is ISTD

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Instrument ID: HP3 Calibration Date(s): 06/20/89 06/20/89

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>CE301 RRF50 =>DCJ20
RRF80 =>CE303 RRF120=>CE304 RRF160=>CE305

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Phenol *	2.132	2.119	1.847	1.932	1.935	1.993	6.3*
bis(-2-Chloroethyl)Ether	2.212	1.908	1.575	1.465	1.631	1.758	17.2
2-Chlorophenol	1.882	1.652	1.448	1.402	1.366	1.550	13.9
1,3-Dichlorobenzene	1.826	1.607	1.444	1.357	1.349	1.516	13.3
1,4-Dichlorobenzene *	1.848	1.545	1.353	1.354	1.263	1.473	15.9*
Benzyl_Alcohol	.610	.971	.955	.985	1.034	.911	18.8
1,2-Dichlorobenzene	1.911	1.661	1.475	1.379	1.364	1.558	14.8
2-Methylphenol	1.738	1.647	1.410	1.414	1.442	1.530	9.9
bis(2-chloroisopropyl)ether	2.535	2.661	2.229	2.242	2.294	2.392	8.1
4-Methylphenol	1.751	1.562	1.410	1.414	1.301	1.487	11.7
N-Nitroso-Di-n-propylamine #	1.730	1.413	1.401	1.394	1.472	1.482	9.6#
Hexachloroethane	.854	.733	.641	.606	.582	.683	16.3
Nitrobenzene	.658	.617	.531	.510	.520	.567	11.7
Isophorone	.938	.912	.817	.809	.844	.864	6.7
2-Nitrophenol *	.279	.287	.253	.254	.256	.266	6.0*
2,4-Dimethylphenol	.453	.460	.394	.399	.408	.423	7.4
Benzoic_Acid	0.000	.343	.295	.242	.380	.315	19.0
bis(-2-Chloroethoxy)Methane	.616	.595	.509	.502	.527	.550	9.5
2,4-Dichlorophenol *	.354	.360	.289	.278	.291	.314	12.4*
1,2,4-Trichlorobenzene	.372	.360	.306	.295	.297	.326	11.4
Naphthalene	1.273	1.138	.910	.865	.899	1.017	17.6
4-Chloroaniline	.453	.470	.412	.420	.426	.436	5.6
Hexachlorobutadiene *	.161	.166	.137	.130	.132	.145	11.7*
4-Chloro-3-methylphenol *	.464	.442	.384	.385	.376	.410	9.7*
2-Methylnaphthalene	1.256	1.159	.993	.992	.939	1.068	12.5
Hexachlorocyclopentadiene #	.160	.205	.175	.177	.175	.178	9.1#
2,4,6-Trichlorophenol *	.392	.402	.365	.342	.349	.370	7.1*
2,4,5-Trichlorophenol	0.000	.431	.366	.342	.366	.376	10.2
2-Chloronaphthalene	1.303	1.233	1.065	.985	.971	1.112	13.5
2-Nitroaniline	0.000	.605	.530	.537	.523	.549	6.9
Dimethyl_Phthalate	1.669	1.527	1.342	1.339	1.278	1.431	11.4
Acenaphthylene	2.206	2.069	1.778	1.688	1.579	1.864	14.2
2,6-Dinitrotoluene	.407	.408	.343	.372	.363	.379	7.5
3-Nitroaniline	0.000	.457	.410	.429	.393	.422	6.4
Acenaphthene *	1.339	1.168	.972	.945	.989	1.082	15.5*
2,4-Dinitrophenol #	0.000	.234	.248	.260	.258	.250	4.8#
4-Nitrophenol #	0.000	.180	.183	.194	.186	.186	3.2#

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Instrument ID: HP3 Calibration Date(s): 06/20/89 06/20/89

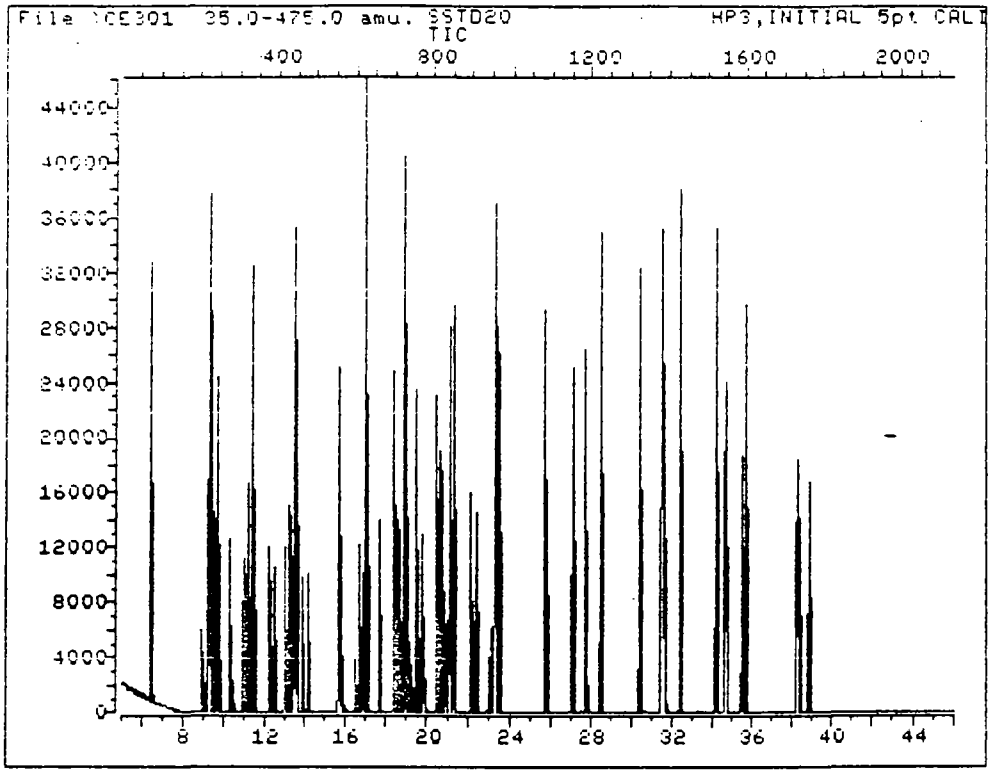
Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>CE301 RRF50 =>DCJ20
RRF80 =>CE303 RRF120=>CE304 RRF160=>CE305

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Dibenzofuran	1.907	1.728	1.430	1.404	1.458	1.586	14.0
2,4-Dinitrotoluene	.567	.589	.503	.516	.496	.534	7.7
Diethylphthalate	1.742	1.570	1.310	1.273	1.259	1.431	15.1
4-Chlorophenyl-phenylether	.631	.610	.484	.468	.482	.535	14.7
Fluorene	1.601	1.404	1.195	1.220	1.108	1.306	15.1
4-Nitroaniline	0.000	.456	.447	.466	.442	.453	2.4
4,6-Dinitro-2-methylphenol	0.000	.171	.155	.154	.144	.156	7.3
N-Nitrosodiphenylamine (1) *	.569	.507	.353	.349	.319	.419	26.6*
4-Bromophenyl-phenylether	.175	.167	.146	.141	.147	.155	9.6
Hexachlorobenzene	.199	.192	.167	.158	.160	.175	10.7
Pentachlorophenol *	0.000	.137	.120	.127	.128	.128	5.5*
Phenanthrene	1.148	1.034	.908	.896	.929	.983	10.9
Anthracene	1.150	1.032	.879	.828	.841	.946	14.8
Di-n-Butylphthalate	1.953	1.746	1.424	1.493	1.443	1.612	14.3
Fluoranthene *	1.358	1.251	1.049	1.038	1.014	1.142	13.4*
Pyrene	1.698	1.715	1.372	1.340	1.425	1.510	12.0
Butylbenzylphthalate	1.143	1.159	.941	.960	.984	1.037	10.1
3,3'-Dichlorobenzidine	.311	.391	.348	.342	.335	.345	8.4
Benzo(a)Anthracene	1.400	1.532	1.279	1.263	1.349	1.364	8.0
Chrysene	1.244	1.129	.931	.860	.839	1.001	17.8
bis(2-Ethylhexyl)Phthalate	1.602	1.589	1.323	1.190	1.274	1.396	13.5
Di-n-octyl phthalate *	2.984	2.472	2.184	2.009	2.120	2.354	16.6*
Benzo(b)fluoranthene	1.280	1.397	1.289	1.224	1.351	1.308	5.1
Benzo(k)Fluoranthene	1.325	.976	1.289	.632	.595	.964	36.1
Benzo(a)Pyrene *	1.169	1.142	1.030	.952	1.035	1.066	8.3*
Indeno(1,2,3-cd)Pyrene	1.390	1.406	1.254	1.180	1.203	1.287	8.2
Dibenz(a,h)Anthracene	1.074	1.005	.862	.806	.835	.916	12.7
Benzo(g,h,i)Perylene	1.114	1.132	1.001	.931	.975	1.031	8.6
Nitrobenzene-d5	.405	.424	.395	.385	.404	.403	3.6
2-Fluorobiphenyl	1.152	1.113	1.121	1.012	1.115	1.103	4.8
Terphenyl-d14	.895	1.035	.969	.876	1.059	.967	8.5
Phenol-d5	2.003	1.914	1.853	1.865	1.877	1.902	3.2
2-Fluorophenol	.962	1.080	1.040	1.005	1.215	1.060	9.1
2,4,6-Tribromophenol	.111	.108	.102	.100	.100	.104	4.9

(1) Cannot be separated from Diphenylamine

TOTAL ION CHROMATOGRAM



Data File: ^CE301::D3 Quant Output File: ^CE301::SC
Name: SSTD20
Misc: HP3,INITIAL 5pt CALIBRATION BTL# 6

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890619 16:34

Operator ID: JOHN
Quant Time: 890620 15:28
Injected at: 890620 14:41

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890620 15:28
Output File: ^CE301::SC Injected at: 890620 14:41
Data File: >CE301::D3 Dilution Factor: 1.00000
Name: SSTD20
Misc: HP3,INITIAL 5pt CALIBRATION BTL# 6

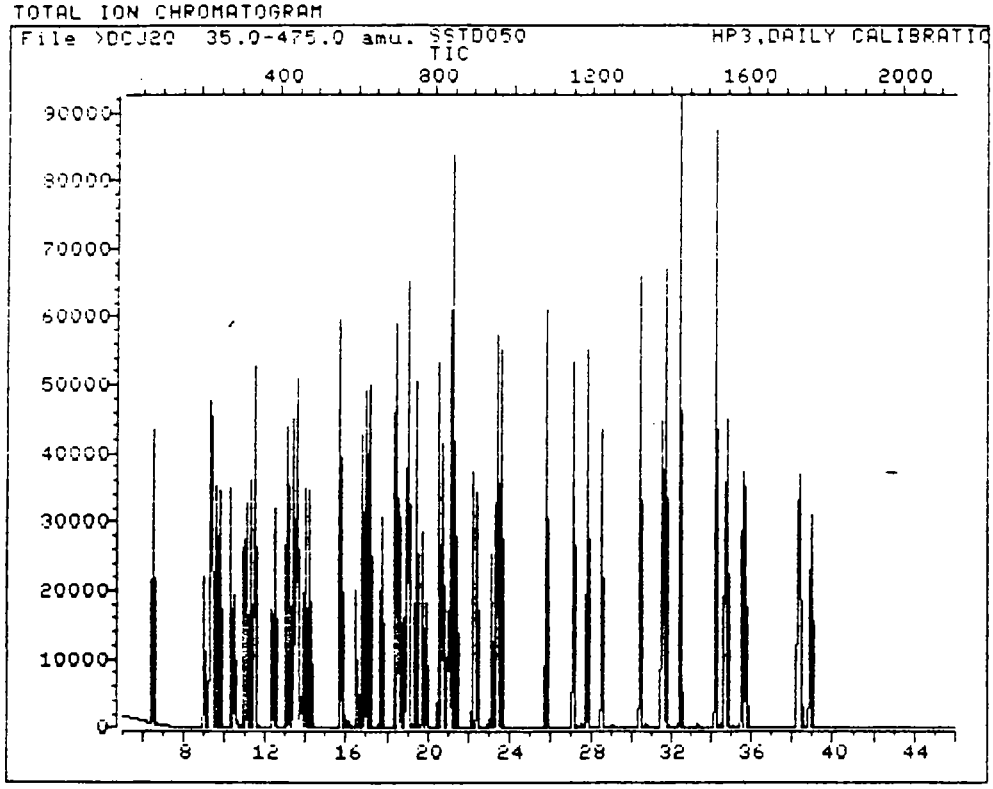
ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890619 16:34

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.65	243	8581	40.00	ng/uL	98
2)	2-Fluorophenol	6.40	74	20646	82.48	ng/uL	91
3)	Phenol-d5	9.31	225	42971	111.58	ng/uL	80
4)	Phenol	9.33	226	9147	20.06	ng/uL	74
5)	bis(-2-Chloroethyl)Ether	9.21	220	9490	23.27	ng/uL	71
6)	2-Chlorophenol	9.23	221	8073	23.15	ng/uL	95
7)	1,3-Dichlorobenzene	9.52	236	7836	22.81	ng/uL	96
8)	1,4-Dichlorobenzene	9.69	245	7928	23.75	ng/uL	93
9)	Benzyl Alcohol	10.35	279	2615	14.71	ng/uL	76
10)	1,2-Dichlorobenzene	10.21	272	8200	22.88	ng/uL	95
11)	2-Methylphenol	10.96	311	7455	20.00	ng/uL	87
12)	bis(2-Chloroisopropyl)ether	10.81	303	10878	16.24	ng/uL	87
13)	4-Methylphenol	11.40	334	7515M	20.16	ng/uL	69
14)	N-Nitroso-Di-n-propylamine	11.23	325	7423	22.62	ng/uL	82
15)	Hexachloroethane	11.10	318	3664	24.71	ng/uL	81
16)	*d8-Naphthalene	13.42	439	37933	40.00	ng/uL	88
17)	Nitrobenzene-d5	11.40	334	19227	53.14	ng/uL	86
18)	Nitrobenzene	11.44	336	12478	22.48	ng/uL	79
19)	Isophorone	12.19	375	17786	20.92	ng/uL	87
20)	2-Nitrophenol	12.40	386	5300	21.03	ng/uL	95
21)	2,4-Dimethylphenol	12.90	412	8598	20.32	ng/uL	93
22)	Benzoic Acid	13.58	447	5082	25.83	ng/uL	95
23)	bis(-2-Chloroethoxy)Methane	13.08	421	11682	22.09	ng/uL	92
24)	2,4-Dichlorophenol	13.23	429	6705	20.25	ng/uL	93
25)	1,2,4-Trichlorobenzene	13.35	435	7054	20.68	ng/uL	96
26)	Naphthalene	13.48	442	24138	23.94	ng/uL	99
27)	4-Chloroaniline	13.89	463	8590	19.74	ng/uL	91
28)	Hexachlorobutadiene	14.17	478	3049	19.29	ng/uL	98
29)	4-Chloro-3-methylphenol	15.66	555	8791	20.95	ng/uL	91
30)	2-Methylnaphthalene	15.62	553	23822	21.13	ng/uL	92
31)	*d10-Acenaphthene	18.83	720	23956	40.00	ng/uL	91
32)	Hexachlorocyclopentadiene	16.39	593	1919	17.41	ng/uL	93
33)	2,4,6-Trichlorophenol	16.69	609	4696	19.70	ng/uL	88
34)	2,4,5-Trichlorophenol	16.83	616	4779	18.14	ng/uL	96
35)	2-Chloronaphthalene	17.06	628	15613	23.59	ng/uL	99
36)	2-Fluorobiphenyl	16.94	622	34508	54.72	ng/uL	93
37)	2-Nitroaniline	17.64	658	6821	19.98	ng/uL	96
38)	Dimethyl Phthalate	18.45	700	19995	21.94	ng/uL	79
39)	Acenaphthylene	18.31	693	26421	22.30	ng/uL	92
40)	2,6-Dinitrotoluene	18.54	705	4871	19.97	ng/uL	91
41)	3-Nitroaniline	18.95	726	5164	25.61	ng/uL	89
42)	Acenaphthene	18.91	724	16035	23.82	ng/uL	93
43)	2,4-Dinitrophenol	19.21	740	1770	21.51	ng/uL	86

	Compound	R.T.	Scan#	Area	Conc	Units	q
44)	4-Nitrophenol	19.83	772	1649	20.79	ng/uL	86
45)	Dibenzofuran	19.43	751	22847	21.98	ng/uL	94
46)	2,4-Dinitrotoluene	19.71	766	6795	20.01	ng/uL	74
47)	Diethylphthalate	20.70	817	20870	23.07	ng/uL	91
48)	4-Chlorophenyl-phenylether	20.64	814	7554	21.61	ng/uL	86
49)	Fluorene	20.46	805	19182	22.61	ng/uL	95
50)	4-Nitroaniline	20.85	825	4267	28.99	ng/uL	91
51)	2,4,6-Tribromophenol	21.31	849	6673	87.81	ng/uL	94
52)	*d10-Phenanthrene	23.31	953	42867	40.00	ng/uL	99
53)	4,6-Dinitro-2-methylphenol	20.95	830	3422	22.52	ng/uL	82
54)	N-Nitrosodiphenylamine	21.08	837	12206	24.95	ng/uL	93
55)	4-Bromophenyl-phenylether	22.10	890	3747	19.69	ng/uL	75
56)	Hexachlorobenzene	22.41	906	4257	20.49	ng/uL	95
57)	Pentachlorophenol	23.06	940	- 2350	16.85	ng/uL	97
58)	Phenanthrene	23.37	956	24615	22.53	ng/uL	97
59)	Anthracene	23.50	963	24650	23.81	ng/uL	98
60)	Di-n-Butylphthalate	25.76	1080	41860	25.52	ng/uL	98
61)	Fluoranthene	27.02	1146	29095	22.29	ng/uL	96
62)	*d12-Chrysene	31.53	1380	34342	40.00	ng/uL	83
63)	Pyrene	27.68	1180	29159	21.34	ng/uL	80
64)	Terphenyl-d14	28.49	1222	38400	47.18	ng/uL	98
65)	Butylbenzylphthalate	30.31	1317	19632	21.98	ng/uL	83
66)	3,3'-Dichlorobenzidine	31.60	1384	5346	20.94	ng/uL	95
67)	Benzo(a)Anthracene	31.45	1376	24035	19.48	ng/uL	90
68)	Chrysene	31.58	1383	21360	24.15	ng/uL	93
69)	Bis(2-Ethylhexyl)Phthalate	32.35	1423	27500	23.61	ng/uL	94
70)	*d12-Perylene	35.60	1592	33041	40.00	ng/uL	95
71)	Di-n-octyl phthalate	34.16	1517	49302	27.20	ng/uL	87
72)	Benzo(b)fluoranthene	34.60	1540	21141	18.33	ng/uL	81
73)	Benzo(k)Fluoranthene	34.68	1544	21892	25.74	ng/uL	79
74)	Benzo(a)Pyrene	35.43	1583	19313	20.92	ng/uL	79
75)	Indeno(1,2,3-cd)Pyrene	38.18	1726	22970	22.53	ng/uL	55
76)	Dibenz(a,h)Anthracene	38.26	1730	17742	25.43	ng/uL	72
77)	Benzo(g,h,i)Perylene	38.78	1757	18406	23.45	ng/uL	59

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >DCJ20::D3 Quant Output File: ^DCJ20::SC
Name: SSTD050
Misc: HP3,DAILY CALIBRATION BTL# 2

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890619 16:34

Operator ID: DENNIS
Quant Time: 890620 11:17
Injected at: 890620 10:30

QUANT REPORT

Operator ID: DENNIS Quant Rev: 6 Quant Time: 890620 11:17
Output File: `DCJ20::SC Injected at: 890620 10:30
Data File: :DCJ20::D3 Dilution Factor: 1.00000
Name: SSTD050
Misc: HP3,DAILY CALIBRATION BTL# 2

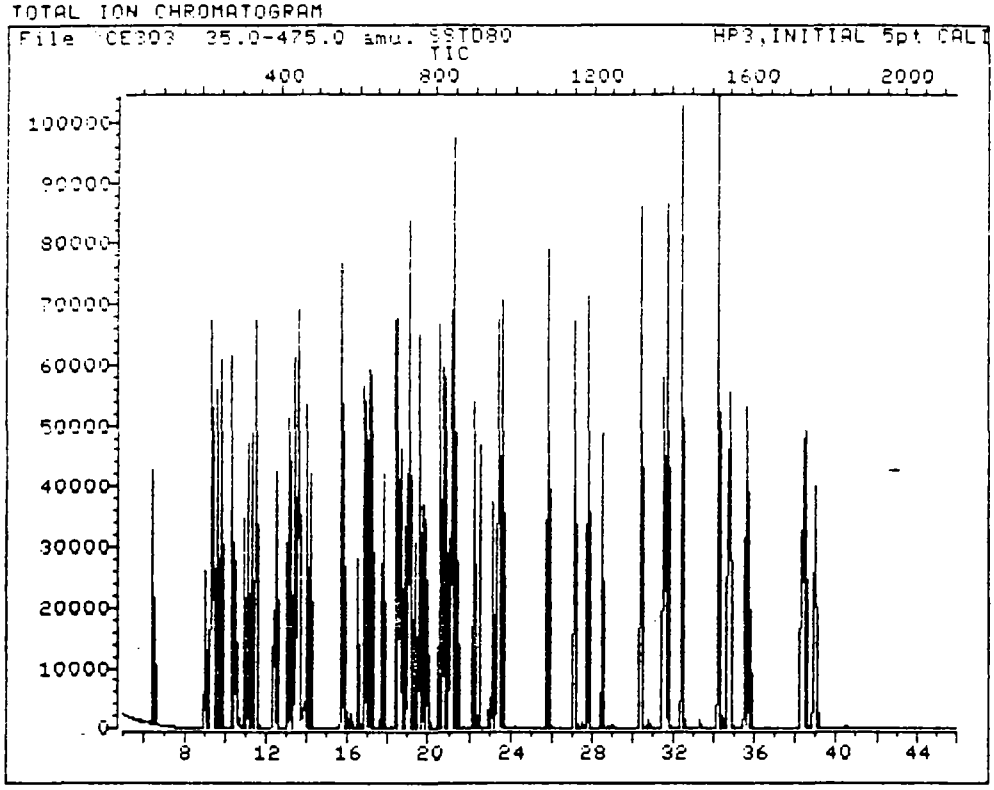
ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890619 16:34

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.68	245	11262	40.00	ng/uL	98
2)	2-Fluorophenol	6.42	76	30399	92.53	ng/uL	95
3)	Phenol-d5	9.35	228	53874	106.59	ng/uL	82
4)	Phenol	9.39	230	29831	49.85	ng/uL	72
5)	bis(-2-Chloroethyl)Ether	9.23	222	26865	50.19	ng/uL	63
6)	2-Chlorophenol	9.25	223	23256	50.82	ng/uL	98
7)	1,3-Dichlorobenzene	9.54	238	22624	50.18	ng/uL	96
8)	1,4-Dichlorobenzene	9.71	247	21749	49.64	ng/uL	95
9)	Benzyl Alcohol	10.43	284	13664	58.58	ng/uL	86
10)	1,2-Dichlorobenzene	10.23	274	23375	49.70	ng/uL	97
11)	2-Methylphenol	10.98	313	23183	47.39	ng/uL	88
12)	bis(2-Chloroisopropyl)ether	10.83	305	37461	42.61	ng/uL	93
13)	4-Methylphenol	11.47	338	21985M	44.94	ng/uL	68
14)	N-Nitroso-Di-n-propylamine	11.29	329	19895	46.18	ng/uL	82
15)	Hexachloroethane	11.12	320	10324	53.04	ng/uL	80
16)	*d8-Naphthalene	13.45	441	44221	40.00	ng/uL	87
17)	Nitrobenzene-d5	11.43	336	23459	55.62	ng/uL	83
18)	Nitrobenzene	11.48	339	34082	52.67	ng/uL	81
19)	Isophorone	12.27	380	50429	50.88	ng/uL	91
20)	2-Nitrophenol	12.45	389	15869	54.02	ng/uL	95
21)	2,4-Dimethylphenol	12.97	416	25425	51.54	ng/uL	96
22)	Benzoic Acid	13.81	460	18961	82.66	ng/uL	93
23)	bis(-2-Chloroethoxy)Methane	13.12	424	32887	53.34	ng/uL	94
24)	2,4-Dichlorophenol	13.27	432	19884	51.52	ng/uL	92
25)	1,2,4-Trichlorobenzene	13.37	437	19906	50.05	ng/uL	95
26)	Naphthalene	13.50	444	62928	53.54	ng/uL	98
27)	4-Chloroaniline	13.93	466	25977	51.21	ng/uL	94
28)	Hexachlorobutadiene	14.20	480	9199	49.93	ng/uL	99
29)	4-Chloro-3-methylphenol	15.70	558	24417	49.91	ng/uL	95
30)	2-Methylnaphthalene	15.64	555	64056	48.75	ng/uL	87
31)	*d10-Acenaphthene	18.83	721	27448	40.00	ng/uL	91
32)	Hexachlorocyclopentadiene	16.39	594	7027	55.63	ng/uL	95
33)	2,4,6-Trichlorophenol	16.74	612	13781	50.45	ng/uL	86
34)	2,4,5-Trichlorophenol	16.85	618	14796	49.01	ng/uL	97
35)	2-Chloronaphthalene	17.10	631	42297	55.77	ng/uL	98
36)	2-Fluorobiphenyl	16.97	624	38184	52.85	ng/uL	93
37)	2-Nitroaniline	17.68	661	20743	53.03	ng/uL	96
38)	Dimethyl Phthalate	18.51	704	52393	50.18	ng/uL	81
39)	Acenaphthylene	18.35	696	70985	52.28	ng/uL	95
40)	2,6-Dinitrotoluene	18.60	709	13992	50.06	ng/uL	93
41)	3-Nitroaniline	19.01	730	15667	67.82	ng/uL	92
42)	Acenaphthene	18.95	727	40059	51.94	ng/uL	93
43)	2,4-Dinitrophenol	19.28	744	8019	85.04	ng/uL	85

	Compound	R.T.	Scan#	Area	Conc	Units	q
44)	4-Nitrophenol	19.89	776	6168	67.86	ng/uL	86
45)	Dibenzofuran	19.47	754	59288	49.78	ng/uL	97
46)	2,4-Dinitrotoluene	19.78	770	20192	51.90	ng/uL	69
47)	Diethylphthalate	20.74	820	53860	51.96	ng/uL	92
48)	4-Chlorophenyl-phenylether	20.66	816	20939	52.28	ng/uL	93
49)	Fluorene	20.51	808	48157	49.53	ng/uL	96
50)	4-Nitroaniline	20.97	832	15627	92.66	ng/uL	84
51)	2,4,6-Tribromophenol	21.34	851	7380	84.76	ng/uL	96
52)	*d10-Phenanthrene	23.34	955	49948	40.00	ng/uL	99
53)	4,6-Dinitro-2-methylphenol	21.05	836	10688	60.37	ng/uL	74
54)	N-Nitrosodiphenylamine	21.14	841	31674	55.57	ng/uL	94
55)	4-Bromophenyl-phenylether	22.12	892	10429	47.05	ng/uL	76
56)	Hexachlorobenzene	22.45	909	11988	49.53	ng/uL	95
57)	Pentachlorophenol	23.12	944	8562	52.70	ng/uL	93
58)	Phenanthrene	23.41	959	64534	50.69	ng/uL	99
59)	Anthracene	23.55	966	64411	53.40	ng/uL	97
60)	Di-n-Butylphthalate	25.80	1083	108999	57.04	ng/uL	98
61)	Fluoranthene	27.07	1149	78132	51.38	ng/uL	92
62)	*d12-Chrysene	31.55	1382	36038	40.00	ng/uL	79
63)	Pyrene	27.72	1183	77246	53.88	ng/uL	82
64)	Terphenyl-d14	28.51	1224	46642	54.61	ng/uL	95
65)	Butylbenzylphthalate	30.34	1319	52215	55.71	ng/uL	93
66)	3,3'-Dichlorobenzidine	31.65	1387	17620	65.76	ng/uL	98
67)	Benzo(a)Anthracene	31.49	1379	69009	53.30	ng/uL	90
68)	Chrysene	31.65	1387	50851	54.79	ng/uL	93
69)	Bis(2-Ethylhexyl)Phthalate	32.38	1425	71577	58.55	ng/uL	94
70)	*d12-Perylene	35.65	1595	38342	40.00	ng/uL	96
71)	Di-n-octyl phthalate	34.19	1519	118483	56.33	ng/uL	88
72)	Benzo(b)fluoranthene	34.65	1543	66965	50.03	ng/uL	87
73)	Benzo(k)Fluoranthene	34.74	1548	46783	47.40	ng/uL	86
74)	Benzo(a)Pyrene	35.47	1586	54728	51.09	ng/uL	88
75)	Indeno(1,2,3-cd)Pyrene	38.24	1730	67390	56.96	ng/uL	57
76)	Dibenz(a,h)Anthracene	38.34	1735	48185	59.51	ng/uL	72
77)	Benzo(g,h,i)Perylene	38.86	1762	54268	59.58	ng/uL	65

* Compound is ISTD

TOTAL ION CHROMATOGRAM



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Name: SSTD80
Misc: HP3,INITIAL 5pt CALIBRATION BTL# 5

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890619 16:34

Operator ID: JOHN
Quant Time: 890620 14:30
Injected at: 890620 13:43

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890620 14:30
Output File: CE303::SC Injected at: 890620 13:43
Data File: CE303::D5 Dilution Factor: 1.00000
Name: SSTD80
Misc: HP3,INITIAL 5pt CALIBRATION BTL# 5

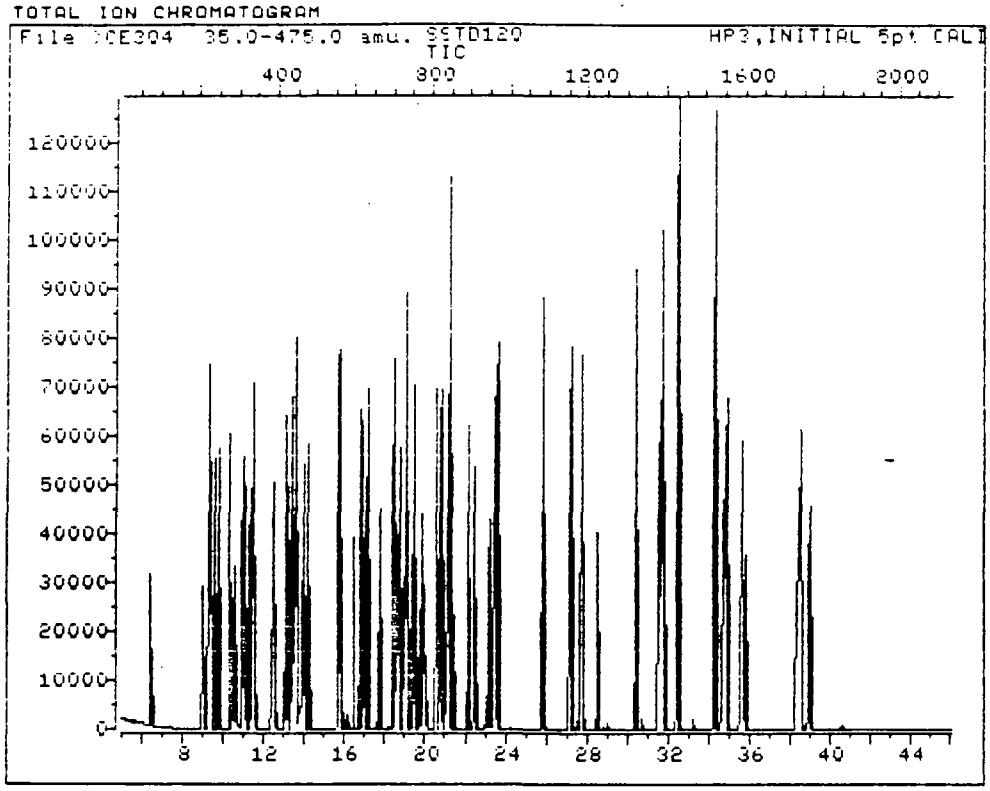
ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890619 16:34

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.68	244	11846	40.00	ng/uL	98
2)	2-Fluorophenol	6.43	75	30798	89.12	ng/uL	90
3)	Phenol-d5	9.37	228	54884	103.23	ng/uL	84
4)	Phenol	9.39	229	43757M	69.51	ng/uL	96
5)	bis(-2-Chloroethyl)Ether	9.25	222	37315	66.28	ng/uL	75
6)	2-Chlorophenol	9.27	223	34310	71.27	ng/uL	98
7)	1,3-Dichlorobenzene	9.56	238	34207	72.12	ng/uL	97
8)	1,4-Dichlorobenzene	9.74	247	32067	69.57	ng/uL	96
9)	Benzyl Alcohol	10.45	284	22632	92.24	ng/uL	82
10)	1,2-Dichlorobenzene	10.26	274	34952	70.66	ng/uL	97
11)	2-Methylphenol	11.01	313	33400	64.90	ng/uL	91
12)	bis(2-Chloroisopropyl)ether	10.83	304	52804	57.11	ng/uL	88
13)	4-Methylphenol	11.01	313	33400	64.90	ng/uL	69
14)	N-Nitroso-Di-n-propylamine	11.33	330	33200	73.27	ng/uL	84
15)	Hexachloroethane	11.12	319	15187	74.18	ng/uL	84
16)	*d8-Naphthalene	13.47	441	48395	40.00	ng/uL	87
17)	Nitrobenzene-d5	11.45	336	23875	51.73	ng/uL	86
18)	Nitrobenzene	11.51	339	51350	72.52	ng/uL	81
19)	Isophorone	12.35	383	79108	72.93	ng/uL	89
20)	2-Nitrophenol	12.47	389	24511	76.25	ng/uL	97
21)	2,4-Dimethylphenol	12.99	416	38140	70.65	ng/uL	92
22)	Benzoic Acid	13.89	463	28572	113.82	ng/uL	98
23)	bis(-2-Chloroethoxy)Methane	13.14	424	49301	73.06	ng/uL	90
24)	2,4-Dichlorophenol	13.30	432	28018	66.34	ng/uL	92
25)	1,2,4-Trichlorobenzene	13.39	437	29589	67.98	ng/uL	96
26)	Naphthalene	13.53	444	88059	68.45	ng/uL	98
27)	4-Chloroaniline	13.95	466	39873	71.82	ng/uL	95
28)	Hexachlorobutadiene	14.20	479	13271	65.82	ng/uL	98
29)	4-Chloro-3-methylphenol	15.72	558	37160	69.41	ng/uL	89
30)	2-Methylnaphthalene	15.66	555	96147	66.86	ng/uL	88
31)	*d10-Acenaphthene	18.86	721	30356	40.00	ng/uL	92
32)	Hexachlorocyclopentadiene	16.39	593	10601	75.88	ng/uL	94
33)	2,4,6-Trichlorophenol	16.76	612	22160	73.35	ng/uL	88
34)	2,4,5-Trichlorophenol	16.87	618	22247	66.64	ng/uL	91
35)	2-Chloronaphthalene	17.10	630	64682	77.11	ng/uL	96
36)	2-Fluorobiphenyl	16.99	624	42549	53.24	ng/uL	93
37)	2-Nitroaniline	17.72	662	32149	74.32	ng/uL	91
38)	Dimethyl Phthalate	18.55	705	81480	70.57	ng/uL	83
39)	Acenaphthylene	18.36	695	107967	71.90	ng/uL	95
40)	2,6-Dinitrotoluene	18.64	710	20803	67.29	ng/uL	93
41)	3-Nitroaniline	19.03	730	24919	97.53	ng/uL	90
42)	Acenaphthene	18.97	727	58989	69.15	ng/uL	97
43)	2,4-Dinitrophenol	19.32	745	15080	144.61	ng/uL	86

	Compound	R.T.	Scan#	Area	Conc	Units	q
44)	4-Nitrophenol	19.93	777	11130	110.72	ng/uL	89
45)	Dibenzofuran	19.49	754	86821	65.91	ng/uL	96
46)	2,4-Dinitrotoluene	19.80	770	30551	71.01	ng/uL	79
47)	Diethylphthalate	20.78	821	79542	69.39	ng/uL	91
48)	4-Chlorophenyl-phenylether	20.68	816	29376	66.32	ng/uL	90
49)	Fluorene	20.53	808	72526	67.45	ng/uL	98
50)	4-Nitroaniline	21.07	836	27143	145.52	ng/uL	92
51)	2,4,6-Tribromophenol	21.36	851	7729	80.26	ng/uL	97
52)	*d10-Phenanthrene	23.34	954	55415	40.00	ng/uL	98
53)	4,6-Dinitro-2-methylphenol	21.11	838	17207	87.60	ng/uL	69
54)	N-Nitrosodiphenylamine	21.16	841	39119	61.86	ng/uL	93
55)	4-Bromophenyl-phenylether	22.15	892	16204	65.88	ng/uL	78
56)	Hexachlorobenzene	22.45	908	18541	69.05	ng/uL	91
57)	Pentachlorophenol	23.15	944	13285	73.70	ng/uL	99
58)	Phenanthrene	23.44	959	100582	71.21	ng/uL	95
59)	Anthracene	23.59	967	97445	72.82	ng/uL	95
60)	Di-n-Butylphthalate	25.80	1082	157778	74.42	ng/uL	99
61)	Fluoranthene	27.09	1149	116310	68.94	ng/uL	93
62)	*d12-Chrysene	31.57	1382	41158	40.00	ng/uL	88
63)	Pyrene	27.74	1183	112953	68.99	ng/uL	85
64)	Terphenyl-d14	28.51	1223	49833	51.09	ng/uL	98
65)	Butylbenzylphthalate	30.36	1319	77456	72.37	ng/uL	93
66)	3,3'-Dichlorobenzidine	31.69	1388	28651	93.63	ng/uL	99
67)	Benzo(a)Anthracene	31.51	1379	105265	71.19	ng/uL	91
68)	Chrysene	31.67	1387	76669	72.34	ng/uL	95
69)	Bis(2-Ethylhexyl)Phthalate	32.38	1424	108884	77.99	ng/uL	94
70)	*d12-Perylene	35.67	1595	41851	40.00	ng/uL	94
71)	Di-n-octyl phthalate	34.21	1519	182809	79.63	ng/uL	88
72)	Benzo(b)fluoranthene	34.71	1545	107899	73.86	ng/uL	87
73)	Benzo(k)Fluoranthene	34.71	1545	107899	100.15	ng/uL	87
74)	Benzo(a)Pyrene	35.54	1588	86187	73.71	ng/uL	88
75)	Indeno(1,2,3-cd)Pyrene	38.32	1733	105007	81.31	ng/uL	56
76)	Dibenz(a,h)Anthracene	38.38	1736	72153	81.64	ng/uL	77
77)	Benzo(g,h,i)Perylene	38.92	1764	83781	84.27	ng/uL	64

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CE304::D3 Quant Output File: ^CE304::SC
Name: SSTD120
Misc: HP3,INITIAL 5pt CALIBRATION BTL# 4

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890619 16:34

Operator ID: JOHN
Quant Time: 890620 13:20
Injected at: 890620 12:33

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890620 13:20
Output File: ^CE304::SC Injected at: 890620 12:33
Data File: ^CE304::D3 Dilution Factor: 1.00000
Name: SSTD120
Misc: HP3,INITIAL 5pt CALIBRATION BTL# 4

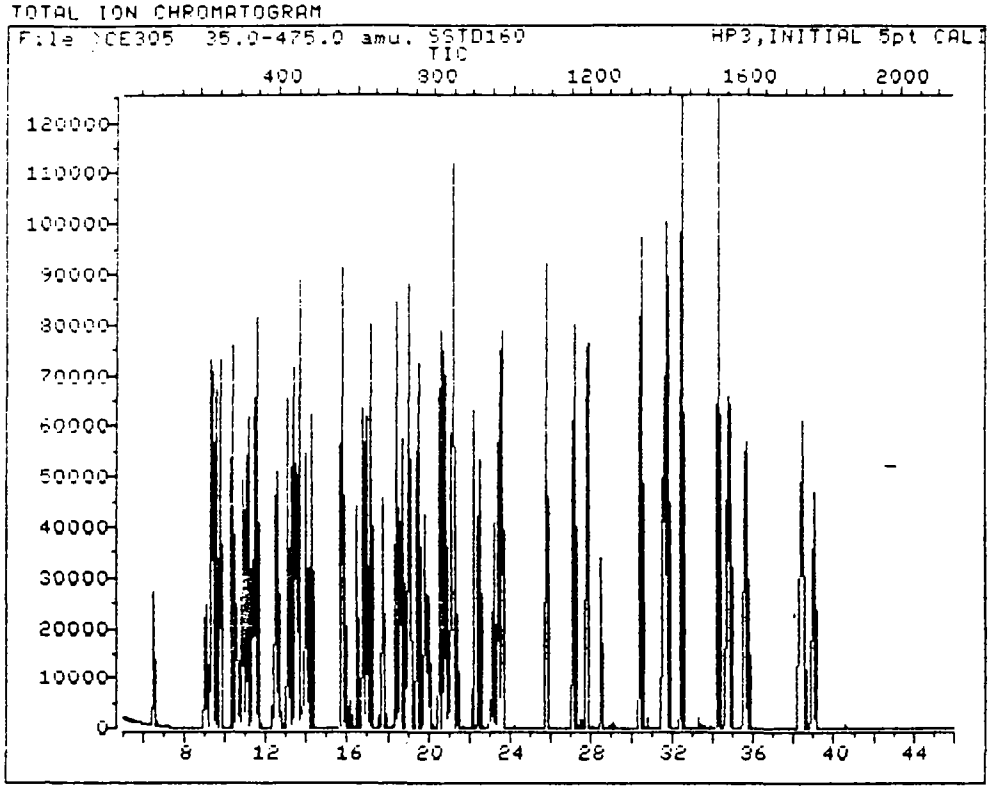
ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890619 16:34

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.67	244	9540	40.00	ng/uL	95
2)	2-Fluorophenol	6.42	75	23968	86.12	ng/uL	96
3)	Phenol-d5	9.36	228	44492	103.91	ng/uL	83
4)	Phenol	9.40	230	55284	109.05	ng/uL	69
5)	bis(-2-Chloroethyl)Ether	9.26	223	41930	92.47	ng/uL	76
6)	2-Chlorophenol	9.28	224	40128	103.51	ng/uL	97
7)	1,3-Dichlorobenzene	9.55	238	38827	101.65	ng/uL	94
8)	1,4-Dichlorobenzene	9.72	247	38764	104.43	ng/uL	94
9)	Benzyl Alcohol	10.47	286	28176	142.59	ng/uL	84
10)	1,2-Dichlorobenzene	10.24	274	39455	99.04	ng/uL	97
11)	2-Methylphenol	11.01	314	40459	97.62	ng/uL	86
12)	bis(2-Chloroisopropyl)ether	10.84	305	64175	86.18	ng/uL	90
13)	4-Methylphenol	11.01	314	40459	97.62	ng/uL	64
14)	N-Nitroso-Di-n-propylamine	11.34	331	39889	109.31	ng/uL	86
15)	Hexachloroethane	11.13	320	17350M	105.23	ng/uL	
16)	*d8-Naphthalene	13.46	441	38998	40.00	ng/uL	88
17)	Nitrobenzene-d5	11.44	336	18786	50.51	ng/uL	86
18)	Nitrobenzene	11.51	340	59611	104.47	ng/uL	84
19)	Isophorone	12.38	385	94712	108.36	ng/uL	90
20)	2-Nitrophenol	12.46	389	29720	114.73	ng/uL	96
21)	2,4-Dimethylphenol	13.01	418	46724	107.40	ng/uL	95
22)	Benzoic Acid	13.90	464	28307	139.93	ng/uL	97
23)	bis(-2-Chloroethoxy)Methane	13.15	425	58748	108.04	ng/uL	95
24)	2,4-Dichlorophenol	13.30	433	32513	95.53	ng/uL	94
25)	1,2,4-Trichlorobenzene	13.38	437	34469	98.27	ng/uL	97
26)	Naphthalene	13.53	445	101255	97.68	ng/uL	98
27)	4-Chloroaniline	13.96	467	49143	109.85	ng/uL	97
28)	Hexachlorobutadiene	14.21	480	15218	93.66	ng/uL	95
29)	4-Chloro-3-methylphenol	15.73	559	45004	104.31	ng/uL	90
30)	2-Methylnaphthalene	15.65	555	116098	100.18	ng/uL	89
31)	*d10-Acenaphthene	18.84	721	25636	40.00	ng/uL	90
32)	Hexachlorocyclopentadiene	16.40	594	13586	115.15	ng/uL	93
33)	2,4,6-Trichlorophenol	16.77	613	26304	103.10	ng/uL	88
34)	2,4,5-Trichlorophenol	16.88	619	26282	93.22	ng/uL	91
35)	2-Chloronaphthalene	17.11	631	75743	106.92	ng/uL	96
36)	2-Fluorobiphenyl	16.98	624	32435	48.06	ng/uL	94
37)	2-Nitroaniline	17.73	663	41290	113.02	ng/uL	96
38)	Dimethyl Phthalate	18.56	706	102973	105.60	ng/uL	80
39)	Acenaphthylene	18.36	696	129787	102.35	ng/uL	96
40)	2,6-Dinitrotoluene	18.67	712	28640	109.70	ng/uL	88
41)	3-Nitroaniline	19.06	732	33013	153.01	ng/uL	91
42)	Acenaphthene	18.98	728	72705	100.92	ng/uL	94
43)	2,4-Dinitrophenol	19.34	747	20007	227.18	ng/uL	87

	Compound	R.T.	Scan#	Area	Conc	Units	q
44)	4-Nitrophenol	19.96	779	14907	175.60	ng/uL	87
45)	Dibenzofuran	19.50	755	107987	97.08	ng/uL	97
46)	2,4-Dinitrotoluene	19.83	772	39707	109.28	ng/uL	75
47)	Diethylphthalate	20.81	823	97867	101.09	ng/uL	91
48)	4-Chlorophenyl-phenylether	20.69	817	36021	96.30	ng/uL	88
49)	Fluorene	20.54	809	93852	103.35	ng/uL	93
50)	4-Nitroaniline	21.11	839	35861	227.66	ng/uL	90
51)	2,4,6-Tribromophenol	21.37	852	6435	79.13	ng/uL	97
52)	*d10-Phenanthrene	23.35	955	47206	40.00	ng/uL	98
53)	4,6-Dinitro-2-methylphenol	21.13	840	21859M	130.63	ng/uL	
54)	N-Nitrosodiphenylamine	21.19	843	49384	91.68	ng/uL	93
55)	4-Bromophenyl-phenylether	22.15	893	19948	95.21	ng/uL	75
56)	Hexachlorobenzene	22.48	910	22417	98.00	ng/uL	98
57)	Pentachlorophenol	23.17	946	-18009	117.28	ng/uL	96
58)	Phenanthrene	23.46	961	126939	105.50	ng/uL	94
59)	Anthracene	23.60	968	117317	102.91	ng/uL	97
60)	Di-n-Butylphthalate	25.81	1083	211360	117.02	ng/uL	98
61)	Fluoranthene	27.12	1151	146985	102.27	ng/uL	91
62)	*d12-Chrysene	31.60	1384	38336	40.00	ng/uL	84
63)	Pyrene	27.75	1184	154151	101.08	ng/uL	85
64)	Terphenyl-d14	28.50	1223	41972	46.19	ng/uL	96
65)	Butylbenzylphthalate	30.37	1320	110457	110.79	ng/uL	92
66)	3,3'-Dichlorobenzidine	31.72	1390	39283	137.83	ng/uL	98
67)	Benzo(a)Anthracene	31.54	1381	145193	105.42	ng/uL	93
68)	Chrysene	31.68	1388	98931	100.21	ng/uL	95
69)	Bis(2-Ethylhexyl)Phthalate	32.41	1426	136906	105.28	ng/uL	92
70)	*d12-Perylene	35.68	1596	39939	40.00	ng/uL	95
71)	Di-n-octyl phthalate	34.26	1522	240763	109.89	ng/uL	88
72)	Benzo(b)fluoranthene	34.76	1548	146620M	105.16	ng/uL	88
73)	Benzo(k)Fluoranthene	34.83	1552	75683M	73.61	ng/uL	88
74)	Benzo(a)Pyrene	35.56	1590	114089	102.24	ng/uL	86
75)	Indeno(1,2,3-cd)Pyrene	38.37	1736	141424	114.76	ng/uL	56
76)	Dibenz(a,h)Anthracene	38.43	1739	96593	114.52	ng/uL	79
77)	Benzo(g,h,i)Perylene	38.97	1767	111515	117.53	ng/uL	57

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >CE305::D3 Quant Output File: ^CE305::SC
Name: SSTD160
Misc: HP3,INITIAL 5pt CALIBRATION BTL# 3

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890619 16:34

Operator ID: JOHN
Quant Time: 890620 12:22
Injected at: 890620 11:35

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890620 12:22
Output File: ^CE305::SC Injected at: 890620 11:35
Data File: >CE305::D3 Dilution Factor: 1.00000
Name: SSTD160
Misc: HP3,INITIAL 5pt CALIBRATION BTL# 3

ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890619 16:34

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.69	246	9264	40.00	ng/uL	98
2)	2-Fluorophenol	6.44	77	28145	104.14	ng/uL	96
3)	Phenol-d5	9.38	230	43467	104.54	ng/uL	84
4)	Phenol	9.42	232	71699	145.65	ng/uL	66
5)	bis(-2-Chloroethyl)Ether	9.29	225	60422	137.23	ng/uL	82
6)	2-Chlorophenol	9.31	226	50630	134.49	ng/uL	94
7)	1,3-Dichlorobenzene	9.58	240	49975	134.74	ng/uL	95
8)	1,4-Dichlorobenzene	9.75	249	46783	129.79	ng/uL	94
9)	Benzyl Alcohol	10.52	289	38313	199.67	ng/uL	83
10)	1,2-Dichlorobenzene	10.27	276	50548	130.66	ng/uL	98
11)	2-Methylphenol	11.04	316	53439	132.79	ng/uL	88
12)	bis(2-Chloroisopropyl)ether	10.86	307	85007	117.56	ng/uL	87
13)	4-Methylphenol	11.54	342	48206M	119.78	ng/uL	68
14)	N-Nitroso-Di-n-propylamine	11.37	333	54540	153.91	ng/uL	86
15)	Hexachloroethane	11.13	321	21579	134.78	ng/uL	86
16)	*d8-Naphthalene	13.48	443	35886	40.00	ng/uL	87
17)	Nitrobenzene-d5	11.46	338	18101	52.89	ng/uL	85
18)	Nitrobenzene	11.54	342	74622	142.11	ng/uL	82
19)	Isophorone	12.40	387	121129M	150.60	ng/uL	93
20)	2-Nitrophenol	12.48	391	36769	154.25	ng/uL	98
21)	2,4-Dimethylphenol	13.04	420	58622	146.43	ng/uL	92
22)	Benzoic Acid	14.14	477	54515M	292.86	ng/uL	
23)	bis(-2-Chloroethoxy)Methane	13.17	427	75610	151.11	ng/uL	90
24)	2,4-Dichlorophenol	13.33	435	41768	133.37	ng/uL	89
25)	1,2,4-Trichlorobenzene	13.41	439	42594	131.97	ng/uL	93
26)	Naphthalene	13.56	447	128989	135.22	ng/uL	98
27)	4-Chloroaniline	13.96	468	61098	148.42	ng/uL	94
28)	Hexachlorobutadiene	14.21	481	19019	127.20	ng/uL	97
29)	4-Chloro-3-methylphenol	15.73	560	53944	135.88	ng/uL	88
30)	2-Methylnaphthalene	15.68	557	134818	126.43	ng/uL	84
31)	*d10-Acenaphthene	18.87	723	23288	40.00	ng/uL	90
32)	Hexachlorocyclopentadiene	16.41	595	16294	152.03	ng/uL	97
33)	2,4,6-Trichlorophenol	16.77	614	32489	140.18	ng/uL	89
34)	2,4,5-Trichlorophenol	16.89	620	34113	133.19	ng/uL	98
35)	2-Chloronaphthalene	17.14	633	90430	140.53	ng/uL	98
36)	2-Fluorobiphenyl	16.99	625	32451	52.93	ng/uL	93
37)	2-Nitroaniline	17.76	665	48744	146.88	ng/uL	94
38)	Dimethyl Phthalate	18.58	708	119033	134.38	ng/uL	84
39)	Acenaphthylene	18.39	698	147116	127.71	ng/uL	95
40)	2,6-Dinitrotoluene	18.70	714	33864	142.79	ng/uL	75
41)	3-Nitroaniline	19.08	734	36645	186.96	ng/uL	91
42)	Acenaphthene	18.99	729	92140	140.80	ng/uL	94
43)	2,4-Dinitrophenol	19.35	748	24023	300.28	ng/uL	87

	Compound	R.T.	Scan#	Area	Conc	Units	q
44)	4-Nitrophenol	19.99	781	17354	225.03	ng/uL	88
45)	Dibenzofuran	19.53	757	135866	134.46	ng/uL	90
46)	2,4-Dinitrotoluene	19.85	774	46227	140.05	ng/uL	71
47)	Diethylphthalate	20.83	825	117270	133.35	ng/uL	92
48)	4-Chlorophenyl-phenylether	20.72	819	44861	132.02	ng/uL	83
49)	Fluorene	20.56	811	103233	125.15	ng/uL	95
50)	4-Nitroaniline	21.10	839	41145M	287.54	ng/uL	85
51)	2,4,6-Tribromophenol	21.37	853	5798	78.48	ng/uL	92
52)	*d10-Phenanthrene	23.36	956	40567	40.00	ng/uL	97
53)	4,6-Dinitro-2-methylphenol	21.16	842	23278M	161.88	ng/uL	
54)	N-Nitrosodiphenylamine	21.20	844	51736	111.76	ng/uL	95
55)	4-Bromophenyl-phenylether	22.16	894	23815	132.27	ng/uL	71
56)	Hexachlorobenzene	22.49	911	25927	131.89	ng/uL	97
57)	Pentachlorophenol	23.18	947	20797	157.60	ng/uL	96
58)	Phenanthrene	23.47	962	150689	145.73	ng/uL	96
59)	Anthracene	23.61	969	136423	139.26	ng/uL	95
60)	Di-n-Butylphthalate	25.82	1084	234222	150.90	ng/uL	97
61)	Fluoranthene	27.13	1152	164475	133.17	ng/uL	93
62)	*d12-Chrysene	31.61	1385	29445	40.00	ng/uL	80
63)	Pyrene	27.76	1185	167861	143.31	ng/uL	84
64)	Terphenyl-d14	28.49	1223	38988	55.87	ng/uL	97
65)	Butylbenzylphthalate	30.38	1321	115834	151.27	ng/uL	93
66)	3,3'-Dichlorobenzidine	31.71	1390	39401	179.98	ng/uL	97
67)	Benzo(a)Anthracene	31.55	1382	158908	150.22	ng/uL	94
68)	Chrysene	31.69	1389	98794	130.29	ng/uL	95
69)	Bis(2-Ethylhexyl)Phthalate	32.40	1426	150087	150.27	ng/uL	90
70)	*d12-Perylene	35.67	1596	30173	40.00	ng/uL	94
71)	Di-n-octyl phthalate	34.26	1523	255818	154.55	ng/uL	88
72)	Benzo(b)fluoranthene	34.76	1549	163025M	154.78	ng/uL	86
73)	Benzo(k)Fluoranthene	34.82	1552	71847M	92.50	ng/uL	87
74)	Benzo(a)Pyrene	35.55	1590	124937	148.20	ng/uL	90
75)	Indeno(1,2,3-cd)Pyrene	38.38	1737	145136	155.89	ng/uL	50
76)	Dibenz(a,h)Anthracene	38.44	1740	100796	158.19	ng/uL	82
77)	Benzo(g,h,i)Perylene	38.98	1768	117733	164.25	ng/uL	65

* Compound is ISTD

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Instrument ID: HP3 Calibration Date: 06/19/89 Time: 1225

Lab File ID: DCJ19 Init. Calib. Date(s): 05/23/89 05/23/89

Min RRF50 for SPCC(#) = 0.050 Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D
Phenol *	1.856	2.126	14.5 *
bis(-2-Chloroethyl)Ether	1.574	1.901	20.8
2-Chlorophenol	1.274	1.625	27.6
1,3-Dichlorobenzene	1.441	1.602	11.1
1,4-Dichlorobenzene *	1.433	1.556	8.6 *
Benzyl Alcohol	1.009	.829	17.9
1,2-Dichlorobenzene	1.480	1.670	12.9
2-Methylphenol	1.341	1.738	29.6
bis(2-chloroisopropyl)ether	3.018	3.122	3.5
4-Methylphenol	1.419	1.738	22.4
N-Nitroso-Di-n-propylamine #	1.512	1.530	1.2 #
Hexachloroethane	.635	.691	8.9
Nitrobenzene	.495	.585	18.2
Isophorone	.844	.896	6.2
2-Nitrophenol *	.247	.266	7.4 *
2,4-Dimethylphenol	.404	.446	10.6
Benzoic Acid	.315	.207	34.2
bis(-2-Chloroethoxy)Methane	.538	.558	3.6
2,4-Dichlorophenol *	.323	.349	8.1 *
1,2,4-Trichlorobenzene	.342	.360	5.2
Naphthalene	.949	1.063	12.0
4-Chloroaniline	.442	.459	3.8
Hexachlorobutadiene *	.168	.167	0.9 *
4-Chloro-3-methylphenol *	.358	.443	23.6 *
2-Methylnaphthalene	.911	1.189	30.5
Hexachlorocyclopentadiene #	.171	.184	7.7 #
2,4,6-Trichlorophenol *	.402	.398	1.0 *
2,4,5-Trichlorophenol	.366	.440	20.2
2-Chloronaphthalene	1.032	1.105	7.1
2-Nitroaniline	.523	.570	9.1
Dimethyl Phthalate	1.394	1.522	9.2
Acenaphthylene	1.771	1.979	11.7
2,6-Dinitrotoluene	.360	.407	13.2
3-Nitroaniline	.343	.337	1.9
Acenaphthene *	1.018	1.124	10.4 *
2,4-Dinitrophenol #	.254	.137	45.9 #
4-Nitrophenol #	.159	.132	16.6 #

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Instrument ID: HP3 Calibration Date: 06/19/89 Time: 1225

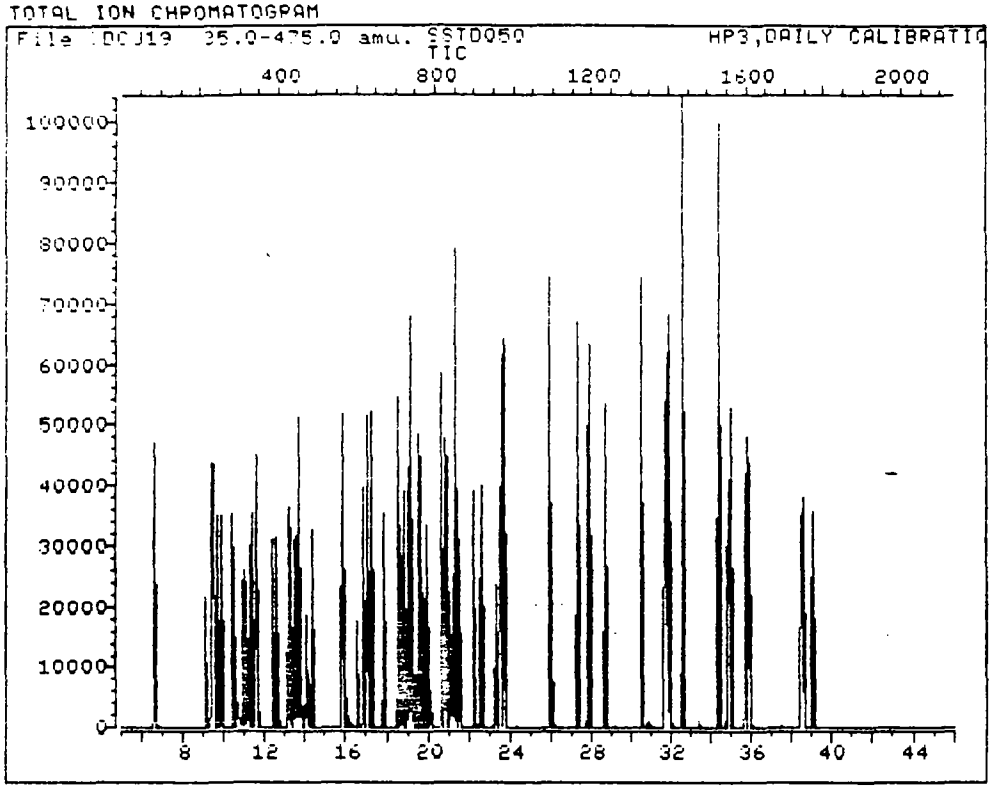
Lab File ID: DCJ19 Init. Calib. Date(s): 05/23/89 05/23/89

Min RRF50 for SPCC(#) = 0.050 Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D
Dibenzofuran	1.576	1.736	10.2
2,4-Dinitrotoluene	.514	.567	10.3
Diethylphthalate	1.347	1.510	12.1
4-Chlorophenyl-phenylether	.565	.584	3.3
Fluorene	1.298	1.417	9.1
4-Nitroaniline	.408	.246	39.8
4,6-Dinitro-2-methylphenol	.154	.142	7.8
N-Nitrosodiphenylamine (1) *	.387	.456	17.9 *
4-Bromophenyl-phenylether	.173	.178	2.6
Hexachlorobenzene	.201	.194	3.8
Pentachlorophenol *	.147	.130	11.5 *
Phenanthrene	.932	1.020	9.4
Anthracene	.878	.966	10.1
Di-n-Butylphthalate	1.375	1.530	11.3
Fluoranthene *	1.122	1.218	8.6 *
Pyrene	1.427	1.591	11.5
Butylbenzylphthalate	.897	1.040	16.0
3,3'-Dichlorobenzidine	.332	.297	10.3
Benzo(a)Anthracene	1.405	1.437	2.3
Chrysene	.960	1.030	7.3
bis(2-Ethylhexyl)Phthalate	1.166	1.357	16.3
Di-n-octyl phthalate *	1.783	2.194	23.0 *
Benzo(b)fluoranthene	1.236	1.396	12.9
Benzo(k)Fluoranthene	.925	1.030	11.3
Benzo(a)Pyrene *	1.029	1.118	8.6 *
Indeno(1,2,3-cd)Pyrene	1.242	1.234	0.6
Dibenz(a,h)Anthracene	.899	.845	6.0
Benzo(g,h,i)Perylene	.994	.950	4.4
Nitrobenzene-d5	.351	.382	8.6
2-Fluorobiphenyl	1.100	1.053	4.2
Terphenyl-d14	1.003	.948	5.5
Phenol-d5	1.598	1.795	12.3
2-Fluorophenol	1.164	1.167	0.3
2,4,6-Tribromophenol	.155	.127	18.0

(1) Cannot be separated from Diphenylamine

TOTAL ION CHROMATOGRAM



Data File: >DCJ19::D3 Quant Output File: ^DCJ19::SC
Name: SSTD050
Misc: HP3,DAILY CALIBRATION BTL# 2

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890615 16:40

Operator ID: DENNIS
Quant Time: 890619 13:12
Injected at: 890619 12:25

QUANT REPORT

Operator ID: DENNIS Quant Rev: 6 Quant Time: 890619 13:12
Output File: `DCJ19::SC Injected at: 890619 12:25
Data File: :DCJ19::D3 Dilution Factor: 1.00000
Name: SSTD050
Misc: HP3,DAILY CALIBRATION BTL# 2

ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890615 16:40

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.79	251	10326	40.00	ng/uL	98
2)	2-Fluorophenol	6.54	82	30123	101.44	ng/uL	98
3)	Phenol-d5	9.45	233	46344	98.29	ng/uL	85
4)	Phenol	9.48	235	27436	48.12	ng/uL	74
5)	bis(-2-Chloroethyl)Ether	9.35	228	24539	50.52	ng/uL	69
6)	2-Chlorophenol	9.37	229	20981	50.32	ng/uL	96
7)	1,3-Dichlorobenzene	9.66	244	20671	49.70	ng/uL	95
8)	1,4-Dichlorobenzene	9.83	253	20088	49.43	ng/uL	94
9)	Benzyl Alcohol	10.52	289	10694	36.32	ng/uL	82
10)	1,2-Dichlorobenzene	10.35	280	21560	51.45	ng/uL	95
11)	2-Methylphenol	11.12	320	22429	51.80	ng/uL	88
12)	bis(2-Chloroisopropyl)ether	10.95	311	40300	47.38	ng/uL	96
13)	4-Methylphenol	11.12	320	22429	51.80	ng/uL	70
14)	N-Nitroso-Di-n-propylamine	11.39	334	19749	43.58	ng/uL	92
15)	Hexachloroethane	11.23	326	8923	49.38	ng/uL	90
16)	*d8-Naphthalene	13.56	447	43399	40.00	ng/uL	87
17)	Nitrobenzene-d5	11.54	342	20696	51.00	ng/uL	91
18)	Nitrobenzene	11.60	345	31751	49.73	ng/uL	88
19)	Isophorone	12.37	385	48634	48.63	ng/uL	91
20)	2-Nitrophenol	12.56	395	14414	50.37	ng/uL	98
21)	2,4-Dimethylphenol	13.06	421	24207	49.66	ng/uL	94
22)	Benzoic Acid	13.81	460	11256	33.08	ng/uL	97
23)	bis(-2-Chloroethoxy)Methane	13.24	430	30256	50.13	ng/uL	96
24)	2,4-Dichlorophenol	13.37	437	18937	49.70	ng/uL	89
25)	1,2,4-Trichlorobenzene	13.50	444	19517	49.62	ng/uL	95
26)	Naphthalene	13.64	451	57680	52.06	ng/uL	99
27)	4-Chloroaniline	14.02	471	24892	50.11	ng/uL	95
28)	Hexachlorobutadiene	14.31	486	9041	47.91	ng/uL	93
29)	4-Chloro-3-methylphenol	15.81	564	24006	50.18	ng/uL	92
30)	2-Methylnaphthalene	15.76	561	64481	51.53	ng/uL	88
31)	*d10-Acenaphthene	18.97	728	29395	40.00	ng/uL	93
32)	Hexachlorocyclopentadiene	16.53	601	6764	57.97	ng/uL	94
33)	2,4,6-Trichlorophenol	16.85	618	14627	46.22	ng/uL	94
34)	2,4,5-Trichlorophenol	16.99	625	16164	48.60	ng/uL	97
35)	2-Chloronaphthalene	17.22	637	40613	47.43	ng/uL	97
36)	2-Fluorobiphenyl	17.08	630	38691	49.33	ng/uL	93
37)	2-Nitroaniline	17.81	668	20945	47.90	ng/uL	90
38)	Dimethyl Phthalate	18.62	710	55905	49.26	ng/uL	81
39)	Acenaphthylene	18.47	702	72703	51.49	ng/uL	93
40)	2,6-Dinitrotoluene	18.74	716	14968	52.52	ng/uL	84
41)	3-Nitroaniline	19.12	736	12370	41.04	ng/uL	93
42)	Acenaphthene	19.08	734	41301	47.31	ng/uL	96
43)	2,4-Dinitrophenol	19.39	750	5049	35.72	ng/uL	90

	Compound	R.T.	Scan#	Area	Conc	Units	q
44)	4-Nitrophenol	20.05	784	4867	38.21	ng/uL	81
45)	Dibenzofuran	19.58	760	63774	50.26	ng/uL	95
46)	2,4-Dinitrotoluene	19.89	776	20831	47.07	ng/uL	87
47)	Diethylphthalate	20.85	826	55503	47.18	ng/uL	93
48)	4-Chlorophenyl-phenylether	20.80	823	21445	46.83	ng/uL	92
49)	Fluorene	20.64	815	52061	49.32	ng/uL	99
50)	4-Nitroaniline	21.07	837	9031	39.38	ng/uL	81
51)	2,4,6-Tribromophenol	21.47	858	9325	86.46	ng/uL	98
52)	*d10-Phenanthrene	23.47	962	58956	40.00	ng/uL	96
53)	4,6-Dinitro-2-methylphenol	21.14	841	10449	45.21	ng/uL	88
54)	N-Nitrosodiphenylamine	21.26	847	33638	50.15	ng/uL	94
55)	4-Bromophenyl-phenylether	22.26	899	13083	52.20	ng/uL	87
56)	Hexachlorobenzene	22.59	916	14284	45.51	ng/uL	91
57)	Pentachlorophenol	23.26	951	9589	44.44	ng/uL	96
58)	Phenanthrene	23.57	967	75137	53.28	ng/uL	96
59)	Anthracene	23.70	974	71187	50.07	ng/uL	97
60)	Di-n-Butylphthalate	25.93	1090	112786	48.87	ng/uL	99
61)	Fluoranthene	27.24	1158	89745	50.66	ng/uL	91
62)	*d12-Chrysene	31.72	1391	46953	40.00	ng/uL	89
63)	Pyrene	27.88	1191	93388	55.53	ng/uL	87
64)	Terphenyl-d14	28.66	1232	55641	52.88	ng/uL	96
65)	Butylbenzylphthalate	30.49	1327	61052	55.65	ng/uL	95
66)	3,3'-Dichlorobenzidine	31.80	1395	17454	57.38	ng/uL	94
67)	Benzo(a)Anthracene	31.67	1388	84340	53.70	ng/uL	93
68)	Chrysene	31.82	1396	60455	50.93	ng/uL	93
69)	Bis(2-Ethylhexyl)Phthalate	32.53	1433	79633	53.10	ng/uL	92
70)	*d12-Perylene	35.82	1604	46787	40.00	ng/uL	94
71)	Di-n-octyl phthalate	34.34	1527	128329M	53.23	ng/uL	89
72)	Benzo(b)fluoranthene	34.84	1553	81663	50.04	ng/uL	89
73)	Benzo(k)Fluoranthene	34.92	1557	60222	57.86	ng/uL	89
74)	Benzo(a)Pyrene	35.67	1596	65363	51.68	ng/uL	88
75)	Indeno(1,2,3-cd)Pyrene	38.42	1739	72185	46.96	ng/uL	64
76)	Dibenz(a,h)Anthracene	38.49	1743	49402	43.16	ng/uL	79
77)	Benzo(g,h,i)Perylene	39.05	1772	55574	45.50	ng/uL	65

* Compound is ISTD

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Instrument ID: HP3 Calibration Date: 06/22/89 Time: 1445

Lab File ID: DC322 Init. Calib. Date(s): 06/20/89 06/20/89

Min RRF50 for SPCC(#) = 0.050 Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D	
Phenol	1.993	1.997	0.2	*
bis(-2-Chloroethyl)Ether	1.758	1.892	7.6	
2-Chlorophenol	1.550	1.708	10.2	
1,3-Dichlorobenzene	1.516	1.626	7.2	
1,4-Dichlorobenzene	1.473	1.609	9.3	*
Benzyl Alcohol	.911	.867	4.8	
1,2-Dichlorobenzene	1.558	1.706	9.5	
2-Methylphenol	1.530	1.664	8.8	
bis(2-chloroisopropyl)ether	2.392	2.236	6.5	
4-Methylphenol	1.487	1.664	11.9	
N-Nitroso-Di-n-propylamine	1.482	1.570	5.9	#
Hexachloroethane	.683	.794	16.2	
Nitrobenzene	.567	.613	8.2	
Isophorone	.864	.868	0.5	
2-Nitrophenol	.266	.280	5.1	*
2,4-Dimethylphenol	.423	.433	2.4	
Benzoic Acid	.315	.319	1.3	
bis(-2-Chloroethoxy)Methane	.550	.596	8.3	
2,4-Dichlorophenol	.314	.339	7.8	*
1,2,4-Trichlorobenzene	.326	.362	11.2	
Naphthalene	1.017	1.093	7.5	
4-Chloroaniline	.436	.469	7.5	
Hexachlorobutadiene	.145	.163	11.9	*
4-Chloro-3-methylphenol	.410	.425	3.6	*
2-Methylnaphthalene	1.068	1.195	11.9	
Hexachlorocyclopentadiene	.178	.231	29.9	#
2,4,6-Trichlorophenol	.370	.399	8.0	*
2,4,5-Trichlorophenol	.376	.421	12.0	
2-Chloronaphthalene	1.112	1.194	7.4	
2-Nitroaniline	.549	.562	2.5	
Dimethyl Phthalate	1.431	1.536	7.3	
Acenaphthylene	1.864	2.066	10.8	
2,6-Dinitrotoluene	.379	.399	5.4	
3-Nitroaniline	.422	.414	2.0	
Acenaphthene	1.082	1.267	17.1	*
2,4-Dinitrophenol	.250	.254	1.6	#
4-Nitrophenol	.186	.178	4.1	#

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Instrument ID: HF3 Calibration Date: 06/22/89 Time: 1445

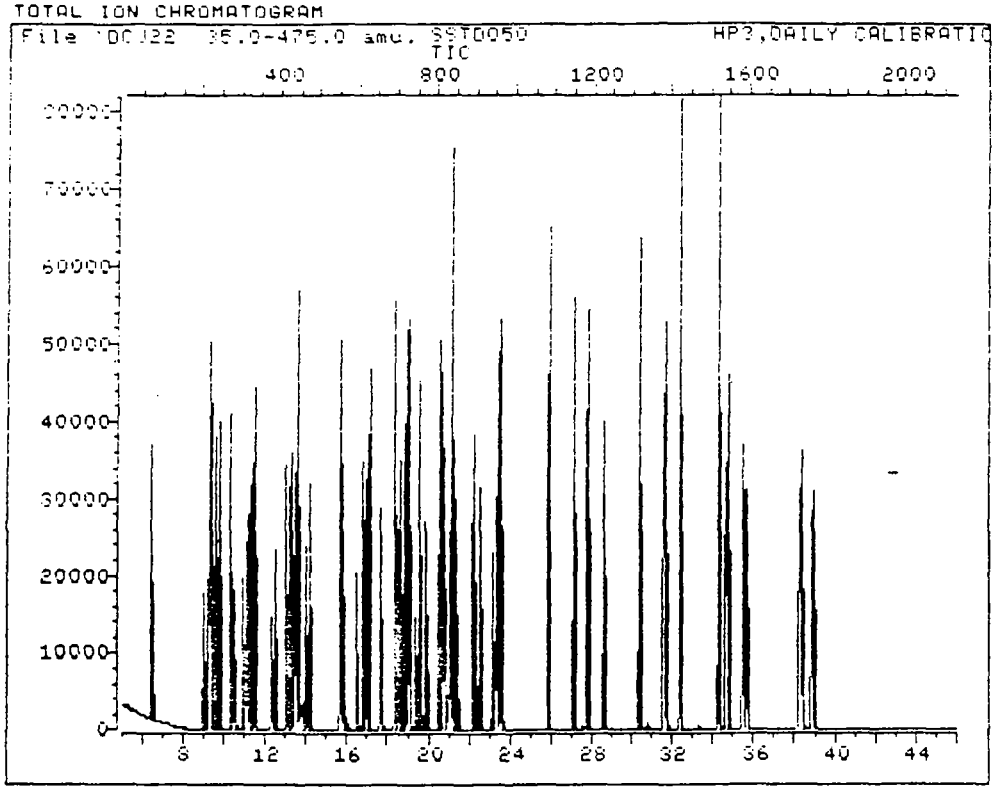
Lab File ID: DCJ22 Init. Calib. Date(s): 06/20/89 06/20/89

Min RRF50 for SPCC(#) = 0.050 Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D
Dibenzofuran	1.586	1.762	11.1
2,4-Dinitrotoluene	.534	.542	1.4
Diethylphthalate	1.431	1.597	11.6
4-Chlorophenyl-phenylether	.535	.593	10.8
Fluorene	1.306	1.490	14.1
4-Nitroaniline	.453	.285	37.1
4,6-Dinitro-2-methylphenol	.156	.189	21.3
N-Nitrosodiphenylamine (1) *	.419	.458	9.1 *
4-Bromophenyl-phenylether	.155	.172	11.0
Hexachlorobenzene	.175	.183	4.6
Pentachlorophenol *	.128	.124	2.8 *
Phenanthrene	.983	1.102	12.1
Anthracene	.946	1.048	10.8
Di-n-Butylphthalate	1.612	1.686	4.6
Fluoranthene *	1.142	1.231	7.8 *
Pyrene	1.510	1.688	11.7
Butylbenzylphthalate	1.037	1.183	14.0
3,3'-Dichlorobenzidine	.345	.199	42.4
Benzo(a)Anthracene	1.364	1.440	5.6
Chrysene	1.001	1.170	16.9
bis(2-Ethylhexyl)Phthalate	1.396	1.615	15.7
Di-n-octyl phthalate *	2.354	2.642	12.2 *
Benzo(b)fluoranthene	1.308	1.440	10.1
Benzo(k)Fluoranthene	.964	.944	2.0
Benzo(a)Pyrene *	1.066	1.116	4.8 *
Indeno(1,2,3-cd)Pyrene	1.287	1.397	8.5
Dibenz(a,h)Anthracene	.916	1.024	11.8
Benzo(g,h,i)Perylene	1.031	1.138	10.4
Nitrobenzene-d5	.403	.417	3.5
2-Fluorobiphenyl	1.103	1.178	6.9
Terphenyl-d14	.967	.980	1.4
Phenol-d5	1.902	1.902	0.0
2-Fluorophenol	1.060	.946	10.8
2,4,6-Tribromophenol	.104	.109	4.4

(1) Cannot be separated from Diphenylamine

TOTAL ION CHROMATOGRAM



Data File: >DCJ22::D3 Quant Output File: ^DCJ22::SC
Name: SSTD050
Misc: HP3,DAILY CALIBRATION BTL# 2

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

Operator ID: DENNIS
Quant Time: 890622 15:32
Injected at: 890622 14:45

QUANT REPORT

Operator ID: DENNIS Quant Rev: 6 Quant Time: 890622 15:33
Output File: ^DCJ22::SC Injected at: 890622 14:45
Data File: ^DCJ22::D3 Dilution Factor: 1.00000
Name: SSTD050
Misc: HP3,DAILY CALIBRATION BTL# 2

ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.68	244	10010	40.00	ng/uL	95
2)	2-Fluorophenol	6.43	75	-23675	87.62	ng/uL	95
3)	Phenol-d5	9.35	227	47588	99.38	ng/uL	83
4)	Phenol	9.37	228	24988	47.12	ng/uL	63
5)	bis(-2-Chloroethyl)Ether	9.24	221	23670	49.56	ng/uL	67
6)	2-Chlorophenol	9.26	222	21369	51.69	ng/uL	99
7)	1,3-Dichlorobenzene	9.54	237	20346	50.59	ng/uL	95
8)	1,4-Dichlorobenzene	9.72	246	20134	52.08	ng/uL	95
9)	Benzyl Alcohol	10.41	282	10845	44.65	ng/uL	78
10)	1,2-Dichlorobenzene	10.24	273	21344	51.37	ng/uL	95
11)	2-Methylphenol	10.99	312	20823	50.53	ng/uL	87
12)	bis(2-Chloroisopropyl)ether	10.83	304	27982	42.02	ng/uL	86
13)	4-Methylphenol	10.99	312	20823	50.53	ng/uL	65
14)	N-Nitroso-Di-n-propylamine	11.30	328	19641	55.54	ng/uL	83
15)	Hexachloroethane	11.12	319	9936M	54.14	ng/uL	
16)	*d8-Naphthalene	13.45	440	40955	40.00	ng/uL	87
17)	Nitrobenzene-d5	11.41	334	21347	49.13	ng/uL	77
18)	Nitrobenzene	11.49	338	31402	49.74	ng/uL	83
19)	Isophorone	12.28	379	44460	47.60	ng/uL	87
20)	2-Nitrophenol	12.43	387	14312	48.69	ng/uL	92
21)	2,4-Dimethylphenol	12.95	414	22185	47.11	ng/uL	90
22)	Benzoic Acid	13.80	458	16336	46.51	ng/uL	99
23)	bis(-2-Chloroethoxy)Methane	13.12	423	30495	50.06	ng/uL	93
24)	2,4-Dichlorophenol	13.26	430	17344	47.09	ng/uL	90
25)	1,2,4-Trichlorobenzene	13.37	436	18550	50.31	ng/uL	93
26)	Naphthalene	13.51	443	55967	48.02	ng/uL	98
27)	4-Chloroaniline	13.91	464	23993	49.86	ng/uL	91
28)	Hexachlorobutadiene	14.20	479	8328	48.88	ng/uL	97
29)	4-Chloro-3-methylphenol	15.68	556	21737	48.06	ng/uL	91
30)	2-Methylnaphthalene	15.63	553	61183	51.57	ng/uL	90
31)	*d10-Acenaphthene	18.84	720	25506	40.00	ng/uL	93
32)	Hexachlorocyclopentadiene	16.40	593	7379	56.50	ng/uL	97
33)	2,4,6-Trichlorophenol	16.72	610	12736	49.73	ng/uL	94
34)	2,4,5-Trichlorophenol	16.86	617	13438	48.87	ng/uL	95
35)	2-Chloronaphthalene	17.09	629	38076	49.44	ng/uL	97
36)	2-Fluorobiphenyl	16.95	622	37572	52.94	ng/uL	93
37)	2-Nitroaniline	17.69	660	17925	46.50	ng/uL	96
38)	Dimethyl Phthalate	18.49	702	48954	50.28	ng/uL	82
39)	Acenaphthylene	18.34	694	65860	49.92	ng/uL	96
40)	2,6-Dinitrotoluene	18.61	708	12723	48.93	ng/uL	89
41)	3-Nitroaniline	18.99	728	13202	45.34	ng/uL	88
42)	Acenaphthene	18.94	725	40399	54.26	ng/uL	97
43)	2,4-Dinitrophenol	19.26	742	8101	54.36	ng/uL	87

	Compound	R.T.	Scan#	Area	Conc	Units	q
44)	4-Nitrophenol	19.90	775	5679	49.54	ng/uL	80
45)	Dibenzofuran	19.46	752	56165	50.97	ng/uL	94
46)	2,4-Dinitrotoluene	19.76	768	17281	46.05	ng/uL	77
47)	Diethylphthalate	20.75	819	50914	50.86	ng/uL	90
48)	4-Chlorophenyl-phenylether	20.67	815	19905	48.59	ng/uL	86
49)	Fluorene	20.51	807	47489	53.06	ng/uL	99
50)	4-Nitroaniline	20.94	829	9072	31.24	ng/uL	85
51)	2,4,6-Tribromophenol	21.34	850	6937	101.15	ng/uL	99
52)	*d10-Phenanthrene	23.32	953	47582	40.00	ng/uL	99
53)	4,6-Dinitro-2-methylphenol	21.03	834	11263	55.31	ng/uL	78
54)	N-Nitrosodiphenylamine	21.13	839	27224	45.11	ng/uL	93
55)	4-Bromophenyl-phenylether	22.13	891	10239M	51.53	ng/uL	
56)	Hexachlorobenzene	22.44	907	10898	47.71	ng/uL	96
57)	Pentachlorophenol	23.11	942	- 7403	45.38	ng/uL	99
58)	Phenanthrene	23.40	957	65543	53.31	ng/uL	97
59)	Anthracene	23.56	965	62323	50.78	ng/uL	97
60)	Di-n-Butylphthalate	25.79	1081	100288	48.29	ng/uL	98
61)	Fluoranthene	27.08	1148	73194	49.17	ng/uL	92
62)	*d12-Chrysene	31.56	1381	34597	40.00	ng/uL	81
63)	Pyrene	27.71	1181	72978	49.20	ng/uL	84
64)	Terphenyl-d14	28.50	1222	42392	47.34	ng/uL	98
65)	Butylbenzylphthalate	30.35	1318	51165	51.04	ng/uL	84
66)	3,3'-Dichlorobenzidine	31.64	1385	8600	25.42	ng/uL	93
67)	Benzo(a)Anthracene	31.48	1377	62292	47.01	ng/uL	91
68)	Chrysene	31.64	1385	50586	51.81	ng/uL	93
69)	Bis(2-Ethylhexyl)Phthalate	32.37	1423	69846	50.82	ng/uL	94
70)	*d12-Perylene	35.64	1593	37570	40.00	ng/uL	94
71)	Di-n-octyl phthalate	34.19	1518	124057	53.43	ng/uL	88
72)	Benzo(b)fluoranthene	34.64	1541	67629	51.53	ng/uL	85
73)	Benzo(k)Fluoranthene	34.75	1547	44347	48.37	ng/uL	82
74)	Benzo(a)Pyrene	35.48	1585	52432	48.89	ng/uL	87
75)	Indeno(1,2,3-cd)Pyrene	38.23	1728	65588	49.66	ng/uL	57
76)	Dibenz(a,h)Anthracene	38.33	1733	48113	50.95	ng/uL	77
77)	Benzo(g,h,i)Perylene	38.85	1760	53463	50.27	ng/uL	61

* Compound is ISTD

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: S-CUBED Contract: 68-D9-0022

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Instrument ID: HP3 Calibration Date: 06/23/89 Time: 1226

Lab File ID: DCJ23 Init. Calib. Date(s): 06/20/89 06/20/89

Min RRF50 for SPCC(#) = 0.050 Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D	
Phenol	1.993	1.875	5.9	*
bis(-2-Chloroethyl)Ether	1.758	1.907	8.5	
2-Chlorophenol	1.550	1.655	6.8	
1,3-Dichlorobenzene	1.516	1.672	10.2	
1,4-Dichlorobenzene	1.473	1.649	12.0	*
Benzyl Alcohol	.911	.815	10.5	
1,2-Dichlorobenzene	1.558	1.680	7.8	
2-Methylphenol	1.530	1.553	1.5	
bis(2-chloroisopropyl)ether	2.392	1.933	19.2	
4-Methylphenol	1.487	1.519	2.1	
N-Nitroso-Di-n-propylamine	1.482	1.289	13.0	#
Hexachloroethane	.683	.769	12.5	
Nitrobenzene	.567	.582	2.7	
Isophorone	.864	.790	8.6	
2-Nitrophenol	.266	.271	1.9	*
2,4-Dimethylphenol	.423	.411	2.9	
Benzoic Acid	.315	.227	28.0	
bis(-2-Chloroethoxy)Methane	.550	.541	1.5	
2,4-Dichlorophenol	.314	.339	7.8	*
1,2,4-Trichlorobenzene	.326	.363	11.5	
Naphthalene	1.017	1.073	5.5	
4-Chloroaniline	.436	.431	1.3	
Hexachlorobutadiene	.145	.167	15.2	*
4-Chloro-3-methylphenol	.410	.403	1.7	*
2-Methylnaphthalene	1.068	1.179	10.4	
Hexachlorocyclopentadiene	.178	.247	38.8	#
2,4,6-Trichlorophenol	.370	.409	10.5	*
2,4,5-Trichlorophenol	.376	.444	17.9	
2-Chloronaphthalene	1.112	1.232	10.8	
2-Nitroaniline	.549	.462	15.9	
Dimethyl Phthalate	1.431	1.558	8.9	
Acenaphthylene	1.864	2.016	8.2	
2,6-Dinitrotoluene	.379	.384	1.3	
3-Nitroaniline	.422	.414	1.9	
Acenaphthene	1.082	1.242	14.7	*
2,4-Dinitrophenol	.250	.265	6.1	#
4-Nitrophenol	.186	.165	11.3	#

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Instrument ID: HP3 Calibration Date: 06/23/89 Time: 1226

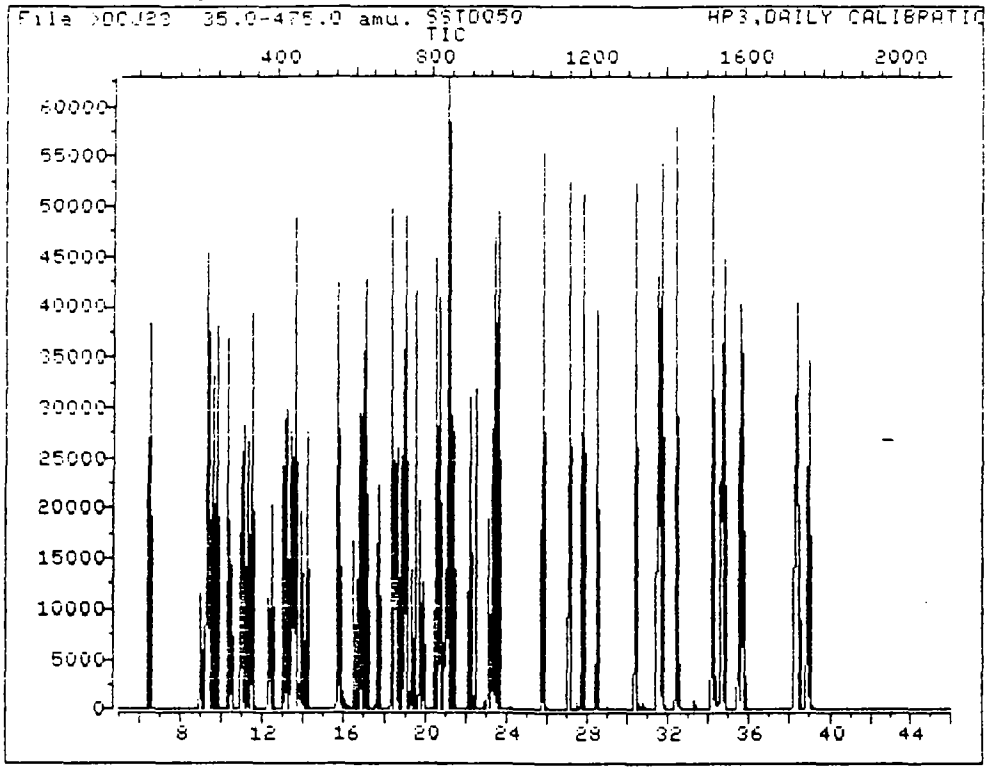
Lab File ID: DCJ23 Init. Calib. Date(s): 06/20/89 06/20/89

Min RRF50 for SPCC(#) = 0.050 Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D	
Dibenzofuran	1.586	1.775	11.9	
2,4-Dinitrotoluene	.534	.569	6.6	
Diethylphthalate	1.431	1.515	5.9	
4-Chlorophenyl-phenylether	.535	.630	17.7	
Fluorene	1.306	1.482	13.5	
4-Nitroaniline	.453	.330	27.2	
4,6-Dinitro-2-methylphenol	.156	.174	11.3	
N-Nitrosodiphenylamine (1)	.419	.450	7.2	*
4-Bromophenyl-phenylether	.155	.178	14.6	
Hexachlorobenzene	.175	.208	19.0	
Pentachlorophenol	.128	.131	2.3	*
Phenanthrene	.983	1.080	9.9	
Anthracene	.946	1.029	8.7	
Di-n-Butylphthalate	1.612	1.589	1.4	
Fluoranthene	1.142	1.299	13.8	*
Pyrene	1.510	1.504	0.4	
Butylbenzylphthalate	1.037	.854	17.7	
3,3'-Dichlorobenzidine	.345	.251	27.2	
Benzo(a)Anthracene	1.364	1.420	4.1	
Chrysene	1.001	1.055	5.4	
bis(2-Ethylhexyl)Phthalate	1.396	1.192	14.6	
Di-n-octyl phthalate	2.354	2.049	12.9	*
Benzo(b)fluoranthene	1.308	1.534	17.2	
Benzo(k)Fluoranthene	.964	.977	1.4	
Benzo(a)Pyrene	1.066	1.175	10.3	*
Indeno(1,2,3-cd)Pyrene	1.287	1.541	19.7	
Dibenz(a,h)Anthracene	.916	1.100	20.1	
Benzo(g,h,i)Perylene	1.031	1.233	19.6	
Nitrobenzene-d5	.403	.386	4.2	
2-Fluorobiphenyl	1.103	1.200	8.8	
Terphenyl-d14	.967	.892	7.7	
Phenol-d5	1.902	1.881	1.2	
2-Fluorophenol	1.060	1.188	12.0	
2,4,6-Tribromophenol	.104	.137	31.1	

(1) Cannot be separated from Diphenylamine

TOTAL ION CHROMATOGRAM



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Name: SSTD050
Misc: HP3,DAILY CALIBRATION BTL# 2

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890623 13:37

Operator ID: DENNIS
Quant Time: 890623 13:38
Injected at: 890623 12:26

QUANT REPORT

Operator ID: DENNIS Quant Rev: 6 Quant Time: 890623 13:38
Output File: ^DCJ23::SC Injected at: 890623 12:26
Data File: ^DCJ23::D3 Dilution Factor: 1.00000
Name: SSTD050
Misc: HP3,DAILY CALIBRATION BTL# 2

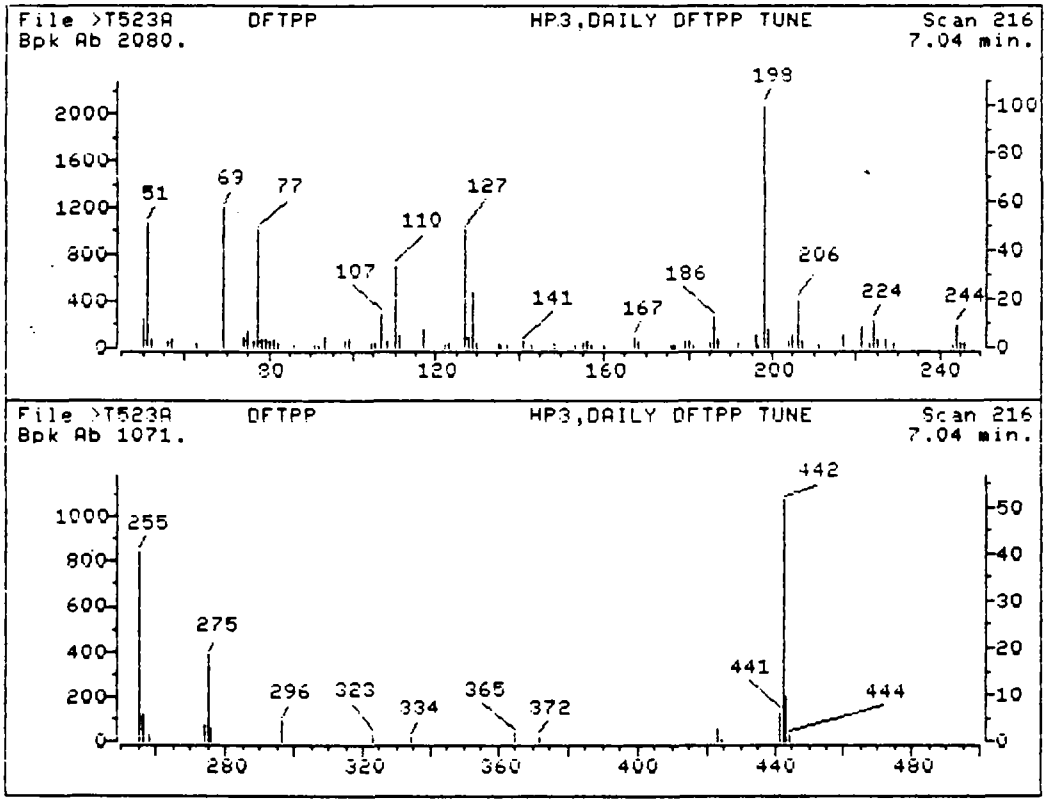
ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890623 13:37

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.66	244	9761	40.00	ng/uL	95
2)	2-Fluorophenol	6.43	76	28987	125.56	ng/uL	88
3)	Phenol-d5	9.35	228	45889	98.89	ng/uL	81
4)	Phenol	9.37	229	22879	46.95	ng/uL	65
5)	bis(-2-Chloroethyl)Ether	9.24	222	23270	50.41	ng/uL	69
6)	2-Chlorophenol	9.26	223	20198	48.47	ng/uL	97
7)	1,3-Dichlorobenzene	9.55	238	20396	51.40	ng/uL	95
8)	1,4-Dichlorobenzene	9.72	247	20118	51.23	ng/uL	95
9)	Benzyl Alcohol	10.41	283	9941	47.00	ng/uL	74
10)	1,2-Dichlorobenzene	10.24	274	20497	49.24	ng/uL	95
11)	2-Methylphenol	10.99	313	18948	46.66	ng/uL	86
12)	bis(2-Chloroisopropyl)ether	10.82	304	23586	43.22	ng/uL	80
13)	4-Methylphenol	11.45	337	18532M	45.63	ng/uL	63
14)	N-Nitroso-Di-n-propylamine	11.30	329	15722	41.04	ng/uL	77
15)	Hexachloroethane	11.10	319	9381	48.41	ng/uL	91
16)	*d8-Naphthalene	13.45	441	40569	40.00	ng/uL	87
17)	Nitrobenzene-d5	11.43	336	19561	46.25	ng/uL	83
18)	Nitrobenzene	11.49	339	29528	47.46	ng/uL	79
19)	Isophorone	12.28	380	40046	45.46	ng/uL	86
20)	2-Nitrophenol	12.43	388	13746	48.48	ng/uL	88
21)	2,4-Dimethylphenol	12.97	416	20838	47.41	ng/uL	94
22)	Benzoic Acid	13.84	461	11500	35.53	ng/uL	96
23)	bis(-2-Chloroethoxy)Methane	13.13	424	27454	45.44	ng/uL	91
24)	2,4-Dichlorophenol	13.26	431	17185	50.01	ng/uL	88
25)	1,2,4-Trichlorobenzene	13.38	437	18429	50.15	ng/uL	92
26)	Naphthalene	13.51	444	54394	49.06	ng/uL	98
27)	4-Chloroaniline	13.92	465	21833	45.93	ng/uL	90
28)	Hexachlorobutadiene	14.18	479	8491	51.46	ng/uL	89
29)	4-Chloro-3-methylphenol	15.69	557	20432	47.45	ng/uL	94
30)	2-Methylnaphthalene	15.63	554	59766	49.31	ng/uL	88
31)	*d10-Acenaphthene	18.84	721	25384	40.00	ng/uL	96
32)	Hexachlorocyclopentadiene	16.38	593	7850	53.45	ng/uL	92
33)	2,4,6-Trichlorophenol	16.72	611	12973	51.18	ng/uL	92
34)	2,4,5-Trichlorophenol	16.86	618	14077	52.63	ng/uL	96
35)	2-Chloronaphthalene	17.09	630	39078	51.56	ng/uL	95
36)	2-Fluorobiphenyl	16.96	623	38074	50.91	ng/uL	94
37)	2-Nitroaniline	17.69	661	14646	41.05	ng/uL	92
38)	Dimethyl Phthalate	18.51	704	49427	50.73	ng/uL	78
39)	Acenaphthylene	18.34	695	63971	48.80	ng/uL	96
40)	2,6-Dinitrotoluene	18.61	709	12169	48.05	ng/uL	90
41)	3-Nitroaniline	19.02	730	13150	50.04	ng/uL	83
42)	Acenaphthene	18.94	726	39409	49.01	ng/uL	96
43)	2,4-Dinitrophenol	19.29	744	8420	52.22	ng/uL	90

	Compound	R.T.	Scan#	Area	Conc	Units	q
44)	4-Nitrophenol	19.90	776	5231	46.28	ng/uL	95
45)	Dibenzofuran	19.46	753	56313	50.37	ng/uL	95
46)	2,4-Dinitrotoluene	19.77	769	18067	52.53	ng/uL	84
47)	Diethylphthalate	20.75	820	48083	47.45	ng/uL	92
48)	4-Chlorophenyl-phenylether	20.67	816	19980	53.10	ng/uL	89
49)	Fluorene	20.52	808	47031	49.76	ng/uL	91
50)	4-Nitroaniline	20.98	832	10460	57.93	ng/uL	85
51)	2,4,6-Tribromophenol	21.34	851	8667	125.54	ng/uL	95
52)	*d10-Phenanthrene	23.33	954	49003	40.00	ng/uL	99
53)	4,6-Dinitro-2-methylphenol	21.06	836	10643	45.88	ng/uL	83
54)	N-Nitrosodiphenylamine	21.13	840	27555	49.14	ng/uL	94
55)	4-Bromophenyl-phenylether	22.11	891	10883	51.60	ng/uL	78
56)	Hexachlorobenzene	22.44	908	12769	56.89	ng/uL	97
57)	Pentachlorophenol	23.12	943	8027	52.64	ng/uL	93
58)	Phenanthrene	23.42	959	66169	49.01	ng/uL	92
59)	Anthracene	23.56	966	63013	49.09	ng/uL	97
60)	Di-n-Butylphthalate	25.79	1082	97322	47.11	ng/uL	98
61)	Fluoranthene	27.08	1149	79588	52.79	ng/uL	96
62)	*d12-Chrysene	31.56	1382	42719	40.00	ng/uL	91
63)	Pyrene	27.71	1182	80289	44.55	ng/uL	89
64)	Terphenyl-d14	28.50	1223	47626	45.49	ng/uL	98
65)	Butylbenzylphthalate	30.35	1319	45606	36.09	ng/uL	87
66)	3,3'-Dichlorobenzidine	31.64	1386	13423	63.20	ng/uL	95
67)	Benzo(a)Anthracene	31.51	1379	75835	49.30	ng/uL	93
68)	Chrysene	31.66	1387	56335	45.10	ng/uL	95
69)	Bis(2-Ethylhexyl)Phthalate	32.37	1424	63632	36.89	ng/uL	93
70)	*d12-Perylene	35.66	1595	44571	40.00	ng/uL	93
71)	Di-n-octyl phthalate	34.20	1519	114179	38.79	ng/uL	89
72)	Benzo(b)fluoranthene	34.66	1543	85447	53.25	ng/uL	90
73)	Benzo(k)Fluoranthene	34.76	1548	54435	51.73	ng/uL	88
74)	Benzo(a)Pyrene	35.51	1587	65489	52.64	ng/uL	92
75)	Indeno(1,2,3-cd)Pyrene	38.24	1729	85838	55.16	ng/uL	67
76)	Dibenz(a,h)Anthracene	38.36	1735	61304	53.70	ng/uL	83
77)	Benzo(g,h,i)Perylene	38.90	1763	68689	54.15	ng/uL	72

* Compound is ISTD

Date and Time of Injection: 5/23/89 14:14
Tune Datafile: >T523A::D4



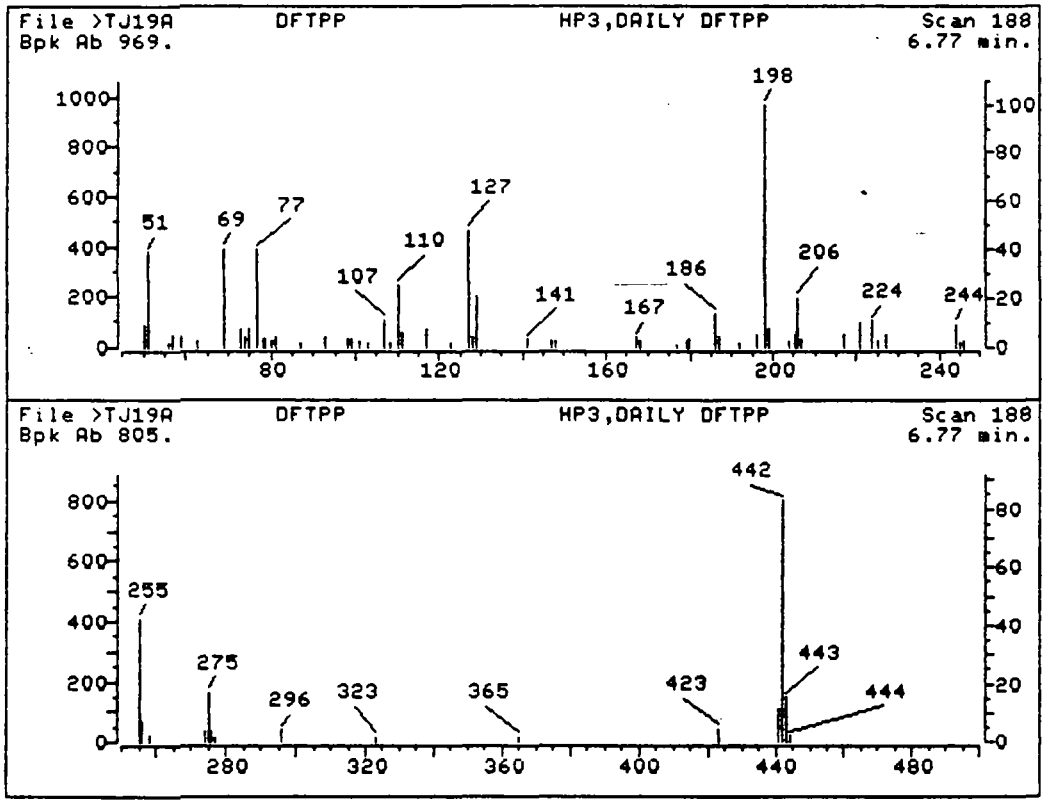
Date and Time of Injection: 5/23/89 14:14
Tune Datafile: >T523A::D4

>T523A DFTPP HP3,DAILY DFTPP TUNE
216 NRM

File: >T523A Scan #: 216 Retn. time: 7.04

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
50.00	11.683	93.00	4.087	141.10	2.260	192.05	1.202	245.15	1.154
51.00	51.106	98.00	2.596	143.00	.625	196.15	4.471	246.05	1.635
52.00	2.933	99.00	3.077	148.10	1.731	196.75	.769	255.15	40.481
56.00	2.308	104.10	1.154	153.10	.913	198.05	100.000	256.15	5.673
57.00	3.077	105.10	1.154	155.10	1.538	199.05	7.356	258.15	1.587
63.00	1.731	107.00	13.269	156.10	1.923	204.15	2.596	274.15	3.510
69.00	57.404	108.00	2.260	157.00	.673	205.05	4.952	275.05	18.558
74.10	4.087	110.10	33.750	160.10	.913	206.15	19.279	276.05	2.788
75.00	6.827	111.00	5.144	166.95	4.327	207.15	2.644	296.15	4.375
76.10	2.452	117.10	7.356	168.05	2.067	211.05	.913	323.15	1.538
77.10	48.221	122.00	.673	175.95	.913	217.05	4.856	334.05	.913
78.00	3.125	123.00	1.490	176.25	.673	221.15	8.269	365.05	1.779
79.00	2.933	127.10	48.125	176.95	.769	223.15	1.202	372.15	1.106
80.00	2.019	128.10	3.750	179.05	2.644	224.15	10.817	423.35	2.596
81.00	3.221	129.10	22.548	180.05	2.212	225.15	3.413	424.25	.721
82.00	1.106	130.00	1.827	181.05	1.010	227.05	3.413	441.25	6.587
86.00	.962	135.10	1.683	185.05	1.298	228.95	1.058	442.35	51.490
91.00	.913	136.00	.865	186.05	12.067	243.15	.673	443.25	9.663
92.00	.817	137.20	.577	187.05	2.933	244.15	9.375	444.35	1.250

Date and Time of Injection: 6/19/89 12:01
Tune Datafile: >TJ19A::D3



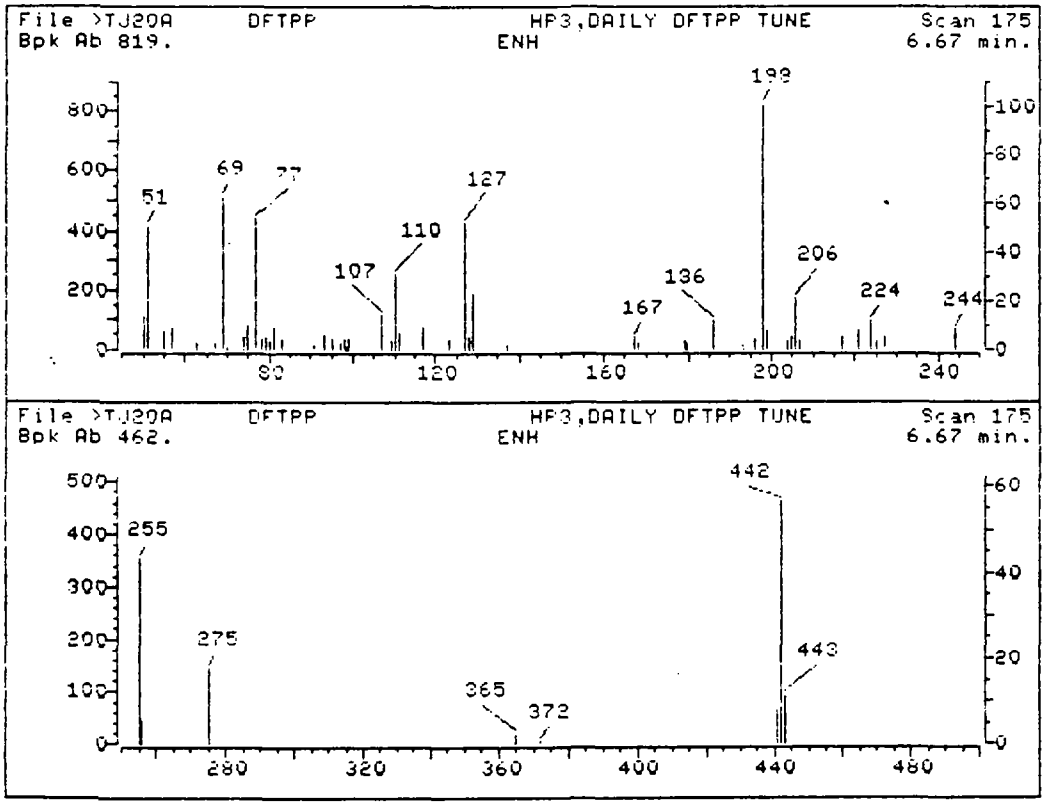
Date and Time of Injection: 6/19/89 12:01
Tune Datafile: >TJ19A::D3

>TJ19A DFTPP HP3,DAILY DFTPP
188 NRM

File: >TJ19A Scan #: 188 Retn. time: 6.77

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
50.00	9.185	87.00	1.238	129.00	20.537	198.95	7.224	255.95	7.121
51.00	39.009	92.90	3.715	140.90	3.096	204.05	2.477	257.95	2.580
56.00	1.754	98.00	2.890	147.10	2.477	205.15	4.954	273.95	3.818
57.00	4.747	98.80	3.406	148.00	2.167	205.95	20.330	275.05	17.234
59.10	4.231	101.10	2.580	166.95	3.715	207.05	2.993	276.05	3.509
63.00	2.477	102.90	1.548	167.95	2.477	216.95	4.644	276.85	1.238
68.90	40.351	107.00	10.733	176.95	1.032	220.95	9.598	296.05	4.334
73.10	7.637	108.00	1.651	179.05	2.580	223.95	10.630	322.95	1.651
74.00	3.922	110.00	25.077	179.95	2.993	225.05	2.374	364.95	1.858
75.00	7.327	111.00	5.676	185.95	13.416	227.05	4.438	423.05	4.644
77.00	40.041	117.00	7.121	187.05	3.612	244.05	9.082	441.15	11.662
78.10	3.509	122.90	1.342	191.95	1.754	245.05	1.342	442.15	83.075
78.90	2.993	127.00	47.678	196.05	4.438	245.95	2.374	443.05	15.377
80.00	2.064	128.10	3.612	197.95	100.000	254.95	42.105	444.15	2.064
81.00	3.612								

Date and Time of Injection: 6/20/89 8:28
Tune Datafile: >TJ20A::D3



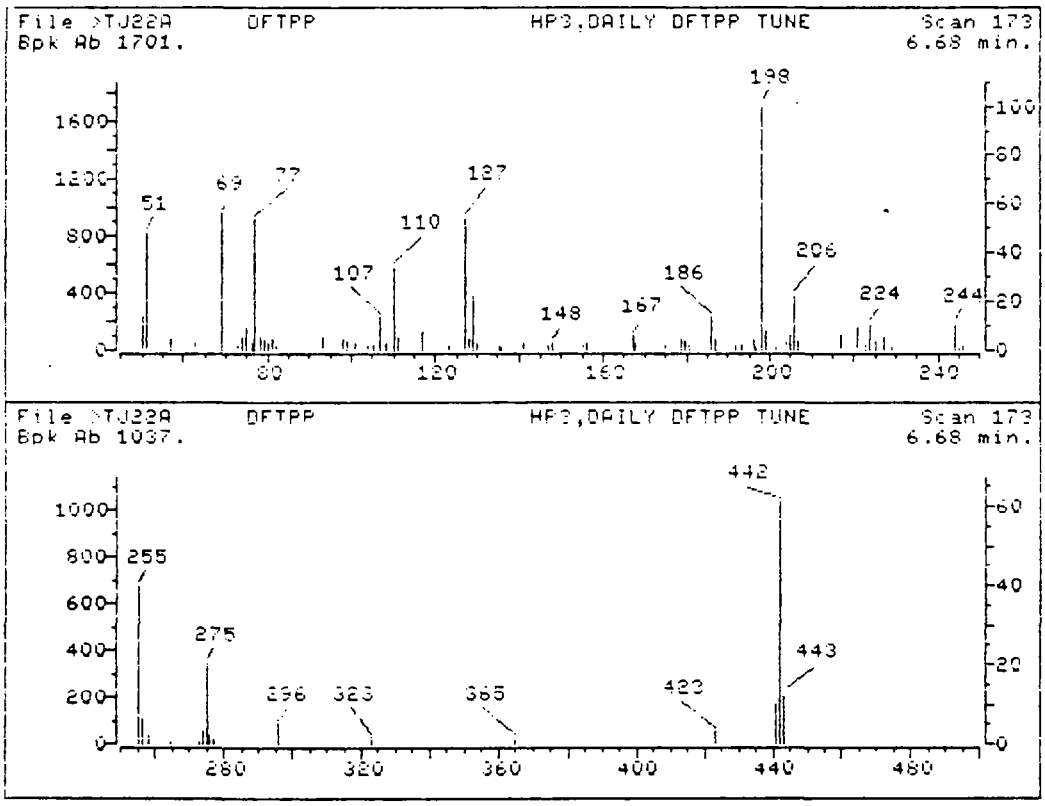
Date and Time of Injection: 6/20/89 8:28
Tune Datafile: >TJ20A::D3

>TJ20A DFTPP HP3,DAILY DFTPP TUNE
175 NRM ENH

File: >TJ20A Scan #: 175 Retn. time: 6.67

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
50.00	13.228	79.10	4.884	109.10	3.134	179.95	2.320	223.95	11.193
51.00	50.590	80.00	3.256	110.00	30.769	186.05	11.396	224.95	3.378
55.10	6.960	81.10	8.832	111.10	6.146	193.05	1.221	226.95	4.640
57.10	9.117	83.10	4.192	116.90	9.402	196.05	3.704	244.05	8.099
63.00	2.198	90.90	1.750	123.10	3.826	197.95	100.000	254.95	43.020
67.00	2.035	93.00	5.942	127.00	51.689	198.95	7.285	255.95	5.250
69.00	61.986	95.10	3.907	128.00	4.558	203.95	3.134	275.05	17.420
70.10	.773	97.10	2.401	129.00	22.100	204.95	4.558	364.95	2.076
74.00	4.558	98.00	3.663	137.10	1.425	205.95	20.391	371.95	.529
75.00	9.565	98.60	.407	166.95	4.518	207.05	3.053	441.05	7.692
77.00	53.358	99.10	3.867	167.95	2.116	216.95	5.088	442.05	56.370
78.00	4.111	106.90	13.960	179.05	3.337	220.95	7.204	442.95	11.152

Date and Time of Injection: 6/22/89 14:05
Tune Datafile: TJ22A::D3



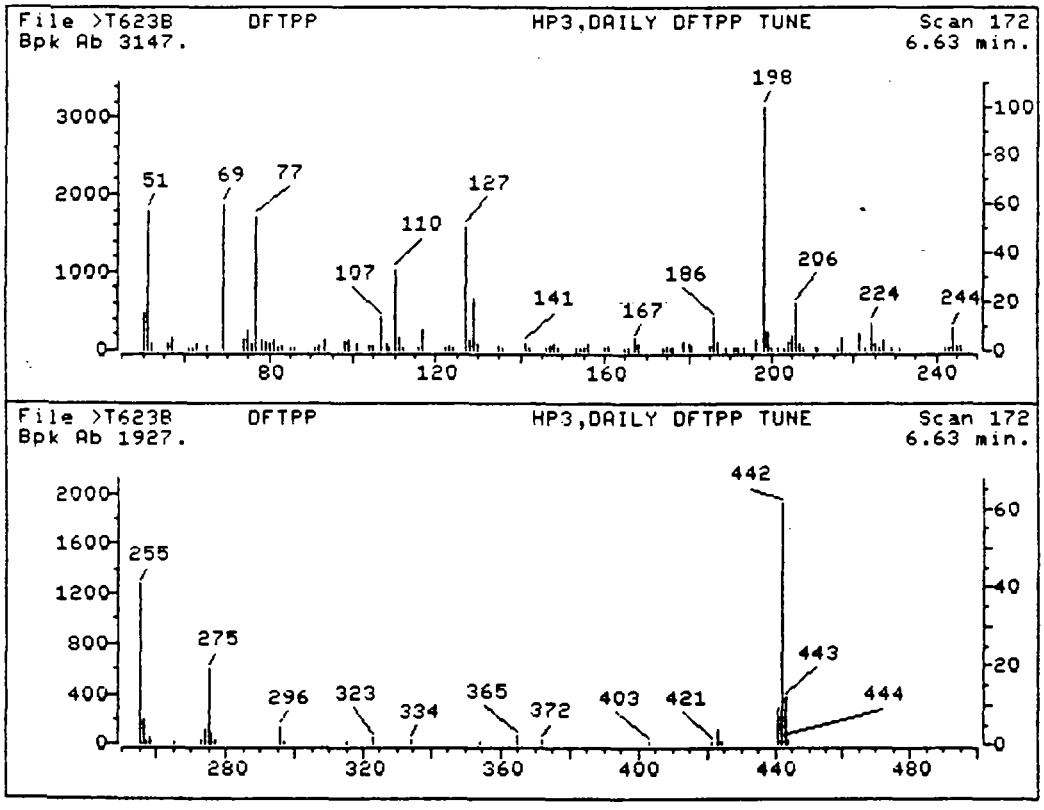
Date and Time of Injection: 6/22/89 14:05
Tune Datafile: >TJ22A::D3

>TJ22A DFTPP HP3,DAILY DFTPP TUNE
173 NRM

File: >TJ22A Scan #: 173 Retn. time: 6.68

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
50.00	12.875	98.90	3.292	141.00	1.940	196.65	.941	245.95	1.764
51.00	48.031	101.00	2.116	146.90	1.411	197.95	100.000	254.95	39.624
57.00	3.645	104.00	1.117	148.00	2.410	198.95	7.349	256.05	6.055
63.00	2.058	105.10	1.235	152.90	.588	201.45	.941	258.05	2.352
69.00	55.908	107.00	13.051	155.00	1.352	203.95	2.704	264.85	.588
73.10	1.881	108.00	2.528	156.00	1.999	204.95	5.938	272.75	.705
74.00	4.762	110.00	33.686	166.95	5.467	205.95	21.811	273.95	3.116
75.00	8.995	111.00	4.527	167.85	2.528	207.05	2.998	274.95	20.341
76.10	2.469	117.00	7.407	174.95	1.881	216.95	5.291	275.85	2.234
77.00	53.322	123.00	1.764	178.95	3.762	220.95	9.171	276.95	1.529
78.10	4.586	127.00	53.616	179.95	2.822	222.95	1.235	296.05	5.115
79.10	3.704	128.00	4.233	180.85	1.235	223.95	10.582	323.05	1.587
80.00	2.528	129.00	21.576	185.95	12.992	225.05	2.939	364.85	1.529
81.00	3.880	130.00	2.116	187.05	3.704	226.95	4.527	423.05	3.116
82.00	1.411	134.00	.999	191.85	1.058	228.85	.882	441.05	9.935
93.00	4.762	135.10	1.881	193.05	1.293	243.95	10.053	442.05	60.964
98.00	3.762	135.90	.588	195.95	4.056	245.05	.941	443.05	11.934

Date and Time of Injection: 6/23/89 12:02
Tune Datafile: >T623B::D3



Date and Time of Injection: 6/23/89 12:02
Tune Datafile: >T623B::D3

>T623B DFTPP HP3,DAILY DFTPP TUNE
172 NRM

File: >T623B Scan #: 172 Retn. time: 6.63

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
50.00	15.189	101.00	2.129	154.00	.953	198.95	7.404	255.05	40.610
51.00	57.261	104.00	1.207	155.10	.794	199.95	.636	256.05	6.546
52.00	2.637	105.00	1.176	156.00	2.034	201.45	.794	256.95	.477
55.90	2.193	107.00	13.060	160.10	.572	202.85	.477	258.05	1.875
57.00	4.608	108.00	2.351	161.00	1.112	204.05	3.305	264.95	.667
61.00	.667	108.90	.350	164.85	1.049	205.05	5.434	273.05	1.271
62.00	.826	110.00	32.602	165.95	.763	206.05	18.939	274.05	3.718
63.00	2.193	111.00	4.735	167.05	4.417	207.05	2.415	275.05	18.939
65.00	1.335	111.90	.445	167.95	2.002	207.95	.731	276.05	2.447
69.00	59.549	116.00	.763	173.85	.922	210.55	.953	276.95	1.271
74.00	4.004	117.00	8.008	174.95	1.430	210.95	.922	295.95	4.385
75.00	8.294	122.00	.858	175.95	.731	216.15	.508	297.05	.540
76.00	2.351	123.00	1.271	176.15	.731	216.95	5.021	315.05	.477
77.00	54.401	124.00	.636	176.45	.636	221.15	6.165	323.05	1.621
78.00	3.654	127.00	50.207	178.95	3.305	222.95	.985	334.05	.922
79.00	3.178	128.00	4.258	180.05	2.065	224.05	10.899	354.05	.699
80.00	2.479	129.00	20.972	180.95	1.112	225.05	2.606	364.95	2.097
81.00	4.036	130.00	2.129	185.05	1.525	226.15	.445	372.05	.985
82.00	1.017	135.00	1.430	186.05	13.092	226.95	3.750	402.95	.508
83.00	1.080	136.00	.413	186.95	2.892	229.05	1.017	421.25	.572
85.00	.763	141.00	2.447	188.95	.699	230.95	.413	423.15	3.559
85.90	.922	142.00	.953	191.05	.445	242.05	.477	424.25	.699
90.90	.667	146.00	.445	191.95	.953	243.15	.763	441.15	9.183
92.00	1.080	147.10	1.112	193.05	.763	244.05	8.643	442.15	61.233
93.00	4.131	148.00	2.288	196.05	4.258	245.05	1.430	443.15	11.916
98.00	2.796	148.90	.604	197.95	100.000	246.05	1.335	444.05	1.207
99.00	3.654	153.00	.667						

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK11

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: LBB06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: LBB06

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/19/89

GPC Cleanup: (Y/N) Y pH: 0.0 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	660	U
111-44-4	bis(2-Chloroethyl)ether	660	U
95-57-8	2-Chlorophenol	660	U
541-73-1	1,3-Dichlorobenzene	660	U
106-46-7	1,4-Dichlorobenzene	660	U
100-51-6	Benzyl alcohol	660	U
95-50-1	1,2-Dichlorobenzene	660	U
95-48-7	2-Methylphenol	660	U
108-60-1	bis(2-Chloroisopropyl)ether	660	U
106-44-5	4-Methylphenol	660	U
621-64-7	N-Nitroso-di-n-propylamine	660	U
67-72-1	Hexachloroethane	660	U
98-95-3	Nitrobenzene	660	U
78-59-1	Isophorone	660	U
88-75-5	2-Nitrophenol	660	U
105-67-9	2,4-Dimethylphenol	660	U
65-85-0	Benzoic acid	3200	U
111-91-1	bis(2-Chloroethoxy)methane	660	U
120-83-2	2,4-Dichlorophenol	660	U
120-82-1	1,2,4-Trichlorobenzene	660	U
91-20-3	Naphthalene	660	U
106-47-8	4-Chloroaniline	660	U
87-68-3	Hexachlorobutadiene	660	U
59-50-7	4-Chloro-3-methylphenol	660	U
91-57-6	2-Methylnaphthalene	660	U
77-47-4	Hexachlorocyclopentadiene	660	U
88-06-2	2,4,6-Trichlorophenol	660	U
95-95-4	2,4,5-Trichlorophenol	3200	U
91-58-7	2-Chloronaphthalene	660	U
88-74-4	2-Nitroaniline	3200	U
131-11-3	Dimethylphthalate	660	U
208-96-8	Acenaphthylene	660	U
606-20-2	2,6-Dinitrotoluene	660	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK11

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: LBB06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: LBB06

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/19/89

GPC Cleanup: (Y/N) Y pH: 0.0 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3200	U
83-32-9	Acenapthene	660	U
51-28-5	2,4-Dinitrophenol	3200	U
100-02-7	4-Nitrophenol	3200	U
132-64-9	Dibenzofuran	660	U
121-14-2	2,4-Dinitrotoluene	660	U
84-66-2	Diethylphthalate	660	U
7005-72-3	4-Chlorophenyl-phenylether	660	U
86-73-7	Fluorene	660	U
100-01-6	4-Nitroaniline	3200	U
534-52-1	4,6-Dinitro-2-methylphenol	3200	U
86-30-6	N-Nitrosodiphenylamine (1)	660	U
101-55-3	4-Bromophenyl-phenylether	660	U
118-74-1	Hexachlorobenzene	660	U
87-86-5	Pentachlorophenol	3200	U
85-01-8	Phenanthrene	660	U
120-12-7	Anthracene	660	U
84-74-2	Di-n-butylphthalate	660	U
206-44-0	Fluoranthene	660	U
129-00-0	Pyrene	660	U
85-68-7	Butylbenzylphthalate	660	U
91-94-1	3,3'-Dichlorobenzidine	1300	U
56-55-3	Benzo(a)anthracene	660	U
218-01-9	Chrysene	660	U
117-81-7	bis(2-Ethylhexyl)phthalate	740	
117-84-0	Di-n-octylphthalate	660	U
205-99-2	Benzo(b)fluoranthene	660	U
207-08-9	Benzo(k)fluoranthene	660	U
50-32-8	Benzo(a)pyrene	660	U
193-39-5	Indeno(1,2,3-cd)pyrene	660	U
53-70-3	Dibenz(a,h)anthracene	660	U
191-24-2	Benzo(g,h,i)perylene	660	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK11

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: LBB06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: LBB06

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 dec._____ Date Extracted: 06/06/89

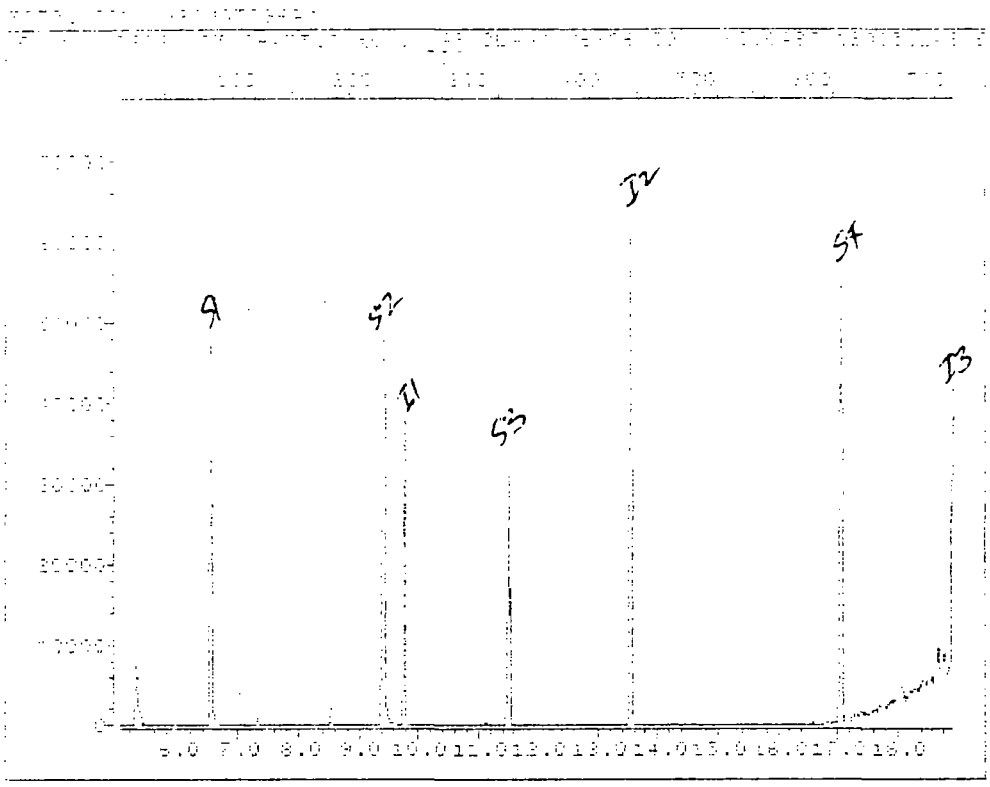
Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/19/89

GPC Cleanup : (Y/N) Y pH: 0.0 Dilution Factor: 1.000

Number TICs found: 19

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

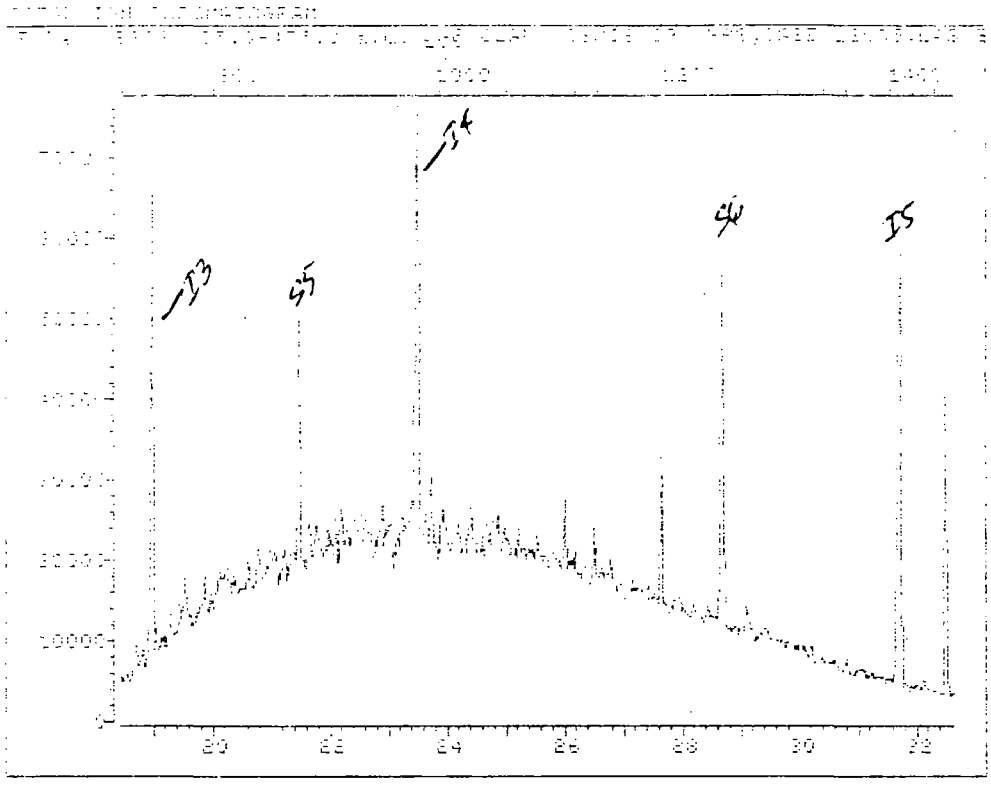
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	5.29	770	J
2.	UNKNOWN	18.06	220	J
3.	UNKNOWN HYDROCARBON	18.72	300	J
4.	UNKNOWN	19.28	360	J
5.00128-37-0	PHENOL, 2,6-BIS(1,1,-DIMETHY	19.55	150	J
6.	UNKNOWN	19.87	150	J
7.	UNKNOWN	20.61	140	J
8.	UNKNOWN	21.65	320	J
9.	UNKNOWN	22.09	220	J
10.	UNKNOWN	22.19	330	J
11.	UNKNOWN	22.40	210	J
12.	UNKNOWN	23.63	170	J
13.	UNKNOWN	23.73	400	J
14.	UNKNOWN	23.92	630	J
15.	UNKNOWN	24.67	210	J
16.	UNKNOWN	26.01	290	J
17.	UNKNOWN	26.51	260	J
18.	UNKNOWN HYDROCARBON	27.64	690	J
19.	UNKNOWN	29.09	300	J
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				



Data File: [illegible]05 Quant Output File: [illegible]5L
Name: LAB BLANK 06/05/89
Mtrx: HPD,C-SE 12055,LAB SLX,IW 30g,FUC 2ml,06/05/89,pH [illegible]

ID File: ID_SCB[illegible]55
Title: HP BNA Standards
Last Calibration: 890629 10:45

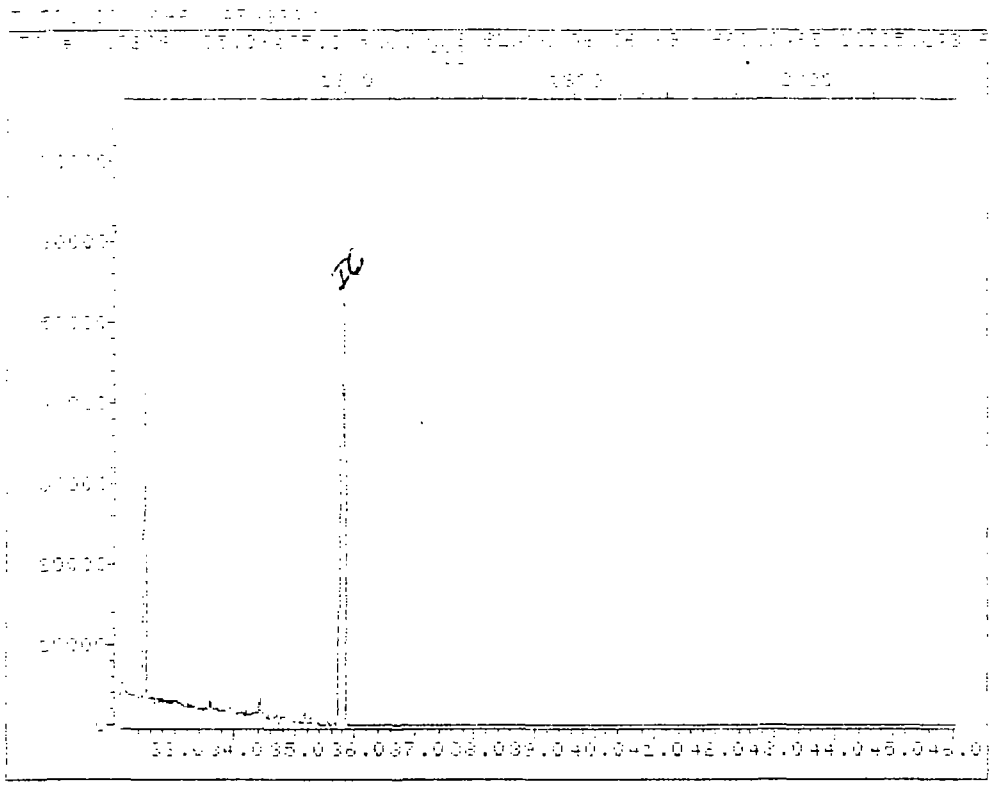
Operator ID: DSHUTS
Quant Time: 890619 10:47
Injected at: 890619 20:5[illegible]



Data File: [illegible]05 Quant Output File: [illegible]
Name: [illegible] BLANK [illegible]
[illegible] SPE,CASE [illegible] LAB BLK,DW 50g,FVC 5ml,[illegible],pH 7,AMBT#[illegible]

Id File: ID_BCA[illegible]
Title: HP BNA Standards
Last Calibration: 890629 10:40

Operator ID: [illegible]
Quant Time: 890629 10 41
Injected at: 890619 20:55



Data File: >LB806::03 Quant Output File: 'LB806::SC
Name: LAB BLANK 06/06/89
Misc: 'HP5,CASE 11055,LAB BLK,IW 50g,FVC 2ml,06/05/89,pH 7.XMBTL#10

Id File: 'D_ECA::SC
Title: 4' BNA Standards
Last Calibration: 890629 10:43

Operator ID: DENNIS
Quant Time: 890629 10:45
Injected at: 890619 20:55

TIC page 3 of 3

QUANT REPORT

Operator ID: DENNIS Quant Rev: 6 Quant Time: 890629 10:43
Output File: ^LBB06::SC Injected at: 890619 20:55
Data File: >LBB06::D3 Dilution Factor: 1.00000
Name: LAB BLANK 06/06/89
Misc: HP5,CASE 12035,LAB BLK,IW 30g,FVC 2ml,06/05/89,pH 7,XMBTL#10

ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890629 10:45

% Sur Rec = Amix FV / Amt spiked

A = 200 BN = 103

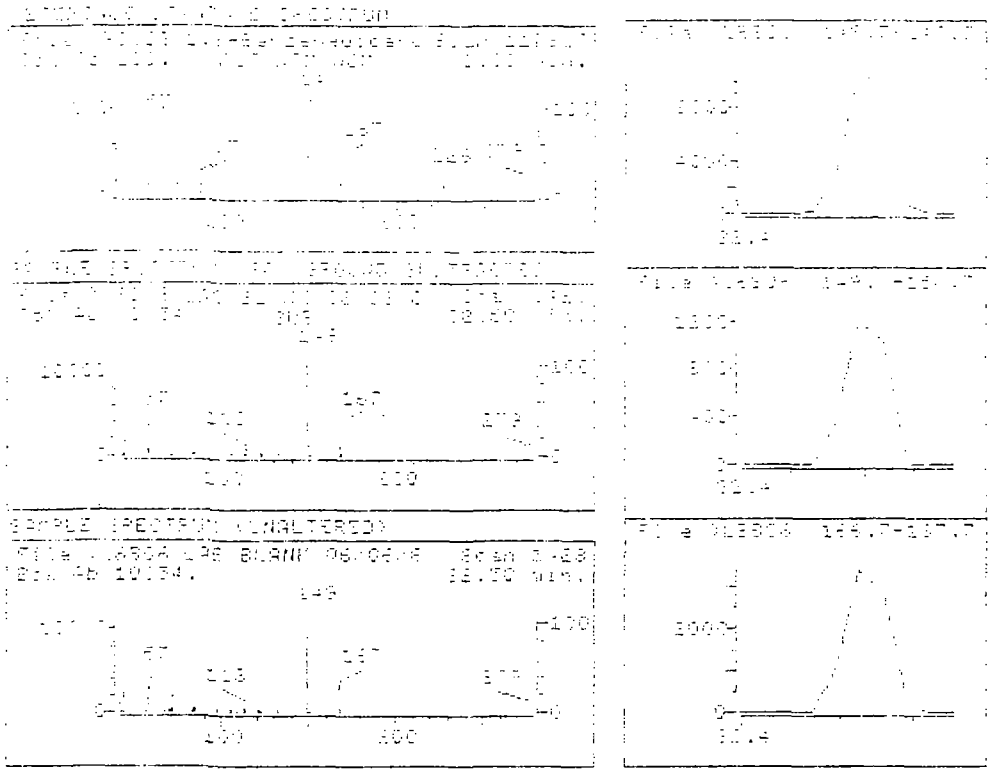
Cmpd Fd = Amt (ppm) X FV / IW

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.77	152.0	16539	40.00	ng/uL	96
2)	2-Fluorophenol	6.56	112.0	32841	68.07	ng/uL	94
3)	Phenol-d5	9.42	99.0	55000	74.10	ng/uL	84
4)	Phenol	0.00	94.0	0	0.00	ng/uL	
5)	bis(-2-Chloroethyl)Ether	0.00	93.0	0	0.00	ng/uL	
6)	2-Chlorophenol	0.00	128.0	0	0.00	ng/uL	
7)	1,3-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
8)	1,4-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
9)	Benzyl Alcohol	0.00	108.0	0	0.00	ng/uL	
10)	1,2-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
11)	2-Methylphenol	0.00	108.0	0	0.00	ng/uL	
12)	bis(2-Chloroisopropyl)ether	0.00	45.0	0	0.00	ng/uL	
13)	4-Methylphenol	0.00	108.0	0	0.00	ng/uL	
14)	N-Nitroso-Di-n-propylamine	0.00	70.0	0	0.00	ng/uL	
15)	Hexachloroethane	0.00	117.0	0	0.00	ng/uL	
16)	*d8-Naphthalene	13.56	136.0	75568	40.00	ng/uL	89
17)	Nitrobenzene-d5	11.52	82.0	24639	34.19	ng/uL	88
18)	Nitrobenzene	0.00	77.0	0	0.00	ng/uL	
19)	Isophorone	0.00	82.0	0	0.00	ng/uL	
20)	2-Nitrophenol	0.00	139.0	0	0.00	ng/uL	
21)	2,4-Dimethylphenol	0.00	107.0	0	0.00	ng/uL	
22)	Benzoic Acid	0.00	105.0	0	0.00	ng/uL	
23)	bis(-2-Chloroethoxy)Methane	0.00	93.0	0	0.00	ng/uL	
24)	2,4-Dichlorophenol	0.00	162.0	0	0.00	ng/uL	
25)	1,2,4-Trichlorobenzene	0.00	180.0	0	0.00	ng/uL	
26)	Naphthalene	0.00	128.0	0	0.00	ng/uL	
27)	4-Chloroaniline	0.00	127.0	0	0.00	ng/uL	
28)	Hexachlorobutadiene	0.00	225.0	0	0.00	ng/uL	
29)	4-Chloro-3-methylphenol	0.00	107.0	0	0.00	ng/uL	
30)	2-Methylnaphthalene	0.00	142.0	0	0.00	ng/uL	
31)	*d10-Acenaphthene	18.97	164.0	41385	40.00	ng/uL	93
32)	Hexachlorocyclopentadiene	0.00	237.0	0	0.00	ng/uL	
33)	2,4,6-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
34)	2,4,5-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
35)	2-Chloronaphthalene	0.00	162.0	0	0.00	ng/uL	
36)	2-Fluorobiphenyl	17.06	172.0	43840	40.24	ng/uL	95
37)	2-Nitroaniline	0.00	65.0	0	0.00	ng/uL	
38)	Dimethyl Phthalate	0.00	163.0	0	0.00	ng/uL	
39)	Acenaphthylene	0.00	152.0	0	0.00	ng/uL	
40)	2,6-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
41)	3-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
~~42)~~	Acenaphthene	19.04	153.0	566	~~0.48~~	ng/uL	88
43)	2,4-Dinitrophenol	0.00	184.0	0	0.00	ng/uL	
44)	4-Nitrophenol	0.00	109.0	0	0.00	ng/uL	
45)	Dibenzofuran	0.00	168.0	0	0.00	ng/uL	
46)	2,4-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
47)	Diethylphthalate	0.00	149.0	0	0.00	ng/uL	
48)	4-Chlorophenyl-phenylether	0.00	204.0	0	0.00	ng/uL	
49)	Fluorene	0.00	166.0	0	0.00	ng/uL	

310

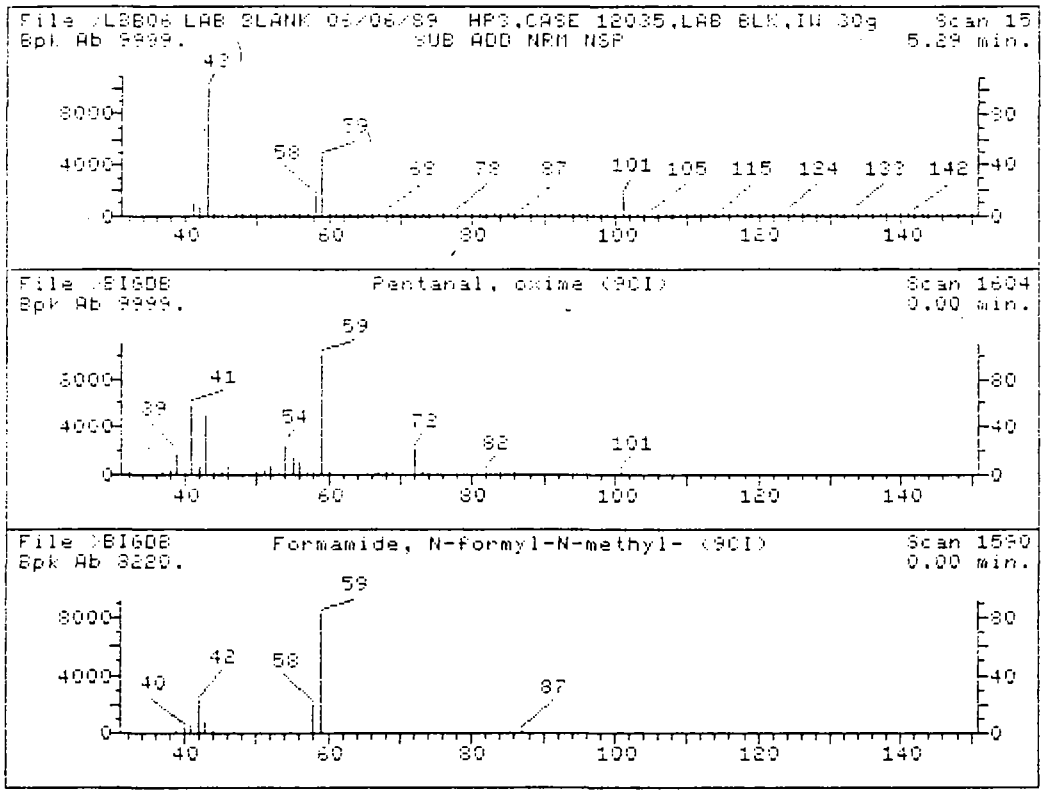
50)	4-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
51)	2,4,6-Tribromophenol	21.47	330.0	9851	74.88	ng/uL	92
52)	*d10-Phenanthrene	23.50	188.0	69637	40.00	ng/uL	98
53)	4,6-Dinitro-2-methylphenol	0.00	198.0	0	0.00	ng/uL	
54)	N-Nitrosodiphenylamine	0.00	169.0	0	0.00	ng/uL	
55)	4-Bromophenyl-phenylether	0.00	248.0	0	0.00	ng/uL	
56)	Hexachlorobenzene	0.00	284.0	0	0.00	ng/uL	
57)	Pentachlorophenol	0.00	266.0	0	0.00	ng/uL	
58)	Phenanthrene	0.00	178.0	0	0.00	ng/uL	
59)	Anthracene	0.00	178.0	0	0.00	ng/uL	
60)	Di-n-Butylphthalate	0.00	149.0	0	0.00	ng/uL	
61)	Fluoranthene	0.00	202.0	0	0.00	ng/uL	
62)	*d12-Chrysene	31.73	240.0	73796	40.00	ng/uL	90
63)	Pyrene	0.00	202.0	0	0.00	ng/uL	
64)	Terphenyl-d14	28.68	244.0	51933	29.69	ng/uL	96
65)	Butylbenzylphthalate	0.00	149.0	0	0.00	ng/uL	
66)	3,3'-Dichlorobenzidine	0.00	252.0	0	0.00	ng/uL	
67)	Benzo(a)Anthracene	0.00	228.0	0	0.00	ng/uL	
68)	Chrysene	0.00	228.0	0	0.00	ng/uL	
69)	Bis(2-Ethylhexyl)Phthalate	32.50	149.0	27631	11.04	ng/uL → 7AC	92
70)	*d12-Perylene	35.82	264.0	82898	40.00	ng/uL	95
71)	Di-n-octyl phthalate	0.00	149.0	0	0.00	ng/uL	
72)	Benzo(b)fluoranthene	0.00	252.0	0	0.00	ng/uL	
73)	Benzo(k)Fluoranthene	0.00	252.0	0	0.00	ng/uL	
74)	Benzo(a)Pyrene	0.00	252.0	0	0.00	ng/uL	
75)	Indeno(1,2,3-cd)Pyrene	0.00	276.0	0	0.00	ng/uL	
76)	Dibenz(a,h)Anthracene	0.00	278.0	0	0.00	ng/uL	
77)	Benzo(g,h,i)Perylene	0.00	276.0	0	0.00	ng/uL	

* Compound is ISTD



Data File: >L080o::D7 Quant Output File: [illegible]
Name: LAB BLANK 06/06/89
Mtn: HP5,CASE 12035.LAB BLK,IW 30g,FUC 2ml,06/05/89,pH 7,MBTLAB
Quant Time: 890629 10:45 Quant IP File: [illegible]
Injected at: 890619 20:55 Last Calibration: 890629 10:45

Compound No: 69
Compound Name: Bis(2-Ethylhexyl)Phthalate
Peak Number: 1429
Retention Time: 52.50 min
Quant Ion: 149.0
Area: 37631
Concentration: 11.94 ng/mL
Q-value: 92



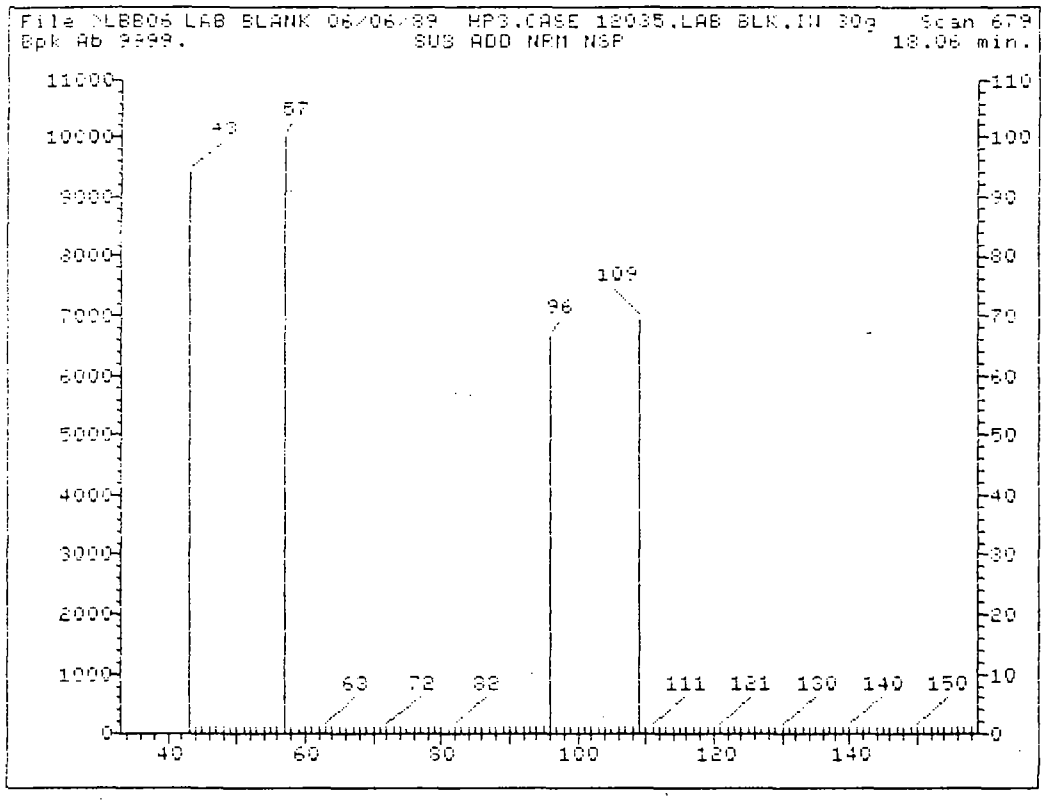
UNKNOWN

UNKNOWN #,1
Injected at: 890619 20:53
AREA = 27842.00 TENTATIVE CONCENTRATION IS 770.00

1. Pentanal, oxime (9CI) 101 C5H11NO
2. Formamide, N-formyl-N-methyl- (9CI) 87 C3H5NO2

Sample file: >LBB06 Spectrum #: 15
Search speed: 2 Tilting option: F No. of ion ranges searched: 55

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	15*	628795	1604	"BIGDB	27	52	3	0	46	58	3	13
2.	11*	18197256	1590	"BIGDB	21	48	1	0	56	64	2	14

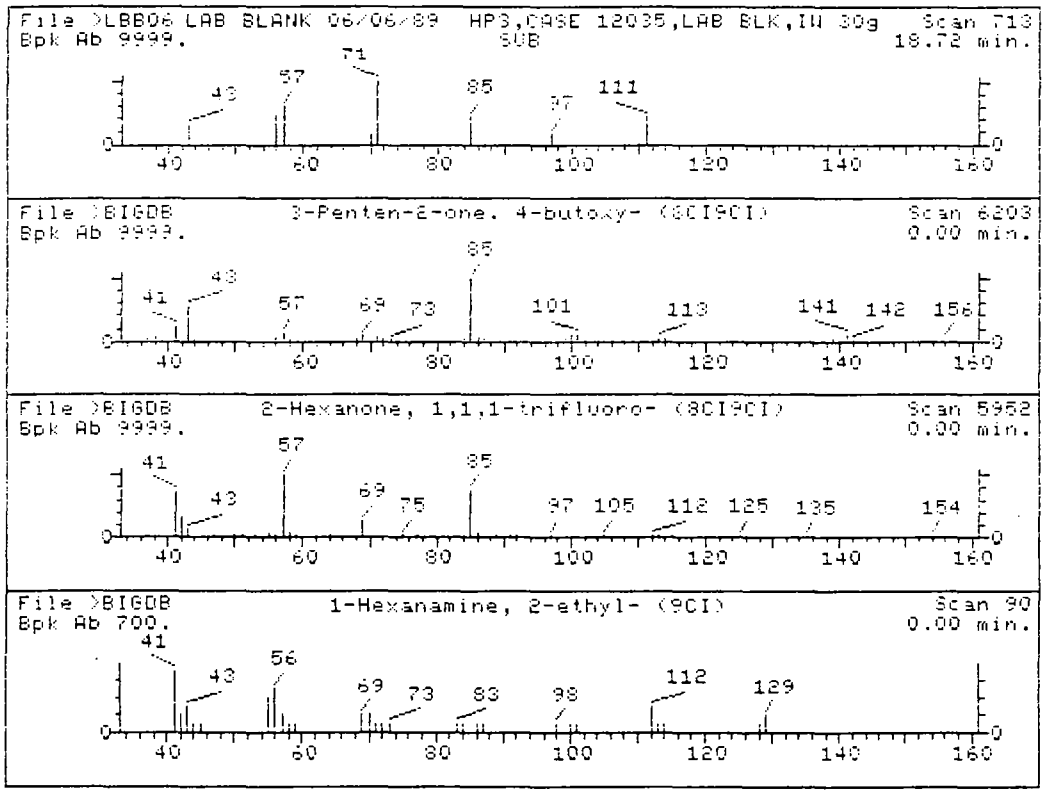


UNKNOWN

UNKNOWN #,2
Injected at: 890619 20:53
AREA = 15979.00 TENTATIVE CONCENTRATION IS 220.00

Sample file: >LBB06 Spectrum #: 679

No data base entries were retrieved.



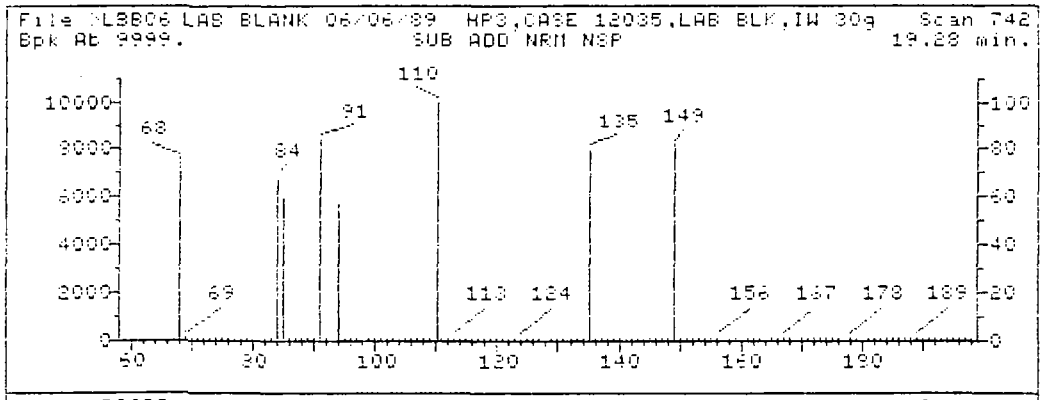
UNKNOWN HYDROCARBON

UNKNOWN #,3
Injected at: 890619 20:53
AREA = 22253.00 TENTATIVE CONCENTRATION IS 300.00

1.	3-Penten-2-one, 4-butoxy- (8CI9CI)	156	C9H16O2
2.	2-Hexanone, 1,1,1-trifluoro- (8CI9CI)	154	C6H9F3O
3.	1-Hexanamine, 2-ethyl- (9CI)	129	C8H19N
4.	2(3H)-Furanone, 5-butyldihydro- (8CI9CI)	142	C8H14O2
5.	Borinic acid, diethyl-, methyl ester (8CI9CI)	100	C5H13BO
6.	Pentanoic acid, 2-methylpropyl ester (9CI)	158	C9H18O2

Sample file: >LBB06 Spectrum #: 713
Search speed: 2 Tilting option: F No. of ion ranges searched: 57

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	25*	3431876	6203	"BIGDB	40	51	1	3	50	46	7	15
2.	25*	360349	5952	"BIGDB	46	40	2	3	52	47	7	19
3.	23*	104756	90	"BIGDB	63	16	2	3	86	60	6	43
4.	15*	104507	6088	"BIGDB	35	52	1	4	52	57	3	12
5.	15*	7397468	3872	"BIGDB	20	69	2	0	72	57	3	13
6.	11*	10588100	6075	"BIGDB	27	58	3	0	43	65	2	13



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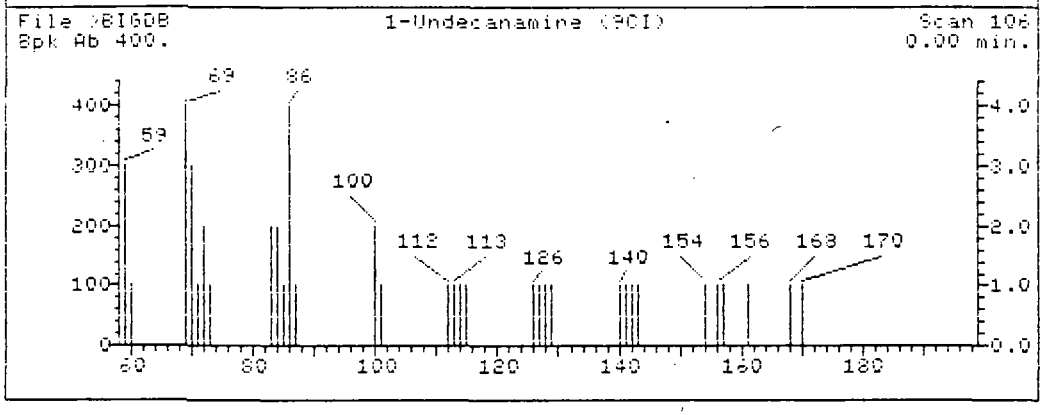
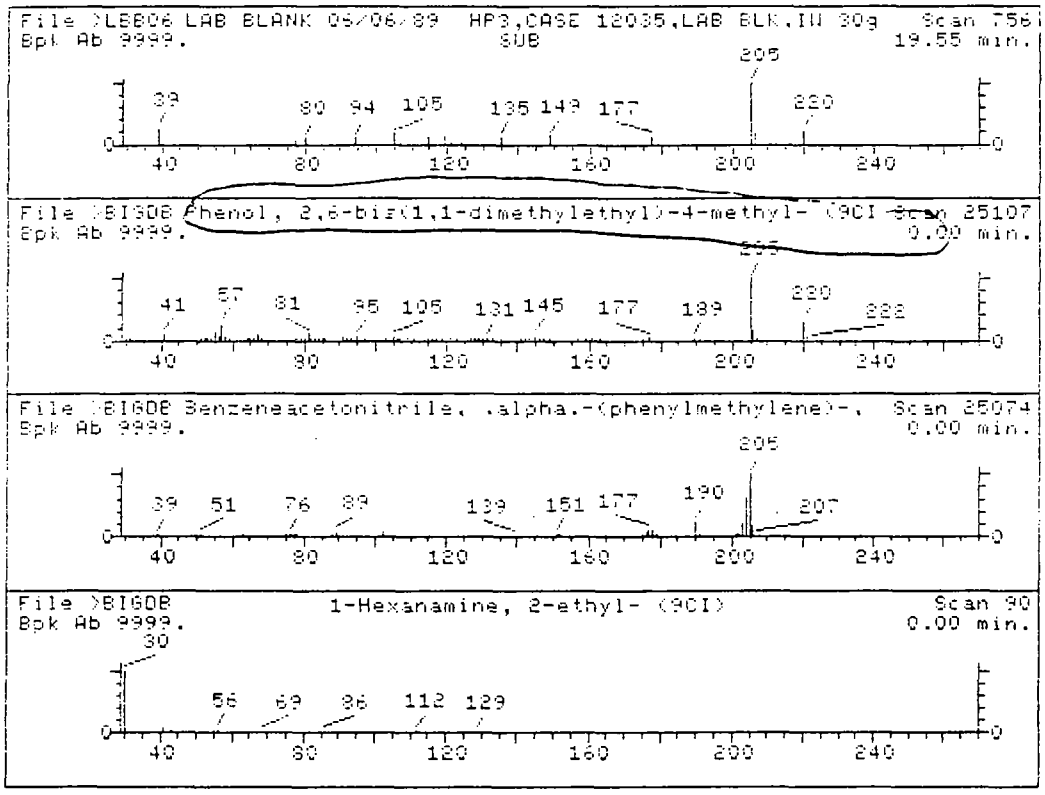


UNKNOWN #,4
Injected at: 890619 20:53
AREA = 26002.00 TENTATIVE CONCENTRATION IS 360.00

1. 1-Undecanamine (9CI) 171 C11H25N

Sample file: >LBB06 Spectrum #: 742
Search speed: 2 Tilting option: F No. of ion ranges searched: 82

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	11	7307553	106	"BIGDB	65	23	3	4	74	62	2	12

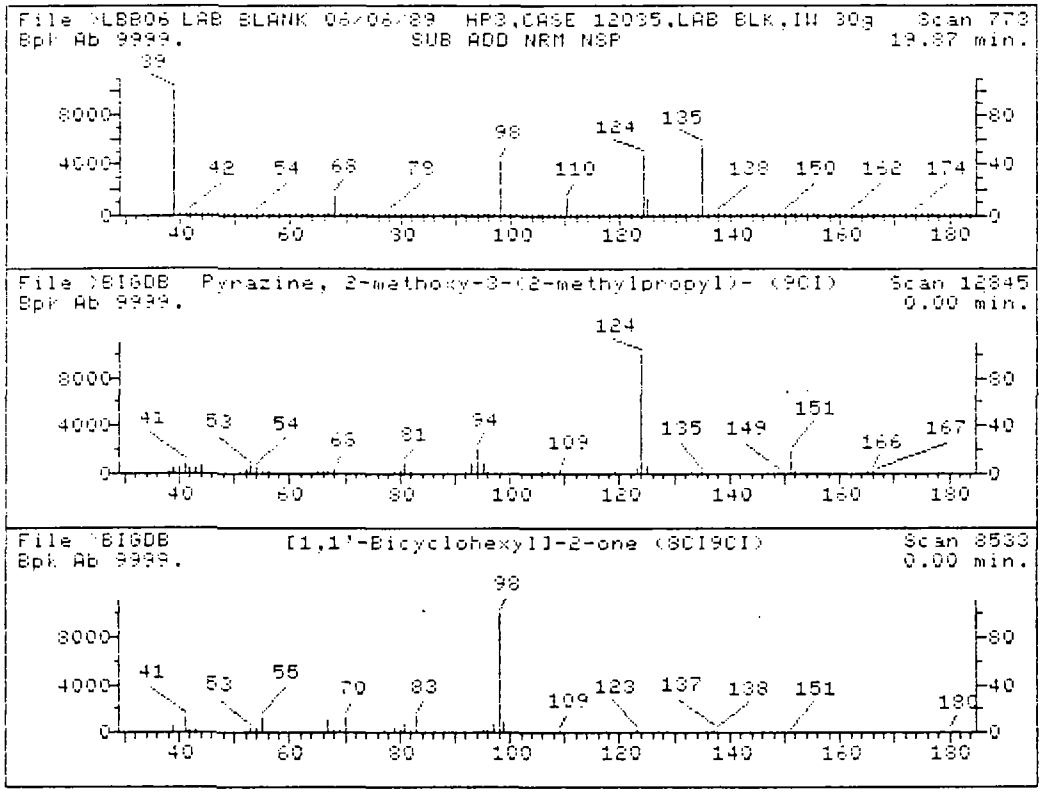


UNKNOWN #,5
Injected at: 890619 20:53
AREA = 11133.00 TENTATIVE CONCENTRATION IS 150.00

1. Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl- (9CI) 220 C15H24O
2. Benzeneacetonitrile, .alpha.-(phenylmethylene)-, (E) - (9CI) 205 C15H11N
3. 1-Hexanamine, 2-ethyl- (9CI) 129 C8H19N

Sample file: >LBB06 Spectrum #: 756
Search speed: 2 Tilting option: F No. of ion ranges searched: 53

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IU
1.	67*	128370	25107	"BIGDB	56	61	1	-3	51	15	54	27
2.	42*	16610803	25074	"BIGDB	25	99	3	0	100	24	17	13
3.	24*	104756	90	"BIGDB	50	14	2	2	29	55	7	25



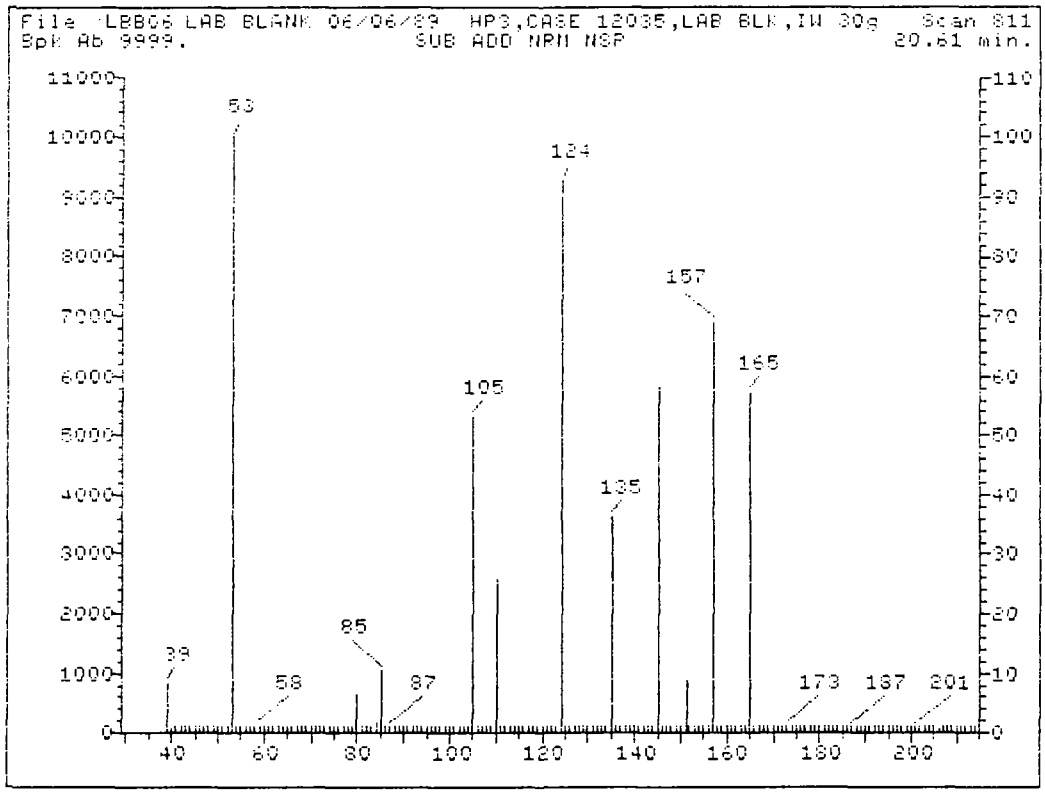
UNKNOWN

UNKNOWN #,6
Injected at: 890619 20:53
AREA = 11286.00 TENTATIVE CONCENTRATION IS 150.00

1. Pyrazine, 2-methoxy-3-(2-methylpropyl)- (9CI) 166 C9H14N2O
2. [1,1'-Bicyclohexyl]-2-one (8CI9CI) 180 C12H20O

Sample file: >LBB06 Spectrum #: 773
Search speed: 2 Tilting option: F No. of ion ranges searched: 55

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	30*	24683009	12845	"BIGDB	43	47	1	3	76	41	8	18
2.	15*	90426	8533	"BIGDB	38	54	2	2	59	60	3	12



UNKNOWN

UNKNOWN #,7
Injected at: 890619 20:53
AREA = 10556.00 TENTATIVE CONCENTRATION IS 140.00

Sample file: >LBB06 Spectrum #: 811

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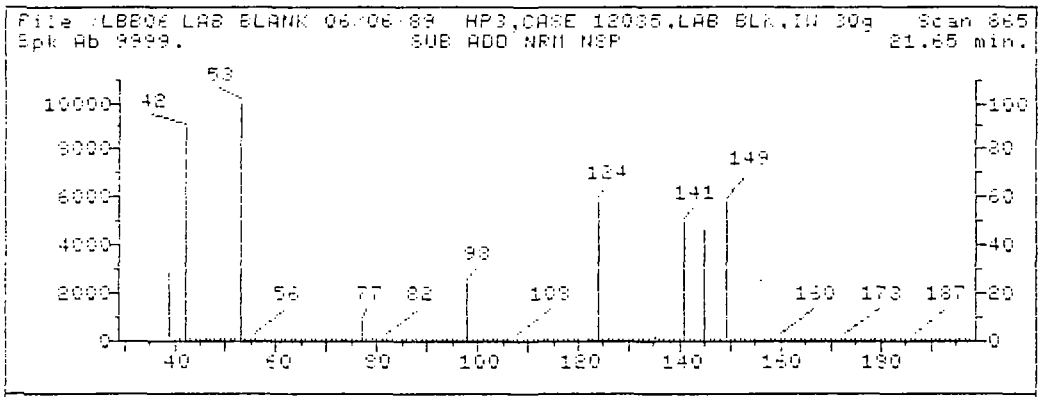

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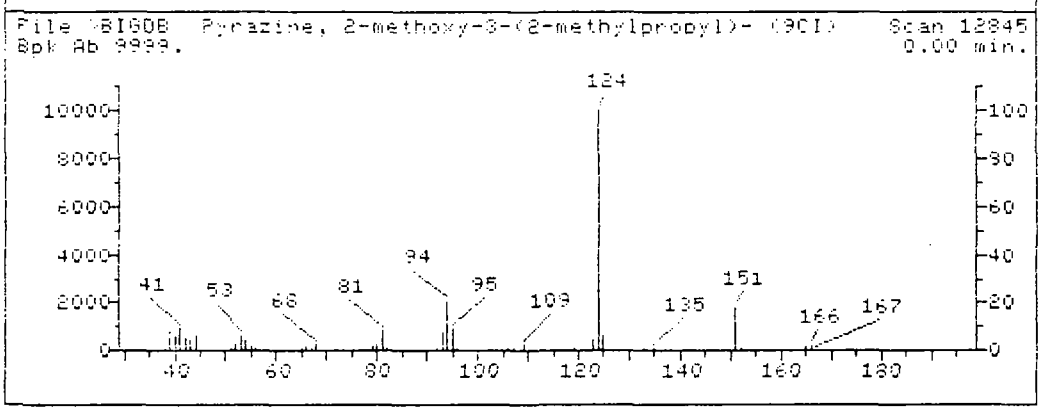
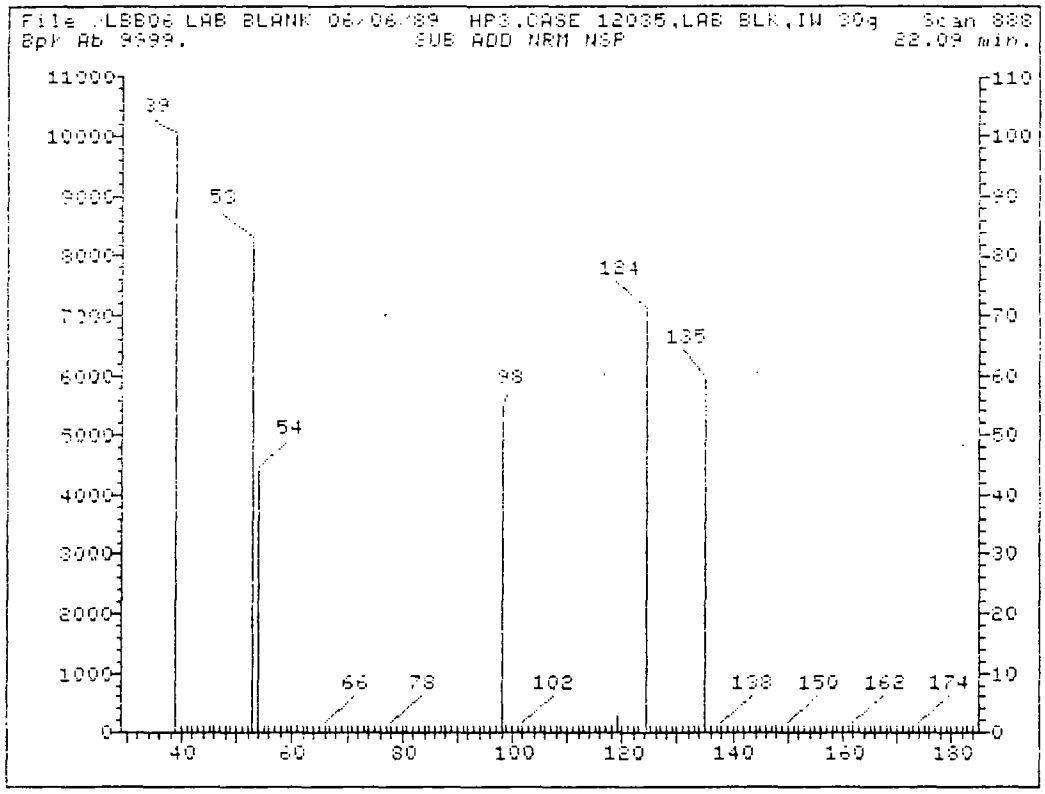


UNKNOWN #,8
Injected at: 890619 20:53
AREA = 21614.00 TENTATIVE CONCENTRATION IS 320.00

1. Pyrazine, 2-methoxy-3-(2-methylpropyl)- (9CI) 166 C9H14N2O

Sample file: >LBB06 Spectrum #: 865
Search speed: 2 Tilting option: F No. of ion ranges searched: 53

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	15*	24683009	12845	"BIGDB	43	47	2	2	84	56	3	15

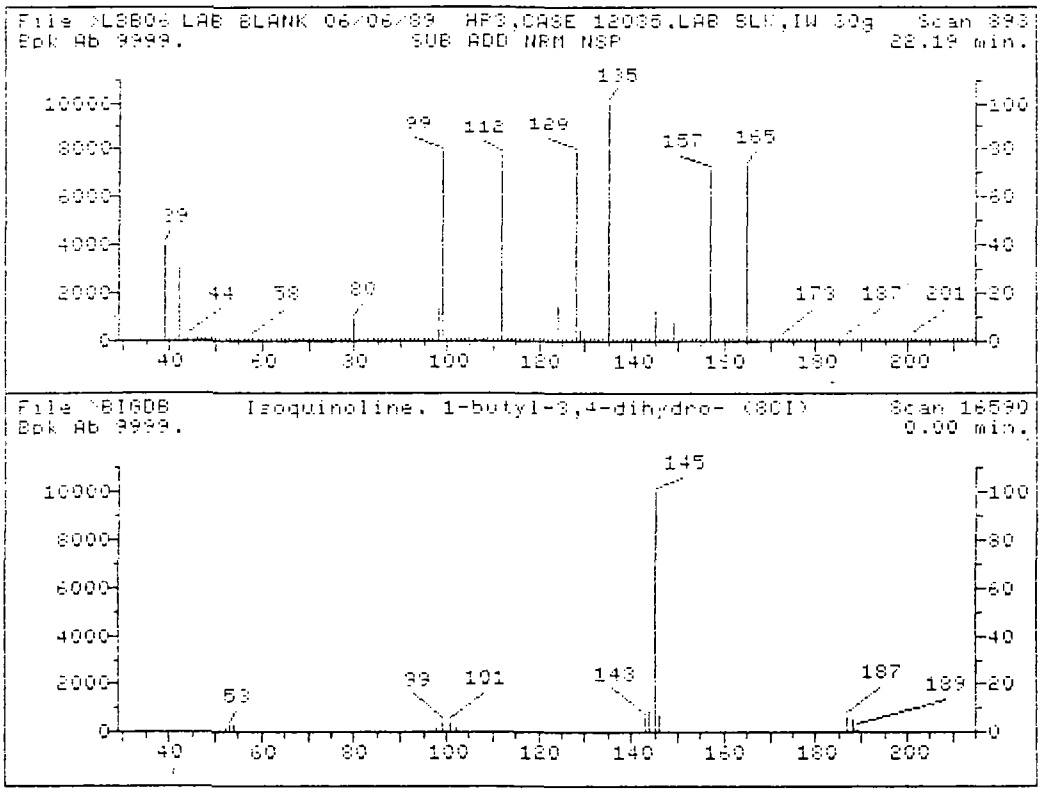


UNKNOWN

UNKNOWN #,9
Injected at: 890619 20:55
AREA = 14930.00 TENTATIVE CONCENTRATION IS 220.00

Sample file: >LBB06 Spectrum #: 888

No data base entries were retrieved.



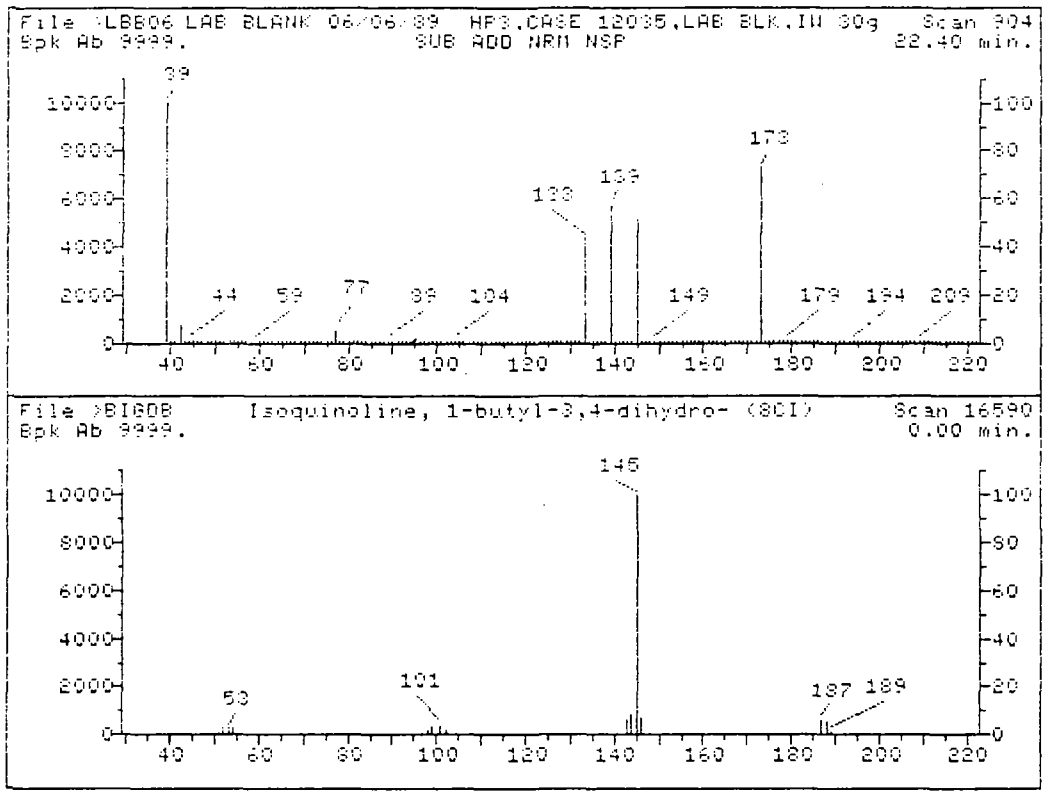
UNKNOWN

UNKNOWN #,10
Injected at: 890619 20:53
AREA = 22525.00 TENTATIVE CONCENTRATION IS 330.00

1. Isoquinoline, 1-butyl-3,4-dihydro- (8CI) 187 C13H17N

Sample file: >LBB06 Spectrum #: 893
Search speed: 2 Tilting option: F No. of ion ranges searched: 53

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	24*	33351438	16590	"BIGDB	32	20	0	3	12	52	7	21



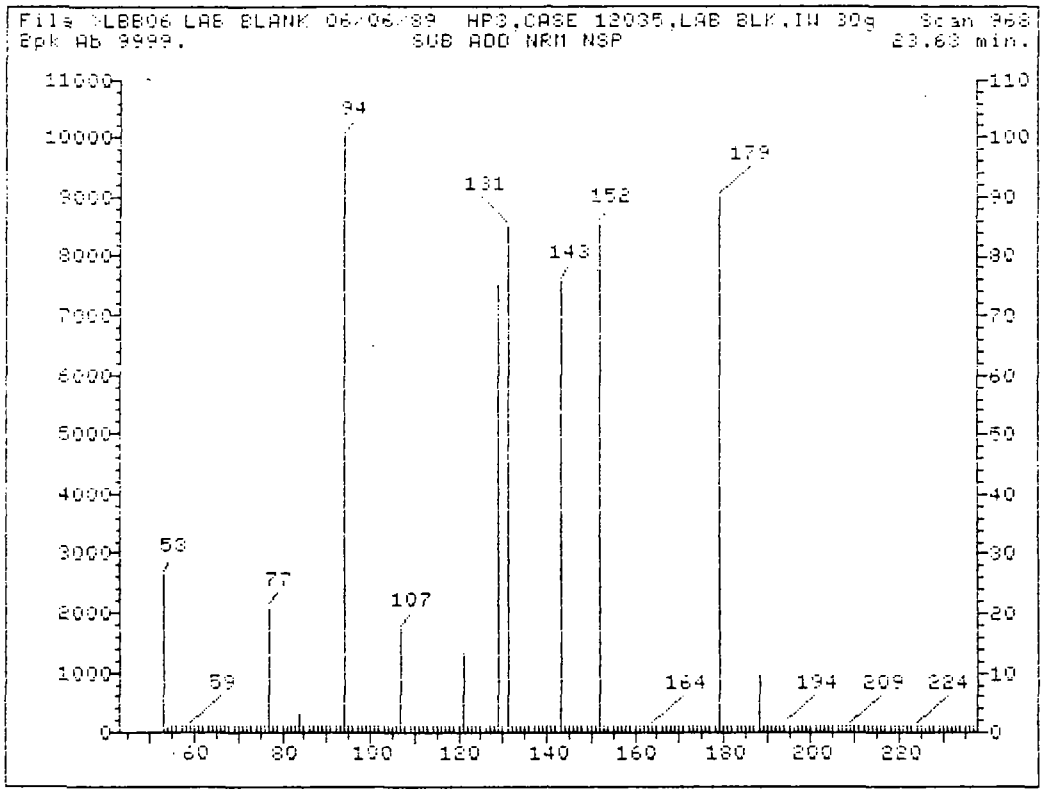
UNKNOWN

UNKNOWN #,11
Injected at: 890619 20:53
AREA = 14113.00 TENTATIVE CONCENTRATION IS 210.00

1. Isoquinoline, 1-butyl-3,4-dihydro- (8CI) 187 C13H17N

Sample file: >LBB06 Spectrum #: 904
Search speed: 2 Tilting option: F No. of ion ranges searched: 53

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	12*	33351438	16590	"BIGDB	32	20	0	2	13	65	2	21

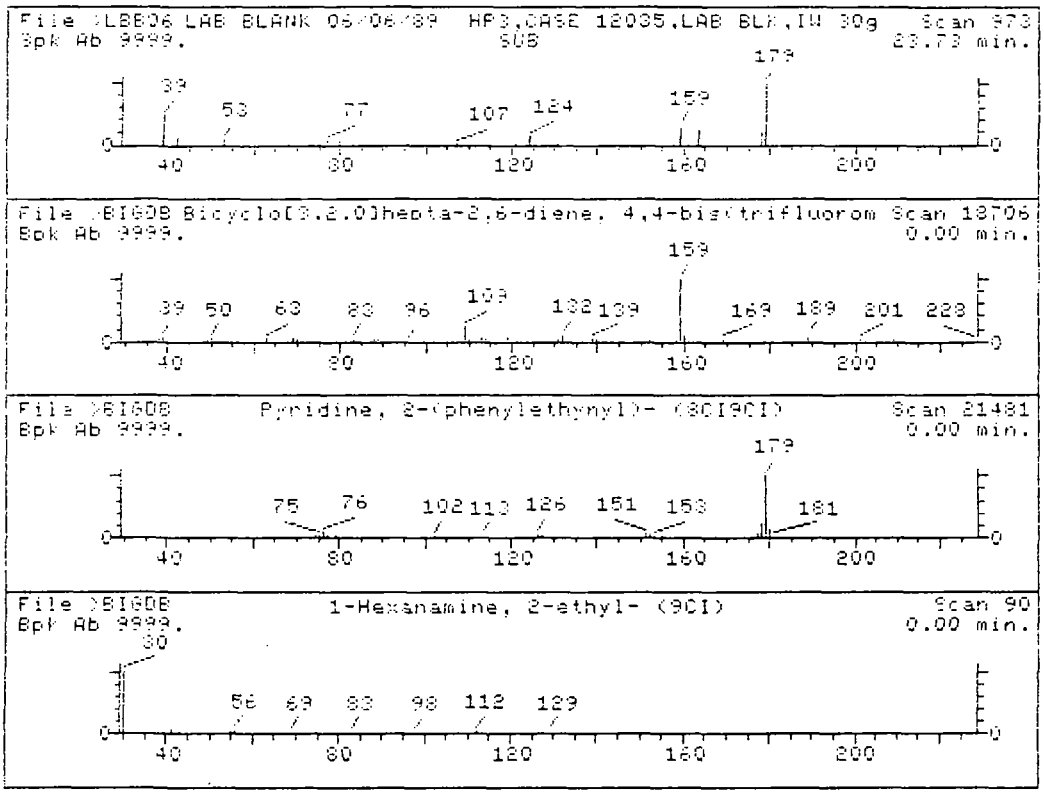


UNKNOWN

UNKNOWN #,12
Injected at: 890619 20:53
AREA = 11676.00 TENTATIVE CONCENTRATION IS 170.00

Sample file: >LBB06 Spectrum #: 968

No data base entries were retrieved.



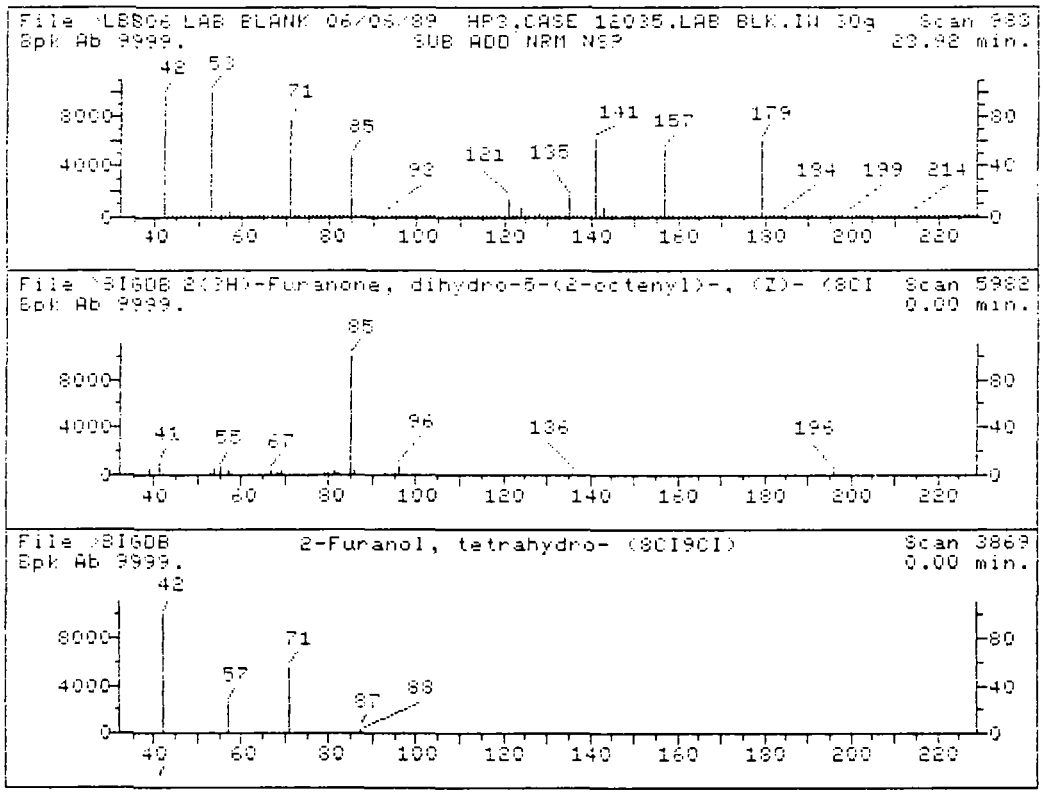
UNKNOWN

UNKNOWN #,13
Injected at: 890619 20:53
AREA = 27464.00 TENTATIVE CONCENTRATION IS 400.00

1. Bicyclo[3.2.0]hepta-2,6-diene, 4,4-bis(trifluorometh yl)- (8CI) 228 C9H6F6
2. Pyridine, 2-(phenylethynyl)- (8CI9CI) 179 C13H9N
3. 1-Hexanamine, 2-ethyl- (9CI) 129 C8H19N

Sample file: >LBB06 Spectrum #: 973
Search speed: 2 Tilting option: F No. of ion ranges searched: 53

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_I
1.	31*	714647	18706	"BIGDB	42	53	1	1	27	40	10	17
2.	30*	13141429	21481	"BIGDB	42	54	1	0	93	50	10	24
3.	30*	104756	90	"BIGDB	50	14	2	3	28	50	10	25



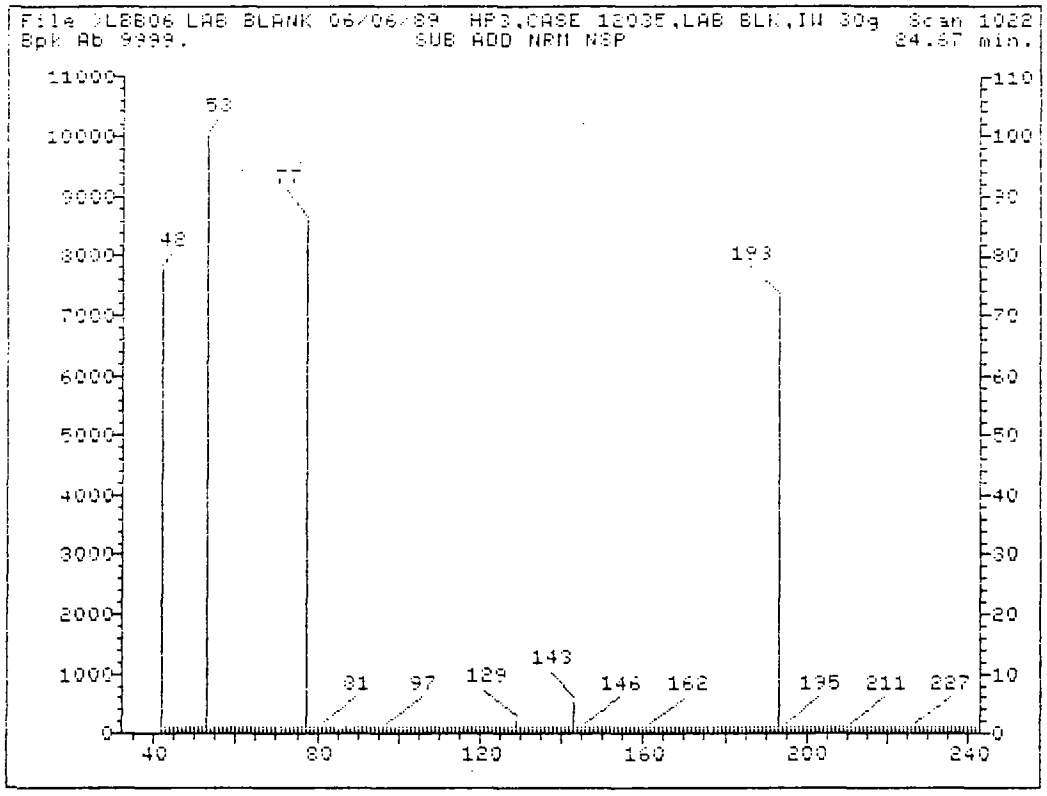
UNKNOWN

UNKNOWN #,14
Injected at: 890619 20:53
AREA = 42978.00 TENTATIVE CONCENTRATION IS 630.00

1. 2(3H)-Furanone, dihydro-5-(2-octenyl)-, (Z)- (8CI9CI 196 C12H20O2
2. 2-Furanol, tetrahydro- (8CI9CI) 88 C4H8O2

Sample file: >LBB06 Spectrum #: 983
Search speed: 2 Tilting option: F No. of ion ranges searched: 56

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IU
1.	15*	18679180	5982	"BIGDB	56	34	1	2	41	57	3	12
2.	11*	5371528	3869	"BIGDB	21	19	1	0	97	61	2	14



UNKNOWN

UNKNOWN #,15
Injected at: 890619 20:53
AREA = 14476.00 TENTATIVE CONCENTRATION IS 210.00

Sample file: >LBB06 Spectrum #: 1022

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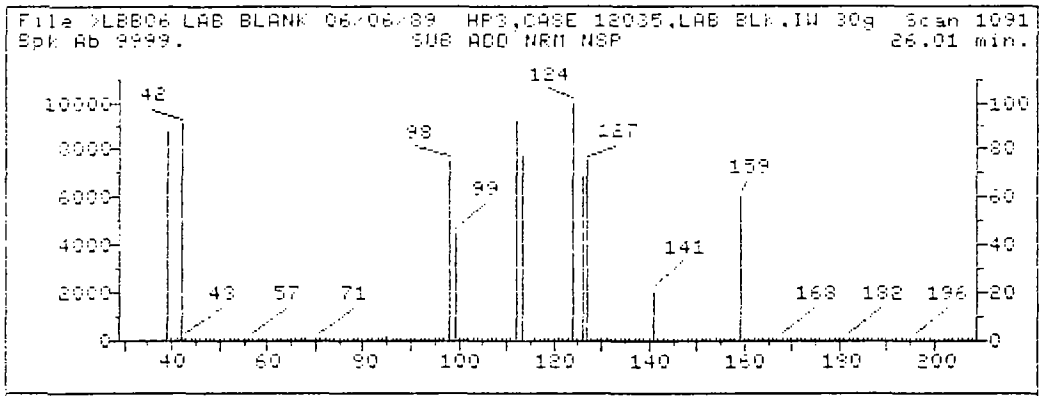
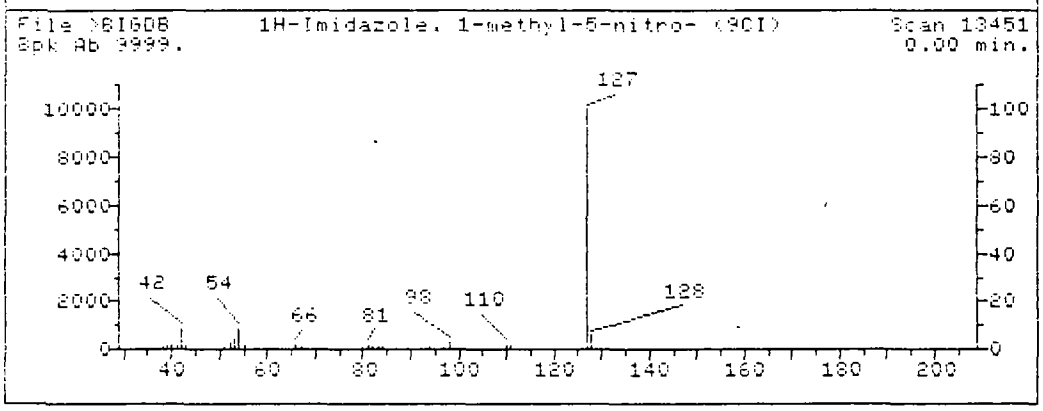


UNKNOWN

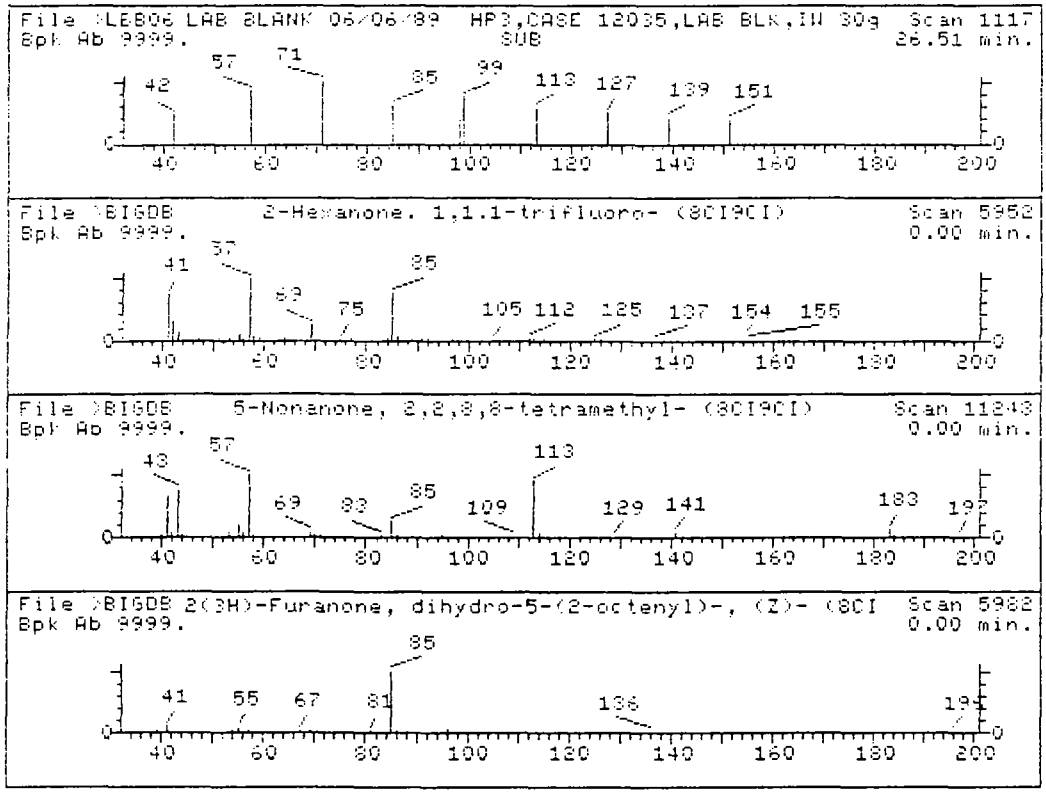


. UNKNOWN #,16
Injected at: 890619 20:53
AREA = 19639.00 TENTATIVE CONCENTRATION IS 290.00

1. 1H-Imidazole, 1-methyl-5-nitro- (9CI) 127 C4H5N3O2

Sample file: >LBB06 Spectrum #: 1091
Search speed: 2 Tilting option: F No. of ion ranges searched: 52

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	11*	3034422	13451	"BIGDB	36	43	1	1	76	61	2	12



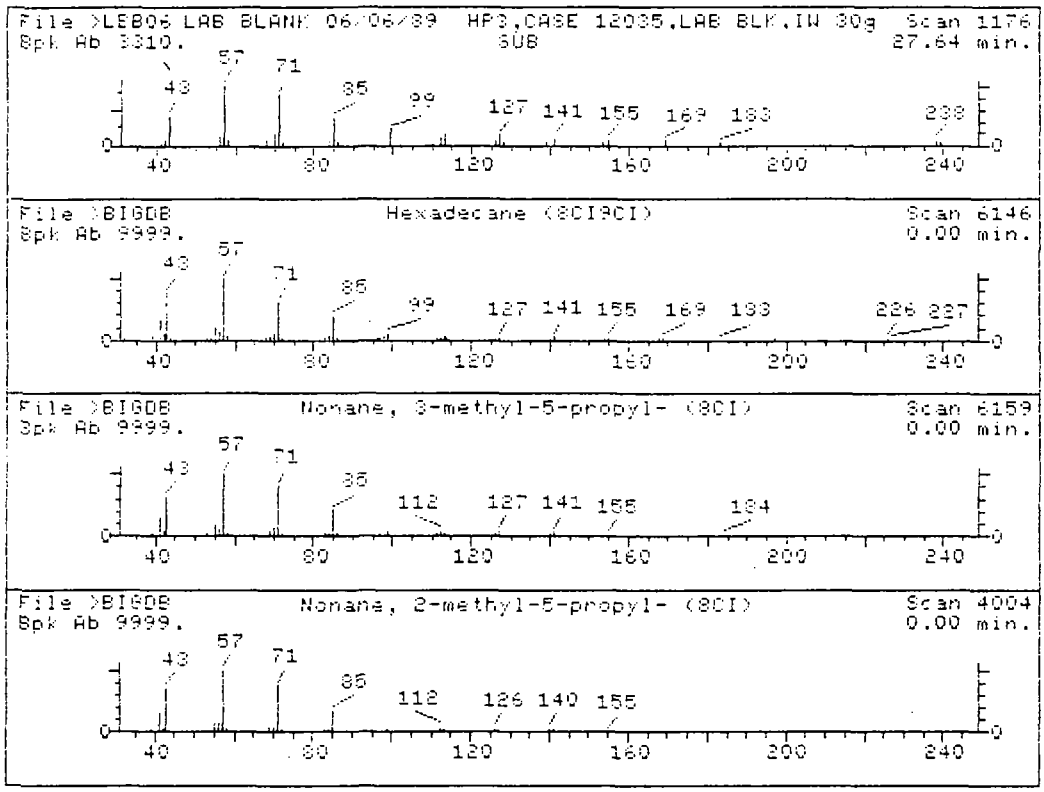
UNKNOWN

UNKNOWN #,17
Injected at: 890619 20:53
AREA = 18029.00 TENTATIVE CONCENTRATION IS 260.00

1.	2-Hexanone, 1,1,1-trifluoro- (8CI9CI)	154	C6H9F3O
2.	5-Nonanone, 2,2,8,8-tetramethyl- (8CI9CI)	198	C13H26O
3.	2(3H)-Furanone, dihydro-5-(2-octenyl)-, (Z)- (8CI9CI	196	C12H20O2
4.	[1,3,5]Dioxaborino[5,4-d]-1,3,2-dioxaborin, 2,6-diethyltetrahydro-, (4aS-cis)- (9CI)	198	C8H16B2O4
5.	Undecane, 5,5-dimethyl- (8CI)	184	C13H28
6.	Hexanethioic acid, S-methyl ester (8CI9CI)	146	C7H14OS

Sample file: >LBB06 Spectrum #: 1117
Search speed: 2 Tilting option: F No. of ion ranges searched: 56

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	37*	360349	5952	"BIGDB	39	47	1	4	59	28	14	14
2.	26*	5709955	11243	"BIGDB	64	48	1	1	74	58	7	54
3.	24*	18679180	5982	"BIGDB	36	52	1	3	70	45	8	12
4.	15*	74793081	8961	"BIGDB	38	76	1	4	86	58	3	14
5.	11*	17312731	13427	"BIGDB	24	75	3	0	423	61	2	12
6.	11*	2432771	8888	"BIGDB	20	72	2	0	160	64	2	13



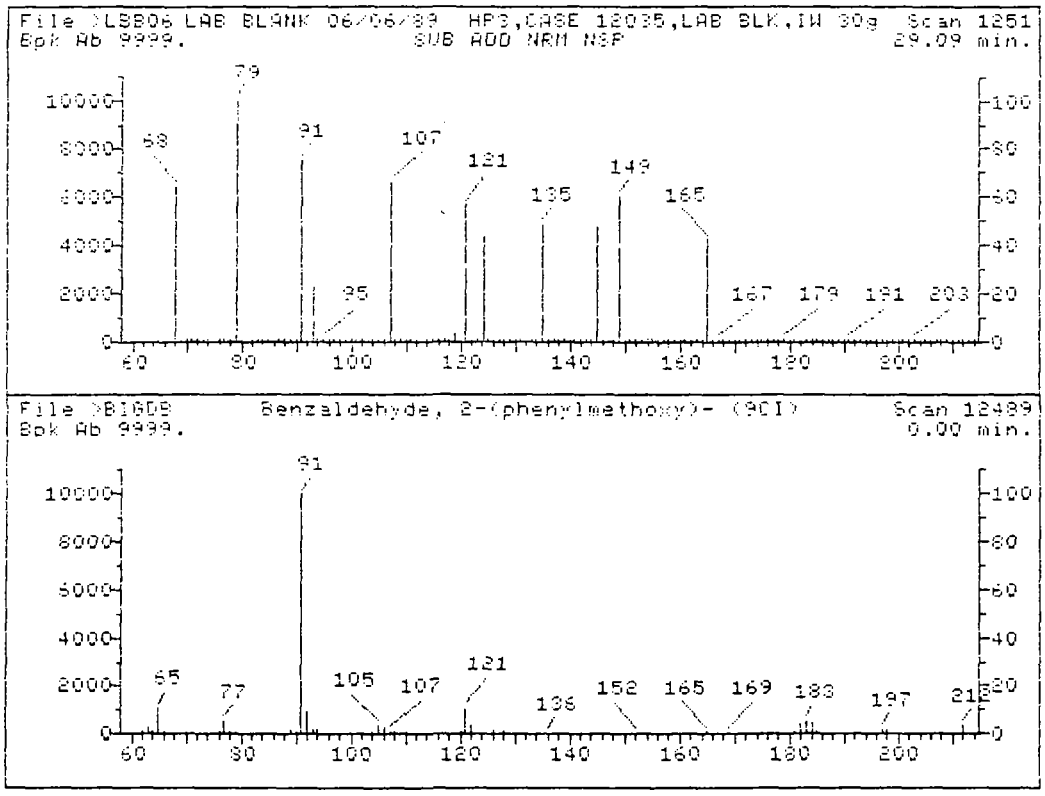
UNKNOWN HYDROCARBON

UNKNOWN #,18
Injected at: 890619 20:53
AREA = 57349.00 TENTATIVE CONCENTRATION IS 690.00

1.	Hexadecane (8CI9CI)	226	C16H34
2.	Nonane, 3-methyl-5-propyl- (8CI)	184	C13H28
3.	Nonane, 2-methyl-5-propyl- (8CI)	184	C13H28
4.	Octane, 6-ethyl-2-methyl- (9CI)	156	C11H24
5.	Methylamine, N-(1-propylbutylidene)- (8CI)	127	C8H17N
6.	Octane, 2-methyl- (8CI9CI)	128	C9H20

Sample file: >LBB06 Spectrum #: 1176
Search speed: 2 Tilting option: F No. of ion ranges searched: 61

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	70	544763	6146	"BIGDB	87	33	2	-4	81	10	42	19
2.	41	31081182	6159	"BIGDB	56	49	2	0	100	23	17	12
3.	35	31081171	4004	"BIGDB	54	49	2	0	100	26	14	12
4.	30	62016197	6106	"BIGDB	52	38	3	0	120	35	12	13
5.	27*	10599787	5818	"BIGDB	28	64	3	0	244	37	10	13
6.	20*	3221612	6061	"BIGDB	24	71	3	0	195	51	5	12



UNKNOWN

UNKNOWN #,19
Injected at: 890619 20:53
AREA = 24835.00 TENTATIVE CONCENTRATION IS 300.00

1. Benzaldehyde, 2-(phenylmethoxy)- (9CI) 212 C14H12O2

Sample file: >LBB06 Spectrum #: 1251
Search speed: 2 Tilting option: F No. of ion ranges searched: 82

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	11*	5896173	12489	"BIGDB	40	66	2	4	56	62	2	12

MS data file header from : >LBB06

Sample: LAB BLANK 06/06/89 Operator: DENNIS SUPER GRP. 6/19/89 20:53
Misc : HP3,CASE 12035,LAB BLK,IW 30g,FVC 2ml,06/05/89,pH 7,%MBTL#10
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: XBNA Tuning file: MTDH01 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 280 Transfer line temp. : 0

Chromatographic temperatures :	35.	305.	0.	0.	0.
Chromatographic times, min. :	4.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	1.0	0.0

>LBB06 LAB BLANK 06/06/89 HP3,CASE 12035,LAB BLK,IW 30g,FVC 2ml,06

35.0| 475.0 CLP TIC
Upslope: .20 Area Reject: 9781. Max Peaks: 19 Bunching: 1
Onslope: 0.00 Results File ILBB06 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	5.29	14	15	21	7627	27842	27842	48.55	6.714
2	18.06	673	679	684	2393	47025	15979	27.86	3.853
3	18.72	707	713	715	4530	69441	22253	38.80	5.366
4	19.28	738	742	747	4395	118353	26002	45.34	6.270
5	19.55	754	756	759	4862	85749	11133	19.41	2.685
6	19.87	771	773	776	4560	89817	11286	19.68	2.722
7	20.61	809	811	816	3252	144347	10556	18.41	2.546
8	21.65	862	865	868	5572	153267	21614	37.69	5.212
9	22.09	886	888	890	5719	105630	14930	26.03	3.600
10	22.19	891	893	896	6817	137287	22525	39.28	5.432
11	22.40	902	904	906	4655	116238	14113	24.61	3.403
12	23.63	966	968	970	4706	111608	11676	20.36	2.816
13	23.73	970	973	976	9784	176770	27464	47.89	6.623
14	23.92	979	983	990	6104	302851	42978	74.94	10.364
15	24.67	1020	1022	1025	3951	133871	14476	25.24	3.491
16	26.01	1089	1091	1094	8397	130440	19639	34.24	4.736
17	26.51	1114	1117	1121	6673	158407	18029	31.44	4.348
18	27.64	1173	1176	1179	23010	156679	57349	100.00	13.830
19	29.09	1249	1251	1259	4309	139566	24835	43.31	5.989

Sum of corrected areas: 414679.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	40.0	97810.	9.77	5.08 - 11.67
2	40.0	161068.	13.56	11.67 - 16.26
3	40.0	196654.	18.97	16.26 - 21.23
4	40.0	184463.	23.50	21.23 - 27.61
5	40.0	223161.	31.73	27.61 - 33.77
6	40.0	254227.	35.82	33.77 - 46.04

^^^ Dilution Factor = 1.000000 U dilf = 2.000000
Method called for 30.00000 g or mL This sample was 30.00000 g or mL

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK12

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: LB608

Sample wt/vol: 1.0 (g/mL) G Lab File ID: LB608

Level: (low/med) MED Date Received: / /

% Moisture: not dec. 0 dec._____ Date Extracted: 06/08/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/89

GPC Cleanup: (Y/N) N pH: 0.0 Dilution Factor: ~~0.500~~ 1.0 pw

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	9900	U
111-44-4	bis(2-Chloroethyl)ether	9900	U
95-57-8	2-Chlorophenol	9900	U
541-73-1	1,3-Dichlorobenzene	9900	U
106-46-7	1,4-Dichlorobenzene	9900	U
100-51-6	Benzyl alcohol	9900	U
95-50-1	1,2-Dichlorobenzene	9900	U
95-48-7	2-Methylphenol	9900	U
108-60-1	bis(2-Chloroisopropyl)ether	9900	U
106-44-5	4-Methylphenol	9900	U
621-64-7	N-Nitroso-di-n-propylamine	9900	U
67-72-1	Hexachloroethane	9900	U
98-95-3	Nitrobenzene	9900	U
78-59-1	Isophorone	9900	U
88-75-5	2-Nitrophenol	9900	U
105-67-9	2,4-Dimethylphenol	9900	U
65-85-0	Benzoic acid	48000	U
111-91-1	bis(2-Chloroethoxy)methane	9900	U
120-83-2	2,4-Dichlorophenol	9900	U
120-82-1	1,2,4-Trichlorobenzene	9900	U
91-20-3	Naphthalene	9900	U
106-47-8	4-Chloroaniline	9900	U
87-68-3	Hexachlorobutadiene	9900	U
59-50-7	4-Chloro-3-methylphenol	9900	U
91-57-6	2-Methylnaphthalene	9900	U
77-47-4	Hexachlorocyclopentadiene	9900	U
88-06-2	2,4,6-Trichlorophenol	9900	U
95-95-4	2,4,5-Trichlorophenol	48000	U
91-58-7	2-Chloronaphthalene	9900	U
88-74-4	2-Nitroaniline	48000	U
131-11-3	Dimethylphthalate	9900	U
208-96-8	Acenaphthylene	9900	U
606-20-2	2,6-Dinitrotoluene	9900	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK12

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: LB608

Sample wt/vol: 1.0 (g/mL) G Lab File ID: LB608

Level: (low/med) MED Date Received: / /

% Moisture: not dec. 0 dec._____ Date Extracted: 06/08/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/89

GPC Cleanup: (Y/N) N pH: 0.0 Dilution Factor: ~~0.500~~ 1.0 gm

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	48000	U
83-32-9	Acenapthene	9900	U
51-28-5	2,4-Dinitrophenol	48000	U
100-02-7	4-Nitrophenol	48000	U
132-64-9	Dibenzofuran	9900	U
121-14-2	2,4-Dinitrotoluene	9900	U
84-66-2	Diethylphthalate	9900	U
7005-72-3	4-Chlorophenyl-phenylether	9900	U
86-73-7	Fluorene	9900	U
100-01-6	4-Nitroaniline	48000	U
534-52-1	4,6-Dinitro-2-methylphenol	48000	U
86-30-6	N-Nitrosodiphenylamine (1)	9900	U
101-55-3	4-Bromophenyl-phenylether	9900	U
118-74-1	Hexachlorobenzene	9900	U
87-86-5	Pentachlorophenol	48000	U
85-01-8	Phenanthrene	9900	U
120-12-7	Anthracene	9900	U
84-74-2	Di-n-butylphthalate	9900	U
206-44-0	Fluoranthene	9900	U
129-00-0	Pyrene	9900	U
85-68-7	Butylbenzylphthalate	9900	U
91-94-1	3,3'-Dichlorobenzidine	20000	U
56-55-3	Benzo(a)anthracene	9900	U
218-01-9	Chrysene	9900	U
117-81-7	bis(2-Ethylhexyl)phthalate	9900	U
117-84-0	Di-n-octylphthalate	9900	U
205-99-2	Benzo(b)fluoranthene	9900	U
207-08-9	Benzo(k)fluoranthene	9900	U
50-32-8	Benzo(a)pyrene	9900	U
193-39-5	Indeno(1,2,3-cd)pyrene	9900	U
53-70-3	Dibenz(a,h)anthracene	9900	U
191-24-2	Benzo(g,h,i)perylene	9900	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK12

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: LB608

Sample wt/vol: 1.0 (g/mL) G Lab File ID: LB608

Level: (low/med) MED Date Received: / /

% Moisture: not dec. 0 dec._____ Date Extracted: 06/08/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/89

GPC Cleanup : (Y/N) N pH: 0.0 Dilution Factor: ~~0.500~~ 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
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16.				
17.				
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19.				
20.				
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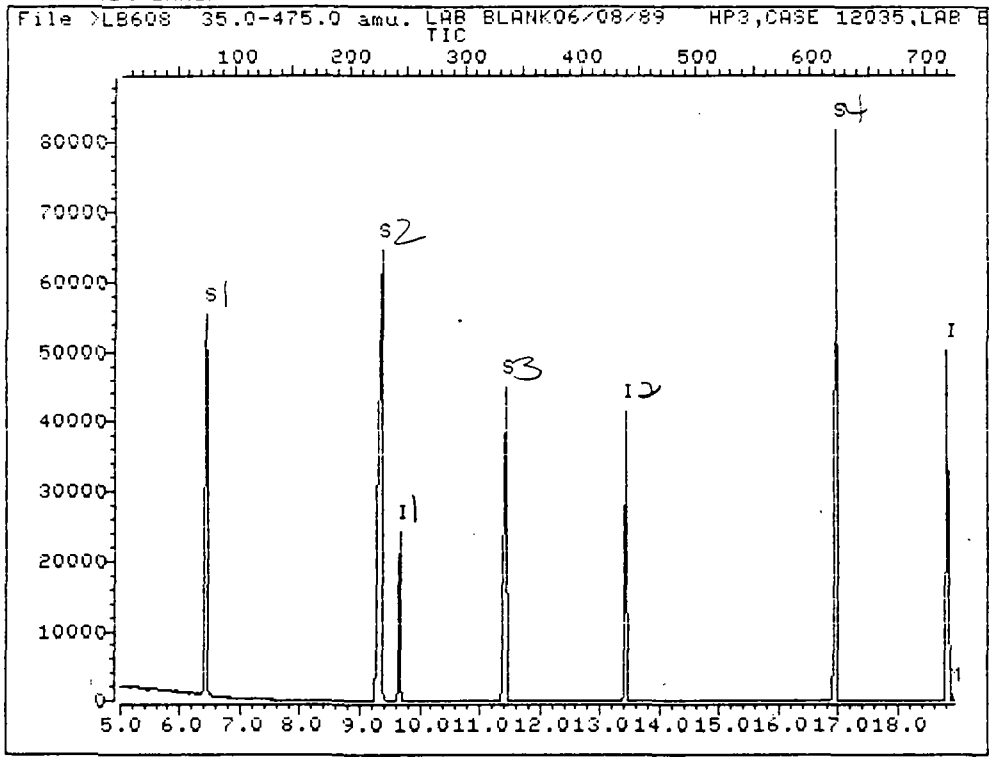
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

TOTAL ION CHROMATOGRAM



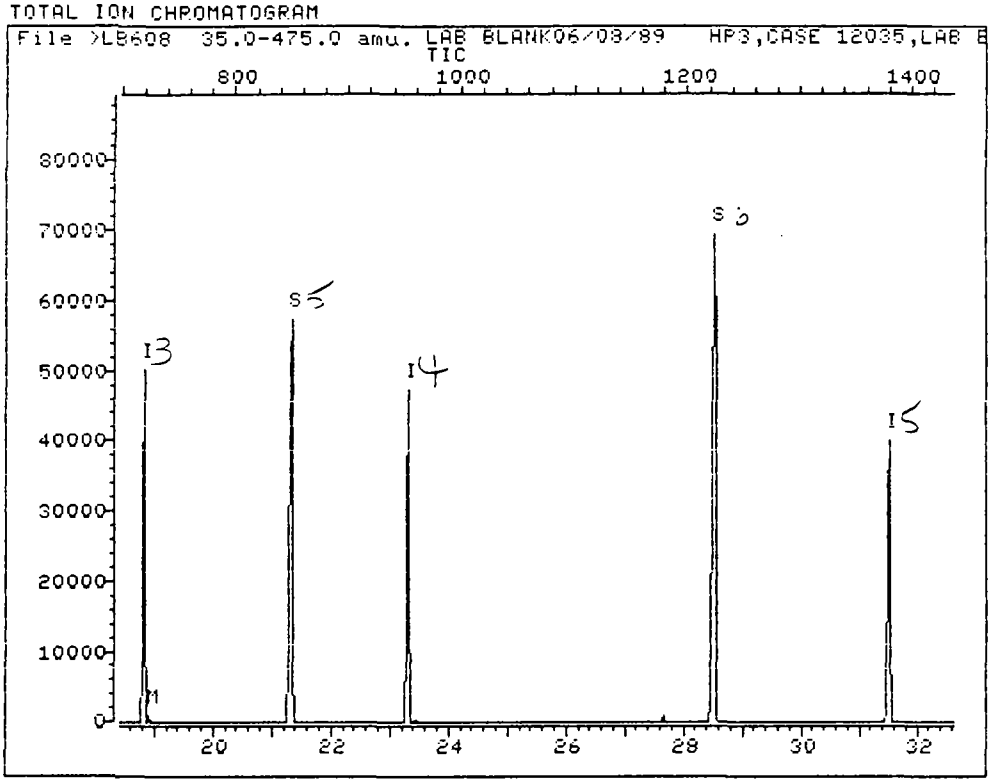
Data File: >LB608::D3 Quant Output File: ^LB608::SC
Name: LAB BLANK06/08/89
Misc: HP3,CASE 12035,LAB BLK,IW 1.0g,FV 2ml,06/08/89,pH 7,%MBTL# 7

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

Operator ID: JOHN
Quant Time: 890620 16:47
Injected at: 890620 15:59

TIC page 1 of 3

TOTAL ION CHROMATOGRAM



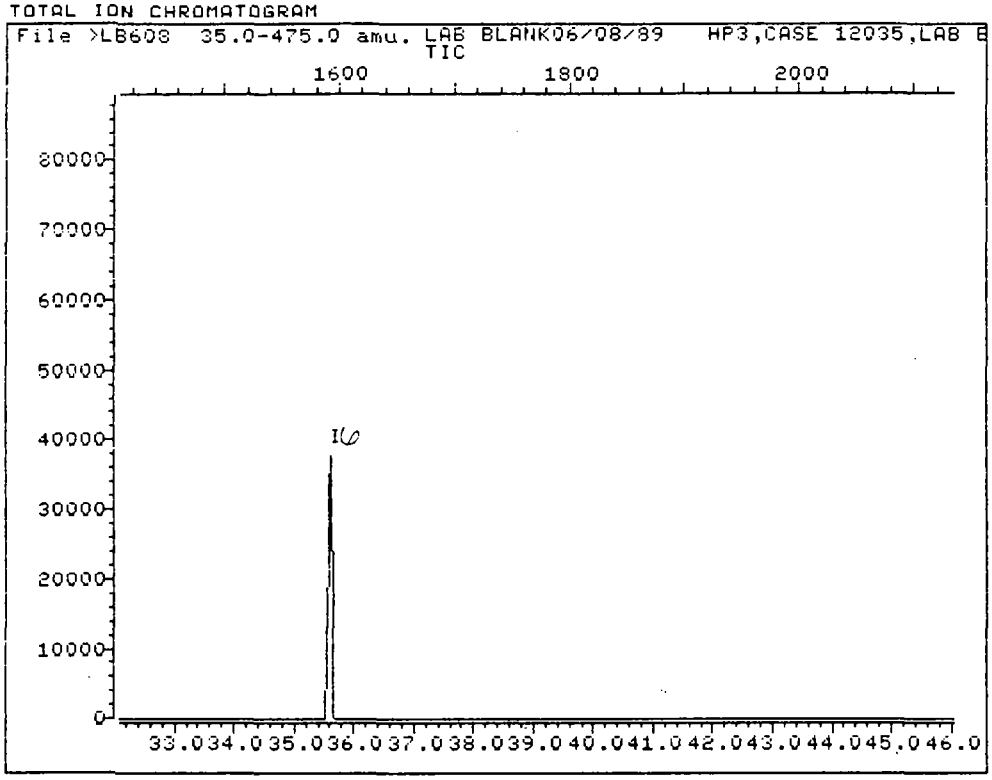
Data File: >LB608::D3 Quant Output File: ^LB608::SC
Name: LAB BLANK06/08/89
Misc: HP3,CASE 12035,LAB BLK,IW 1.0g,FV 2ml,06/08/89,pH 7,%MBTL# 7

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

Operator ID: JOHN
Quant Time: 890620 16:47
Injected at: 890620 15:59

TIC page 2 of 3

TOTAL ION CHROMATOGRAM



Data File: >LB608::D3 Quant Output File: ^LB608::SC
Name: LAB BLANK06/08/89
Misc: HP3,CASE 12035,LAB BLK,IW 1.0g,FV 2ml,06/08/89,pH 7,%MBTL# 7

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

Operator ID: JOHN
Quant Time: 890620 16:47
Injected at: 890620 15:59

TIC page 3 of 3

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890620 16:47
Output File: ^LB608::SC Injected at: 890620 15:59
Data File: >LB608::D3 Dilution Factor: 1.00000
Name: LAB BLANK06/08/89
Misc: HP3,CASE 12035,LAB BLK,IW 1.0g,FV 2ml,06/08/89,pH 7,%MBTL# 7

ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890620 16:42

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.67	152.0	10183	40.00	ng/uL	96
2)	2-Fluorophenol	6.44	112.0	52211	189.95	ng/uL	94
3)	Phenol-d5	9.36	99.0	104962	215.47	ng/uL	84
4)	Phenol	0.00	94.0	0	0.00	ng/uL	
5)	bis(-2-Chloroethyl)Ether	0.00	93.0	0	0.00	ng/uL	
6)	2-Chlorophenol	0.00	128.0	0	0.00	ng/uL	
7)	1,3-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
8)	1,4-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
9)	Benzyl Alcohol	0.00	108.0	0	0.00	ng/uL	
10)	1,2-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
11)	2-Methylphenol	0.00	108.0	0	0.00	ng/uL	
12)	bis(2-Chloroisopropyl)ether	0.00	45.0	0	0.00	ng/uL	
13)	4-Methylphenol	0.00	108.0	0	0.00	ng/uL	
14)	N-Nitroso-Di-n-propylamine	0.00	70.0	0	0.00	ng/uL	
15)	Hexachloroethane	0.00	117.0	0	0.00	ng/uL	
16)	*d8-Naphthalene	13.42	136.0	45468	40.00	ng/uL	88
17)	Nitrobenzene-d5	11.42	82.0	49850	103.34	ng/uL	80
18)	Nitrobenzene	0.00	77.0	0	0.00	ng/uL	
19)	Isophorone	0.00	82.0	0	0.00	ng/uL	
20)	2-Nitrophenol	0.00	139.0	0	0.00	ng/uL	
21)	2,4-Dimethylphenol	0.00	107.0	0	0.00	ng/uL	
22)	Benzoic Acid	0.00	105.0	0	0.00	ng/uL	
23)	bis(-2-Chloroethoxy)Methane	0.00	93.0	0	0.00	ng/uL	
24)	2,4-Dichlorophenol	0.00	162.0	0	0.00	ng/uL	
25)	1,2,4-Trichlorobenzene	0.00	180.0	0	0.00	ng/uL	
26)	Naphthalene	0.00	128.0	0	0.00	ng/uL	
27)	4-Chloroaniline	0.00	127.0	0	0.00	ng/uL	
28)	Hexachlorobutadiene	0.00	225.0	0	0.00	ng/uL	
29)	4-Chloro-3-methylphenol	0.00	107.0	0	0.00	ng/uL	
30)	2-Methylnaphthalene	0.00	142.0	0	0.00	ng/uL	
31)	*d10-Acenaphthene	18.83	164.0	27845	40.00	ng/uL	95
32)	Hexachlorocyclopentadiene	0.00	237.0	0	0.00	ng/uL	
33)	2,4,6-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
34)	2,4,5-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
35)	2-Chloronaphthalene	0.00	162.0	0	0.00	ng/uL	
36)	2-Fluorobiphenyl	16.96	172.0	75691	97.70	ng/uL	94
37)	2-Nitroaniline	0.00	65.0	0	0.00	ng/uL	
38)	Dimethyl Phthalate	0.00	163.0	0	0.00	ng/uL	
39)	Acenaphthylene	0.00	152.0	0	0.00	ng/uL	
40)	2,6-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
41)	3-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
~~42)~~	Acenaphthene	18.90	153.0	685	~~.84~~	ng/uL	95
43)	2,4-Dinitrophenol	0.00	184.0	0	0.00	ng/uL	
44)	4-Nitrophenol	0.00	109.0	0	0.00	ng/uL	
45)	Dibenzofuran	0.00	168.0	0	0.00	ng/uL	
46)	2,4-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
47)	Diethylphthalate	0.00	149.0	0	0.00	ng/uL	
48)	4-Chlorophenyl-phenylether	0.00	204.0	0	0.00	ng/uL	
49)	Fluorene	0.00	166.0	0	0.00	ng/uL	
50)	4-Nitroaniline	0.00	138.0	0	0.00	ng/uL	

50)	4-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
51)	2,4,6-Tribromophenol	21.35	330.0	17787M	237.58	ng/uL	93
52)	*d10-Phenanthrene	23.31	188.0	50388	40.00	ng/uL	98
53)	4,6-Dinitro-2-methylphenol	0.00	198.0	0	0.00	ng/uL	
54)	N-Nitrosodiphenylamine	0.00	169.0	0	0.00	ng/uL	
55)	4-Bromophenyl-phenylether	0.00	248.0	0	0.00	ng/uL	
56)	Hexachlorobenzene	0.00	284.0	0	0.00	ng/uL	
57)	Pentachlorophenol	0.00	266.0	0	0.00	ng/uL	
58)	Phenanthrene	0.00	178.0	0	0.00	ng/uL	
59)	Anthracene	0.00	178.0	0	0.00	ng/uL	
60)	Di-n-Butylphthalate	0.00	149.0	0	0.00	ng/uL	
61)	Fluoranthene	0.00	202.0	0	0.00	ng/uL	
62)	*d12-Chrysene	31.52	240.0	43037	40.00	ng/uL	80
63)	Pyrene	0.00	202.0	0	0.00	ng/uL	
64)	Terphenyl-d14	28.54	244.0	102800	92.28	ng/uL	98
65)	Butylbenzylphthalate	0.00	149.0	0	0.00	ng/uL	
66)	3,3'-Dichlorobenzidine	0.00	252.0	0	0.00	ng/uL	
67)	Benzo(a)Anthracene	0.00	228.0	0	0.00	ng/uL	
68)	Chrysene	0.00	228.0	0	0.00	ng/uL	
69)	Bis(2-Ethylhexyl)Phthalate	0.00	149.0	0	0.00	ng/uL	
70)	*d12-Perylene	35.62	264.0	43559	40.00	ng/uL	95
71)	Di-n-octyl phthalate	0.00	149.0	0	0.00	ng/uL	
72)	Benzo(b)Fluoranthene	0.00	252.0	0	0.00	ng/uL	
73)	Benzo(k)Fluoranthene	0.00	252.0	0	0.00	ng/uL	
74)	Benzo(a)Pyrene	0.00	252.0	0	0.00	ng/uL	
75)	Indeno(1,2,3-cd)Pyrene	0.00	276.0	0	0.00	ng/uL	
76)	Dibenz(a,h)Anthracene	0.00	278.0	0	0.00	ng/uL	
77)	Benzo(g,h,i)Perylene	0.00	276.0	0	0.00	ng/uL	

* Compound is ISTD

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH42MS

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: MSH42

Sample wt/vol: 30.0 (g/mL) G Lab File ID: MSH42

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 16 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/22/89

GPC Cleanup: (Y/N) Y pH: 8.1 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	9200	
111-44-4	bis(2-Chloroethyl)ether	780	U
95-57-8	2-Chlorophenol	8200	
541-73-1	1,3-Dichlorobenzene	780	U
106-46-7	1,4-Dichlorobenzene	4500	
100-51-6	Benzyl alcohol	780	U
95-50-1	1,2-Dichlorobenzene	780	U
95-48-7	2-Methylphenol	780	U
108-60-1	bis(2-Chloroisopropyl)ether	780	U
106-44-5	4-Methylphenol	780	U
621-64-7	N-Nitroso-di-n-propylamine	4600	
67-72-1	Hexachloroethane	780	U
98-95-3	Nitrobenzene	780	U
78-59-1	Isophorone	780	U
88-75-5	2-Nitrophenol	780	U
105-67-9	2,4-Dimethylphenol	780	U
65-85-0	Benzoic acid	3800	U
111-91-1	bis(2-Chloroethoxy)methane	780	U
120-83-2	2,4-Dichlorophenol	780	U
120-82-1	1,2,4-Trichlorobenzene	4200	
91-20-3	Naphthalene	780	U
106-47-8	4-Chloroaniline	780	U
87-68-3	Hexachlorobutadiene	780	U
59-50-7	4-Chloro-3-methylphenol	9500	
91-57-6	2-Methylnaphthalene	780	U
77-47-4	Hexachlorocyclopentadiene	780	U
88-06-2	2,4,6-Trichlorophenol	780	U
95-95-4	2,4,5-Trichlorophenol	3800	U
91-58-7	2-Chloronaphthalene	780	U
88-74-4	2-Nitroaniline	3800	U
131-11-3	Dimethylphthalate	780	U
208-96-8	Acenaphthylene	780	U
606-20-2	2,6-Dinitrotoluene	780	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH42MS

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: MSH42

Sample wt/vol: 30.0 (g/mL) G Lab File ID: MSH42

Level: (low/med) LOW Date Received: 06/03/89

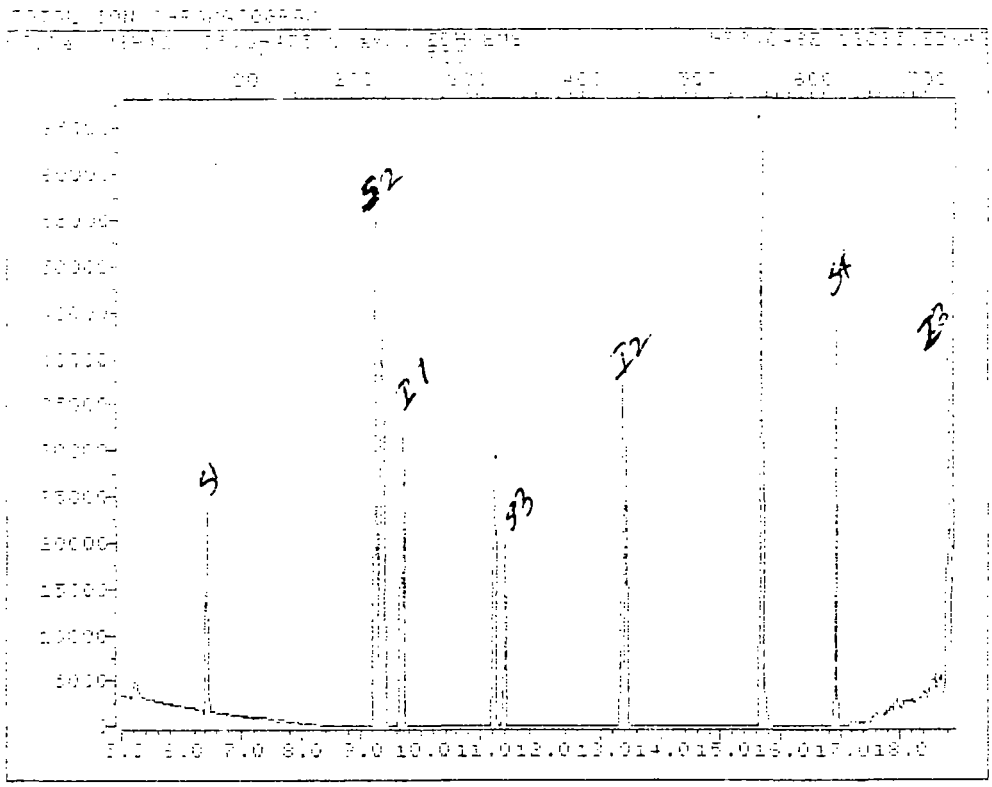
% Moisture: not dec. 16 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/22/89

GPC Cleanup: (Y/N) Y pH: 8.1 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3800	U
83-32-9	Acenapthene	5000	
51-28-5	2,4-Dinitrophenol	3800	U
100-02-7	4-Nitrophenol	12000	
132-64-9	Dibenzofuran	780	U
121-14-2	2,4-Dinitrotoluene	4200	
84-66-2	Diethylphthalate	780	U
7005-72-3	4-Chlorophenyl-phenylether	780	U
86-73-7	Fluorene	780	U
100-01-6	4-Nitroaniline	3800	U
534-52-1	4,6-Dinitro-2-methylphenol	3800	U
86-30-6	N-Nitrosodiphenylamine (1)	780	U
101-55-3	4-Bromophenyl-phenylether	780	U
118-74-1	Hexachlorobenzene	780	U
87-86-5	Pentachlorophenol	11000	
85-01-8	Phenanthrene	780	U
120-12-7	Anthracene	780	U
84-74-2	Di-n-butylphthalate	780	U
206-44-0	Fluoranthene	780	U
129-00-0	Pyrene	4300	
85-68-7	Butylbenzylphthalate	780	U
91-94-1	3,3'-Dichlorobenzidine	1600	U
56-55-3	Benzo(a)anthracene	780	U
218-01-9	Chrysene	780	U
117-81-7	bis(2-Ethylhexyl)phthalate	1300	B
117-84-0	Di-n-octylphthalate	780	U
205-99-2	Benzo(b)fluoranthene	780	U
207-08-9	Benzo(k)fluoranthene	780	U
50-32-8	Benzo(a)pyrene	780	U
193-39-5	Indeno(1,2,3-cd)pyrene	780	U
53-70-3	Dibenz(a,h)anthracene	780	U
191-24-2	Benzo(g,h,i)perylene	780	U

(1) - Cannot be separated from Diphenylamine

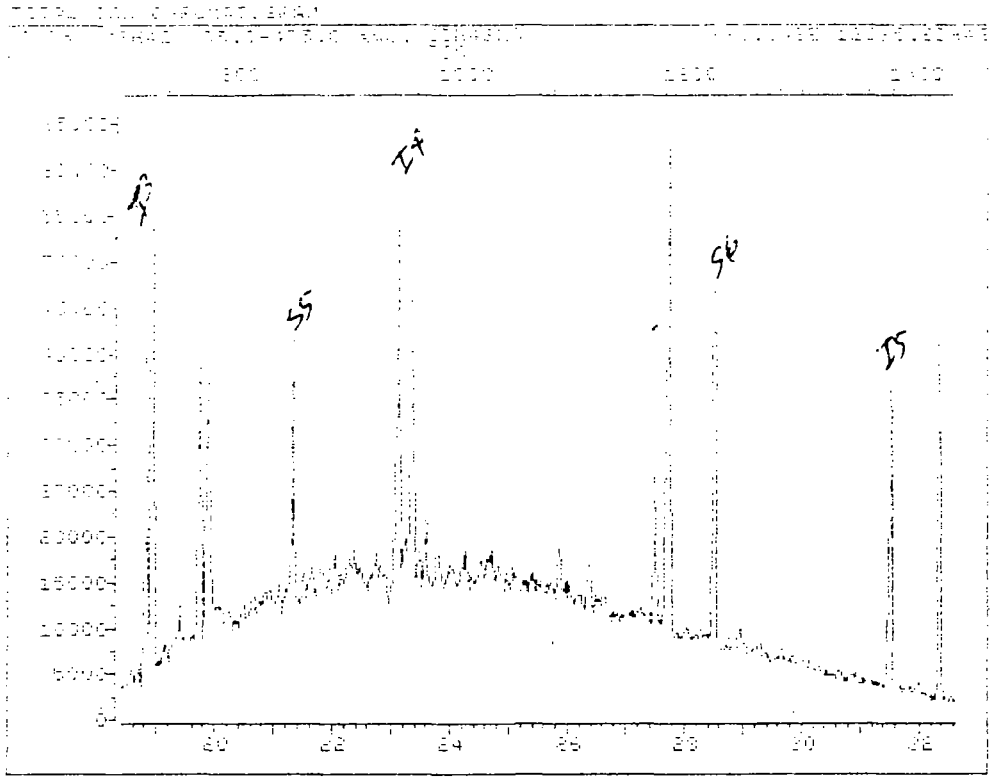


Data File: ^MSH42::03 Quant Output File: ^MSH42::SC
Name: EDH42MS
Misc: HP5,SASE 12055,EDH42MS,IW 50g,FVC 2ml,06/9c/89,pH3,3MI37LB

Id File: ID_SUG::SC
Title: HP EPA Standards
Last Calibration: 890622 10:24

Operator ID: DENNIS
Quant Time: 890622 19:07
Injected at: 890622 18:20

TIC page 1 of 3

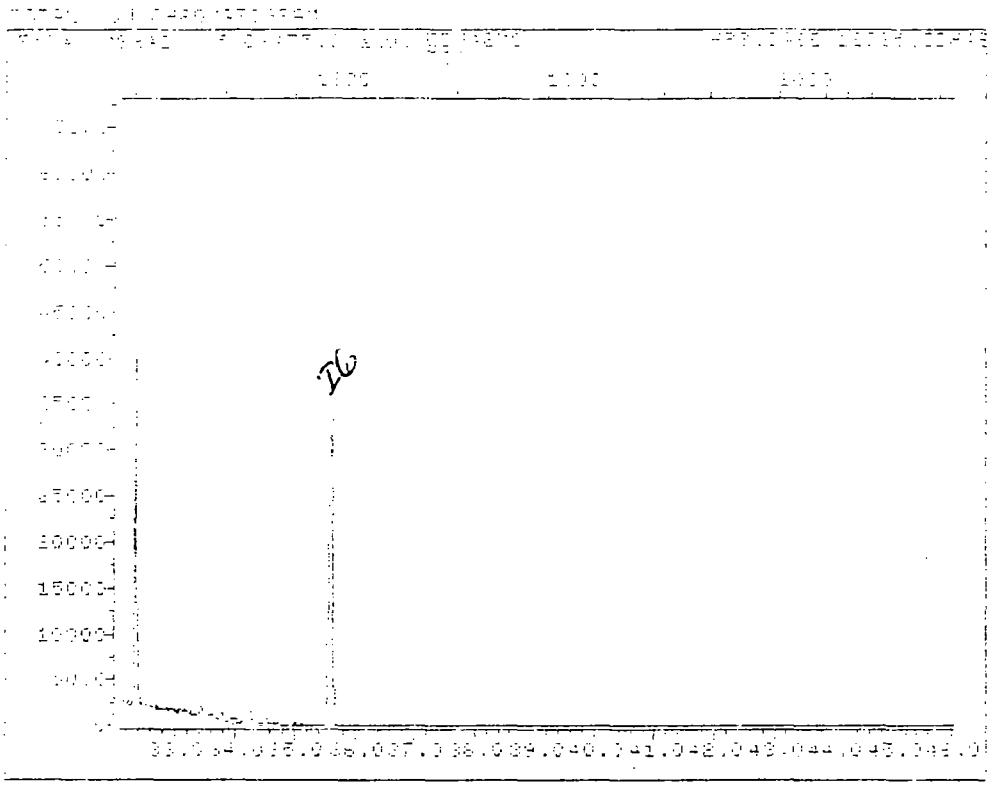


Data File: [illegible] Quant Output File: [illegible]
Name: [illegible]
Desc: HP3,CASE 17035,EDH42MS.TW 50g,FUC 2ml,06/30/90,[illegible]

In file: 10,MCA:SC
Title: HP 8H3 Standards
Last Calibration: 890622 16:56

Operator ID: LENNIS
Quant Time: 890622 19:02
Injected at: 890622 18:20

TIC page 2 of 3



Data File: WMSN42::05 Quant Output File: ^MSN4[::SC
Name: EDN42MS
Exec: HP5.CASE 12035,EDN42MS,IW 30g,FVC 2ml,06/06/89,pH0,XM1%FLM =

Cal File: IW_SMA::SC
Title: HF SMA Standards
Last Calibration: 890622 18:24

Operator ID: DENNIS
Count Time: 890622 19:07
Injected at: 890622 18:20

Fig page 5 of 5

QUANT REPORT

% Moist.: 15.23 Wet: 30 g Dry: 25.23 g

Operator ID: DENNIS Quant Rev: 6 Quant Time: 890622 19:07
Output File: ^MSH42::SC Injected at: 890622 18:20
Data File: >MSH42::D3 Dilution Factor: 1.00000
Name: EDH42MS
Misc: HP3,CASE 12035,EDH42MS,IW 30g,FVC 2ml,06/06/89,pH8,%M1BTL# 4

ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890622 16:24

% Sur Rec = Amtx FV x100 / Amt spiked A = BN =

Cmpd Fd = Amt (ppm) X FV / IW (FV → 2, IW → 325.2)

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.67	152.0	8390	40.00	ng/uL	94
2)	2-Fluorophenol	6.42	112.0	17051	85.93	ng/uL	90
3)	Phenol-d5	9.34	99.0	38988	97.75	ng/uL	85
4)	Phenol	9.38	94.0	48719	116.31	ng/uL → 9100	68
5)	bis(-2-Chloroethyl)Ether	0.00	93.0	0	0.00	ng/uL	
6)	2-Chlorophenol	9.24	128.0	36922	103.07	ng/uL → 8200	96
7)	1,3-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
8)	1,4-Dichlorobenzene	9.71	146.0	19190	56.86	ng/uL → 4500	95
9)	Benzyl Alcohol	0.00	108.0	0	0.00	ng/uL	
10)	1,2-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
11)	2-Methylphenol	0.00	108.0	0	0.00	ng/uL	
12)	bis(2-Chloroisopropyl)ether	0.00	45.0	0	0.00	ng/uL	
13)	4-Methylphenol	0.00	108.0	0	0.00	ng/uL	
14)	N-Nitroso-Di-n-propylamine	11.23	70.0	19023	57.78	ng/uL → 4600	72
15)	Hexachloroethane	0.00	117.0	0	0.00	ng/uL	
16)	*d8-Naphthalene	13.42	136.0	39313	40.00	ng/uL	86
17)	Nitrobenzene-d5	11.40	82.0	17115	41.76	ng/uL	79
18)	Nitrobenzene	0.00	77.0	0	0.00	ng/uL	
19)	Isophorone	0.00	82.0	0	0.00	ng/uL	
20)	2-Nitrophenol	0.00	139.0	0	0.00	ng/uL	
21)	2,4-Dimethylphenol	0.00	107.0	0	0.00	ng/uL	
22)	Benzoic Acid	0.00	105.0	0	0.00	ng/uL	
23)	bis(-2-Chloroethoxy)Methane	0.00	93.0	0	0.00	ng/uL	
24)	2,4-Dichlorophenol	0.00	162.0	0	0.00	ng/uL	
25)	1,2,4-Trichlorobenzene	13.36	180.0	18966	53.26	ng/uL → 4200	93
26)	Naphthalene	0.00	128.0	0	0.00	ng/uL	
27)	4-Chloroaniline	0.00	127.0	0	0.00	ng/uL	
28)	Hexachlorobutadiene	0.00	225.0	0	0.00	ng/uL	
29)	4-Chloro-3-methylphenol	15.69	107.0	49911	119.60	ng/uL → 9500	94
30)	2-Methylnaphthalene	0.00	142.0	0	0.00	ng/uL	
31)	*d10-Acenaphthene	18.83	164.0	23320	40.00	ng/uL	94
32)	Hexachlorocyclopentadiene	0.00	237.0	0	0.00	ng/uL	
33)	2,4,6-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
34)	2,4,5-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
35)	2-Chloronaphthalene	0.00	162.0	0	0.00	ng/uL	
36)	2-Fluorobiphenyl	16.94	172.0	33983	49.46	ng/uL	93
37)	2-Nitroaniline	0.00	65.0	0	0.00	ng/uL	
38)	Dimethyl Phthalate	0.00	163.0	0	0.00	ng/uL	
39)	Acenaphthylene	0.00	152.0	0	0.00	ng/uL	
40)	2,6-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
41)	3-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
42)	Acenaphthene	18.94	153.0	47004	63.63	ng/uL → 5700	94
43)	2,4-Dinitrophenol	0.00	184.0	0	0.00	ng/uL	
44)	4-Nitrophenol	19.91	109.0	15155	145.94	ng/uL → 12000	91
45)	Dibenzofuran	0.00	168.0	0	0.00	ng/uL	
46)	2,4-Dinitrotoluene	19.75	165.0	16907	53.50	ng/uL → 4200	64
47)	Diethylphthalate	0.00	149.0	0	0.00	ng/uL	
48)	4-Chlorophenyl-phenylether	0.00	204.0	0	0.00	ng/uL	
49)	Fluorene	0.00	166.0	0	0.00	ng/uL	
50)	4-Nitroaniline	0.00	138.0	0	0.00	ng/uL	

50)	4-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
51)	2,4,6-Tribromophenol	21.33	330.0	6795	107.14	ng/uL	98
52)	*d10-Phenanthrene	23.36	188.0	37493	40.00	ng/uL	97
53)	4,6-Dinitro-2-methylphenol	0.00	198.0	0	0.00	ng/uL	
54)	N-Nitrosodiphenylamine	0.00	169.0	0	0.00	ng/uL	
55)	4-Bromophenyl-phenylether	0.00	248.0	0	0.00	ng/uL	
56)	Hexachlorobenzene	0.00	284.0	0	0.00	ng/uL	
57)	Pentachlorophenol	23.12	266.0	16518	141.58	ng/uL → 11000	97
58)	Phenanthrene	0.00	178.0	0	0.00	ng/uL	
59)	Anthracene	0.00	178.0	0	0.00	ng/uL	
60)	Di-n-Butylphthalate	0.00	149.0	0	0.00	ng/uL	
61)	Fluoranthene	0.00	202.0	0	0.00	ng/uL	
62)	*d12-Chrysene	31.52	240.0	38644	40.00	ng/uL	86
63)	Pyrene	27.75	202.0	87614	53.74	ng/uL → 4300	86
64)	Terphenyl-d14	28.52	244.0	42316	44.68	ng/uL	98
65)	Butylbenzylphthalate	0.00	149.0	0	0.00	ng/uL	
66)	3,3'-Dichlorobenzidine	0.00	252.0	0	0.00	ng/uL	
67)	Benzo(a)Anthracene	0.00	228.0	0	0.00	ng/uL	
68)	Chrysene	0.00	228.0	0	0.00	ng/uL	
69)	Bis(2-Ethylhexyl)Phthalate	32.35	149.0	25863	16.58	ng/uL → 1348	94
70)	*d12-Perylene	35.62	264.0	41044	40.00	ng/uL	93
71)	Di-n-octyl phthalate	0.00	149.0	0	0.00	ng/uL	
72)	Benzo(b)fluoranthene	0.00	252.0	0	0.00	ng/uL	
73)	Benzo(k)Fluoranthene	0.00	252.0	0	0.00	ng/uL	
74)	Benzo(a)Pyrene	0.00	252.0	0	0.00	ng/uL	
75)	Indeno(1,2,3-cd)Pyrene	0.00	276.0	0	0.00	ng/uL	
76)	Dibenz(a,h)Anthracene	0.00	278.0	0	0.00	ng/uL	
77)	Benzo(g,h,i)Perylene	0.00	276.0	0	0.00	ng/uL	

* Compound is ISTD

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH42MSD

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: MSDR2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: MSDR2

Level: (low/med) LOW Date Received: 06/03/89

% Moisture: not dec. 16 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/23/89

GPC Cleanup: (Y/N) Y pH: 8.1 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	4000	
111-44-4	bis(2-Chloroethyl)ether	780	U
95-57-8	2-Chlorophenol	3600	
541-73-1	1,3-Dichlorobenzene	780	U
106-46-7	1,4-Dichlorobenzene	2000	
100-51-6	Benzyl alcohol	780	U
95-50-1	1,2-Dichlorobenzene	780	U
95-48-7	2-Methylphenol	780	U
108-60-1	bis(2-Chloroisopropyl)ether	780	U
106-44-5	4-Methylphenol	780	U
621-64-7	N-Nitroso-di-n-propylamine	1900	
67-72-1	Hexachloroethane	780	U
98-95-3	Nitrobenzene	780	U
78-59-1	Isophorone	780	U
88-75-5	2-Nitrophenol	780	U
105-67-9	2,4-Dimethylphenol	780	U
65-85-0	Benzoic acid	3800	U
111-91-1	bis(2-Chloroethoxy)methane	780	U
120-83-2	2,4-Dichlorophenol	780	U
120-82-1	1,2,4-Trichlorobenzene	2200	
91-20-3	Naphthalene	780	U
106-47-8	4-Chloroaniline	780	U
87-68-3	Hexachlorobutadiene	780	U
59-50-7	4-Chloro-3-methylphenol	3800	
91-57-6	2-Methylnaphthalene	780	U
77-47-4	Hexachlorocyclopentadiene	780	U
88-06-2	2,4,6-Trichlorophenol	780	U
95-95-4	2,4,5-Trichlorophenol	3800	U
91-58-7	2-Chloronaphthalene	780	U
88-74-4	2-Nitroaniline	3800	U
131-11-3	Dimethylphthalate	780	U
208-96-8	Acenaphthylene	780	U
606-20-2	2,6-Dinitrotoluene	780	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH42MSD

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: MSDR2

Sample wt/vol: 30.0 (g/mL) G Lab File ID: MSDR2

Level: (low/med) LOW Date Received: 06/03/89

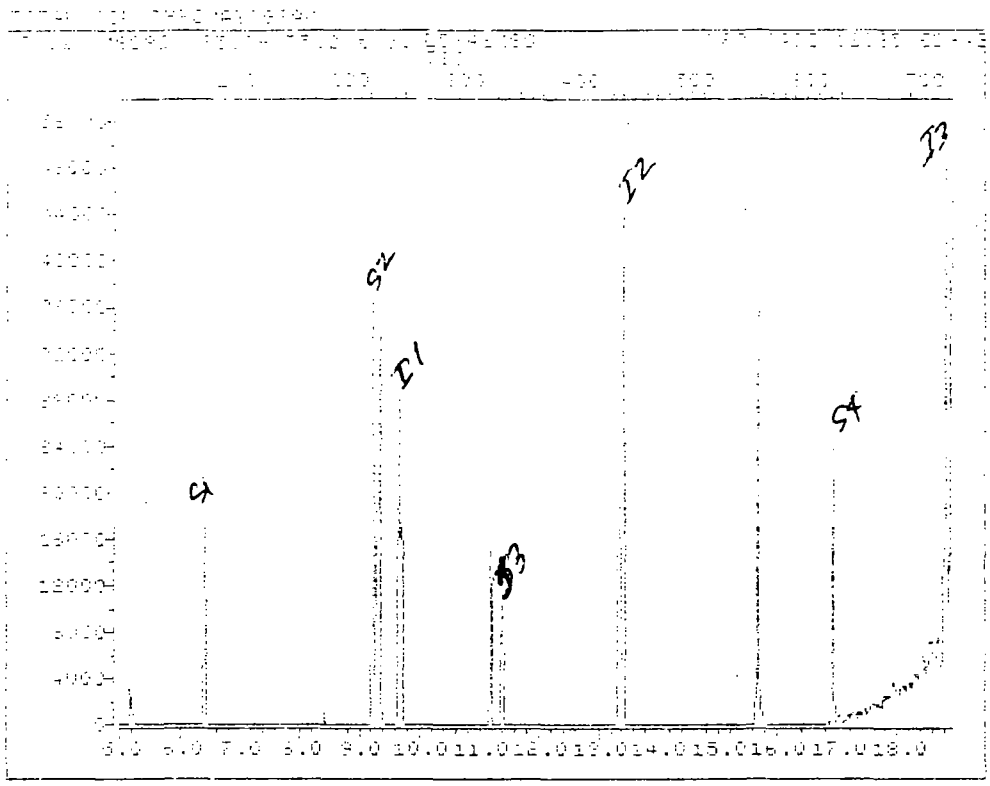
% Moisture: not dec. 16 dec._____ Date Extracted: 06/06/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/23/89

GPC Cleanup: (Y/N) Y pH: 8.1 Dilution Factor: 1.000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3800	U
83-32-9	Acenapthene	2200	
51-28-5	2,4-Dinitrophenol	3800	U
100-02-7	4-Nitrophenol	3400	J
132-64-9	Dibenzofuran	780	U
121-14-2	2,4-Dinitrotoluene	1400	
84-66-2	Diethylphthalate	780	U
7005-72-3	4-Chlorophenyl-phenylether	780	U
86-73-7	Fluorene	780	U
100-01-6	4-Nitroaniline	3800	U
534-52-1	4,6-Dinitro-2-methylphenol	3800	U
86-30-6	N-Nitrosodiphenylamine (1)	780	U
101-55-3	4-Bromophenyl-phenylether	780	U
118-74-1	Hexachlorobenzene	780	U
87-86-5	Pentachlorophenol	5000	
85-01-8	Phenanthrene	780	U
120-12-7	Anthracene	780	U
84-74-2	Di-n-butylphthalate	780	U
206-44-0	Fluoranthene	780	U
129-00-0	Pyrene	1900	
85-68-7	Butylbenzylphthalate	780	U
91-94-1	3,3'-Dichlorobenzidine	1600	U
56-55-3	Benzo(a)anthracene	780	U
218-01-9	Chrysene	780	U
117-81-7	bis(2-Ethylhexyl)phthalate	1100	B
117-84-0	Di-n-octylphthalate	780	U
205-99-2	Benzo(b)fluoranthene	780	U
207-08-9	Benzo(k)fluoranthene	780	U
50-32-8	Benzo(a)pyrene	780	U
193-39-5	Indeno(1,2,3-cd)pyrene	780	U
53-70-3	Dibenz(a,h)anthracene	780	U
191-24-2	Benzo(g,h,i)perylene	780	U

(1) - Cannot be separated from Diphenylamine

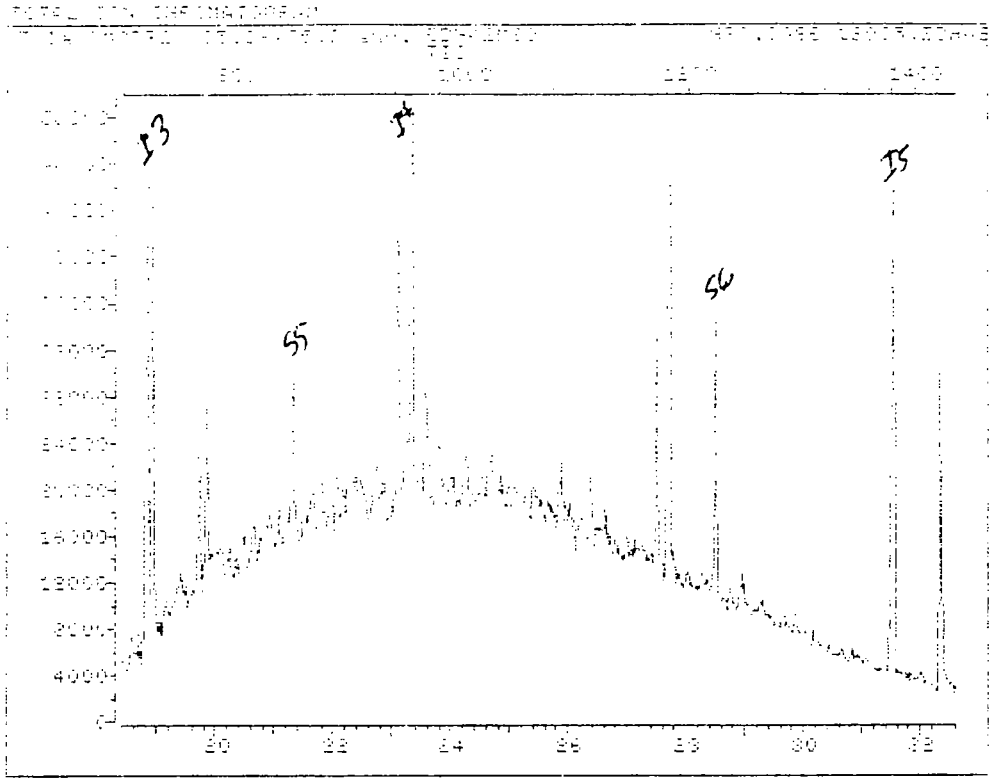


Data File: *M50R2::D3 Quant Output File: *M50R2::SC
Name: EDH42M50
Misc: DF3.CASE 12055,EDH42M50,IW 30g,FVC 2ml,06/06/89,pH 8,XPTL# 3

Id File: ID_SLA::SC
Title: HF EMA Standards
Last Calibration: 890623 13:53

Operator ID: DENNIS
Quant Time: 890623 14:34
Injected at: 890623 15:47

TIC peak 1 of 3



Data File: MS0082:D3 Quant Output File: MS0082:3

Name: 5PH42M50

Misc: HP8,CASE 12035,5PH42M50,IW 30g,TUC 2ul,06/03/89,pH 6.38TLB 3

Id Files: ID_DEMMIS

Title: HP 8MS Standards

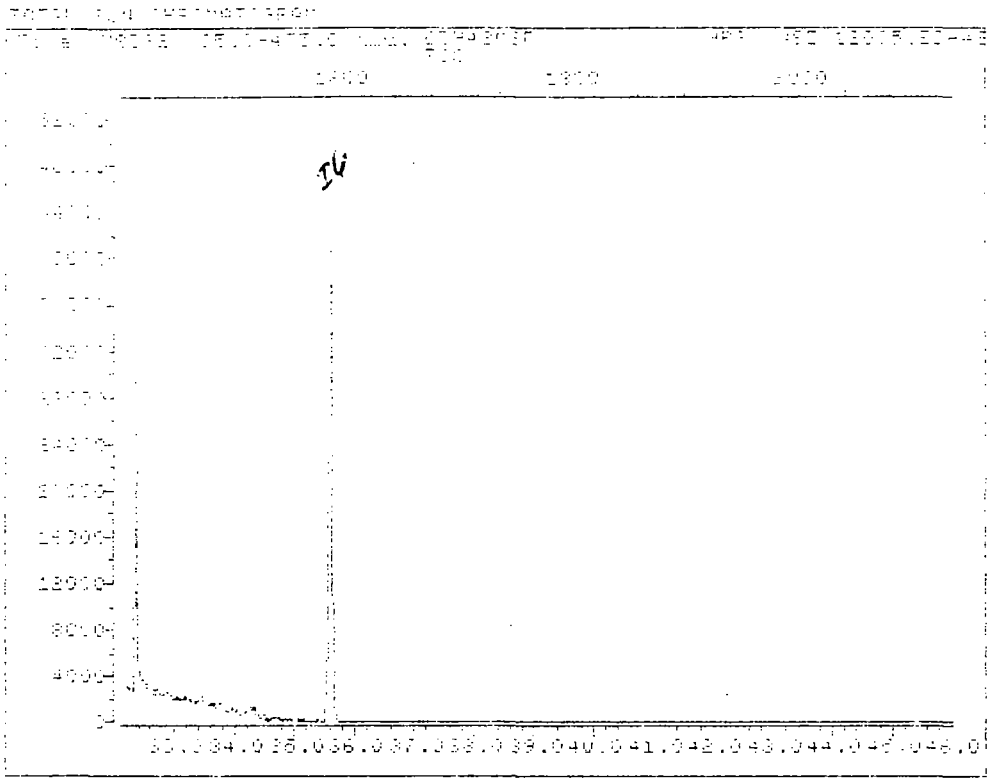
Last Calibration: 890625 13:59

Operator ID: DENNIS

Quant Time: 890625 14:54

Injected at: 890625 13:47

TIC page 2 of 3



Data File: MSD92::93 Quant Output File: MSD92::SL
Name: EDP42MSD
Miss: HCY,CASE 12035,EDH42MSD,IW 30g,PVC 2ml,06 06/82,pH 8,05T# 7

IS File: ID,BCA::CC
Title: HP BNA Standards
Last Calibration: 890625 13:50

Operator ID: DENNIS
Quant Time: 890625 13:54
Injected at: 290625 13:47

Page 2 of 2

% Moist.: 15.23 Wet: 30 g Dry: 25.281 g

QUANT REPORT

Operator ID: DENNIS Quant Rev: 6 Quant Time: 890623 14:34
Output File: ^MSDR2::SC Injected at: 890623 13:47
Data File: >MSDR2::D3 Dilution Factor: 1.00000
Name: EDH42MSD
Misc: HP3,CASE 12035,EDH42MSD,IW 30g,FVC 2ml,06/06/89,pH 8,%BTL# 3

ID File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890623 13:58

% Sur Rec = Amtx FV x100 / Amt spiked A = BN =

Cmpd Fd = Amt (ppm) X FV/IW

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.65	152.0	11604	40.00	ng/uL	93
2)	2-Fluorophenol	6.42	112.0	13255	38.46	ng/uL	97
3)	Phenol-d5	9.31	99.0	22559	41.35	ng/uL	79
4)	Phenol	9.35	94.0	27549	50.64	ng/uL → 4000	85
5)	bis(-2-Chloroethyl)Ether	0.00	93.0	0	0.00	ng/uL	
6)	2-Chlorophenol	9.23	128.0	21786	45.37	ng/uL → 3600	96
7)	1,3-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
8)	1,4-Dichlorobenzene	9.69	146.0	11984	25.05	ng/uL → 2000	91
9)	Benzyl Alcohol	0.00	108.0	0	0.00	ng/uL	
10)	1,2-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
11)	2-Methylphenol	0.00	108.0	0	0.00	ng/uL	
12)	bis(2-Chloroisopropyl)ether	0.00	45.0	0	0.00	ng/uL	
13)	4-Methylphenol	0.00	108.0	0	0.00	ng/uL	
14)	N-Nitroso-Di-n-propylamine	11.19	70.0	8768	23.46	ng/uL → 1900	78
15)	Hexachloroethane	0.00	117.0	0	0.00	ng/uL	
16)	*d8-Naphthalene	13.43	136.0	47619	40.00	ng/uL	88
17)	Nitrobenzene-d5	11.39	82.0	8492	18.49	ng/uL	78
18)	Nitrobenzene	0.00	77.0	0	0.00	ng/uL	
19)	Isophorone	0.00	82.0	0	0.00	ng/uL	
20)	2-Nitrophenol	0.00	139.0	0	0.00	ng/uL	
21)	2,4-Dimethylphenol	0.00	107.0	0	0.00	ng/uL	
22)	Benzoic Acid	0.00	105.0	0	0.00	ng/uL	
23)	bis(-2-Chloroethoxy)Methane	0.00	93.0	0	0.00	ng/uL	
24)	2,4-Dichlorophenol	0.00	162.0	0	0.00	ng/uL	
25)	1,2,4-Trichlorobenzene	13.35	180.0	11757	27.18	ng/uL → 2200	91
26)	Naphthalene	0.00	128.0	0	0.00	ng/uL	
27)	4-Chloroaniline	0.00	127.0	0	0.00	ng/uL	
28)	Hexachlorobutadiene	0.00	225.0	0	0.00	ng/uL	
29)	4-Chloro-3-methylphenol	15.68	107.0	22838	47.61	ng/uL → 3500	93
30)	2-Methylnaphthalene	0.00	142.0	0	0.00	ng/uL	
31)	*d10-Acenaphthene	18.83	164.0	28056	40.00	ng/uL	93
32)	Hexachlorocyclopentadiene	0.00	237.0	0	0.00	ng/uL	
33)	2,4,6-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
34)	2,4,5-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
35)	2-Chloronaphthalene	0.00	162.0	0	0.00	ng/uL	
36)	2-Fluorobiphenyl	16.93	172.0	19558	23.24	ng/uL	94
37)	2-Nitroaniline	0.00	65.0	0	0.00	ng/uL	
38)	Dimethyl Phthalate	0.00	163.0	0	0.00	ng/uL	
39)	Acenaphthylene	0.00	152.0	0	0.00	ng/uL	
40)	2,6-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
41)	3-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
42)	Acenaphthene	18.93	153.0	24582	28.22	ng/uL → 2200	94
43)	2,4-Dinitrophenol	0.00	184.0	0	0.00	ng/uL	
44)	4-Nitrophenol	19.85	109.0	4916	42.51	ng/uL → 3400	92
45)	Dibenzofuran	0.00	168.0	0	0.00	ng/uL	
46)	2,4-Dinitrotoluene	19.72	165.0	6855	17.16	ng/uL → 1400	92
47)	Diethylphthalate	0.00	149.0	0	0.00	ng/uL	
48)	4-Chlorophenyl-phenylether	0.00	204.0	0	0.00	ng/uL	
49)	Fluorene	0.00	166.0	0	0.00	ng/uL	
50)	4-Nitroaniline	0.00	138.0	0	0.00	ng/uL	

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50)	4-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
51)	2,4,6-Tribromophenol	21.30	330.0	4436	46.31	ng/uL	97
52)	*d10-Phenanthrene	23.34	188.0	48887	40.00	ng/uL	97
53)	4,6-Dinitro-2-methylphenol	0.00	198.0	0	0.00	ng/uL	
54)	N-Nitrosodiphenylamine	0.00	169.0	0	0.00	ng/uL	
55)	4-Bromophenyl-phenylether	0.00	248.0	0	0.00	ng/uL	
56)	Hexachlorobenzene	0.00	284.0	0	0.00	ng/uL	
57)	Pentachlorophenol	23.11	266.0	10137	63.29	ng/uL → 5200	97
58)	Phenanthrene	0.00	178.0	0	0.00	ng/uL	
59)	Anthracene	0.00	178.0	0	0.00	ng/uL	
60)	Di-n-Butylphthalate	0.00	149.0	0	0.00	ng/uL	
61)	Fluoranthene	0.00	202.0	0	0.00	ng/uL	
62)	*d12-Chrysene	31.55	240.0	56342	40.00	ng/uL	91
63)	Pyrene	27.71	202.0	51220	24.18	ng/uL → 14000	90
64)	Terphenyl-d14	28.50	244.0	25211	20.07	ng/uL	92
65)	Butylbenzylphthalate	0.00	149.0	0	0.00	ng/uL	
66)	3,3'-Dichlorobenzidine	0.00	252.0	0	0.00	ng/uL	
67)	Benzo(a)Anthracene	0.00	228.0	0	0.00	ng/uL	
68)	Chrysene	0.00	228.0	0	0.00	ng/uL	
69)	Bis(2-Ethylhexyl)Phthalate	32.36	149.0	22611	13.47	ng/uL → 11000	91
70)	*d12-Perylene	35.63	264.0	62211	40.00	ng/uL	93
71)	Di-n-octyl phthalate	0.00	149.0	0	0.00	ng/uL	
72)	Benzo(b)fluoranthene	0.00	252.0	0	0.00	ng/uL	
73)	Benzo(k)Fluoranthene	0.00	252.0	0	0.00	ng/uL	
74)	Benzo(a)Pyrene	0.00	252.0	0	0.00	ng/uL	
75)	Indeno(1,2,3-cd)Pyrene	0.00	276.0	0	0.00	ng/uL	
76)	Dibenz(a,h)Anthracene	0.00	278.0	0	0.00	ng/uL	
77)	Benzo(g,h,i)Perylene	0.00	276.0	0	0.00	ng/uL	

* Compound is ISTD

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH45MS

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: MSR45

Sample wt/vol: 1.0 (g/mL) G Lab File ID: MSR45

Level: (low/med) MED Date Received: 06/03/89

% Moisture: not dec. 12 dec.____ Date Extracted: 06/08/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/23/89

GPC Cleanup: (Y/N) N pH: 9.1 Dilution Factor: ~~0.500~~ 1.0 gr

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	150000	
111-44-4	bis(2-Chloroethyl)ether	11000	U
95-57-8	2-Chlorophenol	140000	
541-73-1	1,3-Dichlorobenzene	11000	U
106-46-7	1,4-Dichlorobenzene	68000	
100-51-6	Benzyl alcohol	11000	U
95-50-1	1,2-Dichlorobenzene	11000	U
95-48-7	2-Methylphenol	11000	U
108-60-1	bis(2-Chloroisopropyl)ether	11000	U
106-44-5	4-Methylphenol	11000	U
621-64-7	N-Nitroso-di-n-propylamine	110000	
67-72-1	Hexachloroethane	11000	U
98-95-3	Nitrobenzene	11000	U
78-59-1	Isophorone	11000	U
88-75-5	2-Nitrophenol	11000	U
105-67-9	2,4-Dimethylphenol	11000	U
65-85-0	Benzoic acid	54000	U
111-91-1	bis(2-Chloroethoxy)methane	11000	U
120-83-2	2,4-Dichlorophenol	11000	U
120-82-1	1,2,4-Trichlorobenzene	72000	
91-20-3	Naphthalene	11000	U
106-47-8	4-Chloroaniline	11000	U
87-68-3	Hexachlorobutadiene	11000	U
59-50-7	4-Chloro-3-methylphenol	130000	
91-57-6	2-Methylnaphthalene	11000	U
77-47-4	Hexachlorocyclopentadiene	11000	U
88-06-2	2,4,6-Trichlorophenol	11000	U
95-95-4	2,4,5-Trichlorophenol	54000	U
91-58-7	2-Chloronaphthalene	11000	U
88-74-4	2-Nitroaniline	54000	U
131-11-3	Dimethylphthalate	11000	U
208-96-8	Acenaphthylene	11000	U
606-20-2	2,6-Dinitrotoluene	11000	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH45MS

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: MSR45

Sample wt/vol: 1.0 (g/mL) G Lab File ID: MSR45

Level: (low/med) MED Date Received: 06/03/89

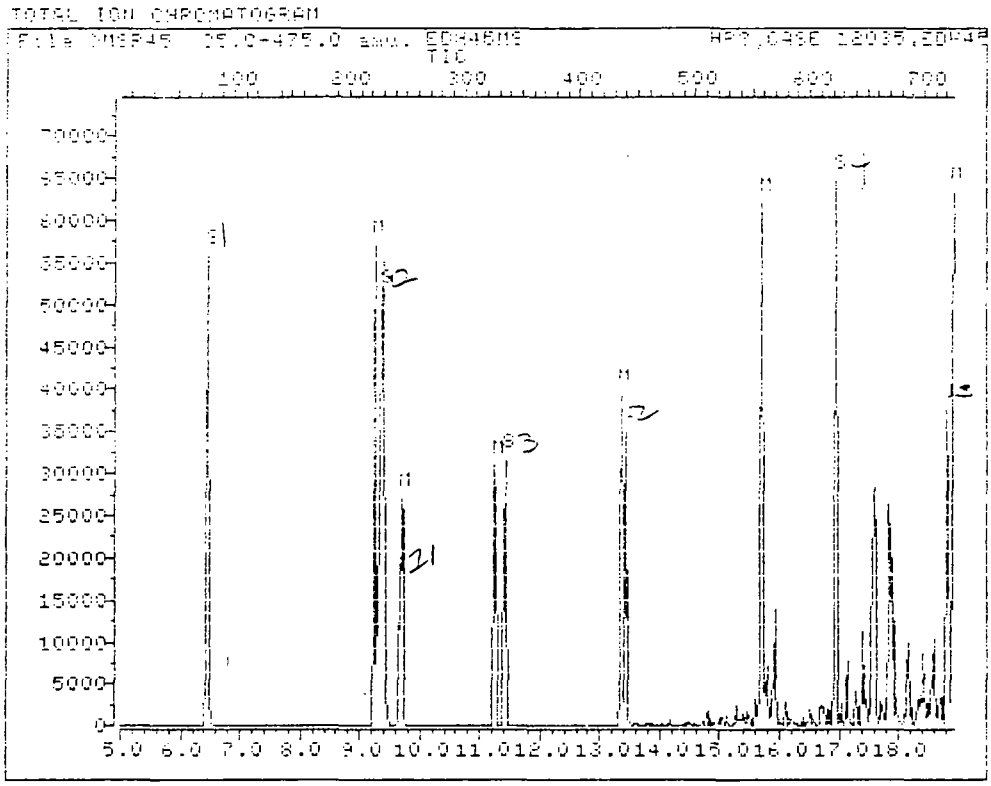
% Moisture: not dec. 12 dec._____ Date Extracted: 06/08/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/23/89

GPC Cleanup: (Y/N) N pH: 9.1 Dilution Factor: ~~0.500~~ - 1.0 gm

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	54000	U
83-32-9	Acenapthene	70000	
51-28-5	2,4-Dinitrophenol	54000	U
100-02-7	4-Nitrophenol	120000	
132-64-9	Dibenzofuran	3200	J
121-14-2	2,4-Dinitrotoluene	49000	
84-66-2	Diethylphthalate	11000	U
7005-72-3	4-Chlorophenyl-phenylether	11000	U
86-73-7	Fluorene	5500	J
100-01-6	4-Nitroaniline	54000	U
534-52-1	4,6-Dinitro-2-methylphenol	54000	U
86-30-6	N-Nitrosodiphenylamine (1)	11000	U
101-55-3	4-Bromophenyl-phenylether	11000	U
118-74-1	Hexachlorobenzene	11000	U
87-86-5	Pentachlorophenol	160000	
85-01-8	Phenanthrene	17000	
120-12-7	Anthracene	4300	J
84-74-2	Di-n-butylphthalate	11000	U
206-44-0	Fluoranthene	13000	
129-00-0	Pyrene	68000	
85-68-7	Butylbenzylphthalate	11000	U
91-94-1	3,3'-Dichlorobenzidine	22000	U
56-55-3	Benzo(a)anthracene	3400	J
218-01-9	Chrysene	4400	J
117-81-7	bis(2-Ethylhexyl)phthalate	11000	U
117-84-0	Di-n-octylphthalate	11000	U
205-99-2	Benzo(b)fluoranthene	4000	J
207-08-9	Benzo(k)fluoranthene	6400	J
50-32-8	Benzo(a)pyrene	2300	J
193-39-5	Indeno(1,2,3-cd)pyrene	11000	U
53-70-3	Dibenz(a,h)anthracene	11000	U
191-24-2	Benzo(g,h,i)perylene	11000	U

(1) - Cannot be separated from Diphenylamine



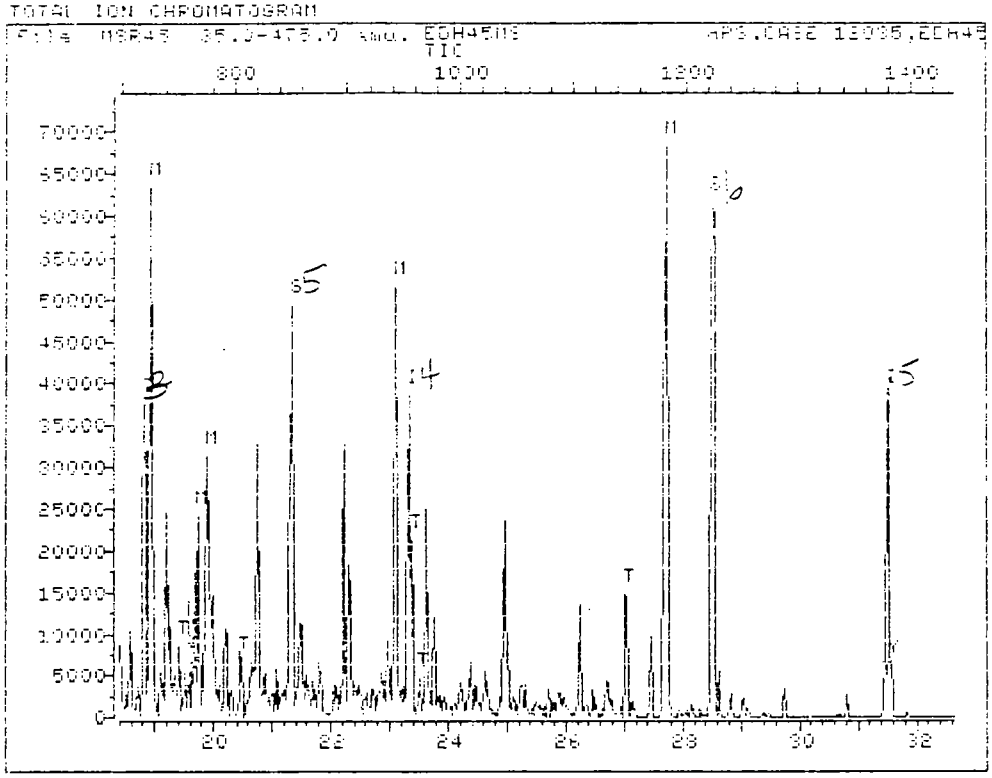
Data File: >MSR45::D3 Quant Output File: ^MSR45::SC
Name: EDH45MS
Misc: HP3,CASE 12035,EDH45MS,IW 1g,FV 1ml,06/06/89,pH 9,XM12BTL# 6

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890623 13:58

Operator ID: JOHN
Quant Time: 890623 17:45
Injected at: 890623 16:58

TIC page 1 of 3

TOTAL ION CHROMATOGRAM



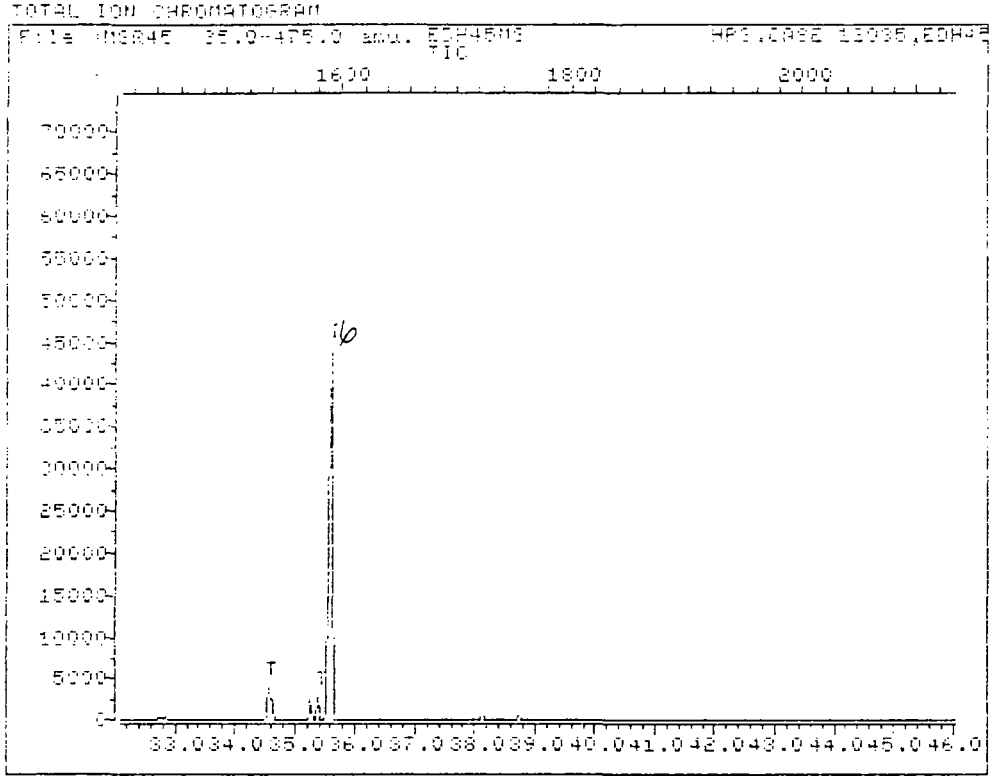
Data File: >MSR45::D3 Quant Output File: ^MSR45::SC
Name: EDH45MS
Misc: HP3,CASE 12035,EDH45MS,IW 1g,FV 1ml,06/06/89,pH 9,%M12BTL# 6

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890623 13:58

Operator ID: JOHN
Quant Time: 890623 17:45
Injected at: 890623 16:58

TIC page 2 of 3

TOTAL ION CHROMATOGRAM



Data File: >MSR45::D3 Quant Output File: ^MSR45::SC
Name: EDH45MS
Misc: HP3,CASE 12035,EDH45MS,IW 1g,FV 1ml,06/06/89,pH 9,XM12BTL# 6

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890623 13:58

Operator ID: JOHN
Quant Time: 890623 17:45
Injected at: 890623 16:58

TIC page 3 of 3

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 890623 17:45
Output File: ^MSR45::SC Injected at: 890623 16:58
Data File: >MSR45::D3 Dilution Factor: 1.00000
Name: EDH45MS
Misc: HP3,CASE 12055,EDH45MS,IW 1g,FV 1ml,06/06/89,pH 9,%M12BTL# 6

ID File: ID_ECH::SC
Title: HP BNA Standards
Last Calibration: 890623 13:58

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.66	152.0	7192	40.00	ng/uL	96
2)	2-Fluorophenol	6.47	112.0	45637	213.68	ng/uL	92
3)	Phenol-d5	9.38	99.0	70796	209.38	ng/uL	97
4)	Phenol	9.41	94.0	43941	130.33	ng/uL → 140000	70
5)	bis(-2-Chloroethyl)Ether	0.00	93.0	0	0.00	ng/uL	
6)	2-Chlorophenol	9.26	128.0	37032	124.42	ng/uL → 140000	96
7)	1,3-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
8)	1,4-Dichlorobenzene	9.70	146.0	17900	60.38	ng/uL → 66000	93
9)	Benzyl Alcohol	0.00	108.0	0	0.00	ng/uL	
10)	1,2-Dichlorobenzene	0.00	146.0	0	0.00	ng/uL	
11)	2-Methylphenol	0.00	108.0	0	0.00	ng/uL	
12)	bis(2-Chloroisopropyl)ether	0.00	45.0	0	0.00	ng/uL	
13)	4-Methylphenol	0.00	108.0	0	0.00	ng/uL	
14)	N-Nitroso-Di-n-propylamine	11.24	70.0	21531	92.93	ng/uL → 100000	95
15)	Hexachloroethane	0.00	117.0	0	0.00	ng/uL	
16)	*d8-Naphthalene	13.44	136.0	36762	40.00	ng/uL	87
17)	Nitrobenzene-d5	11.41	82.0	30288	85.44	ng/uL	86
18)	Nitrobenzene	0.00	77.0	0	0.00	ng/uL	
19)	Isophorone	0.00	82.0	0	0.00	ng/uL	
20)	2-Nitrophenol	0.00	139.0	0	0.00	ng/uL	
21)	2,4-Dimethylphenol	0.00	107.0	0	0.00	ng/uL	
22)	Benzoic Acid	0.00	105.0	0	0.00	ng/uL	
23)	bis(-2-Chloroethoxy)Methane	0.00	93.0	0	0.00	ng/uL	
24)	2,4-Dichlorophenol	0.00	162.0	0	0.00	ng/uL	
25)	1,2,4-Trichlorobenzene	13.36	180.0	21266	63.67	ng/uL → 75000	91
26)	Naphthalene	0.00	128.0	0	0.00	ng/uL	
27)	4-Chloroaniline	0.00	127.0	0	0.00	ng/uL	
28)	Hexachlorobutadiene	0.00	225.0	0	0.00	ng/uL	
29)	4-Chloro-3-methylphenol	15.71	107.0	43610	117.77	ng/uL → 140000	92
30)	2-Methylnaphthalene	0.00	142.0	0	0.00	ng/uL	
31)	*d10-Acenaphthene	18.82	164.0	24992	40.00	ng/uL	91
32)	Hexachlorocyclopentadiene	0.00	237.0	0	0.00	ng/uL	
33)	2,4,6-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
34)	2,4,5-Trichlorophenol	0.00	196.0	0	0.00	ng/uL	
35)	2-Chloronaphthalene	0.00	162.0	0	0.00	ng/uL	
36)	2-Fluorobiphenyl	16.96	172.0	59888	79.88	ng/uL	93
37)	2-Nitroaniline	0.00	65.0	0	0.00	ng/uL	
38)	Dimethyl Phthalate	0.00	163.0	0	0.00	ng/uL	
39)	Acenaphthylene	0.00	152.0	0	0.00	ng/uL	
40)	2,6-Dinitrotoluene	0.00	165.0	0	0.00	ng/uL	
41)	3-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
42)	Acenaphthene	18.94	153.0	48253	62.18	ng/uL → 65000	97
43)	2,4-Dinitrophenol	0.00	184.0	0	0.00	ng/uL	
44)	4-Nitrophenol	19.90	109.0	11239	109.11	ng/uL → 130000	90
45)	Dibenzofuran	19.42	168.0	3103	2.80	ng/uL → 3200	99
46)	2,4-Dinitrotoluene	19.75	165.0	15427	43.36	ng/uL → 3400	37
47)	Diethylphthalate	0.00	149.0	0	0.00	ng/uL	360
48)	4-Chlorophenyl-phenylether	0.00	204.0	0	0.00	ng/uL	
49)	Fluorene	20.48	166.0	4517	4.88	ng/uL → 2200	91

50)	4-Nitroaniline	0.00	138.0	0	0.00	ng/uL	
51)	2,4,6-Tribromophenol	21.35	330.0	24446	286.48	ng/uL	95
52)	*d10-Phenanthrene	23.33	188.0	50200	40.00	ng/uL	98
53)	4,6-Dinitro-2-methylphenol	0.00	198.0	0	0.00	ng/uL	
54)	N-Nitrosodiphenylamine	0.00	169.0	0	0.00	ng/uL	
55)	4-Bromophenyl-phenylether	0.00	248.0	0	0.00	ng/uL	
56)	Hexachlorobenzene	0.00	284.0	0	0.00	ng/uL	
57)	Pentachlorophenol	23.12	266.0	23266	141.42	ng/uL	99
58)	Phenanthrene	23.39	178.0	19954	14.72	ng/uL	95
59)	Anthracene	23.50	178.0	4892	3.79	ng/uL	99
60)	Di-n-Butylphthalate	0.00	149.0	0	0.00	ng/uL	
61)	Fluoranthene	27.02	202.0	18609	11.41	ng/uL	96
62)	*d12-Chrysene	31.51	240.0	53588	40.00	ng/uL	92
63)	Pyrene	27.74	202.0	120444	59.79	ng/uL	1
64)	Terphenyl-d14	28.52	244.0	103645	86.74	ng/uL	91
65)	Butylbenzylphthalate	0.00	149.0	0	0.00	ng/uL	
66)	3,3'-Dichlorobenzidine	0.00	252.0	0	0.00	ng/uL	
67)	Benzo(a)Anthracene	31.43	228.0	5758	3.03	ng/uL	91
68)	Chrysene	31.56	228.0	5437	3.85	ng/uL	94
69)	Bis(2-Ethylhexyl)Phthalate	0.00	149.0	0	0.00	ng/uL	
70)	*d12-Perylene	35.60	264.0	57956	40.00	ng/uL	95
71)	Di-n-octyl phthalate	0.00	149.0	0	0.00	ng/uL	
72)	Benzo(b)fluoranthene	34.57	252.0	5969M	2.69	ng/uL	91
73)	Benzo(k)Fluoranthene	34.62	252.0	1981M	1.40	ng/uL	1
74)	Benzo(a)Pyrene	35.39	252.0	3430	2.01	ng/uL	91
75)	Indeno(1,2,3-cd)Pyrene	0.00	276.0	0	0.00	ng/uL	
76)	Dibenz(a,h)Anthracene	0.00	278.0	0	0.00	ng/uL	
77)	Benzo(g,h,i)Perylene	0.00	276.0	0	0.00	ng/uL	

* Compound is ISTD

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH45MSD

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: MSDR5

Sample wt/vol: 1.0 (g/mL) G Lab File ID: MSDR5

Level: (low/med) MED Date Received: 06/03/89

% Moisture: not dec. 12 dec._____ Date Extracted: 06/08/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/23/89

GPC Cleanup: (Y/N) N pH: 9.1 Dilution Factor: ~~0.500~~ 10 gw

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	140000	
111-44-4	bis(2-Chloroethyl)ether	11000	U
95-57-8	2-Chlorophenol	140000	
541-73-1	1,3-Dichlorobenzene	11000	U
106-46-7	1,4-Dichlorobenzene	66000	
100-51-6	Benzyl alcohol	11000	U
95-50-1	1,2-Dichlorobenzene	11000	U
95-48-7	2-Methylphenol	11000	U
108-60-1	bis(2-Chloroisopropyl)ether	11000	U
106-44-5	4-Methylphenol	11000	U
621-64-7	N-Nitroso-di-n-propylamine	100000	
67-72-1	Hexachloroethane	11000	U
98-95-3	Nitrobenzene	11000	U
78-59-1	Isophorone	11000	U
88-75-5	2-Nitrophenol	11000	U
105-67-9	2,4-Dimethylphenol	11000	U
65-85-0	Benzoic acid	54000	U
111-91-1	bis(2-Chloroethoxy)methane	11000	U
120-83-2	2,4-Dichlorophenol	11000	U
120-82-1	1,2,4-Trichlorobenzene	75000	
91-20-3	Naphthalene	11000	U
106-47-8	4-Chloroaniline	11000	U
87-68-3	Hexachlorobutadiene	11000	U
59-50-7	4-Chloro-3-methylphenol	140000	
91-57-6	2-Methylnaphthalene	11000	U
77-47-4	Hexachlorocyclopentadiene	11000	U
88-06-2	2,4,6-Trichlorophenol	11000	U
95-95-4	2,4,5-Trichlorophenol	54000	U
91-58-7	2-Chloronaphthalene	11000	U
88-74-4	2-Nitroaniline	54000	U
131-11-3	Dimethylphthalate	11000	U
208-96-8	Acenaphthylene	11000	U
606-20-2	2,6-Dinitrotoluene	11000	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EDH45MSD

Lab Name: S-CUBED Contract: 68-D9-0027

Lab Code: S3 Case No.: 12035 SAS No.: SDG No.: EDH42

Matrix: (soil/water) SOIL Lab Sample ID: MSDR5

Sample wt/vol: 1.0 (g/mL) G Lab File ID: MSDR5

Level: (low/med) MED Date Received: 06/03/89

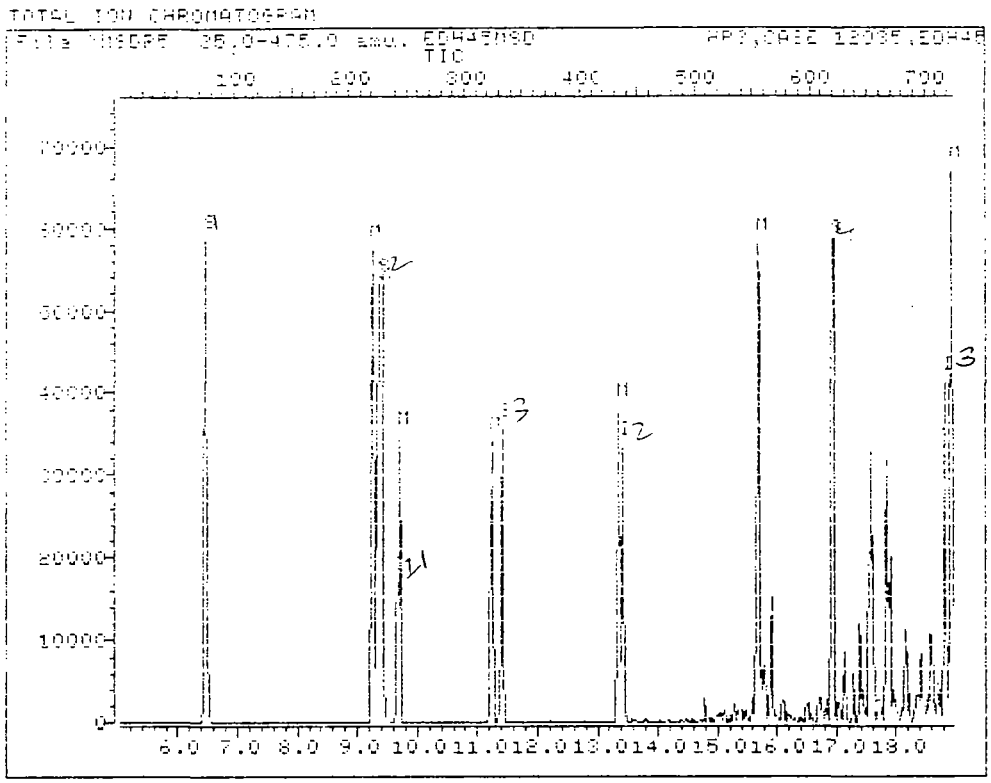
% Moisture: not dec. 12 dec._____ Date Extracted: 06/08/89

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/23/89

GPC Cleanup: (Y/N) N pH: 9.1 Dilution Factor: ~~0.500~~ 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	54000	U
83-32-9	Acenapthene	68000	
51-28-5	2,4-Dinitrophenol	54000	U
100-02-7	4-Nitrophenol	130000	
132-64-9	Dibenzofuran	3200	J
121-14-2	2,4-Dinitrotoluene	54000	
84-66-2	Diethylphthalate	11000	U
7005-72-3	4-Chlorophenyl-phenylether	11000	U
86-73-7	Fluorene	5500	J
100-01-6	4-Nitroaniline	54000	U
534-52-1	4,6-Dinitro-2-methylphenol	54000	U
86-30-6	N-Nitrosodiphenylamine (1)	3200	J
101-55-3	4-Bromophenyl-phenylether	11000	U
118-74-1	Hexachlorobenzene	11000	U
87-86-5	Pentachlorophenol	160000	
85-01-8	Phenanthrene	16000	
120-12-7	Anthracene	4100	J
84-74-2	Di-n-butylphthalate	11000	U
206-44-0	Fluoranthene	13000	
129-00-0	Pyrene	66000	
85-68-7	Butylbenzylphthalate	11000	U
91-94-1	3,3'-Dichlorobenzidine	22000	U
56-55-3	Benzo(a)anthracene	3400	J
218-01-9	Chrysene	4100	J
117-81-7	bis(2-Ethylhexyl)phthalate	11000	U
117-84-0	Di-n-octylphthalate	11000	U
205-99-2	Benzo(b)fluoranthene	3900	J
207-08-9	Benzo(k)fluoranthene	6100	J
50-32-8	Benzo(a)pyrene	2200	J
193-39-5	Indeno(1,2,3-cd)pyrene	11000	U
53-70-3	Dibenz(a,h)anthracene	11000	U
191-24-2	Benzo(g,h,i)perylene	11000	U

(1) - Cannot be separated from Diphenylamine



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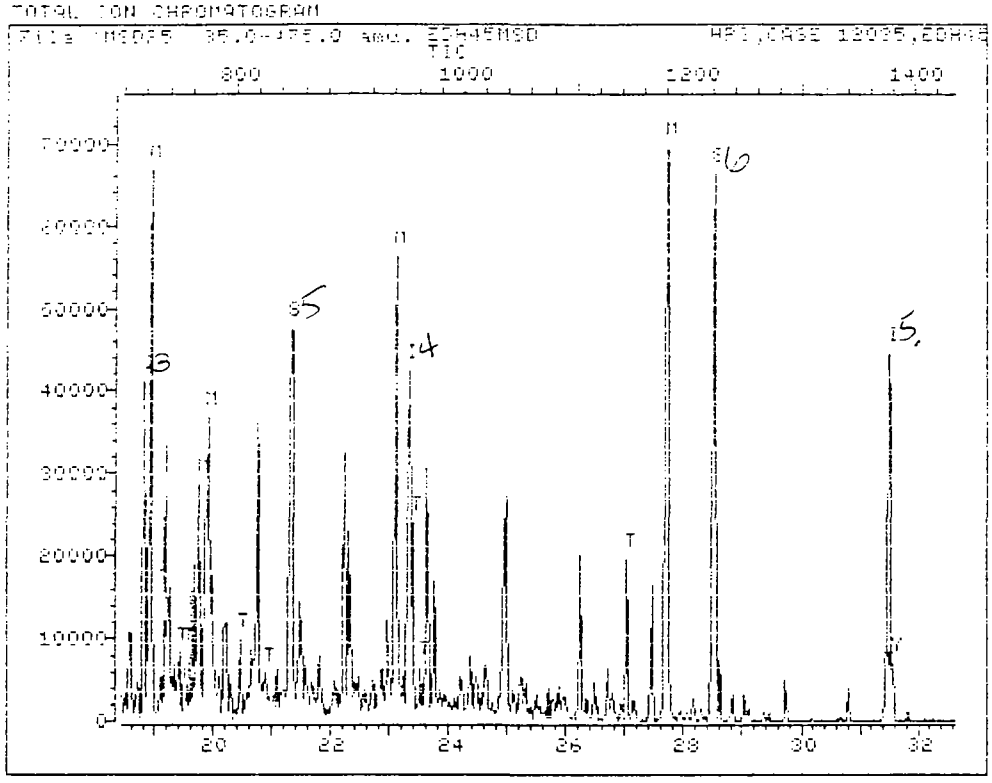
Title: HP BNA Standards
Last Calibration: 890623 13:58

Operator ID: JOHN
Quant Time: 890623 18:43
Injected at: 890623 17:56

TIC page 1 of 3

TOTAL ION CHROMATOGRAM



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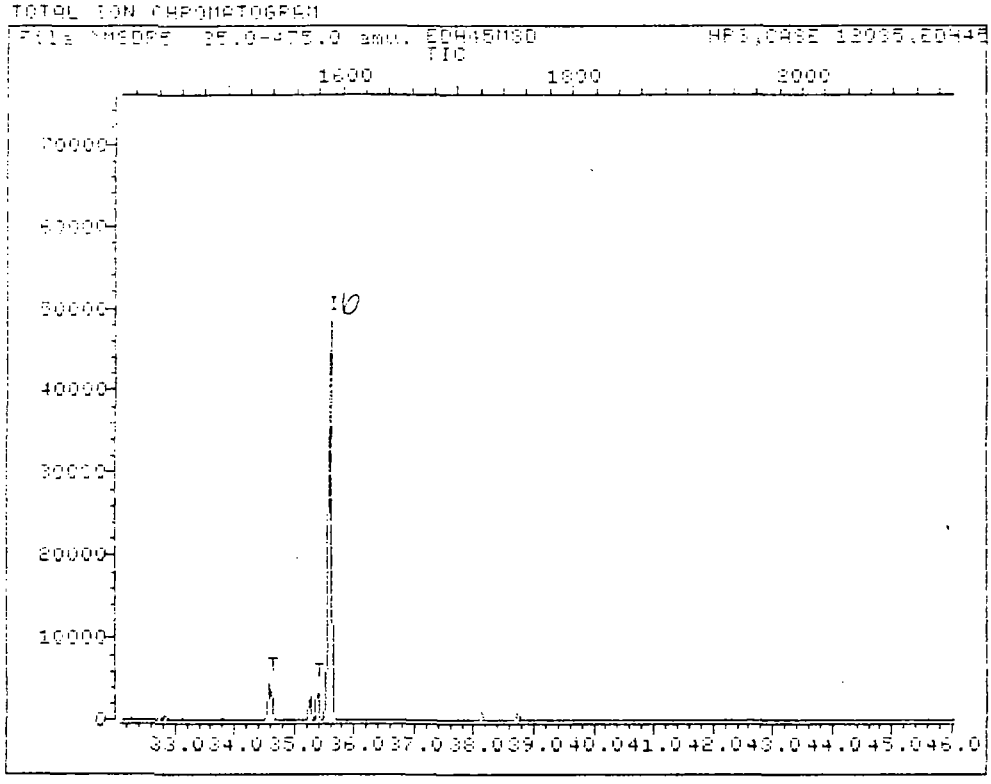
Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890623 13:58

Operator ID: JOHN
Quant Time: 890623 18:43
Injected at: 890623 17:56

TIC page 2 of 3

TOTAL ION CHROMATOGRAM



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Name: EDH45MSD
Misc: HP3,CASE 12035,EDH45MSD,IW 1g,FV 1ml,06/06/89,pH 9,%M1BTL# 7

Id File: ID_BCA::SC
Title: HP BNA Standards
Last Calibration: 890623 13:58

Operator ID: JOHN
Quant Time: 890623 18:43
Injected at: 890623 17:56

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