US EPA RECORDS CENTER REGION 5
557147

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 6/17/92

SUBJECT: Review of Region V CLP Data
Received for Review on June 4, 1992

FROM: Charles T. Elly, Director(5SCRL) Patrick J. Chunlla for
Central Regional Laboratory

TO: Data User: PRC

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

SITE NAME: Saltnalley (OH) SMO Case No. 19026

EPA Data Set No. _____ No. of Samples 12 DU/Activity Numbers /

CRL No. _____

SMO Traffic No. EQK 13 - 19, EQK 30 - 34

CLP Laboratory: Clayton Hrs. for Review 21

Following are our findings:

See Attached Review - PJC

( ) Data are acceptable for use.
(✓) Data are acceptable for use with qualifications.
( ) Data are preliminary - pending verification by laboratory.
( ) Data are unacceptable.

cc: Elanor McLean, Sample Mgmt. Office
Edward Kantor, EMSL-Las Vegas

CONTRACTOR: Clayton CASE 19026

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

This review covers twelve samples, seven of which (EQK13 through EQK19) are soils and five of which (EQK30 through EQK34) are waters, for complete organic analysis at low levels except for samples EQK13 through EQK19 and EQK34, which were analyzed for volatiles only.

The reviewer's narrative and data qualifiers follow.

Reviewed by: Al Venuto (Lockheed/ESAT)

Date: 15 June 1992 Hrs. Required for Review: 18

Case # 19026

CLAYTON

1. Holding Times:

All samples were promptly analyzed for volatiles and easily met the fourteen day holding time from date of sampling for soils and preserved water samples.

All water samples thus analyzed were extracted for both semi-volatiles and pesticides/PCBs well within the seven day holding times for these fractions; all extracts were promptly analyzed.

2. GC/MS Tuning and GC Instrument Performance:

The GC tuning and mass calibration were all within the required Q.C. limits. All pesticide breakdown results were well below the maximum permissible limits.

3. Calibration:

The calibration outliers for all fractions are listed on the outliers forms. All RPDs in the pesticide calibration verification summaries (Pest-1) were generally well below the maximum permissible 25%. For the pesticide florisil cartridge check, the recovery of tetrachloro-m-xylene was slightly below the lower limit; since no pesticide TCL compounds were found in any of the unspiked samples, no action is recommended.

4. Method Blanks:

The water volatile method blank VBLKEAw was found to contain only the common contaminants methylene chloride and acetone; all of its associated samples also contained these two compounds except for EQK32MS and EQK33, which contained no acetone. VBLKEBw contained only methylene chloride, which was also found in both of its associated samples. The soil volatile method blank VBLKEAs contained only methylene chloride, which was also found in both of its associated samples. VBLKEBs contained methylene chloride and acetone, both of which were also found in all of its associated samples except for EQK15, which contained no acetone.

The semi-volatile method blank contained no TCL compounds but did contain two unknown TICs; all of its associated samples except EQK31 also contained the earlier eluting TIC, but only EQK33 also contained the later eluting TIC.

The pesticide method blank contained no TIC compounds.

5. Surrogate Recoveries:

All surrogate recoveries for all fractions were within the Q.C. limits.

Al Venuto
15 June 1992

Case # 19026

6. Matrix Spikes and Matrix Spike Duplicates:

All volatile MS and MSD recoveries and RPDs were within the Q.C. limits except for the RPD for toluene in EQK32, which was above the limit; since toluene was not found in the unspiked sample EQK32, no action is recommended.

For the semi-volatile fraction, all MS and MSD recoveries and RPDs were within the Q.C. limits except for the recoveries of 4-nitrophenol in both EQK32MS and EQK32MSD, which were somewhat above the limit; since this compound was not found in the unspiked sample, no action is recommended.

For the pesticide fraction, all spike recoveries in EQK32MS were above the upper limits and the RPDs for Lindane, Heptachlor and Dieldrin were above the limits; since none of these was present in the unspiked sample, no action is recommended.

7. Field Duplicates and Field Blanks:

Sample EQK31 was identified as a duplicate of EQK30; the analyses of both were nearly identical except for a few disparate semi-volatile TICs.

Sample EQK33 was identified as a field blank; it contained no compounds other than those also found in the associated method blanks. Sample EQK34 was identified as a trip blank and analyzed for volatiles only; in addition to methylene chloride (which was also found in the associated method blank) it contained the TCL compounds acetone and chloroform.

8. Internal Standards Performance:

All volatile IS areas were within the Q.C. limits and all semi-volatile IS areas were well within the Q.C. limits.

9. Compound Identification:

All compound identifications appear to be satisfactory.

10. Compound Quantitation and Reported Detection Limits:

The correct limits were used and the proper adjustments were made for percent moisture (soil samples).

11. System Performance:

All aspects of the system performance appear to be satisfactory except that in the volatile fraction, a large peak was noted at the very beginning of each chromatogram. The results for chloromethane and vinyl chloride in each sample are therefore compromised and should be considered UJ, estimated quantiation limits, since neither was found in any sample.

12. Additional Case-Specific Problems:

None noted.

Al Venuto (Lockheed/ESAT)
15 June 1992

CALIBRATION OUTLIERS
VOLATILE TCL COMPOUNDS

CASE\SAS#: 19026 CONTRACTOR: CLAYTON

Instrument# HP-5E		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time: 4-23-92		4-23-92 10:58			5-6-92 17:26			5-7-92 12:28								
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
Chloromethane	0.01															
Bromomethane	0.10															
Vinyl chloride	0.10															
Chloroethane	0.01															
Methylene chloride	0.01															
Acetone	0.01	.447	34.9	J	.556			.577	29.1	J						
Carbon disulfide	0.01															
1,1-Dichloroethene	0.10															
1,1-Dichloroethane	0.20															
1,2-Dichloroethene (total)		2.37			1.32	44.4	J	1.18	50.3	J						
Chloroform	0.20															
1,2-Dichloroethane	0.10															
2-Butanone	0.01	.630			.791	25.6	J	.638								
1,1,1-Trichloroethane	0.10															
Carbon tetrachloride	0.10															
Bromodichloromethane	0.20															
1,2-Dichloropropane																
cis-1,3-Dichloropropene	0.20															
Trichloroethene	0.30															
Dibromochloromethane	0.10															
1,1,2-Trichloroethane	0.10															
Benzene	0.50															
tran-1,3-Dichloropropene	0.10	.376			.405			.239	36.4	J						
Bromoform	0.10															
4-Methyl-2-pentanone	0.01															
2-Hexanone	0.01															
Tetrachloroethene	0.20															
1,1,2,2-Tetrachloroethane	0.50															
Toluene	0.40															
Chlorobenzene	0.50															
Ethylbenzene	0.10															
Styrene	0.30															
Xylene (total)	0.30															
Toluene-d8																
Bromofluorobenzene																
1,2-Dichloroethane-d4																

Samples affected:

VBLK EAs	VBLK EDs
EQK13	EQK14
EQK16	EQK14MS
	EQK14MSD
	EQK15
	EQK17
	EQK18
	EQK19

Reviewer's Init/Date: AV 6-12-92

* These flags should be applied to the analytes on the sample data sheets.
\# Minimum Relative Response Factor

CALIBRATION OUTLIERS
VOLATILE TCL COMPOUNDS

CASE\SAS#: 19026 CONTRACTOR: CLAYTON

Instrument# HP.5E		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time: 4-27-92		4-27-92 19:00			5-5-92 7:03			5-6-92 00:15								
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
Chloromethane	0.01	.356			.357			.191	46.4	J						
Bromomethane	0.10															
Vinyl chloride	0.10	.526			.553			.353	32.9	J						
Chloroethane	0.01															
Methylene chloride	0.01															
Acetone	0.01	.286	37.4	J	.279			.201	29.7	J						
Carbon disulfide	0.01															
1,1-Dichloroethene	0.10															
1,1-Dichloroethane	0.20															
1,2-Dichloroethene (total)		2.80			2.90			1.44	48.7	J						
Chloroform	0.20															
1,2-Dichloroethane	0.10															
2-Butanone	0.01															
1,1,1-Trichloroethane	0.10															
Carbon tetrachloride	0.10															
Bromodichloromethane	0.20															
1,2-Dichloropropane																
cis-1,3-Dichloropropene	0.20															
Trichloroethene	0.30															
Dibromochloromethane	0.10															
1,1,2-Trichloroethane	0.10															
Benzene	0.50															
tran-1,3-Dichloropropene	0.10	.412			.419			.592	43.7	J						
Bromoform	0.10	.546			.754	38.1	J	.763	39.7	J						
4-Methyl-2-pentanone	0.01															
2-Hexanone	0.01															
Tetrachloroethene	0.20															
1,1,2,2-Tetrachloroethane	0.50															
Toluene	0.40															
Chlorobenzene	0.50															
Ethylbenzene	0.10															
Styrene	0.30															
Xylene (total)	0.30															
Toluene-d8																
Bromofluorobenzene																
1,2-Dichloroethane-d4																

Samples affected:

VBLKEAw	VBLKEBw
EQK31	EQK30
EQK32	EQK34
EQK32MS	
EQK32MSD	
EQK33	

Reviewer's Init/Date: AV 6-12-92

* These flags should be applied to the analytes on the sample data sheets.
# Minimum Relative Response Factor

w

CALIBRATION OUTLIER
SEMVOLATILE TCL COMPOUNDS
(Page 1)

CASE\SAS#: 19026 CONTRACTOR: CLAYTON

Instrument# HP-6F		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time: 5-18-92		5-18-92 12:46			5-22-92 00:43			5-22-92 19:07			5-27-92 3:07					
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
Phenol	0.80															
bis(chloroethyl) Ether	0.70															
2-Chlorophenol	0.70															
1,3-Dichlorobenzene																
1,4-Dichlorobenzene																
1,2-Dichlorobenzene																
2-Methylphenol	0.70															
2,2'-Oxybis(1-chl-propane)	0.01															
4-Methylphenol	0.60															
N-nitroso-di-n-propylamine	0.50															
Hexachloroethane	0.30															
Nitrobenzene	0.20															
Isophorone	0.40															
2-Nitrophenol	0.10															
2,4-Dimethylphenol	0.20															
bis-(2-chloroethoxyl)methane	0.30															
2,4-Dichlorophenol	0.20															
1,2,4-Trichlorobenzene	0.20															
Naphthalene	0.70															
4-Chloroaniline	0.01	.196	37.4	J	.072	63.3	J	.113	42.4	J	.183					
Hexachlorobutadiene	0.01															
4-Chloro-3-methylphenol	0.20															
2-Methylnaphthalene	0.40															
Hexachlorocyclopentadiene	0.01															
2,4,6-Trichlorophenol	0.20															
2,4,5-Trichlorophenol	0.20															
2-Chloronaphthalene	0.80															
2-Nitroaniline	0.01	.501			.368	26.6	J	.462			.440					
Dimethyl phthlate	0.01															
Acenaphthylene	1.30															
2,6-Dinitrotoluene	0.20															
3-Nitroaniline	0.01	.030	32.6	J/R	.019	36.7	J/R	.074	146.7	J	.014	53.3	J/R			
Acenaphthene	0.30															
2,4-Dinitrophenol	0.01	.231			.173	25.1	J	.178			.117	49.4	J			
4-Nitrophenol	0.01	.177			.109	38.4	J	.095	46.3	J	.085	52.0	J			
Dibenzofuran	0.80															
2,4-Dinitrotoluene	0.20															

Affected samples:

EQK30	EQK32MSD	SBLK W1
EQK31		EQK33
EQK32		
EQK32MS		

Reviewer's Init/Date: AV 6-12-92

* These flags should be applied to the analytes on the sample data sheets.
\# Minimum Relative Response Factor

CALIBRATION OUTLIER
SEMVOLATILE TCL COMPOUNDS
(Page 2)

CASE\SAS#: 19026 CONTRACTOR: CLAYTON

Instrument# HP-6F		Initial Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time: 5-18-92		5-18-92 12:46			5-22-92 00:43			5-22-92 19:07			5-27-92 3:07					
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
Diethylphthalate	0.01															
4-Chlorophenyl-phenylether	0.40															
Fluorene	0.90															
4-Nitroaniline	0.01	.072			.061			.101	40.3	J	.048	33.3	J/R			
4,6-Dinitro-2-methylphenol	0.01															
N-nitrosodiphenylamine	0.01	.387			.256	33.8	J	.290	25.1	J	.464					
4-Bromophenyl-phenylether	0.10															
Hexachlorobenzene	0.10	.291			.370	27.2	J	.345			.328					
Pentachlorophenol	0.05	.174			.192			.177			.122	29.9	J			
Phenanthrene	0.70															
Anthracene	0.70															
Carbazole			38.8	J												
Di-n-butylphthalate	0.01	1.41			1.66			1.55			1.76	25.2	J			
Fluoranthene	0.60															
Pyrene	0.60	1.66			1.77			2.17	31.2	J	2.28	37.4	J			
Butylbenzylphthalate	0.01	.919			.972			1.16	26.0	J	1.20	30.0	J			
3,3'-Dichlorobenzidine	0.01	.106			.057	46.2	J	.023	78.3	J/R	.041	61.3	J/R			
Benzo(a)anthracene	0.80															
Chrysene	0.70															
bis(2-Ethylhexyl)phthalate	0.01	1.27			1.46			1.70	33.6	J	1.56					
Di-n-octyl phthalate	0.01															
Benzo(b)fluoranthene	0.70															
Benzo(k)fpuoranthene	0.70	1.02			1.23			1.36	33.5	J	1.35	32.5	J			
Benzo(a)pyrene	0.70															
Indeno(1,2,3-cd)pyrene	0.50															
Dibenz(a,h)anthrancene	0.40															
Benzo(g,h,i)perylene	0.50															
Nitrobenzene-d5	0.01															
2-Fluorobiphenyl	0.70															
Terphenyl-d14	0.50															
Phenol-d5	0.80															
2-Fluorophenol	0.60															
2,4,6-Tribromophenol	0.01															
2-Chlorophenol-d4																
1,2-Dichlorobenzene-d4																

Reviewer's Init/Date: AV 6-12-92

* These flags should be applied to the analytes on the sample data sheets.
\# Minimum Relative Response Factor

CALIBRATION OUTLIERS
PEST/PCB TCL COMPOUNDS

CASE\SAS#: 19026 **CONTRACTOR:** CLAYTON

Column: DB-608

Instrument#: D082	Init. Cal.		Cont. Cal.		Cont. Cal.		Cont.Cal	
Date/Time 5-16-92	5-16-92 17:47		5-21-92 14:57					
	%RSD	*	%RPD	*	%RPD	*	%RPD	*
Alpha-BHC	21.3	J						
Beta-BHC								
Delta-BHC								
Gamma-BHC								
Heptachlor								
Aldrin								
Heptachlor epoxide								
Endosulfan I								
Dieldrin								
4,4'-DDE								
Endrin								
Endosulfan II								
4,4'-DDD								
Endosulfan sulfate								
4,4'-DDT								
Methoxychlor								
Endrin ketone								
Endrin aldehyde								
Alpha chlordane								
Gamma chlordane								
Aroclor-1016								
Aroclor-1221								
Aroclor-1232								
Aroclor-1242								
Aroclor-1248								
Aroclor-1254								
Aroclor-1260								
Toxaphene								

Affected samples:

PBLKW1
EQK30
EQK31
EQK32
EQK32MS
EQK32MSD
EQK33

Pest/PCB

Reviewer's Initial/Date AV 6-12-92

3/90 Rev

* These flags should be applied to the analytes on the Sample Data Sheets.

CALIBRATION OUTLIERS
PEST/PCB TCL COMPOUNDS

CASE\SAS#: 19026 **CONTRACTOR:** CLAYTON

Column: DB-1701

Instrument#: D081	Init. Cal.		Cont. Cal.		Cont. Cal.		Cont.Cal	
Date/Time 5-16-92	5-16-92 17:47		5-21-92 14:57					
	%RSD	*	%RPD	*	%RPD	*	%RPD	*
Alpha-BHC	21.3	J						
Beta-BHC								
Delta-BHC								
Gamma-BHC								
Heptachlor								
Aldrin								
Heptachlor epoxide								
Endosulfan I								
Dieldrin								
4,4'-DDE								
Endrin								
Endosulfan II								
4,4'-DDD								
Endosulfan sulfate								
4,4'-DDT								
Methoxychlor								
Endrin ketone								
Endrin aldehyde								
Alpha chlordane								
Gamma chlordane								
Aroclor-1016								
Aroclor-1221								
Aroclor-1232								
Aroclor-1242								
Aroclor-1248								
Aroclor-1254								
Aroclor-1260								
Toxaphene								

Affected samples:

PBLK W1
EQK30
EQK31
EQK32
EQK32MS
EQK32MSD
EQK33

Pest/PCB

Reviewer's Initial/Date AV 6-12-92

3/90 Rev

* These flags should be applied to the analytes on the Sample Data Sheets.

DATA REPORTING QUALIFIERS
(page 1)

For reporting results to EPA, the following result qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE-if the results is a value greater than or equal to the Contract Required Quantitation Limit (CRQL), report the value.

U - Indicates compound was analyzed for but not detected. The sample Quantitation Limit must be corrected for dilution and for percent moisture. For example, 10 U for phenol in water if thee sample final volume is the protocol-specified final volume. If a 1 to 10 dilution of extract is necessary, the reported limit is 100 U. For a soil sample, the value <u>must</u> also be adjusted for percent moisture. For example, if the sample had 24% moisture <u>and</u> a 1 to 10 dilution factor, the Sample Quantitation Limit for phenol (330 U) would be corrected to:

$$\frac{(330\ U) \times df}{D} \qquad \text{where } D = \frac{100 - \%\ \text{moisture}}{100}$$

and df = dilution factor

$$\text{at 24\% moisture, } D = \frac{100 - 24}{100} = 0.76$$

$$\frac{(330\ U) \times 10}{.76} = 4300\ U \text{ rounded to the appropriate number of significant figures}$$

For soil samples subjected to GPC clean-up procedures, the extract must be concentrated to 0.5 ml, and the sensitivity of the analysis is not compromised by the cleanup procedures. Therefore, the CRQL values will apply to all samples, regardless of cleanup. However, if a sample extract cannot be concentrated to the protocol-specified volume, this fact be accounted for in reporting the Sample Quantitation Limit.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit bur greater than zero. For example, if the sample quantitation limit is 10 ug/L, but a concentration of 3 ug/L is calculated, report it is as 3J. The Sample Quantitation Limit must be adjusted for dilution as discussed for the U flag. The J flag is also applied to pesticide/Aroclor results where the pesticide/Aroclor is confirmed to be present but the concentration is less than the CRQL.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds. Where the identification is based on a mass spectral library search. It is applied to all TIC results.

DATA REPORTING QUALIFIERS
(page 2)

P - This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two columns (see Form X). The lower of the two values is reported on Form I and flagged with a "P".

C - This flag applies to pesticide results where identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but unsuccessful, do not apply this flag, instead use a laboratory-defined, discussed below.

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified TCL compound.

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for the specific analysis. This flag will not apply to pesticide/PCBs analyzed by GC/MS methods. If one or more compounds have a response greater than full scale, the sample or extract must be diluted and re-analyzed according to the specifications. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the Form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported on separate Form I. The Form I for the diluted sample shall have the "DL" suffix appended to the sample number.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample and all concentration values reported on that Form I are flagged with the "D" flag. This flag alerts data users that any discrepancies between the concentrations reported may be due to dilution of the sample or extract.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

X - Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the Sample Data Summary Package and the SDG Narrative. If more than one flag is required, use "Y" and "Z", as needed. If more than five qualifiers are required for a sample result, use the "X" flag to combine several flags, as needed. For instance, the "X" flag might combine the "A", "B" and "D" flags for some sample. The laboratory-defined are limited to letters "X", "Y" and "Z".

Midwestern Operations

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Novi, MI 48375
(313) 344-1770
Fax (313) 344-2654

RECEIVED
JUN 04 1992
US EPA CENTRAL REGIONAL LAB.
536 S. CLARK ST.
CHICAGO, ILLINOIS 60605

Clayton
ENVIRONMENTAL
CONSULTANTS

SDG NARRATIVE

Laboratory Name: Clayton Environmental Consultants (CLAYTN)
Case No.: 19026
EPA Sample Nos.: EQK13-19, EQK30-34
SDG No.: EQK13
Contract No.: 68-D1-0087

Case Summary

Case 19026 was received on April 30, 1992, and consisted of 7 soil samples for volatile analysis only, 4 water samples for full organic analysis, and 1 water sample for volatile analysis only.

The VOA water pH's are as follows:

Sample:	pH	Sample:	pH
EQK30:	1.8	EQK33:	1.7
EQK31:	1.8	EQK34:	1.8
EQK32:	2.2		

The Hewlett Packard GC/MS data system Clayton uses has a combined NBS/WILEY library. The data system prints the mass spectra for all tentatively identified compounds (TIC) and the top three library matches. When no library matches are found, the data system prints "NO DATA BASE ENTRIES RETRIEVED."

Standards

The instrument was tuned to meet the abundance criteria for BFB and DFTPP before any standards, blanks, or samples were analyzed. Response factor criteria for volatile and semivolatile target compounds, and volatile and semivolatile surrogate compounds met the minimum RRF criteria and maximum %RSD criteria for initial and continuing calibration data.

Surrogate Recoveries

Surrogate recovery results are reported on Form II and can be found in the QC summary data package.

002 RD 06-03-92

Clayton
ENVIRONMENTAL
CONSULTANTS

Matrix Spike and Matrix Spike Duplicate

Matrix spike and matrix spike duplicate recovery data are reported on Form III and can be found in the QC summary data package.

Blanks

The method blanks with corresponding samples are reported on the method blank summary Form IV and can be found in the QC summary data package.

I certify that this data package is in compliance with the terms and the 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 following signature.

Todd J. Outhouse
Project Leader, CLP

06/03/92
Date

EPA

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Organic Traffic Report & Chain of Custody Record

(For Organic CLP Analysis)

SAS No. (if applicable)

Case No.

1. Sample Description (Enter in Column A)
   1. Surface Water
   2. Ground Water
   3. Leachate
   4. Rinsate
   5. Soil/Sediment
   6. Oil (High only)
   7. Waste (High only)
   8. Other (Specify)

2. Preservative (Enter in Column D)
   1. HCl
   2. HNO3
   3. NaHSO4
   4. H_2SO_4
   5. Other (Specify)
   6. Ice only
   N. Not preserved

3. Region No.

Sampling Co.

Sampler (Name): C. [illegible]

Sampler Signature: [illegible]

4. Type of Activity: Lead / Pre-Remedial / Remedial / Removal

SF	PA	RIFS	CLEM
PRP	SSI	RD	REMA
ST	LSI	RA	REM
FED		O&M	OIL
		NPLD	UST

5. Date Shipped

Carrier

Airbill Number: [illegible]

6. Ship To: Clayton Conv. Consultants
22345 Roethel Drive
Novi, MI 48375
ATTN: Robin Douglas

7. Date Received -- Received by: 04-30-92 SDG#= EQK13 Robin Douglas

Laboratory Contract Number: 68-D1-0087

Unit Price: $810.00

8. Transfer to

Date Received

Received by

Contract Number

Price

CLP Sample Numbers (from labels)	A Enter # From Box 1	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative from Box 6	E RAS Analysis: VOA	BNA	Pest/PCB	High ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Inorg. Samp. No.	K Sample Condition on Rec't	L High Conc. Phases (Check below): Solids	Water -- Mis Liq.	Non Water -- Mis Liq.
EQK32	1	L	G	N		X			5-046633, 5-046634	SW-2	4/29/92 1245	CL H	MERA32	Intact			
EQK32	↓	↓	↓	↓			X		5-046625, 5-046626	SW-2	4/29/92 1245	↓	MERA32	↓			
EQK16	5	L	G	N	X				5-046561, 5-046562	SD-5	4/29/92 1300	↓	MERA16	↓			
EQK17	↓	↓	↓	↓	X				5-046565, 5-046566	SD-6	4/29/92 1330	↓	MERA17	↓			
EQK18	↓	↓	↓	↓	X				5-046569, 5-046570	SD-7	4/29/92 1045	↓	MERA18	↓			
EQK19	↓	↓	↓	↓	X				5-046573, 5-046574	SD-8	4/29/92 1030	↓	MERA19	↓			

Shipment for Case complete? (Y/N) Y

Page 1 of ____

Sample used for a spike and/or duplicate: EQK32, EQK14

Additional Sampler Signatures: [illegible]

Chain of Custody Seal Number: 157439, 157440

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[illegible]	4/29/92 1640	Christopher P. Coppel	Christopher P. Coppel	4/29/92 1642	CPC 4/29/92 ~~[illegible]~~

Received for Laboratory by: (Signature) Robin Douglas

Date / Time: 04-30-92 0845

Remarks: Is custody seal intact? Y/N/none — Intact

Split Samples ☐ Accepted (Signature) ☐ Declined

EPA Form 9110-2 (Rev. 5-91) Replaces EPA Form (2075-7), previous edition which may be used

DISTRIBUTION:
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SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

Org-2

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Organic Sample Collection Requirements

"This form replaces both the individual Traffic Report and EPA Chain of Custody Record. If the sampling team elects to use an alternative chain-of-custody form, cross out the bottom portion of this record and indicate that chain-of-custody information is recorded on an alternative form."

Water Samples	Required Volume	Container Type
Extractable Analysis (Low Level)	1 Gallon	1 X 4-Liter Amber Glass Bottle OR 2 X 80-oz. Amber Glass Bottle OR 4 X 1-Liter Amber Glass Bottles
Extractable Analysis (Medium Level*)	1 Gallon	32-oz. Wide-Mouth Glass Jars
Volatile Analysis (Low or Medium Level*)	80 ml.	2 X 40-ml. Glass Vials

*All Medium and High Level Samples to be Sealed in Metal Can for Shipment

Soil/Sediment Samples	Required Volume	Container Type
Extractable Analysis (Low or Medium Level*)	6 oz.	1 X 8-oz.Wide-Mouth Glass Jar OR
	240 ml.	2 X 4-oz. Wide-Mouth Glass Jars
Volatile Analysis (Low or Medium Level*)		2 X 120 ml. Wide-Mouth Glass Vials†

†Soil VOA Vials under study, subject to change, check to ensure proper sealing.

HIGH CONCENTRATION SAMPLE COLLECTION REQUIREMENTS

Liquid or Solid Samples	Required Volume	Container Type
Extractable and Volatile Analysis	6 oz.	1 X 8-oz.Wide-Mouth Glass Jar

1. **Organic Sample Collection Requirements**
   - Please indicate sample to spike and/or duplicate.
   - Ship medium and high concentration samples in paint cans.
   - Aqueous samples require one triple-volume sample per twenty for Matrix Spike/Matrix Spike Duplicate.
   - Oily samples must be analyzed under the Special Analytical Services (SAS) program.
   - Confirmatory analysis and Special Analytical Services (SAS) parameters may require extra volume; for SAS consult specified SAS methods for requirements.
   - Additional sample volume not required for method OLC01.

2. **Cooler and Sample Documentation**
   - Complete all sections of the Traffic Report/Chain of Custody Form - Press firmly with a ball point pen to ensure that carbon copies are legible. Check the information and correct any errors.
   - Please remember to complete the Chain of Custody information on the form.
   - Seal the two sets of laboratory Traffic Report/Chain of Custody form copies in a plastic bag. Include a return address for the cooler. Tape bag under cooler lid.
   - Overlap the lid and bottle of each sample container with custody seals.
   - Seal each container in a plastic bag.
   - Pack medium and high concentration samples in metal cans.
   - Cool low waters to 4° C. Cooling of low soils is optional. Do not cool medium or high concentration waters and soils.
   - Separate and surround cooler contents with vermiculite or equivalent packaging.
   - Seal the cooler, overlapping the lid and body with custody seals.
   - FAX SMO a copy of the Traffic Report/Chain of Custody Form as soon as possible. Send SMO the pink copy of the Traffic Report within 5 days.
   - In column E RAS analysis indicate number of sample bottles sent for analysis.

3. **Sample Shipment Reporting**
   - PHONE IN ALL SHIPMENTS IMMEDIATELY TO SMO (or to RSCC, if instructed)
     Required information:
     - Case (and/or SAS) Number
     - Date shipped
     - Number of samples by concentration and matrix
     - Carrier and airbill number
     - Next planned shipment

     Leave your name and a number where you can be reached.
   - Information for SATURDAY DELIVERIES must be phoned in by 3:00 PM (Eastern) the preceding FRIDAY.
   - Report any delays or changes of scope (i.e., changes in number of samples to be collected, matrix changes, etc.)
   - CALL IF YOU HAVE ANY QUESTIONS

     USEPA Contract Laboratory Program
     Sample Management Office
     P.O. Box 818
     Alexandria, VA 22313
     Phone: (703) 557-2490
     (703) 684-5678
     FAX: (703) 683-0378

EPA

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Organic Traffic Report & Chain of Custody Record

(For Organic CLP Analysis)

SAS No. (if applicable)

Case No.

1. Sample Description (Enter in Column A)
   1. Surface Water
   2. Ground Water
   3. Leachate
   4. Rinsate
   5. Soil/Sediment
   6. Oil (High only)
   7. ~~Waste (High only)~~
   8. Other (Specify)

2. Preservative (Enter in Column D)
   1. HCl
   2. HNO3
   3. NaHSO4
   4. H_2SO_4
   5. Other (Specify)
   6. Ice only
   N. Not preserved

3. Region No.

Sampling Co.

5. Date Shipped

Carrier

7. Date Received -- Received by: 04-30-92 SDG# = EQK13 Robin Douglas

Sampler (Name): [illegible]

Airbill Number: [illegible]

Laboratory Contract Number: 68-D1-0087

Unit Price: $810.00

Sampler Signature: [illegible]

4. Type of Activity

	Lead	Pre-Remedial	Remedial		Removal	
SF	X		RIFS		CLEM	
PRP		PA	RD		REMA	
ST		SSI	RA		REM	
FED		LSI	O&M		OIL	
			NPLD		UST	

6. Ship To: Clayton Env. Consultants, 22345 Roethel Drive, Novi, MI 48375

ATTN: Robin Douglas

8. Transfer to

Date Received

Received by

Contract Number

Price

CLP Sample Numbers (from labels)	A Enter # From Box 1	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative from Box 6	E RAS Analysis VOA	BNA	Pest/PCB	High ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Inorg. Samp. No.	K Sample Condition on Rec't	L High Conc. Phases (Check below) Solids	Water -- Mis Liq.	Non Water -- Mis Liq.
~~EQK12~~	~~5~~	~~L~~	~~G~~	~~N~~	~~X~~				~~5-046545, 5-046546~~	~~SD-1~~	~~4/29/92~~	~~CLA~~	~~MERA12~~	Intact			
EQK13	1	1	1	1	X				5-046549, 5-046550	SD-2	4/29/92 1530	1	MERA13	↓			
EQK14	1	1	1	1	X				5-046553, 5-046554	SD-3	4/29/92 1550	1	MERA14	↓			
EQK15	↓	↓	↓	↓	X				5-046557, 5-046558	SD-4	4/29/92 1500	1	MERA15	↓			
EQK30	1	L	G	1	X				5-046605, 5-046606	SW-1	4/29/92 1100	1	MERA30	↓			
EQK30	1	1	1	N		X			5-046607	SW-1	4/29/92 1100	1	MERA30	↓			
EQK30	1	1	1	N			X		5-046608	SW-1	4/29/92 1100	1	MERA30	↓			
EQK31	1	1	1	1	X				5-046611, 5-046612	SW-1D	4/29/92 1100	1	MERA31	↓			
EQK31	1	1	1	N	~~X~~ SPECIAL	X			5-046613	SW-1D	4/29/92 1100	1	MERA31	↓			
EQK31	↓	↓	↓	N			X		5-046614	SW-1D	4/29/92 1100	↓	MERA31	↓			

Shipment for Case complete? (Y/N) Y

Page 1 of 2

Sample used for a spike and/or duplicate: EQK32, EQK14

Additional Sampler Signatures: [illegible]

Chain of Custody Seal Number: 157441, 157442

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[illegible]	4/29/92 1640	Christopher L. Coppel	Christopher L. Coppel	4/29/92 1651	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) Robin Douglas	Date / Time 04-30-92 0845	Remarks Is custody seal intact? Y/N/none Intact	

Split Samples ☐ Accepted (Signature) ☐ Declined

EPA Form 9110-2 (Rev. 5-91) Replaces EPA Form (2075-7), previous edition which may be used

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SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

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Org-2

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Organic Sample Collection Requirements

"This form replaces both the individual Traffic Report and EPA Chain of Custody Record. If the sampling team elects to use an alternative chain-of-custody form, cross out the bottom portion of this record and indicate that chain-of-custody information is recorded on an alternative form."

Water Samples	Required Volume	Container Type
Extractable Analysis (Low Level)	1 Gallon	1 X 4-Liter Amber Glass Bottle OR 2 X 80-oz. Amber Glass Bottle OR 4 X 1-Liter Amber Glass Bottles
Extractable Analysis (Medium Level*)	1 Gallon	32-oz. Wide-Mouth Glass Jars
Volatile Analysis (Low or Medium Level*)	80 ml.	2 X 40-ml. Glass Vials

*All Medium and High Level Samples to be Sealed In Metal Can for Shipment

Soil/Sediment Samples	Required Volume	Container Type
Extractable Analysis (Low or Medium Level*)	6 oz.	1 X 8-oz.Wide-Mouth Glass Jar OR
	240 ml.	2 X 4-oz. Wide-Mouth Glass Jars
Volatile Analysis (Low or Medium Level*)		2 X 120 ml. Wide-Mouth Glass Vials†

†Soil VOA Vials under study, subject to change, check to ensure proper sealing.

HIGH CONCENTRATION SAMPLE COLLECTION REQUIREMENTS

Liquid or Solid Samples	Required Volume	Container Type
Extractable and Volatile Analysis	6 oz.	1 X 8-oz.Wide-Mouth Glass Jar

1. **Organic Sample Collection Requirements**
   - Please indicate sample to spike and/or duplicate.
   - Ship medium and high concentration samples in paint cans.
   - Aqueous samples require one triple-volume sample per twenty for Matrix Spike/Matrix Spike Duplicate.
   - Oily samples must be analyzed under the Special Analytical Services (SAS) program.
   - Confirmatory analysis and Special Analytical Services (SAS) parameters may require extra volume; for SAS consult specified SAS methods for requirements.
   - Additional sample volume not required for method OLC01.

2. **Cooler and Sample Documentation**
   - Complete all sections of the Traffic Report/Chain of Custody Form - Press firmly with a ball point pen to ensure that carbon copies are legible. Check the information and correct any errors.
   - Please remember to complete the Chain of Custody information on the form.
   - Seal the two sets of laboratory Traffic Report/Chain of Custody form copies in a plastic bag. Include a return address for the cooler. Tape bag under cooler lid.
   - Overlap the lid and bottle of each sample container with custody seals.
   - Seal each container in a plastic bag.
   - Pack medium and high concentration samples in metal cans.
   - Cool low waters to 4° C. Cooling of low soils is optional. Do not cool medium or high concentration waters and soils.
   - Separate and surround cooler contents with vermiculite or equivalent packaging.
   - Seal the cooler, overlapping the lid and body with custody seals.
   - FAX SMO a copy of the Traffic Report/Chain of Custody Form as soon as possible. Send SMO the pink copy of the Traffic Report within 5 days.
   - In column E RAS analysis indicate number of sample bottles sent for analysis.

3. **Sample Shipment Reporting**
   - PHONE IN ALL SHIPMENTS IMMEDIATELY TO SMO (or to RSCC, if instructed)
     Required information:
     - Case (and/or SAS) Number
     - Date shipped
     - Number of samples by concentration and matrix
     - Carrier and airbill number
     - Next planned shipment

     Leave your name and a number where you can be reached.
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   - CALL IF YOU HAVE ANY QUESTIONS

     USEPA Contract Laboratory Program
     Sample Management Office
     P.O. Box 818
     Alexandria, VA 22313
     Phone: (703) 557-2490
     (703) 684-5678
     FAX: (703) 683-0378

EPA

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Organic Traffic Report & Chain of Custody Record

(For Organic CLP Analysis)

SAS No. (if applicable)

Case No.

1. Sample Description (Enter in Column A)
   1. Surface Water
   2. Ground Water
   3. Leachate
   4. Rinsate
   5. Soil/Sediment
   6. Oil (High only)
   7. Waste (High only)
   8. Other (Specify)

2. Preservative (Enter in Column D)
   1. HCl
   2. HNO3
   3. NaHSO4
   4. H_2SO_4
   5. Other (Specify)
   6. Ice only
   N. Not preserved

3. Region No. | Sampling Co.

Sampler (Name)

Sampler Signature: [signature]

4. Type of Activity: Lead / Pre-Remedial / Remedial / Removal

	Lead	Pre-Remedial	Remedial	Removal
SF	X		RIFS	CLEM
PRP		PA	RD	REMA
ST		SSI X	RA	REM
FED		LSI	O&M	OIL
			NPLD	UST

5. Date Shipped | Carrier

Airbill Number: [illegible]

6. Ship To: Clayton Env. Consultants, 22345 Roethel Drive, Novi, MI 48375

ATTN: Robin Douglas

7. Date Received -- Received by: 04-30-92 SDG#=EQK13 Robin Douglas

Laboratory Contract Number: 68-D1-0087

Unit Price: $810.00

8. Transfer to

Date Received

Received by

Contract Number

Price

CLP Sample Numbers (from labels)	A Enter # From Box 1	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative from Box 6	E RAS Analysis VOA	BNA	Pest/PCB	High ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp. CLP Inorg. Samp. No.	K Sample Condition on Rec't	L High Conc. Phases (Check below) Solids	Water -- Mis Liq.	Non Water -- Mis Liq.
EQK32	1	1	G	1	X				5-046617-046622	SW-2	4/29/92 1245	CLH	MERA32	Intact			
EQK33				1	X				5-046631, 5-046632	FR-1	4/29/92 1210		MERA33	M			
EQK33				N		X			5-046633	FR-1	4/29/92 1210		MERA33	M			
EQK33				N			X		5-046634	FR-1	4/29/92 1210		MERA33	M			
EQK34				1	X				5-046637, 5-046638	TR-1	4/29/92 900			M			

* SDG - Final Sample, RD 04-30-92

Shipment for Case complete? (Y/N) Y

Page 1 of 2

Sample used for a spike and/or duplicate: EQK32, EQK14

Additional Sampler Signatures: [signature]

Chain of Custody Seal Number: 157441, 157442

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	4/29/92 1650	Christopher P Cappel	Christopher P Cappel	4/29/92 1651	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) Robin Douglas	Date / Time 04-30-92 0845	Remarks Is custody seal intact? Y/N/none Intact	

Split Samples ☐ Accepted (Signature) ☐ Declined

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DISTRIBUTION:
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SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

O 02244

19026.5

Org-2

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Organic Sample Collection Requirements

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Water Samples	Required Volume	Container Type
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Extractable Analysis (Medium Level*)	1 Gallon	32-oz. Wide-Mouth Glass Jars
Volatile Analysis (Low or Medium Level*)	80 ml.	2 X 40-ml. Glass Vials

*All Medium and High Level Samples to be Sealed In Metal Can for Shipment

Soil/Sediment Samples	Required Volume	Container Type
Extractable Analysis (Low or Medium Level*)	6 oz.	1 X 8-oz.Wide-Mouth Glass Jar OR
	240 ml.	2 X 4-oz. Wide-Mouth Glass Jars
Volatile Analysis (Low or Medium Level*)		2 X 120 ml. Wide-Mouth Glass Vials†

†Soil VOA Vials under study, subject to change, check to ensure proper sealing.

HIGH CONCENTRATION SAMPLE COLLECTION REQUIREMENTS

Liquid or Solid Samples	Required Volume	Container Type
Extractable and Volatile Analysis	6 oz.	1 X 8-oz.Wide-Mouth Glass Jar

1. Organic Sample Collection Requirements
- Please indicate sample to spike and/or duplicate.
- Ship medium and high concentration samples in paint cans.
- Aqueous samples require one triple-volume sample per twenty for Matrix Spike/Matrix Spike Duplicate.
- Oily samples must be analyzed under the Special Analytical Services (SAS) program.
- Confirmatory analysis and Special Analytical Services (SAS) parameters may require extra volume; for SAS consult specified SAS methods for requirements.
- Additional sample volume not required for method OLC01.

2. Cooler and Sample Documentation
- Complete all sections of the Traffic Report/Chain of Custody Form - Press firmly with a ball point pen to ensure that carbon copies are legible. Check the information and correct any errors.
- Please remember to complete the Chain of Custody information on the form.
- Seal the two sets of laboratory Traffic Report/Chain of Custody form copies in a plastic bag. Include a return address for the cooler. Tape bag under cooler lid.
- Overlap the lid and bottle of each sample container with custody seals.
- Seal each container in a plastic bag.
- Pack medium and high concentration samples in metal cans.
- Cool low waters to 4° C. Cooling of low soils is optional. Do not cool medium or high concentration waters and soils.
- Separate and surround cooler contents with vermiculite or equivalent packaging.
- Seal the cooler, overlapping the lid and body with custody seals.
- FAX SMO a copy of the Traffic Report/Chain of Custody Form as soon as possible. Send SMO the pink copy of the Traffic Report within 5 days.
- In column E RAS analysis indicate number of sample bottles sent for analysis.

3. Sample Shipment Reporting
- PHONE IN ALL SHIPMENTS IMMEDIATELY TO SMO (or to RSCC, if instructed)
  Required information:
  - Case (and/or SAS) Number
  - Date shipped
  - Number of samples by concentration and matrix
  - Carrier and airbill number
  - Next planned shipment

  Leave your name and a number where you can be reached.
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- CALL IF YOU HAVE ANY QUESTIONS

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  P.O. Box 818
  Alexandria, VA 22313
  Phone: (703) 557-2490
  (703) 684-5678
  FAX: (703) 683-0378

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

	EPA SAMPLE NO.	SMC1 (TOL)#	SMC2 (BFB)#	SMC3 (DCE)#	OTHER	TOT OUT
01	EQK30	94	94	94	0	0
02	EQK31	108	107	78	0	0
03	EQK32	107	104	84	0	0
04	EQK33	96	91	78	0	0
05	EQK34	98	103	92	0	0
06	EQK32MS	104	102	85	0	0
07	EQK32MSD	93	90	87	0	0
08	VBLKEAW	100	94	85	0	0
09	VBLKEBW	99	96	97	0	0

		QC LIMITS
SMC1 (TOL)	= Toluene-d8	(88-110)
SMC2 (BFB)	= Bromofluorobenzene	(86-115)
SMC3 (DCE)	= 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

2B
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Level:(low/med) LOW

	EPA SAMPLE NO.	SMC1 (TOL)#	SMC2 (BFB)#	SMC3 (DCE)#	OTHER	TOT OUT
01	EQK13	116	104	99	0	0
02	EQK14	123	99	93	0	0
03	EQK15	118	83	83	0	0
04	EQK16	118	100	91	0	0
05	EQK17	124	99	94	0	0
06	EQK18	121	98	77	0	0
07	EQK19	122	96	91	0	0
08	EQK14MS	100	85	90	0	0
09	EQK14MSD	122	100	96	0	0
10	VBLKEA*	115	111	98	0	0
11	VBLKEB*	125	109	89	0	0

		QC LIMITS
SMC1 (TOL)	= Toluene-d8	(84-138)
SMC2 (BFB)	= Bromofluorobenzene	(59-113)
SMC3 (DCE)	= 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix Spike - EPA Sample No.: EQK32

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.00	0	47.90	96	61-145
Trichloroethene	50.00	0	55.00	110	71-120
Benzene	50.00	0	52.30	105	76-127
Toluene	50.00	0	60.30	121	76-125
Chlorobenzene	50.00	0	53.80	108	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50.00	47.60	95	1	14	61-145
Trichloroethene	50.00	55.30	111	1	14	71-120
Benzene	50.00	51.10	102	3	11	76-127
Toluene	50.00	49.20	98	21 *	13	76-125
Chlorobenzene	50.00	52.30	105	3	13	75-130

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

* Values outside of QC limits

RPD: 1 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS:

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix Spike - EPA Sample No.: EQK14 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	63.30	0	61.26	97	59-172
Trichloroethene	63.30	0	60.25	95	62-137
Benzene	63.30	0	64.05	101	66-142
Toluene	63.30	3.013	73.29	111	59-139
Chlorobenzene	63.30	0	69.87	110	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	63.30	53.80	85	13	22	59-172
Trichloroethene	63.30	62.28	98	3	24	62-137
Benzene	63.30	64.94	103	2	21	66-142
Toluene	63.30	87.34	133	18	21	59-139
Chlorobenzene	63.30	69.11	109	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

EPA SAMPLE NO.

VBLKEAw

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID: E9744 Lab Sample ID: VBLKEA

Date Analyzed: 05/05/92 Time Analyzed: 1018

GC Column: CAP ID: 0.530(mm) Heated Purge: (Y/N) N

Instrument ID: HP-5E

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EQK31	967190	E9746	1149
02	EQK32	967192	E9747	1228
03	EQK33	967196	E9750	1429
04	EQK32MS	967192	E9748	1309
05	EQK32MSD	967192	E9749	1349

COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKEBw

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID: E9761 Lab Sample ID: VBLKEB

Date Analyzed: 05/06/92 Time Analyzed: 0219

GC Column: CAP ID: 0.530(mm) Heated Purge: (Y/N) N

Instrument ID: HP-5E

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EQK30	967188	E9769	1035
02	EQK34	967198	E9767	0849

COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.
VBLKEA5

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID: E9775 Lab Sample ID: VBLKEA

Date Analyzed: 05/06/92 Time Analyzed: 2039

GC Column: CAP ID: 0.530(mm) Heated Purge: (Y/N) Y

Instrument ID: HP-5E

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EQK13	967174	E9780	0100
02	EQK16	967180	E9777	2240

COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKEB5

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID: E9792 Lab Sample ID: VBLKEB

Date Analyzed: 05/07/92 Time Analyzed: 1321

GC Column: CAP ID: 0.530(mm) Heated Purge: (Y/N) Y

Instrument ID: HP-5E

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EQK14	967176	E9793	1421
02	EQK15	967178	E9796	1640
03	EQK17	967182	E9797	1724
04	EQK18	967184	E9798	1817
05	EQK19	967186	E9799	1909
06	EQK14MS	967176	E9794	1503
07	EQK14MSD	967176	E9795	1542

COMMENTS:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKEAW

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

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

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: E9744

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. _____ Date Analyzed: 05/05/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	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	4	J
67-64-1	Acetone	31	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLKEAw

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

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

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: E9744

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. _____ Date Analyzed: 05/05/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKEBW

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

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

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: E9761

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. _____ Date Analyzed: 05/06/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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

CAS NO.	COMPOUND		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	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKEBW

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

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

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: E9761

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. _____ Date Analyzed: 05/06/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKEAs

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

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

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9775

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. _____ Date Analyzed: 05/06/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKEA5

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

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

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9775

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. _____ Date Analyzed: 05/06/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKEB

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

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

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9792

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. _____ Date Analyzed: 05/07/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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	4	J
67-64-1	Acetone	12	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLKEBS

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

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

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9792

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. _____ Date Analyzed: 05/07/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

19026 · 5

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK13

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) SOIL Lab Sample ID: 967174

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9780

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. 40 Date Analyzed: 05/07/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl Chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene Chloride	25	BV
67-64-1	Acetone	27	
75-15-0	Carbon Disulfide	17	U
75-35-4	1,1-Dichloroethene	17	U
75-34-3	1,1-Dichloroethane	17	U
540-59-0	1,2-Dichloroethene (total)	17	U
67-66-3	Chloroform	17	U
107-06-2	1,2-Dichloroethane	17	U
78-93-3	2-Butanone	17	U
71-55-6	1,1,1-Trichloroethane	17	U
56-23-5	Carbon Tetrachloride	17	U
75-27-4	Bromodichloromethane	17	U
78-87-5	1,2-Dichloropropane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
79-01-6	Trichloroethene	17	U
124-48-1	Dibromochloromethane	17	U
79-00-5	1,1,2-Trichloroethane	17	U
71-43-2	Benzene	17	U
10061-02-6	trans-1,3-Dichloropropene	17	U
75-25-2	Bromoform	17	U
108-10-1	4-Methyl-2-Pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
108-88-3	Toluene	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
100-42-5	Styrene	17	U
1330-20-7	Xylene (total)	17	U

AV 6-12-92

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
EQK13

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) SOIL Lab Sample ID: 967174

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9780

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. 40 Date Analyzed: 05/07/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 624920	Disulfide, dimethyl	13.39	9	JN

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK14

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) SOIL Lab Sample ID: 967176

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9793

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. 21 Date Analyzed: 05/07/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	13 ~~14~~	BJU
67-64-1	Acetone	56	BU
75-15-0	Carbon Disulfide	13	U
75-35-4	1,1-Dichloroethene	13	U
75-34-3	1,1-Dichloroethane	13	U
540-59-0	1,2-Dichloroethene (total)	13	U
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	2-Butanone	13	U
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	13	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	13	U
124-48-1	Dibromochloromethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
71-43-2	Benzene	13	U
10061-02-6	trans-1,3-Dichloropropene	13	U
75-25-2	Bromoform	13	U
108-10-1	4-Methyl-2-Pentanone	13	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
108-88-3	Toluene	3	J
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (total)	13	U

AV 6-12-92

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQK14

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) SOIL Lab Sample ID: 967176

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9793

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. 21 Date Analyzed: 05/07/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK15

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) SOIL Lab Sample ID: 967178

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9796

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. 73 Date Analyzed: 05/07/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	37	U
74-83-9	Bromomethane	37	U
75-01-4	Vinyl Chloride	37	U
75-00-3	Chloroethane	37	U
75-09-2	Methylene Chloride	37 ~~52~~	BJ U
67-64-1	Acetone	37	U
75-15-0	Carbon Disulfide	37	U
75-35-4	1,1-Dichloroethene	37	U
75-34-3	1,1-Dichloroethane	37	U
540-59-0	1,2-Dichloroethene (total)	37	U
67-66-3	Chloroform	37	U
107-06-2	1,2-Dichloroethane	37	U
78-93-3	2-Butanone	37	U
71-55-6	1,1,1-Trichloroethane	37	U
56-23-5	Carbon Tetrachloride	37	U
75-27-4	Bromodichloromethane	37	U
78-87-5	1,2-Dichloropropane	37	U
10061-01-5	cis-1,3-Dichloropropene	37	U
79-01-6	Trichloroethene	37	U
124-48-1	Dibromochloromethane	37	U
79-00-5	1,1,2-Trichloroethane	37	U
71-43-2	Benzene	37	U
10061-02-6	trans-1,3-Dichloropropene	37	U
75-25-2	Bromoform	37	U
108-10-1	4-Methyl-2-Pentanone	37	U
591-78-6	2-Hexanone	37	U
127-18-4	Tetrachloroethene	37	U
79-34-5	1,1,2,2-Tetrachloroethane	37	U
108-88-3	Toluene	37	U
108-90-7	Chlorobenzene	37	U
100-41-4	Ethylbenzene	37	U
100-42-5	Styrene	37	U
1330-20-7	Xylene (total)	37	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
EQK15

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) SOIL Lab Sample ID: 967178

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9796

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. 73 Date Analyzed: 05/07/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 75183	Methane, thiobis-	2.73	440	JN
2. 624920	Disulfide, dimethyl	13.40	320	JN
3. 3658808	Trisulfide, dimethyl	22.55	240	JN

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK16

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) SOIL Lab Sample ID: 967180

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9777

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. 72 Date Analyzed: 05/06/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	36	U
74-83-9	Bromomethane	36	U
75-01-4	Vinyl Chloride	36	U
75-00-3	Chloroethane	36	U
75-09-2	Methylene Chloride	36 ~~27~~	BJU
67-64-1	Acetone	36	U
75-15-0	Carbon Disulfide	36	U
75-35-4	1,1-Dichloroethene	36	U
75-34-3	1,1-Dichloroethane	36	U
540-59-0	1,2-Dichloroethene (total)	36	U
67-66-3	Chloroform	36	U
107-06-2	1,2-Dichloroethane	36	U
78-93-3	2-Butanone	36	U
71-55-6	1,1,1-Trichloroethane	36	U
56-23-5	Carbon Tetrachloride	36	U
75-27-4	Bromodichloromethane	36	U
78-87-5	1,2-Dichloropropane	36	U
10061-01-5	cis-1,3-Dichloropropene	36	U
79-01-6	Trichloroethene	36	U
124-48-1	Dibromochloromethane	36	U
79-00-5	1,1,2-Trichloroethane	36	U
71-43-2	Benzene	36	U
10061-02-6	trans-1,3-Dichloropropene	36	U
75-25-2	Bromoform	36	U
108-10-1	4-Methyl-2-Pentanone	36	U
591-78-6	2-Hexanone	36	U
127-18-4	Tetrachloroethene	36	U
79-34-5	1,1,2,2-Tetrachloroethane	36	U
108-88-3	Toluene	36	U
108-90-7	Chlorobenzene	36	U
100-41-4	Ethylbenzene	36	U
100-42-5	Styrene	36	U
1330-20-7	Xylene (total)	36	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
EQK16

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) SOIL Lab Sample ID: 967180

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9777

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. 72 Date Analyzed: 05/06/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 75183	Methane, thiobis-	2.74	170	JN
2. 624920	Disulfide, dimethyl	13.36	130	JN
3. 3658808	Trisulfide, dimethyl	22.56	57	JN

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK17

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) SOIL Lab Sample ID: 967182

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9797

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. 40 Date Analyzed: 05/07/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl Chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene Chloride	17 ~~16~~	BJU
67-64-1	Acetone	78	BU
75-15-0	Carbon Disulfide	17	U
75-35-4	1,1-Dichloroethene	17	U
75-34-3	1,1-Dichloroethane	17	U
540-59-0	1,2-Dichloroethene (total)	17	U
67-66-3	Chloroform	17	U
107-06-2	1,2-Dichloroethane	17	U
78-93-3	2-Butanone	17	U
71-55-6	1,1,1-Trichloroethane	17	U
56-23-5	Carbon Tetrachloride	17	U
75-27-4	Bromodichloromethane	17	U
78-87-5	1,2-Dichloropropane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
79-01-6	Trichloroethene	17	U
124-48-1	Dibromochloromethane	17	U
79-00-5	1,1,2-Trichloroethane	17	U
71-43-2	Benzene	17	U
10061-02-6	trans-1,3-Dichloropropene	17	U
75-25-2	Bromoform	17	U
108-10-1	4-Methyl-2-Pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
108-88-3	Toluene	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
100-42-5	Styrene	17	U
1330-20-7	Xylene (total)	17	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQK17

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) SOIL Lab Sample ID: 967182

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9797

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. 40 Date Analyzed: 05/07/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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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EPA SAMPLE NO.

EQK18

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) SOIL Lab Sample ID: 967184

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9798

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. 34 Date Analyzed: 05/07/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	15	U
74-83-9	Bromomethane	15	U
75-01-4	Vinyl Chloride	15	U
75-00-3	Chloroethane	15	U
75-09-2	Methylene Chloride	~~15~~ 12	BJ U
67-64-1	Acetone	43	B U
75-15-0	Carbon Disulfide	15	U
75-35-4	1,1-Dichloroethene	15	U
75-34-3	1,1-Dichloroethane	15	U
540-59-0	1,2-Dichloroethene (total)	15	U
67-66-3	Chloroform	15	U
107-06-2	1,2-Dichloroethane	15	U
78-93-3	2-Butanone	15	U
71-55-6	1,1,1-Trichloroethane	15	U
56-23-5	Carbon Tetrachloride	15	U
75-27-4	Bromodichloromethane	15	U
78-87-5	1,2-Dichloropropane	15	U
10061-01-5	cis-1,3-Dichloropropene	15	U
79-01-6	Trichloroethene	15	U
124-48-1	Dibromochloromethane	15	U
79-00-5	1,1,2-Trichloroethane	15	U
71-43-2	Benzene	15	U
10061-02-6	trans-1,3-Dichloropropene	15	U
75-25-2	Bromoform	15	U
108-10-1	4-Methyl-2-Pentanone	15	U
591-78-6	2-Hexanone	15	U
127-18-4	Tetrachloroethene	15	U
79-34-5	1,1,2,2-Tetrachloroethane	15	U
108-88-3	Toluene	15	U
108-90-7	Chlorobenzene	15	U
100-41-4	Ethylbenzene	15	U
100-42-5	Styrene	15	U
1330-20-7	Xylene (total)	15	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQK18

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) SOIL Lab Sample ID: 967184

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9798

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. 34 Date Analyzed: 05/07/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK19

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) SOIL Lab Sample ID: 967186

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9799

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. 34 Date Analyzed: 05/07/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	15	U
74-83-9	Bromomethane	15	U
75-01-4	Vinyl Chloride	15	U
75-00-3	Chloroethane	15	U
75-09-2	Methylene Chloride	15 ~~18~~	BJ U
67-64-1	Acetone	46	BU
75-15-0	Carbon Disulfide	15	U
75-35-4	1,1-Dichloroethene	15	U
75-34-3	1,1-Dichloroethane	15	U
540-59-0	1,2-Dichloroethene (total)	15	U
67-66-3	Chloroform	15	U
107-06-2	1,2-Dichloroethane	15	U
78-93-3	2-Butanone	15	U
71-55-6	1,1,1-Trichloroethane	15	U
56-23-5	Carbon Tetrachloride	15	U
75-27-4	Bromodichloromethane	15	U
78-87-5	1,2-Dichloropropane	15	U
10061-01-5	cis-1,3-Dichloropropene	15	U
79-01-6	Trichloroethene	15	U
124-48-1	Dibromochloromethane	15	U
79-00-5	1,1,2-Trichloroethane	15	U
71-43-2	Benzene	15	U
10061-02-6	trans-1,3-Dichloropropene	15	U
75-25-2	Bromoform	15	U
108-10-1	4-Methyl-2-Pentanone	15	U
591-78-6	2-Hexanone	15	U
127-18-4	Tetrachloroethene	15	U
79-34-5	1,1,2,2-Tetrachloroethane	15	U
108-88-3	Toluene	15	U
108-90-7	Chlorobenzene	15	U
100-41-4	Ethylbenzene	15	U
100-42-5	Styrene	15	U
1330-20-7	Xylene (total)	15	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQK19

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) SOIL Lab Sample ID: 967186

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9799

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. 34 Date Analyzed: 05/07/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

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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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK30

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967188

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: E9769

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. ____ Date Analyzed: 05/06/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

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

CAS NO.	COMPOUND		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	10 ~~4~~	BJU
67-64-1	Acetone	53	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
EQK30

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967188

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: E9769

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. ____ Date Analyzed: 05/06/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK31

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967190

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: E9746

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. _____ Date Analyzed: 05/05/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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

CAS NO.	COMPOUND		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	10 ~~6~~	BJU
67-64-1	Acetone	19	B
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQK31

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967190

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: E9746

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. _____ Date Analyzed: 05/05/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

19026·5

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK32

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967192

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: E9747

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. _____ Date Analyzed: 05/05/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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

CAS NO.	COMPOUND		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	~~10~~	BJU
67-64-1	Acetone	14	BU
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

AV
6-12-92

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQK32

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967192

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: E9747

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. _____ Date Analyzed: 05/05/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

19026·5

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK33

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967196

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: E9750

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. _____ Date Analyzed: 05/05/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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

CAS NO.	COMPOUND		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	10 ~~8~~	BJU
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

AV 6-12-92

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQK33

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967196

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: E9750

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. _____ Date Analyzed: 05/05/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

096 RD 06-02-92
09

19026·5

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK34

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967198

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: E9767

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. _____ Date Analyzed: 05/06/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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

CAS NO.	COMPOUND		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	10 ~~3~~	BJU
67-64-1	Acetone	18	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	29	
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

AV 6-12-92

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQK34

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967198

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: E9767

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. _____ Date Analyzed: 05/06/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	S7 (2CP)#	S8 (DCB)#	TOT OUT
01	EQK30	75	61	94	68	62	77	62	56	0
02	EQK31	74	58	102	55	51	77	57	53	0
03	EQK32	81	67	99	73	65	81	66	66	0
04	EQK33	65	51	102	63	60	58	58	52	0
05	EQK32MS	67	58	100	58	55	61	56	56	0
06	EQK32MSD	76	65	86	66	63	51	63	63	0
07	SBLKW1	96	63	110	65	62	58	61	60	0

		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(35-114)	
S2 (FBP)	= 2-Fluorobiphenyl	(43-116)	
S3 (TPH)	= Terphenyl-d14	(33-141)	
S4 (PHL)	= Phenol-d5	(10-110)	
S5 (2FP)	= 2-Fluorophenol	(21-110)	
S6 (TBP)	= 2,4,6-Tribromophenol	(10-123)	
S7 (2CP)	= 2-Chlorophenol-d4	(33-110)	(advisory)
S8 (DCB)	= 1,2-Dichlorobenzene-d4	(16-110)	(advisory)

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

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix Spike - EPA Sample No.: EQK32

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	#	QC LIMITS REC.
Phenol	75.00	0	43.00	57		12-110
2-Chlorophenol	75.00	0	44.40	59		27-123
1,4-Dichlorobenzene	50.00	0	26.30	53		36- 97
N-Nitroso-di-n-prop. (1)	50.00	0	31.00	62		41-116
1,2,4-Trichlorobenzene	50.00	0	27.70	55		39- 98
4-Chloro-3-methylphenol	75.00	0	48.80	65		23- 97
Acenaphthene	50.00	0	31.40	63		46-118
4-Nitrophenol	75.00	0	78.70	105	*	10- 80
2,4-Dinitrotoluene	50.00	0	42.00	84		24- 96
Pentachlorophenol	75.00	0	58.20	78		9-103
Pyrene	50.00	0	37.20	74		26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	#	% RPD	#	QC LIMITS RPD	QC LIMITS REC.
Phenol	75.00	50.70	68		18		42	12-110
2-Chlorophenol	75.00	53.10	71		18		40	27-123
1,4-Dichlorobenzene	50.00	31.70	63		17		28	36- 97
N-Nitroso-di-n-prop. (1)	50.00	38.70	77		22		38	41-116
1,2,4-Trichlorobenzene	50.00	34.10	68		21		28	39- 98
4-Chloro-3-methylphenol	75.00	49.90	67		3		42	23- 97
Acenaphthene	50.00	36.00	72		13		31	46-118
4-Nitrophenol	75.00	82.10	110	*	5		50	10- 80
2,4-Dinitrotoluene	50.00	39.60	79		6		38	24- 96
Pentachlorophenol	75.00	65.20	87		11		50	9-103
Pyrene	50.00	35.20	70		6		31	26-127

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

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

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

COMMENTS: INST HP-6F 967205
CASE 19026 EQK32

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLKW1

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID: F7564 Lab Sample ID: 967210

Instrument ID: HP-6F Date Extracted: 05/04/92

Matrix: (soil/water) WATER Date Analyzed: 05/27/92

Level:(low/med) LOW Time Analyzed: 0838

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	EQK30	967201	F7536	05/22/92
02	EQK31	967203	F7537	05/22/92
03	EQK32	967205	F7538	05/22/92
04	EQK33	967209	F7565	05/27/92
05	EQK32MS	967207	F7539	05/22/92
06	EQK32MSD	967207	F7548	05/23/92

COMMENTS: INST HP-6F 967210
CASE 19026 SBLKW1

1B 19026 · 5

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKW1

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967210

Sample wt/vol: 1000 (g/mL) ML Lab File ID: F7564

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/04/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/27/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C 19026 · 5

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKW1

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967210

Sample wt/vol: 1000 (g/mL) ML Lab File ID: F7564

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/04/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/27/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

19026 - 5 EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SBLKW1

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967210

Sample wt/vol: 1000 (g/mL) ML Lab File ID: F7564

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/04/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/27/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	4.30	2	J
2.	Unknown	20.25	2	J

34 4 RD06-02-92

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK30

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967201

Sample wt/vol: 1000 (g/mL) ML Lab File ID: F7536

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/04/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

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

CAS NO.	COMPOUND		Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK30

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967201

Sample wt/vol: 1000 (g/mL) ML Lab File ID: F7536

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/04/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

19026 • 5

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQK30

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967201

Sample wt/vol: 1000 (g/mL) ML Lab File ID: F7536

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/04/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown ketone or ester	4.10	13	J
2.	Unknown	4.30	14	BJU
3.	Cyclohexenol	4.80	4	J
4. 108850	Cyclohexane, bromo-	9.31	2	JN
5.	Unknown	10.48	2	J

AV
6-12-92

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK31

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967203

Sample wt/vol: 1000 (g/mL) ML Lab File ID: F7537

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/04/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK31

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967203

Sample wt/vol: 1000 (g/mL) ML Lab File ID: F7537

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/04/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

19026 • 5

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQK31

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967203

Sample wt/vol: 1000 (g/mL) ML Lab File ID: F7537

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/04/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 4

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Cyclohexanol	4.74	4	J
2.	Unknown	10.48	2	J
3.	Cyclohexenol	15.55	3	J
4.	Unknown siloxane	28.51	2	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK32

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967205

Sample wt/vol: 1000 (g/mL) ML Lab File ID: F7538

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/04/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK32

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967205

Sample wt/vol: 1000 (g/mL) ML Lab File ID: F7538

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/04/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

19026 • 5

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQK32

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967205

Sample wt/vol: 1000 (g/mL) ML Lab File ID: F7538

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/04/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 4

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	4.31	7	BJ
2.	Cyclohexenol	4.79	3	J
3.	Cyclohexenone	5.64	2	J
4.	Unknown	10.48	3	J

AV
6-12-92

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK33

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967209

Sample wt/vol: 1000 (g/mL) ML Lab File ID: F7565

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/04/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/27/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

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

CAS NO.	COMPOUND		Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK33

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967209

Sample wt/vol: 1000 (g/mL) ML Lab File ID: F7565

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/04/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/27/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

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

CAS NO.	COMPOUND		Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

19026.5

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EQK33

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967209

Sample wt/vol: 1000 (g/mL) ML Lab File ID: F7565

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/04/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/27/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	4.29	3	BJ U
2.	Unknown	20.24	2	BJ U

AV
6-12-92

2E

WATER PESTICIDE SURROGATE RECOVERY

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

GC Column(1): DB-608 ID: 0.54(mm) GC Column(2): DB-1701 ID: 0.55(mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKW1	83	86	89	92			0
02	EQK30	79	80	79	73			0
03	EQK31	101	103	100	101			0
04	EQK32	84	88	94	96			0
05	EQK33	67	69	96	96			0
06	EQK32MS	101	106	112	116			0
07	EQK32MSD	69	76	83	83			0

	ADVISORY QC LIMITS
TCX = Tetrachloro-m-xylene	(60-150)
DCB = Decachlorobiphenyl	(60-150)

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

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix Spike - EPA Sample No.: EQK32

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	#	QC LIMITS REC.
gamma-BHC (Lindane)	0.500	0	0.913	183	*	56-123
Heptachlor	0.500	0	0.660	132	*	40-131
Aldrin	0.500	0	0.606	121	*	40-120
Dieldrin	1.000	0	1.84	184	*	52-126
Endrin	1.000	0	1.76	176	*	56-121
4,4'-DDT	1.000	0	1.74	174	*	38-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	#	% RPD	#	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)	0.500	0.538	108		52	*	50	56-123
Heptachlor	0.500	0.442	88		40	*	31	40-131
Aldrin	0.500	0.435	87		33		43	40-120
Dieldrin	1.000	1.18	118		44	*	38	52-126
Endrin	1.000	1.17	117		40		45	56-121
4,4'-DDT	1.000	1.16	116		40		50	38-127

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

* Values outside of QC limits

RPD: 3 out of 6 outside limits
Spike Recovery: 6 out of 12 outside limits

COMMENTS:

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4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKW1

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab Sample ID: 967210 Lab File ID: _____

Matrix:(soil/water) WATER Extraction:(SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N Date Extracted: 05/01/92

Date Analyzed (1): 05/21/92 Date Analyzed (2): 05/21/92

Time Analyzed (1): 1700 Time Analyzed (2): 1700

Instrument ID (1): D082 Instrument ID (2): D081

GC Column (1): DB-608 ID: 0.54 (mm) GC Column (2): DB-1701 ID: 0.55 (mm)

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	EQK30	967200	05/21/92	05/21/92
02	EQK31	967202	05/21/92	05/21/92
03	EQK32	967204	05/21/92	05/21/92
04	EQK33	967208	05/21/92	05/21/92
05	EQK32MS	967206MS	05/21/92	05/21/92
06	EQK32MSD	967206MSD	05/21/92	05/21/92

COMMENTS: BLANK EXTRACTION COMMENT

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKW1

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967210

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/30/92 5-3-92

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/01/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/21/92

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

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EPA SAMPLE NO.

EQK30

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967200

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/30/92

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/01/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/21/92

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

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

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK31

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967202

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/30/92

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/01/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/21/92

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

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

CAS NO.	COMPOUND	Q
319-84-6	alpha-BHC	0.050 U
319-85-7	beta-BHC	0.050 U
319-86-8	delta-BHC	0.050 U
58-89-9	gamma-BHC (Lindane)	0.050 U
76-44-8	Heptachlor	0.050 U
309-00-2	Aldrin	0.050 U
1024-57-3	Heptachlor epoxide	0.050 U
959-98-8	Endosulfan I	0.050 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
1031-07-8	Endosulfan sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
53494-70-5	Endrin ketone	0.10 U
7421-36-3	Endrin aldehyde	0.10 U
5103-71-9	alpha-Chlordane	0.050 U
5103-74-2	gamma-Chlordane	0.050 U
8001-35-2	Toxaphene	5.0 U
12674-11-2	Aroclor-1016	1.0 U
11104-28-2	Aroclor-1221	2.0 U
11141-16-5	Aroclor-1232	1.0 U
53469-21-9	Aroclor-1242	1.0 U
12672-29-6	Aroclor-1248	1.0 U
11097-69-1	Aroclor-1254	1.0 U
11096-82-5	Aroclor-1260	1.0 U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK32

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967204

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/30/92

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/01/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/21/92

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: ____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK33

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967208

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 04/30/92

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 05/01/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/21/92

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-36-3	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No._____ CERCLIS No. (34)

Case No. 19026 Site Name Location: Sattralloy

Contractor or EPA Lab: Clayton Data User: PRC

No. of Samples: 12 Date Samples or Data Received: June 4, 1992

Have Chain-of-Custody records been received? YES____ NO ✓
Have traffic reports or packing lists been received? YES____ NO ✓
If no, are traffic report or packing list numbers written on the chain-of-custody record? YES_____ NO_____
If no, which traffic report or packing list numbers are missing?

_____ _____ _____ _____
_____ _____ _____ _____

Are basic data forms in? YES ✓ NO_____
No. of samples claimed: 12 No. of samples received: 12

Received by: A.D. Harris Date: June 4, 1992

Received by LSSS: DMM Date: 6-4-92

Review started: 11 June 1992 Reviewer Signature: Al Venuto

Total time spent on review: 18 hrs. Date review completed: 15 June 1992

Copied by:_____ Date:_____

Mailed to user by: Lynette Burnett Date: 6-19-92

DATA USERS:
Please fill in the blanks below and return this form to:
Sylvia Griffin, Data Mgmt. Coordinator, Region V, 5SCRL

Data received by:_____ Date:_____

Data review received by:_____ Date:_____
Inorganic Data Complete[ ] Suitable for Intended Purpose[ ] ✓if OK
Organic Data Complete [ ] Suitable for Intended Purpose[ ] list
Dioxin Data Complete [ ] Suitable for Intended Purpose[ ] prblms
SAS Data Complete [ ] Suitable for Intended Purpose[ ] below.
PROBLEMS: Please indicate reasons why data are not suitable for your uses.

_____

_____

Received by Data Mgmt. Coordinator for Files Date:_____

Q. C.

SUMMARY

Q. C.

SUMMARY

Q. C.

SUMMARY

PKG.

COVER SHEET 19026-5

LAB CODE: CLAYTN

CASE #: 19026

SDG #: EQK13

SAS # (if applicable): _____

CONTRACT #: 68-D1-0087

(check one)

___ ORGANIC SOW 2/88

X ORGANIC SOW OLM01.0

___ INORGANIC SOW 7/88

___ INORGANIC SOW ILM01.0

___ LOW CONCENTRATION ORGANIC SOW OLC01.0

___ LOW CONCENTRATION INORGANIC SOW ILC01.0

___ HIGH CONCENTRATION ORGANIC SOW 9/88

___ HIGH CONCENTRATION INORGANIC SOW HCIN

THIS DATA PACKAGE CONTAINS:

X RAS data only

___ SAS data only

___ RAS+SAS data

___ regional request/additional data

___ other (please explain below)

_____

SAMPLE DELIVERY GROUP (SDG)
TRAFFIC REPORT (TR) COVER SHEET

Lab Name: Clayton Environmental Contract No.: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____

Full Sample Analysis Price in Contract: $ 810.00
SDG No./First Sample in SDG: EQK13 Sample Receipt Date: 04/30/92 (MM/DD/YY)
(Lowest EPA Sample Number in first shipment of samples received under SDG)

Last Sample in SDG: EQK34 Sample Receipt Date: 04/30/92 (MM/DD/YY)
(Highest EPA Sample Number in last shipment of samples received under SDG)

EPA Sample Numbers in the SDG (listed in alphanumeric order):

1	EQK13	11	EQK33
2	EQK14	12	EQK34
3	EQK15	13	
4	EQK16	14	
5	EQK17	15	
6	EQK18	16	
7	EQK19	17	
8	EQK30	18	
9	EQK31	19	
10	EQK32	20	

Note: There are a maximum of 20 field samples in an SDG.

Attach Traffic Reports to this form in alphanumeric order (i.e., the order listed on this form).

Robin Douglas
Sample Custodian

04-30-92
Date

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

Case No. 19026 SDG No. 53 SDG Nos. To Follow _____ _____ _____ SAS No. _____ Date Recvd 6/4/92

EPA Lab ID: Clayton

Lab Location: Novigmchigan

Region: V Audit No.: _____

Re-Submitted CSF? Yes___ No___

Box No(s): _____

COMMENTS:

H2 Custody Seals Well present at time of arrival

Over for additional comments.

ITEMS	YES	NO	N/A
CUSTODY SEALS			
1. Present on package?	✓		
2. Intact upon receipt?	✓		
FORM DC-2			
3. Numbering scheme accurate?	✓		
4. Are enclosed documents listed?	✓		
5. Are listed documents enclosed?	✓		
FORM DC-1			
6. Present?	✓		
7. Complete?	✓		
8. Accurate?	✓		
CHAIN-OF-CUSTODY RECORD(s)			
9. Signed?	✓		
10. Dated?	✓		
TRAFFIC REPORT(s) PACKING LIST(s)			
11. Signed?	✓		
12. Dated?	✓		
AIRBILLS/AIRBILL STICKER			
13. Present?	✓		
14. Signed?	✓		
15. Dated?	✓		
SAMPLE TAGS			
16. Does DC-1 list tags as being included?	✓		–
17. Present?	✓		–
ALL DOCUMENTS			
18. Activities identified?	✓	–	
19. Legible?	✓		
20. Original?		✓	
20a. If "NO," does the copy indicate where original documents are located?	✓		

Received by: Adrenus D Harris Adrenus D Harris / Data Recvd Date 6/4/92

Audited by: Al Venuto AL VENUTO / org. data reviewer Date 6/12/92

Audited by: _____ _____ Date ___/___/___

Signature Printed Name/Title

TO BE COMPLETED BY CEAT

Date Recvd by CEAT: ___/___/___ Date Entered: ___/___/___ Date Reviewed: ___/___/___

Entered by: _____ _____

Reviewed by: _____ _____

Signature Printed Name/Title

DC-2 ___

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

LABORATORY NAME Clayton Environmental
CITY/STATE Novi, Michigan

CASE NO. 19026 SDG NO. EQK13 SDG NOS. TO FOLLOW _____
_____ _____ SAS NO. _____

CONTRACT NO. 68-D1-0087
SOW NO. _____

		PAGE NOs FROM	PAGE NOs TO	CHECK LAB	CHECK EPA
1.	Inventory Sheet (Form DC-2) (Do not number)	N/A	N/A	✓	AV
2.	SDG Case Narrative	001	003	✓	AV
3.	SDG Cover Sheet/Traffic Report	004	007	✓	AV
4.	Volatiles Data				
	a. QC Summary				
	System Monitoring Compound Summary (Form II VOA)	008	009	✓	AV
	Matrix Spike/Matrix Spike Duplicate Summary (Form III VOA)	010	011	✓	AV
	Method Blank Summary (Form IV VOA)	012	015	✓	AV
	GC/MS Instrument Performance Check (Form V VOA)	016	021	✓	AV
	Internal Standard Area and RT Summary (Form VIII VOA)	022	025	✓	AV
	b. Sample Data	026	106		
	TCL Results - (Form I VOA)			✓	AV
	Tentatively Identified Compounds (Form I VOA-TIC)			✓	AV
	Reconstructed total ion chromatograms (RIC) for each sample			✓	AV
	For each sample:				
	Raw spectra and background-subtracted mass spectra of target compounds identified			✓	AV
	Quantitation reports			✓	AV
	Mass spectra of all reported TICs with three best library matches			✓	AV
	c. Standards Data (All Instruments)	107	169		
	Initial Calibration Data (Form VI VOA)			✓	AV
	RICs and Quan Reports for all Standards			✓	AV
	Continuing Calibration Data (Form VII VOA)			✓	AV
	RICs and Quantitation Reports for all Standards			✓	AV
	d. Raw QC Data				
	BFB	170	187	✓	AV
	Blank Data	188	209	✓	AV
	Matrix Spike/Matrix Spike Duplicate Data	210	221	✓	AV

RECEIVED
JUN 04 1992
US EPA CENTRAL REGIONAL LAB.
536 S. CLARK ST.
CHICAGO, ILLINOIS 60605

FORM DC-2-1

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET (Cont.)

CASE NO. 19026 SDG NO. EQK13 SDG NOS. TO FOLLOW _____
_____ _____ SAS NO. _____

	PAGE NOs FROM	PAGE NOs TO	CHECK LAB	CHECK EPA
5. Semivolatiles Data				
a. QC Summary				
Surrogate Percent Recovery Summary (Form II SV)	222	222	✓	AV
MS/MSD Summary (Form III SV)	223	223	✓	AV
Method Blank Summary (Form IV SV)	224	224	✓	AV
GC/MS Instrument Performance Check (Form V SV)	225	228	✓	AV
Internal Standard Area and RT Summary (Form VIII SV)	229	234	✓	AV
b. Sample Data	235	275		
TCL Results - (Form I SV-1, SV-2)			✓	AV
Tentatively Identified Compounds (Form I SV-TIC)			✓	AV
Reconstructed total ion chromatograms (RIC) for each sample			✓	AV
For each sample:				
Raw spectra and background-subtracted mass spectra of target compounds			✓	AV
Quantitation reports			✓	AV
Mass spectra of TICs with three best library matches				
GPC chromatograms (if GPC performed)			✓	—
c. Standards Data (All Instruments)	276	325		
Initial Calibration Data (Form VI SV-1, SV-2)			✓	AV
RICs and Quan Reports for all Standards			✓	AV
Continuing Calibration (Form VII SV-1, SV-2)			✓	AV
RICs and Quanitation Reports for all Standards			✓	AV
Semivolatile GPC Calibration Data-UV detector traces			✓	—
d. Raw QC Data				
DFTPP	326	341	✓	AV
Blank Data	342	351	✓	AV
Matrix Spike/Matrix Spike Duplicate Data	352	359	✓	AV
6. Pesticides				
a. QC Summary				
Surrogate Percent Recovery Summary (Form II PEST)	360	360	✓	AV
MS/MSD Duplicate Summary (Form III PEST)	361	361	✓	AV
Method Blank Summary (Form IV PEST)	362	362	✓	AV

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET (Cont.)

CASE NO. 19026 SDG NO. EQK13 SDG NOS. TO FOLLOW _____
_____ _____ SAS NO. _____

	PAGE NOs FROM	PAGE NOs TO	CHECK LAB	CHECK EPA
6. Pesticides (cont.)				
b. Sample Data	363	390		
TCL Results - Organic Analysis Data Sheet (Form I PEST)			✓	AV
Chromatograms (Primary Column)			✓	AV
Chromatograms from second GC column confirmation			✓	AV
GC Integration report or data system printout			✓	AV
Manual work sheets			✓	AV
For pesticides/Aroclors confirmed by GC/MS, copies of raw spectra and copies of background-subtracted mass spectra of target compounds (samples & standards)			✓	~~AV~~
c. Standards Data	391	449		
Initial Calibration of Single Component Analytes (Form VI PEST-1 and PEST-2)			✓	AV
Initial Calibration of Multicomponent Analytes (Form VI, PEST-3)			✓	AV
Analyte Resolution Summary (Form VI PEST-4)			✓	AV
Calibration Verification Summary (Form VII PEST-1)			✓	AV
Calibration Verification Summary (Form VII PEST-2)			✓	AV
Analytical Sequence (Form VIII PEST)			✓	AV
Florisil Cartridge Check (Form IX PEST-1)			✓	AV
Pesticide GPC Calibration (Form IX PEST-2)			✓	AV
Pesticide Identification Summary for Single Component Analytes (Form X PEST-1)			✓	AV
Pesticide Identification Summary for Multicomponent Analytes (Form X PEST-2)			✓	AV
Chromatograms and data system printouts A print of retention times and corresponding peak areas or peak heights			✓	AV
Pesticide GPC calibration data - UV detector traces			✓	—
d. Raw QC Data				
Blank Data	450	591	✓	AV
Matrix Spike/Matrix Spike Duplicate Data	592	605	✓	AV

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET (Cont.)

CASE NO. 19026 SDG NO. EQK13 SDG NOS. TO FOLLOW _____
_____ _____ SAS NO. _____

	PAGE NOs FROM	PAGE NOs TO	CHECK LAB	CHECK EPA
7. Miscellaneous Data				
Original preparation and analysis forms or copies of preparation and analysis logbook pages	606	641	✓	AV
Internal sample and sample extract transfer chain-of-custody records	642	646	✓	AV
Screening Records	N/A	N/A	✓	—
All instrument output, including strip charts from screening activites (describe or list)	N/A	N/A	✓	—
	N/A	N/A	✓	—
	N/A	N/A	✓	—
8. EPA Shipping/Receiving Documents				
Airbills (No. of shipments 1)	647	647	✓	AV
Chain-of-Custody Records	648	650	✓	AV
Sample Tags	651	651	✓	AV
Sample Log-In Sheet (Lab & DC1)	652	657	✓	AV
SDG Cover Sheet	658	658	✓	AV
Miscellaneous Shipping/Receiving Records (describe or list)				
	N/A	N/A	✓	—
	N/A	N/A	✓	—
9. Internal Lab Sample Transfer Records and Tracking Sheets (describe or list)				
	N/A	N/A	✓	—
	N/A	N/A	✓	—
10. Other Records (describe or list)				
Telephone Communication Log	659	659	✓	AV
	N/A	N/A	✓	—
	N/A	N/A	✓	—

11. Comments: _____

Completed by: Robin Douglas (Signature) Robin Douglas/Sample Custodian, DCO (Printed Name/Title) 06-03-92 (Date)
(CLP Lab)

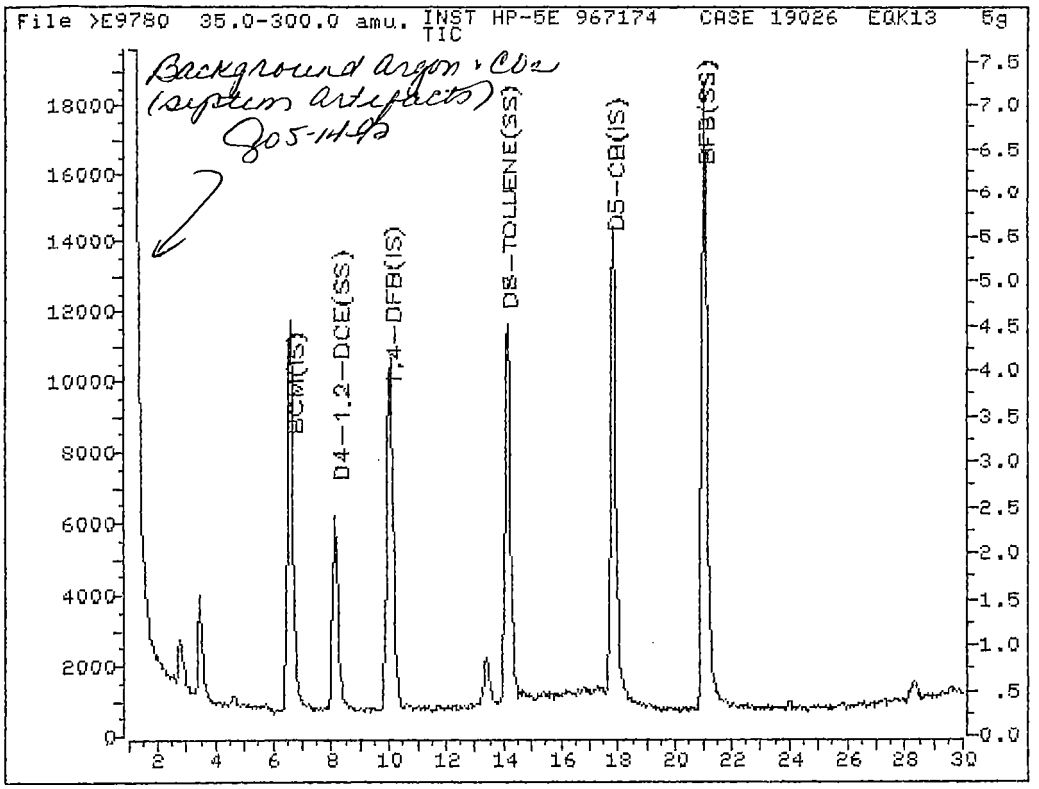
Audited by: Al Venuto (Signature) AL VENUTO / org data reviewer (Printed Name/Title) 6-12-92 (Date)
(EPA)

FORM DC-2-4

VOLATILE

DATA

SAMPLE DATA PACKAGE



MS data file header from : >E9780

Sample: INST HP-5E 967174 Operator: TERMINAL63MS 5/07/92 1:00
Misc : CASE 19026 EQK13 5g IS/SS=50,44745,447
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

05-14-92

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920507 01:33
Output File: ^E9780::QT Injected at: 920507 01:00
Data File: >E9780::D9 Dilution Factor: 1.00000
Name: INST HP-5E 967174
Misc: CASE 19026 EQK13 5g IS/SS=50,44745,447

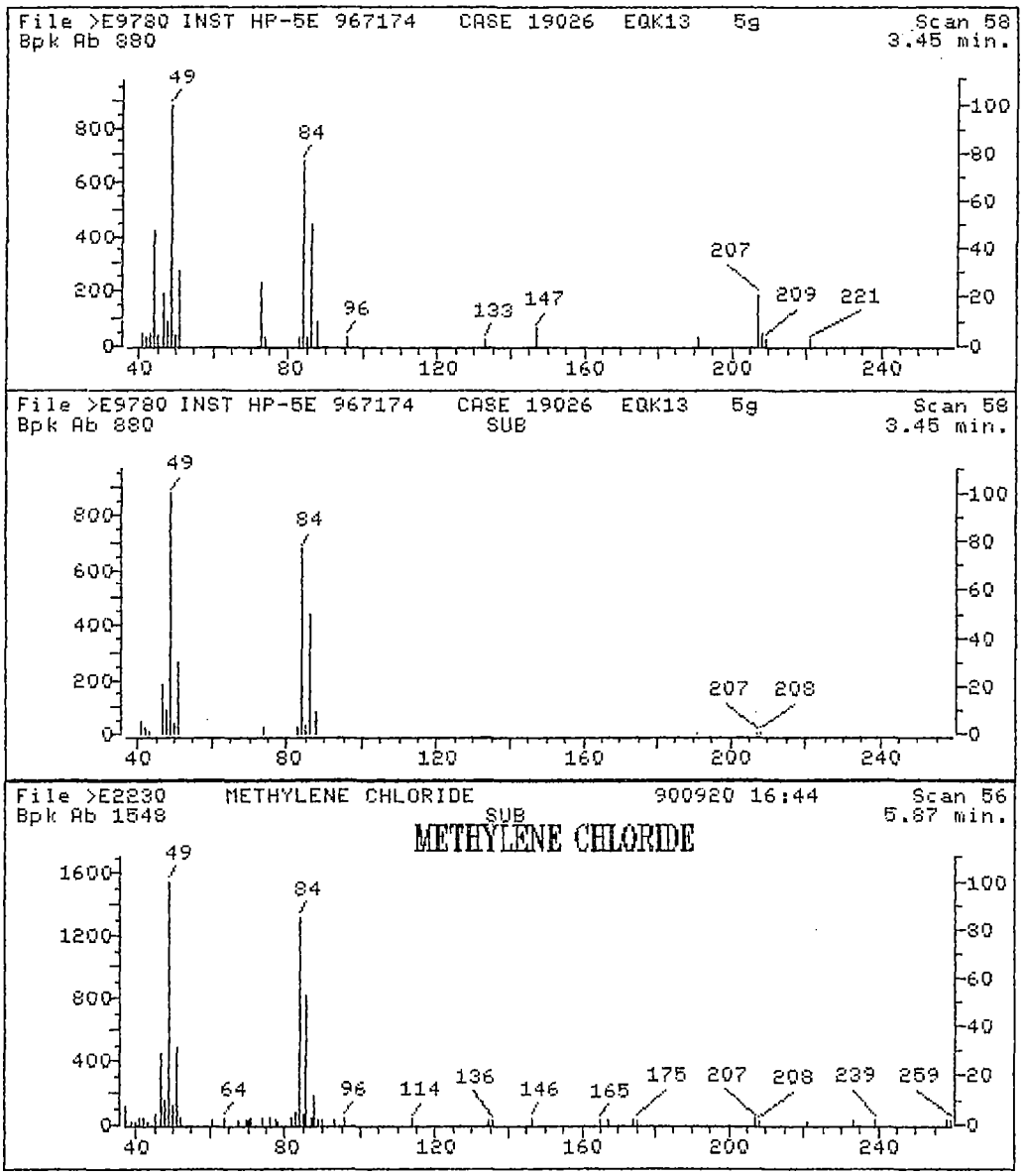
ID File: NCSID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (SOIL)
Last Calibration: 920506 18:21

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.58	128.0	19953	50.00	ug/Kg	94
6)	METHYLENE CHLORIDE	3.45	84.0	7116	14.68	ug/Kg	81
7)	ACETONE	2.90	43.0	3570	16.08	ug/Kg	70
13)	d4-1,2-DICHLOROETHANE(SS)	8.14	65.0	27792	49.68	ug/Kg	100
16)	*1,4-DIFLUOROBENZENE(IS)	10.03	114.0	65002	50.00	ug/Kg	33
28)	*d5-CHLOROBENZENE(IS)	17.85	117.0	51109	50.00	ug/Kg	100
33)	d8-TOLUENE(SS)	14.17	98.0	53172	58.02	ug/Kg	99
37)	4-BROMOFLUOROBENZENE(SS)	21.07	95.0	53959	52.22	ug/Kg	98

* Compound is ISTD

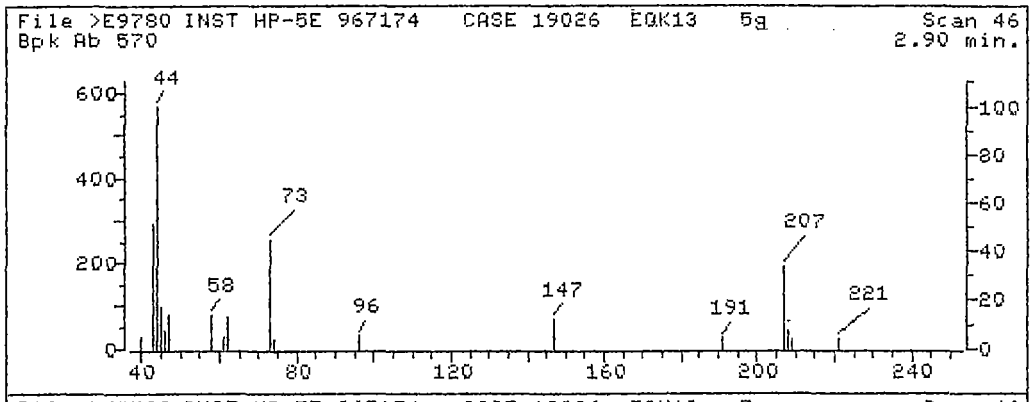
1805-1490

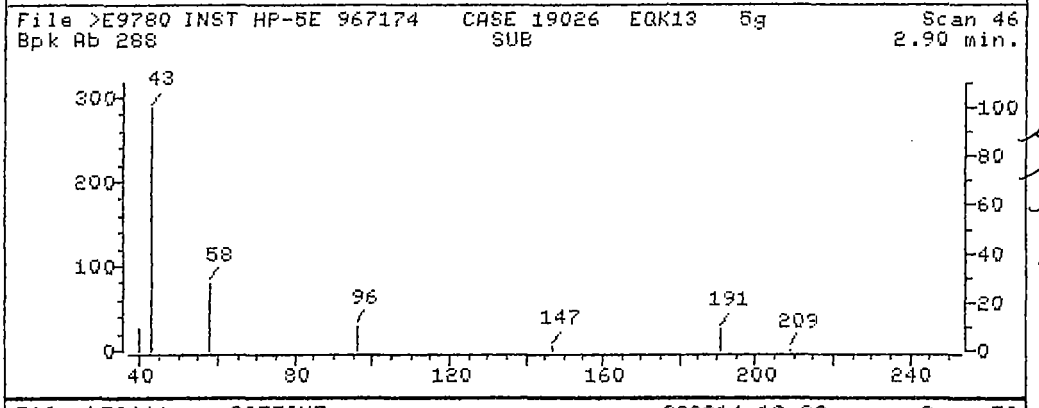
SAMPLE NAME : INST HP-5E 967174
MISC : CASE 19026 EQK13 5g IS/SS=50,44745,447
INJECTION TIME : 920507 01:00
INSTRUMENT ID : 5E



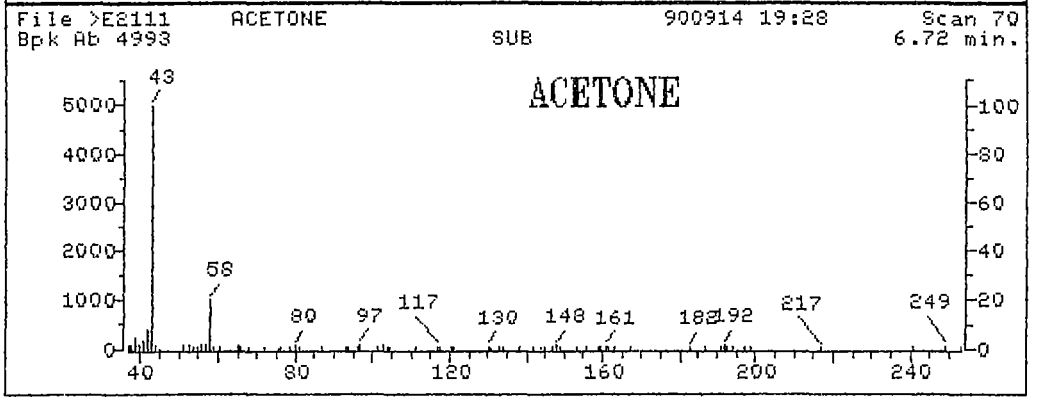
1005-1492

SAMPLE NAME : INST HP-5E 967174
MISC : CASE 19026 EQK13 5g IS/SS=50,44745,447
INJECTION TIME : 920507 01:00
INSTRUMENT ID : 5E





Background cannot be completely subtracted away - few extraneous ions are present
S



1985-14-DP

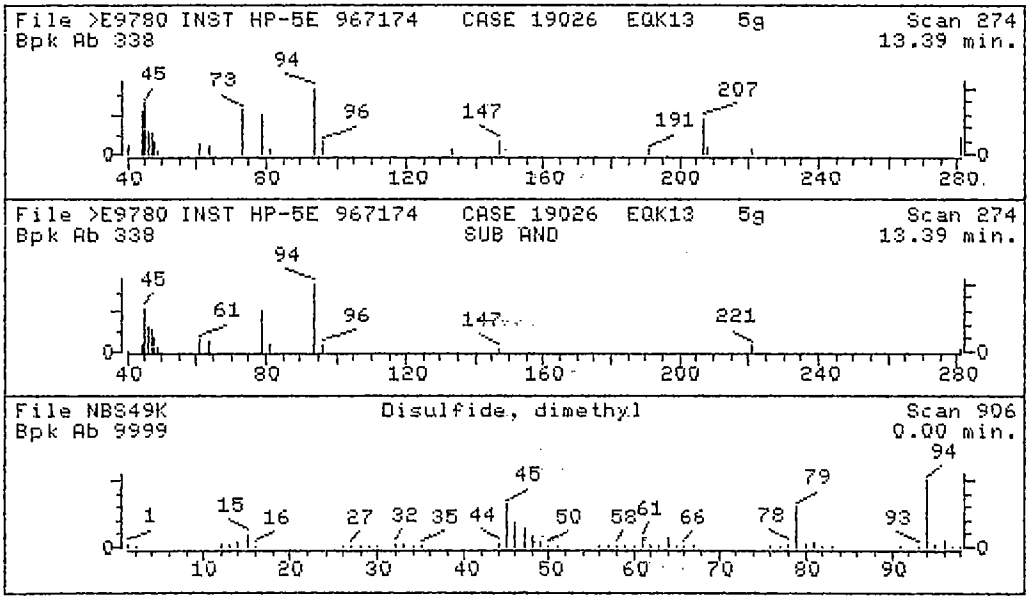
SAMPLE NAME:INST HP-5E 967174
MISC:CASE 19026 EQK13
INJECTION TIME:920507 01:00
INSTRUMENT ID:5E

Cp5-14-92

1. Disulfide, dimethyl 94 C2H6S2

Sample file: >E9780 Spectrum #: 274
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*	624920	8674	NBS49K	85	33	1	0	92	2	68	83



Cp5-14-92

DATE/TIME INJECTED 920507 01:00
>E9780 INST HP-5E 967174 CASE 19026 EQK13

THE INTEGRATION PARAMETERS USED WERE
,.20:0.00,-13949
NO SMOOTHING WAS DONE.

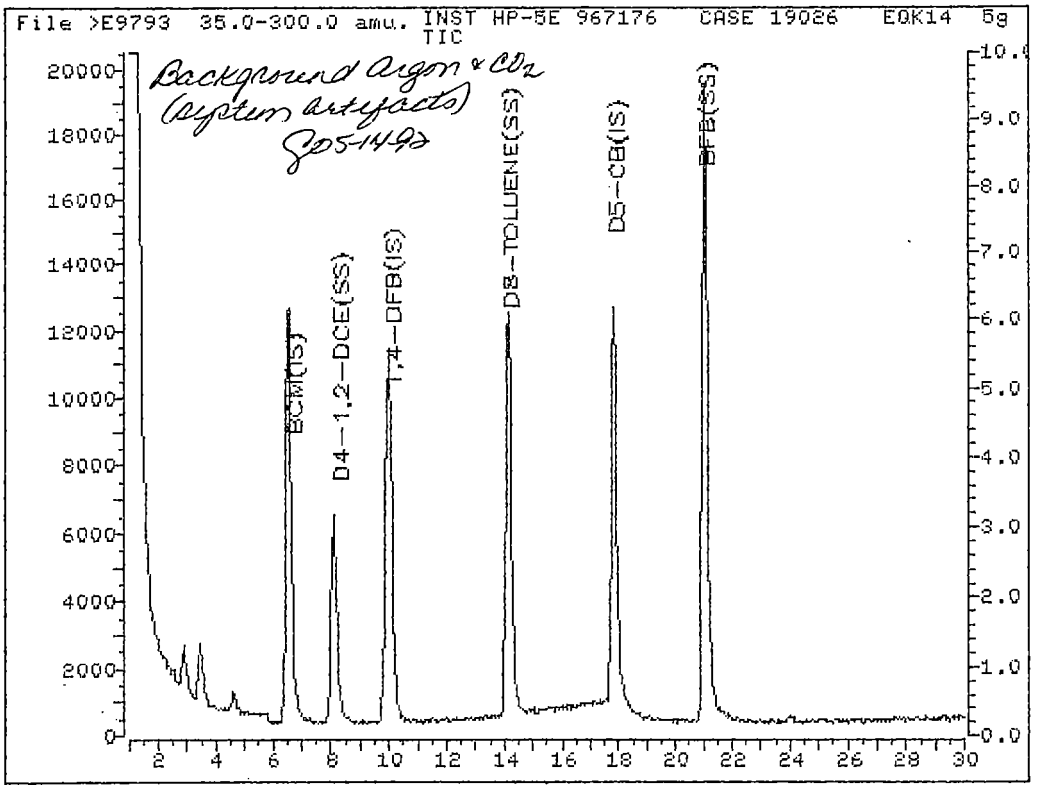
INTEGRATION TABLE

TIC NUM	PEAK NUM	RETENTION TIME	FIRST SCAN	MAX SCAN	LAST SCAN	CORRECTED AREA	CONCENTRATION ug/Kg	ug/Kg	ISTD USED
1	6	13.386	270	274	281	16180	5.20	8.67	2

INTERNAL STANDARD TABLE

IS NUM	PEAK NUM	R.T. MIN.	FIRST SCAN	MAX SCAN	LAST SCAN	CORRECTED AREA	INTERNAL STANDARD NAME
1	3	6.579	120	126	139	139485	BROMOCHLOROMETHANE(IS)
2	5	10.029	194	201	211	155487	1,4-DIFLUOROBENZENE(IS)
3	8	17.848	365	371	382	162946	d5-CHLOROBENZENE(IS)

1805-14-92



MS data file header from : >E9793

Sample: INST HP-5E 967176 Operator: TERMINAL63MS 5/07/92 14:21
Misc : CASE 19026 EQK14 5g IS/SS=50ppb 44745,44746
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

gp5-14-92

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920507 14:54
Output File: ^E9793::QT Injected at: 920507 14:21
Data File: >E9793::D1 Dilution Factor: 1.00000
Name: INST HP-5E 967176
Misc: CASE 19026 EQK14 5g IS/SS=50ppb 44745,44746

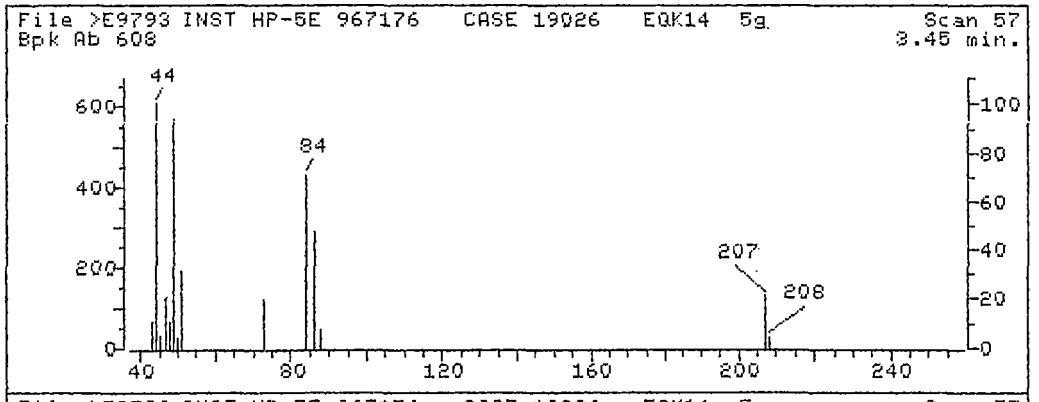
ID File: NCSID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (SOIL)
Last Calibration: 920507 13:43

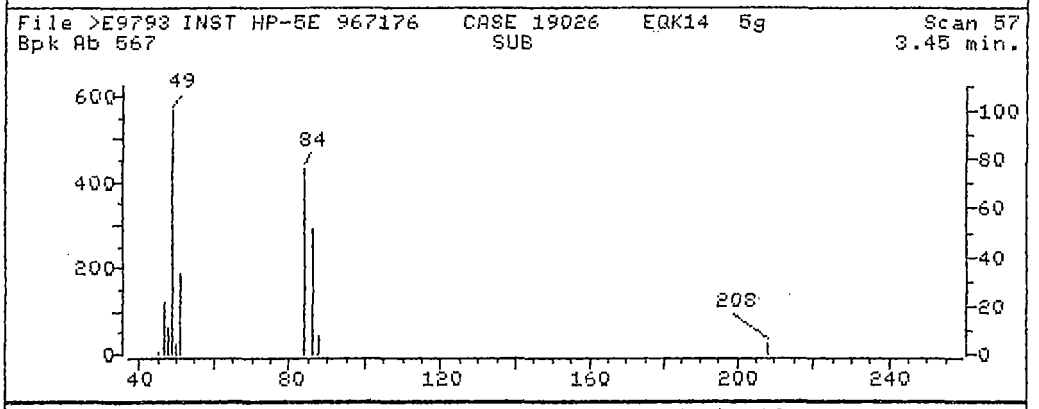
	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.53	128.0	23308	50.00	ug/Kg	98
6)	METHYLENE CHLORIDE	3.45	84.0	4999	8.98	ug/Kg	82
7)	ACETONE	2.89	43.0	11897	44.22	ug/Kg	72
13)	d4-1,2-DICHLOROETHANE(SS)	8.09	65.0	31851	46.37	ug/Kg	100
16)	*1,4-DIFLUOROBENZENE(IS)	9.98	114.0	72859	50.00	ug/Kg	32
28)	*d5-CHLOROBENZENE(IS)	17.84	117.0	43964	50.00	ug/Kg	100
33)	d8-TOLUENE(SS)	14.16	98.0	57734	61.60	ug/Kg	98
34)	TOLUENE	14.30	91.0	2089	2.38	ug/Kg	86
37)	4-BROMOFLUOROBENZENE(SS)	21.06	95.0	56009	49.31	ug/Kg	98

* Compound is ISTD

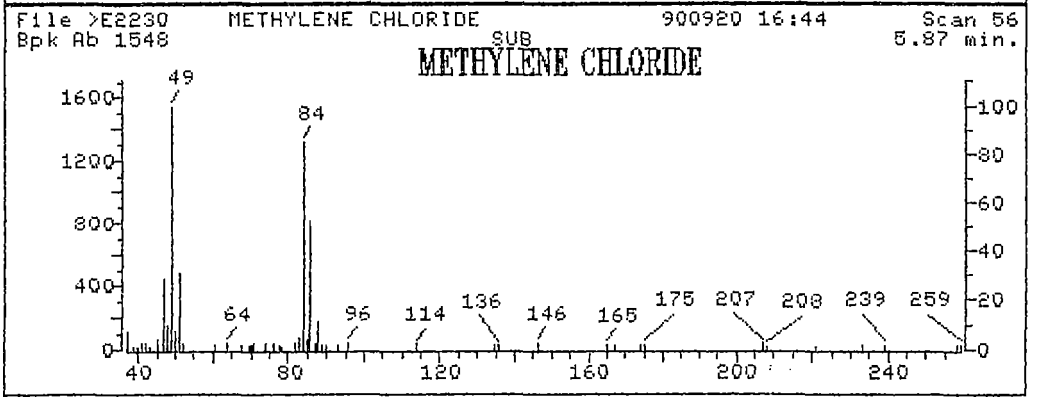
1905-1493

SAMPLE NAME : INST HP-5E 967176
MISC : CASE 19026 EQK14 5g IS/SS=50ppb 44745,44746
INJECTION TIME : 920507 14:21
INSTRUMENT ID : 5E



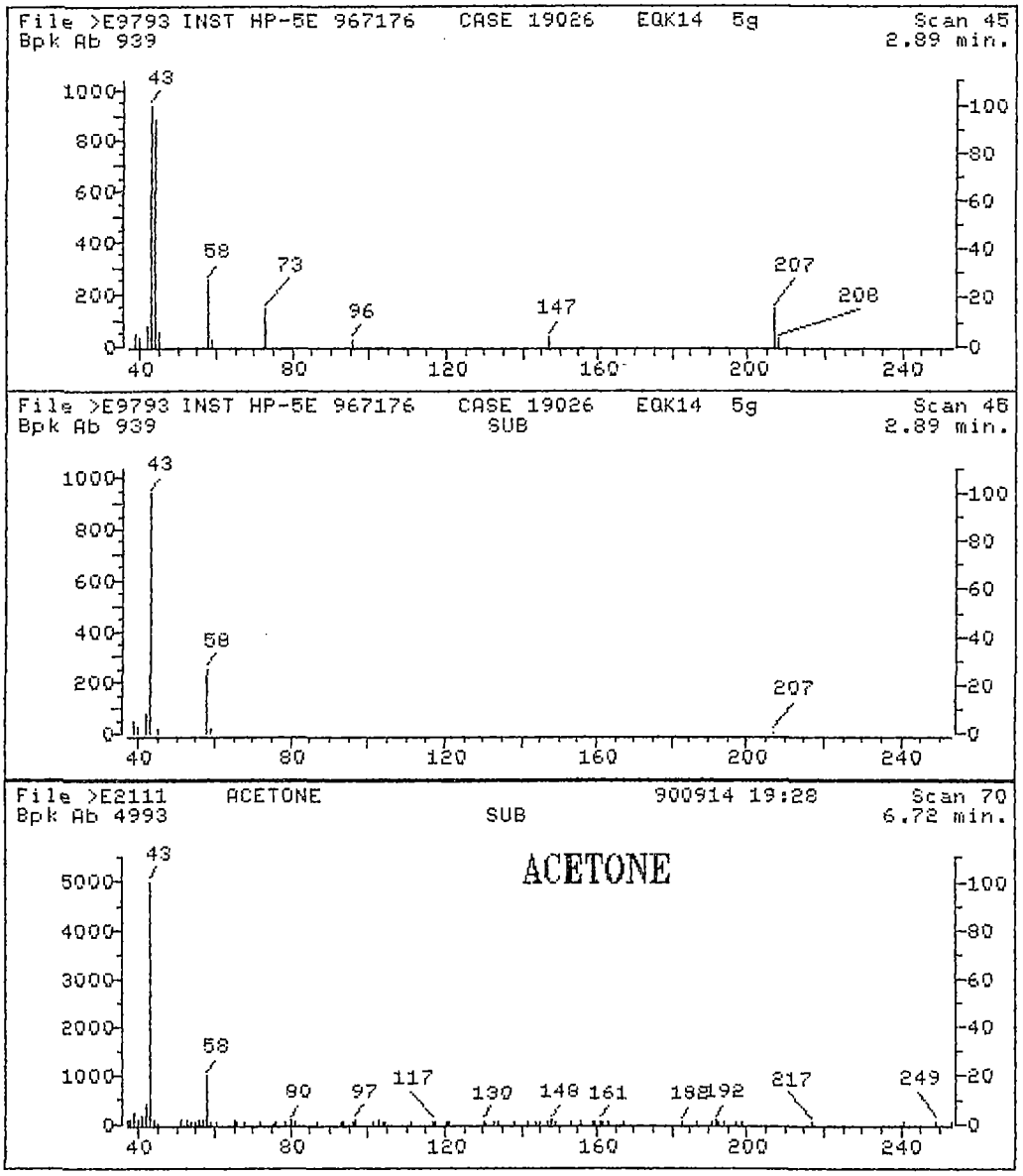


Below the CRDL-
8



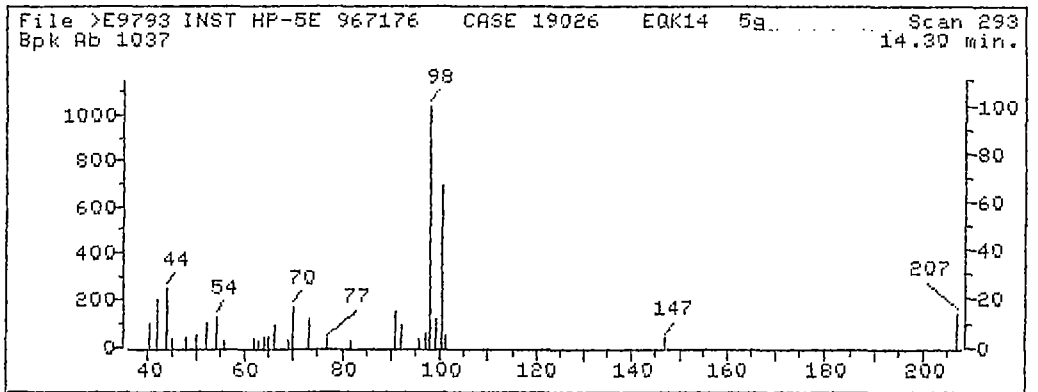
1805-14-92

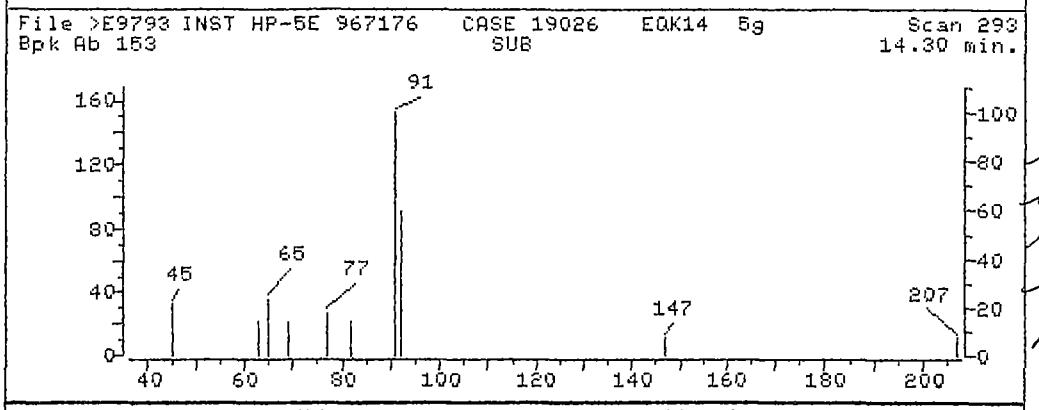
SAMPLE NAME : INST HP-5E 967176
MISC : CASE 19026 EQK14 5g IS/SS=50ppb 44745,44746
INJECTION TIME : 920507 14:21
INSTRUMENT ID : 5E



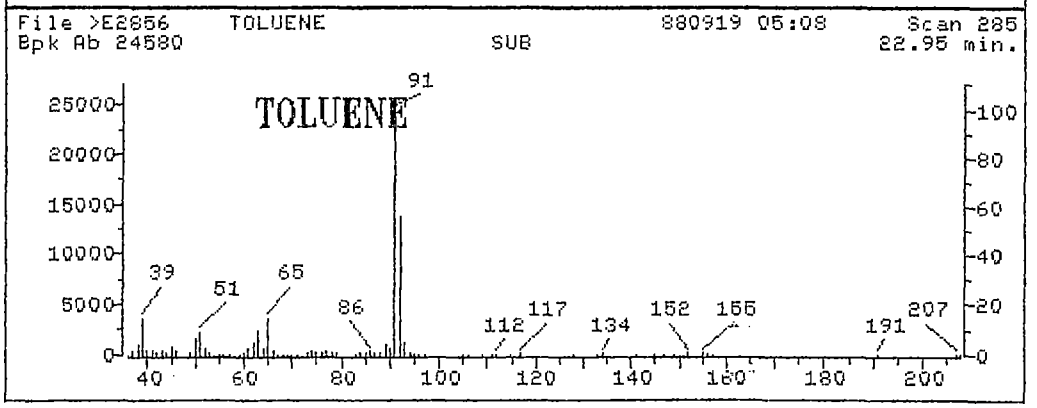
185-1493

SAMPLE NAME : INST HP-5E 967176
MISC : CASE 19026 EQK14 5g IS/SS=50ppb 44745,44746
INJECTION TIME : 920507 14:21
INSTRUMENT ID : 5E

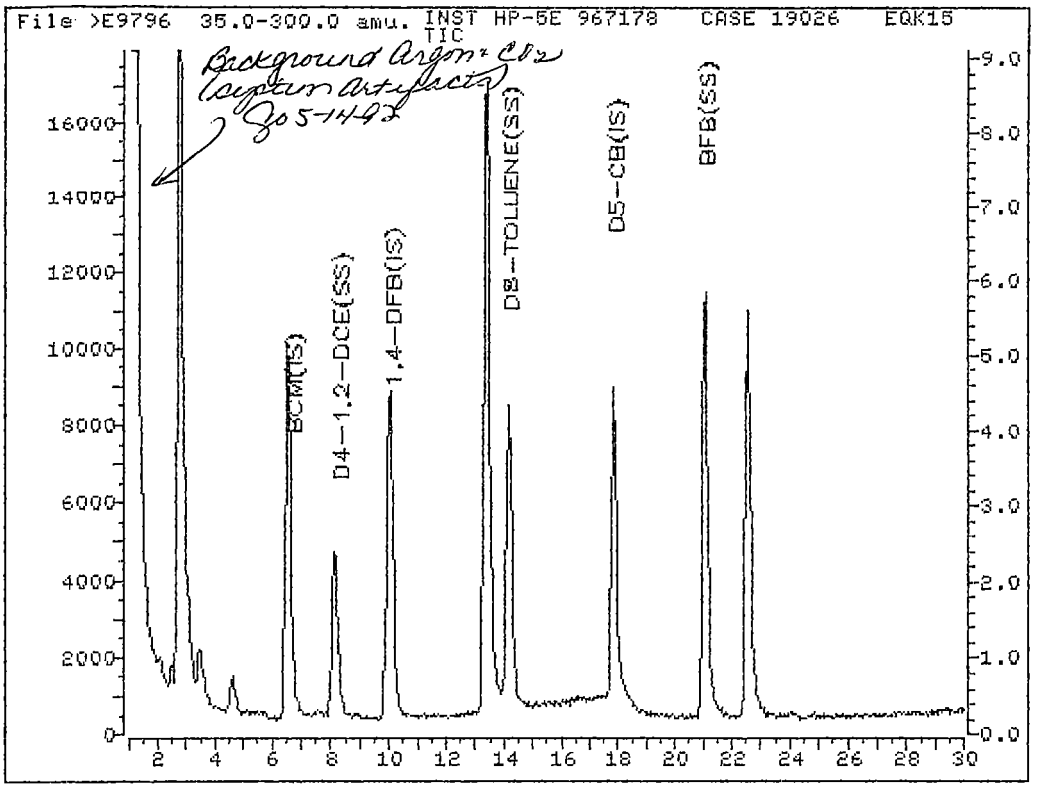




Below the CRQL - background cannot be completely subtracted away - few extraneous ions are present.



1 gp 5-14-93



MS data file header from : >E9796

Sample: INST HP-5E 967178 Operator: TERMINAL63MS 5/07/92 16:40
Misc : CASE 19026 EQK15 5g IS/SS=50ppb 44745,44746
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

Jo 5-14-92

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920507 17:13
Output File: ^E9796::QT Injected at: 920507 16:40
Data File: >E9796::D1 Dilution Factor: 1.00000
Name: INST HP-5E 967178
Misc: CASE 19026 EQK15 5g IS/SS=50ppb 44745,44746

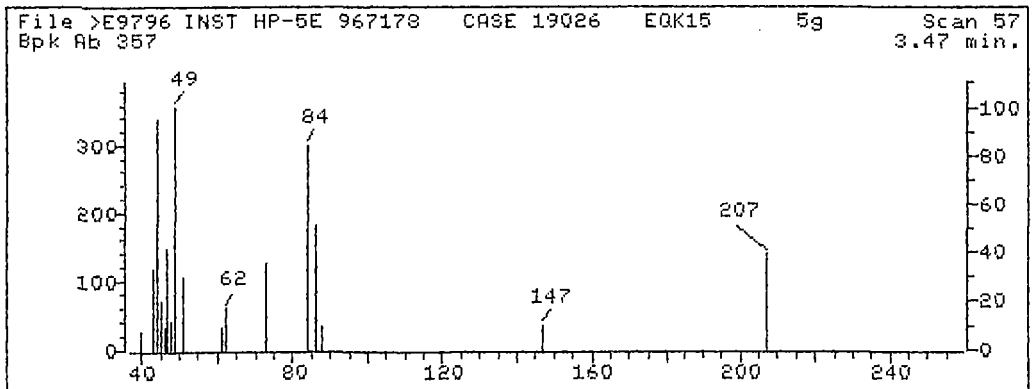
ID File: NCSID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (SOIL)
Last Calibration: 920507 13:43

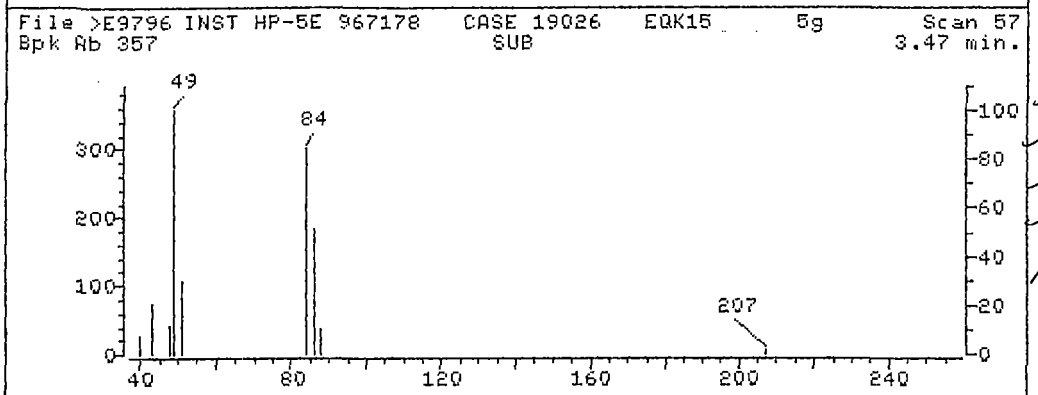
	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.55	128.0	18399	50.00	ug/Kg	99
6)	METHYLENE CHLORIDE	3.47	84.0	3760	8.56	ug/Kg	76
13)	d4-1,2-DICHLOROETHANE(SS)	8.11	65.0	22403	41.32	ug/Kg	100
16)	*1,4-DIFLUOROBENZENE(IS)	10.04	114.0	56598	50.00	ug/Kg	33
28)	*d5-CHLOROBENZENE(IS)	17.86	117.0	30969	50.00	ug/Kg	100
33)	d8-TOLUENE(SS)	14.18	98.0	39022	59.11	ug/Kg	96
37)	4-BROMOFLUOROBENZENE(SS)	21.08	95.0	33309	41.63	ug/Kg	99

* Compound is ISTD

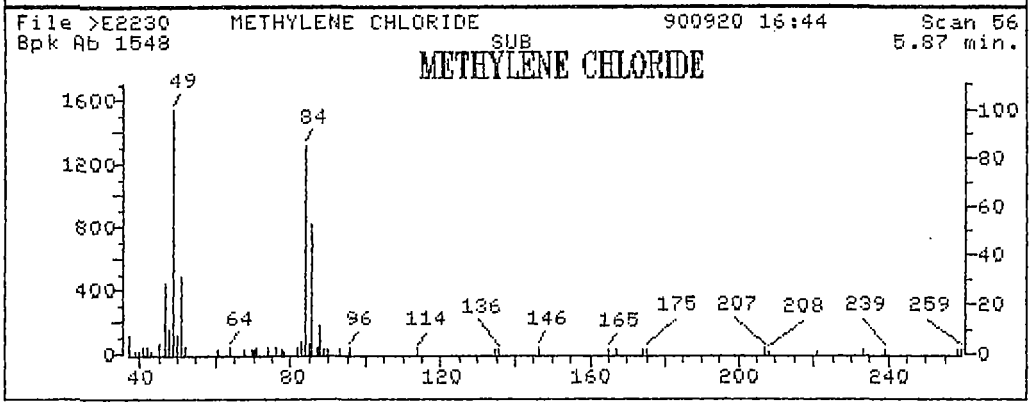
19851492

SAMPLE NAME : INST HP-5E 967178
MISC : CASE 19026 EQK15 5g IS/SS=50ppb 44745,44746
INJECTION TIME : 920507 16:40
INSTRUMENT ID : 5E





Below the CRPL-background cannot be completely subtracted away. few extraneous ions are present.
Z



✓ 905-1492

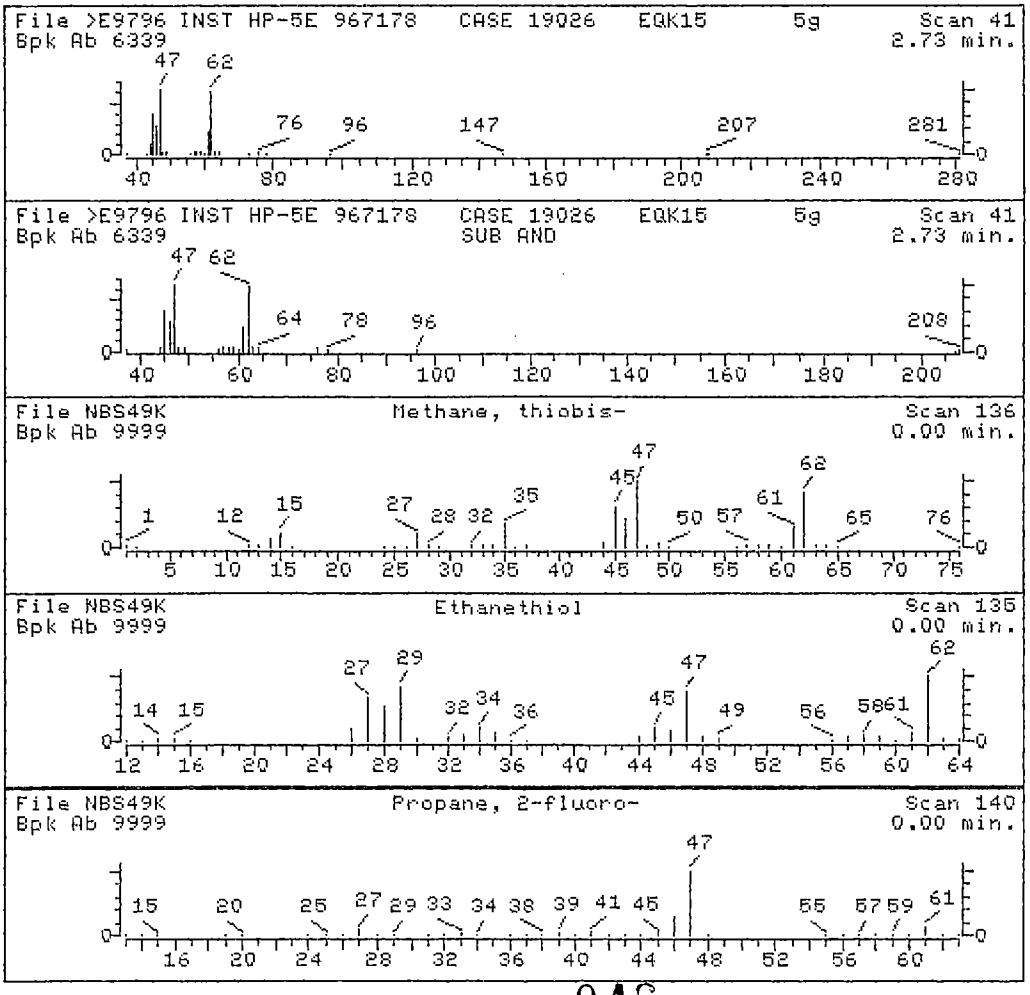
SAMPLE NAME:INST HP-5E 967178
MISC:CASE 19026 EQK15
INJECTION TIME:920507 16:40
INSTRUMENT ID:5E

SQ5-14-92

1. Methane, thiobis- 62 C2H6S
2. Ethanethiol 62 C2H6S
3. Propane, 2-fluoro- 62 C3H7F

Sample file: >E9796 Spectrum #: 41
Search speed: 1 Tilting option: S No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	96*	75183	2340	NBS49K	82	43	0	0	99	2	72	94
2.	29*	75081	2339	NBS49K	31	97	1	0	68	41	8	17
3.	15*	420268	2192	NBS49K	26	61	2	0	100	56	3	14



SQ5-14-92

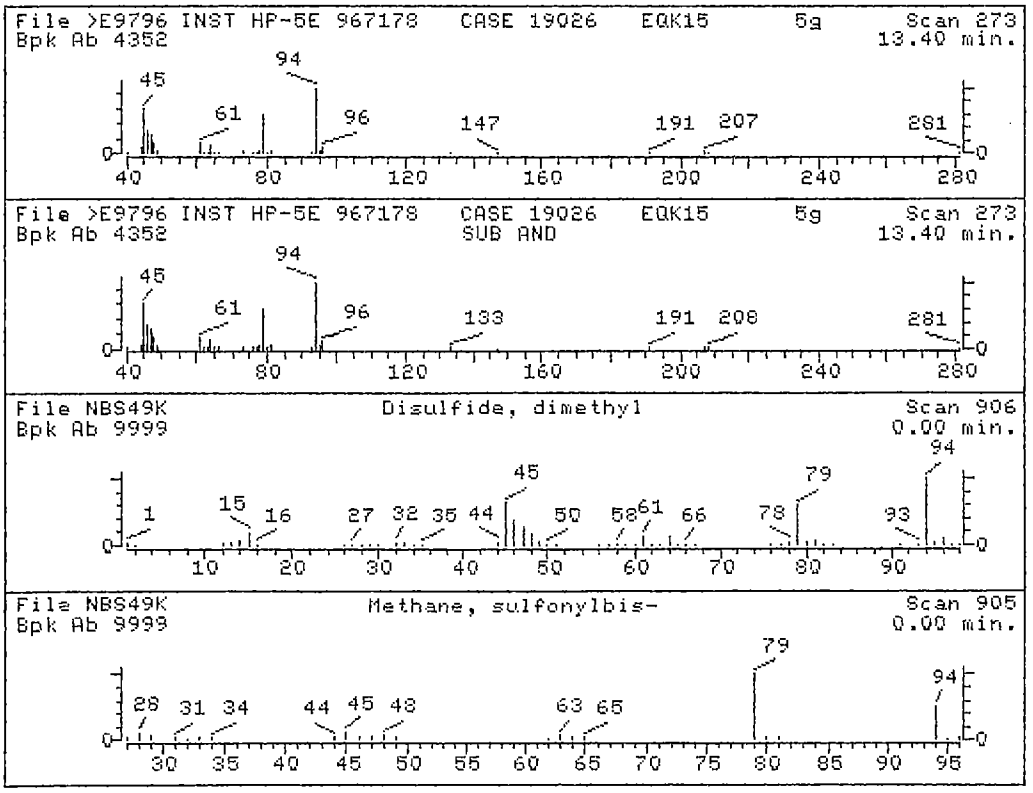
SAMPLE NAME:INST HP-5E 967178
MISC:CASE 19026 EQK15
INJECTION TIME:920507 16:40
INSTRUMENT ID:5E

805-1492

1. Disulfide, dimethyl 94 C2H6S2
2. Methane, sulfonylbis- 94 C2H6O2S

Sample file: >E9796 Spectrum #: 273
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.	96*	624920	8674	NBS49K	91	27	0	0	92	0	72	96
2.	26*	67710	8673	NBS49K	27	68	2	0	199	44	8	14



1805-1492

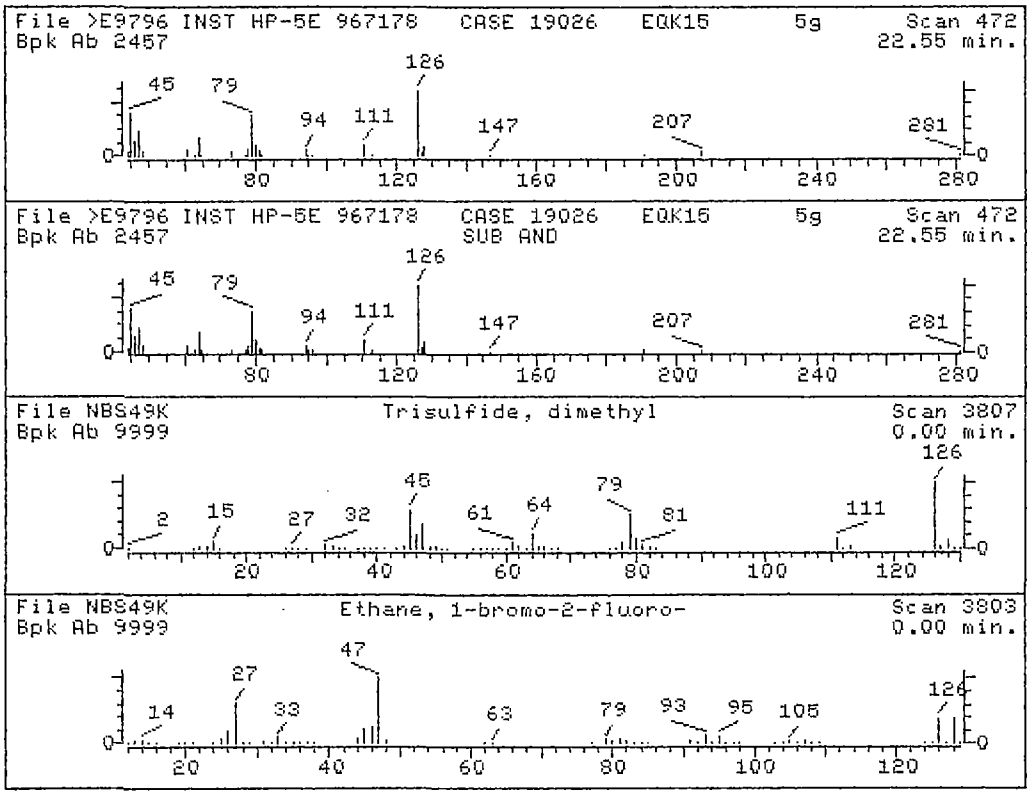
SAMPLE NAME:INST HP-5E 967178
MISC:CASE 19026 EQK15
INJECTION TIME:920507 16:40
INSTRUMENT ID:5E

gp5.14.92

1. Trisulfide, dimethyl 126 C2H6S3
2. Ethane, 1-bromo-2-fluoro- 126 C2H4BrF

Sample file: >E9796 Spectrum #: 472
Search speed: 1 Tilting option: S No. of ion ranges searched: 48

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	93*	3658808	14672	NBS49K	91	27	1	0	100	2	68	89
2.	36*	762492	14671	NBS49K	27	86	3	0	260	29	14	13



gp5.14.92

DATE/TIME INJECTED 920507 16:40
>E9796 INST HP-5E 967178 CASE 19026 EQK15

THE INTEGRATION PARAMETERS USED WERE
,.20:0.00,-10290
NO SMOOTHING WAS DONE.

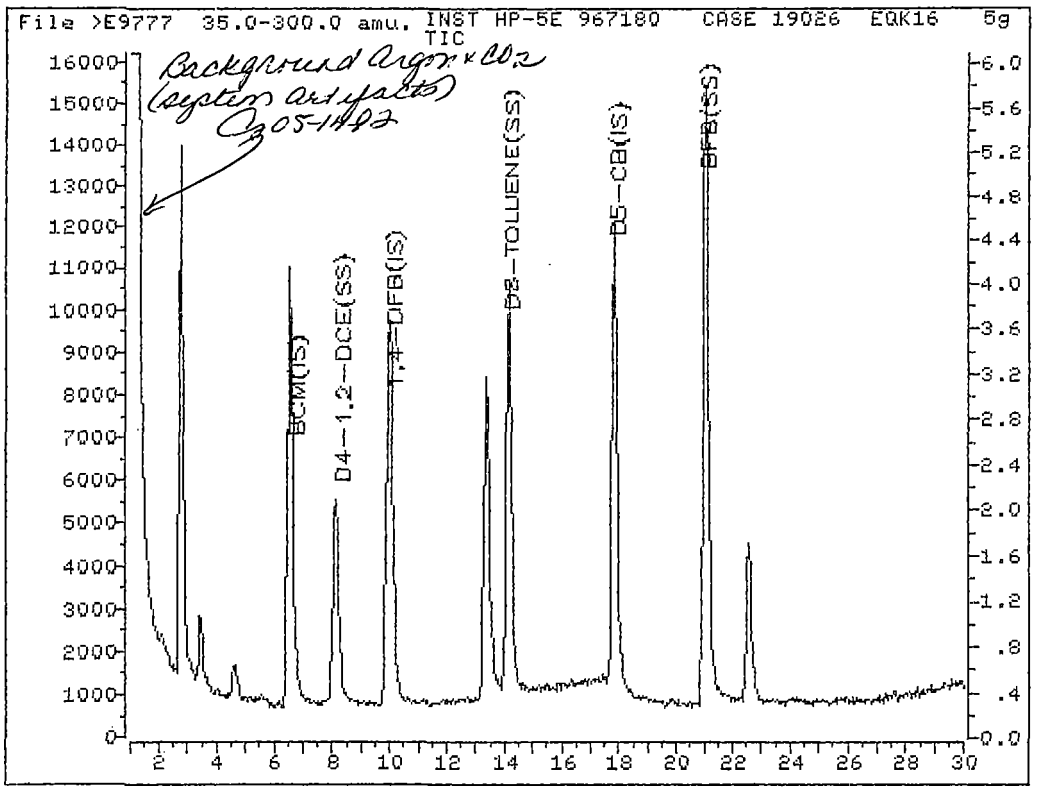
INTEGRATION TABLE

TIC NUM	PEAK NUM	RETENTION TIME	FIRST SCAN	MAX SCAN	LAST SCAN	CORRECTED AREA	CONCENTRATION ug/Kg	CONCENTRATION ug/Kg	ISTD USED
1	1	2.729	38	41	54	304212	120.21	445.24	1
2	7	13.397	266	273	284	234696	86.66	320.95	2
3	11	22.548	467	472	483	132954	64.60	239.26	3

INTERNAL STANDARD TABLE

IS NUM	PEAK NUM	R.T. MIN.	FIRST SCAN	MAX SCAN	LAST SCAN	CORRECTED AREA	INTERNAL STANDARD NAME
1	4	6.546	119	124	142	126529	BROMOCHLOROMETHANE(IS)
2	6	10.040	191	200	209	135419	1,4-DIFLUOROBENZENE(IS)
3	9	17.858	364	370	382	102904	d5-CHLOROBENZENE(IS)

1905-14-92



MS data file header from : >E9777

Sample: INST HP-5E 967180 Operator: TERMINAL63MS 5/06/92 22:40
Misc : CASE 19026 EQK16 5g IS/SS=50,44745,447
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

19051492

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920506 23:13
Output File: ^E9777::QT Injected at: 920506 22:40
Data File: >E9777::D9 Dilution Factor: 1.00000
Name: INST HP-5E 967180
Misc: CASE 19026 EQK16 5g IS/SS=50,44745,447

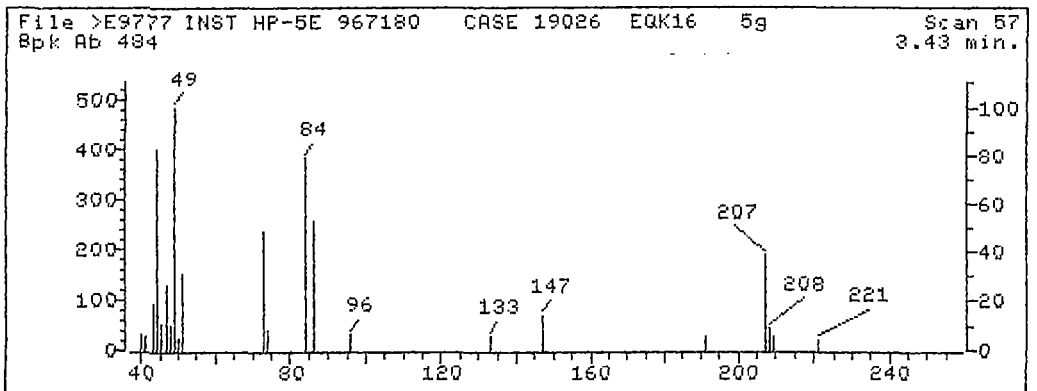
ID File: NCSID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (SOIL)
Last Calibration: 920506 18:21

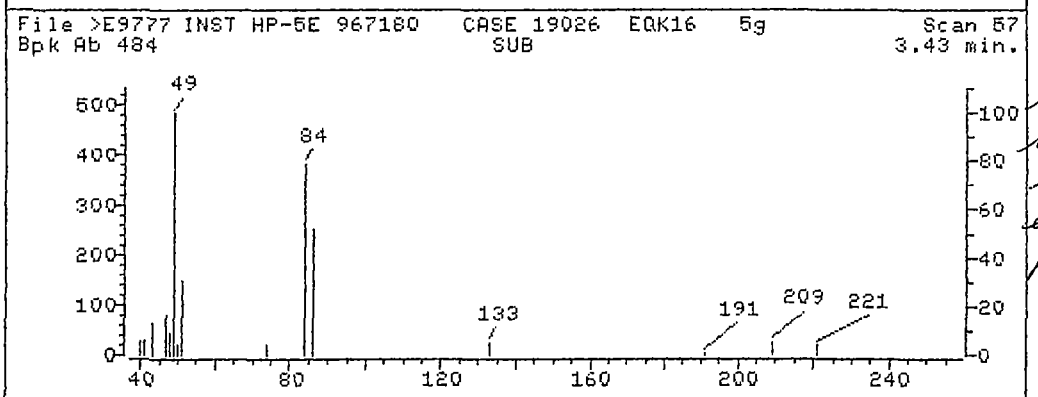
	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.55	128.0	18556	50.00	ug/Kg	95
6)	METHYLENE CHLORIDE	3.43	84.0	3474	7.70	ug/Kg	79
13)	d4-1,2-DICHLOROETHANE(SS)	8.12	65.0	23737	45.63	ug/Kg	100
16)	*1,4-DIFLUOROBENZENE(IS)	10.00	114.0	60531	50.00	ug/Kg	33
28)	*d5-CHLOROBENZENE(IS)	17.82	117.0	43933	50.00	ug/Kg	100
33)	d8-TOLUENE(SS)	14.14	98.0	46306	58.78	ug/Kg	97
37)	4-BROMOFLUOROBENZENE(SS)	21.04	95.0	44392	49.98	ug/Kg	97

* Compound is ISTD

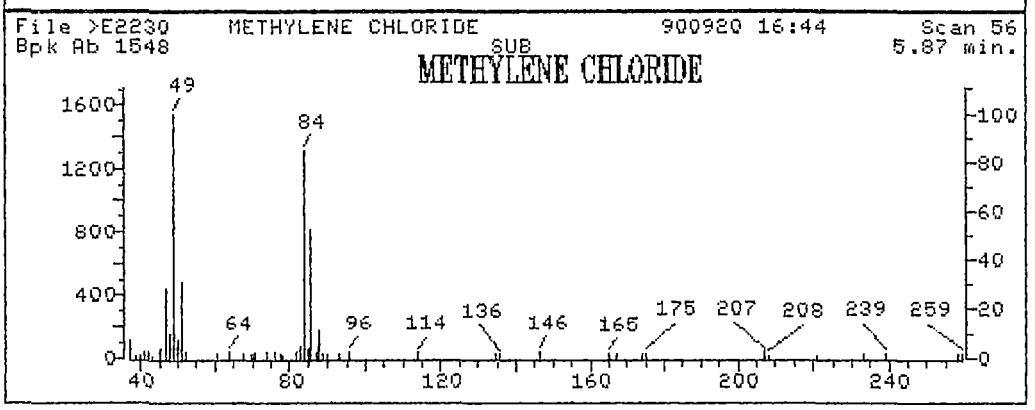
19054492

SAMPLE NAME : INST HP-5E 967180
MISC : CASE 19026 EQK16 5g IS/SS=50,44745,447
INJECTION TIME : 920506 22:40
INSTRUMENT ID : 5E





Below the CNQL - background cannot be completely subtracted away - few extraneous ions are present
Z



JQ05-1492

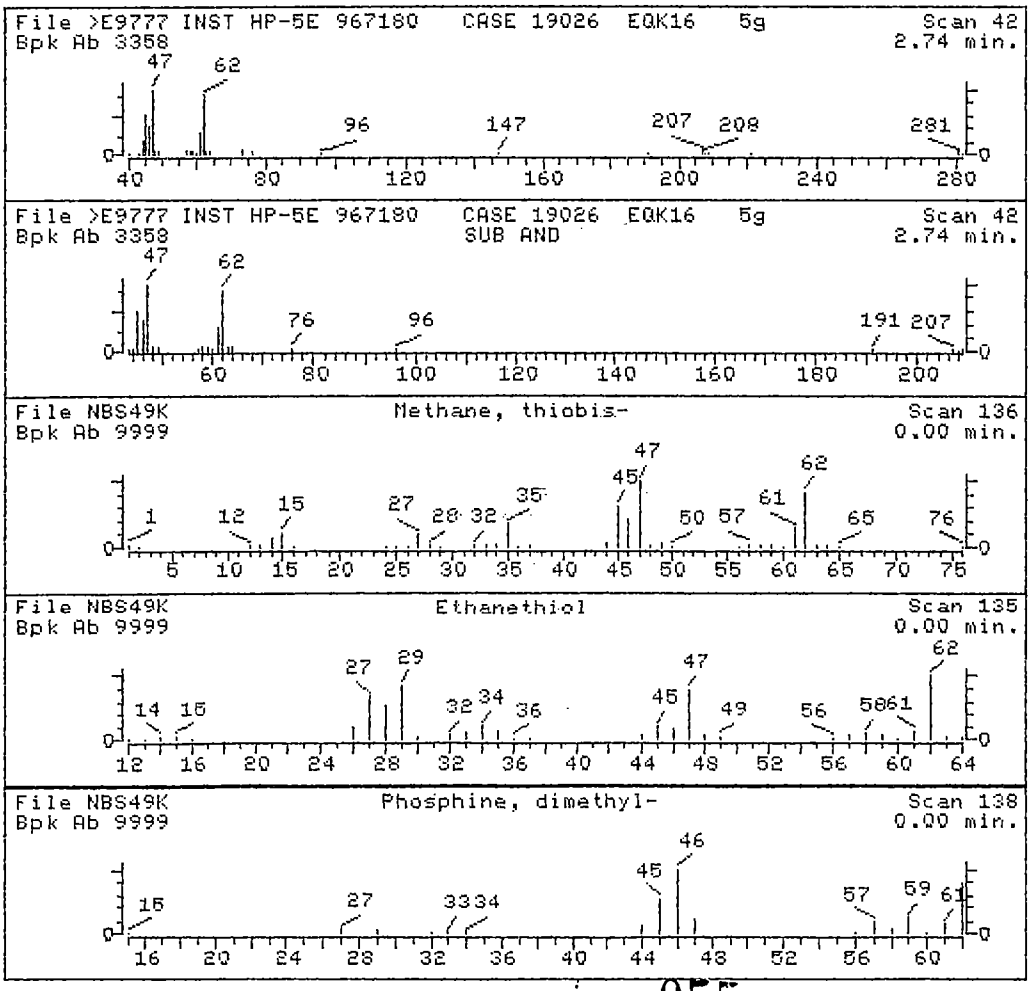
SAMPLE NAME:INST HP-5E 967180
MISC:CASE 19026 EQK16
INJECTION TIME:920506 22:40
INSTRUMENT ID:5E

gps-1492

1. Methane, thiobis- 62 C2H6S
2. Ethanethiol 62 C2H6S
3. Phosphine, dimethyl- 62 C2H7P

Sample file: >E9777 Spectrum #: 42
Search speed: 1 Tilting option: S No. of ion ranges searched: 47

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	96*	75183	2340	NBS49K	82	43	0	0	98	1	72	94
2.	41*	75081	2339	NBS49K	37	91	0	0	63	42	14	33
3.	25*	676595	2342	NBS49K	23	83	3	0	114	46	7	12



gps-1492

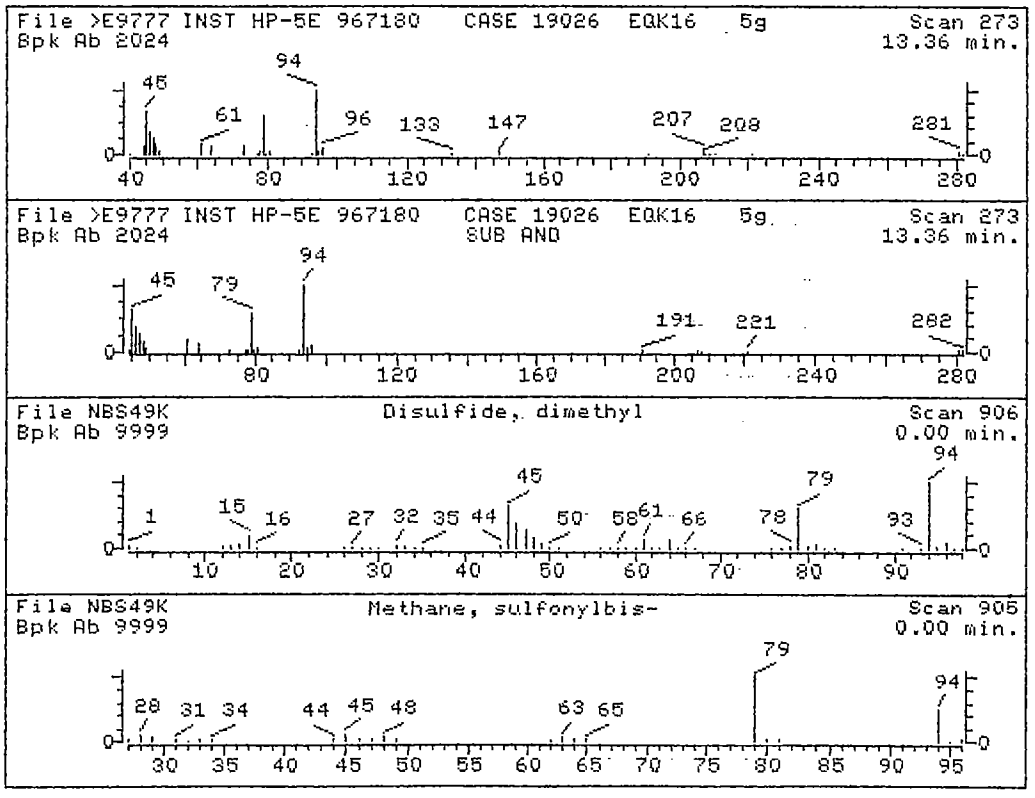
SAMPLE NAME:INST HP-5E 967180
MISC:CASE 19026 EQK16
INJECTION TIME:920506 22:40
INSTRUMENT ID:5E

Q05-14-93

1. Disulfide, dimethyl 94 C2H6S2
2. Methane, sulfonylbis- 94 C2H6O2S

Sample file: >E9777 Spectrum #: 273
Search speed: 1 Tilting option: S No. of ion ranges searched: 48

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	96*	624920	8674	NBS49K	91	27	0	0	93	1	72	96
2.	25*	67710	8673	NBS49K	32	63	3	0	199	43	8	13



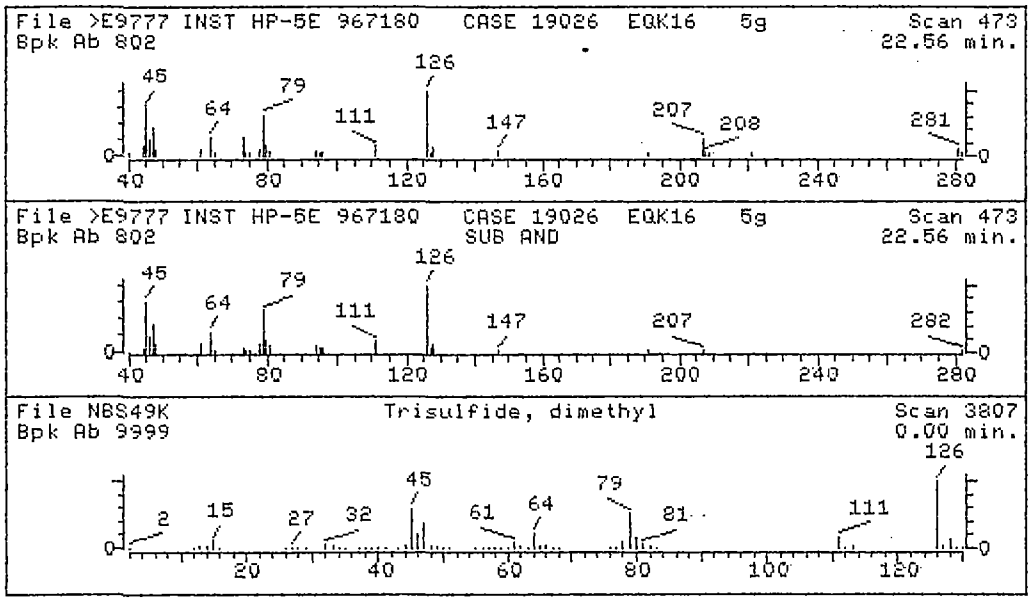
Q05-14-93

SAMPLE NAME:INST HP-5E 967180
MISC:CASE 19026 EQK16
INJECTION TIME:920506 22:40
INSTRUMENT ID:5E

J05-1492 1. Trisulfide, dimethyl 126 C2H6S3

Sample file: >E9777 Spectrum #: 473
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*	3658808	14672	NBS49K	91	27	1	0	98	3	68	89



J05-1492

DATE/TIME INJECTED 920506 22:40
>E9777 INST HP-5E 967180 CASE 19026 EQK16

THE INTEGRATION PARAMETERS USED WERE
,.20:0.00,-12750
NO SMOOTHING WAS DONE.

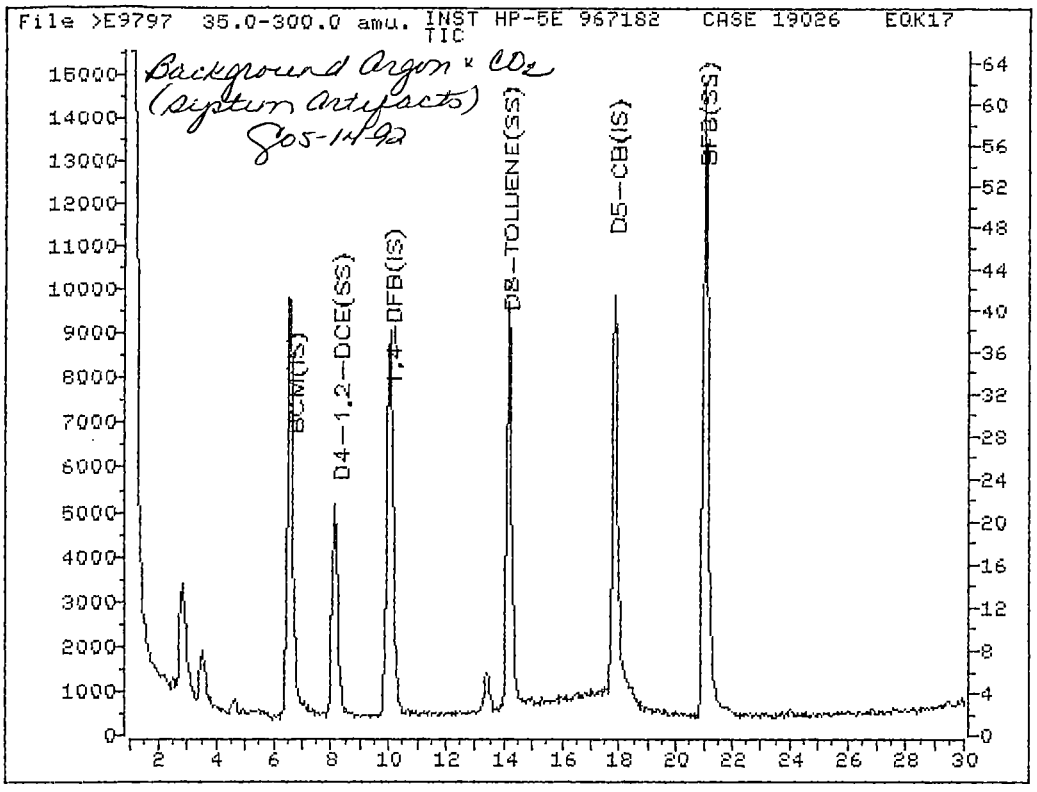
INTEGRATION TABLE

TIC NUM	PEAK NUM	RETENTION TIME	FIRST SCAN	MAX SCAN	LAST SCAN	CORRECTED AREA	CONCENTRATION ug/Kg	ug/Kg	ISTD USED
1	1	2.736	39	42	54	122086	47.88	171.00	1
2	6	13.359	267	273	284	105590	36.03	128.68	2
3	10	22.557	468	473	481	43481	16.12	57.57	3

INTERNAL STANDARD TABLE

IS NUM	PEAK NUM	R.T. MIN.	FIRST SCAN	MAX SCAN	LAST SCAN	CORRECTED AREA	INTERNAL STANDARD NAME
1	3	6.552	118	125	134	127495	BROMOCHLOROMETHANE(IS)
2	5	10.002	191	200	212	146531	1,4-DIFLUOROBENZENE(IS)
3	8	17.820	364	370	379	134871	d5-CHLOROBENZENE(IS)

1905-14-97



MS data file header from : >E9797

Sample: INST HP-5E 967182 Operator: TERMINAL63MS 5/07/92 17:24
Misc : CASE 19026 EQK17 5g IS/SS=50ppb 44745,44746
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

S05-14-92

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920507 17:57
Output File: ^E9797::QT Injected at: 920507 17:24
Data File: >E9797::D1 Dilution Factor: 1.00000
Name: INST HP-5E 967182
Misc: CASE 19026 EQK17 5g IS/SS=50ppb 44745,44746

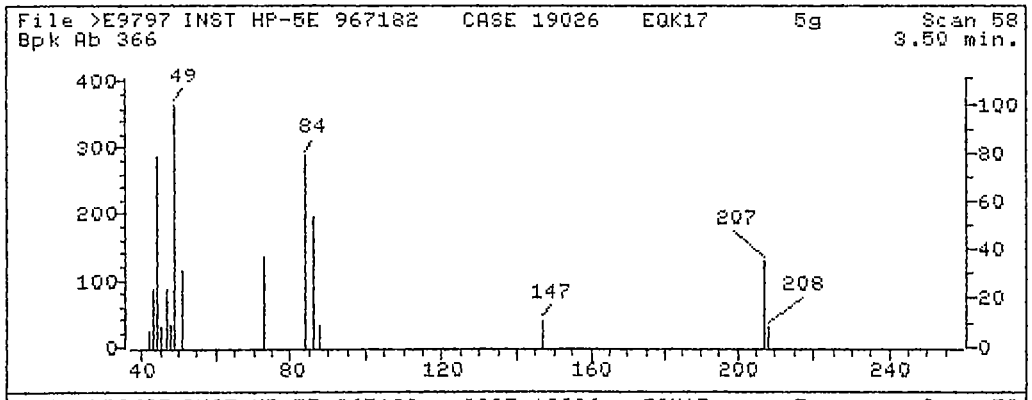
ID File: NCSID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (SOIL)
Last Calibration: 920507 13:43

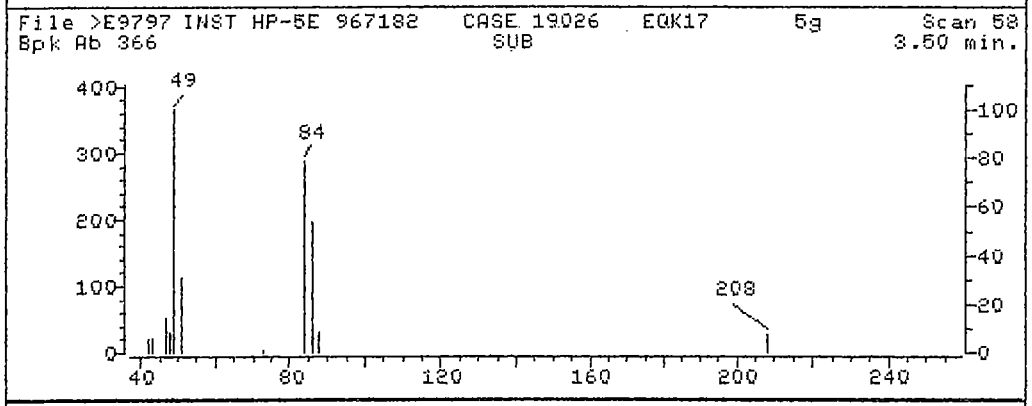
	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.54	128.0	18205	50.00	ug/Kg	96
6)	METHYLENE CHLORIDE	3.50	84.0	4171	9.59	ug/Kg	79
7)	ACETONE	2.86	43.0	9870	46.97	ug/Kg	69
13)	d4-1,2-DICHLOROETHANE(SS)	8.15	65.0	25188	46.95	ug/Kg	100
16)	*1,4-DIFLUOROBENZENE(IS)	10.03	114.0	57389	50.00	ug/Kg	33
28)	*d5-CHLOROBENZENE(IS)	17.85	117.0	33292	50.00	ug/Kg	100
33)	d8-TOLUENE(SS)	14.17	98.0	44097	62.14	ug/Kg	98
37)	4-BROMOFLUOROBENZENE(SS)	21.07	95.0	42570	49.49	ug/Kg	97

* Compound is ISTD

JGP 5-14-92

SAMPLE NAME : INST HP-5E 967182
MISC : CASE 19026 EQK17 5g IS/SS=50ppb 44745,44746
INJECTION TIME : 920507 17:24
INSTRUMENT ID : 5E





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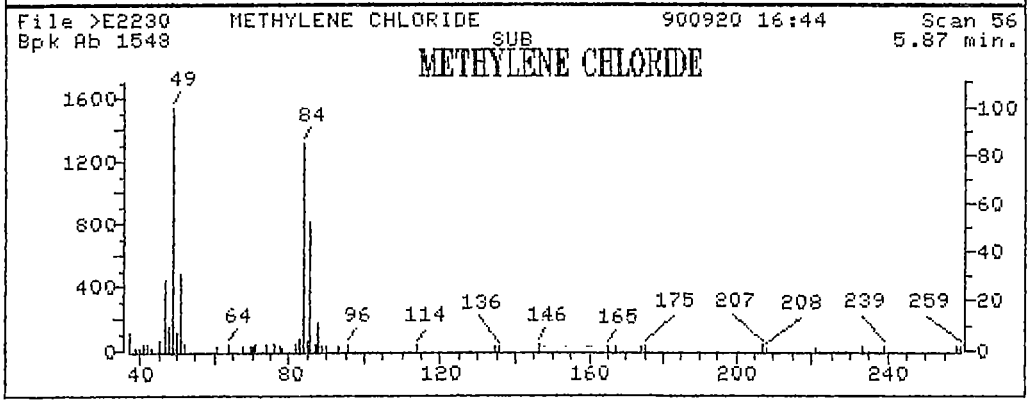
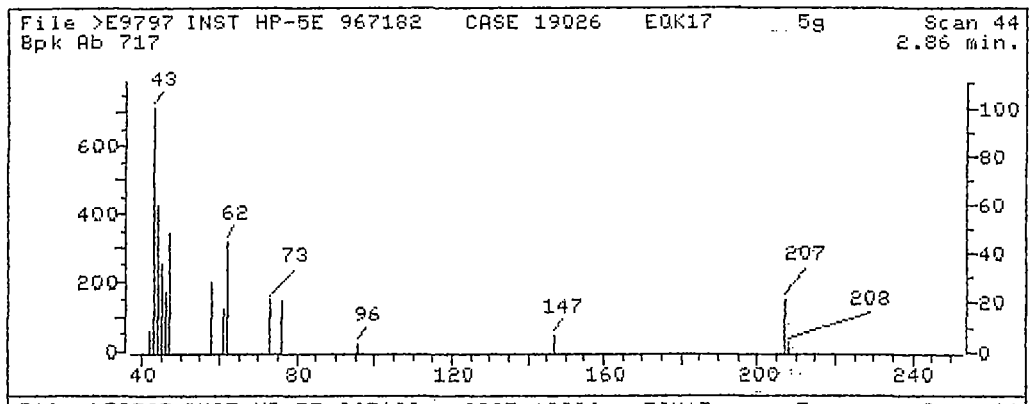
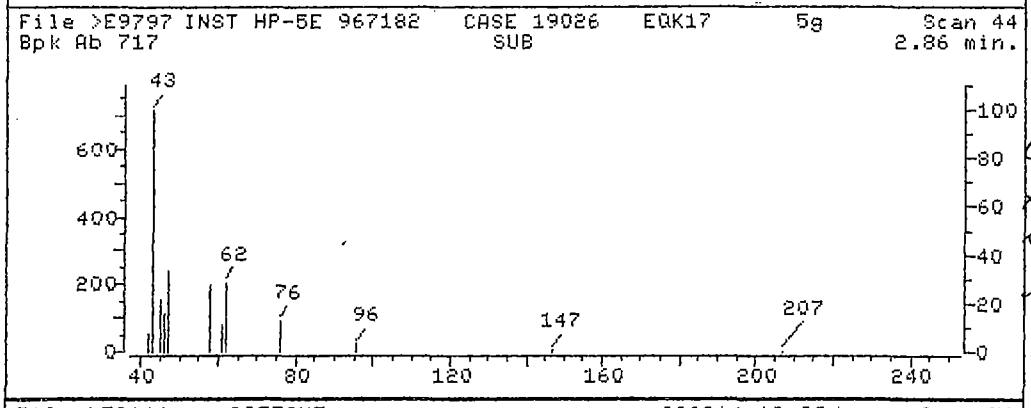


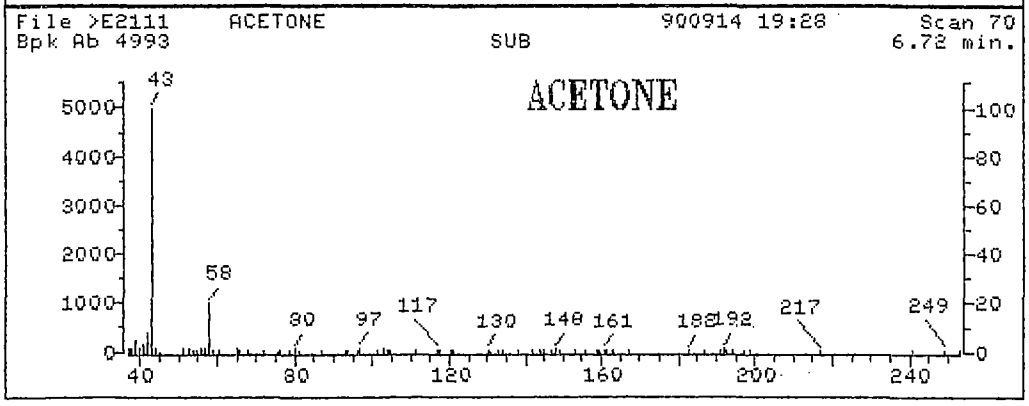
18-5-14-92

SAMPLE NAME : INST HP-5E 967182
MISC : CASE 19026 EQK17 5g IS/SS=50ppb 44745,44746
INJECTION TIME : 920507 17:24
INSTRUMENT ID : 5E

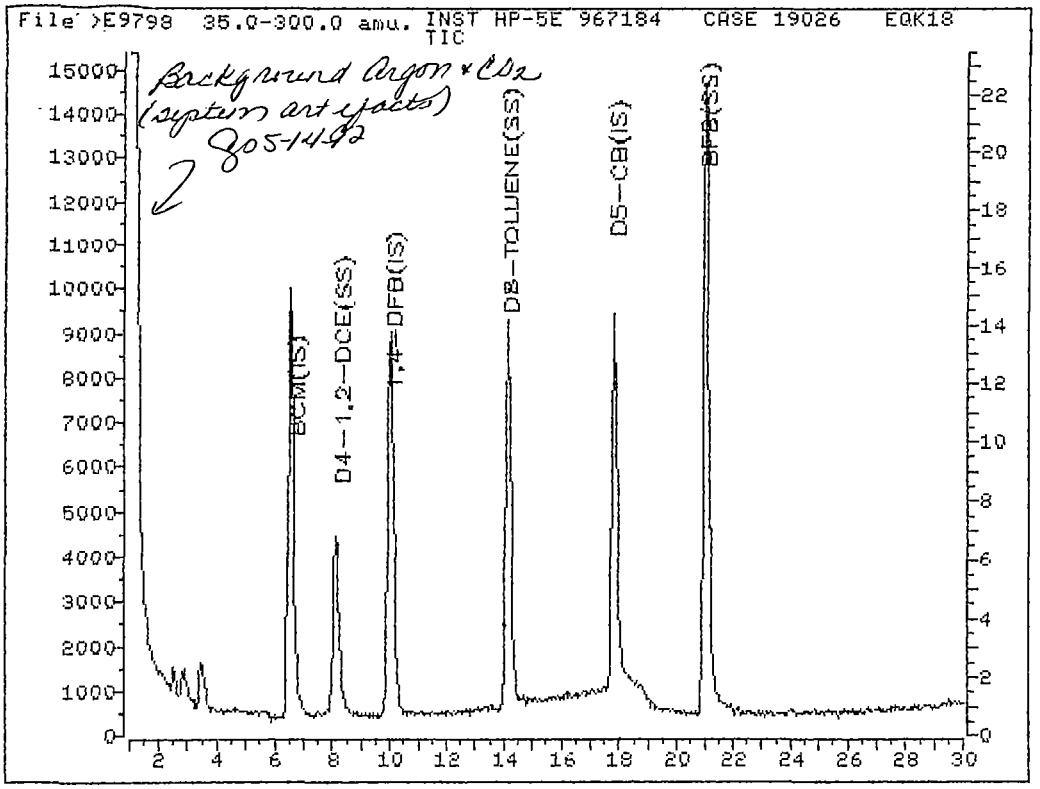




Background cannot be completely subtracted away - several extraneous ions are present. S



JC 05-14-93



MS data file header from : >E9798

Sample: INST HP-5E 967184 Operator: TERMINAL63MS 5/07/92 18:17
Misc : CASE 19026 EQK18 5g IS/SS=50ppb 44745,44746
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

805-1492

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920507 18:50
Output File: ^E9798::QT Injected at: 920507 18:17
Data File: >E9798::D1 Dilution Factor: 1.00000
Name: INST HP-5E 967184
Misc: CASE 19026 EQK18 5g IS/SS=50ppb 44745,44746

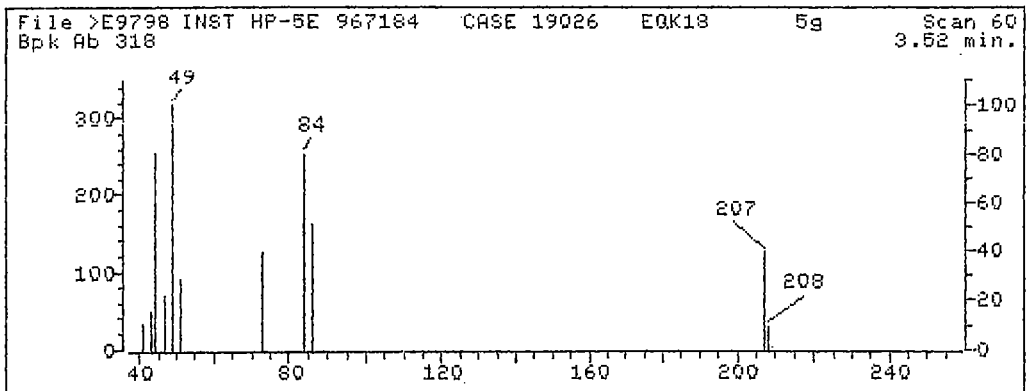
ID File: NCSID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (SOIL)
Last Calibration: 920507 13:43

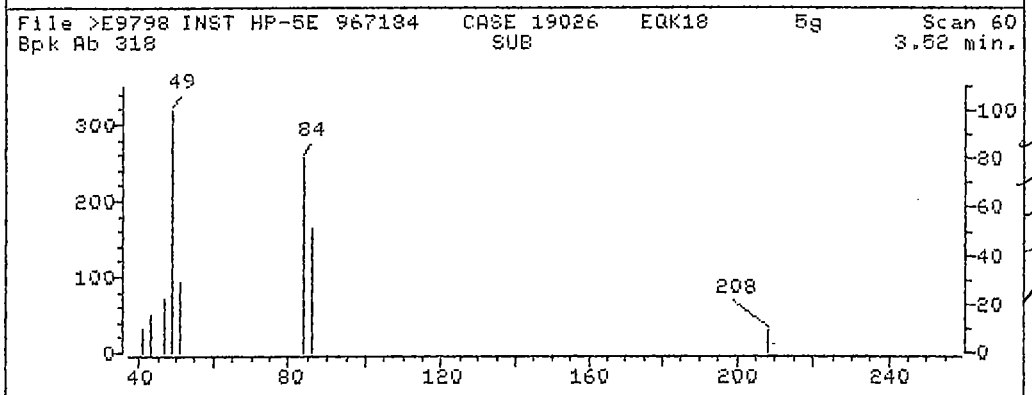
	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.55	128.0	17911	50.00	ug/Kg	98
6)	METHYLENE CHLORIDE	3.52	84.0	3335	7.80	ug/Kg	78
7)	ACETONE	2.87	43.0	5835	28.22	ug/Kg	70
13)	d4-1,2-DICHLOROETHANE(SS)	8.12	65.0	20195	38.26	ug/Kg	100
16)	*1,4-DIFLUOROBENZENE(IS)	10.05	114.0	56578	50.00	ug/Kg	32
28)	*d5-CHLOROBENZENE(IS)	17.82	117.0	33129	50.00	ug/Kg	100
33)	d8-TOLUENE(SS)	14.14	98.0	42687	60.45	ug/Kg	99
37)	4-BROMOFLUOROBENZENE(SS)	21.04	95.0	42096	49.18	ug/Kg	92

* Compound is ISTD

1805-1492

SAMPLE NAME : INST HP-5E 967184
MISC : CASE 19026 EQK18 5g IS/SS=50ppb 44745,44746
INJECTION TIME : 920507 18:17
INSTRUMENT ID : 5E





Below the CRPL background cannot be completely subtracted away - few extraneous ions are present
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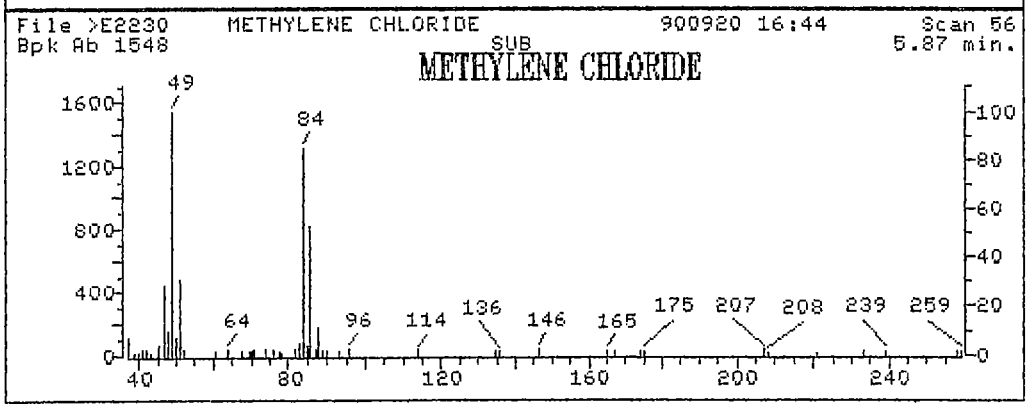
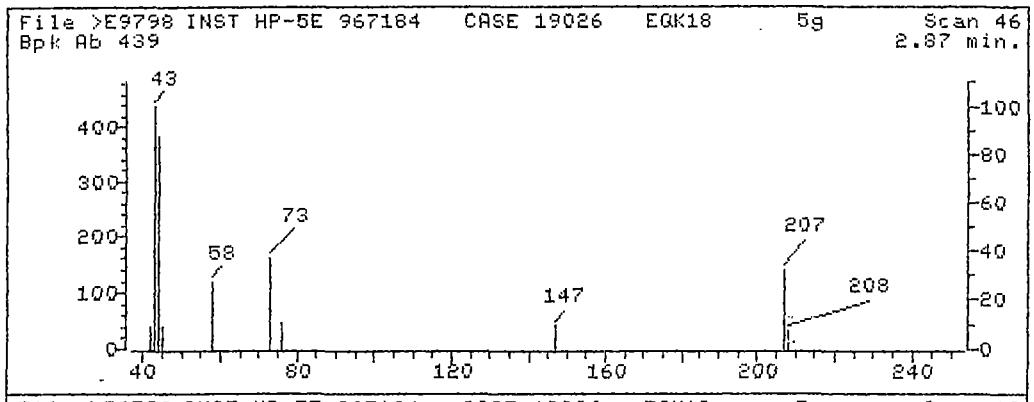
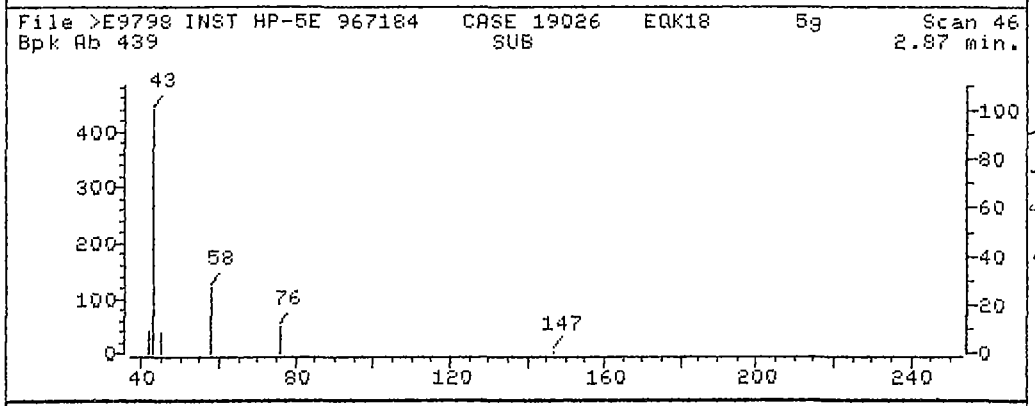


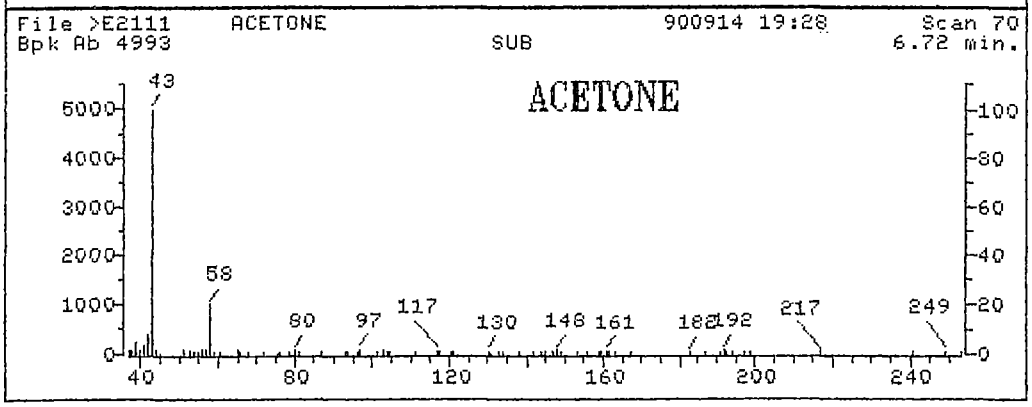
1 905-14-92

SAMPLE NAME : INST HP-5E 967184
MISC : CASE 19026 EQK18 5g IS/SS=50ppb 44745,44746
INJECTION TIME : 920507 18:17
INSTRUMENT ID : 5E





Background cannot be completely subtract away - few extraneous ions are present.
8



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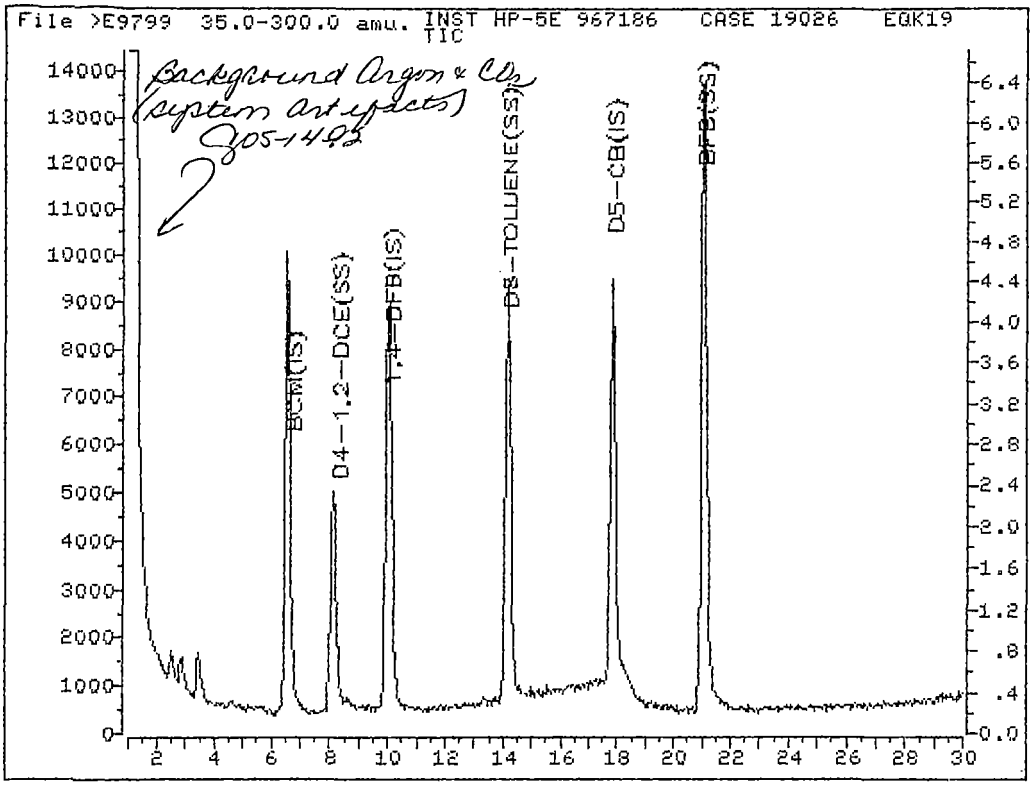


MS data file header from : >E9799

Sample: INST HP-5E 967186 Operator: TERMINAL63MS 5/07/92 19:09
Misc : CASE 19026 EQK19 5g IS/SS=50ppb 44745,44746
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

Q05-1493

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920507 19:42
Output File: ^E9799::QT Injected at: 920507 19:09
Data File: >E9799::D1 Dilution Factor: 1.00000
Name: INST HP-5E 967186
Misc: CASE 19026 EQK19 5g IS/SS=50ppb 44745,44746

ID File: NCSID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (SOIL)
Last Calibration: 920507 13:43

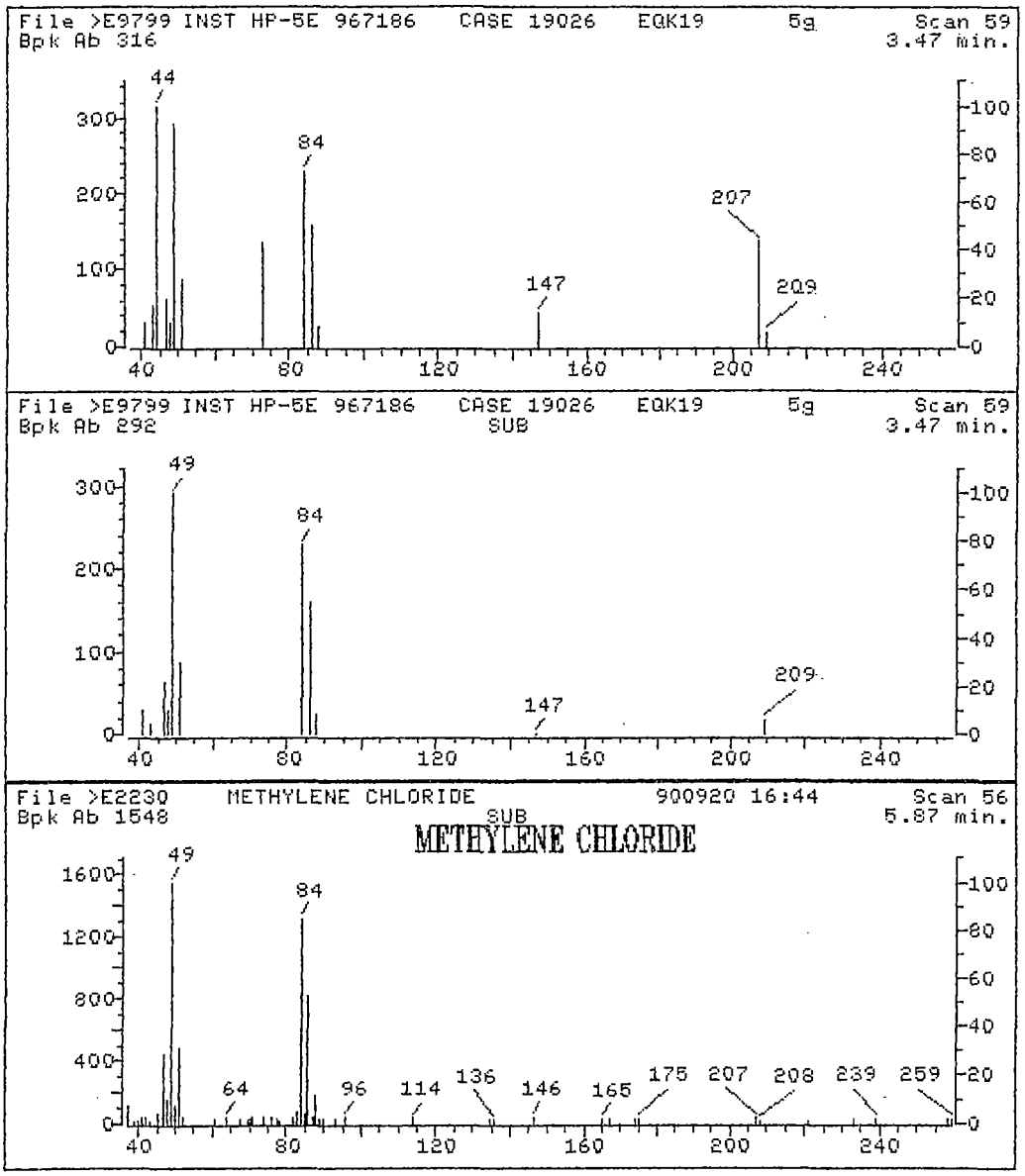
	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.55	128.0	17817	50.00	ug/Kg	98
6)	METHYLENE CHLORIDE	3.47	84.0	2717	6.39	ug/Kg	78
7)	ACETONE	2.88	43.0	6207	30.18	ug/Kg	71
13)	d4-1,2-DICHLOROETHANE(SS)	8.12	65.0	23860	45.44	ug/Kg	100
16)	*1,4-DIFLUOROBENZENE(IS)	10.05	114.0	56477	50.00	ug/Kg	32
28)	*d5-CHLOROBENZENE(IS)	17.82	117.0	32672	50.00	ug/Kg	100
33)	d8-TOLUENE(SS)	14.14	98.0	42496	61.02	ug/Kg	98
37)	4-BROMOFLUOROBENZENE(SS)	21.04	95.0	40401	47.86	ug/Kg	94

* Compound is ISTD

1905149

19026 · 5

SAMPLE NAME : INST HP-5E 967186
MISC : CASE 19026 EQK19 5g IS/SS=50ppb 44745,44746
INJECTION TIME : 920507 19:09
INSTRUMENT ID : 5E



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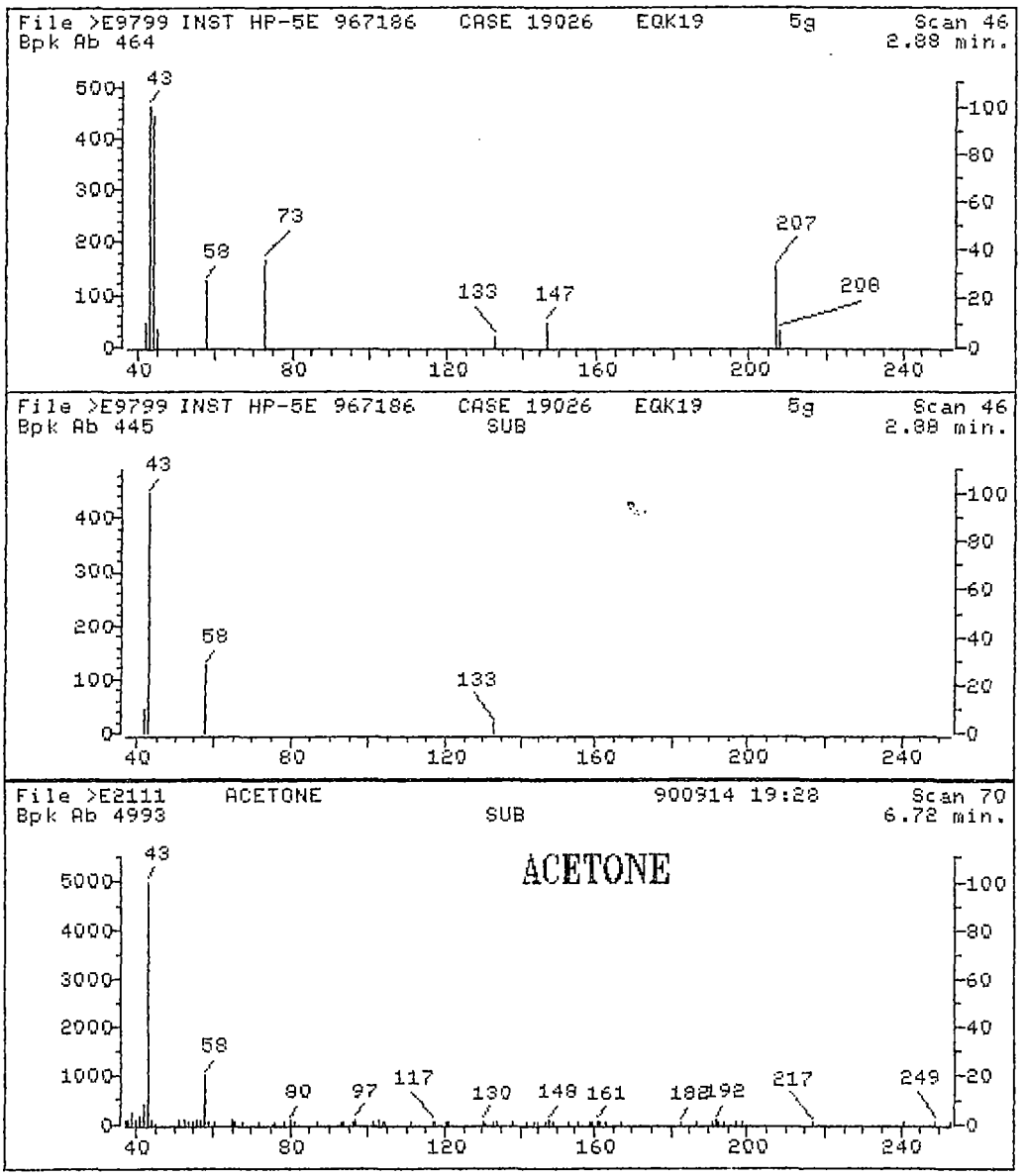
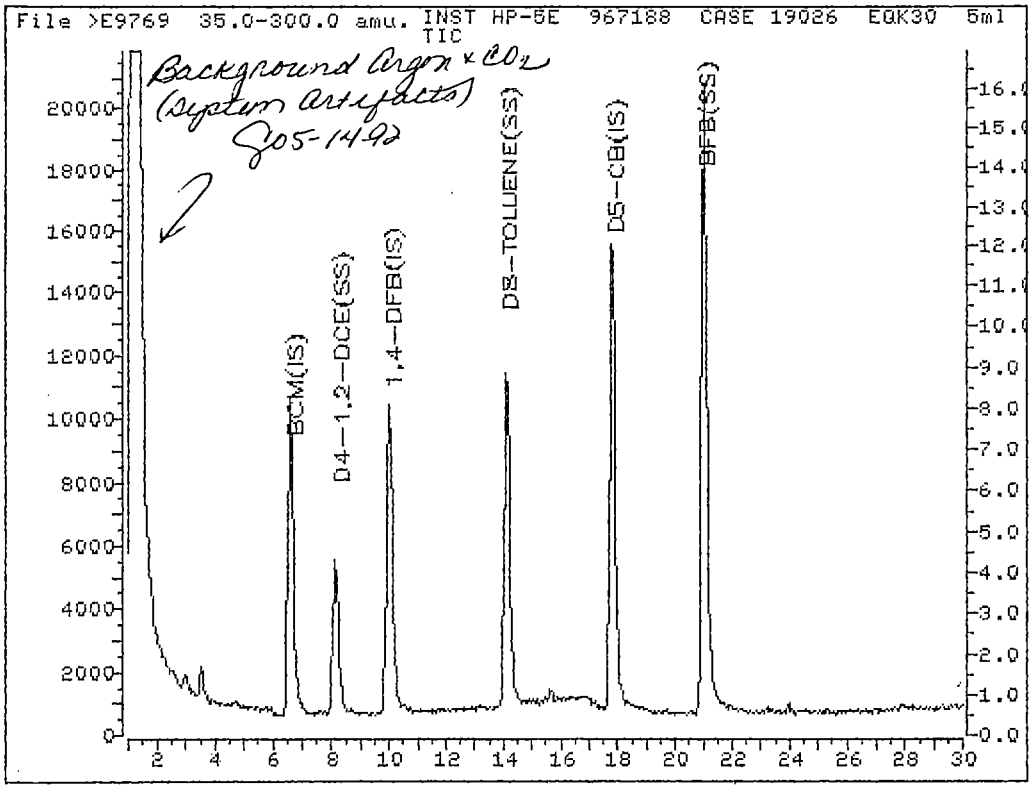
1805-14-92

SAMPLE NAME : INST HP-5E 967186
MISC : CASE 19026 EQK19 5g IS/SS=50ppb 44745,44746
INJECTION TIME : 920507 19:09
INSTRUMENT ID : 5E



✓ 90514-90

19026.5



MS data file header from : >E9769

Sample: INST HP-5E 967188 Operator: TERMINAL63MS 5/06/92 10:35
Misc : CASE 19026 EQK30 5ml IS/SS=50ppb 44733,44
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

~~19005.5~~ 5-19-92
19026.5

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920506 11:29
Output File: ^E9769::D4 Injected at: 920506 10:35
Data File: >E9769::D2 Dilution Factor: 1.00000
Name: INST HP-5E 967188
Misc: CASE 19026 EQK30 5ml IS/SS=50ppb 44733,44

ID File: CAPID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (WATER) CAPILLARY COLUMN
Last Calibration: 920506 01:06

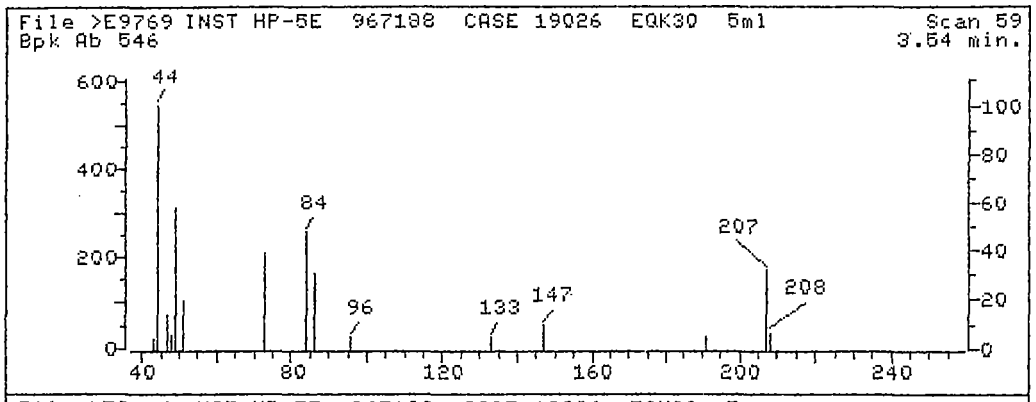
	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.62	128.0	18918	50.00	ug/L	96
6)	METHYLENE CHLORIDE	3.54	84.0	2262	4.35	ug/L	78
7)	ACETONE	2.99	43.0	4039	53.12	ug/L	71
13)	d4-1,2-DICHLOROETHANE(SS)	8.14	65.0	25849	46.87	ug/L	100
16)	*1,4-DIFLUOROBENZENE(IS)	10.03	114.0	67090	50.00	ug/L	31
28)	*d5-CHLOROBENZENE(IS)	17.80	117.0	62403	50.00	ug/L	100
33)	d8-TOLUENE(SS)	14.12	98.0	53776	47.02	ug/L	95
37)	4-BROMOFLUOROBENZENE(SS)	21.02	95.0	59882	47.15	ug/L	92

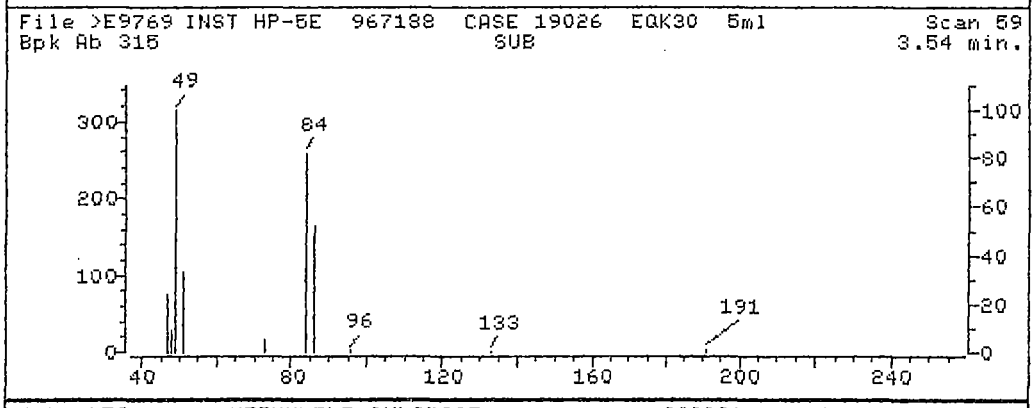
* Compound is ISTD

JG 5-14-92

~~19005.5~~ 3-29-92
19026.5

SAMPLE NAME : INST HP-5E 967188
MISC : CASE 19026 EQK30 5ml IS/SS=50ppb 44733,44
INJECTION TIME : 920506 10:35
INSTRUMENT ID : 5E





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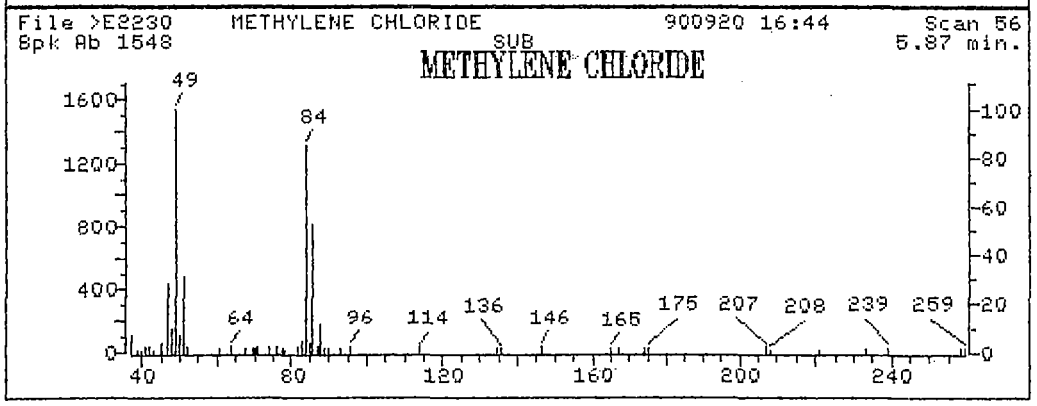
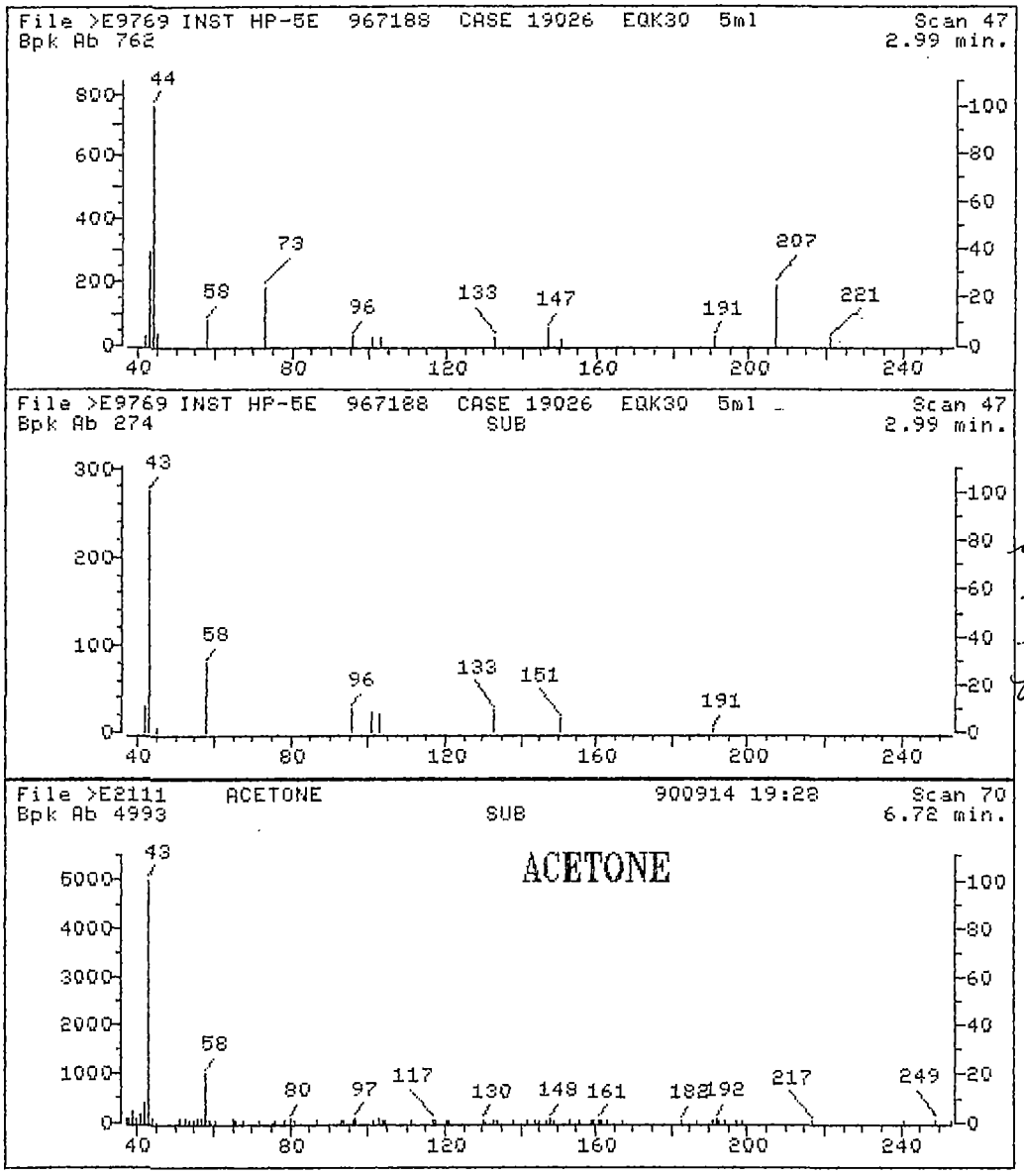


✓ 90514-92

~~19005.5~~ 19026.5

SAMPLE NAME : INST HP-5E 967188
MISC : CASE 19026 EQK30 5ml IS/SS=50ppb 44733,44
INJECTION TIME : 920506 10:35
INSTRUMENT ID : 5E



Background cannot be completely subtracted away - few extraneous ions are present.

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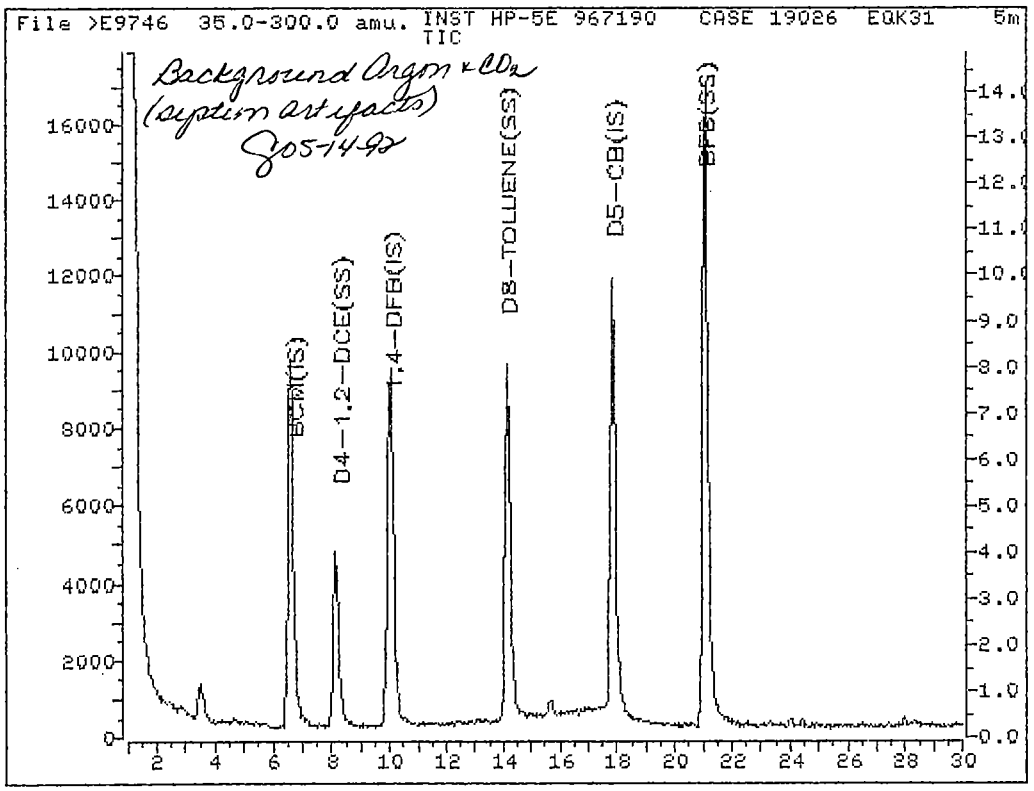
~~19005.5~~ 5-29-92
19026.5



MS data file header from : >E9746

Sample: INST HP-5E 967190 Operator: TERMINAL63MS 5/05/92 11:49
Misc : CASE 19026 EQK31 5ml IS/SS=50ppb 44733,4
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

GO5-14-92

~~19005 - 5~~ 5-29-92

19026 · 5

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920505 12:22
Output File: ^E9746::QT Injected at: 920505 11:49
Data File: >E9746::D1 Dilution Factor: 1.00000
Name: INST HP-5E 967190
Misc: CASE 19026 EQK31 5ml IS/SS=50ppb 44733,4

ID File: CAPID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (WATER) CAPILLARY COLUMN
Last Calibration: 920505 08:13

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.59	128.0	17920	50.00	ug/L	98
6)	METHYLENE CHLORIDE	3.51	84.0	3139	6.10	ug/L	80
7)	ACETONE	2.91	43.0	1862	18.64	ug/L	77
13)	d4-1,2-DICHLOROETHANE(SS)	8.15	65.0	23808	39.09	ug/L	100
16)	*1,4-DIFLUOROBENZENE(IS)	10.04	114.0	60977	50.00	ug/L	32
28)	*d5-CHLOROBENZENE(IS)	17.85	117.0	44054	50.00	ug/L	100
33)	d8-TOLUENE(SS)	14.17	98.0	46795	54.14	ug/L	99
37)	4-BROMOFLUOROBENZENE(SS)	21.07	95.0	51749	53.54	ug/L	98

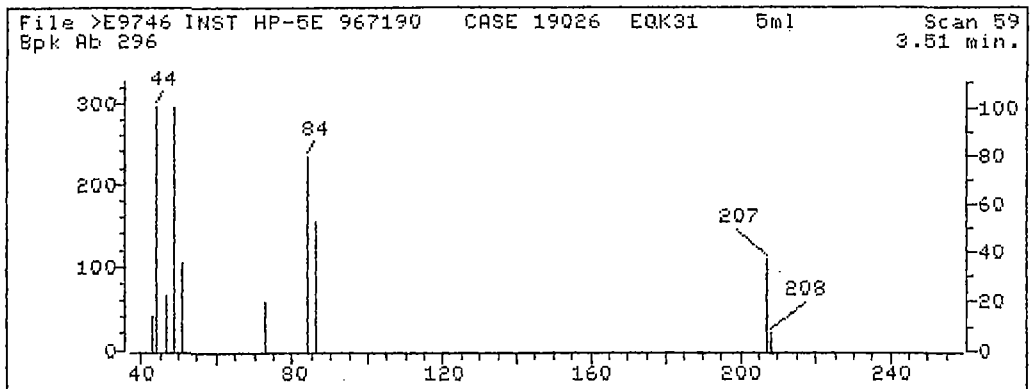
* Compound is ISTD

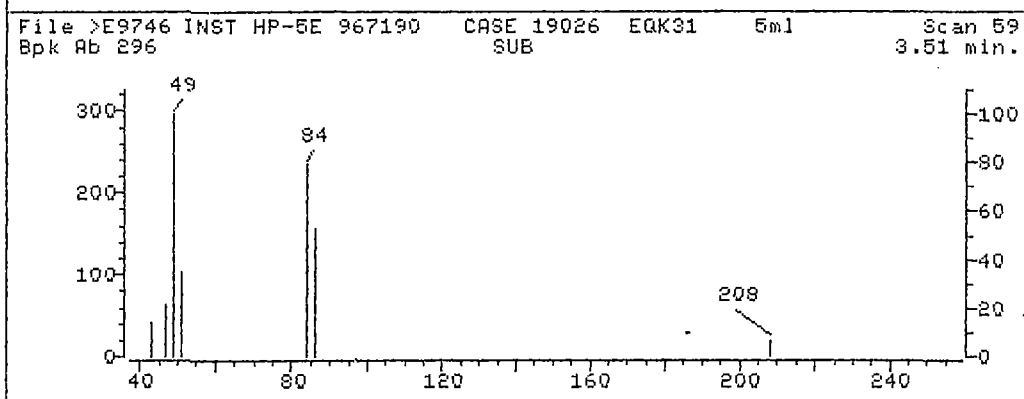
JG 5-14-92

~~19005.5~~ TO 5-29-92

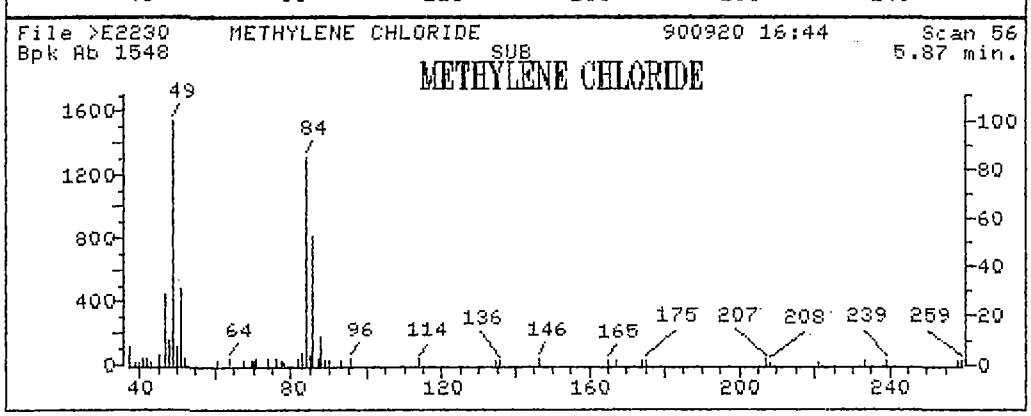
19026.5

SAMPLE NAME : INST HP-5E 967190
MISC : CASE 19026 EQK31 5ml IS/SS=50ppb 44733,4
INJECTION TIME : 920505 11:49
INSTRUMENT ID : 5E





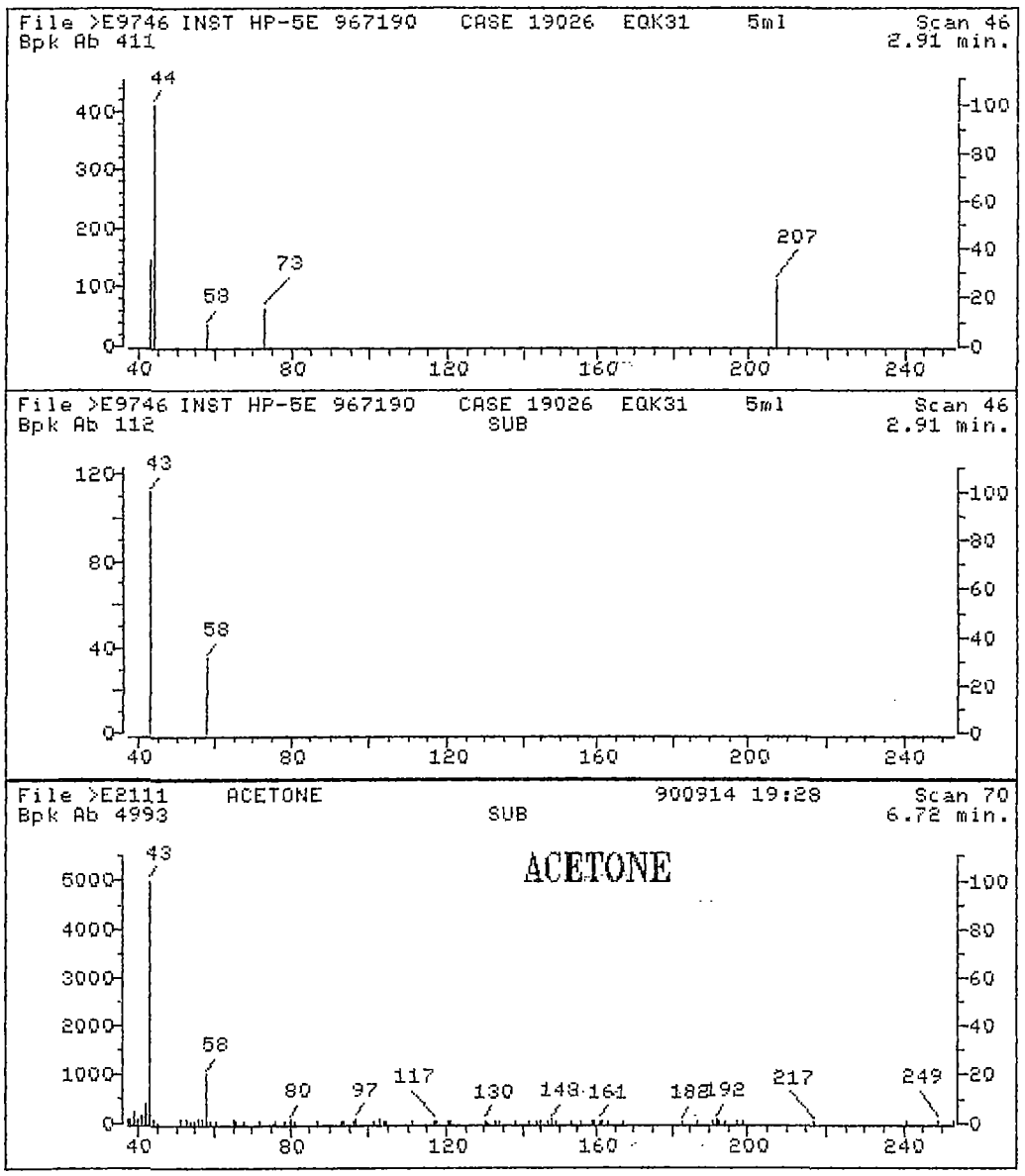
Below the CRQL - background cannot be completely subtracted away - few extraneous ions are present.
S



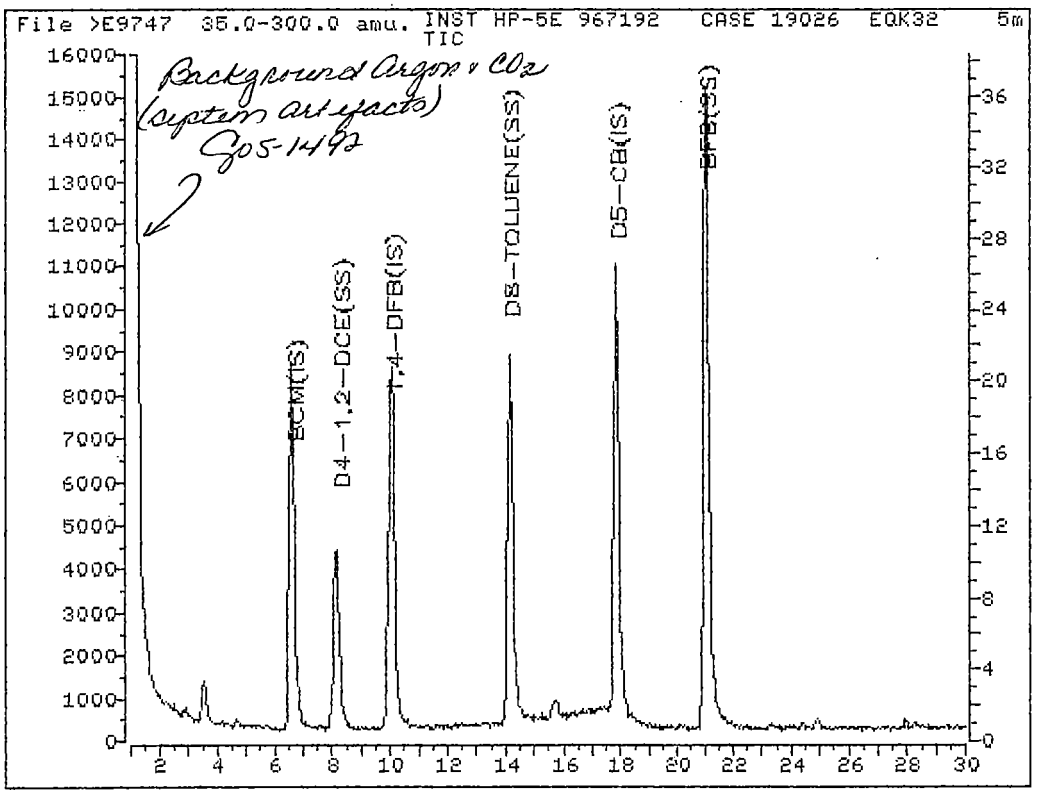
✓ 905-14-92

~~19005.5~~ 19026.5

SAMPLE NAME : INST HP-5E 967190
MISC : CASE 19026 EQK31 5ml IS/SS=50ppb 44733,4
INJECTION TIME : 920505 11:49
INSTRUMENT ID : 5E



~~19005 · 5~~ TO 5-29-92
19026 · 5



MS data file header from : >E9747

Sample: INST HP-5E 967192 Operator: TERMINAL63MS 5/05/92 12:28
Misc : CASE 19026 EQK32 5ml IS/SS=50ppb 44733,4
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

GJ05-14-92

~~19005.5~~ 5-27-92

19026.5

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920505 13:02
Output File: ^E9747::QT Injected at: 920505 12:28
Data File: >E9747::D1 Dilution Factor: 1.00000
Name: INST HP-5E 967192
Misc: CASE 19026 EQK32 5ml IS/SS=50ppb 44733,4

ID File: CAPID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (WATER) CAPILLARY COLUMN
Last Calibration: 920505 08:13

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.56	128.0	15818	50.00	ug/L	90
6)	METHYLENE CHLORIDE	3.52	84.0	3021	6.66	ug/L	84
7)	ACETONE	2.88	43.0	1257	14.26	ug/L	84
13)	d4-1,2-DICHLOROETHANE(SS)	8.17	65.0	22712	42.25	ug/L	100
16)	*1,4-DIFLUOROBENZENE(IS)	10.05	114.0	55628	50.00	ug/L	32
28)	*d5-CHLOROBENZENE(IS)	17.87	117.0	41493	50.00	ug/L	100
33)	d8-TOLUENE(SS)	14.19	98.0	43522	53.46	ug/L	95
37)	4-BROMOFLUOROBENZENE(SS)	21.04	95.0	47492	52.17	ug/L	92

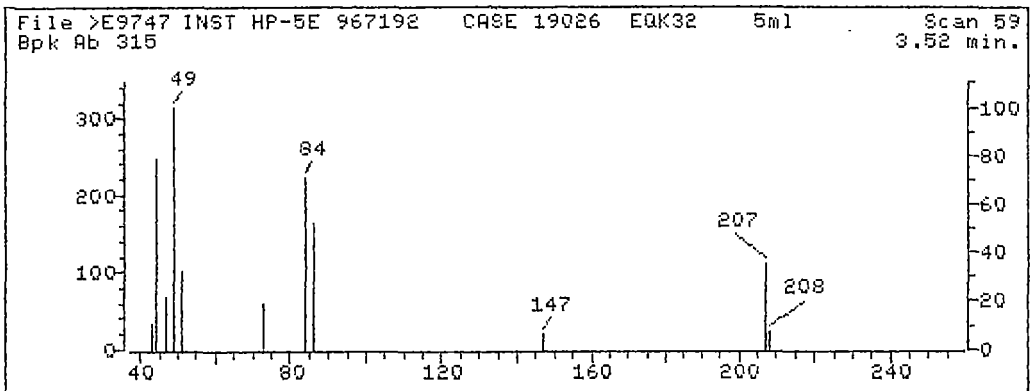
* Compound is ISTD

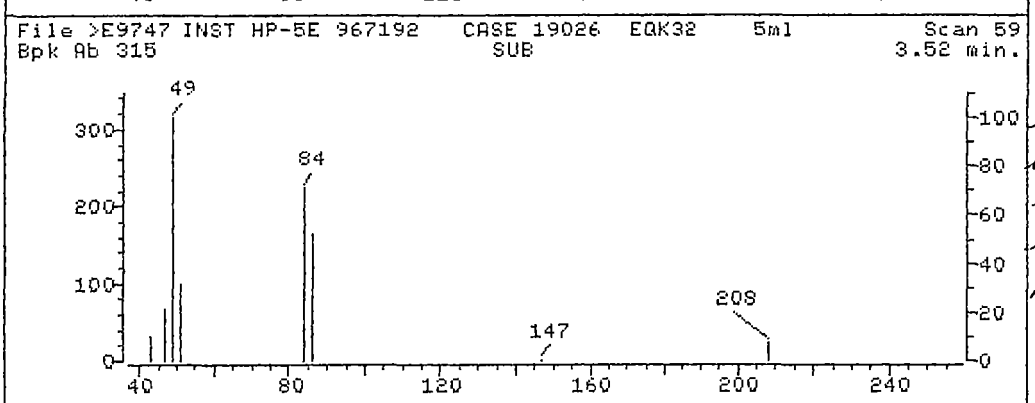
1905-1-1-92

~~19005.5~~ JO 5-29-92

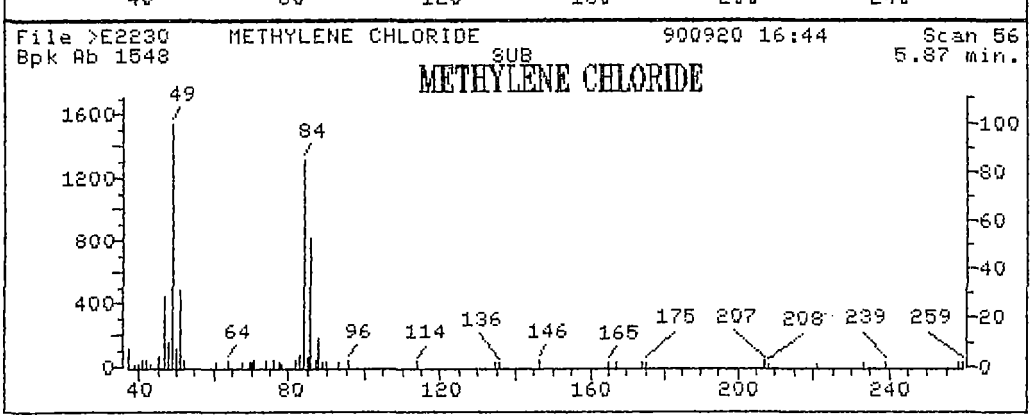
19026.5

SAMPLE NAME : INST HP-5E 967192
MISC : CASE 19026 EQK32 5ml IS/SS=50ppb 44733,4
INJECTION TIME : 920505 12:28
INSTRUMENT ID : 5E





Below the CRPL - background cannot be completely subtracted away - few extraneous ions are present.
S



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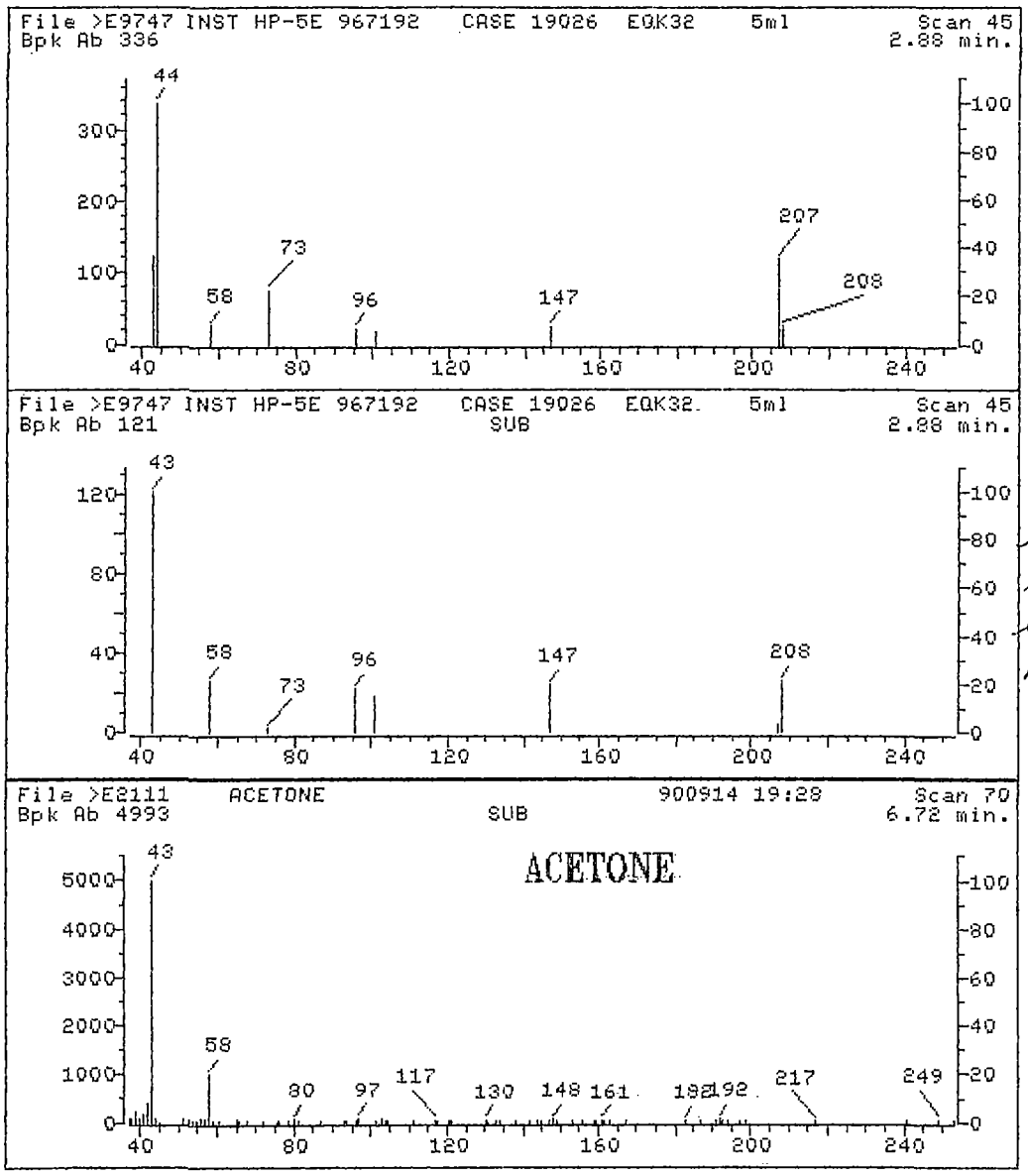
~~19005.5~~ JO 5-29-92

19026.5

SAMPLE NAME : INST HP-5E 967192
MISC : CASE 19026 EQK32 5ml IS/SS=50ppb 44733,4
INJECTION TIME : 920505 12:28
INSTRUMENT ID : 5E



Background cannot be completely subtracted away - several extraneous ions are present
S

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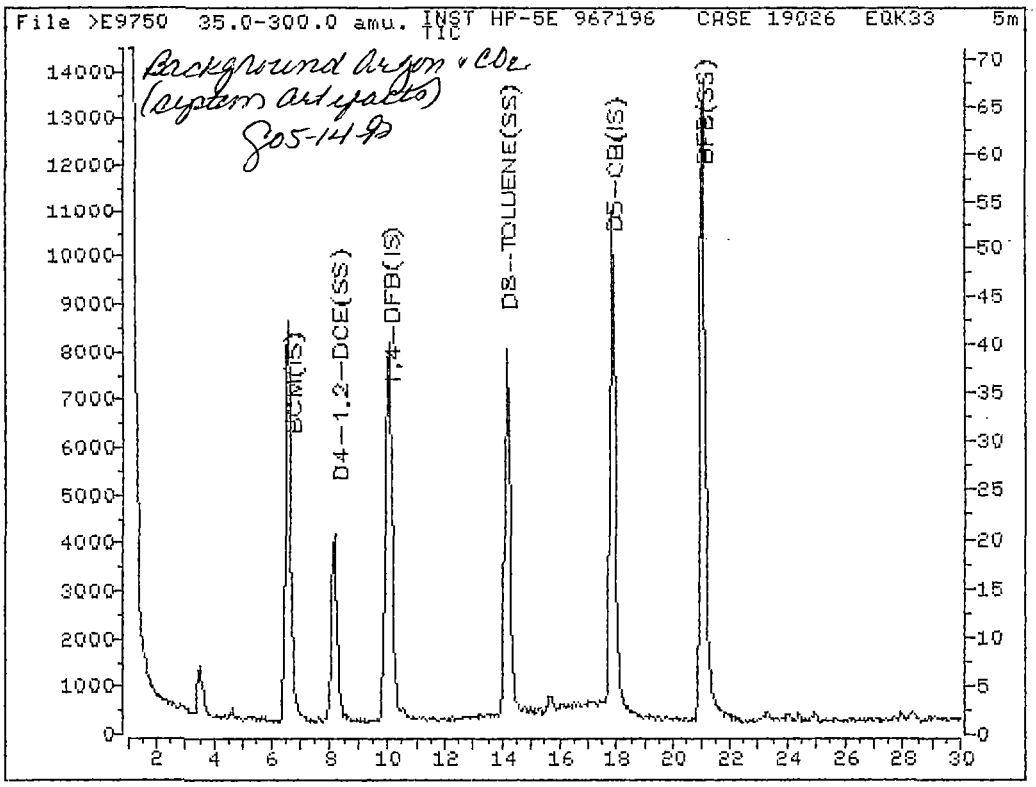
~~18005.5~~ 5-09-92

18026.5



MS data file header from : >E9750

Sample: INST HP-5E 967196 Operator: TERMINAL63MS 5/05/92 14:29
Misc : CASE 19026 EQK33 5ml IS/SS=50ppb 44733,4
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

097 RD06-02-92

805-14-92

~~19005.5~~ 5-27-92

19026.5

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920505 15:02
Output File: ^E9750::QT Injected at: 920505 14:29
Data File: >E9750::D1 Dilution Factor: 1.00000
Name: INST HP-5E 967196
Misc: CASE 19026 EQK33 5ml IS/SS=50ppb 44733,4

ID File: CAPID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (WATER) CAPILLARY COLUMN
Last Calibration: 920505 08:13

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.59	128.0	15686	50.00	ug/L	96
6)	METHYLENE CHLORIDE	3.51	84.0	3404	7.56	ug/L	80
13)	d4-1,2-DICHLOROETHANE(SS)	8.16	65.0	20870	39.15	ug/L	100
16)	*1,4-DIFLUOROBENZENE(IS)	10.04	114.0	54293	50.00	ug/L	31
28)	*d5-CHLOROBENZENE(IS)	17.86	117.0	40896	50.00	ug/L	100
33)	d8-TOLUENE(SS)	14.18	98.0	38534	48.02	ug/L	97
37)	4-BROMOFLUOROBENZENE(SS)	21.08	95.0	40951	45.64	ug/L	96

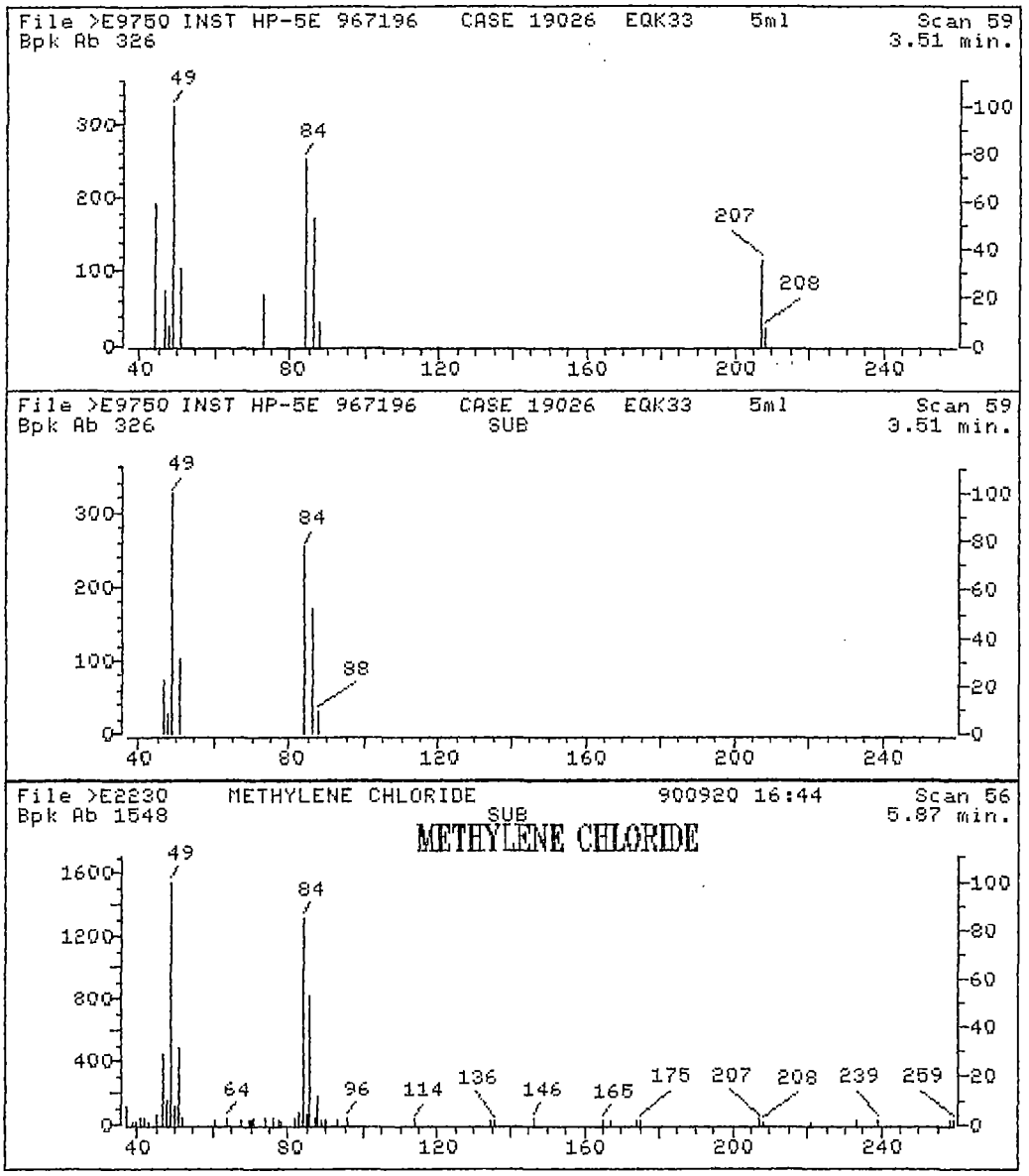
* Compound is ISTD

JQ5-14-92

~~19005 · 5~~ TO 5-29-92

19026 · 5

SAMPLE NAME : INST HP-5E 967196
MISC : CASE 19026 EQK33 5ml IS/SS=50ppb 44733,4
INJECTION TIME : 920505 14:29
INSTRUMENT ID : 5E



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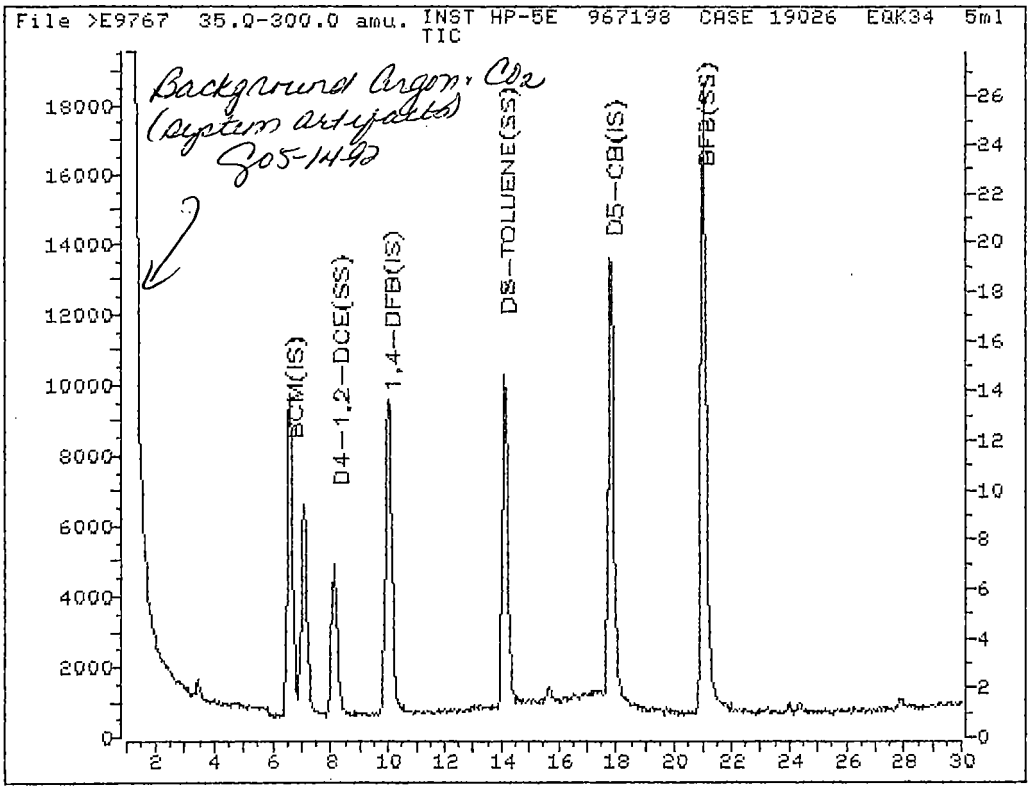
19026.5



MS data file header from : >E9767

Sample: INST HP-5E 967198 Operator: TERMINAL63MS 5/06/92 8:49
Misc : CASE 19026 EQK34 5ml IS/SS=50ppb 44733,44
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

JO 5-14-92

~~19005.5~~ 5-29-92

19026.5

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920506 09:22
Output File: ^E9767::D4 Injected at: 920506 08:49
Data File: >E9767::D1 Dilution Factor: 1.00000
Name: INST HP-5E 967198
Misc: CASE 19026 EQK34 5ml IS/SS=50ppb 44733,44

ID File: CAPID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (WATER) CAPILLARY COLUMN
Last Calibration: 920506 01:06

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.58	128.0	17526	50.00	ug/L	98
6)	METHYLENE CHLORIDE	3.45	84.0	1407	2.92	ug/L	74
7)	ACETONE	2.85	43.0	1258	17.86	ug/L	73
12)	CHLOROFORM	7.08	83.0	30623	28.89	ug/L	89
13)	d4-1,2-DICHLOROETHANE(SS)	8.14	65.0	23398	45.80	ug/L	100
16)	*1,4-DIFLUOROBENZENE(IS)	9.98	114.0	62403	50.00	ug/L	32
28)	*d5-CHLOROBENZENE(IS)	17.80	117.0	51815	50.00	ug/L	100
33)	d8-TOLUENE(SS)	14.12	98.0	46422	48.89	ug/L	99
37)	4-BROMOFLUOROBENZENE(SS)	21.02	95.0	54359	51.55	ug/L	90

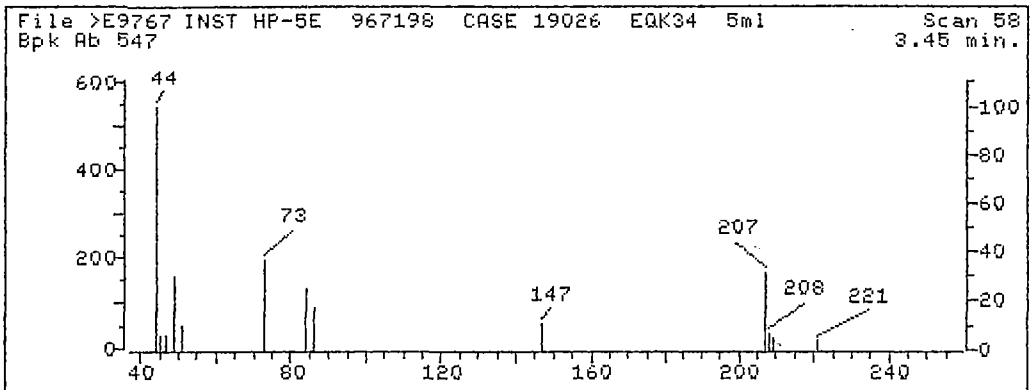
* Compound is ISTD

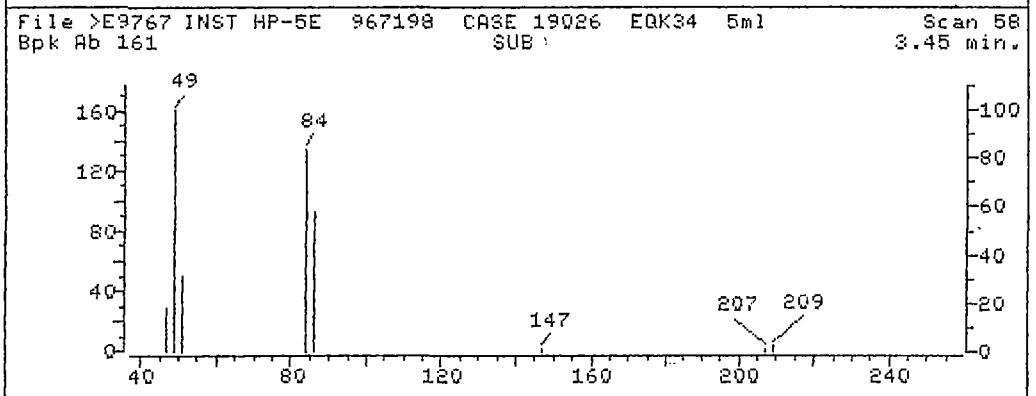
1805-14-92

~~19005.5~~ 5-29-92

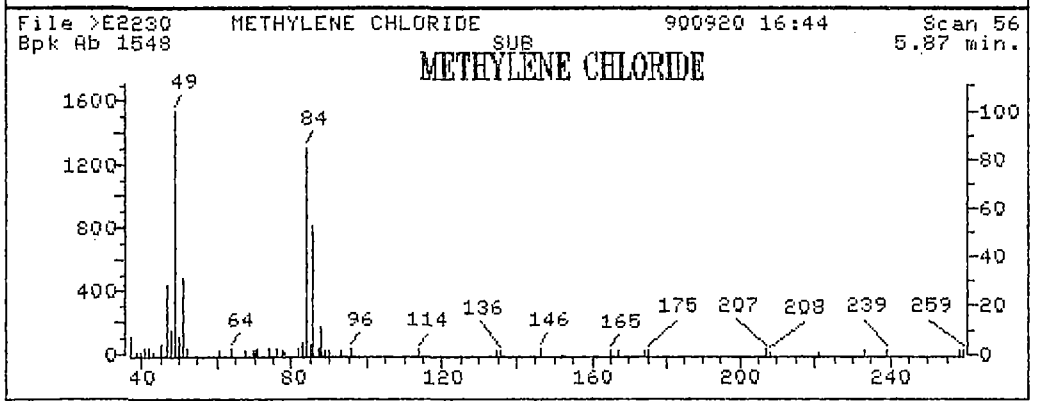
19026.5

SAMPLE NAME : INST HP-5E 967198
MISC : CASE 19026 EQK34 5ml IS/SS=50ppb 44733,44
INJECTION TIME : 920506 08:49
INSTRUMENT ID : 5E





Below the CRQL - 8



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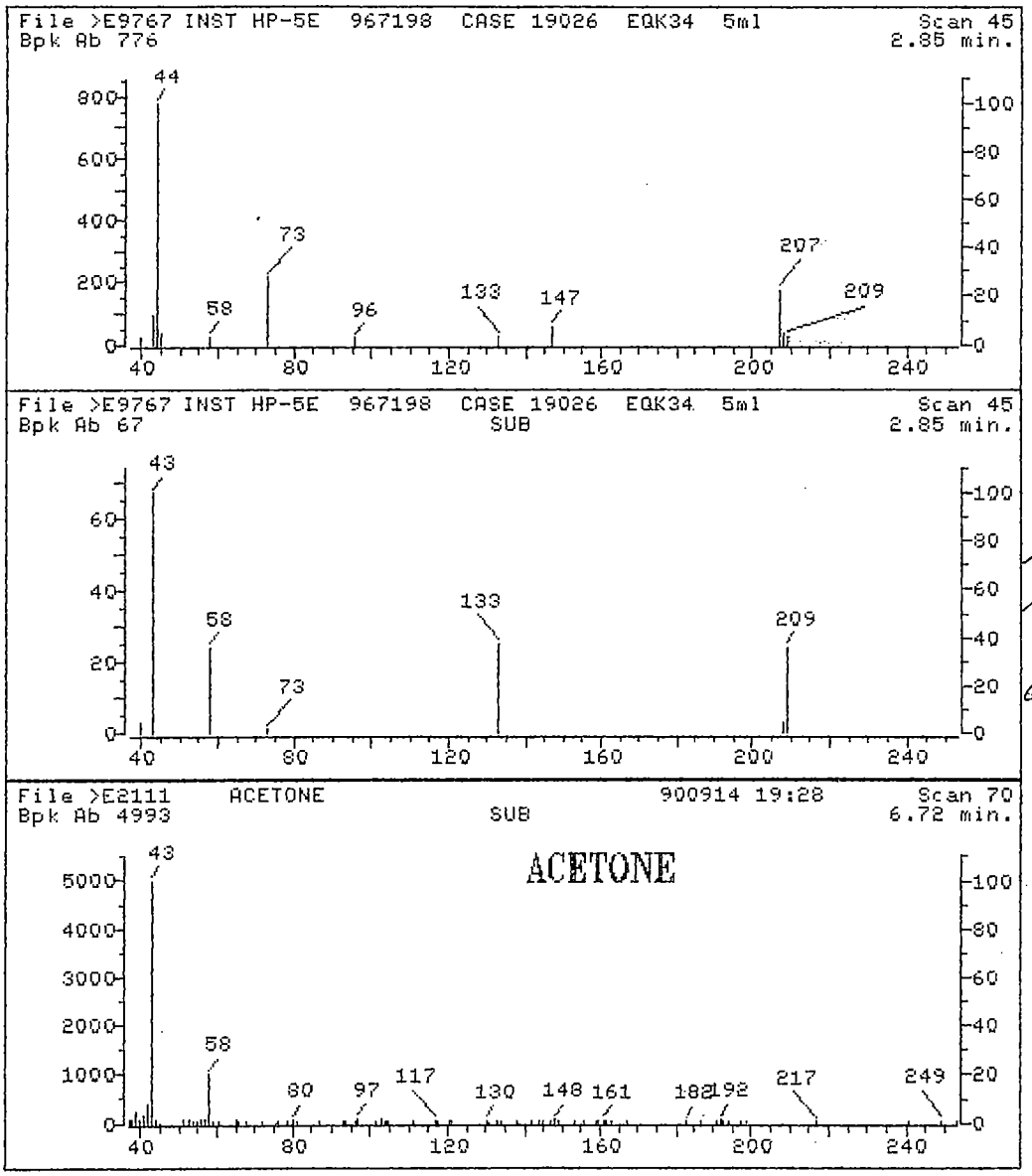
~~19005.5~~ JO 5-29-92

19026.5

SAMPLE NAME : INST HP-5E 967198
MISC : CASE 19026 EQK34 5ml IS/SS=50ppb 44733,44
INJECTION TIME : 920506 08:49
INSTRUMENT ID : 5E



Background cannot be completely subtracted away - few extraneous ions are present.
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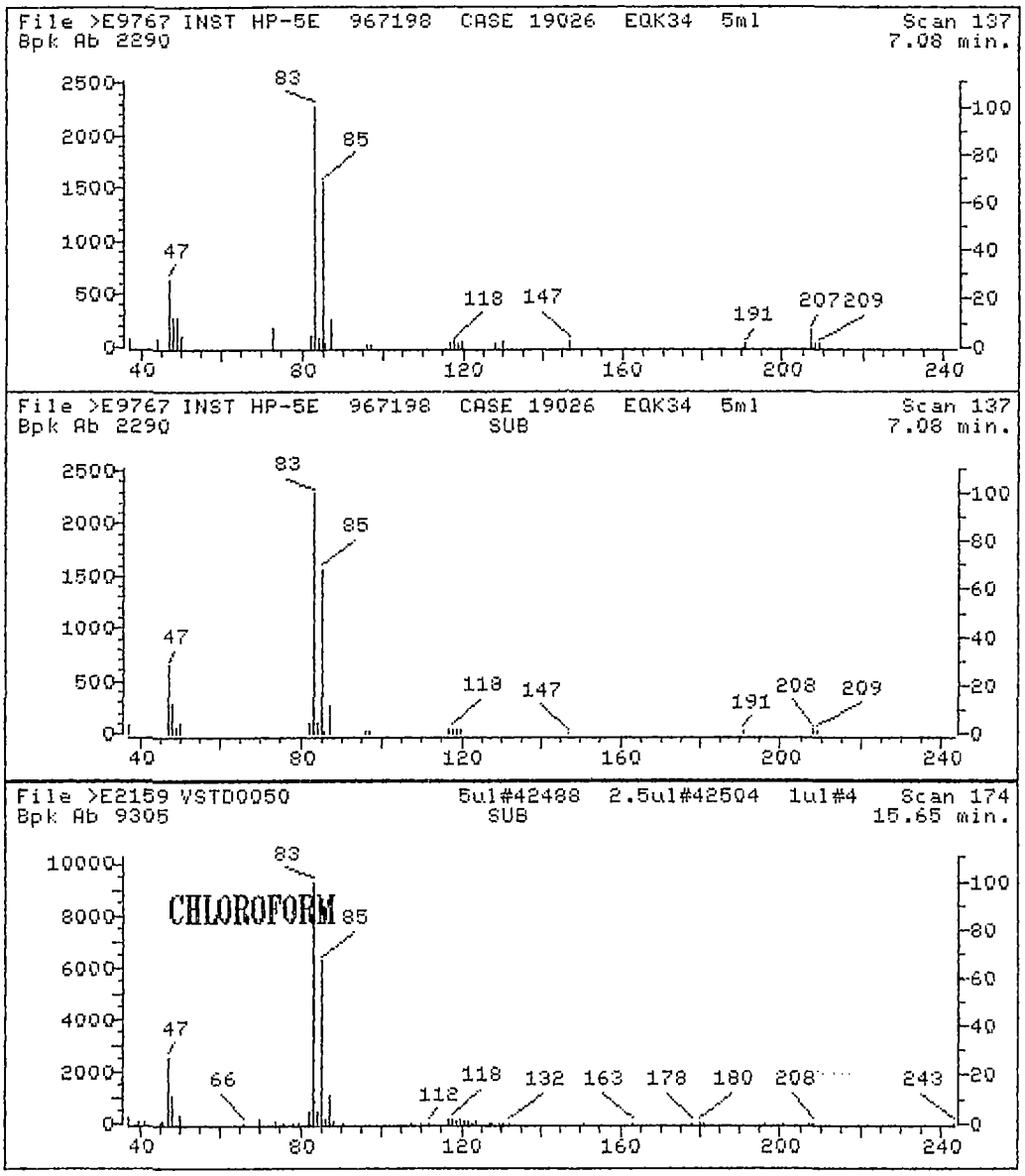
~~19005.5~~ TO 5-27-92

19026.5

SAMPLE NAME : INST HP-5E 967198
MISC : CASE 19026 EQK34 5ml IS/SS=50ppb 44733,44
INJECTION TIME : 920506 08:49
INSTRUMENT ID : 5E



1 905-14-92

STANDARDS DATA PACKAGE

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Instrument ID: HP-5E Calibration Date(s): 04/23/92 04/23/92

Heated Purge: (Y/N): Y Calibration Times: 1058 1646

GC Column: CAP ID: 0.530(mm)

LAB FILE ID: RRF10 = E9545 RRF20 = E9541
RRF50= E9538 RRF100= E9542 RRF200= E9543

COMPOUND	RRF10	RRF20	RRF50	RRF100	RRF200	RRF	% RSD
Chloromethane	0.365	0.378	0.343	0.359	0.333	0.356	5.0
Bromomethane *	0.978	1.008	0.965	0.936	0.905	0.958	4.1*
Vinyl Chloride *	0.511	0.530	0.487	0.505	0.483	0.503	3.8*
Chloroethane	0.430	0.407	0.400	0.381	0.363	0.396	6.4
Methylene Chloride	1.424	1.189	1.090	1.047	1.007	1.151	14.5
Acetone	0.690	0.519	0.344	0.345	0.337	0.447	34.9
Carbon Disulfide	3.000	2.795	2.803	2.587	2.644	2.766	5.8
1,1-Dichloroethene *	1.123	1.051	1.039	0.919	0.925	1.011	8.7*
1,1-Dichloroethane *	2.103	1.904	1.905	1.736	1.954	1.920	6.8*
1,2-Dichloroethene (total)	2.592	2.374	2.270	2.197	2.428	2.372	6.4
Chloroform *	2.940	2.595	2.674	2.393	2.610	2.642	7.5*
1,2-Dichloroethane *	1.790	1.551	1.607	1.452	1.598	1.600	7.7*
2-Butanone	0.857	0.666	0.460	0.536	0.629	0.630	23.9
1,1,1-Trichloroethane *	0.762	0.768	0.782	0.680	0.737	0.746	5.4*
Carbon Tetrachloride *	0.691	0.726	0.748	0.664	0.714	0.709	4.6*
Bromodichloromethane *	0.810	0.870	0.895	0.794	0.862	0.846	5.0*
1,2-Dichloropropane	0.343	0.357	0.320	0.298	0.325	0.329	6.9
cis-1,3-Dichloropropene *	0.548	0.526	0.524	0.490	0.535	0.525	4.1*
Trichloroethene *	0.505	0.495	0.517	0.444	0.481	0.488	5.8*
Dibromochloromethane *	0.842	0.927	0.940	0.828	0.888	0.885	5.6*
1,1,2-Trichloroethane *	0.425	0.423	0.413	0.367	0.377	0.401	6.8*
Benzene *	0.825	0.763	0.751	0.691	0.755	0.757	6.3*
trans-1,3-Dichloropropene *	0.394	0.365	0.378	0.356	0.387	0.376	4.1*
Bromoform *	0.634	0.755	0.780	0.733	0.759	0.732	7.8*
4-Methyl-2-Pentanone	0.656	0.522	0.507	0.444	0.480	0.522	15.4
2-Hexanone	0.394	0.351	0.297	0.279	0.331	0.330	13.7
Tetrachloroethene *	0.659	0.665	0.682	0.524	0.549	0.616	11.9*
1,1,2,2-Tetrachloroethane *	1.031	1.126	1.043	0.932	0.963	1.019	7.4*
Toluene *	1.233	1.162	1.173	0.929	1.004	1.100	11.6*
Chlorobenzene *	1.082	1.015	0.995	0.860	0.956	0.982	8.3*
Ethylbenzene *	0.419	0.396	0.400	0.339	0.370	0.385	8.1*
Styrene *	0.836	0.838	0.853	0.720	0.812	0.812	6.6*
Xylene (total) *	0.513	0.474	0.513	0.435	0.467	0.480	6.9*
Toluene-d8	1.229	1.214	1.159	0.885	1.014	1.100	13.4
Bromofluorobenzene	0.987	1.102	1.053	0.799	0.897	0.968	12.6
1,2-Dichloroethane-d4	1.696	1.521	1.443	1.253	1.472	1.477	10.8

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Instrument ID: HP-5E Calibration Date(s): 04/27/92 04/27/92

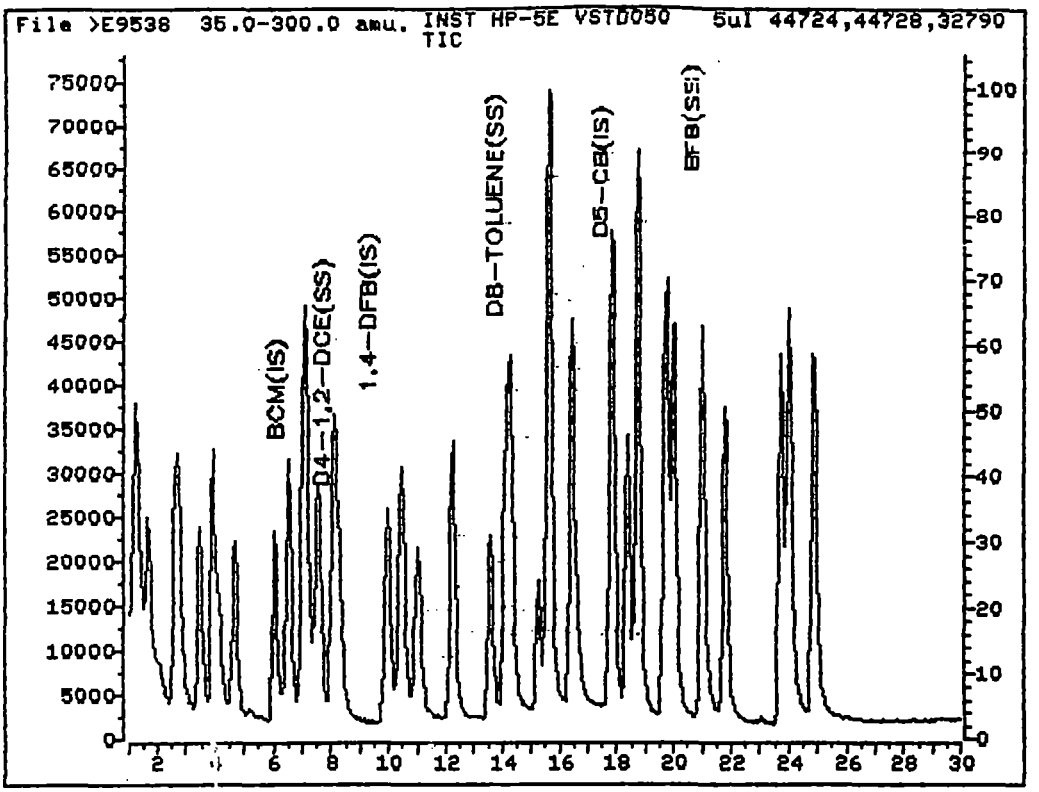
Heated Purge: (Y/N): N Calibration Times: 1900 2233

GC Column: CAP ID: 0.530(mm)

LAB FILE ID: RRF10 = E9631 RRF20 = E9632
RRF50= E9630 RRF100= E9633 RRF200= E9634

COMPOUND	RRF10	RRF20	RRF50	RRF100	RRF200	RRF	% RSD
Chloromethane	0.406	0.405	0.263	0.355	0.349	0.356	16.4
Bromomethane *	1.127	1.094	0.918	0.981	0.933	1.011	9.4*
Vinyl Chloride *	0.578	0.588	0.429	0.523	0.510	0.526	12.1*
Chloroethane	0.512	0.501	0.443	0.434	0.408	0.460	9.8
Methylene Chloride	1.492	1.558	1.492	1.292	1.267	1.420	9.3
Acetone	0.467	0.250	0.290	0.227	0.195	0.286	37.4
Carbon Disulfide	3.356	3.256	3.095	3.184	3.139	3.206	3.2
1,1-Dichloroethene *	1.376	1.202	1.140	1.208	1.112	1.208	8.5*
1,1-Dichloroethane *	2.169	2.128	2.138	2.148	2.119	2.140	0.9*
1,2-Dichloroethene (total)	3.183	2.848	2.734	2.667	2.589	2.804	8.3
Chloroform *	2.871	2.916	2.884	2.954	2.796	2.884	2.0*
1,2-Dichloroethane *	1.606	1.694	1.660	1.806	1.716	1.696	4.4*
2-Butanone	0.461	0.381	0.363	0.357	0.337	0.380	12.6
1,1,1-Trichloroethane *	0.699	0.742	0.696	0.761	0.726	0.725	3.8*
Carbon Tetrachloride *	0.621	0.677	0.633	0.710	0.689	0.666	5.7*
Bromodichloromethane *	0.795	0.852	0.834	0.890	0.854	0.845	4.1*
1,2-Dichloropropane	0.391	0.397	0.365	0.374	0.352	0.376	4.9
cis-1,3-Dichloropropene *	0.562	0.576	0.587	0.593	0.571	0.578	2.1*
Trichloroethene *	0.488	0.538	0.490	0.504	0.483	0.501	4.5*
Dibromochloromethane *	0.775	0.851	0.812	0.898	0.866	0.840	5.7*
1,1,2-Trichloroethane *	0.409	0.426	0.409	0.430	0.399	0.415	3.1*
Benzene *	0.848	0.865	0.862	0.854	0.800	0.846	3.1*
trans-1,3-Dichloropropene *	0.394	0.424	0.419	0.421	0.403	0.412	3.2*
Bromoform *	0.467	0.533	0.530	0.607	0.595	0.546	10.4*
4-Methyl-2-Pentanone	0.411	0.376	0.376	0.372	0.316	0.370	9.2
2-Hexanone	0.227	0.196	0.219	0.211	0.188	0.208	7.7
Tetrachloroethene *	0.609	0.648	0.617	0.643	0.576	0.619	4.7*
1,1,2,2-Tetrachloroethane *	0.794	0.804	0.786	0.832	0.726	0.788	4.9*
Toluene *	1.313	1.332	1.306	1.292	1.162	1.281	5.3*
Chlorobenzene *	0.975	0.990	1.009	1.015	0.993	0.996	1.6*
Ethylbenzene *	0.396	0.396	0.432	0.429	0.394	0.409	4.7*
Styrene *	0.780	0.822	0.887	0.902	0.822	0.843	6.0*
Xylene (total) *	0.492	0.483	0.523	0.530	0.498	0.505	4.0*
Toluene-d8	1.295	1.243	1.222	1.150	1.063	1.195	7.5
Bromofluorobenzene	0.983	0.948	0.935	0.911	0.844	0.924	5.6
1,2-Dichloroethane-d4	1.520	1.498	1.422	1.470	1.430	1.468	2.9

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.



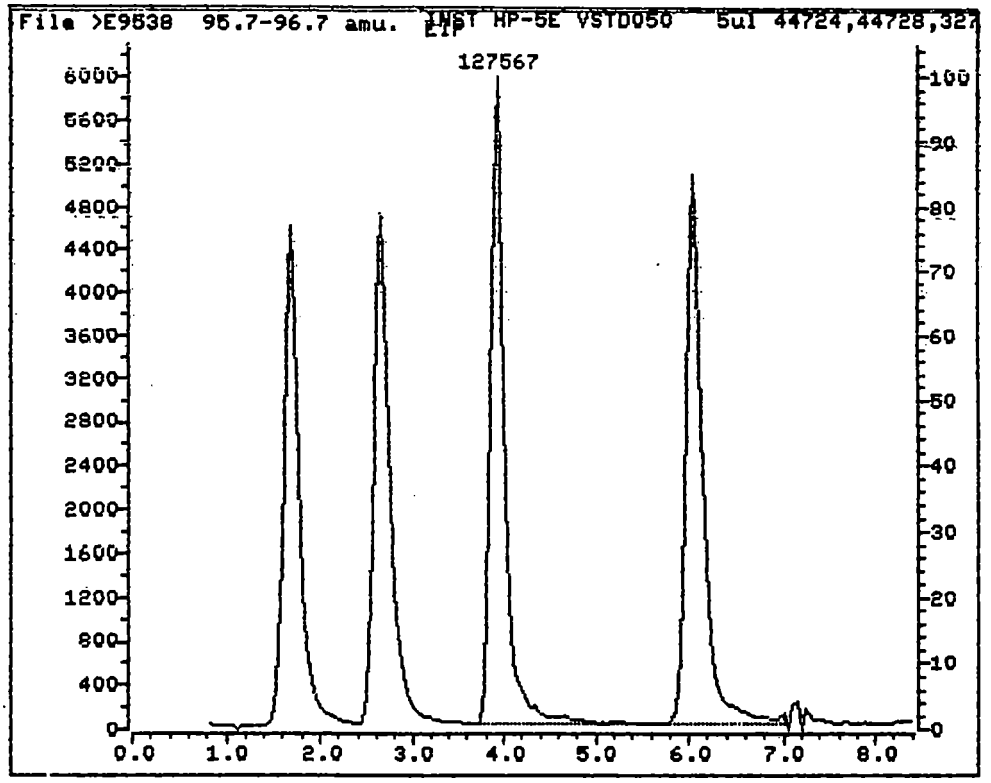
MS data file header from : >E9538

Sample: INST HP-5E VSTD050 Operator: TERMINAL60MS 4/23/92 10:58
Misc : 5ul 44724,44728,32790 IS/SS=50ppb 44731,44733
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF DBT56", Case 18050
RD 06-01-92

1gp50490



Data File: >E9538::D2 Quant Output File: ^E9538::QT
Name: INST HP-5E VSTD050
Misc: 5ul 44724,44728,32790 IS/SS=50ppb 44731,44733
Quant Time: 920423 18:19 Quant ID File: NCSID5::D7
Injected at: 920423 10:58 Last Calibration: 920423 18:14

Compound No: 11
Compound Name: 1,2-DICHLOROETHENE (TOTAL)
Scan Number: 68
Retention Time: 3.93 min.
Quant Ion: 96.0
Area: 127567M
Concentration: 96.26 ug/Kg
q-value: 84

This report was produced by QAREA on: 920504 17:03

"COPY
ORIGINAL IS FILED IN CSF DBT56, Case 18056
RD 06-01-92

1C95-0499

QUANT REPORT

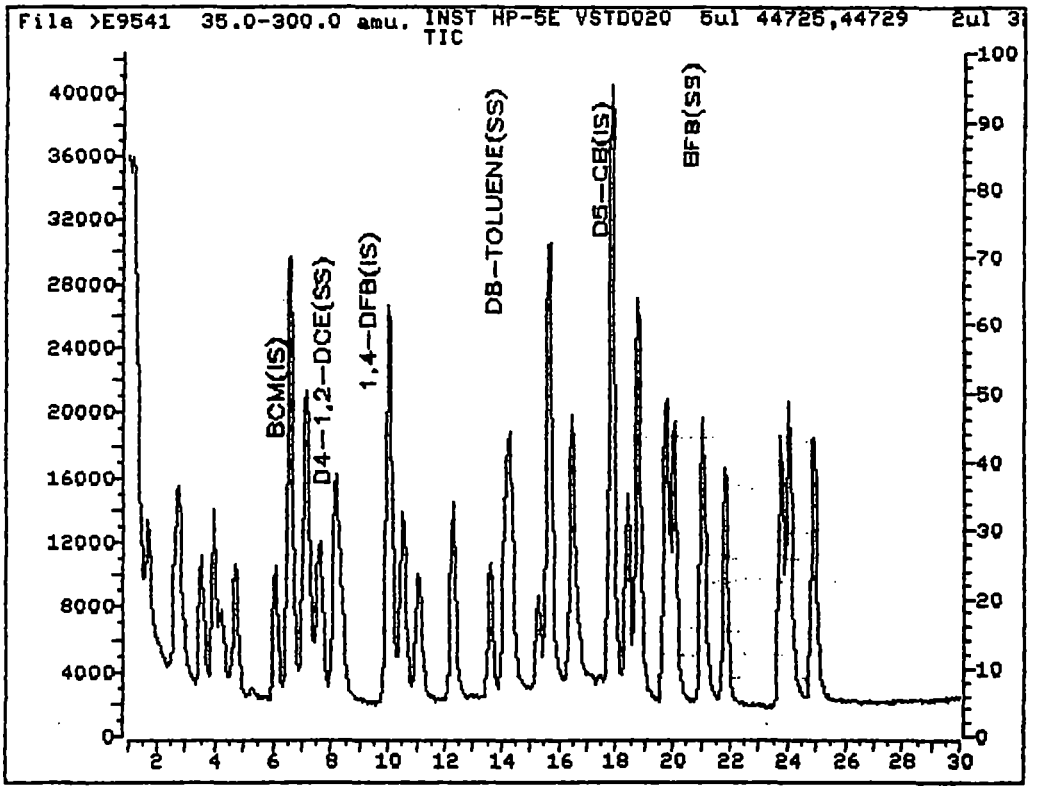
Operator ID: TERMINAL60 Quant Rev: 6 Quant Time: 920423 18:19
Output File: ^E9538::QT Injected at: 920423 10:58
Data File: >E9538::D2 Dilution Factor: 1.00000
Name: INST HP-5E VSTD050
Misc: 5ul 44724,44728,32790 IS/SS=50ppb 44731,44733

ID File: NCSID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (SOIL)
Last Calibration: 920423 18:14

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.55	128.0	56203	50.00	ug/Kg	86
2)	CHLOROMETHANE	1.30	50.0	19253	50.00	ug/Kg	96
3)	BROMOMETHANE	1.67	94.0	54255	50.00	ug/Kg	17
4)	VINYL CHLORIDE	1.40	62.0	27347	50.00	ug/Kg	96
5)	CHLOROETHANE	1.76	64.0	22506	50.00	ug/Kg	98
6)	METHYLENE CHLORIDE	3.47	84.0	61263	50.00	ug/Kg	77
7)	ACETONE	2.87	43.0	19356	50.00	ug/Kg	71
8)	CARBON DISULFIDE	2.78	76.0	157556	50.00	ug/Kg	62
9)	1,1-DICHLOROETHENE	2.64	96.0	58398	50.00	ug/Kg	92
10)	1,1-DICHLOROETHANE	4.71	63.0	107047	50.00	ug/Kg	92
11)	1,2-DICHLOROETHENE (TOTAL)	3.93	96.0	127567M	96.26	ug/Kg	84
12)	CHLOROFORM	7.06	83.0	150312	50.00	ug/Kg	92
13)	d4-1,2-DICHLOROETHANE(SS)	8.12	65.0	81088	50.00	ug/Kg	100
14)	1,2-DICHLOROETHANE	8.30	62.0	90312	50.00	ug/Kg	98
15)	2-BUTANONE	6.37	43.0	25867	50.00	ug/Kg	83
16)	*1,4-DIFLUOROBENZENE(IS)	10.00	114.0	172374	50.00	ug/Kg	28
17)	1,1,1-TRICHLOROETHANE	7.15	97.0	134723	50.00	ug/Kg	92
18)	CARBON TETRACHLORIDE	7.56	117.0	128877	50.00	ug/Kg	94
19)	BROMODICHLOROMETHANE	12.26	83.0	154353	50.00	ug/Kg	95
20)	1,2-DICHLOROPROPANE	11.06	63.0	55235	50.00	ug/Kg	64
21)	CIS-1,3-DICHLOROPROPENE	13.59	75.0	90281	50.00	ug/Kg	100
22)	TRICHLOROETHENE	10.51	130.0	89086	50.00	ug/Kg	94
23)	DIBROMOCHLOROMETHANE	16.45	129.0	162106	50.00	ug/Kg	96
24)	1,1,2-TRICHLOROETHANE	15.62	97.0	71203	50.00	ug/Kg	96
25)	BENZENE	8.12	78.0	129453	50.00	ug/Kg	100
26)	TRANS-1,3-DICHLOROPROPENE	15.25	75.0	65109	50.00	ug/Kg	100
27)	BROMOFORM	20.04	173.0	134501	50.00	ug/Kg	98
28)	*d5-CHLOROBENZENE(IS)	17.83	117.0	120929	50.00	ug/Kg	100
29)	4-METHYL-2-PENTANONE	14.33	43.0	61260	50.00	ug/Kg	86
30)	2-HEXANONE	16.68	43.0	35867	50.00	ug/Kg	86
31)	TETRACHLOROETHENE	15.67	164.0	82451	50.00	ug/Kg	79
32)	1,1,2,2-TETRACHLOROETHANE	21.79	83.0	126116	50.00	ug/Kg	94
33)	d8-TOLUENE(SS)	14.15	98.0	140196	50.00	ug/Kg	98
34)	TOLUENE	14.28	91.0	141828	50.00	ug/Kg	91
35)	CHLOROBENZENE	17.88	112.0	120281	50.00	ug/Kg	87
36)	ETHYLBENZENE	18.38	106.0	48384	50.00	ug/Kg	79
37)	4-BROMOFLUOROBENZENE(SS)	21.01	95.0	127302	50.00	ug/Kg	89
38)	STYRENE	19.81	104.0	103183	50.00	ug/Kg	51
39)	TOTAL XYLENES	19.72	106.0	61978	50.00	ug/Kg	79

* Compound is ISTD

"COPY
ORIGINAL IS FILED IN CSF DBT56", Case 18050 RD 06-01-92 JC 050497



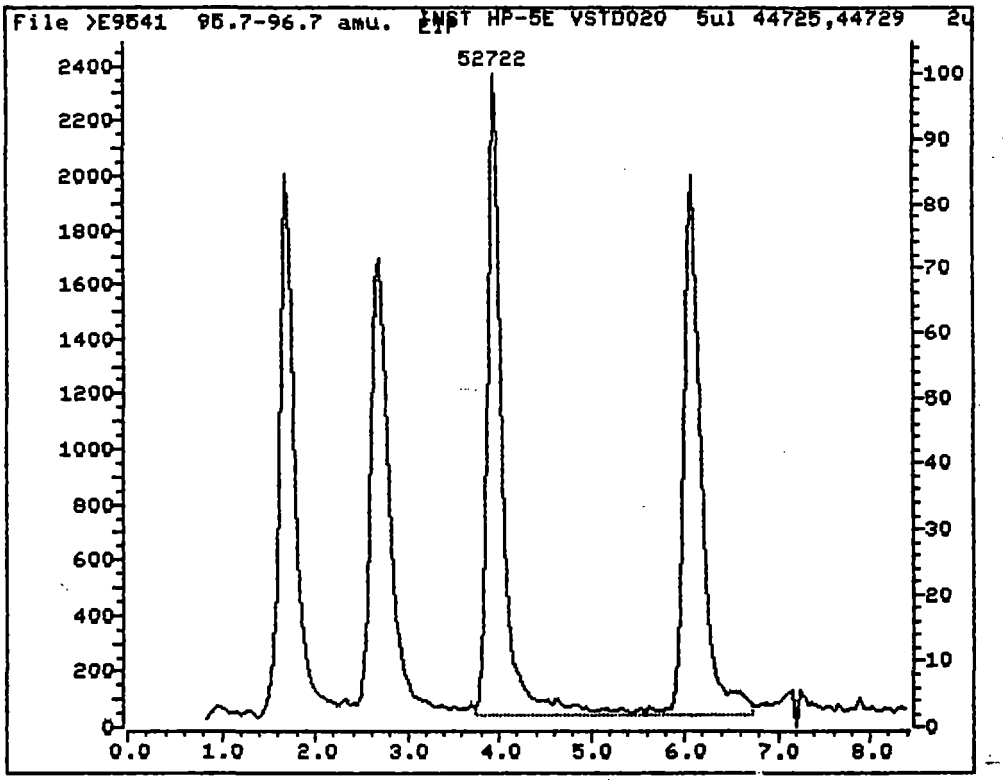
MS data file header from : >E9541

Sample: INST HP-5E VSTD020 Operator: TERMINAL60MS 4/23/92 13:47
Misc : 5ul 44725,44729 2ul 32790 SS=20 44731 IS=50 4473
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF DBT56", Case 18050
RD 06-01-92

1405-0492



Data File: >E9541::D2 Quant Output File: ^E9541::D8
Name: INST HP-5E VSTD020
Misc: 5ul 44725,44729 2ul 32790 SS=20 44731 IS=50 4473
Quant Time: 920423 14:36 Quant ID File: NCSID5::D7
Injected at: 920423 13:47 Last Calibration: 920423 12:52

Compound No: 11
Compound Name: 1,2-DICHLOROETHENE (TOTAL)
Scan Number: 68
Retention Time: 3.93 min.
Quant Ion: 96.0
Area: 52722M
Concentration: 30.46 ug/Kg
q-value: 92

This report was produced by QAREA on: 920504 17:08

"COPY
ORIGINAL IS FILED IN CSF DB756, Case 18050
RD 06-01-92

JCp5-04-92

QUANT REPORT

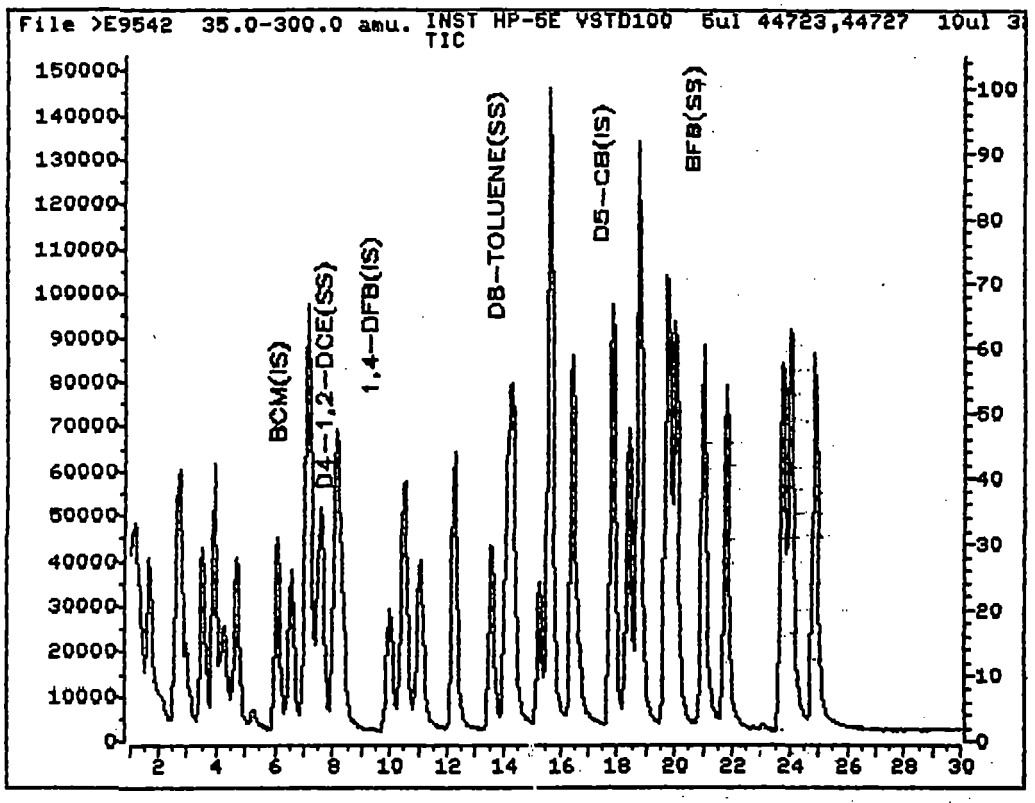
Operator ID: TERMINAL60 Quant Rev: 6 Quant Time: 920423 14:36
Output File: ^E9541::D8 Injected at: 920423 13:47
Data File: >E9541::D2 Dilution Factor: 1.00000
Name: INST HP-5E VSTD020
Misc: 5ul 44725,44729 2ul 32790 SS=20 44731 IS=50 4473

ID File: NCSID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (SOIL)
Last Calibration: 920423 12:52

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.55	128.0	55526	50.00	ug/Kg	77
2)	CHLOROMETHANE	1.30	50.0	8403	13.29	ug/Kg	97
3)	BROMOMETHANE	1.67	94.0	22383	13.29	ug/Kg	17
4)	VINYL CHLORIDE	1.40	62.0	11779	13.80	ug/Kg	97
5)	CHLOROETHANE	1.76	64.0	9034	13.17	ug/Kg	93
6)	METHYLENE CHLORIDE	3.51	84.0	26399	11.12	ug/Kg	76
7)	ACETONE	2.96	43.0	11518	25.86	ug/Kg	73
8)	CARBON DISULFIDE	2.78	76.0	62085	14.04	ug/Kg	62
9)	1,1-DICHLOROETHENE	2.68	96.0	23353	15.44	ug/Kg	89
10)	1,1-DICHLOROETHANE	4.76	63.0	42298	14.41	ug/Kg	90
11)	1,2-DICHLOROETHENE (TOTAL)	3.93	96.0	52722M	30.46	ug/Kg	92
12)	CHLOROFORM	7.10	83.0	57645	17.66	ug/Kg	89
13)	d4-1,2-DICHLOROETHANE(SS)	8.12	65.0	33782	24.81	ug/Kg	100
14)	1,2-DICHLOROETHANE	8.35	62.0	34449	23.00	ug/Kg	97
15)	2-BUTANONE	6.46	43.0	14800	21.33	ug/Kg	85
16)	*1,4-DIFLUOROBENZENE(IS)	10.00	114.0	166542	50.00	ug/Kg	28
17)	1,1,1-TRICHLOROETHANE	7.20	97.0	51162	20.50	ug/Kg	93
18)	CARBON TETRACHLORIDE	7.61	117.0	48341	18.56	ug/Kg	97
19)	BROMODICHLOROMETHANE	12.26	83.0	57926	15.54	ug/Kg	90
20)	1,2-DICHLOROPROPANE	11.06	63.0	23807	16.25	ug/Kg	61
21)	CIS-1,3-DICHLOROPROPENE	13.59	75.0	35038	17.90	ug/Kg	100
22)	TRICHLOROETHENE	10.51	130.0	32994	17.74	ug/Kg	96
23)	DIBROMOCHLOROMETHANE	16.45	129.0	61753	17.66	ug/Kg	97
24)	1,1,2-TRICHLOROETHANE	15.62	97.0	28208	18.72	ug/Kg	98
25)	BENZENE	8.16	78.0	50838	17.60	ug/Kg	100
26)	TRANS-1,3-DICHLOROPROPENE	15.25	75.0	24334	18.21	ug/Kg	100
27)	BROMOFORM	20.04	173.0	50314	18.30	ug/Kg	98
28)	*d5-CHLOROBENZENE(IS)	17.83	117.0	118236	50.00	ug/Kg	100
29)	4-METHYL-2-PENTANONE	14.33	43.0	24701	26.44	ug/Kg	89
30)	2-HEXANONE	16.68	43.0	16596	27.39	ug/Kg	89
31)	TETRACHLOROETHENE	15.66	164.0	31472	27.74	ug/Kg	80
32)	1,1,2,2-TETRACHLOROETHANE	21.79	83.0	53274	17.78	ug/Kg	90
33)	d8-TOLUENE(SS)	14.15	98.0	57402	25.70	ug/Kg	99
34)	TOLUENE	14.28	91.0	54934	23.30	ug/Kg	88
35)	CHLOROBENZENE	17.87	112.0	47987	20.41	ug/Kg	88
36)	ETHYLBENZENE	18.43	106.0	18738	21.50	ug/Kg	78
37)	4-BROMOFLUOROBENZENE(SS)	21.05	95.0	52104	21.56	ug/Kg	98
38)	STYRENE	19.81	104.0	39628	20.41	ug/Kg	51
39)	TOTAL XYLENES	19.72	106.0	22394	19.82	ug/Kg	80

* Compound is ISTD

"COPY
ORIGINAL IS FILED IN CSF DOT56, Case 18050
RD 06-01-92 JCP 5-04-92



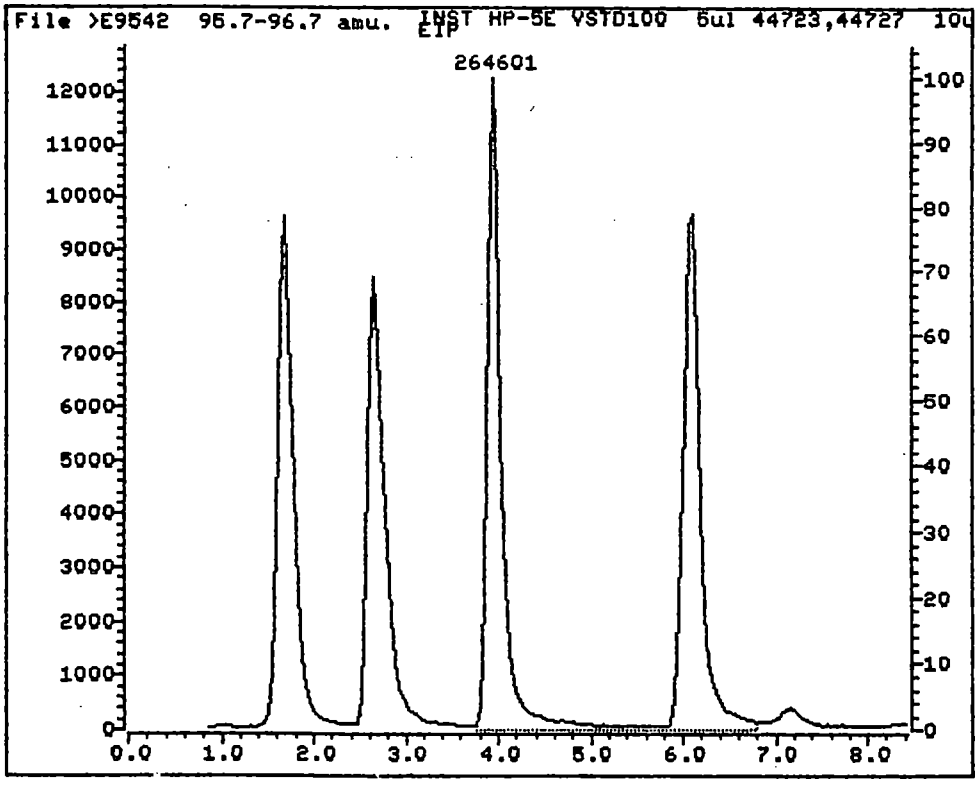
MS data file header from : >E9542

Sample: INST HP-5E VSTD100 Operator: TERMINAL60MS 4/23/92 14:34
Misc : 5ul 44723,44727 10ul 32790 SS=100 44731 IS=50 447
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF DBT56", Case 18050
RD 06-01-92

1905-0492



Data File: >E9542::D2 Quant Output File: ^E9542::D8
Name: INST HP-5E VSTD100
Misc: 5ul 44723,44727 10ul 32790 SS=100 44731 IS=50 447
Quant Time: 920423 15:12 Quant ID File: NCSID5::D7
Injected at: 920423 14:34 Last Calibration: 920423 12:52

Compound No: 11
Compound Name: 1,2-DICHLOROETHENE (TOTAL)
Scan Number: 68
Retention Time: 3.94 min.
Quant Ion: 96.0
Area: 264601M
Concentration: 140.96 ug/Kg
q-value: 94

This report was produced by QAREA on: 920504 17:12

"COPY
ORIGINAL IS FILED IN CSF DBT56, Case 18050
06-01-92

JCP5-04-92

QUANT REPORT

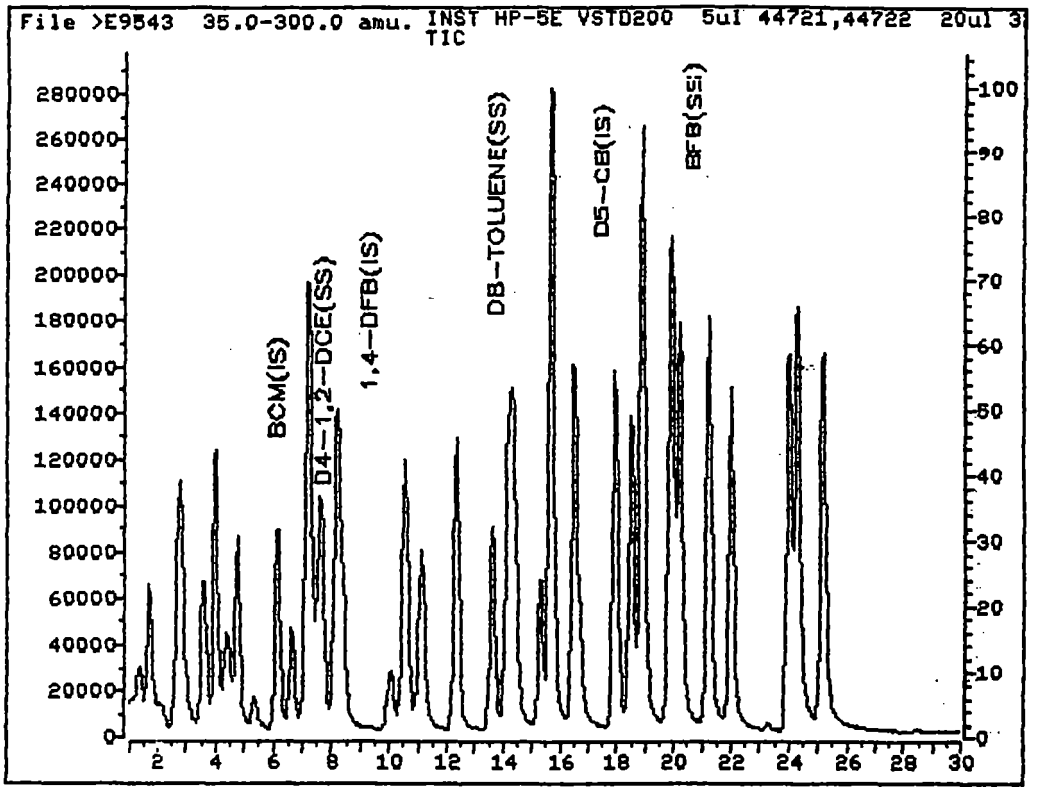
Operator ID: TERMINAL60 Quant Rev: 6 Quant Time: 920423 15:12
Output File: ^E9542::D8 Injected at: 920423 14:34
Data File: >E9542::D2 Dilution Factor: 1.00000
Name: INST HP-5E VSTD100
Misc: 5ul 44723,44727 10ul 32790 SS=100 44731 IS=50 447

ID File: NCSID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (SOIL)
Last Calibration: 920423 12:52

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.56	128.0	60221	50.00	ug/Kg	80
2)	CHLOROMETHANE	1.31	50.0	43210	63.03	ug/Kg	97
3)	BROMOMETHANE	1.68	94.0	112743	61.73	ug/Kg	17
4)	VINYL CHLORIDE	1.40	62.0	60790	65.67	ug/Kg	98
5)	CHLOROETHANE	1.73	64.0	45869	61.67	ug/Kg	95
6)	METHYLENE CHLORIDE	3.52	84.0	126100	48.97	ug/Kg	74
7)	ACETONE	2.97	43.0	41595	86.11	ug/Kg	67
8)	CARBON DISULFIDE	2.79	76.0	311532	64.94	ug/Kg	62
9)	1,1-DICHLOROETHENE	2.65	96.0	110731	67.49	ug/Kg	93
10)	1,1-DICHLOROETHANE	4.72	63.0	209093	65.69	ug/Kg	92
11)	1,2-DICHLOROETHENE (TOTAL)	3.94	96.0	264601M	140.96	ug/Kg	94
12)	CHLOROFORM	7.11	83.0	288223	81.40	ug/Kg	91
13)	d4-1,2-DICHLOROETHANE(SS)	8.13	65.0	150900	102.20	ug/Kg	100
14)	1,2-DICHLOROETHANE	8.36	62.0	174832	107.61	ug/Kg	98
15)	2-BUTANONE	6.47	43.0	64506	85.72	ug/Kg	86
16)	*1,4-DIFLUOROBENZENE(IS)	10.01	114.0	185574	50.00	ug/Kg	29
17)	1,1,1-TRICHLOROETHANE	7.16	97.0	252393	90.76	ug/Kg	92
18)	CARBON TETRACHLORIDE	7.57	117.0	246413	84.90	ug/Kg	99
19)	BROMODICHLOROMETHANE	12.27	83.0	294745	70.96	ug/Kg	89
20)	1,2-DICHLOROPROPANE	11.07	63.0	110450	67.64	ug/Kg	62
21)	CIS-1,3-DICHLOROPROPENE	13.56	75.0	181959	83.43	ug/Kg	100
22)	TRICHLOROETHENE	10.48	130.0	164872	79.54	ug/Kg	93
23)	DIBROMOCHLOROMETHANE	16.46	129.0	307443	78.89	ug/Kg	96
24)	1,1,2-TRICHLOROETHANE	15.59	97.0	136087	81.06	ug/Kg	97
25)	BENZENE	8.13	78.0	256614	79.71	ug/Kg	100
26)	TRANS-1,3-DICHLOROPROPENE	15.26	75.0	132031	88.66	ug/Kg	100
27)	BROMOFORM	20.01	173.0	272121	88.81	ug/Kg	98
28)	*d5-CHLOROBENZENE(IS)	17.80	117.0	147900	50.00	ug/Kg	100
29)	4-METHYL-2-PENTANONE	14.34	43.0	131277	112.35	ug/Kg	86
30)	2-HEXANONE	16.65	43.0	82632	109.03	ug/Kg	85
31)	TETRACHLOROETHENE	15.63	164.0	155043	109.26	ug/Kg	79
32)	1,1,2,2-TETRACHLOROETHANE	21.80	83.0	275814	73.59	ug/Kg	94
33)	d8-TOLUENE(SS)	14.11	98.0	261728	93.67	ug/Kg	98
34)	TOLUENE	14.30	91.0	274792	93.18	ug/Kg	89
35)	CHLOROBENZENE	17.84	112.0	254410	86.51	ug/Kg	90
36)	ETHYLBENZENE	18.40	106.0	100210	91.93	ug/Kg	80
37)	4-BROMOFLUOROBENZENE(SS)	21.02	95.0	236294	78.16	ug/Kg	96
38)	STYRENE	19.78	104.0	213078	87.72	ug/Kg	49
39)	TOTAL XYLENES	19.68	106.0	128733	91.08	ug/Kg	79

* Compound is ISTD

"COPY
ORIGINAL IS FILED IN CSF DBT56 "Case 18050
RD 06-01-92
JC05-0492



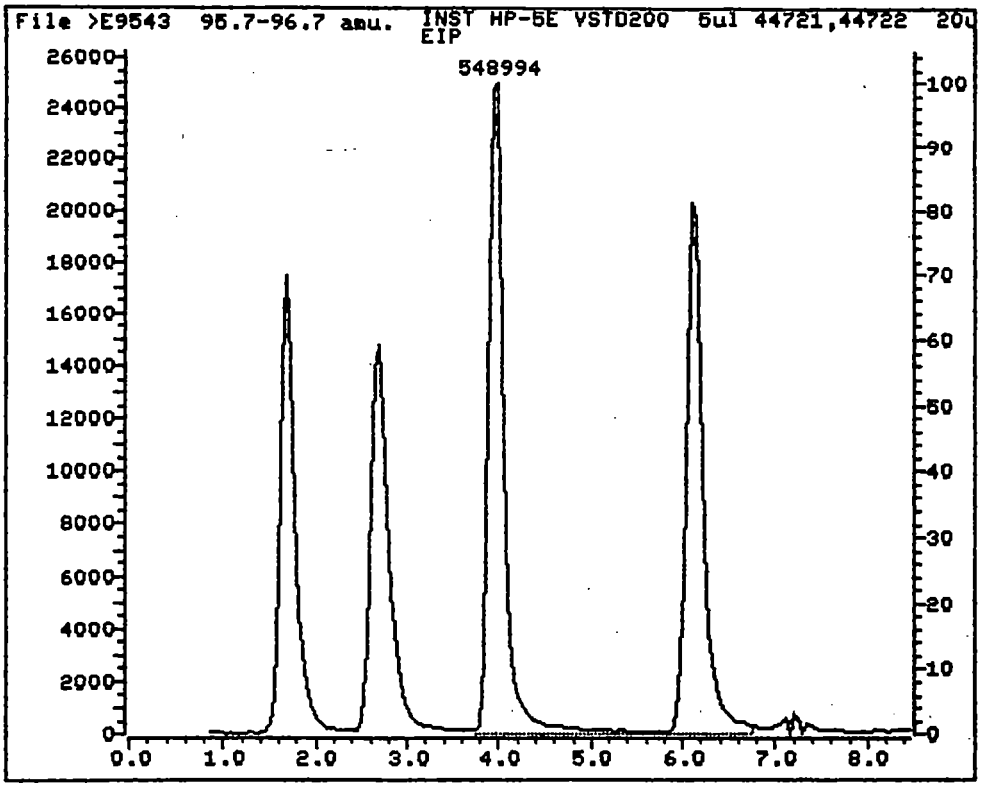
MS data file header from : >E9543

Sample: INST HP-5E VSTD200 Operator: TERMINAL60MS 4/23/92 15:17
Misc : 5ul 44721,44722 20ul 32790 SS=200 44731 IS=50 447
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF DGT56, Case 18050
RD 06-01-92

1085-04-92



Data File: >E9543::D2 Quant Output File: ^E9543::D8
Name: INST HP-5E VSTD200
Misc: 5ul 44721,44722 20ul 32790 SS=200 44731 IS=50 447
Quant Time: 920423 15:52 Quant ID File: NCSID5::D7
Injected at: 920423 15:17 Last Calibration: 920423 12:52

Compound No: 11
Compound Name: 1,2-DICHLOROETHENE (TOTAL)
Scan Number: 69
Retention Time: 3.98 min.
Quant Ion: 96.0
Area: 548994M
Concentration: 311.53 ug/Kg
q-value: 84

This report was produced by QAREA on: 920423 16:09

"COPY
ORIGINAL IS FILED IN CSF DBT56, Case 18050
RD 06-01-92

JCP50492

QUANT REPORT

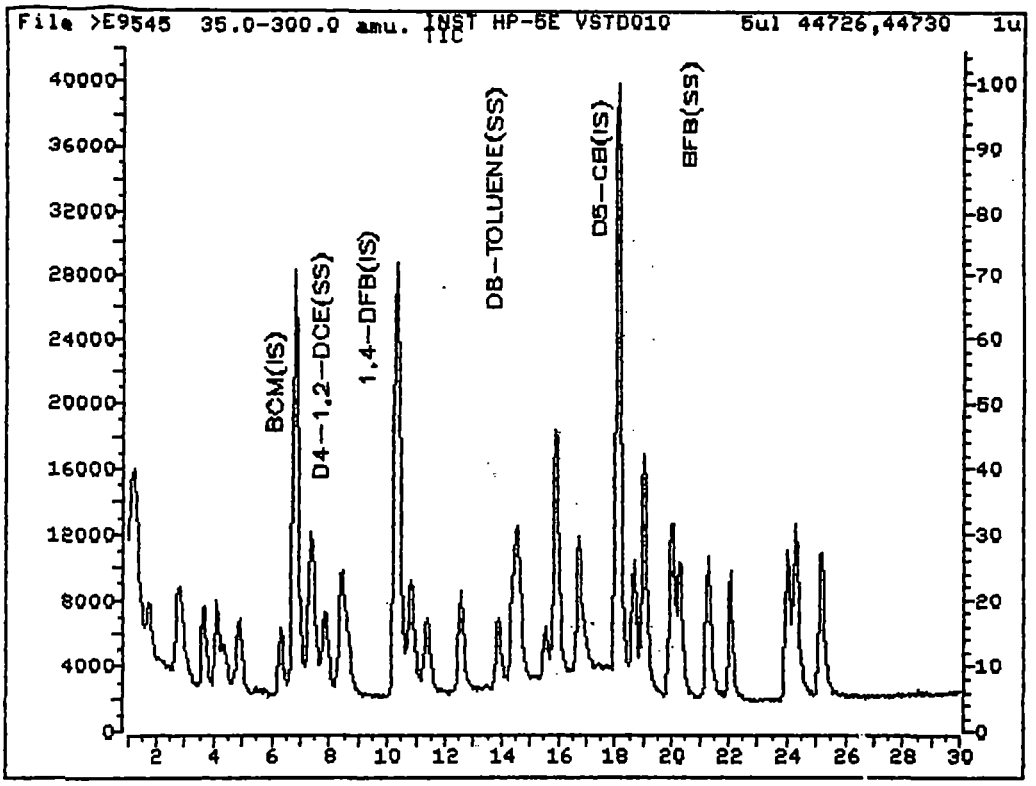
Operator ID: TERMINAL60 Quant Rev: 6 Quant Time: 920423 15:52
Output File: ^E9543::D8 Injected at: 920423 15:17
Data File: >E9543::D2 Dilution Factor: 1.00000
Name: INST HP-5E VSTD200
Misc: 5ul 44721,44722 20ul 32790 SS=200 44731 IS=50 447

ID File: NCSID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (SOIL)
Last Calibration: 920423 12:52

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.61	128.0	56535	50.00	ug/Kg	87
2)	CHLOROMETHANE	1.31	50.0	75404	117.16	ug/Kg	98
3)	BROMOMETHANE	1.68	94.0	204744	119.42	ug/Kg	18
4)	VINYL CHLORIDE	1.41	62.0	109114	125.55	ug/Kg	98
5)	CHLOROETHANE	1.77	64.0	82130	117.62	ug/Kg	96
6)	METHYLENE CHLORIDE	3.52	84.0	227703	94.19	ug/Kg	72
7)	ACETONE	3.02	43.0	76182	167.99	ug/Kg	68
8)	CARBON DISULFIDE	2.79	76.0	597874	132.75	ug/Kg	61
9)	1,1-DICHLOROETHENE	2.70	96.0	209183	135.81	ug/Kg	94
10)	1,1-DICHLOROETHANE	4.77	63.0	441865	147.86	ug/Kg	92
11)	1,2-DICHLOROETHENE (TOTAL)	3.98	96.0	548994M	311.53	ug/Kg	84
12)	CHLOROFORM	7.16	83.0	590224	177.55	ug/Kg	90
13)	d4-1,2-DICHLOROETHANE(SS)	8.17	65.0	333000	240.23	ug/Kg	100
14)	1,2-DICHLOROETHANE	8.36	62.0	361483	237.00	ug/Kg	97
15)	2-BUTANONE	6.61	43.0	142283	201.40	ug/Kg	88
16)	*1,4-DIFLUOROBENZENE(IS)	10.02	114.0	177191	50.00	ug/Kg	29
17)	1,1,1-TRICHLOROETHANE	7.21	97.0	522285	196.71	ug/Kg	93
18)	CARBON TETRACHLORIDE	7.58	117.0	506291	182.70	ug/Kg	99
19)	BROMODICHLOROMETHANE	12.32	83.0	611130	154.10	ug/Kg	93
20)	1,2-DICHLOROPROPANE	11.12	63.0	230138	147.61	ug/Kg	62
21)	CIS-1,3-DICHLOROPROPENE	13.61	75.0	379496	182.24	ug/Kg	100
22)	TRICHLOROETHENE	10.52	130.0	341261	172.42	ug/Kg	92
23)	DIBROMOCHLOROMETHANE	16.46	129.0	629640	169.20	ug/Kg	95
24)	1,1,2-TRICHLOROETHANE	15.63	97.0	267386	166.81	ug/Kg	97
25)	BENZENE	8.13	78.0	535077	174.06	ug/Kg	100
26)	TRANS-1,3-DICHLOROPROPENE	15.27	75.0	274359	192.95	ug/Kg	100
27)	BROMOFORM	20.19	173.0	538025	183.91	ug/Kg	99
28)	*d5-CHLOROBENZENE(IS)	17.89	117.0	142057	50.00	ug/Kg	100
29)	4-METHYL-2-PENTANONE	14.44	43.0	272869	243.14	ug/Kg	88
30)	2-HEXANONE	16.74	43.0	187849	258.05	ug/Kg	86
31)	TETRACHLOROETHENE	15.68	164.0	312126	229.00	ug/Kg	78
32)	1,1,2,2-TETRACHLOROETHANE	21.99	83.0	547201	152.00	ug/Kg	91
33)	d8-TOLUENE(SS)	14.16	98.0	576470	214.80	ug/Kg	96
34)	TOLUENE	14.30	91.0	570452	201.39	ug/Kg	89
35)	CHLOROBENZENE	17.94	112.0	543167	192.30	ug/Kg	89
36)	ETHYLBENZENE	18.49	106.0	210063	200.62	ug/Kg	81
37)	4-BROMOFLUOROBENZENE(SS)	21.21	95.0	509478	175.44	ug/Kg	94
38)	STYRENE	19.96	104.0	461198	197.67	ug/Kg	51
39)	TOTAL XYLENES	19.87	106.0	265095	195.26	ug/Kg	81

* Compound is ISTD

"COPY
ORIGINAL IS FILED IN CSF DB156, Case 18050 RQ 06-01-92



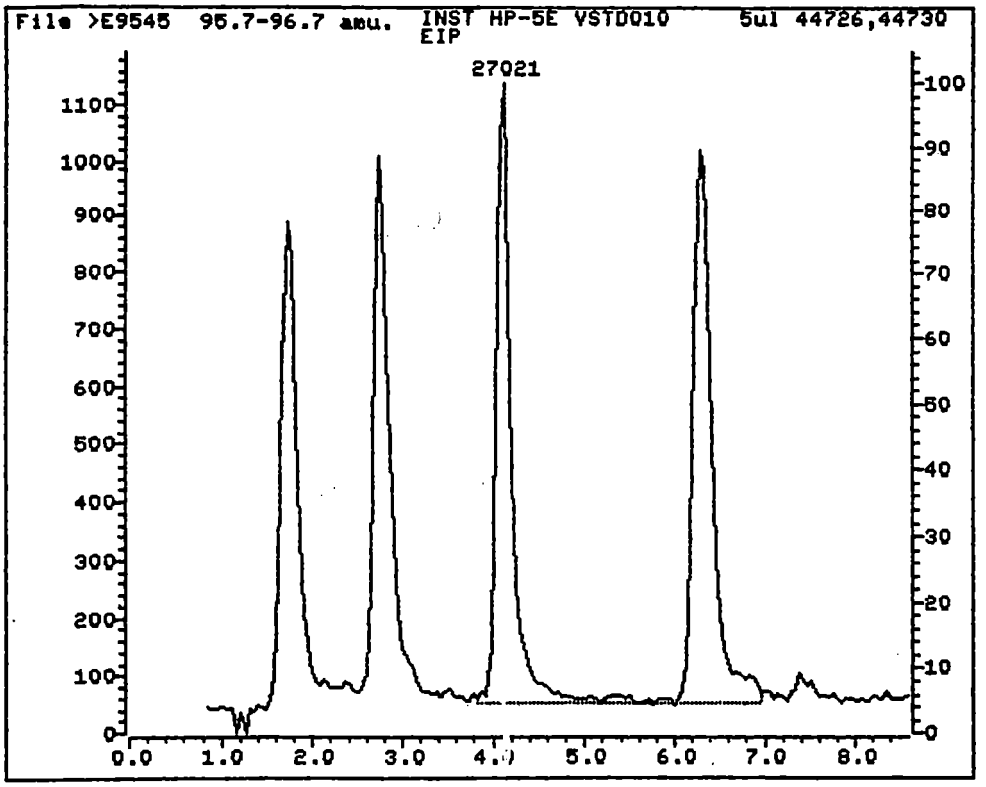
MS data file header from : >E9545

Sample: INST HP-5E VSTD010 Operator: TERMINAL60MS 4/23/92 16:46
Misc : 5ul 44726,44730 1ul 32790 SS=010 44731 IS=50
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF DBT56", Case 18050
RD 06-01-92

1805-04-92



Data File: >E9545::D2 Quant Output File: ^E9545::D8
Name: INST HP-5E VSTD010
Misc: 5ul 44726,44730 1ul 32790 SS=010 44731 IS=50
Quant Time: 920423 17:21 Quant ID File: NCSID5::D7
Injected at: 920423 16:46 Last Calibration: 920423 12:52

Compound No: 11
Compound Name: 1,2-DICHLOROETHENE (TOTAL)
Scan Number: 72
Retention Time: 4.11 min.
Quant Ion: 96.0
Area: 27021M
Concentration: 16.63 ug/Kg
q-value: 83

This report was produced by QAREA on: 920423 17:29

"COPY
ORIGINAL IS FILED IN CSF DBT56, Case 18050
RD 06-01-92

1 Cg05-0492

QUANT REPORT

Operator ID: TERMINAL60 Quant Rev: 6 Quant Time: 920423 17:21
Output File: ^E9545::D8 Injected at: 920423 16:46
Data File: >E9545::D2 Dilution Factor: 1.00000
Name: INST HP-5E VSTD010
Misc: 5ul 44726,44730 1ul 32790 SS=010 44731 IS=50

ID File: NCSID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (SOIL)
Last Calibration: 920423 12:52

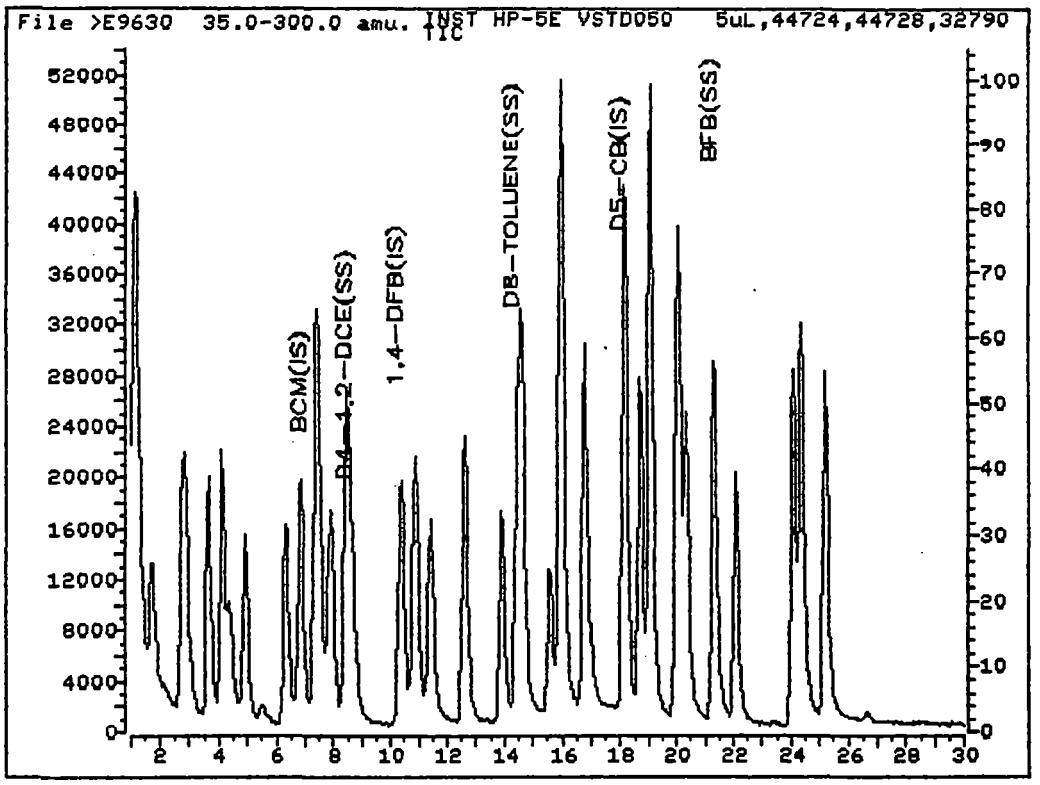
	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.83	128.0	52115	50.00	ug/Kg	92
2)	CHLOROMETHANE	1.35	50.0	3809	6.42	ug/Kg	95
3)	BROMOMETHANE	1.72	94.0	10192	6.45	ug/Kg	17
4)	VINYL CHLORIDE	1.44	62.0	5325	6.65	ug/Kg	95
5)	CHLOROETHANE	1.81	64.0	4487	6.97	ug/Kg	94
6)	METHYLENE CHLORIDE	3.65	84.0	14846	6.66	ug/Kg	76
7)	ACETONE	3.06	43.0	7193	17.21	ug/Kg	71
8)	CARBON DISULFIDE	2.87	76.0	31267	7.53	ug/Kg	61
9)	1,1-DICHLOROETHENE	2.73	96.0	11705	8.24	ug/Kg	91
10)	1,1-DICHLOROETHANE	4.90	63.0	21917	7.96	ug/Kg	90
11)	1,2-DICHLOROETHENE (TOTAL)	4.11	98.0	27021M	16.63	ug/Kg	83
12)	CHLOROFORM	7.34	83.0	30644	10.00	ug/Kg	90
13)	d4-1,2-DICHLOROETHANE(SS)	8.39	65.0	17682	13.84	ug/Kg	100
14)	1,2-DICHLOROETHANE	8.62	62.0	18659	13.27	ug/Kg	98
15)	2-BUTANONE	6.64	43.0	8934	13.72	ug/Kg	90
16)	*1,4-DIFLUOROBENZENE(IS)	10.33	114.0	180528	50.00	ug/Kg	29
17)	1,1,1-TRICHLOROETHANE	7.43	97.0	27513	10.17	ug/Kg	94
18)	CARBON TETRACHLORIDE	7.84	117.0	24938	8.83	ug/Kg	99
19)	BROMODICHLOROMETHANE	12.54	83.0	29262	7.24	ug/Kg	93
20)	1,2-DICHLOROPROPANE	11.39	63.0	12375	7.79	ug/Kg	62
21)	CIS-1,3-DICHLOROPROPENE	13.87	75.0	19787	9.33	ug/Kg	100
22)	TRICHLOROETHENE	10.83	130.0	18242	9.05	ug/Kg	94
23)	DIBROMOCHLOROMETHANE	16.72	129.0	30416	8.02	ug/Kg	97
24)	1,1,2-TRICHLOROETHANE	15.90	97.0	15347	9.40	ug/Kg	98
25)	BENZENE	8.44	78.0	29794	9.51	ug/Kg	100
26)	TRANS-1,3-DICHLOROPROPENE	15.53	75.0	14239	9.83	ug/Kg	100
27)	BROMOFORM	20.27	173.0	22905	7.68	ug/Kg	99
28)	*d5-CHLOROBENZENE(IS)	18.06	117.0	132147	50.00	ug/Kg	100
29)	4-METHYL-2-PENTANONE	14.61	43.0	17351	16.62	ug/Kg	81
30)	2-HEXANONE	16.91	43.0	10415	15.38	ug/Kg	86
31)	TETRACHLOROETHENE	15.94	164.0	17410	13.73	ug/Kg	75
32)	1,1,2,2-TETRACHLOROETHANE	22.06	83.0	27244	8.14	ug/Kg	89
33)	d8-TOLUENE(SS)	14.42	98.0	32473	13.01	ug/Kg	96
34)	TOLUENE	14.56	91.0	32592	12.37	ug/Kg	88
35)	CHLOROBENZENE	18.15	112.0	28611	10.89	ug/Kg	92
36)	ETHYLBENZENE	18.66	106.0	11082	11.38	ug/Kg	81
37)	4-BROMOFLUOROBENZENE(SS)	21.28	95.0	26095	9.66	ug/Kg	92
38)	STYRENE	20.04	104.0	22086	10.18	ug/Kg	50
39)	TOTAL XYLENES	19.95	106.0	13561	10.74	ug/Kg	78

* Compound is ISTD

"COPY
ORIGINAL IS FILED IN CSF DBT66, "Case 18050
RD 06-01-92 1805-04-92

~~19005 · 5~~ 5-29-92

19026 · 5



MS data file header from : >E9630

Sample: INST HP-5E VSTD050 Operator: TERMINAL63MS 4/27/92 19:00
Misc : 5uL,44724,44728,32790 IS,SS=50,44731,4473
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

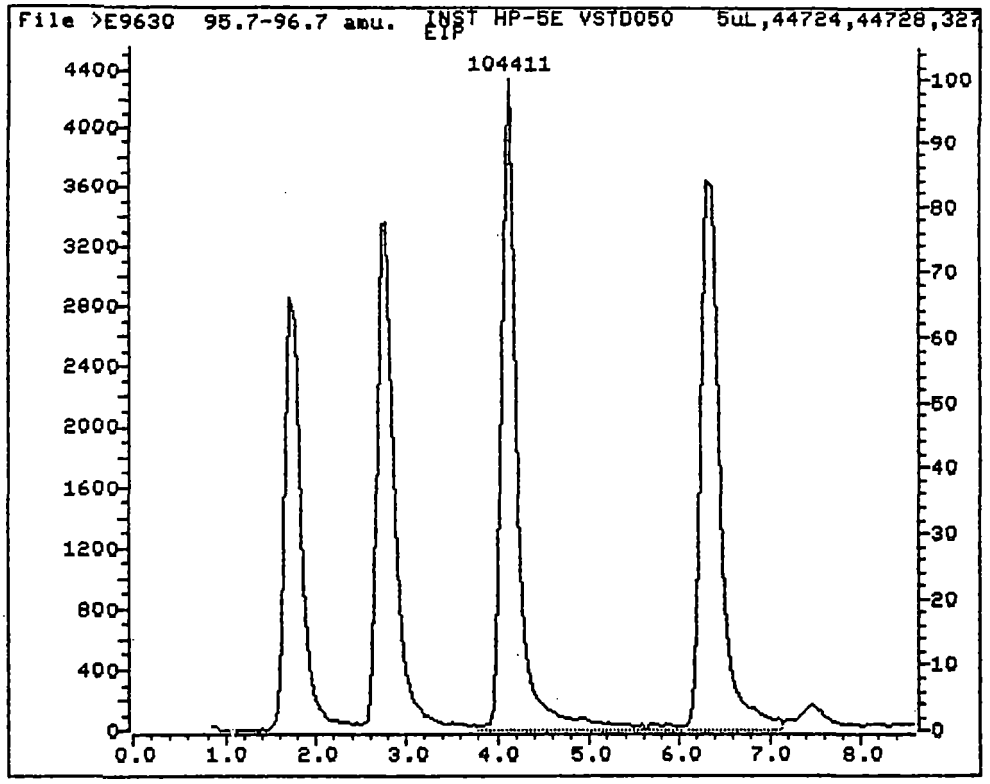
Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF EM564, Case 19005
06-01-92

JB 05/06/92

~~19005.5~~ 5-21-92

19026.5



Data File: >E9630::D2 Quant Output File: ^E9630::QT
Name: INST HP-5E VSTD050
Misc: 5uL,44724,44728,32790 IS,SS=50,44731,4473
Quant Time: 920427 19:31 Quant ID File: CAPID5::D7
Injected at: 920427 19:00 Last Calibration: 920427 18:54

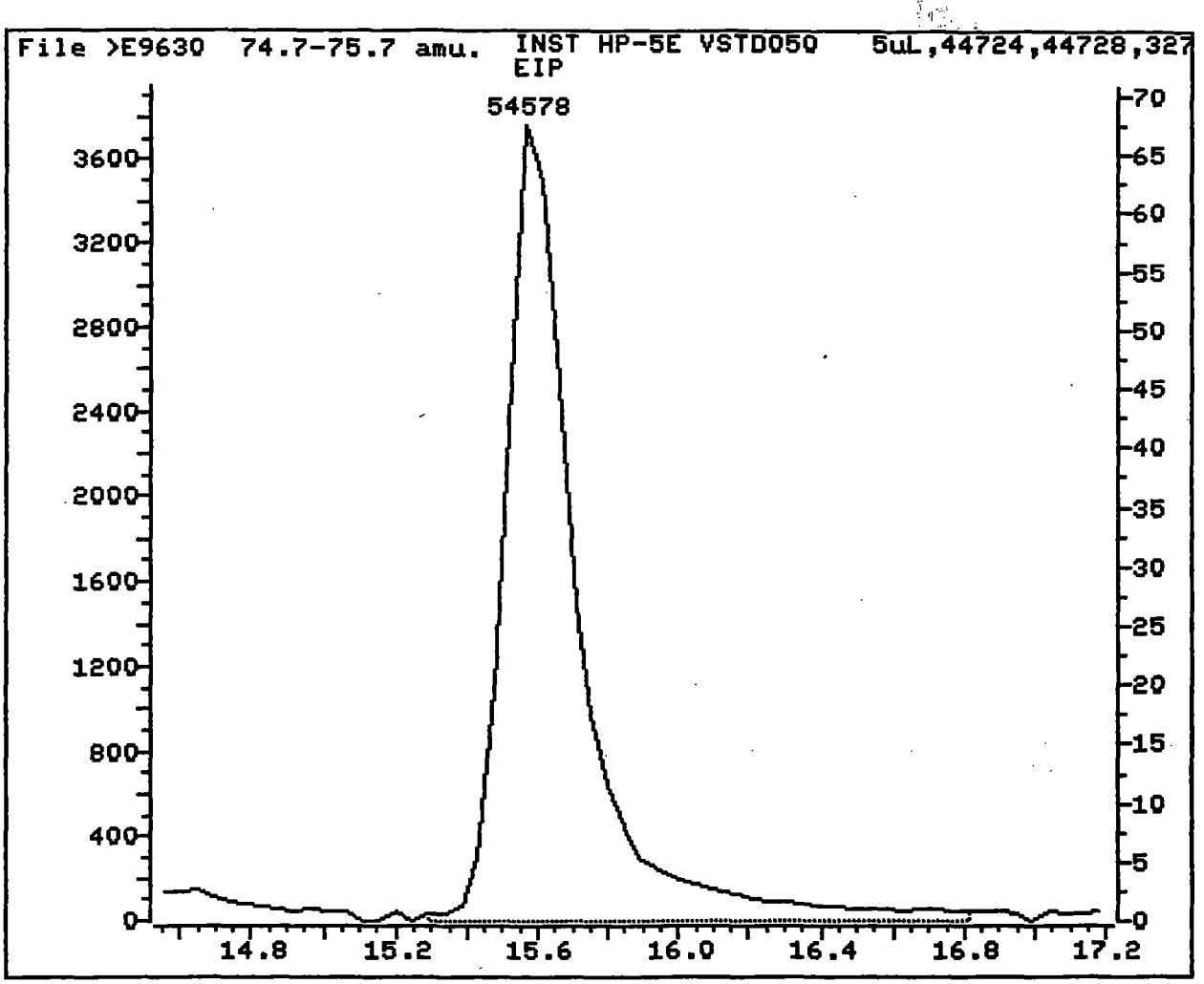
Compound No: 11
Compound Name: 1,2-DICHLOROETHENE (TOTAL)
Scan Number: 72
Retention Time: 4.11 min.
Quant Ion: 96.0
Area: 104411M
Concentration: 94.61 ug/L
q-value: 86

This report was produced by QAREA on: 920427 23:50

"COPY
ORIGINAL IS FILED IN CSF EMS64, Case 19005
RD 06-01-92

JB 05/06/92

19026 · 5
~~19005 · 5~~



Data File: >E9630::D2 Quant Output File: ^E9630::QT
Name: INST HP-5E VSTD050
Misc: 5uL,44724,44728,32790 IS,SS=50,44731,4473
Quant Time: 920427 19:31 Quant ID File: CAPID5::D7
Injected at: 920427 19:00 Last Calibration: 920427 18:54

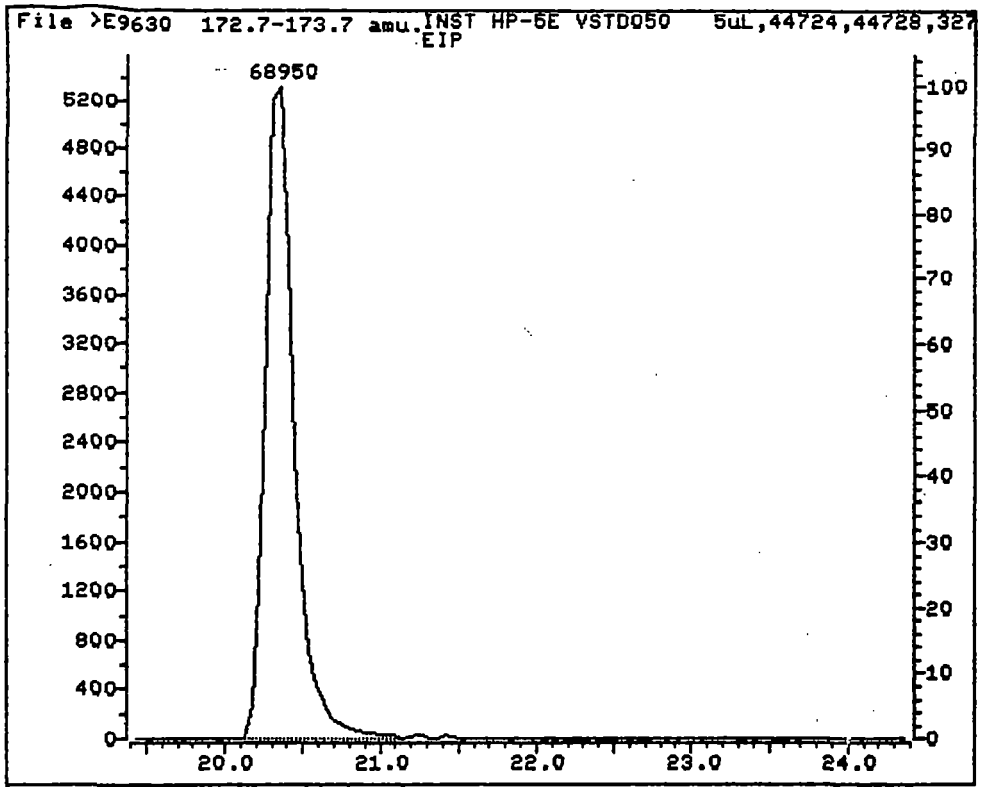
Compound No: 26
Compound Name: TRANS-1,3-DICHLOROPROPENE
Scan Number: 321
Retention Time: 15.57 min.
Quant Ion: 75.0
Area: 54578M
Concentration: 36.73 ug/L
q-value: 100

This report was produced by QAREA on: 920506 23:04

"COPY
ORIGINAL IS FILED IN CSF EH5644, Case 19005
06-01-92
05/06/92

~~19005.5~~ 5-07-92

19026.5



Data File: >E9630::D2 Quant Output File: ^E9630::QT
Name: INST HP-5E VSTD050
Misc: 5uL,44724,44728,32790 IS,SS=50,44731,4473
Quant Time: 920427 19:31 Quant ID File: CAPID5::D7
Injected at: 920427 19:00 Last Calibration: 920427 18:54

Compound No: 27
Compound Name: BROMOFORM
Scan Number: 425
Retention Time: 20.36 min.
Quant Ion: 173.0
Area: 68950M
Concentration: 36.31 ug/L

This report was produced by QAREA on: 920428 00:26

"COPY
ORIGINAL IS FILED IN CSF EMS64, Case 19005
RD 06-01-92

JB05/06/92

~~19005·5~~ 19026·5

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920427 19:31
Output File: ^E9630::QT Injected at: 920427 19:00
Data File: >E9630::D2 Dilution Factor: 1.00000
Name: INST HP-5E VSTD050
Misc: 5uL,44724,44728,32790 IS,SS=50,44731,4473

ID File: CAPID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (WATER) CAPILLARY COLUMN
Last Calibration: 920427 18:54

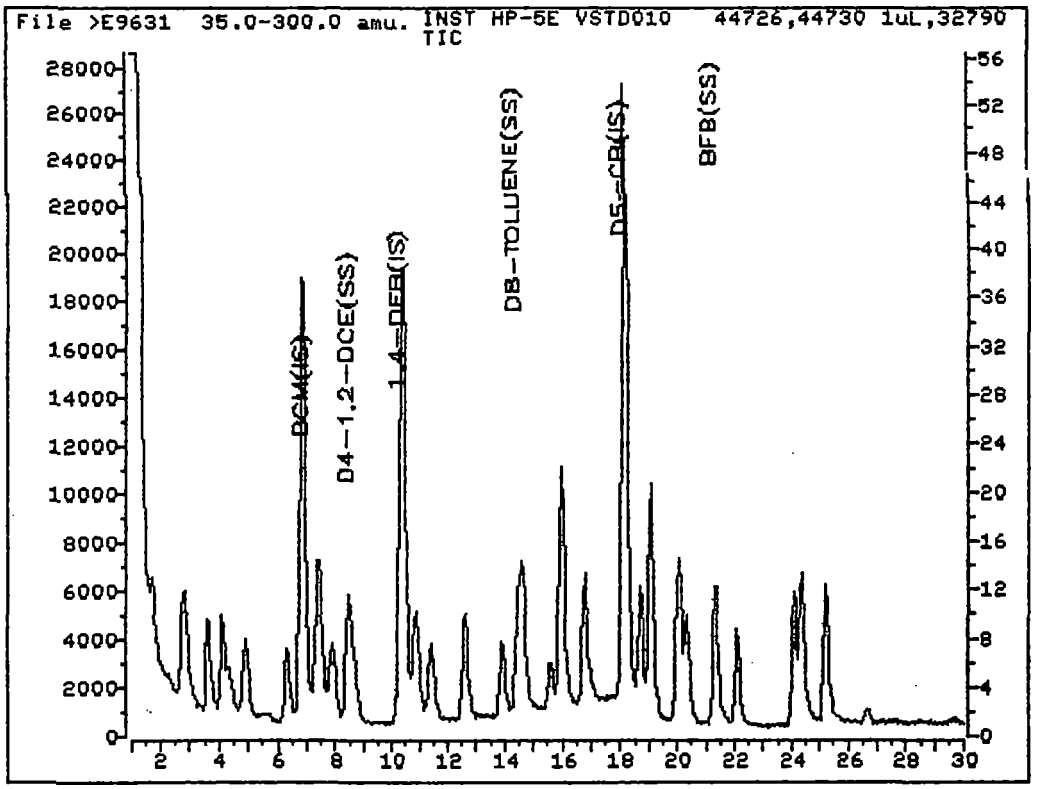
	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.82	128.0	38188	50.00	ug/L	87
2)	CHLOROMETHANE	1.35	50.0	10046	47.83	ug/L	97
3)	BROMOMETHANE	1.72	94.0	35061	48.61	ug/L	16
4)	VINYL CHLORIDE	1.44	62.0	16400	47.95	ug/L	98
5)	CHLOROETHANE	1.81	64.0	16902	49.06	ug/L	96
6)	METHYLENE CHLORIDE	3.65	84.0	56967	52.78	ug/L	76
7)	ACETONE	3.05	43.0	11063	56.86	ug/L	61
8)	CARBON DISULFIDE	2.87	76.0	118184	52.35	ug/L	62
9)	1,1-DICHLOROETHENE	2.78	96.0	43514	51.28	ug/L	92
10)	1,1-DICHLOROETHANE	4.94	63.0	81635	52.80	ug/L	91
11)	1,2-DICHLOROETHENE (TOTAL)	4.11	96.0	104411M	94.61	ug/L	86
12)	CHLOROFORM	7.38	83.0	110122	52.04	ug/L	92
13)	d4-1,2-DICHLOROETHANE(SS)	8.44	65.0	54290	51.64	ug/L	100
14)	1,2-DICHLOROETHANE	8.67	62.0	63410	51.58	ug/L	97
15)	2-BUTANONE	6.69	43.0	13845	57.93	ug/L	91
16)	*1,4-DIFLUOROBENZENE(IS)	10.41	114.0	130187	50.00	ug/L	29
17)	1,1,1-TRICHLOROETHANE	7.47	97.0	90650	50.72	ug/L	94
18)	CARBON TETRACHLORIDE	7.93	117.0	82459	51.41	ug/L	96
19)	BROMODICHLOROMETHANE	12.62	83.0	108575	50.22	ug/L	94
20)	1,2-DICHLOROPROPANE	11.43	63.0	47552	47.90	ug/L	62
21)	CIS-1,3-DICHLOROPROPENE	13.91	75.0	76430	51.43	ug/L	100
22)	TRICHLOROETHENE	10.87	130.0	63790	50.56	ug/L	96
23)	DIBROMOCHLOROMETHANE	16.77	129.0	105695	51.82	ug/L	98
24)	1,1,2-TRICHLOROETHANE	15.94	97.0	53276	52.51	ug/L	99
25)	BENZENE	8.48	78.0	112201	51.81	ug/L	100
26)	TRANS-1,3-DICHLOROPROPENE	15.57	75.0	54578M	36.73	ug/L	100
27)	BROMOFORM	20.36	173.0	68950M	36.31	ug/L	
28)	*d5-CHLOROBENZENE(IS)	18.15	117.0	91753	50.00	ug/L	100
29)	4-METHYL-2-PENTANONE	14.65	43.0	34545	54.36	ug/L	82
30)	2-HEXANONE	17.00	43.0	20055	58.76	ug/L	85
31)	TETRACHLOROETHENE	15.98	164.0	56590	51.81	ug/L	78
32)	1,1,2,2-TETRACHLOROETHANE	22.10	83.0	72095	53.48	ug/L	92
33)	d8-TOLUENE(SS)	14.46	98.0	112146	51.59	ug/L	98
34)	TOLUENE	14.60	91.0	119859	51.47	ug/L	87
35)	CHLOROBENZENE	18.19	112.0	92600	49.39	ug/L	90
36)	ETHYLBENZENE	18.70	106.0	39644	54.90	ug/L	80
37)	4-BROMOFLUOROBENZENE(SS)	21.32	95.0	85813	51.30	ug/L	96
38)	STYRENE	20.08	104.0	81398	52.55	ug/L	53
39)	TOTAL XYLENES	20.03	106.0	47951	51.51	ug/L	80

* Compound is ISTD

"COPY"
ORIGINAL IS FILED IN CSF EHS64, Case 19005
06-01-92

~~19005 · 5~~ 5-01-92

19026 · 5



MS data file header from : >E9631

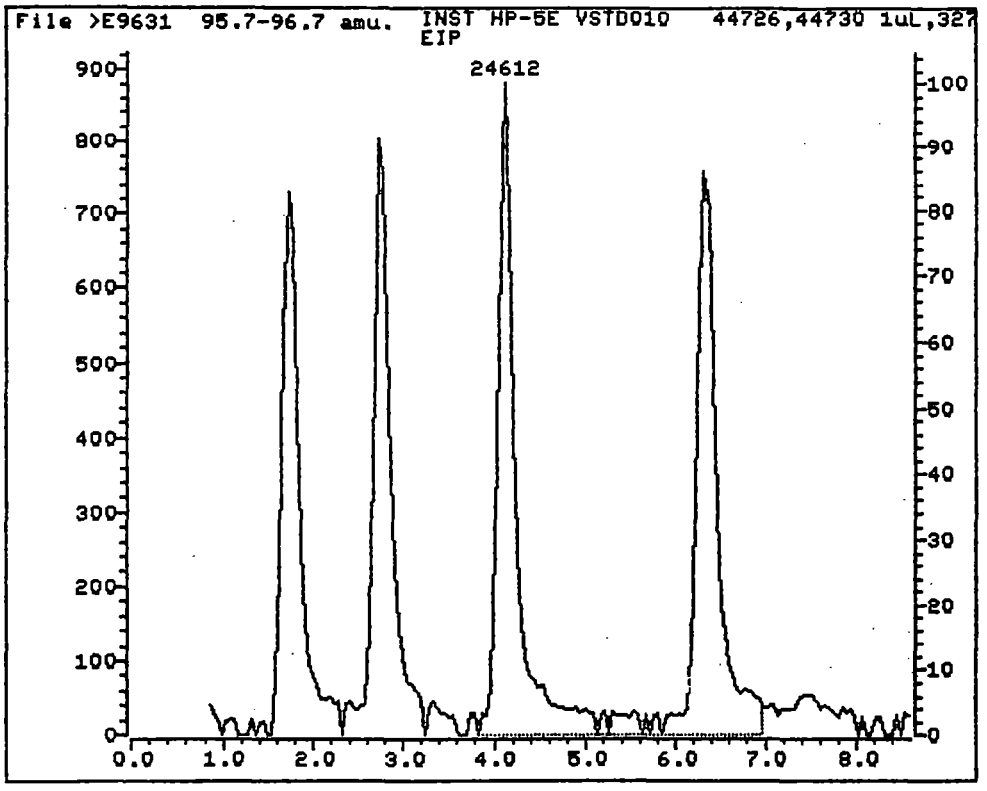
Sample: INST HP-5E VSTD010 Operator: TERMINAL63MS 4/27/92 20:24
Misc : 44726,44730 1uL,32790 SS=10 44731 IS=50,4473
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF EMS64, Case 19005
06-01-92

~~19005 · 5~~ 5-29-92

19026 · 5



Data File: >E9631::D3 Quant Output File: ^E9631::QT
Name: INST HP-5E VSTD010
Misc: 44726,44730 1uL,32790 SS=10 44731 IS=50,4473
Quant Time: 920427 20:55 Quant ID File: CAPID5::D7
Injected at: 920427 20:24 Last Calibration: 920427 18:54

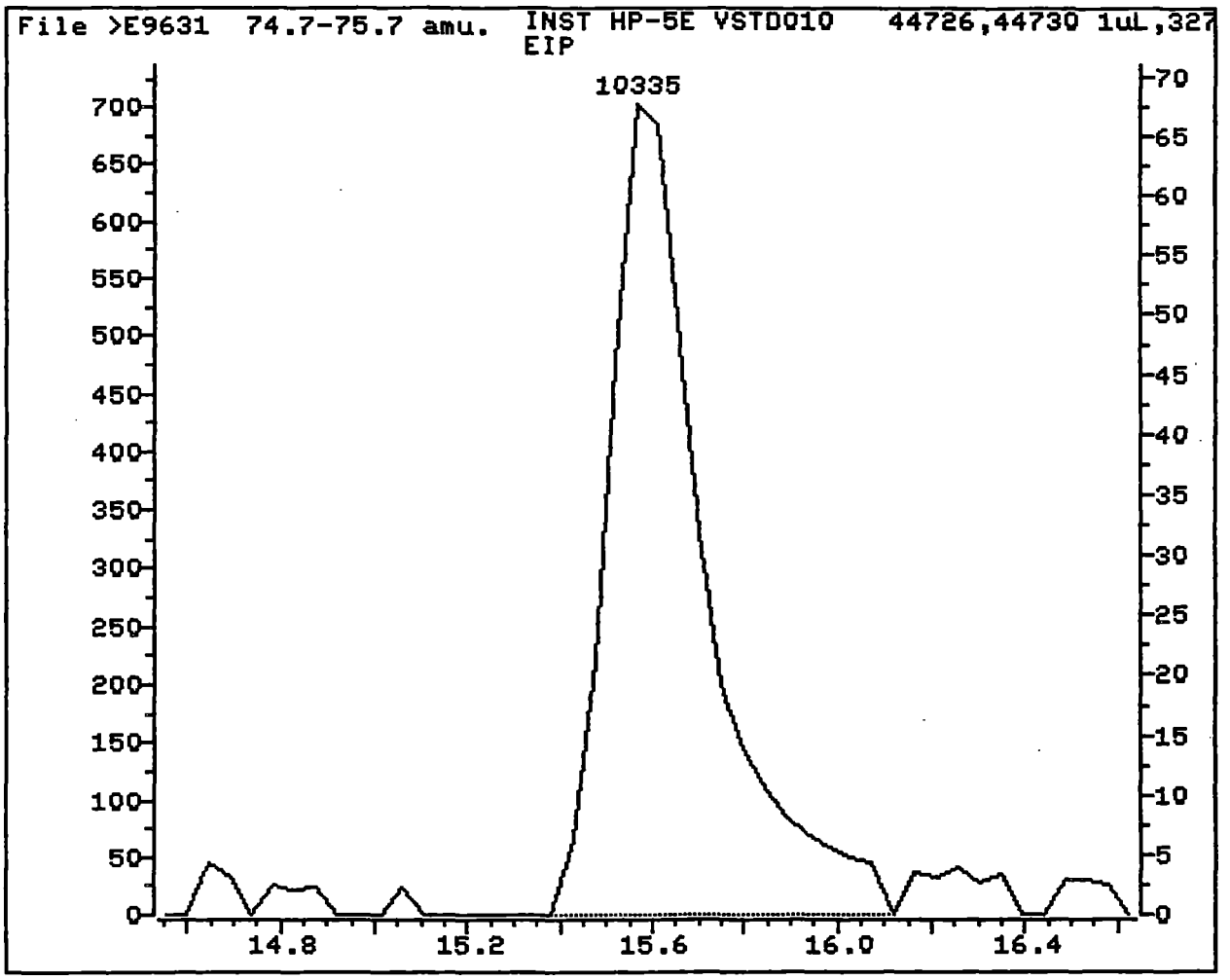
Compound No: 11
Compound Name: 1,2-DICHLOROETHENE (TOTAL)
Scan Number: 72
Retention Time: 4.11 min.
Quant Ion: 96.0
Area: 24612M
Concentration: 22.03 ug/L
q-value: 84

This report was produced by QAREA on: 920427 23:56

"COPY
ORIGINAL IS FILED IN CSF EMS64, Case 19005
06-01-92

JB05/06/92

~~19005 · 5~~ 5-17-92
19026 · 5



Data File: >E9631::D3 Quant Output File: ^E9631::QT
Name: INST HP-5E VSTD010
Misc: 44726,44730 1uL,32790 SS=10 44731 IS=50,4473
Quant Time: 920427 20:55 Quant ID File: CAPID5::D7
Injected at: 920427 20:24 Last Calibration: 920427 18:54

Compound No: 26
Compound Name: TRANS-1,3-DICHLOROPROPENE
Scan Number: 321
Retention Time: 15.57 min.
Quant Ion: 75.0
Area: 10335M
Concentration: 6.89 ug/L
q-value: 100

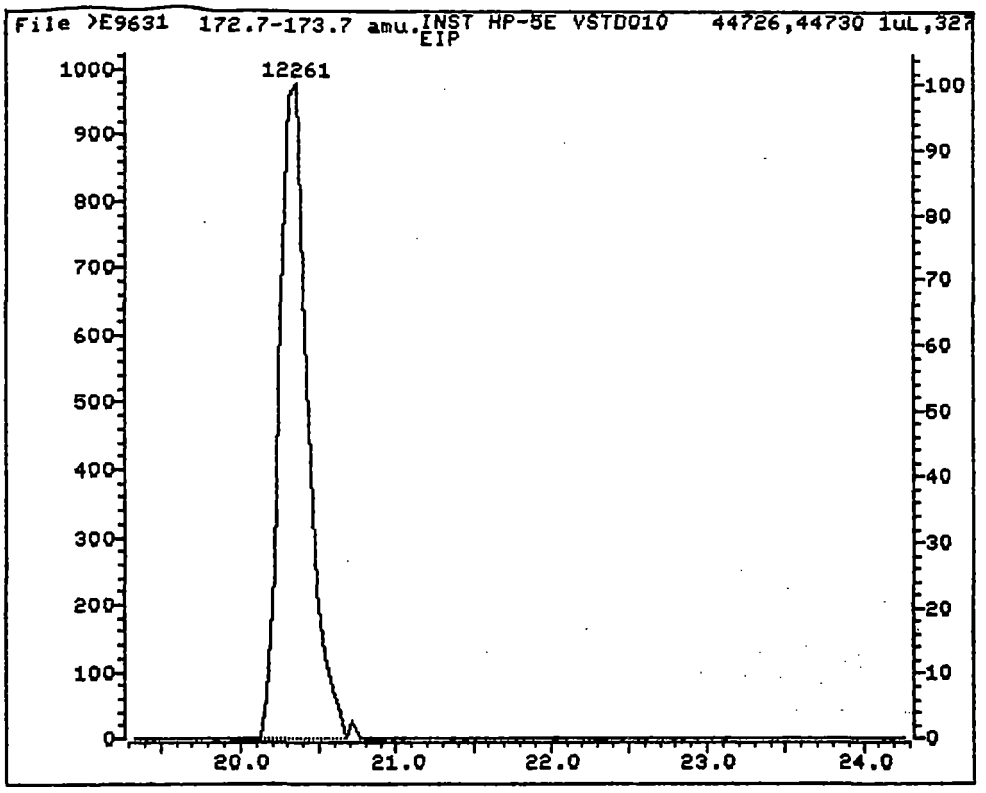
This report was produced by QAREA on: 920506 22:58

"COPY
ORIGINAL IS FILED IN CSF EM564, Case 19005
RD 06-01-92

VB 05/06/92

~~19005 · 5~~ 5-29-92

19026 · 5



Data File: >E9631::D3 Quant Output File: ^E9631::QT
Name: INST HP-5E VSTD010
Misc: 44726,44730 1uL,32790 SS=10 44731 IS=50,4473
Quant Time: 920427 20:55 Quant ID File: CAPID5::D7
Injected at: 920427 20:24 Last Calibration: 920427 18:54

Compound No: 27
Compound Name: BROMOFORM
Scan Number: 425
Retention Time: 20.35 min.
Quant Ion: 173.0
Area: 12261M
Concentration: 6.40 ug/L

This report was produced by QAREA on: 920428 00:28

"COPY
ORIGINAL IS FILED IN CSF EN564, Case 19005
RD06-01-92

JB05/06/92

~~19005 · 5~~ JO 5-29-92

19026 · 5

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920427 20:55
Output File: ^E9631::QT Injected at: 920427 20:24
Data File: >E9631::D3 Dilution Factor: 1.00000
Name: INST HP-5E VSTD010
Misc: 44726,44730 1uL,32790 SS=10 44731 IS=50,4473

ID File: CAPID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (WATER) CAPILLARY COLUMN
Last Calibration: 920427 18:54

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.82	128.0	38658	50.00	ug/L	86
2)	CHLOROMETHANE	1.35	50.0	3140	14.77	ug/L	99
3)	BROMOMETHANE	1.72	94.0	8715	11.94	ug/L	17
4)	VINYL CHLORIDE	1.44	62.0	4468	12.90	ug/L	99
5)	CHLOROETHANE	1.81	64.0	3961	11.36	ug/L	93
6)	METHYLENE CHLORIDE	3.60	84.0	11537	10.56	ug/L	72
7)	ACETONE	3.05	43.0	3607	18.31	ug/L	64
8)	CARBON DISULFIDE	2.87	76.0	25951	11.36	ug/L	63
9)	1,1-DICHLOROETHENE	2.73	96.0	10635	12.38	ug/L	88
10)	1,1-DICHLOROETHANE	4.94	63.0	16773	10.72	ug/L	90
11)	1,2-DICHLOROETHENE (TOTAL)	4.11	96.0	24612M	22.03	ug/L	84
12)	CHLOROFORM	7.38	83.0	22194	10.36	ug/L	92
13)	d4-1,2-DICHLOROETHANE(SS)	8.48	65.0	11751	11.04	ug/L	100
14)	1,2-DICHLOROETHANE	8.67	62.0	12413	9.97	ug/L	96
15)	2-BUTANONE	6.69	43.0	3563	14.73	ug/L	83
16)	*1,4-DIFLUOROBENZENE(IS)	10.37	114.0	131323	50.00	ug/L	29
17)	1,1,1-TRICHLOROETHANE	7.47	97.0	18354	10.18	ug/L	95
18)	CARBON TETRACHLORIDE	7.88	117.0	16313	10.08	ug/L	98
19)	BROMODICHLOROMETHANE	12.62	83.0	20881	9.57	ug/L	93
20)	1,2-DICHLOROPROPANE	11.43	63.0	10277	10.26	ug/L	60
21)	CIS-1,3-DICHLOROPROPENE	13.91	75.0	14752	9.84	ug/L	100
22)	TRICHLOROETHENE	10.87	130.0	12807	10.06	ug/L	94
23)	DIBROMOCHLOROMETHANE	16.76	129.0	20368	9.90	ug/L	97
24)	1,1,2-TRICHLOROETHANE	15.93	97.0	10737	10.49	ug/L	98
25)	BENZENE	8.48	78.0	22276	10.20	ug/L	100
26)	TRANS-1,3-DICHLOROPROPENE	15.57	75.0	10335M	6.89	ug/L	100
27)	BROMOFORM	20.35	173.0	12261M	6.40	ug/L	
28)	*d5-CHLOROBENZENE(IS)	18.14	117.0	92246	50.00	ug/L	100
29)	4-METHYL-2-PENTANONE	14.69	43.0	7587	11.88	ug/L	85
30)	2-HEXANONE	16.99	43.0	4179	12.18	ug/L	84
31)	TETRACHLOROETHENE	15.98	164.0	11239	10.23	ug/L	78
32)	1,1,2,2-TETRACHLOROETHANE	22.10	83.0	14649	10.81	ug/L	93
33)	d8-TOLUENE(SS)	14.46	98.0	23898	10.94	ug/L	99
34)	TOLUENE	14.60	91.0	24224	10.35	ug/L	90
35)	CHLOROBENZENE	18.19	112.0	17981	9.54	ug/L	90
36)	ETHYLBENZENE	18.70	106.0	7314	10.07	ug/L	82
37)	4-BROMOFLUOROBENZENE(SS)	21.32	95.0	18128	10.78	ug/L	97
38)	STYRENE	20.08	104.0	14395	9.24	ug/L	52
39)	TOTAL XYLENES	20.03	106.0	9086	9.71	ug/L	75

* Compound is ISTD

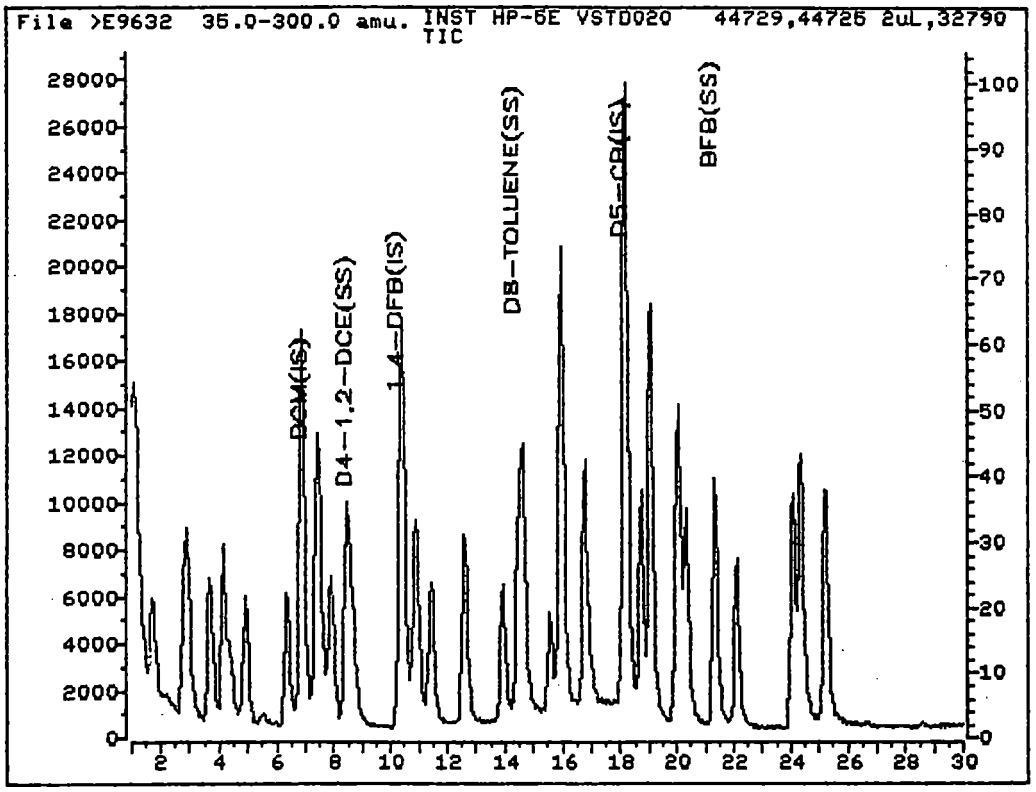
"COPY

ORIGINAL IS FILED IN CSF EMS64, Case 19005
RD 06-01-92

JPB 05/06/9-

~~19005·5~~ 5-27-92

19026·5



MS data file header from : >E9632

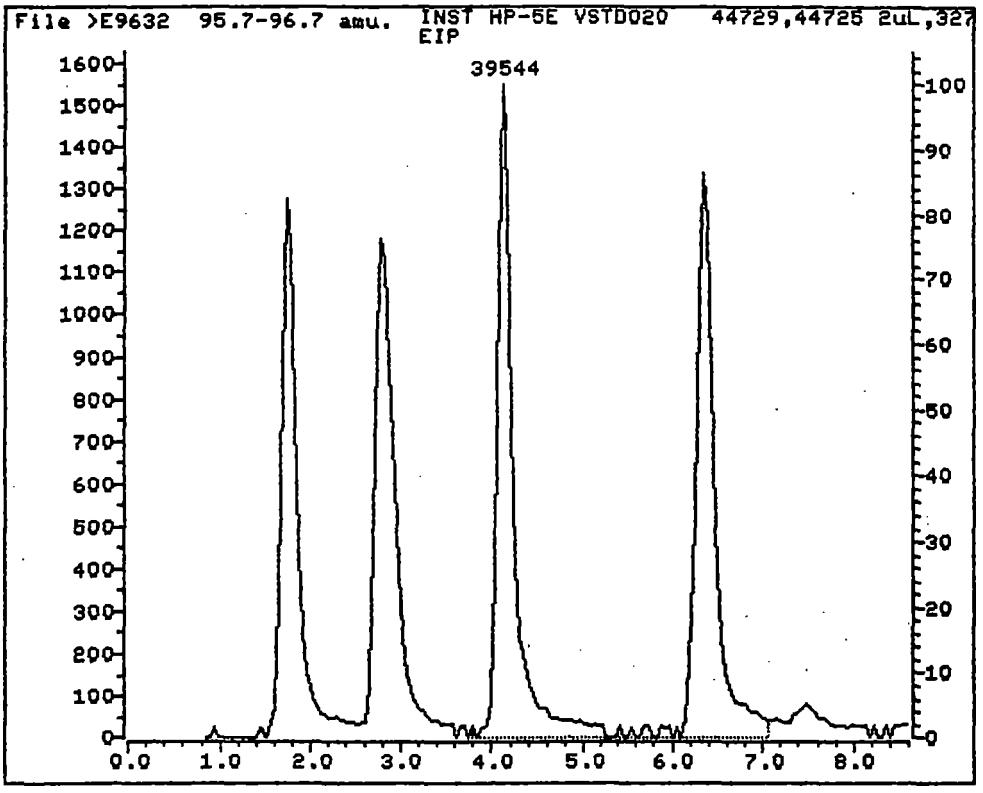
Sample: INST HP-5E VSTD020 Operator: TERMINAL63MS 4/27/92 21:16
Misc : 44729,44725 2uL,32790 SS=20 44731 IS=50,4473
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF EMS64, Case 19005
RD 06-01-92

19005/06/92

~~19005·5~~ 5-27-96
19026·5



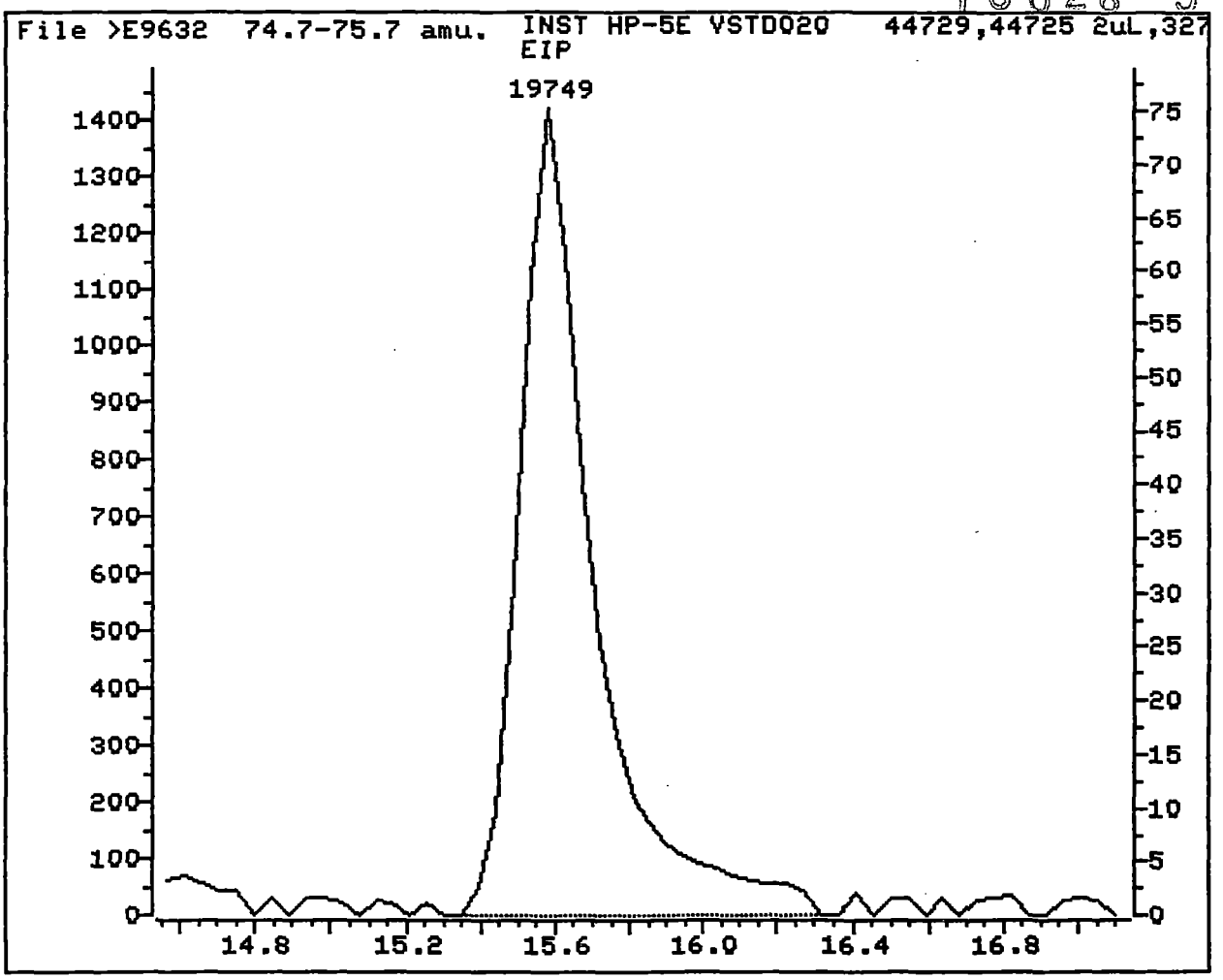
Data File: >E9632::D3 Quant Output File: ^E9632::QT
Name: INST HP-5E VSTD020
Misc: 44729,44725 2uL,32790 SS=20 44731 IS=50,4473
Quant Time: 920427 21:48 Quant ID File: CAPID5::D7
Injected at: 920427 21:16 Last Calibration: 920427 18:54

Compound No: 11
Compound Name: 1,2-DICHLOROETHENE (TOTAL)
Scan Number: 72
Retention Time: 4.12 min.
Quant Ion: 96.0
Area: 39544M
Concentration: 39.41 ug/L
q-value: 86

This report was produced by QAREA on: 920428 00:07

"COPY
ORIGINAL IS FILED IN CSF EM564, Case 19005
RD 06-01-92
JB 05/06/92

~~19005 · 5~~ 19026 · 5



Data File: >E9632::D3 Quant Output File: ^E9632::QT
Name: INST HP-5E VSTD020
Misc: 44729,44725 2uL,32790 SS=20 44731 IS=50,4473
Quant Time: 920427 21:48 Quant ID File: CAPID5::D7
Injected at: 920427 21:16 Last Calibration: 920427 18:54

Compound No: 26
Compound Name: TRANS-1,3-DICHLOROPROPENE
Scan Number: 321
Retention Time: 15.58 min.
Quant Ion: 75.0
Area: 19749M
Concentration: 14.86 ug/L
q-value: 100

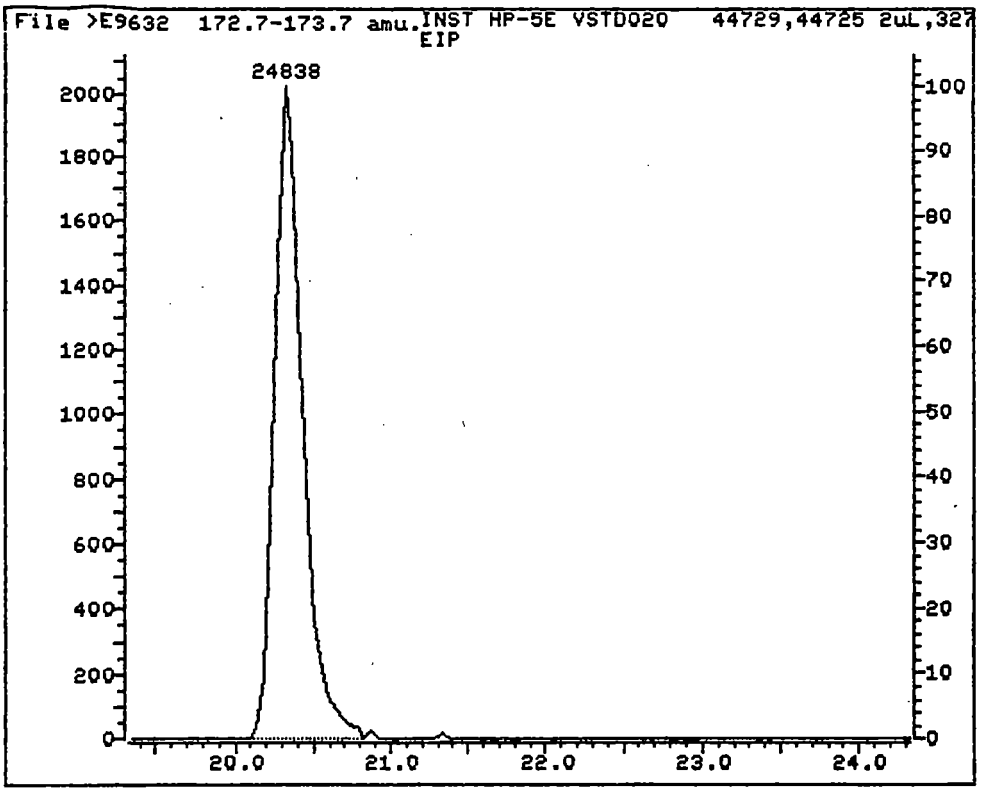
This report was produced by QAREA on: 920506 23:00

"COPY
ORIGINAL IS FILED IN CSF EM564, Case 19005
ED 06-01-92

JB05/06/92

~~18005.5~~ TO 5-29-92

19026.5



Data File: >E9632::D3 Quant Output File: ^E9632::QT
Name: INST HP-5E VSTD020
Misc: 44729,44725 2uL,32790 SS=20 44731 IS=50,4473
Quant Time: 920427 21:48 Quant ID File: CAPID5::D7
Injected at: 920427 21:16 Last Calibration: 920427 18:54

Compound No: 27
Compound Name: BROMOFORM
Scan Number: 424
Retention Time: 20.32 min.
Quant Ion: 173.0
Area: 24838M
Concentration: 14.63 ug/L

This report was produced by QAREA on: 920428 00:31

"COPY
ORIGINAL IS FILED IN CSF EM564, Case 19005
RD 06-01-92

JB 05/06/92

~~19005 · 5~~ 19026 · 5

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920427 21:48
Output File: ^E9632::QT Injected at: 920427 21:16
Data File: >E9632::D3 Dilution Factor: 1.00000
Name: INST HP-5E VSTD020
Misc: 44729,44725 2uL,32790 SS=20 44731 IS=50,4473

ID File: CAPID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (WATER) CAPILLARY COLUMN
Last Calibration: 920427 18:54

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.84	128.0	34717	50.00	ug/L	85
2)	CHLOROMETHANE	1.36	50.0	5627	29.47	ug/L	96
3)	BROMOMETHANE	1.73	94.0	15190	23.16	ug/L	17
4)	VINYL CHLORIDE	1.46	62.0	8167	26.27	ug/L	96
5)	CHLOROETHANE	1.82	64.0	6964	22.23	ug/L	98
6)	METHYLENE CHLORIDE	3.66	84.0	21636	22.05	ug/L	75
7)	ACETONE	3.02	43.0	3477	19.66	ug/L	66
8)	CARBON DISULFIDE	2.93	76.0	45219	22.03	ug/L	62
9)	1,1-DICHLOROETHENE	2.79	96.0	16694	21.64	ug/L	92
10)	1,1-DICHLOROETHANE	4.95	63.0	29552	21.03	ug/L	91
11)	1,2-DICHLOROETHENE (TOTAL)	4.12	96.0	39544M	39.41	ug/L	86
12)	CHLOROFORM	7.39	83.0	40487	21.05	ug/L	90
13)	d4-1,2-DICHLOROETHANE(SS)	8.45	65.0	20803	21.76	ug/L	100
14)	1,2-DICHLOROETHANE	8.68	62.0	23524	21.05	ug/L	98
15)	2-BUTANONE	6.70	43.0	5292	24.36	ug/L	88
16)	*1,4-DIFLUOROBENZENE(IS)	10.38	114.0	116426	50.00	ug/L	28
17)	1,1,1-TRICHLOROETHANE	7.48	97.0	34537	21.61	ug/L	93
18)	CARBON TETRACHLORIDE	7.90	117.0	31521	21.97	ug/L	94
19)	BROMODICHLOROMETHANE	12.59	83.0	39697	20.53	ug/L	95
20)	1,2-DICHLOROPROPANE	11.44	63.0	18488	20.82	ug/L	61
21)	CIS-1,3-DICHLOROPROPENE	13.92	75.0	26820	20.18	ug/L	100
22)	TRICHLOROETHENE	10.89	130.0	25051	22.20	ug/L	96
23)	DIBROMOCHLOROMETHANE	16.78	129.0	39653	21.74	ug/L	96
24)	1,1,2-TRICHLOROETHANE	15.90	97.0	19847	21.87	ug/L	98
25)	BENZENE	8.49	78.0	40299	20.81	ug/L	100
26)	TRANS-1,3-DICHLOROPROPENE	15.58	75.0	19749M	14.86	ug/L	100
27)	BROMOFORM	20.32	173.0	24838M	14.63	ug/L	
28)	*d5-CHLOROBENZENE(IS)	18.11	117.0	83576	50.00	ug/L	100
29)	4-METHYL-2-PENTANONE	14.66	43.0	12585	21.74	ug/L	85
30)	2-HEXANONE	16.96	43.0	6556	21.09	ug/L	84
31)	TETRACHLOROETHENE	15.99	164.0	21672	21.78	ug/L	79
32)	1,1,2,2-TETRACHLOROETHANE	22.11	83.0	26889	21.90	ug/L	89
33)	d8-TOLUENE(SS)	14.48	98.0	41556	20.99	ug/L	99
34)	TOLUENE	14.61	91.0	44524	20.99	ug/L	90
35)	CHLOROBENZENE	18.20	112.0	33112	19.39	ug/L	91
36)	ETHYLBENZENE	18.71	106.0	13253	20.15	ug/L	80
37)	4-BROMOFLUOROBENZENE(SS)	21.33	95.0	31680	20.79	ug/L	99
38)	STYRENE	20.09	104.0	27466	19.47	ug/L	49
39)	TOTAL XYLENES	20.00	106.0	16152	19.05	ug/L	81

* Compound is ISTD

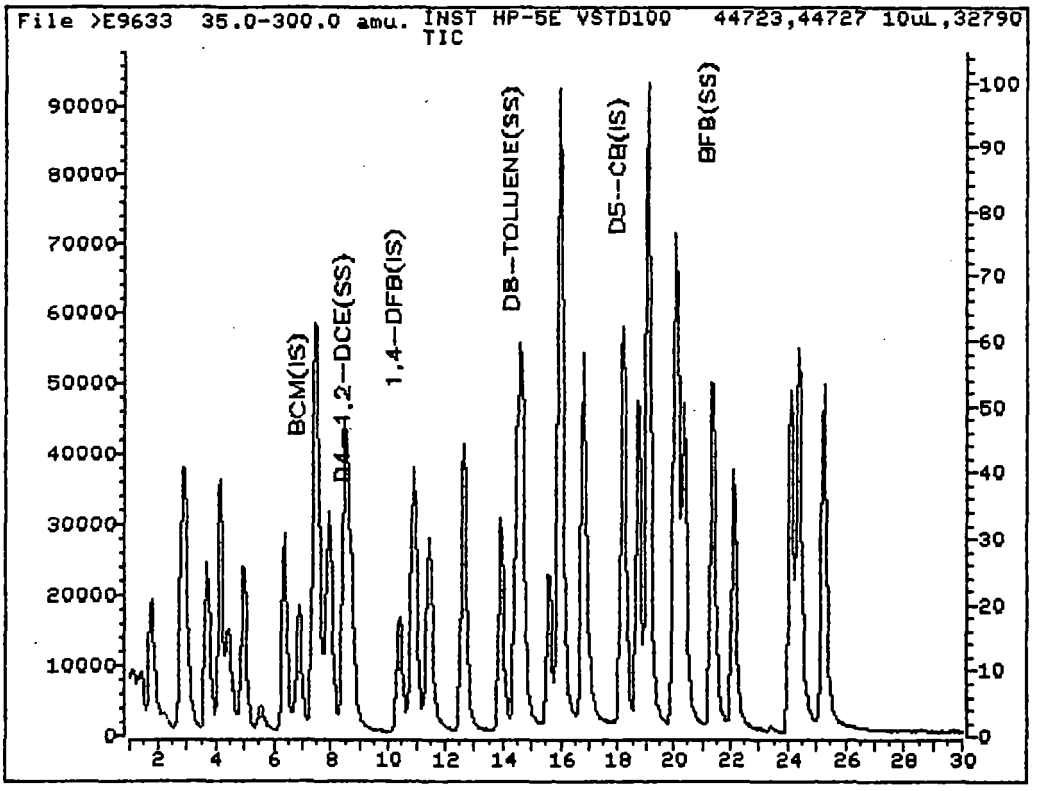
"COPY

ORIGINAL IS FILED IN CSF EMS64; Case 19005
RD 06-01-92

JB 05/06

~~19005 · 5~~ JO 5-27-92

19026 · 5



MS data file header from : >E9633

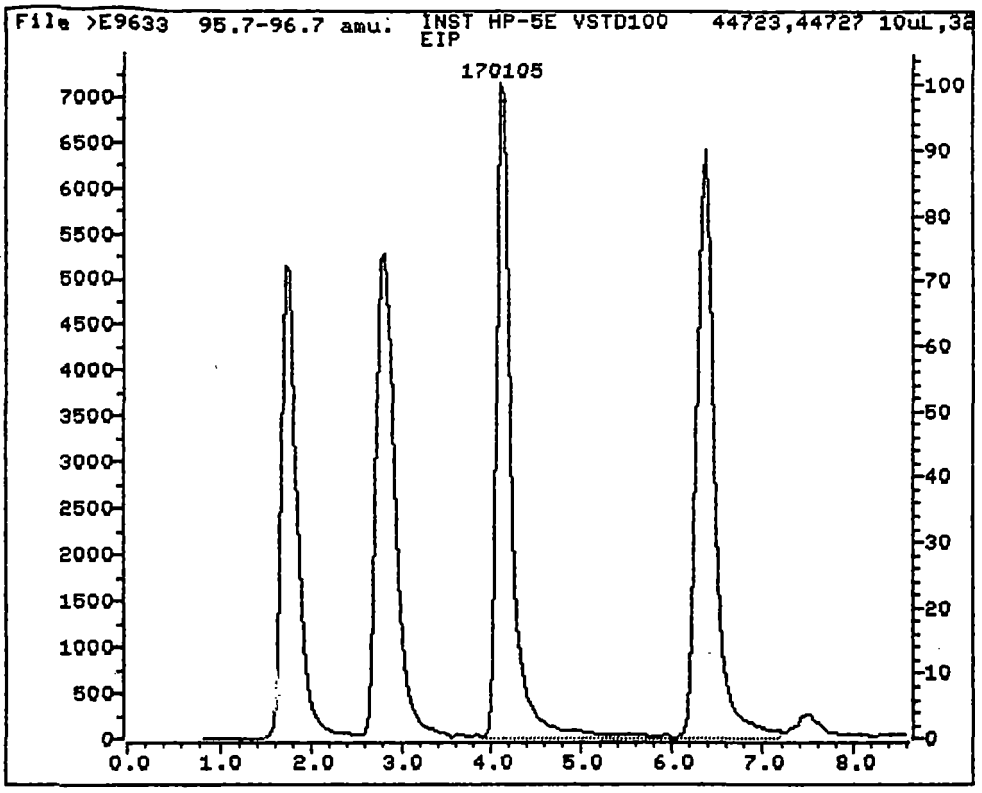
Sample: INST HP-5E VSTD100 Operator: TERMINAL63MS 4/27/92 21:54
Misc : 44723,44727 10uL,32790 SS=100 44731 IS=50,447
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF EMS64, Case 19005
RD 06-01-92
JB 05/06/92

~~19005 · 5~~ 5-29-92

19026 · 5



Data File: >E9633::D3 Quant Output File: ^E9633::QT
Name: INST HP-5E VSTD100
Misc: 44723,44727 10uL,32790 SS=100 44731 IS=50,447
Quant Time: 920427 22:45 Quant ID File: CAPID5::D7
Injected at: 920427 21:54 Last Calibration: 920427 18:54

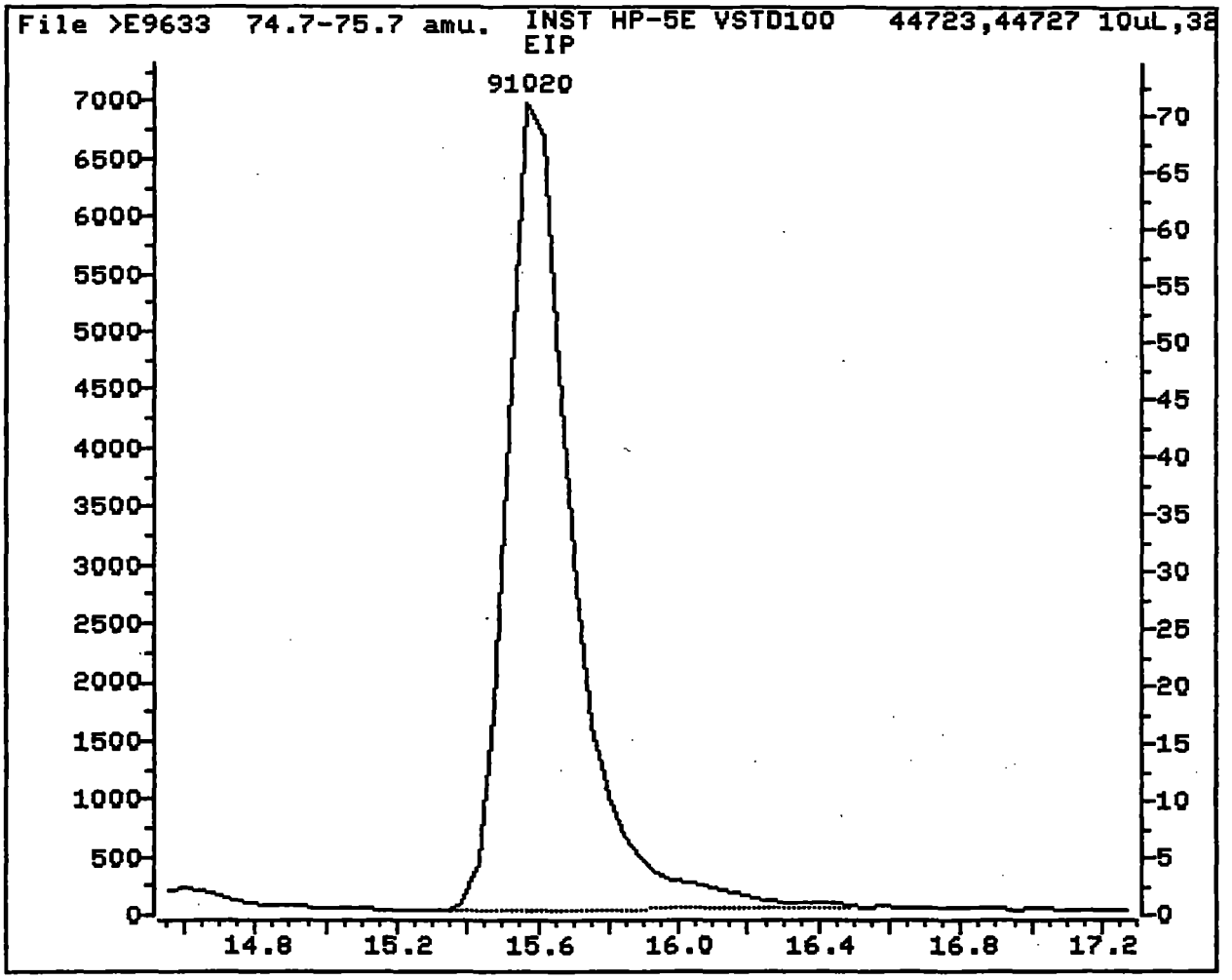
Compound No: 11
Compound Name: 1,2-DICHLOROETHENE (TOTAL)
Scan Number: 72
Retention Time: 4.11 min.
Quant Ion: 96.0
Area: 170105M
Concentration: 184.57 ug/L
q-value: 88

This report was produced by QAREA on: 920428 00:13

"COPY
ORIGINAL IS FILED IN CSF EMS64, Case 19005
RD 06-01-92

JD 05/06/92

~~19005-5~~ TO 5-29-92
19026-5



Data File: >E9633::D3 Quant Output File: ^E9633::QT
Name: INST HP-5E VSTD100
Misc: 44723,44727 10uL,32790 SS=100 44731 IS=50,447
Quant Time: 920427 22:45 Quant ID File: CAPID5::D7
Injected at: 920427 21:54 Last Calibration: 920427 18:54

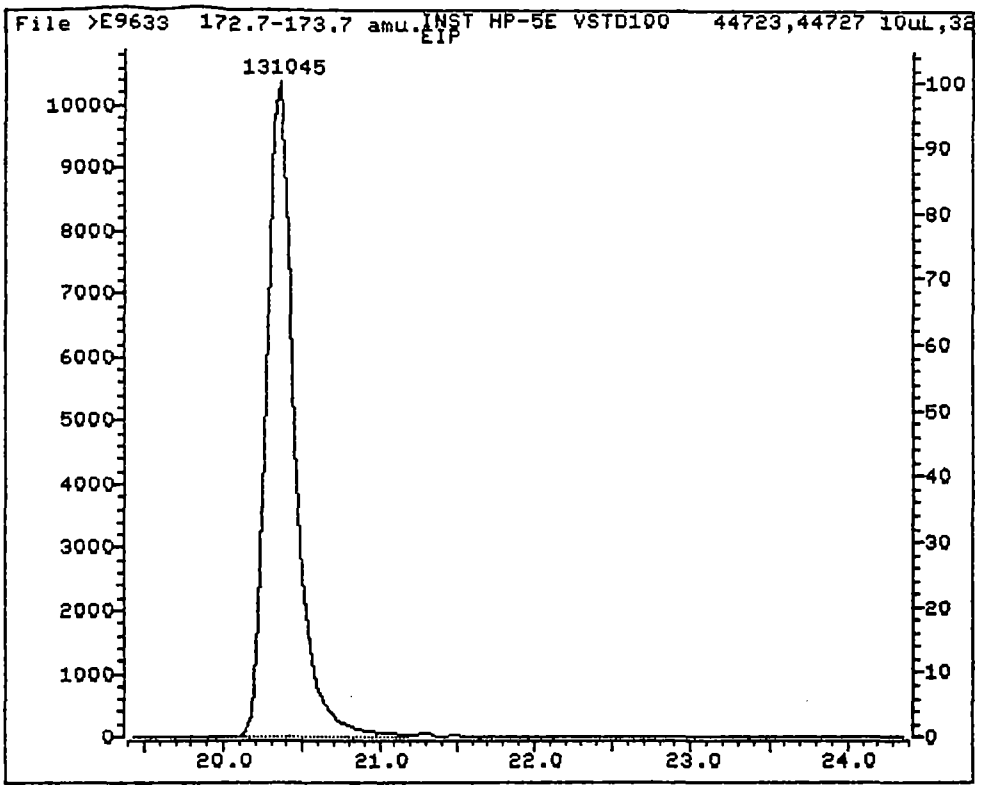
Compound No: 26
Compound Name: TRANS-1,3-DICHLOROPROPENE
Scan Number: 321
Retention Time: 15.57 min.
Quant Ion: 75.0
Area: 91020M
Concentration: 73.84 ug/L
q-value: 100

This report was produced by QAREA on: 920506 23:07

"COPY
ORIGINAL IS FILED IN CSF EMS6 Case 19005
RD 06-01-92 VBB 05/06/92

~~19005 · 5~~ TO 5-29-92

19026 · 5



Data File: >E9633::D3 Quant Output File: ^E9633::QT
Name: INST HP-5E VSTD100
Misc: 44723,44727 10uL,32790 SS=100 44731 IS=50,447
Quant Time: 920427 22:45 Quant ID File: CAPID5::D7
Injected at: 920427 21:54 Last Calibration: 920427 18:54

Compound No: 27
Compound Name: BROMOFORM
Scan Number: 425
Retention Time: 20.36 min.
Quant Ion: 173.0
Area: 131045M
Concentration: 83.20 ug/L

This report was produced by QAREA on: 920428 00:34

"COPY
ORIGINAL IS FILED IN CSF EMS6"4, Case 19005
RD 06-01-92

JB 5/06/92

~~19005-5~~ TO 5-29-92

19026-5

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920427 22:45
Output File: ^E9633::QT Injected at: 920427 21:54
Data File: >E9633::D3 Dilution Factor: 1.00000
Name: INST HP-5E VSTD100
Misc: 44723,44727 10uL,32790 SS=100 44731 IS=50,447

ID File: CAPID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (WATER) CAPILLARY COLUMN
Last Calibration: 920427 18:54

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.87	128.0	31890	50.00	ug/L	88
2)	CHLOROMETHANE	1.35	50.0	22627	129.01	ug/L	99
3)	BROMOMETHANE	1.76	94.0	62597	103.92	ug/L	17
4)	VINYL CHLORIDE	1.44	62.0	33359	116.80	ug/L	95
5)	CHLOROETHANE	1.86	64.0	27706	96.30	ug/L	99
6)	METHYLENE CHLORIDE	3.65	84.0	82433	91.47	ug/L	73
7)	ACETONE	3.10	43.0	14474	89.08	ug/L	64
8)	CARBON DISULFIDE	2.92	76.0	203049	107.70	ug/L	61
9)	1,1-DICHLOROETHENE	2.82	96.0	77039	108.71	ug/L	93
10)	1,1-DICHLOROETHANE	4.99	63.0	136996	106.11	ug/L	92
11)	1,2-DICHLOROETHENE (TOTAL)	4.11	96.0	170105M	184.57	ug/L	88
12)	CHLOROFORM	7.42	83.0	188436	106.63	ug/L	89
13)	d4-1,2-DICHLOROETHANE(SS)	8.48	65.0	93787	106.82	ug/L	100
14)	1,2-DICHLOROETHANE	8.71	62.0	115220	112.23	ug/L	97
15)	2-BUTANONE	6.73	43.0	22791	114.19	ug/L	86
16)	*1,4-DIFLUOROBENZENE(IS)	10.42	114.0	107990	50.00	ug/L	29
17)	1,1,1-TRICHLOROETHANE	7.47	97.0	164260	110.79	ug/L	92
18)	CARBON TETRACHLORIDE	7.93	117.0	153381	115.28	ug/L	96
19)	BROMODICHLOROMETHANE	12.63	83.0	192185	107.15	ug/L	92
20)	1,2-DICHLOROPROPANE	11.43	63.0	80670	97.96	ug/L	61
21)	CIS-1,3-DICHLOROPROPENE	13.91	75.0	128096	103.91	ug/L	100
22)	TRICHLOROETHENE	10.92	130.0	108858	104.01	ug/L	94
23)	DIBROMOCHLOROMETHANE	16.77	129.0	193979	114.65	ug/L	95
24)	1,1,2-TRICHLOROETHANE	15.94	97.0	92876	110.36	ug/L	97
25)	BENZENE	8.48	78.0	184375	102.63	ug/L	100
26)	TRANS-1,3-DICHLOROPROPENE	15.57	75.0	91020M	73.84	ug/L	100
27)	BROMOFORM	20.36	173.0	131045M	83.20	ug/L	
28)	*d5-CHLOROBENZENE(IS)	18.15	117.0	80383	50.00	ug/L	100
29)	4-METHYL-2-PENTANONE	14.70	43.0	59871	107.54	ug/L	87
30)	2-HEXANONE	17.00	43.0	33864	113.25	ug/L	84
31)	TETRACHLOROETHENE	15.98	164.0	103328	107.98	ug/L	82
32)	1,1,2,2-TETRACHLOROETHANE	22.11	83.0	133745	113.24	ug/L	90
33)	d8-TOLUENE(SS)	14.47	98.0	184964	97.13	ug/L	98
34)	TOLUENE	14.65	91.0	207649	101.78	ug/L	92
35)	CHLOROBENZENE	18.19	112.0	163129	99.31	ug/L	87
36)	ETHYLBENZENE	18.70	106.0	69031	109.11	ug/L	81
37)	4-BROMOFLUOROBENZENE(SS)	21.33	95.0	146476	99.95	ug/L	96
38)	STYRENE	20.13	104.0	144989	106.84	ug/L	51
39)	TOTAL XYLENES	20.04	106.0	85276	104.56	ug/L	81

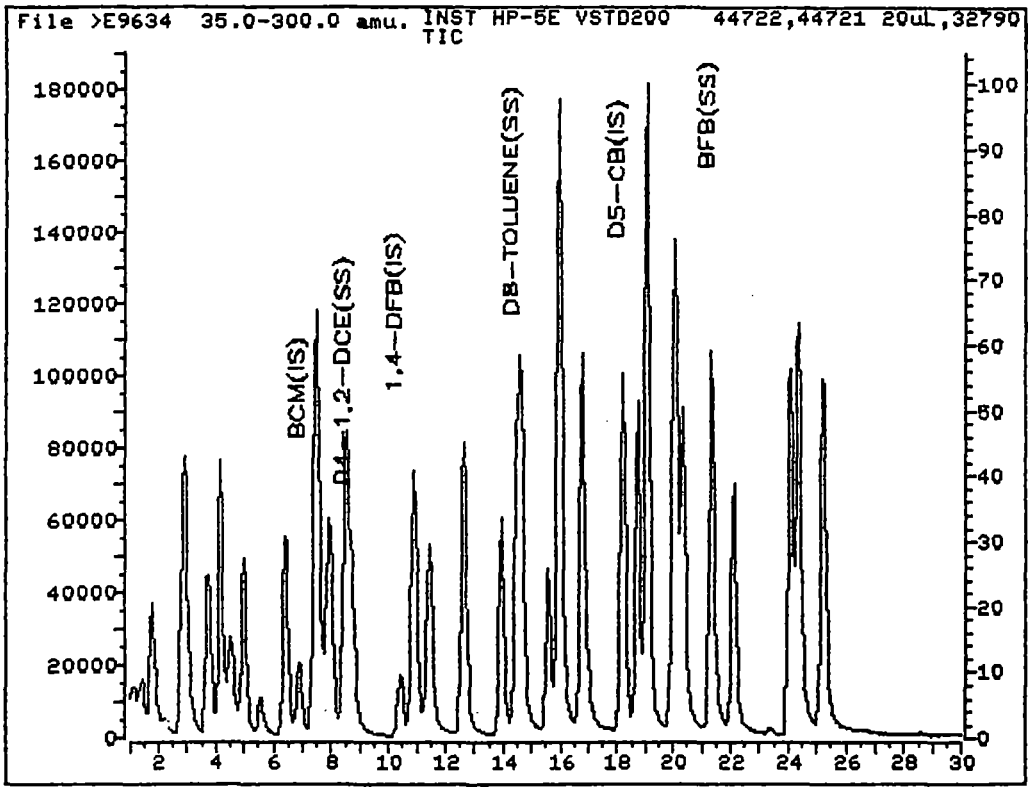
* Compound is ISTD

"COPY
ORIGINAL IS FILED IN CSF EM564, Case 19005
RD 06-01-92

JBS05/06/92

~~19005.5~~ TO 5-29-92

19026.5



MS data file header from : >E9634

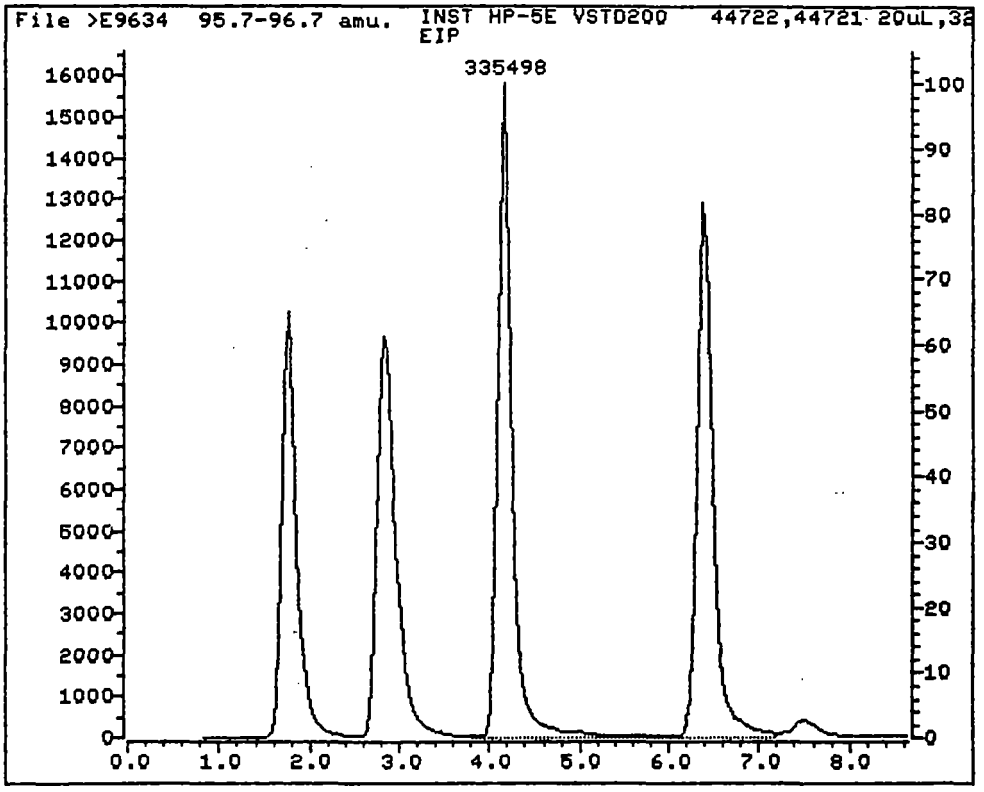
Sample: INST HP-5E VSTD200 Operator: TERMINAL63MS 4/27/92 22:33
Misc : 44722,44721 20uL,32790 SS=200 44731 IS=50,447
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF EMS64, Case 19005
RD 06-01-92

JB 605/06/92

~~18005.5~~ 5-29-92
19028.5



Data File: >E9634::D3 Quant Output File: ^E9634::QT
Name: INST HP-5E VSTD200
Misc: 44722,44721 20uL,32790 SS=200 44731 IS=50,447
Quant Time: 920427 23:07 Quant ID File: CAPID5::D7
Injected at: 920427 22:33 Last Calibration: 920427 18:54

Compound No: 11
Compound Name: 1,2-DICHLOROETHENE (TOTAL)
Scan Number: 73
Retention Time: 4.16 min.
Quant Ion: 96.0
Area: 335498M
Concentration: 358.38 ug/L
q-value: 84

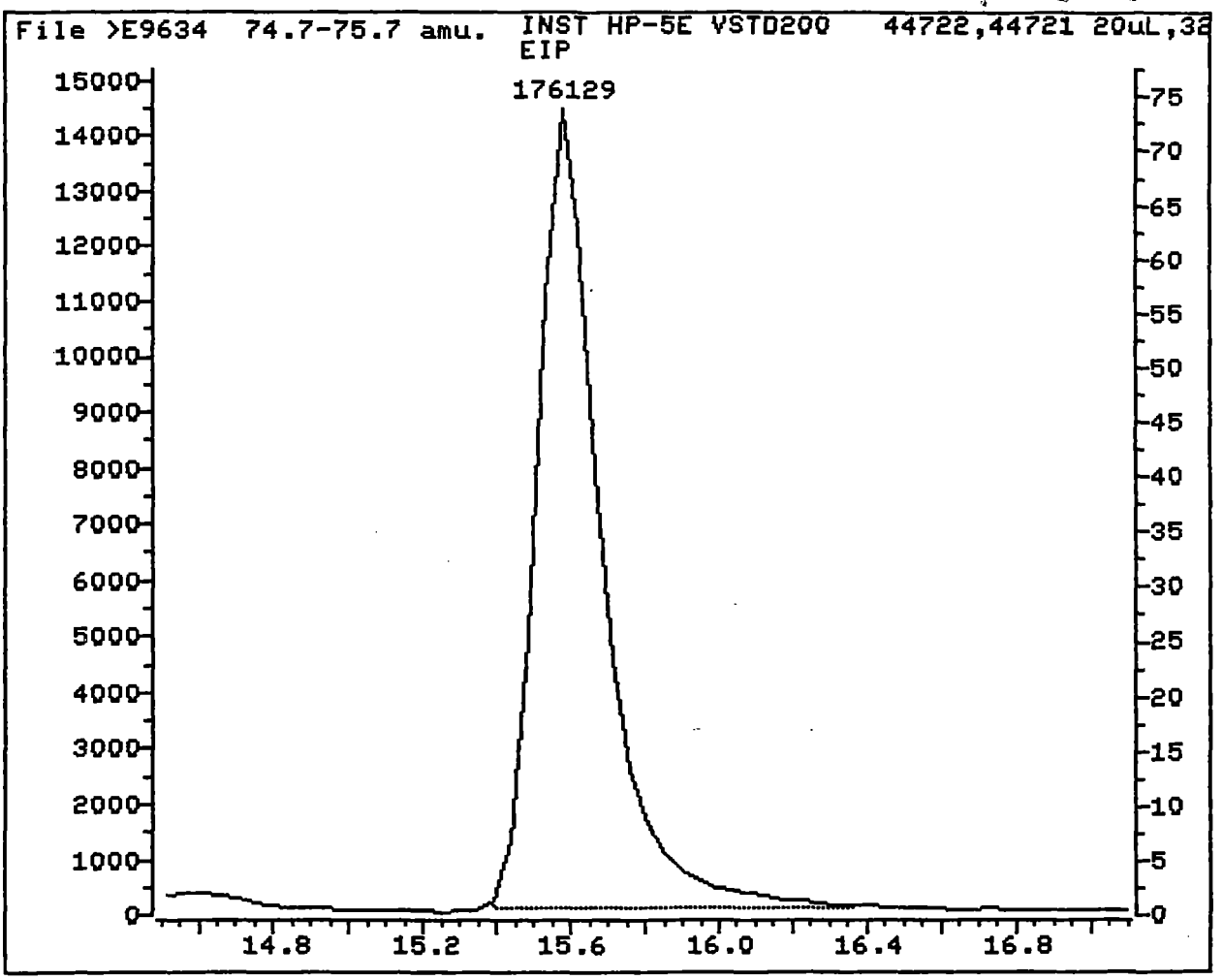
This report was produced by QAREA on: 920428 00:17

"COPY
ORIGINAL IS FILED IN CSF EM564, Case 19005
RD 06-01-92

JB 05/06/92

~~18005.5~~ JO 5-29-92

18026.5



Data File: >E9634::D3 Quant Output File: ^E9634::QT
Name: INST HP-5E VSTD200
Misc: 44722,44721 20uL,32790 SS=200 44731 IS=50,447
Quant Time: 920427 23:07 Quant ID File: CAPID5::D7
Injected at: 920427 22:33 Last Calibration: 920427 18:54

Compound No: 26
Compound Name: TRANS-1,3-DICHLOROPROPENE
Scan Number: 321
Retention Time: 15.58 min.
Quant Ion: 75.0
Area: 176129M
Concentration: 141.29 ug/L
q-value: 100

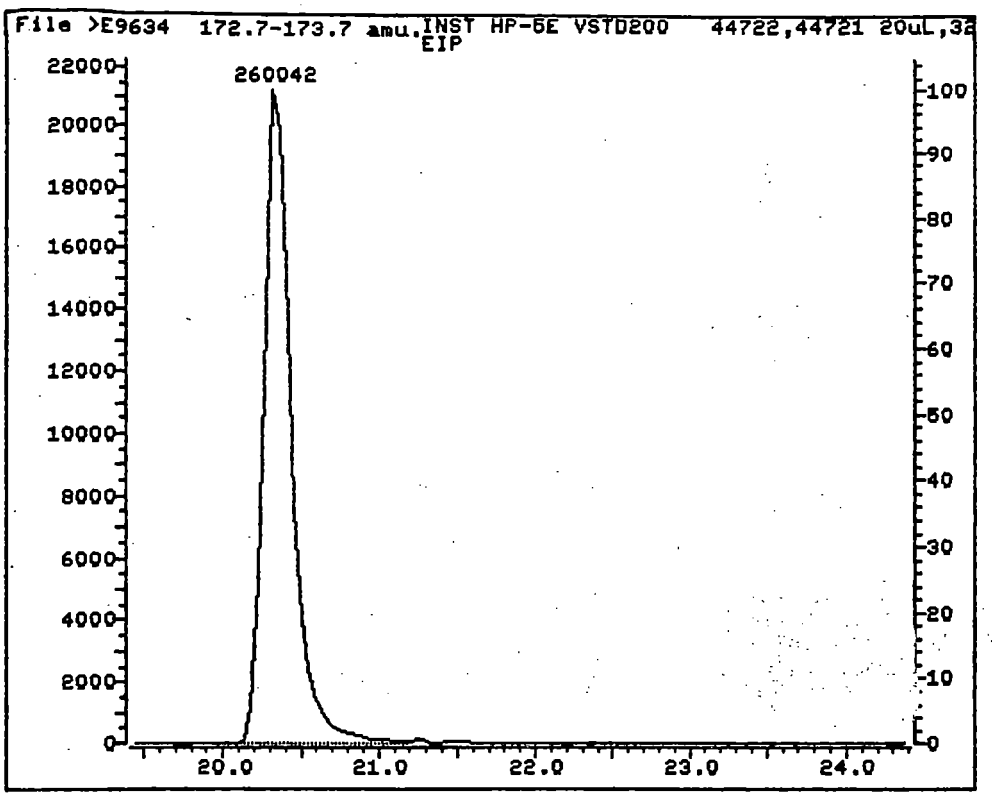
This report was produced by QAREA on: 920506 23:09

"COPY
ORIGINAL IS FILED IN CSF EMS64, Case 19005
RD 06-01-92

JB 05/06/92

~~19005 · 5~~ TO 5-29-92

19026 · 5



Data File: >E9634::D3 Quant Output File: ^E9634::QT
Name: INST HP-5E VSTD200
Misc: 44722,44721 20uL,32790 SS=200 44731 IS=50,447
Quant Time: 920427 23:07 Quant ID File: CAPID5::D7
Injected at: 920427 22:33 Last Calibration: 920427 18:54

Compound No: 27
Compound Name: BROMOFORM
Scan Number: 424
Retention Time: 20.32 min.
Quant Ion: 173.0
Area: 260042M
Concentration: 163.26 ug/L

This report was produced by QAREA on: 920428 00:36

"COPY
ORIGINAL IS FILED IN CSF EM564, Case 19005
RD 06-01-92

JB 05/06/92

~~19005 · 5~~ TO 5-29-92

19028 · 5

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920427 23:07
Output File: ^E9634::QT Injected at: 920427 22:33
Data File: >E9634::D3 Dilution Factor: 1.00000
Name: INST HP-5E VSTD200
Misc: 44722,44721 20uL,32790 SS=200 44731 IS=50,447

ID File: CAPID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (WATER) CAPILLARY COLUMN
Last Calibration: 920427 18:54

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.92	128.0	32393	50.00	ug/L	90
2)	CHLOROMETHANE	1.35	50.0	45160	253.49	ug/L	99
3)	BROMOMETHANE	1.77	94.0	120831	197.48	ug/L	17
4)	VINYL CHLORIDE	1.49	62.0	66021	227.56	ug/L	95
5)	CHLOROETHANE	1.86	64.0	52898	181.00	ug/L	97
6)	METHYLENE CHLORIDE	3.75	84.0	164153	179.31	ug/L	75
7)	ACETONE	3.15	43.0	25234	152.90	ug/L	66
8)	CARBON DISULFIDE	2.96	76.0	406676	212.37	ug/L	61
9)	1,1-DICHLOROETHENE	2.83	96.0	144155	200.26	ug/L	93
10)	1,1-DICHLOROETHANE	4.99	63.0	274573	209.36	ug/L	92
11)	1,2-DICHLOROETHENE (TOTAL)	4.16	96.0	335498M	358.38	ug/L	84
12)	CHLOROFORM	7.47	83.0	362215	201.79	ug/L	91
13)	d4-1,2-DICHLOROETHANE(SS)	8.53	65.0	185297	207.77	ug/L	100
14)	1,2-DICHLOROETHANE	8.72	62.0	222291	213.16	ug/L	97
15)	2-BUTANONE	6.83	43.0	43718	215.65	ug/L	89
16)	*1,4-DIFLUOROBENZENE(IS)	10.42	114.0	109201	50.00	ug/L	30
17)	1,1,1-TRICHLOROETHANE	7.52	97.0	317296	211.64	ug/L	94
18)	CARBON TETRACHLORIDE	7.94	117.0	300848	223.61	ug/L	98
19)	BROMODICHLOROMETHANE	12.63	83.0	373205	205.77	ug/L	94
20)	1,2-DICHLOROPROPANE	11.48	63.0	153755	184.65	ug/L	63
21)	CIS-1,3-DICHLOROPROPENE	13.92	75.0	249315	200.00	ug/L	100
22)	TRICHLOROETHENE	10.93	130.0	210939	199.32	ug/L	92
23)	DIBROMOCHLOROMETHANE	16.77	129.0	378279	221.10	ug/L	96
24)	1,1,2-TRICHLOROETHANE	15.94	97.0	174160	204.64	ug/L	96
25)	BENZENE	8.53	78.0	349643	192.47	ug/L	100
26)	TRANS-1,3-DICHLOROPROPENE	15.58	75.0	176129M	141.29	ug/L	100
27)	BROMOFORM	20.32	173.0	260042M	163.26	ug/L	
28)	*d5-CHLOROBENZENE(IS)	18.11	117.0	86451	50.00	ug/L	100
29)	4-METHYL-2-PENTANONE	14.70	43.0	109372	182.67	ug/L	85
30)	2-HEXANONE	17.00	43.0	64943	201.94	ug/L	88
31)	TETRACHLOROETHENE	15.99	164.0	199011	193.37	ug/L	76
32)	1,1,2,2-TETRACHLOROETHANE	22.11	83.0	251196	197.76	ug/L	91
33)	d8-TOLUENE(SS)	14.47	98.0	367488	179.43	ug/L	97
34)	TOLUENE	14.61	91.0	401904	183.17	ug/L	91
35)	CHLOROBENZENE	18.20	112.0	343547	194.46	ug/L	92
36)	ETHYLBENZENE	18.71	106.0	136284	200.29	ug/L	80
37)	4-BROMOFLUOROBENZENE(SS)	21.33	95.0	291888	185.19	ug/L	97
38)	STYRENE	20.09	104.0	284201	194.72	ug/L	52
39)	TOTAL XYLENES	20.00	106.0	172061	196.17	ug/L	81

* Compound is ISTD

"COPY
ORIGINAL IS FILED IN CSF EM564 Case 19005
RD 06-01-92

JB 05/06/92

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Instrument ID: HP-5E Calibration date: 05/05/92 Time: 0703

Lab File ID: E9742 Init. Calib. Date(s): 04/27/92 04/27/92

Heated Purge: (Y/N) N Init. Calib. Times: 1900 2233

GC Column: CAP ID: 0.530(mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Chloromethane	0.356	0.357		-0.3	
Bromomethane	1.011	1.065	0.100	-5.3	25.0
Vinyl Chloride	0.526	0.553	0.100	-5.1	25.0
Chloroethane	0.460	0.535		-16.3	
Methylene Chloride	1.420	1.435		-1.1	
Acetone	0.286	0.279		2.4	
Carbon Disulfide	3.206	3.061		4.5	
1,1-Dichloroethene	1.208	1.157	0.100	4.2	25.0
1,1-Dichloroethane	2.140	2.585	0.200	-20.8	25.0
1,2-Dichloroethene (total)	2.804	2.903		-3.5	
Chloroform	2.884	3.036	0.200	-5.3	25.0
1,2-Dichloroethane	1.696	1.806	0.100	-6.5	25.0
2-Butanone	0.380	0.461		-21.3	
1,1,1-Trichloroethane	0.725	0.632	0.100	12.8	25.0
Carbon Tetrachloride	0.666	0.598	0.100	10.2	25.0
Bromodichloromethane	0.845	0.876	0.200	-3.7	25.0
1,2-Dichloropropane	0.376	0.444		-18.1	
cis-1,3-Dichloropropene	0.578	0.611	0.200	-5.7	25.0
Trichloroethene	0.501	0.498	0.300	0.6	25.0
Dibromochloromethane	0.840	0.780	0.100	7.1	25.0
1,1,2-Trichloroethane	0.415	0.380	0.100	8.4	25.0
Benzene	0.846	0.835	0.500	1.3	25.0
trans-1,3-Dichloropropene	0.412	0.419	0.100	-1.7	25.0
Bromoform	0.546	0.754	0.100	-30.1	25.0
4-Methyl-2-Pentanone	0.370	0.379		-2.4	
2-Hexanone	0.208	0.200		3.8	
Tetrachloroethene	0.619	0.468	0.200	24.4	25.0
1,1,2,2-Tetrachloroethane	0.788	0.813	0.500	-3.2	25.0
Toluene	1.281	0.975	0.400	23.9	25.0
Chlorobenzene	0.996	0.970	0.500	2.6	25.0
Ethylbenzene	0.409	0.354	0.100	13.4	25.0
Styrene	0.843	0.823	0.300	2.4	25.0
Xylene (total)	0.505	0.453	0.300	10.3	25.0
Toluene-d8	1.195	0.981		17.9	
Bromofluorobenzene	0.924	1.097	0.200	-18.7	25.0
1,2-Dichloroethane-d4	1.468	1.699		-15.7	

All other compounds must meet a minimum RRF of 0.010.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Instrument ID: HP-5E Calibration date: 05/06/92 Time: 0015

Lab File ID: E9759 Init. Calib. Date(s): 04/27/92 04/27/92

Heated Purge: (Y/N) N Init. Calib. Times: 1900 2233

GC Column: CAP ID: 0.530(mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Chloromethane	0.356	0.191		46.4	
Bromomethane	1.011	0.834	0.100	17.5	25.0
Vinyl Chloride	0.526	0.353	0.100	32.9	25.0
Chloroethane	0.460	0.377		18.0	
Methylene Chloride	1.420	1.373		3.3	
Acetone	0.286	0.201		29.7	
Carbon Disulfide	3.206	2.830		11.7	
1,1-Dichloroethene	1.208	1.118	0.100	7.4	25.0
1,1-Dichloroethane	2.140	2.352	0.200	-9.9	25.0
1,2-Dichloroethene (total)	2.804	1.438		48.7	
Chloroform	2.884	3.024	0.200	-4.9	25.0
1,2-Dichloroethane	1.696	1.797	0.100	-6.0	25.0
2-Butanone	0.380	0.347		8.7	
1,1,1-Trichloroethane	0.725	0.671	0.100	7.4	25.0
Carbon Tetrachloride	0.666	0.653	0.100	2.0	25.0
Bromodichloromethane	0.845	0.905	0.200	-7.1	25.0
1,2-Dichloropropane	0.376	0.404		-7.4	
cis-1,3-Dichloropropene	0.578	0.593	0.200	-2.6	25.0
Trichloroethene	0.501	0.543	0.300	-8.4	25.0
Dibromochloromethane	0.840	0.831	0.100	1.1	25.0
1,1,2-Trichloroethane	0.415	0.378	0.100	8.9	25.0
Benzene	0.846	0.832	0.500	1.7	25.0
trans-1,3-Dichloropropene	0.412	0.592	0.100	-43.7	25.0
Bromoform	0.546	0.763	0.100	-39.7	25.0
4-Methyl-2-Pentanone	0.370	0.284		23.2	
2-Hexanone	0.208	0.162		22.1	
Tetrachloroethene	0.619	0.589	0.200	4.8	25.0
1,1,2,2-Tetrachloroethane	0.788	0.710	0.500	9.9	25.0
Toluene	1.281	1.034	0.400	19.3	25.0
Chlorobenzene	0.996	1.035	0.500	-3.9	25.0
Ethylbenzene	0.409	0.389	0.100	4.9	25.0
Styrene	0.843	0.850	0.300	-0.8	25.0
Xylene (total)	0.505	0.497	0.300	1.6	25.0
Toluene-d8	1.195	0.916		23.4	
Bromofluorobenzene	0.924	1.018	0.200	-10.2	25.0
1,2-Dichloroethane-d4	1.468	1.458		0.7	

All other compounds must meet a minimum RRF of 0.010.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Instrument ID: HP-5E Calibration date: 05/06/92 Time: 1726

Lab File ID: E9772 Init. Calib. Date(s): 04/23/92 04/23/92

Heated Purge: (Y/N) Y Init. Calib. Times: 1058 1646

GC Column: CAP ID: 0.530(mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Chloromethane	0.356	0.435		-22.2	
Bromomethane	0.958	1.050	0.100	-9.6	25.0
Vinyl Chloride	0.503	0.602	0.100	-19.7	25.0
Chloroethane	0.396	0.463		-16.9	
Methylene Chloride	1.151	1.215		-5.6	
Acetone	0.447	0.556		-24.4	
Carbon Disulfide	2.766	2.612		5.6	
1,1-Dichloroethene	1.011	0.840	0.100	16.9	25.0
1,1-Dichloroethane	1.920	2.157	0.200	-12.3	25.0
1,2-Dichloroethene (total)	2.372	1.318		44.4	
Chloroform	2.642	2.604	0.200	1.4	25.0
1,2-Dichloroethane	1.600	1.596	0.100	0.2	25.0
2-Butanone	0.630	0.791		-25.6	
1,1,1-Trichloroethane	0.746	0.654	0.100	12.3	25.0
Carbon Tetrachloride	0.709	0.608	0.100	14.2	25.0
Bromodichloromethane	0.846	0.831	0.200	1.8	25.0
1,2-Dichloropropane	0.329	0.392		-19.2	
cis-1,3-Dichloropropene	0.525	0.582	0.200	-10.9	25.0
Trichloroethene	0.488	0.503	0.300	-3.1	25.0
Dibromochloromethane	0.885	0.783	0.100	11.5	25.0
1,1,2-Trichloroethane	0.401	0.393	0.100	2.0	25.0
Benzene	0.757	0.821	0.500	-8.5	25.0
trans-1,3-Dichloropropene	0.376	0.405	0.100	-7.7	25.0
Bromoform	0.732	0.900	0.100	-23.0	25.0
4-Methyl-2-Pentanone	0.522	0.602		-15.3	
2-Hexanone	0.330	0.405		-22.7	
Tetrachloroethene	0.616	0.505	0.200	18.0	25.0
1,1,2,2-Tetrachloroethane	1.019	1.054	0.500	-3.4	25.0
Toluene	1.100	0.939	0.400	14.6	25.0
Chlorobenzene	0.982	0.956	0.500	2.6	25.0
Ethylbenzene	0.385	0.380	0.100	1.3	25.0
Styrene	0.812	0.809	0.300	0.4	25.0
Xylene (total)	0.480	0.466	0.300	2.9	25.0
Toluene-d8	1.100	0.897		18.4	
Bromofluorobenzene	0.968	1.011	0.200	-4.4	25.0
1,2-Dichloroethane-d4	1.477	1.402		5.1	

All other compounds must meet a minimum RRF of 0.010.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Instrument ID: HP-5E Calibration date: 05/07/92 Time: 1228

Lab File ID: E9791 Init. Calib. Date(s): 04/23/92 04/23/92

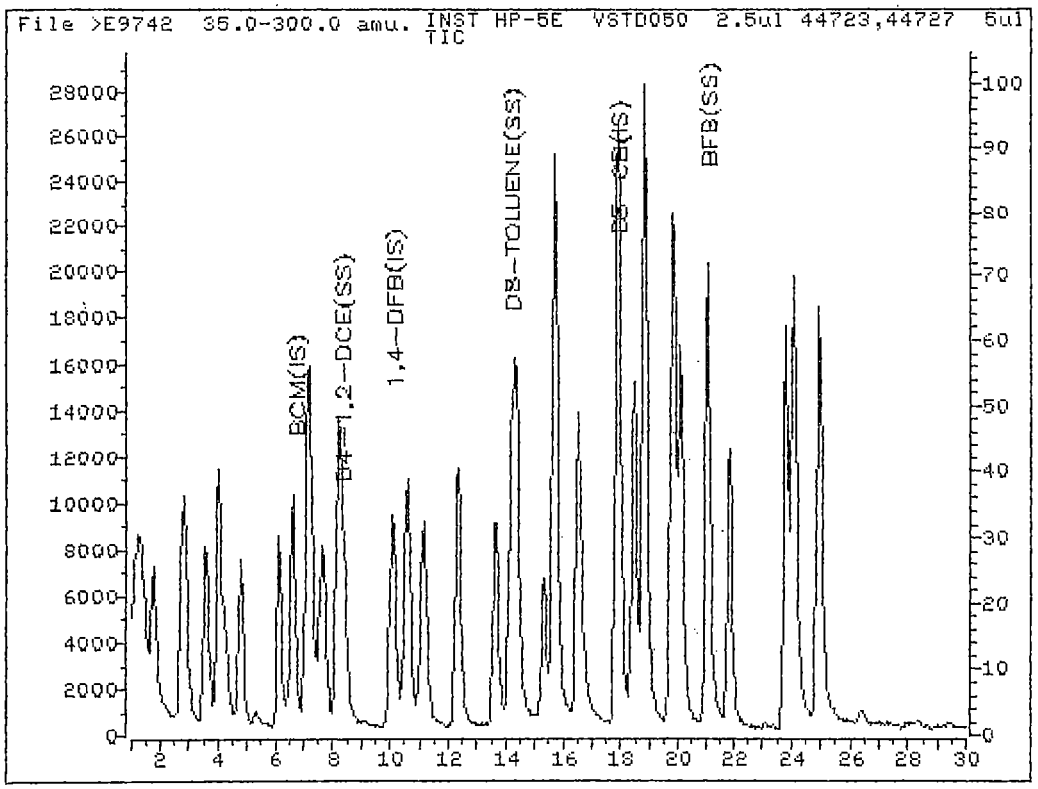
Heated Purge: (Y/N) Y Init. Calib. Times: 1058 1646

GC Column: CAP ID: 0.530(mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Chloromethane	0.356	0.421		-18.3	
Bromomethane	0.958	1.002	0.100	-4.6	25.0
Vinyl Chloride	0.503	0.592	0.100	-17.7	25.0
Chloroethane	0.396	0.490		-23.7	
Methylene Chloride	1.151	1.194		-3.7	
Acetone	0.447	0.577		-29.1	
Carbon Disulfide	2.766	3.201		-15.7	
1,1-Dichloroethene	1.011	1.081	0.100	-6.9	25.0
1,1-Dichloroethane	1.920	2.087	0.200	-8.7	25.0
1,2-Dichloroethene (total)	2.372	1.178		50.3	
Chloroform	2.642	2.475	0.200	6.3	25.0
1,2-Dichloroethane	1.600	1.480	0.100	7.5	25.0
2-Butanone	0.630	0.638		-1.3	
1,1,1-Trichloroethane	0.746	0.647	0.100	13.3	25.0
Carbon Tetrachloride	0.709	0.595	0.100	16.1	25.0
Bromodichloromethane	0.846	0.779	0.200	7.9	25.0
1,2-Dichloropropane	0.329	0.373		-13.4	
cis-1,3-Dichloropropene	0.525	0.451	0.200	14.1	25.0
Trichloroethene	0.488	0.498	0.300	-2.0	25.0
Dibromochloromethane	0.885	0.706	0.100	20.2	25.0
1,1,2-Trichloroethane	0.401	0.361	0.100	10.0	25.0
Benzene	0.757	0.801	0.500	-5.8	25.0
trans-1,3-Dichloropropene	0.376	0.239	0.100	36.4	25.0
Bromoform	0.732	0.700	0.100	4.4	25.0
4-Methyl-2-Pentanone	0.522	0.516		1.1	
2-Hexanone	0.330	0.320		3.0	
Tetrachloroethene	0.616	0.530	0.200	14.0	25.0
1,1,2,2-Tetrachloroethane	1.019	0.920	0.500	9.7	25.0
Toluene	1.100	0.997	0.400	9.4	25.0
Chlorobenzene	0.982	0.914	0.500	6.9	25.0
Ethylbenzene	0.385	0.373	0.100	3.1	25.0
Styrene	0.812	0.787	0.300	3.1	25.0
Xylene (total)	0.480	0.471	0.300	1.9	25.0
Toluene-d8	1.100	1.066		3.1	
Bromofluorobenzene	0.968	1.292	0.200	-33.5	25.0
1,2-Dichloroethane-d4	1.477	1.473		0.3	

All other compounds must meet a minimum RRF of 0.010.

~~19005.5~~ 19026.5



MS data file header from : >E9742

Sample: INST HP-5E VSTD050 Operator: TERMINAL63MS 5/05/92 7:03
Misc : 2.5ul 44723,44727 5ul 32790 IS/SS=50ppb 44733,44
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

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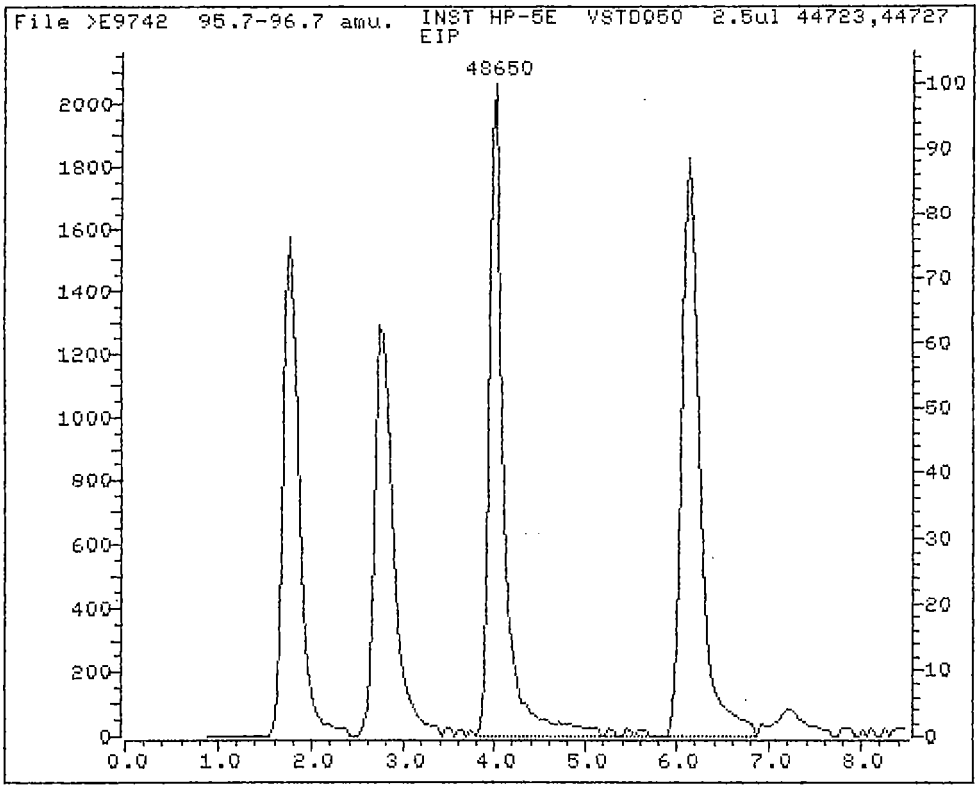

Data File: >E9742::D1 Quant Output File: ^E9742::QT
Name: INST HP-5E VSTD050
Misc: 2.5ul 44723,44727 5ul 32790 IS/SS=50ppb 44733,44
Quant Time: 920505 08:14 Quant ID File: CAPID5::D7
Injected at: 920505 07:03 Last Calibration: 920505 08:13

Compound No: 11
Compound Name: 1,2-DICHLOROETHENE (TOTAL)
Scan Number: 69
Retention Time: 4.02 min.
Quant Ion: 96.0
Area: 48650M
Concentration: 100.00 ug/L
q-value: 93

This report was produced by QAREA on: 920505 08:23

JGP 5-14-92

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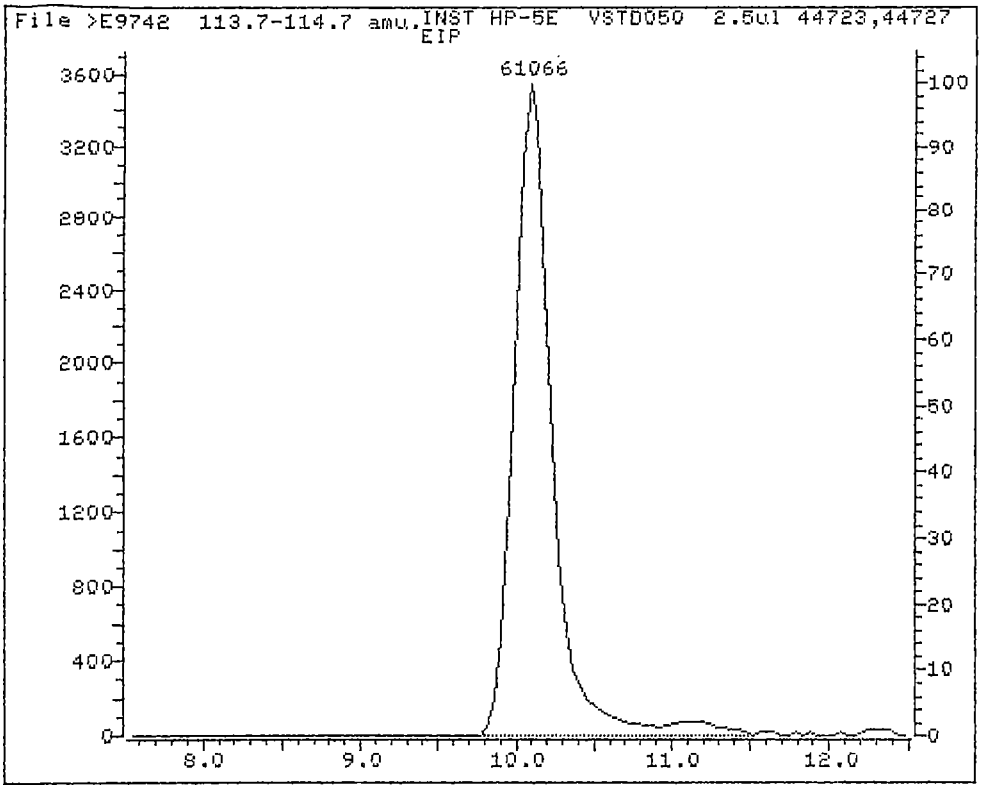
19026.5



Data File: >E9742::D1 Quant Output File: ^E9742::QT
Name: INST HP-5E VSTD050
Misc: 2.5ul 44723,44727 5ul 32790 IS/SS=50ppb 44733,44
Quant Time: 920505 07:36 Quant ID File: CAPID5::D7
Injected at: 920505 07:03 Last Calibration: 920505 00:30

Compound No: 16 (ISTD)
Compound Name: 1,4-DIFLUOROBENZENE(IS)
Scan Number: 201
Retention Time: 10.09 min.
Quant Ion: 114.0
Area: 61066M
Concentration: 50.00 ug/L
q-value: 33

This report was produced by QAREA on: 920505 08:07

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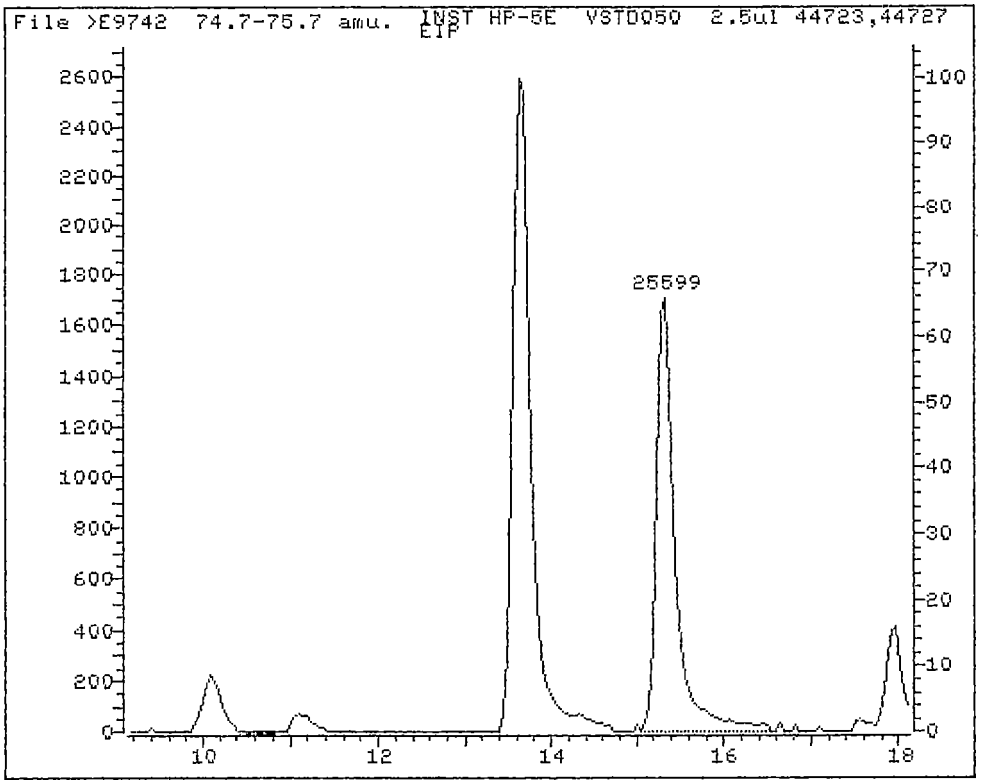
19028.5



Data File: >E9742::D1 Quant Output File: ^E9742::QT
Name: INST HP-5E VSTD050
Misc: 2.5ul 44723,44727 5ul 32790 IS/SS=50ppb 44733,44
Quant Time: 920505 08:14 Quant ID File: CAPID5::D7
Injected at: 920505 07:03 Last Calibration: 920505 08:13

Compound No: 26
Compound Name: TRANS-1,3-DICHLOROPROPENE
Scan Number: 315
Retention Time: 15.34 min.
Quant Ion: 75.0
Area: 25599M
Concentration: 34.28 ug/L
q-value: 100

This report was produced by QAREA on: 920514 10:20

1805-14-92

~~19005.5~~ 5-29-92

19026.5

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920505 08:14
Output File: ^E9742::QT Injected at: 920505 07:03
Data File: >E9742::D1 Dilution Factor: 1.00000
Name: INST HP-5E VSTD050
Misc: 2.5ul 44723,44727 5ul 32790 IS/SS=50ppb 44733,44

ID File: CAPID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (WATER) CAPILLARY COLUMN
Last Calibration: 920505 08:13

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.64	128.0	16760	50.00	ug/L	83
2)	CHLOROMETHANE	1.40	50.0	5982	50.00	ug/L	99
3)	BROMOMETHANE	1.77	94.0	17847	50.00	ug/L	17
4)	VINYL CHLORIDE	1.49	62.0	9270	50.00	ug/L	97
5)	CHLOROETHANE	1.86	64.0	8959	50.00	ug/L	99
6)	METHYLENE CHLORIDE	3.56	84.0	24047	50.00	ug/L	85
7)	ACETONE	2.96	43.0	4671	50.00	ug/L	70
8)	CARBON DISULFIDE	2.87	76.0	51298	50.00	ug/L	61
9)	1,1-DICHLOROETHENE	2.73	96.0	19396	50.00	ug/L	92
10)	1,1-DICHLOROETHANE	4.80	63.0	43321	50.00	ug/L	89
11)	1,2-DICHLOROETHENE (TOTAL)	4.02	96.0	48650M	100.00	ug/L	93
12)	CHLOROFORM	7.15	83.0	50887	50.00	ug/L	89
13)	d4-1,2-DICHLOROETHANE(SS)	8.21	65.0	28479	50.00	ug/L	100
14)	1,2-DICHLOROETHANE	8.44	62.0	30263	50.00	ug/L	97
15)	2-BUTANONE	6.46	43.0	7719	50.00	ug/L	83
16)	*1,4-DIFLUOROBENZENE(IS)	10.09	114.0	61066M	50.00	ug/L	33
17)	1,1,1-TRICHLOROETHANE	7.24	97.0	38602	50.00	ug/L	89
18)	CARBON TETRACHLORIDE	7.65	117.0	36500	50.00	ug/L	99
19)	BROMODICHLOROMETHANE	12.35	83.0	53493	50.00	ug/L	91
20)	1,2-DICHLOROPROPANE	11.15	63.0	27099	50.00	ug/L	63
21)	CIS-1,3-DICHLOROPROPENE	13.63	75.0	37339	50.00	ug/L	100
22)	TRICHLOROETHENE	10.60	130.0	30432	50.00	ug/L	95
23)	DIBROMOCHLOROMETHANE	16.49	129.0	47609	50.00	ug/L	97
24)	1,1,2-TRICHLOROETHANE	15.66	97.0	23197	50.00	ug/L	98
25)	BENZENE	8.21	78.0	50992	50.00	ug/L	100
26)	TRANS-1,3-DICHLOROPROPENE	15.34	75.0	25599M	34.28	ug/L	100
27)	BROMOFORM	20.07	173.0	46052	50.00	ug/L	98
28)	*d5-CHLOROBENZENE(IS)	17.87	117.0	55529	50.00	ug/L	100
29)	4-METHYL-2-PENTANONE	14.42	43.0	21033	50.00	ug/L	92
30)	2-HEXANONE	16.72	43.0	11126	50.00	ug/L	94
31)	TETRACHLOROETHENE	15.70	164.0	26015	50.00	ug/L	80
32)	1,1,2,2-TETRACHLOROETHANE	21.87	83.0	45132	50.00	ug/L	89
33)	d8-TOLUENE(SS)	14.19	98.0	54474	50.00	ug/L	99
34)	TOLUENE	14.32	91.0	54152	50.00	ug/L	88
35)	CHLOROBENZENE	17.91	112.0	53848	50.00	ug/L	90
36)	ETHYLBENZENE	18.46	106.0	19653	50.00	ug/L	83
37)	4-BROMOFLUOROBENZENE(SS)	21.09	95.0	60914	50.00	ug/L	94
38)	STYRENE	19.84	104.0	45708	50.00	ug/L	55
39)	TOTAL XYLENES	19.75	106.0	25167	50.00	ug/L	78

* Compound is ISTD

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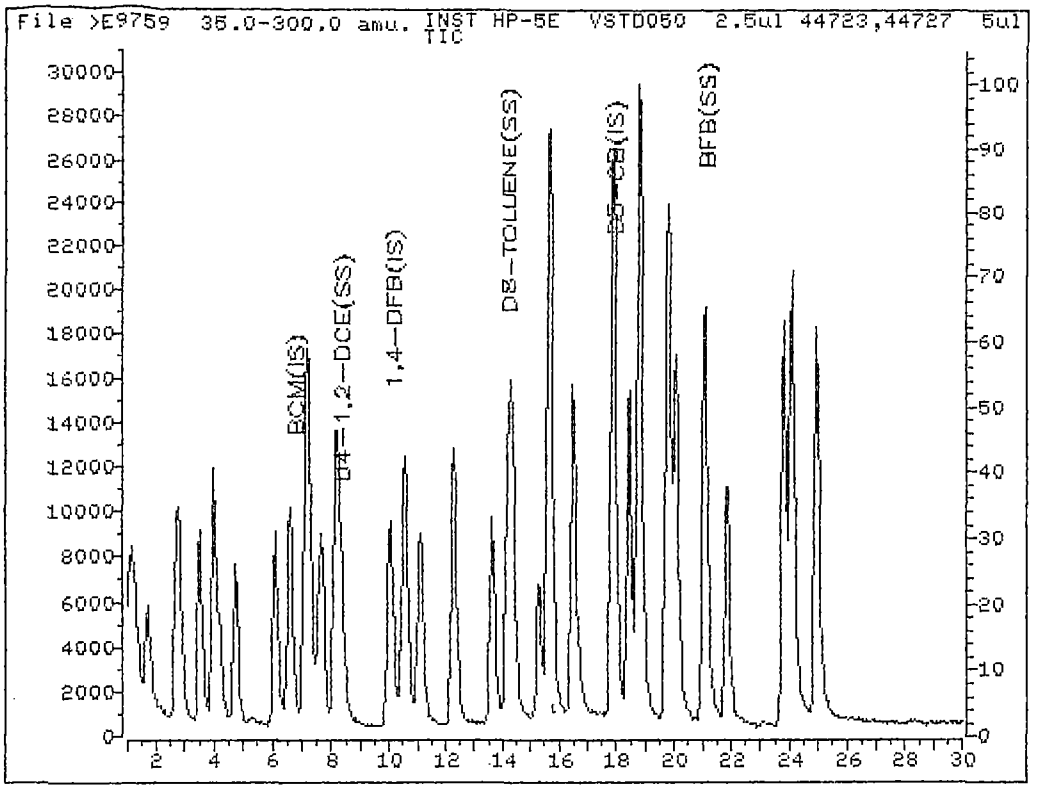

MS data file header from : >E9759

Sample: INST HP-5E VSTD050 Operator: TERMINAL63MS 5/06/92 0:15
Misc : 2.5ul 44723,44727 5ul 32790 IS/SS=50ppb 44733,44
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

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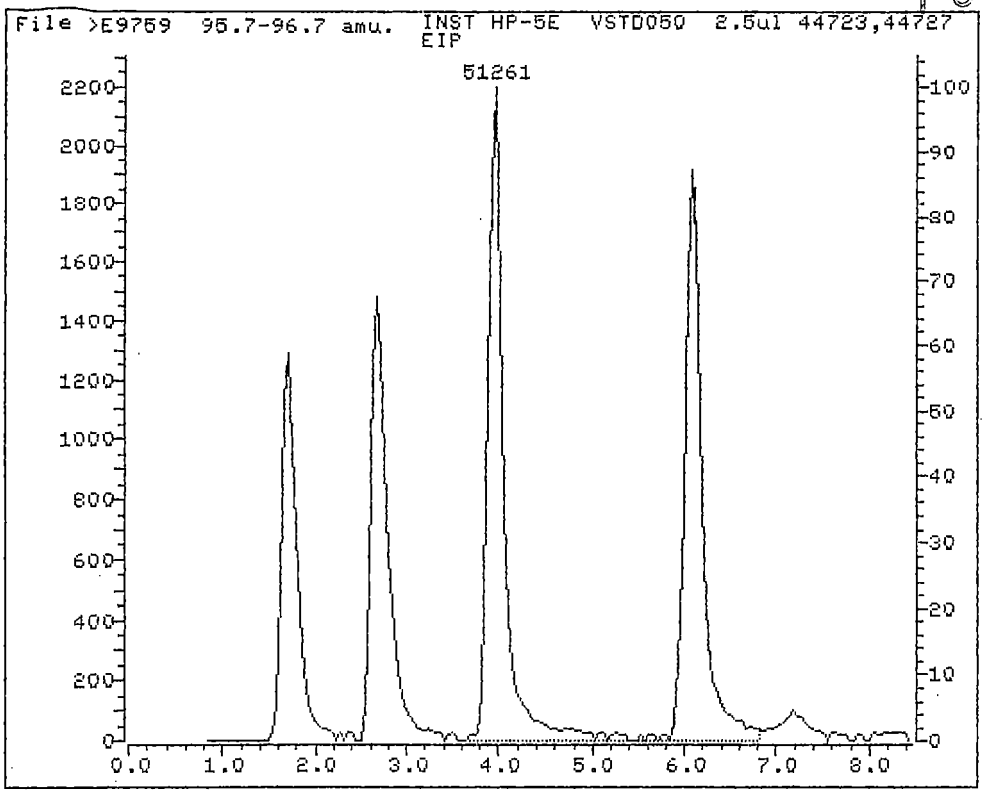

Data File: >E9759::D1 Quant Output File: ^E9759::QT
Name: INST HP-5E VSTD050
Misc: 2.5ul 44723,44727 5ul 32790 IS/SS=50ppb 44733,44
Quant Time: 920506 01:07 Quant ID File: CAPID5::D7
Injected at: 920506 00:15 Last Calibration: 920506 01:06

Compound No: 11
Compound Name: 1,2-DICHLOROETHENE (TOTAL)
Scan Number: 69
Retention Time: 3.96 min.
Quant Ion: 96.0
Area: 51261M
Concentration: 100.00 ug/L
q-value: 96

This report was produced by QAREA on: 920506 01:22

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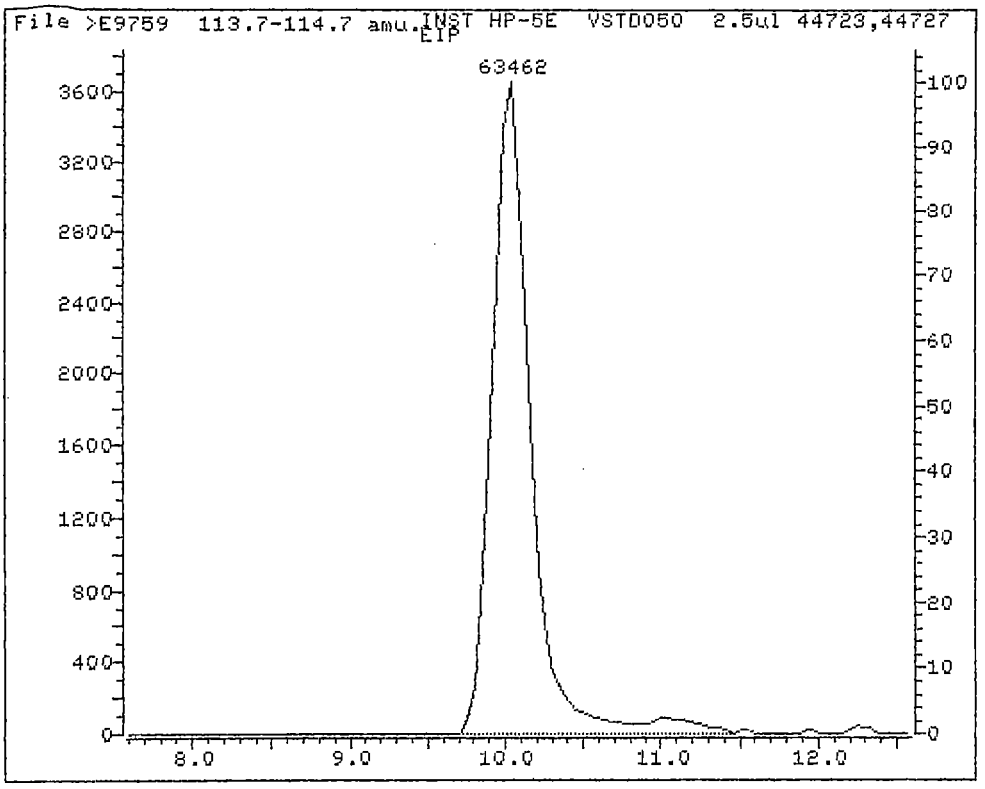
19026 · 5



Data File: >E9759::D1 Quant Output File: ^E9759::QT
Name: INST HP-5E VSTD050
Misc: 2.5ul 44723,44727 5ul 32790 IS/SS=50ppb 44733,44
Quant Time: 920506 00:48 Quant ID File: CAPID5::D7
Injected at: 920506 00:15 Last Calibration: 920505 08:13

Compound No: 16 (ISTD)
Compound Name: 1,4-DIFLUOROBENZENE(IS)
Scan Number: 201
Retention Time: 10.03 min.
Quant Ion: 114.0
Area: 63462M
Concentration: 50.00 ug/L
q-value: 31

This report was produced by QAREA on: 920506 00:56

1905-1492

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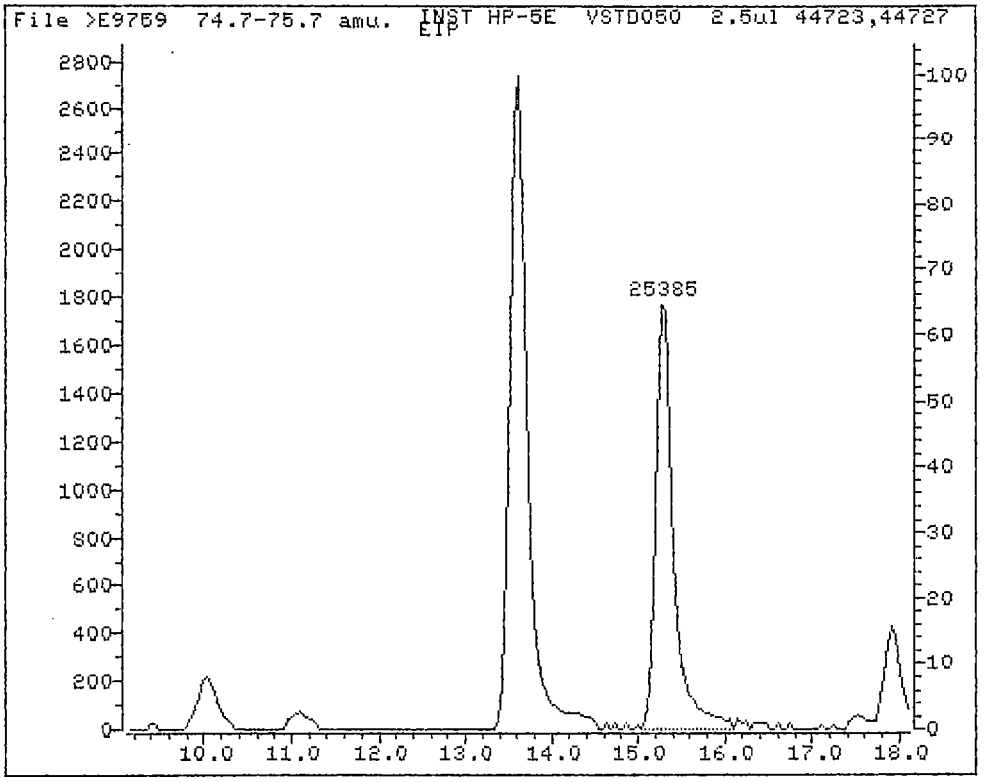
19026.5



Data File: >E9759::D1 Quant Output File: ^E9759::QT
Name: INST HP-5E VSTD050
Misc: 2.5ul 44723,44727 5ul 32790 IS/SS=50ppb 44733,44
Quant Time: 920506 01:07 Quant ID File: CAPID5::D7
Injected at: 920506 00:15 Last Calibration: 920506 01:06

Compound No: 26
Compound Name: TRANS-1,3-DICHLOROPROPENE
Scan Number: 315
Retention Time: 15.28 min.
Quant Ion: 75.0
Area: 25385M
Concentration: 33.75 ug/L
q-value: 100

This report was produced by QAREA on: 920514 12:27

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~~19005.5~~ 5-29-92

QUANT REPORT

19026.5

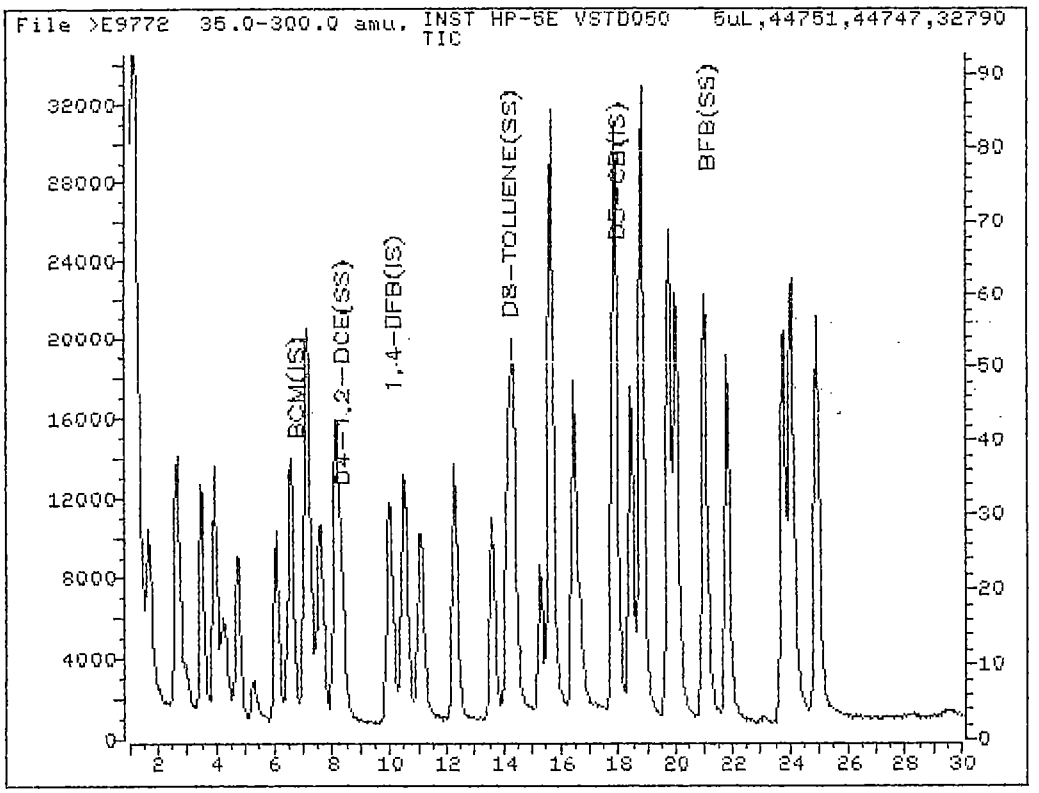
Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920506 01:07
Output File: ^E9759::QT Injected at: 920506 00:15
Data File: >E9759::D1 Dilution Factor: 1.00000
Name: INST HP-5E VSTD050
Misc: 2.5ul 44723,44727 5ul 32790 IS/SS=50ppb 44733,44

ID File: CAPID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (WATER) CAPILLARY COLUMN
Last Calibration: 920506 01:06

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.58	128.0	17820	50.00	ug/L	98
2)	CHLOROMETHANE	1.34	50.0	3407	50.00	ug/L	98
3)	BROMOMETHANE	1.71	94.0	14857	50.00	ug/L	17
4)	VINYL CHLORIDE	1.43	62.0	6283	50.00	ug/L	97
5)	CHLOROETHANE	1.80	64.0	6725	50.00	ug/L	98
6)	METHYLENE CHLORIDE	3.50	84.0	24465	50.00	ug/L	83
7)	ACETONE	2.91	43.0	3581	50.00	ug/L	65
8)	CARBON DISULFIDE	2.81	76.0	50429	50.00	ug/L	62
9)	1,1-DICHLOROETHENE	2.68	96.0	19928	50.00	ug/L	92
10)	1,1-DICHLOROETHANE	4.75	63.0	41905	50.00	ug/L	90
11)	1,2-DICHLOROETHENE (TOTAL)	3.96	96.0	51261M	100.00	ug/L	96
12)	CHLOROFORM	7.09	83.0	53882	50.00	ug/L	91
13)	d4-1,2-DICHLOROETHANE(SS)	8.15	65.0	25972	50.00	ug/L	100
14)	1,2-DICHLOROETHANE	8.38	62.0	32029	50.00	ug/L	98
15)	2-BUTANONE	6.40	43.0	6189	50.00	ug/L	83
16)	*1,4-DIFLUOROBENZENE(IS)	10.03	114.0	63462M	50.00	ug/L	31
17)	1,1,1-TRICHLOROETHANE	7.18	97.0	42582	50.00	ug/L	95
18)	CARBON TETRACHLORIDE	7.64	117.0	41472	50.00	ug/L	98
19)	BROMODICHLOROMETHANE	12.29	83.0	57411	50.00	ug/L	92
20)	1,2-DICHLOROPROPANE	11.09	63.0	25628	50.00	ug/L	65
21)	CIS-1,3-DICHLOROPROPENE	13.62	75.0	37606	50.00	ug/L	100
22)	TRICHLOROETHENE	10.54	130.0	34476	50.00	ug/L	95
23)	DIBROMOCHLOROMETHANE	16.47	129.0	52745	50.00	ug/L	97
24)	1,1,2-TRICHLOROETHANE	15.65	97.0	23987	50.00	ug/L	99
25)	BENZENE	8.19	78.0	52800	50.00	ug/L	100
26)	TRANS-1,3-DICHLOROPROPENE	15.28	75.0	25385M	33.75	ug/L	100
27)	BROMOFORM	20.06	173.0	48409	50.00	ug/L	97
28)	*d5-CHLOROBENZENE(IS)	17.85	117.0	55335	50.00	ug/L	100
29)	4-METHYL-2-PENTANONE	14.36	43.0	15722	50.00	ug/L	91
30)	2-HEXANONE	16.70	43.0	8956	50.00	ug/L	94
31)	TETRACHLOROETHENE	15.69	164.0	32579	50.00	ug/L	83
32)	1,1,2,2-TETRACHLOROETHANE	21.81	83.0	39262	50.00	ug/L	95
33)	d8-TOLUENE(SS)	14.17	98.0	50702	50.00	ug/L	99
34)	TOLUENE	14.31	91.0	57244	50.00	ug/L	90
35)	CHLOROBENZENE	17.90	112.0	57268	50.00	ug/L	91
36)	ETHYLBENZENE	18.45	106.0	21501	50.00	ug/L	78
37)	4-BROMOFLUOROBENZENE(SS)	21.07	95.0	56307	50.00	ug/L	96
38)	STYRENE	19.83	104.0	47015	50.00	ug/L	50
39)	TOTAL XYLENES	19.74	106.0	27502	50.00	ug/L	77

* Compound is ISTD

1905-14-92

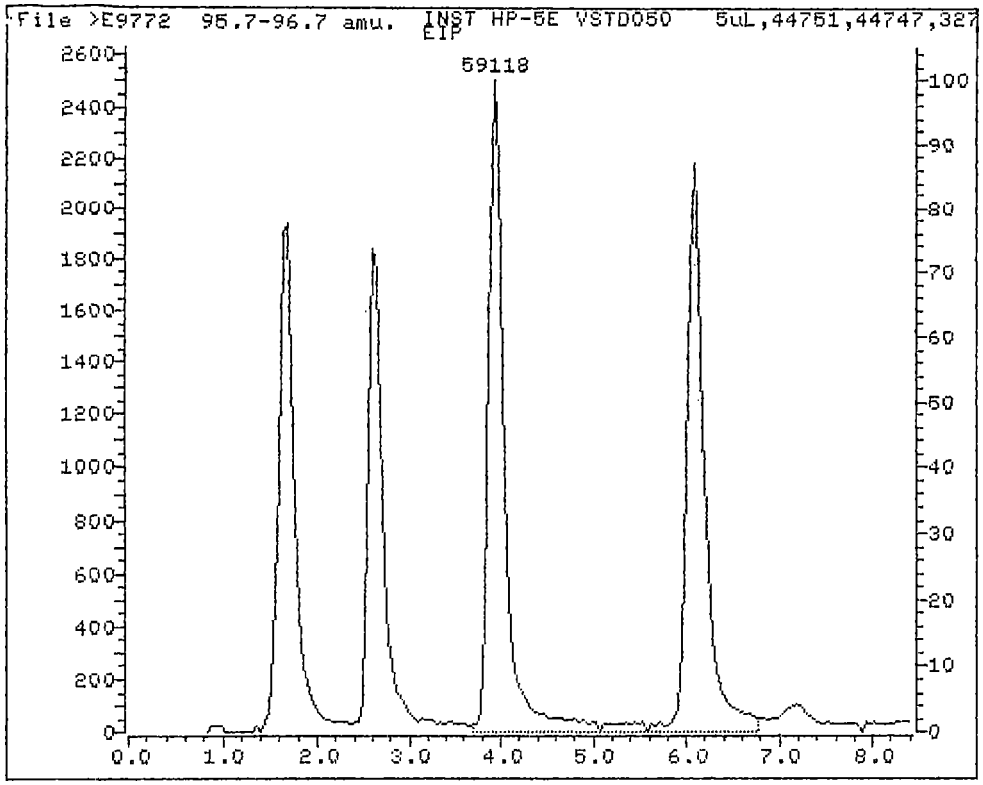


MS data file header from : >E9772

Sample: INST HP-5E VSTD050 Operator: TERMINAL63MS 5/06/92 17:26
Misc : 5uL,44751,44747,32790 IS/SS=50,44745,447
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

1905-1490



Data File: >E9772::DF Quant Output File: ^E9772::D4
Name: INST HP-5E VSTD050
Misc: 5uL,44751,44747,32790 IS/SS=50,44745,447
Quant Time: 920506 18:26 Quant ID File: NCSID5::D7
Injected at: 920506 17:26 Last Calibration: 920506 18:21

Compound No: 11
Compound Name: 1,2-DICHLOROETHENE (TOTAL)
Scan Number: 68
Retention Time: 3.93 min.
Quant Ion: 96.0
Area: 59118M
Concentration: 100.00 ug/Kg
q-value: 96

This report was produced by QAREA on: 920506 20:43

1805-14-90

QUANT REPORT

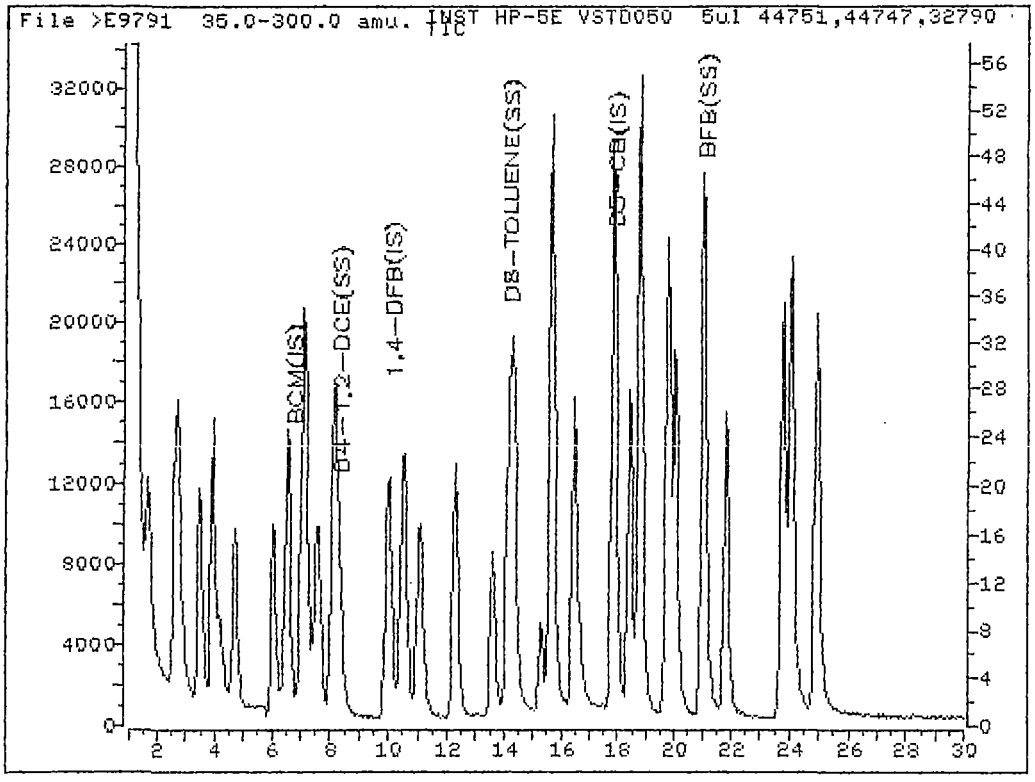
Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920506 18:26
Output File: ^E9772::D4 Injected at: 920506 17:26
Data File: >E9772::DF Dilution Factor: 1.00000
Name: INST HP-5E VSTD050
Misc: 5uL,44751,44747,32790 IS/SS=50,44745,447

ID File: NCSID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (SOIL)
Last Calibration: 920506 18:21

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.59	128.0	22426	50.00	ug/Kg	91
2)	CHLOROMETHANE	1.30	50.0	9750	50.00	ug/Kg	99
3)	BROMOMETHANE	1.67	94.0	23543	50.00	ug/Kg	16
4)	VINYL CHLORIDE	1.40	62.0	13493	50.00	ug/Kg	96
5)	CHLOROETHANE	1.72	64.0	10391	50.00	ug/Kg	98
6)	METHYLENE CHLORIDE	3.47	84.0	27250	50.00	ug/Kg	81
7)	ACETONE	2.96	43.0	12480	50.00	ug/Kg	71
8)	CARBON DISULFIDE	2.68	76.0	58565	50.00	ug/Kg	61
9)	1,1-DICHLOROETHENE	2.59	96.0	18837	50.00	ug/Kg	94
10)	1,1-DICHLOROETHANE	4.75	63.0	48377	50.00	ug/Kg	90
11)	1,2-DICHLOROETHENE (TOTAL)	3.93	96.0	59118M	100.00	ug/Kg	96
12)	CHLOROFORM	7.10	83.0	58393	50.00	ug/Kg	91
13)	d4-1,2-DICHLOROETHANE(SS)	8.11	65.0	31435	50.00	ug/Kg	100
14)	1,2-DICHLOROETHANE	8.34	62.0	35790	50.00	ug/Kg	97
15)	2-BUTANONE	6.46	43.0	18347	51.68	ug/Kg	80
16)	*1,4-DIFLUOROBENZENE(IS)	10.00	114.0	72657	50.00	ug/Kg	33
17)	1,1,1-TRICHLOROETHANE	7.15	97.0	47550	50.00	ug/Kg	93
18)	CARBON TETRACHLORIDE	7.56	117.0	44156	50.00	ug/Kg	99
19)	BROMODICHLOROMETHANE	12.30	83.0	60395	50.00	ug/Kg	93
20)	1,2-DICHLOROPROPANE	11.10	63.0	28490	50.00	ug/Kg	62
21)	CIS-1,3-DICHLOROPROPENE	13.58	75.0	42293	50.00	ug/Kg	100
22)	TRICHLOROETHENE	10.50	130.0	36573	50.00	ug/Kg	94
23)	DIBROMOCHLOROMETHANE	16.48	129.0	56901	50.00	ug/Kg	94
24)	1,1,2-TRICHLOROETHANE	15.65	97.0	28563	50.00	ug/Kg	95
25)	BENZENE	8.16	78.0	59654	50.00	ug/Kg	100
26)	TRANS-1,3-DICHLOROPROPENE	15.29	75.0	29437	50.00	ug/Kg	100
27)	BROMOFORM	20.03	173.0	65375	50.00	ug/Kg	97
28)	*d5-CHLOROBENZENE(IS)	17.82	117.0	63754	50.00	ug/Kg	100
29)	4-METHYL-2-PENTANONE	14.37	43.0	38354	50.00	ug/Kg	94
30)	2-HEXANONE	16.67	43.0	25850	50.00	ug/Kg	95
31)	TETRACHLOROETHENE	15.65	164.0	32211	50.00	ug/Kg	82
32)	1,1,2,2-TETRACHLOROETHANE	21.82	83.0	67199	50.00	ug/Kg	91
33)	d8-TOLUENE(SS)	14.14	98.0	57163	50.00	ug/Kg	99
34)	TOLUENE	14.32	91.0	59863	50.00	ug/Kg	86
35)	CHLOROBENZENE	17.91	112.0	60937	50.00	ug/Kg	84
36)	ETHYLBENZENE	18.42	106.0	24202	50.00	ug/Kg	78
37)	4-BROMOFLUOROBENZENE(SS)	21.04	95.0	64450	50.00	ug/Kg	99
38)	STYRENE	19.80	104.0	51590	50.00	ug/Kg	53
39)	TOTAL XYLENES	19.70	106.0	29724	50.00	ug/Kg	76

* Compound is ISTD

1805-1490

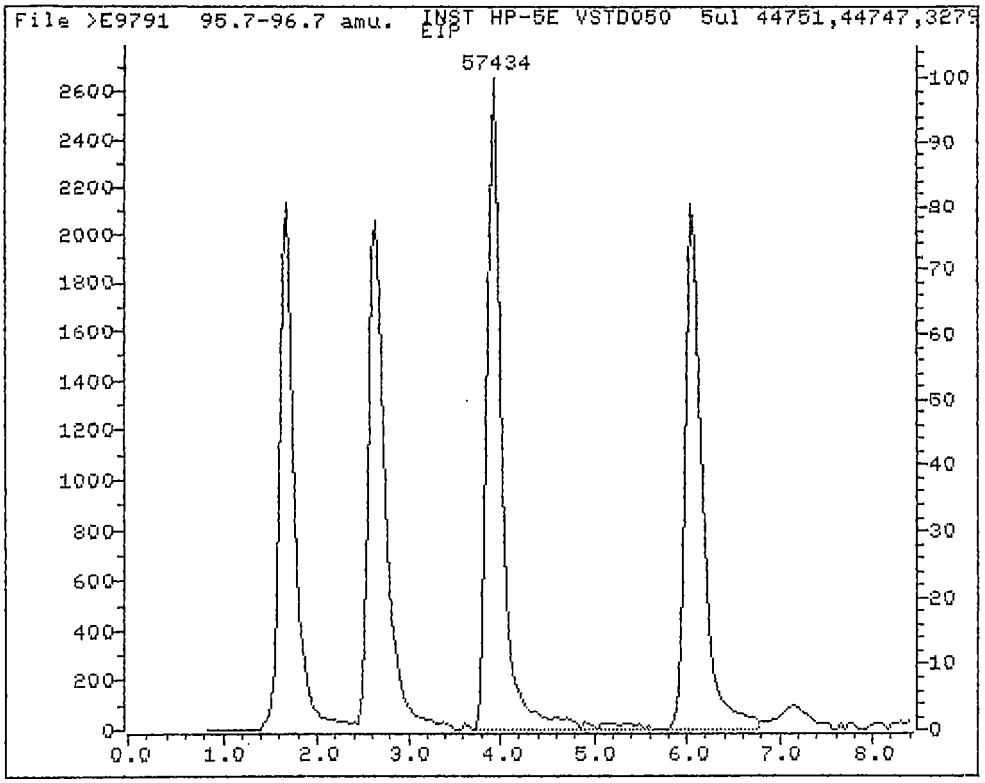


MS data file header from : >E9791

Sample: INST HP-5E VSTD050 Operator: TERMINAL63MS 5/07/92 12:28
Misc : 5ul 44751,44747,32790 IS/SS=50ppb 44745,44746
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

19051490

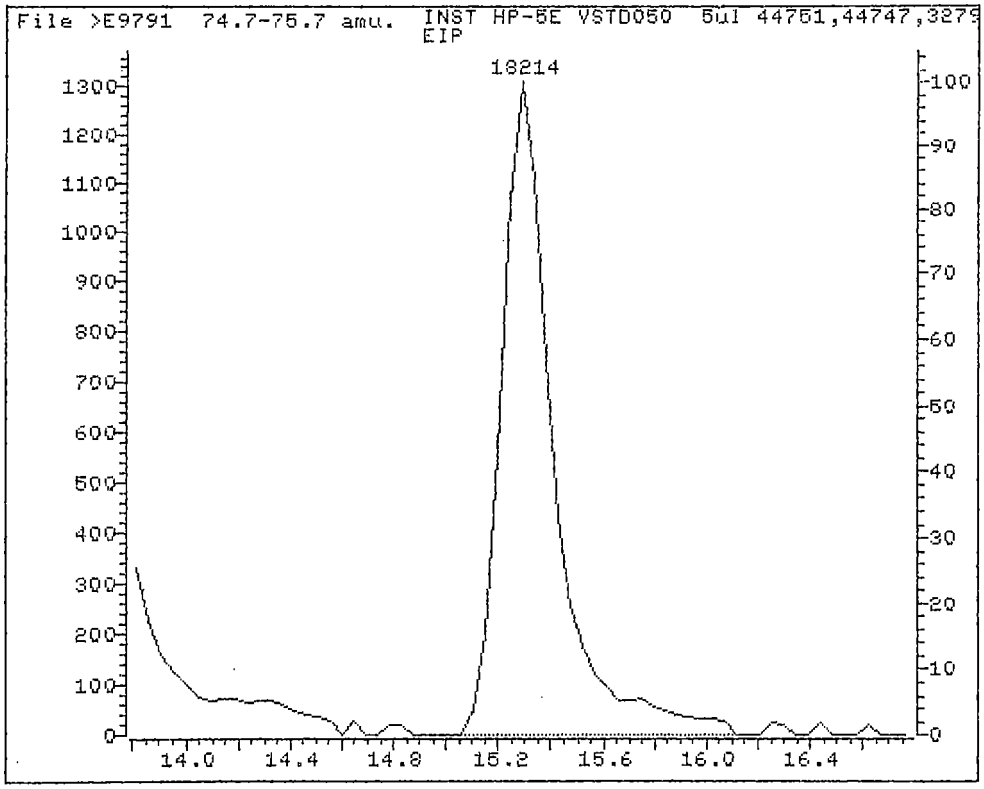


Data File: >E9791::D9 Quant Output File: ^E9791::QT
Name: INST HP-5E VSTD050
Misc: 5ul 44751,44747,32790 IS/SS=50ppb 44745,44746
Quant Time: 920507 13:49 Quant ID File: NCSID5::D7
Injected at: 920507 12:28 Last Calibration: 920507 13:43

Compound No: 11
Compound Name: 1,2-DICHLOROETHENE (TOTAL)
Scan Number: 68
Retention Time: 3.93 min.
Quant Ion: 96.0
Area: 57434M
Concentration: 100.16 ug/Kg
q-value: 95

This report was produced by QAREA on: 920507 13:55

1C857490



Data File: >E9791::D9 Quant Output File: ^E9791::QT
Name: INST HP-5E VSTD050
Misc: 5ul 44751,44747,32790 IS/SS=50ppb 44745,44746
Quant Time: 920507 13:49 Quant ID File: NCSID5::D7
Injected at: 920507 12:28 Last Calibration: 920507 13:43

Compound No: 26
Compound Name: TRANS-1,3-DICHLOROPROPENE
Scan Number: 315
Retention Time: 15.29 min.
Quant Ion: 75.0
Area: 18214M
Concentration: 50.00 ug/Kg
q-value: 100

This report was produced by QAREA on: 920507 13:57

ICP5-1490

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920507 13:49
Output File: ^E9791::QT Injected at: 920507 12:28
Data File: >E9791::D9 Dilution Factor: 1.00000
Name: INST HP-5E VSTD050
Misc: 5ul 44751,44747,32790 IS/SS=50ppb 44745,44746

ID File: NCSID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (SOIL)
Last Calibration: 920507 13:43

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.55	128.0	24376	50.00	ug/Kg	94
2)	CHLOROMETHANE	1.31	50.0	10267	50.00	ug/Kg	98
3)	BROMOMETHANE	1.67	94.0	24432	50.00	ug/Kg	17
4)	VINYL CHLORIDE	1.40	62.0	14419	50.00	ug/Kg	97
5)	CHLOROETHANE	1.77	64.0	11948	50.00	ug/Kg	96
6)	METHYLENE CHLORIDE	3.47	84.0	29106	50.00	ug/Kg	86
7)	ACETONE	2.92	43.0	14068	50.00	ug/Kg	69
8)	CARBON DISULFIDE	2.73	76.0	78025	50.00	ug/Kg	61
9)	1,1-DICHLOROETHENE	2.64	96.0	26358	50.00	ug/Kg	90
10)	1,1-DICHLOROETHANE	4.71	63.0	50881	50.00	ug/Kg	90
11)	1,2-DICHLOROETHENE (TOTAL)	3.93	96.0	57434M	100.16	ug/Kg	95
12)	CHLOROFORM	7.10	83.0	60322	50.00	ug/Kg	94
13)	d4-1,2-DICHLOROETHANE(SS)	8.11	65.0	35916	50.00	ug/Kg	100
14)	1,2-DICHLOROETHANE	8.34	62.0	36086	50.00	ug/Kg	97
15)	2-BUTANONE	6.41	43.0	15561	50.00	ug/Kg	83
16)	*1,4-DIFLUOROBENZENE(IS)	10.04	114.0	76221	50.00	ug/Kg	32
17)	1,1,1-TRICHLOROETHANE	7.15	97.0	49337	50.00	ug/Kg	92
18)	CARBON TETRACHLORIDE	7.56	117.0	45387	50.00	ug/Kg	99
19)	BROMODICHLOROMETHANE	12.30	83.0	59359	50.00	ug/Kg	90
20)	1,2-DICHLOROPROPANE	11.10	63.0	28423	50.00	ug/Kg	62
21)	CIS-1,3-DICHLOROPROPENE	13.59	75.0	34341	50.00	ug/Kg	100
22)	TRICHLOROETHENE	10.50	130.0	37966	50.00	ug/Kg	94
23)	DIBROMOCHLOROMETHANE	16.48	129.0	53809	50.00	ug/Kg	95
24)	1,1,2-TRICHLOROETHANE	15.66	97.0	27495	50.00	ug/Kg	98
25)	BENZENE	8.16	78.0	61033	50.00	ug/Kg	100
26)	TRANS-1,3-DICHLOROPROPENE	15.29	75.0	18214M	50.00	ug/Kg	100
27)	BROMOFORM	20.03	173.0	53387	50.00	ug/Kg	97
28)	*d5-CHLOROBENZENE(IS)	17.82	117.0	60426	50.00	ug/Kg	100
29)	4-METHYL-2-PENTANONE	14.37	43.0	31202	50.00	ug/Kg	95
30)	2-HEXANONE	16.71	43.0	19348	50.00	ug/Kg	98
31)	TETRACHLOROETHENE	15.66	164.0	32043	50.00	ug/Kg	82
32)	1,1,2,2-TETRACHLOROETHANE	21.82	83.0	55619	50.00	ug/Kg	89
33)	d8-TOLUENE(SS)	14.14	98.0	64405	50.00	ug/Kg	97
34)	TOLUENE	14.32	91.0	60223	50.00	ug/Kg	88
35)	CHLOROBENZENE	17.91	112.0	55259	50.00	ug/Kg	90
36)	ETHYLBENZENE	18.42	106.0	22535	50.00	ug/Kg	80
37)	4-BROMOFLUOROBENZENE(SS)	21.04	95.0	78056	50.00	ug/Kg	97
38)	STYRENE	19.80	104.0	47547	50.00	ug/Kg	50
39)	TOTAL XYLENES	19.70	106.0	28436	50.00	ug/Kg	77

* Compound is ISTD

JCP5-14-92

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID (Standard): E9742 Date Analyzed: 05/05/92

Instrument ID: HP-5E Time Analyzed: 0703

GC Column: CAP ID: 0.530(mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA	#	RT	#	IS2(DFB) AREA	#	RT	#	IS3(CBZ) AREA	#	RT	#
	12 HOUR STD	16760		6.64		61066		10.09		55529		17.87	
	UPPER LIMIT	33520		7.14		122132		10.59		111058		18.37	
	LOWER LIMIT	8380		6.14		30533		9.59		27764		17.37	
	EPA SAMPLE NO.												
01	EQK31	17920		6.59		60977		10.04		44054		17.85	
02	EQK32	15818		6.56		55628		10.05		41493		17.87	
03	EQK33	15686		6.59		54293		10.04		40896		17.86	
04	EQK32MS	16549		6.59		56007		10.04		43680		17.86	
05	EQK32MSD	16438		6.59		55542		10.04		53018		17.86	
06	VBLKEAw	18351		6.59		65073		10.04		51824		17.85	

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

AREA UPPER LIMIT = + 100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT.
RT LOWER LIMIT = -0.50 minutes of internal standard RT.

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID (Standard): E9759 Date Analyzed: 05/06/92

Instrument ID: HP-5E Time Analyzed: 0015

GC Column: CAP ID: 0.530(mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA	#	RT	#	IS2(DFB) AREA	#	RT	#	IS3(CBZ) AREA	#	RT	#
	12 HOUR STD	17820		6.58		63462		10.03		55335		17.85	
	UPPER LIMIT	35640		7.08		126924		10.53		110670		18.35	
	LOWER LIMIT	8910		6.08		31731		9.53		27668		17.35	
	EPA SAMPLE NO.												
01	EQK30	18918		6.62		67090		10.03		62403		17.80	
02	EQK34	17526		6.58		62403		9.98		51815		17.80	
03	VBLKEBw	18550		6.55		64807		10.00		58641		17.82	

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

AREA UPPER LIMIT = + 100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT.
RT LOWER LIMIT = -0.50 minutes of internal standard RT.

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID (Standard): E9772 Date Analyzed: 05/06/92

Instrument ID: HP-5E Time Analyzed: 1726

GC Column: CAP ID: 0.530(mm) Heated Purge: (Y/N) Y

		IS1(BCM) AREA	#	RT	#	IS2(DFB) AREA	#	RT	#	IS3(CBZ) AREA	#	RT	#
	12 HOUR STD	22426		6.59		72657		10.00		63754		17.82	
	UPPER LIMIT	44852		7.09		145314		10.50		127508		18.32	
	LOWER LIMIT	11213		6.09		36328		9.50		31877		17.32	
	EPA SAMPLE NO.												
01	EQK13	19953		6.58		65002		10.03		51109		17.85	
02	EQK16	18556		6.55		60531		10.00		43933		17.82	
03	VBLKEA5	23049		6.59		74792		10.00		55815		17.86	

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

AREA UPPER LIMIT = + 100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT.
RT LOWER LIMIT = -0.50 minutes of internal standard RT.

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID (Standard): E9791 Date Analyzed: 05/07/92

Instrument ID: HP-5E Time Analyzed: 1228

GC Column: CAP ID: 0.530(mm) Heated Purge: (Y/N) Y

		IS1(BCM) AREA	#	RT	#	IS2(DFB) AREA	#	RT	#	IS3(CBZ) AREA	#	RT	#
	12 HOUR STD	24376		6.55		76221		10.04		60426		17.82	
	UPPER LIMIT	48752		7.05		152442		10.54		120852		18.32	
	LOWER LIMIT	12188		6.05		38110		9.54		30213		17.32	
	EPA SAMPLE NO.												
01	EQK14	23308		6.53		72859		9.98		43964		17.84	
02	EQK15	18399		6.55		56598		10.04		30969		17.86	
03	EQK17	18205		6.54		57389		10.03		33292		17.85	
04	EQK18	17911		6.55		56578		10.05		33129		17.82	
05	EQK19	17817		6.55		56477		10.05		32672		17.82	
06	EQK14MS	21891		6.57		70141		10.02		50200		17.84	
07	EQK14MSD	21044		6.59		67123		10.04		41017		17.86	
08	VBLKEBs	22471		6.55		70810		10.00		41445		17.86	

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

AREA UPPER LIMIT = + 100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT.
RT LOWER LIMIT = -0.50 minutes of internal standard RT.

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

RAW Q. C. DATA PACKAGE

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID: E9537 BFB Injection Date: 04/23/92

Instrument ID: HP-5E BFB Injection Time: 1024

GC Column: CAP ID: 0.530(mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	16.2
75	30.0 - 66.0% of mass 95	45.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	81.5
175	4.0 - 9.0% of mass 174	5.9 (7.3)1
176	93.0 - 101.0% of mass 174	79.7 (97.8)1
177	5.0 - 9.0% of mass 176	5.7 (7.1)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050		E9538	04/23/92	1058
02	VSTD020		E9541	04/23/92	1347
03	VSTD100		E9542	04/23/92	1434
04	VSTD200		E9543	04/23/92	1517
05	VSTD010		E9545	04/23/92	1646

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID: E9628 BFB Injection Date: 04/27/92

Instrument ID: HP-5E BFB Injection Time: 1641

GC Column: CAP ID: 0.530(mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	15.8
75	30.0 - 66.0% of mass 95	43.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	72.6
175	4.0 - 9.0% of mass 174	5.3 (7.3)1
176	93.0 - 101.0% of mass 174	70.6 (97.2)1
177	5.0 - 9.0% of mass 176	4.9 (7.0)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050		E9630	04/27/92	1900
02	VSTD010		E9631	04/27/92	2024
03	VSTD020		E9632	04/27/92	2116
04	VSTD100		E9633	04/27/92	2154
05	VSTD200		E9634	04/27/92	2233

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID: E9739 BFB Injection Date: 05/05/92

Instrument ID: HP-5E BFB Injection Time: 0355

GC Column: CAP ID: 0.530(mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	18.6
75	30.0 - 66.0% of mass 95	44.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	73.6
175	4.0 - 9.0% of mass 174	4.6 (6.3)1
176	93.0 - 101.0% of mass 174	72.1 (97.9)1
177	5.0 - 9.0% of mass 176	5.3 (7.3)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050		E9742	05/05/92	0703
02	VBLKEAw	VBLKEAw	E9744	05/05/92	1018
03	EQK31	967190	E9746	05/05/92	1149
04	EQK32	967192	E9747	05/05/92	1228
05	EQK32MS	967192	E9748	05/05/92	1309
06	EQK32MSD	967192	E9749	05/05/92	1349
07	EQK33	967196	E9750	05/05/92	1429

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID: E9758 BFB Injection Date: 05/05/92

Instrument ID: HP-5E BFB Injection Time: 2338

GC Column: CAP ID: 0.530(mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	17.1
75	30.0 - 66.0% of mass 95	43.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.6
173	Less than 2.0% of mass 174	0.1 (0.1)1
174	50.0 - 120.0% of mass 95	81.8
175	4.0 - 9.0% of mass 174	6.0 (7.3)1
176	93.0 - 101.0% of mass 174	79.8 (97.6)1
177	5.0 - 9.0% of mass 176	5.5 (6.9)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050		E9759	05/06/92	0015
02	VBLKEBW	VBLKEBW	E9761	05/06/92	0219
03	EQK34	967198	E9767	05/06/92	0849
04	EQK30	967188	E9769	05/06/92	1035

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID: E9770 BFB Injection Date: 05/06/92

Instrument ID: HP-5E BFB Injection Time: 1515

GC Column: CAP ID: 0.530(mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	17.9
75	30.0 - 66.0% of mass 95	44.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	75.9
175	4.0 - 9.0% of mass 174	5.4 (7.1)1
176	93.0 - 101.0% of mass 174	74.0 (97.5)1
177	5.0 - 9.0% of mass 176	5.3 (7.1)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050		E9772	05/06/92	1726
02	VBLKEAs	VBLKEAs	E9775	05/06/92	2039
03	EQK16	967180	E9777	05/06/92	2240
04	EQK13	967174	E9780	05/07/92	0100

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID: E9790 BFB Injection Date: 05/07/92

Instrument ID: HP-5E BFB Injection Time: 1148

GC Column: CAP ID: 0.530(mm) Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	19.3
75	30.0 - 66.0% of mass 95	43.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	70.8
175	4.0 - 9.0% of mass 174	4.7 (6.7)1
176	93.0 - 101.0% of mass 174	69.7 (98.4)1
177	5.0 - 9.0% of mass 176	4.7 (6.8)2

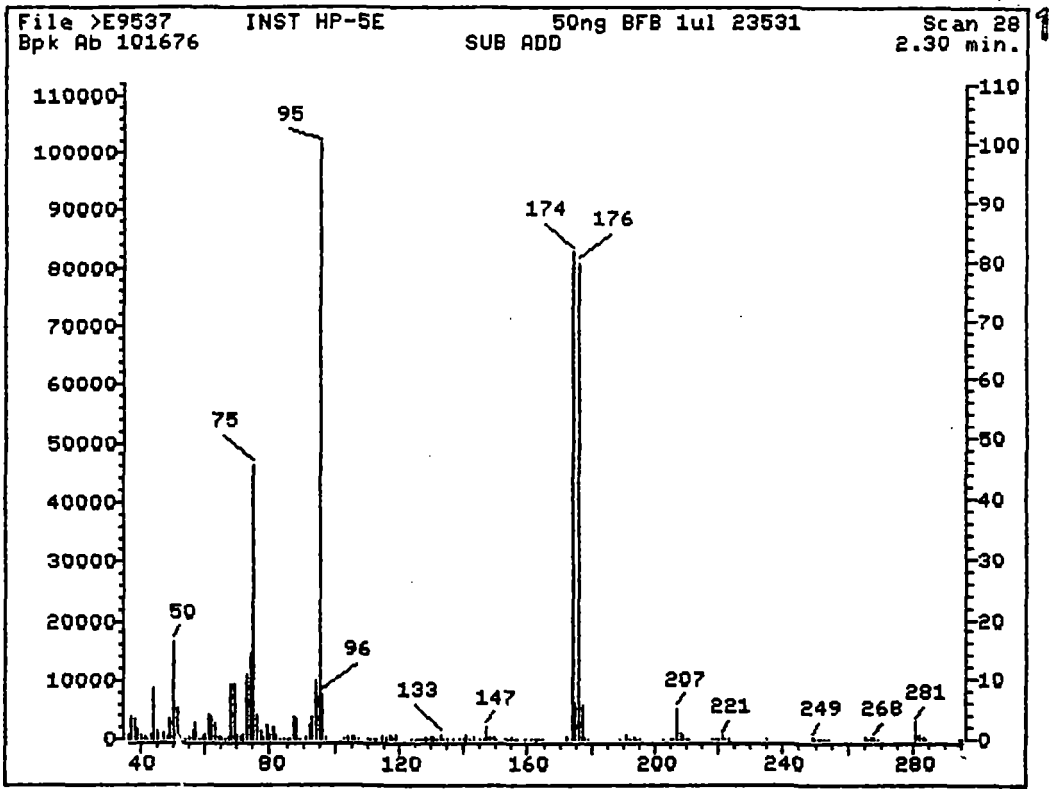
1-Value is % mass 174 2-Value is % mass 176

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050		E9791	05/07/92	1228
02	VBLKEBS	VBLKEBS	E9792	05/07/92	1321
03	EQK14	967176	E9793	05/07/92	1421
04	EQK14MS	967176	E9794	05/07/92	1503
05	EQK14MSD	967176	E9795	05/07/92	1542
06	EQK15	967178	E9796	05/07/92	1640
07	EQK17	967182	E9797	05/07/92	1724
08	EQK18	967184	E9798	05/07/92	1817
09	EQK19	967186	E9799	05/07/92	1909

~~19005 • 5~~ 5-29-92

19026 • 5



MS data file header from : >E9537

Sample: INST HP-5E Operator: TERMINAL60MS 4/23/92 10:24
Misc : 50ng BFB 1ul 23531
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BFBME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	80.	220.	0.	0.	0.
Chromatographic times, min. :	.5	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	20.0	0.0	0.0	0.0	0.0

SCANS WERE SUMMED AS

+ 28
29
+ 30 Q05-04-92
- 25

"COPY
ORIGINAL IS FILED IN CSF DBT56, Case 18050
Robin Douglas
06-01-92

Q05-04-92

~~19005.5~~ JO 5-21-92

19026.5

04/23/92 10:24
>E9537 INST HP-5E 50ng BFB 1ul 23531
28 SUB ADD NRM

File: >E9537 Scan #: 28 Retn. time: 2.30

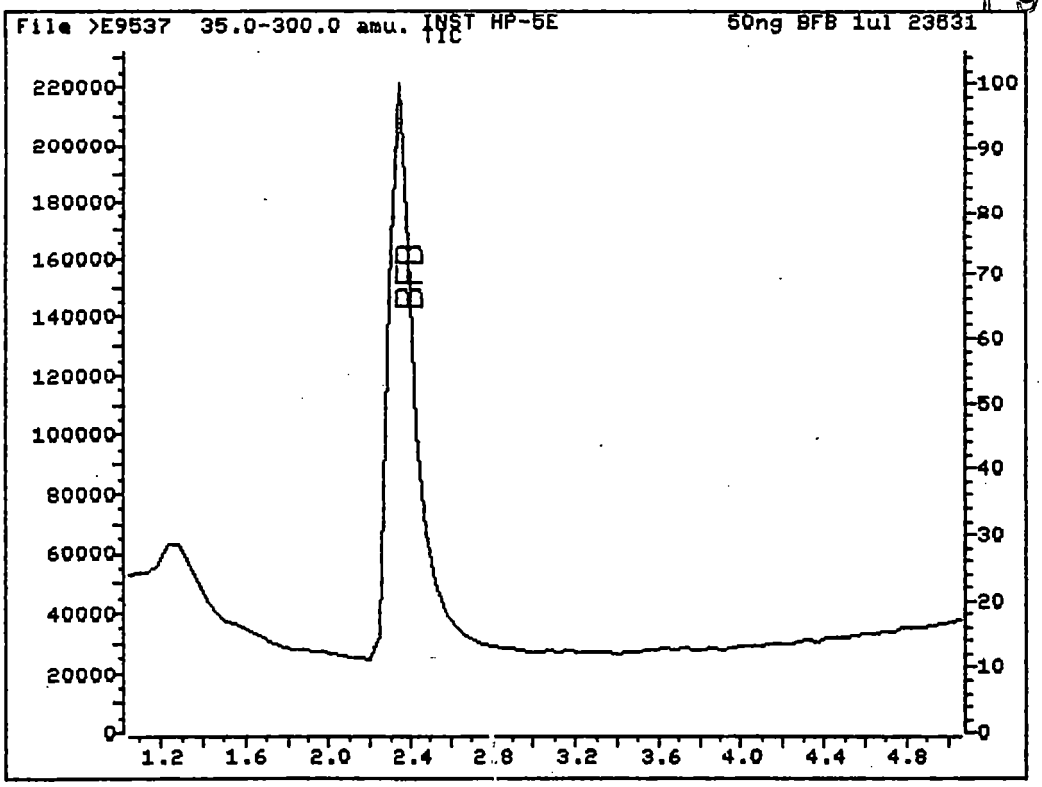
m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	.771	69.95	.843	110.00	.055	146.95	2.073	205.60	.011
36.95	3.728	71.15	.209	110.90	.102	147.95	.533	206.90	5.167
37.95	3.251	71.95	.626	112.00	.127	148.95	.265	207.90	1.082
39.05	1.577	72.95	10.859	112.85	.034	149.95	.134	209.00	.686
39.95	.579	73.95	14.191	114.75	.209	152.80	.061	209.90	.058
41.05	.448	75.00	45.409	115.85	.296	153.80	.073	210.85	.002
42.00	.188	76.00	4.047	116.95	.609	154.90	.233	217.80	.015
43.00	.702	77.00	1.344	117.85	.303	155.80	.048	219.00	.110
43.90	8.544	78.00	.500	118.90	.650	156.55	.034	219.90	.032
45.00	1.543	78.90	2.302	123.65	.019	156.85	.061	221.00	.585
47.00	1.012	79.85	.796	125.05	.095	158.85	.103	221.85	.155
47.85	.434	80.85	2.201	125.65	.054	160.85	.159	222.95	.090
48.95	3.528	81.85	.701	126.05	.011	161.90	.045	234.65	.005
49.95	16.249	82.95	.203	126.85	.193	162.20	.021	248.90	.219
50.95	4.989	83.95	.063	127.95	.345	162.80	.141	249.90	.078
52.05	.213	85.05	.176	128.90	.175	163.60	.018	250.90	.160
53.90	.011	85.80	.030	129.80	.276	164.90	.090	251.80	.002
55.00	.483	86.90	3.853	130.80	.263	171.85	.355	252.90	.028
56.00	1.375	87.90	3.541	131.90	.031	173.80	81.467	253.70	.030
57.00	2.553	89.00	.039	132.00	.024	174.90	5.982	264.90	.232
57.95	.160	90.95	.370	133.00	.792	175.80	79.704	265.95	.076
59.05	.421	91.95	2.310	133.90	.141	176.90	5.660	265.95	.025
59.95	.839	92.95	3.659	134.85	.121	177.80	.220	266.85	.319
60.95	3.984	93.95	9.790	136.85	.089	178.75	.094	267.75	.341
61.95	3.791	94.95	100.000	138.55	.022	188.95	.064	268.95	.009
62.95	2.571	95.95	7.469	138.75	.025	190.95	.690	280.95	3.006
64.00	.322	96.90	.357	139.75	.082	191.95	.129	281.90	.784
65.00	.295	102.95	.195	140.80	.720	192.95	.398	282.90	.505
66.00	.043	103.85	.346	141.80	.069	193.75	.060	283.90	.097
67.00	.357	104.95	.272	142.90	.529	194.80	.029	294.50	.016
68.00	9.156	105.85	.377	145.10	.104	202.75	.040	295.00	.106
68.95	9.265	106.95	.125	145.85	.149	204.95	.113		

SCANS WERE SUMMED AS
28
+ 29
+ 30 QP5-04-92
- 25

"COPY
ORIGINAL IS FILED IN CSF DBT56, Case 18050
Robin Douglas
06-01-92

QP5-04-92

19026·5



MS data file header from : >E9537

Sample: INST HP-5E Operator: TERMINAL60MS 4/23/92 10:24
Misc : 50ng BFB 1ul 23531
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BFBME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

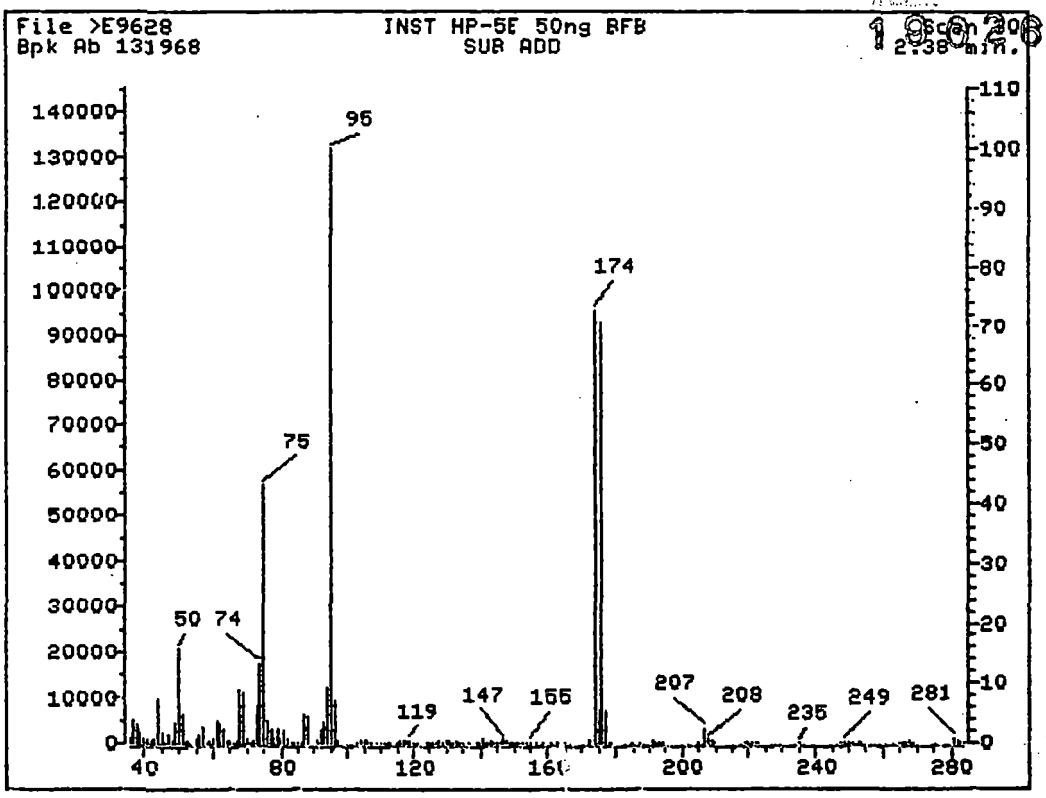
Chromatographic temperatures :	80.	220.	0.	0.	0.
Chromatographic times, min. :	.5	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	20.0	0.0	0.0	0.0	0.0

"COPY
ORIGINAL IS FILED IN CSF DBT66, Case 18050
RD 06-01-92

10050492

~~19005 · 5~~ 5-29-92

19026 · 5



MS data file header from : >E9628

Sample: INST HP-5E 50ng BFB Operator: TERMINAL63MS 4/27/92 16:41
Misc :
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BFBME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	80.	220.	0.	0.	0.
Chromatographic times, min. :	.5	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	20.0	0.0	0.0	0.0	0.0

SCANS WERE SUMMED AS
30.00
+
31.00
+
32.00
- 27.00

BS05/06/92

"COPY
ORIGINAL IS FILED IN CSF EMS64", Case 19005
06-01-92

BS05/06

~~19005.5~~ 5-29-92

19026.5

04/27/92 16:41
>E9628 INST HP-5E 50ng BFB
30 SUB ADD NRM

File: >E9628 Scan #: 30 Retn. time: 2.38

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	.775	68.00	8.723	107.00	.076	142.00	.043	190.95	.316
36.95	3.798	68.95	8.584	108.90	.014	142.90	.390	191.95	.082
37.95	3.161	70.05	.796	110.00	.027	143.90	.017	192.85	.199
38.95	1.668	71.05	.170	111.00	.058	144.90	.037	193.95	.049
39.95	.598	72.05	.483	112.00	.049	145.85	.123	204.85	.016
41.05	.734	73.05	5.984	112.85	.061	146.95	.710	206.90	2.513
42.00	.225	73.95	13.155	114.95	.149	147.95	.264	207.90	.546
43.00	.637	74.90	42.957	115.85	.239	148.95	.152	208.90	.327
43.90	7.359	76.00	3.841	116.95	.446	149.85	.078	209.90	.035
45.00	1.626	77.00	2.322	117.85	.248	149.95	.020	218.90	.067
46.00	.049	78.00	.809	118.90	.464	150.70	.027	219.90	.019
47.00	1.240	78.90	2.221	119.90	.022	150.90	.033	221.00	.162
47.95	.505	79.85	.687	121.00	.024	151.70	.039	221.85	.038
48.95	3.406	80.85	1.944	123.85	.016	152.70	.080	222.05	.020
49.95	15.772	81.95	.549	124.75	.025	153.80	.042	222.95	.024
51.05	4.756	82.95	.053	125.05	.077	154.80	.205	234.95	.012
52.05	.270	83.95	.031	125.95	.073	156.85	.110	247.65	.011
53.00	.099	85.05	.099	126.95	.202	158.85	.081	248.90	.077
55.00	.593	86.00	.086	127.85	.308	160.85	.070	249.80	.050
56.00	1.359	86.90	4.597	128.85	.136	160.95	.033	250.90	.030
57.00	2.877	87.90	4.265	129.80	.271	162.90	.089	253.00	.033
58.05	.177	90.85	.353	130.90	.208	163.80	.027	253.80	.030
58.95	.236	91.95	2.194	131.60	.017	165.00	.025	264.90	.035
59.95	.782	92.95	3.283	131.90	.016	171.95	.269	265.75	.018
60.95	3.875	93.95	9.046	133.00	.480	173.80	72.581	266.85	.158
61.95	3.441	94.95	100.000	133.90	.102	174.90	5.274	267.75	.458
62.95	2.432	95.95	7.181	134.95	.202	175.90	70.531	268.95	.058
64.00	.320	96.80	.333	136.85	.120	176.90	4.951	280.95	.832
64.90	.234	102.95	.123	138.75	.057	177.95	.202	282.00	.239
65.70	.014	103.85	.252	139.75	.082	178.85	.056	282.90	.157
66.00	.030	104.95	.252	139.80	.031	184.80	.045	283.90	.021
67.00	.327	105.95	.280	140.80	.677	186.90	.077		

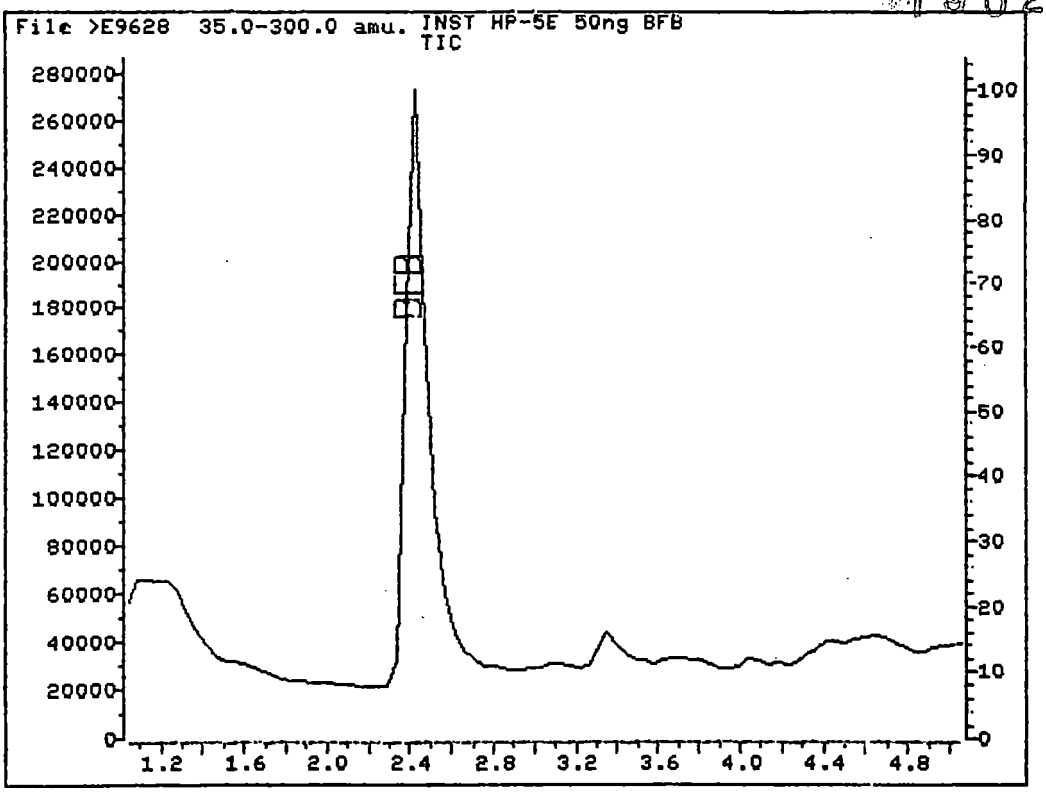
SCANS WERE SUMMED AS

30.00
+ 31.00
+ 32.00 –
– 27.00 JB05/06/92

"COPY
ORIGINAL IS FILED IN CSF EM564, Case 19005
RD 06-01-92

JB05/06/92

~~19005·5~~ 19026·5 TO 3-29-98



MS data file header from : >E9628

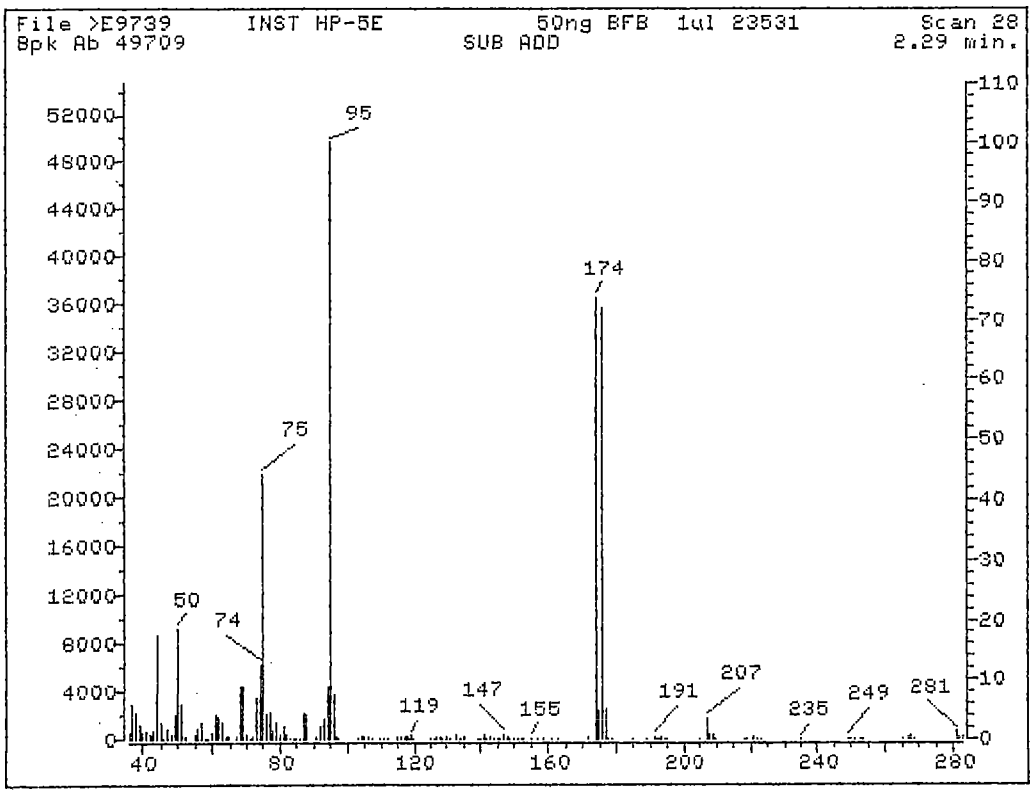
Sample: INST HP-5E 50ng BFB Operator: TERMINAL63MS 4/27/92 16:41
Misc :
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BFBME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	80.	220.	0.	0.	0.
Chromatographic times, min. :	.5	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	20.0	0.0	0.0	0.0	0.0

"COPY
ORIGINAL IS FILED IN CSF EMS64, Case 19005
RD 06-01-92

JB 05/06/97

~~19005.5~~ 5-27-92
19026.5



MS data file header from : >E9739

Sample: INST HP-5E Operator: TERMINAL63MS 5/05/92 3:55
Misc : 50ng BFB 1ul 23531
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BFBME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	80.	220.	0.	0.	0.
Chromatographic times, min. :	.5	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	20.0	0.0	0.0	0.0	0.0

SCANS WERE SUMMED AS
28.00
+
29.00
+
30.00
-
25.00

1985-1490

~~10005·5~~ 5-27-92
19026·5

05/05/92 03:55
>E9739 INST HP-5E 50ng BFB 1ul 23531
28 SUB ADD NRM

File: >E9739 Scan #: 28 Retn. time: 2.29

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	1.088	70.00	.857	105.90	.312	140.70	.732	191.65	.109
37.00	5.595	71.00	.014	107.00	.195	141.75	.052	192.25	.060
38.00	4.540	72.00	.491	109.75	.050	142.95	.501	192.95	.471
39.05	2.458	72.95	6.647	110.65	.034	143.95	.030	194.10	.179
39.95	1.096	73.95	12.493	111.05	.046	144.95	.060	194.90	.084
41.05	1.432	74.95	44.183	111.95	.046	145.75	.135	204.75	.070
42.05	.636	76.05	3.961	115.00	.225	147.05	.817	205.05	.040
43.05	1.438	76.95	4.416	116.00	.221	147.90	.310	207.00	3.508
44.00	17.379	77.95	1.438	117.00	.509	148.90	.191	208.00	.758
45.00	2.732	78.90	2.746	117.70	.330	149.80	.091	208.90	.591
46.00	.095	80.00	.700	117.90	.040	151.00	.165	209.80	.101
47.00	1.682	81.00	1.929	118.20	.030	152.10	.030	218.70	.082
47.90	.577	82.00	.622	118.85	.561	152.90	.046	219.00	.097
49.10	4.031	82.90	.129	119.65	.044	154.95	.173	221.00	.268
49.95	18.618	84.10	.056	125.00	.042	156.85	.137	221.80	.044
50.95	5.597	84.95	.066	125.90	.012	158.85	.046	222.95	.050
52.05	.390	85.95	.064	126.40	.056	160.90	.157	235.05	.032
55.05	.821	86.95	4.466	126.90	.211	160.90	.042	248.95	.103
56.00	1.557	87.85	4.090	128.00	.376	162.90	.139	249.95	.040
57.10	2.841	90.90	.433	128.80	.171	171.90	.310	250.85	.068
58.00	.074	91.90	2.000	130.00	.215	173.90	73.586	252.80	.103
59.00	.145	92.90	3.245	130.95	.141	174.90	4.627	253.10	.040
60.10	1.068	94.00	8.837	132.95	.652	175.90	72.021	253.60	.046
60.90	4.068	95.00	100.000	133.65	.082	176.85	5.238	264.90	.046
61.95	3.615	95.95	7.550	133.95	.070	177.75	.163	267.00	.336
63.05	2.605	96.75	.294	134.95	.302	178.75	.097	267.80	.561
63.95	.334	97.05	.193	138.90	.042	179.05	.103	268.95	.175
64.95	.288	102.90	.139	139.20	.030	184.90	.078	280.95	1.271
67.00	.463	104.00	.233	139.90	.082	188.85	.036	281.95	.336
68.00	8.759	105.00	.268	139.90	.042	190.95	.477	282.95	.308
68.90	8.691								

SCANS WERE SUMMED AS
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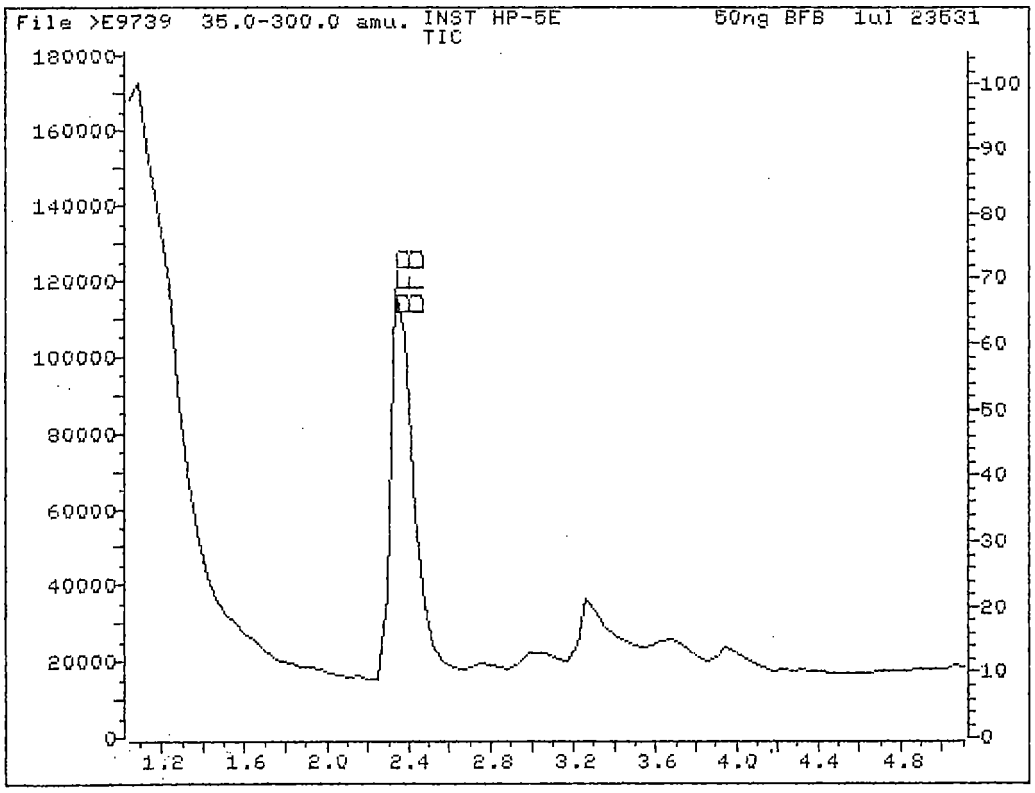

MS data file header from : >E9739

Sample: INST HP-5E Operator: TERMINAL63MS 5/05/92 3:55
Misc : 50ng BFB 1ul 23531
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BFBME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	80.	220.	0.	0.	0.
Chromatographic times, min. :	.5	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	20.0	0.0	0.0	0.0	0.0

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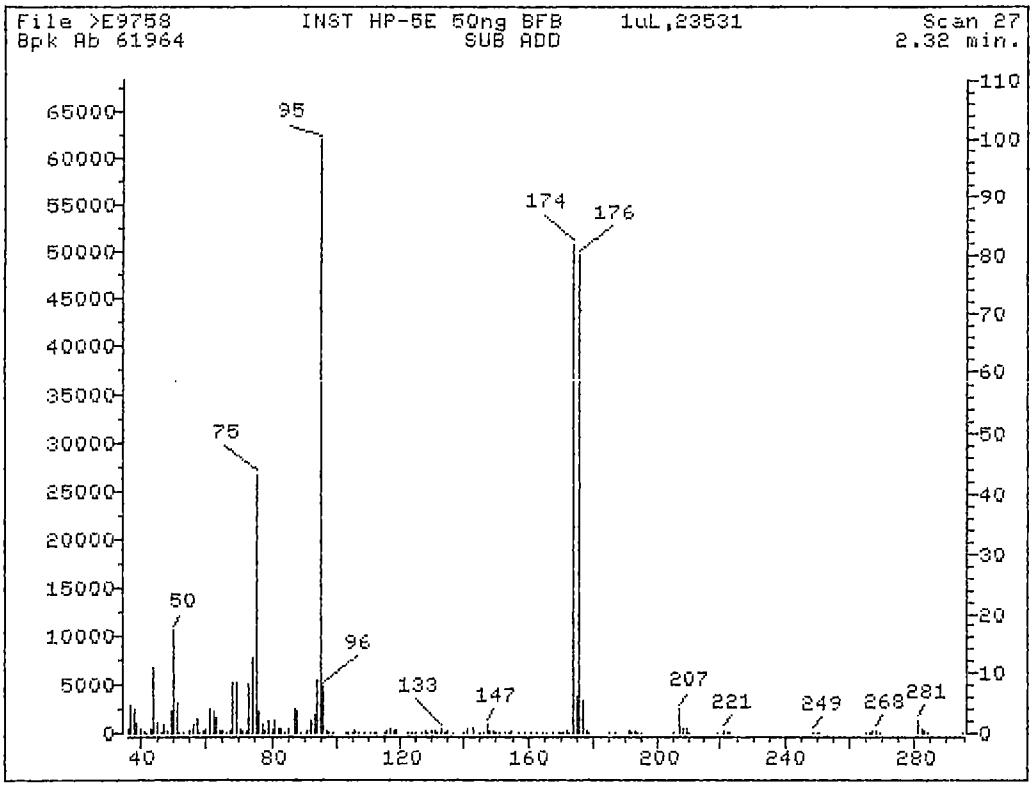
19026.5



MS data file header from : >E9758

Sample: INST HP-5E 50ng BFB Operator: TERMINAL63MS 5/05/92 23:38
Misc : 1uL,23531
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BFBME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	80.	220.	0.	0.	0.
Chromatographic times, min. :	.5	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	20.0	0.0	0.0	0.0	0.0

SCANS WERE SUMMED AS
27.00
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19026.5

05/05/92 23:38
>E9758 INST HP-5E 50ng BFB 1uL,23531
27 SUB ADD NRM

File: >E9758 Scan #: 27 Retn. time: 2.32

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	.870	67.10	.371	98.95	.034	141.00	.694	184.90	.029
37.10	4.662	68.00	8.595	103.00	.110	142.75	.563	187.00	.050
38.05	3.944	69.00	8.582	104.00	.176	144.95	.077	190.95	.502
39.05	1.714	70.10	.831	105.00	.168	145.85	.058	191.95	.113
40.05	.641	71.10	.213	105.90	.258	147.05	1.435	193.05	.315
41.05	.466	72.00	.476	106.80	.094	148.00	.424	193.80	.024
42.05	.055	73.05	8.037	108.85	.024	148.90	.295	195.00	.040
43.15	.608	73.95	12.536	110.95	.048	149.90	.082	204.95	.039
44.00	10.632	75.05	43.023	111.95	.042	151.00	.037	207.00	4.035
45.00	1.698	75.95	3.681	112.45	.031	152.80	.077	208.10	.828
46.00	.063	76.95	1.381	112.75	.031	153.85	.024	209.10	.565
47.00	1.273	77.95	.437	115.00	.176	154.85	.255	210.10	.086
48.00	.476	78.90	2.067	115.90	.289	156.95	.100	218.80	.071
49.00	3.650	80.00	.775	117.00	.560	158.95	.039	221.10	.447
49.95	17.118	80.90	2.048	117.90	.268	160.80	.184	222.10	.066
50.95	4.927	82.00	.616	118.95	.528	162.90	.113	222.95	.065
52.05	.178	82.80	.789	122.35	.027	164.85	.048	249.05	.153
53.05	.053	83.90	.055	123.95	.040	165.75	.060	249.85	.026
55.05	.526	85.05	.550	124.80	.045	167.85	.089	250.85	.129
56.00	1.306	86.95	3.951	126.90	.200	169.65	.036	264.90	.060
57.10	2.487	87.75	3.701	128.00	.341	169.95	.055	266.10	.026
58.00	.155	88.95	.056	128.80	.126	170.80	.032	267.00	.321
59.00	.292	91.00	.240	129.90	.321	172.00	.381	268.00	.421
60.00	.770	91.90	2.042	130.95	.297	172.80	.042	269.05	.044
61.00	4.085	93.00	3.173	131.75	.097	173.90	81.770	281.05	2.146
62.05	3.623	94.00	8.818	133.05	.679	175.00	5.965	282.05	.612
62.95	2.576	95.00	100.000	134.15	.097	175.90	79.822	283.05	.387
63.95	.358	96.05	7.638	134.95	.228	176.95	5.545	283.95	.107
65.05	.278	96.95	.420	136.80	.095	178.05	.229	294.75	.027
65.95	.036	97.95	.029	139.80	.045	178.75	.079		

SCANS WERE SUMMED AS
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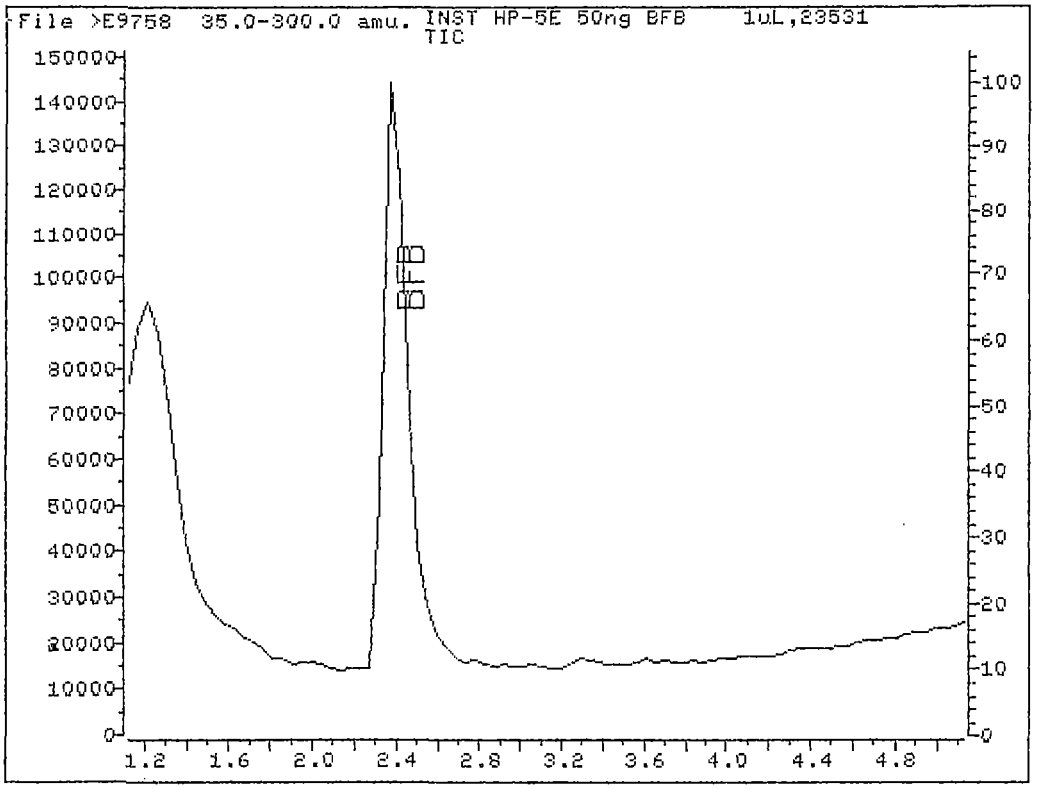
19026.5

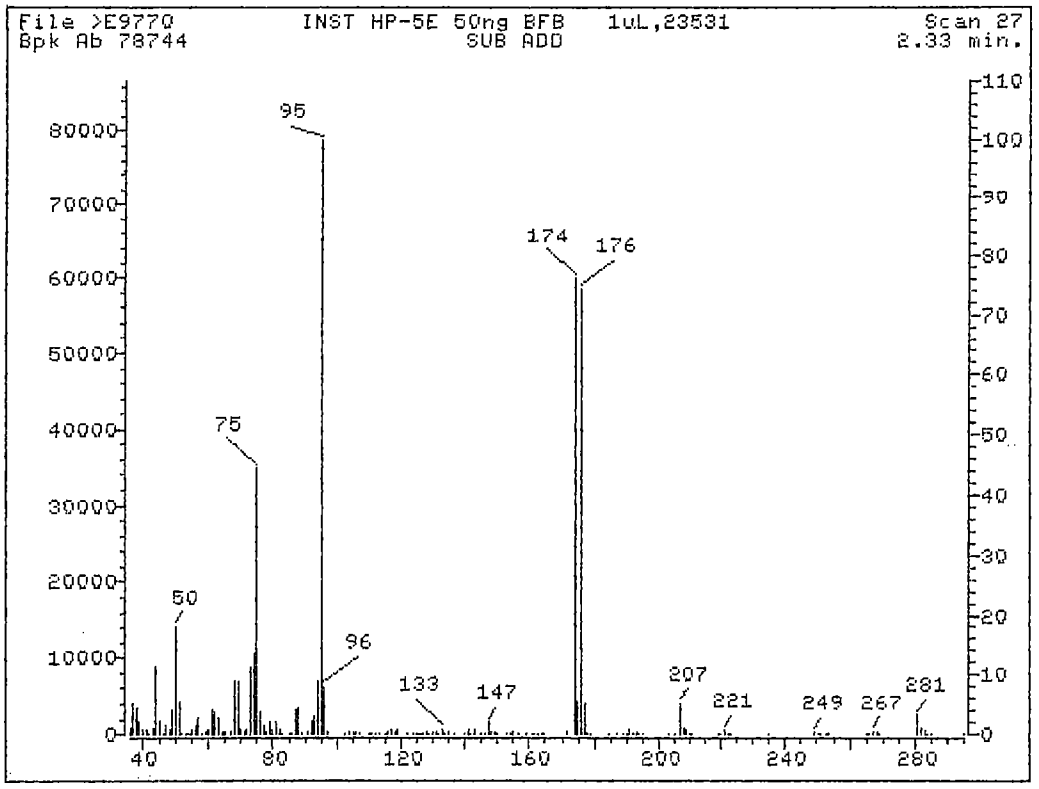


MS data file header from : >E9758

Sample: INST HP-5E 50ng BFB Operator: TERMINAL63MS 5/05/92 23:38
Misc : 1uL,23531
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BFBME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	80.	220.	0.	0.	0.
Chromatographic times, min. :	.5	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	20.0	0.0	0.0	0.0	0.0

1905-14-92



MS data file header from : >E9770

Sample: INST HP-5E 50ng BFB Operator: TERMINAL63MS 5/06/92 15:15
Misc : 1uL,23531
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BFBME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	80.	220.	0.	0.	0.
Chromatographic times, min. :	.5	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	20.0	0.0	0.0	0.0	0.0

SCANS WERE SUMMED AS
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JG 05/14/92

05/06/92 15:15
>E9770 INST HP-5E 50ng BFB 1uL,23531
27 SUB ADD NRM

File: >E9770 Scan #: 27 Retn. time: 2.33

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	1.044	68.00	8.779	106.80	.127	147.05	1.961	202.95	.058
37.00	4.981	69.00	8.737	110.15	.024	147.90	.447	205.05	.122
38.05	4.273	70.00	.781	110.85	.132	149.00	.239	207.00	5.080
39.05	2.006	71.10	.240	111.95	.093	149.90	.084	208.00	1.085
40.05	.695	71.90	.544	113.00	.028	152.90	.041	209.00	.638
41.05	.707	72.95	11.160	115.00	.187	153.95	.093	209.70	.113
42.05	.179	73.95	13.391	115.90	.234	154.85	.208	210.80	.029
43.05	.940	74.95	44.319	116.90	.569	156.85	.097	219.00	.062
44.00	11.085	76.05	3.683	117.90	.268	158.95	.051	219.90	.060
45.00	2.073	76.95	1.424	118.95	.592	160.90	.150	221.00	.645
46.10	.160	78.05	.502	121.85	.019	161.90	.027	222.10	.151
47.00	1.372	78.90	2.139	123.95	.025	162.90	.175	223.05	.099
47.90	.551	79.90	.831	125.00	.133	164.00	.024	234.85	.025
49.00	3.947	80.90	1.995	125.70	.061	164.95	.056	248.95	.240
49.95	17.891	81.90	.692	126.50	.032	171.80	.419	250.05	.050
50.95	5.302	83.10	.155	126.90	.109	173.90	75.880	250.95	.197
52.05	.188	85.05	.136	127.90	.297	174.90	5.401	252.80	.020
53.05	.034	85.95	.047	128.90	.147	175.90	73.969	253.30	.025
53.75	.025	86.95	4.162	129.90	.296	176.85	5.221	253.60	.025
54.15	.039	87.95	4.240	130.95	.267	177.85	.183	265.10	.194
55.05	.608	88.95	.006	131.95	.027	178.75	.085	265.90	.062
56.00	1.479	91.00	.340	132.95	.758	178.95	.047	267.00	.409
57.00	2.883	92.00	1.991	133.75	.188	184.80	.048	268.00	.345
58.00	.190	92.90	3.185	134.95	.224	186.80	.025	268.95	.093
59.00	.479	94.00	8.740	136.70	.100	186.90	.034	280.95	3.274
59.90	.792	95.00	100.000	139.90	.030	188.85	.071	281.95	.891
61.00	4.059	95.95	7.796	140.90	.610	189.85	.030	283.05	.568
61.95	3.793	96.95	.363	141.95	.030	190.95	.664	284.05	.104
63.05	2.625	102.80	.189	142.85	.545	191.85	.140	284.95	.060
64.05	.220	103.90	.253	144.95	.177	192.95	.358	294.95	.058
64.95	.297	104.90	.220	145.05	.055	193.90	.095	295.05	.032
67.00	.347	105.80	.300	145.95	.157	194.90	.056		

SCANS WERE SUMMED AS
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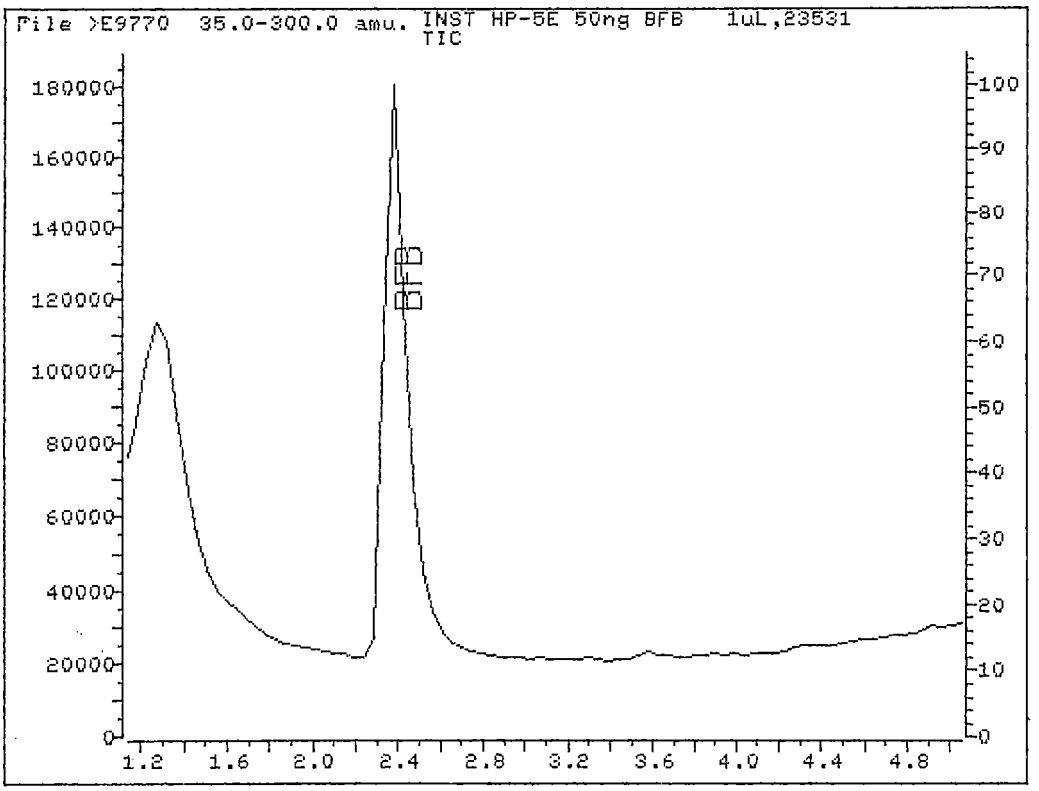
1905-14-92



MS data file header from : >E9770

Sample: INST HP-5E 50ng BFB Operator: TERMINAL63MS 5/06/92 15:15
Misc : 1uL,23531
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BFBME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	80.	220.	0.	0.	0.
Chromatographic times, min. :	.5	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	20.0	0.0	0.0	0.0	0.0

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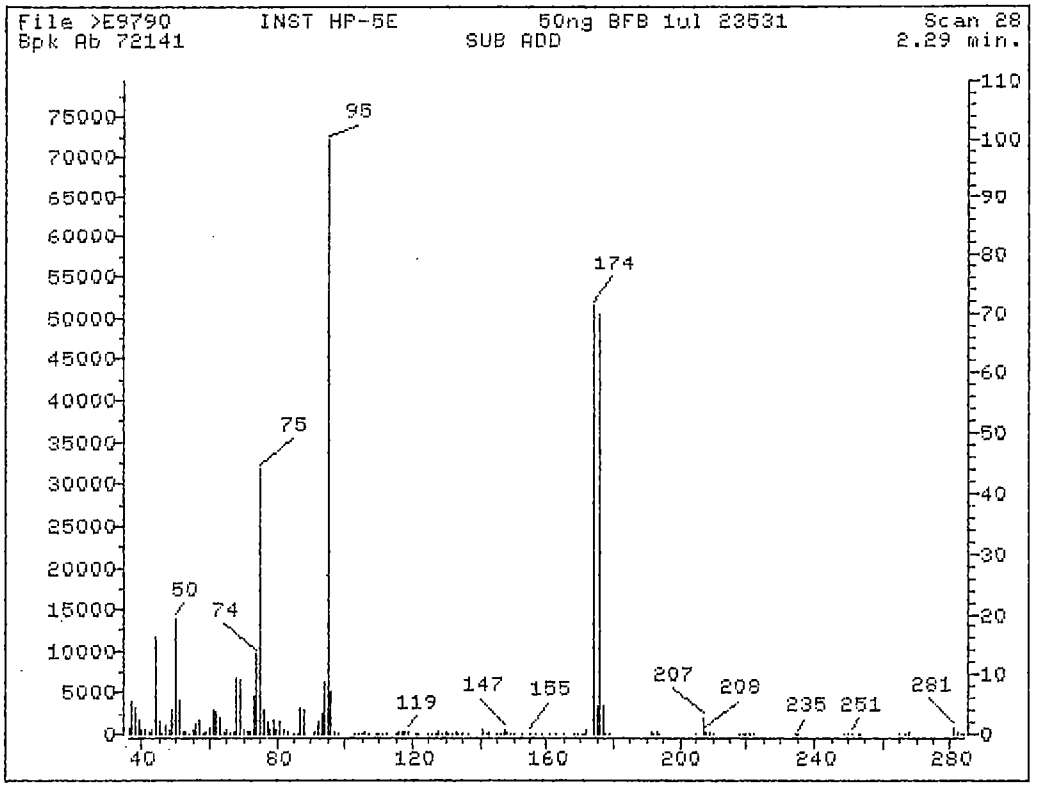

MS data file header from : >E9790

Sample: INST HP-5E Operator: TERMINAL63MS 5/07/92 11:48
Misc : 50ng BFB 1ul 23531
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BFBME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	80.	220.	0.	0.	0.
Chromatographic times, min. :	.5	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	20.0	0.0	0.0	0.0	0.0

SCANS WERE SUMMED AS
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1905-1492

05/07/92 11:48
>E9790 INST HP-5E 50ng BFB 1ul 23531
28 SUB ADD NRM

File: >E9790 Scan #: 28 Retn. time: 2.29

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	1.047	66.05	.097	97.95	.042	140.90	.647	192.05	.087
37.10	5.341	67.00	.363	103.00	.090	141.75	.032	193.05	.223
38.05	4.504	68.00	9.474	103.90	.172	142.85	.507	193.70	.028
39.05	2.477	69.00	9.031	105.00	.202	145.05	.047	204.95	.026
39.95	.841	70.00	.694	105.90	.288	145.85	.123	207.00	2.725
41.05	.645	71.10	.297	107.00	.168	147.05	.819	208.00	.495
42.15	.323	72.00	.539	109.05	.130	148.00	.311	209.00	.352
43.05	.861	72.95	6.381	109.95	.039	149.00	.100	210.00	.025
44.00	16.242	73.95	13.457	111.05	.132	150.00	.033	218.00	.040
45.00	1.914	75.05	43.908	112.05	.173	152.90	.062	219.10	.083
46.00	.090	76.05	3.982	115.00	.193	154.85	.169	219.80	.039
47.00	1.512	77.05	1.954	115.90	.259	156.75	.082	221.10	.193
48.00	.561	78.05	.640	116.90	.463	156.95	.036	222.00	.067
49.00	3.981	78.90	2.477	117.90	.266	158.85	.112	234.75	.026
50.05	19.284	79.90	.768	118.95	.466	160.90	.049	235.15	.029
51.05	5.618	80.90	2.214	121.05	.049	163.00	.112	249.05	.118
52.05	.270	82.00	.636	121.75	.022	164.85	.003	249.85	.080
53.05	.240	83.10	.250	125.00	.046	167.95	.029	250.95	.125
53.95	.119	84.85	.148	126.00	.026	169.05	.003	253.10	.026
55.05	.707	86.05	.148	127.00	.173	170.60	.025	253.40	.022
56.00	1.587	86.95	4.544	127.90	.337	170.90	.028	253.80	.029
57.00	2.539	87.95	4.114	129.00	.154	171.90	.843	264.70	.047
58.00	.008	91.00	.268	129.90	.294	173.90	70.766	265.10	.035
59.10	.211	92.00	2.036	130.95	.191	175.00	4.742	266.90	.176
60.00	.922	93.00	3.334	132.15	.026	175.90	69.658	267.70	.434
61.00	4.113	94.00	8.930	132.95	.385	176.95	4.761	281.05	1.052
61.95	3.762	95.00	100.000	133.75	.072	177.85	.195	282.05	.331
63.05	2.846	95.95	7.035	134.95	.097	178.95	.011	283.05	.172
64.05	.408	96.85	.403	136.90	.028	191.05	.334	283.95	.004
65.05	.729								

SCANS WERE SUMMED AS
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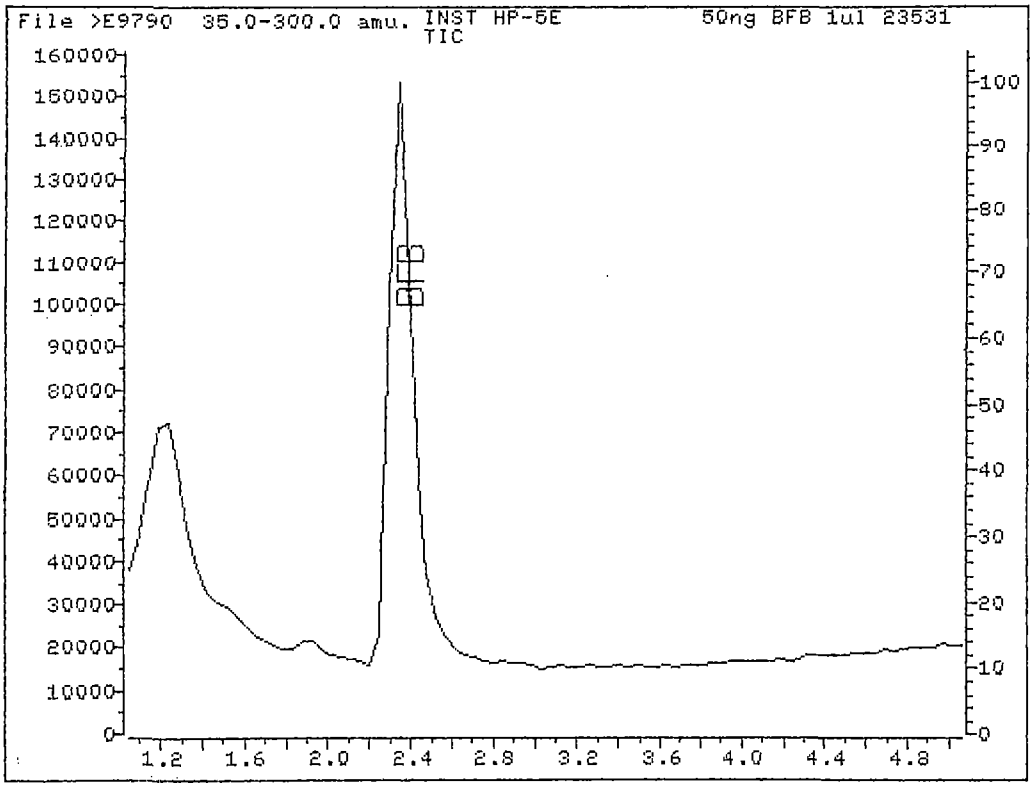
185-1492



MS data file header from : >E9790

Sample: INST HP-5E Operator: TERMINAL63MS 5/07/92 11:48
Misc : 50ng BFB 1ul 23531
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BFBME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	80.	220.	0.	0.	0.
Chromatographic times, min. :	.5	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	20.0	0.0	0.0	0.0	0.0

195-1492

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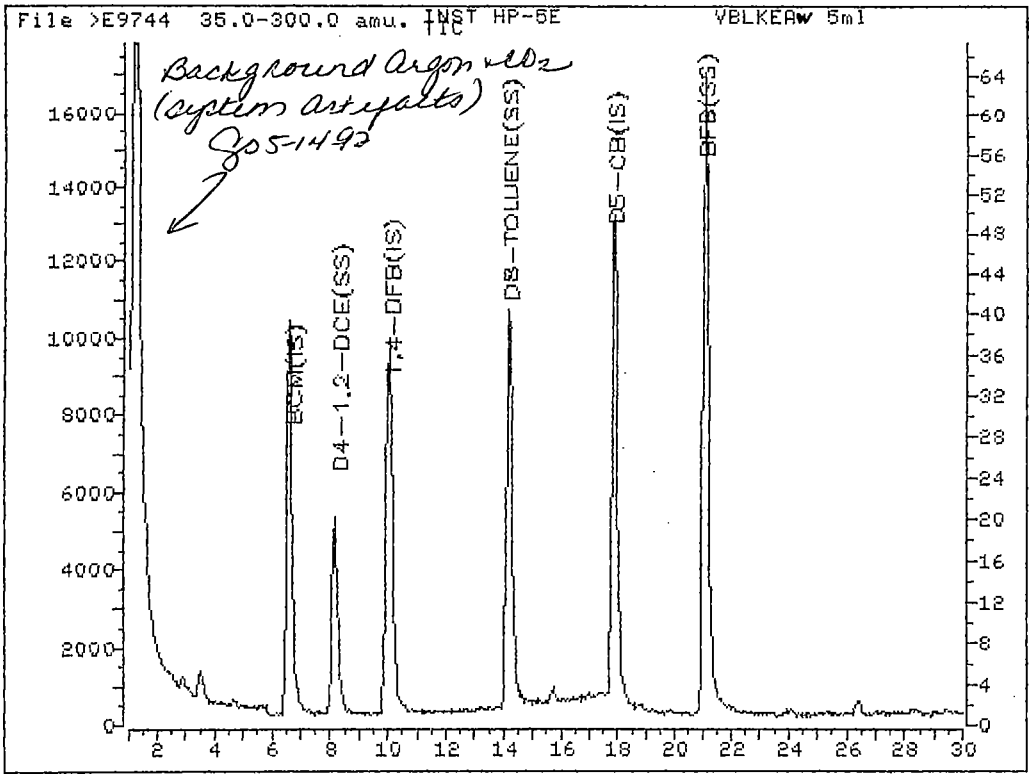
19028-5



MS data file header from : >E9744

Sample: INST HP-5E Operator: TERMINAL63MS 5/05/92 10:18
Misc : VBLKEAW 5ml IS/SS=50ppb 44733,44
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

1 5-14-92

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19026.5

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920505 10:51
Output File: ^E9744::QT Injected at: 920505 10:18
Data File: >E9744::D1 Dilution Factor: 1.00000
Name: INST HP-5E
Misc: VBLKEAW 5ml IS/SS=50ppb 44733,44

ID File: CAPID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (WATER) CAPILLARY COLUMN
Last Calibration: 920505 08:13

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.59	128.0	18351	50.00	ug/L	89
6)	METHYLENE CHLORIDE	3.51	84.0	2168	4.12	ug/L	85
7)	ACETONE	2.91	43.0	3208	31.36	ug/L	77
13)	d4-1,2-DICHLOROETHANE(SS)	8.15	65.0	26523	42.53	ug/L	100
16)	*1,4-DIFLUOROBENZENE(IS)	10.04	114.0	65073	50.00	ug/L	34
28)	*d5-CHLOROBENZENE(IS)	17.85	117.0	51824	50.00	ug/L	100
33)	d8-TOLUENE(SS)	14.18	98.0	50599	49.76	ug/L	97
37)	4-BROMOFLUOROBENZENE(SS)	21.12	95.0	53694	47.22	ug/L	94

* Compound is ISTD

1 Sp5-14-92

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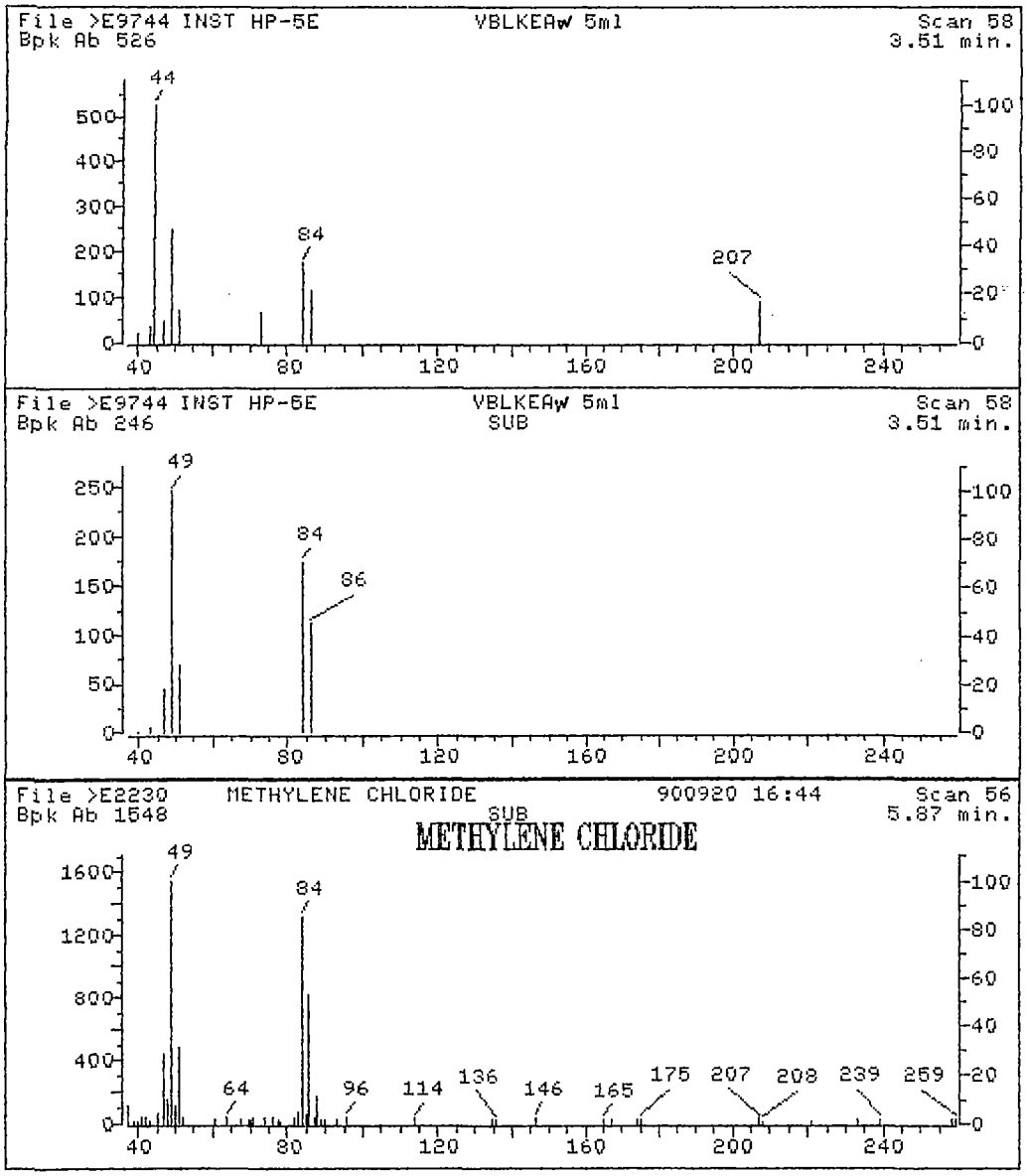
19026.5

SAMPLE NAME : INST HP-5E
MISC : VBLKEAw 5ml IS/SS=50ppb 44733,44
INJECTION TIME : 920505 10:18
INSTRUMENT ID : 5E



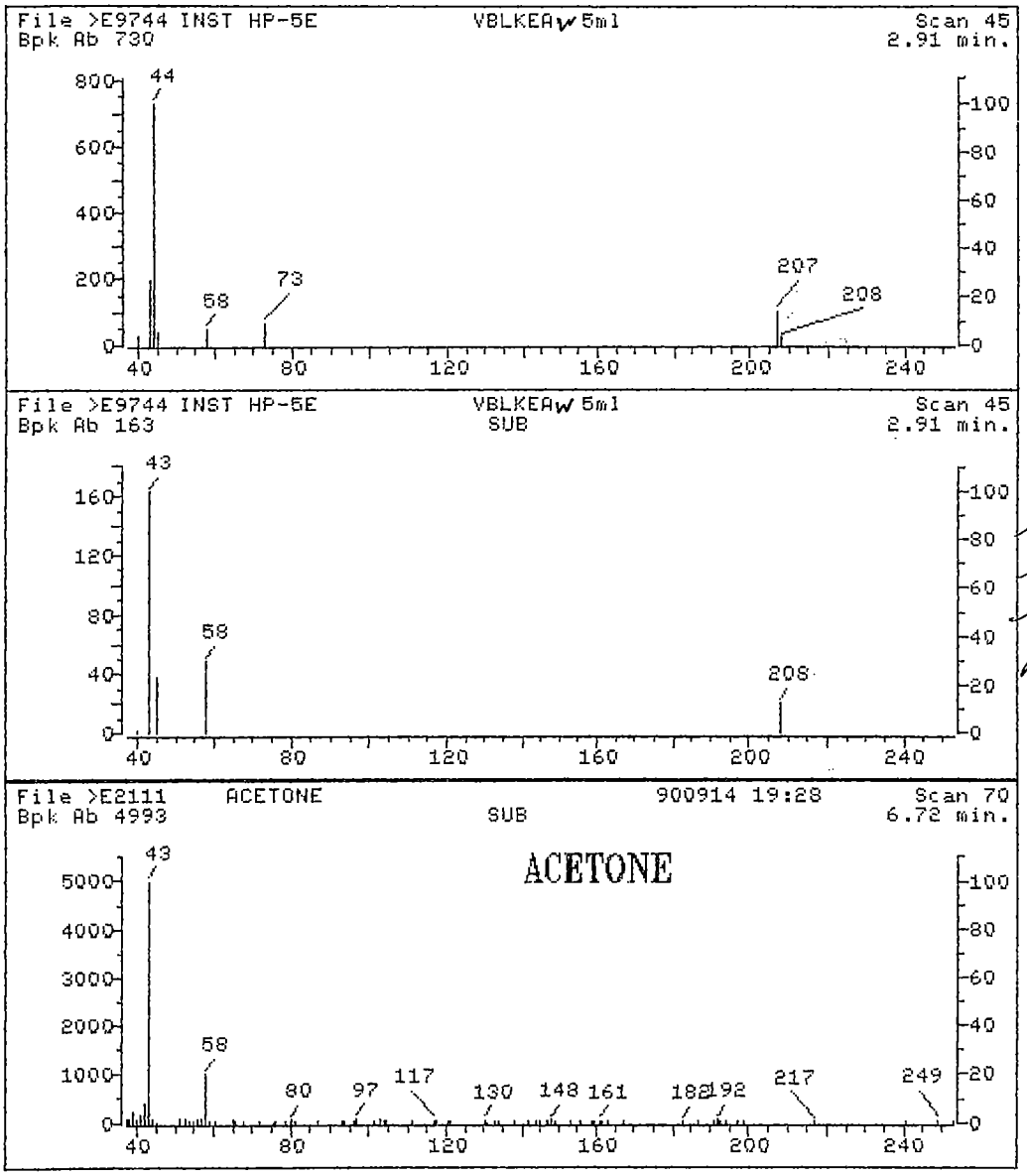
Below the CRPL-
S

J 5-14-92

~~19005.5~~ 5-29-92

19026.5

SAMPLE NAME : INST HP-5E
MISC : VBLKEAw 5ml IS/SS=50ppb 44733,44
INJECTION TIME : 920505 10:18
INSTRUMENT ID : 5E



Background cannot be completely subtracted away - few extraneous ions are present.
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5-14-92

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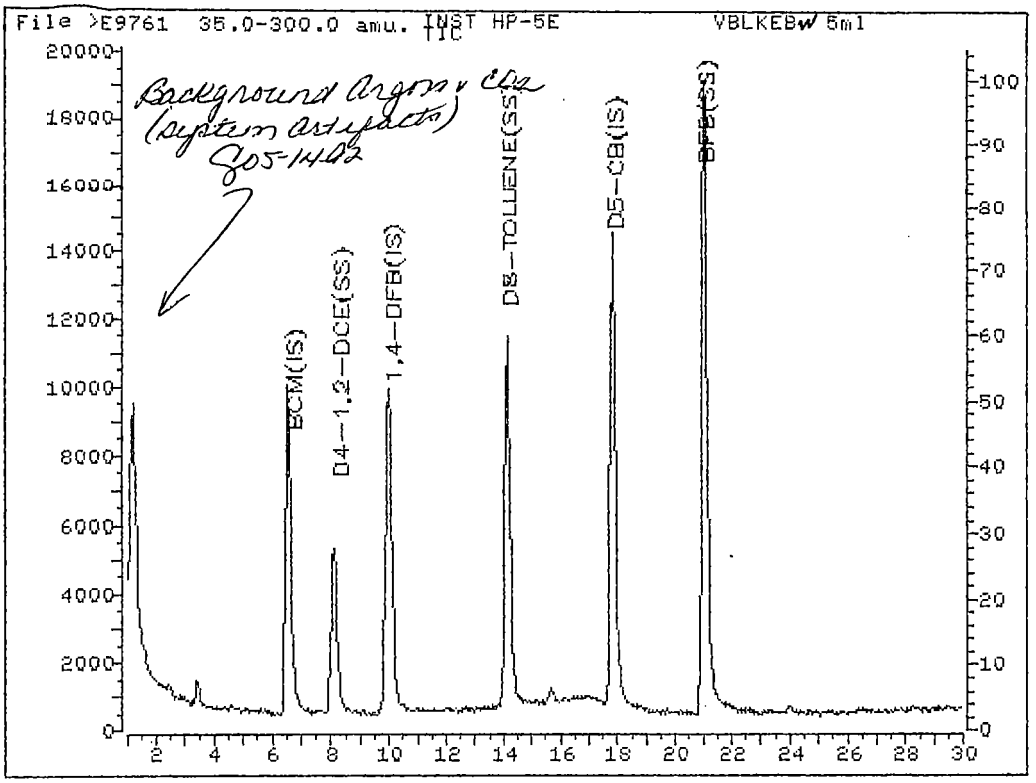
19026.5



MS data file header from : >E9761

Sample: INST HP-5E Operator: TERMINAL63MS 5/06/92 2:19
Misc : VBLKEBw 5ml IS/SS=50ppb 44733,44
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

805-14-92

~~19005.5~~ 5-27-92

19026.5

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920506 02:53
Output File: ^E9761::QT Injected at: 920506 02:19
Data File: >E9761::D1 Dilution Factor: 1.00000
Name: INST HP-5E
Misc: VBLKEBW 5ml IS/SS=50ppb 44733,44

ID File: CAPID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (WATER) CAPILLARY COLUMN
Last Calibration: 920506 01:06

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.55	128.0	18550	50.00	ug/L	95
6)	METHYLENE CHLORIDE	3.42	84.0	1696	3.33	ug/L	75
13)	d4-1,2-DICHLOROETHANE(SS)	8.11	65.0	26271	48.59	ug/L	100
16)	*1,4-DIFLUOROBENZENE(IS)	10.00	114.0	64807	50.00	ug/L	30
28)	*d5-CHLOROBENZENE(IS)	17.82	117.0	58641	50.00	ug/L	100
33)	d8-TOLUENE(SS)	14.14	98.0	53133	49.44	ug/L	99
37)	4-BROMOFLUOROBENZENE(SS)	21.04	95.0	57279	48.00	ug/L	90

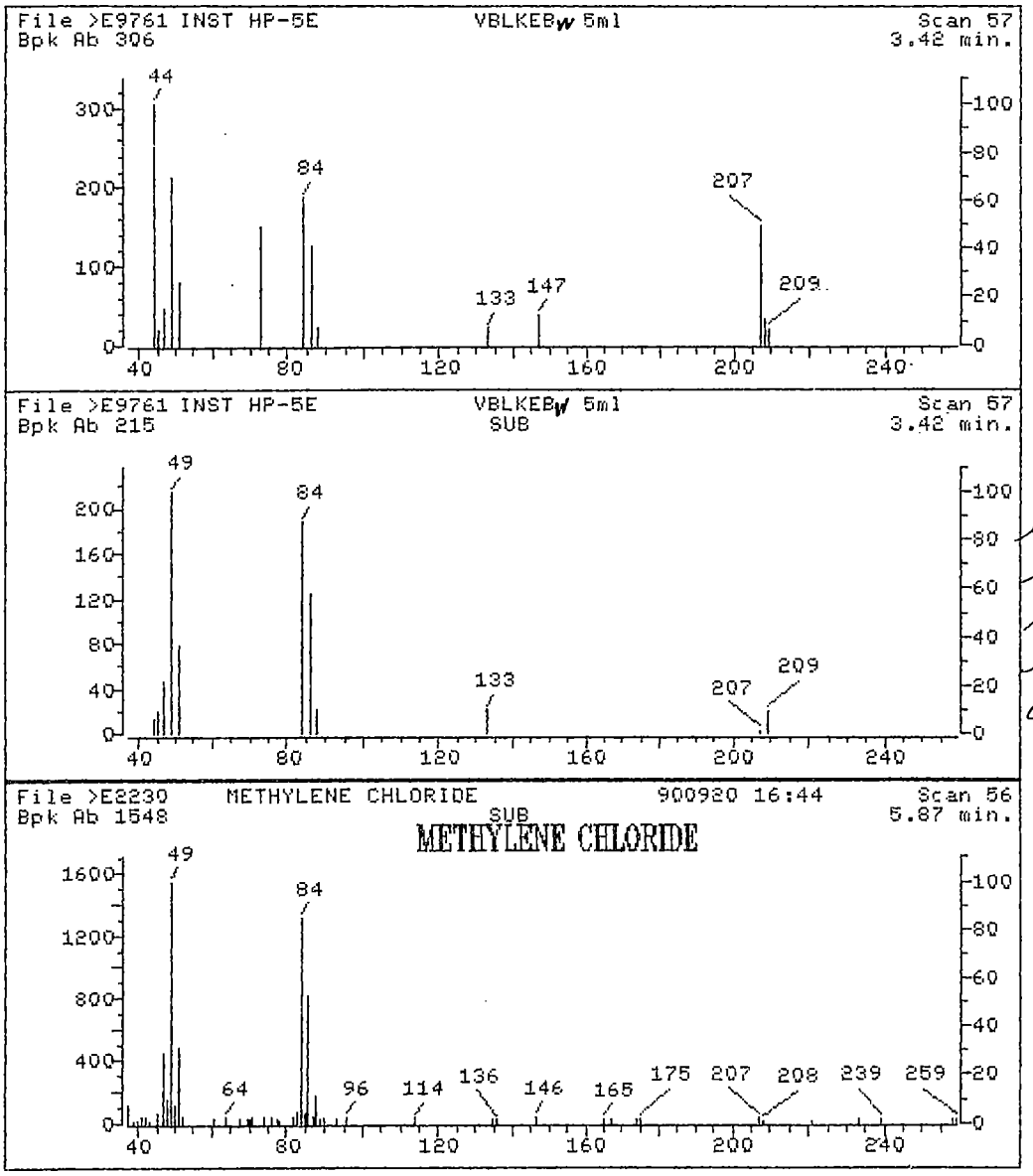
* Compound is ISTD

JGP 5-14-92

~~19005.5~~ TO 5-29-92

19026.5

SAMPLE NAME : INST HP-5E
MISC : VBLKEBw 5ml IS/SS=50ppb 44733,44
INJECTION TIME : 920506 02:19
INSTRUMENT ID : 5E



Below the CRQL - background cannot be completely subtracted away - few extraneous ions are present
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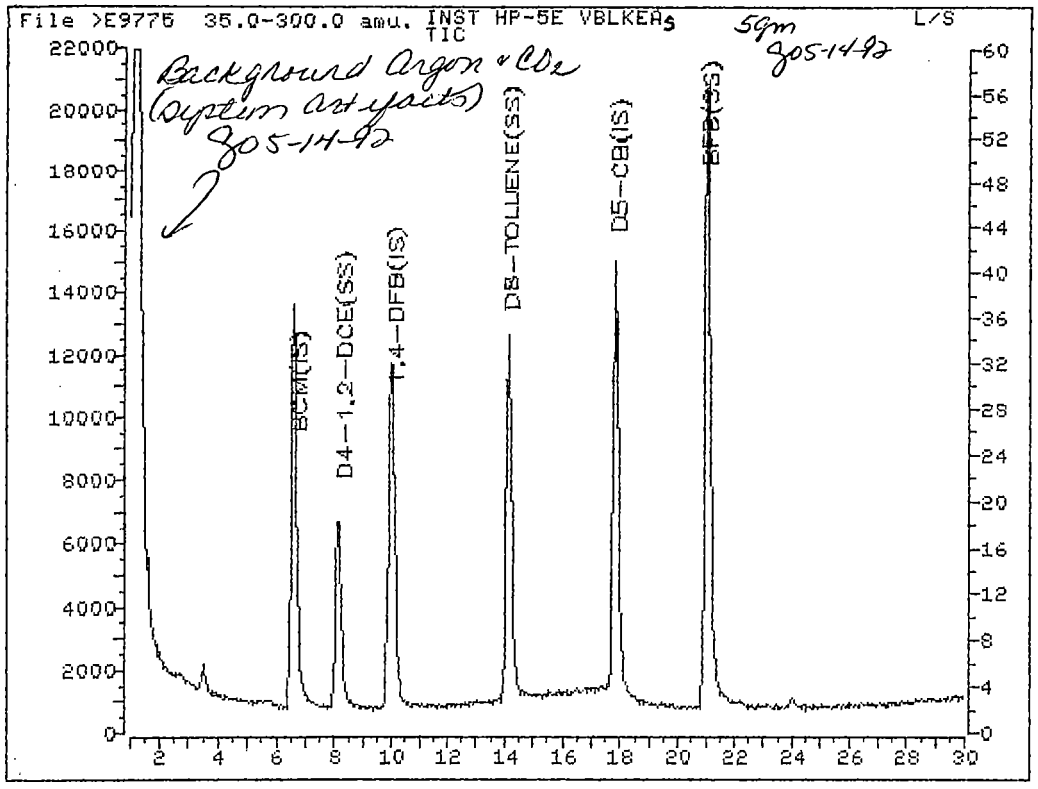
1905-14-92



MS data file header from : >E9775

Sample: INST HP-5E VBLKEAs Operator: TERMINAL63MS 5/06/92 20:39
Misc : L/S 5gm 905-14-92 IS/SS=50,44745,447
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

905-14-92

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920506 21:12
Output File: ^E9775::D4 Injected at: 920506 20:39
Data File: >E9775::DF Dilution Factor: 1.00000
Name: INST HP-5E VBLKEAs
Misc: L/S 5gm IS/SS=50,44745,447
Cp5-14-92

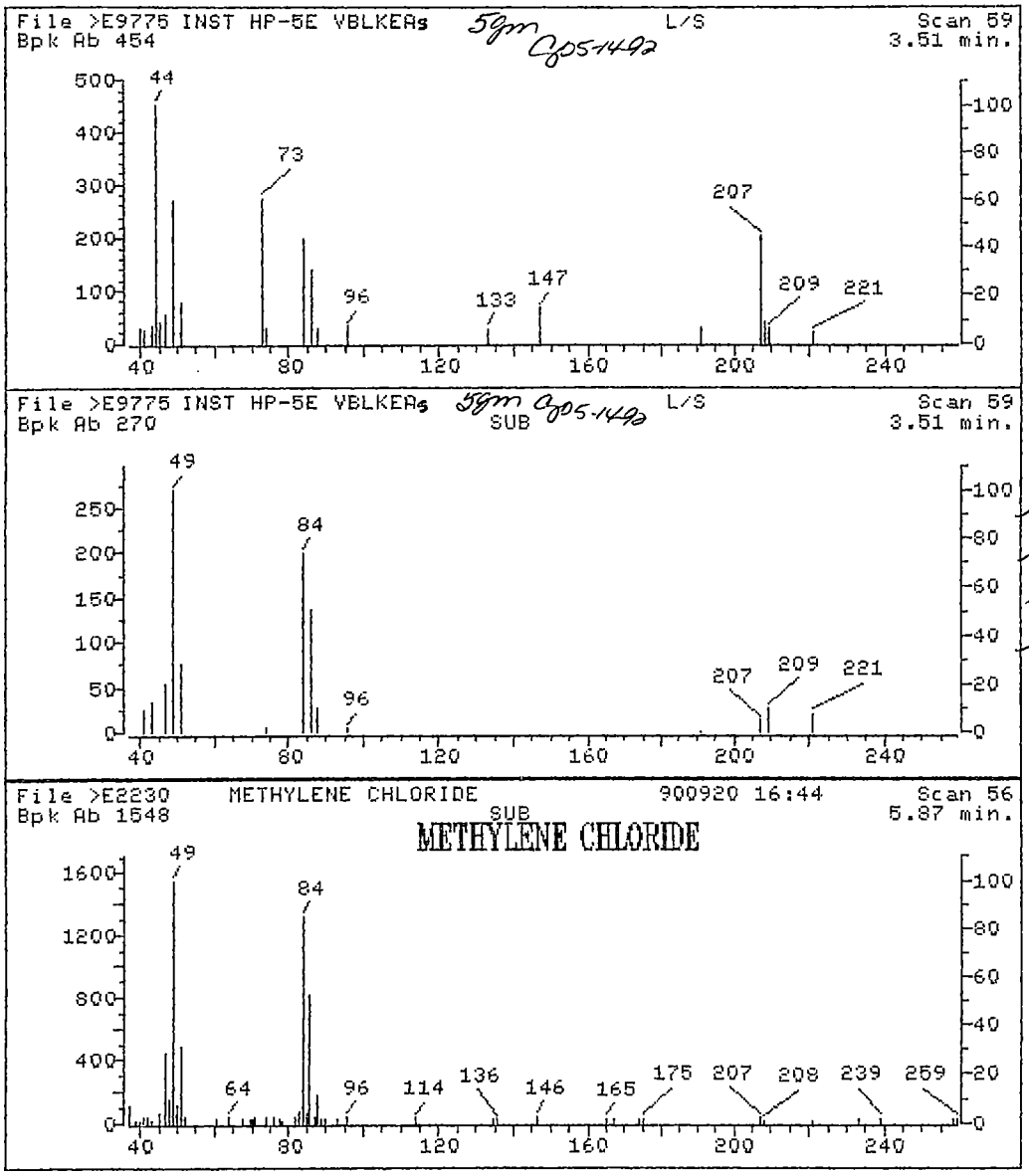
ID File: NCSID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (SOIL)
Last Calibration: 920506 18:21

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.59	128.0	23049	50.00	ug/Kg	94
6)	METHYLENE CHLORIDE	3.51	84.0	1895	3.38	ug/Kg	81
13)	d4-1,2-DICHLOROETHANE(SS)	8.11	65.0	31615	48.93	ug/Kg	100
16)	*1,4-DIFLUOROBENZENE(IS)	10.00	114.0	74792	50.00	ug/Kg	32
28)	*d5-CHLOROBENZENE(IS)	17.86	117.0	55815	50.00	ug/Kg	100
33)	d8-TOLUENE(SS)	14.14	98.0	57762	57.71	ug/Kg	99
37)	4-BROMOFLUOROBENZENE(SS)	21.08	95.0	62513	55.40	ug/Kg	96

* Compound is ISTD

1 Cp5-14-92

SAMPLE NAME : INST HP-5E VBLKEAs
MISC : L/S 5gm IS/SS=50,44745,447
INJECTION TIME : 920506 20:39 CQ05-1492
INSTRUMENT ID : 5E



Below the CRPL background cannot be completely subtracted away - few extraneous ions are present.
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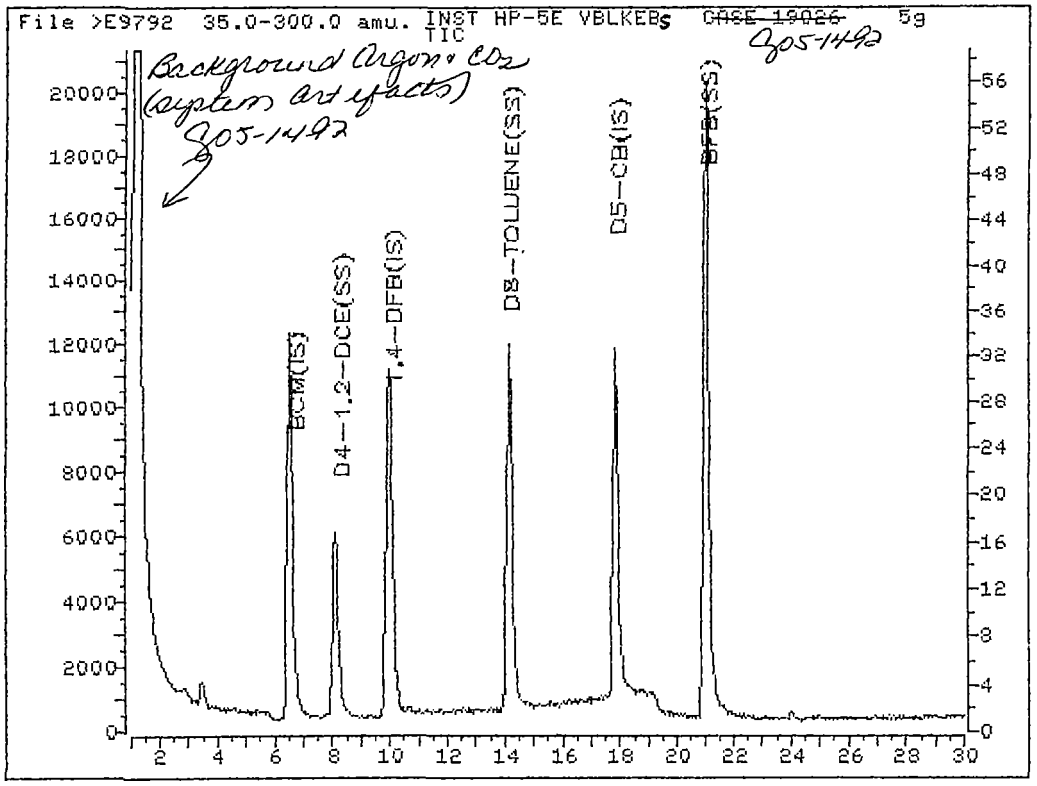
1CQ05-1492



MS data file header from : >E9792

Sample: INST HP-5E VBLKEBS Operator: TERMINAL63MS 5/07/92 13:21
Misc : ~~CASE 19026~~ SQ5-14-92 5g IS/SS=50ppb 44745,44746
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

SQ5-14-92

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920507 13:54
Output File: ^E9792::QT Injected at: 920507 13:21
Data File: >E9792::D9 Dilution Factor: 1.00000
Name: INST HP-5E VBLKEBs
Misc: ~~CASE 19026~~ 5g IS/SS=50ppb 44745,44746
CQ05-14-92
ID File: NCSID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (SOIL)
Last Calibration: 920507 13:43

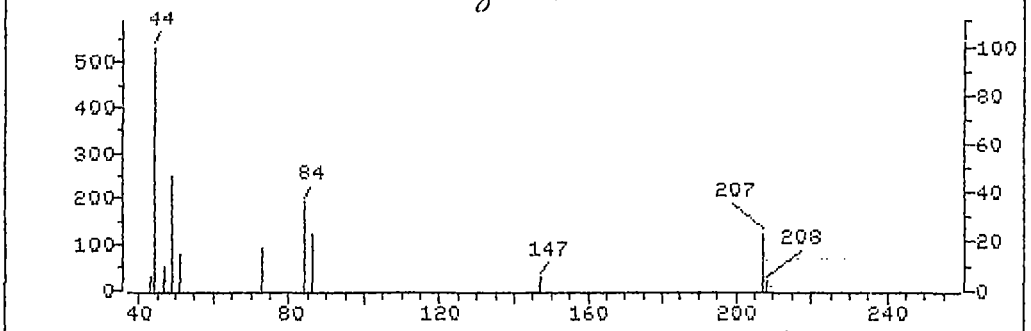
	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.55	128.0	22471	50.00	ug/Kg	94
6)	METHYLENE CHLORIDE	3.47	84.0	2036	3.79	ug/Kg	81
7)	ACETONE	2.92	43.0	3064	11.81	ug/Kg	70
13)	d4-1,2-DICHLOROETHANE(SS)	8.11	65.0	29313	44.27	ug/Kg	100
16)	*1,4-DIFLUOROBENZENE(IS)	10.00	114.0	70810	50.00	ug/Kg	33
28)	*d5-CHLOROBENZENE(IS)	17.86	117.0	41445	50.00	ug/Kg	100
33)	d8-TOLUENE(SS)	14.18	98.0	55118	62.39	ug/Kg	99
37)	4-BROMOFLUOROBENZENE(SS)	21.03	95.0	58472	54.61	ug/Kg	95

* Compound is ISTD

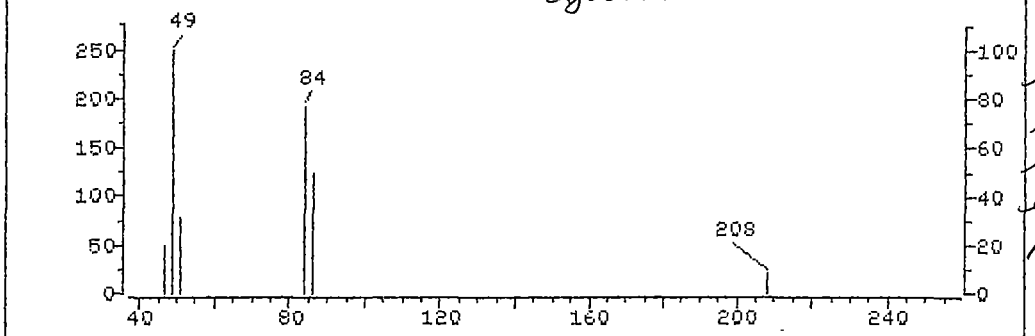
CQ05-14-92

SAMPLE NAME : INST HP-5E VBLKEBs
MISC : ~~CASE 19026~~ Cz05-14-92 5g IS/SS=50ppb 44745,44746
INJECTION TIME : 920507 13:21
INSTRUMENT ID : 5E

File >E9792 INST HP-5E VBLKEBs ~~CASE 19026~~ 5g Scan 58
Bpk Ab 534 Cz05-14-92 3.47 min.



File >E9792 INST HP-5E VBLKEBs ~~CASE 19026~~ 5g Scan 58
Bpk Ab 249 SUB Cz05-14-92 3.47 min.



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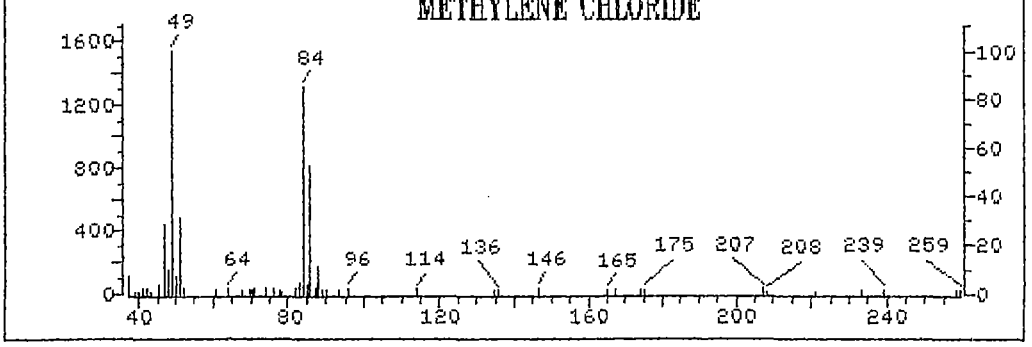
File >E2230 METHYLENE CHLORIDE 900920 16:44 Scan 56
Bpk Ab 1548 SUB 5.87 min.

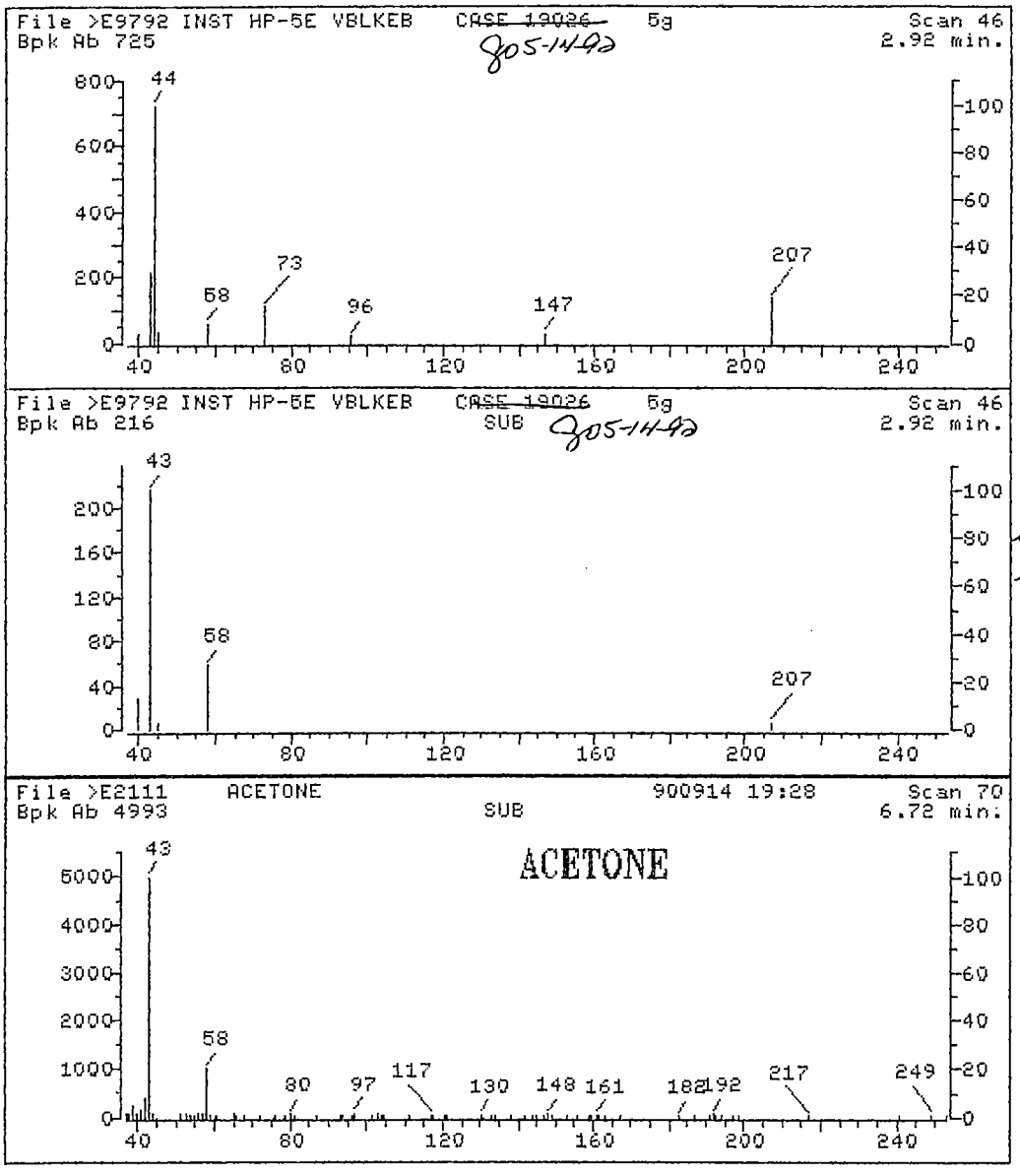
METHYLENE CHLORIDE



Cz05-14-92

19026.5

SAMPLE NAME : INST HP-5E VBLKEB
MISC : ~~CASE 19026~~ 5g 05-14-92 IS/SS=50ppb 44745,44746
INJECTION TIME : 920507 13:21
INSTRUMENT ID : 5E



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1 05-14-92

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK14MS

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) SOIL Lab Sample ID: 967176

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9794

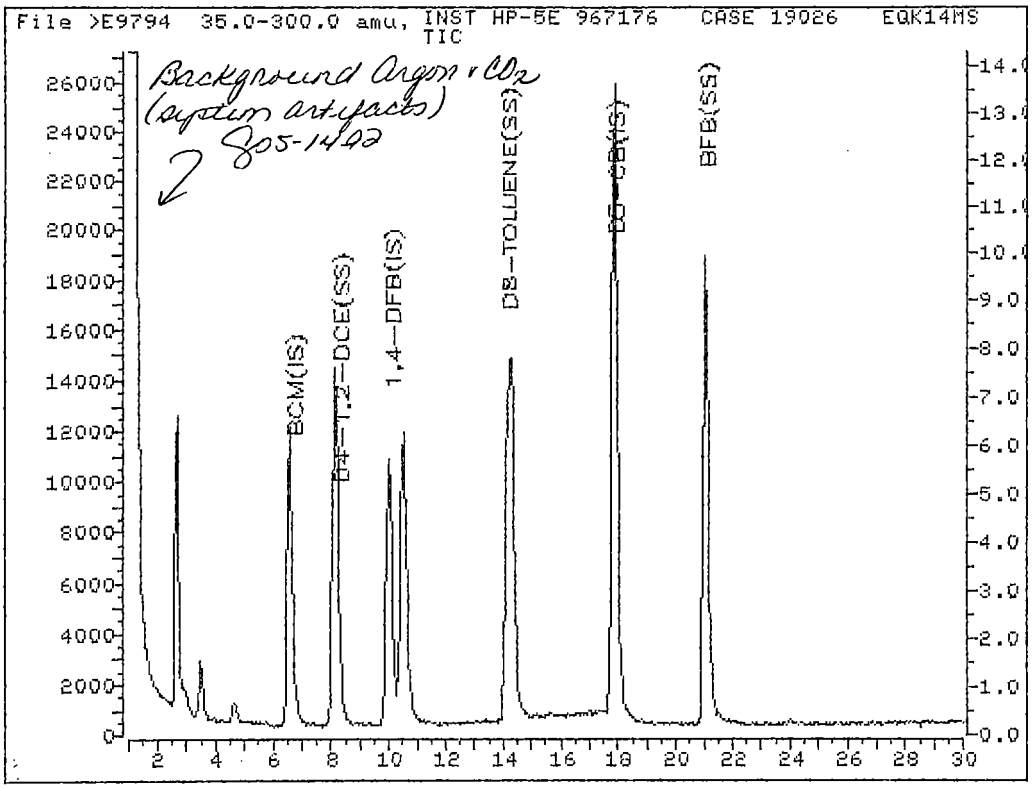
Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. 21 Date Analyzed: 05/07/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	12	BJ
67-64-1	Acetone	29	B
75-15-0	Carbon Disulfide	13	U
75-35-4	1,1-Dichloroethene	61	
75-34-3	1,1-Dichloroethane	13	U
540-59-0	1,2-Dichloroethene (total)	13	U
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	2-Butanone	13	U
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	13	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	60	
124-48-1	Dibromochloromethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
71-43-2	Benzene	64	
10061-02-6	trans-1,3-Dichloropropene	13	U
75-25-2	Bromoform	13	U
108-10-1	4-Methyl-2-Pentanone	13	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
108-88-3	Toluene	73	
108-90-7	Chlorobenzene	70	
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (total)	13	U



MS data file header from : >E9794

Sample: INST HP-5E 967176 Operator: TERMINAL63MS 5/07/92 15:03
Misc : CASE 19026 EQK14MS 5g IS/SS=50ppb 44745,44746
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

805-1492

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920507 15:36
Output File: ^E9794::QT Injected at: 920507 15:03
Data File: >E9794::D1 Dilution Factor: 1.00000
Name: INST HP-5E 967176
Misc: CASE 19026 EQK14MS 5g IS/SS=50ppb 44745,44746

ID File: NCSID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (SOIL)
Last Calibration: 920507 13:43

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.57	128.0	21891	50.00	ug/Kg	99
6)	METHYLENE CHLORIDE	3.49	84.0	4999	9.56	ug/Kg	79
7)	ACETONE	2.94	43.0	5768	22.83	ug/Kg	75
9)	1,1-DICHLOROETHENE	2.67	96.0	22913	48.40	ug/Kg	93
13)	d4-1,2-DICHLOROETHANE(SS)	8.14	65.0	28978	44.92	ug/Kg	100
16)	*1,4-DIFLUOROBENZENE(IS)	10.02	114.0	70141	50.00	ug/Kg	32
22)	TRICHLOROETHENE	10.53	130.0	33267	47.61	ug/Kg	93
25)	BENZENE	8.14	78.0	56806	50.57	ug/Kg	100
28)	*d5-CHLOROBENZENE(IS)	17.84	117.0	50200	50.00	ug/Kg	100
33)	d8-TOLUENE(SS)	14.16	98.0	53384	49.89	ug/Kg	99
34)	TOLUENE	14.30	91.0	57982	57.95	ug/Kg	87
35)	CHLOROBENZENE	17.89	112.0	50670	55.19	ug/Kg	88
37)	4-BROMOFLUOROBENZENE(SS)	21.06	95.0	54886	42.32	ug/Kg	97

* Compound is ISTD

1805-1493

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK32MS

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967192

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: E9748

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. _____ Date Analyzed: 05/05/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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

CAS NO.	COMPOUND		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	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	48	
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	55	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	52	
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	60	
108-90-7	Chlorobenzene	54	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

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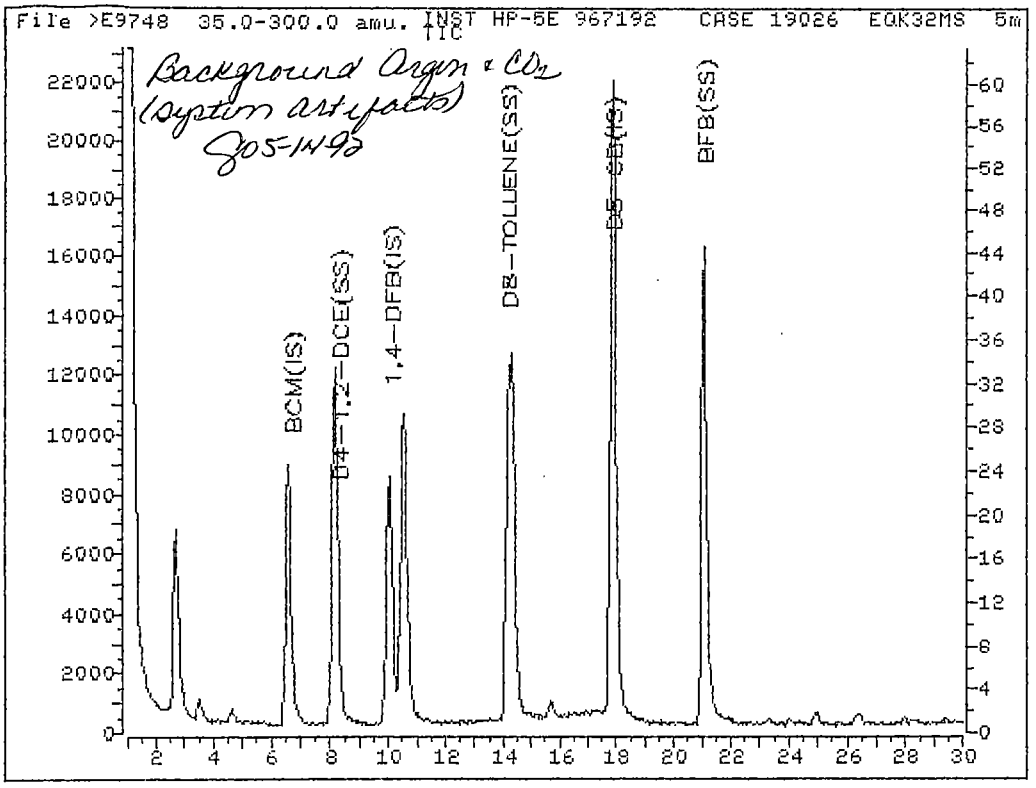
19026.5



MS data file header from : >E9748

Sample: INST HP-5E 967192 Operator: TERMINAL63MS 5/05/92 13:09
Misc : CASE 19026 EQK32MS 5ml MS=50 IS/SS=50ppb 44733,4
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

905-1492

~~19005 · 5~~ 5-21-92

19026 · 5

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920505 13:42
Output File: ^E9748::QT Injected at: 920505 13:09
Data File: >E9748::D1 Dilution Factor: 1.00000
Name: INST HP-5E 967192
Misc: CASE 19026 EQK32MS 5ml MS=50 IS/SS=50ppb 44733,4

ID File: CAPID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (WATER) CAPILLARY COLUMN
Last Calibration: 920505 08:13

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.59	128.0	16549	50.00	ug/L	99
6)	METHYLENE CHLORIDE	3.51	84.0	2196	4.62	ug/L	83
9)	1,1-DICHLOROETHENE	2.68	96.0	18357	47.92	ug/L	94
13)	d4-1,2-DICHLOROETHANE(SS)	8.11	65.0	23777	42.28	ug/L	100
16)	*1,4-DIFLUOROBENZENE(IS)	10.04	114.0	56007	50.00	ug/L	32
22)	TRICHLOROETHENE	10.55	130.0	30700	55.00	ug/L	91
25)	BENZENE	8.16	78.0	48961	52.35	ug/L	100
28)	*d5-CHLOROBENZENE(IS)	17.86	117.0	43680	50.00	ug/L	100
33)	d8-TOLUENE(SS)	14.18	98.0	44422	51.83	ug/L	97
34)	TOLUENE	14.32	91.0	51413	60.35	ug/L	86
35)	CHLOROBENZENE	17.90	112.0	45592	53.82	ug/L	91
37)	4-BROMOFLUOROBENZENE(SS)	21.08	95.0	49085	51.22	ug/L	97

* Compound is ISTD

1C05-14-92

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK14MSD

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) SOIL Lab Sample ID: 967176

Sample wt/vol: 5.0 (g/mL) G Lab File ID: E9795

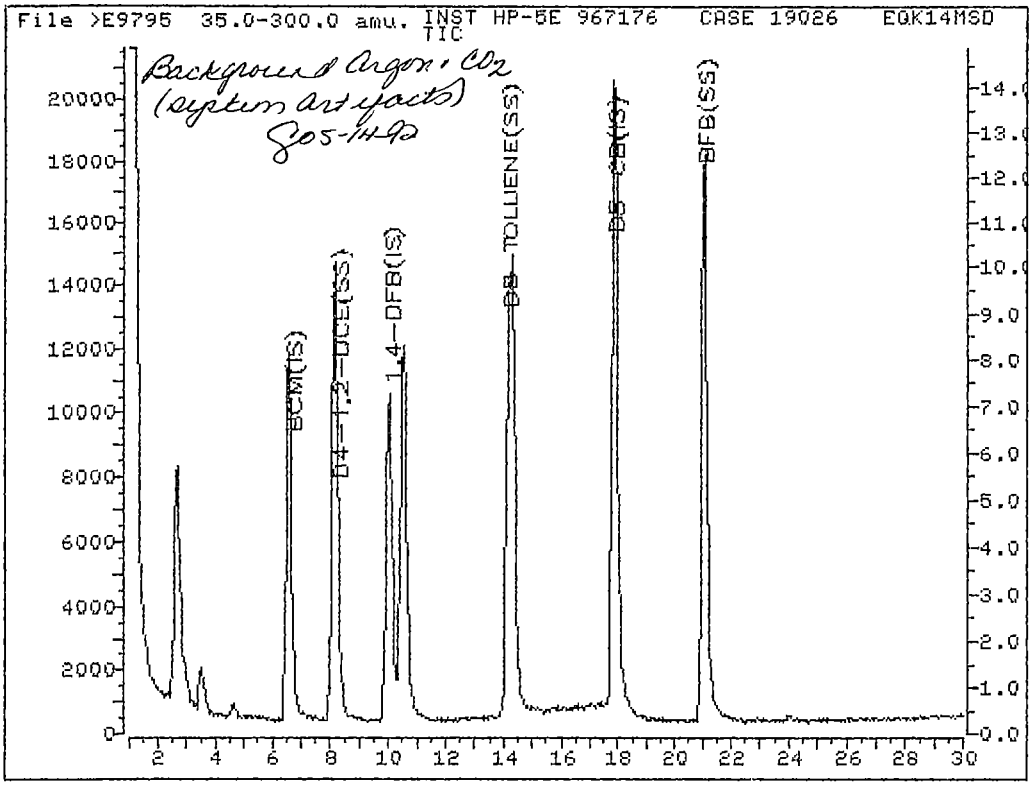
Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. 21 Date Analyzed: 05/07/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	11	BJ
67-64-1	Acetone	38	B
75-15-0	Carbon Disulfide	13	U
75-35-4	1,1-Dichloroethene	54	
75-34-3	1,1-Dichloroethane	13	U
540-59-0	1,2-Dichloroethene (total)	13	U
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	2-Butanone	13	U
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	13	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	62	
124-48-1	Dibromochloromethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
71-43-2	Benzene	65	
10061-02-6	trans-1,3-Dichloropropene	13	U
75-25-2	Bromoform	13	U
108-10-1	4-Methyl-2-Pentanone	13	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
108-88-3	Toluene	87	
108-90-7	Chlorobenzene	69	
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (total)	13	U



MS data file header from : >E9795

Sample: INST HP-5E 967176 Operator: TERMINAL63MS 5/07/92 15:42
Misc : CASE 19026 EQK14MSD 5g IS/SS=50ppb 44745,44746
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

805-1492

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920507 16:15
Output File: ^E9795::QT Injected at: 920507 15:42
Data File: >E9795::D1 Dilution Factor: 1.00000
Name: INST HP-5E 967176
Misc: CASE 19026 EQK14MSD 5g IS/SS=50ppb 44745,44746

ID File: NCSID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (SOIL)
Last Calibration: 920507 13:43

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.59	128.0	21044	50.00	ug/Kg	97
6)	METHYLENE CHLORIDE	3.51	84.0	4505	8.96	ug/Kg	80
7)	ACETONE	2.96	43.0	7317	30.12	ug/Kg	69
9)	1,1-DICHLOROETHENE	2.68	96.0	19360	42.54	ug/Kg	92
13)	d4-1,2-DICHLOROETHANE(SS)	8.15	65.0	29738	47.95	ug/Kg	100
16)	*1,4-DIFLUOROBENZENE(IS)	10.04	114.0	67123	50.00	ug/Kg	33
22)	TRICHLOROETHENE	10.55	130.0	32901	49.20	ug/Kg	92
25)	BENZENE	8.15	78.0	55093	51.25	ug/Kg	100
28)	*d5-CHLOROBENZENE(IS)	17.86	117.0	41017	50.00	ug/Kg	100
33)	d8-TOLUENE(SS)	14.18	98.0	53394	61.07	ug/Kg	97
34)	TOLUENE	14.32	91.0	56445	69.04	ug/Kg	87
35)	CHLOROBENZENE	17.90	112.0	40965	54.61	ug/Kg	85
37)	4-BROMOFLUOROBENZENE(SS)	21.08	95.0	53187	50.19	ug/Kg	96

* Compound is ISTD

185-1492

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
EQK32MSD

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967192

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: E9749

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: not dec. _____ Date Analyzed: 05/05/92

GC Column: CAP ID: 0.530 (mm) Dilution Factor: 1.0

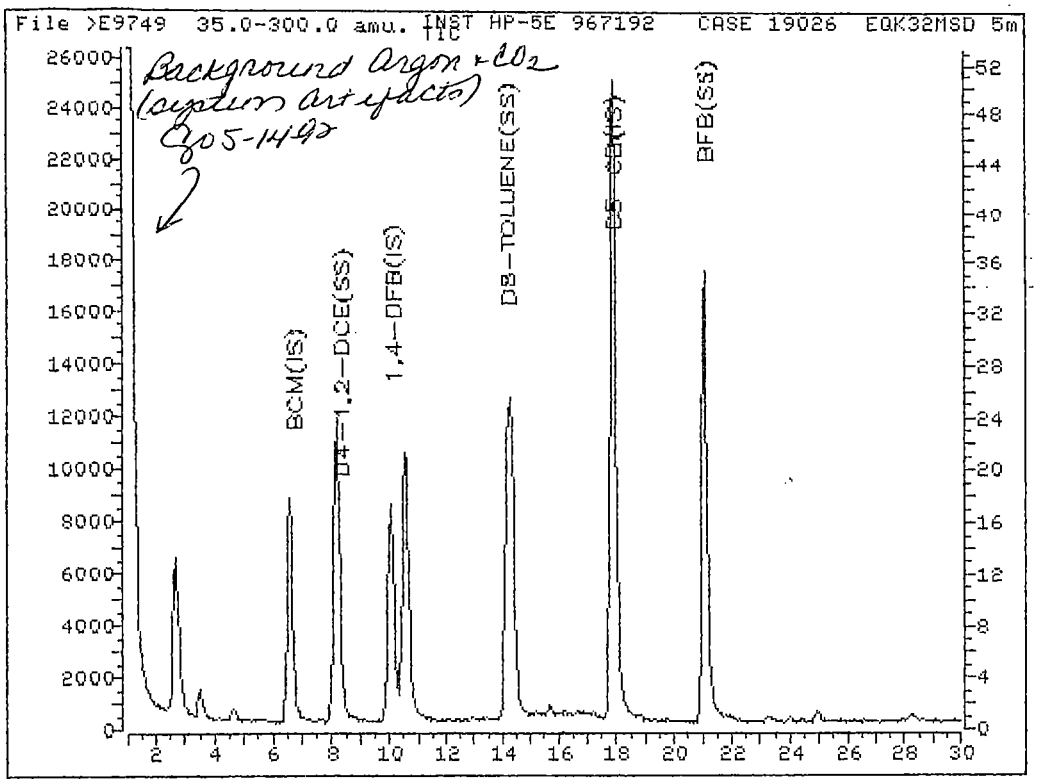
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

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

CAS NO.	COMPOUND		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	7	BJ
67-64-1	Acetone	16	B
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	48	
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	55	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	51	
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	49	
108-90-7	Chlorobenzene	52	
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

~~19005-5~~ 50 5-27-92

19026·5



MS data file header from : >E9749

Sample: INST HP-5E 967192 Operator: TERMINAL63MS 5/05/92 13:49
Misc : CASE 19026 EQK32MSD 5ml MS=50 IS/SS=50ppb 44733,4
Sys. #: 2 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: CAPME5 Tuning file: MANTU5 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 250 Transfer line temp. : 0

Chromatographic temperatures :	-5.	10.	180.	0.	0.
Chromatographic times, min. :	1.0	1.0	1.0	0.0	0.0
Chromatographic rate, deg/min:	2.0	5.0	0.0	.1	0.0

Cp5-14-92

~~19005.5~~ 5-29-93

19026.5

QUANT REPORT

Operator ID: TERMINAL63 Quant Rev: 6 Quant Time: 920505 14:22
Output File: ^E9749::QT Injected at: 920505 13:49
Data File: >E9749::D1 Dilution Factor: 1.00000
Name: INST HP-5E 967192
Misc: CASE 19026 EQK32MSD 5ml MS=50 IS/SS=50ppb 44733,4

ID File: CAPID5::D7
Title: VOLATILES BY USEPA SOW REV. 1/91 (WATER) CAPILLARY COLUMN
Last Calibration: 920505 08:13

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE(IS)	6.59	128.0	16438	50.00	ug/L	94
6)	METHYLENE CHLORIDE	3.51	84.0	3307	7.01	ug/L	82
7)	ACETONE	2.91	43.0	1467	16.01	ug/L	86
9)	1,1-DICHLOROETHENE	2.68	96.0	18109	47.60	ug/L	94
13)	d4-1,2-DICHLOROETHANE(SS)	8.16	65.0	24337	43.56	ug/L	100
16)	*1,4-DIFLUOROBENZENE(IS)	10.04	114.0	55542	50.00	ug/L	31
22)	TRICHLOROETHENE	10.55	130.0	30621	55.31	ug/L	97
25)	BENZENE	8.16	78.0	47367	51.06	ug/L	100
28)	*d5-CHLOROBENZENE(IS)	17.86	117.0	53018	50.00	ug/L	100
33)	d8-TOLUENE(SS)	14.18	98.0	48289	46.42	ug/L	99
34)	TOLUENE	14.32	91.0	50881	49.20	ug/L	89
35)	CHLOROBENZENE	17.91	112.0	53745	52.27	ug/L	90
37)	4-BROMOFLUOROBENZENE(SS)	21.08	95.0	52286	44.95	ug/L	96

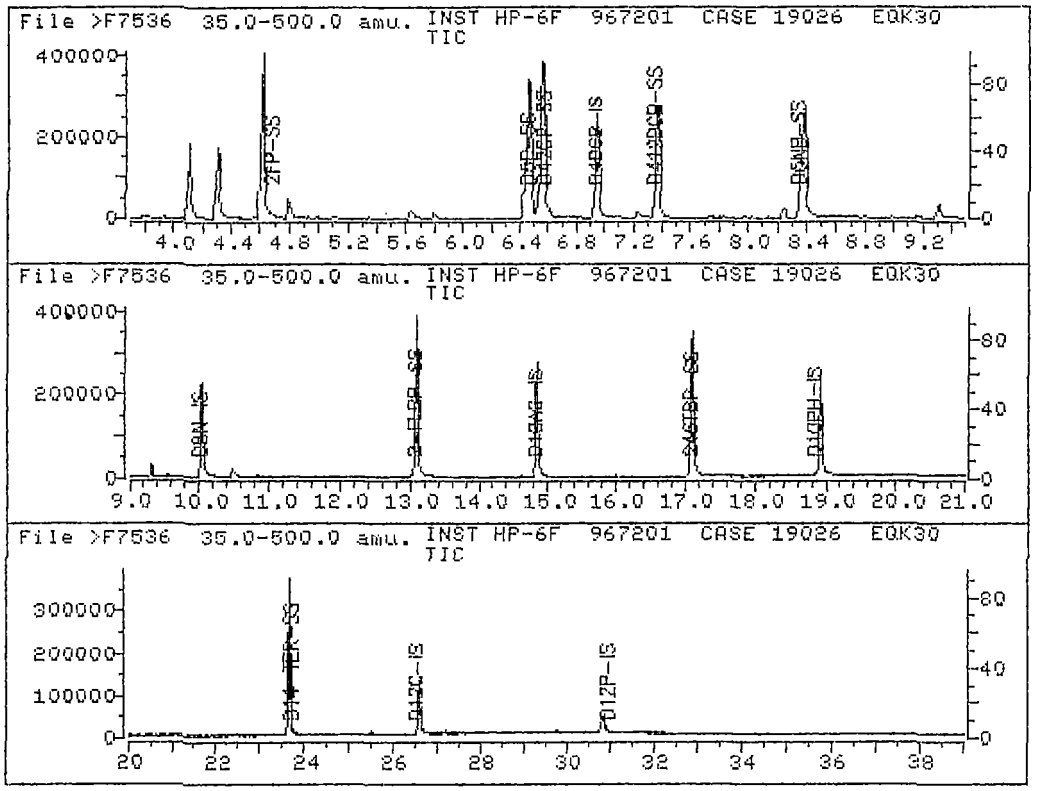
* Compound is ISTD

19051493

SEMI-VOLATILE

DATA

SAMPLE DATA PACKAGE



MS data file header from : >F7536

Sample: INST HP-6F 967201 Operator: TERMINAL62MS 5/22/92 9:44
Misc : CASE 19026 EQK30 IS=40 44502(BTL#10
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BNAME6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	1.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	9.0	0.0	0.0	.1	0.0

JCP5-28-92

QUANT REPORT

Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920522 10:26
Output File: ^F7536::QT Injected at: 920522 09:44
Data File: >F7536::D6 Dilution Factor: .50000
Name: INST HP-6F 967201
Misc: CASE 19026 EQK30 IS=40 44502(BTL#10

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920522 02:04

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4 (IS)	6.94	152.0	71152	40.00	ng	88
13)	2-FLUOROPHENOL (SS)	4.62	112.0	186485	46.24	ng	67
14)	PHENOL-d5 (SS)	6.46	99.0	281381	51.03	ng	69
15)	2-CHLOROPHENOL-d4 (SS)	6.56	132.0	216489	46.28	ng	74
16)	1,2-DICHLOROBENZENE-d4 (SS)	7.36	152.0	90046	28.04	ng	81
17)	*NAPHTHALENE-d8 (IS)	10.03	136.0	251618	40.00	ng	100
30)	NITROBENZENE-d5 (SS)	8.38	82.0	204425	37.63	ng	84
31)	*ACENAPHTHENE-d10 (IS)	14.84	164.0	158200	40.00	ng	95
50)	2-FLUOROBIPHENYL (SS)	13.10	172.0	316582	30.60	ng	100
51)	2,4,6-TRIBROMOPHENOL (SS)	17.11	329.7	132326	57.72	ng	100
52)	*PHENANTHRENE-d10 (IS)	18.93	188.0	261241	40.00	ng	100
63)	*CHRYSENE-d12 (IS)	26.54	240.0	150299	40.00	ng	100
70)	TERPHENYL-d14 (SS)	23.65	244.0	361589	47.02	ng	100
71)	*PERYLENE-d12 (IS)	30.80	264.0	105895	40.00	ng	100

* Compound is ISTD

1C05-2892

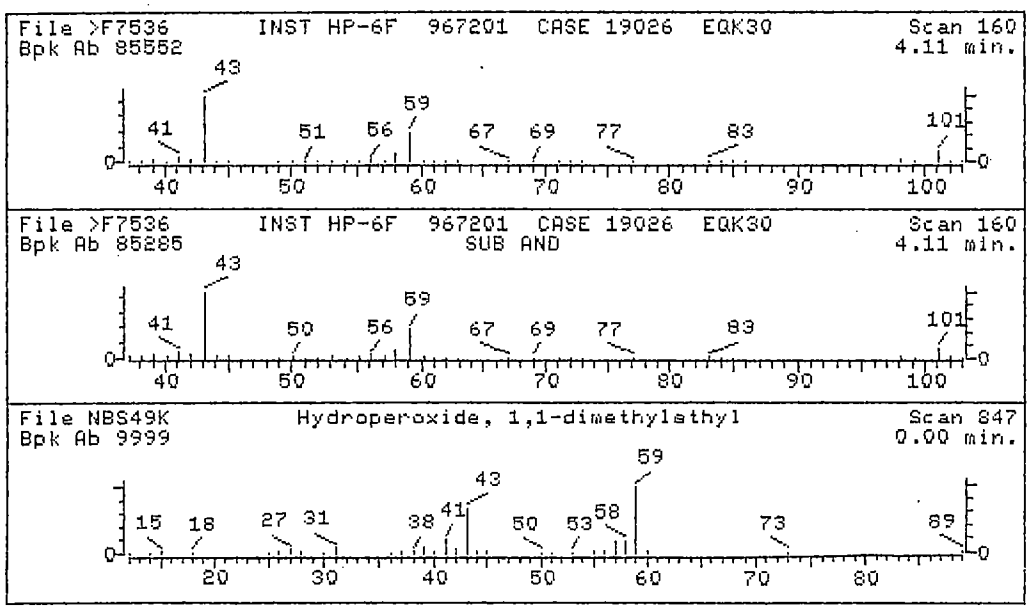
SAMPLE NAME:INST HP-6F 967201
MISC:CASE 19026 EQK30
INJECTION TIME:920522 09:44
INSTRUMENT ID:6F

1. Hydroperoxide, 1,1-dimethylethyl 90 C4H1002

305-2892 / Unknown ketone or ester

Sample file: >F7536 Spectrum #: 160
Search speed: 1 Tilting option: S No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	20	75912	1733	NBS49K	34	31	1	0	41	51	5	12



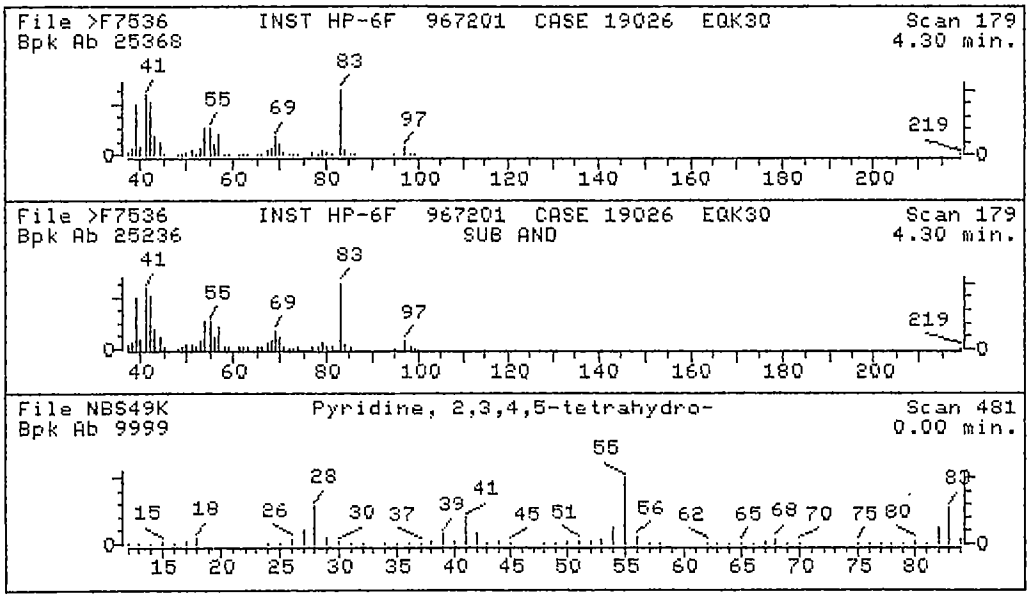
305-2892

SAMPLE NAME:INST HP-6F 967201
MISC:CASE 19026 EQK30
INJECTION TIME:920522 09:44
INSTRUMENT ID:6F

1. Pyridine, 2,3,4,5-tetrahydro- 83 C5H9N
C305-2892 Unknown Compound

Sample file: >F7536 Spectrum #: 179
Search speed: 1 Tilting option: S No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	20*	505180	6132	NBS49K	38	55	2	0	172	54	5	18



C305-2892

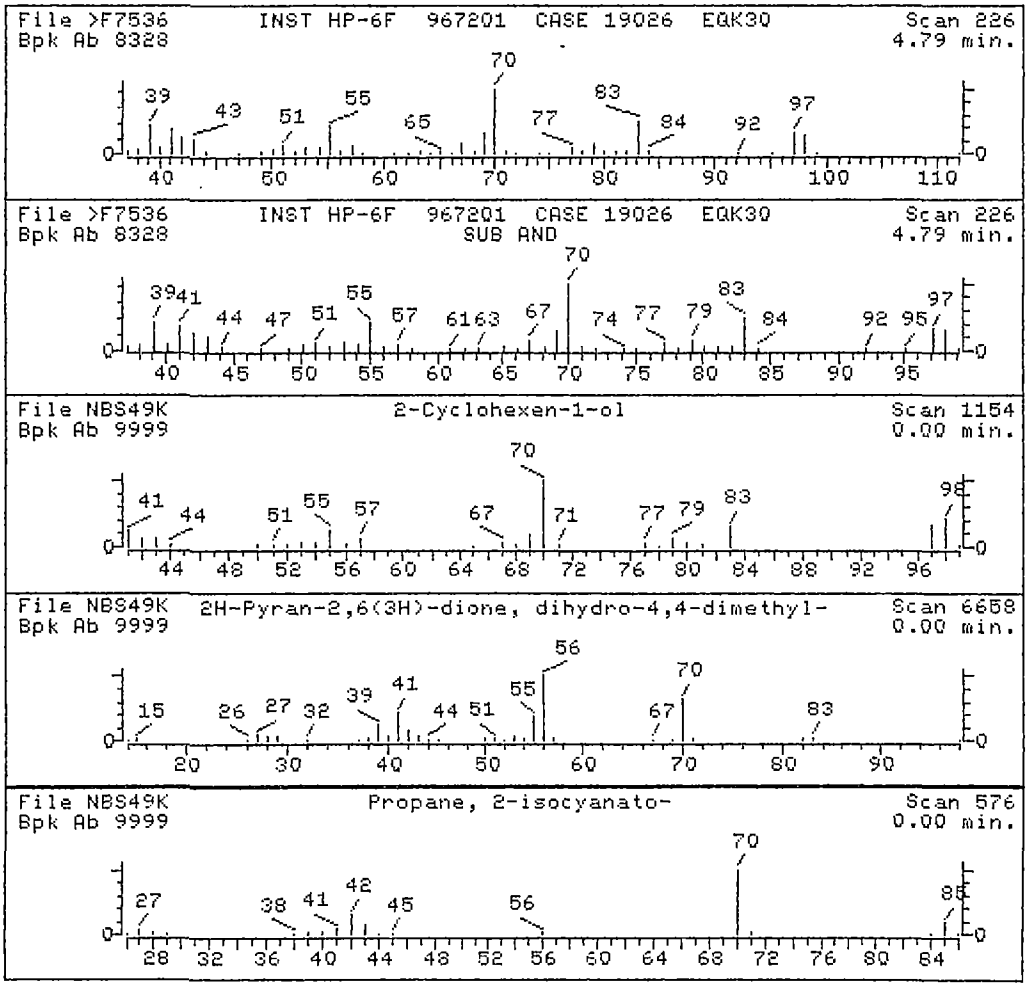
SAMPLE NAME:INST HP-6F 967201
MISC:CASE 19026 EQK30
INJECTION TIME:920522 09:44
INSTRUMENT ID:6F

1. 2-Cyclohexen-1-ol 98 C6H10O
2. 2H-Pyran-2,6(3H)-dione, dihydro-4,4-dimethyl- 142 C7H10O3
3. Propane, 2-isocyanato- 85 C4H7NO

905-2892 Cyclo hexenol

Sample file: >F7536 Spectrum #: 226
Search speed: 1 Tilting option: S No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	76*	822673	3845	NBS49K	64	35	0	0	66	34	32	77
2.	15	4160821	4020	NBS49K	38	44	2	0	114	57	3	13
3.	15	1795488	3825	NBS49K	34	42	1	0	81	60	3	12



905-2892

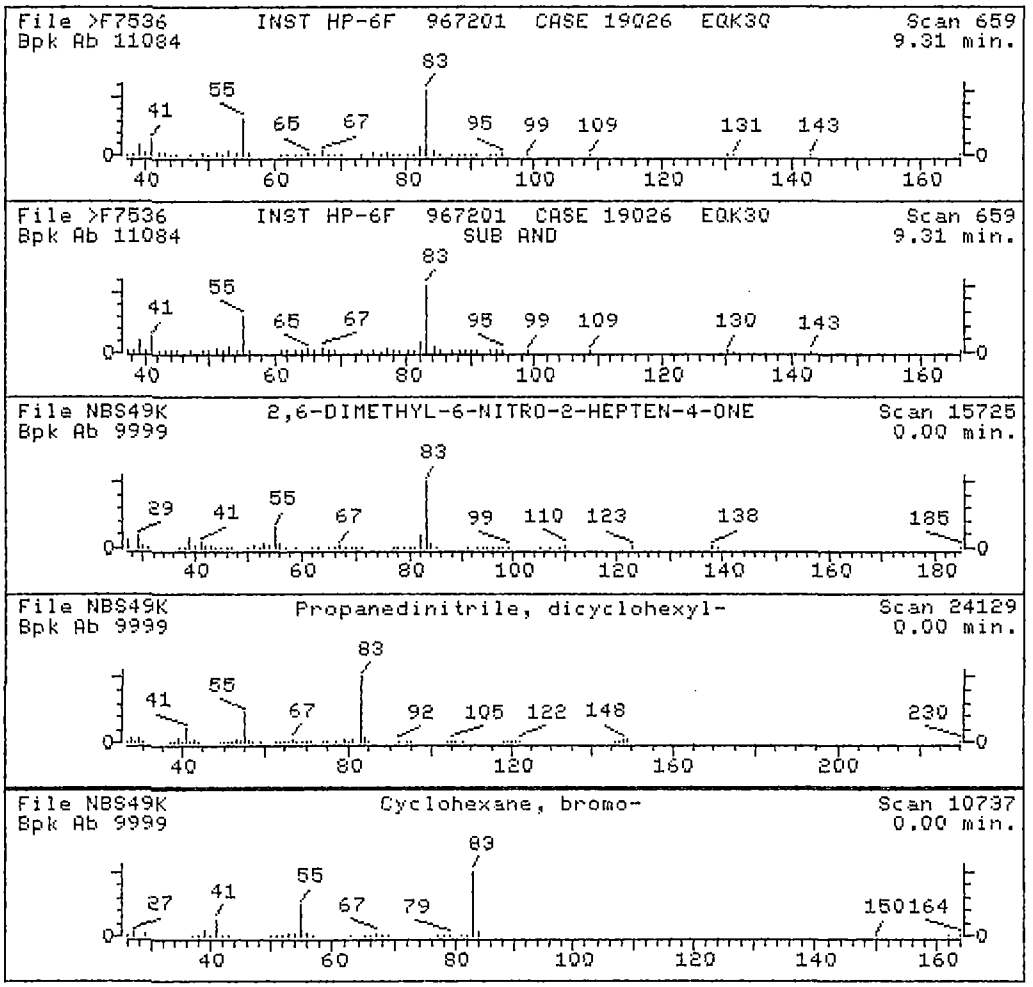
SAMPLE NAME:INST HP-6F 967201
MISC:CASE 19026 EQK30
INJECTION TIME:920522 09:44
INSTRUMENT ID:6F

1. 2,6-DIMETHYL-6-NITRO-2-HEPTEN-4-ONE 185 C9H15NO3
2. Propanedinitrile, dicyclohexyl- 230 C15H22N2
3. Cyclohexane, bromo- 162 C6H11Br

gos-28-92

Sample file: >F7536 Spectrum #: 659
Search speed: 1 Tilting option: S No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	60	73583569	6226	NBS49K	38	49	2	0	74	15	30	12
2.	46	74764286	6240	NBS49K	50	41	2	0	100	24	17	17
3.	43	108850	6204	NBS49K	40	34	2	0	100	22	17	14



gos-28-92

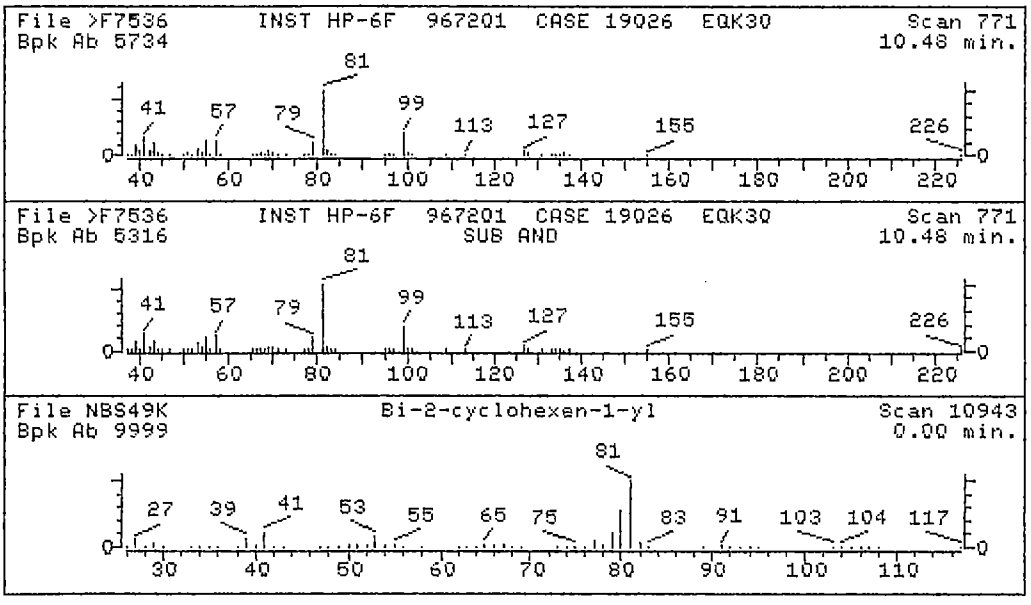
SAMPLE NAME:INST HP-6F 967201
MISC:CASE 19026 EQK30
INJECTION TIME:920522 09:44
INSTRUMENT ID:6F

1. Bi-2-cyclohexen-1-yl 162 C12H18

gps-2892 ✓ Unknown Compound

Sample file: >F7536 Spectrum #: 771
Search speed: 1 Tilting option: S No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	41	1541204	5807	NBS49K	36	49	2	0	70	25	17	12



gps-2892

DATE/TIME INJECTED 920522 09:44
>F7536 INST HP-6F 967201 CASE 19026 EQK30

THE INTEGRATION PARAMETERS USED WERE
,.20:0.00,-26816
NO SMOOTHING WAS DONE.

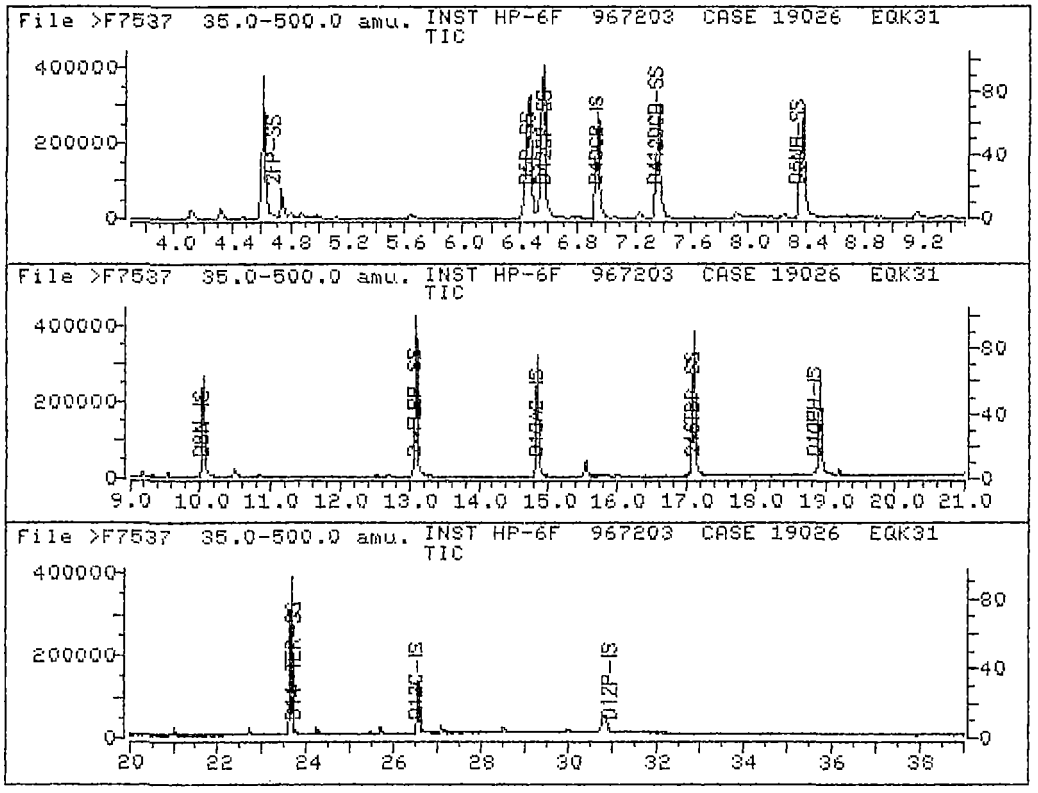
INTEGRATION TABLE

TIC NUM	PEAK NUM	RETENTION TIME	FIRST SCAN	MAX SCAN	LAST SCAN	CORRECTED AREA	CONCENTRATION ng	ug/L	ISTD USED
1	1	4.105	157	160	174	303806	13.37	13.37	1
2	2	4.304	176	179	193	317333	13.97	13.97	1
3	5	4.795	224	226	238	85347	3.76	3.76	1
4	13	9.313	655	659	663	58573	2.07	2.07	2
5	15	10.483	767	771	782	58715	2.08	2.08	2

INTERNAL STANDARD TABLE

IS NUM	PEAK NUM	R.T. MIN.	FIRST SCAN	MAX SCAN	LAST SCAN	CORRECTED AREA	INTERNAL STANDARD NAME
1	9	6.943	428	432	440	454404	1,4-DICHLOROBENZENE-d4 (IS)
2	14	10.044	723	729	740	565125	NAPHTHALENE-d8 (IS)
3	17	14.850	1179	1189	1205	743612	ACENAPHTHENE-d10 (IS)
4	19	18.928	1567	1578	1594	699600	PHENANTHRENE-d10 (IS)
5	21	26.542	2294	2301	2314	421796	CHRYSENE-d12 (IS)
6	22	30.798	2695	2705	2717	268157	PERYLENE-d12 (IS)

/CPS-2892



MS data file header from : >F7537

Sample: INST HP-6F 967203 Operator: TERMINAL62MS 5/22/92 10:34
Misc : CASE 19026 EQK31 IS=40 44502(BTL#11
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BNAME6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	1.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	9.0	0.0	0.0	.1	0.0

1905-2892

QUANT REPORT

Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920522 11:16
Output File: ^F7537::QT Injected at: 920522 10:34
Data File: >F7537::DG Dilution Factor: .50000
Name: INST HP-6F 967203
Misc: CASE 19026 EQK31 IS=40 44502(BTL#11

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920522 02:04

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4 (IS)	6.95	152.0	78195	40.00	ng	85
13)	2-FLUOROPHENOL (SS)	4.61	112.0	169182	38.17	ng	70
14)	PHENOL-d5 (SS)	6.46	99.0	247822	40.89	ng	69
15)	2-CHLOROPHENOL-d4 (SS)	6.56	132.0	219110	42.62	ng	73
16)	1,2-DICHLOROBENZENE-d4 (SS)	7.37	152.0	93820	26.59	ng	79
17)	*NAPHTHALENE-d8 (IS)	10.04	136.0	273744	40.00	ng	100
30)	NITROBENZENE-d5 (SS)	8.38	82.0	217494	36.80	ng	85
31)	*ACENAPHTHENE-d10 (IS)	14.85	164.0	175062	40.00	ng	91
50)	2-FLUOROBIPHENYL (SS)	13.10	172.0	333387	29.12	ng	100
51)	2,4,6-TRIBROMOPHENOL (SS)	17.11	329.7	146990	57.94	ng	100
52)	*PHENANTHRENE-d10 (IS)	18.93	188.0	287577	40.00	ng	100
63)	*CHRYSENE-d12 (IS)	26.54	240.0	149508	40.00	ng	100
70)	TERPHENYL-d14 (SS)	23.64	244.0	389259	50.88	ng	100
71)	*PERYLENE-d12 (IS)	30.80	264.0	103214	40.00	ng	100

* Compound is ISTD

1985-28892

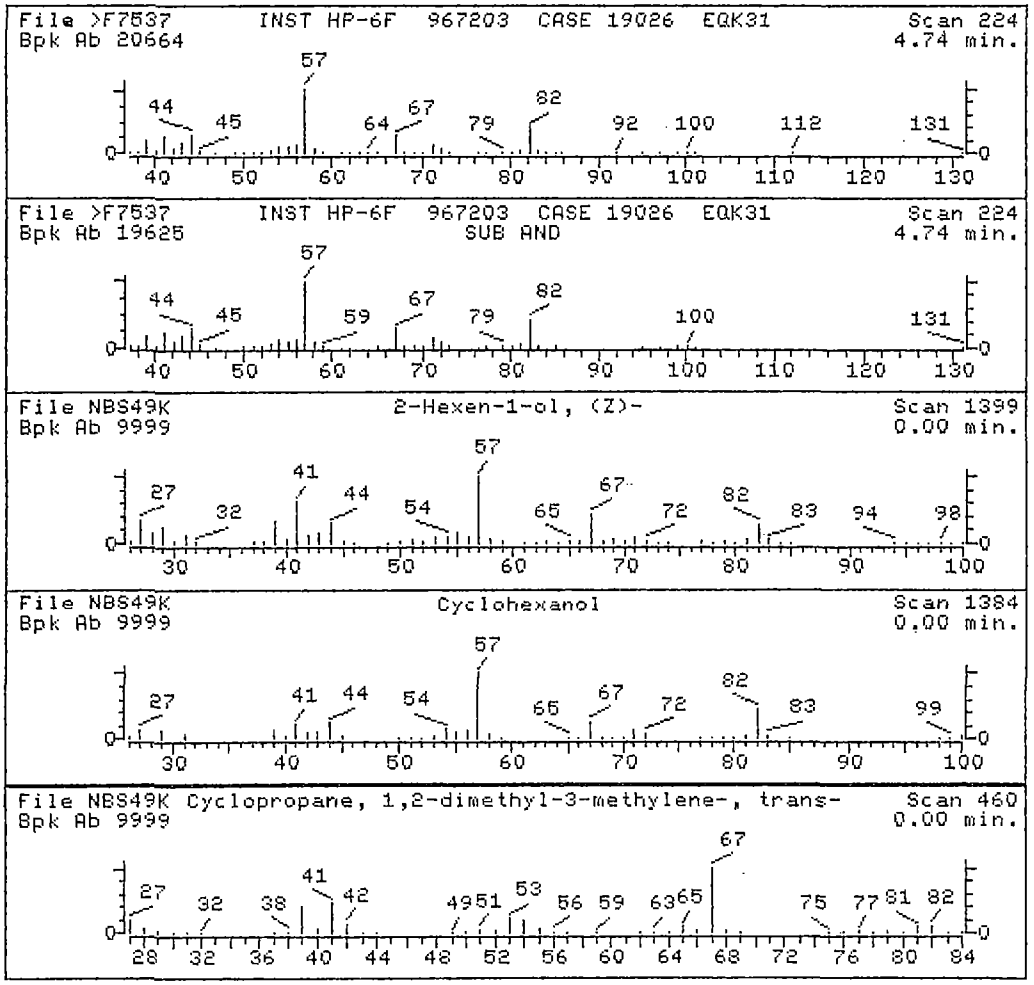
SAMPLE NAME:INST HP-6F 967203
MISC:CASE 19026 EQK31
INJECTION TIME:920522 10:34
INSTRUMENT ID:6F

1. 2-Hexen-1-ol, (Z)- 100 C6H12O
2. Cyclohexanol 100 C6H12O
3. Cyclopropane, 1,2-dimethyl-3-methylene-, trans- 82 C6H10

805-3892 ✓ Cyclohexanol

Sample file: >F7537 Spectrum #: 224
Search speed: 1 Tilting option: S No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	52*	928949	5870	NBS49K	45	53	2	1	68	16	20	17
2.	38*	108930	5866	NBS49K	46	48	1	0	56	44	12	29
3.	25*	5070008	3453	NBS49K	40	41	2	2	30	41	8	13



805-3892

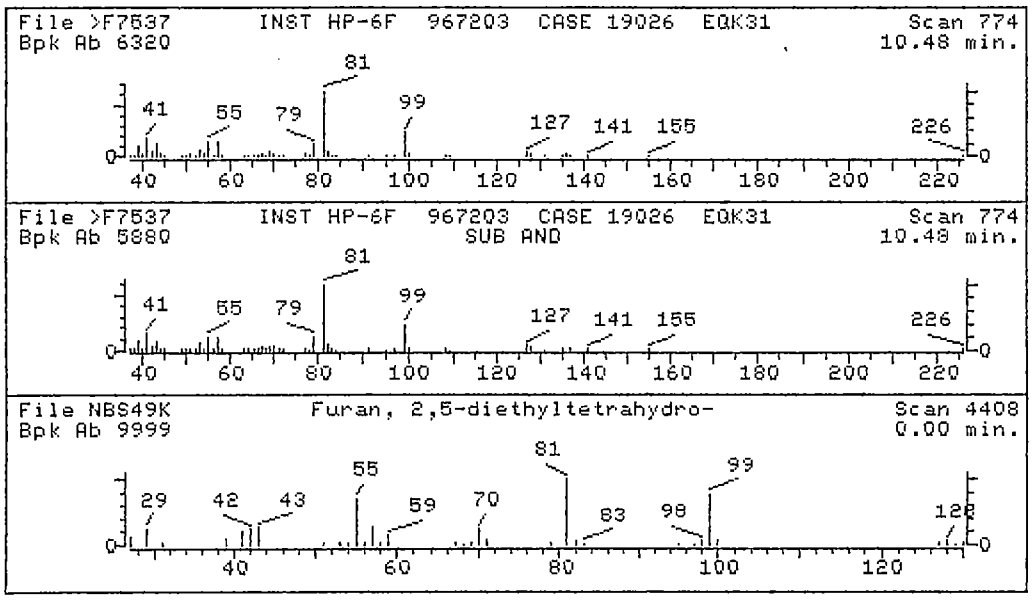
SAMPLE NAME:INST HP-6F 967203
MISC:CASE 19026 EQK31
INJECTION TIME:920522 10:34
INSTRUMENT ID:6F

1. Furan, 2,5-diethyltetrahydro- 128 C8H16O

Cpo5-2892 ✓ Unknown Compound

Sample file: >F7537 Spectrum #: 774
Search speed: 1 Tilting option: S No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	25*	41239489	9701	NBS49K	25	74	3	0	51	42	8	13



Cpo5-2892

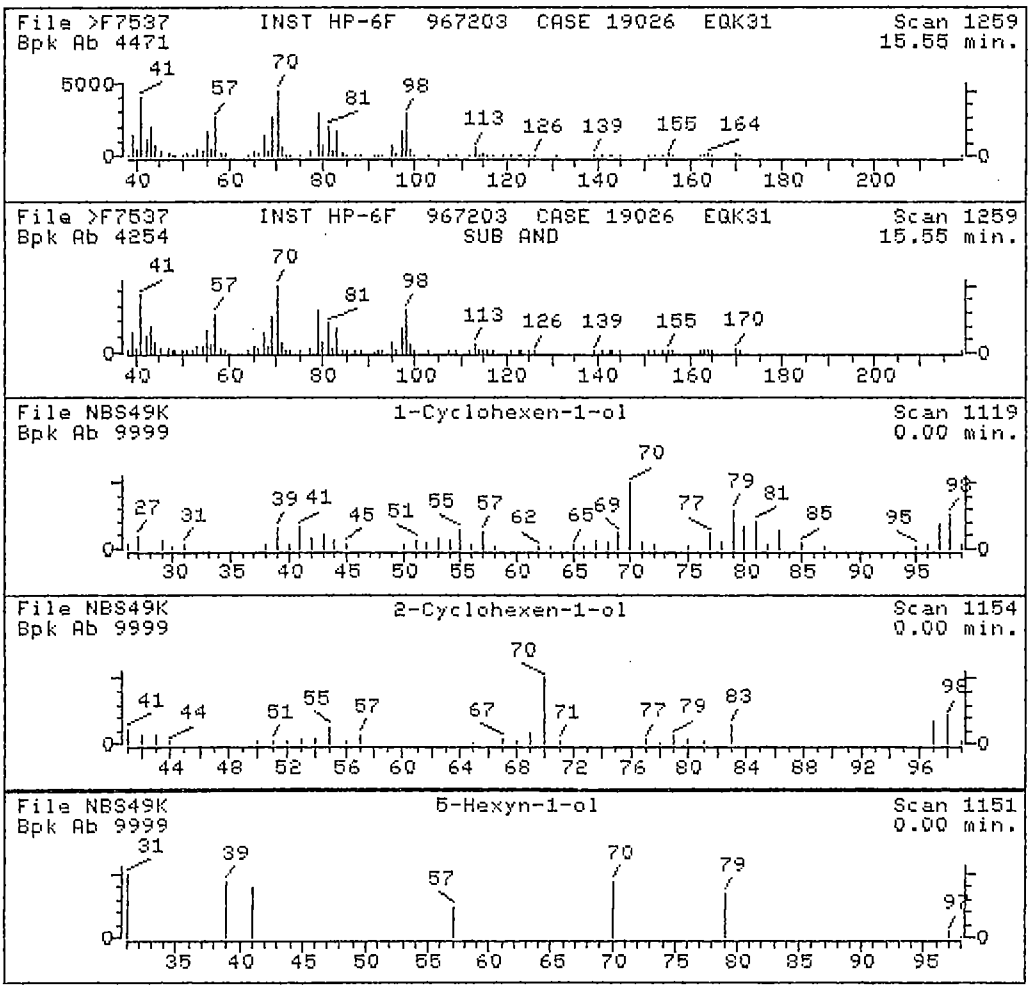
SAMPLE NAME:INST HP-6F 967203
MISC:CASE 19026 EQK31
INJECTION TIME:920522 10:34
INSTRUMENT ID:6F

1. 1-Cyclohexen-1-ol 98 C6H10O
2. 2-Cyclohexen-1-ol 98 C6H10O
3. 5-Hexyn-1-ol 98 C6H10O

Q05-2898 ✓ Cyclohexenol

Sample file: >F7537 Spectrum #: 1259
Search speed: 1 Tilting option: S No. of ion ranges searched: 42

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	60*	4065810	3841	NBS49K	41	72	3	0	100	12	30	13
2.	59*	822673	3845	NBS49K	45	54	0	-1	100	25	27	34
3.	30*	928905	3844	NBS49K	30	34	1	0	90	37	10	16



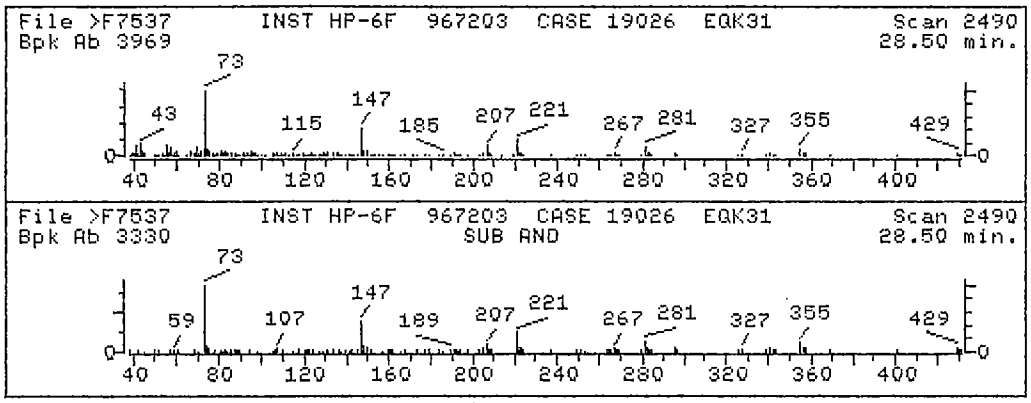
Q05-2898

SAMPLE NAME:INST HP-6F 967203
MISC:CASE 19026 EQK31
INJECTION TIME:920522 10:34
INSTRUMENT ID:6F

Sample file: >F7537 Spectrum #: 2490

*No data base entries were retrieved.

GPS-2892 * Unknown siloxane



GPS-2892

DATE/TIME INJECTED 920522 10:34
>F7537 INST HP-6F 967203 CASE 19026 EQK31

THE INTEGRATION PARAMETERS USED WERE
.20:0.00,-27075
NO SMOOTHING WAS DONE.

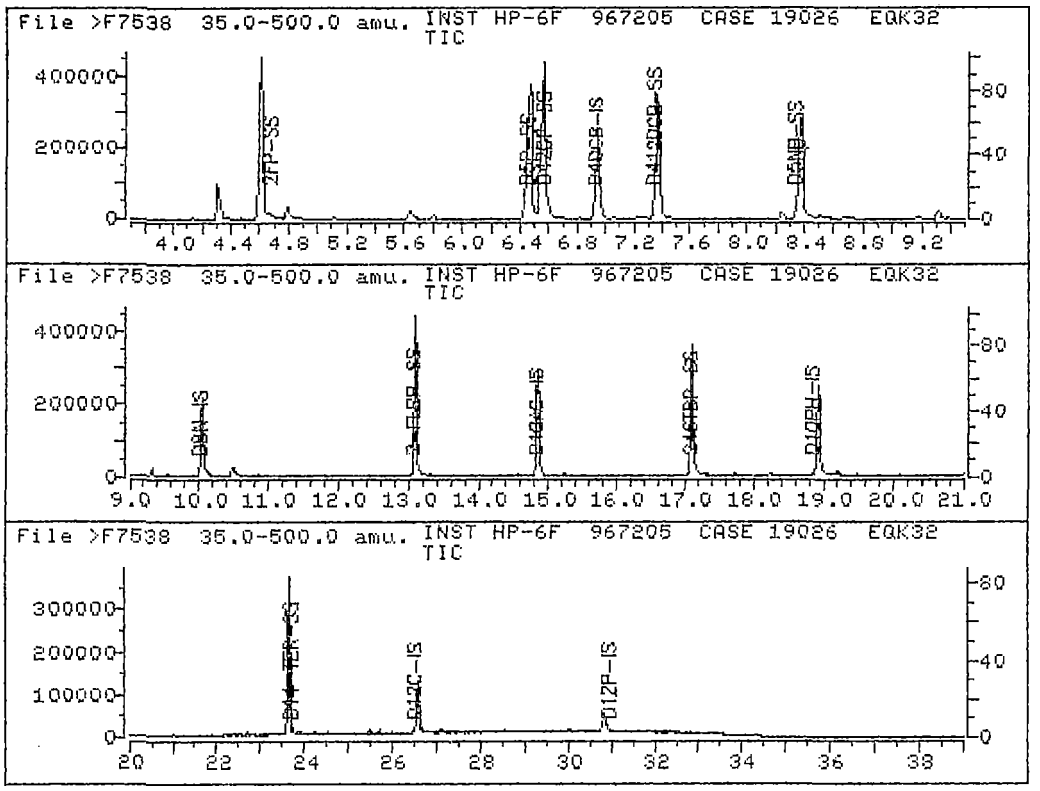
INTEGRATION TABLE

TIC NUM	PEAK NUM	RETENTION TIME	FIRST SCAN	MAX SCAN	LAST SCAN	CORRECTED AREA	CONCENTRATION ng	ug/L	ISTD USED
1	4	4.739	222	224	228	100836	4.14	4.14	1
2	14	10.481	771	774	785	68858	2.21	2.21	2
3	18	15.552	1248	1259	1267	109533	2.76	2.76	3
4	28	28.503	2484	2490	2496	43444	2.03	2.03	5

INTERNAL STANDARD TABLE

IS NUM	PEAK NUM	R.T. MIN.	FIRST SCAN	MAX SCAN	LAST SCAN	CORRECTED AREA	INTERNAL STANDARD NAME
1	7	6.951	431	436	444	487004	1,4-DICHLOROBENZENE-d4 (IS)
2	13	10.042	727	732	746	622393	NAPHTHALENE-d8 (IS)
3	17	14.850	1184	1192	1204	794773	ACENAPHTHENE-d10 (IS)
4	20	18.931	1569	1581	1590	745603	PHENANTHRENE-d10 (IS)
5	26	26.541	2298	2304	2314	428303	CHRYSENE-d12 (IS)
6	29	30.792	2697	2707	2721	270753	PERYLENE-d12 (IS)

1CP5-2892



MS data file header from : >F7538

Sample: INST HP-6F 967205 Operator: TERMINAL62MS 5/22/92 11:24
Misc : CASE 19026 EQK32 IS=40 44502(BTL#12
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BNAME6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	1.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	9.0	0.0	0.0	.1	0.0

1905-2898

19026.5

QUANT REPORT

Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920522 12:07
Output File: ^F7538::QT Injected at: 920522 11:24
Data File: >F7538::D6 Dilution Factor: .50000
Name: INST HP-6F 967205
Misc: CASE 19026 EQK32 IS=40 44502(BTL#12

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920522 02:04

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4 (IS)	6.95	152.0	74575	40.00	ng	84
13)	2-FLUOROPHENOL (SS)	4.61	112.0	207280	49.04	ng	71
14)	PHENOL-d5 (SS)	6.47	99.0	315975	54.67	ng	71
15)	2-CHLOROPHENOL-d4 (SS)	6.56	132.0	242690	49.50	ng	74
16)	1,2-DICHLOROBENZENE-d4 (SS)	7.37	152.0	111870	33.24	ng	83
17)	*NAPHTHALENE-d8 (IS)	10.04	136.0	259129	40.00	ng	100
30)	NITROBENZENE-d5 (SS)	8.39	82.0	226313	40.45	ng	84
31)	*ACENAPHTHENE-d10 (IS)	14.85	164.0	163545	40.00	ng	92
50)	2-FLUOROBIPHENYL (SS)	13.11	172.0	360592	33.71	ng	100
51)	2,4,6-TRIBROMOPHENOL (SS)	17.11	329.7	144630	61.02	ng	100
52)	*PHENANTHRENE-d10 (IS)	18.93	188.0	271742	40.00	ng	100
63)	*CHRYSENE-d12 (IS)	26.54	240.0	148455	40.00	ng	100
70)	TERPHENYL-d14 (SS)	23.64	244.0	375976	49.49	ng	100
71)	*PERYLENE-d12 (IS)	30.80	264.0	109256	40.00	ng	100

* Compound is ISTD

1C85-2892

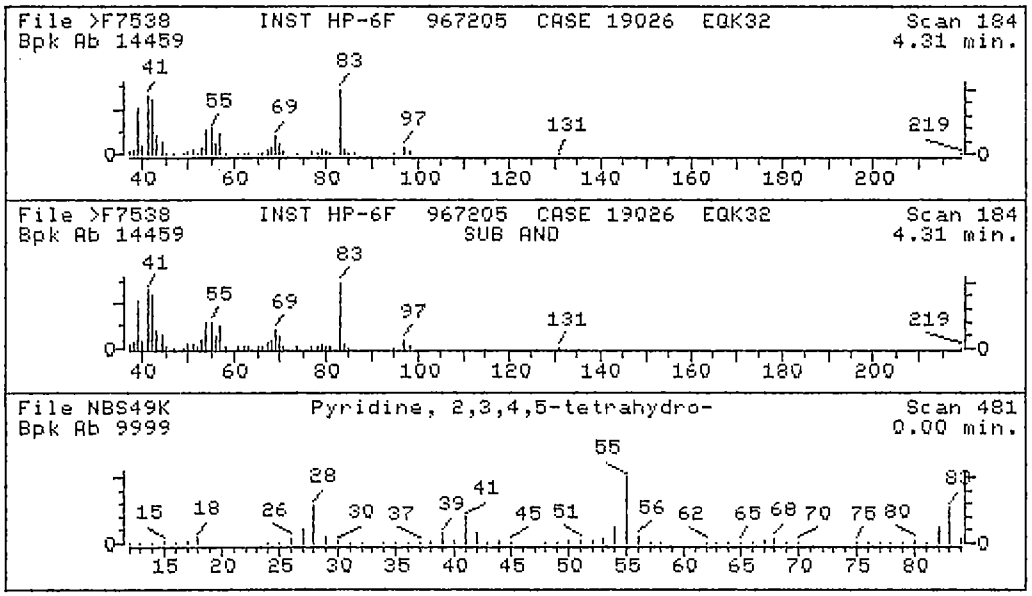
SAMPLE NAME:INST HP-6F 967205
MISC:CASE 19026 EQK32
INJECTION TIME:920522 11:24
INSTRUMENT ID:6F

1. Pyridine, 2,3,4,5-tetrahydro- 83 C5H9N

gps-2898 ✓ Unknown compound

Sample file: >F7538 Spectrum #: 184
Search speed: 1 Tilting option: S No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	25*	505180	6132	NBS49K	38	55	2	0	165	47	7	18



gps-2898

19026·5

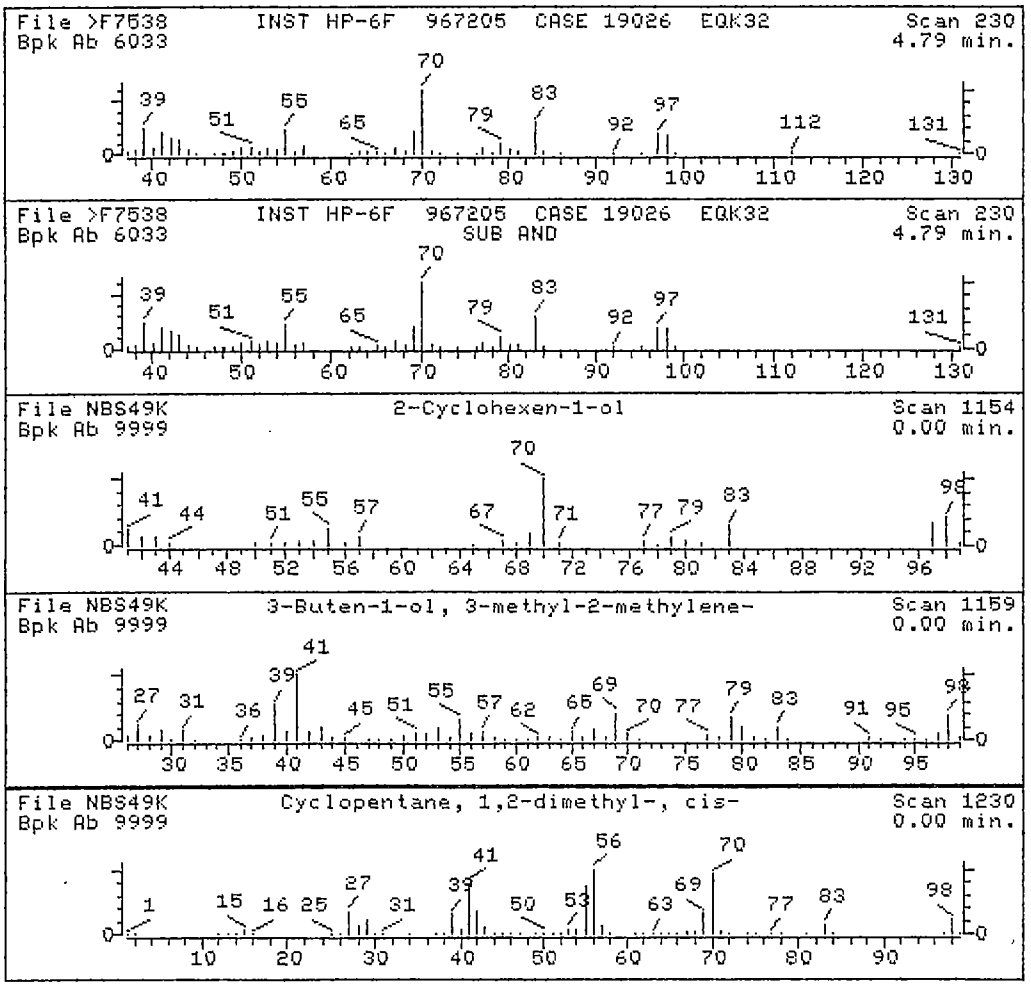
SAMPLE NAME:INST HP-6F 967205
MISC:CASE 19026 EQK32
INJECTION TIME:920522 11:24
INSTRUMENT ID:6F

SP5-2892 ✓ Cyclohexenol

1. 2-Cyclohexen-1-ol 98 C6H10O
2. 3-Buten-1-ol, 3-methyl-2-methylene- 98 C6H10O
3. Cyclopentane, 1,2-dimethyl-, cis- 98 C7H14

Sample file: >F7538 Spectrum #: 230
Search speed: 1 Tilting option: S No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	69*	822673	3845	NBS49K	63	36	1	0	69	34	26	60
2.	41*	26431130	9432	NBS49K	51	57	2	1	51	28	14	18
3.	25*	1192183	3858	NBS49K	31	71	3	0	108	48	7	13



SP5-2892

19026·5

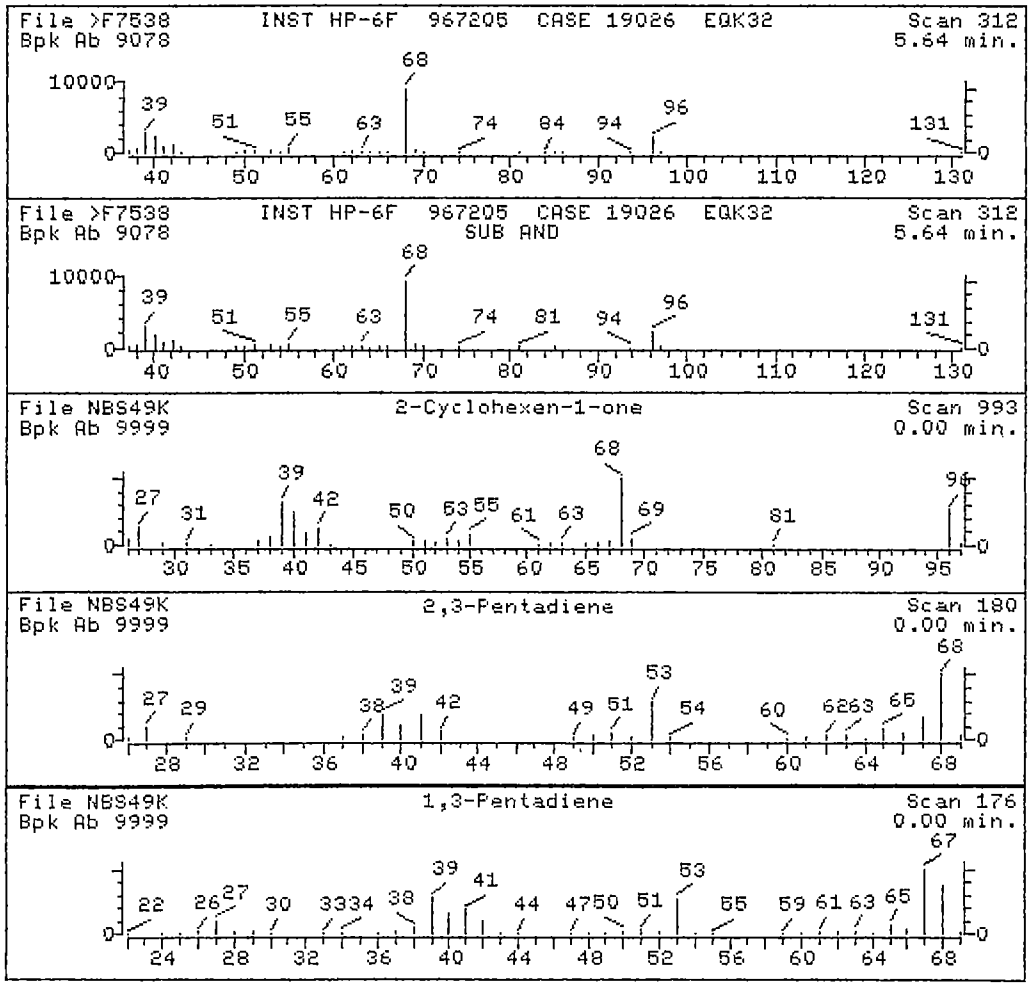
SAMPLE NAME:INST HP-6F 967205
MISC:CASE 19026 EQK32
INJECTION TIME:920522 11:24
INSTRUMENT ID:6F

1. 2-Cyclohexen-1-one 96 C6H8O
2. 2,3-Pentadiene 68 C5H8
3. 1,3-Pentadiene 68 C5H8

805-2898 / Cyclohexenone

Sample file: >F7538 Spectrum #: 312
Search speed: 1 Tilting option: S No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	61*	930687	3554	NBS49K	57	34	1	0	40	35	22	46
2.	52*	591968	3535	NBS49K	22	81	2	0	100	19	20	13
3.	25*	504609	3531	NBS49K	39	74	2	0	57	48	7	14



805-2898

19026·5

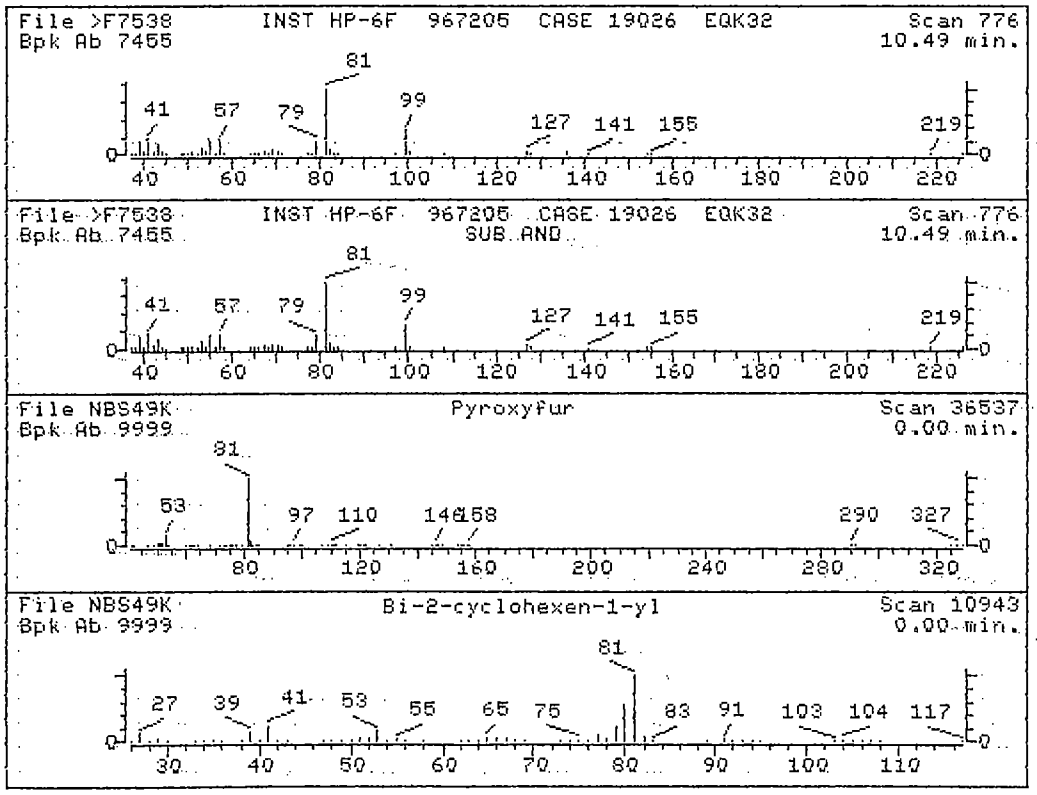
SAMPLE NAME:INST HP-6F 967205
MISC:CASE 19026 EQK32
INJECTION TIME:920522 11:24
INSTRUMENT ID:6F

1. Pyroxyfur 325 C11H7Cl4NO2
2. Bi-2-cyclohexen-1-yl 162 C12H18

qp5-2898 ✓ Unknown Compound

Sample file: >F7538 Spectrum #: 776
Search speed: 1 Tilting option: S No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	29	70166482	5835	NBS49K	31	56	0	0	70	42	8	17
2.	15	1541204	5807	NBS49K	36	49	2	0	65	57	3	12



✓ qp5-2898

DATE/TIME INJECTED 920522 11:24
>F7538 INST HP-6F 967205 CASE 19026 EQK32

THE INTEGRATION PARAMETERS USED WERE
,.20:0.00,-28363
NO SMOOTHING WAS DONE.

INTEGRATION TABLE

TIC NUM	PEAK NUM	RETENTION TIME	FIRST SCAN	MAX SCAN	LAST SCAN	CORRECTED AREA	CONCENTRATION ng	ug/L	ISTD USED
1	1	4.310	181	184	196	166700	7.22	7.22	1
~~2~~	~~3~~	~~4.644~~	~~216~~	~~216~~	~~224~~	~~46507~~	~~2.02~~	~~2.02~~	~~1~~
3	4	4.790	228	230	242	72978	3.16	3.16	1
4	5	5.644	309	312	321	48685	2.11	2.11	1
5	14	10.485	772	776	792	92203	3.16	3.16	2

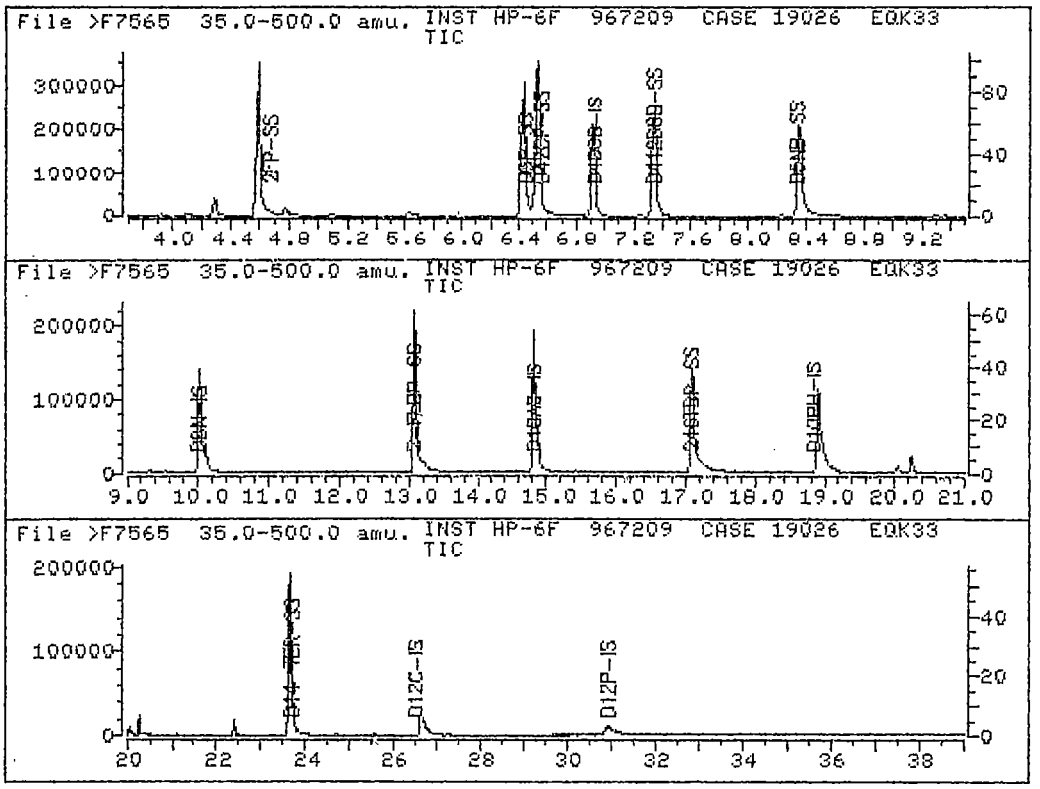
BS 05/30/92

INTERNAL STANDARD TABLE

IS NUM	PEAK NUM	R.T. MIN.	FIRST SCAN	MAX SCAN	LAST SCAN	CORRECTED AREA	INTERNAL STANDARD NAME
1	8	6.948	432	437	445	461589	1,4-DICHLOROBENZENE-d4 (IS)
2	13	10.046	728	734	748	583923	NAPHTHALENE-d8 (IS)
3	16	14.851	1187	1194	1205	737804	ACENAPHTHENE-d10 (IS)
4	18	18.932	1574	1584	1598	709063	PHENANTHRENE-d10 (IS)
5	20	26.540	2302	2309	2324	415060	CHRYSENE-d12 (IS)
6	21	30.804	2703	2714	2727	283630	PERYLENE-d12 (IS)

26/5 RD06-02-92

195-2892



MS data file header from : >F7565

Sample: INST HP-6F 967209 Operator: TERMINAL62MS 5/27/92 9:30
Misc : CASE 19026 EQK33 IS=40 44502(BTL# 6
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BNAME6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	1.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	9.0	0.0	0.0	.1	0.0

JCP 5-28-92

QUANT REPORT

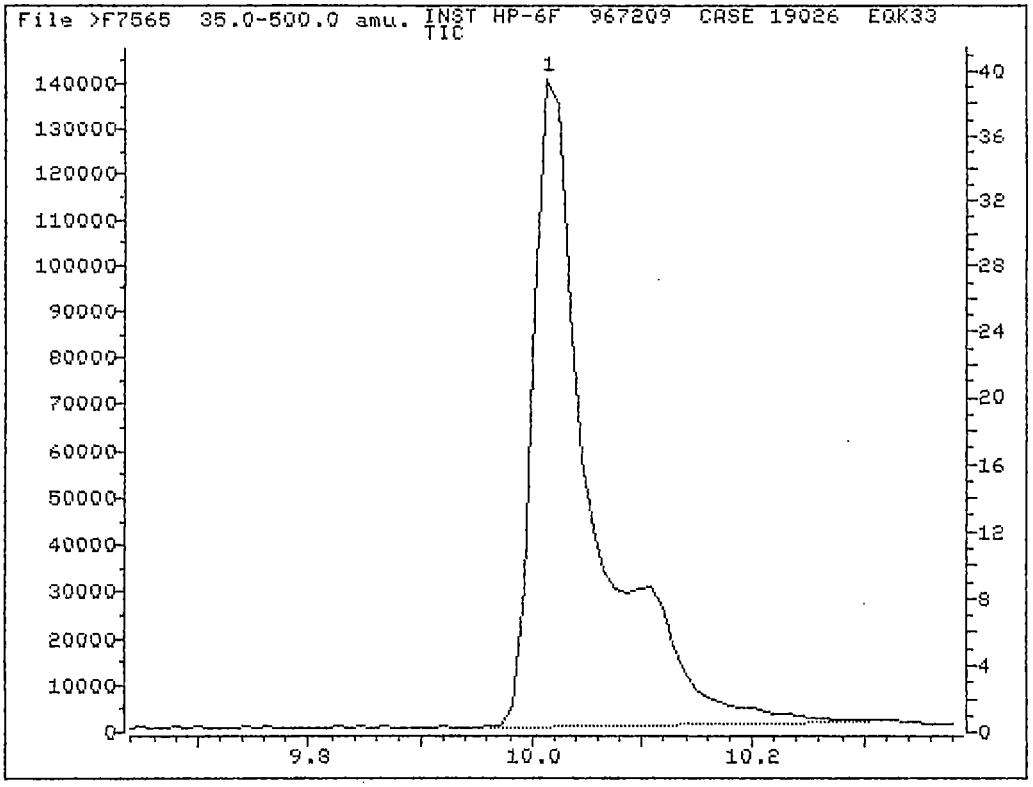
Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920527 10:13
Output File: ^F7565::QT Injected at: 920527 09:30
Data File: >F7565::D9 Dilution Factor: .50000
Name: INST HP-6F 967209
Misc: CASE 19026 EQK33 IS=40 44502(BTL# 6

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920527 04:38

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4 (IS)	6.92	152.0	64625	40.00	ng	83
13)	2-FLUOROPHENOL (SS)	4.59	112.0	165844	44.75	ng	70
14)	PHENOL-d5 (SS)	6.44	99.0	236153	47.44	ng	69
15)	2-CHLOROPHENOL-d4 (SS)	6.54	132.0	184109	43.62	ng	67
16)	1,2-DICHLOROBENZENE-d4 (SS)	7.34	152.0	75873	25.98	ng	79
17)	*NAPHTHALENE-d8 (IS)	10.01	136.0	228170	40.00	ng	100
30)	NITROBENZENE-d5 (SS)	8.36	82.0	165423	32.74	ng	82
31)	*ACENAPHTHENE-d10 (IS)	14.82	164.0	145255	40.00	ng	92
50)	2-FLUOROBIPHENYL (SS)	13.08	172.0	237844	25.50	ng	100
51)	2,4,6-TRIBROMOPHENOL (SS)	17.08	329.7	75636	43.32	ng	100
52)	*PHENANTHRENE-d10 (IS)	18.91	188.0	212687	40.00	ng	100
63)	*CHRYSENE-d12 (IS)	26.59	240.0	86178	40.00	ng	100
70)	TERPHENYL-d14 (SS)	23.62	244.0	269101	51.05	ng	100
71)	*PERYLENE-d12 (IS)	30.90	264.0	48650	40.00	ng	100

* Compound is ISTD

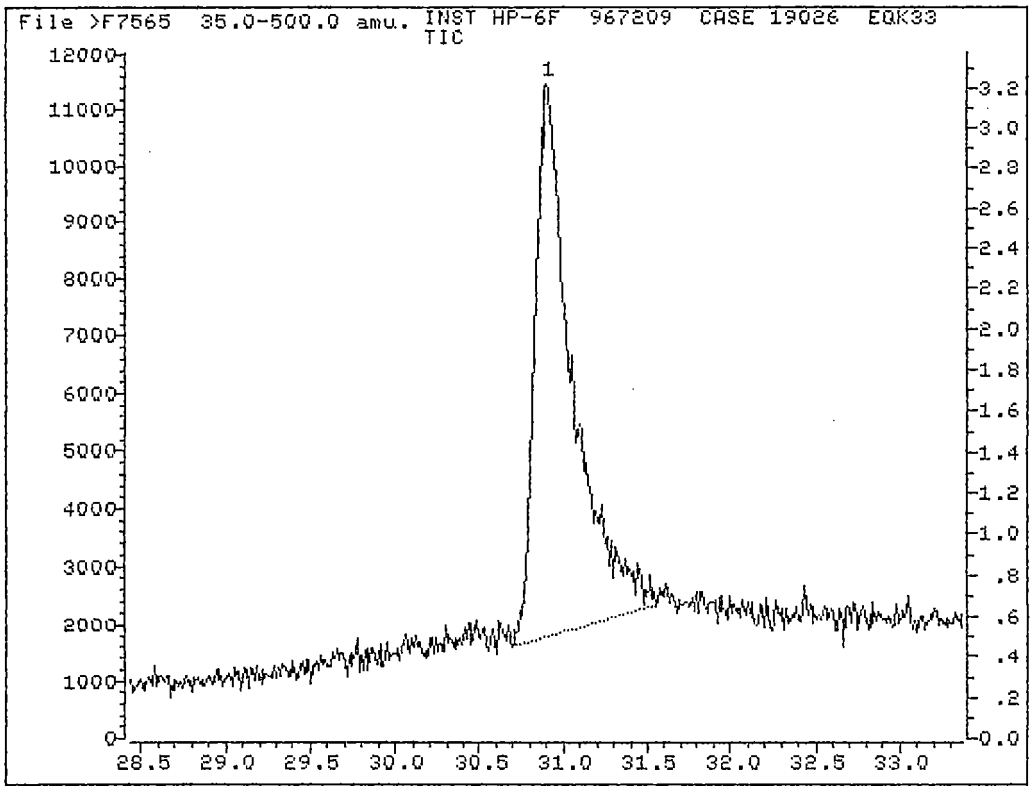
185-2897



Peak No: 10
Internal Standard Name: NAPHTHALENE-d8 (IS)
Scan Number: 728
Retention Time: 10.01 min.
Corrected Area: 520797M
Concentration: 40.0000000
Corrected Conc:39.9999920

1905-2892

19026.5



Peak No: 20
Internal Standard Name: PERYLENE-d12 (IS)
Scan Number: 2732
Retention Time: 30.90 min.
Corrected Area: 149347M
Concentration: 40.0000000
Corrected Conc:39.9999920

1805-2890

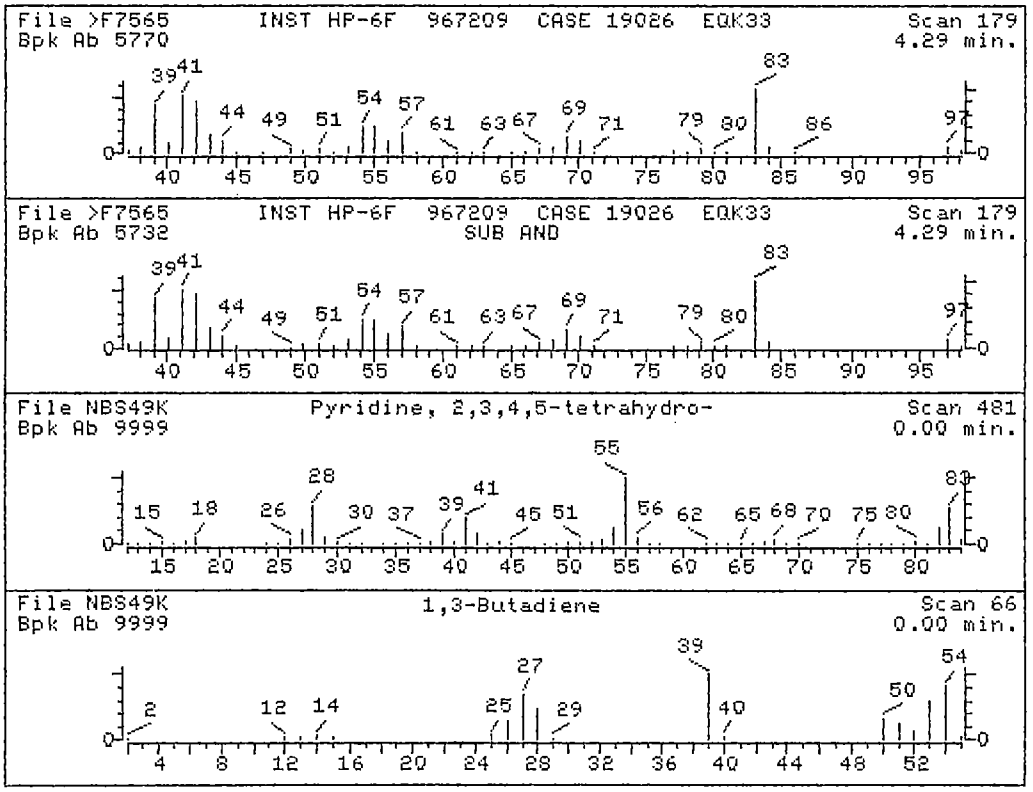
SAMPLE NAME:INST HP-6F 967209
MISC:CASE 19026 EQK33
INJECTION TIME:920527 09:30
INSTRUMENT ID:6F

1. Pyridine, 2,3,4,5-tetrahydro- 83 C5H9N
2. 1,3-Butadiene 54 C4H6
✓ Unknown compound

905:2892

Sample file: >F7565 Spectrum #: 179
Search speed: 1 Tilting option: S No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	20*	505180	6132	NBS49K	38	55	2	0	177	54	5	18
2.	11*	106990	755	NBS49K	25	74	2	0	50	63	2	14



905:2892

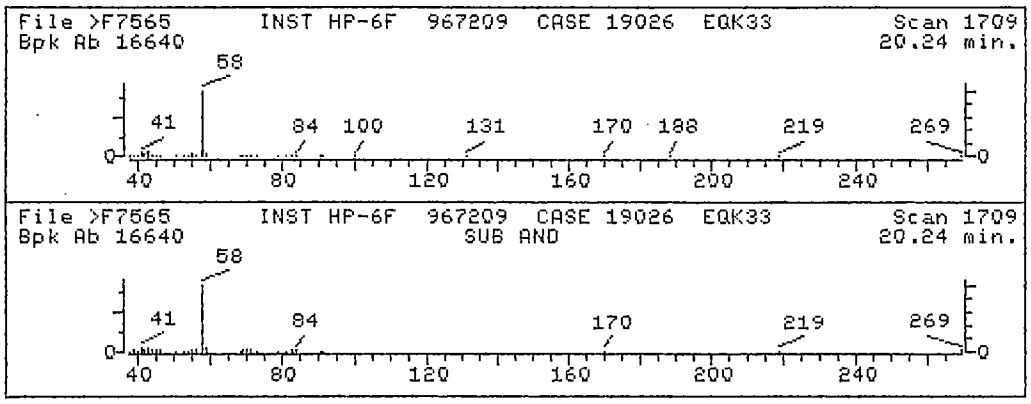
19026.5

SAMPLE NAME:INST HP-6F 967209
MISC:CASE 19026 EQK33
INJECTION TIME:920527 09:30
INSTRUMENT ID:6F

Sample file: >F7565 Spectrum #: 1709

* No data base entries were retrieved.

8053893 / * Unknown compound



8053893

DATE/TIME INJECTED 920527 09:30
>F7565 INST HP-6F 967209 CASE 19026 EQK33

THE INTEGRATION PARAMETERS USED WERE
,.20:0.00,-10251
NO SMOOTHING WAS DONE.

INTEGRATION TABLE

TIC NUM	PEAK NUM	RETENTION TIME	FIRST SCAN	MAX SCAN	LAST SCAN	CORRECTED AREA	CONCENTRATION ng	ug/L	ISTD USED
1	1	4.288	176	179	192	68749	3.27	3.27	1
2	16	20.243	1703	1709	1719	68003	2.31	2.31	4

INTERNAL STANDARD TABLE

IS NUM	PEAK NUM	R.T. MIN.	FIRST SCAN	MAX SCAN	LAST SCAN	CORRECTED AREA	INTERNAL STANDARD NAME
1	7	6.916	427	431	441	420060	1,4-DICHLOROBENZENE-d4 (IS)
~~2~~	~~10~~	~~10.014~~	~~724~~	~~728~~	~~735~~	~~424593~~	~~NAPHTHALENE-d8 (IS)~~ CA 05-28-92
3	12	14.820	1183	1189	1214	670170	ACENAPHTHENE-d10 (IS)
4	14	18.908	1574	1581	1610	588113	PHENANTHRENE-d10 (IS)
5	19	26.586	2311	2318	2361	253933	CHRYSENE-d12 (IS)
~~6~~	~~20~~	~~30.900~~	~~2715~~	~~2732~~	~~2745~~	~~102510~~	~~PERYLENE-d12 (IS)~~
2	10	10.01	723	728	756	~~502~~520797	NAPHTHALENE-d_8 (IS) CA 05-28-92
6	20	30.90	2712	2732	2794	149347	PERYLENE-d_{12} (IS)

1 CA 05-28-92

STANDARDS DATA PACKAGE

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Instrument ID: HP-6F Calibration Date(s): 05/18/92 05/18/92

Calibration Times: 1246 1621

LAB FILE ID: RRF20 = F7462 RRF50 = F7463
RRF80 = F7464 RRF120= F7465 RRF160= F7466

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	RRF	% RSD
Phenol *	1.912	1.681	1.542	1.436	1.347	1.584	14.0*
bis(2-Chloroethyl)Ether *	1.543	1.364	1.255	1.158	0.872	1.238	20.2*
2-Chlorophenol *	1.419	1.278	1.130	1.011	0.955	1.159	16.5*
1,3-Dichlorobenzene *	1.652	1.470	1.349	1.233	1.161	1.373	14.2*
1,4-Dichlorobenzene *	1.662	1.474	1.299	1.160	1.078	1.335	17.7*
1,2-Dichlorobenzene *	1.551	1.341	1.146	0.986	0.871	1.179	23.1*
2-Methylphenol *	1.286	1.184	1.042	0.906	0.902	1.064	16.0*
2,2'-oxybis(1-Chloropropane	2.729	2.468	2.304	2.216	1.673	2.278	17.1
4-Methylphenol *	1.371	1.225	1.105	1.038	0.882	1.124	16.5*
N-Nitroso-Di-n-Propylamine *	1.235	1.165	1.131	1.063	0.757	1.070	17.4*
Hexachloroethane *	0.798	0.718	0.653	0.606	0.625	0.680	11.5*
Nitrobenzene *	0.499	0.460	0.458	0.448	0.514	0.476	6.1*
Isophorone *	0.963	0.915	0.950	0.982	0.982	0.958	2.9*
2-Nitrophenol *	0.249	0.238	0.237	0.229	0.227	0.236	3.7*
2,4-Dimethylphenol *	0.411	0.385	0.378	0.365	0.382	0.384	4.4*
bis(2-Chloroethoxy)Methane *	0.576	0.525	0.519	0.525	0.420	0.513	11.1*
2,4-Dichlorophenol *	0.374	0.348	0.344	0.327	0.321	0.343	6.1*
1,2,4-Trichlorobenzene *	0.423	0.371	0.357	0.331	0.364	0.369	9.1*
Naphthalene *	1.168	1.019	0.968	0.875	0.841	0.974	13.3*
4-Chloroaniline	0.302	0.146	0.135	0.244	0.154	0.196	37.4
Hexachlorobutadiene	0.255	0.226	0.213	0.192	0.208	0.219	10.8
4-Chloro-3-Methylphenol *	0.424	0.410	0.395	0.384	0.373	0.397	5.1*
2-Methylnaphthalene *	0.802	0.706	0.676	0.624	0.672	0.696	9.5*
Hexachlorocyclopentadiene	0.427	0.403	0.387	0.372	0.419	0.402	5.6
2,4,6-Trichlorophenol *	0.473	0.435	0.423	0.428	0.432	0.438	4.6*
2,4,5-Trichlorophenol *		0.482	0.437	0.387	0.362	0.417	12.8*
2-Chloronaphthalene *	1.314	1.153	1.086	1.019	0.812	1.077	17.1*
2-Nitroaniline		0.440	0.480	0.531	0.552	0.501	10.1
Dimethyl Phthalate	1.680	1.496	1.403	1.333	1.068	1.396	16.1
Acenaphthylene *	2.184	1.930	1.771	1.633	1.522	1.808	14.4*
2,6-Dinitrotoluene *	0.417	0.399	0.388	0.380	0.387	0.394	3.7*
3-Nitroaniline		0.023	0.022	0.032	0.043	0.030	32.6
Acenaphthene *	1.320	1.159	1.061	0.990	0.947	1.095	13.6*
2,4-Dinitrophenol		0.210	0.241	0.244	0.228	0.231	6.7
4-Nitrophenol		0.166	0.184	0.190	0.169	0.177	6.5
Dibenzofuran *	1.925	1.717	1.613	1.552	1.721	1.706	8.3*
2,4-Dinitrotoluene *	0.577	0.560	0.575	0.572	0.652	0.587	6.3*

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Instrument ID: HP-6F Calibration Date(s): 05/18/92 05/18/92

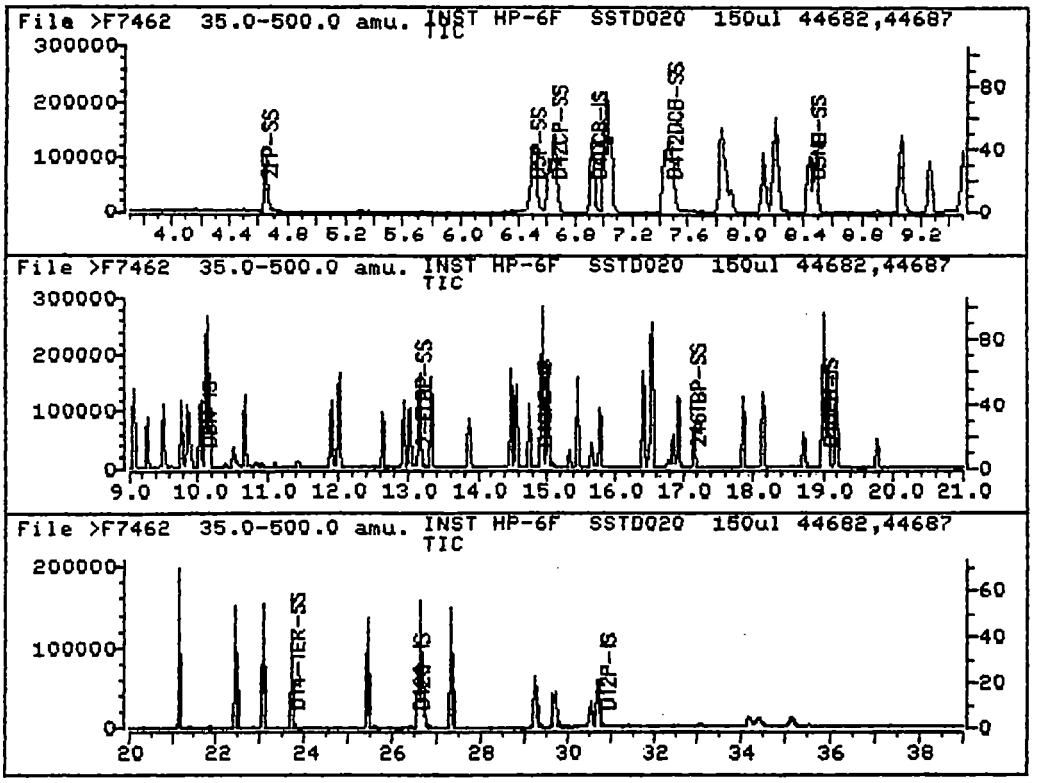
Calibration Times: 1246 1621

LAB FILE ID: RRF20 = F7462 RRF50 = F7463
RRF80 = F7464 RRF120= F7465 RRF160= F7466

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	RRF	% RSD
Diethylphthalate	1.713	1.449	1.340	1.292	1.480	1.455	11.2
4-Chlorophenyl-phenylether *	0.697	0.613	0.563	0.525	0.393	0.558	20.2*
Fluorene *	1.505	1.302	1.224	1.147	1.084	1.252	13.0*
4-Nitroaniline		0.076	0.071	0.076	0.066	0.072	6.6
4,6-Dinitro-2-Methylphenol		0.171	0.180	0.178	0.173	0.176	2.4
N-Nitrosodiphenylamine (1)	0.541	0.413	0.368	0.351	0.264	0.387	26.2
4-Bromophenyl-phenylether *	0.251	0.230	0.216	0.206	0.158	0.212	16.4*
Hexachlorobenzene *	0.330	0.295	0.278	0.259	0.293	0.291	9.0*
Pentachlorophenol *		0.169	0.177	0.173	0.177	0.174	2.2*
Phenanthrene *	1.213	1.069	0.989	0.964	0.954	1.038	10.4*
Anthracene *	1.142	1.022	0.976	0.861	0.793	0.959	14.3*
Carbazole	0.437	0.199	0.195	0.227	0.242	0.260	38.8
Di-n-Butylphthalate	1.824	1.598	1.425	1.241	0.958	1.409	23.5
Fluoranthene *	1.185	1.079	1.058	0.979	0.935	1.047	9.2*
Pyrene *	2.102	1.782	1.600	1.454	1.342	1.656	18.0*
Butylbenzylphthalate	1.120	1.034	0.944	0.863	0.633	0.919	20.3
3,3'-Dichlorobenzidine	0.120	0.075	0.094	0.114	0.127	0.106	20.0
Benzo(a)Anthracene *	1.156	1.106	1.098	1.064	1.024	1.090	4.5*
Chrysene *	1.121	1.066	1.008	0.952	0.882	1.006	9.3*
bis(2-Ethylhexyl)Phthalate	1.585	1.426	1.294	1.182	0.856	1.269	21.7
Di-n-Octyl Phthalate *	2.956	3.176	3.258	3.113	2.163	2.933	15.2*
Benzo(b)Fluoranthene *	1.314	1.452	1.404	1.594	1.405	1.434	7.2*
Benzo(k)Fluoranthene *	1.193	1.066	1.113	0.830	0.892	1.019	15.0*
Benzo(a)Pyrene *	1.057	1.063	1.088	1.074	1.039	1.064	1.7*
Indeno(1,2,3-cd)Pyrene *	0.713	0.733	0.754	0.791	0.799	0.758	4.9*
Dibenz(a,h)Anthracene *	0.718	0.724	0.739	0.758	0.774	0.743	3.1*
Benzo(g,h,i)Perylene *	0.763	0.765	0.770	0.772	0.781	0.770	0.9*
Nitrobenzene-d5	0.492	0.465	0.470	0.468	0.457	0.470	2.8
2-Fluorobiphenyl	1.438	1.255	1.160	1.090	1.043	1.197	13.1
Terphenyl-d14	1.218	1.072	0.982	0.888	0.840	1.000	15.1
Phenol-d5	1.763	1.656	1.531	1.467	1.404	1.564	9.3
2-Fluorophenol	1.272	1.182	1.076	1.018	0.987	1.107	10.7
2,4,6-Tribromophenol	0.241	0.249	0.249	0.240	0.243	0.244	1.8
2-Chlorophenol-d4	1.463	1.345	1.219	1.141	1.031	1.240	13.6
1,2-Dichlorobenzene-d4	1.014	0.901	0.815	0.730	0.673	0.827	16.4

(1) Cannot be separated from Diphenylamine

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.



MS data file header from : >F7462

Sample: INST HP-6F SSTD020 Operator: TERMINAL62MS 5/18/92 12:46
Misc : 150ul 44682,44687 IS=40 44502(BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BNAME6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	1.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	9.0	0.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF DBT56, "Case 18050
RD 06-01-92
JB 05/19/92

QUANT REPORT

Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920518 13:29
Output File: ^F7462::QT Injected at: 920518 12:46
Data File: >F7462::DH Dilution Factor: 1.00000
Name: INST HP-6F SSTD020
Misc: 150ul 44682,44687 IS=40 44502(BTL# 1

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920516 13:48

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4 (IS)	7.01	152.0	63043	40.00	ng	86
2)	PHENOL	6.51	94.0	60257	20.23	ng	100
3)	BIS(2-CHLOROETHYL)ETHER	6.66	93.0	48649	20.24	ng	76
4)	2-CHLOROPHENOL	6.64	128.0	44739	19.98	ng	90
5)	1,3-DICHLOROBENZENE	6.92	146.0	52069	19.53	ng	90
6)	1,4-DICHLOROBENZENE	7.05	146.0	52400	19.86	ng	90
7)	1,2-DICHLOROBENZENE	7.46	146.0	48899	20.34	ng	88
8)	2-METHYLPHENOL	7.84	108.0	40522	19.61	ng	87
9)	2,2'-OXYBIS(1-CHLOROPROPANE)	7.86	45.0	86033	18.10	ng	100
10)	4-METHYLPHENOL	8.20	108.0	43225	19.94	ng	97
11)	N-NITROSO-DI-n-PROPYLAMINE	8.22	70.0	38940	18.15	ng	49
12)	HEXACHLOROETHANE	8.13	117.0	25170	19.55	ng	79
13)	2-FLUOROPHENOL (SS)	4.65	112.0	40089	19.18	ng	72
14)	PHENOL-d5 (SS)	6.49	99.0	55581	19.59	ng	71
15)	2-CHLOROPHENOL-d4 (SS)	6.60	132.0	46123	19.72	ng	75
16)	1,2-DICHLOROBENZENE-d4 (SS)	7.43	152.0	31973	19.59	ng	83
17)	*NAPHTHALENE-d8 (IS)	10.12	136.0	226890	40.00	ng	100
18)	NITROBENZENE	8.48	77.0	56617	19.10	ng	66
19)	ISOPHORONE	9.07	82.0	109285	18.18	ng	90
20)	2-NITROPHENOL	9.26	139.0	28210	18.85	ng	69
21)	2,4-DIMETHYLPHENOL	9.49	107.0	46572	19.65	ng	89
22)	BIS(2-CHLOROETHOXY)METHANE	9.76	93.0	65348	19.20	ng	79
23)	2,4-DICHLOROPHENOL	9.86	162.0	42419	19.19	ng	91
24)	1,2,4-TRICHLOROBENZENE	10.04	180.0	48036	18.87	ng	97
25)	NAPHTHALENE	10.16	128.0	132462	19.52	ng	100
26)	4-CHLOROANILINE	10.51	127.0	34253	71.28	ng	96
27)	HEXACHLOROBUTADIENE	10.67	225.0	28943	17.27	ng	79
28)	4-CHLORO-3-METHYLPHENOL	11.90	107.0	48139	18.63	ng	100
29)	2-METHYLNAPHTHALENE	12.02	142.0	90985	20.22	ng	94
30)	NITROBENZENE-d5 (SS)	8.44	82.0	55865	19.17	ng	86
31)	*ACENAPHTHENE-d10 (IS)	14.93	164.0	139366	40.00	ng	93
32)	HEXACHLOROCYCLOPENTADIENE	12.64	237.0	29779	16.26	ng	96
33)	2,4,6-TRICHLOROPHENOL	12.94	196.0	32929	17.61	ng	96
35)	2-CHLORONAPHTHALENE	13.33	162.0	91532	19.18	ng	93
37)	DIMETHYL PHTHALATE	14.55	163.0	117095	19.20	ng	62
38)	ACENAPHTHYLENE	14.48	152.0	152163	19.28	ng	87
40)	ACENAPHTHENE	15.01	153.0	92002	18.89	ng	86
43)	DIBENZOFURAN	15.45	168.0	134145	19.13	ng	88
44)	2,4-DINITROTOLUENE	15.78	165.0	40199	17.62	ng	78
45)	2,6-DINITROTOLUENE	14.73	165.0	29034	17.98	ng	81
46)	DIETHYLPHTHALATE	16.55	149.0	119351	20.72	ng	91

* Compound is ISTD

"COPY

ORIGINAL IS FILED IN CSF DB156, Case 18050/13005/6d9
RD 06-01-92

QUANT REPORT

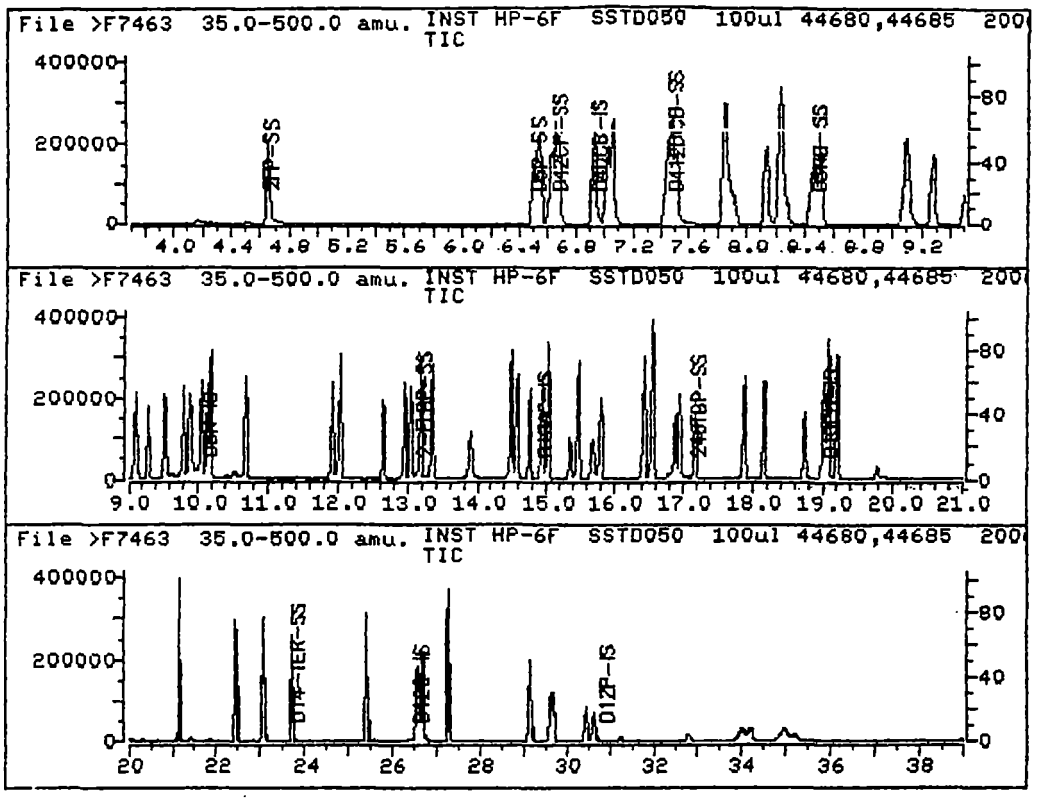
Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920518 13:29
Output File: ^F7462::QT Injected at: 920518 12:46
Data File: >F7462::DH Dilution Factor: 1.00000
Name: INST HP-6F SSTD020
Misc: 150ul 44682,44687 IS=40 44502(BTL# 1

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920516 13:48

	Compound	R.T.	Q ion	Area	Conc	Units	q
47)	4-CHLOROPHENYL-PHENYLETHER	16.53	204.0	48564	18.59	ng	100
48)	FLUORENE	16.41	166.0	104857	19.44	ng	97
50)	2-FLUOROBIPHENYL (SS)	13.17	172.0	100212	19.60	ng	100
51)	2,4,6-TRIBROMOPHENOL (SS)	17.17	329.7	16790	11.46	ng	100
52)	*PHENANTHRENE-d10 (IS)	19.01	188.0	246622	40.00	ng	100
54)	N-NITROSODIPHENYLAMINE	16.93	169.0	66664	20.48	ng	86
55)	4-BROMOPHENYL-PHENYLETHER	17.86	248.0	30912	16.88	ng	96
56)	HEXACHLOROBENZENE	18.16	284.0	40675	15.88	ng	100
58)	PHENANTHRENE	19.07	178.0	149611	19.40	ng	86
59)	ANTHRACENE	19.19	178.0	140842	18.44	ng	83
60)	CARBAZOLE	19.76	167.0	53881	18.63	ng	78
61)	DI-N-BUTYLPHTHALATE	21.14	149.0	224870	20.47	ng	100
62)	FLUORANTHENE	22.42	202.0	146089	17.44	ng	93
63)	*CHRYSENE-d12 (IS)	26.60	240.0	139720	40.00	ng	100
64)	PYRENE	23.03	202.0	146837	22.80	ng	98
65)	BUTYLBENZYLPHTHALATE	25.40	149.0	78264	24.00	ng	72
66)	3,3'-DICHLOROBENZIDINE	26.71	252.0	8417	23.43	ng	100
67)	BENZO(a)ANTHRACENE	26.54	228.0	80731	17.83	ng	86
68)	BIS(2-ETHYLHEXYL)PHTHALATE	27.30	149.0	110739	25.14	ng	96
69)	CHRYSENE	26.66	228.0	78295	17.86	ng	91
70)	TERPHENYL-d14 (SS)	23.70	244.0	85064	21.25	ng	100
71)	*PERYLENE-d12 (IS)	30.69	264.0	85946	40.00	ng	100
72)	DI-N-OCTYLPHTHALATE	29.21	149.0	127015	21.61	ng	100
73)	BENZO(b)FLUORANTHENE	29.63	252.0	56483	15.65	ng	100
74)	BENZO(k)FLUORANTHENE	29.69	252.0	51277	17.32	ng	100
75)	BENZO(a)PYRENE	30.50	252.0	45428	16.21	ng	97
76)	INDENO(1,2,3-cd)PYRENE	34.19	276.0	30642	15.64	ng	100
77)	DIBENZO(a,h)ANTHRACENE	34.39	278.0	30846	15.76	ng	100
78)	BENZO(g,h,i)PERYLENE	35.15	276.0	32803	16.78	ng	100

* Compound is ISTD

"COPY
ORIGINAL IS FILED IN CSF DBT56, Case 18050
RD 06-01-92
JBoo 5/20/92

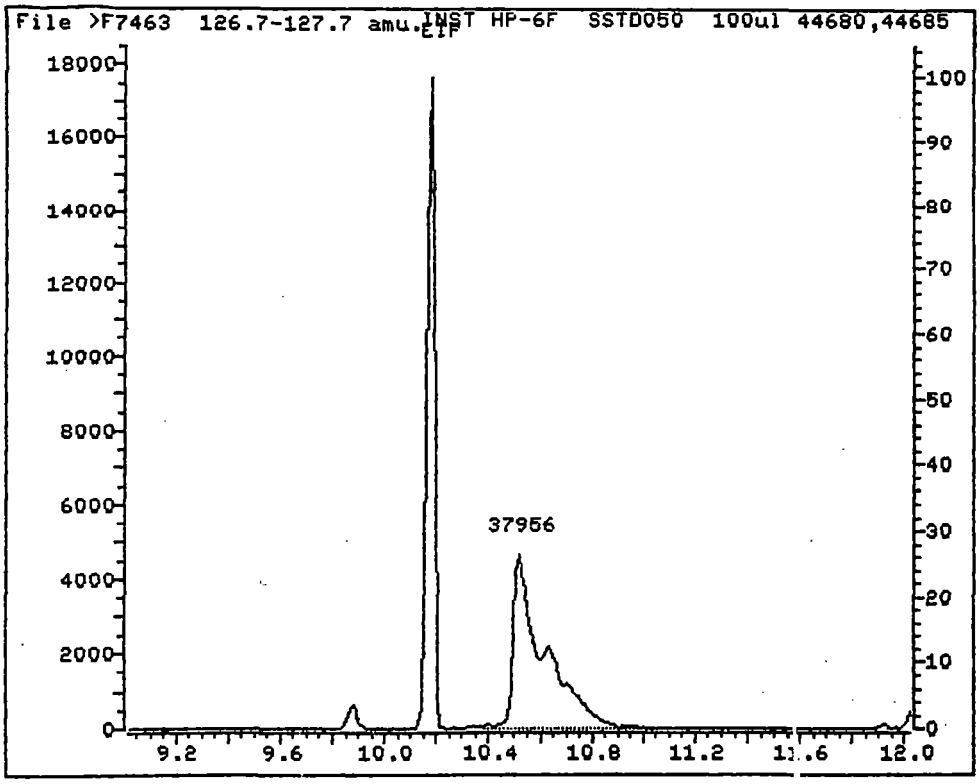


MS data file header from : >F7463

Sample: INST HP-6F SSTD050 Operator: TERMINAL62MS 5/18/92 13:40
Misc : 100ul 44680,44685 200ul MECL2 IS=40 44502(BTL# 2
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BNAME6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	1.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	9.0	0.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF DBT56,
Case 18050 JJB 05/19/92
RD06-01-92



Data File: >F7463::DH Quant Output File: ^F7463::QT
Name: INST HP-6F SSTD050
Misc: 100ul 44680,44685 200ul MECL2 IS=40 44502(BTL# 2
Quant Time: 920518 14:22 Quant ID File: NCBID6::D1
Injected at: 920518 13:40 Last Calibration: 920516 13:48

Compound No: 26
Compound Name: 4-CHLOROANILINE
Scan Number: 779
Retention Time: 10.52 min.
Quant Ion: 127.0
Area: 37956M
Concentration: 86.39 ng
q-value: 99

This report was produced by QAREA on: 920518 14:59

"COPY
ORIGINAL IS FILED IN CSF DBT56,
Case 18050
RD 06-01-92

JB 05/19/92

QUANT REPORT

Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920518 14:22
Output File: ^F7463::QT Injected at: 920518 13:40
Data File: >F7463::DH Dilution Factor: 1.00000
Name: INST HP-6F SSTD050
Misc: 100ul 44680,44685 200ul MECLZ IS=40 44502(BTL# 2

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920516 13:48

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4 (IS)	7.02	152.0	57294	40.00	ng	85
2)	PHENOL	6.54	94.0	120376	44.47	ng	100
3)	BIS(2-CHLOROETHYL)ETHER	6.68	93.0	97650	44.70	ng	80
4)	2-CHLOROPHENOL	6.66	128.0	91498	44.96	ng	82
5)	1,3-DICHLOROBENZENE	6.93	146.0	105253	43.43	ng	90
6)	1,4-DICHLOROBENZENE	7.06	146.0	105575	44.03	ng	90
7)	1,2-DICHLOROBENZENE	7.47	146.0	96035	43.94	ng	90
8)	2-METHYLPHENOL	7.84	108.0	84789	45.14	ng	86
9)	2,2'-OXYBIS(1-CHLOROPROPANE)	7.87	45.0	176768	40.92	ng	100
10)	4-METHYLPHENOL	8.23	108.0	87704	44.52	ng	97
11)	N-NITROSO-DI-n-PROPYLAMINE	8.25	70.0	83427	42.78	ng	51
12)	HEXACHLOROETHANE	8.14	117.0	51394	43.92	ng	84
13)	2-FLUOROPHENOL (SS)	4.65	112.0	84653	44.56	ng	67
14)	PHENOL-d5 (SS)	6.51	99.0	118612	46.01	ng	70
15)	2-CHLOROPHENOL-d4 (SS)	6.61	132.0	96324	45.32	ng	74
16)	1,2-DICHLOROBENZENE-d4 (SS)	7.44	152.0	64544	43.52	ng	83
17)	*NAPHTHALENE-d8 (IS)	10.13	136.0	207434	40.00	ng	100
18)	NITROBENZENE	8.50	77.0	119166	43.98	ng	66
19)	ISOPHORONE	9.10	82.0	237344	43.19	ng	88
20)	2-NITROPHENOL	9.27	139.0	61765	45.14	ng	71
21)	2,4-DIMETHYLPHENOL	9.51	107.0	99864	46.09	ng	86
22)	BIS(2-CHLOROETHOXY)METHANE	9.79	93.0	136171	43.77	ng	78
23)	2,4-DICHLOROPHENOL	9.88	162.0	90357	44.72	ng	92
24)	1,2,4-TRICHLOROBENZENE	10.05	180.0	96317	41.38	ng	96
25)	NAPHTHALENE	10.18	128.0	264179	42.58	ng	100
26)	4-CHLOROANILINE	10.52	127.0	37956M	86.39	ng	99
27)	HEXACHLOROBUTADIENE	10.69	225.0	58681	38.31	ng	83
28)	4-CHLORO-3-METHYLPHENOL	11.91	107.0	106300	45.01	ng	100
29)	2-METHYLNAPHTHALENE	12.03	142.0	183170	44.52	ng	94
30)	NITROBENZENE-d5 (SS)	8.46	82.0	120451	45.22	ng	84
31)	*ACENAPHTHENE-d10 (IS)	14.93	164.0	128662	40.00	ng	90
32)	HEXACHLOROCYCLOPENTADIENE	12.64	237.0	64815	38.34	ng	95
33)	2,4,6-TRICHLOROPHENOL	12.96	196.0	70009	40.54	ng	98
34)	2,4,5-TRICHLOROPHENOL	13.04	196.0	77555	42.45	ng	97
35)	2-CHLORONAPHTHALENE	13.34	162.0	185413	42.08	ng	93
36)	2-NITROANILINE	13.90	65.0	70765	35.09	ng	68
37)	DIMETHYL PHTHALATE	14.58	163.0	240520	42.72	ng	56
38)	ACENAPHTHYLENE	14.49	152.0	310469	42.62	ng	88
39)	3-NITROANILINE	15.06	138.0	3740	11.21	ng	13
40)	ACENAPHTHENE	15.03	153.0	186443	41.47	ng	85
41)	2,4-DINITROPHENOL	15.35	184.0	33699	39.06	ng	100

"COPY

* Compound is ISTD

ORIGINAL IS FILED IN CSF DBT56, Case 18050 RD 06-01-92

JB 03/19/92

QUANT REPORT

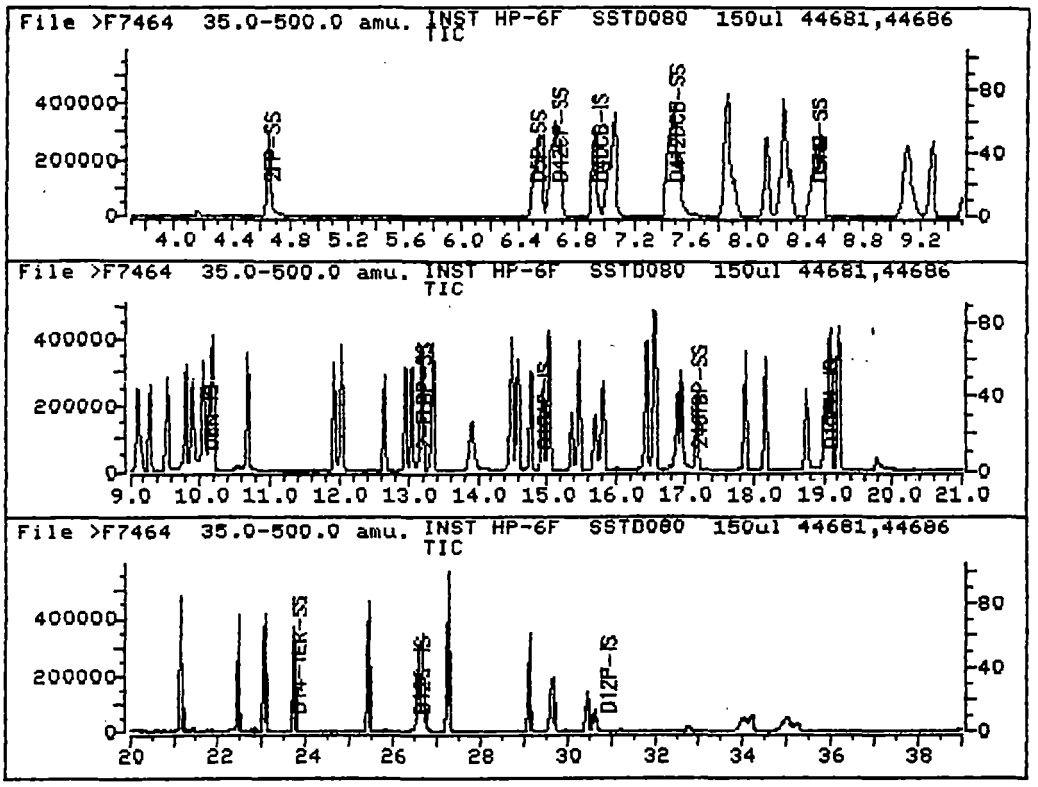
Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920518 14:22
Output File: ^F7463::QT Injected at: 920518 13:40
Data File: >F7463::DH Dilution Factor: 1.00000
Name: INST HP-6F SSTD050
Misc: 100ul 44680,44685 200ul MECL2 IS=40 44502(BTL# 2

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920516 13:48

	Compound	R.T.	Q ion	Area	Conc	Units	q
42)	4-NITROPHENOL	15.67	109.0	26758	40.00	ng	79
43)	DIBENZOFURAN	15.47	168.0	276168	42.67	ng	88
44)	2,4-DINITROTOLUENE	15.80	165.0	90102	42.79	ng	80
45)	2,6-DINITROTOLUENE	14.75	165.0	64165	43.05	ng	80
46)	DIETHYLPHTHALATE	16.56	149.0	233053	43.83	ng	91
47)	4-CHLOROPHENYL-PHENYLETHER	16.54	204.0	98573	40.87	ng	100
48)	FLUORENE	16.43	166.0	209367	42.04	ng	99
49)	4-NITROANILINE	16.82	138.0	12277	29.85	ng	84
50)	2-FLUOROBIPHENYL (SS)	13.19	172.0	201910	42.78	ng	100
51)	2,4,6-TRIBROMOPHENOL (SS)	17.17	329.7	40040	29.60	ng	100
52)	*PHENANTHRENE-d10 (IS)	19.01	188.0	233689	40.00	ng	100
53)	4,6-DINITRO-2-METHYLPHENOL	16.88	198.0	50053	41.53	ng	100
54)	N-NITROSODIPHENYLAMINE	16.95	169.0	120575	39.09	ng	83
55)	4-BROMOPHENYL-PHENYLETHER	17.88	248.0	67166	38.71	ng	92
56)	HEXACHLOROBENZENE	18.16	284.0	86060	35.47	ng	100
57)	PENTACHLOROPHENOL	18.75	266.0	49253	32.66	ng	100
58)	PHENANTHRENE	19.08	178.0	312364	42.74	ng	84
59)	ANTHRACENE	19.20	178.0	298486	41.24	ng	85
60)	CARBAZOLE	19.77	167.0	58033	21.18	ng	75
61)	DI-N-BUTYLPHTHALATE	21.15	149.0	466899	44.86	ng	100
62)	FLUORANTHENE	22.43	202.0	315263	39.73	ng	96
63)	*CHRYSENE-d12 (IS)	26.57	240.0	144463	40.00	ng	100
64)	PYRENE	23.04	202.0	321881	48.35	ng	97
65)	BUTYLBENZYLPHTHALATE	25.38	149.0	186784	55.40	ng	73
66)	3,3'-DICHLOROBENZIDINE	26.69	252.0	13631	36.70	ng	100
67)	BENZO(a)ANTHRACENE	26.53	228.0	199691	42.66	ng	85
68)	BIS(2-ETHYLHEXYL)PHTHALATE	27.24	149.0	257418	56.52	ng	96
69)	CHRYSENE	26.65	228.0	192529	42.48	ng	90
70)	TERPHENYL-d14 (SS)	23.70	244.0	193538	46.76	ng	100
71)	*PERYLENE-d12 (IS)	30.59	264.0	85809	40.00	ng	100
72)	DI-N-OCTYLPHTHALATE	29.09	149.0	340711	58.07	ng	100
73)	BENZO(b)FLUORANTHENE	29.58	252.0	155743	43.23	ng	100
74)	BENZO(k)FLUORANTHENE	29.64	252.0	114378	38.69	ng	100
75)	BENZO(a)PYRENE	30.42	252.0	113995	40.75	ng	97
76)	INDENO(1,2,3-cd)PYRENE	34.00	276.0	78675	40.23	ng	100
77)	DIBENZO(a,h)ANTHRACENE	34.18	278.0	77604	39.70	ng	100
78)	BENZO(g,h,i)PERYLENE	34.97	276.0	82076	42.04	ng	100

* Compound is ISTD

"COPY
ORIGINAL IS FILED IN CSF DBT56, Case 18050
RD 06-01-92 jb 05/19/9



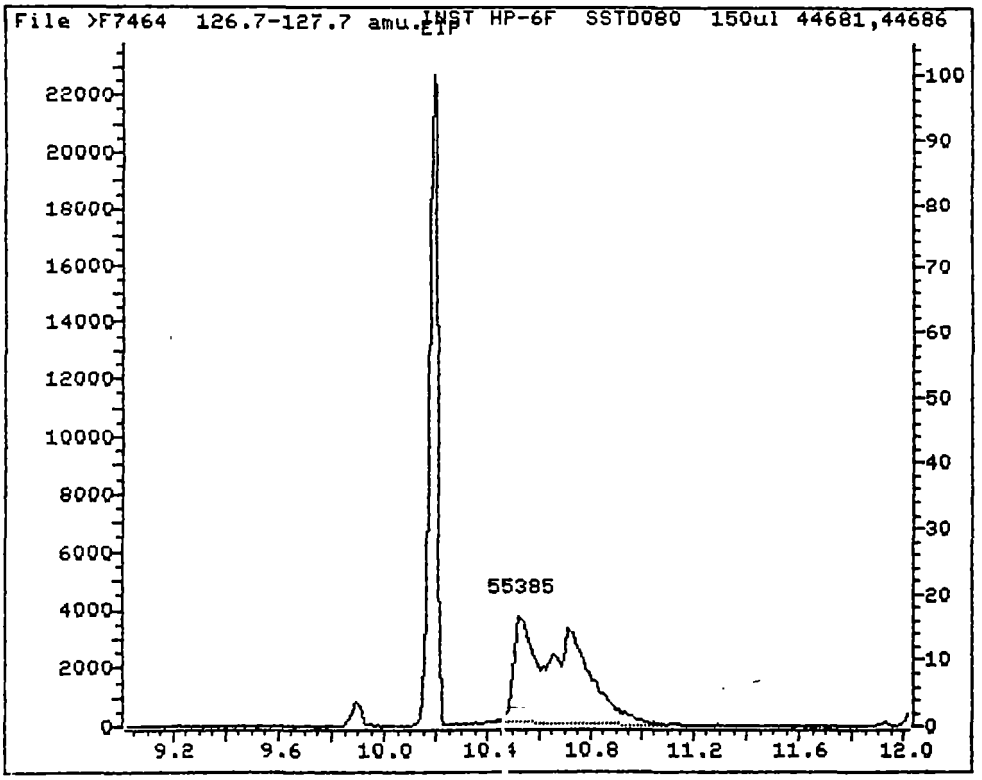
MS data file header from : >F7464

Sample: INST HP-6F SSTD080 Operator: TERMINAL62MS 5/18/92 14:33
Misc : 150ul 44681,44686 IS=40 44502(BTL# 3
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BNAME6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	1.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	9.0	0.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF DBT56, Case 18050" 5/19/92

RD 06-01-92



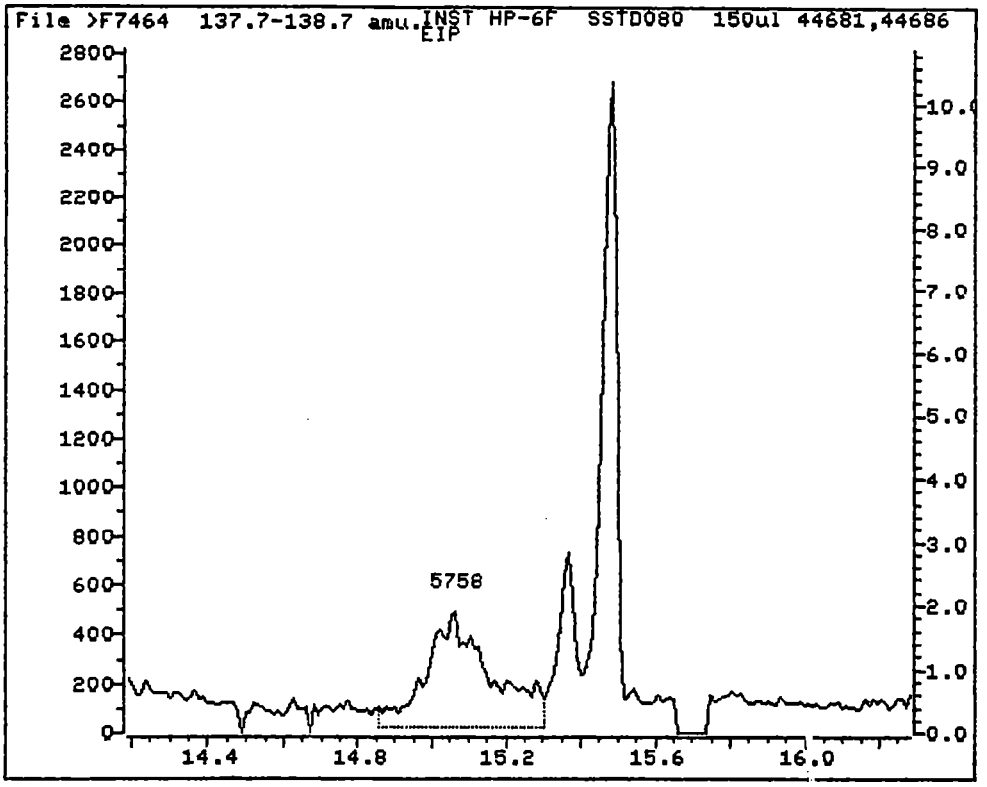
Data File: >F7464::DH
Name: INST HP-6F SSTD080
Misc: 150ul 44681,44686
Quant Time: 920518 15:16
Injected at: 920518 14:33

Quant Output File: ^F7464::QT
IS=40 44502(BTL# 3
Quant ID File: NCBID6::D1
Last Calibration: 920516 13:48

Compound No: 26
Compound Name: 4-CHLOROANILINE
Scan Number: 782
Retention Time: 10.52 min.
Quant Ion: 127.0
Area: 55385M
Concentration: 127.90 ng
q-value: 97

This report was produced by QAREA on: 920518 15:52

"COPY
ORIGINAL IS FILED IN CSF DBT56 pb 05/19/92
Case 18050
RD 06-01-92



Data File: >F7464::DH
Name: INST HP-6F SSTD080
Misc: 150ul 44681,44686
Quant Time: 920518 15:16
Injected at: 920518 14:33

Quant Output File: ^F7464::QT
IS=40 44502(BTL# 3
Quant ID File: NCBID6::D1
Last Calibration: 920516 13:48

Compound No: 39
Compound Name: 3-NITROANILINE
Scan Number: 1217
Retention Time: 15.07 min.
Quant Ion: 138.0
Area: 5758M
Concentration: 16.90 ng
q-value: 35

This report was produced by QAREA on: 920520 09:44

"COPY
ORIGINAL IS FILED IN CSF DBT56", Case 18050
RD 06-01-92
JBD 5/20/92

QUANT REPORT

Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920518 15:16
Output File: ^F7464::QT Injected at: 920518 14:33
Data File: >F7464::DH Dilution Factor: 1.00000
Name: INST HP-6F SSTD080
Misc: 150ul 44681,44686 IS=40 44502(BTL# 3

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920516 13:48

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4 (IS)	7.02	152.0	59357	40.00	ng	86
2)	PHENOL	6.56	94.0	183030	65.27	ng	100
3)	BIS(2-CHLOROETHYL)ETHER	6.69	93.0	149027	65.85	ng	78
4)	2-CHLOROPHENOL	6.66	128.0	134106	63.61	ng	82
5)	1,3-DICHLOROBENZENE	6.93	146.0	160162	63.79	ng	92
6)	1,4-DICHLOROBENZENE	7.06	146.0	154250	62.10	ng	89
7)	1,2-DICHLOROBENZENE	7.48	146.0	136108	60.12	ng	89
8)	2-METHYLPHENOL	7.86	108.0	123692	63.56	ng	83
9)	2,2'-OXYBIS(1-CHLOROPROPANE)	7.88	45.0	273517	61.11	ng	100
10)	4-METHYLPHENOL	8.25	108.0	131194	64.28	ng	96
11)	N-NITROSO-DI-n-PROPYLAMINE	8.28	70.0	134280	66.46	ng	52
12)	HEXACHLOROETHANE	8.14	117.0	77526	63.95	ng	80
13)	2-FLUOROPHENOL (SS)	4.66	112.0	127672	64.86	ng	64
14)	PHENOL-d5 (SS)	6.53	99.0	181725	68.04	ng	70
15)	2-CHLOROPHENOL-d4 (SS)	6.63	132.0	144738	65.73	ng	71
16)	1,2-DICHLOROBENZENE-d4 (SS)	7.45	152.0	96708	62.94	ng	82
17)	*NAPHTHALENE-d8 (IS)	10.13	136.0	204461	40.00	ng	100
18)	NITROBENZENE	8.52	77.0	187097	70.05	ng	65
19)	ISOPHORONE	9.11	82.0	388344	71.70	ng	89
20)	2-NITROPHENOL	9.29	139.0	96848	71.81	ng	64
21)	2,4-DIMETHYLPHENOL	9.54	107.0	154579	72.39	ng	85
22)	BIS(2-CHLOROETHOXY)METHANE	9.81	93.0	212348	69.25	ng	77
23)	2,4-DICHLOROPHENOL	9.89	162.0	140511	70.56	ng	92
24)	1,2,4-TRICHLOROBENZENE	10.05	180.0	146148	63.71	ng	96
25)	NAPHTHALENE	10.19	128.0	395960	64.74	ng	100
26)	4-CHLOROANILINE	10.52	127.0	55385M	127.90	ng	97
27)	HEXACHLOROBUTADIENE	10.69	225.0	87255	57.79	ng	81
28)	4-CHLORO-3-METHYLPHENOL	11.93	107.0	161332	69.30	ng	100
29)	2-METHYLNAPHTHALENE	12.03	142.0	276282	68.13	ng	94
30)	NITROBENZENE-d5 (SS)	8.47	82.0	192316	73.25	ng	83
31)	*ACENAPHTHENE-d10 (IS)	14.94	164.0	131371	40.00	ng	91
32)	HEXACHLOROCYCLOPENTADIENE	12.65	237.0	101777	58.97	ng	94
33)	2,4,6-TRICHLOROPHENOL	12.96	196.0	111257	63.10	ng	97
34)	2,4,5-TRICHLOROPHENOL	13.05	196.0	114740	61.50	ng	95
35)	2-CHLORONAPHTHALENE	13.36	162.0	285254	63.40	ng	94
36)	2-NITROANILINE	13.91	65.0	126202	61.29	ng	70
37)	DIMETHYL PHTHALATE	14.59	163.0	368731	64.14	ng	55
38)	ACENAPHTHYLENE	14.50	152.0	465368	62.56	ng	87
39)	3-NITROANILINE	15.07	138.0	5758M	16.90	ng	35
40)	ACENAPHTHENE	15.03	153.0	278680	60.70	ng	84
41)	2,4-DINITROPHENOL	15.37	184.0	63344	71.91	ng	100

* Compound is ISTD

"COPY
ORIGINAL IS FILED IN CSF DBT56," Case 18056 5/20/92
ED 06-01-92

QUANT REPORT

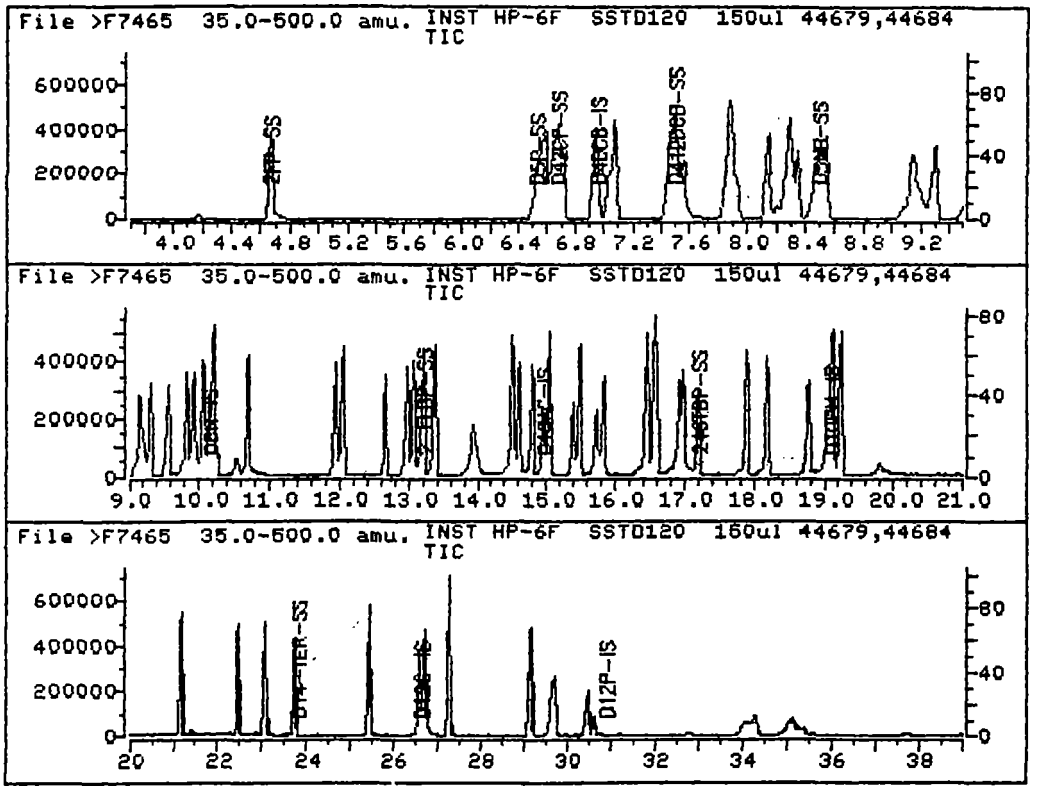
Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920518 15:16
Output File: ^F7464::QT Injected at: 920518 14:33
Data File: >F7464::DH Dilution Factor: 1.00000
Name: INST HP-6F SSTD080
Misc: 150ul 44681,44686 IS=40 44502(BTL# 3

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920516 13:48

	Compound	R.T.	Q ion	Area	Conc	Units	q
42)	4-NITROPHENOL	15.70	109.0	48242	70.63	ng	77
43)	DIBENZOFURAN	15.48	168.0	423785	64.13	ng	86
44)	2,4-DINITROTOLUENE	15.82	165.0	151044	70.25	ng	78
45)	2,6-DINITROTOLUENE	14.77	165.0	101964	66.99	ng	81
46)	DIETHYLPHTHALATE	16.58	149.0	351964	64.83	ng	90
47)	4-CHLOROPHENYL-PHENYLETHER	16.55	204.0	147890	60.06	ng	100
48)	FLUORENE	16.45	166.0	321716	63.26	ng	99
49)	4-NITROANILINE	16.86	138.0	18613	44.33	ng	79
50)	2-FLUOROBIPHENYL (SS)	13.19	172.0	304770	63.25	ng	100
51)	2,4,6-TRIBROMOPHENOL (SS)	17.19	329.7	65515	47.44	ng	100
52)	*PHENANTHRENE-d10 (IS)	19.02	188.0	240521	40.00	ng	100
53)	4,6-DINITRO-2-METHYLPHENOL	16.90	198.0	86749	69.93	ng	100
54)	N-NITROSODIPHENYLAMINE	16.96	169.0	177239	55.82	ng	84
55)	4-BROMOPHENYL-PHENYLETHER	17.89	248.0	103736	58.09	ng	90
56)	HEXACHLOROBENZENE	18.18	284.0	133679	53.52	ng	100
57)	PENTACHLOROPHENOL	18.76	266.0	84981	54.75	ng	100
58)	PHENANTHRENE	19.09	178.0	475727	63.25	ng	83
59)	ANTHRACENE	19.22	178.0	469379	63.01	ng	86
60)	CARBAZOLE	19.77	167.0	93602	33.19	ng	73
61)	DI-N-BUTYLPHTHALATE	21.15	149.0	685455	63.99	ng	100
62)	FLUORANTHENE	22.45	202.0	508744	62.29	ng	93
63)	*CHRYSENE-d12 (IS)	26.58	240.0	162513	40.00	ng	100
64)	PYRENE	23.05	202.0	519863	69.41	ng	97
65)	BUTYLBENZYLPHTHALATE	25.39	149.0	306902	80.91	ng	72
66)	3,3'-DICHLOROBENZIDINE	26.69	252.0	30573	73.16	ng	100
67)	BENZO(a)ANTHRACENE	26.54	228.0	357057	67.81	ng	86
68)	BIS(2-ETHYLHEXYL)PHTHALATE	27.24	149.0	420561	82.08	ng	93
69)	CHRYSENE	26.67	228.0	327780	64.28	ng	91
70)	TERPHENYL-d14 (SS)	23.71	244.0	319191	68.55	ng	100
71)	*PERYLENE-d12 (IS)	30.58	264.0	95009	40.00	ng	100
72)	DI-N-OCTYLPHTHALATE	29.09	149.0	619182	95.31	ng	100
73)	BENZO(b)FLUORANTHENE	29.58	252.0	266683	66.85	ng	100
74)	BENZO(k)FLUORANTHENE	29.66	252.0	211573	64.63	ng	100
75)	BENZO(a)PYRENE	30.44	252.0	206763	66.75	ng	95
76)	INDENO(1,2,3-cd)PYRENE	34.02	276.0	143216	66.15	ng	100
77)	DIBENZO(a,h)ANTHRACENE	34.20	278.0	140421	64.88	ng	100
78)	BENZO(g,h,i)PERYLENE	35.02	276.0	146370	67.71	ng	100

* Compound is ISTD

"COPY
ORIGINAL IS FILED IN CSF DBT56" Case
RD 06-01-92

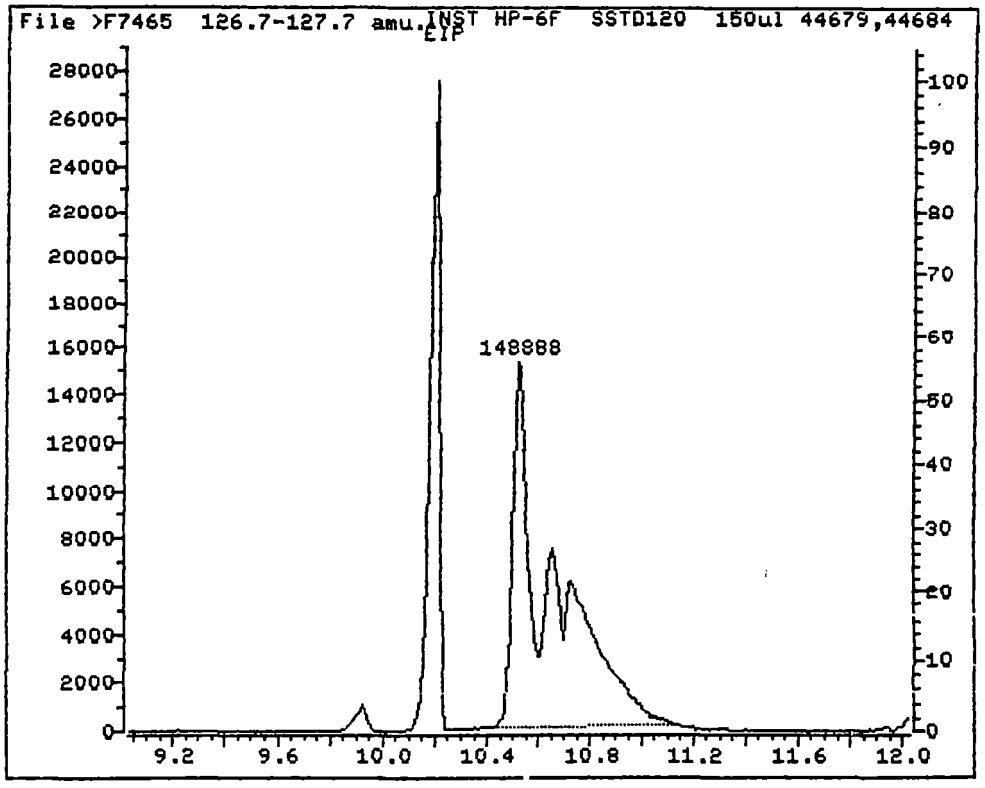


MS data file header from : >F7465

Sample: INST HP-6F SSTD120 Operator: TERMINAL62MS 5/18/92 15:27
Misc : 150ul 44679,44684 IS=40 44502(BTL# 4
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BNAME6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	1.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	9.0	0.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF DBT56, Case 180 JB 05/19/92
RD 06-01-92

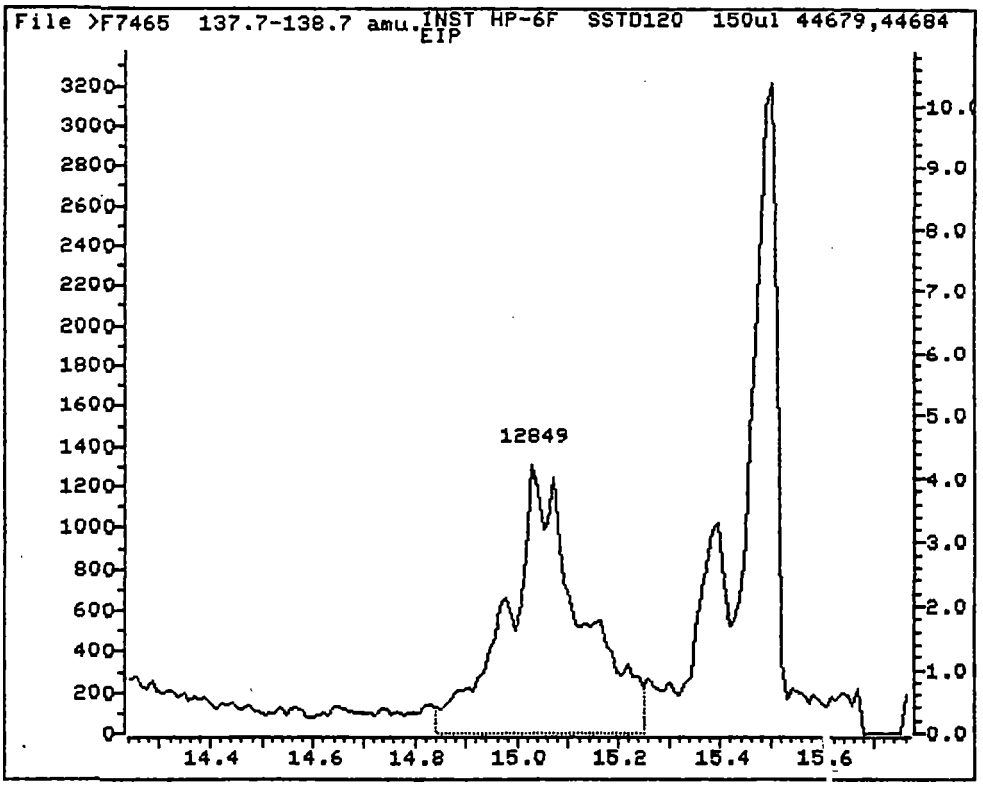


Data File: >F7465::DH
Quant Output File: ^F7465::QT
Name: INST HP-6F SSTD120
Misc: 150ul 44679,44684
IS=40 44502(BTL# 4
Quant Time: 920518 16:10
Quant ID File: NCBID6::D1
Injected at: 920518 15:27
Last Calibration: 920516 13:48

Compound No: 26
Compound Name: 4-CHLOROANILINE
Scan Number: 780
Retention Time: 10.52 min.
Quant Ion: 127.0
Area: 148888M
Concentration: 345.80 ng
q-value: 94

This report was produced by QAREA on: 920518 16:38

"COPY
ORIGINAL IS FILED IN CSF DBTS6, Case 18050
RD 06-01-92
B005/19/92



Data File: >F7465::DH
Quant Output File: ^F7465::QT
Name: INST HP-6F SSTD120
Misc: 150ul 44679,44684
IS=40 44502(BTL# 4
Quant Time: 920518 16:10
Quant ID File: NCBID6::D1
Injected at: 920518 15:27
Last Calibration: 920516 13:48

Compound No: 39
Compound Name: 3-NITROANILINE
Scan Number: 1211
Retention Time: 15.03 min.
Quant Ion: 138.0
Area: 12849M
Concentration: 37.44 ng
q-value: 45

This report was produced by QAREA on: 920520 09:54

"COPY
ORIGINAL IS FILED IN CSF DBI56", Case 18059 JB 05/20/92
RD 06-01-92

QUANT REPORT

Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920518 16:10
Output File: ^F7465::QT Injected at: 920518 15:27
Data File: >F7465::DH Dilution Factor: 1.00000
Name: INST HP-6F SSTD120
Misc: 150ul 44679,44684 IS=40 44502(BTL# 4

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/9T
Last Calibration: 920516 13:48

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4 (IS)	7.03	152.0	58874	40.00	ng	85
2)	PHENOL	6.59	94.0	253618	91.18	ng	100
3)	BIS(2-CHLOROETHYL)ETHER	6.71	93.0	204609	91.15	ng	80
4)	2-CHLOROPHENOL	6.68	128.0	178582	85.40	ng	81
5)	1,3-DICHLOROBENZENE	6.95	146.0	217722	87.43	ng	91
6)	1,4-DICHLOROBENZENE	7.07	146.0	204829	83.14	ng	90
7)	1,2-DICHLOROBENZENE	7.49	146.0	174224	77.58	ng	90
8)	2-METHYLPHENOL	7.88	108.0	160023	82.91	ng	79
9)	2,2'-OXYBIS(1-CHLOROPROPANE)	7.90	45.0	391465	88.18	ng	100
10)	4-METHYLPHENOL	8.28	108.0	183278	90.54	ng	97
11)	N-NITROSO-DI-n-PROPYLAMINE	8.35	70.0	187751	93.68	ng	51
12)	HEXACHLOROETHANE	8.15	117.0	106974	88.97	ng	86
13)	2-FLUOROPHENOL (SS)	4.67	112.0	179837	92.12	ng	65
14)	PHENOL-d5 (SS)	6.56	99.0	259117	97.81	ng	67
15)	2-CHLOROPHENOL-d4 (SS)	6.63	132.0	201572	92.30	ng	72
16)	1,2-DICHLOROBENZENE-d4 (SS)	7.46	152.0	129007	84.66	ng	82
17)	*NAPHTHALENE-d8 (IS)	10.14	136.0	203287	40.00	ng	100
18)	NITROBENZENE	8.54	77.0	273473	102.98	ng	63
19)	ISOPHORONE	9.14	82.0	598762	111.19	ng	88
20)	2-NITROPHENOL	9.30	139.0	139684	104.17	ng	66
21)	2,4-DIMETHYLPHENOL	9.56	107.0	222590	104.84	ng	85
22)	BIS(2-CHLOROETHOXY)METHANE	9.83	93.0	319898	104.93	ng	76
23)	2,4-DICHLOROPHENOL	9.92	162.0	199642	100.83	ng	91
24)	1,2,4-TRICHLOROBENZENE	10.06	180.0	202150	88.63	ng	96
25)	NAPHTHALENE	10.21	128.0	533845	87.79	ng	100
26)	4-CHLOROANILINE	10.52	127.0	148888M	345.80	ng	94
27)	HEXACHLOROBUTADIENE	10.69	225.0	116948	77.90	ng	81
28)	4-CHLORO-3-METHYLPHENOL	11.94	107.0	233911	101.06	ng	100
29)	2-METHYLNAPHTHALENE	12.06	142.0	380760	94.44	ng	95
30)	NITROBENZENE-d5 (SS)	8.49	82.0	285517	109.38	ng	82
31)	*ACENAPHTHENE-d10 (IS)	14.95	164.0	132345	40.00	ng	93
32)	HEXACHLOROCYCLOPENTADIENE	12.65	237.0	147680	84.93	ng	96
33)	2,4,6-TRICHLOROPHENOL	12.98	196.0	169863	95.64	ng	99
34)	2,4,5-TRICHLOROPHENOL	13.07	196.0	153772	81.82	ng	99
35)	2-CHLORONAPHTHALENE	13.38	162.0	404674	89.28	ng	93
36)	2-NITROANILINE	13.93	65.0	210935	101.68	ng	69
37)	DIMETHYL PHTHALATE	14.61	163.0	529289	91.39	ng	62
38)	ACENAPHTHYLENE	14.52	152.0	648457	86.54	ng	85
39)	3-NITROANILINE	15.03	138.0	12849M	37.44	ng	45
40)	ACENAPHTHENE	15.05	153.0	393226	85.02	ng	83
41)	2,4-DINITROPHENOL	15.40	184.0	96761	109.04	ng	100

* Compound is ISTD

"COPY
ORIGINAL IS FILED IN CSF DB156 Case 18050
RD 06-01-92

JAB 05/19/92

QUANT REPORT

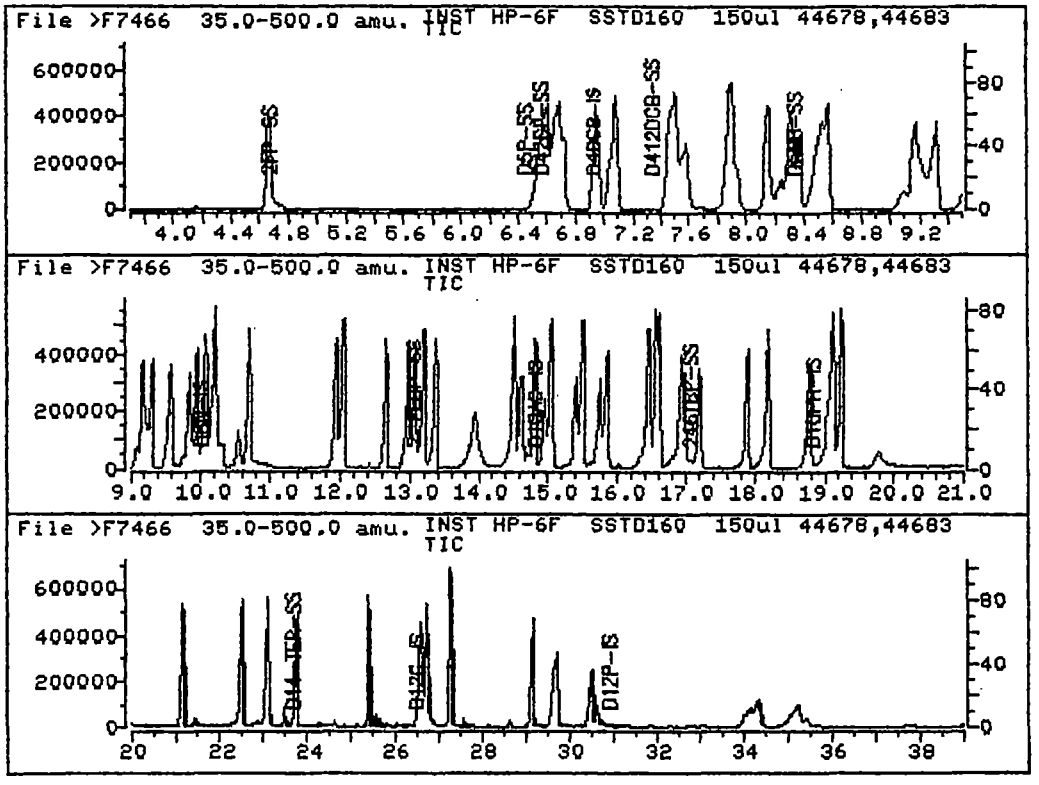
Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920518 16:10
Output File: ^F7465::QT Injected at: 920518 15:27
Data File: >F7465::DH Dilution Factor: 1.00000
Name: INST HP-6F SSTD120
Misc: 150ul 44679,44684 IS=40 44502(BTL# 4

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920516 13:48

	Compound	R.T.	Q ion	Area	Conc	Units	q
42)	4-NITROPHENOL	15.73	109.0	75380	109.55	ng	76
43)	DIBENZOFURAN	15.50	168.0	616310	92.57	ng	84
44)	2,4-DINITROTOLUENE	15.85	165.0	227239	104.91	ng	81
45)	2,6-DINITROTOLUENE	14.80	165.0	151066	98.52	ng	79
46)	DIETHYLPHTHALATE	16.60	149.0	513181	93.83	ng	89
47)	4-CHLOROPHENYL-PHENYLETHER	16.56	204.0	208520	84.06	ng	100
48)	FLUORENE	16.45	166.0	455468	88.91	ng	98
49)	4-NITROANILINE	16.90	138.0	30232	71.47	ng	76
50)	2-FLUOROBIPHENYL (SS)	13.21	172.0	432731	89.14	ng	100
51)	2,4,6-TRIBROMOPHENOL (SS)	17.20	329.7	95441	68.60	ng	100
52)	*PHENANTHRENE-d10 (IS)	19.03	188.0	249149	40.00	ng	100
53)	4,6-DINITRO-2-METHYLPHENOL	16.93	198.0	133252	103.70	ng	100
54)	N-NITROSODIPHENYLAMINE	16.98	169.0	262292	79.75	ng	85
55)	4-BROMOPHENYL-PHENYLETHER	17.90	248.0	154107	83.30	ng	93
56)	HEXACHLOROBENZENE	18.19	284.0	193624	74.84	ng	100
57)	PENTACHLOROPHENOL	18.78	266.0	129556	80.58	ng	100
58)	PHENANTHRENE	19.12	178.0	720872	92.52	ng	82
59)	ANTHRACENE	19.24	178.0	643469	83.40	ng	84
60)	CARBAZOLE	19.78	167.0	169640	58.08	ng	73
61)	DI-N-BUTYLPHTHALATE	21.17	149.0	927458	83.59	ng	100
62)	FLUORANTHENE	22.47	202.0	731448	86.45	ng	95
63)	*CHRYSENE-d12 (IS)	26.60	240.0	171036	40.00	ng	100
64)	PYRENE	23.07	202.0	745799	94.62	ng	97
65)	BUTYLBENZYLPHTHALATE	25.40	149.0	442960	110.96	ng	67
66)	3,3'-DICHLOROBENZIDINE	26.71	252.0	58661	133.39	ng	100
67)	BENZO(a)ANTHRACENE	26.55	228.0	546096	98.54	ng	86
68)	BIS(2-ETHYLHEXYL)PHTHALATE	27.26	149.0	606533	112.47	ng	94
69)	CHRYSENE	26.69	228.0	488671	91.06	ng	91
70)	TERPHENYL-d14 (SS)	23.72	244.0	455625	92.97	ng	100
71)	*PERYLENE-d12 (IS)	30.59	264.0	107813	40.00	ng	100
72)	DI-N-OCTYLPHTHALATE	29.11	149.0	1006919	136.59	ng	100
73)	BENZO(b)FLUORANTHENE	29.63	252.0	515498	113.87	ng	100
74)	BENZO(k)FLUORANTHENE	29.69	252.0	268362	72.25	ng	100
75)	BENZO(a)PYRENE	30.47	252.0	347337	98.82	ng	96
76)	INDENO(1,2,3-cd)PYRENE	34.08	276.0	255959	104.18	ng	100
77)	DIBENZO(a,h)ANTHRACENE	34.28	278.0	245184	99.83	ng	100
78)	BENZO(g,h,i)PERYLENE	35.12	276.0	249839	101.85	ng	100

* Compound is ISTD

"COPY
ORIGINAL IS FILED IN CSF DBT56," Case 18050
RD 06-01-92 JAB 05/19/92

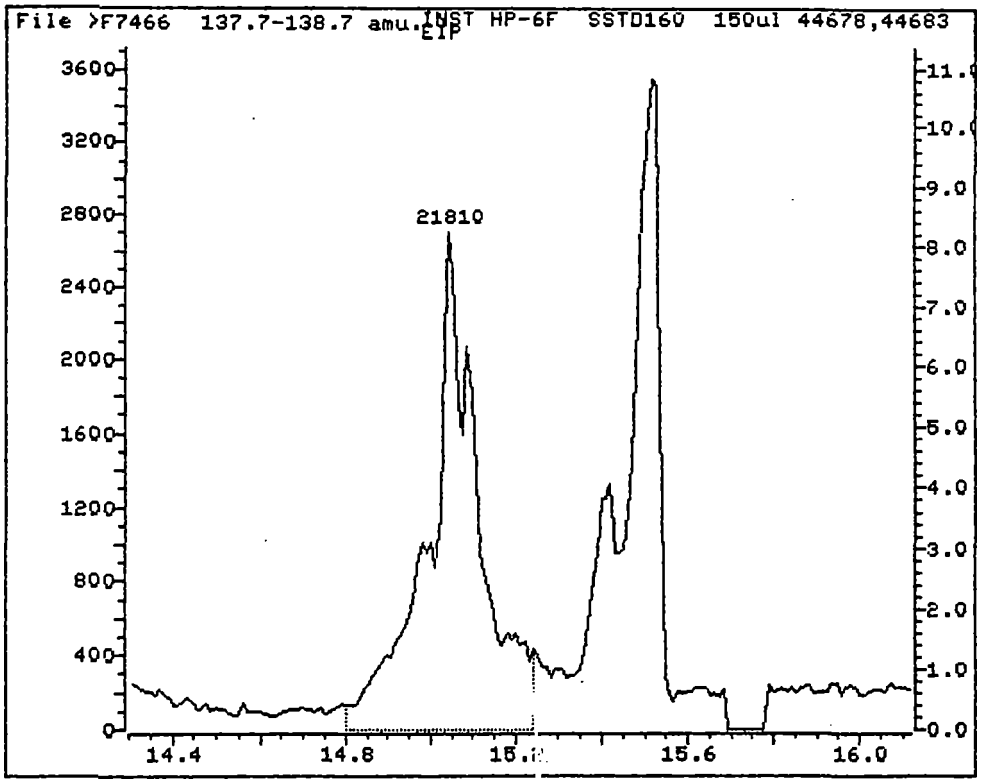


MS data file header from : >F7466

Sample: INST HP-6F SSTD160 Operator: TERMINAL62MS 5/18/92 16:21
Misc : 150ul 44678,44683 IS=40 44502(BTL# 5
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BNAME6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	1.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	9.0	0.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF DBT56, Case 18050
RD 06-01-92
ICP 5-27-92

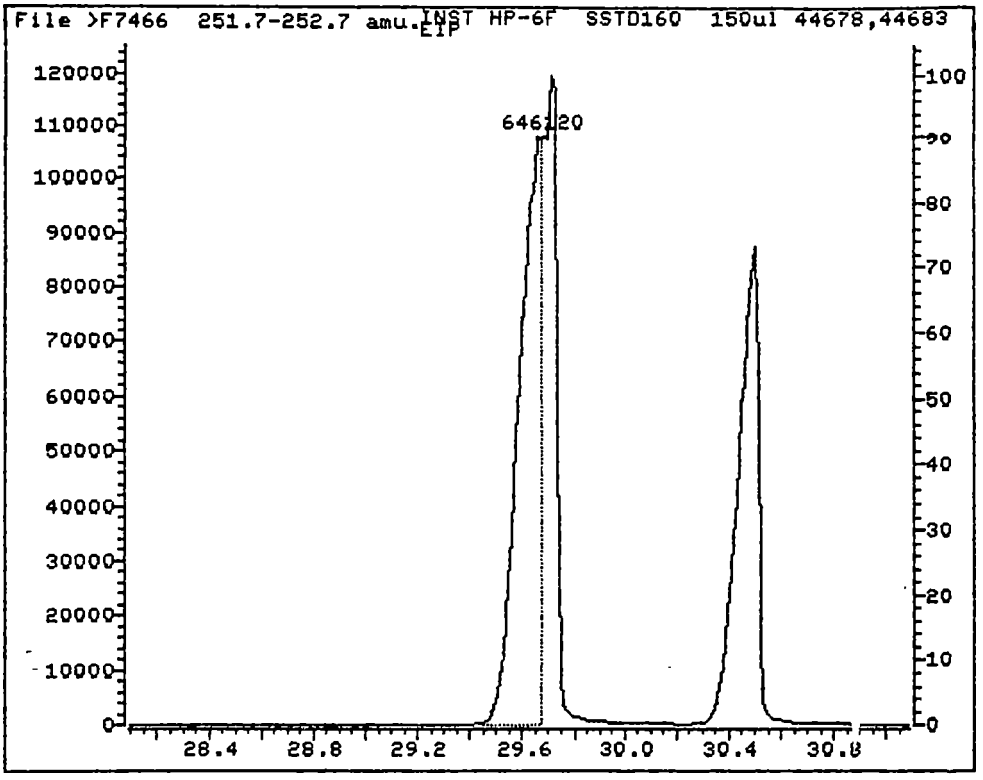


Data File: >F7466::DH
Quant Output File: ^F7466::QT
Name: INST HP-6F SSTD160
Misc: 150ul 44678,44683
IS=40 44502(BTL# 5
Quant Time: 920518 17:04
Quant ID File: NCBID6::D1
Injected at: 920518 16:21
Last Calibration: 920516 13:48

Compound No: 39
Compound Name: 3-NITROANILINE
Scan Number: 1208
Retention Time: 15.04 min.
Quant Ion: 138.0
Area: 21810M
Concentration: 65.87 ng
q-value: 37

This report was produced by QAREA on: 920520 10:00

"COPY
ORIGINAL IS FILED IN CSF DB156 Case 18050
RD 06-01-92
JB 05/20/92



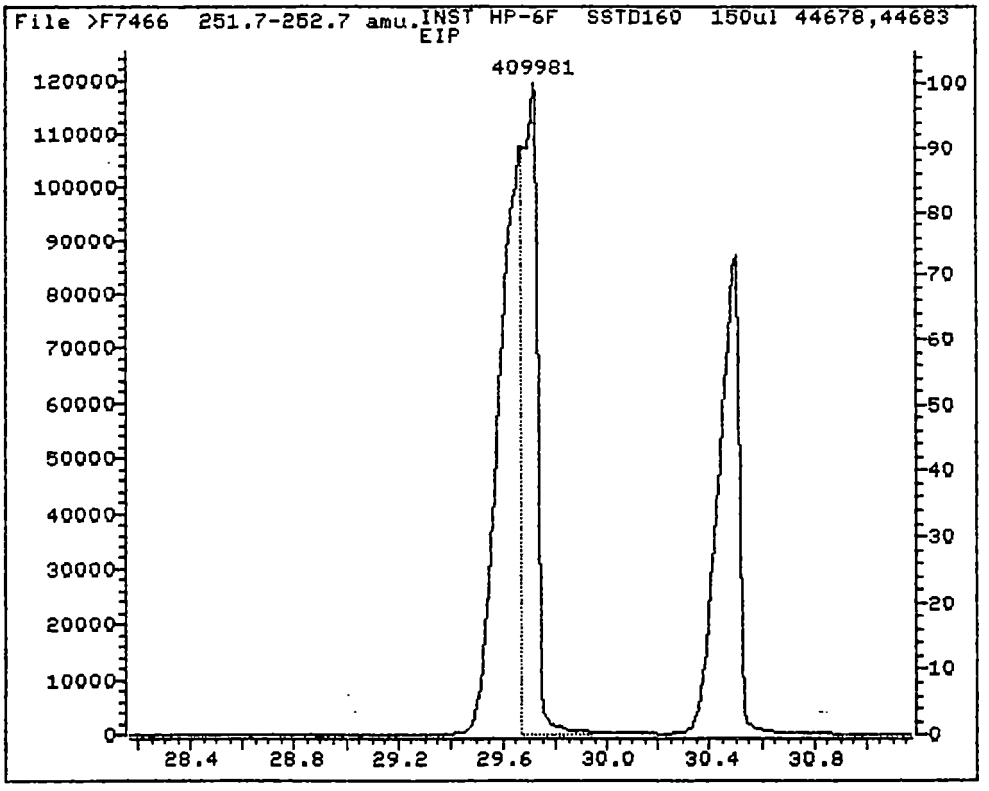
Data File: >F7466::DH
Name: INST HP-6F SSTD160
Misc: 150ul 44678,44683
Quant Time: 920518 17:04
Injected at: 920518 16:21

Quant Output File: ^F7466::QT
IS=40 44502(BTL# 5
Quant ID File: NCBID6::D1
Last Calibration: 920516 13:48

Compound No: 73
Compound Name: BENZO(b)FLUORANTHENE
Scan Number: 2602
Retention Time: 29.67 min.
Quant Ion: 252.0
Area: 646120M
Concentration: 133.86 ng
q-value: 100

This report was produced by QAREA on: 920518 17:48

"COPY
ORIGINAL IS FILED IN CSF DBT56, Case 18050 JBB 05/19/92
RD 06-01-92



Data File: >F7466::DH
Name: INST HP-6F SSTD160
Misc: 150ul 44678,44683
Quant Time: 920518 17:04
Injected at: 920518 16:21

Quant Output File: ^F7466::QT
IS=40 44502(BTL# 5
Quant ID File: NCBID6::D1
Last Calibration: 920516 13:48

Compound No: 74
Compound Name: BENZO(k)FLUORANTHENE
Scan Number: 2606
Retention Time: 29.71 min.
Quant Ion: 252.0
Area: 409981M
Concentration: 103.51 ng
q-value: 100

This report was produced by QAREA on: 920518 17:54

"COPY
ORIGINAL IS FILED IN CSF DBT56,"
Case 150/50
RD 06-01-92
BB 05/19/92

QUANT REPORT

Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920518 17:04
Output File: ^F7466::QT Injected at: 920518 16:21
Data File: >F7466::DH Dilution Factor: 1.00000
Name: INST HP-6F SSTD160
Misc: 150ul 44678,44683 IS=40 44502(BTL# 5

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920516 13:48

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4 (IS)	7.03	152.0	57653	40.00	ng	84
2)	PHENOL	6.60	94.0	310671	114.06	ng	100
3)	BIS(2-CHLOROETHYL)ETHER	6.72	93.0	201061	91.46	ng	76
4)	2-CHLOROPHENOL	6.69	128.0	220333	107.60	ng	78
5)	1,3-DICHLOROBENZENE	6.95	146.0	267773	109.81	ng	90
6)	1,4-DICHLOROBENZENE	7.08	146.0	248565	103.02	ng	90
7)	1,2-DICHLOROBENZENE	7.50	146.0	200770	91.30	ng	89
8)	2-METHYLPHENOL	7.90	108.0	208014	110.05	ng	81
9)	2,2'-OXYBIS(1-CHLOROPROPANE)	7.91	45.0	385821	88.75	ng	100
10)	4-METHYLPHENOL	8.31	108.0	203418	102.62	ng	98
11)	N-NITROSO-DI-n-PROPYLAMINE	8.37	70.0	174652	88.99	ng	51
12)	HEXACHLOROETHANE	8.15	117.0	144226	122.49	ng	80
13)	2-FLUOROPHENOL (SS)	4.67	112.0	227644	119.07	ng	63
14)	PHENOL-d5 (SS)	6.57	99.0	323813	124.82	ng	65
15)	2-CHLOROPHENOL-d4 (SS)	6.65	132.0	237765	111.17	ng	71
16)	1,2-DICHLOROBENZENE-d4 (SS)	7.46	152.0	155307	104.07	ng	83
17)	*NAPHTHALENE-d8 (IS)	10.16	136.0	194048	40.00	ng	100
18)	NITROBENZENE	8.57	77.0	398845	157.35	ng	61
19)	ISOPHORONE	9.17	82.0	761880	148.22	ng	88
20)	2-NITROPHENOL	9.32	139.0	176397	137.81	ng	58
21)	2,4-DIMETHYLPHENOL	9.58	107.0	296803	146.45	ng	86
22)	BIS(2-CHLOROETHOXY)METHANE	9.85	93.0	326306	112.13	ng	74
23)	2,4-DICHLOROPHENOL	9.95	162.0	249502	132.01	ng	90
24)	1,2,4-TRICHLOROBENZENE	10.09	180.0	282908	129.94	ng	97
25)	NAPHTHALENE	10.22	128.0	652890	112.48	ng	100
26)	4-CHLOROANILINE	10.54	127.0	119506	290.78	ng	94
27)	HEXACHLOROBUTADIENE	10.71	225.0	161300	112.56	ng	84
28)	4-CHLORO-3-METHYLPHENOL	11.96	107.0	289657	131.10	ng	100
29)	2-METHYLNAPHTHALENE	12.07	142.0	521428	135.48	ng	93
30)	NITROBENZENE-d5 (SS)	8.51	82.0	354910	142.43	ng	82
31)	*ACENAPHTHENE-d10 (IS)	14.96	164.0	127686	40.00	ng	93
32)	HEXACHLOROCYCLOPENTADIENE	12.67	237.0	213812	127.45	ng	96
33)	2,4,6-TRICHLOROPHENOL	13.00	196.0	220868	128.89	ng	99
34)	2,4,5-TRICHLOROPHENOL	13.08	196.0	185044	102.05	ng	95
35)	2-CHLORONAPHTHALENE	13.39	162.0	414538	94.80	ng	93
36)	2-NITROANILINE	13.95	65.0	282170	140.98	ng	67
37)	DIMETHYL PHTHALATE	14.63	163.0	545360	97.60	ng	58
38)	ACENAPHTHYLENE	14.53	152.0	777166	107.50	ng	85
39)	3-NITROANILINE	15.04	138.0	21810M	65.87	ng	37
40)	ACENAPHTHENE	15.06	153.0	483779	108.42	ng	79
41)	2,4-DINITROPHENOL	15.41	184.0	116658	136.26	ng	100

* Compound is ISTD

"COPY
ORIGINAL IS FILED IN CSF DBT 58, Case 18050
RD 06-01-92 JB 05/19/92

QUANT REPORT

Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920518 17:04
Output File: ^F7466::QT Injected at: 920518 16:21
Data File: >F7466::DH Dilution Factor: 1.00000
Name: INST HP-6F SSTD160
Misc: 150ul 44678,44683 IS=40 44502(BTL# 5

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920516 13:48

	Compound	R.T.	Q ion	Area	Conc	Units	q
42)	4-NITROPHENOL	15.77	109.0	86207	129.86	ng	74
43)	DIBENZOFURAN	15.52	168.0	878848	136.83	ng	86
44)	2,4-DINITROTOLUENE	15.87	165.0	332897	159.29	ng	81
45)	2,6-DINITROTOLUENE	14.82	165.0	197700	133.64	ng	78
46)	DIETHYLPHTHALATE	16.63	149.0	755693	143.21	ng	89
47)	4-CHLOROPHENYL-PHENYLETHER	16.58	204.0	200542	83.79	ng	100
48)	FLUORENE	16.47	166.0	553371	111.96	ng	98
49)	4-NITROANILINE	16.91	138.0	33867	82.98	ng	84
50)	2-FLUOROBIPHENYL (SS)	13.23	172.0	532811	113.76	ng	100
51)	2,4,6-TRIBROMOPHENOL (SS)	17.22	329.7	123882	92.29	ng	100
52)	*PHENANTHRENE-d10 (IS)	19.04	188.0	236939	40.00	ng	100
53)	4,6-DINITRO-2-METHYLPHENOL	16.94	198.0	163555	133.84	ng	100
54)	N-NITROSODIPHENYLAMINE	17.00	169.0	250339	80.04	ng	85
55)	4-BROMOPHENYL-PHENYLETHER	17.91	248.0	149413	84.93	ng	89
56)	HEXACHLOROBENZENE	18.21	284.0	277546	112.81	ng	100
57)	PENTACHLOROPHENOL	18.79	266.0	167666	109.65	ng	100
58)	PHENANTHRENE	19.13	178.0	903863	121.98	ng	83
59)	ANTHRACENE	19.25	178.0	751753	102.45	ng	86
60)	CARBAZOLE	19.80	167.0	229080	82.47	ng	74
61)	DI-N-BUTYLPHTHALATE	21.17	149.0	907668	86.02	ng	100
62)	FLUORANTHENE	22.48	202.0	885774	110.08	ng	94
63)	*CHRYSENE-d12 (IS)	26.61	240.0	170632	40.00	ng	100
64)	PYRENE	23.09	202.0	916280	116.52	ng	97
65)	BUTYLBENZYLPHTHALATE	25.41	149.0	431713	108.40	ng	70
66)	3,3'-DICHLOROBENZIDINE	26.72	252.0	86360	196.83	ng	100
67)	BENZO(a)ANTHRACENE	26.58	228.0	699100	126.45	ng	85
68)	BIS(2-ETHYLHEXYL)PHTHALATE	27.26	149.0	584467	108.64	ng	94
69)	CHRYSENE	26.71	228.0	602324	112.51	ng	90
70)	TERPHENYL-d14 (SS)	23.74	244.0	573162	117.23	ng	100
71)	*PERYLENE-d12 (IS)	30.61	264.0	114957	40.00	ng	100
72)	DI-N-OCTYLPHTHALATE	29.13	149.0	994663	126.54	ng	100
73)	BENZO(b)FLUORANTHENE	29.67	252.0	646120M	133.86	ng	100
74)	BENZO(k)FLUORANTHENE	29.71	252.0	409981M	103.51	ng	100
75)	BENZO(a)PYRENE	30.50	252.0	477783	127.48	ng	95
76)	INDENO(1,2,3-cd)PYRENE	34.14	276.0	367466	140.27	ng	100
77)	DIBENZO(a,h)ANTHRACENE	34.35	278.0	356041	135.96	ng	100
78)	BENZO(g,h,i)PERYLENE	35.21	276.0	359269	137.36	ng	100

* Compound is ISTD

"COPY
ORIGINAL IS FILED IN CSF DBT56, Case 18050
RD 06-01-92
JB 05/19/92

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Instrument ID: HP-6F Calibration date: 05/22/92 Time: 0043

Lab File ID: F7526 Init. Calib. Date(s): 05/18/92 05/18/92

Init. Calib. Times: 1246 1621

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Phenol	1.584	1.529	0.800	3.5	25.0
bis(2-Chloroethyl)Ether	1.238	1.285	0.700	-3.8	25.0
2-Chlorophenol	1.159	1.205	0.800	-4.0	25.0
1,3-Dichlorobenzene	1.373	1.434	0.600	-4.4	25.0
1,4-Dichlorobenzene	1.335	1.432	0.500	-7.3	25.0
1,2-Dichlorobenzene	1.179	1.340	0.400	-13.7	25.0
2-Methylphenol	1.064	1.080	0.700	-1.5	25.0
2,2'-oxybis(1-Chloropropane)	2.278	2.096		8.0	
4-Methylphenol	1.124	1.087	0.600	3.3	25.0
N-Nitroso-Di-n-Propylamine	1.070	1.063	0.500	0.7	25.0
Hexachloroethane	0.680	0.722	0.300	-6.2	25.0
Nitrobenzene	0.476	0.422	0.200	11.3	25.0
Isophorone	0.958	0.853	0.400	11.0	25.0
2-Nitrophenol	0.236	0.239	0.100	-1.3	25.0
2,4-Dimethylphenol	0.384	0.337	0.200	12.2	25.0
bis(2-Chloroethoxy)Methane	0.513	0.511	0.300	0.4	25.0
2,4-Dichlorophenol	0.343	0.350	0.200	-2.0	25.0
1,2,4-Trichlorobenzene	0.369	0.390	0.200	-5.7	25.0
Naphthalene	0.974	1.037	0.700	-6.5	25.0
4-Chloroaniline	0.196	0.072		63.3	
Hexachlorobutadiene	0.219	0.259		-18.3	
4-Chloro-3-Methylphenol	0.397	0.375	0.200	5.5	25.0
2-Methylnaphthalene	0.696	0.686	0.400	1.4	25.0
Hexachlorocyclopentadiene	0.402	0.419		-4.2	
2,4,6-Trichlorophenol	0.438	0.458	0.200	-4.6	25.0
2,4,5-Trichlorophenol	0.417	0.491	0.200	-17.8	25.0
2-Chloronaphthalene	1.077	1.134	0.800	-5.3	25.0
2-Nitroaniline	0.501	0.368		26.6	
Dimethyl Phthalate	1.396	1.468		-5.2	
Acenaphthylene	1.808	1.832	1.300	-1.3	25.0
2,6-Dinitrotoluene	0.394	0.379	0.200	3.8	25.0
3-Nitroaniline	0.030	0.019		36.7	
Acenaphthene	1.095	1.135	0.800	-3.7	25.0
2,4-Dinitrophenol	0.231	0.173		25.1	
4-Nitrophenol	0.177	0.109		38.4	
Dibenzofuran	1.706	1.651	0.800	3.2	25.0
2,4-Dinitrotoluene	0.587	0.482	0.200	17.9	25.0

All other compounds must meet a minimum RRF of 0.010.

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Instrument ID: HP-6F Calibration date: 05/22/92 Time: 0043

Lab File ID: F7526 Init. Calib. Date(s): 05/18/92 05/18/92

Init. Calib. Times: 1246 1621

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Diethylphthalate	1.455	1.413		2.9	
4-Chlorophenyl-phenylether	0.558	0.621	0.400	-11.3	25.0
Fluorene	1.252	1.262	0.900	-0.8	25.0
4-Nitroaniline	0.072	0.061		15.3	
4,6-Dinitro-2-Methylphenol	0.176	0.185		-5.1	
N-Nitrosodiphenylamine (1)	0.387	0.256		33.8	25.0
4-Bromophenyl-phenylether	0.212	0.259	0.100	-22.2	25.0
Hexachlorobenzene	0.291	0.370	0.100	-27.2	25.0
Pentachlorophenol	0.174	0.192	0.050	-10.3	25.0
Phenanthrene	1.038	1.039	0.700	-0.1	25.0
Anthracene	0.959	0.910	0.700	5.1	25.0
Carbazole	0.260	0.218		16.2	
Di-n-Butylphthalate	1.409	1.659		-17.7	
Fluoranthene	1.047	1.014	0.600	3.2	25.0
Pyrene	1.656	1.769	0.600	-6.8	25.0
Butylbenzylphthalate	0.919	0.972		-5.8	
3,3'-Dichlorobenzidine	0.106	0.057		46.2	
Benzo(a)Anthracene	1.090	1.100	0.800	-0.9	25.0
Chrysene	1.006	1.094	0.700	-8.7	25.0
bis(2-Ethylhexyl)Phthalate	1.269	1.464		-15.4	
Di-n-Octyl Phthalate	2.933	2.383		18.8	
Benzo(b)Fluoranthene	1.434	1.231	0.700	14.2	25.0
Benzo(k)Fluoranthene	1.019	1.231	0.700	-20.8	25.0
Benzo(a)Pyrene	1.064	1.013	0.700	4.8	25.0
Indeno(1,2,3-cd)Pyrene	0.758	0.620	0.500	18.2	25.0
Dibenz(a,h)Anthracene	0.743	0.868	0.400	-16.8	25.0
Benzo(g,h,i)Perylene	0.770	0.923	0.500	-19.9	25.0
Nitrobenzene-d5	0.470	0.432	0.200	8.1	25.0
2-Fluorobiphenyl	1.197	1.308	0.700	-9.3	25.0
Terphenyl-d14	1.000	1.023	0.500	-2.3	25.0
Phenol-d5	1.564	1.550	0.800	0.9	25.0
2-Fluorophenol	1.107	1.134	0.600	-2.4	25.0
2,4,6-Tribromophenol	0.244	0.290		-18.8	
2-Chlorophenol-d4	1.240	1.315	0.800	-6.0	25.0
1,2-Dichlorobenzene-d4	0.827	0.903	0.400	-9.2	25.0

(1) Cannot be separated from Diphenylamine
All other compounds must meet a minimum RRF of 0.010.

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Instrument ID: HP-6F Calibration date: 05/22/92 Time: 1907

Lab File ID: F7543 Init. Calib. Date(s): 05/18/92 05/18/92

Init. Calib. Times: 1246 1621

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Phenol	1.584	1.512	0.800	4.5	25.0
bis(2-Chloroethyl)Ether	1.238	1.254	0.700	-1.3	25.0
2-Chlorophenol	1.159	1.155	0.800	0.3	25.0
1,3-Dichlorobenzene	1.373	1.416	0.600	-3.1	25.0
1,4-Dichlorobenzene	1.335	1.405	0.500	-5.2	25.0
1,2-Dichlorobenzene	1.179	1.307	0.400	-10.9	25.0
2-Methylphenol	1.064	1.049	0.700	1.4	25.0
2,2'-oxybis(1-Chloropropane)	2.278	2.230		2.1	
4-Methylphenol	1.124	1.090	0.600	3.0	25.0
N-Nitroso-Di-n-Propylamine	1.070	1.011	0.500	5.5	25.0
Hexachloroethane	0.680	0.682	0.300	-0.3	25.0
Nitrobenzene	0.476	0.421	0.200	11.6	25.0
Isophorone	0.958	0.859	0.400	10.3	25.0
2-Nitrophenol	0.236	0.239	0.100	-1.3	25.0
2,4-Dimethylphenol	0.384	0.347	0.200	9.6	25.0
bis(2-Chloroethoxy)Methane	0.513	0.516	0.300	-0.6	25.0
2,4-Dichlorophenol	0.343	0.348	0.200	-1.5	25.0
1,2,4-Trichlorobenzene	0.369	0.379	0.200	-2.7	25.0
Naphthalene	0.974	1.023	0.700	-5.0	25.0
4-Chloroaniline	0.196	0.113		42.4	
Hexachlorobutadiene	0.219	0.245		-11.9	
4-Chloro-3-Methylphenol	0.397	0.395	0.200	0.5	25.0
2-Methylnaphthalene	0.696	0.711	0.400	-2.2	25.0
Hexachlorocyclopentadiene	0.402	0.382		5.0	
2,4,6-Trichlorophenol	0.438	0.452	0.200	-3.2	25.0
2,4,5-Trichlorophenol	0.417	0.516	0.200	-23.7	25.0
2-Chloronaphthalene	1.077	1.150	0.800	-6.8	25.0
2-Nitroaniline	0.501	0.462		7.8	
Dimethyl Phthalate	1.396	1.494		-7.0	
Acenaphthylene	1.808	1.909	1.300	-5.6	25.0
2,6-Dinitrotoluene	0.394	0.387	0.200	1.8	25.0
3-Nitroaniline	0.030	0.074		-146.7	
Acenaphthene	1.095	1.134	0.800	-3.6	25.0
2,4-Dinitrophenol	0.231	0.178		22.9	
4-Nitrophenol	0.177	0.095		46.3	
Dibenzofuran	1.706	1.684	0.800	1.3	25.0
2,4-Dinitrotoluene	0.587	0.513	0.200	12.6	25.0

(1) Cannot be separated from Diphenylamine
All other compounds must meet a minimum RRF of 0.010.

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Instrument ID: HP-6F Calibration date: 05/22/92 Time: 1907

Lab File ID: F7543 Init. Calib. Date(s): 05/18/92 05/18/92

Init. Calib. Times: 1246 1621

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Diethylphthalate	1.455	1.404		3.5	
4-Chlorophenyl-phenylether	0.558	0.610	0.400	-9.3	25.0
Fluorene	1.252	1.303	0.900	-4.1	25.0
4-Nitroaniline	0.072	0.101		-40.3	
4,6-Dinitro-2-Methylphenol	0.176	0.176		0.0	
N-Nitrosodiphenylamine (1)	0.387	0.290		25.1	25.0
4-Bromophenyl-phenylether	0.212	0.250	0.100	-17.9	25.0
Hexachlorobenzene	0.291	0.345	0.100	-18.6	25.0
Pentachlorophenol	0.174	0.177	0.050	-1.7	25.0
Phenanthrene	1.038	1.006	0.700	3.1	25.0
Anthracene	0.959	0.966	0.700	-0.7	25.0
Carbazole	0.260	0.252		3.1	
Di-n-Butylphthalate	1.409	1.548		-9.9	
Fluoranthene	1.047	1.027	0.600	1.9	25.0
Pyrene	1.656	2.172	0.600	-31.2	25.0
Butylbenzylphthalate	0.919	1.158		-26.0	
3,3'-Dichlorobenzidine	0.106	0.023		78.3	
Benzo(a)Anthracene	1.090	1.048	0.800	3.9	25.0
Chrysene	1.006	1.092	0.700	-8.5	25.0
bis(2-Ethylhexyl)Phthalate	1.269	1.696		-33.6	
Di-n-Octyl Phthalate	2.933	3.474		-18.4	
Benzo(b)Fluoranthene	1.434	1.360	0.700	5.2	25.0
Benzo(k)Fluoranthene	1.019	1.360	0.700	-33.5	25.0
Benzo(a)Pyrene	1.064	1.036	0.700	2.6	25.0
Indeno(1,2,3-cd)Pyrene	0.758	0.900	0.500	-18.7	25.0
Dibenz(a,h)Anthracene	0.743	0.720	0.400	3.1	25.0
Benzo(g,h,i)Perylene	0.770	0.635	0.500	17.5	25.0
Nitrobenzene-d5	0.470	0.424	0.200	9.8	25.0
2-Fluorobiphenyl	1.197	1.315	0.700	-9.9	25.0
Terphenyl-d14	1.000	1.236	0.500	-23.6	25.0
Phenol-d5	1.564	1.530	0.800	2.2	25.0
2-Fluorophenol	1.107	1.102	0.600	0.5	25.0
2,4,6-Tribromophenol	0.244	0.302		-23.8	
2-Chlorophenol-d4	1.240	1.297	0.800	-4.6	25.0
1,2-Dichlorobenzene-d4	0.827	0.882	0.400	-6.7	25.0

(1) Cannot be separated from Diphenylamine

All other compounds must meet a minimum RRF of 0.010.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Instrument ID: HP-6F Calibration date: 05/27/92 Time: 0307

Lab File ID: F7559 Init. Calib. Date(s): 05/18/92 05/18/92

Init. Calib. Times: 1246 1621

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Phenol	1.584	1.532	0.800	3.3	25.0
bis(2-Chloroethyl)Ether	1.238	1.316	0.700	-6.3	25.0
2-Chlorophenol	1.159	1.193	0.800	-2.9	25.0
1,3-Dichlorobenzene	1.373	1.452	0.600	-5.8	25.0
1,4-Dichlorobenzene	1.335	1.466	0.500	-9.8	25.0
1,2-Dichlorobenzene	1.179	1.366	0.400	-15.9	25.0
2-Methylphenol	1.064	1.075	0.700	-1.0	25.0
2,2'-oxybis(1-Chloropropane)	2.278	2.456		-7.8	
4-Methylphenol	1.124	1.088	0.600	3.2	25.0
N-Nitroso-Di-n-Propylamine	1.070	1.086	0.500	-1.5	25.0
Hexachloroethane	0.680	0.714	0.300	-5.0	25.0
Nitrobenzene	0.476	0.432	0.200	9.2	25.0
Isophorone	0.958	0.921	0.400	3.9	25.0
2-Nitrophenol	0.236	0.230	0.100	2.5	25.0
2,4-Dimethylphenol	0.384	0.399	0.200	-3.9	25.0
bis(2-Chloroethoxy)Methane	0.513	0.524	0.300	-2.1	25.0
2,4-Dichlorophenol	0.343	0.342	0.200	0.3	25.0
1,2,4-Trichlorobenzene	0.369	0.377	0.200	-2.2	25.0
Naphthalene	0.974	1.033	0.700	-6.1	25.0
4-Chloroaniline	0.196	0.183		6.6	
Hexachlorobutadiene	0.219	0.238		-8.7	
4-Chloro-3-Methylphenol	0.397	0.405	0.200	-2.0	25.0
2-Methylnaphthalene	0.696	0.749	0.400	-7.6	25.0
Hexachlorocyclopentadiene	0.402	0.453		-12.7	
2,4,6-Trichlorophenol	0.438	0.425	0.200	3.0	25.0
2,4,5-Trichlorophenol	0.417	0.476	0.200	-14.2	25.0
2-Chloronaphthalene	1.077	1.157	0.800	-7.4	25.0
2-Nitroaniline	0.501	0.440		12.2	
Dimethyl Phthalate	1.396	1.512		-8.3	
Acenaphthylene	1.808	1.967	1.300	-8.8	25.0
2,6-Dinitrotoluene	0.394	0.377	0.200	4.3	25.0
3-Nitroaniline	0.030	0.014		53.3	
Acenaphthene	1.095	1.171	0.800	-6.9	25.0
2,4-Dinitrophenol	0.231	0.117		49.4	
4-Nitrophenol	0.177	0.085		52.0	
Dibenzofuran	1.706	1.699	0.800	0.4	25.0
2,4-Dinitrotoluene	0.587	0.496	0.200	15.5	25.0

(1) Cannot be separated from Diphenylamine
All other compounds must meet a minimum RRF of 0.010.

7C 19026 5

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Instrument ID: HP-6F Calibration date: 05/27/92 Time: 0307

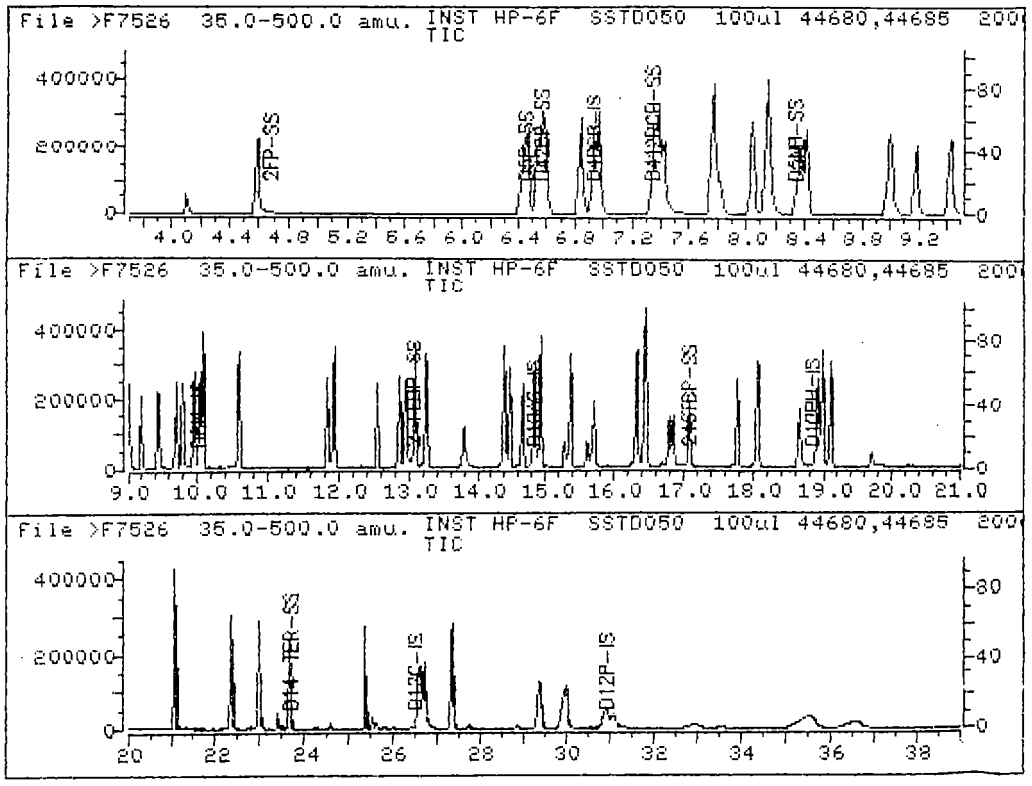
Lab File ID: F7559 Init. Calib. Date(s): 05/18/92 05/18/92

Init. Calib. Times: 1246 1621

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Diethylphthalate	1.455	1.445		0.7	
4-Chlorophenyl-phenylether	0.558	0.600	0.400	-7.5	25.0
Fluorene	1.252	1.316	0.900	-5.1	25.0
4-Nitroaniline	0.072	0.048		33.3	
4,6-Dinitro-2-Methylphenol	0.176	0.139		21.0	
N-Nitrosodiphenylamine (1)	0.387	0.464		-19.9	25.0
4-Bromophenyl-phenylether	0.212	0.243	0.100	-14.6	25.0
Hexachlorobenzene	0.291	0.328	0.100	-12.7	25.0
Pentachlorophenol	0.174	0.122	0.050	29.5	25.0
Phenanthrene	1.038	1.044	0.700	-0.6	25.0
Anthracene	0.959	1.086	0.700	-13.2	25.0
Carbazole	0.260	0.202		22.3	
Di-n-Butylphthalate	1.409	1.764		-25.2	
Fluoranthene	1.047	1.137	0.600	-8.6	25.0
Pyrene	1.656	2.276	0.600	-37.4	25.0
Butylbenzylphthalate	0.919	1.195		-30.0	
3,3'-Dichlorobenzidine	0.106	0.041		61.3	
Benzo(a)Anthracene	1.090	0.993	0.800	8.9	25.0
Chrysene	1.006	1.180	0.700	-17.3	25.0
bis(2-Ethylhexyl)Phthalate	1.269	1.562		-23.1	
Di-n-Octyl Phthalate	2.933	3.532		-20.4	
Benzo(b)Fluoranthene	1.434	1.350	0.700	5.9	25.0
Benzo(k)Fluoranthene	1.019	1.350	0.700	-32.5	25.0
Benzo(a)Pyrene	1.064	1.055	0.700	0.8	25.0
Indeno(1,2,3-cd)Pyrene	0.758	0.710	0.500	6.3	25.0
Dibenz(a,h)Anthracene	0.743	0.640	0.400	13.9	25.0
Benzo(g,h,i)Perylene	0.770	0.710	0.500	7.8	25.0
Nitrobenzene-d5	0.470	0.443	0.200	5.7	25.0
2-Fluorobiphenyl	1.197	1.284	0.700	-7.3	25.0
Terphenyl-d14	1.000	1.223	0.500	-22.3	25.0
Phenol-d5	1.564	1.540	0.800	1.5	25.0
2-Fluorophenol	1.107	1.147	0.600	-3.6	25.0
2,4,6-Tribromophenol	0.244	0.240		1.6	
2-Chlorophenol-d4	1.240	1.306	0.800	-5.3	25.0
1,2-Dichlorobenzene-d4	0.827	0.904	0.400	-9.3	25.0

(1) Cannot be separated from Diphenylamine

All other compounds must meet a minimum RRF of 0.010.



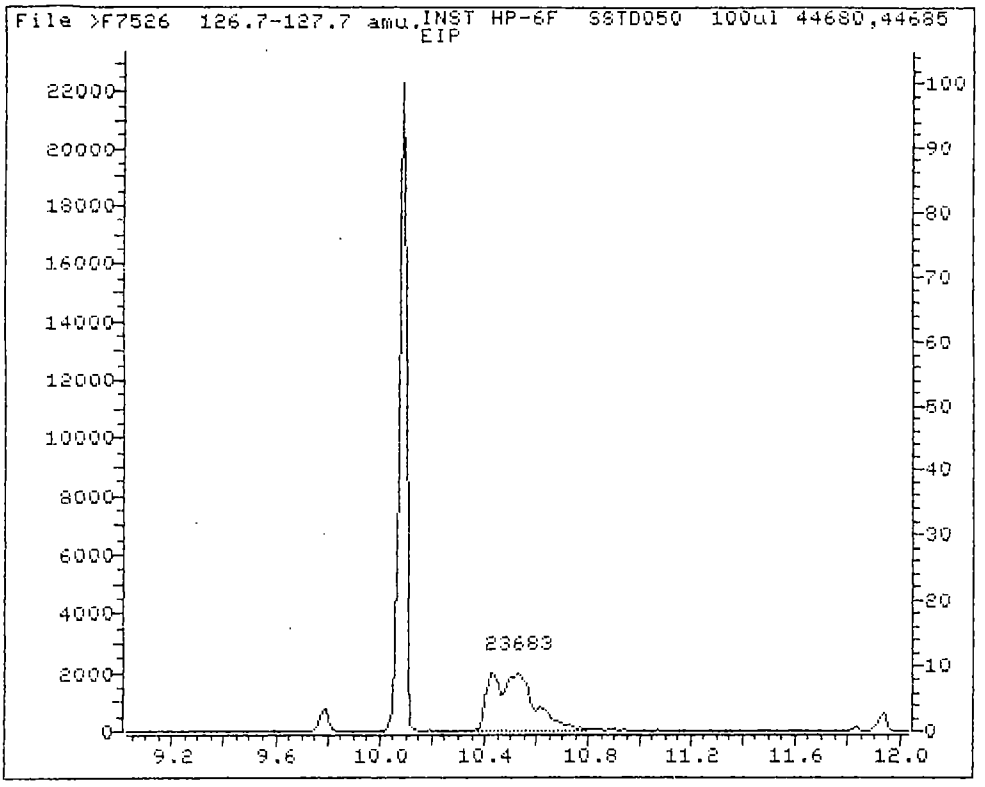
MS data file header from : >F7526

Sample: INST HP-6F SSTD050 Operator: TERMINAL62MS 5/22/92 0:43
Misc : 100ul 44680,44685 200ul MECL2 IS=40 44502(BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BNAME6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	1.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	9.0	0.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF EN564, Case 1900 S
RD 06-01-92

JGP 5-28-90

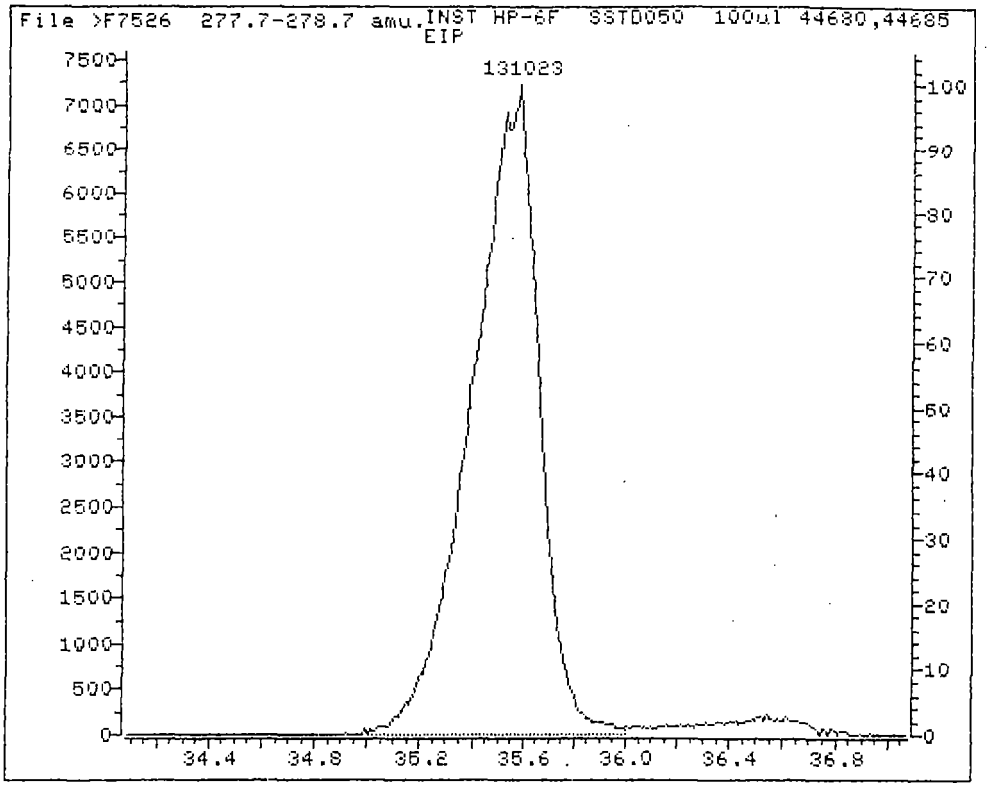


Data File: >F7526::DF Quant Output File: ^F7526::QT
Name: INST HP-6F SSTD050
Misc: 100ul 44680,44685 200ul MECL2 IS=40 44502(BTL# 1
Quant Time: 920522 02:05 Quant ID File: NCBID6::D1
Injected at: 920522 00:43 Last Calibration: 920522 02:04

Compound No: 26
Compound Name: 4-CHLOROANILINE
Scan Number: 784
Retention Time: 10.53 min.
Quant Ion: 127.0
Area: 23683M
Concentration: 50.00 ng
q-value: 76

This report was produced by QAREA on: 920522 02:37

"COPY
ORIGINAL IS FILED IN CSF EMS64, Case 19005
RD 06-01-92
JGP 5-28-92



Data File: >F7526::DF Quant Output File: ^F7526::QT
Name: INST HP-6F SSTD050
Misc: 100ul 44680,44685 200ul MECL2 IS=40 44502(BTL# 1
Quant Time: 920522 02:05 Quant ID File: NCBID6::D1
Injected at: 920522 00:43 Last Calibration: 920522 02:04

Compound No: 77
Compound Name: DIBENZO(a,h)ANTHRACENE
Scan Number: 3181
Retention Time: 35.58 min.
Quant Ion: 278.0
Area: 131023M
Concentration: 50.00 ng
q-value: 100

This report was produced by QAREA on: 920522 02:40

"COPY
ORIGINAL IS FILED IN CSF EH564, Case 19005
RD 06-01-92
ICP 5-28-90

QUANT REPORT

Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920522 02:05
Output File: ^F7526::QT Injected at: 920522 00:43
Data File: >F7526::DF Dilution Factor: 1.00000
Name: INST HP-6F SSTD050
Misc: 100ul 44680,44685 200ul MECL2 IS=40 44502(BTL# 1

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920522 02:04

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4 (IS)	6.93	152.0	75569	40.00	ng	86
2)	PHENOL	6.46	94.0	144440	50.00	ng	100
3)	BIS(2-CHLOROETHYL)ETHER	6.59	93.0	121366	50.00	ng	85
4)	2-CHLOROPHENOL	6.57	128.0	113819	50.00	ng	86
5)	1,3-DICHLOROBENZENE	6.84	146.0	135411	50.00	ng	91
6)	1,4-DICHLOROBENZENE	6.97	146.0	135219	50.00	ng	92
7)	1,2-DICHLOROBENZENE	7.38	146.0	126547	50.00	ng	91
8)	2-METHYLPHENOL	7.77	108.0	101995	50.00	ng	84
9)	2,2'-OXYBIS(1-CHLOROPROPANE)	7.78	45.0	197955	50.00	ng	100
10)	4-METHYLPHENOL	8.15	108.0	102645	50.00	ng	97
11)	N-NITROSO-DI-n-PROPYLAMINE	8.17	70.0	100379	50.00	ng	54
12)	HEXACHLOROETHANE	8.04	117.0	68194	50.00	ng	73
13)	2-FLUOROPHENOL (SS)	4.59	112.0	107083	50.00	ng	70
14)	PHENOL-d5 (SS)	6.43	99.0	146421	50.00	ng	75
15)	2-CHLOROPHENOL-d4 (SS)	6.54	132.0	124202	50.00	ng	77
16)	1,2-DICHLOROBENZENE-d4 (SS)	7.35	152.0	85258	50.00	ng	85
17)	*NAPHTHALENE-d8 (IS)	10.04	136.0	264201	40.00	ng	100
18)	NITROBENZENE	8.42	77.0	139362	50.00	ng	69
19)	ISOPHORONE	9.00	82.0	281704	50.00	ng	92
20)	2-NITROPHENOL	9.19	139.0	78907	50.00	ng	74
21)	2,4-DIMETHYLPHENOL	9.43	107.0	111411	50.00	ng	89
22)	BIS(2-CHLOROETHOXY)METHANE	9.70	93.0	168676	50.00	ng	81
23)	2,4-DICHLOROPHENOL	9.79	162.0	115475	50.00	ng	94
24)	1,2,4-TRICHLOROBENZENE	9.95	180.0	128852	50.00	ng	98
25)	NAPHTHALENE	10.09	128.0	342390	50.00	ng	100
26)	4-CHLOROANILINE	10.53	127.0	23683M	50.00	ng	76
27)	HEXACHLOROBUTADIENE	10.59	225.0	85494	50.00	ng	82
28)	4-CHLORO-3-METHYLPHENOL	11.83	107.0	123780	50.00	ng	100
29)	2-METHYLNAPHTHALENE	11.93	142.0	226490	50.00	ng	93
30)	NITROBENZENE-d5 (SS)	8.36	82.0	142601	50.00	ng	90
31)	*ACENAPHTHENE-d10 (IS)	14.84	164.0	161385	40.00	ng	92
32)	HEXACHLOROCYCLOPENTADIENE	12.55	237.0	84517	50.00	ng	96
33)	2,4,6-TRICHLOROPHENOL	12.86	196.0	92394	50.00	ng	99
34)	2,4,5-TRICHLOROPHENOL	12.96	196.0	99065	50.00	ng	99
35)	2-CHLORONAPHTHALENE	13.25	162.0	228867	50.00	ng	94
36)	2-NITROANILINE	13.80	65.0	74336	50.00	ng	72
37)	DIMETHYL PHTHALATE	14.47	163.0	296187	50.00	ng	69
38)	ACENAPHTHYLENE	14.40	152.0	369597	50.00	ng	90
39)	3-NITROANILINE	15.02	138.0	3757	50.00	ng	52
40)	ACENAPHTHENE	14.92	153.0	229046	50.00	ng	86
41)	2,4-DINITROPHENOL	15.27	184.0	34950	50.00	ng	100

* Compound is ISTD

"COPY
ORIGINAL IS FILED IN CSF EH564, Case 19008 RD 06-01-92, CP

QUANT REPORT

Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920522 02:05
Output File: ^F7526::QT Injected at: 920522 00:43
Data File: >F7526::DF Dilution Factor: 1.00000
Name: INST HP-6F SSTD050
Misc: 100ul 44680,44685 200ul MECL2 IS=40 44502(BTL# 1

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920522 02:04

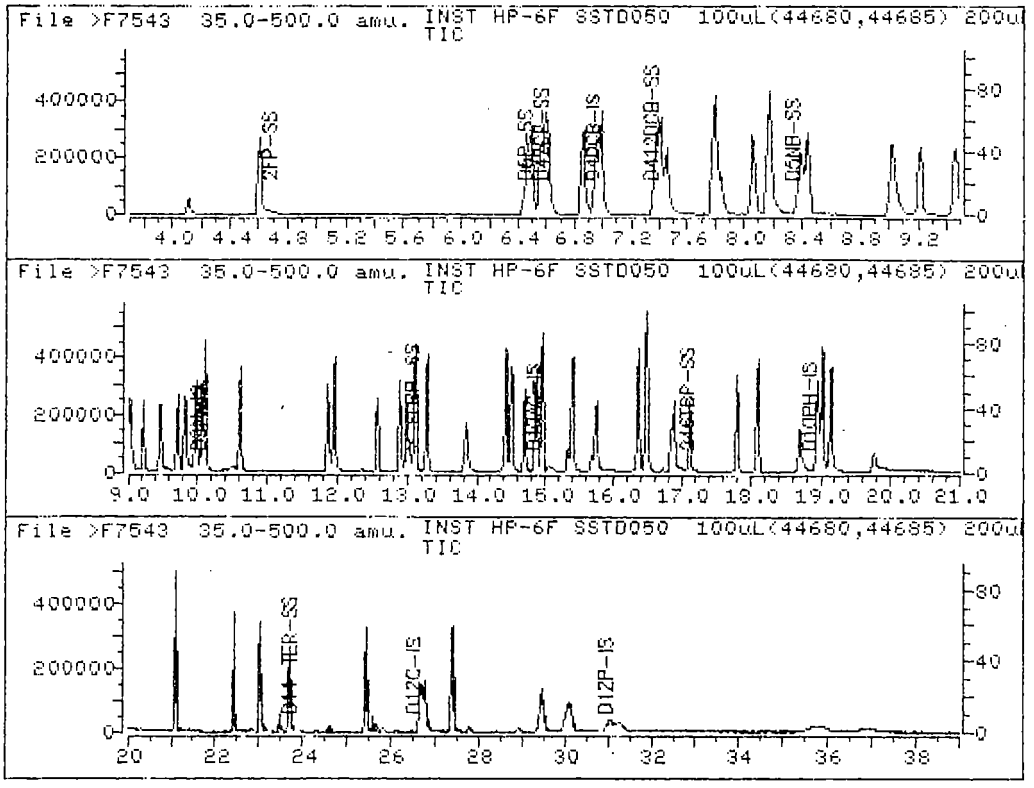
	Compound	R.T.	Q ion	Area	Conc	Units	q
42)	4-NITROPHENOL	15.60	109.0	22078	50.00	ng	87
43)	DIBENZOFURAN	15.37	168.0	333045	50.00	ng	92
44)	2,4-DINITROTOLUENE	15.71	165.0	97211	50.00	ng	74
45)	2,6-DINITROTOLUENE	14.66	165.0	76369	50.00	ng	82
46)	DIETHYLPHTHALATE	16.47	149.0	285091	50.00	ng	91
47)	4-CHLOROPHENYL-PHENYLETHER	16.44	204.0	125209	50.00	ng	100
48)	FLUORENE	16.33	166.0	254487	50.00	ng	97
49)	4-NITROANILINE	16.76	138.0	12349	50.00	ng	89
50)	2-FLUOROBIPHENYL (SS)	13.09	172.0	263860	50.00	ng	100
51)	2,4,6-TRIBROMOPHENOL (SS)	17.08	329.7	58468	50.00	ng	100
52)	*PHENANTHRENE-d10 (IS)	18.92	188.0	260345	40.00	ng	100
53)	4,6-DINITRO-2-METHYLPHENOL	16.79	198.0	60255	50.00	ng	100
54)	N-NITROSODIPHENYLAMINE	16.85	169.0	83423	50.00	ng	85
55)	4-BROMOPHENYL-PHENYLETHER	17.78	248.0	84403	50.00	ng	98
56)	HEXACHLOROBENZENE	18.07	284.0	120429	50.00	ng	100
57)	PENTACHLOROPHENOL	18.66	266.0	62354	50.00	ng	100
58)	PHENANTHRENE	18.98	178.0	338020	50.00	ng	83
59)	ANTHRACENE	19.11	178.0	296027	50.00	ng	84
60)	CARBAZOLE	19.69	167.0	70899	50.00	ng	76
61)	DI-N-BUTYLPHTHALATE	21.06	149.0	539773	50.00	ng	100
62)	FLUORANTHENE	22.36	202.0	329971	50.00	ng	92
63)	*CHRYSENE-d12 (IS)	26.60	240.0	153310	40.00	ng	100
64)	PYRENE	22.97	202.0	339066	50.00	ng	96
65)	BUTYLBENZYLPHTHALATE	25.36	149.0	186258	50.00	ng	77
66)	3,3'-DICHLOROBENZIDINE	26.74	252.0	10874	50.00	ng	100
67)	BENZO(a)ANTHRACENE	26.55	228.0	210759	50.00	ng	86
68)	BIS(2-ETHYLHEXYL)PHTHALATE	27.30	149.0	280619	50.00	ng	95
69)	CHRYSENE	26.68	228.0	209618	50.00	ng	91
70)	TERPHENYL-d14 (SS)	23.64	244.0	196121	50.00	ng	100
71)	*PERYLENE-d12 (IS)	31.07	264.0	120813	40.00	ng	100
72)	DI-N-OCTYLPHTHALATE	29.33	149.0	359839	50.00	ng	100
73)	BENZO(b)FLUORANTHENE	29.95	252.0	371905	100.00	ng	100
74)	BENZO(k)FLUORANTHENE	29.95	252.0	371905	100.00	ng	100
75)	BENZO(a)PYRENE	30.88	252.0	153006	50.00	ng	94
76)	INDENO(1,2,3-cd)PYRENE	35.39	276.0	93646	50.00	ng	100
77)	DIBENZO(a,h)ANTHRACENE	35.58	278.0	131023M	50.00	ng	100
78)	BENZO(g,h,i)PERYLENE	36.53	276.0	139338	50.00	ng	100

* Compound is ISTD

"COPY

ORIGINAL IS FILED IN CSF EH564, Case 19005
RD 06-01-92

1085-2892



MS data file header from : >F7543

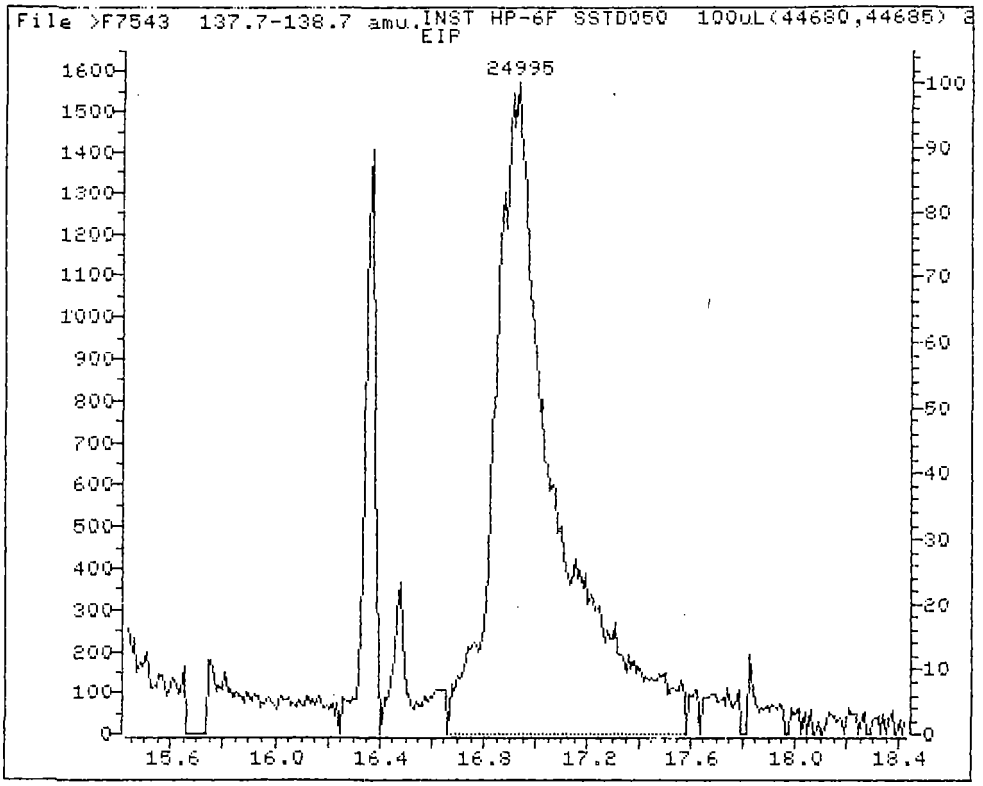
Sample: INST HP-6F SSTD050 Operator: TERMINAL62MS 5/22/92 19:07
Misc : 100uL(44680,44685) 200uL MeCl2 IS=40ng 44502(1:2) BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BNAME6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	1.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	9.0	0.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF EM564 Case 19005
06-01-92

195-2892

19026·5



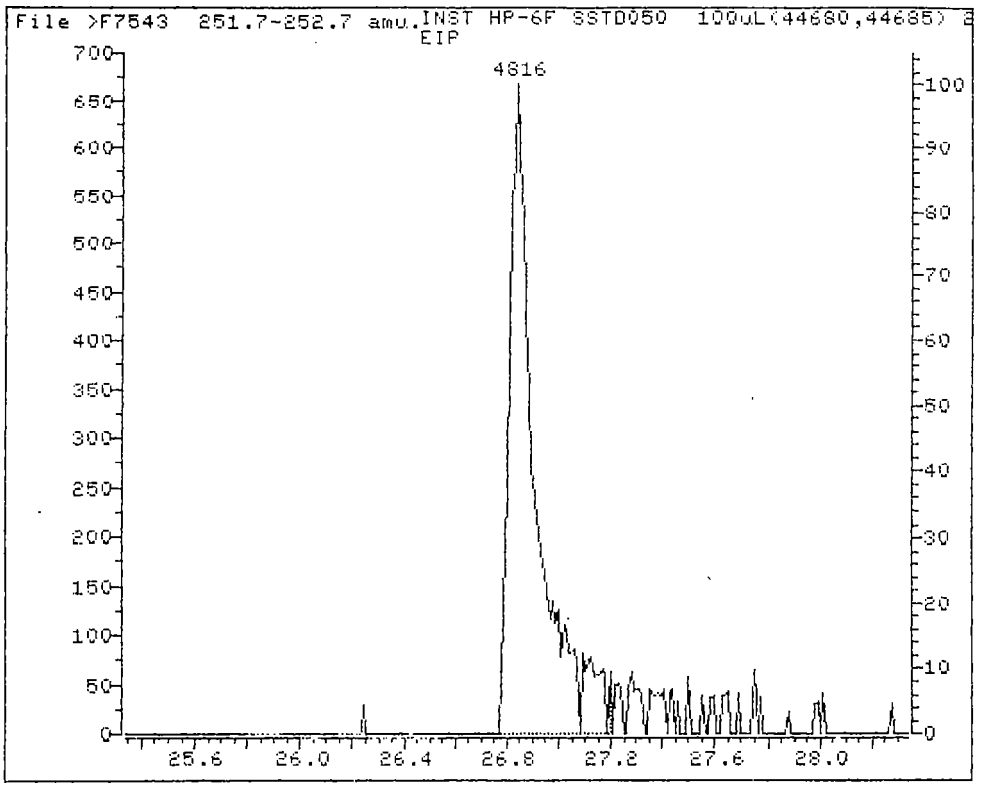
Data File: >F7543::D8 Quant Output File: ^F7543::QT
Name: INST HP-6F SSTD050
Misc: 100uL(44680,44685) 200uL MeCl2 IS=40ng 44502(1:2) BTL# 1
Quant Time: 920522 20:21 Quant ID File: NCBID6::D1
Injected at: 920522 19:07 Last Calibration: 920522 20:18

Compound No: 49
Compound Name: 4-NITROANILINE
Scan Number: 1396
Retention Time: 16.93 min.
Quant Ion: 138.0
Area: 24995M
Concentration: 50.00 ng
q-value: 86

This report was produced by QAREA on: 920522 21:25

"COPY
ORIGINAL IS FILED IN CSF EMS64, Case 19005
RD 06-01-92

1 cp5-2892



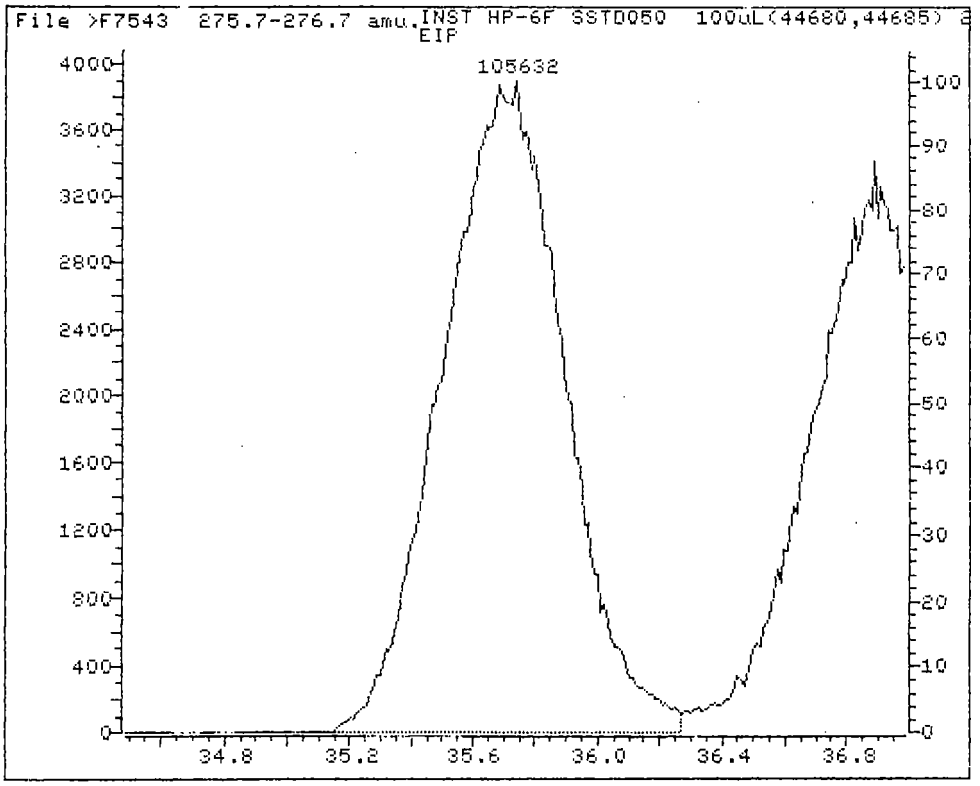
Data File: >F7543::D8 Quant Output File: ^F7543::QT
Name: INST HP-6F SSTD050
Misc: 100uL(44680,44685) 200uL MeCl2 IS=40ng 44502(1:2) BTL# 1
Quant Time: 920522 20:21 Quant ID File: NCBID6::D1
Injected at: 920522 19:07 Last Calibration: 920522 20:18

Compound No: 66
Compound Name: 3,3'-DICHLOROBENZIDINE
Scan Number: 2343
Retention Time: 26.84 min.
Quant Ion: 252.0
Area: 4816M
Concentration: 50.01 ng
q-value: 100

This report was produced by QAREA on: 920522 21:18

"COPY
ORIGINAL IS FILED IN CSF EM564, Case 19005
RD 06-01-92

CP5-28-90



Data File: >F7543::D8 Quant Output File: ^F7543::QT
Name: INST HP-6F SSTD050
Misc: 100uL(44680,44685) 200uL MeCl2 IS=40ng 44502(1:2) BTL# 1
Quant Time: 920522 20:21 Quant ID File: NCBID6::D1
Injected at: 920522 19:07 Last Calibration: 920522 20:18

Compound No: 76
Compound Name: INDENO(1,2,3-cd)PYRENE
Scan Number: 3193
Retention Time: 35.74 min.
Quant Ion: 276.0
Area: 105632M
Concentration: 50.03 ng
q-value: 100

This report was produced by QAREA on: 920522 21:22

"COPY
ORIGINAL IS FILED IN CSF EMS64, Case 1900 S
RD 06-01-92

JCP5-8892

QUANT REPORT

Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920522 20:21
Output File: ^F7543::QT Injected at: 920522 19:07
Data File: >F7543::D8 Dilution Factor: 1.00000
Name: INST HP-6F SSTD050
Misc: 100uL(44680,44685) 200uL MeCl2 IS=40ng 44502(1:2) BTL# 1

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920522 20:18

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4 (IS)	6.95	152.0	85319	40.00	ng	88
2)	PHENOL	6.50	94.0	161205	50.00	ng	100
3)	BIS(2-CHLOROETHYL)ETHER	6.62	93.0	133728	50.00	ng	80
4)	2-CHLOROPHENOL	6.60	128.0	123163	50.00	ng	82
5)	1,3-DICHLOROBENZENE	6.86	146.0	150992	50.00	ng	93
6)	1,4-DICHLOROBENZENE	6.99	146.0	149860	50.00	ng	89
7)	1,2-DICHLOROBENZENE	7.41	146.0	139414	50.00	ng	90
8)	2-METHYLPHENOL	7.80	108.0	111888	50.00	ng	81
9)	2,2'-OXYBIS(1-CHLOROPROPANE)	7.81	45.0	237817	50.00	ng	100
10)	4-METHYLPHENOL	8.17	108.0	116232	50.00	ng	97
11)	N-NITROSO-DI-n-PROPYLAMINE	8.18	70.0	107787	50.00	ng	50
12)	HEXACHLOROETHANE	8.06	117.0	72757	50.00	ng	73
13)	2-FLUOROPHENOL (SS)	4.61	112.0	117498	50.00	ng	65
14)	PHENOL-d5 (SS)	6.47	99.0	163159	50.00	ng	69
15)	2-CHLOROPHENOL-d4 (SS)	6.56	132.0	138328	50.00	ng	74
16)	1,2-DICHLOROBENZENE-d4 (SS)	7.38	152.0	94019	50.00	ng	83
17)	*NAPHTHALENE-d8 (IS)	10.07	136.0	312302	40.00	ng	100
18)	NITROBENZENE	8.45	77.0	164272	50.00	ng	67
19)	ISOPHORONE	9.02	82.0	335213	50.00	ng	92
20)	2-NITROPHENOL	9.22	139.0	93211	50.00	ng	74
21)	2,4-DIMETHYLPHENOL	9.47	107.0	135285	50.00	ng	87
22)	BIS(2-CHLOROETHOXY)METHANE	9.72	93.0	201598	50.00	ng	86
23)	2,4-DICHLOROPHENOL	9.82	162.0	135668	50.00	ng	92
24)	1,2,4-TRICHLOROBENZENE	9.98	180.0	147924	50.00	ng	94
25)	NAPHTHALENE	10.12	128.0	399282	50.00	ng	100
26)	4-CHLOROANILINE	10.51	127.0	44010	50.00	ng	97
27)	HEXACHLOROBUTADIENE	10.61	225.0	95582	50.00	ng	82
28)	4-CHLORO-3-METHYLPHENOL	11.87	107.0	154297	50.00	ng	100
29)	2-METHYLNAPHTHALENE	11.97	142.0	277458	50.00	ng	93
30)	NITROBENZENE-d5 (SS)	8.39	82.0	165375	50.00	ng	88
31)	*ACENAPHTHENE-d10 (IS)	14.86	164.0	198195	40.00	ng	89
32)	HEXACHLOROCYCLOPENTADIENE	12.57	237.0	94757	50.00	ng	96
33)	2,4,6-TRICHLOROPHENOL	12.90	196.0	111880	50.00	ng	96
34)	2,4,5-TRICHLOROPHENOL	13.00	196.0	127750	50.00	ng	98
35)	2-CHLORONAPHTHALENE	13.29	162.0	284950	50.00	ng	92
36)	2-NITROANILINE	13.85	65.0	114434	50.00	ng	70
37)	DIMETHYL PHTHALATE	14.51	163.0	370239	50.00	ng	61
38)	ACENAPHTHYLENE	14.42	152.0	472995	50.00	ng	91
39)	3-NITROANILINE	15.05	138.0	18320	50.00	ng	50
40)	ACENAPHTHENE	14.96	153.0	281037	50.00	ng	87
41)	2,4-DINITROPHENOL	15.32	184.0	44154	50.00	ng	100

* Compound is ISTD

"COPY 316

ORIGINAL IS FILED IN CSF EMS69 Case 19026 Sp 5-28-92
RD06-01-92

19026·5

QUANT REPORT

Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920522 20:21
Output File: ^F7543::QT Injected at: 920522 19:07
Data File: >F7543::D8 Dilution Factor: 1.00000
Name: INST HP-6F SSTD050
Misc: 100uL(44680,44685) 200uL MeCl2 IS=40ng 44502(1:2) BTL# 1

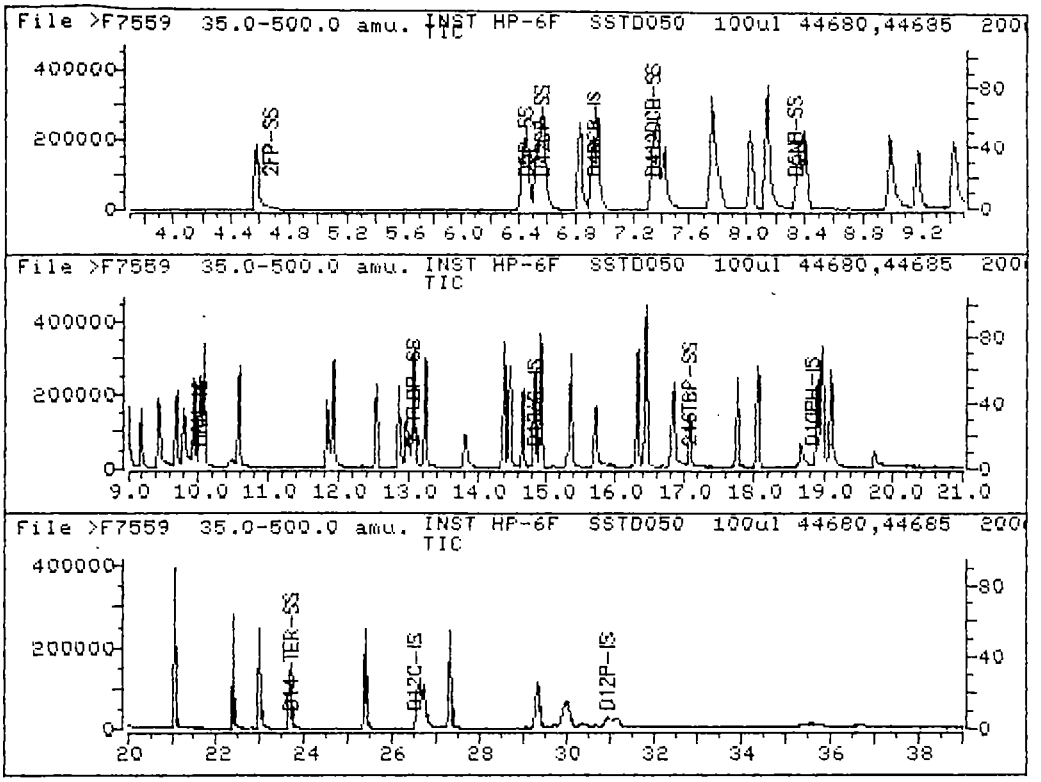
ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920522 20:18

	Compound	R.T.	Q ion	Area	Conc	Units	q
42)	4-NITROPHENOL	15.68	109.0	23508	50.00	ng	86
43)	DIBENZOFURAN	15.41	168.0	417265	50.00	ng	92
44)	2,4-DINITROTOLUENE	15.75	165.0	127182	50.00	ng	76
45)	2,6-DINITROTOLUENE	14.70	165.0	95844	50.00	ng	82
46)	DIETHYLPHTHALATE	16.50	149.0	347707	50.00	ng	91
47)	4-CHLOROPHENYL-PHENYLETHER	16.48	204.0	151231	50.00	ng	100
48)	FLUORENE	16.36	166.0	322707	50.00	ng	98
49)	4-NITROANILINE	16.93	138.0	24995M	50.00	ng	86
50)	2-FLUOROBIPHENYL (SS)	13.12	172.0	325681	50.00	ng	100
51)	2,4,6-TRIBROMOPHENOL (SS)	17.13	329.7	74926	50.00	ng	100
52)	*PHENANTHRENE-d10 (IS)	18.96	188.0	341272	40.00	ng	100
53)	4,6-DINITRO-2-METHYLPHENOL	16.84	198.0	74993	50.00	ng	100
54)	N-NITROSODIPHENYLAMINE	16.89	169.0	123780	50.00	ng	85
55)	4-BROMOPHENYL-PHENYLETHER	17.82	248.0	106840	50.00	ng	96
56)	HEXACHLOROBENZENE	18.11	284.0	147332	50.00	ng	100
57)	PENTACHLOROPHENOL	18.71	266.0	75643	50.00	ng	100
58)	PHENANTHRENE	19.02	178.0	429052	50.00	ng	83
59)	ANTHRACENE	19.15	178.0	411987	50.00	ng	85
60)	CARBAZOLE	19.76	167.0	107343	50.00	ng	77
61)	DI-N-BUTYLPHTHALATE	21.10	149.0	660358	50.00	ng	100
62)	FLUORANTHENE	22.40	202.0	438048	50.00	ng	92
63)	*CHRYSENE-d12 (IS)	26.66	240.0	164729	40.00	ng	100
64)	PYRENE	23.01	202.0	447289	50.00	ng	95
65)	BUTYLBENZYLPHTHALATE	25.39	149.0	238538	50.00	ng	80
66)	3,3'-DICHLOROBENZIDINE	26.84	252.0	4816M	50.01	ng	100
67)	BENZO(a)ANTHRACENE	26.61	228.0	215872	50.00	ng	86
68)	BIS(2-ETHYLHEXYL)PHTHALATE	27.36	149.0	349155	50.00	ng	93
69)	CHRYSENE	26.74	228.0	224899	50.00	ng	91
70)	TERPHENYL-d14 (SS)	23.68	244.0	254480	50.00	ng	100
71)	*PERYLENE-d12 (IS)	31.22	264.0	93897	40.00	ng	100
72)	DI-N-OCTYLPHTHALATE	29.42	149.0	407706	50.00	ng	100
73)	BENZO(b)FLUORANTHENE	30.06	252.0	319321	100.00	ng	100
74)	BENZO(k)FLUORANTHENE	30.06	252.0	319321	100.00	ng	100
75)	BENZO(a)PYRENE	31.02	252.0	121553	50.00	ng	95
76)	INDENO(1,2,3-cd)PYRENE	35.74	276.0	105632M	50.03	ng	100
77)	DIBENZO(a,h)ANTHRACENE	35.82	278.0	84518	50.00	ng	100
78)	BENZO(g,h,i)PERYLENE	36.89	276.0	74523	50.00	ng	100

* Compound is ISTD

"COPY
ORIGINAL IS FILED IN CSF EM564, Case 19005
RD06-01-92
1 gp 5-28-92

317



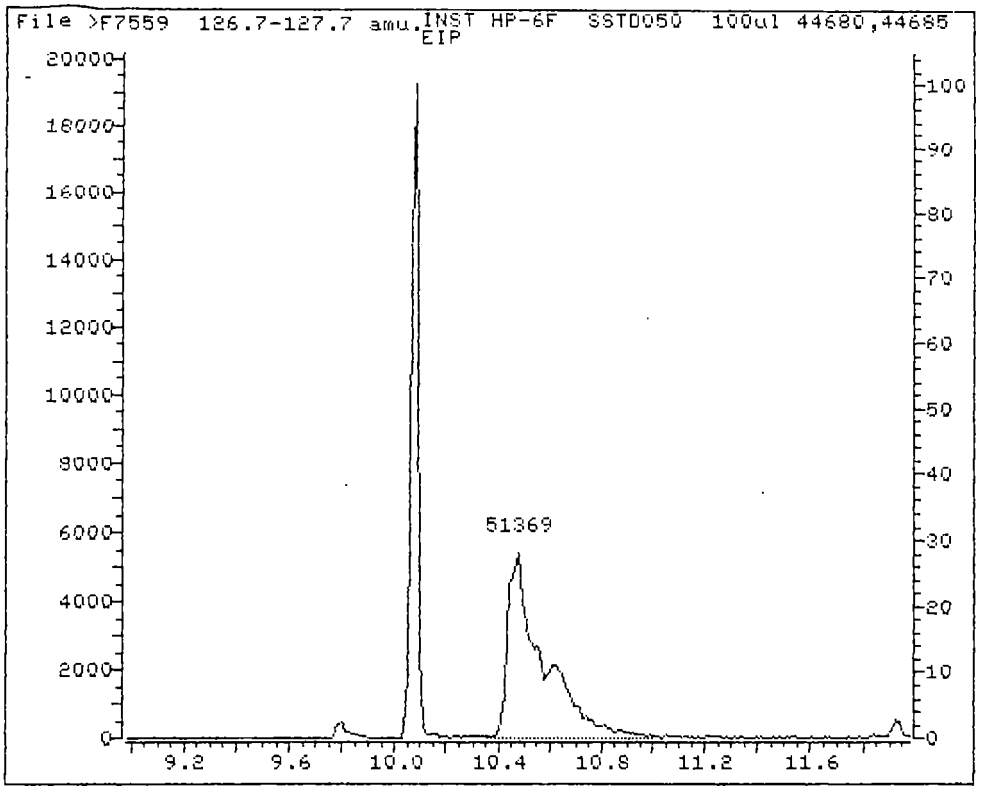
MS data file header from : >F7559

Sample: INST HP-6F SSTD050 Operator: TERMINAL62MS 5/27/92 3:07
Misc : 100ul 44680,44685 200ul MECL2 IS=40 44502(BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BNAME6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	1.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	9.0	0.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF EMS64, Case 19005
RD06-01-92

1805-28-90



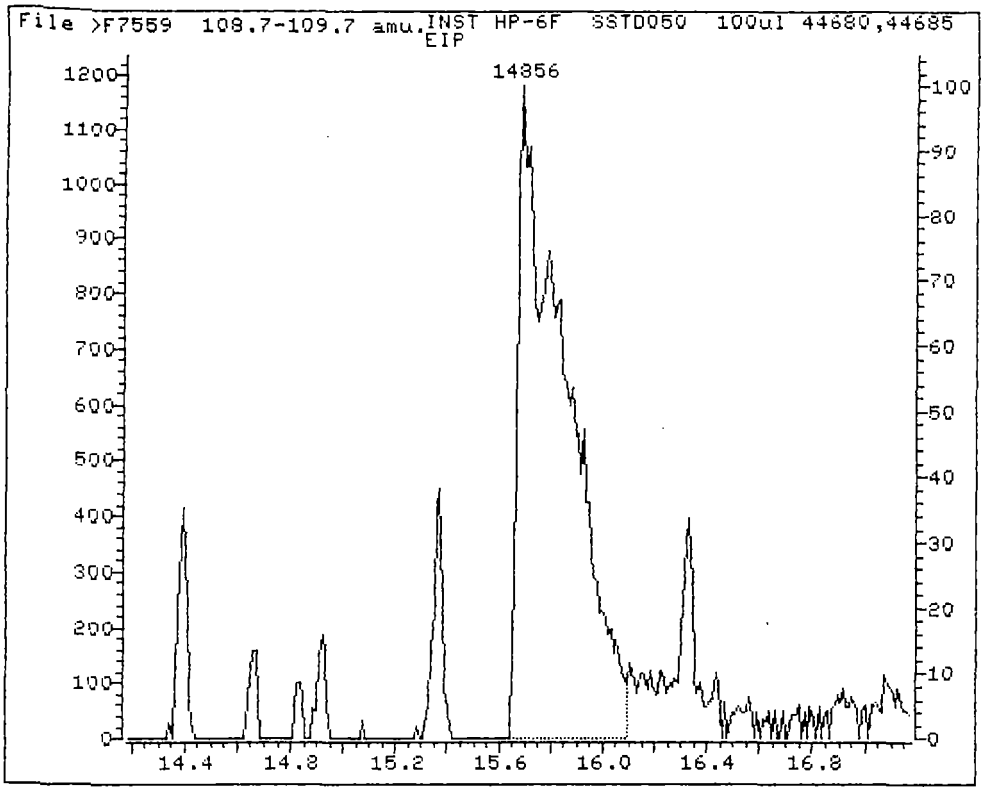
Data File: >F7559::D8 Quant Output File: ^F7559::QT
Name: INST HP-6F SSTD050
Misc: 100ul 44680,44685 200ul MECL2 IS=40 44502(BTL# 1
Quant Time: 920527 04:39 Quant ID File: NCBID6::D1
Injected at: 920527 03:07 Last Calibration: 920527 04:38

Compound No: 26
Compound Name: 4-CHLOROANILINE
Scan Number: 779
Retention Time: 10.48 min.
Quant Ion: 127.0
Area: 51369M
Concentration: 50.00 ng
q-value: 99

This report was produced by QAREA on: 920527 05:29

"COPY
ORIGINAL IS FILED IN CSF EM564, Case 19005
RD 06-01-92

1985-2890

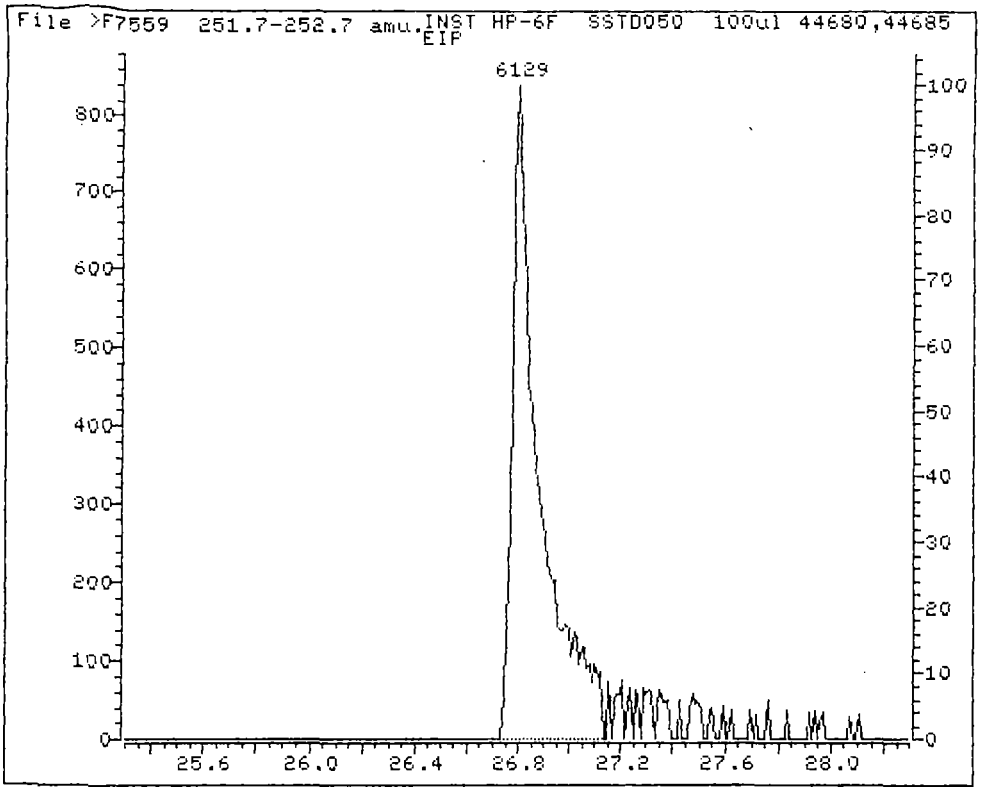


Data File: >F7559::D8 Quant Output File: ^F7559::QT
Name: INST HP-6F SSTD050
Misc: 100ul 44680,44685 200ul MECL2 IS=40 44502(BTL# 1
Quant Time: 920527 04:39 Quant ID File: NCBID6::D1
Injected at: 920527 03:07 Last Calibration: 920527 04:38

Compound No: 42
Compound Name: 4-NITROPHENOL
Scan Number: 1277
Retention Time: 15.68 min.
Quant Ion: 109.0
Area: 14856M
Concentration: 50.00 ng
q-value: 81

This report was produced by QAREA on: 920527 05:27

"COPY
ORIGINAL IS FILED IN CSF EMS 84, Case 19005
RD 06-01-92



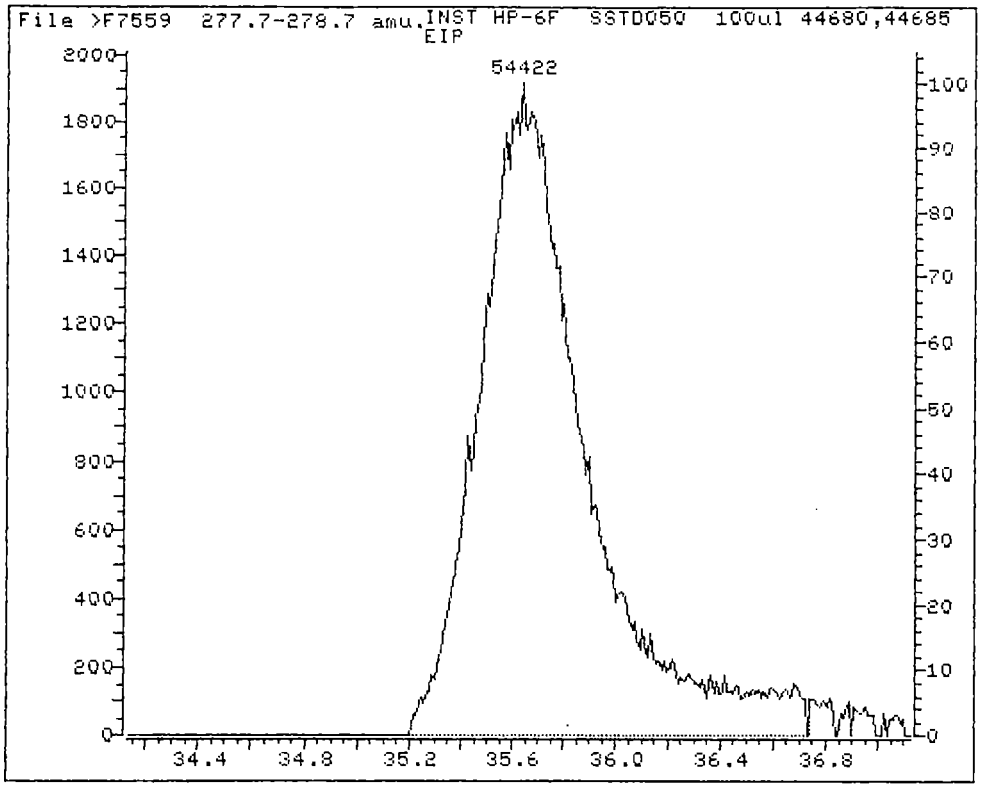
Data File: >F7559::D8 Quant Output File: ^F7559::QT
Name: INST HP-6F SSTD050
Misc: 100ul 44680,44685 200ul MECL2 IS=40 44502(BTL# 1
Quant Time: 920527 04:39 Quant ID File: NCBID6::D1
Injected at: 920527 03:07 Last Calibration: 920527 04:38

Compound No: 66
Compound Name: 3,3'-DICHLOROBENZIDINE
Scan Number: 2340
Retention Time: 26.80 min.
Quant Ion: 252.0
Area: 6129M
Concentration: 50.00 ng
q-value: 100

This report was produced by QAREA on: 920527 05:31

"COPY
ORIGINAL IS FILED IN CSF EMS64, Case 19005
RD 06-01-92

19026·5



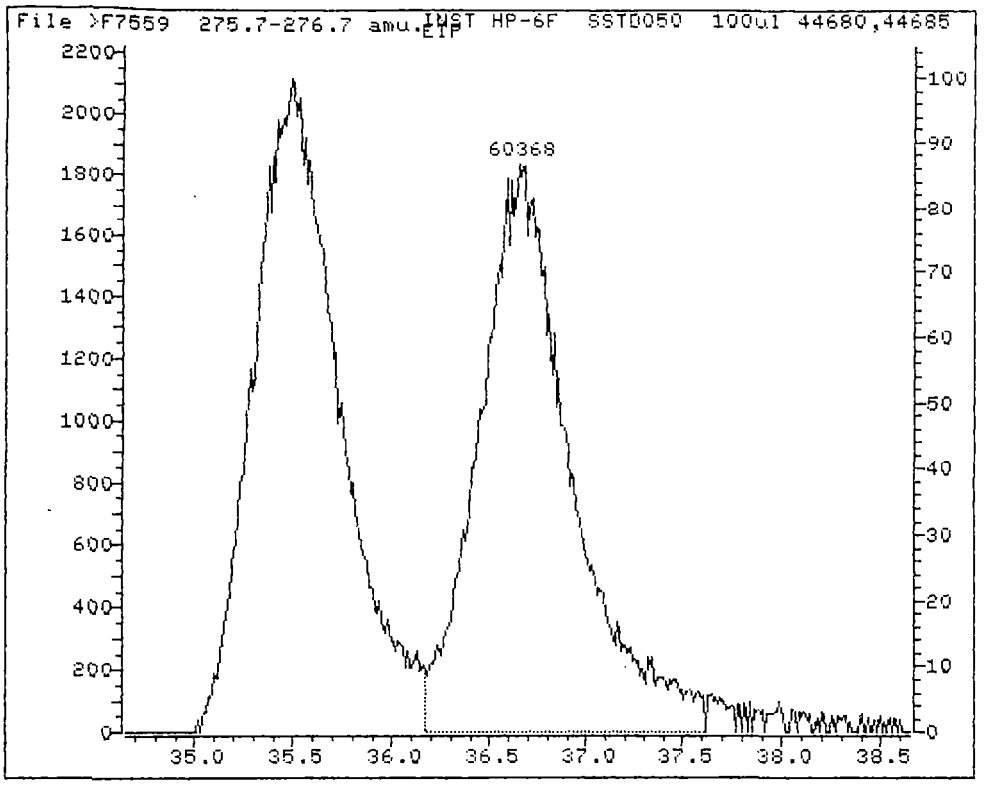
Data File: >F7559::D8 Quant Output File: ^F7559::QT
Name: INST HP-6F SSTD050
Misc: 100ul 44680,44685 200ul MECL2 IS=40 44502(BTL# 1
Quant Time: 920527 04:39 Quant ID File: NCBID6::D1
Injected at: 920527 03:07 Last Calibration: 920527 04:38

Compound No: 77
Compound Name: DIBENZO(a,h)ANTHRACENE
Scan Number: 3185
Retention Time: 35.63 min.
Quant Ion: 278.0
Area: 54422M
Concentration: 50.00 ng
q-value: 100

This report was produced by QAREA on: 920527 05:35

"COPY
ORIGINAL IS FILED IN CSF EMS64, Case 19005
RD06-01-92

1805-2890



Data File: >F7559::D8 Quant Output File: ^F7559::QT
Name: INST HP-6F SSTD050
Misc: 100ul 44680,44685 200ul MECL2 IS=40 44502(BTL# 1
Quant Time: 920527 04:39 Quant ID File: NCBID6::D1
Injected at: 920527 03:07 Last Calibration: 920527 04:38

Compound No: 78
Compound Name: BENZO(g,h,i)PERYLENE
Scan Number: 3282
Retention Time: 36.65 min.
Quant Ion: 276.0
Area: 60368M
Concentration: 50.00 ng
q-value: 100

This report was produced by QAREA on: 920527 05:37

ORIGINAL IS FILED IN CSF EMS64, Case 19005
RD 06-01-92

JCP 5-28-92

QUANT REPORT

Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920527 04:39
Output File: ^F7559::QT Injected at: 920527 03:07
Data File: >F7559::D8 Dilution Factor: 1.00000
Name: INST HP-6F SSTD050
Misc: 100ul 44680,44685 200ul MECL2 IS=40 44502(BTL# 1

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920527 04:38

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4 (IS)	6.92	152.0	61958	40.00	ng	84
2)	PHENOL	6.46	94.0	118674	50.00	ng	100
3)	BIS(2-CHLOROETHYL)ETHER	6.58	93.0	101907	50.00	ng	73
4)	2-CHLOROPHENOL	6.56	128.0	92369	50.00	ng	85
5)	1,3-DICHLOROBENZENE	6.83	146.0	112483	50.00	ng	91
6)	1,4-DICHLOROBENZENE	6.95	146.0	113527	50.00	ng	92
7)	1,2-DICHLOROBENZENE	7.37	146.0	105835	50.00	ng	89
8)	2-METHYLPHENOL	7.77	108.0	83261	50.00	ng	78
9)	2,2'-OXYBIS(1-CHLOROPROPANE)	7.78	45.0	190187	50.00	ng	100
10)	4-METHYLPHENOL	8.14	108.0	84259	50.00	ng	97
11)	N-NITROSO-DI-n-PROPYLAMINE	8.14	70.0	84136	50.00	ng	50
12)	HEXACHLOROETHANE	8.03	117.0	55311	50.00	ng	79
13)	2-FLUOROPHENOL (SS)	4.58	112.0	88829	50.00	ng	61
14)	PHENOL-d5 (SS)	6.43	99.0	119310	50.00	ng	71
15)	2-CHLOROPHENOL-d4 (SS)	6.53	132.0	101165	50.00	ng	76
16)	1,2-DICHLOROBENZENE-d4 (SS)	7.34	152.0	69995	50.00	ng	82
17)	*NAPHTHALENE-d8 (IS)	10.03	136.0	224076	40.00	ng	100
18)	NITROBENZENE	8.41	77.0	121049	50.00	ng	67
19)	ISOPHORONE	8.99	82.0	258009	50.00	ng	90
20)	2-NITROPHENOL	9.18	139.0	64550	50.00	ng	72
21)	2,4-DIMETHYLPHENOL	9.43	107.0	111888	50.00	ng	87
22)	BIS(2-CHLOROETHOXY)METHANE	9.69	93.0	146652	50.00	ng	80
23)	2,4-DICHLOROPHENOL	9.80	162.0	95774	50.00	ng	93
24)	1,2,4-TRICHLOROBENZENE	9.94	180.0	105536	50.00	ng	97
25)	NAPHTHALENE	10.08	128.0	289341	50.00	ng	100
26)	4-CHLOROANILINE	10.48	127.0	51369M	50.00	ng	99
27)	HEXACHLOROBUTADIENE	10.58	225.0	66685	50.00	ng	82
28)	4-CHLORO-3-METHYLPHENOL	11.84	107.0	113340	50.00	ng	100
29)	2-METHYLNAPHTHALENE	11.93	142.0	209923	50.00	ng	91
30)	NITROBENZENE-d5 (SS)	8.36	82.0	124068	50.00	ng	83
31)	*ACENAPHTHENE-d10 (IS)	14.83	164.0	140568	40.00	ng	93
32)	HEXACHLOROCYCLOPENTADIENE	12.54	237.0	79536	50.00	ng	96
33)	2,4,6-TRICHLOROPHENOL	12.87	196.0	74625	50.00	ng	99
34)	2,4,5-TRICHLOROPHENOL	12.97	196.0	83601	50.00	ng	96
35)	2-CHLORONAPHTHALENE	13.25	162.0	203314	50.00	ng	93
36)	2-NITROANILINE	13.82	65.0	77294	50.00	ng	70
37)	DIMETHYL PHTHALATE	14.48	163.0	265755	50.00	ng	57
38)	ACENAPHTHYLENE	14.39	152.0	345698	50.00	ng	87
39)	3-NITROANILINE	15.10	138.0	2528	50.00	ng	63
40)	ACENAPHTHENE	14.92	153.0	205811	50.00	ng	87
41)	2,4-DINITROPHENOL	15.31	184.0	20611	50.00	ng	100

* Compound is ISTD

"COPY" 324

ORIGINAL IS FILED IN CSF EMS64, "Case 19005 CP5-2892
RD 06-01-92

19026 · 5

QUANT REPORT

Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920527 04:39
Output File: ^F7559::QT Injected at: 920527 03:07
Data File: >F7559::D8 Dilution Factor: 1.00000
Name: INST HP-6F SSTD050
Misc: 100ul 44680,44685 200ul MECL2 IS=40 44502(BTL# 1

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920527 04:38

	Compound	R.T.	Q ion	Area	Conc	Units	q
42)	4-NITROPHENOL	15.68	109.0	14856M	50.00	ng	81
43)	DIBENZOFURAN	15.37	168.0	298554	50.00	ng	89
44)	2,4-DINITROTOLUENE	15.71	165.0	87107	50.00	ng	75
45)	2,6-DINITROTOLUENE	14.67	165.0	66302	50.00	ng	80
46)	DIETHYLPHTHALATE	16.46	149.0	253851	50.00	ng	93
47)	4-CHLOROPHENYL-PHENYLETHER	16.44	204.0	105361	50.00	ng	100
48)	FLUORENE	16.33	166.0	231244	50.00	ng	98
49)	4-NITROANILINE	16.92	138.0	8414	50.00	ng	67
50)	2-FLUOROBIPHENYL (SS)	13.09	172.0	225697	50.00	ng	100
51)	2,4,6-TRIBROMOPHENOL (SS)	17.09	329.7	42238	50.00	ng	100
52)	*PHENANTHRENE-d10 (IS)	18.92	188.0	235592	40.00	ng	100
53)	4,6-DINITRO-2-METHYLPHENOL	16.81	198.0	40910	50.00	ng	100
54)	N-NITROSODIPHENYLAMINE	16.84	169.0	136756	50.00	ng	84
55)	4-BROMOPHENYL-PHENYLETHER	17.78	248.0	71590	50.00	ng	93
56)	HEXACHLOROBENZENE	18.07	284.0	96565	50.00	ng	100
57)	PENTACHLOROPHENOL	18.68	266.0	35836	50.00	ng	100
58)	PHENANTHRENE	18.98	178.0	307348	50.00	ng	83
59)	ANTHRACENE	19.11	178.0	319774	50.00	ng	85
60)	CARBAZOLE	19.73	167.0	59525	50.00	ng	75
61)	DI-N-BUTYLPHTHALATE	21.05	149.0	519419	50.00	ng	100
62)	FLUORANTHENE	22.36	202.0	334920	50.00	ng	93
63)	*CHRYSENE-d12 (IS)	26.61	240.0	119919	40.00	ng	100
64)	PYRENE	22.97	202.0	341217	50.00	ng	99
65)	BUTYLBENZYLPHTHALATE	25.34	149.0	179138	50.00	ng	74
66)	3,3'-DICHLOROBENZIDINE	26.80	252.0	6129M	50.00	ng	100
67)	BENZO(a)ANTHRACENE	26.55	228.0	148917	50.00	ng	86
68)	BIS(2-ETHYLHEXYL)PHTHALATE	27.28	149.0	234160	50.00	ng	94
69)	CHRYSENE	26.69	228.0	176874	50.00	ng	91
70)	TERPHENYL-d14 (SS)	23.65	244.0	183377	50.00	ng	100
71)	*PERYLENE-d12 (IS)	31.12	264.0	67982	40.00	ng	100
72)	DI-N-OCTYLPHTHALATE	29.29	149.0	300159	50.00	ng	100
73)	BENZO(b)FLUORANTHENE	29.95	252.0	229368	100.00	ng	100
74)	BENZO(k)FLUORANTHENE	29.95	252.0	229368	100.00	ng	100
75)	BENZO(a)PYRENE	30.92	252.0	89659	50.00	ng	96
76)	INDENO(1,2,3-cd)PYRENE	35.49	276.0	60339	50.00	ng	100
77)	DIBENZO(a,h)ANTHRACENE	35.63	278.0	54422M	50.00	ng	100
78)	BENZO(g,h,i)PERYLENE	36.65	276.0	60368M	50.00	ng	100

* Compound is ISTD

"COPY 325
ORIGINAL IS FILED IN CSF EMS64F
Case 19005
RD 06-01-92

1905-2892

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID (Standard): F7526 Date Analyzed: 05/22/92

Instrument ID: HP-6F Time Analyzed: 0043

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	75569	6.93	264201	10.04	161385	14.84
	UPPER LIMIT	151138	7.43	528402	10.54	322770	15.34
	LOWER LIMIT	37784	6.43	132100	9.54	80692	14.34
	EPA SAMPLE NO.						
01	EQK30	71152	6.94	251618	10.03	158200	14.84
02	EQK31	78195	6.95	273744	10.04	175062	14.85
03	EQK32	74575	6.95	259129	10.04	163545	14.85
04	EQK32MS	72684	6.96	257992	10.05	164497	14.87

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d8

AREA UPPER LIMIT = + 100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT.
RT LOWER LIMIT = -0.50 minutes of internal standard RT.

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID (Standard): F7526 Date Analyzed: 05/22/92

Instrument ID: HP-6F Time Analyzed: 0043

	IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
12 HOUR STD	260345		18.92		153310		26.61		120813		31.08	
UPPER LIMIT	520690		19.42		306620		27.11		241626		31.58	
LOWER LIMIT	130172		18.42		76655		26.11		60406		30.58	
EPA SAMPLE NO.												
01 EQK30	261241		18.93		150299		26.55		105895		30.81	
02 EQK31	287577		18.93		149508		26.55		103214		30.81	
03 EQK32	271742		18.93		148455		26.55		109256		30.81	
04 EQK32MS	267462		18.95		148123		26.58		110650		30.89	

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = + 100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT.
RT LOWER LIMIT = -0.50 minutes of internal standard RT.

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID (Standard): F7543 Date Analyzed: 05/22/92

Instrument ID: HP-6F Time Analyzed: 1907

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
	12 HOUR STD	85319		6.95		312302		10.07		198195		14.86	
	UPPER LIMIT	170638		7.45		624604		10.57		396390		15.36	
	LOWER LIMIT	42660		6.45		156151		9.57		99098		14.36	
	EPA SAMPLE NO.												
01	EQK32MSD	71869		6.97		256493		10.07		160363		14.87	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d8

AREA UPPER LIMIT = + 100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT.
RT LOWER LIMIT = -0.50 minutes of internal standard RT.

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

BC

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID (Standard): F7543 Date Analyzed: 05/22/92

Instrument ID: HP-6F Time Analyzed: 1907

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	341272		18.96		164729		26.67		93897		31.23	
	UPPER LIMIT	682544		19.46		329458		27.17		187794		31.73	
	LOWER LIMIT	170636		18.46		82364		26.17		46948		30.73	
	EPA SAMPLE NO.												
01	EQK32MSD	249480		18.95		120402		26.56		88630		30.81	

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = + 100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT.
RT LOWER LIMIT = -0.50 minutes of internal standard RT.

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID (Standard): F7559 Date Analyzed: 05/27/92

Instrument ID: HP-6F Time Analyzed: 0307

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
	12 HOUR STD	61958		6.92		224076		10.03		140568		14.83	
	UPPER LIMIT	123916		7.42		448152		10.53		281136		15.33	
	LOWER LIMIT	30979		6.42		112038		9.53		70284		14.33	
	EPA SAMPLE NO.												
01	EQK33	64625		6.92		228170		10.01		145255		14.82	
02	SBLKW1	60087		6.92		147329		10.02		130200		14.83	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d8

AREA UPPER LIMIT = + 100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT.
RT LOWER LIMIT = -0.50 minutes of internal standard RT.

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID (Standard): F7559 Date Analyzed: 05/27/92

Instrument ID: HP-6F Time Analyzed: 0307

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	235592		18.92		119919		26.62		67982		31.13	
	UPPER LIMIT	471184		19.42		239838		27.12		135964		31.63	
	LOWER LIMIT	117796		18.42		59960		26.12		33991		30.63	
	EPA SAMPLE NO.												
01	EQK33	212687		18.91		86178		26.60		48650		30.91	
02	SBLKW1	191998		18.92		71620		26.63		39935		30.93	

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = + 100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT.
RT LOWER LIMIT = -0.50 minutes of internal standard RT.

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

RAW Q. C. DATA PACKAGE

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID: F7461 DFTPP Injection Date: 05/18/92

Instrument ID: HP-6F DFTPP Injection Time: 1213

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	54.8
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	68.3
70	Less than 2.0% of mass 69	0.3 (0.5)1
127	25.0 - 75.0% of mass 198	43.6
197	Less than 1.0% of mass 198	0.1
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	19.2
365	Greater than 0.75% of mass 198	1.90
441	Present, but less than mass 443	8.0
442	40.0 - 110.0% of mass 198	58.1
443	15.0 - 24.0% of mass 442	11.0 (18.9)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD020		F7462	05/18/92	1246
02	SSTD050		F7463	05/18/92	1340
03	SSTD080		F7464	05/18/92	1433
04	SSTD120		F7465	05/18/92	1527
05	SSTD160		F7466	05/18/92	1621

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID: F7525 DFTPP Injection Date: 05/22/92

Instrument ID: HP-6F DFTPP Injection Time: 0010

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	38.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	51.2
70	Less than 2.0% of mass 69	0.3 (0.5)1
127	25.0 - 75.0% of mass 198	37.8
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	23.2
365	Greater than 0.75% of mass 198	2.61
441	Present, but less than mass 443	12.1
442	40.0 - 110.0% of mass 198	90.3
443	15.0 - 24.0% of mass 442	16.9 (18.7)2

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

THIS CHECK 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		F7526	05/22/92	0043
02	EQK30	967201	F7536	05/22/92	0944
03	EQK31	967203	F7537	05/22/92	1034
04	EQK32	967205	F7538	05/22/92	1124
05	EQK32MS	967207	F7539	05/22/92	1208

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID: F7541 DFTPP Injection Date: 05/22/92

Instrument ID: HP-6F DFTPP Injection Time: 1719

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	42.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	53.9
70	Less than 2.0% of mass 69	0.4 (0.8)1
127	25.0 - 75.0% of mass 198	36.9
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	22.1
365	Greater than 0.75% of mass 198	2.45
441	Present, but less than mass 443	11.5
442	40.0 - 110.0% of mass 198	82.9
443	15.0 - 24.0% of mass 442	15.4 (18.6)2

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

THIS CHECK 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		F7543	05/22/92	1907
02	EQK32MSD	967207	F7548	05/23/92	0010

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Lab File ID: F7558 DFTPP Injection Date: 05/27/92

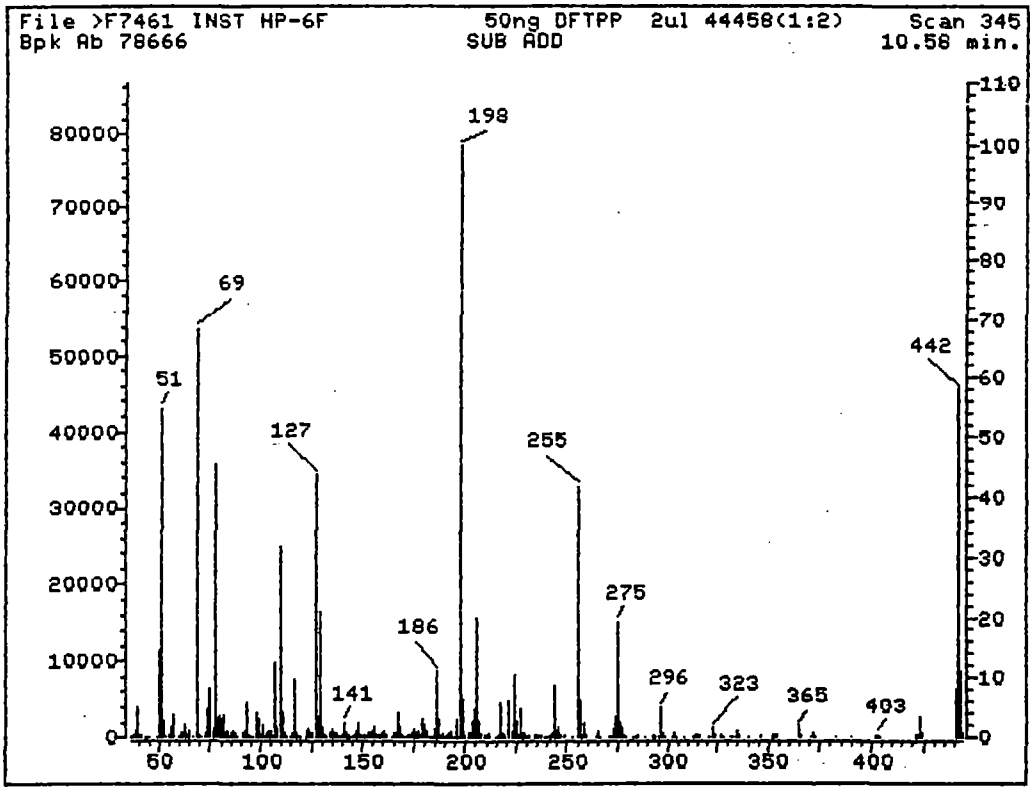
Instrument ID: HP-6F DFTPP Injection Time: 0233

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	47.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	60.2
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	25.0 - 75.0% of mass 198	40.0
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	20.9
365	Greater than 0.75% of mass 198	2.06
441	Present, but less than mass 443	9.7
442	40.0 - 110.0% of mass 198	71.1
443	15.0 - 24.0% of mass 442	13.4 (18.9)2

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

THIS CHECK 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		F7559	05/27/92	0307
02	SBLKW1	967210	F7564	05/27/92	0838
03	EQK33	967209	F7565	05/27/92	0930



MS data file header from : >F7461

Sample: INST HP-6F Operator: TERMINAL62MS 5/18/92 12:13
Misc : 50ng DFTPP 2ul 44458(1:2) BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: DFTPP6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

SCANS WERE SUMMED AS
345.00
+
346.00
+
347.00
-
341.00

"COPY
ORIGINAL IS FILED IN CSF DBT56, Case 18050
RO 06-01-92
JBB 05/19/92

05/18/92 12:13
>F7461 INST HP-6F 50ng DFTPP 2ul 44458(1:2)
345 SUB ADD NRM

File: >F7461 Scan #: 345 Retn. time: 10.58

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	.070	101.00	1.931	157.00	.376	208.00	.671	283.10	.154
37.00	.206	102.20	.060	157.90	.392	209.00	.222	284.00	.106
38.10	.966	103.00	.732	158.00	.064	210.20	.334	285.00	.234
39.10	5.035	104.00	1.187	159.00	.313	211.10	.842	289.00	.034
40.00	.459	105.00	1.148	160.00	.657	215.00	.132	292.10	.036
41.10	.275	106.00	.104	161.00	1.021	216.00	.408	293.00	.328
43.10	.108	107.00	12.304	161.90	.278	217.00	5.649	294.00	.037
44.10	.181	108.00	1.851	164.10	.064	218.00	.741	295.00	.051
45.10	.107	110.00	31.527	165.00	.822	219.00	.226	296.10	4.968
49.05	.156	110.95	4.206	166.10	.647	221.10	6.097	297.10	.698
50.05	14.605	111.95	.549	167.00	3.923	223.00	1.072	298.10	.034
51.05	54.773	112.85	.188	168.00	1.618	224.10	10.444	302.15	.061
52.05	2.647	114.95	.053	169.10	.339	225.10	2.692	303.05	.600
52.85	.141	116.05	.805	170.10	.079	226.10	.247	304.05	.141
55.05	.426	116.95	9.734	171.00	.179	227.00	4.650	307.95	.041
55.95	1.847	118.05	.726	172.10	.421	228.10	.638	312.85	.028
57.05	3.778	119.05	.118	173.00	.481	229.00	.826	314.05	.220
60.15	.046	119.95	.160	174.05	.811	230.00	.044	315.05	.439
61.05	.755	122.05	.992	175.05	1.458	231.10	.375	316.05	.315
61.95	.633	123.05	1.476	176.05	.604	234.00	.243	321.05	.078
63.05	2.042	123.95	.658	177.05	.886	235.00	.243	323.05	1.576
64.15	.313	125.05	.553	177.95	.244	236.00	.165	324.05	.291
65.15	.924	127.05	43.610	178.95	3.069	237.05	.275	327.05	.282
67.05	.052	128.05	3.408	180.05	2.036	238.95	.071	327.95	.061
69.05	68.320	129.05	20.691	181.05	1.055	240.05	.112	332.00	.123
70.05	.348	130.05	1.700	182.05	.083	241.05	.191	333.00	.150
71.05	.065	131.15	.386	182.85	.053	242.05	.486	334.10	.975
73.05	.545	132.05	.133	183.95	.197	243.05	.580	335.10	.234
74.05	4.806	134.05	.567	185.05	1.416	244.05	8.820	340.90	.088
75.05	8.128	135.05	1.508	186.05	10.949	245.05	1.168	346.00	.324
76.15	1.210	136.05	.576	187.05	3.066	246.05	1.770	352.10	.467
77.05	45.504	137.05	.700	188.15	.272	246.95	.277	353.10	.318
78.05	2.978	137.95	.142	189.05	.733	248.95	.278	354.10	.458
79.05	3.695	138.95	.052	189.95	.116	252.95	.151	364.95	1.899
80.00	2.908	140.05	.277	190.95	.305	255.05	41.768	365.95	.224
81.00	3.856	141.05	2.422	191.85	.774	256.05	5.916	370.95	.072
82.00	.856	142.05	.803	193.05	.905	257.15	.403	372.05	.792
83.10	.882	143.00	.538	194.05	.202	258.05	2.465	372.95	.205
84.10	.187	144.00	.084	195.05	.058	259.05	.365	382.95	.174
85.00	.741	145.00	.064	196.05	3.081	264.05	.050	390.05	.117
86.00	1.181	146.00	.409	196.65	.099	265.05	.943	402.00	.281
87.00	.547	147.00	1.110	198.05	100.000	265.95	.074	403.10	.399
88.00	.142	148.00	2.333	199.05	6.380	270.90	.033	404.10	.080
91.00	.869	148.90	.521	200.05	.522	272.10	.100	421.10	.385
92.10	.924	150.00	.168	201.45	.552	273.00	1.253	422.10	.344

"COPY
ORIGINAL IS FILED IN CSF DBT56, "Case 18050 05/19/92
RD06-01-92 JBB

05/18/92 12:13
>F7461 INST HP-6F 50ng DFTPP 2ul 44458(1:2)
345 SUB ADD NRM

File: >F7461 Scan #: 345 Retn. time: 10.58

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
93.00	5.644	151.10	.324	201.65	.160	274.00	3.319	423.10	3.254
94.00	.406	151.40	.061	203.05	.566	275.00	19.228	424.10	.605
95.10	.116	152.00	.201	204.05	2.677	276.10	2.424	441.05	7.951
96.10	.169	153.00	.747	205.05	4.580	277.00	1.572	442.15	58.066
98.00	4.091	154.00	.549	206.00	19.972	277.90	.233	443.15	10.982
99.00	3.189	155.00	1.078	207.00	2.611	279.00	.033	444.15	.858
100.10	.318	156.10	1.632						

SCANS WERE SUMMED AS
345.00
+
346.00
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347.00
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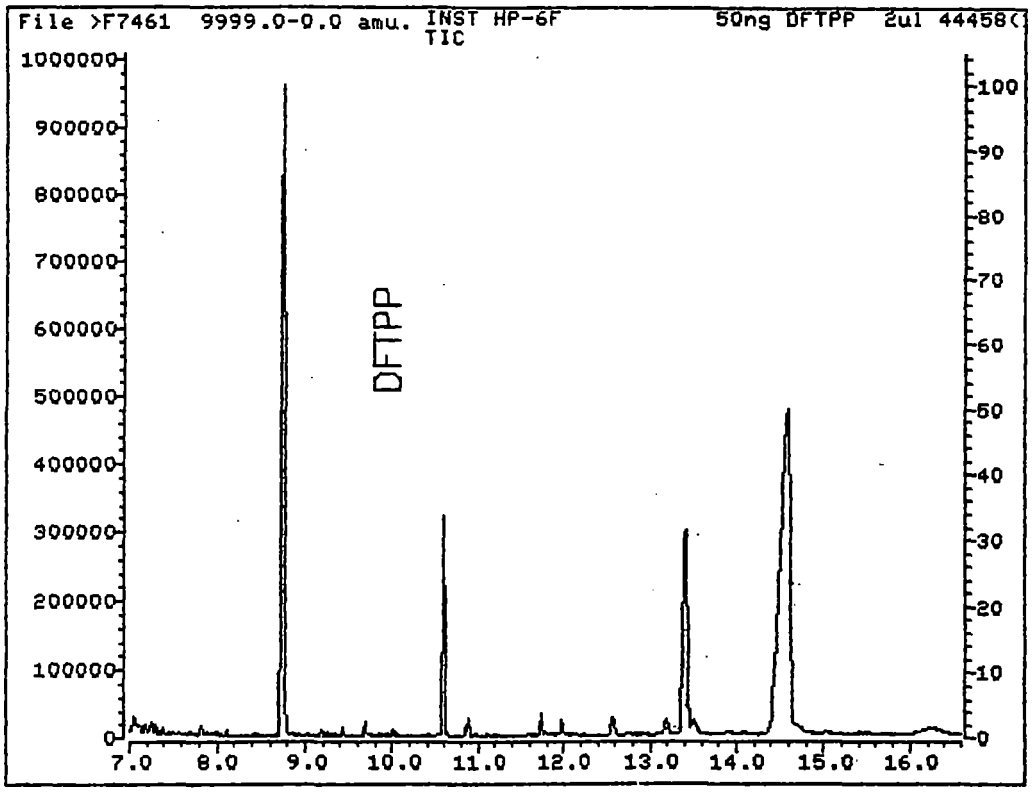
341.00

"COPY
ORIGINAL IS FILED IN CSF DBI58, Case 18050
RD 06-01-92 JB 5/19/92



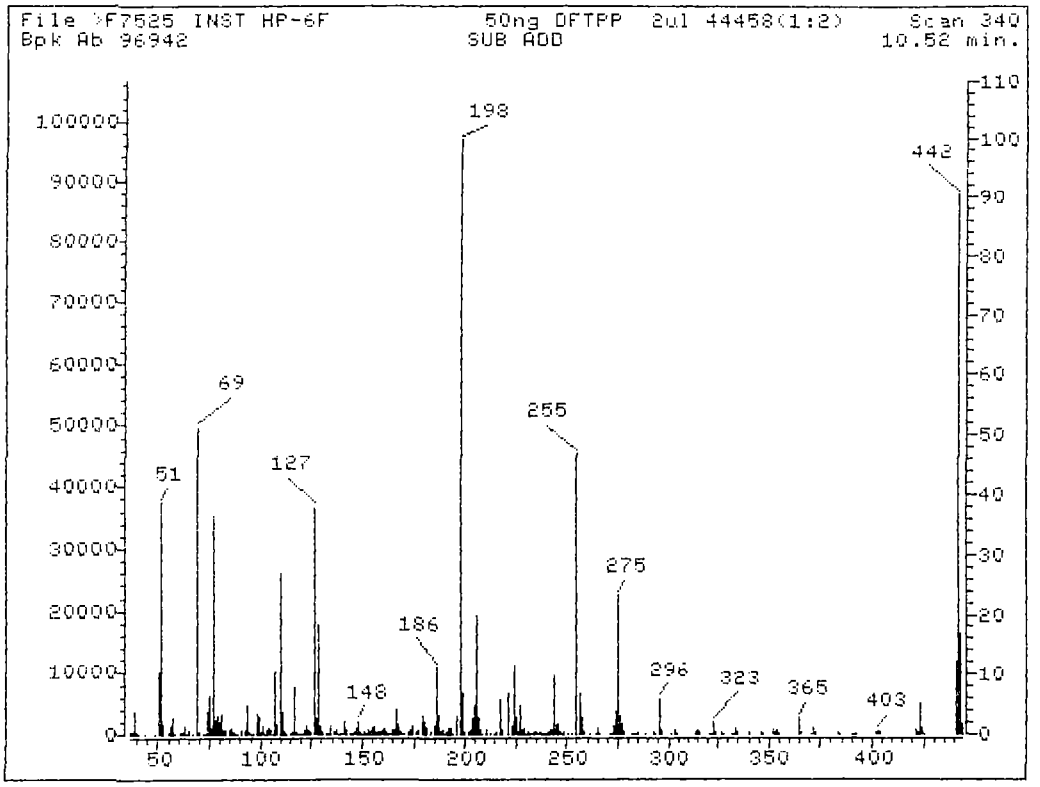
MS data file header from : >F7461

Sample: INST HP-6F Operator: TERMINAL62MS 5/18/92 12:13
Misc : 50ng DFTPP 2ul 44458(1:2) BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: DFTPP6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 0

Chromatographic temperatures :	0.	0.	0.	0.	0.
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0

"COPY
ORIGINAL IS FILED IN CSF DBT56, Case 18050
RD 06-01-92 JBB 5/19/92

19026-5



MS data file header from : >F7525

Sample: INST HP-6F Operator: TERMINAL62MS 5/22/92 0:10
Misc : 50ng DFTPP 2ul 44458(1:2) BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: DFTPP6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	.1	7.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	20.0	0.0	0.0	.1	0.0

SCANS WERE SUMMED AS
340.00
+
341.00
+
342.00
-
337.00

"COPY
ORIGINAL IS FILED IN CSF EMS 64, Case 19005
RD 06-01-92

08528 92

19026·5

05/22/92 00:10
>F7525 INST HP-6F 50ng DFTPP 2ul 44458(1:2)
340 SUB ADD NRM

File: >F7525 Scan #: 340 Retn. time: 10.52

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.40	.032	105.10	.076	156.00	1.546	215.90	.448	284.00	.102
37.10	.218	106.00	.045	157.00	.365	217.00	5.750	285.10	.312
38.10	.505	107.00	10.402	158.00	.408	218.00	.688	288.90	.035
39.10	3.638	108.00	1.628	159.10	.301	218.90	.072	293.00	.347
40.00	.437	110.00	26.882	160.00	.659	221.00	6.654	294.00	.087
41.10	.146	110.95	3.641	160.90	.994	223.00	1.209	295.10	.023
44.10	.202	111.95	.435	162.00	.234	224.00	11.376	296.00	5.879
48.15	.022	112.75	.046	163.00	.035	225.10	2.881	297.00	.865
49.05	.013	113.05	.104	164.00	.119	226.10	.287	300.95	.030
50.05	10.287	115.15	.030	165.00	.785	227.00	4.759	302.95	.674
51.05	38.588	115.95	.390	166.00	.626	227.90	.677	303.95	.200
52.05	1.858	116.95	7.895	167.00	3.935	229.00	1.020	314.05	.299
55.05	.327	117.95	.539	168.00	1.564	230.00	.106	314.95	.600
56.05	1.334	118.75	.093	169.00	.248	231.10	.419	316.05	.354
57.05	2.770	119.05	.058	170.10	.070	232.00	.033	321.05	.141
58.05	.164	119.85	.057	171.00	.191	233.10	.051	322.05	.083
61.05	.436	121.05	.026	172.10	.388	234.00	.321	322.95	1.997
62.05	.526	121.95	.759	173.00	.453	235.00	.347	323.95	.365
63.05	1.464	123.05	1.229	173.95	.744	236.10	.165	326.95	.356
63.95	.186	123.95	.564	174.95	1.425	236.95	.357	328.05	.191
65.05	.661	124.85	.499	176.05	.462	237.95	.039	332.00	.129
67.15	.017	127.05	37.788	176.95	.874	238.85	.193	333.00	.195
69.05	51.181	128.05	2.888	177.75	.250	240.05	.117	334.00	1.204
70.05	.244	129.05	18.041	178.95	3.073	240.85	.299	335.00	.356
72.35	.023	129.95	1.456	179.95	1.935	241.95	.570	340.90	.229
72.95	.042	131.05	.387	180.95	.980	243.05	.642	345.90	.436
73.95	3.822	132.05	.149	182.95	.045	244.05	9.712	347.00	.037
75.05	6.353	132.85	.053	183.35	.040	245.05	1.294	352.00	.582
76.05	1.061	133.25	.027	183.75	.253	245.95	1.811	353.00	.394
77.05	36.128	134.05	.446	185.05	1.433	246.95	.356	354.10	.671
78.05	2.437	134.95	1.328	186.05	11.076	247.95	.041	355.00	.048
79.05	2.945	136.05	.509	187.05	3.001	249.05	.279	364.85	2.610
80.00	2.061	137.05	.570	188.15	.310	250.85	.037	365.95	.361
81.00	3.252	137.75	.123	188.95	.618	252.15	.040	371.15	.182
82.00	.772	137.95	.124	190.05	.119	252.95	.196	371.95	1.151
83.00	.598	138.65	.030	191.15	.327	254.95	46.545	373.05	.253
85.00	.570	138.95	.048	191.95	.895	256.05	6.681	383.05	.273
85.90	.876	140.05	.183	192.95	.916	257.05	.542	384.05	.040
87.00	.339	141.05	2.065	193.95	.197	257.95	2.781	390.05	.129
88.00	.116	142.05	.779	196.05	3.029	258.95	.419	391.05	.056
89.00	.055	142.70	.410	197.95	100.000	261.05	.068	391.95	.081
90.90	.806	144.00	.060	198.95	6.616	264.05	.053	402.00	.468
92.10	.793	145.00	.039	200.05	.449	265.05	1.026	403.00	.671
93.00	4.781	146.00	.375	201.55	.536	265.85	.115	404.00	.241
94.00	.364	147.00	1.109	202.95	.590	270.90	.030	421.00	.592

"33H"
ORIGINAL IS FILED IN CSF EM564; Case 19005
RD 06-01-92 JCP 5-28-92

05/22/92 00:10
>F7525 INST HP-6F 50ng DFTPP 2ul 44458(1:2)
340 SUB ADD NRM

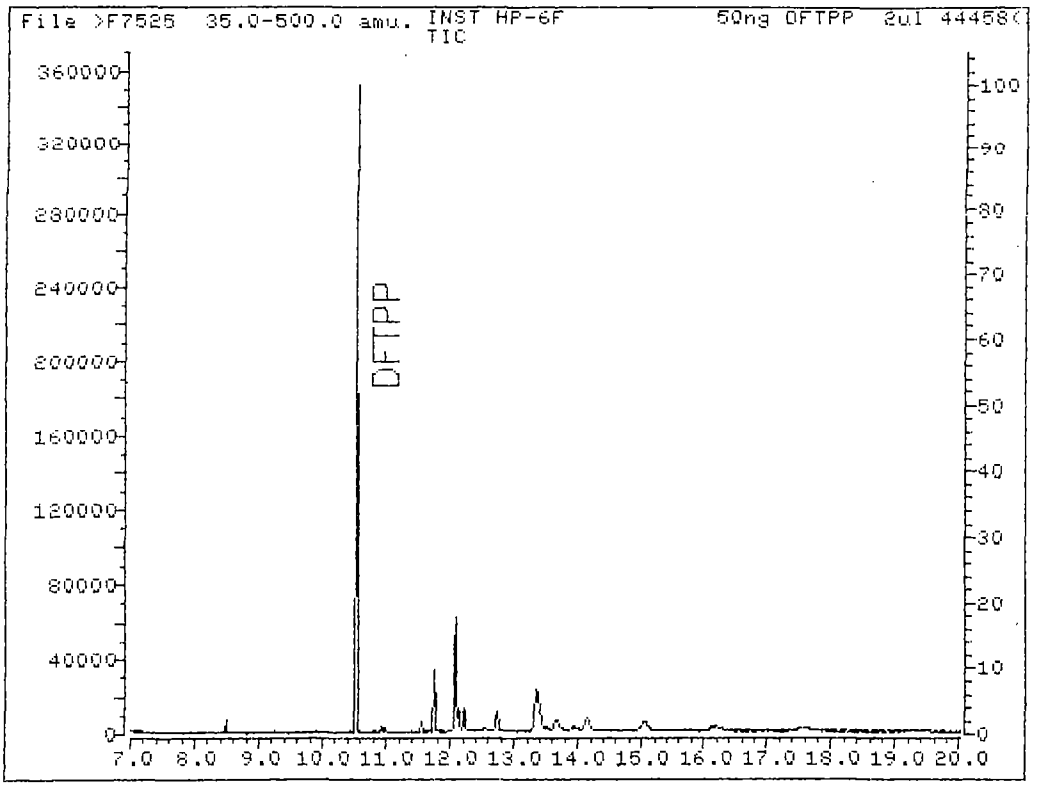
File: >F7525 Scan #: 340 Retn. time: 10.52

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
95.00	.154	148.00	2.093	204.05	2.854	272.00	.095	422.10	.398
96.00	.153	149.00	.468	205.05	4.617	273.00	1.461	423.00	4.925
98.00	3.345	150.00	.138	206.00	19.989	274.00	3.840	424.00	.907
99.00	2.765	151.10	.255	207.00	2.576	275.00	23.164	424.70	.024
100.00	.340	151.30	.168	208.00	.723	276.00	3.055	425.00	.068
101.00	1.502	151.60	.093	208.90	.202	277.00	1.747	441.05	12.123
101.80	.023	152.10	.121	210.20	.240	277.90	.217	442.05	90.330
103.00	.612	153.00	.745	211.00	.808	282.00	.054	443.05	16.932
104.00	.972	154.00	.509	213.00	.033	283.00	.161	444.05	1.565
104.90	.854	155.00	.974	214.90	.186				

SCANS WERE SUMMED AS
340.00
+
341.00
+
342.00
-
337.00

"COPY
ORIGINAL IS FILED IN CSF EM564, Case 19005
RD 06-01-92

1805-2892



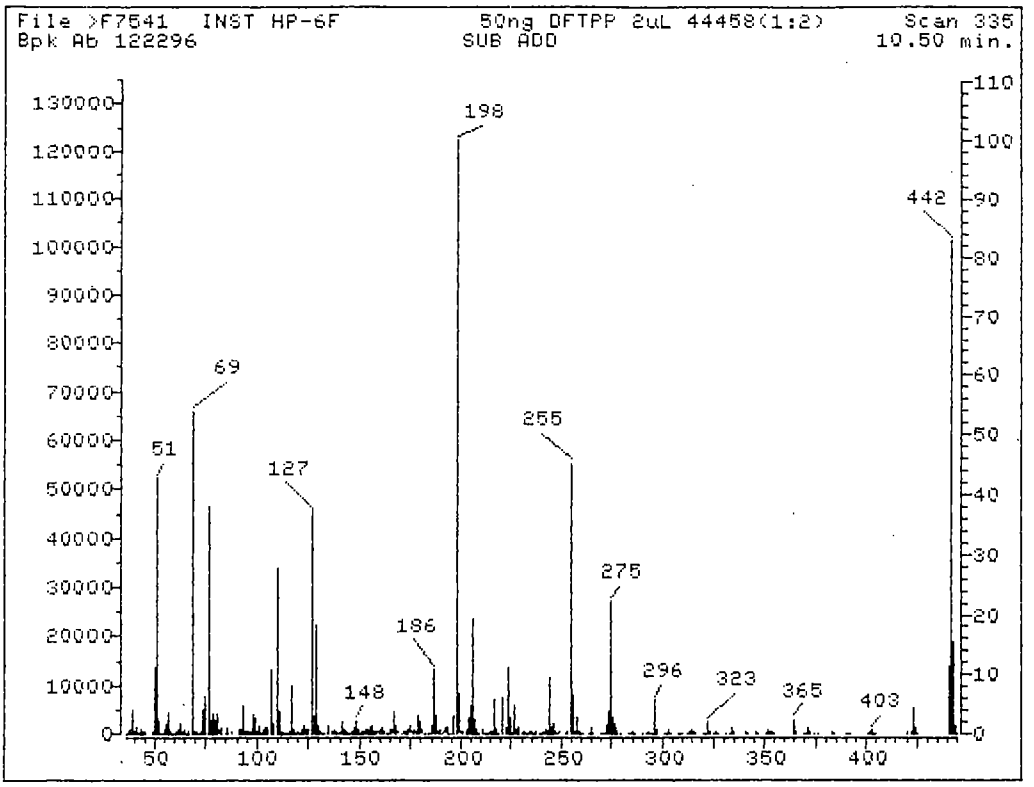
MS data file header from : >F7525

Sample: INST HP-6F Operator: TERMINAL62MS 5/22/92 0:10
Misc : 50ng DFTPP 2ul 44458(1:2) BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: DFTPP6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	.1	7.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	20.0	0.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF EMS64", Case 19005
RD06-01-92

pg 5-28-93



MS data file header from : >F7541

Sample: INST HP-6F Operator: TERMINAL62MS 5/22/92 17:19
Misc : 50ng DFTPP 2uL 44458(1:2) BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: DFTPP6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	.1	7.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	20.0	0.0	0.0	.1	0.0

SCANS WERE SUMMED AS
335.00
+
336.00
+
337.00
-
331.00

"COPY
ORIGINAL IS FILED IN CSF EM564, Case 19005
RD 06-01-92

1Cp5-2892

05/22/92 17:19
>F7541 INST HP-6F 50ng DFTPP 2uL 44458(1:2)
335 SUB ADD NRM

File: >F7541 Scan #: 335 Retn. time: 10.50

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.10	.066	101.00	1.543	162.10	.255	226.00	.117	302.95	.658
37.10	.255	102.00	.197	163.00	.101	227.00	4.733	303.95	.188
38.10	.651	103.00	.633	164.00	.076	228.00	.592	307.95	.083
39.10	4.188	104.00	1.030	165.00	.793	228.90	.888	309.05	.027
40.00	.476	105.00	1.093	166.00	.630	230.00	.124	309.95	.038
41.10	.967	107.00	10.927	167.00	3.767	231.10	.383	312.95	.033
42.20	.150	108.00	1.662	168.00	1.460	232.00	.096	313.85	.229
43.10	.809	110.00	27.715	169.00	.340	233.00	.101	314.95	.611
44.00	.259	110.95	3.853	170.10	.140	234.00	.307	315.95	.334
45.10	.218	111.95	.471	170.90	.152	235.00	.367	317.05	.038
49.05	.248	112.95	.145	172.00	.388	235.90	.146	321.05	.164
50.05	11.254	113.95	.022	173.00	.441	236.95	.316	321.95	.087
51.05	42.529	115.05	.108	173.95	.845	238.95	.191	322.95	1.885
51.95	2.110	115.95	.347	174.95	1.366	239.95	.115	323.95	.356
53.05	.200	116.95	8.157	176.05	.454	240.95	.269	325.95	.025
54.05	.107	117.95	.575	176.95	.760	241.95	.571	326.85	.338
55.15	.864	119.05	.157	177.95	.274	243.05	.534	327.85	.154
56.05	1.639	119.95	.215	178.95	2.943	243.95	9.312	331.80	.130
57.05	3.636	121.05	.113	179.95	2.031	245.05	1.200	333.00	.166
58.05	.354	121.95	.829	180.95	.871	245.95	1.823	334.00	1.154
58.95	.011	122.95	1.399	182.05	.202	246.95	.375	334.90	.296
59.85	.060	123.95	.664	183.05	.115	247.95	.050	340.90	.231
61.05	.536	125.05	.629	183.95	.192	248.95	.337	342.00	.032
62.05	.581	126.95	36.902	184.95	1.446	249.95	.063	345.90	.323
63.05	1.653	127.95	3.023	185.95	10.650	251.85	.078	347.00	.029
63.95	.246	128.95	18.006	186.95	3.043	252.95	.252	351.10	.017
65.05	.719	130.05	1.399	187.95	.304	254.95	45.154	352.00	.552
66.05	.072	131.05	.341	188.95	.657	255.95	6.560	353.00	.378
67.05	.315	131.95	.180	190.05	.123	256.95	.483	353.90	.535
69.05	53.859	132.95	.083	191.05	.379	257.95	2.576	355.00	.113
70.15	.418	134.05	.540	192.05	.935	258.95	.395	364.85	2.450
71.15	.253	134.95	1.339	193.05	1.007	259.85	.039	365.95	.348
72.15	.027	136.05	.506	194.05	.161	261.05	.049	369.95	.034
73.05	.244	137.15	.684	195.05	.188	263.95	.073	370.95	.150
74.05	3.913	138.05	.211	196.05	2.964	265.05	1.020	371.95	1.057
75.05	6.529	139.15	.158	197.95	100.000	266.05	.112	372.95	.219
77.05	37.970	140.05	.262	198.95	6.638	269.90	.026	373.95	.025
78.05	2.477	140.95	2.135	200.05	.455	270.80	.075	376.85	.020
79.05	3.291	142.05	.814	201.55	.515	271.90	.138	382.95	.279
80.00	2.281	142.90	.478	202.95	.612	273.00	1.409	383.95	.031
81.00	3.354	143.90	.127	203.95	2.705	273.90	3.747	389.95	.154
82.00	.797	144.90	.046	205.05	4.591	275.00	22.127	391.05	.087
83.00	.974	145.20	.172	206.00	19.142	276.00	2.837	391.95	.072
84.10	.164	146.00	.380	207.00	2.476	276.90	1.769	400.90	.043
85.10	.960	147.00	1.036	208.00	.712	277.90	.259	401.90	.392

"COPY
ORIGINAL IS FILED IN CSF EM564, Case 19005
RD 06-01-92 CPS-2890

19026·5

05/22/92 17:19
>F7541 INST HP-6F 50ng DFTPP 2uL 44458(1:2)
335 SUB ADD NRM

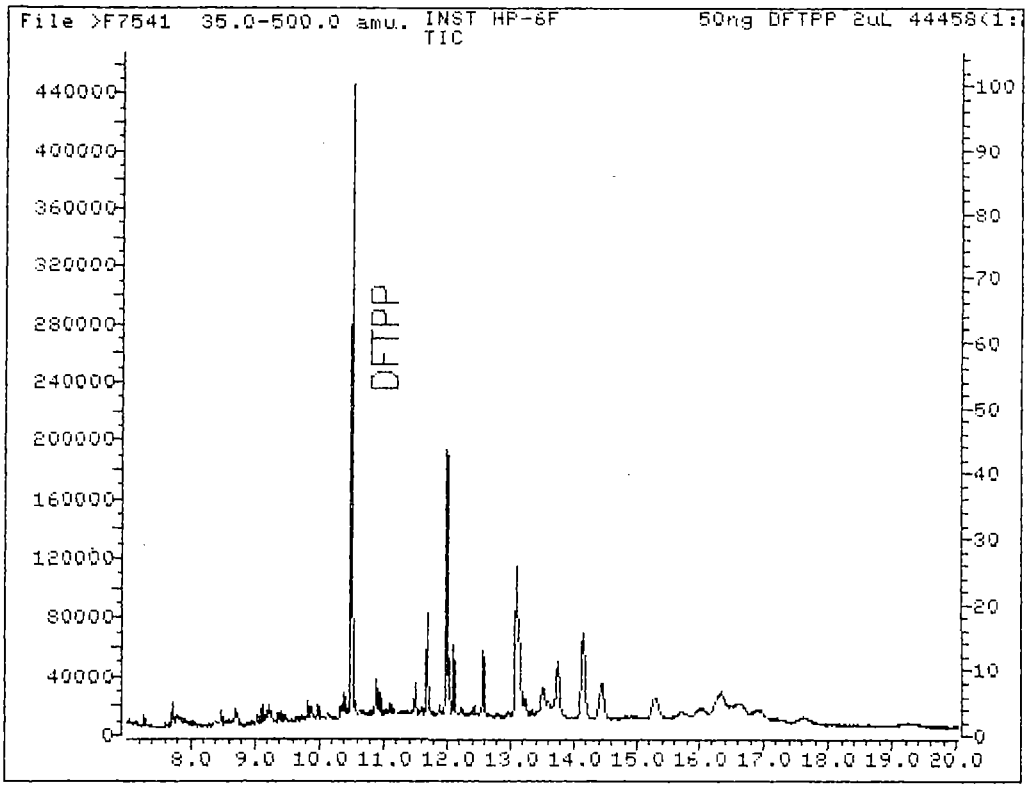
File: >F7541 Scan #: 335 Retn. time: 10.50

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
86.00	.788	147.90	2.160	209.00	.175	279.00	.067	402.90	.585
87.00	.423	149.00	.585	211.10	.814	283.00	.176	403.90	.195
87.90	.112	150.00	.145	211.70	.031	284.10	.125	404.80	.020
88.90	.046	151.10	.532	213.10	.026	285.00	.305	420.90	.515
91.00	.614	152.00	.282	214.00	.025	286.00	.039	422.00	.479
92.00	.800	152.90	.719	215.00	.262	290.00	.042	423.00	4.522
93.00	4.902	154.00	.567	216.00	.378	292.00	.074	424.00	.933
94.10	.335	155.00	1.127	216.90	5.598	293.00	.352	425.00	.095
95.10	.373	156.00	1.463	218.00	.712	293.90	.071	440.95	11.528
96.10	.345	157.00	.352	219.00	.161	294.90	.056	441.95	82.896
97.10	.237	157.90	.392	221.00	6.097	286.00	5.674	442.95	15.444
98.00	3.465	158.90	.248	223.00	1.159	297.00	.800	443.95	1.249
99.00	2.765	160.00	.699	224.00	11.077	300.95	.036	445.05	.059
100.00	.291	161.00	.959	225.00	2.783	301.95	.091		

SCANS WERE SUMMED AS
335.00
+
336.00
+
337.00
-
331.00

"COPY
ORIGINAL IS FILED IN CSF EM56A, Case 19005
RD06-01-92

1 Sp5-28-92



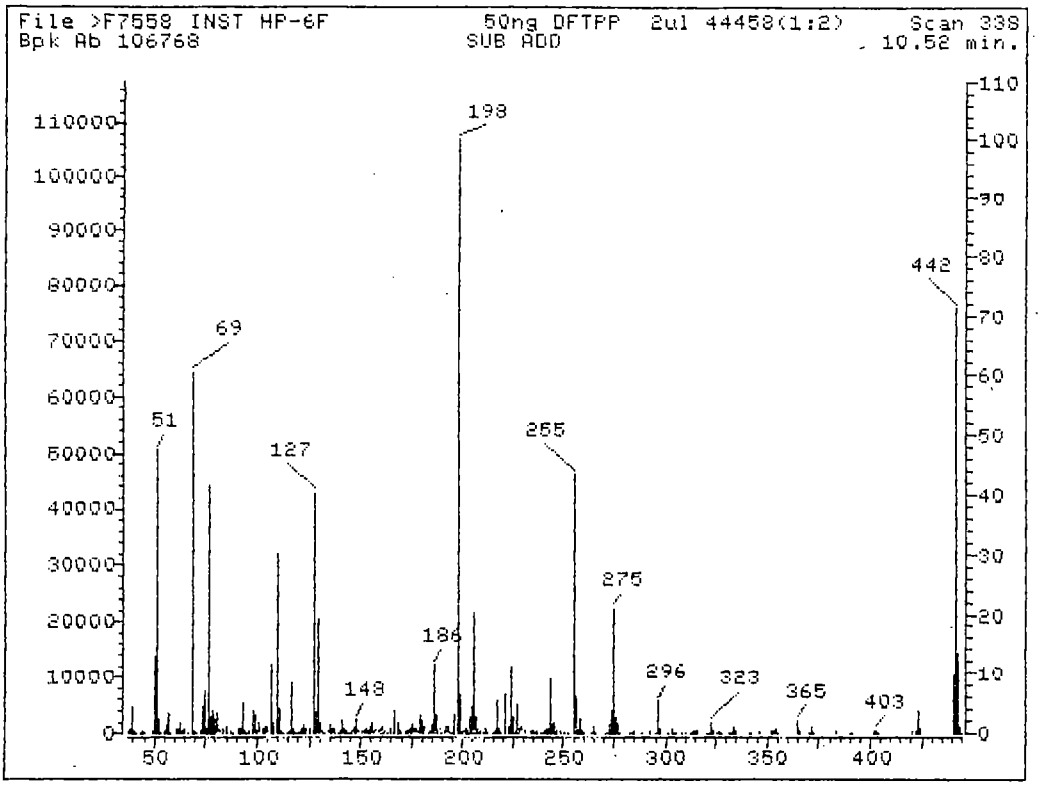
MS data file header from : >F7541

Sample: INST HP-6F Operator: TERMINAL62MS 5/22/92 17:19
Misc : 50ng DFTPP 2uL 44458(1:2) BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: DFTPP6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	.1	7.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	20.0	0.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF EM564 Case 19005
RD 06-01-92

1905-2893



MS data file header from : >F7558

Sample: INST HP-6F Operator: TERMINAL62MS 5/27/92 2:33
Misc : 50ng DFTPP 2ul 44458(1:2) BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: DFTPP6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: -0 Analyzer temp.: 275 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	.1	7.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	20.0	0.0	0.0	.1	0.0

SCANS WERE SUMMED AS
338.00
+
339.00
+
340.00
-
334.00

"COPY
ORIGINAL IS FILED IN CSF EM564, Case 19005
RD06-01-92

1905-28-92

05/27/92 02:33
>F7558 INST HP-6F 50ng DFTPP 2ul 44458(1:2)
338 SUB ADD NRM

File: >F7558 Scan #: 338 Retn. time: 10.52

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.10	.304	104.00	1.104	161.10	.965	218.00	.659	296.00	5.299
38.10	.686	105.00	1.059	161.80	.235	218.90	.163	297.10	.720
39.10	4.458	107.00	11.517	163.00	.101	221.00	6.258	297.90	.034
40.10	.525	108.00	1.866	164.00	.128	223.00	1.134	300.95	.025
41.10	.146	110.00	29.902	165.00	.819	224.00	10.968	302.95	.609
43.10	.070	110.95	4.045	166.10	.672	225.00	2.702	304.05	.159
44.10	.213	111.95	.452	167.00	3.768	226.10	.281	304.95	.022
45.10	.098	112.75	.039	168.00	1.650	227.00	4.768	307.95	.030
48.95	.363	113.05	.132	169.10	.330	228.00	.594	310.05	.087
50.05	12.728	114.95	.024	170.00	.083	229.00	.962	313.05	.041
51.05	47.256	115.95	.521	170.90	.192	230.00	.079	313.95	.248
52.05	2.399	116.95	8.484	172.00	.427	231.10	.393	314.95	.502
52.85	.059	117.95	.595	173.00	.449	234.10	.259	315.95	.346
55.05	.388	118.95	.090	174.05	.813	235.00	.308	320.85	.126
56.05	1.483	120.05	.102	174.95	1.382	236.00	.142	321.95	.043
57.05	3.473	120.95	.052	176.05	.566	236.95	.318	323.05	1.812
57.85	.180	121.95	.863	176.95	.870	239.05	.202	324.15	.313
61.05	.566	122.95	1.363	178.05	.282	239.95	.096	325.95	.023
61.95	.585	123.95	.661	178.95	2.971	240.95	.294	326.95	.269
63.05	1.682	125.05	.554	179.95	1.918	241.95	.560	327.95	.157
64.05	.232	127.05	39.996	181.05	.990	243.05	.582	331.90	.112
65.05	.863	128.05	3.283	182.05	.105	244.05	9.266	333.00	.163
67.15	.199	128.95	19.288	182.85	.077	245.05	1.223	334.00	1.041
69.05	60.197	129.95	1.578	183.95	.241	245.95	1.644	334.90	.259
70.05	.214	131.05	.349	185.05	1.396	246.95	.309	341.00	.165
70.95	.023	132.05	.164	186.05	11.429	248.95	.305	342.00	.037
73.15	.327	132.95	.104	187.05	3.049	250.95	.022	345.90	.352
74.05	4.358	133.95	.487	188.05	.320	252.05	.035	352.10	.488
75.05	7.215	135.05	1.440	188.95	.691	252.95	.169	353.00	.371
76.15	.739	136.05	.546	190.05	.110	255.05	43.238	354.00	.568
77.05	41.216	137.05	.647	191.05	.288	256.05	6.102	354.90	.037
78.05	2.720	137.85	.154	191.95	.912	256.95	.469	364.95	2.062
79.05	3.587	139.05	.081	193.05	.904	258.05	2.448	365.95	.304
80.00	2.487	139.95	.222	193.95	.197	259.05	.398	370.95	.056
81.00	3.408	140.95	2.192	194.95	.107	260.05	.037	372.05	.941
82.00	.735	142.05	.825	196.05	2.916	264.05	.065	372.95	.200
83.00	.811	142.90	.518	197.95	100.000	264.95	.967	382.95	.228
83.90	.116	144.10	.046	198.95	6.524	266.05	.107	390.05	.114
85.00	.619	145.00	.108	200.05	.465	271.00	.070	391.05	.090
85.90	.929	146.10	.426	201.55	.554	271.90	.055	402.00	.356
87.00	.435	147.00	1.125	203.05	.495	273.00	1.353	403.00	.523
88.00	.197	147.90	2.281	204.05	2.712	274.00	3.642	404.00	.174
91.00	.847	149.00	.439	205.05	4.440	275.00	20.855	421.00	.416
92.00	.815	151.10	.313	206.00	20.081	276.00	2.733	422.10	.418
93.00	5.223	151.90	.211	207.00	2.656	277.00	1.721	423.10	3.874

"COPY

ORIGINAL IS FILED IN CSF EM564; Case 19005 5.28.92
RD06-01-92 1905

05/27/92 02:33
>F7558 INST HP-6F 50ng DFTPP 2ul 44458(1:2)
338 SUB ADD NRM

File: >F7558 Scan #: 338 Retn. time: 10.52

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
94.00	.380	152.90	.788	208.00	.732	278.00	.237	424.10	.757
95.10	.143	153.90	.517	208.90	.248	283.00	.147	424.90	.064
96.00	.305	155.00	1.090	210.20	.202	284.00	.095	441.05	9.699
98.00	3.656	156.00	1.610	211.00	.786	285.10	.282	442.05	71.071
99.00	3.157	157.10	.421	212.90	.037	289.00	.053	443.05	13.430
100.10	.301	158.00	.398	215.00	.170	292.10	.064	444.05	1.187
101.00	1.644	158.90	.301	216.00	.421	293.00	.362	445.05	.061
103.00	.613	160.00	.598	217.00	5.432	295.00	.092		

SCANS WERE SUMMED AS
338.00
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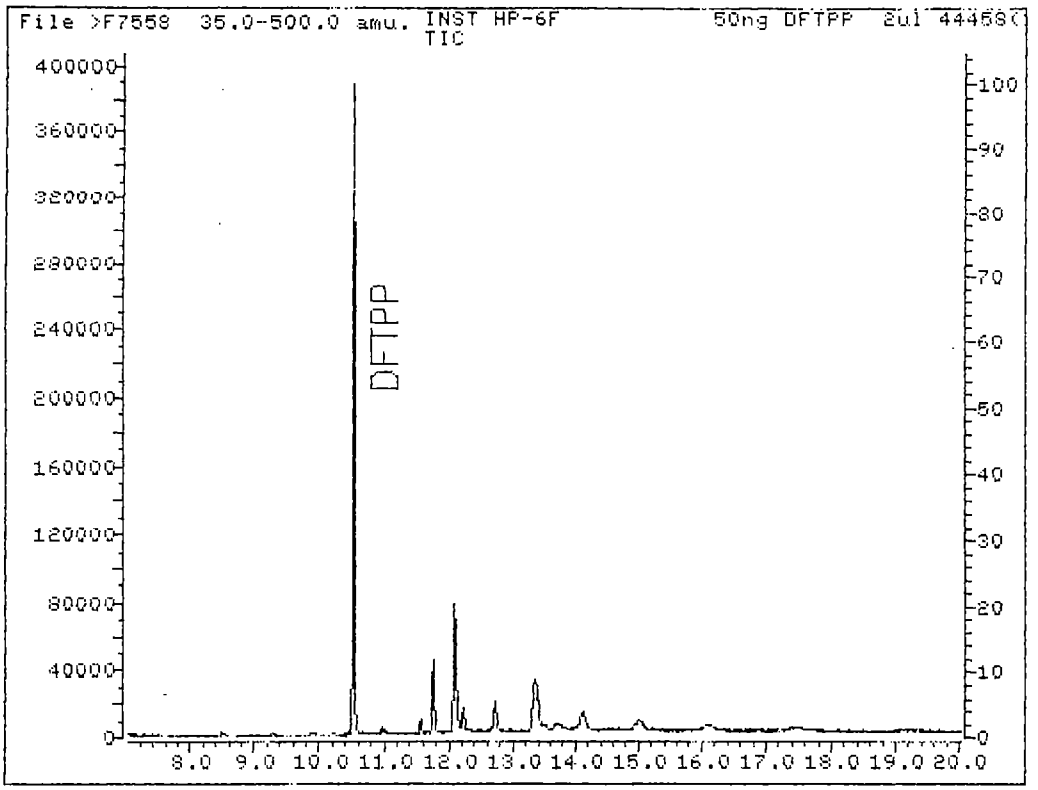
334.00

"COPY
ORIGINAL IS FILED IN CSF EMS64, Case 19005
RD06-01-92

340

1 gp5-28-92



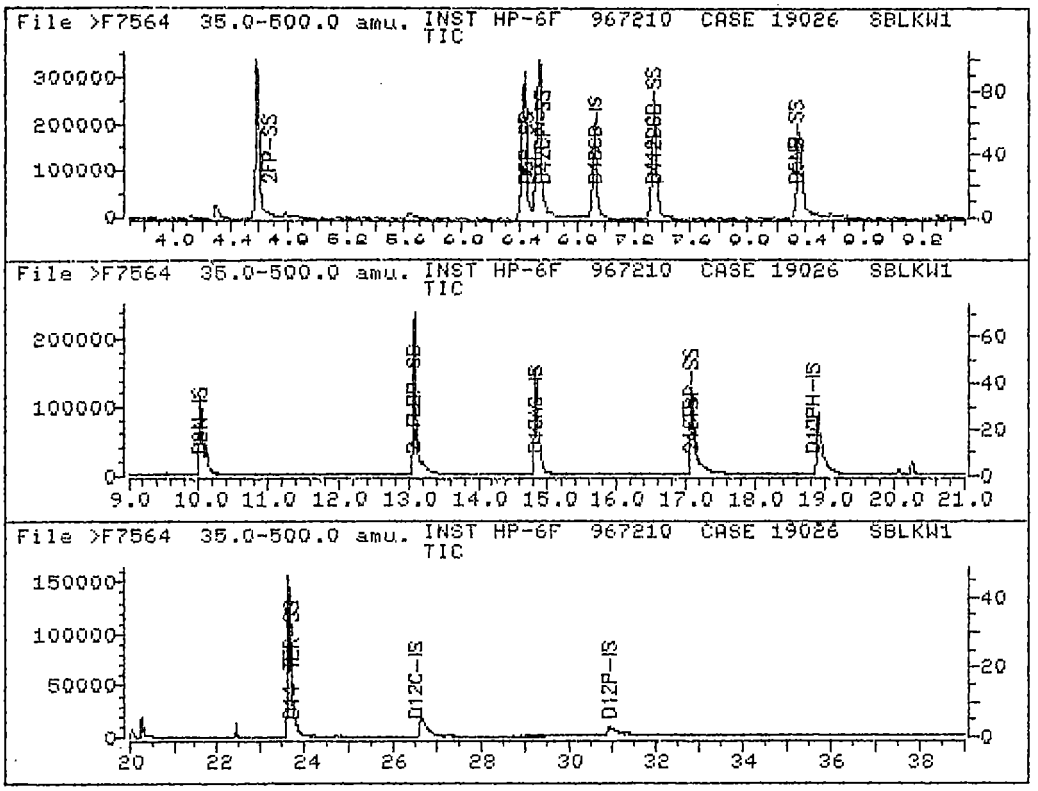
MS data file header from : >F7558

Sample: INST HP-6F Operator: TERMINAL62MS 5/27/92 2:33
Misc : 50ng DFTPP 2ul 44458(1:2) BTL# 1
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: DFTPP6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 275 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	.1	7.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	20.0	0.0	0.0	.1	0.0

"COPY
ORIGINAL IS FILED IN CSF EMS69, Case 19005
RD06-01-92

1C85-2890



MS data file header from : >F7564

Sample: INST HP-6F 967210 Operator: TERMINAL62MS 5/27/92 8:38
Misc : CASE 19026 SBLKW1 IS=40 44502(BTL# 5
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BNAME6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	1.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	9.0	0.0	0.0	.1	0.0

345 RD 06-02-92

185-2892

19026 · 5

QUANT REPORT

Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920527 09:21
Output File: ^F7564::QT Injected at: 920527 08:38
Data File: >F7564::D9 Dilution Factor: .50000
Name: INST HP-6F 967210
Misc: CASE 19026 SBLKW1 IS=40 44502(BTL# 5

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920527 04:38

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4 (IS)	6.92	152.0	60087	40.00	ng	84
13)	2-FLUOROPHENOL (SS)	4.59	112.0	160887	46.69	ng	67
14)	PHENOL-d5 (SS)	6.44	99.0	226910	49.03	ng	68
15)	2-CHLOROPHENOL-d4 (SS)	6.54	132.0	179254	45.68	ng	73
16)	1,2-DICHLOROBENZENE-d4 (SS)	7.35	152.0	81710	30.09	ng	81
17)	*NAPHTHALENE-d8 (IS)	10.02	136.0	147329	40.00	ng	100
30)	NITROBENZENE-d5 (SS)	8.36	82.0	156788	48.05	ng	83
31)	*ACENAPHTHENE-d10 (IS)	14.83	164.0	130200	40.00	ng	95
50)	2-FLUOROBIPHENYL (SS)	13.09	172.0	261815	31.31	ng	100
51)	2,4,6-TRIBROMOPHENOL (SS)	17.10	329.7	68077	43.50	ng	100
52)	*PHENANTHRENE-d10 (IS)	18.92	188.0	191998	40.00	ng	100
63)	*CHRYSENE-d12 (IS)	26.62	240.0	71620	40.00	ng	100
70)	TERPHENYL-d14 (SS)	23.62	244.0	240180	54.83	ng	100
71)	*PERYLENE-d12 (IS)	30.92	264.0	39935	40.00	ng	100

* Compound is ISTD

1905-2892

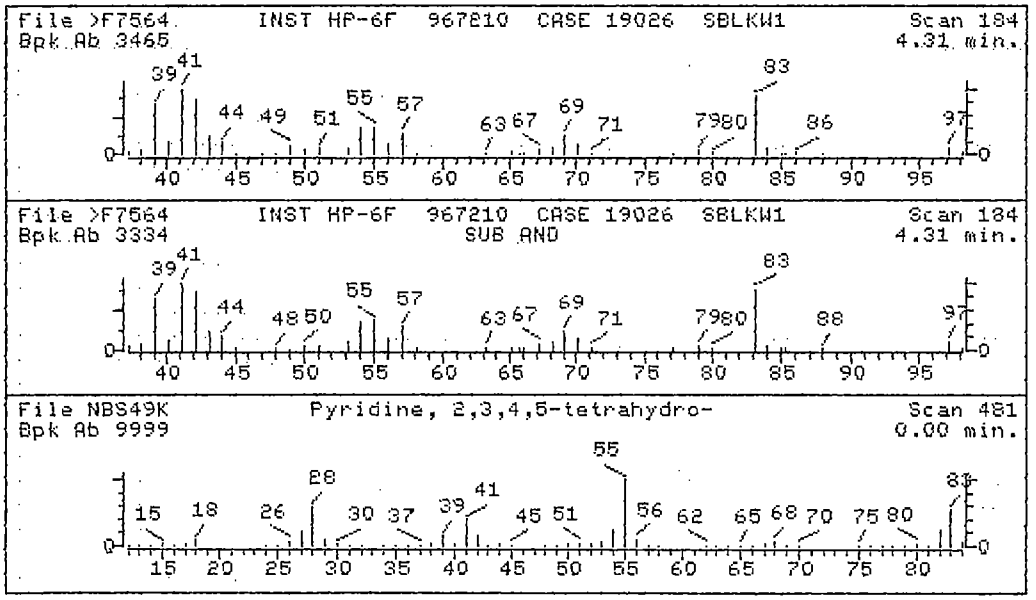
SAMPLE NAME:INST HP-6F 967210
MISC:CASE 19026 SBLKW1
INJECTION TIME:920527 08:38
INSTRUMENT ID:6F

1. Pyridine, 2,3,4,5-tetrahydro- 83 C5H9N

C285-2893 / Unknown compound

Sample file: >F7564 Spectrum #: 184
Search speed: 1 Tilting option: S No. of ion ranges searched: 41

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
1.	20*	505180	6132	NBS49K	32	61	2	0	168	53	5	15



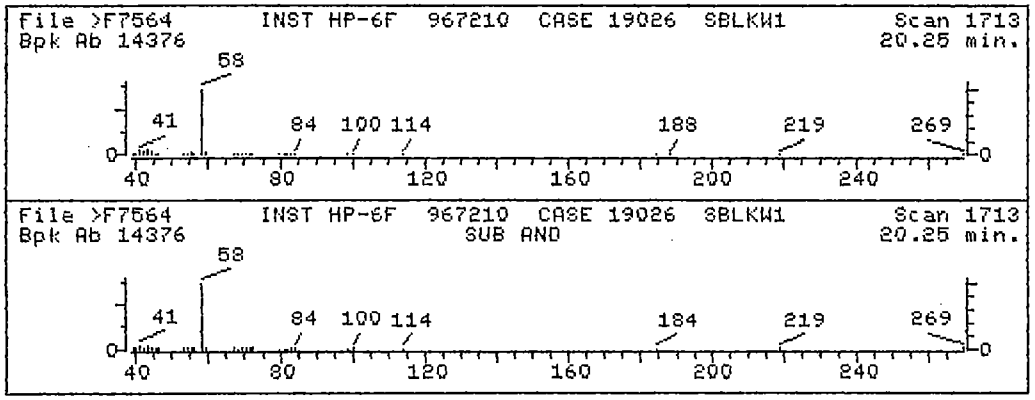
C285-2893

SAMPLE NAME:INST HP-6F 967210
MISC:CASE 19026 SBLKW1
INJECTION TIME:920527 08:38
INSTRUMENT ID:6F

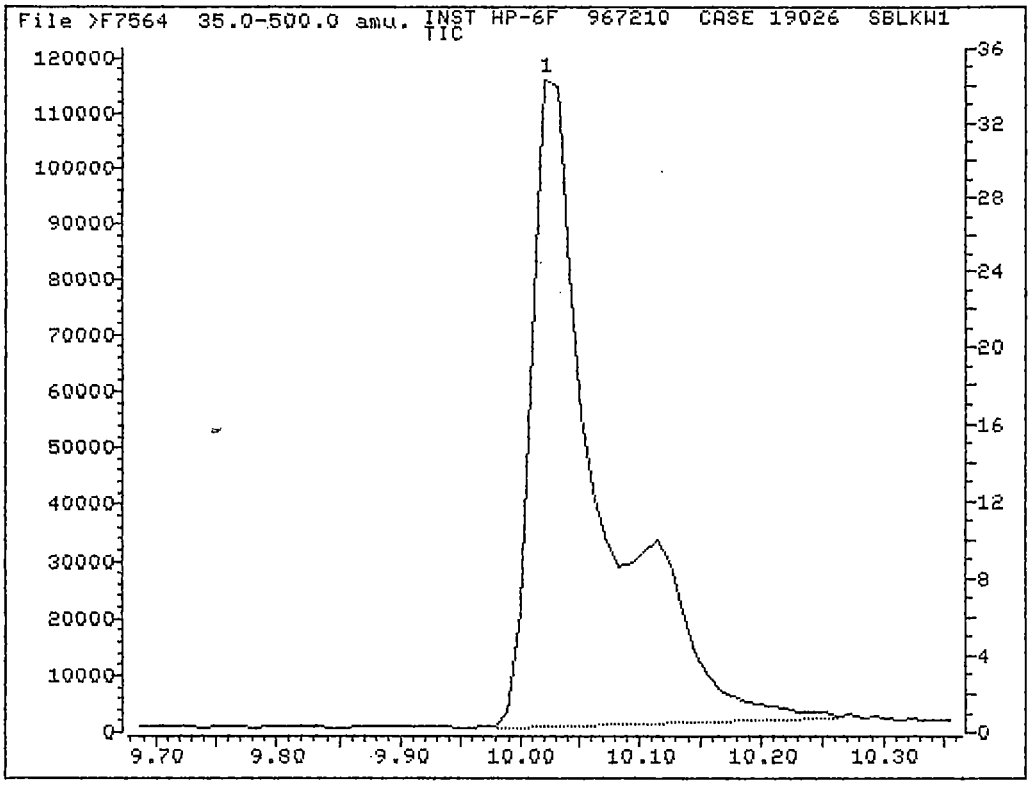
Sample file: >F7564 Spectrum #: 1713

*No data base entries were retrieved.
*Unknown compound

805-28-92

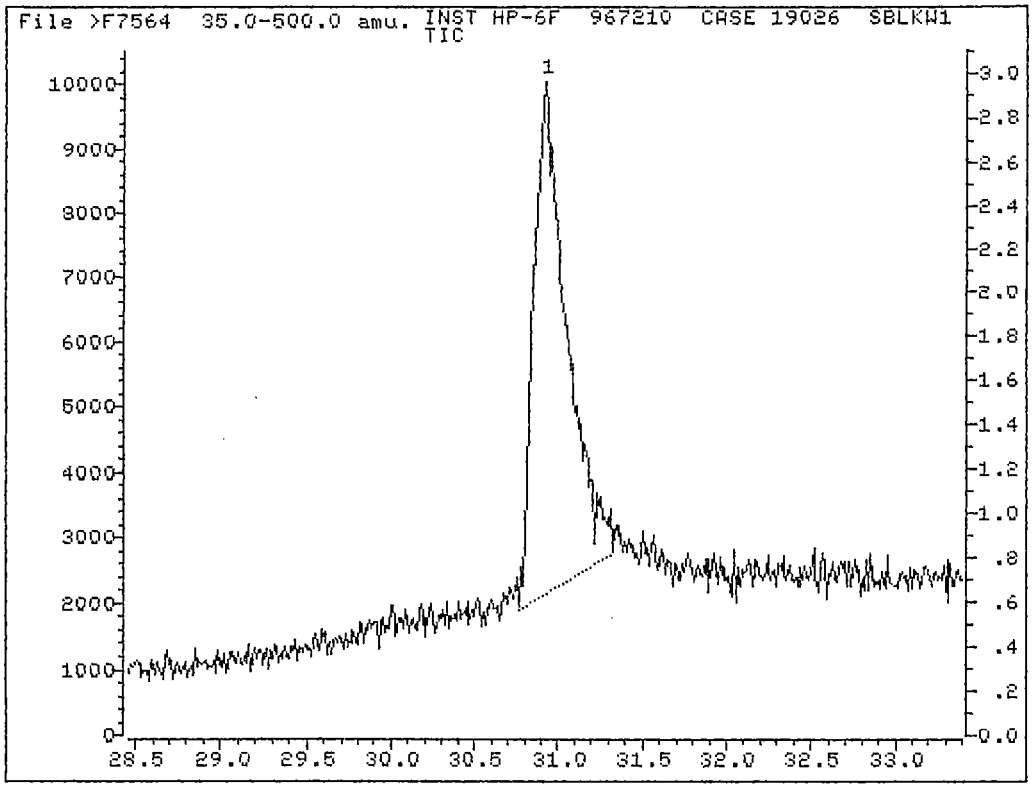


805-28-92



Peak No: 10
TIC Name: Unidentified TIC
Scan Number: 732
Retention Time: 10.02 min.
Corrected Area: 460007M
Concentration: **********
Corrected Conc:**********

1985-2890



Peak No: 20
TIC Name: Unidentified TIC
Scan Number: 2737
Retention Time: 30.93 min.
Corrected Area: 106459M
Concentration: **********
Corrected Conc:**********

1CP5-2890

DATE/TIME INJECTED 920527 08:38
>F7564 INST HP-6F 967210 CASE 19026 SBLKW1

THE INTEGRATION PARAMETERS USED WERE
,.20:0.00,-8873
NO SMOOTHING WAS DONE.

INTEGRATION TABLE

TIC NUM	PEAK NUM	RETENTION TIME	FIRST SCAN	MAX SCAN	LAST SCAN	CORRECTED AREA	CONCENTRATION ng	ug/L	ISTD USED
1	1	4.305	181	184	189	41021	2.09	2.09	1
2	16	20.254	1708	1713	1726	59306	2.27	2.27	4

INTERNAL STANDARD TABLE

IS NUM	PEAK NUM	R.T. MIN.	FIRST SCAN	MAX SCAN	LAST SCAN	CORRECTED AREA	INTERNAL STANDARD NAME
1	7	6.923	431	435	450	392096	1,4-DICHLOROBENZENE-d4 (IS)
~~2~~	~~10~~	~~10.021~~	~~728~~	~~732~~	~~738~~	~~345949~~	~~NAPHTHALENE-d8 (IS)~~ 05-28-92
3	12	14.829	1187	1193	1220	602276	ACENAPHTHENE-d10 (IS)
4	14	18.919	1579	1585	1615	521827	PHENANTHRENE-d10 (IS)
5	19	26.610	2314	2323	2347	186003	CHRYSENE-d12 (IS)
~~6~~	~~20~~	~~30.928~~	~~2724~~	~~2737~~	~~2754~~	~~88732~~	~~PERYLENE-d12 (IS)~~
2	10	10.02	728	732	755	460007	NAPHTHALENE-d8 (IS) 05-28-92
6	20	30.93	2722	2737	2775	106459	PERYLENE-d12 (IS)

05-28-92

19026 • 5

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK32MS

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967207

Sample wt/vol: 1000 (g/mL) ML Lab File ID: F7539

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/04/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

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

CAS NO.	COMPOUND		Q
108-95-2	Phenol	43	
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	44	
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	26	
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	31	
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	28	
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	49	
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	31	

1C

19026 • 5

EPA SAMPLE NO.

EQK32MS

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967207

Sample wt/vol: 1000 (g/mL) ML Lab File ID: F7539

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/04/92

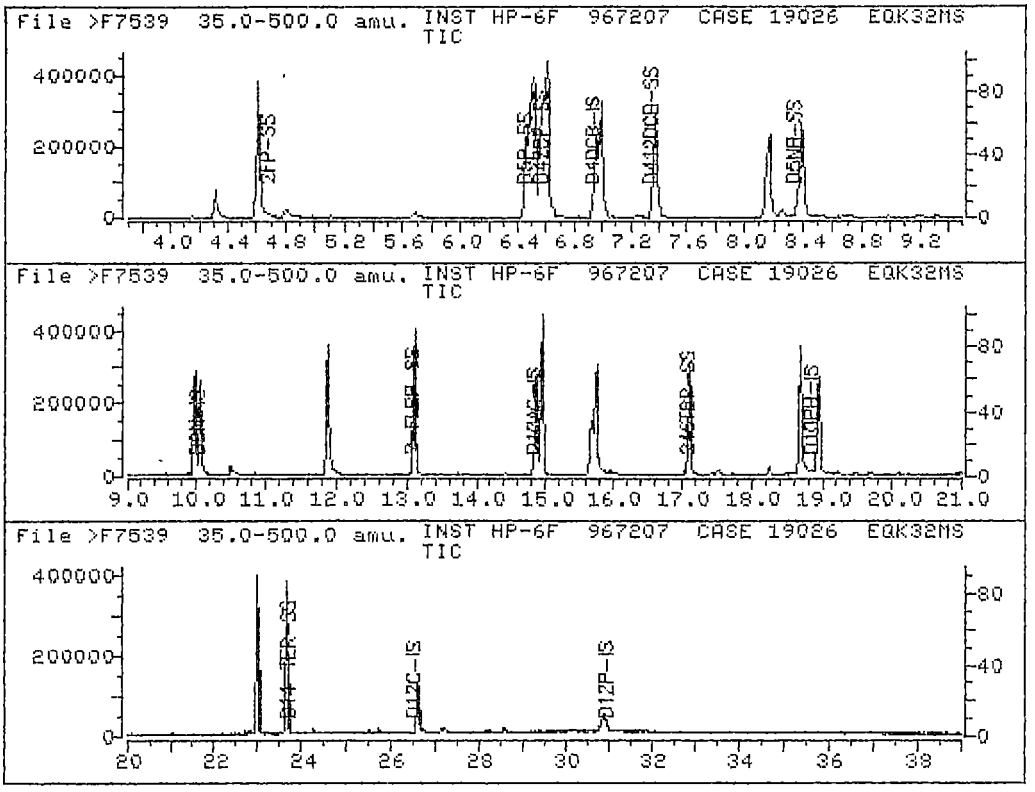
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/22/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	79	
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	42	
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	58	
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	37	
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine



MS data file header from : >F7539

Sample: INST HP-6F 967207 Operator: TERMINAL62MS 5/22/92 12:08
Misc : CASE 19026 EQK32MS IS=40 44502(BTL#13
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BNAME6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	1.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	9.0	0.0	0.0	.1	0.0

1985-2890

QUANT REPORT

Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920522 12:50
Output File: ^F7539::QT Injected at: 920522 12:08
Data File: >F7539::DG Dilution Factor: .50000
Name: INST HP-6F 967207
Misc: CASE 19026 EQK32MS IS=40 44502(BTL#13

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920522 02:04

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4 (IS)	6.96	152.0	72684	40.00	ng	82
2)	PHENOL	6.51	94.0	238900	42.99	ng	100
4)	2-CHLOROPHENOL	6.61	128.0	194437	44.40	ng	87
6)	1,4-DICHLOROBENZENE	6.99	146.0	136616	26.26	ng	90
11)	N-NITROSO-DI-n-PROPYLAMINE	8.17	70.0	119700	31.00	ng	54
13)	2-FLUOROPHENOL (SS)	4.62	112.0	169390	41.12	ng	70
14)	PHENOL-d5 (SS)	6.49	99.0	244113	43.33	ng	69
15)	2-CHLOROPHENOL-d4 (SS)	6.58	132.0	200738	42.01	ng	73
16)	1,2-DICHLOROBENZENE-d4 (SS)	7.38	152.0	91108	27.78	ng	80
17)	*NAPHTHALENE-d8 (IS)	10.05	136.0	257992	40.00	ng	100
24)	1,2,4-TRICHLOROBENZENE	9.98	180.0	139456	27.71	ng	97
28)	4-CHLORO-3-METHYLPHENOL	11.88	107.0	235968	48.81	ng	100
30)	NITROBENZENE-d5 (SS)	8.39	82.0	186092	33.41	ng	87
31)	*ACENAPHTHENE-d10 (IS)	14.87	164.0	164497	40.00	ng	88
40)	ACENAPHTHENE	14.96	153.0	293107	31.39	ng	84
42)	4-NITROPHENOL	15.68	109.0	70864	78.72	ng	84
44)	2,4-DINITROTOLUENE	15.75	165.0	166432	41.99	ng	79
50)	2-FLUOROBIPHENYL (SS)	13.11	172.0	309679	28.79	ng	100
51)	2,4,6-TRIBROMOPHENOL (SS)	17.12	329.7	108716	45.61	ng	100
52)	*PHENANTHRENE-d10 (IS)	18.95	188.0	267462	40.00	ng	100
57)	PENTACHLOROPHENOL	18.70	266.0	149078	58.18	ng	100
63)	*CHRYSENE-d12 (IS)	26.57	240.0	148123	40.00	ng	100
64)	PYRENE	23.00	202.0	487307	37.19	ng	96
70)	TERPHENYL-d14 (SS)	23.66	244.0	378999	50.00	ng	100
71)	*PERYLENE-d12 (IS)	30.88	264.0	110650	40.00	ng	100

* Compound is ISTD

1C852898

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

19026 • 5 EPA SAMPLE NO.

EQK32MSD

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967207

Sample wt/vol: 1000 (g/mL) ML Lab File ID: F7548

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: _____ decanted: (Y/N) ____ Date Extracted: 05/04/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/23/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

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

CAS NO.	COMPOUND		Q
108-95-2	Phenol	51	
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	53	
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	32	
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	39	
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	34	
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	50	
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	36	

19026 · 5

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EQK32MSD

Lab Name: CLAYTON NOVI Contract: 68-D1-0087

Lab Code: CLAYTN Case No.: 19026 SAS No.: _____ SDG No.: EQK13

Matrix: (soil/water) WATER Lab Sample ID: 967207

Sample wt/vol: 1000 (g/mL) ML Lab File ID: F7548

Level: (low/med) LOW Date Received: 04/30/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 05/04/92

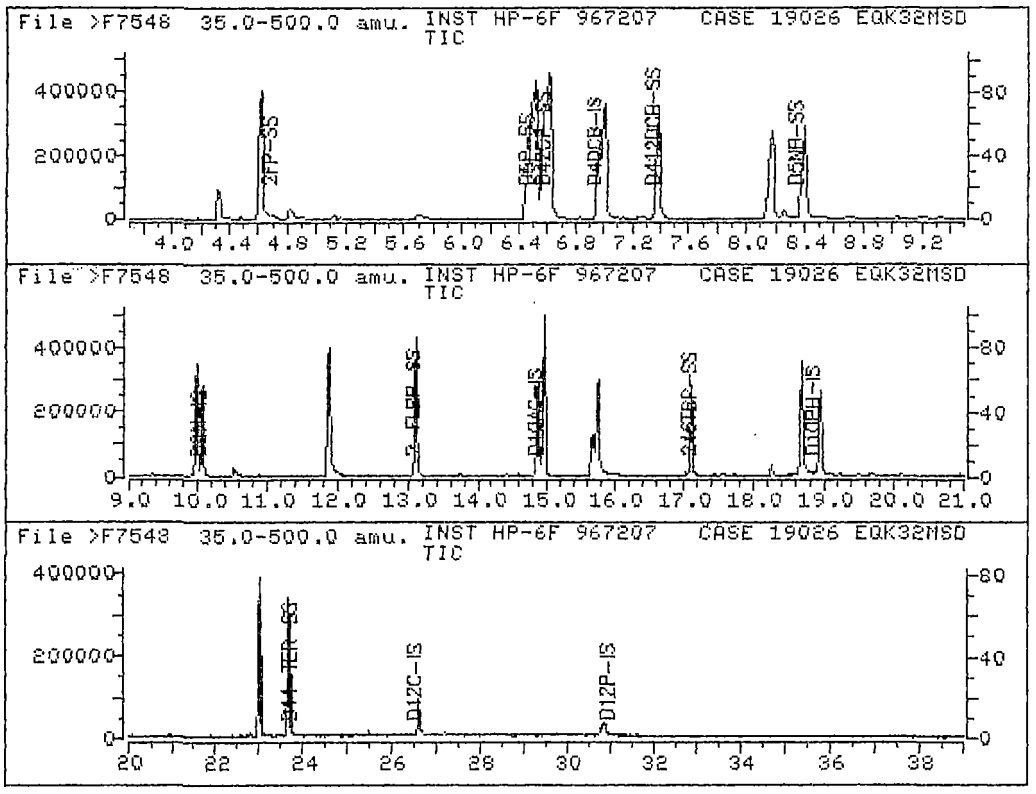
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/23/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	82	
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	40	
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	65	
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	35	
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine



MS data file header from : >F7548

Sample: INST HP-6F 967207 Operator: TERMINAL62MS 5/23/92 0:10
Misc : CASE 19026 EQK32MSD IS=40ng 44502(1:2) BTL# 5
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: BNAME6 Tuning file: MTBNA6 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 300 Transfer line temp. : 0

Chromatographic temperatures :	40.	300.	0.	0.	0.
Chromatographic times, min. :	1.0	10.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	9.0	0.0	0.0	.1	0.0

1805-2892

QUANT REPORT

Operator ID: TERMINAL62 Quant Rev: 6 Quant Time: 920523 00:53
Output File: ^F7548::QT Injected at: 920523 00:10
Data File: >F7548::D8 Dilution Factor: .50000
Name: INST HP-6F 967207
Misc: CASE 19026 EQK32MSD IS=40ng 44502(1:2) BTL# 5

ID File: NCBID6::D1
Title: SEMI-VOLATILES BY USEPA SOW REV. 1/91
Last Calibration: 920522 20:18

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-DICHLOROBENZENE-d4 (IS)	6.97	152.0	71869	40.00	ng	85
2)	PHENOL	6.52	94.0	275120	50.65	ng	100
4)	2-CHLOROPHENOL	6.61	128.0	220387	53.11	ng	88
6)	1,4-DICHLOROBENZENE	7.01	146.0	160000	31.69	ng	91
11)	N-NITROSO-DI-n-PROPYLAMINE	8.18	70.0	140618	38.72	ng	57
13)	2-FLUOROPHENOL (SS)	4.62	112.0	187065	47.25	ng	65
14)	PHENOL-d5 (SS)	6.49	99.0	270448	49.19	ng	71
15)	2-CHLOROPHENOL-d4 (SS)	6.58	132.0	218401	46.86	ng	73
16)	1,2-DICHLOROBENZENE-d4 (SS)	7.39	152.0	100000	31.57	ng	83
17)	*NAPHTHALENE-d8 (IS)	10.07	136.0	256493	40.00	ng	100
24)	1,2,4-TRICHLOROBENZENE	9.98	180.0	165525	34.06	ng	95
28)	4-CHLORO-3-METHYLPHENOL	11.88	107.0	253044	49.92	ng	100
30)	NITROBENZENE-d5 (SS)	8.41	82.0	207399	38.17	ng	83
31)	*ACENAPHTHENE-d10 (IS)	14.87	164.0	160363	40.00	ng	94
40)	ACENAPHTHENE	14.96	153.0	327384	35.99	ng	83
42)	4-NITROPHENOL	15.67	109.0	62432	82.06	ng	84
44)	2,4-DINITROTOLUENE	15.76	165.0	162952	39.59	ng	76
50)	2-FLUOROBIPHENYL (SS)	13.11	172.0	340353	32.29	ng	100
51)	2,4,6-TRIBROMOPHENOL (SS)	17.12	329.7	93141	38.41	ng	100
52)	*PHENANTHRENE-d10 (IS)	18.95	188.0	249480	40.00	ng	100
57)	PENTACHLOROPHENOL	18.70	266.0	144241	65.21	ng	100
63)	*CHRYSENE-d12 (IS)	26.55	240.0	120402	40.00	ng	100
64)	PYRENE	22.99	202.0	460849	35.24	ng	95
70)	TERPHENYL-d14 (SS)	23.66	244.0	319558	42.95	ng	100
71)	*PERYLENE-d12 (IS)	30.80	264.0	88630	40.00	ng	100

* Compound is ISTD

185-2893

Satralloy

CONTRACT COMPLIANCE SCREENING SUMMARY

FOR ORGANICS BY CRTERION

DATE MAILED: 6-23-92

LAB CODE: CLAYTN CONTRACT: 68 D10087 SAMPLES: 15 SCREENER: DR /CE DATE SCREENED: 6/18/92

CASE NO: 19026 SAS NO: _____ SOG NO: EQK 13 REGION: V DATE RECEIVED: 6/4/92

Shelf date: 6/17/92
Time Screened: 5 hr

VOA

SAMPLE	A HOLD	B TUNE	C BLKS	CALIB D INIT	CALIB E CONT	F SUR	G MS/D	H COMP
EQK13-01	Y							
EQK14-01	Y							
EQK14-08	Y							
EQK14-09	Y							
EQK15-01	Y							
EQK16-01	Y							
EQK17-01	Y							
EQK18-01	Y							
EQK19-01	Y							
EQK30-01	Y							
EQK31-01	Y							
EQK32-01	Y							
EQK32-08	Y							
EQK32-09	Y							
EQK33-01	Y							
EQK34-01	Y							

BNA

SAMPLE	A HOLD	I HOLD	D TUNE	C BLKS	CALIB D INIT	CALIB E CONT	F SUR	G MS/D	H COMP
EQK13-01	NA								
EQK14-01									
EQK14-08									
EQK14-09									
EQK15-01									
EQK16-01									
EQK17-01									
EQK18-01									
EQK19-01									
EQK30-01	Y								
EQK31-01	Y								
EQK32-01	Y								
EQK32-08	Y								
EQK32-09	Y								
EQK33-01	Y								
EQK34-01	NA								

PESTICIDES

SAMPLE	A HOLD	I HOLD	B BLKS	C DDT	D RT/W	E ANAL	F DEG	G DBC	H MS/D	CALIB I INIT	CALIB J CONT	K COMP
EQK13-01	NA											
EQK14-01												
EQK14-08												
EQK14-09												
EQK15-01												
EQK16-01												
EQK17-01												
EQK18-01												
EQK19-01												
EQK30-01	Y											
EQK31-01	Y											
EQK32-01	Y											
EQK32-08	Y											
EQK32-09	Y											
EQK33-01	Y											
EQK34-01	NA											

CODE: E = EXPLAIN, R = RESUBMIT, S = SUBMIT, N = NONCOMPLIANT, Y = ANALYZED, NA = NOT ANALYZED

CONTRACT COMPLIANCE SCREENING: HITS, SAMPLE TYPE AND LRD,

CASE: 19026 SAS NO: _____ DRD: 6/4/92 DATE: 6/19/92

LAB CODE: CLAYTN SOG NO: EQK13 REGION: V SCREENED BY: DR/CE

SAMPLE NO.	HITS					SAMPTYPE	LRD
	VOA		BNA		PEST	OLW, OLS OR OMS	
	TCL	TIC	TCL	TIC	TCL		
EQK13-01	2	1				OLS	4/30/92
EQK14-01	3	0				OLS	
EQK14-08	2	—				OLS	
EQK14-09	2	—				OLS	
EQK15-01	1	3				OLS	
EQK16-01	1	3				OLS	
EQK17-01	2	0				OLS	
EQK18-01	2	0				OLS	
EQK19-01	2	0				OLS	
EQK30-01	2	0	0	5	0	OLW	
EQK31-01	2	0	0	4	0	OLW	
EQK32-01	2	0	0	4	0	OLW	
EQK32-08	1	—	0	—	0	OLW	
EQK32-09	2	—	0	—	0	OLW	
EQK33-01	1	0	0	2	0	OLW	
EQK34-01	3	0				OLW	

HOLDING TIMES:
WORKSHEET

CIRCLE FRACTIONS WHICH ARE NOT WITHIN CRITERIA.

SAMPLE ID	LRD	VOA DATE ANAL	BNA		PEST.		HOLDING TIME
			DATE EXT	DATE ANAL	DATE EXT	DATE ANAL	
EQK13-01	4/30/92	5/7/92					
EQK14-01		5/7/92					
EQK14-08		5/7/92					
EQK14-09		5/7/92					
EQK15-01		5/7/92					
EQK16-01		5/6/92					
EQK17-01		5/7/92					
EQK18-01		5/7/92					
EQK19-01		5/7/92					
EQK30-01		5/6/92	5/4/92	5/22/92	5/1/92	5/21/92	
EQK31-01		5/5/92	5/4/92	5/22/92	5/1/92	5/21/92	
EQK32-01		5/5/92	5/4/92	5/22/92	5/1/92	5/21/92	
EQK32-08		5/5/92	5/4/92	5/22/92	5/1/92	5/21/92	
EQK32-09		5/5/92	5/4/92	5/23/92	5/1/92	5/21/92	
EQK33-01		5/5/92	5/4/92	5/27/92	5/1/92	5/21/92	
EQK34-01		5/6/92					

VOA - Holding Time = Analysis within 10 days of LRD water & soil

BNA - Holding Times = Extraction within 5 days of LRD for water.
Holding Times = Extraction within 10 days of LRD for Soil/Sed.
Holding Times = Analyzed within 40 days following extraction.

PEST - Holding Times = Extraction within 5 days of LRD for water
Holding Times = Extraction within 10 days of LRD for Soil/Sed.
Holding Times = Analyzed within 40 days following extraction.

WP:12-003-9

U.S.E.P.A. - C.L.P.
SAMPLE MANAGEMENT OFFICE

ORGANIC
CONTRACT COMPLIANCE SCREENING BY CRITERION

CASE: 19026 SAMPLES: 16 SDG NO: EQK13

LAB CODE: CLAYTN SCREENED BY: DR /CE DATE: 6/18/92

FRACTION	CRITERION	COMMENTS
		No comments on this package.

In Reference to Case No(s):

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM

Telephone Record Log

Date of Call: _____

Laboratory Name: _____

Lab Contact: _____

Region: _____

Regional Contact: _____

Call Initiated By: ____ Laboratory ____ Region

In reference to data for the following sample number(s):

_____

_____

_____

Summary of Questions/Issues Discussed:

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_____

Summary of Resolution:

_____

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Signature _____ Date _____

Distribution: (1) Lab Copy, (2) Region Copy, (3) SMO Copy